



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

Charles A. Potter
Local Inspector of Hulls

TRANSPORTATION LIBRARY

Charles A. Potter

Emm F. Keene.

THE UNIVERSITY OF CHICAGO

STEAMBOAT INSPECTORS' MANUAL.

LAWS GOVERNING

STEAMBOAT INSPECTION SERVICE.

THE
TRANSPORTATION LIBRARY

**Revised Statutes of the United States,
AS AMENDED BY VARIOUS ACTS OF CONGRESS,**

TO WHICH ARE ADDED THE

**REVISED RULES AND REGULATIONS OF THE BOARD OF
SUPERVISING INSPECTORS,**

As amended January and February, 1895.

**TOGETHER WITH VARIOUS DECISIONS OF THE TREASURY
DEPARTMENT APPERTAINING THERETO.**

**Compiled by Supervising Inspector-General JAS. A. DUMONT, for the
use of the officers of the Steamboat Inspection Service.**

6th Edition—Revised 1882-'83-'84-'87-'90-'95.

**WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1895.**

**Transportation
Library**

HE

584

.05

A22

1295

TREASURY DEPARTMENT,
Document No. 1777.
Steamboat Inspection.

Tuttle
7-23-35
Transport.

10-24-517W

**TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE,
OFFICE OF THE SUPERVISING INSPECTOR-GENERAL,
Washington, D. C., May 31, 1895.**

To supervising and local inspectors of steam vessels:

As but a limited number of copies of this book have been printed, officers of the service are enjoined to preserve them in good order. Their attention is also called to the blank pages at the end of the volume, in which they will note the number and title of decisions that may appear in forthcoming numbers of the monthly synopsis of Treasury decisions. They should also there make notes of all amendments to the rules and regulations. By so doing they will save themselves much trouble in looking up references for their guidance. A careful study of the contents of the *Manual* will enable officers of the service to perform their duties uniformly and correctly, and with credit to the service.

In all cases of doubt concerning the construction of the law, rules, or decisions contained herein, officers are invited to correspond freely with this office; local inspectors, through the medium of the supervising inspectors.

Respectfully yours,

JAS. A. DUMONT,
Supervising Inspector-General.

Charles A. Foster
Hull Inspector
Toledo, Ohio April 1905
L A W S.

TABLE OF CONTENTS.

	Page.
TITLE LII.....CHAPTER I: Inspection.....	
CHAPTER II: Transportation of passen- gers and merchandise.....	27
TITLE XLVIII..CHAPTER V: Navigation.....	37
CHAPTER VI: Transportation of passen- gers and merchandise.....	49
CHAPTER IX: Summary trial for certain offenses against naviga- tion laws.....	61
TITLE LXVIII.....Remission of fines, penal- ties, and forfeitures.....	61
TITLE LXX.....CHAPTER III: Crimes arising within the maritime and territorial jurisdiction of the United States.....	63
CHAPTER VI: Official misconduct, etc.....	65
ACT JANUARY 6, 1874.....Relating to limitation of steam pressure of vessels used exclusively for tow- ing and carrying freight on the Mississippi River and its tributaries.....	65
ACT APRIL 17, 1874.....To authorize the employ- ment of certain aliens as engineers and pilots.....	66
ACT AUGUST 2, 1882.....To regulate the carriage of passengers by sea.....	52
ACT MARCH 3, 1883.....To amend section 4214 of the Revised Statutes, re- lating to yachts.....	66
ACT JUNE 26, 1884.....To remove certain burdens on the American mer- chant marine and encour- age the American foreign carrying trade, and for other purposes.....	67

	Page.
ACT JUNE 19, 1886	To abolish certain fees for official services to Ameri- can vessels, * * * and for other purposes..... 67
ACT JULY 9, 1886	Towing vessels may carry persons in addition to crew..... 17, 34
ACT APRIL 4, 1888.....	An act to amend the laws relating to navigation, and for other purposes... 68
ACT MARCH 2, 1889.....	To amend sections 4488 and 4489 68
ACT APRIL 11, 1892.....	Amending act of March 2, 1889, requiring line-carry- ing projectiles on lake, bay, and sound steamers. 69
ACT SEPTEMBER 4, 1890	In regard to collisions at sea..... 69
ACT DECEMBER 22, 1890	To amend section 4426 17
ACT FEBRUARY 21, 1891	Marking names and drafts of vessels..... 70
ACT JANUARY 22, 1894	Section 4430 as amended by, relating to inspection of boiler plate at mills..... 18
ACT FEBRUARY 8, 1895.....	To regulate navigation on the Great Lakes..... 42
ACT FEBRUARY 19, 1895.....	To adopt special rules for the navigation of harbors, rivers, and inland waters of the United States, ex- cept the Great Lakes..... 71
ACT FEBRUARY 28, 1895.....	Section 4434 amended by, re- lating to boiler plate and space between flues 19
ACT MARCH 1, 1895.....	To amend sections 4400 and 4414 72
ACT MARCH 2, 1895.....	Amending act March 1, 1895. 74

REVISED STATUTES OF THE UNITED STATES.

TITLE LII.

REGULATION OF STEAM VESSELS.

CHAPTER ONE.

INSPECTION.

- | | |
|--|---|
| Sec. | Sec. |
| 4399. What vessels deemed steam vessels. | 4421. Certificate of inspection. |
| 4400. What vessels subject to the provisions of this Title. | 4422. License to carry gunpowder. |
| 4401. Vessels navigating coastwise and on the Great Lakes. | 4423. Disposal of certificate of inspection. |
| 4402. Qualifications and appointment of Supervising Inspector-General. | 4424. Carrying passengers or gunpowder contrary to law. |
| 4403. Duties. | 4425. Inspector certifying falsely. |
| 4404. Qualifications and appointment of supervising inspectors. | 4426. Ferryboats, canal boats, yachts, etc. |
| 4405. Meeting and assignment of districts. | 4427. Tugboats, freight boats, etc. |
| 4406. Duties of supervising inspectors. | 4428. Construction of boilers. |
| 4407. To report violations of law. | 4429. Improper construction of boilers. |
| 4408. Supervision of local boards. | 4430. Inspection of boiler plates. |
| 4409. Districts not having inspectors. | 4431. Stamping of boiler plates. |
| 4410. Annual reports of supervising inspectors. | 4432. Counterfeiting stamps. |
| 4411. Regulations as to furnishing information to local inspectors. | 4433. Pressure of steam allowable. |
| 4412. Regulations as to steamers passing. | 4434. Boiler plate and space between flues. |
| 4413. Penalty for violation. | 4435. Feed and connecting pipes. |
| 4414. Number and salaries of local inspectors. | 4436. Safety valves, fusible plugs, etc. |
| 4415. Qualifications and appointment. | 4437. Obstructing safety valves, etc. |
| 4416. What persons are not eligible. | 4438. Licenses of officers by inspectors. |
| 4417. Inspection of hulls. | 4439. License of captain. |
| 4418. Inspection of boilers. | 4440. License of chief mate. |
| 4419. Control of safety valves and steam registers. | 4441. License of engineer. |
| | 4442. License of pilot. |
| | 4443. License of captain or mate as pilot. |
| | 4444. State regulation of pilots. |
| | 4445. Oath of licensed officers. |
| | 4446. Licenses to be posted. |
| | 4447. Renewal of officer's license. |

Sec.
 4448. Licensed officers to assist inspectors in examinations.
 4449. Revocation of officer's license for refusing to serve.
 4450. Investigation of conduct of officers.
 4451. Payment of marshals and witnesses.
 4452. Appeal to supervising inspector.
 4453. Reinspection and notice for repairs.
 4454. Failure to make repairs.
 4455. Effect of inspector's official act.

Sec.
 4456. Inspection in districts not having inspectors.
 4457. Records and reports by local inspectors.
 4458. Fees.
 4459. Bonds of inspectors.
 4460. Instruments, stationery, printing, etc., for local boards.
 4461. Payment of salaries and expenses.
 4462. Regulations to be made by the Secretary of the Treasury.

SEC. 4399. Every vessel propelled in whole or in part by steam shall be deemed a steam vessel within the meaning of this Title.

SEC. 4400. All steam vessels navigating any waters of the United States which are common highways of commerce, or open to general or competitive navigation, excepting public vessels of the United States, vessels of other countries, and boats propelled in whole or in part by steam for navigating canals, shall be subject to the provisions of this Title.

*["And all foreign private steam vessels carrying passengers from any port of the United States to any other place or country shall be subject to the provisions of sections forty-four hundred and seventeen, forty-four hundred and eighteen, forty-four hundred and twenty-one, forty-four hundred and twenty-two, forty-four hundred and twenty-three, forty-four hundred and twenty-four, forty-four hundred and seventy, forty-four hundred and seventy-one, forty-four hundred and seventy-two, forty-four hundred and seventy-three, forty-four hundred and seventy-nine, forty-four hundred and eighty-two, forty-four hundred and eighty-eight, forty-four hundred and eighty-nine, forty-four hundred and ninety-six, forty-four hundred and ninety-seven, forty-four hundred and ninety-nine, and forty-five hundred of this Title, and shall be liable to visitation and inspection by the proper officer, in any of the ports of the United States, respecting any of the provisions of the sections aforesaid."]† * * *

SEC. 4401. All coastwise seagoing vessels and vessels navigating the Great Lakes, shall be subject to the navigation laws of the United States, when navigating within the jurisdiction thereof; and all vessels, propelled in whole or in part by steam, and navigating as aforesaid, shall be subject to all the rules and regula-

* Amendment approved August 7, 1882.

† The proviso and sections 2 to 6 inclusive of amendment to section 4400 were repealed by act of Congress approved March 1, 1895. (See p. 72.)

tions established in pursuance of law for the government of steam vessels in passing, as provided by this Title; and every coastwise seagoing steam vessel subject to the navigation laws of the United States, and to the rules and regulations aforesaid, not sailing under register, shall, when under way, except on the high seas, be under the control and direction of pilots licensed by the inspectors of steamboats.

SEC. 4402. There shall be a Supervising Inspector-General, who shall be appointed from time to time by the President, by and with the advice and consent of the Senate, and who shall be selected with reference to his fitness and ability to systematize and carry into effect all the provisions of law relating to the Steamboat-Inspection Service, and who shall be entitled to a salary of three thousand five hundred dollars a year, and his reasonable traveling expenses, or mileage at the rate of ten cents a mile,* incurred in the performance of his duty.

SEC. 4403. The Supervising Inspector-General shall, under the direction of the Secretary of the Treasury, superintend the administration of the steamboat-inspection laws, preside at the meeting of the board of supervising inspectors, receive all reports of inspectors, receive and examine all accounts of inspectors, report fully at stated periods to the Secretary of the Treasury upon all matters pertaining to his official duties, and produce a correct and uniform administration of the inspection laws, rules, and regulations.

SEC. 4404. There shall be ten supervising inspectors, who shall be appointed by the President, by and with the advice and consent of the Senate. Each of them shall be selected for his knowledge, skill, and practical experience in the uses of steam for navigation, and shall be a competent judge of the character and qualities of steam vessels, and of all parts of the machinery employed in steaming. Each supervising inspector shall be entitled to a salary of three thousand dollars a year and his actual and reasonable traveling expenses at the rate of ten cents a mile,* incurred in the performance of his duty, together with his actual and reasonable expenses for transportation of instruments, which shall be certified and sworn to under such instructions as may be given by the Secretary of the Treasury.

SEC. 4405. The supervising inspectors and the Supervising Inspector-General shall assemble as a board once in each year, at the city of Washington, District of Columbia, on the third Wednesday in January, and at such other times as the Secretary of the Treasury shall prescribe, for joint consultation, and shall assign to each of the supervising inspectors the limits of territory within which he shall perform his duties. The board shall establish all necessary regulations required to carry out in the

*Amended by act March 1, 1895. See section 4414. (See p. 72)

most effective manner the provisions of this Title, and such regulations, when approved by the Secretary of the Treasury, shall have the force of law. The supervising inspector for the district embracing the Pacific coast shall not be under obligation to attend the meetings of the board oftener than once in two years; but when he does not attend such meetings he shall make his communications thereto, in the way of a report, in such manner as the board shall prescribe.

SEC. 4406. Each supervising inspector shall watch over all parts of the territory assigned to him, shall visit, confer with, and examine into the doings of the local boards of inspectors within his district, and shall instruct them in the proper performance of their duties; and shall, whenever he thinks it expedient, visit any vessels licensed, and examine into their condition, for the purpose of ascertaining whether the provisions of this Title have been observed and complied with, both by the board of inspectors and the master and owners. All masters, engineers, mates, and pilots of such vessels shall answer all reasonable inquiries, and shall give all the information in their power in regard to any such vessel so visited, and her machinery for steaming, and the manner of managing both.

SEC. 4407. Whenever a supervising inspector ascertains to his satisfaction that any master, mate, engineer, pilot, or owner of any steam vessel fails to perform his duties according to the provisions of this Title, he shall report the facts in writing to the board of local inspectors, in the district where the vessel was inspected or belongs; and, if need be, he shall cause the negligent or offending party to be prosecuted; and if the supervising inspector has good reason to believe there has been, through negligence or any other cause, a failure of the board which inspected the vessel to do its duty, he shall report the facts in writing to the Secretary of the Treasury, who shall cause immediate investigation into the truth of the complaint, and, if he deems the cause sufficient, shall remove any officer found delinquent.

SEC. 4408. The supervising inspectors shall see that the several boards of local inspectors within their respective districts execute their duties faithfully, promptly, and as far as possible, uniformly in all places, by following out the provisions of this Title according to the true intent and meaning thereof; and they shall, as far as practicable, harmonize differences of opinion existing in different local boards.

SEC. 4409. The supervising inspector shall visit any collection district in which there is at any time no board of inspectors, and within which steam vessels are owned or employed. Each supervising inspector shall have full power in any such district, or in any district where, from distance or other cause, it is inconvenient to resort to the local board, to inspect any steam vessel and the boilers of such steamer, and to grant certificates of

approval, and to do and perform all the duties imposed upon local boards.

SEC. 4410. Each supervising inspector shall report, in writing, at the annual meetings of the board, the general business transacted in his district during the year, embracing all violations of the laws regulating steam vessels, and the action taken in relation to the same, all investigations and decisions by local inspectors, and all cases of appeal, and the result thereof; and the board shall examine into all the acts of each supervising inspector and local board, and all complaints made against the same, in relation to the performance of their duties under the law, and the judgment of the board in each case shall be entered upon their journal; and the board shall, as far as possible, correct mistakes where they exist.

SEC. 4411. The board of supervising inspectors shall establish such regulations as may be necessary to make known in a proper manner, to local inspectors, the names of all persons licensed under the provisions of this Title, the names of all persons from whom licenses have been withheld, and the names of all whose licenses have been suspended or revoked; also the names of all steam vessels neglecting or refusing to make such repairs as may be ordered pursuant to law, and the names of all that have been refused certificates of inspection.

*SEC. 4412. The board of supervising inspectors shall establish such regulations, to be observed by all steam vessels in passing each other, as they shall from time to time deem necessary for safety; two printed copies of such regulations, signed by them, shall be furnished to each of such vessels, and shall at all times be kept posted up in conspicuous places in such vessels.

*SEC. 4413. Every pilot, engineer, mate, or master of any steam vessel who neglects or willfully refuses to observe the regulations established in pursuance of the preceding section shall be liable to a penalty of fifty dollars, and for all damages sustained by any passenger, in his person or baggage, by such neglect or refusal.

†SEC. 4414. There shall be, in each of the following collection districts, one inspector of hulls and one inspector of boilers, namely: The districts of New York, New York; Boston, Massachusetts; Philadelphia, Pennsylvania; San Francisco, California; Albany, New York; New London, Connecticut; Baltimore, Maryland; Buffalo, New York; Cleveland, Ohio; New Orleans, Louisiana; Norfolk, Virginia; Saint Louis, Missouri; Dubuque, Iowa; Detroit, Michigan; Chicago, Illinois; [Jacksonville, Flor-

*Reenacted by act of Congress approved February 19, 1895, and made specially applicable to harbors, rivers, and inland waters of the United States. (See p. 71.)

†As amended by acts approved March 1 and March 2, 1895. (See pp. 72 and 74.)

ida; Bangor, Maine; New Haven, Connecticut;]* Michigan, Michigan; Milwaukee, Wisconsin; Port Huron, Michigan; Willamette, Oregon; Portland, Maine; Puget Sound, Washington; Savannah, Georgia; Pittsburg, Pennsylvania; Oswego, New York; Charleston, South Carolina; Duluth, Minnesota; Louisville, Kentucky; Evansville, Indiana; Memphis, Tennessee; Nashville, Tennessee; Cincinnati, Ohio; Gallipolis, Ohio; Wheeling, West Virginia; Superior, Michigan; Burlington, Vermont; Apalachicola, Florida; Galveston, Texas; Mobile, Alabama; and Providence, Rhode Island.

The inspector of hulls and the inspector of boilers in the districts enumerated in the preceding paragraph shall be entitled to the following salaries, to be paid under the direction of the Secretary of the Treasury, namely:

In districts inspecting one hundred steamers and less to a salary of one thousand two hundred dollars per year each.

In districts inspecting over one hundred and less than one hundred and fifty steamers, to a salary of one thousand five hundred dollars per year each.

In districts inspecting one hundred and fifty and less than two hundred steamers, to a salary of one thousand eight hundred dollars per year each.

In districts inspecting two hundred and less than three hundred steamers, to a salary of two thousand dollars per year each.

In districts inspecting three hundred and less than five hundred steamers, to a salary of two thousand two hundred and fifty dollars per year each.

In districts inspecting five hundred steamers and upward, to a salary of two thousand five hundred dollars per year each.

The Supervising Inspector-General shall report to the Secretary of the Treasury the number of inspections for the year next preceding the approval of this Act and thereafter, at the end of each fiscal year, the number of steamers inspected in each local district in that year, which number shall be the basis upon which shall be determined the salaries to be paid to local inspectors for the following fiscal year, in the ratio described in the preceding paragraphs of this section. And, in addition, the Secretary of the Treasury may appoint, upon the nomination of the supervising inspector of the district, in collection districts where there are two hundred and twenty-five steamers and upward to be inspected annually, assistant inspectors, at a salary, for the district of New York, of two thousand dollars a year each; for the district of New Orleans, Louisiana; Philadelphia, Pennsylvania; Baltimore, Maryland; Boston, Massachusetts; Chicago, Illinois; [Jacksonville, Florida; Bangor, Maine; New Haven, Connecticut;]† and San Francisco, California, at one thousand

* Inserted in accordance with act of Congress approved March 2, 1895, Naval Appropriation Bill. (See p. 74)

† Words in brackets stricken out, and inserted after word "Illinois" in first paragraph of section 4414. (See p. 74)

eight hundred dollars per year each ; and for all other districts at a salary not exceeding one thousand six hundred dollars a year each ; and he may appoint a clerk to any such board at a compensation not exceeding one thousand two hundred dollars a year to each person so appointed. Every inspector provided for in this or the preceding sections of this Title shall be paid for his actual and reasonable traveling expenses at the rate of eight cents per mile, incurred in the performance of his duty, together with his actual and reasonable expenses for transportation of instruments, which shall be certified and sworn to under such instructions as shall be given by the Secretary of the Treasury.

SEC. 4415. Whenever any vacancy occurs in any local board of inspectors, or whenever local inspectors are to be appointed for a new district, the supervising inspector shall notify the collector or other chief officers of the customs for the district, and the judge of the district court for the district in which such appointment is to be made, who, together with the supervising inspector, shall meet together as a board of designators, and fill the vacant or new inspectorship. Such board; or the major part thereof, when designating an inspector of hulls, shall select a person of good character and suitable qualifications and attainments to perform the services required of inspectors of hulls and who, from his practical knowledge of shipbuilding and navigation and the uses of steam in navigation, is fully competent to make a reliable estimate of the strength, seaworthiness, and other qualities of the hulls of steam vessels and their equipment, deemed essential to safety of life in their navigation ; and when designating an inspector of boilers, shall select a person of good character and suitable qualifications and attainments to perform the services required of inspectors of boilers, who, from his knowledge and experience of the duties of an engineer employed in navigating vessels by steam, and also of the construction and use of boilers, and machinery, and appurtenances therewith connected, is able to form a reliable opinion of the strength, form, workmanship, and suitableness of boilers and machinery to be employed without hazard to life, from imperfection in the material, workmanship, or arrangement of any part of such apparatus for steaming. No appointment of an inspector of hulls or an inspector of boilers shall be made without the concurrence of the supervising inspector. The inspector of hulls and the inspector of boilers thus designated, when approved by the Secretary of the Treasury, shall, from the date of designation, constitute a board of local inspectors.

SEC. 4416. No person interested, either directly or indirectly, in any patented article required to be used on any steamer by this Title, or who is a member of any association of owners, masters, engineers, or pilots of steamboats, or who is directly or indirectly pecuniarily interested in any steam vessel, or who has not the qualifications and acquirements prescribed by this Title,

or who is intemperate in his habits, shall be eligible to hold the office of either supervising or local inspector, or to discharge the duties thereof; and if any such person shall attempt to exercise the functions of the office of either inspector, he shall be deemed guilty of a misdemeanor, punishable by a fine of five hundred dollars, and shall be dismissed from office.

SEC. 4417. The local inspectors shall, once in every year, at least, upon application in writing of the master or owner, carefully inspect the hull of each steam vessel within their respective districts, and shall satisfy themselves that every such vessel so submitted to their inspection is of a structure suitable for the service in which she is to be employed, has suitable accommodations for passengers and the crew, and is in a condition to warrant the belief that she may be used in navigation as a steamer, with safety to life, and that all the requirements of law in regard to fires, boats, pumps, hose, life-preservers, floats, anchors, cables, and other things, are faithfully complied with; and if they deem it expedient, they may direct the vessel to be put in motion, and may adopt any other suitable means to test her sufficiency and that of her equipment.

SEC. 4418. The local inspectors shall also inspect the boilers of all steam vessels before the same shall be used, and once at least in every year thereafter. They shall subject all boilers to the hydrostatic pressure, and shall satisfy themselves by thorough examination that the boilers are well made, of good and suitable material; that the openings for the passage of water and steam, respectively, and all pipes and tubes exposed to heat are of proper dimensions and free from obstruction; that the spaces between and around the flues are sufficient; that the flues are circular in form; that the fire line of the furnace is at least two inches below the prescribed minimum water line of the boilers; that the arrangements for delivering the feed water is such that the boilers can not be injured thereby; and that such boilers and machinery, and the appurtenances, may be safely employed in the service proposed in the written application, without peril to life. They shall also satisfy themselves that the safety valves are of suitable dimensions, sufficient in number, and well arranged; and that the weights of the safety valves are properly adjusted, so as to allow no greater pressure in the boilers than the amount prescribed by the inspection certificate; that there is a sufficient number of gauge cocks properly inserted,* [and, to indicate the pressure of steam, suitable steam registers that will correctly record each excess of steam carried above the prescribed limit and the highest point attained]; and suitable steam gauges to indicate the pressure of steam; and that there are reliable low-water gauges; and that the fusible metals are properly

*Amended and words in brackets stricken out by act approved June 19, 1886. (See p. 97)

inserted so as to fuse by the heat of the furnace whenever the water in the boilers falls below its prescribed limits; and that adequate and certain provision is made for an ample supply of water to feed the boilers at all times, whether such vessel is in motion or not, so that in high-pressure boilers the water shall not be less than four inches above the top of the flues; and that means for blowing out are provided, so as to thoroughly remove the mud and sediment from all parts of the boilers, when they are under pressure of steam. [In subjecting to the hydrostatic tests boilers usually designated and known as high-pressure boilers, the inspectors shall assume one hundred and ten pounds* to the square inch as the maximum pressure allowable as a working power for a new boiler of forty-two inches in diameter, made in the best manner, of inspected iron plates, one-fourth of an inch thick, and of a quality required by law, and shall rate the working power of all high-pressure boilers, whether old or new, according to their strength, compared with this standard; and in all cases the test applied shall exceed the working power allowed, in the ratio of one hundred and sixty-five to one hundred and ten. In subjecting to the hydrostatic tests boilers usually designated and known as low-pressure boilers, the inspectors shall allow as a working power for each new boiler a pressure of only three-fourths the number of pounds to the square inch to which it has been subjected by the hydrostatic test, and for which it has been found to be sufficient. Should the inspectors be of the opinion that any boiler, by reason of its construction or material, will not safely allow so high a working pressure as is above described, they may, for reasons to be stated specially in their certificate, fix the working pressure of such boiler at less than three-fourths of the test pressure.]† All boilers used on steam vessels and constructed of iron or steel plates, inspected under the provisions of section forty-four hundred and thirty, shall be subjected to a hydrostatic test, in the ratio of one hundred and fifty pounds to the square inch to one hundred pounds to the square inch of the working steam power allowed. No boiler or pipe, nor any of the connections therewith, shall be approved, which is made, in whole or in part, of bad material, or is unsafe in its form, or dangerous from defective workmanship, age, use, or other cause.

SEC. 4419. One of the safety valves may, if in the opinion of the local inspectors it is necessary to do so [and the steam registers shall],‡ be taken wholly from the control of all persons engaged in navigating such vessel and secured by the inspectors.

* See act January 6, 1874, page 65.

† Part in brackets virtually expired by limitation February 28, 1872.

‡ Part in brackets repealed by act of June 19, 1886. (See p. 68)

SEC. 4420. (Expired by limitation December 17, 1873.) *

SEC. 4421. When the inspection of a steam vessel is completed and the inspectors approve the vessel and her equipment throughout, they shall make and subscribe a certificate to the collector or other chief officer of the customs of the district in which such inspection has been made, in accordance with the form and regulations prescribed by the board of supervising inspectors. Such certificate shall be verified by the oaths of the inspectors signing it [,] before the chief officer of the customs of the district, or any other person competent by law to administer oaths. If the inspectors refuse to grant a certificate of approval, they shall make a statement in writing, and sign the same, giving the reasons for their disapproval.

SEC. 4422. Upon the application of any master or owner of any steam vessel employed in the carriage of passengers, for a license to carry gunpowder, the local inspectors shall examine such vessel, and if they find that she is provided with a chest or safe composed of metal, or entirely lined and sheathed therewith, or if the vessel has one or more compartments thoroughly lined and sheathed with metal, at a secure distance from any fire, they may grant a certificate to that effect, authorizing such vessel to carry as freight within such chests, safes, or compartments, the article of gunpowder.

SEC. 4423. Every collector or other chief officer of the customs shall retain on file all original certificates of the inspectors required to be delivered to him, and shall give to the master or owner of the vessel therein named three certified copies thereof; two of which shall be placed by such master or owner in conspicuous places in the vessel where they will be most likely to be observed by passengers and others, and there kept at all times, framed under glass; and the other shall be retained by such master or owner as evidence of the authority thereby conferred.

SEC. 4424. Whenever any passenger is received on board any steam vessel not having the certified copies of the certificate of approval placed and kept as required by this Title, or whenever any passenger steam vessel receives or carries any gunpowder on board, not having a certificate authorizing the same, and a certified copy thereof placed and kept as required, or shall carry any gunpowder at a place or in a manner not authorized by such certificate, such steam vessel shall be liable to a penalty of one hundred dollars for each offense.†

SEC. 4425. Every inspector who willfully certifies falsely touching any steam vessel, as to her hull, accommodations, boilers, engines, machinery, or their appurtenances, or any of her equipments, or any matter or thing contained in any certificate signed and sworn to by him shall be punished by fine of not more than

* Reenacted without limitation in act approved January 6, 1874. (See p. 66)

† See sections 4474-4476.

five hundred dollars, or imprisonment for not more than six months, or both.*

SEC. 4426. The hull and boilers of every ferryboat, canal boat, yacht, or other small craft of like character, propelled by steam, shall be inspected under the provisions of this Title. Such other provisions of law for the better security of life as may be applicable to such vessels, shall, by the regulations of the board of supervising inspectors, also be required to be complied with before a certificate of inspection shall be granted; and no such vessel shall be navigated without a licensed engineer and a licensed pilot: "Provided, however, That in open steam launches of ten tons burden and under, one person, if duly qualified, may serve in the double capacity of pilot and engineer."†

SEC. 4427. The hull and boiler of every tugboat, towing boat, and freight boat shall be inspected under the provisions of this Title; and the inspectors shall see that the boilers, machinery, and appurtenances of such vessels are not dangerous in form or workmanship, and that the safety valves, gauge cocks, low-water alarm indicators, steam gauges, and fusible plugs are all attached in conformity to law; and the officers navigating such vessels shall be licensed in conformity with the provisions of this Title, and shall be subject to the same provisions of law as officers navigating passenger steamers.‡

SEC. 4428. Every boiler manufactured to be used on steam vessels, and made of iron or steel plates, shall be constructed of plates that have been stamped in accordance with the provisions of this Title.

* See sections 5481, 5482, p. 65

† Act approved December 22, 1890.

‡ AN ACT relating to the licensing of vessels engaged in towing, to carry persons in addition to their crews.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any steam vessel engaged in the business of towing vessels, rafts, or water crafts of any kind, and not carrying passengers, may be authorized and licensed by the supervising inspector of the district in which said steamer shall be employed, to carry on board such number of persons, in addition to its crew, as the supervising inspector in his judgment shall deem necessary to carry on the legitimate business of such towing steamers, not exceeding, however, one person to every net ton of measurement of said steamer: *Provided, however,* That the person so allowed to be carried shall not be carried for hire.

SEC. 2. That every steam vessel licensed under the foregoing section shall carry and have on board, in accessible places, one life-preserver for every person allowed to be carried in addition to those provided for the crew of such vessel.

* * * * *

Approved July 9, 1886.

18251—2

SEC. 4429. Every person who constructs a boiler, or steam pipe connecting*the boilers, to be used on steam vessels, of iron or steel plates which have not been duly stamped and inspected according to the provisions of this Title, or who knowingly uses any defective, bad, or faulty iron or steel in the construction of such boilers; or who drifts any rivet hole to make it come fair, or who delivers any such boiler for use, knowing it to be imperfect in its flues, flanging, riveting, bracing, or in any other of its parts, shall be fined one thousand dollars, one-half for the use of the informer. Nothing in this Title shall be so construed as to prevent from being used, on any steamer, any boiler or steam generator which may not be constructed of riveted iron or steel plates, when the board of supervising inspectors have satisfactory evidence that such boiler or steam generator is equal in strength and as safe from explosion as a boiler of the best quality constructed of riveted iron or steel plates. [*“Provided, however, That the Secretary of the Treasury may grant permission to use any boiler or steam generator not constructed of riveted iron or steel plates upon the certificate of the supervising inspector of steamboats for the district wherein such boiler or generator is to be used, and other satisfactory proof that the use of the same is safe and efficient; said permit to be valid until the next regular meeting of the supervising inspectors who shall act thereon.”*]* *

† SEC. 4430. Every iron or steel plate used in the construction of steamboat boilers, and which shall be subject to a tensile strain, shall be inspected in such manner as shall be prescribed by the board of supervising inspectors and approved by the Secretary of the Treasury, so as to enable the inspectors to ascertain its tensile strength, homogeneousness, toughness, and ability to withstand the effect of repeated heating and cooling; and no iron or steel plate shall be used in the construction of such boilers which has not been inspected and approved under those rules.

And the Supervising Inspector-General may, under the direction of the Secretary of the Treasury, detail assistant inspectors from any local inspection district where assistant inspectors are employed, to inspect iron or steel boiler plates at the mills where the same are manufactured; and if the plates are found in accordance with the rules of the supervising inspectors, the assistant inspector shall stamp the same with the initials of his name, followed by the letters and words, “U. S. Assistant Inspector;” and material so stamped shall be accepted by the local inspectors in the districts where such material is to be manufactured into marine boilers as being in full compliance with the requirements of this section regarding the inspection of boiler plates; it being further provided that any person

* Amendment approved August 7, 1882.

† As amended by act approved January 22, 1894.

who affixes any false, forged, fraudulent, spurious, or counterfeit of the stamp herein authorized to be put on by an assistant inspector shall be deemed guilty of a felony, and shall be fined not less than one thousand dollars, nor more than five thousand dollars, and imprisoned not less than two years nor more than five years.

SEC. 4431. Ever[y] plate of boiler iron or steel, made for use in the construction of steamboat boilers, shall be distinctly and permanently stamped by the manufacturer thereof, and, if practicable, in such places that the marks shall be left visible when such plates are worked into boilers, with the name of the manufacturer, the place where manufactured, and the number of pounds tensile strain it will bear to the sectional square inch; and the inspectors shall keep a record in their office of the stamps upon all boiler plates and boilers which they inspect.

SEC. 4432. Every person who counterfeits, or causes to be counterfeited, any of the marks or stamps prescribed for boiler iron, or steel plates, or who designedly stamps, or causes to be stamped falsely, any such plates; and every person who stamps or marks, or causes to be stamped or marked, any such iron or steel plates with the name or trade-mark of another, with the intent to mislead or deceive, shall be fined two thousand dollars, one-half to the use of the informer, and may, in addition thereto, at the discretion of the court, be imprisoned not exceeding two years.

SEC. 4433. The working steam pressure allowable on boilers constructed of plates inspected as required by this Title, when single riveted, shall not produce a strain to exceed one-sixth of the tensile strength of the iron or steel plates of which such boilers are constructed; but where the longitudinal laps of the cylindrical parts of such boilers are double riveted, and the rivet holes for such boilers have been fairly drilled instead of punched, an addition of twenty per centum to the working pressure provided for single riveting may be allowed: *Provided*, That all other parts of such boilers shall correspond in strength to the additional allowances so made; and no split calking shall in any case be permitted.

*SEC. 4434. No externally fired boiler having its shell constructed of iron or steel plates exceeding an average thickness of thirty one-hundredths of an inch shall be employed on any steam vessel navigating the Red River or the North or rivers flowing into the Gulf of Mexico or their tributaries; and no externally fired boiler employed on any such steam vessel shall have less than three inches space between its shell and any of its internal flues, and not less than three inches space between such flues when any such flues are more than five inches in diameter; and every such externally fired boiler employed on any such steam vessel shall be provided with a manhole in the lower part of the

* As amended by act of Congress approved February 28, 1895.

front head thereof, of such dimensions as may be prescribed by the Board of Supervising Inspectors, in all cases where the distance between its internal flues is less than three inches. Externally fired boilers having shells constructed of iron or steel plates not exceeding an average thickness of fifty one-hundredths of an inch may, in the discretion of the Secretary of the Treasury, be authorized and employed on steam vessels navigating the Atlantic and Pacific oceans, or salt-water bays or sounds, or the Great Lakes, or any of them, and waters flowing to and from the same, or any of them: *Provided*, That on inspection no plate that is by this Act limited to a thickness of thirty one-hundredths of an inch and no plate that is by this Act limited to a thickness of fifty one-hundredths of an inch shall be rejected for use if found to exceed those dimensions, respectively, if the average thickness thereof does not exceed the limits therein specified, and the amount of steam pressure that will be permitted to be carried in boilers constructed in accordance with the requirements of this Act shall be determined from measurements showing the least thickness of the plates.

SEC. 4435. The feed water shall be delivered into the boilers in such manner as to prevent it from contracting the metal or otherwise injuring the boilers. And when boilers are so arranged on a vessel that there is employed a water connecting pipe through which the water may pass from one boiler to another, there shall also be provided a similar steam connection, having an area of opening into each boiler of at least one square inch for every two square feet of effective heating surface contained in anyone of the boilers so connected, half the flue and all other fire surfaces being computed as effective. Adequate provisions shall be made on all steam vessels to prevent sparks or flames from being driven back from the fire doors into the vessel.

SEC. 4436. Every boiler shall be provided with a good, well-constructed safety valve or valves, of such number, dimensions, and arrangements as shall be prescribed by the board of supervising inspectors, and shall also be provided with a sufficient number of gauge cocks and a reliable low-water indicator that will give alarm when the water falls below its prescribed limits; and in addition thereto there shall be inserted, in a suitable manner, in the flues, crown sheet, or other parts of the boiler most exposed to the heat of the furnace when the water falls below its prescribed limits, a plug of good Banca tin.

SEC. 4437. Every person who intentionally loads or obstructs, or causes to be loaded or obstructed, in any way or manner, the safety valve of a boiler, or who employs any other means or device whereby the boiler may be subjected to a greater pressure than the amount allowed by the certificate of the inspectors, or who intentionally deranges or hinders the operation of any machinery or device employed to denote the state of the water or steam in any boiler, or to give warning of approaching danger,

or who intentionally permits the water to fall below the prescribed low-water line of the boiler, and every person concerned therein, directly or indirectly, shall be guilty of a misdemeanor, and shall be fined two hundred dollars, and may also be imprisoned not exceeding five years.

SEC. 4438. The boards of local inspectors shall license and classify the masters, chief mates, engineers, and pilots of all steam vessels. It shall be unlawful to employ any person, or for any person to serve as a master, chief mate, engineer, or pilot on any steamer, who is not licensed by the inspectors; and anyone violating this section shall be liable to a penalty of one hundred dollars for each offense.

SEC. 4439. Whenever any person applies to be licensed as master of a steam vessel, the inspector[s] shall make a diligent inquiry as to his character, and shall carefully examine the applicant, as well as the proofs which he presents in support of his claim, and if they are satisfied that his capacity, experience, habits of life, and character are such as to warrant the belief that he can be safely intrusted with the duties and responsibilities of the station for which he makes application, they shall grant him a license authorizing him to discharge such duties on any such vessel for the term of one year; but such license shall be suspended or revoked, upon satisfactory proof of bad conduct, intemperate habits, incapacity, inattention to his duties, or the willful violation of any provision of this Title.

SEC. 4440. Whenever any person applies for authority to be employed as chief mate of steam vessels, the inspectors shall require satisfactory evidence of the knowledge, experience, and skill of the applicant in lading cargo, and in handling and stowage of freight, and shall examine him as to his knowledge and ability in navigation and managing such vessels, and all other duties pertaining to his station; and if satisfied of his qualifications and good character, they shall grant him a license, authorizing him to perform such duties for the term of one year; but such license shall be suspended or revoked upon satisfactory proof of bad conduct, intemperate habits, unskillfulness or want of knowledge of the duties of his station, or the willful violation of any provision of this Title.

SEC. 4441. Whenever any person applies for authority to perform the duties of engineer of any steam vessel, the inspectors shall examine the applicant as to his knowledge of steam machinery, and his experience as an engineer, and also the proofs which he produces in support of his claim; and if, upon full consideration, they are satisfied that his character, habits of life, knowledge and experience in the duties of an engineer are all such as to authorize the belief that he is a suitable and safe person to be entrusted with the powers and duties of such a station, they shall grant him a license, authorizing him to be employed in such duties for the term of one year, in which they shall assign him to the

appropriate class of engineers ; but such license shall be suspended or revoked upon satisfactory proof of negligence, unskillfulness, intemperance, or the willful violation of any provision of this Title. Whenever complaint is made against any engineer holding a license authorizing him to take charge of the boilers and machinery of any steamer, that he has, through negligence or want of skill, permitted the boilers in his charge to burn or otherwise become in bad condition, or that he has not kept his engine and machinery in good working order, it shall be the duty of the inspectors, upon satisfactory proof of such negligence or want of skill, to revoke the license of such engineer and assign him to a lower grade or class of engineers, if they find him fitted therefor.

SEC. 4442. Whenever any person claiming to be a skillful pilot of steam vessels offers himself for a license, the inspectors shall make diligent inquiry as to his character and merits, and if satisfied from personal examination of the applicant, with the proof that he offers that he possesses the requisite knowledge and skill, and is trustworthy and faithful, they shall grant him a license for the term of one year to pilot any such vessel within the limits prescribed in the license, but such license shall be suspended or revoked upon satisfactory evidence of negligence, unskillfulness inattention to the duties of his station, or intemperance, or the willful violation of any provisions of this Title.

SEC. 4443. Where the master or mate is also pilot of the vessel he shall not be required to hold two licenses to perform such duties, but the license issued shall state on its face that he is authorized to act in such double capacity.

SEC. 4444. No State or municipal government shall impose upon pilots of steam vessels any obligation to procure a State or other license in addition to that issued by the United States, or any other regulation which will impede such pilots in the performance of the duties required by this Title ; nor shall any pilot charges be levied by any such authority upon any steamer piloted as provided by this Title ; and in no case shall the fees charged for the pilotage of any steam vessel exceed the customary or legally established rates in the State where the same is performed. Nothing in this Title shall be construed to annul or affect any regulation established by the laws of any State, requiring vessels entering or leaving a port in any such State, other than coast-wise steam vessels, to take a pilot duly licensed or authorized by the laws of such State, or of a State situate upon the waters of such State.

SEC. 4445. Every master, chief mate, engineer, and pilot, who receives a license, shall, before entering upon his duties, make oath before one of the inspectors herein provided for, to be recorded with the certificate, that he will faithfully and honestly, according to his best skill and judgment, without concealment or reservation, perform all the duties required of him by law.

SEC. 4446. Every master, mate, engineer, and pilot who shall receive a license shall, when employed upon any vessel, place his certificate of license, which shall be framed under glass, in some conspicuous place in such vessel, where it can be seen by passengers and others at all times; and for every neglect to comply with this provision by any such master, mate, engineer, or pilot, he shall be subject to a fine of one hundred dollars, or to the revocation of his license.

SEC. 4447. When any licensed officer is employed on a steamer in a district distant from any local board of inspectors, such inspectors, or the supervising inspector of the district, may grant a renewal of his license, without such licensed officer being personally present, under such regulations as the board of supervising inspectors shall prescribe.

SEC. 4448. All officers licensed under the provisions of this Title shall assist the inspectors in their examination of any vessel to which such licensed officers belong, and shall point out all defects and imperfections known to them in the hull, equipments, boilers, or machinery of such vessel, and also shall make known to the inspectors, at the earliest opportunity, all accidents or occurrences producing serious injury to the vessel, her boilers, or machinery; and in default thereof the license of any such officer so neglecting or refusing shall be revoked.

SEC. 4449. If any licensed officer shall, to the hindrance of commerce, wrongfully or unreasonably refuse to serve in his official capacity on any steamer, as authorized by the terms of his certificate of license, or shall fail to deliver to the applicant for such service at the time of such refusal, if the same shall be demanded, a statement in writing, assigning good and sufficient reasons therefor, or if any pilot or engineer shall refuse to admit into the pilot house or engine room any person whom the master or owner of the vessel may desire to place there for the purpose of learning the profession, his license shall be revoked, upon the same proceedings as are provided in other cases of revocation of such licenses.

SEC. 4450. The local boards of inspectors shall investigate all acts of incompetency or misconduct committed by any licensed officer while acting under the authority of his license, and shall have power to summon before them any witness within their respective districts, and compel their attendance by a similar process as in the United States circuit or district court; and they may administer all necessary oaths to any witnesses thus summoned before them; and after reasonable notice in writing, given to the alleged delinquent, of the time and place of such investigation, such witnesses shall be examined under oath, touching the performance of his duties by any such licensed officer; and if the board shall be satisfied that such licensed officer is incompetent, or has been guilty of misbehavior, negligence, or unskillfulness, or has endangered life, or willfully violated any provision of this Title, they shall immediately suspend or revoke his license.

*†SEC. 4451. The chief officer of the customs for the district shall pay out of the revenues received under the provisions of this Title such fees to the United States marshal for his services, and to any witness, so summoned, for his actual travel and attendance, as shall be officially certified to by any inspector hearing the case, upon the back of such summons, not exceeding the rate allowed for fees and to witnesses for travel and attendance in any circuit or district courts of the United States.

SEC. 4452. Whenever any board of local inspectors refuses to grant a license to any person applying for the same, or suspends or revokes the license of any master, mate, engineer, or pilot, any person deeming himself wronged by such refusal, suspension, or revocation, may, within thirty days thereof, on application to the supervising inspector of the district, have his case examined anew by such supervising inspector; and the local board shall furnish to the supervising inspector, in writing, the reasons for its doings in the premises; and such supervising inspector shall examine the case anew, and he shall have the same powers to summon witnesses and compel their attendance, and to administer oaths that are conferred on local inspectors; and such witnesses and the marshal shall be paid in the same manner as provided for by the preceding section; and such supervising inspector may revoke, change, or modify the decision of such local board; and like proceedings may be had by any master or owner of any steam vessel in relation to the inspection of such vessel, or her boilers or machinery, by any such local board; and in case of repairs, and in any investigation or inspection, where there shall be a disagreement between the local inspectors, the supervising inspector, when so requested, shall investigate and decide the case.

SEC. 4453. In addition to the annual inspection, the local inspector shall examine, at proper times, steamers arriving and departing to and from their respective ports, so often as to enable them to detect any neglect to comply with the requirements of law, and also any defects or imperfections becoming apparent after the inspection aforesaid, and tending to render the navigation of the vessels unsafe; and if they shall discover any omission to comply with law, or that repairs have become necessary to make the vessel safe, the inspectors shall at once notify the master, in writing, stating in the notice what is required; and if the master deem the requirements unreasonable and unnecessary, he may apply for a reexamination of the case to the supervising inspector, as provided in the preceding section. All inspections and orders for repairs shall be promptly made by the inspectors, and, when it can be safely done, in their judgment, they shall permit repairs to be made where those interested can most conveniently do them.

* See sections 829 and 848, Revised Statutes.

† Amended by act approved April 4, 1888. (See p. 66)

SEC. 4454. If any master or owner of any steamer shall refuse or neglect to comply with the requirements of the local inspectors, made in pursuance of the preceding section, and shall, contrary thereto and while the same remains unreversed by the supervising inspector, employ the vessel by navigating her, the master and owner shall be liable to a penalty of five hundred dollars for each offense, one-half for the use of the informer; for which sum the vessel itself shall be liable, and may be seized and proceeded against by libel in any district court having jurisdiction; and the master and owner, and the vessel itself, shall, in addition thereto, be liable for any damage to passengers and their baggage which shall occur from any defects as stated in the notice prescribed by the preceding section.*

SEC. 4455. The inspectors of one district shall not modify or annul the doings of the inspectors of another district in regard to repairs, unless there is a change in the state of things, demanding more repairs than were thought necessary when the order was made. Nor shall the inspectors of one district license a person coming from another district, if such person has been rejected for unfitness or want of qualifications.

SEC. 4456. The local boards of inspectors, when so requested in writing by any master or owner, shall, under the direction of the supervising inspector, inspect steamers in other collection districts where no such board is established; and if a certificate of approval is not granted, no other inspection shall be made by the same or any other board until the objections made by such local board, and unreversed by the supervising inspector of the district, are removed. Nothing in this section shall impair the right of the inspectors to permit such vessel to go to another port for repairs, if in their opinion, it can be done with safety.

SEC. 4457. The local inspectors shall keep a record of certificates of inspection of vessels, their boilers, engines and machinery, and of all their acts in their examination and inspection of steamers, whether of approval or disapproval; and when a certificate of approval is recorded the original shall be delivered to the collector or other chief officer of the customs of the district. They shall also keep a like record of certificates authorizing gunpowder to be carried as freight by any steamer carrying passengers, and of all licenses granted to masters, mates, pilots, and engineers, and of all refusals of the same, of all suspensions and revocations of license, of all refusals, suspensions, or revocations of which they shall receive notices from other districts; and shall report to the supervising inspector of their respective districts, in writing, their decisions in cases of refusal of licenses, or of the suspension or revocation thereof, and all testimony received by them in such proceedings. They shall also report promptly to such supervising inspector all violations of the steamboat laws that come to their knowledge. They shall also keep an accurate account of

* See section 5344.

every steamer boarded by them during the year, and of all their official acts and doings, which in the form of a report, they shall communicate to the supervising inspector of the district, at such times as the board of supervising inspectors, by their established rules, shall direct.

*SEC. 4458. Before issuing any license to any steamer the collector or other chief officer of the customs for the port or district shall demand and receive from the owners thereof, as a compensation for the inspections and examination made for the year, the following sums, in addition to the fees for issuing enrollments and licenses now allowed by law, according to the tonnage of the vessel: For each steam vessel of one hundred tons or under, twenty-five dollars; and in addition thereto, for each and every ton in excess of one hundred tons, five cents. Each master, engineer, pilot, and mate, licensed as herein provided, shall pay for every certificate, granted by any inspector or inspectors, the sum of fifty cents. Such fees shall be paid over to the chief officer of the customs in such manner and under such regulations as shall be prescribed by the Secretary of the Treasury.

SEC. 4459. Every supervising and local inspector of steamboats shall execute a proper bond, to be approved by the Secretary of the Treasury, in such form and upon such conditions as the Secretary may prescribe, for the faithful performance of the duties of his office, and the payment in the manner provided by law of all moneys that may be received by him.

SEC. 4460. The Secretary of the Treasury shall procure for the several supervising inspectors and local boards of inspectors such instruments, stationery, printing, and other things necessary for the use of their respective officers as may be required therefor.

††SEC. 4461. The salaries of the Supervising Inspector-General, of all supervising inspectors, local inspectors, assistant inspectors, and clerks, provided for by this Title, together with their traveling and other expenses when on official duty, and all instruments, books, blanks, stationery, furniture, and other things necessary to carry into effect the provisions of this Title, shall be paid for, under the direction of the Secretary of the Treasury, out of the revenues received into the Treasury from the inspection of steam vessels, and the licensing of the officers of such vessels, which revenues, or so much of them as may be necessary for these purposes, shall be permanently appropriated therefor.

SEC. 4462. The Secretary of the Treasury shall make such regulations as may be necessary to secure the proper execution of this Title.

*Amended by acts approved April 5, 1882, and June 26, 1884; repealed in substance by the first section of act approved June 19, 1886. (See p. 67.)

†Partially amended by act approved June 19, 1886. (See p. 67.)

††Further amended by act approved April 4, 1888. (See p. 88.)

TITLE LII.

CHAPTER TWO.

TRANSPORTATION OF PASSENGERS AND MERCHANDISE.*

- | | |
|---|--|
| Sec.
4463. Officers and crew of passenger steamers. | Sec.
4484. Stairways and gangways on river steamers carrying passengers on main deck. |
| 4464. Number of passengers allowable. | 4485. Accommodation of deck passengers. |
| 4465. Penalty for carrying too great a number of passengers. | 4486. Penalty for not providing proper accommodations for passengers. |
| 4466. Special permit for excursions. | 4487. River steamers to be anchored when navigation is unsafe. |
| 4467. List of passengers. | 4488. Lifeboats, etc., on ocean, lake, and sound steamers. |
| 4468. Penalty for failure to keep passenger list. | 4489. Penalty for failure to provide lifeboats, etc. |
| 4469. Recovery of penalties. | 4490. Water-tight bulkheads, in lake steamers carrying passengers. |
| 4470. Precautions against fire. | 4491. Use of instruments for security of life. |
| 4471. Fire pumps and hose. | 4492. Barges carrying passengers. |
| 4472. Dangerous articles not to be carried on passenger steamers. | 4493. Liability of master and owners for damage to passengers. |
| 4473. Penalty for unlawfully carrying cotton or hemp. | 4494. Two copies of this Title to be kept on each passenger steamer. |
| 4474. License for use of petroleum in the production of motive power. | 4495. Name of steamer to be exhibited |
| 4475. Mode of packing dangerous articles. | 4496. Duties of customs officers. |
| 4476. Punishment for unlawfully shipping dangerous articles. | 4497. Penalty for omission of duty by customs officer. |
| 4477. Watchmen on passenger steamers. | 4498. Registry, enrollment, etc., denied to vessels not complying with the law. |
| 4478. Penalty for failure to keep watchmen. | 4499. Penalty for failure to comply. |
| 4479. Fire extinguishers. | 4500. Penalty in cases not provided for. |
| 4480. Wire tiller ropes, bell pulls, etc., for passenger steamers. | |
| 4481. Boats for river steamers. | |
| 4482. Life-preservers for river steamers carrying passengers. | |
| 4483. Fire buckets, axes, etc., for river steamers carrying passengers. | |

SEC. 4463. No steamer carrying passengers shall depart from any port unless she shall have in her service a full complement of licensed officers and full crew, sufficient at all times to manage the vessel, including the proper number of watchmen. But if any such vessel, on her voyage, is deprived of the services of any

* See section 4281, page 50.

licensed officer, without the consent, fault, or collusion of the master, owner, or any person interested in the vessel, the deficiency may be temporarily supplied, until others licensed can be obtained.

SEC. 4464. The inspectors shall state in every certificate of inspection granted to steamers carrying passengers, other than ferryboats, the number of passengers of each class that any such steamer has accommodations for, and can carry with prudence and safety.

SEC. 4465. It shall not be lawful to take on board of any steamer a greater number of passengers than is stated in the certificate of inspection; and for every violation of this provision the master or owner shall be liable, to any person suing for the same, to forfeit the amount of passage money and ten dollars for each passenger beyond the number allowed.

SEC. 4466. If any passenger steamer engages in excursions, the inspectors shall issue to such steamer a special permit, in writing, for the occasion, in which shall be stated the additional number of passengers that may be carried, and the number and kind of life-saving appliances that shall be provided for the safety of such additional passengers; and they shall also, in their discretion, limit the route and distance for such excursions.

SEC. 4467. The master of every passenger steamer shall keep a correct list of all the passengers received and delivered from day to day, noting the places where received and where landed, which record shall be open to the inspection of the inspectors and officers of the customs at all times; and the aggregate number of passengers shall be furnished to inspectors as often as called for; but on routes not exceeding one hundred miles, the number of passengers, if kept, shall be sufficient.

SEC. 4468. Every master of any passenger steamer who fails, through negligence or design, to keep a list of passengers, as required by the preceding section, shall be liable to a penalty of one hundred dollars.

SEC. 4469. The penalties imposed by sections forty-four hundred and sixty-five and forty-four hundred and sixty-eight shall be a lien upon the vessel in each case; but a bond may, as provided in other cases, be given to secure the satisfaction of the judgment.

SEC. 4470. Every steamer carrying passengers or freight shall be provided with suitable pipes and valves attached to the boiler to convey steam into the hold and the different compartments thereof, to extinguish fire; and every stove used on board of any such vessel shall be well and securely fastened, so as to prevent it from being moved or overthrown, and all woodwork or other ignitable substances about the boilers, chimneys, cook houses, and stovepipes exposed to ignition, shall be thoroughly shielded by some incombustible material, in such a manner as to leave the air to circulate freely between such material and woodwork

or other ignitable substance; and before granting a certificate of inspection the inspector shall require all other necessary provisions to be made throughout such vessel to guard against loss or danger from fire.

SEC. 4471. Every steamer permitted by her certificate of inspection to carry as many as fifty passengers, or upward, and every steamer carrying passengers, which also carries cotton, hay, or hemp, shall be provided with a good double-acting steam fire pump, or other equivalent apparatus for throwing water. Such pump or other apparatus for throwing water shall be kept at all times and at all seasons of the year in good order and ready for immediate use, having at least two pipes of suitable dimensions, one on each side of the vessel, to convey the water to the upper decks, to which pipes there shall be attached, by means of stop-cocks or valves, both between decks and on the upper deck, good and suitable hose of sufficient strength to stand a pressure of not less than one hundred pounds to the square inch, long enough to reach to all parts of the vessel and properly provided with nozzles, and kept in good order and ready for immediate service. Every steamer exceeding two hundred tons burden and carrying passengers shall be provided with two good double-acting fire pumps, to be worked by hand; each chamber of such pumps, except pumps upon steamers in service on the twenty-eighth day of February, eighteen hundred and seventy-one, shall be of sufficient capacity to contain not less than one hundred cubic inches of water; and such pumps shall be placed in the most suitable parts of the vessel for efficient service, having suitable well-fitted hose to each pump, of at least one-half the vessel in length, kept at all times in perfect order, and shipped up and ready for immediate use. On every steamer not exceeding two hundred tons, one of such pumps may be dispensed with. Each fire pump thus prescribed shall be supplied with water by means of a suitable pipe connected therewith, and passing through the side of the vessel so low as to be at all times under water when she is afloat; and no fire pump thus provided for shall be placed below the lower deck of the vessel. Every steamer shall also be provided with a pump which shall be of sufficient strength and suitably arranged to test the boilers thereof.

* SEC. 4472. No loose hay, loose cotton, or loose hemp, camphene, nitroglycerine, naphtha, benzine, benzole, coal oil, crude or refined petroleum, or other like explosive burning fluids, or like dangerous articles, shall be carried as freight or used as stores on any steamer carrying passengers; nor shall baled cotton or hemp be carried on such steamers unless the bales are compactly pressed and thoroughly covered with bagging of similar fabric, and secured with good rope or iron bands; nor shall gunpowder be

* See sections 4278-4280 and 5353-5355, pages 49, 50, 63, and 84.

carried on any such vessel, except under special license; nor shall oil of vitriol, nitric or other chemical acids be carried on steamers except on the decks or guards thereof, or in such other safe part of the vessel as shall be prescribed by the inspectors. Refined petroleum which will not ignite at a temperature less than one hundred and ten degrees of Fahrenheit thermometer, may be carried on board such steamers upon routes where there is no other practicable mode of transporting it, and under such regulations as shall be prescribed by the board of supervising inspectors with the approval of the Secretary of the Treasury; and oil or spirits of turpentine may be carried on such steamers when put up in good metallic vessels, or casks, or barrels well and securely bound with iron and stowed in a secure part of the vessel; and friction matches may be carried on such steamers when securely packed in strong tight chests or boxes, the covers of which shall be well secured by locks, screws, or other reliable fastenings, and stowed in a safe part of the vessel at a secure distance from any fire or heat. All such other provisions shall be made on every steamer carrying passengers or freight, to guard against and extinguish fire, as shall be prescribed by the board of supervising inspectors, and approved by the Secretary of the Treasury.

SEC. 4473. Every bale of cotton or hemp that shall be shipped or carried on any passenger steamer, without conforming to the provisions of the preceding section, shall be subject to a penalty of five dollars, and shall be liable to seizure and sale to secure the payment of such penalty.

SEC. 4474. The Secretary of the Treasury may grant permission to the owner of any steam vessel to use any invention or process for the utilization of petroleum or other mineral oils or substances in the production of motive power, and may make and enforce regulations concerning the application and the use of the same for such purpose. But no such permission shall be granted, unless upon the certificate of the supervising inspector of steamboats for the district wherein such vessel is registered, and other satisfactory proof that the use of the same is safe and efficient; and upon such proof, and the approval of such certificate by the Secretary of the Treasury, a special license for the use of such process or invention shall issue under the seal of the Treasury Department.*

Provided, however, That the Secretary of the Treasury may permit the use of petroleum as fuel on steamers not carrying passengers, without the certificate of the supervising inspector of the district where the vessel is to be used, subject to such conditions and safeguards as the Secretary of the Treasury in his judgment shall provide. For a violation of any of the conditions imposed by the Secretary of the Treasury a penalty of five hun-

* Amended, act approved October 18, 1888.

dred dollars shall be imposed, which penalty shall be a lien upon the vessel, but a bond may, as provided in other cases, be given to secure the satisfaction of the judgment.

SEC. 4475. All gunpowder, nitroglycerine, camphene, naphtha, benzine, benzole, coal oil, crude or refined petroleum, oil of vitriol, nitric or other chemical acids, oil or spirits of turpentine, friction matches, and all other articles of like character, when packed or put up for shipment shall be securely packed and put up separately from each other and from all other articles; and the package, box, cask, or other vessel containing the same shall be distinctly marked on the outside, with the name or description of the article contained therein.

*SEC. 4476. Every person who packs or puts up, or causes to be packed or put up for shipment, any gunpowder, nitroglycerine, camphene, naphtha, benzine, benzole, coal oil, crude or refined petroleum, oil of vitriol, nitric or other chemical acids, oil or spirits of turpentine, friction matches, or other articles of like character otherwise than as directed by the preceding section, or who knowingly ships or attempts to ship the same, or delivers the same to any such vessel as stores, unless duly packed and marked, shall be deemed guilty of a misdemeanor, and punished by a fine not exceeding two thousand dollars, or imprisonment not exceeding eighteen months, or both; one-half of the fine to go to the informer, and the articles to be liable to seizure and forfeiture.

SEC. 4477. Every steamer carrying passengers during the night-time shall keep a suitable number of watchmen in the cabins, and on each deck, to guard against fire or other dangers, and to give alarm in case of accident or disaster.

SEC. 4478. For any neglect to keep the watchmen required by the preceding section, the license of the officer in charge of the vessel for the time being shall be revoked; and every owner of such vessel who neglects or refuses to furnish the number of men necessary to keep watch as required shall be fined one thousand dollars.

SEC. 4479. The board of supervising inspectors may require steamers carrying either passengers or freight to be provided with such number and kind of good and efficient portable fire extinguishers as, in the judgment of the board, may be necessary to protect them from fire when such steamers are moored or lying at a wharf without steam to work the pumps.

SEC. 4480. Every steamer carrying passengers shall be provided with wire tiller ropes, or iron rods or chains, for the purpose of steering and navigating the vessel, and shall employ wire bell pulls for signaling the engineer from the pilot house, together with tubes of proper size so arranged as to return the sound of the engine bells to the pilot house, or other arrangement to

* See note to section 4472.

repeat back the signal. But on any such vessel navigated by the mariner's compass, so much of such wire rope or chain may be dispensed with and disused as shall influence or disturb the working of the compass.

