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ANNUAL REPORT

OF THE

OPERATIONS

OF THE

UNITED STATES LIFE-SAVING SERVICE

FOR THE

FISCAL YEAR ENDING JUNE 30, 1883.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1884.

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ORGANIZATION

OF THE

UNITED STATES LIFE-SAVING SERVICE.

(In conformity to Act of Congress approved June 18, 1878.)

SUMNER I. KIMBALL, General Superintendent.

WILLIAM D. O'CONNOR, Assistant General Superintendent.

CAPT. JAMES H. MERRYMAN, United States Revenue Marine, Inspector of Life-Saving Stations.

CAPT. GEORGE R. SLICER, United States Revenue Marine, } Superintendents of Construction of Life-Saving Stations.
CAPT. JAMES H. MERRYMAN, United States Revenue Marine, }

ASSISTANT INSPECTORS.

First District.—CAPT. RUSSELL GLOVER, United States Revenue Marine, Portland, Maine.

Second District.—CAPT. DANIEL B. HODGSDON, United States Revenue Marine, Boston, Massachusetts.

Third District.—LIEUT. GEORGE E. MCCONNELL, United States Revenue Marine, Bay Shore, New York.

Fourth District.—LIEUT. CHARLES H. MCLELLAN, United States Revenue Marine, Tom's River, New Jersey.

Fifth District.—LIEUT. W. A. FAILING, United States Revenue Marine, Chincoteague, Virginia.

Sixth District.—LIEUT. EDWIN L. WADE, United States Revenue Marine, Norfolk, Virginia.

Seventh District.— * * *

Eighth District.—CAPT. LEONARD G. SHEPARD, United States Revenue Marine, Galveston, Texas.

Ninth District.—CAPT. JOHN G. BAKER, United States Revenue Marine, Oswego, New York.

Tenth District.— * * *

Eleventh District.—LIEUT. FRANK H. NEWCOMB, United States Revenue Marine, Chicago, Illinois.

Twelfth District.—CAPT. JOHN W. WHITE, United States Revenue Marine, East Oakland, California.

LIEUT. CHARLES F. SHOEMAKER, United States Revenue Marine, on special duty, Washington, D. C.

LIEUT. THOMAS D. WALKER, United States Revenue Marine, on special duty, Washington, D. C.

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DISTRICT SUPERINTENDENTS.

First District.—JOHN M. RICHARDSON, Portland, Maine.
Second District.—BENJAMIN C. SPARROW, East Orleans, Massachusetts.
Third District.—HENRY E. HUNTTING, Bridgehampton, New York.
Fourth District.—JOHN G. W. HAVENS, Metedeconk, New Jersey.
Fifth District.—BENJAMIN S. RICH, Onancock, Virginia.
Sixth District.—JOSEPH W. ETHERIDGE, Manteo, North Carolina.
Seventh District.—CHAMPLIN H. SPENCER, Daytona, Florida.
Eighth District.—WILLIAM H. HUTCHINGS, Galveston, Texas.
Ninth District.—DAVID P. DOBBINS, Buffalo, New York.
Tenth District.—JEROME G. KIAH, Sand Beach, Michigan.
Eleventh District.—NATHANIEL ROBBINS, Benton Harbor, Michigan.
Twelfth District.—CAPT. JOHN W. WHITE, United States Revenue Marine (Acting), East Oakland, California.

ASSISTANT DISTRICT SUPERINTENDENT.

Third District.—NICHOLAS BALL, New Shoreham, Rhode Isand.

BOARD ON LIFE-SAVING APPLIANCES.

CAPT. FRANK R. BABY, New York City, *President.*
CAPT. J. H. MERRYMAN, United States Revenue Marine, Inspector Life-Saving Stations.
CAPT. D. A. LYLE, Ordnance Department, United States Army.
LIEUT. T. D. WALKER, United States Revenue Marine, Assistant Inspector Life-Saving Stations, *Recorder.*
BENJAMIN C. SPARROW, Superintendent Second Disirict, Life-Saving Service.
DAVID P. DOBBINS, Superintendent Ninth District, Life-Saving Service.
JOHN C. PATTERSON, Keeper Station No. 1, Fourth District, Life-Saving Service.

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LETTER OF TRANSMITTAL.

TREASURY DEPARTMENT,
UNITED STATES LIFE-SAVING SERVICE,
Washington, D. C., November 24, 1883.

SIR: I have the honor to submit the following report of the operations of the Life-Saving Service for the fiscal year ending June 30, 1883, and of the expenditures of the moneys appropriated for the maintenance of the Service for that period, in accordance with the requirements of section 7 of the act of June 18, 1878.

A compilation of the statistics of wrecks and casualties which have occurred on or near the coasts and on the rivers of the United States, and to American vessels at sea or on the coasts of foreign countries, collected under authority of the act of June 20, 1874, is included.

I have the honor to be, very respectfully,

SUMNER I. KIMBALL,
General Superintendent.

Hon. CHARLES J. FOLGER,
Secretary of the Treasury.

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OPERATIONS

OF THE

UNITED STATES LIFE-SAVING SERVICE.

1883.

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TREASURY DEPARTMENT,
Document No. 593.
Life-Saving Service.

REPORT

OF THE

UNITED STATES LIFE-SAVING SERVICE.

OPERATIONS.

At the close of the last fiscal year there were one hundred and ninety-four stations in the Life-Saving Establishment, distributed upon the sea and lake coasts as follows:

First District (coast of Maine and New Hampshire)	7
Second District (coast of Massachusetts)	17
Third District (coast of Rhode Island and Long Island)	37
Fourth District (coast of New Jersey)	40
Fifth District (coast from Cape Henlopen to Cape Charles)	11
Sixth District (coast from Cape Henry to Cape Fear River)	27
Seventh District (eastern coast of Florida and coast of Georgia and South Carolina)	5
Eighth District (Gulf coast)	5
Ninth District (Lakes Erie and Ontario)	10
Tenth District (Lakes Huron and Superior)	12
Eleventh District (Lake Michigan)	16
Twelfth District (Pacific coast)	7
Total	194

Of these stations one hundred and forty-nine were on the Atlantic, thirty-seven on the Lakes, seven on the Pacific, and one was at the Falls of the Ohio, Louisville, Kentucky.

The following statement shows the periods of the employment of surfmen at such of the stations as were manned with crews during any portion of the year, which periods respectively constituted what is termed the active season:

Employment of surfmen, season of 1882–'83.

District.	Stations.	Period of employment.
1	Quoddy Head, Cross Island, Crumple Island, Cranberry Isles, White Head, Fletcher's Neck, and Rye Beach.	6 surfmen at each station from September 1, 1882, to November 30, 1882, inclusive, and 7 at each from December 1, 1882, to April 30, 1883, inclusive.
2	Plum Island, Davis's Neck, Fourth Cliff, Gurnet's, Manomet Point, Race Point, Peaked Hill Bar, Highlands, Parmet River, Cahoon's Hollow, Nauset, Orleans, Chatham, Monomoy, and Surfside.	6 surfmen at each station from September 1, 1882, to November 30, 1882, inclusive, and 7 at each from December 1, 1882, to April 30, 1883, inclusive
	High Head	7 surfmen from January 10, 1883, to April 30, 1883, inclusive.
	Muskeget	7 surfmen from February 7, 1883, to April 30, 1883, inclusive.

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Employment of surfmen, season of 1882-'83—Continued.

District.	Stations.	Period of employment.
3	Point Judith, Block Island, Ditch Plain, Hither Plain, Napeague, Tiana, Moriches, Blue Point, Fire Island, Jones's Beach, Short Beach, and Long Beach.	6 surfmen at each station from September 1, 1882, to November 30. 1882, inclusive, and 7 at each from December 1, 1882, to April 30, 1883, inclusive.
	Narragansett Pier, Watch Hill, New Shoreham, Amagansett, Georgica, Mecox, Southampton, Shinnecock, Quogue, Petunk, Forge River, Smith's Point, Bellport, Lone Hill, Point of Woods, Oak Island, Gilgo, Zack's Inlet, Point Lookout, Far Rockaway, Rockaway, Rockaway Point, Coney Island, and Eaton's Neck.	6 surfmen at each station from September 16, 1882, to November 30, 1882, inclusive, and 7 at each from December 1, 1882, to April 30, 1883, inclusive.
4	Spermaceti Cove, Chadwick's, Barnegat, Little Egg, Brigantine, Ocean City, and Tatham's.	6 surfmen at each station from September 1, 1882, to November 30, 1882, inclusive, and 7 at each from December 1, 1882, to April 30, 1883, inclusive.
	Sandy Hook, Seabright, Monmouth Beach, Long Branch, Deal, Shark River, Spring Lake, Squan Beach, Bay Head, Mantoloking, Tom's River, Island Beach, Cedar Creek, Forked River, Loveladies Island, Harvey's Cedars, Ship Bottom, Long Beach, Bond's, Little Beach, Atlantic City, Absecom, Great Egg, Peck's Beach, Corson's Inlet, Sea Isle City, Townsend's Inlet, Hereford Inlet, Holly Beach, Turtle Gut, Cold Spring, and Cape May.	6 surfmen at each station, from September 15, 1882, to November 30, 1882, inclusive, and 7 at each from December 1, 1882, to April 30, 1883, inclusive.
5	Cape Henlopen, Rehoboth Beach, Indian River Inlet, Ocean City, Green Run Inlet, Pope's Island, Assateague Beach, Watchapreague, Hog Island, Cobb's Island, and Smith's Island.	6 surfmen at each station from September 1, 1882, to November 30, 1882, inclusive, and 7 at each from December 1, 1882, to April 30, 1883, inclusive.
6	Cape Henry, Seatack, Dam Neck Mills, Little Island, False Cape, Wash Woods, Currituck Inlet, Whale's Head, Poyner's Hill, Caffey's Inlet, Paul Gamiel's Hill, Kitty Hawk, Kill Devil Hills, Nag's Head, Bodie's Island, Oregon Inlet, Pea Island, Chicamicomico, Gull Shoal, Little Kinnakeet, Big Kinnakeet, Creed's Hill, Durant's, and Cape Fear.	6 surfmen at each station from September 1, 1882, to November 30, 1882, inclusive, and 7 at each from December 1, 1882, to April 30, 1883, inclusive.
8	San Luis, and Saluria	6 surfmen at each station from September 1, 1882, to April 30, 1883, inclusive.
	Aransas	6 surfmen from September 7, 1882, to April 30, 1883, inclusive.
	Brazos	6 surfmen from October 1, 1882, to April 30, 1883, inclusive.
9	Big Sandy, Salmon Creek, and Erie	7 surfmen at each station from July 1 to December 10, 1882, and from April 20 to June 30, 1883.
	Oswego, Fairport, and Cleveland	8 surfmen at each station from July 1 to December 10, 1882, and from April 20 to June 30, 1883.
	Charlotte, and Point Marblehead	1 surfman at each station from July 1 to December 10, 1882, and from April 20 to June 30, 1883.
	Buffalo	8 surfmen from July 1 to December 10, 1882, and from April 25 to June 30, 1883.
	Louisville	6 surfmen from July 1, 1882 to June 30, 1883.
10	Sand Beach	8 surfmen from July 1 to December 11, 1882, and from April 16 to June 30, 1883.
	Point aux Barques, Grindstone City, and Sturgeon Point.	7 surfmen at each station from July 1 to December 11, 1882, and from April 16 to June 30, 1883.
	Ottawa Point	7 surfmen from July 1 to December 12, 1882, and from April 16 to June 30, 1883.
	Thunder Bay Island	8 surfmen from July 1 to December 14, 1882, and from April 16 to June 30, 1883.
	Middle Island	8 surfmen from July 1 to December 12, 1882, and from April 16 to June 30, 1883.
	Hammond's Bay	7 surfmen from July 1 to December 15, 1882, and from April 16 to June 30, 1883.
	Vermillion Point, Crisp's, Two Heart River, and Muskallonge Lake.	7 surfmen at each station from July 1 to November 30, 1882, and from May 7 to June 30, 1883.
11	North Manitou Island	6 surfmen from November 2 to November 30, 1882, and from May 9 to June 30, 1883.
	Point Betsey, and Evanston	7 surfmen at each station from July 1 to November 30, 1882, and from April 2 to June 30, 1883.
	Grand Point au Sable	7 surfmen from July 1 to November 30, 1882, and from April 10 to June 30, 1883.
	Manistee, Muskegon, Saint Joseph, Kenosha, Racine, Sheboygan, and Two Rivers.	8 surfmen at each station from July 1 to November 30, 1882, and from April 2 to June 30, 1883.

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Employment of surfmen, season of 1882-'83—Continued.

District.	Stations.	Period of employment.
11	Ludington, Grand Haven, Chicago, and Milwaukee.	8 surfmen at each station from July 1 to December 31, 1882, and from April 2 to June 30, 1883.
12	Cape Disappointment	8 surfmen from October 2, 1882, to March 31, 1883, inclusive.
	Humboldt Bay	6 surfmen from October 21, 1882, to June 30, 1883, inclusive.
	Golden Gate Park	6 surfmen from October 2, 1882, to June 30, 1883, inclusive.

The coast of Florida, constituting a portion of the Seventh District, is not included in the foregoing statement, the stations being simply provisioned houses of refuge respectively under the charge of keepers, but without crews, the character of the coast being such, in the case of stranded vessels, as to make escape to the shore generally comparatively easy, and the main danger to the shipwrecked being from thirst and starvation after landing, the region being for the most part desolate and uninhabited. The keepers and their families are required to explore the beaches after every storm for several miles in either direction, on the lookout for persons who may have been cast ashore. For the benefit of such persons, there are also guide-posts set at intervals of a mile apart along the entire coast, showing the direction and distance to the nearest station or light-house.

STATISTICS.

The reports of the district officers show that during the year there were three hundred disasters to documented vessels within the field of station operations. On board these vessels, there were three thousand seven hundred and ninety-six persons, of whom three thousand seven hundred and eighty-one were saved, and only fifteen lost. The estimated value of the vessels was $5,100,925, and that of their cargoes $2,075,615, making the total value of the property involved $7,176,540. Of this amount, $5,611,800 was saved, and $1,564,740 lost. The number of vessels totally lost was sixty-eight. There were, besides, one hundred and sixteen disasters to smaller craft, such as sail-boats, row-boats, &c., on which were two hundred and forty-four persons, two hundred and forty of whom were saved and four lost. The value of the property involved in the latter disasters was $66,180, of which $59,900 was saved and $6,280 lost.

The results of all the disasters to vessels within the scope of the service, including the smaller craft, aggregate, therefore, as follows:

Total number of disasters	416
Total value of property involved	$7,242,720
Total value of property saved	$5,671,700
Total value of property lost	$1,571,020
Total number of persons involved	4,040
Total number of persons saved	4,021

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Total number of persons lost	19
Total number of shipwrecked persons succored at stations	*651
Total number of days' succor afforded	†1,879
Number of vessels totally lost	68

The apportionment of the foregoing statistics to the Atlantic, Lake, and Pacific coasts, respectively, is shown in the following table:

	Total number of disasters.	Total value of vessels.	Total value of cargoes.	Total amount of property involved.	Total amount of property saved.	Total amount of property lost.	Total number of persons on board.	Total number of persons saved.	Total number of persons lost.	Number of shipwrecked persons succored at stations.	Total number of days' succor afforded.	Number of disasters involving total loss of vessels.
Atlantic and Gulf coasts..	220	$3,748,785	$1,587,785	$5,336,570	$4,051,065	$1,285,505	2,450	2,443	7	527	1,550	49
Lake coasts*...	187	1,326,935	473,780	1,800,715	1,525,100	275,615	1,513	1,501	12	114	319	18
Pacific coasts..	9	90,075	15,360	105,435	95,535	9,900	77	77	....	10	10	1
Total.....	416	5,165,795	2,076,925	7,242,720	5,671,700	1,571,020	4,040	4,021	19	651	1,879	68

* Including the river station at Louisville, Kentucky.

The apportionment to the several districts is as follows:

First District.

Number of disasters	45
Value of vessels	$183,045
Value of cargoes	$24,340
Total value of property	$207,385
Number of persons on board vessels	251
Number of persons saved	251
Number of persons lost	None.
Number of shipwrecked persons succored at stations	43
Number of days' succor afforded	79
Value of property saved	$164,320
Value of property lost	$43,065
Number of disasters involving total loss of vessels	7

Second District.

Number of disasters	26
Value of vessels	$266,805
Value of cargoes	$51,495
Total value of property	$318,300
Number of persons on board vessels	168
Number of persons saved	168
Number of persons lost	None.
Number of shipwrecked persons succored at stations	50
Number of days' succor afforded	102
Value of property saved	$283,255
Value of property lost	$35,045
Number of disasters involving total loss of vessels	6

* Including 71 persons not on vessels in tables.

† Including 211 days' succor to persons not on vessels in tables.

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Third District.

Number of disasters	37
Value of vessels	$204,990
Value of cargoes	$87,020
Total value of property	$292,010
Number of persons on board vessels	153
Number of persons saved	153
Number of persons lost	None.
Number of shipwrecked persons succored at stations	53
Number of days' succor afforded	177
Value of property saved	$201,355
Value of property lost	$90,655
Number of disasters involving total loss of vessels	5

Fourth District.

Number of disasters	47
Value of vessels	$2,244,235
Value of cargoes	$953,710
Total value of property	$3,197,945
Number of persons on board vessels	1,425
Number of persons saved	1,421
Number of persons lost	4
Number of shipwrecked persons succored at stations	130
Number of days' succor afforded	493
Value of property saved	$2,654,580
Value of property lost	$543,365
Number of disasters involving total loss of vessels	11

Fifth District.

Number of disasters	29
Value of vessels	$356,900
Value of cargoes	$324,470
Total value of property	$681,370
Number of persons on board vessels	196
Number of persons saved	193
Number of persons lost	3
Number of shipwrecked persons succored at stations	110
Number of days' succor afforded	343
Value of property saved	$376,890
Value of property lost	$304,480
Number of disasters involving total loss of vessels	8

Sixth District.

Number of disasters	23
Value of vessels	$340,460
Value of cargoes	$128,300
Total value of property	$468,760
Number of persons on board vessels	179
Number of persons saved	179
Number of persons lost	None.
Number of shipwrecked persons succored at stations	77
Number of days' succor afforded	229
Value of property saved	$233,215
Value of property lost	$235,545
Number of disasters involving total loss of vessels	8

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Seventh District.

Number of disasters	1
Value of vessels	$50
Value of cargoes	None.
Total value of property	$50
Number of persons on board vessels	3
Number of persons saved	3
Number of persons lost	None.
Number of shipwrecked persons succored at stations	None.
Number of days' succor afforded	None.
Value of property saved	$50
Value of property lost	None.
Number of disasters involving total loss of vessels	None.

Eighth District.

Number of disasters	12
Value of vessels	$152,300
Value of cargoes	$18,450
Total value of property	$170,750
Number of persons on board vessels	75
Number of persons saved	75
Number of persons lost	None.
Number of shipwrecked persons succored at stations	21
Number of days' succor afforded	54
Value of property saved	$137,400
Value of property lost	$33,350
Number of disasters involving total loss of vessels	4

Ninth District.

Number of disasters	78
Value of vessels	$447,310
Value of cargoes	$252,435
Total value of property	$699,745
Number of persons on board vessels	915
Number of persons saved	914
Number of persons lost	1
Number of shipwrecked persons succored at stations	12
Number of days' succor afforded	15
Value of property saved	$581,725
Value of property lost	$118,020
Number of disasters involving total loss of vessels	5

Tenth District.

Number of disasters	31
Value of vessels	$421,680
Value of cargoes	$72,040
Total value of property	$493,720
Number of persons on board vessels	195
Number of persons saved	195
Number of persons lost	None.
Number of shipwrecked persons succored at stations	9
Number of days' succor afforded	15
Value of property saved	$465,235
Value of property lost	$28,485
Number of disasters involving total loss of vessels	None.

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Eleventh District.

Number of disasters	78
Value of vessels	$457,945
Value of cargoes	$149,305
Total value of property	$607,250
Number of persons on board vessels	403
Number of persons saved	392
Number of persons lost	11
Number of shipwrecked persons succored at stations	75
Number of days' succor afforded	161
Value of property saved	$478,140
Value of property lost	$129,110
Number of disasters involving total loss of vessels	13

Twelfth District.

Number of disasters	9
Value of vessels	$90,075
Value of cargoes	$15,360
Total value of property	$105,435
Number of persons on board vessels	77
Number of persons saved	77
Number of persons lost	None.
Number of shipwrecked persons succored at stations	None.
Number of days' succor afforded	None.
Value of property saved	$95,535
Value of property lost	$9,900
Number of disasters involving total loss of vessels	1

To the number of persons mentioned in the foregoing statements as saved should be added twenty-two persons rescued, who had fallen from wharves, piers, &c., and who would certainly have been drowned but for the assistance rendered by life-saving crews.

The investigations held in each case show that the nineteen persons lost during the year were entirely beyond human aid. Of this number nine were drowned by the sudden capsizing of vessels at some distance from land, before assistance could reach them; seven were lost in endeavoring to get ashore by their own efforts, while the life-saving crews were hurrying to the rescue; one perished by being thrown overboard by the shock of a collision; one was washed overboard from a stranded vessel, and one died as soon as landed, owing to previous exposure on a wreck.

The number of disasters during the year exceed by seventy-one the number of disasters of the year preceding, which was considerably larger than that of any previous year in the history of the service. The amount of property involved was $2,476,493 greater than in the preceding year, but the amount lost was $88,750 less than that of the preceding year, while the amount saved was $2,565,243 more. The number of lives lost was seven more than in the preceding year, but in proportion to the number of persons on board the vessels suffering disaster it is considerably less, the ratio of reduction being six per cent.

The assistance rendered during the year in saving vessels and cargoes

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has been much larger than in any previous year, three hundred and thirty-seven vessels having been worked off when stranded, repaired when damaged, piloted out of dangerous places, or similarly assisted by the station crews. There were besides one hundred and twenty-five instances (thirty-nine more than in the preceding year), where vessels running into danger of stranding were warned off by the night signals of the patrols, most of them thus being saved from partial or total destruction.

In the year's operation's the surf-boat was used three hundred and seventy-two times, making five hundred and seventy-three trips. The self-righting and self-bailing life-boat was used twenty-one times, making twenty-six trips. Smaller boats were used one hundred times, making one hundred and twelve trips. The river life-skiffs at the Louisville (Kentucky,) Life-Saving Station, Ninth District, were used fifty-five times, making ninety-four trips. The breeches-buoy was used sixteen times, making one hundred and forty-six passages. The wreck gun was employed seventeen times, firing twenty-three shots. The heaving-stick was used twenty-five times. There were landed by the surf-boat three hundred and ninety-three persons; by the life-boat, ten; by the small boats, seventy-three; by the river life-skiffs, one hundred and twenty-five, and by the breeches-buoy, one hundred and forty-seven. Two persons were taken from the water's edge apparently dead, but were resuscitated. By casting lines over vessels the life-saving crews brought ashore, without other appliances, six persons, and three persons were rescued by dragging them out of the surf and undertow.

As previously mentioned twenty-two persons were taken in various ways from the water, into which they had fallen from wharves, piers, &c.

The table given below contains a summary of results in the field of life-saving operations since the introduction of the present system:

GENERAL SUMMARY

*Of disasters which have occurred within the scope of life-saving operations from November 1, 1871 (date of introduction of present system), to close of fiscal year ending June 30, 1883.**

Total number of disasters	2,108
Total value of vessels	$24,521,640
Total value of cargoes	$11,999,734

* It should be observed that the operations of the Service during this period have been limited as follows: Season of 1871–'72, to the coasts of Long Island and New Jersey; seasons of 1872–'74, to coasts of Cape Cod, Long Island, and New Jersey; season of 1874–'75, to the coasts of New England, Long Island, New Jersey, and coast from Cape Henry to Cape Hatteras; season of 1875–'76, coasts of New England, Long Island, New Jersey, coast from Cape Henlopen to Cape Charles, and coast from Cape Henry to Cape Hatteras; season of 1876–'77 and since, all the foregoing, with the addition of the eastern coast of Florida and portions of the lake coasts and during the past three years the coast of Texas.

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Total value of property involved	$36,521,374
Total value of property saved	$23,736,992
Total value of property lost	$12,784,382
Total number of persons involved*	18,764
Total number of persons saved	18,338
Total number of lives lost†	426
Total number of persons succored‡	3,729
Total number of days' succor afforded	10,308

LOSS OF LIFE.

During the year there were ten disasters involving loss of life within the scope of the service. A detailed relation of the circumstances of each case, and of the action of the life-saving crews, is given below.

WRECK OF A SKIFF.

The first disaster of the year, involving loss of life within the scope of the service, took place on the 10th of August, 1882, at the Falls of the Ohio, nearly a mile north of the Louisville Station. It appears that a man, named Louis F. Frink, a plasterer by trade, was emigrating with his wife from Pittsburgh, Pennsylvania, to Paducah, Kentucky, the journey being made down the Ohio in an open river-skiff. The couple arrived at Jeffersonville, Indiana, on the 9th of August, where they landed and remained until about noon of the 10th, Frink, meanwhile, drinking freely. He had been warned of the danger of the passage over the falls, and before starting took the precaution to secure his wife with a cord to the stem of the boat, and to tie his dog on board in the same way. The day was cool, and a fresh northwest wind was blowing. After completing his preparations, Frink headed the boat down the river, and pulled for the Indiana chute of the falls. The catastrophe was not long in following. As the neighborhood of the descent was reached, the rower failed to get into the current of the chute, and in a few moments the boat was swept sheer over the dam. It capsized, of course, in going over, throwing everybody out; and when it struck the water below it sunk, beaten under, as were its recent occupants, by the force of the waterfall. Before long, some witnesses on the Indiana shore, a hundred and fifty yards distant, saw it come to the surface, bottom up, and drift away, with the dog swimming with it in tether. Presently the man emerged, and swam to it. The woman next appeared for an instant, sunk, came up again, floated on her back for a short distance, then disappeared forever.

The disaster had not only been seen, but anticipated at the station.

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* Including persons rescued not on board vessels.

† One hundred and eighty-three of these were lost at the disasters of the steamers Huron and Metropolis—in the case of the former when the stations were not open, and in the latter when service was impeded by distance—and fourteen others in the same year, owing to similar causes.

‡ Including castaways not on board vessels embraced in tables.

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Boatman Farrell, who was on the lookout, saw through his marine glass the boat start away from shore, and judged by the distance above the dam at which it put off that it would go over the chute in safety. But the moment he saw it in proximity to the dam, he apprehended danger, and gave the alarm.

The rapidity with which this station operates for a rescue can hardly be conceived. There is the crash of a gong; through the broad, open doorway, men, pushing a boat, rush down a slanted gang-plank; and in a moment they are in and away, rowing like mad. It was thus that on this occasion one of the station boats, the Reckless, shot out, driven with fury by three rowers, boatmen Gillooley, Smith, and Trager. Keeper Devan, hearing the alarm in his own room at the station, sprang out on deck, and saw the boat already darting headlong on her way. To save time, the rowers took the most direct course, flying straight down the Kentucky chute, and then obliquely across the tumbling, broken waters of what is known as Backbone Reef. In ten minutes after the disaster they had come up to the capsized skiff, then drifting into the breakers of the lower reef, with the nearly exhausted man clinging to it, and the dog swimming in tow. Both were at once hauled into the boat by the life-savers, who then made a desperate effort to recover the skiff, but were obliged soon to recede for their own safety, and saw the capsized waif go rolling over and over down through the broken mass of running water called the Big Breakers, below which it was soon afterward recovered. The rescued man now began to regain his speech, and let the crew know that he had his wife attached to the skiff before the plunge over the dam. This was the first intimation given the life-boatmen that there had been another person on board. They at once towed the boat ashore, a mile below the scene of disaster, and made an examination, finding nothing but a fragment of the cord, hanging to the stem, by which the woman had been attached. She had been fastened by the wrist, and it is probable that when all were thrown out as the skiff was flung over the dam, the jerk had broken the cord. Some people who had followed the boat along the river bank were interrogated by the life-boatmen, but averred that they had seen no woman when the catastrophe took place, although, as already related, she had been seen by other witnesses further up-stream. Longer search for her was now impracticable, as the boat was a mile below the scene of disaster, and to return against the heavy current was impossible. The crew therefore put the boat back to the station through the canal which skirts the river, having first taken off Frink's wet clothing and dressed him in some garments stripped from themselves.

The station was reached at 4.30 P. M., and the wretched man made as comfortable as possible. Keeper Devan questioned him closely, and thinking it possible that the woman might have reached the Indiana shore, alive or dead, or that her body if still submerged could be recovered, he took the hooks and grapnels and started out in one of the

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station boats with a crew. A number of people, men and boys, were found on the other side of the river who had witnessed the disaster and had seen the woman's successive appearances in the water. It was found that the grapnels and drags could not be used, owing to the extreme rockiness of the bottom, but Keeper Devan and his men made a vigorous search for the body along the shore, among the drift-piles, and in the eddies. It proved unavailing, and the poor corpse was never seen again.

Frink remained at the station for twenty-four hours under succor. The next day, the keeper provided him with clothing, including a hat and shoes, raised a subscription for him, procured him a free pass, and started him on his way to Paducah by one of the river steamers. His unfortunate wife was not quite nineteen years of age and had been married only a year.

WRECK OF THE GEORGE D. SANDFORD.

The next wreck of the year at which life was lost within the scope of the service took place on the 4th of October, 1882, and was that of the steamer George D. Sandford, of Grand Haven, Michigan, bound without cargo from Frankfort, Michigan, to Manistee, Michigan, and having on board a crew of five, and eight passengers. At about half-past 9 o'clock at night, the weather being calm, and the sea running smooth under a dense fog, the light at Manistee, which is built on the south pier, about two hundred feet from the end of it, appeared through the thick atmosphere apparently at a long distance, and the steamer was headed directly for it. The light, owing to a deception of the fog, still seemed a long way off, when suddenly the men on the lookout forward saw the pier loom up, like a wall, close aboard, and shouted to the captain to back the vessel. The bell was at once rung to stop and back her strong, and the engineer promptly reversed the engines and pulled the throttle-valve wide open, thus putting on all steam for the receding movement. A few powerful backward revolutions were made by the engine, and the steamer's speed was slackened to four miles an hour, but the effort was too late, and presently she struck the pier head, bow on, with a tremendous concussion, which burst the steam-pipe a little above the starboard door of the engine-room and threw the boiler about seven inches forward. The shock instantly stopped the engines, and the steamer fell away and drifted slowly from the pier.

Amidst the confusion and uproar which follows such disasters a voice was heard three times from the sea, calling, "George," and those on board, peering through the thick fog, had a momentary sight of a man weltering in the sleek water, but at such a distance that help was impossible. It was at first supposed that the captain was overboard, but it proved to be the engineer, a colored man named Albert Hicks. Probably the unfortunate man, after reversing the engines, had gone to the door of the engine-room to look out, and been thrown over the side by the shock when the steamer struck the pier. The engine-room, it will

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be understood, was flush with the deck, and the door only a short distance from the rail over which, under the circumstances, his precipitation would therefore be easy. The name he was heard calling from the water was thought to be that of one of the deck-hands, George Rosco.

Immediately upon the collision the steamer's whistle had been vigorously sounded by the captain for assistance, and a tug promptly came out and towed her inside, making her fast to the north pier. About the same time, or fifteen minutes after the steamer had struck, the keeper and crew of the Manistee Life-Boat Station, half a mile distant, arrived upon the scene in the surf-boat, having been roused by the station patrolman, who was on duty on the north pier, and had heard the crash of the collision and the hissing of escaping steam beyond the south pier when the accident occurred. Upon learning the loss of the engineer, the keeper took the captain of the vessel into the surf-boat with him and entered upon a search for the missing man, rowing about in the fog for over an hour, but finding no trace of him. At one time, the surf-boat crew were quite lost in the fog, and had to be guided only by sound in making their way. The next day they dragged the mouth of the river a long time for the body of the engineer, and finally, about 10 o'clock in the forenoon, recovered it, quite uninjured, and turned it over to the coroner. It is evident that this fatality, like the case preceding, was beyond retrieval.

WRECK OF THE J. O. MOSS.

A third wreck, involving loss of life, took place on the 24th of November, 1882, four miles north of the Grand Point au Sable Station, Lake Michigan. The vessel was the schooner J. O. Moss, of Chicago, Illinois, bound to that place from East Frankfort, Michigan, with a cargo of shingles, and having a crew of six men. She had been struck by a sudden gale and snow-storm the afternoon of the day preceding (November 23), and failing to weather Grand Point au Sable, and drifting rapidly to leeward, she was anchored during the night just outside of the breakers, three miles north of the light-house. One of the patrolmen from the station a mile beyond the light house discovered her at about 3 o'clock in the morning, and returning to the station reported the fact to the keeper, who at once roused his men and hurried one of them forward to keep watch upon her. The remainder of the crew soon followed and arrived abreast of the vessel at daybreak. Just as they came up they saw her part her chain, swing around, and drift toward the beach. The spectacle was of the wildest. A northwest gale was raging with a universal whirl of snow, the sea was a mass of crashing breakers, and through all came the schooner, broadside to the shore, rolling, the keeper said, worse than he had ever seen a vessel roll, the hull completely smothered in the surf, and the crew up in the rigging. She soon stranded, five hundred feet from the beach, and in her stationary position continued her heavy swaying. The keeper, as soon

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as her advance ceased, hurried with the crew back to the station for the wreck-gun and apparatus, sending forward one of the men to Hamlin, a mile beyond the station, to telephone to Ludington for a team, the conditions of the road and weather making hauling by hand impracticable.

Surfman Stillson, the member of the crew who had been first dispatched to keep watch upon the vessel, remained behind under orders to continue his surveillance. Upon his arrival he had kindled a large fire upon the beach, which he kept well burning. As the morning deepened the tide fell, and although the schooner maintained her convulsive rolling, the sailors were enabled to descend from the rigging to the deck, where they stood clustered around the foremast under the lee of the fore-gaff and boom. At times, however, the sea would suddenly mount and break all over the vessel in a fury of foam, so that not a man on board could be seen. While the surfman stood watching this dismal and terrible show he suddenly saw one of the men on board preparing to leave for the shore in a yawl, carrying the end of a line with him, and at once by every possible gesture attempted to dissuade him, signifying to him also that help was on the way. His efforts proved useless, for the sailor presently set out in the boat, which came plunging in half buried in foam, and in a few moments was flung upside down in the breakers, leaving the man wildly struggling for his life. He would undoubtedly have been drowned, but the surfman, at the greatest personal peril, rushed into the seething water, and managed to clutch him and then drag him on shore. He was almost insensible, but his brave rescuer carried him to the fire, where he soon recovered. The boat drifting ashore, Surfman Stillson got hold of the line attached to it and secured it to a log, the sailors on board hauling it taut and fastening the other end to the wreck. Before long the surfman was horrified to see another of the ship's company, Barney McDonald, the mate, undertaking to make his way to the shore, hand over hand, on the suspended line, and signaled and gesticulated to him with all his might to forbear the effort, letting him know, as he had done in the case of the other sailor, that assistance was coming. But despite his mute appeals the mate continued to swing on, hand over hand, with the surf wallowing and leaping beneath him. He worked along in this way for about twenty-five yards, when he paused for a moment, then all at once let go his hold like one exhausted, and dropped into the sea. The surfman gazed with dreadful solicitude at the place where he fell, but the disappearance was instant and final.

In the mean time the station force was toiling heavily on its way through the storm. The team sent for had arrived a little before 10 o'clock in the forenoon; the wagon had been loaded up with all the apparatus, except the hawser and hauling-lines, which were in the mortar cart, and the cart hitched on behind; and the party had started in this order on their rough journey. The most direct road was along the

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beach, but the way was perfectly strewn with logs and drift-stuff of al kinds thrown up by the surf, and the men and horses were forced to take their load along the inside sand-hills, some of the crew going on ahead to choose the best track and throw aside the obstructions which were even there. The most serious obstacle to progress was the soft and yielding sand, over which rapid passage was impossible, but by dint of the strenuous exertions of man and beast the party arrived abreast of the vessel by 11 o'clock, an hour after starting. The line already stretched from the schooner was at once utilized to haul aboard the whip-line, and the tail-block was made fast to the foremast close to the jaws of the boom—too low, but the unfortunate sailors were so cold and exhausted that they could not climb the rigging to fasten it higher. The hawser was next hauled on board by the life-saving crew, and attached to the mast by the sailors. It could not be made taut, owing to the continued rolling of the vessel, and the first man brought in by the breeches-buoy, the captain, was alternately in and out of the water, as the lines rose and dipped with the swaying of the hull. Although speedily brought to land, he was insensible upon arrival—it was at first thought dead—but he soon revived under the warmth of the beach fire, and brandy from the station medicine-chest was given to restore him. The three men remaining on the wreck were successively brought to land, through and over the surf, arriving, like their captain, drenched and exhausted, and were similarly restored. When sufficiently revived they were all laid in the wagon, covered up with the horse-blankets and conveyed with all possible speed to the station, where they were supplied with dry clothes and food, and made comfortable. They remained under succor until the next day, when they left for their homes.

The body of the unfortunate mate, McDonald, was searched for that day by members of the station crew, but without result. Three weeks later, or about the middle of December, it was found washed ashore, between Ludington and Pentwater. But for his rash and precipitate attempt to reach the shore, this man would undoubtedly have been saved with his fellows.

WRECK OF THE ECLIPSE.

At about the same time that the mate was lost, another sailor was dying in the surf at a wreck a few miles distant, hidden from the view of the Grand Point au Sable crew by a thickly wooded point of land projecting into the lake. The rescue of the sailors from the J. O. Moss was accomplished by noon, and after conveying them to the station the crew returned with the team to look after the apparatus. Two of them went down the beach to search for the body of McDonald, and the remainder had nearly reached the station with the loaded wagon when they were intercepted by two hunters, showing signs of the speed with which they had come, who told them that there was a vessel ashore nine miles behind them, with one man already drowned, and the rest of the crew all in the rigging. The team was instantly put to the right

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about and started for the wreck. One of the men ran to the station to notify the keeper, who immediately set out after the team, leaving the man with the charge to pick up the other two members of the crew then searching for the body of McDonald.

The vessel to which the crew were now hurrying was the schooner Eclipse, of Chicago, laden, like the other, with shingles, and bound to the place above named, from Manistee, Michigan, with a crew of six men. She had left Manistee in the afternoon of the preceding day, under favoring winds, but at 5 o'clock a terrific gale, with a heavy snow-squall, blew out of the west-northwest, and before long the schooner was laboring in a tremendous sea. Her effort was to clear Grand Point au Sable, which lay under her lee, passing which she could have made better weather, and to this end she was forced along under a double-reefed mainsail and whole foresail and jib. This press of sail caused her to careen to leeward, so that her deck-load of shingles began to work, and some of them were swept overboard. She kept along, making more leeway than headway, the strain to which she was subjected opening her seams, so that she constantly took in water, until finally, about 9 o'clock in the evening, she heeled over so that the sea ran into her galley windows and forecastle, and she filled and lay perfectly helpless, on her side. Breakers were seen to leeward through the blinding snow-storm, and the captain, only hoping now that the vessel might be made to go ashore, head on, cut the main peak halyards, which brought down the mainsail, and caused her to pay off slowly under her head sails, assisted by two heavy seas which struck her bow in succession, and knocked her head around. She had nearly got before the sea, when she struck heavily on the outer bar, but gradually worked over it, and brought up on the inner bar, about four hundred feet from shore, where she partly righted. From the moment of striking, the sea made a clean sweep over her, the sailors clinging any way they could to the rigging, until she grounded finally, when they all got into the port ratlines, partly sheltered by the head of the mainsail, which had remained partly up. In this wretched situation they remained until the next day, drenched by the flying seas and nearly frozen. All night the snow continued at intervals, adding to their misery. By the forenoon of the next day the clouds began to break, the wind and sea to moderate, and the snow came and went in squalls. The unfortunate sailors needed some mitigation of their suffering, for they were now completely exhausted and seeing no prospect of relief upon the lonely wooded coast, it was determined among them that one of their number should endeavor to get ashore with a line. Accordingly a sort of raft was improvised by lashing to each corner of the main hatch a bunch of shingles, and a young seaman named Anton Rasmusson started on it for the shore, shoving it along with a pole, and bearing the end of a line. A strong current was running to the southward to offset the force of which the seaman's efforts were made on the lee side, and when about sixty feet from shore

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the raft set so strongly against the pole that it broke in the middle. Being now without the means of propulsion, the poor seaman, taking with him the end of the line, jumped overboard and attempted to swim ashore. His mates saw him struggle for a few minutes in the water, then disappear. He was lost.

After this calamity the unhappy men on board resigned further effort. But at noon they suddenly saw the two hunters on the beach opposite the vessel, and the captain made energetic signs that he wanted the help of the life-saving station below the point, and had the satisfaction of seeing the men start off on the run.

It was about half past 1 when the hunters came upon the remnant of the life-saving crew, then toiling back to the station from the wreck of the J. O. Moss. As already stated, the team bearing the apparatus at once turned upon its tracks to the rescue. The second journey was more arduous and terrible than the first. As before, the way lay within the sand-hills, the beach being one ragged strew of logs and drift-stuff, and the team had to toil up and down the rough dunes, and around their bases when the acclivities were too formidable, tearing and plunging at the same time through undergrowths of brush and over fallen trees and drift-wood for an unintermitted stretch of nine miles. Two of the men acted as pioneers, going ahead to pick out the road and heave away the worst obstacles; the others hauled with the team. To add to their difficulties, one of the horses gave out on the way, and had to be helped along, as well as the wagon. The heroic drudgery ended at length by the party arriving abreast of the wreck, just before dark, or at 7 o'clock in the evening.

The two hunters had preceded them. On their way they had found the body of the drowned sailor on the beach three quarters of a mile below the wreck. After securing it they had continued on and lit a good fire in front of the wreck, which was of great service in enabling the sailors to follow the operations of the life-saving crew in the succeeding darkness. These operations began without delay. The gun was planted, and at the first fire threw the shot-line over the stays between the masts. The whip-line and hawser soon followed and were secured to the mainmast, and within an hour the men on board were brought ashore, one by one, in the breeches-buoy. As soon as each man was landed he was given a drink of brandy from the station medicine chest and taken to the fire for warmth.

As the horses were completely tired out, and the teamster could not undertake to get back over such a road at night, the team was taken into the woods and kept there until morning. The apparatus was piled up safely upon the beach, the lines between the vessel and shore were hauled taut, two members of the life-saving crew were placed on guard, and the remainder, with the rescued sailors, started on their weary tramp for the station, where they arrived, exhausted, drenched, and half-starved, at twenty minutes past midnight. The members of the station

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crew had got thoroughly wet by rushing into the water to help the men out of the breeches-buoy at the wreck of the J. O. Moss, and their clothes had frozen upon them, and afterwards thawed with their exertions. As for the sailors, besides being soaked through and through, they had been thirty hours without food, fifteen of which they had spent in the rigging. The first thing done upon arrival was to prepare them supper and get them thoroughly dry and warm. Two of them remained at the station until the afternoon of the next day; the other three staid for three days.

The body of the unfortunate young sailor was given in charge to the coroner, and taken to Ludington. He was twenty-five years of age, and belonged at Chicago, where he was to have been married on his return. It is, of course, obvious that his death under the circumstances could not have been prevented.

The labors of the life-saving crew upon this date seem particularly worthy of honorable comment. They performed the remarkable service of saving life from two wrecks in succession with the same apparatus; working in the second instance with wet and frozen lines, which it required peculiar skill and judgment to handle effectively. To achieve this end involved a severe trudge to and from the station, of thirty-four miles, trundling, with the aid of half-blown horses, a heavy wagon load behind them, through a rough wilderness of brush and sand, and with the concomitants of a battering gale and blasts of snow. The heavy work of setting up hawsers and hauling lines, and dragging upon them in the drench of icy surf through the periods of the rescue, becomes a mere incident to the savage toils of such a journey.

WRECK OF THE JESSIE MARTIN.

Six days later, on November 30, 1882, another life was lost a mile from the Grand Haven Station, Lake Michigan, incidental to an attempt to get off the stranded schooner Jessie Martin. The vessel belonged at Muskegon, Michigan, and on the night of November 23 she ran ashore in a heavy westerly gale on the south side of the piers at Grand Haven. The damage she sustained by this casualty was not serious, and her owner contracted with Mr. John Dibble, of Muskegon, to get her afloat and have her towed into harbor. She had two holes in her starboard bow—one, above water, which was easily stopped from the outside; the other below water, about eight inches in diameter, which could not be got at by the diver, and which was therefore plugged from the inside with a stuffing of gunny bags, held in place by wooden braces from the deck beams. The vessel was then pumped free, and on the morning of November 30, all preparations being completed, the tug W. Batcheller, made fast to her by a line about seven hundred feet long. The weather was cloudy and freezing cold, a southwest gale was blowing at the rate of thirty miles an hour, and a stormy sea was running in great waves, throwing showers of spray upon the schooner, which accumulated upon

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her hull, spars, and rigging in rough sheaths of ice. On board was Mr. Dibble, the contractor, a one-armed man, heavily dressed against the weather, and wearing long boots, and there were also six men whom he had employed to prepare the vessel for being pulled off, and who were also well swathed up in storm-proof clothing.

About 10 o'clock the tug, then lying abreast of the south pier, steamed away, the tow-line tautened, and the schooner came off the beach with a plunge, and seemed to stand on end between the seas, the water meanwhile bursting upward and madly sheeting all over her. The next instant she plunged downward, covered with foam and spray, then mounted again bow up, as though she were going to leave the sea, the breakers still scattering over her, and continued her progress in this way under the strain of the tow-line, striking the bottom so heavily with each descent as to jar all her timbers, and make the men on board afraid that her masts would be unstepped and thrown out of her. Before long, as she got into deeper water, the pounding ceased, and she began to labor heavily, falling off sluggishly into the vast troughs of the sea, as though water-logged. Probably the violent pounding with which she began her course displaced the gunny-bag packing in the hole in her hull, letting the sea stream in, and it is also likely that with the torrents constantly bursting over her she took in water at her hatches, which were on but not fastened down as they should have been. She continued to move forward, wallowing more and more inertly, until the tug had gone about half a mile beyond the pier end and had swept around in a great circle to enter the piers. The schooner had now, following the same curve, swung around broadside to the sea, and as the tug made for the entrance began to feel the tow-line pulling on her starboard bow to bring her head around. What ensued was as speedy as awful. The wretched vessel, lolling in the trough of the sea, so full of water as to be without buoyancy, pushed by the gale upon her port side and pulled by the tow-line upon the other, instead of coming around under the strain, was simply dragged down and rolled over like a log to starboard, settling upon her bulwarks until her masts lay in the water. As she toppled, the sea burst all over her hull in a furious cascade, and her hatches fell off and floated away. The men on board as she capsized scattered out into her rigging in a wild scramble for their lives. Incumbered by their clothing, their struggles on an overturning ship, in the whirl of flying water, were of necessity terrible. Three reached the main shrouds, two got to the fore cross-trees, and one to the main. The remaining man, Mr. Dibble, had been in the passageway alongside the cabin on the starboard side, and the men in the shrouds could see him, near the surface of the water in that region, vainly trying to climb on to the main boom. As he had but one arm, and was hampered by the abundance of his clothing, his efforts were ineffectual. For a short time he moaned and struggled in the water, but gradually the sounds and motions ceased, and he slowly drowned.

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Meanwhile the prostrate wreck, with the men clinging to her shrouds and cross-trees, was leaping and floundering, still sluggishly advancing in the tow of the tug, which was endeavoring to get her inside the piers, where there was still water.

Keeper John De Young was at the Grand Haven Station, some distance away, watching from the doorway the operations of the tug from the beginning. His crew were in the house, with the exception of one man out on patrol on the north pier. The moment the schooner capsized he sprang back shouting to the crew to launch the boat. The station is on the edge of the pier, and with one rush the men poured out, shoved the boat into the water, and tumbled in with alacrity. The tug Johnson was lying near the station, and at once took them in tow, giving them an opportunity to put on their cork jackets, which in their haste they had neglected to don. After towing them about half way down the piers the tug cast off, and the men seized the oars and pulled out, meeting the W. Batcheller outside of the ends of the piers, still towing the wreck in, her steam whistle meanwhile screeching an alarm. They rowed on and soon reached the capsized schooner. A more exciting spectacle could hardly have been encountered. The vessel lay on her side, jumping about like a living thing in the huge wash of the seas, with her masts submerged. Two drenched and streaming figures, waist-deep in the water, clung to the fore cross-trees, one horn of which bobbed around above the surface. Another similar figure was holding on at the main cross-trees. Three others, limp and inert, were hanging in the main shrouds, dipped and thrashed about continually, and most of the time under water. The body of the contractor was in the sea, beneath the mainsail, and not visible.

The keeper speedily made up his mind that the two men on the fore cross-trees were in the most dangerous position, as a gaff or boom was flailing around them with every leap of the hull. Accordingly he steered the boat's bow up to them, the crew cautiously oaring in. The rigging of the wreck was beneath them, and every time the seas fell they could feel it press and scrape against the boat's bottom. As soon as they got within reach the forward men seized the two sufferers, one by one, and dragged them on board. The boat fell away.

The two men rescued, unmanned by fright and suffering, and fearful that the boat would be capsized in the raging sea, begged the keeper to put them on shore at once, but he told them that he would first save every one on the wreck or perish, and bidding them stow close and keep still, ordered the boat pulled around the schooner's bow, which was under water, as well as the tow-line, and dropping back on the windward side, abreast of the main rigging, took a momentary survey of the situation. In a moment he sang out to the man in the main cross-trees that he was going to take off the three men in the main shrouds first, as they were in the most danger, to which the man assented. A scene of terrible gallantry now followed. The keeper ordered the man

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in the bow to throw the boat's painter to the three men in the shrouds, but as the rope fell upon one man inert and the other two apparently dead, it was drawn back, and the effort to attach the boat to the wreck was renewed with the small grapnel. The grapnel, however, could not be made to hold, and the bold surfmen now tried to attach the boat to the rigging by the boat-hooks. Despite the convulsive tumbling of the water, they succeeded for a minute in keeping alongside, and dragged one of the three men aboard over the bow. The next instant a huge sea swept them on top of the wreck, the boat-hooks scattering from the surfmen's hands and getting lost. Another big sea followed and swept them off, carrying them swiftly astern of the wreck a boat's length. In a second the oars were out and the men again pulled up alongside. The solitary man in the main cross-trees had meanwhile worked his way along the rigging, and was dragged aboard instantly. Then came a third enormous wave, which washed all over the wreck, and buried one of the two men clinging to the shrouds under water. The keeper could just see his head upon the surface, and fearful that he was going to lose him, shouted to his men to jump and save him. Surfman Paul Vandenburg at once sprang into the flood, but caught his foot in the wreck as he went and pitched over to leeward, coming up again quickly, floated by his cork jacket. Surfmen Van Toll and Fisher followed him in the jump for the wreck, clutched the submerged man and hauled him by main strength above water, themselves holding by the rigging. They then helped their comrade, Vandenburg, to regain his place in the boat, which he effected with the loss of one rubber boot, his foot having been tangled up in the sunken shrouds.

The fearful excitement of the scene continued in the effort to get the two half-drowned and perishing men on board the surf-boat. Words can hardly describe the difficulties and perils involved in the task. Both of the men were unconscious, half sustained by being enmeshed in the rigging and half by Surfmen Van Toll and Fisher, who held by the shrouds, waist deep in the water, and buoyed up by their cork jackets, waiting their chance to heave the dead weight in their hands into the surf-boat. This chance depended on the boat getting fairly alongside between the seas—no safe nor easy matter, as she followed a vessel steadily receding under tow toward the harbor and bounding from side to side like a wounded whale with every wash of the furious waves. It was only wary maneuvering that kept her from being at any moment flung into the air by collision with the wreck or stove to flinders. Every other minute the torn waters yawned in troughs, into which she dropped to rise the next instant, quivering and leaping on the summit of the curling ridges. The keeper and two surfmen worked her by the oars, while the two others on board were kept steadily bailing, the strong wind keeping her, nevertheless, half-full with the spray it showered over her. So great was the peril that the rescued men on board, expecting every moment to be capsized, thought they would be

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safer on the wreck, and one man even wanted to get overboard and lash himself to the half-sunk rigging. It was under these conditions that the desperate toil of the rescue was conducted, and it was fully half an hour before the two drenched and inanimate figures were got into the boat. Surfmen Van Toll and Fisher then clambered in out of the water and the surf-boat shoved off and made for the harbor.

Keeper De Young's greatest fear now was that the unconscious men might never revive, and the moment the station was reached they were taken up-stairs and stripped and put to bed, as were all the others. The man who had been longest under water the keeper at once laid down and practiced on him the method of resuscitating the apparently drowned. It was half an hour before he showed any signs of life and about an hour before he came to. "He was just like a chunk of ice, he was so cold," said the keeper in his deposition. As soon as he became conscious brandy was given him, and for three hours he was swathed in hot flannels and vigorously rubbed with them by the keeper and his men. Finally he was left between hot blankets, and in about five hours was himself again. Of the other men two were insensible, but were revived without great effort by the rubbing of the life-saving crew and the administration of cordials. There was not at the time any change of clothing at the station, and the six men were kept in bed until their clothes were dried. As for the life-saving crew, they were drenched, and performed their ministrations in the wettest of wet habiliments.

The keeper did not learn of Mr. Dibble's death until after he had left the wreck, and as soon as he was assured of the revival of the man who had been so nearly drowned, or within an hour after the arrival at the station, he had an old metallic boat launched and rowed out with four men to the wreck, which was then lying in the still water abreast of the station. The body of the unfortunate man was found under water, beneath the mainsail, held by a turn of the peak-halyards around one leg. He had been thus submerged for over two hours, and was of course lifeless. It is plain that under the circumstances of the catastrophe nothing could have been done to save him.

WRECK OF THE ALBERT DAILEY.

The next wreck of the year which involved fatality within life-saving limits was that of the schooner Albert Dailey, of Augusta, Maine, and took place at Smith's Island, Virginia, on January 7, 1883, three miles northeast by east from the Smith's Island Station (Fifth District), G. D. Hitchens, keeper. The schooner was proceeding with a load of coal and a crew of six men from Baltimore, Maryland, to Bridgeport, Connecticut, and at 8 o'clock in the evening, owing to a dense fog and a strong current, ran aground upon the Smith's Island beach, about two hundred and fifty yards from the shore. At half past 1 o'clock in the night there was a transient lifting of the fog, and a passing patrolman saw her appear for a moment in the murk, like a phantom. He imme-

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diately fired a red Coston light, and soon afterward another. The second signal met with a response from the vessel, and he ran for the station and roused the crew. The men turned out with the surf-boat, and after a three-miles' drag up the dark beach, launched at a point judged to be somewhere near abreast of the wreck, and rowed off on what proved a quest of the greatest obscurity. The fog had closed in heavily, deepening the darkness of the night, and the keeper standing at the steering oar on the stern, could see nothing but the toiling figures of the rowers and the little area of unquiet waters around the boat, vaguely lit by the lanterns and imbedded in a close surrounding of gloom. The rowing continued long, and it was not until half past 4 in the morning that this groping search ended, and the vessel loomed upon the sight of the crew.

At the request of the captain, Keeper Hitchens and his men remained on board the schooner until an hour after noon, at which time the sea began to rise, and the entire crew were conveyed ashore in the surf-boat, and made comfortable at the station. The men's personal effects and the ship's papers were also brought to the station.

The next day (January 9), the captain and crew were reconveyed in the surf-boat to the vessel, on board which a bargain was made with Mr. Cobb, of the Cobb Wrecking Company, to get her off, and if possible save the cargo. The keeper then took back the captain to the station, leaving behind Mr. Cobb with three of his wreckers, together with the five men composing the schooner's crew. A blinding snow-storm had now set in, and the keeper seeing that the wind had gone to the northeast, and that there was every prospect of bad weather, earnestly entreated the wrecking party and the sailors to come ashore, but they absolutely refused, stating that the wrecking company's surf-boat was alongside, and would enable them to reach the land at any time should the situation became dangerous. It was finally arranged that until dark, in case they needed assistance, a signal should be set on board, and that afterwards, or at any time if the weather should become thick, they should sound the fog-horn, which could readily be heard on shore. Still apprehensive of danger, Keeper Hitchens, immediately upon his return to land, had his boat hauled up on the beach opposite the vessel, ready for service.

At 4 o'clock in the afternoon the weather was so thick that the patrols were set. The men were instructed to use the utmost vigilance, and to be particularly on the alert for a signal from the vessel. At 8 o'clock in the evening, a patrolman coming in from the beach reported that she could no longer be seen. Nothing, in fact, was now visible, the driving snow having wrought a general obliteration. A heavy gale was streaming from the northeast, and the surf ran high and broke over the sands in torrents.

At half past 11 another patrolman came into the station with the startling news that the schooner's hatches and part of her boat had

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come on shore, which seemed to indicate that she had sunk or was breaking up. The keeper instantly roused the crew, and he and his men, assisted by the captain of the schooner and by Lieutenant Failing, the inspector of the district, who was at the station, loaded up the mortar-cart with the wreck-gun and apparatus, and set out for the neighborhood of the disaster. The hauling was dreadful. As already said, the distance was three miles, and the whole way the snow and sleet drove directly in the men's faces, lashed also by the icy blasts, while their heavy burden had to be dragged through twelve inches of snow and slush, over a beach of mushy sand, thickly knobbed with stumps and wattled with tree-roots. It was 2 o'clock in the morning before the terrible labor was achieved and the exhausted group paused to take breath abreast of the sunken schooner. The dim outlines of her masts could be vanishingly seen at intervals in the darkness, as the gusts rent the whirling snow, but her hull was invisible, proving that it was buried in the furious spread of overrunning surf which crashed without cessation at the feet of the party of rescuers. It was a matter of inference that the people on board had sought refuge in the rigging, which was afterwards known to be the case, they having been driven aloft by a rising of the sea so sudden and so inundating as to leave them no time to make the signal agreed upon with the keeper. With a view of discovering, if possible, the exact position of the vessel, as well as of encouraging the unfortunate sailors and wreckers, the keeper burned six Coston signals in succession, but their illumination failed to reveal the wreck, now muffled from sight by the snow-storm, and at 3 o'clock it was determined to make an effort to reach her with the surf-boat, which, as previously stated, had been left on the beach, in anticipation of its use being required. The launch was accordingly made, but such was the stress of sea and current that it took nearly an hour, consumed in several attempts, to even get away from the beach, clear of the breakers. Once beyond the outer line of broken water, some distance was accomplished, but the boat inevitably fell to leeward, there being no light upon the vessel to guide her, nor any sight nor sound in that direction, and the keeper, realizing how impossible it would be, in case the wreck was reached, to get the men down from the rigging in that swollen and tumultuous sea, and fearful that at any moment the boat might be smashed to pieces in the darkness by floating timbers, thus cutting off all hope of a rescue, determined that he must wait for daylight, and accordingly put back to the shore.

The day broke drearily upon a dismal and terrible spectacle. In the obscure light, two masts with their spars and cordage spired from an immense heaped sea, which ran and roared in universal foam and spray. Up aloft, lashed to the fore rigging, where they had been since the day before, were the sufferers of the wreck, whitened and shapeless with the frozen accumulations of the tempest. They lay back aslant upon the ratlines in attitudes and postures indicative of numbness and exhaus-

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tion. The spectators saw all this through the stormy veiling of the snow.

It was plain that a boat could not be launched upon that field of swollen and tumbling water, and no time was lost in training the Lyle gun upon the wreck for an effort to rescue the men by the breeches-buoy. The first shot threw the line across the jib-boom, but the men did not move from the fore-rigging to secure it, and after a short time the keeper hauled it in and fired again. This time the line fell in nearly the same place, but as no effort was made by the men on the wreck to get hold of it, it was evident that they were too weak from exposure to risk a descent toward the hull, over which the torrents were bursting every moment and might reach and sweep them away. The keeper now made a third effort to fire a line nearer to the rigging where the men were, but a sudden gust of wind violently yawed it aside, and it failed to fall on the vessel. The keeper hauled it in and again fired it, but this time it broke in its flight. It appeared subsequently that had it dropped into the hands of the shipwrecked men they were then too benumbed to haul the whip-line on board by its agency.

The keeper began to realize their helplessness, and felt that the desperate chances of a rescue were now narrowed down to a hard effort with the boat when the tide should fall. It was then about 8 o'clock, and the condition of the surf made a launch impossible, but the wind had begun to backen, as old sailors say, into the westward, and the sea would abate somewhat on the ebb. The only course open was to wait. Finally, at about half-past 11 in the forenoon, although the sea was running terribly, the life-saving crew could bear no longer the dreadful sight, seen through the thick-falling snow, of that cluster of human beings in the rigging near the cross-trees, with the surf bounding and crashing half-mast high beneath them, and the keeper gave the word to launch. He and his men had been drenched to the skin by the water breaking over them in their prolonged struggle to reach the wreck by the boat during the night, and their clothes, frozen upon them for many hours, literally clashed as they sprang to the oars. In a moment the boat was afloat and in conflict with the breakers. The men gave themselves to the contest with the sternest energy, but the current ran like a mill-race through a frightful sea, and despite their best endeavors they were swept to leeward of the wreck and had to put back to shore. After a few moments rest another start was made, and this time the crew got so near as to lay hold of a line which was attached to the wreck, but the sea tore it from the hands that held it, and the boat had to put back again. Immediately upon landing the keeper gave the word for another attempt, and once more the indomitable crew headed the boat through the breakers. This time they succeeded in reaching the wreck, and held alongside until they got down four of the perishing men into the boat. With these they put back to the beach.

Two of the men were entirely unconscious, and as it was seen that

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no time must be lost in the endeavor to restore them, they were at once borne away to the station, Lieutenant Failing, a young man named Johnson, belonging to the revenue sloop, and Messrs. Goffigan and Coston, keeper and assistant keeper of the Smith's Island Light-House, being on hand to render this assistance. The life-saving crew meanwhile, without pausing, addressed themselves to the task of rescuing the four men still on the wreck. They were much exhausted, having been on the beach in their wet and frozen clothes without food or fire since midnight, and being further spent by several periods of severe physical toil, but they were also greatly encouraged by the success of their last endeavor, and rushed to the launch with renewed energies. It cost them a hard struggle to reach the vessel, but finally they got alongside and took off the remaining four men, with whom they safely returned to the shore.

The relief and exultation, which are the natural concomitants of a rescue, were alloyed in this case by a fatal incident. One of the wreckers, Richard Gordon, died from his long exposure about the time the boat landed. There was also another loss, Edward Hunter, the vessel's steward, having been washed overboard during the night. Of the seven men saved, two were brought to the station nearly dead, and it took five hours' constant labor to restore them to consciousness. After coming to, hot coffee was given them, and the ministrations of the crew were continued until their complete recovery was effected. It is needless to observe that all of the rescued men had suffered severely, and required much attention. Five of them remained at the station under succor for five days and one for a day.

The foregoing statement can give but a faint account of the difficulty, hardship, and extreme peril encountered by the life-saving crew in the noble work of the rescue. The lives of seven men were saved, against all probability, by their efforts. The loss of the other two can only be referred to the sad and strange fatuity which made them stay upon the wreck in the face of entreaty and warning, when sea and sky alike threatened them with destruction.

WRECK OF THE SALLIE W. KAY.

Three days later, on January 10, 1883, another wreck, involving loss of life, took place on the coast of the Fifth District, in the height of the same snow-storm—a storm which for violence and long continuance had no parallel in the annals of the year in that region. The vessel concerned was the three-masted two-decked schooner Sallie W. Kay, of Somers Point, New Jersey, bound from Baltimore to Boston, with a cargo of coal, and having a crew of seven men, the captain included. At a quarter past 6, in the morning of the date named, she was sailing in the heart of the chaos of snow, the lookout on deck being unable to see hardly more than her length ahead, when she suddenly brought up hard and fast aground. The moment she struck, the watch below

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rushed up on deck, and all hands made haste to lower the yawl, hanging at the stern, and got it under the bow, ready for use in case it became necessary to leave the vessel; but before anything could be done the sea broke over the stern in a torrent, wrenched the boat from the tackles, and swept it out of sight. The next moment the crew had to fly aloft into the rigging. Sea after sea came charging over the stern, scattering, rending, and staving in all directions. Before long the top of the cabin was torn off, the hatches were burst open, and the water poured in and filled the schooner.

The peril on deck was so immediate that the sailors had sprang up into the rigging without having time to lower the sails, which remained set through the entire period of disaster. Another peril at once succeeded. The gradual filling of the vessel, added to the burden of her cargo, soon weighted her down so that she lay still, but for some time before this was accomplished she lifted and fell, pounding bottom so violently with her hull that with every jar the crew feared her masts would unstep and be thrown over the side. Threatened thus with danger of their lives, they descended from the rigging, between seas, and clambered beyond the bowsprit out on to the jib-boom. Here they clustered, straddling the spar in a row, and got some shelter from the gale and snow by loosing the flying-jib and wrapping themselves as a group in its folds.

The schooner had struck upon a bar about two hundred and fifty yards from shore, some five and a half miles north of the Ocean City Station (W. T. West, keeper), but save that they knew they were on the coast of Maryland, on which, as they were aware, there were life-saving stations, the sailors had no idea as to their locality or surroundings. It was fully an hour before the universal cloud of snow which whirled around them was rent asunder for a moment by a gust, and gave them a brief glimpse of the beach and a solitary dwelling to the northwest at some distance behind it. This transitory view, in addition to their knowledge of the existence of life-saving stations on the coast, immediately made them confident that help would soon reach them.

The house they saw beyond the beach was the dwelling of a fisherman named Howard, and a son of his, a boy, after a couple of hours had gone by, happened to descry the wreck in a lull of the storm and at once called his father. The high storm-tide was then bursting upon the beach, in some places running clear over it into the bay beyond, and the surf was cutting deep gullies across the sand, through which it jetted with torrent force, so that to notify the men at the Ocean City Station, six miles distant, as the fisherman at once desired to do, was for the present impracticable, travel being extremely perilous if not impossible. Under the circumstances Howard decided to wait until the tide abated. He could see the people on the wreck, and considered them in no immediate danger. At a little after 9 o'clock the tide began to fall, relieving the beach of the flood which had surcharged it, and the boy was

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dispatched for the station. He had got so far upon his toilsome way as to have come abreast of the vessel in his passage when a tragic incident occurred.

The sailors had maintained their weary and desolate watch upon the jib-boom for about three hours, with no sign as yet of coming relief, when one of them, a German, named Anton, his patience becoming exhausted, declared that he was going to swim ashore and fetch assistance. He was a young man, very muscular, and a powerful swimmer, and it appears had accomplished a similar feat before. The captain endeavored to dissuade him, knowing the danger of such an attempt and realizing the terrible condition of the sea he proposed to enter, but the young man was determined, and stripping off his boots and a part of his clothing, slid down the martingale, dropped into the water, and struck out boldly for the shore. At this time the captain, up on the jib-boom, saw the boy passing the wreck on his way to alarm the station. The courageous swimmer was meanwhile struggling powerfully with the sea. For a long time his comrades anxiously watched him, and saw him again and again nearly effect a landing, but borne back at each approach by the powerful undertow. At last he was swept away southward by the swift current, and gradually receded from view, battling with the swirling waters to the last.

After this gloomy catastrophe the dejected sailors were doubly resigned to wait until help should arrive. But for the snow, although they were more than a mile beyond the limits of the station patrol, they might have been discovered and rescued at an early hour. They were, however, invisible even at the extremity of the beat, which, moreover, the condition of the beach made it impossible to attain. The patrolman who had started out from the station on his watch at 4 o'clock in the morning, after an exhausting trudge of a couple of hours, was unable to make more than a mile and a half of his four miles' allotment, and was forced by the ever-increasing peril of his march to retreat to the station, where he did not arrive until 8 o'clock. His way had been through a storm of blinding snow and spray, which rendered vision impossible beyond a few yards. The beach, as before stated, was trenched with gullies, through which, with every rush of the sea, the water drove as though forced from an engine. In low places the sands were flooded, and the patrolman waded hip-deep. Where the water did not reach was the snow, and this lay twenty inches deep on a level and up to the waist or over the head in the drifts. Under these conditions patrolling was judged impracticable, as even with the greatest toil and danger the men could accomplish only a short distance, and then could see nothing, and the best that could be done was to keep a vigilant watch from the lookout of the station.

As the forenoon wore on there was a temporary lull in the snowstorm and the horizons opened, so that by 11 o'clock one of the station crew caught sight of the distant schooner. The station was at once

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roused to activity, and Keeper West ordered out the apparatus. Realizing, however, the impossibility of hauling it by hand over such a beach, he dispatched a man for a pair of oxen, no horses being available. Owing to distance and the encumbered road there was some delay in bringing up the cattle, so that the start for the wreck with the load of apparatus could not be made until noon.

The journey, as may readily be imagined, was terrible. The men buckled to with the oxen, tugging the loaded mortar-cart, with its thousand pounds' weight of apparatus, over the snow-clogged, torn, and flooded beach, and against the onset of the gale. Midway between the station and the wreck they met the little messenger toiling toward them, and their anxiety to get to the scene of disaster rose to fever heat when they learned that the sailors had been driven to the jib-boom for safety. Every muscle and sinew was now strained to renewed exertion, and at length, at a quarter past 2, the party arrived in front of the vessel.

The men were dreadfully exhausted and paused a few moments to recover breath and strength, but the spectacle of the wretched sailors perched upon the jib-boom of the wreck, with the waters coiling and leaping below them, made their pause of short continuance, and it was but a little space before the mortar-cart was unloaded and the gun trained. At the first shot the line flew over the foretopmast stay, and the bight slipped down within reach of the sailors, who at once began to haul in. They were so numb and cramped with their long confinement upon the spar, beaten by the cold gale and snow, with only the shelter of a drenched and frozen sail, that it was with some difficulty they could gather in the whip-line, which the current bellied far to southward as it was paid out from the beach. But before long the lines were set up and the breeches-buoy rigged on, and in half an hour from the time of the arrival of the station crew the six men were safely landed. Ten residents of Ocean City, including the local signal service operator, having heard the rumor of the disaster, had followed the life-saving crew to the scene of action and rendered good service in hauling the sailors ashore.

The rescued men were in an almost dying condition, and no time was lost in setting out with them on the toilsome way to the station. The keeper and citizens took them in charge, while the crew loaded up the apparatus in the mortar-cart and followed after. It was with difficulty that the poor seamen could walk, they were so cold and exhausted. Fortunately, the signal service operator, Mr. James Crawford, had come to the scene in his wagon, in which three men at a time were conveyed alternately, while those who walked in their turn were supported and helped forward by the keeper and citizens. The plan adopted was for two of the latter to get a sailor between them, with his arms around their necks, and thus half-carry, half-urge him onward. Despite this aid, the sailors, long before the station was reached, wanted to sit down,

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they were so far gone, and, left to themselves, would undoubtedly have given up and died upon the beach. Under the circumstances, the march with these cripples through the slush of sand and the snow-drifts, was painful and slow, but it was indomitably maintained and ended at nearly 6 o'clock in the evening by arrival at the shelter of the station. Once there, the worst was over. The frozen garments of the sailors were stripped from them and exchanged for such dry clothes as the slender stores of the surfmen afforded, and by the aid of plentiful hot coffee and food, the poor men were before long restored and put to bed. They were kept under succor at the station for two days.

The first man landed from the wreck told the life-saving crew of the loss of the sailor Anton. Two days afterward his body was found tossing in the surf upon the beach sixteen miles below the scene of disaster. It is evident that his loss must be charged to his rash, though gallant, effort to swim ashore, and that his life would have been saved had he waited like his comrades.

WRECK OF THE JENNY LIND.

The eighth wreck of the year within the scope of life-saving operations which was marked by fatality, occurred on May 21, 1883, the vessel being the schooner Jenny Lind, of Chicago, Illinois, bound to that place from Muskegon, Michigan, with a cargo of slabs, and having a crew of five men. She was thirty-five years old and was considered unseaworthy, an opinion which appears justified by the circumstances of her disaster on the date named. On the night of May 20, during a heavy north-northeast gale, she had anchored close inshore, over two miles south of the entrance to Chicago Harbor. At daybreak, or a little after 4 o'clock in the morning of May 21, the keeper of the Chicago Station, Telesford Saint Peter, saw her through his marine glass from the station lookout, she being one of four schooners anchored at varying distances southward of the harbor. A little before 5 o'clock Keeper Saint Peter saw her stand out into the lake under a close-reefed foresail and jib and the peak of her mainsail, the intention being evident to work her off shore and run her for South Chicago Harbor, ten miles distant. The keeper was called away from the lookout for about ten minutes, and upon his return saw that she was making very slow progress, being then only half a mile from shore, and realized by her heavy lounging motions that she was water-logged. The gale at this time was driving heavily under a cloudy sky, and there was a tremendous sea running, the force of which was hardly impaired by the breakwater and piers to windward. Presently, while the keeper watched the lumbering, lurching vessel, he saw her heave up heavily on a wave and roll down upon her side, broadside to the sea, which at once mounted, white with foam, and burst all over her. In a little while she partially righted, with her foremast gone, the other sticking out aslant toward the shore, and the water tumbling across her hull, sometimes leaping

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halfway to the main cross-trees. She lay motionless in her half-prostrate position, evidently aground. Nothing could be seen of her men.

The keeper at once left the lookout and called the crew. Although certain that those on board the schooner must have been lost as soon as she upset, with such a sea pouring over them, he decided to proceed overland to a point abreast of the capsized vessel on the chance that some of them might be washed toward the shore, and accordingly dispatched Surfmen Nequette and Courchain for two teams. Only one, however, could by any possibility be procured at that early hour, and hitching this to the surf-boat carriage, with the mortar-cart loaded with the apparatus tailed on behind, the start was made for the wreck, which lay off the foot of Twenty-seventh street. The double load of course made it hard for the team, and it was with great toil on the part of men and horses that the arrival was accomplished by seven o'clock, nearly two hours after the vessel had capsized.

The convictions of the keeper as to the almost immediate loss of those on board when the schooner went over were found to be sadly justified. Very soon after her overthrow she began to break up under the shattering force of the seas flung upon her. The station crew found upon arrival pieces of her hull and spars, and a great strew of her cargo of slabs thrown upon the beach. One of her sailors had, by the merest accident, been washed in and jammed between two piles near the shore below Twenty-seventh street, whence he had been dragged in an exhausted condition by a policeman and conveyed to a hospital. The remaining four seamen had all perished with the breaking up of the old hull, and from the first moment of the catastrophe were beyond assistance.

WRECK OF SCHOONER PETREL'S YAWL.

On the same date, May 21, 1883, three lives were lost by marine disaster in Lake Michigan, a short distance from the Milwaukee Station (Milwaukee, Wisconsin, Eleventh District.) The circumstances were as follows:

The schooner Petrel, of Milwaukee, was on her way to that place from Charlevoix, Michigan, with a cargo of maple cord-wood, her crew consisting of a captain, mate, and four seamen, when, on the evening of May 20, the wind, which had been increasing through the day, swelled to a strong gale, accompanied by a raging sea, and the vessel began to leak. All night the captain kept her before the wind, under the peak of the fore-sail and the fore stay-sail, he steering and the crew working at the pumps. By daylight Milwaukee Bay was reached, but the captain did not dare to attempt an entrance to the harbor, as the schooner, being partly water-logged, did not steer well, and a wild sea was breaking over the piers, while a large fleet of vessels, through which he would have had to thread his way, lay at anchor outside. He accordingly stood in toward the land northeast of the piers, about a mile and a half from which he dropped anchor. It appears from his statements that the

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mate about this time entered upon a singular course of conduct. This man had been shipwrecked on a former voyage and seems to have become completely demoralized through a present fear of losing his life, behaving so that the contagion of his apprehension extended to the crew. He objected at once to the captain bringing the vessel to anchor, declaring that her bow would be knocked out of her by the sea. Although the leak was steadily gaining on them the sailors, apparently unmanned by his terror, could not be kept at the pumps more than a few minutes at a time, going to the work under repeated orders and abandoning it each time after brief effort. Finally, the mate got into the ship's yawl, which was in tow astern, and was soon followed by the crew, leaving the captain on board alone. The captain had had the yawl lowered and made fast by a long line astern, intending to use it as a means of escape in case the vessel should sink. Expecting before long the assistance of a tug to tow the schooner into harbor he had also got his chain duly buoyed and ready for slipping. At about 6 o'clock in the morning he saw a tug coming toward him from Milwaukee, and called to the crew, telling them that the owner's boat was coming to tow the schooner in and that they had better come on board. The men made no response. Shortly after when the tug got nearer the captain repeated his summons, but got no answer. He then motioned to the tug, which had now reached him, to come around on the starboard side, where he had a line ready for her. By some mistake the tug came around on the other side and did not get the line. The captain then slipped his chain and the schooner drifted to leeward, came into collision with a vessel anchored astern, and carried away her jib-boom. She soon swung clear, however, and meanwhile the tug got hold of the line, towed her in safely, and the captain steering ran her on a bank inside the harbor. She was subsequently repaired and made as good as new.

The moment the captain had slipped his moorings the men in the yawl cut the line and pulled for the harbor. As they drew near they made a vigorous effort to put in at the entrance, but were swept away about eighty yards south of the south pier. Surfman Ahlswede, one of the station-men, had been watching them from the time they left the vessel, and seeing them fail to enter the harbor, ran down upon the pier with the object of casting a line to them with his heaving stick, but they were between two and three hundred yards distant and quite out of range. In a moment the surfman saw a monstrous breaker swell up from the sea and rush down upon them. They made an effort to meet it head on, but in a second it struck the boat and threw it end over end. The surfman at a glance saw four men out of the five struggling in the water and bounded away for the station. When he had run about a hundred feet he paused for an instant and saw but two, both clinging to the upset boat. The sight made him run on with all his speed. It denoted that three men out of the five had perished.

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One of them had sunk immediately and never came to the surface; two had emerged to struggle for a moment, and then go down forever; the other two reached and clung to the capsized boat, tossed and flung about by the breakers and in momentary expectation of being torn from their hold and drowned.

Five of the life-saving crew were at the station and saw the boat capsize as soon as the surfman on the pier. They at once sprang for the surf-boat, and dragged it across the beach, aided by several bystanders. At the same time Keeper Evenson, coming from his house, about twelve hundred yards from the station, saw the accident, and pulling off and throwing his overcoat to a neighbor, ran with all his might toward his crew, arriving just as they got to the water's edge. In a moment the boat was heading through the stormy surf, with the spray flying over her bows. The pull out was hard but brief, lasting not more than fifteen minutes. The boat with the men clinging to it was drifting shoreward all the time, being about half way the length of the pier from the beach and rapidly approaching the worst of the breakers. About six feet of the fourth plank from the keel on the starboard side aft, had been knocked out of her by the sea, and one of the men had his arm through the frame, while he gripped the planking with one hand. The other man lay across the keel, holding by the edge of the same break. Both of them showed livid through the incessant wash of the sea, and were evidently exhausted with cold and effort to the verge of letting go. A few minutes later, entering the more violent breakers, they would have been wrenched from their hold and destroyed. The surf-boat came swooping by them with powerful oar-strokes, and as she passed, the keeper stooped, clutched one man, and hauled him from his hold into the boat. The surf-boat then turned and bore down on the other side, the men forward seizing the other man, and dragging him in over the bows. The boat was then squared for the shore, reaching it without accident a quarter of a mile south of the station.

On the way the keeper learned the fate of the three men lost. The men rescued were not insensible, although chilled through and exhausted. One was able to walk to the station. The other was carried by the surfmen, crying out all the way that he was going to die. Immediately upon arrival they were both stripped of their drenched clothing, rubbed until warmth and animation were restored, given hot brandy and water, and put to bed, where they remained until evening, when one of them went to his boarding-house in the city, and the other, an old man sixty-seven years of age, betook himself to the marine hospital.

The mate was one of the three men lost. His panic terror, communicated to the others, was obviously the cause of the disaster. He was named Charles J. Olson. The men who perished with him were Jacob Hanson, a Norwegian, who had been in this country a year, and Martin A. Matiason, also a Norwegian, just arrived in the United States.

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Had they remained on the vessel they would have reached land in safety. The two men saved, Olla Owenson and Johannes Abenson, owed their lives to the prompt intervention of the life-saving crew, as they could not have kept their grip upon the broken yawl when it once got into the breakers near the shore.

WRECK OF THE FANNIE A. BAILEY.

The tenth and last fatal shipwreck of the year within the scope of the service is marked by another instance of loss of life resulting from irrational panic. The vessel was the schooner Fannie A. Bailey, of Portland, Maine. She sailed from Windsor, Nova Scotia, for Philadelphia, Pennsylvania, with a cargo of plaster the latter part of May last, having on board a crew of seven men, including the captain, together with the captain's wife and child, making nine persons in all. The child was a little boy, three years old. On the night of June 3, 1883, the schooner had arrived in the neighborhood of the Delaware, tossing about in fresh southerly gales, and wrapped in a fog so dense that her captain was in some perplexity as to his precise whereabouts. She was put under easy sail, and lay off and on through the night, waiting for daylight and clear weather. At half past 5 o'clock in the morning of June 4 the monotonous crashing of the heavy sea, which had continued through the night, was suddenly and fearfully varied by a shock which made the vessel tremble through all her hull and seemed as if it might have jerked the masts out of her. Every one on board was at once thrown into consternation and dismay. It was evident that the vessel was aground. Shock after shock succeeded, the hull with every convulsive lift and fall striking bottom so violently that presently a piece of the keel broke off and floated up alongside. All the time a mad rain of spray was showering incessantly upon the decks. To add to the novel confusion and horror of the situation, the fog prevented anything being seen beyond the immediate surrounding of wrathful breakers, and the effect to those on board was the same as if the vessel was pounding to pieces on some reef far out to sea. In point of fact the place of stranding was on the Hereford Shoals, about two miles from shore, and the same distance east of the Hereford Inlet Station (Fourth District) on the coast of New Jersey.

The captain in this case, as in that of the Petrel, did not lose his head in the terrors of the disaster, and in this case also it was the mate that became a slave to fright, and appears to have infected all the rest of the crew save one. The talk instantly flew around that the vessel was going to pieces, and the sailors, led by the mate, proceeded to hoist out the yawl, which was stowed on deck over the main hatch. The captain did his best to arrest this action, but in vain. He entreated the men not to abandon the vessel until compelled to; represented that assistance would come from the coast when the lifting of the fog allowed the vessel to be discovered; protested and implored; but the floating up

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of the fragment of keel appears to have thoroughly possessed the sailors with the idea that the schooner was breaking up, and taking advantage of an interim in the captain's talk, when he was below for a few minutes attending to his wife and child, they dropped the yawl astern, piled into it their baggage and got into it themselves, the mate being the first of all. Only a single man refused to desert the captain—a sailor named Thomas Shields, of Newport, Rhode Island, the only American before the mast, all the others being Swedes or Germans. Upon coming up from below, the captain, finding the situation of affairs, renewed his protests, until finally the mate, ashamed, after all, to leave him on the vessel, clambered up on deck to induce him to enter the boat with the crew. The captain, seeing that the desertion of the vessel was a foregone conclusion, and afraid to be left without any means of possible escape for himself, his family, and the brave sailor who stood by him, at length reluctantly yielded to the mate's persistence and allowed his wife and child to be lowered over the stern into the boat, he himself preparing to follow. Just after this was done the fog thinned away, showing, like a dark smear in the distance, the edge of the beach, and also showing a discouraging line of breakers, which told the captain plainly that a landing could never be effected in such a boat as the yawl. A few moments later the fog dispersed still further, and the captain distinctly saw the life-saving station against its back-ground of dense woods. He immediately called to the men to come on board, but they refused. He then directed the mate to have the boat come up slowly, that he might take back his wife and child, and the mate obeyed, ordered the boat up, and slid down the painter into her that he might help to lift up the woman and the baby to the captain. Suddenly, dreadful to relate, the boat rolled over in the swash astern, and in an instant all her company were struggling for their lives in the water.

There was on board a small nine-foot boat, utterly unfit for service in such a sea. It was but the work of a moment for the captain to strip to his underclothing, and, with the aid of the sailor, Shields, to get this boat over the side. It fortunately struck the water right side up, and the captain leaping into it alone, for it was too small to hold another, rowed frantically after the mother and her baby, beating off the men who tried to clutch and climb into the boat, and would have upset it instantly. He first reached the little boy, who was floating by upon the water, nearly insensible, and frothing at the mouth and nose, seized him and placed him in the bottom of the skiff. He then reached his wife, who was also almost unconscious, and by a great effort got her also. Then he put back for the ship, throwing on the way a line to a man who swam toward him, and bidding him tow astern, as the boat would not hold another. The line soon parted or got adrift, and the poor fellow was swept out to sea. How the captain contrived to cope with the stormy flood so long, in a craft so small and frail, is a mystery. It was by great effort, and when his strength was nearly exhausted,

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that he managed to bring the boat so near the vessel that a deep-sea line could be thrown him, by aid of which he was worked up astern. The mate and a seaman who had succeeded in getting hold of the rudder chains, and somehow reaching the deck, assisted Shields in the operation. The latter now threw a line to the captain, who at once bent it around the body of his wife. As if this was the signal for catastrophe, a monstrous wave arose rolling from the sea, and in a second the boat was engulfed and whirled away bottom up with the child. Neither boat nor babe was ever seen afterward. The poor mother left dangling in the air at the extremity of the rope, was quickly hauled up on deck. The captain was swept astern for a considerable distance, but recovered himself, and being a powerful swimmer, and not encumbered with clothing, struck out and got sufficiently near the vessel to catch a line thrown him, by means of which he was soon aboard. His wife was lying on the deck perfectly unconscious, and he at once set himself to the work of restoring her. It was an hour before she was brought to, although several hours before she could speak, and the men carried her below and put her in one of the berths in the cabin.

The vessel had struck, as already stated, at about half past 5 o'clock. Within an hour afterward three of her crew had perished, together with the little child. It was the time of year (June) when the stations on the Atlantic coast are closed for the season, as required by law. Had the Hereford Inlet Station, however, been open, the patrol could not possibly have descried the vessel through the two miles of dense fog between her and the shore. The keeper of the station, Christopher Ludlam, who lived across the bay which separates the beach from the main-land, rose early that morning, and finding the weather foggy, walked down to the boat landing at Mayville on the bay side, so as to command a view of the beach when the atmosphere should clear. At about 9 o'clock the fog lifted, and he saw the vessel beyond the distant beach, and knew, if only by the way she was canted over, that she was aground. He at once put off in a gunning skiff across the bay to the station, where he expected to find his men, there being an arrangement that they should assemble there whenever they should discern a wreck. On the way across, he came upon Keeper Holmes, of the Tatham's Station, next above his own, who had been out in a boat fishing with his brother, Charles, then on a visit from Indiana, and had caught sight of the wreck. By half past 11 these three men reached the beach, where they met Mr. Hewett, the light-keeper, and Dr. Tompkins, an ex-surgeon of the Army, residing in that neighborhood. Dr. Tompkins had a team, and quickly harnessed his horse to the surf-boat carriage to draw it to the water's edge. Only four out of the five men present were oarsmen, but although several members of the station force were on their way, it was desirable to set out at once, even with a short crew, before the flood-tide came and made the sea worse. Help in the pinch was afforded by a local car-

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penter, Ellsworth Hewett, gallantly volunteering to take an oar, and the boat put off with these five men. By keeping the channel and sheering off as much as possible from the broken water, and by dint of the sturdiest rowing, the surf-boat crew achieved the two miles out to the wreck in half an hour.

They found the schooner heavily slanted over on her port side, with her head to the ocean, in the midst of a wild whirl of raging water. She was broken in two, and at times the sea flew over her in a flood from stem to stern. The people on board were clinging to her weather quarter, that being the highest part of her out of water. The yawl was riding by its painter alongside, having been righted and bailed out by those on board. It was fortunate that the surf-boat arrived just then, as these preparations showed that the intention of the ship's company was to make another effort to land in case aid did not soon reach them from shore—an effort which would probably have resulted fatally. It was with difficulty that the keeper kept the surf-boat from being swept under the counter and damaged by the flume of water which slipped along the sides of the hull like a mill-race, but holding alongside, he sang out to those on board to get down into the boat quick, as there was no tarrying there. The captain replied that they were all ready, but that his wife was in the cabin; whereat Keeper Ludlam sprang on board, tumbled below, and wading waist deep in water across the inclined floor, found the poor woman, perfectly unconscious, in a berth on the upper side, and returned to the deck with her in his arms. No time was lost in getting her into the surf-boat, followed by the others, and in casting off, and leaving the dangerous proximity of the wreck. The rescued people were in a deplorable condition. They had nothing left except the soaked clothing they sat in, all the baggage, even to the ship's bedding, having been placed in the yawl at the time the sailors attempted to leave, and lost when she capsized. The captain's wife was very thinly clad, and the first thing done after getting her aboard, was to wrap her up in some of the surf-boat crew's coats, which they stripped off for the purpose. The return was effected safely and speedily, and Keeper Ludlam, knowing that the poor woman was in a very critical condition, had her carried, immediately upon landing, to Dr. Tompkins's house, which was within two hundred yards of the station. Restoratives, from the station medicine chest, were furnished for the captain's wife, and complete suits of clothing both for her and her husband, were drawn from the supply on hand provided by the Women's National Relief Association. By the next day all the shipwrecked people were sufficiently recovered to be taken over to the mainland for passage to their homes.

The landing was effected by 1 o'clock, and the rescuing party were received upon the beach, and aided by several of the crews of the Hereford Inlet and Tatham's Stations. It was fortunate that the venture was made without waiting for a fuller boat's crew, for the sea came

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in so terribly with the flood tide that the wreck was unapproachable, and a party of wreckers, in a large wrecking boat, attempting that afternoon to get to her, were beaten back in utter discomfiture. Later her sails and rigging were saved in a damaged condition, but all the rest were torn to fragments by the sea, and not a vestige of the vessel remained.

The bodies of the three sailors lost were cast ashore some weeks afterward, but the little child was never seen again. It is evident from the recital of the facts that all these lives would have been saved but for the ungovernable fright which made the sailors desert the vessel for the yawl.

SERVICES OF CREWS AT THE WESTERN FLOODS IN 1883.

The repetition of the Western river floods during the year, on a scale even more formidable than that of the year preceding, gave occasion for the services of life-saving crews at certain points—services which were broadly extra-official, and so marked in their extent and character as to merit special notice in the annual record.

The swelling of the streams dates from almost the beginning of February. As early as the 3d of that month there was a sudden rise in the Grand River, near the mouth of which, or at the entrance of Fairport Harbor, Lake Erie, the Fairport Station is situated. The action of heavy rains and consequent melting of snow, caused the ice in the river to break up and run down to the harbor mouth, where it was met by the solid ice in the lake, and formed a gorge, which soon after brought about a tremendous overflow. The cottages of three members of the Fairport crew were deeply flooded, and the men, with their families, had to seek safety and shelter at the station, which stood at a somewhat higher elevation near by, and in which the keeper (George F. Babcock) with his wife and three children were living at the time. The house which had thus become the refuge of eleven persons was in hardly better plight than the dwellings the refugees had left. Its lower floors were inundated, the harbor piers and beach being entirely submerged, and its occupants were kept busy staving off with boat-hooks the stream of ice-cakes, heavy timbers, logs, and drift-wood which were incessantly swept toward it by the strong river current, and threatened it with destruction. Fortunately for those within, the danger was of comparatively short duration, the flood abating by the giving way of the gorge on the third day after it set in.

About the same time the Cuyahoga River, running through Cleveland, Ohio, suffered a similar rise. At 5 o'clock in the morning of February 4th a policeman came to the Cleveland Station, where the keeper (C. C. Goodwin) and his family were residing, the station being closed for the season, and gave notice that the water was seven or eight feet deep in the region near the river side, known as Stone's Levee, two miles above the station, and that a number of poor families were al-

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ready insulated in their houses by the flood, and could not get away. The keeper at once called his son, hunted up two river boatmen to assist, and loaded a clinker-boat upon a wagon which the policeman had thoughtfully brought with him for the purpose of taking the boat across the city. By 6 o'clock the party arrived at the scene of disaster. Generally the river at Cleveland has high banks or bluffs, but at this particular locality the banks are even lower than the river's level, and the water had therefore effected an inundation. The region is one of lumber-yards intersected by streets, in which are houses two stories in height, the lower stories being rented for offices and the upper to laborers in the yard. Here people, half clad, were floating around on lumber-piles in ten feet of water, and others were perched on the roofs or grouped at upper windows. A cold drizzling rain added to the general wretchedness. The boat was instantly launched on this distressful scene and the work of taking in men, women, and children began, and was continued throughout the day in an incessant rain. The place was so blocked with dangerous floating *debris* or fixed obstructions, such as lumber loaded on cars, that it was almost unnavigable, and the keeper and his men had often to resort to the expedient of building bridges of planks from one lumber pile to another in order to effect the deliverance of the sufferers. The day was consumed in this laborious work, and thirty-seven persons were rescued. It was 6 o'clock in the evening before the keeper and his men, wet through, cold, and famished, got back to the station.

A few days later the general overflow had culminated in the great flood of the Ohio River, and Keeper Goodwin, with a volunteer crew of seven, all ex-surfmen, rendered signal service at Cincinnati. The Masonic fraternity of that city had sent him a request for assistance, to which he manfully responded, and on February 15th, mustered his men, sent forward twelve small boats, mounted the surf-boat with its carriage on a platform car, and at 1 o'clock in the day started by special train from Cleveland for the scene of disaster, free transportation having been furnished him by the Cleveland, Columbus, Cincinnati and Indianapolis Railroad Company. The life-saving party arrived at Cincinnati the next day, February 16th, and after reporting to the Masonic committee, launched the surf-boat and rowed up through the flooded streets to the neighborhood of the Masonic Temple, where they found the fleet of boats Keeper Goodwin had sent forward. The point of greatest suffering was, it appears, less at Cincinnati than at Newport, Kentucky, on the opposite side of the river. Here there were several hundred houses submerged, or partially so, and ten thousand persons in distress out of a population of near thirty thousand. The Masonic committee, among whom were several persons of official distinction, Mayor Horton, of Newport, being one, having had the life-saving crew placed under their direction, ordered them to this place; and Keeper Goodwin at once loaded up his fleet of boats with about a ton of provisions, and

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started on the work of succor, arriving at Newport at 1 o'clock in the afternoon of the same day. Before sunset about two hundred and fifty persons, imprisoned in the upper stories of their dwellings, had been supplied with provisions. The good work continued throughout the next day, February 17th, food being served out to about two hundred and thirty persons. On February 18th the life-saving men were reenforced in their labors by a gallant crew of eight, divided into two boats, members of the Queen City Rowing Club, of Buffalo, who had volunteered from that city for the service, and placed themselves under the orders of the Masonic relief committee. The number of persons relieved that day by the life-saving crew was two hundred and fifty.

On February 19 the weather came on cold and freezing over the miserable scene, and the crew distributed coal as well as provisions. The number of persons succored was two hundred and sixty. On February 20 the water began to fall at the rate of from one to two inches an hour. Fuel and provisions were distributed through the day to about two hundred and forty persons. The weather continued at freezing point. The next day, February 21, the water had fallen ten feet, and Mayor Horton and the committee notified the crew that the need for their services was over, and receiving many thanks for their brave work they returned by the night express to Cleveland, where they arrived the next day, February 22, all of them pretty well worn out, and some of them quite sick with their unremitting toil and exposure, for the labors of each day had been complemented by police duty over the submerged district at night. The surf-boat shared in their dilapidation, its bottom planks being almost chafed through by its constant rough attrition with submerged ruins and floating *débris*, and needing to be replaced with new. The number of persons succored through its agency during the five days' toil of the crew was over twelve hundred.

It was at one time thought probable that more aid would be needed at Cincinnati, and upon application, this office gave authority to the mayor of the city of Sandusky to command the services of the Point Marblehead life-saving crew (Lake Erie, Ohio). Accordingly, on February 16, Keeper Clemons, who was in charge of the station, received a call by telegraph from the mayor to render service at Cincinnati, and immediately mustered his crew, then not on duty, as the station was closed for the season. A team was procured and the surf-boat hauled over to Sandusky Bay, which was solidly frozen over. The boat was then loaded up on a sleigh and shoved across the ice by the keeper and his seven men, in a pouring rain. From the station to the other side of the bay was a distance of fully six miles. The start was made at a quarter past 6 o'clock in the evening, and continued across the dark ice, over which the rain was sheeting, until 9 o'clock, nearly three hours later, when the crew arrived at Sandusky, and reported to the mayor. They remained waiting under orders until the next day, February 17, when they received word from the mayor that their services would not, after

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all, be required at Cincinnati, and loading up their boat again upon the sleigh, they again pushed it before them across the ice-bound bay, this time in the face of a strong northwest wind, and arrived at the station at 4 o'clock in the afternoon.

The misery and horror of the flood were felt in their fullness at Louisville, where nine miles of river front were submerged on both sides of the stream, Jeffersonville, New Albany, Portland, and Shippingport laid under water; hundreds of houses overturned, swept away and broken to fragments, and thousands of people left destitute and homeless. It will be remembered that Louisville is the location of the famous river station at the Falls of the Ohio, the life-saving exploits of whose crew, under the leadership of Keeper William M. Devan, have become of wide repute throughout the country. On this occasion they found, even more than at the flood of the year preceding, full scope for their activity. The station was visited at the height of the overflow by Superintendent Dobbins, who has charge of the Ninth Life-Saving District, in which it is situated. It is constructed so as to float and be secured at one point or another—a house built upon a barge—and the superintendent upon his arrival found it moored head and stern to a large brick block on top of the levee between Third and Fourth streets, in sixteen and eighteen feet of water, the lower story of the block being completely submerged, and the tops of the street lamp-posts in front being just visible. Keeper Devan had been appointed by the mayor of the city and several relief committees to take charge of the distribution of supplies and command the organized effort for assistance of all kinds, and the station had been made the headquarters of general succor. It presented at that time more the appearance of a country store than of a life-saving station. Beds, bedding, furniture, clothing, provisions, and groceries of all kinds were piled up on the floor in assorted heaps ready for shipment to the sufferers. City and State officials came and went, intermingling with the station men and their assistants. Boats were constantly going from the station laden with bread, meat, groceries, and other stores, and as constantly arriving in its vicinity freighted with groups of wretched creatures and such remnants of their household goods as the flood had spared.

The scene of operations was well-nigh indescribable. All the lower part of the city, along the whole river front, stood in water, with canals for streets. In this region were lumber-yards, paper-mills, oil-works, iron-works, glass-works, tobacco-works, pork-houses, planing-mills, all sorts of work-shops and manufactories, their lower stories buried in the turbid flood, some of them in a state of partial wreck, and now and then one in ruin. Beyond was a wide and melancholy waste of muddy yellow waves, irregularly dotted here and there with houses half submerged and the tops of trees. The whole scene was one of abject desolation and destruction. On the surface of the dismal flood tumbled the wrecks of overturned houses, great lumps of ice, masses of floating lumber, arti-

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cles of furniture, *débris* of all kinds, surging incessantly down toward the chute, which was now undistinguishable from the stream, there being forty-two feet of water on the falls. At night this expanse was the haunt of river thieves, who prowled around in boats through the darkness, and broke through the roofs of any dwellings abandoned by their inmates. The station supply-boats, which did duty upon it by day in conveying fuel and provisions to the still inhabited houses, half buried by the overflow, patrolled it, with the city police at night, in all directions, far and near, as a guard. In the city proper, apart from the marginal or suburban districts, which had become the haunt of these picaroons, the danger was no less to life than to property. At the height of the season of disaster the gas-works had been flooded, and in the total darkness which enveloped the nocturnal streets, ruffians, armed with sand-bag clubs, lurked on the watch for belated wayfarers. Every form of anxiety and apprehension seemed let loose, and wretchedness pervaded daily life like an atmosphere.

The river had begun to rise on the 9th of February and reached the danger line on the 11th. On the latter date the entire part of the city known as Shippingport was submerged, the water had heavily backed up into the suburb called Portland, and all the lower parts of the town along the river front were flooded. Already a large number of mills, factories, distilleries, and work-shops of various kinds had been filled to their second stories and compelled to suspend operations, thus throwing a multitude of people out of employment. A great many families had removed, and others were preparing to do so. Keeper Devan and his men were in full blast, and, incited by their example, a host of skiffs were out on the river rendering assistance. The station had been removed to a safer mooring, and the keeper and crew worked with all their energy in rescuing people and saving property from submerged or breaking houses. About a thousand dollars' worth of household effects were saved that day by their efforts. At noon word came to the station that a large raft of logs, worth $2,000, had broken lose from its moorings some two miles up the river, and was drifting away to destruction. Keeper Devan put a line into his second boat, the Ready, rowed away with his men, and coming up with the raft, got the line fast to it, checked its headway by mooring it to a moored coal-barge, and shortly after had it safely brought to shore and delivered to its owner. The remainder of the day was spent in assisting people to escape from their endangered dwellings and removing their household property. At night the crew boated, in alternate watches, over the flooded district, doing police duty.

The next day, February 12, was spent by the station men in removing families and their household goods to places of safety. The river continued to rise steadily, and there were thirty-six feet of water on the falls. In anticipation of being flooded, Keeper Devan moved his family further up-town.

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The climax of disaster came on the evening of this day. The upper river district of the city, known generally as the Point, is a low valley, full of houses, protected from possible inundation by a huge dam or levee, forty feet thick, and two thousand feet long. Beyond this dam was an immense extent of water, sixty feet deep, which had for days been rising gradually, inch by inch. It had now reached the level of the embankment, over which it had spilled all day in a thin sheet, increasing by 7 o'clock in the evening to a heavy pour, so that by 9 o'clock five or six inches of water ran over the streets of the neighborhood. At this rate of overflow no damage was likely to ensue, and the only real danger was in the possibility of the dam giving way. Although its great strength encouraged the hope and belief that it would withstand the heavy strain upon it, the chance of its yielding was entertained, and all the afternoon the police were busy notifying the people in the neighborhood to move. Many had gone, but most of them, being poor, and having really nowhere to go, had remained in the trust that all would be well with them. They now formed part of the great crowd which all the evening stood watching the dam by the light of numerous bonfires.

At nearly 10 o'clock an anxious party, among which were the mayor, the city engineer, and several other officials, made part of the throng, but soon retired, satisfied that no break in the embankment was then threatened. Keeper Devan and Boatman Farrell had come down with them in the station boat Reckless, but remained after they had left, standing on the levee, the keeper certain, on his part, that mischief was impending. The monotonous noise of the falling water continued, and the crowd gradually thinned off, until, at nearly 11 o'clock, the place was quite deserted. The keeper and his man remained almost solitary, watching, by the light of the dying bonfires, the array of lonely houses, in every one of which a light was burning, and the flood pouring in a broad cascade over the lower section of the dam.

Suddenly, with a heart-shaking roar, the embankment was cloven and the pent water burst through in a torrent. The valley was instantly overswept, and amidst the thunder of the flood there was heard the crashing of timbers and a confusion of cries and screams, while light after light went out quickly, leaving the scene in darkness. It was but the work of a minute for the keeper and Boatman Farrell to haul the long life-boat across the embankment and launch it into the foaming swash of the valley, following the shrieks for help. As the boat dashed along, dangerously steered through a wild riff-raff of rushing débris, the rowers saw fences, shanties, sheds, and outhouses fly up from their fastenings on every side and whirl away to ruin. Now and then small houses went past with mewing cats arching on their roofs, and several times raft-like surfaces, such as plank walks or sections of flooring, were seen thickly covered and all alive with rats. A two-story house, from whence the nearest screams proceeded, was soon reached, and a man and his wife and five children, three of them very small, were

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taken from the upper windows and quickly landed. The boat then shot back to two houses in succession, rescuing a woman from each. Lights now began to twinkle out on the roofs and upper stories over the flood, showing that the people were making their way aloft to be saved or save themselves. A hundred screams rent the air in all directions. Keeper Devan and Boatman Farrell still kept racing to and fro, making rescues. The other station-boat, the Ready, came down before long and joined in the work. The engine men had been telephoned for and also responded, and soon twenty boats were speeding to and fro delivering the victims. Huge bonfires sprang up in all directions beyond the flooded space, greatly aiding the work of rescue, and to these fires the drenched and streaming people were carried as soon as landed. They could be seen in miserable, shivering groups around the flames, many of them only half clad. No words could describe the confusion, the horror, the anguish of the scene. Probably its most fearful element was the uncertainty of families as to the fate of their respective members, separated in the rude divisions incident to prompt rescue. In many cases mothers could be seen running about in distraction looking for their children. Through all the miserable hurly-burly the station-boats and their coadjutors in rescue toiled steadily on, racing hither and thither through the frothing torrent, and by 1 o'clock every one in danger had been brought ashore. Half an hour later the water behind the embankment had got down to the level of the river and the danger of further destruction was over. The main part of the district now presented the aspect of six hundred acres of water, with the top of a house sticking up here and there. Hundreds of dwellings had been swept away and broken to fragments; others had been turned over, and still others lifted from their foundations. Between two and three thousand people had been made outcasts, although, fortunately, thanks to the terrible energy with which the work of rescue had been conducted, no lives had been lost. Of course, every house that could afford accommodation was promptly opened for the succor of the rescued, the engine-houses receiving many of them.

The morning of February 13 dawned clear and cold upon a wide panorama of devastation. The river continued to rise steadily, being now over thirty-nine feet on the falls, and the flood was creeping higher and higher, forcing fresh removals in all directions along the river front. Thousands of people assembled and stood gazing upon the spread of turbid water, dotted with the roofs of still standing houses or the bobbing wrecks of houses overthrown, and over whose surface, thickly covered with floating timbers, planks, bundles of shingles, sheds, sections of wooden pavement, outhouses, articles of furniture, counters, shelves, desks, barrels, kegs, buckets, and an indescribable pell-mell of rubbish and ruin, a hundred boats were shooting, engaged in recovering household goods from all accessible dwellings. By 9 o'clock in the morning the steamboat Mattie Hays had been loaded with pro-

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visions by the relief committee, and, with the mayor, several city officials, and the life-saving crew on board, moved out to the succor of the sufferers. The first persons visited were a famished multitude of men, women, and children gathered in some anchored barges, many of whom had not tasted food since the day before. After they were supplied, the two station boats and one other shot out from the steamer in among the inundated houses, heavily laden with provisions, which were dealt out to the people in the upper stories. By 12 o'clock the distribution was completed in the region of the broken dam. Among the incidents of the voyage was the rescue of a half drowned and frozen cat, which the noble-hearted keeper took into the boat from a piece of floating lumber. A little later, a poor dog, howling piteously on the roof of a shed, was taken off by the same boat and put ashore.

At 1 o'clock the steamer headed down the river on another trip of distribution to Portland and Shippingport, where the flood had made serious inroads. Half the life-saving crew assisted in distributing the provisions to the inhabitants in these quarters; the remainder were occupied up at the city proper in assisting to remove furniture from the flooded homes around the levee. The day ended in a dreary fall of rain, which added to the general misery.

This rain continued through the whole of the next day, February 14. There were now over forty feet of water on the falls, and the river was rising steadily. The entire river front, from the broken dam to Portland, was under water, and every hour the public alarm increased, as new streets were entered by the rushing torrent. The life-saving boats were out all day, their crews working hard in supplying insulated dwellings with provisions and removing families and their goods from endangered houses. Their method of working was to have a flat in tow of their two boats, loaded with provisions to draw from, and having space on which household effects could be conveniently piled. The range of operations embraced the whole nine miles of river front. In one instance a house was entered from the boat by the second-story window and a young mother found in a bed surrounded with water, where, within a few hours, she had given birth to a child.

The rain continued on the next day, February 15, until noon, when it stopped, leaving a cloudy sky and pleasant atmosphere. The river still rose, and there were over forty-one feet of water on the falls. Over a dozen houses broke from their foundations during the day and drifted down over the chute, to be finally dashed to pieces. At least fifty additional families were compelled to move by the advance of the flood, those of the station boatmen Leopold and Farrell being among them. Both of the station boats were out all day, and the keeper and his men toiled unremittingly in distributing provisions and removing furniture.

The next day, February 16, was cloudy and pleasant until noon, when rain set in. The rising of the river still continued and there were

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over forty-two feet of water on the falls. Of course, this rise involved still further encroachments of the flood, and houses were hourly filling or crumbling under its advance. The gas-works, which were in the flooded district of Portland, had now begun to fill, and the city was threatened with nocturnal darkness. In fact, the city authorities decided not to have the street-lamps lighted that night, but save the gas for the use of householders. A great deal of illness, especially of the malarial type, prevailed throughout the flooded districts, and the life-saving crew, with their coadjutors, had begun to distribute medicines suitable to chills and fever along with the supplies of provisions. It was on this day that Superintendent Dobbins arrived, and the keeper sent Boatman Gillooley over to Jeffersonville, on the Indiana shore, to row him across. The steamer Mattie Hays had also started on the same errand, with the mayor and a large number of city officials on board, and met Captain Dobbins in the life-saving boat about half way across. He was at once taken on deck, and, after the customary introductions, the mayor took the opportunity to express, in behalf of the city of Louisville, heartfelt gratitude for the aid rendered by the life-saving crew, adding that to Keeper Devan and his brave men the people owed more than they could ever express. The day was spent by the life-saving crew, like the days preceding, in rescuing families from flooded houses, saving furniture, and dealing out provisions, and the greater part of the night was given, as had been every night since the 11th, to the same work, and to helping police the river against the swarm of thieves which infested it and broke into the half-submerged houses whenever opportunity favored. The gas-works were now inundated, and at night the city was in total darkness.

On February 17 the rain fell heavily until noon, when it changed to hail, with a strong northwest wind, and by evening to a snow-storm. The weather turned bitterly cold, increasing the misery of the sufferers from the flood, and the high wind made fresh havoc among the shaking houses, several of which were overturned, torn from their foundations, and swept over the falls. A strong current in the river also wrought much destruction among the lumber-yards and rafts of logs, a great deal of the material being carried away. Nevertheless the dreary weather and the ravage of the storm were mitigated with hope, for the river had begun to go down. The life-savers were almost alone in their work, owing to the savage inclemency of the day, and were out constantly, having the flat in tow of their boats, loaded with provisions and clothing, which they distributed incessantly to all in need. The station medicine-chest was also brought into requisition. During the day a barge of coal was procured and dealt out to many families immersed in their flood-surrounded houses and in misery for want of fire. A number of persons were landed, and their furniture brought away, from tenements tottering in the wind. In one case a family had not

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vacated the house more than two hours when it turned over on its side and was buried in the waters.

On the next day, February 18, the weather was clear and cold, and the river was still falling. The day was spent by the life-saving crew in the usual distributions of clothing, provisions, and coal. The same ministrations were continued on the 19th, which was also cold and fine. The 20th was occupied in a last distribution, the necessity for the services of the life-saving crew having ceased with this date. The river was now falling sensibly, and the register showed thirty-six feet of water on the falls. The station was removed to her old mooring quarters and put in order. The keeper and his men were nearly worn out with their long-continued labors. Several of the crew had terribly sore hands, caused by incessant heavy lifting and hard pulling. During their nine days' ordeal this gallant squad had brought ashore four hundred and fifty persons. Of these about two hundred were rescued from actual peril. They comprised men, women, and children, many of them infirm, and several of them so sick that they had to be carried down a ladder into the boats. The number of people to whom the crew distributed provisions, clothing, fuel, and medicines was upward of four thousand. No estimate can be formed of the value of the great amount of property they saved, which consisted mainly of the household effects of poor people, to whom, considering the fact that it was their all, it had a worth beyond computation.

A departing flood marks its exodus with ravage, and the inundated districts of the city suffered much destruction from the abating waters for a long time after the need had ceased for the distribution of supplies to the distressed people by the life-saving crew. It is noteworthy that the flood, both in its coming and going, with all its involved suffering and loss, appears, judging by the expressions of the local journals and by other testimonies, to have made less impression upon the community of Louisville than the manful and ardent service rendered to the sufferers from the calamity by Keeper Devan and his men. The enthusiasm with which their exploits have been regarded in that region ever since the establishment of the station seemed to augment immeasurably with every day of their toilsome and perilous voyages of succor over the yellow waves of the overflow.

ESTABLISHMENT OF STATIONS.

Since the last report seven additional stations have been completed, one at Hunniwell's Beach, Maine; one at Muskeget Island, and one at Coskata, Nantucket, Massachusetts; one at Brigantine Beach, New Jersey; and one at New Inlet, one at Cape Hatteras, and one at Ocracoke, coast of North Carolina.

Four other stations are in process of construction and approaching completion. One at Lewes, Delaware; one at North Beach, Maryland; and one at Wallop's Beach, and one at Parramore's Beach, Virginia.

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There have been nine sites selected for new stations, which it is proposed to construct next year, provided titles which have been promised are obtained and sufficient appropriation shall be made by Congress, namely: One at Brenton's Point, Rhode Island; one at Grand Marais, Lake Superior; one at Frankfort, one at Pentwater, one at the mouth of White River, one at Holland, and one at South Haven, Michigan; one at Michigan City, Indiana; and one at Sturgeon Bay Canal, Wisconsin. Sites are also now being selected for the remaining stations authorized by Congress.

BOARD ON LIFE-SAVING APPLIANCES.

The Board on Life-Saving Appliances had but one meeting during the year, that being sufficient for the transaction of the business brought before it. The full report of their proceedings and conclusions is published herewith.

THE WOMEN'S NATIONAL RELIEF ASSOCIATION.

The benefactions of the ladies of this society have been continued during the year with marked advantage to a number of shipwrecked persons. Sixty-three stations have been supplied by the association with boxes of clothing, together with supplies of such cordials and delicate food as are of peculiar benefit to people landed from wrecks. These boxes came into good use at the wrecks of the schooner D. M. Foster on the coast of Lake Ontario, on December 1, 1882; the schooner Oliver Ames on the coast of Cape Cod, on December 3, 1882; the schooner Boston on the coast of North Carolina, on December 30, 1882; the schooner Albert Dailey on the coast of Virginia, on January 7, 1883; the German bark Friedericke on the coast of Cape Cod on January 10, 1883; the British bark Dulcimer on the coast of North Carolina, on February 12, 1883; the Italian bark Angela on the coast of North Carolina, on March 4, 1883; the sloop Mary Gray's boat on the coast of Virginia, on March 8, 1883; and the schooner Petrel on the coast of Lake Michigan, on October 17, 1883. Besides the sixty-three stations supplied, the association has notified the service that boxes of food and clothing are ready for nine more, which have accordingly been designated.

AWARDS OF MEDALS.

During the year the medals of the service have been awarded in seven instances.

The case first in order was that of Mr. C. A. J. Queckberner, of New York, who was shown to have saved from drowning at least thirty-five persons between 1876 and 1881. At various times in the year 1876 he jumped overboard and rescued twelve persons by swimming to them and bringing them in—one, a boy who had fallen into the East River; two, men who were capsized in the Harlem River; one, a young lady who had fallen from an East River boat; one, a man from the North River; two, boys capsized in Flushing Bay; one, a boy at Staten Island;

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one, a man at the same place; two, a man and his son fallen overboard from an excursion boat on the Hudson River; and one, another boy from the East River. In 1877, while out rowing in a skiff, he saved a boy from drowning in Newtown Creek, Long Island. The boy when reached had gone under and was rescued by diving for him. In 1880 and 1881 he was employed as a professional surfman by the hotel at Long Beach, Long Island. The first of these two years he saved nine lives, and the second thirteen. These were in every case gentlemen and ladies who had become exhausted while swimming in the surf, and would have perished had he not swum out and helped them to make their way in. Although these rescues in no case appear by the evidence to have been effected with great personal peril, their gallantry and humanity, and the degree of effort and hardship they involved, fully entitled Mr. Queckberner to the silver medal of the Life-Saving Service, which was accordingly awarded him.

A similar medal was awarded to two young men respectively, Charles R. Rosevear and John H. Theiss, who, on July 10, 1882, saved a man named James Haggerty from drowning. Haggerty was standing on board the tug Brandon, at the foot of Barrow street, in the North River (New York), his nudity denoting that he had either been in bathing or was about to go in, when the by-standers saw him lose his balance with a sudden lurch of the tug and fall overboard. He tried to catch the pier as he fell, but missed, and in his descent struck his head violently against the tug, inflicting a terrible wound. As he weltered inertly in the water, without making any effort at self-preservation, the young man, Rosevear, sprang overboard and seized him, but being small and slight of build, soon found himself growing unable to keep the drowning man above water, and was rapidly becoming exhausted, when his companion, young Theiss, sprang in and helped him to swim to the tug with Haggerty, who was then got on board, where it was at once seen that he was insensible and bleeding profusely from the wound in his head. He was attended to by a physician, and then removed to a hospital. But for the manly action of the two brave young men he would certainly have been drowned.

The gold medal of the Service was awarded to William H. Daily, of Santa Cruz, California, in recognition of his having saved, at various times, twenty-eight persons from drowning. A representative instance of his heroism was the rescue of Mr. J. W. DeWoolfe at Santa Cruz, on the 5th of July, 1881. This gentleman had swum off from shore about four hundred yards, when he became exhausted, and despite his efforts began to sink. The sea was rough and the surf heavy, and the witnesses declare that the struggles of the drowning man were terrible. He himself testifies that he was finally going down when seized by Mr. Daily, who had dashed into the breakers, and with great strength and skill swam out to him. In a number of cases the rescues were accomplished at the imminent risk of Mr. Daily's life. They were all effected by swimming to those in peril, and in several instances by diving and bringing them to the surface.

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The gold medal of the Service was also awarded to Mr. Dominick J. Ryder, a young man twenty-four years of age, who was shown by the evidence presented in support of his application, to have saved from drowning eleven persons since 1876. He was proprietor of some bathing houses on Rockaway Beach during the period of these rescues, and in recognition of them had received a medal from the hotel-keepers in that locality. During the season of 1876 he saved three persons by swimming out to them and bringing them in. In 1877 he swam out to a gentleman and his wife, and, with extreme difficulty, got them to shore, both insensible, and the gentleman so far gone that it took two hours to resuscitate him. The same year he swam out to where a man was said to have sunk, saw nothing but some air-bubbles, and dived. He was immediately grappled with under water, and only rid himself of the maniac grip of the drowning man by a blow which made him let go his hold and drove him to the surface. The bold rescuer then seized him from behind under the arm-pits and rushed him to the beach, where he arrived unconscious, an hour's work being necessary to resuscitate him. In 1878 a lady, who was drifting out with the tide, was saved by Mr. Ryder plunging after her in his clothes and swimming to the shore with her. He saved a boy in 1880 in the same way, and in 1881 a gentleman and his wife who were being carried away by the undertow. In the same year he swam out at midnight from the beach and brought in an unfortunate lady who was attempting suicide while in a state of mental aberration. All of these rescues involved hardy effort in a great degree, and some of them extreme personal danger.

The next award of the year was to Mr. Julius W. Rohn, of Milwaukee, who is stated to have saved at various times forty-seven persons from drowning. The instance brought to the special attention of the Department gave evidence of his heroism upon an occasion of peril to a number of excursionists on the 20th of June, 1880. It appears that at 9 o'clock in the evening of that date a party of eighty people, men, women, and children, returning from a day of pleasure on the Milwaukee River, undertook to land from a steamboat on a wharf in the rear of a swimming school kept by Mr. Rohn, when the wharf gave way and precipitated about thirty of them into the river. The water was from twelve to twenty feet deep at that place, and the evidence shows that many lives would have been lost but for Mr. Rohn, who sprang overboard, and, aided by his two boys and some by-standers, succeeded in rescuing every one. The silver medal of the Service was awarded him in recognition of his brave and efficient action.

The final award of the year was connected with a terrible and melancholy occurrence. On the 15th of April, 1883, the time being near at hand for the relighting of the lake coasts incident to the approaching opening of navigation, Mr. William Marshall, the keeper of the Spectacle Reef light-house, Lake Huron, undertook to go thither in a sail-boat from Mackinac Island, where he resides. The distance was about

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twenty miles, and arrangements had been made with a local steamer for the transportation of the keeper and his assistants to the light-house, but her machinery became disabled, and rather than risk a long delay Mr. Marshall decided to take advantage of a favoring wind and set out in the sail-boat. The weather was cold; a gale from the southwest was blowing, with frequent puffs and squalls, and the lake was fill of ice, both fixed and floating. It took the continuous labor of a great many people on the island from morning until half past 2 o'clock in the afternoon to get the boat through the mass of little bergs and floes which grated and drifted for a long way out from the island shores, but at the time named open water was reached and the boat went on her way, flying only a single-reefed foresail in deference to the gale.

There were on board William Marshall, the keeper; Edward Chambers, first assistant keeper; James C. Marshall, the principal's son, second assistant keeper; and Edward Lasley, third assistant keeper. The boat also carried the men's clothing for the season and several weeks' supply of provisions. For seven or eight miles she followed the shores of Round Island and Bois Blanc Island, sailing through comparatively smooth water. When within about two miles of Bois Blanc light-house it became necessary to alter her course, and in order to do so shift the sail over from one side of the boat to the other. This was the moment of an unlooked for catastrophe. The fore-boom was longer than it should have been, and in coming over the end caught in the main halyards. Just then a short blast of wind from the west struck the detained canvas, and in a twinkling the horrified men found themselves in the water, with the capsized boat down on its beam ends and jumping about aimlessly on the waves. There was an instant struggle with the waters to gain the overturned vessel. The keeper, with a frantic effort, helped his son to get a hold, then managed to get on himself, and became conscious that all four were on the side of the boat, clinging to the gunwale, with the water every other minute washing over them. The mast and sail held the boat down sheer upon its side, so that the hold of the men, which was from the keel across the bottom to the gunwale, involved a long stretch over the hull, and was too difficult to be long maintained. Seeing that they were all in danger of quickly perishing, the keeper pulled out his pocket-knife, and got Chambers to cut away the foremast, which he did with great effort and at the risk of his life, being under water several times for some seconds.

The riddance of the mast and sail enabled the boat to right a little, and gave the men a better grip by bringing them nearer to the gunwale, although, having drifted into rougher water, they were all agasp and half drowned by the seas which constantly broke over them. Young Marshall suffered the most, his place on the boat having chanced to be the worst, keeping him under water more than the others, and greatly exhausting him. His father in turn was greatly exhausted by the constant hold he kept upon him in the effort to help him maintain his po-

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sition. Nothing could be more touching than the devotion and self-sacrifice of all these poor men, who from first to last seemed to forget themselves in the desire to encourage and sustain each other. It is difficult to understand how they could have survived the hardship of their protracted immersion in the icy water, but the evidence shows that they floated clinging to the boat for about three hours, or until they were within somewhat over a hundred yards from Bois Blanc Island. Here, as ill chance would have it, the chain which had run out of the boat formed a bight or loop, and dragging on the bottom caught some obstacle and stopped further progress toward the shore. The men then yelled with all their might for help and were heard by the keeper of Bois Blanc light-house, and three or four fishermen from Mackinac Island, who happened to be at the station and running out, saw and recognized in those holding on to the capsized boat the Spectacle Reef light-keeper and his associates. Among them was a gallant young fellow named Joseph Cardran, who at once undertook the task of rescue. The only boat available was a small skiff, with which his companions thought it impossible he could effect anything, inasmuch as a formidable array of breakers, thick with ice, was crashing upon the shore, and a rough sea rolling beyond. The essay was terribly perilous, but Cardran at length succeeded in forcing out the skiff to the unfortunate men upon the wreck. Young Marshall by this time was almost gone, and the first and third assistants, Chambers and Lasley—the latter half-crippled by an injury to one of his legs, incurred while trying to keep his hold upon the boat—nobly insisted that the keeper should take the first chance, and endeavor to reach shore with his failing son. The young man expressed the hope that if one of them had to perish it might be he, and earnestly begged his father to endeavor to save himself and never mind him. These were his last words, for he was got into the skiff with his father, where he lay still, and the boat under the management of young Cardran set out on the return, but as it neared the shore a sea filled it, and the next instant it was overthrown. The three men got hold of it, but in a moment Cardran saw that it would not support them all, and shouting to the others to hold on, bravely let go and struck out for the land.

It was but a few moments before the wretched father saw his son release his hold and go down. Unable through exhaustion to effectively help him, he himself became unconscious, and still clinging with a death-grip to the skiff, was washed in among the dwarf icebergs in the surf. Cardran meanwhile battled valiantly with the sea, sank three or four times, and was finally dragged out of the bergs and breakers unconscious. At the same time a fisherman named Chart managed to get hold of the skiff to which the elder Marshall clung and hauled it out of the surf, while Alfred Cardran, a youth of eighteen, brother to Joseph, rolled the inanimate body of the keeper up on shore. Then, with the spectacle of two apparently dead bodies before him, and one of them his brother, the brave boy, still alive to those in peril, quickly bailed out the skiff,

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launched it, and dauntlessly put out to the rescue. After much hardship and peril he reached Chambers and Lasley, who still clung to the capsized boat, and with a prudence equal to his heroism, decided to attempt to save only one at a time, in order to avoid overloading the skiff. He accordingly took Lasley in and after a dangerous voyage gained the shore; then returning got Chambers from the tumbling seas, and again made the return trip in safety. Joseph Cardran by this time had revived and helped to carry the insensible body of Mr. Marshall into the light-house, where for five hours he was rubbed and otherwise ministered to, and was finally restored.

It is evident that but for the heroic daring of the two Cardran boys every one on board the light-house boat would have perished. In commemoration of their splendid gallantry the gold medal of the service was awarded to each of them, never in any instance more worthily.

CONCLUSION.

No special recommendation is required to be made for the Service this year. Its greatest present need is for additional clerical force, rendered necessary by the increase in business consequent upon its development, but the addition calls for no particular legislation, being a matter of appropriation, and will probably be provided for.

The marked success which has attended life-saving operations during the year, gives abundant reason for congratulation. The statistics of disaster and rescue show greater results than have ever before been accomplished by the agency of the service. These results are undoubtedly largely referable to the cheering and stimulating influence which the reasonable compensation now accorded the keepers and crews, and the provision in the nature of pension made for them and their families in case of personal disaster, have generated in the life-saving corps, and which has caused them to discharge their duties at the very top of their abilities and energies.

It is unquestionable, however, that the service must find the main permanent cause of its high efficiency during the past year, and in all years, in its utter exemption from political influence. From the first, the personnel has been made up of the worthiest material procurable, freedom from political considerations having committed the selection to an unbiased choice on moral and professional grounds solely. It is manifest that in this way only the prime adepts in surf and beach work could have been obtained, and the best results of relief and rescue secured; and this was the way pursued, although, as has been before stated, not without constant difficulty. The statute of 1882 declaring the service non-political, removed all obstacles to the carrying out of the true policy of the service, and has made it easier to conduct life-saving affairs with sole reference to the public good. The splendid work of the year is less an attestation of the high capacity of the life-saving crews than of the value of the principle by which alone they could have been chosen.

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SERVICES OF LIFE-SAVING CREWS

DURING

FISCAL YEAR ENDING JUNE 30, 1883.

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SERVICES OF LIFE-SAVING CREWS.

DURING

FISCAL YEAR ENDING JUNE 30, 1883.

July 1.—During the prevalence of a southeast storm the schooner Maria Louisa, of and from Wiscasset, Maine, for Provincetown, Massachusetts, with a cargo of lumber, which had put into Saquish Cove, below Plymouth, for a harbor, sprung a leak while at anchor and dragged ashore, in the forenoon, on Saquish Head, two miles west of the Gurnet Point Station (Second District), Massachusetts. The station was closed for the summer season, but the keeper soon mustered a crew for the surf-boat, partly volunteers, and proceeded to the vessel to offer assistance. When he arrived the people belonging to the schooner, four in number, were safely ashore with their baggage, having landed without difficulty in their own boat. The schooner was an old one, and soon commenced breaking up. It was at first proposed to attempt to stop the leaks at low water and then float her off, but by afternoon the damage to the hull was so great the idea of repairing her was abandoned. About two-thirds of the cargo was saved. When the captain and his men were ready to leave (July 7), the keeper conducted them in his boat to Plymouth and obtained for them free passes to Boston on the Old Colony Railroad.

July 1.—On this date two men, named Kinsey and Hanes, were rescued from drowning by the keeper of the Forked River Station, (Fourth District), New Jersey. The men were out gunning in Barnegat Bay, when their skiff capsized. They were a mile and a half from shore at the time, and would have perished but for the sturdy conduct of Keeper Allgor, who pulled with all his might to their assistance, arriving just in time to save them.

July 1.—On the morning of June 30, the three-masted schooner Escanaba, of Cleveland, Ohio, bound from Marquette, Michigan, to Ashtabula, Ohio, with a cargo of eight hundred tons of iron ore, while proceeding down Lake Huron, during the prevalence of a strong easterly gale with thick, rainy weather, broke adrift from the steamer having her in charge by the parting of the tow-line, when off Thunder Bay Island, and was compelled to run for a harbor under the westerly or lee side of Middle Island, some fourteen or fifteen miles to the northward and westward of the spot where the accident occurred. So long as the wind was from the eastward the schooner was safe, but at 3 o'clock the next morning (July 1) the wind shifted into the northwest and commenced blowing hard from that quarter, soon raising a considerable sea. As the vessel was now in danger of dragging onto a lee shore, the captain at daylight hoisted a signal for assistance from the Middle Island Station (Tenth District), about three-fourths of a mile distant upon the island. The signal was immediately discovered by the life-saving crew, and they at once went off on board, reaching the schooner at 7. The Escanaba was a large vessel of between four and five hundred tons measurement, but carried a crew of only six men and a boy, all told, she

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being one of a large class of lake vessels which usually tow from port to port, and place but little dependence upon their sails. The wife and daughter of the captain were also on board. The captain desired assistance in getting his vessel clear of the island, being unable to do so with the few men at his command. There was no time to be lost, and the life-saving crew went quickly to work, got the schooner under way, and piloted her out of danger. As the men left to return to the station the captain expressed much thankfulness for their assistance in relieving his vessel from a very dangerous situation, stating that he should fully report the facts to the owner upon reaching port.

July 1.—At quarter past 4 in the afternoon the lookout at the Racine station (Eleventh District), Wisconsin, saw two persons struggling in the river some distance from the station. He gave the alarm, and Surfmen Charles Hyttel and Robert Peterson at once hastened to the spot and gallantly plunged into the water to their assistance. Hyttel succeeded in rescuing one of them, a boy named Charles Volkenstadt, nine years old, but the other, a young man named Albert Wuste, was drowned, although Surfman Peterson made strenuous efforts to reach him by diving repeatedly. The water was cold and very muddy. Wuste's body was recovered by the life-saving crew after it had been under water three-quarters of an hour, and all efforts at resuscitation failed, the physician who was sent for pronouncing life extinct. Young Volkenstadt was taken to the keeper's house, where proper restoratives were administered, and in a few hours the little fellow was able to accompany his parents home. It seems that Wuste and Volkenstadt were fishing from the Government pier when the latter slipped or fell into the river. His companion in attempting to save him also fell in, and it was supposed was seized with cramps and became helpless. The coroner's inquest was held at the station before the removal of the body the same evening.

July 2.—At about 11 o'clock in the night of July 1 the sloop Herschel, of Bangor, Maine, bound from Rockland to Saint George, in ballast, and carrying a crew of two men, dragged from her anchorage in Wheeler's Bay during a northeast storm and stranded on Hen Island, about two miles northwest of the life-saving station on White Head Island (First District). The station was closed at the time for the summer, but at daylight next morning (July 2) one of the life-saving crew, named Rackliff, residing not far distant, discovered the vessel and at once boarded her to ascertain whether she needed assistance. Finding the sloop was hard and fast on the rocks, and that help from the station was necessary, Rackliff crossed in his boat to White Head Island and informed the keeper, who in turn, after surveying the situation, sent word to his men to assemble on board the vessel in the evening for the purpose of getting her off, the night tide being the most favorable for operations. Accordingly, at 7 o'clock the crew mustered on board and after considerable labor succeeded in floating her off in a leaky condition. As she was in danger of sinking, despite the efforts of the life saving crew to keep her free by pumping and bailing, they ran her up into the bay and grounded her in a safe place on the flats, where the captain could have her properly rapaired before resuming his voyage.

July 3.—At 8 o'clock in the evening the lookout at the Chicago Station (Eleventh District), Lake Michigan, saw a small cat-rigged boat with two men in it cast off from the breakwater and commence beating toward the river against the strong northeasterly wind which was blowing at the time. The boat had proceeded but a few hundred yards when it capsized through press of sail, and the men were thrown into the

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water. The alarm was instantly given, and in seven minutes from the time the accident occurred the life-saving crew in their surf-boat were on the spot. The men were taken into the surf-boat and the sail-boat was righted and towed back to the breakwater, where the men had temporary quarters. They were very thankful to the station crew for saving their lives.

July 4.—At about half past 10 in the morning the lookout at Louisville Station (Ninth District), Louisville, Kentucky, discovered a small skiff with one man in it drifting down the rapids towards the cross-dam of the Ohio Falls. The alarm was instantly given, and a moment later the crew of the station put off to the rescue. The skiff was overtaken before reaching the dam and towed safely to the river bank, much to the relief of its occupant, one Herman Brockman, of Jeffersonville, Indiana, who expressed the liveliest gratitude to the keeper and his men for thus saving his life. But for the timely aid of the station crew Mr. Brockman would have been carried over the falls and drowned, as he was an inexperienced oarsman and unable to swim.

July 4.—At 3 o'clock in the morning the north patrol from the Sheboygan Station (Eleventh District), Lake Michigan, returned to the station and reported a disabled steamer with two scows in tow, making signals of distress about six miles north of the station. Owing to the great distance and the fact that the wind was dead ahead, the life-saving crew pulled across the harbor to the tug Kitty Smoke, and sought her aid in going to the steamer's assistance in order to save time. The captain of the tug being ill and unfit for duty, the keeper took charge, and after getting on board a supply of fuel started out with his crew as quickly as possible to the disabled vessel, arriving alongside of her at half past 4. The steamer was the John Gregory, of Green Bay, Wisconsin, the captain reporting that he left Sheboygan the previous evening for Sturgeon Bay with the two scows in tow, and that at 10 o'clock, when about twenty miles up the coast, the steam-chest burst, and being thus disabled his vessel had drifted back towards the point whence she started. The Gregory and her consorts were at once taken in tow by the Kitty Smoke and brought safely into Sheboygan Harbor and moored at the dock. Besides a crew of five men the Gregory had three passengers on board, and when the accident occurred one of the latter, a thirteen year old son of the owner of the vessel, was scalded about the face and head while lying in one of the berths in the cabin. The boy's injuries were promptly attended to as soon as Sheboygan was reached, the keeper sending at once for medical aid.

July 5.—As the steamer Lora, with an excursion party on board, was making a landing at Morrison's wharf, Saint Joseph, Michigan, one of the party, named Church, fell overboard while attempting to climb down one of the steamer's fenders to the wharf. Two of the crew of the Saint Joseph's Station (Eleventh District), who were in the vicinity, at once rushed to the man's assistance, and after getting him safely ashore, procured a conveyance for him to his house.

July 6.—At half past 11 in the forenoon, as William St. Clair and John Strong, of Sand Beach, Michigan, were out sailing on Lake Huron, their boat capsized, through mismanagement, when about a quarter of a mile out, and the men were thrown into the water. But for the prompt assistance of the crew of the Sand Beach Station (Tenth District), they would have been drowned; the keeper and two of his crew putting off quickly to the rescue, and bringing them safely ashore. Their boat was also recovered by the station crew.

July 6.—At half past 9 at night, the schooner Willie Louttet, of Grand

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Haven, Michigan, stuck fast on a sunken crib off the end of the south pier at the entrance to that harbor. When the Grand Haven Life-Saving crew (Eleventh District) went on board soon afterwards to offer assistance, the captain requested them to procure a steam-tug. The request was complied with, and in an hour and a half, with the aid of the tug, the schooner was safely afloat.

July 6.—The tug M. A. Gagnon, of Two Rivers, Wisconsin, while employed as a tender to the Government dredging-machine at work in Two Rivers Harbor, fouled her propeller in a fish-seine when about half a mile out on Lake Michigan, on her way to the dumping-ground with a mud-scow in tow, and became temporarily disabled. Fearing his vessel would drift ashore on the beach, the captain of the tug sounded his steam-whistle for assistance. The signal was promptly responded to by the crew of the Two Rivers Life-Saving Station (Eleventh District), the keeper at first supposing some one had fallen overboard. Upon arriving alongside and learning the nature of the accident, they at once took the steamer's line and towed her safely into the harbor, when they cleared the propeller, and enabled the tug to resume her work.

July 8.—Three boys, named John and Joseph McWilliams and Murray Kline, of Louisville, Kentucky, ranging in age from twelve to fourteen years, while attempting to cross the Ohio River to Jeffersonville, Indiana, in a small skiff, got caught in the rapids and would have been carried over the falls and drowned but for the prompt activity of the crew of the Louisville Station (Ninth District), who, upon discovering the perilous situation of the youngsters, put off in their boat and rescued them.

July 9.—At about 3 o'clock in the afternoon a man named James Riley attempted to swim across the Menomonee River near the Milwaukee Station (Eleventh District), and when about in mid-stream he became frightened and shouted lustily for help. His cries being heard at the station, the keeper and one of the crew quickly jumped into a boat and reached the man just in time to save him from drowning. It was a very narrow escape.

July 9.—At half past 6 o'clock in the morning, during a thick fog, the crew of the Two Rivers Station (Eleventh District), Lake Michigan, heard a steamer's whistle in the offing as though in need of assistance. They at once put out in the surf-boat, and, after pulling about two miles from the piers, guided by the sound, they found the steam-tug Joseph Goldsmith, of Milwaukee, from Menomonee for Two Rivers, with a scow laden with logs in tow, unable to find the harbor on account of the fog. She was at once piloted safely with her convoy into port, for which the captain was very thankful.

July 10.—At half past 9 in the morning word reached the Cleveland Station (Ninth District), Lake Erie, that a boy named Willie Sofer, nine years old, had been drowned while bathing in Lake Erie, a short distance up the beach from the station. The crew at once hurried to the spot, and after a search of about ten minutes recovered the body. It had then been under water three-quarters of an hour, but efforts were at once made to bring the little fellow to, the life-saving crew persevering with the proper manipulation and the application of artificial warmth for fully an hour and a half, or until it was demonstrated without shadow of doubt that life was extinct.

July 10.—On Sunday afternoon, July 9, the steam-tug E. H. Miller, of Alpena, Michigan, with a large raft of logs in tow from False Presque Isle for Alpena, arrived off the north end of Middle Island, Lake Huron,

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short of fuel, and was compelled to leave the raft and return for a fresh supply. The wind was then southeast, and the raft lay comparatively safe under the lee of the island. Soon after midnight, however, on the morning of the 10th, the wind shifted to northwest and drove the raft ashore; so that when the tug arrived again at 4 o'clock it was found necessary to call upon the Middle Island Station (Tenth District) for assistance. The crew responded promptly to the call in their boat and ran the necessary lines from the steamer to the raft and otherwise assisted in getting the raft afloat, thus enabling the Miller to proceed on her way without the loss of a single log. The raft contained four hundred thousand feet of lumber and was valued at $2,600.

July 10.—The schooner Glad Tidings, of Cleveland, Ohio, belonging to the Western Seamen's Friend Society, in charge of a missionary named Henry Bundy, employed by the society to labor for the religious welfare of seamen at the various lake ports, while proceeding from Horse-shoe Island to Beaver Harbor, Lake Michigan, encountered a gale from the southwest and was dismasted at half past 6 in the evening, when to the northward and westward of Beaver Island and about four miles distant from the Beaver Island Life-Boat Station (Eleventh District) on the island. The schooner was two and a half miles from the nearest land when the accident occurred and she immediately came to anchor. Her situation was soon discovered on the island and word sent to the station. The keeper mustered a volunteer crew as quickly as possible and after a long and arduous pull on account of the gale, the vessel was reached about 11 o'clock. She was completely crippled by the loss of her spars. There were five persons on board, namely, the captain, his wife, son, and two daughters. The state of the weather prevented anything from being done that night toward repair of damages, but the captain requested the services of a tug to tow him into the harbor next morning. He was also desirous of seeing his wife and daughters safely ashore. The keeper, therefore, landed the ladies that night upon his return to the island, and at daylight in the morning he dispatched a steamer to bring the disabled schooner into Beaver Harbor where she could be properly refitted and put in good shape again.

July 10.—At 3 in the afternoon Keeper Henry J. Woods, of the Muskegon Station (Eleventh District), Lake Michigan, rescued the five-year old son of Mr. Charles Watson, of that place, who had fallen into the river and would have drowned but for the gallantry of the keeper, the child being almost dead when taken from the water.

July 10.—At 2 o'clock in the afternoon a fishing-boat, with two men in it, while returning from the fishing-grounds off Sheboygan, Wisconsin, was dismasted by the strong southerly wind when about a mile to leeward of the harbor piers, and would have had much difficulty in reaching port but for the aid of the Two Rivers life-saving crew (Eleventh District), who hurried to her assistance with a line and towed her safely in. The two fishermen were very thankful for the assistance rendered them.

July 11.—At 4 o'clock in the morning one of the patrolmen of the Chicago Station (Eleventh District) saw a boat with no one in it drifting out of the basin towards the lake. He at once jumped into a skiff and overtook the boat and towed it to the station, where it was cared for until claimed by the owner late in the day.

July 11.—At 3 o'clock in the afternoon a boy named Edward Edgar, fourteen years of age, slipped from the harbor breakwater at Chicago and fell into the water. Two of the crew of the Chicago Station (Eleventh District) were on the breakwater at the time fishing, and

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they at once ran to the boy's assistance and rescued him, although not without some difficulty.

July 12.—At half past 2 in the morning the patrol from the Ottawa Point Station (Tenth District), Tawas Bay, Lake Huron, discovered a small schooner ashore on Ottawa Point, about half a mile distant from the station. The alarm was given, and the life-saving crew turned out at once with their boat and boarded the vessel. She proved to be the Nakick, of Bay City, Michigan, bound from East Tawas to Au Gres, with an excursion party of thirteen persons, including six women, who were *en route* to a public celebration at the last-named place, the vessel having missed the channel and grounded in shoal water at about the time she was sighted by the patrol. The life-saving crew went to work and ran an anchor out into deep water, and after about two hours' labor succeeded in floating the schooner without damage, much to the relief of the excursionists, who lost no time in departing for their place of destination, duly thankful to the life-saving crew for their assistance.

July 12.—The crew of the Thunder Bay Island Station (Tenth District), Lake Huron, rendered good service in assisting to recover a raft of valuable logs which had broken adrift during a gale the day previous from the steam-tug James Reid of Detroit, Michigan. The Alpena Reporter (newspaper) thus concludes a very flattering notice of the work performed. * * * "It is a pleasure to learn that these crews respond promptly to such demands as are made upon them, and our readers can congratulate themselves that the perils of navigation in this vicinity are reduced to the minimum through their vigilance."

July 12.—The steam-barge R. C. Britain, of and from Whitehall, Michigan, for Chicago, Illinois, with a large cargo of lumber and fish, put into Muskegon, Michigan, at 10 o'clock at night for the purpose of discharging a portion of her lumber, being dangerously overloaded. Just as the vessel got inside, and when about to make a landing at the north pier, she gave a couple of heavy lurches and spilled the deck load, consisting of over fifty thousand feet of lumber and several tons of fish in boxes, overboard. The accident was soon discovered by the patrolman from the Muskegon Station (Eleventh District) who was on the pier at the time, and after making the steamer's lines fast he hastened to the house and called assistance. The life-saving crew were not long in reaching the vessel in their surf-boat with boat-hooks and lines, and at once set to work securing the floating cargo to prevent it from drifting away. After they had recovered the boxes of fish and put them back on board the steamer, the captain decided to leave the lumber and proceed on his voyage. The lumber, therefore, was left in charge of the keeper and the steamer departed, the station crew working hard the rest of the night in removing the property to where it would be safe until the steamer's return. The captain, upon his arrival a week later, expressed much thankfulness for the great assistance they had rendered him.

July 12.—At 5 o'clock in the evening two of the crew of the Evanston Station (Eleventh District), Lake Michigan, went off and rescued a man and woman who were overtaken by a heavy squall while out sailing on the lake. They were found to be without the means of rowing back to the land.

July 13.—At about 3 in the afternoon, as Mr. William E. Armstrong and his niece, Miss Flora Keyes, temporary residents of Ludington, Michigan, were out in the sail-boat Mermaid for an afternoon sail on Père Marquette Lake, their boat was upset by a sudden gust of wind when about one hundred and fifty yards from and directly opposite the

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Ludington Station (Eleventh District). The accident was witnessed by one of the station crew, and upon his giving the alarm four of the men at once put off to the rescue. Some fishermen who were close by when the yacht went over also hastened to the spot. The latter, with the aid of the station crew, took Miss Keyes into their boat and conveyed her safely ashore. After assisting Miss Keyes, and then seeing Mr. Armstrong out of danger, the life-saving crew righted the yacht, towed it into the shoal water and bailed it out and put it in good order again.

July 14.—At one o'clock in the afternoon one of the crew of the Milwaukee Station (Eleventh District), Lake Michigan, rescued a little girl named Annie Strelitz, five years old, who had fallen into the river near the station.

July 15.—The schooner Addie M. Bird, of Rockland, Maine, went ashore on Great Duck Island, off Mount Desert, Maine, on July 13, at half past 10 in the morning, during the prevalence of a thick fog. She carried a crew of seven men, and was bound from Boston, Massachusetts, to Windsor, Nova Scotia, in ballast. The accident occurred at high water, the vessel going so well up on the rocks that when the tide fell she was almost dry and her crew landed without difficulty. The life-saving station on Little Cranberry Island (First District), about eight miles distant to the northeast, was closed for the season, and as the place where the schooner struck was hidden from view at the station, even in clear weather, the keeper knew nothing of the disaster until the following day (14th) at 7 o'clock in the evening, when the captain arrived in his yawl in quest of assistance. It was then too late to do anything that night, but at 5 o'clock next morning (15th) Keeper Hadlock started with his entire crew to the schooner's relief, accompanied by the captain. The vessel lay in a bad position with part of her keel gone, her rudder broken and unhung, and several holes in her bottom through which the tide flowed and ebbed. The keeper took charge, at the captain's request, went to work with his men and patched the holes in her bottom with canvas, calked the seams where necessary, repaired and rehung the rudder, and removed a portion of the rocky ledge under the stern; the latter being done to afford a clear channel into deep water. After completing these temporary repairs the schooner's anchors were planted off shore, the cables were hove taut, and at high water on the 16th the life-saving crew succeeded in hauling the vessel safely off. She was very leaky, but by keeping the pumps going they managed to keep her afloat until a snug berth was reached in Southwest Harbor, Mount Desert, where she was at once put under repair. But for the excellent service thus rendered by Keeper Hadlock and his crew, the schooner would undoubtedly have soon become a total wreck.

July 15.—The schooner Orient, of and from Boston, Massachusetts, for Bangor, Maine, with a cargo of kerosene oil and carrying a crew of three men, grounded a little after midnight on Otter Island Ledge, Muscle Ridge Channel, four or five miles northeast of White Head Island Station (First District), coast of Maine. The station, as already mentioned in this record (July 2), was closed for the summer, but the crew were quickly mustered at daylight, as soon as the accident was discovered by the watchful keeper, and the party at once put off to her relief, arriving alongside at 6 o'clock. The vessel was hard on the rocks, listed off shore, and leaking so badly that the pumps were of no use. The first effort to right the schooner preparatory to hauling her off was unsuccessful, the leak gaining with such rapidity that when the life-saving

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crew descended into the cabin to recover the men's clothing they found the water waist deep. While the crew were thus engaged the captain of the vessel proceeded to Rockland in his yawl to telegraph to Bangor for a tug. No tug could be found, and before he returned to his vessel the life-saving crew succeeded at high water in heaving her off the rocks. The schooner was scarcely afloat however, when she rolled over on her side and became unmanageable. While she lay in this position the life-saving crew removed and landed such of the cargo as could be got at, and then, as nothing further could be done for the vessel that day, they went home for a supply of provisions for the schooner's crew, who were nearly famished, their stores being beyond reach, under water in the cabin. After that they built a fire and constructed a shelter for the sailors on Otter Island, close by, and made them comfortable for the night, the captain desiring to remain as near as possible to his vessel, which still remained fast to the anchor used in heaving her off. Early the next morning (16th), just as the keeper arrived at the island with a fresh stock of provisions for the shipwrecked sailors, the schooner's hawser parted and she went adrift. There was no time to lose in seeking the aid of a tug, so he hurried off to a place called Lobster Cove, three miles distant, where the schooner Medora was anchored, and engaged that vessel to go to the Orient's assistance. Captain Elwell of the Medora, was soon under way and upon reaching the capsized schooner he towed her in to the nearest beach and grounded her. The life-saving crew went at once to work and assisted in righting the vessel and pumping her out; then after repairing damages and hauling her once more afloat they reloaded the cargo and sent her on her way apparently none the worse for the mishaps that had befallen her.

July 16.—Shortly before 6 o'clock in the evening the crew of the Chicago Station (Eleventh District), Lake Michigan, were alarmed by the report of the lookout that the small sloop-yacht Nellie had capsized, and that the three men who had gone out in her for a sail were struggling in the water. As quickly as possible the surf-boat was launched and pulled to the struggling men, who were about two hundred yards distant from the station. A momentary delay, caused by one of the life-saving crew stumbling overboard just as the boat was put into the water, enabled two sailors belonging to the schooner Milwaukee Belle, anchored close to where the Nellie capsized, to reach the three men a moment or so in advance of the station crew and pick them up. There was therefore nothing left for the station crew to do but recover the capsized sloop, which they did, and towed it to a safe place.

July 17.—On this date the crew of the Milwaukee Station (Eleventh District) were busily engaged for several hours in assisting an officer of the lake survey in planting buoys to mark the location of the sunken wreck of the barge Thomas A. Scott, of Milwaukee Harbor.

July 18.—The schooner Young Teazer, of New Bedford, Massachusetts, bound from Baltimore for Providence, with a cargo of coal and carrying a crew of six men, stranded at 1 o'clock in the morning, on the south side of Long Island, New York, about a mile and a half east of the Smith's Point Station (Third District), opposite Smith's Point. The weather at the time was rainy and thick, with a moderate southerly wind. The stations on Long Island were closed for the summer, but the vessel was discovered at daylight by one of the men of the Forge River Station, who had just gone out in the bay fishing. The crews of the Smith's Point and Forge River Stations assembled abreast the vessel as quickly as possible, and in due season all hands were rescued with the surf-boat from the Forge River Station, and with their effects

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taken to the Smith's Point Station, where they remained for two days, or until the captain could arrange for their transportation home. The vessel began breaking up soon after the rescue of the men, and with the cargo became a total loss.

July 18.—The schooner Annie E. Moore, of Seaford, Delaware, bound from Newburg, New York, to Washington, District of Columbia, with a cargo of plaster, ran ashore on Smith's Island, Virginia, in the dusk of the evening of the 17th, about a mile and a quarter northeast of the Smith's Island Station (Fifth District), coast of Virginia. The schooner stranded on the flood tide and went so high up on the beach that at low water she was almost dry and her crew, five in number, landed without difficulty. As the station was closed for the summer and there were but few people on the island, the accident was not discovered until daylight next morning (18th), when the schooner was sighted by the light-keeper. The keeper of the station being absent on business of the Service, the light-keeper sent word to E. Richardson, who was the only member of the crew within reach. The latter proceeded to the vessel as quickly as possible, and finding the crew already ashore, he conducted them to the station and provided for their wants. The captain was quite ill, but when, after three days of careful nursing he was able to travel, Richardson took the five men across the bay to the main-land, and procured for them conveyance to Cherrystone. The vessel was afterwards saved with but slight damage, although half of the cargo was lost.

July 19.—A telegram was received at the Oswego Station (Ninth District), Lake Ontario, to the effect that the body of Miles McCrispin (a deck hand on the tug John Navagh, who had tumbled overboard from that vessel and been drowned on June 29, off Oswego), had been found on the beach to the north some four miles below the Big Sandy Station. The keeper took a boat, and in tow of the tug John Navagh, proceeded to the latter station, where he got the keeper and crew to launch the life-boat and assist in recovering the corpse, which was soon found and turned over to friends in Oswego.

July 19.—At half past 1 in the afternoon, a boy named Frank Little, eight years old, while playing upon the Government wharf at Sand Beach, Michigan, fell overboard, and would have been drowned but for the assistance of Surfman James McCash, of Sand Beach Station (Tenth District), who hurried to the spot just in time to save him, the little fellow being unable to swim.

July 20.—At half past 3 in the afternoon, as a man named Matthew O'Connor was crossing the Genesee River at Charlotte, Lake Ontario, New York, in a small skiff, he lost his balance and fell overboard, and would have drowned but for the prompt action of Surfman Charles H. Corey, of the Charlotte Station (Ninth District), a quarter of a mile distant, who hurried to the spot upon witnessing the accident, and arrived just in time to save the poor fellow as he was sinking.

July 20.—At half past 6 in the evening a man named Gallagher called at the Cleveland Station (Ninth District), Cleveland, Ohio, and requested assistance in recovering the body of his son, a boy thirteen years old, who had been drowned that afternoon while bathing. Three of the surfmen set out to the spot at once in a skiff, with grapplings, while the keeper followed along the beach on foot. Although quite a crowd had collected nothing seems to have been done until the station crew arrived, although two professional divers were present. As the water was not more than five or six feet deep the grapnels were thrown aside and the men divested themselves of their clothing and plunged in, and

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after vigorous search for half an hour the body was found and conveyed ashore to the sorrowing parent.

July 23.—The crew of the Milwaukee Station (Eleventh District), assisted in the recovery of the body of a boy named Ernest Spencer, six years old, who had been drowned about two miles north of the station on July 16. They had engaged in the search on two previous days (July 20 and 22), but it was not until July 23 that the corpse was found.

July 25.—At 6 o'clock in the evening, as the steamer Rainbow, of the Louisville, Evansville, and Henderson Mail Packet Line, was passing down the Indiana chute of Falls of the Ohio, *en route* from Louisville to Henderson, Kentucky, with thirty-seven passengers and a large miscellaneous cargo, she struck a loose rock near the left-hand reef and sprung a dangerous leak, compelling the pilot in charge to head her for the Indiana shore, where she sunk in shoal water close in to the bank, about three-quarters of a mile below the chute. Signals were at once made for the assistance of some steam-tugs which were at work at Portland, on the Kentucky side of the river. The crew of the Louisville Station (Ninth District) had in the mean time discovered the steamer's danger, and they immediately put off to her aid, arriving alongside soon after she grounded. Finding that the passengers and crew (numbering one hundred and six persons, all told) were in no immediate peril, the keeper and his men went into the hold, where the water was then waist deep, and found and stopped the leak. By the time this was done three tow-boats arrived from Portland with their pumping apparatus. The life-saving crew then assisted in rigging the pumps, and in a short time the Rainbow was pumped out and a gang of carpenters put to work repairing damages. Part of the station crew remained on board all night, in readiness to assist in case their services should be needed further, and did not leave her until she was safely back at her berth at Louisville next morning.

July 25.—The three-masted schooner Stampede, of Sheboygan, Wisconsin, bound from Alabaster, Michigan, to Chicago, Illinois, with a cargo of three thousand barrels of calcimine plaster and carrying a crew of seven men, stranded on the outer reef on the east side of Middle Island, Lake Huron, about two miles east-southeast of the Middle Island Station (Tenth District), at half past 3 in the morning. The vessel was discovered at quarter past 4 by the morning patrol from the station as he made the circuit of the island, and without loss of time he hurried to the station and gave the alarm. The life-saving crew responded quickly to the call, and in thirty-five minutes from the time she was sighted by the patrol they were alongside in their surf-boat. Finding that the schooner was hard and fast on the reef, and that it would be necessary to lighten her, the first thing done was to throw overboard about seven hundred barrels of the plaster. They then carried out the schooner's anchors, and after much labor and difficulty succeeded, at 2 o'clock in the afternoon, in heaving her off without damage. The captain expressed much thankfulness for the assistance rendered by the men of the station, and freely acknowledged that the safety of his vessel was due to their efforts.

July 26.—At daybreak one of the crew of the Buffalo Station (Ninth District), Buffalo, New York, discovered a steam-tug aground on Horseshoe Reef, Niagara River, about a mile and three-quarters northwest of the station. He quickly reported to the keeper, and in a short time the life-saving crew were on their way in their surf-boat to the steamer, with the necessary appliances for getting her afloat. The vessel was the James Ash, of Buffalo, with a crew of three men. She was on her

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way down Niagara River to Tonawanda when the accident occurred, having missed the channel and struck on the reef during the night. The life-saving crew arrived in good season, and commencing operations at once they succeeded in half an hour in hauling the tug safely off the reef, and thus enabled her to proceed on her way without sustaining any damage.

July 26.—The crew of the station at Buffalo, New York (Ninth District), were called upon to attempt the resuscitation of a woman named Annie Doyle, cook of the schooner Eveleigh B., lying in the harbor, who fell overboard and was drowned while stepping onto the vessel from the wharf. The men applied the usual methods for the restoration of apparently drowned persons for over an hour, in the presence of two physicians, but without effect. The body had been under water about twenty minutes when brought to the surface.

July 26.—A few hours after their return to Louisville with the steamer Rainbow, as before recorded, the crew of the Louisville Station (Ninth District) were again called into service by the report of the man on lookout that a skiff with two men in it was drifting down the river and in danger of going over the cross-dam of the falls. Boat No. 1 was quickly manned and pulled to the rescue, the skiff being overtaken just in time to avert disaster, it being within twenty feet of the dam when the sturdy life-savers checked its further progress. The occupants of the skiff were Frenchmen, unable to speak English, who had ventured out on the river for pleasure, in complete ignorance of the danger to which they were exposing themselves. The skiff was towed safely to the river bank and the men sent on their way rejoicing, truly thankful for their escape from a watery grave. As the keeper quaintly expressed it in his report, they had "had a close call."

July 26.—At 10 o'clock in the night the tug Joseph Goldsmith, with a scow in tow, arrived off Two Rivers, Wisconsin, and made signals for assistance in making the harbor, there being no beacon lights to guide her in. The keeper of the Two Rivers Station (Eleventh District) at once placed a lantern on each of the piers at the entrance, and the steamer was thus enabled to reach port in safety.

July 27.—On this date, at about half past 8 in the morning, the keeper of the Evanston Station (Eleventh District), Lake Michigan, put off in a boat and rescued two little boys, named David Ketcham and Norman Copeland, aged eight and six years, respectively, who had gone adrift on a raft and would probably have been lost but for his timely assistance. It seems the boys were playing upon the raft when one of them cast off the line which held it to the shore, and the raft, thus released, at once drifted out into the lake before the fresh southwest wind then blowing. The accident occurred about a mile south of the station, and the raft was half a mile from shore when overtaken by the keeper and towed back.

July 28.—At 5 o'clock in the evening a man named Frank Ettman fell into the Menomonee River, at Milwaukee, Wisconsin, and would have been drowned but for the prompt aid of the Milwaukee crew (Eleventh District), who hurried to the spot just in time to save his life.

July 30.—At 5 o'clock in the evening the lookout at the Saint Joseph Station, (Eleventh District), Lake Michigan, saw a boy fall into the river opposite the station. The crew instantly set out in two or three small boats to the rescue, but while they were pulling across, the boy's father, Mr. William Foy, jumped in and lifted his son out. They reached the spot, however, in time to help Mr. Foy out of the water, and then con-

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veyed them both to the station and dried their clothing so they could return to the city all right.

August 1.—At 6 o'clock in the morning, during a fresh southeasterly blow, which was directly on shore, the patrol from the Sand Beach Station (Tenth District), Lake Huron, reported that the schooner Annie, of Sand Beach, Michigan, had dragged ashore about twenty rods south of the station. It was raining quite hard, and the surf was increasing with the wind. The keeper, seeing that his boat was not needed, proceeded with his crew to the vessel on foot. The three men composing the schooner's crew were already at work trying to get her off. The station men therefore pitched in with a will, and in less than an hour had the schooner afloat without damage and safely anchored in deep water. The aid of the life-saving crew was very opportune, for the bottom where the vessel lay was rocky, and the sea rolling in would soon have knocked her to pieces, and made her a complete wreck. It was also fortunate she had no cargo on board, as it enabled them to handle her the more easily.

August 1.—Scarcely had the men of the Sand Beach Station (Tenth District) returned to their quarters when the lookout reported another schooner ashore some distance beyond where the Annie had struck. The surf-boat was instantly launched, and the crew started to her assistance, a ten minutes' pull taking them alongside. She was the Sweepstakes, of Sand Beach, Michigan, with a crew of three men, and in ballast. She had dragged ashore in the gale the same as the Annie. The life-saving crew lost no time, but got to work as quickly as possible, and after running a line to a crib out in the lake soon hauled her afloat without damage. The ready aid of the station crew saved her from wreck, as the surf was very rough and she was pounding hard on the bottom when they arrived. After mooring her in a good berth they conducted the crew to the station to remain until the blow was over, stopping on the way thither alongside the scow Eagle, a small vessel, anchored near by, to take off a man who hailed them with a request to be taken ashore, he preferring to land rather than suffer the discomforts of riding out the gale in his craft. The station crew did excellent work, and were back in their quarters by 10 o'clock in the forenoon.

August 2.—At 9 o'clock at night the patrol from the Saint Joseph Station (Eleventh District), Lake Michigan, heard shouts on board the steamer Lora, lying at Morrison's wharf, on the opposite side of the river, that there was a man overboard. The patrolman immediately called to the keeper, who at the time was making his boat fast at the back of the station, and both started across the river to the man's assistance. They found him clinging to one of the Lora's fenders, and got him into the boat as quickly as possible and took him ashore. He was intoxicated and unable to speak English, but a man was soon found who told them his name and where he lived, so they were enabled to see him safely home.

August 3.—At about 6 o'clock in the evening, as a pleasure party belonging to the German Saint Paul's Church, of Erie, Pennsylvania, were about to land from an excursion steamer on their return to the city, a little five-year-old girl, named Mary Sopp, lost her hat, and in endeavoring to catch it fell overboard. Great confusion ensued among the women and children. By a lucky circumstance two surfmen, named Peter Murphy and Henry Stram, of the Presque Isle Station (Ninth District), Erie, Pennsylvania, were on their way over to the city for supplies, and noticing the excitement on board the steamer and guessing the cause, they at once pulled to the spot, just as the little one had

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disappeared for the second time, probably to rise no more. One of them made a lunge and providentially caught the child by the hair and pulled her into the boat in an insensible condition. Their familiarity with the method in vogue in the Service for the restoration of apparently drowned persons was speedily turned to account, and in a short time the child was brought to and placed in the arms of her friends, who at once took her home. It was a remarkably narrow escape, as a few seconds more would probably have sealed her fate. A local paper closed its account of the rescue with the following words of praise: "The Life-Saving men are entitled to great credit for their promptness and efficiency in the case. They were the right men in the right place; knew what to do and how to do it, and did it."

August 3.—At about noon the tug Henry S. Sill, while towing out of the harbor of Racine, Wisconsin, the schooner Souvenir, bound to Muskegon, Michigan, dropped the tow-line and engaged in a race with the tug Rudolph Wetzel for an incoming vessel. The Souvenir, having been thus suddenly abandoned, found herself unable to keep clear of the beach, and let go her anchor, but the wind being strong from the eastward and the lake rough, she parted the chain and drifted ashore about a mile north of the Racine Station (Eleventh District), and commenced pounding heavily in the surf. Her crew got out a line and endeavored to run the end of it in their yawl to the tug Wetzel (which by this time had discontinued the race and headed for the Souvenir), but it proved too short. At this moment the life-saving crew arrived, and seeing the great danger the schooner was in, promptly beached their boat, ran back to the station, and obtained a longer hawser, which they hauled down to the boat by team, and then taking it on board the schooner ran the end to the tug, and thus enabled the latter to haul the schooner afloat and take her back into the harbor.

August 5.—At 2 o'clock in the morning, the weather being rainy and the wind directly off the land, the schooner L. B. Shepard, of Chicago, Illinois, in attempting to beat into the harbor of Muskegon, Lake Michigan, encountered a strong adverse current, which would have carried her out into the lake again but for the prompt assistance of the pier-end lookout from the Muskegon Station (Eleventh District), who threw her a line and helped make her fast to the pier until the aid of a harbor tug could be obtained to tow her in.

August 6.—At about half past 2 in the afternoon the lookout at the Cleveland Station (Ninth District), Lake Erie, saw a man jump from a boat into the lake, some distance out, between the station and the breakwater. The wind blowing fresh from the southwest, the boat drifted beyond the man's reach, and observing his danger the surfman at once gave the alarm, which quickly dispatched two of the crew to his assistance in a skiff. Before they had gone far, however, the poor fellow went down. Instantly the rest of the life-saving crew dashed out in the surf-boat and every effort was made, by diving and sweeping the bottom with drags until 6 o'clock in the evening, to recover the body, but without success, the water being from sixteen to eighteen feet deep. Upon his return to the station the keeper received word that two boys had been drowned that afternoon while bathing about four miles up the river. Two of the crew were at once sent to the spot in the small station skiff with grapnels. The water was there about fifteen feet deep and the men commenced the search by diving for the bodies. This method failing, the drags were brought into use, and one of the bodies, that of Francis Kelly, fourteen years of age, was recovered at half past 1 the next morning (August 7) and delivered to his friends. The search for

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the missing boy and also for the man drowned in the harbor was resumed after breakfast of the 7th and continued all day, both parties being alike unsuccessful. On the following day (the 8th) friends of the drowned man brought a number of giant-powder torpedoes to the station, which the life-saving crew exploded near the spot where the poor fellow had disappeared. That night a blow came on from the northwest, and at daylight of the 9th the body was found washed ashore on the rocks. No tidings have been received of the finding of the body of the other boy drowned in the river.

August 6.—At about half past 3 o'clock in the morning, during the prevalence of a thick fog, the patrol from the Racine Station, (Eleventh District), Lake Michigan, heard the whistles of a steamer out on the lake as though in distress, and quickly reported the fact at the station. The crew at once manned the life-boat and went out in tow of the tug Rudolph Wetzel to Racine Reef, some two miles from land (being guided thither by the sound of the whistles), and there found the steamer Escanaba, of Marine City, Michigan, with a crew of sixteen men and deeply laden with iron ore, from Escanaba, Michigan, for Chicago, Illinois, stranded on the reef. She was so hard aground that it was found necessary to lighten her, and while the preparatory arrangements were being made the crew returned ashore for breakfast. They then went off again and sounded all round the vessel to find the deepest water, and when that was done assisted in the removal of cargo until sundown, when, as the night bade fair to be calm and foggy, they landed at the station to obtain rest, promising to return at once should the weather change. They again boarded the vessel early the next morning (7th) and worked hard all day until half past 4, when she was sufficiently lightened for the tugs Henry S. Sill and M. A. Knapp to pull her afloat, after which she proceeded on her voyage. The steamer was fortunate in getting off as she did, for the wind freshened from the northeast that afternoon, and the next day a gale set in from the same quarter, which would have proved very disastrous had she remained on the reef.

August 7.—The barkentine Edward Cushing, of Camden, Maine, bound from Boston to Camden in ballast, with a crew of six men and one passenger on board, encountered foggy weather with light southerly winds, and finding herself close in to the coast just to the westward of Penobscot Bay, was compelled to anchor to avoid being swept ashore by the current. It was 6 in the morning when she came to in the vicinity of Norton's Island Reef, almost in the breakers. She was in quite a dangerous situation, for if left there until low water she would ground upon the rocky bottom, with the certainty of going to pieces, as the sea was very rough. Fortunately she was soon discovered by one of the men belonging to the White Head Island Station (First District), on his way to his fish-nets. Upon his going alongside the captain expressed alarm for the safety of his vessel and requested the immediate assistance of the station crew, the station being but half a mile distant to the southeast. The man at once notified the keeper, who, although the station was closed for the summer, soon assembled his crew and went on board. The bark was light-handed, being four men short of her full complement. The life-saving crew, therefore, turned to and ran out a kedge and then hove up the anchor and kedged the vessel some two hundred yards further off-shore. By this time the wind had freshened so that it became necessary to let go both anchors with a good scope of chain to hold her, it being 10 o'clock at night when they finished making everything snug, and returned ashore. Next morning, the 8th, at

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7 o'clock, the station crew again went on board and kedged the vessel further from the reef, and when far enough off to be well clear of the rocks they got her under way and beat her round White Head into Seal Harbor, where she was safely moored by dusk in the evening. It will thus be seen that the crew of the station were busily engaged for two days in assisting to extricate the vessel, and there is no doubt that it was mainly owing to their prompt aid and thorough knowledge of the local dangers to be avoided that the vessel was saved to her owners.

August 7.—In the evening, between 6 and 7 o'clock, as one of the crew of the Sturgeon Point Station (Tenth District), Lake Huron, was out on the beach, he met the crew of the schooner Milwaukee Belle, of Chicago, Illinois, who had just brought ashore their captain suffering with cramps, and in need of medical attendance. The keeper did what he could for his immediate relief and advised the men to take him to Harrisville, a few miles distant, where the nearest medical aid could be obtained. The life-saving crew then went out to the vessel, which had been left in charge of the mate, and informed him where the captain had been sent.

August 7.—At 5 o'clock in the evening, as the Racine crew (Eleventh District), Lake Michigan, were returning in their boat from the steamer Escanaba, which they had helped to release from Racine Reef, as previously recorded, they discovered a schooner ashore just beyond Wind Point, Wisconsin, about five miles north of the station. They at once headed toward her, but before going far were hailed by the tug Rudolph Wetzel for the loan of the station-hawser with which to go to the schooner's aid. The hawser was accordingly brought from the station and, in tow of the tug the life-saving crew proceeded to the stranded vessel, arriving there about 6 o'clock. She was the Caledonia, of Racine, which had been anchored in the vicinity of the Point loading stones for Chicago, and had been driven ashore at 4 o'clock by a heavy squall from the northeast. A gang of men were busily engaged throwing cargo overboard to lighten her when the relief party arrived. As the schooner lay in too shoal water for the tug to get near her the end of the hawser was taken in by the life-saving crew with the surf-boat, and as soon as they got it fast the tug commenced pulling and in half an hour had her afloat. She was then towed into Racine Harbor.

August 8.—The schooner B. H. Jones, of Perth Amboy, New Jersey, bound from Rondout, New York, to Baltimore with a cargo of cement, and having four passengers on board besides her regular crew of six men, stranded at 5 o'clock in the evening of August 7 on the Middle Ground, an outlying shoal at the entrance to Chesapeake Bay, about eight miles southwest by west from the Smith's Island Station (Fifth District), Virginia, the accident being attributed to the current. The station was closed for the summer, the only person present being the keeper. There were not enough people on the island to man the boat, so the keeper, as soon as he saw the vessel's danger, dispatched a messenger to the main-land to muster a crew. Owing to the distance to be traveled the men did not reach the station until after midnight, and as quickly as possible the surf-boat was launched, reaching the schooner at 3 in the morning (August 8). The station men turned to with a will, assisting the schooner's crew, and after considerable effort succeeded in extricating the vessel from her dangerous situation, thus probably saving her from wreck.

August 8.—Between 2 and 3 o'clock in the afternoon two boys, who

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had borrowed a small scow and rowed over to the Chicago Breakwater, in attempting to return, against a strong northwesterly breeze, found themselves unable to manage their craft, which was being rapidly swept to the southward, where there was danger of their being dashed by the high sea against the south end of the breakwater, when their situation was observed by the crew of the Chicago Station (Eleventh District), who quickly put out in the surf-boat, and, overtaking them just in time, brought them safely ashore.

August 9.—At about 4 in the afternoon the keeper of the Cross Island Station (First District), coast of Maine, discovered pieces of wreckage floating past the island, and fearing a vessel had been wrecked in the vicinity, he at once mustered as many of his men as he could find—the station being closed for the summer season—and started in search of her. The weather was very foggy, but pulling to the eastward they shortly found the vessel a complete wreck on the southernmost of the Double Headed Islands, off the eastern end of Cross Island. Her crew of five men were safely ashore, having landed without assistance. She proved to be the schooner Hugh Ross, of Parrsboro', Nova Scotia, to which place she was bound, from Plymouth, Massachusetts, in ballast; the captain reporting that she had run on in the fog the night before. As her boat had been lost, and the sailors were without means of reaching the main-land, the keeper conducted them thither in his boat and procured for them transportation to Eastport, where assistance could be obtained from the British consul in reaching Parrsboro', where most of them belonged.

August 9.—The fishing schooner Hattie N. Reed, of and from Gloucester, Massachusetts, with a crew of thirteen men, stranded in a fog at half past 7 in the evening of August 8 on Newman's Point, Tremont, Mount Desert Island, Maine; the place where she struck being about five miles to the westward of the Cranberry Isles Station (First District). The station was closed for the summer, but news of the accident reaching the keeper on the following afternoon at 5 o'clock (August 9), he mustered his crew as quickly as possible and started for the vessel. When they arrived they found the revenue steamer A. J. Dallas anchored near by, with her hawser to the schooner, endeavoring to haul her off. The vessel was floated off by the Dallas the same evening and towed to Southwest Harbor, the life-saving crew aiding in getting her there and in bringing her safely to anchor.

August 10.—At about 3 in the afternoon the keeper of the Cross Island Station (First District), coast of Maine, discovered through the fog the schooner Pushaw of Saint George, Maine, anchored close in to the breakers in a very dangerous situation, on the south side of Cross Island. She had a crew of four men, and was bound from Boston to Calais in ballast. The captain reported that in running along the coast in the fog he had suddenly found himself close in shore and that he had anchored to avoid going onto the rocks. He was very anxious to get his vessel into a safe place, so the keeper with four of his men—the station being closed for the summer and the crew off duty—helped get her under way and piloted her into Cross Island Harbor, where the anchorage was good, and where she would be safe until the fog lifted and enabled her to resume her voyage.

August 10.—A telegram having reached the keeper of the Big Sandy Station (Ninth District), Lake Ontario, New York, at an early hour from the captain of the yacht Cricket that the yacht's small row-boat had been lost somewhere in Mexico Bay, Lake Ontario, two of the crew were dis-

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patched in search of it, one of them along shore and the other in a sail boat. They found the missing boat about seven miles northward from the station and returned it to its owner.

August 10.—The crew of the Sturgeon Point Station (Tenth District), Lake Huron, observing that the crew of the schooner Milwaukee Belle, of Chicago, Illinois, anchored off the station, were coming ashore in their boat, went down to aid them if necessary. It was fortunate they did so, for when the surf was reached the boat broached to and filled with water, throwing some of the men overboard, and nearly drowning one of them. The life-saving crew assisted them ashore and helped haul up the boat and bail it out.

August 10.—On this date a small skiff containing a man and a woman, named Frink, was swept over the falls of the Ohio River, near Louisville, Kentucky. The man was saved by the crew of the Louisville Station (Ninth District), but the woman was drowned. (See page 19.)

August 11.—Shortly before noon a man named Wright, of Texas, New York, in company with a lady friend named Marshall, from Syracuse, set out from Mexico Point in a small skiff for a row on Lake Ontario. As the lake was quite rough, two or three of the crew of the Salmon Creek Station, (Ninth District,) Salmon Creek, New York, who saw them start and feared trouble from the awkward manner in which the skiff was handled, jumped into the station dingey and pulled down the creek so as to be on hand in case of accident. Sure enough, before the station men had gone far, the skiff capsized, throwing the two pleasure-seekers into the water. They clung to the bottom until the life-savers arrived, when one of the latter sprang into the water and helped the woman into the station boat, and while his comrades were taking her ashore, assisted the man to land his skiff.

August 11.—At a little before 2 o'clock in the afternoon the stern-wheel steamer Buckeye State, of Cincinnati, Ohio, with eighty persons on board, including thirty passengers, and a heavy cargo, bound from Huntington, West Virginia, to Saint Louis, Missouri, in attempting to make a landing at the foot of Fourth street, Louisville, Kentucky, got caught by the strong current setting over the falls as the pilot was rounding her to, and before it could be prevented she was swept onto the wing-dam where she broke in two and quickly sunk to her boiler-deck. The accident was observed from the Louisville Station (Ninth District), and in two or three minutes from the time the alarm was given the life-saving crew were alongside with their boats ready to render assistance. Much excitement prevailed among the passengers when the boat sunk, but the early arrival of the life-savers and other assistance from the shore reassured them. The station men gave their first attention to the ladies and children, whom they landed with their baggage as quickly as possible, and when they were all safe the male passengers were taken ashore; twenty-two out of the thirty being thus aided. The rest were landed by the other boats. A couple of steam tugs, coming alongside while the crew were thus engaged, rendered further service by the life-saving crew unnecessary. The steamer became a total wreck, and about one-third of her cargo was lost.

A local paper in its account of the accident says:

"The crew of the life-saving station were promptly on hand with their long boats, and did vigorous and efficient service in removing passengers and baggage. All the passengers were safely carried to the shore, and then the tugs De Pamo and Transit went to the assistance of the disabled vessel."

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On the next day Keeper Devan received the following letters of thanks from passengers who had been landed from the wreck:

"LOUISVILLE, KY., *August* 12, 1882.

"DEAR SIR: We called on the afternoon of the 11th, but had not the pleasure of meeting you, and therefore take this method of returning our thanks to you and your efficient corps of assistants for their promptness in reaching the wreck of the steamer Buckeye State and for their kindness and courtesy in first caring for the frightened ladies and children.

"We regret exceedingly that the passengers became so scattered after the disaster that it was impossible for them to make a common expression of their thankfulness to and admiration of your admirable corps. Wishing you success in your noble avocation, and hoping we may some time be able to reciprocate your good will, we remain,

"Very respectfully,

"H. B. MCLAIN,
"R. B. MCLAIN and family,
"*Of Wheeling, West Virginia.*

"Capt. WILLIAM M. DEVAN,
"*United States Life-Saving Corps.*"

"LOUISVILLE, KENTUCKY, *August* 12, 1882.

"DEAR SIR: I desire to extend to you and your men the heartfelt thanks of myself and family for your noble and efficient services of yesterday in rescuing us from the wreck of the ill-fated Buckeye State.

"Three of your noble men I would especially commend for their brave and indefatigable work did I but know their names. All I know of them is they were in a boat marked No. 10; and never was boat manned by three more efficient men. Our hearty thanks to the tender, compassionate hearts that lie beneath those broad, massive shoulders and arms with muscle like iron. Perhaps they will remember their debtor.

"C. E. CASBY.

"SUPERINTENDENT LIFE-SAVING SERVICE,
"*Louisville, Kentucky.*"

August 11.—At a little before 5 o'clock in the morning the keeper of the Sturgeon Point light-house called at the Sturgeon Point Life-Saving Station (Tenth District), Lake Huron, and informed the keeper that he had just observed, as he was extinguishing his light, a vessel about six miles distant to the southeast, with a signal of distress flying. The live-saving crew turned out at once with ther surf-boat to offer assistance, but when within a mile of the vessel, a tug which had put out to her from Harrisville, Michigan, reached her and took her in tow, the vessel then hauling down her colors. It was afterwards learned that she was bound down the lake to Green Bush, and having lost her ground tackle the day before, she needed a tug to take her in.