SEC. 4481. Every steam vessel navigating rivers only, except ferryboats, freight boats, canal boats, and towing boats, of less than fifty tons, shall have at least one good substantial boat with lines attached, and properly supplied with oars, and kept in good condition at all times, and ready for immediate use; and in addition thereto, every such vessel carrying passengers shall have one or more metallic lifeboats, fire proof, and in all respects good and substantial boats, of such dimensions and arrangements as the board of supervising inspectors by their regulations shall prescribe, which boats shall be carried in the most convenient manner to be brought into immediate use in case of accident. But where the character of the navigation is such that, in the opinion of the supervising inspector, the metallic lifeboats can be dispensed with, he may exempt any such vessel from carrying the same, or may require a substitute therefor, at his discretion.

SEC. 4482. Every such steam vessel carrying passengers shall also be provided with a good life-preserver, made of suitable material, for every cabin passenger for which she will have accommodation, and also a good life-preserver or float for each deck or other class passenger which the inspector's certificate shall allow her to carry, including the officers and crew; which life-preservers and floats shall be kept in convenient and accessible places on such vessel in readiness for immediate use in case of accident.

SEC. 4483. Every such steam vessel carrying passengers, of two hundred tons burden or less, shall also keep at least eighteen fire buckets and two water barrels, and shall have not less than four axes; and every such steamer of over two hundred tons, and not less than five hundred tons burden, shall carry not less than twenty-four buckets, four water barrels, and six axes; and every such steamer of over five hundred tons shall carry not less than thirty-five buckets, six water barrels, and eight axes. The buckets and barrels shall be kept in convenient places and filled with water, to be in readiness in case of fire, and the axes shall be kept in good order and ready for immediate use. Tanks of suitable dimensions and arrangement, or buckets in sufficient number, may be substituted for barrels.

SEC. 4484. Every such steam vessel carrying passengers on the main deck shall be provided with permanent stairways and other sufficient means, convenient to the passengers, for their escape to the upper deck in case of the vessel sinking or of other accident endangering life; and in the stowage of freight upon such deck, where passengers are carried, gangways or passages sufficiently large to allow persons to pass freely through them shall be left open both fore and aft of the vessel, and also to and along the guards on each side.

SEC. 4485. The captain or mate of every such steam vessel carrying passengers upon the main deck shall assign to all deck passengers, when taking passage, the space on deck they may occupy during the voyage, and such space shall not thereafter be occupied by freight, nor overcrowded by other persons, nor shall freight be stored about the boilers or machinery, in such manner as to obstruct or prevent the engineer from readily attending to his duties.

SEC. 4486. For every violation of the provisions of the two preceding sections the owners of the vessel shall be punished by a fine of three hundred dollars.

SEC. 4487. On any steamers navigating rivers only, when, from darkness, fog, or other cause, the pilot or watch shall be of opinion that the navigation is unsafe, or, from accident to or derangement of the machinery of the boat, the chief engineer shall be of the opinion that the further navigation of the vessel is unsafe, the vessel shall be brought to anchor or moored as soon as it can be prudently done: *Provided*, That if the person in command shall, after being so admonished by either of such officers, elect to pursue such voyage, he may do the same; but in such case both he and the owners of such steamer shall be answerable for all damages which shall arise to the person of any passenger, or his baggage, from such causes in so pursuing the voyage, and no degree of care or diligence shall in such case be held to justify or excuse the person in command, or the owners.

SEC. 4488. Every steamer navigating the ocean, or any lake, bay or sound of the United States, shall be provided with such numbers of lifeboats, floats, rafts, life-preservers [line-carrying projectiles and the means of propelling them],* and drags as will best secure the safety of all persons on board such vessel in case of disaster; and every seagoing vessel carrying passengers, and every such vessel navigating any of the Northern or Northwestern lakes, shall have the lifeboats required by law, provided with suitable boat-disengaging apparatus, so arranged as to allow such boats to be safely launched while such vessels are under speed or otherwise, and so as to allow such disengaging apparatus to be operated by one person, disengaging both ends of the boat simultaneously from the tackles by which it may be lowered to the water. And the board of supervising inspectors shall fix and determine, by their rules and regulations, the kind of lifeboats, floats, rafts, life-preservers [line-carrying projectiles and the means of propelling them],* and drags that shall be used on such

*Act amending, approved March 2, 1889, to take effect February 1, 1890 (see p.48), and act repealing use of, on LAKES, BAYS, and SOUNDS, approved April 11, 1892 (see p.49).

vessels, and also the kind and capacity of pumps or other appliances for freeing the steamer from water in case of heavy leakage, the capacity of such pumps or appliances being suited to the navigation in which the steamer is employed.

SEC. 4489. The owner of any such steamer who neglects or refuses to provide such lifeboats, floats, rafts, life-preservers [line-carrying projectiles and the means of propelling them], drags, pumps, or appliances, as are, under the provisions of the preceding section, required by the board of supervising inspectors, and approved by the Secretary of the Treasury, shall be fined one thousand dollars.

*SEC. 4490. Every seagoing steamer, and every steamer navigating the great Northern or Northwestern lakes, carrying passengers, the building of which shall be completed after the twenty-eighth day of August, eighteen hundred and seventy-one, shall have not less than three water-tight cross bulkheads, such bulkheads to reach to the main deck in single-decked vessels, otherwise to the deck next below the main deck; to be made of iron plates, sustained upon suitable framework; and to be properly secured to the hull of the vessel. The position of such bulkheads and the strength of material of which the same shall be constructed shall be determined by the general rules of the board of supervising inspectors.

SEC. 4491. No kind of instrument, machine, or equipment for the better security of life, provided for by this Title shall be used on any steam vessel which shall not first be approved by the board of supervising inspectors, and also by the Secretary of the Treasury.

SEC. 4492. Every barge carrying passengers, while in tow of any steamer shall be subject to the provisions of this Title relating to fire buckets, axes, life-preservers, and yawls, to such extent as shall be prescribed by the board of supervising inspectors; and for any violation of this section the penalty shall be two hundred dollars, recoverable one-half for the use of the informer.

*SEC. 3. That steam vessels of one hundred tons burden or under, engaged in the coastwise bays and harbors of the United States, may be licensed by the United States local inspectors of steam vessels to carry passengers or excursions on the ocean or upon the Great Lakes of the North or Northwest, not exceeding fifteen miles from the mouth of such bays or harbors, without being required to have the three water-tight cross bulkheads provided by section forty-four hundred and ninety of the Revised Statutes for other passenger steamers: *Provided*, That in the judgment of the local inspector such steamers shall be safe and suitable for such navigation without danger to human life, and that they shall have one water-tight collision bulkhead not less than five feet abaft the stem of said steamer. [Act approved July 9, 1886.]

* SEC. 4493. Whenever damage is sustained by any passenger or his baggage, from explosion, fire, collision, or other cause, the master and the owner of such vessel, or either of them, and the vessel shall be liable to each and every person so injured, to the full amount of damage if it happens through any neglect or failure to comply with the provisions of this Title, or through known defects or imperfections of the steaming apparatus or of the hull; and any person sustaining loss or injury through the carelessness, negligence, or willful misconduct of any master, mate, engineer, or pilot, or his neglect or refusal to obey the laws governing the navigation of such steamers, may sue such master, mate, engineer, or pilot, and recover damages for any such injury caused by any such master, mate, engineer, or pilot.

SEC. 4494. Every master or commander of any steam vessel carrying passengers shall keep on board of such vessel at least two copies of the provisions of this Title, to be furnished to him by the Secretary of the Treasury; and if the master or commander neglects or refuses to do so, or shall unreasonably refuse to exhibit a copy of the same to any passenger who asks for it, he shall be liable to a penalty of twenty dollars.

SEC. 4495. Every steam vessel of the United States, in addition to having her name painted on her stern, shall have the same conspicuously placed in distinct, plain letters, of not less than six inches in length, on each outer side of the pilot house, if it has such, and in case the vessel has side-wheels, also on the outer side of each wheelhouse; and if any such steamboat be found without having her name placed as required, she shall be subject to the same penalty and forfeiture as provided by law in the case of a vessel of the United States found without having her name, and the name of the port to which she belongs, painted on her stern.

SEC. 4496. All collectors, or other chief officers of the customs, and all inspectors within the several districts, shall enforce the provisions of this Title against all steamers arriving and departing.

SEC. 4497. Every collector, or other chief officer of the customs, or inspector, who negligently or intentionally omits any duty under the preceding section, shall be liable to removal from office, and to a penalty of one hundred dollars for each offense, to be sued for in an action of debt.

SEC. 4498. No license, register, or enrollment shall be granted, nor any other papers be issued, by any collector or other chief officer of the customs, to any vessel propelled in whole or in part by steam, until he shall have satisfactory evidence that all the provisions of this Title have been fully complied with.

SEC. 4499. If any vessel propelled in whole or in part by steam be navigated without complying with the terms of this Title, the

* See section 5344, page 63

owner shall be liable to the United States in a penalty of five hundred dollars for each offense, one-half for the use of the informer, for which sum the vessel so navigated shall be liable, and may be seized and proceeded against by way of libel in any district court of the United States having jurisdiction of the offense.

SEC. 4500. The penalty for the violation of any provision of this Title, not otherwise specially provided for, shall be a fine of five hundred dollars, recoverable one-half for the use of the informer.

TITLE XLVIII.

REGULATION OF COMMERCE AND NAVIGATION.

CHAPTER FIVE.

NAVIGATION.

Sec. 4233. Rules for preventing collisions.	Sec. 4235. State regulations of pilots.
4234. Forfeiture of sailing vessels for omission of lights.	4236. Pilots on boundaries between States.
	4237. No discrimination in rates of pilotage.

*SEC. 4233. The following rules for preventing collisions on the water, shall be followed in the navigation of vessels of the Navy and of the mercantile marine of the United States:

STEAM AND SAIL VESSELS.

Rule one. Every steam vessel which is under sail, and not under steam, shall be considered a sail vessel; and every steam vessel which is under steam, whether under sail or not, shall be considered a steam vessel.

LIGHTS.

Rule two. The lights mentioned in the following rules, and no others, shall be carried in all weathers, between sunset and sunrise.

Rule three. All ocean-going steamers, and steamers carrying sail, shall, when under way, carry—

(A) At the foremast head a bright white light, of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles, and so constructed as to show a uniform and unbroken light over an arc of the horizon of twenty points of the compass, and so fixed as to throw the light ten points on each side of the vessel, namely, from right ahead to two points abaft of the beam on either side.

(B) On the starboard side, a green light, of such a character as to be visible on a dark night, with a clear atmosphere, a distance of at least two miles, and so constructed as to show a uniform and unbroken light over an arc of the horizon of ten points of the compass, and so fixed as to throw the light from right ahead to two points abaft the beam on the starboard side.

*Reenacted by act of Congress approved February 19, 1895. (See p. 77.)

(C) On the port side, a red light of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles, and so constructed as to show a uniform and unbroken light over an arc of the horizon of ten points of the compass, and so fixed as to throw the light from right ahead to two points abaft the beam on the port side.

The green and red lights shall be fitted with inboard screens, projecting at least three feet forward from the lights so as to prevent them from being seen across the bow.

Rule four. Steam vessels, when towing other vessels, shall carry two bright white masthead lights vertically, in addition to their side lights, so as to distinguish them from other steam vessels. Each of these masthead lights shall be of the same character and construction as the masthead lights prescribed by Rule three.

Rule five. All steam vessels, other than ocean-going steamers and steamers carrying sail, shall, when under way carry on the starboard and port sides lights of the same character and construction and in the same position as are prescribed for side lights by Rule three, except in the case provided in Rule six.

Rule six. River steamers navigating waters flowing into the Gulf of Mexico, and their tributaries, shall carry the following lights, namely: One red light on the outboard side of the port smoke pipe, and one green light on the outboard side of the starboard smoke pipe. Such lights shall show both forward and abeam on their respective sides.

Rule seven. All coasting steam vessels, and steam vessels other than ferryboats and vessels otherwise expressly provided for, navigating the bays, lakes, rivers, or other inland waters of the United States, except those mentioned in Rule six, shall carry the red and green lights, as prescribed for ocean-going steamers; and, in addition thereto, a central range of two white lights; the after light being carried at an elevation of at least fifteen feet above the light at the head of the vessel. The headlight shall be so constructed as to show a good light through twenty points of the compass, namely: From right ahead to two points abaft the beam on either side of the vessel; and the after light so as to show all around the horizon. The lights for ferryboats, barges and canal boats when in tow of steam vessels,* shall be regulated by such rules as the board of supervising inspectors of steam vessels shall prescribe.

Rule eight. Sail vessels, under way or being towed, shall carry the same lights as steam vessels under way, with the exception of the white masthead lights, which they shall never carry.

Rule nine. Whenever, as in case of small vessels during bad weather, the green and red lights can not be fixed, these lights shall be kept on deck, on their respective sides of the vessel, ready for instant exhibition, and shall, on the approach of or to

*As amended by act approved March 3, 1893

other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side. To make the use of these portable lights more certain and easy, they shall each be painted outside with the color of the light they respectively contain, and shall be provided with suitable screens.

Rule ten. All vessels, whether steam vessels or sail vessels, when at anchor in roadsteads or fairways, shall, between sunset and sunrise, exhibit where it can best be seen, but at a height not exceeding twenty feet above the hull, a white light in a globular lantern of eight inches in diameter, and so constructed as to show a clear, uniform, and unbroken light, visible all around the horizon, and at a distance of at least one mile.

Rule eleven. Sailing pilot vessels shall not carry the lights required for other sailing vessels, but shall carry a white light at the masthead, visible all around the horizon, and shall also exhibit a flare-up light every fifteen minutes.

Rule twelve. Coal boats, trading boats, produce boats, canal boats, oyster boats, fishing boats, rafts or other water craft, navigating any bay, harbor, or river, by hand power, horse power, sail, or by the current of the river, or which shall be anchored or moored in or near the channel or fairway of any bay, harbor, or river, shall carry one or more good white lights, which shall be placed in such manner as shall be prescribed by the board of supervising inspectors of steam vessels.*

Rule thirteen. Open boats shall not be required to carry the side lights required for other vessels, but shall, if they do not carry such lights, carry a lantern having a green slide on one side and a red slide on the other side; and, on the approach of or

*[Extract from the proceedings of the Board of Supervising Inspectors of Steam Vessels, at the thirty-ninth annual meeting, held at Washington, D. C., commencing January 21, 1891.]

At the meeting held February 3, the following report of the Joint Committee on Pilot Rules was adopted, amending the rule for lights on rafts as follows :

Resolved, That all coal boats, trading boats, produce boats, canal boats, oyster boats, fishing boats, and other water craft navigating any bay, harbor, or river, propelled by hand power, horse power, sail, or by the current of the river, or which shall be moored in or near the channel or fairway of any bay, harbor, or river, shall carry one bright white light forward, not less than six feet above the rail or deck.

Rafts of one crib and not more than two in length shall carry one bright white light on a pole not less than twelve feet high ; three or more cribs in length, shall carry one white light at each end of the raft at the same height. Boom rafts with cross binders towed ahead of steamers on the Mississippi and Ohio rivers,

to other vessels, such lantern shall be exhibited in sufficient time to prevent collision, and in such a manner that the green light shall not be seen on the port side, nor the red light on the star-board side. Open boats, when at anchor or stationary, shall exhibit a bright white light. They shall not, however, be prevented from using a flare-up, in addition, if considered expedient.

Rule fourteen. The exhibition of any light on board of a vessel of war of the United States may be suspended whenever, in the opinion of the Secretary of the Navy, the commander in chief of a squadron, or the commander of a vessel acting singly, the special character of the service may require it.

FOG SIGNALS.

Rule fifteen. Whenever there is a fog or thick weather, whether by day or night, fog signals shall be used as follows:

(A) Steam vessels under way shall sound a steam whistle placed before the funnel, not less than eight feet from the deck, at intervals of not more than one minute.

(B) Sail vessels under way shall sound a fog horn at intervals of not more than five minutes.

(C) Steam vessels and sail vessels, when not under way, shall sound a bell at intervals of not more than five minutes.

(D) Coal boats, trading boats, produce boats, canal boats, oyster boats, fishing boats, rafts, or other water craft, navigating any bay, harbor, or river, by hand power, horse power, sail, or by the current of the river, or anchored or moored in or near the channel or fairway of any bay, harbor, or river, and not in any port, shall sound a fog horn, or equivalent signal, which shall make a sound equal to a steam whistle, at intervals of not more than two minutes.

and other waters flowing into the Gulf of Mexico, and on the Red River of the North, shall carry a white light *twelve feet high* at the forward end of the raft, and one such light at each side midway between the forward and after end.

Rafts of more than one crib abreast shall carry one white light on each outside corner of the raft, making four lights in all. Bag or boom rafts navigating or anchored in the fairway of any bay, harbor, or river shall carry a white light at least twelve feet high at each end of the raft, and one of such lights on each side midway between the forward and after end.

Rowboats shall carry one white light two feet above the stem.

JAS. A. DUMONT,

Supervising Inspector-General,

President Board of Supervising Inspectors.

Approved, February 16, 1891.

A. B. NETTLETON,

Acting Secretary.

STEERING AND SAILING RULES.

Rule sixteen. If two sail vessels are meeting end on, or nearly end on, so as to involve risk of collision, the helms of both shall be put to port, so that each may pass on the port side of the other.

Rule seventeen. When two sail vessels are crossing so as to involve risk of collision, then, if they have the wind on different sides, the vessel with the wind on the port side shall keep out of the way of the vessel with the wind on the starboard side, except in the case in which the vessel with the wind on the port side is closehauled, and the other vessel free, in which case the latter vessel shall keep out of the way. But if they have the wind on the same side, or if one of them has the wind aft, the vessel which is to windward shall keep out of the way of the vessel which is to leeward.

Rule eighteen. If two vessels under steam are meeting end on, or nearly end on, so as to involve risk of collision, the helms of both shall be put to port, so that each may pass on the port side of the other.

Rule nineteen. If two vessels under steam are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way of the other.

Rule twenty. If two vessels, one of which is a sail vessel and the other a steam vessel, are proceeding in such direction as to involve risk of collision, the steam vessel shall keep out of the way of the sail vessel.

Rule twenty-one. Every steam vessel, when approaching another vessel, so as to involve risk of collision, shall slacken her speed, or, if necessary, stop and reverse; and every steam vessel shall, when in a fog, go at a moderate speed.

Rule twenty-two. Every vessel overtaking any other vessel shall keep out of the way of the last-mentioned vessel.

Rule twenty-three. Where, by rules seventeen, nineteen, twenty, and twenty-two, one of two vessels shall keep out of the way, the other shall keep her course, subject to the qualifications of Rule twenty-four.

Rule twenty-four. In construing and obeying these rules, due regard must be had to all dangers of navigation, and to any special circumstances which may exist in any particular case rendering a departure from them necessary in order to avoid immediate danger.

*SEC. 4234. Collectors, or other chief officers of the customs, shall require all sail vessels to be furnished with proper signal lights, and every such vessel shall, on the approach of any steam vessel during the nighttime, show a lighted torch upon that point or quarter to which such steam vessel shall be approaching.

* Repealed substantially by act of Congress, approved February 19, 1895. (See section 3 of that act, p. 71.)

Every such vessel that shall be navigated without complying with the provisions of this and the preceding section, shall be liable to a penalty of two hundred dollars, one-half to go to the informer; for which sum the vessel so navigated shall be liable, and may be seized and proceeded against by way of libel, in any district court of the United States having jurisdiction of the offense.

SEC. 4235. Until further provision is made by Congress, all pilots in the bays, inlets, rivers, harbors, and ports of the United States shall continue to be regulated in conformity with the existing laws of the States respectively wherein such pilots may be, or with such laws as the States may respectively enact for the purpose.

SEC. 4236. The master of any vessel coming into or going out of any port situate upon waters which are the boundary between two States, may employ any pilot duly licensed or authorized by the laws of either of the States bounded on such waters, to pilot the vessel to or from such port.

SEC. 4237. No regulations or provisions shall be adopted by any State which shall make any discrimination in the rate of pilotage or half-pilotage between vessels sailing between the ports of one State and vessels sailing between the ports of different States, or any discrimination against vessels propelled in whole or in part by steam, or against national vessels of the United States; and all existing regulations or provisions making any such discrimination are annulled and abrogated.

AN ACT To regulate navigation on the Great Lakes and their connecting and tributary waters.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following rules for preventing collisions shall be followed in the navigation of all public and private vessels of the United States upon the Great Lakes and their connecting and tributary waters as far east as Montreal:

STEAM AND SAIL VESSELS.

RULE 1. Every steam vessel which is under sail and not under steam, shall be considered a sail vessel; and every steam vessel which is under steam, whether under sail or not, shall be considered a steam vessel. The word steam vessel shall include any vessel propelled by machinery. A vessel is under way within the meaning of these rules when she is not at anchor or made fast to the shore or aground.

LIGHTS.

RULE 2. The lights mentioned in the following rules and no others shall be carried in all weathers from sunset to sunrise. The word visible in these rules when applied to lights shall mean visible on a dark night with a clear atmosphere.

RULE 3. Except in the cases hereinafter expressly provided for, a steam vessel when under way shall carry:

(a) On or in front of the foremast, or if a vessel without a foremast, then in the forepart of the vessel, at a height above the hull of not less than twenty feet, and if the beam of the vessel exceeds twenty feet, then at a height above the hull not less than such beam, so, however, that such height need not exceed forty feet, a bright white light so constructed as to show an unbroken light over an arc of the horizon of twenty points of the compass, so fixed as to throw the light ten points on each side of the vessel, namely, from right ahead to two points abaft the beam on either side, and of such character as to be visible at a distance of at least five miles.

(b) On the starboard side, a green light, so constructed as to throw an unbroken light over an arc of the horizon of ten points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the starboard side, and of such a character as to be visible at a distance of at least two miles.

(c) On the port side, a red light, so constructed as to show an unbroken light over an arc of the horizon of ten points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the port side, and of such a character as to be visible at a distance of at least two miles.

(d) The said green and red lights shall be fitted with inboard screens projecting at least three feet forward from the light, so as to prevent these lights from being seen across the bow.

(e) A steamer of over one hundred and fifty feet registered length shall also carry when under way an additional bright light similar in construction to that mentioned in subdivision (a), so fixed as to throw the light all around the horizon and of such character as to be visible at a distance of at least three miles. Such additional light shall be placed in line with the keel at least fifteen feet higher from the deck and more than seventy-five feet abaft the light mentioned in subdivision (a).

VESSELS TOWING.

RULE 4. A steam vessel having a tow other than a raft shall in addition to the forward bright light mentioned in subdivision (a) of rule three carry in a vertical line not less than six feet above or below that light a second bright light of the same construction and character and fixed and carried in the same manner as the forward bright light mentioned in said subdivision (a) of rule three.

Such steamer shall also carry a small bright light abaft the funnel or after mast for the tow to steer by, but such light shall not be visible forward of the beam.

RULE 5. A steam vessel having a raft in tow shall, instead of the forward lights mentioned in rule four, carry on or in front of the foremast, or if a vessel without a foremast then in the fore part of the vessel, at a height above the hull of not less than twenty feet, and if the beam of the vessel exceeds twenty feet, then at a height above the hull not less than such beam, so however that such height need not exceed forty feet, two bright lights in a horizontal line athwartships and not less than eight feet apart, each so fixed as to throw the light all around the horizon and of such character as to be visible at a distance of at least five miles. Such steamer shall also carry the small bright steering light aft, of the character and fixed as required in rule four.

RULE 6. A sailing vessel under way and any vessel being towed shall carry the side lights mentioned in rule three.

A vessel in tow shall also carry a small bright light aft, but such light shall not be visible forward of the beam.

RULE 7. The lights for tugs under thirty tons register whose principal business is harbor towing, and for boats navigating only on the River Saint Lawrence, also ferryboats, rafts, and canal boats, shall be regulated by rules which have been or may hereafter be prescribed by the Board of Supervising Inspectors of Steam Vessels.

RULE 8. Whenever, as in the case of small vessels under way during bad weather, the green and red side lights cannot be fixed, these lights shall be kept at hand lighted and ready for use, and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side, nor, if practicable, more than two points abaft the beam on their respective sides. To make the use of these portable lights more certain and easy, they shall each be painted outside with the color of the light they respectively contain, and shall be provided with suitable screens.

RULE 9. A vessel under one hundred and fifty feet registered length, when at anchor, shall carry forward, where it can best be seen, but at a height not exceeding twenty feet above the hull, a white light in a lantern constructed so as to show a clear, uniform, and unbroken light, visible all around the horizon, at a distance of at least one mile.

A vessel of one hundred and fifty feet or upward in registered length, when at anchor, shall carry in the forward part of the vessel, at a height of not less than twenty and not exceeding forty feet above the hull, one such light, and at or near the stern of the vessel, and at such a height that it shall be not less than fifteen feet lower than the forward light, another such light.

RULE 10. Produce boats, canal boats, fishing boats, rafts, or other water craft navigating any bay, harbor, or river by hand power, horse power, sail, or by the current of the river, or which shall be anchored or moored in or near the channel or fairway of any bay, harbor, or river, and not otherwise provided for in these rules, shall carry one or more good white lights, which shall be placed in such manner as shall be prescribed by the Board of Supervising Inspectors of Steam Vessels.

RULE 11. Open boats shall not be obliged to carry the side lights required for other vessels, but shall, if they do not carry such lights, carry a lantern having a green slide on one side and a red slide on the other side; and on the approach of or to other vessels, such lantern shall be exhibited in sufficient time to prevent collision, and in such a manner that the green light shall not be seen on the port side, nor the red light on the starboard side. Open boats, when at anchor or stationary, shall exhibit a bright white light. They shall not, however, be prevented from using a flare-up in addition if considered expedient.

RULE 12. Sailing vessels shall at all times, on the approach of any steamer during the nighttime, show a lighted torch upon that point or quarter to which such steamer shall be approaching.

RULE 13. The exhibition of any light on board a vessel of war or revenue cutter of the United States may be suspended whenever, in the opinion of the Secretary of the Navy, the commander in chief of a squadron, or the commander of a vessel acting singly, the special character of the service may require it.

FOG SIGNALS.

RULE 14. A steam vessel shall be provided with an efficient whistle, sounded by steam or by some substitute for steam, placed before the funnel not less than eight feet from the deck, or in such other place as the local inspectors of steam vessels shall determine, and of such character as to be heard in ordinary weather at a distance of at least two miles, and with an efficient bell, and it is hereby made the duty of the United States local inspectors of steam vessels when inspecting the same to require each steamer to be furnished with such whistle and bell. A sailing vessel shall be provided with an efficient fog horn and with an efficient bell.

Whenever there is thick weather by reason of fog, mist, falling snow, heavy rainstorms, or other causes, whether by day or by night, fog signals shall be used as follows:

(a) A steam vessel under way, excepting only a steam vessel with raft in tow, shall sound at intervals of not more than one minute three distinct blasts of her whistle.

(b) Every vessel in tow of another vessel shall, at intervals of one minute, sound four bells on a good and efficient and properly placed bell as follows: By striking the bell twice in quick succession, followed by a little longer interval, and then again

striking twice in quick succession (in the manner in which four bells is struck in indicating time).

(c) A steamer with a raft in tow shall sound at intervals of not more than one minute a screeching or Modoc whistle for from three to five seconds.

(d) A sailing vessel under way and not in tow shall sound at intervals of not more than one minute—

If on the starboard tack with wind forward of abeam, one blast of her fog horn :

If on the port tack with wind forward of the beam, two blasts of her fog horn ;

If she has the wind abaft the beam on either side, three blasts of her fog horn.

(e) Any vessel at anchor and any vessel aground in or near a channel or fairway shall at intervals of not more than two minutes ring the bell rapidly for three to five seconds.

(f) Vessels of less than ten tons registered tonnage, not being steam vessels, shall not be obliged to give the above-mentioned signals, but if they do not they shall make some other efficient sound signal at intervals of not more than one minute.

(g) Produce boats, fishing boats, rafts, or other water craft navigating by hand power or by the current of the river, or anchored or moored in or near the channel or fairway and not in any port, and not otherwise provided for in these rules, shall sound a fog horn, or equivalents signal, at intervals of not more than one minute.

RULE 15. Every vessel shall, in thick weather, by reason of fog, mist, falling snow, heavy rain storms, or other causes, go at moderate speed. A steam vessel hearing, apparently not more than four points from right ahead, the fog signal of another vessel shall at once reduce her speed to bare steerageway, and navigate with caution until the vessels shall have passed each other.

STEERING AND SAILING RULES

SAILING VESSELS.

RULE 16. When two sailing vessels are approaching one another so as to involve risk of collision one of them shall keep out of the way of the other, as follows, namely :

(a) A vessel which is running free shall keep out of the way of a vessel which is closehauled.

(b) A vessel which is closehauled on the port tack shall keep out of the way of a vessel which is closehauled on the starboard tack.

(c) When both are running free, with the wind on different sides, the vessel which has the wind on the port side shall keep out of the way of the other.

(d) When they are running free, with the wind on the same side, the vessel which is to windward shall keep out of the way of the vessel which is to leeward.

STEAM VESSELS.

RULE 17. When two steam vessels are meeting end on, or nearly end on, so as to involve risk of collision each shall alter her course to starboard, so that each shall pass on the port side of the other.

RULE 18. When two steam vessels are crossing so as to involve risk of collision the vessel which has the other on her own starboard side shall keep out of the way of the other.

RULE 19. When a steam vessel and a sailing vessel are proceeding in such directions as to involve risk of collision the steam vessel shall keep out of the way of the sailing vessel.

RULE 20. Where, by any of the rules herein prescribed, one of two vessels shall keep out of the way, the other shall keep her course and speed.

RULE 21. Every steam vessel which is directed by these rules to keep out of the way of another vessel shall, on approaching her, if necessary, slacken her speed or stop or reverse.

RULE 22. Notwithstanding anything contained in these rules every vessel overtaking any other shall keep out of the way of the overtaken vessel.

RULE 23. In all weathers every steam vessel under way in taking any course authorized or required by these rules shall indicate that course by the following signals on her whistle, to be accompanied whenever required by corresponding alteration of her helm; and every steam vessel receiving a signal from another shall promptly respond with the same signal or, as provided in Rule Twenty-six:

One blast to mean, "I am directing my course to starboard."

Two blasts to mean, "I am directing my course to port." But the giving or answering signals by a vessel required to keep her course shall not vary the duties and obligations of the respective vessels.

RULE 24. That in all narrow channels where there is a current, and in the rivers Saint Mary, Saint Clair, Detroit, Niagara, and Saint Lawrence, when two steamers are meeting, the descending steamer shall have the right of way, and shall, before the vessels shall have arrived within the distance of one-half mile of each other, give the signal necessary to indicate which side she elects to take.

RULE 25. In all channels less than five hundred feet in width, no steam vessel shall pass another going in the same direction unless the steam vessel ahead be disabled or signify her willingness that the steam vessel astern shall pass, when the steam vessel astern may pass, subject, however, to the other rules applicable to such a situation. And when steam vessels proceeding in opposite directions are about to meet in such channels, both such vessels shall be slowed down to a moderate speed, according to the circumstances.

RULE 26. If the pilot of a steam vessel to which a passing signal is sounded deems it unsafe to accept and assent to said signal, he shall not sound a cross signal; but in that case, and in every case where the pilot of one steamer fails to understand the course or intention of an approaching steamer, whether from signals being given or answered erroneously, or from other causes, the pilot of such steamer so receiving the first passing signal, or the pilot so in doubt, shall sound several short and rapid blasts of the whistle; and if the vessel shall have approached within half a mile of each other both shall reduce their speed to bare steerageway, and, if necessary, stop and reverse.

RULE 27. In obeying and construing these rules due regard shall be had to all dangers of navigation and collision and to any special circumstances which may render a departure from the above rules necessary in order to avoid immediate danger.

RULE 28. Nothing in these rules shall exonerate any vessel, or the owner or master or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper lookout, or of a neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

SEC. 2. That a fine, not exceeding two hundred dollars, may be imposed for the violation of any of the provisions of this Act. The vessel shall be liable for the said penalty, and may be seized and proceeded against, by way of libel, in the district court of the United States for any district within which such vessel may be found.

SEC. 3. That the Secretary of the Treasury of the United States shall have authority to establish all necessary regulations, not inconsistent with the provisions of this Act, required to carry the same into effect.

The Board of Supervising Inspectors of the United States shall have authority to establish such regulations to be observed by all steam vessels in passing each other, not inconsistent with the provisions of this Act, as they shall from time to time deem necessary; and all regulations adopted by the said Board of Supervising Inspectors under the authority of this Act, when approved by the Secretary of the Treasury, shall have the force of law. Two printed copies of any such regulations for passing, signed by them, shall be furnished to each steam vessel, and shall at all times be kept posted up in conspicuous places on board.

SEC. 4. That all laws or parts of laws, so far as applicable to the navigation of the Great Lakes and their connecting and tributary waters as far east as Montreal, inconsistent with the foregoing rules are hereby repealed.

SEC. 5. That this Act shall take effect on and after March first, eighteen hundred and ninety-five.

Approved, February 8, 1895.

TITLE XLVIII.

CHAPTER SIX.

TRANSPORTATION OF PASSENGERS AND MERCHANDISE.

Sec.	Sec.
4278. Transportation of nitroglycerine.	4284. General average of losses.
4279. Packing and marking nitroglycerine.	4285. Transfer of interest of owner to trustee.
4280. Regulation by States of traffic in nitroglycerine.	4286. When charterer is deemed owner.
4281. Liability of masters, etc., as carriers.	4287. Remedies reserved.
4282. Loss by fire.	4288. Shipping inflammable materials.
4283. Liability of owner not to exceed his interest.	4289. Exception to limitation of liability.

SEC. 4252. (Sections 4252 to 4277, inclusive, of this Title repealed by act approved August 2, 1882.) (See pp. 52-59.)

* SEC. 4278. It shall not be lawful to transport, carry, or convey, ship, deliver on board, or cause to be delivered on board, the substance or article known or designated as nitroglycerine, or glynoil oil, nitroileum or blasting oil, or nitrated oil, or powder mixed with any such oil, or fiber saturated with any such article or substance, upon or in any vessel or vehicle used or employed in transporting passengers by land or water between a place in any foreign country and a place within the limits of any State, Territory, or district of the United States, or between a place in one State, Territory, or district of the United States and a place in any other State, Territory, or district thereof.

SEC. 4279. It shall not be lawful to ship, send, or forward any quantity of the substances or articles named in the preceding section, or to transport, convey, or carry the same by a vessel or vehicle of any description, upon land or water, between a place in a foreign country and a place within the United States, or between a place in one State, Territory, or district of the United States and a place in any other State, Territory, or district thereof, unless the same shall be securely inclosed, deposited, or packed in a metallic vessel surrounded by plaster of Paris, or other material that will be nonexplosive when saturated with such oil or substance, and separate from all other substances, and the outside of the package containing the same to be marked, printed, or labeled in a conspicuous manner with the words "Nitroglycerine, dangerous."

* SEC. 4280. The two preceding sections shall not be so con-

* See sections 4472, 5353-5355, pages 29, 63, 64.

strued as to prevent any State, Territory, district, city, or town within the United States from regulating or from prohibiting the traffic in or transportation of those substances, between persons or places lying or being within their respective territorial limits, or from prohibiting the introduction thereof into such limits, for sale, use, or consumption therein.

SEC. 4281. If any shipper of platina, gold, gold dust, silver, bullion, or other precious metals, coins, jewelry, bills of any bank or public body, diamonds, or other precious stones, or any gold or silver in a manufactured or unmanufactured state, watches, clocks, or timepieces of any description, trinkets, orders, notes, or securities for payment of money, stamps, maps, writings, title deeds, printing, engravings, pictures, gold or silver plate or plated articles, glass, china, silks in a manufactured or unmanufactured state, and whether wrought up or not wrought up with any other material, furs, or lace, or any of them contained in any parcel, or package, or trunk, shall lade the same as freight or baggage, on any vessel, without at the time of such lading giving to the master, clerk, agent, or owner of such vessel receiving the same a written notice of the true character and value thereof, and having the same entered on the bill of lading therefor, the master and owner of such vessel shall not be liable as carriers thereof in any form or manner; nor shall any such master or owner be liable for any such goods beyond the value and according to the character thereof so notified and entered.

* SEC. 4282. No owner of any vessel shall be liable to answer for or make good to any person any loss or damage which may happen to any merchandise whatsoever, which shall be shipped, taken in, or put on board any such vessel, by reason or by means of any fire happening to or on board the vessel, unless such fire is caused by the design or neglect of such owner.

SEC. 4283. The liability of the owner of any vessel, for any embezzlement, loss, or destruction, by any person, of any property, goods, or merchandise shipped or put on board of such vessel, or for any loss, damage, or injury by collision, or for any act, matter, or thing lost, damage, or forfeiture, done, occasioned, or incurred, without the privity or knowledge of such owner or owners, shall in no case exceed the amount or value of the interest of such owner in such vessel and her freight then pending.

SEC. 4284. Whenever any such embezzlement, loss, or destruction is suffered by several freighters or owners of goods, wares, merchandise, or any property whatever, on the same voyage, and the whole value of the vessel, and her freight for the voyage, is not sufficient to make compensation to each of them, they shall receive compensation from the owner of the vessel in proportion to their respective losses; and for that purpose the freighters and owners of the property, and the owner of the vessel, or any

* See sections 5353-5355, pages 63, 64.

of them, may take the appropriate proceedings in any court, for the purpose of apportioning the sum for which the owner of the vessel may be liable among the parties entitled thereto.

SEC. 4285. It shall be deemed a sufficient compliance on the part of such owner with the requirements of this Title relating to his liability for any embezzlement, loss, or destruction of any property, goods, or merchandise, if he shall transfer his interest in such vessel and freight, for the benefit of such claimants, to a trustee, to be appointed by any court of competent jurisdiction, to act as such trustee for the person who may prove to be legally entitled thereto; from and after which transfer all claims and proceedings against the owner shall cease.

SEC. 4286. The charterer of any vessel, in case he shall man, victual, and navigate such vessel at his own expense, or by his own procurement, shall be deemed the owner of such vessel within the meaning of the provisions of this Title relating to the limitation of the liability of the owners of vessels; and such vessel, when so chartered, shall be liable in the same manner as if navigated by the owner thereof.

SEC. 4287. Nothing in the five preceding sections shall be construed to take away or affect the remedy to which any party may be entitled, against the master, officers, or seamen, for or on account of any embezzlement, injury, loss, or destruction of merchandise, or property, put on board any vessel, or on account of any negligence, fraud, or other malversation of such master, officers, or seamen, respectively, nor to lessen or take away any responsibility to which any master or seaman of any vessel may by law be liable, notwithstanding such master or seaman may be an owner or part owner of the vessel.

SEC. 4288. Any person shipping oil of vitriol, unslaked lime, inflammable matches, or gunpowder, in a vessel taking cargo for divers persons on freight, without delivering, at the time of shipment, a note in writing, expressing the nature and character of such merchandise, to the master, mate, officer, or person in charge of the lading of the vessel, shall be liable to the United States in a penalty of one thousand dollars. But this section shall not apply to any vessel of any description whatsoever used in rivers or inland navigation.

*SEC. 4289. The provisions of the seven preceding sections, and of section eighteen of an act entitled 'An act to remove certain burdens on the American merchant marine and encourage the American foreign carrying trade, and for other purposes,' approved June twenty-sixth, eighteen hundred and eighty-four, relating to the limitations of the liability of the owners of vessels, shall apply to all seagoing vessels, and also to all vessels used on lakes or rivers or in inland navigation, including canal boats, barges, and lighters."

* Amended June 19, 1886.

AN ACT to regulate the carriage of passengers by sea.

[Substituted for sections 4252 to 4277, Revised Statutes, repealed by act approved August 2, 1882.]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall not be lawful for the master of a steamship or other vessel whereon emigrant passengers, or passengers other than cabin passengers, have been taken at any port or place in a foreign country or dominion (ports and places in foreign territory contiguous to the United States excepted) to bring such vessel and passengers to any port or place in the United States unless the compartments, spaces and accommodations hereinafter mentioned have been provided, allotted, maintained, and used for and by such passengers during the entire voyage; that is to say, in a steamship, the compartments or spaces, unobstructed by cargo, stores, or goods, shall be of sufficient dimensions to allow for each and every passenger carried or brought therein one hundred cubic feet, if the compartment or space is located on the main deck or on the first deck next below the main deck of the vessel, and one hundred and twenty cubic feet for each passenger carried or brought therein if the compartment or space is located on the second deck below the main deck of the vessel; and it shall not be lawful to carry or bring passengers on any deck other than the decks above mentioned. And in sailing vessels such passengers shall be carried or brought only on the deck (not being an orlop deck) that is next below the main deck of the vessel, or in a poop or deck house constructed on the main deck; and the compartment or space, unobstructed by cargo, stores, or goods, shall be of sufficient dimensions to allow one hundred and ten cubic feet for each and every passenger brought therein. And such passengers shall not be carried or brought in any between decks, nor in any compartment, space, poop, or deck house, the height of which from deck to deck is less than six feet. In computing the number of such passengers carried or brought in any vessel, children under one year of age shall not be included, and two children between one and eight years of age shall be counted as one passenger; and any person brought in such vessel who shall have been, during the voyage, taken from any other vessel wrecked or in distress on the high seas, or have been picked up at sea from any boat, raft, or otherwise, shall not be included in such computation. The master of a vessel coming to a port or place in the United States in violation of either of the provisions of this section shall be deemed guilty of a misdemeanor; and if the number of passengers other than cabin passengers carried or brought in the vessel, or in any compartment, space, poop, or deck house thereof, is greater than the number allowed to be carried or brought therein, respectively, as hereinbefore prescribed, the said master shall be fined fifty

dollars for each and every passenger in excess of the proper number, and may also be imprisoned not exceeding six months.

SEC. 2. That in every such steamship or other vessel there shall be a sufficient number of berths for the proper accommodation, as hereinafter provided, of all such passengers. There shall not be on any deck nor in any compartment or space occupied by such passengers more than two tiers of berths. The berths shall be properly constructed, and be separated from each other by partitions, as berths ordinarily are separated, and each berth shall be at least two feet in width and six feet in length; and the interval between the floor or lowest part of the lower tier of berths and the deck beneath them shall not be less than six inches, nor the interval between each tier of berths, and the interval between the uppermost tier and the deck above it, less than two feet six inches; and each berth shall be occupied by not more than one passenger over eight years of age; but double berths of twice the above-mentioned width may be provided, each double berth to be occupied by no more and by none other than two women, or by one woman and two children under the age of eight years, or by husband and wife, or by a man and two of his own children under the age of eight years, or by two men personally acquainted with each other. All the male passengers upward of fourteen years of age who do not occupy berths with their wives shall be berthed in the fore part of the vessel, in a compartment divided off from the space or spaces appropriated to the other passengers by a substantial and well-secured bulkhead; and unmarried female passengers shall be berthed in a compartment separated from the spaces occupied by other passengers by a substantial and well-constructed bulkhead, the opening or communication from which to an adjoining passenger space shall be so constructed that it can be closed and secured. Families, however, shall not be separated except with their consent. Each berth shall be numbered serially, on the outside berth board, according to the number of passengers that may lawfully occupy the berth; and the berths occupied by such passengers shall not be removed or taken down until the expiration of twelve hours from the time of entry, unless previously inspected within a shorter period. For any violation of either of the provisions of this section the master of the vessel shall be liable to a fine of five dollars for each passenger carried or brought on the vessel.

SEC. 3. That every such steamship or other vessel shall have adequate provision for affording light and air to the passenger decks and to the compartments and spaces occupied by such passengers, and with adequate means and appliances for ventilating the said compartments and spaces. To compartments having sufficient space for fifty or more of such passengers at least two ventilators, each not less than twelve inches in diameter, shall be provided, one of which ventilators shall be inserted in the

forward part of the compartment, and the other in the afterpart thereof, and shall be so constructed as to ventilate the compartment; and additional ventilators shall be provided for each compartment in the proportion of two ventilators for each additional fifty of such passengers carried or brought in the compartment. All ventilators shall be carried at least six feet above the uppermost deck of the vessel, and shall be of the most approved form and construction. In any steamship the ventilating apparatus provided, or any method of ventilation adopted thereon, which has been approved by the proper emigration officers at the port or place from which said vessel was cleared, shall be deemed a compliance with the foregoing provisions; and in all vessels carrying or bringing such passengers there shall be properly constructed hatchways over the compartments or spaces occupied by such passengers, which hatchway shall be properly covered with houses or booby hatches, and the combings or sills of which shall rise at least six inches above the deck; and there shall be proper companion ways or ladders from each hatchway leading to the compartments or spaces occupied by such passengers; and the said companion ways or ladders shall be securely constructed, and be provided with hand rails or strong rope, and, when the weather will permit, such passengers shall have the use of each hatchway situated over the compartments or spaces appropriated to their use; and every vessel carrying or bringing such passengers shall have a properly located and constructed caboose and cooking range, or other cooking apparatus, the dimensions and capacity of which shall be sufficient to provide for properly cooking and preparing the food of all such passengers. In every vessel carrying or bringing such passengers there shall be at least two water-closets or privies, and an additional water-closet or privy for every one hundred male passengers on board, for the exclusive use of such male passengers, and an additional water-closet or privy for every fifty female passengers on board, for the exclusive use of the female passengers and young children on board. The aforesaid water-closets and privies shall be properly inclosed and located on each side of the vessel, and shall be separated from passengers' spaces by substantial and properly constructed partitions or bulkheads; and the water-closets and privies shall be kept and maintained in a serviceable and cleanly condition throughout the voyage. For any violation of either of the provisions of this section, or for any neglect to conform to the requirements thereof, the master of the vessel shall be liable to a penalty not exceeding two hundred and fifty dollars.

SEC. 4. An allowance of good, wholesome, and proper food, with a reasonable quantity of fresh provisions, which food shall be equal in value to one and a half navy rations of the United States, and of fresh water, not less than four quarts per day, shall be furnished each of such passengers. Three meals shall be served

daily, at regular and stated hours, of which hours sufficient notice shall be given. If any such passengers shall at any time during the voyage be put on short allowance for food and water, the master of the vessel shall pay to each passenger three dollars for each and every day the passenger may have been put on short allowance, except in case of accidents, where the captain is obliged to put the passengers on short allowance. Mothers with infants and young children shall be furnished the necessary quantity of wholesome milk or condensed milk for the sustenance of the latter. Tables and seats shall be provided for the use of passengers at regular meals. And for every willful violation of any of the provisions of this section the master of the vessel shall be deemed guilty of a misdemeanor and shall be fined not more than five hundred dollars, and be imprisoned for a term not exceeding six months. The enforcement of this penalty, however, shall not affect the civil responsibility of the master and owners of the vessel to such passengers as may have suffered from any negligence, breach of contract, or default on the part of such master and owners.

SEC. 5. That in every such steamship or other vessel there shall be properly built and secured, or divided off from other spaces, two compartments or spaces to be used exclusively as hospitals for such passengers, one for men and the other for women. The hospitals shall be located in a space not below the deck next below the main deck of the vessel. The hospital spaces shall in no cases be less than in the proportion of eighteen clear superficial feet for every fifty such passengers who are carried or brought on the vessel, and such hospitals shall be supplied with proper beds, bedding, and utensils, and be kept so supplied throughout the voyage. And every steamship or other vessel carrying or bringing emigrant passengers, or passengers other than cabin passengers, exceeding fifty in number, shall carry a duly qualified and competent surgeon or medical practitioner, who shall be rated as such in the ship's articles, and who shall be provided with surgical instruments, medical comforts, and medicines proper and necessary for diseases and accidents incident to sea voyages, and for the proper medical treatment of such passengers during the voyage, and with such articles of food and nourishment as may be proper and necessary for preserving the health of infants and young children; and the services of such surgeon or medical practitioner shall be promptly given, in any case of sickness or disease, to any of the passengers, or to any infant or young child of any such passengers, who may need his services. For a violation of either of the provisions of this section the master of the vessel shall be liable to a penalty not exceeding two hundred and fifty dollars.

SEC. 6. That the master of every such steamship or other vessel is authorized to maintain good discipline and such habits of cleanliness among such passengers as will tend to the preserva-

tion and promotion of health, and to that end he shall cause such regulations as he may adopt for such purpose to be posted up on board the vessel, in a place or places accessible to such passengers, and shall keep the same so posted up during the voyage. The said master shall cause the compartments and spaces provided for, or occupied by, such passengers to be kept at all times in a clean and healthy condition, and to be, as often as may be necessary, disinfected with chloride of lime, or by some other equally efficient disinfectant. Whenever the state of the weather will permit, such passengers, and their bedding shall be mustered on deck, and a clear and sufficient space on the main or any upper deck of the vessel shall be set apart, and so kept, for the use and exercise of such passengers during the voyage. For each neglect or violation of any of the provisions of this section the master of the vessel shall be liable to a penalty not exceeding two hundred and fifty dollars.

SEC. 7. That neither the officers, seamen, nor other persons employed on any such steamship or other vessel shall visit or frequent any part of the vessel provided or assigned to the use of such passengers, except by the direction or permission of the master of such vessel, first made or given for such purpose; and every officer, seaman, or other person employed on board of such vessel who shall violate the provisions of this section shall be deemed guilty of a misdemeanor, and may be fined not exceeding one hundred dollars, and be imprisoned not exceeding twenty days, for each violation; and the master of such vessel who directs or permits any officer, seaman, or other person employed on board the vessel to visit or frequent any part of the vessel provided for or assigned to the use of such passengers, or the compartments or spaces occupied by such passengers, except for the purpose of doing or performing some necessary act or duty as an officer, seaman, or other person employed on board of the vessel, shall be deemed guilty of a misdemeanor, and may be fined not more than one hundred dollars for each time he directs or permits the provisions of this section to be violated. A copy of this section, written or printed in the language or principal languages of the passengers on board, shall, by or under the direction of the master of the vessel, be posted in a conspicuous place on the fore-castle and in the several parts of the vessel provided and assigned for the use of such passengers, and in each compartment or space occupied by such passengers, and the same shall be kept so posted during the voyage; and if the said master neglects so to do, he shall be deemed guilty of a misdemeanor, and shall be fined not more than one hundred dollars.

SEC. 8. That it shall not be lawful to take, carry, or have on board of any such steamship or other vessel any nitroglycerine, dynamite, or any other explosive article or compound, nor any vitriol or like acids, nor gunpowder, except for the ship's use, nor any article or number of articles, whether as a cargo or ballast,

which by reason of the nature or quantity or mode of storage thereof, shall, either singly or collectively, be likely to endanger the health or lives of the passengers or the safety of the vessel, and horses, cattle, or other animals taken on board of or brought in any such vessel shall not be carried on any deck below the deck on which passengers are berthed, nor in any compartment in which passengers are berthed, nor in any adjoining compartment except in a vessel built of iron, and of which the compartments are divided off by water-tight bulkheads extending to the upper deck. For every violation of any of the provisions of this section the master of the vessel shall be deemed guilty of a misdemeanor, and shall be fined not exceeding one thousand dollars, and be imprisoned for a period not exceeding one year.

SEC. 9. That it shall not be lawful for the master of any such steamship or other vessel, not in distress, after the arrival of the vessel within any collection district of the United States, to allow any person or persons, except a pilot, officer of the customs, or health officer, agents of the vessel, and consuls to come on board of the vessel, or to leave the vessel, until the vessel has been taken in charge by an officer of the customs, nor, after charge so taken, without leave of such officer, until all the passengers, with their baggage, have been duly landed from the vessel; and on the arrival of any such steamship or other vessel within any collection district of the United States, the master thereof shall deliver to the officer of customs who first comes on board the vessel and makes demand therefor a correct list, signed by the master, of all the passengers taken on board the vessel at any foreign port or place, specifying separately the names of the cabin passengers, their age, sex, calling, and the country of which they are citizens, and the number of pieces of baggage belonging to each passenger, and also the name, age, sex, calling, and native country of each emigrant passenger, or passengers other than cabin passengers, and their intended destination or location, and the number of pieces of baggage belonging to each passenger, and also the location of the compartment or space occupied by each of such passengers during the voyage; and if any of such passengers died on the voyage, the said list shall specify the name, age, and cause of death of each deceased passenger; and a duplicate of the aforesaid list of passengers, verified by the oath of the master, shall, with the manifest of the cargo, be delivered by the master to the collector of customs on the entry of the vessel. For a violation of either of the provisions of this section, or for permitting or neglecting to prevent a violation thereof, the master of the vessel shall be liable to a fine not exceeding one thousand dollars.

SEC. 10. That in case there shall have occurred on board any such steamship or other vessel any death among such passengers during the voyage, the master or consignees of the vessel shall, within forty-eight hours after the arrival of the vessel within a

collection district of the United States, or within twenty-four hours after the entry of the vessel, pay to the collector of customs of such district the sum of ten dollars for each and every such passenger above the age of eight years who shall have died on the voyage by natural disease; and the master or consignees of any vessel who neglect or refuse to pay such collector, within the time hereinbefore prescribed, the sums of money aforesaid, shall be liable to a penalty of fifty dollars in addition to the sum required to be paid as aforesaid for each passenger whose death occurred on the voyage. All sums of money paid to any collector under the provisions of this section shall be by him paid into the Treasury of the United States in such manner and under such regulations as shall be prescribed by the Secretary of the Treasury.

SEC. 11. That the collector of customs of the collection district within which, or the surveyor of the port at which, any such steamship or other vessel arrives, shall direct an inspector or other officer of the customs to make an examination of the vessel, and to admeasure the compartments or spaces occupied by the emigrant passengers, or passengers other than cabin passengers, during the voyage; and such measurements shall be made in the manner provided by law for admeasuring vessels for tonnage; and to compare the number of such passengers found on board with the list of such passengers furnished by the master to the customs officer; and the said inspector or other officer shall make a report to the aforesaid collector or surveyor, stating the port of departure, the time of sailing, the length of the voyage, the ventilation, the number of such passengers on board the vessel, and their native country, respectively; the cubic quantity of each compartment or space, and the number of berths and passengers in each space, the kind and quality of the food furnished to such passengers on the voyage; the number of deaths, and the age and sex of those who died during the voyage, and of what disease; and in case there was any unusual sickness or mortality during the voyage, to report whether the same was caused by any neglect or violation of the provisions of this act, or by the want of proper care against disease by the master or owners of the vessel; and the said reports shall be forwarded to the Secretary of the Treasury at such times and in such manner as he shall direct.

SEC. 12. That the provisions of this act shall apply to every steamship or other vessel whereon emigrant passengers, or passengers other than cabin passengers, are taken on board at a port or place in the United States for conveyance to any port or place in a foreign country except foreign territory contiguous to the United States, and shall also apply to any vessel whereon such passengers are taken on board at any port or place of the United States on the Atlantic Ocean or its tributaries for conveyance to a port or place on the Pacific Ocean or its tributaries, or *vice versa*; and whether the voyage of said vessel is to be continuous

from port to port or such passengers are to be conveyed from port to port in part by the way of any overland route through Mexico or Central America; and the said collector of customs may direct an examination of the vessel to be made by an inspector or other officer of the customs, who shall make the examination and report whether the provisions of this act have been complied with in respect to such vessel, and the said collector is authorized to withhold the clearance of such vessel until the coming in of such report; and if the said report shall show that any of the provisions of this act have not been complied with, the collector is authorized and directed to withhold the clearance of such vessel until the said provisions are complied with; and if any such vessel leaves the aforesaid port or place without having been duly cleared by the collector of customs, the master shall be deemed guilty of a misdemeanor, and may be fined not exceeding one thousand dollars, and be imprisoned not exceeding one year, and the vessel shall be liable to seizure and forfeiture.

SEC. 13. That the amount of the several fines and penalties imposed by any section of this act upon the master of any steamship or other vessel carrying or bringing emigrant passengers, or passengers other than cabin passengers, for any violation of the provisions of this act, shall be liens upon such vessel, and such vessel may be libeled therefor in any circuit or district court of the United States where such vessel shall arrive or depart.

SEC. 14. That this act shall come into operation and take effect ninety days after the passage of this act; and sections forty-two hundred and fifty-two to forty-two hundred and seventy-seven, inclusive, of the Revised Statutes of the United States are, from and after said date, repealed; and this act may be cited for all purposes as "The Passenger Act, eighteen hundred and eighty-two."

Approved August 2, 1882.

TITLE XLVIII.

CHAPTER NINE.

SUMMARY TRIAL FOR CERTAIN OFFENSES AGAINST NAVIGATION LAWS.

Sec. 4305. Recovery of penalties and forfeitures under navigation laws.

SEC. 4305. All the penalties and forfeitures which may be incurred for offenses against this Title may be sued for, prosecuted, and recovered in such court, and be disposed of in such manner, as any penalties and forfeitures which may be incurred for offenses against the laws relating to the collection of duties, except when otherwise expressly prescribed.

TITLE LXVIII.

REMISSION OF FINES, PENALTIES, AND FORFEITURES.

Sec.
5294. Remission of penalties under steamboat laws.

Sec.
5295. Officers and informers may be witnesses.

SEC. 5294. The Secretary of the Treasury may, upon application therefor, remit or mitigate any fine or penalty provided for in laws relating to steam vessels, or discontinue any prosecution to recover penalties denounced in such laws, excepting the penalty of imprisonment, or of removal from office, upon such terms as he, in his discretion, shall think proper; and all rights granted to informers by such laws shall be held subject to the Secretary's power of remission, except in cases where the claims of any informer to the share of any penalty shall have been determined by a court of competent jurisdiction prior to the application for the remission of the penalty; and the Secretary shall have authority to ascertain the facts upon all such applications, in such manner and under such regulations as he may deem proper.

SEC. 5295. Any officer or other person entitled to or interested in a part or share of any fine, penalty, or forfeiture incurred under any law of the United States, may be examined as a witness in any of the proceedings for the recovery of such fine, penalty, or forfeiture by either of the parties thereto, and such examination shall not deprive such witness of his share or interest in such fine, penalty, or forfeiture.

TITLE LXX.

CRIMES.

CHAPTER THREE.

CRIMES ARISING WITHIN THE MARITIME AND TERRITORIAL JURISDICTION OF THE UNITED STATES.

Sec. 5344. Officers and owners of steamboats through whose misconduct, etc., life is lost.	Sec. 5354. Death caused by such transportation deemed manslaughter.
5347. Maltreatment of crew by officers of vessels.	5355. Transportation of nitroglycerine, etc., how allowed.
5353. Transportation of nitroglycerine, etc., in passenger conveyances.	

SEC. 5344. Every captain, engineer, pilot, or other person employed on any steamboat or vessel, by whose misconduct, negligence, or inattention to his duties on such vessel, the life of any person is destroyed, and every owner, inspector, or other public officer, through whose fraud, connivance, misconduct, or violation of law, the life of any person is destroyed, shall be deemed guilty of manslaughter, and, upon conviction thereof before any circuit court of the United States, shall be sentenced to confinement at hard labor for a period of not more than ten years.

SEC. 5347. Every master or other officer of any American vessel on the high seas, or on any other waters within the admiralty or maritime jurisdiction of the United States, who, from malice, hatred, or revenge, and without justifiable cause, beats, wounds, or imprisons any of the crew of such vessel, or withholds from them suitable food and nourishment, or inflicts upon them any cruel and unusual punishment, shall be punished by a fine of not more than one thousand dollars, or by imprisonment not more than five years, or by both.

* SEC. 5353. Every person who knowingly transports, or delivers or causes to be delivered, nitroglycerine, nitrooleum or blasting oil, or nitrated oil, or powder mixed with any such oil, or fiber saturated with any such substance or article, on board any vessel or vehicle whatever employed in conveying passengers by land or water between any place in a foreign country and any place within the United States, or between a place in one State, Territory, or district of the United States and a place in any other State, Territory, or district thereof, shall be punished by a

* See sections 4472, 4278-4280, pages 29, 49, 50.

fine of not less than one thousand dollars nor more than ten thousand dollars ; one-half to the use of the informer.

*SEC. 5354. When the death of any person is caused by the explosion of any quantity of such articles, or either of them, while the same is being placed upon any vessel or vehicle, to be transported in violation of the preceding section, or while the same is being so transported, or while the same is being removed from such vessel or vehicle, every person who knowingly placed or aided, or permitted the placing of such articles upon such vessel or vehicle, to be so transported, is guilty of manslaughter, and shall suffer imprisonment for a period not less than two years.

*SEC. 5355. Every person who knowingly ships, sends, or forwards any quantity of the articles mentioned in section fifty-three hundred and fifty-three, or who transports the same by any mode of conveyance upon land or water, between any of the places specified in that section, unless such articles be securely inclosed, deposited, or packed in a metallic vessel surrounded by plaster of Paris, or other nonexplosive material when saturated with such oil, and separated from all other substances, and the outside of the package be marked, printed, or labeled in a conspicuous manner with the words "NITROGLYCERINE ; DANGEROUS," shall be punished by a fine of not less than one thousand nor more than five thousand dollars ; one-half to the use of the informer.

* See sections 4472, 4278-4280, pages 29, 49, 50.

TITLE LXX.

CHAPTER SIX.

OFFICIAL MISCONDUCT, ETC.

Sec.
5481. Officers of the United States guilty of extortion.

Sec.
5482. Inspector of steamboats receiving illegal fees.

* SEC. 5481. Every officer of the United States who is guilty of extortion under color of his office shall be punished by a fine of not more than five hundred dollars, or by imprisonment not more than one year, except those officers or agents of the United States otherwise differently and specially provided for in subsequent sections of this chapter.

SEC. 5482. Every inspector of steamboats who, upon any pretense, receives any fee or reward for his services, except what is allowed to him by law, shall forfeit his office, and be otherwise punished by a fine of not more than five hundred dollars, or by imprisonment not more than six months, or by both.

AN ACT relating to the limitation of steam pressure of vessels used exclusively for towing and carrying freight on the Mississippi river and its tributaries.

Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled, That the provisions of an act entitled "An act to provide for the better security of life on vessels propelled in whole or in part by steam," &c., approved February twenty-eighth, eighteen hundred and seventy-one, so far as they relate to the limitation of steam pressure of steamboats used exclusively for towing and carrying freight on the Mississippi river and its tributaries, are hereby so far modified as to substitute for such boats one hundred and fifty pounds of steam pressure in place of one hundred and ten pounds, as provided in said act for the standard pressure upon standard boilers of forty-two inches diameter, and of plates of one-quarter of an inch in thickness; and such boats may, on the written permit of the supervising inspector of the district in which such boats shall carry on their business, be permitted to carry steam above the standard pressure of one hundred and ten pounds, but not exceeding the standard pressure of one hundred and fifty pounds to the square inch.

Approved, January 8, 1874.

* See section 4425, page 16.

AN ACT to authorize the employment of certain aliens as engineers and pilots.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any alien who, in the manner provided for by law, has declared his intention to become a citizen of the United States, and who shall have been a permanent resident of the United States for at least six months immediately prior to the granting of such license, may be licensed, as if already naturalized, to serve as an engineer or pilot upon any steam-vessel subject to inspection under the provisions of the act entitled "An act to provide for the better security of life on board of vessels propelled in whole or in part by steam, and for other purposes," approved February twenty eighth, eighteen hundred and seventy-one.

Approved, April 17, 1874.

AN ACT to amend section four thousand two hundred and fourteen of the Revised Statutes, relating to yachts.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section forty-two hundred and fourteen of the Revised Statutes of the United States be amended so as to read as follows:

"SEC. 4214. The Secretary of the Treasury may cause yachts used and employed exclusively as pleasure vessels or designed as models of naval architecture, if built and owned in compliance with the provisions of sections forty-one hundred and thirty-three to forty-one hundred and thirty-five, to be licensed on terms which will authorize them to proceed from port to port of the United States, and by sea to foreign ports, without entering or clearing at the custom-house, such license shall be in such form as the Secretary of the Treasury may prescribe. The owner of any such vessel, before taking out such license, shall give a bond in such form and for such amount as the Secretary of the Treasury shall prescribe, conditioned that the vessel shall not engage in any trade, nor in any way violate the revenue laws of the United States; and shall comply with the laws in all other respects. Such vessels, so enrolled and licensed, shall not be allowed to transport merchandise or carry passengers for pay. Such vessels shall have their name and port placed on some conspicuous portion of their hulls. Such vessels shall, in all respects, except as above, be subject to the laws of the United States, and shall be liable to seizure and forfeiture for any violation of the provisions of this Title: **Provided*, That all charges for license and inspection fees for any pleasure vessel or yacht shall not exceed five dollars, and for admeasurement shall not exceed ten cents per ton."

* Amended by act approved June 19, 1886.

SEC. 2. That the said original section forty-two hundred and fourteen be, and the same is hereby, repealed.

SEC. 3. That this act shall take effect from and after its passage.
Approved, March 3, 1883.

AN ACT to remove certain burdens on the American merchant marine and encourage the American foreign carrying trade and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the last clause of section forty-one hundred and thirty-one of the Revised Statutes be amended so as to read as follows :

"All the officers of vessels of the United States shall be citizens of the United States, except that in cases where, on a foreign voyage, or on a voyage from an Atlantic to a Pacific port of the United States, any such vessel is for any reason deprived of the services of an officer below the grade of master, his place, or a vacancy caused by the promotion of another officer to such place, may be supplied by a person not a citizen of the United States until the first return of such vessel to its home port ; and such vessel shall not be liable to any penalty or penal tax for such employment of an alien officer."

* * * * *
Approved, June 26, 1884.

AN ACT to abolish certain fees for official services to American vessels, and to amend the laws relating to shipping commissioners, seamen, and owners of vessels, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That on and after July first, eighteen hundred and eighty-six, no fees shall be charged or collected by collectors or other officers of customs, or by inspectors of steam vessels * * * for the following services to vessels of the United States, to wit : * * * inspecting, examining, and licensing steam vessels, including inspection certificate and copies thereof; and licensing of master, engineer, pilot, or mate of a vessel; and all provisions of laws authorizing or requiring the collection of fees for such services are repealed, such repeal to take effect July first, eighteen hundred and eighty-six. * * * And the Secretary of the Treasury shall allow and pay, from any money in the Treasury not otherwise appropriated, said officers such compensation for said services as each would have received prior to the passage of this act; * * **
Provided, That such services have, in the opinion of the Secretary of the Treasury, been necessarily rendered.

SEC. 14. That section forty-four hundred and eighteen of the Revised Statutes is hereby amended by striking out from the nineteenth and following lines thereof the words "and, to indicate the pressure of steam, suitable steam registers that will correctly record each excess of steam carried above the prescribed limit, and the highest point attained," and inserting in lieu thereof the following: "and suitable steam gauges to indicate the pressure of steam."

* * * * *

Approved, June 19, 1886.

AN ACT to amend the laws relating to navigation, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

* * * * *

SEC. 2. That section one of the act hereinbefore mentioned be amended, in the third line from the end of the section, by inserting after the words "shipping commissioners," the words "and clerks of steamboat inspectors, and such allowances for fees of United States marshals and witnesses for services under the steamboat-inspection laws, and for expenses of steamboat inspectors provided for by section forty-four hundred and sixty-one of the Revised Statutes."

* * * * *

Approved, April 4, 1888.

AN ACT to amend sections forty-four hundred and eighty-eight and forty-four hundred and eighty-nine of the Revised Statutes requiring life-saving appliances on steamers.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That sections forty-four hundred and eighty-eight and forty-four hundred and eighty-nine of the Revised Statutes shall be amended by inserting after the words "life-preservers," wherever they occur, the words "line-carrying projectiles, and the means of propelling them."

SEC. 2. This act to take effect February first, eighteen hundred and ninety.

Approved, March 2, 1889.

AN ACT to repeal the provisions of an act entitled "An act to amend sections forty-four hundred and eighty-eight and forty-four hundred and eighty-nine of the Revised Statutes, requiring life-saving appliances on steamers," approved March second, eighteen hundred and eighty-nine, so far as they relate to steamers plying exclusively upon any of the lakes, bays, or sounds of the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the provisions of an act entitled "An act to amend sections forty-four hundred and eighty-eight and forty-four hundred and eighty-nine of the Revised Statutes, requiring life-saving appliances on steamers," approved March second, eighteen hundred and eighty-nine, be, and the same are hereby, repealed so far as they relate to the carrying of line-carrying projectiles and the means of propelling them on steamers plying exclusively upon any of the lakes, bays, or sounds of the United States.

SEC. 2. That nothing herein contained shall be construed to repeal or affect the provisions of said act so far as they apply to ocean-going steamers; and that all acts or parts of acts inconsistent with this be, and the same are hereby, repealed.

Approved, April 11, 1892.

[Act of September 4, 1890, in regard to collision at sea, to go into effect December 15, 1890.]

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

A PROCLAMATION.

Whereas an act of Congress in regard to collision at sea was approved September 4, 1890, the said act being in the following words:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in every case of collision between two vessels it shall be the duty of the master or person in charge of each vessel, if and so far as he can do so without serious danger to his own vessel, crew, and passengers (if any) to stay by the other vessel until he has ascertained that she has no need of further assistance, and to render to the other vessel, her master, crew, and passengers (if any) such assistance as may be practicable and as may be necessary in order to save them from any danger caused by the collision, and also to give to the master or person in charge of the other vessel the name of his own vessel and her port of registry, or the port or place to which she belongs, and also the names of the ports and places from which and to which she is bound. If he fails so to do, and no reasonable cause for such failure is shown, the collision shall, in the absence of proof to the contrary, be deemed to have been caused by his wrongful act, neglect, or default.

"SEC. 2. That every master or person in charge of a United States vessel who fails, without reasonable cause, to render such assistance or give such information as aforesaid shall be deemed guilty of a misdemeanor, and shall be liable to a penalty of one thousand dollars or imprisonment for a term not exceeding two years; and for the above sum the vessel shall be liable, and may be seized and proceeded against by process in any district court of the United States by any person; one-half of such sum to be payable to the informer and the other half to the United States.

"SEC. 3. That this act shall take effect at a time to be fixed by the President by proclamation issued for that purpose."

And whereas it is provided by section 3 of the said act that it shall take effect at a time to be fixed by the President by proclamation issued for that purpose;

Now, therefore, I, Benjamin Harrison, President of the United States of America, do hereby, in virtue of the authority vested in me by section 3 of the said act, proclaim the fifteenth day of December, 1890, as the day on which the said act shall take effect.

In testimony whereof, I have hereunto set my hand and caused the seal of the United States of America to be affixed.

Done at the city of Washington this eighteenth day of November, in the year of our Lord one thousand eight hundred and ninety and of the Independence of the United States the one hundred and fifteenth.

[SEAL.]

BENJ. HARRISON.

By the President :

JAMES G. BLAINE,

Secretary of State.

AN ACT to amend section forty-one hundred and seventy-eight, Revised Statutes, in relation to the marking of vessels' names at bow and stern; and also to provide for marking the draught.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section forty-one hundred and seventy-eight of the Revised Statutes be, and the same is hereby, amended to read entire as follows:

"SEC. 4178. The name of every documented vessel of the United States shall be marked upon each bow and upon the stern, and the home port shall also be marked upon the stern. These names shall be painted, or carved and gilded, in Roman letters in a light color on a dark ground, or in a dark color on a light ground, and to be distinctly visible. The smallest letters used shall not be less in size than four inches. If any vessels of the United States shall be found without these names being so marked the owner or owners shall be liable to a penalty of ten dollars for each name omitted: *Provided, however,* That the names on each bow may be marked within the year eighteen hundred and ninety-one.

"SEC. 2. The draught of every registered vessel shall be marked upon the stem and stern post, in English feet or decimeters, in either Arabic or Roman numerals. The bottom of each numeral shall indicate the draught to that line.

The owner, agent, or master, of every inspected seagoing steam or sail vessel shall indicate the draught of water at which he shall deem his vessel safe to be loaded for the trade she is engaged in, which limit, as indicated, shall be stated in the vessel's certificate of inspection, and it shall be unlawful for such vessel to be loaded deeper than stated in said certificate."

Approved, February 21, 1891.

AN ACT To adopt special rules for the navigation of harbors, rivers and inland waters of the United States, except the Great Lakes and their connecting and tributary waters as far east as Montreal, supplementary to the Act of August nineteenth, eighteen hundred and ninety, entitled "An Act to adopt regulations for preventing collisions at sea."

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That on and after March first, eighteen hundred and ninety-five, the provisions of sections forty-two hundred and thirty-three, forty-four hundred and twelve, and forty-four hundred and thirteen of the Revised Statutes and regulations pursuant thereto shall be followed on the harbors, rivers and inland waters of the United States.

The provisions of said sections of the Revised Statutes and regulations pursuant thereto are hereby declared special rules duly made by local authority relative to the navigation of harbors, rivers and inland waters as provided for in Article thirty, of the Act of August nineteenth, eighteen hundred and ninety, entitled "An Act to adopt regulations for preventing collisions at sea."

SEC. 2. The Secretary of the Treasury is hereby authorized, empowered and directed from time to time to designate and define by suitable bearings or ranges with light houses, light vessels, buoys or coast objects, the lines dividing the high seas from rivers, harbors and inland waters.

SEC. 3. Collectors or other chief officers of the customs shall require all sail vessels to be furnished with proper signal lights. Every such vessel that shall be navigated without complying with the Statutes of the United States, or the regulations that may be lawfully made thereunder, shall be liable to a penalty of two hundred dollars, one-half to go to the informer; for which sum the vessel so navigated shall be liable, and may be seized

and proceeded against by way of libel in any district court of the United States having jurisdiction of the offense.

SEC. 4. The words "inland waters" used in this Act shall not be held to include the Great Lakes and their connecting and tributary waters as far east as Montreal; and this Act shall not in any respect modify or affect the provisions of the Act entitled "An Act to regulate navigation on the Great Lakes and their connecting and tributary waters," approved February eighth, eighteen hundred and ninety-five.

Approved, February 19, 1895.

AN ACT To amend "An act to amend section forty-four hundred of title fifty-two of the Revised Statutes of the United States, concerning the regulation of steam vessels," approved August seventh, eighteen hundred and eighty-two; and also to amend section forty-four hundred and fourteen, title fifty-two, of the Revised Statutes, "Regulation of steam vessels."

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the "Act to amend section forty-four hundred of title fifty-two of the Revised Statutes of the United States," approved August seventh, eighteen hundred and eighty-two, be, and the same is hereby, amended by striking out from the first section thereof all after the word "aforesaid," in the fourteenth line of said section, also sections two to six, inclusive, of said act.

SEC. 2. That section forty-four hundred and fourteen of the Revised Statutes be amended to read as follows:

"SEC. 4414. There shall be, in each of the following collection districts, one inspector of hulls and one inspector of boilers, namely: The districts of New York, New York; Boston, Massachusetts; Philadelphia, Pennsylvania; San Francisco, California; Albany, New York; New London, Connecticut; Baltimore, Maryland; Buffalo, New York; Cleveland, Ohio; New Orleans, Louisiana; Norfolk, Virginia; Saint Louis, Missouri; Dubuque, Iowa; Detroit, Michigan; Chicago, Illinois; Michigan, Michigan; Milwaukee, Wisconsin; Port Huron, Michigan; Willamette, Oregon; Portland, Maine; Puget Sound, Washington; Savannah, Georgia; Pittsburg, Pennsylvania; Oswego, New York; Charleston, South Carolina; Duluth, Minnesota; Louisville, Kentucky; Evansville, Indiana; Memphis, Tennessee; Nashville, Tennessee; Cincinnati, Ohio; Gallipolis, Ohio; Wheeling, West Virginia; Superior, Michigan; Burlington, Vermont; Apalachicola, Florida; Galveston, Texas; Mobile, Alabama; and Providence, Rhode Island.

"The inspector of hulls and the inspector of boilers in the districts enumerated in the preceding paragraph shall be entitled

to the following salaries, to be paid under the direction of the Secretary of the Treasury, namely :

"In districts inspecting one hundred steamers and less to a salary of one thousand two hundred dollars per year each.

"In districts inspecting over one hundred and less than one hundred and fifty steamers, to a salary of one thousand five hundred dollars per year each.

"In districts inspecting over one hundred and fifty and less than two hundred steamers, to a salary of one thousand eight hundred dollars per year each.

"In districts inspecting two hundred and less than three hundred steamers, to a salary of two thousand dollars per year each.

"In districts inspecting three hundred and less than five hundred steamers, to a salary of two thousand two hundred and fifty dollars per year each.

"In districts inspecting five hundred steamers and upward, to a salary of two thousand five hundred dollars per year each.

"The Supervising Inspector-General shall report to the Secretary of the Treasury the number of inspections for the year next preceding the approval of this act and thereafter, at the end of each fiscal year, the number of steamers inspected in each local district in that year, which number shall be the basis upon which shall be determined the salaries to be paid to local inspectors for the following fiscal year, in the ratio described in the preceding paragraphs of this section. And, in addition, the Secretary of the Treasury may appoint, upon the nomination of the supervising inspector of the district, in collection districts where there are two hundred and twenty-five steamers and upwards to be inspected annually, assistant inspectors, at a salary, for the district of New York, of two thousand dollars a year each ; for the districts of New Orleans, Louisiana ; Philadelphia, Pennsylvania ; Baltimore, Maryland ; Boston, Massachusetts ; Chicago, Illinois ; Jacksonville, Florida ; Bangor, Maine ; New Haven, Connecticut ; and San Francisco, California, at one thousand eight hundred dollars per year each ; and for all other districts at a salary not exceeding one thousand six hundred dollars a year each ; and he may appoint a clerk to any such board at a compensation not exceeding one thousand two hundred dollars a year to each person so appointed. Every inspector provided for in this or the preceding sections of this title shall be paid for his actual and reasonable traveling expenses at the rate of eight cents per mile, incurred in the performance of his duty, together with his actual and reasonable expenses for transportation of instruments, which shall be certified and sworn to under such instructions as shall be given by the Secretary of the Treasury."

SEC. 3. That all Acts and parts of Acts inconsistent with the provisions of this Act be, and the same are hereby, repealed.

Approved, March 1, 1895.

AN ACT Making appropriations for the Naval Service for the fiscal year ending June thirtieth, eighteen hundred and ninety-six, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.

* * * * *

An Act entitled "An Act to amend 'An Act to amend section forty four hundred of title fifty-two of the Revised Statutes of the United States, concerning the regulation of steam vessels,' approved August seventh, eighteen hundred and eighty-two; and also to amend section forty-four hundred and fourteen, title fifty-two, of the Revised Statutes, 'Regulation of steam vessels,'" approved March first, eighteen hundred and ninety-five, is hereby amended by striking therefrom the words "Jacksonville, Florida; Bangor, Maine; and New Haven, Connecticut;" where said words occur in the ninth paragraph of the second section thereof, following the word "Illinois" and inserting the same in the second paragraph of section two of said Act after the word "Illinois."

Approved, March 2, 1895.

GENERAL RULES AND REGULATIONS
PRESCRIBED BY THE
BOARD OF SUPERVISING INSPECTORS OF STEAM VESSELS

AS AMENDED

JANUARY AND FEBRUARY, 1895.

AMENDMENTS APPROVED FEBRUARY 14, 20, AND 21, 1895.

W. E. CURTIS,

Acting Secretary of the Treasury.

OFFICERS OF THE STEAMBOAT-INSPECTION SERVICE.

JAMES A. DUMONT, Supervising Inspector-General.

Clerks in office of Supervising Inspector-General.—W. H. Clarke, chief clerk; William F. Gatchell, L. R. Messenger, Calvin C. J. Norris.

Messenger.—Alexander Freeman.

SUPERVISING INSPECTORS.

First district.—John Bermingham, San Francisco, Cal.

Second district.—George H. Starbuck, New York, N. Y.

Third district.—William H. Murdaugh, Norfolk, Va.

Fourth district.—James O'Neal, St. Louis, Mo.

Fifth district.—William R. Tibbals, St. Paul, Minn.

Sixth district.—James N. Thompson, Memphis, Tenn.

Seventh district.—E. P. Chancellor, Cincinnati, Ohio.

Eighth district.—John H. Galwey, Detroit, Mich.

Ninth district.—Michael J. Galvin, Buffalo, N. Y.

Tenth district.—Matt O'Brien, New Orleans, La.

TERRITORY EMBRACED IN SUPERVISING DISTRICTS.

First district embraces all waters and rivers of the United States west of the Rocky Mountains.

Second district embraces the waters of the Atlantic coast, rivers, and tributaries between the Bay of Passamaquoddy and Cape Charles.

Third district embraces the waters of the Atlantic Coast, rivers, and tributaries between Cape Charles and Cape Sable.

Fourth district embraces the Mississippi River and tributaries from above Greenfield, Mo., up to and including Keokuk, Iowa; the Illinois River below Peoria; and the Missouri River up to the mouth of the Niobrara River at its junction with the Missouri River.

Fifth district embraces the Upper Mississippi River and its tributaries above Keokuk, Iowa; the Red River of the North, and that part of the Missouri River and its tributaries above its junction with the Niobrara River, and all that portion of Lake Superior bounded by the States of Minnesota and Wisconsin.

Sixth district embraces the Ohio River and tributaries up to and including Carrollton, Ky., and the Mississippi River and tributaries from Greenville, Miss., up to and including Greenfield, Mo.

Seventh district embraces the Ohio River and tributaries above Carrollton, Ky.

Eighth district embraces all the waters of the lakes north and west of Lake Erie, with their tributaries, except that portion of Lake Superior which is bounded by the States of Minnesota and Wisconsin, and also includes the upper portion of the Illinois River down to and including Peoria, Ill.

Ninth district embraces all the waters of the River St. Lawrence, Lakes Erie, Ontario, and Champlain, and their tributaries.

Tenth district embraces the coast and tributary waters of the Gulf of Mexico, between Cape Sable and the mouth of the Rio Grande, and the Mississippi River and tributaries to Greenville, Miss.

LOCAL INSPECTORS.

District.	Of hulls.	Of boilers.	Residence.
First	Enoch S. Talbot..... D. Marcucci, assistant..... W. J. Bryant..... Edward S. Edwards..... Samuel G. Fairchild..... P. C. Petrie, assistant..... John F. Walsh, assistant..... David P. Dey, assistant..... Wm. N. Walsh, assistant..... Jas. McCausland, assistant..... George E. Hand, assistant..... Geo. W. Wilmurt, assistant..... Henry M. Seeley, assistant..... Robert B. Keller..... Albert C. Crandall..... Charles F. Owen, assistant..... Rufus S. DeMott, assistant..... Edward Wilcox..... Elisha P. Beckwith..... John A. Smith, assistant..... Victor E. Wright..... Harrison A. Thompson.....	W. A. Phillips..... John K. Bulger, assistant..... George W. Bullene..... Frank McDermott..... Thomas H. Barrett..... George Phillips, assistant..... Gilbert B. Nelson, assistant..... Lyman Howard, assistant..... Andrew H. Pitchford, assistant..... John W. Fleming, assistant..... Wm. A. Leonard, assistant..... Robert S. Rodie, assistant..... John E. Gunn, assistant..... Augustus W. Pratt..... Andrew J. Savage..... John B. O'Brien, assistant..... Wm. M. Gilman, assistant..... Charles A. Potter..... Charles M. Daboll.....	San Francisco, Cal. Do. Seattle, Wash. Portland, Oreg. New York, N. Y. Do. Do. Do. Do. Do. Do. Do. Do. Albany, N. Y. Boston, Mass. Do. Do. Providence, R. I. New London, Conn. Do. New Haven, Conn. Philadelphia, Pa. Do. Do. Portland, Me. Bangor, Me. Baltimore, Md. Do. Do.
Second	George A. Pollister..... Charles O. Cousins..... John H. Cooper..... Chas. W. Wright, assistant.....	Frederick L. Dennis, Christopher Vert..... David H. Howard, assistant..... Daniel J. Dougherty, assistant..... James H. Merritt..... Walter L. Blaisdell..... Edwin F. White..... Michael Stanton, assistant..... Edward G. Allen, assistant.....	
Third			

LOCAL INSPECTORS—Continued.

District.	Of hulls.	Of boilers.	Residence.
Third	Wm. Y. Johnson..... Wm. H. Gannon..... Wm. G. Lee..... Leo Vogel..... Archibald Gordon..... John Monaghan..... George B. Knapp..... Garrett F. Huls..... George M. Green..... Francis Hopkins..... John E. Abraham..... James F. Browinski..... Edwin F. Maddy..... Wm. H. Clark..... John M. Phillips..... Sidney J. Millen..... Charles A. Richardson..... James Hogan, assistant..... Alvin Dodge..... Anthon O. Kruger..... Frank H. Danger..... Wm. Fitzgerald..... Edward M. Marion..... Frederick L. R. Pope, assistant..... Byron J. Holt..... George L. DeWolf..... H. E. Judson, assistant..... John R. Molther.....	James W. Nicholson..... Elbert E. Groom..... Edward B. Fitzgerald..... Charles A. Spencer..... Wm. W. Corey..... Michael F. Chalk..... Samuel H. Nimrick..... Henry C. Waltz..... Fred D. Wyatt..... John H. Moore..... Joseph J. Dunn..... George W. Dameron..... Edward Morgan..... Reuben M. Thomas..... George H. Atkinson..... Thomas Daly..... Stewart H. Moore..... Thomas Kehoe, assistant..... Henry Bloecker..... Charles M. Gooding..... Frank Van Liew..... Daniel W. Chipman..... Joseph G. Schumacher..... George C. Neal, assistant..... Andrew I. Goodhue..... James McGrath..... Wm. F. Pletz, assistant..... Robert Chestnut.....	Norfolk, Va. Charleston, S. C. Savannah, Ga. Jacksonville, Fla. St. Louis, Mo. Duluth, Minn. Dubuque, Iowa. Memphis, Tenn. Nashville, Tenn. Evansville, Ind. Louisville, Ky. Cincinnati, Ohio. Gallipolis, Ohio. Wheeling, W. Va. Pittsburg, Pa. Detroit, Mich. Chicago, Ill. Do. Grand Haven, Mich. Marquette, Mich. Port Huron, Mich. Milwaukee, Wis. Buffalo, N. Y. Do. Burlington, Vt. Cleveland, Ohio. Do. Oswego, N. Y.
Fourth			
Fifth			
Sixth			
Seventh			
Eighth			
Ninth			

New Orleans, La.
Do.
Apalachicola, Fla.
Galveston, Tex.
Mobile, Ala.

Wilson Youngblood.....
B. R. Hutchings, assistant.....
Alton Pierce.....
Lewis C. Hershberger.....
Eugene O'Brien.....

James McC. Baker.....
Benjamin F. Kelly, assistant.....
George H. Whiteside.....
Robert G. Murray.....
Samuel Taylor.....

Tenth.....

18251—6

CLERK TO SUPERVISING INSPECTOR, SECOND DISTRICT.....FRANK J. DUNLEA.

CLERKS TO LOCAL BOARDS.

Thomas R. Craigie, San Francisco, Cal.
George D. Claggett, Portland, Oreg.
Willis H. Rooks, Seattle, Wash.
Harry S. Eckert, New York, N. Y.
Frank G. Williams, New York, N. Y.
Clarence L. Roberts, New York, N. Y.
John J. Lyon, New York, N. Y.
D. J. Phelan, New York, N. Y.
Edwin C. Donnell, New York, N. Y.
Thomas J. Reilly, Albany, N. Y.
George A. Copeland, Boston, Mass.
John M. B. Kelly, Boston, Mass.
Calvin G. Williams, New London, Conn.
John J. McKernan, Philadelphia, Pa.
W. H. O'Brien, Portland, Me.

Wm. E. Linn, Baltimore, Md.
Harry D. Baker, Baltimore, Md.
James V. Trehy, Norfolk, Va.
George A. Gregory, Savannah, Ga.
Thomas W. Rogers, St. Louis, Mo.
Charles T. Abbott, Duluth, Minn.
Morgan T. Cotter, Pittsburgh, Pa.
George E. Fairbairn, Detroit, Mich.
Daniel L. Murphy, Chicago, Ill.
Robert W. Radeke, Grand Haven, Mich.
Lee R. Whitney, Milwaukee, Wis.
David McArron, Port Huron, Mich.
James F. Loftus, Buffalo, N. Y.
Edward Lawlor, Cleveland, Ohio.
Frank Otto, New Orleans, La.

Table of pressures allowable on boilers made since February 28, 1872.

Diameter of boiler.	Thickness of plates.	45,000 tensile strength. 1-6, 7,500.		50,000 tensile strength. 1-6, 8,333.3.		55,000 tensile strength. 1-6, 9,166.6.		60,000 tensile strength. 1-6, 10,000.		65,000 tensile strength. 1-6, 10,833.3.		70,000 tensile strength. 1-6, 11,666.6.	
		Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.
36 inches.	.1875	78.12	93.74	86.8	104.16	95.48	114.57	104.16	124.99	112.84	135.4	121.52	145.82
	.21	87.5	105.	97.21	116.65	106.94	128.3	116.66	139.99	126.38	151.65	136.11	163.33
	.23	95.83	114.99	106.47	127.76	117.12	140.54	127.77	153.32	138.41	166.09	149.07	178.88
	.25	104.16	124.99	115.74	138.88	127.31	152.77	138.88	166.65	150.46	180.55	162.03	194.43
	.26	108.33	129.99	120.37	144.44	132.4	158.88	144.44	173.32	156.48	187.77	168.51	202.21
	.29	120.83	144.99	134.25	161.11	147.68	177.21	161.11	193.33	174.53	219.43	187.90	225.48
	.3125	130.2	156.24	144.67	173.6	159.14	190.96	173.6	208.32	188.07	225.68	202.5	243.04
	.33	137.5	165.	152.77	183.32	168.05	201.66	183.33	219.99	196.61	238.33	213.88	256.65
	.35	145.83	174.99	162.03	194.43	178.23	213.87	194.44	233.32	210.64	252.76	226.84	272.20
	.375	158.25	187.5	173.61	208.33	190.97	229.16	208.33	249.99	225.69	271.82	243.05	291.66
38 inches.	.1875	74.01	88.89	82.23	98.67	90.46	108.54	98.68	118.41	106.9	128.28	115.13	138.16
	.21	82.89	99.46	92.1	110.52	101.31	121.57	110.52	132.62	119.73	143.67	128.93	154.71
	.23	90.78	108.93	100.87	121.04	110.96	133.15	121.05	145.26	131.13	157.35	141.22	169.46
	.25	98.68	118.41	109.64	131.56	120.61	144.73	131.57	157.88	142.54	171.04	153.5	184.20
	.26	102.63	123.15	114.03	136.83	125.43	150.51	136.84	164.2	148.24	177.88	159.64	191.56
	.29	114.47	137.36	127.19	152.62	139.91	167.89	152.63	183.15	165.35	196.42	178.06	213.67
	.3125	123.35	148.02	137.19	164.46	150.76	189.91	164.47	197.36	178.17	213.8	191.88	230.25
	.33	130.26	156.31	144.73	173.67	169.2	191.04	173.68	206.41	188.15	225.78	212.62	243.14
	.35	138.15	165.78	153.5	184.21	168.85	202.82	184.21	221.05	199.56	239.47	214.91	257.89
	.375	148.	177.60	164.73	197.67	180.91	217.09	197.36	236.83	213.81	256.57	230.26	276.31

Table of pressures allowable on boilers made since February 28, 1872—Continued.

Diameter of boiler.	Thick- ness of plates.	45,000 tensile strength. 1-6, 7,500.		50,000 tensile strength. 1-6, 8,333.3.		55,000 tensile strength. 1-6, 9,166.6.		60,000 tensile strength. 1-6, 10,000.		65,000 tensile strength. 1-6, 10,833.3.		70,000 tensile strength. 1-6, 11,666.6.	
		Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.
40 inches.	.1875	70.31	84.37	78.12	93.74	85.93	102.11	93.75	112.5	101.56	121.87	109.37	131.24
	.21	73.75	94.50	87.49	104.98	96.24	115.48	105.	126.	113.74	136.48	122.49	146.98
	.23	86.25	103.5	95.83	114.99	105.41	128.49	115.	138.	124.53	149.49	134.16	160.99
	.25	93.75	112.5	104.16	124.99	114.58	137.49	125.	150.	135.41	162.49	145.83	174.99
	.26	97.5	117.	108.33	129.99	119.16	142.99	130.	156.	140.83	168.99	151.66	181.99
	.29	108.75	130.5	120.83	144.99	132.91	159.49	145.	174.	157.08	188.49	169.16	202.99
	.3125	117.18	140.61	130.2	156.24	143.23	171.86	156.25	187.45	169.27	203.12	182.29	218.74
	.33	123.75	148.5	137.49	164.98	151.24	181.48	165.	198.	178.74	214.48	192.49	230.98
	.35	131.25	157.5	145.83	174.99	160.41	192.49	175.	210.	189.53	227.49	204.16	244.99
	.375	140.62	168.74	156.24	187.48	171.87	206.24	187.5	225.	203.12	243.74	218.74	262.48
42 inches.	.1875	66.96	80.35	74.40	89.28	81.84	98.20	89.28	107.13	96.72	116.06	104.16	124.99
	.21	75.	90.	83.32	99.99	91.66	109.99	100.	120.	106.33	129.99	116.66	139.99
	.23	82.14	98.56	91.23	109.51	100.39	120.46	109.52	131.42	118.65	142.38	127.77	153.32
	.25	89.28	107.13	99.2	119.04	109.12	130.94	119.04	142.84	128.96	154.75	136.88	166.65
	.26	92.85	111.42	103.17	123.8	113.49	136.19	123.8	148.56	134.12	160.94	144.44	173.32
	.29	103.57	124.28	115.07	138.08	126.57	151.85	138.09	165.7	149.6	179.52	161.11	193.83
	.3125	111.6	133.92	124.	148.6	136.4	163.68	148.74	178.56	161.2	193.44	173.61	206.23
	.33	117.85	141.42	130.94	157.12	144.04	172.84	157.14	188.56	170.23	204.27	183.33	219.99
	.35	125.5	150.	138.88	166.65	152.77	183.22	166.66	199.99	180.55	216.66	194.44	233.82
	.375	133.92	160.7	148.8	178.56	163.68	196.40	178.57	214.28	193.45	232.14	206.33	249.99

Table of pressures allowable on boilers made since February 28, 1872—Continued.

Diameter of boiler.	Thickness of plates.	45,000 tensile strength. 1-6, 7,500.		50,000 tensile strength. 1-6, 8,333.3.		55,000 tensile strength. 1-6, 9,166.6.		60,000 tensile strength. 1-6, 10,000.		65,000 tensile strength. 1-6, 10,833.3.		70,000 tensile strength. 1-6, 11,666.6.	
		Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.
44 inches.	.1875	63.92	76.7	71.02	85.22	78.12	93.74	85.22	102.26	92.32	110.78	99.42	119.3
	.21	71.59	85.9	79.54	95.44	87.49	104.98	95.45	114.54	103.4	124.06	111.36	133.63
	.23	78.4	94.08	87.12	104.54	95.83	114.99	104.54	125.44	113.25	135.9	121.96	146.35
	.25	85.22	102.26	94.69	113.62	104.16	124.99	113.63	136.35	123.1	147.72	132.56	159.07
	.26	88.63	106.35	98.48	118.17	108.33	129.99	118.18	141.81	128.02	153.62	137.87	165.44
	.29	98.86	118.63	109.84	131.80	120.83	144.99	131.81	158.17	142.79	171.33	153.78	184.53
	.3125	106.53	127.83	118.36	142.03	130.2	156.24	142.04	170.44	153.88	184.65	165.71	198.85
46 inches.	.33	112.5	135.	124.99	149.98	137.49	164.98	150.	180.	162.49	194.98	174.99	209.98
	.35	119.31	143.17	132.57	159.08	145.83	174.99	159.09	190.9	172.34	206.8	185.6	222.72
	.375	127.81	153.37	142.04	170.44	156.24	187.43	170.45	204.54	184.65	221.58	198.96	238.63
	.1875	61.14	73.36	67.93	81.51	74.72	89.66	81.51	97.81	88.31	105.97	95.1	114.12
	.21	68.47	82.16	76.08	91.29	83.69	100.42	91.3	109.56	98.91	118.69	106.52	127.82
	.23	75.	90.	83.33	100.	91.66	109.99	100.	120.	108.33	129.99	116.66	139.99
	.25	81.51	97.81	90.57	108.68	99.63	119.55	108.69	130.42	117.75	141.3	126.8	152.16
46 inches.	.26	84.78	101.73	94.2	113.04	103.62	124.34	113.44	135.64	122.46	146.96	131.88	158.25
	.29	94.56	113.47	105.07	126.86	115.57	138.68	126.90	151.3	136.59	163.92	147.1	178.52
	.3125	101.9	122.28	113.21	135.86	124.54	149.44	135.86	163.03	147.19	176.62	158.51	190.21
	.33	107.6	129.12	119.56	143.47	131.62	157.82	143.97	173.16	155.43	186.51	167.39	200.86
	.35	114.13	136.95	126.8	152.16	139.49	167.38	152.17	182.6	164.85	197.82	177.53	213.03
	.375	122.28	146.73	135.86	163.03	149.45	179.34	163.04	195.64	176.62	211.94	190.21	228.26

Table of pressures allowable on boilers made since February 28, 1872—Continued.

Diameter of boiler.	Thickness of plates.	45,000 tensile strength. 1-6, 7,500.		50,000 tensile strength. 1-6, 8,333.3.		55,000 tensile strength. 1-6, 9,166.6.		60,000 tensile strength. 1-6, 10,000.		65,000 tensile strength. 1-6, 10,833.3.		70,000 tensile strength. 1-6, 11,666.6.	
		Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.
48 inches.	.1875	58.59	70.30	65.1	78.12	71.61	85.93	78.12	93.74	84.63	101.55	91.13	109.35
	.21	65.62	78.74	72.91	87.49	80.2	96.24	87.49	104.98	94.79	113.74	102.08	122.49
	.23	71.87	86.24	79.85	95.82	87.84	105.4	95.83	114.99	103.81	124.57	111.8	133.16
	.25	78.12	93.74	86.8	104.16	95.43	114.57	104.16	124.99	112.84	135.4	121.52	145.82
	.26	81.25	97.50	90.27	108.32	99.3	119.16	108.33	129.99	117.36	140.83	126.38	151.65
	.29	90.62	108.74	100.69	120.82	110.76	132.91	120.83	144.99	130.9	157.08	140.97	169.16
	.3125	97.65	117.18	108.5	130.2	119.35	143.22	130.21	156.25	141.05	169.26	151.9	182.28
	.33	103.12	123.74	114.58	137.49	123.04	151.24	137.5	165.99	148.95	178.74	160.41	192.49
	.35	109.87	131.24	121.52	145.82	133.67	160.4	145.83	174.99	157.98	189.57	170.13	204.15
	.375	117.18	140.61	130.2	156.24	143.22	171.86	156.25	187.50	169.27	203.12	182.29	218.74
54 inches.	.1875	52.08	62.49	57.87	69.44	63.65	76.38	69.44	82.44	75.23	90.27	81.01	97.21
	.21	58.83	69.99	64.81	77.77	71.29	85.54	77.77	93.32	84.25	101.1	90.74	108.88
	.23	63.88	76.65	70.98	85.17	78.06	93.69	85.18	102.21	92.28	110.73	99.38	119.25
	.25	69.44	83.32	77.16	92.59	84.37	101.84	92.59	111.10	100.3	120.36	108.02	129.62
	.26	72.22	86.66	80.24	96.28	88.27	105.92	96.29	115.54	104.81	125.17	112.44	134.8
	.29	80.55	96.66	89.5	107.40	96.06	118.14	107.41	128.98	116.35	139.62	125.3	150.36
	.3125	86.8	104.16	96.44	115.72	106.09	127.30	115.55	138.66	125.38	150.45	135.03	162.08
	.33	91.66	109.99	101.84	122.22	112.03	134.43	122.22	146.66	132.4	158.88	142.59	171.10
	.35	97.22	116.66	108.02	129.62	118.82	142.58	129.62	155.54	142.43	168.51	151.23	181.47
	.375	104.16	124.99	115.74	138.88	127.31	152.77	138.88	166.65	150.46	180.55	162.03	194.43

Table of pressures allowable on boilers made since February 28, 1872—Continued.

Diameter of boiler.	Thickness of plates.	45,000 tensile strength. 1-6, 7,500.		50,000 tensile strength. 1-6, 8,333.3.		55,000 tensile strength. 1-6, 9,166.6.		60,000 tensile strength. 1-6, 10,000.		65,000 tensile strength. 1-6, 10,833.3.		70,000 tensile strength. 1-6, 11,666.6.	
		Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.
60 Inches.	.1875	46.87	56.24	52.08	62.49	57.29	68.74	62.5	75.	67.7	81.24	72.91	87.49
	.21	52.5	63.	58.33	69.99	64.16	76.99	69.99	84.	75.83	90.99	81.66	97.99
	.23	57.5	69.	63.88	76.65	70.27	84.32	76.66	91.99	83.05	99.66	89.44	107.23
	.25	62.5	75.	69.44	83.33	76.38	91.65	83.33	99.99	90.27	108.32	97.22	116.66
	.28	65.	78.	72.22	86.66	79.44	95.32	86.66	103.99	93.88	112.66	101.11	121.33
	.30	72.5	87.	80.55	96.66	83.61	106.33	96.66	115.99	104.72	125.66	112.77	135.22
	.3125	78.12	93.74	86.8	104.16	95.48	114.57	104.16	124.99	112.95	135.54	121.52	145.22
	.33	82.5	99.	91.66	109.99	100.83	120.99	109.99	132.	119.16	142.99	128.33	153.99
66 Inches.	.35	87.5	105.	97.22	116.66	106.94	128.32	116.66	139.99	126.38	151.65	136.11	163.33
	.375	93.75	112.5	104.16	124.99	114.58	137.49	125.	150.	135.41	162.49	145.83	174.99
	.1875	42.61	51.13	47.34	56.8	52.07	62.49	56.81	68.17	61.55	73.86	66.28	79.53
	.21	47.72	57.26	53.	63.63	58.33	69.99	63.63	76.35	68.93	82.71	74.24	89.08
	.23	52.27	62.72	58.	69.69	63.88	76.65	69.69	83.62	75.5	90.6	81.31	97.57
	.25	56.81	68.17	63.13	75.75	69.44	83.32	75.75	90.99	82.07	96.48	86.37	106.04
	.28	59.00	70.9	65.65	78.78	72.22	86.66	78.78	94.53	85.35	102.42	91.91	110.29
	.30	65.99	79.08	73.23	87.87	80.55	96.66	87.87	105.44	95.2	114.24	102.52	123.02
66 Inches.	.3125	71.	85.2	78.91	94.69	86.89	104.16	94.69	113.62	102.58	123.09	110.47	132.56
	.33	75.	90.	83.33	99.99	91.66	109.99	99.99	120.	108.33	129.99	116.66	139.99
	.35	79.56	95.47	88.38	106.05	97.22	116.66	106.	127.27	114.89	137.86	123.73	148.47
	.375	85.26	102.27	94.69	113.62	104.16	124.99	113.62	136.34	123.1	147.72	132.57	159.08

Table of pressures allowable on boilers made since February 28, 1872—Continued.

Diameter of boiler.	Thickness of plates.	45,000 tensile strength. 1-6, 7,500.		50,000 tensile strength. 1-6, 8,333.3.		55,000 tensile strength. 1-6, 9,166.6.		60,000 tensile strength. 1-6, 10,000.		65,000 tensile strength. 1-6, 10,833.3.		70,000 tensile strength. 1-6, 11,666.6.	
		Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.
72 inches.	.1875	38.06	46.87	43.4	52.06	47.74	57.28	52.06	62.49	56.42	67.70	60.76	72.91
	.21	43.75	52.5	48.6	58.33	53.47	64.16	58.33	69.99	63.19	75.82	68.05	81.66
	.23	47.91	57.49	53.24	63.88	58.56	70.27	63.88	76.65	69.21	83.05	74.53	89.43
	.25	52.06	62.49	57.87	68.44	63.65	76.38	68.44	83.32	75.22	90.28	81.01	97.21
	.26	54.16	64.99	60.18	72.21	66.2	79.44	72.22	86.66	78.24	93.88	84.25	101.10
	.29	60.41	72.49	67.12	80.54	73.84	88.60	80.55	96.66	87.26	104.71	93.98	112.77
	.3125	65.10	78.12	72.33	86.8	79.57	95.48	86.8	104.16	94.03	112.83	101.27	121.52
	.35	68.75	82.5	76.38	91.65	84.02	100.82	91.66	109.99	99.3	119.16	106.94	128.32
78 inches.	.375	72.91	87.49	81.01	97.21	89.11	108.93	97.22	116.66	105.32	123.38	113.42	136.1
		78.12	93.74	86.8	104.16	95.48	114.57	104.16	124.99	112.84	135.43	121.52	145.82
	.1875	38.06	43.21	40.06	48.07	44.07	52.87	48.07	57.68	52.06	62.49	56.06	67.29
	.21	40.38	48.45	44.87	53.84	49.35	59.22	53.84	64.60	58.33	69.99	62.82	75.38
	.23	44.23	53.07	49.14	58.96	54.05	64.86	58.95	70.76	63.88	76.65	68.80	82.56
	.25	48.07	57.68	53.41	64.09	58.76	70.5	64.4	76.92	69.44	83.32	74.77	89.73
	.26	50.	60.	55.55	66.66	60.11	73.33	66.66	79.99	72.22	86.66	77.77	93.32
	.29	55.78	68.91	61.96	74.35	68.16	81.79	74.35	89.22	80.55	96.66	86.73	104.1
78 inches.	.3125	60.09	72.1	66.77	80.12	73.45	88.14	80.12	96.14	86.8	104.16	93.48	112.17
	.33	63.46	76.15	70.51	84.61	77.56	93.07	84.61	101.53	91.66	109.99	98.71	118.45
	.35	67.3	80.78	74.78	89.73	82.26	98.71	89.74	107.68	97.22	116.66	104.70	125.64
	.375	72.11	86.53	80.12	96.14	88.14	106.76	96.15	115.38	104.16	124.99	112.17	134.6

Table of pressures allowable on boilers made since February 28, 1872—Continued.

Diameter of boiler.	Thickness of plates.	45,000 tensile strength. 1-6, 7,500.		50,000 tensile strength. 1-6, 8,333.3.		5,000 tensile strength. 1-6, 9,166.6.		60,000 tensile strength. 1-6, 10,000.		65,000 tensile strength. 1-6, 10,833.3.		70,000 tensile strength. 1-6, 11,666.6.	
		Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.
84 inches.	.1875	33.48	40.17	37.2	44.68	40.92	49.1	44.64	53.56	48.36	58.03	52.08	62.49
	.21	37.5	45.	41.66	49.99	45.83	54.99	50.	60.	54.16	64.99	58.33	69.99
	.23	41.02	49.22	45.63	54.75	50.19	60.22	54.75	65.71	59.32	71.18	63.65	76.38
	.25	44.64	53.56	49.6	59.52	54.56	65.47	59.52	71.42	64.48	77.37	69.44	83.32
	.26	46.42	55.7	51.58	61.89	56.74	68.08	61.9	74.28	67.06	80.46	72.22	86.66
	.29	51.78	62.13	57.53	69.03	63.29	75.94	69.04	82.84	74.8	89.76	80.55	96.66
	.3125	55.8	66.96	62.4	74.4	68.2	81.84	74.4	89.28	80.6	96.72	86.8	104.16
	.33	58.92	70.7	65.47	78.56	72.02	86.42	78.57	94.28	85.11	102.13	91.66	109.99
	.35	62.5	75.	69.44	83.32	76.38	91.65	83.33	99.99	90.27	108.32	97.22	116.66
	.375	66.96	80.35	74.4	89.28	81.84	98.2	89.28	107.13	96.72	116.06	104.16	124.99
90 inches.	.1875	31.25	37.5	34.72	41.66	38.19	45.82	41.66	49.99	45.13	54.15	48.68	58.33
	.21	35.	42.	38.86	46.65	42.77	51.32	46.66	55.99	50.55	60.66	54.44	65.32
	.23	38.33	45.99	42.59	51.10	46.35	55.22	51.11	61.33	55.37	66.44	59.62	71.54
	.25	41.66	49.99	46.29	55.54	50.92	61.1	55.55	66.66	60.18	72.21	64.81	77.77
	.26	43.33	51.99	48.14	57.76	52.96	63.55	57.77	69.32	62.59	75.1	67.4	80.88
	.29	48.33	57.99	53.7	64.44	59.07	70.8	64.44	77.32	68.81	83.77	75.18	90.21
	.3125	52.08	62.49	57.96	69.43	63.65	76.38	69.44	83.32	75.23	90.27	81.01	97.21
	.33	55.33	66.	61.11	73.33	67.22	80.66	73.33	87.99	79.44	96.32	85.55	102.66
	.35	58.33	69.99	64.81	77.77	71.29	85.54	77.77	93.32	84.25	101.1	90.72	108.88
	.375	62.5	75.	69.44	83.32	76.38	91.65	83.33	99.99	90.27	108.32	97.22	116.66

Table of pressures allowable on boilers made since February 28, 1872—Continued.

Diameter of boiler.	Thickness of plates.	45,000 tensile strength. 1-6, 7,500.		50,000 tensile strength. 1-6, 8,333.3.		55,000 tensile strength. 1-6, 9,166.6.		60,000 tensile strength. 1-6, 10,000.		65,000 tensile strength. 1-6, 10,833.3.		70,000 tensile strength. 1-6, 11,666.6.	
		Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.	Pres- sure.	20 per cent addi- tional.
96 inches.	.1875	29.29	35.14	32.55	39.06	35.8	42.96	39.06	46.87	42.31	50.77	45.57	54.68
	.21	32.81	39.37	36.45	43.74	40.1	48.12	43.75	52.5	47.39	56.86	51.04	61.24
	.23	35.93	43.11	39.93	47.91	43.92	52.7	47.91	57.49	51.9	62.28	55.9	67.08
	.26	39.06	46.87	43.4	52.08	47.74	57.28	52.08	62.49	56.42	67.67	60.76	72.91
	.28	40.62	48.74	45.14	54.16	49.65	59.58	54.16	64.99	58.78	70.53	63.19	75.82
	.29	45.31	54.37	50.34	60.4	55.38	66.45	60.41	72.49	65.45	78.54	70.48	84.57
	.3125	48.82	58.58	54.25	65.1	59.67	71.6	65.1	78.12	70.52	84.62	75.95	91.14
	.33	51.56	61.87	57.29	68.74	63.02	75.62	68.75	82.5	74.47	89.36	80.2	96.24
	.35	54.68	65.61	60.76	72.91	66.83	80.19	72.91	87.49	78.99	94.78	85.06	102.07
	.375	58.58	70.29	65.1	78.12	71.61	85.93	78.12	93.74	84.63	101.55	91.14	108.6

GENERAL INDEX TO RULES AND REGULATIONS.

Subject.	Rule.	Page.
Boiler plate	I	93
Boilers and attachments	II	99
Duties of inspectors	IX	151
Excursion steamers	VIII	150
Ferryboats	VII	149
Fire apparatus	IV	133
Inspection of steamers	VI	148
Licensed officers—duties	V	136
Life-saving appliances	III	125
Miscellaneous	X	154
Rules of practice		156
Rules of order		158
Pilot rules, harbors, rivers, and inland waters		160
Pilot rules, Western rivers		170
Pilot rules, Great Lakes		175

GENERAL RULES AND REGULATIONS.

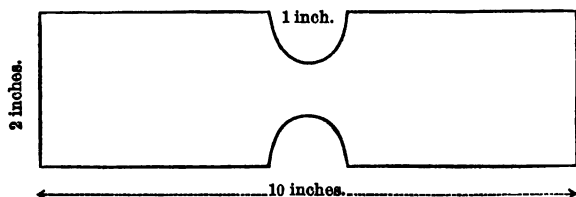
RULE I.—BOILER PLATE.

	Section.
Ductility and other qualities, how obtained.....	6
Form of recording tests.....	8
Gauge for determining thickness of boiler plate.....	7
Manufacturers to furnish affidavit with samples.....	4
Manufacturer's affidavit, form of.....	5
Plates, how to be stamped.....	1
Samples, dimensions of.....	3
Samples, pieces, how prepared.....	3
Tensile strength, how obtained.....	3
Tensile strength to be rated with the lowest stamp on plate..	2

1. Every iron or steel plate intended for the construction of boilers to be used on steam vessels shall be stamped by the manufacturer in the following manner: At the diagonal corners, at a distance of about 4 inches from the edges and at or near the center of the plate, with the name of the manufacturer, the place where manufactured, and the number of pounds tensile strain it will bear to the sectional square inch.

2. Whenever inspectors shall find a plate of iron or steel with stamps differing as to the tensile strength of the material, they shall rate the tensile strength of the same in accordance with the lowest stamp found thereon.

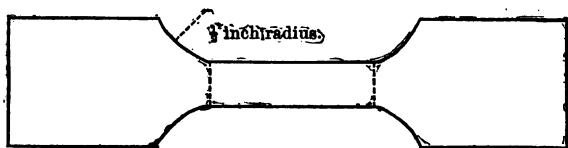
3. To ascertain the tensile strength and other qualities of *iron plate*, there shall be taken from each sheet to be used in shell or other parts of boiler which are subject to tensile strain a test piece prepared in form according to the following diagram, viz: 10 inches in length, 2 inches in width, cut out in the center in the manner indicated.



All sample pieces of iron plate five-sixteenths ($\frac{5}{16}$) inch thick and under shall be 1 inch wide at reduced section; plate over five-sixteenths ($\frac{5}{16}$) inch thick shall be reduced in width at center to

an aggregate area approximating four-tenths ($\frac{4}{10}$) of one square inch, but such reduced area shall in no case exceed forty-five nor be less than thirty-five one-hundredths of an inch, and the force at which the piece can be parted in the direction of the fiber or grain represented in pounds avoirdupois in proportion to the ratio of its area shall be deemed the tensile strength per square inch of the plate from which the sample was taken;* and should the tensile strength ascertained by the test equal that marked on the plates from which the test pieces were taken, the plates must be allowed to be used in the construction of marine boilers.

To ascertain the tensile strength and other qualities of steel plate, there shall be taken from each sheet to be used in shell or other parts of boiler which are subject to tensile strain, a test piece prepared in form according to the following diagram:



The length of straight part in center varying as called for by thickness of material as follows: The straight portion shall be in length at least eight times the width multiplied by the thickness of said part, and have a reduction of area as called for by the present rules of the board, and an elongation of at least 25 per cent. The straight part shall be of a width of 1 inch. All test pieces of 1 inch thickness and upward shall have the straight part 8 inches in length. The ends of test pieces may be from 1½ to 2 inches in width, and from 4 to 6 inches long, as may be desired.

Provided, however, That where contracts for boilers for ocean-going steamers require a test of material in compliance with the British Board of Trade, British Lloyds, or Bureau Veritas rules for testing, the inspectors shall make the tests in compliance with the following rules:

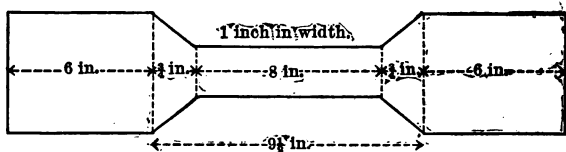
Steel plates shall in all cases have an ultimate elongation of not less than 20 per cent in a length of 8 inches. It is to be capable

*Or, the tensile strength equals the breaking stress of test piece divided by the area of smallest section of test piece before testing, thus:

Given a breaking stress of 20,600 pounds, an original thickness of .385 inch, and an original width of 1.04 inches, of smallest section, then—

$$\text{Tensile strength} = \frac{20,600}{.385 \times 1.04} = \frac{20,600}{.4004} = 51,448 \text{ pounds.}$$

of being bent to a curve of which the inner radius is not greater than one and a half times the thickness of the plates after having been heated uniformly to a low cherry red, and quenched in water of 82 degrees Fahrenheit. Such tests to be made at the place of manufacture of the material, by a local or assistant inspector of the district in which such material is to be used, whenever possible. If, however, from distance or other sufficient reason, the inspectors of the district are unable to make such tests, the Supervising Inspector-General may direct a local or assistant inspector from another district to make them. In every case, however, the inspector making the tests shall stamp the initials of his name above the manufacturer's stamp on the plates, and also the letters "U. S. I.," with the initials or abbreviated signs of the name of the port to which the inspector making the tests belongs. The test piece under this provision shall be prepared in form according to the following diagram :



Provided always, That the plate possesses homogeneousness, toughness, and ability to withstand the effect of repeated heating and cooling; but should these tests prove any plate to be overstamped, such plate must be rejected as failing to have the strength stamped thereon. But nothing herein shall be so construed as to prevent the manufacturer from restamping such plate and all other plates in the lot at the lowest tensile strength indicated by the deficient sample, provided such restamping is done previous to the use of the plates in the manufacture of marine boilers. When more than one sample shall be tested from one sheet, the sample showing the lowest tensile strength shall be allowed as the tensile strength of the plate.

4. The manufacturer of any boiler to be used for marine purposes shall furnish the inspectors of the district where such boiler or boilers are to be constructed a blue print or tracing descriptive of same for their approval, which shall be kept on file in their office, also the kind of material and size of rivets to be used in the construction of such boiler and the size and pitch of the rivet holes in same, as well as an affidavit in the following form, subscribed to, either by himself or authorized agent having superintendence of the construction of such boilers.

No iron or steel plates stamped with a T. S. under 45,000 pounds will hereafter (May 12, 1888) be allowed in the construction of a marine boiler in any of its parts.

5. AFFIDAVIT OF MANUFACTURER OF MARINE STEAM BOILERS.*

COUNTY OF _____,

State of _____, ss:

On this _____ day of _____, A. D. 189—, personally appeared before me, a notary public in and for the county of _____, and State of _____, Mr. _____, who, being duly sworn, deposes and says that he is _____, of _____, boiler manufacturer, and that the accompanying samples of _____, manufactured by _____ of _____, were cut from plates stamped _____, T. S., which are to be used in the construction of a marine boiler for _____, and no plate for shell or other part of boiler subject to tensile strain of less tensile strength or quality than herein specified will be used in the construction of said boiler, the dimensions of which will be: Length, —; diameter, —. Holes drilled, —, or punched. Number of tubes, —; length, —; thickness, —; diameter, —. Number of flues, —; length, —; thickness, —; diameter, —. Number of furnaces, —; length, —; thickness, —; diameter, —. Kind of furnaces, —; round, —; corrugated, —; flat side, —. Thickness of plates of cylindrical shell of boiler, —; thickness of side sheets in flat side of furnace, —; thickness of flat top sheet of back connection, —; thickness of plates of cylindrical shell of back connection, —; thickness of material of boiler heads, —; thickness of tube sheets, —; thickness of plates of shell of steam chimney, —; thickness of plates in lining of steam chimney, —; thickness of side sheets, —; pressure of steam the boiler is to be inspected for, —. And of the style known as _____, to be used upon the steamer _____.

Sworn to and subscribed before me this _____ day of _____, 189—.

_____,
Notary Public.

(Form 21724.)

AFFIDAVIT OF MANUFACTURER OF MARINE STEAM BOILERS, OF MATERIAL TESTED AT THE MILLS.

COUNTY OF _____,

State of _____, ss:

On this _____ day of _____, A. D. 189—, personally appeared before me, _____, a notary public in and for the county of _____, and State of _____, Mr. _____, who, being duly

*Inspectors will not accept this affidavit unless the data required is given, unless accompanied by a satisfactory explanation in writing, to be filed with the affidavit.

Inspectors may make requisition on the Department for the necessary supply of blank affidavits for the use of boiler manufacturers.

sworn, deposes and says that he is ———, of ———, boiler manufacturer, and has contracted to build ——— marine boiler for ——— of ———, plate stamped ———, T. S., from ——— plate manufactured by ———, of ———, was tested at the mills by a United States assistant inspector, as provided in the act of Congress approved January 22, 1894; each of said plates having stamped thereon the words "U. S. assistant inspector," and the initials ———, and numbered as follows: ———

And no plate for shell or other part of boiler subject to tensile strain other than herein specified will be used in the construction of said boiler, the dimensions of which will be: *Length*, —; *diameter*, —; *holes drilled*, —, or *punched*. *Number of tubes*, —; *length*, —; *thickness*, —; *diameter*, —. *Number of flues*, —; *length*, —; *thickness*, —; *diameter*, —. *Number of furnaces*, —; *length*, —; *thickness*, —; *diameter*, —. *Kind of furnaces*, —; *round*, —; *corrugated*, —; *flat side*, —. *Thickness of plates of cylindrical shell of boiler*, —; *thickness of side sheets in flat side of furnace*, —; *thickness of flat top sheet of back connection*, —; *thickness of plates of cylindrical shell of back connection*, —; *thickness of material of boiler heads*, —; *thickness of tube sheets*, —; *thickness of plates of shell of steam chimney*, —; *thickness of plates in lining of steam chimney*, —; *thickness of side sheets*, —; *pressure of steam the boiler is to be inspected for*, —. And of the style known as —, to be used upon the steamer —.

[Signature:] _____

Sworn to and subscribed before me this — day of —, 189—.

Notary Public.

[NOTE.—Inspectors will not accept this affidavit without the data required, unless accompanied by a satisfactory explanation in writing, to be filed with the affidavit.]

Form approved February 20, 1895.

C. S. HAMLIN,

Acting Secretary of the Treasury.

6. To ascertain the ductility and other lawful qualities, iron of 45,000 pounds tensile strength shall show a contraction of area *

*The contraction of area per cent is obtained by subtracting the reduced area, after breaking, from the original area of smallest section, dividing that difference by the original area, and multiplying the quotient by 100, thus:

Given an original area of .3172 inch and a reduced area after breaking, of .2442 inch, then the contraction of area equals

$$\frac{.3172 - .2442}{.3172} \times 100 = \frac{.073}{.3172} \times 100 = 23 \text{ per cent}$$

RULE II.—BOILERS AND ATTACHMENTS.