August 12.—At about 5 o'clock in the evening the lookout on the roof of the Cleveland Station (Ninth District), Lake Erie, reported a vessel on fire some six or seven miles out on the lake to the northeast. The crew quickly launched their boat and after a hard pull of three-quarters of an hour drew up alongside the burning vessel, which proved to be the harbor tug James Amadeus, of Cleveland, Ohio, with a crew of three men. There were two other tugs, the Dreadnaught and the Maggie Sanborn, already on the spot rendering aid. The life-saving

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crew were soon at work cutting holes in the deck to get the hose to play on the fire then raging below, and while they were deluging the vessel with water the two assisting tugs towed the vessel as fast as they could towards the harbor, the fire being almost extinguished by the time she got there. The fire had made rapid headway before the life-saving crew could arrive, and the engine-room and pilot-house were completely destroyed; but the men contributed largely by their efforts in getting the fire under control and finally subduing it.

August 12.—About 10 o'clock in the morning the keeper of the Cape Arago Station (Twelfth District), coast of Oregon, observing a salmon-fishing boat running in towards the cape, before a strong northwest wind and high sea, set the ensign as a guide for her, but she suddenly changed her course and stood in for the beach between Coos Head and a low point of land about one and a half miles from the station. To attract the attention of the boat's occupants the ensign was dipped and other signals made, but no notice was taken of them and she ran in behind the point. There being no crew on duty at the station, the keeper took a couple of life-belts and a heaving-line, and in company with the keeper of the light-house started for the beach, upon reaching which, they found the boat containing two men anchored outside of the breakers. By signalling and shouting the station-keeper succeeded in instructing them how to get in, which they did in safety, and their boat being secured they were taken to the station in a cold, benumbed condition, and made comfortable.

The boat had left Astoria, Columbia River, on the 10th, bound to San Francisco, and on the night of the 11th got into a heavy northwester and anchored forty-five miles above Cape Arago. Towards morning she was swept into a creek, but a strong tide cut her out again, when sail was made and she soon afterwards hove in sight of the Arago Station, as above described.

August 13.—At about noon the steamer Gazelle, of Detroit, Michigan, arrived in the harbor of Fairport, Ohio, with an excursion party on board, and reported that when about a mile out on the lake a man named John Miller, of Cleveland, had jumped overboard with the intention of swimming in. The crew of the Fairport Station (Ninth District,) upon hearing the news, at once went out in their surf-boat, picked the man up and brought him on board the steamer. Although a good swimmer, he was much intoxicated, and it is doubtful whether he could have reached the shore safely.

August 13.—Between the hours of 3 and 6 o'clock in the afternoon of Sunday, August 13, the crew of the Louisville Station (Ninth District) were kept more than ordinarily busy, although the first day of the week, if the weather be fine, almost invariably brings its record of one or more rescues of people in danger near the Ohio Falls by this crew, on account of the large number of pleasure-seekers usually out upon the river. On this date the crew were instrumental in preventing four boats or skiffs from going over the falls, the number of people thus saved from almost certain destruction being eleven. The first alarm was given soon after 3 o'clock, when the lookout reported a small skiff with four men in it pulling carelessly and quite unconscious of their peril directly towards the falls. The life-saving crew promptly set out to intercept them, and dashing alongside the skiff as it neared the dam took it in tow and brought its occupants safely to the shore. The men had gone out rowing for pleasure, although inexperienced oarsmen and ignorant of the danger they were exposing themselves to. They were all residents of Louisville, Kentucky, but refused their names

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when questioned by the crew, fearing to give publicity to their rash conduct.

August 13.—About an hour after the rescue of the four men, as above narrated, another alarm was struck on the gong at the Louisville Station (Ninth District); this time the lookout reporting a skiff with two boys in it dangerously close to the cross-dam at the falls. A moment later one of the station boats was off at the top of its speed, the sturdy life-savers arriving just in time to prevent the skiff from going over the dam, and towing it with its occupants to the station. The keeper sent them back to the boat-house where the skiff belonged, after cautioning them to keep close in-shore on the way and admonishing them not to be caught in such a scrape again. The boys' names were Louis Bailey and Oliver McCorkle. They were not more than twelve or thirteen years of age, and entirely too small to be out on such a dangerous river alone.

August 13.—The third alarm was given at 5 o'clock, a skiff with three boys in it being in danger of going over the dam. As soon as the gong struck, boat No. 2 shot out from the station, and in six minutes the life-savers had the boys ashore. One of them was not more than seven years old, the others being about fifteen or sixteen. None of them could swim. They belonged in Louisville, but would not give their names. Had they gone over the falls their death would have been certain.

August 13.—The fourth and last rescue for the day by the Louisville crew was accomplished at about 6 o'clock. It seems that two men, named Gus. Sweitzer and Robert W. Ramsey, living in Louisville, had gone out for an afternoon row upon the river, and before returning ashore it was proposed to visit the steamer Buckeye State, wrecked upon the dam two days before. Finding the current was strong and that they were running into danger, they changed their minds and put about for the city. In their struggle against the swiftly-moving waters one of the oars snapped in two, and they immediately began to lose ground. An alarm being given, the station crew dashed out at once to the men's assistance and saved them from being swept over the dam and lost. It was a narrow escape, and the men were becomingly grateful to their rescuers.

August 14.—The keeper of the Cranberry Isles Station (First District), coast of Maine, having learned from some fishermen that there was a vessel ashore on Mount Desert Rock, sixteen or seventeen miles south of the station, mustered his crew (the house being then closed for the summer) and started at half past 6 in the morning with the surf-boat, in tow of the revenue steamer A. J. Dallas, to her assistance, arriving at the vessel at about half-past 9. She proved to be the three-masted schooner Saint John, of Saint John, New Brunswick, to which port she was bound from Boston in ballast, her crew numbering nine men. She had also two passengers on board. She had stranded five days previously in thick foggy weather. Besides the Dallas there were two other steamers present—the United States buoy-tender Iris and a tug from Saint John. The life-saving crew were kept busy all day running lines and in every way possible assisting the steamers in their efforts to float the schooner off, but as the tide did not rise high enough by about three feet, and all the hawsers in use parted without budging the vessel in the least, the attempt was abandoned for the day at the instance of the owner, who was present, and the life-saving crew returned in tow of the Dallas to the station, arriving home at half past 5 in the evening. The owner subsequently sent to Saint John for the necessary appliances for blocking her up and launching her, and she was afterwards got off and

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towed to Southwest Harbor for temporary repairs before proceeding to her destination.

August 15.—On the morning of August 14, as the crew of the Cranberry Isles Station (First District) were going off in tow of the revenue steamer Dallas to the assistance of the schooner Saint John, stranded on Mount Desert Rock, they discovered a schooner ashore on Black Island, about eight miles to the westward of the station. They stopped, therefore, on their way back in the afternoon, and after consultation with the captain agreed to assist him the following day in getting the vessel off. She was the Madam Roland, a Gloucester, Massachusetts, fisherman, with a crew of ten men, bound home from the Bryers Island ground with a fare of fish, and had stranded at 3 o'clock in the morning of August 9 during a thick fog. She had received considerable damage on the rocks, starting her wood ends and garboard forward, besides staving a hole on the starboard side, so that the tide ebbed and flowed within her. She had been stripped and a part of her cargo saved, in a damaged condition, by her own crew before the life-saving men visited her. The latter started from Little Cranberry Island in their surf-boat at daylight on the 15th, reaching the schooner, after an eight-mile journey, at half past 6. Operations were at once commenced, the keeper taking charge and having all the leaks stopped as well as possible, by chinsing the opened seams and battening the hole in her side. After that the ballast was removed, and with the aid of anchors planted off shore they succeeded on the flood tide in heaving the schooner safely afloat. She was then taken in tow by the revenue steamer Dallas to Bass Harbor, Mount Desert, and moored to the wharf where she could be refitted, preparatory to resuming her voyage. The captain had almost given up hope of saving her before the life-saving crew arrived, and was so well pleased that he presented each man with a sum of money in token of his appreciation of their services.

August 15.—The sloop Unqua, of Saint Augustine, Florida, with a crew of two men, bound from New York to Jacksonville, Florida, in ballast, encountered rough weather off the coast of North Carolina, and sprung a leak, and in attempting to run into Oregon Inlet during a thick rain-storm to repair damages, missed the channel and ran ashore. She struck at the north side of the inlet about two miles and a half south of the Bodie's Island Station, (Sixth District). The sea-coast stations were closed for the summer and the crews off duty, but Surfman Wise, of the Oregon Inlet Station, just south of the inlet, saw her strike, and, in company with a man named Green, living near by hurried to her assistance. They waded on board and manned the pumps and soon got the leak under control. An anchor was then carried out, and after considerable difficulty the sloop was hove off into the channel. While hoisting the mainsail, however, it blew to pieces, and the sloop drifted ashore again, compelling them to wait for the tide to rise before she could be got afloat. When she did come off they took her to an anchorage in Roanoke Sound. The next day the keeper of the Bodie's Island Station took a letter from the captain to the nearest post-office, ordering a new mainsail from New York. The sail was not received until the month of November, and just about the time it came she parted her mooring in a heavy northeast gale and went ashore again, this time being assisted off by the entire crew of the Oregon Inlet Station, who were then on duty and who saw her safely on her way into Pamlico Sound. The sloop seemed fated, however, for, on the 28th of November, when at anchor in Bogue Sound, North Carolina, near Old Topsail Inlet, and beyond the reach of assistance from the stations, she again broke adrift during a

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heavy northwester and drove ashore near Fort Macon, where she became almost a total wreck and was sold for a nominal sum.

August 16.—At about 5 in the morning, as the schooner Redondo, of and for Ellsworth, Maine, from Boston, with a general cargo and carrying a crew to four men, was standing in past White Head, at the westerly side of the entrance of Penobscot Bay, a dense fog prevailing at the time, she was run into by the steamer Penobscot, and lost her jibboom, besides receiving other damage. The steamer struck the schooner with such force that the latter was driven almost onto the rocks, her anchor being let go just in time to hold her. The crash of the collision was heard on shore by Surfman Grant, of the White Head Island life-saving crew (First District), who at once hurried down abreast of the schooner to ascertain whether assistance was needed. The captain replying to his question in the affirmative, Grant quickly reported to the keeper, and, although the house was closed for the summer, the men were soon assembled and off to the vessel, reaching her at 6 o'clock. The schooner lay but fifty yards from the rocks in a bad position. The keeper, familiar with the locality, at once took charge, and ordered the anchor hove short and sail hoisted. The boat was then sent out ahead with a towline and the vessel's bow winded off shore so the sails would help her, and tripping the anchor at the same time they slowly, with the little aid the sails afforded in the light breeze, towed the schooner out into the offing and left her to proceed on her way. The service thus rendered, while appearing perhaps trivial in its relation, amounted practically to the saving of the vessel, for her own crew of so few men could have done little or nothing alone towards extricating her.

August 17.—At about 9 o'clock in the morning a man belonging to the sloop-yacht Florence Anna, of Oak Orchard, New York, came to the Big Sandy Station (Ninth District), Lake Ontario, New York, and reported that during the previous night, while the yacht was on her way from the Saint Lawrence River to Oak Orchard, they had lost their reckoning, and as the wind was very light they had run the vessel aground on the beach about three miles north of the station, intending at daylight to haul her afloat again and proceed on their voyage. The wind sprang up fresh, however, from the westward before daylight and made the surf so rough that the yacht settled in the sand and became too deeply imbedded for her crew of three men to haul her off without assistance. The life-saving crew quickly responded to the call for aid, and succeeded in getting the yacht afloat before she could receive any damage, and took her into Big Sandy Creek, where she remained until the next day, and then left for her destination.

August 17.—At half past 4 in the afternoon word reached the crew of the Louisville Station (Ninth District) that a ten year old boy named Philip Barry had been drowned in the river at 4 o'clock, off the foot of Preston street, Louisville, Kentucky, about half a mile east of the station. The crew at once repaired to the place with their appliances for dragging the river bed, and after searching for half an hour they succeeded in recovering the body and turned it over to the coroner for the necessary inquest.

August 17.—At 8 o'clock at night as one of the crew of the Saint Joseph Station (Eleventh District), Lake Michigan, was starting out on patrol, he discovered fire in a large pile of cord-wood on the pier across the river opposite the station. The alarm was quickly given and the crew turned out with buckets and succeeded in saving all but about five cords, there being over a hundred cords of wood in the pile. But for the early discovery of the fire by the station crew the entire quantity would have been destroyed.

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August 17.—The schooner Josephine, of Sheboygan, Wisconsin, from Chicago, Illinois, for Ludington, Michigan, in ballast, with a crew of three men, sprung a leak at 4 o'clock in the morning of the 16th, when forty miles out from port, and was forced to put back to Chicago for repairs, arriving there in a water-logged condition at about 8 o'clock at night. The crew of the Chicago Station (Eleventh District), offered their assistance soon after she reached the harbor and just as soon as they learned her condition, but it was declined. The next morning, however, when the offer was renewed the captain very gladly accepted their services, and as the pumps were out of order and would not work the station force-pump was taken on board, and in three hours the life-saving crew had all the water pumped out of her, after which they helped get her under way for South Chicago where the owner resided and where she was laid up.

August 19.—At about half past 4 in the afternoon the steamer Gray Eagle, of the Louisville and Henderson (Kentucky) Packet Line, *en route* from Louisville to Henderson, with fifty passengers, and a crew numbering fifty more, and laden with a large and valuable cargo of general merchandise, in descending the Falls of the Ohio, struck a loose bowlder on one of the reefs, which stove a hole in her bottom, through which the water poured with such rapidity that to save her from sinking on the falls the pilot was obliged to head her with all speed for the Indiana shore, where she was grounded in shoal water, near Clarksville. As soon as her distress signal was heard at the Louisville Station (Ninth District), on the opposite side of the river, the crew started to her assistance. The vessel being then aground and her passengers in no danger, the life-saving crew directed their energies towards finding and stopping the leak. They cut holes in the deck to receive the suction hose of three harbor tugs which had also come to the steamer's aid, and then went below where the water was waist deep and assisted in temporarily repairing the damage so she could be pumped out preparatory to floating her off and taking her to a marine railway for permanent repairs. When the leak was got under such control that the steamer's pumps could keep her free, three of the station men returned to their quarters, while the keeper and the rest remained on board until next morning (regardless of their personal comfort after getting wet to the skin while at work stopping the leak), busying themselves during the night in every way they could be of service and only leaving the vessel when there was no further need of their help.

August 19.—At about 10 o'clock in the morning, the schooner Floretta, of and for Chicago, Illinois, from Buffalo, New York, with a cargo of coal, upon entering the harbor of Chicago, in tow of a tug, collided when near the outer breakwater, about half a mile northeast of the Chicago Station (Eleventh District), with the schooner R. B. King, of that port, which was just leaving for Grand Haven, Michigan, both vessels receiving considerable damage to spars and rigging. The station crew went off immediately upon seeing what had occurred, and assisted in clearing the wreckage and getting the two vessels apart, which was accomplished in half an hour, after which they were both towed into port by tugs, the boat's crew remaining by the King until she was safely inside.

August 20.—The south patrol before midnight, from the Sturgeon Point Station (Tenth District), Lake Huron, warned off by burning Coston lights a tug-boat which was in danger of running ashore. His first signal was unheeded, but the second one proved effectual and she sheered off.

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August 20.—At 11 o'clock at night the schooner Hatty Grant, of Chicago, fouled the end of the north pier, Muskegon Harbor, Lake Michigan, near the Muskegon Station (Eleventh District), and damaged herself. The patrolman, who was on the pier at the time, assisted in making her fast until a tug could go to her relief.

August 21.—The schooner Sarah Jane, of Ellsworth, Maine, bound, with a cargo of fish from Otter Creek, Mount Desert, to Cranberry Island, stranded at 7 in the morning on the northwest point of Little Cranberry Island, about a mile and a half west-northwest of the Cranberry Isles Station (First District). The accident was soon discovered by the keeper, who put off with one of his men to her assistance—the station at the time being closed for the summer, and the rest of the crew away. An anchor was carried out, and in a short time they hove the vessel afloat and clear of the rocks. The crew of the schooner numbered three men.

August 21.—Between 11 and 12 o'clock in the day a small sloop-rigged pleasure-boat, with two men in it, who were out for a sail on Lake Michigan, was capsized by a sudden puff of wind when two or three hundred yards from the shore and a little over half a mile to the southward of the Evanston Station (Eleventh District), Illinois. The keeper of the station happening to be at his residence, nearly opposite the spot where the accident occurred, jumped into a boat of his own, and, pulling off, rescued the men, and with their boat in tow started for the shore. By this time the rest of the crew arrived in the surf-boat, having discovered the accident from the station, and they took charge of the capsized sloop and hauled it ashore while the keeper landed the two men.

August 21.—Between 9 and 10 o'clock at night of the same date on which the keeper of the Evanston Station (Eleventh District) rescued the two men from the capsized sail-boat, the crew saved another man, a student of the Northwestern University, who through the careless management of his boat had been capsized in the lake about four hundred yards from the shore directly in front of the station. His cries for assistance being heard by the crew, four of the men put off at once in a boat and brought him safely to the station, where, as he was somewhat exhausted from exposure and nervous excitement, he was properly cared for until sufficiently recovered to be able to reach home with assistance. The crew also recovered the boat and brought it ashore.

August 22.—At 6 o'clock in the morning the sloop William H. Vanneman, of Bridgeton, New Jersey, with a crew of two men, bound out on a fishing cruise from Cape May, while attempting to cross Cold Spring Bar on her way to sea missed stays in going about, owing to the lightness of the wind, and stranded on the shoal ground about a mile south of Turtle Gut Station (Fourth District), coast of New Jersey. The station was then closed for the summer, but the keeper and another man belonging to the station boarded the vessel at about half past 9, as soon as possible after they discovered her. At 10 o'clock she was floated off in a leaky condition being partly full of water. The two life-saving men assisted in taking her back into the harbor and also in freeing her of water.

August 22.—At about 11 o'clock at night, as the steamboat Will Kyle, bound from New Orleans, Louisiana, to Cincinnati, Ohio, was unloading a portion of her freight at Louisville, Kentucky, a colored man, name unknown, employed on the boat, fell overboard and was drowned. The alarm was quickly given and three of the crew of the Louisville Station (Ninth District), about two hundred yards distant, hurried to the spot in their boat with grapplings to search for the body. After

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an hour's search, during which time the steamer left on her trip up the river, the body was recovered and the coroner sent for; the station men watching the body until that official arrived and removed it for burial.

August 23.—Soon after 1 o'clock in the day, during a fresh northerly gale, the keeper of the Middle Island Station (Tenth District) Lake Huron, discovered a signal of distress flying from the schooner Mona, of Detroit, Michigan, which was lying at Monaghan's dock, on the Michigan shore, some two or three miles to the southward and westward of the station, loading cedar posts for transport to East Saginaw, Michigan. The surf-boat was launched and the life-saving crew proceeded to the vessel with all the dispatch possible. The sea was pounding her hard against the dock, and the captain fearful she would be knocked to pieces had set signal for the assistance of the life-saving crew in running an anchor off shore and heaving her clear, his own yawl being leaky and unfit for such work. Besides, there were but five persons on board all told, one, the cook, being a woman. The station crew therefore with their surf-boat carried out the anchor and chain to a good scope off shore, a task that took them at least an hour to accomplish, and then returned aboard and hove the schooner far enough clear of the dock for her to ride out the gale in safety, the captain thanking them heartily as they left for aiding so materially in saving his vessel.

August 24.—At 4 o'clock in the afternoon the lookout at the Cleveland Station (Ninth District), Lake Erie, reported a small boat with two men in it capsized about a half mile northwest of the station. The crew instantly sprang into the surf-boat, and in a few minutes picked up the two men, and with their upset boat in tow conducted them to the station, where dry clothing was offered to them. Their boat was also righted, bailed out, and put in good order again. The men declined changing their wet garments, but were loud in their expressions of thankfulness to the life-saving crew for saving them from a watery grave.

August 28.—At half past 8 o'clock at night the schooner Estella Day, of New Castle, Delaware, with a crew of five men, had just finished discharging a cargo of ice from Boston, at Atlantic City, New Jersey, and was hauling from the wharf out into the stream, when she drifted ashore on the beach inside the harbor, about three-quarters of a mile north of the Atlantic City Station (Fourth District). The mate, who was in charge at the time, being unable to float her off without assistance, requested aid from the keeper of the station. The house was then closed for the summer, but the keeper quickly mustered a boat's crew, five of them belonging to the regular crew, and two volunteers; and with the surf-boat carried out the schooner's anchor with the station hawser attached, and after an all-night job succeeded at 4 o'clock in the morning (August 29) in hauling the schooner safely off the beach.

August 29.—At 5 o'clock in the afternoon the schooner Aroline, of and from Bremen, Maine, on a fishing cruise, with a crew of four men, while standing down Muscle Ridge Channel, Penobscot Bay, grounded on Hurricane Ledge, a very dangerous reef of rocks about two miles to the eastward of the White Head Island Station (First District), coast of Maine. She was quickly seen by the keeper of the station, and although the house was closed for the summer and the crew off duty, he soon mustered enough of the men to go off with him to her assistance. The schooner was hard and fast on the edge of the ledge with a heavy list off shore, so that part of her deck was under water. The first thing done was to carry out an anchor and hawser to windward, and by that means, with tackles from the mast-heads to the hawser, they hove her

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upright before the tide could come in and fill her, in which case there would have been small chance of saving her. Then, when the tide flowed, an anchor was run out ahead and she was hauled safely afloat and taken to the anchorage at Hewell's Island and left in good shape; the life-saving crew returning ashore at about 10 o'clock the same night. The vessel was no doubt saved through their exertions.

August 30.—At a quarter before 9 o'clock at night, the weather being rainy, the patrol from the Grand Point au Sable Station (Eleventh District), Lake Michigan, sighted a vessel on fire out on the lake to the northwest of the station. She was evidently making for the land, so he hurried to the station and reported, and in a short time the life-saving crew were off in their boat to render all the assistance possible. Arriving alongside at a little past 9, soon after she grounded abreast of the Grand Point au Sable light-house, about a mile north of the station, they learned she was the steam-barge Albert Miller, of and from Manistee, Michigan, with a cargo of lumber and laths for Chicago, Illinois. Her crew numbered sixteen all told, and there was also one passenger. The yawl had already been lowered, and the passenger with four of the crew had started for the shore when the life-savers reached the burning craft, and, as the fire was making rapid progress, it was decided to land the rest as quickly as possible. The people were accordingly taken ashore in the surf-boat at once, seven being landed the first trip and five the second, it being learned upon arrival with the first load that the five men in the yawl had had a narrow escape before reaching shore by the capsizing of their boat in the surf. When all were safely ashore, the station crew pulled out to the tug C. Williams, which lay in the offing, and borrowed the necessary tools, with which they returned and scuttled the steamer in several places to let the water into her, and they then set to work endeavoring to subdue the flames. It was of no use, however, and after working strenuously until half past 4 in the morning they abandoned further effort, returned ashore, and gave their attention to the wrecked crew, furnishing a few of them with necessary articles of clothing from the supply placed at the station by the Women's National Relief Association. The people remained at the station until noon that day, or until they could obtain transportation back to Manistee. A small portion of the cargo was recovered, but the steamer became a total wreck. It was probably fortunate for her crew that the disaster occurred before the vessel got too far out in the lake and beyond the reach of aid. As it was, the situation of the twelve men left on board after the departure of the yawl was a very serious one, the life-saving crew having arrived on the scene just in time to render good service.

August 31.—At a little before 2 in the afternoon the lookout at the Louisville Station (Ninth District) gave the alarm that a man in a small flat-boat was in a very dangerous situation on the Falls of the Ohio, just below the cross dam. A boat was instantly manned, and the life-savers hurried with all the speed possible to the man's assistance. Upon reaching the flat they towed it safely over the falls and sent the man on his way rejoicing. His name was James Lindsey, and he was on his way from Cincinnati, Ohio, to Evansville, Indiana. It seems that parties up the river had told him there was no danger in descending the falls. He learned differently, however, when that point was reached, and he became so badly demoralized with fright that he was unable to extricate his craft from the rapids. In this predicament, it was no doubt owing to the exertions of the station crew that he escaped with his life.

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September 2.—At 3 o'clock in the afternoon the schooner S. Bates, of and for Chicago, Illinois, from Pentwater, Michigan, with a cargo of lumber and shingles, arrived in the harbor of Milwaukee, Wisconsin, in tow of a tug which had picked her up in a water-logged condition some distance offshore. As she passed the Milwaukee Station (Eleventh District) on her way in the captain hailed for assistance at the pumps. The life-saving crew immediately responded, but by the time they got alongside in their surf-boat, the tug had grounded her so she could not settle any deeper in the water, and the captain decided not to commence pumping until the next day. Accordingly, at 10 o'clock the following morning the life-saving crew went to work at the pumps, and by 6 in the evening had the vessel in such condition that she was enabled subsequently to resume her voyage; it being found, as the pumping progressed, that the leak was in the cabin bulk-head, above deck, where it had been covered up by the deck-load, and where, owing to her being laden almost decks to, the water had poured into her in sufficient volume to almost fill her.

September 3.—At a little after 3 o'clock in the afternoon the sloop Sea Bird, of Chicago, Illinois, with three men on board, while beating in toward Chicago Harbor from the water-works' crib out in the lake, was struck by a sudden gust of wind when near the new breakwater, about a mile from the Chicago Station (Eleventh District), which carried away her mast at the deck, and left her in a helpless condition. The accident being witnessed by the station lookout, he gave the alarm to the crew, and, launching the surf-boat, they went off to the sloop, and, after recovering her mast and sail, towed her safely into the harbor. They also took in tow at the same time a small skiff with two boys in it, who had been out for a pull upon the lake and were unable to get back on account of the wind blowing off shore.

September 3.—At about 9 o'clock in the morning, a southwesterly gale with a heavy sea prevailing at the time, the lookout at the Kenosha Station (Eleventh District), Lake Michigan, sighted a vessel some six miles northeastward of the station flying a signal of distress. The crew at once manned the life boat and went out to her, and found she was the barge Golden Harvest, of Grand Haven, bound from Muskegon, Michigan, to Chicago, Illinois, with a cargo of lumber, and that she had sprung a leak early the previous day (September 2). In addition to her regular crew of five men she had two passengers, and they were all nearly worn out by the fatigue of working steadily at the pumps during the preceding twenty-eight hours. The life-saving crew therefore took charge so the people might obtain much-needed rest, and as the vessel then had about four feet of water in her hold, some of them manned the pumps while the others worked her in towards Kenosha Harbor. While they were thus engaged the tug Wetzel arrived from Racine (having been telegraphed for from Kenosha after the life-boat went out), and took the barge in tow, the harbor being reached at 1 in the afternoon. The barge was there grounded on a mud flat, when the station crew went down into the fore-peak, and by cutting away a portion of the ceiling found the leak, which they stopped as well as they were able, so she could be pumped out and enabled to resume her voyage down the lake, which she did the same evening. The captain of the barge expressed his thankfulness to the life-saving crew in grateful terms, and frankly acknowledged that he was indebted to them for saving his vessel

September 5.—The south patrol from the Sturgeon Point Station, Tenth District (Lake Huron), seeing a vessel standing too close inshore,

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immediately burned a patrol signal, and the craft thus warned went about and headed off.

September 6.—At about midnight of September 5, two schooners were driven ashore on Mustang Island, coast of Texas, during the prevalence of a furious gale from the eastward. One was the Tex Mex, of and for Corpus Christi from Calcasieu, Louisiana, with a cargo of lumber, the other was the Two Marys, of New York, also bound to Corpus Christi with railroad ties from Apalachicola, Florida. The first-named vessel had a crew of seven and the latter nine men. The schooners stranded on the northeast end of the island about half a mile east of the Aransas Station (Eighth District) Aransas Pass. The station was not then manned for the winter season, but through a fortunate circumstance the crew of the Saluria Station were present, having arrived in the bay a few hours previous on board the schooner J. M. McInnis, which had been floated off the beach near their station, and when the gale sprung up compelled to seek a harbor at Aransas, forty or fifty miles to the leeward of where the vessel had been ashore for several months; the men of the Saluria Station having been specially called together to assist in getting her off. The keeper of the Aransas Station discovered the two wrecks at about 2 in the morning (6th). He at once called upon the Saluria crew for their assistance and with the additional help of a party of volunteers the surf-boat was run out and hauled down abreast of the Two Marys, the nearest to the station. They arrived just as day was breaking, the journey along the beach, dead to windward in the teeth of the gale, being very fatiguing. A boat's crew was quickly told off and under the leadership of Keeper Mercer of the local station (Aransas) the people on both vessels, numbering sixteen in all, were brought safely ashore with their baggage; three trips being made to the Two Marys and one to the Tex Mex. The crew of the latter vessel upon landing were conducted to Aransas wharf, where an office of the owners of that vessel is located, while the crew of the Two Marys went to the station and there received shelter during the time they were engaged in saving the cargo, a period of several days. Both schooners were totally wrecked. Much credit was bestowed on the gallant party through whose instrumentality on this occasion so many lives were saved.

September 7.—At a quarter before 10 in the night, during the prevalence of a fresh northeasterly gale with a very rough sea, the crew of the Thunder Bay Island Station (Tenth District), Lake Huron, were aroused by the alarm whistles of a steamer away to the northward of the island. Instantly every man was on the alert, and in a short time the station crew were off in their life-boat to see what was the matter and offer assistance. A steamer was soon sighted about three miles dead to windward. The keeper burned a Coston signal to let her know that assistance was coming, and in about forty minutes from the time they started the life-saving crew arrived alongside. She was the propeller Glenfinlas, of the Western Express Line, of Hamilton, Ontario, with five lady passengers, a crew of twenty-seven all told, and a valuable cargo of railroad iron and general merchandise from Montreal, Province of Quebec, for Chicago, Illinois. The captain reported his machinery disabled by the breaking of the propeller shaft, and desired the life-boat to remain by him, as the vessel was rolling so fearfully in the trough of the sea, he was afraid she would spring a leak and go down with all hands. By 11 o'clock the sea had increased so that it was necessary for the life-saving crew to shove off and remain at some distance from the steamer to keep the boat from danger. The anchor which had previously been let go but failed to hold, soon afterwards

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fetched her up, and she was enabled to lie easier the rest of the night, head to wind and sea; the life-boat then making fast to her again, astern. The weather was indeed so bad that a passing steamer which ran down to the Glenfinlas in answer to her distress signal, was obliged to resume her course again, unable to do more than take care of herself, she labored so in the sea. It was a weary vigil for the life-saving crew in their boat, exposed to the keen northerly wind, and the almost constant dash of the spray from the wave crests. With the first dawn of day it was decided to seek assistance from Alpena. The station crew therefore started for that place, some fifteen miles distant, and after a hard pull of nearly three hours reached the harbor, and dispatched the tug Golden Eagle to the Glenfinlas' relief, the disabled craft arriving safely in port at 2 o'clock in the afternoon. Then, and not till then, did the life-saving crew return to the station, it being 5 o'clock in the evening when they got there almost completely used up, the men having rowed a distance of at least forty miles since they set out the night before. The captain of the steamer was so grateful for the service rendered that the next day he indited the following letter to the General Superintendent:

"PROPELLER GLENFINLAS,
"*Alpena, September* 9, 1882.

"SIR: I take the liberty to inform you of the efficiency of the life-saving crew at Thunder Bay Island, Lake Huron. About 10 o'clock on the night of the 7th instant our engine stopped and I was informed by our chief engineer that the shaft was broken. There were several steamboats near us at the time and I blew the whistle for assistance, but as the night was stormy, and I presume many of them had all they could do to take care of themselves, they passed by without paying any attention to our signal.

"About ten minutes after our first signal was given I discovered the light of a boat leaving the island and supposed it was a fishing-tug coming to us, but about about twenty minutes later I was very much surprised to see by their torch that it was the life-boat. They had a strong wind and heavy sea to contend with, notwithstanding which they were alongside in about forty minutes from the time of leaving the station, a distance of about three miles.

"We drifted eight or ten miles before the anchor held, and were exposed all night to a sea that swept the whole length of the lake. The wind was very cold, and, although the life crew must have suffered from exposure, they remained near us all night, and in the morning rowed to this port, a distance of fifteen miles, and sent a tug to our assistance.

"Both passengers and crew join me in saying that too much praise cannot be given to Capt. John Persons and his crew. They are indeed a credit to the Life-Saving Service.

"I remain, sir, yours, very respectfully,

"H. ZEALAND,
"*Master Propellor Glenfinlas, of Hamilton, Ontario.*

"To the GENERAL SUPERINTENDENT
"OF THE LIFE-SAVING STATIONS,
"*Washington, D. C.*"

September 8.—The schooner Copia, of and from New York, for Rockaway, Long Island, with a cargo of coal, and carrying a crew of four men, while running for Rockaway Inlet, before daylight in the morning, missed the channel buoys and stranded on the beach to the eastward of the inlet, about three-quarters of a mile west of the Rockaway Point

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Station (Third District), Rockaway Beach. The station was not manned, and it was some time before the keeper could muster his crew. As soon as they could be assembled they put off in the surf-boat and landed the schooner's crew and conducted them to the station where three of them were sheltered and cared for three days. With the assistance of the life-saving crew the vessel's spars, sails, rigging, and other outfits, as well as about thirty or thirty-five tons of cargo, were saved in good condition. The vessel was quite an old one and became a total loss.

September 8.—At 8 o'clock in the morning the schooner John Schuette, of Milwaukee, arrived off the harbor of Two Rivers, Wisconsin, and requested the aid of the crew of the Two Rivers Station (Eleventh District), Lake Michigan, in searching for an anchor she had lost about a mile southeast of the station a few days previous. The crew responded promptly to the call, and going out in their boats assisted in sweeping for and recovering the anchor, which they hoisted on board, when the schooner resumed her voyage, the captain thanking the men heartily for their services.

September 8.—At 7 o'clock in the evening the crew of the Two Rivers Station (Eleventh District), went in their surf boat, at the request of the captain of the schooner Ellen Stevenson, of Manitowoc, Wisconsin, and towed his vessel up the river to her place of discharge, there being no tug in the harbor nor any other help available.

September 9, 10, and 15.—On these dates the crew of the Big Sandy Station (Ninth District), Big Sandy Creek, Lake Ontario, New York, were engaged in searching for the body of a young man named Ralph McChesney, who was drowned in Lake Ontario, between Little Sandy Creek and Port Ontario, some distance from the station. The body was eventually recovered about three miles north of the station on September 23, and the family, as well as the coroner, notified by telegraph; the station crew taking charge until the arrival of friends to remove it.

September 9.—The crew of the Two Rivers Station (Eleventh District) were called upon to perform a similar service for the schooner Tom Paine, of Charlevoix, Michigan, to that rendered the evening previous to the Ellen Stevenson, she being unable to get up the river without assistance. They accordingly towed her thither with the surf-boat.

September 11.—The three-masted schooner James W. Drury, of Boston, Massachusetts, carrying a crew of eight men, bound from Bath, Maine, to Philadelphia, with a cargo of ice, stranded at 11 o'clock at night, September 10, in thick, stormy weather, on the north bar of Townsend's Inlet, coast of New Jersey, a mile from the beach and about a mile and a half southeast of the Townsend's Inlet Station (Fourth District), situated on the north side of the inlet. The station was not yet opened for the winter season, but one of the crew discovered the vessel at 7 o'clock next morning (11th) and he at once reported to the keeper. The latter mustered a crew as quickly as possible and went off to offer assistance. The schooner's yawl had swamped and capsized alongside, and after righting that with some difficulty and hoisting it on board, they assisted a wrecking company in getting the necessary ground-tackle in readiness for floating the vessel off, the sea being then very rough from the eastward and unfavorable for operations that day. Further help on board was declined, but on leaving they carried letters and dispatches from the captain over to the main-land, and also made arrangements when they got there, at the captain's request, for a supply of ice hooks to be used in taking out cargo to lighten the vessel. The schooner was hauled off a few days later by tugs in the employ of the wrecking company, with whom the captain had made contract.

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September 11.—Shortly after noon, during the prevalence of a strong northeasterly gale and high sea, the lookout at the Cleveland Station (Ninth District) Lake Erie, saw a yawl break adrift from its moorings and commence driving towards the breakwater. The life-saving crew at once put out in their surf-boat and after a hard pull succeeded in reaching the yawl just in time to save it from being dashed to pieces. It was towed into the river and delivered to its owner, whom they notified.

September 12.—At a quarter past 4 in the morning one of the patrolmen from the Rye Beach Station (First District), Rye Beach, New Hampshire, discovered a schooner on fire off the coast about two miles north-northeast of the station. He reported the fact as quickly as possible and by half past 6 the life-saving crew were alongside in their boat after a hard pull against the high wind and sea then prevailing. The vessel proved to be the Pulaski, of and from Thomaston, Maine, for Boston, with a cargo of lime which had caught fire from the vessel springing a leak. She had been abandoned by her crew, the only living creature on board being a small dog which was passed into the boat and saved. The vessel being in a sinking condition, all the property they could recover was a kedge and part of the running rigging, which was conveyed ashore. She soon afterwards sunk in five or six fathoms of water, about half a mile from shore, and became a total wreck. Her crew of two men were found by the life saving crew, upon their return, at a farm-house near Foss's Beach, having landed in their own boat. They were conducted to the station and their wants attended to, one of them soon afterwards starting for his home, while the other, the captain, remained until the next day.

September 12.—The crew of the Nausett Station, Cape Cod, Massachusetts (Second District), picked up in the surf several thousand spruce laths, which were duly advertised in the local papers as awaiting the claim of the owner. They had probably been lost from a passing vessel during the northeast gale which prevailed at the time.

September 12.—This day will long be remembered by the crew of the Chatham Station, in the Second District (Chatham, Massachusetts), and also by the little band of four seafarers belonging to the schooner Mary Shields, of Gardiner, Maine, whom they rescued from the perils of the storm which then raged on the eastern coast. The vessel was wrecked on Chatham Bar, about three miles south of the station. She was owned and commanded by one Hiram Waitt, and sailed from Augusta, Maine, with a cargo of lumber for New York. When off Cape Cod she encountered the full fury of the gale, the sea running mountains high. To add to the danger and discomfort of her crew rain was falling heavily. At about midnight the mainsail burst from the bolt-ropes, and the jib soon followed, leaving the vessel under nothing but a close-reefed foresail with which to weather the shore, then close under her lee. The schooner was deeply laden, and by the loss of her canvas she became practically unmanageable. Chatham lights were made, abeam, at half past 3 in the morning, and half an hour later she thumped heavily on the bar, about a mile further south, and fetched up. The schooner's yawl was swept away by the sea as soon as she struck and in ten minutes afterward the ill-fated vessel was full of water. Had the cargo been other than lumber she must have gone to pieces and the crew been lost long before any assistance could reach them. The south beat from the station does not extend more than perhaps a mile on account of an inlet or opening from the sea into Chatham Harbor, consequently the men at the station knew nothing of the accident until near 8 o'clock, the weather being too

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thick for them to see more than a few hundred yards in any direction. A fisherman was the first to discover the vessel. He had crossed the harbor to the beach at daylight in search of drift-wood. The wreck was at once reported at Chatham Village and in a short time a crowd of fishermen had gathered at the beach abreast of the vessel. Two attempts were made by these men to reach her with their boats, but each one failed, it being impossible, owing to the frightful sea, to get nearer than a hundred yards of her. When first seen by the station watch her masts were just discernible through the mists during a temporary lull in the storm. It was impossible to reach the crew from the outside, so the boat was launched in the harbor and the crew proceeded down inside as quickly as possible. It was half past 8 when they arrived abreast the wreck and landed on the inner side of the beach. The scene was wild and terrible. The schooner lay about half a mile distant on the outer shore or bar, the foresail still set, and with her head towards the shore. The crew could be seen huddled together on the top of the cabin, aft, under the lee of the main boom, which afforded partial shelter from the seas that almost incessantly broke over the stern and scattered the deck load far to leeward. Some forty or fifty surf-fishermen were gathered on the beach, powerless to do anything after their failure to reach the ill-fated craft with their boats. The keeper and his men saw at once it would be impossible to rescue the schooner's crew except by means of the breeches-buoy after the vessel should drive closer in with the flood tide. No time was to be lost, so back they went in their boat for the beach apparatus, the pull to the station being three miles dead to windward in the very teeth of the gale, with the rain coming down in torrents. The sea, even in the harbor, was very rough. Arrived at the station, a larger boat was substituted and the beach apparatus placed therein, the cart being dismounted in order to secure compact stowage. The vessel in the mean time had driven nearer to the beach, so that when the station crew arrived the second time she was about three hundred and fifty yards out. She had also swung around with her head off shore. The halyards of the foresail had been cut to let the sail run down, and as she now headed the sea she lay easier. Had she remained much longer in her first position the stern would have been burst in and the destruction of the vessel would have been speedy and complete. The fishermen lent willing assistance in unloading the boat of its burden and in hauling the gear across the beach to the edge of the surf. The apparatus was then quickly arranged by the disciplined crew and the gun brought to bear on the wreck. The first shot passed over the vessel, but owing to the long range the line bellied far to the leeward and fell into the sea. The schooner lying end on, she presented but a small mark to fire at, the difficulty being increased by the fact that the line of fire was directly across of wind. At the second attempt a larger line was tried. The shot lodged it on the weather or port side of the vessel. One of the sailors sprang in to the waist to secure it, but a sea boarding the vessel at that moment, he was knocked off his feet and the line fell overboard. It was quickly hauled ashore again for another attempt. The third shot was successful, the line passing over the spring-stay with the bight outside the main rigging. The line was quickly passed down on deck by one of the sailors and eagerly hauled in until the whip-block reached them. Some delay occurred at this juncture through the neglect of the sailors, in their excitement, to follow the instructions on the tally-board attached to the block. Instead of hitching the block well up the mast, they made it fast just above their heads and foul of the rigging. They were at last made to un-

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derstand by signs from shore what was wanted, and the mate then dipped the block clear and carried it aloft and made it fast under the cross-trees. Further delay occurred in getting the hawser properly fast. The schooner during all this time was slowly changing her position to the southward, so that it became necessary to shift the sand anchor from where it was first planted. No delay was occasioned on that account, however, and as soon as the hawser was secured to the mast the life-savers bowsed it taut, and communication was complete. The first to come ashore in the breeches-buoy was the captain, an aged and infirm man. He had also received injuries from contact with the floating lumber of the deck-load, and had to be assisted aloft and into the buoy. The sight of the old man being tenderly helped up the rigging by his men, and his journey along the line to the shore, was one long to be remembered by those who witnessed it. Two or three hundred people had gathered on the edge of the bluff in front of the village, and when the rescuing party on the outlying beach drew the captain ashore the air was rent with shouts and cheers by the assembled multitude. The rest of the crew soon followed, so that in twenty minutes from the time the buoy was rigged they were all safely ashore. The poor fellows were in a truly pitiable condition after the many hours of exposure on the wreck. As the gale still raged furiously, and rendered it almost impossible to pull the deeply-laden boat direct to the station, it was decided to convey the rescued crew and the apparatus across to the village, and proceed along the west shore and recross to the station from North Chatham. This was accordingly done, the party being hospitably furnished with hot supper at the house of Displayman Nickerson, of the United States Signal Service, before leaving the village. It was long after dark before the labors of the day were ended and the gear put back in its place at the station. The poor fellows had saved nothing but the wet clothing they stood in, and as soon as the station was reached they were rigged out from the supply of warm clothing furnished by the Women's National Relief Association. After remaining two days at the station, or long enough to enable them to recover from the effects of the terrible ordeal through which they had passed, the keeper procured for them free passes over the Old Colony Railroad to Boston. The vessel was a total loss.

September 12.—The body of an unknown man, about forty-five years of age, was found upon the lake shore by the crew of the Point Marblehead Station (Ninth District), Lake Erie, and properly cared for until the arrival of the local authorities, who took charge and had it decently interred.

September 12.—As Surfman Aumay, of the Chicago Station (Eleventh District), Lake Michigan, was passing through the yard of the Illinois Central Railroad toward his station, and while in the vicinity of Slip No. 2, his attention was attracted by the screams of a child in the water. Rushing to the spot, he found that a little four-year-old girl, named Louisa Boucher, had fallen overboard while at play, and was being held by the hand from sinking by a boy eight years old, who was unable from the height of the dock to pull her out. Aumay speedily rescued the little creature and carried her home to her parents.

September 12.—At about half past 7 in the evening, as the schooner Josephine Dresden, from Chicago, Illinois, with a crew of five men, was attempting to make the harbor of Racine, Wisconsin, where she belonged, during the prevalence of a southeast gale with a heavy sea, she missed the entrance in the darkness, and striking the leeward or north pier only saved herself from going ashore by quickly letting go an an-

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chor. The accident was observed by the watch from the Racine Station (Eleventh District), who called his comrades, and the life-boat being launched they went out to the vessel, and, assisted by a tug, got her safely into the harbor.

September 13.—At half past 2 in the afternoon the schooner Fiat, of Sandy Creek, New York, bound from Oswego to Woodville, with a crew of three men and a full cargo, grounded on Big Sandy Creek Bar, and would have been compelled to lighter the cargo before getting off but for the assistance of the crew of the Big Sandy Station (Ninth District), located at the mouth of the creek, who went off with the necessary warps, and after considerable effort succeeded in hauling the vessel in over the bar so she could proceed to her destination.

September 13.—At 2 o'clock in the afternoon, the Sturgeon Point crew (Tenth District), Lake Huron, discovered a fishing-boat ashore about two miles north of the station, and hastened at once to the spot and helped her crew of two men haul her up clear of the surf so she could be repaired; the boat having parted her cable during the gale then blowing and driven onto the beach, where she received some damage.

September 13.—At 7 o'clock in the morning the schooner Ruby, of Chicago, attempted, although the wind was light and baffling and there was a strong current setting out of the river, to enter the harbor of Muskegon, Michigan, under sail and without the aid of a tug, and came very near drifting onto a sunken crib, where she would have been badly damaged had not the pier-end lookout from the Muskegon Station (Eleventh District), by means of a heaving line, got the end of her hawser to the pier and held her from drifting further until a tug could go to her assistance.

September 14.—At 3 o'clock in the afternoon, during the prevalence of a strong southwesterly wind, the yacht Lillie R. broke adrift from her moorings in Buffalo Harbor, New York, and would have received serious damage but for the promptness of the crew of the station at that place (Ninth District), who went on board and kedged her back to her old berth and moored her in safety.

September 14.—Later in the same day on which the Buffalo crew assisted the yacht Lillie R. they recovered a quantity of lumber which had been lost overboard in the outer harbor from the barge Elmo, and returned it to the owners.

September 15.—The schooner Jed. F. Duren, of Calais, Maine, bound from New York to Eastport, with a cargo of coal, and having a crew of five men, was overtaken by a severe southerly gale with stormy weather during the night of September 14, when she was between Grand Manan Island and West Quoddy Head, and being badly crippled by the loss of sails, only succeeded with the utmost difficulty in reaching an anchorage in Quoddy Roads where further and more serious disaster awaited her. She was sighted off West Quoddy Head by the patrol from the Quoddy Head Station (First District) soon after midnight, although in the darkness he little suspected the strait she was in. The captain afterwards reported that he saw the man's light, and, knowing what it was, made up his mind, in case he could not weather Sail Rock, off West Quoddy Head, to put his helm up and run the vessel ashore as near the light as possible, in hopes the man would discover her and bring assistance. Had he done so the destruction of the schooner and all her crew would have been certain, as the sea dashed with such tremendous fury against the rocks that she would have gone to pieces before help could have arrived from the station. Seeing that she weathered Sail Rock and then squared away into the bay, the patrol supposed

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she was all right. At daylight she was discovered at anchor near the Lower Middle Ground, Quoddy Roads, about two miles northeast of the station, and shortly afterwards a signal of distress was seen in her rigging. As quickly as possible the life-saving crew put off to her aid. It seems she had anchored too close to the shore, and as the tide fell commenced pounding on the bottom. There was a steamer at anchor in the bay, and when the life-saving crew arrived alongside, the captain of the schooner requested them to seek her assistance in towing him into deeper water. The steamer refused, however, the captain not caring to risk the safety of his own vessel on account of the heavy sea. The schooner was leaking badly, and by the time the station crew got back to her, her pumps had become choked, and she had three feet of water in the hold. As she was settling fast it was decided to abandon her. The life-saving men, therefore, pitched in with a will to help save the crew's personal effects, and while five of the party, including the keeper, were thus engaged in the cabin, the vessel gave a lurch to port, and sank almost before they could extricate themselves. It was a perilous moment, for as the water poured into the cabin through the forward companion-way the door of the after one slammed to, and thus imprisoned the men. The keeper seeing the danger called to his comrades to save themselves, and made a rush for the after door, which he kicked open and thus cleared a way of escape, the party barely reaching the boat as the schooner went down, the boat's painter having to be cut to save her from being drawn under. The gale being ahead for returning to the station, the people thus so gallantly rescued by the life-saving crew were taken to Lubec village, a mile or two distant, where every accommodation was obtained for them. In the afternoon when the gale moderated, the life-saving crew returned to the sunken vessel, and stripped her of everything they could get at, the work being completed early on the following morning. A day or two later the owner of the schooner arrived, and, accompanied by the captain, visited the station to personally thank the life-saving crew for their splendid behavior. The vessel was afterwards raised by a wrecking company, and put in proper trim again.

September 15.—The fishing schooner Emma S. Osier, of Gloucester, Massachusetts, carrying a crew of seven men bound from the fishing banks to Bass Harbor, Mount Desert, Maine, with a fare of fish, grounded on the rocks, a little after midnight, at a place called Old Cove, on the southeasterly shore of Great Cranberry Island, during the prevalence of a southerly gale with thick, rainy weather. When the vessel struck she was thrown on her beam ends by the heavy sea, her decks were swept, and the crew narrowly escaped being washed overboard and lost. She was quickly discovered by one of the patrolmen from the Little Cranberry Island Station (First District,) as he made the circuit of the island, and report was at once made to the keeper. It was then a little after 1 o'clock A. M. The life-saving crew hauled their boat on its carriage to the west side of the island and launched as quickly as possible, the distance from the station being about a mile and three-quarters. The schooner was found hard and fast in a very bad situation, surrounded by rocks, the reef outside of her being almost bare. The first thing done was to keel her to starboard, or inshore, to prevent the sea breaking on board and filling her. Then, after furling the sails, the life-saving crew made the necessary preparations for heaving her off, and at low water planted the anchors off to the southwest, and when the tide swelled succeeded in heaving her a distance of about five hundred yards, clear of the rocks, where she

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would lie safe until the sea went down, which was now breaking very heavily in the passage through which she must be taken to get her clear; the wind also being ahead. It took until afternoon to accomplish this and after assisting in pumping the vessel out and seeing everything snug, the life saving crew returned to their station to await better weather. On the following morning at 8 o'clock, the sea having subsided, they again went off, recovered the schooner's anchors and chains, and, when the tide rose, floated her clear and piloted her in through the western passage as far as Sutton's Island off the entrance to the southwest harbor and left her to pursue her way into that place to repair damages, which were slight. Her crew were extremely thankful for the aid rendered by the life-saving men, as it was, without doubt, mainly through their exertions that the vessel was saved from complete wreck. The owner Mr. D. A. Osier, in an official statement of the occurrence to the collector of customs at Gloucester, says: "Too much cannot be said in favor of the captain and crew at the life-saving station who rendered us very valuable assistance in getting the vessel off the rocks."

September 15.—At an early hour in the morning a fully-equipped fishing boat, with the name Empire State painted on it, was found in the surf by the patrol from the Long Beach Station (Third District), Long Island, New York, and upon his reporting it at the station the crew turned out and hauled it to a place of safety. A notice of the finding of the boat, sent by the keeper to the New York Herald, resulted a few days later in the arrival of the owner at the station to claim his property.

September 15.—At 2 o'clock in the afternoon the crew of the Coney Island Station (Third District), Long Island, New York, signalized the reopening of the station on this date for the winter season by rescuing from drowning a man named George Marshall, whose boat had capsized in Sheepshead Bay, about half a mile north of the station. The man was sheltered at the station until the tide fell, when the life-saving crew righted and bailed his boat out so he could return home all right.

September 15.—The sloop Alert, of Somer's Point, New Jersey, with eight persons on board, two of whom were her regular crew, and the rest excursionists, in beating in through Absecom Inlet at 2 o'clock in the afternoon, against a strong northwest wind, misstayed through her center-board touching bottom, and before her anchor could fetch her up, drove onto the shoal at the north side of the inlet, about half a mile northeast of the Atlantic City Station (Fourth District), New Jersey. The crew of the station, who had that day entered upon their duties for the season, saw the accident and quickly launched their boat, arriving on board the sloop half an hour after she struck. Her anchor was at once carried out into the channel and then backed by another one belonging to the station, and in a short time the life-saving crew succeeded in heaving her afloat. As soon as the sloop came off the shoal the steam yacht Skip Jack went alongside and towed her into the harbor. The only damage sustained was a broken center-board.

September 15.—At 2 o'clock in the morning the schooner Normandie, of New Orleans, Louisiana, with a crew of three men, bound from Saint Mary's to Galveston, Texas, parted her cables during the prevalence of a fresh northeasterly gale and stranded on the northeast end of Matagorda Island, about two miles south-southeast of Saluria Station, (Eighth District), located on the island. The accident was soon discovered by one of the patrolmen from the station, and upon his giving the alarm the life-saving crew hurried down to her to offer their assistance. She had driven well up on the beach, and sustained damages that would need to be repaired before anything could be done towards getting her

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off. The men subsequently rendered excellent service in floating the vessel. (See October 2.)

September 15.—On the same day that the Normandie stranded a similar accident befel the schooner Lottie Mayo, of Brashear, Louisiana. The vessel carried a crew of three men, and was bound from Corpus Christi to Galveston, Texas, in ballast. She had put into Pass Cavallo for refuge from the gale the day previous (14th), and while beating up the channel misstayed and got so close to the breakers that it was necessary to anchor to avoid going ashore. In that situation she held on until 10 o'clock in the morning of the 15th, when her cables parted and she went ashore on the northeast end of Matagorda Island about a mile and a half southeast of the Saluria Station (Eighth District). The mishap, occurring in broad daylight, was witnessed by the crew of the station, who at once turned out to the schooner's assistance. They planted anchors off shore, and after several hours' hard work succeeded in getting her afloat, and then took her to a safe anchorage, the men returning to their station at 8 o'clock in the evening.

September 15.—The Sturgeon Point crew (Tenth District), Lake Huron, found a yawl on the beach about two miles to the southward of the station, which they took charge of until a claimant was found for it at Harrisville, Michigan, a few miles distant. It belonged to the barge City of the Straits, of Buffalo, New York, which had been abandoned the day before in a water-logged condition out on the lake.

September 16.—At about 3 o'clock in the afternoon the crew of the Rye Beach Station (First District), New Hampshire, saw a schooner anchor off the coast about two and a half miles south of the station. Watching her closely, they observed an hour or so later that she had hoisted a signal of distress. The life-saving crew went off at once to her assistance. Arriving alongside after a smart pull, they found her to be the James Barrett, of Bristol, Maine, carrying a crew of five men, bound from Perth Amboy, New Jersey, to Gardiner, Maine, with a cargo of coal. She had encountered bad weather, lost her deck-load overboard, and split some of her sails, the latter disabling her so that she was compelled to anchor until assistance could be obtained in getting into Portsmouth Harbor. She had also lost one of her anchors. The life-saving crew turned to and assisted with their boat in laying out a kedge in place of the lost anchor so she could ride out the gale, and also in reefing her canvas preparatory to working her into port. By the time this was done darkness had set in and the station men returned on shore for the night. Early next morning (17th), the weather having moderated, they again went off and got the schooner under way and worked her safely into Portsmouth Harbor. While heaving in chain the kedge was lost. On the next day (18th), therefore, part of the crew went out to the place where the schooner had been anchored, and after a search of three hours recovered the kedge and conveyed it ashore and notified the captain of the schooner to send for it.

September 16.—At noon the sloop William Tell, of Somers Point, New Jersey, carrying a crew of three men, while bound in to Atlantic City from a fishing cruise was swept by the ebb tide onto the shoals at the north side of Absecom Inlet, about three-quarters of a mile northeast of the Atlantic City Station (Fourth District), coast of New Jersey. She was boarded by the life-saving crew, who carried out her anchor and made all preparations, and when the flood tide made in the evening they floated her without damage, and saw her safely on her way into the harbor.

September 17.—One of the crew of the Chatham Station (Second Dis-

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trict), Cape Cod, Massachusetts, reported at 10 o'clock in the morning that a large three-masted schooner was anchored off the coast about three miles south of the station, with a signal in her main rigging. Supposing she was in distress the life-saving crew at once put off in their boat to offer assistance, but upon getting alongside the schooner it was found she required no aid, but was merely signaling to private parties in Chatham. There was a very high wind at the time, and the crew were three hours in making the trip to and from the vessel.

September 17.—At 4 o'clock in the afternoon a pile of saw-dust about three hundred feet west of the Manistee Station (Eleventh District), Lake Michigan, took fire from the sparks from the smoke-stack of a passing tug. The station crew hurried to the spot with their fire-buckets as soon as the fire was discovered, and after working for about two hours succeeded in quenching it and preventing it from spreading to the surrounding property.

September 17.—At 2 o'clock in the afternoon the lookout at the Racine Station (Eleventh District), Lake Michigan, discovered, with the aid of the glass, a small sail-boat apparently in distress some five or six miles distant from the station. The life-saving crew put off at once to her relief in the surf-boat. There were two men in her, her sails were down, and she was half full of water, and when overtaken by the Racine crew was drifting off shore before the wind and sea, unmanageable. The men were taken into the surf-boat, and with the sail-boat in tow the crew started back for the harbor, but before they had gone very far the tug Rudolph Wetzel steamed out and saved them a long pull by towing both boats in.

September 18.—At about noon, as a man named Frederick Gerbinsky, who had come from Manitowoc, Wisconsin, was attempting to enter the harbor of Two Rivers in a small sail-boat, he fetched to leeward of the piers and drifted into the breakers north of the entrance, where his boat was in imminent danger of capsizing. The man's peril was quickly seen by the crew of the Two Rivers Station (Eleventh District), who put out with all the speed possible to his rescue, reached the spot just in time to prevent serious accident, and towed the boat safely inside, to the great relief of Gerbinsky, who felt, with good reason, that his escape had been a narrow one.

September 19.—At 4 o'clock in the afternoon the sloop-rigged catamaran Teaser, of Staten Island, New York, while *en route* to that place from Babylon, Long Island, broke her cross-beam and sprung a leak when abreast of Oak Island Station (Third District), Long Island, New York, and became disabled. The sea was fortunately smooth, and the two men on board the catamaran landed in their yawl and sought the assistance of the life-saving crew. The latter at once turned out with their surf-boat and towed the catamaran ashore and hauled it out clear of the surf, where it could be repaired. The two men were taken care of at the station until the next day.

September 19.—A steamer with barges in tow was running dangerously close to Ottawa Point, Lake Huron, when discovered by the patrol from the Ottawa Point Station, (Tenth District). He at once made signal by flashing a red Coston light, and the vessels thus warned sheered further off shore.

September 20.—At 1 o'clock in the morning a steamer arrived off the Point Betsy Station (Eleventh District), Lake Michigan, and made signal by showing a torch-light, as though desiring to communicate with the station. The station crew at once answered by lantern and the steamer then bore away to the westward, off shore, it being evident

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that she had wished to ascertain her distance from land, the weather being dark and rainy.

September 20.—At 9 o'clock at night the crew of the Two Rivers Station (Eleventh District), Lake Michigan, rendered assistance to the sloop Rippling Wave, of Manitowoc, which was bound in to Two Rivers from Saint Joseph, Michigan, with a cargo of apples. In attempting to enter the harbor in the dark she struck on a sunken crib at the end of one of the piers. As soon as the lookout discovered her the life-saving crew hurried down the pier and took her line and towed her into the harbor before any damage was done.

September 21.—At 3 o'clock in the afternoon the schooner Lizzie Cochran, of and from Bangor, Maine, with a cargo of lumber for Rattlesnake Island, on the Hudson River, New York, and carrying a crew of six men, while standing in through Fisher's Island Sound, under all sail, grounded on Sugar Reef, about a mile west-southwest of the Watch Hill Station (Third District), Rhode Island. The accident was soon discovered by the life-saving crew, and they at once put off in their boat to the schooner's assistance. As the sea was then smooth and the vessel lay easy, the captain declined the keeper's offer of aid. The captain took the keeper's advice, however, to procure the services of a tug, and at once proceeded with two of his men in the yawl for Stonington, where he could telegraph to New London. The life-saving crew returned at the same time to their station, promising to keep a lookout for signals. Shortly after dark the station patrol reported a signal-light on board the schooner. The crew therefore again went off. It was a false alarm, however, as the supposed signal turned out to be the light shown on deck when the captain returned from Stonington. The keeper's second offer to remain by the vessel all night being again declined, he returned ashore again. Next morning (22d) at daylight the New London wrecking steamer, telegraphed for by the captain, was seen to go alongside, both vessels being soon afterwards hidden from view by a dense fog which rolled in from sea-ward. After taking an early breakfast the keeper resolved to renew his offer to help get the schooner off. This time the offer was gladly accepted, the captain requesting the life-saving crew to stay by him until the tug, which had gone back for a lighter, should again come out. When the lighter arrived all hands commenced discharging cargo. While they were thus employed the wind gradually canted into the southeast and freshened, the sea growing so rough that before the lighter was half loaded it had to be cast off and towed away to save it from pounding to pieces on the reef. After the tug left with the lighter matters assumed a serious aspect. The schooner began thumping heavily on the rocks, and leaked so fast that the pumps could scarcely keep her free. Pieces of the keel also broke off and floated up alongside. The keeper seeing this, and realizing that unless something was done quickly the vessel would bilge and become a wreck, resolved to wait no longer for the tug's return. He therefore took charge, and ordered the mainsail hoisted, and had the boom guyed well over to windward for the purpose of swinging the schooner's head to the sea. The movement was happily successful, for as the vessel lifted on the seas her head gradually swung to the southeast, and in a short time, to the great relief of all on board, she slowly backed astern clear of the reef, and was once more afloat. As quickly as possible they hoisted the jib and then the foresail, and the schooner was headed for Stonington with the wind and tide in her favor. Her contact with the rocky bottom had damaged the rudder, but a temporary steering apparatus was soon rigged. One of the sta-

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tion men assisted the captain at the helm, while the keeper and another of the men acted as pilots, the rest aiding the crew of the vessel at the pumps and in trimming the sails. In this way the schooner was taken into port, and safely moored under the lee of the breakwater, much to the surprise of the wreckers, who shortly afterwards hove in sight on their way from New London, this time with two tugs instead of one. After thus saving the vessel, the life-saving crew returned to their station, six miles distant, the same evening, fatigued and hungry, having eaten nothing since morning before setting out. The captain, who owned a share in her, gratefully acknowledged in his official report of the occurrence to the collector of customs that the life-saving crew were fully entitled to the credit of extricating the schooner and taking her into Stonington.

September 22.—The Austrian bark Antonio Mimbelli, of Trieste (in ballast), carrying a crew of fourteen men and bound from Dunkirk, France, to the Delaware Breakwater, for orders, stranded at half past 4 in the morning, in thick stormy weather, on the south end of Turtle Gut Bar, coast of New Jersey, about a quarter of a mile from the beach and half a mile distant from the Turtle Gut Station (Fourth District). She was soon discovered by the patrol, and by 5 o'clock the life-saving crew were on board, ready to render assistance. The first service required of them by the captain was to carry a message ashore for the assistance of steam-tugs, one of the surfmen being dispatched with it to the nearest telegraph office at Cape May City as soon as they landed. After taking a hasty breakfast they again went off, and with the help of the crews of the Holly Beach and Cold Spring Stations, who had also arrived on the scene, ran lines from the bark to the tug Argus, which had also come to her assistance. As soon as the flood tide set in the tug made several ineffectual attempts to haul the bark off, but the lines parted each time, as the vessel was nearly half full of water and fast settling in the sand. As it was apparent she would soon become a complete wreck the captain decided to abandon her and he and his men were therefore landed with their baggage by the Turtle Gut crew, in the surf-boat, and taken to the station, where they were fed and housed until arrangements could be made for their passage to Philadelphia four or five days later. The life-saving crew went off again on the day after the wreck (23d) and saved all the spare sails, provisions, and cabin furniture possible, and brought them ashore.

September 22.—At 9 o'clock in the morning the lookout at the Racine Station (Eleventh District), Lake Michigan, reported a small sail-boat about five miles distant to the northeast of the harbor with a signal of distress hoisted. She appeared to be unmanageable and was drifting rapidly away from the land before the strong southwest wind. The life-saving crew instantly got out the surf-boat, and after an hour's pull came up with the craft, which had two young men in it, residents of Racine, who had gone out for a sail, but their boat becoming leaky and unmanageable they had been unable to beat back. They refused to get into the surf-boat, but desired to be taken in tow. The end of a line was therefore tossed to them, and after a long and hard pull of about two hours, the life-saving crew succeeded in towing them safely back into the harbor.

September 23.—At about 4 o'clock in the morning the British iron steamship Nuphar, of North Shields, laden with pig-iron and chemicals from Newcastle, England, for Philadelphia, Pennsylvania, and carrying a crew of twenty-three men, all told, stranded at the entrance to Townsend's Inlet, coast of New Jersey, about a mile and a half from shore and

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two miles distant in a southeasterly direction from the Townsend's Inlet Station (Fourth District), on the north side of the inlet. She was soon discovered by the patrols from the Townsend's Inlet and Tatham's Stations, the latter being some miles distant to the southward on Tatham's Beach. Both crews repaired on board the stranded steamer as quickly as possible, the men from the Townsend's Inlet Station arriving at about half past 6 and the Tatham's Beach crew at 9 o'clock, the latter having to tug their boat on its carriage a long distance before launching near the inlet. Some of the men went to work in getting one of the steamer's anchors ready for carrying out and the others assisted in throwing cargo overboard to lighten her. While they were thus employed a wrecking crew boarded the vessel and contracted with the captain to try and save her. The life-saving men aided the wreckers in the preliminary but very difficult work of laying out the anchor and chain, and then, as there was no further need of their remaining on board, the wrecking party having taken charge, they returned to their respective stations, the keeper of the Townsend's Inlet Station upon leaving carrying letters and dispatches ashore for the captain. As the sea grew very rough later in the day it became necessary to suspend operations and leave the vessel, her crew landing in the wreckers' boat and seeking refuge at the Townsend's Inlet Station, where they remained for nearly two weeks, or until the steamer had become so badly wrecked that no hope of saving her remained. During that time the Townsend's Inlet crew performed frequent service with their boat in carrying the captain and officers to and fro and assisting them otherwise in every way that lay in their power. The Nuphar became a total loss.

September 23.—The midwatch patrol south from the Oregon Inlet Station (Sixth District), coast of North Carolina, when about three miles from the station sighted a vessel running dangerously close to the breakers. The wind was blowing on shore and the night very dark, and the people on board probably had no idea of their danger. The surfman immediately flashed his Coston signal, and the vessel thus warned quickly hauled off shore.

September 24.—About 3 o'clock in the morning the patrol from the Sea Isle City Station (Fourth District), coast of New Jersey, seeing a vessel standing in towards the beach, burned a Coston light and warned her off.

September 25.—But for the timely action of two of the crew of the Plum Island Station (Second District), Massachusetts, two young men belonging to an excursion party from Haverhill, who were out in a small rowboat, would have been caught in the breakers on Newburyport Bar and probably drowned. Upon seeing the peril to which the youths were exposed, as their boat neared the breakers, the station men quickly put out in a dory and warned them in time to prevent serious accident. The young men were very thankful for the warning, and turned about and pulled up the river out of danger.

September 25.—The mid-watch patrol south from the Monmouth Beach Station (Fourth District), New Jersey, while making the tour of his beat, found the body of a man floating in the surf. He at once removed the corpse beyond reach of the tide, and later in the day it was given in charge of the coroner for burial.

September 26.—The crew of the Harvey Cedars Station (Fourth District), New Jersey, discovered a small yacht, with no one on board, adrift in Barnegat Bay, and went off and anchored her in a safe place to await the arrival of the owner.

September 27.—At 5 P. M. the schooner C. and R. Tarbox, of and

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from Bristol, Maine, with a crew of five men, on a fishing cruise, parted her cable and struck on Pulfery's Rock, Wood Island Harbor, about three-quarters of a mile west-northwest of the Fletcher's Neck Station (First District), near Biddeford Pool, Maine. She was seen to strike by one of the men at the station, and half an hour later the entire crew were on board with an offer of assistance, which was gladly accepted by the captain. The schooner's anchors were run out, and the lines hove taut to steady the vessel until the tide turned, when the aid of a steamer was obtained, and as the tide rose she was floated off and taken to a safe anchorage.

September 27.—The schooner J. W. Haig, of and from Philadelphia, for South Creek, North Carolina, with a cargo of hay and salt and carrying a crew of five men, went ashore at dusk in the evening of the 26th on the Middle Ground near Bird Island, in Hatteras Inlet, about seven miles west southwest of the Durant's Station (Sixth District), Hatteras, North Carolina. She was discovered by one of the station men when he reached the southerly limit of his patrol at daylight (27th), and reported as soon as possible to the keeper. The surf-boat was launched, and, after a long and arduous pull the life-saving crew reached the vessel, but their offer of assistance was declined with thanks, the people being in no danger and busily at work stripping her. Although no service was rendered in this case, the station crew deserve credit for their vigilance and activity in pulling so great a distance, the journey to the vessel and back being fully fifteen miles.

September 28.—The Cuban steamer Damuji, of Cienfuegos, to which port she was bound from New York, carrying a crew of seven men, became disabled by the breaking down of her machinery when off the coast of North Carolina on September 27, and to avoid being blown ashore by the northeast wind then blowing, anchored, when half a mile from the shore, about two miles south of the Whale's Head Station (Sixth District), North Carolina. She made no signal, and did not appear to be in distress when the life-saving crew saw her come to. The sea increased so much during the night that at half past 1 next morning (28th) the steamer parted her cables and drove onto the beach nearly high and dry, so that her crew were able to jump ashore without difficulty. When the mid-watch patrol from the station passed the steamer on his way south, soon after midnight, she was still in the offing, but on his way back, at about 2 o'clock, he found her hard aground in the breakers and her crew safe, but wet and shivering, on the beach. He at once conducted them to the station, where they were furnished with dry clothing and made comfortable. The steamer was subsequently floated by the Baker Salvage Company, of Norfolk, and towed to that port for repairs, her crew being housed and fed at the station until she was pulled off, a period of several days.

September 29.—The crews of the Orleans and Chatham Stations, (Second District,) Cape Cod, Massachusetts, recovered from the surf several thousand feet of spruce lumber, evidently from a passing vessel. It was duly advertised in the local papers.

October 1—One of the crew of the Assateague Beach Station (Fifth District), coast of Virginia, sighted a vessel running dangerously close to Fox Shoal, Chincoteague Inlet, and by flashing a Coston signal warned her so that she changed her course and went clear.

October 1.—At half past 3 o'clock in the afternoon of Sunday, October 1, an alarm was given by the man on lookout at the Louisville Station (Ninth District) that a skiff with three boys in it was drifting down the river near the Indiana shore, apparently unmanageable, and

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in danger of being swept over the falls. Boat No. 1 was instantly launched from the station, and, after a hard pull, the life-savers succeeded in overtaking the skiff and towed it with its occupants safely ashore. The boys, whose names were Lee Phillips, Lewis Knoblock, and Charles Best, residents of Louisville, Kentucky, had hired the skiff for a row upon the river without knowing how to manage it and completely ignorant of the danger to which they were exposing themselves.

October 1.—An hour or two after the rescue of Lee Phillips and his companions the Louisville crew were called upon to assist another skiff, with two men in it, which was also in danger of going over the falls, and in fifteen minutes from the time the alarm was given the two men were safely landed on the river bank. The men, residents of Louisville, Kentucky, had gone out for an excursion on the river, and one of them being intoxicated, his comrade was unable single handed to manage the skiff and keep it out of the influence of the strong current.

October 1.—At half past 1 in the morning, the weather being thick, the crew of the Two Rivers Station (Eleventh District), Lake Michigan, were aroused by the sound of a steamer's whistle away out on the lake as though calling for assistance. The crew at once put out in their surf-boat and found the signals had been made by the tug Joseph Goldsmith, of Milwaukee, bound into Two Rivers from Peshtigo, Green Bay, Wisconsin, with a scow loaded with logs in tow, which had lost her way in the fog and run a couple of miles past the harbor. As the captain of the tug desired to be shown the way in, the keeper took charge and piloted the two vessels safely into the harbor.

October 2.—The schooner Normandie, of New Orleans, previously mentioned in this record (September 15) as driven ashore on Matagorda Island, inside Pass Cavallo, Texas, during a northeasterly storm, having completed the repairs rendered necessary by the accident, the crew of the Saluria Station (Eighth District), were requested by the captain to aid in getting her off. They accordingly went to work on the above date and planted anchors off shore and also assisted in blocking the schooner up. These preliminaries being completed the task of moving the vessel was commenced. Satisfactory progress was made on the two succeeding days so that by the evening of the 4th the schooner was down to low-water mark. At 2 o'clock in the morning of the 5th everything being in readiness and the tide full, work was resumed and in a short time the schooner was hauled afloat and taken to a safe anchorage up the bay. The life-saving crew also recovered the anchors lost when the vessel parted her cables and drove ashore. The captain of the Normandie expressed the greatest thankfulness for the services of the life-saving crew, as it was mainly through their exertions that his vessel was saved.

October 2.—On this date the crew of the Sturgeon Point Station (Tenth District), Lake Huron, recovered from the surf a quantity of lumber, which they piled up on the beach to await the claim of its owner.

October 3.—At 2 o'clock in the morning the schooner Bohea, of Fall River, Massachusetts, with a crew of three men, bound from Cuttyhunk to Dighton, Massachusetts, with a cargo of sea-weed, stranded in Cow Cove, at the northern extremity of Block Island, several miles distant from the New Shoreham Station (Third District), situated on the east side of the island. The place where she struck is far beyond the station patrol limits, and it was not until near 5 o'clock that the north patrol learned of the accident from a man who had been gathering sea-weed on the beach. The patrolman reported the fact at once to the keeper, who hurried to the spot as fast as he could on horseback to ascertain

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the exact situation of the vessel. She lay about fifty yards from the beach, and in answer to the keeper's hail her crew came ashore in their boat and conveyed him on board. He helped them carry out an anchor to hold her from driving further up, and then, after advising the captain to throw his cargo overboard to lighten her, returned to the station for his crew and the necessary hawsers and tackles. He also borrowed a suitable anchor, and to save time got the schooner Hattie Rebecca, of Newport, which was lying in the harbor, to convey the gear, with his men, to the stranded vessel. Upon arrival they found she had sprung a leak and was full of water. After helping to throw all the cargo overboard they pumped and bailed the water out, and then with their hawsers hove the schooner afloat and took her into New Shoreham harbor, where she could be repaired, arriving there at 11 o'clock at night. She was so leaky they had to keep the pumps going steadily until she was safe in the harbor. But for the assistance thus rendered the schooner would soon have gone to pieces, as she was in a very exposed situation, with the full force of the sea rolling directly into the cove.

October 3.—The schooner Curlew, of Port Huron, Michigan, carrying a crew of five men, bound from Bay City to Mount Clemens, Michigan, with a cargo of lumber, sprang a leak on the passage when off Point aux Barques, Lake Huron, and put in to Sand Beach harbor of refuge for assistance. She then had three feet of water in the hold, and the crew of the Sand Beach Station (Tenth District) went on board as soon as her condition was learned and pumped for sixteen hours, or until she was free of water and able to resume her voyage. The captain was very grateful for the service rendered, as it had saved him from the necessity of unloading before he reached his destination.

October 4.—At 1 o'clock in the morning the south patrol from the Hog Island Station (Fifth District), coast of Virginia, sighted a schooner evidently bound in through Great Machipongo Inlet, but heading directly for the shoals and in danger of stranding in the breakers. He at once burned a Coston signal to warn her, and she hauled off-shore until daylight, when she could safely find her way in.

October 4.—At half past 9 at night as the steamer George D. Sandford, of Grand Haven, Michigan, was entering the harbor of Manistee, in the same State, during a dense fog, she came in violent contact with one of the harbor piers, knocking the engineer, a colored man, named Albert Hicks, overboard. The poor fellow was drowned before aid could reach him. His body was recovered on the following day by the crew of the Manistee Station (Eleventh District). (See page 21.)

October 6.—During the 8 o'clock (night) watch one of the patrols from the Jones's Beach Station (Third District), coast of Long Island, New York, discovered a vessel standing in too close to the beach and warned her of her danger by burning a couple of Coston signals, so that she quickly hauled off-shore.

October 6.—During the night the south patrol from Holly Beach Station (Fourth District), coast of New Jersey, seeing a schooner heading towards the beach, burned a Coston light, when she at once changed her course to the northeast and went clear.

October 6.—The schooner Dan, of New Castle, Delaware, with a crew of four men, bound from Indian River to Port Penn, Delaware, with a cargo of oak lumber, while proceeding to sea, got becalmed and was carried ashore by the current just to the northward of Indian River Inlet at 3 o'clock in the afternoon. She was quickly boarded by the crew of Indian River Station (Fifth District), Delaware, just north of

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where the vessel lay, who took one of the station lines and bent it to the schooner's anchor which they carried out preparatory to heaving the vessel off at next high water. After assisting the captain in every manner possible they returned ashore, promising to return when the tide served. Before long, however, the schooner was floated off by her own crew and taken back into the inlet. The captain warmly thanked the life-saving crew, when they again went on board, for the use of the line, saying, that without it he could not have got the vessel afloat, as he had no gear belonging to the vessel fit for such work.

October 6.—The same conditions which operated against the Dan, as above recorded, also caused the schooner Chief to go ashore, both vessels passing out of Indian River Inlet in company, and both standing in the same locality. The Chief also hailed from New Castle, and carried the same number of men (four), but was bound to Millville, New Jersey, with a cargo of pine lumber. The crew of the Indian River Station (Fifth District) boarded her and with their surf-boat carried out her anchor and made all necessary arrangements, so that her own crew were enabled to heave her off early next morning, and run her back into the inlet for repairs. The captain expressed his hearty thanks to the life-saving crew for the assistance they had rendered him, saying it had saved his vessel.

October 7.—At 3 in the afternoon, as two of the surfmen of Plum Island Station (Second District), near Newburyport, Massachusetts, were out on the Merrimac River in a dory, they saw a gunning-float, with two men on it, capsize near Salisbury Point, a mile or two to the northward and westward of the station. They pulled at once to the rescue and picked up one of the men and put him on board of a steamear lying at the point. The other man being a good swimmer, succeeded in reaching a scow a short distance off without assistance.

October 7.—During the night the north patrol from the Sturgeon Point Station, (Tenth District), Lake Huron, warned off, by burning a Coston signal, a steamer which was steering too close in shore.

October 10.—The schooner Nautilus, of Deer Isle, Maine, with a crew of two men, bound from York, Maine, to Boston, with a cargo of brick, sprang a leak on the passage and was compelled to anchor about half a mile southeast of the Rye Beach Station (First District), coast of New Hampshire, and signal for assistance. The life-saving crew went on board as quickly as possible and manned the pumps, and after considerable labor, succeeded in getting the leak under control. They then got the vessel under way, the keeper and one of the surfmen remaining on board to assist at the pumps and to pilot her into Portsmouth harbor, where she arrived at 8 in the evening. It was after midnight when they got back to the station, as they had to walk all the way—some eight miles.

October 10.—The crew of the Short Beach Station (Third District), Long Island, New York, observed a bark standing in on the wind very close to the land, and by the use of the International Code of Signals warned her so that she tacked just in time to escape getting ashore.

October 11.—Soon after 8 o'clock in the morning a flat-boat belonging to the Government and used on the Louisville and Portland Canal, near Louisville, Kentucky, in attempting to proceed from the cross-dam at the falls to Shippingport, on the Kentucky shore, about two miles below the city, became unmanageable in the strong current, and, notwithstanding the efforts of the people on board, was carried onto what is known as Backbone Reef, just below the dam. The crew of the Louisville Station (Ninth District), went to her at once with tackle, &c., and

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worked energetically for several hours in laying out anchors, trying to float the vessel off, but as the river was very low they were unsuccessful, and had to suspend operations until a better opportunity presented. The crew of the boat, nine in number, landed in their own boat, when it was found she could not be got off that day.

October 12.—At 4 o'clock in the afternoon the Cuckoo, a small cat-rigged boat, owned at Newport, Rhode Island, was driven ashore in a furious northeast gale a mile and a half north of the Point Judith Station (Third District), Rhode Island. The boat was under the management of three young men, who had gone out from Newport for a sail, and had been caught by the gale and driven across Narraganset Bay. They were seen by the keeper approaching the station a few minutes after their fortunate landing and were taken in, clothed with dry garments from the store provided by the Women's National Relief Association, supplied with food, and made generally comfortable. The station crew meanwhile went up the beach to save the boat, which they found a man who had been gathering sea-weed on the beach trying to haul out from the surf with his ox-team, and assisted him to land. The three young men were kept at the station all night, and the next day, the keeper, finding them destitute of funds, took measures to procure them free railroad passes, which enabled them to get back to their homes, two of them to Newport and one to Providence.

October 12.—During the first night watch, the weather being stormy and thick, the south patrol from the Chicamicomico Station (Sixth District), coast of North Carolina, seeing a vessel's light close inshore, burned a Coston light, which the people on board answered by a torch. The north patrol observing the signals reported them to the station, and the keeper hastened down the beach, but upon reaching the locality the vessel had hauled off, her lights being visible some distance at sea.

October 12.—At about 11 o'clock at night as two fishermen were running into the harbor of Erie, Pennsylvania, from the fishing grounds with a fare of fish, during a fresh gale, their boat, the Myrtle, of Conneaut, Ohio, was capsized by the heavy sea when about a quarter of a mile to the eastward of the Erie Station (Ninth District) and the men were thrown into the water. The accident was immediately discovered by the station lookout and an alarm given, but before the crew could reach the spot in their surf-boat the two men were picked up by a passing tug and taken to Erie. The life-saving crew recovered the boat, however, and towed it to a safe place, where they righted and bailed it out and then restored it to its owner. About one-half of the cargo of fish was lost when the boat upset.

October 12.—The schooner Hercules, of and from Pine Lake, Michigan, for Milwaukee, Wisconsin, with a load of cord-wood and tan-bark, encountered a southeasterly gale on the night of the 11th and morning of the 12th, which disabled her steering-gear and drove her so far to leeward that to save her, if possible, from going ashore she was anchored when about half a mile from the beach and three and a half miles to the northward of Sheboygan harbor. She was discovered in that situation at 5 o'clock by one of the patrols from the Sheboygan Station (Eleventh District) and reported to the keeper, who at once directed two of the crew to proceed up the coast and watch for any signal she might make for assistance, as the wind was dead on shore and the sea very heavy. At about noon the schooner began dragging her anchor, and it was seen by the two surfmen that she occasionally thumped on the bottom. A signal of distress was soon afterwards hoisted and her people were observed throwing the deck-load overboard. These facts

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were reported at the station as soon as possible, and the crew, who were ready for the call, turned out at once and with the aid of horses proceeded to the spot with the beach apparatus. It was a heavy drag, as the recent rains had made the roads almost impassable. The schooner was still riding to her anchor when the life-saving crew arrived at half past 1 in the afternoon, but she was laboring so heavily in the sea that the keeper decided to remain, feeling sure that she would soon be abandoned by her crew. He did not have to wait long, for at 3 o'clock she slipped her cable and soon afterwards fetched up on the bottom about two hundred and sixty yards from the foot of the bluff, some seventy-five or eighty feet high, upon which the party of life savers were assembled with their apparatus. The gear was in readiness for use, and as soon, therefore, as the vessel struck, the gun was loaded and fired and the shot-line sent whizzing between the masts, where it lodged on the main-topmast stay. With communication thus established it took but a short time to arrange the gear, and in due season the schooner's crew of five men were all safely drawn ashore. They were all more or less used up from exposure, but restoratives from the medicine-chest soon revived them and they were conducted to comfortable quarters in the city. On the following day, the storm having abated, the life-saving crew went on board in their surf-boat accompanied by the captain, and removed such of the cabin furniture and stores as could be landed and took them to the station, the captain subsequently sending a dispatch for a steam pump and the services of a tug. On the 17th, the tug not having yet put in an appearance, the station crew took a couple of pumps on board and pumped the schooner out, and then after unloading her cargo onto the beach succeeded in mooring her out to the outer bar and there left her for the night. The next morning the tug Arctic, of Kenosha, arrived at Sheboygan and towed the station crew in their surf-boat to the stranded vessel, and after working hard for several hours they succeeded in floating her off in a leaky condition. The anchor and chain she had slipped when she went ashore was then searched for and recovered, and the schooner soon afterwards left in tow of the Arctic for Manitowoc for repairs, the captain as he left thanking the life-saving crew very warmly for the valuable aid they had extended to him. The cargo was sold where it lay upon the beach.

October 13.—Between 4 and 5 o'clock in the afternoon a small sail-boat, owned at West Hampton, Long Island, capsized in crossing the bay between the beach and the main-land, with one man on board. Three of the crew of the Petunk Station (Third District), Long Island, New York, sprang into a skiff, rowed out, rescued the man, and towed the boat ashore.

October 14.—The midnight patrol from the Chicamicomico Station (Sixth District), North Carolina, seeing a steamship standing in for the shore, immediately burned his Coston light, when she hauled off seaward. But for the prompt action of the surfman this vessel would have run ashore in a few moments, and probably become a wreck, as the wind was high and the surf heavy.

October 14.—At daylight the crew of the Cape Fear Station (Sixth District), Smith's Island, North Carolina, discovered a large three-masted schooner ashore on Frying Pan Shoals, about nine miles south-southeast of the station. The boat was launched as soon as possible, and after a hard pull for two hours they reached the vessel to find her abandoned, her people having been taken off by a steamer which passed them on the way out. The schooner proved to be the Robbie L. Foster,

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of Saint George, Maine, bound from New York to Savannah with a cargo of railroad iron. She was full of water, with the sea breaking over her, and as it was apparent she could not be saved the life-saving crew returned to their station, reaching there at 3 in the afternoon, much fatigued from the trip, which had taken over eight hours. The keeper afterwards learned from the captain of the steamer which took the people off, that nine men were rescued, including a passenger, and that he had landed them at Smithville, at the mouth of Cape Fear River. Although no assistance was rendered in this case, the life-saving crew deserve the credit of making a gallant effort by undertaking a long and dangerous journey to the stranded vessel. The schooner became a total loss.

October 15.—The steam-tug Narragansett, bound from Port Johnson, New Jersey, to Providence, Rhode Island, with the schooners Manhattan and Union in tow, encountered heavy easterly weather when off Point Judith, which compelled her to turn back for the purpose of seeking a harbor at Stonington. In turning about to the westward, the Manhattan, a large vessel of nearly a thousand tons, coal laden, grounded on an outlying reef known as Squid's Ledge, about two miles to the westward of Point Judith. She stuck there for half an hour, and when the tug succeeded in hauling her off was leaking so badly that the pumps had to be started to keep her afloat. The tug cast off the Union and put on all steam to get the Manhattan into Stonington before she sunk. When within two miles of Watch Hill, however, the Manhattan had so much water in her that she became unmanageable, and, seeing she would soon sink, the tug headed her in for the land. She foundered, however, off Narragansett Beach, about a mile to the eastward of the Watch Hill Station, (Third District), coast of Rhode Island, and her crew of seven men were taken on board the tug. As soon as they discovered what had happened the life-saving crew went off and brought the crew of the Manhattan ashore from the tug, and sheltered them at the station until the next day, when the tug called for them, the keeper giving them a letter to the railroad officials at Stonington, requesting a free passage for them to their homes. The vessel became a total loss.

October 15.—At 3 o'clock in the morning the north patrol from the Sandy Hook Station (Fourth District), coast of New Jersey, fell in with four men near the Sandy Hook fog-signal, who had just been wrecked in the vicinity of the East Beacon light at the north point of the Hook. They reported that they were from Jersey City on an excursion to Sandy Hook in the cat-rigged boat Addie Taylor, and getting too close to the shore had been upset in the surf, and the boat swamped. The patrolman conducted them at once to the station, where they were given a warm breakfast and made comfortable, and later in the day taken to the steamboat wharf and sent home, free passes being obtained by the keeper for two of the party who were without money. The life-saving crew also worked on the beach for several hours in saving the spars, sail, and rigging, which they shipped to the owner at Jersey City, the boat itself becoming a wreck. The men were very grateful to the life-saving crew for their assistance and hospitality.

October 15.—About 3 o'clock in the afternoon the crew of the Chicamicomico Station (Sixth District), coast of North Carolina, picked up a quantity of plank, which they turned over to the commissioner of wrecks.

October 15.—At about 11 o'clock on this (Sunday) morning, two boys, named John and Edward Davis, residing in Louisville, Kentucky, who had hired a skiff and gone rowing upon the river, got caught in the

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rapid current setting down the falls, and losing all control of themselves, through fright, were in danger of being swept away and drowned when discovered by the crew of the Louisville Station (Ninth District), who dashed out in a boat to their rescue and brought them safely to shore.

October 15.—At 2 o'clock in the afternoon of the same day that the Louisville crew saved the two Davis boys they were instrumental in rescuing three men, W. G. Seaver, of Saint Louis, Missouri, and Alfred and George H. Woodward, of Cincinnati, Ohio, who had also hired a skiff and gone out rowing, and through inexperience and ignorance of the current were in danger of being swept over the falls and drowned. The watchful life-saving crew, seeing the peril the men were in, hastened to their assistance and brought them safely ashore. It was a narrow escape, and the men were very thankful for the aid received from the station.

October 15.—At about 10 o'clock in the forenoon the steam-barge Oregon, with the barge Plymouth, of Buffalo, New York, in tow, arrived off the Sheboygan Harbor, Wisconsin, and blew her whistle for assistance. The crew of the Sheboygan Station (Eleventh District), Lake Michigan, went off at once in their surf-boat and learned that the Plymouth, which was heavily laden with lumber for Chicago, Illinois, from Bay City, Michigan, had sprung a leak and needed assistance, her crew of eight men being worn out by their labors at the pumps during the preceding thirty-six hours, and the water in the hold being over seven feet deep and steadily gaining. The station crew went at once to the pumps and kept them going until the tug Wetzel came down the lake on her way from Manitowoc to Racine with a schooner in tow, and in response to the keeper's hail came alongside and took the Plymouth in tow for the harbor. The barge was so deep in the water, however, that she took the bottom when near the entrance and remained there for two hours with the tug pulling on her all the time before she could be got off. While she lay there the sea increased so rapidly from the southeast, and made her labor so heavily that at one time her crew seriously thought of taking to the surf-boat for safety. The Wetzel got her into the harbor, however, by 1 o'clock in the afternoon; the life-saving crew remaing at the pumps until 2 o'clock the next morning (October 22), by which time she was nearly freed of water, and her crew were sufficiently rested to be able to keep the leak under control.

October 16.—At half past 10 at night one of the crew of the Cobb's Island Station (Fifth District), coast of Virginia, sighted a vessel in danger of running ashore, and warned her by burning a Coston light, so that she quickly changed her course and stood clear.

October 16.—At 9 o'clock in the night, during the prevalence of a fresh southerly breeze, with misty weather and a rough sea, the patrol from the Thunder Bay Island Station (Tenth District), Lake Huron, heard a steamer whistle off in the direction of North Point. Fearing it was a vessel in distress he at once reported the fact, and the life-saving crew turned out in their boat. After pulling some distance in the direction indicated by the patrol, the whistle sounded again. The keeper at once burned Coston signals to let the vessel know that aid was coming, but after searching until midnight, and finding no trace of her, he returned with his men to the station, giving strict orders to the patrols to keep vigilant watch for the craft supposed to be in distress. Nothing further was heard, however, and the next day it was learned that the whistles proceeded from the steamer James Reid, which had touched bottom without knowing where she was, the signals of the life-saving crew ap-

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prising the captain of his position, and enabling him to shape his course accordingly for Alpena, whither he was bound.

October 16.—On the 15th, during the prevalence of a strong southwesterly breeze, one of the crew of the Cape Disappointment Station (Twelfth District), Washington Territory, in beating around Chinook Point on his way back toward the station in a cat-rigged fishing-boat, and while going about for an offshore tack, missed stays and before he could prevent it the boat drifted into the breakers and was cast ashore on the point about seven miles east of the station. Returning on foot he reported the accident at the station, and on the following day (16th) the crew pulled up there in the surf-boat, and by means of rollers and an anchor and warp succeeded in saving the boat for him.

October 17.—The schooner Raymond T. Maull, of Somers Point, New Jersey, with a crew of eight men, bound from Boston to Philadelphia, in ballast, encountered thick weather during the night of the 16th on her way down the coast, and finding herself dangerously close in to the breakers on the bar at Turtle Gut Inlet, New Jersey, was compelled to anchor to avoid going ashore. Her signal, next morning (17th) towards daylight, for assistance in clearing the shoals was soon discovered by the patrol from the Turtle Gut Station (Fourth District), and the crew went off to her as quickly as possible, reaching her at 6 o'clock. They assisted in getting her under way, and then piloted her out of danger with no other damage than the loss of a small anchor, which it was impossible to recover.

October 18.—The sloop Ada Rhame, of New York, with a crew of two men, bound from East Rockaway, Long Island, to New York, in ballast, while standing out through Hog Island Inlet against a heavy head sea, with thick, foggy weather, stranded on the shoal at the west side of the inlet, at 1 o'clock in the afternoon, about two miles and a half to the westward of the Long Beach Station (Third District), coast of Long Island, New York. Owing to the state of the weather, the vessel was not discovered by the patrol until about 4 o'clock, as she lay on the farther side of the inlet at too great a distance to be seen until the fog lifted. As soon as possible the alarm was given at the station and the life-saving crew proceeded to the sloop's assistance, arriving on board at half past 5. As the tide had then fallen and she could not be moved that day, the keeper ran an anchor out to hold her from going further onto the shoal during the night and then returned ashore, the captain preferring to remain on board and agreeing to make signal in case he needed help during the night. The life-saving crew upon returning in the morning (19th) found the sloop had driven up on the beach; the captain reporting that he had made an attempt to get her off on the night flood, which resulted in her being carried further ashore. Anchors were again planted in the channel by the life-saving crew, and although the sea was very heavy and swept the sloop's deck repeatedly, compelling the men at times to hold on with all their might to avoid being washed overboard, they succeeded after much labor and discomfort in floating the vessel off at high water at about 11 o'clock in the day and took her back into the inlet. The owner of the vessel, a resident of East Rockaway, warmly thanked the life-saving crew for thus saving his property.

October 20.—At 2 o'clock in the morning, the weather being quite stormy, the north patrol from Ocean City Station (Fifth District), coast of Maryland, sighted a vessel very close in and in danger of running on to the bar. He at once burned a Coston light when she changed her course off shore.

October 21.—At about 8 o'clock in the morning three men belonging

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to a pile-driver at work in Barnegat Bay were attempting to reach Sea Side Park, in a small sail boat, to obtain a supply of provisions, when the boat capsized and the men were thrown into the water. A fresh northeast breeze prevailed and the water was quite rough, but they managed to cling to the bottom of the boat until discovered by one of the patrolmen of the Island Beach Station (Fourth District), coast of New Jersey, and rescued, after being in the water about two hours. The boat was some distance from the shore and entirely hidden from view at the station by a piece of woods which fringed the inner part of the beach towards the bay; in fact the discovery of the men's situation was due to a fortunate circumstance in the patrolman visiting the bay shore to observe what was going on in that direction. One of the rescued men was so badly used up from cold and exposure as to be almost speechless, when he reached the shore. They were conducted to the station where their clothes were dried and all necessary attention was bestowed upon them until they had sufficiently recovered in the afternoon to return to their vessel in the bay. Their boat in the mean time had been righted and put in good order again by members of the life-saving crew.

October 21.—The crew of the Paul Gamiel's Hill Station (Sixth District), coast of North Carolina, found about five hundred feet of pine boards, stranded along the beach, which they secured, and turned over to the commissioner of wrecks.

October 21.—The midnight and morning patrols from Kill Devil Hills Station (Sixth District), North Carolina, found a quantity of pine boards, which had drifted on the beach, evidently from a passing vessel. They were turned over to the commissioner of wrecks.

October 21.—At about 4 o'clock in the afternoon the crew of the Oregon Inlet Station (Sixth District), North Carolina, found a quantity of birch planks washing about in the surf, which they recovered, and subsequently turned over to the commissioner of wrecks.

October 22.—At about 2 o'clock in the morning the south patrol from the Island Beach Station (Fourth District), coast of New Jersey, found the body of a man, very much decomposed, which had been cast up by the surf. The coroner at Tom's River was notified, who after viewing the corpse ordered it buried on the beach.

October 22.—The crew of Pea Island Station (Sixth District), North Carolina, discovered about fifteen hundred feet of birch plank floating in the surf, in the vicinity of the station, which they hauled out on the beach and turned over to the commissioner of wrecks.

October 22.—Shortly before 10 o'clock in the forenoon the lookout at the Oswego Station (Ninth District), Lake Ontario, New York, discovered and reported a small sloop stranded about four miles east of the station. The life-saving crew went at once to her assistance arriving on board at half-past 10. She was the yacht Phantom, of and from Oswego, with a party of five men on board, who had started out that morning on a hunting expedition. The men stated that when two miles out the vessel carried away her main-boom in the strong breeze then blowing, and that before the damage could be temporarily repaired she had drifted ashore. As the lake was not very rough, the life-saving crew soon succeeded in hauling the yacht afloat, and towed her out to a tug, which on account of the shallowness of the water was obliged to come to some distance off, and the latter towed her back to Oswego where the party arrived about noon. The only damage was the loss of the main-boom.

October 24.—At a little before 5 o'clock in the morning the patrol from the Scituate Station (Second District), coast of Massachusetts,

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sighted a vessel close in and heading directly for the beach. As quickly as possible he burned a Coston light to warn her, and the people seeing it instantly put the vessel about and headed her off on the other tack. But for the timely signal of the patrolman she would have run ashore.

October 24.—At 3 o'clock in the morning the steamer Annie Young, of Erie, Pennsylvania, with a crew of twenty-three men, and loaded with a general cargo from Buffalo, New York, for Milwaukee, Wisconsin, and Chicago, Illinois, ran ashore in a thick fog about eight miles north of Milwaukee Harbor. She was discovered by the tug Starke Brothers of that port, and the captain hailed the crew of the Milwaukee Station (Eleventh District) and informed them of the disaster at 5 o'clock as he steamed into the harbor to procure two scows for the purpose of lightening the cargo to get the vessel off. The life-saving crew launched their boat and waited for the tug going out again, in hopes she would give them a tow. The tug did not respond to their hail, however, but passed right out with the scows in tow without stopping. This necessitated a long pull; so the men started at once and reached the stranded vessel by 8 o'clock, as soon as the tug. Their proffer of assistance was gladly accepted by the captain, and after they had helped to remove enough of the cargo to load the two scows the steamer was hauled afloat by a couple of tugs and taken into port. She received but slight damage.

October 25.—The 8 o'clock (night) patrol of the Watch Hill Station (Third District), coast of Rhode Island, sighted a schooner drifting along with the tide and dangerously close to the rocks inside the buoy off Napatree Point, the wind being so light that she had scarcely steerage way. He at once flashed a Coston signal to her, and the people, taking warning by it, managed to steer her head off shore, and she went clear.

October 25.—At about half past 12 in the day the crew of the Middle Island Station (Tenth District), Lake Huron, observed a steam-barge with two other barges in tow entering the channel between the island and the main-land; the steamer soon afterwards, when about two miles distant, blowing her whistle as though desiring to communicate. They went off to her at once in the life-boat, and upon boarding her, found she was the Oregon, of Buffalo, New York, and that her consorts were the R. N. Rice and the Plymouth, also of that port, the captain saying he was a stranger there, and was looking for Monaghan's wharf, where he was to take the barges to load cedar posts. The keeper told him Mr. Monaghan shipped timber from three different places along the main shore, and suggested that he had better land and ascertain which wharf his consorts were to load at. As the captain expressed a wish to be taken ashore in the life-boat, the keeper complied, and thus enabled him to get his instructions in short order and save valuable time, for which the captain was very thankful, the keeper, upon leaving, giving him all the information necessary in regard to reaching the wharf.

October 26.—Between the hours of 8 and 10 at night the patrol from the Cleveland Station (Ninth District), Lake Erie, when approaching the end of his beat, heard cries for help, and hastening to the spot found a man, named Thompson, searching for the body of his wife, who, while attempting to draw a pail of water that afternoon, had fallen overboard from the deck of the old dismantled steamer J. K. White, which she and her husband had made their home. The patrol searched for and recovered the body, and reported the facts to the keeper, who sent word to the coroner, and then took charge of the body until that official arrived.

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October 27.—The morning patrol from the Seabright Station (Fourth District), coast of New Jersey, picked up a fishing dory, which was duly advertised, and afterwards delivered to the owner.

October 28.—Half an hour after midnight the crew of the White Head Island Station (First District), coast of Maine, were aroused by one of the patrolmen on duty with the cry that there was a fire on Spruce Head Island, a little over a mile distant across Seal Harbor. The men started for the scene in one of their boats as quickly as possible with all the buckets they could muster. The fire was in a frame building on the wharf of the Bodwell Granite Company, and was used as a blacksmith shop. It had made too much headway, when discovered, for the building to be saved, but the life-saving crew rendered good service in preventing the flames from spreading, the men remaining on the spot until there was no further danger to the adjoining buildings and vessels lying at the wharf.

October 28.—The schooner O. J. Hale, of Port Huron, Michigan, carrying a crew of seven men bound from Tawas, Michigan, to Sandusky, Ohio, with a cargo of lumber, sprang a leak in Saginaw Bay, Lake Huron, at 2 o'clock in the morning during a southeast gale and became waterlogged. She was towed by the steam barge Burlington into Sand Beach harbor of refuge, where the owner joined her and attempted to proceed. The sea, however, was too heavy for a vessel in her condition, and after losing twenty thousand feet of lumber overboard she put back for assistance. The crew of the Sand Beach Station (Tenth District), went on board upon learning the condition of affairs, and aided in pumping her out and removing enough of the cargo to make her safe, and thus enabled her to resume her voyage in tow of the Burlington. They worked on board of her about nine hours.

October 28.—At 5 o'clock in the morning, the weather being rough and threatening a storm, the crew of the Sheboygan Station (Eleventh District), Lake Michigan, were aroused by the north patrol with the report that a small schooner was anchored in the lake a few hundred feet to the northward of the harbor piers, with a signal flying for assistance. They went out to her at once in their boat, notifying a tug as they went to follow as quickly as possible, and as soon as the tug arrived alongside they helped heave up the anchor and get the schooner safely into the harbor. She was the Luna, of and from Manitowoc with a cargo of wood for Milwaukee, the captain having been compelled to bear up for shelter at Sheboygan until the blow was over.

October 29.—At a quarter before 4 o'clock in the morning the two surfmen on patrol from the Plum Island Station (Second District), below Newburyport, Massachusetts, discovered a vessel ashore on the south breaker at the entrance to Newburyport Harbor, about half a mile northeast of the station. Signal was at once made to her that she was seen and the men hurried to the station and gave the alarm. The boat was quickly run out and the life-saving crew proceeded to the stranded vessel, reaching her shortly after 4 o'clock. She proved to be the schooner Forest Maid, of and from Newburyport, with a crew of seven men bound on a fishing cruise. While going out over the bar, the wind being light, she had been carried by the strong ebb tide onto the shoal. The first thing done by her crew was to let go an anchor to hold her, but finding she continued to drive farther on they veered away cable, hoping she would go completely over. In this they were disappointed, for she soon fetched up hard and fast with ninety fathoms of cable out. As the water was still falling nothing could be done until the flood tide. The life-saving crew remained on board, and when the tide began

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to rise at 8 o'clock, commenced operations by heaving in on the cable. The wind freshened considerably while they were at work, raising quite a swell, which caused the schooner to pound heavily. They persevered, however, gaining a little every time she lifted on the seas, so that by 9 o'clock the schooner was safely afloat and on her way back into the harbor, apparently none the worse for the accident.

October 29.—At 7 o'clock in the evening, a fresh southwesterly wind prevailing at the time with a heavy sea, the schooner Fleetwing, of Charlevoix, Michigan, for which place she was bound from Sheboygan, Wisconsin, in ballast, with a crew of four men, while attempting to make the harbor of Manistee, Michigan, struck the leeward or north pier, where she carried away her fore-rigging, and then swinging clear began drifting towards the beach. Fortunately, the watch from the Manistee Station (Eleventh District) was on the pier, and, catching the end of a line thrown to him from the schooner, and making it fast, she was held there until he could run to the station and call his comrades, who hurried to the spot and helped repair the damage and then warping her down to the end of the pier, made sail on her so she could stand out into the lake again.

October 30.—At 11 o'clock at night the west patrol from the Rockaway Station (Third District), coast of Long Island, sighted a vessel close to the beach, and by flashing his Coston signal warned her of her danger, so that she quickly headed off shore.

October 30.—At 1 o'clock in the afternoon a small sloop, bound from Long Point to Whisky Harbor, Michigan, with a cargo of lumber, was capsized through carrying too great a press of sail, and the owner, a man named Wilsie, thrown overboard. When the accident occurred the sloop was about three miles and a half to the eastward of the Point aux Barques Station (Tenth District), Lake Huron, and about two miles from shore. The crew of the station soon became aware of what had happened and put off at once in their life-boat to render assistance. Upon arrival they found the man was already safe on board the barge Silver Martin, which was passing at the time and picked him up. As he was badly chilled from his ducking, the life-saving crew took him as quickly as possible to the station, where he was furnished with dry clothing and warm food. They then went out again and towed the sloop to the station and righted and bailed her out, and after putting her in good order moored her safely for the night, the man proceeding to his home at Whisky Harbor, as soon as he was able to travel, on foot, it being but a few miles distant. The sloop sustained no damage, but her cargo was lost.

October 30.—At about 9 o'clock in the morning, during the prevalence of a southeast gale, the lookout at the Kenosha Station (Eleventh District), Lake Michigan, sighted a vessel partially dismasted, at anchor out in the lake about three miles distant to windward. It being evident she needed assistance the crew put off at once in the surf-boat, reaching her in about an hour's time, after a hard pull against the heavy sea. She was the George L. Wren, of Chicago, Illinois, to which port she was bound with a cargo of lumber from Manistique, Michigan, and carried a crew of seven men. The captain reported that she had been struck by a heavy squall the day previous (29th) off Milwaukee, which carried away both topmasts, the foremast-head, and the fore-gaff. He was anxious to get into Racine Harbor for refuge from the storm, but the vessel drew eleven feet of water, and being badly crippled, he dared not venture in without assistance, afraid he would get ashore. The keeper therefore took charge, and with his crew to assist in handling

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the vessel she was got under way and piloted safely into the harbor, where she remained until the weather moderated and a tug could be engaged to tow her to Chicago. That the services of the station crew were appreciated is shown by the following card published in the Chicago Tribune of November 6, 1882, after the schooner's arrival: "The captain and crew of the schooner George L. Wren wish to publicly return their thanks to the life-saving crew at Kenosha for their assistance when that vessel was dismasted off that port recently, as without the assistance of the brave fellows comprising the life-crew the crew of the Wren would in all likelihood have all found watery graves."

October 31.—The crew of the Humboldt Bay Station (Twelfth District), California, were engaged in recovering from the surf a quantity of lumber belonging to a surveying party on the beach, which was in danger of being lost.

October 31.—At 8 o'clock at night the crew of the Humboldt Bay Station (Twelfth District) found two drunken sailors on the beach, who, while coming down the bay from Eureka to board their vessel, the schooner Alaska, anchored below the station, had jumped overboard and swam ashore, leaving the mate who was in charge of the boat to proceed to the vessel alone. They were taken to the station and given dry clothing and shelter and the next morning put on board the schooner.

November 1.—On this date the crew of the White Head Island Station (First District), coast of Maine, saved the schooner Kenduskeag, of Bangor, Maine, from destruction on the rocks in Wheeler's Bay, about a mile and a half to the westward of the station. The vessel had a crew of five men, and was bound from Portsmouth, New Hampshire, to Bangor, in ballast. She encountered foggy and tempestuous weather, and through error of her compass got too close in shore and struck on Red Ledge, where she pounded heavily and then passed over into deep water. The anchor was quickly let go, but although afloat she was still in a most dangerous situation, being almost surrounded by breakers from which nothing but the most skillful handling could extricate her. It was 3 o'clock in the morning when she came to, the darkness and fog preventing her discovery from the station until near daylight. When seen by one of the surfmen he lost no time in reporting to the keeper, and all hands tumbled out as quickly as possible and manned the boat. They arrived on board at 6 o'clock. The captain was unacquainted with the locality and could do nothing. He therefore requested the keeper to take charge with his men and get the vessel out as best they could. The station-keeper, thoroughly familiar with the ground, complied with the captain's wishes and ordered sail set. He then got the vessel under way and by good management worked her out from among the rocky ledges and round past White Head into the channel, where he left her to proceed up the bay; returning with his crew to the station at about noon.

November 1.—The sloop Annie A. Smith, of Patchogue, Long Island, having a crew of three men, bound from Port Johnson, New Jersey, to Freeport, Long Island, with a load of coal, stranded at the easterly end of Hog Island at 10 o'clock in the morning as she was attempting to enter Hog Island Inlet, the wind being moderate from the southwest with thick fog. She was discovered about noon by the keeper of the Far Rockaway Station (Third District), coast of Long Island, two or three miles to the westward, and as quickly as possible the crew went on board to her assistance. While they were on their way in the surf-boat, the crew of the sloop sent word to the keeper of the Long Beach Station (the next station to the eastward), one of the sailors being ac-

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quainted with him, and the crew of that station arrived soon after the Hog Island crew commenced work. The sloop lay in a rather bad situation and could not be moved until the next high water, the tide then running ebb. Accordingly, after completing the necessary preparations, the two crews returned ashore, it being agreed between the keepers that but one crew, that from Long Beach, should go off in the evening and resume operations. The latter, therefore, boarded the sloop again at 7 o'clock, and after working hard until half past 1 in the morning, November 2, during which time they had to throw overboard half of the cargo, succeeded in floating the sloop safely off. She was then run to the eastward and anchored abreast of the Long Beach Station until daylight, the night being too dark for her to be taken in through the inlet with safety.

November 1.—At 10 o'clock at night one of the patrols from the Cobb's Island Station (Fifth District), coast of Virginia, sighted a vessel in danger of running ashore, and by burning his Coston signal warned her in season for her to go about and stand off on the other tack.

November 1.—At 1 o'clock in the afternoon the schooner Kate E. Howard, of Chicago, Illinois, carrying a crew of five men, anchored off the north pier at Evanston, Illinois, with a cargo of lumber from Muskegon, Michigan, and at 3 o'clock veered into the north side of the pier and commenced to unload. By the time her deck-load was off, at half past 5, the wind had freshened from the northeast and raised such a rough sea that when the stevedore gang employed to discharge her returned from supper at 7 o'clock, the water was flying over the vessel in such volume, fore and aft, that they refused to work. As she lay on the weather side of the pier, and there was danger of her getting badly damaged, the captain decided to get under way, and therefore obtained the aid of the crew of the Evanston Station (Eleventh District), to help haul the vessel down to the end of the pier and make the necessary preparations for working out from the land, the life-saving crew boarding the vessel without the aid of their boat. As the anchor was far enough off to enable her to swing clear of the pier the captain concluded to ride the gale out, if possible, and when everything was snug about decks offered to land the station crew with his yawl. In making the attempt, however, he came near swamping the boat and gave it up, the boat soon afterwards breaking adrift and driving ashore to leeward of the pier. As the wind and sea were steadily increasing, and the schooner lay in quite shoal water—there being but three or four feet to spare under her keel—it was decided to run to Chicago, about twelve miles distant, for a harbor. After shortening in the chain, therefore, and hoisting sail they slipped the anchor and filled away at a quarter past 10, arriving in Chicago just before midnight. As soon as she was safely moored, there being no further need of their services, the life-saving crew hurried to the depot, hoping to catch the midnight train, but failing in that they returned to Evanston on foot, reaching the station at 3 in the morning, after delaying a short time on the way to search for and recover the schooner's boat, which they hauled to a place of safety until the schooner should return to discharge the rest of her cargo.

November 1.—At half past 7 in the morning the crew of the Sheboygan Station (Eleventh District) were called upon to search for the body of a man named Albert Farvour, a resident of Sheboygan, Wisconsin, who, it was feared, had committed suicide during the night previous by drowning himself. The crew responded at once and proceeded in their boat to the spot where it was supposed he had jumped into the

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river, and after grappling for an hour found the body and carried it home.

November 1.—At 9 o'clock at night the south patrol of the Sheboygan Station, (Eleventh District), Lake Michigan, reported that a schooner had just missed the harbor in attempting to run in and had anchored near the beach about seventy-five yards from the south harbor pier. The surf-boat was immediately launched, and, after dispatching a man for a tug, the crew pulled round to her and found she was the Lucy Graham, of and from Milwaukee for Washington Island, Wisconsin, with supplies for the lumber camp at that place. The captain stated that he had been unable to make the harbor on account of his steering gear being damaged. As the vessel was lying in but eight feet of water, with a heavy sea running, making it impossible for the tug to go alongside, the surfmen ran a line from her to the pier, and hove her out into deeper water, when the tug took hold and towed her safely inside, the station crew helping to moor her. But for the timely assistance of the life-saving crew, the schooner would soon have dragged ashore, and probably gone to pieces as the bottom was sandy and very poor holding ground.

November 2.—At about half past 5 in the evening the crew of the Gurnet Station, (Second District), near Plymouth, Massachusetts, discovered the small sailing-yacht Martha, of Duxbury, about three-quarters of a mile to the southward and eastward of the station, drifting seaward before the gale which was then blowing from the northwest. One of the station boats was quickly manned, and after a pretty rough time of it they succeeded in bringing the yacht safely back to her berth in the harbor, afterwards sending word to the owner to come and take charge of his property. The owner was very thankful to the station crew for recovering the boat and made them a present of a sum of money in token of his appreciation.

November 2.—At daylight the crew of the Monomoy Station (Second District), coast of Massachusetts, sighted a schooner at anchor off shore near Little Round Shoal, five or six miles to the southward of the station, with her bowsprit and headgear gone and apparently in distress. The life-saving crew put off to her as quickly as possible, arriving soon after 9 o'clock. She proved to be the Cora, of Dennis, Massachusetts, bound from Philadelphia to Boston with a cargo of coal, and had a crew of seven men. She had been in collision with another vessel during the night and had anchored to repair the damage to her hull as much as possible, having been cut down almost to the water-line, besides losing her bowsprit with all the gear attached. As the wind was fair for Boston and the weather fine the captain proposed continuing on his voyage, but he warmly welcomed the life-saving crew and requested their assistance in clearing the shoals, which extended in nearly every direction. He also desired to send a dispatch to the owners of the vessel, apprising them of the accident. The life-saving crew therefore helped get the vessel under way and piloted her safely to the northward of Pollock Rip, a dangerous shoal off Monomoy, and then left her to proceed on her cruise; receiving from the captain a dispatch to be taken to the nearest telegraph office at Harwich, on the main-land, several miles distant, one of the crew being sent forward with it in a sail-boat as soon as they arrived at the station, toward noon.

November 2.—The steam yacht Lotus, of and from New York, with a crew of five persons, bound to Monmouth Beach, New Jersey, stranded on a bar in Shrewsbury River, about a mile northwest of Seabright Station (Fourth District), New Jersey, at 2 o'clock in the afternoon, the

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vessel springing a leak after she struck and making water so fast that the fires were put out. As it was impossible to do anything for the relief of the vessel that day on account of the wind, which blew a gale from the northwest, the crew were landed in one of the station boats, the steamer having no boat of her own. The life-saving crew also assisted on the following day (3d) in laying out an anchor and cable, so that her own people found no trouble in heaving her off at high water and she was then towed to her destination.

November 2.—At about half past 6 in the morning the lookout on the roof of the Cleveland Station (Ninth District), Lake Erie, discovered and reported a barge at anchor, about a mile north of the Cleveland harbor piers, with a signal of distress flying. The life-saving crew went off to her at once against the heavy northeast gale and high sea then prevailing, and found she was the barge B. B. Icsman, of Sandusky, bound in to Cleveland, Ohio, from Bay City, Michigan, with a cargo of lumber and laths. She was leaking badly and had carried away her rudder-chains, and being thus disabled had anchored the night before to wait for the assistance of tugs to tow her into port. The vessel carried a crew of four men and one woman, the latter, the wife of the captain, acting as cook. The life-saving crew upon learning the condition of affairs returned to Cleveland and obtained the aid of the tugs L. P. Smith and Patrick Henry, and then went on board again, assisted in heaving up the anchor and getting her tow-lines to the two steamers, and by half past 10 in the forenoon had the barge safely moored at her dock, some three miles up the Cuyahoga river.

November 2.—On this date as a couple of tugs with a large and valuable raft of logs in tow were proceeding down Lake Huron on their way from Black River, Alcona County, Michigan, to Toledo, Ohio, they were overtaken by a strong northerly gale, which raised such a high and dangerous sea that when they were off Point aux Barques at about 8 o'clock A. M., it became necessary for their own safety to cast the raft adrift and run to the nearest harbor for shelter. When abandoned the raft was about five miles distant from the Point aux Barques Station (Tenth District). The keeper had observed the movements of the tugs and as soon as they left kept a sharp watch on the raft, knowing that it would now drift inshore before the wind and sea. As it came nearer he noticed something on it which he took to be a man. The life-boat was immediately launched, but on approaching near enough the object was found to be a frame structure for holding signal lanterns. An attempt was made to recover the tow line, a huge fifteen-inch hawser, but the sea was too heavy for them. Later in the day, however, after the raft had grounded on a reef a few hundred yards from shore about a mile and a half to the eastward of the station, they succeeded after much labor in hauling it clear of the rocks where it was chafing badly. There was too much of it and it was too heavy for them to take it ashore. On the day following (November 3), the gale having abated, the life-saving crew pulled up the coast some two or three miles towards New River and recovered several hundred feet of lumber from the surf, and while they were thus engaged one of the tugs reappeared and made signal for their assistance in getting her hawser from the raft. She was unable to approach near enough to get it herself, so the station men recovered it alone, having to use two of their boats to carry it out to the steamer. During the following week the crew rendered excellent service, from time to time, in aiding whenever necessary a gang of men employed to float the raft off to the tug and also acting in concert with the crew of the Grindstone City Station, to the westward, in saving a

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quantity of lumber and laths which lay scattered along the beach between the two stations. Eighteen trips in all were made by the Point aux Barques crew in their boats in aiding to recover the property, from the time it was driven ashore until the tug finally took it in tow again on November 11, for its destination one of the station hawsers being also used on two occasions when needed to expedite the work.

November 2.—At about 1 o'clock in the morning the watch at the Chicago Station (Eleventh District), Lake Michigan, observed signal lights on board a vessel in the direction of the new breakwater, and he was just about to report his discovery when the tug George B. McClellan hailed him as she passed with information that the signals proceeded from a schooner which had struck the breakwater while attempting to enter the harbor, and that she was in danger of sinking. As soon as he could arouse his comrades they turned out with the surf-boat and put off to render assistance. The wind was blowing strong from the northeast, and there was a heavy sea, which gave the men a hard pull until they got under the lee of the breakwater, and by skirting that structure until its northerly end was reached they presently found the vessel at anchor in the gap between the breakwater and the shore. She was the schooner J. W. Brown, of Chicago, and was from Grand Haven, Michigan, with a cargo of slabs, her crew numbering seven men. The captain reported that three of the men jumped onto the breakwater at the time of the collision, fearing the vessel would go down. As she was leaking badly the keeper put two of the station crew on board to assist at the pumps while he returned into the harbor for a tug to tow her in. Upon getting to the station he dispatched two men to hunt up a tug, directing them to accompany the tug and help bring the vessel inside. Owing to the gale, the men had some difficulty in finding a tug willing to undertake the job, but the captain of the McClellan finally consented to go, the three sailors who had jumped onto the breakwater being also found and induced to accompany them. The sailors had just been landed by a tug which had been lying under the lee of the breakwater at the time the schooner struck. The schooner was then got under way, the four surfmen assisting, and by keeping the pumps going she was towed safely into the harbor.

November 3.—At 8 o'clock in the morning, as the sloop L. C. Wallace, of Somers Point, New Jersey, with a crew of two men, was beating in through the north channel of Absecom Inlet, with a cargo of coal from New York, she missstayed and before she could be got round went ashore on the north shoals about three-fourths of a mile northeast of Atlantic City Station (Fourth District), New Jersey, and seven hundred yards distant from the beach. A fresh breeze was blowing at the time, the tide was low, and there was rather an ugly sea running. Discovering the bad position of the sloop almost as soon as she struck, the life-saving crew went off at once to her assistance. A hasty survey of the situation convinced the keeper that the delay of sending ashore for a heavy anchor to heave the vessel back into the north channel would result in disaster, on account of the sea, so he advised an attempt to force her over the shoal into the main channel. The captain of the sloop assenting to this, the keeper took charge with his men and crowded on all the sail possible. By that means they succeeded in driving the vessel across the shoal into deep water, and she was then piloted inside, where she anchored about noon. She was fortunate in receiving no damage, for the thumping she got on the shoal at one time threatened her destruction.

November 3.—The keeper and crew of the Smith's Island Station, Vir-

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ginia (Fifth District), seeing a small schooner flying a signal in the neighborhood of Isaac Shoal, five miles away from the station, went out to her, and found on board, in an insensible condition, the captain of a sloop which had been wrecked the night before several miles from land and beyond the scope of the service. He had succeeded in swimming to a bar near the beach, where he had been seen by the crew of the schooner, who got him on board, and finding him soon sinking into apparent death from his long exposure to cold had signaled for assistance. The life-saving crew applied bottles of hot water and hot bricks to various parts of his body, and practiced upon him the method of resuscitation in use by the service, by which means he was brought to. They then landed him in the surf-boat, and, as he was unable to walk, sent for a cart and conveyed him to the station, where he was tenderly succored for six days, or until he had in some degree recovered, when he was sent to his home.

November 4.—At a late hour in the night word reached the Louisville Station (Ninth District) that a man had stumbled into the river at the foot of Fourth street, Louisville, Kentucky, a few hundred feet west of the station. One of the boats was instantly manned and in a few moments the life-saving crew had the man safe in their boat and on his way to the station. He was very drunk, but insisted upon being taken home. Two of the men therefore escorted him thither and put him comfortably to bed. He would doubtless have been drowned but for the prompt arrival of the life-savers.

November 4.—At a few minutes after 9 o'clock in the morning the crew of the Middle Island Station (Tenth District), Lake Huron, while busily engaged at their various duties about the house, were startled by the sound of a steamer's distress whistles away to the southward of the island. The surf-boat was instantly launched and off they went in the direction of Bratton's Landing, on the Michigan shore, about three miles to the southward and westward, and there found the steam-barge Oregon, of Buffalo, New York, which they had assisted a few days previous (see October 25) hard aground on a reef about two hundred yards out from the end of the wharf, and a little to the northward of it. They arrived about 10 o'clock. The vessel had a crew of fifteen persons, all told, and was loaded with over half a million feet of lumber from Perry Sound, Ontario, for her home port. The captain, who gladly welcomed the life-saving crew, reported that while steaming into the wharf to pick up the barge Plymouth, which had completed her lading, he had missed the channel and run on to the reef where the depth of water was nearly two feet less than the vessel's draft. The wind was freshening from the southward, and the life-saving crew got to work as quickly as possible and ran a hawser to the Plymouth at the wharf and tried hard for some time to heave the steamer off, but without success. They then got a heavy anchor out astern, which was a very laborious task, as the Oregon having none suitable, they had to borrow one from the Plymouth and take it first alongside the stranded vessel to bend on her hawser. Upon getting it laid all right they hove on the hawser for an hour or more, and still the vessel would not budge, although her propeller was kept going all the time as an aid to their efforts, the only result being to bring the anchor home. It was then 1 o'clock in the afternoon and the weather looked threatening, with every prospect of a stormy night. The keeper therefore advised the captain to send to Alpena, several miles distant, for a tug. This the captain agreed to, and upon being landed by the surf-boat he hired a team and dispatched the mate post haste to Alpena for the desired

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aid. Upon returning on board with the captain the life-saving crew pitched in again with the rest and labored at the capstan bars until the tug came at 7 o'clock, or long after dark, but still without result. The arrival of the tug made it necessary as a preliminary move to get the anchor in on board, as in case she succeeded in hauling the Oregon off stern first it would be in the way and give them trouble. But there being no ready means of hoisting it in aft, the work of transporting it forward to the gangway was performed by the station crew with their boat. As the night was extremely dark, and the sea rough, the men found it a very dangerous undertaking. It was accomplished, however, by skillful management, and the tug then took up a position alongside the Oregon, and opening out under a full head of steam made a vigorous effort to pull her off the reef. As the stranded vessel still remained firm, the tug was requested at 10 o'clock to change her position to the Oregon's port bow and attempt to wind her head round to the southward or toward the wharf. This was refused on account of the shoalness of the water and heavy sea under the Oregon's bow, the captain of the tug fearing his own vessel would strike the bottom. He agreed, however, to take a hawser out aft and attempt to pull the vessel stern first. While preparing for this and just as some of the station crew were passing from the steam-barge to the tug to aid with the lines, a heavy sea gave the latter a rank sheer to leeward, and one of the surfmen (Edward Snelgrove), fell overboard by the slipping of the gang-plank between the two vessels, and came near being lost. Fortunately some of the men were in the surf-boat and they reached the spot just in time to save him. The tug steamed out on the Oregon's weather quarter and anchored so as to keep well to windward, and then her tow-line was run in to the barge by the station crew, and the tug went on pulling again until half past 2 in the morning, the life-saving crew in their boat being kept constantly busy conveying messages to and fro between the two vessels. As the barge still remained firm on the reef notwithstanding all that had been done, it was at the hour last named decided to suspend operations until daylight, and the men were directed to seek shelter and obtain much-needed rest. All hands were much fatigued from working in the wet and cold for seventeen or eighteen hours with barely time to snatch a mouthful to eat, and the station men gladly sought the warmest places they could find, some under the lee of the smoke-stack, and others going down into the fire-room; the keeper, however, remaining awake to take care of the surf-boat. Their repose was of short duration, for all hands were up and had breakfast before daylight, in readiness to resume operations at 6 o'clock. By that hour the wind had backed into the southeast and was blowing a gale. Upon turning to, the station men went out to the tug and urged the captain to attempt to turn the barge's head round, but he steadily refused to take the risk until the weather moderated, fearful for the safety of his own craft. He was perfectly willing to do all he could aft and went on pulling again for another three hours, but still the barge did not move, the surf-boat keeping busy all that time passing to and fro with messages and instructions. The barge was now pounding heavily and in danger of knocking herself to pieces, and as the keeper had become satisfied that the only way they could succeed was to wind her head round, he proposed running a line from forward to the stern-capstan of one of the barges on the south side of the wharf; the Oregon having no forward capstan. This was assented to by the captain, but the only available hawser on board was not long enough and some delay occurred in borrowing a hawser to tail on to it from the barge R. N. Rice, which was anchored half a mile away.

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Great difficulty was also encountered in getting the end of the hawser to the barge's capstan, the wharf being piled up with cedar posts and railroad ties, which impeded their movements very much. It was at last got on a stretch, and after a couple of hours of hard heaving by the life-saving crew the Oregon's head was moved some thirty or forty feet in the direction of the wharf. It should be stated that during all this time her engine was reversed at full speed, and the tug was keeping up a tremendous strain on the stern hawser. The men being much encouraged by the success of their plan kept on heaving for a short time longer, when suddenly, to the joyful surprise of everybody, the Oregon slid off the reef into the channel, and was once more afloat, nearly taking the capstan the station crew were working at out of its socket before the hawser could be slacked out. It was then all plain sailing, and the tug lost no time in moving the vessel out into the offing, astern of the R. N. Rice. The life-saving crew repaired on board at once, expecting she would be leaking badly, but, to their astonishment, found her as tight as a bottle, after laying on the reef for about twenty-seven hours, and pounding at times hard enough to almost shake the masts out of her. Her good condition was doubtless due to the fact that she was a new and strongly-built vessel, this being her first trip. There being nothing further for them to do, the life-saving crew turned the prow of their boat homeward, the captain, when they left, expressing the utmost thankfulness to them and to the Life-Saving Service generally, and frankly telling them that the safety of his vessel and her cargo was mainly due to their untiring energy and skill. It was 2 o'clock Sunday afternoon when they reached their quarters, completely fagged out, having been almost continuously at work and exposed to the wild November storm since 9 o'clock the previous day, making during that time, in addition to the other work performed, some fifty trips with the surf-boat in passing to and fro between the vessels, some of which were attended with peril to life and limb.

November 5.—The schooner Mary E. Amsden, of Calais, Maine, with a crew of eight men, bound from New York to Richmond, Virginia, with a heavy cargo of railroad iron, blasting powder, and soda, sprung a leak in a gale off the New Jersey coast and was compelled to bear up for the Delaware for a harbor. The leak gained on the schooner so fast, however, that she had to anchor off Cape May, New Jersey, at about daylight and signal for assistance. She came to abreast of Cape May City, about three hundred yards from the beach, a mile to the southward of the Cold Spring Station (Fourth District). Her signal was soon discovered by the patrols from the Cold Spring and Cape May Stations, and both crews went off as quickly as possible to render aid. The captain reported his pumps disabled and several feet of water in the hold. He had just hove short on the anchor and proposed beaching the vessel to save the lives of himself and crew. The station men urged him to hold on and promised their best efforts to get the schooner safely into the Delaware. A bailing party was at once organized with buckets, while others set to work repairing the pumps, the boat belonging to the Cold Spring Station being dispatched ashore again for more men and an extra pump. All hands pitched in with a will and by sundown, when a relief party went off and thus permitted the life-saving crews to land so as to attend to their regular patrol duties, the water in the schooner's hold had been reduced about one-half. Early next morning (November 6) the station crews again went aboard and resumed their labors, and by 4 in the afternoon when the tug Cynthia No. 2, which had been telegraphed for, arrived, the schooner was entirely freed of water. She was then

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taken in tow by the steamer to Philadelphia for repairs. The vessel would undoubtedly have been beached and probably lost but for the urgent advice of the station men against such a step.

November 5.—The patrol from the Dam Neck Mills Station (Sixth District), coast of Virginia, discovered a yawl in the surf and hauled it up on the beach. The keeper took charge of it and notified the State commissioner of wrecks.

November 5.—The schooner Hattie Lollis, of Wilmington, Delaware, with two passengers and a crew of four men, and partly laden with mill supplies, from Philadelphia, Pennsylvania, for Leechville, North Carolina, which anchored in Hatteras Inlet during a heavy northeast gale—the wind attaining a velocity of forty-two miles an hour—parted her cable at 2 o'clock in the morning and drove ashore on the south side of the inlet, at a point about six miles west-southwest of the Durant's Station (Sixth District), on Hatteras beach, coast of North Carolina. Owing to the darkness and the great distance at which the vessel stranded beyond the station patrol limit—the inlet intervening—she was not seen until daylight; and even then the patrolman who discovered her was not certain she was in trouble until she hoisted her colors union down. As soon as possible after that the life saving crew launched the surf-boat and went to her assistance, the passage across the inlet being very rough on account of the high sea. As the vessel lay well up on the beach and almost dry at low water, so that there was no immediate danger, all the service the station crew could render that day was to land the two passengers with their baggage, and then establish a camp upon the beach for the convenience of the crew, who proposed remaining by the vessel until the arrival of a wrecking company from Norfolk; the life-saving crew carrying a telegram requesting such aid to the nearest telegraph office, at the captain's request. Two days later (November 7) the keeper again visited the schooner with his men and helped recover the anchor which had been lost in the gale, besides assisting in making other preparations towards getting the vessel off, which was subsequently accomplished by the Baker Salvage Company (November 10), and the captain enabled to proceed on his voyage. The schooner suffered but slight damage.

November 5.—At 1 o'clock in the afternoon, as the schooner Fiat, of and from Oswego, New York, was attempting to enter Big Sandy Creek, Lake Ontario, New York, on her way to Woodville, with a cargo of coal, oil, and salt, she grounded on the rocks at the mouth of the creek through the water being unusually low in the channel. She was seen to fetch up by the lookout at the Big Sandy Station (Ninth District), a quarter of a mile distant, and the life-saving crew went off at once to aid her crew (three men) in getting into the creek. One of the station lines was brought into use as a warp and hove well taut, and then, by swinging the booms from side to side and causing the vessel to roll on her keel, they succeeded in working her in over the reef into deep water without damage, and enabled her to proceed to her destination.

November 5.—At midnight the canal-boat Carrie and Cora, of Fulton, New York, an open scow, bound from Fair Haven, New York, to Oswego, New York, with a cargo of apples, potatoes, and onions, sprang a leak while in tow of a tug, two miles from shore, and nine miles west of Oswego, and having a heavy deck-load spread apart under the weight, causing her seams to open until she became water-logged. Her cargo was washed overboard, but the tug succeeded in towing her into Oswego Harbor. The crew of the Oswego Station (Ninth District), Lake Ontario, New York, launched the surf-boat about noon, and, in com-

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pany with a tug, went in search of the lost cargo. After seven hours' labor they succeeded in recovering one hundred and ten barrels. The next day (November 6) they spent eight hours on the water in the same search, but without further result.

November 5.— At 8 o'clock at night, during the prevalence of a fresh southeast gale with a heavy sea, the patrol of the Sand Beach Station (Tenth District), Lake Huron reported that the schooner Ida Robinson, of that place, which had been laid up in the harbor with no one on board, had just dragged anchor about a hundred and fifty yards to the north of the station. The life-saving crew therefore hurried to her at once in the surf-boat with a couple of light anchors and a hawser, and after nearly four hours of downright hard work kedged her off and took her to a safe anchorage. But for their labors she would undoubtedly have gone to pieces before morning, as she lay in a bad place, where the surf was very rough.

November 5.—Between 9 and 10 o'clock at night of the 4th, the weather being stormy, the owner of the fishing-steamer Pottawatomie, of Milwaukee, Wisconsin, called at the Milwaukee Station (Eleventh District), Lake Michigan, and reporting his vessel some hours overdue, expressed fears that an accident had befallen her. It was decided to wait a short time longer, and as she failed to arrive by midnight the keeper got up steam on another fishing-steamer and started out at 1 o'clock in the morning in search of her. After cruising out into the lake some forty-odd miles without finding her, they were compelled to put back for more coal, intending to resume the search to the northward in the direction of Sheboygan, but upon reaching the harbor the vessel was found at the station, where she had been dropped by the steamer Starucca, of Buffalo, which had picked her up in a disabled condition, her shaft being broken, and towed her in. The keeper took her to her wharf and had her unloaded, and then towed her to the ship-yard for repairs.

November 6.—At half past 8 at night the patrol from the Coney Island Station (Third District), Long Island, discovered a capsized skiff in the surf, with a man clinging to it, about a mile to the westward of the station. The patrolman sprang to the man's relief and brought him ashore, and hurried him to the station to get his wet clothing off as quickly as possible. The poor fellow arrived in an almost helpless condition, and the keeper at once administered hot stimulants, furnished him with dry clothing, and made him comfortable for the night. His name was George Pray, a resident of Rockaway. He had been out in Jamaica Bay, and getting lost in the darkness was carried out of Rockaway Inlet by the ebb tide, and in attempting to land on Coney Island, supposing it to be Rockaway Beach, was capsized and narrowly escaped drowning in the surf. He was extremely fortunate in being so quickly discovered by the patrolman.

November 6.—The steam-barge Oregon, of Buffalo, New York, which the crew of the Middle Island Station (Tenth District), Lake Huron, had recently aided so materially in saving from wreck (November 4–5) seemed again destined to get into trouble. After being floated from the reef near Bratton's wharf, she had anchored to the southward of Middle Island, waiting to proceed when the storm abated. The weather continued bad, however, and in the afternoon of the 6th the captain, fearing he would be driven ashore again, concluded to lift his anchor and run into Middle Island passage for shelter under the lee of the island. While steaming up between the island and the main-land at about half past 4 o'clock, the vessel struck on the shoal known as the Middle Ground, about a mile and a half to the westward of the life-

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saving station. She was soon discovered by the keeper, who immediately ordered the life-boat out, and in a quarter of an hour afterwards the life-saving crew were on board. The wind was still blowing a gale and the weather was rainy and thick. The captain said he wanted the tug which had aided him the two previous days, and as she was anchored to the northward of the island, not a great distance off, the life-saving crew pulled to her at once to find that she was already getting up steam, having heard the Oregon's distress signals soon after she struck. As it was 6 o'clock, however, and quite dark when the tug was ready to start, the captain expressed fears that it would be unsafe to go near the stranded vessel, as he was not familiar with the channel near the reef where the vessel lay. The keeper assured him of his cooperation and assistance, offering to run the hawser with his life-boat so the tug would not have to go alongside. The sea was so rough in mid-channel near the stranded vessel that it was found necessary to keep well under the lee of the island until the tug's ten-inch hawser could be coiled in the life-boat, and when that was done the life-saving crew started again in tow of the tug, the latter steaming as near to the reef as was deemed safe in the darkness, and then dropping the life-boat to pull the rest of the distance, the men paying out the hawser as they went. The hawser being too short, the boat's cable was bent to it and even then was too short to reach. The keeper wanted the tug to run closer and try it again, but this was declined on account of the shoalness of the water all around the vessel, and the attempt to run the hawser to her had to be abandoned for the night. The tug soon afterwards anchored, and the life-saving crew pulled aboard the Oregon again. It was then 8 o'clock. The Oregon being short of provisions and unable to furnish supper to the station men, the latter at 9 o'clock proposed going ashore to get something to eat and then return and remain on board. The captain, however, thought, as the vessel lay firm and did not thump any, they need not return until morning, promising to make signal in case matters became worse; so with that assurance the men went back to their station, glad of the opportunity to change their wet clothing and have supper, the boat being held in readiness for launching at a moment's notice, and the patrols instructed to keep a sharp lookout for any signal from the stranded vessel. Fortunately, at midnight the gale abated and the rain ceased, and by half past 5 in the morning, when the life-saving crew set out, after an early breakfast, the wind had shifted into the west and the sea was much smoother. The first work they did, at the request of the tug captain, was to sound around the stranded vessel for the best water, so the tug could approach as near as possible. The latter then dropped in to within a few hundred feet, and had her hawser run to the Oregon by the life-boat crew, and at 7 o'clock the work of pulling on her commenced in earnest. As the engineer of the Oregon suspected something was wrong with the propeller, he was taken into the boat to make an examination, which resulted in the discovery that two of the blades had been knocked off, probably from contact with bowlders under the stern, of which there were several, the water being shoalest at that point. The vessel, in fact, was hardest aground aft, and it was decided to lighten that end by shifting some of the cargo forward. The station crew lent willing aid, and by 10 o'clock, when some sixty or seventy thousand feet of lumber had been moved forward, the vessel began slowly to move. The tug was all this time pulling away under a full head of steam, and by continuing the work of lightening the vessel aft she moved faster and faster, until at 11 o'clock in the forenoon she

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went entirely afloat. The Oregon was then piloted clear of all danger out to the north end of the island, where she came to long enough for the station men to assist in re-stowing the cargo, and by 1 o'clock she was ready to proceed on her voyage, much to the relief of the captain, who again expressed his deep obligations to the men for their valuable service in contributing so largely towards extricating his vessel on the two occasions from very dangerous situations, the only damage she had sustained, so far as was ascertained, being the loss of the two propeller blades, which materially lessened her speed.

November 9.—During the night one of the crew at the Assateague Beach Station (Fifth District), coast of Virginia, saved a vessel from running on to Ship Shoal, near the coast, by burning a Coston signal, the vessel's course being quickly changed so that she went clear.

November 9.—At half past 4 in the afternoon the steam-tug M. A. Knapp, of Racine, Wisconsin, with a crew of three men, while engaged in towing a loaded mud-scow out of the river at that place, grounded a short distance to the south of the south harbor pier, the scow also getting aground at the same time. The accident being quickly discovered by the crew of the Racine Station (Eleventh District) Lake Michigan, they turned out with their surf-boat, and by means of a tackle which they had taken with them succeeded in winding the tug round with her head off shore when her engine was put in motion and she floated off. The station crew then ran a line to the stranded scow and she in turn was pulled off by the tug.

November 9.—At 10 o'clock at night, the weather being calm and foggy, the crew of the Two Rivers Station (Eleventh District), Lake Michigan, were aroused by a steamer's whistle out on the lake which sounded as though she was calling for assistance. The keeper at once put off in a skiff with two of his men, and after proceeding about a mile from the harbor found the tug Welcome, of Milwaukee, Wisconsin, with a dredging machine in tow, bound from Ahnapee to Manitowoc, in the same State, which had got into shoal water and lost her reckoning, and was desirous of communicating with the shore to find out where she was. The keeper gave the captain the desired information, for which he was very thankful, as it saved him from further detention, and at once shaped his course down the coast to his destination.

November 10.—At about 7 o'clock in the evening four men belonging to the fishing schooner J. J. Burns, of Boston, Massachusetts, while out in a dory "torching" for herring in the vicinity of Gurnet Point, Massachusetts, got caught in the breakers and swamped, and narrowly escaped with their lives. Their cries for help were heard by the crew of the Gurnet Station (Second District), a few hundred yards distant, who hurried in a boat to their relief. The men were safely ashore, however, when the life-saving crew arrived, but the latter assisted in hauling the dory up clear of the surf and then took the men to the station, where they were furnished with dry clothing and a hot supper and made comfortable for the night. At about midnight another boat's crew of four men belonging to the same vessel arrived at the station in search of their missing shipmates, whom they had feared were drowned. These also were afforded accommodations for the night, and when all had breakfasted in the morning they left for their vessel, which was anchored in the Cow-yard, Duxbury Bay, thankful to the life-saving crew for their good offices.

November 10.—At about 7 o'clock in the evening the patrol from the Cape Fear Station, (Sixth District), coast of North Carolina, seeing a vessel's light so close in that he feared she would get ashore, burned his Cos-

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ton light and immediately reported the circumstance at the station. A close watch was kept on the vessel, but no assistance was required, as she hauled off shore, having evidently taken warning from the signal.

November 10.—The midwatch patrol south from the Sturgeon Point Station (Tenth District), Lake Huron, sighted a steamer in the darkness running dangerously close along the shore. His warning signal, a Coston light, was quickly seen by those on board, and the vessel sheered off to a safe distance.

November 10.—During the night the patrol from the Cape Disappointment Station (Twelfth District), Washington Territory, burned a Coston signal to warn off a vessel which stood close in to the shore and burned a flare-up light, as though desiring to ascertain if she was near the land. She headed off shore as soon as she was answered by the patrol.

November 11.—At about 2 o'clock in the afternoon the crew of the Sheboygan Station (Eleventh District), Lake Michigan, observed a schooner come to anchor out in the lake, about a mile and a half distant from the station, and hoist her colors as though needing assistance. Upon putting off to her with the surf-boat they learned she was the G. D. Douseman, of Chicago, Illinois, to which place she was bound with a load of lumber from Green Bay, Wisconsin; the captain reporting that the night previous he had been run into by an unknown vessel, which had carried away his main boom, split the mainsail, and stove his yawl so badly that it was unfit for use, and being in need of oil and other supplies he was desirous of aid in getting ashore to make the necessary purchases. He was therefore given passage to town in the surf-boat, assisted in procuring what supplies he wanted, and afterwards taken back to his vessel, and thus enabled when the wind came out fair to resume his voyage down the lake.

November 11.—At 9 o'clock at night, the weather being foggy and dark, the tug M. A. Gagnon arrived off the harbor of Two Rivers, Wisconsin, where she belonged, on her way from Manitowoc, in the same State, and blew her whistle as a signal to the crew of the Two Rivers Station (Eleventh District), to display lights on the pier so she could get in, as there was no regular harbor light. The keeper at once dispatched a man with a lantern down to the end of each pier to show the tug the way in, and she was thus enabled to reach the harbor in safety. The captain thanked the men warmly for the assistance thus extended to him.

November 12.—At a quarter before 8 in the evening, the weather being dark and thick, with a strong southwesterly wind, as the north patrol from Chatham station (Second District), Cape Cod, Massachusetts, was returning over his beat to the station, he discovered a vessel close in and rapidly nearing the shore. He immediately burned a Coston light to warn her off, but it was too late, as she grounded just as the signal ignited. The vessel had fetched up on the outer bar, two hundred yards from the beach, about a third of a mile north of the station. He could plainly hear the people on board shouting for assistance as he started toward the house to give the alarm. The life-boat was run out on its carriage, hauled abreast of the vessel, and launched as quickly as possible, the life-saving crew boarding her in less than half an hour from the time she struck. The vessel had taken the bar head on, but by the time the life-saving crew arrived abreast of her with the boat she had swung around broadside to, and thus afforded them somewhat of a lee in getting off from the beach. She proved to be the schooner Fawn, of and from Boston for New York, in ballast, with a crew of six men. The sea was very rough and dangerous, and fearing to overload the

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boat, the keeper called to the sailors to jump in without gathering up their effects, and they were soon safely landed, nothing the worse for their adventure beyond a good drenching. They were all at the station in less than an hour from the time the vessel came ashore. Dry clothing was at once furnished to them from the supply placed at the station by the Women's National Relief Association, and then, after a hot supper, they were all right. The next day the life-saving crew brought their baggage ashore. In the mean time the captain made contract with a wrecking company to save the vessel, and the latter commenced operations without delay, the life-saving crew assisting when their regular duties at the station would permit, so that on the fourth day (November 16) the schooner floated off and left for New Bedford for repairs. The captain inserted the following card of thanks in a local paper:

"We, the undersigned, wish to express our deep sense of gratitude to Capt. N. E. Gould and crew, of Life-Saving Station No 13, for their prompt and efficient aid in rescuing us from our perilous condition on that dark and rugged night of November 12th, from the schooner Fawn, ashore near said station. In forty-five minutes from the time the vessel struck, we were all safe and comfortable at the station, although they were obliged to carry their boat some five hundred yards and board us in a heavy sea. Too much credit cannot be given those brave men who peril their lives for the unfortunate mariners.

"A. McDONALD, *Captain.*
"M. J. MACKAY, *Mate.*
"GEO. E. McCARTY.
"CHAS. SLARBRANCH.
"ALEX. McFARLANE.
"THOMAS SHAW."

It should be stated that on the 15th, as the wrecking company were taking part of their gear off to the vessel, in the course of their operations one of their surf-boats was swamped, the men in her getting a thorough ducking. Being badly chilled, they were at once taken to the station and furnished with hot drinks and also with dry clothing until their own wet garments could be dried.

November 13.—At 1 o'clock in the afternoon the sloop Madge Schults, with a man named Schwarts on board, bound from Coney Island to Jamaica Bay, Long Island, was capsized by the strong southerly breeze as she was passing in through Rockaway Inlet, about half a mile distant from the Rockaway Point Station (Third District.) The man clung to the bottom of his craft and made signals for help, which were quickly seen by the lookout at the station, and in a few moments the life-saving crew were off in their boat to his rescue. He was taken from the water as quickly as possible and landed on Barren Island, where there was shelter close by. They also towed his sloop into shoal water, righted her and bailed her out, and anchored her in a safe place for him.

November 13.—At 8 o'clock at night the three-masted schooner City of Toledo, of and for Manistee, Michigan, from Milwaukee, Wisconsin, with a cargo of apples, while attempting to make Manistee Harbor, the weather being very dark, with a heavy sea from the southwest, missed the entrance between the piers, and was heading straight for the beach to the north of the harbor when discovered by the keeper of the Manistee Station (Eleventh District), who happened to be on the end of the north pier. He instantly burned a Coston signal, which was seen by the captain, who dropped his anchors and let the sails run down just in time to save the vessel from running ashore. A heaving line was then thrown

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to the pier, by means of which the keeper, assisted by one of his crew, who arrived at that moment, hauled her hawser to the pier and made it fast in order to prevent her from swinging nearer to the beach. He then dispatched the surfman for the rest of the crew while he went in quest of a tug. Upon its arrival he and his men took passage to the schooner, which they assisted to get under way and take into the harbor. The captain thanked the station crew very warmly for their assistance, and told the keeper that but for the warning he gave the schooner would have gone onto the beach, as he was entirely unaware of his danger and supposed he was sailing into the harbor all right.

November 14.—At 11 o'clock in the day, during a heavy blow from the westward, the crew of the Oswego Station (Ninth District), Lake Ontario, launched their surf-boat and assisted the light-keeper in reaching the beacon on the new breakwater at that place, the high sea making it impossible for him to get there in his own boat. In the evening, just before sundown, they again went off to take his boat to him and aid in placing the light on the east breakwater.

November 14.—At about 2 o'clock in the afternoon, during the prevalence of a strong westerly wind, with quite a rough sea, the pier-head lookout from the Buffalo Station (Ninth District), Lake Erie, reported a tug with a schooner in tow both aground on Bird Island Reef, Niagara River, about a mile and a half northwest of the station. The life-saving crew went out at once in their boat to render assistance, arriving on the spot at half past 2. The schooner proved to be the Glenifer, of Saint Catharine's, Ontario, lumber laden, from Port Hope, Ontario, for Tonawanda, New York, her crew numbering seven men, while the tug, her consort, was the Harvey Neelson, also of Saint Catharine's, with a crew of five, including a woman cook. As the tug was pounding heavily upon the reef, and likely to damage herself, the life-saving crew transferred the woman to the schooner, which was lying more steady, and then, by means of a hawser, hove the tug's head around, up-stream, so she would lie easier. Shortly after that the steam-tug George R. Hand came out from Buffalo with a stout hawser, and the end of it being run by the station crew in their boat to the stranded tug, the latter was soon hauled safely afloat. The schooner was so firmly grounded on the reef that it was evident she would have to be lightened of her cargo, and as nothing could be done further that day the two tugs started for Buffalo. The life-saving crew remained a short time longer, and when they put back into the harbor at 5 o'clock took with them the woman left behind on the schooner by the tug, and returned her safely to her vessel again, after the keeper's wife had provided her with a hot supper at the station. The schooner was floated off four days later with the aid of lighters and steam pumps, and also taken into Buffalo Harbor.

November 15.—The schooner Henry D. Brewster, of Patchogue, Long Island, New York, having a crew of four men, bound from Albany, New York, to Bay Shore, Long Island, with a cargo of lumber, in running for Fire Island Inlet, mistook the channel and stranded on the shoals about two miles to the westward of the Fire Island Station (Third District), coast of Long Island, the accident occuring at 3 o'clock in the afternoon. The lookout at the station saw her fetch up, and as soon as possible the life-saving crew went off in their boat to her assistance, arriving on board at about half past 3. They planted one of the schooner's anchors out in the channel and after heaving upon it for three hours got her afloat, without damage, and ran her into the bay, where she was anchored for the night at about half past 7, abreast of the station.

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November 15.—Shortly before 5 o'clock in the morning, the weather being cloudy and dark, and very cold, the watch at the Racine Station (Eleventh District), Lake Michigan, reported a steamer aground on Racine Reef, about two miles off shore, to the eastward of the harbor. The crew turned out at once with their life-boat, and, upon reaching the vessel learned that she was the propeller Stephen C. Hall, of Muskegon, Michigan, from Cheboygan, Michigan, for Chicago, Illinois, with a cargo of lumber, her crew numbering fifteen men, who were then engaged in throwing the deck-load overboard to lighten her, she having struck the reef at about half past 4. The lake being very rough, she was pounding heavily, and the captain requested the life-saving crew to obtain for him the assistance of tugs from Milwaukee as quickly as possible. The crew accordingly returned and telegraphed to Milwaukee for the desired aid, besides reporting the facts at Racine, and then went out again, being followed soon afterwards by the Racine tug Henry S. Sill, with a lighter and a gang of men to help unload the stranded vessel. The Milwaukee tug Welcome arrived later, and setting to work in concert with the Sill succeeded at about noon in floating the vessel off, and took her into Racine Harbor.

It should be mentioned that while the station crew were alongside the stranded vessel they sighted a three-masted schooner at anchor three miles to the northward, with a signal of distress flying. They pulled up to her and found she was the Julia B. Merrill, of and from Chicago, for White Lake, in ballast, and that she wanted a tug to tow her into port, she having been run into by a steamer the night previous and lost her yawl, besides carrying away the mizzen boom. Upon the keeper reporting that the only Racine tug in service was then engaged alongside the stranded steamer, the captain decided to get under way and resume his voyage.

November 16–22.—Between these dates the crew of the Cross Island Station (First District), coast of Maine, made five trips with their life-boats to the north end of Libbey Island, seven miles distant from the station, to assist the revenue steamer Levi Woodbury in floating the British schooner Lizzie K., of Saint John, New Brunswick, which had stranded on the island at 11 o'clock the night of November 12, while running for a harbor at Machias, on her way from Providence, Rhode Island, to Saint John. The schooner was in ballast, and had a crew of five men. She could not be seen from Cross Island, hence it was not until the fourth day after she went ashore that word of the accident reached the life-saving crew. They rendered all the assistance in their power from that day until she was hauled afloat by the Levi Woodbury, on November 22.

November 16.—The 8 o'clock patrol to the westward from the Point Lookout Station (Third District), coast of Long Island, sighted a vessel close inshore, and fearing she would strike the bar, he at once warned her by burning a Coston signal, when she quickly hauled off.

November 16.—At 11 o'clock at night the patrol from the Cobb's Island Station (Fifth District), coast of Virginia, sighted a vessel standing in on the wind and in danger of striking the bar. He immediately warned her by burning a Coston red light, and she tacked and headed off shore.

November 17.—At about 11 o'clock at night, during the prevalence of a strong northeasterly gale with rain, one of the patrolmen from the New Shoreham Station (Third District), Block Island, arrived at the station in great haste and reported that the schooner Rose Brothers, a Newport fisherman, lying in the harbor, had dragged down afoul of some boats, and that they were all in danger of being damaged. The

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life-saving crew turned out at once, and, finding no one on board the schooner, they carried out her spare anchor and warped her back to her old berth and moored her before any harm had been done.

November 17.—At 2 o'clock in the morning, the weather being rainy and thick, the steamer Inter-Ocean, of Marine City, Michigan, bound from Escanaba, Michigan, to Fairport, Ohio, with a cargo of iron ore, and having a crew of nineteen persons, grounded on the bar at the entrance to the river at the latter place as she was steaming in. The crew of the Fairport Station (Ninth District) Lake Erie, at once boarded her and offered assistance, when the captain requested them to send him a tug-boat to keep him off the bar. They found a tug in the harbor, but the engineer being ashore it became necessary to go to the steamer again for one of her engineers, whom they put on board of the tug, and the latter then went to the Inter-Ocean's assistance and got her safely into port without damage.

November 17.—On this date, at noon, the barge Keepsake, of Port Huron, Michigan, which had been lying at the east pier, Cleveland, Ohio, was compelled to run up the river for safety during a northeast gale, leaving her bow and stern fasts behind her, being unable to cast them off from the pier. Four of her crew were subsequently sent back in a yawl to recover the two lines, and while they were thus engaged the yawl was capsized by its catching under a projection of the pier as it lifted on a sea, and the men were thrown into the water. One of the crew of the Cleveland station (Ninth District) had been watching the men's movements, and as soon as the yawl upset he gave the alarm, and in company with the keeper at once started to their assistance. All four of the men were soon safe in the station boat, and, with their yawl in tow, the keeper hurried them to the boat-house, where the poor fellows were given dry clothing and something to warm them inwardly. While their wants were thus receiving attention, others of the life-saving crew righted and bailed the skiff out, and by the time the men were ready to leave it was again in good shape so they could return in it to their vessel. The men's names were John McDufferin, William Smith, W. Brown, and John Wiseman, all of Port Huron.

November 17.—At about 10 o'clock in the morning the keeper and a part of the crew of the Ottawa Point Station (Tenth District), Lake Huron, went off to the tug W. E. Quinby, of East Saginaw, Michigan, which had grounded in Tawas Bay, a mile or so to the westward of the station, and after about two hours' labor succeeded in kedging her afloat without damage. She had run aground while grappling the bottom for some rafting chains she had lost overboard.

November 17.—One of the night patrols from the Grand Point au Sable Station (Eleventh District), Lake Michigan, sighted a vessel running dangerously close to the shore, and quickly warned her off by burning a Coston signal.

November 17–18.—On these two days part of the crew of the Chicago Station (Eleventh District), Lake Michigan, were engaged in an unsuccessful search for the body of a man reported to have committed suicide by drowning in the lake opposite the Illinois Central Railroad Viaduct.

November 18.—The patrol from Big Kinnakeet Station (Sixth District), coast of North Carolina, discovering a vessel standing into danger, burned a Coston light, when she at once hauled off shore.

November 18.—On the morning of the 17th, the weather being stormy, the crew of the Racine Station (Eleventh District), Lake Michigan, received information that the sail-boat Martha, of Chicago, was ashore some seven or eight miles north of the station beyond Wind Point, the

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two men who had been out in her picking up floating lumber having, through loss of their sails in a gale, found it impossible to reach Racine and been compelled for their own safety to beach her. They had no trouble in landing. The weather continued stormy all day and nothing could be done, but on the following day (18th), when the weather permitted, the station crew went to the spot in their surf-boat and assisted the tug Henry S. Sill in getting the boat afloat and safely into the harbor of Racine.

November 20.—At a quarter past 10 in the forenoon the schooner George White, of Tuckerton, New Jersey, bound, without cargo, from Jersey City to Watchapreague, Virginia, and having a crew of four men, stranded two hundred yards from shore, a mile from the Watchapreague Station (Fifth District), Virginia. She was seen at 10 o'clock by the station lookout, running in for land in the fresh north-northwest wind. Presently she changed her course and made for the north inlet, heading straight into peril, as this inlet is not navigable. The keeper at once ran up the danger signal, warning her to keep away, but she paid no heed and came in, the high sea making a clean breach over her, and at once struck upon a dangerous shoal of sand. The keeper lost no time in launching the surf-boat and boarded the schooner, finding that the captain had mistaken the north for the south inlet, and thus given over his vessel to the mercy of the sea and shoal. The life-saving crew immediately ran out the schooner's anchors, and after an hour's energetic labor, hove her off, worked her up inside the inlet, and left one of the surfmen to pilot her into a safe harbor. Their timely intervention saved her from destruction.

November 21.—Just before daybreak the west patrol from the Point Lookout Station (Third District), coast of Long Island, saw a vessel close in to the beach, and, fearing she would run ashore, he burned a Coston signal and she at once sheered off.

November 21.—A vessel in danger of stranding on Ship Shoal, near Chincoteague Inlet, Virginia, was warned off by one of the crew of the Assateague Beach Station (Fifth District), who flashed a Coston signal in season for her to change her course.

November 22.—The schooner E. J. Munsell, of and for Boston, Massachusetts, from Gardiner, Maine, with a cargo of lumber, encountered bad weather on November 17 and sprung a leak and was dismasted when off Thatcher's Island, Massachusetts, her crew of three men abandoning her and landing in their own boat the same day at Cape Ann. She was subsequently picked up on the 21st in Cape Cod Bay by the schooner M. M. Chase and towed into Saquish Cove, Gurnet Point, during the night. At daybreak the vessels were discovered at anchor by the keeper of the Gurnet Point Station (Second District), who at once put off in his sail-boat to warn them against laying there and, if necessary, pilot them up into the anchorage known as the Cow Yard, in Duxbury Bay, while the tide served, knowing it would be impossible for the Chase to tow the wreck against the ebb. The weather looked threatening from the eastward, and the proffered services were gladly accepted by the captain of the Chase, the keeper taking charge and piloting both vessels safely in. He afterwards conveyed the captain to Plymouth, to telegraph for the aid of a tug and make such arrangements as were necessary, and then took him back to his vessel, declining the captain's offer of remuneration for the assistance rendered.

November 22.—The Norwegian bark Neptune, bound from Philadelphia to Hamburg, with a cargo of petroleum, upon passing out of the Delaware, was unable to find a pilot-boat to receive the pilot who had

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brought her down the river, and as she had a fair wind and was anxious to take advantage of it, she ran down toward the Rehoboth Beach Station (Fifth District), coast of Delaware, several miles below Cape Henlopen, and there hove to and made signal for a boat. The life-saving crew immediately went off alongside with their surf-boat, and upon learning what was wanted, promptly brought the pilot ashore, so the bark could depart on her voyage without further detention.

November 22.—At half past 7 in the evening the north patrol from the Smith's Island Station (Fifth District), coast of Virginia, sighted a steamer close to the beach and in danger of stranding. He quickly burned a Coston signal, from which the steamer took warning, and she changed her course and stood off.

November 23.—At about half past 8 in the evening, during a violent southwesterly gale and snow storm, the schooner J. W. Doane, of Chicago, Illinois, having a crew of ten men, in attempting to enter Buffalo Harbor, New York, whither she was bound, in ballast, from Erie, Pennsylvania, missed the entrance between the piers, and before she could be checked with her anchors, which were immediately let go, dragged on to the end of the old stone breakwater and bilged. The accident was witnessed by the pier-head lookout from the Buffalo Station (Ninth District), and as soon as he gave the alarm the life-saving crew turned out with their surf-boat to her assistance. The tugs Orient and R. F. Goodman were already there, and the station crew made strenuous efforts to establish communication between those vessels and the schooner, so they could endeavor to haul her off. The sea, however, was very high and broke against the schooner with such fury that it was impossible to go near her to take the end of her line for fear of dashing the surf-boat to pieces. They therefore pulled around into the Erie basin, where it was smoother, and landed on the inner side of the breakwater, and by that means got hold of the schooner's tow-line and passed it to the tugs. The latter pulled on the schooner for about an hour, until the line parted, and as she failed to budge in the least and it seemed practically impossible to get her off, they reluctantly abandoned the attempt and returned into the harbor. The life-saving crew offered to take the captain and his men off the wreck, but they all declined save one, a resident of Buffalo, named Brown, whom they assisted on to the breakwater from the end of the jib-boom and then conveyed ashore. Before leaving, the keeper obtained a promise from the captain to make signal to the patrol in case matters became so much worse that he found it necessary to abandon the vessel. After the station crew had gone, however, the captain and his men concluded that the breakwater would be the safest place for them to spend the night, and they therefore climbed down on to it without signaling for assistance, and stayed there until the life-saving crew went off to them at daylight in their boat and brought them ashore. The schooner became a total wreck.

November 23.—At 6 o'clock in the evening, it being very dark, with snow and rain, the east patrol from the Vermillion Point Station (Tenth District), Lake Superior, sighted a steamer heading directly for Vermillion Point Reef, about half a mile to the eastward of the station. He instantly flashed a Coston signal to her, and a moment later she had changed her course offshore. In five minutes more, but for the warning, she would have struck on the reef.

November 23.—At a quarter past 7 in the evening the patrol from the Grand Haven Station (Eleventh District), Lake Michigan, observed a schooner endeavoring to reach the harbor of Grand Haven, Michigan, for refuge from the westerly gale and snow-storm which then prevailed.

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As the vessel could only carry short sail, owing to the gale, she was swept too far to leeward by the strong southerly current setting along shore across the harbor mouth, and the result was that, despite the exertions of her crew to keep her up, she struck the south pier, and drove ashore just to the leeward of it. The alarm was at once given at the station, and the men, jumping into the surf-boat, pulled across the river, and ran down the pier just in time to catch a line from the vessel to hold her there until they could assist the three men composing her crew on to the pier, whence they were taken across the river to the station for the night. She was the Jessie Martin, from Milwaukee, Wisconsin, bound to Muskegon, Michigan, where she belonged, with a cargo of flour and oats. The vessel and a portion of her cargo was afterwards saved in a damaged condition by a wrecking party from Muskegon, the person in charge, named Dibble, losing his life by the capsizing of the vessel after she was hauled from the beach, and just as she was being headed for the harbor (November 30). The life-saving crew rendered excellent service on that occasion, and saved the lives of six of the wrecking party, all of whom would undoubtedly have been lost but for their exertions. For the account of Mr. Dibble's death and the rescue of his comrades see page 27.

November 23.—On the same night that the Jessie Martin ran ashore in attempting to enter the harbor of Grand Haven, Michigan, the schooner Thomas N. Skinner, of and from Muskegon, Michigan, for Chicago, Illinois, with a cargo of lumber, which was also attempting to find shelter from the storm, met with a similar accident to that which befell the Martin, the current setting her so far out of her course that she struck the pier and afterwards drove onto the beach, where she subsequently became a wreck. She was discovered at 8 o'clock standing in for the harbor by the crew of the Grand Haven Station (Eleventh District), who had just rescued the three men from the Jessie Martin. She struck the pier a quarter of an hour later, and the men, rushing to the spot, caught a line thrown by the sailors and made it fast. Two of the men at once jumped on to the pier, and the rest, six in number, were about to follow when the line parted under the strain brought to bear on it, and the schooner drove onto the beach to the southward of the harbor. The station crew sprang into the surf-boat and pulled out and around the end of the pier to the stranded vessel, and in a short time took the six men off and safely landed them. As before stated, the vessel was lost, but the sails and rigging and a portion of the cargo were recovered with the assistance of the life-saving crew, who aided by every means in their power in saving the property.

November 24.—Two men, named Whitney and White, residing in Duxbury, Massachusetts, started in the afternoon from Gurnet Point in the small two-masted yacht Martha on their return home, but the wind and tide being strongly against them they were obliged to turn back to to the Gurnet anchorage. An attempt to pick up the mooring buoy while running before the wind failed, and before they could prevent it with the helm the sails jibed over and carried away the fore-gaff, the boat being rounded to and an anchor let go just in time to save her from going onto the rocks at the point. The keeper of the Gurnet Point Station (Second District) witnessed the accident and put off as quickly as possible with two of his crew in a dory to the aid of the men on the yacht, kedging their craft well off from the rocks to a safe anchorage, and then bringing the men ashore until the gale subsided. The same boat was saved to her owner about three weeks previous to this, when she had broken from her moorings and was drifting out to sea. (See November 2.)

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November 24.—At about half past 3 in the morning the south patrol from the Hog Island Station (Fifth District) coast of Virginia, sighted a large three-masted schooner passing down the coast and so close in that it was apparent that unless she changed her course she would soon fetch up on the shoals, extending seaward from Great Machipongo Inlet. He instantly swung his lantern to her and then burned a Coston red light, from which the schooner took warning and stood off just in time to escape disaster. Two minutes later and she would have struck the shoals.

November 24.—At half past 7 in the morning, a few hours after their return from the wrecked schooner J. W. Doane, (heretofore related,) and while the storm still raged with unabated fury, the crew of the Buffalo Station (Ninth District) learned from the pier-head lookout that a schooner was anchored in a dangerous situation just beyond the "sand catch," about three miles south of Buffalo Harbor. It was soon afterward observed from the station lookout that she was dragging ashore. The beach apparatus was therefore ordered out, and after more than an hour of almost superhuman exertions and much hardship in traveling rugged and almost impassable roads it was brought abreast of the vessel, which was now hard and fast in the sand, about two hundred yards off. A signal of distress was flying in the rigging, but none of her crew were to be seen on deck. The first shot from the wreck-gun dropped the line between the masts, but it was not until some twenty minutes had elapsed that the sailors became aware that relief was at hand, when one of their number went on deck and seeing the line across the vessel he at once called his shipmates, who soon came tumbling up. The whip and hawser were hauled off in good shape, and the breeches-buoy rigged, and in twenty minutes' time the entire crew of the schooner, seven in number, including a woman, were safely landed. They reported their craft as the Groton, of Detroit, Michigan, bound in to Buffalo from Wallaceburg, Ontario, with a cargo of stave-bolts. When all were ashore the gear was unrigged and reloaded on its cart and the party set out for Buffalo, where they arrived at noon, the station crew being completely fagged out with their labors at the two wrecks. The latest reports concerning the Groton represent her as half buried in the sand, and that she had fallen into such a state of dilapidation as to render her constructively a total loss, the expense necessary to save her being estimated as equivalent to her value at the time she went ashore.

November 24.—The schooner Montauk, of Chicago, Illinois, whither she was bound with a cargo of coal from Buffalo, New York, was overtaken by a heavy northerly gale, with a blinding snow-storm and very rough sea, after passing through the Straits of Mackinac, and, losing her reckoning, stranded off the north end of North Manitou Island, Lake Michigan, at 3 o'clock in the morning, the place where she struck being about three miles distant from the North Manitou Island Station (Eleventh District). The weather being dark and thick she was not discovered from shore until daylight, when a fisherman employed in the vicinity carried news of the disaster to the station. The keeper immediately hurried up the beach, with two of his men, to a point where he could ascertain her exact situation, and finding that she was some distance out from the shore, with the sea making a clean breach over her, he dispatched the men back to the station with instructions for the crew to proceed to the vessel in a large sail-boat, belonging to himself, while he kept on to let the people on board know that help was coming. The boat arrived after an extremely rough journey, and by watching their chances between the seas the life-saving crew succeeded in taking all hands, eight in number, off the wreck and conducted them safely ashore

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to the station, where they were hospitably sheltered and fed for four days, or until enabled to leave the island. They were all very grateful to the station crew, and felt, as they expressed it, that "they had been lifted from the grave." The vessel and cargo were a total loss.

November 24.—At about 3 o'clock in the afternoon it was reported at the Manistee Station (Eleventh District), Lake Michigan, that a schooner had been driven ashore the previous night some ten miles south of the station during a violent westerly gale and snow-storm, and that her crew were in the rigging and in danger of freezing to death. The keeper, in order to get to the vessel as quickly as possible, engaged the tug Alfred P. Wright to tow the life-boat thither, and reached the spot, with his crew, in an hour from the time he received the news. It was then found that the heavy sea had driven the schooner in over the bar, and so close to the shore that a party of farmers of the neighborhood had rescued the six men, composing her crew, with a small boat. The vessel turned out to be the General Siegel, of Hamlin, Michigan, which had but recently left Manistee for Chicago, with a cargo of lumber. She became a complete wreck, and a part only of her cargo was recovered. Although they accomplished nothing, it was an extremely rough trip for the station crew, as the weather was so bitter cold, and they got so badly iced up from the water dashing over them, that when the station was reached it was some time before they could remove their cork life-belts, they were so covered with ice.

November 24.—On this date, during a violent snow-storm, the schooner J. O. Moss, of Chicago, Illinois, was wrecked near Grand Point au Sable, Lake Michigan, and one of her crew lost, the rest, five in number, being rescued by the crew of the Grand Point au Sable Station (Eleventh District). For the particulars of this disaster see page 22.

November 24.—The Eclipse, another Chicago schooner, was also wrecked in the vicinity of Grand Point au Sable, Lake Michigan, on this date, and five of her men were assisted ashore by the Grand Point au Sable crew (Eleventh District); one man being drowned in an attempt to reach the shore before the life-saving crew arrived, and while they were at work on the J. O. Moss. For the particulars see page 24.

November 24.—The schooner Morning Light, of Buffalo, New York, bound with a cargo of lumber from Manistee, Michigan, to Chicago, Illinois, and having on board a crew of seven men, dragged her anchors in a northwest gale and went ashore about 5 o'clock in the morning five miles south of the Ludington Station (Eleventh District) and two hundred yards from shore. She was discovered about half past 7 o'clock by one of the patrolmen, who hurried to the station with the news, and the keeper and his men were on the point of setting out with the beach apparatus, when a man came from abreast of the wreck, saying that there was but one person alive on board. The information proved false, but it had the effect of making the keeper decide upon going out to the wreck in the life-boat, as it appeared that there was not force enough on board the vessel to haul out the lines of the beach apparatus through the swift current and heavy sea. The sea was indeed tremendous, and was breaking clear across the harbor from pier to pier as the life-boat went out in tow of a tug, but by the time of arrival at the wreck it had begun to run down and the gale was abating. About half a mile to windward of the schooner the tug released the life-boat, and the crew pulled down to the first line of breakers and let go the anchor, with the intention of allowing the boat to drop down to within working distance. The peril was very great. Some hours before the mainmast had gone overboard, but still hung dangling and thrashing

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the water, suspended by the triatic stay to the foremast; and as the fore-rigging was gone there was the prospect of both spars coming down at any moment, which made the lee of the vessel a terribly dangerous place for the life-boat to work in. Nevertheless, there was no other course for her bold crew but to risk being crushed by the fall of the masts in order to save from death the seven men they had now discovered to be on board. They accordingly veered down from their anchor, but when within twenty-five feet of the hull the current swept them outside, and the maneuver had to be repeated three times before the boat got so near the dreadful overhang as to enable one of the men to throw the hand grapnel, which caught the jib-topsail stay. By this they managed to hold on until they took two men off the wreck, when the jib boom gave way, and they had to cut loose and work back toward their anchor. In a few minutes they again began to pull cautiously down toward the perilous lee, with its precarious mast and swinging spar, when suddenly a terrific sea rose, like a shoulder, and threw the life-boat end over end. Some of the men were held under her and were half drowned before she gained her keel. Others had been struck, either by her gunwales as she came down or by the oars, cordage, and other articles which fell from her, and were hurt sorely. As soon as she righted the men best able scrambled in and helped in the rest, the two rescued sailors being pulled on board first.

Between the spare oars lashed to the life-boat and those picked up from the water there were still nine available, but the crew found themselves too weak from their recent submersion and their struggles for life to continue operations with any prospect of success, and were reluctantly compelled to cut their cable and make for the shore. Before they had reached it the fore and main masts fell from the vessel with a crash directly on the spot where the life-boat had capsized. The overset may, therefore, be considered providential, as, if it had not happened, the crew would have probably been crushed by the falling spars.

Immediately upon landing the keeper dispatched one of his men with a team to the station to bring up the surf-boat. He and the rest of the crew remained to protect the life-boat from the breakers and the wash of logs and lumber on the beach, and endeavor to rescue any of the sailors who might be swept from the schooner's deck. Before long one of these men was seen to jump overboard and swim stoutly for the land. Despite the heavy sea he held his own valiantly, and even got so near the beach as to be in three or four feet depth of water, when the terrible undertow took his legs from under him, threw him down, and he would probably have been swept out to sea and drowned had not the keeper and one of his men gallantly rushed in and pulled him ashore.

When the surfman dispatched to the station arrived he found that a crew of fishermen had just launched the surf-boat, and although he was drenched, half frozen, and had hurt his head when the life-boat capsized, he took command. The sea had been going down fast, and was now in such a state that passage directly out of the harbor was feasible; so the surf-boat was taken out in tow of a tug to the wreck, where it dropped down through a mass of wreck débris and lumber from the rapidly breaking up vessel, took off the four remaining sailors and brought them to the station at Ludington. One of the seven men thus rescued remained at the station under succor for two days; the other six for three days. None of them saved anything from the schooner but what they had on their backs.

The life-boat fared badly in the shocks of the rescue, being consid-

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erably damaged by encounters with floating lumber and by the strain of her capsize. The grapnel, heaving-stick, several of her oars, her drogue-rope, and other articles of her furniture were lost. To offset these injuries and losses and the hurts of her crew, were the lives of seven men, gallantly saved.

November 25.—At half past 1 in the afternoon a scow loaded with stone for the construction of the jetty outside Newburyport harbor in coming out in tow of the steamer May Queen became unmanageable in consequence of the strong northwest gale then blowing and was compelled to anchor about one-eighth of a mile to the northward of the Plum Island Station (Second District), coast of Massachusetts. Shortly afterwards, as three men were attempting to pull in a boat from the scow to the steamer, they narrowly escaped being blown out to sea, and upon making for the beach for safety were assisted ashore by the life-saving crew, who took them to the station and cared for them until the tide favored, when they were aided in reaching the steamer, which by that time had run back into the river, and were enabled to return to Newburyport.

November 25.—One of the crew of the Bellport Station (Third District), Long Island, while out on the 8 o'clock patrol, sighted a large steamer very close in to the beach, and at once burned a Coston signal to warn her of her danger. The warning was effectual, as she immediately hauled further off-shore.

November 25.—At about 1 o'clock in the afternoon, during the prevalence of a fresh northwesterly gale with a heavy sea, the lookout at the Oswego Station (Ninth District), Lake Ontario, discovered and reported a schooner in the offing apparently in distress, with her fore and main topmasts and foremast head gone. It was evident that she would fetch to leeward of the harbor and probably go ashore unless assistance reached her soon, so the keeper took a stout hawser in his boat to a tug lying in the harbor and requested the captain of the latter to go out and tow the vessel in. The tug captain complied at once, and with the assistance of two of the station crew, whom the keeper detailed to accompany him, went out and towed the schooner safely into port. She was the L. D. Bullock, of Toronto, Ontario, with a crew of seven men, and was from Belleville, Ontario, with a cargo of barley for Oswego, the captain reporting that he had lost his spars in the gale when about twenty-five miles off shore.

November 26.—On this date the crew of the Little Cranberry Island Station (First District), coast of Maine, were busily engaged at Cranberry Island Harbor, about two miles to the westward of the station, from 10 in the morning until 3 in the afternoon, on board the schooner Telegraph, of and from Ellsworth for Bar Harbor, Maine, with lumber, which had put into Cranberry Isles in a leaky condition, her crew of three men being worn out and unable to keep the leak under control. The station crew pumped the vessel out and stopped the leak as best they could, so that she was enabled to resume her voyage next morning.

November 26.—The schooner Virginia, of and from Boston, Massachusetts, for Sullivan, Maine, with a general cargo and carrying a crew of three men, sprung a leak on the passage, and in trying to make a harbor stranded on Beach Island Ledge, about three-fourths of a mile off shore from the Fletcher's Neck Station (First District), coast of Maine, at half-past 7 in the evening. Both the patrolmen from the station discovered the accident, and although they were a long distance apart they arrived at the station and reported at almost the same moment. The surf-boat was quickly launched, and in a few minutes the life-sav-

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ing crew were on board the schooner. She lay head on to the rocks, leaking badly and with her sails lowered. The life-saving crew ran out a kedge, with which they hove the schooner afloat and then took her safely around through Winter Harbor into Biddeford Pool, where they grounded her on the flats to keep her from sinking, a gang being kept at the pumps and another bailing with buckets all the way in. The leak was so bad that even with the pumps discharging a steady stream the vessel was half full of water when the Pool was reached. As the ebb tide would leave the schooner high and dry they waited until low water, found and stopped the leak, then pumped her out and floated her off on the flood and moored her safely to an adjacent wharf. The captain was very grateful for the service thus rendered, freely telling the station crew when shoving off in their boat that his vessel would have been totally lost but for their timely arrival on board. Had she remained on the rocks a short time longer she would have gone to pieces.

November 26.—At break of day the patrol from the Watch Hill Station (Third District), coast of Rhode Island, discovered a vessel apparently ashore on Wicopesset Island, off the east end of Fisher's Island, about three miles to the westward of the station, across Fisher's Island Sound. He reported at the station as quickly as possible, and the crew at once turned out with their surf-boat and went off on board, the wind then being from the northwest, with quite a chop sea. They arrived alongside at half past 7, and found her to be the schooner George Walker, of Machias, Maine, having a crew of seven men, bound from Hillsborough, New Brunswick, to Rondout, New York, with a cargo of plaster. She lay on the south side of the island, head on the rocks, with her stern afloat; the captain reporting that she had run ashore the night before during a snow-storm. He had already carried out an anchor astern in an attempt to haul her off before the life-saving crew arrived, the main boom being also guyed out to windward so the sail would keep her from swinging broadside on. As the tide was still rising the life-saving crew went at once to work and assisted in throwing overboard several tons of the cargo to lighten her. While they were thus engaged the hawser attached to the anchor astern parted, and the schooner swung clear. Before, however, she could be brought under control with the sails she fetched up again stern first on the rocks in Wicopesset channel. She was now in such a position that the flood tide only set her the harder on the rocks, and the men were compelled to wait for slack water, when it would be a comparatively easy matter to haul her afloat. While thus waiting, however, a wrecking tug arrived from New London and took the schooner's hawser, and in a short time pulled her off without damage and towed her clear of all danger. The life-saving crew suffered severely from the cold, but got back to the station all right at about noon, after seeing the schooner safely headed on her course up the Sound.