	Section.
Boilers to have eight inches space between bottom of boiler and woodwork.....	21
Boilers, auxiliary, for seagoing steamers.....	25
Boilers, coil and pipe, inspection of.....	30
Boilers, space required at back end of.....	23
Boilers, used for other than marine purposes not allowed....	37
Boilers, tubular, vertical.....	18
Boiler, heads bumped, concave, and flat, strength of.....	17
Boiler head, flat, with stiffening plate, pressure on.....	6
Boiler heads, Western rivers, thickness of.....	17
Braces and stays, strains allowed (iron).....	6
Braces and stays, strains allowed (steel).....	7
Braces for flat surfaces, strength of.....	5
Butt straps, thickness of.....	8
Copper steam pipes, flanging of.....	38
Feed-water, temperature of.....	16
Furnace shell, top of, to be same thickness as cylindrical shell.	7
Furnaces, vertical boiler, pressure on.....	15
Flues, riveted and lap-welded.....	8
Flues, thickness of material required when not otherwise specially provided for.....	9
Flues, lap-welded, not exceeding 6 inches diameter, length of.	10
Flues, lap-welded, exceeding 6 inches and not exceeding 16 inches diameter, when not required to be made in sections.	11
Flues, lap-welded and riveted, when, may be allowed in 5-foot sections.....	12
Flues, riveted and lap-welded, exceeding 6 inches and not exceeding 40 inches diameter, carrying excess of steam provided in section 8.....	13
Flues, thickness of material, lap-welded.....	9
Flues, corrugated, extra.....	14
Flues, ribbed.....	14
Flues, thickness of material, for furnaces.....	15
Gauge cocks, number of, and how to be inserted.....	27
Gauges, low-water, in use prior to February 28, 1872.....	31
Gauges, low-water, for horizontal cylindrical boilers.....	34
Gauges, steam, kind admissible.....	29
Gauges, low-water, guard to prevent getting into steam pipe	32
Gauges, to record steam pressure correctly, to be attached..	30
Holes cut in bilge or bottom to be accessible.....	38
Holes cut in boiler to be strengthened.....	38
Huston type brace, strain allowable on.....	7
Heads of drums, tubulous boilers, construction of.....	39
Manholes, dimensions of.....	21
Plate containing certain data to be attached to boilers.....	24
Plugs of Banca tin, how inserted.....	26

	Section.
Pressure, hydrostatic, proportion applied to steam pressure allowed.....	4
Pressure, hydrostatic, how applied to boilers with steam chimneys.....	33
Pressure, steam, how to determine.....	3
Pressure for boilers built prior to February 28, 1872.....	1
Pressure for boilers built after February 28, 1872.....	2
Pressure allowed boilers built ten years, how determined....	1
Rivet holes must be fairly drilled.....	2, 3
Safety valves, construction and attachment of.....	28
Safety valves on donkey boilers.....	28
Shell plates to be rolled to form of shell with grain of material.....	7
Slip joints, material constructed of, for salt-water steamers.....	23
Steam and mud drums.....	17
Steam chimneys, construction of.....	15
Stopcock on feed pipe.....	38
Valves, etc., when to be of brass.....	38
Woodwork near boilers internally heated, space required...	20
Woodwork near boilers externally heated, space required...	19
Woodwork and other ignitable substances near boilers, protection to.....	22

(1) PRESSURE ALLOWABLE ON BOILERS OF VARIOUS DIMENSIONS BUILT PRIOR TO FEBRUARY 28, 1872.

1. Boilers built prior to February 28, 1872, shall be deemed to have a tensile strength of 50,000 pounds to the sectional square inch, whether stamped or not, and shall be tested under the rule prescribed for boilers inspected under the provisions of section 26 of the act relating to boilers built after the 28th of February, 1872.

Any boiler having been in use ten years or more shall, at the first annual inspection thereafter, be drilled at points near the water line, and at bottom of shell of boiler, or such other points as the local inspectors may direct, to determine the thickness of such material at those points, and the general condition of such boiler or boilers at the time of such inspection; and the thickness of said material shall be determined thereafter at such annual inspection as the local inspector may deem necessary, and the steam pressure allowed shall be governed by such ascertained thickness and general condition of the boiler.

(See table of pressures allowable on boilers made since February 28, 1872.)

2. In the first column to the left will be found the diameter of boilers varying by 2" from 36" to 48" and by 6" from 48" to 96". In the second column will be found the thickness of boiler plates, expressed in the decimal parts of an inch, and varying—by $\frac{1}{32}$ " nearly—from $\frac{3}{8}$ " to $\frac{1}{2}$ "; .1875, .25, .3125, and .375 are the decimal

equivalents for $\frac{1}{8}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ ", and $\frac{1}{2}$ ". The decimals .21, .23, .26, and .29 correspond nearly to $\frac{1}{8}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ ", and $\frac{1}{2}$ " in the table of the pressures allowable on boilers made prior to February 28, 1872. At the heads of the double columns will be found the tensile strength of the plates *per square inch of section*; also one-sixth ($\frac{1}{6}$) of that amount. The pressures allowable on single-riveted boilers will be found in the first divisions of the double columns under the tensile strength and opposite the diameters and thickness; and in the second divisions the pressures allowable on boilers where all the rivet holes have been fairly drilled instead of punched and the longitudinal laps of their cylindrical parts double riveted.

3. The pressure for any dimension of boilers not found in the table annexed to these rules must be ascertained by the following rule, viz:

Multiply one-sixth ($\frac{1}{6}$) of the lowest tensile strength found stamped on any plate in the cylindrical shell by the thickness—expressed in inches or parts of an inch—of the thinnest plate in the same cylindrical shell, and divide by the radius or half diameter—also expressed in inches—and the sum will be the pressure allowable per square inch of surface for single riveting, to which add 20 per cent for double riveting, when all the holes have been "fairly drilled" and no part of such hole has been punched.

Where butt straps are used in the construction of marine boilers, the straps for single butt strapping shall in no case be less than the thickness of the shell plates; and where double butt straps are used, the thickness of each shall in no case be less than five-eighths ($\frac{5}{8}$) the thickness of the shell plates.

4. The hydrostatic pressure applied must be in the proportion of 150 pounds to the square inch to 100 pounds to the square inch of the steam pressure allowed.

5. Where flat surfaces exist, the inspector must satisfy himself that the spacing and distance apart of the bracing and all other parts of the boiler are so arranged that all will be of not less strength than the shell, and he must also, after applying the hydrostatic test, thoroughly examine every part of the boiler.

6. No braces or stays* hereafter employed in the construction of boilers shall be allowed a greater strain than six thousand (6,000) pounds per square inch of section, and no solid or hollow

* To determine diameter of circular brace or stay to withstand a given stress, divide the stress by the product of .7854 by the stress allowed per square inch of section (see sections 6 and 7, Rule II), and extract the square root of the quotient. Example:

Given pressure on stay equal 4,500 pounds, on material allowed 6,000 pounds per square inch of section, then—

$$\text{Diameter} = \sqrt{\frac{4,500}{6,000 \times .7854}} = .97 \text{ inch.}$$

screw stay bolt shall be allowed to be used in the construction of marine boilers in which salt water is used to generate steam, unless said screw stay bolt is protected by a socket. But such screw stay bolts without socket may be used in staying the fire boxes and furnaces of such boilers and elsewhere when fresh water is used for generating steam in said boilers. Water used from a surface condenser shall be deemed fresh water. The flat surface at back connection or back end of boilers may be stayed by the use of a tube, the ends of which being expanded in holes in each sheet beaded and further secured by a bolt passing through the tube and secured by a nut. An allowance of steam shall be given from the outside diameter of pipe. For instance, if the pipe used be $1\frac{1}{4}$ inches diameter outside, with a $1\frac{1}{4}$ -inch bolt through it, the allowance will be the same as if a $1\frac{1}{4}$ -inch bolt were used in lieu of the pipe and bolt. And no brace or stay bolt used in a marine boiler will be allowed to be placed more than $10\frac{1}{4}$ inches from center to center on fire boxes, furnaces, and back connections; nor on these than at a greater distance than will be determined by the following formulas:

The working pressure allowed on flat surfaces fitted with screw stay bolts and nuts, or plain bolt with single nut and socket, or riveted head and socket, will be determined by the following rule:

When plates $\frac{7}{8}$ inch thick and under are used in the construction of marine boilers, using 112 as a constant, multiply this by the square of the thickness of plate in sixteenths of an inch. Divide this product by the square of the pitch or distance from center to center of stay bolt.

EXAMPLE.

Plate $\frac{7}{8}$ inch thick with socket bolts or stay, 6-inch center, would be 112, the constant, multiplied by the square of 7, the thickness of the plates in sixteenths, which is 49, would give 5,488, which, divided by the square of 6, which is 36, being the distance from center to center of stays or the pitch, would be 152, the working pressure allowed, provided the strain on stay or bolt does not exceed 6,000 pounds per square inch of section.

Plates $\frac{1}{2}$ inch thick, stay bolts spaced 4-inch center = $\frac{112 \times 16}{16} = 112$ pounds W. P.

Plates $\frac{3}{8}$ inch thick, stay bolts spaced 5-inch center = $\frac{112 \times 25}{25} = 112$ pounds W. P.

Plates $\frac{5}{8}$ inch thick, stay bolts spaced 6-inch center = $\frac{112 \times 25}{36} = 77$ pounds W. P.

Plates $\frac{3}{4}$ inch thick, stay bolts spaced 6-inch center = $\frac{112 \times 36}{36} = 112$ pounds W. P.

Plates above $\frac{7}{8}$ inch thick, the pressure will be determined by the same rule, excepting the constant will be 120; then a plate $\frac{1}{2}$

inch thick, stays spaced 7 inches from center, would be as follows : 120, the constant, multiplied by 64, the square of thickness in sixteenths of an inch, equals 7,680, which, divided by the square of 7 inches (distance from center to center of stays), which is 49, would give 156 pounds W. P.

Plates $\frac{1}{4}$ or $\frac{1}{2}$ of an inch thick, spaced 10 $\frac{1}{2}$ inches, would be

$$\frac{120 \times 144}{110.25} = 156 \text{ pounds W. P.}$$

On other flat surfaces there may be used stay bolts with ends threaded, having nuts on same, both on the outside and inside of plates. The working pressure allowed would be as follows :

A constant 140, multiplied by the square of the thickness of plate in sixteenths of an inch, this product divided by the pitch or distance of bolts from center to center, squared, gives working pressure.

EXAMPLE.

A plate $\frac{1}{4}$ inch thick, supported by bolts 14 inches, would be

$$\frac{140 \times 144}{196} = 102 \text{ pounds W. P.}$$

Same thickness of plate, with bolts 12-inch centers, would be

$$\frac{140 \times 144}{144} = 140 \text{ pounds W. P.}$$

Flat part of boiler-head plates when braced with bolts having double nuts and a washer at least one-half the thickness of head, where washers are riveted to the outside of the head, and of a size equal to $\frac{1}{4}$ of the pitch of stay bolts, or where heads have a stiffening plate covering the area braced will equal the thickness of head and washers, the head and stiffening plate being riveted together, with rivets spaced and of sufficient sectional area of rivets as determined by section 8, Rule II, for socket bolts shall be allowed a constant of 200, rivets to be spaced by thickness of washer on the stiffening plate. Boiler heads so reinforced will be allowed a thickness to compute pressure allowed of 80 per cent of the combined thickness of head and washer, or head and stiffening plate.

EXAMPLE.

A plate $\frac{1}{4}$ inch thick, with a washer $\frac{1}{4}$ inch thick and 5.6 inches square, supported by bolts 14-inch centers, would be

$$\frac{200 \times 144}{196} = 146 \text{ pounds W. P.}$$

Spaced 15-inch centers, with a washer $\frac{1}{4}$ inch thick and 6 inches square, supported by bolts 15-inch centers, would be

$$\frac{200 \times 144}{225} = 128 \text{ pounds W. P.}$$

Plates fitted with double angle iron and riveted to plate with leaf at least two-thirds thickness of plate and depth at least one-fourth of the pitch, would be allowed the same pressure as determined by formula for plate with washer riveted on.

EXAMPLE

Plate $\frac{1}{4}$ inch thick, supported by angle iron and supported by bolts, 14-inch centers, would be $\frac{200 \times 144}{196} = 146$ pounds working pressure, but no flat surface shall be unsupported at a greater distance in any case than 16 inches, and such flat surfaces shall not be of less strength than the shell of the boiler and able to resist the same strain and pressure to the square inch. In allowing the strain on a screw stay bolt, the diameter of the same shall be determined by the diameter at the bottom of the thread.

7. Plates of iron or steel, used in the construction of boilers, extending beyond the cylindrical shell to the front of the boiler over the furnaces, shall extend at least 12 inches below the center of the shell, and shall not be of less tensile strength or thickness than the adjoining sheets in the cylindrical portions of the shell, and that the sheets forming the shell shall be rolled to form of shell with the grain of the material.

Steel stay bolts exceeding a diameter of $1\frac{1}{4}$ inches and not exceeding a diameter of $2\frac{1}{4}$ inches at the bottom of the thread may be allowed a strain not exceeding 8,000 pounds per square inch of cross section; steel stay bolts exceeding a diameter of $2\frac{1}{4}$ inches at bottom of thread may be allowed a strain not exceeding 9,000 pounds per square inch of cross section; but no forged or welded steel stays will be allowed.

The ends of such stays may be upset to a sufficient thickness to allow for truing up and including the depth of the thread.

And all such stays after being upset shall be thoroughly annealed.

Any steel stay brace of the Huston type, or similar thereto, prepared at one heat from a solid piece of plate without welds, intended for use in marine boilers, to be allowed a strain exceeding 6,000 pounds per square inch of cross section, shall be tested as hereinafter provided for steel bars intended to be used as stay bolts; and any brace formed in this way, with an area of cross section of 1.227 and not exceeding an area of 5 inches, may be allowed a strain not exceeding 7,000 pounds per square inch of cross section; exceeding this area, may be allowed a strain not exceeding 8,000 pounds to the square inch.

All steel bars intended for use as stay bolts to be allowed a strain exceeding 6,000 pounds per square inch of cross section shall be tested by the inspectors, in lots not to exceed fifty bars, in the following manner: Inspectors shall promiscuously select one bar from each lot and bend one end of such bar cold to a curve the inner radius of which is to equal one and one-half times

the diameter of the test bar; and should any such test bar break in the bending process, the lot from which the test bar was taken shall not be allowed to be worked into stay bolts for marine boilers.

And all manufacturers of marine boilers desiring to employ the steel stays provided for herein shall be required to furnish the inspectors with the following form of affidavit:

STATE OF _____,

County of _____, ss:

Personally appeared before me, a notary public for and in the county of _____ and State of _____, Mr. _____, who, being first duly sworn, deposes and says that he is the _____ of the steam-boiler works situated at _____, and known as the _____, and that the lot or lots of steel bars from which test bars were taken and tested by the inspector- on the _____ day of _____, 189—, and allowed for use in the steam boiler- to be constructed for the steamer _____, and to be allowed a strain not to exceed _____ pounds per square inch of section as a working steam pressure, will be used in the construction of the boiler- for the steamer _____, and no material for stay bolts required to carry a strain equal to _____ pounds per square inch of section will be used as stay bolts or stays in the construction of the boiler- for the said steamer unless tested by the inspector and approved by him in accordance with the requirements of law.

Sworn to and subscribed before me this _____ day of _____, 189—.

Notary Public.

RIVETED AND LAP-WELDED FLUES.

8. The following table shall include all riveted and lap-welded flues exceeding 6 inches in diameter and not exceeding 40 inches in diameter not otherwise provided for by law. And all such flues shall be made in sections, according to their respective diameters, not to exceed the lengths prescribed in the table, and such sections shall be properly fitted one into the other and substantially riveted, and the thickness of material required for any such flue of any given diameter shall in no case be less than the least thickness prescribed in the table for any such given diameter; and all such flues may be allowed the prescribed working steam pressure if in the opinion of the inspectors it is deemed safe to make such allowance. And inspectors are therefore required, from actual measurement of each flue, to make such reduction from the prescribed working steam pressure for any material deviation in the uniformity of the thickness of material, or for any material deviation in the form of the flue from that of a true circle, as in their judgment the safety of navigation may require.

Table of steam pressure per square inch allowable on riveted and lap-welded flues made in sections.

Thickness of material required.	Greatest length of sections allowable, 3 feet.									
	Least thickness of material allowable.					Least thickness of material allowable.				
	.18 inch.	.20 inch.	.21 inch.	.22 inch.	.23 inch.	.24 inch.	.25 inch.	.26 inch.	.27 inch.	.28 inch.
Thickness of material required.	Diameter of flues.									
	Over 6 and not over 7 inches.	Over 7 and not over 8 inches.	Over 8 and not over 9 inches.	Over 9 and not over 10 inches.	Over 10 and not over 11 inches.	Over 11 and not over 12 inches.	Over 12 and not over 13 inches.	Over 13 and not over 14 inches.	Over 14 and not over 15 inches.	Over 15 and not over 16 inches.
.18-inch	Lbs. pres-sure 189	Lbs. pres-sure 184	Lbs. pres-sure 179	Lbs. pres-sure 174	Lbs. pres-sure 172	Lbs. pres-sure 165	Lbs. pres-sure 158	Lbs. pres-sure 147	Lbs. pres-sure 147	Lbs. pres-sure 147
.19-inch	Lbs. pres-sure 199	Lbs. pres-sure 194	Lbs. pres-sure 189	Lbs. pres-sure 184	Lbs. pres-sure 179	Lbs. pres-sure 172	Lbs. pres-sure 165	Lbs. pres-sure 158	Lbs. pres-sure 147	Lbs. pres-sure 147
.20-inch	Lbs. pres-sure 204	Lbs. pres-sure 199	Lbs. pres-sure 194	Lbs. pres-sure 189	Lbs. pres-sure 184	Lbs. pres-sure 179	Lbs. pres-sure 172	Lbs. pres-sure 165	Lbs. pres-sure 158	Lbs. pres-sure 147
.21-inch	Lbs. pres-sure 204	Lbs. pres-sure 199	Lbs. pres-sure 194	Lbs. pres-sure 189	Lbs. pres-sure 184	Lbs. pres-sure 179	Lbs. pres-sure 172	Lbs. pres-sure 165	Lbs. pres-sure 158	Lbs. pres-sure 147
.22-inch	Lbs. pres-sure 204	Lbs. pres-sure 199	Lbs. pres-sure 194	Lbs. pres-sure 189	Lbs. pres-sure 184	Lbs. pres-sure 179	Lbs. pres-sure 172	Lbs. pres-sure 165	Lbs. pres-sure 158	Lbs. pres-sure 147
.23-inch	Lbs. pres-sure 204	Lbs. pres-sure 199	Lbs. pres-sure 194	Lbs. pres-sure 189	Lbs. pres-sure 184	Lbs. pres-sure 179	Lbs. pres-sure 172	Lbs. pres-sure 165	Lbs. pres-sure 158	Lbs. pres-sure 147
.24-inch	Lbs. pres-sure 204	Lbs. pres-sure 199	Lbs. pres-sure 194	Lbs. pres-sure 189	Lbs. pres-sure 184	Lbs. pres-sure 179	Lbs. pres-sure 172	Lbs. pres-sure 165	Lbs. pres-sure 158	Lbs. pres-sure 147

Riveted and lap-welded flues of any thickness of material, diameter, and length of sections, prescribed in the table, may be made in sections of any desired length, exceeding the maximum length allowed by the table, by reducing the prescribed pressure in proportion to the increased length of section, according to the following rule :

RULE.—Multiply the pressure in the table allowed for any prescribed thickness of material and diameter of flue by the greatest length, in feet, of sections allowable for such flue, and divide the product by the desired length of sections, in feet, from center line to center line of rivets in the circular seams of such sections, and the quotient will give the working steam pressure allowable.

EXAMPLE.

Taking a flue in the table 24 inches in diameter, required to be made in sections not exceeding 2.5 feet in length, and having a thickness of material of 0.44 of an inch, and allowed a pressure of 157 pounds, and it is desired to make this flue in sections 5 feet in length.

Then we have

$$\frac{157 \times 2.5}{5} = 78.5 \text{ pounds pressure allowable.}$$

THICKNESS OF MATERIAL REQUIRED FOR TUBES AND FLUES NOT OTHERWISE PROVIDED FOR.

9. Tubes and flues not exceeding 6 inches in diameter, and made of any required length; and

Lap-welded flues required to carry a working steam pressure not to exceed 60 pounds per square inch and having a diameter not exceeding 16 inches and a length not exceeding 18 feet; and

Lap-welded flues required to carry a steam pressure exceeding 60 pounds per square inch and not exceeding 120 pounds per square inch, and having a diameter not exceeding 16 inches, and a length not exceeding 18 feet, and made in sections not exceeding 5 feet in length, and fitted properly one into the other, and substantially riveted ; and

All such tubes and flues shall have a thickness of material according to their respective diameters, as prescribed in the following table :

Outside diameter.	Thick-ness.	Outside diameter.	Thick-ness.	Outside diameter.	Thick-ness.
<i>Inches.</i>	<i>Inch.</i>	<i>Inches.</i>	<i>Inch.</i>	<i>Inches.</i>	<i>Inch.</i>
1	.072	3½	.120	9	.180
1½	.072	3¾	.120	10	.208
1¾	.088	3½	.120	11	.220
1¾	.095	4	.134	12	.229
2	.095	4½	.134	13	.238
2½	.095	5	.148	14	.248
2½	.109	6	.165	15	.259
2¾	.109	7	.165	16	.270
3	.109	8	.165	-----	-----

10. Lap-welded flues not exceeding 6 inches in diameter may be made of any required length without being made in sections. And all such lap-welded flues and riveted flues not exceeding 6 inches in diameter may be allowed a working steam pressure not to exceed 225 pounds per square inch, if deemed safe by the inspectors.

11. Lap-welded flues exceeding 6 inches in diameter and not exceeding 16 inches in diameter, and not exceeding 18 feet in length, and required to carry a steam pressure not exceeding 60 pounds per square inch, shall not be required to be made in sections.

12. Lap-welded and riveted flues exceeding 6 inches in diameter, and not exceeding 16 inches in diameter, and not exceeding 18 feet in length, and required to carry a steam pressure exceeding 60 pounds per square inch, and not exceeding 120 pounds per square inch, may be allowed, if made in sections not exceeding 5 feet in length, and properly fitted one into the other, and substantially riveted.

13. Riveted and lap-welded flues exceeding 6 inches in diameter and not exceeding 40 inches in diameter, required to carry a working steam pressure per square inch exceeding the maximum steam pressure prescribed for any such flue in the table of section 8 of this rule, shall be constructed under the provisions of section 15 of this rule, and limited to the working steam pressure therein provided for furnace flues; but in no case shall the material in any such riveted or lap-welded flue be of less thickness for any given diameter than the least thickness prescribed, in the aforementioned table, for flues of such diameter.

CORRUGATED FURNACE FLUES.

14. The strength of all corrugated flues, when used for furnaces or steam chimneys (corrugation not less than $1\frac{1}{4}$ inches deep and not exceeding 8 inches from centers of corrugation), and provided that the plain parts at the ends do not exceed 6 inches in length, and the plates are not less than five-sixteenths inch thick, when new, corrugated, and practically true circles, to be calculated from the following formula:

$$\frac{14000}{D} \times T = \text{pressure.}$$

T = thickness, in inches.

D = mean diameter, in inches.

EXAMPLE.

Given, a corrugated flue 40 inches mean diameter, one-half inch thick; required, the pressure allowed by inspectors:

$$\begin{array}{r} 40 \overline{) 14000} \\ \underline{350} \\ .5 \\ \hline 175.0 \end{array} \text{ pounds pressure allowed.}$$

RIBBED FURNACE FLUES.

The strength of ribbed flues, when used for furnaces or steam chimneys (rib projections not less than $1\frac{1}{8}$ inches deep) and not more than 9 inches from center to center of ribs, and provided that the plain parts at ends do not exceed 9 inches, and constructed of plates not less than seven-sixteenths inch thick, with practically true circle, to be calculated from the following formula :

C = constant 14000.

T = thickness of flue in decimals of an inch.

D = diameter of flue.

P = pressure of steam allowable.

$$\text{Formula : } \frac{C \times T}{D} = P.$$

EXAMPLE.

Given, ribbed flue 40 inches mean diameter, one-half inch thick; required, the pressure allowed, $\frac{14000 \times .5}{40} = 175$ pounds.

The thickness of both corrugated and ribbed flues shall be ascertained by requiring the manufacturer to have said flue drilled for $\frac{1}{4}$ -inch gas-pipe tap, and filled with a screw plug that can be removed by the boiler inspector when making inspection of said boiler; and the pressure of steam allowed shall be determined by the thickness ascertained by inspection. Said hole shall be drilled at least as far in as the fourth corrugation from the end of flue, and in top of center corrugation.

15. The steam pressure allowable and the thickness of material required for flues used as furnaces in boilers, and for vertical boiler furnaces having a diameter of not more than 42 inches and a height of not more than 40 inches, except as hereafter otherwise provided, shall be determined by the following formula, viz :

Let D = diameter of flue in inches.

89600 = a constant.

T = thickness of flue in decimals of an inch.

L = length of flue in feet, not to exceed 8 feet.

P = pressure of steam allowable in pounds.

$$\text{Formula : } \frac{89600 \times T^2}{L \times D} = P.$$

EXAMPLE.

Given, a flue 40 inches in diameter, 7 feet in length, and five-tenths of an inch in thickness; required, working pressure to be allowed.

Substituting values in the formula, and performing the operation indicated, we have—

$$P = \frac{89600 \times T^2}{L \times D} = \frac{89600 \times .25}{7 \times 40} = \frac{22400}{280} = 80 \text{ pounds pressure.}$$

Provided, That when such flues are made in sections of less than 8 feet in length and flanged to a depth of not less than 2½ inches, and substantially riveted together with wrought-iron rings between such flanges, and such rings having a thickness of not less than half an inch and a width of not less than 2½ inches, or, in lieu thereof, angle-iron rings are employed, and such rings having a thickness of material of not less than double the thickness of the material in the flue and a depth of not less than 2½ inches, and substantially riveted in position with wrought-iron thimbles between the inner surface of such ring and the outer surface of the flue, at a distance from the flue not to exceed 2 inches, with rivets having a diameter of not less than one and one-half times the thickness of material in the flue, and placed apart at a distance not to exceed 6 inches from center to center at the outer surface of the flue, the distance between the flanges, or the distance between such angle-iron rings, shall be taken as the length of the flue in determining the pressure allowable.

EXAMPLE.

Given, a flue 40 inches in diameter, 8 feet long, and five-tenths of an inch in thickness, having one ring at the middle of its length; required, the pressure allowable by the inspectors:

Substituting values in the formula, and performing the operation, we have—

$$P = \frac{89600 \times T^2}{L \times D} = \frac{89600 \times .25}{4 \times 40} = \frac{22400}{160} = 140 \text{ pounds pressure.}$$

The strengthening rings may be of half-round iron containing an area of cross section of not less than 9.6 times the thickness of material in the flue, and held in position around the flue with thimbles, at a distance from the surface of the flue not to exceed 2 inches, and substantially riveted with rivets spaced not more than 8 inches from center to center at the surface of the flue, for rivets having a diameter of not less than seven-eighths of an inch; and not more than 6 inches from center to center for rivets having a diameter of not less than three-quarters of an inch; and not more than 4 inches from center to center for rivets having a diameter of not less than five-eighths of an inch; and no such rivets shall be allowed having a diameter of less than five-eighths of an inch; and the size of all such strengthening rings shall be determined according to the following example:

EXAMPLE.

Let .5 = thickness of material in the flue in decimals of an inch,

9.6 = a constant,

2 = a constant,

.7854 = a constant,

18251—8

Then we have—

$$\sqrt{\frac{.5 \times 9.6 \times 2}{.7854}} = 3'' .5 \text{ half-round iron.}^*$$

The working steam pressure allowable on flues having half-round iron strengthening rings shall be determined according to the following example :

EXAMPLE.

Let 89600 = a constant,

.5 = thickness of material in flue in decimals of an inch,

.75 = a coefficient,

40 = diameter of flue in inches,

3 = distance from center to center of strengthening rings in feet,

Then we have—

$$\frac{89600 \times .5 \times .5 \times .75}{40 \times 3} = 140 \text{ pounds working steam pressure per square inch allowable.}$$

The thickness of material required for flue shall be determined by the following example:

Let 140 = pressure per square inch,

40 = diameter of flue in inches,

3 = distance from center to center of strengthening rings,

89600 = a constant,

.75 = a coefficient,

Then we have—

$$\sqrt{\frac{140 \times 40 \times 3}{89600 \times .75}} = .5, \text{ thickness of material required in decimals of an inch.}$$

The distance from center to center of strengthening rings of half-round iron shall be determined by the following example:

EXAMPLE.

Let 89600 = a constant,

.75 = a coefficient,

.5 = thickness of material in decimals of an inch,

140 = given pressure per square inch,

40 = diameter of flue in inches,

Then we have—

$$\frac{89600 \times .75 \times .5 \times .5}{140 \times 40} = 3 \text{ feet, distance from center to center of strengthening rings.}$$

To determine the thickness of material required:

RULE.—Multiply the diameter of the flue in inches by the length of the flue in feet, and multiply the product by the pressure per square inch in pounds, and divide the last product by the constant 89600, then extract the square root of the quotient. The answer will give the thickness of material required.

*The same result can be obtained more readily by means of the equivalent formula, $\sqrt{\frac{24.446 \times T}{1}}$, where T = thickness of material in the flue in decimals of an inch.

EXAMPLE.

Let D = diameter of flue or furnace in inches,
 L = length of flue in feet,
 P = pressure per square inch in pounds,
 C = 89600, a constant,
 T = thickness of material in decimals of an inch.

$$\text{Formula: } \sqrt{\frac{D \times L \times P}{C}} = T.$$

EXAMPLE.

Let 40 = diameter of flue or furnace in inches,
 4 = length of flue or length of furnace in feet,
 140 = pressure per square inch in pounds,
 89600 = a constant,
 Then we have—

$$\sqrt{\frac{40 \times 4 \times 140}{89600}} = .5, \text{ thickness of material in decimals of an inch.}$$

All vertical boiler furnaces constructed of wrought iron or steel plates, and having a diameter of over 42 inches or a height of over 40 inches, and crown sheets of flat-sided furnaces, if made with a radius of over 21 inches, and all cylindrical shells of back connections having a radius of over 21 inches, shall be stayed with bolts as provided by section 6 of Rule II, for flat surfaces; and the thickness of material required for the shells of such furnaces shall be determined by the distance between the centers of the stay bolts in the furnace and not in the shell of the boiler; and the steam pressure allowable shall be determined by the distance from center of stay bolts in the furnace, and the diameter of such stay bolts at the bottom of the thread. Where steam chambers are formed in such vertical boilers at the upper end thereof by a sheet in form of a cone between the upper tube sheet and upper head of such boiler, the pressure allowed shall be determined by the diameter of such cone at the central point between the tube sheet and upper head of such boiler.

Steam chimneys or superheaters formed of a flue, with an inclosing shell, shall be built as follows:

The outer shell subject to internal pressure shall be constructed under rules governing the shells of boilers, without allowance for any bracing to lining or flue.

The lining of flue subject to external pressure shall be constructed as follows:

FOR LININGS.

Plates under 30 inches in diameter shall be at least $\frac{1}{8}$ inch thick.

Thirty inches and under 45 inches diameter, plates shall be at least $\frac{1}{4}$ inch thick.

Forty-five inches and under 55 inches diameter, plates shall be at least $\frac{3}{8}$ inch thick.

Fifty-five inches and under 65 inches diameter, plates shall be at least $\frac{3}{8}$ inch thick.

Sixty-five inches and under 75 inches diameter, plates shall be at least $\frac{7}{16}$ inch thick.

Seventy-five inches and under 85 inches diameter, plates shall be at least $\frac{1}{2}$ inch thick.

Eighty-five inches diameter a corresponding increase in thickness of plate of $\frac{1}{16}$ inch for every 10 inches increase in diameter.

The linings of flue shall be braced as follows:

On or for all boilers using salt water, carrying a steam pressure of 60 pounds and under per square inch, the lining shall be braced with socket bolts, with heads and with ends of bolts threaded for nuts, with plate washers not over 12 inches between centers (or equivalent) on the inside of the lining; bolts to be at least 1 inch diameter.

On or for all boilers using salt water, carrying a steam pressure over 60 pounds per square inch, the lining shall be braced with socket bolts, with heads and with ends of said bolts threaded for nuts, with plate washers not over 10 inches between centers (or equivalent) on the inside of lining; bolts to be at least $1\frac{1}{4}$ inches diameter; the diameter of the bolts to be determined by the diameter at the bottom of the thread of said bolt.

On or for all boilers using fresh water, the lining may be braced as described for boilers using salt water, or as hereafter described (or equivalent thereto), viz, with iron or steel angle rings, properly riveted to lining, and properly connected to outer shell by plate braces. These plate braces shall be of sufficient number and width to make space between plates not over 20 inches on the lining; the angle rings shall be at least $2\frac{1}{2}$ inches by $2\frac{1}{2}$ inches on linings, $\frac{3}{8}$ inch and $\frac{1}{2}$ inch thick; 3 inches by 3 inches on linings, $\frac{7}{16}$ inch and $\frac{1}{2}$ inch thick; $3\frac{1}{2}$ inches by $3\frac{1}{2}$ inches on linings, $\frac{7}{16}$ inch and $\frac{1}{2}$ inch thick, and 4 inches by 4 inches on linings, $\frac{1}{2}$ inch or more in thickness: *Provided, however,* That lining of steam chimney, between 24 inches and 32 inches diameter and $\frac{1}{2}$ inch thick, and lining between 32 inches and 48 inches diameter, $\frac{1}{2}$ inch thick, may be used in lengths not exceeding 8 feet, without bracing.

The pressure of steam to be allowed on linings shall be determined by the following formula, viz:

Constant, 89600.

D = diameter in inches.

T = thickness in decimals of an inch.

L = length in feet.

P = pressure of steam allowable in pounds.

$$\text{Formula: } \frac{89600 \times T^2}{L \times D} = P.$$

And the length of the lining or flue shall be the distance between center and center of angle rings, or center of angle rings to center of nearest row of rivets holding head, but in no

case shall this distance be greater than $2\frac{1}{2}$ feet, except as otherwise provided.

Corrugated or ribbed flues may be used as lining to steam chimney or superheaters under the same rules and conditions as apply to their use in the furnace of steam boilers.

16. The feed water shall not be admitted into any boiler, used in connection with a condensing engine, at a temperature less than 100 degrees, Fahrenheit, and any boiler used in connection with a noncondensing engine, at less than 180 degrees. And no marine boilers shall be used without having proper auxiliary appliances for supplying said boilers with water in addition to the usual mode employed.

17. All heads employed in the construction of cylindrical boilers for steamers navigating the Red River of the North and rivers whose waters flow into the Gulf of Mexico shall have a thickness of material as follows: For boilers having a diameter exceeding 32 inches, and not exceeding 36 inches, not less than half an inch; for boilers exceeding 36 inches in diameter and not exceeding 40 inches in diameter, not less than nine-sixteenths of an inch; for boilers exceeding 40 inches in diameter, not less than one-sixteenth of an inch additional thickness for every eight inches additional diameter, required for boilers 40 inches in diameter.

And the heads of steam and mud drums of such boilers shall have a thickness of material of not less than half an inch.

BUMPED HEADS OF BOILERS.

Pressure allowed on bumped heads.—Multiply the thickness of the plate by one-sixth of the tensile strength, and divide by six-tenths of the radius to which head is bumped, which will give the pressure per square inch of steam allowed.

The pressure on unstayed flat-heads on steam drums or shells of boilers, when flanged and made of wrought iron or steel or of cast steel, shall be determined by the following rule:

The thickness of plate in inches multiplied by one-sixth of its tensile strength in pounds, which product divided by the area of the head in square inches multiplied by .09 will give pressure per square inch allowed. The material used in the construction of flat-heads when tensile strength has not been officially determined shall be deemed to have a tensile strength of 45,000 pounds.

When such heads are stayed or braced, the pressure allowed shall be determined by section 6 of Rule II.

Pressure allowable for concaved heads of boilers.—Multiply the pressure per square inch allowable for bumped heads attached to boilers or drums convexly, by the constant .6, and the product will give the pressure per square inch allowable in concaved heads.

18. Vertical tubular boilers shall not be used on steamers navigating the Red River of the North, and rivers whose waters

flow into the Gulf of Mexico, unless the water line is 2 inches above the upper end of the tubes and fire line.

19. All steamers navigating rivers, having boilers externally heated, shall have a clear space of not less than 6 inches between the boilers and woodwork on either side, and 4 inches on the top of said boilers.

20. All steamers navigating the ocean, sounds, lakes, bays, and rivers, the boilers of which shall be internally heated, shall have a clear space of at least 4 inches on either side, and at the top not less than 2 inches clear space above the covering of the boiler.

21. All boilers hereafter placed in steamers shall have a clear space of at least 8 inches between the under side of the cylindrical shell and the floor of keelson.

All manholes for the shell of boilers shall have an opening not less in diameter than 11 by 15 inches in the clear, except that boilers less than 34 inches diameter of shell have an opening in the clear, in manholes of not less than 9 by 14½ inches; all boiler shells between 34 and 38 inches diameter, an opening of not less than 9 by 16 inches; and all boiler shells between 38 and 48 inches in diameter, an opening not less than 11 by 15½ inches.

22. All woodwork or other ignitable substance approaching within 2 inches of the boiler shall be suitably sheathed with metal, so adjusted as to permit a free circulation of air between the sheathing and the ignitable surface.

23. All boilers shall have a clear space at the back and ends thereof of 2 feet opposite the back connection door. Slip joints in steam pipes shall, in their working parts, when the steamer is to be employed in navigating salt water, be made of copper or composition: *Provided*, That on vessels constructed of iron or steel with metal bulkheads, the distance between back connection doors and such metal bulkheads shall not be less than 16 inches.

24. There shall be fastened to each boiler a plate containing the name of the manufacturer of the material, the place where manufactured, the tensile strength, the name of the builder of the boiler, when and where built.

25. Every seagoing steamer carrying passengers shall be supplied with an auxiliary or donkey boiler of sufficient capacity to work the fire pumps, and such boilers shall not be placed below the lower decks, except on single-deck vessels, on any steamer hereafter built, or applying for first inspection as a passenger steamer.

26. All steamers shall have inserted in their boilers plugs of Banca tin, at least one-half inch in diameter at the smallest end of the internal opening, in the following manner, to wit: Cylinder boilers with flues shall have one plug inserted in one flue of each boiler; and also one plug inserted in the shell of each boiler from the inside, immediately before the fire line, and not less than four feet from the forward end of the boiler. All fire-box boilers

shall have one plug inserted in the crown of the back connection or in the highest fire service of the boiler. All upright tubular boilers used for marine purposes shall have a fusible plug inserted in one of the tubes at a point at least two inches below the lower gauge cock, and said plug may be placed in the upper head sheet when deemed advisable by the local inspectors. All fusible plugs, unless otherwise provided, shall have an external diameter not less than that of a one-inch gas or steam pipe screw tap, except when such plugs shall be used in the tubes of upright boilers, plugs may be used with an external diameter of not less than that of a three-eighths of an inch gas or steam pipe screw tap, said plugs to conform in construction with plugs now authorized to be used by this Board; and it shall be the duty of the inspectors to see that these plugs are filled with Banca tin at each annual inspection.

27. All steamers having one or two boilers shall have three suitable gauge cocks in each boiler. Those having three or more boilers in battery shall have three in each outside boiler and two in each remaining boiler in the battery; and the middle gauge cocks in all boilers shall not be less than 4 inches above the top of the flues, tubes, or crown of the fire box.

28. Lever safety valves to be attached to marine boilers shall have an area of not less than 1 square inch to 2 square feet of the grate surface in the boiler, and the seats of all such safety valves shall have an angle of inclination of 45 degrees to the center line of their axes.

The valves shall be so arranged that each boiler shall have one separate safety valve, unless the arrangement is such as to preclude the possibility of shutting off the communication of any boiler with the safety valve or valves employed. This arrangement shall also apply to lock-up safety valves when they are employed.

Any spring-loaded safety valves constructed so as to give an increased lift by the operation of steam, after being raised from their seats, or any spring-loaded safety valve constructed in any other manner or so as to give an effective area equal to that of the aforementioned spring-loaded safety valve, may be used in lieu of the common lever-weighted valve on all boilers on steam vessels, and all such spring-loaded safety valves shall be required to have an area of not less than 1 square inch to 3 square feet of grate surface of the boiler, except as hereinafter otherwise provided for water-tube or coil and sectional boilers, and each spring-loaded valve shall be supplied with a lever that will raise the valve from its seat a distance of not less than that equal to one-eighth the diameter of the valve opening, and the seats of all such safety valves shall have an angle of inclination to the center line of their axis of 45 degrees. All spring-loaded safety valves for water-tube or coil and sectional boilers required to carry a steam pressure exceeding 175 pounds per square inch shall be

required to have an area of not less than 1 square inch to 6 square feet of the grate surface of the boiler. Nothing herein shall be construed to prohibit the use of two safety valves on any water-tube or coil and sectional boiler, provided the combined area of such valves is equal to that required by rule for one such valve. But in no case shall any spring-loaded safety valve be used in lieu of the lever-weighted safety valve without first having been approved by the Board of Supervising Inspectors.

The first paragraph of this section applies to valves constructed in material, workmanship, and principle according to the drawings for a safety valve printed with these rules, and all common lever safety valves to be hereafter applied to the boilers of steam vessels must be so constructed.

When this construction of a safety valve is applied to the boilers of steamers navigating rough waters, the link may be connected direct with the spindle of the valve: *Provided always*, That the fulcrum or points upon which the lever rests are made of steel, knife or sharp edged, and hardened; in this case the short end of the lever should be attached directly to the valve casing. In all cases the link requires but a slight movement, not exceeding one-eighth of an inch.

DIRECTIONS TO ACCOMPANY DRAWINGS FOR THE SAFETY VALVES REFERRED TO.

[For drawings, see page 47, Proceedings of 1877, and page 28, Rules and Regulations of 1882.]

All the points of bearing on lever must be in the same plane.

The distance of the fulcrum must in no case be less than the diameter of the valve opening.

The length of the lever should not exceed the distance of the fulcrum multiplied by ten.

The width of the bearings of the fulcrum must not be less than three-fourths of 1 inch.

The length of the fulcrum link should not be less than 4 inches.

The lever and fulcrum link must be made of wrought iron or steel, and the knife-edged fulcrum points and bearings for the points must be made of steel and hardened. But the chambers and saddle flanges of this and all other types of safety valves attached to boilers may be made of cast iron or other suitable material.

The valve, valve seat, and bushing for the stem or spindle must be made of composition (gun metal) when the valve is intended to be attached to a boiler using salt water; but when the valve is to be attached to a boiler using fresh water, and generating steam of a high pressure, the parts named, with the exception of the bushings for the spindle, may be made of cast iron.

The valve must be guided by its spindle, both above and below the ground seat and above the lever, through supports either made of composition (gun metal) or bushed with it.

The spindle should fit loosely in the bearings or supports.

When the valve is intended to be applied to the boilers of steamers navigating rough waters the fulcrum link may be connected directly with the spindle of the valve; providing always that the knife-edged fulcrum points are made of steel and hardened, and that the vertical movement of the valve is unobstructed by any lateral movement.

In all cases the weight must be adjusted on the lever to the pressure of steam allowed in each case by a correct steam gauge attached to the boiler. The weight must then be securely fastened in its position and the lever marked, for the purpose of facilitating the replacing of the weight should it be necessary to remove the same; and in no case shall a line or any other device be attached to the lever or weight except in such a manner as will enable the engineer to raise the valve from its seat.

Donkey boilers, used on all steam vessels for driving pumps, hoisting engines, electric lights, or other purposes, must be inspected the same as the main steam boilers, and supplied with water and steam gauges, and the safety valves must comply with the same regulations as the main boilers.

The area of all openings in boilers and connections leading from boilers to safety valves, both the lever and spring-loaded valves, used on marine boilers, shall not be less than the area of the valve used in said safety valve.

29. All steam gauges heretofore in use on steamers shall be admissible by the inspectors, and other steam gauges hereafter made, of equal merit, shall be allowed.

30. All boilers or sets of boilers shall have attached to them at least one gauge that will correctly indicate a pressure of steam equal to 80 per cent of the hydrostatic pressure applied by the inspectors.

31. The appliances in use on steamers constructed prior to the 28th of February, 1872, for determining the height of water in the boilers shall be considered reliable low-water gauges.

32. There must be means provided in all boilers using the low-water gauges which are operated by means of a float inside the same to prevent the float from getting into the steam pipe.

33. In applying the hydrostatic test to boilers with a steam chimney the test gauge should be applied to the water line of such boilers.

34. All horizontal cylindrical boilers used on steamers navigating the waters flowing into the Gulf of Mexico shall be provided with a reliable low-water gauge.

35. [Repealed.]

36. [Repealed.]

37. All steam boilers made in conformity to the steamboat law in force at the time they were built, provided always that the boilers are in good condition, may be lawfully used on any steamer, provided they have not been used for other than marine purposes.

38. All holes cut through the bottom or bilge of a steam vessel that are covered by a sea valve or cocks, and secured to the skin of the vessels by bolts and connected to the engines and boilers by pipes, shall be arranged so as to be accessible at all times, so that if a leak or defect occur it can be reached.

All parts of said valves except the chamber shall be made of brass or bronze when used on wooden-hull vessels navigating salt water; but in the case of iron-hull vessels the brass or bronze bolts may be dispensed with.

On all boilers built after July 1, 1891, a flanged bronzed or brass-seated stopcock or valve shall be attached to the boiler between all check valves and all steam and feed pipes and boilers, in order to facilitate access to connections. The stop-valves attached to main steam pipes may, however, be made of cast iron or other suitable material.

All copper steam pipes shall be flanged to a depth of not less than four times the thickness of the material in the pipes, and all such flanging shall be made to a radius not to exceed the thickness of the material in such pipes. And all such pipes shall have a thickness of material according to the working steam pressure allowed on the boiler, and such thickness of material shall be determined by the following rule:

RULE.—Multiply the working steam pressure in pounds per square inch allowed the boiler by the diameter of the pipe in inches, then divide the product by the constant whole number 8000, and add .0625 to the quotient; the sum will give the thickness of material required.

EXAMPLE.

Let 175 pounds = working steam pressure per square inch
allowed the boiler,
5 inches = diameter of the pipe,
8000 = a constant.

Then we have—

$$\frac{175 \times 5}{8000} + .0625 = .1718 +, \text{ thickness of material in decimals of an inch.}$$

The flanges of all copper steam pipes over 3 inches in diameter shall be made of bronze or brass composition, and shall have a thickness of material of not less than four times the thickness of material in the pipes plus .25 of an inch; and all such flanges shall have a boss of sufficient thickness of material projecting from the back of the flange a distance not less than three times the thickness of material in the pipe; and all such flanges shall be counterbored in the face to fit the flange of the pipe; and the joints of all copper steam pipes shall be made with a sufficient number of good and substantial bolts to make such joints at least equal in strength to all other parts of the pipe.*

* See further rule relating to feed and steam pipes included under section 7 of Rule IV.

The terminal and intermediate joints of all wrought iron and homogeneous steel feed and steam pipes over 2 inches in diameter and not over 5 inches in diameter shall be made of wrought iron, homogeneous steel, or malleable iron flanges or equivalent material; and all such flanges shall have a depth through the bore of not less than that equal to one-half of the diameter of the pipe to which any such flange may be attached; and such bores shall taper slightly outwardly toward the face of the flanges; and the ends of such pipes shall be enlarged to fit the bore of the flanges, and they shall be substantially beaded into a recess in the face of each flange.

But where such pipes are made of extra heavy lap-welded steam pipe the flanges may be attached with screw threads; and all joints in bends may be made with good and substantial malleable iron elbows or equivalent material.

All feed and steam pipes not over 2 inches in diameter may be attached at their terminal and intermediate joints with screw threads by flanges, sleeves, elbows, or union couplings; but where the ends of such pipes at their terminal joints are screwed into material in the boiler, drum, or other connection having a thickness of not less than $\frac{1}{4}$ inch, the flanges at such terminal joints may be dispensed with. Where any such pipes are not over 1 inch in diameter and any of the terminal ends are to be attached to material in the boiler or connection having a thickness of less than $\frac{1}{4}$ inch, a nipple shall be firmly screwed into the boiler or connection against a shoulder, and such pipe shall be screwed firmly into such nipple. And should inspectors deem it necessary for safety, they may require a jam nut to be screwed onto the inner end of any such nipple.

All lap-welded iron or steel steam pipes over 5 inches in diameter or riveted wrought iron or steel steam pipes over 5 inches in diameter, in addition to being expanded into tapered holes and substantially beaded into recess in face of flanges, as provided in preceding paragraph for steam and feed pipes exceeding 2 inches and not exceeding 5 inches in diameter, shall be substantially and firmly riveted with good and substantial rivets through the hubs of such flanges; and no such hubs shall project from such flanges less than 2 inches in any case.

Steam pipes of iron or steel, when lap-welded by hand or machine, with their flanges welded on, shall be tested to a hydrostatic pressure of at least double the working pressure of the steam to be carried and properly annealed after all the work requiring fire is finished. When an affidavit of the manufacturer is furnished that such test has been made and annealed they may be used for marine purposes.

When holes exceeding 6 inches in diameter are cut in boilers for pipe connections, man and hand-hole plates, such holes shall be reinforced with wrought iron or steel rings of sufficient width and thickness of material to equal the amount of material

cut from such boilers, except when holes are cut in any flat surface of such boilers, and such holes are flanged inwardly to a depth of not less than $1\frac{1}{4}$ inches, measuring from the outer surface, the reinforcement rings may be dispensed with.

39. All coil and pipe boilers hereafter made must be subjected at inspection to a hydrostatic pressure double that of the steam pressure allowed in the certificate of inspection: *Provided*, That in all cases where the sections of water-tube or other sectional boilers are so arranged that they can be subjected to a hydrostatic pressure independent of any drum, that such sections shall be tested to a hydrostatic pressure of double the steam pressure required to be carried on such boilers; and upon the presentation to the inspectors of an affidavit from the manufacturer of such a boiler that such a hydrostatic pressure has been applied the inspectors shall subject such a boiler to a hydrostatic pressure of 50 per cent greater than the steam pressure to be carried, and that in cases where the pipes or tubes of water-tube or other sectional boilers are connected with any drum so that the hydrostatic pressure can not be applied independent of such drum, upon the presentation of an affidavit from the manufacturers of any such boiler, when such boiler is completed and ready for inspection, that the tubes or pipes of such boiler have all been tested either by himself or the manufacturer of such tubes or pipes to a hydrostatic pressure of not less than 600 pounds per square inch, the inspectors shall apply a hydrostatic pressure of 50 per cent greater than the steam pressure to be allowed.

The use of cast-steel manifolds, tees, return bends or elbows in the construction of pipe generators, shall be allowed, and the pressure of steam shall not be restricted to less than one-half the hydrostatic pressure applied to pipe generators, unless a weakness should develop under such test as would render it unsafe in the judgment of the inspector making such inspection.

All drums attached to coil, pipe, sectional, or water-tube boilers not already in use or actually contracted for, to be built for use on a steam vessel, and its building commenced at or before the date of the approval of this rule, shall be required to have the heads of wrought iron or steel or cast steel, flanged and substantially riveted to the drums, or secured by bolts and nuts of equal strength with rivets, in all cases where the diameters of such drums exceed 6 inches.

Except steam drums not exceeding 15 inches diameter attached to coil or pipe generators may be used when heads are made of malleable iron or cast steel, said drums being threaded on outside of such shell with a good full U. S. standard thread, eight to the inch, for a distance of at least 1 inch on such shell, the thread on head to correspond with the same and well fitted; the end of shell projecting beyond the threaded part and screwed against a packing that will prevent water or steam to come in contact with the threaded part:

Provided, Such steam drums are placed outside of and not brought in contact with the heat or gases used in generating steam, and have been subjected to a hydrostatic pressure of double the steam pressure allowed.

RULE III.—LIFE-SAVING APPLIANCES.

	Section.
Barges towed by steamers making excursions, how equipped	20
Boats required for certain river steamers	6
Boats for freight, canal, and towing steamers	7
Boats for ferryboats	22
Bulkheads for certain steamers	21
Drags or floating anchors, how constructed, and number of	17
Escape, means of, to lifeboats	1
Lifeboats, how to determine the carrying capacity	2
Lifeboats, how built	3
Lifeboats, how equipped	4
Lifeboats, how carried	5
Lifeboats for excursion steamers	8
Lifeboats, metallic, to have automatic plugs	9
Lifeboats for river steamers	10
Lifeboats, required by section 10, number and capacity	11
Lifeboats for steamers on oceans, lakes, bays, and sounds	12
Lifeboats for ferry steamers, 50 tons and under	22
Life floats, materials and dimensions	16
Life-preservers, how constructed and how distributed	18
Life-preservers for barges carrying passengers	19
Life rafts, a portion may be substituted for lifeboats	13
Life rafts required for certain steamers	14
Life rafts and floats, carrying capacity, and how rated	15
Line-carrying projectiles and the means of propelling them	24
Mode of manufacture and test of bronze guns	25
Steering apparatus, extra, for passenger steamers	1
Steam launches, when they may dispense with lifeboats	23
When cork cushions may be used in lieu of life preservers	18

1. Where ladders or steps are necessary to enable passengers on board to escape conveniently to the lifeboats, such steps shall be provided and placed on each side of the steamer, with man-ropes of suitable size and of sufficient length to reach the water, and one of the means of escape from one deck to another shall be near the stern of the vessel. Extra steering apparatus for all steamers carrying passengers, consisting of relieving tackles or tiller, must be provided,

2. The carrying capacity of all lifeboats shall be determined by the following rule:

RULE.—Multiply the outside length, outside width, and inside depth together, and the product by .6; and divide the product by 10 for ocean, lake, bay, or sound steamers; and, for river steamers, divide the product by 7; the quotient will be the number of persons such a boat is allowed to carry.

EXAMPLE.

The carrying capacity of a boat 20 feet in length, 5 feet in breadth, and 3 feet in depth, will be determined as follows:

For ocean, lake, bay, or sound steamers,

$$\frac{20 \times 5 \times 3 \times .6}{10} = \frac{180}{10} = 18 \text{ persons.}$$

For river steamers, same boat, $\frac{180}{7} = 25 \text{ persons.}$

3. All lifeboats must be substantially built. Metallic lifeboats must be constructed of good iron or other suitable metal, not less in thickness than No. 18 wire gauge (Birmingham standard).

4. All lifeboats must have life lines securely fastened to their gunwales, and a good rope painter, of suitable size and length, properly attached; and every lifeboat must be supplied with not less than four oars, and kept in good condition for immediate use.

5. All lifeboats must, if possible, be carried on cranes or davits, but if it is not possible so to carry all the lifeboats required, the remainder must be stowed near at hand, so as to be easily and readily launched when required.

6. Steamers navigating rivers only (except ferryboats, freight boats, canal boats and towing boats, of less than 50 tons) must have one good substantial boat.

7. Freight, canal, and towing steamers of less than 50 tons must be equipped with boats, as, in the opinion of the inspectors, may be necessary, in case of disaster, to secure the safety of all persons on board.

8. Steamers making excursions under a permit must have at least one lifeboat, and shall be equipped with other lifeboats, or their equivalents, as, in the judgment of the inspectors, will best secure the safety of all persons on board in case of disaster.

9. All metallic lifeboats hereafter built shall be furnished with an automatic plug.

10. Passenger steamers navigating rivers, excepting steamers under 100 gross tons hereinafter provided for, must be supplied, in addition to the boat required by the sixth and seventh sections of this rule, with lifeboats in proportion to their tonnage, as follows:

Steamers between 100 and 300 gross tons.....	1 boat
Steamers between 300 and 600 gross tons.....	2 boats
Steamers between 600 and 900 gross tons.....	3 boats
Steamers between 900 and 1,200 gross tons.....	4 boats
Steamers of 1,200 gross tons and upward.....	5 boats

These lifeboats shall not be of less dimensions than those named in the example in section 2 of this rule, unless, where smaller lifeboats are employed, their aggregate capacity shall equal the aggregate capacity of the larger boats: *Provided, how-*

ever, That river steamers required to carry more than two boats may, where the owners prefer to do so, supply the boat capacity above that number with a good, substantial life raft or rafts, such raft or rafts to be of equal aggregate carrying capacity of the boats so omitted.

11. No steamer embraced in section 10 shall be required to have more lifeboats, or of a greater capacity, than sufficient to carry the passengers allowed by the certificate of inspection (including the crew). One of the lifeboats, unless exempted by the supervising inspector, must be made of metal.

12. Passenger steamers navigating oceans, Northwestern lakes, bays, and sounds of the United States, excepting steamers under 100 gross tons, hereinafter provided for, must be equipped with lifeboats in proportion to their tonnage, as follows:

Steamers between 100 and 200 tons.....	2 boats
Steamers between 200 and 300 tons.....	3 boats
Steamers between 300 and 400 tons.....	4 boats
Steamers between 400 and 500 tons.....	5 boats
Steamers between 500 and 1,000 tons.....	6 boats
Steamers between 1,000 and 1,500 tons.....	7 boats
Steamers between 1,500 and 2,000 tons.....	8 boats
Steamers between 2,000 and 2,500 tons.....	9 boats
Steamers between 2,500 and 3,000 tons.....	10 boats
Steamers between 3,000 and 3,500 tons.....	11 boats
Steamers between 3,500 and 4,000 tons.....	12 boats
Steamers between 4,000 and 5,000 tons.....	13 boats
Steamers of 5,000 tons and above.....	14 boats

These boats shall be substantially built with reference to the trade in which the steamer is engaged, and shall not be of less dimensions than those named in the example in section 2 of this rule, unless, where smaller lifeboats are employed, their aggregate capacity shall equal the aggregate capacity of the larger boats: *Provided, however*, that no steamer shall be required to have more lifeboats than sufficient to carry the passengers she is allowed by her certificate of inspection, together with her officers and crew.

13. A portion of the lifeboats required on all passenger steamers may be substituted by their equivalents in *approved* life rafts when, in the judgment of the inspectors, it can be done with safety.

14. All steamers built for the navigation of oceans, Northwestern lakes, and sounds (meaning in waters sufficiently rough to swamp boats) shall be equipped with life rafts in proportion of one, at least, to every two lifeboats required.

15. All life rafts and floats shall have an actual buoyancy of 187½ pounds upon oceans for every person allowed, and 156 pounds

upon lakes, bays, sounds, and rivers for every person allowed.*† Such life rafts and floats must be suitably equipped with life lines and oars.

All rubber and canvas rafts shall be kept inflated at all times.

All life rafts made in whole or in part of granulated cork heretofore approved by this Board [shall] be excluded from use on

* *Resolved*, That the alteration in the rating of life rafts shall not apply to any vessel already equipped and supplied with life-saving appliances as called for by law that is now in force, but shall be obligatory on vessels hereafter equipped, or on vessels requiring additional equipments. Rafts that were actually in use on steam vessels previous to March 1, 1884, are exempted from this provision.

† *Determination of capacity of life raft*.—In general, the net buoyancy of a life raft, when wholly immersed in water, equals the weight of displaced water less the weight of raft in air; so that the buoyancy can be obtained by estimating volume of all fixed parts and water-tight spaces, calculating the weight of equal volume of water, and deducting weight of raft in air. Another method is to estimate the net weight of material of raft when immersed in water, and not inclosed, and also the buoyancy of inclosed spaces, and deducting the former from the latter.

The usual form of life rafts consists of two circular, hollow, metallic, water-tight cylinders, each with conical ends (cones or frustums of cones), united with framework of wood and metal.

The volume of a cylinder equals the area of base (circular cross section) multiplied by the length of cylinder. The volume of a cone equals the area of base (circular cross-section) multiplied by one-third the altitude of cone. The total volume of the cylinders and cones equals the sum of volumes of two cylinders and four cones.

Knowing the volume of inclosed space in cubic feet and weight of cubic feet of water (Haswell gives sea water $64\frac{1}{4}$ pounds per cubic foot, and fresh water $62\frac{1}{4}$), the buoyancy of inclosed space can be obtained. Deducting net weight of raft gives net buoyancy.

Dividing net buoyancy, in pounds, for fresh or salt water respectively by the number of pounds allowed to one person ($187\frac{1}{4}$ for ocean and 156 for inland, per rule), will give the number of persons allowed.

Example under second method: Required, the capacity of life raft on ocean steamer, having given, diameter of cylinder and base of cones equals 2.1 feet; length of cylinder, 16 feet; altitude of each cone, 2 feet; net weight of materials of raft, without inclosed spaces, when immersed in water, 220 pounds.

The area of circular cross section, or base of cones and cylinders, equals $.7854 \times \text{square of diameter} = .7854 \times 2.1 \times 2.1 = 3.4636$ square feet. Volume 1 cylinder $= 3.4636 \times 16 = 55.4176$ cubic feet. Volume 2 cylinders $= 55.4176 \times 2 = 110.8352$ cubic feet. Volume 1

all steam vessels : *Provided, however, That it does not apply to rafts now in use. **

16. When wooden life floats are required on steam vessels, in compliance with law, they shall be at least of the following dimensions, or other proper dimensions of equal cubical capacity, viz, 4 feet in length, 14 inches in breadth, and 2 inches in thickness. These floats shall be made of white pine wood, or of any other wood not exceeding white pine in weight per cubic foot.

17. Drags or floating anchors shall be constructed so as to be capable of being compactly stowed near the head of the ship. Steamers navigating the ocean must be provided with at least one drag, of dimensions as follows : For ships of 400 tons or under, not less than 25 superficial feet ; of 600 tons, not less than 36 feet ; of 1,000 tons, not less than 50 feet ; of 1,500 tons, not less than 80 feet ; of 2,500 tons, not less than 100 feet, and in this ratio for all vessels of a greater or intermediate burden not above stated. Steamers whose routes do not extend *off anchorage* are not required to have drags or floating anchors on board.

18. Every life-preserver adjustable to the body of a person shall be made of good sound cork blocks or other suitable material, with belts and shoulder straps properly attached, and shall be constructed so as to place the cork underneath the shoulders and around the body of the person wearing it, the shoulder straps to be sewed on at least 8 inches apart on the back of preserver, and sewed together at the angle where they cross the body, and must have also a strap across the breast from one shoulder strap to the other, sewed fast at one end and with a buttonhole in the other, with a button on shoulder strap to which the crosspiece can be buttoned; and that all belt life-preservers shall be not less than 54 inches in length, measurement from end to end around the body.† And it shall be the duty of the inspectors to see by actual examination that every such life-preserver contains at least 6 pounds of good cork, which shall have a buoyancy of at least 4 pounds to each pound of cork. Inspectors are further required to direct such life-preservers to be distributed throughout the cabins, staterooms, berths, and other places convenient for passengers on such

cone = $\frac{1}{3} \times 2 \times 3.4636 = 2.309$ cubic feet. Volume 4 cones = 9.236 cubic feet. Volume 2 cylinders and 4 cones =

$110.8352 + 9.236 = 120.0712$ cubic feet.

The weight of 1 cubic foot of sea water weighing 64.125 pounds, the buoyancy of inclosed space = $120.0712 \times 64.125 = 7699.56$ pounds.

Deducting weight of materials of raft, gives net buoyancy, or—

$7699.56 - 220 = 7479.56$ pounds.

Dividing by number of pounds allowed to one person on ocean raft, 187.5, gives number of persons allowed, as follows :

$7479.56 \div 187.5 = 39$ persons.

* February 18, 1885.

† Local inspectors must enforce this amendment upon all pre-servers passed by them on and after April 1, 1889.

steamer; and there shall be a printed notice posted in every cabin and stateroom, and in conspicuous places about the decks, informing passengers of the location of life-preservers and other life-saving appliances, and of the mode of applying or adjusting the same. Cork cushions, when constructed of good sound cork blocks or other suitable material, with belts and shoulder straps properly attached, said cushions to contain not less than 6 pounds of cork, when passed by local inspectors, may be used in lieu of life-preservers on small pleasure steamers.

19. Barges towed by steamers and carrying passengers on regular "night routes" shall have a life-preserver for each passenger; and, in addition thereto, shall be supplied with a yawl boat, ten buckets, and three axes.

20. Barges carrying passengers, in tow of steamers, and engaged in excursions, shall be supplied with twenty-five life-preservers, ten buckets, and three axes, and one or more yawl boats.

21. Every seagoing steamer and every steamer navigating the great Northern and Northwestern lakes carrying passengers shall not have less than three water-tight cross bulkheads. Such bulkheads shall reach to the main deck in single-decked vessels, otherwise to the deck next below the main deck. For wooden hulls they shall be fastened to suitable framework, which framework must be securely attached to the hull and calked. For iron hulls they shall be well secured to the framework of the hulls and strengthened by stanchions of angle iron placed not more than 2 feet from center to center. One of the bulkheads must be placed forward and one abaft of the engines and boilers.

The third or collision bulkhead must be placed not nearer than 5 feet from the stem of the vessel. Iron bulkheads must be made not less than one-quarter of an inch in thickness, and wooden bulkheads must be of equal strength and covered with iron plates not less than one-sixteenth of an inch in thickness.

22. Steam ferryboats of 50 tons burden and over must be supplied with lifeboats as in the judgment of the inspectors will best promote the security of life on board of such vessels in case of disaster, according to the average number of passengers carried per trip.

23. Table of dimensions of boats for passenger steamers of 100 tons gross and under. Boats of other dimensions of equivalent cubical capacity may be used.

Number of tons (gross).	Number of boats.	Dimensions.				Factor.	Con- tents.
		Length.	Breadth.		Depth.		
		<i>Feet.</i>	<i>Ft.</i>	<i>In.</i>	<i>Ft. In.</i>		<i>Cub. ft.</i>
50 to 100	1	18	5	6	2 3	.7	125.9
30 to 50	1	16	5	6	2 3	.7	138.6
10 to 30	1	14	5	0	2 2	.7	106.1
0 to 10	1	14	4	6	2 0	.7	88.2

The lifeboat on steamers between 50 and 100 tons must be in addition to the working boat required by section 6 of this rule.

The boat for passenger steamers of 10 tons and less may be dispensed with if such steamer is provided with metallic air chambers, placed under the seats and in the ends of said vessels, of sufficient capacity to float the inert weight of said vessel, including her boilers and machinery; otherwise the lifeboat referred to in above table must be either carried or towed at all times when being navigated with passengers on board; and all such vessels referred to in this section shall also be provided with one life-preserver for every person which the inspection certificate shall allow them to carry, including the officers and crew.

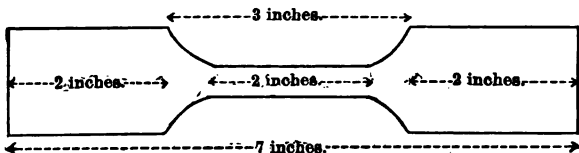
All open steam launches or other steam vessels of 5 tons burden or less, used for pleasure purposes only, will not be required to carry a lifeboat. Such steamers when licensed to carry passengers may dispense with the lifeboat when such vessels are provided with metallic air chambers placed under the seats and in the ends of said vessels, of sufficient capacity to float the inert weight of said vessel, including her boilers and machinery; and such vessels shall also be provided with one life-preserver for every person which the inspection certificate shall allow them to carry, including the officers and crew; and every such steam vessel carrying fifteen passengers or less shall carry at least two fire buckets and one ax.

24.* All steam vessels, certificated as ocean, lake, bay, or sound, at their annual inspection after the adoption of this rule (except vessels of 100 tons and under, inspected under the provisions of section 4426, Revised Statutes, and freight and towing steamers, inspected under the provisions of section 4427, Revised Statutes), shall be provided with a line-carrying projectile and the means of propelling it, such as may have received the formal approval of the Board of Supervising Inspectors.

25. All cast bronze guns of the Lyle type, approved by the Board of Supervising Inspectors, January, 1890, for use on board of steam vessels as a means of propelling line-carrying projectiles, shall be composed of an alloy equal in quality to an alloy composed of 92 per cent of Lake Superior copper and 8 per cent of German or Banca tin; and shall have a tensile strength of not less than 35,000 pounds per square inch of section, and a ductility of not less than 25 per cent. At least one sample of the material shall be taken from the lower portion of the sinking head in each gun, and to be not less than 7 inches in length, 2 inches in width,

*Act in force only on ocean-going steamers; its use on lakes, bays, and sounds having been repealed by act approved April 11, 1892.

$\frac{1}{2}$ inch in thickness, and have a section 0.5 by 0.75 inch over a length of 2 inches, according to the following diagram.



All samples shall be furnished to the supervising inspector of the second district for testing, and shall be accompanied by an affidavit of the manufacturer that such samples were taken from guns, each of which shall be distinctly marked, so as to be readily identified by the inspectors. All such guns shall be made of sufficient thickness of material in all its parts, so as to withstand at least three discharges of 8 ounces of Hazzard's navy cannon powder without fracture or damage to the gun, and all evidences of such tests shall be made by affidavit by manufacturers to the inspectors. And, further, all such guns shall in all other respects and dimensions conform to the Lyle gun in use by the United States Life-Saving Service.

And each gun so provided for shall be supplied with at least three projectiles and the necessary lines to connect such projectiles, and at least three charges of Hazzard's navy cannon powder.

When approved rockets are used instead of guns, there shall be, in every case, at least three of said rockets; and all steamers that are required under the law to carry line-carrying projectiles and the means of propelling them shall be supplied auxiliary thereto with at least 800 feet of 3-inch manila line for vessels of 100 to 500 tons gross, and 1,500 feet of said line for steamers above 500 tons gross; such auxiliary line to be kept always ready for use in connection with the gun and rocket, and which lines shall not be used for any other purpose.

Resolved, That the following blank form of affidavit be printed at the end of and form a part of section 25, Rule III:

STATE OF _____,

County of _____, City of _____, ss:

_____, manufacturer of guns to discharge line-carrying projectiles, having been duly sworn, deposes and says, that bronze gun No. —, of the Lyle pattern, manufactured by me, has been tested by firing three rounds, the proof charge being 8 ounces of Hazzard navy cannon powder, which fired a line-carrying projectile of 18 pounds weight distances of _____, _____, _____ feet, after which test the said gun was found to be safe and

sound in all its parts; and, further, that the said gun is at least 20 inches in length of bore, the diameter of which is $2\frac{1}{4}$ inches.

Sworn to before me this — day of —, 189—.

_____,
Notary Public.

RULE IV.—FIRE APPARATUS.

	Section.
Axes for passenger steamers.....	1
Axes for other than passenger steamers.....	2
Axes, where located and how kept.....	4
Barrels for passenger steamers.....	1
Barrels for other than passenger steamers.....	2
Bilge injection, steamers not having, how equipped.....	15
Buckets for passenger steamers.....	1
Buckets for other than passenger steamers.....	2
Pipes for conducting water from fire pumps, how constructed.....	16
Pipes for carrying steam into hold, how constructed.....	7
Pipes leading from pumps, diameter of.....	10
Pumps or equivalents for certain steamers.....	8
Pumps must be of a certain capacity.....	9
Pumps, rotary, allowed under certain conditions.....	11
Pumps for testing boilers.....	12
Pumps, what constitutes an equivalent for certain steamers...	13
Pumps, steam fire, how equipped.....	14
Spark arresters for certain Western steamers.....	6
Siphon steam pump allowed under certain conditions.....	17
Tarpaulin, certain articles to be covered with.....	5
Water, provisions for keeping, for fire.....	3

1. All inland passenger steamers are required to be provided with fire buckets, barrels, and axes, as follows :

	Tons.	Barrels.	Buckets.	Axes.
All steamers less than.....	10	-----	2	1
All steamers over 10 tons and not over.....	25	-----	4	1
All steamers over 25 tons and not over.....	50	1	6	2
All steamers over 50 tons and not over.....	100	1	8	2
All steamers over 100 tons and not over.....	200	2	18	4
All steamers over 200 tons and not over.....	500	4	24	6
All steamers over 500 tons and not over.....	1,000	6	35	8
All steamers over 1,000 tons.....	-----	8	50	10

2. For tug, tow, freight, and small ferry steamers:

	Tons.	Bar- rels.	Buck- ets.	Axes.
All steamers less than.....	10	-----	2	1
All steamers over 10 tons and not over.....	25	-----	4	1
All steamers over 25 tons and not over.....	50	1	6	2
All steamers over 50 tons and not over.....	100	1	8	2
All steamers over 100 and not over.....	200	1	12	2
All steamers over 200 and not over.....	500	2	15	3
All steamers over 500 and not over.....	1,000	3	20	4
All steamers over 1,000 tons, not less than.....	-----	4	25	5

Provided, however, That tanks of suitable dimensions and arrangements, or buckets in sufficient number, may be substituted for barrels on all vessels. Five buckets shall be considered as equivalent to one barrel.

3. Fire buckets, barrels, or tanks must be constantly filled with water, and in such positions on board as shall be most convenient for extinguishment of fire.

4. All axes must be located so as to be readily found in time of need, must not be used for general purposes, and must be kept in good condition.

5. All hay, straw, and baled shavings carried on the deck of passenger steamers shall be covered with a tarpaulin while on board.

6. All steamers on Western rivers having their boilers situated so that the sparks from the fires may be driven back among combustible materials shall have a sheet-iron fender extending forward from the fire doors not less than 2 feet, at the height of the furnace fronts, and connecting with the same.

7. The main pipes and their branches required on steamers to convey steam from the boilers to the hold and separate compartments of the same, except the cabins, shall not be less than 1½ inches in diameter, except on steamers employed on Western rivers, which steamers may use branch pipes not less than three-quarters of an inch in diameter. All branch pipes leading into the several compartments of the hold of the vessel shall be supplied with valves, the handles marked so as to indicate the compartment or parts of the vessel to which they lead. These valves or their handles shall be placed in the most accessible part of the main deck of the vessel, and so arranged, when practicable, that all can be inclosed in a box or casing, the door of which shall be plainly marked with the words, "Steam Fire Apparatus."

8. Steamers required to be provided with double-acting steam fire pumps, or equivalents for throwing water, shall be equipped according to their tonnage, as follows:

For a steamer of not more than 200 tons burden, 4 inches stroke and 2 inches diameter of plunger.

Of more than 200 and not over 500 tons burden, 7 inches stroke and 4 inches diameter of plunger.

Of more than 500 and not over 1,000 tons burden, 7 inches stroke and 6 inches diameter of plunger.

Of more than 1,000 and not over 1,500 tons burden, 10 inches stroke and 6 inches diameter of plunger.

Of more than 1,500 and not over 2,000 tons burden, 10 inches stroke and 8 inches diameter of plunger.

Of more than 2,000 and not over 2,500 tons burden, 12 inches stroke and 8 inches diameter of plunger.

Of more than 2,500 and not over 3,000 tons burden, 12 inches stroke and 10 inches diameter of plunger.

9. Steamers are not restricted to any particular proportions for fire pumps; any dimensions equal to those specified in section 8 or greater in capacity may be allowed.

10. The diameter of the pipes and hose leading from the pumps must in no case be less than that of the discharge opening of the pumps, provided, however, that the pipe and hose shall in no instance be less than $1\frac{1}{4}$ inches in internal diameter.

11. A rotary pump, when driven by an engine independent of the main engine, may be considered as an equivalent for the double acting fire pump, and used as such when equal to it in efficiency and the degree of capacity required.

12. Any steamer having on board an independent steam pump and an auxiliary boiler suitably arranged and of sufficient strength and capacity for testing the boilers thereof; or if one of the hand fire pumps be suitably arranged and of sufficient strength and capacity for testing the boilers; or if the "doctor," so called, when arranged permanently for testing the boilers, is, in the judgment of the inspectors, suitable for the purposes intended, may be considered as having complied with the law.

13. Any steamer of 200 tons burden or under, required to have a double-acting steam fire pump, and having in use on board a "doctor," so called, may be considered as having a lawful equivalent for such pump when such "doctor" has pipes attached to it leading to the upper and between decks, such pipes being provided with hose and valves according to law; but the pipes and hose shall in no case be less than one and one-half inches in internal diameter. The pumps for supplying the boilers shall in no case be considered as an equivalent for the double-acting steam fire pump on steamers above 200 tons burden.

14. All steam fire pumps required shall be supplied with connection pipes, leading to the hold of the vessel, with stopcocks or shut-off valves attached, and so arranged that such pumps may be used for pumping and discharging water overboard from the hold; and each compartment bulkhead shall be fitted with valves, so as to admit water from one compartment to the other, and the valves so arranged as to be worked from the main deck.

15. Steamers not having a bilge injection, and carrying passengers on waters other than rivers, should be equipped with such additional fire pumps as shall be equal in capacity to the bilge injection.

16. All pipes used as mains for conducting water from fire pumps on board steam vessels, in place of hose, shall be of wrought iron or copper, with wrought iron or copper connections; and an air-escape pipe must lead from the end of said mains to the upper deck, with a valve or cock attached,

17. Steam siphon pumps which have been approved by the Board of Supervising Inspectors may be allowed in lieu of double-acting steam fire pumps on all steamers of 100 tons burden and under.

RULE V.—LICENSED OFFICERS.

	Section.
Accidents, licensed officers must report, to inspectors.....	17
Code of signals between pilots and engineers.....	25
Engineers, duty of, when assuming charge of boiler.....	4
Engineers, classification of.....	2
Engineers for high-pressure steamers on rivers.....	3
Engineers, license to, condition precedent to granting original.....	5
Indians, licensing of, under certain conditions.....	11
License, how obtained.....	1
License, grade of engineer and pilot, how raised.....	18
License, joint, effect of revocation or suspension.....	21
License, renewal.....	19
License, effect of revocation.....	20
License, suspension, term of duration must be stated.....	22
Mates, duty of.....	16
Masters river steamers, qualifications and examinations.....	23
Masters, examination of, for river steamers.....	24
Master's license, qualification of, for ocean, lake, and bay.....	14
Mates, qualifications of, for ocean steamers.....	14
Pilots must be able to distinguish colored signal lights.....	10
Pilots, route, how extended.....	11
Pilots, original license, upon what condition issued.....	12
Pilots, how governed.....	13
Pilots, steamers over 100 tons must have first-class.....	6
Pilots, second-class, may act on certain steamers.....	7
Pilot houses, only certain persons allowed to enter.....	9
Station bills, duty of the master.....	15
Watchmen required in addition to the pilot on watch.....	8

1. Before an original license is issued to any person to act as a master, mate, pilot, or engineer, he must personally appear before some local board or a supervising inspector for examination; but upon the renewal of such license, when the distance from any local board or supervising inspector is such as to put the person holding the same to great inconvenience and expense to appear in person, he may, upon taking the oath of office before

any person authorized to administer oaths, and forwarding the same, together with the license to be renewed, to the local board, or supervising inspector of the district in which he resides or is employed; have the same renewed by the said inspectors if no valid reason to the contrary be known to them; and they shall attach such oath to the stub end of the license, which is to be retained on file in their office: *Provided, however, That the applicant for renewal is at the time personally within the jurisdiction of the United States inspection laws, as defined in sections 4400 and 4447 of the Revised Statutes.* And inspectors are directed, when licenses are completed, to draw a broad pen and red ink mark through all unused spaces in the body thereof, so as to prevent as far as possible illegal interpolation after issue.

And inspectors will, before granting an original license to any person to act as an officer of steam vessels, require the applicant to make his written application upon the blank form authorized by the Board of Supervising Inspectors, which application shall be filed in the records of the inspector's office. Inspectors shall also, when practicable, require applicants for pilot's license to have the written indorsement of the master and engineer of the vessel upon which he has served, and of one licensed pilot as to his qualifications. In the case of applicants for original engineer's license, they shall also, when practicable, have the indorsement of the master and engineer of a vessel on which they have served, together with one other licensed engineer.

No original master's, mate's, pilot's, or engineer's license shall be issued hereafter or grade increased except upon written examination, which written examination shall be placed on file as records of office of the inspectors issuing said license.

Any person who has served as master, commander, pilot, or engineer of any steam vessel of the United States, in any service in which a license as master, commander, pilot, or engineer, was not required at the time of such service, shall be entitled to license as master, commander, pilot, or engineer, if the inspectors, upon written examination as required for applicants for original license, may find him qualified: *Provided, That the experience of any such applicant within three years of making application has been such as to qualify him to serve in the capacity for which he makes application to be licensed; but no such license shall be granted except under such restrictions as may be prescribed by the supervising inspector of the district in which the applicant files his application.*

2. The classification of engineers shall be as follows:

CHIEF.

Chief engineer of ocean steamers.

Chief engineer of condensing lake, bay, and sound steamers.

Chief engineer of noncondensing lake, bay, and sound steamers.

Chief engineer of condensing river steamers.

Chief engineer of noncondensing river steamers.

Chief engineer of condensing freight, towing, and fishing steamers.

Chief engineer of noncondensing freight, towing, and fishing steamers.

Chief engineer of condensing steamers under 100 tons.

Chief engineer of noncondensing steamers under 100 tons.

Chief engineer of canal steamers.

Any person holding chief engineer's license shall be permitted to act as first assistant on any steamers of double the tonnage of same class named in said chief's license.

Engineers of all classifications may be allowed to pursue their profession upon all waters of the United States in the class for which they are licensed, if found upon examination qualified therefor.

FIRST ASSISTANT.

First assistant engineer of ocean steamers.

First assistant engineer of condensing lake, bay, and sound steamers.

First assistant engineer of noncondensing lake, bay, and sound steamers.

First assistant engineer of condensing river steamers.

First assistant engineer of noncondensing river steamers.

First assistant engineer of condensing freight, towing, and fishing steamers.

First assistant engineer of noncondensing freight, towing, and fishing steamers.

First assistant engineer of condensing steamers under 100 tons.

First assistant engineer of noncondensing steamers under 100 tons.

First assistant engineer of canal steamers.

Engineers of lake, bay, and sound steamers who have actually performed the duties of engineers for a period of three years shall be entitled to examination for engineer of ocean steamers, applicant to be examined in the use of salt water, method employed in regulating the density of the water in boilers, the application of the hydrometer in determining the density of sea water, and the principle of constructing the instrument, and shall be granted such grade as the inspectors may find him competent to fill.

SECOND ASSISTANT.

Second assistant engineer of ocean steamers.

Second assistant engineer of condensing lake, bay, and sound steamers.

Second assistant engineer of noncondensing lake, bay, and sound steamers.

Second assistant engineer of condensing river steamers.

Second assistant engineer of noncondensing river steamers.

Second assistant engineer of condensing freight, towing, and fishing steamers.

Second assistant engineer of noncondensing freight, towing, and fishing steamers.

Second assistant engineer of condensing steamers under 100 tons.

Second assistant engineer of noncondensing steamers under 100 tons.

THIRD ASSISTANT.

Third assistant engineer of ocean steamers.

Third assistant engineer of condensing lake, bay, and sound steamers.

Third assistant engineer of noncondensing lake, bay, and sound steamers.

Third assistant engineer of condensing river steamers.

Third assistant engineer of noncondensing river steamers.

Third assistant engineer of condensing freight, towing, and fishing steamers.

Third assistant engineer of noncondensing freight, towing, and fishing steamers.

First, second, and third assistant engineers may act as such on any steamer of the grade of which they hold license or as such assistant engineer on any steamer of a lower grade than to those to which they hold a license.

Inspectors may designate upon the certificate of any chief or assistant engineer the tonnage of the vessel on which he may act:

Provided, however, That any engineer whose license is designated by tonnage may act in similar capacity on any steamer of larger tonnage, provided the engine in said steamer is not larger than the one to which his tonnage license restricted him. That Form 2130¹,* special license to engineers, be issued only to engineers in charge of vessels of 10 tons and under, and that all other licenses to engineers be issued on Forms 2129 and 2130, according to grades specified in this section.

3. Assistant engineers may act as chief engineers on high-pressure steamers of 100 tons burden and under of the class and tonnage or particular steamer for which the inspectors, after a thorough examination, may find them qualified. In all cases where an assistant engineer is permitted to act as first [chief] engineer, the inspectors shall state on the face of his certificate of license the class and tonnage of steamers or the particular steamer on which he may so act.

4. It shall be the duty of an engineer, when he assumes charge of the boilers and machinery of a steamer, to forthwith thoroughly examine the same, and if he finds any part thereof in bad condition, caused by neglect or inattention on the part of his predecessor, he shall immediately report the facts to the local inspectors

* Inspectors will, when using 2130¹, draw a pen-and-ink cross down over the second cipher in the figure 100 in the body of the form until the present supply of blanks is exhausted.

of the district, who shall thereupon investigate the matter ; and if the former engineer has been culpably derelict of duty, they shall suspend or revoke his license.

5. No person shall receive an original license as engineer or assistant engineer, except for special license on small pleasure steamers of 10 tons and under, and ferryboats, sawmill boats, pile-drivers, and other nondescript similar small vessels, navigated outside of ports of entry and delivery, who has not served at least three years in the engineer's department of a steam vessel, which experience must have been obtained within two years preceding the application :

Provided, That any person who has served as a regular machinist in a marine-engine works for a period of not less than three years, and any person who has served for a period of not less than three years as a locomotive engineer, stationary engineer, regular machinist in a locomotive or stationary-engine works, and any person who has graduated as a mechanical engineer from a duly recognized school of technology may be licensed to serve as engineer on steam vessels after having had not less than one year's experience in the engine department of a steam vessel, which experience must have been obtained within two years preceding the application (which fact must be verified by the certificate in writing of the licensed engineer or master under whom the applicant has served, said certificate to be filed with the application of the candidate) and no person shall receive license as above, except for special license, who is not able to determine the weight necessary to be placed on the lever of a safety valve* (the diameter of valve, length of lever, and fulcrum

* *General equations of safety valve.*—For any number of weights, the general equation for equilibrium is formed by taking the sum of moments of forces acting about the fulcrum.

Let—

L=length of lever, in inches.

W=weight of lever, in pounds.

G=distance of center of gravity
of lever from fulcrum, in
inches.

B=weight of ball, in pounds.

C=distance of center of gravity
of ball from fulcrum, in
inches.

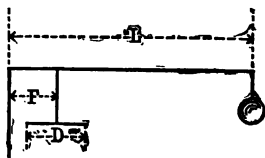
V=weight of valve and stem,
in pounds.

F=fulcrum distance, in inches.

P=pressure of steam, in pounds,
per square inch.

D=diameter of valve, in inches.

A=area of valve, in square
inches, =.7854 D²



being known) to withstand any given pressure of steam in a boiler, or who is not able to figure and determine the strain brought on the braces of a boiler with a given pressure of steam,†

Then the general equation with one weight at any point of lever is as follows :

$$BC + WG + VF - APF = 0.$$

From the solution of which any part can be found, the other parts being known.

With center of gravity at center of lever and ball at end of lever ($C=L$, and $G=\frac{1}{2}L$), then the above equation becomes,

$$BL + \frac{1}{2}WL + VF - APF = 0.$$

From which,

$$B = \frac{APF - \frac{1}{2}WL - VF}{L} = \frac{APF - (\frac{1}{2}WL + VF)}{L}$$

And

$$P = \frac{BL + \frac{1}{2}WL + VF}{AF}$$

Which are the ordinary equations of safety valve, under the given conditions.

Example.—Required the weight of ball necessary to be placed on the end of lever, having given, weight of lever, 20 pounds; length of lever, 40 inches; weight of valve and stem, 10 pounds; fulcrum distance, 4 inches; diameter of valve, 4 inches; area of valve = .7854 \times square of diameter = .7854 \times 16 = 12.5664 square inches; center of gravity at center of lever.

12.5664 area (A)

100 pressure (P)

1256.64 area multiplied by pressure.

4 fulcrum distance (F)

5026.56 area \times pressure \times fulcrum distance.

440. deduct one-half length of lever multiplied by

Length of ——— weight of lever, and weight valve and stem
lever, 40) 4586.56 multiplied by fulcrum distance.

114.664 pounds, WEIGHT OF BALL.

$\frac{1}{2} \times 40 = 20$, $\frac{1}{2}$ length of lever.

20 weight of lever.

400

Weight valve and stem multiplied by fulcrum distance =
 $10 \times 4 = 40$.

$400 + 40 = 440$.

†To determine pressure on boiler brace, the brace being perpendicular to the surface, determine the area supported by the brace and multiply it by the given steam pressure.

Example.—Given a steam pressure of 180 pounds, and distance

the position and distance apart of braces being known, such knowledge to be determined by an examination in writing and the report of examination filed with the application in the office of the local inspectors, and no engineer or assistant engineer now holding a license shall have the grade of the same raised without possessing the above qualifications.

And no original license shall be granted any engineer or assistant engineer who can not read and write and does not understand the plain rules of arithmetic.

6. The navigation of every steamer above 100 tons burden shall be under the control of a first-class pilot, and every such pilot shall be limited in his license to the particular service for which he is adapted. Special pilots may also be licensed for small steamers of all kinds locally employed.

7. Second-class pilots may be allowed to take charge of steamers not exceeding 100 tons burden, and may be authorized by the license granted to act in charge of a watch as assistant to a first-class pilot on freight and towing steamers of all tonnage.

8. All passenger and ferry steamers shall, in addition to the regular pilot on watch, have one of the crew also on watch in or near the pilot house; and this rule applies to all steamers navigating in the nighttime.

9. Masters and pilots of passenger steamers shall exclude from the pilot houses of such steamers, while under way, all persons not connected with the navigation of such steamers, except officers of the Steamboat Inspection Service, licensed officers of steamboats, persons regularly engaged in learning the profession of pilot, officers of the United States Coast Survey, Light-House Service, and engineer officers connected with the improvement of rivers and harbors. The supervising inspectors, however, shall have the power, if in their judgment it will not endanger life on board of such passenger steamers, to grant permits authorizing the masters of such steamers, except when such steamers are making excursions under permits granted by the inspectors, to allow a limited number of such persons as they may deem proper in the pilot house of such steamers between the hours of sunrise and sunset, on the condition that such persons will not in any way interfere with the pilots in the performance of their duties. In the case of any violation of the conditions of any such permit it shall, upon demand, be surrendered to the supervising inspector having jurisdiction, and no such permit

between centers, spaced square, 5 inches, then the stress on the brace would equal

$$(5 \times 5) \times 180 = 4500 \text{ pounds.}$$

If the brace is oblique to the supported surface the tension on the oblique brace equals the tension on the perpendicular brace multiplied by the secant of the angle made by the oblique brace to the perpendicular to surface.

shall again be issued to any such master by any supervising inspector except the supervising inspector of the district to whom it was surrendered, and not by him until it shall be shown to his satisfaction that all the provisions of such permit will thereafter be complied with.

The master of every passenger steamer shall keep three printed copies of this section of Rule V posted in conspicuous places on such steamer, one of which shall be kept posted in the pilot house.

Such printed copies shall be furnished by the Treasury Department to local inspectors for distribution among the passenger steamers of their respective districts.

10. Inspectors are forbidden to issue original licenses to pilots of steam vessels, except on the official certificate of a surgeon of the Marine-Hospital Service that the applicant is free from the defect known as color blindness.

In case the applicant is pronounced color-blind he may, in the discretion of the inspectors, be limited to act as pilot on a vessel navigating in daylight only.

In case of renewal of license of any pilot who has not been examined, and who is living at an inconvenient distance from a surgeon of the Marine-Hospital Service, he may be examined for color blindness by any respectable physician residing in the same town or locality with said applicant, who (the physician) shall furnish a report of the examination made upon the regulation blanks, which shall be in duplicate, one of which shall be furnished the applicant and the other sent by mail to the local inspectors of steam vessels, to which application shall be made for a renewal of license.

In case the applicant shall be found incompletely color-blind the local inspectors shall examine with the colored signal lights, and if satisfied that the applicant can sufficiently distinguish the color signal lights used on steam vessels they may, in their discretion, renew the license of such applicant: *Provided, however,* Before granting or renewing a license to pilots, masters, or engineers, inspectors shall satisfy themselves that they can properly hear the bell and whistle signals.

11. Inspectors are forbidden to issue original licenses to pilots who can not read and write: *Provided, however,* That upon navigable waters of the United States newly opened to steamboat navigation, and where the only pilots obtainable are illiterate Indians or other natives, the fact that such persons can neither read nor write shall not be considered a bar to such Indians or other natives receiving license as pilot of steam vessels, provided they are otherwise qualified therefor. Inspectors having jurisdiction over the Red River of the North and rivers whose waters flow into the Gulf of Mexico are forbidden to issue original licenses to pilots for routes extending beyond these rivers, except inspectors having jurisdiction of the coast of the Gulf of

Mexico, who may grant such licenses for coastwise routes, subject to the approval of the adjoining boards.

12. No original license for any route shall be issued to any person, except for special license on small pleasure steamers and ferryboats navigating outside of ports of entry and delivery, who has not been employed in the deck department of a steamer or sail vessel for the term of at least three years preceding the application for license, or who has not served continuously for two years (during the season of navigation) in the pilot house of a steam vessel as wheelsman or quartermaster, which fact the inspectors may require to be verified by the certificate in writing of the licensed master or pilot under whom the applicant has served, said certificate to be filed with the application of the candidate.

13. Pilots of steam vessels, while in the discharge of their duties, must be governed by the rules of the Board of Supervising Inspectors made for their guidance, and not by any instructions emanating from any inspector or other person.

14. That no original master's license on lake [or] bay steamers shall be issued hereafter to any person who has not been licensed and served at least one year as first-class pilot or chief mate on such steamers, such service as pilot or chief mate to have been within three years preceding the application for license: *Provided, however,* That the foregoing clause shall not apply to any person[s] who [have] has served at least three years as master on sailing vessels on waters for which the applicant desires to obtain a license. Whenever a master or mate desires to act as pilot, and furnishes the necessary evidence of his ability, the local inspectors for the district where the license is issued shall indorse such pilot routes on the master's or mate's certificate.

Mates and pilots of sailing vessels who have served three years on such vessels may be licensed in the same capacity on steam vessels after serving a year in the deck department of a steam vessel, such experience to have been within three years preceding the application.

And no original license as master or mate of ocean steamers, or of coastwise steamers plying upon waters of the ocean or high seas, shall be issued to any person, or grade of license raised, or route extended, who does not understand navigation, and who is not able to determine ship's position at sea by observation of the sun, to obtain longitude by chronometer, and to determine ship's latitude by meridian altitude of either the sun, moon, or stars. The examination to determine his qualifications shall be in writing, which shall be kept on file in the office granting such license; and all examinations of other masters, mates, or pilots shall be in writing and kept on file for reference: *Provided, however,* That applicants for original license to act as master or mate of steamers engaged in the Atlantic coast menhaden fisheries shall only be subjected to such examination as shall satisfy the inspectors

that the applicant is a competent coast pilot, capable of navigating such fishing steamers.

And : That hereafter no original master or chief mate of ocean or coastwise steamers shall be granted a license without first having been examined and passed for color blindness.

15. It shall be the duty of the master of every inspected steamer of 80 net tons and over, carrying passengers on the ocean, lakes, gulf[s], or bays, when such steamer is under way, to cause to be prepared a station bill for his own department, and one, also, for the engineer's department, in which shall be assigned a post or station of duty for every person employed on board such steamer, in case of fire or other disaster ; which station bills shall be placed in the most conspicuous places on board for the observation of the crew. And it shall be the duty of such master, or of the mate or officer next in command, once at least in each week, to call all hands to quarters and exercise them in the discipline and use of the fire pumps, and all other apparatus for the safety of life on board of such vessel, and to see that all the equipments required by law are in complete working order for immediate use ; and the fact of the exercise of the crew, as herein contemplated, shall be entered upon the steamer's log book, stating the day of the month and hour when so exercised ; and any neglect or omission on the part of the officer in command of such steamer to strictly enforce said rule shall be deemed cause for the revocation of the license of such officer. Upon navigable rivers the captains of all passenger steamers of 80 net tons and over shall be required to maintain a strict discipline and organize the officers and permanent crew, so as to act with promptness in case of fire or other disaster ; and the captain shall cause to be prepared at least two station bills, assigning the officers and permanent crew to definite places ; said station bills shall be conspicuously placed, under glass, near the inspection certificate.

16. It shall be the duty of the mate of every steamer carrying passengers to assign to deck or steerage passengers the space they may occupy on board during the voyage, and to supervise the stowage of freight or cargo, and see that the space set apart for passengers is not encroached upon. He shall also carefully examine all packages of freight delivered on board for shipment, with a view to detect and prevent any combustible or other dangerous articles prohibited by law being delivered on board.

17. Whenever a steamer meets with an accident involving loss of life or damage to property, it shall be the duty of the licensed officers of any such steamer to report the same, in writing and in person, without delay, to the nearest local board : *Provided*, When from distance it may be inconvenient to report in person, it may be done in writing only, and the report sworn to before an authorized magistrate.

18 Except by the consent in writing of the board that granted the license, no other board shall raise the grade of an engineer,

mate, or pilot during the year for which the license was granted, and the grade of no original license shall be raised during the term for which it is issued, nor at any time thereafter, unless the holder can show one year's actual service in the capacity for which he has been licensed: *Provided*, That no person receiving special license either as pilot or engineer shall be eligible to a higher grade of license until such person has actually served three full seasons of navigation on the waters for which he is licensed, and then only on satisfactory written evidence of such service, to be placed on file with the application for increase of grade.

19. Whenever an officer shall apply for a renewal of his license for the same grade, the presentation of the old certificate shall be considered sufficient evidence of his title to renewal, which certificate shall be retained by the inspectors upon their official files, as the evidence upon which the license was renewed: *Provided*, It is presented within twelve months after the date of its expiration, unless such title has been forfeited, or facts shall have come to the knowledge of the inspectors which would render a renewal improper; nor shall any license be renewed in advance of the date of the expiration thereof, unless there are extraordinary circumstances that shall justify a renewal beforehand, which may be granted by anticipating, not to exceed thirty days, the expiration of the license; in which case the reasons therefor must appear in detail upon the records of the inspectors renewing the license.

All examinations for licenses to be made by the board of local inspectors.

20. When the license of any master, mate, pilot, or engineer is revoked, such license expires with such revocation, and any license subsequently granted to such person shall be considered in the light of an original license.

21. The suspension or revocation of a joint license shall debar the person holding the same from the exercise of any of the privileges therein granted so long as such suspension or revocation shall remain in force.

22. When the license of any master, mate, engineer, or pilot is suspended, the inspectors making such suspension shall determine the term of its duration, except that such suspension can not extend beyond the time for which the license was issued.

23. Inspectors shall examine all applicants for original license to act as master of steamers navigating rivers exclusively, which examination shall be reduced to writing and made part of the permanent records of the office of inspectors making such examination; and no original license shall be issued to any person to act as master of such steamers who has not, by actual continuous service on board of such steamers for a period of not less than three years, acquired practical knowledge, skill, and experience essential in case of emergency and disaster, and in the navigation of such steamers with safety to life and property, and

at least one year of service to have been within three years of the date of making application for such license; and no such original license shall be issued, except upon the official certificate of a surgeon of the Marine-Hospital Service that the applicant is free from the defect known as color-blindness; and no license shall be issued to any applicant who can not read and write.

24. "The line of examination to be pursued by inspectors in examining applicants for original license as master of river steamers" shall be as follows:

(1) As to his general knowledge of the duties of master of such steamers.

(2) As to his ability to handle the wheel in case of emergency or disaster.

(3) As to the knowledge of his duties and proper method [of procedure] in case of fire on his vessel.

(4) As to his knowledge of proper management of vessel and crew in case of collision or sinking.

(5) As to executive ability generally to manage officers and crew.

(6) As to his general knowledge and ability to navigate steamers with safety to life and property.

(7) As to his knowledge of pilot rules governing the navigation of such steamers.

(8) As to his knowledge of signals between the pilot house and engine room.

(9) As to his knowledge of signal lights and their proper position.

(10) As to duties of master in case of fog or stormy weather, and on such other subjects in connection with the navigation of such vessels as the inspectors conducting such examination may deem proper and necessary.

25. Starting, stopping, and backing signals for steam vessels navigating the waters of the eighth and ninth supervising inspection districts, and so much of Lake Superior as is included in the Fifth district.

The Eighth district embraces all the waters of the lakes north and west of Lake Erie, with their tributaries, except the portion of Lake Superior which is bounded by the States of Minnesota and Wisconsin, and also includes the upper portion of the Illinois River down to and including Peoria, Ill.

Ninth district embraces all the waters of Lakes Erie, Ontario, Champlain, Memphremagog, and the River St. Lawrence, and their tributaries.

There shall be used between the master or pilot and engineer the following code of signals, to be made by bell or whistle, namely:

1 whistle or bell.....	Go ahead.
1 whistle or bell.....	Stop.
2 whistles or bells.....	Back.

3 whistles or bells.....	Check.
1 long whistle or 4 bells.....	Strong.
1 long whistle or 4 bells.....	All right.

Two whistles or two bells, when the engine is working ahead, will always be a signal to *stop and back strong*.

RULE VI.—INSPECTION OF STEAMERS.

	Section.
Annual inspection to be made only on written application....	1
Certificates of inspection to be issued for a period of not less than one year.....	7
Certificates of inspection and license, how signed.....	6
Duty of owners to notify inspectors when on dry dock.....	5
Hulls, inspection of.....	4
Inspection may be made within thirty days of expiration of current certificate.....	7
Permit to proceed to other ports for repairs, how issued.....	7
Steamers, inspectors may lawfully inspect.....	3
Steamers not owned by the United States Government must be inspected.....	2

1. The annual inspection of a steamer must be made only on written application, presented to the United States inspectors by the owner, master, or authorized agent of the steamer to be inspected. Such application must state upon its face that previous application for inspection has not been made to any other board of local inspectors, or supervising inspector.

2. Steam vessels employed by the Government, unless the titles of the same are actually vested in the United States, are not exempt from inspection.

3. Inspectors may lawfully inspect within their respective districts, upon proper application, any steamer running upon the waters of their district, the certificate of which is about to expire.

4. In the inspection of the hulls of steamers, if the inspector shall not have satisfactory evidence otherwise of the soundness of the timber, he shall not give a certificate until the hull of the vessel shall be bored to his satisfaction.

5. Whenever any steam vessel is placed upon the dock for repairs, it shall be the duty of the owner or agent to report the same to the board of local inspectors of that district so that a thorough inspection may by them be made to determine what is necessary to make such vessel seaworthy, if the condition or age of the steamer in the judgment of the inspectors renders such examination necessary.

And : That before making general repairs to a boiler of a steam vessel the engineer in charge of such steamer shall report, in writing, the nature of such repairs to the local inspector of the district wherein such repairs are to be made.

6. Certificates of inspection signed by one local inspector only shall not be valid, nor shall the name of a regular inspector be substituted by that of any other person upon any such certificate. This rule also applies to licenses.

7. Certificates of inspection for any period less than one year shall not be issued, but nothing herein shall be construed as preventing local inspectors from inspecting steamers for renewal of certificate, upon due application in writing, at any time not exceeding thirty days of expiration of current certificate of inspection, providing the same can be done without greater expense than would be incurred if taking place when inspection is regularly due, and that such inspection shall not interfere with other inspections regularly falling due at the same time. This rule, however, is not to be construed as preventing the inspection of any steamer at an earlier period than thirty days anterior to the expiration of the steamer's certificate, when necessary "for the purpose of concentrating the work of the inspectors within certain given periods" (Department decision 7703, August 17, 1886, page 216, Manual, edition 1890) for the purpose of saving traveling expenses. Inspectors issuing a permit to a steamboat to proceed to other ports for repairs must state upon the face of the same the conditions upon which it is granted and whether the vessel is to be allowed to carry freight or passengers, the quantity and number: *Provided, however,* That no steam vessels whose certificate has expired will be permitted to carry passengers or freight while en route to another port for repairs.

When under section 4456, Revised Statutes, where steamers obtain a permit from the local inspectors of a district to go from their district to another to make repairs, said local inspectors shall notify the supervising inspector of their district, stating the repairs to be made on said steamer. And the supervising inspector shall notify the supervising inspector of the district where such repairs are to be made, together with a copy of the report of the inspectors indicating the repairs ordered on said steamers.

RULE VII.—FERRYBOATS.

Section.

Ferryboats, what constitute	2
Ferryboats to be confined to route specified in certificate.....	2
Ferryboats may go beyond specified route, how.....	2
Ferryboats, how equipped	3
Lights required.....	1

1. All double-ended ferryboats on lakes and seaboard shall carry a central range of clear, bright, white lights, showing all around the horizon, placed at equal altitudes forward and aft; also such side lights as specified in section 4233 of the Revised Statutes, Rule III, Paragraphs B and C. Local inspectors in districts having ferryboats shall, whenever the safety of navigation may require, designate for each line of such boats a certain light,

white or colored, which shall show all around the horizon, to designate and distinguish such lines from each other, which lights shall be carried on a flagstaff amidships 15 feet above the white range lights. * * * The signal lights on ferryboats on waters flowing into the Gulf of Mexico and their tributaries shall be the same as those on all other steamboats on the same waters, except double-ended ferryboats, which shall be governed by the rule governing double-ended ferryboats on lakes and seaboards.

2. Ferryboats are steamers running under a ferry charter granted by any State or municipal authority, and steam vessels employed as a means of crossing any river, or other similar water, in continuation of any established highway, may also be considered ferryboats under the law; and the navigation of such vessels must be confined to the ferry routes specified in the inspection certificate issued; but such vessels may be permitted, under excursion permits, to go beyond their authorized routes with passengers only, or, without such permit, to lighten or relieve vessels in distress.

3. All ferryboats carrying passengers shall be equipped as passenger steamers to such an extent as in the opinion of the inspectors shall, in each case, be deemed just and proper, in accordance with the average number of passengers carried per trip.

RULE VIII.—EXCURSION STEAMERS.

	Section.
Lifeboats, when required.....	3
Life-saving appliances, additional for certain waters.....	2
Permits, how issued.....	1

1. If the master or owners of any passenger or ferry steamer desire to engage in excursions, the inspectors, upon the written application of such master or owners, shall issue a permit, stating the number of extra passengers the boat may carry with prudence and safety, the route she may run, and the kind and extra number of life-saving appliances with which she is provided. The excursion permit, when used, must be exposed to the view of the passengers, in connection with the certificate of inspection.

2. Passenger steamers making excursions on the Northern and Northwestern lakes, or on waters of the Atlantic and Pacific coasts and rivers flowing into the same, shall have, in addition to their regular life-saving equipments, a life-preserver or float, made in accordance with the rules of the Board, or their equivalent in other approved life-saving appliances, for each additional passenger allowed.

3. Steamers making excursions under a permit must have at least one lifeboat that will best secure the safety of those on board in case of disaster.

RULE IX.—DUTIES OF INSPECTORS.

	Section.
Boiler manufactories to be visited for certain purposes.....	1
Boiler covering, removal at annual inspections.....	7
Boilers inspected, number to be reported annually to supervising inspectors.....	3
Casualties, local boards to report to supervising inspectors..	10
Excess of steam, inspectors to prosecute for carrying.....	14
Fire apparatus to be tested by hull and boiler inspectors jointly.....	2
Local inspectors to thoroughly examine interior of boiler....	8
Local inspectors of hulls and boilers to take indication of hydrostatic pressure.....	9
Notifications, how sent to local inspectors of adjoining districts.....	5
Official records, where they may be examined.....	15
Report, annual, of supervising inspectors, how and to whom made.....	4
Reports, quarterly, of local inspectors, how and to whom made.....	11
Reports, quarterly, of local inspectors, when to be made....	12
Reports, alphabetical list of steamers inspected, officers licensed, and when made.....	13
Signal lights, size of globes.....	2
Testimony, when it may be obtained through the supervising inspector.....	6

1. The inspectors shall visit places where marine boilers are being constructed as often as possible, for the purpose of ascertaining and making a record of the stamps upon the material, its thickness, and qualities.

2. It shall be the duty of the inspectors jointly, before granting a certificate of inspection, to thoroughly test the fire apparatus of steamers, and to examine carefully all pumps, hose, lifeboats, and other equipments required by law, and to see that the [glass globes of] colored signal lights are in no case less than 6 inches diameter and 6 inches high.

3. It shall be the duty of local inspectors to report correctly at the end of the year, to the supervising inspectors, the number of boilers inspected in each of their local districts.

4. Each supervising inspector, in his annual report to the board of supervising inspectors, is required to report the number of steamers inspected in his district, classified and alphabetically arranged, stating when built, where built, amount of tonnage, the number of masters, mates, pilots, and engineers licensed, with their grade, number of issue, number of licenses; these lists to be made on blanks to be furnished by the Department. He is also required to report all expenditures in his district, including

salaries, and traveling and incidental expenses; he is also required to report all casualties, such report to be made so as to accord in form with the tabular statement published in the nineteenth annual report; also any occurrence and matters which, in his opinion, will add value to the service and interest to the report.

No supervising inspector shall make his annual report public until after the same has been presented to the board of supervising inspectors, as required by section 4410, Revised Statutes; and, further, that no local board, or the clerk thereof, shall make public any report without the consent of their supervising inspector or that of the Supervising Inspector-General.

5. It shall be the duty of the supervising inspectors to inform their respective local boards, in writing, of their decisions in cases of appeal. It shall also be the duty of the local inspectors to notify the local inspectors of adjoining districts, through the supervising inspector, of all revocations or suspensions of licenses, and also of the names of all persons from whom licenses have been withheld, the names of all steam vessels neglecting or refusing to make repairs when ordered, and the names of all that have been refused certificates, with the reasons therefor; and once in each year local inspectors shall be supplied with a list of all licensed officers, which shall be printed in the annual report of the supervising inspectors.

6. Whenever any inspector shall find it necessary, in conducting his investigations, or in the performance of any of his duties, to obtain testimony from the inspectors of other districts, he shall request the same through the supervising inspector.

7. Local inspectors, at their annual inspections of steam boilers, shall remove from the surface of such boilers as are covered so much of said covering as may be necessary to enable them to examine parts of the boilers which can not be properly examined from the inside, and shall examine, in a thorough and careful manner, either externally or internally, all parts of the shell of every boiler; and the masters and owners of every steam vessel shall afford every facility necessary to carry out, in the most effective and efficient manner, the provisions of this section; and that in no case shall an intermediate inspection be deemed any part of the regular annual inspection.

8. It shall be the duty of local inspectors of boilers to thoroughly examine the interior of all boilers when it is possible to do so, to see that the braces are in place and of proper size, and to determine whether the boilers are in good condition, before granting a certificate of inspection. Such examinations to be made after the hydrostatic pressure has been applied.

9. And it shall be the duty of both the hull and boiler inspectors to be present when the boiler is being tested by hydrostatic pressure, and the hull inspector, as well as the boiler inspector, shall observe and note the indication upon the gauge.

10. Local boards shall report forthwith to their supervising inspectors in detail all accidents of a serious character, such as collisions, foundering, sinking, fires, and all other casualties of interest to or affecting the steamboat service in their respective districts.

11. Local boards shall report quarterly to their supervising inspectors all cases of revocation, suspension, and refusal of licenses to masters, mates, pilots, and engineers, with the reasons therefor; all examinations into alleged violations of the steamboat law, with their decisions thereon; steamers inspected, with their class and tonnage; steamers refused inspection, their class and tonnage, and the reasons for such refusal; steamers gone out of service, with their class and tonnage; the number of masters, mates, pilots, and engineers licensed; grade of licenses issued during the quarters ending March 31, June 30, September 30, and December 31 of each year.

12. The quarterly reports may be made on or immediately after the first day of January, April, July, and October in each year.

13. Inspectors shall, on or before the fifth day of January in each year, make alphabetical lists, arranged according to class and grade, of names of steamers inspected during the year previous, with their tonnage; when and where built; the name and grade of masters, mates, pilots, and engineers licensed, together with all the events affecting the Steamboat-Inspection Service and occurring in their districts, are to be reported in a tabular form, and according to blanks to be furnished by the Treasury Department.

14. When it is known or comes to the knowledge of the local inspectors that any steam vessel is or has been carrying an excess of steam beyond that which is allowed by her certificate of inspection, it is recommended that the local inspectors in whose district said steamer is being navigated, in addition to reporting the fact to the United States district attorney for prosecution, under section 4437, Revised Statutes, shall require the owner or owners of said steamer to place on the boiler of said steamer a lock-up safety valve that will prevent the carrying of an excess of steam and shall be under the control of said local inspectors.

On the placing of a lock-up safety valve upon any boiler, it shall be the duty of the engineer in charge of same to blow or cause the said valve to blow off steam at least once in each watch of six hours or less, to determine whether the valve is in working order, and it shall be his duty to report to the local inspectors any failure of such valve to operate.

In case no such report is made, and a safety valve is found that has been tampered with or out of order, the license of the engineer having such boiler in charge shall be revoked.

It shall be the duty of the local inspectors to send a copy of this rule to every steamer in their district, when said copies are furnished by the Department.

15. All official records and official documents on file in the office of any supervising inspector, or board of local inspectors, after official action thereon has been concluded, shall be open to public inspection and examination: *Provided*, Such inspection or examination be made in the office to which such official records and documents belong.

RULE X.—MISCELLANEOUS.

	Section.
Draft of water on ocean steamers to be limited.....	1
Equipments to be branded with name of steamer.....	2
Oil below a certain fire test not allowed as stores on passenger steamers.....	3
Refined petroleum may be carried under certain restrictions.....	4
Refined petroleum, how to put up for shipment.....	5
Watchman and lookout for ocean steamers.....	6
Watchman for passenger steamers.....	7
Whistles to be blown by towing steamers in fog.....	8

1.* Local inspectors shall limit the draft of water on all ocean passenger steamers and note the same on the face of the certificate of inspection.

The rule for determining the draft of ocean-going steamers shall be as follows:

No vessel is to be loaded so that her freeboard (measured at the lowest point of sheer) from the main-deck stringer plate to the water's edge shall be less than indicated in the following table:

Depth of hold from top of ceiling to under side of main deck.	Freeboard at lowest point of sheer, for each foot-depth of hold.	Depth of hold from top of ceiling to under side of main deck.	Freeboard at lowest point of sheer, for each foot-depth of hold.
<i>Feet.</i>	<i>Inches.</i>	<i>Feet.</i>	<i>Inches.</i>
8	1½	20	3
10	2	22	3¼
12	2½	24	3½
14	2¾	26	3¾
16	3	28	3¾
18	3	30	3¾

2. All the equipments of a steamer, such as buckets, axes, boats oars, rafts, life-preservers, floats, barrels, and tanks, shall be painted or branded with the name of the steamer to which they belong.

* Circular.

LOAD LINE SEAGOING STEAM VESSELS.

1891. Department No. 34.

TREASURY DEPARTMENT,
OFFICE OF SUPERVISING INSPECTOR-GENERAL
OF STEAM VESSELS,

Washington, D. C., March 5, 1891.

To inspectors of steam vessels and owners, agents, and masters of seagoing steam vessels:

Your attention is called to the following extract from an act of Congress amending section 4178, Revised Statutes, approved February 21, 1891, relating to the load line of seagoing steam vessels, as follows:

"SECTION 2. * * * The owner, agent, or master of every inspected seagoing steam * * * vessel shall indicate the draft of water at which he shall deem his vessel safe to be loaded for the trade she is engaged in, which limit, as indicated, shall be stated in the vessel's certificate of inspection, and it shall be unlawful for such vessel to be loaded deeper than stated in said certificate."

In pursuance of the extract from the act of Congress above quoted, inspectors of steam vessels will, as the inspections of seagoing steam vessels fall due, ascertain from the master, owner, or agent of such vessels the draft of water at which he shall deem his vessel safe to be loaded for the trade she is engaged in, and to state the load line indicated in the certificate of inspection previous to issuing the same.

The extract from the law quoted herein is from the bill referred to in a footnote on page 1 of Department Circular No. 25 of February 18, 1891.

JAMES A. DUMONT,
Supervising Inspector-General.

Approved:

A. B. NETTLETON,
Acting Secretary.

[Inspectors will now be governed by the law as set forth in this circular.]

3. No oil that will stand a fire test of less than 300 degrees (Fahrenheit) shall be used as stores on any steamer carrying passengers.

4. Refined petroleum which will not ignite at a temperature of less than 110 degrees (Fahrenheit) may, upon routes where there is no other practical mode of transporting it, be carried on passenger steamers; but it shall not be lawful to receive on board or transport any petroleum, unless the owner or master of the steamer shall have first received from the inspectors a certificate designating the place or places in such steamer in which the same may be carried or stowed, with the further condition that the certificate shall be conspicuously posted on the steamer.

5. Refined petroleum must not, in any case, be received on board or carried, unless it is put up in good iron-bound casks or barrels, or in good metallic cans or vessels, carefully packed in boxes, and the casks, barrels, or boxes plainly marked on the heads thereof with the manufacturer's name, the name of the article, and the degree of temperature (Fahrenheit) at which the petroleum will ignite.

6. All steamers navigating the ocean during the nighttime shall have a lookout at or near the bow, and one watchman in each cabin or steerage.

7. All passenger steamers navigating rivers, lakes, bays, and sounds in the nighttime shall have a watchman on each deck below the hurricane deck, including the cabins, such as are accessible to the passengers and crew when under way; and a watchman as lookout at the bow, excepting on steamboats navigating the waters emptying into the Gulf of Mexico, having hurricane decks that terminate abaft the stem; then the watchman as lookout shall be stationed on the forward part of such hurricane deck, who shall perform no other duty between sunset and sunrise.

8. All steam vessels (except upon the Red River of the North and rivers whose waters flow into the Gulf of Mexico), when engaged in towing during fog or thick weather, shall sound three distinct blasts of their steam whistles in quick succession, repeating at intervals not exceeding one minute.

RULES OF PRACTICE FOR THE GOVERNMENT OF SUPERVISING AND LOCAL INSPECTORS OF STEAM VESSELS IN TRIALS OF LICENSED OFFICERS OF STEAM VESSELS.

I.—APPLICATION AND ISSUE OF LICENSES.

1. Application for original license shall be made on Form No. 2124, and comply with the requirements of law.

2. Inspectors will furnish applicants with a written or printed notice of time and place of examination.

3. If the inspectors shall decline to grant the applicant the license asked for, they shall furnish him a statement in writing setting forth the cause of their refusal to grant the same.

II.—SUSPENSION AND REVOCATION OF LICENSES.

1. The inspectors shall, when charges have been duly filed against a licensed officer of steam vessels, furnish the accused with a copy thereof, setting forth specifically their character, and the section of the statutes or the rules of the Board that have been violated.

2. Subpœnas shall be in the prescribed form, one copy of which shall be furnished each witness.

3. All testimony shall be reduced to writing. The accused shall be permitted to cross-examine witnesses, and in case of exception to questions for any cause, the inspectors shall note the exceptions in the margin of the deposition. The deposition shall be signed by the witness, and sworn to before the inspectors.

4. The accused may have the hearing of the case continued for satisfactory reasons, and the Board may, in like manner, continue the hearing from day to day.

5. During the trial the witnesses shall be examined separately, but if the accused is also a witness he shall not be subject to this rule.

6. At any time before the conclusion of the evidence the charge or charges may be amended, notice of said amendment being furnished to the accused of the nature of such amendment, but no amendment shall be permitted after the conclusion of the evidence.

7. Where the witnesses reside in a district other than that in which the accused is being tried, a certified copy of the charges, together with such interrogatories as the inspectors desire to propound, shall be forwarded to the inspectors of the district where the witnesses reside, and said inspectors shall examine the witnesses in the same manner as prescribed in Rule III of these rules.

8. The testimony thus taken shall be forwarded to the inspectors investigating the case and read as evidence in the cause, the same as though such testimony had been taken by the inspectors trying the cause.

9. The inspectors will furnish the accused with a statement in writing of their finding in the premises.

10. The inspectors shall record in a well-bound book, to be furnished by the Department for that purpose, the charge or charges against the accused, the testimony of all witnesses, and their decision in the premises, which record shall be verified by their signatures.

III.—APPEAL TO SUPERVISING INSPECTORS.

1. The supervising inspector, upon notice of an appeal from the decision of the local board, provided said notice of appeal shall be made within thirty days from the date of the decision of the local board, shall give notice in writing to said local board to forward a certified copy of their decision, together with the charge and all evidence in writing on file in their office.

2. The supervising inspector shall then proceed to investigate the case under the same rules prescribed for the trial of the accused by the local board.

3. The testimony taken before the local board may be considered by the supervising inspector, for the purpose of determining whether the finding of the local board is justified by the evidence, and he shall have power to remand the same for explanation or correction, but not for a new trial; but the testimony taken before the local board, except for the purpose of impeaching a witness, can not be read in evidence in the trial of the case before the supervising inspector except by consent.

4. Upon the conclusion of the case the supervising inspector shall furnish the appellant with a notice of his finding in like manner as prescribed for local inspectors.

RULES OF ORDER.

ADOPTED AT THE SPECIAL MEETING HELD JUNE, 1871.
AMENDED JANUARY 29, 1885.

I. The president shall take the chair at the hour appointed, a quorum being present, and shall call the Board to order, when the secretary shall read the proceedings of the preceding day, which, if correct, shall be approved, and the following order of business be observed :

First. Presentation of communications by districts.

Second. Motions and resolutions.

Third. Presentation of memorials and petitions.

Fourth. Reports of committees of the Board.

Fifth. Miscellaneous business.

II. The president shall preserve decorum and order ; he shall pronounce the decision of the Board on all subjects, and shall decide all questions of order without debate, unless, entertaining doubts on the point of order raised, he may call for the sense of the Board ; he may speak on points of order only, rising from his seat ; he may also, on any other occasion, call any member to the chair, and while on the floor he shall have the privilege of entering into any debate on any question before the Board ; such substitution, however, shall not extend beyond an adjournment. An appeal may be made from the decision of the president by any two members, on which no member shall speak more than once, without leave of the Board.

III. Any member who shall deliver his opinion or speak in any debate, shall rise in his place and respectfully address the president, and shall confine himself to the question under debate, and avoid personality. If two or more members rise to speak at the same time, the president shall decide who shall speak first.

IV. No member shall speak more than twice on the same question without leave of the Board ; nor more than once until every member choosing to do so shall have spoken.

V. If a member, while speaking, is called to order by the president or by any other member, he shall cease speaking until it is determined whether he is in order or not, and the objectionable words, shall, if required, be reduced to writing.

VI. No motion shall be debated or open for discussion or decision until the same has been seconded, and it shall be reduced to writing if desired by the president or any member.

VII. When a question is before the Board no motion shall be received but to adjourn, to lay on the table, to postpone indefinitely, to postpone to a certain day, to commit, to amend ; which several motions shall have precedence in the order they here stand arranged.

VIII. A motion to adjourn shall always be in order, and shall be decided without debate. When a question is postponed indefinitely

nately, the same shall not be acted upon again or reconsidered during the session of the Board.