November 26.—At half past 3 in the morning the crew of the Muskegon Station (Eleventh District), Lake Michigan, were aroused by the captain and four sailors of the schooner Donaldson, of Buffalo, New York, who reported that their vessel had left that port for Chicago, Illinois, with a cargo of coal, and that when off the Manitou Islands, in the northern part of Lake Michigan, on the night of the 23d, she had been overtaken by a violent northerly gale, which had blown away her sails and partially dismasted her, and that in this unmanageable condition she had drifted to the southward until within twenty-five or thirty miles of Muskegon Harbor, when, on the 25th, the captain had

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set out in the yawl to obtain assistance from that place, leaving four men on board. The captain also said that he landed the previous evening after a very rough and perilous trip, and had failed in his efforts to induce the Muskegon tugs to go to the schooner's relief on account of the heavy sea. He was therefore very anxious for the safety of the men remaining on board, and said he would like the life-saving crew to go out in search of the vessel and take the four men then with him back to her, while he went elsewhere for a tug. It was very dark and raining and snowing, with a strong westerly wind right in their teeth, but the station crew launched the life-boat at once, taking the four men with them, and went in quest of the schooner, which they found soon after daybreak at anchor offshore, some eighteen miles northwest of Muskegon. They remained on board several hours, in case they should be needed, but the weather clearing up during the forenoon, the captain arrived alongside at 11 o'clock with the tug James McGordon, which had consented to attempt to tow him to Chicago. This turn of affairs rendered the presence of the station crew no longer necessary, and they set out on their return after helping to get the vessel under way, reaching their quarters at half past 2 in the afternoon, drenched to the skin and almost chilled through after a very rough trip, the sea having broken over the boat on the way with such violence that the men had to lash themselves to the thwarts to avoid being washed overboard. They had not been back very long when the tug McGordon returned, having been forced, for her own safety, to abandon the schooner and run back, the sea being too heavy for her. The sailors stuck to their vessel, however, when the tug left, refusing to leave her, and it was subsequently learned that, after drifting further to the southward, she was picked up on the following day (27th) by another tug and taken to her destination.

November 27.—The schooner Maggie W. Willard, of and from Portland for Eastport, Maine, in ballast, with a crew of five men, struck on Sea Horse Rock, about two miles to the westward of the Crumple Island Station (First District), coast of Maine, at 1 o'clock in the afternoon. She was soon afterwards discovered by the station crew, who at once pulled out to her and offered assistance. Finding the vessel in a very dangerous position and leaking, the first thing they did was to save the crew's effects and take them to the station. All efforts to get the vessel off that afternoon, and also the next morning (28th) at 3 o'clock, utterly failed. They, therefore, went to work and stripped the wreck of sails, rigging, and everything else movable and placed them on board of a small schooner, and then, at the captain's request, proceeded in their boat to Jonesport, several miles distant, in search of a tug. No tug could be found, however, and that night the schooner drove over the reef and sunk in deep water, becoming a total loss.

November 27.—Just before 8 o'clock at night the patrolman on the western beat from the Peaked Hill Bar Station (Second District), Cape Cod, Massachusetts, saw a vessel dangerously close in to the bar. He at once burned a Coston signal, and the vessel took warning from it and hauled off shore.

November 27.—At about half past 7 in the evening one of the crew of the Hog Island Station (Fifth District), coast of Virginia, while on the south patrol, discovered a large vessel standing in on the wind directly towards the beach. Seeing she would soon be ashore if she kept on, he swung his lantern to her, but that not being heeded, he burned a Coston signal, which had the desired effect, and the vessel tacked and stood off shore.

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November 28.—At 7 o'clock the patrol from the Cobb's Island Station (Fifth District), coast of Virginia, discovered a vessel standing in on the wind, and almost in the breakers. He quickly ignited a Coston light, which had the desired effect of warning the people on board, and they went about and stood off shore.

November 28.—On the 23d, as the tug Gem, of Manistee, Michigan, was engaged in towing an empty scow from Portage to Manistee, she was overtaken by stormy weather which raised such a dangerous sea that to save herself from foundering she was compelled to cast the scow adrift; the scow being dashed onto the beach very soon after it was cast off. Five days later (November 28), the storm having abated and the sea become smooth, the crew of the Manistee Station (Eleventh District), went out with their boat at the request of the captain of the Gem and assisted him in hauling the scow afloat and in taking it into the harbor.

November 29.—At 9 o'clock in the morning a man named Duboice arrived at the Holly Beach Station (Fourth District), coast of New Jersey, nearly perished from exposure, having been out in the bay all night in an open boat. He was at once taken in hand, and his wet clothing removed, and by proper care and the administration of restoratives, was sufficiently recovered in the afternoon to leave for his home.

November 29.—On the 24th of November the large three-masted schooner Henry A. Kent of Lorain, Ohio, with a crew of ten men, and laden with iron ore from Escanaba, Michigan, for Cleveland, Ohio, was overtaken when off Thunder Bay Island, Lake Huron, by a violent northeast gale and snow-storm, and lost all of her spars excepting a portion of the mainmast, the masts in going over the side opening her decks and making her leak so badly that she became almost a wreck. Four of the crew also were badly injured when the masts went. The storm lasted for several days and the vessel drifted to the southward at the mercy of the wind and waves until she made the land in the morning of the 29th near Sand Beach Harbor of Refuge, Michigan, some ninety miles from where she became disabled, and there let go both anchors in eighteen fathoms of water, about two miles from shore and three or four miles to the northeast of the Sand Beach Station (Tenth District). The weather was still quite bad, the snow coming in squalls and the sea being very heavy. The vessel was discovered by the man on lookout at the station during a lull in the storm at about 9 o'clock, and as soon as he caught sight of her signal of distress the alarm was given. The station crew jumped at once into their life-boat, the district superintendent, who was present, going with them, and pulled out to the tug John Owen, lying at the breakwater, and requested the captain to tow them to the schooner. This was done, as the vessel lay directly to windward and it would be a long and difficult pull with the oars. But a short time was required to spread the fires and get up steam, and at 10 o'clock the tug started with the life-boat in tow, arriving near the vessel half an hour later. It was unsafe for the tug to go alongside on account of the sea, so the schooner was boarded by the life-saving crew, with word from the tug to slip her cables and the tug would take her in tow for Sand Beach. This was agreed to at first, but the captain of the Kent, upon second thought, decided to heave up his best bower, which had ninety fathoms of chain out, if the station men would assist, and then slip from the other after buoying it. As soon, therefore, as the life-saving crew could run their hawser between the two vessels the starboard anchor was hove up, the port one slipped, and the tug towed the dismasted vessel into the harbor, where she was snugly moored at the break-

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water, and the captain landed, it being then half past 1 in the afternoon. The captain, in describing his perilous drift from the place where the vessel was dismasted, stated that on four several occasions he had given everything up as lost, and fully expected she would go down with all hands. He said that even after he anchored the situation of the vessel was so bad that she could not have remained afloat many hours, and in that case they would all have been drowned, as no ordinary boat, such as the schooner had, could ever have reached the shore in such a sea. He was therefore very grateful for the timely assistance extended to him. The gale abated the next morning (November 30), and at 8 o'clock in the evening, the sea having gone down, the life-saving crew went off to the vessel for the purpose of aiding to recover the anchor she had slipped from, as she was to proceed on her voyage that night in tow. The tug refused to go that much out of her way, and the project had to be abandoned, the captain of the schooner then giving the keeper authority to employ a suitable vessel with which to go out and pick up the anchor after he had gone. The same night, before the Kent got under way to proceed down the lake, the station men returned ashore at the captain's request for a supply of provisions, as his stock was running low. On the following day (December 1) the life-saving crew were busily engaged from 7 in the morning until 6 in the evening in recovering the schooner's anchor and seventy-five fathoms of chain, which they landed at Sand Beach and afterwards shipped to her.

November 30.—At half past 7 o'clock in the evening the patrol from Smith's Point Station (Third District), Long Island, seeing a vessel standing into danger, burned a Coston light, when she hauled off seaward, and was soon out of sight.

November 30.—At about 8 o'clock at night the patrol from the Monmouth Beach Station (Fourth District), New Jersey, when a short distance south of the station, saw a buggy, containing two intoxicated men, capsize down a steep bank. He ran to the spot and found the buggy wrecked and the men, in an unconscious condition, lying under it. They were taken to the station, and after receiving necessary attention sent to Seabright where they belonged.

November 30.—On this date, as an attempt was being made to save the schooner Jessie Martin, of Muskegon, Michigan, which had stranded near the harbor of Grand Haven a few days previous, the schooner capsized after getting afloat, drowning the leader of the salvage party, a Mr. John Dibble, of Muskegon. The rest, six in number, were rescued by the crew of the Grand Haven Station (Eleventh District). For the particulars, see page 27.

December 1.—At 9 o'clock at night one of the patrolmen from the Peaked Hill Bar Station (Second District), Cape Cod, Massachusetts, reported a vessel apparently ashore on the outer bar, about a quarter of a mile to the westward of the station. The life-saving crew boarded her as quickly as possible, and found that she was not aground, but anchored very close to the bar in sixteen feet of water. The captain reported that he had split some of his sails, and had come to anchor for the purpose of repairing them. She proved to be the schooner Clara Jane, of Lubec, Maine, having a crew of five men, bound from Perth Amboy to Boston with a cargo of pig-iron. She was in a dangerous situation and the sooner she could be got away the better. The life-saving crew therefore helped repair damages, and then got the vessel under way, and saw her safely on her course for Boston, the captain thanking them warmly for their services. The surf was so heavy that the boat half filled with water twice while returning to the beach, and narrowly escaped swamping.

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December 1.—At about 2 o'clock in the morning the brig Jenny Phinney, of Portland, Maine, bound from Cardenas, Cuba, to New York, with a cargo of sugar, ran ashore on the coast of Long Island, about half a mile to the eastward of Jones' Inlet, the wind at the time blowing hard from the westward with a heavy sea. She carried a crew of ten men all told. The brig was quickly discovered by the patrol from the Short Beach Station (Third District), about half a mile to the eastward of where she struck, and in little over half an hour the life-saving crew were abreast of her with their surf-boat. They got away from the beach all right, but the wind and sea were so heavy it was impossible to reach the vessel, and they were compelled to abandon the attempt. Resort was therefore had to the beach apparatus. This necessarily took time in hauling the loaded cart from the station, but as quickly as possible the gun was placed in position and communication established, the second shot being successful in carrying the line on board. Here another obstacle was encountered in the strong current setting to the eastward along shore. The vessel lay nearly three hundred yards from the beach, and the lines in being hauled off so great a distance through the surf, became badly entangled, giving the men much trouble to clear them. While they were thus engaged the crews of the two adjacent stations—Zach's Inlet to the east and Point Lookout to the west—arrived on the scene and lent valuable aid. The difficulties were at length overcome and the ten men all safely landed in the breeches-buoy. All hands were at once taken to the station and made as comfortable as possible, and the next day their baggage was brought ashore, after the sea had gone down sufficiently to permit the launching of the boat. The seamen were then conducted to the mainland to take the cars to New York, the captain accompanying them to the depot to telegraph for the assistance of the Coast Wrecking Company. The latter arrived the next day and commenced operations by removing part of the cargo to lighten the brig, and on the day following (December 4), she was floated off and towed to New York, with much of her cargo in a damaged condition.

December 1.—About 9 o'clock at night the patrol from Corson's Inlet Station (Fourth District), coast of New Jersey, saw a schooner in danger of running aground, when he at once burned a Coston light and she tacked and stood off shore.

December 1.—At 7 o'clock in the morning, during the prevalence of a westerly gale and snow-storm, with a very rough sea, the crew of the Oswego Station (Ninth District), Lake Ontario, sighted a deeply-laden three-masted schooner standing in for the harbor. The tug Cummings soon afterwards took her in tow, but before the harbor could be reached the hawser parted and the schooner drifted afoul of the east break-water and received some damage. The tug succeeded in hauling her clear, however, and was again heading for the piers when the hawser parted a second time, and before anything could be done to check her the schooner drifted rapidly to leeward and fetched up on the beach, broadside to, about a quarter of a mile east of the station. The life-saving crew were not idle. They followed with their beach apparatus as soon as the schooner broke adrift, and within a few moments after she struck the gun was placed in position and fired and a line dropped directly on board between the main and mizzen masts. As quickly as possible the whip and hawser were sent off, and as soon as the breeches-buoy was rigged one of the surfmen went out in it to the vessel to superintend the landing of her crew. She was the D. M. Foster, of and from Toronto, Province of Ontario, with a cargo of lumber and railroad ties for

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Oswego, her crew consisting of six men and one woman, the latter serving as cook. The first return of the buoy brought the woman ashore, and the rest of the crew followed, one by one, until all were safe. They were then taken to the station and furnished with dry clothing and a good breakfast and made as comfortable as possible. At 8 o'clock the next morning (December 2), the gale having moderated, the life-saving crew went off to the vessel in their surf-boat, accompanied by the captain and mate, and recovered the crew's personal effects. The cargo was also subsequently saved, but the schooner became a total wreck.

December 2.—The schooner Champion, of and for Gloucester, Massachusetts, from Plymouth, with a cargo of vegetables, and having a crew of but two men, stranded on Dick's Flat, Plymouth Harbor, near Duxbury Pier light-house, at about 6 o'clock in the morning, while on her way out to sea. The shoal where she struck is about three miles west-southwest of the Gurnet Point Station (Second District), and the crew of the station were not sure she was aground until about 10 o'clock in the forenoon, when they were on their way in the surf-boat to Plymouth for supplies for the station. As the tide was then ebbing and nothing could be done until the tide came in the keeper decided to continue on to town and stop alongside on his way back. The life-saving crew therefore arrived on board a little before 2 o'clock in the afternoon. They found one of the men, the captain, at the pumps and the other bailing from the hatch; the vessel, as the tide left her after the station crew passed her in the forenoon, having heeled over on her side, bringing a strain on her upper works which opened her seams and caused her to leak badly. The two men were wet and cold and almost used up, and were very glad of the assistance of the life-saving crew. The keeper, at the captain's request, at once took charge. The pumps were manned while another gang went to work bailing, and when she began to right with the incoming tide they shifted the booms over and canted her the other way, so as to bring the leaky seams out of the water and enable them to chinse them with oakum and nail canvas over all to stop the leaks. After doing this and getting most of the water out of her they carried out an anchor into the channel, set all sail, and by heaving hard on the hawser, and tipping her so as to bring her on an even keel, which was done by sending all the men that could be spared out on the end of the bowsprit, she was hauled off the shoal at about 4 o'clock and got safely under way, the keeper then giving her up to the captain again in tolerably good shape for continuing the voyage. As the weather looked bad outside the captain concluded to remain in port for the night and accordingly anchored. The life-saving crew saved the vessel, as the wind freshened during the night from the eastward and made the surf rough enough on the shoal to have completely wrecked her had she remained there.

December 2.—At about 6 o'clock in the morning the schooner Floretta, in attempting to enter the harbor of Chicago, Illinois, during a blinding northwesterly snow squall, ran afoul of the outer breakwater and narrowly escaped being wrecked. As soon as she struck, the crew, after letting go their anchor, jumped onto the breakwater for safety, on account of the heavy sea, and were shortly afterwards taken off and landed at the Chicago station (Eleventh District) by the tug A. A. Carpenter, which was near by at the time of the accident. Upon arrival at the station the captain, who on the way had made an agreement with the tug to bring his vessel into the harbor if practicable, requested the life-saving crew to go out with him and help get her out of her dangerous situation. The surf-boat was accordingly launched, and, in tow of the

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tug, the station crew went off to the schooner. Owing to the sea, however, much difficulty was experienced in getting fast to her, and when they did the grappling line was so coated with ice, the water on it having frozen rapidly, that it was found impossible to climb on board, and the line slipping from their grasp they were for a time compelled to give up the attempt. A second tug, the J. H. Hackley, came up at that moment and offered to take the schooner's crew out of the surf-boat and put them on board their vessel, but the roughness of the sea prevented, the surf-boat being thrown against the Hackley with such force that two of her planks were stove. As nothing, therefore, could be accomplished just then the party went back to the station, where the schooner's crew were furnished with dry clothing, and later on, the wind and sea having moderated, the life-saving crew accompanied the sailors out to their vessel on the Carpenter, and this time succeeded, after slipping the anchor, in getting the Floretta safely into port.

December 2.—About 9 o'clock in the morning the keeper at Shoalwater Bay Station (Twelfth District) discovered through a lift in the fog a vessel flying a signal of distress and apparently lying broadside on the outer end of Empire Spit. The station not being provided with a crew, the keeper secured three volunteers, launched the surf-boat, and went alongside, when he learned she was the three-masted schooner Annie Larsen, of San Francisco, from San Diego for South Bend, Shoalwater Bay, in ballast, with a crew of ten men and three passengers aboard. The captain stated that he had brought his vessel safely over the bar, when the weather shut in thick, and suddenly discovering breakers right ahead he dropped both anchors in twelve feet of water. As the schooner was in a dangerous position, surging and rolling heavily, the station men made sail, got her under way, and cleared the spit, when the captain requested the keeper to pilot her into the harbor. The surf-boat was sent ashore and the keeper took the schooner safely to South Bend, returning to the station the following morning. The captain was very thankful for the assistance rendered, as he would probably have lost his vessel if she had remained on the spit until the tide turned.

December 3.—The schooner Oliver Ames, of Taunton, Massachusetts, bound from Gardiner, Maine, to Richmond, Virginia, with a cargo of ice, and having a crew of seven men, stranded at half past 2 in the morning off Race Point, Cape Cod, within a few hundred yards of the Race Point Station (Second District), coast of Massachusetts. The weather was very tempestuous, the wind being fresh from the northward, with frequent snow squalls. The night also was extremely dark and the sea high and dangerous. The schooner was sighted by the westerly patrol from the station a few moments before she struck, but his warning signal was of no avail, as she fetched up on the bar about two hundred and fifty yards from the beach, while his Coston light was yet burning. He hurried to the station and reported, and in a few minutes the life-saving crew were out with their surf-boat. On attempting to launch, the boat was thrown back upon the beach full of water. Not discomfited by this the boat was quickly bailed out and a second attempt made, but with the same result. The third time the life-saving crew got well afloat, but just as they were beginning to fancy themselves all right a heavy comber took the boat and tossed it end over end and the crew were thrown floundering into the surf. Fortunately two of the men had been left in reserve upon the beach, and with their assistance those in the water were hauled safely out. Seeing there was no chance of getting to the vessel in the boat in the darkness and against such a tremendous sea, the keeper ordered the beach apparatus

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brought from the station. The crew were gone only a few minutes, the distance being so short, but when they arrived abreast the vessel the second time she had been driven in over the bar and was much nearer to the shore. Just, however, as the keeper was about to fire the shot line to the schooner her yawl was seen coming in through the breakers. The gear was instantly dropped and all hands ran to meet the boat, which they quickly hauled clear of the surf. But a part of the schooner's crew were in it, and it was full of water. The sailors had taken the precaution to bring the end of a line ashore with them from the vessel. By this means and the attachment of a line from the beach the boat was sent off for the remainder of the crew, and in a short time all hands were safe, the yawl being filled with water the second trip also. The people were at once taken to the station and provided with dry clothing from the supply furnished by the Women's National Relief Association, and made as comfortable as possible, one of them, the mate, being so badly chilled that it was necessary to give him brandy to revive him, the rest taking hot coffee. The next day the life-saving crew obtained free passes for four of the men to Boston, over the Old Colony Railroad. They also assisted the wrecking company which took charge of the vessel in discharging the cargo of ice, freeing her of water, and laying out an anchor and chain, by means of which, on the fourth day after she stranded, the schooner was hauled safely afloat. She was then taken by the tug Confidence to Boston for repairs. While she was ashore her three remaining sailors were fed and sheltered at the station.

December 3.—The schooner Pallas, of Rockland, Maine, having a crew of three men, bound from Clinton Point, New York, for Portland, Maine, with a cargo of molding sand, encountered strong head winds and heavy seas off Cape Cod, Massachusetts, and at about half past 5 in the morning sprung a leak and became unmanageable; the accident occurring when she was abreast of Nausett lights. Being close in to the breakers the crew were fearful they would be washed overboard as soon as she struck, and therefore took to their boat. Fortunately they were discovered at daylight, pulling vigorously to keep away from the surf, by the keeper of the Nausett Station (Second District). The surf-boat was at once launched and the three men rescued and brought ashore by the life-saving crew, although not without a thorough drenching, as the station boat was nearly swamped on the bar in running back, the sea was so rough. It was indeed a wonder that the schooner's yawl did not capsize and drown the three men before the life-saving crew reached them. The schooner meanwhile drifted into the surf, three-quarters of a mile north of the station, and being very old she soon broke up. Every possible attention was bestowed upon the men by the station crew until they were able to travel, two days afterwards, when they left for Boston by rail.

December 3.—At about 3 o'clock in the afternoon the crew of the Cape Fear Station (Sixth District), coast of North Carolina, saw a schooner standing in towards a reef about one mile south-southwest of the station, and fearing she would run ashore hoisted the International Code Signal J. D., signifying "You are standing into danger," when she tacked and went clear.

December 3.—At 11 o'clock at night during the prevalence of a heavy southeasterly snow-storm the keeper of the Two Rivers Station (Eleventh District), Lake Michigan, received information that a steamer was ashore about a mile southwest of the station. His crew were not on duty at the time, as the station had been closed for the winter a few

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days previous, but he at once set out to assemble the men, directing each one as he found him to proceed at once to the scene of the disaster. He had thus notified six of the crew and was on his way to find the rest when he discovered through the gloom a schooner ashore about four hundred yards to the northeast of the station. It was then midnight, and as soon, therefore, as he found the other two men he instructed them to go down abreast of the latter vessel with lanterns and Coston signals to let her people know that assistance would soon reach them. This done the keeper proceeded to where the steamer was ashore and found six of his men already there, and in their company were six of the steamer's crew, including the second mate, who had just landed in one of their own boats; the mate reporting that the rest had refused to leave, preferring to remain on board until daylight, the vessel being not more than two hundred feet from the beach. He also reported the steamer as the Depere, of Kenosha, Wisconsin, with a crew of thirty men, and that she was bound from Chicago, Illinois, to Manitowoc, Wisconsin, with a general cargo. It will thus be seen she had run a few miles past her port of destination, owing probably to the blinding snow which had obscured the lights of the harbor. After burning a Coston signal to let the rest of the people know that assistance was handy, in case they wished to be landed before daylight, the keeper detailed one man to remain there on watch and build a fire on the beach, while he and the rest of his crew started to the station for the surf-boat to board the other vessel, telling the mate of the steamer as he left that he would return as soon as he could rescue the schooner's crew. It was 3 o'clock in the morning (December 4) when the life-saving crew arrived abreast of the stranded schooner, which lay two hundred yards out from the beach, and barely distinguishable in the storm. The surf at that point was extremely rough, and it was deemed prudent to wait for daylight before attempting to launch, the chances for getting out through the surf in the darkness being very doubtful. As soon as it was light enough to see what they were doing the schooner was boarded and her crew of seven men were safely landed by 7 o'clock, and conducted to comfortable quarters in town. The rescue was effected none too soon, for the vessel had even then broken in two. She proved to be the Oliver Culver, owned in Chicago, Illinois, and bound to that port from Pensaukee, Wisconsin, with a load of lumber. She became a total wreck, but the captain succeeded in saving a little more than one-half of the cargo. Without a moment's delay the keeper turned his attention to the Depere, but upon arriving there with the surf-boat half an hour after landing the crew of the schooner, he found the rest of her people all ashore, the surfman whom he had left there on watch having, with the assistance of the second mate, succeeded in landing them with the steamer's boat after daylight while the station crew were engaged at the Culver, the surf not being so heavy where she lay as it was further north. The Depere weathered the storm and remained in fair condition, but owing to the lateness of the season and the difficulties and great expense which would attend the necessary operations for her release, her owners, the Goodrich Transportation Company, decided to let her lie there until spring with two men on board to watch her, and in the following April (1883) she was floated off. (See this record April 20.)

December 4.—At half past 7 in the morning of December 3, the sloop Eureka, of Chincoteague, Virginia, bound, with a cargo of oysters, from that place to Philadelphia, and manned by a crew of three, having parted her cable and dragged her other anchor in a strong gale and heavy sea, stranded fifty yards from shore and about three miles from

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the Cape Henlopen Station (Fifth District), Delaware. The point of stranding was some distance up a bay, curving inland from the ocean, and hidden from sight upon the outer beach by an intervening mass of woods. The disaster was not known at the station until the evening patrolman, at 8 o'clock P. M., brought the news to the keeper, with the statement that she was high and dry on the bar, and her crew all ashore. The next morning (December 4), early after breakfast, the keeper proceeded to her, and offered assistance to her captain, which was accepted. The life-saving crew accordingly boarded the vessel and assisted a wrecking steamer in running out hawsers between her and the sloop. They then engaged in grappling for her anchors, which they got after some labor, and placed on board. Presently a hawser parted on which the wrecking steamer was pulling strongly, and they assisted in running out another. All efforts failed to budge the sloop, and at evening the crew returned to the station. The next day (December 5) the captain decided to lighten the sloop by taking out the oysters, and sent at evening to the keeper for a tackle and some assistance. The keeper responded to the call by 3 o'clock in the morning following (December 6), taking with him the tackle and four men. Arriving, they fell to work, and heaving on her anchors got her fairly afloat, when the wind suddenly sprang from the northwest and blew so hard that the men could not continue, and the sloop again stranded on the bar. She went off, however, safely on the next high tide.

December 4.—The crew of the Rehoboth Beach Station (Fifth District), coast of Delaware, picked up a vessel's yawl in the surf south of the station, and cared for it, awaiting the claim of the owner.

December 4.—At half past 4 in the morning, the bark Maddalena Seconda, of Genoa, Italy, bound, with a cargo of dry bones, from Montevideo to Baltimore, and having a crew of eleven men and one passenger, stranded a quarter of a mile from Cedar Island and about a mile northeast of the Watchapreague Station (Fifth District), Virginia. She was discovered an hour afterward by one of the patrolmen, who burned his red Coston light, and then hurried with the news to the station. At 6 o'clock the surf-boat was alongside and found the vessel manned by Italians—except two English sailors. The captain was drunk and refractory, refusing to be taken ashore, as did all the others, except the two Englishmen, with whom the surf-boat returned to the station. At half past 12 it was observed that the Italians were preparing to come ashore in their own boats, and the keeper, fearing the usual deadly consequences of this folly, at once launched the surf-boat and arrived alongside in time to head off the movement and take the seven remaining men of the crew and the single passenger into the surf-boat. The captain and second mate refused to leave the vessel, and the surf-boat had to return to land without them. At half past 3 in the afternoon, as the weather looked bad, the keeper became worried for their safety, and again launched the surf-boat and went out to the bark. Despite his earnest entreaties, the captain and second mate obstinately declined to be saved, and the keeper had to put back again from a bootless errand. At 7 o'clock in the evening these troublesome customers displayed a signal light, and the keeper once more launched the surf boat and boarded the vessel. It does not appear why he and his crew had been thus summoned through the winter darkness, across a perilous spread of rising sea, for the captain, who was still very drunk, and the other officer, were resolutely bent upon remaining on board. The keeper's blood was up, however, and he now determined to land them if he had to tie them and put them in the surf-boat. The mate

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appears to have been easy to deal with, but it was not without some difficulty that the intoxicated captain was forced over the side into the surf-boat, and once in he made a frantic attempt to scale the side of the hull and regain the deck. The surf-boat pushed off, however, whereupon he subsided and gave no further trouble, and after a weary struggle with many lines of breakers the life-saving crew reached the shore safely, having delivered all on board the bark. The rescued persons were succored at the station, ten of them for four days and two for eight days. The men are reported as having been quite famished and ate voraciously. On the next day (December 5) a wrecking steamer appeared, standing in for the bark, and the surf-boat was launched to take out the Italian captain to make terms with her for floating his vessel. By December 13 the wreckers got her off the bar and took her in tow to Norfolk, the life-saving crew keeping her under constant surveillance during this interim.

December 5.—The schooner William Lancaster, of and from Weymouth, Nova Scotia, for Boston, with a cargo of wood, and having a crew of six men, stranded a little after 9 o'clock at night, December 4, on East Bunker's Ledge, about two miles north of Little Cranberry Island, coast of Maine, while attempting to make Cranberry Island Harbor during a fresh southerly gale. The schooner's port (red) light was discovered by the patrol from the Little Cranberry Island Station (First District), which is situated on the southerly side of the island, at about the time she struck, but on account of the distance and the darkness of the night he could not determine whether she was aground or merely anchored near the reef. He reported the facts to the keeper, who proceeded to the north shore to see for himself. Even with the aid of a good night-glass it was impossible for him to make the schooner out very distinctly, so the surf-boat was ordered launched and the crew went off to her, arriving a little after midnight (morning of the 5th) and finding her hard and fast on the reef. The sea was very rough and it was dangerous to keep the boat alongside, so, after consulting with the captain and agreeing upon a course of action when the tide rose, the keeper landed with his men upon the dry part of the ledge to await the return of high water. The men had thus to remain in a very exposed situation for hours, the snow and hail making their stay upon the ledge extremely uncomfortable. In due time, when the tide swelled, they went on board and helped set the double-reefed foresail and jib for the purpose of canting the schooner's head to the eastward. Then, as she swung in the desired direction and began lifting on the seas, they hoisted the mainsail, also double-reefed, and under the pressure of her canvas the next heavy swell took her off into deep water and she was once more afloat. She was then beat up into Cranberry Island Harbor and moored in a snug berth, having fortunately sustained but trifling damage from her contact with the rocks. After thus finishing their good work the men returned to the station, arriving there at 7 o'clock, pretty well used up from the fatigue and exposure they had undergone.

December 5.—At 2 o'clock in the morning the north patrol from the Hog Island Station (Fifth District), coast of Virginia, sighted a steamer running so closely along the coast that there was danger of her getting ashore. He instantly flashed a Coston light to her, but before she could steer off far enough she took the bottom. She must have struck very lightly, however, as she soon backed off into deep water and went her way.

December 6.—On this date, at an early hour, during the prevalence of a hard southerly gale with thick rainy weather, the schooner We're

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Here, of Sedgwick, Maine, bound from Boston to Sedgwick, in ballast, which had sought refuge from the gale in Seal Harbor, inside White Head Island, coast of Maine, dragged her anchors and drifted afoul of the schooner E. M. Branscom, of Ellsworth, Maine, bound from Franklin, Maine, to New York with a cargo of staves and heading, which had also anchored in the harbor. The Branscom had a crew of four men and the other vessel three. Owing to the heavy sea running considerable damage was done, the We're Here carrying away her jib-boom and all attached, besides injuring her cutwater, while the Branscom had her bulwarks and yawl badly stove. The crew of the White Head Island Station (First District), located about a mile from the scene of the accident, were quickly on hand, and rendered effective service to both vessels in getting them apart and repairing their damage, the task being an all-day one, keeping them busy until 6 in the evening.

December 6.—The three-masted schooner Enoch Robinson, of Taunton, Massachusetts, bound from Boston to Baltimore, in ballast, having a crew of eight men, stranded at 3 o'clock in the morning on Monomoy beach, coast of Massachusetts, about half a mile northeast of the Monomoy Station (Second District), during thick rainy weather with a fresh southerly wind. She was discovered twenty minutes after she struck by the patrol from the station, and by 4 o'clock the life-saving crew were alongside in their boat ready to render assistance. The crew of the schooner being in no immediate danger, as the vessel was large and high up out of the water, preferred staying on board and would not land. The life-saving crew remained on board, however, until daylight, in case their services should be needed, and then at the captain's request conveyed a dispatch ashore to the telegraph office at Chatham, a few miles distant, reporting the situation of the vessel to her owner, the captain declining any other assistance. The schooner was floated off two days afterwards by a wrecking company under a contract with the owner.

December 7.—The schooner Ophir, of Belfast, Maine, with a crew of three men, bound from Wheeler's Bay to Rockland, Maine, with a cargo of wood, missed stays in going about while beating out of Wheeler's Bay and stranded on what is known as Mill Rock, a mile or two to the northward and westward of the station on White Head Island (First District) coast of Maine, at about 7 o'clock in the morning. Intervening islands completely hid the vessel from view at the station, but as soon as word reached the life-saving crew they launched their boat and went to her, arriving at 8 o'clock, an hour after the occurrence of the accident. The schooner was then badly bilged and full of water. The first thing the station men did was to throw over part of the cargo to lighten her. They then ran lines to adjacent rocks, got tackles to the mast-heads and hove the vessel down almost on her beam ends, to reduce her draught of water, and after considerable labor succeeded in hauling her off the rock and onto the sandy beach in Wiley's Cove where she could be properly repaired. The vessel was thus saved from wreck. It was afternoon when they got back to their station.

December 7.—At about the time the crew of the White Head Island Station succeeded in relieving the schooner Ophir, in Wheeler's Bay, the sloop Goldsmith Maid, of and from Saint George, Maine, for Rockland, Maine, with a load of wood, stranded on the northwest point of Rackliff Island, about a mile and a half northeast of the station. She was discovered by the crew as they returned to the station, and they at once went to her assistance. She had but one man on board and he was of course powerless to do anything. The life-saving crew therefore took charge

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and removed the cargo, ran out an anchor and made a strong effort to get the sloop off. As the tides were running low, but little was accomplished on that day and the day following (8th). On the third day, however (December 9), they succeeded with considerable difficulty in floating the sloop off without damage, and took her alongside a wharf in the bay where she was left safe and snug.

December 7.—At half past 3 in the afternoon, the schooner Sarah Louisa of and from Boston for Ipswich, Massachusetts, in ballast, with a crew of three men, while riding out a furious northwesterly gale and snow-storm off Squam Bar, Massachusetts, parted her cables and stranded off Coffin's Beach, about a mile and a half southwest of the Davis Neck Station (Second District). She was soon discovered by the station crew, who at once started to board her. To save time, as the vessel lay dead to windward, they proceeded on foot to the boat-house of the Massachusetts Humane Society near Annisquam light-house and used the society's boat. While on the way to the schooner they saw her crew land in their own boat on Coffin's Beach. The life-saving crew therefore changed their course, landed on the beach and met the three men and conducted them with their baggage to the station, where they remained until the next day. The vessel was saved when the gale abated.

December 7.—At about 7 in the morning, during the prevalence of a fresh southerly breeze with cloudy weather, the keeper of the Gurnet Point Station (Second District), coast of Massachusetts, saw a three-masted schooner which had been anchored in the channel between Saquish Neck and Brown's Bank, a mile to the westward of the station, commence dragging towards Saquish Cove. He could see no one on the deck of the vessel, all hands being below, and fearing she would soon be ashore, he called his crew and started in the surf-boat to the schooner's assistance. Before they reached her, however, she was seen to get under way and commenced beating to windward again, as she was then dangerously close to the shore (Saquish Neck). The keeper noticed she was heading directly for Black Point Ledge, so waved to her to go about, which she did, just in time to avoid disaster. She was, in fact, so close to the ledge that she touched bottom once or twice with her keel as she went round. She proved to be the Ajax, of Indianola, Texas, bound from Boston to Duxbury, in ballast, with nine persons on board, one of whom was a passenger. Upon getting on board, the life-saving crew assisted in extricating her from her rather perilous situation, the keeper taking the wheel and acting as pilot, and remained by her until they got her safely to anchor in the Cow Yard, in Duxbury Bay. The captain was very thankful to the station crew for their assistance, saying that the vessel had been saved once before (in December, 1880) by the crew of the Pass Cavallo Station (Eighth District), coast of Texas, and that he thought the Life-Saving Service "a great institution."

December 7.—At about 7 o'clock in the evening, the schooner Pecora, of Bridgeton, New Jersey, bound, with a cargo of pine boards, from South Creek, North Carolina, to Philadelphia, and having a crew of four, and two passengers, stranded on Cheese Wreck Shoal, in a north gale and high sea, a mile from shore, and two miles southeast of the Watchapreague Station (Fifth District), Virginia. At 4 o'clock in the afternoon the schooner had undertaken, on account of the gale, to put into the local inlet for harbor, but the wind increased, and in standing in on the port tack, she mis-stayed, and had to let go her anchor. Half an hour later she had parted her big chain, and began to drag her

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anchor on the lee side of the shoal. At 5 o'clock the captain cut away her masts, which made her lie easier, and at 7, the hour of her stranding, he burned a torch for assistance, which was responded to from the station with a red Coston light. The surf-boat at once was launched and pulled through the inlet around the south point of the beach, when it was found impossible to get farther, the rowers not being able to make any advance against the hard violence of the wind. The only course open was to land and wait until the gale moderated.

At half past 5 the next morning, December 8, the gale had somewhat abated and the surf-boat again put out seaward. After a strenuous row the life-saving crew succeeded, by 6 o'clock, in reaching the schooner. The captain wanted the services of a wrecking steamer which lay in the inlet, to which the crew accordingly conveyed him; but the master of the steamer refused the task of towing the stranded vessel into harbor, probably on account of the dangerous condition of the wind and sea. The life-saving crew then rowed the captain to the station, where they gave him hot coffee and refreshments, then at 10 o'clock launched the boat and rowed out alongside the wreck, waited until 1 o'clock, when the making of flood-tide somewhat abated the fury of the waters on the shoal, then took off the passengers and crew, and in three-quarters of an hour had them safely housed at the station, where they remained under succor for a day.

The schooner had been left in good trim and not leaking. The next day (December 9) the keeper took advantage of the weather, there being a moderate west breeze and an easy sea, and at 4 o'clock in the morning mustered the crew, launched the surf-boat, and rowed out and boarded the dismasted vessel. It was then flood-tide, and the men weighed her anchor, put the surf-boat ahead, and entered upon the severe labor of towing the unwieldy hull into a safe harbor three miles distant. After a tremendous tug, lasting several hours, the task was effected and the schooner lay anchored in her haven. But for the labors of the life-saving crew she and her cargo would have been lost.

December 7.—At 9 o'clock in the morning, the weather being extremely cold, the crew of the Milwaukee Station (Eleventh District), Lake Michigan, were called upon to go out in the tug J. J. Hagerman to the schooner C. C. Barnes, of Manitowoc, Wisconsin, lying about half a mile out in the lake, and help heave up her anchor and get her into port, she being so badly iced up that her crew could do nothing without assistance. The life-saving crew went out to the vessel and rendered the desired aid, the vessel reaching the harbor safely soon after 11 o'clock.

December 7.—At 9 o'clock at night the patrol from the Cape Disappointment Station (Twelfth District) discovered a bark standing too close in to the rocks to the northward of the station, and warned her off by burning a Coston danger signal.

December 8.—On the night of December 7 the schooner Anthea Godfrey, of Wilmington, Delaware, bound from that place, with a cargo of guano, for Petersburg, Virginia, and having a crew of six men, stranded on Carter's Bar, three miles from shore, and about the same distance southeast of the Cobb's Island Station (Fifth District), Virginia. The weather was bitterly cold, and there was a northwest gale and heavy sea. The vessel was discovered at daylight by a station patrolman, and the surf-boat was at once launched and pulled out to her. The life-saving crew found her in a distressing plight. She was completely coated with ice, in some places five or six inches thick. Her decks, her bulwarks, her sails, rigging, and halyards were all incased with the

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frozen spray. Every one of the six men on board were more or less frost-bitten, two of them having their hands and feet in such a condition that they were unable to do anything. The life-saving crew at once fell to work, and after some hard pounding on the sheathing of ice, and much vigorous pulling, they managed to get the sails down and furled. They then took the captain and crew, with all their effects, into the surf-boat, and rowed to the station, where the unfortunate men were supplied with a hot dinner and their frost-bitten hands and feet attended to. The sailors remained under succor at the station for two days.

The next day (December 9) the life-saving crew rowed the captain out to his vessel, which was then in the hands of a salvage company. The day following (December 10) the schooner was got afloat, and the crew again launched the surf-boat, and conveyed on board the captain and his men, with all their effects.

The Smith's Island and Hog Island life-saving crews on December 8th also boarded the vessel from a distance of twelve and fifteen miles respectively, discovering on getting alongside that the sailors had already been landed by the crew of the nearer station.

December 9.—At a little after 6 in the morning one of the patrolmen from the Plum Island Station (Second District), near Newburyport, Massachusetts, discovered a schooner ashore on the east end of the Humpsands, inside Plum Island Point, about a mile and a half northwest of the station. He reported to the keeper as quickly as possible, the crew being at breatfast when he arrived. As the vessel lay inside the bar, and it was not absolutely necessary to use the surf-boat, which would involve a long drag up the beach with the wagon, the keeper decided to hurry at once to the light-house at the Point and borrow the light-keeper's wherry, by that means saving time. Reaching the vessel, she proved to be the James Baker, of and for Boston, with a cargo of sand, her crew numbering four men; the captain reporting that she had driven ashore the night previous at 8 o'clock, during the furious northwesterly gale which then prevailed. After consultation with the captain, the keeper and his men carried out an anchor to a scope of sixty fathoms, then set all sail that would help her, and as the tide rose, by heaving upon the hawser they slowly moved the vessel a few feet at a time until she was once more afloat in the channel without apparent damage. The schooner was then got under way and proceeded on her voyage, the captain expressing in the strongest terms his thankfulness to the crew of the station.

December 9.—At a quarter before 5 o'clock in the morning one of the patrolmen from the Forge River Station (Third District), coast of Long Island, when about two miles east of the station sighted a square-rigged vessel standing in on the port tack towards the beach, the wind being from the westward with quite a rough sea on the bar. He instantly burned his Coston light to warn her off, but without avail, for before she could be put about she fetched up hard and fast on the outer bar while the patrolman's signal was yet burning. The people on board answered him, however, and off he dashed to the station to give the alarm. The life-saving crew tumbled out as quickly as possible and hauled the boat on its wagon abreast of the vessel and launched into the surf, reaching the brig, for such she proved to be, about 6 o'clock. She was the Water Lily, of New York, bound home from Saint Pierre, Martinique, West Indies, with a cargo of sugar. Her crew numbered eight men and she had a Sandy Hook pilot also, the latter having boarded the vessel some days previous, off Barnegat. The

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captain refused to leave his vessel and only the pilot and the mate were landed the first trip. After breakfast, however, as the sea grew rougher and the situation of the brig became worse, all hands were very glad to come ashore; the keeper and crew of the Moriches Station, who had arrived on the ground, assisting the Forge River men in landing them with their baggage. They were all properly cared for at the station until it was seen the brig could not be saved, and were then taken over to the main-land for passage by rail to New York. The brig broke up inside of forty-eight hours from the time she struck, and, with the cargo, became almost a total loss, as but three hogsheads of the cargo of sugar were recovered.

December 10.—At 8 o'clock in the morning, during the prevalence of a thick snow-storm, part of the crew of the Little Cranberry Island Station (First District), coast of Maine, boarded the fishing schooner Commonwealth, of Gloucester, Massachusetts, which had anchored the night before in a rather bad place off Marsh Head on the north side of Little Cranberry Island, and piloted her to a safe anchorage in Cranberry Island Harbor.

December 10.—At 11 o'clock at night the north patrol from the Nausett Station (Second District), Cape Cod, Massachusetts, sighted a vessel standing in towards the beach and almost in the breakers. As quickly as possible he burned a Coston danger signal, and the people on board seeing it, at once changed her course off shore and saved her from stranding.

December 10.—During the night one of the crew of the Assateague Beach Station (Fifth District), coast of Virginia, sighted a vessel standing directly towards Ship Shoal, a dangerous place near Chincoteague Inlet, and by burning a Coston signal warned her so that she changed her course and went clear.

December 10.—On this date, the conditions being favorable, the crew of the Louisville Station (Ninth District), went out to the flat-boat aground on Backbone Reef, Falls of the Ohio (as recorded in this report October 11), and after pumping the water out of her succeeded in hauling the boat off the reef, and took her safely down the falls to her place of destination, Shippingport, Kentucky. The river had just commenced rising, and the life-saving crew probably saved the flat-boat from being swept by the flood against one of the bridge piers below the reef and destroyed.

December 11.—The schooner Avis, of and from Saint John, New Brunswick, lumber-laden, for New York, and having a crew of five men, in attempting to make a harbor in Quoddy Bay, at 8 o'clock in the evening, during a thick snow-storm, struck on the Middle Ground about a mile and a half northeast of the Quoddy Head Station (First District), coast of Maine. Her signals of distress were quickly seen by the station patrol, and after an hour's hard pull in the darkness the life-saving crew boarded the vessel. By the time they arrived she had floated off the reef and anchored in deep water. Upon sounding the pumps it was found she was leaking, but not enough to endanger the crew. The station men assisted in getting everything snug, and when there was no further need of their services returned ashore, promising to return again in the morning. On the 12th they again went off and conveyed the captain in the surf-boat to Lubec, some miles distant, to note a protest, and then, as the leak became no worse, assisted in getting the vessel under way, piloted her clear of the shoals, and saw her safely on her way to sea.

December 11.—The schooner Daniel B. Harris, of Bridgeton, New Jer-

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sey, bound from Hog Island, Virginia, to Hereford Inlet, New Jersey, with a cargo of oysters, and having a crew of two men, met with reverses on the way up the coast, and after having been blown off to sea in a gale of wind put into Little Egg Harbor Inlet on December 10 short of fuel and other supplies. The crew of the Little Egg Station (Fourth District), New Jersey, on the north side of the inlet, saw her come to and noticed that the ice setting out with the ebb tide caused her to drag some distance before she fetched up. On the 11th, when the flood tide set in, the vessel made an attempt to get under way, and it was then found that when she dragged the day previous she had fouled an old chain on the bottom, all efforts to clear it on the part of her crew being futile. The life-saving crew went on board, in response to the captain's signal for aid, and after some hours of hard work they succeeded in clearing the anchor, and then, after supplying him with fuel and other articles of which he was in need, saw the vessel safely out of the inlet on her way to her destination.

December 11.—At half past 12 o'clock in the day an alarm was given by the lookout at the Louisville (Kentucky) Station (Ninth District) that a yawl with two men in it was drifting down the river and in danger of being swept over the cross-dam at the falls, it being plain from the men's actions that they were unaccustomed to handling boats and powerless to extricate themselves. A boat's crew from the station immediately set out to their relief and succeeded in bringing them safely ashore. The men were Edward Shersinger and John Burke, of Evansville, Indiana, who had gone out for a row upon the river in a yawl belonging to the steamer James Guthrie, one of the Louisville and Henderson packets.

December 12.—The crew of the Crumple Island Station (First District), coast of Maine, went off in their surf-boat to the British bark Harvester, of Londonderry, bound from Saint John, New Brunswick, to Dublin, Ireland, which had hove to and hoisted her colors half-mast when some four or five miles distant from the station, the captain being desirous of landing his pilot. The pilot was taken ashore and the bark proceeded on her voyage.

December 12.—At half past 5 o'clock in the morning, during a thick fog, the iron steamer Hesper, of Hartlepool, England, bound, with a cargo of salt in sacks, from Liverpool to Galveston, Texas, and having a crew of twenty-three men, stranded five or six hundred yards from shore and about half a mile south of the San Luis Station (Eighth District), Texas. The vessel was immediately discovered by one of the station men, who called the keeper, and by the aid of a marine glass her square-rigged top masts could be discovered through the fog. A Coston signal was at once fired, and the surf-boat launched and pulled alongside. Upon boarding the steamer the keeper found the captain and all hands forward getting hawsers up on deck to run out anchors. In a few minutes the surf-boat left with a letter to Mr. Muller, the steamer's agent at Galveston, requesting the aid of a tug, and afterwards returned to the steamer and assisted to run out the anchors and cables for working her off. The superintendent of the district arrived in the afternoon from Galveston, together with Mr. Muller, and later in the day the tug Estelle appeared and began the work of endeavoring to pull the vessel off, an effort which ended between 8 and 9 in the evening by the cable parting. The tug then returned with the ship's agent to Galveston for more assistance. The gear of the steam-winch having been rigged to discharge cargo with the aid of the life-saving crew, the latter assisted to get up the salt in slings on deck and throw

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it overboard to lighten the vessel. As the vessel was rolling hard, causing eccentric motions in the ascending loads, the station crew ran considerable risk of injury during this operation, one of them, Andrew Crozier, being struck by a swinging sling of salt and his arm and leg sprained. About forty tons of the cargo having been dumped overboard, and the steamer continuing to pound with much force on the strand, her ballast tanks were pumped up and the crew left for the night, arriving at the station by 11 o'clock. Superintendent Hutchings and three of the agents for the cargo came ashore with them and were lodged at the station.

The next day, at sunrise (December 13), the crew were mustered by the keeper. Andrew Crozier, who had been injured in discharging cargo the day before, was excused from boat duty, and the remainder rowed out to the Hesper. Soundings were taken around her, and as nothing more could then be done, the crew returned to the station. At 3 o'clock in the afternoon they again launched and took out blocks and tackle, which the steamer had signaled for. Further assistance was rendered by taking the steamer's boats in tow with tackle to lift anchors. At 4 o'clock the revenue steamer McLane appeared and anchored within cable distance of the wreck.

The day following, December 14, the steam lighter Buckthorn arrived with equipments and hands to discharge cargo. The life-saving crew were on board at an early hour and continued their labors. At 11 in the forenoon the tug Estelle again appeared with the schooner Mary E. Clarke in tow, and anchored half a mile from the Hesper. The life-saving crew ran lines to the lighter and the schooner, the latter being thus drawn up under the forward hatch of the steamer, where she could receive salt, which had, up to that time, been thrown overboard. Later the crew helped to get an 11-inch hawser from the steamer to the Buckthorn, and another line from the Buckthorn to the Estelle, and the two vessels, thus ranged in tandem, began a strenuous pull upon the steamer, the result being that she was dragged afloat by ten minutes past 5 in the evening. The station crew made one more trip to bring from the station some baggage of Superintendent Hutchings and convey him to the Estelle, which was to pilot the steamer over the bar to Galveston that night. At half past 6 they returned to the station, their three days' labors ended.

December 12.—At 10 o'clock in the forenoon, during a heavy southeast blow, the keeper of the Two Rivers Station (Eleventh District), Lake Michigan, received word that the steamer Depere, which had stranded on December 3 (as already mentioned in this record under that date) about a mile southwest of the station, and been left in charge of two watchmen for the winter, was in danger of going to pieces through pounding so hard in the surf, and that the two men were anxious to be brought ashore, as their own boat had been stove and was full of water. The keeper quickly mustered his crew—the station being then closed for the season—and went to their assistance with the surf-boat. The snow was so deep that a sleigh had to be used to get the boat down abreast of the vessel, and then another difficulty was encountered in the huge barrier of ice cakes which had been driven ashore by the sea, and piled up in the edge of the surf. They succeeded, however, after much labor, in dragging the boat over it and into the surf, the same work having to be repeated upon their return with the two men, who were safely landed on the beach at about noon, their boat being also brought ashore with them. The situation of the men had been a very grave one, as there was no telling how soon the steamer might

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break up, the surf was so heavy; and they were very grateful to the life-saving crew for so promptly coming to their relief.

December 13.—At 7 o'clock in the morning the lookout at the Cross Island Station (First District), coast of Maine, discovered, with the aid of the glass, a vessel apparently on her beam ends, about seven miles off shore to the southward. The life-saving crew quickly launched the life-boat, and went out, reaching the vessel at about 10 o'clock. She proved to be the schooner Billow, of Windsor, Nova Scotia. The vessel lay completely on her side with the masts in the water; there was no one on board, and she was badly stove amidships, indicating that she had been in collision with another vessel. She was also full of water. After considerable labor, the life-saving crew succeeded in cutting away the mainmast, and by that means righted the vessel. They then got everything into as good shape as possible, and as the wind was fair run her in for the land under her head sails, reaching Cross Island Harbor in the afternoon. It was subsequently learned that she had been in collision the night before with the schooner Lookout, of Eastport, Maine, and that her crew of four men had been taken off by the latter vessel and landed at Eastport, where she was bound with a load of coal. A telegram was, therefore, sent to Eastport, apprising the owner, who was on board at the time of the collision, of the recovery of his vessel. The latter and the crew arrived on the 16th, when the keeper turned the vessel over to them. The life-saving crew then assisted in stopping the leak and pumping her out so she could be towed to Eastport by the revenue steamer Levi Woodbury for necessary repairs; the keeper obtaining the services of the latter vessel for that purpose. At the time of the collision the schooner was on her way from Canning, Nova Scotia, to Boston, with a cargo of potatoes. Most of the cargo was lost.

December 13.—On this date the crew of the Sandy Hook Station (Fourth District), New Jersey, had a hard pull of several miles against a strong tide and ugly sea to the British steamship Furnesia, of and from Glasgow, which had grounded in New York lower bay, near Southwest Spit, on her way into New York. When the men were within a mile or so of the steamer the United States Ordnance Department steamer Ordnance overhauled them on her way up the bay and gave them a tow. The Furnesia was loaded with a miscellaneous cargo and had nearly four hundred people on board, passengers and crew. The captain warmly thanked the men for going on board, but stated that no assistance was required, as the vessel was in no particular danger. Upon shoving off to return ashore they were enthusiastically cheered by the passengers, some of them shouting, "We'll remember the life-saving men." The steamer floated off on the flood-tide, and proceeded to the city.

December 14.—The schooner Louise P. Mallory, of Middletown, Connecticut, with a crew of seven men, bound from Bath, Maine, to New York, with a cargo of lumber, lost one of her anchors by the parting of the chain at 10 o'clock at night December 13, in Winter Harbor, coast of Maine, during the prevalence of a strong southeasterly gale. The crew of the Fletcher's Neck Station (First District), about a mile distant from where the vessel was lying, went off in their boat early next morning (14th) at the captain's request and swept for and recovered the anchor and helped get it on board; after which the schooner proceeded on her voyage.

December 14.—The schooner Jefferson, of and for New York, from Mobile, Alabama, lumber-laden and with a crew of eight men, stranded

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on the shoals off Barnegat Inlet, coast of New Jersey, at 6 o'clock in the morning in a heavy sea; the place where she fetched up being about three-fourths of a mile east of Barnegat Station (Fourth District). She was soon discovered from the station, and the crew at once went on board to tender assistance. After an ineffectual attempt to get the vessel off they were compelled to abandon operations until the sea went down, and at the captain's request returned ashore to telegraph to New York for the services of the Coast Wrecking Company. In the afternoon, at 5 o'clock, the weather looking bad, the life-saving crew again went off in response to the captain's signal and brought five men, including the captain, ashore and sheltered them at the station for the night. Early the next morning (15th), when the wrecking steamer Relief arrived with a lighter, the life-saving crew took the five men back to their vessel and all hands commenced lightening her, so that by 10 o'clock in the forenoon, at high-water, she was safely floated off and taken in tow for New York, the surfmen returning to their station at 11 o'clock. Nine trips in all were made by the station crew to and from the vessel, besides one trip across the inlet with the local agent of the wrecking company.

December 14.—At about noon on this date the keeper of the Creed's Hill Station (Sixth District), near Cape Hatteras, North Carolina, sighted a schooner apparently becalmed, as she had all sail set and was heading as though on the wind, although from her position he judged she must be on or very close to the outer edge of the inner shoals off the cape, four or five miles to the southeast of the station. She made no signal of distress, but after watching her closely with his glass for about three quarters of an hour he discovered that she had lowered a boat. This led him to suspect something wrong, and he at once ordered out the surf-boat. The wind was light from the westward, with hazy weather. There was also quite a swell rolling in from seaward and breaking heavily on the shoals. An hour's pull brought the life-saving crew alongside the schooner at about 2 o'clock. Sure enough she was hard and fast, the strong flood-tide toward Hatteras Inlet having set her onto the shoal. She was the John Floyd, of Jacksonville, Florida, from New York, with a load of coal, and there were eight persons on board, one being a passenger. The captain had already laid out a kedge in the hope of heaving the vessel off. This explained the lowering of the yawl, as seen from the station. The life-saving crew lent willing assistance to the sailors at the capstan in their efforts to get the schooner afloat, but after two hours of hard heaving (4 P. M.) it was found she had not budged in the least. On the contrary, she was settling in the sand, and was then leaking badly, there being over four feet of water in the hold when the pumps were sounded, although when the life-saving crew arrived she was apparently as tight as a bottle. The keeper also observed that she was breaking in two amidships, and as it was getting dark he advised the captain to leave her. The latter refused at first, saying he should stay by his vessel as long as possible. He soon changed his mind, however, when the keeper pointed out the condition of the vessel and expressed the opinion that there was no prospect of saving her, and consented to her abandonment. The sails were therefore lowered and rolled up and the men told to get their baggage into the surf-boat. Then, with the passenger, the mate, and the cook in the surf-boat, and the captain and four seamen in the yawl, a start was made for the shore, the surf-boat taking the yawl in tow. It was a long and dangerous pull, and as night set in before they had gone far the utmost caution was necessary. Upon nearing the beach, however, they were guided to the locality of the sta-

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tion by signal lights flashed by one of the station crew who had been left behind in charge of the house, and they were thus enabled to make a good landing by half past 7. As soon as the boats grated on the sand they were met by the crew of the Durant's Station, some miles below, near Hatteras Inlet, who had come up, upon discovering the wreck at 4 o'clock, prepared to render assistance. The Creed's Hill crew being quite tired out from their long pull of several miles with the deeply laden boat, the service of the Durant's crew in hauling the boats up clear of the surf and assisting the shipwrecked men with their baggage to the station was very acceptable. On the next day the two life-saving crews attempted to reach the wreck to recover some more of the crew's effects which had been left behind, but the schooner had then settled deep in the sand, and there was nothing but her masts in sight above water, the vessel and cargo becoming a total loss. The rescued crew remained at the station for three days and then were assisted in procuring passage to their homes.

It should be mentioned as showing the spirit which animated the men in going off to the wreck, that while the boat was being drawn down to the surf on its carriage one of the surfmen (A. B. Midgett) at the drag rope stumbled and fell, the wheels of the carriage passing over one of his legs. He told his comrades not to wait for him, that he would overtake them. He was as good as his word, for by the time the boat was ready to launch he came up nearly out of breath and took his place at an oar, as though nothing had happened. When, however, the people were safely landed and the excitement was passed, the poor fellow found he had been more badly hurt than he at first supposed. He was laid up, unfit for duty, for several days by it.

December 15.—On this date the crew of the Quoddy Head Station (First District), coast of Maine, rendered signal service by the rescue of the crew, fifteen in number, of the bark Scotia, of Liverpool, England, wrecked about a mile southwest of the station during a terrific easterly gale and snow-storm. The Scotia was a vessel of over nine hundred tons, and was from Bahia, Brazil, bound to St. John, New Brunswick, in ballast, her crew numbering as above stated. She took the gale the night previous in the Bay of Fundy, lost spars and canvas, and became unmanageable. At half past 4 in the morning West Quoddy Head light was sighted a short distance off, to the leeward, and an anchor was quickly let go with a long scope of chain, to save her from going on to the rock-bound coast. She held on for about an hour, or until the tide turned, when the chain parted and the ill-fated craft fetched up on a rocky ledge about two hundred and fifty yards from the shore, a mile or so southwest of the station. The faint glare of her distress signal, soon after the chain parted, was discovered through the driving snow by the eastern patrol from the station, and he supposing the vessel would fetch up near the light-house, so reported to the keeper when he reached the house with the alarm. It was plain no boat could get off in such a sea, and as the road eastward over the rocks was impassable for the cart, the men were compelled to carry the life-saving appliances by hand, a very difficult task in such a storm when the drifting snow in some places would bring them almost to a stand-still. Upon nearing the point indicated by the patrol, the latter, who had gone on ahead with the keeper, reported the vessel nowhere to be seen. She had evidently driven down the coast to the westward. Search was accordingly instituted, and in a little while her signal light was seen and answered by the life-saving crew. As the road was better in the direction in which

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she lay they reloaded the gear on the cart, and after much toil and hardship arrived abreast of her at about half past 6.

It was scarcely light enough to see, but no time was lost. The first shot from the wreck gun carried the line directly over the vessel, and dropped it in the midst of the group of shivering sailors, who stood anxiously watching the shore. The captain with ready intelligence saw at once what was to be done, and in a short time he had the whip and then the hawser properly fast, bending them with his own hands, and by 7 o'clock the breeches-buoy went off. In the first five trips of the buoy ten men were landed, two at a time; the rest coming ashore singly. It seems the captain remained until the last, and when all the other were safely ashore he made signals as though unwilling to leave his ship. Seeing this, and fearing the vessel would soon go to pieces, Keeper Myers, of the station, resolved to go off in the buoy. Reaching the vessel he found the captain was desirous of saving his instruments and charts. Myers advised him to abandon the idea, as the risk in landing was great enough without hampering himself with such articles as the captain proposed to take; the keeper promising to do his best, if the ship held together, in saving all the property possible after the sea went down, when the boat could be used. The captain therefore consented and landed at once. Eleven of the crew thus saved were colored men, natives of warm southern climes, and being thinly clad they suffered dreadfully from the cold. The poor fellows were deeply grateful to their rescuers, patting them on the back, and invoking God's blessing upon them for their noble work. All hands were pretty well used up, and when the station was reached needed no pressing to partake of the warm food already prepared by one of the surf-men who had been dispatched ahead to make ready for the shipwrecked crew. The scanty wardrobes of the surfmen were also drawn upon to provide dry clothing for the unfortunates in place of the drenched and frozen garments in which they reached the shore.

The bark became a hopeless wreck, although later in the day, with a shift of wind, the sea subsided sufficiently to permit the station men to go off in their boat and save a portion of the crew's clothing, and the captain's charts and instruments. The Eastport Sentinel and the Saint John (New Brunswick) Globe in their accounts of the wreck, referred in the highest terms to the gallantry of the Quoddy Head crew, the first named paper publishing the following letter from the captain of the ill-fated craft:

"LUBEC, *December* 15, 1882.

"*To the Editor of Eastport Sentinel:*

"During the severe gale on the morning of the 14th instant, the British bark Scotia was driven so near the breakers on West Quoddy Head that she was forced to let go her anchors. While lying in that perilous position she was discovered by the patrol of the Life-Saving Station No. 1, who promptly gave the alarm to his comrades at the station, and at once set off with life-saving gear to the rescue of the crew. On reaching the Head the ship was discovered to have drifted about a mile and a half west of her first position where she had landed on the reef. Burning a light on the Head to encourage the distressed, they again shouldered the gear and started back for the wreck, where they successfully fired the first shot some hundred yards beyond the ship, the line falling in the midst of the ship's company. All of the operations on shore were so promptly executed by an active crew under the direction of their skillful captain, that notwithstanding the loss of time in first going to

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the Head, where the ship had been discovered at anchor, in about an hour from the time of striking of the ship all the crew had been safely landed. In behalf of the officers and crew of the Scotia I tender their best and most grateful thanks to Captain Myers and crew, and for myself must ever remain their debtor.

"ANDREW M. FOSTER,
"*Master of Scotia.*"

December 15.—At 8 o'clock in the morning the crew of the White Head Island Station (First District), coast of Maine, discovered a schooner aground on Upper Gangway Ledge, Muscle Ridge Channel, between four and five miles distant from the station. The wind was blowing fresh and there was a heavy sea running, making the situation of the vessel very dangerous. The station crew therefore put off at once to the vessel in their surf-boat, but before they could reach her she floated off without assistance and proceeded on her course to the eastward, apparently undamaged.

December 16.—The schooner Adele Trudell, of Philadelphia, with a cargo of coal, stranded at 6 o'clock in the morning about two hundred yards from the beach, a mile and three-quarters north of Island Beach Station (Fourth District), coast of New Jersey. She was discovered a few minutes after striking by the station patrol, and as soon as he reported her the life-saving crew set out in their boat to offer assistance. Fortunately the wind was offshore and the sea smooth, and just as the boat got alongside the schooner she floated off and proceeded on her way, the captain shouting his thanks to the life-saving crew as his vessel edged away from the shore for hastening so promptly to his relief when they discovered the vessel. The schooner's destination was not learned.

December 17.—At 1 o'clock in the morning the three-masted schooner Isaac L. Clark, of Bridgeton, New Jersey, with a crew of seven men, laden with coal from Georgetown, District of Columbia, for New York, missed stays while going about in beating in past Sandy Hook, and got into the breakers at the point of the Hook where she fetched up, about seven-eighths of a mile north-northwest of the Sandy Hook Station (Fourth District), coast of New Jersey. The north patrol from the station had just reached the point as she struck, and after burning his Coston signal and shouting to the captain not to attempt to land through the surf, he hurried to the station and reported. The crew turned out as quickly as possible with their boat, and by 2 o'clock, after a desperate pull in the rough sea and the darkness, the piercing cold gale being right in their teeth and the tide and sea also against them, they reached the vessel. Some idea of the difficulties encountered in pulling to the vessel can be formed from the statement of the keeper that when about half way he was compelled to sheer in under the land for a lee and lie to in order to give his men a breathing spell, so nearly were they exhausted. The sea was breaking heavily against the vessel, covering her with spray which froze as it fell and encased everything in ice. The captain, being very anxious to obtain the assistance of a tug, the life-saving crew landed abreast of the vessel with a dispatch to the Coast Wrecking Company, and then returned aboard to be in readiness in case the vessel should commence breaking up, as the captain feared she would do. While waiting for the steamer an anchor was planted off shore and the hawser hove taut, after which all possible sail was crowded on to help work the schooner off. By the time these preparations were complete the tug came alongside and commenced operations, all hands aiding with a will. The vessel had struck on the first of the ebb, and but

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little could be accomplished until the tide turned. Presently, however, when the tide began to swell, she moved in her sandy bed, and by noon, eleven hours after she grounded, the life-saving crew had the satisfaction of seeing her safely afloat in deep water. The captain, as he bade farewell to them, when the tug took him in tow for New York, expressed the heartiest acknowledgment for the invaluable service he had received in saving his schooner. It should be stated that the keeper slipped and fell between two of the thwarts in the boat and hurt his leg badly, and that all hands suffered more or less from exposure while working upon the ice-incrusted vessel.

December 17.—The three-masted schooner Zenobia, of and from Pascagoula, Mississippi, for Saint Mary's, Texas, with a cargo of lumber, laths, and shingles, and having a crew of six men, stranded on the shoals off San Luis Pass, coast of Texas, at 7 o'clock in the evening of December 15, about a mile southwest of the bar, and three and one-half miles from the San Luis Station (Eighth District), on the westerly end of Galveston Island. Owing to the darkness of the night and the fact that the vessel struck on the farther side of the Pass she was not seen by the station crew until daylight next morning (16th), and even then no danger was suspected, as light-draught vessels frequently anchor in the vicinity of where she lay, and it was supposed she was waiting for a fair tide to enter the Pass, the wind being then offshore. This belief was strengthened by the fact that she lay perfectly upright, with all her sails furled. In the afternoon, however, the life-saving crew were surprised by the arrival of the captain and some of his men at the station in quest of the aid of a steamer from Galveston; he reporting his vessel aground and full of water. The keeper dispatched one of the surfmen at once to Galveston, twenty odd miles distant, on horseback, to report the fact to the district superintendent. The man reached town at 8 o'clock that night, his horse breaking down on the way and compelling him to make six miles of the journey on foot. Arrangements were forthwith made for the revenue steamer Louis McLane to start for the scene of the wreck early in the morning (17th), the superintendent putting an extra line on board that vessel and taking passage on her at the time appointed. The McLane arrived off San Luis Pass soon after noon. In the mean time the life-saving crew had gone to work at an early hour, and at the request of the captain unbent all the sails except the jib and mizzen and landed them with the running rigging on the beach inside the Pass. They then sounded around the vessel for the best water and carried out an anchor to heave her off within reach of the steamer's lines, as the shoal extended so great a distance seaward from where she lay that it would be impossible for the McLane to get anywhere near her. The new line brought down by the superintendent was taken on board the schooner by a boat's crew from the cutter and attached to the cable already run out, and then after a second anchor had been run out the labor of moving her commenced in dead earnest, the force at command enabling the officers to keep one gang at the windlass while another threw the rest of the deck load overboard. The main rigging, which had been carried away by the shifting of the deck load when the vessel struck, was also secured in order to keep the mast from going over the side, as was threatened by the way she pounded on the bottom. By right-down hard work the schooner was slowly hove out towards the edge of the shoal until she floated, in a waterlogged condition and with her deck awash, in about ten feet of water, there being a depth of eighteen inches to spare under her keel. It was then 8 o'clock at night, and they had

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but one hundred and fifty yards further to haul her to bring her within reach of the steamer's tow-line. Instead of continuing their operations, however, the relief party were compelled to suspend work, as the captain insisted upon heaving his vessel into the channel so as to get into the Pass, which would have to be done in daylight, although the district superintendent and the officers of the cutter strongly urged him to give up that idea and let them tow him to Galveston, where the vessel could be properly repaired. Finding him obdurate, there was no other course left them than to come to with the starboard anchor and let the schooner remain where she was for the night, the captain and his men accompanying the life-saving crew to the station, while the McLane's men returned on board their vessel, which was anchored in the offing. Thus ended a very hard and disagreeable day's work, all hands being wet and cold and pretty well fagged out. The men would cheerfully have remained and kept the vessel moving until within reach of the steamer had the captain been disposed to follow the advice given him. As the sequel proved, his ill-timed perverseness was fatal to the schooner's prospects. Although when operations were suspended the weather was fine, the wind freshened from the southeast during the night, and by daylight of the 18th a heavy sea was rolling in, which forced the vessel back onto the shoal, and by the time the men got down to the point, soon after daylight, ready to resume work, she was within a hundred yards of the west end of Galveston Island, where she became a total wreck, the surf making a clean breach over her and breaking her up so badly that further efforts to save her were useless. In addition to the sails and rigging which were landed inside the Pass by the life-saving crew, they also recovered the anchors and a considerable quantity of the lumber from the surf. From the reports received in this case there is no doubt that the schooner would have been hauled off and taken safely to port but for the singular conduct of the captain in insisting that she should be towed in to the Pass near by, a course which, under the circumstances, was utterly impracticable.

December 17.—The mail steamer Humboldt, of and from San Francisco, California, for Eureka, in the same State, with a passenger list of seventeen persons and a crew of twenty-two, and loaded with a general cargo, in attempting to cross the bar at the entrance to Humboldt Bay, at low water, on her way in to her destination, at about noon, took the bottom, and was in imminent danger of becoming a wreck on account of the sea, which was very rough and caused her to thump heavily. The crew of the Humboldt Bay Station (Twelfth District), at the north side of the entrance, about two miles distant from where the vessel struck, were soon aware of the accident, and in a short time put out in the life-boat and offered their assistance. This was gladly accepted, and at the captain's request they started to run a line—which they had taken the precaution to carry with them from the station—from the steamer to the tug Mary Ann, lying just inside the bar, and were pulling towards the latter vessel, when the Humboldt floated off by her own efforts and passed safely over the bar into the bay. Although it will thus be seen that the life-boat crew contributed nothing towards getting the steamer afloat, they received high commendation from the captain and others on board the Humboldt, and also from the captain of the tug for being so promptly on hand to save life and property in case the steamer had been wrecked. She was in a very dangerous situation, with the sea making a breach over her, and it was rather doubtful at one time whether she would get off.

It should be stated that the tug also grounded on the inner edge of

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the bar in her efforts to get near the steamer, but fortunately floated off, although not without some damage from a heavy sea which boarded her while she lay there.

December 18.—The schooner Mary D. Wilson, of Calais, Maine, having a crew of three men, bound from New York to Boston with a cargo of iron and logwood, encountered a heavy northwesterly squall on the afternoon of December 17, when off Nausett lights, Cape Cod, Massachusetts, and lost her mainsail and sprung the foremast head, besides receiving other damage. She anchored off Chatham for the night, and at daylight of the 18th was boarded by the crew of the Chatham Station (Second District). The crew of the vessel were pretty well used up, and gladly accepted the keeper's offer of assistance in making temporary repairs to enable them to reach a harbor in Vineyard Sound. When the schooner was ready to proceed they procured the services of a pilot, then got her under way and saw her safely on her course. The vessel afterward grounded on Bearse's shoal, some miles to the southward, off Monomoy, but before the crew of the Monomoy Station reached her she floated off. They went on board and offered assistance, however, which was declined.

December 18.—At half past 11 in the forenoon of December 17, the schooner J. G. Crate, of Somers Point, New Jersey, with a crew of four men, and laden with wood from Green Bank, New Jersey, for New York, while proceeding down Great Bay toward Little Egg Harbor Inlet, missed the channel and stranded upon a sand-bar about three miles to the westward of Little Egg Station (Fourth District), coast of New Jersey. The accident caused the vessel to spring a leak and fill with water, so that her crew were constrained to land that night and seek quarters at a hotel near by. They made an unsuccessful attempt to pump the vessel out the next morning (18th), and afterward set signal for assistance from the station. The life-saving crew went promptly on board, and after trying the pumps for some time, they determined to remove part of the cargo in order to locate and stop the leak. With some trouble they found the damage in the center-board trunk and repaired it, thus enabling the vessel to be pumped out and floated upon the next flood-tide, none the worse for the adventure.

December 18.—At 5 in the morning the schooner Recruit, of Chincoteague, Virginia, having a crew of three men, bound from New York to Chincoteague with a load of coal and brick, stranded on the north bar of Turtle Gut Inlet, about a mile east-northeast of the Turtle Gut Station (Fourth District), coast of New Jersey. A fresh off-shore breeze prevailed at the time and the tide was ebb. The station patrol discovered the vessel soon after she struck and by half past 6 the life-saving crew were on board ready to assist in getting her afloat. As but little could be done until the tide turned they returned ashore and started a messenger to Cape May City with a dispatch, after which they went off again; the crew of the Holly Beach Station, three miles distant to the northward, arriving about the same time. It was then 8 o'clock. All hands at once turned to and planted an anchor offshore and then crowded on sail, and after four hours of hard work they succeeded in getting the schooner safely afloat, so she could proceed on her voyage.

December 18.—On December 17, at 11 o'clock at night, the schooner Gertrude T. Browning, of Somers Point, New Jersey, bound, with a cargo of lumber from James River, Virginia, to Philadelphia, and having a crew of five men, mistaking the light upon a vessel ashore for that of one afloat, and attempting to pass inside of her ran aground on Isaac Shoals, a quarter of a mile from land, and about five miles southwest

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of the Smith's Island Station (Fifth District), Virginia. She was discovered at half past 6 o'clock in the morning (December 18), and by 8 o'clock the life-saving crew had boarded her and entered upon the hard work of hauling her off. They ran out her anchors and hove her up to them, then ran out again and hauled the hawser taut, and the schooner floated on the next tide.

December 20.—The crew of the False Cape Station (Sixth District), coast of Virginia, picked up and secured about 4,000 feet of yellow pine lumber, which they found stranded on the beach, evidently from a passing vessel. It was turned over to the custody of the State wreck commissioner, as required by law.

December 20.—During the morning watch the patrolmen from Little Island Station (Sixth District), coast of Virginia, found a quantity of lumber floating in the surf and hauled it up on the beach. It was turned over to the commissioner of wrecks.

December 20.—The crew of the Wash Woods Station (Sixth District), coast of North Carolina, hauled out of the surf and secured on the beach some three or four thousand feet of pine lumber which had evidently been lost from a passing vessel. It was turned over to the State commissioner of wrecks.

December 21.—At 7 o'clock in the evening a man named Tracy was brought to the Quoddy Head Station (First District), coast of Maine, suffering from being struck upon the head by a block while at work stripping the British bark Scotia wrecked a few days previous (December 15) near the station. He was then insensible, and the crew took him in hand and brought him to, and afterward sent for a doctor. On the following day they procured a team and sent him home, he having recovered sufficiently to be moved.

December 21.—At a little before midnight the patrol from the Scituate Station (Second District) discovered a vessel steering along the shore in close proximity to the rocks off Scituate, Massachusetts, and upon his burning a Coston signal to warn her of her danger she immediately changed her course and steered further off shore.

December 22.—The three-masted schooner Henry D. May, of and for Philadelphia, Pennsylvania, with a cargo of lumber from Savannah, Georgia, stranded at 5 o'clock in the morning on Frying Pan Shoals, North Carolina, during a thick fog with a fresh southerly breeze. There were eight persons on board the vessel, including one passenger. She lay far off from the land in a very exposed situation, about four miles and a half south-southeast of the Cape Fear Station (Sixth District), on Smith's Island. She was discovered and reported at daylight by the station patrol, and by half past 7 o'clock the life-saving crew were alongside in their surf-boat ready to render assistance. As the captain desired to leave the vessel at once, and obtain the services of wreckers, all hands were taken into the boat and landed at the station, the life-saving crew afterward conducting the captain to Smithville, several miles distant, where he could telegraph to the owners, and make arrangements with the local wrecking company for saving the vessel; agreeing when the keeper left him at Smithville to make signal to the station for his men when he came out with the wreckers. Some time during the night following the schooner worked over the shoal and floated off in a water-logged condition; but as the weather was still foggy the life-saving crew knew nothing about it until the afternoon of the 23d, when the fog lifted and revealed the vessel drifting off, five or six miles to the eastward of the shoals. The wrecking schooner Collins soon afterward came out from Smithville with the captain on board,

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and in answer to his signal the life-saving crew took the men off to him, and also informed him of the situation of his vessel, he not until then being aware that she had floated off. The keeper offered to accompany him out to her, but this he thought unnecessary, and declined with thanks. When he reached her with the wreckers, at dusk in the evening, she had eight feet of water in the hold. Fortunately the weather was fine, and the wrecking company succeeded in freeing her by the next day (December 24), and took her safely into Cape Fear for repairs.

December 24.—During the night one of the patrols from the Assateague Beach Station (Fifth District), coast of Virginia, by burning his Coston signal, warned a vessel which was approaching too near Ship Shoal, off Chincoteague Inlet, so that she changed her course and went clear.

December 25.—A vessel standing in too close to the beach was warned of her danger by one of the patrolmen from Assateague Beach Station (Fifth District), coast of Virginia, who flashed a Coston signal in time to save her from stranding.

December 26.—At 8 o'clock Christmas night the schooner Ella Rose, of and for Ellsworth, Maine, from Boston, with a cargo of corn and iron, struck on Upper Gangway Ledge, Muscle Ridge Channel, four or five miles northeast of the station on White Head Island (First District), coast of Maine, and sunk in twelve feet of water between the ledge and Ash Island, her deck being just above water. On account of the great distance she was off and the darkness of the night she was not discovered by the life-saving crew until daylight of the 26th. They pulled to her at once in the surf-boat, arriving just as her crew of three men were abandoning her to take passage for home on the schooner Medford, lying near. As nothing could be done at that time, the men returned to their station. In the afternoon, however, the revenue steamer Levi Woodbury and the schooner Charley Hanley, of Rockland, arrived and made preparations for raising the schooner. The life-saving crew accordingly went up there again and assisted the cutter's crew in getting chains under the sunken vessel and in raising her, rendering all the aid in their power until she was towed by the Woodbury safely into Owl's Head Bay, a few miles distant, the men getting back to their station at 3 o'clock next morning (27th) pretty well fatigued.

December 26.—At 6 o'clock in the morning the patrol of the San Luis Station (Eighth District), Texas, discovered a brig close upon the shore. He at once fired a red Coston signal, and she went about immediately. Later the keeper signaled sailing directions to Galveston by flag, and she proceeded on her way.

December 27.—During the midnight watch the patrol from the Block Island Station (Third District) discovered a steamer ashore on the west side of Block Island, about two and a half miles north of the station. He quickly burned a Coston light to let the people on board know they were seen, and then hurried to the station and gave the alarm. The surf-boat was at once launched, but when the crew got to within a quarter of a mile of the vessel she floated off on the rising tide and proceeded on her course apparently without damage.

December 27.—During the night a vessel was saved from stranding on Ship Shoal by one of the crew of the Assateague Beach Station (Fifth District), coast of Virginia, who discovered her danger while he was out on patrol, and by instantly burning a Coston red light warned her just in time for her to change her course. A minute later she would have been hard and fast ashore.

December 27.—At 7 o'clock in the evening, the patrol of the San Luis

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Station (Eighth District), Texas, when two miles away on his beat, saw a vessel close inshore, and made her stand out of peril by firing his red Coston light.

December 27.—At a quarter past 6 in the evening, as the keeper and one of the crew of the Milwaukee Station (Eleventh District), Lake Michigan, were going to their supper their attention was attracted to the river by the screams of persons who had evidently fallen into the water. The river was only partially closed by the ice, and running out to the open water they arrived just in time to rescue a man named Joseph Sass, who was clinging to the edge of the ice. They had scarcely got him out when a woman rose to the surface, and she also was lifted from the water. The woman, whose name was Julia Ann Otrumpke, appeared to be quite dead, but they carried her to the keeper's house, not far off, where they immediately put in operation the method in vogue in the service for the resuscitation of apparently drowned persons, which in about twenty minutes resulted in establishing respiration, and in course of three-quarters of an hour she was so far restored that she could be put to bed; the doctor who was called in approving of the treatment and pronouncing her in a fair way to recover. In the mean time the man Sass had found refuge in a house near the spot where he was rescued, and after he had somewhat recovered from the shock incident to his fall into the icy water he suddenly remembered that a man named Frank Luge, in whose company he had been, with the woman, had also stumbled overboard and was probably drowned. Two men at once ran out onto the ice with a long pole and succeeded in recovering the body just about the time the keeper had succeeded in restoring the woman to consciousness. The keeper responded, therefore, to the further call for his services and made strenuous efforts to resuscitate the poor fellow. It was of no use, however, and after working on him for three-quarters of an hour the body was delivered to the proper authorities. The man had been under water nearly an hour and was no doubt quite dead when found. The woman was hospitably cared for at the keeper's house for three days, and then when the doctor said she could be removed, she was wrapped warmly in blankets and taken to her home in the city. It seems the party had been walking together on the ice, and the evening being very dark, they had accidently stumbled overboard with the results narrated.

December 29.—At about 6 in the evening the cat-rigged fishing boat Emma, of Atlantic City, New Jersey, with three men on board, in returning from a cruise off shore, stranded on the north shore of Absecom Inlet about three-quarters of a mile northeast of the Atlantic City Station (Fourth District). Fortunately the wind was light and the sea quite smooth or the men would have been in a bad fix. The evening was intensely dark, and as no signal was shown the boat could not be seen from the station. One of her crew, therefore, took the skiff and pulled across the inlet to the station for assistance. The life-saving crew promptly responded to the call, went off in their surf-boat, removed the cargo of fish, about fifteen hundred pounds weight, floated the vessel off the shoal without damage, and then reloaded her and sent the men on their way rejoicing into the harbor.

December 29.—Between 4 and 5 o'clock in the morning, the patrol of the San Luis Station (Eighth District), Texas, saw a bark close inshore, and caused her to wear off by firing a red Coston light. The escape was narrow.

December 30.—Just before midnight on the same date that the Emma was relieved by the crew of the Atlantic City Station (December 29)

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the sloop William Tell, of Somers Point, New Jersey, with a crew of three men, bound in to Atlantic City from a fishing cruise with a fare of fish, missed the channel in the darkness and stranded on the shoals at the north side of Absecom Inlet, at a point about a mile to the eastward of the life-saving station. The wind was light from the westward and the sea still smooth. Her light was sighted at about the time she struck by the station patrolman, but as no distress signal was made it was supposed she had anchored to wait for a breeze. At 3 o'clock in the morning (30th), however, the captain becoming alarmed, jumped into his yawl and pulled over to the station for assistance, asking the keeper to go off at daylight, when the tide would serve best. His appearance at the station was the first intimation the crew had of the sloop's danger, as she was so far away in the darkness her exact position could not be determined. Accordingly, without waiting for the day to dawn, the life-saving crew went on board to find that the sloop had already bilged and was full of water. As she was very old, and there was no prospect of saving her, the life-saving crew, at the captain's request, turned to and stripped her of sails, rigging, ground tackle, and all else movable, amounting in value to about three hundred dollars, and brought them ashore, landing her crew at the same time. The hull soon afterward broke up and became, with the cargo of fish, a total loss.

December 30.—The schooner Boston, of and for Philadelphia, Pennsylvania, from New Berne, North Carolina, with a cargo of lumber and shingles, and having a crew of five men, encountered a severe northeast storm on her way up the coast and sprung a leak, the water gaining on her so fast that the captain was obliged to beach her to save the lives of himself and crew. She struck the bar, two hundred yards from shore, about a mile and a half south of the False Cape Station (Sixth District), coast of Virginia, at 9 o'clock. The schooner was discovered by the patrol, heading for the land, fifteen minutes before she struck, and he started at once for the station and informed the keeper. It was impossible for the surf-boat to live in such a sea as was then running, so the beach apparatus was taken out and hauled to the scene of the wreck as fast as the condition of the beach would permit, it being a quarter before 10 when the life-saving crew arrived on the ground. They were not long in establishing communication by means of the wreck-gun, the first shot carrying the line on board. Just as they were about to send off the whip, however, the strong current setting to the southward moved the vessel some distance from where she first fetched up, compelling the life-saving crew to dig up the sand anchor—which they had already buried—and follow with all the apparatus to the place where she stopped. This caused some delay, but in due time the gear was sent off, and the breeches-buoy rigged, and by noon the schooner's crew were all safely ashore. The crew of the station were assisted in making the rescue by one of the surfmen from the next station south (Wash Woods), who had sighted the stranded vessel from his patrol beat and hurried forward in time to render valuable aid. The wrecked crew were at once conducted to the station and made as comfortable as possible with dry clothing and warm food, it being necessary to administer stimulants to the captain, who suffered from a severe chill after reaching the house, brought on no doubt from exposure in dripping wet garments to the cutting north wind, which blew right in their teeth all the way from the wreck. The journey is described by the keeper as being a severe one indeed. On the following day (31st) the gale having abated somewhat, the life-saving crew returned to the wreck and by means of the breeches-buoy,

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which was still rigged, recovered such of the men's effects as could be found, the vessel by that time being full of water and almost a complete wreck. The people were taken care of at the station for several days, until transportation could be procured for them, nothing but the sails, rigging, and other outfits and a portion of the cargo being saved.

December 30.—At 3 o'clock in the afternoon the schooner Annie Farrow, of Washington, North Carolina, with a crew of three men, broke adrift from her moorings inside Hatteras Inlet in a furious northerly storm, during which the wind attained a velocity of seventy-two miles an hour and drove ashore on the inner edge of the beach about half a mile northeast of Durant's Station (Sixth District), coast of North Carolina. She was quickly discovered by the crew of the station, who started at once to her assistance. They met the captain, with whom they were acquainted, coming ashore with his crew, he telling them nothing could be done for the vessel until the gale abated. Watch was kept on her from shore, however, and word sent to the next station north, at Creed's Hill, for assistance, it being proposed to make an effort as soon as the storm moderated to get her off. The desired help arrived at about midnight, and the two crews went to work. They were not successful just then, as the tide had fallen off too low. As there was a good prospect of getting the schooner off on the next tide and the local crew thought they could do it without the aid of the Creed's Hill crew, the latter soon afterward returned to their station to keep a lookout for wrecks upon the outer beach and the shoals off Cape Hatteras, which are very dangerous in stormy weather. At 4 o'clock in the morning (December 31) the Durant's crew again went on board with the vessel's own crew and after some hours' hard work succeeded in getting the schooner afloat, without damage, and took her to a safe anchorage, returning to their station at about 8 o'clock.

December 30.—The captain of the three-masted schooner General Franz Siegel, of Cleveland, Ohio, called upon the keeper of the Point Marblehead Station (Ninth District) at 11 o'clock in the night and requested assistance in getting his vessel afloat, she having grounded a short distance from the quarry dock, Point Marblehead, Ohio, just as she had cast off her lines to proceed on her voyage to Cleveland with a cargo of stone. The station had closed for the season—lake navigation being generally suspended—but the keeper soon assembled his crew and went to the schooner's aid, and in about an hour she was worked afloat and started off on her voyage without apparent damage.

December 31.—At half past 7 in the evening one of the patrolmen of the Hog Island Station (Fifth District), coast of Virginia, returning over his beat, when about three miles north of the station, saw the red and green running lights of a steamer coming straight toward the beach. He immediately burned a Coston Signal, which the steamer at once answered with a blast of her whistle, and then sheered off shore. But for the patrolman's warning she would in a few minutes have been aground.

December 31.—Just as the crew of the Durant's Station (Sixth District) returned from their labors on the schooner Annie Farrow the lookout on the roof of the house discovered a sloop ashore on the north end of Oliver's Reef, in Pamlico Sound, about seven miles distant, northwest from the station. They at once launched their surf-boat and went to her assistance, arriving on board at half past 9. She proved to be the Independence, of Hatteras, North Carolina, with a crew of two men, bound from Elizabeth City to Hatteras, with a cargo of corn and coal, the captain reporting that he had been driven ashore by the gale at 2 o'clock that morning. The sloop being a small craft, the life-saving crew

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transferred a portion of her cargo to the surf-boat, sufficient to lighten her, then hove her afloat, re-stowed the cargo, hoisted sail, and sent her on her way to her destination without any damage.

January 1, 1883.—During the first night watch the patrol from Little Egg Station (Fourth District), coast of New Jersey, seeing a vessel standing in too close to the beach, burned a Coston light, when she tacked and stood off shore.

January 2.—During the night one of the patrolmen from the Assateague Beach Station (Fifth District), coast of Virginia, sighted a vessel dangerously close to Fox Shoals, Chincoteague Inlet, and warned her with a Coston light, so that she stood off and escaped getting ashore.

January 3.—At about sunset, as two men were fishing from the ice on the south shore of Moriches Bay, Long Island, New York, not far from the Petunk Station (Third District), the ice broke loose and drifted out into the bay, carrying the men with it. The life-saving crew went at once to their relief in a boat and brought them safely ashore.

January 3.—The two-masted schooner, Samuel Ober, of Provincetown, Massachusetts, bound with a cargo of pig-iron from Baltimore to Providence, Rhode Island, and having a crew of four men, misstayed in going about, and stranded at 11 o'clock at night about three hundred yards from shore and a mile from the Pope's Island Station (Fifth District), Virginia. A short time after the vessel struck she was seen by the passing patrolman, who fired two Coston lights to let the sailors know that their situation was known and that help was at hand. He then hung his lantern in a conspicuous place as a sign of cheer, and ran to the station with the news. The life-saving crew at once turned out, launched the surf-boat, and reaching the vessel by midnight, took off the men and their baggage and brought them ashore. In the morning (January 4) they reconveyed them on board, and joined them in planting an anchor and endeavoring, though without success, to heave off the schooner. As the weather was threatening, the captain concluded to strip her of her sails and running rigging, which, with the assistance of the station crew, was done, and the gear put in a place of safety on land. The day following a salvage company took the schooner in hand and succeeded in pulling her off. The captain and men were kept and succored at the station for four days. Subsequently the captain published the following card of thanks in a local paper:

"EDITOR VIRGINIAN: I desire through your paper to convey my thanks to Captain Bloxom and crew of Life-Saving Station No. 6 for their timely aid in rescuing myself and crew from the wreck of the schooner Samuel Ober, that went ashore on Assateague Beach on the night of the 3d instant, and also for the efforts made to save the vessel and cargo. It gives me great pleasure to acknowledge publicly the hospitable entertainment and kind treatment of myself and crew at the hands of Captain Bloxom and his men during our stay on the island. Surely the shipping interest of the country is fortunate in having such gallant men as those at Station No. 6 to rescue its crews and save its stranded property.

"JAMES CUMMINGS,
"*Master Schooner Samuel Ober.*
"CHINCOTEAGUE ISLAND, *January* 10, 1883."

January 3.—On this date the crew of the Creed's Hill Station (Sixth District), coast of North Carolina, learned that a small schooner, the Belle, of Hatteras, North Carolina, had dragged her anchors during the storm of December 30, and driven ashore in Pamlico Sound, about five

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and a half miles north of the station, the thick woods which fringe the beach on the Sound side preventing her from being seen from the station. The vessel had no cargo in her, and her crew of three men were on shore at the time of the accident. As soon as they were informed of the facts the life-saving crew went to the schooner's assistance, and after working on her for several hours succeeded in hauling her afloat with but slight damage and took her back to her former anchorage.

January 4.—At half past 4 in the afternoon the crew of the Peaked Hill Bar Station (Second District), Cape Cod, Massachusetts, sighted a barkentine standing in too close to the bar, as though unaware of her danger. They immediately made signals to warn her, and she changed her course and went clear.

January 4.—A surfman of the Pope's Island Station (Fifth District), Virginia, on patrol in the fore part of the night saw a steamer heading perilously near the beach, and let blaze his red Coston signal, which caused her to at once stand off shore.

January 4.—At 9 o'clock in the morning the master of the schooner Melville, of New Berne, North Carolina, came to the Creed's Hill Station (Sixth District) and reported that his vessel had parted her cables during the gale of December 30, and driven ashore in Pamlico Sound, at a point five or six miles distant, and requested assistance in hauling her afloat. As in the case of the Belle, before recorded (January 3), her crew were on shore at the time of the accident. The life-saving crew at once responded to the call and proceeded to the schooner's relief, it being found necessary to block her up and construct ways in order to launch her, she having gone so far up on the shore. The blocking up was completed that day, but further work had to be suspended until the tides were more favorable, not being high enough. A few days later, however, on the recurrence of the spring tides, the life-saving crew again went on board and assisted until she was once more safely afloat.

January 5.—At 1 o'clock in the day the crew of the Quoddy Head Station (First District), coast of Maine, discovered a schooner at anchor about four miles to the eastward of the station flying a signal of distress. The weather was bitter cold, with a gale from the northwest. The men lost no time, however, but got the boat out and pulled to the vessel. She proved to be the Clara Dinsmore, of Lubec, from Boston, loaded with corn and provisions. There were four men on board, one of them a passenger. It appeared she had received hard usage in the gale, splitting some of her sails and getting badly iced up, and was in need of assistance in working up to Lubec, whither she was bound. The life-saving crew therefore pitched in at once, the keeper taking charge, got the vessel under way, and, with what sails she had left, beat her up the bay to her destination, where she arrived at 6 in the evening. The ice had been making about the schooner so fast while at anchor that she would have become completely unmanageable but for the timely arrival of the station men, her own crew being nearly used up. It was 8 o'clock at night when the life-saving crew reached their station, the ice in the bay rendering the return trip both difficult and dangerous.

January 7–9.—For an account of the rescue of the crew of the schooner Albert Dailey, of Augusta, Maine, by the crew of the Smith's Island Station (Fifth District), coast of Virginia, and the subsequent loss of two lives, one the steward of the vessel and the other a wrecker employed by the company having charge of the operations for her release from the beach, see page 31.

January 8.—The three-masted schooner Wyoming, of Boston, Massa-

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chusetts, with a crew of six men, bound from Azua, San Domingo, to New York, with a cargo of sugar and lignum-vitæ, encountered thick weather and strong head winds on the voyage and stranded at 6 o'clock in the morning of the above date off the coast of Maryland, about five and a quarter miles north of the Green Run Inlet Station (Fifth District). Owing to the thick weather and the fact that she grounded about three-quarters of a mile beyond the ordinary patrol limit of the station, the schooner was not discovered until after 9 o'clock, three hours after she struck, and it was near noon when the patrolman reached the station with the news. The boat was quickly run out on its carriage and hauled along the shore for a distance of two miles, when, finding his men were giving out under the heavy load and the bad condition of the beach, the keeper ordered the boat launched and pulled the rest of the way by water, arriving alongside the vessel at 2 o'clock. The six men were safely landed, with their baggage, in two trips. The captain wished to remain as near the vessel as possible, and as accommodations were to be had in the vicinity for all hands he declined, on account of the great distance, the keeper's offer of quarters at the station. The life-saving crew therefore returned to their house, after doing all that lay in their power toward making the shipwrecked people comfortable. Although a wrecking company arrived the next day in response to a telegram for their aid and contracted to get the vessel off, it was of no use, as extremely bad weather set in soon afterwards, and the schooner with her cargo became a total loss.

January 9.—At 9 o'clock at night the steamship Pottsville, of Philadelphia, Pennsylvania, with a crew of eighteen men, from Boston for Philadelphia in ballast, stranded on the coast of New Jersey, during a violent northeast gale and snow-storm, about a mile south of Chadwick's Station (Fourth District), some miles to the northward of Barnegat. The south patrol had already passed to the limit of his beat and just met the north patrol from the Tom's River Station, when the two men sighted the steamer's lights to the northward. They hurried along the beach as fast as was possible against the storm, which was right in their teeth, and finding it was a large steamer on the bar made signal to her that she was discovered, and hastened on to the station. The surf was too heavy for the boat, so the beach apparatus was got out; the life-saving crew arriving abreast of the ship at about 11 o'clock. The trudge along the beach with the heavily-loaded cart in the blinding snow and the pitchy darkness of the night was laborious indeed. The first shot from the wreck-gun was, happily, successful in establishing communication, but owing to the swiftness of the current setting along shore, considerable difficulty was experienced in sending the whip-line off to the ship. Under the circumstances, however, excellent time was made by the hardy life-savers in getting the breeches-buoy rigged, and in little over half an hour from the time it was placed upon the hawser, the entire crew of eighteen men were safely ashore; the keeper dispatching them at once to the station in charge of two surfmen, while the rest remained behind to recover the apparatus, the ship sluing completely around upon the bar during the latter operation, and giving them much trouble, besides damaging some of the gear and rendering it unfit for further service. The weather was so extremely cold that several of the men, including the keeper, were frost-bitten while engaged in the work of rescue; some of the oldest beachmen present declaring that it was the hardest night they had ever experienced. It was, indeed, fortunate that the people were landed so expeditiously, for had there been any serious hitch to delay operations a few hours, or until the tide rose, the

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men would have been driven into the rigging by the surf which then swept the steamer's deck, and many of them have suffered with frosted limbs and perhaps been frozen to death. As it was, the rescue was splendidly managed, the affair reflecting great credit upon all concerned. It should be mentioned that in addition to the regular crew of the station and the surfmen from the Tom's River Station, there were present three men from a house on the beach about a quarter of a mile away, who, upon hearing the gun fired, hastened to the scene and rendered valuable assistance. The crew were taken care of at the station for two days and then sent home, a wrecking company afterwards taking charge of the vessel and floating her safely off some months later without apparent damage.

January 9.—The sloop yacht Lady Alice, of Sea Isle City, New Jersey, bound in ballast from that place for Anglesea, New Jersey, with three men on board, stranded in a fresh breeze and cloudy weather at 11 o'clock in the forenoon, a quarter of a mile from shore and about half a mile southwest of the Townsend's Inlet Station (Fourth District), New Jersey. She immediately made signal for assistance, and the keeper and one of his crew went out to her in a small skiff and brought ashore the three men, took them to the station, dried their clothes, gave them a good hot dinner, and made them comfortable. A strong northeast gale began blowing at 5 o'clock in the afternoon, and the snow fell fast, the beginning of a snow-storm which lasted all night and the next day, and was the severest fall which the region had known for years. Seeing as soon as the gale began, that there was no prospect of getting the yacht afloat, the keeper and two of his men, facing the snow-storm and the rising sea, rowed out to her, secured her sails, laid her anchor, which they reinforced with the surf-boat grapnel, and left her for the night. At 7 o'clock in the evening, her three men having had supper, and being in good condition, left the station to go about three miles north to Sea Isle City. The next morning (January 10) the keeper and one of his crew, accompanied by one of the yacht's company, went on board and succeeded in bringing her in through the ice-drift against a strong north wind to a safe anchorage. Her men were very grateful to the life-saving crew for the assistance rendered.

January 9.—About 1 o'clock at night, the wind being north-northeast, the weather thick and a heavy sea running, the schooner Thomas J. Martin, of Bridgeton, New Jersey, bound with a cargo of phosphate rock, from Charleston, South Carolina, to New York, and having a crew of eight men, stranded about four hundred yards from shore and a half a mile to the north of the Caffey's Inlet Station (Sixth District), North Carolina. The station patrolman was over two miles north of the wreck when he discovered her, which was about twenty minutes after her stranding. He at once fired his red Coston light and ran for the station, where he arrived at 2 o'clock, badly exhausted with the speed of his course. Keeper Austin immediately threw up some rockets, both as a signal of cheer for the ship and to recall the patrolman on the south beat for service with the rest of the crew. The night was so black and thick and the surf so high, that it was judged prudent to operate with the wreck-gun rather than the boat, and this, with the beach apparatus, was accordingly taken, the rescuing party arriving abreast of the wreck by half past 2. Nothing could be seen of her, looking through the misty darkness across the tumbling waste of water but the red and green lights in her rigging, except when at intervals she burned a torch, which made her bulk start out vaguely upon the gloom; but even these appearances were not sufficient in the thick atmosphere to enable the

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crew to determine her distance from shore, and it was therefore deemed useless to fire the wreck-gun, since the shot would necessarily be thrown at random. In the enforced interim of waiting, the keeper left one man with orders to build a fire upon the beach, and hurried back with the remainder of the crew to fetch the surf-boat for use if it should be required. Upon re-arrival the weather had cleared a little overhead, and the vessel could be dimly seen working on the rising tide, over the outer bar to the south, impelled by wind, current, and sea. A little before daybreak she brought up solid on the outer rise of the inner bar and the wreck gun was at once planted and fired, the shot-line falling handsomely in the forward rigging at the first essay. The whip-line was then sent out, followed by the hawser, but the men on board worked so slowly in getting up the lines that the keeper grew impatient, and as day was on the point of breaking, and the coming light would enable the crew to see what they were doing, the surf-boat was launched and made speedy work of the rescue, the eight men on board being brought ashore at the first trip, and most of their baggage at a second. By half past 7 o'clock all hands were at the station, where the rescued men received proper attention; five of them were fed and sheltered at the station for a day and a half, when they left for their homes; the other three remained for eight days.

At 1 o'clock on the day of the rescue the life-saving crew again went out in the surf-boat, taking with them the schooner's mate, and made an effort to recover the shot line, which had been left attached on board, and furl the vessel's spanker, which was flying loose, but were baffled by the strong current, which made it impossible, in the absence of assistance on deck, to hold the boat near the hull, or to get over her sides. The effort was successfully renewed later (January 12), when the water was low and the surf had abated, and some provisions were brought away, the shot line being found irrecoverable, so snarled up had it become with everything near it. The vessel and cargo proved a total loss.

Two patrolmen from the two stations on either side of Caffey's Inlet, not meeting the patrols therefrom, pushed on to see what was the matter, and finding them at the wreck turned in and rendered good service. The colored cook of the Caffey's Inlet Station, Appollus Owens, also volunteered, and helped all he could.

January 9.—At half past 8 in the morning the schooner Ellen, of Galveston, Texas, bound with a load of lumber from Calcasieu, Louisiana, to Corpus Christi, Texas, and having a crew of three men, stranded on the bar in attempting to go out of Pass Cavallo, where she had been compelled to put in by stress of weather before high tide. The accident took place a mile and a half from shore and about two miles from the Saluria Station (Eighth District), Texas. In response to the signal of distress at once set by the schooner, the life-saving crew promptly launched the surf-boat and went out to her. They found her heavily striking on the bar and leaking, and several of the men immediately fell to at the pumps, which was all that could be done under the circumstances. At the request of the master of the vessel the station crew remained on board until the rising tide floated her off, which was between 10 and 11 o'clock in the forenoon. The damage she sustained proved slight, and soon after she continued her voyage.

January 9.—At about half past 1 o'clock in the afternoon the lookout at the Louisville station (Ninth District), Louisville, Kentucky, reported an unusual excitement near the Cincinnati Mail line wharf-boat, a short distance above the station. A boat was immediately

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launched, and upon reaching the spot the crew ascertained that an intoxicated man had fallen overboard from the Louisville and Cincinnati mail steamer Ben Franklin and been rescued by one of the crew of that steamer, and was then lying on the wharf-boat. The keeper, finding the man shivering in his wet garments and suffering from an attack of *mania a potu*, at once conveyed him to the station, where, the case being a desperate one, he was kept and properly treated until his recovery, which took place within a few days, when he left for his home in Baltimore, Maryland.

January 10.—Good service was rendered on the stormy morning of this date by keeper Marcus M. Pierce and the crew of the Orleans Station (Second District), Massachusetts, upon the occasion of the wreck of the bark Friedericke, of Stettin, Germany, bound from the German port of Pillau to Portland, Maine, with a cargo of rags, and having on board a crew of eleven men. A heavy east-northeast gale was prevailing, accompanied by a blinding snow-storm, and a tremendous sea, nearly at flood, was breaking all over the beach and crashing against the steep bank, twenty-five or thirty feet high, at its back. The weather was so bad that day patrols had been ordered, and two of the station crew were out on this duty. At half past 10 o'clock in the forenoon a member of the crew happened out and saw the vessel plunging and driving shoreward through the surf, about five hundred yards south of the station. He at once gave the alarm and the keeper ran from the station to an eminence near by in order to get the exact position of the bark. She had stranded seventy-five yards from shore, and the keeper could faintly see through the immense whirl of the snow men running around her decks, as he expressed it, "like wild," and hear their shrieks and cries for help through the roar of the surf. He only paused long enough to telegraph them by energetic signs that assistance was coming, and then ran back to the station. The boat-room doors had meanwhile been opened by the crew, and the hauling force being short, owing to the absence of the two on patrol, the keeper threw himself among the men at the thills of the mortar cart, shouting "forward," and the start was made for the wreck. As the beach was completely flooded by the raging surf, the station men were compelled to make their road over the rough sand-swales back of the bank. The hauling here was terrible, the way being hummocked by the innumerable hillocks, and further obstructed by deep snow-drifts. Very often the wheels of the heavily-loaded mortar-cart would become chocked by ridges of frozen sand six inches high, forced up by the tires, in the effort to haul the cart over which the tugging and straining group of men would slip on the snowy surface, and fall heavily on their knees, borne down also by the weight of the load they were dragging. These labors and hardships were meanwhile exasperated by anxiety for the sailors on board the bark, whom they could no longer be seen by or see, the road they had been compelled to take below the slope of the bank having put the vessel out of sight. Their progress was necessarily slow, and in dread of some harm befalling the sailors in this interim of disappearance, or of these men undertaking in their apparent desertion the desperate folly of trying to effect a landing in the ship's boat, the keeper was sorely tempted to lighten the load by taking out the hawser and hauling lines, being only deterred by the consideration that the ropes would be seriously impaired for use if taken from under the covering of tarpaulin and exposed to the snow and to the salt spray which was flying copiously over the bank. All toils end, and after nearly an hour's stern labor the men came with their burden to the edge of the bank abreast

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of the bark. The scene was wildly picturesque. The sailors appeared to have lost their terror and stood huddled together on the deck, beaten by the heavy spray, which was flying all over the decks, and by which, in fact, they were drenched to the skin. All around the vessel was a rabble of white breakers, lashing the hull with furious activity. Not a moment was lost by the life-saving crew in preparing for the rescue. The men sprang to their respective tasks as described in the manual of beach operations, and in a few minutes the wreck-gun was fired and the shot-line flew across the end of the foreyard and jib-boom. Some delay ensued in getting hold of the line, the sailors being half crippled with wet and cold, but at length one of the mates got it with considerable difficulty and brought it on deck in the lee of the forward house, where there was good footing. The hauling was now entered upon with energy, the whip-line and hawser were soon set up and the breeches-buoy rigged on, and within half an hour from the time of the station crew's arrival the eleven men were safely landed, having been brought in one by one across the tumbling field of breakers. The two men out on day watch arrived just about the commencement of operations and took their part in the work of the rescue.

The captain of the bark and his crew were taken to the station, furnished with dry clothing and warm food, and made comfortable. They had been eighty-five days at sea, and sadly short of provisions. They remained three days at the station, when the keeper procured them free passes over the Old Colony Railroad, and they left for Boston. The cargo of the bark was saved in a damaged condition. The vessel was lost.

January 10.—Shortly before 6 o'clock in the morning, during a furious northeast snow storm, the mate of the steamer George W. Danielson, of Providence, Rhode Island, plying between Block Island, Newport, and Providence, arrived in great haste at the New Shoreham Station (Third District), Block Island, and requested the assistance of the life-saving crew in preventing damage to that vessel, which was then lying at the wharf in the harbor, about two hundred yards distant. She had parted her moorings and was in a very dangerous situation, pounding heavily against the wharf, her crew of seven men being unable to haul her to a safe berth without assistance. The life-saving crew accompanied the mate on board, and after an hour or two of hard work succeeded in hauling the vessel clear of the wharf to a place where she could ride out the gale in safety.

January 10.—While the crew of the New Shoreham Station were engaged on board the steamer Danielson, four fishing sloops, namely, the Nellie B., the Snowy Daisy, the Connecticut, and the Bob, dragged against the wharf, and were also in danger of destruction. The owners of these vessels being ashore, at their homes, the life-saving crew, as soon as they got the steamer safe, went to work and hauled them out into the harbor, one by one, and moored them where they would be safe from the storm. The Bob was in the worst situation, and would very soon have sunk but for the timely arrival of the station crew. After that the men helped haul up some fifteen or twenty row-boats which were lying on the shore, in order to save them, the tide being very high.

January 10.—The schooner Maggie Cummings, of Boston, Massachusetts, having a crew of four men, bound from Providence to New York, with a cargo of empty oil barrels, stranded during a blinding snow-storm at 2 o'clock in the morning, on the north shore of Long Island, about a mile and a half to the eastward of the Eaton's Neck Station (Third District), Long Island. She was discovered twenty min-

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utes later by the two patrolmen from the station. As the vessel had been cast well up on the beach by the high sea, and the tide was then leaving her, the two men found but little difficulty in assisting all hands ashore by means of a plank, without having to go to the station for the boat or other appliances. The surfmen conducted them direct to the station, where they were made as comfortable as possible, and as soon as it was daylight the life-saving crew went on board and got their effects. On the next day the owner of the schooner arrived and preparations were made by the life-saving crew toward getting her off. An anchor was carried out with the schooner's hawser attached, but the latter proving too short the station hawser was substituted. The vessel had driven so high up that it was necessary to dig the sand away on the outside before they could commence heaving. This had to be done five different times, as the sea would wash the sand back each time a channel was dug. At last, after several days of hard work they succeeded, on January 26, in heaving her safely afloat, the labor being vastly increased by their having to haul the vessel a distance of several hundred feet through a field of drift ice which had been lodged against the shore by the prevailing northerly winds. A passing tug soon afterwards took charge of the vessel and towed her to port. During the time the schooner lay ashore the crew were sheltered and took their meals at the station, the latter, as well as a supply of provisions and water sufficient to last them to port, being paid for by the captain.

January 10.—The three-masted schooner Mabel Thomas, of New Haven, Connecticut, with a crew of seven men, bound from Newburyport, Massachusetts, to Baltimore, Maryland, in ballast, stranded off Ocean Grove, coast of New Jersey, about three-quarters of a mile north of the Shark River Station (Fourth District), at 6 o'clock in the morning, during a northeasterly gale and thick snow-storm. As it was high water and there was a very rough sea, the schooner went so well up on the beach that the ebb tide left her almost dry. She was discovered by the patrol at 7 o'clock, and half an hour later the life-saving crew were on the ground assisting the people ashore with the aid of a line thrown from the vessel, there being no need of any of the station appliances. The men were sheltered at the station until the 13th and left for New York. The schooner became a total wreck, although the Coast Wrecking Company made strenuous exertions to save her.

January 10.—The three-masted schooner Sallie W. Kay, of Somers Point, New Jersey, bound with a cargo of coal from Baltimore to Boston, went ashore at 6 o'clock in the morning in a heavy snow-storm, five and a half miles north of the Ocean City Station (Fifth District), Maryland. Six of the seven men on board were saved by the life-saving crew. For full particulars see page 35.

January 11.—The crew of the Manomet Point Station (Second District), coast of Massachusetts, recovered from the surf some thirty-five empty oil barrels which had been cast ashore. The property was duly advertised in the press with a view of finding the owner.

January 11.—The schooner Margaret A. Amelia, of Somers Point, New Jersey, with a crew of three men, bound from Haverstraw, New York, to Atlantic City, New Jersey, with a cargo of brick, which had put into Barnegat Bay a few days previous for a harbor, on her way down the coast was caught by a large field of ice in motion with the ebb tide, parted her cable and stranded on the south side of Barnegat Inlet, about a quarter of a mile northeast of the Barnegat Station (Fourth District). The accident occurred between 4 and 5 o'clock in the afternoon, and was wit-

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nessed by the life-saving crew, who at once put off in their boat to render assistance. The life-saving crew tried their best to get her off on the flood tide that night, but the sea being very rough the schooner bilged and filled with water, thus for the time baffling their efforts. It was near midnight when they suspended operations, all three of the men belonging to the schooner going to the station with them for shelter. A few days later (19th), at 7 in the morning, the life-saving crew again boarded the vessel, upon the return of the captain who had been home, removed her cargo, pumped and bailed her out, planted her anchors in deep water, and at full tide hove her afloat and took her back to the anchorage inside the inlet, whence she was afterwards towed up the bay for repairs. It should be mentioned that when the captain and his men went home, soon after the accident, they walked down the beach to Little Egg Harbor Inlet, and were there assisted across the bay to Leed's Point by the crew of the Little Egg Station.

January 11.—At 3 o'clock in the afternoon, the sea being smooth, but full of dangerously drifting ice, the sloop Mittie, of New York, out on a fishing trip on the New Jersey coast, with three men on board, was so dragged by the moving ice-pack as to part her cable, and to prevent her being swept out to sea the captain ran her ashore on the south side of Absecom Inlet, half a mile from the Atlantic City Station (Fourth District), New Jersey. The life-saving crew were on hand immediately, finding the vessel about twenty-five yards from the beach, but as the ice was running very badly, tumbling and piling along through the surf in great masses, it was impracticable to launch the surf-boat until the slack of the tide. The keeper accordingly hailed the captain and informed him that he would be assisted by the crew when the tide slackened. An hour and three-quarters later the slack came, and the boat was launched and worked cautiously, not without danger and difficulty, through the ice-drifts to the sloop. An anchor was then run out from the vessel, and by 6 o'clock she was hove off without damage and piloted to a safe harbor.

January 11.—At 11 o'clock at night the north patrol from the Green Run Inlet Station (Fifth District), coast of Maryland, sighted a schooner steering too close in to the beach. He at once flashed a Coston signal to her, and the vessel thus warned hauled further off and escaped the danger she was in of running ashore.

January 12.—At about 3 o'clock in the afternoon the sloop Mary Ella, of Camden, New Jersey, which had been laid up at Somers Point, New Jersey, and had been torn from her moorings by the ice when it broke up, drifted ashore on the north bar of Great Egg Harbor Inlet, two miles northeast of the Ocean City Station (Fourth District). The life-saving crew went out to her immediately in the surf-boat and found no one on board. At floodtide they got her off the bar and worked her up through the floating ice to a safe harbor. About dark they discovered her captain and one of his men pushing about among the ice in a small boat on the search for the sloop, got them on board, and took them to her at her anchorage.

January 12.—The three-masted schooner Elizabeth M. Buehler, of Philadelphia, Pennsylvania, with a crew of eight men, bound from Baltimore, Maryland, to Harlem, New York, with a cargo of coal, stranded on the coast of Maryland at 2 o'clock in the morning, about three and a half miles north of the Green Run Inlet Station (Fifth District). She was discovered after she struck by the patrol, who made signal that she was seen, and then hurried to the station and reported to the keeper. The sea being very rough, with the wind and current

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against them, it became necessary for the life-saving crew to haul the boat to the scene of the wreck on its carriage. This, owing to the great distance and the fact that snow had fallen for two days previous, consumed much time, and it was fully 6 o'clock when the life-savers reached the vessel. While on the way they discovered a second vessel ashore about three-quarters of a mile further north. This nerved the gallant fellows to almost superhuman efforts, and as quickly as possible they ran their boat down abreast of the Buehler and went on board. The sailors were very anxious to get ashore, as the vessel had bilged and had nine feet of water in her. It was altogether unsafe, on account of the heavy surf, to land them all at once, so two trips were made with the surf-boat, four men with their baggage being landed each time. They were at once dispatched to the station, while the life-saving crew lifted their boat into its carriage again and pressed on to the second wreck, an account of which is subjoined. The Buehler with her cargo became a total loss.

January 12.—It was about 7 o'clock when the crew of the Green Run Inlet Station landed the men from the Elizabeth M. Buehler, and they at once set out for the other wreck which was reached in about half an hour (7.30 A. M.). She was the three-masted schooner Julia Grace, of Halifax, Nova Scotia, with a crew of seven men, bound from Bon-Air, West Indies, to New York, with a cargo of salt. She had stranded at 3 o'clock in the morning, about an hour after the Buehler. Two trips were also made by the life-saving crew in this case, three men being brought ashore first, and the remaining four on the second trip, each man having his baggage in the boat with him. It was all done so expeditiously that by half past 8 the surf-boat was again mounted on its carriage and the life-saving crew were *en route* back to their station, where they arrived with the rescued men at 11 o'clock. This vessel also with her cargo became a total loss. The two crews, numbering fifteen men in all, were compelled to remain at the station for six days, until transportation could be procured, the frozen condition of the bay, and the deep snow on the beach, preventing them from getting away sooner. With reference to these and other wrecks, which occurred in that vicinity during the month of January, see testimonial following the account of the rescue of the crew of the Spanish steamer Alpin, on January 20.

January 12.—At a little before 11 o'clock in the forenoon two of the surfmen belonging to the Watchapreague Station (Fifth District), on the south end of Cedar Island, Virginia, who had been dispatched to the main-land for supplies, returned in haste to the station and reported a large steamer ashore on the south end of Parramore's Island, near Little Machipongo Inlet, about eight miles to the southward of the station. The vessel could not be seen from the roof of the house nor from any part of Cedar Island on account of intervening woods on Parramore's Island. The surf-boat was at once launched, and the life-saving crew started down to the vessel by the inside passage, and out through Little Machipongo Inlet, the route taken, which was the best and most expeditious, involving a pull of about eight and a half miles. They reached the steamer at 2 o'clock in the afternoon, and found her to be the Egypt, of Newcastle, England, with a crew of twenty-four men, from Charleston, South Carolina, for Bremen, with a cargo of cotton. She was making for Newport News, Virginia, for coal, and had struck the beach in the afternoon of the day previous (11th) during a thick snow-storm. As the vessel lay easy and the weather was fine, the captain declined with thanks the keeper's offer of assistance, he having already sent a request to Norfolk for the aid of a wrecking company. After arranging, there-

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fore, with the captain to signal by gun or rocket in case he should need their aid, the life-saving crew returned to the station, pretty well fatigued after the long pull of seventeen miles, out and back. The Baker Salvage Company arrived the next day (13th) with lighters and the proper appliances and made contract to get the steamer off. The keeper, however, maintained a close watch on the condition of the vessel each day, by either visiting her himself or sending members of his crew, so as to be able to render assistance, if necessary, until she was safely floated off, without material damage, on the 21st, ten days after she struck. The wrecking company were compelled to remove about nine hundred bales of the cotton before the steamer was sufficiently lightened to haul her off.

January 13.—The schooner D. M. Anthony, of Taunton, Massachusetts, bound, with a general cargo, from Boston to Philadelphia, and having a crew of seven men, stranded at half past 4 in the morning on the north bar of Hereford Inlet, two miles from shore and the same distance east of the Hereford Inlet Station (Fourth District), New Jersey. An hour later she was discovered by the station patrol, and the surf-boat was instantly launched and came up to her at about half past 6. The life-saving crew boarded her, ran out a kedge anchor, and helped her sailors to heave on the hawser until high tide, but failed to get her afloat. The next day (January 14) they again boarded her and worked at her pumps until sunset. On the day following (January 15) a wrecking company arrived, and at 8 o'clock in the morning the life-saving crew again boarded the schooner, assisted in throwing over the cargo, and helped the wreckers to heave the vessel off the bar, which was accomplished by 2 o'clock in the afternoon. The master of the schooner, in his official report of the disaster, observes: "The life-saving crew are entitled to all praise for prompt and valuable assistance."

The crew of a neighboring station (Tatham's) also boarded the vessel from a distance of four miles, but returned, their assistance not being needed.

January 13.—At about half past 1 o'clock in the afternoon a launch belonging to the Five Fathom Bank Light Ship, with three men on board, got stuck fast in the drift ice two hundred and fifty yards from shore, a mile south-southwest of the Turtle Gut Station (Fourth District), New Jersey. The life-saving crew at once got a horse and wagon, loaded up with the wreck-gun, shot-line, and hawser, and were abreast of the boat in a few minutes. Having shot a line across her, and by this means got the hawser aboard, the latter was attached to the wagon, and the horse, with the aid of the crew, dragged the boat by main force within forty yards of the beach. The boat had in tow a small bateau, used for service in shallow water, and, making fast to this the slack of the hawser, the three men got in and were hauled ashore over the ice by the life-saving crew. Later, at high tide, the heavier boat lifted with the sea, and was easily drawn ashore, the main body of the drift ice floating away. The three liberated men remained all night at the station.

The next day (January 14) the life-saving crew assembled at 7 o'clock in the morning, rolled the boat down to low-water mark, and when she floated on the incoming tide, took her into Cold Spring Inlet and made her fast in a safe place after four hours' effort.

January 13.—A vessel in danger of running onto Ship Shoal, off Chincoteague Inlet, Virginia, was warned in time to change her course and escape, by one of the patrolmen from the Assateague Beach Station (Fifth District), who flashed a Coston light as soon as he discovered her situation.

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January 13.—As the captain of the schooner Eclipse, of San Francisco, lying in Humboldt Bay, California, was on his way in his yawl to visit the schooner Mary and Ida, anchored a short distance to windward of his own vessel, the main sheet got jammed as he was tacking the boat and the wind being fresh she capsized. Fortunately the accident was witnessed by one of the crew of the Humboldt Bay Station (Twelfth District), nearly half a mile distant, and as quickly as possible the keeper, and two of his men dashed off in a boat to the relief of the captain, who had managed to cling to the bottom of the yawl and in five minutes they had him safely in their boat, and, with the capsized craft in tow, took him back to his vessel.

January 14.—Just before midnight, as the south patrol of the Chatham Station (Second District), Cape Cod, Massachusetts, was returning over his beat towards the station, the weather being dark and stormy, he discovered the running lights of a vessel rapidly approaching the bar, and a moment or two later saw the vessel herself. Knowing that if she kept on she would soon be ashore, he flashed his Coston signal to her and she at once wore round and escaped disaster.

January 15.—The brig Stanley, of and from Halifax, Nova Scotia, for New York, with a cargo of plaster, encountered heavy adverse winds on the passage, and after getting as far as Cape Cod was driven back to the vicinity of Mount Desert Island, Maine. She was sighted by the Little Cranberry Island life-saving crew (First District) the night of the 14th and as she appeared to act strangely, alternately luffing to the wind and squaring before it, and did not respond to the signal made from the station at daylight (15th), it was decided to board her, the men suspecting she needed assistance. Their surmises were correct, it being learned upon going on board that she had sprung a leak during the gale, although a new vessel, and that her crew, eleven men all told, were almost worn out from constant labor at the pumps and consequent loss of rest for four days and nights. This being the condition of affairs, and as the captain wished to make a harbor, the life-saving crew took charge, assuming for the nonce the duties of the seamen, worked the brig safely into Cranberry Island Harbor, brought her to anchor, and made everything snug, for which her officers and crew were extremely grateful.

January 15.—About half past 2 o'clock in the afternoon, the schooner Alpha, of Astoria, Oregon, from Tillamook Bay for Portland, with a cargo of potatoes and salmon, and having on board a crew of four men and eight passengers, in attempting to enter the Columbia River by the north channel, lost the wind and was swept by the strong current and high sea into the breakers on Peacock Spit, one mile southwest from Cape Disappointment Station (Twelfth District), Washington Territory, the crew taking refuge in the rigging and the passengers in the cabin. The lifeboat was immediately launched and went to her assistance, but as she drew only four feet of water she passed safely through the breakers and over the spit without striking. The surfmen then got a line to her and towed her clear of the shoals into deep water, whence she could shape her course in safety.

January 16.—The sloop Rio Grande, of Perth Amboy, New Jersey, with a crew of four men, bound from Little Egg Harbor for New York with a cargo of clams, went ashore at Wreck Pond Inlet, coast of New Jersey, at half past 1 in the afternoon, during a northeast snow-storm, the weather being so thick that the captain mistook the locality for Squan Inlet, where he intended running for shelter. She lay almost midway between the stations at Spring Lake and Squan Beach (Fourth

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District), and both crews hurried to her assistance and landed the four men. Everything movable in the vessel, including her cargo, was then taken ashore to lighten her, and after carrying out anchors they hove her well clear of the surf, and on the night tide floated her into Wreck Pond, where she would be safe until the storm abated, the life-saving crews getting back to their respective stations about 2 o'clock the next morning. The following is an extract from the captain's report to the collector of customs at Perth Amboy:

"Able assistance was rendered the vessel in her distress by Capts. Henry Howland and Frank Longstreet, of Life-Saving Stations Nos. 8 and 9, and their respective crews, who took off the crew in a life-boat.

"J. W. FOSTER,
"*Owner and Master.*"

January 16.—Twice during the night the patrol of the Assateague Beach Station (Fifth District), Virginia, burned red Coston lights to warn vessels running too near the shoals.

January 16.—At 1 o'clock in the afternoon the crew of the False Cape Station (Sixth District), coast of Virginia, sighted a large steamer aground on an outlying shoal about a mile and a half from land, east-northeast of the station, the weather at the time being quite stormy from the northeast. As the steamer made no reply to the signals hoisted by the keeper, the life-saving crew put off in their boat to offer assistance. She proved to be the Lamperts, of Newcastle, England, from Benisooef, Egypt, for Baltimore, Maryland, with a cargo of iron ore. The captain stated that he had been unable to make out the station signals on account of the fog, hence his failure to reply. He was in need of no assistance beyond information as to the extent and direction of the shoal upon which the vessel had struck, it not being laid down on his chart. The keeper gave him what information he could without going on board, and then pulled off to sound for the best water. While he was thus engaged the steamer succeeded in backing off clear of the shoal and proceeded on her course, apparently without damage. She lay aground for about two hours.

January 16.—At noon a brigantine, with her signal set for a pilot, was seen from the San Luis Station (Eighth District), Texas, standing in for the surf known as the South Breakers, at San Luis Pass. The keeper immediately signaled her by the flags to keep off shore, and was obeyed. The surf-boat was then launched and pulled alongside. She proved to be the Kajaran, of Christiansand, Norway, bound from Rio Janeiro to Galveston with a cargo of coffee. The keeper instructed her captain as to his whereabouts and course, and she went on her way. The surf-boat got back to the station by 3 in the afternoon.

January 17.—At 7 o'clock in the evening the north patrol from the Indian River Inlet Station (Fifth District), coast of Delaware, sighted a small vessel standing in towards the beach, and so close that she was in danger of striking the bar. He at once flashed a Coston signal to her, and she went off on the other tack.

January 18.—During the night one of the patrols from the Spring Lake Station (Fourth District), coast of New Jersey, sighted a steamer standing directly towards the beach. He immediately struck off a Coston signal to warn her of danger. It was too late, for she grounded on the bar while the signal was yet burning. She lay there but fifteen or twenty minutes, however, for before he could summon assistance she backed off and was safe.

January 18.—The ship Fred. E. Scammell, of Parrsboro, Nova Scotia,

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bound from Antwerp to New York with a cargo of iron and empty barrels, and having a crew of seventeen men, stranded at midnight in a thick fog on Brigantine Shoals, three miles from shore and five miles south of Brigantine Station (Fourth District), New Jersey. The tide was at half flood and the sea rough. The density of the fog and the distance of the vessel from shore prevented her discovery by the station patrols until toward morning, when the fog had thinned and the ship was burning red lights. As she could not be seen at all when she had ceased to burn the lights, it was judged best not to attempt to go out to her until daybreak. At 5 o'clock the surf boat was launched, getting through the breakers at the first trial, and by 6 o'clock reached the ship, taking in a sea alongside which partly filled her. Upon boarding the vessel and consulting with her officers it was decided that the station crew should land the mate at Atlantic City, to enable him to send telegrams to the owners and summon the aid of a wrecking company. The crew afterwards conveyed the mate back to the ship and staid by her until the arrival of the wreckers at half past 4 in the afternoon, when they returned to the station, and as the ship lay easy and was in charge of the wrecking company, they did not go out to her again for the next two days. On Sunday, however (January 21), the ship signaled to the station that she was afloat, and that aid was wanted to run out a line. The return signal was made that the crew were coming; the surf-boat was launched in a roaring northwest wind and rowed vigorously for the ship through a rough sea, and by noon came up alongside. Immediately, upon boarding, the crew fell to work at the pumps and at shifting cargo, so as to make room for the steam-pump. There was then four feet of water in the hold, and the life-saving crew hoisted their boat to the davits and kept the pumps going all night. At 8 o'clock in the evening the ship floated away about one hundred and fifty yards and again grounded. At 11 o'clock the next day (January 22), the life-saving crew, much exhausted by their labors and vigils, left the ship, the captain no longer needing their assistance. The day following (January 23) the ship floated off and proceeded to New York in tow.

The crew of the Atlantic City Station also discovered the wreck on the morning of January 18 and boarded her with praiseworthy zeal by 9 o'clock, finding, however, that the Brigantine crew had preceded them by three hours. As the ship did not need any further help they returned to their station.

January 18.—Shortly after 3 o'clock in the morning the north patrol from the Ocean City Station (Fifth District), coast of Maryland, when about a mile from the station, sighted a steamer running too close to the beach and in danger of striking the bar. He immediately flashed a Coston signal to warn her, when she changed her course and went clear.

January 18.—The patrol from the Dam Neck Mills Station (Sixth District), coast of Virginia, observing a bark heading in towards the beach, and apparently almost ashore, burned a Coston light, when she at once hauled off and escaped stranding.

January 20.—A little after 1 o'clock in the morning, the weather being thick and dark, the wind northeast, and the sea high, the steamship Alpin, of Bilbao, Spain, bound, with a general cargo from Inagua, Bahamas, to New York, having three passengers on board, and a crew of twenty-six men, grounded on the outer bar, three hundred yards from shore and three miles north of the Green Run Inlet Station (Fifth District), Maryland. She was discovered within fifteen minutes

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after standing by one of the station patrolmen, who burned two red Coston lights in succession to reassure those on board and then started for the station. The keeper, J. C. Birch, procured an ox-team, the beach being so wet with the overflooding surf that the boat could not be hauled on its carriage by hand, and set out for the wreck. It was found upon arrival that nothing could be done until daybreak, the darkness was so thick and the torrents of surf and sea so prodigious. The dawn soon came, and the crew launched the surf-boat, and after a sturdy struggle managed to get alongside, and took off a lady passenger and the purser. The sea, however, was so violent that the boat could not be kept near the hull, and Keeper Birch was reluctantly compelled to put back to land with the two persons rescued and resort to the beach apparatus as the means for further operations. The team was accordingly dispatched for the wreck-gun and its concomitant appliances. When they arrived a single shot was fired, which threw a line across the steamer's bow and established connection. The gear was then set up and twenty-six persons were speedily landed by the breeches-buoy.

By this time the tide had fallen and the sea become smoother, although the surf was still high. The surf-boat was again launched and went out, returning with a part of the ship company's baggage and the mails. Another trip was made and the remainder of the baggage was brought ashore, together with the captain, who had remained on board to the last.

It was then 3 o'clock in the afternoon, and all of the twenty-nine persons on board the steamship had been rescued. It was 8 o'clock in the evening before the life-saving crew got back with their gear to the station. They were almost broken down with fatigue. As will be seen by previous reports, this was the fourth wreck of the week at which they had rendered service, and for some time past the thick weather had been so incessant that they had been traveling the beach on patrol both night and day. On this particular occasion, having started away from the station in the early morning, they had had nothing to eat since the supper of the night before until late in the evening of their return. The instance is typical of the hardships frequently endured by life-saving crews.

Of the people rescued twenty were succored at the station for a day. The steamship was subsequently pulled off the bar by a salvage company, the life saving crew assisting by getting out her cargo to lighten her.

The gallant services rendered by the life-saving crews at the wrecks of the Alpin, the Wyoming, the Sallie W. Kay, the Julia Grace, and the E. M. Buehler were the occasion of the following testimonial:

"JANUARY 21, 1883.

"To the GENERAL SUPERINTENDENT
"*U. S. Life-Saving Service, Washington, D. C.:*

"We, the undersigned, being present, feel it our duty to report the gallant service rendered by the keepers and crews of Stations 4 and 5 (Ocean City and Green Run Inlet), Fifth Life-Saving District, at the following wrecks in the last two weeks: Schooner Wyoming, Boston, A. G. Bellatly, master, six men, surf-boat; schooner Sallie W. Kay, Philadelphia, L. Smith, master, six men, breeches-buoy—one lost; schooner E. M. Buehler, Philadelphia, J. L. Maloy, master, eight men, surf-boat; schooner Julia Grace, Halifax, Nova Scotia, James Dickson, master seven men, surf-boat; Spanish steamer Alpin, Bilbao, C. Aguirie, master,

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three men surf-boat, twenty-six men breeches-buoy; making a total of fifty-six saved and one lost. It is our firm belief that had it not been for the Life-Saving Service the officers and crews of the above-named vessels would have been lost. Would also respectfully state, while at the stations, the officers and crews were treated with the utmost kindness.

"JAMES L. MALOY, Jr.,
"*Master schooner E. M. Buehler.*
"JAMES L. MALOY,
"*Owner schooner E. M. Buehler.*
"HENRY SEYMOUR,
"*Agent Merritt Coast Wrecking Company of New York.*
"L. G. NORMAN,
"*Purser of the steamship Alpin, of Bilbao.*
"ANDREW D. CAMP,
"*Ship-builder, Philadelphia.*
"A. L. BURTON,
"*Owner of vessels and agent New England Wrecking Company.*
"VAPOR ALPIN,
"1mo *pilot* (*1st mate*), *Modesto de Vergana.*
"C. AGUIRRA,
"*Capt. Vapor Espanol Alpin.*
"ANGEL YDRYAGA,
"2do *pilot* (*2d mate*), *del Vapor Espanol Alpin.*
"GEORGE W. PRIDE, Jr.,
"*Tug owner and agent.*
"A. G. BELLATLY,
"*Master schooner Wyoming.*"

And twenty-two others, residents of Ocean City, Berlin, and other places near the coast.

January 20.—In the forenoon the purser of the Spanish steamship Alpin, who had been landed by the crew of the Green Run Inlet Station, appeared at the Assateague Beach Station (Fifth District), Virginia, with reports for the agents in New York. The keeper telephoned them for him to Chincoteague, whence they were transmitted to the metropolis.

January 21.—The patrol from the Cape Henry Station (Sixth District), coast of Virginia, observing a steamship close in to the beach during a fog, burned Coston lights to warn her of her danger, when she immediately hauled off shore.

January 22.—At 7 o'clock in the evening the west patrol from the Race Point Station (Second District), coast of Massachusetts, saw a steamer running into danger, and by burning a Coston signal gave her timely warning, so that she changed her course, and kept further from the shore.

January 22.—The 8 o'clock patrol northward from the Indian River Inlet Station (Fifth District), coast of Delaware, sighted a sloop standing in towards the beach, and almost ashore. He quickly ignited his Coston signal to warn her of her danger, and she went about and stood off on the other tack just in time to save herself.

January 22.— At half past 4 in the morning a vessel was seen by the patrol of San Luis Station (Eighth District), Texas, running along shore, and heading for San Luis Pass Shoals. The patrolman at once fixed a red Coston light, and the vessel stood off shore.

January 23.—During the night one of the crew of the Assateague

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Beach Station (Fifth District), coast of Virginia, sighted a passing vessel too close to the beach, and by burning a Coston signal warned her of her danger, so that she sheered further off shore.

January 24.—During the second night-watch, the south patrol from the False Cape Station (Sixth District), coast of Virginia, discovered a steamer nearing the beach, and immediately burned a Coston light, whereupon the vessel sheered off and soon disappeared.

January 25.—During the prevalence of a strong southwest gale on the night of the 24th the sloop Minerva, belonging to the military post at Fort Canby, Cape Disappointment, Washington Territory, capsized in the heavy sea and parted her moorings, and was carried out by the ebb tide onto Peacock Spit, off the cape, where she fetched up, full of water. She was discovered early in the morning of the 25th by the patrol from the Cape Disappointment Station (Twelfth District,) and as soon as possible the crew set out in their life-boat to bring her back. Before, however, they reached the spit she worked off, and was swept by the tide and sea across the Middle Sands into the South Channel, where they eventually succeeded in reaching her by making the detour of Sand Island, and after cutting away what was left of her broken spars and stowing her sails in the life-boat, they towed her up to Point Ellice, some miles above the station, and made her fast until an opportunity should present for taking her to her old anchorage, it being impossible to get her back that day. It was 6 o'clock in the evening when they reached the station, after an absence of about ten hours. Two days later (27th), the weather being then favorable, the life-saving crew went up to Point Ellice in a tug and towed the sloop down to the fort.

January 26.—During the night the patrols from the False Cape (Virginia) and Wash Woods (North Carolina) Stations, Sixth District, sighted, just as they met midway between the two stations, a steamer so close in that she appeared to be aground. They immediately flashed their Coston signals preliminary to giving the alarm at their respective stations, when the vessel quickly sheered off and went clear.

January 26.—At about 11 o'clock at night the north patrol from the Wash Woods Station (Sixth District), coast of North Carolina, discovered, close in to the beach, what appeared by her lights to be a large steamer. He at once burned a Coston light, which was answered by another from the vessel, and immediately afterwards she hauled off shore and disappeared.

January 26–30.—The crew, six in number, of the schooner Eugene, which ran into a wreck thirty miles southeast of Ocracoke Inlet on the 22d and sunk, landed in their yawl near Durant's Station (Sixth District), coast of North Carolina, and were succored there for four days, until they were able to secure transportation to their homes.

January 26.—At 8 o'clock in the evening of January 25 the crew of the Brazos Station (Eighth District), Texas, were on the lookout, when the heavy fog then prevailing fell away a little, and they saw a steamer and a sloop coming up toward the bar from the northeast. The fog soon closed in again, and did not lift until 9 o'clock the following morning (January 26), when the keeper discovered the sloop ashore on the southeast point of Padre Island, where she had grounded about an hour after the glimpse had of her the evening before. The surf-boat was at once launched for the vessel, which was found to be the Rescue, of Corpus Christi, Texas, bound from that place in ballast to Point Isabel, Texas, with three passengers on board and a crew of two men. She was found lying in three feet of water and clear of the surf. The station crew rowed to Point Isabel to get the means for her release,

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and, returning, worked on her all the afternoon. The next morning (January 27) they again went out to her at 6 o'clock, and, it being found that she needed certain repairs, engaged in the effort to haul her on shore, assisted by the captain and five men from the schooner Laura Lewis. By 4 o'clock in the afternoon they had her on the beach twenty feet above high-water mark. A few days afterwards she was floated and went on to her port.

January 27.—At half past 8 in the evening three men, named John Duffy, James Murphy, and Cornelius Driscoll, the crew of the sloop Jumbo, of Bath, Maine, which lay frozen in in Duxbury Bay, came to the Gurnet Point Station (Second District), coast of Massachusetts, and requested shelter for the night. They reported that upon returning from Kingston with a supply of provisions and while attempting to board their vessel over the ice they had broken through two or three times and were obliged to give up further efforts to reach her until morning. As the men were wet and cold they were at once provided with dry clothing and a warm supper and made comfortable. Later in the night, as two of the station crew were traversing the beach on patrol, they heard cries of some one on the inner edge of the beach towards the bay, as though in need of help. Hastening in that direction, they found a Mr. Cobb, the storekeeper, from whom the three sailors had purchased their supplies, wandering about with his team entirely at a loss which way to go. It seems he had brought the men down from Kingston to a point opposite their vessel, and that soon after starting upon his return homeward he had lost his way. The surfmen at once put him on the right road and saw him well towards the village, for which he was very thankful. The three sailors were taken care of at the station until morning (28th), and after breakfast were assisted in regaining their vessel.

January 28.—During the second night-watch the patrol from Hereford Inlet Station (Fourth District), coast of New Jersey, discovering a vessel standing into danger, burned a Coston light, when she at once changed her course.

January 28.—The patrol from Paul Gamiel's Hill Station (Sixth District), coast of North Carolina, discovering a vessel close in to the beach, burned a Coston light to warn her off, but, as no notice was taken of it, he immediately burned another, whereupon she tacked and stood out to sea.

January 28.—At a little before 3 o'clock in the afternoon the schooner Palma, of Key West, Florida, with a crew of four men, bound from Pensacola, Florida, to Indianola, Texas, with a cargo of lumber and shingles, stranded on the Middle Ground in Aransas Pass, between Saint Joseph and Mustang Islands, coast of Texas, as she was attempting to enter the Pass. The captain, who was a stranger in that locality, had supposed himself all right and running into Pass Cavallo direct to his destination, whereas the strong southwesterly current, of which he was ignorant, had carried him some forty-odd miles beyond his reckoning. The schooner was quickly boarded by the crew of the Aransas Station (Eighth District), on Mustang Island, who lent ready assistance to her crew, and after two hours' work succeeded in floating her off and took her to a safe anchorage inside the pass, to the great relief of her captain, who was very grateful to them. Although the swell rolling in from seaward caused the vessel to pound quite hard on the shoal she received no damage. She put to sea the next day and ran back to Pass Cavallo, where she got in without mishap. Three days later, however (January 31), she grounded in Matagorda Bay and was boarded by the

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crew of the Saluria Station on Matagorda Island, who offered their assistance. As the captain thought there was no danger, he declined the offer with thanks. She came off at high water in the evening.

January 30.—As the mid-watch patrol southward from the Cape Henlopen Station (Fifth District), coast of Delaware, was traversing his beat he sighted through the fog a schooner close in to the beach within hailing distance, and upon shouting to warn the crew of their danger the captain replied that he had lost his reckoning and was anxious to learn his whereabouts. The patrolman told him where he was, when the schooner's course was at once changed off shore, and she went clear just as the fog shut down very thick again.

January 30.—On this date, at about 1 o'clock in the afternoon, the crew of the Louisville Station (Ninth District), ever on the alert, launched one of their boats and pulled to the rescue of a cow belonging to a trader named Charles Burkhardt, of Louisville, Kentucky, which had broken loose and plunged into the Ohio River. The poor beast was quickly caught by the current and swept towards the wing dam. The men, however, followed in hot pursuit, and overtaking her drew her ashore and delivered her to her owner amid the applauding shouts of a multitude of people who had gathered on the river bank and witnessed their daring feat.

January 31.—At half past 7 in the evening the patrol of the San Luis Station (Eighth District), Texas, saw a vessel's lights too near the shore and warned her off by burning a red Coston light.

February 1.—At about half past 4 in the morning the south patrol from the Hog Island Station (Fifth District), coast of Virginia, discovered a large three-masted schooner heading in towards the beach on the starboard tack, and in danger of running ashore. He instantly swung his lantern, and the schooner seeing it attempted to go about, but mis-stayed. He then burned a Coston signal, and the schooner upon making a second effort succeeded in getting about on the other tack and stood off shore, although not without touching the bottom as she swung round, she was so close in. It was a narrow escape.

February 1.—The patrol from the Creed's Hill Station (Sixth District), coast of North Carolina, during the first watch in the evening, observing a vessel standing into danger burned a Coston light, when she at once sheered off and went clear.

February 1.—On this date the crew of the Creed's Hill Station (Sixth District), coast of North Carolina, assisted in saving a small sloop, the Author, of Hatteras, North Carolina, which had dragged ashore the previous day in Pamlico Sound, about five miles distant from the station, during the prevalence of a fresh northwesterly gale.

February 2.—During the first night-watch the patrol from Townsend's Inlet Station (Fourth District), coast of New Jersey, seeing a vessel heading for the beach burned a Coston light, when she immediately went about and stood off shore.

February 3.—The 8 o'clock (night) patrol, southward from the Papes Island Station (Fifth District), coast of Maryland, sighted a schooner standing in on the wind towards the land and in danger of running onto the bar. He immediately burned a Coston signal, and the vessel taking warning by it tacked and stood off shore.

February 3.—The schooner Carrie Hall Lister, of Wilmington, Delaware, bound, with a cargo of pine wood, from York River, Virginia, to New York, and having a crew of five men, stranded two miles from land, and about the same distance southeast of the Watchapreague Station (Fifth District), Virginia. She had been lying in Watcha-

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preague Inlet, and that morning weighed anchor and steered out from buoy to buoy for the bar, but soon, apparently from her navigator's unacquaintance with the locality, she brought up hard and fast aground on Dawson's Shoal. In half an hour the life-saving crew were alongside in the surf-boat, and lay by until flood tide, when with their assistance she was got afloat, and at half past 11 steered away for New York undamaged.

February 3.—At about 7 o'clock in the morning the man on lookout at the Louisville Station (Ninth District), Louisville, Kentucky, reported that the steamer Raven, of Saint Louis, Missouri, with the barges Crescent City and H. B. Smith in tow, bound from Cincinnati, Ohio, to New Orleans, Louisiana, had, in consequence of the rapid current and strong wind, been unable to fetch the chute on her way down the falls, and was in danger of being carried over the dam. Both the station boats were launched and the crew started at their best speed to the steamer's assistance. While they were getting off, however, the captain, to save the steamer and the lives of himself and crew, cast the barges adrift and was thus enabled to stem the current and get out of danger, the two barges being swept rapidly down the falls. The life-saving crew soon overtook them and by means of lines from their boats endeavored to steer them safely between the piers of the railroad bridge below the dam. One of them, however, the Crescent City, struck one of the piers and was somewhat damaged, but the other fortunately went clear. As soon as the bridge was passed the men managed, after considerable labor to head the barges toward the Indiana shore and then made them fast opposite Clarksville, the captain of the Raven as soon as he knew they were safe dispatching the tow-boat Little Andy Fuller to tow them back to him at Louisville. After they had secured the barges, the station crew were obliged to return by way of the canal along the Kentucky shore, the current in the river was so strong. Captain Parker, of the Raven, acknowleged the assistance as follows:

"Owing to heavy winds the steamer Raven and barges were in danger of going over the dam at Louisville, and it became necessary to cut the two empty barges loose. The Life-Saving Service was promptly on hand and rendered valuable service in landing the barges safely.

"SAMUEL PARKER,
"*Master Steamer Raven.*"

February 4.—The ship Parkfield, of Liverpool, England, bound from Calcutta to New York, with a cargo of jute, saltpeter, and flaxseed, and having on board a crew of twenty-four men, struck, between 2 and 3 o'clock at night, in dense fog, on a shoal about two and a half miles from shore, and the same distance south of Little Egg Station (Fourth District), New Jersey. The tide was at flood, and the sea and surf were wild and dangerous. The fog was so thick that the vessel could not possibly be seen from the shore, but at 10 o'clock in the forenoon the wind blew it aside a little, and Patrolman Cranmer caught sight of her, simultaneously with the crew at the station. A team was immediately procured from the adjacent light-house, and the surf-boat was quickly hauled down to Little Egg Harbor Inlet, another patrolman coming up from his beat just in time to take his place at the oar. The boat was then launched and shot down the inlet out into the heavy sea, until abreast of the ship. Here the terror of the expedition began. The shoals had to be crossed by the surf-boat, a distance of half a mile of raging water, and each moment of the passage was fraught with deadly peril. Every time the boat fell from the seas the shock was

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so violent that the men were raised from their thwarts. The bow oarsman, Lewis Cranmer, fared worst, the jolts on these occasions throwing him high up from his seat, leaving him to fall from such elevations as to put his bones in danger. Several times he came down on his side with such force as to nearly dash the corks out of his life-belt, and but for this protection his ribs would undoubtedly have been broken. After an hour of this sort of travail the ship was reached, and found with seventeen feet of water in her. As it was desirable under the circumstances to land the sailors as quickly as possible, and as the surf-boat could only hold a few at a time, the keeper decided upon the plan of taking with him as many as he could, and let the rest follow his lead closely in the ship's boats, until the outer breakers of the beach were reached, on the margin of which they were to lay, and let him land them through the combers in successive trips of the surf-boat, letting their boats go adrift as fast as emptied. In pursuance of this programme, a compass was borrowed from the ship to enable the surf-boat to steer for the beach through the dense fog, the captain and carpenter with all their baggage were taken on board, and the station crew put back with their convoy following in due order. When about half way from ship and shore, they met the boat of the Little Beach Station on her way to the rescue. The keeper was not in her, having, it appeared, hurt himself severely in the effort to launch. The surfman in charge stated that he had filled the boat in trying to cross the shoals, and had been obliged to regain the channel, and effect a passage to the ship by another way where the water was deeper. He now turned back and followed in the wake of the Little Egg surf-boat. Presently the fog lifted, and the keeper piloting the return, seeing that flood tide had made and that the water in the channel had consequently deepened, changed his original plan of landing, concluding that all the boats could pass in safely through the inlet. Charging them accordingly, to strictly follow his lead, he kept the channel, and soon swept safely with his train into the smooth water of the inlet. As one of the boats could not row very fast, the Little Beach surf-boat took her in tow, and drew her with speed to her haven. Thus the gallant and perilous enterprise of the life-savers ended in saving the entire crew of twenty-four men. The vessel was lost.

The gratitude of the captain for the bold service rendered the ship's company found expression in the following letter, addressed to the station crew:

"NEW YORK, *February* 15, 1883.

"GENTLEMEN: It is quite impossible for me to express in words the thanks which are due to each one of you for your noble self-sacrificing efforts to rescue myself and crew of the ship Parkfield, so lately stranded at Little Egg Harbor on the Jersey coast, and for your kind protection subsequent thereto.

"The very fact that you have such appliances on the coast under your control for saving life, very materially reduces the dangers of our perilous avocation, and doubtless in our case, had it not have been for such appliances in the hands of a fearless crew, guided by a kind Providence, we must surely have met a watery grave.

"Kindly accept the accompanying small sum in memory of our sudden and unexpected visit to your coast, and allow me, in the name of my officers and men, to thank you for your noble rescue.

"WILLIAM ANDERSON,
"*Master of the British ship Parkfield.*

"Capt. JARVIS B. RIDER,
"*And men of the Life-Saving Station No. 23, Tuckerton, New Jersey.*"

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February 5.—During the night one of the crew of the Belport Station (Third District), Long Island, warned a vessel out of danger by swinging his lantern to her. She was running along the beach too closely and would soon have been ashore.

February 6.—At 1 o'clock at night the patrol of the San Luis Station (Eighth District), Texas, saw a schooner close on shore, and made her haul off out of danger by letting off his red Coston signal.

February 6.—At about half past 8 in the morning two steers, on their way to the stock-yard at Louisville, Kentucky, while being landed from the steamer, jumped into the river from the wharf-boat, not far from the Louisville Station (Ninth District), and swam directly towards the falls. The occurrence was quickly discovered by the lookout, and both boats belonging to the station started in pursuit. One of the animals was recaptured before the dam was reached, and towed ashore; the other one, while that was being done, got a good start, and was carried over the dam before he was caught. They were both restored to their owner, who went on his way rejoicing.

February 7.—At 2 o'clock in the afternoon, the small stern-wheel river steamer Edith, of Eureka, California, with a crew of two men, while attempting to pass out of Humboldt Bay on her way down the coast to Eel River, whither she was bound, broke her shaft before she got outside, and when about two miles southeast of the Humboldt Bay Station (Twelfth District), in attempting to come to, to avoid drifting into the breakers on the bar, lost all three of her anchors. The crew of the station, observing she was in trouble, went out in their life-boat as quickly as possible, and remained by her until she could effect temporary repairs to enable her to return to port.

February 8.—At 4 o'clock in the afternoon the keeper of the Moose-a-bec light-house, on Mistake Island, coast of Maine, hoisted signal to the Crumple Island Station (First District), a few miles distant, that there was a vessel in distress in the vicinity of the light-house. The vessel could not be seen from the station, as Wass Island intervened. The boat was therefore launched, and after an hour's pull the life-saving crew found the object of their search ashore on Steel Coat Island, about four miles and a half east-northeast of the station. She proved to be the schooner Elizabeth, with a general cargo, from Boston for Calais, Maine, her home port. She had gone on the rocks the day before (7th) during thick weather, and when the life-saving crew arrived was badly bilged, with the tide ebbing and flowing in her. Her crew of three men had landed on Mistake Island and taken refuge at the light house. As the schooner could not be saved, the life-saving crew conveyed the captain to Jonesport to communicate with the owner, the men then returning to the wreck to take charge until the captain arrived in order to prevent the cargo from being plundered, remaining all night. They afterwards assisted in recovering most of the cargo in a damaged condition, and in stripping the vessel, being engaged in that work for several days. The hull became a total wreck.

February 11.—The schooner Madawaska Maid, of Gloucester, Massachusetts, bound from Eastport, Maine, to Gloucester, Massachusetts, with a cargo of frozen herring, and having on board seven men, one of them a passenger, ran upon East Bunker's Ledge at about 4 o'clock in the morning in a thick snow-storm, a mile and a half from the Little Cranberry Island Station (First District), Maine. The wreck could not be seen from the station precincts on account of woods and other natural obstructions, and the news was brought to the crew between 8 and 9 o'clock in the morning by the son of one of the surfmen who had been

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on a high point of the island. The surf-boat was at once launched and rowed out through a rough sea to the vessel, which was found heeled over broadside to on the ledge, pounding heavily, and the sea breaking over her. One of the crew boarded her with difficulty and found that she was abandoned and already breaking up. He was taken off the jib-boom, and the surf-boat returned. The master of the vessel and his crew had left her shortly after she struck and reached Southwest Harbor. At about 11 o'clock in the forenoon he appeared at the station with three of his men and wanted the keeper to take him out to his vessel. The keeper and his crew subsequently boarded the wreck again, and found that the vessel had been stripped, by a company of wreckers, of everything but the mainsail. He took from one of the wreckers' boats the captain's chest, the quadrant, two cases of liquor, and some boxes of matches, which were put into the surf-boat and brought to the station. The master and his three men remained at the station that night and returned to Southwest Harbor in the morning. The vessel became a total loss.

February 11.—At 10 o'clock in the forenoon, after the clearing off of a thick snow-storm, the crew of the Watch Hill Station (Third District), Rhode Island, were notified that there was a vessel ashore on Fisher's Island at a point about ten miles west-southwest of the station. She could just be seen with the glasses, and the crew put off to her at once in their life-boat, reaching her at noon. She was the schooner Charles L. Mitchell, of Boston, Massachusetts, bound from Portsmouth, New Hampshire, to Philadelphia, Pennsylvania; the captain reporting that she went ashore during the storm at 2 o'clock that morning. Her crew of nine men were in no danger, and as she lay well up on the rocks and partly full of water the captain declined with thanks any assistance from the life-saving crew, who therefore returned to the station, a New London wrecking company having undertaken to try and get her afloat. Although in this case the services of the crew were not required, the facts are mentioned to show the promptness with which long journeys are sometimes undertaken by the crews in their efforts to save life and property.

February 11.—A patrolman of the Cobb's Island Station (Fifth District), Virginia, saw at 7 o'clock in the evening a steamer heading for the shoals in that vicinity. He at once let blaze his red Coston light in warning, and she changed her course and stood away from the shore.

February 12.—The bark Dulcimer, of London, England, with a crew of eleven men, bound from Pernambuco, Brazil, to New York, with a cargo of sugar, was wrecked at half past 5 in the morning on the coast of North Carolina, about a mile and a half south of Durant's Station (Sixth District), near Hatteras Inlet, the disaster being attributed to the foggy weather then prevailing. She was discovered at 6 o'clock by the station patrol and reported to the keeper. As the sea was too rough to use the boat the life-saving crew set out with their beach apparatus, arriving abreast of the bark at half past 6, an hour after she struck. The wreck-gun was placed in position as quickly as possible and fired, the first shot carrying the line over the fore-yard arm. The whip-line and hawser then followed, and after some little delay, occasioned by the strong current, which prevented very rapid work, all hands were safely landed from the bark and conducted to the station, where they were properly cared for. On the following morning (13th) the life-saving crew assisted the captain in recovering some of his personal effects which had been left on board, the vessel then being in the hands of wreckers who were engaged in stripping her. In the afternoon the

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sea became much worse, and word reached the station that four of the wrecking gang, who were on board the bark, needed the help of the life-saving crew in getting ashore. The latter responded to the call without delay, and by using one of the bark's boats soon had the men safe on the beach. The sailors were sheltered at the station for several days and then took passage for Norfolk, the vessel and cargo becoming a total loss.

February 12.—At 2 o'clock in the morning of February 10, the schooner Annie Laura, of Indianola, Texas, with a crew of two men, bound from Constance, Louisiana, to Galveston, Texas, with a cargo of oysters, struck during a thick fog upon the wreck of a sunken steamer in Sabine Pass, coast of Texas, and immediately sunk, the disaster coming upon them so suddenly that before they could secure it their yawl was swept away, and the men were glad to take refuge upon the dome of the steamer's boiler, which projected some feet above the water. The weather continuing thick, the perilous situation of the men was not discovered until the morning of the 12th, when the fog lifted and they were seen and rescued by the crew of the sloop Scandinavian, anchored about a quarter of a mile away, who conducted them to the Sabine Pass Station (Eighth District), four or five miles distant, for shelter. There was no crew on duty at the time, but the keeper housed and fed them for two days, until they were able to leave, and subsequently, at the request of the owner, took charge of the vessel and employed some men to strip her as she lay sunk, the masts, sails, rigging, and ground-tackle being all that was recovered.

February 13.—At 11 o'clock at night (February 12) the schooner Shekinah, of Bridgeton, New Jersey, bound in ballast from New York to Elizabeth City, North Carolina, with a crew of five men, dragged her anchors in a strong north wind and stranded on the southwest end of Cobb's Island, twenty yards from shore and about two hundred yards north of the Cobb's Island Station (Fifth District), Virginia. The keeper immediately ran down to her to see what could be done, and, as it was high water and the vessel was in no immediate danger, he concluded it better to wait until the tide fell before attempting to get her off. Accordingly, at 4 o'clock in the morning (February 13), he and his crew launched the surf-boat, pulled alongside, and, running out an anchor, hove the hawser well taut. At the next high-water the vessel floated off under the strain of the hawser, and swung to her anchors without damage.

February 13.—At half past 6 in the morning one of the surfmen belonging to the Smith's Island Station (Fifth District), coast of Virginia, discovered from the top of Cape Charles light-house, near the station, a schooner ashore on the Middle Ground, Chesapeake Bay, about eight miles distant. The surf-boat was quickly launched and the crew put off to her assistance, but before they could arrive, and when yet about a mile away from her, she floated off and proceeded on her course apparently uninjured.

February 15.—At half past 3 in the morning, during a thick snow-storm, the east patrol from the Race Point Station (Second District), coast of Massachusetts, heard a steamer's whistle in the offing and soon afterwards saw her lights, showing that she was heading directly for the shore. He quickly flashed a Coston signal to warn her, and she immediately reversed her engine and backed off, answering the patrolman's signal by giving two short blasts of her whistle as she went off.

February 16.—At half past 6 in the morning, during the prevalence of one of the densest fogs that had been known on the coast for years,

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the steamship City of Richmond, of and from Liverpool, England, for New York, with four hundred and twenty-five persons on board, all told, passengers and crew, and a valuable cargo, missed the channel on her way into port and grounded on the Outer Middle Ground, off Sandy Hook, about three quarters of a mile from the beach, between the Sandy Hook and Spermaceti Cove Stations (Fourth District), coast of New Jersey. She was discovered by both crews at a little after 7 o'clock, during a temporary lift in the fog, and they both got off as quickly as possible to offer her assistance. The vessel lay easy, however, and was in no particular danger so long as the sea remained smooth. The captain asked them to convey telegrams ashore for the aid of tugs, and one crew he requested in the afternoon to sound around the vessel for the deepest water, which they did. Each crew made two trips to the grounded steamer, but could render no further service than is stated above, a number of tugs arriving in response to the captain's call for assistance, which remained by her until they succeeded in hauling her afloat at 6 o'clock in the evening. She then anchored until the next day at noon, when the fog lifted and enabled her to proceed into port.

February 16.—At 8 o'clock in the evening the barkentine Minnie Hunter, of Boston, Massachusetts, bound, with a cargo of molasses, from Cardenas, Cuba, to the Delaware Breakwater for orders, and having on board ten persons, including the captain and his wife, stranded in rounding Cape Henlopen during a thick fog, a hundred yards from shore and two miles north of the Cape Henlopen Station (Fifth District), Delaware. At 9 o'clock a station patrolman, passing abreast of the vessel, heard a gun from the sea and saw a very dim light out seaward, which looked a long way off, but knowing that he could not see a light at any considerable distance through a dense fog he at once concluded that it must be on a vessel near the shore and therefore aground, and instantly fired his red Coston light and ran back to the station. The keeper lost no time in ordering out the surf-boat, and, harnessing his horse to the boat-carriage, made for a point abreast of the wreck, the surf being so heavy and the fog so thick that a launch near the station was impracticable. As the sand of the beach was hard and smooth, the crew made excellent time in reaching their launching-point, and were on board the vessel by 11 o'clock. They found her pounding and leaking badly, and all hands fell to work on the pumps. At 1 o'clock in the night (February 17), a wrecking tug came out from the harbor to her assistance, and the life-saving crew assisted in getting a line from the wreck to the steamer to aid in running a hawser between the two. The floodtide was running strongly, and the vessel was beating the bottom with great violence. This heavy pounding probably resulted in a sudden opening of her seams, against which the pumps could not avail, for all at once, and before the hawser could be stretched to the tug, she filled with water to the level of the decks. As soon as the tug discovered her condition, she gave up effort and steamed back into harbor. The captain of the barkentine, who had accidentally injured his foot in Cuba, and was in consequence a cripple, asked the keeper if he could then with safety land him and his wife, who was very much frightened. This the keeper engaged to do if the fog lifted, which it did at 3 o'clock in the morning, making the beach dimly visible through the darkness, and surprising the life-saving crew by its nearness. The captain, his wife, and a wrecker, who had come on board from the tug, were now got into the surf-boat. The sailors had decided to remain on the vessel until daylight, and the boat pushed off. The fog shut down thickly after the boat got inside the point of the cape, but here there was smooth water, and a

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landing was effected safely. Later, the sailors came ashore with their effects, in the ship's boats. Seven of the shipwrecked men remained at the station, well cared for, for three days, and one for one day. They were entirely destitute. The vessel was lost.

February 17.—The night patrol from the Spermaceti Cove Station (Fourth District), coast of New Jersey, hearing a steamer approaching the beach in a fog, ran down to the edge of the surf and burned a Coston light, when she reversed her engines and backed off shore.

February 17.—The schooner Enterprise, of Chincoteague, Virginia, bound with a cargo of oysters from that place to New York, with a crew of three men, met with shipwreck at 2 o'clock in the afternoon, a mile and three-quarters southwest by west from the Absecom Station (Fourth District), New Jersey. The station crew saw her about 1 o'clock heading toward the beach, the wind at the time being light, and supposed she had hove up in the wind to turn her sails, but a few minutes later the day watch expressed the apprehension that she would find bottom before long, and after watching her for a couple of minutes longer the keeper ordered the surf boat run out from the station in anticipation of the possible danger. At 2 o'clock the foreboding was realized, the vessel struck a hundred yards from the beach, and immediately filled and sunk, her crew flying up into the rigging. It was high tide at the time and the sea was running rough and heavily, so that only the schooner's masts appeared above the tumbling waters, her hull being entirely submerged. The surf-boat was instantly launched, and within fifty minutes the three sailors had been taken out of the rigging and safely landed. The crew of the Great Egg Station, some four miles distant, also descried the wreck, launched, and pulled to the rescue; but about midway saw the Absecom crew land the sailors, and, beaching their boat, came down on foot to the scene of action. The vessel was lost.

February 17.—At 3 o'clock in the morning the schooner John Mosser, of New York, bound to that place from Rappahannock, Virginia, with a cargo of oysters and a crew of six men, went ashore in a thick fog, one mile from land, and the same distance east of Hereford Inlet Station (Fourth District), New Jersey. The disaster appears to have been due to the schooner's compass being out of order. Owing to the density of the fog, the vessel was not discovered until 9 o'clock in the morning, and only then by a blast of a fog-horn from her decks being heard by the patrol. The sound gave no certainty of a wreck, but the keeper, fearing that a vessel might be on the bar, made ready to launch the surf-boat, when the schooner's crew suddenly appeared at the station. Although there was a heavy sea on, it was low water, and they had succeeded, the schooner being well up on the bar, in reaching the inlet, up which they had come, and landed on the inside. The fog presently lifted somewhat, and the vessel was seen on the south bar, about half a mile away, having pounded and worked along to that distance from her original point of stranding. The life-saving crew at once went out to her in the surf-boat, and did all they could to save her, but were forced to abandon her on the high tide, bringing away with them all the effects of the crew, and also the mainsail and jib. On January 19th and 20th they again boarded the schooner in company with the sailors and saved all the other sails and the rigging. The vessel became a total loss. Her crew were sheltered and succored at the station for six days.

The crew of the adjacent station (Tatham's) also discovered and visited the schooner, but could render no service, having been anticipated by the men of the nearer station.

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February 17.—Soon after dark in the evening the master of the small schooner Frank Pigot, of Elizabeth City, North Carolina, arrived at the Pea Island Station (Sixth District), coast of North Carolina, and requested the assistance of the life-saving crew in getting his vessel afloat. She was loaded with wood from Powell's Point for Pea Island, and had grounded at 6 o'clock on what is known as New Inlet Shoal, in Pamlico Sound, about three miles southwest of the station, the captain being unacquainted with the channel. The life-saving crew turned out at once to the schooner's relief, and soon succeeded in hauling her off the shoal and anchored her in a safe place for the night. The vessel carried but two men, and they could have done nothing without aid from the station.

February 19.—The crew of the Little Cranberry Island Station (First District), coast of Maine, while on their way in the surf-boat to Southwest Harbor, Mount Desert, on business, fell in with two men in a boat who had got caught in the ice and were unable to extricate themselves. The men were assisted in reaching the harbor in safety.

February 20.—One of the night patrols from the Lone Hill Station (Third District), Long Island, saw a large schooner standing close in towards the beach and, by at once burning a Coston signal, succeeded in warning her of her danger so that she wore round and stood off on the other tack. A few moments later and she would have struck the outer bar.

February 20.—At 7 o'clock in the evening, the keeper of the Aransas Station (Eighth District), Texas, learned that a daughter of one of the Aransas Pass pilots was ill, and her condition becoming critical for want of medical assistance. The nearest physician was at Rockport, fifteen miles distant, and the wind and tide being against a sail-boat, the keeper and his men launched the surf-boat, and after over three hours' pull reached Rockport and got the doctor. The friendly master of a steam-tug belonging to the State of Texas, learning the situation, volunteered to tow the party back to Aransas, by which means they made the passage in about two hours, and were spared the labor of rowing. The timely arrival of the physician is reported to have saved the young woman's life.

February 21.—At a quarter past 3 in the morning, during a thick snow-storm, one of the patrols of the Little Cranberry Island Station (First District), coast of Maine, discovered a vessel heading direct for the rocks on the east side of the island (Little Cranberry). He instantly burned a Coston signal, which was seen by the people on board, and, letting fly the main sheet, they squared off just in time to save the vessel from going onto the rocks, where she would, no doubt, have been wrecked but for the warning given.

February 26.—At 8 in the morning the crew of the Crumple Island Station (First District), coast of Maine, sighted a vessel some miles west-northwest of the station, appearing to be aground. The weather was bitterly cold, with the thermometer at zero, and the wind blew a fresh gale from the northwest. The boat was launched, however, and after a hard pull the life-saving crew reached the vessel at noon to find she was not ashore but at anchor near Pot Rock, having got in there by mistake during a thick snow-storm the day before. She was the brig Annie Palmes, of and for Saint John, New Brunswick, in ballast. The captain thanked the crew for going to him, but said he needed no assistance. It was a hard pull for the men and occupied them all day, it being 6 in the evening when the comforting shelter of the station was reached.

February 27.—This date affords an instance of the disheartening con-

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ditions under which life-saving crews sometimes render service which in itself involves the severest labor and no little danger. At 8 o'clock in the morning the crew of the Little Island Station (Sixth District), Virginia, Abel Belanga, keeper, discovered the Italian bark Figogna, of Genoa, bound with a cargo of one thousand tons of iron-ore from Parma, Italy, to Baltimore, Maryland, and having a crew of fourteen men, standinshore under close-reefed topsails. She soon stayed and stood off, but presently came to anchor in six fathoms of water about a mile north of the station and the same distance from shore, and set a signal of distress. It appeared subsequently that she was leaking badly and could not be kept free. The weather at the time was cloudy, and there was a strong northeast wind and a high and turbulent sea and powerful current. Under these circumstances Keeper Belanga judged it better to haul the surf-boat up the beach abreast of the vessel so as to lessen the rowing distance as much as possible. This was done, and the launch was made against a terrible array of breakers, through which the keeper and his men had literally to fight their way. After a hard struggle they got beyond these masses of broken water and encountered the sea proper, where the contest was almost as difficult. The rowing was almost in the teeth of wind, sea, and current, and at times the surf-boat could hardly make any headway. It took an hour and a half of strenuous and exhausting effort to accomplish the mile between the beach and vessel and come up alongside. This travail, however, was but the beginning of troubles. No one on board the bark could speak more than a word or two of English, the life-saving crew, of course, being equally incapable of Italian, and the ship's officers, it may as well be said here, appear, with incredible folly, to have conceived the idea from the start, maintaining it to the last with dogged pertinacity, that the brave men who had rowed out to their assistance under conditions of so much peril and hardship, and all others who subsequently offered aid, were some sort of picaroons or land-sharks, with evil designs upon the vessel, and whom they must therefore treat with hostility. In reply to the hail they contrived to let him know that they wanted a steamer—for what purpose could not be determined—and seemed disposed with this to end all communication. To hold the boat alongside a line was necessary, but this they would neither give nor allow to be taken on board. Finally the keeper got hold of one of the braces of the main-yard, which happened to be adrift, and managed to make the boat hang on. He then made signs that he wanted to come on board, which were met with signs of refusal, the Italians gathering at the bulwarks, shaking their heads and looking savage. The keeper then took a pencil and paper from his pocket and made signs that he wanted to write, and after a little they put the steps over the vessel's port quarter for him to get on board. He found no one who could speak a sentence of intelligible English. He was presently invited by the mate into the cabin, where he beheld the captain sitting on a lounge with his face nearly covered with blood and apparently unable to stand or walk. No explanation of this singular apparition could be obtained, and the keeper set himself to induce the mate to write a telegram to the Italian consul at Baltimore, which he eventually did, and with which the keeper and his crew returned to the shore.

Having dispatched the news that the bark was in distress and needed steam assistance, Keeper Belanga and his men then went out abreast of the vessel, and erected a signal pole for the purpose of communicating with her, but could not get the slightest answer to his signals. Anxious for her safety, the keeper then took the International Code Signal-book, and at noon boarded her again at the cost of another hard row. Arrived

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on deck, he could only find by the use of the signal code, that she was loaded with mineral, and had considerable water in her hold, a burden under which she must soon go down unless something was done to relieve her. The keeper wanted to put his men immediately at the pumps, but this the captain resisted, desiring rather that he should take another telegram ashore for the consul, which was done. At half past 4 in the afternoon, the keeper and his men had another hard row out to the vessel, conveying a dispatch from the consul stating that a steamer of the Baker Salvage Company was on its way to her. They remained on board until after dark, working steadily at the pumps, when they left and returned to the station, having first, with the aid of the signal book, made arrangements with the captain that in case of increasing danger, he should burn flash lights and run the vessel ashore to keep her from sinking. The hard day's work ended by the keeper sitting up all night to keep watch upon her from the station, the moonlight making her plainly visible. The patrols were also charged to maintain similar vigilance, and all hands to be ready to launch the surf-boat at a moment's notice, and rescue the sailors in the event of catastrophe.

At 4 o'clock in the morning of the next day (February 28), the keeper saw that the vessel was under way, and apparently standing out to sea. Daybreak, however, which soon came, revealed the fact that she had become unmanageable, and the life-saving crew at once launched the surf-boat and boarded her. They found her with her decks nearly level with the sea, and the water in the hold increased. All hands at once fell to at the pumps. While they were working to free her, a three-masted schooner, the S. R. Graham, of Philadelphia, appeared and sent a boat on board, but finding the bark in good hands they returned to the schooner, which at once sailed away, the captain promising to hurry up the salvage steamer if he met her. The water-logged condition of the bark made her helm useless, and the keeper undertook to steer her ashore by her sails, while his men stuck to the pumps. The task was well nigh maddening. The working of the ship was of course in the hands of the Italian sailors, and everything the keeper would do they would undo, until at length, worn out with labor and thoroughly disgusted, he and his men gave up endeavoring to sail the ship, and devoted themselves doggedly to the effort to keep her afloat with the pumps until assistance should arrive. All this time, with the water nearly up to her decks, she was drifting out to sea.

At about 10 o'clock the revenue steamer Hamilton hove in sight, and the keeper at once let her captain know the condition of the Italian bark, and her need of being towed ashore. A boat was soon lowered from the cutter and a young officer came on board, who proceeded to get the vessel ready for towing. The Italian captain presently fell afoul of him, and though neither could understand each other's words, it became evident that the captain wanted to know by what authority the other was presuming to help him, some preposterous idea of heavy charges appearing to be involved in his questionings. To reassure him the officer opened his overcoat and showed his uniform, but the action seemed merely to fill this stupid man with the notion that his vessel was going to be taken from him by force.

Without being aware of the effect he had produced, the young officer left to run the line for towing, and meanwhile the captain of the bark stopped the life-saving crew from pumping, which alone kept the vessel afloat, and would not let them touch the brakes. The revenue steamer's boat soon came back in charge of another officer who walked aft to confer with the captain while the boat's crew and the station men hauled

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on board the tow-line, which the keeper himself made fast to the bitts. Presently, however, the officer from the steamer came back and ordered the hawser cast off, the captain having obstinately refused assistance under the idea that it involved the capture of his vessel. At the request of the officer, Keeper Belanga went alongside the revenue steamer, and recounted all that he had done to her commander, who remarked that he had never met with such a case before, and told the keeper he had a bad and thankless job of it, and that he could do nothing. The keeper replied that he should stay by the vessel to the last, and endeavor to save the lives of those on board. He then returned to the bark, the revenue steamer kindly towing him to windward of her and then leaving to aid a dismasted schooner then in sight. Arriving on board, he sounded and found the water gaining in the hold, and was allowed by the captain to let his men resume their desperate labor at the pumps. It was then noon. Shortly afterward two pilot-boats appeared, and their officers came on board and tried, without success, to effect some communication with the Italian captain. They then brought on board a man who could speak French, a language the captain understood, but soon found that he repelled all assistance and left in deep disgust, having asked the life-saving crew to dine with them, an offer gladly accepted, as the men were half starved, having had nothing to eat since the evening before, besides being worn out with their toils and anxieties in behalf of the thankless and obdurate company of the bark. The only result of the colloquy with the French interpreter was to bring out the fact that the captain had held the keeper aloof on the suspicion that he was an insurance agent. It would seem that he had become partially disabused of this notion since he had permitted the life-saving crew to continue their work at the pumps.

The effort to lighten the vessel of her load of water was soon, however, seen to be hopeless. The wind was blowing stiff from the west-southwest, the station on the beach was nearly out of sight, and the bark was helplessly drifting out to sea, ten miles already from shore, and slowly going down. At half past 1, as the vessel was so low that the water could swash over her bulwarks and lay in a pool half leg deep amidships, it was clear that she could not float much longer, and the keeper stopped his men at the pumps and ordered them for their lives into the surf-boat alongside. They obeyed, and he then begged the captain and crew to join them. The entreaty, although prolonged for some time, produced not the least effect, but finally, at a quarter to 2 o'clock, the vessel began to pitch by the bow, and this frightened the sailors and started them to leave. Even then, however, they could not be induced to come into the surf-boat, but got into the ship's boats, three in number, which lay astern loaded with baggage, and cast off. The captain and mate would not budge from the flooded decks, despite the alarmed adjurations of the life-saving crew. The mate seemed anxious and hesitant, while the captain remained perched up on the quarter-deck in a sort of stupor, with the air of one grieving for the loss of his vessel. Despite the great danger of remaining in the neighborhood of a sinking ship, the life-saving crew could not bear to leave while there was a chance of saving these strangely obstinate men. It was now ten minutes past 2, and the vessel was settling fast, the rail on each bow forward of her foremast level with the water, which was pouring over on both sides in a solid sheet. The peril of remaining longer by a vessel hanging with her bows down in the sea, submerged already up to her forward rail, and the floods tumbling over her bowsprit, was only too evident, and the keeper reluctantly gave the order to cast off and

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row away. Presently the bark listed a little to port, and it was not until then that the captain and mate, standing aft upon a vessel already poised aslant for her swift descent to the bottom, consented, by gesture, to be taken off. Their insensate delay of course added sharp peril to the surf-boat if she approached the maelstrom the huge hull would make in sinking, and which would be likely to suck her down into the gulf, but the men at once bent to their oars, the surf-boat shot up, received the two Italians, who tumbled in without ceremony over the starboard quarter, and with desperate oar-strokes darted away. They had hardly got beyond the suction of the sinking ship, when, in the graphic language of the keeper, "She made a plunge, bows first, and with a sickening clatter and throb went down." She had sunk in eight fathoms of water, and nothing was visible of her now but her masts and yards standing up from the huge coils of the sea.

The terrible spectacle of the ingulfment was hardly ended when the captain and mate began to clamor and gesticulate to be let out of the surf-boat which had saved them, and put into one of their own boats. Of course, the keeper, knowing the danger of navigating the unquiet sea in common boats, and uneasy already as to the fate of the other sailors when they should come to cope with the surf in trying to effect a landing, made the most vigorous remonstrance sign and gesture could convey. It was all in vain, for the captain and mate ordered up a boat, got in, and immediately headed away, the keeper at first thought, for Baltimore, refusing even to follow the guidance of the surf-boat, which would have been an important help and safeguard in the effort to reach the shore. Seeing that they could do no more for them, the life-saving crew rowed in to their own headquarters, where they arrived safely, much spent by their exertions. Some fluctuation appears to have soon taken place in the rancorous suspicion of the Italians, for before long they shaped their course for the shore, and succeeded in landing without accident abreast of the station. They were at once taken in with their baggage, and made comfortable for the night. "So ended," the brave keeper dejectedly records in his journal, "two days of hard labor for the most unthankful set of people that I ever met with."

The labor, however, did not quite end with the two days. The morning following (March 1) the life-saving crew launched the surf-boat and took a row of ten miles, conveying the mate out to the sunken vessel, the masts and yards of which the agents of the salvage company, arrived too late, were now stripping. The wrecking steamer lay alongside, and the mate made arrangements with her captain for the conveyance of himself and his shipmates to Norfolk. In the afternoon the steamer came up to the station for them, the life-saving crew carried their baggage down to the boat, and at sunset the company left for Norfolk, having received the succor and protection of the station for one night and one day.

It appears that the conduct of the Italian captain, resulting in the altogether unnecessary loss of his vessel, was made known to his Government, and that it became the subject of official inquiry, with what result is not known.

Keeper Barco and the crew of the Dam Neck Mills Station, next above Little Island, hearing that the vessel was in distress, equipped and launched their surf-boat for service on the afternoon of February 28, but arrived after the bark had gone down and while the sailors were making in their own boats for the shore.