IX. When the yeas and nays shall be called on any question, which may be done when three members require it, the secretary shall call the names of the members by districts, commencing with the first, when the members present shall answer affirmatively or negatively as their names are called, unless they shall be excused by the Board : *Provided, however,* That the yeas and nays shall always be called upon the adoption of a rule or device requiring the approval of the Secretary of the Treasury. The absentees and those not voting shall also be recorded.

X. Any member may call for the division of a question when the sense will admit of it.

XI. When a blank is to be filled, and different sums, numbers, or times shall be proposed, the question shall first be taken on the highest sum or number and on the longest or latest time.

XII. When the reading of any paper or other matter is called for, and the same is objected to by any member, it shall be determined by a vote of the Board.

XIII. Every member of the Board present shall vote on all questions unless excused by the Board, and all questions shall be decided by a majority of votes, except in cases otherwise provided.

XIV. No motion for reconsideration shall be received, unless made by a member and seconded by another who voted in the majority on the question.

XV. All committees shall be appointed by the president unless otherwise ordered by the Board on motion, in which case they may be appointed by ballot or *viva voce*.

XVI. Before putting the question the president shall ask : " Is the Board ready for the question ? " If no member rise to speak, and a majority of the Board are ready for the question, the president shall put the question ; and, after doing so, no member shall speak upon it.

XVII. If a pending question be lost by adjournment of the Board, and revived on the succeeding day, no member who shall have spoken upon it twice on the preceding day shall be permitted again to speak on it without leave.

XVIII. When a motion is made to lay on the table, the question shall be taken without debate.

XIX. Any one or more of the foregoing standing rules may be altered or amended when a majority of the Board shall so determine, provided a motion to alter, amend, or change shall have been at least one day before the Board.

XX. All cases of order not herein provided for shall be governed, in the discretion of the Board, by the best uses in like cases, particularly such as prevail in the Congress of the United States.

XXI. The Board shall, at every session, elect one of its members as secretary.

PILOT RULES FOR ATLANTIC AND PACIFIC COAST INLAND WATERS.

Rules and regulations for the government of pilots of steamers navigating harbors, rivers, and inland waters (except the Great Lakes, the Red River of the North, and rivers emptying into the Gulf of Mexico, and their tributaries) when meeting or approaching each other, whether by day or night, and as soon as fully within sound of the steam whistle. (Adopted by the Board of Supervising Inspectors June, 1871; amended January, 1875, 1881, 1882, 1893, 1895.)

RULE I. When steamers are approaching each other "head and head," or nearly so, it shall be the duty of each steamer to pass to the right or port side of the other; and the pilot of either steamer may be first in determining to pursue this course, and thereupon shall give, as a signal of his intention, one short and distinct blast of his steam whistle, which the pilot of the other steamer shall answer promptly by a similar blast of his steam whistle, and thereupon such steamers shall pass to the right or port side of each other. But if the course of such steamers is so far on the starboard of each other as not to be considered by pilots as meeting "head and head," or nearly so, the pilot so first deciding shall immediately give two short and distinct blasts of his steam whistle, which the pilot of the other steamer shall answer promptly by two similar blasts of his steam whistle, and they shall pass to the left or on the starboard side of each other.

NOTE.—In the night, steamers will be considered as meeting "head and head" so long as both the colored lights of each are in view of the other.

RULE II. When steamers are approaching each other in an oblique direction (as shown in diagram of the fourth situation) they shall pass to the right of each other, as if meeting "head and head," or nearly so, and the signals by whistle shall be given and answered promptly, as in that case specified.

RULE III. If, when steamers are approaching each other, the pilot of either vessel fails to understand the course or intention of the other, whether from signals being given or answered erroneously, or from other causes, the pilot so in doubt shall immediately signify the same by giving several short and rapid blasts of the steam whistle; and if the vessels shall have approached within half a mile of each other, both shall be immediately slowed to a speed barely sufficient for steerageway until the proper signals are given, answered, and understood, or until the vessels shall have passed each other.

Vessels approaching each other from opposite directions are forbidden to use what has become technically known among pilots as "cross signals"—that is, answering one whistle with two, and answering two whistles with one. In all cases, and under all circumstances, a pilot receiving either of the whistle signals provided in the rules, which for any reason he deems injudicious to comply with, instead of answering it with a cross signal, must at once observe the provisions of this rule.

RULE IV. When steamers are running in a fog or thick weather it shall be the duty of the pilot to cause a long blast of the steam whistle to be sounded at intervals not exceeding one minute.

Steamers, when **DRIFTING** or at **ANCHOR** in the fairway of other vessels in a fog or thick weather, shall *ring their bells* at intervals of not more than two minutes.

RULE V. Whenever a steamer is nearing a short bend or curve in the channel, where, from the height of the banks or other cause, a steamer approaching from the opposite direction can not be seen for a distance of half a mile, the pilot of such steamer, when he shall have arrived within half a mile of such curve or bend, shall give a signal by one long blast of the steam whistle, which signal shall be answered by a similar blast, given by the pilot of any approaching steamer that may be within hearing. Should such signal be so answered by a steamer upon the farther side of such bend, then the usual signals for meeting and passing shall immediately be given and answered; but if the first alarm signal of such pilot be not answered, he is to consider the channel clear and govern himself accordingly.

When boats are moved from their docks or berths, and other boats are liable to pass from any direction toward them, they shall give the same signal as in case of boats meeting at a bend; but immediately after clearing the berths so as to be fully in sight, they shall be governed by Rule I.

RULE VI. The signals, by the blowing of the steam whistle, shall be given and answered by pilots, in compliance with these rules, not only when meeting "head and head," or nearly so, but at all times when passing or meeting at a distance within half a mile of each other, and whether passing to the starboard or port.

RULE VII. When two steamers are approaching the narrows known as "Hell Gate," on the East River at New York, side by side, or nearly so, running in the same direction, the steamer on the right or starboard hand of the other (when approaching from the west), when they shall have arrived abreast of the north end of Blackwells Island, shall have the right of way, and the steamer on the left or port side shall check her way and drop astern. In like case when two steamers are approaching from the east, and are abreast of Negro Point, the steamer on the right or starboard hand of the other shall have the right of way,

and shall proceed on her course without interference, and the steamer on the port side of the other shall keep at a safe distance astern (not less than three lengths) until both steamers have passed through the difficult channel.

RULE VIII. When steamers are running in the same direction, and the pilot of a steamer which is astern shall desire to pass on the right or starboard hand of the steamer ahead, he shall give one short blast of the steam whistle, as a signal of such desire and intention, and shall put his helm to port; or if he shall desire to pass on the left or port side of the steamer ahead, he shall give two short blasts of the steam whistle as a signal of such desire and intention, and shall put his helm to starboard, and the pilot of the steamer ahead shall answer by the same signals, or if he does not think it safe for the steamer astern to attempt to pass at that point, he shall immediately signify the same by giving several short and rapid blasts of the steam whistle, and under no circumstances shall the steamer astern attempt to pass the steamer ahead until such time as they have reached a point where it can be safely done, when said steamer ahead shall signify her willingness by blowing the proper signals. The boat ahead shall in no case attempt to cross the bow or crowd upon the course of the passing steamer.

Every vessel coming up with another vessel from any direction more than two points abaft her beam—that is, in such a position, with reference to the vessel which she is overtaking, that at night she would be unable to see either of that vessel's side lights—shall be deemed to be an overtaking vessel; and no subsequent alteration of the bearing between the two vessels shall make the overtaking vessel a crossing vessel within the meaning of these rules, or relieve her of the duty of keeping clear of the overtaken vessel until she is finally past and clear.

N. B.—The foregoing rules are to be complied with in all cases, except when steamers are navigating in a crowded channel, or in the vicinity of wharves; under such circumstances steamers must be run and managed with great caution, sounding the whistle, as may be necessary, to guard against collision or other accidents.

SECTION 4233, REVISED STATUTES—Rule twenty-four.—In construing and obeying these rules, due regard must be had to all dangers of navigation, and to any special circumstances which may exist in any particular case rendering a departure from them necessary in order to avoid immediate danger.

RULE IX. All double-ended ferryboats on lakes and seaboard shall carry a central range of clear, bright, white lights, showing all around the horizon, placed at equal altitudes forward and aft; also such side lights as specified in section 4233, Revised Statutes, rule three, Paragraphs B and C.

Local inspectors in districts having ferryboats shall, whenever the safety of navigation may require, designate for each line of such boats a certain light, white or colored, which shall show all around the horizon, to designate and distinguish such lines from

each other, which light shall be carried on a flagstaff amidships, 15 feet above the white range lights.

The line dividing jurisdiction between pilot rules on Western rivers and harbors, rivers and inland waters at New Orleans, shall be the lower limits of the city.

LIGHTS FOR BARGES AND CANAL BOATS IN TOW OF STEAM VESSELS.

RULE X. On the inland rivers, bays, sounds, and harbors of the United States—except on the waters of the Hudson River and its tributaries from Troy to Sandy Hook, the waters of the East River, and Long Island Sound, and the waters entering thereon, and to the Atlantic Ocean, to and including Narragansett Bay, R. I., and tributaries, and Lake Champlain—barges and canal boats towing astern of steam vessels, when towing singly, or what is known as tandem towing, shall each carry a green light on the starboard side and a red light on the port side.

When two or more boats are abreast, the colored lights shall be carried at the outer sides of the bows of the outside boats.

Barges or canal boats towing alongside a steam vessel shall, if the deck, deck houses, or cargo of the barge or canal boat be so high above water as to obscure the side lights of the towing steamer, when being towed on the starboard side of the steamer, carry a green light upon the starboard side; and when towed on the port side of the steamer, a red light on the port side of the barge or canal boat; and if there is more than one barge or canal boat abreast, the colored lights shall be displayed from the outer side of the outside barges or canal boats.

Barges and canal boats, when being towed by steam vessels on the waters of the Hudson River and its tributaries from Troy to Sandy Hook, the East River, and Long Island Sound (and the waters entering thereon, and to the Atlantic Ocean), to and including Narragansett Bay, R. I., and tributaries, and Lake Champlain, shall carry lights as follows:

Barges and canal boats being towed astern of steam vessels, when towing singly, or what is known as tandem towing, shall each carry a white light on the bow and a white light on the stern.

Barges and canal boats when towed at a hawser two or more abreast, when in one tier, shall carry a white light on the bow and a white light on the stern of each of the outside boats; when in more than one tier, each of the outside boats shall carry a white light on its bow; and the outside boats in the last tier shall each carry, in addition, a white light on the outer after part of stern.

Barges or canal boats towed alongside a steam vessel, if on the starboard side of said steam vessel, shall display a white light on her own starboard bow; and if on the port side of said steam vessel, shall display a white light on her own port bow; and if there is more than one barge or canal boat alongside, the white lights

shall be displayed from the outboard side of the outside barge or canal boat.

When barges or canal boats are massed in tiers and towed at a hawser, as is usual on the Hudson River, there shall be carried on the forward port side of the port boat of each tier a white light, and on the forward starboard side of the starboard boat in each tier a white light, and on the after port side of the port boat in the stern tier a white light, and on the after starboard side of the starboard boat in the stern tier a white light.

The white lights for barges and canal boats referred to in the preceding rules shall be carried at least 10 feet and not more than 30 feet abaft the stem or extreme forward end of the vessel, above the deck rail of the vessel on single-decked vessels, and on the upper deck of double or three decked barges or canal boats; and shall be of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least 5 miles.

The colored side lights referred to in the foregoing rules must be fitted with inboard screens, so as to prevent them from being seen across the bow, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least 2 miles, and so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass, and so fixed as to throw the light from right ahead to 2 points abaft the beam on either side. The minimum size of glass globes used shall not be less than 6 inches in diameter, and 6½ inches high in the clear.

Any barge or canal boat in tow of a steam vessel, when the last boat of a tow, and not required by these rules to carry a light on the stern—except upon rivers whose waters flow into the Gulf of Mexico—on being overtaken by another vessel, shall show from her stern to such last-mentioned vessel a flare-up light; or, in lieu thereof, a white light fixed and carried in a lantern, which shall be so constructed, fitted, and screened that it shall throw an unbroken light over an arc of the horizon of 12 points of the compass, viz, for 6 points from right aft on each side of the vessel, so as to be visible at a distance of at least 1 mile.

These rules for lights on barges and canal boats shall take effect at sundown May 1, 1894, and the lights provided therein shall thereafter be carried from sunset to sunrise at all times when being navigated.

Provided, That nothing in these rules shall be construed as compelling barges or canal boats in tow of steam vessels, passing through any waters en route or directly to or from a port where lights for barges or canal boats are different from those of the waters whereon such vessels are usually employed, to change their lights from those required on the waters from which their trip begins or terminates; but should such vessels engage in local employment on waters requiring different lights from those where they are customarily employed, they shall comply with the local rules where employed.

EXTRACTS FROM REVISED STATUTES.

SEC. 4233. The following rules for preventing collisions on the water shall be followed in the navigation of vessels of the Navy and of the mercantile marine of the United States.

STEAM AND SAIL VESSELS.

RULE ONE.—Every steam vessel which is under sail, and not under steam, shall be considered a sail vessel; and every steam vessel which is under steam, whether under sail or not, shall be considered a steam vessel.

LIGHTS.

RULE TWO.—The lights mentioned in the following rules, and no others, shall be carried in all weathers, between sunset and sunrise.

RULE THREE.—All ocean-going steamers, and steamers carrying sail, shall, when under way, carry—

(A) At the foremast head, a bright white light, of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles, and so constructed as to show a uniform and unbroken light over an arc of the horizon of twenty points of the compass, and so fixed as to throw the light ten points on each side of the vessel, namely, from right ahead to two points abaft the beam on either side.

(B) On the starboard side, a green light, of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles, and so constructed as to show a uniform and unbroken light over an arc of the horizon of ten points of the compass, and so fixed as to throw the light from right ahead to two points abaft the beam on the starboard side.

(C) On the port side, a red light, of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles, and so constructed as to show a uniform and unbroken light over an arc of the horizon of ten points of the compass, and so fixed as to throw the light from right ahead to two points abaft the beam on the port side.

The green and red lights shall be fitted with inboard screens, projecting at least three feet forward from the lights, so as to prevent them from being seen across the bow.

RULE FOUR.—Steam vessels, when towing other vessels, shall carry two bright white masthead lights vertically, in addition to their side-lights, so as to distinguish them from other steam vessels. Each of these masthead lights shall be of the same character and construction as the masthead lights prescribed by rule three.

RULE FIVE.—All steam vessels, other than ocean-going steamers and steamers carrying sail, shall, when under way, carry on the starboard and port sides lights of the same character and con-

struction and in the same position as are prescribed for sidelights by Rule three, except in the case provided in Rule six.

RULE SIX.—River-steamers navigating waters flowing into the Gulf of Mexico, and their tributaries, shall carry the following lights, namely: One red light on the outboard side of the port smoke-pipe, and one green light on the outboard side of the starboard smoke-pipe. Such lights shall show both forward and abeam on their respective sides.

RULE SEVEN.—All coasting steam vessels, and steam vessels other than ferryboats and vessels otherwise expressly provided for, navigating the bays, lakes, rivers, or other inland waters of the United States, except those mentioned in Rule six, shall carry the red and green lights, as prescribed for ocean-going steamers; and, in addition thereto, a central range of two white lights; the after light being carried at an elevation of at least fifteen feet above the light at the head of the vessel. The head-light shall be so constructed as to show a good light through twenty points of the compass, namely: from right ahead to two points abaft the beam on either side of the vessel; and the after-light so as to show all around the horizon. The lights for ferryboats, barges, and canal boats, when in tow of steam vessels, shall be regulated by such rules as the Board of Supervising Inspectors of Steam Vessels shall prescribe.

When towing, the law will be complied with by having an additional light aft 2 or 3 feet below the proper after light, also showing around the horizon, and from a flagstaff of sufficient height put anywhere abaft the pilot house.

Lights so displayed on towing vessels without masts are considered the equivalents of the two masthead lights required by rule four, section 4233, Revised Statutes.

(Decision of the Secretary of the Treasury, No. 3838, dated January 8, 1879.)

DIAGRAMS.

The following diagrams are intended to illustrate the working of the foregoing system of colored lights, and are to be used by pilots in connection with the rules, as sailing directions on meeting or nearing other steamers:

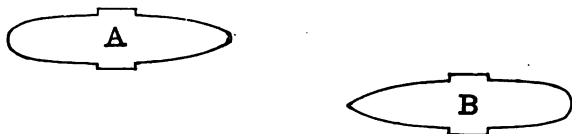
FIRST SITUATION.

Here the two colored lights, visible to each, will indicate their direct approach ("head and head") toward each other. In this situation it is a standing rule that both shall put their helms to port and pass to the right, each having previously given one blast of the steam whistle.



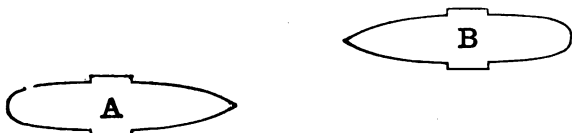
SECOND SITUATION.

Here the green light only will be visible to each, the screens preventing the red light from being seen. They are therefore passing to starboard, which is ruleable in this situation, each pilot having previously signified his intention by two blasts of the steam whistle.



THIRD SITUATION.

A and B will see each other's red light only, the screens preventing the green lights from being seen. Both vessels are evidently passing to port, which is ruleable in this situation, each pilot having previously signified his intention by one blast of the steam whistle.



FOURTH SITUATION.

This is a situation requiring great caution; the red light of B in view to A and the green light of A in view to B will inform both that they are approaching each other in an oblique direction. A should put his helm to port and pass astern of B, while B should continue on his course or port his helm if necessary to avoid collision, each having previously given one blast of the steam whistle, as required by the rules when passing to the right.



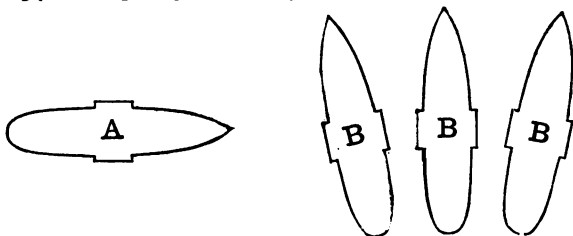
FIFTH SITUATION.

This is a situation requiring great caution; the red light of A in view to B and the green light of B in view to A will inform both that they are approaching each other in an oblique direction. B should put his helm to port and pass astern of A, while A should continue on his course or port his helm, if necessary to avoid collision, each having previously given one blast of the steam whistle, as required by the rules when passing to the right.



SIXTH SITUATION.

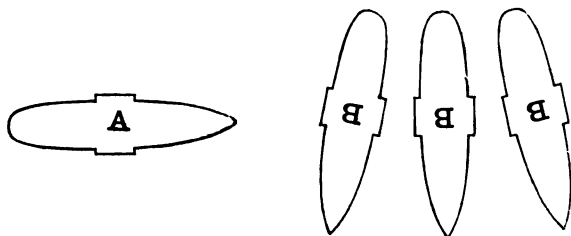
In this situation the steamer A will only see the red light of the steamer B in whichever of the three positions the latter may happen to be, because the green light will be hid from view; A will be assured that the port side of B is toward him, and that the latter is therefore crossing the bows of A in some direction to port; A will therefore (if so near as to fear collision) port his helm with confidence and pass clear. On the other hand, the steamer B, in either of the three positions, will see both the red and green lights of A, by which the former will know that a steamer is approaching directly toward him; B will act accordingly and keep away if necessary.



SEVENTH SITUATION.

In this situation the steamer A will only see the green light of the steamer B in whichever of the three positions the latter may happen to be, because the red light will be hid from view; A will

be assured that the starboard side of B is toward him, and that the latter is therefore crossing the bows of A in some direction to starboard; A will therefore (if so near as to fear collision) starboard his helm with confidence and pass clear. On the other hand, the steamer B, in either of the three positions, will see both the red and green lights of A, by which the former will know that a steamer is approaching directly toward him; B will act accordingly and keep away if necessary.



The manner of fixing the colored lights should be particularly attended to. They will require to be fitted each with a screen, of wood or canvas, on the inboard side, and close to the light, in order to prevent both being seen at the same moment from any direction but that of right ahead to two points abaft the beam.

This is important, for without the screens any plan of bow lights would be ineffectual as a means of indicating the direction of steering. This would be readily understood by a reference to the preceding illustrations, where it will appear evident that in any situation in which two vessels may approach each other in the dark the colored lights will instantly indicate to both the relative course of each; that is, each will know whether the other is approaching directly or crossing the bows either to the starboard or port.

This intimation, with the signals by whistle, as provided, is all that is required to enable vessels to pass each other in the darkest night with almost equal safety as in broad day. If at anchor, all vessels, without distinction, must exhibit a bright white light at least 20 feet above the surface of the water.

DISTRESS SIGNALS RECOMMENDED BY THE BOARD OF SUPERVISING INSPECTORS.

ARTICLE 31. (Prescribed by International Marine Conference, 1889.)

In the daytime.

1. A gun fired at intervals of about a minute.
2. The International Code signal of distress, indicated by N. C.
3. The distant signal, consisting of a square flag, having either above or below it a ball or anything resembling a ball.

4. Rockets or shells, as prescribed below, for use at night.
5. A continuous sounding with a steam whistle or any fog-signal apparatus.

At night.

1. A gun fired at intervals of about a minute.
2. Flames on the vessel (as from a burning tar barrel, oil barrel, etc.).
3. Rockets or shells, bursting in the air with a loud report and throwing stars of any color or description, fired one at a time at short intervals.
4. A continuous sounding with a steam whistle or any fog-signal apparatus.

PILOT RULES FOR WESTERN RIVERS.

Rules and regulations for the government of pilots of steamers navigating the Red River of the North and rivers whose waters flow into the Gulf of Mexico, and their tributaries. Adopted by the Board of United States Supervising Inspectors of Steam Vessels, June, 1871; amended January, 1875, February, 1880 and 1895, to take effect March 1, 1895.

RULE I. When steamers are approaching each other from opposite directions, the signals for passing shall be one blast of the steam whistle to pass to the right, and two blasts of the steam whistle to pass to the left.

The pilot on the ascending steamer shall be the first to indicate the side on which he desires to pass; but if the pilot on the descending steamer shall deem it dangerous to take the side indicated by the pilot of the ascending steamer, he shall at once signify that fact by sounding the alarm or danger signal of three or more short blasts of the steam whistle, and it shall be the duty of the pilot of the ascending steamer to answer by a similar signal of three or more blasts of the whistle, after which the pilot of the descending steamer may indicate by his whistle the side on which he desires to pass, and the pilot of the ascending steamer shall govern himself accordingly, the descending steamer being entitled to the right of way. The signals for passing must be made, answered, and understood before the steamers have arrived at a distance of 800 yards of each other. *Provided, however,* That when a steamer on the Mississippi River is about to enter the Ohio River at the same time that a steamer on the Ohio River is about to enter the Mississippi River, at Cairo Point, the steamer on the Mississippi River shall give the first signal. But in no case shall pilots on steamers attempt to pass each other until there has been a thorough understanding as to the side each steamer shall take.

RULE II. If from any cause the signals for passing are not made at the proper time, *as provided in Rule I;* or, should the

signals be given and not properly understood, from any cause whatever, and either boat become imperiled thereby, the pilot on either steamer may be the first to sound the alarm or danger signal, which shall consist of *three or more* short blasts of the steam whistle in quick succession. Whenever the danger signal is given, the engines of *both steamers must be stopped* and backed until their headway has been fully checked; nor shall the engines of either steamer be again started ahead until the steamers can safely pass each other. Vessels approaching each other from opposite directions are forbidden to use what has become technically known among pilots as "cross signals"—that is, answering one whistle with two, and answering two whistles with one. In all cases, and under all circumstances, a pilot receiving either of the whistle signals provided in the rules, which for any reason he deems injudicious to comply with, instead of answering it with a cross signal, must at once observe the provisions of this rule.

RULE III. When two boats are about to enter a narrow channel at the same time, the ascending boat shall be stopped below such channel until the descending boat shall have passed through it; but should two boats unavoidably meet in such channel, then it shall be the duty of the pilot of the ascending boat to make the proper signals, and when answered, the ascending boat shall lie as close as possible to the side of the channel the exchange of signals may have determined, as provided by Rule I, and either stop the engines or move them so as only to give the boat steerageway, and the pilot of the descending boat shall cause his boat to be worked slowly until he has passed the ascending boat.

When two steamers are approaching a bridge span or draw from opposite directions and the passing signals as provided in Rule I have been given and understood, should the pilot of the descending steamer deem it dangerous for the steamers to pass each other between the piers of such span or draw, he shall sound the alarm or danger signal, and it shall then be the duty of the pilot of the ascending steamer to answer with a similar alarm signal, and to slow or stop his engines below such span or draw until the descending steamer shall have passed.

RULE IV. When a steamer is ascending and running close on a bar or shore the pilot shall in no case attempt to cross the river when a descending boat shall be so near that it would be possible for a collision to ensue therefrom.

RULE V. When any steamer, whether ascending or descending, is nearing a short bend or point where, from any cause, a steamer approaching in an opposite direction can not be seen at a distance of 600 yards, the pilot of such steamer, when he shall have arrived within 600 yards of that bend or point, shall give a signal of one long sound of his steam whistle, as a notice to any steamer that may be approaching; and should there be any approaching steamer within hearing of such signal, it shall be the duty of the

pilot thereof to answer such signal by one long sound of his steam whistle, when both boats shall be navigated with the proper precautions, as required by preceding rules.

RULE VI. When a steamer is running in a fog or thick weather, it shall be the duty of the pilot to sound his steam whistle at intervals not exceeding one minute.

Steamers on rivers whose waters flow into the Gulf of Mexico, lying to during fog or thick weather, when the fog whistle or any sound is heard indicating the approach of another steamer, shall, if lying on the right shore, or right bank, give one tap of the bell; if lying on left shore, or left bank, give two taps of the bell, at intervals of not more than one minute, to indicate their presence, which signals shall continue until the approaching steamer has passed. Right and left shore or bank is understood by facing down stream, or with the flow of the current.

RULE VII. When steamers are running in the same direction, and the pilot of the boat astern shall desire to pass either side of the boat ahead, he shall give the signal as in Rule I, and the pilot of the boat ahead shall answer by the same signal; or, if he prefer to keep on his course, he shall make the necessary signals, and the boat wishing to pass must govern herself accordingly; but the boat ahead shall in no case attempt to cross her bow or crowd upon her course. Every vessel coming up with another vessel from any direction more than two points abaft her beam—that is, in such a position with reference to the vessel which she is overtaking that at night she would be unable to see either of that vessel's side lights—shall be deemed to be an overtaking vessel; and no subsequent alteration of the bearing between the two vessels shall make the overtaking vessel a crossing vessel within the meaning of these rules, or relieve her of the duty of keeping clear of the overtaken vessel until she is finally past and clear.

RULE VIII. When boats are moved from their docks or berths, and other boats are liable to pass from any direction toward them, they shall give the same signal as in case of boats meeting at a bend; but immediately after clearing the berths so as to be fully in sight, they shall be governed by Rule I.

RULE IX. The lights for barges and canal boats when towed ahead or alongside of the steamer, as is customary upon rivers whose waters flow into the Gulf of Mexico, shall be as follows:

When one barge is towed by a steamer and such barge is towed ahead, such barge shall have a green light on the starboard bow and a red light on port bow. When such barge is towed alongside of the steamer, on the starboard side, such barge shall have a green light on the starboard bow; when such barge is towed alongside of a steamer on the port side, such barge shall have a red light on the port bow. When two barges are towed alongside of a steamer, one on the starboard and one on the port side, the starboard barge shall carry a green light on the star-

board bow and the port barge shall carry a red light on the port bow. When two or more barges are towed ahead, the green light shall be placed on the starboard bow of the starboard barge, and a red light on the port bow of the port barge, and at a distance of not less than 10 feet above the surface of the water.

The colored side lights referred to in the foregoing rules must be fitted with inboard screens, so as to prevent them from being seen across the bow, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least 2 miles, and so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass, and so fixed as to throw the light from right ahead to 2 points abaft the beam on either side. The minimum size of glass globes used shall not be less than 6 inches in diameter, and 5½ inches high in the clear.

RULE X. Signal lights for steamers under way are provided by law as follows, the same to be carried between sunset and sunrise :

For ocean steamers and steamers carrying sail, a bright white light at the foremast head, to throw the light through 10 points of the compass on each side of the ship, viz, from right ahead to 2 points abaft the beam, and to be visible at least 5 miles. On the starboard side a green light, and on the port side a red light, each to throw the light through 10 points of the compass on their respective sides, viz, from right ahead to 2 points abaft the beam, and to be visible at least 2 miles. These colored lights are to be fitted with inboard screens projecting at least 3 feet forward from the light, to prevent them from being seen across the bow.

For steamers navigating waters flowing into the Gulf of Mexico, and the Red River of the North, a red light on the outboard side of the port smoke pipe, and a green light on the outboard side of the starboard smoke pipe—these lights to show both forward and abeam on their respective sides.

For coasting steamers and those navigating bays, lakes, or other inland waters, other than ferryboats and those above provided for, the red and green side lights as prescribed for ocean steamers, and a central range of two white lights, the after light being carried at an elevation of at least 15 feet above the light at the head of the vessel ; the headlight to show through 20 points of the compass, namely, from right ahead to 2 points abaft the beam on either side of the vessel ; and the after light to show all around the horizon.

For steamers towing other vessels, the colored lights will be the same as prescribed for ocean steamers ; and two white mast lights shall also be carried vertically, to distinguish them from other steamers ; the white lights to show through 20 points of the compass, viz, from right ahead to 2 points abaft the beam on either side of the vessel.

RESOLUTION ADOPTED BY THE BOARD OF SUPERVISING INSPECTORS OF STEAM VESSELS, JANUARY 25, 1889, RECOMMENDING LIGHTS FOR TOWBOATS.

Resolved, That it is the sense of this Board that where towboats navigating rivers whose waters flow into the Gulf of Mexico find it necessary to use a signal light or lights on the stern of their boats, they are advised to use, uniformly, two white lights, one above the other, 3 feet apart, the upper light not to be less than 15 feet above the roof of the upper deck, on the afterpart of the stern of the steamer.

RULE XI. A bright white light, not exceeding 20 feet above the hull, shall be exhibited by all steamers when at anchor between sunset and sunrise, in a globular lantern of 8 inches in diameter, so placed as to throw a good light all around the horizon.

RULE XII. The signal lights on ferryboats on waters flowing into the Gulf of Mexico and their tributaries shall be the same as those on all other steamboats on the same waters except double-ended ferryboats shall carry a central range of clear, bright, white lights, showing all around the horizon, placed at equal altitudes forward and aft; also such side lights as specified in section 4233 of the Revised Statutes, rule three, Paragraphs B and C.

RULE XIII. All other steamers, ferry or otherwise, having but one chimney, shall have brackets securely fastened to each side of the same so as to carry the red and green lights the same as passenger steamers.

RULE XIV. The line dividing jurisdiction between the pilot rules on Western rivers and harbors, rivers, and inland waters at New Orleans, shall be the lower limits of the city.

DISTRESS SIGNALS RECOMMENDED BY THE BOARD OF SUPERVISING INSPECTORS.

ARTICLE 31. (Prescribed by International Marine Conference, 1889.)

In the daytime.

1. A gun fired at intervals of about a minute.
2. The International Code signal of distress indicated by N. C.
3. The distant signal, consisting of a square flag, having either above or below it a ball or anything resembling a ball.
4. Rockets or shells as prescribed below for use at night.
5. A continuous sounding with a steam whistle or any fog signal apparatus.

At night.

1. A gun fired at intervals of about a minute.
2. Flames on the vessel (as from a burning tar barrel, oil barrel, etc.).
3. Rockets or shells, bursting in the air with a loud report and throwing stars of any color or description, fired one at a time at short intervals.
4. A continuous sounding with a steam whistle or any fog signal apparatus.

PILOT RULES FOR THE GREAT LAKES AND THEIR CONNECTING AND TRIBUTARY WATERS AS FAR EAST AS MONTREAL.

RULE I. When steamers are approaching each other "head and head," or nearly so, it shall be the duty of each steamer to pass to the right or port side of the other; and the pilot of either steamer may be first in determining to pursue this course, and thereupon shall give, as a signal of his intention, one short and distinct blast of his steam whistle, which the pilot of the other steamer shall answer promptly by a similar blast of his steam whistle, and thereupon such steamers shall pass to the right or port side of each other. But if the course of such steamers is so far on the starboard of each other as not to be considered by pilots as meeting "head and head," or nearly so, the pilot so first deciding shall immediately give two short and distinct blasts of his steam whistle, which the pilot of the other steamer shall answer promptly by two similar blasts of his steam whistle, and they shall pass to the left or on the starboard side of each other.

NOTE.—In the night, steamers will be considered as meeting "head and head" so long as both the colored lights of each are in view of the other.

RULE II. When steamers are approaching each other in an oblique direction (as shown in diagrams of the fourth and fifth situations), they shall pass to the right of each other, as if meeting "head and head," or nearly so, and the signals by whistle shall be given and answered promptly, as in that case specified.

RULE III. If, when steamers are approaching each other, the pilot of either vessel fails to understand the course or intention of the other, whether from signals being given or answered erroneously or from other causes, the pilot so in doubt shall immediately signify the same by giving several short and rapid blasts of the steam whistle; and if the vessels shall have approached within half a mile of each other, both shall be immediately slowed to a speed barely sufficient for steerageway until the proper signals are given, answered, and understood, or until the vessels shall have passed each other.

Vessels approaching each other from opposite directions are forbidden to use what has become technically known among pilots as "cross signals"—that is, answering one whistle with two, and answering two whistles with one. In all cases, and under all circumstances, a pilot receiving either of the whistle signals provided in the rules, which for any reason he deems injudicious to comply with, instead of answering it with a cross signal, must at once observe the provisions of this rule.

RULE IV. Whenever a steamer is nearing a short bend or curve in the channel, where, from the height of the banks or other cause, a steamer approaching from the opposite direction can not be seen for a distance of half a mile, the pilot of such steamer, when he shall have arrived within half a mile of such curve or bend, shall give a signal by one long blast of the steam whistle, which signal shall be answered by a similar blast, given by the pilot of any approaching steamer that may be within hearing. Should such signal be so answered by a steamer upon the farther side of such bend, then the usual signals for meeting and passing shall immediately be given and answered; but if the first alarm signal of such pilot be not answered, he is to consider the channel clear and govern himself accordingly.

When boats are moved from their docks or berths, and other boats are liable to pass from any direction toward them, they shall give the same signal as in case of boats meeting at a bend; but immediately after clearing the berths so as to be fully in sight they shall be governed by Rule I.

RULE V. The signals, by the blowing of the steam whistle, shall be given and answered by pilots, in compliance with these rules, not only when meeting "head and head," or nearly so, but at all times when passing or meeting at a distance within half a mile of each other, and whether passing to the starboard or port.

RULE VI. When steamers are running in the same direction, and the pilot of a steamer which is astern shall desire to pass on the right or starboard hand of the steamer ahead, he shall give one short blast of the steam whistle as a signal of such desire and intention, and shall put his helm to port; or if he shall desire to pass on the left or port side of the steamer ahead, he shall give two short blasts of the steam whistle as a signal of such desire and intention, and shall put his helm to starboard, and the pilot of the steamer ahead shall answer by the same signals; or if he does not think it safe for the steamer astern to attempt to pass at that point, he shall immediately signify the same by giving several short and rapid blasts of the steam whistle, and under no circumstances shall the steamer astern attempt to pass the steamer ahead until such time as they have reached a point where it can be safely done, when said steamer ahead shall signify her willingness by blowing the proper signals. The boat ahead shall in no case attempt to cross the bow or crowd upon the course of the passing steamer.

Every vessel coming up with another vessel from any direction more than two points abaft her beam—that is, in such a position with reference to the vessel which she is overtaking that at night she would be unable to see either of that vessel's side lights—shall be deemed to be an overtaking vessel, and no subsequent alteration of the bearing between the two vessels shall make the overtaking vessel a crossing vessel within the meaning of these rules,

or relieve her of the duty of keeping clear of the overtaken vessel until she is finally past and clear.

N. B.—The foregoing rules are to be complied with in all cases except when steamers are navigating in a crowded channel or in the vicinity of wharves; under such circumstances steamers must be run and managed with great caution, sounding the whistle as may be necessary, to guard against collision or other accidents.

In construing and obeying these rules due regard must be had to all dangers of navigation, and to any special circumstances which may exist in any particular case rendering a departure from them necessary in order to avoid immediate danger.

RULE VII.—All double-ended ferryboats on the Great Lakes and tributaries thereto shall carry a central range of clear, bright, white lights, showing all around the horizon, placed at equal altitudes forward and aft; also such side lights as specified in rule three, paragraphs (b) and (c), act of Congress approved February 8, 1896, regulating navigation on the Great Lakes.

Local inspectors in districts having ferryboats shall, whenever the safety of navigation may require, designate for each line of such boats a certain light, white or colored, which shall show all around the horizon, to designate and distinguish such lines from each other, which light shall be carried on a flagstaff amidship, 15 feet above the white range light.

RULE VIII. When steamers are running in a fog or thick weather, except steamers with a raft in tow, it shall be the duty of the pilot to cause three distinct blasts of the steam whistle to be sounded at intervals not exceeding one minute. A steamer with a raft in tow shall sound at intervals of not more than one minute a screeching or Modoc whistle for from three to five seconds.

A steam vessel hearing, apparently not more than four points from right ahead, the fog signal of another vessel, shall at once reduce her speed to bare steerageway, and navigate with caution until the vessels shall have passed each other.

RULE IX. Tugs under 30 tons register (net) and small steamers navigating Lake Ontario and the St. Lawrence River, except open boats, shall carry the red and green lights prescribed by law for other lake steamers; and, in addition thereto, a central range of two white lights, the after light being carried at an elevation of at least 15 feet above the light at the head of the vessel; and, when towing other vessels, shall carry an additional white light aft not less than 3 feet vertically below the after range light.

Except as provided for in the preceding paragraph of this rule, steam tugs under 30 tons register (net) whose principal business is harbor towing shall carry the red and green side lights carried by other steamers; and, at the foremast head, or, if the steamer have no foremast, then on top of the pilot house, a white light so constructed as to show a uniform and unbroken light over an arc

of the horizon of 20 points of the compass, and so fixed as to throw the light 10 points on each side of the vessel, namely, from right ahead to 2 points abaft the beam on either side, and of such a character as to be visible at a distance of at least 3 miles; and when towing, except when towing a raft, shall carry an additional white light hung not less than 3 feet vertically above the foremast head light. When towing a raft the two head lights shall be hung horizontally not less than 4 feet apart.

Open boats on the Great Lakes and their tributaries east as far as Montreal shall not be obliged to carry the side lights required for other vessels, but shall, if they do not carry such lights, carry a lantern having a green slide on one side and a red slide on the other side; and on the approach of or to other vessels, such lantern shall be exhibited in sufficient time to prevent collision, and in such a manner that the green light shall not be seen on the port side, nor the red light on the starboard side.

RULE X. Barges or canal boats in tow of a steamer shall carry the red and green side lights, which shall be placed in the same manner as required on other vessels being towed.

RULE XI. Produce boats, canal boats, fishing boats, rafts, or other water craft navigating any bay, harbor, or river, by hand power, horse power, sail, or by the current of the river, or which shall be anchored or moored in or near the channel or fairway of any bay, harbor, or river, and not otherwise provided for, shall carry one bright white light forward, not less than 6 feet above the deck.

Rafts shall carry, in each case, on a pole not less than 6 feet high, a bright white light, visible all around the horizon, as follows:

Rafts of one crib and not more than two in length shall carry one such light. Rafts of three or more cribs in length shall carry one such light at each end of the raft. Rafts of more than one crib abreast shall carry one such light on each outside corner of the raft, making four lights in all.

Bag or boom rafts navigating or anchored in the fairway of any bay, harbor, or river, shall carry a bright white light at least 12 feet high at each end of the raft, and one of such lights on each side midway between the forward and after end.

EXTRACTS FROM ACT OF CONGRESS APPROVED FEBRUARY 8, 1895, RELATING TO NAVIGATION ON THE GREAT LAKES.

The following rules for preventing collisions shall be followed in the navigation of all public and private vessels of the United States upon the Great Lakes and their connecting and tributary waters as far east as Montreal:

STEAM AND SAIL VESSELS.

RULE ONE.—Every steam vessel which is under sail and not under steam, shall be considered a sail vessel; and every steam vessel which is under steam, whether under sail or not, shall be

considered a steam vessel. The word steam vessel shall include any vessel propelled by machinery. A vessel is under way, within the meaning of these rules, when she is not at anchor or made fast to the shore or aground.

LIGHTS.

RULE TWO.—The lights mentioned in the following rules and no others shall be carried in all weathers from sunset to sunrise. The word visible in these rules, when applied to lights, shall mean visible on a dark night with a clear atmosphere.

RULE THREE.—Except in the cases hereinafter expressly provided for, a steam vessel when under way shall carry :

(a) On or in front of the foremast, or if a vessel without a foremast, then in the forepart of the vessel, at a height above the hull of not less than twenty feet, and if the beam of the vessel exceeds twenty feet, than at a height above the hull not less than such beam, so, however, that such height need not exceed forty feet, a bright white light so constructed as to show an unbroken light over an arc of the horizon of twenty points of the compass, so-fixed as to throw the light ten points on each side of the vessel, namely, from right ahead to two points abaft the beam on either side, and of such character as to be visible at a distance of at least five miles.

(b) On the starboard side, a green light, so constructed as to throw an unbroken light over an arc of the horizon of ten points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the starboard side, and of such a character as to be visible at a distance of at least two miles.

(c) On the port side, a red light, so constructed as to show an unbroken light over an arc of the horizon of ten points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the port side, and of such a character as to be visible at a distance of at least two miles.

(d) The said green and red lights shall be fitted with inboard screens projecting at least three feet forward from the light, so as to prevent these lights from being seen across the bow.

(e) A steamer of over one hundred and fifty feet register length shall also carry when under way an additional bright light similar in construction to that mentioned in subdivision (a), so fixed as to throw the light all around the horizon and of such character as to be visible at a distance of at least three miles. Such additional light shall be placed in line with the keel at least fifteen feet higher from the deck and more than seventy-five feet abaft the light mentioned in subdivision (a).

LIGHTS FOR VESSELS TOWING.

RULE FOUR.—A steam vessel having a tow other than a raft shall, in addition to the forward bright light mentioned in subdivision (a) of rule three, carry in a vertical line not less than

six feet above or below that light a second bright light of the same construction and character and fixed and carried in the same manner as the forward bright light mentioned in said subdivision (a) of rule three. Such steamer shall also carry a small bright light abaft the funnel or after mast for the tow to steer by, but such light shall not be visible forward of the beam.

RULE FIVE.—A steam vessel having a raft in tow shall, instead of the forward lights mentioned in rule four, carry on or in front of the foremast, or if a vessel without a foremast then in the fore part of the vessel, at a height above the hull of not less than twenty feet, and if the beam of the vessel exceeds twenty feet, then at a height above the hull not less than such beam, so, however, that such height need not exceed forty feet, two bright lights in a horizontal line athwartships and not less than eight feet apart, each so fixed as to throw the light all around the horizon and of such character as to be visible at a distance of at least five miles. Such steamer shall also carry the small bright steering light aft, of the character and fixed as required in rule four.

LIGHTS FOR VESSELS TOWED.

RULE SIX.—A sailing vessel under way and any vessel being towed shall carry the side lights mentioned in rule three.

A vessel in tow shall also carry a small bright light aft, but such light shall not be visible forward of the beam.

LIGHTS FOR VESSELS AT ANCHOR.

RULE NINE.—A vessel under one hundred and fifty feet register length, when at anchor, shall carry forward, where it can best be seen, but at a height not exceeding twenty feet above the hull, a white light in a lantern constructed so as to show a clear, uniform, and unbroken light, visible all around the horizon, at a distance of at least one mile.

A vessel of one hundred and fifty feet or upward in register length, when at anchor, shall carry in the forward part of the vessel, at a height of not less than twenty and not exceeding forty feet above the hull, one such light, and at or near the stern of the vessel, and at such a height that it shall be not less than fifteen feet lower than the forward light, another such light.

FOG SIGNALS.

RULE FOURTEEN.—A steam vessel shall be provided with an efficient whistle, sounded by steam or by some substitute for steam, placed before the funnel not less than eight feet from the deck, or in such other place as the local inspectors of steam vessels shall determine, and of such character as to be heard in ordinary weather at a distance of at least two miles, and with an efficient bell, and it is hereby made the duty of the United States

local inspectors of steam vessels when inspecting the same to require each steamer to be furnished with such whistle and bell. A sailing vessel shall be provided with an efficient fog horn and with an efficient bell.

Whenever there is thick weather by reason of fog, mist, falling snow, heavy rain storms, or other causes, whether by day or by night, fog signals shall be used as follows :

(a) A steam vessel under way, excepting only a steam vessel with raft in tow, shall sound at intervals of not more than one minute three distinct blasts of her whistle.

(b) Every vessel in tow of another vessel shall, at intervals of one minute, sound four bells on a good and efficient and properly placed bell as follows : By striking the bell twice in quick succession, followed by a little longer interval, and then again striking twice in quick succession (in the manner in which four bells is struck in indicating time).

(c) A steamer with a raft in tow shall sound at intervals of not more than one minute a screeching or Modoc whistle for from three to five seconds.

(d) A sailing vessel under way and not in tow shall sound at intervals of not more than one minute—

If on the starboard tack with wind forward of abeam, one blast of her fog horn ;

If on the port tack with wind forward of the beam, two blasts of her fog horn ;

If she has the wind abaft the beam on either side, three blasts of her fog horn.

(e) Any vessel at anchor and any vessel aground in or near a channel or fairway shall at intervals of not more than two minutes ring the bell rapidly for three to five seconds.

MODERATE SPEED IN THICK WEATHER.

RULE FIFTEEN.—Every vessel shall, in thick weather, by reason of fog, mist, falling snow, heavy rain storms, or other causes, go at moderate speed. A steam vessel hearing, apparently not more than four points from right ahead, the fog signal of another vessel, shall at once reduce her speed to bare steerageway, and navigate with caution until the vessels shall have passed each other.

RULE TWENTY-THREE.—In all weathers every steam vessel under way in taking any course authorized or required by these rules shall indicate that course by the following signals on her whistle, to be accompanied whenever required by corresponding alteration of her helm ; and every steam vessel receiving a signal from another shall promptly respond with the same signal or, as provided in rule twenty-six :

One blast to mean, "I am directing my course to starboard."

Two blasts to mean, "I am directing my course to port." But

the giving or answering signals by a vessel required to keep her course shall not vary the duties and obligations of the respective vessels.

STEAMERS IN NARROW CHANNELS.

RULE TWENTY-FOUR.—That in all narrow channels where there is a current, and in the rivers St. Mary, St. Clair, Detroit, Niagara, and St. Lawrence, when two steamers are meeting, the descending steamer shall have the right of way, and shall, before the vessels shall have arrived within the distance of one-half mile of each other, give the signal necessary to indicate which side she elects to take.

RULE TWENTY-FIVE.—In all channels less than five hundred feet in width, no steam vessel shall pass another going in the same direction unless the steam vessel ahead be disabled or signify her willingness that the steam vessel astern shall pass, when the steam vessel astern may pass, subject, however, to the other rules applicable to such a situation. And when steam vessels proceeding in opposite directions are about to meet in such channels, both vessels shall be slowed down to a moderate speed, according to the circumstances.

DIRECT SIGNALS.

RULE TWENTY-SIX.—If the pilot of a steam vessel to which a passing signal is sounded deems it unsafe to accept and assent to said signal, he shall not sound a cross signal; but in that case, and in every case where the pilot of one steamer fails to understand the course or intention of an approaching steamer, whether from signals being given or answered erroneously, or from other causes, the pilot of such steamer so receiving the first passing signal, or the pilot so in doubt, shall sound several short and rapid blasts of the whistle; and if the vessels shall have approached within half a mile of each other both shall reduce their speed to bare steerageway, and, if necessary, stop and reverse.

FINE.

RULE TWENTY-EIGHT, SECTION TWO.—That a fine, not exceeding two hundred dollars, may be imposed for the violation of any of the provisions of this act. The vessel shall be liable for the said penalty, and may be seized and proceeded against, by way of libel, in the district court of the United States for any district within which such vessel may be found.

DIAGRAMS.

The following diagrams are intended to illustrate the working of the foregoing system of colored lights, and are to be used by pilots in connection with the rules, as sailing directions on meeting or nearing other steamers:

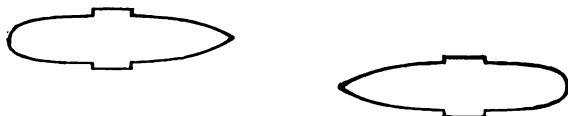
FIRST SITUATION.

In this situation the two colored lights will be visible to the pilot of each steamer, which will indicate their direct approach "head and head" toward each other. In this situation it is a standing rule that both shall put their helms to port and pass to the right, each having previously given one blast of the steam whistle.



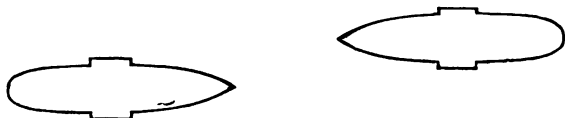
SECOND SITUATION.

In this situation the green light only will be visible to the pilot of each steamer. They are, therefore, passing to starboard, which is ruleable in this situation, each pilot having previously signified his intention by two blasts of the steam whistle.



THIRD SITUATION.

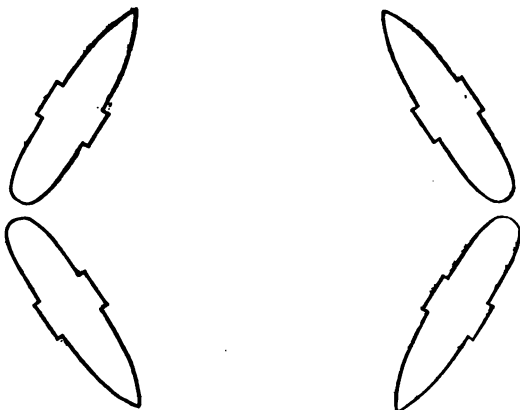
In this situation the red light only will be visible to the pilot of each steamer. Both vessels are evidently passing to port, which is ruleable in this situation, each pilot having previously signified his intention by one blast of the steam whistle.



FOURTH AND FIFTH SITUATIONS.

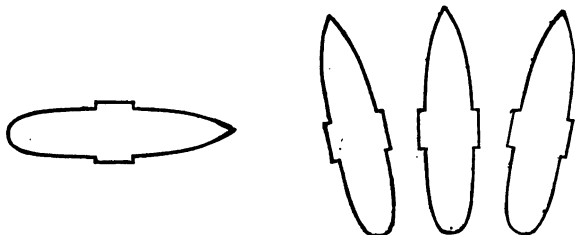
When steamers are approaching each other in an oblique direction as indicated in the diagrams of the fourth and fifth situations, so that a continuation of their courses would involve risk of collision, the vessel which has the other on her own star-

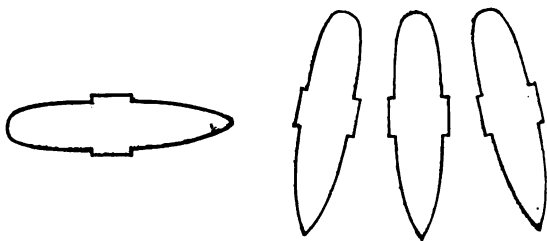
board side shall keep out of the way of the other, and shall, if necessary to do so, slacken her speed, or stop and reverse; indicating her intention by either one or two blasts of the steam whistle, as the circumstances may require, and in accordance with Rule I of the Pilot Rules.



SIXTH AND SEVENTH SITUATIONS.

A steamer approaching another crossing her bow at, or nearly at right angles, as represented in diagrams of the sixth and seventh situations, shall, if approaching the crossing steamer so near as to involve risk of collision, port her helm, when seeing only the red light of the crossing steamer; and starboard her helm, if only the green light is in view; at the same time, slow, or stop and back, if necessary, each steamer to give the whistle signals as provided in Rule I of the rules, the crossing steamer to keep course and speed.





NOTE.—The whistle signals of the above situations must be given in all cases, except as qualified by Rule III, Pilot Rules.

The manner of fixing the colored lights should be particularly attended to. They will require to be fitted each with a screen, of wood or canvas, on the inboard side and close to the light, in order to prevent both being seen at the same moment from any direction but that of right ahead to 2 points abaft the beam.

This is important, for without the screens any plan of bow lights would be ineffectual as a means of indicating the direction of steering. This will be readily understood by a reference to the preceding illustrations, where it will appear evident that in any situation in which two vessels may approach each other in the dark the colored lights will instantly indicate to both the relative course of each; that is, each will know whether the other is approaching directly, or crossing the bows either to starboard or port.

This intimation, with the signals by whistle, as provided, is all that is required to enable vessels to pass each other in the darkest night with almost equal safety as in broad day.

INSTRUMENTS, MACHINES, AND EQUIPMENTS APPROVED FOR USE ON STEAM VESSELS.

LIFE RAFTS.

Metallic raft, presented by Mr. O. R. Ingersoll, of New York.

Metallic raft, presented by Hon. H. C. Calkins, of New York.

Metallic raft, presented by Frazee Life Raft Company, New York.

Vulcanized rubber raft, called Monitor life raft, presented by Monitor Raft Company, New York.

India-rubber raft (gondola), presented by Torrey & Co., of New York.

Ogden's life raft.

J. A. Cone's life raft (Drein & Son), Wilmington, Del.

Davis's life raft.

Clark's life raft.

Rider's life raft.

American Flexible Life Raft Company.

M. A. Bryson's deer-hair life raft.

Beasley's life raft.

Columbia; Churchman & Groves, Philadelphia, Pa.

Le Duc; Tule Improvement Company, San Francisco, Cal.

Lewis H. Raymond's life raft.

Barstow's self-detaching life raft.

Miller's life-saving raft.

Woolsey's life buoy. (Rated for two persons, for lake, bay, and river, when made, as at present, of 52 pounds of cork, and in that proportion when containing a greater amount of cork.)

Edwin A. Hay's life raft.

John T. Smith's metallic life raft (when the cylinders are provided with water-tight bulkheads placed not over 2 feet apart).

Robert Roberts's metallic life raft (to be rated in accordance with section 15 of Rule III).

O. R. Ingersoll's life raft, canvas cylinders covered with rattan (when provided with cross braces and air-tight valves for determining its air-tight condition).

Emmett Harding's combined life raft and settee (when cylinders are constructed of metal, to be rated in accordance with section 15 of Rule III).

John T. Smith's "life raft" (when constructed of galvanized iron, of not less than 24 wire gauge, Birmingham standard, in thickness).

O. R. Ingersoll's life raft, composed of two cylinders made of cane and filled with block cork (to be rated according to section 15 of Rule III).

David Kahnweiler's metallic life raft.

Chamber's life raft.

Griffith life raft.

Hussey life raft.

The Ammen metallic balsa or life raft.

AUXILIARY LIFE RAFTS.

Detachable deck, presented by Joseph Sawyer, Detroit, Mich.
Griffith's combined ladder and raft, as an auxiliary raft.

LIFEBOATS.

Automatic self-righting and bailing, presented by P. R. Beaupré, of Metropolis, Ill.

Self-righting and bailing, presented by Mr. Stoddars.

Shears's self-bailing and self-righting boat.

George Judson's lifeboat.

Burke, Wise & Co., lifeboat lowering and launching apparatus.

Dickinson's self-righting lifeboat.

Eddy's patent sea lifeboat.

Dean & Co.'s improved diagonal lifeboat,

Richardson's self-righting and self-bailing lifeboat.

Dobbin's lifeboat.

F. L. Norton's; boats to be built of yellow metal.

O. R. Ingersoll, boat.

Dobbin's metallic lifeboat.

J. Walter Douglas, lifeboat.

Wm. H. Taylor's lifeboat.

Aniello lifeboat.

LIFE-PRESERVERS.

Cork life-preservers, presented by E. Clark, J. A. Seamans,
O. R. Ingersoll, and M. A. Scott.

Kahnweiler's never-sink life-preserver.

Kahnweiler's improved life-preserver.

Godfrey & Boyce's life-preserver.

Rubber life-saving dress, C. S. Merriman.

Bryson's deer-hair life-preserver.

J. Richard's life-saving overcoat.

White & Hay's life-cork jacket.

George Clark, jr., life-preserver.

Kahnweiler's improved granulated life-preserver.

Fitch Reynold's cork life-preserver.

Life-preserver (invented by Eliza R. Cogswell).

James S. Dunant's California tule life-preserver (when ends of
tule are bound with copper wire).

Le Duc Tule Improvement Company's life-preserver (when
ends of tule are bound with copper wire).

The Standard Life-Saving Mattress Company, "boat and chair
cushions."

R. Beeching & Co.,

Truslow & Co.,

John Robinson & Co.,

Armstrong Brothers & Co.,

W. H. Godfrey,

} granulated cork.

The Edward Maynard, presented by John T. Smith, New York.

The Le Duc, presented by Jos. K. McCammon.

John T. Smith's, New York, N. Y.

LIFE-SAVING MATTRESSES.

Life-saving mattresses, presented by J. W. Wotton, of New
York.

Torrence's life-saving mattress.

Mrs. H. B. Mountain's life-saving mattress.

Adam's life-preserving mattress.

Pack & Van Horn's life-preserving mattress.

Woodfin's cork mattress.

Hunt's life-saving mattress.

Bryson's deer-hair life-saving mattress.

H. D. Ostermoor's elastic felt mattress.

Horton's life-saving mattress.

Holmes's life-preserving bed.

B. F. Flynn's standard life-saving mattress (with a rating for a single life-preserver).

Air mattress, presented by W. H. Huntington, Metropolitan Air Goods Company, Boston, Mass., rated as a single life-preserver.

Alexander & Howell's pillow life belt (when containing 6 pounds good sound cork blocks).

LINE-CARRYING PROJECTILES.

February 4, Hunt's line-carrying gun—large.

February 4, Hunt's line-carrying gun—small. May be used on all vessels from 100 to 500 tons.

February 4, the Lyle line-carrying gun.

February 4, Cunningham self line-carrying rocket.

October 9, Cunningham small rocket for vessels of 500 tons and over 100 tons.

February 10, 1893, No. 2 Hunt gun (20 inches long, 2½ inches diameter of bore). May be used on steam vessels from 100 to 500 tons when the gun is constructed in all its parts of material same as used in the large Hunt gun already approved by this Board.

FLOATING ANCHORS OR DRAGS.

Marine drags, presented by Joseph Humphreys and J. Faunce. Umbrella (invented by Capt. William Skiddy).

Ingersoll's marine drag.

Viger & Sawyer's marine drag.

Edson's marine drag.

Wilson's marine drag.

Fleetwood's marine drag.

Beal's marine drag.

Hart's marine drag.

Barstow's ever-ready drag (arms to be made of wrought iron).

William H. Hart's marine drag.

STEAM PUMPS.

Landsell's double-suction steam siphon, presented by H. S. Landsell, New York.

Coll's single-suction steam siphon, presented by Mr. Coll, Pittsburg.

A. Sluthouer, New Philadelphia, Ohio, fire and bilge pump.

Coll's improved steam siphon pump.

Sheriff's steam siphon pump.

Van Duzen & Tift's steam jet pump (for use as a steam fire pump on steamers of 100 tons and under).

Hall's duplex steam pump.

FIRE EXTINGUISHERS.

The Babcock fire extinguisher.

The National fire extinguisher, presented by J. E. Thompson.

The Champion fire extinguisher.

Ætna fire extinguisher.

Holloway fire extinguisher.

Stiner's repeating fire extinguisher.

Platt's peerless fire extinguisher.

Amazon and Neptune fire extinguisher.

Martin's protective fire extinguisher for ocean steamers.

STEAM GENERATORS.

Mill's auxiliary steam generator (approved for use on boilers using fresh water).

Farris's water-circulating grate bars and water fronts.

DEVICES FOR REMOVING SEDIMENT FROM BOILERS.

Sediment agitator, presented by B. W. Reynolds, Evansville, Ind.

John C. McLaughlin, Pittsburg, Pa.

Armstrong's vortex skimmer.

Ordinary blow-off cocks and mud valves.

SAFETY VALVES.

Common lever valve.

Herreshoff Manufacturing Company, pop safety valve.

H. G. Ashton, East Cambridge, Mass.

Case & Bailey, Detroit, Mich.

J. D. Lynde, Philadelphia, Pa.

Richardson & Co., Troy, N. Y.

Dry Dock Engine Works, Detroit, Mich.

Cockburn's safety valve.

Ashcroft's safety valve.

Crosby's safety valve.

Morse's safety valve.

Hodgin's safety valve.

A. Orme's safety valve.

W. E. Pierson, pop valve.

George E. Collyer, safety valve.

R. F. Silliman's safety valve.

Consolidated Safety Valve Company, Boston, Mass., steam and vacuum gauge.

American Steam Gauge Company, Boston, Mass., "American spring safety valve."