February 28.—The three-masted schooner Providence, of Bridgeton, New Jersey, from Philadelphia for Boston, with a cargo of coal, and

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having a crew of seven men, stranded at 7 o'clock in the morning during a thick snow-storm about seven hundred yards east-northeast of the Orleans Station (Second District,) coast of Cape Cod, Massachusetts. She was seen to strike by two of the surfmen and the boat was at once run out, the station crew arriving on board in about twenty minutes from the time she took the bar. The captain gave the men a warm welcome, and expressed much thankfulness for their prompt offer of assistance. Fortunately the sea was not very rough and the tide was about half-ebb; the prospect, therefore, of getting the schooner off at high water being very good. The life-saving crew at once turned to and helped clear the decks of ice and snow, furled the mainsail and made such preparations as were necessary for floating the vessel at flood tide. While they were thus busy the crew of the Chatham Station arrived and offered assistance. Towards noon the wind shifted to the westward, off the land, and blew a gale, and by the proper disposition of the head sails they succeeded a little after 1 o'clock in the afternoon, with the help of the tide, in forcing the schooner off the bar into deep water, without damage, to the great relief of her crew.

March 1.—At about half past 4 o'clock in the afternoon as the steamer James Guthrie, of Louisville, Kentucky, of the Louisville and Henderson Packet Line, was endeavoring to ascend the Falls of the Ohio by the Indiana Chute, on her way from Henderson to Louisville, with a large miscellaneous cargo and one hundred and thirty-seven persons on board, including sixty-seven passengers, she struck an obstruction which stove a hole in her bottom, through which the water poured in such volume that to prevent her from sinking the captain was compelled to back her down clear of the chute, and make a landing as quickly as possible on the Indiana shore, near Clarksville, between Jeffersonville and New Albany. She could not be seen from the Louisville Station (Ninth District), neither were her distress signals heard, but news of the accident reached the keeper very soon after its occurrence, and the crew at once put off to her assistance, the men arriving on board in good season to render valuable service. As she was then fast to the bank, and there was no immediate danger of her sinking with the steam pumps and siphons working to their full capacity, the life-saving crew devoted themselves to the task of finding out and temporarily repairing the damage, which was successfully accomplished, and the leak brought under control. As three steamers had also come to the Guthrie's relief, and there was now a good working force on hand the keeper sent one boat's crew back to the station, while he, with the other crew, remained on board until the next day, assisting in putting the steamer in good trim again. A local paper, in its account of the accident, thus refers to the services of the station crew:

"The signal of distress was blown, and in a short time the Andy Fulton, Walker Morris, and the ferry-boat Music were beside her, as were Captain Devan, of the life-saving station, and two boat loads of his crew, who rendered all the assistance in their power, and saved the noble steamer from an apparently horrible fate."

March 3.—The brig Tula, of New York, with a crew of seven men, bound from Charleston, South Carolina, to Newcastle, Delaware, with a cargo of phosphate, stranded on the coast of Delaware, about a mile and a half south of the Indian River Inlet Station (Fifth District), at half past 4 in the morning, it being very dark, with a strong northeasterly wind and rough sea. She was discovered by the patrol at 5 o'clock, and quickly reported to the keeper, who at once started with his men to her assistance, arriving on board at 6 o'clock. The sea was then break-

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ing over the vessel, and all hands were landed without delay and taken to the station, where they were furnished with dry clothing and made comfortable, the life-saving crew returning on board after breakfast, and saving their effects and a portion of the brig's stores, which were also taken to the house. Word was also sent to Lewes for the aid of the wrecking company.

On the following day (4th) when the wreckers arrived in the powerful steam-tug North America, the life-saving crew took the sailors back on board the brig, with their baggage, and ran the necessary lines preparatory to the effort to save her. The attempt of the wrecking company that day to haul her off, after throwing overboard about fifty tons of the cargo, was not successful. The removal of fifty tons more of the cargo the next day (5th) and a hard pull upon the brig at high water was equally without result, the vessel refusing to budge. Indeed, the outlook that day was so bad, the vessel having sprung a bad leak, that the life-saving men were called upon to take the baggage ashore again, it being feared she would go to pieces. After working hard all night, the wrecking company succeeded at high water, at 4 o'clock in the morning of the 6th, in hauling the brig afloat and she was at once towed in to the Delaware Breakwater with the pumps steadily going to keep her afloat. In fact, they had to tow her with such haste that there was no time to stop and pick up the men's baggage as they passed the station on the way in, it having to be forwarded to the vessel at Lewes by wagon. The brig reached her destination in due season, although in need of repairs, and with what cargo remained on board in a damaged condition. About two days' shelter in all were afforded to the crew at the station while their vessel lay aground.

March 3.—At 9 o'clock in the forenoon, a small shad-boat, sloop-rigged, named the Allie, with two men on board, capsized and filled in a rough north wind and heavy sea, two miles from Duck Island, in Pamlico Sound, and about five miles from the Oregon Inlet Station (Sixth District), North Carolina. The boat was seen by two of the station men, who had started to Manteo for provisions, but were then returning, being warned back by the violence of the wind. She was under sail when first observed, which the station men thought it was all she could do to carry, and they kept watch upon her, and presently saw her go over. They instantly started for her, and reached her in half an hour. After a great deal of difficulty in getting their boat alongside in the heavy sea, they succeeded in taking the two men from the wreck, and brought them to the station, where they were kept until the following day. In the morning (March 4) the keeper and crew went out to the capsized boat, righted and bailed her, bent her sails, and saw her on her way to Roanoke Island, with the rescued men in charge.

March 5.—At 11 o'clock in the forenoon the lookout at the Crumple Island Station (First District), coast of Maine, reported a brig about eight miles off shore, with a signal flying as though in need of assistance. The life-saving crew at once pulled out to her and found she was a Norwegian vessel desirous of learning her whereabouts, the captain having at first mistaken Moose-a-bec light-house for the one at Cutler Harbor. The keeper gave him his correct bearings, the brig's course was shaped accordingly, and she filled away and went out of sight.

March 5.—During the night the patrol from the Cold Spring Station (Fourth District), New Jersey, seeing a schooner running dangerously near Cold Spring Inlet Bar, burned a Coston light to warn her, when she immediately hauled off.

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March 5.—The barkentine Angela, of Genoa, Italy, bound with a cargo of iron ore from Cartagena, Spain, to Baltimore, Maryland, and having a crew of ten men, stranded at midnight three hundred yards from shore, and a quarter of a mile south of the Paul Gamiel's Hill Station (Sixth District), North Carolina. The vessel had sprung a leak, and, being in a sinking condition, was run aground to save the lives of her crew. At the time the sea was high, the surf raging, and the wind blowing freshly from the north. The wreck was immediately seen by the two patrolmen then starting away from the station on their respective beats, and one of them promptly fired the red Coston light as a signal to those on board, and gave the alarm. The keeper, William H. O'Neal, at once roused all hands, and they turned out with the surf-boat and beach apparatus, and speedily got abreast of the wreck, with which from that time until morning they were engaged in efforts to effect communication. The steepness of the beach at this particular locality, which lets the sea break almost without intervention directly on the shore, causes, in any roused condition of the waters, a surf of great fury; and on this occasion the incessant torrents flung upon the sands made boat service impossible. Operations were therefore confined to the wreck-gun. Two shots fired in succession fell short of the wreck, and a third parted the line; a fourth reached the vessel, and the life-saving crew waited, wondering why the sailors did not haul the line on board. The solution came at daybreak, when the barkentine's men were discovered out at sea in the ship's boat, beyond the line of breakers, having abandoned the vessel under the conviction that she was going to pieces. In a little while, seeing the group of station men upon the beach, they proceeded to make a series of attempts to land, but were warned off in each instance by the life-saving crew waving before them a red flag. It was still impossible to launch a boat, but the sea was beginning to fall very fast, and the keeper was sure that if he could only keep the sailors away from the surf, entering which they would certainly be drowned, he would be able by 10 o'clock to pass the breakers in the surf-boat and save them. At 9 o'clock, however, the sailors rowed away up the beach, outside the breakers, toward the Caffey's Inlet Station, several miles north of the station at Paul Gamiel's Hill. Keeper Austin, of this station, was on the beach with Keeper O'Neal and his men, watching the sailors, and instantly telephoned to his crew to be on the lookout for them, and then hurried away to his post. Upon arriving he found his crew beside the surf-boat, ready for a launch. The beach at this station, unlike that at Paul Gamiel's Hill, is flat, so that the surf was much less violent, and, besides, the sea had now fallen considerably. The surf-boat crew, therefore, were enabled to fight their way successfully through the mob of breakers, shipping in the passage about a barrel of water, and after rowing half a mile to the southward, met the wrecked sailors, took off five of them, and put back for the shore, shipping another barrel of water in the return. After waiting a few minutes they again essayed the passage. This time they went through with the shipment of but little water, reached the boat from the wreck, took in the remaining five men, together with the captain's chest of books, papers, and instruments, and returned safely to the shore. It was then 11 o'clock in the forenoon.

The men thus happily rescued were in a pitiable plight. The sea had drenched them, one might say, to their very hearts, and they were famished and half frozen. Some of them were nearly naked, and the remainder had not clothing enough to keep them warm under ordinary circumstances. No time was lost in making them comfortable with food

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and cordials, and dry clothing was procured for them from the Poyner's Hill Station, next above, a supply being on hand there, donated by the Women's National Relief Association. The men thus succored poured forth gratitude in their profuse Italian way, and called down blessings on the life-saving crew for rescuing and caring for them.

In the afternoon the captain and four of the sailors went down to the Paul Gamiel's Hill Station for their lodging. The remaining five remained at the Caffey's Inlet Station for that night, and joined their shipmates the next day. All of them were lodged and fed at the Paul Gamiel's Hill Station for two days, and eight of the ten for three days, until the Italian consul could arrange for their transportation to Norfolk. The vessel and cargo were totally lost.

March 5.—One of the crew of the Nag's Head Station (Sixth District), coast of North Carolina, found a vessel's yawl which had been washed up on the beach about a mile and a half south of the station. It was duly turned over to the custody of the State wreck commissioner.

March 6.—At about 5 o'clock in the morning one of the patrolmen from the Orleans Station (Second District), Cape Cod, Massachusetts, observed a steamer in dangerous proximity to the Nausett Harbor bar, and by quickly burning a Coston signal prevented her from running ashore, her crew taking warning and changing their course so that she went clear.

March 7.—At about half past 2 in the morning the barkentine Wolverton, of Portland, Maine, bound, with a cargo of sugar, from Cardenas, Cuba, to New York, and manned by a crew of ten, struck on Turner's Shoal, five miles from land, and the same distance from the Assateague Beach Station (Fifth District), Virginia. The wind was strong, and from the south-southwest at the time, the sky overcast, and the sea high and at three-quarters flood. An hour after striking the vessel showed a signal light, which was at once answered by the beach patrol, who ran to the station and reported the probable locality of the wreck. The keeper, James T. Tracy, immediately ordered the surf-boat run out, and it was launched as soon as daybreak enabled the crew to see what they were doing. The wind had now shifted to the northwest, and was blowing a gale of thirty-five miles an hour; the sea was breaking and running furiously in almost every direction, and the weather was bitterly cold. After an hour's struggle, the life-saving crew came up and boarded the vessel, which they found pounding on the shoal. It was then 6 o'clock in the morning. By 9 she had sunk in the furious shallows, her bottom was broken in, her hull full of water, and the sea was sheeting over her so that to remain on board was impossible. It was equally impossible to gain the land in the teeth of the tempest, and the only course open was to launch the ship's long-boat, with some of the sailors, the remainder being taken into the surf-boat, and for both boats to lie in the comparative shelter the lee of the nearly-sunken hull afforded. The bitter cold and the violent gale and raging sea made the long hours of waiting which ensued as dreary as dangerous. The keeper, in his report of the wreck, describing these conditions, observes, somewhat quaintly, "They made things look a little dark for us." The whole day was spent in the tossing and plunging boats under the lee of the wreck. Finally, late in the afternoon, the tempest appeared to slacken, and the captain of the vessel proposed that the keeper should take his personal effects and three of the sailors into the surf-boat, while the remaining seven, himself included, should follow in the long-boat, and in this way endeavor to reach the shore. The plan was agreed upon, and at 5 o'clock in the afternoon the two boats broke their miserable camp

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in the lee of the wreck and started for the land. They had not gone far when the wind again swelled to a gale, and blew with such terrific stress that the long-boat was forced to put back to the half shelter of the hull. The surf-boat, better fitted for the struggle, continued her course, though with prodigious difficulty, and efforts that strained every muscle and sinew of her crew. After dreadful toil, the men succeeded in reaching the land at 11 o'clock at night. They had left the vessel, near which they had staid all day, at 5 in the afternoon. Their last meal was the supper of the night before, and for thirty-six hours they had had nothing to eat or drink. Exhausted, famished, and half frozen, their first care was to get some food. A few hours' necessary rest followed the repast, and then at 4 o'clock in the morning (March 8) they again launched the surf-boat and brought the captain and the remainder of the sailors ashore. The wind and sea had now moderated, and at half past 8 they again launched and brought in a lot of the ship's stores, returning to the station with their load at 2 o'clock in the afternoon. Two days afterward (March 10) the vessel careened over square on her beam ends, with her spars lying in the water, and became a total loss.

The rescued sailors remained at the station for three days, and were made as comfortable as possible. At the end of this period they got transportation to New York at half price. The keeper of the station and two of his men got their hands frosted as part of the hardship of their brave adventure. The appreciation of the gallantry, constancy, and sufferings of the life-saving crew upon this occasion found expression in the following letter from the captain of the barkentine:

"CHINCOTEAGUE ISLAND,
"*Accomac County, Virginia, March* 27, 1883.

"SIR: In view of the hardships undergone by the captain and crew of Life-Saving Station No. 7, of District No. 5, in saving myself and crew of the wrecked barkentine Wolverton, I desire to express my sincere thanks in behalf of my crew."

[Here follows a statement of the circumstances of the wreck and rescue, substantially as given, after which the testimonial continues:]

"The close attention to duty, the bravery and kindness of Captain Tracy and his men, are deserving of special mention.

"Very truly, yours,

"JAMES DYER,
"*Master.*

"To the GENERAL SUPERINTENDENT OF THE
LIFE-SAVING SERVICE,
"*Washington, D. C.*"

March 7.—The schooner Fannie, of Galveston, Texas, bound, in ballast, with a crew of four men, from Corpus Christi, Texas, to Calcasieu, Louisiana, stranded at 2 o'clock in the afternoon on the northeast end of Matagorda Island, a mile southeast of the Saluria Station (Eighth District), Texas. There being a northeast gale, with rain-squalls, and a rough and very high sea, the schooner had attempted to run in for a refuge, but misstayed, and was compelled to come to a sudden anchorage, which proved insecure, for the stress of the sea caused such a strain upon her moorings that presently one chain parted, and she dragged the remaining anchor until she came up on the beach. The life-saving crew were immediately on hand, but the schooner, being of light draught,

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drove through the breakers and stranded so high that the four sailors were able to land without assistance, and the only thing to be done was to escort them to the station, where they were made comfortable for the night.

The next morning (March 8), the life-saving crew came down with the sailors to the vessel, which had bilged and filled with water during the night, and all hands fell to work to remove everything from her to the station, including sails and rigging. In the afternoon the sailors were discharged and left for Galveston. The vessel having been stripped, nothing more was done until March 19, when the owners began operations for repairing and floating her. Labor being scarce in the vicinity, the life-saving crew gave active assistance in this work. By noon of March 24 they had bent on the schooner's sails, procured anchors and run them out, and had hove her ahead about fifty feet, when the revenue steamer McLane came to their aid and she was soon hauled off. After getting her afloat it was found that she leaked badly, and, the sea being rough, her only safety was to be towed to Indianola. The revenue steamer accordingly took her in charge, and the life-saving crew got on board to keep her free. During the voyage the station men had to toil incessantly at the pumps and in bailing to keep the water from gaining on her. Arriving opposite the town, the steamer let go, and the life-saving crew made sail on the schooner and ran her aground in a safe place, convenient for hauling her upon the ways for repairs. The crew then returned on the revenue steamer to the station, where they arrived about half past 8 in the evening (March 24).

March 8.—At about 4 o'clock in the morning one of the crew of the Hog Island Station (Fifth District), coast of Virginia, returned from his patrol with a man named Wilson belonging to the sloop Mary Gray, of Tuckerton, New Jersey, anchored inside the island, whom he had found on the beach endeavoring to reach the station. The man was nearly exhausted, and one of his feet was shoeless and badly frozen. He reported that in company with a shipmate named, Parker, he had landed on the island the day previous for a supply of provisions, and that after partaking too freely of liquor they had started for their vessel at 8 o'clock in the evening. Before they could reach her, however, their boat capsized and, with the two men clinging to the bottom of it, drifted down to the inlet with the ebb tide and was cast ashore at the south point of the island.

The night was bitter cold and the men were almost perished when they regained the beach; but Parker set out at once for the light-house, some miles distant across the meadows, and Wilson started for the station, the latter, as the sequel proved, being fortunate enough to meet the patrol and thus get assistance. Upon learning the facts the keeper dispatched several of his men in search of Parker, while he took Wilson in hand, and after replacing his wet clothing with a warm outfit from the supply furnished to the station by the Women's National Relief Association, made every possible effort for his recovery by the administration of stimulants and proper attention to his frozen foot. After doing all in his power for the man's relief he sallied out to assist his men in their search for Parker, and about 8 o'clock found him frozen to death and half covered by the tide in a muddy cove, which the poor fellow had evidently attempted to cross after separating from Wilson. Although it was apparent that he had been dead some hours an effort was made to bring him to, and this failing, he was decently shrouded and conveyed on board the sloop to his brother, the captain. The survivor, Wilson, received careful nursing at the station until even-

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ing, when he was taken on an extemporized stretcher across the island to the bay shore and thence to his vessel. His escape from the fate which befell his shipmate was doubtless due to his making for the station instead of the light-house, and the aid he received from the patrol in reaching it, his condition even then when under treatment being so critical that the keeper almost despaired of his recovery. As it was, there was danger that his foot would have to be amputated, and it was principally for the purpose of getting him to where he could receive early surgical attention that he was removed to the vessel.

March 8.—At about half past 8 o'clock at night the patrol from the Chicamicomico Station (Sixth District), coast of North Carolina, observing a steamer close inshore, burned a Coston light to warn her off, when she changed her course and went clear.

March 10.—At 11 o'clock at night the patrol from the Little Cranberry Island Station (First District), coast of Maine, flashed a Coston signal to a vessel which he discovered heading directly for the rocky ridge, which is bare at low water, between Baker's and Little Cranberry Islands, and the craft, thus warned of her danger, went about and escaped striking on the rocks, where she would probably have become a wreck. She afterward worked round into Cranberry Island Harbor and anchored for the rest of the night, but got underway at daylight before the crew could ascertain her name.

March 10.—About 9 o'clock at night the north patrol from Peck's Beach Station (Fourth District), coast of New Jersey, saw a vessel's light close inshore. He burned a Coston light, which, though not responded to, was evidently seen, as the vessel at once hauled off shore and disappeared.

March 11.—The day prior to this date the three-masted schooner Jane Emson, of Taunton, Massachusetts, bound, with a cargo of railway ties, from Norfolk, Virginia, to New York, and having a crew of seven men, stranded at half past 8 in the evening on some dangerous shoals a mile from Myrtle Island, Virginia, and seven miles northeast of the Smith's Island Station (Fifth District), Virginia. It was high water and a rough sea at the time, and the night was dark and thick, with a west-southwest gale prevailing. The vessel was not discovered until daybreak (March 11), her distance from the station preventing her from being seen in the darkness. She was then descried by one of the station patrolmen on the lookout from the top of the neighboring light-house tower, and the alarm being given the life-saving crew launched the surf-boat, reached the vessel by half past 6, and by 10 returned to land with the seven sailors, who were entertained at the station for three days. The vessel was lost.

The Cobb's Island Station crew, ten miles distant, discovered the wreck at half past 7 o'clock in the morning, and, going and returning, had eight hours' hard pull at the oars, finding that the sailors had already been rescued by the crew of the nearer station.

March 12.—At 4 o'clock in the afternoon the crew of the Barnegat Station (Fourth District), coast of New Jersey, went off in their surf-boat to offer assistance in floating the sloop Everett Presto, of and from Rockaway, Long Island, with a crew of two men, bound to Egg Harbor, New Jersey, which had just grounded at low water on Barnegat Shoals, about a half a mile east of the station. Fortunately the vessel was in light trim and she floated off when the tide rose without the life-saving crew's assistance, although they remained on board until she was safely on her way into the inlet. She received no damage.

March 13.—At 3 o'clock in the afternoon, the sloop H. J. Bishop, of

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Brookhaven, New York, bound, in ballast, from Baltimore to Hog Island, Virginia, with a crew of three men, stranded about half a mile from shore on the north end of certain shoals near Hog Island Inlet, and six miles northeast of the Cobb's Island Station (Fifth District), Virginia. The weather was fair and the sea low. The surf-boat was speedily launched, and in little more than an hour the life-saving crew were alongside, and ran out an anchor, hove the cable taut, and waited for the tide to rise. Meanwhile the keeper and crew of the Hog Island Station, five miles away, arrived upon the scene, and joined in the work when the time came, heaving and poling with vigor, until, by 7 o'clock in the evening, the sloop floated. The keeper and crew of the Hog Island Station remained on board and took her through Hog Island Channel to a safe anchorage. As the wind blew up that night, and the locality of the stranding was dangerous, her conveyance to a secure haven prevented her from being driven ashore again and perhaps lost.

March 15.—At a little before 11 o'clock at night the south patrol from the Nausett Station (Second District), Cape Cod, Massachusetts, sighted a large steamer running so closely along the coast that she was in immediate danger of stranding on the outer bar. He at once ignited his Coston signal, and the steamer taking warning by it hauled farther off shore.

March 15.—At 1 o'clock in the morning the south patrol from the Orleans Station (Second District), Cape Cod, Massachusetts, when two miles distant from the station, discovered a schooner standing inshore on the port tack and almost in the breakers. He quickly burned his patrol signal (a Coston red light), and the vessel thus warned went about and escaped striking the bar.

March 15—At half past 4 in the afternoon as a man from Speonk Village, Long Island, was crossing Moriches Bay in a small sail-boat from the beach to the main-land, he capsized her by carrying too great a press of sail, and was thrown into the water. Fortunately, two of the crew of the Petunk Station (Third District), coast of Long Island, a mile or two distant, were fishing in the vicinity, and seeing the boat go over, pulled to the man's assistance, took him from the water, righted the boat and bailed it out, and sent him on his way thankful for his escape.

March 15.—At 7.30 P. M. the patrol from the Turtle Gut Station (Fourth District), coast of New Jersey, seeing a schooner in danger of running ashore, burned a Coston light, when she at once altered her course and soon disappeared from sight.

March 16.—At 5 o'clock in the morning the schooner Rebecca M. Smith, of Philadelphia, bound, without cargo, from Boston to that place, and having on board seven men, mistook the distance from shore and went aground on the north bar of Hereford Inlet, two miles from shore, and the same distance from the Hereford Inlet Station (Fourth District), New Jersey. At 6 o'clock, an hour later, she was boarded by the life-saving crew, who, after strenuous effort, succeeded in getting her afloat and safely anchored off the bar by 11 o'clock in the forenoon. In this labor they were sturdily assisted by the crew of the adjacent station (Tatham's), who had boarded the schooner by half past 7 o'clock in the morning. Both crews were compelled to remain on board the schooner until sunset, on account of the strength of the wind blowing from the north-northwest.

March 18.—At 9 o'clock in the morning one of the patrolmen belonging to the White Head Island Station (First District), coast of Maine, returned to the house and reported that a small sloop which had anchored the night before in Seal Harbor under the lee of Rackcliff Island, about a

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mile distant from the station, had just sunk at her anchor. There was no one on board of her at the time, her owner being ashore. She had gone down in about eighteen feet of water. The station crew turned out with their boat and swept lines under the sunken craft, then got a small schooner and moored her over the spot for rigging the necessary purchases to, and by that means raised the sloop, bailed her out, removed the iron ballast, and then towed her ashore and hauled her out high and dry where she could be repaired, the men completing their task and turning the vessel over to her owner at 3 o'clock in the afternoon.

March 18.—At half past 4 in the afternoon the crew of the Plum Island Station (Second District), near Newburyport, Massachusetts, went off in their surf-boat and assisted the crew of the schooner Ella M. Johnson, of Newburyport, in floating the vessel off the bar at the entrance of the harbor, on which she had grounded while inward bound from a fishing cruise. She had attempted to run in on the first of the flood when there was not depth of water enough on the bar, the consequence being that she took the bottom. She was got off at high water without damage and proceeded into the harbor.

March 20.—During the midnight watch the patrol from the Atlantic City Station (Fourth District), coast of New Jersey, seeing a steamer running dangerously near the beach, immediately burned a Coston light, when she hauled off seaward.

March 21.—During the night the patrol from the Cold Spring Station (Fourth District), coast of New Jersey, observing a sloop in danger of running ashore on Cold Spring Inlet Bar, burned a Coston light, when she altered her course and went clear.

March 21.—The sloop Vienna, of Onancock, Virginia, bound, with oysters, from Matchipongo, Virginia, to Tuckerton, New Jersey, and having a crew of three men, ran aground at a little after 4 o'clock in the afternoon on the south end of Rogers Island Bar, three-quarters of a mile from shore and two miles southwest of the Hog Island Station (Fifth District), Virginia. The life-saving crew went out to her in the surf-boat, but when within fifty yards of her she suddenly floated off on the rising tide. The keeper then took her to a safe anchorage in Hog Island channel, and left her, after instructing the captain in regard to the points of the bar, which extends far out from the island into the inlet.

March 22.—The schooner Elsie M. Smith, of and from Portland, Maine, with a crew of seventeen men, bound to the George's Bank on a fishing cruise, in attempting to make Cranberry Island Harbor during a fresh westerly gale, stranded on a ledge of rocks off the northwest point of Little Cranberry Island, coast of Maine, the accident occurring at about 5 in the afternoon. The crew of the Little Cranberry Island Station (First District), located a mile and a half from where the vessel ran aground, arrived on board a few minutes after 6 and the keeper took charge. No time was to be lost, for the sea was rough and there was danger of the schooner bilging. An anchor was accordingly run out to a good scope and the schooner's head hove off shore, and then, as the tide swelled, sail was made and she came off and was piloted safely into the harbor, fortunately but little the worse for her contact with the rocks. The captain was very thankful to the life-saving crew for their aid in saving his vessel.

March 24.—At 9 o'clock at night the south patrol from the Nausett Station (Second District), Cape Cod, Massachusetts, when about two

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and three-quarter miles from the station, saw a vessel standing into danger and immediately warned her off by flashing his Coston light.

March 25.—At about 2 o'clock in the afternoon, during a fresh northwest gale, word reached the crew of the Narragansett Pier Station (Third District), coast of Rhode Island, that a schooner had capsized and sunk a short time previous about three miles south of the station. They at once proceeded to her in their boat, but while on the way three of the four men composing her crew were picked up by the schooner R. S. Dean, which was passing at the time, one man being drowned. The spot was also visited by the crew of the Point Judith Station, some miles further south, but nothing could then be done, as the vessel, which proved to be the Warren Gates, of New London, Connecticut, loaded with iron, had gone down in fourteen fathoms of water.

As the schooner's topmasts were sticking out of water and were a source of danger to vessels passing at night, the Point Judith crew took the precaution of hanging a lantern in the rigging for several nights, until the obstruction was removed. The crew of the Narragansett Pier Station also went out on the 26th, at the request of the Equitable Insurance Company, of Providence, Rhode Island, and buoyed the spot where the schooner had sunk.

March 27.—The 8 o'clock (night) patrol southward from the Indian River Inlet Station (Fifth District) coast of Delaware, sighted a vessel almost becalmed and edging in towards the beach. It being evident the people on board were not aware they were so close to the land, he burned a Coston signal to warn them, when they at once let go their anchor and held the vessel from drifting nearer, and at midnight, when a breeze sprang up from the northwest, they got under way and stood off.

March 27.—The crew of Durant's Station (Sixth District), North Carolina, rowed down about six miles to the schooner T. M. Thomas, of Beaufort, North Carolina, bound with lumber from Washington, North Carolina, to Pennsgrove, New Jersey, which on her way down Pamlico Sound the day previous, had anchored inside the beach on account of the fresh northwest gale then prevailing, but had slipped her cables and driven ashore about 10 o'clock at night (March 26), five hundred yards from land. Being beyond the patrol limits, and inside the point of the beach, on the lower side of an intervening inlet, she could not be seen by the patrolmen, and was discovered the next day at 11 o'clock from the lookout on top of the station, having then hoisted a signal of distress. The life-saving crew reached her by half past 1 o'clock, and found her lying in good condition, with her men all ashore, having landed in the ship's yawl. Nothing needed to be done except to carry a telegram to the signal office from the captain to the owners. The schooner floated off with the next tide.

March 29.—During the night the patrol from the Hereford Inlet Station (Fourth District), coast of New Jersey, discovering a vessel standing in to danger, burned his Coston light, when her course was immediately altered, and she went clear.

March 29.—One of the patrolmen of the Pope's Island Station (Fifth District), Virginia, seeing a schooner sailing too near the breakers, fired a red Coston light, which made her tack and stand out of danger.

March 30.—At about half past 3 in the afternoon the lookout on duty at the Louisville Station (Ninth District), Louisville, Kentucky, reported a skiff with three colored men in it unable to stem the current, and sweeping rapidly down the river towards the cross-dam of the Ohio Falls. One of the station boats was instantly manned by three of the

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crew and pulled to the rescue. They soon reached the skiff, and towed it out of the current into the slack water near the bank, where there was no danger. The men were not much accustomed to handling boats, and did not know the current was so strong until they found themselves carried with frightful rapidity towards the dam. It was a narrow escape, and the poor fellows were very grateful to the life-savers.

April 1.—During the night the patrol from Cold Spring Station (Fourth District), New Jersey, discovered two sloops running dangerously near Cold Spring Inlet bar and burned a Coston light, when they immediately hauled off and went clear.

April 3.—The schooner Bounding Billow, of and from Gloucester, Massachusetts, with a crew of fourteen men, on a fishing cruise, stranded at a little before 4 o'clock in the morning off the north point of Sandy Hook, about a mile distant from the Sandy Hook Station (Fourth District), coast of New Jersey. She was discovered at twenty minutes past 4 by the north patrol and reported, and as soon as possible the keeper sent a stout hawser forward in the cart, while he followed soon afterwards with the surf-boat, and boarded the vessel at 5 o'clock. After consultation with the captain the keeper dispatched a few men to the Sandy Hook railroad pier for the loan of an anchor, which, with one also belonging to the schooner, they planted off shore. These preparations being completed in the afternoon they succeeded, on the high water at about 4 o'clock, in floating the schooner off with but slight damage. The captain expressed much thankfulness to the station crew for aiding so largely in saving his vessel. It was 6 o'clock in the evening when the men got back to their houses after their long and arduous but successful day's work.

April 4.—The schooner Harry B. Diverty, of Camden, New Jersey, bound from Little Egg Harbor, New Jersey, to New York, with a cargo of fish scraps and manned by five men, stranded at 8 o'clock in the morning, at ebb-tide, on the Middle Ground in Great Bay, one mile west of Little Egg Station (Fourth District), New Jersey. The schooner had loaded at a fish factory three miles up the bay, and was on her way out to sea, when she stranded on account of the shallows not being buoyed. The life-saving crew boarded her within an hour, and found her leaking badly. The sand being cut from under her stern by the sea, left her unsupported aft, and the heavy strain thus caused made her seams open to the water. The life-saving crew at once set her pumps going and ran out her anchor. In course of time the flood-tide raised her to an even keel, which caused the worst of the leaks to close, and after four hours of flood, the station men succeeded in heaving her off into the channel, to the great gratification of the captain.

April 4.—At about 7 o'clock in the morning the crew of the Evanston Station (Eleventh District), Lake Michigan, observed a schooner about a mile out in the lake, working to the northward through the floating ice-fields. They kept a sharp watch on her and noticed that when opposite Grosse Point she took in all sail and seemed to be unmanageable. The ice being in motion she was slowly carried two or three miles further, when a signal was hoisted for assistance. It was then a little after noon, and soon after the life saving crew got away in the surf-boat and made the best of their way through the ice to the schooner's relief. She was the Iris, carrying a crew of three men, bound from Chicago, Illinois, to Manitowoc, Wisconsin, where she belonged, with a general cargo, the captain reporting her to be the first sailing-vessel departure of the season from the port named. Her anchor had been let go, but the pressure of the ice was so great it failed to hold and he

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wanted a tug to release her. The life-saving crew, intent upon doing all they could, found upon inquiry that the schooner was provided with a kedge and proposed that it be used. It was therefore got ready, and with a stout line bent to it dropped over the quarter. By means of the re-enforcement thus afforded to the bower anchor the vessel's drift was checked, when the ice parted and moved past her, leaving her in open water. The station crew then helped get the schooner under way and she proceeded on her voyage.

April 6.—At 9 o'clock in the morning the schooner William Whitehead, of New Orleans, Louisiana, with a crew of six men, bound from Brazos Santiago, Texas, to Mobile, Alabama, in ballast, while standing out over Brazos Santiago Bar, on her way to sea, stranded on the north shoal or breaker off the southeast point of Padre Island, about three miles northeast of the Brazos Station (Eighth District), on Brazos Island, coast of Texas. The accident was caused by the wind dying out, and the vessel losing steerage-way, was at once carried by the strong ebb-tide onto the shoal. She was observed to fetch up by the life-saving crew, and as the pilot in charge hoisted a signal of distress they went off as quickly as possible to her assistance. When they got on board she was thumping quite hard and a portion of her false keel had been knocked off. Quick work was therefore necessary in order to float her off before she bilged. An anchor was accordingly run out with the surf-boat to a long scope of hawser, and after some hours of hard heaving they succeeded in sluing the schooner's head to the sea, which was very rough. Fortunately a fresh breeze sprang up from the northeast about that time, and by setting the foresail and jibs they forced her, as she lifted on the seas, over the bar and into deep water, where she was brought to anchor soon after 2 o'clock P. M. She had sprung her rudder-head and was leaking, but as there were no facilities for repairing at Brazos it was decided by the captain to proceed on his voyage, which he did a few days later, after making such temporary repairs to the rudder as he was able. In this case the life-saving crew no doubt aided very materially in saving the vessel from going to pieces on the shoal.

April 7.—The 8 o'clock (night) patrol, south, from the Cahoon's Hollow Station (Second District), Cape Cod, Massachusetts, discovered a vessel inside the outer bar and in imminent danger of running ashore. He immediately flashed a Coston light to her and she sheered out just in time to save herself.

April 9.—The patrol from the Little Island Station (Sixth District), coast of Virginia, observing a schooner standing too close inshore for her safety, burned a Coston light, when she immediately hauled off.

April 9.—In the evening of April 8 the schooner Iola, of and from Jacksonville, Florida, with a crew of four men, anchored opposite the house of refuge at Gilbert's Bar, Florida (Seventh District), with a quantity of lumber to be used in repairing the house, and early the next morning (9th) commenced rafting it through the surf. The sea was quite rough, and as the yawl, with the captain and two men in it, was entering the breakers with a raft of the lumber in tow, it capsized and came near drowning the two seamen. The captain was thrown clear of the boat and found no difficulty in scrambling ashore. Not so the sailors, however, for the yawl rolled over on top of them and held them down. The keeper of the house, David Brown, and his sixteen year old son, were fortunately on the beach and witnessed the accident. They ran at once to the men's assistance, and, aided by the captain, succeeded in righting the boat and brought the two men safely ashore, one

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of them saying, after expressing gratitude for his deliverance, "If we had been two minutes longer under that boat we would have been dead men." The keeper also assisted them in getting the lumber ashore out of the surf.

April 10.—At 6 o'clock in the evening the schooner Friendly, of and from Grand Manan Island, New Brunswick, on her way to Eastport, Maine, for repairs, with a crew of two men, ran ashore on the Lower Middle Ground, Quoddy Roads, about a mile and a half northeast of the Quoddy Head Station (First District), coast of Maine, and an hour or so later was assisted off and taken to a safe anchorage by the life-saving crew. The next morning (11th) the wind had freshened from the eastward and raised quite a sea, and the crew of the schooner, being short-handed, were unable to heave up her anchors. The station men, therefore, boarded her again, got her under way, one of the anchors being lost by the cable parting, and run her up to Lubec, whence she could proceed without further assistance to Eastport.

April 10.—At about half past 9 at night, the weather being foggy and the wind light from the eastward, the sloop Virginia, of Patchogue, Long Island, with a crew of two men, while running for Fire Island Inlet on her way from Rockaway to Patchogue, stranded on Oak Island, to the westward of the inlet, about a quarter of a mile east of Oak Island Station (Third District), coast of Long Island. The sloop was in ballast and drove so high up on the beach that the two men jumped ashore without difficulty. She was discovered fifteen minutes after she went on by the keeper of the station, who summoned his crew, rigged the necessary purchases, and hauled the sloop still higher, clear of the surf, to save her from damage until a chance presented for getting her off. The two men were sheltered meanwhile at the station, and upon the recurrence of spring-tide the life-saving crew commenced operations, and after two days' labor (April 19–20) the vessel was hauled afloat and taken into the inlet without receiving any damage.

April 10.—At nearly 4 o'clock in the morning the three-masted schooner Lizzie Dewey, of Lubec, Maine, bound, with a cargo of molasses, from Matanzas, Cuba, to the Delaware Breakwater for her orders, and having eight men on board, stranded, through an error in navigation, on shoals at the point of Cape Henlopen, four hundred yards from shore and two miles north of the Cape Henlopen Station (Fifth District), Delaware. The patrol having passed a few minutes before she had struck, she was not discovered until two hours after, when the next watch went by. Between 6 and 7 the surf-boat arrived alongside, and found a tug endeavoring with a hawser to pull her off. It was then running a strong floodtide, with a heavy ground swell, and the schooner was pounding hard and working between every thump still further upon the shoal. The life-saving crew boarded her and got ready to assist at the pumps in case she sprang a leak. Meanwhile another tug came out of harbor, and the captain engaged her to help, seeing that a single tug would be ineffectual. The two pulled and strained at her until nearly high tide, when she yielded to their efforts and came off the shoal. The life-saving crew went into harbor with her, and after she anchored conveyed the captain ashore in the surf-boat.

April 11.—At half past 4 in the morning the patrol from the White Head Island Station (First District), coast of Maine, observed a vessel steering directly towards a dangerous sunken ledge in the vicinity of White Head Island, and burned a Coston signal to warn her off. She quickly changed her course, but not in time to entirely clear the reef, for she struck the outer edge of it and remained there two or three minutes

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before they could get her headed off clear. Had the signal not been made, however, she would have taken the rocks under full headway and probably knocked a hole in her bottom and sunk. She stood off and passed out of sight before her name could be ascertained.

April 11.—At 3 o'clock in the morning four schooners went ashore in a thick fog on the east side of Huntington Bay, at distances varying from a half a mile to a mile from the Eaton's Neck Station (Third District), Long Island, New York. Two of them needed no help and floated off with the rising tide at midday—the Oscar F. Hawley, of Port Jefferson, Long Island, laden with coal and having a crew of four men, and the Marietta Smith, of Greenport, New York, with a crew of four men and no cargo. The other two received aid from the life-saving crew. One of them, the Estella Day, of Newcastle, Delaware, bound thither from Providence, Rhode Island, with six men on board and no cargo, was hove off about noon, the sailors and station men working together. The other—the Copy, of Ellsworth, Maine, bound from New York to Boston, laden with fire retorts, and manned by a crew of four, was not got afloat until half past 1 in the morning of the next day. The life-saving crew and sailors also worked in this case in concert, and a spare hawser from the station was brought into use to get the vessel afloat.

April 12.—One of the patrol of the Cape Henlopen Station (Fifth District), Delaware, going out on the first watch, saw through a rift in the thick fog then prevailing the mast of a schooner very near the beach. He at once hailed the vessel and warned her crew of their danger. The fog lifted while he was talking, and he saw the men on board haul off shore as quickly as possible.

April 13.—At about 4 o'clock in the morning the north patrol from the Scituate Station (Second District) sighted a vessel standing in on the starboard tack and almost on to the rocks. He instantly flashed a Coston signal to warn her, and she went about, barely saving herself from going ashore. It was a narrow escape, as the misty condition of the atmosphere prevented the patrolman from seeing her until she was close in.

April 13.—At 9 o'clock in the morning, the weather being foggy, the keeper of the Hog Island Station (Fifth District), coast of Virginia, observed a large three-masted schooner running down the coast and so close in that she was in danger of striking the bar. He at once hoisted the International Code flags, J. D., signifying "You are standing into danger," and the schooner, taking warning from it, jibed her sails over and stood off.

April 13.—At 7 o'clock in the evening, as a man named Donohoe, in the employ of F. M. Dougherty, a coal dealer in Louisville, Kentucky, was attempting to shift an empty coal barge from the foot of Preston street to the foot of Brook street, Louisville, the barge swung too far out into the stream and was caught by the strong current, which parted the lines and away it went adrift. The barge was then about a quarter of a mile above the Louisville Station (Ninth District), and as soon as discovered by the man on the lookout a boat's crew dashed out to its assistance. The man on the barge, thoroughly alive to his danger, quickly gave them the end of a line, which the life-savers made fast to their boat and then began a gallant struggle for the mastery of the current. The towing of so large a vessel by the small station boat against such odds as the swift-running current presented was no child's play, but the men put forth their utmost exertions and succeeded in the course of half or three-quarters of an hour in getting the barge back

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into the slack water and made it fast to the bank about a quarter of a mile below the station, the man being taken off and landed near the station, very thankful for his escape. The next day the owner of the barge sent the following testimonial to the life-saving crew:

"No. 420 JEFFERSON STREET,
"*Louisville, Kentucky, April* 14, 1883.

"LIFE-SAVERS' GALLANT CREW:

"You do not know how grateful I feel to you for saving my man and barge last night. If they had gone against a bridge-pier, Donohoe, no doubt, would have been lost.

"Respectfully, your friend,

"F. M. DOUGHERTY."

April 14.—The crew of the New Shoreham Station (Third District), Block Island, Rhode Island, went at 5 o'clock in the morning to the assistance of the sloop Franklin Pierce, of New London, Connecticut, bound from that place on a fishing trip, with three men on board, which had stranded in clear weather about six hundred feet from the station. They helped the men on board to run out an anchor, and after nearly two hours' work got her afloat without damage.

April 14.—At half past 2 o'clock in the morning the crew of the Louisville Station (Ninth District) were alarmed with the report of the look-out that a small skiff with a man in it was drifting down the river with the current, and in danger of speedily going over the dam at the falls. It was evident from the way the man acted with the skiff that he was not aware of his peril. One of the station boats was, therefore, quickly manned, and in a few minutes the life-savers reached the skiff, towed it out of the current, and safely landed its occupant, who gave his name as Frederick Weiss, a resident of Louisville.

April 16.—At a quarter before 3 in the morning, during a thick fog, the eastern patrol from the Surfside Station (Second District), Nantucket, Massachusetts, sighted a large square-rigged vessel close in to the breakers. His warning signal was quickly answered by those on board and he started off to the station, about a mile and a quarter distant, to give the alarm. The boat was launched without delay and the life-saving crew went on board to find the bark, for such she proved to be, anchored in four fathoms of water about four hundred and fifty yards from the beach. She was the Alice Reed, of New York, bound from Singapore to Boston, with a cargo of sumac, hides, rattan, and pepper, and had sixteen persons on board, all told, including two passengers. The captain reported heavy weather on the passage, during which he had lost and split sails, and being partially disabled on that account, the vessel had been set by the current too far to the westward. Thick weather setting in, and finding himself in shoal water, he had anchored just in time to save the vessel from going ashore. He desired the services of a pilot to take him clear of Nantucket Shoals; so the life-saving crew took him ashore and assisted him in finding one, and also two extra men to help work the vessel to Boston, as she was short-handed. The captain and his party were put on board at about 8 o'clock, and then, as the wind was still light, the life-saving crew helped get up the anchor and with their surf-boat towed the bark half a mile off shore to a safer anchorage to wait for a breeze. After doing this, as one of the passengers, a lady, was quite sick and desired to be landed, the life-saving crew took her ashore and conducted her to the hotel in town

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on the north side of the island, where she could obtain proper medical attendance. The same afternoon, when a breeze sprang up, the bark got under way and proceeded towards Boston.

April 16.—About half past 4 o'clock in the morning the west patrol from the Petunk Station (Third District), coast of Long Island, New York, discovering a three-masted schooner close in to the outer bar, burned a Coston light, when she went about and stood off shore.

April 17.—The Crumple Island crew (First District), coast of Maine, picked up a row-boat, seventeen feet long, adrift at sea off the station, which they advertised and subsequently delivered to the owner, who arrived from Saint John, New Brunswick, and claimed it.

April 17.—At 6 o'clock in the evening, the bark Frei, of Porsgrund, Norway, bound, with a cargo of rosin, from Wilmington, North Carolina, to Glasgow, Scotland, and having a crew of nine men, failed to obey her helm, and was swept aground in a strong tide on Cape Fear Bar, a mile from shore and about five miles distant from the Cape Fear Station (Sixth District), North Carolina. The surf-boat was launched and reached the vessel at about half past 7. The bark was not in imminent danger, but the night was dark and thick, the wind had swollen to a gale, and the weather looked threatening. There was consequently considerable excitement and apprehension on board, and the captain and pilot requested the life-saving crew to stay by them in case of accident. They accordingly remained, ready for service until half past 4 in the morning (April 18), when it was high water, and the bark was got off the bar with the assistance of a steamer which had come to her aid and towed her out to sea.

As she floated away, a row-boat towing astern, belonging to the pilot and his assistant, who were still on board, filled and capsized and would have been lost but for the life-saving crew, who got after her, righted and bailed her out and took her in tow. Later, they took the pilot and his aid into the surf-boat and landed them at Smithville in tow of the steamer.

April 18.—During the forenoon a pile-driver employed by the fishermen of Fairport, Ohio, in driving net stakes out in Lake Erie, broke one of the parts of her machinery which some of the crew brought ashore for repairs, leaving but two men on board. In the mean time bad weather came on, and as the two men were unable to get the craft into the harbor without assistance they made signal for aid, which was immediately answered by the keeper of the Fairport Station (Ninth District), who went off with four men and helped kedge the disabled vessel safely inside.

April 18.—At about half past 9 at night, during the prevalence of a northeasterly gale, with a rough sea, as the three-masted schooner Speed, of Racine, Wisconsin, was attempting to enter that harbor with a cargo of lumber and shingles from Pentwater, Michigan, in tow of the tug Henry S. Sill, the tow-line parted just as she was entering between the two piers, and before anything could be done to prevent it she drifted ashore just to the north of the light-house crib. The crew of the Racine Station (Eleventh District) got off in their life-boat as quickly as possible, intending to aid the tug in making fast to her again, but the surf was so heavy and the water so shoal it could not be done. They therefore pulled back into the harbor, and by means of a heaving-line sent the end of a hawser on board the vessel, the other end being passed to the tug from the pier. The tug could not budge her, however, and as she had now fallen over on her beam ends and showed signs of breaking up, the keeper decided to bring the crew—who were

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in the rigging—ashore by the breeches-buoy. He therefore sent back to the station for the gear, and as they had the heaving-line already fast to her, it did not take long to rig the gear, and by 10 o'clock the people, five in number, all residents of Racine, were safely landed with their effects. It was a remarkably quick piece of work. On the 20th the station crew were busy all day with their boat assisting in an effort to get the vessel off, by running lines, getting a steam-pump on board, &c., but it was of no use, as she was too badly wrecked. Most of the cargo, however, was saved.

April 20.—At 4 o'clock in the afternoon the sloop Island Belle, of Rockland, Maine (sixty-nine tons), loaded with granite, from Hurricane Island for Saint George, and having a crew of four men, while beating in to Seal Harbor, grounded on the flats off Spruce Head, it being low water at the time. The crew of the White Head Island Station (First District), about a mile and a half distant, discovering the accident, boarded the vessel as quickly as possible and remained by her until she floated on the floodtide, in order to assist in case the great weight of her cargo should cause her to spring a leak while lying aground. Fortunately, she came off uninjured. The crew arrived back at the station soon after dark.

April 20.—At about 10 o'clock in the morning, a heavy rain-storm then prevailing, the wind blowing from the south-southwest at the rate of twenty-five miles an hour, and a high sea running, the sloop Edith Fowle, of Chincoteague, Virginia, manned by three men, and going with oysters from James River, Virginia, to Chincoteague, suddenly had her mast-head and topmast carried away by the gale and fell into distress. The vessel was about two miles from shore when the disaster occurred, and the crew of the Assateague Station (Fifth District), Virginia, put out in the surf-boat from about the same distance, and reached her in about half an hour. Once on board, they cleaned up her decks, got down her broken spars, went aloft and fitted a strap on the remainder of her mast, sent up peak and throat halyard-blocks and hooked them onto the strap, and double reefed her mainsail. Then, lashing her broken spars on deck, and hoisting her mainsail, they left her all prepared to continue her voyage, and she sailed safely into Chincoteague.

April 20.—At half past 1 o'clock in the afternoon, as a small express wagon was being driven up the gang plank ashore from the New Orleans wharf-boat at Louisville, Kentucky, the mule attached to the wagon slipped off into the river and hung there with the wagon still on the plank. The accident was observed by the keeper and crew of the Louisville Station (Ninth District) two hundred feet distant, and instantly launching a boat they pulled to the spot, and quickly released the mule and towed it safely ashore.

April 21.—About 11 o'clock in the forenoon, the schooner Sarah Babcock, laden with rough stone for light-house construction, and manned by a crew of five, ran upon Latimer's Reef, in Fisher's Island Sound, about two miles from the main-land and five miles west of the Watch Hill Station (Third District), Rhode Island. The keeper and his men at once launched the surf-boat, and after an hour's hard pulling against wind and tide, reached the schooner. It appears that the vessel had been moored alongside of the reef, but in the fresh wind and strong current, her anchors failed to hold, and she went onto the rocks, against which the life-saving crew found her beating, heeled over on one side, the sea washing over her deck, and her condition extremely uncomfortable as well as perilous. The crew boarded her, and proceeded to throw

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over a portion of her cargo from the one side, by which means she was soon righted, and lay in better trim. The wind gradually calmed down, and the crew then assisted the sailors to put a strain on the anchors sufficient to hold the vessel off the rocks and make her safe. Her captain expressed at parting much thankfulness to the life-saving crew for their assistance in releasing the craft from a dangerous situation.

April 21.—At a little after noon the crew of the Petunk Station (Third District), coast of Long Island, observing a large frame dwelling-house on fire, about two miles distant on the main-land, hurried across the bay in boats and rendered good service by aiding in saving the furniture, &c., and preventing the flames from extending to the neighboring houses.

April 22.—At about 1 o'clock in the day the crew of the White Head Island Station (First District), Maine, rescued the crew, five in number, of the British schooner Mary George. The schooner was from Newburyport, Massachusetts, bound to Saint John, New Brunswick (where she belonged), in ballast. While passing up Muscle Ridge Channel at the entrance to Penobscot Bay, under all sail, at noon, the weather perfectly clear with the wind from northwest, she was struck by a sudden squall and capsized, her crew crawling out on her bottom as she went over. The accident occurred just above Oak Island about four miles northeast of the station. With splendid dash the life-saving crew sped to the rescue in their surf-boat, the schooner being reached and the men safe in the station boat in half an hour from the time of the accident. While discussing the chances of saving the vessel the schooner Mary J. Elliott came up, bound to Rockland. The captain of the latter kindly gave the captain of the Mary George and two of his men passage to Rockland, where they could obtain the services of a vessel having the necessary appliances for righting their craft, the other two men remaining in the vicinity with the life-saving crew and accompanying them to the station at nightfall. At daylight next morning (23d) the life-saving crew again went out with the two men just as the captain arrived from Rockland with two steam sloops well equipped for the business on hand. After a hard day's work the schooner, although full of water, was righted and taken into Owl's Head Bay, where she could be pumped out and put in trim again, the station crew returning to their quarters at half past 8 that night pretty well fagged out.

April 22.—During the 8 o'clock (night) watch, the south patrol from the Rehoboth Beach Station (Fifth District), coast of Delaware, saw a schooner standing in towards the land and in danger of striking the bar. He at once flashed a Coston signal to warn her and she went about and stood off shore.

April 22.—At a few minutes after 11 o'clock at night, as the steamer Ben Franklin, of Cincinnati, Ohio, one of the Louisville and Cincinnati Mail Line, was approaching her landing at Louisville, the strong easterly wind prevented her from rounding to as quickly as she ought to have done, and, getting caught in the swift current setting down towards the falls, she was swept against the wing-dam, where she lodged hard and fast, with her stem projecting over the dam. She was loaded with a general cargo and had fifty passengers, besides a crew of sixty-five, making a total of one hundred and fifteen persons on board, all told. The fact that she was drawing about three feet of water, while the depth on the dam was but little over two feet, was all that saved her from being dashed over the dam and instantly wrecked, with an accompanying terrible loss of life. The accident was witnessed by the lookout at the Louisville Station (Ninth District), and before the steamer sounded her whistles

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for assistance the life-saving crew were alongside with their two boats ready to render aid. The vessel had suffered no apparent damage, but, before taking any active steps towards getting her off, the keeper offered to convey any passengers ashore who desired to go. About twenty-five availed themselves of the offer and were promptly landed. Two stout hawsers were then brought from the station and run from the steamer to the river bank and hove well taut to hold her, these being supplemented with three more lines belonging to the steamer. The life-savers then procured the services of two harbor tugs, and after several hours of hard labor the steamer was hauled clear of the dam at 8 o'clock in the morning (April 23) and safely moored at her landing. In recognition of the services of the life-saving crew on this occasion the captain of the steamer sent the following letter to the keeper:

"LOUISVLLE AND CINCINNATI U. S. MAIL-LINE CO.,
"*Louisville, Kentucky, April 27*, 1883.

"For the services rendered steamer Ben Franklin on Sunday night, April 22, while on the dam at this port, I, as captain, in behalf of myself and company, return thanks for the efficient and gallant services rendered us. Had it not been for the prompt attention of yourself and crew there is no telling what the damage might have been, and it is with great pleasure I address the above lines to you.

"Very respectfully,

"BEN. M. MIRRILEES,
"*Captain Steamer Ben Franklin.*

"Capt. WILLIAM M. DEVAN,
"*Life-Saving Station, Louisville, Kentucky.*"

April 22.—The schooner S. P. Wilson, of Chicago, Illinois, in making the harbor of Grand Haven, Michigan, broke adrift from the tug which had her in tow and was assisted by the crew of the Grand Haven Station (Eleventh District) in getting fast to the pier to avoid being blown out into the lake again, the wind blowing quite fresh at the time directly down the harbor.

April 22.—At daylight the north patrol from the Evanston Station (Eleventh District), Lake Michigan, sighted a schooner at anchor off shore about six miles north of the station. It was blowing hard at the time from the eastward, with frequent rain-squalls, and the sea being quite rough, it was feared she would drag ashore. A close watch was therefore kept upon her all day until 4 in the afternoon, when the keeper saw her hoist a signal of distress, and a little later run up her jib and head for the beach. A team was at once obtained to haul the beach apparatus and the crew started up the shore as quickly as possible towards the place where she must strike. Arriving abreast of her, six miles distant from the station, in an hour and a quarter (6 P. M.), they found she had stranded some two or three hundred feet from the beach and had swung round broadside to, affording a tolerably good lee for landing the people who had shoved off from her in their yawl just as the station men got there. The undertaking was not without considerable risk, as the deck load of cedar posts and cord-wood, of which her cargo was wholly composed, was rapidly coming ashore in the surf, but, taking in the situation at a glance, the life-saving crew rushed down and assisted them in making a safe landing. There were six persons in all, one being a woman, the stewardess. The schooner proved to be the S. Bates, of Chicago, Illinois, whither she was bound, from Horne's Pier, Wisconsin. The captain reported that he had been compelled to anchor through

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loss of sails, and that, when he found the anchor would not hold and that the vessel must inevitably drag ashore, he had concluded to beach her before dark in order to save the lives of himself and crew. He had therefore slipped his cable, hoisted the jib, and let her go as high up as possible. As nothing had been saved but what they stood in, the keeper's offer to go off in the yawl and recover their effects was gladly accepted, and, after the station crew had thus saved all that was possible, they procured comfortable quarters for the wrecked crew in the vicinity before their return to the station, which was reached at 9 o'clock at night. A large portion of the cargo was saved, but the schooner became a total wreck.

April 23.—At half past 7 in the evening of April 22, the schooner George Lewmon, of Onancock, Virginia, from the Potomac River, for Keyport, New Jersey with a cargo of oysters, was totally dismasted in a northeast gale and snow-storm off the coast of New Jersey, and was compelled to let go her anchors to avoid driving onto the beach, about a mile and a half to leeward. She was discovered at anchor next morning (23d) at daylight by the crew of the Deal Beach Station (Fourth District), but on account of the condition of the sea it was impossible for them to launch their boat. The keeper, therefore, telegraphed at once to the Coast Wrecking Company for the aid of one of their tugs, receiving reply that none could be sent. The schooner remained at anchor until a little afternoon, when, fearing she would founder in deep water, the captain slipped his cables and let her drive ashore about a quarter of a mile north of the station. The life-saving crew were already on hand with their surf-boat, and as soon as she struck pulled out through the breakers and brought all hands, five in number, safely ashore to the station, where they were sheltered for three days until the captain could arrange for their departure, the vessel becoming a total wreck.

April 24.—At half past 8 in the morning the crew of the Chicago Station (Eleventh District), Lake Michigan, went off in their surf-boat and rescued the second mate of the steamer Toledo, of Detroit, Michigan, who, in attempting to go off in a small scow to his vessel, which was lying in Chicago Harbor, had been blown off by the strong northwesterly wind, and was fast drifting out into the lake. The scow would soon have been swamped and the man probably lost but for the timely assistance of the life-saving crew.

April 26.—At half past 4 in the morning the schooner Libbie T., of Halifax, Nova Scotia, from Londonderry, Nova Scotia, for Boston, Massachusetts, with six passengers and a cargo of potatoes, and having a crew of four men, while beating into Quoddy Roads for a harbor, struck on Wormell's Ledge, about a mile and a quarter east-northeast of the Quoddy Head Station (First District), coast of Maine. She was discovered by the station patrol a few minutes after she went on, and as quickly as possible the life-saving crew went off to her assistance in their boat. She lay head on to the reef in a very unsafe position, with rocks on either side, which would have made short work of the craft had the sea been anyways rough. It was then half-ebb, so, waiting patiently until the turn of the tide, the life-saving crew watched their opportunity, and when the flood began to lift her all hands manned the halyards and made sail, and by guying the boom well out they succeeded in backing the vessel safely off into deep water without her sustaining any damage. She was then piloted into the Roads and anchored, and afterwards, when the wind favored, proceeded on her voyage.

April 27.—The schooner Lucy May, of and from Rockland, for Saint George, Maine, in ballast, with a crew of six men, while beating down

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Muscle Ridge Channel, at the entrance to Penobscot Bay, at about 4 in the afternoon, missed stays in attempting to go about, off Hay Island Ledge, and was compelled to anchor to avoid driving into the rocks. The crew of the White Head Island Station (First District), coast of Maine, saw her come to, and noticing she was within her own length of the breakers, and in a dangerous position, where she would strike the rocky bottom at low water, they went off to her assistance, the distance from the station being about three-quarters of a mile. Quick work was necessary, as it was then the first of the ebb-tide. The life-saving crew, therefore, carried out a kedge with the surf-boat, and assisted in heaving the schooner well to windward, clear of the rocks; then making sail they took her to the anchorage in Seal Harbor, where she was safe. Had the vessel remained where she anchored first she would probably have been wrecked, as the wind was blowing fresh and the sea was rough.

April 30.—The midnight patrol from the Dam Neck Mills Station (Sixth District), coast of Virginia, when about three-quarters of a mile to the northward of the station, found a fishing dory with two nets and two oars in it. The State commissioner of wrecks was duly notified.

April 30.—At half past 5 in the morning the captain of the schooner Arrow, of Chicago, Illinois, arrived at the Two Rivers Station (Eleventh District), Lake Michigan, and reported that his vessel had run ashore an hour and a half previous (4 o'clock) about three and a half miles northeast of Rawley's Point, and that, the lake being smooth, he and his crew, three in all, had landed in their own boat. The weather was fine, with a light breeze from the northeast. The schooner was from Milwaukee, Wisconsin, bound to Leland, Michigan, in ballast. The captain reported her lying easy, but requested that one of the station crew be sent on board with an auger, in case it was found necessary to scuttle her to prevent her from pounding to pieces should the sea become rough, the captain soon after leaving by rail for Manitowoc, Wisconsin, to obtain the aid of a tug. While the captain was absent the station patrols visited the vessel from time to time during the day, and reported her condition to the keeper. It was not until 5 o'clock the next morning that the captain arrived with a tug and requested the life-saving crew to accompany him to the vessel to assist in the effort to get her off. The tug started with the surf-boat in tow at half past 5, or as soon as the men could swallow a hasty breakfast, reaching the Arrow at 6 o'clock. The station crew assisted the tug in getting her lines to the schooner, and then set to work at the pumps, while they made a strenuous effort to get her off. She refused to move, however, and after pulling on her for four hours the tug gave it up, and towed the surf-boat crew back to Two Rivers; then left for Green Bay, whither she was bound. Nothing further could be done by the life-saving crew until May 4, when the captain decided to strip the vessel of everything movable, as she was nearly full of water and in bad condition. The crew, therefore, removed the anchors and chains and sails and running rigging, which were conveyed to the station for safe keeping. The captain afterwards went to Chicago to obtain assistance in making one more effort to save his vessel, returning with the steam-barge R. G. Ingersoll and a steam-pump, and at 4 in the morning of the 23d one of the owners called at the station for the assistance of the crew, and also for the loan of a hawser. The men responded at once, but it was too late, for when the relief party arrived at the vessel, an hour and a half later, she was so deeply imbedded in the sand that nothing could be done further than to save the spars and standing rig-

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ging, and when this was effected the unfortunate craft was abandoned as a complete wreck. Although the station crew accomplished nothing more than saving the vessel's outfit, the owners and captain were very thankful for the willing assistance they afforded in the efforts to float her off.

May 2.—At 10 o'clock at night, as the steamer Northwest was leaving the harbor of Cleveland, Ohio, for Detroit, Michigan, one of her passengers, who was intoxicated, fell overboard. The patrol from the Cleveland Station (Ninth District), witnessing the accident, immediately went to the rescue and got the man ashore in an exhausted, speechless condition. Application of the methods of resuscitation in practice by the service was begun, when the patient revived. He was then placed in bed at the station, where he remained over night, and the next morning, after breakfast, took his departure, with many expressions of gratitude.

May 2.—The schooner Maria, of Manistee, Michigan, with a crew of three men, in leaving Portage Harbor for her home port with a cargo of cord-wood, struck the bar as she passed out and commenced leaking so badly that the crew were compelled to throw overboard the cargo in order to reach their destination. Upon her arrival at Manistee in a water-logged condition, the crew of the Manistee Station (Eleventh District), Lake Michigan, went on board and pumped the vessel out, and then helped take her up the river to a safe berth at the wharf. The captain was very thankful for their aid.

May 2.—At 3 o'clock in the morning the crew of the Golden Gate Park Station (Twelfth District), California, were aroused by an alarm of fire at the Beach House, some distance back from the station. They hurried to the spot to render aid, but owing to the difficulty of getting water were unable to save the main building. They, however, saved the stables and barns, together with the live-stock and other property, and afforded shelter at the station to the owner of the place and his wife and six children until they could be otherwise provided for.

May 3.—At 9 o'clock at night, during the prevalence of a fresh northeasterly gale on Lake Erie, the captain of the schooner Volunteer, of Cleveland, Ohio, lying at the quarry docks, Point Marblehead, Ohio, called at the Point Marblehead Station (Ninth District), about half a mile distant, and requested the aid of the crew in hauling his vessel to a more secure berth in order to save her from damage in the heavy sea which was setting directly against the dock. The keeper and his crew went on board and ran the schooner's anchor and got her some distance off, but the captain fearing the anchor would not hold sent for the assistance of a tug. The tug failed to come, however, and as the weather was getting worse, and nothing further could be done, the captain decided to drop back into his old berth, where she was again made fast. The sea became very bad towards midnight, and as the vessel was deeply laden with stone she filled and sunk in shoal water. The station crew assisted her men, three in number, ashore and sheltered them for the night at the station and dried their wet clothes for them. They also hauled the schooner's boat ashore and saved it from being knocked to pieces. Two days later the schooner was pumped out by a steam-tug and taken to Sandusky, a few miles distant, for repairs, preparatory to proceeding to Cleveland, whither she was bound, with her cargo.

May 4.—During the forenoon of this date four boys belonging in Louisville, Kentucky, attempted to cross the Ohio river from Jeffersonville, Indiana, in a small flat-boat, which was unprovided with oars,

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their only means of propulsion being a couple of small pieces of board. They got as far as mid-stream without trouble, but there the full force of the current caught them and they would soon have been swept over the dam but for the prompt action of the Louisville life-saving crew (Ninth District), who, as soon as they discovered the boys' peril, went to their aid and brought them safely to the Louisville shore.

May 6.—The steamship Cydonia, of North Shields, England, bound from New York to Saint John, in ballast, with a crew of twenty-one men, ran ashore on the reef off the south side of Tuckernuck Island at 1 o'clock in the morning, during a dense fog. She was discovered at daylight by the keeper of the Muskeget Station (Second District), coast of Massachusetts, who was on Tuckernuck Island at the time, his station being closed for the season. As the station was four or five miles distant, on Muskeget Island, he resolved, in order to save time, to use the Massachusetts Humane Society's boat on Tuckernuck Island; so, quickly mustering a boat's crew, four of whom were his own men and the rest volunteers, he went off on board the steamer. An attempt was at once made to relieve her by laying cables off shore, but without avail, for as soon as they commenced heaving, the anchors worked home without budging the vessel in the least. The keeper, therefore, advised the captain to procure heavier ground tackle at Nantucket, a few miles distant, and offered to take him there in the boat. The captain gladly accepted the offer, and upon reaching Nantucket made arrangements with the underwriters' agent for the dispatch of steam tugs and all necessary appliances for hauling the steamer off. The tugs arrived alongside the next morning (7th) and operations were resumed, the keeper and his men rendering excellent service in running lines and superintending the planting of the anchors off shore, their thorough knowledge of the locality enabling them to do so to the best advantage. At high water in the evening, everything being in readiness, the keeper gave the signal, the hawsers were hove taut, and the tugs put in motion, and after a short but strong and steady pull the good ship Cydonia moved slowly in her sandy bed and finally slid off into deep water, and was once more safely afloat, apparently uninjured. The keeper and his men accompanied her until she had made a good offing, and after giving the captain the best course for clearing the shoals of Nantucket returned ashore, reaching the island at 9 o'clock that night.

May 6.—The steam pile-driver Mason, of and from Au Sable, Michigan, with a crew of four men, in running down Lake Huron to East Tawas, in the same State, encountered strong southerly winds, and, through not having sufficient steam power to make headway against the sea, was driven ashore at 11 o'clock in the morning on the outer side of Ottawa Point, about three hundred yards to the southward and westward of the Ottawa Point Station (Tenth District). The life-saving crew went to her at once in their surf-boat, and finding she had no appliances for getting off with they returned to the station for an anchor and line, which they ran out from the vessel, and by half past 2 in the afternoon had her safely afloat and at anchor, waiting for the wind to moderate. She reached Tawas all right later in the day, when the wind abated.

May 7.—At about half past 7 in the evening the lookout at the Cleveland Station (Ninth District), Lake Erie, gave the alarm that the small harbor tug W. H. Doane, of Cleveland, Ohio, engaged in towing the schooner Venus out into the lake, had just capsized and sunk about a mile north of the station, off the east pier. The surf-boat was instantly run out, and the life-saving crew proceeded to the spot to render what assist

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ance they could. Owing to the distance they had to pull they were too late to be of much service, as the men of the tug, three in number, had already been picked up by the schooner's yawl and were safe when the surf-boat arrived. They, however, recovered clothing and other articles of value that were floating over the spot where the tug went down, and on the following morning (8th) went out with the owner of the tug to locate her, and after sweeping the bottom for about an hour found where she lay preparatory to an effort to be made to raise her. It was learned that the accident was caused by the jamming of one of the lines fast to the tug when she attempted to cast off and allow the schooner to proceed on her way. Four days later (May 11th) the life-saving crew went out and assisted in raising her and bringing her into the harbor.

May 7.—At 2 o'clock in the afternoon three men, residents of Muskegon, Michigan, who were out rowing on the river opposite that place in a boat, ventured too near the mouth of the harbor, where it was very rough, and where the boat took in so much water that the men, becoming frightened, lost all control and were in danger of being carried by the strong current out into the lake and swamped. Fortunately some of the crew of the Muskegon Station (Eleventh District), Lake Michigan, observed their perilous situation, and hurrying to the rescue they succeeded in throwing them the end of a line, which the poor fellows made fast, when they were towed back into smooth water and safely landed on the pier. It was a narrow escape, as the boat was full of water when the life-savers arrived, and the men were clinging to her with all their might to avoid being washed overboard.

May 7.—At a quarter past 2 in the morning, the weather being rainy and dark, the patrol from the Grand Haven Station (Eleventh District), Lake Michigan, saw a vessel dangerously close in, and warned her with a Coston signal in time to prevent her running ashore.

May 9.—At 2 o'clock in the afternoon the lookout at the Big Sandy Creek Station (Ninth District), Lake Ontario, New York, discovered and reported a schooner ashore at the mouth of Big Salmon River, about ten miles south of the station. The crew at once launched their life-boat, and as the wind was from the northeast and fair, ran down to the vessel under sail, reaching her at about 4 o'clock. She proved to be the William Gilbert, of Sandy Creek, New York, carrying a crew of three men, bound from Chaumont, New York, to Port Ontario, in the same State, with a cargo of lime-stone. The captain reported that while attempting to enter the river the strong outsetting current had cut the vessel out of the channel into shoal water near the bank, where she grounded hard and fast. Two lines had already been run out by her crew, one to the shore and the other to the kedge planted in the channel, in an attempt to float her off. The life-saving crew ran additional lines with their boat, including one they had brought from the station. After heaving the lines well taut and trimming the sails to help the schooner as much as possible, the station men obtained the use of a lighter, into which they discharged some of the cargo, the crew of the Salmon Creek Station, some four miles distant to the southward, arriving about that time and lending efficient aid. By thus lightening the vessel and heaving upon the warps the schooner was hauled afloat at about 7 o'clock in the evening without sustaining any damage and taken up the river to her destination, it being quite late when the two life-saving crews reached their respective stations.

May 9.—At a little after 6 o'clock in the evening the lookout on duty at the Louisville Station (Ninth District) gave the alarm that a small open river flat, with a man and a woman in it, in attempting to cross the

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Ohio River from Jeffersonville, Indiana, had got caught by the current in mid-stream and was in danger of going over the falls. One of the station-boats was quickly manned and in a short time the flat was reached and taken in tow, and its occupants, Thomas and Pauline Trout, were safely landed at Louisville.

May 9.—At 8 o'clock in the morning the steam-tug Albion, of Chicago, Illinois, while engaged in recovering an anchor which had been lost by a vessel near Hamlin, Michigan, got the hawser she was using afoul of her propeller, when about a mile southwest of the Grand Point au Sable Station (Eleventh District), Lake Michigan, and became temporarily disabled. Her whistles for assistance being heard by the station crew they went off promptly in one of their boats and aided in clearing the line from the wheel so she could resume her work.

May 9.—On this date the schooner Kate E. Howard, of Chicago, had come from Muskegon, Michigan, to Evanston, Illinois, with a cargo of lumber, which she had unloaded at the Evanston north pier, and was lying at the pier waiting for two of her crew who were expected from Chicago. On board were the captain, mate, cook, and a boy, the captain's brother. At about half-past 6 o'clock in the evening, the weather being bad and threatening, a strong wind having set in from the northwest, with heavy squalls, accompanied with pouring rain and lightning, the captain, lest the schooner should thump or chafe to her injury against the pier, judged it prudent to run her out about three-fourths of a mile into the lake, where he took in all sail and let go the anchor. At about 7 o'clock the crew were forward paying out chain, when a violent squall suddenly struck the vessel and instantly rolled her down upon her side. The captain, mate, and cook had just time to spring into the fore-rigging, from whence they soon discovered the boy clinging to a rope, and washed out by the sea from the hull, and by great effort succeeded in pulling him up after them. All the time the rain fell so thickly that they could not see a boat's length ahead of them, and the bow of the vessel began to sink as she lay upon her beam ends, compelling all hands to get away from the fore-rigging to the main cross-trees. The mate and cook were the first to make the effort, and crawled along the rigging to the hull, through the wash of the sea, the mate swallowing so much water in the passage that he was almost exhausted. The hull gained, the two men ran along it to the main rigging, and clambered out to the cross-trees, the mate being so spent that he had to be helped along by the cook. Meanwhile the bow had continued to sink, and as the captain could not follow the course of his predecessors, on account of the fore-rigging being now completely under water, he was forced to make his way along the rope between the two masts called the triatic stay, which he did, slowly dragging along the boy, his brother, and after protracted and laborious effort succeeded in reaching the main cross-trees, upon which he climbed, aided by the cook, and pulled his brother up after him. The rain still fell in a deluge, and the obscurity it made was thickened by the growing darkness. The men on the cross-trees shouted repeatedly in chorus for aid, but their voices were drowned by the wind and storm, and they could do nothing better for themselves than to pull around them the gaff-topsail as a shelter from the gale.

In the mean time Keeper Lawson, of the Evanston Station (Eleventh District), and his men were straining their eyes on shore in the direction they knew the schooner had gone for the purpose of anchoring. They were three-quarters of a mile away, and nothing could be seen through the rain-thickened murk, even with the aid of the occasional flashes of lightning. As the minutes wore by the atmosphere cleared a

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little, and the crew faintly descried a black object, but concluded it was a tug, several tugs having been seen on the lake before the storm. Finally, at a quarter to 8, on the mere suspicion that the schooner might be in trouble, they launched the surf-boat, and pulled out to her. When half a mile from shore they saw her in a flash of lightning, weltering on her side, with the group in her cross-trees. The sight made them give way with a will, and though wind and sea were against them, they lay down to the oars with an energy which soon brought them up to the shivering and exhausted men who clung to their perch on the capsized vessel, with the seas every other minute washing over them. In a few moments the four were gotten into the boat, and twenty minutes after 8 were housed at the station. The captain lived in the village, and went home, but the other three were taken in hand by the life-saving crew, given restoratives, stripped, rubbed dry with towels, wrapped in dry clothing and blankets, and made comfortable all night at the station.

The next day (May 10) the captain procured the services of a tug, and at 1 o'clock in the afternoon the life-saving crew went out in the surf-boat, and ran a hawser from the tug, which they made fast to the after timber-head of the wreck. The vessel lay just where she capsized, in thirty feet of water, with her after-quarter just out of the sea. After an attempt by the tug for two hours to break her loose from her moorings, the timber-head gave way, and as the day was squally and rainy, and the wreck all awash with the sea, further work was abandoned, and the surf-boat returned to shore with the captain. Later in the day the weather cleared a little, and the crew again went out with the captain and brought to land the main gaff-topsail and a number of things which were liable to be washed away.

The next day (May 11) the tug got the wreck afloat, the life-saving men assisting, and after towing her for two miles were obliged to give up, and telegraph for two more tugs to get her into Chicago. At the entrance to the harbor still two others were required, so that five in all were necesary to get this refractory schooner into a safe haven. The life-saving crew rendered final service to her owners by dragging for and recovering some of her lines and halyards.

May 9.—Shortly before midnight, as the north patrol of the Sheboygan Station (Eleventh District), Lake Michigan, was returning towards the station at the expiration of his watch, he discovered a large, newly-constructed crib, intended for the improvement of the harbor at that place, which had broken from its moorings and was drifting down the river with the current towards the lake. As soon as he could report it, the life-saving crew turned out in their boat, taking with them a stout hawser, and upon overtaking the crib before it got out into the lake made it fast temporarily with the hawser until they could return and borrow a length of chain from a schooner lying near, with which the crib was properly secured. But for the vigilance of the patrol and the promptness of the crew in turning out and securing it, the crib, which was worth nearly $2,000, would have been lost, as there was a northeast storm at the time, and if it had once got outside the piers it would have been cast onto the beach and sanded up beyond hope of recovery in a very short time.

May 10.—The schooner Capella, of and from Muskegon, Michigan, for Racine, Wisconsin, with a load of slabs and carrying a crew of two men, ran ashore about three miles to the northward of Racine Harbor at 9 o'clock in the night of May 9, the wind blowing fresh from the eastward, with thick, squally weather and quite a rough sea. The night was so

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dark and rainy that she could not be seen from the beach until daylight in the morning (10th), when the patrol from the Racine Station (Eleventh District) discovered and reported her. The surf-boat was launched as quickly as possible, and the life-saving crew, after a hard struggle against the heavy sea, reached the schooner at half past 6. They found but one person, the captain, on board, the other men having constructed a raft and gone ashore on it soon after the vessel struck; the captain, an old man, preferring to remain by his vessel until assistance should arrive from the station. He was drenched to the skin and quite benumbed with cold, and as soon as the station could be reached he was given proper restoratives and put to bed. A dispatch was then sent to Chicago for the aid of the revenue steamer Andrew Johnson in getting his vessel afloat, but the message failed to reach her.

The next morning (11th), the storm having abated, the life-saving crew went on board and helped to remove the deck-load to lighten her, and later in the day assisted in an effort made by the harbor-tug Henry S. Sill to get her off. It was unsuccessful, however. On the day following, the revenue steamer Johnson having arrived and commenced operations, the station crew were kept busy in running lines, sounding around the vessel, and aiding in every way they could until she was floated off, at 5 o'clock in the evening. As the schooner was being towed towards the harbor she rolled over on her side, and they had much difficulty in righting her. Scarcely had they got her into the river when she went over a second time. As it was then too late to do anything, they left her for the night, and on the following day (Sunday) the life-saving crew helped raise and strip her and take her up the river, where she could be repaired. The captain was cared for at the station five days.

May 11.—At daylight the keeper of the Monomoy Station (Second District), coast of Massachusetts, discovered a schooner ashore on the southwest part of Handkerchief Shoal, about four and a half miles to the southward and westward of the station. His crew were not on duty, as all the Atlantic coast stations were then closed for the summer. The keeper of the Chatham Station was present, however, and the two men put off in a sail-boat to the schooner's assistance, arriving on board at 7 o'clock. She proved to be the T. S. McLellan, of and for Portland, Maine, from Philadelphia, with a load of coal, her crew numbering six men. It was also learned that she had struck the shoal during the night and had afterwards floated at high water and anchored; but the wind being fresh from the southwest, and the sea rough, her ground tackle failed to hold her and she went ashore again at about half past 4 in the morning. Nothing could be done for her relief until the next high water, and as she was then tight the crew refused to leave her, the captain promising to make signal to the station in case he needed assistance. After the two keepers left a wrecking company went on board and contracted with the captain to save the vessel. Before they could do anything, however, the schooner bilged and filled with water, and thus ended all hope of getting her off. The wreckers, therefore, took the crew into their boat and landed them at the Monomoy Station, where the keeper sheltered and fed them until the next day and then conveyed them to Chatham and procured for them free passes to their homes.

May 12.—At 11 o'clock at night of the 11th of May, the steamer Gulnare, of Kingston, Jamaica, West Indies, stranded during a fog on the coast of New Jersey, about a mile and three-quarters south of the Long Beach Station (Fourth District). She was in ballast from New York

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for Port Antonio, Jamaica, and carried a crew of sixteen men. The life-saving station was closed for the summer, but the vessel was discovered at 4 o'clock the next morning (12th) by one of the crew, who reported the facts to the keeper as quickly as possible. The latter assembled his men at the station with all dispatch, hauled the boat out and proceeded to the steamer, boarding her at a little after 5 o'clock, thus making excellent time all the circumstances considered. The crew were then safely landed by the life-saving crew, three trips being necessary with the boat in getting all hands ashore with their baggage. On the next day a wrecking company arrived and took charge, and after working on the steamer several days succeeded in saving her, with but slight damage.

May 12.—At half past 10 in the forenoon the Canadian barkentine Cecelia, of Windsor, Ontario, with a crew of eight men, bound up to Lake Superior from Saint Catharines, Ontario, in ballast, while running for shelter under the lee of Middle Island, Lake Huron, during a strong northwest blow, got caught inside of a reef off the southeast part of the island, through hauling up before she had made the buoy on the reef, and was only saved from going ashore by quickly letting go the anchor. The patrol from the Middle Island Station (Tenth District), had watched the vessel's movements, and thinking when she anchored she was ashore, lost no time in getting to the station, a mile or so distant, and giving the alarm, so that by half past 11 the life-saving crew were alongside in their surf-boat ready to assist in extricating her. They found, however, that she was afloat, although in a dangerous situation, where the water was very shoal. The captain decided not to attempt to move her until the wind moderated, and when the men shoved off he accompanied them ashore and went to the station. As the day wore on the wind lulled a little, and at 4 in the afternoon the life-saving crew took the captain off again and then sounded around the vessel to ascertain the best way out, the deepest water being found astern. When this was settled they assisted in hoisting sail and tripping the anchor, and then backed her clear of the reef and beat her up to a safe anchorage between the island and the main land, about a mile and a half from the station, it being past 9 at night when they got back to their quarters. Early the next morning (Sunday) they again went off, as requested by the captain the night before, and after helping to get the vessel under way piloted her well out, clear of the island and saw her safely started on her voyage up the lake.

May 12.—At half past 6 in the evening, as Surfman Moses Bunker, of the Two Rivers Station (Eleventh District), Lake Michigan, was proceeding towards the station he saw a boy named Augus Martin, residing in Two Rivers, fall overboard from a saw-log on which he had been standing, about fifty feet out from the river bank. The man instantly jumped into a boat near by and reached the spot just in time to save the little fellow from drowning. All who witnessed the affair highly commended Bunker's conduct, and the boy's friends were very grateful to him.

May 14.—On the night of May 14, the strong freshet setting out of the Grand River at Fairport, Ohio, into Lake Erie, carried two large cribs intended for the Government pier at that place adrift from their moorings. The crew of the Fairport Station (Ninth District), succeeded in securing one of them before it reached the lake and towed it back up the river to a place of safety. The other one got outside before they could check it and grounded to the westward of the harbor, where it embedded itself so deeply in the sand that the crew worked nearly two

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whole days assisting the people in charge before it could be floated and taken back to where it belonged.

May 14.—At 7 o'clock in the morning, during the prevalence of a northeast rain-storm, the captain of the schooner Condor, of Chicago, Illinois, arrived at the Sheboygan Station, (Eleventh District), Lake Michigan, and requested assistance in saving his vessel, which he reported had run ashore that morning at 3 o'clock some six miles north of Sheboygan Harbor. She was a small vessel of thirty tons, carrying a crew of but two men, and was from Muskegon, Michigan, with a cargo of thirty thousand feet of lumber from Manitowoc, Wisconsin. The men had landed in their yawl without difficulty soon after she struck. The surf-boat was at once launched and the station crew took the captain across the river to the tug Kitty Smoke, with which arrangements were made for getting the schooner off, the party leaving soon afterwards in tow of the tug for the stranded vessel. They found her nearly high and dry, and as the surf had increased and was too rough for successful operations it was decided not to do anything until the sea moderated. The captain therefore returned with the relief party to Sheboygan.

On the following morning (15th), the weather being favorable, the station crew again went out in tow of the tug, and after running the tug's hawser went to work lightening the schooner, some manning the pumps to get the water out of her while the rest removed the cargo on to the beach. When this was done the tug commenced pulling on her, and about an hour later the schooner got off and was towed to Sheboygan, whence she was afterwards taken to Manitowoc for repairs. The captain thanked the station crew very heartily for their help in saving his vessel.

May 15.—At about noon the crew of the Milwaukee Station (Eleventh District), Lake Michigan, were called upon by some sailors belonging to the schooner Pewaukee to search for the body of a shipmate, named Dennis Black, who they reported had been knocked overboard from the schooner's yawl by collision with a tug some distance up the river an hour or two previous and drowned. The life-saving crew repaired to the place at once in their boat and grappled for and recovered the body and gave it in charge of the city authorities.

May 17.—At about 3 o'clock in the afternoon as the keeper and four of the crew of the Muskegon Station (Eleventh District), Lake Michigan, were out on one of the harbor piers fishing, near where the schooner Charley J. Smith, from Manistee for Chicago, with a cargo of shingles, was lying wind bound, they observed the schooner Jessie Martin coming down the river under all sail, bound out to Milwaukee, and, owing to the baffling wind, heading directly towards the Smith. Something must be done, and that very quickly, to prevent a collision, as the Martin had a four or five knot current with her and was approaching very rapidly. The station men therefore ran towards the Martin with a heavgin-line, with which they got the end of a hawser from her to the pier, and by this means she was sheered in close enough for them to jump on board and help run her sails down, and, by getting additional lines out, stop her headway; she being within two feet of the other vessel when she fetched up. It was a remarkably close shave, and there is no doubt the saving of both schooners from serious damage was due to the watchfulness and activity of the station men, as the collision seemed inevitable, and not the least effort to prevent it had been made by the people on board the Martin until the keeper and his party took the initiative.

May 18.—In the afternoon, about 3 o'clock, Mr. Lambert N. Goldsmith, with his son, Norton, of Louisville, Kentucky, and a Mr. William T.

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Binder, of Philadelphia, Pennsylvania, engaged two young men, named Morris and Wiesen, to take them out fishing in a skiff near the cross-dam above the falls of the Ohio River, about half a mile from the Louisville Station (Ninth District). Arriving at the dam, Wiesen jumped out with the end of the painter for the purpose of making the skiff fast. The current was so strong, however, that he was unable to hold the line long enough to get it secured, and away went the skiff adrift down the falls, leaving Wiesen alone on the dam. A strong south-west wind was blowing (up-stream), which made the water quite rough, and half swamped the skiff. Fortunately the whole occurrence was seen by the lookout on the roof of the station, and as soon as the skiff broke adrift the alarm was given, and three of the crew set out to the rescue. It required a hard pull to overtake the skiff as it dashed onward with the rushing current, but their skill and experience gave them the advantage, and before the skiff reached the most dangerous part of the falls the gallant life-savers dashed alongside, arrested its further progress, and were soon on their way shoreward with the skiff in tow, to the great relief of the fishing party, young Wiesen being picked up as they returned past the dam and landed near the station with the rest. Upon reaching the city, Mr. Goldsmith and his friend sent the following letter of thanks to the life-saving crew:

"LOUISVILLE, KENTUCKY, *May* 18, 1883.

"GENTLEMEN: Please accept our heartfelt thanks for the quick and efficient manner in which you came to our rescue after being swept over the falls. When we started on our fishing excursion, we were assured that we were in competent hands, but found to our sorrow that we were mistaken, with the exception of one whose name we regret to be unable to state, and who did all in his power to save us.

"Assuring you that we shall ever gratefully remember the gallant exertions of the crew that came so swiftly to our rescue, we remain, very truly, yours.

"WM. T. BINDER,
"*Of Philadelphia.*
"LAMBERT N. GOLDSMITH,
"NORTON GOLDSMITH,
"*Louisville.*

"To the CAPTAIN AND MEMBERS OF THE
"UNITED STATES LIFE-SAVING STATION,
"*Louisville, Kentucky.*"

May 19.—At about 5 o'clock in the afternoon the lookout at the Erie Station (Ninth District), Lake Erie, discovered and reported a small sloop yacht aground on the sunken breakwater half a mile to the northward of the station. Two of the surfmen were at once dispatched by the keeper to her assistance. She proved to be the Una, of Erie, Pennsylvania, in charge of two men who had gone out for a sail, and through mismanagement had run her into the old breakwater, where she had half filled with water. The surfmen lost no time but went to work bailing the sloop out, and after considerable labor got her afloat with but slight damage, and took her back to her berth at Erie. They were gone from the station about three hours.

May 19.—At a quarter past 6 in the morning the schooner City of Green Bay, of Chicago, Illinois, with a crew of seven persons, including a woman serving as cook, bound from Buffalo, New York, to Sheboygan, Wisconsin, with a cargo of coal, stranded off Thunder Bay Island, Lake

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Huron, during a dense fog, about five hundred yards west of the Thunder Bay Island Station (Tenth District), the weather being so thick that although so near she was not seen by the station crew until half an hour after she struck, when the fog lifted a little. It was blowing a gale from the southeast with a heavy sea. The crew got off to her in their life-boat as quickly as possible and offered to take the people ashore at once, but the captain refused. The men remained on board about an hour and a half, and at the expiration of that time finding the captain still obdurate they returned ashore for breakfast. At 10 o'clock the wind and sea having increased, the life-saving crew again went on board, when the captain requested them to take him to Alpena, on the main.land, ten or twelve miles distant, for the assistance of a tug. The keeper informed him he would do so provided permission was given to land the rest of the crew. The conversation resulted in the captain taking passage in the life-boat to Sugar Island, a mile distant, where he engaged a fishing boat to convey him to Alpena. As the weather was growing worse all the time, with heavy rain-squalls, the keeper told the captain as he parted from him at Sugar Island to return to Thunder Bay Island, that he should land the schooner's crew as soon as he arrived; the captain in reply saying he could do as he pleased in the matter. Accordingly, the life-saving crew returned directly to the vessel, where they found the sailors ready and anxious to leave, as the sea was breaking on board, the decks were opening, and there was six feet of water in the hold. In fact the sea was so rough that it was only with the greatest difficulty and danger that the woman first and then the men were taken into the boat, the keeper graphically saying in his report that "the boat reared and plunged like a wild horse, and that the friction of the painter in surging over the schooner's rail as the sea forced the boat backward was so great as to make the line smoke." Once in the life-boat the wrecked crew were soon landed and taken to the station and there made comfortable.

At 3 in the afternoon the tug Ralph came out from Alpena, and when a mile from the station signaled for the life-saving crew, the captain reporting when the life-boat went off that he had been dispatched to the scene to render any assistance possible. As the crew of the schooner were safe, and nothing further could be done that day in the storm he returned soon afterwards. While out on this trip the life-saving crew encountered a terrific squall of wind and rain. By next morning (Sunday) the wind had changed to the westward and the sea being not so rough the sailors were taken off to their vessel and remained on board all day. The water in the hold had then increased to a depth of nine feet. Towards sundown, the wind having worked round to the northeast again and freshened, the life-saving crew brought the people ashore a second time. On Monday (21st) it was still blowing from the northeast, when a powerful tug, the Martin Swain, arrived with steam-pumps and other appliances for getting the schooner off. Operations were at once commenced in spite of the heavy sea and bitter cold weather, and by removing two hundred and fifty tons of the cargo and pumping the water out, the schooner was floated off the next morning (22d) at 8 o'clock, damaged to the extent of nearly one-quarter of her value, the life-saving crew being on hand most of the time and lending all the aid in their power towards the schooner's release. During the time the vessel lay ashore the sailors received about forty-eight hours' shelter at the station, and they were one and all very thankful for what was done for them by the life-saving crew.

May 20.—On May 19, at about 3 in the afternoon, the schooner

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Clara, of New York, with a cargo of wood from James River, Virginia, for New York, drifted ashore, waterlogged and abandoned, abreast of a place called Sand Bridge, about three and a quarter miles north of the Little Island Station (Sixth District), Virginia. The keeper of the station had received word by telephone from Cape Henry, three days before, of the wreck of the vessel off shore, and that her crew had been rescued and landed at Norfolk by the Baltimore steam pilot-boat, which had also made an unsuccessful attempt to tow the vessel in. The schooner was old and fast going to pieces, and as the station was then closed for the season and the crew away, the keeper, with another man in his employ, took charge of the wreck on the 20th, saved all the property they could and turned it over to the custody of the State wreck commissioner, whom they notified.

May 20.—At a quarter past 4 in the afternoon a boy came running to the Erie Station (Ninth District), Lake Erie, and informed the keeper that a small skiff had capsized in Misery Bay, about a mile distant from the station and that he thought somebody was drowned. Five of the life-saving crew were instantly dispatched by the keeper to the place of the accident, which could not be seen, even from the lookout on the roof, on account of the woods intervening, and found upon arrival that it was as the boy had said—one man, named O'Brien, had been drowned. It seems that he with three others, all residents of Erie, had gone over from the city in a small skiff fishing. The skiff was only large enough to carry two men with safety, but the men, through a too free use of intoxicating liquor, seem to have been unmindful of their danger, and by all getting on one side of their craft to raise the anchor capsized the skiff and were precipitated into the water. Three of them seem to have been unable to help themselves, and although the water was but three feet deep, O'Brien sunk to the bottom immediately and was drowned, and when the station men arrived was still under water, while the other two, Nicholas Johnson and John Murphy, were lying face down and insensible on the beach near the water's edge. The fourth man, James O'Hearn, seemed half demented with fright and unable to do anything to assist his comrades. The drowned man was quickly taken from the water and vigorous efforts were made to resuscitate him, but without avail. Better results attended their efforts to restore Johnson and Murphy, for they came to in a short time and were taken with their dead comrade to the station, where the efforts to revive the latter were renewed. He was, however, beyond recovery. The life-savers took two of the men and the dead body over to Erie the same day, but the other man being threatened with congestion of the lungs was compelled to remain until next morning, the prompt application by the keeper of the proper remedies bringing him round all right. There can be little doubt that two more of them would have died but for the timely arrival of the life-saving crew.

May 20.—During the prevalence of a fresh northeast gale with rainy weather, the crew of the Sand Beach Station (Tenth District), Lake Huron, assisted the crew of the fishing tug Minnie in moving her from the weather side of the wharf at which she was lying to a safe berth until the blow was over, her own crew being unable to accomplish the work alone.

May 20.—At about noon during the prevalence of a strong northerly gale, the keeper and one of the surfmen of the Ludington Station (Eleventh District), Lake Michigan, went off in a boat to the rescue of a man who was adrift in a small skiff on Pere Marquette Lake and brought him safely ashore.

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May 20.—The schooner Persia, with a cargo of lumber from Muskegon, Michigan, in attempting to enter Chicago harbor—where she belonged—at half past 9 at night, during the prevalence of a northerly gale with a very rough sea, missed the entrance and ran afoul of the breakwater, where she remained pounding against it, in danger of being badly damaged, until the crew of the Chicago Station (Eleventh District), Lake Michigan, could arrive in their boat and run a line from her to the tug J. H. Hackley, which, after some difficulty, owing to the line parting, succeeded in towing her clear and safely into the harbor. One of the sailors, who had jumped onto the breakwater when she struck, for the purpose of making her lines fast in an effort to steady her, got left behind, and was subsequently landed by the crew of the station.

May 20–22.—While the crew of the Chicago Station (Eleventh District) were engaged in assisting the schooner Persia, as recorded above, the schooner R. P. Mason, bound in to Chicago from Sutton's Bay, with a cargo of lumber, also missed the entrance and fouled the outer breakwater (10.30 P. M.). Three of her crew, fearing she would go to pieces, jumped onto the breakwater, the schooner very soon afterwards swinging clear and drifting off to the southward. The three men were taken off the same night by the tug A. A. Carpenter, and landed at the station, where they were found by the crew upon their return from the Persia. They were taken proper care of until the 22d, when an opportunity presented for their return to their vessel.

May 20.—At half past 7 in the evening, during the prevalence of a heavy northerly gale, the keeper of the Evanston Station (Eleventh District), Lake Michigan, discovered fire in a room on the second floor of the preparatory building, belonging to the Northwestern University, upon the grounds of which institution the station is located. He instantly dispatched one of the crew to alarm the Evanston fire department, and then started with the rest of his men with all the buckets they could find, and in a few moments succeeded in extinguishing the flames, which would in a very short time, but for their opportune arrival, have resulted in the destruction of the building—a large four-story frame structure, situated about one hundred feet west of the station. The conduct of the station crew was highly commended by the officers of the university, the agent, Mr. T. C. Hoag, expressing the opinion that with the high wind then blowing one-half of the village of Evanston would have been destroyed had they not quenched the fire as quickly as they did.

May 20.—At 9 o'clock at night, as the three-masted schooner Lillie E., of and from Manistee, Michigan, for Milwaukee, Wisconsin, with a cargo of lumber, was attempting to enter the harbor at the latter place, she missed the piers, owing to the heavy sea which had set her too far to leeward, and ran ashore about half a mile south of the Milwaukee Station, (Eleventh District), Lake Michigan. She was quickly discovered by the life-saving crew, who pulled down the river until abreast of her and then hauled their boat over to the beach and launched into the surf. The sea was so high, however, that the attempt to get alongside the stranded vessel failed; the boat being thrown violently back upon the beach three times. Recourse was then had to the beach apparatus which was soon brought from the station, and communication established, the line reaching the vessel at the first shot. The whip and hawser were next sent off, and the breeches-buoy rigged. The buoy went off all right until it was within fifty feet of the vessel and there it came to a stop owing to the turns in the whip and hawser, which had twisted together while being hauled through the surf, the

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efforts of the life-saving crew with all the aid they could muster being insufficient to budge it either way. It was then proposed to haul the boat out to the vessel by hand along the hawser, and the station crew were just about to start when the schooner's crew were seen at work aloft endeavoring to clear the lines. The boat was therefore abandoned, and in a short time the people on board the schooner succeeded in getting the buoy free and in working order. The rest was comparatively easy and in a short time the crew of the schooner, seven in number, were all safely landed on the beach. After a short stay at the keeper's house for coffee and other refreshments, they were taken to the station, where they received shelter for several days during the prosecution of the operations for getting the vessel off. The vessel was hauled afloat by tugs in a damaged condition on June 1, and taken to a ship-yard for repairs, the life-saving crew while she lay ashore affording all the assistance in their power towards saving her by running lines to the tugs and in such other ways as they could be of service.

May 21.—At a quarter-past 7 in the morning the schooner Thomas the Ghost, a small vessel, owned at Sand Beach, Michigan, and carrying a crew of but two men, broke adrift from her moorings at the wharf in Sand Beach Harbor during a northeast gale, and was driven into shoal water at the head of the wharf, about a hundred yards east of the Sand Beach Station (Tenth District), where she lay pounding for a short time until the station crew arrived with an anchor and line and hove her afloat. As the holding ground in the harbor was bad, however, she soon dragged ashore again, and the life-saving crew seeing it would be better to let her lie there until the blow was over hauled her up high and dry where she would be perfectly safe. The only damage she sustained was a broken rudder, which could soon be replaced.

May 21.—At 5 o'clock in the morning the west patrol of the Grindstone City Station (Tenth District), Lake Huron, reported a large and valuable raft of logs on the beach about a mile from the station, it being evident that it had recently been cast adrift from the vessel having it in tow on account of the northeast gale and heavy sea which then prevailed. The station crew repaired to the spot on foot, but found they could do nothing until the weather moderated. On the 23d a telegram was received from the captain of the tug Vulcan, requesting the life-saving crew to recover her tow-line from the raft, that vessel having brought the raft from Black River, Michigan, on its way to Toledo, Ohio, and when overtaken by the gale been compelled to cast it adrift and seek a harbor for shelter. The keeper and his men responded at once, and after considerable difficulty succeeded in clearing the line and coiling it safely on the raft. At half past 4 in the morning of the 24th the tugs Vulcan and Torrent arrived off the station and signaled for the assistance of the crew in floating the raft. After piloting the steamers as close to the shore as possible, the life-saving crew aided them in getting a part of the raft off, which the Vulcan at once started with for Sand Beach, Michigan, the nearest harbor where it would be safe until the rest of the logs could be put afloat. It was then half past 4 in the afternoon, the station crew having been at the oars since the tugs arrived at early dawn. Nothing further was done until the 30th, when the station men again lent their aid, and also on the 31st, in recovering some of the logs which had broken adrift. In the evening of June 1, a gang of men in the employ of the owners of the timber arrived to reraft the timber off, and in the absence of other accommodation in the vicinity were furnished with quarters at the station until the last of the raft was removed, and taken in tow on June 15, the life-saving crew rendering

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service on two occasions subsequent to May 31, viz, on the 8th and the 14th of June, respectively, on which dates tugs arrived to remove the remaining sections of the raft and the crew assisted with their boat in running the necessary lines and piloting the tugs clear of danger both upon arrival and departure. The raft was valued at $20,000, and not a stick of it was lost. The work of the life-saving crew on this occasion was highly commended by the local press.

May 21.—The schooner Jenny Lind, of Chicago, Illinois, capsized and was totally wrecked off that port at 5 o'clock in the morning, during a furious gale, and four out of her crew of five men were lost before assistance could reach them from the Chicago Station (Eleventh District). (For the particulars, see page 39.)

May 21.—At about half past 7 in the morning, as the crew of the Chicago Station (Eleventh District), Lake Michigan, were returning with the apparatus from the wreck of the Jenny Lind, they observed that the schooner H. B. Burger, of Milwaukee, Wisconsin, bound into Chicago, with a cargo of lumber from Muskegon, Michigan, was dragging towards the shore. A halt being ordered, the gear was quickly unloaded and taken to the water's edge for use. Just then, however, the schooner's cables parted and she swept past them to the southward like a race-horse before the gale and sea, and fetched up, with a fearful crash, against a crib-pier extending out into the lake at the foot of Twenty-eighth street. The men, who had dropped the gear as soon as it was seen it would not be of service, and followed after with boat-hooks and a heavy line, arrived abreast of her immediately after she struck. By means of a heaving line the end of a hawser was soon hauled to the pier and made fast so as to steady the vessel, and in this way her crew, seven in number, were enabled to jump onto the pier in safety. The schooner became a wreck in a few hours, and only a small part of her cargo was recovered. On their way back towards the station, the life-saving crew observed that two other schooners, the Ottawa and L. J. Conway, anchored off Twenty-second street, were also dragging inshore, one of them being not more than one hundred and fifty yards. The crew hurried towards them to be in readiness in case of disaster, but they both managed to hold on and at 10 o'clock that night, the wind and sea having moderated somewhat, succeeded in getting under way and stood out into the lake, the station men remaining on watch until that time, and not leaving the locality until the two vessels were well out in the offing.

May 21.—Soon after midnight of the 20th, as the crew of the Milwaukee Station (Eleventh District), were unrigging the breeches-buoy apparatus from the schooner Lillie E., after rescuing her crew, as before related, they saw another vessel drive ashore about a mile and a half further south, or two miles from the station. The keeper at once ordered the gear down to her as quickly as possible, he and one of the surfmen going on ahead with a heaving line and life preservers. When within half a mile of her, however, he met the crew of three men, who had managed to land a few minutes before by throwing the end of a line to some men on the beach, and then climbing down it, the vessel being nearly high and dry. Their vessel was the schooner Sailor Boy, of Milwaukee, bound into that place from Pier Port, Michigan, with a cargo of wood. She had anchored outside, but the gale coming on, her cable parted and she drove ashore. The crew were taken to the keeper's house and given refreshments, and then to the station, where they remained the rest of the night. The vessel became a wreck, the

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life-saving crew helping to strip her when it became apparent she could not be got off.

May 21.—At half past 6 in the morning a yawl with five men in it, belonging to the schooner Petrel, in attempting to enter the harbor of Milwaukee, Wisconsin, capsized in the heavy sea then running, and three of the men were drowned before assistance could reach them. The other two were rescued by the crew of the Milwaukee Station (Eleventh District). (See page 40.)

May 21.—At about half past 4 in the afternoon the crew of the Milwaukee Station (Eleventh District) were called upon to go out in their boat, in tow of a tug, to the schooner Elida, of Milwaukee, to bring ashore one of the crew whose wife was dying, the sea being too heavy for the tug to go alongside the schooner without damage. The request was complied with and the man safely landed.

May 21.—Soon after their return from the schooner Elida the crew of the Milwaukee Station (Eleventh District) were requested by the captain of the tug Welcome to take a pumping gang of five men out in their life-boat to the schooner Annie Vought, of Buffalo, which was anchored in the bay in a leaky condition, the sea being too rough for the tug to go alongside. The five men were soon on their way and put safely on board, the life-boat being towed out and back by the tug.

May 22.—At about 4 o'clock in the afternoon, as the schooner Annie Minnis, of Port Hope, Province of Ontario, with a crew of seven men, was leaving Oswego, New York, in tow of a tug, bound to her home port in ballast, the tow-line parted just as the two vessels were passing out through the breakwater. It was blowing fresh from the northeast, with quite a sea running, and before another line could be passed to the schooner she drifted afoul of the breakwater. Observing the schooner's danger as soon as the accident occurred, the crew of the Oswego Station (Ninth District) pulled out in the surf-boat to render all the assistance in their power. Before they reached the schooner, however, the tug got another line fast and turned back with her into the harbor, leaving behind on the breakwater one of the crew, who had jumped off to make the schooner's lines fast until the tug could get her under control again. The sailor, a Canadian named William Johnson, was in a very perilous situation, as the sea was breaking over him and he had to cling hard to one of the piles to save himself from being washed off. Seeing his danger, the life-saving crew went as quickly as possible to his relief and took him into their boat and brought him safely back to his vessel, which by that time had reached the harbor.

May 22.—A couple of hours or so after the rescue of the seaman belonging to the schooner Annie Minnis, as above recorded, the crew of the Oswego Station were called upon to go off again to the breakwater to hang out the beacon light, which the light-keeper, on account of the gale and heavy sea, was unable to do with his own boat.

May 22.—At a quarter before 9 o'clock in the morning the crew of the Cleveland Station (Ninth District), Lake Erie, were requested to go out with a couple of harbor tugs—the Dreadnaught and Mary Virginia—to assist in recovering a crib intended for the Government breakwater at that place, which had broken adrift during a violent storm the day before and driven ashore about a mile west of the station. The crew responded to the call with their boat, and after several hours of hard work accomplished their errand and moved the crib in position again, although not without a painful accident to one of their number, Surfman Lawrence Distel, who, while standing upon the crib handling the lines

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to secure it by, stepped on to a loose plank and fell into one of the pockets and broke his leg.

May 22.—On May 21 the Canadian steamer Prussia, of Saint Catharines, Ontario, while lying in the harbor of Sand Beach, Michigan, Lake Huron, was compelled during the gale which prevailed at the time to slip from her moorings at the breakwater, on account of the sea which was dashing entirely over that structure, and seek safety at the wharf, losing three of her hawsers by the operation. The next day (22d), at the request of the captain, the crew of the Sand Beach Station (Tenth District) went out in their surf-boat to grapple for the lines, and after about three hours' work recovered and delivered them on board the steamer. They were valued at about $150.

May 22.—On Sunday, the 20th, two men, residents of Chicago, Illinois, went out in a boat on a fishing excursion to the Fullerton avenue conduit, north of the harbor, and while thus engaged the storm set in previously mentioned in this record, which soon made the lake so rough that their boat broke adrift and washed on to the beach, leaving the men completely isolated on the conduit. It was not until the next morning (21st) that news of their situation reached the crew of the Chicago Station, but as the latter were then at South Chicago, some miles distant, watching the vessels in danger in that locality (*supra*, May 21), it was impossible to go at once to their relief. The poor fellows remained, therefore, on the conduit all that day exposed to the full fury of the storm, it being near midnight before the station crew returned from the southern part of the city. As soon as possible, however, the keeper dispatched a man to the north on patrol, directing him to ascertain and report whether the men were still there. He was unable on account of the darkness to learn anything until daybreak (22d), when, seeing the men still on the conduit, he immediately procured a team and hurried back to report, the distance to the station being two or three miles. As soon as he arrived the surf-boat was run out on its carriage, and with the aid of the team hauled abreast of the conduit as quickly as possible. Finding the beach was too rough at that point to launch without danger of staving the boat, they proceeded about three-quarters of a mile further on to where it was not so strong, and then got off in good shape. The sea was still very rough, and it was only by skillful maneuvering and watching their chances that they succeeded in reaching the men and taking them safely off, the rescue being witnessed by a large crowd on shore, who at once rent the air with cheers as the gallant surfmen headed their boat towards the station with the rescued men. As the latter had taken but little food with them upon starting out two days previous, and were nearly famished, they were furnished with a good breakfast at the station, and in a few hours were able to leave for their homes apparently none the worse for their misadventure.

May 22.—At a little after 7 in the morning, while the crew of the Chicago Station (Eleventh District), Lake Michigan, were engaged in rescuing the two men on the conduit off the northern part of the city, as previously recorded, Surfman McMillan, who had been left in charge of the station, saw, as he supposed, a schooner run ashore about six miles to the southward in the direction of Hyde Park. Upon inquiring by telephone to that place he learned that she was really ashore and needed immediate assistance. The district inspector, Lieutenant Newcomb, arriving just then, a truck was procured and the beach apparatus taken as quickly as possible abreast of the stranded vessel, word being left for the keeper and the rest to follow as soon as they returned from the

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conduit. The crew of the schooner had already floated the end of a line ashore by attaching it to a bunch of shingles, and by this means communication was established, McMillan attaching the line to a boat which he borrowed and being hauled off by the crew. They refused, however, to come ashore, as the vessel was lying easy with a good prospect of getting off, and the gale was rapidly moderating. She proved to be the L. J. Conway, of Milwaukee, Wisconsin, and was one of the vessels anchored off Twenty-second street, which the station crew had spent many hours in watching the previous day, afraid they would drag ashore. The captain reported that he was from Muskegon for Chicago with a cargo of shingles and a crew of four men. As nothing could be done for the vessel the beach apparatus was returned at once, McMillan meeting his comrades on the way after their rescue of the men from the conduit. The schooner subsequently got off with the aid of a tug.

May 23.—At half past 8 in the morning, during a northwest storm, the harbor tug N. B. Gates called upon the crew of the Cleveland Station (Ninth District), Lake Erie, to go to the assistance of the schooner Selkirk, of Cleveland, Ohio, which was lying just inside the breakwater, three-quarters of a mile off, unable to get into the harbor, her crew of four men not being sufficient to heave up her anchors, which were both down. The station men at once jumped aboard the tug, went off to the schooner and manned the windlass, and after about two hours of hard labor hove up the anchors, so that the tug could tow her inside, remaining by her until they had her safe and snug at the dock.

May 24.—The steamer Vint Shinkle, of Cincinnati, Ohio, belonging to the Memphis and Ohio River Packet Company, on her way from Memphis, Tennessee, to Cincinnati, with a miscellaneous cargo and twenty-five passengers, besides her regular crew of fifty-six (making a total of eighty-one souls on board), parted her tiller-rope at about 5 o'clock in the morning, just as she came out of the Louisville and Portland Canal, below Louisville, and, becoming temporarily disabled, was carried by the current afoul of one of the abutments of the gate in the wing-dam, just above the canal, and stove a hole in her side just above the water line. The accident was seen from the Louisville Station (Ninth District), an eighth of a mile distant and in a few minutes the crew were alongside the steamer with both their boats ready to render assistance. Finding there was no immediate danger to be apprehended, the keeper sent one of the boats back, while he remained with the other boat's crew, ran the necessary lines to the river bank, and then, with the assistance of the tow-boat Tom Rees, the steamer was hauled clear of the dam and taken safely to her wharf.

May 24.—At half past 8 in the morning as the crew of the Point aux Barques Station (Tenth District), Lake Huron, were out about three miles to the eastward of the station exercising with their surf-boat, they sighted a party of two or three men endeavoring to tow a lighter onto the beach. Upon pulling to the spot they found that the craft was leaky and full of water, and that the men, who belonged to the schooner Alice Hawkins, of Sand Beach, Michigan, were trying to beach it for repairs, the men reporting that it was used by the schooner in conveying stone to Sand Beach, and that it had sprung a leak a few days previous while riding out a gale of wind. As they were in need of assistance the life-saving crew turned to with their boat, and after some difficulty succeeded in towing the lighter ashore, and then getting the water out of it, shored it up so that the leak in the bottom could be got at and stopped.

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May 24.—At half past 1 in the afternoon the lookout at the Ludington Station (Eleventh District), Lake Michigan, gave an alarm of fire at Ward's lumber mill, situated on the water front some little distance from the station. The station force-pump was at once put into the surf-boat and the crew repaired to the scene of the fire as quickly as possible. As it was found the pump could not be operated to advantage in the boat, they put it on board the tug George E. Brockway and soon had a stream of water on the burning lumber in concert with the Brockway and another tug, which had also hurried to the spot, and by the promptness thus displayed the station crew aided very materially in staying the progress of the flames until the arrival of the local fire department, so that in two or three hours the fire was entirely subdued. The district superintendent subsequently received the following very complimentary letter from the manager of the mill in recognition of the excellent service thus rendered:

"LUDINGTON, MICH., *June* 1, 1883.

"DEAR SIR: May 24 a fire broke out in the lumber piles on the Ward docks which destroyed about 60,000 feet of lumber, valued at $540. The Ludington life-saving boatmen, under command of Capt. Robert Broadbent, arrived there about as soon as the two tugs that had short lengths of hose, and got a stream on the burning lumber, doing as good service as possible with one length of hose, and helped very materially in keeping the fire from spreading until the city fire department could get there with their hose, all the hose they could muster being needed on account of the great distance from hydrants. The life-saving crew were very prompt at the fire and were very active and efficient, and they have the thanks of the owners of so much property saved through their aid.

"Very truly,

"THOMAS R. LYON, *Agent.*
"Per JNO. S. WOODRUFF,
"*Manager of Ward Mills.*

"N. ROBBINS,
"*Superintendent Eleventh Life-Saving District,*
"*Grand Haven, Michigan.*"

May 25.—At about 8 o'clock in the evening two boys, named James Monahan and John Comfort, residing in Louisville, Kentucky, were out in a small skiff for a row on the Ohio River, and through carelessness or inability to manage their craft got caught in the strong current at the head of the falls and were being carried with great rapidity towards the cross-dam when discovered by the crew of the Louisville Station (Ninth District), who put out as quickly as possible and brought them safely ashore. They would without doubt have been swept over the dam and drowned but for the timely aid of the station men.

May 25.—At 11 o'clock at night, during the prevalence of foggy weather, the patrol from the North Manitou Island Station (Eleventh District), Lake Michigan, discerned above the fog the topmast of a schooner heading directly towards the beach. He at once burned a Coston signal, which was fortunately seen by the people on board in time for them to go about and stand out of danger. A minute later and she would have been ashore, as she was so close in that the men could be heard running forward to light up the head sheets as they put her in stays.

May 26.—The north patrol of the Ludington Station (Eleventh Dis-

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trict), Lake Michigan, while returning over his beat towards the station shortly before 4 o'clock in the morning, observed a yawl adrift on the lake, which he recovered and returned to the owner.

May 27.—At about 7 o'clock in the evening, as Charles Miller, of Rochester, New York, who had been out rowing on the Genesee River, at Charlotte, Lake Ontario, New York, was attempting to land near a tug-boat lying at the dock, his boat was swept by the current across the bow of the tug and capsized, throwing him into the water. His cries for help were fortunately heard by one of the enrolled volunteer crew of the Charlotte Life-Boat Station (Ninth District), who hastened to his assistance and succeeded, with the help of others, in rescuing him from drowning.

May 27.—At a little after 1 o'clock in the day, the lookout on duty at the Louisville Station (Ninth District), gave the alarm that a boy had fallen overboard from the steamer Vint Shinkle, lying at the levee, a short distance from the station. The crew instantly manned a boat and picked up the boy and brought him to the station, where he was given dry clothing to wear home.

May 27.—At half past 5 in the evening the crew of the Milwaukee Station (Eleventh District), Lake Michigan, went off in their surf-boat to the aid of three men, residents of Milwaukee, Wisconsin, who, while out in a boat for a pull in the harbor, had been driven off shore during a violent squall from the southwest. The boat was come up with when a mile from the shore and towed back as far as the station, whence the men could row home without trouble.

May 28.—At 9 o'clock at night the crew of the Manistee Station (Eleventh District), Lake Michigan, were informed that a schooner had just left the harbor to proceed on her voyage, with no one but the captain on board who, it was stated, was so much under the influence of liquor that he did not know what he was doing, and was heading the vessel straight for the beach. The keeper ordered the boat out, and he and his men were just going off to the vessel when her crew came down and requested to be put on board. Their request was complied with, and the station crew remained by them until the schooner could be headed about, off shore, and her course duly shaped towards her destination.

May 29.—At about half past 8 in the morning the schooner Fiat, of Oswego, New York, carrying a crew of four men, bound from Trenton, Province of Ontario, to Woodville, New York, with a cargo of lumber, arrived off the mouth of Big Sandy Creek, upon which stream Woodville is situated, and made signal to the Big Sandy Station (Ninth District) for assistance in getting into the creek. The keeper went off to pilot her in but the depth of water being scant she grounded on the outer bar. He at once called for his crew, who went off with lines, which were run to the bank and hove taut, after which they rafted the lumber alongside, and, thus lightened, the schooner was hove over the bar into deep water. The station men then reloaded the cargo and saw the vessel safely on her way without damage, the task being completed by noon.

May 31.—The schooner Henry J. Raymond, of and from New York, for Virginia, in ballast, with a crew of six men, stranded off Ocean Grove, New Jersey, at half past 7 in the morning, during the prevalence of a thick fog. She struck about a mile and a half north of the Shark River Station (Fourth District), which was then closed for the summer season. The keeper discovered her a little after 8 o'clock, and quickly mustered a boat's crew, partly of his own men and the rest volunteers, and boarded her before 9 o'clock, bringing all hands safely ashore. In

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the afternoon, as the captain and mate desired to return on board, the keeper conveyed them thither with the surf-boat, and also established communication by means of a line from the vessel to the shore as a precautionary measure in case of bad weather. A watch was also maintained upon the beach all night. In the morning (June 1) they again landed the captain and mate and helped pump the vessel out, besides assisting in other ways towards saving her, remaining by her until 4 o'clock in the afternoon, when she was taken in charge by the Coast Wrecking Company, of New York, who eventually floated her off in a damaged condition.

June 1.—At 9 in the morning the keeper of the White Head Island Station (First District) coast of Maine, discovered a small boat with one man in it drifting with the ebbtide out of Seal Harbor to sea. He at once jumped into a boat of his own—there being no time to go to the station—and succeeded in overtaking the boat and towed it back; its occupant, a man belonging in Saint John, New Brunswick, being helplessly intoxicated. The man was given in charge of some friends and his boat properly taken care of. As it was the first of the ebb at the time, the man would no doubt have been carried far out from land and probably lost but for the promptness of the keeper, as the sea was very rough. The keeper was the only man on duty at the time, the station being closed for the summer season.

June 2.—At about 7 o'clock in the afternoon, three men, named William McQueen, A. Watkins, and Joseph Watkins, of Louisville, Kentucky, who had gone out fishing on the Ohio River, at the head of the falls, got caught in a dangerous locality through ignorance of the current and would have been swept over the dam but for the timely assistance of the Louisville (Ninth District) life-saving crew, who went to their rescue and brought them safely ashore.

June 4.—On this date the crew of the White Head Island Station (First District), coast of Maine, saved the schooner Carrie H. Spofford, of Deer Isle, Maine, from destruction upon what is known as Red Ledge, in Wheeler's Bay, about a mile to the westward of the station. The schooner had no cargo on board, and was bound from Nantucket, Massachusetts, to Deer Isle, Maine, her crew numbering four men. She struck on the ledge at 7 in the morning, during a dense fog, the wind being light from the southward. The crew took to their boat soon after she struck, but getting bewildered in the fog, with no land in sight, they pulled about for a short time, not knowing which way to turn, until discovered by one of the life-saving men who conducted them to the house and then summoned the keeper—the station being closed for the summer and the men off duty. The keeper sent out an alarm, and as soon as the men were assembled they boarded the schooner. She was then half full of water, pounding heavily upon the rocks, and with the rudder unshipped and badly damaged. The first thing done was to get out an anchor and heave the vessel off the ledge. After moving her far enough from the rocks they repaired the rudder as well as they were able in the heavy sea, and rehung it, some of the men having to bail from the hatches with buckets and keep the pumps going all the time to prevent her from filling and rolling over on her side. As soon as the rudder was shipped they got the schooner under way and took her into Seal Harbor, where she came to at 3 o'clock in the afternoon. It had been raining nearly all day and the men being drenched to the skin, the keeper, as soon as the sails were rolled up and everything was made snug about deck, sent them home to change their clothing and get something to eat, word being given to assemble again at 6 o'clock.

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They were all promptly on hand at the hour named, the vessel being then nearly full of water again. It was therefore decided to run her out onto the flats in the harbor, which they did at high water at 10 o'clock at night, her own crew going ashore with the life-savers and taking shelter at the station. The next morning (June 5) at low water, the vessel being high and dry, the leaks were found and temporarily repaired so she could be taken home, and then as the tide raised she was pumped out, floated off, and piloted safely out of the harbor and delivered up to her captain, who was very grateful to the life-saving crew for their excellent work in saving his vessel.

June 4.—At about half past 5 in the morning the schooner Fannie A. Bailey, of Portland, Maine, with nine persons on board, including the captain's wife and child, was wrecked during a thick fog on the north bar of Hereford Inlet, coast of New Jersey, while on a voyage from Windsor, Nova Scotia, to Philadelphia, Pennsylvania, with a cargo of plaster. Four lives were lost by the capsizing of the yawl, in which the crew were about to attempt to land soon after the vessel struck. The remainder of the people were rescued by the surf-boat from the Hereford Inlet Station (Fourth District) as soon as the fog lifted and the situation of the vessel was discovered. The particulars of this disaster will be found on page 43.

June 4.—During the night the patrols from the Grand Point an Sable Station (Eleventh District), Lake Michigan, warned off by the burning of Coston signals two vessels which were steering too close to the beach and in danger of running ashore. One of them was the schooner Mary Ellen Cook, of Ludington, Michigan, the other vessel being unknown.

June 5.—The schooner Emma K. Smalley, of Lubec, Maine, bound from New York to Machias, Maine, with six men on board, and laden with coal, stranded in a dense fog at half past 3 in the afternoon, two hundred yards from the north end of Block Island and five miles north of the New Shoreham Station (Third District), Block Island, Rhode Island. The keeper of the station (then closed for the season) heard of the disaster about 6 o'clock in the evening, and hastened on horseback to the locality, boarded the vessel, and found that one of his surfmen had preceded him. As a party of wreckers were then in charge, the two men assisted the latter in floating the vessel off, after which she proceeded to Newport for repairs.

June 5.—At 1 o'clock in the afternoon, during a heavy squall, as the steam pile-driver Mohawk, of Fairport, Ohio, was returning to that port she disabled her machinery when about a quarter of a mile off and hoisted a signal for assistance. The signal was quickly seen by the crew of the Fairport Station (Ninth District), and they put out at once in their boat with the necessary lines and kedged her safely into the harbor.

June 5.—During a thick fog in the afternoon the crew of the Ludington Station (Eleventh District), Lake Michigan, were alarmed by the whistles of a steamer out on the lake as though signaling for assistance. Upon going off in their surf-boat they found she was the George E. Brockway, of that port, which had just arrived and wanted the aid of a tug to take into the harbor one of the lumber-laden scows she had in tow. The tug was sent out to her as desired.

June 5.—At 3 o'clock in the morning the schooner Eveline Bates, of Grand Haven, Michigan, with a crew of seven men, which had cleared from Muskegon, in the same State, for Chicago, Illinois, the day previous, with a cargo of lumber, returned to Muskegon in a water-logged condition, having sprung a leak when but twenty miles from port. The crew of the Muskegon Station (Eleventh District), Lake Michigan, upon

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learning her condition and that her crew were nearly worn out from pumping all night, went on board and relieved them. They pumped until 1 o'clock in the afternoon (nine hours), when, finding the leak was not diminished any, the captain decided to unload the vessel. Her cargo was therefore removed, and having procured a steam pump to keep her afloat she left soon afterward for Chicago in tow of a tug.

June 5.—On this date a large Newfoundland dog was observed by one of the crew of the Chicago Station (Eleventh District) swimming about in one of the slips of the Illinois Central Railroad, not far from the station, unable to get ashore and nearly exhausted. The man at once jumped into a boat and brought the poor animal safely to land, thus saving its life.

June 6.—At 9 o'clock at night the crew of the Thunder Bay Island Station (Tenth District), Lake Huron, went off to the assistance of a fishing-boat which had lost its way in the fog, and piloted it safely into the harbor at Sugar Island, whither it was bound.

June 7.—The two-masted schooner Annie Whiting, of Castine, Maine, bound from Georgetown, District of Columbia, to South Boston, Massachusetts, with a cargo of coal, and having six men on board, stranded at 11 o'clock at night, in a thick fog and heavy sea, at Blue Rock, southwest side of Block Island. The keeper of the Block Island Station (Third District), Rhode Island, did not hear of the accident until 5 o'clock in the morning of the following day, the season for active operations being over, and at once took the keys and went down to the closed station, where he found the captain and four of his men, who had just landed in their own boat with their personal effects. The keeper took charge of their baggage, and then went off to the schooner in the captain's boat, and brought away the mate, who had been left on board, having first helped him to furl the vessel's sails. He then rowed the captain to the main-land, where he could telegraph his owners. The house was kept open until the 15th of June for the accommodation of the ship's company while stripping the vessel, at which the station crew assisted two days. All personal effects and the provisions on board were saved in good condition. The cargo of coal was lost, together with the vessel.

June 7.—At half past 7 in the evening Surfman Gesman, of the Smith's Point Station (Third District), Long Island, New York, discovered a boat capsized a quarter of a mile east of the station and about the same distance from shore. He promptly put out to the rescue, and on reaching the wreck found it to be the cat-boat Nellie, which had upset in a northwest squall on her way from Bellport to Moriches. A man was clinging to her, whom Surfman Gesman soon relieved from his perilous position, and having with considerable difficulty righted the capsized craft and freed her from water, he took her in tow and rowed ashore. He then took the rescued man to his house and furnished him with dry clothing and kept him until the next morning, when he proceeded in his boat to Bellport, very grateful for the assistance and kind treatment he had received.

June 7.—At a little after 3 o'clock in the morning the keeper of the Point Marblehead Station (Ninth District), Lake Erie, discovered what appeared to be a vessel on fire a long distance to the eastward off shore. He immediately assembled his crew and started in the surf-boat, with all the buckets he could muster, to the vessel's assistance. After a pull of four or five miles they were overtaken by the tug Col. Davis, which gave them a tow, and the burning vessel was reached at a little after 6 o'clock, the distance traveled being upwards of twenty miles. They found she was the steamer Vulcan, of Detroit, Michigan, on her way

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down the lake from Saginaw, Michigan, to Cleveland, Ohio, with a large raft of logs in tow. She was then all ablaze and deserted, the absence of her boat indicating that her people had taken to it, and started for the land as soon as the fire spread beyond their control. The nearest land was about fourteen miles distant, but as the sea was smooth no apprehensions were felt for their safety. A Sandusky tug, the Myrtle, had also arrived on the scene and the donkey-pumps of the two vessels were soon at work playing streams of water on the steamer, the life-saving crew assisting with their buckets until lines could be secured to her, when the tugs started with her and the raft in tow for the harbor of Vermillion, Ohio, where the assistance of a fire-engine was obtained and the fire extinguished, although not until there was little left for the flames to feed upon, and the vessel was reduced to a complete wreck. At Vermillion they found the Vulcan's people, fourteen in number, all safe, they having pulled directly for that place as soon as they were driven to their boat. They reported that the fire had originated in the wood-work about the boiler. When the fire was subdued and before leaving for the station in tow of the Col. Davis, the life-saving crew, at the request of the captain of the Vulcan, recovered his tow-line, which was still fast to the raft. The raft had not been damaged in the least. It was half past 8 in the evening when the crew got back to the station after their long journey and an arduous and exciting day's work.

June 8.—At about midnight of the 7th of June the sloop-rigged boat Mineral, of and from Haverhill, Massachusetts, for Portland, Maine, with a crew of two men and having no cargo on board, stranded in a thick fog on the south side of Fletcher's Neck, about two hundred yards distant from the Fletcher's Neck Station (First District), near Biddeford Pool, Maine. The boat bilged on the rocks almost as soon as she struck and filled with water, the men landing without trouble in a small dory and taking shelter in a barn. As the station was closed for the season and the crew off duty, the keeper knew nothing of the accident until daylight, when he hastened to the spot and rendered all necessary assistance to the two men in saving spars, sails, rigging, &c., and affording them shelter at the station until the following day. It was impossible to save the boat, as she was too badly damaged.

June 8.—At 3 o'clock in the afternoon, the weather being very fine, as Surfmen Rich and Dyer, of the Parmet River Station (Second District), Cape Cod, Massachusetts, were out in a dory fishing, about three miles from land, they fell in with the schooner N. J. Miller, of Boothbay, Maine, having a crew of five men, bound from Bangor for Baltimore, with a cargo of lumber, in a leaky condition and almost water-logged. The men offered to go ashore for assistance or to aid in any other way the captain might desire. The captain said he proposed running into Vineyard Haven for a harbor and that all he wanted was to be reported by telegraph to the owners of the vessel, so that instructions in regard to necessary repairs could reach him as soon as he entered port. A dispatch was accordingly taken ashore from the captain and carried to the nearest telegraph office, about five miles distant from where the men landed. The vessel reached harbor safely.

June 9.—At half past 11 in the morning the fishing tug M. P. Harrison, of Michigan City, Indiana, with a crew of three men and having a pound-net boat in tow, bound out from Saint Joseph, Michigan, to the fishing-ground, about six miles up the coast to the northward, ran aground about half a mile north of Saint Joseph Harbor during a thick fog, the wind being fresh from the westward and directly on shore. The crew landed, however, without difficulty, in their net-boat, and went

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to the Saint Joseph Station (Eleventh District), Lake Michigan, for assistance in getting their vessel off. The keeper at once sent for the tug Lewis Wallace, and, taking six of his crew in the surf-boat and a stout hawser, started in tow of the tug to where the Harrison was ashore. Arriving on the scene, a few minutes after 12, they got to work as quickly as possible, and by 2 o'clock in the afternoon the vessel was hauled afloat again without any damage.

June 9.—Just as the keeper of the Saint Joseph Station (Eleventh District) was leaving the house with his men to assist in floating the fishing steamer M. P. Harrison, the south patrol came running in with information that the fishing boat General Sheridan, of Saint Joseph, had run ashore in the fog, about three-quarters of a mile south of the harbor. The keeper at once directed the patrolman and another of the crew to proceed to the spot immediately and render all the aid possible. They found it impracticable to float her off that day, so hauled her up clear of the surf, and removed the nets and the fish with which she was loaded, and on the next day (Sunday) the entire crew went down and launched her from the beach and took her into the harbor, for which service the owners were very thankful.

June 9.—At about 7 o'clock in the evening the captain of the schooner Elbe, of Milwaukee, Wisconsin, called at the Milwaukee Station (Eleventh District) for the assistance of the crew, reporting that his vessel had run ashore in the fog that evening about ten miles north of the harbor, while on her way to Milwaukee, with a cargo of slabs, from White Lake, Michigan. He had landed in search of aid as soon as she struck. The surf-boat was launched and the crew set out at once in tow of the tug S. S. Coe to the schooner's relief, reaching her at half past 9 at night. After running the tug's hawser to her and removing part of her deck-load to lighten her, she was hauled afloat and towed into the harbor, although leaking so badly that the station crew had to keep the pumps going all the way in. She arrived soon after midnight.

June 10.—At about 7 o'clock in the evening of Sunday, June 10, an alarm was given by the lookout at the Louisville Station (Ninth District), that two men in a skiff were drifting down the Ohio River towards the cross-dam and in danger of being swept over the falls. Instantly a relief party set out from the station and overtook them before the falls were reached, and brought them safely ashore. The men who had thus so narrowly escaped with their lives were James Whalen and Edward Seibert, both residing in Louisville.

June 10.—At about half past 10 in the forenoon, as three men, residents of Grand Haven, Michigan, were out for a sail in the sloop Raven, of that place, they were struck by a sudden puff of wind just outside the harbor, which capsized the sloop and threw them into the water. Fortunately, one of the crew of the Grand Haven Station (Eleventh District) was out on the end of one of the piers at the time, and seeing the sloop go over he quickly put off in a small boat lying near and picked them up. By that time the rest of the station crew arrived with the surf-boat, when the men were transferred to the latter and taken up to the city, the sloop also being taken in tow, and upon arrival in the harbor righted and bailed out. The men were very thankful for their escape.

June 10.—At half past 12 in the day, as two men, named William Neustedt and Alexander Gagnon, residents of Two Rivers, Wisconsin, were returning in a small boat from a sail upon Lake Michigan, the boat was capsized by a sudden gust of wind just as they were lowering their sail, when between the harbor piers and but a short distance from

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the Two Rivers Station (Eleventh District). The accident was witnessed by the lookout on the roof of the station, and as soon as he could give the alarm the keeper and three of his crew put off in a skiff to the assistance of the two men, who were clinging to the bottom of their boat. The life-savers helped them into the skiff, and then, with the capsized boat in tow, took them to the station. Beyond the momentary fright they received, the men were not much the worse for their ducking, and as soon as the station crew could right their boat and put it in good order they got into it again, and, after warmly thanking their rescuers, left for their homes.

June 11.—At half past 7 in the morning, the weather being very foggy, Surfman Doane, who was then in charge of the Chatham Station (Second District), Cape Cod, Massachusetts, during the temporary absence of the keeper, discovered a vessel ashore about three-quarters of a mile to the southward of the station. The house was then closed and the crew off duty for the summer. Doane, therefore, assisted a party of men, who had also arrived on the scene, in getting an anchor and cable from Chatham, and in mustering a sufficient force to relieve the vessel, so that on the next flood tide she was hauled off and proceeded on her voyage. She was the schooner Albert H. Cross, of Newburyport, Massachusetts, bound from Gloucester to the Delaware Breakwater, with a cargo of stone, her crew numbering eight men.

June 11.—At 11 o'clock in the day the lookout at the Oswego Station (Ninth District), Lake Ontario, New York, discovered and reported the sloop-yacht Maud, of Oswego, capsized at the mouth of the harbor, a few hundred yards distant from the station. The yacht had three men on board who were out for a sail, and when she went over they managed to cling to her until the life-saving crew arrived in their surf-boat and towed her in to the pier so they could jump ashore. The station men then took the craft inside the harbor to a place where she could be righted, having sustained no damage.

June 11.—At half past 5 in the morning the harbor tug N. B. Gates hailed the crew of the Cleveland Station (Ninth District), Lake Erie, and requested them to go out to the schooner Selkirk, lying near the breakwater, where she was employed, and assist, as on a former occasion (May 23), in getting her into the river until the subsidence of a fresh westerly gale, which was then blowing. The crew responded at once, and taking passage on the tug helped the three men on the schooner heave up her anchors, after which she was towed to a safe berth inside.

June 11.—While the crew of the Cleveland Station were yet engaged in assisting the schooner Selkirk, they observed that the sloop yacht Rover, lying not far from the breakwater, was dragging her anchor in the heavy sea and drifting directly towards the rocks. There was no one on board of her, and as soon as the Selkirk was safe, the life-saving crew went to her with the tug and hove up her anchor and took her safely into the river, where they made her fast, and then notified her owner, who resided in Cleveland.

June 11.—At 3 o'clock in the afternoon one of the crew of the Point Marblehead Station (Ninth district), Lake Erie, saw a boat with two men in it capsize in the vicinity of the quarry dock, about half a mile east of the station. He at once went to their assistance and helped them up on to the dock and then took their boat in to the beach and hauled it up safe.

June 11.—At 2 o'clock in the morning of June 9, during a thick fog, the small three-masted schooner Wollin, of and from Holland, Michigan,

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with a cargo of lumber for Chicago, Illinois, ran ashore opposite Wilmette, Illinois, about three and a half miles north of the Evanston Station (Eleventh District), Lake Michigan, going so high up on the beach that her crew of four men were able to land without assistance. Owing to the fog the vessel was not immediately seen by the patrol, and when news of the accident reached the station after daybreak the captain had already left by train for Chicago to engage the services of a tug. The weather being unfavorable for operations on the following day nothing was attempted, but on the second day (June 11), when the tug hove in sight from Chicago at 10 o'clock, with a lighter and steam-pump, the life-saving crew went off in their boat and accompanied the relief party to render all the aid possible. With their assistance the lighter was hauled alongside the stranded vessel, and the pump put on board and set up, and by pumping her out and removing a part of the cargo she was sufficiently lightened at half past 5 in the evening for the tug to haul her afloat, when she was taken in tow for Chicago.

June 12.—At half past 4 in the morning the lookout at the Two Rivers Station (Eleventh District), Lake Michigan, reported hearing a steamer's whistle off shore to the northeast as though she was signaling for assistance in making the harbor, the weather being very foggy. The station crew manned their boat at once, and, after a pull of a mile, found the steam-tug George Pankratz, of and from Manitowoc, Wisconsin, bound up the lake to Kewaunee, in the same State, with a barge in tow, endeavoring to find the harbor in order to wait for clear weather. The keeper offered to lead the way in with his boat if the steamer would follow, and this being done, the tug and her consort were soon afterwards safely in the harbor, the captain being very thankful for the assistance thus extended to him.

June 13.—The three-masted schooner, Thomas R. Pillsbury, of Thomaston, Maine, bound from New York to Boston, with a cargo of coal, and having nine men on board, mistook the fog whistle on Point Judith for that on Block Island, and at 11 o'clock in the forenoon went ashore in a thick fog, two hundred yards from land, a mile west of the Point Judith Station (Third District), Rhode Island. The season of active operations being over, the station crew were not on duty, but at 1 o'clock P. M., one of them, Surfman Whaley, came running to the station where the keeper, Herbert M. Knowles, then was, and reported that he had discovered and boarded the schooner, and that her captain wanted the aid of the revenue steamer Dexter and of a tug. The keeper at once telegraphed for these vessels, and soon after boarded the schooner with Surfman Whaley, where the two men assisted in hauling taut the hawser of a small anchor which had been run out, no other assistance being then needed, as the sea was smooth and the vessel lay easy. Surfmen Hall and Kenyon, of the Point Judith Station, joined them later, and at 4 o'clock in the afternoon the schooner was floated off without damage by the Narragansett Wrecking Company, Keeper Knowles and his three men assisting. At the request of the captain, the keeper and Surfman Hall went with him to Boston to render aid in case the vessel should leak.

June 13.—At a little before 4 o'clock in the afternoon, word reached the keeper of the Louisville Station (Ninth District), that a man had fallen overboard from the steamer City of Madison lying at the city wharf, and being under the influence of liquor had sunk immediately and drowned before assistance could reach him. In his fall he had dragged overboard with him a friend with whom he was talking, who, however, being a good swimmer had managed to save himself. Both

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boats belonging to the station were at once launched, and equipped with drags the crew went in search of the body. After grappling for about twenty minutes it was found and landed at the station, where immediate but unsuccessful efforts were made for its resuscitation.

June 14.—At 2 o'clock in the afternoon the crew of the Evanston Station (Eleventh District), Lake Michigan, went off in their boat in response to a signal from the schooner Peoria, some two miles from the station, and received from the captain the corpse of a man which he had picked up in the lake soon after coming out of Chicago Harbor on his way to Muskegon. The body was conveyed to the station, put in ice, and the facts telephoned to the coroner, who took charge of it on the following day, and on the day thereafter, it not being identified, was buried by the county authorities.

June 15.—In the afternoon of this date a canoe, with two young men in it, capsized on Lake Ontario, about a mile out from the harbor of Charlotte, New York. They were quickly picked up by a passing tug and landed at the Charlotte Station (Ninth District), where the keeper took them in hand and provided them with clothing while their own wet garments were being dried at the station fire.

June 15.—On this date the keeper of the Point Marblehead Station (Ninth District), Lake Erie, picked up a capsized yawl and restored it to the barge William Vanatta, of East Saginaw, Michigan, lying not far from the station, to which vessel it belonged. It had been overturned, with two men in it, by a steam-tug, the latter rescuing the men before the keeper could arrive.

June 15.—At half past 10 in the forenoon news reached the Louisville Station (Ninth District) that a man had been drowned early that morning at Garr's Landing, on the Ohio River, below the falls, about eight miles from Louisville. The keeper had one of the boats manned at once, and proceeded down over the falls as quickly as possible with the station dragging apparatus, and upon reaching the spot found the body, after a short search, not far from where the accident occurred. Upon getting the body ashore the keeper summoned the Louisville coroner, to whom it was given in charge. The man had been employed on a fleet of coal barges, and while engaged at his work had accidentally fallen overboard and drowned before his comrade could reach him.

June 15.—At 8 o'clock in the morning the crew of the North Manitou Island Station (Eleventh District), Lake Michigan, were called upon to aid the crew of the schooner South Side, of Milwaukee, Wisconsin, in recovering an anchor and sixty fathoms of chain which they were unable to heave up without assistance. The station men responded to the call, and succeeded, after two hours' labor, in getting the anchor and chain on board, after which the schooner proceeded on her voyage to Milwaukee, whither she was bound with a cargo of wood. The captain was very thankful for the assistance extended to him.

June 16.—At a little after 10 o'clock in the forenoon word reached the Evanston Station (Eleventh District), Lake Michigan, that a young man named Frank Johnson, a resident of Evanston, Illinois, had been drowned by the capsizing of his canoe near the Evanston south pier, about three-quarters of a mile south of the station. The keeper at once proceeded to the spot in his boat with the necessary dragging appliances, and after searching for upwards of an hour in concert with a Mr. Hallstrom, of Evanston, found the body, which had then been under water about an hour and a quarter. The method in vogue in the service for the resuscitation of apparently drowned persons was at once applied by the keeper, and three physicians were summoned; but

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it was of no avail, as life had no doubt been long extinct, one of the physicians expressing the opinion that death took place as soon as the man sank beneath the surface, as the water expelled during the efforts at resuscitation was deeply tinged with blood.

June 17.—At about 5 o'clock Sunday afternoon, June 17, three young men, residents of Louisville, Kentucky, who had gone out in a skiff for a row upon the Ohio River, were saved from being swept over the falls, and probably lost, by the promptness of the Louisville crew (Ninth District), who upon discovering their peril, as the skiff sped towards the dam, put off in one of the station boats and reached the young men just in time to prevent disaster. The men were inexperienced, and knew nothing of their danger until the arrival of the life-savers, and they were very grateful for the assistance received.

June 17.—At 9 o'clock in the morning during a thick fog, the crew of the Point aux Barques Station (Tenth District), Lake Huron, went off in answer to a call from the steam-tug Dave and Mose, of Port Huron, Michigan, and piloted her inshore to a raft of logs she was to take in tow for Sand Beach, Michigan, and assisted with their boat in running necessary tow lines preparatory to the tug proceeding on her way. They had not been back at the station, after doing this, more than an hour when the tug signaled again for aid, the life-saving crew finding when they boarded her the second time that she had got caught on a rock about a mile and a half to the eastward of the station in trying to thread her way out from among the reefs near the shore, the weather still being thick. The life-saving crew sounded until they found the channel and piloted the tug, which in the mean time had floated off clear of all danger, by taking the lead with their boat, the tug following. The tug received no damage and proceeded safely towards her destination with the raft in tow, the captain being very thankful for the aid they received from the station.

June 18.—At half past 1 in the afternoon the crew of the Louisville Station (Ninth District) were notified of the drowning the day before (Sunday) of a boy nine years old, named Michael Tierney, in Two Mile Island Chute, Ohio River, about two miles above the station. They at once repaired to the spot, and after sweeping the river bed for about forty minutes, recovered the child's body and delivered it to the sorrowing father, who was present when they found it.

June 19.—The schooner D. A. Huntley, of Parrsboro', Nova Scotia, from New York for Dorchester, New Brunswick, in ballast, with a crew of seven men, while running along the coast before a fresh southeasterly gale with thick fog, got to leeward of her course, and came very near driving onto the rocks at Cross Island, coast of Maine, the island not being discovered until it was close aboard. Her anchors were let go just in time to hold her, her stern, as she swung round, being within forty or fifty feet of the breakers. Fearing she would drag ashore, the crew abandoned her and trudged across the island to the life-saving station (Cross Island, First District), where they were admitted by one of the life-saving crew, who was fishing in the vicinity, the house being closed for the summer and the crew off duty. It was then 4 o'clock in the afternoon and word was sent the same evening to the keeper. The next morning (20th) the keeper, with as many of his crew as he could assemble, went off to the vessel. The weather was too stormy to warrant an attempt to extricate her. The following day brought no change; all that could be done was to keep watch from shore, so that in case she dragged onto the rocks and was wrecked, they could save as much of the property as possible. By daylight of the

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22d, however, the wind had shifted into a more favorable quarter, so mustering his men, all hands again boarded the schooner in company with her own crew, and got her under way and beat her into Cross Island Harbor for an anchorage, the keeper promising to return as soon as the fog lifted and pilot the vessel to sea. This he did on the next day (23d), and the schooner proceeded an her voyage without damage, the captain being very thankful for thus escaping so well.

June 19.—The schooner Laura Bridgman, of Saint George, Maine, having a crew of seven men, bound from Baltimore, Maryland, to Fall River, Massachusetts, with a cargo of coal, stranded off Asbury Park, New Jersey, at about 4 o'clock in the afternoon during a thick fog, the wind being fresh from the southeast with a rough sea. She struck sixty yards from the shore about a mile and a half north of the Shark River Station (Fourth District). The station was closed for the summer, but the vessel was soon discovered by the keeper (John Kittell), who, upon arrival abreast of her, found a party of three men who had just made an unsuccessful attempt to launch a small surf-boat belonging to one of the bathing establishments on the beach. They proposed getting a larger boat, but the keeper realizing that whatever was done must be done quickly, as the schooner was thumping heavily and likely to commence breaking up at any moment in the heavy sea, called to one of the men, a good surfman, named Eden Blowers, to assist him with the surf-boat just abandoned by the others. Blowers gallantly responded, and the two men headed the frail craft into the surf. The first effort to get off failed, but nothing daunted they succeeded the second time, and reached the schooner in good shape. The crew were very anxious to get ashore, and willingly agreed to follow Kittell's instructions. As his boat was too small to carry all hands, the keeper advised the lowering of the schooner's yawl. Two of the sailors were then helped into the shore-boat with Blowers, while the five others got into the yawl, the keeper taking charge of the steering oar. Watching a favorable opportunity the keeper gave the word to shove off at the right moment, and in a short time the schooner's crew were safely landed, thanks to the energy and skill of their rescuers. The vessel soon afterwards became a wreck, nothing but her spars, sails, and rigging being saved.

June 19.—At 10 o'clock in the forenoon the lookout at the Chicago Station (Eleventh District) sighted a small row-boat, with one man in it, about 4 miles out on Lake Michigan, apparently unmanageable and drifting rapidly away from the shore before the strong northwest wind which blew almost a gale. The surf-boat was quickly launched, and the life-saving crew put off under sail to the man's assistance, overtaking him when about six miles out. His name was J. E. Harris, a resident of Chicago. He had lost one of his oars, and being thus prevented from working his way back against the heavy wind, his boat had drifted off broadside to the sea, and was in momentary danger of being swamped before assistance could reach him. The poor fellow had stripped off his clothing with the intention of attempting to swim back, but becoming exhausted by his efforts to manage the boat his strength had failed, and when the crew arrived he was utterly helpless. He was at once assisted into the surf-boat, and with his boat in tow, the life-savers took to their oars and turned back. The wind was so strong that they were fully three hours in getting back under the lee of the land, and even then they fetched about six miles to the southward of the harbor, in the vicinity of Hyde Park. Once, however, in smooth water, they took a few minutes' rest, and then started along shore for the station, part of the way receiving assistance from the tug Lorena, which

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took them in tow off Twenty-second street and dropped them in front of the station at a quarter past 2 in the afternoon. Mr. Harris undoubtedly owed his life to the life-saving crew, and very freely acknowledged it, saying, as he left the station for his house, that words could not express his gratitude to them for saving him from a watery grave.

June 20.—At 1 o'clock in the afternoon the crew of the Oswego Station (Ninth District), Lake Ontario, New York, went off and rescued two small boys who had been sculling about in Oswego Harbor in a small scow, and were fast being carried out into the lake by the strong southwest wind. The scow was about half a mile out when the life-savers overtook it and towed it back.

June 20.—At 6 o'clock in the morning the pier-head patrol from the Buffalo Station (Ninth District), Lake Erie, reported a five-oared boat aground on the Erie Basin breakwater, about a mile northwest of the station. The boat was at once recovered by the station crew and returned to the schooner Selden E. Marvin, to which vessel it belonged, the captain informing them that it had been stolen from him in the night and set adrift.

June 20.—At about 2 o'clock in the afternoon a woman of Louisville, Kentucky, very much under the influence of liquor, attempted suicide by jumping into the Ohio River from the New Orleans wharf-boat at that place, a few hundred feet from the Louisville Station (Ninth District). The lookout at the station saw her spring overboard, and giving the alarm, a boat's crew got off in an instant to her rescue. The woman had disappeared twice and was again going down when the men caught her by the hair and lifted her into the boat. She was taken to the station, and a messenger dispatched to her house near by, on Third street, for dry clothing, her brother soon afterwards arriving at the station and taking her home with the assistance of one of the crew.

June 20 —At half past 2 in the morning, the large schooner Emma C. Hutchinson (seven hundred and thirty-six tons), of and from Cleveland, Ohio, for Chicago, Illinois, with a cargo of coal and carrying a crew of eleven persons, all told, while beating up Lake Huron towards the Straits of Mackinac against a fresh westerly breeze with rainy weather, missed stays in attempting to go about when off the northerly part of Hammond's Bay, Michigan, and went onto the rocks at a point about eleven miles northwest of the Hammond's Bay Station (Tenth District.) She was sighted from the station after daylight, at a little before 7 o'clock, although from her great distance and the state of the weather it could not be determined whether she was ashore or simply at anchor. This doubt was soon set at rest, however, by the arrival of the second mate of the vessel in a sail-boat, who reported her ashore and in need of assistance—a passing fisherman having informed the captain where the station was located. The life-saving crew were soon on their way to her in the surf-boat, and arrived on board at half past 9. They found the vessel in a very dangerous situation in case a gale of wind should set in, and it was decided to lighten her by throwing cargo overboard, pending the return of the captain who had gone to Cheboygan for the aid of a tug. The life-saving crew, besides helping in this work, sounded around the vessel and found that she was on the inner reef. When the tug arrived at 5 in the evening it became necessary to take soundings again to find a channel for the steamer to reach the stranded vessel by. This took them a couple of hours, and as soon as it was accomplished and they had got the tug into a good position for pulling on the schooner, more of the cargo was jettisoned, until about fifty tons had been taken out. The tug in

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the mean time had not been idle, and she soon afterwards succeeded in hauling the vessel afloat. Before, however, they could get her fairly started she swung onto the reef again, and stuck harder than before, baffling the best efforts of the tug to release her until some fifty or sixty tons more of the cargo had been dumped overboard, when she was floated a second time. It was then thought she was all right, but in attempting to pass over the outer reef she again fetched up hard and fast. It was now evident that they had an all-night job on hand. The coal whip was therefore again manned, and by removing still more of the cargo and tugging at the vessel until half past 4 in the morning (21st) they succeeded in getting the schooner safely afloat and clear of all danger. The captain was very thankful for the aid which the life-saving crew had contributed towards saving his vessel. It was 7 o'clock when they returned to their quarters, after an absence of just twenty-four hours, quite tired out with their labors on board and the long pull of twenty-five miles to and from the vessel.

June 20.—At about 10 o'clock in the morning two men, residents of Astoria, Oregon, while out fishing in the vicinity of Peacock Spit, near Cape Disappointment, Washington Territory, attempted to aid two other fishermen who were in a dangerous situation, and in so doing their boat got caught in the breakers and capsized. The keeper of the Cape Disappointment Station (Twelfth District) happening to be near by in his own fishing-boat (the station being closed for the summer season), hastened to the spot, and succeeded, with the aid of a comrade, in saving the two men and their boat and net, and landed them near the station, where the boat could be bailed out and put in order again.

June 22.—At 2 o'clock in the morning the watchman on the breakwater in the outer harbor of Chicago, Illinois, made signal by lantern to the Chicago Station (Eleventh District) that the assistance of the life-saving crew was required. The surfman on lookout immediately launched the station skiff and pulled out to the point indicated, about half a mile distant, and there found that a cat-rigged boat, the Mayflower, with three men in it, had capsized, throwing the men overboard. The latter were clinging to the boat when he arrived, and as the skiff was too small to hold them he pulled back to the station as quickly as possible and aroused the rest of the crew, who went out and picked the men up. They then righted the boat and towed it to the station, the three men, who had evidently stolen the boat, leaving in a hurry as soon as the shore was reached. The sail-boat was subsequently delivered to its rightful owner.

June 22.—At 6 o'clock in the evening the keeper and one of the crew of the Milwaukee Station (Eleventh District), Lake Michigan, went out about three-quarters of a mile from the station and recovered the body of a drowned man, which they brought ashore and turned over to the proper authorities.

June 23.—At half past 9 at night the pier-head lookout from the Buffalo Station (Ninth District), New York, discovered and reported a steamer aground on the Horse Shoe Reef, Niagara River, about two miles northeast of the station. The life-saving crew put a hawser into their surf-boat and went out in tow of the tug Griffin to the stranded vessel's assistance. She proved to be the steam-yacht Norman L. Wagner, of and from Buffalo, bound to Grand Island, Niagara River, with an excursion party of fifty-four persons on board, all told, the captain reporting that the accident had been caused by the strong current. The station crew as quickly as possible ran their hawser between the

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excursion steamer and the tug, and by means of it the tug succeeded in hauling the vessel afloat with but little damage, and towed her back into Buffalo Harbor, the life-saving men remaining by her until she was safe at the dock.

June 24.—At half past 5 o'clock in the morning a man reported at the Cleveland Station (Ninth District), Lake Erie, that while out fishing he had seen a corpse floating in the water just inside the breakwater pier. The keeper with two surfmen at once proceeded in a boat to the place indicated, found the body (which proved to be that of Mr. Charles T. Goodwin, cashier of the freight department of the Lake Shore Railroad), took it ashore, and turned it over to the coroner. A gold watch and some money were recovered with the body.

June 24.—At about half past 7 o'clock in the morning a report was received at the Louisville Station (Ninth District), that a man named Rittenauer, a resident of Louisville, Kentucky, had been drowned in the Ohio River while fishing below the railroad bridge, about one mile from the station. One of the boats was launched, and provided with drags, the crew proceeded to the scene of the accident, and after a short search recovered the body and turned it over to the coroner.

June 24.—At half past 10 in the forenoon the steam-barge H. C. Akeley, of Grand Haven, Michigan, having a crew of seventeen persons, all told, bound from Escanaba, Michigan, to Vermillion, Ohio, with a cargo of iron ore, ran aground on a reef about five miles to the southeast of the Point aux Barques Station (Tenth District), Lake Huron, during a dense fog. She was discovered shortly before noon by the crew of the station, and they went off to her as quickly as possible in their life-boat to aid in getting her afloat. Two small schooners, the Sunnyside and the Louise, were employed by the captain to lighter the steamer's fuel, in the transfer of which from the stranded vessel the life-saving crew assisted. Finding that would be insufficient to lighten her, all hands were put at work throwing cargo overboard, and by that means, after nearly one-fourth of her lading had been removed, and with the aid of the tug Sweepstakes, of Detroit, the barge was hauled afloat the next morning (25th), after which the fuel was transferred back to her again, it being 1 o'clock in the afternoon when the crew returned to the station, after an absence of twenty-five hours. They had worked almost continuously during that time, only two hours being taken for rest. The sea became quite rough on the morning of the 25th, and just as the barge floated off, the schooner Louise, with the fuel on board, carried away her jib-boom, broke several of her bulwark stanchions, and then, parting her lines, went adrift, giving considerable trouble to get her alongside the barge again to reload the coal. The Sunnyside also suffered damage to her upper works while alongside of the barge, and had her yawl swept from the davits by the sea. The life-saving crew assisted both these vessels very materially by expediting the transfer of the fuel back to the Akeley and helping them to get under way on their return to port.

June 24.—Shortly before midnight of the 23d the schooner Penobscot, of and from Milwaukee, Wisconsin, for Muskegon, Michigan, in ballast, with a crew of eight men, when nearing her destination was overtaken by a violent westerly squall which blew away some of her sails so that to save herself from driving ashore she was compelled to let go both anchors, the place where she came to being about two miles north of the harbor and half a mile from the beach. The anchors failed to hold at first, and before they fetched up she had dragged to within fifty yards of the beach, where there was but ten feet of water. Her sit-

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uation was soon discovered by the watch from the Muskegon Station (Eleventh District), and upon his giving the alarm the crew turned out with their surf-boat, the keeper taking the precaution to carry a spare line with him in case of need, and notifying a tug, as he went out, of what had happened, and requesting her to follow. The tug arrived abreast of the vessel almost as soon as the station crew, and an effort was made to run the schooner's hawser to her, but it was too short as the tug was unable to approach near enough on account of the heavy sea. Another heavy squall coming up at that time, which lasted about an hour, the tug was compelled, for her own safety, to run back into the harbor, the surf-boat riding it out astern of the schooner. Fortunately the squall brought a shift of wind from the eastward, off the land, and this, with the heavy rain, knocked the sea down considerably, so that it was decided to get the schooner under way at once, into deeper water. The station crew therefore assisted in making sail and heaving the anchors up, but another difficulty then arose on account of the vessel being so close in under the land, which was so high that she was practically becalmed. To remedy this the keeper took the end of a line from the schooner and with the surf-boat towed her out until her sails would draw, when she at once headed for the harbor, and was soon afterwards taken in tow by a tug. The captain of the Penobscot was very grateful for the aid he received from the life-saving crew, and their conduct was highly commended by the local press.

June 25.—At 5 o'clock in the afternoon, the sea being smooth and the tide at ebb, a small cat-boat, with two men on board, capsized in an attempt to shift the sail, half a mile from Canarsie, Long Island. Surfman John Wight, of the Coney Island Station (Third District), Long Island, New York, put out at once in a yawl, fished out the two men, and towed the boat ashore.

June 25.—At half past 1 in the morning the lookout at the Chicago Station (Eleventh District), Lake Michigan, observed a signal by the watchman on the harbor breakwater calling for the services of the life-saving crew. He at once aroused his comrades, and as soon as the surf-boat could be launched, they pulled in the direction indicated, and found the sloop-rigged scow Anthony Beffel, with a load of cobble-stones from Racine, Wisconsin, which had dragged her mooring, owing to the stormy, northerly wind, and drifted afoul of the breakwater, where she sprung a leak and was in danger of sinking. Two of the surfmen were at once detailed to assist her own crew of two men at the pumps, while the keeper with the rest of his men returned to the station for a suitable line with which they hauled the scow back into the basin, where, after pumping her out, they left her safe and snug. She would no doubt have sunk but for the prompt arrival of the station crew.

June 25.—On the same day that the Chicago crew (Eleventh District), saved the scow Anthony Beffel from sinking, they found the bodies of two men floating in the lake off the harbor, which they brought in and delivered into the custody of the city authorities. One of them was picked up in the morning and the other in the afternoon, the latter a mile and a half from the station. They were supposed to have drifted in from the wreck of the schooner Wells Burt, which had foundered in the lake on the 20th of May.

June 26.—At about half past 3 o'clock in the afternoon word was received at the Cleveland Station (Ninth District), Lake Erie, that Max Berger, ten years of age, residing in Cleveland, had, while wading in the lake between the station and the breakwater, gone beyond his depth, and, being unable to swim, been drowned. Three of the surfmen, pro-

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vided with grapnels and boat-hooks, proceeded at once to the locality in a boat and recovered the body, after three-quarters of an hour search, and carried it to the station, whence it was soon afterwards removed by the grief-stricken parents.

June 26.—On this date the crew of the Chicago Station (Eleventh District) picked up another body floating in the lake which was also supposed to have come from the foundered schooner Wells Burt. It was delivered to the proper authorities for burial.

June 27.—At about half past 7 in the evening, news reaching the Chicago Station (Eleventh District), Lake Michigan, that three men were out on the south end of the breakwater unable to get ashore, the crew went off there in the surf-boat and brought them safely to the city. They were brothers, named Brown, residents of Chicago, who had gone out for a day's fishing, and reported that when the wind freshened in the afternoon and they attempted, after two or three unsuccessful efforts to reach the city, to haul the boat upon the breakwater beyond reach of the waves, it got adrift from them and was dashed against the piling and badly stove, leaving them without means of reaching home.

June 28.—The brig Martha A. Berry, of Portland, Maine, with a crew of eight men, bound from Philadelphia, Pennsylvania, for Portland, with a cargo of coal, having sprung a leak on the passage, was run ashore at 5 o'clock in the evening, on Common Flat, a shoal in Chatham Roads, on the westerly side of Monomoy Island, Cape Cod, Massachusetts, the object being to keep her from sinking in deep water. The place of grounding was about three miles north by west of the Monomoy Station (Second District), the keeper of which quickly discovered her and went on board to offer assistance. He put off alone in his sail-boat, the station being closed for the season and his men off duty. As the water was smooth, and there being no particular danger to the crew, the captain declined the keeper's offer to take him and his men ashore, preferring to remain on board, as he intended to employ a wrecking party from Chatham to save all that was possible from the wreck. On the following day (29th) the men landed at Chatham Station, the keeper of which obtained for them free passes on the Old Colony Railroad to Boston. The brig became a wreck, but her outfit and a portion of the cargo were saved by the wreckers.

June 29.—The three-masted schooner John Bird, of and for Rockland, Maine, from Boston, in ballast, with a crew of eight men and two passengers—the captain's wife and daughter—while proceeding up Muscle Ridge Channel, Penobscot Bay, before the wind, at about 7 in the morning, the weather being very foggy, made the breakers on Yellow Ledge close aboard, and in attempting to go about after luffing to the wind, missed stays and came very near drifting onto the rocks, the anchor being let go just in time to hold her. The ledge she thus escaped striking on is a little less than a mile to the eastward of the station on White Head Island (First District). The station was then closed for the summer, but one of the crew at work in the vicinity fortunately discovered the vessel through the fog, and supposing she was on the reef hurried with the news to the keeper's house. The latter mustered as many of his men as were within call, and boarded the schooner as quickly as possible, to find that she was not on the rocks but very close to them. Upon consultation with the captain it was decided to attempt to kedge her to windward and thus get her clear, but while making the necessary preparations the schooner commenced dragging her anchor. This compelled a change of plan, and not a moment was to be lost. In a little

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while she would be thumping on the rocky bottom. As quickly as it could be done, the spanker and mainsail were allowed to run down, the cable was slipped, and the jibs hoisted. This manuever was well executed. The head sails canted her head round, the schooner soon gathered way, cleared the ledge by a close shave, and a moment later was safe. The after sails were then set, and the schooner was piloted into Seal Harbor and anchored to await the clearing off of the fog. One anchor was of course lost, but they had saved the vessel by it.

June 29.—The three-masted schooner F. E. McDonald, of Belfast, Maine, with a crew of six men, bound from New London, Connecticut, for Jacksonville, Florida, with a cargo of jetty stone, stranded at 4 o'clock in the afternoon on New Inlet Bar, coast of North Carolina, about five miles north of the Chicamicomico Station (Sixth District), the weather at the time being clear with a fresh southerly breeze. The stations on that coast were closed for the summer, but one of the Chicamicomico crew discovered the schooner soon after she struck and made haste to notify the keeper, who mustered his men as quickly as possible and started for the wreck, the keeper of the Gull Shoal Station making one of the party. The surf-boat was used, and as the wind and sea were in their favor they launched in front of the station and pulled by water the entire distance. The vessel was reached at about 6 o'clock, and although the surf was very rough her crew were landed with their baggage in a very handsome manner and taken to the New Inlet Station for shelter. Early the next morning (June 30) the life-saving crew returned to the scene and made a trip to the stranded vessel with the captain to ascertain her condition, preparatory to the employment of wreckers to save her. Besides the assistance thus rendered, the sailors were sheltered at the station for three days and the captain for a week longer, the keeper's team being also in use on the beach for a couple of days in hauling supplies for the sustenance of the wrecked crew and other necessary work.

The captain wrote the following indorsement upon the keeper's report:

"On the day of the accident we were all taken off with our effects and all property cared for, and our things taken the best of care of with ourselves.

"S. P. KANE,
"*Master.*"

June 29.—At 5 o'clock in the evening, as a pleasure party, consisting of a gentleman named Eliot and two ladies of his family, were out for a sail on Pere Marquette Lake (Ludington), Michigan, in the small sloop-yacht Katie May, the yacht became almost unmanageable by the tack lashing of the jib getting adrift and was unable to fetch the wharf, the wind being off the land and quite fresh. Fortunately the sloop was not more than three hundred yards distant from the Ludington Station (Eleventh District), and the signals of the party for aid were promptly responded to by three of the life-saving crew, who went off in a couple of skiffs and towed the yacht safely to the wharf.

June 29.—Shortly after the men of the Ludington Station returned from assisting the party on board the sloop Katie May, the lookout saw a man adrift in a canoe out on Pere Marquette Lake making signals for assistance. The surfman at once went out in a skiff and brought him safely ashore, and afterwards returned and recovered the canoe, which was half full of water.

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TABLE OF WRECKS

WITHIN THE FIELD OF OPERATIONS OF THE LIFE-SAVING SERVICE.

SEASON OF 1882-1883.

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LIFE-SAVING SERVICE.—TABLE

DISTRICT No. 1.—EMBRACING COASTS

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1882.						
July 1	Hen Island, two miles northwest of station.	White Head	Sl. Herschel	Bangor, Me	Dagget	24
July 13	Southwest side of Great Duck Island.	Cranberry Isles.	Sc. Addie M. Bird	Rockland, Me	Fales	323
July 15	Otter Island Ledge, five miles northeast of station.	White Head	Sc. Orient	Boston, Mass	Gilmore	58
Aug. 3	Northwest point of Little Cranberry Island.	Cranberry Isles.	Sc. Flash*	Gloucester, Mass	McDonald	78
Aug. 7	Norton's Island Reef	White Head	Bkt. Edward Cushing.†	Camden, Me	Bickmore	497
Aug. 8	Newman's Point, five miles northwest of station.	Cranberry Isles.	Sc. Hattie N. Reed‡	Gloucester, Mass	Kelly	49
Aug. 9	Double Headed Island, half mile southeast of station.	Cross Island	Sc. Hugh Ross§	Parrsboro', N. S	Miller	98
Aug. 9	Southwest point of Mount Desert Rock.	Cranberry Isles.	Sc. St. John	Saint John, N. B	Copp	249
Aug. 9	Northeast point of Black Island.	do	Sc. Madam Roland‖	Gloucester, Mass	Murphy	62
Aug. 10	South side of Cross Island.	Cross Island	Sc. Pushaw†	Saint George, Me	Wall	118
Aug. 16	Off White Head Island	White Head	Sc. Redondo	Ellsworth, Me	Woodard	99
Aug. 21	Northwest point of Little Cranberry Island.	Cranberry Isles.	Sc. Sarah Jane	do	Grover	12
Aug 29	Hurricane Ledge	White Head	Sc. Aroline	Bremen, Me	McFarlin	17
Sept. 12	Two miles northeast of station.	Rye Beach	Sc. Pulaski	Thomaston, Me	Dow	39
Sept. 15	Middle Ground, Quoddy Bay.	Quoddy Head	Sc. Jed F. Duren	Calais, Me	Cook	112
Sept. 15	Old Cove, southeast end of Great Cranberry Island.	Cranberry Isles.	Sc. Emma S. Osier	Gloucester, Mass	Innis	24
Sept. 19	Near Rackliff Island, Seal Harbor.	White Head	Sc. Atlas*	Rockland, Me	Chandler	14
Sept. 27	Pulfery's Rock, Wood Island Harbor.	Fletcher's Neck.	Sc. C. and R. Tarbox.	Bristol, Me	Willard	31
Nov. 1	Red Ledge, Wheeler's Bay	White Head	Sc. Kenduskeag	Bangor, Me	Whitney	148
Nov. 12	North end of Libbey Island	Cross Island	Sc. Lizzie K	Saint John, N. B	Odell	99
Nov. 26	Beach Island Ledge	Fletcher's Neck.	Sc. Virginia	Boston, Mass	Abbott	55
Nov. 27	Sea-Horse Rock	Crumple Island.	Sc. Maggie W. Willard.	Portland, Me	Gilley	46
Dec. 4	Bunker's Ledge, two and one-half miles north of station.	Cranberry Isles.	Sc. Wm. Lancaster	Weymouth, N. S	Randle	94
Dec. 6	Seal Harbor, one mile northeast of station.	White Head	Sc. We're Here	Sedgwick, Me	Gross	56
Dec. 6	Seal Harbor, one mile northeast of station.	do	Sc. E. M. Branscom	Ellsworth, Me	Lord	86
Dec. 7	Northwest point of Rackliff's Island.	do	Sl. Goldsmith Maid	Saint George, Me	Wiley	15
Dec. 7	Mill Rock, Wheeler's Bay.	do	Sc. Ophir	Belfast, Me	Jones	98
Dec. 11	Middle Ground, Quoddy Bay.	Quoddy Head	Sc. Avis	Saint John, N. B	McLean	124
Dec. 12	Three miles south of Cross Island.	Cross Island	Sc. Billow	Windsor, N. S	Jenkins	65
Dec. 14	West Quoddy Head	Quoddy Head	Bk. Scotia	Liverpool, England.	Foster	921
Dec. 25	Upper Gangway Ledge, six miles northeast of station.	White Head	Sc. Ella Rose	Ellsworth, Me	Ford	60
1883.						
Feb. 7	West side of Steal's Harbor Island.	Crumple Island.	Sc. Elizabeth§	Calais, Me	O'Brien	84
Feb. 11	East Bunker's Ledge	Cranberry Isles.	Sc. Madawaska Maid.§	Gloucester, Mass	Jones	63
Mar. 18	Seal Harbor, one mile northwest of station.	White Head	Sloop (no name)	Saint George, Me	Andrews	
Mar. 22	Reef off northwest end of Little Cranberry Island.	Cranberry Isles.	Sc. Elsie M. Smith	Portland, Me	Jewett	107

* No assistance required. † Not wrecked, but in perilous position, from which life-saving crew extricated her.
‡ Got off by revenue steamer Dallas.

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OF WRECKS, SEASON OF 1882–'83.

OF MAINE AND NEW HAMPSHIRE.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
Rockland, Me....	Saint George, Me.	.....	$300	.....	$300	$250	$50	2	2	..	....	....
Boston, Mass	Windsor, N. S...	.....	12,000	.....	12,000	11,200	800	7	7	..	....	....
....do	Bangor, Me	Kerosene oil.	1,000	$700	1,700	1,500	200	3	3	..	....	....
Gloucester, Mass.	Fishing.....	.....	4,500	.....	4,500	4,500	.....	15	15	..	....	....
Boston, Mass	Camden, Me	.....	20,000	.....	20,000	20,000	.....	7	7	..	....	....
Gloucester, Mass.	Fishing.....	Fish	4,000	400	4,400	4,350	50	13	13	..	....	....
Plymouth, Mass.	Parrsboro', N. S.	.....	4,000	.....	4,000	.....	4,000	5	5	..	....	....
Boston, Mass	Saint John, N. B.	.....	12,000	.....	12,000	9,000	3,000	11	11	..	....	....
Bryer's Island, N. S.	Gloucester, Mass.	.....	3,800	.....	3,800	3,200	600	10	10	..	....	....
Boston, Mass	Calais, Me	.....	2,000	.....	2,000	2,000	.....	4	4	..	....	....
....do	Ellsworth, Me ..	General.....	2,500	2,000	4,500	4,400	100	4	4	..	....	....
Mount Desert, Me.	Cranberry Island, Me.	Fish	300	60	360	360	.....	3	3	..	....	....
Bremen, Me.. ..	Fishing.....	.....	800	.....	800	800	.....	4	4	..	....	....
Thomaston, Me ..	Boston, Mass ...	Lime	300	440	740	.....	740	2	2	..	1	1
New York	Eastport, Me ...	Coal	4,000	1,000	5,000	2,500	2,500	5	5	..	....	....
Fishing grounds .	Bass Harbor, Me.	Fish	2,500	500	3,000	2,900	100	7	7	..	....	....
Rockland, Me....	Rackliff Island, Me.	.....	400	.....	400	400	.....	3	3	..	....	....
Bristol, Me	Fishing.....	Barrels	500	50	550	525	25	5	5	..	....	....
Portsmouth, N.H.	Bangor, Me	.....	4,500	.....	4,500	4,400	100	5	5	..	....	....
Providence, R. I.	Saint John, N.B.	.....	1,500	.....	1,500	1,000	500	5	5	..	....	....
Boston, Mass	Sullivan, Me	General merchandise.	1,000	2,000	3,000	2,100	900	3	3	..	....	....
Portland, Me	Easport, Me	.....	3,500	.....	3,500	.....	3,500	5	5	..	5	10
Weymouth, N. S .	Boston, Mass ...	Wood.....	1,200	500	1,700	1,600	100	6	6	..	....	....
Boston, Mass	Sedgwick, Me ..	.....	2,000	.....	2,000	1,900	100	3	3	..	....	....
Franklin, Me	New York	Cooperage ...	3,000	3,500	6,500	6,425	75	4	4	..	....	....
Saint George, Me.	Rockland, Me...	Wood.....	800	40	840	800	40	1	1	..	....	....
Wheeler's Bay, Me.	....do	....do	600	150	750	500	250	3	3	..	....	....
Saint John, N. B.	New York	Lumber.....	6,000	2,400	8,400	8,200	200	5	5	..	....	....
Canning, N. S	Boston, Mass ...	Potatoes	4,000	1,200	5,200	4,000	1,200	4	4	..	4	12
Bahia, Brazil.....	Saint John, N. B.	.....	11,000	.....	11,000	.....	11,000	15	15	..	15	30
Boston, Mass	Ellsworth, Me ..	Corn and iron.	2,000	2,500	4,500	2,400	2,100	3	3	..	....	....
....do	Calais, Me	General.....	3,000	3,000	6,000	2,800	3,200	3	3	..	....	....
Eastport, Me....	Gloucester, Mass.	Fish	4,000	2,000	6,000	.....	6,000	7	7	..	4	4
Spruce Head, Me.	Saint George, Me.	.....	120	.....	120	110	10	1	1	..	....	....
Portland, Me ...	Western Bank..	.....	14,000	.....	14,000	14,000	.....	17	17	..	....	....

§ Crew got ashore without assistance. Taken to mainland by life-saving crew.
‖ Got off by life-saving crew with assistance of revenue steamer Dallas.

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DISTRICT No. 1.—EMBRACING COASTS OF

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1883.						
Apr. 10	Middle Ground, Quoddy Bay.	Quoddy Head.	Sc. Friendly	Grand Manan, N. B.	Burnham	18
Apr. 20	Seal Harbor, one and a half miles northeast of station.	White Head	Sl. Island Belle	Rockland, Me.	Hill	69
Apr. 22	Muscle Ridge Channel, four miles northeast of station.	do	Sc. Mary George	Saint John, N. B.	Wilson	95
Apr. 26	Wormell's Ledges, Quoddy Bay, one and a quarter miles east northeast of station.	Quoddy Head	Sc. Libbie T.	Halifax, N. S.	Taylor	68
Apr. 27	Hay Island Ledge, one-half mile east of station.	White Head	Sc. Lucy May*	Rockland, Me.	Boyd	184
June 1	Seal Harbor, one mile northeast of station.	do	Sail-boat	Saint George, Me.	Fleming	
June 4	Red Ledge, Wheeler's Bay, one mile west of station.	do	Sc. Carrie H. Spofford.	Deer Isle, Me.	Marshall	89
June 7	South side of Fletcher's Neck.	Fletcher's Neck.	Sl. Mineralf	Haverhill, Mass.	Danforth	
June 19	South side of Cross Island, one and a half miles southwest of station.	Cross Island	Sc. D. A. Huntley*	Parrsboro', N. S.	Huntley	99
June 29	Yellow Ledge, one mile east of station.	White Head	Sc. John Bird*	Rockland, Me.	Bird	355
	Total					

DISTRICT No. 2.—EMBRACING

1882.						
July 1	Saquish Head, two miles west of station.	Gurnet's	Sc. Maria Louisa‡	Wiscasset, Me.	Dickerson	95
Sept. 12	Chatham Bar	Chatham	Sc. Mary Shields	Gardiner, Me.	Waitt	95
Oct. 3	Two miles southwest of station.	Monomoy	Sc. Florine F. Nickerson.§	Chatham, Mass.	Eldridge	56
Oct. 7	Salisbury Point, one and a half miles north-northwest of station.	Plum Island	Gunning Float	Hampton, N. H.		
Oct. 29	South Breaker, south side of Newburyport Bar.	do	Sc. Forest Maid	Newburyport, Mass.	Post	47
Nov. 2	Three-fourths of a mile south-southeast of station.	Gurnet's	Yacht Martha	Duxbury, Mass.	Whitney	
Nov. 2	Five and a half miles southeast of station.	Monomoy	Sc. Cora	Dennis, Mass.	Fisk	350
Nov. 10	Five hundred yards southwest of station.	Gurnet's	Dory‖	Boston, Mass.	Mullen	
Nov. 12	Nauset Beach	Chatham	Sc. Fawn	do	McDonald	313
Nov. 15	Chatham Bar	do	Surf-boat	Chatham, Mass.	Braser	
Nov. 24	Near Gurnet Head	Gurnet's	Yacht Martha*	Duxbury, Mass.	Whitney	
Dec. 1	One-fourth of a mile west of station.	Peaked Hill Bar.	Sc. Clara Jane*	Lubec, Me.	Allan	125
Dec. 2	Dick's Flat, three miles west-southwest of station.	Gurnet's	Sc. Champion	Gloucester, Mass.	Gray	19
Dec. 3	Two miles northeast of Race Point.	Race Point	Sc. Oliver Ames	Taunton, Mass.	Babbett	456
Dec. 3	Harry's Bluff, three-quarters of a mile north of station.	Nauset	Sc. Pallas	Rockland, Me.	French	68
Dec. 6	Monomoy Beach, one-half mile northeast of station.	Monomoy	Sc. Enoch Robinson	Taunton, Mass.	Blake	574
Dec. 7	Squam Bar, one and a half miles southwest of station.	Davis Neck	Sc. Sarah Louise	Boston, Mass.	Fogger-son.	48
Dec. 7	Saquish Cove, one mile west of station.	Gurnet's	Sc. Ajax*	Indianola, Tex.	Northrop	319
Dec. 8	One and a half miles northwest of station.	Plum Island	Sc. James Baker	Boston, Mass.	Appleby	63

* In perilous position, from which station crew extricated her. † Crew landed in their own boat.
‡ Crew landed without assistance.

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MAINE AND NEW HAMPSHIRE—Continued

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
Grand Manan, N. B.	Eastport, Me		$400		$400	$375	$25	2	2			
Hurricane Island, Me.	Saint George, Me.	Granite	5,000	$400	5,400	5,400		4	4			
Newburyport, Mass.	Saint John, N. B.		6,000		6,000	5,600	400	5	5		2	4
Londonderry, N. S.	Boston, Mass	Potatoes	2,000	1,500	3,500	3,500		10	10			
Rockland, Me	Saint George, Me.		8,000		8,000	8,000		6	6			
Spruce Head, Me.	White Head Island, Me.		25		25	25		1	1			
Nantucket, Mass.	Deer Isle, Me		3,000		3,000	2,600	400	4	4		4	4
Haverhill, Mass.	Portland, Me		500		500		500	2	2		2	2
New York	Dorchester		5,000		5,000	5,000		7	7		6	12
Boston, Mass	Rockland, Me		16,000		16,000	15,700	300	10	10			
			183,045	24,340	207,385	164,320	43,065	251	251		43	79

COAST OF MASSACHUSETTS.

Wiscasset, Me	Provincetown, Mass.	Lumber	3,000	750	3,750	500	3,250	4	4			
Augusta, Me	New York	do	2,500	1,000	3,500	500	3,000	4	4		4	8
Chatham, Mass	Fishing		4,000		4,000	4,000		14	14			
Hampton, N. H	Haverhill, Mass.		10		10	10		2	2			
Newburyport, Mass.	Fishing		3,500		3,500	3,500		7	7			
Duxbury, Mass	Gurnet, Mass		200		200	200						
Philadelphia, Pa.	Boston, Mass	Coal	14,000	1,800	15,800	14,300	1,500	7	7			
Plymouth, Mass.	Fishing	Fish	20	15	35	30	5	4	4		4	8
Boston, Mass	New York		8,000		8,000	6,500	1,500	6	6		6	16
Chatham, Mass	Nauset Beach	Cable	75	150	225	205	20	7	7		7	7
Gurnet, Mass	Duxbury, Mass.		200		200	200		2	2			
Perth Amboy, N. J.	Boston, Mass	Pig-iron	5,000	6,000	11,000	11,000		5	5			
Plymouth, Mass.	Gloucester, Mass	Vegetables	400	200	600	580	20	2	2			
Gardiner, Me	Richmond, Va	Ice	18,000	1,200	19,200	17,000	2,200	7	7		7	16
Clinton Point, N. Y.	Portland, Me	Molding sand.	1,500	200	1,700		1,700	3	3		3	6
Boston Mass	Baltimore, Md		40,000		40,000	37,500	2,500	8	8			
do	Ipswich, Mass		700		700	650	50	3	3		3	3
do	Duxbury, Mass.		12,000		12,000	12,000		9	9			
do	Plum Island Point, Mass.	Sand	3,500	80	3,580	3,580		4	4			

§ No assistance required of life-saving crew.

‖ Boat belonged to Sc. J. J. Burns, of Boston, Mass.

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DISTRICT No. 2.—EMBRACING COAST

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1883.						
Jan. 10	Orleans Beach, Cape Cod.	Orleans	Bk. Friedricke	Stettin, Germany.	Boehm	434
Feb. 28	Seven hundred yards east-northeast of station.	do	Sc. Providence	Bridgeton, N. J.	Selover	399
Mar. 18	North Breaker, Newburyport Bar.	Plum Island	Sc. Ella M. Johnson.	Newburyport, Mass.	Norton	28
May 6	Reef, south side of Tuckernuck, four and a half miles southeast of station.	Muskeget	Str. Cydonia	North Shields, England.	Arson	1,092
May 11	Southeast part of Handkerchief Shoal, four and a half miles southwest of station.	Monomoy	Sc. T. S. McLellan.	Portland, Me.	White	163
June 11	Chatham Bar	Chatham	Sc. Albert H. Cross.	Newburyport, Mass.	Pendleton.	340
June 28	Common Flats, three and a half miles northwest of station.	Monomoy	Bg. Martha A. Berry.	Portland, Me.	Lawrence	335
	Total					

DISTRICT No. 3.—EMBRACING COASTS

1882.						
July 18	One and a half miles east of Smith's Point Station.	Forge River and Smith's Point.	Sc. Young Teaser	New Bedford, Mass.	Andrews	156
Sept. 8	Three quarters of a mile west of station.	Rockaway Point.	Sc. Copia	New York	Jamerson	135
Sept. 15	Sheep's Head Bay, one-half mile north of station.	Coney Island.	Cat-boat	Sheep's Head Bay, N. Y.	Marshall	
Sept. 19	One-quarter of a mile east of station.	Oak Island	Catamaran Teazer	Staten Island, N. Y.	Hewlett	
Sept. 21	Sugar Reef, two miles southwest of station.	Watch Hill	Sc. Lizzie Cochran	Bangor, Me.	Hopkins	184
Oct. 3	Cow Cove, five miles north of station.	New Shoreham.	Sc. Bohea	Fall River, Mass	Blake	11
Oct. 12	One and a half miles north of station.	Point Judith.	Sail-boat Cuckoo	Newport, R. I		
Oct. 13	One-half mile northwest of station.	Petunk	Cat-boat	West Hampton, N. Y.	Culver	1
Oct. 15	Narragansett Beach, one mile east of station.	Watch Hill	Manhattan	New York	Lettie	978
Oct. 18	West side of Hog Island Inlet.	Long Beach	Sl. Ada Rhame	do	Pearsall	15
Nov. 1	do	Far Rockaway.	Sl. Annie A. Smith	Patchogue, N. Y.	Smith	11
Nov. 6	Coney Island Beach, one mile west of station.	Coney Island.	Skiff	Rockaway, N. Y.		
Nov. 13	Rockaway Inlet	Rockaway Point.	Sl. Madge Schullte	New York	Schwarte	2
Nov. 15	Fire Island Bar, two miles west from station.	Fire Island	Sc. Henry D. Brewster.	Patchogue, N. Y.	Newton	42
Nov. 26	Wicopessett Island, five miles west by south of station.	Watch Hill	Sc. George Walker.	Machias, Me.	Thompson.	372
Dec. 1	One-half mile east of Jones' Inlet.	Short Beach	Bg. Jennie Phinney.	Portland, Me.	Anderson	438
Dec. 9	Two miles east of station	Forge River	Bg. Water Lily	New York	Maclure	219
1883.						
Jan. 10	Two hundred yards east of station.	New Shoreham.	Sl. Snowy Daisy	Newport, R. I	Dodge	7
Jan. 10	do	do	Sl. Connecticut	do	Dodge	7
Jan. 10	do	do	Sl. Nellie B	do	Ball	9
Jan. 10	do	do	Str. George W. Danielson.	Providence, R. I.	Cowley	131
Jan. 10	do	do	Sl. Bob	Newport, R. I	Mitchell	8
Jan. 10	One and a half miles east of station.	Eaton's Neck.	Sc. Maggie Cummings.	Boston, Mass	Conary	90

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OF MASSACHUSETTS—Continued.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
Pillau, Prussia...	Portland, Me ...	Rags.....	$12,000	$30,000	$42,000	$30,000	$12,000	11	11	..	11	33
Philadelphia, Pa .	Boston, Mass ...	Coal	20,000	5,000	25,000	25,000	.....	7	7	..	....	....
Fishing	Newburyport, Mass.	Fish.....	3,700	100	3,800	3,800	.....	9	9	..	....	....
New York	Saint John, N. B.	.....	75,000	.....	75,000	75,000	.....	21	21	..	....	....
Philadelphia, Pa.	Portland, Me. ..	Coal	2,500	1,000	3,500	.....	3,500	6	6	..	5	5
Gloucester, Mass.	Delaware, Breakwater.	Stone	34,000	2,000	36,000	36,000	.....	8	8	..	....	....
Philadelphia, Pa.	Portland, Me ...	Coal	3,000	2,000	5,000	1,200	3,800	8	8	..	....	....
.....	.....	.....	266,805	51,495	318,300	283,255	35,045	168	168	..	50	102

OF RHODE ISLAND AND LONG ISLAND.

Baltimore, Md ...	Providence, R. I.	Coal	5,000	1,500	6,500	.....	6,500	6	6	..	4	8
New York.....	Rockaway, N. Y.	... do	3,000	500	3,500	250	3,250	4	4	..	3	9
Sheep's Head Bay, N. Y.	Pleasure trip...	.....	50	.....	50	50	.....	1	1	..	....	....
Babylon, N. Y...	Staten Island, N. Y.	.....	1,000	.....	1,000	500	500	2	2	..	2	2
Bangor, Me	Rattlesnake Island, N. Y.	Lumber	5,000	3,000	8,000	7,450	550	6	6	..	....	....
Cuttyhunk, Mass.	Dighton, Mass.	Seaweed	400	40	440	375	65	3	3	.	3	3
Newport, R. I....	Pleasure trip...	.....	100	.....	100	100	.....	3	3	..	3	3
West Hampton, N. Y.	.... do	.....	75	.....	75	75	.....	1	1	..	....	....
Port Johnson, N. J.	Providence, R. I.	Coal	6,000	7,500	13,500	....	13,500	7	7	..	7	7
East Rockaway, N. Y.	New York.....	.....	1,200	.....	1,200	1,150	50	2	2	..	....	....
Port Johnson, N. Y.	Freeport.....	Coal	1,500	80	1,580	1,520	60	3	3	..	....	....
Rockaway, N. Y.	.....	.....	10	.....	10	10	.....	1	1	..	....	....
Coney Island, N. Y.	Jamaica Bay....	.....	200	.....	200	200	.....	1	1	.	....	....
Albany, N. Y....	Bay Shore, N. Y.	Lumber	5,000	2,000	7.000	7,000	.....	4	4	..	....	....
Hillsboro', N. B ..	Rondout, N. Y..	Plaster	10,000	800	10,800	10,750	50	7	7	.	....	....
Cardenas, Cuba ..	New York	Sugar.....	16,000	40,000	56,000	23,000	33,000	10	10	..	10	16
St. Pierre, W. I ..	....do	....do	3,000	15,000	18,000	1,000	17,000	9	9	..	8	22
Anchored in Block Island Harbor..		.....	400	.....	400	400	.....	(*)	...	...	....	....
.....do		.....	200	.....	200	200	.....	(*)	....	....	....	....
.....do		.....	600	.....	600	600	.....	(*)	....	....	....	....
Providence, R.I..	Newport, R. I...	.....	16,000	.....	16,000	16,000	.....	7	7	..	....	....
Anchored in Block Island Harbor..		.....	50	.....	50	45	5	(*)	....	....	....	....
Providence, R. I .	New York	Barrels	5,000	800	5,800	4,500	1,300	4	4	..	4	44

* No one on board.

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DISTRICT No. 3.—EMBRACING COASTS OF

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1883.						
Mar. 15	One and a half miles northwest of station.	Petunk	Cat-rigged boat	Speonk, N. Y.		1
Apr. 10	One-quarter of a mile east of station.	Oak Island	Sl. Virginia	Patchogue, N. Y.	Ruland	14
Apr. 11	One-half mile from Eaton's Neck Point.	Eaton's Neck	Sc. Copy	Ellsworth, Me		66
Apr. 11	One and a quarter miles southwest of station.	do	Sc. Oscar F. Hawley	Port Jefferson, N. Y.		115
Apr. 11	One-half mile west-northwest of station.	do	Sc. Marietta Smith	Greenport, N. Y.		104
Apr. 11	Three-quarters of a mile west-southwest of station.	do	Sc. Estella Day	New Castle, Del.		228
Apr. 14	Six hundred feet northeast of station.	New Shoreham.	Sl. Franklin Pierce	New London, Conn.	Lester	18
Apr. 16	North part of Block Island, four and a half miles north-northeast of station.	Block Island	Str. Professor Morse*	New York	Swain	999
Apr. 21	Latimer's Reef, Fisher's Island, five miles west of station.	Watch Hill	Sc. Sarah Babcock†	Greenwich, Conn	Hill	55
June 5	North end of Block Island, five miles north of station.	New Shoreham.	Sc. Emma K. Smalley	Lubec, Me	Cousins	196
June 7	One-quarter of a mile east of station.	Smith's Point	Cat-boat Nellie	Bellport, N. Y.		
June 7	Blue Rock, southwest part of Block Island, one-half mile south-southwest of station.	Block Island	Sc. Annie Whiting	Castine, Me	Gray	181
June 13	One mile west of station	Point Judith	Sc. Thomas R. Pillsbury.	Thomaston, Me	Pitcher	415
June 25	Three miles east of station.	Coney Island	Cat-boat	Canarsie, N. Y.	Brossly	
	Total					

DISTRICT No. 4.—EMBRACING

1882.						
July 1	Waretown, N. J	Forked River	Gunning skiff	Waretown, N. J.		
July 6	One mile south of station	Ship Bottom	Sc. Maggie Sutphen†	Somer's Point, N. J.	Smith	16
Aug. 22	Cold Spring Bar, one mile south of station.	Turtle Gut	Sl. Wm. H. Vanneman	Bridgeton, N. J.	Sutton	10
Aug. 28	Three-quarters of a mile north of station.	Atlantic City	Sc. Estella Day	New Castle, Del.	Carry	228
Sept. 10	North bar of Towsend's Inlet.	Towsend's Inlet.	Sc. James W. Drury	Boston, Mass	Studly	451
Sept. 15	Bar north side of Absecom Inlet.	Atlantic City	Sl. Alert	Somer's Point, N. J.	Gale	7
Sept. 16	North Shoals, Absecom Inlet.	Atlantic City	Sl. William Tell	Somer's Point, N. J.	Somers	25
Sept. 22	East End Turtle Gut Bar	Turtle Gut	Bk. Antonio Mimbelli.	Trieste, Austria	Ostoich	657
Sept. 23	Towsend's Inlet	Towsend's Inlet.	Str. Nuphar	North Shields, England.	Brooks	1,279
Oct. 15	Sandy Hook Point	Sandy Hook	Sl. Adda Taylor	Jersey City, N. J.	Foulks	2
Oct. 21	Barnegat Bay, three-quarters of a mile west-southwest of station.	Island Beach	Yawl No. 12	New York	Howell	
Nov. 2	Bar in Shrewsbury River, one mile northwest of station.	Seabright	St. y. Lotus	do	Grant	
Nov. 3	North Shoals, Absecom Inlet.	Atlantic City	Sl. L. C. Wallace	Somer's Point, N. J.	Higbee	17

* No assistance required of life-saving crew. † In dangerous position, from which life-saving crew extricated her.

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RHODE ISLAND AND LONG ISLAND—Continued.

Where from.	Where boun d.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor af-forded.
.....	.....	.....	$100	.....	$100	$100	.....	1	1	..	.....	.....
Rockaway, N. Y	Patchogue, N.Y.	.....	800	.....	800	800	.....	2	2	..	2	20
New York	Boston, Mass...	Fire retorts..	2, 000	$3, 500	5, 500	5, 500	.....	4	4	..	.....	.....
Port Johnston, N. J.	Port Jefferson, N. Y.	Coal	1, 500	800	2, 300	2, 300	.....	4	4	..	.....	.....
Greenport, N. Y..	New York	.....	8, 000	.....	8, 000	8, 000	.....	4	4	..	.....	.....
Providence, R. I .	New Castle, Del.	.....	20, 000	.....	20, 000	20, 000	.....	6	6	..	.....	.....
New London, Conn.	Fishing.....	.....	700	.....	700	700	.....	3	3	..	.....	.....
New York.....	Boston, Mass...	Coal	50, 000	6, 000	56, 000	46, 000	$10, 000	19	19	..	.....	.....
Greenwich, Conn.	Fisher's Island Sound.	Stone	3, 000	200	3, 200	3, 200	.....	5	5	..	.....	.....
New York.....	Machias, Me....	Coal	8, 000	1, 000	9, 000	9, 000	.....	6	6	..	.....	.....
Bellport, N. Y...	Moriches, N. Y	.....	80	.....	80	80	.....	1	1	..	1	1
Georgetown, D. C.	South Boston, Mass.	Coal	3, 000	1, 800	4, 800	.....	4, 800	6	6	..	.....	642
New York.....	Boston, Mass...	....do	28, 000	2, 500	30, 500	30, 475	25	9	9	..	.....	.....
Canasie, N. Y	On pleasure trip.	.....	25	.....	25	25	.....	2	2	..	.....	.....
.....	.....	.....	204, 990	87, 020	292, 010	201, 355	90, 655	153	153	..	53	177

COAST OF NEW JERSEY.

Waretown, N. J	.....	.....	10	.....	10	10	.....	2	2	..	.....	.....
New York.....	Great Egg Harbor.	Coal	1, 500	25	1, 525	1, 525	.....	2	2	..	.....	.....
Cape May, N. J..	Fishing.....	.....	900	.....	900	700	200	2	2	..	.....	.....
Boston, Mass	Philadelphia, Pa.	.....	15, 000	.....	15, 000	15, 000	.....	5	5	..	.....	.....
Bath, Me.....	...do	Ice	25, 000	700	25, 700	23, 400	2, 300	8	8	..	.....	.....
Atlantic City, N. J.	.....	.....	900	.....	900	890	10	8	8	..	.....	.....
Atlantic City, N. J.	Fishing	.....	1, 000	.....	1, 000	1, 000	.....	3	3	..	.....	.....
Dunkerque, France.	Delaware Breakwater.	.....	14, 000	.....	14, 000	.....	14, 000	14	14	..	14	84
New Castle, England.	Philadelphia, Pa.	General.....	150, 000	150, 000	300, 000	.....	300, 000	23	23	..	23	215
Jersey City, N. J.	On pleasure trip.	.....	300	.....	300	.....	300	4	4	..	4	4
... do	Barnegat Bay...	.....	20	.....	20	20	.....	3	3	..	3	3
New York.....	Monmouth Beach, N. J.	.....	3, 000	.....	3, 000	3, 000	.....	5	5	..	1	1
....do	Absecom, N. J..	Coal	1, 000	25	1, 025	1, 025	.....	2	2	..	.....	.....

‡ No assistance by life-saving crew.

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DISTRICT NO. 4.—EMBRACING

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1882.						
Nov. 5	Cape May	Cold Spring and Cape May.	Sc. Mary E. Amsden.	Calais, Me	Maguire	344
Dec. 11	Three miles north-northwest of station.	Sandy Hook	St. sp. Salier*	Bremen, Germany.	Wiegand	253
Dec. 11	One-fourth of a mile west of station.	Little Egg	Sc. Daniel B. Harris	Bridgeton, N. J	Willets	15
Dec. 13	Three miles north-northwest of station.	Sandy Hook	St. sp. Furnessia*	Glasgow, Scotland	Small	3,600
Dec. 14	Barnegat Shoal	Barnegat	Sc. Jefferson	New York	Gibbs	325
Dec. 17	North point of Sandy Hook.	Sandy Hook	Sc. Isaac L. Clark	Bridgeton, N. J	Crammer	335
Dec. 18	Three miles west of station.	Little Egg	Sc. J. G. Crate	Somer's Point, N.J.	Shin	43
Dec. 18	Turtle Gut Inlet, one mile east-northeast of station.	Turtle Gut	Sc. Recruit	Chincoteague, Va.	Taylor	17
Dec. 29	North shoal Absecom Inlet, three-quarters of a mile northeast of station.	Atlantic City.	Cat-boat Emma	Atlantic City, N.J.	Ducas	
Dec. 29	Shoal, north side of Absecom Inlet, one mile east of station.	do	Sl. William Tell	Somer's Point, N.J.	Scull	25
1883.						
Jan. 9	One mile south of station	Chadwick's	Str. Potteville	Philadelphia, Pa.	Pierce	1,283
Jan. 9	One-half mile southwest of station.	Towsend's Inlet.	Sl. Lady Alice	Sea Isle City, N. J.	Holmes	5
Jan. 10	Three-quarters of a mile north of station.	Shark River	Sc. Mabel Thomas	New Haven, Conn.	McKenzie	336
Jan. 11	Barnegat Inlet, four hundred yards northeast of station.	Barnegat	Sc. Margaret A. Amelia.	Somer's Point, N.J.	Reed	24
Jan. 11	South side of Absecom Inlet, one-half mile north of station.	Atlantic City.	Sl. Millie	New York	Bebee	20
Jan. 12	Great Egg, Harbor Inlet, two miles northeast of station.	Ocean City	Sl. Mary Ella	Camden, N. J.	Somers	8
Jan. 13	North Bar, Hereford Inlet, two miles east of station.	Hereford Inlet.	Sc. D. M. Anthony	Taunton, Mass.	Kenney	552
Jan. 13	Southwest end of Two-Mile Beach.	Turtle Gut	Launch of U. S. Light-ship No. 44.		Adams	
Jan. 16	Wreck Pond Inlet	Spring Lake and Squan Beach.	Sl. Rio Grande	Perth Amboy, N.J.	Foster	13
Jan. 18	Brigantine Shoals	Brigantine	Sc. Fred. E. Scammell.	Parrsboro', N. S.	Clendeney	1,350
Feb. 4	Shoal two and one half miles south of station.	Little Egg	Ship Parkfield	Liverpool, England.	Anderson	1,397
Feb. 16	One and three-quarters miles southeast of Sandy Hook Station.	Sandy Hook and Spermaceti Cove.	St. sp. City of Richmond.†	do	Condron	2,824
Feb. 17	One and three-quarters miles southwest of station.	Absecom	Sc. Enterprise	Chincoteague, Va.	Jones	22
Feb. 17	South Bar, Hereford Inlet, one mile east of station.	Hereford Inlet.	Sc. John Mosser	New York	Curtis	98
Feb. 24	Anchorage Island Bar, one mile west of station.	Little Egg	Sc. Queen of the West ‡	Greenport, N. Y.	Sherer	14
Mar. 12	Barnegat Shoals, half mile east of station.	Barnegat	Sl. Everett Presto‡	Rockaway, N. Y.	Piersall	6
Mar. 16	North Bar, Hereford Inlet.	Tatham's and Hereford Inlet.	Sc. Rebecca M. Smith	Philadelphia, Pa.	Grace	318
Apr. 3	One and a quarter miles northwest of station.	Sandy Hook	Sc. Bounding Billow.	Gloucester, Mass.	Noble	57
Apr. 4	Middle Ground, one mile west of station.	Little Egg	Sc. Harry B. Diverty.	Camden, N. J	Nickerson.	173
Apr. 23	Deal Beach	Deal	Sc. George Lewmon.	Onancock, Va	Russell	49
May 11	One and three-quarters miles south of station.	Long Beach	Str. Guinare	Kingston, Jamaica.	Gunther	213

*Assistance of life-saving crew offered, but not required.

† Vessel got off by tugs.

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COAST OF NEW JERSEY,—Continued.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
New York	Richmond, Va	Railroad iron, powder, and soda.	$15,000	$15,000	$30,000	$28,000	$2,000	8	8	..	....	....
Bremen, Germany	New York	General	170,000	200,000	370,000	365,000	5,000	341	341	..	....	....
Hog Island, Va.	Hereford Inlet, N. J.	Oysters	1,600	140	1,740	1,690	50	2	2	..	....	....
Glasgow, Scotland.	New York	General	800,000	225,000	1,025,000	1,025,000	.....	367	367	..	....	....
Mobile, Ala	....do	Lumber	20,000	12,000	32,000	31,000	1,000	8	8	..	5	5
Georgetown, D.C.	....do	Coal	15,000	3,000	18,000	17,500	500	7	7	..	....	....
Green Bank, N.J.	....do	Wood	1,800	160	1,960	1,960	.....	4	4	..	....	....
New York	Chincoteague, Va.	Coal and brick.	2,000	200	2,200	2,180	20	3	3	..	....	....
Fishing	Atlantic City, N. J.	Fish	400	25	425	425	.....	3	3	..	....	....
... do	....do	....do	750	80	830	300	530	3	3	..	....	....
Boston, Mass	Philadelphia, Pa.	.....	100,000	....	100,000	100,000	.....	18	18	..	14	28
Sea Isle City, N. J.	Angle Sea, N. J.	.....	150	.....	150	140	10	3	3	..	3	3
Newburyport, Mass.	Baltimore, Md	.....	10,000	.....	10,000	.....	10,000	7	7	..	7	7
New York	Atlantic City, N. J.	Brick	1,200	100	1,300	860	440	3	3	..	3	5
....do	Fishing	.....	1,200	.....	1,200	1,200	.....	3	3	..	....	....
.....	.....	.....	1,000	.....	1,000	1,000	.....	....	....	..	....	....
Boston, Mass	Philadelphia, Pa.	General	25,000	5,000	30,000	29,000	1,000	7	7	..	1	1
Cape May City, N. J.	Five Fathom Bank.	.....	5	.....	5	5	.....	3	3	..	3	3
Little Egg Harbor, N. J.	New York	Clams	1,000	200	1,200	1,000	200	4	4	..	....	....
Antwerp	....do	Iron and barrels.	70,000	30,000	100,000	74,900	25,100	17	17	..	....	....
Calcutta, India	....do	Jute, saltpeter, and flax-seed.	25,000	120,000	145,000	6,000	139,000	24	24	..	24	66
Liverpool, England.	....do	General	700,000	180,000	880,000	877,000	3,000	425	425	..	....	....
Chincoteague, Va.	....do	Oysters	1,000	385	1,385	.....	1,385	3	3	..	3	6
Rappahannock, Va.	....do	....do	4,000	3,500	7,500	.....	7,500	6	6	..	6	,36
Greenport, N. Y.	Little Egg Harbor, N. J.	.....	1,000	.....	1,000	$1,000	.....	4	4	..	....	....
Rockaway, N. Y.	Great Egg Harbor, N. J.	.....	500	.....	500	500	.....	2	2	..	....	....
Boston, Mass	Philadelphia, Pa.	.....	12,000	.....	12,000	12,000	.....	7	7	..	....	....
Gloucester, Mass.	Fishing	.....	7,000	.....	7,000	6,900	100	14	14	..	7	7
Little Egg Harbor, N. J.	New York	Fish	8,000	3,600	11,600	11,600	.....	5	5	..	....	....
Potomac River	Keyport, N. J.	Oysters	6,000	570	6,570	100	6,470	5	5	..	5	15
New York	Port Antonio, Jamaica.	.....	7,000	.....	7,000	6,250	750	16	16	..	....	....

‡ No assistance required of life-saving crew.

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DISTRICT No. 4.—EMBRACING

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1883.						
May 31	One and a half miles north of station.	Shark River ..	Sc. Henry J. Raymond.	New York	Cranmer .	190
June 4	North Bar of Hereford Inlet, two miles east of station.	Hereford Inlet.	Sc. Fannie A. Bailey.	Portland, Me	Hume	272
June 19	Opposite Asbury Park.....	Shark River ..	Sc. Laura Bridgman.	Saint George, Me.	Hart.....	330
	Total.....	.....	.....	.....	.....	.....

DISTRICT No. 5.—EMBRACING COAST BETWEEN

1882.						
July 17	One and one-fourth miles northeast of station.	Smith's Island.	Sc. Annie E. Moore.	Seaford, Del	Carey.....	126
Aug. 7	Middle Ground, eight miles southwest by west of station.	....do	Sc. B. H. Jones.....	Perth Amboy, N.J.	Pearce	216
Oct. 6	One mile south-southeast of station.	Indian River Inlet.	Sc. Chief.....	New Castle, Del..	Melson ...	32
Oct. 6	.....do.....	....do	Sc. Dan	....do	Chamberlain.	38
Nov. 20	One mile north-northwest of station.	Watchapreague.	Sc George White...	Tuckerton, N. J..	Parker....	42
Dec. 3	Three miles from station...	Cape Henlopen.	Sl. Eureka.....	Chincoteague, Va.	Sneed.....	19
Dec. 4	Cedar Island, one mile northeast of station.	Watchapreague.	Bk. Maddalena Seconda.	Genoa, Italy.....	Schiafino .	473
Dec. 7	Cheese Wreck Shoal, two miles southeast of station.	....do	Sc. Pecora..... ..	Bridgeton, N. J...	Branin....	75
Dec. 7	Carter's Bar, three and one-half miles southeast of Cobb's Island Station.	Cobb's Island and Smith's Island.	Sc. Anthea Godfrey	Wilmington, Del..	Price	182
Dec. 17	Isaac Shoals, five and one-half miles southwest of station.	Smith's Island.	Sc. Gertrude T. Browning.	Somer's Point, N.J.	Showell...	134
1883.						
Jan. 3	One mile south of station..	Pope's Island.	Sc. Samuel Ober....	Provincetown, Mass.	Cummings	68
Jan. 7	Smith's Island Beach, three miles northeast by east of station.	Smith's Island.	Sc. Albert Dailey...	Augusta, Me.....	Goldthwaite.	236
Jan. 8	Five and one-fourth miles north of station.	Green Run Inlet.	Sc. Wyoming.....	Boston, Mass	Bellatty ..	197
Jan. 9	One mile south of station...	Pope's Island.	Mud Scow No. 1	....	....	.....
Jan. 10	Five and one-half miles north of station.	Ocean City ...	Sc. Sallie W. Kay...	Somer's Point, N.J.	Smith	377
Jan. 12	Three and one-half miles north of station.	Green Run Inlet.	Sc. Elizabeth M. Buehler.	Philadelphia, Pa ..	Maloy	491
Jan. 12	Four and one-fourth miles north of station.	Green Run Inlet.	Sc. Julia Grace.....	Halifax, N. S.....	Dickson ..	149
Jan. 20	Three miles north of station.	do	St. sp. Alpin	Bilboa, Spain ..	Aguirie ..	833
Feb. 3	Southeast end of Dawson's Shoals, two miles southeast of station.	Watchapreague.	Sc. Carrie Hall Lister.	Wilmington, Del..	Pearce ..	142
Feb. 12	Southwest end of Cobb's Island.	Cobb's Island	Sc. Shekinah.....	Bridgeton, N. J...	Shaw	84
Feb. 16	Point of Cape Henlopen, two miles north of station.	Cape Henlopen.	Bkne. Minnie Hunter.	Boston, Mass	Laithwaite	457
Feb. 18	Two and one-half miles north-northwest of station.	....do	Sc. Rachel A. Collins.*	Wilmington, Del..	Betts . ..	133
Mar. 3	One and one-half mile southeast of station.	Indian River Inlet.	Bg. Tula.....	New York	Chase.....	181
Mar. 7	Turner's Shoal, five miles southeast of station.	Assateague Beach.	Bkne. Wolverton ...	Portland, Me	Dyer.....	620
Mar. 11	Myrtle Island	Cobb's Island and Smith's Island.	Sc. Jane Emson.....	Taunton, Mass....	Greene ...	329

*No assistance required of life-saving crew.

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COAST OF NEW JERSEY—Continued.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
New York	Virginia		$8,000		$8,000	$5,500	$2,500	6	6	..	....	....
Windsor, N. S	Philadelphia, Pa.	Plaster	8,000	$2,500	10,500	.....	10,500	9	5	4	4	4
Baltimore, Md	Fall River, Mass.	Gas coal	8,000	1,500	9,500	.....	9,500	7	7	..	....	....
.....	.....	.....	2,244,235	953,710	3,197,945	2,654,580	543,365	1,425	1,421	4	130	498

CAPE HENLOPEN AND CAPE CHARLES.

Newburg, N. Y.	Washington, D. C.	Plaster	8,000	1,000	9,000	8,350	650	5	5	..	5	15
Rondout, N. Y.	Baltimore, Md.	Cement	6,000	2,500	8,500	8,250	250	10	10	..	....	....
Indian River, Del.	Millville, N. J.	Lumber	700	325	1,025	850	175	4	4	..	....	....
....do	Port Penn, Del.	....do	1,000	400	1,400	1,100	300	4	4	..	....	....
Jersey City, N. J.	Watchapreague, Va.	.....	2,000	.....	2,000	2,000	.....	4	4	..	....	....
Chincoteague, Va.	Philadelphia, Pa.	Oysters	1,000	250	1,250	1,240	10	3	3	..	....	....
Montevideo, S. A.	Baltimore, Md.	Bones	20,000	8,000	28,000	26,000	2,000	12	12	..	12	56
South Creek, N. C.	Philadelphia, Pa.	Lumber	2,000	1,300	3,300	2,500	800	6	6	..	4	4
Wilmington, Del.	Petersburg, Va.	Guano	6,000	11,000	17,000	16,000	1,000	6	6	..	6	12
James River, Va	Philadelphia, Pa.	Lumber	6,000	1,100	7,100	6,800	300	5	5	..	....	....
Baltimore, Md.	Providence, R. I.	Pig-iron	1,000	3,000	4,000	3,250	750	4	4	..	4	16
... do	Bridgeport, Conn.	Coal	10,000	1,500	11,500	.....	11,500	9	7	2	6	31
Azua, Santo Domingo.	New York	Lignumvitæ and sugar.	7,000	9,000	16,000	.....	16,000	6	6	..	....	....
Philadelphia, Pa	Norfolk, Va.	.....	5,000	.....	5,000	3,000	2,000	....	....	....	....	....
Baltimore, Md	Boston, Mass	Coal	18,000	2,255	20,255	.....	20,255	7	6	1	6	12
... do	Harlem, N. Y.	....do	25,000	2,500	27,500	.....	27,500	8	8	..	8	48
Bon-Air, W. I.	New York	Salt	5,000	1,140	6,140	.....	6,140	7	7	..	7	42
Inagua, Bahamas	....do	General	150,000	150,000	300,000	225,000	75,000	29	29	..	20	20
York River, Va.	....do	Wood	5,000	700	5,700	5,700	.....	5	5	..	....	....
New York	Elizabeth City, N. C.	.....	2,500	.....	2,500	2,500	.....	5	5	..	....	....
Cardenas, Cuba	Delaware Breakwater.	Molasses	6,000	24,000	30,000	.....	30,000	10	10	..	8	22
Atlantic City, N. J.	Hatteras, N. C.	.....	3,000	.....	3,000	3,000	.....	5	5	..	....	....
Charleston, S. C.	New Castle, Del	Phosphate	7,000	4,000	11,000	7,000	4,000	7	7	..	7	14
Cardenas, Cuba	New York	Sugar	37,700	57,000	94,700	.....	94,700	10	10	..	10	30
Norfolk, Va.	....do	Railway ties.	8,000	3,000	11,000	.....	11,000	7	7	..	7	21

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DISTRICT No. 5—EMBRACING COAST BETWEEN

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1883.						
Mar. 13	North end of shoal, south side of Hog Island Inlet.	Hog Island and Cobb's Island.	Sl. H. J. Bishop.....	Brookhaven, N. Y.	Larkins ..	21
Mar. 21	Southeast part of Rogue's Island.	Hog Island ...	Sl. Vienna	Onancock, Va	Steelman .	21
Apr. 10	Round Shoal, point of Cape Henlopen, two miles north of station.	Cape Henlopen.	Sc. Lizzie Dewey...	Lubec, Me.....	Peters	374
Apr. 30	Near Chincoteague Bar, two and one-half miles south-southwest of station.	Assateague Beach,	Sl. Edith Fowle.....	Chincoteague, Va.	Pater	23
	Total.....	.....	.....	.....	.....	.....

DISTRICT No. 6.—EMBRACING COAST

1882.						
Aug. 15	Two and a half miles southeast of station.	Bodie's Island.	Sl. Unqua	Saint Augustine, Fla.	Lennon ...	18
Sept. 26	Middle Ground, near Bird Shoal, seven miles west-southwest of station.	Durant's.....	Sc. James W. Haig*	Philadelphia, Pa..	Irland	15
Sept. 28	One and a half miles south of Currituck light-house.	Whale's Head.	St. sp. Damuji†.....	Cienfuegos, Cuba	McCarthy	153
Oct. 14	Frying Pan Shoals, nine miles south-southeast of station.	Cape Fear	Sc. Robbie L. Foster. ‡	Saint George, Me.	Hart	431
Nov. 5	South side of Hatteras Inlet.	Durant's.....	Sc. Hattie Lollis	Wilmington, Del..	Sipple	160
Dec. 14	Inner shoal of Cape Hatteras, five and a half miles southeast of station.	Creed's Hill ..	Sc. John Floyd.....	Jacksonville, Fla .	Howard ..	182
Dec. 22	Frying Pan Shoals, four and a half miles south-southeast of station.	Cape Fear	Sc. Henry D. May...	Philadelphia, Pa..	Morris....	278
Dec. 30	False Cape, one and a half miles south of station.	False Cape ...	Sc. Boston	....do	Jones.....	120
Dec. 30	Six miles west-northwest of Hatteras light-house.	Creed's Hill ..	Sc. Melville	New Berne, N. C..	Scarborough.	13
Dec. 30	Three miles northwest of Hatteras light.	....do	Sc. Belle	Hatteras, N. C....	Jennett...	6
Dec. 30	One-half mile northeast of station.	Durant's.....	Sc. Annie Farrow ..	Washington, N. C.	Peal	40
Dec. 31	North end of Oliver's Reef, seven miles northwest of station.	....do	Sl. Independence ...	Hatteras, N. C....	Poiner....	13
1883.						
Jan. 9	One-half mile north of station.	Caffey's Inlet.	Sc. Thomas J. Martin.	Bridgeton, N. J...	Marts	508
Jan. 16*	False Cape, two miles east-northeast of station.	False Cape ...	St. sp. Lamperts*..	New Castle, England.	.....	1,317
Feb. 12	One and a half miles south-southwest of station.	Durant's.....	Bk. Dulcimer.....	London, England .	McDowell.	290
Feb. 13*	.....do.....	....do	....do	....do	....do	290
Feb. 17	New Inlet Shoals, three miles southwest of station.	Pea Island....	Sc. Frank Pigot....	Elizabeth City, N. C.	Goodwin..	9
Feb. 28	Ten miles east-northeast of station.	Little Island..	Bk. Figogna.....	Genoa, Italy.....	Nicolini ..	843
Mar. 3	Five miles west by south of station.	Oregon Inlet..	Sl. Allie.....	Roanoke Island, N. C.	Creef.....	3
Mar. 4	One-fourth mile south of Paul Gamiel's Hill Station.	Caffey's Inlet, Paul Gamiel's Hill.	Bk. Angela.....	Genoa, Italy.....	Carlo	373
Mar. 26	Six and a half miles southwest by west of station.	Durant's.....	Sc. L. M. Thomas...	Beaufort, N. C....	Weaks ...	72

*No assistance required of life-saving crew.

†Got off by wrecking company.

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CAPE HENLOPEN AND CAPE CHARLES—Continued.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
Baltimore, Md	Hog Island, Va	.....	$2,000	.....	$2,000	$2,000	.....	3	3	..	....	....
Machipongo, Va	Tuckerton, N. J	Oysters.....	1,000	$300	1,300	1,300	.....	3	3	..	....	....
Matanzas, Cuba	Delaware Breakwater.	Molasses	10,000	40,000	50,000	49,900	$100	8	8	..	....	...
James River, Va.	Chincoteague, Va.	Oysters.....	1,000	200	1,200	1,150	50	4	4	..	....	....
.....	.....	.....	356,900	324,470	681,370	376,890	304,480	196	193	3	110	343

BETWEEN CAPE HENRY AND CAPE FEAR RIVER.

New York.....	Jacksonville, Fla	.....	600	.....	600	300	300	2	2	..	....	....
Philadelphia, Pa.	South Creek, N. C.	Hay	2,000	200	2,200	40	2,160	5	5	..	....	....
New York.....	Cienfuegos, Cuba.	.....	25,000	.....	25,000	12,500	12,500	7	7	..	6	26
....do	Savannah, Ga...	Railroad iron.	30,000	40,000	70,000	.....	70,000	9	9	..	....	....
Philadelphia, Pa.	Leachville, N. C.	General.....	8,000	200	8,200	8,000	200	6	6	..	....	....
New York.....	Jacksonville, Fla	Coal	8,000	1,500	9,500	.....	9,500	8	8	..	8	24
Savannah, Ga....	Philadelphia, Pa.	Lumber	9,000	2,200	11,200	10,200	1,000	8	8	..	7	7
New Berne, N. C	....do	....do	3,000	1,500	4,500	450	4,050	5	5	..	5	27
Elizabeth City, N. C.	Hatteras, N. C ..	.....	500	.....	500	500	.....	3	3	..	....	....
....do	....do	.....	300	.....	300	285	15	3	3	..	....	....
Hyde County, N. C.	....do	.....	1,500	.....	1,500	1,500	.....	3	3	..	....	....
Elizabeth City, N. C.	....do	Corn and coal.	300	150	450	450	.....	2	2	..	....	....
Charleston, S. C..	New York.....	Phosphate rock.	28,000	7,000	35,000	.....	35,000	8	8	..	8	34
Benisooef, Egypt.	Baltimore, Md ..	Iron ore	150,000	15,000	165,000	165,000	.....	45	45	..	....	....
Pernambuco, Brazil.	New York.....	Sugar.... ...	10,000	32,000	42,000	.....	42,000	11	11	..	11	36
....do	....do	....do	.....	.....	.....	.....	.....	4	§4	..	....	....
Powell's Point, N. C.	Pea Island, N. C.	Merchandise.	500	40	540	540	.....	2	2	..	....	....
Parma, Italy.....	Baltimore, Md..	Iron ore.....	30,000	15,000	45,000	.....	45,000	14	14	..	14	14
Roanoke Marshes	Roanoke Island, N. C.	.....	200	.....	200	180	20	2	2	..	2	2
Cartagena, Spain	Baltimore, Md..	Iron ore.....	9,500	3,000	12,500	.....	12,500	10	10	..	10	33
Washington, N. C	Penn's Grove, N. J.	Lumber.....	4,000	1,000	5,000	4,500	500	5	5	..	....	....

‡ Crew taken off by passing vessel.

§ Four wreckers taken off by life-saving crew.

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DISTRICT No. 6.—EMBRACING COAST BETWEEN

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1883.						
Apr. 17	Cape Fear Bar, five miles northwest of station.	Cape Fear	Rowboat	Smithville, N. C	Hasket	
Apr. 17	do	do	Bk. Frey	Porsgrund, Norway.	Halworson	281
June 29	Five miles north of station.	Chicamicomico	Sc. F. E. McDonald.	Belfast, Me	Kane	253
	Total					

DISTRICT No. 7.—EASTERN COAST OF FLORIDA

1883.						
Apr. 9	Saint Lucie Rocks	Gilbert's Bar.	Yawl of sc. Iola	Jacksonville, Fla.	Foggard	

DISTRICT No. 8.—EMBRACING

1882.						
Sept. 5	Northeast end of Mustang Island, one-half mile east of station.	Aransas	Sc. Tex Mex	Corpus Christi, Tex.	Conary	109
Sept. 5	do	do	Sc. Two Marys	New York	Coggins	151
Sept. 15	Northeast end of Matagorda Island, two miles southsoutheast of station.	Saluria	Sc. Normandie	New Orleans, La.	Tobin	18
Sept. 15	Northeast end of Matagorda Island, one and a half miles southeast of station.	do	Sc. Lottie Mayo	Brashear, La	Campbell	41
Dec. 12	Three miles northeast of San Louis Pass, one-half mile south of station.	San Louis	St. sp. Hesper	Hartlepool, England.	Watson	107
Dec. 15	One-half mile from west end of Galveston Island, three and a half miles south-southwest of station.	do	Sc. Zenobia	Pascagoula, Miss	Morgan	79
1883.						
Jan. 9	Pass Cavallo Bar, two miles east of station.	Saluria	Sc. Ellen	Galveston, Tex	Brandt	27
Jan. 25	Southeast point of Padre Island, three miles northnortheast of station.	Brazos	Sl. Rescue	Corpus Christi, Tex.	Caffige	8
Jan. 28	Between Mustang and Saint Joseph's Islands, one-half mile north-northeast of station.	Aransas	Sc. Palma	Key West, Fla	Smith	71
Feb. 10	Four and a half miles southeast of station.	Sabine Pass	Sc. Annie Laura	Indianola, Tex	Serra	17
Mar. 7	Northeast end of Matagorda Island.	Saluria	Sc. Fannie	Galveston, Tex	Cooms	40
Apr. 6	Southeast point of Padre Island, three miles northnortheast of station.	Aransas	Sc. William Whitehead.	New Orleans, La	Mooney	150
	Total					

DISTRICT NO. 9.—EMBRACING

1882.						
July 4	Near Cross Dam, Falls of the Ohio.	Louisville	Skiff	Jeffersonville, Ind.		
July 8	do	do	do	Louisville, Ky		
July 20	One-quarter mile southwest of station.	Charlotte	do	Charlotte, N. Y		

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CAPE HENRY AND CAPE FEAR—Continued.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
Smithville, N. C.			$60		$60	$60		2	2			
Wilmington, N. C	Glasgow, Scotland.	Rosin	10,000	$9,000	19,000	19,000		9	9			
New London, Conn.	Jacksonville, Fla	Jetty rock	10,000	510	10,510	9,710	$800	6	6		6	26
			340,460	128,300	468,760	233,215	235,545	179	179		77	229

AND COAST OF GEORGIA AND SOUTH CAROLINA.

Jacksonville, Fla.	Gilbert's Bar, Fla.		50		50	50		3	3			

GULF COAST.

Calcasieu, La.	Corpus Christi, Tex.	Lumber	7,000	3,500	10,500	2,500	8,000	7	7			
Apalachicola, Fla.	do	Railroad ties	12,000	2,000	14,000	2,000	12,000	9	9		9	29
St. Mary's, Tex	Galveston, Tex		1,800		1,800	1,600	200	3	3			
Corpus Christi, Tex.	do		2,500		2,500	2,500		3	3			
Liverpool, England.	do	Salt	110,000	9,000	119,000	116,000	3,000	23	23			
Pascagoula, Miss.	St. Mary's, Tex	Lumber	6,000	2,000	8,000	500	7,500	6	6		6	14
Pass Cavallo, Tex.	Corpus Christi, Tex.	Lumber	3,000	300	3,300	3,300		3	3			
Corpus Christi, Tex.	Point Isabel, Tex.		500		500	400	100	5	5			
Pensacola, Fla.	Indianola, Tex.	Lumber	1,000	1,500	2,500	2,500		4	4			
Constance, La.	Galveston, Tex	Oysters	1,500	150	1,650		1,650	2	2		2	4
Corpus Christi, Tex.	Calcasieu, La		2,000		2,000	1,600	400	4	4		4	7
Brazos Santiago, Tex.	Mobile, Ala		5,000		5,000	4,500	500	6	6			
			152,300	18,450	170,750	137,400	33,350	75	75		21	54

LAKES ONTARIO AND ERIE.

Jeffersonville, Ind.			15		15	15		1	1			
Louisville, Ky.	Jeffersonville, Ind.		5		5	5		3	3			
Charlotte, N. Y.			10		10	10		1	1			

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DISTRICT No. 9.—EMBRACING

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1882.						
July 25	Near Left-hand Reef, Indiana Chute, Falls of the Ohio.	Louisville	Str. Rainbow	Louisville, Ky	Berry	895
July 25	Horse-Shoe Reef, northwest of station.	Buffalo	Str. James Ash	Buffalo, N. Y	Carr	22
July 26	Near Cross Dam, Falls of the Ohio.	Louisville	Skiff	Louisville, Ky		
Aug. 10	Indiana side, Falls of the Ohio.	do	do	Pittsburgh, Pa		
Aug. 11	Five hundred yards northwest of station.	Salmon Creek	do	Little Salmon River, N. Y.	Wright	
Aug. 11	Wing Dam, Falls of the Ohio.	Louisville	Str. Buckeye State	Cincinnati, Ohio	Kirker	651
Aug. 12	Seven miles northeast of station.	Cleveland	Str. James Amadeus	Cleveland, Ohio	Ellsworth	42
Aug. 13	Near Cross Dam, Falls of the Ohio.	Louisville	Skiff	Louisville, Ky		
Aug. 13	do	do	do	do		
Aug. 13	do	do	do	do		
Aug. 13	do	do	do	do		
Aug. 17	Three miles north of station.	Big Sandy	Sl. Florence Anna	Oak Orchard, N. Y.	Brayly	6
Aug. 19	Left-hand Reef, Falls of the Ohio.	Louisville	Str. Gray Eagle	Louisville, Ky	Westfall	736
Aug. 24	One-half mile northwest of station.	Cleveland	Row-boat	Cleveland, O	Norman	
Aug. 31	Below Cross Dam, Falls of the Ohio.	Louisville	Flat			
Sept. 13	One-quarter mile north of station.	Big Sandy	Sc. Fiat	Oswego, N. Y	Jenkins	38
Sept. 17	Cross Dam, Falls of the Ohio.	Louisville	Skiff	Louisville, Ky		
Sept. 17	do	do	do	do		
Sept. 17	do	do	do	do		
Sept. 17	do	do	do	do		
Sept. 22	Nine miles northeast of station.	Cleveland	Sc. J. Bigler	Chicago, Ill	Connor	353
Sept. 24	Below Cross Dam, Falls of the Ohio.	Louisville	Skiff	Louisville, Ky	Steinberg	
Sept. 25	Horse-shoe Reef, northwest of station.	Buffalo	Str. John Nice	Tonawanda, N. Y.	Burns	10
Oct. 1	Near Cross Dam, Falls of the Ohio.	Louisville	Skiff	Louisville, Ky		
Oct. 1	Indiana side, Falls of the Ohio.	do	do	do		
Oct. 11	Backbone Reef, Falls of the Ohio.	do	Flat	do	Littrell	
Oct. 13	One-quarter mile east of station.	Erie	Fish-boat Myrtle	Conneaut, Ohio	Brown	
Oct. 15	Below Cross Dam, Falls of the Ohio.	Louisville	Skiff Bessie Dale	Louisville, Ky		
Oct. 15	do	do	Skiff Lazy John	do		
Oct. 22	Four-mile Point, four miles east of station.	Oswego	Sl. Phantom	Oswego, N. Y	Phelps	5
Nov. 2	One mile north of station	Cleveland	Bge. B. B. Iceman	Sandusky, Ohio	Reynolds	284
Nov. 5	One-quarter mile west of station.	Big Sandy	Sc. Fiat	Big Sandy Creek, N. Y.	Jenkins	38
Nov. 12	Two hundred rods northwest of station.	Point Marblehead.	Sc. Nellie Blanch	Locust Point, Ohio	Shephard	
Nov. 14	Bird Island Reef, two and a half miles northwest of station.	Buffalo	Str. Harvey Neelon	Saint Catharines, Ont.	McAllister	47
Nov. 14	do	do	Sc. Glenifer	do	Robinson	376
Nov. 17	Four hundred and sixty yards north of station.	Fairport	Str. Inter Ocean	Marine City, Mich.		1,069
Nov. 17	East pier	Cleveland	Yawl *	Port Huron, Mich.		
Nov. 23	One-quarter mile northwest of station.	Buffalo	Sc. J. W. Doane	Chicago, Ill	Long	617
Nov. 24	Two and a half miles south of station.	do	Sc. Groton	Detroit, Mich	Lohr	352

* Boat belonged to barge Keepsake, of Port Huron, Mich.

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LAKES ONTARIO AND ERIE—Continued.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
Louisville, Ky...	Henderson, Ky.	Miscellaneous.	$75,000	$20,000	$95,000	$94,000	$1,000	106	106	..	....	....
Buffalo, N. Y....	Tonawanda, N. Y.	.....	4,000	.....	4,000	4,000	.....	3	3	..	....	....
Louisville, Ky...	Pleasure trip...	.....	5	.....	5	5	.....	2	2	..	....	....
Pittsburgh, Pa...	Padhucah, Ky ..	.....	5	.....	5	5	.....	2	1	1	1	1
Mexico Point, N. Y.	Pleasure trip ..	.....	30	.....	30	30	.....	2	2	..	....	....
Huntington, W. Va.	Saint Louis, Mo.	Iron, &c.....	22,000	13,000	35,000	8,000	27,000	80	80	..	....	....
Cleveland, Ohio..	.....	.....	7,000	.....	7,000	4,000	3,000	3	3	..	....	....
Louisville, Ky...	Pleasant Trip..	.....	15	.....	15	15	.....	2	2	..	....	....
....do	....do	.....	10	.....	10	10	.....	3	3	..	....	....
....do	... do	.....	10	.....	10	10	.....	2	2	..	....	....
....do	....do	.....	15	.....	15	15	.....	4	4	..	....	....
Saint Lawrence River.	Oak Orchard, N. Y.	.....	500	.....	500	500	.....	3	3	..	....	....
Louisville, Ky ...	Henderson, Ky..	Merchandise.	35,000	100,000	135,000	133,500	1,500	100	100	..	....	....
Cleveland, Ohio ..	Fishing	.....	50	.....	50	50	.....	2	2	..	....	....
Cincinnati, Ohio..	Evansville, Ind.	.....	5	.....	5	5	.....	1	1	..	....	....
Oswego, N. Y	Woodville, N.Y.	Coal	3,000	425	3,425	3,425	.....	3	3	..	....	....
Louisville, Ky ...	Pleasure trip ..	.....	20	.....	20	20	.....	4	4	..	....	....
....do	... do	.....	20	.....	20	20	.....	4	4	..	....	....
... do	....do	.....	5	.....	5	5	.....	2	2	..	....	....
....do	....do	.....	20	.....	20	20	.....	4	4	..	....	....
Ashtabula, Ohio..	Cleveland, Ohio.	.....	10,000	.....	10,000	10,000	.....	8	8	..	....	....
Louisville, Ky....	Fishing	.....	5	.....	5	5	.....	2	2	..	....	....
Tonawanda, N.Y.	.....	.....	7,000	.....	7,000	6,975	25	5	5	..	....	....
Louisville, Ky ...	Pleasure trip ...	.....	5	.....	5	5	.....	2	2	..	....	....
... do	....do	.....	15	.....	15	15	.....	3	3	..	....	....
....do	Shippingsport, Ky.	.....	200	.....	200	100	100	9	9	..	....	....
Fishing	Erie, Pa	Fish	500	100	600	450	150	2	2	..	....	....
Louisville, Ky ...	Pleasure trip ..	.....	20	.....	20	20	.....	3	3	..	....	....
....do.....	....do.....	.....	15	.....	15	15	.....	2	2	..	....	....
Oswego, N. Y	....do.....	.....	150	.....	150	130	20	5	5	..	....	....
Bay City, Mich...	Cleveland, Ohio.	Lumber.....	8,000	6,500	14,500	14,000	500	5	5	..	....	....
Oswego, N. Y.....	Woodville, N. Y.	Coal, oil, and salt.	3,000	350	3,350	3,350	.....	3	3	..	....	....
Locust Point, O..	Huron, Ohio.....	Fish	300	200	500	500	.....	2	2	..	....	....
Port Colborne, Canada.	Tonawanda, N.Y	.....	9,000	.....	9,000	9,000	.....	5	5	..	1	1
Port Hope, Ont...	....do.....	Lumber.....	10,000	9,000	19,000	19,000	.....	7	7	..	....	....
Escanaba, Mich..	Fairport, Ohio...	Iron ore.....	50,000	5,000	55,000	55,000	.....	19	19	..	....	....
.....	.....	.....	150	.....	150	150	.....	4	4	..	....	....
Erie, Pa.....	Buffalo, N. Y....	.....	38,000	.....	38,000	.....	38,000	10	10	..	....	....
Wallaceburg, Ont	....do.....	Stave bolts ..	10,000	2,050	12,050	.....	12,050	7	7	..	....	....

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DISTRICT No. 9.—EMBRACING

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1882.						
Dec. 1	One-quarter mile east of station.	Oswego	Sc. D. M. Foster	Toronto, Ont	Jackman	330
Dec. 11	Near Cross Dam, Falls of the Ohio.	Louisville	Yawl James Guthrie	Louisville, Ky		
Dec. 30	One-half mile east of station.	Point Marblehead.	Gen'l Franz Siegel	Cleveland, Ohio	Sherwood	317
1883.						
Feb. 3	Wing and Cross Dams, Falls of the Ohio.	Louisville	Bge. H. B. Smith	Saint Louis, Mo	Parker	838
Feb. 3	do	do	Bge. Crescent City	do	Parker	789
Feb. 11	Falls of the Ohio	do	Raft of logs	Louisville, Ky		
Mar. 1	Indiana Chute, Falls of the Ohio.	do	Str. James Guthrie	do	Penney	732
Mar. 30	Near Cross Dam, Falls of the Ohio.	do	Skiff	do		
Apr. 3	Falls of the Ohio	do	Coal barge	Pittsburgh, Pa		
Apr. 14	Near Cross Dam, Falls of the Ohio.	do	Skiff	Louisville, Ky		
Apr. 18	One mile north of station	Fairport	Pile-driver	Fairport, Ohio	Gibson	
Apr. 22	Wing Dam, Falls of the Ohio.	Louisville	Str. Ben. Franklin	Cincinnati, Ohio	Merriless	747
May 3	One-half mile east of station.	Point Marblehead.	Sc. Volunteer	Cleveland, Ohio	Jennings	52
May 4	Cross Dam, Falls of the Ohio.	Louisville	Flat			
May 9	Ten miles south of station	Big Sandy	Sc. Wm. Gilbert	Sandy Creek, N.Y.	Gilbert	48
May 9	Cross Dam, Falls of the Ohio.	Louisville	Flat	Louisville, Ky		
May 14	Fairport, Ohio	Fairport	Crib			
May 18	Cross Dam, Falls of the Ohio.	Louisville	Skiff A. Henderson	Louisville, Ky		
May 19	One-half mile north-northwest of station.	Erie	Sl. Una	Erie, Pa		
May 21	Cleveland, Ohio	Cleveland	Crib			
May 22	One-eighth mile northwest of station.	Oswego	Sc. Annie Minnis	Port Hope	Wakely	190
May 24	Wing Dam, Falls of the Ohio.	Louisville	Str. Vint Shinkle	Cincinnati, Ohio	Deen	621
May 25	Cross Dam, Falls of the Ohio.	do	Skiff	Louisville, Ky		
May 27	One-quarter of a mile southwest of station.	Charlotte	Row-boat			
May 29	Outer bar of Big Sandy Creek, one-quarter mile west of station.	Big Sandy	Sc. Flat	Oswego, N. Y	Jenkins	38
June 2	Cross Dam, Falls of the Ohio.	Louisville	Skiff John Tompkins.	Louisville, Ky		
June 5	One-quarter mile east-northeast of station.	Fairport	St. pile-driver Mohawk.	Fairport, Ohio	Post	5
June 7	Twenty-five miles east of station.	Point Marblehead.	Str. Vulcan	Detroit, Mich	Rolls	249
June 10	Near Cross Dam, Falls of the Ohio.	Louisville	Skiff J. H. Hildebrand.	Louisville, Ky		
June 11	One-eighth of a mile west of station.	Oswego	Sl. Maud	Oswego, N. Y	Joyce	4
June 11	Three quarters of a mile west-southwest of station.	Cleveland	Sl. Rover	Cleveland, Ohio	Overbech	
June 11	One-half mile east of station	Point Marblehead.	Row-boat	Marblehead, Ohio		
June 17	Near Cross Dam, Falls of the Ohio.	Louisville	Skiff	Louisville, Ky		
June 20	One-half mile northeast of station.	Oswego	Scow		Cain	
June 20	One mile northwest of station.	Buffalo	Row-boat	Detroit, Mich		
June 23	Horse-shoe Reef, two miles northwest of station.	do	St. yacht Norman L. Wagner.	Buffalo, N. Y	Taylor	96
	Total					

* No one on board.

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LAKES ONTARIO AND ERIE—Continued.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
Toronto, Ont	Oswego, N. Y	Lumber	$8,000	$4,400	$12,400	$4,400	$8,000	7	7	..	7	7
Louisville, Ky	Pleasure trip		100		100	100		2	2	..	....	....
Marblehead, Ohio.	Cleveland, Ohio.	Limestone	12,000	260	12,260	12,260		7	7	..	....	....
Cincinnati, Ohio.	New Orleans, La.		5,000		5,000	5,000		(*)		....	....	....
do	do.		5,000		5,000	4,850	150	(*)		....	....	....
Broke from moorings			2,000		2,000	2,000				....	....	....
Henderson, Ky	Louisville, Ky	Miscellaneous	30,000	50,000	80,000	79,500	500	137	137	..	....	....
Louisville, Ky	Pleasure trip		5		5	5		3	3	..	....	....
Adrift			500		500	500		1	1	..	....	....
Louisville, Ky	Pleasure trip		15		15	15		1	1	..	....	....
Fairport Harbor			700		700	700		2	2	..	....	....
Cincinnati, Ohio.	Louisville, Ky	Miscellaneous	15,000	5,000	20,000	20,000		115	115	..	....	....
Marblehead, Ohio.	Cleveland, Ohio.	Limestone	2,500	80	2,580	2,080	500	3	3	..	3	6
Jeffersonville, Ind.	Louisville, Ky		5		5	5		4	4	..	....	....
Chaumont, N. Y	Port Ontario, N. Y.	Limestone	3,000	150	3,150	3,150		3	3	..	....	....
Jeffersonville, Ind.	Louisville, Ky		5		5	5		2	2	..	....	....
			1,200		1,200	1,200				....	....	....
Louisville, Ky	Fishing		25		25	25		5	5	..	....	....
Erie, Pa	Pleasure trip		100		100	95	5	2	2	..	....	....
			2,000		2,000	1,850	150			....	....	....
Port Hope			5,000		5,000	4,980	20	7	7	..	....	....
Memphis, Tenn	Cincinnati, Ohio.	Miscellaneous	24,000	20,000	44,000	43,750	250	81	81	..	....	....
Louisville, Ky	Pleasure trip		5		5	5		2	2	..	....	....
Charlotte	do		20		20	20		1	1	..	....	....
Trenton, Canada.	Woodville, N. Y.	Lumber	3,000	820	3,820	3,820		4	4	..	....	....
Louisville, Ky	Fishing		10		10	10		3	3	..	....	....
	Fairport, Ohio		2,500	100	2,600	2,600		3	3	..	....	....
Saginaw, Mich	Cleveland, Ohio.		25,000	†15,000	40,000	15,000	25,000	14	14	..	....	....
Louisville, Ky	Pleasure trip		10		10	10		2	2	..	....	....
Oswego, N. Y	do		75		75	75		3	3	..	....	....
Adrift			300		300	300		(*)		....	....	....
Marblehead, Ohio			10		10	10		2	2	..	....	....
Louisville, Ky	Pleasure trip		15		15	15		3	3	..	....	....
Oswego, N. Y	do		10		10	10		2	2	..	....	....
			100		100	100		(*)		....	....	....
Buffalo, N. Y	Grand Island, N. Y.		7,000		7,000	6,900	100	54	54	..	....	....
			447,310	252,435	699,745	581,725	118,020	915	914	1	12	15

† Raft of logs in tow.

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DISTRICT No. 10.—EMBRACING

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1882.						
July 6	One-quarter mile northeast of station.	Sand Beach...	Sail-boat Emma.....	Sand Beach, Mich.	.....	.....
July 12	Ottawa Point, one-half mile southwest of station.	Ottawa Point.	Sc. Nakiok.....	Bay City, Mich...	Mead	10
July 10	Middle Island.....	Middle Island.	Raft of logs	Alpena	.....	.....
July 11	Thunder Bay Island	Thunder Bay Island.	....do	....do	.....	.....
July 25	Two miles east-southeast of station.	Middle Island.	Sc. Stampede	Sheboygan, Wis ..	Aga	295
Aug. 1	Forty rods south of station	Sand Beach...	Sc. Sweepstakes	Sand Beach, Mich.	Moore	35
Aug. 1	Twenty rods south of station.	....do	Sc, Annie.....	....do.....	Mall	32
Aug. 23	Three miles southwest of station.	Middle Island.	Scow Mona*.....	Detroit, Mich	Fleming ..	102
Sept. 8	Three miles northeast of station.	Thunder Bay Island.	Str. Glenfinlas	Hamilton, Ontario	Zealand...	.....
Sept. 13	Two miles north of station.	Sturgeon Point	Fish-boat	.....	Lamere ...	.....
Oct. 3	Off Point Aux Barques, northeast of station.	Sand Beach...	Sc. Curlew.....	Port Huron, Mich	Norton ...	80
Oct. 28	Three-quarters of a mile northeast of station.	....do	Sc. O. J. Hale.....	....do	Narcon ...	326
Oct. 30	Three and a half miles east of station.	Point Aux Barques.	Sloop (no name)	.....	Wilsie	.....
Nov. 2	One and a half miles southeast of station.	Point aux Barques.	Raft of logs.....	Black River, Mich.	.....	.....
Nov. 4	Reef, three and a half miles southwest of station.	Middle Island.	St. bg. Oregon.....	Buffalo, N. Y.....	Criqui	536
Nov. 5	Thirty rods north of station.	Sand Beach...	Sc. Ida Robinson...	Sand Beach, Mich.	Moore	12
Nov. 6	Middle Ground, one and a half miles west of station.	Middle Island.	St. bg. Oregon†.....	Buffalo, N. Y.....	Criqui	536
Nov. 17	One mile west of station....	Ottawa Point.	Str. W. E. Quinby...	East Saginaw, Mich.	Burlington	39
Nov. 29	Three and a half miles northeast of station.	Sand Beach...	Sc. Henry A. Kent..	Lorain, Ohio.....	Vader	772
Nov. 30	Southeast side of Sugar Island.	Thunder Bay Island.	Fish-boat	Sand Beach.....	.....	5
1883.						
May 6	Sixty rods southwest of station.	Ottawa Point.	St. pile-driver Mason	Au Sable, Mich...	.....	.....
May 12	One and a half miles southeast of station.	Middle Island.	Bk. Cecelia*.....	Windsor, Canada.	Brooks....	342
May 19	Five hundred yards west of station.	Thunder Bay Island.	Sc. City of Green Bay.	Chicago, Ill.....	Foster....	346
May 21	Twenty rods east of station.	Sand Beach...	Sc. Thomas The Ghost.	Sand Beach, Mich.	Mall	.....
May 21	One mile west of station...	Grindstone City.	Raft of logs.....	Black River, Mich.	.....	.....
May 24	Three miles southeast of station.	Point aux Barques.	Stone lighter.....	Sand Beach, Mich.	Hawkins..	4
June 17	One and a half miles east-northeast of station.	....do	Str. Dave and Mose.	Port Huron, Mich.	Townsend	10
June 20	North point of Hammond's Bay.	Hammond's Bay.	Sc. Emma C. Hutchinson.	Cleveland, Ohio...	Hutchinson.	737
June 24	Five miles southeast of station.	Point aux Barques.	St. bg. H. C. Akeley..	Grand Haven, Mich.	Stretch ...	1,187
June 25	.....do.....	....do	Sc. Sunny Side.....	Sand Beach, Mich.	Cleary	36
June 25	.....do.....	....do	Sc. Louise.....	....do	Davis.....	32
	Total.....	.....	.....	.....	.....	.....

* In perilous position, from which life-saving crew extricated her.

† No one on board.

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LAKES HURON AND SUPERIOR.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
Sand Beach, Mich.	.....	.....	$50	.....	$50	$50	.....	2	2	.....	.....	.....
East Tawas, Mich.	Au Gres, Mich..	.....	200	.....	200	200	.....	13	13	.....	.....	.....
False Presque Isle.	Alpena	.....	2,600	.....	2,600	2,600	.....	.....	.....	.....	.....	.....
.....	....do	.....	60	.....	60	60	.....	.....	.....	.....	.....	.....
Alabaster, Mich.	Chicago, Ill	Plaster	12,000	$6,000	18,000	16,500	$1,500	7	7	.....	.....	.....
Sand Beach, Mich.	.....	.....	500	.....	500	500	.....	3	3	.....	.....	.....
....do	.....	.....	400	.....	400	400	.....	3	3	.....	.....	.....
Lake Huron	East Saginaw, Mich.	Cedar posts..	2,500	1,100	3,600	3,600	.....	5	5	.....	.....	.....
Montreal, Ont....	Chicago, Ill	Railroad iron and general merchandise.	22,600	14,000	36,600	36,475	125	25	25	.....	.....	.....
.....	Lake Erie	.....	20	.....	20	10	10	2	2	.....	.....	.....
Bay City, Mich ..	Mount Clemens, Mich.	Lumber.....	1,500	1,000	2,500	2,400	100	5	5	.....	.....	.....
Tawas, Mich.....	Sandusky, Ohio.	....do	3,000	5,000	8,000	5,800	2,200	7	7	.....	.....	.....
Long Point, Mich.	Whisky Harbor, Mich.	....do	100	10	110	100	10	1	1	1	1	
Black River, Mich.	Toledo, Ohio....	.....	15,000	.....	15,000	13,000	2,000	.....	.....	.....	.....	.....
Perry Sound, Canada.	Buffalo, N. Y....	Lumber.....	70,000	7,000	77,000	77,000	.....	15	15	.....	.....	.....
.....	In harbor.....	Miscellaneous	500	600	1,100	1,100	.....	(†)	.....	.....	.....	.....
Perry Sound, Canada.	Buffalo, N. Y....	Lumber.....	70,000	7,000	77,000	77,000	.....	15	15	..	..	.....
Au Gres, Mich...	East Tawas, Mich.	.....	2,000	.....	2,000	2,000	.....	2	2	.....	.....	.....
Escanaba, Mich..	Cleveland, Ohio.	Iron ore.....	34,000	9,820	43,820	28,820	15,000	10	10	.....	.....	.....
Sand Beach, Mich.	Middle Island, Mich.	.....	125	.....	125	75	50	2	2	2	2	
Au Sable, Mich...	East Tawas, Mich.	.....	2,000	.....	2,000	2,000	.....	4	4	..	..	.....
Saint Catharine's, Ont.	Sable, Mich.....	.....	6,000	.....	6,000	6,000	.....	8	8	.....	.....	.....
Buffalo, N. Y.....	Sheboygan, Wis.	Coal.....	12,000	4,000	16,000	12,000	4,000	7	7	6	12	
Sand Beach, Mich.	.....	.....	300	.....	200	200	.....	2	2	.....	.....	.....
Black River, Mich.	Toledo, Ohio....	.....	20,000	.....	20,000	20,000	.....	.....	.....	.....	.....	.....
Sand Beach, Mich.	Barrel Point Reef, Mich.	.....	25	.....	25	25	.....	3	3	.....	.....	.....
....do	.....	.....	5,000	§ 500	5,500	5,500	.....	11	11	.....	.....	.....
Cleveland, Ohio..	Chicago, Ill.....	Coal.....	23,000	4,200	27,200	26,550	650	7	7	.....	.....	.....
Escanaba, Mich..	Vermillion, Ohio	Iron ore.....	113,000	11,700	124,700	121,950	2,750	17	17	.....	.....	.....
Sand Beach, Mich.	.....	Fuel	1,800	60	1,860	1,820	40	10	10	.....	.....	.....
Port Hope, Ont..	.....	....do	1,500	50	1,550	1,500	50	9	9	.....	.....	.....
.....	.....	.....	421,680	72,040	493,720	465,235	28,485	195	195	..	9	15

‡ Second disaster. § Raft of logs in tow.

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DISTRICT No. 11.—EMBRACING

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1882.						
July 3	Three-quarters of a mile south of station.	Chicago	Sail-boat	Chicago, Ill	Moore	2
July 4	Six miles northeast of station.	Sheboygan	Str. John Gregory	Green Bay, Wis	Burnham	75
July 6	One-half mile south of station.	Two Rivers	Str. M. A. Gagnon	Two Rivers, Wis	Gagnon	18
July 10	Four miles northwest of station.	Beaver Island	Sc. Glad Tidings	Cleveland, Ohio	Bundy	21
July 12	Off Evanston	Evanston	Canoe	Evanston, Ill		
July 13	Opposite station	Ludington	Sail-boat Mermaid	Ludington, Mich		
July 27	One mile southeast of station.	Evanston	Raft			
Aug. 3	One mile north of station	Racine	Sc. Souvenir	Racine, Mich	Johnson	87
Aug. 6	Racine Reef, two miles southeast of station.	do	Str. Escanaba	Marine City, Mich.	Owen	1,161
Aug. 7	Five and a quarter miles north of station.	do	Sc. Caledonia	Racine, Wis	Olson	54
Aug. 19	One-half mile northeast of station.	Chicago	Sc. Floretta	Chicago, Ill	Muray	296
Aug. 19	do	do	Sc. R. B. King	do	Dunbar	83
Aug. 21	Evanston, Ill	Evanston	Sloop	Evanston, Ill		
Aug. 21	do	do	Row-boat	do		
Aug. 30	One mile north of station	Grand Point au Sable.	St. bg. Albert Miller	Manistee, Mich	Stevens	284
Sept. 3	One mile northeast of station.	Chicago	Row-boat	Chicago, Ill		
Sept. 3	do	do	Sl. Sea Bird	do	Watson	4
Sept. 3	Six miles northeast of station.	Kenosha	Bge. Golden Harvest.	Grand Haven, Mich.	Burmest	255
Sept. 17	Five and a half miles northeast of station.	Racine	Fish-boat	Racine, Wis	Hanson	
Sept. 18	Five hundred rods southeast of station	Two Rivers	Sail-boat †	Two Rivers, Wis		
Sept. 20	Two Rivers, Wis	do	Sl. Rippling Wave	Manitowac, Wis	Bennett	5
Sept. 22	Five miles northeast of station.	Racine	Skiff	Racine, Wis		
Oct. 4	One-half mile west of station.	Manistee	Str. George D. Sanford.	Grand Haven, Mich.	Bon	52
Oct. 12	Three and a half miles north of station.	Sheboygan	Sc. Hercules	Pine Lake, Mich	Tullock	90
Oct. 15	One and a quarter miles east-northeast of station.	do	Bge. Plymouth	Buffalo, N. Y	Rowen	876
Oct. 24	Eight miles north of station.	Milwaukee	Str. Annie Young	Erie, Pa	Wait	1,007
Oct. 29	North Pier, Manistee, Mich.	Manistee	Sc. Fleetwing	Charlevoix, Mich.	Smith	41
Oct. 29	Off Milwaukee, Wis	Kenosha	Sc. George L. Wren	Chicago, Ill	Costillo	214
Nov. 1	Evanston North Pier	Evanston	Sc. Kate E. Howard	do	Thompson	96
Nov. 1	Sheboygan	Sheboygan	Sc. Lucy Graham	Milwaukee, Wis	Gunderson	62
Nov. 2	New Breakwater, Chicago	Chicago	Sc. J. W. Brown	Chicago, Ill	Pottgether	166
Nov. 9	Racine, Wis	Racine	Str. M. A. Knapp	Racine, Wis	Gilmore	18
Nov. 13	End of North Pier, five-eighths of a mile west of station.	Manistee	Sc. City of Toledo †	Manistee, Mich	Kelly	245
Nov. 15	Racine Reef, two miles southeast of station.	Racine	Str. Stephen C. Hall	Muskegon, Mich	Brown	477
Nov. 23	One mile northwest of station.	Manistee	Scow	Portage, Mich		50
Nov. 23	Grand Haven, Mich	Grand Haven	Sc. Thomas S. Skinner.	Muskegon, Mich	Davis	195
Nov. 23	do	do	Sc. Jessie Martin	do	Welcher	43
Nov. 24	North Point, three miles north of station.	North Manitou Island.	Sc. Montauk	Chicago, Ill	Gunderson	332
Nov. 24	Four miles north of station.	Grand Point au Sable.	Sc. J. O. Moss	do	Davis	119
Nov. 24	Near Porter Creek, nine miles north of station.	do	Sc. Eclipse	do	Johnson	158

* Two scows in tow.

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LAKE MICHIGAN.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
Chicago, Ill.....	On pleasure trip	.....	$100	.....	$100	$95	$5	2	2	..	....	....
Sheboygan, Wis..	Sturgeon Bay, Wis.	.....	8,000	*$4,000	12,000	11,850	150	8	8	..	....	....
Two Rivers, Wis.	.....	.....	3,000	.....	3,000	3,000	.....	5	5	..	....	....
Horse-shoe Island.	Beaver Island Harbor.	Books, &c ...	5,000	200	5,200	5,100	100	5	5	..	3	3
Evanston, Ill ...	On pleasure trip.	.....	30	.....	30	30	.....	2	2	..	....	....
.....	.....	.....	75	.....	75	75	.....	2	2	..	....	....
South Evanston, Ill.	.....	.....	5	.....	5	5	.....	2	2	..	....	....
Racine, Wis	Muskegon, Mich.	.....	3,000	.....	3,000	2,875	125	4	4	..	....	....
Escanaba, Mich..	Chicago, Ill.....	Iron ore	85,000	9,000	94,000	93,290	710	16	16	..	....	....
Wind Point, Wis.	....do	Stones	1,500	150	1,650	1,575	75	3	3	..	....	....
Buffalo, N. Y....	Chicago, Ill.....	Coal	12,000	4,000	16,000	15,500	500	8	8	..	....	....
Chicago, Ill.....	Grand Haven, Mich.	.....	2,000	.....	2,000	1,850	150	5	5	..	....	....
Evanston, Ill ...	On pleasure trip.	.....	85	.....	85	85	.....	2	2	..	....	....
....do	....do	.....	10	.....	10	10	.....	1	1	..	1	1
Manistee, Mich..	Chicago, Ill.....	Lumber	25,000	3,000	28,000	50	27,950	17	17	..	15	15
Chicago, Ill.....	.....	.....	60	.....	60	60	.....	2	2	..	....	....
....do	.....	.....	200	.....	200	180	20	3	3	..	....	....
Muskegon, Mich.	Chicago, Ill. ...	Lumber	10,000	2,000	12,000	11,800	200	7	7	..	....	....
Racine, Wis.....	On pleasure trip.	.....	50	.....	50	50	.....	2	2	..	....	....
Manitowac, Wis.	Two Rivers, Wis	.....	5	.....	5	5	.....	1	1	..	....	....
St. Joseph, Mich.	....do	Apples	200	100	300	300	.....	1	1	..	....	....
Racine, Wis	Pleasure trip...	.....	35	.....	35	35	.....	2	2	..	....	....
Frankfort, Mich..	Manistee, Mich.	.....	8,000	.....	8,000	7,800	200	13	12	1	....	....
Pine Lake, Mich	Milwaukee, Wis	Wood and bark.	2,500	800	3,300	2,605	695	5	5	..	....	....
Bay City, Mich..	Chicago, Ill.....	Lumber	5,000	11,000	16,000	16,000	.....	9	9	..	....	....
Buffalo, N. Y.....	....do	General merchandise.	45,000	64,000	109,000	108,700	300	23	23	..	....	....
Sheboygan Wis..	Charlevoix, Mich.	.....	1,200	.....	1,200	1,100	100	4	4	..	....	....
Manistique, Mich.	Chicago, Ill.....	Lumber	9,000	2,800	11,800	11,550	250	7	7	..	....	....
Muskegon, Mich.	Evanston, Ill .	.. do	6,000	1,500	7,500	7,500	.....	5	5	..	....	....
Milwaukee, Wis.	Washington Island, Wis.	Provisions...	1,200	300	1,500	1,500	.....	4	4	..	....	....
Grand Haven, Mich.	Chicago, Ill.....	Slabs	1,000	300	1,300	1,250	50	7	7	..	....	....
Racine, Wis.....	.....	.....	3,500	.....	3,500	3,500	.....	3	3	..	....	....
Milwaukee, Wis.	Manistee, Mich.	Apples	5,000	150	5,150	5,050	100	8	8	..	....	....
Cheboygan, Mich.	Chicago, Ill.....	Lumber	40,000	7,200	47,200	45,300	1,900	15	15	..	....	....
Portage, Mich ...	Manistee, Mich	.....	600	.....	600	300	300	.....	.....	..	....	....
Muskegon, Mich.	Chicago, Ill.....	Lumber	6,000	3,000	9,000	.....	9,000	8	8	..	....	....
Milwaukee, Wis.	Muskegon, Mich	Oats, flour, and salt.	4,000	1,500	5,500	4,000	1,500	3	3	..	3	3
Buffalo, N. Y....	Chicago, Ill.....	Coal	15,000	4,000	19,000	.....	19,000	8	8	..	8	32
East Frankfort, Mich.	....do	Shingles	4,000	3,000	7,000	1,000	6,000	6	5	1	5	5
Manistee, Mich..	....do	....do	4,000	5,235	9,235	4,235	5,000	6	5	1	5	5

†In perilous position from which she was rescued by life-saving crew.

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DISTRICT No. 11.—EMBRACING

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1882.						
Nov. 24	Five miles south of station.	Ludington	Sc. Morning Light	Buffalo, N. Y.	Burch	226
Nov. 30	One mile west-southwest of station.	Grand Haven	Sc. Jessie Martin*	Muskegon, Mich.	Dibble	43
Dec. 3	One mile southwest of station.	Two Rivers	Str. Depere	Kenosha, Wis	Pitman	736
Dec. 4	Ninety rods northeast of station.	do	Sc. Oliver Culver	Chicago, Ill.	Edwards	304
Dec. 12	One mile southwest of station.	do	Str. Depere†	Kenosha, Wis	Pitman	736
1883.						
Apr. 4	Three miles northeast of Grosse Point.	Evanston	Sc. Iris	Manitowac, Wis.	Dow	62
Apr. 18	One-quarter of a mile east of station.	Racine	Sc. Speed	Racine, Wis	Nelson	104
Apr. 22	Five miles north of Grosse Point.	Evanston	Sc. S. Bates	Chicago, Ill.	Welsh	139
Apr. 24	Three hundred yards southeast of station.	Chicago	Scow	do		
Apr. 30	Three and a half miles northeast of station.	Two Rivers	Sc. Arrow	do	Blakely	69
May 7	Muskegon	Muskegon	Row-boat	Muskegon, Mich.		
May 9	Three-quarters of a mile southeast of station.	Evanston	Sc. Kate E. Howard	Chicago, Ill.	Thompson	286
May 9	Sheboygan, Wis	Sheboygan	Crib			
May 9	Three miles north of station.	Racine	Sc. Capella	Muskegon, Mich.	Simonson	25
May 14	Six miles north of station.	Sheboygan	Sc. Condor	Chicago, Ill	Morris	30
May 20	Two and a half miles north of station.	Chicago	Row-boat	do	Bassett	1
May 20	Four hundred and fifty yards south-southeast of station.	do	Sc. Persia	do	Peterson	97
May 20	One-half mile south of station.	Milwaukee	Sc. Lillie E.	Manistee, Mich.	Brook	182
May 20	Outer breakwater, Chicago.	Chicago	Sc. R. P. Mason	Milwaukee, Wis.	Leisk	161
May 21	Two miles and a half south of station.	do	Sc. H. B. Burger	do	McCoy	191
May 21	do	do	Sc. Jenny Lind	Chicago, Ill.	Anderson	111
May 21	Two miles south of station.	Milwaukee	Sc. Sailor Boy	Milwaukee, Wis.	Christensen.	76
May 21	One-half mile southeast of station.	do	Yawl	do		
May 22	Hyde Park, six miles south of station.	Chicago	Sc. L. J. Conway‡	do	Smith	90
May 27	Northeast of station	Milwaukee	Row-boat§	do		
June 9	Three-quarters of a mile south-southwest of station.	Saint Joseph	Sc. General Sheridan	Saint Joseph, Mich.	Plumb	
June 9	One-half mile north of station.	do	Str. M. P. Harrison	Michigan City, Ind.	Lutz	17
June 9	Three and a half miles north of station.	Evanston	Sc. Wollen	Holland, Mich.	Borgeman	49
June 9	White Fish Bay, ten miles north of station.	Milwaukee	Sc. Elbe	Milwaukee, Wis.	Bratchsky	68
June 10	One-half mile southwest of station.	Grand Haven	Sl. Raven	Grand Haven, Mich.	Matthews	
June 10	Two Rivers, Wis	Two Rivers	Sloop	Two Rivers, Wis.	Neustedt	
June 19	Six miles southeast of station.	Chicago	Row-boat	Chicago, Ill.		
June 22	One-half mile southeast of station.	do	Sl. May Flower	do	Martin	3
June 24	Three miles from station.	Ludington	Sc. Penobscot	Milwaukee, Wis.	Johnson	257
June 25	One-quarter mile southeast of station.	Chicago	Sl. Anthony Beffel		Beffel	20

* Second disaster.

† Two men having gone on board the wreck of the str. Depere were rescued, their boat having broken and filled.

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LAKE MICHIGAN—Continued.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
Manistee, Mich	Chicago, Ill	Lumber	$7,000	$4,000	$11,000	.....	$11,000	7	7	..	7	20
.....	.....	.....	3,500	.....	3,500	$3,000	500	7	6	1	6	6
Chicago, Ill	Manitowac, Wis.	General merchandise.	50,000	200	50,200	43,150	7,050	30	30	..	.....	.....
Pensaukee, Wis.	Chicago, Ill	Lumber	4,000	2,500	6,500	1,560	5,000	7	7	..	.....	.....
Chicago, Ill	Manitowac, Wis.	.....	.....	.....	.....	.....	.....	2	2	..	.....	.....
.....do	.....do	General	800	600	1,400	1,400	.....	3	3	..	.....	.....
Pentwater, Mich.	Racine, Wis	Lumber	4,000	1,300	5,300	1,100	4,200	5	5	..	.....	.....
Hornes Pier, Wis.	Chicago, Ill	Posts and wood.	4,000	800	4,800	800	4,000	6	6	..	.....	.....
Chicago, Ill	.....	.....	15	.....	15	15	.....	1	1	..	.....	.....
Milwaukee, Wis.	Leeland, Mich	.....	1,100	.....	1,100	400	700	3	3	..	.....	.....
Muskegon, Mich.	On pleasure trip	.....	20	.....	20	20	.....	3	3	..	.....	.....
Evanston, Ill	Muskegon, Mich	.....	4,500	.....	4,500	4,000	500	4	4	..	3	3
.....	Adrift	.....	1,800	.....	1,800	1,800	.....	.....	.....	.....	.....	.....
Muskegon, Mich.	Racine, Wis	Slabs	800	60	860	100	760	2	2	..	1	5
....do	Manitowoc, Wis.	Lumber	1,500	225	1,725	1,620	105	2	2	..	.....	.....
Chicago, Ill	.....	.....	40	.....	40	35	5	2	2	..	2	2
Muskegon, Mich.	Chicago, Ill	Lumber	3,000	1,000	4,000	3,925	75	5	5	..	.....	.....
Manistee, Mich.	Milwaukee, Wis.	....do	10,000	5,000	15,000	9,700	5,300	7	7	..	7	49
Sutton's Bay	Chicago, Ill	... do	5,600	620	6,220	4,590	1,630	6	6	..	3	6
Muskegon, Mich.	....do	....do	8,000	1,500	9,500	300	9,200	7	7	..	1	1
....do	... do	Slabs	1,500	600	2,100	.....	2,100	5	1	4	.....	.....
Pierport, Mich.	Milwaukee, Wis.	Wood	1,600	240	1,840	100	1,740	3	3	..	3	3
Charlevoix, Mich.	....do	.....	10	.....	10	10	.....	5	2	3	2	2
Muskegon, Mich.	Chicago, Ill	Shingles	3,500	2,000	5,500	5,200	300	4	4	..	.....	.....
Milwaukee, Wis.	On pleasure trip	.....	35	.....	35	35	.....	3	3	..	.....	.....
Saint Joseph, Mich.	Fishing	Fish	200	250	450	440	10	3	3	..	.....	.....
... do	....do	.....	3,500	.....	3,500	3,500	.....	3	3	..	.....	.....
Holland, Mich	Chicago, Ill	Lumber	1,800	900	2,700	2,400	300	4	4	..	.....	.....
White Lake, Mich.	Milwaukee, Wis.	Slabs	1,200	150	1,350	1,250	100	4	4	..	.....	.....
Grand Haven, Mich.	On pleasure trip	.....	50	.....	50	50	.....	3	3	..	.....	.....
Two Rivers, Wis.	....do	.....	25	.....	25	25	.....	2	2	..	.....	.....
Chicago, Ill	.....	.....	30	.....	30	30	.....	1	1	..	.....	.....
....do	South Chicago, Ill.	.....	100	.....	100	100	.....	3	3	..	.....	.....
Milwaukee, Wis.	Muskegon, Mich	.....	18,000	.....	18,000	17,900	100	8	8	..	.....	.....
Racine, Wis	Chicago, Ill	Cobble-stones	250	125	375	350	25	2	2	..	.....	.....

‡ No assistance required from life-saving crew. § Drifting out to sea.

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DISTRICT No. 11.—EMBRACING

Date.	Place.	Name of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1883.						
June 27	Three-quarters mile south of station.	Chicago	Row-boat Jennie	Chicago, Ill.	Finch	1
June 29	Ludington, Mich	Grand Point au Sable.	Yacht Katie May	Ludington, Mich.	Elliott	
June 29	Near Ludington	Ludington	Canoe			
	Total					

DISTRICT No. 12.—

1882.						
Sept. 1	Two miles southwest of station.	Golden Gate Park.	Bk. Dublin	San Francisco, Cal.	Malony	706
Oct. 15	Seven miles east of station.	Cape Disappointment.	Fish-boat	Fort Canby, Wash. Ter.	Neinburg.	8
Dec. 2	Two and one-half miles southeast of station.	Shoalwater Bay.	Sc. Annie Larsen*	San Francisco, Cal.	Larsen	377
Dec. 17	Two and one-fourth miles southwest of station.	Humboldt Bay	Str. Mary Ann	Eureka, Cal	Roening	77
Dec. 17	Two miles southwest of station.	do	Str. Humboldt	San Francisco, Cal.	Paton	389
1883.						
Jan. 13	One-half mile east-southeast of station.	do	Yawl Eclipse	Eureka, Cal		2
Jan. 24	Peacock Spit, one mile southwest of station.	Cape Disappointment.	Sl. Minerva	Cape Disappointment, Wash. Ter.		6
Feb. 7	One mile northeast of station.	Humboldt Bay	Str. Edith	Eureka, Cal	Smith	33
June 20	Peacock Spit, one and one-half miles southwest of station.	Cape Disappointment.	Fish-boat	Astoria, Oreg	Brown	2
	Total					

RECAPIT

Districts.	Total number of disasters.	Total value of vessels.	Total value of cargoes.
District No. 1	45	$183,045	$24,340
District No. 2	26	266,805	51,495
District No. 3	37	204,990	87,020
District No. 4	47	2,244,235	953,710
District No. 5	29	356,900	324,470
District No. 6	23	340,460	128,300
District No. 7	1	50	
District No. 8	12	152,300	18,456
District No. 9	78	447,310	252,435
District No. 10	31	421,680	72,040
District No. 11	78	457,945	149,305
District No. 12	9	90,075	15,360
Aggregate	416	5,165,795	2,076,925

*In perilous position, from which life-saving crew extricated her.

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LAKE MICHIGAN—Continued.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons succored at station.	No. of days' succor afforded.
Chicago, Ill			$30		$30		$30	3	3			
Ludington, Mich.	On pleasure trip		75		75	$75		3	3			
	do		10		10	10		1	1			
			457,945	149,305	607,250	478,140	129,110	403	392	11	75	161

EMBRACING PACIFIC COAST.

Port Townsend, Wash. Ter.	San Francisco, Cal.	Lumber	5,000	10,000	15,000	8,000	7,000	11	11			
Fort Canby, Wash. Ter.			225		225	225		2	2			
Santiago	Shoalwater Bay		30,000		30,000	30,000		13	13			
Eureka, Cal	Humboldt Bay		16,000		16,000	14,500	1,500	5	5			
San Francisco, Cal	Eureka, Cal	Merchandise	36,000	5,000	41,000	39,800	1,200	41	41			
	do		100		100	100		1	1			
Fort Canby, Wash. Ter.			500		500	400	100					
Eureka, Cal	Eel River, Cal		2,000		2,000	1,950	50	2	2			
Baker's Bay, Wash. Ter.		Fish	250	360	610	560	50	2	2			
			90,075	15,360	105,435	95,535	9,900	77	77			

ULATION.

Total amount of property involved.	Total amount of property saved.	Total amount of property lost.	Total number of persons on board.	Total number of persons saved.	Total number of persons lost.	Number of shipwrecked persons succored at stations.	Total amount of days' succor afforded.	Number of disasters involving total loss of vessels.
$207,385	164,320	43,065	251	251		44	80	7
318,300	283,255	35,045	168	168		56	108	6
292,010	201,355	90,655	153	153		59	185	5
3,197,945	2,654,580	543,365	1,425	1,421	4	138	501	11
681,370	376,890	304,480	196	193	3	117	353	8
468,760	233,215	235,545	179	179		83	253	8
50	50		3	3				
170,750	137,400	33,350	75	75		30	70	4
699,745	581,725	118,020	915	914	1	15	27	5
493,720	465,235	28,485	195	195		23	127	
607,250	478,140	129,110	403	392	11	76	165	12
105,435	95,535	9,900	77	77		10	10	1
7,242,720	5,671,700	1,571,020	4,040	4,021	19	†651	†1,879	68

† These figures include 71 persons to whom succor was given who were not on board the vessels embraced in the tables, and 211 days of such succor, as follows:

District No. 1, 1 person 1 day.
District No. 2, 6 persons 6 days.
District No. 3, 6 persons 8 days.
District No. 4, 8 persons 8 days.
District No. 5, 7 persons 10 days.
District No. 6, 6 persons 24 days.
District No. 8, 9 persons 16 days.
District No. 9, 3 persons 12 days.
District No. 10, 14 persons 112 days.
District No. 11, 1 person 4 days.
District No. 12, 10 persons 10 days.
Total, 71 persons 211 days.

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APPROPRIATIONS AND EXPENDITURES.

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STATEMENT

SHOWING THE

APPROPRIATIONS AND EXPENDITURES FOR THE MAINTENANCE OF THE LIFE-SAVING SERVICE FOR THE FISCAL YEAR ENDING JUNE 30, 1883.

Appropriation—Life-Saving Service, 1883.

For salary of one superintendent for the life-saving stations on the coasts of Maine and New Hampshire, District No. 1.	$1,500 00	
For salary of one superintendent for the life-saving stations on the coast of Massachusetts, District No. 2	1,500 00	
For salary of one superintendent for the life-saving stations on the coasts of Rhode Island and Long Island, District No. 3	1,800 00	
For salary of one assistant superintendent for the life-saving stations on the coasts of Rhode Island and Long Island, District No. 3	1,000 00	
For salary of one superintendent for the life-saving stations on the coast of New Jersey, District No. 4	1,800 00	
For salary of one superintendent for the life-saving stations on the coasts of Delaware, Maryland, and Virginia, District No. 5	1,500 00	
For salary of one superintendent for the life-saving stations on the coasts of Virginia and North Carolina, District No. 6	1,800 00	
For salary of one superintendent for the houses of refuge on the coast of Florida, District No. 7	1,200 00	
For salary of one superintendent for the life-saving and life-boat stations on the coast of the Gulf of Mexico, District No. 8	1,500 00	
For salary of one superintendent for the life-saving and life-boat stations on the coasts of Lakes Ontario and Erie, District No. 9	1,800 00	
For salary of one superintendent for the life-saving and life-boat stations on the coasts of Lakes Huron and Superior, District No. 10	1,800 00	
For salary of one superintendent for the life-saving and life-boat stations on the coast of Lake Michigan, District No. 11	1,800 00	
For salary of one superintendent for the life-saving and life-boat stations on the coasts of Washington Territory, Oregon, and California, District No. 12	1,800 00	
		$20,800 00
For salary of 202 keepers of life-saving and life-boat stations and houses of refuge		141,400 00
For pay of crews of surfmen employed at the life-saving and life-boat stations, during the period of actual employment; compensation of volunteers at life-saving and life-boat stations for actual and deserving service rendered upon any occasion of disaster, at such rate, not to exceed $10 for each person, as the Secretary of the Treasury may determine; pay of volunteer crews for drill and exercise; fuel for stations and houses of refuge; repairs and outfits for same; rebuilding and improvement of same; supplies and provisions for houses of refuge and for shipwrecked persons succored at stations; traveling expenses of officers under orders from the Treasury Department; for carrying out the provisions of sections seven and eight of the act approved May fourth, eighteen hundred and eighty-two,		

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and contingent expenses, including freight, storage, repairs to apparatus, medals, labor, stationery, advertising, and miscellaneous expenses that cannot be included under any other head of life-saving stations on the coasts of the United States	$580,000 00	
Additional appropriations under joint resolutions of June 30, 1882, and subsequent dates, for salaries of employés	321 54	
		$580,321 54
To replace life-saving medals provided for by section seven of the act of July twentieth, eighteen hundred and seventy-four, which have been stolen from parties upon whom they have been bestowed or have been lost without fault on their part, one hundred dollars, or so much thereof as may be necessary, to be expended under the direction of the Secretary of the Treasury		100 00
Total		742,621 54

Expenditures.

Salary of superintendent of life-saving stations in District No. 1 from July 1, 1882, to June 30, 1883	1,500 00	
Salary of superintendent of life-saving stations in District No. 2 from July 1, 1882, to June 30, 1883	1,500 00	
Salary of superintendent of life-saving stations in District No. 3 from July 1, 1882, to June 30, 1883	1,800 00	
Salary of assistant superintendent of life-saving stations in District No. 3 from July 1, 1882, to June 30, 1883	1,000 00	
Salary of superintendent of life-saving stations in District No. 4 from July 1, 1882, to June 30, 1883	1,800 00	
Salary of superintendent of life-saving stations in District No. 5 from July 1, 1882, to June 30, 1883	1,500 00	
Salary of superintendent of life-saving stations in District No. 6 from July 1, 1882, to June 30, 1883	1,800 00	
Salary of superintendent of houses of refuge in District No. 7 from July 1, 1882, to June 30, 1883	1,200 00	
Salary of superintendent of life-saving and life-boat stations in District No. 8 from July 1, 1882, to June 30, 1883	1,500 00	
Salary of superintendent of life-saving and life-boat stations in District No. 9 from July 1, 1882, to June 30, 1883	1,800 00	
Salary of superintendent of life-saving and life-boat stations in District No. 10 from July 1, 1882, to June 30, 1883	1,800 00	
Salary of superintendent of life-saving and life-boat stations in District No. 11 from July 1, 1882, to June 30, 1883	1,800 00	
Salary of superintendent of life-saving and life-boat stations in District No. 12 from December 21, 1882, to June 30, 1883	953 80	
		19,953 80
Pay of 190 keepers, Districts Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12, quarter ending September 30, 1882	20,532 06	
Pay of 196 keepers, Districts Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12, quarter ending December 31, 1882	31,872 21	
Pay of 190 keepers, Districts Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12, quarter ending March 31, 1883	32,507 15	
Pay of 194 keepers, Districts Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12, quarter ending June 30, 1883	32,674 84	
Pay of keeper of the Brazos Station, District No. 8, for services from July 1 to September 19, 1882, at $400 per annum	$88 05	
Less amount deducted to replace public property appropriated by said keeper to private use	2 00	
	86 05	
Pay of keeper of the Cape Henry Station, District No. 6, being balance of compensation, difference between $400 and $700 per annum from September 15, to December 28, 1882	85 60	
		117,757 91
Pay of surfmen in District No. 1, from September 1, 1882, to April 30, 1883	18,545 00	
Pay of surfmen in District No. 2, from September 1, 1882, to April 30, 1883	42,023 32	

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Pay of surfmen in District No. 3, from September 1, 1882, to April 30, 1883	$91,798 39	
Pay of surfmen in District No. 4, from September 1, 1882, to April 30, 1883	98,868 72	
Pay of surfmen in District No. 5, from September 1, 1882, to April 30, 1883	29,137 67	
Pay of surfmen in District No. 6, from September 1, 1882, to April 30, 1883	63,651 61	
Pay of surfmen in District No. 8, from September 1, 1882, to April 30, 1883	9,138 59	
Pay of surfmen in District No. 9, from July 1, 1882, to June 30, 1883	25,782 26	
Pay of surfmen in District No. 10, from July 1 to December 15, 1882, and from April 16 to June 30, 1883	31,619 03	
Pay of surfmen in District No. 11, from July 1 to December 31, 1882, and from April 2 to June 30, 1883	44,486 14	
Pay of surfmen in District No. 12, from October 2, 1882, to June 30, 1883	6,000 37	
Pay of one surfman as acting keeper of the White Head Station, District No. 1, from July 1 to September 10, 1882	106 66	
Pay of one surfman as acting keeper of the Tiana Station, District No. 3, from July 1, to September 11, 1882	106 50	
Pay of surfmen in District No 1, for services at wrecks which occurred at periods when crews were not required to reside at the stations	223 00	
Pay of surfmen in District No. 2, for services at wrecks which occurred at periods when crews were not required to reside at the stations	36 00	
Pay of surfmen in District No. 3, for services at wrecks which occurred at periods when crews were not required to reside at the stations	41 00	
Pay of surfmen in District No. 4, for services at wrecks which occurred at periods when crews were not required to reside at the stations	24 00	
Pay of surfmen in District No. 5, for services at wrecks which occurred at periods when crews were not required to reside at the stations	42 00	
Pay of surfmen in District No. 11, for services at wrecks which occurred at periods when crews were not required to reside at the stations	69 00	
Pay of disabled surfmen under the provisions of section 7 of the act approved May 4, 1882	1,283 00	
		$462,982 26
Pay of volunteer surfmen in District No. 9, for drill and exercise	593 75	
Pay of volunteer surfmen in District No. 9, for services at wrecks	136 00	
Pay of volunteer surfmen in District No. 11, for services at wrecks	30 00	
Pay of volunteer surfmen in District No. 12, for services at wrecks	21 00	
		780 75
Apparatus	14,521 99	
Books, charts, stationery, advertising, telegraphing, &c	1,091 62	
Compensation for special services, labor, &c	4,383 71	
Equipments	3,254 07	
Freight, packing, storage, &c	1,871 08	
Fuel and water for stations	10,387 23	
Furniture, supplies, &c	12,886 23	
Lithographing and engraving	52 00	
Medicines	172 10	
Rebuilding, repair, and improvement of stations	8,790 78	
Recording conveyances	11 29	
Removal of stations	570 50	
Rent of offices of inspector and superintendents	559 67	
Repairs of apparatus, equipments, and furniture	1,048 69	
Sites for stations	4 99	
Stables and forage for horses kept at stations for hauling boats and apparatus	1,416 04	
Storehouse built at Sandy Hook for life-saving appliances	432 78	

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Subsistence of persons rescued from wrecked vessels	$295 10	
Transporting apparatus to and from wrecks where horses are not kept	213 50	
Traveling expenses of officers	7,251 68	
		$69,215 05
For replacing the medal of John Hussey, being the duplicate of the gold life-saving medal awarded him March 28, 1878		67 46
Total expenditures from appropriation "Life-Saving Service, 1883".		670,757 23
Balance of available funds July 1, 1883"		71,864 31
		742,621 54

At the beginning of the fiscal year there remained on hand, available from the appropriation of the preceding year, the following:

Unexpended balance July 1, 1882		$54,660 45
To which repayments have been made amounting to		757 77

To the above there should also be added the following amounts included for the purposes set forth in the "acts making appropriations to supply deficiencies in the appropriations for the fiscal years ending June 30, 1882, and for prior years, and June 30, 1883, and for prior years, and for those certified as due by the accounting officers of the Treasury in accordance with section 4 of the act of June 14, 1878, heretofore paid from permanent appropriations, and for other purposes," approved August 5, 1882, and March 3, 1883, respectively, viz:

"To meet a deficiency for the Life-Saving Service under the provisions of the act of May 4, 1882, as follows:"

For pay of superintendents, one on the coasts of Maine and New Hampshire	$79 67	
One on the coast of Massachusetts	79 67	
One on the coasts of Rhode Island and Long Island	47 81	
One on the coast of New Jersey	47 81	
One on the coasts of Delaware, Maryland, and Virginia	79 67	
One on the coasts of Virginia and North Carolina	127 47	
One on the coasts of South Carolina, Georgia, and Florida	31 86	
One on the coast of the Gulf of Mexico	79 67	
One on the coasts of Lakes Ontario and Erie	127 47	
One on the coast of Lake Michigan	127 47	
One on the coasts of Washington Territory, Oregon, and California	286 81	
		1,115 38
"Compensation of one superintendent of life-saving and life-boat stations on the coasts of Lakes Huron and Superior, being a deficiency for the fiscal year 1882"		127 47
Total available funds		56,661 07

The expenditures from this sum during the last year, made in payment of indebtedness standing over from the preceding year, were as as follows:

Life-Saving Service 1882, available as above		$56,661 07
Pay of superintendents in Districts Nos. 4, 5, and 6 for services from April 1 to June 30, 1882	$875 00	
Pay of superintendent in District No. 7 for services from January 1 to April 6, 1882 (Mrs. Hunt, administratrix)	266 48	
Amount paid superintendent Ninth Life-Saving District, being balance found due upon settlement of his accounts	7 50	
Paid balance of compensation due the superintendents of Districts Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11, under authority of act of May 4, 1882, and provided for by acts of August 5, 1882, and March 3, 1883, before referred to	956 04	
		2,105 02
Pay of the keeper of the Indian River house of refuge, Seventh Life-Saving District, for services from October 1 to December 31, 1881	100 00	

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Pay of 73 keepers, Districts Nos. 4, 5, and 6, for the quarter ending June 30, 1882	$7,300 00	
Pay of keeper of the Gull Shoal Station, District No. 6, from January 1 to January 11, 1882	12 23	
Pay of keeper of the Muskegon Station, District No. 11, from January 1 to March 3, 1882	68 89	
		$7,481 12
Pay of surfmen, District No. 6, for the month of April, 1882	7,605 00	
Pay of two surfmen at the Buffalo Station, District No. 9, one from July 1 to July 13, 1881, and one from July 1 to July 20, 1881	47 90	
Pay of one surfman at the Vermillion Point Station, District No. 10, from October 1 to October 22, 1881	31 93	
Pay of one surfman at the Muskallonge Lake Station, District No. 10, from October 1 to November 16, 1881	69 00	
Pay of surfmen in District No. 1 for services at wrecks which occurred at periods when crews were not required to reside at the stations	36 00	
Pay of surfmen in District No. 3 for services at wrecks which occurred at periods when crews were not required to reside at the stations	42 00	
Pay of surfmen in District No. 4 for services at wrecks which occurred at periods when crews were not required to reside at the stations	57 00	
Pay of surfmen in District No. 5 for services at wrecks which occurred at periods when crews were not required to reside at the stations	9 00	
		7,897 83
Pay of one volunteer surfman in District No. 12 for services at wreck	6 00	
		6 00
Apparatus	3,561 99	
Books, charts, stationery, advertising, &c	101 45	
Compensation for special services, labor, &c	286 00	
Equipments	541 44	
Freight, packing, storage, telegraphing, &c	213 01	
Fuel and water for stations	324 45	
Furniture, supplies, &c	1,057 06	
Rebuilding, repair, and improvement of stations	8,543 39	
Recording conveyances	3 61	
Rent of offices of inspector and superintendents	281 66	
Repairs of apparatus and equipments	38 16	
Sites for stations	17 00	
Stables and forage for horses kept at stations for hauling boats and apparatus	249 15	
Subsistence of persons rescued from wrecked vessels	50 00	
Transporting apparatus to and from wrecks where horses are not kept	17 00	
Traveling expenses of officers	345 72	
		15,631 09
Total expenditures from appropriation "Life-Saving Service, 1882"		33,121 06
Balance available July 1, 1883		23,540 01
		56,661 07

There also remained unexpended at the beginning of the fiscal year from appropriations of 1881, the following:

Unexpended balances July 1, 1882.

Life-Saving Service, 1881	$39,350 07
Life-Saving Service, contingent expenses, 1881	1,721 60

To which no repayments have been made.

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During the last fiscal year no expenditures were made from the appropriation "Life-Saving Service, 1881," and the balance on hand, $39,350.07, was carried to the surplus fund and covered into the Treasury June 30, 1883.

The expenditures during the year from appropriation "Life-saving Service, contingent expenses, 1881," were as follows:

Life-Saving Service contingent expenses, 1881, available as above stated		$1,721 60
Water for stations	$ 0 83	
Sites for stations	12 00	
		12 83
Balance unexpended and carried to surplus fund June 30, 1883		1,708 77

The total net expenditures for the maintenance of the Life-Saving Service during the fiscal year ending June 30, 1883, were, therefore, as follows:

Life-Saving Service, 1883	$670,757 23	
Life-Saving Service, 1882	33,121 06	
	703,878 29	
Less repayments to appropriation Life-Service Service, 1882	757 77	
Net expenditures		$703,120 52
Life-Saving Service contingent expenses, 1881		12 83
Total net expenditures of the service		703,133 35

There remained standing to the credit of the respective appropriations at the close of the fiscal year ending June 30, 1883, available as heretofore stated, the following balances:

Life-Saving Service, 1883	$71,864 31
Life-Saving Service, 1882	23,540 01

The foregoing statement of the net expenditures of the Life-Saving Service for the fiscal year ending June 30, 1883, differs from the expenditures by warrants in the following particulars:

Net expenditures by warrants			$703,358 37
From which should be deducted the amount of the following items:			
Amounts in hands of disbursing clerk June 30, 1883:			
Life-Saving Service, 1882	$323 75		
Life-Saving Service, 1883	1,849 68		
		$2,173 43	
Amounts reappropriated and expended by warrant, not included in the foregoing statement:			
Life-Saving Service contingent expenses, 1879 and prior years	$42 21		
Life-Saving Service, 1879 and prior years	283 87		
Life-Saving Service, 1880 and prior years	175 50		
		501 58	
		2,675 01	
Less amount in hands of disbursing clerk June 30, 1882, as shown on page 277 of the report for 1882		2,449 99	
			225 02
Net expenditures from the appropriations for the year			703,133 35

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It is proper to state that during the fiscal year just closed there has been available, under authority of section 3, act of June 18, 1878—

On account of appropriation "rebuilding and improving life-saving stations, proceeds of sales," the sum of		$797 92
From which there has been expended during the year, in connection with the rebuilding of Station No. 6 (Deal), Fourth District	$103 00	
Leaving an available balance July 1, 1883, of	694 92	
		797 92

To the foregoing statement of expenditures for the maintenance of the Life-Saving Service may be added the following:

APPROPRIATION.

Salaries, office Life-Saving Service, amount appropriated—joint resolutions of June 30, 1882, and subsequent dates, and legislative act August 5, 1882	$31,978 63

EXPENDITURES.

Compensation of officers and employés in office of Life-Saving Service	31,458 28	
Amount in hands of disbursing clerk unexpended	520 35	
		$31,978 63

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INSTRUCTIONS TO MARINERS IN CASE OF SHIPWRECK.

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INSTRUCTIONS TO MARINERS IN CASE OF SHIPWRECK,

WITH

INFORMATION CONCERNING THE LIFE-SAVING STATIONS UPON THE COASTS OF THE UNITED STATES.

—

Prepared by LIEUTENANT C. H. MCLELLAN, U. S. R. M., *Assistant Inspector Life-Saving Stations, under the direction of the General Superintendent.*

GENERAL INFORMATION.

Life-saving stations, life boat stations, and houses of refuge are located upon the Atlantic and Pacific sea-board of the United States, the Gulf of Mexico, and the Lake coasts, as shown in the list of stations following, the latitude and longitude being given so far as determined.

All stations on the Atlantic coast from the eastern extremity of the State of Maine to Cape Fear, North Carolina, are manned annually by crews of experienced surfmen from the 1st of September until the 1st of May following.

Upon the Lake coasts the stations are manned from the opening until the close of navigation, and upon the Pacific coast they are open the year round, but, with the exception of Stations Nos. 3 and 7, are not manned, depending upon volunteer effort from the neighboring people in case of shipwreck.

All life-saving and life-boat stations are fully supplied with boats, wreck-gun, beach apparatus, restoratives, &c.,

Houses of refuge are supplied with boats, provisions, and restoratives, but not manned by crews; a keeper, however, resides in each throughout the year, who, after every storm, is required to make extended excursions along the coast with a view of ascertaining if any shipwreck has occurred and finding and succoring any persons that may have been cast ashore.

Houses of refuge are located exclusively upon the Florida coast, where the requirements of relief are widely different from those of any other portion of the sea-board.

Most of the life-saving and life-boat stations are provided with the International Code of Signals, and vessels can, by opening communication, be reported or obtain the latitude and longitude of the station where determined, information as to the weather probabilities in most cases, or, if crippled or disabled, a steam-tug or revenue-cutter will be telegraphed for, where facilities for telegraphing exist, to the nearest port, if requested.

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All services are performed by the life-saving crews without other compensation than their wages from the Government, though, in view of the meagerness of their pay, they are not prohibited from receiving such rewards for labor performed or risks incurred at wrecks as owners or masters of vessels or other persons may see fit to voluntarily bestow upon them, but *they are strictly forbidden to solicit such rewards.*

Destitute sea-farers are provided with food and lodgings at the nearest station by the Government as long as necessarily detained by the circumstances of shipwreck.

The station crews patrol the beach from two to four miles each side of their stations four times between sunset and sunrise, and if the weather is foggy the patrol is continued through the day.

Each patrolman carries Coston signals. Upon discovering a vessel standing into danger, he ignites one of them, which emits a brilliant red flame of about two minutes' duration, to warn her off, or, should the vessel be ashore, to let her crew know that they are discovered and assistance is at hand.

If the vessel is not discovered by the patrol immediately after striking, rockets or flare-up lights should be burned, or, if the weather be foggy, guns should be fired to attract attention, as the patrolman may be some distance away on the other end of his beat.

Masters are particularly cautioned, if they should be driven ashore anywhere in the neighborhood of the stations, especially on any of the sandy coasts where there is not much danger of vessels breaking up immediately, to remain on board until assistance arrives, and under no circumstances should they attempt to land through the surf in their own boats until the last hope of assistance from the shore has vanished. Often when comparatively smooth at sea a dangerous surf is running which is not perceptible four hundred yards off shore, and the surf when viewed from a vessel never appears as dangerous as it is. Many lives have unnecessarily been lost by the crews of stranded vessels being thus deceived and attempting to land in the ships' boats.

The difficulties of rescue by operations from the shore are greatly increased in cases where the anchors are let go *after entering the breakers*, as is frequently done, and the chances of saving life correspondingly lessened.

INSTRUCTIONS.

RESCUE WITH THE LIFE-BOAT OR SURF-BOAT.

The patrolman, after discovering your vessel ashore and burning a Coston signal, hastens to his station for assistance. If the use of a boat is practicable, either the large life-boat is launched from its ways in the station and proceeds to the wreck by water, or the lighter surf-boat is hauled overland to a point opposite the wreck and launched, as circumstances may require.

Upon the boat reaching your vessel, the directions and orders of the keeper (who always commands and steers the boat) should be implicitly obeyed. Any headlong rushing and crowding should be prevented, and the captain of the vessel should remain on board, to preserve order, until every other person has left.

Women, children, helpless persons, and passengers should be passed into the boat first.

Goods or baggage will positively not be taken into the boat until all

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are landed. If any be passed in against the keeper's remonstrance he is fully authorized to throw the same overboard.

RESCUE WITH THE BREECHES-BUOY OR LIFE-CAR.

Should it be inexpedient to use either the life-boat or surf-boat, recourse will be had to the wreck-gun and beach apparatus for the rescue by the breeches-buoy or the life-car.

A shot with a small line attached will be fired across your vessel.

Get hold of the line as soon as possible and haul on board until you get a tail-block with a whip or endless line rove through it. This tail-block should be hauled on board as quickly as possible to prevent the whip drifting off with the set or fouling with wreckage, &c. Therefore, if you have been driven into the rigging where but one or two men can work to advantage, cut the shot-line and run it through some available block, such as the throat or peak-halliards block or any block which will afford a clear lead, or even between the ratlines, that as many as possible may assist in hauling.

Attached to the tail-block will be a tally-board, with the following directions in English on one side and French on the other.

"Make the tail of the block fast to the lower mast, well up. If the masts are gone, then to the best place you can find. Cast off shot-line, see that the rope in the block runs free, and show signal to the shore."

The above instructions being complied with, the result will be as shown in Figure 1.

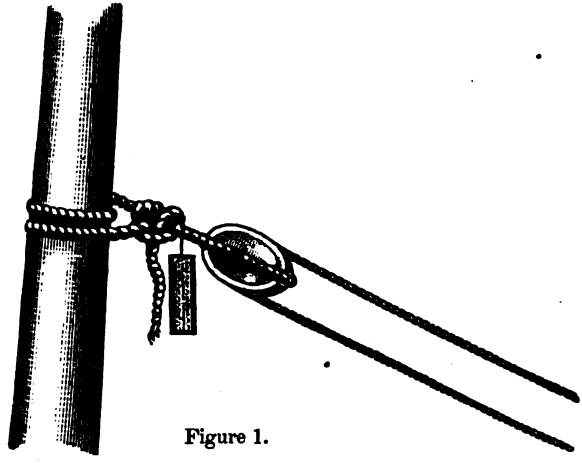

Figure 1.

As soon as your signal is seen a three-inch hawser will be bent on to the whip and hauled off to your ship by the life-saving crew.

If circumstances will admit, you can assist the life-saving crew by manning that part of the whip to which the hawser is bent and hauling with them.

When the end of the hawser is got on board a tally-board will be found attached, bearing the following directions in English on one side and French on the other:

"Make this hawser fast about 2 feet above the tail-block; see all

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clear, and that the rope in the block runs free, and show signal to the shore."

These instructions being obeyed, the result will be as shown in Figure 2.

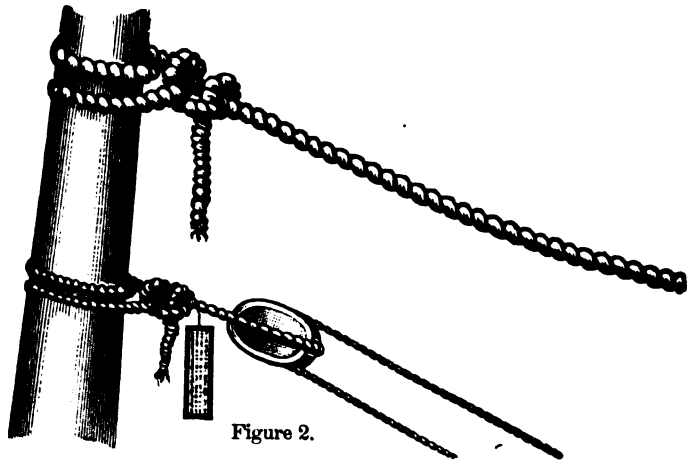

Figure 2.

Take particular care that there are no turns of the whip-line round the hawser before making the hawser fast.

When the hawser is made fast, the whip cast off from the hawser, and your signal seen by the life-saving crew, they will haul the hawser taut and by means of the whip will haul off to your ship a breeches-buoy suspended from a traveler-block, or a life-car from rings, running on the hawser.

Figure 3 represents the apparatus rigged, with the breeches-buoy hauled off to the ship.

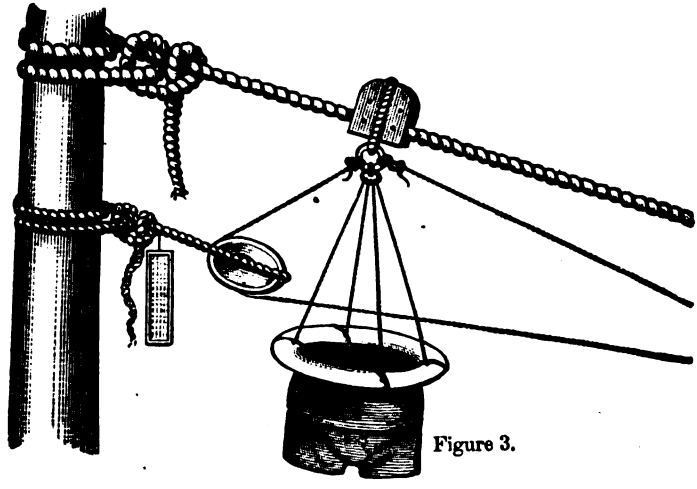

Figure 3.

If the breeches-buoy be sent, let one man immediately get into it, thrusting his legs through the breeches. If the life-car, remove the hatch, place as many persons into it as it will hold (four to six), and

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secure the hatch on the outside of the hatch-bar and hook signal as before, and the buoy or car will be hauled ashore. This will be repeated until all are landed. On the last trip of the life-car the hatch must be secured by the inside hatch-bar.

In many instances two men can be landed in the breeches-buoy at the same time, by each putting a leg through a leg of the breeches and holding on to the lifts of the buoy.

Children when brought ashore by the buoy should be in the arms of older persons or securely lashed to the buoy. Women and children should be landed first.

In signaling as directed in the foregoing instructions, if in the daytime, let one man separate himself from the rest and swing his hat, a handkerchief, or his hand; if at night, the showing of a light, and concealing it once or twice, will be understood; and like signals will be made from the shore.

Circumstances may arise, owing to the strength of the current or set, or the danger of the wreck breaking up immediately, when it would be impossible to send off the hawser. In such a case a breeches-buoy or life-car will be hauled off instead by the whip, or sent off to you by the shot-line, and you will be hauled ashore through the surf.

If your vessel is stranded during the night and discovered by the patrolman, which you will know by his burning a brilliant red light, keep a bright lookout for signs of the arrival of the life-saving crew abreast of your vessel.

From one to four hours may intervene between the burning of the light and their arrival, as the patrolman may have to return to his station, perhaps three or four miles distant, and the life-saving crew draw the apparatus or surf-boat through the sand or over bad roads to where your vessel is stranded.

Lights on the beach will indicate their arrival, and the sound of cannon-firing from the shore may be taken as evidence that a line has been fired across your vessel. Therefore, upon hearing the cannon, make strict search aloft, fore and aft, for the shot-line, for it is almost certain to be there. Though the movements of the life-saving crew may not be perceptible to you, owing to the darkness, your ship will be a good mark for the men experienced in the use of the wreck-gun, and the first shot seldom fails.

RECAPITULATION.

Remain by the wreck until assistance arrives from the shore, unless your vessel shows signs of immediately breaking up.

If not discovered immediately by the patrol, burn rockets, flare-up, or other lights, or, if the weather be foggy, fire guns.

Take particular care that there are no turns of the whip-line round the hawser before making the hawser fast.

Send the women, children, helpless persons, and passengers ashore first.

Make yourself thoroughly familiar with these instructions, and remember that on your coolness and strict attention to them will greatly depend the chances of bringing you and your people safely to land.

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LIST OF LIFE-SAVING DISTRICTS AND STATIONS

ON THE

COASTS OF THE UNITED STATES.

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LIFE-SAVING DISTRICTS AND STATIONS ON THE COASTS OF THE UNITED STATES.

FIRST DISTRICT.

EMBRACING COASTS OF MAINE AND NEW HAMPSHIRE.

Name of station.	State.	Locality.	Approximate position.* Latitude, north.			Longitude, west.		
			°	′	″	°	′	″
Quoddy Head	Me.	Carrying Point Cove	44	48	40	66	58	50
Cross Island	Me.	Off Machiasport	44	36	00	67	17	00
Crumple Island	Me.	Off Jonesborough	44	26	40	67	35	50
Cranberry Isles	Me.	Off Mount Desert, Little Cranberry Island	44	15	20	68	12	50
White Head	Me.	On White Head Island, near light	43	58	40	69	07	50
Hunniwell's Beach	Me.	At mouth of Kennebec River	43	44	40	69	46	50
Fletcher's Neck	Me.	Biddeford Pool, Fletcher's Neck	43	26	30	70	20	30
Rye Beach	N. H.	Rye Beach	42	59	30	70	45	20

SECOND DISTRICT.

EMBRACING COAST OF MASSACHUSETTS.

Plum Island	Mass.	Near mouth of Merrimac River	42	48	30	70	49	00
Davis' Neck	Mass.	Near Annisquam light	42	40	10	70	40	20
Fourth Cliff	Mass.	South end of fourth cliff, Scituate	42	09	30	70	42	10
Gurnet	Mass.	8 miles northeast of Plymouth	42	00	10	70	36	10
Manomet Point	Mass.	7 miles southeast of Plymouth	41	55	30	70	32	40
Race Point	Mass.	⅚ mile northeast of Race Point light, Cape Cod.	42	04	10	70	14	20
Peaked Hill Bar	Mass.	2½ miles northeast of Provincetown, Cape Cod.	42	04	30	70	09	10
High Head	Mass.	3 miles north of Highland light	42	08	40	70	06	30
Highland	Mass.	⅝ mile northwest of light, Cape Cod	42	02	50	70	04	20
Parmet River	Mass.	3½ miles south of Highland light	42	00	00	70	01	10
Cahoon's Hollow	Mass.	2½ miles east of Wellfleet	41	56	40	70	00	00
Nausett	Mass.	1½ miles south of lights	41	50	30	69	56	40
Orleans	Mass.	Abreast of Ponchet Island	41	45	30	69	56	00
Chatham	Mass.	2 miles north of Chatham light	41	43	10	69	55	40
Monomoy	Mass.	2 miles north of Monomoy light	41	36	00	69	59	50
Coskata	Mass.	Near Great Point, Nantucket	41	22	00	70	01	20
Surfside	Mass.	2½ miles south of the town of Nantucket	41	14	30	70	05	00
Muskeget	Mass.	About midway of Muskeget Island	41	20	10	70	19	20

THIRD DISTRICT.

EMBRACING COASTS OF RHODE ISLAND AND LONG ISLAND.

Narragansett Pier	R. I.	Northern part of the town	41	26	00	71	27	20
Point Judith	R. I.	Near light	41	21	40	71	29	00
Watch Hill	R. I.	Near light	41	18	20	71	51	30
New Shoreham	R. I.	Block Island, east side, near landing	41	10	20	71	33	30
Block Island	R. I.	Block Island, west side, near Dickens' Point.	41	09	40	71	36	40
Montauk Point	N. Y.	At the light	41	04	00	71	51	30
Ditch Plain	N. Y.	3 miles southwest of Montauk light	41	02	10	71	54	30
Hither Plain	N. Y.	¼ mile southwest of Fort Pond	41	01	30	71	57	50
Napeague	N. Y.	Abreast Napeague Harbor	40	59	45	72	02	40
Amagansett	N. Y.	Abreast of the village	40	58	00	72	08	20
Georgica	N. Y.	1 mile south of village of East Hampton	40	56	40	72	11	40
Mecox	N. Y.	2 miles south of the village of Bridgehampton.	40	54	10	72	18	00

* Obtained from latest Coast Survey charts.

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THIRD DISTRICT—Continued.

Name of station.	State.	Locality.	Approximate position.* Latitude, north.			Longitude, west.		
			°	′	″	°	′	″
Southampton	N. Y.	¾ mile south of the village	40	52	10	72	23	40
Shinnecock	N. Y.	3 miles from the head of Shinnecock Bay	40	50	40	72	27	50
Tiana	N. Y.	4 miles east of Quogue	40	49	40	72	31	30
Quogue	N. Y.	½ mile south of the village	40	48	20	72	36	00
Petunk	N. Y.	1½ miles southwest of Petunk village	40	47	30	72	39	00
Moriches	N. Y.	2½ miles southwest of Speonk village	40	46	30	72	43	10
Forge River	N. Y.	3½ miles south of Moriches	40	44	30	72	49	00
Smith's Point	N. Y.	Abreast of the point	40	44	00	72	52	20
Bellport	N. Y.	4 miles south of the village	40	42	40	72	55	50
Blue Point	N. Y.	4½ miles south of Patchogue	40	40	40	73	01	20
Lone Hill	N. Y.	4½ miles south of Sayville	40	39	40	73	04	20
Point of Woods	N. Y.	5 miles south of Islip	40	38	50	73	08	10
Fire Island	N. Y.	East side of Fire Island Inlet	40	37	40	73	13	20
Oak Island	N. Y.	East end of Oak Island	40	38	10	73	17	40
Gilgo	N. Y.	West end of Oak Island	40	37	20	73	22	20
Jones' Beach	N. Y.	East end of Jones' Beach	40	36	40	73	26	20
Zach's Inlet	N. Y.	West end of Jones' Beach	40	36	10	73	28	50
Short Beach	N. Y.	½ mile east of Jones' Inlet	40	35	30	73	31	20
Point Lookout	N. Y.	2 miles west of New Inlet	40	35	10	73	35	40
Long Beach	N. Y.	Near Lucy's Inlet	40	34	40	73	39	00
Far Rockaway	N. Y.	Near Hog Island Inlet	40	35	30	73	44	00
Rockaway	N. Y.	Near the village of Rockaway	40	35	30	73	47	20
Rockaway Point	N. Y.	West end of Rockaway Beach	40	34	10	73	51	50
Coney Island	N. Y.	Manhattan Beach	40	34	20	73	56	20
Eaton's Neck	N. Y.	East side entrance to Huntington Bay, Long Island Sound.	40	57	10	73	24	00

FOURTH DISTRICT.

EMBRACING COAST OF NEW JERSEY.

Sandy Hook	N. J.	East of main light	40	27	40	73	59	50
Spermaceti Cove	N. J.	East of the upper end of cove	40	25	40	73	59	00
Seabright	N. J.	About a mile south of Navesink light	40	22	50	73	58	30
Monmouth Beach	N. J.	About a mile south of Seabright	40	20	30	73	58	30
Long Branch	N. J.	Near Green's pond	40	16	40	73	59	00
Deal	N. J.	North of Asbury Park	40	13	50	73	59	50
Shark River	N. J.	Near the mouth of Shark River	40	11	30	74	00	40
Spring Lake	N. J.	2½ miles below Shark River	40	09	20	74	01	20
Squan Beach	N. J.	1 mile southeast of Squan village	40	07	00	74	02	00
Bay Head	N. J.	At the head of Barnegat Bay	40	04	00	74	02	40
Mantoloking	N. J.	2½ miles below the head of Barnegat Bay	40	01	40	74	03	10
Chadwick's	N. J.	5 miles below the head of Barnegat Bay	39	59	10	74	04	00
Tom's River	N. J.	On the beach abreast mouth Tom's River	39	56	10	74	04	30
Island Beach	N. J.	1½ miles south of Seaside Park	39	53	40	73	05	00
Cedar Creek	N. J.	5¾ miles north of Barnegat Inlet	39	51	10	74	05	10
Forked River	N. J.	North side of Barnegat Inlet	39	48	10	74	05	40
Barnegat	N. J.	South side of Barnegat Inlet	39	45	30	74	06	10
Loveladies Island	N. J.	On the beach abreast of the Islands	39	43	50	74	07	20
Harvey's Cedars	N. J.	5½ miles south of Barnegat Inlet	39	41	20	74	08	30
Ship Bottom	N. J.	Midway of Long Beach	39	38	10	74	11	00
Long Beach	N. J.	1¾ miles north of Beach Haven	39	35	00	74	13	20
Bond's	N. J.	2½ miles south of Beach Haven	39	32	00	74	15	20
Little Egg	N. J.	Near the light north of inlet	39	30	10	74	17	20
Little Beach	N. J.	South side of Little Egg Inlet	39	27	30	74	19	30
Brigantine	N. J.	5½ miles above Absecom light	39	25	30	74	20	30
Atlantic City	N. J.	At Absecom light	39	22	00	74	24	50
Absecom	N. J.	3 miles below Absecom light	39	20	50	74	27	40
Great Egg	N. J.	6 miles below Absecom light	39	19	00	74	31	10
Ocean City	N. J.	South side of the inlet	39	17	20	74	34	00
Peck's Beach	N. J.	3½ miles above Corson's Inlet	39	14	50	74	36	50
Corson's Inlet	N. J.	Near the inlet, north side	39	13	10	74	38	20
Sea Isle City	N. J.	3½ miles above Townsend's Inlet	39	09	50	74	41	00
Townsend's Inlet	N. J.	Near the inlet, north side	39	07	30	74	42	40
Tatham's	N. J.	3½ miles above Hereford Inlet	39	03	40	74	45	00
Hereford Inlet	N. J.	Near Hereford light	39	00	20	74	47	20
Holly Beach	N. J.	6 miles above Cape Island City	38	58	40	74	49	50
Turtle Gut	N. J.	4 miles above Cape Island City	38	57	10	74	51	10
Cold Spring	N. J.	2 miles above Cape Island City	38	56	00	74	54	00
Cape May	N. J.	Near the light	38	55	40	74	57	30
Bay Shore	N. J.	2½ miles west of Cape Island City	38	56	40	74	58	10

* Obtained from latest Coast Survey charts.

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FIFTH DISTRICT.

EMBRACING COAST BETWEEN HENLOPEN AND CAPE CHARLES.

Name of station.	State.	Locality.	Approximate position.* Latitude, north.			Longitude, west.		
			°	′	″	°	′	″
Lewes	Del	2 miles west of Cape Henlopen light	38	46	50	75	07	10
Cape Henlopen	Del.	¾ mile southerly from Cape Henlopen light.	38	45	50	75	04	50
Rehoboth Beach	Del.	Opposite north end of Rehoboth Bay	38	41	30	75	04	20
Indian River Inlet	Del.	North side of inlet	38	37	50	75	03	40
Ocean City	Md	Just north of village	38	20	00	75	05	00
North Beach	Md.	10 miles south of Ocean City	38	11	30	75	09	20
Green Run Inlet	Md.	North side of inlet	38	04	30	75	12	50
Pope's Island	Md.	2 miles south of Green Run Inlet	38	00	20	75	15	40
Assateague Beach	Va	1¼ miles south of Assateague light	37	53	40	75	21	40
Wallop's Island	Va	1½ miles south of Chincoteague Inlet	37	52	00	75	26	50
Watchapreague	Va	South end of Cedar Island	37	35	20	75	36	40
Parramore's Beach	Va	Midway of the beach	37	32	20	75	37	20
Hog Island	Va	South end of Hog Island	37	22	50	75	41	30
Cobb's Island	Va	South end of Cobb's Island	37	17	30	75	47	00
Smith's Island	Va	At Cape Charles light	37	07	00	75	53	40

SIXTH DISTRICT.

EMBRACING COAST BETWEEN CAPE HENRY AND CAPE FEAR.

Cape Henry	Va	About ⅛ mile southeast of Cape Henry light.	36	55	10	75	59	50
Seatack	Va	About 5½ miles south of Cape Henry light.	36	51	10	75	58	40
Dam Neck Mills	Va	About 10 miles south of Cape Henry light.	36	47	10	75	57	30
Little Island	Va	On beach abreast of North Bay	36	41	30	75	55	20
False Cape	Va	On beach abreast of Back Bay	36	36	00	75	53	50
Wash Woods	N.C.	On beach abreast of Knott's Island	36	32	00	75	52	10
Currituck Inlet	N.C.	About 5½ miles north of Currituck Beach light.	36	27	30	75	50	40
Whale's Head	N.C.	About ⅞ mile north of Currituck Beach light.	36	23	20	75	49	40
Poyner's Hill	N.C.	About 5½ miles south of Currituck Beach light.	36	17	50	75	48	10
Caffey's Inlet	N.C.	About 10½ miles south of Currituck Beach light.	36	13	40	75	46	20
Paul Gamiel's Hill	N.C.	About 5 miles north of Kitty Hawk	36	08	00	75	43	50
Kitty Hawk	N.C.	On the beach abreast of north end of Kitty Hawk Bay.	36	03	50	75	41	30
Kill Devil Hills	N.C.	About 4½ miles south of Kitty Hawk	36	00	10	75	39	40
Nag's Head	N.C.	8 miles north of Oregon Inlet	35	56	00	75	36	40
Bodie's Island	N.C.	¾ mile northeast of Bodie's Island light	35	49	40	75	33	20
Oregon Inlet	N.C.	¼ mile south of Oregon Inlet	35	47	50	75	32	10
Pea Island	N.C.	About 2 miles north of New Inlet	35	42	50	75	29	30
New Inlet	N.C.	¾ mile south of New Inlet	35	41	00	75	29	00
Chicamicomico	N.C.	5 miles south of New Inlet	35	36	40	75	27	50
Gull Shoal	N.C.	About 11 miles south of New Inlet	35	29	50	75	28	40
Little Kinnakeet	N.C.	About 11 miles north of Cape Hatteras light.	35	25	00	75	29	10
Big Kinnakeet	N.C.	5½ miles north of Cape Hatteras light	35	20	00	75	30	20
Cape Hatteras	N.C.	1 mile south of light	35	14	20	75	31	20
Creed's Hill	N.C.	4 miles west of Cape Hatteras light	35	14	30	75	35	00
Durant's	N.C.	8 miles east of Hatteras Inlet	35	12	45	75	40	20
Ocracoke	N.C.	2½ miles west of Hatteras Inlet	35	10	45	75	46	30
Cape Fear	N.C.	On Smith's Island, Cape Fear	33	50	30	77	57	20

SEVENTH DISTRICT.

EASTERN COAST OF FLORIDA AND COAST OF GEORGIA AND SOUTH CAROLINA.

Indian River	Fla	11 miles north of Indian River Inlet	27	40	00	80	21	20
Gilbert's Bar	Fla	Saint Lucie Rocks, north side Saint Lucie Inlet.	27	12	00	80	09	50
Orange Grove	Fla	Southern end Lake Worth, 32 miles south of Jupiter Inlet.	26	27	30	80	03	20
Fort Lauderdale	Fla	7 miles north of New River Inlet	26	08	00	80	06	00
Biscayne Bay	Fla	10 miles north of Boca Rattones, Narrows Cut.	25	54	10	80	08	00

* Obtained from latest Coast Survey charts.

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EIGHTH DISTRICT.

EMBRACING GULF COAST OF UNITED STATES.

Name of station.	State.	Locality.	Approximate position.*	
			Latitude, north.	Longitude, west.
			° ′ ″	° ′ ″
Sabine Pass	Tex	East side of pass	29 43 00	93 50 00
San Luis	Tex	West end Galveston Island	29 07 00	95 04 00
Saluria	Tex	Northeast end Matagorda Island	28 23 00	96 24 00
Aransas	Tex	Northeast end Mustang Island	27 51 00	97 03 00
Brazos	Tex	North end Brazos Island, entrance to Brazos Satiago.	26 04 00	97 08 00

NINTH DISTRICT.

EMBRACING LAKES ERIE AND ONTARIO.

Big Sandy	N. Y.	North side of mouth of Big Sandy Creek, Lake Ontario		
Salmon Creek	N. Y.	East side of mouth of Salmon Creek, Lake Ontario.		
Oswego	N. Y.	Entrance of Oswego Harbor, Lake Ontario.		
Charlotte	N. Y.	Entrance of Charlotte Harbor, Lake Ontario.		
Buffalo	N. Y.	Entrance of Buffalo Harbor, Lake Erie		
Erie	Pa	Entrance of Erie Harbor, Lake Erie		
Fairport	Ohio	Entrance of Fairport Harbor, Lake Erie		
Cleveland	Ohio	Entrance of Cleveland Harbor, Lake Erie		
Point Marblehead	Ohio	Point Marblehead, near Quarry Docks, Lake Erie.		
Louisville	Ky	Falls of the Ohio River, Louisville, Ky		

TENTH DISTRICT.

EMBRACING LAKES HURON AND SUPERIOR.

Sand Beach	Mich	Inside the harbor, Lake Huron		
Point aux Barques	Mich	Near light, Lake Huron		
Grindstone City	Mich	1 mile northwest of city, Lake Huron		
Ottawa Point (Tawas)	Mich	Near light, Lake Huron		
Sturgeon Point	Mich	Near light, Lake Huron		
Thunder Bay Island	Mich	Near light, Lake Huron		
Middle Island	Mich	North end of Middle Island, Lake Huron		
Hammond's Bay	Mich	Hammond's Bay, Lake Huron		
Vermillion Point	Mich	10 miles west of White Fish Point, Lake Superior.		
Crisp's	Mich	16 miles west of White Fish Point, Lake Superior.		
Two Heart River	Mich	Near mouth of Two Heart River, Lake Superior.		
Muskallonge Lake	Mich	Near mouth of Sucker River, Lake Superior.		

ELEVENTH DISTRICT.

LAKE MICHIGAN.

Beaver Island	Mich	Near light		
North Manitou Island	Mich	Near Pickard's wharf		
Point Betsy	Mich	Near light		
Manistee	Mich	Entrance of harbor		
Grand Point au Sable	Mich	Near light		
Ludington	Mich	In the harbor		
Muskegon	Mich	Entrance of harbor, Port Sherman		
Grand Haven	Mich	Entrance of harbor		

*Obtained from latest Coast Survey charts.

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ELEVENTH DISTRICT—Continued.

Name of station.	State.	Locality.	Approximate position.*	
			Latitude, north.	Longitude, west.
			° ′ ″	° ′ ″
Saint Joseph	Mich.	In the harbor		
Chicago	Ill	In the harbor		
Evanston	Ill	Evanston, Ill., on Northwestern University grounds		
Kenosha	Wis.	In the harbor on Washington Island		
Racine	Wis.	In the harbor		
Milwaukee	Wis.	Near entrance of harbor		
Sheboygan	Wis.	Entrance of harbor		
Two Rivers	Wis.	Entrance of harbor		

TWELFTH DISTRICT.

PACIFIC COAST.

Neah Bay	Wash.T.	On Indian reservation	48	22	00	124	38	20
Shoalwater Bay	Wash.T.	Near light-house boat-landing	46	43	30	124	03	00
Cape Disappointment	Wash.T.	Baker's Bay	46	16	40	124	02	00
Cape Arago	Oreg.	Coos Bay, near light	43	20	20	124	22	00
Humboldt Bay	Cal.	Near light	40	46	00	124	12	50
Bolinas Bay	Cal.	1¾ miles north northeast of Bolinas Point	37	54	20	122	41	00
Golden Gate Park	Cal.	On beach in Golden Gate Park, San Francisco.	37	45	50	122	30	30

* Obtained from latest Coast Survey charts.

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ABSTRACTS

OF

RETURNS OF WRECKS AND CASUALTIES TO VESSELS

WHICH HAVE OCCURRED ON AND NEAR THE

COASTS AND ON THE RIVERS OF THE UNITED STATES,

AND TO

AMERICAN VESSELS AT SEA AND ON THE COASTS OF FOREIGN COUNTRIES,

DURING THE

FISCAL YEAR ENDING JUNE 30, 1883.

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WRECKS, CASUALTIES, AND COLLISIONS AT HOME AND ABROAD.

REMARKS EXPLANATORY OF THE WRECK STATISTICS FOR THE YEAR 1882–'83.

The following is the tenth annual statement of wrecks and casualties which have occurred on or near the coasts and on the rivers of the United States, and to American vessels at sea or on the coasts of foreign countries.

The statistics relating to disasters upon our own coasts are compiled from reports obtained and received through the officers of the customs, in compliance with the acts of June 20, 1874, and June 18, 1878.

Those relating to disasters which have occurred to American shipping in foreign waters are derived from reports received from our consular officers abroad and through the courtesy of officers of foreign governments, an interchange of such information having been effected, through the Department of State, with most other maritime nations.

In the preparation of the accompanying tables it has been found advisable, in order to facilitate reference, to make the following general divisions:

I. Disasters occurring on the Atlantic and Gulf coasts of the United States, embracing—

1. All casualties outside of, but in proximity to, coast-line;
2. All casualties occurring in the bays and harbors adjacent to the coasts named;
3. All casualties occurring in or near the mouths of rivers emptying into the ocean or Gulf.

II. Disasters occurring upon the Pacific coast of the United States, including those occurring in adjacent waters, as in the first division.

III. Disasters occurring on the Great Lakes, embracing—

1. All casualties occurring on Lakes Superior, Michigan, Huron, Saint Clair, Erie, or Ontario, reported by officers of the customs, whether in waters under the jurisdiction of the United States or of Great Britain;
2. All casualties occurring in rivers, straits, &c., connecting the several lakes named;
3. All casualties occurring in the harbors of any of said lakes, or in or near the mouths of rivers emptying into them, within the United States.

IV. Disasters occurring in rivers within the United States, embracing all rivers except those referred to in the foregoing division.

V. Disasters occurring to American shipping at sea or in foreign waters.

The disasters embraced in the foregoing divisions are classified as follows, viz:

1. *Founderings*—embracing founderings which resulted from the leaking or capsizing of vessels, but not those which resulted from collision, stranding, or striking any sunken wreck, or against piers, snags, or ice.
2. *Strandings*—embracing disasters resulting from running aground,

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striking a rock, reef, bar, or other natural object, although the vessel may have foundered as a result of such casualty.

3. *Collisions*—embracing all collisions between vessels only.

4. *Other causes*—embracing disasters resulting from various causes, as follows, viz:

Fire, irrespective of result;
Scuttling, or any intentional damage to vessel;
Collisions with fields or quantities of ice, although vessel may be sunk thereby;
Striking on sunken wrecks, anchors, buoys, piers, or bridges;
Leakage (except when vessel foundered or went ashore for safety);
Loss of masts, sails, boats, or any portion of vessel's equipments;
Capsizing, when vessel did not sink;
Damage to machinery;
Fouling of anchors;
Striking of lightning;
Explosion of boilers;
Breakage of wheels;
Also water logged, missing, and abandoned vessels.

Since the publication of the annual statement for the fiscal year ending June 30, 1882, information has been received of the occurrence of disasters during that year to ninety-three American vessels and the loss of forty-three lives. The table annexed shows the nature of these casualties and the divisions in which they occurred:

	Foundering.	Stranding.	Collisions.	Other causes.	Total.	Totally lost.	Partially lost.	Lives lost on vessels damaged.	Lives lost on vessels not damaged.	Total number of lives lost.
Atlantic and Gulf coast	2	13	9	15	39	3	36	.....	2	2
Pacific coast	.....	1	3	1	5	.....	5	.....	.....	.....
Great Lakes	.....	5	1	2	8	3	5	2	.....	2
Rivers	.....	3	6	3	12	.....	12	.....	7	7
At sea or in foreign waters	2	3	3	21	29	3	26	16	16	32
Total	4	25	22	42	93	9	84	18	25	43

Of the lives lost reported above, nine were lost on the bark Nonpareil, of New York, which foundered while on passage from Fernandina, Florida, to Montevideo, South America; six were lost in dories of the schooner James A. Garfield while attending trawls; five were lost on the steamer Sydney L. Wright, of Philadelphia, supposed to have foundered while on passage from Philadelphia, Pennsylvania, to Porto Rico; two were lost from the schooner James Platt, of Detroit, which stranded on South Fox Island, Lake Michigan, during a blinding snow-storm and a heavy gale; one was lost by vessels in collision; fourteen fell overboard; three were washed overboard by heavy seas; one jumped overboard while intoxicated; one walked overboard while asleep, and one was killed by the starting of the engine while oiling the machinery.

As the foregoing could not properly be included in the report for the fiscal year just closed, the General Summary Table of the previous year, amended so as to include the particulars furnished by the wreck reports mentioned above, is reprinted. The table will be convenient for comparison with the corresponding table in the statements of the present and other years.

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Summary of disasters to vessels which occurred on and near the coasts and on the rivers of the United States, and to American vessels at sea and on the coasts of foreign countries, during the fiscal year ending June 30, 1882.

Nature of casualties.	Number of vessels.	Aggregate tonnage.	Wrecks involving total loss.	Casualties involving partial damage.	Number of lives lost.
Founderings:					
Atlantic and Gulf coasts	42	3,356	30	12	13
Pacific coast	5	214	3	2	.....
Great lakes	9	1,565	6	3	38
Rivers	11	1,154	5	6	9
At sea or in foreign waters	31	13,182	31	.....	99
Total	98	19,471	75	23	159
Strandings:					
Atlantic and Gulf coasts	301	65,178	116	185	27
Pacific coast	26	10,814	17	9	2
Great lakes	134	58,062	20	114	10
Rivers	22	8,671	9	13	1
At sea or in foreign waters	66	28,305	45	21	17
Total	549	171,030	207	342	57
Vessels collided:					
Atlantic and Gulf coasts	418	112,319	18	400	11
Pacific coast	43	21,934	1	42	.....
Great lakes	181	73,774	5	176	8
Rivers	100	76,916	4	96	1
At sea or in foreign waters	47	27,263	3	44	9
Total	789	312,206	31	758	29
Other causes:					
Atlantic and Gulf coasts	215	52,539	14	201	8
Pacific coast	24	8,025	3	21	.....
Great lakes	189	56,281	8	181	19
Rivers	115	36,771	37	78	107
At sea or in foreign waters	209	109,478	27	182	133
Total	752	263,094	89	663	267
Grand total	2,188	765,801	402	1,786	*512

RECAPITULATION.

Atlantic and Gulf coasts	976	33,392	178	798	59
Pacific coast	98	40,987	24	74	2
Great lakes	513	189,682	39	474	75
Rivers	248	123,512	55	193	118
At sea or in foreign waters	353	178,228	106	247	258
Total	2,188	765,801	402	1,786	*512

	Atlantic and Gulf coast.	Pacific coast.	Great lakes.	Rivers.	At sea or in foreign waters.	Aggregate.
Total value vessels involved	$14,818,095	$2,636,600	$9,641,125	$4,746,755	$6,687,375	$38,529,950
Total value cargoes involved	5,163,470	348,625	2,635,150	1,728,730	7,696,690	17,572,665
Aggregate	19,981,565	2,985,225	12,276,275	6,475,485	14,384,065	56,102,615
Total insurance on vessels	2,836,115	935,100	3,918,340	1,720,190	2,399,525	11,809,270
Total insurance on cargoes	1,961,120	136,760	1,518,700	904,100	3,563,705	8,084,385
Aggregate	4,797,235	1,071,860	5,437,040	2,624,290	5,963,230	19,893,655
Total losses to vessels	2,007,600	561,505	893,480	1,093,975	2,540,560	7,097,120
Total loses to cargoes	771,210	132,180	267,630	386,980	1,913,150	3,471,150
Aggregate	2,778,810	693,685	1,161,110	1,480,955	4,453,710	10,568,270
Total tonnage vessels involved	233,392	40,987	189,682	123,512	178,228	765,801
Total tonnage vessels lost	33,180	7,692	10,247	14,931	46,483	112,533

*In addition to the number of lives lost here reported, 234 were lost in cases where no other casualty occurred to the vessels, making the total number of lives lost 746.

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As the tables, Nos. 1 to 64, inclusive, embrace all casualties involving losses as low as $50, for the purpose of exhibiting their nature, causes, and localities, the character of vessels, loss of life, and other information of importance, the following table of disasters, involving damage amounting to $500 and upward (damage less than that amount to vessels and cargoes being considered unimportant in a pecuniary sense), is subjoined, the corresponding table for the two previous years being also reprinted for the purpose of comparison:

Statement showing amount of losses for fiscal years ending June 30, 1881, 1882, *and* 1883.

YEAR ENDING JUNE 30, 1881.

	$500 to $1,000.	$1,000 to $2,000.	$2,000 to $5,000.	$5,000 to $10,000.	$10,000 to $20,000.	$20,000 to $30,000.	$30,000 to $40,000.	$40,000 to $50,000.	$50,000 to $75,000.	$75,000 to $100,000.	$100,000 to $200,000.	$200,000 to $300,000.	$300,000 and over.	Unknown.	Total.
Atlantic and Gulf coasts	91	106	77	37	23	12	6	5	2	3	3	1	1	62	429
Pacific coast	15	9	8	9	6	1	1	....	1	....	....	....	1	3	54
Great lakes	71	56	60	26	17	8	7	2	3	....	....	....	....	40	290
Rivers	24	29	44	20	13	6	3	4	7	3	....	1	....	10	164
At sea or in foreign waters	50	40	51	49	41	13	11	8	6	6	3	2	....	12	292
Total	251	240	240	141	100	40	28	19	19	12	6	4	2	127	1,229

YEAR ENDING JUNE 30, 1882.

Atlantic and Gulf coasts	120	101	107	39	36	16	7	1	1	1	1	...	1	69	500
Pacific coast	6	8	12	4	10	2	....	1	3	2	....	....	....	7	55
Great lakes	74	58	46	23	12	5	2	3	2	....	1	....	....	36	262
Rivers	28	17	34	14	15	3	6	3	5	2	1	....	....	10	138
At sea or in foreign waters	44	30	56	45	33	21	....	4	10	5	7	1	..	12	268
Total	272	214	255	125	106	47	15	12	21	10	10	1	1	134	1,223

YEAR ENDING JUNE 30, 1883.

Atlantic and Gulf coasts	86	81	102	46	34	10	6	5	3	1	2	1	1	75	453
Pacific coast	10	6	16	9	9	1	...	....	....	1	....	....	1	7	60
Great lakes	59	50	42	25	14	7	2	1	....	....	....	....	....	40	240
Rivers	23	35	27	22	15	7	4	1	....	1	4	....	....	14	153
At sea or in foreign waters	54	41	43	43	40	16	6	5	6	2	3	....	...	14	273
Total	232	213	230	145	112	41	18	12	9	5	9	1	2	150	1,179

The subjoined tables show, by localities, the total number of vessels meeting with casualties, the total value of such vessels and their cargoes, the total losses to both, and the total tonnage involved, and the tonnage of vessels totally lost during the fiscal years 1881–'82 and 1882–'83, with the percentage of increase or decrease of the latter compared with the former:

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NUMBER OF VESSELS INVOLVED.

[+ denotes increase; — denotes decrease.]

	1881–'82.	1882–'83.	Per cent.
Atlantic	937	801	−14.51
Pacific	93	88	− 5.38
Great lakes	506	468	− 7.51
Rivers	236	241	+ 2.12
At sea or in foreign waters	323	361	+11.76
Aggregate	2,095	1,959	− 6.49

VALUE OF VESSELS AND CARGOES.

Atlantic	$19,131,890	$22,197,095	+16.02
Pacific	2,807,725	2,462,265	−12.30
Great lakes	12,145,775	10,247,220	−15.63
Rivers	6,273,285	6,759,455	+ 7.75
At sea or in foreign waters	13,253,755	17,524,680	+32.22
Aggregate	53,612,430	59,190,715	+10.40

LOSS TO VESSELS AND CARGOES.

Atlantic	$2,730,175	$3,015,230	+10.44
Pacific	690,775	889,980	+28.84
Great lakes	1,128,363	868,382	−23.04
Rivers	1,471,830	1,482,985	+ .76
At sea or in foreign waters	4,253,290	2,730,961	−35.79
Aggregate	10,274,433	8,987,538	−12.53

TONNAGE OF VESSELS.

Atlantic	225,254	237,388	+ 5.39
Pacific	38,592	30,821	−20.14
Great lakes	187,011	178,400	− 4.61
Rivers	119,753	74,979	−37.39
At sea or in foreign waters	156,484	189,278	+20.96
Aggregate	727,094	710,866	− 2.23

TONNAGE OF VESSELS TOTALLY LOST.

Atlantic	32,776	31,500	− 3.89
Pacific	7,692	5,646	−26.59
Great lakes	9,524	11,376	+19.45
Rivers	14,931	16,527	+10.69
At sea or in foreign waters	45,744	38,119	−16.67
Aggregate	110,667	103,168	− 6.78

On the 30th of June, 1883, the total number of registered, enrolled, and licensed vessels belonging to the United States were 24,217, with a total tonnage of 4,235,487; of this number 1,874 vessels, having a total tonnage of 664,961, met with casualties during the year, being 7.74 per cent. of the total number.

The following exhibit shows the number of steam and sailing vessels, canal-boats, and barges registered, enrolled, and licensed belonging to the United States on June 30, 1883, the number of each class which

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have met with disasters during the year, and the ratio of casualties to the number of vessels:

Comparative table—Casualties to vessels.

Classification.	Number of vessels belonging to the United States.	Number of casualties to vessels.	Ratio of casualties to number of vessels.
Steam-vessels	5,249	562	As 1 to 9.34
Sailing-vessels	16,697	1,262	As 1 to 13.23
Canal-boats	1,186	5	As 1 to 237.20
Barges	1,085	45	As 1 to 24.11
Total	24,217	1,874	As 1 to 12.92

During the year 688 vessels were reported as having met with collisions, but as two vessels were engaged in each collision (though in a few instances three or more collided with each other in gales, &c.), the actual number of casualties of this nature were a little less than one-half that number.

Eighty-five foreign vessels, having an aggregate tonnage of 45,905, met with disasters in American waters during the year. The nationalities of these vessels are given in certain of the accompanying tables.

In addition to the lives lost in the disasters to vessels which are embraced in the tables, 187 persons perished, by drowning or by accident on board, out of crews employed on 172 different vessels. In these cases neither vessels nor cargoes suffered damages, the persons drowned having been lost overboard or having perished by the capsizing of small boats in which they had left their vessels to attend fishing trawls or for other purposes. In some instances lives were lost by falling to the deck from aloft and by being struck by spars, tackling, &c., falling or swinging, owing to the giving way of rigging. These vessels are not included in any of the tables, except 63 and 64.

The following exhibit shows the number of persons on board vessels suffering casualties, the number of lives lost, the ratio of those lost to the number on board, and the ratio of lives lost to the number of casualties for the last eight fiscal years:

Fiscal years.	Number of casualties.	Number of persons on board.	Number of lives lost.	Ratio of lives lost to number on board.	Ratio of lives lost to number of casualties.
1875–'76	2,173	23,602	*885	As 1 to 26.67	As 1 to 2.45
1876–'77	2,062	28,139	*817	As 1 to 34.44	As 1 to 2.52
1877–'78	1,942	25,133	*598	As 1 to 42.03	As 1 to 3.25
1878–'79	2,942	27,811	*743	As 1 to 37.43	As 1 to 2.82
1879–'80	2,318	33,339	*417	As 1 to 79.95	As 1 to 5.56
1880–'81	2,029	30,475	*605	As 1 to 50.37	As 1 to 3.35
1881–'82	2,095	33,921	*494	As 1 to 68.67	As 1 to 4.24
1882–'83	1,959	32,698	*519	As 1 to 63.00	As 1 to 3.77

* This number is exclusive of lives lost where vessels suffered no damage.

The above statement shows a general decrease in the number of lives lost in proportion to the number of persons on board vessels suffering casualty, and a similar decrease in the number of lives lost in proportion to the number of disasters. The decrease has been from 1 out of every 26.67 persons to 1 out of every 63 persons, and from 1 out of

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every 2.45 vessels to 1 out of every 3.77 vessels; a reduction of 57.67 per cent. in the one case and 35 per cent. in the other.

The following table is the same as the one above, except that it is confined to our own domain, the disasters occurring at sea and in foreign waters being excluded:

Fiscal years.	Number of casualties.	Number of persons on board.	Number of lives lost.	Ratio of lives lost to number on board.	Ratio of lives lost to number of casualties.
1875–'76	1,808	19,255	*650	As 1 to 29.62	As 1 to 2.78
1876–'77	1,525	21,688	*315	As 1 to 68.85	As 1 to 4.84
1877–'78	1,531	20,327	*399	As 1 to 50.94	As 1 to 3.83
1878–'79	1,571	21,898	*237	As 1 to 92.40	As 1 to 6.63
1879–'80	1,883	28,128	*187	As 1 to 150.42	As 1 to 10.07
1880–'81	1,655	25,881	*280	As 1 to 92.43	As 1 to 5.91
1881–'82	1,772	28,621	*252	As 1 to 113.58	As 1 to 7.03
1882–'83	1,598	27,566	*333	As 1 to 82.78	As 1 to 4.80

* This number is exclusive of lives lost where vessels suffered no damage.

Thus it appears that upon the coasts and rivers of the United States the loss of life has descended, since the fiscal year ending June 30, 1876, from 1 out of every 29.62 persons on board vessels suffering disaster to 1 out of every 82.78 persons, and from 1 out of every 2.78 such vessels to 1 out of every 4.80, a reduction of 64.22 per cent. in the one case and 42.08 per cent. in the other.

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TABLES.

ATLANTIC AND GULF COASTS.

TABLE 1.—*Abstract of returns of disasters to vessels on the* ATLANTIC *and* GULF *coasts during the year ending June* 30, 1883, *showing the* NUMBER *and* VALUE *of* VESSELS *and* CARGOES *and amount of* LOSS *to same where known.*

Months.	Total value of vessels.		Number of vessels, value unknown.	Total value of cargoes.		Number of cargoes, value unknown.	Unknown, whether laden or not.	Loss to vessels.		Number of vessels totally lost, amount unknown.	Number of vessels damaged, amount unknown.*	Loss to cargoes.		Number of cargoes totally lost, amount unknown.	Number of cargoes not damaged or damage unknown.
	Number.	Amount.		Number.	Amount.			Number.	Amount.			Number.	Amount.		
July	56	$1,614,120	6	35	$302,385	1	6	53	$96,330	.....	9	16	$9,500	.....	26
August	54	1,222,800	6	27	127,185	2	5	49	62,405	.....	11	7	4,610	.....	27
September	95	2,078,600	14	70	640,370	1	12	89	484,040	.....	20	33	209,770	.....	50
October	51	1,943,110	4	32	614,410	2	3	47	115,785	.....	8	11	46,985	.....	26
November	71	1,669,100	5	46	356,080	2	4	64	88,125	.....	12	19	43,700	.....	33
December	82	1,169,975	7	69	686,390	.....	5	77	181,165	.....	12	33	59,865	.....	41
January	60	1,290,785	7	39	343,465	2	7	54	221,490	.....	13	23	156,835	.....	25
February	64	1,763,390	6	42	624,375	.....	6	63	427,255	.....	7	23	171,180	.....	25
March	57	771,550	2	39	324,225	1	2	56	156,760	.....	3	20	135,509	.....	22
April	48	1,750,250	4	27	429,225	1	4	44	67,715	.....	8	11	8,020	.....	21
May	49	838,450	4	29	276,505	1	4	48	108,085	.....	5	15	74,200	.....	19
June	43	953,750	6	28	406,600	.....	4	41	72,545	.....	8	14	13,365	.....	18
Total	730	17,065,880	71	483	5,131,215	13	62	685	2,081,700	.....	116	225	933,530	.....	333

* In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 2.

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TABLE 2.—*Abstract of returns of disasters to vessels on the* ATLANTIC *and* GULF *coasts during the year ending June* 30, 1883, *showing the number of* VESSELS TOTALLY LOST, *the number of* DAMAGED, *aggregate* TONNAGE *of vessels totally lost, number of* PASSENGERS *and* CREW, *and number of* LIVES LOST.

Months.	Number of disasters resulting in total loss to vessels.	Number of disasters resulting in partial damage to vessels.	Whether total or partial loss unknown.	Number of casualties resulting in no damage to vessels.	Total.	Total tons burden of vessels totally lost.	Total number of crew, including master, &c.	Total number of passengers.	Total number of lives lost.
July	11	42	6	3	62	1,516	522	2,104	.....
August	5	44	6	5	60	929	677	2,553	.....
September	24	65	14	6	109	4,675	880	533	10
October	8	39	4	4	55	1,748	603	635	2
November	12	52	5	7	76	1,482	601	207	10
December	20	57	6	6	89	3,234	590	50	10
January	14	40	7	6	67	3,800	481	122	9
February	20	43	6	1	70	6,598	608	840	9
March	13	43	1	2	59	2,366	412	58	6
April	3	41	4	4	52	188	565	419	2
May	13	35	4	1	53	3,207	464	148	1
June	9	32	6	2	49	1,757	404	1,046	4
Total	152	533	69	47	801	31,500	6,747	8,715	63

TABLE 3.—*Abstract of returns of disasters to vessels on the* ATLANTIC *and* GULF *coasts during the year ending June* 30, 1883, *showing the number of* VESSELS *and* CARGOES INSURED *and* UNINSURED, *and the* AMOUNT *of* INSURANCE, *where known.*

Months.	Number of vessels and cargoes reported to be insured and the amount of insurance.					Number of vessels and cargoes reported not insured.		Number of vessels and cargoes whether insured or not unknown.		Vessels in ballast.
	Vessels.		Cargoes.		Total amount of insurance.					
	Number.	Amount.	Number.	Amount.		Vessels.	Cargoes.	Vessels.	Cargoes.	
July	17	$385,900	13	$61,650	$447,550	37	19	8	10	20
August	14	314,785	7	68,665	383,450	40	13	6	14	26
September	23	534,545	23	248,470	783,015	61	27	25	33	26
October	16	129,000	8	230,050	359,050	32	17	7	12	81
November	18	215,100	10	131,410	346,510	50	30	8	12	24
December	26	425,100	29	269,965	695,065	47	23	16	22	15
January	25	116,085	14	123,010	239,095	27	13	15	21	19
February	24	259,645	8	193,660	453,305	35	19	11	21	22
March	26	273,020	19	285,665	558,685	27	13	6	10	17
April	15	80,200	8	350,710	430,910	30	17	7	7	20
May	25	431,900	7	92,535	524,435	23	11	5	16	19
June	12	177,500	8	144,500	322,000	30	14	7	10	17
Total	241	3,342,780	154	2,200,290	5,543,070	439	216	121	188	243

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TABLE 4.—*Abstract of returns of disasters to vessels on the* ATLANTIC *and* GULF *coasts during the year ending June* 30, 1883, *distinguishing the* NATURE *of each casualty.*

Nature of casualty.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Foundered	3	2	6	4	4	2	....	3	2	2	6	1	35
Stranded	11	13	30	16	19	41	28	20	32	13	14	15	242
Collided	38	32	51	26	36	28	26	24	18	26	18	24	347
Capsized	1	....	....	....	3	1	1	2	2	1	1	2	14
Damage to hull, masts, rigging, &c	2	1	8	2	7	8	5	1	5	1	3	2	45
Damage to machinery	1	5	2	2	1	....	1	3	....	2	4	....	21
Explosion of boiler	1	....	....	....	....	....	....	....	....	....	....	....	1
Fire	1	3	5	....	2	4	2	5	3	2	4	1	32
Ice	....	....	....	....	....	....	2	4	1	....	....	....	7
Sprung a leak	3	1	2	2	3	3	1	....	1	2	....	....	18
Struck by lightning	....	2	....	....	....	....	....	....	....	....	....	1	3
Struck wharf, bridge, sunken wreck, &c	1	1	3	3	1	2	1	7	3	3	....	2	27
Waterlogged	....	....	....	....	....	....	....	....	....	....	1	....	1
Miscellaneous	....	....	2	....	....	....	....	....	2	....	2	1	7
Unknown	....	....	....	....	....	....	....	1	....	....	....	....	1
Total	62	60	109	55	76	89	67	70	59	52	53	49	801

TABLE 5.—*Abstract of returns of disasters (excluding collisions) to vessels on the* ATLANTIC *and* GULF *coasts during the year ending June* 30, 1883, *distinguishing the* CAUSE *of each disaster.*

Class and cause of disaster.	Foundерings.	Strandings.	Other causes.	Missing vessels.	Total.
CLASS 1.—*Causes connected with the weather:*					
Calms, currents, and tides	.....	28	1	.....	29
Darkness	.....	14	2	.....	16
Fog, &c	.....	40	3	.....	43
Gales, hurricanes, &c	17	66	57	.....	140
Heavy sea, &c	2	7	4	.....	13
Lightning	.....	.....	3	.....	3
Total of class 1	19	155	70	.....	244
CLASS 2.—*Causes connected with vessels, equipments, or stowage:*					
Defective hull, masts, rigging, &c	1	.....	4	.....	5
Defective chart	.....	1	....	.....	1
Error in chronometer	.....	3	.....	.....	3
Error in compass	.....	3	.....	.....	3
Total of class 2	1	7	4	.....	12
CLASS 3.—*Causes connected with navigation and seamanship:*					
Errors of masters, officers, or crew	.....	29	2	.....	31
Errors of pilots	.....	6	2	.....	8
Total of class 3	.....	35	4	.....	39
CLASS 4.—*Causes connected with machinery or boilers:*					
Damage to machinery	.....	.....	21	.....	21
Explosion of boiler	.....	.....	1	.....	1
Total of class 4	.....	.....	22	.....	22
CLASS 5.—*Other causes:*					
Absence of light or buoys	.....	6	1	.....	7
Fire	.....	.....	32	.....	32
Ice	.....	1	7	.....	8
Misstayed	.....	4	.....	.....	4
Sprung a leak	13	10	8	.....	31
Struck rock, wreck, bridge, &c	.....	7	19	.....	26
Miscellaneous	2	9	7	.....	18
Unknown	.....	8	3	.....	11
Total of class 5	15	45	77	.....	137
Aggregate	35	242	177	.....	454

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TABLE 6.—*Abstract of returns of disasters to vessels on the* ATLANTIC *and* GULF *coasts during the year ending June 30, 1883, showing the number of vessels* COLLIDED *and distinguishing the* CAUSE *of each disaster.*

Cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Accidental	2	2	....	3	5	1	....	2	1	4	....	2	22
Bad management	....	....	....	2	4	1	....	1	3	....	....	1	12
Carelessness	....	1	2	4	1	1	....	....	2	....	....	....	11
Darkness	....	....	6	1	3	....	1	....	2	3	2	....	18
Error of judgment	....	....	....	....	....	....	....	....	....	....	1	....	1
Errors of pilots	....	....	....	1	....	1	....	1	1	....	1	1	6
"Fault of other vessel"	16	9	14	8	9	9	8	4	6	7	2	5	97
Fault of tug-towing	2	1	2	....	1	1	....	....	....	2	....	2	11
Fog	8	2	....	3	4	....	3	4	....	4	4	....	32
High, baffling winds	....	....	....	....	....	....	1	1	....	....	....	....	2
Misunderstanding signals	....	1	1	....	1	1	....	....	....	1	1	2	8
Misstayed	....	....	....	....	....	....	....	....	1	....	1	....	2
Negligence	....	1	....	....	1	1	....	....	....	....	1	1	5
Stress of weather	....	....	4	....	2	3	2	3	....	....	....	3	17
Tides, currents, &c.	5	4	6	....	....	....	....	2	....	....	1	1	19
Want of proper lights	1	....	5	....	....	1	....	2	....	....	....	....	9
Miscellaneous	1	3	....	....	....	....	3	....	....	....	....	....	7
Unknown	3	8	11	4	5	8	8	4	2	5	4	6	68
Total	38	32	51	26	36	28	26	24	18	26	18	24	347

TABLE 7.—*Abstract of returns of disasters to vessels on the* ATLANTIC *and* GULF *coasts during the year ending June 30, 1883, showing the number of vessels and distinguishing their* DESCRIPTION.

Description of vessels.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Barges	1	2	1	....	1	....	....	3	1	1	....	....	10
Barks	2	....	3	1	1	3	2	6	2	2	3	2	27
Barkentines	....	....	....	....	1	....	1	1	1	....	....	....	4
Brigs	....	1	3	....	2	3	2	....	2	1	....	3	17
Canal-boats	....	....	....	....	....	....	....	1	....	....	1	....	2
Ferry-boats	2	....	....	1	....	....	....	2	....	2	....	2	9
Light-ships	....	....	....	1	....	....	....	....	....	....	....	....	1
Schooners	37	31	66	37	29	66	37	36	43	22	27	23	454
Scows	3	2	2	....	22	1	1	....	....	1	2	....	34
Ships	1	3	1	....	....	....	1	2	....	....	1	....	9
Sloops	1	2	6	....	3	3	4	3	2	2	2	3	31
Steamers	13	16	19	11	13	10	12	10	7	15	13	12	151
Steamships	1	2	5	3	3	3	6	5	1	5	4	2	40
Steam yachts	....	....	....	....	....	....	....	....	....	....	....	1	1
Yachts	1	....	2	....	....	....	....	....	....	....	....	....	3
Unknown	....	1	1	1	1	....	1	1	....	1	....	1	8
Total	62	60	109	55	76	89	67	70	59	52	53	49	801

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TABLE 8.—*Abstract of returns of disasters to foreign vessels on the* ATLANTIC *and* GULF *coasts during the year ending June* 30, 1883, *showing nationality and description, and distinguishing those* TOTALLY LOST *and those* PARTIALLY DAMAGED.

Nationality and rig.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	
Austrian bark	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
British bark	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	1	....	1	2	2	4
British brig	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
British schooner	....	....	1	2	....	3	....	....	....	1	....	3	2	2	....	1	....	....	....	....	....	....	....	1	3	13	16
British steamer	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
British ship	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	1	1	2
British steamship	....	1	....	1	1	1	....	....	....	1	....	1	....	3	....	3	....	....	....	....	....	1	....	....	1	12	13
Italian bark	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	1	....	....	1	....	....	....	....	2	2	4
German bark	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	2	....	....	....	....	....	....	....	....	1	2	3
German steamship	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Norwegian bark	....	....	....	....	1	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	2	3	5
Norwegian brig	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	1
Russian bark	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	1
Spanish bark	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Spanish steamer	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	1
Spanish steamship	....	....	....	....	....	1	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	3	3
Total	....	1	1	3	3	7	....	1	1	2	1	6	3	7	3	6	1	2	....	1	1	3	....	3	14	44	58
Aggregate	1		4		10		1		3		9		10		9		3		1		4		3		58		

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TABLE 9.—*Abstract of returns of disasters to vessels on the* ATLANTIC *and* GULF *coasts during the year ending June* 30, 1883, *showing the* TONNAGE *and distinguishing the number of those* TOTALLY LOST *and those* PARTIALLY DAMAGED.

Burden of vessels.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	
Not exceeding 50 tons	3	7	1	9	10	12	2	10	5	15	6	10	2	9	6	13	2	9	1	10	3	9	1	6	42	119	161
Over 50 and not exceeding 100 tons	3	8	1	9	3	18	4	7	2	11	5	17	1	10	4	9	4	10	2	9	2	6	....	8	31	122	153
Over 100 and not exceeding 200 tons	3	13	1	9	5	19	....	7	2	15	5	14	3	7	2	3	3	13	....	6	5	7	3	5	32	118	150
Over 200 and not exceeding 300 tons	1	4	1	5	1	8	....	6	2	3	1	10	2	2	2	4	....	3	....	3	....	4	2	....	12	52	64
Over 300 and not exceeding 400 tons	....	3	1	4	2	4	....	4	....	5	....	7	2	4	1	6	3	4	....	2	....	4	2	2	11	49	60
Over 400 and not exceeding 500 tons	....	1	....	6	1	7	1	1	1	1	2	3	2	5	1	2	....	3	....	3	1	....	....	4	9	36	45
Over 500 and not exceeding 600 tons	1	2	....	1	....	....	....	1	....	3	....	....	2	3	1	1	....	1	....	1	....	2	....	3	4	18	22
Over 600 and not exceeding 700 tons	....	2	....	1	1	1	....	1	....	2	....	....	....	2	....	2	1	....	....	2	1	1	....	....	3	14	17
Over 700 and not exceeding 800 tons	....	1	....	....	....	1	....	....	....	1	....	1	....	1	....	2	....	1	....	1	....	....	....	....	....	9	9
Over 800 and not exceeding 900 tons	....	2	....	1	....	1	....	....	....	2	....	....	....	....	1	....	....	1	....	....	....	1	....	4	1	12	13
Over 900 and not exceeding 1,000 tons	....	....	....	1	....	....	1	....	....	1	1	....	....	1	....	....	....	....	....	3	....	....	....	....	2	6	8
Over 1,000 and not exceeding 1,100 tons	....	2	....	....	....	1	....	....	....	....	....	1	....	....	....	2	....	....	....	1	....	....	....	....	....	7	7
Over 1,100 and not exceeding 1,200 tons	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	1	1	2
Over 1,200 and not exceeding 1,300 tons	....	....	....	1	1	....	....	....	....	2	....	....	....	2	....	1	....	....	....	1	....	2	....	....	1	9	10
Over 1,300 and not exceeding 1,400 tons	....	....	....	1	....	....	....	....	....	....	....	1	....	2	1	1	....	....	....	1	....	....	....	....	1	6	7
Over 1,400 tons	....	3	....	2	....	4	....	7	....	1	....	2	....	....	1	2	....	1	....	3	....	2	....	3	1	30	31
Unknown	....	3	....	5	....	9	....	3	....	2	....	3	....	4	....	2	....	....	....	3	....	2	1	5	1	41	42
Total	11	51	5	55	24	85	8	47	12	64	20	69	14	53	20	50	13	46	3	49	13	40	9	40	152	649	801
Aggregate	62		60		109		55		76		89		67		70		59		52		53		49		801		

NOTE.—In the columns of "partial loss" in this table are included the casualties in which the vessels sustained no damage, for the number of which see appropriate column in Table 2.

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TABLE 10.—*Abstract of returns of disasters to vessels on the* ATLANTIC *and* GULF *coasts during the year ending June* 30, 1883, *showing the number of vessels and distinguishing* AGE.

Age.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Not exceeding 3 years	9	12	13	9	9	14	8	10	7	8	6	5	110
Over 3 and not exceeding 7 years	3	3	7	4	7	8	14	10	3	5	5	4	73
Over 7 and not exceeding 10 years	6	7	16	6	12	13	11	16	7	7	7	5	113
Over 10 and not exceeding 14 years	10	5	16	6	16	7	7	8	11	6	7	4	103
Over 14 and not exceeding 20 years	9	15	20	14	17	19	11	14	13	12	10	12	166
Over 20 and not exceeding 25 years	6	5	2	3	2	6	3	2	2	5	2	2	40
Over 25 and not exceeding 30 years	5	1	7	5	6	6	2	1	5	2	3	4	47
Over 30 and not exceeding 35 years	6	2	11	1	2	5	2	2	5	....	5	1	42
Over 35 and not exceeding 40 years	1	1	1	2	1	4	....	2	2	....	1	1	16
Over 40 and not exceeding 45 years	....	1	....	3	....	....	....	....	....	....	1	....	5
Over 45 and not exceeding 50 years	1	....	3	....	....	1	....	1	....	....	1	1	8
Over 50 years	....	....	....	....	....	2	....	....	....	....	....	1	3
Unknown	6	8	13	2	4	4	9	4	4	7	5	9	75
Total	62	60	109	55	76	89	67	70	59	52	53	49	801

TABLE 11.—*Abstract of returns of disasters to vessels on the* ATLANTIC *and* GULF *coasts during the year ending June* 30, 1883, *showing the number of vessels and distinguishing their* CARGOES.

Cargoes.	July.	Agust.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Ballast	20	26	26	18	24	15	19	22	17	20	19	17	243
Coal	9	9	18	7	7	11	9	5	8	2	10	8	103
Cotton and cotton-seed	....	....	....	....	1	4	3	2	2	2	2	....	16
Explosives	....	....	....	....	....	1	....	....	....	....	....	....	1
Fertilizers	1	1	3	1	....	6	2	2	1	2	....	....	19
Fish, oysters, &c	....	1	5	1	7	7	3	7	6	4	1	....	42
Fruit, coffee, &c	....	1	1	....	....	....	....	1	....	....	1	....	4
Grain	2	....	3	....	2	2	1	1	4	....	....	....	15
Ice	....	1	1	....	....	2	....	1	....	....	1	....	6
Iron, iron ore, &c	2	....	2	2	1	1	1	2	3	1	1	2	18
Lime	....	....	2	2	....	1	....	....	....	....	....	....	5
Logwood	....	....	1	....	....	....	....	....	....	....	....	....	1
Lumber	5	7	18	4	10	17	....	3	6	3	2	3	78
Merchandise (general)	3	4	5	7	8	3	6	4	3	8	4	6	61
Petroleum	1	1	....	....	....	....	1	1	....	....	....	....	4
Provisions, &c	2	1	1	....	2	3	1	....	1	....	....	....	11
Railroad iron, &c	....	....	1	1	1	....	....	....	....	....	....	....	3
Railroad stock	....	....	....	....	....	....	....	....	....	....	....	1	1
Salt	....	....	1	....	1	2	2	1	1	....	....	....	8
Sand, plaster, &c	1	1	1	2	2	1	....	....	....	1	....	1	10
Stone, brick, &c	4	....	3	3	3	1	1	3	2	2	....	2	24
Sugar, molasses, &c	1	....	....	....	....	3	1	2	1	1	....	2	11
Tar, turpentine, &c	....	....	....	....	....	....	1	3	....	....	1	....	5
Wood	3	2	1	3	2	3	1	2	....	2	2	2	23
Miscellaneous	2	....	4	1	1	1	8	2	2	....	5	1	27
Unknown	6	5	12	3	4	5	7	6	2	4	4	4	62
Total	62	60	109	55	76	89	67	70	59	52	53	49	801

TABLE 12.—*Summary*—ATLANTIC *and* GULF *coasts.*

Nature of casualties.	Number of vessels.	Total number of tons.	Laden.	Ballast.	Unknown whether laden or not.	Total loss.	Partial and unknown loss.*	Number of passengers.	Number of crew.	Total on board.	Total number of lives lost.
Founderings	35	3,659	24	11	.....	22	13	7	154	161	3
Strandings	242	61,806	179	63	.....	90	152	685	1,870	2,555	21
Vessels collided	347	119,581	165	120	62	19	328	5,813	3,141	8,954	16
Other causes	177	52,342	128	49	.....	21	156	2,210	1,582	3,792	23
Total	801	237,388	496	243	62	152	649	8,715	6,747	15,462	63

*In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 2.