H. G. Trout, King Iron Works, Buffalo, N. Y., "spring-loaded safety valve" (and allowed a rating of 2 square feet of grate surface of boiler to 1 square inch area of valve).

E. B. Kunkle, spring-loaded safety valve.

Crosby & Meady, pop safety valve.

F. Lunkenheimer, safety valve.

Hall's incased safety valve (when lever is permanently attached to valve casing).

Roe Stephens Manufacturing Company, Detroit, Mich., spring safety valve.

I. T. Kearns pop safety valve.

J. M. Coale's pop safety valve and muffler.

The Crane pop safety valve, presented by The Crane Company.

George Warrington, Chicago, Ill.

J. W. Dawson, Wyandotte, Mich.

Jacob H. Smith, Baltimore, Md.

Roberts safety water tube boiler (improvements), presented by Roberts Safety Water Tube Boiler Company, New York, N. Y.

MISCELLANEOUS.

Lewis H. Raymond's boat plug.

Renton's safety boat plug.

James Snelgrove's automatic boat plug.

Cone's high-steam alarm whistle.

Buddenburg & Shaffer, Banca-tin plug.

J. M. Williams high and low water indicator.

Bailey fusible plug.

Davis renewable fusible safety plug.

FEED-WATER HEATERS.

Thomas Roberts, Baltimore, Md.

Thomas Snowden, Pittsburg, Pa.

Doyle & Reybold, Delaware City, Del.

Charles G. Fisher.

H. C. Haskell, Albany, N. Y.

Sessler & Smith.

Heerman & Smith's water-back heater.

W. W. Martin's feed-water heater.

W. H. D. Sweet, Albany, N. Y.

"Superior" funnel feed-water heater.

COIL BOILERS.

[Coil boilers and other boilers approved under section 4429, Revised Statutes.]

The formula for determining pressure on boilers of the so-called Porcupine type shall be as follows:

Multiply the vertical distance between the [centers of the] horizontal rows of tubes in inches by one-half the diameter of shell of boiler in inches, which gives the area upon which the pressure is exerted to break a diagonal ligament, then find the sectional area of the ligament at its smallest part and multiply by one-sixth the tensile strength of the material. This result, divided

by the area upon which the strain is exerted, gives the working pressure per square inch, which is as follows :

$\frac{E F T}{C D} = W$, the working pressure, in which E equals width of ligament in inches, F thickness of material in inches, T one-sixth the tensile strength, C distance between vertical centers, D one-half the inside diameter of the shell or central column.

For the boiler proposed, 30 inches diameter, five-eighths thick, tensile strength 60,000 pounds, 1.219 inches would be width of ligament, 0.625 thickness of plate; 10,000, one-sixth of tensile strength; $3\frac{1}{4} = 3.6875$ inches, distance of vertical centers; 15 inches, one-half the diameter of shell, would be as follows : 1.219 multiplied by 0.625; this product multiplied by one-sixth the tensile strength, 10,000, equals 7,618.75. This product divided by the product of 3.6875, distance between vertical centers, multiplied by 15, one-half the diameter, equals 55.3125, gives 137.7 as pressure allowed. (Proceedings January 28, 1889.)

Hugo L. Frederick (copper boiler).

Brigham & Markham, Hartford, Conn.

E. W. Millard, Troy, N. Y.

Ofeldt's, Newark, N. J.

Braggin's, Rochester Machine Tool Works.

H. B. Cumming, Malden, Mass.

C. B. Crowley & E. G. Browne, Brooklyn, N. Y.

Chas. L. Seabury, New York, N. Y.

Clapp & Jones Manufacturing Company, Hudson, N. Y.

F. D. Althouse, New York, N. Y.

Herreshoff, Bristol, R. I.

E. E. Roberts, New York.

Charles Ward, West Virginia.

John R. Karstendick, New Orleans, La.

S. Waterhouse, Boston, Mass.

A. Perry Blivin, Brooklyn, N. Y., and George B. Brayton, Providence, R. I., "coil boilers."

Hazleton Company, water-tube boiler.

The Shipman boiler (for using petroleum).

The H. Statesmen boiler, presented by V. R. Hyde, of Portland, Oreg.

The Farnie boiler, presented by Farnie & Geer, of Syracuse, N. Y. (steam pressure to be allowed on such boiler as the bracing will entitle the same to carry).

C. H. Caswell, Newport, R. I.

The Belleville boiler, presented by Miers Coryell, of New York.

The Hartley boiler, presented by the Pioneer Iron Works, Brooklyn, N. Y.

E. G. Durant (for using petroleum).

Copeland boiler (Northrop Manufacturing Company) when composed in all its parts of wrought iron, copper, brass, or steel.

J. W. Walters & Co., sectional water-tube boiler.

- James B. Stead, sectional water-tube boilers, Nos. 1 and 3.
 Crawford & Saunier's "Passaic," Newark, N. J.
 W. J. Sanderson's, Syracuse, N. Y.
 Lidback Manufacturing Company, Portland, Me.
 Harris K. Stroud's, Hastings, Minn.
 Wadham, 1315 Third avenue, New York City.
 Cruickshank's, Providence, R. I.
 Bowdish, Skaneateles, N. Y.
 Hohenstein, Newark, N. J.
 Almy, Providence, R. I.
 S. M. Gray's, Providence, R. I.
 G. E. Tregurtha's, South Boston, Mass.
 Wm. Flagg's, Brooklyn, N. Y.
 Chas. L. Seabury & Co., Nyack, N. Y.
 T. Hansen, Boston, Mass.
 C. B. Mosher, Amesbury, Mass.
 The Worthington water-tube boiler.
 E. J. Copeland, New York, N. Y.
 Martin R. Ruble, Newark, N. J.
 Marvin E. Otis, Rochester, N. Y.
 E. Hayes, Rochester, N. Y.
 Geo. & Jas. Warrington, Chicago, Ill.
 Goodridge attachment for oil boilers.
 John E. T. Bartlett, Brooklyn, N. Y.
 L. D. Davis, Erie, Pa.
 F. J. Robinson, Detroit, Mich.
 "Cary's" steam generator changed from "Gray's," Providence, R. I.
 Sullivan & Ehler, "McQueen," Albany, N. Y.
 Crawford & Saunier, "Gem," Newark, N. J.
 Thomas L. Sturtevant, North Framingham, Mass.
 Edward S. Clark, Boston, Mass.
 The Morrin Climax Steam Generator Company, by the Clark-brook Steam Boiler Company, Brooklyn, N. Y.
 Alfred Box & Co., Philadelphia, Pa.
 Frank Mahoney, New York, N. Y. (horizontal boiler).
 Clay & Torbensen, Camden, N. J.
 Thos. L. Sturtevant, South Framingham, Mass.
 Chas. W. Foster, New Haven, Conn.
 J. M. Glover, Baldwin, Long Island, N. Y.
 Short Duplex Boiler Company, New York, N. Y.
 C. A. Wilkerson, Lynn, Mass.
 Yarrow water-tube boiler, New York, N. Y.
 James S. Gedeohn, pipe boiler, Cleveland, Ohio,
 Ernest A. John's boiler, New York, N. Y.
 Mahoney vertical boiler, New York, N. Y.
 M. H. Plunkett boiler, Nos. 1 and 2, Baltimore, Md.
 McBride Bros.' boiler, Philadelphia, Pa.
 W. S. Fairchild, boiler, Newark, N. J.

- C. McDonagh, Hancock, Mich.
 W. D. Smith, Detroit, Mich.
 J. L. Lacroix and E. Ray, New Orleans, La.
 Joseph Croze, Houghton, Mich.
 F. W. Hyslop, New York, N. Y.
 Ira Bradley, Malden, Mass.
 Cole & Reinhart, Camden, N. J.
 Walter B. Fowler, Lawrence, Mass.
 Gardener C. Hawkins, Boston, Mass.
 Henry Suttor, Griswold pipe generator and the Sutter sectional
 porcupine boiler.
 Louis S. Clark, Pittsburg, Pa.
 H. H. Frederick, New Orleans (3-horsepower).
 E. A. Magee, Brooklyn, N. Y.
 A. E. Corey, Allegheny, Pa.
 Stillman Saunders, Providence, R. I.
 Wickes Bros., East Saginaw, Mich.
 Augustus Bailey, Spuyten Duyvil, N. Y.
 Thomas Fearon, Yonkers, N. Y.
 Howard steam generator, H. J. Hancock, New York, N. Y.
 Collier sectional boiler, Collier Yacht and Engine Works, Detroit,
 Mich.
 Taylor Bros., Trenton, N. J.
 Seachrist & Parker, Erie, Pa.
 Laughlen & Co., Pittsburg, Pa.
 B. Louis Toquet, Westport, Conn.
 Warner & Papst, San Francisco, Cal.
 George D. Bower, Trenton, N. J.
 A. C. Harding, Chicago, Ill.
 Fenlayson & Popkins, Detroit, Mich.
 Joseph Mohr, Chicago, Ill.
 Lewis Saunders, Lawrence, Mass.
 Perkins & Richmond, Grand Rapids, Mich.
 E. P. Clark, New York, N. Y.
 John H. Lutz, Michigan City, Ind.
 Henry Haenel, St. Augustine, Fla.
 Lee H. Stevens, New Albany, Ind.
 I. G. Morgan, Seattle, Wash.
 George H. Holmes, Gardiner, Me.
 Charles W. Foster, New Haven, Conn.
 Babcock & Wilcox, New York, N. Y.
 Anson C. Dearing, Detroit, Mich.
 The Rochester Machine Tool Works, Rochester, N. Y.
 Hampden Hyde, Rochester, N. Y.
 Charles De Vore, Philadelphia, Pa.
 Emil Volk, New York, N. Y.
 J. B. Jardine, San Francisco, Cal.
 L. Boyer's Sons, New York, N. Y.
 J. R. Jackson, McKeesport, Pa.
 George W. Arrowsmith, Fort Niagara, N. Y.

- George L. Wright, North Andover, Mass.
 W. W. Moore, Eugene, Oreg.
 J. J. Driscoll, Stapleton, N. Y.
 Charles Ward, Charleston, W. Va. (coil boiler).
 Charles Ward, Charleston, W. Va. ("Navy"—horizontal pipe boiler).
 R. Munroe & Son, Pittsburg, Pa.
 Samuel T. Williams, Baltimore, Md.
 John A. Flajole, Bay City, Mich.
 D. Rousseau, New York, N. Y.
 The Coulter and McKenzie Machine Company, Bridgeport, Conn.
 John J. Brown, Baltimore Md.
 George E. Dow, Seattle, Wash.
 L. D. Davis, Erie, Pa.
 John A. Duggan, Boston, Mass. ("Christiansen marine boiler").
 Robert R. Zell & Co., Baltimore, Md.
 D. Y. Williams, South Haven, Mich.
 E. U. Gibbs, Elmira, N. Y.
 C. A. Cowley, Brooklyn, N. Y.
 B. T. Squier, New York, N. Y.
 W. J. Tierney and William Marquez, New Orleans, La.
 William Flagg, Bayonne, N. J.
 Frank Printz, New Orleans, La.
 William Skelton, jr., Buffalo, N. Y.
 Charles Ward, Charleston, W. Va., presented the following-named boilers: Ward's torpedo-boat boiler, Ward's torpedo-boat boiler No. 2, and Ward's straight tube launch boiler.
 C. F. Gallion, Baltimore, Md.
 H. H. Taylor, Detroit, Mich.
 Buschman & Layman, Baltimore, Md.
 Thomas L. Sturtevant, Boston, Mass.
 L. H. Stephens, New Albany, Ind.
 Heine safety boiler, by E. D. Meier, St. Louis, Mo.
 Charles A. Parker, Orange, Tex.
 John Bonner, Tiburon, Cal.
 Edward S. Clark Company, Boston, Mass.
 Collier Steam Yacht and Engine Company, Detroit, Mich.
 H. E. Frauz, steam generator, presented by J. H. Mittendorf, Washington, D. C.
 Charles W. Foster, New Haven, Conn.
 Halcyon Skinner, Yonkers, N. Y.
 J. H. & J. D. Lucas, St. Louis, Mo.
 R. C. Price, Allegheny, Pa.
 S. P. Hedges, Greenport, N. Y.
 C. Reinhardt, Baltimore, Md.
 W. Frank West, Morris Heights, N. Y.
 Horace See, New York, N. Y.
 W. J. McCaffrey and Charles Hilbert, Sing Sing, N. Y.
 George Harden, Detroit, Mich.

BOOKS AND BLANKS USED BY INSPECTORS OF STEAM VESSELS.

No.	Description.
2100	Laws relating to the Steamboat Inspection Service.
2101	Rules and Regulations Prescribed by the Board of Supervising Inspectors.
2101½	Rule V, section 9, Rules and Regulations.
2101½	Permit to allow Passengers in Pilot House.
2102	Pilots' Rules and Regulations (Atlantic and Pacific coast inland waters).
2103	Pilots' Rules and Regulations (Western rivers).
2103½	Pilots' Rules and Regulations (Great Lakes).
2104	Oath of Office for Inspectors.
2105	Oath for Licensed Officers.
2106	Salary Voucher.
2106½	Clerks' Salary Voucher.
2107	Personal Monthly Account.
2107½	Abstract of assignments to duty, etc. (inclosure to form 2107).
2107½	Special Report of Moneys Received for Expenses Incurred in Making Additional Trips to Inspect Steamers.
2108	Application to Supervising Inspector for Towboat to Carry Persons Other than Crew.
2108½	Affidavit of Master or Owner of Towing Steamer that Life-Preservers are on Board.
2109	Supervising Inspector's Permit to Towing Steamer to Carry Persons Other than Crew.
2110	Supervising Inspector's Permit Exempting River Steamer from Carrying Metallic Lifeboat.
2111	Application for Inspection.
2111½	Notice to Have Vessel Ready for Inspection.
2112a	Report of Examination of Hull of Steamer.
2112b	Report of Examination of Boiler of Steamer.
2112c	Assistant Hull Inspectors' Report of Examination of Hull of Steamer.
2113	Certificate of Inspection for Passenger Steamer. (<i>Book and blank.</i>)
2113½	Certificate of Inspection for Passenger Steamers of 100 tons burden and under.
2114	Certificate of Inspection for Ferry Steamer. (<i>Book and blank.</i>)
2114½	Certificate of Inspection for Ferry Steamers of 100 tons burden and under.
2115	Certificate of Inspection for Freight, large Towing, and other Steamers. (<i>Book and blank.</i>)
2115½	Certificate of Inspection for Freight, Towing, and other Steamers of 100 tons burden and under.
2116	Certificate of Inspection for Pleasure Yachts. (<i>Book and blank.</i>)
2117	Quarterly Statement of Steam Vessels Inspected.
2118	Summary of Supervising Inspector's Annual Report.
2119	Annual Statement of Steam Vessels Inspected.
2120	Continuation sheet to No. 2119.
2121	Directions to Assistant Inspectors to examine steamers (8 by 5).
2122	
2123	
2124	Application for License.
2124a	Application for License, Masters, Mates, and Pilots (Western rivers).
2124b	Application for License, Engineers (Western rivers).
2124½	Examination of Engineers relative to Safety Valves.
2125	Master's License. (<i>Book.</i>)

No.	Description.
2126	Mate's License. (<i>Book.</i>)
2127	Pilot's (1st class) License. (<i>Book.</i>)
2128	Pilot's (2d class) License. (<i>Book.</i>)
2129	Engineer's (1st class) License. (<i>Book.</i>)
2130	Engineer's (2d class) License. (<i>Book.</i>)
2130½	Special Engineer's License. (<i>Book.</i>)
2130½	Joint Pilot and Engineer's License. (<i>Book.</i>)
2131	License to Carry Gunpowder, etc. (<i>Book and blank.</i>)
2132	Index of Licenses issued to Masters.
2133	Index of Licenses issued to Mates.
2134	Index of Licenses issued to Pilots.
2135	Index of Licenses issued to Engineers.
2135½	Record of Charges, Testimony, and Decisions in Cases of Investigation of Licensed Officers.
2136	Notice of Suspension or Revocation of License.
2137	Annual Statement of Licenses Issued.
2138	Continuation sheet to No. 2137.
2139	Supervising Inspector's Semiannual Report of Inspector's License Books.
2140	
2141	Supervising Inspector's Semimonthly Report.
2142	Supervising Inspector's Annual Statement of Receipts and Expenditures.
2143	Supervising Inspector's Annual Tabular Statement.
2144	Local Inspector's Annual Tabular Statement.
2145	Weekly Reports of Local Inspectors to Supervising Inspectors.
2145½	Weekly Reports of Local Inspectors to Supervising Inspectors.
2146	Local Inspector's Report of Externally-fired Boilers constructed of plate over $\frac{3}{16}$ of an inch in thickness.
2147	Permission to Change Character of Steamer.
2148	Permission to proceed to another Port for Repairs.
2149	Permit to Carry Excursion Party.
2150	
2151	
2152	Summons to appear before Inspectors.
2152½	Statement of Witnesses' Fees certified.
2153	Statement of Visual Examination of Pilots.
2154	Report of Number of Applications for Pilot's License.
2155	Monthly Statement of Licenses Issued.
2156	Requisition for Authority to make Expenditures.
2157	Requisition for Books and Blanks.
2158	Requisition for Stationery.
2159	Return of Public Property.
2160	Report of Passengers Carried.
2161	Report of Violation of Steamboat Laws.
2162	Certificate of Lost or Destroyed License.
2163	Report of Life-Preservers examined.
2164	Record of Letters.
2165	Record of Decisions.
2166	Record of Orders.
2167	Daily record.
2168	
2169	Memorandum Book.
2170	Record of Excursion Permits Issued.
2171	Report of Excursion Permits Issued.
2172	Certificate relative to Carrying Refined Petroleum.
2172½	Affidavit of Manufacturer of Marine Steam Boilers (material tested at the mills).

Books and blanks, etc.—Continued.

No.	Description.
2172 ⁺	Affidavit of Manufacturer of Marine Steam Boilers.
2172 ⁺	Certificate transmitting Samples of Boiler Material for Testing.
2173	Report of Tensile Tests of Samples of Boiler Plates. (<i>Book and blank.</i>)
2174	Affidavit of Manufacturers of Marine Steam Boilers, for Steel Stays.
2184	Requisition for Printing and Binding.
	<i>Books and blanks used in inspection of Foreign Passenger Steamers.</i>
2175	
2176	
2176 ⁺	Application for Inspection.
2177	Certificate of Inspection. (<i>Book and blank.</i>)
2178	
2179	
2180	Laws and Regulations, Foreign Passenger Steamers.
2181 ^a	Reports of Examination of Hulls and Equipments.
2181 ^b	Reports of Examination of Boilers and Machinery.
2182	Notification of Deficiencies on Steamers.
2183	Notice to Collectors that no Application has been made for Inspection.

GENERAL INDEX TO DECISIONS.

Subject.	Pages.
Boiler-plate and boilers.....	217-233
Bulkheads	233-235
Color-blindness.....	235-237
Certificate of inspection.....	201-217
Cotton, carriage of.....	237-238
Dangerous articles.....	238-245
Excursion and excursion steamers.....	245-248
Expense accounts of inspectors.....	249-252
Ferryboats.....	253-255
Fines and penalties.....	255-260
Inspectors of steam vessels, supervising.....	260-265
Inspectors of steam vessels, local.....	265-281
Inspectors of steam vessels, assistants.....	281-285
Licensed officers of steam vessels.....	285-312
Lights, steam and sail vessels.....	312-318
Navigable waters of the United States.....	319-322
Names of steam vessels.....	322-323
Ocean or seagoing steamers.....	323-325
Pile drivers.....	325-326
Towing steamers.....	326-329
Vessels, sail, inspection of.....	329-330

CERTIFICATE OF INSPECTION.

Steam vessels—Applications for inspection must be in writing.

TREASURY DEPARTMENT, *February 24, 1883.*

SIR: The Supervising Inspector-General of Steam Vessels has received a letter from Messrs. Schaffer and Vandevort, local inspectors at St. Louis, dated January 28, 1883, in which they state that they inspected the steamer *Henry Cole* in September last, on the Missouri River, without having first received a written request from the master or owner.

You will please inform Messrs. Schaffer and Vandevort that the inspection of this vessel, under the circumstances reported in their letter, was in violation of section 4417, Revised Statutes of the United States, which provides that inspectors shall, "upon the application in writing of the master or owner, carefully inspect," etc.; and instruct them that they must decline to inspect any vessel under the provisions of section 4417, Revised Statutes, except upon the application in writing of the master or owner, which must be kept on file in their office for reference at all times.

Very respectfully,

H. F. FRENCH,
Acting Secretary.

FRANK BURNETT, Esq.,
Supervising Inspector Fourth District, St. Louis, Mo.

Inspection certificates not to be issued for a less period than one year.

TREASURY DEPARTMENT, *July 12, 1878.*

SIR: The Department is in receipt of your letter of the 8th instant, in which you ask permission to have your vessel, now running on the Mississippi River between Quincy, Ill., and the opposite shore, inspected, to be used until November 1, 1878, at which date you expect to replace her by a new boat now building at Grafton, Ill., accompanying which is a letter from the supervising inspector of the Fourth district, in which he declines to inspect said steamer for a year, for the reason that he does not deem her safe to run after ice forms in the river, and declining to inspect her to run until November 1, as being contrary to the rules and regulations, which forbid the giving of a certificate of inspection for a shorter period than one year.

You are informed that Rule 62,* of Rules and Regulations 1879, forbids the issue of a certificate of inspection for a less term than one year. Said rule, having been approved by the Secretary of the Treasury, has all the force of law, and there is, therefore, no authority to comply with your request as made. But, as the supervising inspector reports, in the letter referred to, the *Rosa Taylor* is perfectly safe for navigation except in ice, there can be no objection to issue to her a certificate for one year, with an indorsement on the face thereof providing that said steamer will not be permitted to run at any time when there is ice in the river. Mr. Burnett has this day been informed of the views expressed herein, and instructed to grant a certificate of inspection for your vessel containing the above proviso.

Very respectfully,

JOHN B. HAWLEY,
Acting Secretary.

JOHN TAYLOR, Esq.,
Owner of ferryboat Rosa Taylor, Quincy, Ill.

When collection districts are not defined by statute, inspection certificates must be filed with the chief officer of customs nearest the point where vessels are inspected.

WASHINGTON, D. C., August 28, 1879.

GENTLEMEN: You are hereby informed, in reply to your communication of the 1st instant, referring to your difficulty in defining the boundary lines of the different collection districts in your inspection district, that the Department has, in its customs regulations regarding the home ports of vessels, article 2, chapter 1, Regulations 1874, decided the home port of a vessel to be that one nearest to which the managing owner resides, thereby establishing a point midway between any two ports as the boundary line between collection districts in all cases where such boundaries are not defined by statute.

In the inspection of steam vessels you are required by section 4421, Revised Statutes, "to make and subscribe a certificate to the collector or other chief officer of the customs of the district in which such inspection is made."

In pursuance of the provisions of the statute quoted, you will be guided by the same boundaries that have been established for the different ports of delivery in your district, and deposit all inspection papers with the chief officers of customs nearest the point where the steamers are inspected. In the transaction of your official business, the home ports of the vessels are not to be taken into consideration.

In your letter of the 25th instant, you give the distance by river from Rock Island, Ill., to Burlington, Iowa, as 11½ miles

* Now section 7, Rule VI, page 149.

less than the distance from Rock Island to Galena, Ill., which plainly places Rock Island in the jurisdiction of the Burlington collection district, as claimed by the surveyor of customs at that place, and you are therefore instructed to return all steamers inspected at Rock Island to the surveyor of customs at Burlington, Iowa.

Very respectfully,

JOHN B. HAWLEY,
Acting Secretary.

Messrs. GIRDON and SCOTT,
United States Local Inspectors, Galena, Ill.

Relative to steam canal boats plying on common highways of commerce.

TREASURY DEPARTMENT, July 24, 1878.

SIR: I am in receipt of your letter of the 18th instant, in which you state that the steamer *Rector*, owned by the Connecticut River Steamboat Company, has been refused a license by the United States local inspectors because the boiler of said steamer was not constructed of lawful iron. You also state that said steamer is used principally upon the canal connecting the lower waters with the upper waters of the Connecticut River, where steam ferryboats and other steamers are subject to annual inspection and license, and that she has, upon two occasions, carried excursion parties to Agawam and Springfield, Mass., and you therefore "submit the question to the Department whether said boat should not also be under the same laws and regulations governing the inspection of boats propelled by steam." You are informed, in reply, that if this steamer, at any time, navigates waters, upon which other steamers, when navigating the same waters, are compelled to be inspected and licensed, as you assert to be the fact in this case, then she is liable to the same inspection, although said steamer may have been built for navigating canals only. But if she is engaged exclusively in navigating the canal, she would come within the excepting clause of section 4400, Revised Statutes. But the Department is not prepared to render a final decision in this matter until fully informed of the nature, extent, and objects of the canal referred to, and furnished with the description of its opening and terminal points and the nature of the navigation at each outlet, which you will please forward at your earliest convenience.

Very respectfully,

JOHN B. HAWLEY,
Acting Secretary.

A. PUTNAM, Esq.,
Collector of Customs, Middletown, Conn.

*Vessels not to be reinspected upon changing name.*TREASURY DEPARTMENT, *September 28, 1878.*

SIR: The Department has received your letter of the 24th instant, asking if it will be necessary to inspect the steamer formerly *D. A. McDonald*, name now changed by act of Congress, to *Silver Wave*, or may the old certificate be used until date of expiration. You are informed that under the circumstances stated, which agree with chapter 141, acts of Congress, second session Forty-fifth Congress, it is the duty of the local inspectors to indorse on the copies of the present certificate of inspection on board the steamer the change of her name and the cause thereof, and to make a similar indorsement on the original filed at the custom-house, both indorsements to be signed by the inspectors. No other inspection will be necessary, unless other changes have been made, until the present certificate expires.

Very respectfully,

H. F. FRENCH, *Assistant Secretary.*

SAMUEL VAN SANT, Esq.,
Le Claire, Iowa.

3610.

Circular relating to changing the characters of steam vessels in districts other than where they were originally inspected.

[1878.—Department No. 59.—Steamboat-Inspection Service.]

TREASURY DEPARTMENT,
Washington, D. C., June 12, 1878.

Local inspectors of steam vessels, in changing the character of a steam vessel during the year for which she has been inspected, under the provisions of circular No. 115, issued from the office of the Supervising Inspector-General of Steam Vessels, September 3, 1877, in a district other than that in which the steamer was originally inspected, will be governed by the following instructions:

They will make an indorsement upon the copies of the certificates exhibited on board the steamer, showing the nature of the change made, as provided for in circular 115, above referred to, except that such interlineations shall be over the *full names* of the local inspectors. They will then transmit to the chief officer of customs of the district in which the vessel was originally inspected a statement showing the nature of the change made, which statement shall be signed by both inspectors and duly attested with their official seal.

Chief officers of customs receiving such statement will file the same with the original certificate of the vessel on file in their offices.

JOHN SHERMAN, *Secretary.*

Freight steamers can not carry passengers.

TREASURY DEPARTMENT, *April 22, 1879.*

SIR: You are informed, in reply to your letters of the 17th and 19th instant respectively, that a steamer sailing under inspection certificate, Form No. 3,* can not carry passengers on excursion or other routes without subjecting herself to the penalties provided in sections 4499 and 4500, Revised Statutes. A steamer sailing under such certificate may have its character changed by indorsement made by the local inspectors upon application; she must then be furnished with the additional life-saving equipments the change requires. In case the steamer your letters relate to desires such a change, you are referred for guidance in the matter to inclosed circulars Nos. 59 and 115, series of 1878.

Very respectfully,

JOHN B. HAWLEY, *Assistant Secretary.*

W. Z. KING, Esq.,

Surveyor of Customs, Greenport, N. Y.

Steam vessels—Defining routes on face of certificates of inspection.

TREASURY DEPARTMENT, *November 16, 1881.*

The term "inland," when used in certificates of inspection of passenger steamers, as descriptive of the waters upon which such steamers may be navigated, is indefinite and vague.

Inspectors are instructed that, in addition to naming the routes upon which steamers are respectively employed—if running upon regular routes—they will, in future, interline upon all certificates of inspection of passenger steamers issued by them the legal designation of the waters upon which such vessels may be navigated, as ocean, lake, bay, sound (sections 4488, 4490, Revised Statutes), or river (section 4481, Revised Statutes), as the case may be; and in every instance they will require the equipments provided by the sections of law quoted above, and the Rules and Regulations of the Board of Supervising Inspectors, according to the character of the waters in which the vessel may be employed.

CHAS. J. FOLGER, *Secretary.*

SUPERVISING AND LOCAL INSPECTORS

OF STEAM VESSELS.

Date of expiration of certificate of inspection.

TREASURY DEPARTMENT, *March 25, 1882.*

SIR: The Department is in receipt of your letter of the 21st instant, in which you present the hypothetical case of a steamer "inspected at noon of March 21, 1881, and received a certificate

* Now forms 2115 and 2115½.

limited on its face to expire March 21, 1882," and you ask, "Does the certificate expire at midnight of the 20th, or is it good until noon of the 21st, or until midnight of the 21st?"

In reply, you are informed that it is not the custom of the Department to render decisions upon hypothetical questions; but in this case it will depart from that rule so far as to say that no officer of the Government would be sustained in a complaint against a steamer for being navigated without inspection, unless such navigation occurred upon a date subsequent to that stated upon the face of the certificate, as the date upon which the certificate expires.

Very respectfully,

CHAS. J. FOLGER,
Secretary.

SURVEYOR OF CUSTOMS,
St. Louis, Mo.

Tugs can be libeled for not having inspection certificates.

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., May 11, 1875.

SIR: I have the honor to return herewith a communication addressed to you by the surveyor of customs at Albany, N. Y., together with copies of two letters received by that officer from the United States attorney for the northern district of that State, which were referred to me on the 4th instant for such action as I might think it necessary to take.

The surveyor asks for instructions as to how he shall proceed in order to compel the masters or owners of steam vessels that have been inspected as provided for by law to call for and receive from the custom-house the certified copies of the inspector's certificate, especially in the case of steam tugs that do not carry passengers.

Section 4423 of the Revised Statutes, Title 52, provides that—

"Every collector or other chief officer of the customs shall retain on file all original certificates of the inspectors required to be delivered to him, and shall give to the master or the owner of the vessel therein named three certified copies thereof; two of which shall be placed by such master or owner in conspicuous places in the vessel, where they will be most likely to be observed by passengers and others, and there kept at all times, framed under glass; and the other shall be retained by such master or owner as evidence of the authority thereby conferred."

Section 4424 of the same Title makes the vessel liable for a penalty of \$100 in case a passenger is received on board any steam vessel not having the certified copies of the certificate of approval

placed and kept on the vessel as required by the section above recited, while sections 4499 and 4500 impose a fine of \$500 for the violation of any provision of Title LII not otherwise specially provided for.

The statutes referred to clearly provide an adequate remedy for the hypothetical case presented by the surveyor, namely, that of a steam tug which does not carry passengers.

If a vessel of this description is navigated on any of the waters of the United States which are common highways of commerce, after it has been inspected, but before the owner procures and places on board the vessel certified copies of the certificate of inspection in the manner required by law, he thereby incurs a penalty of \$500, for which the vessel so navigated may be seized and proceeded against by libel to recover the same.

Very respectfully,

BLUFORD WILSON,
Solicitor of the Treasury

Hon. B. H. BRISTOW,
Secretary of the Treasury.

5606.

Steam vessels—Inspection of steamers partly built in one district and finished in another.

TREASURY DEPARTMENT, March 6, 1883.

SIR: In compliance with the verbal request of John Roach, esq., iron-ship builder, at Chester, Pa., you will direct the local inspectors of steam vessels at Philadelphia, Pa., when requested to do so in writing, to inspect and submit to the hydrostatic test the boilers of all steam vessels built at the Chester yards, and intending to leave there under a master-carpenter's certificate for the port of New York or any port in a State contiguous to that in which the vessel is built (section 4147, Revised Statutes), for completion of outfit and equipments. You will also direct the same inspectors that when they have completed the inspection of the boilers of any such steam vessels, they shall furnish to the master or owners of such vessel, whose boilers have been inspected by them, a sworn certificate of such inspection, stating therein the number of pounds hydrostatic pressure to the square inch such boilers have been subjected to, also the number of pounds steam pressure they can carry with safety. A duplicate of such certificate, also signed and sworn to by them, must be sent to the local inspectors of the district to which the vessel is bound, to complete her inspection, which certificate shall be deemed by the local inspectors of such district as sufficient evidence to them that the boilers have been duly inspected in accordance with law, and that they do not require reinspection.

by them, unless changes should occur after leaving the first-named port; and they shall interline in the certificate of inspection, granted by them to a steamer whose boilers have been inspected in another district, the fact of such inspection, by interlining in parenthesis upon such certificate such fact, in the following manner, *namely*: (Hydrostatic pressure applied by local inspectors at —, as per certificate on file, dated —, 188—); and they will be careful to see that such certificate is kept among the permanent records of the office for future reference if needed.

Very respectfully,

H. F. FRENCH,
Acting Secretary.

GEORGE H. STARBUCK, Esq.,
Supervising Inspector Second District, New York, N. Y.

7062.

Steam vessels—Municipal vessels must have proper life-saving appliances.

TREASURY DEPARTMENT August 5, 1885.

SIR: Your letter of the 9th ultimo, addressed to the Secretary of the Navy, was duly received by this Department by reference of that officer dated the 16th ultimo.

The complaint made against the local inspectors of steam vessels at Galveston for requiring the steamer *Hygeia* to be equipped with a metallic lifeboat was duly referred to the supervising inspector of steam vessels at New Orleans for investigation and report.

That officer, under date of the 31st ultimo, reports "that that vessel (*Hygeia*) is employed by the quarantine authorities of Texas on the waters of Galveston Bay and beyond to the shipping; that she is provided with a small wooden boat, without the attachments which would constitute it a lifeboat or make it serviceable on the rough waters which the vessel navigates; that the local inspectors ordered a metal lifeboat as in their judgment indicated, and that their official order (the cause of complaint) of the 16th instant was intended to forestall any delay in certifying the *Hygeia* when placed in commission;" and the supervising inspector adds in his report that he concurs in the judgment of the local inspectors "as to their jurisdiction and the lifeboat."

In reply to your suggestion "that the *Hygeia* is not subject to the rules of the Navy (Treasury Department, Steamboat Inspection), and those regulations adopted for the security of passengers," you are respectfully informed that "all steam vessels navigating any waters of the United States which are common

highways of commerce, or open to general competitive navigation, *excepting* public vessels of the United States, vessels of all other countries (not carrying passengers from American ports), and boats propelled in whole or in part by steam for navigating canals," are subject to all the provisions of the steamboat laws and the rules of the Board of Supervising Inspectors; and this Department has no discretion to exempt any steam vessel, even though such vessel is the sole property of the State of Texas and used exclusively for its especial business, from any provisions of the laws referred to.

Very respectfully,

DANIEL MANNING,
Secretary.

HON. JOHN IRELAND,
Governor of the State of Texas, Austin, Tex.

6151.

Steam vessels—Not to be reinspected when sold.

TREASURY DEPARTMENT, *February 1, 1884.*

SIR: In reply to your letter of the 26th ultimo, in which you ask if a steamer which has been sold, and whose certificate of inspection has not expired, requires reinspection previous to issuing her a new enrollment and license, you are informed that certificates of inspection are good for one year, without regard to change of ownership. Enrollment and license should be issued upon presentation of her unexpired certificate.

Very respectfully,

CHAS. J. FOLGER,
Secretary.

SURVEYOR OF CUSTOMS,
Paducah, Ky.

8010.

Steam vessels chartered to the United States not exempt from provisions of Title 52, Revised Statutes.

TREASURY DEPARTMENT, *January 28, 1887.*

SIR: This Department is in receipt of your letter of the 26th instant, referring to the collision on the 1st instant between the tugboat *James Bowen*, owned by private parties, but under charter to the United States, and the ferryboat *Atlantic*, belonging to the Union Ferry Company of Brooklyn, also inclosing a copy of the report of the United States local inspectors of steam vessels at New York of their investigation of said collision, with other papers pertaining to the case.

18251—14

The question raised in the case by your Department is as to whether the *James Bowen*, being under charter to the Government, is a public vessel of the United States, and therefore, under section 4400, Revised Statutes, exempted from the requirements of section 4438, Revised Statutes, which forbids the employment of pilots (or other officers) on steam vessels who are not licensed by the local inspectors.

In reply, you are informed that it is the opinion of this Department that a steam vessel to be exempt from the provisions of Title 52, Revised Statutes, as a public vessel of the United States, must have the title to ownership of the vessel actually vested in the United States.

This view of the subject was sustained by the Solicitor of the Treasury in an opinion rendered May 14, 1880, upon a case similar to that now presented, which opinion is as follows :

"SIR: I have the honor to return herewith your reference of the 8d instant, requesting my opinion as to whether a private steamer chartered by the United States is exempt from the provisions of section 4438, Revised Statutes.

"That section makes it unlawful to employ, or for any person to serve as, a master, chief mate, engineer, or pilot on any steamer who is not licensed as provided for therein. This provision is contained in Title 52 of the Revised Statutes, providing for the inspection of vessels propelled in whole or in part by steam. Section 4400 exempts from the provisions of that Title only 'public' vessels of the United States, vessels of other countries, and boats, propelled in whole or in part by steam, for navigating canals. * * *

"In my judgment, a private vessel under charter to the Government is not a 'public vessel of the United States' within the meaning of section 4400, Revised Statutes. If I am correct in this regard, such a vessel is *not* exempt from the requirements contained in section 4438, Revised Statutes."

The inclosures contained in your letter are returned herewith
Respectfully yours,

DANIEL MANNING,
Secretary.

The SECRETARY OF WAR,
Washington, D. C.

7861.

Permits to steam vessels not inspected—How far legal.

TREASURY DEPARTMENT, November 11, 1886.

SIR: The Department is in receipt of your letter of the 6th instant, referring to your previous application for permission to equip a small steamboat for experimental purposes, to which the Department replied that it had "no authority to grant a permit

for running a steam vessel for experimental or other purposes without being inspected as required by Title LII, Revised Statutes," * * * and you now call attention to Department decisions dated respectively March 28, 1878, and March 23, 1880, which you suggest the Department may have overlooked, which decisions, according to your interpretation, would grant the permission you desire.

In reply, you are informed that the decisions you refer to were not overlooked, neither is it thought that the statements contained in the Department's letter to you, quoted herein, are in conflict with the decisions to which you refer, such decisions indicating, in substance, that up to a certain stage of progress in the building of steam vessels, which included "the engines being set in motion for experiments at the dock, or on a trial trip," such vessels did not come within the provisions of the inspection laws, therefore not within the province of the Department either to grant or withhold a permit at such stage or progress of the vessel. The *trial trip* referred to in the decision was the single final trial trip, known amongst builders as the "engineer's trial trip," to which nearly every steamer (new) is subjected before turning the vessel over to the owners, and was not intended to extend to an indefinite number of such trips, such as would be implied in the permission you have asked for.

Your attention is further called to the fact that the second decision, to which you refer, dated March 23, 1880, distinctly states at its close that no permission of the Department is necessary within the terms of its decision regarding experiments at a dock, or on a trial trip. Therefore, the Department reiterates the statement made in its former letter to you of the 3d instant, namely, that it has no authority to *grant a permit for running a steam vessel for experimental or other purpose without compliance with the inspection laws.*

Respectfully yours,

C. S. FAIRCHILD,
Acting Secretary.

WILLIAM MARTIN, Esq.,
P. O. Box 70, Pittsburg, Pa.

Small pleasure steamers not exempt from United States inspection laws.

TREASURY DEPARTMENT,
OFFICE SUPERVISING INSPECTOR-GENERAL
OF STEAM VESSELS,
Washington, D. C., May 15, 1883.

In view of the many applications made to this office by the owners and builders of small steam yachts, and persons contemplating building such vessels, for information as to whether they are

liable to the provisions of Title LII (*Regulations of Steam Vessels*), Revised Statutes of the United States, applicants are informed that, under section 4426, Revised Statutes, the hull and boiler of every yacht, or other small craft of like character, propelled by steam, without regard to size of vessel, provided it can be used in navigation, must be inspected, the boiler being subjected to the hydrostatic test required by law. The pilot and engineer must also be licensed, and such other provisions of the law complied with as may be applicable to the particular vessel under examination. (Affirmed by Supreme Court decision, *Dupont v. Hartranft*, United States Reports, vol. 118, p. 223.)

Sections 4428 and 4431, Revised Statutes, require that the iron or steel plates of which the boiler is constructed must be stamped with the name of the manufacturer, the place where manufactured, and the number of pounds tensile strain it will bear to the sectional square inch; and an actual test of sample of plate used in boiler must be made by the inspectors of steam vessels and recorded in the inspector's office in the district where the boiler is being constructed. (Sections 4430 and 4431, Revised Statutes.) The boiler must be provided with such appurtenances as are necessary to its safe management, viz, feed pump and check valve, steam-pressure gauge, safety valve, gauge cocks, a water gauge (showing the height of the water in the boiler), and blow-off valve, and a tin plug so inserted that it will fuse by the heat of the fire when the water in the boiler falls below the prescribed limit.

There must be on board the means of applying the required hydrostatic test.

There must be provided for each person on board a life-preserver, containing at least 6 pounds of good block cork or other suitable material, adjustable to the body in the manner of a belt or jacket, with shoulder straps.

All open steam launches or other steam vessels of 5 tons burden or less, used for pleasure purposes only, will not be required to carry a lifeboat. Such steamers, when licensed to carry passengers, may dispense with a lifeboat when such vessels are provided with metallic air chambers placed under the seats and in the ends of said vessels of sufficient capacity to float the inert weight of said vessel, including her boilers and machinery, * * * and every such steam vessel carrying fifteen passengers or less shall carry at least two fire-buckets and one ax. (Rules and Regulations, section 23, Rule III.)

A license as "special engineer" for small steam yachts or pleasure vessels will be granted to any person of good character who has sufficient experience to manage the boiler and machinery safely. A similar "special license" as pilot for such vessels will be granted to any person of like good character who is familiar with the navigation in which they are to be employed, understands the pilot rules, and has had sufficient experience in hand-

ring this or other similar vessels. The master of a vessel of this class does not require license. A steam whistle of suitable dimensions must be provided, with which the pilot will make the signals as required by the pilot rules above referred to.

When the equipment is completed and the vessel is ready for inspection, it is required that application shall be made in writing, by the master or owner, to the local inspectors within whose district the vessel is owned or employed.

There are no fees due or collectible for the inspection of steam vessels or for licensing officers, the same having been abolished by act of Congress approved June 19, 1886.

The following extract from a Treasury decision of May 14, 1888, is published herein for the general information of yacht owners and others.

JAS. A. DUMONT,

Supervising Inspector-General of Steam Vessels.

Approved :

C. S. FAIRCHILD,

Secretary.

[Extract.]

* * * * *

In reply to so much of your letter of the 4th instant as applies to the inspection of steam pleasure vessels, you are informed that all such vessels, large or small, are classed as pleasure yachts (see paragraph 6 of inclosed Regulations, dated January 10, 1888), and certificated upon Form 2116, approved February 7, 1888 (copy inclosed).

Section 23, Rule III, Rules and Regulations, exempts vessels of this class of 5 tons burden or less from carrying a lifeboat.

All pleasure yachts (steam) under 100 tons gross burden must carry a licensed pilot and a licensed engineer, but do not require a licensed master. Steam pleasure yachts, without regard to tonnage, unless otherwise specifically provided for, are subject to the general inspection laws applicable to passenger steamers.

The term "persons" used in the certificate, Form 2116, in contradistinction to the word "passenger" used in certificates Forms 2113 and 2113½, issued to steamers regularly engaged in commerce, is simply to distinguish between the class of persons or passengers carried, in the one case such persons being guests of the owners and carried free, while in the other they are persons who are carried for hire.

Different penalties, however, would apply in case of an excess of persons or passengers being carried over the number allowed in the certificate of inspection.

In the case of a steam pleasure yacht, the penalties would accrue under section 4500, Revised Statutes, namely, a fine of \$500, while in the case of an excess on a steamer certificated as a passenger steamer the penalties are defined in sections 4465 and

4499 of the Revised Statutes, namely, under the first-named section, \$10 and the passage money for each person carried in excess, and under the last-named section, a general penalty of \$500.

* * * * *
Respectfully, yours,

HUGH S. THOMPSON,
Acting Secretary.

15759

Steamers may be inspected previous to expiration of certificate, when bound on foreign voyage.

TREASURY DEPARTMENT, *March 13, 1895.*

SIR: In reply to your letter of the 11th instant, requesting inspection of the steam yacht *Oneida* on the 15th instant, though the regular inspection is not due till May 18 next, because of having put a new boiler in the steamer, and intending to sail next week, you are informed that the Supervising Inspector-General will direct the local inspectors at New York to make the required inspection on the 15th instant, under the assumption that the vessel is going out of United States waters, not to return until after the expiration of the current certificate of inspection. If the above assumption is incorrect then there is no authority to anticipate the date of inspection more than thirty days, which the inspectors have authority for under general regulations approved February 20, 1895.

Respectfully yours,

CHARLES S. HAMLIN,
Acting Secretary.

E. C. BENEDICT, Esq.,
29 Broad Street, New York.

11610.

Posting of certificates, etc., on steam vessels.

TREASURY DEPARTMENT, *August 4, 1891.*

SIR: This Department has considered the case of the steamer *Florence*, reported by an officer of the revenue steamer *Forward*, not to have had posted, as required by sections 4423 and 4446, Revised Statutes of the United States, the licenses of master and engineer, and the certificate of inspection. An additional report was obtained, showing, substantially, that the master's license was posted in the pilot house, and the engineer's license and two certificates of inspection in the engine room under glass. The commander of the cutter considered this a violation of the regulations, for the reason that under Rule III, section 9, General Rules and Regulations of the Board of Supervising Inspectors of Steam Vessels, certain persons only are allowed in the pilot house; and for the further reason that the pilot house

and engineer room were not, in his judgment, "conspicuous places" within the meaning of the law.

The vessel in question, measuring less than 100 tons, was inspected under the provisions of section 4426, Revised Statutes, which requires compliance only with the regulations of the Board of Supervising Inspectors before the granting of certificate. The Board has made no regulation requiring the certificate to be exposed in such cases, as mentioned in section 4423, Revised Statutes; and the Department is informed that such vessels are usually so constructed as to make it impracticable for them to comply with the requirements of the section. It was sufficient, therefore, to have the certificate on the boat, and no penalty need be imposed. Please report the final disposition of the matter.

It is suggested that revenue officers should be more specific and definite in their complaints of violations of law in such cases, so that the Department may be able to determine, without requiring additional reports, whether or not the laws have been violated.

Respectfully yours,

CHARLES FOSTER,
Secretary,

COLLECTOR OF CUSTOMS,
Pensacola, Fla.

13266.

Duties of collectors of customs and other officers—Steamers running after expiration of certificate of inspection.

TREASURY DEPARTMENT, September 13, 1892.

SIR: In reply to your letter of the 7th instant, you are informed that sections 4400, 4417, and 4418, Title LII, Revised Statutes of the United States, required that the hull and boiler of every steam vessel employed upon navigable waters of the United States shall be inspected "once in every year at least," so as to determine that all the requirements of law are complied with regarding the condition of the hull and boilers to insure their safety; "and that all the requirements of law in regard to fires, boats, pumps, hose, life-preservers, floats, anchors, cables, and other things, are faithfully complied with."

Section 4421 of the Revised Statutes further requires that, "When the inspection of a steam vessel is completed and the inspectors approve the vessel and her equipments throughout, they shall make and subscribe a certificate to the collector or other chief officer of the customs of the district in which such inspection has been made, in accordance with the form and regulations prescribed by the Board of Supervising Inspectors."

The form of certificate which has been adopted by the Board, and has also received the formal approval of the Secretary of the

Treasury, contains the provision that the certificate issued to any steamer shall expire or terminate at a date one year from the date of the inspection of the steamer, such date to be filled in by the inspectors granting the certificate. If a steamer fails to apply for and be inspected at the expiration of her certificate, and shall continue to be navigated, she is subject to the penalties provided in sections 4499 and 4500, Revised Statutes, which penalties can be remitted or mitigated only by the Secretary of the Treasury, under the authority conferred upon that officer by section 5294, Revised Statutes.

If, as you state, it has been a custom for many years in your district to allow "a lapse of more or less time between the expiration of the time for which the boats were inspected and the new inspection," you are informed that the Department desires that such custom shall cease, and that all violations of law be duly reported. The Department will then exercise its discretionary power in enforcing, remitting, or mitigating the penalties as the facts may determine, giving careful consideration to any mitigating circumstances that may be presented.

Very respectfully,

CHARLES FOSTER,
Secretary.

COLLECTOR OF CUSTOMS,
Milwaukee, Wis.

10318.

Documenting of yachts.

TREASURY DEPARTMENT,
BUREAU OF NAVIGATION,
Washington, D. C., September 30, 1890.

To collectors of customs and others:

Section 4214, Title XLVIII, of the Revised Statutes of the United States, provides that the Secretary of the Treasury may cause yachts used and employed exclusively as pleasure vessels, and designed as models of naval architecture, * * * to be licensed on terms which will authorize them to proceed from port to port in the United States, and by sea to foreign ports, without entering or clearing at the custom-house; * * * and that such vessels shall, in all respects, * * * be subject to the laws of the United States, and shall be liable to seizure and forfeiture for any violation of the provisions of Title XLVIII.

Section 2 of the act of July 5, 1884, provides that "the Commissioner of Navigation shall be specially charged with the decision of all questions relating to the issue of * * * licenses of vessels."

It is hereby directed that all such yachts and pleasure vessels not exempt by law shall be licensed as contemplated by the act

first above cited, and that all such vessels not so licensed shall be held subject to the penalty as denounced by the act, in addition to any other disabilities that may be incurred.

A vessel's papers will show whether or not she is entitled to the privileges of a yacht.

Pleasure vessels and yachts of foreign build, but not entitled to the privileges conferred by section 4216, Revised Statutes, when navigated in the United States, must be held subject to the penalties, dues, and disabilities prescribed by law for such cases. Officers of the customs will take action accordingly.

WILLIAM W. BATES,
Commissioner.

Approved:

GEORGE S. BATCHELLER,
Acting Secretary of the Treasury.

BOILER PLATE AND BOILERS.

7068.

Steam vessels having defective boilers can not be inspected.

TREASURY DEPARTMENT, August 11, 1885.

SIR: In reply to your letter of the 3d instant, requesting the Department to direct the inspector of steam vessels at Baltimore to inspect the steamer *Leila*, notwithstanding the failure of the original owners of the steamer (the State of Maryland) to have the iron of which the boiler was built inspected before being used, in the manner required by section 4430, Revised Statutes, as follows: "Every iron or steel plate used in the construction of steamboat boilers, and which shall be subject to a tensile strain, shall be inspected in such manner as shall be prescribed by the Board of Supervising Inspectors and approved by the Secretary of the Treasury, so as to enable the inspectors to ascertain its tensile strength, homogeneousness, toughness, and ability to withstand the effect of repeated heating and cooling; and no iron or steel plate shall be used in the construction of such boilers which has not been inspected and approved under these rules."

The Board of Supervising Inspectors having prescribed rules for the inspection of iron and steel plate before being made into boilers (rule 1, sections 3 and 6), and the same having received the approval of the Secretary of the Treasury, in the manner provided in the section of law quoted, the Department has no authority to issue the directions asked for.

Very respectfully,

C. S. FAIRCHILD,
Acting Secretary.

JOHN H. BARNE, Esq.,
Attorney for Marion A. Frazier, Baltimore, Md.

Boilers can not be restamped at a higher tensile strain.

TREASURY DEPARTMENT, November 19, 1877.

GENTLEMEN: I am in receipt of your letter of the 15th instant, asking, in view of the fact that a single sample of iron from the boiler of the steamer *E. A. Kent* having withstood a tensile strain much greater than that stamped on it by the manufacturers, that they be allowed to restamp it, denoting the strain shown by the test. The Department declines to authorize the restamping of the *E. A. Kent's* boiler to a greater tensile strength than that stamped on it by the manufacturers of the iron. If they have underestimated its tensile strength, the fact should have been ascertained before the iron was worked into the boiler. Then samples from various sheets could have been tested and the fact ascertained whether the sample you describe was exceptional or really indicated the strength of all the plates intended to be used in said boiler.

Very respectfully,

R. C. McCORMICK, *Assistant Secretary.*

Messrs. BAIRD & HUSTON,

*Beach and Vienna streets, Philadelphia, Pa.**Permission to restamp to a lower grade.*

TREASURY DEPARTMENT, June 27, 1879.

GENTLEMEN: In accordance with the request contained in your letter of the 25th instant, permission is hereby given to Messrs. C. E. Pennock & Co., of Coatesville, Pa., to their authorized agent, to restamp the iron in the boilers of the steamer *City of Atlanta* at 44,500 pounds tensile strain (instead of 50,000 pounds, as originally stamped), to meet the requirements of rule 4,* Revised Rules and Regulations of the Board of Supervising Inspectors; said restamping to be done in the presence of the United States local inspectors of steam vessels at New York, you notifying them of the time when their presence will be needed.

Very respectfully,

JOHN SHERMAN, *Secretary.*

Messrs. N. F. PALMER, JR., & Co.,

*Quintard Iron Works, New York, N. Y.**Relative to stamping tensile strength upon new boilers made of unstamped plates (not in synopsis).*

TREASURY DEPARTMENT, July 11, 1878.

GENTLEMEN: In reply to your application for permission to stamp a tensile strain of 50,000 pounds upon plates composing the boiler of the steam yacht *Kilmeny*, belonging to H. H. Sessions, of

* Now section 3, Rule I, page 93.

Rome, N. Y., inadvertently built of unstamped iron of your manufacture, you are informed that upon furnishing the United States local inspectors of steam vessels at Oswego, N. Y., with samples of the iron actually used in said boiler for testing, according to rule 4,* Rules and Regulations 1877, amended 1878, circular copy of which is inclosed herein, and the said samples are found, upon testing, to show a tensile strain of 50,000 pounds to the square inch, and contain the other qualities required by section 4430, Revised Statutes, permission is hereby granted to stamp said iron at 50,000 T. S.; also stamping thereon your name as the manufacturers thereof, the same to be done under the direction of the aforesaid inspectors, who will be instructed by mail this day to visit Rome, N. Y., for the purpose named, upon being advised by yourselves of the date when it will be convenient for you to meet them there.

Very respectfully,

JOHN B. HAWLEY,
Acting Secretary.

Messrs. JOSEPH L. BAILEY & Co.,
Pine Iron Works, Pennsylvania.

Improperly stamped boiler plates.

TREASURY DEPARTMENT, May 15, 1879.

SIR: The Department is in receipt of yours of the 13th instant, relative to two boilers built by yourself for the steamers *Mount Desert* and *City of Bangor*, the plates used in the construction of which have been stamped at a higher tensile strength than they actually possess, as shown by tested samples, and in which letter you ask that authority be given to the inspectors of steam vessels to grant certificates to the steamers allowing them, respectively, to carry the amount of steam warranted by the stamps upon the plates. In reply, you are informed that the Department has no authority to comply with your request, as sections 4430, 4431, and 4432, Revised Statutes, and rule 4* of the Rules and Regulations Governing the Steamboat Inspection Service, provide the manner of inspecting and testing boiler plates to be used in the construction of marine boilers. A pamphlet copy of the steamboat law, and of rule 4 of the Revised Rules, are herewith furnished for your information. The only remedy in the matter is for the manufacturers of the plates to make application to the Department for permission to restamp them at the tensile strength indicated by the tested samples.

Very respectfully,

H. F. FRENCH,
Assistant Secretary.

W. H. FESSENDEN, Esq.,
Portland, Me.

* Now section 3, Rule I, p. 93.

Steam vessels—Boilers can not be stamped after being used.

TREASURY DEPARTMENT, October 26, 1880.

SIR: The Department is in receipt of your letter of the 22^d instant, in which you ask that authority be given you to stamp the boiler of your small steam pleasure yacht with the tensile strength shown by testing samples of the same iron to be furnished by the manufacturers thereof. In reply, you are informed that the privilege asked for can only be granted in cases where the boilers have never been used. I transmit herewith for your information a copy of Circular No. 85, of 1878, from this Department, relative to the requirements of the law governing this class of vessels.

Very respectfully,

J. K. UPTON, *Assistant Secretary.*

ENOCH MOORE, JR., Esq.,

Wilmington, Del.

6300.

Steam vessels—Testing boiler plates.

TREASURY DEPARTMENT, April 15, 1884.

SIR: You are informed, in reply to yours of the 24th ultimo, that the Department does not feel authorized to permit the inspectors to cut a plate for testing the strength of plates in a boiler that has been used in a mill or for other than marine purposes, even though the plates of which it is composed are duly stamped.

The law (section 4430, Revised Statutes) contemplates that a record of the inspection and tests of boiler plates shall be made previous to the construction of the boiler, and the Department has never departed from this construction except in the case of boilers when actually built for, and have been used exclusively for, marine purposes, and when the testing of the plates to ascertain their strength and other lawful qualities had been unnecessary because they were to be used on waters not under the jurisdiction of the United States, or that such testing had been inadvertently omitted before construction on new boilers intended for marine purposes. Rule 75* of the Rules and Regulations would exclude your boiler from inspection, the rule being as follows: "All steam boilers made in conformity to the steam-boat law in force at the time they were built, provided always that the boilers are in good condition, may be lawfully used on any steamer, provided they have not been used for other than marine purposes."

Very respectfully,

CHAS. J. FOLGER, *Secretary.*

THOMSON KINGSFORD, Esq.,

Oswego, N. Y.

* Now section 37, Rule II.

*Steam vessels—Pressure on boilers.*TREASURY DEPARTMENT, *March 9, 1880.*

GENTLEMEN: The Department has received your letter of the 16th ultimo, requesting that the New York local inspectors be authorized to deviate from the established rule for allowing pressure of steam on boilers under the following circumstances:

You say you have built a boiler of iron plate 0.4065 inch thickness, 78 inches diameter, double riveted, holes punched, the sample from which stood a strain of 53,621 pounds per square inch at the tests made by the inspectors; that you calculated for an allowance of pressure of 93 pounds, and guaranteed 90 pounds to your customers. It appears, however, that the stamp of the plate manufacturers indicates only 49,950 pounds, and that the test pieces, being accidentally rolled light on one side, measured only 0.38 inch in thickness. The inspectors therefore allowed a pressure of 80.07 pounds, apportioned to the figures of the manufacturers' stamp and the thickness of the test pieces, according to the provisions of rule 2.

You request that they be authorized to allow a pressure of 90 pounds, apportioned to the strength exhibited by the sample when tested.

In reply, you are informed that the Department believes that rule 2, Rules and Regulations, which requires that the allowance should be based upon the *thinnest* plate used in a boiler and the lowest tensile strength *stamped* thereon, makes all the allowance possible consistent with safety. The fact that a single sample of the iron used shows a greater strength than is guaranteed by the manufacturers can not be taken into consideration, as they usually stamp their irons so that the minimum strength found by testing will not fall below the stamped strength. It is well known that samples of the same plate vary from 2,000 to 5,000 pounds in tensile strength. Besides this, the iron of your boiler is shown to be deficient in the ductility required by the rules; its contraction of area is but 17.27 per cent for its ultimate strength, 53,625 pounds, which you claim you should be allowed steam for. It should show a contraction of area of 23.06 per cent.

The Department therefore sustains the action of the New York inspectors in allowing, according to the provisions of rule 2, Rules and Regulations, but 80.07 pounds steam to the square inch in the boiler described in your letter of the 16th ultimo.

Very respectfully,

JOHN SHERMAN,
Secretary.

C. H. DELAMATER & Co.,
Delamater Iron Works, New York.

Steam vessels—Steam pressure upon boilers.

TREASURY DEPARTMENT, August 24, 1881.

GENTLEMEN: The Department is in receipt of your letter of the 16th instant, inclosing the decision of the supervising inspector of the second district, affirming the decision of the local inspectors at New York, refusing to allow 100 pounds of steam upon the boiler recently built by you for the steamer *Harry*.

The decision and its affirmation are based upon the fact that that portion of the shell of the boiler termed by you the "wagon box" is really a portion of the cylindrical shell of the boiler, and, being the thinnest plate ($\frac{7}{16}$ inch in thickness) in the cylindrical shell, is the one from which the amount of steam to be allowed is to be calculated under the provisions of rule 2 of the Board of Supervising Inspectors, notwithstanding all other parts of said shell are composed of iron $\frac{1}{8}$ inch in thickness, or $\frac{1}{4}$ inch in excess of that upon which the computation is made. The Department understands you to claim, in opposition to this ruling, that, the "wagon box" being strengthened by bracing similar to that employed in strengthening the lower continuation of the box, which is composed of flat surfaces, the upper cylindrical part should be classed with the latter, and not be deemed a portion of the cylindrical part of the boiler proper, and you appeal to the Department for its construction of the rule upon which the inspectors based their action.

The question as to whether the "wagon box," as constructed, is as strong as the other parts of the shell is not one within the province of the Department to consider.