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TABLE 13.—*Abstract of returns of disasters to vessels on the* PACIFIC *coast during the year ending June* 30, 1883, *showing the* NUMBER *and* VALUE *of* VESSELS *and* CARGOES *and amount of* LOSS *to same where known.*

Months.	Total value of vessels.		Number of vessels, value unknown.	Total value of cargoes.		Number of cargoes, value unknown.	Unknown whether laden or not.	Loss to vessels.		Number of vessels totally lost, amount unknown.	Number of vessels damaged, amount unknown.*	Loss to cargoes.		Number of cargoes totally lost, amount unknown.	Number of cargoes not damaged, or damage unknown.
	Number.	Amount.		Number.	Amount.			Number.	Amount.			Number.	Amount.		
July	8	$274,700	.....	3	$20,170	3	.....	8	$93,850	.....	.....	2	$15,170	.....	4
August	7	192,000	1	4	22,350	1	1	5	4,875	.....	3	1	9,200	.....	5
September	5	27,600	1	3	3,500	.....	1	5	2,385	.....	1	2	3,275	.....	2
October	8	189,000	1	3	4,950	.....	1	7	35,850	.....	2	2	4,500	.....	2
November	11	205,000	.....	6	11,300	.....	.....	11	33,925	.....	.....	5	6,350	.....	1
December	10	282,000	.....	3	11,195	1	.....	10	24,270	.....	.....	1	500	.....	3
January	12	815,500	3	6	104,400	.....	3	12	531,950	.....	3	3	22,900	.....	6
February	4	11,600	.....	2	3,700	.....	.....	3	5,875	.....	1	2	3,100	.....	.....
March	4	30,800	.....	3	10,500	.....	.....	3	6,980	.....	1	2	175	.....	1
April	7	140,000	1	5	16,000	2	1	7	60,750	.....	1	3	8,800	1	4
May	4	81,000	.....	1	2,000	.....	.....	4	11,300	.....	.....	1	1,000	.....	.....
June	1	3,000	.....	.....	.....	.....	.....	1	3,000	.....	.....	.....	.....	.....	.....
Total	81	2,252,200	7	39	210,065	7	7	76	815,010	.....	12	24	74,970	1	28

*In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 14.

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TABLE 14.—*Abstract of returns of disasters to vessels on the* PACIFIC *coast during the year ending June* 30, 1883, *showing the number of* VESSELS TOTALLY LOST, *the number* DAMAGED, *aggregate* TONNAGE *of vessels totally lost, number of* PASSENGERS *and* CREW, *and number of* LIVES LOST.

Months.	Number of disasters resulting in total loss to vessels.	Number of disasters resulting in partial damage to vessels.	Whether total or partial loss unknown.	Number of casualties resulting in no damage to vessels.	Total.	Total tons burden of vessels totally lost.	Total number of crew, including master, &c.	Total number of passengers.	Total number of lives lost.
July	2	6	.....	.....	8	506	154	153	.....
August	1	4	1	2	8	706	93	55	.....
September	.....	5	1	.....	6	.....	22	2	.....
October	2	5	1	1	9	118	72	99	6
November	3	8	.....	.....	11	268	96	8	.....
December	2	8	.....	.....	10	182	109	419	.....
January	2	10	3	.....	15	2,136	108	118	18
February	2	1	.....	1	4	105	13	4	5
March	1	2	.....	1	4	45	24	14	.....
April	4	3	1	.....	8	1,370	84	25	4
May	1	3	.....	.....	4	192	32	17	9
June	1	.....	.....	.....	1	18	2	.....	.....
Total	21	55	7	5	88	5,646	809	914	42

TABLE 15.—*Abstract of returns of disasters to vessels on the* PACIFIC *coast during the year ending June* 30, 1883, *showing the number of* VESSELS *and* CARGOES INSURED *and* UNINSURED, *and the* AMOUNT *of* INSURANCE, *where known.*

Months.	Number of vessels and cargoes reported to be insured, and the amount of insurance.					Number of vessels and cargoes reported not insured.		Number of vessels and cargoes, whether insured or not, unknown.		Vessels in ballast.
	Vessels.		Cargoes.		Total amount of insurance.	Vessels.	Cargoes.	Vessels.	Cargoes.	
	Number.	Amount.	Number.	Amount.						
July	2	$32,000	.....	.....	$32,000	6	5	.....	1	2
August	1	40,000	1	$5,000	45,000	6	3	1	2	2
September	1	4,000	.....	.....	4,000	3	3	2	1	2
October	4	64,500	.....	.....	64,500	4	3	1	1	5
November	6	47,800	1	400	48,200	5	5	.....	.....	5
December	6	42,300	.....	.....	42,300	4	2	.....	2	6
January	3	63,000	1	4,000	67,000	8	3	4	5	6
February	.....	.....	.....	.....	.....	4	2	.....	.....	2
March	2	3,000	.....	.....	3,000	2	2	.....	1	1
April	6	76,300	.....	.....	76,300	1	3	1	5	.....
May	3	53,200	.....	.....	53,200	1	1	.....	.....	3
June	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Total	34	426,100	3	9,400	435,500	45	32	9	18	35

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TABLE 16.—*Abstract of returns of disasters to vessels on the* PACIFIC *coast during the year ending June* 30, 1883, *distinguishing the* NATURE *of each casualty.*

Nature of casualty.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Foundered	1	....	1	1	1	1	....	1	....	....	....	....	6
Stranded	1	1	1	2	5	6	5	....	1	4	....	....	26
Collided	2	6	4	4	4	....	6	....	2	2	2	....	32
Capsized	....	....	....	1	....	....	....	....	....	1	....	....	2
Damage to hull, masts, rigging, &c	....	1	....	....	....	2	....	....	....	....	....	....	3
Damage to machinery	3	....	....	....	....	1	1	1	....	....	....	....	6
Explosion of boiler	....	....	....	....	....	....	1	....	....	....	1	....	2
Fire	....	....	....	....	....	....	....	1	1	1	....	1	4
Ice	1	....	....	....	....	....	....	....	....	....	....	....	1
Struck wharf, piles, &c	....	....	....	....	1	....	2	....	....	....	1	....	4
Miscellaneous	....	....	....	1	....	....	....	1	....	....	....	....	2
Total	8	8	6	9	11	10	15	4	4	8	4	1	88

TABLE 17.—*Abstract of returns of disasters (excluding collisions) to vessels on the* PACIFIC *coast during the year ending June* 30, 1883, *distinguishing the* CAUSE *of each disaster.*

Class and cause of disaster.	Foundrings.	Strandings.	Other causes.	Missing vessels.	Total.
CLASS 1.—*Causes connected with the weather:*					
Calms, currents, and tides	.....	2	.....	.....	2
Darkness	.....	2	1	.....	3
Fog, &c	1	3	.....	.....	4
Gales, hurricanes, &c	1	6	7	.....	14
Heavy sea, &c	.....	9	1	.....	10
Total of class 1	2	22	9	.....	33
CLASS 2.—*Causes connected with vessels, equipments, or stowage:*					
Defective chart	.....	2	.....	.....	2
Total of class 2	.....	2	.....	.....	2
CLASS 3.—*Causes connected with navigation and seamanship:*					
Errors of masters, officers, or crew	.....	1	.....	.....	1
Total of class 3	.....	1	.....	.....	1
CLASS 4.—*Causes connected with machinery or boilers:*					
Damage to machinery	.....	.....	6	.....	6
Explosion of boiler	.....	.....	2	.....	2
Total of class 4	.....	.....	8	.....	8
CLASS 5.—*Other causes:*					
Fire	.....	.....	4	.....	4
Ice	.....	.....	1	.....	1
Sprung a leak	3	.....	.....	.....	3
Struck rock, wreck, or bridge, &c	.....	1	1	.....	2
Miscellaneous	1	.....	1	.....	2
Total of class 5	4	1	7	.....	12
Aggregate	6	26	24	.....	56

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TABLE 18.—*Abstract of returns of disasters to vessels on the* PACIFIC *coast during the year ending June* 30, 1883, *showing the number of vessels* COLLIDED, *and distinguishing the* CAUSE *of each disaster.*

Cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Bad management	1	....	1	....	....	....	....	....	....	....	....	....	2
Carelessness	....	....	....	1	....	....	....	....	....	....	1	....	2
"Fault of other vessel"	....	1	....	2	1	....	1	....	1	....	....	....	6
Heavy sea	....	....	....	....	2	....	....	....	....	....	....	....	2
High, baffling winds	....	....	2	....	....	....	4	....	....	....	....	....	6
Misstayed	1	....	....	....	....	....	....	....	....	....	....	....	1
Misunderstanding signals	....	3	....	1	....	....	....	....	....	....	....	....	4
Tide	....	2	....	....	....	....	....	....	....	2	....	....	4
Want of proper lights	....	....	....	....	....	....	....	....	1	....	....	....	1
Unknown	....	....	1	....	1	....	1	....	....	....	1	....	4
Total	2	6	4	4	4	....	6	....	2	2	2	....	32

TABLE 19.—*Abstract of returns of disasters to vessels on the* PACIFIC *coast during the year ending June* 30, 1883, *showing the* NUMBER *of vessels and distinguishing their* DESCRIPTION.

Description of vessels.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Barks	....	1	....	....	....	....	....	....	....	....	....	....	1
Barges	....	1	....	....	....	....	....	....	....	....	....	....	1
Schooners	3	1	2	4	6	4	4	1	2	3	1	....	31
Scows	....	....	....	....	....	....	1	....	....	....	....	....	1
Ships	....	1	1	1	....	1	4	....	....	2	....	....	10
Sloops	1	....	1	....	....	....	1	1	....	....	....	....	4
Steamers	3	4	2	4	5	5	3	2	1	3	3	1	36
Steamships	1	....	....	....	....	....	2	....	1	....	....	....	4
Total	8	8	6	9	11	10	15	4	4	8	4	1	88

TABLE 20.—*Abstract of returns of disasters to foreign vessels on the* PACIFIC *coast during the year ending June* 30, 1883, *showing* NATIONALITY *and* DESCRIPTION, *and distinguishing those* TOTALLY LOST *and those* PARTIALLY DAMAGED.

[No disasters recorded except in the month of January.]

Nationality and rig.	January.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	
British ship	.....	1	.....	1	1
Total	.....	1	.....	1	1
Aggregate	1		1		

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TABLE 21.—*Abstract of returns of disasters to vessels on the* PACIFIC *coast during the year ending June* 30, 1883, *showing the* TONNAGE *and distinguishing the number of those* TOTALLY LOST *and those* PARTIALLY DAMAGED.

Burden of vessels.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	
Not exceeding 50 tons	1	1	....	1	....	2	1	....	....	1	....	....	1	2	1	2	1	1	....	....	....	....	1	....	6	10	16
Over 50 and not exceeding 100 tons	....	1	....	1	....	1	1	3	3	2	1	3	....	2	1	....	....	1	1	1	....	1	....	....	7	16	23
Over 100 and not exceeding 200 tons	....	1	....	....	....	2	....	....	....	3	1	1	....	2	....	....	....	1	2	....	1	2	....	....	4	12	16
Over 200 and not exceeding 300 tons	....	1	....	1	....	....	....	1	....	1	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	6	6
Over 300 and not exceeding 400 tons	....	1	....	....	....	....	....	....	....	1	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	4	4
Over 400 and not exceeding 500 tons	1	....	....	2	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	3	4
Over 500 and not exceeding 600 tons	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	1
Over 600 and not exceeding 700 tons	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	1
Over 700 and not exceeding 800 tons	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
Over 800 and not exceeding 900 tons	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Over 900 and not exceeding 1,000 tons	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	2	2
Over 1,000 and not exceeding 1,100 tons	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	1
Over 1,100 and not exceeding 1,200 tons	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Over 1,200 and not exceeding 1,300 tons	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	2
Over 1,300 and not exceeding 1,400 tons	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Over 1,400 tons	....	....	....	1	....	....	....	....	....	....	....	1	1	3	....	....	....	....	....	1	....	....	....	....	1	6	7
Unknown	....	....	....	1	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	3	3
Total	2	6	1	7	....	6	2	7	3	8	2	8	2	13	2	2	1	3	4	4	1	3	1	....	21	67	88
Aggregate	8		8		6		9		11		10		15		4		4		8		4		1		88		

NOTE.—In the columns of "Partial loss" in this table are included the casualties in which the vessels sustained no damage, for the number of which see appropriate column in Table 14.

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TABLE 22.—*Abstract of returns of disasters to vessels on the* PACIFIC *coast during the year ending June* 30, 1883, *showing the number of vessels and distinguishing* AGE.

Age.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Not exceeding 3 years	2	....	....	2	3	2	3	1	1	2	1	1	18
Over 3 and not exceeding 7 years	3	3	1	1	1	2	6	1	1	1	1	....	21
Over 7 and not exceeding 10 years	....	2	1	1	3	....	1	....	....	....	1	....	9
Over 10 and not exceeding 14 years	....	....	2	2	1	3	2	....	....	....	1	....	11
Over 14 and not exceeding 20 years	....	....	1	2	1	1	1	1	1	2	....	....	10
Over 20 and not exceeding 25 years	....	....	1	....	1	1	....	....	1	2	....	....	6
Over 25 and not exceeding 30 years	2	1	....	1	....	....	....	....	....	1	....	....	5
Over 30 and not exceeding 35 years	....	....	....	....	....	....	....	1	....	....	....	....	1
Over 35 and not exceeding 40 years	....	....	....	....	....	....	....	....	....	....	....	....	....
Over 40 and not exceeding 45 years	....	1	....	....	....	....	....	....	....	....	....	....	1
Over 45 and not exceeding 50 years	....	....	....	....	....	....	....	....	....	....	....	....	....
Over 50 years	....	....	....	....	....	....	....	....	....	....	....	....	....
Unknown	1	1	....	....	1	1	2	....	....	....	....	....	6
Total	8	8	6	9	11	10	15	4	4	8	4	1	88

TABLE 23.—*Abstract of returns of disasters to vessels on the* PACIFIC *coast during the year ending June* 30, 1883, *showing the number of vessels and distinguishing their* CARGOES.

Cargoes.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Ballast	2	2	2	5	5	6	6	2	1	....	3	1	35
Chemicals	....	....	1	....	....	....	....	....	....	....	....	....	1
Coal	....	....	....	....	....	....	1	....	....	....	....	....	1
Grain	....	1	....	1	....	....	3	....	....	1	....	....	6
Iron	....	....	1	....	....	....	....	....	....	....	....	....	1
Lumber	1	2	....	....	5	1	....	1	....	4	....	....	14
Merchandise (general)	3	2	....	1	....	2	1	....	2	1	1	....	13
Provisions, &c	....	....	1	....	....	....	1	....	....	....	....	....	2
Whale oil, &c	1	....	....	....	....	....	....	....	....	....	....	....	1
Wood	....	....	....	1	....	....	....	....	1	....	....	....	2
Miscellaneous	1	....	....	....	1	1	....	1	....	1	....	....	5
Unknown	....	1	1	1	....	....	3	....	....	1	....	....	7
Total	8	8	6	9	11	10	15	4	4	8	4	1	88

TABLE 24.—*Summary*—PACIFIC *coast.*

Nature of casualties.	Number of vessels.	Total number of tons.	Laden.	Ballast.	Unknown whether laden or not.	Total loss.	Partial and unknown loss.*	Number of passengers.	Number of crew.	Total on board.	Total number of lives lost.
Founderings	6	616	4	2	.....	3	3	6	30	36	.....
Strandings	26	6,074	16	10	.....	11	15	48	252	300	10
Vessels collided	32	13,338	10	15	7	.....	32	172	226	398	.....
Other causes	24	10,793	16	8	.....	7	17	688	301	989	32
Total	88	30,821	46	35	7	21	67	914	809	1,723	42

*In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 14.

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TABLE 25.—*Abstract of returns of disasters to vessels on the* GREAT LAKES *during the year ending June* 30, 1883, *showing the* NUMBER *and* VALUE *of* VESSELS *and* CARGOES *and amount of* LOSS *to same where known.*

Months.	Total value of vessels.		Number of vessels, value unknown.	Total value of cargoes.		Number of cargoes, value unknown.	Unknown whether laden or not.	Loss to vessels.		Number of vessels totally lost, amount unknown.	Number of vessels damaged, amount unknown.*	Loss to cargoes.		Number of cargoes totally lost, amount unknown.	Number of cargoes not damaged, or damage unknown.
	Number.	Amount.		Number.	Amount.			Number.	Amount.			Number.	Amount.		
July	27	$566,150	2	17	$144,780	1	1	23	$15,715	.....	6	6	$1,245	.....	13
August	61	1,520,450	2	36	222,685	2	2	55	92,922	.....	8	12	11,015	.....	28
September	61	1,060,010	3	41	549,065	1	2	55	69,267	.....	9	14	12,635	.....	30
October	63	1,100,750	9	46	537,960	.....	3	59	93,996	.....	13	14	10,140	.....	35
November	66	1,147,100	3	48	517,840	.....	2	60	156,360	.....	9	22	37,085	.....	28
December	14	188,200	.....	8	39,105	.....	.....	13	80,500	.....	1	4	3,650	.....	4
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	1	28,000	.....	1	25,000	.....	.....	.....	.....	.....	1	1	200	.....	.....
April	9	54,200	2	5	24,450	1	.....	8	11,845	.....	3	3	840	.....	3
May	92	1,232,815	13	73	460,640	.....	9	89	158,422	.....	16	37	40,785	.....	45
June	35	698,900	5	23	129,120	1	2	33	62,700	.....	7	9	9,060	.....	17
Total	429	7,596,575	39	298	2,650,645	6	21	395	741,727	.....	73	122	126,655	.....	203

*In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 26.

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TABLE 26.—*Abstract of returns of disasters to vessels on the* GREAT LAKES *during the year ending June* 30, 18-3, *showing the number of* VESSELS TOTALLY LOST, *the number* DAMAGED, *aggregate* TONNAGE *of vessels totally lost, number of* PASSENGERS *and* CREW, *and number of* LIVES LOST.

Months.	Number of disasters resulting in total loss to vessels.	Number of disasters resulting in partial damage to vessels.	Whether total or partial loss unknown.	Number of casualties resulting in no damage to vessels.	Total.	Total tons burden of vessels totally lost.	Total number of crew, including master, &c.	Total number of passengers.	Total number of lives lost.
July	2	21	2	4	29	147	235	13	1
August	2	53	2	6	63	1,004	632	185	.....
September	3	52	3	6	64	1,095	544	16	3
October	7	52	9	4	72	1,709	591	65	7
November	10	50	3	6	69	2,329	564	.....	8
December	5	8	.....	1	14	1,414	113	.....	22
January	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	1	1	.....	10	.....	.....
April	2	6	2	1	11	243	57	.....	.....
May	14	75	14	2	105	2,570	690	20	19
June	3	30	5	2	40	865	287	58	.....
Total	48	347	40	33	468	11,376	3,723	357	60

TABLE 27.—*Abstract of returns of disasters to vessels on the* GREAT LAKES *during the year ending June* 30, 1883, *showing the number of* VESSELS *and* CARGOES INSURED *and* UNINSURED, *and the* AMOUNT *of* INSURANCE, *where known.*

Months.	Number of vessels and cargoes reported to be insured, and the amount of insurance.					Number of vessels and cargoes reported not insured.		Number of vessels and cargoes, whether insured or not, unknown.		Vessels in ballast.
	Vessels.		Cargoes.		Total amount of insurance.	Vessels.	Cargoes.	Vessels.	Cargoes.	
	Number.	Amount.	Number.	Amount.						
July	12	$318,000	5	$107,500	$425,500	15	9	2	5	10
August	37	719,845	15	137,085	856,930	23	19	3	6	23
September	38	479,890	18	290,100	769,990	21	18	5	8	20
October	33	478,700	20	323,200	801,900	28	23	11	6	23
November	30	421,600	14	188,660	610,260	32	25	7	11	19
December	5	46,800	2	5,805	52,605	9	5	.....	1	6
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	1	25,000	25,000	1	.....	.....	.....	.....
April	6	27,500	3	21,600	49,100	3	2	2	1	5
May	55	649,110	27	357,675	1,006,785	34	38	16	17	23
June	18	136,700	10	65,475	202,175	13	12	9	4	14
Total	234	3,278,145	115	1,522,100	4,800,245	179	151	55	59	143

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TABLE 28.—*Abstract of returns of disasters to vessels on the* GREAT LAKES *during the year ending June* 30, 1883, *distinguishing the* NATURE *of each casualty.*

Nature of casualty.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Foundered	2	2	1	1	1	....	....	....	....	..	5	....	12
Stranded	4	10	8	14	18	7	....	....	....	4	27	10	102
Collided	12	27	26	35	14	....	....	....	....	4	44	20	182
Capsized	....	....	....	1	1	....	....	....	....	1	1	....	4
Damage to hull, masts, rigging, &c	4	5	10	5	10	1	....	....	....	....	6	1	42
Damage to machinery	3	3	7	3	4	....	....	....	....	....	4	3	27
Explosion of boiler	....	....	....	1	....	....	....	....	....	....	....	....	1
Fire	....	6	2	1	5	3	....	....	....	....	2	2	21
Never heard from	....	....	....	....	....	1	....	....	....	....	....	....	1
Sprung a leak	....	4	3	5	1	....	..	....	....	..	1	3	17
Struck bridge, pier, sunken wreck, &c	3	4	1	4	7	2	....	....	1	1	11	....	34
Waterlogged	....	1	3	1	2	....	....	....	....	....	1	....	8
Miscellaneous	1	1	3	1	6	...	....	....	....	1	3	1	17
Total	29	63	64	72	69	14	....	....	1	11	105	40	468

TABLE 29.—*Abstract of returns of disasters (excluding collisions) to vessels on the* GREAT LAKES *during the year ending June* 30, 1883, *distinguishing the* CAUSE *of each disaster.*

Class and cause of disaster.	Foundrings.	Strandings.	Other causes.	Missing vessels.	Total.
CLASS 1.—*Causes connected with the weather:*					
Calms, currents, &c	.....	2	2	.....	4
Darkness	.....	8	.....	.....	8
Fog	.....	27	2	.....	29
Gales, hurricanes, &c	6	42	64	.....	112
Heavy sea	1	3	13	.....	17
Total of class 1	7	82	81	.....	170
CLASS 2.—*Causes connected with vessels, equipments, or stowage:*					
Defective chart	.....	2	.....	.....	2
Defective mast	.....	.....	1	.....	1
Total of class 2	.....	2	1	.....	3
CLASS 3.—*Causes connected with navigation and seamanship:*					
Errors of masters, officers, or crew	1	4	.....	.....	5
Errors of pilots	.....	2	8	.....	10
Total of class 3	1	6	8	.....	15
CLASS 4.—*Causes connected with machinery or boilers:*					
Damage to machinery	.....	1	26	.....	27
Explosion of boiler	.....	.....	1	.....	1
Total of class 4	.....	1	27	.....	28
CLASS 5.—*Other causes:*					
Absence of light or buoys	.....	3	1	.....	4
Fire	.....	.....	21	.....	21
Sprung a leak	4	1	11	.....	16
Struck rock, pile, bridge, &c	.....	2	14	.....	16
Miscellaneous	.....	4	5	.....	9
Unknown	.....	1	2	1	4
Total of class 5	4	11	54	1	70
Aggregate	12	102	171	1	286

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TABLE 30—*Abstract of returns of disasters to vessels on the* GREAT LAKES *during the year ending June* 30, 1883, *showing the number of vessels* COLLIDED, *and distinguishing the* CAUSE *of each disaster.*

Cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Accidental	1	....	6	2	1	....	....	....	....	....	3	..	13
Bad management	1	2	2	....	....	....	....	....	....	2	2	6	15
Carelessness	2	1	....	4	....	....	....	....	....	....	....	....	7
Darkness	....	....	....	....	....	....	....	....	....	....	4	....	4
Damage to machinery	....	....	....	....	....	....	....	....	....	....	1	....	1
Errors of pilots	....	....	1	....	2	....	....	....	....	....	....	2	5
"Fault of other vessel"	3	5	2	6	3	....	....	....	....	....	3	2	24
Fault of tug towing	....	8	2	7	....	....	....	....	....	....	4	1	22
Fog	2	....	1	2	2	....	....	....	....	....	2	8	17
High, baffling winds	....	1	4	2	2	....	....	....	....	....	15	....	24
Misunderstanding signals	1	4	2	1	....	....	....	....	....	....	4	....	12
Negligence	....	1	....	....	....	....	....	....	....	....	....	....	1
Stress of weather	....	....	....	1	1	....	....	....	....	....	....	....	2
Tides, currents, &c	....	....	2	5	....	....	....	....	....	....	1	....	8
Miscellaneous	1	2	1	2	....	....	....	....	....	....	1	....	7
Unknown	1	3	3	3	3	....	....	....	....	2	4	1	20
Total	12	27	26	35	14	....	....	....	....	4	44	20	182

TABLE 31.—*Abstract of returns of disasters to vessels on the* GREAT LAKES *during the year ending June* 30, 1883, *showing the number of vessels and distinguishing their* DESCRIPTION.

Description of vessels.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Barges	3	....	3	4	6	....	....	....	....	....	6	....	22
Canal-boats	1	....	....	1	1	....	....	....	....	....	....	....	3
Schooners	9	33	35	42	38	8	....	....	1	9	72	27	274
Scows	2	....	....	....	1	....	....	....	....	....	3	....	6
Sloops	....	....	....	2	2	....	....	....	....	....	2	....	6
Steamers	14	30	25	23	20	6	....	....	....	2	19	13	152
Yachts	....	....	1	....	....	....	....	....	....	....	1	....	2
Unknown	....	....	....	....	1	....	....	....	....	....	2	....	3
Total	29	63	64	72	69	14	....	....	1	11	105	40	468

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TABLE 32.—*Abstract of returns of disasters to foreign vessels on the* GREAT LAKES *during the year ending June* 30, 1883, *showing* NATIONALITY *and* DESCRIPTION, *and distinguishing those* TOTALLY LOST *and those* PARTIALLY DAMAGED.

Nationality and rig.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	
British barges	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	2
British schooners	....	....	....	1	....	2	....	1	....	1	1	....	....	....	....	....	....	....	....	....	....	....	1	....	2	5	7
British steamers	....	1	....	1	....	1	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	6	6
Total	....	3	....	2	....	3	....	3	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1	....	2	13	15
Aggregate	3		2		3		3		1		1		....		....		....		....		1		1		15		

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TABLE 33.—*Abstract of returns of disasters to vessels on the* GREAT LAKES *during the year ending June* 30, 1883, *showing the* TONNAGE *and distinguishing the number of those* TOTALLY LOST *and those* PARTIALLY DAMAGED.

Burden of vessels.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	
Not exceeding 50 tons	1	4	....	6	1	6	2	5	....	10	....	3	....	....	....	....	....	....	....	1	3	9	....	4	7	48	55
Over 50 and not exceeding 100 tons	....	3	....	4	....	2	....	4	1	2	....	1	....	....	....	....	....	....	....	1	2	4	....	5	3	26	29
Over 100 and not exceeding 200 tons	1	4	....	12	....	10	2	4	4	6	1	....	....	....	....	....	....	....	2	3	6	29	....	5	16	73	89
Over 200 and not exceeding 300 tons	....	4	1	10	....	9	1	14	3	12	1	3	....	....	....	....	....	....	....	1	1	13	2	10	9	76	85
Over 300 and not exceeding 400 tons	....	3	....	10	....	14	....	10	1	12	3	....	....	....	....	....	....	....	....	1	....	7	1	5	5	62	67
Over 400 and not exceeding 500 tons	....	2	....	2	1	....	....	6	....	3	....	....	....	....	....	....	....	....	....	....	....	4	....	1	1	18	19
Over 500 and not exceeding 600 tons	....	....	....	2	....	4	1	5	....	1	....	....	....	....	....	....	....	....	....	1	1	3	....	....	2	16	18
Over 600 and not exceeding 700 tons	....	....	....	3	1	4	1	3	1	....	....	....	....	....	....	....	....	....	....	....	....	5	....	1	3	16	19
Over 700 and not exceeding 800 tons	....	1	1	2	....	2	....	2	....	4	....	1	....	....	....	....	....	....	....	....	1	2	....	1	2	15	17
Over 800 and not exceeding 900 tons	....	....	....	1	....	2	....	4	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	9	9
Over 900 and not exceeding 1,000 tons	....	1	....	....	....	3	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	5	....	....	....	10	10
Over 1,000 and not exceeding 1,100 tons	....	....	....	2	....	....	....	2	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	6	6
Over 1,100 and not exceeding 1,200 tons	....	....	....	1	....	1	....	1	....	2	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	7	7
Over 1,200 and not exceeding 1,300 tons	....	....	....	1	....	1	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	7	7
Over 1,300 and not exceeding 1,400 tons	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	2
Over 1,400 tons	....	2	....	5	....	2	....	2	....	4	....	....	....	....	....	....	....	....	....	....	....	2	....	2	....	19	19
Unknown	....	1	....	....	....	1	....	2	....	1	....	....	....	....	....	....	....	....	....	1	....	3	....	1	....	10	10
Total	2	27	2	61	3	61	7	65	10	59	5	9	....	....	....	....	....	1	2	9	14	91	3	37	48	420	468
Aggregate	29		63		64		72		69		14		....	....	....	....	1		11		105		40		468		

NOTE.—In the columns of "Partial loss" in this table are included the casualties in which the vessels sustained no damage, for the number of which see appropriate column in Tables 26,

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TABLE 34.—*Abstract of returns of disasters to vessels on the* GREAT LAKES *during the year ending June* 30, 1883, *showing the number of vessels and distinguishing* AGE.

Age.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Not exceeding 3 years	4	10	15	6	8	1	....	....	....	1	16	7	68
Over 3 and not exceeding 7 years	4	4	4	6	3	1	....	..	....	1	4	3	30
Over 7 and not exceeding 10 years	5	16	16	16	22	2	....	...	1	....	20	6	104
Over 10 and not exceeding 14 years	8	9	5	16	10	3	....	....	....	1	15	4	71
Over 14 and not exceeding 20 years	6	11	14	14	12	4	....	....	....	2	22	7	92
Over 20 and not exceeding 25 years	....	4	2	....	7	....	....	....	....	....	5	4	22
Over 25 and not exceeding 30 years	1	8	8	9	4	3	....	....	....	3	10	6	52
Over 30 and not exceeding 35 years	....	....	..	1	1	....	....	....	....	1	3	....	6
Over 35 and not exceeding 40 years	....	1	....	1	....	....	....	....	....	1	2	1	6
Over 40 and not exceeding 45 years	....	....	....	....	....	....	....	....	....	....	....	....	....
Over 45 and not exceeding 50 years	....	....	....	....	....	....	....	....	....	....	....	....	....
Over 50 years	....	....	....	....	....	....	....	....	....	....	....	....	....
Unknown	1	....	....	3	2	....	....	....	....	1	8	2	17
Total	29	63	64	72	69	14	....	...	1	11	105	40	468

TABLE 35.—*Abstract of returns of disasters to vessels on the* GREAT LAKES *during the year ending June* 30, 1883, *showing the number of vessels and distinguishing thier* CARGOES.

Cargoes.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Ballast	10	23	20	23	19	6	....	....	..	5	23	14	143
Coal	8	11	8	6	5	2	...	....	....	....	15	5	60
Fish	....	....	....	1	1	....	....	....	..	....	....	....	2
Fruit, &c	....	....	....	1	....	....	....	....	....	....	....	....	1
Grain	1	4	9	6	9	....	....	....	1	2	7	3	42
Iron and iron ore	1	6	7	8	2	1	....	....	....	....	1	3	29
Lime	....	....	....	1	....	....	....	....	....	....	....	....	1
Lumber	3	12	13	11	22	4	....	....	....	1	26	11	103
Merchandise (general)	....	2	1	1	....	1	....	....	....	....	1	....	6
Provisions, &c	....	....	....	....	3	....	....	....	....	....	....	....	3
Railroad iron	....	....	2	1	....	....	....	....	....	....	....	....	3
Salt	....	....	....	1	....	....	....	....	....	....	1	....	2
Sand, plaster, &c	1	....	....	....	....	....	....	....	....	....	....	1	2
Stone, brick, &c	4	1	....	2	1	....	....	....	....	....	4	....	12
Wood, &c	....	2	....	4	3	....	....	....	....	3	16	....	28
Miscellaneous	....	....	2	3	2	....	....	....	....	....	2	1	10
Unknown	1	2	2	3	2	....	....	....	....	....	9	2	21
Total	29	63	64	72	69	14	....	....	1	11	105	40	468

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TABLE 36.—*Abstract of returns of disasters to vessels on the* GREAT LAKES *during the year ending June* 30, 1883, *showing the number of vessels and distinguishing the* LAKES *and* CONNECTING RIVERS *on which they occurred.*

Localities.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Lake Erie	5	13	12	12	15	1	....	....	....	1	14	3	76
Lake Huron	2	4	9	10	9	1	....	....	....	....	12	4	51
Lake Michigan	16	33	28	35	38	9	....	....	1	9	60	27	256
Lake Ontario	3	5	6	2	4	2	....	....	....	1	3	....	26
Lake Superior	....	2	3	2	...	1	....	....	....	.. .	1	1	10
Lake Saint Clair	....	1	....	1	....	....	....	....	....	....	1	1	4
Straits of Mackinaw	....	....	1	3	1	....	....	....	....	....	2	....	7
Detroit River	....	2	1	....	....	....	....	....	....	....	2	...	5
Saint Clair River	1	1	2	....	....	....	....	....	....	....	5	4	13
Saint Clair Flats Canal	2	....	....	5	1	....	....	....	...	....	2	....	10
Saint Mary's River	....	2	2	2	..	....	....	....	....	....	1	....	7
Welland Canal	....	....	....	....	1	....	....	....	....	....	2	....	3
Total	29	63	64	72	69	14	....	....	1	11	105	40	468

TABLE 37.—*Summary*—GREAT LAKES.

Nature of casualties.	Number of vessels.	Total number of tons.	Laden. *	Ballast.	Unknown whether laden or not.	Total loss.	Partial and unknown loss.*	Number of passengers.	Number of crew.	Total on board.	Total number of lives lost.
Founderings	12	1,604	8	4	.....	7	5	.....	45	45	16
Strandings	102	45,039	89	13	.....	26	76	60	903	963	14
Vessels collided	182	81 368	94	67	21	2	180	152	1,413	1,565	3
Other causes	172	50,389	113	59	.....	13	159	145	1,362	1,507	27
Total	468	178,400	304	143	21	48	420	357	3,723	4,080	60

* In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in table 26.

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TABLE 38.—*Abstract of returns of disasters to vessels on the* RIVERS *of the United States during the year ending June* 30, 1883, *showing the* NUMBER *and* VALUE *of* VESSELS *and* CARGOES *and amount of* LOSS *to same where known.*

Months.	Total value of vessels.		Number of vessels, value unknown.	Total value of cargoes.		Number of cargoes, value unknown.	Unknown whether laden or not.	Loss to vessels.		Number of vessels totally lost, amount unknown.	Number of vessels damaged, amount unknown.*	Loss to cargoes.		Number of cargoes totally lost, amount unknown.	Number of cargoes not damaged, or damage unknown.
	Number.	Amount.		Number.	Amount.			Number.	Amount.			Number.	Amount.		
July	27	$763,050	1	11	$69,300	.....	1	24	$133,100	.....	4	5	$21,800	.....	7
August	20	786,500	1	12	208,800	.....	.....	18	107,600	.....	3	5	19,470	.....	7
September	21	425,700	.....	13	98,015	.....	.....	18	119,000	.....	3	6	43,965	.....	7
October	25	568,800	1	12	117,810	1	.....	24	50,120	.....	2	2	2,960	.....	11
November	20	251,000	1	14	97,030	1	1	18	40,350	.....	3	7	24,155	.....	9
December	21	332,250	2	15	352,150	.....	2	20	78,585	.....	3	10	129,435	.....	7
January	11	294,000	.....	5	191,445	.....	.....	11	114,875	.....	.....	1	68,000	.....	4
February	17	552,100	3	7	152,915	2	2	17	171,730	.....	3	6	4,340	.....	5
March	24	319,100	5	9	91,590	1	4	24	102,685	.....	5	4	26,010	1	9
April	15	385,200	.....	12	153,560	1	.....	14	31,150	.....	1	7	6,605	.....	6
May	12	294,550	1	7	44,850	1	1	11	80,875	.....	2	5	61,500	.....	4
June	13	182,600	.....	5	27,140	.....	.....	11	27,675	.....	2	1	17,000	.....	4
Total	226	5,154,850	15	122	1,604,605	7	11	210	1,057,745	.....	31	59	425,240	1	80

*In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 39.

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TABLE 39.—*Abstract of returns of disasters to vessels on the* RIVERS *of the United States during the year ending June* 30, 1883, *showing the number of* VESSELS TOTALLY LOST, *the number* DAMAGED, *aggregate* TONNAGE *of vessels totally lost, number of* PASSENGERS *and* CREW, *and number of* LIVES LOST.

Months.	Number of disasters resulting in total loss to vessels.	Number of disasters resulting in partial damage to vessels.	Whether total or partial loss unknown.	Number of casualties resulting in no damage to vessels.	Total.	Total tons burden of vessels totally lost.	Total number of crew, including master, &c.	Total number of passengers.	Total number of lives lost.
July	8	16	1	3	28	4,596	513	992	82
August	5	13	1	2	21	2,267	502	369	9
September	3	15	.....	3	21	1,722	298	341	21
October	3	21	.....	2	26	402	331	109	3
November	3	15	1	2	21	299	256	118	3
December	4	16	2	1	23	859	371	119	.....
January	1	10	.....	.....	11	1,438	203	31	.....
February	8	9	3	.....	20	1,302	205	65	.....
March	7	17	5	.....	29	1,383	404	113	31
April	6	8	.....	1	15	413	338	71	13
May	4	7	1	1	13	1,668	193	119	6
June	1	10	.....	2	13	178	128	112	.....
Total	53	157	14	17	241	16,527	3,742	2,559	168

TABLE 40.—*Abstract of returns of disasters to vessels on the* RIVERS *of the United States during the year ending June* 30, 1883, *showing the number of* VESSELS *and* CARGOES INSURED *and* UNINSURED, *and the* AMOUNT *of* INSURANCE, *where known.*

Months.	Number of vessels and cargoes reported to be insured, and the amount of insurance.					Number of vessels and cargoes reported not insured.		Number of vessels and cargoes whether insured or not unknown.		
	Vessels.		Cargoes.		Total amount of insurance.	Vessels.	Cargoes.	Vessels.	Cargoes.	Vessels in ballast.
	Number.	Amount.	Number.	Amount.						
July	14	$285,000	2	$22,500	$307,500	12	5	2	5	16
August	7	94,000	5	71,700	165,700	13	6	1	1	9
September	9	144,000	2	20,000	164,000	9	5	3	6	8
October	9	187,800	3	80,000	267,800	16	7	1	3	13
November	9	115,500	2	27,000	142,500	10	9	2	5	5
December	11	92,000	7	198,000	290,000	9	4	3	6	6
January	4	71,500	1	65,000	136,500	7	1	.....	3	6
February	5	113,750	1	600	114,350	12	6	3	4	9
March	8	65,750	4	29,520	95,270	16	3	5	7	15
April	8	246,000	2	30,000	276,000	7	6	1	5	2
May	4	110,000	.....	.....	110,000	7	5	2	4	4
June	5	27,900	2	19,140	47,040	8	1	.....	2	8
Total	93	1,553,200	31	563,460	2,116,660	126	58	22	51	101

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TABLE 41.—*Abstract of returns of disasters to vessels on the* RIVERS *of the United States during the year ending June* 30, 1883, *distinguishing the* NATURE *of each casualty.*

Nature of casualty.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Foundered	1	...	...	1	1	1	....	2	....	....	1	1	8
Stranded	4	1	5	5	3	...	....	...	1	5	...	2	26
Collided	10	8	10	8	8	6	2	6	14	...	6	3	81
Capsized	...	...	...	...	...	...	...	...	...	...	...	1	1
Damage to machinery	4	5	1	....	1	1	1	1	1	1	....	3	19
Explosion of boiler, &c	....	1	....	2	....	1	....	....	1	....	1	....	6
Fire	4	....	3	5	4	5	1	2	1	1	2	1	29
Ice	...	...	...	...	...	...	6	5	5	....	....	....	16
Sprung a leak	1	...	...	...	1	2	...	...	...	....	1	....	5
Struck bridge, pier, hidden obstruction, &c	4	5	2	5	3	6	1	3	5	8	2	2	46
Miscellaneous	....	1	...	....	....	1	....	1	1	....	....	...	4
Total	28	21	21	26	21	23	11	20	29	15	13	13	241

TABLE 42.—*Abstract of returns of disasters (excluding collisions) to vessels on the* RIVERS *of the United States during the year ending June* 30, 1883, *distinguishing the* CAUSE *of each disaster.*

Class and cause of disaster.	Foundrings.	Strandings.	Other causes.	Missing vessels.	Total.
CLASS 1.—*Causes connected with the weather:*					
Calms, currents, tides, &c	.....	5	4	.....	9
Darkness	.....	3	.....	.....	3
Fog	.....	1	.....	.....	1
Gales, hurricanes, &c	2	4	6	.....	12
Heavy sea	.....	1	.....	.....	1
Total of Class 1	2	14	10	.....	26
CLASS 3.—*Causes connected with navigation and seamanship:*					
Errors of masters, officers, or crew	.....	2	1	.....	3
Errors of pilots	.....	2	6	.....	8
Total of Class 3	.....	4	7	.....	11
CLASS 4.—*Causes connected with machinery or boilers:*					
Damage to machinery	.....	.....	19	.....	19
Explosion	.....	.....	6	.....	6
Total of Class 4	.....	.....	25	.....	25
CLASS 5.—*Other causes:*					
Absence of light or buoys	.....	.....	1	.....	1
Fire	.....	.....	29	.....	29
Ice	.....	.....	16	.....	16
Sprung a leak	4	.....	4	.....	8
Struck rock, snag, wreck, &c	.....	6	30	.....	36
Miscellaneous	1	2	4	.....	7
Unknown	1	.....	.....	.....	1
Total of Class 5	6	8	84	.....	98
Aggregate	8	26	126	.....	160

NOTE.—Class 2 includes disasters arising from causes connected with vessels, equipments, or stowage. No casualties are reported in this class.

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TABLE 43.—*Abstract of returns of disasters to vessels on the* RIVERS *of the United States during the year ending June* 30, 1883, *showing the number of vessels* COLLIDED, *and distinguishing the* CAUSE *of each disaster.*

Cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Accidental	1	....	....	....	....	....	....	....	1	....	....	....	2
Bad management	....	....	....	1	1	....	....	....	2	....	....	....	4
Carelessness	....	....	1	....	....	....	....	....	....	....	....	....	1
Darkness	....	....	....	....	....	....	2	....	....	....	....	....	2
Errors of pilots	2	....	....	....	....	....	....	....	....	....	....	....	2
"Fault of other vessel"	4	4	2	3	3	1	....	1	3	....	1	....	22
Fault of tug towing	2	....	....	1	....	....	....	....	....	....	1	....	4
Fog	....	....	....	2	....	....	....	....	....	....	....	....	2
Ice	....	....	....	....	....	2	....	2	....	....	....	....	4
Misunderstanding signals	....	....	1	....	....	....	....	....	....	....	....	....	1
Stress of weather	....	....	....	....	1	....	....	2	1	....	....	....	4
Tides, currents, &c	....	....	2	....	....	....	....	....	....	....	....	2	4
Want of proper lights	....	2	....	1	....	....	....	....	....	....	....	....	3
Miscellaneous	....	....	....	....	....	....	....	....	1	....	1	....	2
Unknown	1	2	4	....	3	3	....	1	6	....	3	1	24
Total	10	8	10	8	8	6	2	6	14	....	6	3	81

TABLE 44.—*Abstract of returns of disasters to vessels on the* RVERS *of the United States during the year ending June* 30, 1883, *showing the number of vessels and distinguishing their* DESCRIPTION.

Description of vessels.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Barges	1	2	1	1	1	1	....	2	1	4	....	....	14
Barkentines	....	....	....	....	....	....	....	....	....	....	....	1	1
Brigs	....	....	....	....	....	....	....	1	1	....	....	....	2
Ferry-boats	....	1	1	....	....	....	....	....	2	....	....	....	4
Schooners	5	2	7	7	6	4	....	3	6	....	3	3	46
Sloops	....	1	2	....	....	1	....	....	....	....	....	....	4
Steamers	22	13	10	18	13	15	9	13	18	10	10	8	159
Steamships	....	2	....	....	1	1	2	1	....	1	....	....	8
Steam yachts	....	....	....	....	....	....	....	....	....	....	....	1	1
Unknown	....	....	....	....	....	1	....	....	1	....	....	....	2
Total	28	21	21	26	21	23	11	20	29	15	13	13	241

TABLE 45.—*Abstract of returns of disasters to foreign vessels on the* RIVERS *of the United States during the year ending June* 30, 1883, *showing* NATIONALITY *and* DESCRIPTION, *and distinguishing those* TOTALLY LOST *and those* PARTIALLY DAMAGED.

[No disasters recorded except in November and December, 1882, and March, 1883.]

Nationality and rig.	November.		December.		March.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	
British steamships	....	1	....	1	....	1	....	3	3
Total	....	1	....	1	....	1	....	3	3
Aggregate	1		1		1		3		

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TABLE 46.—*Abstract of returns of disasters to vessels on the* RIVERS *of the United States during the year ending June* 30, 1883, *showing the* TONNAGE, *and distinguishing the number of those* TOTALLY LOST *and those* PARTIALLY DAMAGED.

Burden of vessels.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	
Not exceeding 50 tons	....	4	...	1	1	4	1	7	1	4	1	2	...	3	4	.	....	6	....	1	....	2	....	6	8	46	48
Over 50 and not exceeding 100 tons	....	3	....	1	....	4	....	3	1	5	....	2	....	1	1	4	1	3	....	1	1	2	....	2	4	31	35
Over 100 and not exceeding 200 tons	....	2	1	3	1	1	2	4	1	2	2	4	....	1	1	2	4	2	1	....	1	2	1	1	15	24	39
Over 200 and not exceeding 300 tons	1	....	1	....	....	1	....	1	....	2	....	3	....	1	1	....	1	3	1	2	1	....	....	....	6	13	19
Over 300 and not exceeding 400 tons	2	3	1	3	....	2	....	1	....	1	....	4	....	2	....	1	1	1	....	2	....	1	....	....	4	21	25
Over 400 and not exceeding 500 tons	1	3	....	1	....	1	....	1	....	1	....	....	....	1	....	....	....	....	....	....	....	1	....	....	1	9	10
Over 500 and not exceeding 600 tons	2	....	....	....	....	2	....	1	....	1	1	....	....	....	....	3	....	....	....	....	....	1	....	1	3	9	12
Over 600 and not exceeding 700 tons	....	2	1	1	....	2	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	1	1	8	9
Over 700 and not exceeding 800 tons	....	....	....	1	....	....	....	....	....	....	....	....	....	1	1	....	....	1	....	1	....	....	....	1	1	5	6
Over 800 and not exceeding 900 tons	1	1	1	1	....	1	....	2	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	6	8
Over 900 and not exceeding 1,000 tons	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	1
Over 1,000 and not exceeding 1,100 tons	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Over 1,100 and not exceeding 1,200 tons	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	1	....	....	....	2	2	4
Over 1,200 and not exceeding 1,300 tons	....	....	....	1	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	3	3
Over 1,300 and not exceeding 1,400 tons	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	3	3
Over 1,400 tons	....	....	....	1	1	....	....	....	....	....	....	1	1	....	....	1	....	....	....	....	....	....	....	....	2	3	5
Unknown	....	1	....	1	....	....	....	1	....	....	....	1	....	....	....	..	....	5	4	....	....	....	....	....	4	9	13
Total	8	20	5	16	3	18	3	23	3	18	4	19	1	10	8	12	7	22	6	9	4	9	1	12	53	188	241
Aggregate	28		21		21		26		21		23		11		20		29		15		13		13		241		

NOTE.—In the columns of "Partial loss" in this table are included the casualties in which the vessels sustained no damage, for the number of which see appropriate column in Table 39.

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TABLE 47.—*Abstract of returns of disasters to vessels on the* RIVERS *of the United States during the year ending June 30, 1883, showing the number of vessels and distinguishing* AGE.

Age.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Not exceeding 3 years	5	4	4	10	4	5	1	9	1	1	3	4	51
Over 3 and not exceeding 7 years	6	5	6	2	4	5	2	2	9	3	2	2	48
Over 7 and not exceeding 10 years	5	3	1	4	...	5	4	2	5	3	2	1	35
Over 10 and not exceeding 14 years	3	1	3	2	5	4	1	3	4	2	2	3	33
Over 14 and not exceeding 20 years	4	6	2	4	3	3	2	1	2	2	...	...	29
Over 20 and not exceeding 25 years	3	...	1	1	2	....	1	1	1	....	1	2	13
Over 25 and not exceeding 30 years	...	...	....	....	..	...	....	....	1	....	1	....	2
Over 30 and not exceeding 35 years	....	...	....	....	1	....	....	....	....	....	....	....	1
Over 35 and not exceeding 40 years	....	....	1	1	...	....	....	....	....	....	....	....	2
Over 40 and not exceeding 45 years	....	....	1	....	...	....	....	....	....	....	....	....	1
Over 45 and not exceeding 50 years	....	....	....	....	...	....	....	....	....	....	....	....	.....
Over 50 years	....	1	....	....	..	....	....	....	....	....	....	....	1
Unknown	2	1	2	2	2	1	....	2	6	4	2	1	25
Total	28	21	21	26	21	23	11	20	29	15	13	13	241

TABLE 48.—*Abstracts of returns of disasters to vessels on the* RIVERS *of the United States during the year ending June 30, 1883, showing the number of vessels and distinguishing their* CARGOES.

Cargoes.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Ballast	16	9	8	13	5	6	6	9	15	2	4	8	101
Coal	1	....	2	2	..	...	1	2	....	4	....	3	15
Copper	1	...	...	...	...	...	...	...	...	...	...	...	1
Cotton, cotton-seed, &c	2	1	1	3	5	4	1	....	2	2	....	....	21
Fertilizers	..	1	1	....	..	...	....	....	....	....	....	....	2
Fish, oysters, &c	....	....	....	1	....	1	....	....	1	....	1	....	4
Fruit, &c	..	....	....	....	1	....	....	....	....	....	....	....	1
Grain	...	3	1	2	..	1	....	2	1	....	....	....	10
Iron, iron ore, &c	1	1	....	....	....	....	....	....	....	....	....	....	2
Lumber	1	1	2	1	1	2	....	....	1	1	1	....	11
Merchandise, (general)	1	4	1	1	4	2	1	3	2	2	4	...	25
Naval stores	....	....	....	....	....	....	....	..	1	....	....	....	1
Petroleum	....	....	....	....	....	1	....	....	....	....	....	....	1
Provisions, &c	2	1	1	....	1	1	....	....	....	1	....	....	7
Railroad stock	....	....	1	....	....	....	....	....	....	....	....	..	1
Stone, brick, &c	....	....	1	....	....	1	....	....	....	....	....	....	2
Sugar, molasses, &c	....	....	....	....	....	....	1	....	....	....	....	....	1
Wood	....	....	....	1	1	....	....	1	....	....	....	..	3
Miscellaneous	2	....	2	2	2	2	1	1	2	3	2	2	21
Unknown	1	....	....	....	1	2	....	2	4	....	1	....	11
Total	28	21	21	26	21	23	11	20	29	15	13	13	241

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TABLE 49.—*Abstract of returns of disasters to vessels on the* RIVERS *of the United States during the year ending June* 30, 1883, *distinguishing the* RIVERS *on which they occurred.*

Rivers.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Appomattox, Virginia	....	....	....	2	....	....	1	....	....	....	....	1	4
Arkansas	....	....	....	1	....	....	....	1	....	....	....	....	2
Atchafalaya, Louisiana	1	....	....	....	....	....	....	....	....	....	....	....	1
Bayou Bartholomew, Louisiana	....	....	....	....	....	1	....	....	....	....	....	....	1
Black, Louisiana	....	....	....	....	....	....	....	....	1	1	....	....	2
Black, South Carolina	....	....	....	....	....	....	....	....	1	....	....	....	1
Big Sandy, Kentucky	....	....	....	....	1	....	....	....	....	....	....	....	1
Chattahoochee, Alabama	....	....	....	....	....	....	....	....	....	1	....	....	1
Coquille, Oregon	....	....	....	....	1	....	....	....	....	....	....	....	1
Columbia	....	....	1	2	....	....	....	....	....	....	1	....	4
Connecticut	....	....	....	....	....	....	....	....	1	....	1	1	3
Cooper, South Carolina	....	....	....	1	....	....	....	....	....	....	....	....	1
Delaware	5	6	6	3	2	3	3	4	1	1	1	4	39
Great Kanawha, West Virginia	....	....	1	....	....	....	....	....	....	....	....	....	1
Green, Kentucky	....	....	....	....	....	....	....	2	....	....	....	....	2
Hudson	3	3	2	....	2	2	....	1	1	....	....	....	14
Illinois	....	....	1	....	....	....	....	1	1	....	....	....	3
James	1	....	....	....	....	1	....	2	....	....	....	....	4
Kennebec	....	....	....	1	....	....	....	....	....	....	....	....	1
Mississippi	8	6	5	5	7	7	2	3	6	6	....	1	56
Missouri	2	3	1	....	....	....	1	1	2	....	1	1	12
Monongahela	....	....	....	....	....	....	1	....	4	....	....	....	5
Ohio	4	2	1	3	1	....	2	2	4	4	2	....	25
Osage, Missouri	....	....	....	....	....	....	....	1	....	....	....	....	1
Ouachita, Louisiana	....	....	....	....	....	1	....	....	....	....	....	....	1
Penobscot	....	....	....	....	....	2	....	....	....	....	....	....	2
Potomac	2	....	2	4	3	....	1	....	5	1	6	2	26
Red, Louisiana	....	....	....	....	....	2	....	....	1	....	....	....	3
Roanoke, Virginia	....	....	....	....	1	1	....	....	....	....	....	....	2
Saint Croix	....	....	....	....	....	1	....	....	....	....	....	....	1
Saint Francis, Arkansas	....	....	....	....	1	....	....	....	....	....	....	....	1
Saint John's, Florida	....	....	....	....	1	1	....	....	....	....	....	2	4
Saint Lawrence	1	....	....	....	....	....	....	....	1	....	....	....	2
Skagit, Washington Territory	....	....	....	....	....	....	....	....	....	1	1	....	2
Snokomish, Washington Territory	....	....	....	....	....	1	....	....	....	....	....	....	1
Tennessee	....	....	....	2	....	....	....	1	....	....	....	....	3
Wabash	....	....	....	....	....	....	....	1	....	....	....	....	1
Willamette, Oregon	....	....	1	....	....	....	....	....	....	....	....	1	2
White, Arkansas	1	....	....	....	1	....	....	....	....	....	....	....	2
York, Virginia	....	1	....	2	....	....	....	....	....	....	....	....	3
Total	28	21	21	26	21	23	11	20	29	15	13	13	241

TABLE 50.—*Summary*—RIVERS.

Nature of casualties.	Number of vessels.	Total number of tons.	Laden.	Ballast.	Unknown whether laden or not.	Total loss.	Partial and unknown loss.*	Number of passengers.	Number of crew.	Total on board.	Total number of lives lost.
Founderings	8	685	4	4	.....	5	3	2	34	36	8
Strandings	26	7,225	20	6	.....	5	21	176	454	630	.....
Vessels collided	81	25,838	31	39	11	4	77	1,468	861	2,329	68
Other causes	126	41,231	74	52	.....	39	87	913	2,893	3,306	102
Total	241	74,979	129	101	11	53	188	2,559	3,742	6,301	168

*In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 39.

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TABLE 51.—*Abstract of returns of disasters to American* vessels* AT SEA *or in* FOREIGN WATERS *during the year ending June* 30, 1883, *showing the* NUMBER *and* VALUE *of* VESSELS *and* CARGOES *and amount of* LOSS *to same where known.*

Months.	Total value of vessels.		Number of vessels, value unknown.	Total value of cargoes.		Number of cargoes, value unknown.	Unknown whether laden or not.	Loss to vessels.		Number of vessels totally lost, amount unknown.	Number of vessels damaged, amount unknown.†	Loss to cargoes.		Number of cargoes totally lost, amount unknown.	Number of cargoes not damaged or damage unknown.
	Number.	Amount.		Number.	Amount.			Number.	Amount.			Number.	Amount.		
July	16	$389,000	2	14	$470,500	1	2	16	$142,000	.....	2	5	$63,700	.....	12
August	13	293,500	1	10	376,700	1	1	13	52,710	.....	1	2	48,700	.....	10
September	24	419,750	1	23	796,950	.....	.....	24	159,900	.....	1	12	58,660	.....	11
October	49	942,000	2	39	988,430	5	2	47	227,955	.....	4	22	73,115	.....	24
November	36	1,576,965	1	33	993,260	.....	1	35	215,040	.....	2	20	95,045	.....	14
December	26	605,500	1	19	852,000	3	1	26	114,830	.....	1	11	19,380	1	11
January	48	1,714,550	2	39	1,475,690	.....	2	47	136,025	.....	3	15	32,810	.....	26
February	33	1,521,000	.....	29	1,038,565	.....	.....	32	335,025	.....	1	13	57,300	.....	16
March	39	464,105	1	26	446,785	1	1	37	186,850	.....	3	14	114,210	.....	14
April	23	546,000	1	16	377,445	1	1	20	257,350	.....	4	12	34,620	.....	6
May	28	463,800	2	24	545,200	2	2	27	100,760	.....	3	10	99,155	.....	18
June	11	126,285	1	6	100,700	.....	1	11	81,756	.....	1	4	24,065	.....	3
Total	346	9,062,455	15	278	8,462,225	14	14	335	2,010,201	.....	26	140	720,760	1	165

* In the totals of casualties presented in the following thirteen tables are included, in order to show the whole number of vessels in collision, eight foreign vessels which have collided with American vessels at sea or in foreign waters during the year.

† In this column are included the casualities in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 52.

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TABLE 52.—*Abstract of returns of disasters to American vessels* AT SEA *or in* FOREIGN WATERS *during the year ending June* 30, 1883, *showing the number of* VESSELS TOTALLY LOST, *the number* DAMAGED, *aggregate* TONNAGE *of vessels totally lost, number of* PASSENGERS *and* CREW, *and number of* LIVES LOST.

Months.	Number of disasters resulting in total loss to vessels.	Number of disasters resulting in partial damage to vessels.	Whether total or partial loss unknown.	Number of casualties resulting in no damage to vessels.	Total.	Total tons burden of vessels totally lost.	Total number of crew, including master, &c.	Total number of passengers.	Total number of lives lost.
July	5	11	2	.....	18	3,226	249	5	32
August	2	11	1	.....	14	638	168	1	.....
September	7	17	.....	1	25	4,602	288	6	36
October	10	37	2	2	51	5,345	586	10	45
November	8	27	1	1	37	3,594	483	206	9
December	4	22	1	.....	27	1,449	294	15	1
January	10	37	2	1	50	1,860	643	214	13
February	14	18	.....	1	33	5,660	614	158	23
March	11	26	1	2	40	4,028	391	8	25
April	8	12	1	3	24	4,659	249	64	1
May	6	21	2	1	30	2,359	303	51	1
June	3	8	1	.....	12	699	126	.....	.....
Total	88	247	14	12	361	38,119	4,394	738	186

TABLE 53.—*Abstract of returns of disasters to American vessels* AT SEA *or in* FOREIGN WATERS *during the year ending June* 30, 1883, *showing the number of* VESSELS *and* CARGOES INSURED *and* UNINSURED, *and the* AMOUNT *of* INSURANCE *where known.*

Months.	Number of vessels and cargoes reported to be insured, and the amount of insurance.					Number of vessels and cargoes reported not insured.		Number of vessels and cargoes, whether insured or not, unknown.		Vessels in ballast.
	Vessels.		Cargoes.		Total amount of insurance.	Vessels.	Cargoes.	Vessels.	Cargoes.	
	Number.	Amount.	Number.	Amount.						
July	12	$139,500	5	$264,100	$403,600	4	6	2	6	1
August	8	56,200	3	249,400	305,600	5	7	1	2	2
September	17	166,450	13	232,780	399,230	7	3	1	7	2
October	37	557,100	24	578,130	1,135,230	8	5	6	17	5
November	23	196,800	19	477,815	674,615	13	6	1	9	3
December	19	178,000	9	582,700	760,700	7	5	1	9	4
January	28	383,945	15	460,500	844,445	14	8	8	18	9
February	20	151,975	13	159,545	311,520	9	6	4	10	4
March	30	183,245	14	191,270	374,515	8	1	2	13	12
April	17	192,100	6	272,100	464,200	6	7	1	5	6
May	17	145,665	11	207,500	353,165	11	7	2	10	2
June	9	53,900	2	83,200	137,100	2	3	1	2	5
Total	237	2,404,880	134	3,759,040	6,163,920	94	64	30	108	55

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TABLE 54.—*Abstract of returns of disasters to American vessels* AT SEA *or in* FOREIGN WATERS *during the year ending June* 30, 1883, *distinguishing the* NATURE *of each casualty.*

Nature of casualty.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Foundered	....	....	....	2	3	....	....	2	....	1	1	....	9
Stranded	2	2	6	8	3	2	10	10	7	5	5	5	65
Collided	6	2	....	4	6	4	6	....	4	4	8	2	46
Abandoned	....	....	....	1	1	....	1	1	1	....	....	....	5
Capsized	....	....	2	....	....	....	....	....	....	....	1	....	3
Damage to hull, masts, rigging, &c	5	6	13	25	15	11	25	9	16	5	8	4	142
Damage to machinery	....	1	....	2	1	1	1	....	1	....	2	....	9
Fire	....	1	....	....	2	....	....	....	1	....	....	....	4
Ice	....	....	....	....	....	....	....	....	1	....	1	....	2
Never heard from	2	....	2	2	1	....	1	1	2	....	....	....	11
Sprung a leak	1	1	....	4	2	7	3	6	5	4	3	1	37
Struck by lightning	1	....	....	....	....	....	....	....	....	....	....	....	1
Waterlogged	....	....	....	....	....	....	....	1	....	1	....	....	2
Miscellaneous	....	1	2	3	3	2	3	2	2	4	1	....	23
Unknown	1	....	....	....	....	....	....	1	....	....	....	....	2
Total	18	14	25	51	37	27	50	33	40	24	30	12	361

TABLE 55.—*Abstract of returns of disasters (excluding collisions) to American vessels* AT SEA *or in* FOREIGN WATERS *during the year ending June* 30, 1883, *distinguishing the* CAUSE *of each disaster.*

Class and cause of disaster.	Founderings.	Strandings.	Other causes.	Missing vessels.	Total.
CLASS 1.—*Causes connected with the weather:*					
Calms, currents, and tides	.....	15	.....	.....	15
Darkness, &c	.....	2	2	.....	4
Fog, &c	.....	5	.....	.....	5
Gales, hurricanes, &c	6	28	164	.....	198
Heavy sea, &c	.....	.....	29	.....	29
Lightning	.....	.....	1	.....	1
Total of Class 1	6	50	196	.....	252
CLASS 2.—*Causes connected with vessels, equipments, or stowage:*					
Defective chart	.....	1	.....	.....	1
Defective masts, rigging, &c	.....	.....	3	.....	3
Error in chronometer	.....	1	.....	.....	1
Total of Class 2	.....	2	3	.....	5
CLASS 3.—*Causes connected with navigation and seamanship:*					
Errors of pilots	.....	5	.....	.....	5
Total of Class 3	.....	5	.....	.....	5
CLASS 4.—*Causes connected with machinery or boilers:*					
Damage to machinery	.....	.....	9	.....	9
Total of Class 4	.....	.....	9	.....	9
CLASS 5.—*Other causes:*					
Fire	.....	.....	4	.....	4
Ice	.....	.....	2	.....	2
Sprung a leak	3	.....	11	.....	14
Struck rock, wreck, bridge, &c	.....	2	.....	.....	2
Miscellaneous	.....	4	2	.....	6
Unknown	.....	2	3	11	16
Total of Class 5	3	8	22	11	44
Aggregate	9	65	230	11	315

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TABLE 56.—*Abstract of returns of disasters to American vessels* AT SEA *or in* FOREIGN WATERS *during the year ending June* 30, 1883, *showing the number of vessels* COLLIDED *and distinguishing the* CAUSE *of each disaster.*

Cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Darkness	....	....	....	....	1	....	....	....	....	2	....	....	3
"Fault of other vessel"	....	1	....	....	1	....	1	....	1	1	1	....	6
Fog	4	....	....	....	....	....	....	....	....	....	2	2	8
High, baffling winds	....	....	....	....	2	4	4	....	....	....	2	....	12
Misstayed	....	....	....	....	....	....	....	....	....	....	2	....	2
Negligence	....	1	....	....	....	....	....	....	....	1	....	....	2
Stress of weather	....	....	....	....	....	....	....	....	2	....	....	....	2
Tides, currents, &c	....	....	....	....	2	....	....	....	....	....	....	....	2
Unknown	2	....	....	4	....	....	1	....	1	....	1	....	9
Total	6	2	....	4	6	4	6	....	4	4	8	2	46

TABLE 57.—*Abstract of returns of disasters to American vessels* AT SEA *or in* FOREIGN WATERS *during the year ending June* 30, 1883, *showing the number of vessels and distinguishing their* DESCRIPTION.

Description of vessels.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Barks	5	3	8	13	1	4	8	7	4	3	6	1	63
Barkentines	2	....	....	1	..	1	1	1	1	....	....	....	7
Brigs	....	2	2	8	3	2	4	4	3	2	3	1	34
Brigantines	....	....	1	....	....	1	....	....	1	....	....	....	3
Schooners	6	6	9	16	25	13	26	17	28	12	17	8	183
Ships	4	2	5	8	5	3	5	1	1	4	....	....	38
Sloops	....	....	....	....	....	....	1	....	....	....	....	....	1
Steamers	....	....	....	4	....	2	....	1	1	1	2	....	11
Steamships	1	1	....	1	3	1	4	2	1	2	2	1	19
Unknown	....	....	....	....	....	....	1	....	....	....	....	1	2
Total	18	14	25	51	37	27	50	33	40	24	30	12	361

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TABLE 58.—*Abstract of returns of disasters to American vessels* AT SEA *or in* FOREIGN WATERS *during the year ending June* 30, 1883, *showing the* TONNAGE *and distinguishing the number of those* TOTALLY LOST *and those* PARTIALLY DAMAGED.

Burden of vessels.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	
Not exceeding 50 tons	....	....	....	1	....	....	....	1	....	....	....	3	3	1	1	....	1	1	1	....	....	....	....	....	6	7	13
Over 50 and not exceeding 100 tons	2	2	....	2	2	3	....	....	....	1	1	1	1	5	1	2	2	5	....	1	1	3	....	4	10	29	39
Over 100 and not exceeding 200 tons	....	....	1	1	....	2	3	7	....	8	....	4	2	5	4	2	3	6	....	2	....	5	2	....	15	42	57
Over 200 and not exceeding 300 tons	1	1	....	1	....	1	1	4	2	7	....	4	1	3	1	2	1	6	1	4	3	2	....	1	11	36	47
Over 300 and not exceeding 400 tons	....	2	....	1	....	5	1	8	3	3	1	....	2	4	4	4	1	4	....	3	....	2	1	2	13	38	51
Over 400 and not exceeding 500 tons	....	....	....	....	....	1	....	4	1	....	1	....	1	4	1	2	1	2	1	....	1	4	....	....	7	17	24
Over 500 and not exceeding 600 tons	....	1	1	1	1	1	2	1	....	1	1	3	....	2	....	1	....	1	2	....	....	4	....	1	7	17	24
Over 600 and not exceeding 700 tons	1	2	....	....	2	....	....	1	1	1	....	2	....	4	....	....	....	....	1	1	....	....	....	....	5	11	16
Over 700 and not exceeding 800 tons	....	1	....	1	1	1	....	1	....	....	....	1	....	....	1	1	1	1	....	....	....	1	....	....	3	8	11
Over 800 and not exceeding 900 tons	....	....	....	....	....	1	....	4	....	....	....	....	....	1	....	....	....	....	....	3	....	....	....	....	....	9	9
Over 900 and not exceeding 1,000 tons	....	....	....	....	....	....	1	....	1	1	....	1	....	....	....	1	....	....	....	....	....	....	....	....	2	3	5
Over 1,000 and not exceeding 1,100 tons	....	....	....	....	....	....	....	1	....	....	....	....	....	3	....	1	....	1	1	....	....	....	....	....	1	6	7
Over 1,100 and not exceeding 1,200 tons	....	1	....	....	....	....	1	....	....	....	....	....	....	2	....	1	....	2	....	1	1	1	....	....	2	8	10
Over 1,200 and not exceeding 1,300 tons	....	....	....	....	....	....	1	3	....	....	....	1	....	1	....	....	....	....	1	....	....	....	....	....	2	5	7
Over 1,300 and not exceeding 1,400 tons	....	....	....	1	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	3	3
Over 1,400 tons	1	2	....	2	1	3	....	3	....	7	....	3	....	3	1	2	1	....	....	1	....	1	....	....	4	27	31
Unknown	....	1	....	1	....	....	....	2	....	....	....	....	....	1	....	....	....	....	....	....	....	1	....	1	....	7	7
Total	5	13	2	12	7	18	10	41	8	29	4	23	10	40	14	19	11	29	8	16	6	24	3	9	88	278	361
Aggregate	18		14		25		51		37		27		50		33		40		24		30		12		361		

NOTE.—In the columns of "Partial loss" in this table are included the casualties in which the vessels sustained no damage, for the number of which see appropriate column in Table 52.

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TABLE 59.—*Abstract of returns of disasters to American vessels* AT SEA *or in* FOREIGN WATERS *during the year ending June* 30, 1883, *showing the number of vessels and distinguishing* AGE.

Age.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Not exceeding 3 years	3	....	2	3	4	2	5	3	2	1	3	1	29
Over 3 and not exceeding 7 years	1	3	2	3	4	2	10	4	7	3	6	....	45
Over 7 and not exceeding 10 years	2	....	3	20	12	7	12	10	10	4	7	1	88
Over 10 and not exceeding 14 years	2	3	2	4	5	6	7	2	7	4	4	2	48
Over 14 and not exceeding 20 years	7	4	7	10	6	5	9	9	10	8	2	4	81
Over 20 and not exceeding 25 years	1	1	3	5	3	4	5	1	....	2	2	1	28
Over 25 and not exceeding 30 years	1	....	3	....	1	1	....	2	2	1	3	1	15
Over 30 and not exceeding 35 years	....	2	1	2	1	....	1	1	2	1	1	....	12
Over 35 and not exceeding 40 years	....	....	1	....	....	....	....	....	....	....	....	....	1
Over 40 and not exceeding 45 years	....	....	1	....	....	....	....	....	....	....	....	....	1
Over 45 and not exceeding 50 years	....	....	....	....	....	....	....	....	....	....	....	1	1
Over 50 years	....	....	....	....	....	....	....	....	....	....	....	....	....
Unknown	1	1	....	4	1	....	1	1	....	....	2	1	12
Total	18	14	25	51	37	27	50	33	40	24	30	12	361

TABLE 60.—*Abstract of returns of disasters to American vessels* AT SEA *or in* FOREIGN WATERS *during the year ending June* 30, 1883, *showing the number of vessels and distinguishing their* CARGOES.

Cargoes.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Ballast	1	2	2	5	3	4	9	4	12	6	2	5	55
Coal	2	....	1	4	7	....	3	3	3	1	1	....	25
Cotton, cotton-seed, oil, &c	....	....	....	....	....	1	3	....	2	....	....	....	6
Fertilizers	....	1	....	2	1	2	3	....	1	1	....	....	11
Fish, oysters, &c	1	2	1	....	....	2	3	1	....	....	1	....	11
Fruit, nuts, coffee, &c	....	....	1	4	1	1	1	1	....	....	1	1	11
Grain	1	....	....	1	....	....	....	1	1	....	1	....	5
Hides, furs, &c	1	....	....	....	....	1	....	....	....	....	....	....	2
Ice	2	....	....	....	3	....	....	....	....	....	1	....	6
Iron and iron ore	....	....	....	....	....	1	....	....	....	....	....	....	1
Lime	....	....	....	....	1	....	....	....	....	....	....	....	1
Logwood, &c	....	....	....	1	1	1	....	1	1	....	....	....	5
Lumber, &c	....	1	11	8	10	2	6	7	10	6	5	1	67
Merchandise (general)	5	3	4	3	2	....	7	5	2	3	4	....	38
Petroleum	....	....	1	1	....	....	2	1	....	....	....	....	5
Provisions, &c	....	....	....	....	....	....	2	....	1	....	....	....	3
Railroad iron, &c	....	....	....	2	2	2	....	....	....	....	....	....	6
Salt	....	1	....	2	....	1	1	1	....	....	1	....	7
Sand, plaster, &c	....	....	....	....	....	....	....	....	....	....	....	1	1
Stone, bricks, &c	....	....	....	....	....	1	....	1	....	1	....	....	3
Sugar, molasses, &c	2	1	2	7	1	5	2	3	4	2	7	1	37
Whale oil, &c	1	....	....	....	....	....	....	....	....	....	....	1	2
Wood, &c	....	....	....	3	2	....	2	4	1	1	1	....	14
Miscellaneous	....	2	2	6	2	2	4	....	1	2	3	1	25
Unknown	2	1	....	2	1	1	2	....	1	1	2	1	14
Total	18	14	25	51	37	27	50	33	40	24	30	12	361

TABLE 61.—*Summary*—AT SEA *or in* FOREIGN WATERS.

Nature of casualties.	Number of vessels.	Total number of tons.	Laden.	Ballast.	Unknown whether laden or not.	Total loss.	Partial and unknown loss.*	Number of passengers.	Number of crew.	Total on board.	Total number of lives lost.
Founderings	9	5,699	9	....	.....	9	.....	3	104	107	3
Strandings	65	26,051	45	20	.....	43	22	21	832	853	34
Vessels collided	46	22,698	21	11	14	6	40	60	427	487	.....
Other causes	241	134,830	217	24	.....	30	211	654	3,031	3,685	149
Total	361	189,278	292	55	14	88	273	738	4,394	5,132	186

* In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 52.

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TABLE 62.—GENERAL SUMMARY.

Nature of casualties.	Number of vessels.	Aggregate tonnage.	Laden.	Ballast.	Unknown whether laden or not.	Wrecks involving total loss.	Casualties involving partial and unknown damage.	Number of passengers.	Number of crew.	Total on board.	Number of lives lost.*
Founderings:											
Atlantic and Gulf coasts	35	3,659	24	11	.....	22	13	7	154	161	3
Pacific coast	6	616	4	2		3	3	6	30	36	.....
Great lakes	12	1,604	8	4	.....	7	5	.....	45	45	16
Rivers	8	685	4	4	.....	5	3	2	34	36	3
At sea in foreign waters	9	5,699	9	.....	.....	9	.....	3	104	107	3
Total	70	12,263	49	21	.....	46	24	18	367	385	25
Strandings:											
Atlantic and Gulf coasts	242	61,806	179	63	.....	90	152	685	1,870	2,555	21
Pacific coast	26	6,074	16	10	.....	11	15	48	252	300	10
Great lakes	102	45,039	89	13	.....	26	76	60	903	963	14
Rivers	26	7,225	20	6	.....	5	21	176	454	630	.....
At sea or in foreign waters	65	26,051	45	20	.....	43	22	21	832	853	34
Total	461	146,195	349	112	.....	175	286	990	4,311	5,301	79
Vessels collided:											
Atlantic and Gulf coasts	347	119,581	165	120	62	19	328	5,813	3,141	8,954	16
Pacific coast	32	13,338	10	15	7	.....	32	172	226	398	.....
Great lakes	182	81,368	94	67	21	2	180	152	1,413	1,565	3
Rivers	81	25,838	31	39	11	4	77	1,468	861	2,329	63
At sea or in foreign waters	46	22,698	21	11	14	6	40	60	427	487	.....
Total	688	262,823	321	252	115	31	657	7,665	6,068	13,733	82
Other causes:											
Atlantic and Gulf coasts	177	52,342	128	49	.....	21	156	2,210	1,582	3,792	23
Pacific coast	24	10,793	16	8	.....	7	17	688	301	989	32
Great lakes	172	50,389	113	59	.....	13	159	145	1,362	1,507	27
Rivers	126	41,231	74	52	.....	39	87	913	2,393	3,306	102
At sea or in foreign waters	241	134,830	217	24	.....	30	211	654	3,031	3,685	149
Total	740	289,585	548	192	.....	110	630	4,610	8,669	13,279	333
Grand total	1,959	710,866	1,267	577	115	362	1,597	13,283	19,415	32,698	*519

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RECAPITULATION—(GENERAL SUMMARY).

Nature of casualties.	Number of vessels.	Aggregate tonnage.	Laden.	Ballast.	Unknown whether laden or not.	Wrecks involving total loss.	Casualties involving partial and unknown damage.	Number of passengers.	Number of crew.	Total on board.	Number of lives lost.*
Atlantic and Gulf coasts	801	237,388	496	243	62	152	649	8,715	6,747	15,462	63
Pacific coast	88	30,821	46	35	7	21	67	914	809	1,723	42
Great lakes	468	178,400	304	143	21	48	420	357	3,723	4,080	60
Rivers	241	74,979	129	101	11	53	188	2,559	3,742	6,301	168
At sea or in foreign waters	361	189,278	292	55	14	88	273	738	4,394	5,132	186
Total	1,959	710,866	1,267	577	115	362	1,597	13,283	19,415	32,698	*519

	Atlantic and Gulf coasts.	Pacific coast.	Great lakes.	Rivers.	At sea or in foreign waters.	Aggregate.
Total value vessels involved	$17,065,880	$2,252,200	$7,596,575	$5,154,850	$9,062,455	$41,131,960
Total value cargoes involved	5,131,215	210,065	2,650,645	1,004,605	8,462,225	18,058,755
Aggregate	22,197,095	2,462,265	10,247,220	6,759,455	17,524,680	59,190,715
Total insurance on vessels	3,342,780	426,100	3,278,145	1,553,200	2,404,880	11,005,105
Total insurance on cargoes	2,200,290	9,400	1,522,100	563,460	3,759,040	8,054,290
Aggregate	5,543,070	435,500	4,800,245	2,116,660	6,163,920	19,059,395
Total losses to vessels	2,081,700	815,010	741,727	1,057,745	2,010,201	6,706,383
Total losses to cargoes	933,530	74,070	126,655	425,240	720,760	2,281,155
Aggregate	3,015,230	889,980	868,382	1,482,985	2,730,961	8,987,538
Total tonnage vessels involved	237,388	30,821	178,400	74,979	189,278	710,866
Total tonnage vessels lost	31,500	5,646	11,376	16,527	38,119	103,168

*In addition to the number of lives lost here reported, 187 lives were lost in cases where no other casualty occurred to the vessels, making the total number of lives lost 706.

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TABLE 62.—GENERAL SUMMARY.

Nature of casualties.	Number of vessels.	Aggregate tonnage.	Laden.	Ballast.	Unknown whether laden or not.	Wrecks involving total loss.	Casualties involving partial and unknown damage.	Number of passengers.	Number of crew.	Total on board.	Number of lives lost.*
Founderings:											
Atlantic and Gulf coasts	35	3,659	24	11	.....	22	13	7	154	161	3
Pacific coast	6	616	4	2	.....	3	3	6	30	36	.....
Great lakes	12	1,604	8	4	.....	7	5	.....	45	45	16
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Total	461	146,195	349	112	.....	175	286	990	4,311	5,301	79
Vessels collided:											
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Grand total	1,959	710,866	1,267	577	115	362	1,597	13,283	19,415	32,698	*519

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RECAPITULATION—(GENERAL SUMMARY).

Nature of casualties.	Number of vessels.	Aggregate tonnage.	Laden.	Ballast.	Unknown whether laden or not.	Wrecks involving total loss.	Casualties involving partial and unknown damage.	Number of passengers.	Number of crew.	Total on board.	Number of lives lost.*
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Pacific coast	88	30,821	46	35	7	21	67	914	809	1,723	42
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Rivers	241	74,979	129	101	11	53	188	2,559	3,742	6,301	168
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Total	1,959	710,866	1,267	577	115	362	1,597	13,283	19,415	32,698	*519

	Atlantic and Gulf coasts.	Pacific coast.	Great lakes.	Rivers.	At sea or in foreign waters.	Aggregate.
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Aggregate	22,197,095	2,462,265	10,247,220	6,759,455	17,524,680	59,190,715
Total insurance on vessels	3,342,780	426,100	3,278,145	1,553,200	2,404,880	11,005,105
Total insurance on cargoes	2,200,290	9,400	1,522,100	563,460	3,759,040	8,054,290
Aggregate	5,543,070	435,500	4,800,245	2,116,660	6,163,920	19,059,395
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Total tonnage vessels lost	31,500	5,646	11,376	16,527	38,119	103,168

*In addition to the number of lives lost here reported, 187 lives were lost in cases where no other casualty occurred to the vessels, making the total number of lives lost 706.

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TABLE 63.—*Wrecks and Casualties on and near the Coasts and on the Rivers of the United States, and to American vessels at sea or in foreign waters, involving* LOSS OF LIFE, *during the year ending June* 30, 1883, *in four divisions, viz:* (1) *Founderings;* (2) *Strandings;* (3) *Collisions; and* (4) *Casualties from Other Causes; showing in each case, when known, the* DESCRIPTION *of the* VESSEL *and the* CARGO, *the number of* LIVES LOST, *and the* DATE *and* PLACE *of disaster, &c.*

(1) FOUNDERINGS.

Date of disaster.	Name of vessel.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether resulting in total or partial loss.	Nature of cargo.	No. of lives lost.	Place of disaster.
1882.									
July 31	Tip Top	American scow	124	Battle Island, N. Y.	Oswego, N. Y	Total	Stone	1	Oswego, N. Y., Lake Ontario.
Nov. 2	Cascatelle	American brig	423	Baltimore, Md	Portland, Me	do	Coal	2	Off Smith's Point, Va., Chesapeake Bay.
6	Isis	American steamer	73	Volusia, Fla	Jacksonville, Fla	do	Miscellaneous	3	Saint John's River, Fla.
23	Collingwood	American schooner	258	West Moran Bay	Chicago, Ill	do	Posts and poles	5	Twenty-five miles northeast of Milwaukee, Wis., Lake Michigan.
31	Edna Harwood	do	283	Charleston, S. C	New York City	do	Railroad ties	1	Sixty-five miles southeast of Hatteras, N. C.
1883.									
Feb. 18	C. L. Tayloe	American barkentine.	349	Port Townsend, Wash.	San Pedro, Cal	do	Lumber	2	Off Cape Flattery.
May 16	Job T. Wilson	American sloop	53	Baltimore, Md	Rappahannock River, Va.	Partial	Coal	1	Off Windmill Point, Va., Chesapeake Bay.
20	Wells Burt	American schooner	756	Buffalo, N. Y	Chicago, Ill	Total	do	10	Evanston's Point, Ill., Lake Michigan.

Totals: Vessels, 8; tonnage, 2,319; total losses, 7; partial losses, 1; lives lost, 25.

(2) STRANDINGS.

1882.									
Sept. 5	William S. Farwell	American schooner	146	Cedar Keys, Fla	New York City	Partial	Lumber	4	Tortugas, Fla.
8	Abeona	Norwegian bark	384	Rotterdam, Holland	Corpus Christi, Tex.	Total	Railroad iron	6	Padre Island, Tex.
Oct. 10	Malleville	American bark	924	Shanghai, China	Victoria, British Columbia.	do	Ballast	19	Southwest part of Vancouver's Island.
12	Grace	American steam yacht.	7	Sault Saint Marie, Mich.	Gonlais Bay, Canada	do	do	2	White Fish Bay, Mich., Lake Superior.
Nov. 2	Mary J. Forshay	American sloop	28	Smith's Island, Va.	Norfolk, Va	do	Potatoes	2	Isaac Shoals, Smith's Island, Va.
23	Eclipse	American schooner	158	Manistee, Mich	Chicago, Ill	do	Shingles	1	Nine miles north of Big Point au Sable, Mich., Lake Michigan.

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24	J. O. Moss	....do	119	Frankford, Mich....	....do	...do	...do	1	Three miles north of Grand Point au Sable, Mich., Lake Michigan.
Dec. 1	Henry Folger	....do	326	Port Dalhousie, Ontario.	Brockville, Ontario	...do	Coal	8	Salmon Point Reef, Ontario, Lake Ontario.
1883.									
Jan. 7	Albert Dailey	....do	238	Baltimore, Md	Bridgeport, Conn	...do	....do	1	Smith's Island, Va.
10	Sallie W. Kay	....do	377	....do	Boston, Mass	...do	....do	1	Fenwick's Island, Md.
29	Tacoma	American steamship	2,119	Port Townsend, Wash.	San Francisco, Cal	...do	....do	10	Four miles north of Umpqua Bar, Oregon.
Feb. 18	Ashuelot	United States steamer	786	Amoy, China	Swatow, China	...do	Ballast	11	Near Lammock Island, China.
25	Starlight	American schooner	154	Frontera, Mexico	New York City	...do	Mahogany	1	Off Frontera, Mexico.
Mar. 7	J. W. Sawyer	....do	116	Portland, Me	Saint George's Bank	...do	Fish	3	Ledge near Black Island, Casco Passage, Me.
7	Oracle	American ship	1,550	San Francisco, Cal	Liverpool, England	...do	Grain	1	Herschel Islands, near Cape Horn, South America.
24	Sheet Anchor	American brig	201	....do	Levuka, Fiji	...do	Lumber and merchandise.	2	Samoan Islands, Harbor of Apia.
May 21	Saint Joseph	American barge	165	Bay City, Mich	Detroit, Mich	Partial	Lumber	1	Ten miles above Lexington, Mich., Lake Huron.
21	Mary Ellen Cook	American schooner	175	Ludington, Mich....	Chicago, Ill	...do	....do	1	Near Chicago Breakwater, Ill., Lake Michigan.
June 4	Fannie A. Bailey	... do	258	Windsor, Nova Scotia	Philadelphia, Pa....	Total	Plaster	4	North Bar, Herford Inlet, N. J.

Totals: Vessels, 19; tonnage, 8,231; total losses, 16; partial losses, 3; lives lost, 79.

(3) COLLISIONS.

1882.									
July 4	Sciota	American steamer	117	Wheeling, W. Va	East Liverpool, Ohio	Partial	Ballast	57	Ohio River.
Aug. 6	No name*	Small boat		Milwaukee, Oreg	Pleasure trip	No damage.		1	Milwaukee, Oreg., Willamette River.
Sept. 6	George D. Russell	American schooner	658	Marquette, Mich	Cleveland, Ohio	Total	Iron ore	3	Saint Mary's River.
Nov. 16	Saginaw	American barge	269	New York City		...do	General merchandise.	4	East River, N. Y.
								4	
Dec. 30	Lizzie D. Small	American schooner	185	....do	Petersburg, Va	Partial	Guano	1	Off Squan Beach, N. J.
1883.									
Jan. 19	Mariposa	American brig	298	Perth Amboy, N. J.	Boston, Mass	Total	Coal	6	South of Fisher's Island, Long Island Sound.
30	Grace	American steamer	61	Norfolk, Va	Rappahannock River, Virginia.	Partial	General merchandise.	1	Near Craney Island, Va., Chesapeake Bay.
Mar. 5	Ariel Patterson	American schooner	53	New York City	Sea Bright, N. J.	Total	Ballast	1	Sea Bright, N. J.
8	G. M. Porter	....do	144	Boston, Mass	New York City	Partial	Miscellaneous	1	Off Pollock Rip Light-ship, Mass.
14	Dora Cabler	American steamer	176	Cloverport, Ind	Evansville, Ind	Total	Lumber	1	Ohio River.
15	Jasper	American schooner	19	Crisfield, Md	Potomac River	Partial	Ballast	5	Chiseltine, Potomac River.
Apr. 4	Kit Carson	....do	94	Pawtuxent River, Maryland.	Boston, Mass	Total	Oysters	2	Off Little Egg Harbor, N. J.

Totals: Vessels, 12; tonnage, 2,074; total losses, 6; partial losses, 5; no damage, 1; lives lost, 83.

*Collision with ferry boat Milwaukee.

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TABLE 63.—*Wrecks and Casualties on and near the Coasts and on the Rivers of the United States, &c.*—Continued.

(4) OTHER CAUSES.

Date of disaster.	Name of vessel.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether resulting in total or partial loss.	Nature of cargo.	No. of lives lost.	Place of disaster.	Nature of casualty.
1882.										
July 1	Omar D. Conger ..	Am. str.....	200	Detroit, Mich	Port Huron, Mich.	No damage.	Ballast	1	Lake St. Clair	Fell overboard while drunk.
4	St. John Bolgiano.	Am. str.....	194	North Point Creek, Md.	Baltimore, Md	....do ...	Unknown	1	Baltimore Harbor, Md ..	Jumped, or fell overboard.
7	Irma L. Wheeler..	....do	52	Manistee, Mich ...	.....	....do ...	Ballast	1	Four miles south of Manistee, Mich.. Lake Michigan.	Supposed to have fallen overboard while drawing water.
8	Hilton	....do	166	Port Washington, Wis.	Muskegon, Mich..	....do ...	....do	2	Five miles off Muskegon, Mich., Lake Michigan.	Capsizing of yawl while throwing anchor over.
8	Tarolinta	Am. sch	90	Newport, R. I.....	Boston, Mass.....	....do ...	....do	1	New Bedford Harbor, Mass.	Fell overboard from anchor stock.
10	Marcia C. Day....	Am. ship ...	899	London, Eng.....	New York city ...	....do ...	Unknown	1	At sea	Fell overboard while scrubbing side of vessel.
13	Admiral Blake....	Am. sch	84	Marion, Mass	Whaling cruise ...	....do ...	Sperm oil.....	1	Lat. 30° 43′ N., Long. 50° 41′ W.	Killed by unexpected discharge of bomb gun.
16	John Wilson.....	Am. str	298	New Orleans, La..	Washington, La ..	Total ...	Cotton, cattle, &c.	15	Atchafalaya River, La....	Vessel struck snag and sunk.
17	Wyoming	....do	1034	Fort Benton, Mont	St. Louis, Mo.....	Partial .	Miscellaneous.	1	Atchison, Kans, Missouri River.	Capsizing of yawl.
19	War Hawk	Am. ship ...	1015	San Francisco, Cal	Port Discovery, Wash.	No damage.	Merchandise..	1	At sea	Jumped overboard while drunk.
23	Pilgrim.....	Am. sch	187	Chicago, Ill.	North Bay, Mich .	....do ...	Railroad ties..	1	Lake Michigan	Struck on head by handle of center-board winch.
24	Florida	Am. ship ...	1,415	Philadelphia, Pa..	San Francisco, Cal	...do	Merchandise..	1	At sea	Fell overboard.
25	Silver Wave.....	Am. str.....	168	Dubuque, Iowa ...	Muscatine, Iowa..	.. do	Ballast	1	Near Dubuque, Iowa, Mississippi River.	Do.
25	Galatea	Am. sch	94	San Francisco, Cal	Mendocino, Cal ...	Total ...	Merchandise..	6	At sea	Missing.
26	Fanchon.....	Am. str.....	478	New Orleans, La..	Washington, La ..	Partial..	Miscellaneous	9	Near New Orleans, La., Mississippi River.	Collapse of lower flue.
26	Barney Everleigh	Am. sch	138	Detroit, Mich.....	Buffalo, N. Y.....	No damage.	Ballast	1	Buffalo Harbor, N. Y., Lake Erie.	Fell from wharf while stepping on board vessel.

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	29	Kate Buttironi	Am. str	865	Esgle River, Mich	Marquette, Mich	do	Unknown	1	Seven miles east of Eagle River, Lake Superior.	Fell into hold.
	29	Julia A. Jones	Am. sch	49	Patuxent River, Md.	Baltimore, Md	do	do	1	Saint Leonard's Creek, Md., Chesapeake Bay.	Fell overboard from yawl.
	30	Austria	Am. ship	1,300	Hull, England	San Francisco, Cal	do	Rails	1	Off Cape Horn, South America	Struck by a swinging block.
	—	St. John Smith	Am. steamship.	2,220	Liverpool, England	do	Total	Coal	26	At sea	Missing.
	—	Gatherer	Am. ship	1,509	Antwerp, Belgium	Wilmington, Cal	No damage.	Unknown	1	do	Fell overboard from topsail yard.
Aug.	2	H. Hannah Blanks	Am. str	353	New Orleans, La	Bayou Bartholomew, La.	Partial	Cotton and staves.	1	Mississippi River	Fell overboard.
	2	Wm. E. Bartlett	Am. sch	30	Patuxent River, Md.	Baltimore, Md	No damage.	Unknown	1	Baltimore Harbor, Md	Fell from wharf while stepping on board vessel.
	3	M. H. Clift	Am. str	47	Chattanooga, Tenn	Soddy, Tenn	do	do	1	Chattanooga, Tenn	Fell overboard.
	3	Quickstep	Am. bktne	423	Nanaimo, B. C	La Paz, Mexico	do	Coal	1	Lat. 30° N., long. 121° W.	Knocked overboard while jibing spanker.
	4	Libbie Conger	Am. str	324	Saint Louis, Mo	Saint Paul, Minn	do	Unknown	1	Above Muscatine, Iowa, Mississippi River.	Fell overboard.
	7	Gold Dust	do	876	Vicksburg, Miss	Saint Louis, Mo	Total	Merchandise	7	Hickman, Ky., Mississippi River.	Explosion of boiler.
	7	Walla Walla	Am. steamship.	2,135	Nanaimo, B. C	Portland, Oreg	No damage.	Unknown	1	Portland, Oreg	Fell from gang-plank while drunk.
	8	Saginaw Valley	Am. str	720	Bay City, Mich	Cleveland, Ohio	do	do	1	Cleveland, Ohio, Lake Erie.	Slipped overboard while shifting line.
	8	Madeline	Am. sch	34	San Francisco, Cal.	Point Pedro, Cal	do	Ballast	1	Between Point Pedro and San Rafael, Cal.	Fell overboard (supposed).
	9	Alexander B. Moore.	do	1,099	Chicago, Ill	Buffalo, N. Y	do	Coal	1	Buffalo Harbor, N. Y	Fell from aloft to deck.
	9	Ida	Am. str	589	Baltimore, Md	Choptank River, Md.	do	Unknown	1	Between Seven-Foot Knoll and Oxford, Md.	Fell or jumped overboard.
	16	Ancon	Am. steamship.	1,541	Port Harford, Cal.	Santa Barbara, Cal	do	Merchandise	1	Thirteen miles east of Point Conception, Cal.	Slipped overboard while climbing from main to hurricane deck.
	18	Business	Am. str	986	Milwaukee, Wis	Escanaba, Mich	do	do	1	Escanaba, Mich., Lake Michigan.	Fell into hold.
	18	Wm. D. Hilton	Am. sch	325	Philadelphia, Pa	Providence, R. I	do	Coal	1	At sea	Fell from staging while painting.
	19	Kaater's Kil	Am. str	1,361	Stuyvesant, N. Y	New York City	Partial	Provisions	1	Near Stony Point, Hudson River.	Breaking of walking-beam.
	21	Alvin	do	202	Fort Saint Philip, La.	New Orleans, La	No damage.	Unknown	1	Six miles below New Orleans, La., Mississippi River.	Fell into pitman shaft-hole while drunk.
	22	Tallapoosa	U. S. str	650			do	Ballast	1	Long Island Sound	Knocked senseless and drowned while crew were exercising at lowering boats to pick up an imaginary drowning person.
	22	Will Kyle	Am. str	1,017			do	Unknown	1	Louisville, Ky	Fell or slipped overboard.

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TABLE 63.—*Wrecks and Casualties on and near the Coasts and on the Rivers of the United States, &c.*—Continued.

(4) OTHER CAUSES—Continued.

Date of disaster.	Name of vessel.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether resulting in total or partial lost.	Nature of cargo.	No. of lives lost.	Place of disaster.	Nature of casualty.
1882.										
Aug. 26	Oakes Ames	Am. sch	290	Baltimore, Md	Providence, R. I	No damage.	Coal	1	At sea	Fell overboard.
26	Wanderer	do	11	Erie, Pa	Long Point, Canada.	do	Ballast	1	Twelve miles south of Long Point, Canada, Lake Erie.	Fell overboard (supposed) in a fit.
27	J. A. Travis	do	101	Ellison's Bay, Wis.	Milwaukee, Wis	do	Wood	1	Six miles east of Port Washington, Wis., Lake Michigan.	Knocked overboard while jibing mainsail.
28	Belle Russell	do	220	Jacksonville, Fla	New York City	do	Unknown	1	At sea	Fell from flying jib-boom during a gale.
29	Favorite	Am. str	410	Menominee, Mich.	Chicago, Ill	do	Ballast	1	Off Centerville, Wis., Lake Michigan.	Fell overboard.
29	Minnie Davis	Am. sch	173	In Detroit Harbor, Mich.		do	Lumber	1	Detroit, Mich., Lake Michigan.	Fell overboard (supposed) in a fit.
29	J. I. Case	do	828	Toledo, Ohio	Chicago, Ill	do	Coal	1	Off South Manitou Island, Lake Michigan.	Fell from foremast head to deck.
—	City of Troy	Am. str	1,528	In Troy Harbor, N. Y.		do	Unknown	1	Troy, N. Y.	Fell overboard while washing in the wheel.
—	Centennial	Am. ship	1,287	Liverpool, England.	Hong-Kong, China	do	Coal	2	At sea	One fell from upper mizzen-top yard to deck and one was washed overboard.
Sept. 2	Kate Gillett	Am. sch	264	In Grand Haven Harbor, Mich.		do	Ballast	1	Grand Haven, Mich	Blown overboard while standing on taffrail.
5	City of Freemont	Am. str	706	Mackinaw, Mich	Chicago, Ill	do	Lumber and copper.	1	Lake Michigan	Fell or jumped overboard.
6	Columbia	Am. ship	1,472	New York City	San Francisco, Cal.	do	General	1	At sea	Fell overboard.
7	Mattie	Am. str	102	Bayou Teche, La	Bayou Pigeon, La	do	Ballast	1	Bayou Pigeon, La	Lost from timber raft in tow.
7	Siberia	do	1,618	Chicago, Ill	Buffalo, N. Y	do	Corn	1	Saginaw Bay, Lake Huron.	Washed overboard.
8	Bridgeport	Am. bark	711	New Orleans, La	Boston, Mass	Total	Lumber	12	At sea	Missing.
8	Revere	do	829	San Francisco, Cal.	Port Townsend, Wash.	No damage.	Ballast	1	Lat. 40° 42′ N., long. 128° 15′ W.	Jumped overboard while crazed with drink.
8	Chicago Board of Trade.	Am. sch	424	Green Bay, Wis	Bay City, Mich	do	Unknown	1	Off Rock Island, Green Bay, Wis.	Fell overboard.
8	W. H. Oler	do	693	Boothbay, Me	Philadelphia, Pa	do	Ice	1	Delaware River, Pa	Hanging stage gave way.

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10	Rosetta McNeil...	Am. bark ...	611	Pensacola, Fla	Rio Janeiro, South America.	Total ...	Lumber	12	Gulf of Mexico	Missing.
10	Lightning	Am. str....	48	Baltimore, Md....	Seven-foot Knoll, Md.	No damage.	Unknown.....	1	Mouth of Patapsco River, Md.	Fell overboard.
10	Varnum H. Hill...	Am. brig....	126	Dominica, W. I...	Cruise	... do ...	Sperm oil	1	At sea	Capsizing of a boat while fast to a whale.
13	D. M. Foster.....	British sch..	252	In Oswego Harbor, N. Y.	.....	....do ...	Ballast	1	Oswego, N. Y.....	Fell through hatchway into hold.
14	Felicitous	Am. sch	199	Chicago, Ill.....	North Bay, Wis ..	....do ...	....do	1	Off Two Creeks, Wis....	Fell from aloft to deck.
15	William Slater....	....do	222	New York City...	Boston, Mass	....do ...	Coal	2	Vineyard Haven, Mass..	Capsizing of yawl.
15	Mary E. Webber..	....do	130	Neuvitas, Cuba...	New York City...	....do ...	Lumber.....	1	Off Sandy Hook, N. J....	Knocked overboard by mainsail.
15	Manhattan	Am. steamship.	1,525	Lewes, Del	....do	....do ...	Unknown.....	1	Off Hereford, N. J	Fell overboard while hauling out an awning.
15	Japan	....do	1,239	Buffalo, N. Y	Duluth, Minn. ...	....do ...	Ballast	1	Off Buffalo, N. Y	Fell overboard.
17	Alex. B. Moore ...	Am. sch	1,099	....do	Milwaukee, Wis..	....do ...	Coal	1	Off Sand Beach, Lake Huron.	Fell overboard while securing anchor.
19	Paul Revere	Am. ship ...	1,735	New York City...	Hiogo, Japan	Partial..	Refined petrolium.	1	Indian Ocean	Swept overboard during a gale.
22	Defiance	Am. sch	15	Portland, Me	Wood Island, Me.	No damage.	Ballast	1	At sea	Capsized.
23	Maryland.....	Am. str.....	600	Baltimore, Md	Sparrow's Point, Md.	....do ...	Unknown.....	1	Off Sparrow's Point, Md.	Fell overboard while drawing water.
24	Champlain.....	....do	438	Cross Village, Mich.	Cheboygan, Mich.	....do ...	General merchandise.	1	Saint Ignace, Mich., Lake Huron.	Fell into hold.
24	Josephine Dresden	Am. sch	84	Chicago, Ill.....	Racine, Wis	....do ...	Ballast.....	1	Lake Michigan	Lost overboard.
27	Nellie Husted.....	Am. brig....	341	Hampton Roads, Va.	New York City...	....do ...	Sugar, &c.....	1	Forty-five miles southeast of Cape Henry, Va.	Fell overboard from topsail-yard.
28	Arago	Am. sch	186	San Francisco, Cal.	Fishing.....	....do ...	Ballast	1	Okhotsk Sea, Asia.....	Lost from small boat during a gale.
28	Harriet E. Ford...	....do	50	Fishing Island, Md.	Tangier Sound, Md.	....do ...	Unknown	1	Off Porpoise Point, Chesapeake Bay.	Fell overboard.
30	William Young...	....do	334	Cleveland, Ohio...	Au Sable, Mich...	....do ...	....do	1	Port Huron, Lake Michigan.	Fell into river while boarding vessel.
30	Robert E. Lee.....	Am. str.....	1,479	Vicksburg, Miss..	New Orleans, La..	Total ...	Cotton, &c....	21	Thirty miles below Vicksburg, Mississippi River.	Fire.
—	John Shepard.....	Am. bark...	675	Mobile, Ala.....	Trinidad, Spain...	....do ...	Lumber	11	At sea	Missing.
Oct. 3	Fred. Wilson, No. 2	Am. str.....	302	Pittsburgh, Pa....	Louisville, Ky	Partial..	Ballast	1	Near Vevay, Ind., Ohio River.	Bursting of main steampipe.
4	Carolina	...do	984	Baltimore, Md....	Norfolk, Va.....	No damage.	Unknown	1	Between Point No Point and Windmill Point, Chesapeake Bay.	Walked overboard at night.
4	George D. Sanford, jr.	....do	52	Frankfort, Mich..	Manistee, Mich...	Partial..	Ballast	1	Manistee Harbor, Mich., Lake Michigan.	Fell overboard.
5	Emily Stephens...	Am. sch	69	Bridgeport, Conn.	San Francisco, Cal.	Total ...	Bark	6	Off Point Arena, Cal....	Capsized.
9	Manantico	....do	94	New York City...	Millville, N. J	Partial..	Pig-iron	2	Swash Channel, New York Harbor.	Struck wreck of steamer Nankin and sank.
11	Wm. E. Clowes ...	....do	571	Charleston, S. C...	New York City...	No damage.	Unknown.....	1	Charlestou, S. C.....	Fell from aloft to deck.
12	Robert Murray ...	Am. bark ...	387	Havana, Cuba	....do	Partial..	Sugar.....	1	At sea	Lost overboard in a hurricane.

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TABLE 63.—*Wrecks and Casualties on and near the Coasts and on the Rivers of the United States, &c.*—Continued.

(4) OTHER CAUSES—Continued.

Date of disaster.	Name of vessel.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether resulting in total or partial loss.	Nature of cargo.	No. of lives lost.	Place of disaster.	Nature of casualty.
1882.										
Oct. 12	Jessie	Am. sch	26	Galveston, Tex	Calcasieu, La	Partial	General merchandise.	1	At sea	Knocked overboard while taking in sail.
12	Tiger	Am. str	186	Memphis, Tenn	Osceola, Ark	No damage.	Unknown	1	Near Point Pleasant, Mo.	Fell overboard.
15	Tom Payne	Am. sch	46	Cross Village, Mich	Two Rivers, Wis	do	do	1	Bailey's Harbor, Lake Michigan.	Fell overboard from small boat.
15	Vernon	Am. brig	199	Cedar Keys, Fla	Boston, Mass	Total	Lumber	7	At sea	Missing.
17	S. J. Smith	Am. sch	78	In Providence Harbor, R. I.		No damage.	Unknown	1	Providence, R. I	Fell overboard from jibboom.
17	Nellie May	do	27	East Tawas, Mich	Bay City, Mich	do	Lumber	1	Lake Huron	Fell overboard.
18	J. G. Wall	do	98	San Francisco, Cal.	Port Orford, Oreg	do	Ballast	2	Port Orford, Oreg	Swamping of small boat.
19	Salinas	Am. str	149	do	Gordon's Chute, Cal.	do	do	1	Off Gordon's Chute, Cal.	Capsizing of small boat.
22	Virginia S. Lawson	Am. sch	46	Baltimore, Md		do	Oysters	1	Black Walnut Cove, Chesapeake Bay.	Lost overboard.
23	D. C. Chapman	Am. brig	406	do	Matanzas, Cuba	do	Unknown	1	Abreast of Lazaretto Light, Baltimore Harbor, Md.	Fell overboard.
23	Carrier	Am. str	815	New Orleans, La	Pittsburgh, Pa	do	Sugar, &c	1	Memphis, Tenn	Slipped from wheel, struck guard, and fell overboard.
24	Jennie Lippitt	Am. sch	743	Baltimore, Md	New York City	do	Coal	1	At sea	Washed overboard from bowsprit.
26	De Soto	Am. str	18	In Memphis Harbor, Tenn.		Partial	Ballast	2	Memphis, Tenn., Mississippi Rivers.	Explosion of boiler.
26	Thos. E. Bell	Am. sch	39	Black Walnut Harbor, Md.	Sharp's Island, Md	No damage.	Unknown	1	Off Fisherman's Island, Black Walnut Harbor, Chesapeake Bay.	Knocked overboard by jibing of boom.
28	Rudolph Wetzel	Am. str	23	Racine, Wis		Total	Ballast	3	Three miles east of Oak Creek, Wis., Lake Michigan.	Explosion of boiler.
29	Oceanica	do	1,490	Chicago, Ill	Buffalo, N. Y.	Partial	Grain	1	Off Long Point, Lake Erie.	Shifting of boiler.
29	Wm. Jones	Am. sch	154	do	White River, Mich	No damage.	Bark	1	Off Grand Haven, Mich., Lake Michigan.	Knocked overboard by jibboom.

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	30	Sarah	....do	9	Indianola, Tex	Shell Island, Tex	...do	Ballast	1	Matagorda Bay, Tex	Fell overboard.
	31	Anna Hermine	....do	67	San Francisco, Cal.	Albion, Cal	...do	....do	1	Albion, Cal	Washed from a rock while casting off lines.
	—	Star of the West	Am. bark	1,192	New York City	Breman, Germany.	Total	Refined petroleum.	17	At sea	Missing.
Nov.	3	Union	Am. str	38	In Chicago Harbor, Ill.		No damage.	Ballast	1	Chicago, Ill., Lake Michigan.	Fell overboard while drunk.
	4	Germania	Am. ship	996	Departure Bay, B. C.	San Francisco, Cal.	Partial	Coal	1	At sea	Washed overboard at night.
	6	Samuel H. Tagart	Am. str	310	Locust Point, Md.	Fell's Point, Md	No damage.	Unknown	1	Baltimore Harbor, Md.	Fell overboard.
	9	Tempest	Am. sch	196	Parker's Bay	Chicago, Ill	...do	Railroad ties	1	Off Portage Bay, Lake Michigan.	Lost overboard.
	9	C. Kern	....do	29	Baltimore, Md	Chesapeake Bay	...do	Unknown	1	Between Rock and Stony Creek, Patapsco River.	Fell overboard.
	10	Levonia Perkins	....do	48	Calcasieu, La	Galveston, Tex	Partial	Lumber	1	Off Galveston Bar, Tex.	Capsized.
	11	Goodell	Am. bark	340	Liverpool, England	New York City	No damage.	Unknown	3	At sea	Lost overboard during a gale.
	12	Red Wing	Am. sch	728	Escanaba, Mich	Ashtabula, Ohio	...do	Iron ore	1	Lake Huron	Washed overboard.
	13	Louis Bucki	Am. steamship.	417	Jacksonville, Fla	New York City	...do	Lumber	1	Off Cape May, N. J	Fell overboard while reefing mizzen sail.
	14	City of Tokio	....do	5,080	Yokohama, Japan.	San Francisco, Cal	...do	General merchandise.	1	At sea	Fell overboard from yard arm.
	17	Foaming Sea	Am. sch	97	Norfolk, Va	Havre de Grace, Md.	...do	Unknown	1	Off Sewell's Point, Hampton Roads, Va.	Fell overboard from main boom.
	24	Helvetia	....do	793	Ashtabula, Ohio	Chicago, Ill	...do	Coal	1	Off McGulpin's Point, Straits of Mackinaw.	Fell overboard from main cross-trees.
	24	Pearl	....do	36	Dredging grounds, Md.	Black Walnut Harbor, Md.	...do	Unknown	1	Mouth Black Walnut Cove, Chesapeake Bay.	Fell overboard by parting of line.
	25	Odell	....do	141	Portland, Me	New York City	Partial	Lumber	1	Five miles east of Cape Ann Light, Mass.	Fell overboard from deck load.
	30	John L. Thomas	....do	92	Vivorilla Cay, West Indies.	Baltimore, Md	No damage.	Unknown	1	Off Cape Florida	Fell overboard.
	30	Jessie Martin	....do	42	Milwaukee, Wis.	Grand Haven, Mich.	Partial	Ballast	1	Near Grand Haven, Mich., Lake Michigan.	Capsized.
	30	Reform	Am. str	182	San Quentin, Cal.	Sacramento, Cal	No damage.	....do	1	Sacramento City, Cal	Fell overboard.
	—	Henry S. Williams	Am. sch	223	Jacksonville, Fla.	Washington, D. C.	Total	Lumber	7	At sea	Missing.
Dec.	1	George W. Lochner.	....do	455	Havana, Cuba	Boston, Mass	No damage.	Sugar	1	Between Cape Honda and Jupiter Light, Fla.	Jumped or fell overboard.
	1	Pallie	Am. str	156	Brashear, La	Bayou Vermilion, La.	...do	Unknown	1	Near mouth of Bayou Vermilion, La.	Fell overboard while arranging cargo.
	2	R. G. Peters	....do	386	Benton Harbor, Mich.	Manistee, Mich	Total	Ballast	14	Between Racine and Milwaukee, Wis., Lake Michigan.	Missing.
	2	Silas Brainerd	Am. sch	113	Portland, Conn	New York City	No damage.	Stone	1	New Maromas, Conn., Connecticut River.	Fell overboard while filling water-cask.

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TABLE 63.—*Wrecks and Casualties on and near the Coasts and on the Rivers of the United States, &c.*—Continued.

(4) OTHER CAUSES—Continued.

Date of disaster.	Name of vessel.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether resulting in total or partial loss.	Nature of cargo.	No. of lives lost.	Place of disaster.	Nature of casualty.
1882.										
Dec. 3	L. Virginia	Am. sch	44	Norfolk, Va	Holland Island, Md.	Partial	Ballast	6	One mile northeast of Wolf Trap Bay, Chesapeake Bay.	Capsized.
4	Enterprise	Am. str	51	Durham's Creek, N. C.	Washington, N. C.	Total	Cotton	3	Off Maul's Point, N. C.	Fire.
5	Alexander Gibson	Am. ship	2,194	Liverpool, England	San Francisco, Cal.	No damage.	Coal	1	Off San Francisco, Cal	Fell overboard from aloft.
10	Mystic	Am. sch	83	Gloucester, Mass	Fishing	do	Fish	1	Lat. 42° N., long. 67° W.	Fell overboard while reefing mainsail at night.
13	Willie	do	92	Bellevue Cove, Nova Scotia.	Boston, Mass	do	Piling	1	Boston Harbor, Mass	Capsizing of small boat.
15	John J. Ward	do	296	Charleston, S. C.	Baltimore, Md	do	Unknown	1	Chesapeake Bay, Va	Fell overboard.
18	Harvey Mills	Am. ship	2,186	Queenstown, Ireland.	New York City	Partial	Pig-iron	1	At sea	Lost in a hurricane.
18	Elnorah	Am. sch	145	San Francisco, Cal	Trinidad, West Indies.	No damage.	General merchandise.	1	Off Cape Mendocino, Cal	Lost overboard.
20	Louisiana	Am. ship	2,840	New Orleans, La	New York City	do	Unknown	1	South Pass, La., Mississippi River.	Fell overboard while adjusting a ladder.
26	Ancon	Am. steamship.	1,541	San Francisco, Cal	San Diego, Cal	do	General merchandise.	1	West of Point Pinos Light, Cal.	Jumped overboard while insane.
27	Undaunted	Am. ship	1,764	New York City	Yokohama, Japan	do	Kerosene oil	1	At sea	Fell overboard from fore-rigging.
28	L. H. Hopkins	Am. sch	206	In New York Harbor.		do	Unknown	1	In New York Harbor, N. Y.	Fell overboard.
28	Monarch	Am. str	83	Charleston, S. C.	Cooper River, S. C.	do	Ballast	1	Charleston, S. C.	Caught in machinery.
29	Joseph H. Johnson.	Am. sch	59	Baltimore, Md	Chesapeake Bay	do	Unknown	2	Off Swan Point Bar, Chesapeake Bay.	One fell, the other jumped overboard.
29	Chatham	do	113	Savannah, Ga	Barbadoes, West Indies.	do	Lumber	1	At sea	Fell overboard during a gale.
1883.										
Jan. 5	Saragossa	Am. steamship.	798	Baltimore, Md	New York City	do	Unknown	1	Lat. 39° 30′ N., long. 74° 36′ W.	Lost overboard while heaving lead in a gale.
9	Gen. McClellan	Am. sloop	15	Pool's Island, Md	Baltimore, Md	do	do	1	Patapsco River, Md	Knocked overboard by jibing of boom.

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	9	O. B. Stillman	Am. brig	326	Miragoane, Hayti	Boston, Mass	...do	Logwood	1	Lat. 35° N., long. 74° W.	Knocked overboard by main gaff while securing mainsail.
	10	Mary F. Chisholm	Am. sch	74	Gloucester, Mass	Grand Bank	Partial	Fish	2	Lat. 45° 5′ N., long. 54° 38′ W.	Lost while attending trawls.
	10	Wildwood	Am. ship	1,099	San Francisco, Cal	New York City	No damage.	Unknown	1	At sea	Fell overboard while painting vessel.
	15	H. J. Libby	Am. bark	621	Hamburg, Germany.	Baltimore, Md	Partial	Salt and barrels.	2	...do	Lost overboard.
	16	Josephine	Am. str	73	Seattle, Wash	Skagit River, Wash.	...do	General merchandise.	8	Port Suisun Bay, Wash.	Explosion of boiler.
	16	Arabia	Am. ship	2,081	Liverpool, England.	New York City	No damage.	Unknown	1	At sea	Lost overboard.
	25	Grace L. Fears	Am. sch	89	Gloucester, Mass	Fishing Banks	...do	Ballast	1	...do	Frozen while attending trawls, being unable to reach the vessel on account of squall.
	—	W. F. Joyce	...do	113	Harbor Briton, Newfoundland.	Boston, Mass	Total	Fish	9	...do	Missing.
Feb.	1	Hattie S. Clark	...do	71	Gloucester, Mass	Fishing	No damage.	Ballast	1	...do	Fell overboard.
	7	Transport	Am. str	1,595	Anderdon, Ontario	Grosse Island, Mich.	...do	Cars	1	Off Stony Island, Detroit River.	Do.
	8	Gem	...do	88	Port Madison, Wash.	Union City, Wash.	Total	Miscellaneous.	5	Off Apple Cove, Puget Sound, Wash.	Fire.
	13	Indiana	Am. steamship.	3,102	Philadelphia, Pa	Liverpool, England.	Partial	Grain and general merchandise.	1	At sea	Died from effects of injuries received by heavy sea.
	13	Ohio	Am. str	3,101	Liverpool, England.	Philadelphia, Pa	...do	General merchandise.	1	...do	Washed overboard by heavy sea.
	16	Katie	...do	190	Savannah, Ga	Augusta, Ga	No damage.	...do	1	Savannah River, Ga	Fell overboard.
	17	Alice Carney	Am. sch	23	Mobile, Ala	.....	Partial	Wood and railroad ties.	4	Mobile Bay, Ala	Capsized.
	25	Whip	...do	21	Charleston, S. C	Fishing Banks	Total	Fish	5	Off North Edisto River, S. C.	Unknown.
	—	Annie Lewis	...do	313	Cedar Keys, Fla	Tampico, Mexico	...do	Railroad ties	7	At sea	Missing.
Mar.	1	Hornet No. 2	Am. str	289	Cincinnati, Ohio	Pittsburgh, Pa	No damage.	Barges	1	Near Ravenswood, W. Va., Ohio River.	Fell overboard.
	2	City of Sydney	Am. steamship.	3,017	Sidney, New South Wales.	San Francisco, Cal	...do	General merchandise.	1	At sea	Washed overboard by heavy sea.
	3	Susan H. Ritchie	Am. sch	541	Boston, Mass	New York City	...do	Unknown	1	...do	Lost overboard.
	3	Time	...do	16	Chowan River, N. C.	Norfolk, Va	...do	Wood	1	Chesapeake and Albemarle Canal	Fell overboard.
	4	Yazoo	Am. str	274	New Orleans, La	Bayou Macon, La	Total	Assorted merchandise.	19	Thirty-Five Mile Point, above New Orleans, La., Mississippi River.	Vessel struck sunken log, filled and sunk.
	7	Joseph G. Dean	Am. sch	154	New Bedford, Mass	Baracoa, Cuba	No damage.	Unknown	1	At sea	Fell overboard.
	7	Niagara	Am. steamship.	2,265	New York City	Havana, Cuba	...do	...do	1	...do	Lost overboard.

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TABLE 63.—*Wrecks and Casualties on and near the Coasts and on the Rivers of the United States, &c.*—Continued.

(4) OTHER CAUSES—Continued.

Date of disaster.	Name of vessel.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether resulting in total or partial loss.	Nature of cargo.	No. of lives lost.	Place of disaster.	Nature of casualty.
1883.										
Mar. 7	Caravan	Am. ship	1,395	London, England		No damage.	Petroleum	1	At sea	Washed overboard by heavy sea at night.
7	Sonoma	Am. bark	1,063	Boston, Mass	San Francisco, Cal.	Partial	General merchandise.	1	do	Washed overboard by heavy sea.
9	No name	Am. scow		Craney Island, Va.	Norfolk, Va.	No damage.	Ballast	1	Off Craney Island, Hampton Roads, Va.	Fell overboard (supposed).
10	Florence	Am. sch	23	Patuxent River, Md.	Baltimore, Md	do	Unknown	2	Mouth of Patuxent River, Md.	Small boat filled and sunk while men were going from shore to vessel.
10	John Baizley	Am. bktne	617	Matanzas, Cuba	New York City	do	do	2	Off Sandy Hook Light-Ship.	Fell overboard while endeavoring to get a hawser to tug.
11	Titan	Am. ship	1,229	New York City	Portland, Oreg.	do	General	1	At sea	Washed overboard.
11	Orie M. Remington	Am. sch	139	Baracoa, West Indies.	New York City	do	Fruit, &c	1	do	Fell overboard.
15	Harbor Master	do	8	Turtle Bayou, Tex.	Galveston, Tex	do	Wood	1	Galveston Bay, Tex	Knocked overboard by jibing of mainsail.
16	Martha Innis	do	258	Boston, Mass	New York City	do	Ballast	1	Nantucket Shoals, Mass	Lost overboard.
17	Anna D	do	68	Gloucester, Mass	Saint George's Bank.	do	do	1	Saint George's Bank	Washed overboard by heavy sea.
18	Newsboy	Am. bark	589	Newcastle, New South Wales.	San Francisco, Cal.	do	Coal	1	At sea	Washed overboard in a hurricane.
19	Malay	Am. bktne	743	Newcastle, Australia.	Honolulu, Hawaii	Partial	do	2	Lat. 33° S., long. 178° E	Do.
20	George W. Stetson	Am. sch	74	Gloucester, Mass	Fishing	No damage.	Ballast	2	Western banks	Swamping of dory.
25	Warren Gates	do	73	New York City	Providence, R. I	Partial	Steel wire	1	Off Narragansett Pier, R. I.	Capsized.
26	Clara E. M	do	21	Cedar Keys, Fla	Bay Port, Fla	No damage.	Unknown	1	At sea	Knocked overboard by jibing of mainboom.
26	Shirley	Am. ship	1,049	Tacoma, Wash	San Francisco, Cal.	do	Lumber and piles.	1	Lat. 39° 25′ N., long. 126° 20′ W.	Lost overboard while reefing sails.
27	Nellie T. Morse	Am. sch	461	Pensacola, Fla	Noank, Conn	Partial	Lumber	1	Off Florida coast	Washed overboard.
27	Tuscarora	do	9	Alexandria, Va		No damage.	Ballast	1	Potomac River	Fell overboard.

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	31	Polar Star	Am. str	353	Obion River, Tenn	Saint Louis, Mo	Total	do	6	Belmont, Mo., Mississippi River.	Explosion of boiler.
	—	Sarah E. Allen	Am. sch	105	Philadelphia, Pa	Baracoa, Cuba	do	do	6	At sea	Missing.
	—	Flying Mist	do	57	San Francisco, Cal.	Fishing	do	Merchandise	12	do	Do.
Apr.	4	Laurens	Am. ship	809	New York City	Hamburg, Germany.	Partial	Oil	1	Lat. 40° 30′ N., long. 51° 36′ W.	Knocked down by heavy sea, killed by striking head against vessel.
	4	R. A. Crittenden	Am. sch	86	Gloucester, Mass	Fishing Banks	No damage.	Fish	1	Western banks	Sinking of dory.
	9	Isaac W. Norris	do	22	Dredging in Delaware Bay.		do	Oysters	1	Delaware Bay	Knocked overboard by crank pulling out of hands while winding dredges.
	10	Nettie L. Tice	Am. str	46	In New York Harbor, N. Y.		do	Unknown	1	New York Harbor, N.Y.	Fell overboard.
	11	George W. Wylly	do	162	Columbus, Ga	Apalachicola, Fla.	Total	General merchandise.	13	Fort Gaines, Ga., Chattahoochee River.	Steamer struck pier and sunk.
	13	Caroline Medan	Am. sch	73	San Francisco, Cal.	Albion River, Cal	No damage.	Ballast	1	Off Albion River, Cal	Capsized.
	13	Western Texas	Am. steamship.	1,211	Fernandina, Fla	Port Royal, S. C	do	Unknown	1	At sea	Fell overboard.
	17	Two Brothers	Am. sch	56	San Francisco, Cal.	Salt Point, Cal	Total	do	4	Near Bodega Head, Cal.	Capsized.
	17	Joseph H. Johnson.	do	59	Baltimore, Md	James River, Va	No damage.	Ballast	1	Off Wolf Trap Shoal, Chesapeake Bay.	Knocked overboard by jibboom.
	20	E. F. Bichard	do	37	San Francisco, Cal.	Martinez, Cal	do	do	1	Martinez, Cal	Do.
	22	Lucy	do	12	Portsmouth, N. H.	Gosport, N. H	do	do	1	Portsmouth Harbor, N. H.	Jibing of mainboom.
	24	Don Jacinta	Am. brig	490	Zangebar, Africa	New York City	do	Unknown	1	At sea	Fell overboard from topsail yard.
	29	John McGinnis	Am. sch	131	James River, Va	Philadelphia, Pa	do	Lumber	1	Off Patuxent River, Md., Chesapeake Bay.	Knocked overboard by mainboom while drawing water.
	29	Charles A. Boyd	do	25	Elkton, Md	Georgetown, D. C.	do	Unknown	1	Elk River, Md	Fell overboard while drawing water.
	30	Germania	Am. bark	996	San Francisco, Cal.	Port Townsend, Wash.	do	Ballast	1	Near Tatoosh Island, Wash. Ter.	Fell overboard from jibboom.
	30	J. F. Tracy	Am. sch	139	Grand Haven, Mich	Chicago, Ill	do	Lumber	1	Off Grosse Point, Lake Michigan.	Fell overboard while stepping from deckload to rail.
May	2	L. A. Schultz	Am. str	31	Milwaukee, Wis	Fishing Grounds	do	Fish	1	Off Milwaukee Light, Wis.	Thrown overboard by heavy roll of vessel.
	2	Quaker City	Am. sch	510	Trinidad, Cuba	Boston, Mass	Partial	Sugar	1	At sea	Lost overboard in a gale.
	3	City of Toledo	do	245	Chicago, Ill	Manistee, Mich	No damage.	Ballast	1	Six miles north of Big Point au Sable, Lake Michigan.	Fell overboard while taking in sail.
	3	George L. Fessenden.	do	414	Baltimore, Md	Charleston, S. C	do	Brimstone	1	Ashley River, S. C	Fell overboard from spanker-boom.
	6	Tilda	Am. str	30	Memphis, Tenn	Obion River, Tenn	do	Ballast	1	Mississippi River	Fell overboard.
	8	Shellmound	do	100	In Chattanooga Harbor, Tenn.		do	Unknown	1	Chattanooga, Tenn., Tennessee River.	Fell overboard while reaching over guard for hat.

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TABLE 63.—*Wrecks and Casualties on and near the Coasts and on the Rivers of the United States, &c.*—Continued.

(4) OTHER CAUSES—Continued.

Date of disaster.	Name of vessel.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether resulting in total or partial loss.	Nature of cargo.	No. of lives lost.	Place of disaster.	Nature of casualty.
1883.										
May 10	C. W. Dexter	Am. sch	92	Boston, Mass	Calais, Me	No damage.	Ballast	1	Calais, Me., Saint Croix River.	Fell from aloft to deck while furling topsail.
11	Ann J. Laughton	Am. str	51	Wilmington, Del.	Christiana Creek, Del.	Partial	do	1	Mouth of Christiana Creek, Del.	Rupture in tube-sheet of boiler.
12	City of Washington.	do	270	Washington, D. C.	Alexandria, Va	No damage.	do	1	Potomac River	Jumped overboard; supposed insane.
13	William Treak	Am. barge	390	Bay City, Mich	Detroit, Mich	do	do	1	Detroit, Mich	Fell from cross-trees.
18	Granite State	Am. str	1,197	New York City	Hartford, Conn	Total	General	4	Goodspeed's Landing, Conn., Connecticut River.	Fire.
18	Clara M. Goodrich.	Am. brig	393	Cuba, West Indies.		No damage.	do	1	At sea	Unknown.
19	J. C. Warner	Am. str		In Chattanooga Harbor, Tenn.		do	Unknown	1	Chattanooga, Tenn	Stumbled and fell overboard.
21	Jenny Lind	Am. sch	111	Muskegon, Mich	Chicago, Ill	Total	Slabs	4	Chicago Harbor, Ill	Capsized in a gale.
21	Petrel	do	151	Charlevoix, Mich	Milwaukee, Wis	Partial	Wood	3	Milwaukee Bay, Wis., Lake Michigan.	Capsizing of yawl.
25	Pilot	Am. str	192	Petaluma, Cal	San Francisco, Cal.	Total	General merchandise.	9	Petaluma Creek, Cal	Explosion of boiler.
25	Amos	do	108	Pittsburgh, Pa		do	Ballast	1	Pittsburgh, Pa	Vessel struck pier and sunk.
28	John A. Paige	do	26	Duluth, Minn	Burlington Bay, Minn.	No damage.	Unknown	1	Lake Superior	Fell overboard while drunk.
30	Hattie S. Collins	Am. sch	123	Fall River, Mass	New York City	do	do	1	Long Island Sound	Fell overboard while reefing sail.
June 9	Lizzie B. Morse	do	333	Bath, Me	Morgan City, La	do	do	1	Saint George's Bank	Fell overboard.
13	City of Madison	Am. str	964	Louisville, Ky	Cincinnati, Ohio	do	do	1	Louisville, Ky	Fell overboard while drunk.
16	Ellen Rizpah	Am. sch	67	Watland's Island, West Indies.	Whaling cruise	do	Oil	5	At sea	Small boat drawn under water while fast to a whale.
19	Schuylkill	do	472	Buffalo, N. Y	Chicago, Ill	do	Unknown	1	Abreast of Grosse Point, Lake Michigan.	Killed by the breaking of winch.
22	Dolphin	Am. str	156	Saint Louis, Mo	Glenwood, Mississippi River.	do	Ballast	1	Saint Louis, Mo., Mississippi River.	Fell overboard while placing a fender in position.

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22	Kittie Stevens	Am. sch	131	San Francisco, Cal.	Rockport, Cal	do	do	1	At sea	Fell overboard.
24	Matthew M. Murray.	do	75	Gloucester, Mass.	Grand Bank	do	do	2	Grand Bank	Capsizing of dory while attending trawls.
28	John Navagh	Am. str	10	Oswego, N. Y		do	do	1	Lake Ontario	Tripped and fell overboard while walking quarter-deck.

Totals: Vessels, 232; tonnage, 119,261; total losses, 29; partial losses, 82; no damage, 171; lives lost, 519.

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TABLE 64.—*Summary of Wrecks and Casualties on or near the Coasts and on the Rivers of the United States and at Sea and in Foreign Waters, during the year ending June 30, 1883, involving loss of life.*

Nature of casualties.	Number of vessels.	Tonnage.	Total loss.	Partial loss.	No damage to vessel.	Number of lives lost.
Founderings	8	2,319	7	1	.....	25
Strandings	19	8,231	16	3	.....	79
Vessels collided	12	2,074	6	5	1	88
Other causes	232	119,261	29	32	171	519
Total	271	131,885	58	41	172	706

NOTE.—In this table are included 187 lives lost in cases where no damage was sustained by the vessel or cargo meeting with such casualty; for example, seamen lost overboard in gales, falling from mast and yards, knocked overboard by jib, drowned by upsetting of small boats, &c. Shown in division (4)—Casualties from other causes, Table 63.

TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded during the last ten years.*

ATLANTIC AND GULF COASTS.*

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Absecom Beach, N. J	....	3	2	....	....	....	5	....	....	7	17
Alden Rock, Portland, Me	....	....	1	....	1	....	....	....	....	....	2
Allen Island, Penobscot Bay, Me	....	1	....	....	....	....	....	....	....	....	1
Alligator Point, west coast of Florida	....	....	....	....	....	....	....	....	....	1	1
Amagansett, Long Island, N. Y	....	....	....	....	....	2	....	....	....	....	2
Amazeen Island, N. H	....	1	....	....	....	....	....	....	....	....	1
Anastacia Island, Fla	1	1	....	....	....	....	....	....	1	....	3
Anchorage Island, Little Egg Harbor, N. J	....	....	....	....	....	....	2	1	....	1	4
Annisquam Light (¼ mile east of), Mass	....	....	....	....	1	....	....	....	....	....	1
Aransas Pass, Tex	1	....	1	1	....	1	....	1	4	1	10
Asbury Beach, N. J	....	....	....	....	1	....	....	....	....	....	1
Ash Island, Muscle Ridge Channel, Me	....	....	....	....	1	....	....	....	....	....	1
Ash Island Point, Me	....	....	....	....	....	....	1	....	....	....	1
Ash Point, Lark Ledges, Me	....	....	....	....	....	....	1	....	....	....	1
Ashley River (mouth of), S. C	....	....	....	....	....	....	....	....	2	....	2
Assateague Island, Va	....	....	1	....	2	....	....	....	3	1	7
Assawoman Inlet, Va	1	....	....	....	....	....	....	....	1	....	2
Atlantic City, N. J	....	....	....	1	....	1	....	4	....	1	7
Atlanticville, N. J	....	....	....	....	....	1	....	....	....	....	1
Avery's Ledge, approaching Rockport, Mass	1	....	....	1	....	....	....	2	....	1	5
Back River Shoals, Chesapeake Bay	....	....	....	....	1	....	3	....	....	....	4
Badger's Island, Portsmouth Harbor, N. H	....	....	....	....	....	....	....	2	1	....	3
Baker's Island Bar, Mount Desert, Me	....	....	2	....	....	1	....	....	2	....	5
Baker's Island Shoals, Mass	....	....	....	....	....	....	1	....	....	....	1
Bald Rock, Frenchman's Bay, Me	....	....	....	....	....	....	....	1	....	....	1
Bang's Island, Me	....	....	1	....	....	....	....	....	....	....	1
Bantam Ledge, Penobscot Bay, Me	....	....	....	....	1	2	....	1	....	....	4
Barrancas, Fla	....	....	....	....	....	....	....	1	....	....	1
Barnegat, N. J	3	2	3	2	1	3	2	5	1	3	25
Bar Harbor, Mount Desert, Me	....	....	....	1	....	....	....	....	....	....	1
Barren Island, N. Y	....	....	....	....	....	....	....	1	....	....	1
Barren Inlet, N. C	....	....	....	....	....	....	....	....	....	1	1
Barrett's Point, N. Y	....	....	1	....	....	....	....	....	....	....	1
Barter's Island, Southeast Bay, Me	....	1	....	....	....	....	....	....	....	....	1
Bartlett's Reef, Conn	1	....	....	....	2	2	....	....	....	1	6
Bass Harbor Bar, Me	....	....	....	....	....	....	....	....	1	....	1
Bass Island, Cape Porpoise, Me	....	....	2	....	....	....	....	....	....	....	2
Bass Rip (off Sankaty Head), Mass	....	....	....	....	....	....	....	1	1	....	2
Bass River Breakwater, Cape Cod, Mass	....	....	....	1	....	....	....	....	....	....	1
Bating Hollow Beach, Long Island, N. Y	....	....	....	1	....	....	....	....	....	....	1
Bayou La Fourche, La	....	....	....	....	....	1	....	....	....	....	1

*In a few instances the number of stranded vessels in this table do not agree with those reported in the annual report of the previous year, having been increased by wreck reports received since the publication of the last report.

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Bayou Reef, South Pass, La	....	1	....	....	....	....	....	....	....	....	1
Bay View, Cape Ann, Mass	....	1	....	....	....	....	....	1	....	....	2
Beach Haven, N. J	....	....	1	....	....	....	....	....	....	1	2
Beach Island, Penobscot Bay, Me	1	....	....	....	....	....	....	....	....	....	1
Beach Island Ledge (near Fletcher's Neck), Me	....	....	....	....	....	....	....	....	....	1	1
Beacon Ledge, Portsmouth, N. H	....	....	....	....	2	....	....	....	....	....	2
Bear Island, Me	....	....	....	....	....	....	1	....	....	....	1
Bearse's Shoal, Cape Cod, Mass	1	....	....	....	....	....	....	....	....	....	1
Beaufort, N. C	....	2	1	1	....	....	4	....	2	....	10
Beaufort, S. C	1	....	....	....	1	....	....	....	....	....	2
Beaver-Tail Point, R. I	1	1	1	1	....	....	....	....	1	....	5
Bedloe's Island Reef, New York Bay	....	....	....	....	....	1	1	....	....	....	2
Bedloe's Island (rock 1 mile west of), New York Bay	....	....	....	....	....	....	....	1	....	....	1
Beermore Ledge, Cape Ann, Mass	....	....	....	1	....	....	....	....	....	....	1
Bemo Ledges, Cape Ann, Mass	....	....	....	....	....	....	....	....	1	....	1
Ben Davis Point (shoals near), Delaware Bay, N. J	....	....	....	....	....	....	....	....	1	....	1
Berkley Flats, Norfolk, Va	....	....	....	....	....	....	4	....	....	....	4
Big Dauphin Island, Mississippi Sound	....	....	....	....	....	....	....	1	....	....	1
Billingsgate Shoal, Cape Cod Bay, Mass	....	....	....	....	....	2	....	....	....	....	2
Birch Point, Sheepscot River, Me	....	....	....	....	....	1	....	....	....	....	1
Birch Point, Weskeag River, Me	....	....	1	....	....	....	....	....	....	....	1
Bird Island, Galveston Bar, Tex	....	....	....	....	....	1	....	....	....	....	1
Biscayne Bay, Fla	....	....	....	....	....	....	....	1	....	....	1
Bishop and Clerk's Shoal, Nantucket Sound, Mass	....	1	....	2	....	1	....	....	....	....	4
Bishop Rock, Narragansett Bay, R. I	....	....	....	....	....	....	....	1	....	....	1
Black Head (off), Me	....	....	....	....	1	....	....	....	....	....	1
Black Island, Me	....	1	....	....	....	....	....	....	....	....	1
Black Island (Blue Hill Bay entrance), Me	....	....	....	....	....	....	....	....	....	1	1
Black Island (ledge near), Casco Passage, Me	....	....	....	....	....	....	....	....	....	1	1
Blackbeard Island, Ga	....	....	....	....	....	....	....	....	1	....	1
Black Ledge, New London, Conn	....	....	1	1	....	....	1	....	....	....	3
Black Rock Channel, Boston Harbor, Mass	....	....	....	....	....	....	....	....	1	....	1
Black Rock, New London, Conn	....	....	2	2	....	....	....	....	....	1	5
Black Rock, Newburyport, Mass	....	....	....	....	....	1	....	....	....	....	1
Black Rock, Rye Beach, N. H	....	....	....	....	....	....	1	....	....	....	1
Black Rock, West Quoddy Bay, Me	....	....	....	....	....	....	....	1	....	....	1
Black Rocks (York River), Me	....	....	....	....	....	....	....	....	1	....	1
Blackwell's Island, N. Y	1	....	....	....	1	....	1	....	3	1	7
Block Island, R. I	....	4	3	1	4	....	....	1	6	7	26
Block Island (Grove Point), R. I	....	....	....	....	....	....	1	1	....	....	2
Block Island Breakwater, R. I	....	....	....	....	....	....	1	....	1	....	2
Block Island (northeast end of), R. I	....	....	....	....	....	1	....	....	....	....	1
Block Island (northwest shore of), R. I	....	....	....	....	....	1	....	....	....	1	2
Block Island (southeast point of), R. I	....	....	....	....	1	....	....	....	....	....	1
Block Island (southwest shore of), R. I	....	....	....	2	....	2	....	....	....	2	6
Block Island (west side), R. I	....	....	....	....	....	4	....	....	....	1	5
Block Island (Black Rock), R. I	....	....	....	....	....	....	....	....	1	....	1
Block Island (Sandy Point), R. I	....	....	....	....	....	....	....	....	1	....	1
Blue Rock, R. I	....	....	....	....	....	1	....	....	....	....	1
Bluff Island, Saco Bay, Me	....	....	1	....	....	....	....	....	....	....	1
Bodkin Bar, Chesapeake Bay, Md	1	....	....	1	....	....	....	1	....	....	3
Body's Island, N. C	1	....	....	....	....	....	....	....	....	....	1
Bogue Inlet, N. C	....	....	....	1	....	....	....	....	....	....	1
Bogue Island, N. C	....	....	....	1	....	....	....	....	....	....	1
Boisbubert Island, Me	....	1	....	....	....	....	....	....	....	....	1
Bolivar Beach, Tex	....	....	1	....	....	....	....	1	....	....	2
Bombay Hook, Delaware Bay	....	....	....	1	1	....	....	....	....	....	2
Bonnet Point, Narragansett Bay, R. I	....	....	....	....	....	....	....	2	1	....	3
Boon Island, Me	1	....	....	....	....	....	1	....	....	....	2
Boon Island Ledge, Me	....	....	....	....	....	....	3	....	....	....	3
Booth Bay, Me	1	1	....	....	1	....	....	....	....	3	6
Boston Bay, Mass	....	....	....	....	....	....	1	....	1	....	2
Bowdoinham Bar, Me	....	....	....	....	....	1	....	1	....	....	2
Bower's Beach, Delaware Bay, Del	....	....	....	....	1	....	....	....	....	....	1
Boyd Shoal, Delaware Bay	....	....	....	....	....	....	....	....	....	1	1
Brace's Cove, Cape Ann, Mass	....	....	....	....	1	....	2	....	....	....	3
Brandywine Shoal, Delaware Bay	2	3	1	1	....	2	2	....	....	2	13
Brantford Reef, Long Island Sound	....	....	....	1	1	....	....	....	1	....	3
Brant Island, Pamlico Sound, N. C	....	....	1	....	....	....	....	....	2	....	3
Brant Point, Cape Cod, Mass	....	....	....	....	....	1	....	....	....	....	1
Brazos Bar, Tex	....	....	1	....	1	3	....	....	....	....	5
Brazos de Santiago, Tex	....	4	....	....	....	1	....	2	2	....	9
Brazos River and San Luis Pass (between), Tex	....	....	....	....	....	....	....	....	....	1	1
Breaking Ledge, Me	....	1	....	....	....	....	....	....	....	....	1

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Brenton's Reef, R. I	1	....	....	1	....	1	2	....	....	....	5
Brewster Islands, Boston Harbor, Mass	....	....	....	....	....	3	....	....	....	....	3
Bridgehampton Beach, Long Island, N. Y	....	....	1	....	....	....	....	1	....	....	2
Bridgeport, Conn	....	....	....	....	....	....	....	....	1	1	2
Brigadier Island, Penobscot Bay, Me	....	....	....	....	1	....	....	....	....	....	1
Brigantine Beach, N. J	6	1	2	1	1	3	1	4	2	1	22
Brimstone Point, N. J	....	....	....	....	1	....	....	....	....	....	1
Broad Cove Rock, Casco Bay, Me	....	....	....	....	....	....	1	....	....	....	1
Broadkill River (mouth of), Del	....	....	....	....	....	1	....	....	....	....	1
Browney Island Ledge (Fisherman's Island Passage), Me.	....	....	1	....	....	....	1	....	1	....	3
Brown's Bank, or Brown's Island, Mass	....	....	....	....	....	....	....	1	3	....	4
Brown's Cove, Fox Island Thoroughfare, Me	....	....	....	....	....	....	....	1	....	....	1
Brown's Cove, North Haven Island, Me	....	1	....	....	....	2	1	....	....	....	4
Brown's Ledges, Penobscot Bay, Me	1	....	....	....	....	....	....	....	....	....	1
Bull Rock, Boston Bay, Mass	....	....	....	....	1	....	....	....	....	....	1
Bull Rock, Carver Harbor, Me	....	....	....	....	....	1	....	....	....	....	1
Bull's Island Shoal, S. C	....	....	....	....	....	1	....	....	....	....	1
Burnt Island, Seal Harbor, Me	....	....	....	....	....	....	....	1	....	....	1
Button Moulds, The (off Cape Small Point,) Me	....	....	....	....	....	....	....	1	....	....	1
Caffey's Inlet, N. C	....	....	....	....	....	....	....	....	....	2	2
Cahoon's Hollow, Cape Cod, Mass	....	....	....	....	....	....	....	1	....	....	1
Calcasieu Bar, La	....	....	....	....	....	1	....	....	1	....	2
Calf Island, Boston Harbor, Mass	....	....	....	2	....	....	....	....	....	....	2
Calf Island, or The Calves, Long Island Sound, Conn	....	....	....	....	....	....	....	....	....	1	1
Cape Ann, Mass	....	....	....	1	1	....	....	....	....	....	2
Cape Arundel, Me	....	1	....	....	....	....	....	....	....	....	1
Cape Canaveral (15 miles south of), Fla	....	....	....	....	....	1	....	....	....	....	1
Cape Canaveral (25 miles north of), Fla	....	....	....	....	....	....	1	....	....	....	1
Cape Charles, Va	1	....	....	....	....	1	1	....	....	....	3
Cape Cod, Mass	....	....	....	1	....	....	....	....	....	....	1
Cape Elizabeth, Me	1	1	2	1	....	....	1	....	....	1	7
Cape Fear, N. C	1	....	....	....	....	....	1	....	....	....	2
Cape Fear River (mouth of), N. C	2	2	1	1	1	....	2	1	9	2	21
Cape Florida light-house	....	....	....	1	....	....	....	....	....	....	1
Cape Hatteras, N. C	....	1	3	....	....	1	2	1	....	1	9
Cape Henlopen, Del	5	1	5	5	....	1	3	3	2	3	28
Cape Henlopen (5 miles south of), Del	....	....	....	1	....	....	....	....	....	....	1
Cape Henlopen (7 miles south of), Del	....	....	....	....	1	....	....	....	....	....	1
Cape Henry, Va	....	3	1	6	2	2	2	5	1	....	22
Cape Island, Me	....	....	....	....	....	....	1	....	....	....	1
Cape Lookout, N. C	1	2	1	....	1	2	1	1	....	....	9
Cape Lookout Shoals, N. C	....	....	....	....	....	....	....	1	1	....	2
Cape May, N. J	1	2	1	1	....	2	2	3	1	....	13
Cape Poge, Mass	2	....	1	1	....	2	....	1	....	2	9
Cape Porpoise, Me	....	1	....	....	....	....	1	1	....	....	3
Cape Romain, S. C	....	....	1	....	....	....	....	1	1	....	3
Cape Romano, Fla	....	....	....	....	....	1	....	....	....	....	1
Cape Rosier, Eggemoggin Reach, Me	....	....	....	....	....	....	....	....	1	....	1
Cape San Blas, Fla	....	....	1	....	1	....	....	....	....	1	3
Cape Small Point, Me	1	....	....	....	....	....	1	....	1	....	3
Captain's Island, Long Island Sound	....	....	....	....	1	....	....	....	....	....	1
Caroline Shoal, N. C	1	....	....	....	....	....	....	....	....	....	1
Carr's Rock Ledge, Me	....	....	....	....	....	....	....	....	1	....	1
Castle Hill (rocks off), R. I	....	....	....	1	....	....	....	1	....	....	2
Cedar Hammock, N. C	....	....	....	3	....	....	....	....	....	....	3
Cedar Island, Va	1	....	1	....	....	....	....	....	....	4	6
Cedar Keys, Fla	....	....	....	....	1	....	....	....	....	....	1
Cedar Point, Chesapeake Bay, Md	....	....	....	....	....	2	....	....	....	....	2
Cedar Tree Neck, Vineyard Sound, Mass	....	1	....	....	....	....	....	1	....	....	2
Chandeleur Island, La	....	1	....	....	....	....	1	....	....	....	2
Chandeleur Island light (4 miles southeast of), La	....	....	1	....	....	....	....	....	....	....	1
Chandeleur Island light (14 miles southwest of), La	....	....	....	1	....	....	....	....	....	....	1
Channel Rock, Moos-a-bec Reach, Me	....	....	....	....	....	....	....	....	....	1	1
Chappaquiddick Point, Martha's Vineyard, Mass	....	....	....	....	....	1	....	....	1	....	2
Charles Island, Conn	....	1	....	....	....	....	....	....	....	....	1
Charleston Bar, S. C	1	1	2	....	....	1	1	4	2	2	14
Chatham, Mass	....	1	....	....	1	....	2	....	3	2	9
Chatham Bar, Cape Cod, Mass	2	....	5	....	2	2	....	3	1	2	17
Chebeag Islands, Casco Bay, Me	....	....	1	1	....	....	....	....	1	....	3
Cherrystone Inlet, Va	....	....	....	1	....	....	....	....	....	....	1
Cherrystone Inlet (5 miles above), Va	....	....	1	....	....	....	....	....	....	....	1
Chicamicomico, N. C	....	....	....	....	....	....	....	....	1	....	1
Chincoteague Shoals, Va	1	....	1	1	....	1	1	5	2	....	12
City Island, Long Island, N. Y	....	....	....	1	1	2	....	1	1	....	6

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Clapboard Island, Casco Bay, Me	....	....	2	....	....	....	....	....	....	....	2
Clark's Island, Me	....	1	....	....	....	1	....	....	....	....	2
Clark's Island, Portsmouth, N. H	....	....	1	....	1	....	....	....	1	....	3
Clark's Island, Tex	....	....	....	....	....	....	....	1	....	....	1
Clay Head, Block Island Sound	....	....	....	....	....	1	....	....	....	....	1
Cobb's Island, Va	....	....	....	1	1	1	....	....	1	1	5
Cobb's Island (Carter's Shoals), Va	....	....	1	....	....	....	....	2	2	1	6
Cobb's Island (Williams's Shoals), Va	....	....	....	....	....	1	2	....	....	....	3
Cobscook, Bay, Me	....	....	....	1	....	....	....	....	....	....	1
Cockspur Island, Ga	....	....	....	....	....	....	....	....	1	....	1
Coffee Island, Ga	....	....	....	....	....	....	1	....	....	....	1
Cohasset Rocks, Mass	....	....	....	....	....	1	....	....	....	....	1
Cold Spring Inlet, N. J	2	2	1	6	2	5	2	3	....	1	24
Collin's Beach, Delaware Bay, Del	....	....	....	....	....	1	....	....	....	....	1
Common Flats (near Chatham Roads), Mass	1	....	....	....	....	4	....	....	....	1	6
Conanicut Island, R. I	....	1	....	....	....	1	....	....	....	1	3
Coney Island, N. Y	....	....	....	1	1	....	....	1	1	1	5
Copp's Island, Conn	....	1	....	....	....	....	....	....	....	....	1
Cornfield Point (Long Island Sound), Conn	....	....	....	....	....	....	....	....	....	1	1
Corpus Christi, Tex	....	....	....	....	....	....	....	....	....	1	1
Cottage City, Mass	....	....	....	....	....	....	....	1	....	....	1
Cove Beach, Va	....	....	....	....	....	....	1	....	....	....	1
Cove Point (Chesapeake Bay), Md	....	....	1	1	....	....	....	....	....	....	2
Cow Bay (Long Island), N. Y	....	....	....	....	....	....	....	1	....	....	1
Cow Shoal, Conn	....	....	....	....	1	....	....	....	....	....	1
Cows, The (off Shippan Point), Conn	....	....	....	....	....	....	....	....	....	1	1
Cox's Head, Me	....	....	1	....	....	....	....	....	....	....	1
Crab Meadow, Long Island Sound	....	....	....	....	....	....	....	....	1	....	1
Crabtree Point, North Haven, Me	....	....	....	1	....	....	....	....	....	....	1
Cranberry Island, Me	....	....	2	1	2	....	....	3	....	....	8
Cranberry Island, Petty Pan Reef, Me	....	....	1	....	....	....	....	....	....	....	1
Crane's Neck Point, Long Island, N. Y	....	....	....	....	1	....	....	....	....	....	1
Craney Island, Hampton Roads, Va	....	....	....	....	....	....	1	....	....	....	1
Cross Island, Machias Bay, Me	2	....	....	....	....	1	....	3	....	....	6
Crow Shoal, Delaware Bay, Del	....	....	....	....	....	2	....	....	....	....	2
Cuckolds, The (approaches Damriscotta River, Me)	2	....	....	....	....	....	....	....	....	1	3
Cumberland Island, Ga	1	....	....	....	....	....	....	....	....	....	1
Cunningham Spit, Ga	....	....	....	....	....	....	....	....	1	....	1
Currituck Beach, N. C	2	1	....	....	1	....	....	....	....	1	5
Curtis Creek, Chesapeake Bay, Md	....	....	....	....	....	....	....	....	1	....	1
Curtis Island, Conn	....	....	1	....	....	....	....	....	....	....	1
Cushing Island, Casco Bay, Me	....	....	....	1	....	....	....	....	....	....	1
Cutler, Me	1	....	....	....	1	....	2	4	2	2	12
Cuttyhunk Island, Mass	....	2	3	4	2	1	1	1	....	....	14
Damiscove Island, Me	....	....	....	1	....	....	....	....	....	....	1
Davis Neck, Mass	....	2	....	....	....	....	....	....	....	....	2
Davis Point, Litile Machias Bay, Me	....	....	....	....	....	....	....	1	....	....	1
Deal Beach, N. J	....	....	2	1	2	1	....	....	1	1	8
Dearmon Ledge (near Gloucester), Mass	....	....	....	1	....	....	....	....	....	....	1
Decros Point, Tex	....	....	1	....	....	....	....	....	....	....	1
Decros Point (3½ miles east of), Tex	....	....	....	....	....	....	1	....	....	....	1
Deer Island, Boston Harbor, Mass	....	....	....	....	....	....	....	1	....	....	1
Delaware Breakwater, Del	1	2	2	1	2	3	1	....	1	....	13
Dennisport, Mass	....	....	....	....	1	....	8	....	1	....	10
Despair Island, Narragansett Bay, R. I	....	....	....	1	....	....	....	....	....	....	1
Devil's Back, Boston Harbor, Mass	....	....	....	1	....	1	1	1	....	1	5
Diamond Shoals, Cape Hatteras, N. C	....	....	1	....	3	2	1	3	....	....	10
Dick's Flat, Mass	....	1	....	....	....	....	....	....	....	1	2
Dighton, Mass	....	....	....	....	....	....	1	....	....	....	1
Dimer's Creek, Chesapeake Bay, Va	....	....	....	....	....	....	....	1	....	....	1
Dixie Island, Mobile Bay, Ala	....	....	....	....	....	....	1	....	....	....	1
Dog Island, Fla	....	....	....	....	....	....	1	....	....	....	1
Dogfish Ledges (entrance Cross Island Narrows), Me	....	....	....	....	1	....	....	....	....	....	1
Double-Headed Island, Machias Bay, Me	....	....	....	....	....	....	....	....	....	1	1
Dow Ledges, Deer Island Thoroughfare, Me	....	....	....	....	....	....	1	....	....	....	1
Doyle's Island, Moos-a-bec Reach, Me	....	....	....	....	....	....	....	....	1	....	1
Dread Ledge, Mass	1	....	....	....	....	....	....	....	....	....	1
Drinkwater Point, Me	....	....	....	....	1	....	....	....	....	....	1
Dry Tortugas, Fla	....	....	1	2	1	1	....	....	....	5	10
Duck Island, Mass	....	1	....	....	1	....	....	....	....	....	2
Duck Rocks, West Penobscot Bay, Me	....	....	....	....	....	....	....	....	1	....	1
Duck Ledges, Me	....	1	....	....	....	....	....	....	....	....	1
Dumpling Rock, Buzzard's Bay, Mass	....	....	1	....	....	....	....	....	....	....	1
Dutch Island, R. I	1	....	2	1	1	3	....	1	1	....	10

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ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883	
Duxbury Beach, Mass	...	...	...	...	...	...	...	1	1	...	2
East Bunker's Ledge (off Mount Desert Island), Me	...	...	...	...	...	...	...	...	...	2	2
East Chop, Vineyard Haven, Mass	...	2	...	1	...	1	1	1	...	...	6
East Dennis, Mass	...	...	...	...	...	...	...	...	1	...	1
Eastern Egg Rock (near Moos-a-bec light), Me	...	...	...	...	...	1	...	...	...	...	1
Eastern Point, Cape Ann, Mass	...	...	...	...	...	...	...	1	1	...	2
East Hampton, Long Island, N. Y	...	...	...	...	...	...	2	...	1	...	3
East Orleans, Mass	...	...	...	...	...	1	...	1	...	1	3
East Sister, The, Portsmouth Harbor, Me	...	...	...	...	...	...	...	...	1	...	1
Eaton's Neck, Long Island, N. Y	1	...	...	...	...	3	1	1	1	5	12
Edgartown Harbor, Mass	...	...	...	...	2	4	1	2	...	...	9
Egg Harbor, N. J	...	...	...	...	...	...	1	...	...	...	1
Egg Island, Altamaha Sound, Ga	...	...	...	...	...	1	...	...	...	...	1
Egg Rock (near Browney Island), Me	...	...	...	...	...	1	...	...	...	...	1
Egg Rock (near George's Islands), Me	...	...	...	...	...	...	...	...	1	...	1
Eldridge's Shoal (Vineyard Sound), Mass	...	...	1	...	...	...	...	...	...	...	1
Elihu's Island (mouth of Wicketequock River), Conn	...	...	1	...	...	...	...	...	...	...	1
Emery's Point, Me	1	...	...	...	...	...	...	...	...	...	1
Execution Rocks, Long Island Sound	...	...	...	...	...	...	1	...	1	...	2
Falkner's Island, Long Island Sound	...	...	1	...	...	1	...	...	...	...	2
Fall River, Mass	...	...	3	...	...	1	...	...	...	...	4
Falmouth, Mass	...	...	...	...	1	1	...	...	...	...	2
False Cape, Va	...	2	...	...	1	1	1	1	1	2	9
Federal Point, N. C	...	...	...	...	...	...	1	...	...	...	1
Fenwick's Island, Md	...	...	...	1	4	1	1	1	3	6	17
Fernandina Bar, Fla	...	1	...	...	...	...	...	1	2	...	4
Fidler's Ledge, Fox Island Thoroughfare, Me	...	...	...	...	...	...	1	...	...	1	2
Fingers, The, N. C	...	...	...	...	...	...	1	...	...	...	1
Fire Island, Long Island, N. Y	1	2	4	...	...	3	1	2	2	2	17
Fire Island light (8 miles east of), Long Island, N. Y	...	...	1	...	1	...	...	...	...	...	2
Fire Island, Penobscot Bay, Me	...	...	1	...	...	...	...	...	...	...	1
Fisher's Island, Long Island Sound	3	1	1	1	1	1	...	3	1	2	14
Fisher's Island Sound (rocks in), Conn	...	...	...	...	...	...	...	1	...	...	1
Fisherman's Inlet, Cape Charles, Va	...	...	...	1	...	...	...	...	...	...	1
Fisherman's Island, Me	1	...	1	...	...	1	...	1	...	...	4
Fishing Creek Shoal, Delaware Bay, N. J	...	...	...	...	...	...	1	...	...	...	1
Fishing Island, N. H	...	1	...	...	...	...	...	...	...	1	2
Fishing Point, Assateague Island, Va	...	...	...	...	...	1	...	...	...	...	1
Fishing Rip, Nantucket Sound, Mass	...	...	...	...	...	...	...	...	1	...	1
Five-Mile Beach, N. J	...	...	...	1	...	1	...	...	...	...	2
Flat Rock, New Haven, Conn	...	...	...	...	...	...	1	...	...	...	1
Flatty Creek Bar, Albemarle Sound	...	...	...	...	...	1	...	...	...	...	1
Fletcher's Neck, Me	...	1	...	...	...	...	...	...	...	1	2
Florida Reefs	1	...	...	1	1	...	...	...	4	...	7
Florida Reefs (Ajax Reef), Fla	1	...	...	...	...	...	...	...	...	...	1
Florida Reefs (Alligator Reef), Fla	...	...	...	...	...	...	...	1	...	...	1
Florida Reefs (American Shoal), Fla	1	...	...	...	2	...	...	...	...	...	3
Florida Reefs (Boca Grande Key), Fla	...	...	...	...	...	...	...	...	...	1	1
Florida Reefs (Brewster's Reef), Fla	1	...	...	...	...	...	...	...	...	...	1
Florida Reefs (Cary's Fort Reef), Fla	...	1	...	...	...	...	1	...	...	...	2
Florida Reefs (Cayo Costa), Fla	...	...	...	...	...	...	...	...	1	...	1
Florida Reefs (Conch Reef), Fla	...	...	...	2	...	...	...	...	...	...	2
Florida Reefs (Crocker's Reef), Fla	1	...	...	...	...	...	...	...	...	...	1
Florida Reefs (Davis Shoal), Fla	...	2	...	...	...	...	...	...	...	...	2
Florida Reefs (Duck Key), Fla	...	...	...	1	...	...	...	...	...	...	1
Florida Reefs (Fowey Rocks), Fla	...	...	...	...	1	...	...	...	...	...	1
Florida Reefs (French Reef), Fla	...	1	...	...	...	1	...	...	...	...	2
Florida Reefs (Key West), Fla	...	...	1	2	...	1	...	...	...	...	4
Florida Reefs (Key West, 18 miles northeast of), Fla	...	...	...	...	1	...	...	...	...	...	1
Florida Reefs (Key West, 18 miles northwest of), Fla	...	...	...	...	1	...	...	...	...	...	1
Florida Reefs (Lost Man's Key), Fla	...	...	...	...	...	...	...	...	1	...	1
Florida Reefs (Marquesas Key), Fla	1	1	1	2	...	...	...	...	1	2	8
Florida Reefs (Molasses Key), Fla	...	...	...	1	...	...	...	...	...	1	2
Florida Reefs (Pelican Reef), Fla	...	1	1	...	...	...	1	...	...	...	3
Florida Reefs (Pickle's Reef), Fla	...	...	...	1	2	1	...	...	...	...	4
Florida Reefs (Pulaski Shoals), Fla	...	...	...	...	...	1	...	...	1	...	2
Florida Reefs (Sandy Keys), Fla	...	...	...	...	1	...	...	...	1	...	2
Florida Reefs (Stirrup Key), Fla	...	...	...	...	1	...	...	...	...	...	1
Florida Reefs (Western Dry Rocks), Fla	...	...	...	1	...	...	...	...	...	...	1
Flynn's Knoll, New York Bay	...	...	...	...	...	...	...	...	2	3	5
Flye Island Light-house, Me	...	...	1	...	...	...	...	...	...	...	1
Folly Island, Cape Porpoise, Me	...	...	1	...	...	...	...	...	...	...	1
Fort Green, R. I	...	...	1	...	...	...	...	...	...	...	1
Fort Island, Me	1	...	...	...	...	...	...	...	...	...	1
Fort Macon, N. C	...	1	...	...	...	...	...	...	...	...	1

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Fort Pickens Point, Fla	....	....	....	....	....	1	....	....	....	....	1
Fort Point Rock, Gloucester Harbor, Mass	....	....	....	1	....	....	....	....	....	....	1
Foster's Island, Me	....	....	....	....	....	....	1	....	....	....	1
Fox Islands, Penobscot Bay, Me	....	....	....	....	....	....	....	2	....	1	3
Frost Point, N. H	....	....	....	....	....	....	....	1	....	....	1
Frying Pan Shoals, N. C	....	....	....	....	2	....	....	1	3	3	9
Gallup's Island, Boston Harbor, Mass	....	1	....	....	....	1	....	....	....	2	4
Galveston, Tex	2	....	1	2	2	....	2	1	....	1	11
Galveston Island, Tex	....	....	3	....	....	....	....	2	....	....	5
Gangway Ledge, Muscle Ridge Channel, Me	....	....	....	....	....	....	1	....	....	....	1
Gangway Rock (off Watch Hill), R. I	....	....	1	....	....	....	....	....	....	....	1
Gardiner's Island, Loud Island Sound	....	1	....	1	1	....	6	2	....	....	11
Gay Head, Martha's Vineyard, Mass	....	....	....	1	....	....	1	....	....	2	4
George's Island, Boston Harbor, Mass	....	1	....	1	....	....	....	1	....	....	3
George's Island, Me	....	....	....	....	....	....	1	....	....	....	1
Georgetown Breakwaters, S. C	....	....	....	....	....	....	....	2	1	....	3
Georgetown Harbor, S. C	....	....	2	....	2	....	....	....	1	....	5
Gerrish's Island, Portsmouth Harbor, N. H	....	....	1	....	....	....	....	....	....	2	3
Gilgo Inlet Bar, Long Island, N. Y	....	....	....	....	1	....	....	1	....	....	2
Gloucester, Mass	....	....	4	1	2	2	1	2	3	1	16
Glover's Rock, Me	....	....	....	1	....	....	....	....	....	....	1
Goat Island, Cape Porpoise, Me	....	....	3	....	1	....	....	....	....	....	4
Goat Island, Narragansett Bay, R. I	1	....	....	....	....	....	....	....	....	....	1
Goose Island, Long Island Sound	....	....	1	....	....	....	1	....	....	....	2
Gooseberry Island, Narragansett Bay, R. I	....	....	....	....	....	....	1	....	....	....	1
Gooseberry Neck, Mass	....	....	....	....	....	....	....	....	....	1	1
Goose Rocks, Kennebunkport, Me	....	....	....	....	....	1	....	....	....	....	1
Goshen Reef, Long Island Sound, Conn	....	1	2	1	....	1	....	....	....	....	5
Gott's Islands, Me	....	....	....	....	....	....	....	....	2	....	2
Gould Island, R. I	....	....	....	....	....	....	1	....	....	....	1
Governor's Run, Chesapeake Bay	....	....	....	....	....	....	1	....	....	....	1
Graces Rock (Kennebeck River), Me	....	....	....	....	....	....	....	....	1	....	1
Grand Grozier Shoal, La	....	....	....	....	....	....	1	....	....	....	1
Graves, The, Boston Harbor, Mass	....	3	....	....	....	....	....	....	....	....	3
Great Brewster, The, Boston Bay, Mass	....	....	....	....	....	....	....	....	1	....	1
Great Cranberry Island, Me	....	....	....	....	....	....	1	....	....	1	2
Great Duck Island (off Mount Desert), Me	....	....	....	....	....	....	....	....	....	1	1
Great Egg Harbor, N. J	1	....	1	....	1	1	1	....	1	1	7
Great Fawn Bar, Boston Bay, Mass	1	....	....	1	....	1	1	....	....	....	4
Great Island Shoal, Portsmouth, N. H	....	....	....	1	....	....	....	....	....	....	1
Great Ledge (near Wood's Holl), Mass	....	....	....	....	....	....	....	....	....	1	1
Great Rock, (near Seaconnett), R. I	....	....	1	....	....	....	....	....	....	....	1
Greenbury's Point, Chesapeake Bay, Md	....	....	....	....	....	1	....	....	....	....	1
Green Island, Boston Harbor, Mass	....	1	....	....	....	....	....	....	....	....	1
Green Island Ledge, Casco Bay, Me	....	....	1	1	....	....	....	....	....	....	2
Green Island Ledge, Moos-a-bec Reach, Me	....	....	....	....	....	....	....	....	1	1	2
Green Island Reef, Me	....	....	....	....	....	....	1	....	....	....	1
Green Island, N. J	....	....	....	....	....	....	1	....	....	....	1
Green Run Inlet, Md	....	1	....	1	1	1	....	....	....	....	4
Greenport, N. Y	....	....	....	....	1	....	....	....	....	....	1
Greenwich Point, Conn	....	....	....	....	....	....	2	....	....	....	2
Grindstone Ledge, Muscle Ridge Channel, Me	....	....	....	....	1	....	....	....	....	....	1
Guilford, Conn	....	1	....	....	....	....	1	....	....	....	2
Gull Island, The eastern entrance Long Island Sound	....	....	....	....	....	....	....	1	....	....	1
Gull Rock, Long Island Sound	1	....	....	....	....	....	....	....	....	....	1
Gull Rock, Newport Harbor, R. I	....	2	....	....	....	....	....	....	....	....	2
Gull Rock, Pamlico Sound, N. C	....	....	....	1	....	....	....	....	....	....	1
Gunnison's Cut (between Nassau Sound and Saint George's Inlet), Fla	....	....	....	....	....	....	....	1	....	....	1
Gunning Rocks, Me	....	....	....	....	....	....	....	1	....	....	1
Gun Rock, Lubec Narrows, Me	....	....	1	....	1	....	....	....	....	....	2
Gurnet Point, Mass	....	....	....	1	....	....	....	....	1	1	3
Half-Tide Rock, New Haven, Conn	....	....	....	....	....	....	1	....	....	....	1
Half-Way Rock, Narragansett Bay, R. I	....	....	....	....	....	....	....	1	....	....	1
Halibut Point, Cape Ann, Mass	....	....	....	....	....	2	....	....	....	....	2
Hampton Bar, Va	....	....	1	2	....	....	1	1	1	....	6
Hampton Ledges (Approaches Hampton River), N. H	....	....	....	....	....	....	....	....	....	1	1
Handkerchief Shoal, Mass	....	2	....	....	....	1	3	....	1	1	8
Harbor Island Bar, N. C	....	....	....	....	....	1	....	....	....	....	1
Harding's Beach, Cape Cod Bay, Mass	....	....	1	....	....	....	....	....	....	....	1
Harding's Ledge, Boston Bay, Mass	....	....	1	....	....	....	2	....	....	1	4
Hart Island, Long Island Sound, N. Y	2	1	2	2	....	....	....	....	1	2	10
Hart's Bar, Me	....	....	....	....	....	....	....	....	1	....	1
Haskell's Island, Me	....	....	1	....	....	....	....	....	....	....	1
Hatchett's Point (1 mile west of), Conn	....	....	....	1	....	....	....	....	....	....	1

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Hatchett's Reef, Long Island Sound, Conn	....	....	....	....	....	1	....	....	....	....	1
Hatteras Inlet, N. C	....	....	2	4	3	....	3	....	4	7	23
Hatteras Inlet (7 miles southwest of), N. C	....	....	....	....	....	....	....	1	....	....	1
Hatteras Inlet (8 miles south of), N. C	....	....	....	....	....	....	....	....	1	....	1
Hawes's Shoal, Vineyard Sound, Mass	....	....	....	1	....	1	....	1	....	....	3
Hawkins's Point, Chesapeake Bay, Md	....	1	....	....	....	....	....	....	1	....	2
Hay Island Ledge, Muscle Ridge Channel, Me	....	....	....	....	1	1	....	....	2	....	4
Head Harbor Island, Moos-a-bec Beach, Me	1	....	....	....	1	....	....	....	1	....	3
Hedge Fence Shoal, Vineyard Sound, Mass	....	2	1	2	1	1	1	....	....	2	10
Hell Gate, N. Y	4	6	6	5	3	1	1	....	6	2	34
Hell Gate (Flood Rock), N. Y	....	....	....	....	....	....	....	1	....	1	2
Hell Gate (Hallet's Point), N. Y	....	....	....	....	....	....	1	....	....	....	1
Hell Gate (Negro Head), N. Y	....	....	....	....	....	....	1	....	1	1	3
Hell Gate (North Brother), N. Y	....	....	....	....	....	....	....	....	1	....	1
Hell Gate (Scaly Rock), N. Y	....	....	....	....	....	....	....	1	....	....	1
Hell Gate (Steep Rock), N. Y	....	....	1	1	....	....	....	....	....	....	2
Hell Gate (The Gridiron), N. Y	....	....	....	....	....	....	....	....	4	1	5
Hen and Chickens Shoal (off Cape Henlopen), Del	....	....	....	....	1	....	....	1	....	1	3
Hen and Chickens, The (Buzzard's Bay), Mass	....	....	....	....	....	....	....	....	....	1	1
Henry's Point, Castine Harbor, Me	....	....	....	....	....	....	1	....	....	....	1
Hereford Inlet, N. J	3	1	3	1	1	....	....	1	1	4	15
Hereford Light (6 miles northeast of), N. J	....	....	....	....	....	1	....	....	....	....	1
Heron Island Point, Me	....	....	....	....	1	....	1	....	....	....	2
Heron Neck (ledge near), Me	....	....	....	....	....	....	1	....	....	....	1
Herring Bay, Chesapeake Bay, Md	....	2	....	....	1	....	....	....	....	....	3
Herring Gut, Me	....	....	....	2	1	....	....	....	....	....	3
Highlands, N. J	....	1	....	....	....	....	1	....	....	....	2
Highland Light, Cape Cod, Mass	1	....	....	1	....	....	....	....	....	....	2
High Pine Ledge, Cape Cod Bay, Mass	....	....	....	....	....	....	....	2	....	....	2
Hillsborough Inlet, Fla	....	....	....	1	....	....	....	....	....	....	1
Hill's Point, Chesapeake Bay, Md	....	....	....	....	....	....	....	1	....	....	1
Hill's Point, Va	1	....	....	....	....	....	1	....	....	....	2
Hodgdon's Ledge, Me	....	....	....	1	....	....	....	....	....	....	1
Hodgdon's Point, Me	....	....	....	....	....	1	....	....	....	....	1
Hog Island Bar, Muscongus Sound, Me	....	....	....	....	....	....	....	....	1	....	1
Hog Island, Va	3	....	3	2	....	....	4	....	3	2	17
Hog Island Inlet, N. Y	....	....	....	....	....	....	....	....	....	2	2
Hog Island, Narragansett Bay, R. I	....	....	....	....	....	....	....	1	....	....	1
Hog Island Ledge, Seal Harbor, Me	....	....	....	....	....	1	1	1	....	....	3
Holland's Island, Chesapeake Bay, Md	....	....	....	1	....	1	....	....	....	....	2
Holmes's Cove (east point), Me	....	....	....	....	....	....	....	1	....	....	1
Hooker's Island, Chesapeake Bay, Md	....	....	....	....	....	1	....	....	....	....	1
Hooper's Island Ledge, Herring Gut Harbor, Me	....	....	....	....	1	....	....	....	....	....	1
Hope Island, Narragansett Bay, R. I	....	....	....	....	....	....	....	....	1	....	1
Horn Island, Mississippi Sound	....	....	1	....	1	....	....	1	1	....	4
Horn Point, Chesapeake Bay, Va	....	....	....	....	1	....	....	....	....	....	1
Horse-Shoe Reef, Fisher's Island Sound, Conn	....	....	....	....	....	....	....	1	....	....	1
Horse-Shoe Shoal, Chesapeake Bay, Md	....	....	....	....	1	....	....	....	....	....	1
Horse-Shoe Shoal, Nantucket Sound, Mass	....	....	....	....	....	1	....	....	....	....	1
Horton's Point, N. Y	....	1	....	....	....	....	....	....	....	....	1
House Island, Salem Entrance, Mass	....	....	....	....	....	....	....	1	....	....	1
Hunniwell's Beach, Me	....	....	....	....	....	....	....	....	1	....	1
Hunniwell's Point, Me	....	....	....	....	....	....	1	1	....	1	3
Hunting Island, S. C	1	....	....	1	....	....	....	....	....	....	2
Huntington Neck, Long Island Sound	....	1	....	....	....	....	....	....	....	....	1
Hyannis, Mass	....	....	2	1	....	....	3	2	....	....	8
Hypocrite Ledge, Me	....	....	....	1	....	1	1	1	1	....	5
Indian Point, Penobscot Bay, Me	....	....	....	1	....	....	....	....	....	....	1
Indian River Inlet, Del	....	....	....	....	....	....	2	1	1	3	7
Indian River Inlet (30 miles north of), Fla	....	....	....	....	....	1	....	....	....	....	1
Inlet Point, Long Island, N. Y	....	....	1	....	....	1	....	....	....	....	2
Inner Middle Ground, Chesapeake Bay, Va	....	....	....	....	....	....	....	....	....	1	1
Ipswich Bar, Mass	2	4	1	....	1	1	1	1	1	2	14
Island Beach, N. J	....	1	....	....	....	....	2	1	1	2	7
Island Ledge, Mass	....	....	1	....	....	....	....	....	....	....	1
Isle au Haut, Penobscot Bay, Me	....	....	....	....	....	....	1	....	....	....	1
Isles of Shoals	....	....	2	1	....	....	2	....	....	1	6
Jacob's Point, Long Island, N. Y	....	....	1	....	....	....	....	....	....	....	1
Jamaica Island (off Kittery), Me	....	....	1	....	....	....	....	....	....	1	2
James Island (Appalachicola Bay), Fla	....	....	....	....	....	....	....	....	....	1	1
James Ledge, Narragansett Bay, R. I	....	....	1	....	....	....	....	....	....	....	1
Jamestown Island, Va	....	....	....	....	....	....	1	....	....	....	1
Jekyll Island, Ga	....	....	....	1	....	....	....	....	1	....	2
Jekyll Spit, Ga	....	....	....	....	1	....	....	....	....	....	1

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

List of places.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Jerry's Point, Portsmouth Harbor, N. H	1	....	....	....	....	....	....	....	....	....	1
Jewell's Island Reef, Me	....	....	....	1	....	....	....	....	....	....	1
Joe. Flogger Shoal, Delaware Bay	....	1	1	1	....	....	2	1	....	1	7
Johnson's Point Reef, Ga	....	....	....	....	....	1	....	....	....	....	1
John's Island Ledge (Burnt Coat Harbor Approaches), Me	....	....	....	....	....	....	....	....	....	1	1
Jones's Beach, Long Island, N. Y	....	3	....	....	1	....	....	1	1	....	6
Jones's Hill, N. C	....	....	1	....	....	....	....	....	....	....	1
Jonesport, Me	....	....	....	....	1	....	....	....	....	....	1
Joshua Rock (mouth of Connecticut River)	....	....	....	....	....	....	2	....	....	....	2
Kedges Straits, Chesapeake Bay, Md	....	....	....	....	....	....	....	1	....	....	1
Kegs, The, Muscongus Bay, Me	....	....	....	1	....	....	....	....	....	....	1
Kelsey's Ledge, Damariscotta River, Me	....	....	....	....	....	....	1	....	....	....	1
Kennebunkport, Me	....	....	....	....	1	....	....	....	....	....	1
Kent Island, Chesapeake Bay, Md	....	....	....	1	1	1	2	....	1	1	7
Kill Pond Bar, Mass	1	....	....	....	....	....	....	....	2	....	3
Kimball's Island (ledges off), Penobscot Bay, Me	....	....	....	....	....	....	....	....	....	1	1
King's Beach, Lynn, Mass	....	....	2	....	....	....	....	....	....	....	2
Kinnakeet, N. C	....	....	1	....	....	....	....	....	....	....	1
Kittery (ledge near), Me	....	....	....	....	1	....	....	....	....	....	1
Kittery Point, Me	....	....	2	....	....	....	....	....	....	....	2
Kitty Hawk, N. C	....	....	....	1	....	....	....	....	....	....	1
Lambert's Cove, Vineyard Sound, Mass	....	....	1	....	....	....	....	....	....	....	1
Lambert's Point, Va	....	....	....	....	....	....	....	1	....	....	1
Lane's Island, Penobscot Bay, Me	....	....	....	....	....	1	....	....	....	....	1
Lanesville, Cape Ann, Mass	....	....	....	....	....	....	1	....	....	....	1
Latimer's Reef, Long Island Sound	....	1	....	....	1	....	....	....	....	1	3
Larallette City, N. J	....	....	....	....	....	1	....	....	....	....	1
Lazy Gut Island, Deer Island Thoroughfare, Me	....	....	....	....	....	....	....	1	....	....	1
Leaming Beach, N. J	....	....	1	....	....	....	....	....	....	....	1
Leete's Reef, Conn	....	....	....	1	1	....	....	....	....	....	2
Leighton's Point, Pembroke, Me	....	....	....	1	....	....	....	....	....	....	1
Lewes, Del	2	....	1	3	1	3	2	2	....	1	15
L'Homme à Dieu Shoal, Vineyard Sound, Mass	1	....	2	....	2	....	2	....	....	....	7
Libbey Island, Machias Bay, Me	....	....	2	....	....	....	....	....	1	2	5
Little Bay, Va	....	....	....	....	....	....	1	....	....	....	1
Little Beach, N. J	1	....	....	....	1	....	....	....	....	....	2
Little Cove Point, Chesapeake Bay, Md	....	....	....	....	1	....	....	....	....	....	1
Little Cranberry Island, Me	....	1	....	....	....	....	2	3	1	3	10
Little Cumberland Islands, Ga	1	....	....	....	....	....	....	....	....	....	1
Little Deer Island, Eggermoggin Reach, Me	....	....	....	....	....	....	....	....	1	....	1
Little Egg Harbor, N. J	1	....	4	....	....	4	1	1	1	3	15
Little Gull Island (eastern entrance), Long Island Sound	....	....	1	....	....	....	1	1	....	....	3
Little Inlet, Long Island Sound	....	....	1	....	....	....	....	....	....	....	1
Little Island, Vineyard Haven, Mass	1	....	....	....	....	....	....	....	....	....	1
Little Island, Va	....	....	....	....	....	....	1	....	....	....	1
Little Kinnakeet, N. C	....	....	....	....	....	....	....	....	2	....	2
Little Mud Thoroughfare, N. J	....	....	....	....	....	1	....	....	....	....	1
Little River Island, Me	....	....	1	....	....	....	....	....	....	....	1
Little River Inlet, S. C	....	....	....	....	....	....	....	....	....	1	1
Little Spoon Island, Me	....	....	....	1	....	....	....	....	....	....	1
Lloyd's Neck, Long Island, N. Y	....	1	....	1	....	....	1	1	1	....	5
Lobster Rock, Saco Bay, Me	....	....	....	....	....	1	....	....	....	....	1
Lobster Rocks, Beverley Harbor, Mass	....	....	....	1	....	....	....	....	....	....	1
Lockwood's Folly Inlet, N. C	....	1	1	....	....	....	1	2	....	....	5
Loggerhead Inlet, N. C	....	....	....	....	....	....	....	....	1	....	1
Londoner, The (near Thatcher's Island), Mass	....	....	....	....	1	....	....	....	....	1	2
Long Beach (6 miles east of Cape Ann Harbor), Mass	....	....	....	....	....	1	....	....	....	....	1
Long Beach, Plymouth, Mass	....	....	....	....	....	....	....	....	1	....	1
Long Beach, Long Island, N. Y	....	....	....	....	....	....	....	2	....	....	2
Long Beach, N. J	....	....	....	2	....	3	7	....	2	1	15
Long Branch, N. J	....	1	3	1	....	....	3	....	1	1	10
Long Island, Boston Harbor, Mass	....	....	....	....	1	....	....	1	....	....	2
Long Island, Harbor Head, Me	....	....	1	....	....	....	....	....	....	....	1
Long Ledge, Bass Harbor, Me	....	....	....	....	....	....	....	1	....	....	1
Long Ledge, Scituate, Mass	....	....	....	....	....	....	1	....	....	....	1
Long Ledge, Seal Harbor, Me	....	....	....	....	1	....	....	....	....	....	1
Long Ledge (Sheepscot River), Me	....	....	....	....	....	....	....	....	1	....	1
Long Point, Cape Cod, Mass	....	....	....	....	....	2	....	....	....	....	2
Long Point (near Little River entrance), Me	....	....	....	....	....	....	....	....	1	....	1
Long Shoal, Nantucket Sound, Mass	....	....	....	2	1	....	....	....	....	....	3
Lord's Gifts Flats, Me	....	....	....	....	....	....	1	....	....	....	1
Lovell's Island, Boston Harbor, Mass	....	1	....	....	....	....	....	....	....	....	1
Love Ladies' Island, N. J	....	....	....	....	....	1	....	....	....	....	1

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Lowell's Point, Me	2	....	....	....	....	....	....	....	....	....	2
Lowell's Rocks, Penobscot Bay, Me	....	....	....	....	....	....	1	....	....	....	1
Lower Hell Gate, Me	1	....	....	....	....	....	....	....	....	....	1
Lowe's Point, Chesapeake Bay, Md	....	....	....	....	....	1	....	....	....	....	1
Ludham's Beach, N. J	....	....	....	1	1	1	....	....	....	....	3
Ludington Rock, Long Island Sound, Conn	....	....	....	....	....	....	....	....	....	1	1
Lynn, Mass	....	....	....	....	....	....	....	....	....	1	1
Lynn Haven Bay, Va	1	....	....	1	1	1	....	....	3	....	7
Machias, Me	....	....	1	....	....	....	....	....	1	....	2
Machiasport, Me	....	....	2	....	....	....	....	....	....	....	2
Machipongo Inlet, Va	....	....	....	1	....	....	....	1	....	....	2
Magothy River (mouth of), Chesapeake Bay, Md	....	....	....	....	....	....	....	....	1	....	1
Main Inlet Bar (2½ miles northeast of), N. C	....	....	....	1	....	....	....	....	....	....	1
Mamaroneck, N. Y	....	....	....	....	....	1	....	....	1	....	2
Mandeville, Lake Pontchartrain, La	....	....	....	....	....	....	....	1	....	....	1
Manhattan Beach, N. Y	....	....	....	....	....	....	1	....	....	....	1
Manomet Point, Mass	....	....	....	....	....	....	1	....	....	....	1
Manor Hills, The, Long Island, N. Y	....	....	....	2	....	....	....	....	....	....	2
Mansfield Ledge, Deer Island Thoroughfare, Me	....	....	1	....	....	....	....	....	....	....	1
Marblehead, Mass	....	....	....	....	....	1	....	....	....	....	1
Marblehead Neck, Mass	....	....	1	....	....	....	....	....	....	....	1
Mare Island, Me	....	....	....	....	....	....	....	1	....	....	1
Mark Island Ledge, Penobscot Bay, Me	1	....	1	....	....	....	....	....	1	....	3
Mark Island, Moos-a-bec Reach, Me	....	....	....	....	....	....	....	....	1	....	1
Marsh Bank Bar (off Harwick), Mass	....	....	1	....	....	....	....	....	....	....	1
Marshfield Beach, Boston Bay, Mass	....	....	....	....	....	....	1	1	1	....	3
Marshall's Island, Me	....	....	....	....	....	1	....	....	....	....	1
Martha's Vineyard (south beach), Mass	....	....	....	....	....	....	....	1	....	....	1
Masonboro' Inlet, N. C	....	....	....	....	....	....	1	....	....	....	1
Matagorda Bay, Tex	2	....	11	....	1	....	....	....	....	....	14
Matagorda Island, Tex	....	....	4	....	2	1	2	1	3	2	15
Matagorda Peninsula Tex	....	....	....	....	....	....	....	....	2	....	2
Matanzas Inlet (mouth of), Fla	....	....	....	....	....	....	1	1	....	....	2
Matinicus Island, Me	....	....	....	....	....	....	1	....	1	....	2
Matinicock Point, Long Island, N. Y	....	....	....	1	....	....	....	....	....	....	1
Maurice River (near), Delaware Bay, N. J	....	....	....	....	....	....	....	....	1	....	1
Mayport Beach, Fla	....	....	....	....	....	2	....	....	....	....	2
Menemsha Bight, Vineyard Sound, Mass	....	....	....	....	....	....	....	....	1	....	1
Menunketesuck Point, Conn	1	....	....	....	....	....	....	....	....	....	1
Merrimac River (north breakers), Mass	....	....	1	3	1	1	1	....	1	....	8
Merry Meeting Bay (rocks in), Me	....	....	....	....	....	....	....	1	....	....	1
Merwin's Point, Conn	....	....	....	1	....	....	....	....	....	....	1
Metinic Island, Me	....	..	....	....	1	1	....	....	....	....	2
Metompkin Inlet, Va	....	....	....	1	1	....	....	....	....	....	2
Micomit Rip, Mass	1	....	....	....	....	....	....	....	....	....	1
Middle Ground, Boston Harbor, Mass	....	....	....	....	....	....	....	2	....	....	2
Middle Ground, Chesapeake Bay	....	....	....	....	1	1	1	2	....	....	5
Middle Ground, N. C	....	....	....	....	....	....	1	....	1	....	2
Middle Ground, Quoddy Bay, Me	....	....	....	....	....	....	....	....	....	1	1
Middle Ground, Vineyard Sound, Mass	....	....	....	....	....	....	....	2	....	....	2
Middle Reef (near Woolsey's Point), Long Island, N. Y	....	....	....	1	....	....	....	....	....	....	1
Milk Island, Mass	1	1	....	....	....	....	....	....	....	....	2
Mispillion Light, Del	1	....	....	....	....	1	....	....	....	....	2
Mistake Island, Me	....	1	....	1	....	....	....	....	....	....	2
Mobile Bay, Ala	....	....	....	....	1	....	1	1	....	....	3
Mobile Point, Ala	....	....	....	....	....	....	1	....	....	....	1
Monhegan Island, Me	....	....	1	....	....	....	....	....	....	....	1
Monmouth Beach, N. J	....	....	....	1	....	....	....	1	....	....	2
Monomy Point, Cape Cod, Mass	....	....	1	2	....	1	2	1	....	1	8
Monroe Island, Penobscot Bay, Me	....	....	....	1	....	....	4	....	....	....	5
Montauk Point, Long Island, N. Y	....	....	....	....	1	1	....	....	....	....	2
Montauk Point (5 miles northwest of), Long Island, N. Y	....	....	....	....	....	....	....	....	1	....	1
Moose Island, Booth Bay Harbor, Me	....	1	....	....	....	....	....	....	....	....	1
Moriches, Long Island, N. Y	....	1	....	....	....	1	....	....	....	....	2
Morris' Cove, New Haven Harbor, Conn	....	1	....	1	....	....	....	....	....	....	2
Morris' Island, S. C	....	....	....	....	1	....	....	....	....	....	1
Mount Desert Island (south coast of), Me	....	....	....	....	....	....	....	....	1	....	1
Mount Desert Rock, Me	....	....	....	....	....	1	....	....	....	1	2
Mount Desert (Schooner Head), Me	....	....	....	....	....	....	....	....	1	....	1
Mulberry Island (near mouth James River), Va	....	....	....	....	....	....	....	....	....	1	1
Munroe's Island (West Penobscot Bay), Me	....	....	....	....	....	....	....	....	....	1	1
Muskeget Island, Nantucket Sound, Mass	1	....	....	....	....	3	....	2	....	....	6
Musquito Inlet, Fla	....	....	1	1	1	1	....	....	3	....	7
Musquito Inlet (3 miles north of), Fla	....	....	....	....	....	2	....	....	....	....	2

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Musquito Inlet (7 miles north of), Fla	....	....	....	....	....	1	....	....	....	....	1
Musquito Inlet (4 miles south of), Fla	....	....	....	....	....	1	....	....	....	....	1
Musquito Inlet (12 miles south of), Fla	....	....	....	....	....	....	....	1	....	....	1
Musquito Island (approaches Saint George's River), Me	....	1	....	....	....	....	....	....	....	1	2
Mustang Island, Tex	1	....	....	....	....	....	....	....	1	2	4
Myrtle Island, Va	....	....	....	1	....	....	....	....	....	1	2
Nag's Head, N. C	....	....	....	....	1	1	1	....	....	....	3
Nancy Ledge, Lubec, Me	....	....	....	....	....	1	....	....	....	....	1
Nantasket Beach, Mass	....	....	....	....	....	....	....	....	1	....	1
Nantucket Bay, Mass	....	4	....	....	1	1	....	1	....	1	8
Nantucket (west end of), Mass	....	....	....	....	....	....	....	....	2	....	2
Nantucket Great Point, Mass	....	1	....	....	1	3	1	1	....	....	7
Nantucket, Sankaty Light, Mass	....	....	....	....	1	....	....	....	....	....	1
Nantucket Shoal, Mass	....	....	....	1	....	3	1	....	6	2	13
Napatree Point, R. I	....	....	1	....	....	2	1	....	1	....	5
Napague, Long Island, N. Y	....	....	....	1	....	....	....	....	....	....	1
Narragansett Pier, R. I	1	....	....	....	1	....	....	1	1	....	4
Nasharvena Island, Vineyard Sound, Mass	....	....	....	1	....	1	....	....	....	....	2
Nash's Island, Me	1	....	....	....	....	....	....	....	1	....	2
Nassau Inlet, Fla	1	....	....	....	....	....	....	....	....	....	1
Nauset Beach, Cape Cod, Mass	9	1	1	3	3	....	....	....	....	1	18
Naushon Island, Vineyard Sound, Mass	....	....	1	....	1	....	....	....	....	1	3
Negro Island, Saco Bay, Me	....	....	1	....	....	....	....	....	....	....	1
New Bedford Harbor, Mass	....	1	....	1	....	1	1	....	1	1	6
Newburyport, Mass	1	1	1	....	....	1	....	....	....	2	6
Newcomb's Hollow, Mass	....	....	2	....	....	....	....	....	....	....	2
New Haven, Conn	....	1	1	1	....	....	....	1	1	....	5
New Inlet, Long Island, N. Y	....	1	1	2	....	3	1	....	....	1	9
New Inlet, N. C	....	2	....	1	....	....	1	....	....	2	6
New Inlet, N. J	....	1	....	....	....	....	....	....	....	....	1
New London, Conn	....	....	....	3	....	1	....	2	....	....	6
New London (ledge off), Conn	....	....	....	....	....	....	....	1	1	....	2
New Mill Creek, Va	....	....	....	....	....	....	....	1	....	....	1
New Point Comfort, Chesapeake Bay	....	....	....	....	....	....	....	....	....	1	1
Newport, R. I	....	1	....	2	....	....	1	1	3	1	9
Newport News, Va	....	....	....	1	....	....	....	1	....	....	2
New Topsail Inlet, N. C	....	....	....	....	....	....	....	....	1	....	1
New River (mouth of), N. C	....	....	....	....	....	....	1	1	....	....	2
New Rochelle Harbor, N. Y	....	....	....	....	....	....	....	2	....	....	2
Newton's Rock, Narragansett Bay, R. I	....	....	....	....	....	....	....	....	1	....	1
Nix's Mate, Boston Harbor, Mass	....	....	....	1	....	....	....	....	1	....	2
No Man's Land, Mass	....	....	....	....	....	....	....	2	....	....	2
Nonamesset Island, Vineyard Sound, Mass	....	1	....	....	....	....	....	....	....	1	2
Norfolk (near), Va	....	....	....	....	....	....	....	1	....	....	1
Norman's Woe, entrance Gloucester Harbor, Mass	1	....	....	....	....	....	....	....	....	1	2
North Inlet, S. C	....	1	....	....	....	....	....	....	....	....	1
North Island Beach, S. C	....	....	....	....	....	....	....	....	....	1	1
North Point, Chesapeake Bay, Va	....	....	....	....	....	2	....	....	....	....	2
Northport, Me	....	....	....	1	....	....	....	....	....	....	1
Northport Harbor, N. Y	....	....	....	....	....	....	1	....	....	....	1
North River Bar, N. C	....	....	....	....	....	1	2	....	....	1	4
North Truro, Cape Cod, Mass	....	....	....	....	....	2	....	....	....	....	2
North West, Long Island, N. Y	....	....	....	....	....	....	2	....	....	....	2
Norton's Cove (ledge in), Me	....	....	....	....	....	1	....	....	....	....	1
Norton's Island, Seal Harbor, Me	....	....	....	1	....	....	....	....	....	....	1
Norton's Point, Carver Harbor, Me	....	....	....	....	1	....	....	....	....	....	1
Norton's Shoals, Mass	2	....	....	....	....	....	....	....	....	....	2
Norwalk Islands, Long Island Sound	....	1	....	....	....	....	....	1	....	....	2
Noye's Point, R. I	....	....	1	1	....	....	....	....	....	....	2
Oak Rock (off Cape Ann), Mass	1	....	....	....	....	....	....	....	....	....	1
Ocean City, Md	....	....	1	....	....	1	....	....	2	....	4
Ocean Grove, N. J	1	....	....	1	1	....	....	....	....	2	5
Ocean View, Va	....	....	....	1	....	1	2	....	....	....	4
Ocklockonee Bar, Fla	....	....	....	....	....	....	....	1	....	....	1
Ocracoke Inlet, N. C	....	....	1	3	1	1	1	....	....	....	7
Ocracoke Inlet (5 miles northeast of), N. C	....	....	....	....	....	....	....	....	....	1	1
Odiorne's Point, N. C	....	....	....	1	....	....	....	....	....	....	1
O'Donnell's Point, Lubec Narrows, Me	....	....	....	....	....	1	....	....	....	....	1
Old Cilley Ledge, Penobscot Bay, Me	....	1	1	....	....	....	1	....	....	....	3
Old Currituck Inlet, N. C	....	....	....	....	....	....	1	....	....	....	1
Old Ferry Point, N. Y	....	....	....	....	....	....	1	....	....	....	1
Old Field Point Light, Long Island, N. Y	....	....	....	....	1	....	....	....	....	....	1
Old Man Ledge, Penobscot Bay, Me	....	1	....	....	1	1	....	....	....	....	3
Old Point Comfort, Va	....	....	....	....	....	....	....	1	1	1	3

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Old Prince, The, Cape Porpoise Harbor, Me	....	....	....	....	....	1	....	....	....	....	1
Old Topsail Inlet, N. C	....	....	....	....	....	....	....	....	....	1	1
Old Woman Ledge, Me	....	....	....	....	....	....	1	....	....	....	1
Oregon Inlet, N. C	....	1	1	1	....	....	....	2	....	1	6
Orleans Beach, Cape Cod, Mass	....	....	....	2	2	....	....	1	....	1	6
Ossabaw Island, Ga	....	....	....	....	....	....	1	....	....	....	1
Otter Island Ledge, Muscle Ridge Channel, Me	....	....	....	....	....	....	....	....	....	1	1
Outer Diamond Shoal, Cape Hatteras, N. C	....	....	....	....	....	....	1	1	....	....	2
Outer Ledge (entrance Camden Harbor), Me	....	....	....	....	....	....	....	....	....	1	1
Owl's Head, Me	1	1	....	....	....	....	....	....	....	....	2
Oyster Bay, N. Y	....	....	....	....	....	....	2	....	....	....	3
Oyster Pond Reef, N. Y	....	1	....	....	....	....	....	....	....	....	1
Oyster Rock, Wilmington Harbor, N. C	....	....	....	1	....	....	....	....	....	....	1
Padre Island, Tex	....	....	....	....	2	....	....	4	....	3	9
Pamet Hollow, Cape Cod, Mass	....	....	....	....	1	....	....	....	....	....	1
Paramore's Beach, Va	....	....	....	....	....	....	....	1	1	1	3
Parker's Cove, Isleborough, Me	....	....	....	1	....	....	....	....	....	....	1
Parker's Island, N. Y	....	....	....	....	1	....	....	....	....	....	1
Pascagoula Bar, Miss	....	1	....	....	....	....	....	1	....	....	2
Pasque Island, Vineyard Sound, Mass	2	3	....	1	....	....	....	....	....	....	6
Pass à l'Outre, mouth of Mississippi River, La	1	1	....	....	....	....	....	....	....	....	2
Pass Cavalla, Tex	....	....	3	....	....	....	1	2	....	2	8
Pass Christian, Miss	1	....	....	....	....	....	....	....	....	....	1
Patapsco River (mouth), Chesapeake Bay, Md	....	....	....	....	....	3	1	....	....	....	4
Patuxent River (mouth of), Md	....	....	....	1	....	1	1	....	....	....	3
Pavilion Beach, Mass	....	....	2	....	1	....	....	....	....	....	3
Pawley's Island, S. C	....	....	....	....	....	....	....	....	....	1	1
Peaked Hill Bar, Cape Cod, Mass	....	2	1	1	....	1	1	3	3	....	12
Peak's Island, Casco Bay, Me	....	....	....	....	....	1	....	1	....	....	2
Peck's Beach, N. J	....	....	....	....	....	1	1	....	1	....	3
Pierce's Island, Portsmouth Harbor, N. H	....	....	....	....	....	....	....	1	....	....	1
Pelican Bank, St. Helena Sound, S. C	....	....	....	....	....	....	....	....	....	1	1
Pelican Island, Tex	....	....	....	....	....	....	1	1	1	....	3
Pelican Spit, Galveston Bay, Tex	....	....	....	....	....	....	....	....	1	....	1
Pembroke, Me	....	1	....	....	....	....	....	....	....	1	2
Penfield's Reef, Conn	....	....	....	....	....	1	....	....	1	1	3
Penikese Island, Buzzard's Bay, Mass	....	....	....	....	1	....	....	....	....	....	1
Pensacola, Fla	....	....	....	....	2	....	....	....	1	....	3
Pensacola Bar, Fla	....	....	1	....	1	....	....	....	....	....	2
Pepperell's Cove, Portsmouth Harbor, N. H	....	....	....	1	....	....	....	....	....	....	1
Perdido Bay Bar, Fla	....	....	1	....	....	....	....	....	....	....	1
Perkin's Ledge (mouth of Kennebec River), Me	....	1	....	....	....	....	....	....	....	....	1
Perry's Creek, Penobscot Bay, Me	....	....	....	....	2	....	....	....	....	....	2
Petit Menan Island, Me	1	1	....	2	1	....	2	....	....	....	7
Piankatank River Bar, Va	....	....	....	....	....	2	....	....	....	....	2
Pickard's Point, Penobscot Bay, Me	....	1	....	....	....	....	....	....	....	....	1
Pine Island (off New London), Conn	....	....	....	....	....	1	....	....	....	....	1
Plum Beach Shoal, Narragansett Bay, R. I	....	....	....	....	....	....	....	....	1	....	1
Plum Island, Long Island Sound	....	1	....	....	1	....	....	1	....	....	3
Plum Island, Mass	....	....	....	....	....	....	....	....	1	2	3
Plum Island Point, Mass	....	....	....	....	....	....	1	1	1	....	3
Plum Point, Chesapeake Bay, Md	....	....	....	....	....	1	1	....	....	....	2
Point Allerton, Boston Harbor, Mass	1	1	....	....	....	....	....	....	1	....	3
Point au Fer, Fla	....	1	....	....	....	....	....	....	....	....	1
Point Gammon, Mass	1	....	....	....	....	....	....	....	....	....	1
Point Isabel, Tex	....	3	....	....	....	....	....	3	....	....	6
Point Judith, R. I	1	2	1	1	....	2	1	....	1	....	9
Point Lookout, Chesapeake Bay, Md	....	....	....	....	....	....	....	....	1	....	1
Point No Point, Chesapeake Bay, Md	....	....	....	....	1	....	....	....	....	....	1
Point No Point, Conn	....	....	....	....	....	....	1	....	....	....	1
Point of Rocks, Lynn, Mass	....	....	....	....	....	1	....	....	....	....	1
Point Pleasant, N. J	....	....	....	....	....	1	....	....	....	....	1
Point Seguin, Me	....	....	....	....	....	....	1	....	....	....	1
Pollock Rip, Mass	....	1	1	....	....	....	....	....	1	1	4
Pomp's Island, Moos-à-bec Reach, Me	....	....	....	....	....	....	....	....	1	....	1
Pond Cove, Cape Elizabeth, Me	....	....	....	1	....	....	....	....	....	....	1
Pond Cove Island, Englishman's Bay, Me	....	....	1	....	....	....	....	....	....	....	1
Popasquash Point, Narragansett Bay	....	....	....	....	....	1	....	....	....	....	1
Pool's Island, Chesapeake Bay	....	....	....	....	....	1	....	....	2	....	3
Pope's Island (near), Md	....	....	....	....	....	....	....	....	....	1	1
Portland Head, Cape Elizabeth, Me	....	....	1	....	....	1	....	....	1	....	3
Port Jefferson, Long Island, N. Y	....	....	....	1	....	....	....	....	....	....	1
Port Morris (rock near), N. J	....	....	....	....	....	1	....	....	....	....	1
Portsmouth, N. H	....	....	....	1	3	2	....	1	....	....	7
Portsmouth, Va	....	....	....	....	....	....	1	....	....	....	1

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ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
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Portsmouth (8 miles southwest of), N. C	....	....	....	....	....	....	....	....	....	1	1
Port Royal Bar, S. C	....	....	....	....	....	....	....	....	....	1	1
Powder Horn Bayou, Tex	1	....	2	....	....	....	....	....	....	....	3
Promised Land, Long Island, N. Y	....	....	....	....	....	....	5	....	....	....	5
Prospect Harbor, Me	....	....	5	....	....	....	....	....	....	....	5
Provincetown, Mass	....	....	5	2	....	7	4	1	....	....	19
Pulpit Rock (near Portsmouth), N. H	....	....	....	....	....	....	....	....	2	....	2
Pumpkin Hill Shoal, Charlestown, S. C	....	....	1	1	....	1	....	1	....	....	4
Pumpkin Island, Portsmouth Harbor, N. H	....	....	....	....	....	....	....	1	....	....	1
Punta Rassa, Fla	....	....	....	....	....	....	....	1	....	....	1
Quoddy Head, Me	....	1	1	....	1	1	1	....	2	....	7
Quonochontaug Beach, R. I	....	....	1	....	....	....	1	....	1	....	3
Race Point, Cape Cod, Mass	3	2	4	....	....	2	1	....	3	1	16
Race Point (near Cutler), Me	....	....	....	....	1	....	....	....	....	....	1
Race Rock, Long Island Sound	....	....	....	1	....	....	....	....	....	....	1
Rackliff Island, Seal Harbor, Me	....	....	....	....	....	1	....	....	....	2	3
Ragged Island, Penobscot Bay, Me	....	....	1	....	....	....	....	....	....	....	1
Ragged Point, Assateague Island, Va	....	....	....	....	1	....	....	....	....	....	1
Ram Island (Kennebec River below Bath), Me	....	....	....	....	....	....	....	....	....	1	1
Ram Island Reef, Long Island Sound	....	....	....	1	....	....	....	....	....	....	1
Ram's Head Ledge, Boston Harbor, Mass	....	1	....	....	....	....	....	....	1	....	2
Randall's Island, Long Island Sound, N. Y	....	....	....	....	....	....	....	....	....	1	1
Ravenswood Rock, East River, N. Y	....	....	....	....	....	....	....	1	....	....	1
Ray's Point (near), Me	....	....	....	....	....	....	....	....	1	....	1
Red Fish Bar, Tex	....	....	....	1	....	2	....	....	....	....	3
Red Spring Point, Long Island, N. Y	....	....	1	....	....	....	....	....	....	....	1
Reed's Point, Albemarle Sound, N. C	....	....	....	....	....	....	....	1	....	....	1
Rehoboth Beach, Del	....	....	....	....	....	....	1	....	....	....	1
Revenue Point Shoal, Ala	....	1	....	....	....	....	....	....	....	....	1
Rich Inlet, N. C	....	....	....	....	....	1	....	1	....	....	2
Richmond's Island, Casco Bay, Me	1	....	1	1	....	....	....	....	....	....	3
Rigolets, The, La	....	....	....	....	....	....	....	1	....	....	1
Rip Raps, Hampton Roads, Va	....	....	....	1	....	....	....	....	....	....	1
Robbin's Reef Bay, New York Harbor	....	....	....	....	....	....	1	1	....	....	2
Robert's Harbor, Penobscot Bay, Me	....	....	1	....	....	....	....	....	....	....	1
Robinson's Beach (southwest harbor), Me	....	....	....	....	....	....	1	....	....	....	1
Robinson's Hole, Vineyard Sound, Mass	....	....	....	....	1	....	....	....	1	....	2
Rockaway, Long Island, N. Y	1	....	....	3	....	1	1	1	....	....	7
Rockaway Beach, Long Island, N. Y	....	....	....	....	....	1	....	....	1	1	3
Rockaway Shoals, Long Island Sound	....	....	1	1	....	....	....	1	1	....	4
Rock Island Beach, Long Island Sound	....	1	....	....	....	....	....	....	....	....	1
Rockland, Me	....	....	....	....	1	1	1	....	....	....	3
Rock Point, Chesapeake Bay, Md	....	....	1	....	....	1	....	....	....	....	2
Rockport, Mass	1	....	....	....	....	....	....	1	....	2	4
Rocky Neck, Gloucester Harbor, Mass	....	....	....	....	....	1	....	....	....	....	1
Rocky Point, Long Island Sound	....	....	1	....	1	....	....	....	....	....	2
Rocky Point, Plymouth Bay, Mass	1	....	....	....	....	....	....	1	....	....	2
Romer Shoal, N. Y	1	1	3	....	....	2	1	4	3	1	16
Rose Island, R. I	....	....	....	....	....	1	....	....	1	....	2
Round Shoal, Quoddy Bay, Me	....	....	....	....	....	....	1	1	....	....	2
Royal Shoal (northwest point), N. C	....	....	....	....	....	....	....	1	....	....	1
Rumstick Shoal, Narragansett Bay, R. I	....	....	....	....	....	....	....	....	1	....	1
Rudder Rock, Deer Island Thoroughfare, Me	....	....	1	....	....	....	....	....	....	....	1
Rye Beach, N. H	....	....	....	....	....	2	....	2	....	....	4
Rye Ledge, N. H	....	....	....	....	....	2	....	....	....	....	2
Sabine Pass, Tex	....	....	1	....	....	....	2	1	1	....	5
Sachem's Head, Conn	....	....	....	....	....	1	....	....	....	....	1
Saco (rock near), Me	....	....	....	....	....	....	....	....	....	1	1
Saddle Island, Penobscot Bay, Me	....	....	1	....	....	....	....	....	....	....	1
Sag Harbor, Long Island, N. Y	....	....	....	....	....	....	1	....	....	....	1
Sag Harbor (12 miles east of), N. Y	....	....	....	....	....	....	....	1	....	....	1
Saint Augustine, Fla	....	....	....	....	1	....	....	....	....	....	1
Saint Augustine (12 miles north of), Fla	....	....	....	....	....	....	1	....	....	....	1
Saint Augustine Bar, Fla	....	....	....	1	....	1	....	....	....	1	3
Saint Andrews Bay, Fla	....	....	....	....	....	....	....	....	1	....	1
Saint Catharine's Sound, Ga	....	....	....	....	....	....	....	....	1	....	1
Saint George's Island, Chesapeake Bay	....	....	....	....	....	....	1	....	....	....	1
Saint John's Bar, Fla	3	1	....	1	2	2	2	1	....	1	13
Saint Lucie (10 miles north of), Fla	....	....	....	....	....	1	....	....	....	....	1
Saint Simon's Bar, Ga	1	....	....	....	....	....	1	....	....	....	2
Saint Vincent's Island, Fla	....	....	....	....	1	....	....	....	....	....	1
Sakonnet Point, R. I	....	....	2	....	....	1	3	....	....	....	6
Salem, Mass	....	....	....	....	....	....	1	....	....	....	1
Salt Island Ledge (off Cape Ann), Mass	....	1	....	....	....	....	....	....	....	....	1
Saluria, Tex	....	....	2	....	....	....	....	....	....	....	2

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Sand Island, Ala	...	...	...	...	...	...	...	...	1	...	1
Sand Shoal Inlet, Va	...	...	...	...	1	...	...	...	...	...	1
Sandwich, Mass	...	...	...	...	...	...	1	...	...	...	1
Sandy Hook, N. J	4	...	4	1	3	2	2	2	2	4	24
Sandy Point, Albemarle Sound, N. C	...	...	...	...	...	...	...	...	...	1	1
Sandy Point, Chesapeake Bay	...	...	...	4	...	...	...	...	...	...	4
Sandy Point, Conn	...	...	...	...	...	...	1	...	...	...	1
San Bernard Bar, Tex	...	...	...	...	...	...	...	...	...	1	1
San Luis Pass, Tex	...	4	...	...	...	1	...	1	...	1	7
San Luis Pass (2 miles northeast of), Tex	...	...	...	...	1	...	...	...	...	1	2
San Luis Pass (2 miles southwest of), Tex	...	...	...	...	...	...	...	...	...	1	1
San Luis Pass (4 miles west of), Tex	...	...	...	...	1	1	...	...	...	...	2
Santa Rosa Island, Fla	1	1	...	2	...	2	1	2	1	...	10
Sapelo Shoals, Ga	1	...	...	...	...	...	...	...	...	...	1
Saquish Point, Mass	...	...	...	...	...	...	1	...	...	...	1
Saybrook Bar, Conn	1	1	1	2	3	...	3	...	...	...	11
Saybrook Point, Conn	...	...	...	...	...	1	...	...	1	...	2
Schoodic Island, Frenchman's Bay, Me	...	...	...	...	1	...	1	...	...	...	2
School-ship Rock, Vineyard Haven, Mass	...	...	...	...	...	1	...	...	...	...	1
Scituate, Mass	...	3	...	2	3	1	2	1	1	...	13
Seabright, N. J	...	...	...	...	...	...	2	...	...	1	3
Sea Grove, N. J	...	...	...	1	...	...	...	...	...	...	1
Sea Horse Ledge, Machias Bay, Me	...	...	...	...	...	...	...	...	...	1	1
Seal Cove, Mount Desert, Me	...	...	1	...	...	...	...	...	...	...	1
Seal Harbor, Muscle Ridge Channel, Me	...	...	...	1	2	1	...	...	1	...	5
Seal Island, Machias, Me	...	...	...	...	1	...	...	...	...	...	1
Seavey's Island, Portsmouth Harbor, N. H	...	...	1	...	...	...	...	1	2	...	4
Seven-Foot Knoll, Chesapeake Bay	...	...	...	...	...	...	...	...	1	...	1
Severn River (mouth of), Md	...	...	...	...	1	...	...	...	...	...	1
Sewell's Point, Chesapeake Bay, Va	...	...	1	...	...	...	...	...	...	...	1
Shabbit Island, Me	...	1	...	...	...	...	...	...	...	...	1
Shallotte Inlet, N. C	...	...	...	1	...	1	...	...	...	...	2
Shark River, N. J	1	...	...	...	2	1	...	...	...	1	5
Sheep Island Bar, West Penobscot Bay, Me	...	...	...	...	...	...	...	1	1	...	2
Sheepscot River (mouth of), Me	...	...	...	...	1	...	...	...	...	...	1
Shinnecock, Long Island, N. Y	1	...	2	1	...	...	...	2	...	...	6
Ship Island (shoal off), Miss	...	...	...	...	...	...	...	...	1	...	1
Ship Shoals, Va	...	...	...	1	...	...	...	...	...	...	1
Shippan Point Reef, Long Island Sound	1	1	...	...	...	...	...	...	...	...	2
Shiverly Ledge (off Spruce Head), Me	...	...	...	...	1	...	...	...	...	...	1
Shore Island, R. I	...	...	...	...	1	...	...	...	...	...	1
Short Beach, N. J	...	...	...	...	...	3	...	...	...	...	3
Shot Islands, Englishman's Bay, Me	...	...	...	...	...	...	...	...	1	...	1
Shovelful Shoal, Nantucket Sound, Mass	...	1	3	...	1	2	...	...	...	...	7
Simonton's Cove, Cape Elizabeth, Me	...	...	1	...	...	...	...	...	...	...	1
Sinepuxent Neck, Md	1	...	...	1	2	1	...	...	...	...	5
Sisters, The, Saint George's River approaches, Me	...	...	...	...	...	...	...	...	1	...	1
Skiff Shoals, Nantucket Sound, Mass	...	...	...	...	...	...	...	1	...	...	1
Skinner's Head, Marblehead Harbor, Mass	...	...	...	1	1	...	...	...	...	...	2
Sloop Ledge, Sheepscot Bay, Me	...	...	...	...	...	1	...	...	...	...	1
Smith's Island, Va	...	...	3	...	1	1	1	1	1	3	11
Smith's Island (Isaac's Shoals), Va	...	...	...	...	...	...	1	2	...	2	5
Smith's Point, Chesapeake, Va	1	...	...	...	...	...	3	1	1	2	8
Smith's Point (5 miles northwest of), Chesapeake Bay, Va	...	...	...	...	...	...	...	...	1	...	1
Smith's Point, Long Island, N. Y	...	...	...	...	1	1	...	1	1	1	5
Smith's Rock, Long Island Sound	2	...	...	...	...	...	...	...	...	...	2
Smith's Rock, Scituate Neck, Mass	...	...	...	1	...	...	...	...	...	...	1
Smithtown Harbor, Long Island, N. Y	...	...	...	2	1	...	...	...	...	...	3
Somers Point, N. J	...	...	...	...	...	2	...	...	...	...	2
South Breaker, off Baker's Island	...	...	...	...	2	...	...	...	...	...	2
South Chatham, Mass	...	...	...	...	1	...	...	...	...	...	1
Southern Island (near Saint George), Me	...	...	...	...	1	...	...	...	...	...	1
South Hampton, Long Island, N. Y	1	1	...	...	...	...	...	...	...	...	2
South Harwich, Mass	...	...	...	...	...	...	1	...	...	...	1
South Island Fishing Bank, S. C	...	...	...	...	...	...	1	...	...	...	1
South Marshfield, Beatie's Island, Me	...	1	...	...	...	...	...	...	...	...	1
South Norwalk, Conn	...	...	...	...	...	...	...	1	...	...	1
Southport Bar, Conn	1	...	...	1	...	...	...	...	...	...	2
Southport Island, Me	3	...	...	...	...	...	...	...	...	...	3
South Saint George, Me	...	...	...	2	...	...	...	...	...	...	2
Southwest Harbor (Mount Desert Island), Me	...	...	...	...	...	...	...	...	...	1	1
Southwest Ledge, New London, Conn	...	...	...	...	...	...	1	...	...	...	1
Southwest Pass, mouth of Mississippi River, La	...	...	...	1	...	...	...	...	...	...	1

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Sow and Pigs, Vineyard Sound, Mass	1	....	....	1	....	....	2	1	..	....	5
Spectacle Island, Cumberland Inlet, Ga	....	....	....	1	....	....	....	....	....	....	1
Spindle Rock, south side Rose Island, R. I	....	....	....	....	....	....	....	1	....	....	1
Spruce Head Island, Muscle Ridge Channel, Me	....	....	....	....	....	1	....	1	1	1	4
Spruce Island (off Machias), Me	....	....	....	....	1	....	....	....	....	....	1
Spruce Point, Booth Bay Harbor, Me	....	....	....	1	....	....	1	....	....	....	2
Spruce Point Ledge, Me	1	1	....	....	....	....	....	....	....	....	2
Squam Beach, Mass	....	....	....	....	....	....	....	2	....	1	3
Squan Beach, N. J	1	2	2	2	1	....	2	3	1	....	14
Squash Meadow Shoals, Vineyard Sound, Mass	....	2	1	....	....	....	....	....	1	....	4
Squid Ledge, Block Island Sound, R. I	....	....	....	....	....	....	....	....	....	1	1
Squipnocket Beach, Mass	....	....	....	....	....	....	....	1	....	....	1
Stage Island, Saco Bay, Me	....	....	....	....	....	1	....	....	....	....	1
Stamford, Conn	....	1	....	....	....	1	2	2	....	....	6
Stanley's Point, Me	....	....	....	....	....	....	1	....	....	....	1
Staten Island, N. Y	....	1	1	1	....	....	....	1	....	1	5
Stingray Point, Chesapeake Bay, Va	....	....	2	....	....	....	....	....	....	....	2
Stone Beacon Ledge, Portsmouth Harbor, N. H	....	....	....	1	....	....	....	....	....	....	1
Stone Horse Shoal, Nantucket Sound, Mass	....	....	1	1	1	....	1	....	3	....	7
Stone Horse Shoal (near Tybee Island), Ga	....	....	2	....	....	....	....	....	....	....	2
Stonington Harbor (Academy Ground) Conn	....	....	1	....	....	....	....	....	....	....	1
Stony Inlet, S. C	....	....	2	....	....	1	....	....	....	1	4
Stony Point, Cape Poge, Mass	....	....	....	1	....	....	....	....	1	....	2
Straitsmouth Island (off Cape Ann), Mass	....	....	....	....	....	1	....	....	....	1	2
Stratford Shoals, Conn	1	....	....	1	....	....	....	....	....	1	3
Straw's Point (ledge near), N. H	....	....	....	....	....	1	....	....	....	....	1
Success Rock, Long Island Sound	....	....	....	....	....	....	....	....	1	....	1
Sugar Loaf (mouth of Kennebec River), Me	....	....	....	....	....	....	1	....	....	....	1
Sugar Reef (near Watch Hill), R. I	....	....	....	....	....	....	....	2	....	1	3
Swampscott, Mass	....	....	2	....	....	....	....	....	....	....	2
Swan Point, Chesapeake Bay	....	....	....	....	1	....	....	....	....	1	2
Sweet's Island, Sheepscott River (mouth of), Me	....	....	....	....	1	....	....	....	....	....	1
Tally's Point, Chesapeake Bay, Md	....	....	....	....	1	....	....	....	....	....	1
Tampa, Fla	....	....	....	....	1	....	....	....	....	....	1
Tampa Bay (rocks near), Fla	....	....	....	....	....	....	....	....	1	....	1
Tampa Bay (30 miles south of entrance) Fla	....	....	....	....	....	....	....	....	1	....	1
Tanner's Point, Long Island, N. Y	....	....	....	....	1	....	....	....	....	....	1
Tarpaulin Cove, Vineyard Sound, Mass	1	3	....	....	....	1	1	....	....	....	6
Taylor's Island, Chesapeake Bay, Md	....	....	....	....	....	1	1	....	....	....	2
Tennant's Harbor, Me	....	....	....	....	1	....	....	....	....	....	1
Ten-Pound Island, Gloucester Harbor, Mass	1	....	2	....	....	....	1	....	1	....	5
Terry Ledge (off White Head Light), Me	....	....	1	....	....	....	....	....	....	....	1
Thatcher's Island, Mass	....	....	3	2	....	....	1	....	....	....	6
Thimble, The, Long Island Sound	....	2	....	....	....	1	1	....	....	....	4
Thompson's Ledge, Cranberry Island, Me	....	....	....	....	....	....	1	....	....	....	1
Three Sisters, Chesapeake Bay	....	....	1	....	....	....	....	....	1	....	2
Three Tree Island, Me	....	1	....	....	....	....	....	....	....	....	1
Thomas Point Shoal, Chesapeake Bay, Md	....	....	....	....	....	....	....	....	....	1	1
Throg's Point (rock near), Long Island Sound	....	....	....	....	....	1	....	....	....	....	1
Thurlow's I land, Deer Island Thoroughfare, Me	....	....	....	....	....	....	....	....	1	....	1
Tiger Island, Ga	....	....	....	....	....	1	....	....	....	....	1
Tilghman's Island, Chesapeake Bay, Md	....	....	....	....	....	1	....	....	....	....	1
Timbalier Island, La	....	....	....	....	1	....	1	....	....	....	2
Tiverton, R. I	....	....	....	....	1	1	....	....	....	....	2
Toddy's Rocks, Boston Harbor, Mass	....	....	1	....	....	....	1	....	1	....	3
Tom Moore's Rocks, Mass	....	....	....	....	....	1	....	....	....	....	1
Tom Never's Head, Nantucket Sound, Mass	....	....	....	....	....	1	....	....	....	....	1
Tom's River, N. J	....	....	....	....	....	1	....	....	....	....	1
Tom's Rock (off Kennebec River), Me	....	....	....	....	....	....	....	....	1	....	1
Too's Point, Chesapeake Bay, Va	1	1	....	....	....	....	....	....	....	....	2
Townsend's Inlet, N. J	1	4	2	....	....	2	2	....	2	4	17
Truro, Mass	....	1	....	1	1	....	....	2	....	....	5
Tucker's Beach, N. J	1	....	....	....	....	....	....	1	1	....	3
Tuckernuck Shoals, Nantucket Sound, Mass	....	2	....	2	1	2	1	1	....	2	11
Turner's Shoal, Assateague, Va	1	....	....	....	....	1	....	....	....	1	3
Turtle Gut Inlet, N. J	....	....	....	1	1	....	....	1	....	2	5
Tybee Island, Ga	....	2	....	....	1	....	....	1	....	1	5
Vancock Shoals, Tex	....	1	....	....	....	....	....	....	....	....	1
Vineyard Haven, Mass	1	6	3	....	4	12	6	3	2	1	38
Wading River, Long Island, N. Y	....	....	....	....	....	....	1	....	....	....	1
Wallop's Beach, Va	....	....	....	....	....	....	....	....	1	....	1

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

ATLANTIC AND GULF COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Warwick Neck, Narragansett Bay, R. I	....	..	....	....	....	....	....	....	....	1	1
Wasque Bluff, Martha's Vineyard, Mass	....	..	....	....	....	....	....	....	1	....	1
Watchapreague Inlet, Va	3	2	2	2	3	....	1	....	2	1	16
Watchapreague Inlet (Dawson's Shoals), Va	....	..	....	....	....	....	....	2	....	....	2
Watch Hill, R. I	1	....	....	....	....	..	2	2	1	..	6
Webber's Ledge, Muscongus Sound, Me	....	....	1	....	....	....	....	....	....	....	1
Wellfleet, Cape Cod, Mass	1	....	....	....	....	....	1	....	1	....	3
Well's Beach, Me	1	....	1	....	....	....	....	1	....	..	3
West Chop, Vineyard Sound, Mass	1	2	9	....	....	1	1	3	2	....	19
West Dennis, Cape Cod, Mass	1	..	....	....	..	....	1	....	....	....	2
West Island, Buzzard's Bay, Mass	....	....	....	....	....	....	....	....	1	....	1
West Hampton Bar, Long Island	....	....	....	....	1	..	....	....	....	....	1
Westport Point, Mass	....	....	....	....	1	....	....	....	....	....	1
West Quoddy Head, Me	....	....	....	....	....	1	....	....	1	1	3
West Sister, The, Portsmouth Harbor, N. H	....	....	....	....	....	....	....	1	....	....	1
West Triangle, Me	....	....	....	....	....	..	1	....	....	....	1
Whale Back Shoal, Cape Cod, Mass	....	....	....	....	....	1	....	....	....	....	1
Whale Rock, Narragansett Bay, R. I	....	....	....	....	....	1	1	....	....	....	2
Whale Rock Light, Me	....	1	....	....	....	....	....	....	....	....	1
Wheaton's Reef, Long Island Sound, Conn	....	....	....	....	....	....	....	....	....	1	1
Wheeler's Bay, Me	....	....	1	....	....	....	....	....	....	2	3
White Head (1 mile south of light), Me	....	....	....	....	....	1	....	....	....	....	1
White Head Island, Penobscot Bay, Me	....	....	..	....	..	..	....	2	1	1	4
Whitestone Point, N. Y	....	....	....	....	....	....	1	....	....	....	1
Whortleberry Island, Long Island Sound	....	....	....	....	....	....	1	....	....	....	1
Wickford, R. I	....	....	....	....	....	..	....	....	....	1	1
Wicopesset Island and Reefs, Conn	....	....	..	....	....	1	....	....	....	1	2
Wilkes' Ledge, Buzzard's Bay, Mass	....	1	....	....	....	....	....	....	....	....	1
Willoughby Spit, Chesapeake Bay	1	....	....	....	..	1	....	....	....	....	2
Windmill Point, Chesapeake Bay, Va	....	....	....	....	....	....	....	....	1	....	1
Windmill Point, Stonington, Conn	....	....	1	....	....	....	....	....	....	....	1
Winter Quarter Shoals, Va	2	1	1	....	....	..	2	....	....	....	6
Winthrop Beach, Boston Bay, Mass	1	1	....	....	....	..	....	....	....	..	2
Winthrop Head, Boston Bay, Mass	....	....	....	....	....	1	....	....	....	....	1
Wolf Island Spit, Ga	....	....	....	....	....	....	....	....	1	....	1
Wolftrap Shoal, Mobjack Bay, Va	....	..	1	....	1	....	....	....	....	1	3
Wood End, Cape Cod, Mass	....	5	1	1	1	4	....	....	....	....	12
Wood's Holl, Mass	..	....	1	....	....	1	....	....	2	1	5
Wood Island, Saco Bay, Me	....	..	....	..	1	..	....	2	....	1	4
Wood Island Ledges, Kennebec River, Me	..	....	....	....	....	1	....	....	....	....	1
Woodville Landing, Conn	....	....	....	....	....	....	1	....	....	....	1
Wreck Pond Inlet, N. J	....	....	....	....	....	....	....	....	....	1	1
Wreck Shoals, Mass	....	....	....	....	....	1	....	....	....	....	1
York Beach, Me	1	....	1	....	....	1	....	....	....	....	3
York Ledge, Me	....	1	....	1	....	....	....	....	....	....	2
York Point, Blue Hill Bay, Me	....	....	....	....	....	1	....	....	....	..	1
York Spit, Chesapeake Bay, Va	....	....	....	....	....	....	....	1	....	....	1
Young's Point, Fox Island Thoroughfare, Me	..	..	1	..	..	....	....	....	....	1	2

PACIFIC COAST.*

Albion River, Cal	....	....	....	....	....	1	....	....	....	....	1
Alcatraz Island, San Francisco Bay, Cal	..	....	1	....	1	....	....	1	....	....	3
Angel Island, San Francisco Bay, Cal	....	....	....	....	....	....	1	....	....	..	1
Aquina Bar, Oreg	....	....	1	....	....	....	....	....	....	....	1
Arch Rock, San Francisco Bay, Cal	....	....	....	....	1	....	....	....	1	....	2
Astoria, Oreg	....	1	....	....	....	....	....	....	....	1	2
Belkopsky (one of the Ounga Islands), Alaska	....	..	....	....	....	1	....	....	....	....	1
Berkeley, San Francisco Bay, Cal	..	....	....	....	....	....	1	....	....	....	1
Black Point, San Francisco Bay, Cal	....	..	....	....	....	....	1	....	....	..	1
Bodega Head, Cal	....	....	....	....	....	....	2	....	....	....	2
Bolinas, Cal	....	..	....	....	....	1	....	....	....	....	1
Bowen's Landing, Mendocino County, Cal	....	..	....	2	1	1	....	....	....	1	5
Brother's Island, San Francisco Bay, Cal	....	....	....	....	....	....	1	..	1	....	2
Cape Flattery, Wash. Ter	....	....	1	1	....	..	....	....	....	....	2
Cape Foulweather (10 miles north of), Oreg	..	....	2	....	....	....	....	....	....	....	2
Cape Hancock or Cape Disappointment, Wash. Ter	..	....	....	....	....	....	..	....	1	....	1
Caprian Islands, Alaska	....	..	1	....	....	....	....	....	....	1	1

* In a few instances the number of stranded vessels in this table do not agree with those reported in the annual report of the previous year, having been increased by wreck reports received since the publication of the last report.

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

PACIFIC COAST—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Caspar, Cal	....	....	1	....	....	....	1	....	....	1	3
Catalina Island, Cal	....	....	....	....	....	....	....	....	1	....	1
Clark's Island Reef, Washington Sound	....	1	....	....	....	....	....	....	....	....	1
Clatsop Spit (mouth of Columbia River)	....	1	1	....	....	....	....	....	2	....	4
Columbia River Bar	....	2	....	1	4	1	1	1	2	1	13
Coos Bay Bar, Oreg	2	....	....	....	1	1	2	1	1	....	8
Coos Bay Bar (9 miles north of), Oreg	1	1	....	....	....	....	....	....	....	....	2
Coquille River (mouth of), Oreg	....	....	....	....	....	....	....	....	2	....	2
Coquille River (5 miles south of), Oreg	....	....	....	1	....	....	....	....	....	....	1
Cottoneva, Cal	....	....	....	1	....	....	....	....	....	....	1
Crescent Bay, Wash. Ter	....	....	....	....	1	....	1	1	....	....	3
Crescent City, Cal	....	....	....	1	1	1	2	3	....	....	8
Cuffey's Cove, Cal	1	....	....	1	....	....	....	1	....	1	4
Deadman's Island, San Pedro Bay, Cal	....	....	....	....	....	....	1	....	....	....	1
Destruction Island, Wash. Ter	....	....	1	....	....	....	....	....	....	....	1
Drake's Bay, Cal	....	....	....	....	2	....	....	....	....	....	2
Duncan's Mill, Sonoma County, Cal	....	1	....	....	....	....	....	....	....	....	1
Duxbury Point Reef, Cal	1	1	....	....	1	1	....	....	....	....	4
East Brother Island, San Francisco Bay, Cal	....	....	....	....	....	....	....	....	1	....	1
Ediz Hook, Wash. Ter	....	....	....	....	....	....	1	....	....	....	1
Eel River Bar, Cal	....	....	....	....	2	....	....	....	....	....	2
Farallon Islands, Cal	....	2	....	....	....	....	....	....	....	....	2
Ferguson's Cove, Cal	....	....	....	....	....	....	....	....	....	2	2
Fidalgo Island, Alaska	....	....	....	....	....	....	1	....	....	....	1
Fish Rocks, Cal	....	1	....	....	1	1	1	1	1	....	6
Fisk's Mill, Cal	....	....	1	....	....	....	....	....	....	....	1
Fort Point, San Francisco Bay, Cal	....	1	....	1	....	....	....	....	2	....	4
Fort Ross, Cal	....	1	....	....	....	....	1	....	1	....	3
Fort Stevens, Oreg	....	1	....	....	....	....	....	....	....	....	1
Fresh Water Bay, Wash. Ter	....	1	....	....	....	....	1	....	....	....	2
Gerstler's Cove, Cal	....	....	....	....	1	....	....	....	....	....	1
Golden Gate, Cal	....	....	....	....	....	....	....	1	1	1	3
Goleta, Cal	....	....	....	....	1	....	....	....	....	....	1
Golorin Sound, Alaska	....	....	....	....	....	....	....	....	1	....	1
Gualala, Cal	....	....	....	....	....	....	....	1	....	....	1
Hueneme, Cal	....	....	....	....	....	....	....	....	....	1	1
Humboldt Bar, Cal	....	....	....	....	2	....	....	....	1	2	5
Hunter's Point, San Francisco Bay, Cal	....	....	....	....	1	....	....	....	....	....	1
Kadiak Harbor, 21 miles southeast of, Alaska	....	1	....	....	....	....	....	....	....	....	1
Kake Island, Alaska	1	1	....	....	....	....	....	....	....	....	2
Karluk, Kadiak Island, Alaska	....	....	....	....	....	....	....	....	1	....	1
Karquines Strait, Cal	....	....	....	1	....	....	2	....	....	....	3
Lime Point, San Francisco Bay, Cal	....	....	....	....	1	....	....	....	1	....	2
Little River, Cal	....	....	1	....	1	1	1	....	....	3	7
Marrowstone Point, Wash. Ter	....	....	1	....	....	....	....	....	....	1	2
Mendocino, Cal	....	....	....	....	1	....	....	....	....	....	1
Middle Ground, Suisun Bay, Cal	....	....	....	....	....	....	1	....	....	....	1
Mile Rocks, entrance to San Francisco Bay, Cal	....	....	....	1	2	....	1	1	....	1	6
Mission Rocks, San Francisco Bay, Cal	....	....	....	....	....	1	....	....	....	....	1
Montery Harbor, Cal	....	....	....	....	....	1	....	....	....	....	1
Mora Bay, Cal	....	....	....	2	....	....	....	....	....	....	2
Neah Bay, Wash. Ter	....	....	....	....	....	....	....	2	....	....	2
New Dungeness, Wash. Ter	1	....	....	....	....	2	....	....	....	....	3
Newport, Cal	1	....	....	....	....	....	1	....	....	1	3
Nisqually River (mouth of), Puget Sound	....	....	....	....	....	....	....	1	....	....	1
North Beach, San Francisco Bay, Cal	....	....	....	....	....	....	1	....	....	....	1
North Head, San Francisco Bay, Cal	....	1	....	....	....	....	....	....	....	....	1
Navarro River (mouth of), Cal	....	....	....	....	....	1	....	1	....	....	2
Noyo River (mouth of), Cal	....	....	....	....	1	....	....	1	....	....	2
Oonalaska Island, Alaska	....	....	....	....	....	....	1	....	....	....	1
Ounga Island, Alaska	....	....	....	1	....	....	....	....	....	....	1
Peacock Spit, mouth of Columbia River	....	....	....	....	....	....	....	....	....	1	1
Pillar Point, Cal	....	....	....	1	....	....	....	....	....	....	1
Pillar Point, Straits of Fuca, Wash. Ter	....	....	....	....	....	....	....	....	1	....	1
Point Adams, Oreg	....	....	....	....	....	1	....	....	....	....	1
Point Arena, Cal	1	2	1	....	....	1	1	1	....	....	7
Point Bonita, Cal	....	....	....	....	1	....	....	1	....	....	2
Point Bonita (5 miles northwest of), Cal	....	....	....	....	....	1	....	....	....	....	1
Point Fermin, Cal	....	....	....	....	....	....	....	....	1	....	1
Point Gorda, Cal	1	....	....	....	....	....	....	....	....	....	1
Point Greenville, Wash. Ter	1	....	....	....	....	....	1	....	....	....	2
Point Lobos, Golden Gate, Cal	....	....	....	....	....	....	....	....	1	....	1
Point Montara Reef (near), Cal	....	....	....	....	....	....	....	1	....	....	1
Point of Rocks, Mission Bay, Cal	....	....	....	....	1	....	....	....	....	....	1
Point of Rocks, Wrangel, Alaska	....	....	1	....	....	....	....	....	....	....	1

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PACIFIC COAST—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Point Reyes, Cal	....	1	....	1	1	1	....	....	....	1	5
Point Sal, Cal	....	....	1	....	1	....	....	1	....	....	3
Point San Luis (1 mile west of), Cal	....	....	....	....	....	....	....	1	....	....	1
Point San Pedro, Cal	....	....	....	....	....	....	1	....	....	....	1
Point Sur, Cal	....	1	....	....	....	....	....	....	....	....	1
Point Wilson, Wash. Ter	....	....	1	....	....	....	....	1	....	....	2
Port Orford, Oreg	....	....	1	....	....	....	....	....	....	....	1
Port Orford (15 miles south of), Oreg	....	....	....	....	1	....	....	....	....	....	1
Port Townsend, Wash. Ter	....	....	....	....	....	....	1	....	....	....	1
Red Rock, San Francisco Bay, Cal	....	....	....	....	....	....	1	....	....	....	1
Rockport, Cal	....	....	....	....	....	....	....	....	....	1	1
Rocky Point, Cal	....	....	....	1	....	....	....	....	....	....	1
Rogue River Bar, Oreg	....	1	1	....	....	....	2	....	....	....	4
Rough and Ready (5 miles south of Point Arena), Cal	....	....	....	....	1	....	....	....	....	....	1
Sacramento River (mouth of), Cal	....	....	....	....	....	....	....	....	1	....	1
Saint Lawrence Island, Behring Sea, Alaska	....	....	....	....	....	....	....	1	....	....	1
Saint Paul's Island (ledge off), Alaska	....	....	....	....	....	....	....	1	....	....	1
Salmon Creek, Cal	....	....	....	....	1	....	....	....	....	....	1
San Buenaventura, Cal	....	....	3	1	....	....	....	....	....	....	4
San Diego Bay, Cal	....	....	....	....	1	....	....	....	....	....	1
San Juan Island, Straits of Fuca, Wash. Ter	1	....	....	1	....	....	....	....	....	....	2
San Miguel Island, Cal	....	....	....	....	....	....	2	1	....	....	3
San Pablo Bay, Cal	....	....	....	....	1	....	....	....	....	1	2
San Pedro Bay, Cal	....	....	....	....	....	....	....	1	....	....	1
Sand Island, Oreg	1	....	1	....	....	1	....	....	....	....	3
Santa Cruz Point, Cal	....	....	....	1	....	....	1	....	....	....	2
Shoalwater Bay, Wash. Ter	....	....	1	....	....	....	1	....	2	....	4
Sitka (4½ miles southeast of), Alaska	....	....	....	....	....	....	....	....	....	1	1
Smith's Point, Oreg	....	....	1	....	....	....	....	....	....	....	1
Smith's River (mouth of), Cal	....	....	....	....	1	1	....	1	....	....	3
Soquel, Cal	....	....	....	....	....	....	....	1	....	....	1
South Beach, San Francisco Bay, Cal	....	1	1	....	....	....	....	....	....	....	2
South Farallon Island, Cal	....	....	....	....	....	....	....	1	....	....	1
Stewart's Point, Cal	....	....	1	....	....	....	....	1	....	....	2
Tillamook Bar, Oreg	....	....	....	....	....	....	....	1	....	....	1
Timber Cove, Cal	....	....	....	....	....	....	....	....	....	1	1
Tomales Point, Cal	1	....	....	....	....	....	....	....	....	....	1
Trinidad, Cal	....	....	....	....	1	....	....	....	....	....	1
Umpqua Bar, Cal	1	....	1	....	....	1	....	....	....	....	3
Umpqua Bar (4 miles north of), Oreg	....	....	....	....	....	....	....	....	....	1	1
Utsaladdy Bay, Wash. Ter	....	....	....	....	....	....	....	....	....	1	1
Westport, Humboldt Bay, Cal	....	....	....	....	....	1	1	....	....	....	2
Whitesboro Landing, Mendocino County, Cal	....	....	....	....	....	....	....	....	....	1	1
Wilmington Bay, Cal	....	....	1	....	....	....	....	....	....	....	1
Wyanda Rock, Peril Straits, Alaska	....	....	....	....	....	....	....	....	....	1	1
Yaquima Bay, Cal	1	....	1	1	1	....	....	....	....	....	4

LAKE COASTS.*

[NOTE.—This list includes also places on the Canadian shore where American vessels have stranded.]

Ahnapee, Lake Michigan, Wis	....	1	....	....	....	1	....	....	3	....	5
Alabaster Reef, Lake Huron, Mich	....	....	1	....	....	....	....	....	....	....	1
Alaska, Lake Michigan, Wis	....	....	....	....	....	....	1	....	....	....	1
Alcona, Lake Huron, Mich	1	....	....	....	2	....	....	....	1	....	4
Alpena, Lake Huron, Mich	2	....	....	....	....	....	....	....	....	....	2
Amherstburg, Detroit River, Canada	....	2	....	....	1	....	....	....	....	....	3
Amherst Island, Lake Ontario, Canada	....	....	....	....	....	1	....	....	....	....	1
Antrim, Lake Michigan, Mich	....	1	1	....	....	....	....	....	....	....	2
Apostle Islands, Lake Superior, Wis	....	1	....	....	....	....	....	....	....	....	1
Ashland Bay, Lake Superior, Wis	....	....	....	....	....	....	....	1	....	....	1
Ashtabula, Lake Erie, Ohio	....	1	2	2	....	1	....	....	1	....	7
Ashtabula (8 miles southwest of), Lake Erie, Ohio	....	....	....	....	....	....	....	1	....	....	1
Au Sable, Lake Huron, Mich	....	....	....	....	1	....	2	....	....	1	4
Avon Point, Lake Erie, Ohio	....	1	....	....	....	....	....	....	....	....	1
Bailey's Harbor, Lake Michigan, Wis	....	....	2	....	....	....	....	7	....	....	9
Barcelona, Lake Erie, N. Y	....	....	....	1	....	....	....	....	....	....	1
Bark River (mouth of), Green Bay, Mich	....	....	....	1	1	....	....	....	1	....	3

* In a few instances the number of stranded vessels in this table do not agree with those reported in the annual report of the previous year, having been increased by wreck reports received since the publication of the last report.

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LAKE COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
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Bar Point, Lake Erie, Canada	4	1	1	....	1	....	1	....	2	....	10
Beaver Bay (2 miles northeast of), Lake Superior	....	....	....	....	....	....	1	....	....	....	1
Beaver Bay (8 miles northeast of), Lake Superior	....	....	....	....	....	....	1	....	....	....	1
Beaver Island, Lake Michigan, Mich	2	....	1	....	....	1	2	2	3	1	12
Belle Island, Detroit River, Mich	4	1	1	....	....	....	2	....	....	....	8
Biddle's Point, Lake Michigan, Mich	....	....	....	....	....	1	....	....	....	....	1
Big Point au Sable, Lake Michigan, Mich	....	....	....	....	....	....	....	1	1	1	3
Big Point au Sable (6 miles north of), Lake Michigan, Mich	....	....	....	....	....	....	....	....	....	1	1
Big Sandy Creek, Lake Ontario, N. Y	....	....	....	....	....	....	5	6	4	4	19
Big Sandy Creek (5 miles north of), Lake Ontario, N. Y	....	....	....	....	....	....	....	....	2	....	2
Big Sodus, Lake Ontario, N. Y	....	....	....	....	2	....	2	....	....	....	4
Black Lake Harbor, Lake Michigan, Mich	....	....	....	....	....	....	1	....	....	....	1
Black River, Lake Erie, Ohio	1	....	....	....	....	....	....	....	....	1	2
Black River, Lake Huron, Mich	....	2	....	....	....	....	....	....	....	....	2
Black River, Lake Michigan, Wis	....	....	....	....	....	....	1	....	....	....	1
Black Island Reef, Lake Huron, Mich	....	....	....	....	....	....	2	2	....	....	4
Bois Blanc Island, Detroit River, Canada	....	....	1	....	....	1	....	....	3	1	6
Bois Blanc Island, Straits of Mackinac, Mich	2	1	2	....	....	....	1	....	2	....	8
Braddock's Point, Lake Ontario, N. Y	....	....	....	1	....	....	....	....	....	....	1
Buffalo (4 miles west of), Lake Erie, N. Y	....	....	....	....	....	....	1	....	....	....	1
Buffalo Harbor, Lake Erie, N. Y	1	2	1	1	2	....	5	4	1	3	20
Burnt Cabin Point Reef, Lake Huron, Mich	....	....	....	....	1	....	....	....	1	....	2
Buckhorn Dock, Lake Erie, Canada	....	....	....	1	....	....	....	....	....	....	1
Calumet Harbor, Lake Michigan, Ill	....	....	....	....	....	....	....	....	1	....	1
Calumet (14 miles south of), Lake Michigan, Ill	....	....	....	....	....	....	....	....	1	....	1
Calumet Reef, Lake Michigan, Ill	....	1	....	....	....	....	....	....	....	....	1
Cana Island, Lake Michigan, Wis	....	1	....	....	....	....	....	1	....	....	2
Cape Vincent, Lake Ontario, N. Y	....	....	....	....	....	....	....	....	....	1	1
Carlton, Lake Michigan, Wis	1	....	....	....	....	1	....	....	....	....	2
Caseville, Lake Huron, Mich	....	....	....	....	....	....	....	....	....	2	2
Cat-Head Point, Lake Michigan, Mich	....	1	....	....	....	....	....	....	....	2	3
Cedar Point, Lake Huron	....	....	....	....	....	....	1	....	....	....	1
Cedar Point, Sandusky Bay, Lake Erie, Ohio	2	1	1	....	....	....	2	1	....	....	7
Cedar River, Lake Michigan, Mich	....	....	1	....	....	....	....	....	....	....	1
Centreville (1 mile north of), Lake Michigan, Mich	....	....	....	....	....	....	....	....	1	....	1
Chamber's Island, Lake Michigan, Wis	1	....	....	....	....	....	....	....	....	....	1
Charity Shoal, Lake Ontario	....	....	....	....	....	....	....	....	1	....	1
Charlevoix, Lake Michigan, Mich	....	....	....	1	....	....	....	....	....	1	2
Charlotte, Lake Ontario, N. Y	....	1	1	....	....	2	....	....	1	....	5
Charlotte (5 miles west of), Lake Ontario, N. Y	....	....	....	....	1	....	....	1	....	....	2
Chaquamegon Point, Lake Superior, Wis	....	....	....	....	....	....	....	1	....	....	1
Cheboygan (Straits of Mackinac), Mich	1	....	4	....	1	1	1	1	1	....	10
Cheboygan (18 miles east of), Straits of Mackinac, Mich	....	....	....	....	....	....	....	1	....	....	1
Chester's Reef, Lake Erie	....	1	....	....	....	....	....	....	....	....	1
Chicago Harbor, Lake Michigan, Ill	1	1	6	....	3	....	4	1	2	4	22
Chick-e-no-lee Reef, Lake Erie, Canada	1	....	....	....	....	....	1	....	....	1	3
Chocolay River (1 mile east of), Lake Superior	....	....	....	1	....	....	....	....	....	....	1
Christian Island, Lake Huron, Canada	....	....	....	....	....	....	....	1	....	....	1
Clay Banks, Lake Erie	1	....	....	....	....	....	....	1	....	....	2
Clay Banks, Lake Michigan, Wis	....	....	....	....	....	....	2	....	1	....	3
Cleveland Harbor, Lake Erie, Ohio	3	1	2	....	1	....	2	3	3	....	15
Cockburn Island, Lake Huron, Canada	....	....	....	....	....	2	....	....	....	....	2
Colchester Reef, Lake Erie, Canada	....	1	....	....	....	1	....	1	5	....	8
Collingwood, Lake Huron, Canada	....	....	....	....	....	1	1	....	....	....	2
Conneaut (4 miles east of), Lake Erie, Ohio	....	....	....	....	....	1	....	....	....	....	1
Copper Harbor (reef at entrance), Lake Superior, Mich	....	....	....	....	....	....	....	....	1	....	1
Cove Island, Lake Huron, Canada	1	....	....	....	....	....	....	1	....	....	2
Death's Door, Lake Michigan, Wis	1	1	1	1	....	....	....	....	1	....	5
Detour, Detour Channel, Mich	....	1	....	....	1	....	2	1	....	3	8
Dorney's Reef Point, Lake Michigan	....	1	....	....	....	....	....	....	....	....	1
Dunkirk Harbor, Lake Erie, N. Y	....	2	1	....	....	....	....	....	1	....	4
Eagle Harbor, Green Bay, Lake Michigan, Wis	....	....	....	....	....	1	....	....	....	....	1
Eagle Harbor, Lake Superior, Mich	1	....	....	....	....	....	....	....	1	....	2
East Hamburg, Lake Erie, N. Y	....	....	....	1	....	....	....	....	....	....	1
East Sister Reef, Lake Erie, Canada	....	....	....	....	....	1	....	....	....	....	1
Eleven-Foot Shoals, Green Bay, Lake Michigan	....	1	....	....	....	....	....	1	1	2	5
Elk Creek, Lake Erie, Pa	....	....	....	....	....	....	1	....	....	....	1
Elk Rapids, Lake Michigan, Mich	....	....	....	....	....	....	1	....	....	....	1
Ellison Bay, Lake Michigan, Wis	....	....	....	1	....	....	....	1	....	....	2
Erie Peninsula, Lake Erie, Pa	....	....	....	....	....	....	....	1	....	....	1
Erie (4 miles east of), Lake Erie, Pa	....	....	....	....	....	....	....	4	....	....	4
Erie Harbor, Lake Erie, Pa	....	2	1	....	1	....	2	1	....	1	8
Erie (reef 9 miles east of), Lake Erie, Pa	....	....	....	....	....	....	....	1	....	....	1
Escanaba, Lake Michigan, Mich	....	....	1	....	....	....	....	....	....	....	1

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

LAKE COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Escanaba (6 miles south of), Lake Michigan, Mich	....	....	....	....	....	....	....	....	....	1	1
Evanston, Lake Michigan, Ill	2	....	....	....	....	....	1	....	1	....	4
Fairport, Lake Erie, Ohio	2	2	1	....	1	1	1	5	1	1	15
False Presque Isle, Lake Huron, Mich	....	....	2	....	2	....	1	....	....	....	5
Fayette Harbor (1 mile southwest of), Lake Michigan, Mich	....	....	....	....	....	....	....	....	1	....	1
Featherbed Shoals, Lake Ontario	....	1	....	....	....	....	....	1	....	....	2
Fighting Island, Detroit River	....	1	....	....	....	1	1	1	2	....	6
Fish Point (near Point au Pelée), Lake Erie, Canada	....	....	....	....	....	1	....	....	....	....	1
Fishing Island Shoal, Lake Michigan, Mich	....	....	1	....	....	....	....	....	....	1	2
Ford Shoals, Lake Ontario, N. Y	....	....	....	....	....	1	....	....	....	....	1
Forest Bay, Lake Huron, Mich	....	1	....	....	....	1	....	....	....	....	2
Forty-mile Point, Lake Huron, Mich	....	1	....	1	1	....	....	....	....	1	4
Forty-mile Point, Lake Ontario, N. Y	....	....	....	....	1	....	....	....	....	....	1
Foscoro, Lake Michigan, Wis	....	....	....	....	....	....	1	....	....	....	1
Fox Island Shoal, Lake Michigan, Mich	....	....	....	....	....	....	....	1	....	....	1
Frankfort, Lake Michigan, Mich	3	1	2	....	....	1	....	2	1	1	11
Free Soil, Lake Michigan, Mich	....	....	....	....	....	....	....	....	....	1	1
Galloo Island, Lake Ontario, N. Y	....	....	....	....	1	....	....	1	....	....	2
Garden Island, Lake Michigan	....	....	....	....	....	....	1	....	....	....	1
Georgian Bay, Canada	....	....	....	....	....	....	....	....	1	....	1
Glen Arbor, Lake Michigan, Mich	....	....	....	....	....	....	1	....	....	1	2
Glencoe, Lake Michigan, Ill	....	....	....	....	....	....	1	....	....	....	1
Good Harbor Bay, Lake Michigan, Mich	....	....	2	....	....	....	....	....	....	....	2
Goose Island Shoal, Straits of Mackinac, Mich	....	....	....	....	....	....	1	....	....	....	1
Graham's Shoals, Straits of Mackinac, Mich	1	....	....	....	2	....	....	1	1	1	6
Grand Haven, Lake Michigan, Mich	6	3	6	2	3	9	9	1	2	1	42
Grand Isle, Lake Superior, Mich	1	1	1	1	....	....	....	....	....	....	4
Grand Manitoulin, Lake Huron, Canada	....	....	....	....	....	1	....	....	....	....	1
Grand Marais, Lake Superior, Minn	....	....	1	....	....	....	1	....	....	....	2
Grand Traverse Bay, Lake Michigan, Mich	....	....	....	....	....	....	....	....	1	....	1
Gravelly Point, Lake Huron, Mich	....	....	....	....	....	....	....	....	....	1	1
Gray's Reef, Lake Michigan, Mich	....	....	....	....	....	1	....	....	....	1	2
Greenbush, Lake Huron, Mich	....	....	....	....	....	....	....	1	....	....	1
Green Island, Lake Erie, Ohio	....	....	....	....	....	....	....	....	....	1	1
Grindstone City, Lake Huron, Mich	....	....	1	1	....	....	1	....	....	....	3
Grosse Island, Detroit River, Mich	1	....	1	1	....	....	....	....	2	....	5
Crosse Point, Lake Saint Clair, Mich	....	....	....	....	....	....	....	1	1	2	4
Grosse Point, Lake Michigan, Ill	....	....	....	....	....	....	....	....	....	1	1
Gull Island, Lake Michigan, Mich	....	....	....	....	1	1	....	1	....	1	4
Gull Island, Lake Ontario, N. Y	....	1	....	....	....	....	....	....	....	....	1
Gull Island Reef, Lake Erie	....	....	....	....	....	....	2	1	1	....	4
Gull Island Rock, Lake Superior	....	....	....	....	....	1	....	....	....	....	1
Hamlin, Lake Michigan, Mich	....	....	....	....	....	....	2	....	....	....	2
Hammond's Bay, Lake Huron, Mich	1	....	....	....	....	....	....	....	1	....	2
Hammond's Bay (10 miles northwest of L. S. S.), Lake Huron, Mich	....	....	....	....	....	....	....	....	1	....	1
Harrisville, Lake Huron, Mich	....	....	....	....	1	....	....	....	3	....	4
Hat Island, Green Bay, Lake Michigan, Wis	....	1	....	....	....	....	....	....	....	....	1
Hedge-Hog Harbor, Lake Michigan, Wis	....	....	....	....	....	....	....	1	....	....	1
Herson's Island, Lake Saint Clair, Mich	....	1	....	....	1	....	1	....	1	....	4
Hog Island Reefs, Lake Michigan, Mich	....	....	....	....	....	....	....	....	1	....	1
Holland, Lake Michigan, Mich	....	....	1	1	1	....	1	....	....	....	4
Horn Pier, Lake Michigan, Wis	....	....	....	....	....	....	1	....	....	....	1
Horseshoe Reef, Lake Erie, N. Y	....	....	....	....	....	1	1	2	1	3	8
Horseshoe Reef, Green Bay, Lake Michigan	....	....	....	....	....	1	....	....	1	....	2
Huron Island, Lake Superior, Mich	....	....	1	....	....	....	....	....	....	....	1
Huron River (mouth of), Lake Erie, Mich	....	....	....	....	....	....	....	....	1	....	1
Hyde Park (off), Lake Michigan, Ill	....	....	....	....	1	....	....	....	1	1	3
Indian Town Reef, Green Bay, Lake Michigan	....	....	....	....	....	1	....	....	....	....	1
Inverhuron Harbor, Lake Huron, Canada	....	2	....	....	....	....	....	....	....	....	2
Irondequoit, Lake Ontario, N. Y	....	....	....	....	....	....	1	....	....	....	1
Isle Royale, Lake Superior, Mich	....	....	....	1	....	....	....	....	....	....	1
Jacksonport, Lake Michigan, Wis	....	....	....	....	1	....	....	2	1	1	5
Kalamazoo River (mouth of), Lake Michigan	....	....	....	....	....	1	1	....	....	....	2
Kelley's Island, Lake Erie, Ohio	2	1	1	....	....	....	....	....	....	1	5
Kenosha, Lake Michigan, Wis	1	1	....	1	....	1	....	....	....	....	4
Kewaunee, Lake Michigan, Wis	2	....	1	....	....	....	....	....	....	....	3
Keweenaw Bay, Lake Superior, Mich	....	....	....	1	....	....	....	....	....	....	1
Lake Forest (2 miles south of), Lake Michigan, Ill	....	....	....	....	....	....	1	....	....	....	1
Leamington, Lake Ontario, Canada	....	....	1	....	....	....	....	....	....	....	1
Leland, Lake Michigan, Mich	....	....	....	....	1	....	1	....	....	....	2
Lester River (mouth of), Lake Superior, Minn	....	....	....	....	....	....	....	....	1	....	1
Lexington, Lake Huron, Mich	....	....	1	....	1	....	1	....	....	1	4
Lexington (10 miles north of), Lake Huron, Mich	....	....	....	....	....	....	....	....	....	1	1

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

LAKE COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Limekiln Crossing, Detroit River	....	....	....	....	....	....	5	1	4	....	10
Limekiln Reef, Detroit River	4	3	2	1	2	....	....	1	....	....	13
Limekiln Reef (mouth of), Niagara River, Lake Ontario	....	....	....	....	....	....	2	....	....	....	2
Limekiln Shoals, Lake Erie, Canada	....	....	....	....	....	....	....	....	3	....	3
Limestone Island, Georgian Bay, Canada	....	....	....	1	....	....	....	....	....	....	1
Little Manitou Island, Lake Michigan, Mich	....	1	....	....	....	....	....	....	....	....	1
Little Sturgeon Bay, Lake Michigan, Wis	....	....	1	....	....	....	....	....	....	....	1
Little Summer Island Reef, Lake Michigan, Mich	....	....	....	....	....	....	....	1	....	....	2
Long Point, Lake Erie, Canada	....	5	2	....	4	....	1	....	....	....	12
Long Point, Lake Ontario, Canada	....	....	....	....	....	....	1	1	....	....	2
Long Tail Point, Lake Michigan, Wis	....	....	....	....	1	....	....	....	....	....	1
Lorain, Lake Erie, Ohio	....	....	....	....	....	....	....	....	....	1	1
Ludington, Lake Michigan, Mich	....	1	....	....	....	2	1	1	1	1	7
Mackinac City, Straits of Mackinac, Mich	....	....	1	....	1	....	....	....	....	....	2
Mackinac Island, Straits of Mackinac, Mich	....	....	....	....	....	....	....	1	....	....	1
McGulpin's Point, Straits of Mackinac, Mich	....	....	....	....	....	....	1	....	....	....	1
Maitland, Lake Erie, Canada	....	....	....	....	....	....	1	....	....	....	1
Malden, Detroit River, Canada	1	1	....	....	....	....	....	....	....	....	2
Manistee, Lake Michigan, Mich	2	1	2	1	....	....	5	3	....	1	15
Manitowoc, Lake Michigan, Wis	....	1	3	....	....	....	....	2	3	....	9
Marblehead, Lake Erie, Ohio	....	....	1	....	1	....	4	1	1	1	9
Marquette, Lake Superior, Mich	2	....	....	....	....	....	....	....	1	....	3
Michigan City, Lake Michigan, Ind	1	2	1	....	2	....	3	1	1	....	11
Middle Bass Island, Lake Erie, Ohio	....	1	....	....	....	....	....	....	....	....	1
Middle Island, Lake Huron, Mich	1	....	....	....	....	....	....	....	....	2	3
Middle Island (reef one mile east of), Lake Erie, Canada	....	....	....	....	....	....	....	....	1	....	1
Middle Village, Lake Michigan, Mich	....	....	....	....	1	....	....	....	....	....	1
Milwaukee, Lake Michigan, Wis	2	1	2	....	1	....	3	1	3	1	14
Milwaukee (8 miles south of), Lake Michigan, Mich	....	....	....	....	....	....	....	....	....	1	1
Mission Point, Lake Michigan, Mich	....	....	1	....	....	....	....	....	....	....	1
Mohawk Island, Lake Erie, Canada	....	....	....	....	....	....	....	....	....	1	1
Monastique (6 miles south of), Lake Michigan	....	....	....	....	....	....	....	....	1	....	1
Morgan Point, Lake Erie, Canada	....	1	....	1	....	....	....	....	....	....	2
Mud Bay, Lake Michigan, Wis	....	....	....	....	....	....	....	2	2	....	4
Muskegon, Lake Michigan, Mich	3	1	1	1	1	....	1	3	2	1	14
Napanee, Lake Ontario, Canada	....	....	....	....	....	....	....	....	....	1	1
Nebish Rapids, Saint Mary's River	4	4	1	....	....	....	....	2	....	1	12
New Buffalo, Lake Michigan, Mich	....	....	1	....	....	....	....	....	....	....	1
Niagara Reef, Lake Erie, Ohio	....	....	....	1	....	....	....	....	....	....	1
Niagara River, Lake Erie	1	....	....	....	....	1	....	....	....	....	2
Nine-mile Point, Lake Huron, Mich	....	....	....	....	....	....	2	....	....	....	2
North Bay, Lake Michigan, Wis	....	1	1	....	....	....	....	2	....	....	4
North Fox Island, Lake Michigan	....	....	....	....	....	....	....	....	....	1	1
North Harbor Island Reef, Lake Erie, Canada	....	2	....	....	....	....	....	....	....	....	2
North Manitou Island, Lake Michigan, Mich	4	1	2	2	....	....	2	....	....	1	12
North Point, Lake Huron, Mich	....	....	....	....	4	....	1	....	....	....	5
North Point, Lake Michigan, Wis	1	....	....	....	....	....	1	2	....	2	6
Northport, Lake Michigan, Mich	....	....	....	....	....	....	....	....	1	....	1
Oak Creek Lake, Michigan, Wis	....	....	....	....	....	....	1	....	....	....	1
Oak Point, Lake Huron, Mich	....	....	....	....	....	....	....	....	....	1	1
Oconto Reef, Lake Michigan, Wis	....	....	1	....	....	....	....	....	....	....	1
Old Fort Mackinac, Straits of Mackinac, Mich	....	....	3	1	....	....	....	....	....	....	4
Oqueoc River (mouth of), Lake Huron, Mich	....	....	....	....	....	....	....	....	1	....	1
Oscoda, Lake Huron, Mich	....	....	....	....	....	1	....	....	3	....	4
Oswego, Lake Ontario, N. Y	1	....	1	2	....	2	1	3	1	2	13
Oswego (3½ miles west of), Lake Ontario, N. Y	....	....	....	....	....	....	1	....	....	....	1
Oswego (5 miles east of), Lake Ontario, N. Y	....	....	....	....	....	....	1	....	....	....	1
Oswego (7 miles east of), Lake Ontario, N. Y	....	....	....	....	....	....	....	1	....	....	1
Ottawa Point, Lake Huron, Mich	....	1	....	....	....	....	1	....	1	1	4
Otter Creek (mouth of), Lake Michigan, Mich	....	....	....	....	....	....	....	1	....	....	1
Parisian Island, Lake Superior, Canada	....	....	....	....	....	....	....	....	1	....	1
Pêche Island, Lake Saint Clair, Canada	....	1	....	....	....	....	....	....	....	....	1
Peninsula Point, Lake Michigan, Mich	....	....	1	....	....	....	....	1	....	....	2
Peninsula Point (reef 5 miles from), Mich	....	....	....	....	....	....	1	....	....	....	1
Pentwater, Lake Michigan, Mich	2	....	....	....	....	1	....	....	1	....	4
Peshtigo Harbor (on bar), Lake Michigan, Wis	....	....	....	....	....	....	....	1	1	1	3
Peshtigo Reef, Lake Michigan, Wis	1	1	....	....	....	....	....	....	....	....	2
Pierport, Lake Michigan, Mich	....	....	....	....	....	....	....	....	2	1	3
Pigeon Bay, Lake Erie, Canada	2	....	....	....	2	....	....	....	....	....	4
Pigeon Island, Lake Ontario, Canada	....	1	....	....	....	....	....	....	....	....	1
Pilot Island, Lake Michigan, Wis	1	....	1	....	2	....	1	....	2	1	8
Pine River, Lake Michigan, Mich	1	....	....	....	1	....	....	....	....	....	2
Plum Island, Lake Michigan, Wis	....	1	1	....	1	....	1	1	2	....	7

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

LAKE COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Point Abino, Lake Erie, Canada	....	3	....	....	....	1	1	....	1	....	6
Point au Pelée, Lake Erie, Canada	4	3	3	....	2	1	....	....	1	2	16
Point au Pelée Island, Lake Erie, Canada	....	....	....	....	2	....	2	1	....	....	5
Point au Sable, Straits of Mackinac, Mich	....	....	1	....	....	....	1	1	....	....	3
Point au Sable Bar, Green Bay, Lake Michigan, Wis	....	....	....	....	....	....	....	....	1	1	2
Point aux Barques, Lake Huron, Mich	1	1	1	....	1	....	....	1	1	1	7
Point aux Barques (2 miles east of), Lake Huron, Mich	....	....	....	....	....	....	1	....	....	....	1
Point aux Barques (4½ miles above), Lake Huron, Mich	....	....	....	....	....	1	....	....	....	....	1
Point aux Gres, Lake Huron, Mich	....	....	....	....	....	....	....	....	....	1	1
Point Clark, Lake Huron, Canada	....	....	1	....	....	....	....	....	....	....	1
Point Detour, Lake Michigan, Mich	....	....	....	....	....	....	....	....	1	....	1
Point La Barbe, Straits of Mackinac, Mich	....	....	1	....	....	....	....	....	....	....	1
Point Moullier, Lake Erie, Mich	....	1	....	....	....	....	....	....	....	....	1
Point Peninsula, Lake Ontario, N. Y	....	....	....	1	....	....	1	....	....	....	2
Point Saint Ignace, Straits of Mackinac, Mich	....	....	....	....	....	....	1	....	....	1	2
Portage, Lake Michigan, Mich	....	....	....	1	....	....	....	....	....	....	1
Portage Bay, Lake Michigan, Mich	....	....	....	....	....	....	....	....	....	1	1
Portage Island Reef, Green Bay, Lake Michigan	....	....	....	....	....	1	....	....	....	....	1
Portage River, Lake Superior, Mich	....	1	....	....	....	....	....	....	1	....	2
Port Austin, Lake Huron, Mich	1	2	2	....	2	....	....	1	....	....	8
Port Burwell, Lake Erie, Canada	1	....	1	....	....	....	....	....	....	....	2
Port Colborne, Lake Erie, Canada	....	1	....	....	1	1	1	....	1	....	5
Port Dalhousie, Lake Ontario, Canada	....	....	1	....	....	....	....	....	....	....	1
Port Hope, Lake Huron, Mich	....	....	....	....	....	1	1	....	....	1	3
Port Maitland, Lake Erie, Canada	....	4	....	....	....	....	....	....	....	....	4
Port Ontario, Lake Ontario, N. Y	....	....	....	....	....	....	1	1	....	1	3
Port Ryerse, Lake Erie, Canada	....	....	....	....	1	....	....	....	....	....	1
Port Sanilac, Lake Huron, Mich	1	....	....	....	1	....	....	....	....	....	2
Port Sarnia, Saint Clair River, Canada	....	1	....	....	....	1	....	....	....	2	4
Port Washington, Lake Michigan, Wis	....	1	....	....	....	....	....	....	....	....	1
Poverty Island, Lake Michigan, Mich	....	....	....	....	1	....	....	....	....	....	1
Presque Isle, Lake Erie, Pa	....	....	....	....	1	....	....	....	2	1	4
Presque Isle, Lake Huron, Mich	1	1	....	....	2	....	1	5	....	....	10
Presque Isle, Lake Superior, Wis	....	....	....	....	....	....	....	1	....	....	1
Put-in-Bay Island, Lake Erie, Ohio	....	1	....	....	....	1	1	....	....	....	3
Pultneyville (2 miles east of), Lake Ontario, N. Y	....	....	....	....	....	1	....	....	....	....	1
Pyramid Point, Lake Michigan, Mich	....	....	....	....	....	....	....	....	....	1	1
Quinte Bay, Lake Ontario, Canada	....	....	1	....	....	....	....	....	....	1	2
Racine, Lake Michigan, Wis	....	....	....	3	....	....	4	....	....	4	11
Racine Point, Lake Michigan, Wis	....	....	....	....	....	....	2	....	....	....	2
Racine Reef, Lake Michigan, Wis	2	2	1	....	1	....	....	1	1	2	10
Rawley's Bay, Lake Michigan, Wis	....	....	....	....	....	....	....	1	1	....	2
Rock Falls, Lake Huron, Mich	....	2	....	....	....	....	....	....	....	....	2
Rock Island, Lake Michigan, Wis	1	....	....	....	....	....	....	....	....	1	2
Rondeau, Lake Erie, Canada	....	....	....	....	....	....	....	....	1	....	1
Sackett's Harbor (rocks near), Lake Ontario, N. Y	....	....	....	....	....	....	....	1	....	....	1
Saginaw River (mouth of), Lake Huron, Mich	....	1	....	....	....	1	1	....	....	....	3
Saint Clair Flats, Lake Saint Clair	....	2	....	....	1	....	1	....	....	3	7
Saint Helena Island, Straits of Mackinac, Mich	....	....	1	....	1	....	1	....	2	....	5
Saint Joseph, Lake Michigan, Mich	1	....	3	2	2	1	6	1	1	2	19
Saint Martin's Island, Lake Michigan, Mich	1	....	....	....	....	1	1	....	....	....	3
Saint Mary's River, Mich	....	....	....	....	....	....	....	....	1	1	2
Salmon Point, Lake Ontario, Canada	....	....	....	....	....	....	....	1	....	1	2
Sand Beach, Lake Huron Mich	....	1	....	....	2	1	8	1	2	4	19
Sand Beach (7 miles south of), Lake Huron, Mich	....	....	....	....	....	....	....	....	2	....	2
Sand Point, Lake Michigan, Mich	....	....	....	....	....	....	....	1	....	....	1
Saugatuck, Lake Michigan, Mich	....	....	....	....	....	....	....	....	1	....	1
Sault Sainte Marie (1 mile above), Mich	....	....	....	....	2	....	....	....	....	....	2
Sheboygan, Lake Michigan, Wis	1	2	1	....	....	....	1	1	4	1	11
Sheboygan (6 miles north of), Lake Michigan, Wis	....	....	....	....	....	....	....	....	....	2	2
Sheboygan (7 miles south of), Lake Michigan, Wis	....	....	....	....	....	....	....	....	1	....	1
Simcoe Island, Lake Ontario, Canada	....	....	....	....	....	....	....	....	....	1	1
Sister Bay, Lake Michigan, Wis	....	....	....	1	....	....	....	1	1	....	3
Sister Island, Lake Michigan, Wis	....	....	1	....	....	....	....	....	....	....	1
Skilligalee, Lake Michigan, Mich	....	....	....	1	....	....	....	1	....	....	2
Sleeping Bear Point, Lake Michigan, Mich	....	1	1	....	....	....	....	....	....	....	2
Sodus Harbor, Lake Ontario, N. Y	....	....	....	....	....	....	....	....	....	1	1
South Bay Point, Lake Ontario, Canada	....	....	....	....	....	....	1	....	....	....	1
South Fox Island, Lake Michigan, Mich	1	....	....	....	....	....	1	2	2	....	6
South Haven, Lake Michigan, Mich	....	1	4	....	....	1	2	2	1	....	11
South Manitou Island, Lake Michigan, Mich	....	1	5	2	....	....	1	5	2	....	16
South Point, Lake Michigan, Wis	....	....	....	....	....	....	1	....	....	....	1
Spider Island, Lake Michigan, Wis	....	....	....	....	1	....	....	....	....	....	1
Starve Island Reef, Lake Erie, Ohio	....	....	....	....	....	....	....	....	....	1	1

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TABLE 65.—*List of places on the Coasts of the United States where vessels have Stranded, &c.*—Continued.

LAKE COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Stowe Island Reef, Lake Erie	....	2	1	....	1	1	....	....	3	....	8
Stony Island, Detroit River	....	1	....	....	....	1	....	....	1	....	3
Stony Point, Lake Ontario, N. Y	....	....	....	2	....	....	....	....	1	....	3
Stony Point (5½ miles south of), Lake Ontario, N. Y	....	....	....	....	....	....	....	1	....	....	1
Sturgeon Bay, Lake Michigan, Wis	....	....	....	....	....	....	....	....	1	....	1
Sturgeon Bay (5 miles north of), Lake Michigan, Wis	....	....	....	....	....	....	....	....	....	1	1
Sturgeon Point, Lake Erie, N. Y	....	1	....	....	....	....	....	....	....	....	1
Sturgeon Point, Lake Huron, Mich	....	1	....	....	....	....	1	....	1	1	4
Sugar Island, Lake Huron, Mich	....	....	....	....	1	....	....	....	1	....	2
Tawas Harbor, Lake Huron, Mich	1	....	....	....	....	....	....	1	....	1	3
Thunder Bay, Lake Huron, Mich	....	....	....	2	2	1	....	....	....	....	5
Thunder Bay Island, Lake Huron, Mich	....	....	....	....	....	1	1	....	3	1	6
Tibbit's Point, Lake Ontario, N. Y	....	....	....	....	1	....	....	....	....	....	1
Toledo, Lake Erie, Ohio	....	....	....	....	....	....	....	....	1	1	2
Toronto, Lake Ontario, Canada	....	....	1	1	....	....	....	....	....	....	2
Turtle Island, Lake Erie, Ohio	....	....	....	....	....	....	....	1	....	1	2
Twin Rivers, Lake Michigan, Wis	....	....	....	....	....	....	3	2	2	3	10
Twin Rivers Point, Lake Michigan, Wis	....	....	1	....	....	....	1	1	2	....	5
Two Creeks, Lake Michigan, Wis	....	....	1	....	....	....	....	....	1	....	2
Walker's Point, Lake Huron, Canada	....	....	....	....	....	1	....	....	....	....	1
Washington Island, Lake Michigan, Wis	1	....	....	....	....	2	....	2	....	....	5
Waugoshance Island, Lake Michigan, Wis	....	....	3	....	....	1	....	1	....	1	6
Waukegan, Lake Michigan, Ill	....	1	2	....	....	....	....	....	....	....	3
Wellington, Lake Ontario, Canada	....	....	....	....	....	....	....	....	1	....	1
Whale Back Shoal, Green Bay, Lake Michigan	....	....	....	....	....	....	....	....	....	1	1
Whiskey Bay, Lake Superior	....	....	....	....	....	....	1	....	....	....	1
White Fish Bay, Lake Michigan, Wis	....	....	....	....	....	....	....	1	2	1	4
White Fish Bay, Lake Superior, Mich	....	....	....	....	....	....	....	2	....	1	3
White Fish Point, Lake Michigan, Wis	....	....	....	....	....	....	....	1	....	....	1
White Lake Harbor, Lake Michigan	3	1	1	....	2	2	2	1	....	1	13
White Rock, Saginaw Bay, Lake Huron, Mich	....	1	....	....	....	....	....	....	....	....	1
White Shoals, Lake Michigan, Mich	....	....	....	....	....	....	....	....	....	1	1
Wilson Harbor, Lake Ontario, N. Y	....	1	....	....	....	....	....	....	....	....	1
Wind Point, Lake Michigan, Wis	....	....	1	1	....	....	....	....	....	1	3
Winnetka, Lake Michigan, Ill	....	....	....	....	....	....	....	....	1	1	2
Wolf Island, Lake Ontario, Canada	1	....	....	....	....	....	....	....	....	....	1

TABLE 66.—*List of places where American vessels have Stranded in* FOREIGN WATERS *during the last nine years.**

Name of place.	Fiscal year ending June 30—									Total.
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Abraham's Bay, Monguana Island	....	1	....	....	....	....	....	....	....	1
Abrolhas Island, Brazil, South America	....	....	....	....	....	....	....	1	....	1
Adacora, Venezuela, South America	....	....	....	1	....	....	....	....	....	1
Adjuah, west coast of Africa	....	....	....	....	1	....	....	....	....	1
Algoa Bay (½ mile from Port Elizabeth), Africa	....	....	....	....	....	....	1	....	....	1
Altalta (sand beach 20 miles north), Mexico	1	....	....	....	....	....	....	....	....	1
Altalta Harbor, Mexico	....	....	....	2	....	....	....	1	....	3
Alvarado (25 miles east of), Mexico	....	1	....	....	....	....	....	....	....	1
Alvarado Bar, Mexico	....	....	....	....	....	1	....	....	....	1
Amakusa Island, Japan	....	....	....	....	....	....	....	1	....	1
Amherst Island, Gulf of Saint Lawrence	1	2	....	....	....	....	....	....	....	3
Anegada Island, British West Indies	....	....	....	1	1	....	....	....	....	2
Apple River (mouth of), Nova Scotia	....	....	....	....	....	....	....	1	....	1
Argyle (Old Man), Nova Scotia	....	1	....	....	....	....	....	....	....	1
Arica, Peru, South America	....	....	....	....	1	....	....	....	....	1
Arecibo, Porto Rico, West Indies	....	....	....	....	1	....	....	....	....	1
Arogant Shoal (latitude 5°17′ south, longitude 113°29′ east)	....	1	....	....	....	....	....	....	....	1
Aspinwall, Central America	....	....	....	....	2	2	....	....	....	4
Atlas Straits, East Indies	....	....	....	....	....	1	....	....	....	1
Australia (southwest coast)	....	....	....	....	....	....	1	....	....	1
Awauni Heads, New Zealand	....	....	....	....	....	....	1	....	....	1

* In a few instances the number of stranded vessels in this table do not agree with those reported in the annual report of the previous year, having been increased by wreck reports received since the publication of the last report.

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TABLE 66.—*List of places where American vessels have Stranded in* FOREIGN WATERS, *&c.*—Continued.

Name of place.	Fiscal year ending June 30—									Total.
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Azores (Fayal Island)							1			1
Bahamas			2							2
Bahamas (Abaco Island)					1				2	3
Bahamas (Abaco Light, 15 miles north of)				1						1
Bahamas (Anguilla Island, Salt Key Bank)	1									1
Bahama Bank			1							1
Bahamas (Bimini Island)						2				2
Bahamas (Bone Fish Bay)		1								1
Bahamas (Bud Rock Reef), West Indies									1	1
Bahamas (Caicos Islands)		1	1	1		2	1		1	7
Bahamas (reef north of West Caicos)								1		1
Bahamas (Castle Island)						1				1
Bahamas (Cay Bars)			1							1
Bahamas (Crooked Island)	1	1			1					3
Bahamas (Eleuthera Island), West Indies									1	1
Bahamas (Gingerbread Ground)						1	1			2
Bahamas (Grand Bahama Island)	1									1
Bahamas (Grand Cay Reef)				1						1
Bahamas (Grand Sand Cay)		1								1
Bahamas (Grand Turk and Salt Cay, reef between)					1					1
Bahamas (Green Turtle Key)		1								1
Bahamas (Harbor Island)					1					1
Bahamas (Hogsties Reef)			1			2				3
Bahamas (Inagua Reef)							1			1
Bahamas (Little Bahama Island)					1				2	3
Bahamas (Mariguana Reef)	1	1				2				4
Bahamas (Matanilla Reef)			1							1
Bahamas (Middle Reef)	1									1
Bahamas (Miradpuroos Island)					1					1
Bahamas (Moselle Shoals)	1									1
Bahamas (Nassau, New Providence)					1					1
Bahamas (No Name Cay)				1						1
Bahamas (North Bimini)			1							1
Bahamas (Northwest Reef)	1									1
Bahamas (Orange Key)							1		2	3
Bahamas (Powell's Key)		1								1
Bahamas (Rum Cay)		2								2
Bahamas (Sandy Cay)					1	1				2
Bahamas (San Salvador)				1						1
Bahamas (Sheep Keys Shoal)			1							1
Bahamas (Silver Key Bank)						1				1
Bahamas (South Bimini)	1	1								2
Bahamas (Whale Key)					1					1
Bahamas (Wood Key)		1								1
Balabare Islands, Hebrides				1						1
Balbriggan, Ireland							1			1
Banca Straits, East Indies						1				1
Baracoa Harbor, Cuba			2							2
Barbadoes		1						1		2
Barbaretta Island, Honduras			1							1
Barbuda Island, British West Indies		1								1
Barington, Nova Scotia						1			1	2
Basket Island, Terra del Fuego, South America									1	1
Batavia Harbor (Neptune's Shoals), Java			1							1
Bay of Fundy (Saint Mary's Ledges, entrance to)					1					1
Belfast, Carrickfurgus Bank, Ireland		1								1
Belize (main reef, 30 miles off)		1								1
Benoit's Cove, Newfoundland				1						1
Bermudas		2	2					1	1	6
Bermudas (Adventure Reef)					1					1
Bermudas Reef (15 miles off)					1					1
Bermudas (Saint George Island)					1		1			2
Bermudas (White Island)							1			1
Black Point, Honduras	1									1
Boca del Rio, Mexico									1	1
Bog Shippegan Gully, New Brunswick					1					1
Boiling Reef, Gulf of Georgia	1									1
Bolton Island, Molucca Group, East Indies	1									1
Bonacca Harbor, Honduras	1									1
Bordeaux River (entrance to), France							1			1
Brava Island, Cape Verde Islands		1								1
Brazil (latitude 5°2′ south, longitude 25°22′ west), South America				1						1
Brazil Rock, Nova Scotia						1				1
Briar Island, Bay of Fundy		2								2
Buckos Reef, Tobago, British West Indies	1									1
Bull Ledge (off Cape Canso), Nova Scotia						1				1

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TABLE 66.—*List of places where American vessels have Stranded in* FOREIGN WATERS, *&c.*—Continued.

Name of place.	Fiscal year ending June 30—									Total.
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Byron Island, Gulf of Saint Lawrence	....	...	....	....	1	....	....	....	....	1
Cambodia River (mouth of), China	....	....	....	....	....	....	1	....	....	1
Campobello Island, New Brunswick	....	1	....	....	....	....	....	1	....	2
Canso Harbor, Man-of-War Rock, Cape Breton	....	....	....	....	....	....	....	1	....	1
Cape Agulhas (15 miles north of), Africa	....	....	1	....	....	....	....	....	....	1
Cape Bollard, Newfoundland	....	....	....	1	....	....	....	....	....	1
Cape Breton Island	....	2	....	....	....	....	....	....	....	2
Cape Corrientes, Cuba, West Indies	....	....	....	....	....	1	....	....	....	1
Cape Frio, Brazil, South America	....	....	....	1	....	....	....	....	....	1
Cape Henry, Anticosti Island, Gulf of Saint Lawrence	....	....	....	....	1	....	....	....	....	1
Cape Hogan, Arichat Island, Nova Scotia	....	1	....	....	....	....	....	....	....	1
Cape Horn, South America	....	....	....	1	....	....	....	....	....	1
Cape Isabella, San Domingo, West Indies	....	....	1	....	....	....	....	....	....	1
Cape Negro, Brazil, South America	....	1	....	....	....	....	....	....	....	1
Cape Negro Harbor, Nova Scotia	....	....	....	....	1	....	....	....	....	1
Cape Negro Island, Nova Scotia	1	....	1	....	....	....	....	....	....	2
Cape Patani, Siam	....	....	....	....	....	....	1	....	....	1
Cape Roxo (10 miles northwest of), West Indies	....	....	....	....	....	....	1	....	....	1
Cape Sable, Nova Scotia	1	....	....	....	....	....	....	1	....	2
Cape Saint Mary, Newfoundland	....	....	1	....	....	....	....	....	....	1
Cape Saint Mary (5 miles south of), Newfoundland	....	....	....	1	....	....	....	....	....	1
Cape Saint Roque (near), Brazil, South America	....	....	....	....	....	....	....	1	....	1
Cape Sharp, West Bay, Nova Scotia	....	....	....	....	....	....	1	....	....	1
Cape Town, Africa	....	....	....	....	1	....	....	....	....	1
Cape Verde Islands	....	2	....	....	....	....	....	1	....	3
Cardenas, Cuba, West Indies	....	....	3	....	....	....	....	....	1	4
Carbarieu, Cuba	....	1	....	....	....	....	....	....	....	1
Cariaco, Venezuela, South America	....	....	1	....	....	....	....	....	....	1
Carimata Straits, East Indies	1	....	....	....	....	....	....	....	....	1
Carlisle Bay, Barbadoes	....	1	....	....	....	....	....	....	....	1
Carnarvon Bar, North Wales	....	....	....	1	....	....	....	....	....	1
Carraquette Island, Bay of Chaleurs, New Brunswick	....	....	....	....	....	....	....	1	....	1
Carzonas, Mexico	....	....	....	....	....	....	1	....	....	1
Cascumpeque, Prince Edward Island	....	....	....	....	1	....	....	....	....	1
Cette, France	....	....	....	1	....	....	....	....	....	1
Champerico, Central America	....	....	....	....	....	....	....	1	....	1
Charles Island (Galapagos Group), Pacific Ocean	....	....	....	....	....	1	....	....	....	1
Charlottetown, Prince Edward Island	....	....	....	1	....	....	....	....	....	1
Che-Foo Light (Stick-up Rock), China	....	....	....	....	....	....	1	....	....	1
Cheticamp, Cape Breton Island	....	....	1	....	....	....	....	....	....	1
Chickotan Island, Kurile Islands, Asia	....	....	1	....	....	....	....	....	....	1
Chiltepec Bar, Mexico	....	....	....	....	....	....	....	....	1	1
Chincorro Reef (off east coast of Yucatan)	....	1	....	....	....	....	....	....	....	1
Cienfuegos, Cuba	....	1	1	....	....	....	....	....	1	3
Coachman's Reef, Nova Scotia	....	....	....	....	1	....	....	....	....	1
Coatzacoalcos River Bar, Mexico	....	1	....	....	....	....	....	1	....	2
Cockburn Harbor Shoal, E. C	....	1	....	....	....	....	....	....	....	1
Corcorocame Reef, Honduras	....	....	....	....	1	....	....	....	....	1
Colonia Harbor Rock, Uruguay, South America	1	....	....	....	....	....	....	....	....	1
Colorado Reef, Lord Howe's Island, Australia	....	....	1	....	....	....	....	....	....	1
Comacho Bay, Peru	....	....	1	....	....	....	....	....	....	1
Constantinople, Turkey	....	1	....	....	....	....	....	....	....	1
Coral Island, Japan Bay	....	....	....	1	....	....	....	....	....	1
Corn Island, Central America	1	....	....	....	1	....	....	....	1	3
Coxyde, Belgium	....	....	....	1	....	1	....	....	....	1
Cruz del Padre, Cuba, West Indies	....	....	....	....	....	1	....	1	....	2
Cuba (Anguilla Key), West Indies	....	....	....	....	....	....	....	....	1	1
Cuba (Breton Key), West Indies	....	....	....	....	....	....	....	1	....	1
Cuba (reef north side of), West Indies	....	....	....	....	....	1	....	....	....	1
Cuba (reef south coast of), West Indies	....	....	....	....	....	....	....	....	1	1
Cuba (Cay Largo Island), West Indies	....	....	1	....	....	....	....	....	....	1
Cuba (Colorado Reef), West Indies	1	....	2	....	....	....	....	....	1	4
Cuba (Green Key), West Indies	....	....	....	....	....	....	....	1	....	1
Cuba (Mona Key), West Indies	....	....	....	....	....	....	....	....	1	1
Cuba (Romano Cayo), West Indies	....	....	....	....	....	....	....	....	1	1
Cuba (Salt Key), West Indies	....	....	....	....	....	....	....	....	1	1
Cuba (San Felipe Keys), West Indies	....	....	....	1	....	1	....	....	....	2
Cuba (Stone Key), West Indies	....	....	....	....	....	....	1	....	....	1
Cumberland Gulf, British America	....	....	....	....	....	1	....	....	....	1
Dartmouth, England	....	....	1	....	....	....	....	....	....	1
Deer Island, New Brunswick	1	1	....	1	1	....	....	....	....	4
Demas Key (Salt Key Banks), West Indies	....	1	....	....	....	....	....	....	....	1
Desolation Island, Africa	....	....	....	....	....	....	....	1	....	1
Digby Beach, Nova Scotia	....	....	....	....	....	....	....	1	....	1
Dona Maria Inlet, Cuba	1	....	....	....	....	....	....	....	....	1
Dos Bocas (3 miles west of), Mexico	....	....	....	....	....	....	....	1	....	1
Duck Island, New Brunswick	....	1	....	....	1	....	....	....	....	2

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TABLE 66.—*List of places where American vessels have Stranded in* FOREIGN WATERS, *&c.*—Continued.

Name of place.	Fiscal year ending June 30—									Total.
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Dugeon Shoal, Yorkshire, England							1			1
Duke of York Island, South America							1			1
Duncan's Reef, Halifax, Nova Scotia								1		1
Dunkirk Roads (entrance to), France					1					1
Dungeness, Kent County, England					1					1
East Lammock Island (rock near), China									1	1
East London, Africa			1							1
Ellingwood Island, Nova Scotia									1	1
Emulous Ledge, Nova Scotia				1						1
English Bank, Bristol Channel	1									1
Ensenada (mouth of), Bristol Channel, Argentine Republic			1							1
Falmouth Harbor Reef, Jamaica					1					1
Fiji Islands, northeast group			1							1
Flores Islands (mouth of Rio de la Plata), South America		1						1		2
Flushing, Holland				1						1
Flushing Roads (below Antwerp), Belgium					1			1		2
Formentera, Balearic Islands		1								1
Frenchman's Harbor, Isle of Rautan		1								1
Gabriola Reef, Gulf of Georgia, British Columbia							1			1
Galway, Ireland					1					1
Garrucha Roadstead, Spain				1						1
Gibraltar, Spain		1					1			2
Gonaive Island, West Indies			1							1
Goodwin Sands, England			1							1
Gough's Island, South Pacific Ocean					1					1
Grand Cayman, West Indies				1			1			2
Grand Manan Island, New Brunswick			1		1				1	3
Grand Sands, near Trieste, Austria			1							1
Grand Turk Island, British West Indies		1								1
Greytown, Nicaragua				1						1
Grindstone Island, New Brunswick	1									1
Guanabana, Cuba, West Indies				1						1
Gull Island, Long Harbor, Newfoundland			1							1
Gull Island, Nova Scotia	1							1		2
Gun Fleet Sound, Essex, England				1						1
Hainan Island, China							1			1
Hake (south banks), Nieuwe-Diepe, Holland				1						1
Halifax, Nova Scotia			1				1			2
Hammond's Knoll (off Yarmouth Head)		1								1
Harbor Island, Bay of Islands, Newfoundland			1							1
Havana (reef side of), Cuba					1					1
Havana and Matanzas (between), Cuba, West Indies		1								1
Hawaii Island, Sandwich Islands								1		1
Hayo, Main Rock, Bay of Yeddo, Japan		1								1
Hayti, West Indies									1	1
Heard's Island, Indian Ocean							1			1
Hebrides Island (MacIvor Rock), Scotland							1			1
Helgoland, North Sea						1				1
Herschel Islands (near Cape Horn), South America									1	1
Hong-Kong, China	2									2
Honolulu (near), Sandwich Islands								1		1
Hoogly River, Diamond Harbor, British India	1									1
Hook Point, Wexford, Ireland					1					1
Hope Point, England						1				1
Hull, England									1	1
Idsumosaki Island, Japan					1					1
Imbetiba, Brazil					1					1
Indian Island, Labrador		1								1
Ingonish Harbor, Cape Breton Island, Nova Scotia									1	1
Isle Bois, Straits of Belle Isle					1					1
Isle de Aves, Venezuela, South America						2				2
Island of Veido								1		1
Jacquemel Bay, Hayti, West Indies		1			1					2
Jardinillos Reef, West Indies		1	1					1		3
Jarvis Island, South Pacific				1						1
Jeremie Harbor, Hayti, West Indies			1		2					3
Jig Rock, near Shelburne, Nova Scotia			1							1
Kabe, Japan							1			1
Kabenda, Africa							1			1
Kaffraria, Africa								1		1
Kahoolawe Island, Sandwich Islands								1		1
Kaloot Bank, Holland		1								1
Kamschatka, Sea of Okhotsh, Asia			1							1
Kapaa, Sandwich Islands						1				1
Kingston Harbor, Jamaica						1				1
Kingstown, Ireland							1			1

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TABLE 66.—*List of places where American vessels have Stranded in* FOREIGN WATERS, *&c.*—Continued.

Name of place.	Fiscal year ending June 30—									Total.
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Kutsino Island, off the coast of Japan	....	....	....	....	1	....	....	....	....	1
Laguna Bar, Mexico	....	....	....	....	....	....	....	1	....	1
Lamoig, Jutland	....	....	1	....	....	....	....	....	....	1
Langlade, Island, Newfoundland	....	....	....	....	....	1	....	....	....	1
Last Island, Gulf of Mexico	....	1	....	....	....	....	....	....	....	1
Leones Islands, Montego Bay, Jamaica	1	....	....	....	....	....	....	....	....	1
Lepreaux, Bay of Fundy, New Brunswick	....	....	....	....	1	....	....	....	....	1
Letete Passage, New Brunswick	....	....	....	....	....	....	....	1	....	1
Liberty Point, Campobello Island, New Brunswick	1	....	....	....	....	....	....	....	....	1
Liscomb Harbor, Nova Scotia	....	....	....	1	....	....	....	....	....	1
Little Curaçoa, Carribean Sea	....	....	....	1	....	....	....	....	....	1
Little Fish Bay (60 miles south of), west coast of Africa	....	..	....	....	....	....	....	....	1	1
Liverpool, England	.	....	1	....	....	....	....	....	....	1
Lockport Harbor (ledge off), Nova Scotia	....	....	....	1	....	....	....	....	....	1
Lockville, Geography Bay, West Australia	1	....	....	....	....	....	....	....	....	1
Los Palmos, Canary Islands	....	....	1	....	....	....	....	....	....	1
Lucca (reef), Jamaica	....	....	....	....	2	....	....	....	....	2
Luzon (Island 5 miles south of Cape Bozorda), East Indies	....	....	....	....	....	....	....	1	....	1
Macassar Straits, East Indies	1	....	....	....	....	....	....	....	....	1
MacMaster's Island, New Brunswick	....	....	....	....	....	....	....	1	....	1
MacMillard's Point, Straits of Canso	....	....	....	....	....	....	....	1	....	1
MacNutt's Island, Nova Scotia	....	1	....	....	....	....	....	....	....	1
Madeira Island	....	1	....	....	....	....	....	....	....	1
Magdalen Islands, Gulf of Saint Lawrence	....	1	....	....	....	1	....	....	1	3
Magdalena Point, Buenos Ayres, South America	....	....	....	....	....	....	....	1	....	1
Magdalena River (mouth of), United States of Colombia	....	....	....	....	....	....	1	1	1	3
Main à Dieu Reef, Cape Breton Island	....	....	1	....	....	....	....	....	....	1
Malpec Bar, Gulf of Saint Lawrence	1	....	....	....	....	....	....	....	....	1
Manchioneal Reef, Jamaica, West Indies	....	....	....	....	....	1	....	....	....	1
Manila Bay, Philippine Islands	....	....	....	....	....	1	....	....	3	4
Manuel Lagoon (entrance), Lower California	....	....	....	....	....	....	....	....	1	1
Manzanillo de Cuba (reef north of Sloop Channel), West Indies	....	....	....	....	....	....	1	....	....	1
Manzanillo, Mexico	....	....	....	....	....	....	....	2	....	2
Maquabo, Porto Rico, West Indies	....	....	1	....	....	....	....	....	....	1
Marfa Drychon Beach, Cardigan Bay, Wales	1	....	....	....	....	....	....	....	....	1
Matane (Saint Lawrence River), Canada	....	....	....	1	....	....	....	....	....	1
Matanzas Harbor, Cuba	....	1	1	....	1	....	....	....	....	3
Mayo Island, Cape Verde Group	1	....	....	....	....	....	....	....	....	1
Mazatlan, Mexico	....	....	....	1	....	....	1	1	....	3
Middle Island, Albo Strait, East Indies	....	....	....	....	....	....	1	....	....	1
Middle Wolf, New Brunswick	....	....	1	....	....	....	....	....	....	1
Milford Haven, South Wales	....	....	....	....	1	....	....	....	....	1
Miragoane, Hayti, West Indies	....	....	....	....	1	1	....	....	....	2
Mistaken Point, Newfoundland	....	....	1	....	....	....	....	....	....	1
Mocha Island, Chili, South America	....	....	....	....	....	....	....	....	1	1
Monte Rugginore (east of), Sardinia, Italy	....	1	....	....	....	....	....	....	....	1
Montego Bay, Jamaica, West Indies	....	....	....	....	....	....	....	....	1	1
Montevideo, Uruguay, South America	....	....	....	....	....	1	....	....	....	1
Morant Cays, Jamaica, West Indies	....	....	....	1	....	....	....	....	....	1
Mosquito Coast, Nicaragua	....	....	....	....	....	....	1	1	....	2
Mosquito Coast (Prince Apulco Bar), Nicaragua	....	....	....	....	....	....	....	1	....	1
Moule, Guadaloupe, West Indies	....	....	....	....	1	....	....	....	....	1
Murder Island Ledge (near Yarmouth), Nova Scotia	....	....	1	....	....	....	....	....	....	1
Musquash, Bay of Fundy, New Brunswick	....	....	1	....	....	....	....	2	....	3
Nag's Head, Louisburg, Cape Breton	....	1	1	....	....	....	....	....	....	2
Nanaimo, British America	....	....	....	....	....	1	....	....	....	1
Navidad Bay, Mexico	....	....	....	....	....	....	1	....	....	1
Neiva (between Saint Domingo and Navassa)	....	....	....	1	....	....	....	....	....	1
Nevis, Windward Islands	....	....	....	1	....	....	....	....	....	1
New Guinea (coral reef off southwest coast of)	....	....	....	....	1	....	....	....	....	1
New Harbor Point, Nova Scotia	....	....	....	1	....	....	....	....	....	1
Newport Roads, Wales	....	1	....	....	....	....	....	....	....	1
Nicaragua (coast of)	....	....	....	....	....	1	....	....	....	1
Noel's Point Reef (entrance to Saint George's Harbor), Newfoundland	....	1	....	....	....	....	....	....	....	1
Noon-Day Rock, Pacific Ocean	....	....	....	....	....	1	....	....	....	1
Nuevitas Harbor, Cuba, West Indies	....	1	....	1	....	....	....	....	....	2
Old Providence Island, Caribbean Sea	....	....	....	....	....	....	....	....	1	1
Old Providence Island (reef 9 miles north of), Caribbean Sea	....	....	....	....	....	....	....	1	....	1
Opobo, west coast of Africa	....	....	....	....	....	1	....	....	....	1
Outer Brandy Rock, Newfoundland	....	....	....	....	....	1	....	....	....	1
Pabillon de Pica, South America	....	....	1	....	....	....	....	....	....	1
Packet Rock, Saint Thomas Harbor, West Indies	....	....	....	....	....	1	....	....	....	1
Palance Shoals (near Manila), Philippine Islands	....	1	....	....	....	....	....	....	....	1
Para River (mouth of), South America	1	....	....	....	....	....	....	....	....	1

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TABLE 66.—*List of places where American vessels have Stranded, in* FOREIGN WATERS, *&c.*—Continued.

Name of place.	Fiscal year ending June 30—									Total.
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Paracel Reefs, China Sea								1		1
Pasages, Bay of Biscay, Spain							1			1
Pedro Keys, Caribbean Sea								1		1
Pemba Island (5 miles north of), off east coast of Africa									1	1
Penzance, Mount's Bay, England							1			1
Perula Cay (50 miles north of Manzanillo), Mexico								1		1
Petty's Harbor, Newfoundland								1		1
Pictou, Nova Scotia					1					1
Piragnara Bay, Brazil					1					1
Platte River (mouth of), South America						1				1
Plover Bay, Siberia						1				1
Point Barbara, San Domingo Island						1				1
Point Castilla, Honduras, Central America				1						1
Point Della Madonna, South America					1					1
Point Negro and Point Race (between), South America			1							1
Ponape Islands, Caroline Group, Pacific Ocean						1				1
Ponce, Porto Rico and Saint Thomas (between), West Indies				1						1
Popa Islands, Malay Archipelago, Pacific Ocean			1							1
Porter's Passage (east side of), Halifax, Nova Scotia			1							1
Port aux Basques, Newfoundland									1	1
Port Elizabeth, South Africa					1					1
Port Limon, Central America									1	1
Portland Point, Vancouver's Island, British America						1				1
Port Maria, Jamaica, West Indies	1									1
Port Natal, South Africa					2	1				3
Port Natal, Brazil								1		1
Porto Rico, West Indies			1				1			2
Progreso, Mexico		1							1	2
Prospect, Nova Scotia		1					1			2
Puerto Cortez (6 miles from), Honduras Bay, Central America						1				1
Puntas Arenas (18 miles south of), Costa Rica					1					1
Quoin Point, Cape of Good Hope, Africa		1								1
Quronata, Honduras, Central America				1						1
Redcar Rocks, Yorkshire, England									1	1
Rhio Straits, near Singapore, Malay Peninsula, East Indies						1				1
Rio de Contas (mouth of), Brazil					1					1
Rio Grande River, Mexico							1			1
Rio Grande do Sul Bar, Brazil						1				1
Rocas Reef (125 miles northwest of Cape Saint Roque), Brazil	1									1
Rocky Reef, Point Carlisle Bay, Jamaica				1						1
Roe's Welcome, Hudson's Bay, Canada								1		1
Round Reef, Saint John Harbor, New Brunswick						1				1
Russell's Point, Cape Breton Island						1				1
Rustico Harbor, Prince Edward Island						1				1
Sable Island, Nova Scotia		2								2
Sagua la Grande Harbor, Cuba, West Indies									1	1
Saint Antonio, Brazil						1				1
Saint Christopher Island, British West Indies					1					1
Saint George, New Brunswick	1									1
Saint George Bay, Newfoundland		1								1
Saint George's Bay, Syria						1				1
Saint John, New Brunswick						1			1	2
Saint John's, Porto Rico, West Indies			1							1
Saint Mary's Bay, Nova Scotia	1									1
Saint Pierre, Newfoundland			1							1
Saint Thomas, West Indies			3				1			4
Sand Island (island near), Straits of Formosa					1					1
San Antonio Light (15 miles east of), Cuba				2						2
San Blas, Mexico								1		1
San Geronimo Island, Lower California				1						1
San José de Guatemala		1								1
San Juan Island, Brazil								1		1
San Juan, Vancouver's Island, British America						1				1
San Lucas Island, Gulf of Mexico								1		1
San Quentin Harbor, Lower California				1						1
Sanger Island, Hoogly River, British India			1							1
Santa Anna, Mexico					3					3
Santa Catalina Island, Pacific Ocean					1					1
Santiago de Cuba, West Indies					1					1
Santo Domingo, West Indies								1	3	4
Saona Island, Hayti, West Indies			1		1					2
Saracen Shoal, coast of Borneo							1			1
Scarborough Shoals, China Sea	1									1
Scilly Island, South Pacific					1					1

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TABLE 66.—*List of places where American vessels have Stranded in* FOREIGN WATERS, *&c.*—Concluded.

Name of place.	Fiscal year ending June 30—									Total.
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
Seal Shoal, Newfoundland	....	....	1	....	....	....	....	....	....	1
Serrana Keys, Central America	....	....	....	....	....	....	....	1	....	1
Serranilla Bank, Caribbean Sea	....	....	1	....	....	....	....	1	....	2
Seven Stones (off Land's End), England	....	....	....	1	....	....	....	....	....	1
Shag Harbor, Nova Scotia	....	....	....	....	1	....	....	....	....	1
Shark's Point (mouth of Congo River), Africa	....	....	1	....	....	....	....	....	....	1
Sheelee River (mouth of), Nova Scotia	....	....	....	....	....	1	....	....	....	1
Shelburne, Nova Scotia	....	....	....	....	....	....	....	1	1	2
Shoal Bay, Newfoundland	....	....	....	1	....	....	....	....	....	1
Sicily Island (near Avola), Italy	1	....	....	....	....	....	....	....	....	1
Smith's Island, Port Hood Harbor, Cape Breton Island	....	....	....	2	....	....	....	....	....	2
Soerabaya, Java	....	....	....	....	....	....	....	1	....	1
Soledad Lagoon, Lower California	....	....	....	1	....	....	....	....	....	1
Solomon Islands (Gaudalcanar), Pacific Ocean	....	....	....	....	....	....	....	....	1	1
Stockport, England	1	1	....	....	....	....	....	....	....	2
Straits of Georgia, British North America	....	....	....	....	2	....	....	....	....	2
Straits of Magellan, South America	....	1	....	....	....	....	....	....	....	1
Straits of Sunda, East Indies	....	....	....	....	....	....	....	1	....	1
Sumatra (Gasper Straits)	....	....	1	....	....	....	....	....	....	1
Surinam, Dutch Guiana, South America	....	....	....	....	....	....	1	....	....	1
Suwarrow Reef, South Pacific	....	....	1	....	....	....	....	....	....	1
Swallow Reef, China Sea	....	....	....	1	....	....	....	....	....	1
Swansea, Wales	....	....	....	....	....	1	....	....	....	1
Tabasco River (mouth of), Mexico	....	....	....	....	....	....	1	....	2	3
Talbot's Passage, Cape Horn	....	1	....	....	....	....	....	....	....	1
Tallock Reef, Carimata Straits, East Indies	....	....	....	....	....	....	1	....	....	1
Tamaulipas, Mexico	....	....	....	....	....	....	....	1	....	1
Taylor's Bank, Mersey River, England	....	1	....	....	....	....	....	....	....	1
Tecumshin, Wexford, Ireland	....	....	....	....	1	....	....	....	....	1
Thrumb-Cap Shoal, Nova Scotia	....	....	....	....	....	....	....	1	....	1
Tequish Island, Prince Edward Island	....	....	....	....	....	1	....	....	....	1
Terra del Fuego, South America	....	....	....	....	....	1	....	1	....	2
Terschelling Light, Netherlands	....	....	1	....	....	....	....	....	....	1
Tonala Bar, Mexico	1	1	....	1	....	....	....	1	1	5
Tongue Island, English Channel	....	1	....	....	....	....	....	....	....	1
Torkeo, Sweden	....	1	....	....	....	....	....	....	....	1
Trackio, Nova Scotia	....	....	....	....	1	....	....	....	....	1
Trial Island, British Columbia	....	1	....	....	....	....	....	....	....	1
Triangle Reef, Campeche Bank, Mexico	....	....	....	....	....	....	....	....	1	1
Trinidad, West Indies	....	....	....	1	....	....	....	....	....	1
Tristan d'Acunha Island, South Atlantic	....	....	....	....	....	1	....	....	....	1
Truxillo, Honduras, Central America	....	....	....	1	....	....	....	....	....	1
Turtle Bay, Lower California	....	....	....	....	....	....	....	....	1	1
Tusket Island, Nova Scotia	1	....	....	....	1	....	....	....	....	2
Tuspan, Mexico	....	....	....	....	....	1	....	....	....	1
Tuspan Reef, Mexico	....	....	....	....	....	....	1	1	....	2
Tuspan River Bar, Mexico	1	1	....	1	....	....	1	....	1	5
Two Rivers, Nova Scotia	....	....	....	....	1	....	....	....	....	1
Tyaartoos Island, Barclay Sound, British Columbia	1	....	....	....	....	....	....	....	....	1
Unknown Reef, latitude 50° south, longitude 107° east	....	....	....	....	....	1	....	....	....	1
Valdes Peninsula, Patagonia	1	....	....	....	....	....	....	....	....	1
Vancouver's Island, British Columbia	....	....	....	....	....	....	1	....	....	1
Vancouver's Island (12 miles east of Cape Beale), British Columbia	....	....	....	....	....	....	1	....	....	1
Vancouver's Island (Hesquit Harbor), British Columbia	1	....	....	....	....	....	....	....	1	2
Verdon Roads (near Bordeaux), France	....	1	....	....	....	....	....	....	....	1
Venezuela (coast of), South America	....	....	....	....	....	....	....	....	1	1
Vera Cruz, Mexico	....	....	....	....	....	....	....	....	1	1
Victoria Harbor, British Columbia	....	....	1	....	....	....	....	....	2	3
Walney Island, England	....	....	....	1	....	....	....	....	....	1
Wentworth Creek, Nova Scotia	....	....	....	....	....	1	1	....	....	2
West Bay, Nova Scotia	....	....	....	....	....	....	....	....	1	1
White Head, Nova Scotia	....	....	....	....	1	....	....	....	....	1
Wicklow Bay, Ireland	....	....	1	....	....	....	....	....	....	1
Woahoo Island, Sandwich Islands	....	....	....	....	....	1	....	....	....	1
Wood Creek, New Brunswick	....	....	....	....	....	1	....	....	....	1
Wood's Island, Bay of Islands, British America	1	....	....	....	....	....	....	....	....	1
Woody Island, Cape Breton, British America	1	....	....	....	....	....	....	....	....	1
Yabucoa, Porto Rico, West Indies	....	....	1	....	....	....	....	....	1	2
Yarmouth, Nova Scotia	....	1	1	....	....	....	....	....	....	2
Zanzibar, Africa	....	....	1	....	....	....	....	....	....	1

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REPORT

OF THE

BOARD ON LIFE-SAVING APPLIANCES.

BUFFALO MEETING, SEPTEMBER, 1883.

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LETTER OF TRANSMITTAL.

OFFICE OF THE BOARD ON LIFE-SAVING APPLIANCES,
Buffalo, New York, September 8, 1883.

SIR: I have the honor to transmit herewith the report of the Board on Life-Saving Appliances, and accompanying papers for the Buffalo meeting of September, 1883.

Very respectfully, your obedient servant,

F. R. BABY,
President of the Board.

Hon. SUMNER I. KIMBALL,
General Superintendent U. S. Life-Saving Service,
Washington, D. C.

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REPORT.

BOARD ON LIFE-SAVING APPLIANCES,
Buffalo, New York, September 7, 1883.

I.—PREAMBLE.

The Board on Life-Saving Appliances, constituted by the honorable Secretary of the Treasury in Department letter of January 3, 1882, met at Buffalo, New York, on September 3, 1883, for the transaction of such business as should properly be brought before it.

II.—DOCKET.

CLASS I.—*Wreck Ordnance.*

1. Lyon-Gordon line-carrying projectile.
2. Dobbins' method of splicing braided shot-lines.

CLASS II.—*Miscellaneous appliances.*

1. Dobbins' self-righting surf-boat.
2. Bryant's double life-boat.
3. Dobbins' self-righting, self-bailing, self-ballasting life-boat.
4. Fryer's buoyant propeller ship.
5. Eddy's patent surf-boat.
6. Larson's life-boat.
7. Dean's improved diagonal surf-boat.
8. Cogswell Manufacturing Company's water repellant life-preserver.
9. Coston's distinguishing night-signals (for stations).
10. Richardson's copper signal pouch.
11. Patterson's beach wagon.
12. Ottinger's sand wheel.
13. Williston & Lucas' method of annealing glass.
14. Vincent's patent "oar-locks."
15. Morris' "skimmer ballast."
16. Von Bayer's use of fog-horns.
17. Dobbins' water-proof dress for surfmen.
18. Forbes' use of oil on rough seas.
19. Mrs. Pratt's plan of distributing oil on rough seas.
20. Richardson's oil tank in surf-boats.
21. Fowler's "Folger drag" and use of oil in Life-Saving Service.
22. Baker's projectile for carrying and distributing oil on rough seas.

III.—COMMITTEES APPOINTED.

1. On Eddy surf-boat: Capt. D. A. Lyle, Ordnance Department, U. S. A.; Superintendent B. C. Sparrow, Second District, Life-Saving Service.

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2. On Larson's life-boat: Capt. J. H. Merryman, U. S. R. M.; Superintendent B. C. Sparrow, Second District, Life-Saving Service.
3. On water repellant life-preserver: Superintendent B. C. Sparrow, Second District, Life-Saving Service; Keeper J. C. Patterson, Sandy Hook Station, Fourth District.
4. On Patterson's beach wagon: Capt. J. H. Merryman, U. S. R. M.; Capt. D. A. Lyle, Ordnance Department, U. S. A.; Superintendent D. P. Dobbins, Ninth District, Life-Saving Service.
5. On Ottinger's sand wheel: Superintendent B. C. Sparrow, Second District, Life-Saving Service; Capt. D. A. Lyle, Ordnance Department, U. S. A.; Keeper J. C. Patterson, Sandy Hook Station, Fourth District, Life-Saving Service.

IV.—Committees reported.

Class II.

1. On use of oil on rough seas.
2. On Eddy's patent surf-boat.
3. On Larson's life-boat.

V.—Presence of exhibitors.

Inventors and exhibitors were allowed to be present for the purpose of explaining their devices.

VI.—Results.

Class I.—*Wreck ordnance.*

1. *Lyon-Gordon line-carrying projectile.*—The inventors were notified by the recorder that *action* on this device would be postponed until samples of projectiles fitted for the Lyle service gun could be prepared and submitted to the Board. The inventors not having submitted the necessary samples for experiment, the further consideration of the device is impracticable at this time. The subject was dropped from the docket until such time as the requirements of the Board are complied with.
2. *Dobbins' method of splicing braided shot-lines.*—The ends are unbraided and the threads laid up in three strands and then a long splice is made and the ends confined by neat whippings.

Class II.—*Miscellaneous appliances.*

1. *Dobbins' self-righting surf-boat.*—This boat possesses excellent self-righting qualities, but at the sacrifice of stability on account of its narrow beam.

It is not self-bailing, but when filled with water it floats higher than the ordinary surf-boat. Its weight is 850 pounds. Its cost is $250 when built in numbers.

2. *Dobbins' self-righting, self-bailing, self-ballasting life-boat.*—The inventor abandoned the claim for self-ballasting. This self-righting, self-bailing life-boat has many of the best qualities of the English life-boat, obtained with much lighter weight by a very good method of construction devised by Captain Dobbins. The model is fair but can be improved in future boats built upon this plan.

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The details of this boat will be found in the description submitted by the inventor and appended hereto marked No. IV.

3. *Larson's life-boat.*—The plan of using center-boards does not meet with the approval of the Board in the light of present experience so far as it is a matter of record. The Board adopts the views of its committee in regard to this boat. For further details attention is respectfully invited to the committee's report, appended and marked No. II. (Sub. No. 3.)

4. *Dean's "improved diagonal surf-boat."*—Mr. Dean stated orally that he would withdraw his boat from the test but desired to have the method of construction acted upon by the Board. His method of diagonal construction is similar to a method already in use in the service, which possesses merit.

5. *Coston's distinguishing night signals (for stations.)*—Mr. Coston has not perfected nor submitted his system of signals.

The plan for station signals is not believed to be practicable on account of the difficulty of making it generally known to officers of vessels, or of inducing them to familiarize themselves with a new code which would be only of occasional value to them.

6. *Richardson's copper signal pouch.*—This pouch is better than the leather one now in service, in that it is impervious to water; but the lid is liable to become loose by use and admit water in driving rains. This device is not so large as the leather pouch, but being metallic it is large and stiff enough to cause injury in case the surfman should fall upon it.

7. *Williston & Lucas's method of annealing glass.*—The inventors having submitted no samples since the last meeting of the Board, the committee was discharged from further consideration of the subject and it was dropped from the docket.

8. *Vincent's patent "oar-locks."*—This consists of a pair of metallic thole pins operated by spiral springs and held in position by a lever catch actuated by a small spiral spring. It is ingenious and convenient for light pleasure boats, but delicate in its operation. The spiral springs are liable to set and the strength of the hollow thole pins is not sufficient for the heavy usage of the life-saving service, being liable to indentation when subjected to blows.

The spring catch is defective in that when the pins are depressed the shock of a sudden blow suffices to release them.

9. *Morris' "skimmer ballast."*—This is virtually a false metal bottom hinged to the keel in the after part of the boat. It is lowered by rods and a lever at the forward end. It may also be made to lower from either end. The device would present a large resisting surface to the action of the water and would seriously retard the speed of the boat. It is not a desirable addition to the construction of life or surf boats.

10. *Von Bayer's use of fog-horns.*—This instrument is designed to be carried by patrolmen and to be sounded at intervals. Its use is objectionable for the following reasons:

(1.) It would require an instrument giving a characteristic note different from those in use by fishing and coasting vessels. Shipmasters would have to be instructed in regard to this peculiarity—a matter of more than ordinary difficulty, if not entirely impracticable.

(2.) Its liability to mislead in cases where the notes or blasts are not understood. Shipmasters hearing the blasts would be liable to think they proceeded from fishing or coasting vessels, and would either give them a wide berth to prevent collision, or else would bear down towards the sound in order to hail the supposed vessel and learn their position, in either case running the risk of going ashore.

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(3.) Slinging such a metallic instrument over the shoulder would be apt to injure the surfman in case of falling.

(4.) It is not advisable to load down the patrolman with more than is absolutely necessary.

11. *Dobbins' water-proof dress for surfmen.*—This is made of drilling covered with a patent water-proof composition owned by Cummings & Howes, of Orleans, Massachusetts. It consists of a pair of high trousers fastened to a pair of rubber boots, and a blouse or "jumper" with a hood. The attachment of draw-strings (and rubber bands at the wrists) makes the dress water-tight.

12. *Forbes' use of oil on rough seas.*

13. *Mrs. Pratt's plan of distributing oil on rough seas.*

14. *Richardson's oil tank for surf-boats.*

15. *Fowler's "Folger drag" and use of oil in the Life-Saving Service.*

16. *Baker's projectile for carrying and distributing oil on rough seas.*

These subjects being of a similar nature, were all referred to a committee, whose report is appended marked II. (Sub. No. 1.)

The results of the experiments made show that oil does not smooth rough seas in shallow water, or prevent the breaking of the surf on shores.

VII.—OPINIONS.

CLASS I.—*Wreck ordnance.*

1. *Dobbins' method of splicing braided shot-line.*—The Board is of the opinion that spliced shot-lines should never be used in actual service at wrecks unless in cases of great emergency, where no other lines are available.

CLASS II.—*Miscellaneous appliances.*

1. *Dobbins' self-righting surf-boat.*—The Board is of the opinion that this surf-boat lacks proper stability on account of its narrow beam.

2. *Dobbins' self-righting, self-bailing life-boat.*—This boat presents features that go far, in the opinion of the Board, towards solving the difficult problem of a portable self-righting, self-bailing life-boat for service on the flat beaches of the sea-coast.

3. *Larson's life-boat.*—The Board is of the opinion that the suggestions of Mr. Larson in no way point to any valuable improvement in the present life boats.

4. *Dean's improved diagonal surf-boat.*—The Board is of the opinion that this method of construction is so similar to a method already in use in the service that no further recommendation is requisite.

5. *Coston's distinguishing night signals (for stations).*—The Board is of the opinion that such a code would be of doubtful value at life-saving stations. It would be somewhat expensive, and would increase the impedimenta of the stations without compensating results.

6. *Richardson's copper signal pouch.*—The Board recognizes the fact that this copper pouch is an improvement upon the pouch now in service, but is of the opinion that it is not advisable to attach to the person of the surfman a rigid metallic accouterment of this size; that the lid will become loose enough in time to admit water in driving rains; and since the tin tubes in the second and fifth districts seem to have been very successful and are inexpensive, the Board is of the opinion that these tin tubes should be supplied to all the stations, as they can be carried in the inside pockets of the patrolmen or in the leather pouches already supplied to the service.

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7. *Vincent's patent "oar-locks".*—The Board is of the opinion that these "oar-locks" are too delicate for the ordinary uses of the Life-Saving Service.

8. *Morris' "skimmer ballast."*—It is the opinion of the Board that this invention is not of such a nature as to merit its recommendation for introduction into the Life-Saving Service.

9. *Von Bayer's use of fog-horns.*—The Board is of the opinion that the use of fog-horns by patrolmen is unadvisable.

10. *Dobbins' water-proof dress for surfmen.*—The Board is of the opinion that this suit is pliable enough to allow freedom of movement in the wearer, and that it would be valuable in cases where the crew has to work in the surf, or in going off to a wreck to superintend the sending ashore of shipwrecked persons. It is also the opinion that the men should be allowed to furnish themselves with these suits if they desire them for protection, as the cost would not be greater than that of ordinary water-proof clothing.

11. *Forbes' use of oil on rough seas.*

12. *Mrs. Pratt's plan for distributing oil on rough seas.*

13. *Richardson's oil-tank for surf-boats.*

14. *Fowler's "Folger drag" and use of oil in the Life-Saving Service.*

15.—*Baker's projectile for carrying and distributing oil on rough seas.*—The Board is of the opinion that the use of oil to subdue the waves in shoal water or to prevent the breaking of the surf on beaches, bars, or shores is of no value whatever, though experience has shown that it is of more or less value in deep water or out at sea. It is also the opinion of the Board, in view of the experiments that have been made, that in those cases where boats are called upon to operate at some distance from the shore there may be instances in which the use of oil could be advantageously adopted.

The Board would advise that careful consideration be given to any method of value which should indicate a practicable development of this idea for boats that so operate.

VIII.—Recommendations.

1. *Dobbins' self-righting and self-bailing life-boat.*—The Board, recognizing the good qualities of D. P. Dobbins' self-righting and self-bailing life-boat, recommends that the General Superintendent of the Life-Saving Service obtain a boat of the same general model, but with more beam, and place it at some station on the Atlantic coast where a further trial may be made to determine in actual service its adaptability for launching from a flat sand beach.

2. *Eddy's surf-boat.*—The Board respectfully recommends that the General Superintendent inform Mr. Eddy that if he desires a reconsideration of his patent boat, and will submit a boat built and equipped according to his plan, the Board will make a full and complete series of trials with it in comparison with other boats.

3. *Tin tubes for signal lights.*—The Board respectfully recommends that the tin tubes for signal lights in use in the Second and Fifth Districts be furnished to all districts in the service, on account of their simplicity and inexpensiveness, the cost being only a few cents each.

IX.—Unfinished business.

Class II.—*Miscellaneous appliances.*

1. Bryant's double life-boat.
2. Fryer's buoyant propeller ship.

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3. Eddy's patent surf-boat.
4. Cogswell's water-repellant life-preserver.
5. Patterson's beach wagon.
6. Ottinger's sand wheel.

ADDENDA.

I.—Daily record of proceedings of Board.

II.—Reports of committees.

1. The use of oil on rough and broken water. Report of Superintendent B. C. Sparrow, of the Second Life-Saving District, with the following inclosures:
   - A. Letter from Capt. R. B. Forbes, of Milton, Massachusetts.
   - B. Letter from Superintendent B. C. Sparrow to John Shields, of Perth, Scotland, relative to experiments conducted by the latter at Peterhead.
   - C. The reply of Mr. John Shields.
   - D. Letter from John Shields to James Knowles, of London, England, on same subject.
   - E. Copy of the Nineteenth Century (magazine), April, 1882, containing article on "oiling the waves," by C. F. Gordon Cumming.
   - F. Extract from New York World (newspaper), December 1, 1882, giving an account of Vincenzo Fondacaro's experiments.
   - G. Extracts from New York Herald, March, 1882, "Greasing the Ocean."
   - H. Extract from the London Standard Parliamentary Report, "Stilling the waves with oil," embodying the statement of a member of the Board of Trade in reply to an inquiry made in the British Parliament.
   - I. Extract from the Boston Evening Transcript, "Efficacy of oil on stormy seas."
   - J. Extract from Yachting Gazette (Br.), "Oil on heavy waves in a storm off Tynemouth."
   - K. Extract from Boston Daily Advertiser, March 8, 1882, "Use of oil in stormy weather."
   - L. Newspaper extract giving result of experiment with oil on board British frigate Swiftsure in gale of wind, Pacific Ocean.
   - M. Letter from Lieut. C. H. McLellan, U. S. R. M.
   - N. Letter from Superintendent J. M. Richardson, U. S. L. S. S. (First Life-Saving District).
   - O. Reports on experiments with oil by the keepers of stations in the First District (six papers).
   - P. Reports of further experiments in First District.
   - Q. Letters, &c., from Mrs. T. D. Pratt, explanatory of her plan for distributing oil upon waves.
   - R. Letters from J. Lawrence Fowler, of West Somerville, Massachusetts.
   - S. Letters from J. Lawrence Fowler, of West Somerville, Massachusetts.
   - T. Letter from W. H. H. Hinds, of Kennebunk Port, Maine, recommending the use of oil.

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II.—Report of Committees—Continued.
1. The use of oil on rough and broken water—Continued.
U.—1. Letter from Capt. R. B. Forbes, inclosing letter from W. D. Baker on the use of oil.
2. Letter from W. D. Baker, transmitting samples of his projectiles for distributing oil.
V. Letter from Superintendent B. S. Rich, Fifth Life-Saving District.
W. Appendix to report of Superintendent B. C. Sparrow, inclosing the following papers, viz: "The formation of sea waves," by Emile Sorel. Copy of report of W. Broughton Pryce, assistant secretary marine department Board of Trade, London, March 28, 1883, on experiments with oil at Aberdeen. Extract from the Dundee Advertiser, July 16, 1883, "Harbors of refuge at small cost." Extract from the Dundee Scotsman (editorial), June 25, 1883.
X. Letter from Keeper Goldthwait, First Life-Saving District, on the use of oil-tanks in surf-boats.
Y. Letter from Superintendent Richardson, inclosing reports from the keepers in his district.
2. Eddy's patent surf-boat.
3. Larson's life-boat (four drawings).
III.—Dobbins' open self-righting surf-boat.
IV.—Dobbins' self-righting and self-bailing life-boat.
V.—Dean's improved diagonally-planked surf-boat (drawing).
VI.—Richardson's copper signal pouch (model).
VII.—Vincent's patent "oar-lock" (model and drawing).
VIII.—Morris' "skimmer ballast" for boats.
IX.—Von Bayer's fog-horns for warning vessels off the coast.
X.—Dobbins' method of splicing braided shot-lines, and waterproof dress for surfmen.
XI.—Coston's distinguishing night signal (for stations).

F. R. BABY,
President of the Board.
J. H. MERRYMAN,
Captain, U. S. R. M.
D. A. LYLE,
Captain of Ordnance, U. S. A.
THOMAS D. WALKER,
Lieutenant, U. S. R. M., Recorder.
B. C. SPARROW,
Superintendent Second Life-Saving District.
D. P. DOBBINS,
Superintendent Ninth Life-Saving District.
JNO. C. PATTERSON,
Keeper Sandy Hook Life-Saving Station.

There being no further business before it, the Board adjourned *sine die.*

F. R. BABY,
President of the Board.

THOMAS D. WALKER,
Lieutenant, U. S. R. M., Recorder.

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ADDENDA.

I.

DAILY RECORD OF THE PROCEEDINGS OF THE BOARD.

BUFFALO, NEW YORK, *September* 3, 1883.

In compliance with the call of the president, the Board on Life-Saving Appliances assembled at Buffalo, New York, on the 3d day of September, 1883, at noon. Present: Frank R. Baby, president; Capt. J. H. Merryman, U. S. R. M.; Capt. D. A. Lyle, Ordnance Department U. S. Army; Lieut. T. D. Walker, U. S. R. M., recorder; Superintendent B. C. Sparrow, U. S. L. S. S., and Superintendent D. P. Dobbins, U. S. L. S. S., keeper. Absent: John C. Patterson, U. S. L. S. S.

The proceedings were opened by the reading of the minutes of the last meeting of the Board in November, 1882.

The following resolution, offered by Captain Merryman, was then adopted:

Resolved, That the General Superintendent of the Life-Saving Service, Mr. S. I. Kimball, who is now in the city of Buffalo, be invited by the president of the Board to attend the meetings of the Board and participate in its discussions.

Letters from the Acting General Superintendent of the Life-Saving Service, dated the 29th ultimo and 1st instant, were then read, referring the following subjects to the consideration of the Board, viz:

Letter from D. B. Eddy, of Somerset, Massachusetts, complaining of the report of the Board at its last meeting upon his patent life-boat. (Model and drawings again referred to the Board.)

Letters from James Larson, with drawings of proposed life-boat.

Letter from Superintendent J. M. Richardson, of the First Life-Saving District, submitting a copper signal pouch with waist-belt. (Sample full size.)

Letter from H. D. Morris, of Salem, New York, inclosing specifications and drawings of his proposed "skimmer ballast" for life and surf boats.

Letter from W. D. Baker, of Rockland, Massachusetts, submitting projectiles for carrying and distributing oil upon the surf (two full-sized sample projectiles received).

Letter from J. Lawrence Fowler, of West Somerville, Massachusetts, suggesting the adoption of the "Folger drag" for boats of the service, and advising the use of oil on rough and broken water.

Letter from Superintendent J. M. Richardson, of the First Life-Saving District, proposing an oil-tank, to be fitted in the surf boats of the service, for distributing oil on broken water.

Letter from Hector von Bayer, Washington, District of Columbia (Office of the General Superintendent of the Life-Saving Service), suggesting the use of fog-horns by the patrolmen of the Life-Saving Service in foggy weather to warn vessels off the coast.

Letter from Keeper John C. Patterson, of the Sandy Hook Life-Sav-

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ing Station, New Jersey, submitting model of an improved style of apparatus wagon to replace the hand-cart now in use in the service. (Model received.)

Letters from James Dean & Co., Detroit, Michigan, submitting drawings and description of an "improved diagonal built surf-boat," and asking permission to exhibit a full-sized boat of their construction.

Letters from the Cogswell Manufacturing Company, of New York, submitting samples of their water-repellant life-preserver. (Three samples received.)

Letter from J. H. Dorwer, of Buffalo, New York, submitting a "patent oar-lock," invented by John Vincent, jr. (Sample and drawings.)

These subjects were ordered placed upon the docket, and the next business in order was the presentation of committee reports.

COMMITTEE REPORTS.

1. Captain Merryman, as committee on the Williston and Lucas method of annealing glass for lantern globes, chimneys, &c., reported that no additional samples had been received from the manufacturers since February, 1882. He therefore asked to be discharged from the further consideration of the subject. Upon motion the report was accepted and the committee discharged.

2. Captain Merryman, as committee on Coston's distinguishing night signals (for stations), reported that Mr. Coston had not submitted his plan for the proposed signal. He further reported that it is not believed to be practicable on account of the difficulty of making it generally known to vessels or having it adopted, and also that the supply of all the stations with such system at present would prove very expensive, without compensating results. He therefore asked that the committee be discharged from the further consideration of the subject. The report was received and ordered to be filed, and the committee discharged.

3. Superintendent Sparrow, of the committee on the use of oil on rough water, reported at length the result of his experiments.

Mr. W. D. Baker, of Rockland, Massachusetts, then appeared before the Board and explained in detail his method of distributing oil upon the water, samples of his projectiles being exhibited.

The Board discussed the subject at some length, and finally adopted a resolution that it is the sense of the Board, in view of the experiments that have been made, that the use of oil to subdue the force of waves in shoal water, or to prevent their breaking in surf upon the beaches and bars of the coast, is of no value whatever, though experience has shown that it is of more or less value in deep water at sea in gales of wind. The Board further resolved to advise careful consideration of any method that might indicate a practical development of the plan, which seems to find favor in some of the districts of the service, where boats could operate with oil at a distance from the shore in the vicinity of outlying rocks and shoals.

4. Captain Merryman, of the committee on the Lyon-Gordon line-carrying projectile, reported that no samples had been received from the inventors of this device.

The subject was therefore ordered to be dropped from the docket until such time as the requirements of the Board are complied with.

The committee was discharged.

The Board then proceeded to the consideration of the docket, the first in order being the letters from D. B. Eddy, in which appeal was made

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from the action of the Board at its last meeting in regard to his metallic surf-boat.

The subject was referred to a committee, consisting of Capt. D. A. Lyle and Superintendent B. C. Sparrow, with instructions to report if practicable before the close of the present session.

5. James Larson's method of constructing life-boats:

A letter from James Larson, of Sister Bay, Wisconsin, inclosing drawings of his proposed life-boat, was read and referred to a committee for examination, with instructions to report, if practicable, before the Board closes its session.

The committee was named as follows: Capt. J. H. Merryman and Superintendent B. C. Sparrow.

6. Richardson's metallic signal pouch:

This is a copper signal pouch submitted by Superintendent J. M. Richardson, of the First Life-Saving District.

The sample presented is of full size and attached to a leather belt, on which is a frog or loop for the signal-holder.

After a discussion of the merits of this pouch as compared with the leather one now in use, a motion was adopted declaring it to be the sense of the Board that it is not advisable to attach to the person of the patrolman any metallic accouterment of the dimensions of this device from which he might sustain injury in case he should fall upon it.

The Board also believes that the device, although having merit beyond the leather pouch now used, in being impervious to water, is liable to become loose at the lid and to admit water in driving rains.

It is also liable to injury and indentations, and to become misshapen.

The object sought by Superintendent Richardson, viz, to keep the signals dry, has already been accomplished in at least two districts by inclosing each signal in tight-fitting tin cases, which are carried within the leather pouches or about the persons of the patrolmen in inside pockets.

The Board, therefore, does not consider Mr. Richardson's device a sufficient improvement to warrant a recommendation for its adoption, but would recommend the general introduction throughout the service of the tin cases now used successfully in the Second and Fifth Districts, and at various stations in other districts. These cases of tin are inexpensive and cost but a few cents.

At this point the General Superintendent of the Life-Saving Service stated that he had received a telegram from Capt. Douglass Ottinger, U. S. R. M., at Erie, Pennsylvania, requesting information as to when the Board would examine the sand wheel for boat-wagons, &c., now at the Erie Life-Saving Station.

It was decided to proceed to Erie on Wednesday, the 5th instant, the hour for the examination being fixed at 12 o'clock noon of that day.

At 6.30 P. M. the Board adjourned until 10.30 A. M. to-morrow, the 4th.

THOMAS D. WALKER,
Lieut. U. S. R. M., Recorder.

TUESDAY, *September* 4, 1883.

The Board reassembled as per adjournment at 10.30 A. M., all the members excepting Keeper J. C. Patterson being present.

The minutes of yesterday's session were read and approved.

A telegram was received by the president from Keeper Patterson,

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explaining that he had been detained by illness in his family, and stating that he was on his way to Buffalo.

A letter was also read from the Acting General Superintendent of the Life-Saving Service at Washington, dated the 31st ultimo (received by way of New York), inclosing a letter from J. H. Dormer, of Buffalo, with specifications of the Vincent "patent oar-lock."

The Board then proceeded to the consideration of subjects on the docket, reports of committees being first in order.

REPORTS OF COMMITTEES.

7. Under this call the committee on the Eddy patent life-boat submitted its report, recommending that Mr. Eddy be informed that if he will submit a boat of his model it will be fully tested as to its merits in comparison with the boats now in service. The report was received and the committee discharged, the Board deciding to indorse the committee's recommendation in its report to the General Superintendent.

8. The committee on the Larson boat, by Captain Merryman, its chairman, reported as the result of an investigation that the suggestions of Mr. Larson in regard to the general construction of life-boats do not point to any valuable improvement on the style of boats now used in the service. The report was accepted, and the committee discharged from the further consideration of the subject.

CONSIDERATION OF DOCKET.

9. The Cogswell Manufacturing Company's water-repellent life-preserver was then taken up.

The following members of the Board were appointed a committee to examine and report upon this device: Superintendent B. C. Sparrow and Keeper J. C. Patterson. The sample life-belts, three in number, together with the accompanying papers, were delivered to the committee.

10. H. von Bayer's proposition for the establishment of a system of fog-signals.

Mr. von Bayer's letter was read suggesting the use by the patrolmen of fog-horns in dark or foggy weather to warn vessels against approaching too near the coast.

After discussing the merits of Mr. von Bayer's proposition it was declared to be the opinion of the Board that the use of a fog-horn would be objectionable, for the reason that it would be likely to mislead vessels in foggy weather, and on account of the great difficulty that would be encountered in establishing a system of signals and making it generally known.

The Board also expressed the opinion that it is not advisable to increase the number of articles carried by the patrolmen any more than is absolutely necessary.

11. James Dean & Co.'s "improved diagonal surf-boat."

No model of this method of constructing boats was presented. The drawings and specifications received from Messrs. Dean & Co. were carefully examined, however, and after a full discussion of the subject the Board expressed the opinion that as the method is similar in principle to one already in use in the service there appears to be no necessity for making any recommendation for its adoption.

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12. Patterson's improved hand-cart.

This is a four-wheeled vehicle, submitted by Keeper John C. Patterson, of the Life-Saving Service.

A model, with specifications for the same, was submitted to the Board. It was referred to the following committee for examination and report, viz: Captain Merryman, Captain Lyle, and Superintendent Dobbins.

13. H. D. Morris' "skimmer ballast."

Rough drawings and a description of this device were presented. The discussion of the merits of this appliance for ballasting boats resulted in an expression of the opinion that the advantages claimed for it by its inventor are not such as to commend it for adoption in the Life-Saving Service.

14. John Vincent, jr.'s, "patent oar-lock." (Sample and specifications presented by J. H. Dorwer, of Buffalo, New York.)

After an examination of this device and an interchange of views, the Board arrived at the conclusion that while it is a very ingenious contrivance and adapted for use in ordinary boats, it is not advisable to recommend its adoption in the service.

At 5 P. M. the Board adjourned to meet at Presque Isle, Erie, Pennsylvania, at 12 M. to-morrow, the 5th instant, for the purpose of examining the Ottinger sand-wheel at the station at that place.

THOMAS D. WALKER,
Lieutenant, U. S. R. M., Recorder.

WEDNESDAY, *September* 5, 1883.

The Board met at Erie, Pennsylvania, at 11 o'clock A. M., and proceeded to the Presque Isle Station to examine the Ottinger sand-wheel at noon, as per adjournment; all the members, including Keeper John C. Patterson, who had been detained by illness, being present.

After making as full an examination as was then and there possible in comparison with the common broad-tired wheel now in use, the Board adjourned, at 2 o'clock P. M., to return to Buffalo; the time for reassembly being fixed at 10.30 A. M., to-morrow, the 6th instant.

THOMAS D. WALKER,
Lieutenant, U. S. R. M., Recorder.

THURSDAY, *September* 6, 1883.

The Board reassembled at Buffalo, as per adjournment, at 10.30 A. M., all the members being present.

The minutes of the proceedings on the 4th and 5th instant were read and approved.

No committee reports were presented. The first business therefore taken up was the Ottinger sand-wheel, examined at Erie yesterday.

15. The device consisted of a wooden tire fitted to each wheel of the surf-boat wagon. Each tire is in four sections, bound at the sides with iron plate one-eighth inch thick and three inches wide, the face of the tire forming a series of rectangular-shaped depressions, four in each section, the external dimensions of these depressions being ten and one eighth by eight and one quarter inches, while the internal dimensions are five by three inches with a depth of two inches; two assembling bolts of half or five-eighths inch iron being required for the attachment of each section to the rim of the wheel.

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The diameter of the wheel with the Ottinger attachment was fifty-three inches, with a breadth of tire of eight and one-half inches; while without the attachment the wheel had a diameter of forty-eight and three-eighths inches and a face of five and seven-eighths inches. The time required by the crew of the Presque Isle Station to haul the wagon, with the fully-equipped surf-boat thereon, and with the attachment complete over a given distance was five and one-half minutes, while the return over the same ground without the attachment was made in five and one-quarter minutes. (It should be stated that a stoppage was made on the way out, but it was so brief that the time was not noted.) In removing the device to return over the same ground with the ordinary wheels the assembling-bolts were found somewhat corroded, the station crew being seventeen minutes in getting the sections off.

The weight of each section was about seventeen and a half pounds, making the aggregate weight of sixteen sections for the four wheels of, say, two hundred and eighty pounds. A committee, consisting of Superintendent Sparrow, Captain Lyle, and Keeper Patterson, was appointed to thoroughly test the merits of this invention and report results at the next meeting of the Board.

A communication from Mrs. H. P. Nickels, of New York City, dated November 17, 1882, in relation to "Manes' life-saving apparatus," and inclosing a copy of a report on that device by a committee of the board of supervising inspectors of steam vessels, was then read by the direction of the president. It had been received by him subsequent to the last meeting of the Board.

As the subject was not properly before the Board, under the regulations the recorder was instructed to forward it to the General Superintendent of the Life-Saving Service.

The next subjects taken up were the Dobbins' self-righting and self-bailing and self-ballasting life-boat. Mr. Dobbins explained at length the advantages claimed by him for these boats, and submitted a written request that the Board proceed to the Buffalo Station and examine them and also the following appliances of his design also at that station, viz:

1. The improvement by which the life-car is rendered self-ballasting and self-righting *when afloat.*
2. The detachable bails for the life-car.
3. The open runner-block for use with the life-car (to travel on the hawser).
4. A water-proof dress for surfmen.
5. A boat-wagon, with launching-cradle.
6. Method of splicing the braided shot-line when broken.

Mr. Dobbins also submitted the following letter, and requested to be excused from the deliberations of the Board upon these subjects and also from participation in the action taken thereon:

The letter was as follows:

"BUFFALO, NEW YORK, *September* 6, 1883.

"FRANK R. BABY, Esq.,

"*President Board of Examiners of Life-Saving Appliances:*

"SIR: I have the honor to state that I have no patent on any article of life-saving apparatus that I have ever submitted to the Board; that in case I should hereafter patent any article or device neither I nor my heirs or assigns shall make use of said patent as the basis of any claim against the Government for its use in the Life-Saving Service.

"I have never made, nor do I intend to make either now or in the future, any claims against the United States Government for the use of,

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or the right to use in the Life-Saving Service, any article of apparatus, patented or not, relating to that service, nor the improvement that I may have made or may make in said apparatus. It is with the greatest pleasure that I present them—whether patented or not—to the Government for its use in the Life-Saving Service, if they be deemed worthy of adoption, and all such devices, designs, and improvements may be forever used by the Life-Saving Service without payment of any royalty or other cost or charge of any nature to me or my heirs or assigns.

"If the Government should desire to obtain possession of any boat or device that I have constructed at my own expense, I will transfer said boat or device to the Life-Saving Service at cost price.

"Will you please communicate these facts to the members of the Board on life-saving appliances? I have also the honor to request that the Board excuse me from engaging in the discussion of, or from voting upon, any device of my own presentation or upon any that come either in competition therewith or are designed to supplant it.

"Very respectfully,

"D. P. DOBBINS,
"*Superintendent Ninth Life-Saving District.*"

The Board agreed to Mr. Dobbins' request for leave to withdraw from participation in the discussions upon his device, and then, at 1.30 P. M., proceeded to the Buffalo Life-Saving Station and examined the articles named, witnessing the trial of the self-righting capacity of the boats and life-car. They were each in turn upset by means of a whip rigged to a pair of shears erected in front of the station at the water's edge. The self-righting surf-boat righted itself instantly, remaining full of water. The self-righting and self-bailing life-boat was twice upset and in each case righted instantly and speedily freed itself of water. The life-car also worked well, four of the crew remaining in it when turned bottom up and left to right itself.

The Board then returned to its meeting-room, at 4. 50 P. M., and resumed the consideration of the business.

At 5.15 P. M. the Board adjourned until 9 A. M. to-morrow, the 7th instant.

THOMAS D. WALKER,
Lieutenant, U. S. R. M., Recorder.

FRIDAY, *September* 7, 1883.

The Board reassembled as per adjournment, at 9 A. M., all the members present.

The minutes of yesterday's session were read and approved.

The General Superintendent of the Life-Saving Service, who was present, referred to the Board a communication from Superintendent D. P. Dobbins, dated the 6th instant, requesting that his method of splicing the braided shot-line, and a water-proof dress for surfmen, be regularly placed upon the docket and considered by the Board. Mr. Dobbins exemplified his method of connecting the two ends of a shot-line by submitting to the Board a piece of line so spliced. He also explained the purposes for which his proposed dress would be serviceable, viz, in working about wrecks and in the water.

Mr. Dobbins then withdrew and the Board proceeded to the consideration of the question of the advisability of using spliced shot-lines at wrecks.

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16. Method of splicing shot-lines.

The method consists in unlaying the ends a sufficient length to admit of their being laid up or twisted in three strands, the same as ordinary rope, and then connecting them by a long splice.

The Board expressed the opinion that it is an easy method of splicing braided lines, but would not recommend that spliced lines be used at wrecks. They should only be used for practice.

17. Dobbins' water-proof dress for surfmen was then taken up.

The Board, after discussion, expressed the opinion that this suit is pliable and would allow freedom of movement to the wearer, and that it would be valuable in cases where the men have to work in the surf or in going off to a wreck to superintend the landing of those on board by the life-car or breeches-buoy. The dresses are inexpensive, the cost being but little greater than that of ordinary oil clothing, and could be easily procured by the men of the service.

18. Dobbins' self-righting surf-boat.

The general dimensions are twenty-six feet in length, five feet beam, and two feet two inches depth, the weight being estimated at eight hundred and fifty pounds. The Board expressed the opinion that this boat has not sufficient breadth of beam, and in that respect is inferior to the surf-boats now generally in use in the service. Its self-righting qualities are good, but they are obtained at the sacrifice of its stability on account of its narrow beam.

19. Dobbins' self-righting, self-bailing, and self-ballasting life-boat:

Dimensions: Twenty-six feet long, five feet ten inches beam, and two feet three inches depth amidships, with air-chambers at the ends. The space below the deck is entirely filled with cork. Weight of boat, thirteen hundred pounds.

Mr. Dobbins withdrew the claim that this is a self-ballasting boat.

Considerable discussion ensued upon this subject. The opinion was expressed that this self-righting and self-bailing life-boat has many of the qualities possessed by the English life-boat, obtained with much lighter weight by a very good method of construction devised by Captain Dobbins.

The model is fair, but can be improved in future boats built upon this plan. Even in its present form this boat will go far, in the opinion of the Board, towards solving the difficult problem of obtaining a portable self-righter and self-bailer for service on the flat beaches of the coast.

20. J. J. Bryant's double-boat:

Nothing further having been heard from Captain Bryant since the last meeting of the Board, its consideration was postponed.

21. The Fryer buoyant propeller-ship:

This subject was also postponed, no model having yet been presented.

There being no further business before it the Board adopted the following resolutions:

Resolved, That the thanks of the Board on life-saving appliances be extended to Thomas A. Van Valkenburgh, esq., supervising inspector of steam vessels, Ninth District, for the use of his office, which he generously placed at the disposal of the Board during its session, and for numerous other courtesies.

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Resolved, also, That the thanks of the Board be tendered to James P. White, esq., of Buffalo, for his kind offer of the use of the "reference-room" in the fine building which bears his name.

Resolved, That the foregoing resolutions be spread upon the minutes, and that a copy thereof be transmitted by the president of the Board to Mr. Van Valkenburgh and Mr. White.

The Board then proceeded to the consideration and formation of its report, and at 3.30 P. M. adjourned *sine die*.

THOMAS D. WALKER,
Lieutenant, U. S. R. M., Recorder.

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II.

REPORTS OF COMMITTEES.

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II.—REPORTS OF COMMITTEES.

EAST ORLEANS, MASSACHUSETTS,
June 30, 1883.

SIR: Your committee has the honor to submit the following report on the use of oil in calming a rough sea, with accompanying papers.

Very respectfully,

B. C. SPARROW,
Superintendent Second Life-Saving District, Committee.

FRANK R. BABY, Esq.,
President of Board on Life-Saving Appliances.

1.—REPORT ON THE USE OF OIL IN CALMING A ROUGH SEA.

INTRODUCTORY NOTE.

The special object in the appointment of this committee was for examination of and report upon the letter of Capt. R. B. Forbes, of Milton, Massachusetts, of November 25, 1880, herewith transmitted, marked A.

The interest manifested through the press in the experiments of John Shields, esq., at Peterhead, Scotland, the receipt of many private suggestions that oil might be used in calming the sea for purposes of the Life-Saving Service, and the offering of several devices, by inventors, for distributing the same, have induced an investigation of the subject which has involved an amount of labor not at first anticipated.

The nature of the phenomena presented by a rough sea, the relative influence of the different agencies concerned in its action, and just how far this action can be controlled, can only be determined by carefully compared experiments, which would require an expenditure of time and funds not at present at our disposal: therefore, the subject is herein treated only as a matter of practical observation and not of exhaustive scientific inquiry.

ACKNOWLEDGMENTS.

In preparing this report the committee is under great obligations to Mr. S. I. Kimball, general superintendent of the United States Life-Saving Service, for information and suggestions; to Capt. J. H. Merryman, United States Revenue Marine, inspector of Life-Saving Stations, and Capt. D. A. Lyle, Ordnance Department, United States Army, for collecting and placing at the disposal of the committee printed information; and to S. C. Hopkins, esq., of Boston, Massachusetts, and Keeper W. T. Tuttle, of Monomoy Life-Saving Station, Second District, for the same.

Thanks are also due to John Shields, esq., of Perth, Scotland, for replies to letters of inquiry; to Lieut. C. H. McLellan, United States

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Revenue Marine, Assistant Inspector Life-Saving Stations, and Superintendent B. S. Rich, of the Fifth District, for accounts of their experiments and observations; and to Mr. P. Z. Jenkins, United States Signal Observer, at Provincetown, Massachusetts, for reports of velocity of winds.

Obligations should also be expressed to Capt. Joseph Taylor and J. L. Sparrow, esq., of Orleans, Massachusetts, and Capt. N. K. Kenny, of Chatham, Massachusetts, for valuable information on the subject; to Station Keepers J. F. Holmes, J. W. Young, J. G. Fisher, George A. Veeder, Surfmen Solomon Taylor and J. H. Hardy, in the Second Life-Saving District, for very valuable verbal accounts of personal experience and observation in the use of oil during gales at sea; and also to Keepers M. M. Pierce and N. E. Gould, for the same and for assistance at experiments with oil.

HARMLESS SEA IN DEEP WATER.

Small bodies of water (as ponds unaffected by currents) when the air is motionless present a still, glassy surface; land-locked bays uninfluenced by any swell from the ocean often have the same appearance, and the great ocean itself on the dying out of long-continued moderate off shore winds will become so calm and still that the smallest skiff can be pushed off or on to its shore in safety. Such extreme quiet on the ocean shore is, however, observable only at long intervals. The facility with which the molecules of water move among each other admits of the glassy surface being thrown into undulations by the friction of the first wind that falls upon it. These undulations move along, broad at the base and rounded at the crest, in a manner similar to those caused by rolling a cylinder underneath a flexible fabric, spread upon a horizontal surface. The motion is that of rising and falling. The body of the water is not swept forward to any considerable extent. Billets of wood or other light floating objects rise and fall as the undulations pass beneath them, but derive the greater part of their forward motion from wind and current.

The inertia of the water causes it to accumulate the force imparted to it by the wind as the undulations pass to leeward from the starting point, making them increase in volume and speed in proportion to the depth of water, the velocity and duration of the wind, and the area acted upon.

With a moderate wind blowing at a uniform rate this accumulation of force will cause the undulations to acquire a speed in excess of that of the wind. When this excess of speed becomes sufficient to cause the pressure on the leeward (or forward) slope to become greater than that upon the windward slope the crest of the undulation sharpens until the pressure becomes such as to destroy the cohesion between the crest and the body of the undulations, and it breaks off in what is familiarly called "white caps" (fishermen say it "slops up") and the broken water subsides on the windward side of the undulation. The sea which breaks in this form has not force enough to render it dangerous.

DANGEROUS SEA IN DEEP WATER.

With a rapidly increasing wind the undulations do not accumulate force sufficiently fast to keep pace with it. The tendency is to hurry the windward slope forward over the leeward slope. Any approach to a gale is sufficient to cause such a result, and the crest is thrown violently forward over the leeward slope in a mass of broken water, with all the

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force imparted to it by the momentum of the undulation from which it broke and its own weight in running down hill.

This broken crest is no longer an undulation, rising and falling, but a body of water let loose to rush forward and downward. Light objects are seized by it and carried along at a speed equal to its own. Heavy objects that it cannot readily sweep along it runs over and engulfs. It is the breaking of such a sea which is sought to be controlled.

SEA UPON THE SHORE.

Sea breaking upon the shore is widely different in character from that in deep water and additional agencies are concerned therein.

With an onshore wind an undulation rolling in from deep water has its base abruptly impeded both by the shallows, which are insufficient to support its volume, and the reaction of its predecessor, known among beachmen as the "undertow," while its crest is at liberty to move forward. This it does by passing over the retarded base as broken water, and rushing far up the shore in the form of surf, which, when its force is exhausted, runs back again with a rapidity proportioned to its depth and the steepness of the shore, forming close to the bottom the "undertow" referred to, while the surf from the following breaker wave passes shoreward above it.

(The undertow carries back with it a portion of the sloping shore if it be composed mainly of sand, so that during prevailing onshore winds, with rough sea, sandy shores become "flat.")

The undulations on the surface of the ocean extend long distances beyond the area directly acted upon by the gales which create them, hence heavy "swells" are often seen rolling towards the shore against the winds. Such an undulation, in addition to the impediments acting against its base, has that of the wind against its crest, while the seaward slope continues to press forward.

This causes the shoreward slope to assume a very marked steepness, while the crest grows so sharp and thin as to become in the sunlight transparent. (While advancing in this peculiar form it is called by beachmen a "comber.")

The increasing steepness of the shoreward slope continues until the seaward slope is forced over it, throwing it into concave form and it breaks in what is known as the "curling wave." Beachmen refer to it as "breaking hollow."

The broken crest falls downward with a dead, crushing weight, smashing whatever it chances to fall upon and digging into the bottom (unless rocky), and the surf "boils up" filled with sand, and rushes up the shore with little force compared with that from a sea which breaks before the wind.

(The sand washed up is deposited, and after a few days of off shore winds sandy shores become "steep.")

The sea which breaks upon the shore very often constitutes a lively element of danger in the immediate vicinity when the winds are still and the expanse of water off shore shows not a single "white-cap," and only a few hundred yards from land (often less than one hundred) the waters are powerless to cause disaster to boat or craft exposed to them.

The huge undulations rolling in only cause them to lazily rise and fall, but when the swell reaches the bottom, and there is no depth of water beyond to which to communicate its mighty impulse, it dashes itself in pieces, together with whatever it bears upon its crest.

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HEIGHT AND FORCE OF THE SEA.

Arnot estimated the extreme height of the ocean waves, at a distance from land sufficiently great to be free from any influence of it upon their culmination, to be twenty feet.

The average force of the waves of the Atlantic Ocean during the summer months, as determined by Thomas Stevenson, was six hundred and eleven pounds per square foot, and for the winter months two thousand and eighty-six pounds. During a heavy gale a force of six thousand nine hundred and eighty-three pounds was observed. This amount of force we are urged to endeavor to render harmless by the use of oil.

ACTION OF OIL.

The motion of the air being communicated to water through the medium of friction it follows that whatever diminishes friction tends to prevent water from taking up motion. Oil, being of less specific gravity than water and possessing properties that admit of a small quantity being rapidly spread over a large surface, is peculiarly adapted to act as a lubricant between the two elements. The coefficient of friction between air and water and the proportion of its reduction by means of lubricants would be an interesting field for future inquiry.

At present it is thought sufficient to present such facts as have been gathered relating to the calming effect of oil upon the sea where it breaks in deep water, together with the evidence that where it breaks upon the shore it has no controlling effect whatever.

PAPERS SUBMITTED.

Early in the inquiry a letter was addressed to John Shields, esq., of Perth, Scotland, asking a number of questions on the subject, copy herewith marked B. To which that gentleman replied, in the letter marked C, transmitting also a copy of a paper addressed by him to James Knowles, esq., marked D. He also called attention to an article in the Nineteenth Century (magazine) of April, 1882, entitled "Oiling the waves," herewith marked E.

A large number of newspaper clippings have been collected, the subject matter of the majority of which is embodied in the article referred to in the Nineteenth Century; therefore none are placed on file except an article from the New York World on "Mr. Fondacaro's trip from Montevideo to Naples," marked F; New York Herald, "Greasing the ocean," marked G; London Parliamentary Record, "Stilling the waves with oil," marked H; Boston Evening Transcript (editorial), marked I; Yachting Gazette (item), marked J; Boston Daily Advertiser (item), marked K; unknown publication, marked L; letter of Lieut. C. H. McLellan, United States Revenue Marine, assistant inspector life saving stations, giving results of experiments and observations in use of oil upon the sea, marked M; letter of Superintendent B. S. Rich, of the Fifth Life-Saving District, on same subject, marked V; copy of report of Superintendent J. M. Richardson, First Life-Saving District, on use of oil in surf-boats by means of tanks, marked N; and copies of reports from Keepers Myers and Goldthwait, of Quoddy Head and Fletcher's Neck Life-Saving Stations, respectively, in the First District, on experiments with said tanks, marked O, Nos. 1 2, 3, 4, 5, and 6, and P, Nos. 1, 2, 3, and 4.

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VALUE OF PRINTED MATTER.

In the many printed testimonials which have been examined relating to the efficacy of oil in calming the sea there is a singular absence of information leading to the solution of the question of the practicability of the general use of oil as a means of safety in the future, or that of accounting for its not being more generally used in the past, since the fact that oil will, in a measure, calm the sea is centuries old.

The mere fact of a gale in which oil was used with more or less effect is mentioned, but a marked silence prevails respecting the position of the vessel as regards wind and sea. Papers F, G, and I only, throw a little light on the subject.

INQUIRY AMONG PRACTICAL MEN.

Inquiry among fishermen and whalemen proves that with this class of seafarers the efficacy of oil on a rough sea is well understood, and that during bad gales at sea its use is common when their boats or vessels are exposed under circumstances which render its effects available.

The limits of this report will not admit of a mention of the instances in which these men have used oil with good results, or otherwise, but through their experience is found a solution of the question referred to under the foregoing caption.

When a boat or vessel is lying to in the open ocean exposed to a dangerous sea, and by means of a drogue, or otherwise, makes a "dead drift," *i. e.*, directly before the wind, the pouring of oil upon the water is an effective means of safety, as under such conditions the craft keeps in the calm surface, over which the oil prevents the sea from breaking, but when lying under "ranging sail" no benefit is derived from the use of oil, since the craft will continually range ahead from the oiled surface into rough water.

The occasions during which a vessel makes a "dead drift" are not numerous, since it is a point, during adverse gales, to keep under ranging sail as much as possible in order to avoid being blown too far from the intended course.

It is contrary to the spirit of enterprise to make a dead drift and dispense oil in order to avoid the ordinary dangers of the sea, and most master mariners will continue to risk the chances of shipping a sea and hold their course as best they can. Probably no more oil will be used in the future than has been in the past unless some invention is perfected that will distribute it in advance of a vessel's course in such a position that she will range into it.

PLANS AND DEVICES.

Mrs. T. D. Pratt, formerly of East Boston, Massachusetts, at present known as Mrs. Charles Clement, Pine Lake, Fulton County, New York, has submitted a plan of boat for sending out oil upon the waves, with explanations and model of the same herewith, marked A (together with all correspondence relating to the same).

OPINION.

The committee is of the opinion that the plan of Mrs. Pratt presents no marked ingenuity over that of allowing oil to run from a reservoir

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of any sort, having more or less holes in it, and would involve the carrying of more oil in boats than would be convenient or practicable in order to supply the rate of expenditure that her plan proposes.

THE FOLGER DROGUE.

Mr. J. Lawrence Fowler, No. 6 Newbury street, West Somerville, Massachusetts, in a letter received December 19, 1882, herewith marked R, called attention to his application of oil to the "Folger Drag" (so called).

A copy of the rules and regulations were sent him, to which he replied by letter of December 27, 1882, herewith marked S.

The committee subsequently viewed the invention of Mr. Fowler in Boston, Massachusetts, but as he declined to comply with paragraph VI of General Regulations, his device was not experimented upon.

PLAN OF W. H. H. HINDS.

Mr. W. H. H. Hinds, Kennebunk Port, Maine, in his letter of May 24, 1882, copy herewith marked T, calls attention to the importance of placing a fountain of oil in the front end of each boat, with a force-pump or compressed air arrangement, by which oil may be thrown in front of a boat while passing through breakers.

The device of Superintendent Richardson (see paper N) in part carries out the suggestion of Mr. Hinds. Placing the tank at the bottom of the boat and fixing in it a "Johnson's pump," would be quite in accordance with his plan.

His pump, with a three-sixteenth inch nozzle, will throw one gallon of oil, before a moderate wind, a distance of fifty-five feet in thirty-seven seconds, and against the same wind twenty-seven feet. By reducing the nozzle to one thirty-second of an inch it will throw one gallon of oil before moderate wind twenty-five feet in fifteen minutes and against the wind fifteen feet.

By changing the direction of the stream by means of the flexible discharge pipe a track fifty feet wide can be covered with oil.

An attempt to throw oil by this means against a strong wind would only cause it to be blown back into and around the boat, and would be no improvement over the plan of Superintendent Richardson. A disadvantage of the pump would be the employment of one of a boat's crew to work it.

OPINION.

The committee is of the opinion that no plan or device for throwing oil by any forcible means should be adopted that will not carry it equally well in all directions.

BAKER'S OIL-CARRYING PROJECTILE.

Mr. William D. Baker, Rockland, Massachusetts, by reference of Capt. R. B. Forbes, of Milton, Massachusetts, letters herewith marked V, offered for experiment projectiles to be filled with oil and thrown from a gun or mortar. Device No. 1 consists of a heavy tin tube three and seven-sixteenths inches in diameter and eighteen inches long. In one end is cast five pounds of lead, forming the head of the projectile, slightly convex. The tube after being filled with two and a half quarts of oil is closed at the open end with a composite stopper, formed by

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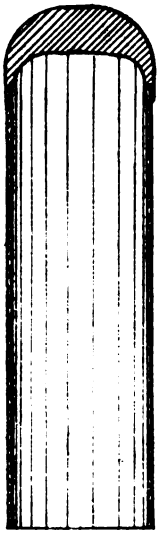
Fig. 1.



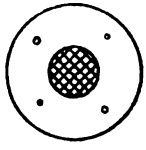
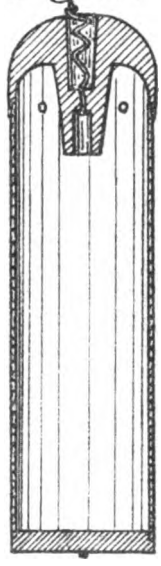


Fig. 2.



LIFE-SAVING APPARATUS

W. D. BAKER'S

OIL CARRYING PROJECTILE

1883.

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riveting together sole-leather and rubber in two layers, each one-fourth of an inch in thickness. In the center of the stopper is an orifice three-fourths of an inch in diameter covered with a fine wire netting.

METHOD OF USING.

The projectile, when required for use, is filled with oil and the composite stopper driven into its place with a hammer. It is placed in the gun with the head downwards or next to the cartridge and the gun is aimed towards the point upon which the oil is to be placed, and fired by means of friction primers and lanyard.

ACTION.

On leaving the gun the projectile reverses, falls at or near the point desired, sinks in the water, while the oil escapes through the wire netting and rises to the surface.

Device No. 2, same as No. 1, except that in casting the head a chamber is formed sufficient to hold two drams of powder, with a hole for the insertion of a five-second fuse leading from it through the center of the head. The fuse is first fitted into a wooden plug and then driven into the hole referred to.

The composite stopper is without the orifice and wire netting.

METHOD OF USING.

The projectile is taken from the packing box with the chamber ready charged and the fuse fixed in place. After being filled and stopped it is placed in the gun in the same manner as device No. 1.

ACTION.

The projectile reverses, the time fuse explodes the powder in the chamber and blows out the stopper and liberates the oil all at once on the surface of the water.

Device No. 3, same as No. 2, with the addition of a weighted canvas bag, which is placed within the projectile, and into which the oil is poured and the mouth of the bag tied up with twine, after which the composite stopper is put in place.

METHOD OF USING.

Same as that for No. 2.

ACTION.

Same as No. 2, except that the oil is not liberated all at once but oozes slowly through the bag and rises to the surface.

Device No 4 consists of a cast-iron projectile twelve inches in length, weighing nine pounds, with a hemispherical shaped head. This projectile was intended to fit a four and three-sixteenth inch mortar, but by an error in constructing was made too small, therefore diameter is not given with capacity for two quarts of oil. Chamber and fuse same as device No. 2. In place of the composite stopper several of these shells are fitted with a cork stopper two inches thick, to which is fastened several fathoms of small strong twine. Near the open end of the projectile intended for use with this form of stopper a small hole is drilled.

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METHOD OF USING.

With the composite stopper the same as that for No. 2.

With the cork stopper, after the oil is poured in, the twine attached is formed in a coil of less diameter than that of the projectile, the remaining end fastened in the hole in the rim and the coil laid upon the oil. The cork stopper is then driven into its place with a hammer.

ACTION.

Same as that of No. 2, and in addition the empty shell falls in the water with twine and cork attached, the latter acting as a buoy to indicate the whereabouts that it may be recovered.

TRIAL OF BAKER'S OIL-CARRYING PROJECTILE.

On January 5, 1883, the inventor made a trial of his various projectiles at the house of the Massachusetts Humane Society, on Nauset Beach, Orleans, Massachusetts, near the mouth of Nauset Harbor. He had a permit to use the guns stored in the building and had constructed projectiles number one, two, and three to fit the three and one-half inch gun used for throwing the Hunt life-saving projectile.

The No. 4 projectile was intended for throwing from a four and three-sixteenth inch mortar.

The wind was northeast and estimated to have a velocity of fifteen miles per hour.

The air was filled with falling snow and the sea rough.

Records of firing of Baker's oil-carrying projectiles.

Date.	Number of fire.	Kind of gun.	Distance of gun from water.	Powder.		Projectile.	Kind of oil.	Quantity of oil.	Direction in which thrown.	Action of projectile.	Action of oil.
				Kind.	Quantity.						
			Yards.		*Ounces.*			*Gallons.*			
Jan. 5	1	Hunt, 3½ inch.	200	Sporting.	3	No. 1..	Boiled linseed.	2½	Windward.	Poor..	0
5	2	....do ...	200	....do ...	3	No. 1..	....do ...	2½	...do ..	Poor..	0
5	3	....do ...	20	....do ...	3	No. 1..	....do ...	2½	...do ..	Poor..	0
5	4	....do ...	20	....do ...	2½	No. 2..	....do ...	2½	...do ..	Good .	0
5	5	....do ...	20	....do ...	2½	No. 3..	....do ...	2½	...do ..	Good .	0
5	6	....do ...	20	... do ...	3	No. 1..	... do ...	2½	...do ..	Poor..	0
5	7	Mortar, 4 3/16 inch.	20	....do ...	2½	No. 4..	Crude petroleum	2	...do ..	Poor..	0
5	8	....do ...	20	....do ...	2½	No. 4..	....do ...	2	...do ..	Poor..	0
5	9	....do ...	20	....do ...	2½	No. 4..	....do ...	2	...do ..	Poor..	0
5	10	....do ...	20	....do ...	2½	No. 4..	....do ...	2	...do ..	Poor..	0
5	11	....do ...	20	....do ...	2½	No. 4..	....do ...	2	...do ..	Poor..	0
5	12	....do ...	20	....do ...	2½	No. 4..	....do ...	2	...do ..	Poor..	0
5	13	....do ...	20	....do ...	2¼	No. 4..	....do ...	2	...do ..	Poor..	0
5	14	....do ...	20	....do ...	2½	No. 4..	....do ...	2	...do ..	Poor..	0

REMARKS ON FIRING OF BAKER'S OIL-CARRYING PROJECTILES.

First shot.—Composite stopper flew out about one hundred yards from the gun. Empty projectile fell in the water about one hundred and twenty-five yards from the shore.

Second shot.—From a position one hundred yards in front of the gun

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and fifty from the line of fire, as the projectile passed the oil could be seen to leave it in a form resembling mist or smoke. It all appeared to escape before the projectile reached the water's edge. The composite stopper was held from flying out by driving it into the tube of the projectile far enough to allow the edges to be bent over it with pliers.

Third shot.—Gun was placed near the water's edge. Oil could be seen to fly from the projectile during its flight. It was apparently empty before striking the water. No effect was produced on the waves.

Fourth shot.—Charge in the chamber exploded and blew out the stopper about seventy yards from the gun. While the projectile was several yards in the air a portion of the oil blew back over the gunner. It had no effect on the sea.

Fifth shot.—Charge exploded as before, about one hundred and fifty yards from the gun. The bag of oil fell into the sea. The empty shell fell about fifty yards beyond the point of explosion.

Sixth shot.—The oil could be seen to leave the projectile during its flight, and, from the force of the wind, to blow backwards in the form of mist, which, through the snow-filled air, could be traced thirty yards to the rear and leeward of the gun.

Seventh shot.—The cork stopper (used instead of the composite) was seen to fly out as the projectile left the gun, fall to the ground, and roll off to leeward from the force of the wind. The whole oily contents of the projectile appeared to blow backwards over the gunner, who was covered with oil. The empty shell flew off the shore about one hundred yards.

Eighth shot.—The charge of powder in the chamber of the projectile exploded with the discharge of the gun, blowing out the cork stopper as before. A portion of the oil was ignited and blew off to leeward of the gun in a small sheet of flame of two seconds' duration.

Ninth shot.—Results as the last, except that the oil did not ignite and much of it showered over the gunner.

Tenth shot.—Exploded prematurely, as before. Oil ignited and a small sheet of flame blew to leeward.

Eleventh shot.—Exploded prematurely. Oil ignited and a sheet of flame covering an area of at least twelve square yards blew to leeward twenty yards before expiring, forming a decided element of danger to the oil-covered gunner. The twine attached to the cork stopper and shell held fast for the first time and fell together into the sea. They were not recovered.

Twelfth shot.—Fuse failed to ignite. The projectile fell into the water with the contents "bottled up."

Thirteenth shot.—Projectile fell into the water with the fuse burning and was extinguished. Contents remained "bottled up."

Fourteenth shot.—Projectile used without powder in the chamber, and, with composite stopper and wire netting, was dropped but a few yards from the shore in order that as little oil as possible escape from it during its flight. The water showed discoloration from the quantity of oil in the immediate vicinity of the spot where it fell, but it had no effect upon the breakers.

PREMATURE EXPLOSIONS.

The length of the projectiles being such as to cause them to project from the muzzle of the guns it was not probable that the small charge of powder would sufficiently envelop the outward ends in flame to insure igniting the fuse if placed therein. Therefore the inventor placed

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them in the end next the cartridge and subject to the whole force of its explosion, which was such as to blow in the wooden plug arrangement and bring the flame in contact with the quick powder in the chamber, causing simultaneous explosions. The fuses when ignited with a match burned full five seconds.

SECOND TRIAL OF BAKER'S OIL-CARRYING PROJECTILES.

The inventor having remedied several defects found to exist in the projectiles, they were given a second trial March 22, 1883, at the same place as before. He decided to abandon the number three and four devices and confine experiments to numbers one and two.

The composite stopper, having been found difficult to confine in place, was substitued by a soft wood plug, one and one-half inches thick, with orifice and wire netting for number one projectile and solid for the number two.

METHOD OF USING THE WOODEN PLUG.

After the projectile was filled with oil the plug was driven in flush with the end of the tin tube and fastened in place by means of a hammer and punch with which the tin was indented into the circumference of the plug, the fastening being more or less secure in proportion to the number of indentations made.

The fuse was secured in a manner to avoid the premature explosion which occurred at the first trial, by a cement of some kind, not recorded by the inventor. The chambers being loaded, its nature was not closely examined.

On the morning of the day referred to the wind blew at a rate estimated at twenty miles per hour, from the northwest, having changed from the north during the preceding night, leaving quite a rough sea breaking on the shore. The beach sand blew very inconveniently for experiments of this sort. No record was made of the different shots fired. Crude petroleum was used for filling.

The number one projectile discharged its contents rapidly as on the first trial.

The number two exploded properly. No ignition of the oil was observed; a very strong sunlight prevented close observation on this point.

The contents of both types of projectiles were all carried into the water and off shore by the wind.

The oil had no effect towards calming the violence of the sea in its breaking on the shore, or on the flat ground covered with broken water. After it passed off into deep water it was too distant for observation worthy of note.

OPINION.

The committee is of the opinion that the several devices of the inventors in their present form dispense oil faster than is necessary; that the number one projectile, at its present rate of delivery, is not adapted to being thrown to windward; that it is of no use for the purposes of the Life-Saving Service in the immediate vicinity of shore, and that its use from boats remote from land by means of guns of the size used in experimenting, or those in use in the Life-Saving Service, is impossible.

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RECOMMENDATION.

The committee respectfully recommend that any additional or improved device under this plan that may be offered in the future receive careful attention.

OTHER EXPERIMENTS WITH OIL.

Selecting an occasion when a long-continued northeast wind caused the sea to roll in upon the bars of Nauset Harbor, at Orleans, Massachusetts, and break at a height, which, had it only been one-third as great, no boat could have lived in it for a moment, we proceeded to the vicinity of the mouth of the harbor in a sixteen-feet dory, accompanied by the keeper of the Orleans Life-Saving Station, in the Second District, and provided with several gallons of highly odoriferous cod-liver oil.

The sea broke across the entire entrance of the harbor in what, at the time of tide, was five or six feet of water.

The water forced over the outer bar by the breakers to deeper waters inside ran in and broke as a secondary sea upon the tongue of an inner bar.

To the very heaviest of the secondary sea it might not have been entirely prudent to have exposed the boat broadside on, but head on to it, there was no element of danger whatever.

The most it could have done in this position might have been to fill her one-third full of water. No single sea could have swamped her.

It was resolved to endeavor to subdue this amount of sea with oil.

It was accordingly poured overboard until an oiled surface of at least one acre was obtained, which an ebb tide swept across and beyond the secondary breakers, and, although the process was kept up for a considerable length of time, the sea continued to break as before.

In order to prove the harmless character of the sea that would not be stilled, a passage was made through it in the boat.

The sea broke over her sufficiently to wet all hands and ship a few buckets of water.

The station keeper remarked that he was "sure that there was oil on the water which came on board, as he could smell it on his jacket."

It having been suggested that could the ocean be covered with oil from the shore to a considerable distance seaward (one or two miles), it might so reduce the undulations as to cause them to break in more shallow water than otherwise, and consequently be less heavy. A pond four hundred yards from shore to shore, with a maximum depth of thirty-five feet was selected for a test of the value of this idea.

When the wind was blowing at a rate of twenty miles per hour (report of United States Signal observer Provincetown, Massachusetts), causing undulations to leeward seven inches in height which broke in white caps over the surface and on the lee shore in miniature breakers and surf, oil was spread upon the water by walking rapidly forwards and backwards for a distance of one hundred and ten yards along the windward shore and allowing it to drip from a leaky dipper. Thirty minutes and three pints of oil sufficed to cover the whole area selected (forty-four thousand yards). The oil obliterated the "white caps" as it advanced, and the use of a field-glass showed when it reached the lee shore. Here was not only a portion of the water off the lee shore protected with oil, but the whole area from windward to leeward on which the wind could act.

But examining the lee shore while the dispensing of oil was still kept

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up it was found that the wavelets broke in usual form and threw up their small surf with as much energy as if no oil had been cast upon them.

The committee has been unable to discover that oil is capable of spreading in all directions irrespective of the direction of the wind.

It has been used by allowing it to drip from the stern of a boat while lying at anchor, both during light and heavy winds, but has been found to go directly to leeward in every case, and never to windward, and to spread much more rapidly on a line in the direction of the wind than upon a line perpendicular to it.

It has been observed that cod-liver oil spreads over a larger surface and holds together more tenaciously than either raw linseed oil or refined petroleum. The latter is found to soon break up and resolve itself into veins or streaks, between which the white caps will appear as before. Raw linseed oil shows this quality to a greater extent than cod-liver oil. Also when allowed to drip slowly at a temperature of seventy degrees into water a few degrees colder it forms in globules which plunge below the surface, to which they return and then float away, retaining this form, which requires a sudden motion to be given to the water before they will break and extend over the surface.

It is probable that with both oil and water at a low temperature the tendency to retain this globular form would be much increased.

THE EXPERIMENT AT PETERHEAD.

It is not infrequently the case that on a bar or shoal where there is a considerable depth of water an undulation will "comb" and pass along into deeper water without breaking, especially if there be little wind, but with a sufficient amount of wind every such comber will break.

It appears that the experiments of Mr. Shields (see paper marked C) were made on a bar where there was from fifteen to forty or fifty feet of water, with a depth outside for at least one mile of not over ten fathoms and inside from three and one-half to seven fathoms, to which the undulations could communicate their force without exhausting the whole of it upon the bar.

Under such conditions there is no doubt but that oil will reduce the sea to the extent that it is caused by the wind.

The experience of Superintendent Rich upon outlying shoals (see paper V) and the opinion of Superintendent Richardson (see paper N) are to this effect.

OPINION.

The committee is of the opinion that the plan of Mr. Shields can never be available for the purposes of the Life-Saving Service, but that it will be expedient to provide such boats as have to operate at a distance from land with the means of dispensing oil when invention shall have perfected the most efficient device.

CONCLUSIONS.

The conclusion deduced from our experiments and those of Lieutenant McLellan, and Superintendents Richardson and Rich from the opinions of these officers, with that of Keeper Goldthwait (see paper P, No. 1), to which might be added that of every keeper and surfman in the

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Second Life-Saving District, is that oil exerts no influence upon a sea that breaks on the shore.

The result, when an inrolling undulation from the ocean throws thousands of tons of water upon the shore, cannot be prevented by a thin film of oil.

It would be as reasonable to suppose that a man who entangles his feet when running rapidly will not fall because his hair is oiled as that a wave will not break when its base is impeded because its crest is oiled.

The majority of the printed statements herewith, assuming them to be authentic, together with all verbal statements made by mariners who have used it, furnish conclusive evidence that in deep water oil has a calming effect upon a rough sea, but there is nothing in either source of information which yet answers the question whether or not there is in the force exerted by the wind a point beyond which oil cannot counteract its influence in causing the sea to break.

Very respectfully,

B. C. SPARROW,
Superintendent Second L. S. District, Committee.

A.

MILTON, *November* 25, 1880.

DEAR SIR: Seeing the inclosed scrap about oil on the waters leads me to inquire particularly how the trial was made at one of your stations, which, according to our late report, resulted unfavorably. I am inclined to think that the trial was not carefully conducted, and I think it is worth looking into and perhaps making another trial under more favorable conditions. In 1859 I sent to the La Plata a small flat iron steamer, rigged temporarily as a three-masted schooner; her naked iron rimmed paddle wheels were shipped with only half the buckets in place and lashed; the steam could be made available by shipping the chimney, putting on the buckets and firing up, and this was done in calms. She was as poor a sailing craft as could well be imagined. Sailing in January, she encountered some severe gales. I had lashed a barrel of oil on the taffrail, and one on each side near the fore rigging. I directed the captain when scudding to bore a small hole in the former, and when lying to to do the same forward. He reported that the after one was of no use, inasmuch as he could not scud her; she would broach to and stay so until it moderated; he found the forward oil of great service in keeping the heavy seas from coming on board. I have often heard whalers speak of the effect of oil draining off a whaler's deck in heavy weather when trying out or cutting up the blubber. No sea could come on board. I have also heard of Captain Cleveland's trials of oil in navigating a small cutter across the Pacific, and I have a thousand times witnessed the effect of the throwing over from a ship the contents of the cook's slop pail, and I am quite satisfied that the quieting effect of oil thrown on rough seas is of practical value. I trust, therefore, that nothing will be said in your report to discourage the use of oil on the water; and I trust, also, that you will authorize further experiments. Captain Hodgdon, of the Gallatin, in his cruises on the coast, if supplied with half a barrel of cheap oil, could make some tests and report thereon, and I could make a short cruise with him and see the effect. If a trial

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should be ordered on some beach with a view to test its utility in a surf, I suggest anchoring a boat just outside the breakers and allowing oil to flow from a cask in a small stream.

* * * * * * *

I see that some good work has lately been done on the lakes and sea coasts.

I am, very respectfully, your servant,

R. B. FORBES.

S. I. KIMBALL, Esq., *Washington.*

The following is the article referred to in Captain Forbes's letter:

"OIL ON THE WATERS."

"Some very remarkable experiments at the entrance of the North Harbor, Peterhead, are described by the Dundee Advertiser as having been attended by very satisfactory results. Bottles filled with oil were sunk to the bottom of the harbor, in which the sea was breaking heavily. The oil was then released, and rising to the surface it exercised an immediate and magical effect in smoothing the troubled waters. Instead of the waves breaking, the sea became quite smooth and glassy-looking, and there was a visible softening down of the waves, which, in place of being sharp crested, were turned into long, undulating seas. The opinion of those who witnessed the experiments was that if by the use of a simple invention oil can be laid on continuously by pipes to the bars of all exposed harbors it will be quite possible to smooth down the stormy waves so that vessels may gain port in safety amid the fiercest storms."

B.

[Office of Superintendent of Life-Saving Stations, Second District.]

EAST ORLEANS, MASSACHUSETTS,
June 1, 1882.

SIR: Having been detailed by the Board for the examination of plans, devices, and inventions intended for use at United States life-saving stations, to make experiments and inquiries concerning the effect of oil in calming a rough sea, I take the liberty of addressing you for the purpose of learning more definitely respecting certain points than I have been able to obtain from reports and comments made in the newspapers on the experiments conducted by you at Peterhead, Scotland.

First.—Is there any preference in kind or quality of oil; if so, what kind and quality is best adapted for use?

Second.—What quantity of oil is required to keep a given surface from being dangerous from a rough sea a given length of time, the force of the wind and current being taken into consideration?

Third.—What was the depth of water when your experiments were made?

Fourth.—It being understood that your experiments were made at the entrance of a harbor, what was the depth of water (say one mile) outside of the place where the oil was let out?

Fifth.—What was the depth and extent of water inside of the place referred to in the preceding question?

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Sixth.—Have you ever made any experiments in the use of oil in calming the sea where it breaks upon the shore; if so, with what result?

Seventh.—In your opinion, is the idea of bringing oil into general use from vessels at sea as a protection in bad weather practicable?

Eighth.—(Admitting that oil is effective in reducing the dangerous character of heavy seas), what, in your opinion, is the reason that it is not in more general use?

Ninth.—How, in your opinion, is the calming of the sea effected by oil?

Trusting that I may hear from you on the foregoing points at your convenience, I am, very respectfully, your obedient servant,

B. C. SPARROW,
Superintendent Second District U. S. Life-Saving Service.

JOHN SHIELDS, Esq.,
Inventor of Sea-Calming Apparatus, Perth, Scotland.

C.

WALLACE WORKS,
Perth, June 21, 1882.

SIR: I have your communication requesting me to give you what information I can as to "the effect of oil in calming the rough sea."

First.—Any kind of oil will do, but mineral oil should be preferred in winter, as it would not be affected by the cold so much as either animal or vegetable oil.

Second.—Where there is no current and where a boat could be anchored in the roughest sea, a very small quantity of oil would suffice, perhaps two or three gallons would enable a ship to ride out the roughest storm, but if riding in a strong current it is difficult to say what quantity would be required. Wind has no effect, as the oil will spread in the face of the wind.

Third.—The depths of water varied from fifteen to forty or fifty feet, but the effect will be the same whatever the depths of water may be.

Fourth.—The depths of water one mile outside of Peterhead Harbor was ten fathoms.

Fifth.—The depths of water inside varied from seven to three and one-half fathoms.

Sixth.—The experiments at Peterhead were made with the result that no broken water passes the oil line, and the water undulates quietly into the shore.

Seventh.—Every vessel should carry a supply of oil, and if overtaken in a storm if they lie to and fill two or three canvas bags with oil and let them be pricked with a needle or small penknife and hung out on the end of a spar to windward of the ship or boat, no more broken water will touch them.

Eighth.—My opinion is that the calming qualities of oil was not generally understood until, when some two or three years ago, I made my experiments in public, when it was seen and has been experimented upon since with the very happiest results.

Ninth.—In my opinion the calming of the sea is effected in the same manner that friction is prevented by the use of oil on machinery. It prevents the wind getting a hold of the water by the thin film of oil floating on the top, and so prevents broken water. If you could get a copy in your country of the Nineteenth Century magazine for April,

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you will get a very good account of some of my experiments and also experiments conducted by sea-faring men. I have endeavored to answer all your queries to the best of my ability, but if there is anything left out I will be very glad to supply the want if you will only point it out to me.

I am, sir, yours truly,

JOHN SHIELDS.

B. C. SPARROW, Esq.,
Superintendent of Life-Saving Stations, Second District,
East Orleans, Massachusetts.

P. S.—I inclose you copy of a letter addressed to and written at the request of Mr. James Knowles, editor of the Ninteenth Century, which will supply you with a considerable amount of information.

J. S.

D.

MAY 6, 1882.

DEAR SIR: Along with this you will receive copies of most of the letters and newspaper articles that I have received relative to pouring oil on troubled waters. A good many of those I received at first have gone amissing, as I did not think it worth while to keep them, but all that I have received have been in the same strain, viz, pointing out the calming effects of oil on water.

The lady or gentleman, and I suppose the former (but will you kindly inform me as to that?), who wrote the article in the Nineteenth Century is substantially correct so far as relates to myself, and I do not know how the writer got the information, as I have written nothing to the newspapers concerning my invention, and I will now, as desired by you, give a short account of the whole thing, but I may state that in no single instance was any of my experiments a failure in so far as the oil was concerned, which in every instance did the duty of calming the waves wherever it was put.

Some five or six years ago, having occasion to be superintending some arrangements in connection with one of the ponds connected with my works here, some oil was spilt on the water, which, at the time, was pretty much broken by a high wind blowing, and to my surprise the oil spread *in all directions* notwithstanding the wind, which appeared to skim over it, and leave a smooth, glassy surface on the water. This struck me very much, and shortly after, when the pond was in pretty much the same state, I sent for my head mechanic, who got twenty or thirty feet of India-rubber tubing. We then went and laid it in the pond along the bottom, keeping one end on land. We then took a flask of oil, and poured it into the tube until it was fully charged; it then began to ascend in beautiful beads to the surface, and spread with lightning rapidity, stilling the whole pond almost instantly, and not more than a *gill* of oil was used. I was then convinced of the great utility that this could be turned to, and to my mind then, and is still, only a mechanical problem, how to get the oil *where* it is wanted, and *when* it is wanted. I continued these experiments on a small scale for about a couple of years, and every time was more and more convinced that it would be a practicable power for saving life and property at sea at no distant date. I then resolved, at my own expense, to give it a more practical test. To this end I consulted Mr. Yeaman, the late member

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of Parliament for Dundee, where he thought I should make the experiment, and he suggested Peterhead, which place I resolved upon. He and I accordingly went on to Peterhead and took a dozen of quart bottles of oil with us. We there met two captains of the name of Gray, engaged in the whale fishing, to whom I explained my experiments and the results, and they at once stated their belief in the efficacy of the thing, and agreed to assist us in our experiment. The following day turned out to be very stormy, and they got the steam-tug belonging to the harbor to carry us out. We lay in the mouth of the harbor, and took a bottle and dropped it down with a piece of cord, when the oil immediately began to ascend, and to their surprise had the effect that I had seen before. In about a minute we drew up the bottle, which was half empty of the oil and its place taken by water, and the remaining half of the oil floating on the top of it, which we dropped into the sea. We then steamed out to the bar and lay to with the ship's head to the wind. Then we dropped five or six bottles all around the boat and steamed out to deep water, and dropped another four or five bottles there in the same manner, and the effect there was somewhat extraordinary, as it was the largest experiment I then had made, and was most gratifying to me. I then at once resolved to utilize it in a practical manner. With that view I got a chart of the harbor, and at once set about getting pipes and valves and other things I then thought necessary for the purpose I had in view. I had six hundred feet of iron pipe one and a quarter inches in diameter laid through the rocky shore at a place called the "Roan Heads." I then attached six hundred feet of gutta-percha pipe, to which were fixed twelve "roses" to allow the oil to escape. After these had been laid by a diver, we charged them with oil, which came to the surface throughout nearly the whole length, and at once calmed the water wherever it came to the surface; but none coming to the surface at the far end, I suspected something wrong with the pipes, and put down another diver, who reported that there were two "kinks" on the gutta-percha tube, which accounted for the oil not getting clear along the pipes to the extreme end. I then had the whole gutta-percha pipe fished up, repaired, and all the "roses" taken off, and three conical valves put on at the far end of the pipe, seventy-five feet apart, and had the whole properly laid down, and again charged with oil. As good luck would have it, the day following was a very stormy one, and a schooner making for the harbor was signaled not to enter, as it was unsafe. We then put the force pump in motion, and in less than half an hour the tug steamed into the harbor with the schooner, which by that time was as smooth as glass, although undulating. I then left the whole apparatus in charge of the harbormaster, who, I am sorry to say, wrote me a fortnight after that the storm had parted the gutta-percha pipe from the iron. I then caused the gutta-percha pipe to be again fished up, and I laid down instead six hundred feet of heavy lead pipe, one inch in diameter, with the three conical valves as before. When this was properly laid we had it tested in the presence of a great many interested in seafaring and harbors, in the face of a very severe storm, and the result was to the entire satisfaction of all who witnessed it, but I am sorry to say that the lead pipes have also been broken, and this is in consequence of the bottom being strewn over with great, heavy bowlders, which are rolled about by the action of the heavy seas that set in there, and when relaid the only mode to prevent the pipes being broken will be to cover them with bags of concrete.

I am at present engaged getting ready a like apparatus for Aberdeen Harbor, but I have reduced the diameter of the pipes still further, viz,

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to three-quarters of an inch, and to have only two valves, which I am now convinced will be all that will be necessary.

The foregoing is a short account of what I have been engaged in, outside of my ordinary business, for the last five years or so, and at a cost to myself of over £600, but it is now an accomplished fact, and in the hands of the Board of Trade can render every harbor in the kingdom a harbor of refuge. I happened to see in the fisheries exhibition in Edinburgh the other day a model of Eyemouth Harbor (that is where the great disaster to fishing-boats, life, and property occurred a year ago), with a projected addition thereto, and a protection wall, which were estimated to cost £85,000, and I have no hesitation in saying that a thoroughly laid down apparatus, such as I have endeavored to describe, would be more efficient by a long way, and not exceeding under any circumstances more than £400 or £500.

I have also invented a buoy that could be put down where it would be impracticable to put pipes and which would communicate with the shore by means of an electric cable, a description of which I inclose. Hollow shells suitable for firing from the rocket guns along our shores, charged with oil, and leaving a small hole open, being fired over a wreck, on sinking to the bottom of the sea, the water would press out the oil, which rising to the surface would prevent any waves from breaking over the wreck, and thus be the means of saving both the ship and the lives upon it.

I have endeavored to give you a fair and truthful account of what has occurred in my own experience, and what I consider is now beyond the reach of experiment and an accomplished fact.

I am, dear sir, yours faithfully,

JOHN SHIELDS.

JAMES KNOWLES, Esq.,
The Hollies, Clapham Common, London, S. W.

E.

OILING THE WAVES—A SAFEGUARD IN TEMPEST.

[By C. F. Gordon Cumming, from "The Nineteenth Century" for April, 1882.]

In the course of many wanderings in many lands I have repeatedly had occasion to notice the action of oil in smoothing the surface of troubled water, and have marveled that we should hear so much of its use, and yet continue to act as if it were wholly a fiction.

It is now many years since I first endeavored to call public attention to the simple precaution which, lying within the reach of all, might prove so invaluable a safeguard to all seafaring men, especially suggesting that a few extra kegs of oil should be considered part of the necessary equipment of every boat which plies its trade along our rocky and billowy shores.

Yet, year after year has passed by, each season swelling the multitude of unnumbered dead who have perished within sight of land; and hitherto no steps have been taken to bring this knowledge into practical, systematic use.

Brought up in the heart of the Highlands (where the excitement of leistering salmon by torchlight on a dark night is a sport not altogether unknown, even in these days of salmon commissioners and watchers

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and water-baliffs), we were well aware of the use often made of a good flask of oil in smoothing the surface of the deep brown pools in which the silvery fish lay all unconscious of the impending spear.

And kinsmen returning from Bermuda have told us how the fishers there pour oil on the sea whenever the ripple prevents their seeing clearly enough to strike their fish; and also, how those at Gibraltar do likewise, to enable them the better to discern where the largest oysters are to be found.

In our schoolroom days we learnt how Pliny had remarked that "all seas are made calme and still with oyle, and therefore the dyvers do spurt it abroad with their mouths into the water, because it dulceth the unpleasant nature thereof, and carryeth a light with it;" and in later years it seemed a remarkable confirmation of his words to find that the divers of the Mediterranean actually do spurt oil in the manner he discribed, in order to clear the light under the surface of the water, by the stillness so caused.

On our own northern coast the herring fishers say they can tell at a distance where the shoals of oily fish are lying by the smoothness of the water over them, and the Cornish fishers can likewise detect the position of the pilchards. In the same way those engaged in the seal fisheries know where their victims are eating their oily prey below the water by the unruffled surface above them. So, also, the track of a wounded whale or porpoise is clearly defined by the escape of oil, and it has often been observed that the body of a dead whale always floats in calm water—however rough the sea all round may be, no breakers can form near that natural oil-vat.

As regards a practical application of the lesson, the men of St. Kilda seem to have been the first of our own countrymen to discover one. There, as usual, necessity proved the mother of invention. This lonely little isle is girt by precipitous cliffs, and has but one landing place, and no harbor. Every fishing expedition, therefore, involves the hazard of extreme danger in returning to shore, for, should a sudden tempest arise and lash the stormy waves to fury, no boat would dare to approach the isle under ordinary circumstances. But the islanders have one abundant harvest in the multitude of all manner of sea fowl, which constitute the sole wealth of St. Kilda. Some of these are so full of oil that the people do not always take the trouble to extract it, but some slovenly householders simply pass a wick through the body of a dead bird, and, drawing it out by the beak, actually light the wick thus oiled, which goes on burning for a considerable time.

It seems to have occurred to some reflecting islander that this abundant oil supply might be somehow specially adapted to the requirements of the beautiful white-winged creatures, to whom wind and wave are alike ministers of delight. So the thought of carrying sea-gull oil to sea took form, and the fishers made puddings of the fat of sea fowls and fastened them astern of their "cobles" to hinder the waves fron breaking.

Away to the northeast, their neighbors in the Shetland isles likewise found means to apply the lesson they had learnt from noting the smooth surface of the water which invariably betrays the spot where a seal chances to be feasting, and they had remarked that the sea was most glassy when the victim was an oil-yielding fish, such as cod or ling. So familiar is this effect that the Shetlanders have a special and singularly descriptive word to express it, namely, "lioom." If you have ever noticed the appearance of the sea in a dead calm, you will at once

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perceive how the very sound of this word suggests the oil-like smoothness of surface.

The hardy Shetland men are a race of bold fishers, and seek their harvest far away in the deep sea, sometimes rowing forty or fifty miles ere they reach the best fishing-grounds, in boats so small and light that a good haul soon overweights them. Yet in these they face the fiercest storms and most treacherous currents. The worst dangers await them as they near home, for there are certain points where the currents meet, and headlands, off which the sea is always tempestuous, while, in the straits between the islands the tide rushes in an impetuous flood, more like a rapid, raging river than like a well regulated ebb and flow. However calm may be the outer sea, these headlong sea-rivers are always tumultuous, breaking in crested billows, and marking their course by a pathway of foam extending for miles out to sea.

Even in calm weather it is rarely considered safe to cross these currents at high tide, and the experienced fishers lie off till it slackens. But, when homeward bound and heavily laden they encounter foul weather and are compelled to face these furious tideways, then in truth they have to encounter such peril as tests the coolest heads and most iron nerves. And then it is (but only when driven to the last extremity) that they put in practice the seal's method of producing the "lioom," and purchasing their safety by sacrificing part of their hardly-earned cargo. Cutting open their fish (chiefly cod and ling), they tear out the livers, and, after crushing them to free the oil, throw them overboard on every side, and immediately, as if by a miracle, the mad raging of the waters is allayed. In one moment a film of oil overspreads the surface, and, though the great waves still heave and roll, they are spell-bound and cannot break, and the little boat which but a few seconds before was in imminent danger of being swamped, now rides securely on the smooth green billows, which from that moment have become powerless to work mischief.

The idea which the Shetland islanders and St. Kildians thus worked out for themselves had already presented itself to other men sailing on the great waters. About the middle of the last century the attention of the great Dr. Franklin was called to the subject by a letter from a gentleman who told how, during a stormy voyage on a Dutch ship the captain, in order to prevent the waves from breaking over the vessel, poured a small quantity of olive oil into the sea—a little at a time, not more than four quarts altogether—and so effectual did this prove that the writer suggested that surely the same simple means might be made greater use of were it only generally known.

Dr. Franklin also observed that whenever whaling vessels were lying in Newport Harbor, Massachusetts, the water was always smooth on account of the leakage of blubber. He accordingly tried sundry experiments to test the working of this phenomenon. On a stormy day he went to a large pond which was so much exposed to the wind as to form waves, and on these he sprinkled a small quantity of oil. At first he took up a position to leeward, but observed that though the oil instantly spread in all directions it could not work effectually against the wind, as it was quickly driven back to the shore. So he went round the pond to windward, where he found that one teaspoonful produced an instant calm over a considerable space, and, spreading rapidly, soon made an oily film over an extent of at least half an acre, which became as smooth as a looking-glass. One drop of oil forms a film of about four feet in circumference.

It seems strange that, after this subject had been taken up by so

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learned a man as Dr. Franklin, so many years should have been suffered to elapse ere any definite effort was made to turn it to practical account.

He afterwards tried the experiment on a larger scale on the surf at Portsmouth, New Hampshire. Selecting a tempestuous day, he sailed out half a mile from the shore, and poured a moderate quantity of oil on the tossing waters. The effect was instantaneous, for, although the swell continued, the surface was not wrinkled or broken, and, though the sea around was white with crested waves, there were none in the smooth track left by his boat; and he noticed that a barge rounding the headland under sail at once turned into that oily path as on to a turnpike.

I have sometimes noticed the same smooth track left by a steamer, as a result of the oily water which she is continually throwing out. I first observed this one evening in the Gulf of Pecheli. There was a little sea on, but nothing to speak of, and the sun was sinking in liquid gold. Its reflection was crossed by a horizontal line of perfectly smooth water, extending as far as we could see on either hand. There was no vessel in sight, but our captain maintained that it was the course of a steamer, and that the smooth water-way was caused by the oil from the machinery. He said this result was always produced in a greater or less degree, and that we only saw it thus plainly because of the sun being at so low an angle.

In the present instance we actually followed the smooth line of oily water till on the following day we caught up with the steamer just as she anchored off the Taku Forts at the mouth of the Peiho.

This brought the subject of "smoothing the waters" back to my mind. Soon afterwards, while crossing the Yellow Sea, *en route* to Nagasaki, in a small brig, we came in for some rough weather, and, though we had no occasion actually to test the matter, I was greatly interested at hearing from our Danish captain of many cases in which he had known of oil being cast on the water to prevent waves from breaking. He said he had himself carried a long wicker basket astern, containing oil bags, so contrived that by their gentle dripping a constant supply should be kept up. The result was admirable. Not one wave broke over the poop; the only objection was the expenditure of oil, and that was a trifle not worth a moment's consideration compared with the damage which would certainly have been done had even one breaker been permitted to form, as any one must realize who has once experienced the awful crash when a huge curling wave strikes a shivering ship, the weight of falling water crushing boats and bulwarks and sweeping the deck.

Another nautical friend, Captain Champion (under whose care I have visited many a beautiful spot in the Fijian Archipelago), has also tested this magic power of oil in allaying the tumult of the waters. On one occasion, when off the coast of New South Wales, he encountered a hurricane so severe that he believes his schooner would undoubtedly have been swamped had he not had recourse to oil bags, which acted almost miraculously in soothing the waves. He made five small canvas bags, each to contain about three pints of oil (fish oil is found to be the most efficacious). To each of these he attached a cord of about a dozen fathoms in length, and threw them overboard from different points of the ship, fore and aft. The leakage from the bags was sufficient to spread an oily film over the surface of the ocean, close round the ship, lasting for two days and nights, during which time the schooner was

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able to ride peacefully in comparatively smooth water, and not a sea broke over her.

Other men have tried the use of oil bladders, just pricked with a needle, and hung over the sides of a vessel, so as to keep up a continual dripping. Several small bladders, containing perhaps a gallon a piece, are found to answer better than one large one, being more diffusive in their action.

Is it not almost incredible that, in the face of so much evidence of the power of oil in literally smoothing the troubled waters, so little practical use should have been made of this knowledge? How very rarely do we hear of its playing any part in those lamentable wrecks, when men are left to perish on foundering vessels because no boat dares to face the breaking billows.

Or those still sadder cases, when brave hearts and strong arms have gone to the rescue, only to be themselves dashed to destruction by the violence with which they have been hurled against the wreck. And yet, a few gallons of oil poured out to windward of the vessel would have so smoothed the broken waves that the boat would not only have been safe herself, but would have been able to rescue the shipwrecked crew.

Unless an oil cask breaks loose by accident, and gets stove in, so that the oil floats out unbidden on its soothing errand of mercy, we hardly ever hear of the use of this most simple safeguard of nature's own devising, and in these exceptional cases the result is invariably recorded as if some strange phenomenon had occurred, instead of its being the inevitable result of a certain cause.

Yet vessels engaged in collecting palm oil on the African coast, or Ceylon, or the Pacific Isles, and, still more frequently, whaling ships laden with whale oil and blubber, have often reported the strange calm of the water on which they floated, while their neighbors were pitching in a chopping sea, and which they attributed to the mere leakage of oil pumped up with the bilge water.

From Newfoundland and Labrador we have heard how such vessels, when riding out fierce gales, have saved themselves by throwing overboard small quantities of blubber, and many cases are on record of vessels having been well nigh wrecked, the breakers pouring over them till they seemed on the point of foundering, when happily the oil casks have broken adrift and been smashed, and so instantly have their contents overcome the mad waters that the raging waves could no longer break over the ship, though they heaved and tossed as tumultuously as before. They seemed spell-bound, and could not succeed in forming crests. And so the men have been enabled to work the pumps, and of course the oil from the broken casks in the hold kept up the supply, effectually preventing the waves from breaking, and the vessels have actually been enabled to ride out the storm and eventually reach their desired haven.

All on board have known that the preservation of the ships, and of their own lives, was due to the action of that precious oil, yet year after year thousands of vessels start to face the dangers of the deep and never think of shipping a few extra casks of oil in case of need. Nor, when the moment of danger has arrived, do they ever think of pouring out even what they have on board for common use. And yet from time to time some one escapes from a wrecked vessel and tells how he attributes what seems his almost miraculous preservation to the fact of some one having had the rare good sense to station a man in the stern of the boat to pour out oil at intervals, and so prevent the waves

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from breaking over her astern. The result seems always satisfactory, and the boat which, but for this precaution would inevitably have been swamped, reaches the land without so much as shipping a bucketful of water.

A notable instance of this has been recorded by Mr. Ritchie as having been observed by him during a hurricane on the island of Porto Santo. He had just seen a vessel torn from her anchor and engulfed by the terrific breakers, when he espied a boat in the middle of the bay, coming toward the shore. Her fate seemed inevitable, but, to his amazement, the huge waves on which she floated never broke, but rolled right up on the strand, and there deposited the boat, so high that the men had only to jump out and scramble up the beach. The mystery, which so amazed him, and which appeared to him little short of a miracle, was simply due to the fact that as the boat neared the breakers the captain had stove in the head of a keg of oil and offered the soothing contents to the raging spirits of the deep.

Repeated efforts have been made by Messrs. W. & R. Chambers to bring such facts as these to the notice of all who "go down to the sea in ships," but their statements have unfortunately been generally received with indifference or disbelief. Yet they have from time to time published the evidence given by the masters of vessels in such minute detail as to place their accuracy beyond all possibility of doubt.

Thus in Chambers' Journal, August 10, 1878, they quote a statement from the New York Shipping List for 1867, where an experienced shipmaster deposes that he has twice saved the vessel under his command by oiling the sea. In one awful gale he lost all his sails and the rudder, and knew that his ship could not have ridden the storm for another hour but for this blessed safeguard. He had five gallons of oil, equal to about thirty quart bottles, which he started over the side of the vessel to windward, allowing it to drip slowly. This lasted fifty-six hours, and, though the waves still heaved tumultuously, the water was smooth, and the vessel was saved, with her cargo and crew. This captain recommended that all vessels of heavy tonnage should be fitted with a couple of iron tanks of forty gallons each, one on each side, with faucets so arranged that the oil could readily be transferred to small casks in case of need. He also recommended that all ship's boats should be provided with tanks of five gallons each, always kept full, and ready for emergencies.

Very noteworthy is the evidence of Captain Betts, of the King Cenric, running from Liverpool to Bombay with coals. He ran into a heavy gale which raged furiously for five days. Happily the chief officer had seen oil bags profitably used during storms in the Atlantic, and bethought him of applying the lesson, so he got two canvas clothes bags and poured two gallons of common pine oil into each. Having slightly punctured the bags he hung one over each side of the vessel, towing them along. The effect produced was magical. The waves, which had previously been breaking over the vessel, causing her tremendous shocks, now broke at a distance of many yards, while all around the ship and in her wake lay a wide belt of perfectly smooth water. The crew were thus enabled to repair damages, and were relieved from this most imminent danger.

The oil in the bags lasted for two days, by which time the worst fury of the storm was over, and there was no occasion to renew the supply. So the expenditure of about thirty shillings' worth of oil was the means of probably saving a valuable ship with its cargo and many precious lives.

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In the summer following the publication of these statistics, Mr. Chambers had the great satisfaction of receiving a letter from Her British Majesty's consul at Wilmington, North Carolina, containing the deposition of Captain Richardson, master of a brigantine just arrived from Bristol. She had been overtaken off Bermuda by a heavy gale, which increased to a hurricane, and blew for thirty-six hours, during which the ship was seriously damaged. Happily Captain Richardson had seen the article quoted above, and it occurred to him to try the experiment. So he prepared one canvas bag holding about three quarts of kerosene oil; this he pierced with small holes with his penknife, and having attached it to a six-fathom rope, he kept it trailing to windward, and found that the topping seas no longer broke, and the vessel was enabled to ride out the gale, which was the most fearful ever witnessed by those on board. He considered that the safety of the vessel was due to the use of the oil, and recommended others in like danger to prepare six-gallon canvas bags, and to enlarge the holes after awhile, the texture of canvas becoming closer as it swells with wetting.

Quite recently Mr. Chambers has received further details of cases in which the crews of wrecked vessels have undoubtedly owed their lives to thus casting oil on the storm-vexed waves. One case was that of the screw-steamer Diamond, of Dundee, recently wrecked off the island of Anholt. Her chief mate says he had often heard of the effect of oil in preventing the sea from breaking, and especially recalled its use in the case of a whaler in the South Seas, whose crew had given up all hope of saving her, when some oil-casks were accidentally crushed, with the extraordinary result that not another wave broke over her.

Bearing this in mind and seeing no sign of a life-boat coming to the rescue of the Diamond, he determined to try the experiment himself, though the ship's boat had apparently little chance of braving such a sea. He provided each boat with a five-gallon can of oil, and told off one of the company to pour it gradually over the stern. Immediately the sea in the wake of the boats became perfectly smooth, and they passed right through the boiling surf and reached the land in safety without shipping a sea. None of the men in the boats believed, when they left the ship, that all would reach the shore alive; and the people on land watched their approach in wonder, deeming it impossible for even the life-boat to live in such awful breakers.

The writer who quotes these cases draws from them the very practical suggestion that every life-boat should be fitted with a proper oil-tank, to be kept always full, and so planned that the crew should have no trouble beyond that of turning on the tap at the moment of need, when the oil should drip of its own accord. He commends the suggestion to the builders of life-boats, and especially to the consideration of the National Life-boat Institution. And he further urges that the Board of Trade should insist on a sufficient supply of oil for this special purpose being put on board every ship as a necessary part of her outfit. Also, that some philanthropic society should issue a pamphlet containing a collection of all the most remarkable instances on record of the action of oil on breakers for gratuitous distribution among all seafaring men.

There can be no doubt whatever that the adoption of these simple precautions would save many precious lives and valuable cargoes, and therefore the indifference with which the subject has hitherto been ignored can only be characterized as culpable neglect.

With regard to the objection which naturally presents itself, that the well-filled oil-tank would add a considerable item of dead weight to a

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boat, the answer is obvious, namely, that the labor—to say nothing of the danger—of battling with the waves would be so enormously lessened that the mere weight would appear a comparatively trifling drawback. It might even be found that any accidental leakage of oil might tend to keep the boats water-tight at all times.

Another simple and most practical method of applying this invaluable safeguard has been suggested, namely, that every life-buoy should have a small bag of oil attached to it, which could be punctured with a knife at the moment of throwing it to a drowning man. Any one who has seen a poor fellow fall overboard, even when quickly followed by a well-directed life-buoy, knows how uncertain are the chances of recovering either. How every eye is strained to descry such puny objects on the great waste of heaving, foam-flecked waters! If a vessel is running before a sharp breeze the life-buoy and the swimmer will be left far behind ere she can be stayed and a boat lowered, and it is hard indeed to mark the exact spot on that wearily monotonous expanse of ever-moving ridges where the search must begin.

Far different would be the case were the life-buoy accompanied by a dripping oil-bag Every one on the vessel would see the smooth surface formed all around it, and not only would the boat go direct to the spot without the unneccessary loss of a moment, but the poor swimmer would have a far better chance of reaching the life-preserver, and would moreover be protected from the breaking waves.

Yet another means has been suggested by which this precious quality of oil might be made available, namely, its use in shells so constructed as to burst on striking the water, and which might be fired from mortars placed on the beach so as either to fall outside the breakers or by subduing them to facilitate the launch of the life-boat or to fall to windward of a wrecked vessel, and so enable the life-boat to approach her in comparative safety. Surely the ingenuity which devises such intricate mechanism for destructive shells and infernal machines might contrive some method by which the oil-shell might be safely dispatched on its errand of mercy.

Though the casting of oil on troubled waters has been so persistently regarded merely as a poetical figure of speech, notes of its actual use have occasionally appeared in books of travel. For instance, it has long been known that when the fishermen of Lisbon find the surf on the bar of the Tagus unusually rough, they empty a bottle or two of oil into the sea, and thereby smooth the waves so effectually that they can pass the breakers in safety. But no one ever took that hint as the embryo of some grand scheme for overcoming the horrors of landing in the surf at Madras, or at many another port where traffic is endangered by the fierceness of the breakers.

No one even tried to apply it to the dangerous bars at the mouths of several of our own large rivers, of Aberdeen for instance, where we have had to mourn such pitiful wrecks of fine vessels, literally dashed to pieces by the mad surf breaking on the bar. Amongst the good ships that have perished at the mouth of the Dee are numbered two in which I had sailed so often that they seemed to me like old friends, and, as I bewailed their fate and that of the kind, brave men drowned within sight of their homes, I thought of the fishers on the Tagus, and marvelled if British ingenuity would never find means to turn their simple precaution to account.

It has been reserved for the nineteenth century to find the practical application of the observations made by Pliny eighteen hundred years ago.

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The subject at last has been taken up in good earnest, and it is to a citizen of Perth, Mr. John Shields, that is due the honor of taking the initiative in a movement which, if fully carried out, must prove of incalculable benefit to our seafaring population. Five years ago, as he stood beside a mill-pond on a windy day, he observed that the waters, which had been considerably ruffled, suddenly became smooth. On examination he found that this arose from oil having been accidentally split from some machinery, and instantly forming such a film on the surface of the pond as to offer no resistance to the wind.

Happily, it at once occurred to him that it might be possible to apply oil in such a systematic manner as to calm the entrance to a harbor in stormy weather. The idea having once suggested itself, he never rested till he had thought it out, and devised means of executing it.

The plan he hit upon was that of laying iron and lead pipes from the beach, right out across the harbor, to the open sea, terminating in the deep water, two hundred feet beyond the bar, and then, by means of a force-pump on the shore, to pump oil into the tubes, and eject it at the bottom of the sea, outside the harbor, so that, as it rose to the surface, it might be driven inward and prevent the formation of breakers on the bar. The pipes are fitted with three conical valves fixed seventy-five feet apart at the sea end of the pipe. These are forced open by the stream of oil as it flows out, and instantly close when the pressure is removed.

Mr. Shields fixed upon Peterhead, in Aberdeenshire (the easternmost headland of Scotland, and consequently a spot exposed to the full force of every gale that sweeps the east coast), as the most suitable spot for his test experiments. Here, then, he proceeded to submerge twelve hundred feet of lead and iron piping. A large barrel containing about a hundred gallons of oil was placed in a shed on the beach in connection with the force-pump.

Towards the end of February last some preliminary experiments were tried on a small scale, but the amount of oil expended was very trifling, and the effect was disappointing. One of the fishers standing by remarked that he could not understand it, as his own life had once been saved by hanging pieces of whale's blubber overboard, and he was certain that the same means systematically applied must produce the desired effect.

On the 1st of March we may say that the apparatus was fully and practically tested for the first time, and with such success as to leave no doubt that it must shortly be a recognized necessity in all harbors dangerous of access. On the day in question a gale was blowing from the southeast, accompanied by a heavy sea. Huge green billows, from ten to twenty feet in height, curled in white crests as they neared the harbor mouth, and broke in mad surf above the bar. No boat could have dared to face these breakers, and any luckless vessel wrecked on that rock-bound, inhospitable coast must have been abandoned to her fate.

No better day could have been selected to test the soothing power of oil. If any perceptible difference could be produced on those raging, tumultuous waters, it was evident that the gaining of a complete mastery over them became merely a question of how much oil was to be expended. In the present instance the big hundred gallon cask was filled. The forcing pump was set in action, and a large quantity of oil was driven through the pipes, whence it was ejected at the bottom of the sea, at some distance beyond the impassable barrier of mighty breakers. The oil immediately rose to the surface, and formed a thin

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film on the water, extending right across the harbor mouth. Straightway the dangerous white crests disappeared, and, though the strong tide still swept inward in huge swelling billows, they were shorn of their terror and became perfectly smooth rollers, on which any vessel or boat might safely have ridden into dock.

Owing to the strength of the tide and the severity of the gale, the oil was swept shoreward so rapidly as to render continuous pumping necessary. But as long as the oil supply was kept up the surf was kept down, and there remained no reasonable doubt in the minds of the spectators that henceforth the raging of the waters could be subdued at will, and that ships might be enabled to make the port in safety, no matter how wild the tempest.

It is needless to say that this experiment created a very deep interest in the neighborhood, and a large number of persons faced the storm in order to witness for themselves a phenomenon which, thanks to Mr. Shields' invention, may hereafter prove one of the best safeguards of our dangerous coasts; and all were fully convinced of its efficacy.

As a matter of course many details were yet imperfect, and much waste was believed to have arisen from leakage of the pipes at points within the harbor. It was proposed when the gale moderated to take up the pipes for further examination, and it seemed probable that it might be found desirable to line the iron pipes with lead for greater solidity. (Possibly a lining of gutta percha might prove still better.)

These, however, are mere matters of detail. If once projectiles were invented by which the breakers could be exorcised at the very spot and the very moment when a ship was about to seek refuge in the harbor, they might perhaps be found as efficacious and more economical than the system of pipe-laying.

Since the first report of Mr. Shields' invention appeared letters have been received from all quarters adding individual testimony to the value of oil in saving boats from capsizing or from being swamped, either at the moment of launching or when attempting to rescue fishing-nets on the approach of foul weather.

One correspondent tells us how two (I can hardly resist writing two foolhardy) Italians crossed the Atlantic last year from Buenos Ayres to some port in the Mediterranean in the Leone di Caprera, a small sailing-boat. On several occasions they encountered rough weather, and would inevitably have been lost had they not repeatedly calmed the water round them by the free use of oil, of which they had laid in an abundant supply. The tiny vessel in which this perilous voyage was performed was exhibited last year in Milan.

The captain of a steamer writes that some months ago he encountered a heavy gale in the Bay of Biscay. Several steamers were lost, and his own vessel was in danger, waves breaking over her with great violence. He had two canvas bags made, each to contain a quart of common lamp oil. The bags were punctured and hung over each bow with sufficient line to let them tow freely. The result was most satisfactory. Scarcely a sea came on board, each wave as it reached the oil ceasing to curl, and undulating past the ship without a break. The oil in each bag lasted eight hours. On the following voyage he was compelled to put the matter to a still more practical test, and the result surpassed his most sanguine expectations. He says:

"I was compelled to abandon my vessel at midnight. There was a heavy sea, and though the boats were provisioned and in readiness for lowering, the sea which was running alongside and breaking over the

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ship made me doubt the possibility of the boats ever living in it, even if the difficulty of launching them was overcome.

"I caused two tins of common lamp oil, each containing about two gallons, to be emptied, one over each side; and, after giving it time to diffuse itself over the water, the boats were lowered and sheered clear of the sinking ship without shipping so much as a bucketful of water. The waves were still towering thirty or forty feet above us, but without a breaker or a white-topped one among them; while ahead and astern they were breaking heavily. I believe that, under Providence, we owe our lives to the use of oil, and trust that it may ere long be recognized as an efficient aid in saving life at sea."

Major-General Hendry, writing to the Globe with reference to the experiments at Peterhead, gives a remarkable instance which occurred in 1846, in which the use of oil was the means of saving the lives of the crew of a schooner which was caught in a heavy gale off Sable Island. Persons standing on the low sandy shore—where furious billows, swept by the whole force of the storm, were dashing with appalling violence—were amazed to see a schooner tearing her way through a sea of white foam, while two men in the after part of the vessel were apparently throwing something at intervals high up into the air.

"The schooner was the Arno, Captain Higgins, with twelve men, from the Quero Bank, where they had been fishing. They left the bank at the commencement of the gale. The captain let go his anchor in twenty fathoms of water, paid out three hundred fathoms of hemp cable, and brought the vessel's head to wind. In a tremendous sea he held on until noon, when, seeing no prospect of the gale abating, he cut his cable and put the vessel before the wind, preferring to run her on shore before night to riding there and foundering at her anchor. He lashed himself to the helm, sent all his men below but two, and nailed up the cabin doors. He had two large casks placed near the fore shrouds and lashed there. He then directed his two best men to station themselves there and lash themselves firmly to the casks, which were partly filled with blubber and oil from the fish. They had each a wooden ladle about two feet long, and with these ladles they dipped up the blubber and oil and threw it up in the air as high as they could. The great violence of the wind carried it far to leeward, and, spreading over the water, made its surface smooth before and left a shining path behind; and although the sea would rise very high, yet the top of it was smooth, and never broke where the oil was. It was raging, pitching, and breaking close to her on each side, but not a barrel of water fell upon her deck the whole distance. The vessel was so old and tender that she went to pieces in a very short time after the crew, with their clothing and provisions, were saved."

The Scotsman, March 15, 1882, tells of yet another ship, which was undoubtedly saved by oiling the waves:

"The ship Airlie, of the Dundee clipper line, arrived in the Tay yesterday from Calcutta with a cargo of jute. Captain Foreman reports that on the 28th of February the ship encountered a terrific gale, which lasted four days. For an hour and a half the vessel lay on her beam-ends, and in order to save the ship the master decided on trying to allay with oil the violence of the sea, which was running mountains high. A number of bags were filled with oil, and the bags having been perforated, so as to let the oil escape gradually, were towed for forty-eight hours to windward. Captain Foreman reports the experiment to have been eminently successful, the water in the immediate vicinity of the vessel becoming 'quite smooth.' A big mountainous wave would

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have been seen bearing down on the ship, and when within two ships' lengths or so from the vessel, when it came amongst the oil, it would suddenly fall. Had it not been for the oil experiment, the captain is of opinion that if the vessel had not altogether foundered she would have had her decks cleared and sustained considerable damage."

Further evidence will doubtless be multiplied. But the great point has now been fairly proved, namely, that this most gentle of mighty agencies may be enlisted in the service of all whose business lies in the great waters, whether on the shores of our own storm-swept isles, or in those distant seas where England's sons face dangers and hardships for the increase of her wealth.

F.

OIL ON THE WATERS.

[From the New York World, Friday, December 1, 1882.]

MR. FONDACARO'S TRIP FROM MONTEVIDEO TO NAPLES IN A THREE-TON BOAT FOR EXPERIMENTAL PURPOSES.

Mr. Vincenzo Fondacaro arrived in New York yesterday from San Domingo by the steamer Geo. W. Clyde. Mr. Fondacaro has won distinction by demonstrating in a practical way what may be done by "pouring oil upon the troubled waters," and only a very little oil was necessary for the purpose. On the 8th of October, 1880, he sailed from Montevideo for Naples in a three-ton boat, which he had built himself. He had a crew of only two men. The voyage was an exceedingly rough one, gales prevailing for three-fourths of the time. Malaga was reached February 4, 1881, and there the voyage ceased for awhile, because the funds and stores of the party had become exhausted. The little boat was enabled to ride out the roughest gales in safety by olive oil being scattered on the water.

Mr. Fondacaro was found by a reporter of the World at the Astor House. He referred with great modesty to the feat he had accomplished. "I claim," said he, "to have made no great discovery. I have no valuable patent. For perhaps two hundred years it has been known how oil would smooth the ruffled surface of the sea and prevent the waves from breaking, and ships in the whaling trade have often saved themselves from foundering by this means; but until I made my voyage it was not known how small a quantity of oil would accomplish this result. Generally a gallon of oil would enable my boat to lay "hove to" in a gale of wind for twenty-four hours and be safe. I did not make this voyage in a spirit of recklessness, but simply to practically test the experiment."

Mr. Fondacaro then described how he made use of the oil. It was inclosed in small bottle-shaped bags, each bag containing about half a gallon. In case of a gale of wind, when it became necessary to lay to, a large bag attached to the bow of the boat was thrown overboard. This the sailors call a floating anchor or drag. This kept his boat's head to the wind. Two of the small bags of oil were then thrown overboard, one fore and one aft. Each bag had a small orifice through which the oil escaped slowly. It circled around the boat and prevented the sea from breaking over her and overwhelming her. "Of course,"

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said Mr. Fondacaro, "the oil does not diminish the size of the waves, but renders them comparatively harmless by preventing them from breaking."

During the voyage many hardships were encountered. The sleeping-berths were necessarily small and generally wet, but so accustomed did Mr. Fondacaro become to such quarters, that when the Canary Islands were reached, and for four days he was entertained by the governor and lodged sumptuously, he found it difficult to sleep in a feather bed.

On his arrival in Italy Mr. Fondacaro received a visit from the King and Queen of Italy. He was invited to the royal palace and very kindly treated. The King proposed that a subscription should be taken up for his crew, "but," said Mr. Fondacaro, "nothing came of it. Nobody subscribed, and I was not going around with a paper asking them to do so. The Italian Government have taken no steps to make a practical application of my process. The English Government experimented with oil by means of life-boats. The English insurance companies are likely to make it a condition of granting insurance." Mr. Fondacaro has published a book, giving full details for seamen in the use of oil for overcoming the destructive effects of the waves.

G.

GREASING THE OCEAN.

[From the New York Herald, March —, 1882.]

CINCINNATI, *March* 8, 1882.

To the Editor of the Herald:

In reference to your article in the Herald a day or two since upon oil upon the sea as a safeguard to ships in a tempest, you will find that many a ship tempest-tossed has been protected and probably saved from destruction by means of oil cast upon the waters. The experience of whalemen in the North Pacific will verify your statements. The writer well remembers the quieting effect upon the ocean when the good ship Abram H. Howland, in a typhoon off the coast of Japan, was compelled to "lay to," anchored, as it were, to an immense right whale. The cable was run out the hawse-hole and fastened around the flukes of the whale, then payed out, as the ship drifted away from the whale, until some fifty or sixty fathoms had been run out, and though the storm was terrific around and on all sides, except to the windward, where the oil from the greasy monster so smoothed the waters that we rode out the gale in safety. The "oil upon the waters" is not theory only, but has been proved by experience. Let ship-owners put aboard a few barrels of lard oil or whale oil as part of the life-saving apparatus of their ships, and when occasion demands use the same for the sure protection of life and property.

G. H. B.

NEW YORK, *March* 6, 1882.

To the Editor of the Herald:

In your last week's issues appeared an interesting report concerning the use of oil for subduing stormy waves, and thus facilitating the escape of life-boats. The principle of this influence of oil on disturbed

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water is correct, but some explanation of this curious fact may be useful to seafarers. The action of oil in this case is both chemical and mechanical. Being heavier than foam and lighter than water, it works its way to the surface of the still element. In so doing it diffuses through and breaks down the swelling. This occurrence is frequently illustrated in the industry of paper-making. Very often the pulp, while being washed in the beating-engine, foams and swells so heavily that it overflows, unless the engine-tender is aware that the throwing of a few drops of oil subdues this rising. The violence of foaming waves is practically caused by the air inclosed in the myriads of bubbles elevating the surface of the water under windy pressure and breaking with explosive effect upon boats or any other obstacles. The molecular diffusion of oil is a practical way of reducing the foam to its watery level, but it should be applied at a certain distance to prevent the shock. To secure this protection it is necessary to project the oil ahead of the boat by a jet or spray system. Many lives might be saved if proper arrangements were made to this effect. The fluidity of oil being extremely fine and subtle in floating, a few gallons, adequately distributed, would, in a case of emergency, prevent capsizing and open the way to salvage.

Respectfully yours,

E. L., *Chemist.*

H.

STILLING THE WAVES WITH OIL.

[From the Parliamentary report of the London Standard; date unknown.]

In Parliament recently, the Earl of Carnavon called attention to the effects said to be produced by pouring oil upon the sea in tempestuous weather, and inquired what measures the Board of Trade had adopted to test the value of recent experiments, and to encourage a discovery valuable to life and property at sea.

Lord Sudeley said the idea of throwing oil on troubled waters had a certain fascination about it which would always render the experiment interesting. Unfortunately it was a subject on which a great deal of sensational and impracticable matter had been published. There was no doubt upon a certain point, with special conditions of wind, tide, and current, oil on troubled waters was of considerable use, and undoubtedly it had been found of advantage on tidal bars, and in case of boats beaching through a surf. They must, however, divest themselves of all idea that it would altogether prevent shipwreck and loss of life on harbor bars. Oil on waves had been constantly used on the Assyrian coast, and in Pliny's time it had been used by divers to keep the waters smooth so that they might get more light. Dr. Badeley, in 1857, had tried many experiments on the subject, but they were not very successful. A number of papers had also been read at many institutions, and there had been a very able review article on the subject. The Board of Trade had taken great interest in the matter, and they were most anxious to collect all the authentic facts which could be obtained. The Board of Trade, however, did not see its way to expend money or to become investors in this matter. It seemed to them that it was their duty in this respect to carry out the same views as they had in regard to railways, namely, to encourage experiments by others. After referring to Mr. Shields' experiments at Peterhead, and to their admittedly inconclusive charac-

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ter, pointing to the fact insisted on by many authorities, that oil was useless in very severe gales of wind, the noble lord said that those experiments would be repeated during the coming winter, and would be carefully watched and recorded. There was no doubt oil would be of use to throw overboard during a wreck to enable boats to approach, and it might be of use when boats were being veered down to a wreck from the windward. There seemed also something in the idea of oil attached to a life-buoy, for, as it would smooth the surface, it would enable the buoy to be better seen, and it would give the drowning man, if he did see it, a better chance of getting hold of the life-buoy. In this way, therefore, it seemed very worthy of trial.

I.

EFFICACY OF OIL ON STORMY SEAS.

[From Boston Evening Transcript, March 23, 1883.]

In the Transcript of the 4th instant I read with much interest a short article with the above heading. It is a subject which should receive the attention of every one in any way interested in lessening the dangers incident to navigation; and I was pleased to see that on the other side of the ocean some experiments have lately been made to test the efficacy of this simple expedient for safety in time of peril, and that its value had been proved in more than one instance.

I have read several articles on this subject within a year or two, and, if I mistake not, the Transcript itself published something in relation to it not long ago, which I intended to notice by a communication, but neglected to do so. My impression is that the tone of these articles was one of doubt as to the real usefulness of any such expedient, treating it as a mere idle theory and of no practical benefit. That idea seems now to be refuted, on apparently reliable testimony; and my object in writing this is to give an account of a circumstance that came under my own observation.

Over twenty years ago, in quest of health and codfish, I made two consecutive summer trips to the Banks of Newfoundland. The passage home at the end of the second season, in the month of September, was long and tempestuous, and one of its episodes was our struggle with the equinoctial, which broke upon us when nearly half of the trip had been accomplished, and brought with it the heavy weather inseparable from such a storm. With plenty of sea room there would have been little to fear; but, unfortunately, when the gale struck us the vessel was "hove to" upon the wrong tack for such a long-continued tempest as this was proving itself to be, and we had been for two days drifting in a northerly direction, and directly towards Sable Island, a terror to sailors, from the numerous shipwrecks that have taken place there.

It is possible there was no real cause for alarm, but our "skipper" was a nervous, timid man, and felt certain, from the last observation taken, that we were almost up with the land, and perhaps in a few hours would be driven ashore. A consultation was had, and it was at last decided—the captain carrying his point after some opposition—that the vessel must be put about on the other tack. But how was this to be done in such a raging storm and tremendous sea? It was an operation not unattended with danger, for, with the lowering of the small piece of foresail we were carrying and the shifting of the helm,

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our little seventy-ton craft would fall off into the trough of the sea, and perhaps be instantly overwhelmed by one of the angry combers with which the waves were capped. Some one at last rather doubtingly suggested pouring some oil overboard, and it was determined to act upon the proposition.

Lashed to the "fore-rigging" on one side of the schooner was a large hogshead (as is usual on all "bankers") in which the cod livers were thrown at each dressing down, leaving the oil to drain out of them at will, to be drawn off at the end of the voyage. While part of the crew made preparations to handle the sail and the wheel, some of this oil was allowed to escape through an orifice near the bottom of the butt, and thence finding its way out through the scuppers, quickly spread itself over a considerable surface of the water, completely subduing the foaming crests, though not, of course, making the sea as level as a house floor, which some may imagine to be the effect produced. We seemed to be, as it were, in a charmed circle, within which the wind howled as fiercely as on the outside, and the sea rose to as great a height, but shorn of its dangerous white caps. Under this favorable condition, and watching our opportunity, the necessary changes were quickly made with the sail and helm, and in a few minutes we were drifting southward in comparative safety, with no land in that direction nearer than the Bermudas.

While we were "coming about," and our little vessel was for an instant broadside onto the sea, she made a sharp lurch, as if intending to turn bottom up, which gave one at least of those on her deck a most uncomfortable feeling. I think his hair came nearer to standing on end than it ever had before or since. After everything had been made snug and secure on deck, all hands adjourned to the cosy cabin, and, there being no prohibitory law in that locality, refreshed themselves with a liberal allowance of "black strap" all around.

For two days more the storm raged, and we were buffeted about at the will of the winds and waves; and after this gale subsided still others beset us, so that two weeks elapsed before we were safely anchored inside the Gurnet, after a twenty-four days' passage from the Grand Banks.

So much for what I know about the effect of oil upon an angry sea.—G. F. K.

J.

[From the Yachting Gazette (English), date unknown.]

A practical experiment, showing the effect of oil on heavy waves in a severe storm, was made off Tynemouth on Thursday, December 7. At the time an easterly gale was blowing with great violence, and the sea at the entrance to the Tyne was little better than a mass of boiling surf. The East Anglian(s), from Yarmouth, in charge of Captain Beacher, made the entrance when the gale was at its worst, and when great danger attended any vessel passing the bar. The master reports that he resolved to try the effects of oil upon the waves, and stationed two men, each with a two-gallon bottle of oil, at the vessel's bows, one on either side. The oil was gently poured upon the "broken" water, and the effect was that it became comparatively smooth at once, and the vessel passed into the harbor with little difficulty. The oil used was that usually burnt in the ship's lamps, and only four or five gallons were poured upon the sea.

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K.

[From the Boston Daily Advertiser, March 8, 1882.]

Ship Cypromene, at San Francisco, from Newcastle, New South Wales, encountered a heavy gale, from northeast to north, on June 1, off New Zealand, lasting twenty-four hours, with very high seas; shipped one which washed the ship fore and aft and caused her to take a tremendous lurch and shifted cargo badly; had all hands below trimming cargo and used fifteen gallons of oil to smooth the troubled waters, which acted well. On June 18, latitude 16° S., longitude 158° W., observed a comet in the heavens, and shortly after had an electric storm alternate gales and calms, accompanied with lightning, balls of fire flying around the ship and composing a most brilliant light.

* * * * * * *

Steamer Missouri, at Liverpool, March 6, from Boston, took fire while discharging, and had cargo partially damaged.

Steamer Morgan City, at New Orleans, reports very heavy weather, had decks swept fore and aft and cabin filled with water; oil thrown overboard, but had no effect.

L.

OIL ON TROUBLED WATERS.

[Publication unknown.]

Letters received from the British naval ship Swiftsure, state that on the 6th of April, while on a voyage from Honolulu to Esquimault, she encountered a terrific gale, during which several heavy seas broke over her, shaking everything inside her. As an experiment a bag containing oil was rigged out over the weather side, and had such a marked effect on the waves that the vessel rode bravely through the gale, which continued with great severity, followed by heavy rain squalls, until the Swiftsure arrived at Esquimault.

M.

UNITED STATES LIFE-SAVING SERVICE,
Bay Shore, June 8, 1882.

SIR: Referring to your letter of the 1st instant, stating that you had been directed by the Board for Examination of Plans, Devices, and Inventions designed for use in the Life-Saving Service, to make experiments and collect information relative to the use of oil in calming a rough sea, especially in the surf, and requesting me to give you any information in my possession relative to the cutting up of a whale which drifted ashore on the south side of Long Island near one of the life-saving stations under my charge, particularly the state of the sea and the effect of the escaping oil upon the same, I would state that last December a medium sized dead whale was driven ashore near Station No. 20, and was cut up and tried out by that crew. At times during the cutting up the whale was in the wash of the sea, and large quantities of oil and fatty matter was washed off upon the surface of the water.

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The men were at work upon the whale fifteen days, and on one or two occasions, with the wind fresh off shore, and a heavy swell setting in from the southard, making a bad surf on the bar, the "slick" caused by the oil extended from the shore to several yards outside of the bar, and in no case was any diminution of the surf perceptible.

The roughness of the water outside of the bar, caused by the wind, was lessened, but the break on the bar, caused by the bottom, the oil had no effect upon whatever.

The above facts I obtained from conversation with the keeper and crew.

I regret that my duties called me to another part of the coast at that particular time, but as this subject has interested me very much, I was very particular to obtain all the information possible on my next visit to that station.

The above reports received from the crew of No. 20, correspond exactly with the result of experiments conducted by myself three years ago.

I took a quantity of oil outside of the break in a surf-boat, wind on shore and a rough sea; at one time a strong set or current was running along shore and the "slick" caused by the oil would not enter the break at all, but was carried along shore outside. At another time, same conditions, but with very little set, the oil was thrown into the break on the bar, and no difference in the force of the break was observable..

I have seen the waves at sea cut down by the pumpings from a petroleum loaded ship, and believe a distressed vessel in deep water can obtain relief by the use of oil thrown upon the water, but in shoal water where the break is caused by the bottom, and where, as we all know, the surf at times is very high, even when there is very little or no wind, oil has no effect whatever.

Very respectfully,

C. H. McLELLAN,
Second Lieutenant, U. S. R. M., and Assistant Inspector Third Dist.

Capt. B. C. SPARROW,
Superintendent Second Life-Saving District,
East Orleans, Massachusetts.

N.

TREASURY DEPARTMENT,
OFFICE OF GENERAL SUPERINTENDENT
UNITED STATES LIFE-SAVING SERVICE,
Washington, D. C., April 28, 1883.

SIR: I transmit herewith for your information a copy of the report of J. M. Richardson, superintendent First Life-Saving District, upon the use of tanks placed in the surf-boat for the purpose of distributing oil upon the surface of the water.

Very respectfully,

S. I. KIMBALL,
General Superintendent.

B. C. SPARROW, Esq.,
Superintendent Second Life-Saving District,
East Orleans, Massachusetts.

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[Office of Superintendent of Life-Saving Stations, First District.]

PORTLAND, ME., *April* 16, 1883.

SIR: In accordance with the permission given me in your letter of March 16, I remained at Station No. 1 for two or three days watching for a chance to try the oil from the tanks which had been placed in the boat. You will please recall the fact that in my first letter to you on this matter my idea was to use one tank placed in the stern of the surf-boat, and I had two copper tanks made, one for Station No. 1 and one for No. 6. These were placed in the boats in due time, and various trials were made, the oil acting all right on the surface of the water, but the keepers found that the boats would keep so far ahead that the slick formed by the oil was virtually of no use, and wrote me several letters, which are forwarded with this, and becoming well satisfied in my own mind that the after end of the boat was the wrong end, I had made for each of the above stations two tanks, sending those for No. 6 to that station with instructions what to do, according to my ideas, and took those for No. 1 with me and placed them in the surf-boat, as shown in the pencil sketch forwarded with this, and am confident I have got it now where it is all right. The oil tanks placed in forward are tubular, nineteen inches long, seven inches diameter, holding each three gallons and a quart of oil. These are fitted with a small gas stop-cock in a lead pipe. The tanks being secured to the forward bulkhead with the lead pipe going out through the boat's side six inches above her water line, one pipe on each side, the end of the pipe turned down neatly onto the outside of the boat's plank, so there can be no leak around it. After placing the tanks in the boat we put into each a mixture of two-thirds signal oil and one-third kerosene, the object being to have a mixture with plenty of fatty matter, and still no danger of thickening or freezing, though this matter would have to be experimented with further, as the more fatty matter, I judge, the better. After getting the boat ready, on the morning of March 24, we launched the boat for a pull, keeping the after tank in her as well as the forward ones. The water was very smooth, scarcely a ripple, though a very strong tide running. After getting outside the cove we started the oil out of the after tank, giving it first half, then a full stream from the pipe, the boat going ahead slowly under oars, and we could see firstrate that the trouble with a tank in aft would be in having but a single stream so far aft that no sea would spread the oil quick enough with a boat going ahead to be of any practical use. We then shut the after tank off and opened both forward ones to one-half the capacity of the cocks, or giving a stream about as large as the small end of a common wooden penholder, and at once saw a vast difference. To start with, the two streams were near the full beam of the boat apart, and her way through the water threw the oil and water about three feet clear of the boat on each side, so that when the slick got aft as far as her stern post the slick was near thirty feeet wide in going twenty feet. We pulled out into the bay, turned around, and pulled back, watching the slick which we had made, and judged that the oil which had run out in two minutes by my watch had spread over two acres, with hardly any motion to the water and no break. As it was so smooth, went back to house and took after tank out as of no practical use. During the above trial we used, as near as we could tell, about one gill of oil, and all hands were perfectly satisfied that the forward tanks were just what was wanted.

On Monday, March 26, with a light north-northeast wind, and comparatively smooth water, we pulled up to the northward about three miles,

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Fig. 1

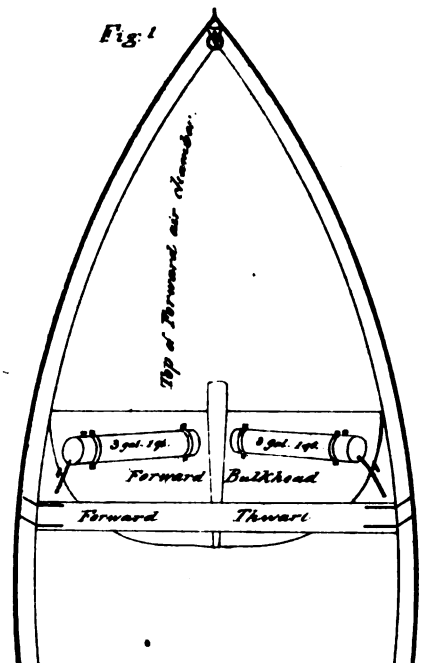
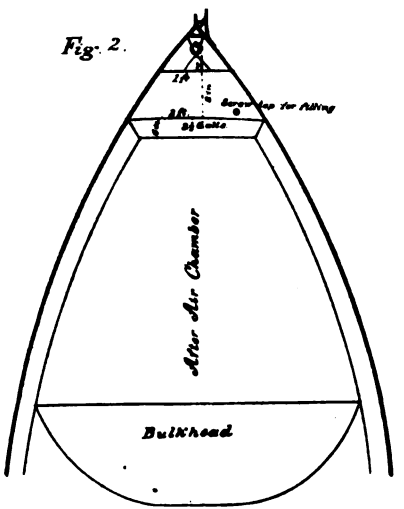


Fig. 2.



LIFE-SAVING APPARATUS.

RICHARDSON'S OIL-TANK

1883

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and pulled the boat right into the Tide Rips in the Race, around Sail Rock, one of the sloppiest holes in the world. The sea in the Rips jumps up every way, no regularity, just like slopping the hands up and down in a tub of water. After getting well into the Rips, started the oil from both tanks and as it left the pipes it made a slick about twelve feet wide, and by the time it got abreast her stern post it was thirty feet; three lengths astern it was fifty feet wide. and one hundred yards astern it was full fifty yards wide, and spreading fast, and in three minutes the oil was four hundred yards astern, and spreading fast, and for five minutes, although the tide was going like a mill stream, there was no break or curl in the top of the sea wherever the oil was. This time we ran a stream out of the tanks as large as a medium sized slate pencil four minutes. We then went back to the beach to wait for the tide to ebb a little more. After waiting a couple of hours we started her out again and pointed her straight for the Rips, where we found things lively, the water flying up into seas, about five feet above a level, and going every way. We concluded if we could smooth that place out, we were good for almost any kind of a circus, so we put her into it, pulling across to the eastward, turned her around and started her back, under six oars, men pulling a good strong stroke to send her for all she was worth. Soon as we started her we opened both oil tanks with a stream flowing about as large as a slate pencil. As she went ahead under her oars and before the tide sea, she threw the oil six feet clear of each side, or in all about eighteen feet from the edge of the slick on one side to the outer edge on the other, and she was going like a horse, and when abreast of the stern post the slick was about forty feet wide. At one hundred yards astern it was, say, sixty yards wide and spreading very fast, and wherever the oil was, all break was gone, though, of course, the sea run up. We run the oil this time, altogether, seven minutes, using a pint of oil, and leaving a glistening track for half a mile in length and from fifty to four hundred yards wide. As it looked like keeping smooth, I left orders with Keeper Myers to try as often as he could, and write me, as I could not wait longer, and left, well satisfied, as well as were all the crew, that oil on the waters was a big institution. On my arrival at No. 6 I found that Keeper Goldthwait had the same experience with the tank in aft that Keeper Myers had, but the tanks forward worked all right, and, as stated in his letter to me, he and his men believe in putting tanks in the boats. Of course there are positions a boat will be in where oil or anything else would be of no use, but my idea, and the crews of 1 and 6, is that where a vessel is lying so that it would be unsafe to go alongside her then let the boat work up to windward of her two or three ships' lengths, start the oil out of her tanks, and soon as the oil works well down toward the vessel let the boat drop down, and before the slick has passed they would have all hands off, or in running before or quartering to a heavy sea the oil would be a great means of safety; or, again, in coming ashore (always much more dangerous than going off), soon as the outer line of breakers are met, hold the boat off, start the oil, and let it work in on the backs of the breakers, and soon as it gets well in let the boat come. Of course, when the sea gets into shoal water, so the foot of it brings up, the head of it will run ahead and curl over; that no power on earth can help, but the oil will break the head off the larger and outer sea. A stream as large as a knitting-needle, or the small end of a penholder, of good fatty oil, is enough for all ordinary purposes, but the keeper must use his judgment according to the way the boat is loaded, distance to run, &c. The

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first tanks were made of copper, but on careful inquiry I learned there was no reason why galvanized iron would not work, so I had four made nineteen inches long, seven inches diameter, at a cost of $2.50 each, against $5 for each copper tank. The above price includes all ready to put in boat. As for oil, there is nearly always enough odds and ends of signal oil at a station to fill the tanks, but even if oil was bought expressly, the cost would be nothing comparatively. It might be years before the oil would be used, and it might be needed a dozen times in a season. I hope the idea will be carried out. At all events I shall leave the tanks in the boats at Nos. 1 and 6, and have faith that they will be of use. The cost of tanks is very little, and, of course, in making a number, the cost would be reduced. Some may think one tank to a boat sufficient, but it needs two, with a discharge pipe each side of boat's bow, so as to give the oil all possible spread on the start, and by having them forward she is at all times more than two-thirds of her length in the slick.

Very respectfully,

J. M. RICHARDSON,
Superintendent.

S. I. KIMBALL, Esq.,
General Superintendent Life-Saving Service,
Washington, D. C.

O.

U. S. LIFE-SAVING STATION No. 1, FIRST DISTRICT,
Lubec, Maine, February 27, 1883.

SIR: Your letter of 24th at hand. I have tried the tank as directed, with the cock wide open in cold weather. The oil that I am using now will run a gallon in fifty-four minutes, with thin oil twenty-four minutes; half turn cold oil, two and a quarter hours, half turn thin, three-quarters of an hour. Just to drop fast it will take four hours to get a gallon.

Yours, truly,

A. H. MYERS,
Keeper.

Capt. J. M. RICHARDSON,
Superintendent First Life-Saving District.

U. S. LIFE-SAVING STATION No. 1, FIRST DISTRICT,
Lubec, Maine, March 4, 1883.

SIR: I have tried the boat again to-day, and find the same trouble. The oil does not spread fast enough to be of any help. As the boat rushes ahead she leaves the oil streak so far astern. I shall not write again until after you make your regular call. Perhaps we can arrange some way to make it satisfactory when you come here.

Yours, truly,

A. H. MYERS,
Keeper.

Capt. J. M. RICHARDSON.

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U. S. LIFE-SAVING STATION NO. 1, FIRST DISTRICT,
Lubec, Maine, March 9, 1883.

SIR: I have again tried the boat with a strong southwest wind and heavy tide rip. I heated a gallon of oil hot and put it in the tank before I started, so to have the oil thin. I also mixed a gallon of kerosene to be sure and have a good stream, but I still find, with the boat rushing through the water, I am so far away before the oil spreads. I had a good chance to-day. I went to windward close along shore about three miles, then kept off in the ebb tide and run back home. It may be the cold weather; it does not work as it did the first morning I tried it, that was warm and rainy. I think I shall have a good chance to-morrow. Shall try again and report success.

Yours, truly,

A. H. MYERS,
Keeper.

Captain RICHARDSON.

U. S. LIFE-SAVING STATION NO. 1, FIRST DISTRICT,
Lubec, Maine, March 10, 1883.

SIR: I have tried the boat again this morning, with a short breaking sea at the commencement of the gale that is now raging, and find the same trouble I have before mentioned. The streak of oil does not spread fast enough. The boat is in the break of the sea before the oil makes a slick large enough to cover her width. The oil slicks the water first rate but too far astern to be of much help to the boat. If I could place her twenty fathoms farther back and keep her there not a sea will break in the oil streak; but as she rushes ahead, even with the force of the wind in a heavy breeze, she leaves the oil too fast. I wish you were here to go out with a good chance. I think you would see a chance for an improvement; say place the tank in the bow of the boat and let a stream go from each bow, I think the boat would show the oil with the water and as she passes through the same would leave a wide streak. This is only my opinion. What it is worth cannot say. Shall try again the first chance.

Yours, truly,

A. H. MYERS,
Keeper.

Captain RICHARDSON.

U. S. LIFE-SAVING STATION NO. 1, FIRST DISTRICT,
Lubec, Maine, March 15, 1883.

SIR: Your letter of March 13 just received. In answer will say will give you my idea of placing the tank forward in the boat. I would place it on top of the air chamber, right in the bow of the boat (there is plenty of room there for a large one), and have it covered in same as the one in the stern; can have two stop cocks from it, one for each side. So long as we get the oil on each side of the stern the boat will spread it herself. There would be no danger of it blowing back into the boat, as it can only be used before the wind. I will measure the bulkheads in the morning, and give you dimensions for two square tanks to go out at the water line. I can get a curve on the hose that will discharge a full stream of oil by drawing off on the top where it goes on to the pipe and crowding in on the bottom; that gives a true curve. I have never

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had any trouble with getting plenty of oil through the tube. There is one way I may have made a mistake, that is, the hose drags the water all the time so the oil has to rise to the surface after passing through the pipe; it is out of water sometimes, then again it would be under two or three inches, then skip along just on top, perhaps. I can improve it some by cutting the hose so it will be above the water. I shall try it any way and can buy a new piece if I find it too short. You need not change any thing about the hose, as I can get a full stream by crowding in on the bottom of the hose and pulling off on the top; can do it in a second and have a true curve. I have no doubt but when a man would need oil in actual service he could make this tank work where it is, because then there would be danger in letting a boat go as fast even as the sea and wind would carry his along. There would be danger of her broaching, and I should use a drogue then. With the oil tank where it is she would be just about in the right place, and with both a boat can stand more sea than she could be rowed to windward in. I have often thought that I am liable to get out in a norther, when we could not pull back. Of course would have to go to Grand Manan; then oil and drogue would both come handy.

Yours, truly,

A. H. MYERS,
Keeper.

Captain RICHARDSON.

U. S. LIFE-SAVING STATION No. 1, FIRST DISTRICT,
Lubec, Maine, April 10, 1883.

SIR: I have tried the boat to-day for the first time since you were here. It has been a spell of smooth weather ever since; could not get even a wind chop before. The trial to-day was very satisfactory and all are satisfied that the oil placed where it is will do all that oil can do in a surf-boat. It spread outside the end of the after oar to-day with all hands rowing hard before the wind, leaving a slick thirty-five feet wide one length astern. Hope to have another chance to-morrow, and a better one.

Yours, truly,

A. H. MYERS,
Keeper.

Captain RICHARDSON.

P.

U. S. LIFE-SAVING STATION No. 6, FIRST DISTRICT,
Biddeford Pool, February 2, 1883.

SIR: I launched the surf-boat this morning and gave the oil a trial. The wind was blowing fresh and quite a sharp sea running. I first pulled out where the sea was running quite sharp, but not breaking, and set the oil to running, and after watching the effect, I have come to this conclusion: That the quantity of oil that would run out through the tubes would be of great advantage in case of boarding a wreck in open sea, where the tops of the sea often curl high enough to fill a boat or perhaps capsize one. This would be prevented by rowing to windward of a wreck and letting the oil run, which would sweep towards the vessel, making it smooth enough to go alongside with safety. After

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trying the oil in deep water I pulled to a ledge where the sea was breaking over it some five or six feet, and placing the boat in position for the oil to sweep across the breakers, I set the oil running and watched very carefully its effect, and this is the opinion I come to in this case, which is this: That a sea that breaks on the shore cannot be checked by the use of oil providing large quantities could be used, for this reason, that a sea running towards the shore must exhaust itself in this way, as there is no way for it to go any further, but any sand bar or spit where the sea can run after breaking the oil will most certainly check it. I shall try this to-morrow and as often as I can next week, and I will write you every time I give it a try. Now I want to say one thing in regard to this experiment, and that is, that the cost of this tank and oil is very small, and that no surf-boat should be without one, for in such cases as I write in the first part of this letter there is not the least doubt but what it would be of great service. I used signal oil with just enough kerosene to make it run well. I wish to say to you, as Captain Myers has said, that I hope you will permit this tank to remain in the boat at this station.

Very respectfully,

J. E. GOLDTHWAIT,
Keeper.

Capt. J. M. RICHARDSON,
Superintendent First District, L. S. S.

U. S. LIFE-SAVING STATION No. 6, FIRST DISTRICT,
Biddeford Pool, Maine, March 5, 1883.

SIR: Yours of the 3d at hand and contents noted. The statement that I make here in this letter is as correct as I can possibly come at in regard to the experiment with the oil tank and use of oil. I have run off a gallon of both kinds of oil (kerosene and signal), and when the oil is clear and not congealed, and the hose placed in position so as not to stop the flow, the kerosene will run off in five minutes and the signal in six minutes, with the cock wide open. But when the hose hangs down in a natural position, if the weather is moderately warm, it will nip together close to where it goes onto the pipe, leaving a small vent through, and it will take nearly four hours to run off a gallon of signal oil; this is with the boat lying perfectly still in the house. If the boat was in the water and in motion the discharge would be more than the last mentioned. Now, I will give you my idea of arranging this pipe and hose so that they will all work alike, and so a larger or smaller amount of flow can be regulated and all work alike. It is by having a crook in the out-board piece of pipe that the hose goes on, and then there will not be any nip in the hose. Another thing will have to be regulated, and that is the oil. Signal oil without a mixture of kerosene will congeal in cold weather and not work through the pipes, and as near as I can come at it from observation since this last cold spell of weather, it wants to be about half and half, signal and kerosene. You will find a diagram on the opposite side of this sheet. I want you to let me know what you think of it. I want to show it up in the right light, for I certainly think it can be made practicable and profitable in a great many cases, and after regulating the oil so we can let it run slow or fast, I think it will be all right. I shall launch to-morrow, and

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try it. By the way, do you know whether Captain Myers used the full length of his hose? I had to cut off about six inches of mine to keep it out of the water; perhaps I may shorten it a few more inches.

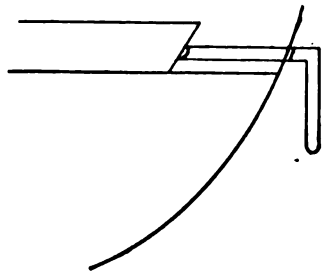
Yours, very respectfully,

J. E. GOLDTHWAIT,
Keeper.

Capt. J. M. RICHARDSON,
Superintendent First District, L. S. S.

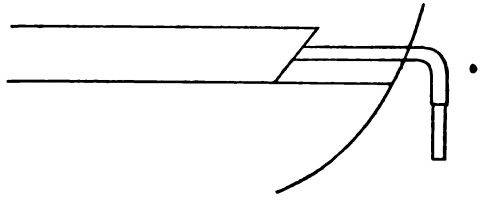
No. 1.

The pipe now in use. Nip in hose, which checks the oil from running.



No. 2.

A crook in the outside pipe and the hose would hang perfectly straight, and the oil could be regulated by the cock.



U. S. LIFE-SAVING STATION No. 6, FIRST DISTRICT,
Biddeford Pool, Maine, March 15, 1883.

SIR: Yours of the 14th, with Keeper Myers' letters enclosed, at hand. I went out this morning and had a pull to windward about two miles, and returned. The wind was light, but quite a sharp sea. I set the oil running, which flowed quite well, it being a mixture of kerosene and signal oil. I agree perfectly with Keeper Myers in regard to the narrowness of the slick from one pipe, and think by having two in the forward part of boat that it will make a much wider slick and be much more benefit. I never have thought that when a boat is driving before the wind and sea with much speed that the oil would be of as much benefit as it would in boarding a vessel at times when it was rough, as I have written before. But I certainly think there are various positions we might be placed in where this tank arrangement would be of great service. I think a tank in the forward part of the boat, so as to have

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the discharge pipes on each side, will be far better for this reason: they will empty themselves a great deal better; the one now in use will not run off all the oil unless the forward end is raised, as there is a slant to the air tank platform. I measured the distance from end of side air tanks, and on the starboard side it is twenty-four and a half inches, on port side twenty-four and a quarter inches, so according to your figures this will be about right. I shall have another try to-morrow, if nothing prevents. I think it would be safe to give the pipe a larger vent, as we can regulate the flow by the stop-cock. I have a good deal of faith in this oil experiment, and do not want it given up without a thorough test.

Very respectfully, yours,

J. E. GOLDTHWAIT,
Keeper.

Capt. J. M. RICHARDSON,
Superintendent First District, L. S. S.

U. S. LIFE-SAVING STATION NO. 6, FIRST DISTRICT,
Biddeford Pool, Maine., April 6, 1883.

SIR: I have had the boat out twice this week, experimenting with oil, the first day using a mixture of kerosene and signal oil, one-third kerosene, two-thirds signal, and the second day using signal oil alone. The first day the wind was light and very smooth sea. Boat was handled partly by oars and partly under sail. Run before the wind about three and a half miles, letting the oil run the whole distance. Oil running from both tanks. When the oil slick passed the stem of the boat it spread about twenty-five feet and continued to widen as it passed astern. The second trial was performed two days later with a fair-sailing breeze and a little more sea than on the first day. The slick widened a little more in passing the stern, and spread much faster than on the first day, the sea being a little sharper, which had a tendency to spread the oil more than on the first trial. It is the general opinion of the crew of this station that this arrangement of oil tanks would be very profitable in many instances, and that the amount of weight added to the boat would not be noticeable, either in launching or hauling up.

Very respectfully,

J. E. GOLDTHWAIT,
Keeper.

Capt. J. M. RICHARDSON,
Superintendent First District, L. S. S.

Q.

MRS. T. D. PRATT'S PLAN FOR USING OIL ON WAVES, ETC.

[Extracts.]

EAST BOSTON, MASSACHUSETTS, *August* 28, 1882.

DEAR SIR:

* * * * * * *

I read on August 18, 1882, that one Shields, of Scotland, was trying * * * to use oil in calming the sea. * * * I have a plan for building a surf-boat or life-boat. * * * Build a boat just as your boats are built for any steamer or sailing vessel; pass around her just

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below her row-locks or gunwales a rubber tube six inches in depth (diameter ?); for a ship's long boat, ten inches in depth. Put in this rail tubes one foot apart, made of brass or whatever you think would stand salt water. Pass a light chain from stem to stern, place on this, just opposite your tubes, covers made of rubber that will fit tight to the tubes in the rail.

As [the] boiler (rubber tank) will not leak when not in use, you can knock this chain off in quick time, leaving it to hang in the water when not wanted. The oil used must be whale oil, or some oil as good, that must run freely from each tube in a small stream. When the boat is overboard and filled with people this confines the oil right with your boat, and at the same time the rail will help keep up the boat the same as life buoys do you or me when overboard. This boat can be used for light-houses and coast craft. I send you herewith a rough draft; also a little paper boat showing you my meaning as well as I can. I can come there [go to Washington] and show you better, of course.

This rail must turn up one foot at the stern, and on each end must be a cover that fits tight. The oil is poured in at the ends. The boiler (tank) must ke kept full all the time. I could have a miniature wooden boat built and rigged out for you as soon as I can hear from you.

* * * * * * *

I think that if you use her (the boat) in heavy seas, you will be convinced that if oil can ever be used, that this will be the safest plan.

* * * * * * *

[Rough pencil sketch omitted.]

Respectfully, yours,

MRS. T. D. PRATT,
No. 20 Liverpool Street, East Boston, Massachusetts.

PRESIDENT LIFE BOAT INSTITUTION,
Washington, D. C.

R.

DECEMBER 7, 1882.

Mr. KIMBALL:

DEAR SIR: Your life-boats' crew will, with the aid of the Folger drogue, launch their boats in smooth water and also be beached in perfect safety. With the adoption of the drogue an entire different set of boats can be substituted, boats not half the size of those now in use, nor half the weight, and not thirty-three per cent. of the cost of the present boats.

I have had a large experience as a diver and recovering sunken treasure; a pilot since 1837; I am one of R. B. Forbes' bringing up, and to whom I refer you. Also to J. W. Candler and Leopold Morse, Representatives, and any merchant in Boston; and to Commodores Luce and Phythian.

I think the Folger drogue or the application of oil by this process, one of the greatest life and property-saving means that has been adopted this century. By adopting it in the life service of this country no more of such losses as have occurred on Cape Cod the last two years need be repeated. I should like to have the opinion of the chief of the Bureau.

Respectfully, yours,

J. LAWRENCE FOWLER,
Boston, Massachusetts.

No. 5 NEWBURY STREET,
West Somerville, December 7, 1882.

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DECEMBER 19, 1882.

DEAR SIR: I have received a dispatch from Mr. Kimball, referring me to you for any business for the Life-Saving Service. I think my appliance of oil to the Folger drogue will be of great service to the Government financially and in saving of life. The expense of the drogue is small, not over $25 for each station, not including the oil. The value of the royaltv, I am willing the Government should appraise. Should be happy to hear from you.

Yours, most respectfully,

J. LAWRENCE FOWLER,
No. 6 Newbury street, West Somerville, Massachusetts.

B. C. SPARROW.

S.

DECEMBER 27, 1882.

DEAR SIR: Your letter of December 21 is received. If at any time you are coming to Boston I should be happy to see you on account of Folger drogue. I will meet you at the office of the Boston Post or Merchants' Exchange, if acceptable.

Please drop a postal appointing time and place.

Yours, most respectfully,

W. LAWRENCE FOWLER,
No. 6 Newbury street, West Somerville, Massachusetts.

Mr. B. C. SPARROW, Esq.

T.

KENNEBUNKPORT, MAINE, *May* 24, 1882.

SIR: Allow me to call your attention and urge upon your department the benefit to be derived from having a fountain of oil in the front part of each life-boat with a small force pump attached, so that a stream of oil might be thrown ahead of the boat as far as possible when passing through breakers or very rough water, to smooth and quiet the troubled waters.

No doubt ships cast away, in many instances, could be approached in safety and comparative ease with such an appliance properly arranged, which could not be done without it. The nozzle or outlet for the oil should be supported as far in front of the boat as possible so that in approaching breakers the oil might take effect on the water as far in front of the boat as possible. To obviate the necessity of operating a force pump in the life boat, a reservoir of compressed air could be attached to the oil fountain in such a way that when the stop cock was turned the oil would be forced out the required distance.

Unquestionably an appliance of the above description could be adopted that would be of vast benefit in saving the lives of those cast away.

Very respectfully, yours, for the saving of life,

W. H. H. HINDS.

To the CHIEF OFFICER OF THE
MARINE LIFE-SAVING DEPARTMENT.
Washington, D. C.

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U.

LETTERS OF W. D. BAKER AND R. B. FORBES IN REGARD TO USE OF OIL ON ROUGH SEAS.

ROCKLAND, MASSACHUSETTS, *October* 5, 1882.

SIR: I have a method of applying oil by the use of charged shells for the purpose of calming the sea for the purpose of saving human life. I was referred to you by the General Superintendent of Life-Saving Service, as the one to whom the matter of the use of oil has been referred.

I should like to lay the matter before you. Will you please inform me when and where it will be convenient for me to see you?

Respectfully,

W. D. BAKER.

Mr. SPARROW.

ROCKLAND, MASSACHUSETTS, *November* 22, 1882.

SIR: Knowing the interest you have taken in Life-Saving appliances on ship-board, I take the liberty to call your attention to the use of oil for protection of life and property at sea by using shells filled with oil thrown from a small mortar. I have been experimenting a number of years with the same, have thrown a shell four inches in diameter containing two quarts of oil from one-half to three-quarters of a mile.

I should like to know if in your opinion it would pay for ships to go prepared to use oil in this way. Suppose they were forced to anchor on a lee shore with these shells; the oil could easily be placed where it would do the most good, thus overcoming the great difficulty of using oil with good effect.

Respectfully,

WM. D. BAKER.

Commodore R. B. FORBES,
Boston.

MILTON, *November* 25, 1882.

MY DEAR SIR: I beg leave to hand you a letter from Mr. W. D. Baker, of Rockland, Massachusetts, which speaks for itself. If he can throw a shell to explode at the right time in the right place his invention may prove of value to the Life-Saving Service. I see that a move is making to place the Life-Saving Service under the authority of the Navy Department. You know my opinion of such a movement which I should strenuously oppose if it was submitted by my own brother.

I am, very truly, yours,

R. B. FORBES.

S. I. KIMBALL, Esq.,
Washington.

ROCKLAND, *June* 21, 1883.

SIR: I send these sample projectiles for carrying and distributing oil, by request of Capt. B. C. Sparrow, Superintendent Second District, Life-Saving Service.

Respectfully,

W. D. BAKER.

S. I. KIMBALL,
General Superintendent Life-Saving Service.

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V.

[Office of Superintendent of Life-Saving Stations, Fifth District.]

ONANCOCK, VIRGINIA, *June* 8, 1883.

MY DEAR SIR: Your favor of the 28th ultimo came during my absence. I now hasten to reply and give you all the information I have on the subject of "casting oil on the troubled waters."

I have been experimenting for several years by lashing an oil-can, with a plug that could be quickly taken out, on the stern of the boat, with a hole in the can one-quarter inch, which afforded sufficient oil to make a "slick."

As a result of the experiment I cannot say that I have seen much, if any, benefit derived where the surf is breaking heavily on the beach. The sea must expend its force by breaking when it reaches the bar or beach, and, in my opinion, no human ingenuity can prevent it. In my district we frequently are called on to render assistance to wrecks three and sometimes five miles from the beach, on shoals of from ten to twenty feet depth of water. There oil is certainly an advantage. It can also, in my opinion, be used to advantage in many cases where a surf-boat is laying under the lee of a wreck, in the act of taking off the crew, provided the wreck is not too near the shore.

I am having an oil tank fitted as an experiment to be worked by the foot of the stroke-oarsman with a treadle, and will give you the result of the experiment when completed and tried.

Hoping the Board may devise and adopt many things that will lessen the disasters that so frequently happen to our noble crews,

I am, very truly, yours,

B. S. RICH,
Superintendent Fifth Life-Saving District.

B. C. SPARROW, Esq.,
Superintendent Second Life-Saving District,
East Orleans, Massachusetts.

W.

BUFFALO, NEW YORK,
September 4, 1883.

SIR: Since the completion of our report the following papers have been received, which are presented as corroborative of various points discussed in the same, viz: "The formation of sea-waves," by Émile Sorel; printed copy of Report of W. Broughton Pryce, assistant secretary of Marine Department Board of Trade, London; "Harbors of refuge at small cost," from Dundee Advertiser; editorial from Scotsman.

Very respectfully,

B. C. SPARROW,
Superintendent Second Life-Saving District, Committee.

FRANK R. BABY, Esq.,
President of Board on Life-Saving Appliances.

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THE FORMATION OF SEA-WAVES.

[By Émile Sorel.—From The Popular Science Monthly, August, 1882.]

One of the first things to be observed in a storm is the way the wind acts. It does not blow regularly, but in gusts. At one moment it bends over the branches of the trees; in the next it has loosened its hold and lets them fly back. We see it swelling out a ship's sails into a full puff; a minute later the sails hang flapping as if they had been struck down.

We can account for these phenomena and explain the intermittence of the wind-puffs by assuming that the molecules of air, displacing each other, excite a vibratory movement, which gives rise to little undulations following one after another at intervals of a few seconds. The resultant of a series of these undulations is a puff of wind which comes on suddenly and is followed by a short lull. A series of puffs constitutes a squall, and an aggregation of squalls forms the atmospheric wave which is called a gale of wind. We should naturally expect to observe the same phases in the formation of sea-waves; and, in fact, if we carefully examine a wave, we shall find that it is covered with very fine ripples, that correspond to the atmospheric vibrations. The ripples give rise to wavelets, which correspond to the undulations of the air, and are seen on the upper part of the waves. The wave proper appears to consist of a series of wavelets. A number of waves constitute a billow; a series of billows gives rise to a heavy sea (*paquet de mer*); a series of heavy seas produces the great swell or tidal wave of the storm.

From the nautical point of view the ripples are of no importance, for they are seldom more than a few millimeters in diameter, but from the scientific point of view they may be considered as the origin of the swing of the liquid element, for they engender the wavelets. The last are still of no interest to the sailor, but are important in their relation to works of art, which are disintegrated by their blows, apparently insignificant, but infinitely multiplied. The wavelets are from ten to thirty centimeters in diameter and not very long. A very heavy wind breaks them up and contributes to the formation of a fine dust of salt water or salt spray, which is destructive to vegetation on exposed coasts. The wave proper may in the English Channel be about ten feet high, thirty feet or more broad, and eighty feet long; its proportions do not disturb large ships, but it is destructive in the long run to port works, and is dangerous to small craft when it breaks. We may estimate that ten waves make a billow. The first of the ten may be relatively small, but the others go on increasing to the last.

The heavy seas are the terror of sailors. They represent an enormous volume of water in motion. A gust of wind cannot possibly raise up such a mass, and it can only be the result of the combined efforts of the tempest. A heavy sea may reach a height equal to twenty-five or thirty or more feet. It is massive, and strikes like a battering-ram. On the land it causes great damage and makes breaches in works of earth and stone; at sea it can send a transatlantic packet to the bottom with a single blow.

The great tidal wave is produced by two causes. On one side it is the general resultant of the billows and the great seas, and on the other hand it is produced by barometrical depressions causing the waters of the ocean to rise. In cyclones the rise of the water in the center would be neutralized by the centrifugal force, and it is therefore probable that

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the former cause acts alone. The tidal wave has but small amplitude, but when inclosed by parallel coasts it may rise to a height of several meters. It then causes inundations of low shores.

The singular fact has been remarked at Havre that in a storm the swell almost always comes after the tide. The sea rises to its normal high-water mark at the prescribed hour, and then begins to retire as usual; all at once it rises again to a height generally much greater than before. This high sea continues for a considerable time, sometimes for several hours; and it has been known to last twenty-four hours.

The billows, heavy seas, and tidal waves possess a considerable inertia, and keep up the swell after the tempest has subsided. The real waves fall, while the billows still subsist, but flattened. It is then easy to estimate the distance between them. On the 26th of March, 1882, I counted eight in a space of four thousand meters.

The most serious event that can take place at sea is a change of wind, such as nearly always occurs in cyclones. The phenomena we have described being well established and sure to continue for a considerable time by virtue of their inertia, when the wind veers around so as to reproduce them in another direction, the new waves cross the old ones, and a chopped sea, dangerous to navigation, is the result.

If any one interested in scientific matters comes to the shore to study the formation of waves he will experience some disappointment, for the configuration of the coasts, the eddies, and the currents, modify the phenomena in a thousand ways. They are, however, always apparent, even in the calmest weather, and vary only in their amplitude. To observe them it is enough to take notice of the level of the water against a post, a jetty, or other structure. Changes of level are produced there quite similar to the pulsations of the sea, and the extent of these pulsations gives quite exact data respecting everything that we have mentioned.

Waves may be classified as direct waves and waves of transmission. The former, with which the surface of the sea is frequently agitated, are those which the wind raises directly. Waves of the second class may be produced in the calmest weather; their origin is frequently quite distant from the places where they are observed; and they reach those places by transmission. A well-known physical experiment will suggest an explanation of the phenomenon of an agitated and raging sea when there is no wind. If we have a long line of billiard-balls arranged in contact one with another, and give a quick blow to the first one, the last one will roll away. The shock is transmitted from the first ball to the last one without the intermediate ones suffering any appreciable motion. Marine disturbances caused by direct waves, tides, earthquakes, &c., may in the same way be transmitted through molecules of still water without agitating them. If the liquid space is free, the vibrations are gradually extinguished; if they meet an obstacle there is a shock. If the obstacle is a shore they form a tidal wave and raise large billows, while a few miles away from the shore the sea is quiet. When the obstacle is a shoal or a contrary vibration heavy waves are raised on the surface of the sea; they seem to start from the bottom, and put ships in great danger. The waves produced in both cases are waves of transmission, as also are those which beat on reefs in pleasant weather, and those which prolong the swell after storms. The transmission may be effected at very great distances—several hundred miles, for example. It presents a kind of analogy with earthquake-shocks which pass over dead points and make themselves felt only in

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places where there are faults or differences in the density of the terrestrial strata.

At Havre, on stormy days, the perturbations of the open sea, transmitted to the shoals of the roadstead, cause oscillations of the water within it, and produce what the sailors call the *levée*, which, in bad weather, prevents the transatlantic steamers from entering the port. Crossing the entrance of the port, with its breakwaters, the *levée* penetrates into the outer harbor and spreads out there, attaining two or three meters in amplitude. It enters the *Bassin du Roi* through a sluice sixteen meters in width, and thence is propagated through a sluice thirteen meters wide to the *Bassin du Commerce*, where, involved in the ins and outs of the quays, it does not reach more than thirty or fifty centimeters in amplitude. This remarkable phenomenon of the *levée*, passing into a chain of basins, appears analogous to that of the vibrations of a tense cord divided into sections by a series of frets in contact with it. When we draw a bow over one of the sections of the cord, the others will also vibrate, while a dead point or node will be formed at each place of contact. In the phenomenon under consideration, the entrance of the port and each sluice give rise to a node.

When a mass of water in motion meets an obstacle, it accumulates against it by virtue of its inertia; the water rises, then falls back. This is called the surf, and may be observed along all coasts. It is produced at sea after every tide. The most curious effect induced by it is the back-flow in rivers. The Seine, for instance, flows rapidly at low water; but as the tide rises, a liquid obstacle several meters high is piled up in less than two hours against the mouth of the river. The water of the Seine then stops, rises, and falls back as surf, while the surf in its turn acts as an obstacle to the current of the river above it. The phenomenon is repeated, and again, and so on, steadily going higher up the river, so that in effect a strong wave ascends the stream. The phenomenon may be easily reproduced on a small scale; every time we suddenly stop the rapid current of a brook or any stream of water, we may see a back-water ascend it.

The amplitude of the movement of the waves remains to be spoken of. It appears to be proportional for direct waves to the force of the wind. On the other hand, since each ripple, wavelet, or wave, occupies a given space, and since, as I have already said, a certain number of these are necessary to give rise to a billow or a heavy sea, it is evident that, with a given wind, a billow of a particular dimension can be formed only if a sheet of water extends over a certain area of surface. This is precisely what takes place, and the dimensions of the billows produced by a given wind appear to be proportional to the extent of the sea in which they are formed. Thus the largest surface of water to be found on the earth is in the latitude of the Cape of Good Hope; and the strongest waves are met in the neighborhood of this cape. In the Mediterranean the wave is short.

In all ages men have sought for means of calming the agitation of the waves, which is so prejudicial to shipping. The best means hitherto employed has been that of breakwaters, the operation of which is too well known to need description. It may be added that floating wave-breaks, such as would be constituted by a large number of spars or planks left to drift, afford a perfect amelioration of the agitation of the waves. Hitherto engineers have applied their efforts only against the larger waves. Why not attack the evil in its origin? Why not take up the ripples and the wavelets and oppose them with floating ripple-breaks? Such breaks might be made with twigs, saw-dust, or soot, &c.,

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and experiment has proved that they will be efficacious. The needles of ice which form in cold weather on the surface of the water are excellent natural wavelet breaks. Generally, every cause hindering the formation of wavelets appeases the agitation of the waves. Thus a rain, every drop of which breaks a ripple, calms the sea to a certain extent. Sailors know this. Billows have been fought against with ordinary wave-breaks. Wavelets may be destroyed by employing light bodies, ripples with dust, microscopic ripples with an infinitely fine powder. A liquid will serve the end admirably. Oil is the best of all agents for the purpose. It has the property (to which capillarity is probably not foreign) of spreading over the water as a pile of billiard balls spreads over a well polished marble table. Its molecules form as many floating microscopic pebbles, in the intervals between which the ripples break, as the billows break upon the shingle of the coasts. Oil thus acts as a lubricant, attenuating the friction of the wind. Capillary phenomena, due to the minuteness of the intervals between the oleaginous molecules, intervene to divide and draw off the surface of the water and completely neutralize the force of the wind. All of these causes together may give us the reason of the efficacy of oil in destroying waves.

It should be understood that all the means of restraining the agitation of waves here indicated are good only against direct waves due to the formation of ripples. They have but slight influence on waves of transmission, which are due to other causes. Oil may appease the billows, but the swell will continue.—*Translated for the Popular Science Monthly from La Nature.*

[Note from Popular Science Monthly for August, 1882.]

The efficiency of oil to temper the rage of the waves in storms at sea is now generally recognized, and it is becoming the practice for vessels to take oil with them to be used in this way in cases of extremity. The ship Glamorganshire was recently saved in a tempest by the timely use of oil; while a powerful steamer, the Navarre, neglecting it, was swept by the waves and went down in the North Sea, on the 6th of March, with those on board. The oil operates by preventing the waves around the vessel from breaking, and converting them into a heavy swell. Chambers' Journal remarks that "ships that leave port unfurnished with oil, in case of emergency, are defrauded of one of their chief elements of safety."

OILING THE WAVES.

The following is a copy of a letter from the Board of Trade (Marine Department), Whitehall Gardens, South Wales, dated 28th March, 1883, in reference to Mr. Shields' experiment in oiling the waves at Aberdeen Harbor entrance:

"SIR: I am directed by the Board of Trade, in reply to your letter of the 15th instant, to forward you herewith a copy of Captain Pryce's report on experiments carried out at Aberdeen in December last with the oil apparatus, with the view of testing its usefulness in smoothing broken waters.

"I am, sir, your obedient servant,

"THOMAS GRAY.

"Mr. JOHN SHIELDS,

"*Balhousie Castle, Perth, New Brunswick,*"

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"SIR: In accordance with instructions, I have the honor to report, for the information of the Board of Trade, that on Saturday last, the 2d instant, I received a telegram from the meteorological office respecting the anticipated bad weather in Aberdeen, and after communicating with Mr. Shields, of Balhousie Castle, proceeded by the 4.35 train, and arrived in that city at 10.35 P. M.

"On Sunday the 3d instant, the winds were veering from southwest to west, with very unsettled appearances, and in the forenoon I went down to the port, accompanied by Mr. Shields and the shore officer, Mr. Patterson, and took a casual view of the river Dee and harbor, returning to the Douglass Hotel, where I was staying, when the lord provost called on me, and expressed his regret that his municipal duties would prevent his being present on the morrow, provided the weather should be such as to enable the oil apparatus being tried. Subsequently I returned to the north pier with Messrs. Shields and Patterson, for the purpose of seeing the water space between the north and south pier-heads, and also to ascertain the set of the tides, the position of the oil pipes, &c., which information I obtained from the harbor-master of pilots, Captain Clarke.

"The barometer at this time, 3 P. M., was standing at 29.05, wind west-southwest with heavy rain, so made arrangements for going on with the experiments so soon as they would be ready in the morning if the wind and sea were suitable for it, and it was then decided that at noon on Monday both oil and pump would be ready.

"Towards evening the wind moderated, and at midnight it was nearly calm.

"Monday the 4th.—Between 2 and 3 A. M. the wind came away strong from the south, and I was informed by the harbor-master, that at 5 A. M. it blew with great violence from the southeast, causing the sea to rise very rapidly, and at 8.30, the shore officer called at the hotel and reported the state of weather as being favorable for putting the oil apparatus and experiment to a crucial test, so that directly after breakfast, I went to the harbor engineer's office (Mr. Smith, chief engineer), for the purpose of obtaining plans of the entrance of the harbor, with position of pipe marked on it, which he readily furnished me with. The pipe, four hundred and sixty feet long on the bottom, is of lead, one and one-quarter inches diameter, and has three conical valves, of three-eighths inch, each fitted on to it, standing one foot high. These valves are seventy feet apart, and are on the south end of it. A force pump worked by two men is attached to an iron pipe on top of the pier, and the oil was pumped out of casks.

"At 0.15 P. M.—wind 9 to 10 southeast, barometer 28.95—on everything being reported as ready, the force pump was started, the state of the sea at the time, both inside and outside the harbor, being one seething mass of broken water, the waves making a clear break over the southern breakwater. The light house at the end of it at times (which is eighty feet above the sea level) was quite submerged by the spray, the waves coming round the north end of the south pier-head and striking the north one, which runs out east-northeast, causing a very dangerous and confused sea inside the entrance and over the bar, on which it broke with great violence, it being three-quarters ebb at the time.

"The currents on the river Dee, I am informed, run out on the surface at all times at flood tide, so that any oil which is pumped or started on it finds its way outside the harbor.

"After a few strokes of the pump it was apparent that the oil valves were in good working order, as smooth spots were to be seen on the

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south or Torry side of the harbor, which soon formed one large mass. This moved out to the eastward, towards the southern breakwater, when it deflected to the north, right across the entrance, and worked its way round the outer extremity of the northern pier-head, where its influence was noticeable on the very heavy sea which was breaking with great violence to the north, so, after pumping until 1 P. M., seventy gallons of seal oil, forty of mineral, and sixty-five of colza, making one hundred and seventy-seven gallons, I suggested that another trial should be made on the following day at a different stage of the tide; and I arranged to be on the pier at 9 A. M., when it would be high water. The gale at this time was raging with great violence, and the seas which came round girdleness from the southeast (which was still the direction of the wind) were very heavy; indeed, the squalls of snow and hail were violent.

"On Tuesday, 5th, 9 A. M., according to appointment, I again attended on the north pier (the wind having veered to east-northeast and the barometer risen to 29.5), attended by Mr. Shields and the shore officers, harbor engineer, and other officers belonging to the port. At 9.35 the pump was started, and, as on the previous day, it soon became apparent that the oil was beginning to show plainly on the surface, and as it was high water, with the wind and sea right in it, did not move off so rapidly as on yesterday, but when it began to do so it was exactly in the same direction, *i. e.*, pressing on the south side, and drifting out against the wind to the south pier-head, when it set directly across between the two pier-heads, to the northward of the port.

"I obtained the sanction of the harbor authorities to make use of the light-house on the north pier, which is forty feet above the sea level, for observing the effect of the oil; so, after pumping for fifty-five minutes, during which time forty-five gallons of seal oil and seventy-five of colza, making one hundred and twenty gallons, were used, I thought enough had been seen to enable me to make a report on the experiments.

"On Monday, the gale and sea being most violent, the effect of the oil was very pronounced, especially when it had found its way down to the south pier-head, and had come in contact with the seas rounding into the harbor; but as it seems the oil was kept to the southward by the waves being on that side, also by the offset or back-water of the waves which struck against the north pier with great violence, it could not work its way sufficiently to the north to influence the crests of the waves running into the fair way, which would have been overwhelming to a small vessel entering the port. The quantity of oil used was one hundred and seventy-seven gallons, and this was of different qualities. During the experiments on Tuesday the wind had veered to the east-northeast, being right into the harbor, the sea running much more regularly than yesterday, so that after a few strokes of the force-pump the oil spread more over the surface. Owing to the offset from the north pier not being so great, and as the tide was just on the turn to ebb, it massed and moved out towards the south side and breakwater, and deflected to the north, right across the harbor mouth, between the pier-heads, when the influence on the crests of the waves was most apparent, reducing them to rollers only. I would therefore desire to condense my opinion on the subject as follows:

"1. Had the pipe been fitted with valves right across the harbor the oil would have come into action sooner than it did, and would probably have been more efficacious.

"2. The smallness of the valves required constant pumping to keep up the necessary supply for covering so large an area of water.

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"3. The oils were of different qualities, so that the effects produced were not easily detected; but what I noticed was that the seal or fish oil produced the best effect.

"There is no doubt in my mind that Mr. Shields has brought this idea of 'stilling the waves' most prominently before the world, and that there is a great deal in it. Quantity over and above that which has been used on these two days is the question, and had five hundred gallons on each been put on the surface instead of what is reported above, I am of opinion that there would have been very little broken water in the mid-channel at the entrance.

"I believe it is no longer an idea, but a reality, and that by scientific application great and beneficial results will be obtained.

"In conclusion, I would respectfully suggest that the Board of Trade acknowledge the attention paid to me by the lord provost of Aberdeen, as well as the shore officer, the harbor engineer, and other officials, during my visit, rendering me as they did every assistance.

"As so much interest in the Kingdom appears to have manifested itself so strongly respecting these experiments, perhaps the Government may be induced to try it at some of our southern ports by other means than those adopted by Mr. Shields, as that gentleman feels confident of its success. I left Aberdeen on Tuesday and got to Perth the same night during some very severe weather, where I staid until yesterday, when I returned to Glasgow in the afternoon.

"I am, sir, your obedient servant,

"W. BROUGHTON PRYCE.

"The ASSISTANT SECRETARY, MARINE DEPARTMENT,
"BOARD OF TRADE, LONDON."

HARBORS OF REFUGE AT SMALL COST.

[From Dundee Advertiser of July 16, 1883.]

The greatest and most striking of our modern inventions, those which have most expedited the progress of civilization and have contributed most largely to the sum of human contentment, have been due to the quiet enthusiasm and determined perseverance of a few patient observers. One man watches the flashing of lightning from a thunder cloud and studies how electrical forces, which for ages were the terror of the ignorant, may be made to transmit intelligence over the whole face of the globe. Another sees a spurt of smoke from a piece of coal in the fire flickering into flame and conceives the possibility of illuminating all the houses in a city by gas instead of oil and candles. Another is struck by the force of steam pressing on the lid of a common kettle and sees the possibility of developing that power to lift, draw, and move weights heavier than Hercules could have handled. The illustrations of the changes which have been effected in the condition of mankind, the arrangements of social life, and the implements of modern industry are innumerable. But it almost invariably happens that however wonderful the success of former inventions have been, every new invention has to pass through a time of incredulity and apathy, if not of covert or even unconcealed opposition. The mass of mankind are "doubting Thomases," and in many cases even seeing scarcely amounts to believing. It is only when all doubts are confuted by repeated demonstrations of success that the majority recognize what is successful. The direct application of oil to smooth the surface of troubled waters is an instance

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of the time required to convince the public, and especially the official, mind of the advantages of the scientific application of well known physical facts.

Our neighbor, Mr. John Shields, of Perth, has experienced not a little of the prevailing *vis inertiæ* whenever new proposals are submitted for official consideration. The history of his observations and efforts is not a little interesting. While standing beside a mill pond on a windy day a good many years ago he noticed that the water which had been considerably ruffled suddenly became smooth. On examination he found that this effect had been produced by a few drops of oil accidently spilt on the surface. It at once occurred to him that there was something in the old saying, "pouring oil on troubled waters," and he commenced a series of experiments on a large scale with the view of calming the entrance of harbors in stormy weather. A man of mechanical training, he noticed that oil spread on the sea acts in the same manner as it does when poured over a revolving "journal" in a stationary "bush." Such a journal moving without oil becomes heated and gradually becomes immovable from the expansion of the metal, but pour a few drops of oil on the "journal" and it immediately spreads over and in between the metals, prevents friction, and all goes smoothly. In the same manner the wind may be likened to a moving "journal" and the sea to the "bush" whereon it rests. The rapid motion of the wind and the friction caused between the two immediately creates angry billows. But pour a small quantity of oil on the water and the friction caused by the motion of the wind ceases and the waters again assume their harmless roll.

Experiments conducted in the lade beside his works at Perth satisfied Mr. Shields that there was a great life and property-saving power in oil if properly applied, and the idea having once suggested itself he never rested till he had thought it out and devised means of executing it. Experiments on a large scale have been repeatedly conducted by him at Peterhead and Aberdeen, where, in rough weather, the stormy seas rage violently. On the first occasion at Peterhead a number of bottles containing oil were dropped from a tug into the water at the entrance of the harbor. The result was so satisfactory that Mr. Shields was induced to inquire into the pacific effects of oil still further, and upon an extended and more permanent system. The last experiment, which was made at Aberdeen in December last year, was witnessed by Capt. W. Broughton Pryce, on behalf of the Board of Trade, and his report was recently made public. After describing the apparatus he states that the sea at the time of the first experiment, both inside and outside the harbor, was one seething mass of broken water, while the waves were breaking over the southern breakwater, and at times submerging the light-house at the end of it (which is eighty feet above sea level) by the spray. In reporting the result Captain Pryce says: "There is no doubt in my mind that Mr. Shields has brought the idea of 'stilling the waves' most prominently before the world, and that there is a great deal in it. * * * I believe it is no longer an idea, but a reality, and that by scientific application great and beneficial results will be obtained."

It may be taken for granted that Captain Pryce does not overstate the results of the trials; in fact it is more likely that he should rather understate them; but with the Board of Trade's approval, even to the limited extent to which their representative goes in his report, there is reason to hope that the invention will now be applied in an extended and permanent form.

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In a recent communication to the Board of Trade Mr. Shields has suggested that the South Bay at Peterhead could easily be converted into a harbor of refuge at a trifling cost.

He proposes to run pipes from the north and south sides of the bay till they nearly meet, in the manner shown in the following sketch:

(Sketch omitted.)

At the sea end of each of these lines of pipes he would fix a sufficient number of valves to throw out any quantity of oil that might be required in a storm, and at the shore end of each he would apply a force-pump He is of opinion that from two hundred to three hundred gallons of oil forced through each of these pipes would be sufficient to render the bay as smooth and safe as a mill-pond. The cost of the apparatus is estimated at £350 to £400, while six hundred gallons of oil could be got for £15. If three hundred or four hundred gallons properly applied is sufficient to afford a safe entrance for vessels to any harbor in a storm why should every harbor not be made a harbor of refuge and every bay round our coast rendered safe? Is it the novelty or the simplicity of the invention that makes those in authority pooh pooh such a matter? Seeing that it is admitted on behalf of the Board of Trade that "there is a great deal in it," why should it depend on one individual to spend his own money or let the system drop out of sight? Mr. Shields has already spent more than £1,000 in experiments, and, seeing that such benefits are likely to be conferred on the sea-faring world by the application of the principle, surely our authorities might with propriety advance what it requires to fit up Peterhead Bay for the test which Mr. Shields invites. He was laughed at by not a few of his friends even after the first experiment at Peterhead, but "he laughs who wins," and we believe it is now Mr. Shields's turn to laugh. Since the reports of the experiments were published Mr. Shields has been communicated with on the subject by the French Government, by the American Government, by the authorities in Australia, and by many bodies in different part of the world connected with sea-faring. It is universally admitted that a harbor of refuge for the east coast is absolutely necessary, but there is considerable diversity of opinion as to where it should be placed. While the question remains unsettled surely the Government would be amply justified in the expenditure of a few hundred pounds in making the south bay of Peterhead available in all weather as a refuge by means of Mr. Shields's invention.

Since Mr. Shields began his experiments he has received numerous communications showing that the effect of oil in smoothing rough water has been long known among the sea-faring population. Herring fishers, it is said, can tell where the fish are lying by the smoothness of the water over them. The islanders of St. Kilda made puddings of the fat of sea fowls and fastened them astern of their cables to prevent the waves from breaking. Shetland fishermen when caught in a gale crush the livers of cod and ling fish and throw them overboard, and the effect is that the raging of the waters in the vicinity of their boat is allayed. Vessels engaged in collecting palm oil, and whaling ships laden with whale oil and blubber, have often reported that they floated in smooth water while their neighbors were pitching in a chopping sea. They attributed this to the leakage of oil pumped out with the bilge water. Many cases could be mentioned where vessels have been saved from shipwreck, and where the crews of wrecked vessels have undoubtedly owed their lives to casting oil on the storm-vexed waves. For instance, Mr. Holness, the second officer of the Kenmure Castle, which was wrecked in the Bay of Biscay recently, stated to the

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Board of Trade inquiry that had it not been for the oil they could never have launched the only boat by which a few of the passengers and crew were saved. An Aberdeen sailor, writing to Mr. Shields on 23d of June, says that while on a voyage from Peterhead in the brig Lord Saltoun to the whaling station at Kinkerton Islands the water began to get pretty smooth when the vessel was from fifteen to twenty miles from the shore, and that when they got within ten miles of the harbor the water became as smooth as glass. At the time it was blowing a stiff breeze. When the harbor was reached they found an American whaler at anchor with the blubber of three large whales in the water that had been cut a few days before. The oil from the dead whales had been carried down by the tide, and extended from the shore to a distance of at any rate twenty-five miles.

The writer further stated that he had had an opportunity on many occasions of seeing the wonderful effect that oil has on the troubled waters. In his opinion Mr. Shields's invention is a very valuable one, and he has no doubt whatever that if plenty of oil could be procured the Atlantic Ocean might be made as smooth as glass in any gale. It will be remembered that during the Board of Trade inquiry held at Dundee, in February, 1882, in connection with the loss of the steamer Loch Awe in the North Sea, the beneficial use of oil was spoken of, Captain Allison, the master of the Loch Awe, in the course of his evidence stated that, "When we left in the boat I took some oil with me, as I thought it might be useful, and I believe the use of it was beneficial." At a later stage of the inquiry Captain Allison was asked for more information regarding the use of oil, when he stated:

"That he believed the crew owed their safety during the five hours they were in the boat to the use of oil. He explained that a tarpaulin, with a bucket attached to it, was used as a drag to the boat, and that by pouring a little oil overboard the heavy seas were prevented from breaking over the boat.

"The court said it was of importance that this testimony to the great advantage of oil in such circumstances should be generally known.

"Mr. CURRIE (legal assessor). You mentioned that you poured oil on the sea. It would be interesting if you would give us some little description of the mode in which you used it.

"Captain ALLISON. I shall be very glad. On the approach of a heavy sea we poured out a quantity of oil, and the boat drifting from it the wave passed us quietly. We had a drag ahead, consisting of a tarpaulin and bucket, with a line of some thirty fathoms. The tarpaulin was under water, and the boat rode to the drag with the assistance of the oars. We poured out about half a pint of oil each time, and it smoothed the head of the broken sea, and prevented it from breaking over the boat. We did that all the time we were in the boat, and when we were rescued the oil had not been expended. In my opinion if we had not had the oil we would not have been here.

"Captain CURLING. Your experience is most interesting, and should be made public. Boats are very often lost with the best management."

While there would be great advantage in having Mr. Shields's suggestion carried out in all exposed harbors on our coasts, it is obviously desirable that all vessels, and more especially steamers, should carry a tank or cask of oil as part of their equipment, with a few canvas bags, through which the oil could be poured when required. There have been many cases in which steamers have had their rudders or propellers damaged when the pouring of oil from the stern would have greatly facilitated the repairs.

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EFFECT OF "OILING THE WAVES."

[From The Scotsman.—Editorial of June 25, 1883.]

When so much is being said about harbors of refuge and the means of saving life on our coasts it may be well to give heed to the results of the experiments that have been made lately with a singularly cheap and simple method of obtaining a certain measure of security. We printed on Saturday a report by a representative of the Board of Trade on Mr. John Shields's experiments in oiling the waves at the entrance of Aberdeen Harbor. The results of the trial reported on did not differ from those that have now been repeatedly obtained at Aberdeen and at Peterhead; but the letter is important because it shows that the attention of the marine authorities in the Board of Trade Department is being given seriously to the subject. Probably most people will think that Captain Pryce, the reporter in question, would have been warranted in using even stronger language with reference to Mr. Shields's idea than is contained in the assurance of his belief that "there is a great deal in it."

A good many facts have passed into proverbs. "Pouring oil on troubled waters" is a singular instance of a proverb passing into a fact. It may quite fairly be contended that the fact must have preceded the saying in some form, since the saying is one that must have originated in knowledge of experiments successfully made. But it is nevertheless true that the trials lately made originated not in actual knowledge, but in the suggestion of the proverb, the truth of which they were intended to test. It now seems to be the case that the effect of oil in producing smooth water around a boat has been long known to seafaring folk. It is an old custom for the Shetland fishermen, when caught in a gale, to crush the livers of cod and ling fish and to throw them overboard, with the effect of quieting the rough water in the immediate neighborhood of their boat; and the same thing has been done habitually by fisherman farther south. There are also well authenticated stories of sea captains in last century who oiled the waves at some critical moment, such as before launching a life-boat. It is not uncommon nowadays for bags of oil to be slung from the stern of a ship driving before the wind, in order that the oil, oozing through perforations, may moderate the force of the hurrying waves. These facts testify to the prevalence of a very general belief in the efficacy of oil when thrown upon or into rough water. To Mr. Shields, however, belongs the credit of having devised the means of applying the remedy in a systematic way, though on a limited scale. It is a question whether the time has not come for a more extensive and more habitual application of the principle. Mr. Shields has suggested to the Board of Trade that, at a trifling cost for laying pipes and supplying force-pumps the South Bay at Peterhead Harbor could be converted into a perfectly safe harbor of refuge. All that would be necessary when a storm occurred would be to set the pumps to work and to force through the pipes and connected valves three or four hundred gallons of mineral oil; and as soon as it had spread over the surface of the water the entrance to the bay would have become as smooth as a mill-pond. If that is likely to be the case there is no reason why the experiment should not be tried; there is rather every reason why the plan should be put in operation at once. The necessary apparatus could be obtained for £300 or £400. The cost of four hundred gallons of oil would be £10.

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That is not a cost that should stand in the way of trial. It will not lessen the desirableness, nay, the necessity, of a permanent harbor of refuge at Peterhead; it will relieve difficulties while that harbor is making and when it has been made. Indeed, the entrance to every harbor in the kingdom ought to be furnished with the oil-distributing apparatus similar to that used at Peterhead and Aberdeen. The expense would be trifling and the benefit would be well-nigh incalculable.

It is in the attempt to make the harbor mouth that fishing-boats and other small craft are most frequently wrecked. If means were taken to smooth the waters around harbor entrances great risks would be avoided and great calamities would be prevented. Every harbor would then be in some degree a harbor of refuge, because it would be a harbor that could be approached and entered with safety in times of storm. The point, however, which it is desirable to press on the attention of the Board of Trade at the present time is the particular suggestion which Mr. Shields has made regarding the South Bay at Peterhead. After the success of the experiments that have taken place both at that port and at Aberdeen there is no room to doubt that the plan would be effectual while the cost would be so trifling that it ought not to prevent the adoption of the scheme.

The doubts of the most skeptical have been shaken, if they have not been entirely removed, by the results of the experiments already made. Captain Pryce is not the only doubter who has been forced to admit, after putting Mr. Shields' idea to the test of proof, that "there is a great deal in it."

It is not necessary to discuss the question at length, whether the action of oil on the water is wholly mechanical or partly also chemical. There is some reason to believe that even when it is supposed to be chemical it is really mechanical. It has been supposed that the oil dissolves the foam of the sea in the same way that a few drops of oil stop the frothing of the pulp in a paper-making machine. It seems more natural to conclude that the layer of oil—which is more viscid than water—on the top of the sea prevents the formation of foam by preventing the breaking of the surface. There is no change of quality, and therefore no chemical change, in any part of the elements concerned. The water remains water; the oil remains oil. The foam disappears because the waves are not allowed to break.

It must be understood, of course, that the effect of the oil is not to make the sea still in the sense of being motionless. The undulation continues, though moderated somewhat by the superincumbent oil, and the oil undulates with the water on which it lies, but the breaking and the foaming cease, and along with them the greatest risk to shipping ceases also. A very thin layer of oil suffices to control the waves, one drop of oil being enough to smooth four feet square of water. It is not, however, merely by overlying the water that the quietness is produced. The oil acts as a lubricant in reducing very greatly the friction between the wind and the water over the area which it covers. The oil, that is to say, not only puts a check on the waves, it also eases off the wind and prevents it from lashing the surface into breakers, and from playing the havoc on which it is bent. Nor is the action of the oil merely transient. It is not carried away, as it might be supposed to be, by the action of the waves beneath it. Indeed, the conduct of the layer of oil forms an excellent proof of the correctness of the true theory of wave motion. That motion, as every one knows, is not progressive in the sense in which a current, for example, a river, or the tidal flow is progressive. The wave advances but the water remains in its place.

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This is seen in the action of the layer of oil; it rises and falls as the water beneath it rises and falls, but it does not move forward until the tide, which is a current, carries it either toward or from the shore. What is true of the oil is true also of the water beneath it, which, in fact, adheres to it. The practical effect of this is that the oil which has been spread over the sea at any place remains nearly at the same place for a considerable time, probably until the tide changes, and brings with that change an abatement of the storm's fury. More, probably, will come to be known about these points when there has been greater experience of the system. Meantime the fact has been settled beyond possibility of question that the pouring out of oil does still troubled waters. It has also been shown how that fact may be turned to account for the prevention of shipwrecks and for the saving of life. If the fullest advantage is not taken of this knowledge without unnecessary delay, the public, and especially the seafaring public, will have a good ground of complaint. The proper authorities could not do better than begin at Peterhead, which has been the scene of some of the most successful experiments on the system.

X.

[Office of Superintendent of Life-Saving Stations, First District.]

PORTLAND, MAINE, *January* 23, 1883.

DEAR SIR: Knowing full well the danger boats are in, running in heavy sea, of being boarded on the stern or quarter, I have been ciphering to see what kind of a contrivance I could get to overcome, in a measure, this great danger. There is no more dangerous position a boat can be placed in than running before a high breaking sea. If there is nothing but a high sea that does not break any boat would ride safely over it, but a *breaking* sea is very dangerous to any boat, however staunch or well handled. The danger of going off a beach at *no time* is so great as running in to make a landing, and all shoremen would rather try going *off* than coming *in*.

I send you to-day a small sectional model showing the after air-chamber of a boat. On this chamber, well aft, is placed a small copper oil tank, to hold about three gallons. From this tank, on the after part, runs a small pipe, as shown, out through the boat's planking. About half way from the after part of the tank to the boat's side, in the pipe, I propose to put a small gas-cock or faucet; this is easily reached by the keeper to open or shut as much as he likes, and allow the oil from the tank to drop into the water, where, spreading out, it will break the rush, making comparatively smooth water. The tanks should be made of copper to withstand the action of *oil* inside and salt water out. The tanks would be secured in place by cleats and covered in on top to prevent anything breaking or bursting them. In the top of tank a small screw-valve to allow filling; the amount of oil—three or four gallons—would last hours, and the cost of the oil trivial. The tanks, I am told, can be made, all in fine shape, completed, not to exceed $3.

This is not a new idea by any means, as whalers *always*, when in a heavy breaking sea, use oil to break the comb of the sea; but I have never heard the idea advanced for boats' safety, only as I have talked with the surfmen of this district. *I know* it will work, and work well, and if I could afford it, would put a tank into every surf-boat in this district at my own expense. It might be years before a tank of oil

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would be used, but if the time comes and it is needed, then the boat and her crew are much safer. Will you kindly, after thinking this matter over, let me hear from you? I intend to have *one* made on my own hook and carry it down the coast with me when I next go. If the idea is in your estimation worth anything to the service, you are certainly welcome to it; and I believe every man in the service will agree that it would give them a better chance.

Very respectfully,

J. M. RICHARDSON,
Superintendent First Life-Saving District.

S. I. KIMBALL, Esq.,
Washington, D. C.

Y.

U. S. LIFE-SAVING STATION NO. 6, FIRST DISTRICT,
Biddeford Pool, February 2, 1883.

SIR: I launched the surf-boat this morning and gave the oil a trial. The wind was blowing fresh and quite a sharp sea running. I first pulled out where the sea was running quite sharp, but not breaking, and set the oil to running, and, after watching the effect, I have come to the conclusion that the quantity of oil that would run out through the tube would be of great advantage in case of boarding a wreck in open sea, where the tops of the sea often curl high enough to fill a boat or perhaps capsize one. This would be prevented by rowing to windward of a wreck and letting the oil run, which would sweep towards the vessel, making it smooth enough to go alongside with safety. After trying the oil in deep water I pulled to a ledge where the sea was breaking over it some five or six feet, and placing the boat in position for the oil to sweep across the breakers, I set the oil running and watched very carefully its effect, and this is the opinion I came to in this case, which is this: That a sea that breaks on the shore cannot be checked by the use of oil, providing large quantities could be used, for this reason: that a sea running towards the shore must exhaust itself in this way, as there is no way for it to go any further, but any sand-bar or spit where the sea can run after breaking the oil will most certainly check it. I shall try this to-morrow and as often as I can next week, and will write you every time I give it a trial. Now, I want to say one thing in regard to this experiment, and that is, that the cost of this tank and oil is very small, and that no surf-boat should be without one, for in such cases as I write in the first part of this letter there is not the least doubt but what it would be of great service. I used signal oil with just enough kerosene to make it run well. I wish to say to you as Captain Myers has said, that I hope you will permit this tank to remain in the boat at this station.

Very respectfully,

J. E. GOLDTHWAIT,
Keeper.

Capt. J. M. RICHARDSON,
Superintendent of First District, L. S. S.

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"2.—EDDY PATENT SURF OR LIFE BOAT."

[See Plate XII, page 473, Report of 1882.]

BUFFALO, NEW YORK, *September* 4, 1883.

SIR: Your committee has carefully examined the subject of the Eddy surf-boat, and discovers no reason for recommending a deviation from the opinion already expressed by the Board at its previous meeting. From the meager data presented to the Board by Mr. Eddy, no other opinion could have been given at that time. In order to afford Mr. Eddy an opportunity for a further examination and trial of his boat, if he desires one, the committee would respectfully recommend that Mr. Eddy be informed that if he will submit a boat of his model for the consideration of the Board, it will be tried, and the weight and cost be definitely determined. The weight given in the report of the Board was that furnished by Mr. Eddy himself when before the Board.

Respectfully submitted.

D. A. LYLE,
Captain of Ordnance,
B. C. SPARROW,
Superintendent Second Life-Saving District,
Committee.

To the PRESIDENT OF THE BOARD ON LIFE-SAVING APPLIANCES.

SOMERSET, MASSACHUSETTS, *December* 28, 1883.

SIR: Your favor of the 13th instant, informing me of the report of the Board on Life-Saving Appliances upon my patent life-boat, is received.

The report, in substance, is, that the boat is not novel, and that its probable weight and cost would make it of no value to the service.

In justice to myself, I cannot let so valuable an invention as my life-boat drop without some comments upon this report.

I must say I cannot understand what led to such a report, for I think I can easily prove to you that neither of the items is correct.

And first, the cost. In my specifications I state that the boat is very simple in construction, and can be made of any material. I mentioned sheet steel, galvanized preferable, as the recent process of making steel has much reduced the price, and although a steel boat might cost a trifle more at first, yet it would outlast several wooden boats, and needs no painting, so that the ultimate cost would be less than the boats now in use. I named no cost in my specifications.

Second, the weight. Surely a boat built simply and of any material ought not to lead a committee to infer any increase of weight. In my specifications I distinctly stated that she could be built as light or lighter weight than the present boats, and I do not hesitate to add that in my opinion my boat of two-thirds the weight of the boats now in use, will carry more passengers and have twice their strength.

I named steel because it is the best combination of strength and light weight.

When I appeared before your committee it failed to ask me any

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question relating to the qualification of the boat, with one exception: the president wished to know if it required as much weight on the keel as the whole weight of persons on deck. Any ten-year old boy accustomed to boating would not ask so ignorant a question, for my boat is wider, stiffer, and more buoyant than any life-boat of the same length ever built, and without any iron keel will not capsize (as the seats are as near the bottom as in open boats) unless placed in the trough of the sea. When such a case was liable to occur, I should use the iron keel (made to unship). I believe that with a heavy iron keel on the boat would weigh no more than those now in the service.

And now for the novelty. I am familiar with all the boats now in use in the service, and also with boats all over the world, and never saw or heard of a boat like mine. Practical judges have examined it, and say they never heard of any like it, and I challenge the Board (with all respect) to name the boat that is near enough like mine so that it could not be called novel. The only boat that comes anywhere near it is the English self-righting boat, and that is nowhere near it, for that acts by valves, &c., and is so heavy it is not used on the Atlantic coast to any extent, and my boat can be used on the shallow beaches of this coast.

Where is the boat in the service on this coast that will not swamp? Look, if you please, a few days since when one of our river crafts, the schooner Oliver Ames, ran on to Cape Cod, when one of your boats from Station No. 6 undertook to rescue the captain and crew, and swamped three times, and the third time Captain Young, the station-master, came near being drowned. My boat would have gone to that schooner without swamping.

I was at the Rio Grande during the rebellion, where two hundred sail were at anchor; one of our revenue cutters came to anchor, lowered two life-boats, put twelve men in one and thirteen men in the other and attempted to land; both boats swamped and all on board drowned. At the time I had a common vessel's boat twenty-one feet long and six feet wide. I laid a very tight deck above her thwarts, covered it with canvas, took out the streak above the thwarts amidships, and went to and from the shore without the least danger of being swamped.

I have used this kind of a boat on the south side of the island of Trinidad, where the trade-winds blow strong, causing a very heavy surf, and Boated off one hundred tons of cocoanuts a day; at the same time no open boat could reach the shore or vessel without swamping.

I could fill pages of further experience, but will not trouble you.

If the board had stated that the boat could not do what I claim, that would be something, but I feel that the report given is evasive and trifling, and does not show a knowledge of boats, and I submit to your judgment if I have a right to feel that I have had an impartial, honest report.

I feel that in self-defense I cannot let the matter rest where the Board was pleased to leave it, and I appeal to you to have this matter reported back for reconsideration, with the request to them that something be reported, and not a mere superficial guess.

With due respect, very truly yours,

DANIEL B. EDDY.

Mr. S. I. KIMBALL,
General Superintendent Life-Saving Service.

P. S.—You will oblige me by returning model at your earliest convenience, as I am about taking steps to have the same boat, with tight bulwarks, introduced upon ships and fishing-vessels.

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SOMERSET, MASSACHUSETTS, *February* 14, 1883.

SIR: Your letter of the 10th instant received and noted. I shall be pleased to have you retain the model of my life-boat and have the matter presented to the Board again at its next meeting.

I solicit the most thorough investigation, and am confident that if you solicit the opinion of those who understand the surf and have practical experience in it, they will sustain all I claim.

Very respectfully,

DANIEL B. EDDY,
By L. C. E.

Mr. S. I. KIMBALL,
General Superintendent Life-Saving Service.

SOMERSET, MASSACHUSETTS, *March* 20, 1883.

SIR: In connection with my letter to you appealing from the decision of the Board upon my patent life-boat, it may be of interest to you to know that the Board of supervising inspectors of steam vessels have just approved my patent sea life-boat, which is built upon exactly the same principles and of the same material as the surf-boat, the principal difference being the latter has open bulwarks and the former has them closed.

Very respectfully,

DANIEL B. EDDY,
By L. C. E.

Mr. SUMNER I. KIMBALL,
General Superintendent.

"3.—LARSON'S LIFE-BOAT."

BUFFALO, *September* 4, 1883.

SIR: Your committee, to which was referred the plans and description of a life-boat submitted by James Larson, of Sister Bay, Wisconsin, has to report the result of an examination of the same:

The drawings are crude, and the inventor makes no claim for any special model. In his attempt to improve upon the self-righting and self-bailing life-boat now used in the Life-Saving Service he presents merely a different method for delivering the boat from water when swamped, and proposes water-ballast (a very objectionable feature) instead of the iron keel and cork-ballast of the English life-boats. He proposes tanks for holding the water-ballast located in the middle of the boat. They are to be filled by pipes with valves presumably, as he terms them, "facets" (*sic*), and to be emptied by means of two pumps. The boat has the end air cases similar to other life-boats for self-righting. The delivery pipes for freeing her of water from the deck are in the stern running through the air case; they consist of four apertures in the front end of the air case with corresponding pipes or tubes which unite in pairs and terminate in two tubes, one on each side of the stern post a rather complicated arrangement which will challenge the skill of a boat-builder to make completely tight and durable. No dimensions of these different parts are furnished by the designer, and all the proposed improvements

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are more of the nature of suggestions or hints which Mr. Larson evidently supposed would be worked out or developed by the Board. There are some suggestions for the use of sails, but nothing novel except the use of pike poles (bent hooks?) for "sprits," to stretch the heads and leeches of the sails. He also suggests double "center-boards," one near each end of the boat, for sailing, and places large cork fenders on each side, outside, for which he claims extra bouyancy. Both of these defeat a claim he makes that the removal of the delivery pipes to the stern of the boat avoids the drag, which he alleges is caused by delivery pipes ending in the bottom of a boat, because there must be openings for the center-boards which will certainly cause as much resistance as the bottom openings in the English life-boat. Also when keeling over under canvas the cork fenders will probably drag in the water. The two center-boards we do not approve. A center-board is doubtless valuable in sailing when working to windward. As to its value in surf work there are various opinions. There are several boats in the service so fitted and actual service will alone demonstrate their worth. Possibly in some conditions of the surf they may be found useful in preventing "broaching to."

In the opinion of your committee the suggestions of Mr. Larson in no way point to any valuable improvement in the present life-boats.

Very respectfully,

J. H. MERRYMAN,
Captain United States Revenue Marine.
B. C. SPARROW,
Superintendent Second Life-Saving District.

Capt. FRANK R. BABY,
President of Board.

SISTER BAY, *November* 9, 1882.

SIR: Your letter of 23d instant at hand, also your information concerning inventions of life-boats, &c. I have done what I can get done in this part of the country (I am forty-three miles from the nearest city). I hope that the committee will understand the drawings I am sending. First, I must remark that I have no special plan for building or carpenter work put on the boat, as I have no experience in that line. Drawing No. 1 represents the boat one-half of an inch to a foot. It shows the ballast-box and center-boards, valves or faucets to let the water up into the boxes. No. 2 represents the outside half and the streak of cork at the outside of the boat. No. 3 represents the deck of the boat, showing the faucets and pumps to pump the water out of the boxes. So, also, the valves to let the water out of the boat when swamped or rolled over. No. 4 represents the boat and the canvas. The most advantage there is in this boat is that it will have more room inside, as there will be no air boxes on the deck of the boat, nor do the air partitions need to be so large as in the common boats on account of the cork outside, and it will do good sailing when nothing can be done with the common boat.

I must make a few remarks concerning the common boats. The boats we have on the lakes—Lakes Michigan and Huron—(of course, the only boats I am acquainted with in this country) are, when fully equipped with everything and manned, overloaded, and these boats will not beat or cannot be pulled against the wind when vessels have to shorten canvas. A life-boat should be able to do work when no other craft can be

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out, and I think it can be done by having a boat built by my plan. This boat will be twenty-six feet long by seven feet beam, but I do not claim that that is the exact size, for I have had nothing to do with life-boats for two years, and there is no boat within seventy miles from this place along this shore. This boat will be calculated most for sailing; that is why it shall have water ballast and the cork outside (the cork shall be solid, four inches thick and twelve inches wide in the middle, slanting even over the planks on the lower edge of the cork) that will make the boat very stiff under canvas. The ballast can be taken in and let out as desired. The faucets can be opened and shut so the boxes can be filled or partly filled, or one box if desired. When ballast shall be taken out it can be pumped up on deck where it will run out the boxes. In case the boat springs a leak, it can be pumped out and that will help to float the boat.

I also claim that if the boat is a little longer than the common ones it will do better sailing. It will not pull hardly any heavier. My plan is also that the holes through the bottom make the boats pull hard; that is why I want to have the water run out aft. That leaves a better bottom and it will do as well. Concerning the center-boards, it is a necessity to have, as the boats draw so little water, and the boards are no trouble at all, and in a case of running in breakers or before the wind, the aft board, if let down, will help to steer and make the boat handle a good deal easier than if without one.

I claim that sprit sails are better sails for a little boat than lug sails, as mast and sail (sprit sail) set together, and the pike poles can be used for sprits. That will leave two articles less in the boat. The boat should have a little deck along the upper part about eight inches wide; it will keep a good deal of water out, and there is a good place under the deck to lash spare oars and masts when pulling the boat. The boat if eighteen feet between the forward and aft bulkhead will give room for six thwarts. One man on a thwart with an eighteen foot oar can do nearly as much pulling as two men with a fourteen-foot oar, each sitting two abreast of one another. That will give room for six oars eighteen feet, or twelve oars fourteen feet. I don't think that the bulkheads, or air partitions, need to be so high as in the common boats, on account of the cork that will make the boat pull and sail lighter.

I hope the gentlemen of the committee will understand the drawings and the letter. As stated, I do not claim that my shape or size of boat is right. I only claim that a boat can be built or improved so it will be a great deal better than the common boats. I have had a good deal of experience in boats, and handling boats, as I was brought up a fisherman, and have been in life-boats a good deal here in this country and in Denmark, my native country. I do not claim any pay for this. If you gentlemen find it good and any reward is given, I will gladly take it, for I am nothing but a fisherman. If I could afford it I should have a model and more complete drawings done and sent to you, for it is one of my greatest pleasures to know that we Americans do not need to go away from home to get good boats and men to handle them. One thing I ask is that if a boat is built by this plan and found good (which it will be), I get papers to show that I am the inventor and that it is my improvement. One thing about the forward sail of the boat is that it should not be quite so wide at the top. One thing I should like to do is to come to New York to one your meetings, as I should better be able to explain than I am now by means of pen and ink. Will you please let me know what conclusion you come to. Other small im-

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provements can be done to a life-boat. I know a plan by which a light, self-bailing surf-boat can be made. If answering this, please address James Larson, fisherman, Sister Bay, Door County, Wisconsin.

Respectfully,

JAMES LARSON.

S. I. KIMBALL, Esq.,
General Superintendent U. S. Life-Saving Service.

III.

DOBBINS' OPEN SELF-RIGHTING SURF-BOAT.

1. *Name or designation of device submitted.*—Dobbins' open self-righting surf-boat.

2. *Nomenclature.*—A, hull; B, keel and keelson; C, stem; D, stern post; E E, end air cases; F, thwarts; G, forward bench grating; H, after platform grating.

3. *Description.*—Carvel built; great shear of gunwale; light shear of keel; end air cases turtle backed; sharp or small square stern, and pierced for six single banked oars.

4. *Kind and quality of material used.*—Built of best white oak, white cork pine, or white cedar, tamarack and white ash, and fastened with best annealed galvanized iron.

5. *Dimensions of parts.*—Length over all, twenty-six feet; depth, two feet two inches, and five feet beam; shear of gunwale, twenty-four inches, and two inches shear of keel.

6. *Weight of device.*—Weight of hull about eight hundred and fifty pounds.

7. *Construction.*—Keel and keelson, solid white oak; frames of best white oak, rove through mortises in keel and keelson, and bent to shape; carvel planked with Michigan cork pine, full length; rim-guards and gunwale clamps of white oak, full length; stem and stern post, of white oak: end air cases formed on cant frames, bent over and turtle backed, to be closely stowed with cork shavings or other lighter material in water-proof bags, and bulkheads double thickness of pine or white cedar.

8. *Method of using.*—Boat propelled with six single-banked ores, and operated same as any ordinary life-boat.

9. *Action.*—Ordinary in action. If capsized will instantly right and carry herself upright when full of water with a crew inside.

10. *Drawings.*—Drawings shown with boat.

11. *Claims.*—I claim as new and novel: The peculiar construction of the boat; the keel and keelson being of solid white-oak; the frames running through mortises in the keel and keelson and bent down into shape, and the cant frames bent over from side to side, forming deck frame for the turtle-back of air cases, which is to be closely stowed with cork shavings or other lighter material in water-proof bags.

12. Secured by caveat. Probable cost, when built by contract in numbers, say $250.

Respectfully submitted to the Board of Examiners of Life-Saving Appliances, by

D. P. DOBBINS,
Superintendent Ninth United States Life-Saving District.

BUFFALO, NEW YORK, *September* 6, 1883.

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IV.

DOBBINS' SELF-RIGHTING AND SELF-BAILING SURF LIFE-BOAT.

1. *Name or designation of device submitted.*—Dobbins' Self-Righting, Self-Bailing, and Insubmergible Surf Life-boat.

2. *Nomenclature.*—A, hull; B, keel and keelson; C, stem; D, stern post; E E, end air cases; F, thwarts; G, forward bench grating; H, after platform grating; J, rider keelson, or strong back; K, deck: L, waste posts; M, prepared cork ballast.

3. *Description.*—Carvel built; great shear of gunwales; light shear of keel; end air cases; turtle-backed; sharp or small square stern; low deck; side waste ports; and pierced for six single banked oars.

4. *Kind and quality of material used.*—Built of select white-oak, white cork pine, or white cedar, tamarack and white-ash, and fastened with best annealed galvanized iron.

5. *Dimension of parts.*—Length over all, twenty-six feet; two feet three inches depth; five feet ten inches beam; twenty-six inches shear of gunwale, and two inches shear of keel.

6. *Weight of device.*—Hull about one thousand pounds; weight of cork ballast three hundred pounds.

7. *Construction.*—Keel and keelson solid white oak; frames of best white oak rove through mortises in keel and keelson, and bent to shape; carvel planked with best Michigan cork pine, full length, or white cedar; rim-guards and gunwale clamps of white oak, full length; stem and stern post of white oak; end air cases formed on cant frames, bent over and turtle-backed, and to be closely stowed with cork shavings or other lighter material in water-proof bags; "rider keelson," or "strong back," full length, edge bolted to keel stem and stern post, and forming support to deck beams; low deck; hold closely stowed with prepared cork in water-proof bags for ballast, and end air cases to be closely stowed with cork shavings or other lighter material in water-tight bags.

8. *Method of using.*—Boat propelled by six single banked oars, and operated same as any ordinary life-boat.

9. *Action.*—Ordinary; if capsized will instantly right and free herself of water through waste ports each side. If stove, little if any water can penetrate into the hold, and all that may penetrate only adds to her ballast and increases her stability.

10. *Drawings* shown with boat.

11. *Claims of inventor.*—I claim as new and novel: The peculiar construction of the boat; keel and keelson of solid timber; frames running through mortises in keel; rider keelson, or strong back; clear deck; spring hinge side; waste ports; prepared cork ballast in water-proof bags; peculiar construction of end air cases, and stowed full of cork shavings, or other lighter material, in water-proof bags, and insubmergibility.

Respectfully submitted to the Board of Examiners of Life-Saving Appliances, by

D. P. DOBBINS,
Superintendent Ninth United States Life-Saving District.

BUFFALO, NEW YORK, *September* 6, 1883.

NOTE.—Secured by caveat. Probable cost when built by contract in numbers, say about $500.

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BUFFALO, *September* 6, 1883.

SIR: I would most respectfully request the Board to examine and test the qualities and capabilities of my open, self-righting surf-boat, belonging to the Buffalo Life-Boat Station, also my self-righting, self-bailing, and insubmergible surf-life-boat at the Buffalo Life-Boat Station. I have also at the same station made several improvements to life-saving appliances belonging to the station, which I desire to exhibit to the Board for examination, &c., to wit:

Improvements in the life-car, making it self-ballasting and self-righting when used afloat, and detachable bales with open runner blocks for its use on hawser, as a car.

Water-proof dress for surfmen.

Boat wagon and launching ways.

Spliced No. 9 braid shot line.

Respectfully,

D. P. DOBBINS,
Superintendent.

F. R. BABY, Esq.,
President Board of Examiners of Life-Saving Appliances.

[Office of Superintendent of Life-Saving Stations, Ninth District.]

BUFFALO, NEW YORK, *September* 6, 1883.

SIR: I have the honor to state that I have no patent on any article of life-saving apparatus that I have ever submitted to the Board; that in case I should hereafter patent any article or device, neither I nor my heirs or assigns shall make use of said patent as the basis of any claim against the Government for its use in the Life-Saving Service. I have never made nor do I intend to make, either now or in the future, any claim against the United States Government for the use of or the right to use in the Life-Saving Service, any article of apparatus, patented or not, relating to that service, nor for any improvement that I may have made or may make in said apparatus.

It is with the greatest pleasure that I present them (whether patented or not) to the Government for its use in the Life-Saving Service, if they be deemed worthy of adoption, and all such devices, designs, and improvements may be forever used by the Life-Saving Service without payment of any royalty or other cost or charge of any nature to me or my heirs or assigns. If the Government should desire to obtain possession of any boat or device that I have had constructed at my own expense, I will transfer said boat or device to the Life-Saving Service at cost price.

Will you please communicate these facts to the members of the Board on Life-Saving Appliances.

I have also the honor to request that the Board will excuse me from engaging in the discussion of, or from voting upon, any device of my own presentation, or upon any that come either in competition therewith, or are designed to supplant it.

Very respectfully,

D. P. DOBBINS,
Superintendent Ninth United States Life-Saving District.

FRANK R. BABY, Esq.,
President Board of Examiners of Life-Saving Appliances.

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[Office of Superintendent of Life-Saving Stations, Ninth District.]

BUFFALO, NEW YORK, *September* 6, 1883.

SIR: You will please excuse me from engaging in the discussions of or from voting upon any device of my own presentation, or upon any that may come either in competition therewith or are designed to supplant it, and have only to say, in way of general information, as I withdraw from the room, that the necessity of boats belonging to the Life-Saving Service being life-boats in fact as well as in name is to me most apparent. No open boat can be made entitled to be called a life-boat, as all are liable to be swamped, and when full of water are unserviceable and comparatively helpless. Their crews stand in constant fear or dread of being swamped by a boarding sea or by capsizing, and, of course, cannot do their work as well as they could if relieved of all fear or concern for their own safety or comfort. In constructing life-boats, I have aimed to secure light, handy craft, that can be easily handled by the crew, afloat or ashore, to secure great strength, good sea-going qualities, and give them all the clear deck-room possible for the accommodation of shipwrecked people and for wrecking material required for use; to secure sufficient stability for hard service, and self-righting and bailing qualities, if capsized, and certain unsubmergibility, the most important of all. My boats cannot be materially affected by the ordinary staving or bilging in contact with wreckage or rocks, and cannot be sunk by any known ordinary cause. Stores and clothing may be kept dry and secure in the end air cases and hold, and every protection necessary to sustain life for a long and exposed period. These boats can be handled and launched from the beach through the surf as easily and with more certainty and security than the ordinary open surf-boats, and when afloat are more serviceable, reliable, and enduring, and may be termed life-boats in fact.

Respectfully,

D. P. DOBBINS,
Superintendent Ninth Life-Saving District.

Capt. FRANK R. BABY,
President of the Board of Examiners
of Life-Saving Appliances.

V.

DETROIT, *June* 19, 1883.

SIR: Herewith we transmit drawing and descriptive matter, &c., of our Improved Diagonal Surf-boat, and ask that we may be permitted to exhibit one of our boats at the next meeting of the Board at Buffalo, New York.

Yours, respectfully,

JAMES DEAN & CO.,
Boat Builders, Detroit, Michigan.

Hon. S. I. KIMBALL,
General Superintendent U. S. Life-Saving Service,
Treasury Department, Washington, D. C.

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DETAILED DESCRIPTION OF IMPROVED DIAGONAL SURF-BOAT.

1. We designate our boat as a diagonal plank surf-boat.

2. It is covered by two letters patent to James Dean, No. 249461, dated November 15, 1881, and No. 260459, dated July 4, 1882.

3. The nomenclature of the parts of our boat is upon the face of the drawing, together with reference letters and dimensions of the parts.

4. This boat is of any desired length, depth, and beam, and is provided, if desired, with air-tanks at the bow and stern.

The essential novelty and peculiarity of construction of this boat consists in its siding, which is placed upon the outside ribs of the boat-frame. This siding consists of diagonal planks extending from the keel to the shear strake.

These diagonal planks we usually make three-sixteenths of an inch by six inches. Upon the outside of this planking is a layer of drilling or canvas made water-proof by a compound of beeswax and oil or paraffine, or other similar water-proof substance. The boat is finished with longitudinal planks extending from fore to aft upon the outside. These planks are straight grain from end to end. They are all made from planks two and one-half inches wide and three-eighths of an inch thick. These are made with compressed joints; that is to say, a portion of the fiber in the center of the edge of the piece is pressed into the wood, forming, as it were, a shallow groove. It is then planed off so as to make a perfect joint with the adjacent plank. Subsequently, the effect of dampness causes this compressed portion to swell out and so constitutes a very perfect water-tight joint, without calking. This structure is exceedingly stiff, strong, and not liable to open by the effect of moisture or weather. In our business of many years, we have found this boat to be very many times stronger than any other boat we have ever made or known. It has been already adopted by the Supervising Inspector of Steamboats, at Washington, for use in the place of metallic boats as life-boats upon the lakes, and we have already made and are still making many boats for that service.

Accompanying this description is a drawing which illustrates the construction of the boat, together with a nomenclature of the various parts and their sizes.

The weight of a boat of this description, twenty-two feet long, six feet beam, and thirty inches in depth, is six hundred and fifty pounds.

The price at which this boat complete will be furnished to the Government and provided with an air tank at each end is $10 per foot in length, over all.

The materials employed are as follows: Keels, seats, ribs, shear strake, cap, clamps, stringers, are of best oak; the diagonal planking and the longitudinal planking are of white cedar. The diagonal and longitudinal planking is secured to the ribs by copper nails passed through all from the outside and riveted upon the washer located on the inside of the ribs. The ribs are located four inches apart. The ribs cross the keel and pass about eighteen inches beyond so as to form the floor timbers. The boat is floored with battens of pine located about three inches apart. The frame work is secured together by copper bolts and rivets.

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VI.

BOX FOR CONTAINING COSTON LIGHTS.

[Office of Superintendent of Life-Saving Stations, First District.]

PORTLAND, MAINE, *April* 16, 1883.

SIR: I forward to you to-day a small copper box, with a belt. The box is intended to carry Coston lights in, so as to keep them at all times *dry*, and to be used in place of the haversacks which we now have. It has been the experience of all the surfmen in this district that in rains, snows, or dense fogs the haversacks will soak through, wetting the lights, causing them to be useless, although they, the lights, are wrapped in cloth, and the spaces left in the sack filled with oakum or other things to absorb the moisture; and when the men are in a hurry for any purpose, the sacks keep bouncing about, so as to impede their progress; or, if stooping down to do anything, it flops around in the way. It is also hard to dry after once wet, and in fact is hardly ever free from dampness. The box and belt sent you is intended to be worn buckled around the waist, on either side a man may see fit to carry the box and holder. A loop for the holder is fastened to the belt. The belt is made long to go outside of heavy clothing and oil clothes. It is next to impossible to get any dampness in the box, and if it should get damp can be set on the back of the stove and thoroughly dried in a few minutes. Every man in this district has worn it on patrol, and all concur in saying it is worth forty of the haversacks. It will hold three lights, with any matches which a man need to have.

The lights should be rolled in a piece of newspaper to prevent any chafing, and I'll risk their getting out.

A year ago I had a similar box made, and sent it to the office in New York, giving them—as now—my reasons for thinking it better than the sack, but for some reason have heard nothing from it; so send this direct to you, hoping you will see some good in it; and, if of any use, you are welcome to the whole thing. Perhaps it may be well to say that this box cost with the belt $3.75, but if you were to have enough made to supply the stations you would get them for much less in the whole.

Experiments are of course more costly than anything else.

Very respectfully,

J. M. RICHARDSON,
Superintendent First L. S. District.

S. I. KIMBALL, Esq.,
General Superintendent L. S. S., Washington, D. C.

VII.

JOHN VINCENT'S PATENT OAR-LOCK.

The side elevation in drawing shows the apparatus ready for use, the brass plate *d d*, being screwed on to the boat's gunwale at the points marked *e*. The cylinders *c c*, within the tubes *t* are prevented from turning and twisting by means of the pin *p* and slot *m*.

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Fig. 1

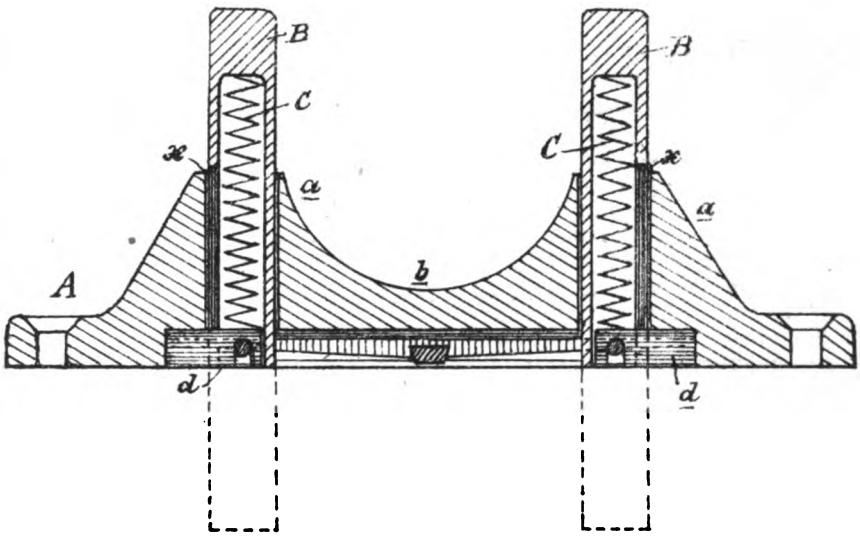
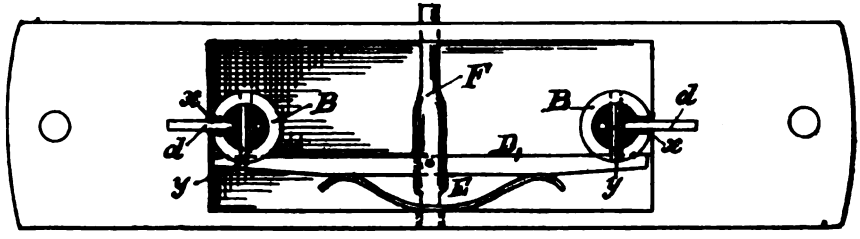


Fig. 2



LIFE-SAVING APPARATUS

J. VINCENT'S

OAR LOCK

1883.

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To throw the lock out of use the cylinders *c* c^1 are pressed down until caught at *a* by the catches *a'*, which catches are held in place by the coil spring *s*.

To throw the lock into use the button *b* is pressed, moving the catches *a'*; the cylinders *c c'* being set free are thrown into position by the brass spring (coil) *f*, which is confined within each cylinder between the top of cylinder and pin *p*.

The pin *r*, near the bottom of cylinder and passing through it, prevents it from springing up too far when thrown into use; it is best shown in the end elevation.

Price per pair, of malleable iron galvanized, $2.00.

VIII.

MORRIS SKIMMER BALLAST.

(Removes all need of weighty ballast—iron, wood, and water.)

This ballast is to be made of plate-iron or thin plate-steel, one-quarter inch or more in thickness, one-quarter to one-third of the length of the keel of the vessel, from two to three feet or more in width, closely fitted to the vessel bottom; in bow and stern boats the large end to be fastened with rocking pinion on or through the keel, the front end having a lifting bar (No. 1, single) through the keel, or two joined after entering the boat, and raised and lowered by lever, with stop pins to graduate ballast, more or less, as needed (as heavily loaded boats would not need much to steady them compared with those partly loaded). This ballast, when not needed at all, is drawn closely to the boat's bottom, making the boat to all intents double bottom, and valuable for protecting the main bottom of the boat on rocky shores and reefs.

Boats sharp at both ends are to have the ballast supported by hoisting bars at either end, as in No. 2, so that the ballast has double action, either end forward. The lifting bars may have water-tight surroundings of heavy rubber hose screwed to the bottom of the boats and extend up to prevent overflow when loaded.

The object of dishing the skimmer, *i. e.*, making it fit the bottom, is that when lowered for ballast No. 3 the pressure of the water flowing over its edges to the rear would prevent the skimmers from shearing out of the water when the boat is running side to the wind, and prevent or lessen the danger of capsizing when struck on its side by "white-caps" or surf, by holding the boat down.

The air-chests of life or surf-boats should be placed above the center line of the boat (water line) and extend above the top of the boat, as in Fig. 4, so that the weight of the boat keeps it right side up and the dead weight all below the water line. When the air-chest extends to the bottom of the boats the dead weight is not at the bottom, but nearer the water line, and the danger of upsetting is increased.

H. D. MORRIS,
Inventor, Salem, New York.

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IX.

USE OF FOG-HORNS FOR LIFE-SAVING SERVICE.

TREASURY DEPARTMENT,
OFFICE OF GENERAL SUPERINTENDENT
UNITED STATES LIFE-SAVING SERVICE,
Washington, D. C., February 2, 1883.

SIR: I have the honor to lay before you, for your kind consideration, a suggestion for the benefit of the Life-Saving Service.

It occurred to me that in thick, foggy weather, in a snow-storm, or dark, misty nights, vessels, in approaching the land too closely, might be warned off by the use of fog-horns blown at intervals by the patrolmen on duty.

When on duty as assistant superintendent of the Third District in the Light-House service, stationed at New London, Connecticut, I was informed that shooting the white gulls inhabiting by thousands Big Gull Island was prohibited. When inquiring for the cause I was informed that the noise of the gulls served to indicate to vessels their proximity to the island at night or in foggy and thick weather, and that the captains of vessels felt safe in shaping their course when once this well known noise was made out.

I know of other places off Lower California where vessels meet with frequent dense fogs, and where the barking of the seal is keenly watched for inorder to avoid going on the rocks of the outlying islands.

In furnishing fog-horns to the patrolmen, who give, say at intervals of three to five minutes, a toot with the fog-horn of characteristic sound, say a short blast followed immediately by a long one, to distinguish the sound from a vessel's fog-horn, a number of wrecks may be obviated and sea-faring life made more secure.

The sound of the horns along the coast may also serve to check the patrolmen in their duty, as the sound in many cases would reach from one station to the adjoining one, and would also be heard by the inhabitants close to the coast.

The horns should be of block tin or brass, with a movable mouth-piece containing the sounding reed, provided with a cord or strap to suspend the same around the shoulders. It should be light and slightly curved to fit the body when suspended, so as not to interfere with the motions of the body.

Very respectfully, your obedient servant,

H. VON BAYER,
Civil Engineer and Draftsman.

S. I. KIMBALL, Esq.,
General Superintendent United States Life-Saving Service.

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X.

[Office of the Superintendent of Life-Saving Stations, Ninth District.]

BUFFALO, NEW YORK, *September* 7, 1883.

SIR: I would most respectfully submit a spliced No. 9 braided shot line and water-proof dress for surfmen to the consideration of the Board of Examiners of Life-Saving Appliances.

Respectfully,

D. P. DOBBINS,
Superintendent Ninth Life-Saving District.

S. I. KIMBALL, Esq.,
General Superintendent United States Life-Saving Service.

XI.

COSTON'S NIGHT SIGNAL.

SIR: After some thought and due consideration, I have deemed it but proper to call the attention of your bureau to the fact that a night signal be established for the purpose of distinguishing a Life-Saving Service station, and submit for approval and adoption a Coston light showing while burning the colors white-green, white-red in succession.

I saw Captain Merryman to-day, and he told me to address you upon the subject, and said that it would be useful, and more so since a vessel could obtain the number of a station and the district by means of the Commercial International Code, which it is hoped will be issued soon for night signaling as well as day. I am informed that the stations are all numbered and given on the coast charts.

I am anxious that early action be taken in the premises, since I am about to publish and issue a distinguishing night signal chart for 1882, and if I could obtain an early and favorable answer it would enable me to publish the said signal in the chart and thus make it more generally known, and therefore more useful.

I forgot to mention that if a vessel should approach our coast and not know where she was, this signal would enable her to obtain all required information and allow her to proceed safely on her way. This would be a means of preventing wrecks, which is of greater moment than to succor one, because no matter how small the loss it is always a loss, and must entail suffering, and whenever a wreck occurs the crews of the service endeavor to assist, and in so doing must run some risk.

With regard to *patrol signals*, I am pleased to inform the superintendent that I have been able, I think, surely to overcome all objections with regard to their not being properly made and wearing out. I have had a very heavy foil cup made, which will stand wear and use for fully a year and more.

Respectfully yours, &c., &c.,

WM. F. COSTON,
Agent Coston Telegraphic Night Signals,
29 Broadway, Rooms 31, New York.

Hon. S. I. KIMBALL,
General Superintendent U. S. Life-Saving Service,
Treasury Department, Washington, D. C.

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