Concerning the other matter at issue, you are informed that, under the advice of the Supervising Inspector-General, who has carefully examined the drawings of the boiler furnished by yourselves, the Department sustains the decision of the inspectors, that the "wagon box" is a continuation of the cylindrical shell of the boiler, and, being constructed of the thinnest plate, the computation for steam-pressure allowance must be made thereon. The authority for this ruling is contained in that portion of rule 2 of Rules and Regulations which reads as follows:

"Multiply one-sixth of the lowest tensile strength found stamped on any plate in the cylindrical shell by the thickness—expressed in inches or parts of an inch—of the thinnest plate in the same cylindrical shell, and divide by the radius or half diameter, also expressed in inches," etc.

Any other construction of the rule than that above given would have a tendency to encourage the use of inferior iron in parts of boilers similar to the one described in this case. The fear expressed in your letter to the Supervising Inspector-General that should the decision of the Department be adverse to you, it would compel the use of tubes, constructed of plates as heavy as that used in the shells, is groundless, for the reason that

the strength of flues or tubes is determined by an entirely different formula, and which is described on pages 11 and 12 of the Proceedings of the Twenty-ninth Annual Meeting of the Board of Supervising Inspectors, 1881, a copy of which will be mailed to your address this day.

Very respectfully,

H. F. FRENCH,
Acting Secretary.

Messrs. HEIPERSHAUSEN BROTHERS,
New York.

2423.

Inspection of steam vessels.

TREASURY DEPARTMENT, *September 1, 1875.*

SIR: Referring to your letter of the 25th ultimo, in which, for certain reasons therein specified, you ask that you be authorized to issue to the local inspectors of your district a general order directing them to permit steamers inspected by them to be used exclusively for towing and carrying of freight on the Mississippi and its tributaries, to carry such a steam pressure, within the limits prescribed in an act of Congress of January 6, 1874, as in their judgment may be safe, you are informed that such a procedure would be unlawful, as delegating to others an authority vested in you alone by the act above referred to.

Very respectfully,

B. H. BRISTOW,
Secretary.

SUPERVISING INSPECTOR STEAMBOATS,
Pittsburg, Pa.

Steam vessels—Use of coil boilers.

TREASURY DEPARTMENT, *February 11, 1883.*

SIR: In reply to your letter of 30th ultimo, addressed to the Supervising Inspector-General of Steam Vessels, saying that the local inspectors at Savannah are unwilling to pass a boiler in your steam launch because, although exactly of the same pattern as the Herreshoff coil boiler, it was not built by Herreshoff, you are informed as follows:

The Board of Supervising Inspectors of Steam Vessels, in approving the use of the Herreshoff coil boiler under the requirements of section 4429, Revised Statutes, intended to approve the form and construction of such boiler as a steam generator by whoever manufactured as equal in strength, and

as safe from explosions, as a boiler of the best quality made of riveted iron or steel plates. It is, therefore, the opinion of the Supervising Inspector-General of Steam Vessels that the local inspectors at Savannah should pass the boiler in your steam launch, provided its form and construction be of the Herreshoff pattern, the material of equal strength, and the coil pipe not over 4 inches in diameter. It is not the intention of this Department, in any requirement or recommendations it may make, to impose upon citizens the necessity of dealing with any particular manufacturer or dealer unless there is a particular direction to that effect for especial reasons, a statement of which will always accompany the directions.

A copy of this letter will be sent to the supervising inspector Third district, requesting him to inform the local inspectors at Savannah of the Supervising Inspector-General's opinion.

Very respectfully,

CHAS. J. FOLGER,
Secretary.

HENRY R. LYLE, Esq.,
San Mateo, Putnam County, Fla.

5617.

Steam vessels—Boilers of the repaired wrecks of foreign steam vessels.

TREASURY DEPARTMENT, March 17, 1883.

SIR: The Department is in receipt of your letter of the 7th instant, addressed to C. P. Conger, esq., and referred to the Supervising Inspector-General of Steam Vessels by the Hon. Omar D. Conger, in which you call attention to the fact that you have purchased the Canadian steam vessel *City of St. Catherine's*, sunk off White Rock in 1880, raised in 1882, and rebuilt at Port Huron under such conditions as entitle said steamer under the law (section 4136, Revised Statutes of the United States) to enrollment and register as an American vessel, but that a technical objection arises in regard to the boiler of the steamer, the plates thereof not being stamped, as required by law (section 4428, Revised Statutes), with the name of the manufacturer and the tensile strain, and a decision is asked for from the Department that will relieve the purchasers of the *City of St. Catherine's* from the technical objection that would prevent their use of the steamer they have purchased.

In reply, you are informed that the law (section 4136, Revised Statutes) that confers upon the Secretary of the Treasury the right to naturalize a foreign-built vessel wrecked in American waters reads as follows:

"The Secretary of the Treasury may issue a register or enrollment for any vessel built in a foreign country whenever such vessel shall be wrecked in the United States, and shall be purchased and repaired by a citizen of the United States, if it shall be found to the satisfaction of the Secretary that the repairs put upon such vessel are equal to three-fourths of the cost of the vessel when so repaired."

It appears to the Department that when a vessel is entitled to naturalization under the above act, every part of the vessel is naturalized, including the engine and boilers, if the vessel is a steamer, and is therefore entitled to inspection. In such case the only matter for the inspectors of steam vessels to determine would be as to the strength and safety of the hull, boilers, and machinery, for the purpose for which the steamer is to be used, omitting of necessity the technical matter of the stamping of the plates, for the reason that, as a foreign vessel, the laws under which the boilers were built did not require such stamping.

In the case of a Canadian-built steam vessel naturalized by special act of Congress, it was the opinion of the Attorney-General of the United States that it was plain that the steamer's "boilers would have been entitled to inspection, without being stamped, for the act in question dispenses with all prerequisites to register or enrollment, and therefore amongst these with the stamping of the boiler-plates." (Letter of Attorney-General dated December 22, 1880, Canadian steamer *Kent*.)

So with the general law in question, the only prerequisites required being that the vessel shall have been wrecked in the United States, and purchased and repaired by a citizen of the United States, at a cost equal to three-quarters of the cost of the vessel when repaired.

These prerequisites being complied with in the present case, to the satisfaction of the Department, instructions will be given to the inspectors at Port Huron to inspect the steamer, waiving the matter of stamping of the plates in the boiler.

Very respectfully,

H. F. FRENCH,
Acting Secretary.

CHARLES A. WARD, Esq.,
Port Huron, Mich.

9068.

Relating to use of boilers on steam vessels that have been used for other than marine purposes.

TREASURY DEPARTMENT, September 27, 1888.

GENTLEMEN: I am in receipt (by reference of Hon. John Sherman, United States Senator) of your letter of the 9th instant, in which you wish to be informed * * * whether a boiler that

18251—15

has been used on land only, but in good order, if used in your sawmill, would be subject to the rule or law which applies to passenger or freight boats, which forbids the use of boilers on steam vessels that have been used for land purposes.

In reply, * * * you are informed that, under the Rules and Regulations of the Board of Supervising Inspectors, boilers built previous to February 28, 1872, can not be used, after having been used for land purposes, in any vessel propelled by steam used on navigable waters of the United States. Boilers built since that date, of material stamped according to law, and of which fact there is a record in the office of the local inspectors of steam vessels in the district where the boiler was built, may be used for marine purposes if the boilers are, in the judgment of the inspectors, safe to use, notwithstanding such boilers have been used for land purposes.

Respectfully yours,

HUGH S. THOMPSON, *Acting Secretary.*

Messrs. S. H. NIGH & BRO.,

Ironton, Ohio.

9359.

Size of holes to be drilled in boilers ten years old and upward, to determine thickness.

TREASURY DEPARTMENT, *March 27, 1889.*

SIR: The Department is in receipt of your letter of the 23d instant, inclosing a protest signed by yourself and other steam-vessel owners at Chicago, against the enforcement of that part of section 1, Rule I,* as amended at the recent session of the Board of Supervising Inspectors of Steam Vessels, which requires "Any boiler having been in use ten years or more shall at each annual inspection thereafter be drilled at points near the water line and at the bottom of shell of boiler, or such other points as the local inspectors may direct, to determine the thickness at those points and the general condition of such boiler or boilers at the time of such inspection, and the thickness of said material shall be determined thereafter at each annual inspection, and the steam pressure allowed shall be governed by such ascertained thickness and general condition of the boiler," and you ask that the mandatory part of this rule be repealed and the matter left in the discretion of the local inspectors.

Your letter and protest having been referred to the Supervising Inspector-General of Steam Vessels, that officer reports that the rule to which objection is made is really in the interests of the steamboat owner, and was so considered by the Board when it was adopted. He says it became necessary for the Board to adopt some uniform rule to determine the standard of old boilers

* Rule amended 1890. See page 93.

regarding the steam pressure to be allowed, the question having been brought to its attention through the explosion of the boiler and the loss of the steamer *A. W. Lawrence* when near Milwaukee, on Lake Michigan, with the loss of life of the master, engineer, and two others of her crew. An investigation of this case, so far as was possible, the steamer having gone to the bottom of the lake, disclosed the fact that, notwithstanding the boiler was aged, no measurement of its shell thickness had been obtained since 1882, five years previously, which fact determined in the minds of the supervising inspectors the necessity of a mandatory rule governing such cases, the responsibility being too great for the local inspector to take upon his own volition, unless supported by a higher authority.

The Board had two courses open to secure the end desired. One was to adopt a standard of depreciation for all boilers when they reach a certain age, the other the rule that was finally adopted, and to which your protest applies. The objection to the first method arises from the fact of the eccentricity of boiler depreciation, it being an established fact that some boilers built of the best material and of superior workmanship last but four or five years, while others, no better apparently in any respect, are in good order at twenty and even thirty years of age. Therefore the injustice of a standard of depreciation according to age, while in the rule adopted by the Board each boiler is allowed steam pressure in accordance with its actual value, the holes drilled to determine thickness having no appreciable effect in weakening the boiler.

The Supervising Inspector-General, however, says he can see no object in drilling 1½-inch holes—a ¾-inch gas tap-hole drilled to 1 inch he deems ample—nor can he see the necessity in every case of drilling four holes, as you say the inspectors at Chicago are doing. One hole at water line and one at bottom of boiler in ordinary cases being ample, and he will so inform the supervising inspector at Detroit, that he may give directions in accordance therewith to his subordinate officers.

Very respectfully,

WILLIAM WINDOW.

Secretary.

WM. HARMAN, Esq.

Manager Chicago Towing Company, Chicago, Ill.

9423.

Construing section 1 of Rule II, Rules and Regulations for Steam Vessels, defining what constitutes ten years' use of boiler.

TREASURY DEPARTMENT, June 8, 1889.

SIR: The Department is in receipt of your letter of the 5th instant, wherein you ask for the Department's construction of so much of the second paragraph of Rule II, as requires boilers to

be tested by boring after ten years' use, to determine thickness of material, whether the term "ten years or more" means ten years from date of first inspection, or ten years actual running time.

In reply, you are informed that the Supervising Inspector-General of Steam Vessels has, in a letter to the supervising inspector Seventh district, dated the 27th ultimo, construed the rule to mean that the "ten years" means "from the date of first inspection." You are further informed that it is within the discretion of the supervising or local inspectors to order boilers bored when they are less than ten years old, if for any reason they think it necessary. The rule was adopted to make such boring compulsory at the end of the ten years, and each year thereafter.

The fact that the material in the boilers of your steamers has been found, under the operation of the rule, deteriorated in thickness since they were put in the boat would seem to determine not only the value of the rule itself but the construction thereof as herein given.

The decision of the local inspectors is returned herewith as requested.

Respectfully yours,

WILLIAM WINDOM,
Secretary.

Mr. JONAS SMITH,
Metropolitan Hotel, New London, Conn.

9588.

Inspectors must make personal examination of stamps on boilers when record was not made at time of building.

TREASURY DEPARTMENT, August 27, 1889.

SIR: The Department is in receipt of your letter of the 22d instant, in which, referring to the letter of the Department to yourself of the 13th instant, you were informed that the boiler of the steam launch *Barrancas* could not be inspected, because of the failure of the inspectors to find the legal stamps thereon, and you now inclose an affidavit of the manufacturer of the boiler, certifying that the *Barrancas* boiler was made of steel stamped 60,000 tensile strength, made by Shoenberger & Co., Pittsburg, Pa., and you ask, on the strength of this affidavit, that the inspectors be directed to make the inspection.

In reply you are informed that this Department has no legal authority to direct the inspectors to make the inspection required, unless they are satisfied from personal visual examination that the material is stamped in the manner required by law, as the inspectors themselves are required to swear substantially to the fact of such stamping in the certificates of inspection they issue,

which they could not do simply on the affidavit of the boiler-maker who built the boiler four years previously, without making themselves liable to the penalties provided in section 4425, Revised Statutes of the United States, for willfully certifying falsely regarding the boiler under consideration, upon a legal requirement of which their only knowledge was through another party.

Respectfully yours,

GEORGE S. BATCHELLER,
Acting Secretary.

B. ROCHEBLAVE, Esq.,
Warrington, Fla.

10295.

Measurement of test pieces of boiler plate for determining reduction of area—Reports to be made to the Supervising Inspector-General.

TREASURY DEPARTMENT,
OFFICE OF SUPERVISING INSPECTOR-GENERAL
OF STEAM VESSELS,
Washington, D. C., October 25, 1890.

To supervising and local inspectors of steam vessels :

Your attention is directed to the provisions of the third paragraph of decision 3423, pages 151 and 152 of the Manual, requiring reports to the Supervising Inspector-General of all tests of material found defective in tensile strength, which decision, it has been ascertained, has not always been complied with.

Supervising and local inspectors having testing machines under their control will be expected hereafter to send to this office copies of all reports of tests that fail to come up to the requirements of the rules in any respect whatever. Supervising inspectors are also advised that while, as a rule, the average measurements of the reduced area of test pieces should be taken for determining the reduction of area, yet in plate over one-half inch thick, where such average would bring the test not over 1 or 2 per cent below the required reduction of area, such material should have the benefit of any calculations of the reduction from the smallest measurement of the fracture, if such measurement would bring the test up to the required reduction of area.

You will please inform the inspectors in your district of this decision.

JAS. A. DUMONT,
Supervising Inspector-General.

Approved :

WILLIAM WINDOM,
Secretary.

Inspection of material of the drums of coil and pipe boilers, and shop number of to be on name plate.

TREASURY DEPARTMENT,
OFFICE OF SUPERVISING INSPECTOR-GENERAL
OF STEAM VESSELS,
Washington, D. C., July 23, 1891.

To supervising and local inspectors of steam vessels, inspection service, and others :

The supervising inspector of the Ninth district has reported to this office the rupture of a steam drum, 20 inches in diameter, attached to a pipe boiler which had been duly approved by the Board of Supervising Inspectors, under the provisions of section 4429, Revised Statutes; such rupture having occurred, as reported, because the material of which it was constructed (iron) was not "rolled to form of shell with the grain of material," as required by section 7 of Rule II. A test of the material since the rupture shows ample tensile strength for the steam pressure allowed, whether with or across the grain, though there is a difference of about 9,000 pounds between the two; whereas the reduction of area with the grain shows 24.32 per cent; while across the grain, to which in this case the material was subjected to the greatest tensile strain, the reduction of area was but 5.94 per cent, or about 9 per cent less than permitted by the Rules and Regulations, section 6 of Rule I.

In order to prevent such accidents in the future, it is deemed advisable that hereafter a sample piece for testing in the usual manner shall be required, and tested under the Rules and Regulations, from all steam drums of boilers applying for the first inspection which are over 15 inches diameter of drum. If drums are made of lap-welded piping, such sample pieces shall be obtained by cutting a strip from one end of the pipe, 2 inches wide, so that the test will be crosswise the roll of the material. If drums are made of riveted iron plate, they must be rolled to form, as required by the rule already referred to.

The inspectors will obtain the usual manufacturer's oath before testing samples, to be filed with their records for reference.

Supervising inspectors, in transmitting their approval to the Treasury Department, of pipe or coil boilers using petroleum as fuel, with steam drums over 15 inches in diameter, will send a copy of the tests of the material of which made, for file with such approval.

Local inspectors are directed to require on the name plates of all new coil or pipe boilers or steam generators not constructed of riveted iron or steel plates the shop number of the boiler, in

addition to the requirements of section 20 of Rule II, for the purpose of identification.

JAS. A. DUMONT,
Supervising Inspector-General.

Approved :

O. L. SPAULDING,
Acting Secretary.

14656.

Inspection of iron and steel plate.

TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE,
OFFICE OF THE SUPERVISING INSPECTOR-GENERAL,
Washington, D. C., February 6, 1894.

To supervising, local, and assistant inspectors of steam vessels, manufacturers of marine boiler plate, boiler manufacturers, and others :

Your attention is invited to the following regulations for carrying into effect the act of Congress approved January 22, 1894, amending section 4430, Title LII, of the Revised Statutes of the United States, relative to inspection of iron or steel boiler plates, by adding thereto a paragraph as follows :

"And the Supervising Inspector-General may, under the direction of the Secretary of the Treasury, detail assistant inspectors from any local inspection district where assistant inspectors are employed, to inspect iron or steel boiler plates at the mills where the same are manufactured ; and if the plates are found in accordance with the rules of the supervising inspectors, the assistant inspector shall stamp the same with the initials of his name, followed by the letters and words, 'U. S. Assistant Inspector ;' and material so stamped shall be accepted by the local inspectors in the districts where such material is to be manufactured into marine boilers as being in full compliance with the requirements of this section regarding the inspection of boiler plates ; it being further provided that any person who affixes any false, forged, fraudulent, spurious, or counterfeit of the stamp herein authorized to be put on by an assistant inspector shall be deemed guilty of a felony, and shall be fined not less than one thousand dollars, nor more than five thousand dollars, and imprisoned not less than two years nor more than five years."

Manufacturers of boiler plate, steel or iron, requiring the services of an assistant inspector, under the provisions of the act quoted, to test boiler plate at the mills where manufactured, must make application to the Supervising Inspector-General direct by mail or telegram, stating, when applications are by mail, the number of plates to be tested, the name and address of

the boiler manufacturer, the local inspection district in which such manufactory is located, accompanied with a duplicate of the boiler manufacturer's order containing size and description of plates required, tensile strength, etc. When application is made by telegram, the details described must be furnished the assistant inspector who may be detailed to make the required tests previous to such tests being made.

Coupons for testing, unless cut off in the presence of the assistant inspector, must be stamped with the manufacturer's stamp at each end of the coupon in such manner that one-half of such stamp shall show on the coupon at the line of shearing or planing, the other half on the plate on same line in such manner that the assistant inspector may, by matching the coupon to the plate, determine to his satisfaction that the coupon is actually from the plate he is to test. In districts having assistant inspectors, where mills are located in the immediate vicinity of the inspector's office—say within 10 miles—the assistant inspector may test as small lots as may be required. When at a greater distance, however, an assistant inspector will not be sent to inspect lots of less than three plates. In cases of lots of three or less plates the material will have to be tested as formerly, namely, by the supervising or local inspector in the district where the plate is to be used.

Assistant inspectors detailed to test material at the mills will, after making the required tests, place thereon the stamps required by the act referred to herein, one of such stamps to be placed over each of the manufacturer's stamps on such plate, required by section 1, Rule I, Rules and Regulations, namely: "All the diagonal corners of each plate, at a distance of about 4 inches from the edges, and at or near the center of the plate." In addition to which, they shall stamp a number under their initials on such plates, so that each plate tested shall be numbered in numerical succession, for record, commencing with No. 1, the numerical order to be continued in all future lots they may test, so that no one assistant inspector's tests shall show duplicate numbered plates.

When tests have been completed, the assistant inspectors making the test shall report the same to the Supervising Inspector-General on blank form 2173, at the same time sending a duplicate thereof to the local inspectors through the supervising inspector of the district where the material is to be used. Under head of "Remarks" at bottom of blank should be noted whether "coupons" were cut off in the inspector's presence or otherwise, as shown by a comparison of sections of stamps on coupon and plate.

JAS. A. DUMONT,
Supervising Inspector-General.

Approved :
W. E. CURTIS,
Acting Secretary.

14908.

Directions for inspection of iron and steel plate.

TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE,
OFFICE OF THE SUPERVISING INSPECTOR-GENERAL,
Washington, D. C., April 27, 1894.

To manufacturers of boilers and boiler plate:

Notice is hereby given that the inspection of iron and steel plate, under the act of Congress approved January 22, 1894, and Department Circular No. 22, dated February 6, 1894, must be confined exclusively to the inspection of iron and steel to be used in the construction of boilers of steam vessels.

Manufacturers of boiler plate will hereafter be required to include in their application for inspection of plate at the mills the following information: Name of steamer, if she has one, upon which the boiler is to be used, for which the plate is ordered. If the steamer is not yet named, then the name of the builder of hull. For whom built. Waters upon which the steamer is to be navigated. United States local inspection district in which she will be inspected. Number and thickness of plates for shell, steam chimneys, linings of same, shell of steam and mud drums. Thickness of head and side sheets, domes, crowns of furnaces and back connections.

To insure prompt inspection of their material, manufacturers of boilers for steam vessels should supply the above information when forwarding their orders to the mills.

JAS. A. DUMONT,
Supervising Inspector-General.

Approved:

W. E. CURTIS,
Acting Secretary.

BULKHEADS.

7510.

*Steamers rebuilt, when required to have water-tight bulkheads—
Case of "B. F. Ferris."*

TREASURY DEPARTMENT, May 13, 1886.

SIR: The Department is in receipt of your letter of the 7th instant, in which you call attention to the opinion of the local inspectors of Cleveland, Ohio, that the steamer *B. F. Ferris*, originally built in 1870. and rebuilt in 1879, "requires three water-

tight bulkheads before she can pass inspection, June 28, 1886, notwithstanding the late inspectors of the district had passed said steamer as exempt from the provisions of section 4490, Revised Statutes, because the date of her original building was previous to the enactment of the statute referred to."

In reply, you are informed that a similar case to that of the *B. F. Ferris* was submitted to the Solicitor of the Treasury in 1885, and that officer rendered an opinion, dated September 30, 1885, in substance that a vessel *rebuilt* since August 28, 1871, though originally built previous thereto, "can not be considered as completed within the spirit or the letter of the law" before the date indicated, and is, therefore, liable to the provisions of law requiring three water-tight bulkheads on passenger steamers navigating the oceans or the great Northern or Northwestern lakes.

In view of this opinion, the Department sustains the action of the present inspectors at Cleveland, in requiring the steamer *B. F. Ferris* to be provided with the "three water-tight cross bulkheads" before granting to said steamer a passenger certificate to navigate Lake Erie, between Sandusky and Catawba Island.

Respectfully yours,

C. S. FAIRCHILD,
Acting Secretary.

A. WEHRLE, Jr.,
Manager Steamer B. F. Ferris, Sandusky, Ohio.

10197.

Steamers navigating Lake Champlain do not require water-tight bulkheads.

TREASURY DEPARTMENT, *September 10, 1890.*

SIR: The Department is in receipt of your letter of the 8th instant, addressed to the Supervising Inspector-General, inclosing letter from the local inspectors at Burlington, Vt., referring to the fact of the omission on the part of their predecessors to require water-tight bulkheads on the steamers *Maquan* and *Reindeer*, as required by section 4490 on "steamers navigating the ocean" and the "great Northern and Northwestern lakes."

In reply, you may inform the inspectors at Burlington that the Department does not consider Lake Champlain—a body of water much less in area than Long Island Sound—as one of the *great* lakes referred to in the statute, the great lakes referred to being the chain of lakes known as Superior, Michigan, Huron, Erie, and Ontario.

The Department therefore decides that the steamers *Maquan* and *Reindeer* are not, under the section of law noted, required to

be provided with water-tight bulkheads such as are required on ocean steamers and steamers navigating the great Northern and Northwestern lakes.

Very respectfully,

GEORGE S. BATCHELLER.

Acting Secretary.

ALEXANDER McMASTER, Esq.,

Supervising Inspector, Ninth District, Buffalo, N. Y.

COLOR BLINDNESS.

4463.

Steam vessels—Indorsement on pilots' licenses.

TREASURY DEPARTMENT, March 19, 1880.

In view of the fact that only one examination for color blindness, as required by Department Circular No. 14, February 17, 1880, will be necessary in any case, supervising and local inspectors are hereby informed that the Department deems it advisable that the evidence of such examination should appear upon the license each pilot receives at the time of the examination, and they are ordered to indorse upon the back of every such license henceforth issued the following form:

Passed examination for color blindness — —, 188—. Surgeon's certificate on file in the office of United States local inspectors at —, as per indorsement upon surrendered license No. —.

*U. S. Local Inspectors of Steam Vessels,
District of —.*

Where this indorsement is original the blank space for number of surrendered license must not be filled.

This arrangement is designed to prevent annoyance to pilots who may be compelled to renew their licenses in districts other than those in which they were examined and in which the record of the examination is kept.

India-rubber stamps for printing above form upon the licenses will be furnished by the Department and sent to each local board as soon as practicable. In the meanwhile the indorsement must be written on the licenses.

Inspectors will acknowledge the receipt of this circular.

JOHN SHERMAN,

Secretary.

*Steam vessels—Incomplete color blindness.*TREASURY DEPARTMENT, *March 11, 1881.*

SIR: The Department has received, by reference from yourself, the letter from the local inspectors at Evansville, Ind., in which they inquire whether James Burnett, who was pronounced completely color-blind, may be licensed as a pilot to run upon a daylight route only.

In reply, you are informed that, in cases similar to the one presented, licenses should be given to special boats known to the inspectors not to be engaged in the nighttime. This would be in accordance with the spirit of the last clause of the first paragraph of rule 44,* Rules and Regulations.

The amendment to the rule relating to this subject adopted at the last annual meeting was not approved.

Very respectfully,

H. F. FRENCH,
Acting Secretary.

SUPERVISING INSPECTOR SIXTH DISTRICT,
Louisville, Ky.

4441.

*Steam vessels—Modifications of Department Circular No. 14, relating to examination of pilots for color blindness.*TREASURY DEPARTMENT, *March 9, 1880.*

In view of the expense and hardship likely to accrue to pilots living at points remote from stations of the Revenue Marine Hospital Service, in visiting such stations for the purpose of being examined as to color blindness, as required by the amendment to rule 47,* Rules and Regulations of the Board of Supervising Inspectors, Department Circular No. 14. dated February 17, 1880, is hereby so modified as to allow pilots employed at places remote from a marine-hospital station to be examined by any respectable resident physician, whose certificate that such pilot is exempt from the disease known as color blindness shall accompany the license and oath of office of such officer when sent to any board of local inspectors for renewal of his license in the manner provided in rule 42,† Rules and Regulations. Upon the receipt of the certificate a license shall be issued the same as though said examination had been made by a marine-hospital surgeon. This modification is not to be applied to applicants for original licenses; they, in all cases, must be examined in the manner provided in Circular No. 14.

* Now section 10, Rule V, page 143.

† Now section 1, Rule V, page 136.

A second visual examination will not be required in any case, and inspectors will therefore retain all certificates upon their permanent files for reference in cases of applications for renewal of license.

JOHN SHERMAN,
Secretary.

SUPERVISING AND LOCAL INSPECTORS
OF STEAM VESSELS.

Steam vessels—Reexamination of pilots for color blindness.

TREASURY DEPARTMENT, *November 5, 1880.*

SIR: The Department has received your letter of the 28th ultimo, in which you ask that, having been rejected in your examination for a pilot's license on account of color blindness, you may be accorded a second examination by the local inspectors. In reply, you are informed that if your case comes within the provisions of Department Circular No. 46, of 1880, a copy of which is herewith inclosed, you are entitled to appear before the local inspectors at Boston for reexamination without appeal to the Department. Otherwise the Department is not disposed to make further modification of the regulations upon this subject.

Very respectfully,

J. K. UPTON,
Acting Secretary.

HORACE K. HALLETT, Esq.,
Boston, Mass.

COTTON—CARRIAGE OF.

6678.

Steam vessels—Carriage of cotton, etc.

TREASURY DEPARTMENT, *December 12, 1884.*

SIR: The Department is in receipt of your letter of the 8th instant, asking if the law (section 4472, Revised Statutes) means that uncompressed cotton shall have side bagging when shipped on a river boat, or whether covering over completely the cotton with tarpaulins answers the purpose of the law.

In reply, you are informed that the law referred to says that "no loose * * * cotton * * * shall be carried as freight * * * on any steamer carrying passengers, nor shall baled cotton * * * be carried on such steamers unless the bales are compactly pressed and thoroughly covered with bagging of similar fabric, and secured with good rope or iron bands."

The Department holds to a strict construction of the law as it reads, namely, that each bale of cotton must be thoroughly covered. The penalty for failure to comply therewith would involve a penalty of \$5 for each bale of cotton not properly covered. The law, however, only applies to *passenger* steamers, and not to steamers licensed to carry freight only.

Very respectfully,

CHAS. E. COON,
Acting Secretary.

FRANCIS C. STANWOOD, Esq.,
Columbus, Ga.

DANGEROUS ARTICLES.

"Dangerous articles" on passenger steamers.

TREASURY DEPARTMENT, *April 29, 1879.*

SIR: The Department has received your letter of the 24th instant, requesting that you may be informed which is the proper construction of that paragraph of section 4472, Revised Statutes, which refers to the carrying of "dangerous articles" on passenger steamers, and reads as follows:

"* * * Refined petroleum which will not ignite at a temperature less than 110 degrees Fahrenheit thermometer, may be carried on board such steamers, upon routes where there is no other practicable mode of transporting it, and under such regulations as shall be prescribed by the Board of Supervising Inspectors, with the approval of the Secretary of the Treasury; and oil or spirits of turpentine may be carried on such steamer when put up in good metallic vessels; * * * and friction matches may be carried on such steamer when securely packed." * * *

The question turns upon the point whether turpentine and matches may be carried upon passenger steamers when there is no other practicable mode of transporting them, or whether that restriction applies only to petroleum, leaving the other articles free to be carried upon any passenger steamer, provided they are carefully packed. You say that the latter construction seems the proper one to you, in which opinion you are sustained by the Department, which hereby decides that the restricting phrase, "upon routes where there is no other practicable mode of transporting it," refers to refined petroleum only.

Very respectfully,

JOHN B. HAWLEY,
Assistant Secretary.

GUSTAVUS ST. GEM, Esq.,
Surveyor of Customs, St. Louis, Mo.

Inflammable materials, transportation of.

TREASURY DEPARTMENT, June 4, 1879.

SIR: The Department is in receipt of your letter of the 26th ultimo, in which you desire to be informed as to whether that portion of section 4472, Revised Statutes, which prohibits the carrying of loose hay, loose cotton, and loose hemp, or of baled cotton or hemp, unless such bales are compactly pressed and thoroughly covered with bagging of similar fabric, would also prohibit the carrying on steam vessels of baled excelsior or tow, unless properly covered. In reply, you are informed that it is the opinion of the Department that the article "hemp," named in the statute, is intended to apply to all vegetable fibrous productions of an inflammable nature. "Excelsior" or tow would be included therein, and should be properly covered when carried on passenger steamers.

Very respectfully,

JOHN B. HAWLEY,
Assistant Secretary.

WM. SCOTT, Esq.,
*Agent New Haven Steamboat Company,
Pier 25, East River, New York.*

Steam vessels—Carriage of explosive and inflammable articles.

TREASURY DEPARTMENT, January 13, 1881.

SIR: The Department has received your letter of the 6th instant, inclosing correspondence between the local inspectors at New London and yourself, relative to your right to carry upon passenger steamers empty barrels that had contained naphtha, benzine, gasoline, or other like dangerous articles, and you request the Department's decision on the subject.

You also refer to and ask the Department to note a question addressed by you to said inspectors in a letter dated 4th instant, among the inclosures, which is as follows: "Whether it is necessary for us to apply for permission to carry refined petroleum which will not ignite under 110°? If so, please inform us to whom, when, and where."

In reply to the first question, you are informed that the Department holds that barrels which have contained naphtha, benzine, gasoline, etc., are dangerous articles to carry on passenger steamers, and are among those intended to be prohibited by section 4472, Revised Statutes.

* * * * *

H. F. FRENCH,
Assistant Secretary.

WILLIAM SCOTT, Esq.,
Agent New Haven Steamboat Company, New York.

Steam vessels—Carriage of inflammable oils.

TREASURY DEPARTMENT, June 9, 1881.

SIR: The Department has received your letter of the 4th instant stating that in February last the local inspectors at New London revoked your license to carry refined petroleum, since which time you have been at the expense of transporting such oils by schooner; and, under a recent decision of Justice Matthews, you ask for a ruling by the Department as to the authority of the passenger steamers of the Continental Steamboat Company to carry kerosene oil.

In reply, you are informed that the decision of Judge Matthews referred to simply sustains that heretofore held by the Department, namely, that where the charges for carrying refined petroleum oil on other than steamboat routes amount to a prohibition of the traffic in such oils, such other routes are not practicable under law, and in such cases the oil may be carried upon passenger steamers. The Solicitor of the Treasury, in an opinion rendered January 25, 1876, says:

"I had occasion to consider this question in a letter addressed to you on the 7th of March last, relating to the shipment of refined petroleum on board passenger steamers from Pittsburg, Pa., to Fort Benton, on the Upper Missouri River.

"It was claimed and shown in that case that, unless the parties were permitted to ship as far as it was possible for them to do so by water, that the extra expense and probabilities of delay consequent upon any other modes of shipment would render it wholly impracticable for them to forward their goods at all, and consequently that they would be compelled to abandon the business altogether. My reply was that the simple question of expense can not determine this matter in any given case unless this fact shall act as a prohibition of the trade."

Judge Matthews, in his decision, says:

"It is therefore held that when the prohibition of shipping refined petroleum upon passenger steamers amounts to a destruction of the trade in this article between any two points, then the other route, which might be mechanically practicable, is not commercially practicable, and is not practicable within the meaning of the statute."

In the case before Judge Matthews the defendants presented the fact that the charges between the ports where the refined petroleum had been carried was but 50 cents per barrel by steamer, while it was \$2 by rail, which Judge Matthews deemed an excess amounting to a prohibition of the traffic, and concludes, therefore, that— * * * "Although the railroad route between the points in question is practicable in a physical and mechanical sense, in a sense that petroleum *can be transported by means of it*, still it is not practicable in a commercial sense, which Congress evidently intended to give it."

If the local inspectors at New London are satisfied that the excess of 10 cents per barrel on refined petroleum shipped by rail from Providence to Newport over that charged by your boats amounts to a prohibition of the traffic, they would be warranted in giving you a permit to carry such oils; not otherwise.

Very respectfully,

H. F. FRENCH,
Acting Secretary.

NATHANIEL F. HALLETT, Esq.,
Superintendent Continental Steamboat Company,
Providence, R. I.

5254.

Steam vessels—Illuminating oils to be used on.

TREASURY DEPARTMENT, June 6, 1882.

SIR: The Department is in receipt of your letter of the 2d instant, referring to Department Circular No. 57, dated May 24, 1882, in which you ask if said circular is intended to prohibit the use, as stores, of oil which will stand a fire test of 300° Fahrenheit on steamers carrying passengers, heretofore permitted under rule 29* of the Board of Supervising Inspectors.

You are informed that the circular referred to was intended to prohibit the use as stores the class of oils forbidden to be so used by section 4472, Revised Statutes. Rule 29,* Rules and Regulations, as amended, does not permit such oils to be used when of 300° fire test, although previously it did so. But the Solicitor of the Treasury having decided that such permission was contrary to law, the paragraph in said rule authorizing it was amended to read as follows: "No oil that will stand a fire test of less than 300° Fahrenheit shall be used as stores on any steamer carrying passengers." The word *no*, beginning the paragraph, being substituted for the word *any*, and the word *shall*, beginning the third line, taking the place of the word *may* in the old rule; the object being to set a measure of safety to other than the oils prohibited by statute, the Board having no authority to make a rule conflicting with the letter of the law,

Very respectfully,

CHAS. J. FOLGER,
Secretary.

SURVEYOR OF CUSTOMS,
Louisville, Ky.

* Now sections 4 and 5, Rule X, pages 155, 156.

Petroleum—Carriage of.

TREASURY DEPARTMENT, June 10, 1886.

SIR: In reply to your letter of the 8th instant, you are informed that there is no authority conferred by law upon any officer of the Government to permit the carriage of petroleum on passenger steamers upon routes upon which there is any other practical method of carrying it.

As you say you carry no passengers upon your Saturday trips to New York and return, the trips upon which you desire to carry refined petroleum, the object may be accomplished by having the character of the steamer changed upon that particular trip to that of "freight steamer," which may be done by indorsement upon the inspection certificate by the local inspectors at New York, and instructions will be given to the inspectors to that effect.

The indorsement should be as follows: "The character of this steamer is changed to that of a *freight* steamer upon the Saturday trip from Newburgh to New York and return."

Your attention is particularly called to the fact that if, after such change of character as noted, any passenger should be carried upon the specified trip, the steamer will be liable to the penalties provided therefor.

Respectfully yours,

W. E. SMITH,
Assistant Secretary.

W. J. IRWIN, Esq.,
The Newburgh Steamboat Company, Newburgh, N. Y.

12071.*Petroleum, etc., transported on steam vessels.*

TREASURY DEPARTMENT, November 14, 1891.

SIR: In reply to your petition of the 23d ultimo, for relief in the matter of a fine incurred by the steamer *D. H. Pike*, this Department has to state that the fine imposed has been reduced to \$100 and costs. For further particulars you are referred to the United States district attorney at St. Louis, who has been instructed in regard to the matter.

A copy of section 4472, Revised Statutes, is inclosed herewith, and your attention is invited to the fact that a permit granted in contravention thereof will not be valid; that petroleum can be carried in vessels like the *D. H. Pike* only when there is no other practicable mode of transporting it, and that naphtha, benzine,

benzole, or crude petroleum can not be carried, legally, on passenger steamers under any circumstances.

Respectfully yours,

O. L. SPAULDING,
Acting Secretary.

TURNER T. LEWIS, Esq.,
*Vice-president St. Louis, Naples and Peoria
Packet Company, St. Louis, Mo.*

9560.

New permits to use petroleum as fuel on steamers will not be issued upon change of ownership or names.

TREASURY DEPARTMENT, *August 12, 1889.*

SIR: I return herewith "Permit to use petroleum" for the steam yacht *Meridas*, issued to you on July 11, 1889, and returned here for change of permit, upon the ground that the vessel has changed name and ownership, the new name being *Swiftsure*.

The Department declines to issue new permits to the class of vessels referred to upon every change of ownership, as such changes may be, and possibly are, made several times during a single year, and such frequent changes would confuse the records of the Department. In the present case the permit already issued was less than a month old at the date of your application.

Respectfully yours,

WILLIAM WINDOW,
Secretary.

ELLIS R. MEEKER, Esq.,
*General Agent Ofeldt Gas Steam Generating System,
foot of Fifty-sixth street, South Brooklyn, N. Y.*

8795.

Transportation of petroleum on passenger steamers.

TREASURY DEPARTMENT, *April 23, 1888.*

SIR: The Department is in receipt of your letter of the 19th instant, in which you ask its opinion as to whether your passenger steamers can legally carry refined petroleum from Detroit to Mackinac Island and St. Ignace, the latter point being accessible by rail, and the former by rail and ferry of 8 or 10 miles, across the straits.

In reply, you are informed that if there are sailing vessels or freight steamers running regularly between Detroit and the ports named in your letter, it would be illegal for passenger steamers to carry refined petroleum. If there are no freight

steamers or sail vessels employed on the route, the carriage of petroleum on passenger steamers would depend upon whether the tariff of freight is so high on the all-rail and ferriage routes as to amount to a prohibition of the traffic in refined petroleum. If it would be, then such oils could be legally carried on passenger steamers, subject to the restriction for safety provided in sections 3 to 5, inclusive, Rule X, of the Rules and Regulations of the Board of Supervising Inspectors.

Respectfully yours,

C. S. FAIRCHILD,
Secretary.

D. CARTER, Esq.,
General Manager Detroit and Cleveland
Steam Navigation Company, Detroit, Mich.

9300.

Steam vessels—Transportation of empty petroleum barrels on passenger steamers. (Synopsis 4745 modified.)

TREASURY DEPARTMENT, March 21, 1889.

SIR: The Department is in receipt of your letter of the 19th instant, inclosing a notice received by the master of the steamer *R. E. Phillips* from the local inspectors at Wheeling, W. Va., forbidding that steamer carrying empty petroleum barrels, they claiming that such barrels are dangerous articles, such as are forbidden by the Revised Statutes, section 4472, to be carried on passenger steamers, and you ask that this order of the inspectors be rescinded.

In reply, you are informed that the local inspectors at Wheeling, in issuing the instructions referred to, were acting according to the strict letter of Department Decision 4745, dated January 13, 1881.

That this ruling has been neglected does not seem to the Department sufficient reason that it should continue to be so neglected, as would seem to be the assumption expressed in your letter, yet the decision referred to was not intended to prevent passenger steamers duly authorized by law to carry petroleum oils "on routes where there is no other practical mode of transporting it" from returning the empty barrels which contained the oil back to the port of shipment when properly stored on such part of the steamer as the inspectors shall direct in the certificate authorizing the carriage of the oil, and the inspectors will be notified of this interpretation of Decision 4745.

Respectfully yours,

WILLIAM WINDOM,
Secretary.

GEORGE RICE, Esq.,
Proprietor Ohio Oil Works, Marietta, Ohio.

***Transportation of gasoline or other similar products of petroleum
forbidden on passenger steamers.***

TREASURY DEPARTMENT, *June 17, 1889.*

SIR: The Department is in receipt of your letter of the 15th instant, with letter inclosed to yourself of the 13th instant from William M. Bird & Co., of your city, requesting that you would obtain from the Department a decision as to whether "gasoline" might not be carried on passenger steamers to Sullivans Island, South Carolina, there being no railroad communication between Charleston and the island.

In reply you are informed that under the provisions of section 4472, Revised Statutes, the only product of petroleum that can be carried on passenger steamers is refined petroleum which will not ignite at a temperature less than 110 degrees, Fahrenheit thermometer, and then only upon routes where there is no other practical mode of transporting it. Whereas "gasoline," which ignites at 60 to 70 degrees Fahrenheit, is simply another name for "naphtha," "benzine," "benzole," etc., articles which are absolutely prohibited in terms in the statute referred to from being carried on passenger steamers under any circumstances whatever.

Respectfully yours,

GEO. S. BATCHELLER,
Acting Secretary.

COLLECTOR OF CUSTOMS,
Charleston, S. C.

EXCURSIONS AND EXCURSION STEAMERS.

[Treasury Department, Office Supervising Inspector-General of
Steamboats.]

ALBANY, N. Y., *August 27, 1880.*

GENTLEMEN: In reply to your verbal inquiry of this date in relation to granting an extra number of passengers to steamers running upon a regular route, you are informed that it is your duty to grant such steamers a permit for such purpose by indorsement upon the regular certificate on hand and upon the original certificate in the custom-house, being careful not to allow more additional passengers than can be carried with prudence and safety, and seeing that additional life-saving appliances for the purpose are put on board of such steamers, the number and kind to be noted in said indorsement, particular care being taken to see that there are sufficient accommodations for the additional passengers, and in all cases there must be a life-preserver for every cabin passenger.

Very respectfully,

JAS. A. DUMONT.

Steam vessels—Excursion permits may be issued for the season.

TREASURY DEPARTMENT, *July 5, 1881.*

GENTLEMEN: The Department has received your letter of 28th ultimo, in which you inquire whether, under the provisions of rule 78* of the Rules and Regulations of the Board of Supervising Inspectors of Steam Vessels, excursion permits may not be issued to steamers carrying passengers for a period of thirty or sixty days, instead of for but single trips.

You are informed, in reply, that the Department sees no objection to passenger steamers receiving permits to carry excursions during the season, with restrictions as to distance, and with the provision that the necessary life-saving equipments shall be kept constantly on board.

* * * * *

Very respectfully,

H. F. FRENCH,
Acting Secretary.

The DETROIT AND CLEVELAND
STEAM NAVIGATION COMPANY,
Detroit, Mich.

14040.

Overcrowding passenger steamers.

TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE,
OFFICE OF SUPERVISING INSPECTOR-GENERAL,
Washington, D. C., May 27, 1893.

Collectors or other chief officers of customs and inspectors of steamboats are hereby notified that Department Circular No. 64, June 11, 1881, in relation to their duties under section 4496, Revised Statutes, is still in force and must be observed accordingly. The essential part of said circular is quoted as follows:

* * * * *

"In view of the large number of passengers carried on passenger and excursion steamers during the season of summer travel, and the frequent complaints that many carry an excess of passengers over the number allowed by their certificates of inspection or excursion permits, it is desirable that officers of the Government whose duty it is to prevent such abuses shall give especial attention to the matter and prevent the overcrowding of such steamers by prosecution for penalties, if such action shall be found necessary.

"Collectors and surveyors of customs are, therefore, directed to instruct their subordinates to make careful examination of

* Now section 1, Rule VIII, p. 150.

such steamers, and to report all cases of violation of law for prosecution. Extra efforts in this direction should be made upon Sundays, and particularly upon the 4th of July. The section of law referred to herein reads as follows :

“Section 4496. All collectors or other chief officers of the customs, and all inspectors within the several districts, shall enforce the provisions of this title against all steamers arriving and departing.”

“Supervising inspectors will instruct the local inspectors to detail one-half their force upon each alternate Sunday for duty in the vicinity of their home ports for the purpose of ascertaining, by actual count of passengers, if necessary, whether the law is complied with, and upon the 4th of July the whole force will be so employed. Inspectors of steam vessels will confer with the chief officers of customs of their districts as to the best methods of carrying out this order. In all cases where it is found necessary to prosecute, the officer prosecuting will report all the facts to the Department for its information.

“A zealous effort on the part of the officers named herein in the performance of the duties required will, it is believed, effectually check the evil complained of.”

In view of a conflict of opinion having arisen in some of the districts as to the authority of inspectors issuing excursion permits on waters not included in the local inspection district issuing such permit, inspectors are informed that any local board of inspectors can issue an excursion permit under section 4466, Revised Statutes, to any steamer then in the waters of their district, to cover all the waters named in the steamer's regular annual certificate of inspection, she being properly equipped and safe, in their judgment, to carry the additional passengers ; and such excursion permit is valid, even though used in waters wholly without the district in which the permit is issued.

In view of the large additional excursion traffic anticipated in consequence of the Columbian Exposition at Chicago, Ill., it is expected that all officers of the service will be exceptionally vigilant in enforcing a strict compliance with the laws relating to both passenger and excursion steamers, to the end that passengers on steam vessels may have the utmost confidence in the safety of American steamboat travel.

JAS. A. DUMONT,
Supervising Inspector-General.

Approved :

J. G. CARLISLE,
Secretary.

Canadian steamers—Passengers on.

TREASURY DEPARTMENT,
BUREAU OF NAVIGATION,
Washington, D. C., September 19, 1887.

SIR: This office is in receipt of your letter dated the 9th instant, relative to certain Canadian steam vessels carrying excursionists in the United States.

The Acting Solicitor of the Treasury has expressed the opinion that the inhibition of section 8 of the act of June 19, 1886, to abolish certain fees, etc., relates to the transportation of passengers between ports or places in the United States when such passengers were taken on board in the United States, but does not include passengers brought on an excursion from a foreign port and temporarily landed at one or more ports in the United States, the act referring to passengers who are transported between domestic ports and who embark in the first instance in the United States.

You may make your practice conform to this opinion.

Respectfully yours,

C. B. MORTON,
Commissioner.

COLLECTOR OF CUSTOMS,
Cape Vincent, N. Y.

*Steam vessels—Jurisdiction of inspectors regarding excursion permits.**

TREASURY DEPARTMENT, September 21, 1880.

SIR: In reply to an inquiry contained in your letter of the 16th instant you are informed that where the route of an excursion steamer lies wholly within the limits of any particular inspection district, the inspectors of that district alone could issue an excursion permit; but where the route is upon the waters of more than one inspection district, the inspectors of either district would have power to issue an excursion permit.

Very respectfully,

H. F. FRENCH,
Assistant Secretary.

JOHN D. SHEPARD,
Supervising Inspector Ninth District, Buffalo, N. Y.

* Not published in monthly synopsis of decisions.

EXPENSE ACCOUNTS OF INSPECTORS.

11672.

Owner of boiler constructed under section 4429, Revised Statutes, must pay actual expenses of supervising inspectors incurred for examination of same when special trip is made from home port to make such examination.

TREASURY DEPARTMENT, August 28, 1891.

SIR: The Department is in receipt of your letter of the 21st instant, in re the examination of a pipe boiler or generator which your son, as you state, wishes to use in a steam launch for pleasure purposes only, in which you complain of the action of the supervising inspector at Detroit in requiring that his actual expenses shall be paid from Detroit to Chicago and return for the purpose of making the necessary examination of the boiler preliminary to this Department granting a permit, as required by section 4429, Revised Statutes, and, in support of your objection, you cite the fact that Congress has repealed the fees for the inspection of steam vessels, and claim that therefore the supervising inspector's demand for his expenses are unauthorized.

In reply, you are informed that the fees abolished by Congress were for inspections made under the provisions of sections 4417 and 4418, Revised Statutes. No fees were ever authorized for examination of newly invented boilers, such as provided for in section 4429, Revised Statutes, and the provisions contained in amendment thereto. Therefore there were no fees to abolish in connection with the statute referred to. The provisions of section 4429, Revised Statutes, affecting such boilers as yours are as follows:

"Nothing in this Title (LII) shall be so construed as to prevent from being used on any steamer any boiler or steam generator which may not be constructed of riveted iron or steel plates when the Board of Supervising Inspectors have satisfactory evidence that such boiler or steam generator is equal in strength, and as safe from explosion, as a boiler of the best quality constructed of riveted iron or steel plates."

Subsequent to the enactment of the law quoted Congress, at the suggestion of this Department, added the following proviso:

"Provided, however, That the Secretary of the Treasury may grant permission to use any boiler or steam generator not constructed of riveted iron or steel plates, upon the certificate of the supervising inspector of steamboats for the district wherein such boiler or generator is to be used, and other satisfactory proof that the use of the same is safe and efficient, said permit to be valid until the next regular meeting of the supervising inspectors who shall act thereon."

In all cases heretofore, when parties interested have had boilers or generators approved under the proviso quoted, the supervising inspector has collected the actual expenses incurred in making the examination, the Department not considering such services as being "necessarily rendered" in behalf of the public interests, any more than it would be to pay the traveling expenses of the whole Board of Supervising Inspectors to visit Chicago to make the final examination of your boiler at the time of its regular meeting, as required by the proviso quoted.

The supervising inspector at Detroit errs, however, in demanding that the other experts required in examinations such as under consideration shall be of "my own (his) selection," and the Supervising Inspector-General will so inform that officer.

The other experts may be selected by the party owning the boiler, but the Department regulations (see copy of certificate inclosed) require the supervising inspector to certify that the "experts indorsing the application of the builder are known to me by reputation to be competent and trustworthy persons, whose judgment may be relied upon as to the safety and efficiency of steam boilers and generators." These requirements, no doubt, led the supervising inspector to adopt the radical assumption that the experts must be of the supervising inspector's own selection.

In conclusion, the Department suggests that it is your privilege either to comply with the supervising inspector's reasonable demand as to the payment of his own actual expenses, or you can let the matter wait, if you prefer, so as to present it to the Board of Supervising Inspectors at their next regular meeting, under the general provisions of section 4429, Revised Statutes.

There will be no charge for the actual inspection of the vessel after the boiler is legally certificated.

Very respectfully,

CHARLES FOSTER,
Secretary.

JAMES P. ROOT, Esq.,
514, 515 Temple Court, 225 Dearborn street, Chicago, Ill.

*Method of preparing mileage and other expense accounts of
inspectors of steam vessels.*

TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE,
OFFICE OF THE SUPERVISING INSPECTOR-GENERAL,
Washington, D. C., May 21, 1895.

To inspectors of steam vessels:

You are hereby directed, in making out your mileage expense accounts, as authorized by the act of Congress approved March 1, 1895, to prepare them in the following manner, on the inside pages of form 2107:

A proper description of the route back will be given, inserting the dates and carrying out the amount as when going. When the return route is the same as when going, an entry as follows will be sufficient: Returned from above trip by same route. Number of miles —, at 8 cents a mile, \$—.

No charge, however, shall be made for fractions of a mile less than one half a mile; if half a mile or over, one mile may be charged.

STATE OF ———, ss:

 ,
 Inspector.

Until a new edition of form 2107 can be printed, the present edition may be used for rendering accounts, inspectors to make

the necessary erasures and interlineations to conform with the instructions contained herein.

JAS. A. DUMONT,
Supervising Inspector-General.

Approved :
S. WIKE,
Acting Secretary.

Amended regulations traveling and other expense accounts of inspectors of steam vessels.

TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE,
OFFICE OF THE SUPERVISING INSPECTOR-GENERAL,
Washington, D. C., June 28, 1895.

To inspectors of steam vessels :

There has been mailed to you this day, under separate cover, a copy of the "Official Table of Distances" compiled by authority of the Secretary of War.

You are hereby informed that all traveling expenses incurred in the performance of your duties, after July 1, 1895, for which you are entitled to mileage under the act of Congress approved March 1, 1895, must be charged for in accordance with the "Official Table of Distances" in all cases where the distances traveled by inspectors in the performance of their duties are found in such tables, and that such distances will be the only ones allowed in the settlement of their accounts. When, however, distances are not found in such tables (except at home ports), they may be taken from the railroad or steamboat time tables, by the "shortest usually traveled route."

When charging mileage from the official distance tables, that fact should be indicated, after stating the names of the places between which the traveling was done, by the initials of the words "official distances," as follows :

From ——— to ———, — miles, O. D., ———.

Otherwise the railroad or steamboat route should be given as formerly, with time table distances.

In cases where the distance from starting to terminal points are not directly given, such distances may usually be found from distances in table between intermediate points. the aggregate of which would give the required distance.

This circular letter supersedes that one on the same subject dated May 1, 1895, in all matters where the terms of said circular are inconsistent with this one.

Respectfully yours,

JAS. A. DUMONT,
Supervising Inspector-General.

Approved :
S. WIKE,
Acting Secretary.

FERRY BOATS.

9316.

Ferryboats—Illegal to leave their regular routes with passengers, except under excursion permit.

TREASURY DEPARTMENT, March 29, 1889.

DEAR SIR: Your letter of the 3d instant, inclosing a copy of Supervising Inspector Hays's decision and findings in the matter of S. D. Van Gorder, upon appeal from the decision of the United States local inspectors, district of Galena, Ill., was duly received, and in view of the fact that Mr. Hays's decision was directly opposed to the laws of Congress and the Rules and Regulations of the Board of Supervising Inspectors as always heretofore construed by this Department, the matter was referred to the Solicitor of the Treasury for his opinion, a copy of which, dated March 26, 1889, please find inclosed.

The Solicitor's opinion, as will be observed, is substantially opposed to the findings of Supervising Inspector Hays. But, as the sentence of suspension imposed upon Captain Van Gorder has about expired, the Solicitor's opinion will be of no special disadvantage to him.

You are further informed that the steamer *Van Gorder*, by taking an excursion party outside the jurisdiction of her United States certificate of inspection, incurred a penalty of \$500 under the provisions of section 4500, Revised Statutes of the United States. But as the inspectors at Galena, inadvertently perhaps, neglected to perform their duty in this respect, this I am not now disposed to review; but will, under the powers conferred upon the Secretary of the Treasury by section 5204, Revised Statutes of the United States, remit the penalty.

Respectfully yours,

WILLIAM WINDOW,
Secretary.

Hon. C. K. DAVIS,
United States Senate, Washington, D. C.

[Opinion of the Solicitor referred to above.]

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., March 26, 1889.

SIR: I have considered the question presented by your indorsement, made on papers herewith returned, relating to an appeal taken, under the provisions of section 4452, Revised Statutes, by S. D. Van Gorder, master of the steam ferryboat *Van Gorder*, from the decision of the United States local inspectors for the

district of Galena, Ill., whereby the license of said appellant, as master and pilot, was suspended for a period of sixty days for an alleged violation of the provisions of Title 52, Revised Statutes.

It appears that this vessel was inspected as provided for in section 4426 of said Title, and was granted a license to navigate for one year, as a ferryboat, the Mississippi River, which is a navigable water of the United States and a highway of commerce. The certificate of inspection issued for this purpose by the board of local inspectors expressly designates the routes to be navigated by said vessel, viz: "Between Winona, Minn., and upper and lower landings on opposite shore, and between La Crosse, Wis., and opposite shore in Minnesota."

I understand it to be conceded that the vessel departed from the routes above described, and that on the 25th day of December, 1888, it was navigated by direction and under the control of Captain Van Gorder, from Winona, Minn., to Fountain City, Wis., a distance of about 8 miles, with an excursion party on board numbering about 25 persons.

For this violation of the terms and conditions contained in the certificate of inspection the master's license was suspended by the local board of inspectors, as stated above.

On appeal, taken to the supervising inspector, as provided for in section 4452, Revised Statutes, this action on the part of the local inspectors was revoked by the supervising inspector for the following among other reasons, viz:

"That by an act of the Wisconsin legislature, approved February 16, 1885, said S. D. Van Gorder was granted a charter to operate a ferry for fourteen years from February 20, 1885, between the corporate limits of the city of Winona and Buffalo County, Wis. * * * That the steamer *Van Gorder* did not at the time of the alleged infraction of the law proceed beyond the limits of Buffalo County, Wis., by navigating the Mississippi River as far as Fountain City, which point might properly be called upper landing, as it is in fact a regular landing for steamboats in Buffalo County, Wis. Her passenger list on December 25, 1888, did not exceed the number the boat was allowed by law to carry, hence it can not be considered as an excursion."

Upon this state of facts you request my "opinion as to whether the supervising inspector of the fifth district, in his decision, has not exceeded the authority conferred upon him by section 4452, Revised Statutes, in revoking the decision of the local inspectors of steam vessels by directing that a ferryboat sailing under a ferry license, passengers unlimited, may carry an excursion party without a permit therefor, with an unlimited number of passengers, beyond the jurisdiction of the ferry route of the steamer as defined in her certificate of inspection."

Section 4426, Revised Statutes, provides that "the hull and boilers of every ferryboat * * * shall be inspected, * * * and such other provision of law for the better security of life

as may be applicable to such vessels shall, by the regulations of the Board of Supervising Inspectors, also be required to be complied with before a certificate of inspection shall be granted."

The regulations established by the Board of Supervising Inspectors, and approved by the Secretary of the Treasury, to carry out the provisions of the statute relating to ferryboats, provide, among other things, that the navigation of such vessels must be confined to the ferry route specified in the inspection certificate issued, but that such vessels may be permitted, under excursion permits, to go beyond their authorized routes with passengers only, or without such permit to lighten or relieve vessels in distress."

A strict observance of the law and regulations above referred to should be enforced for the reason that the statute expressly exempts this class of vessels from the provisions of law requiring the inspectors to state in the certificate of inspection the number of passengers that can be carried with prudence and safety. (Section 4464.)

In my opinion the navigation of this vessel beyond the limits of the routes defined by the certificate of inspection was a violation of law, notwithstanding the charter that was granted by an act of the legislature of Wisconsin.

The charter thus granted can have no bearing on the question submitted.

Very respectfully,

C. C. CARY,
Solicitor.

The SECRETARY OF THE TREASURY.

FINES AND PENALTIES.

3728.

*Circular to supervising and local inspectors of steam vessels,
relating to seizures and fines.*

[1878.—Department No. 105.—Steamboat inspection.]

TREASURY DEPARTMENT,
Washington, D. C., September 26, 1878.

Supervising and local inspectors of steam vessels are hereby directed to inform the United States district attorney of the district of all violations, by licensed officers or owners, of Title 52, Revised Statutes, where the penalty provided for such violation is a fine, and to accompany said information with copies of all papers in the case.

Where the penalty imposed is upon the vessel, they will also report the facts to said United States attorney and to the chief officer of customs of the district.

Inspectors have no authority, under the statutes, to impose and collect fines from such vessels, or from licensed officers and owners of the same.

They are also informed that nothing herein contained is to be construed as discontinuing the reports heretofore made by them on the subject, to the Supervising Inspector-General of Steamboats, under the provisions of Department Circular No. 116, dated September 3, 1877.

JOHN SHERMAN,
Secretary.

4628.

Steam vessels—Fines on.

TREASURY DEPARTMENT, *July 29, 1880.*

SIR: The Department has received your letter of the 24th instant, asking to be informed if steamers running under expired certificates are to be reported for violation of section 4424, Revised Statutes, only.

In reply, you are informed that a steamer running under an expired certificate violates section 4417, Revised Statutes, and is liable to the penalty provided in either section 4499 or 4500, Revised Statutes, namely, \$500, such violation not being otherwise provided for.

The penalty of \$100 provided in section 4424, Revised Statutes, applies only to a steamer which, having been duly inspected according to law, fails to expose her certificate, under glass, to the view of passengers and others, or carries gunpowder without exhibiting the proper license therefor.

The case at New York to which you refer, where a penalty of \$1,000 was imposed upon steamers running under expired certificates, seems to have been a mistake on the part of the officers imposing the penalty, who supposed they had authority to impose the penalty provided in both section 4499 and 4500, Revised Statutes, namely, \$500 each.

Chief officers of customs dealing with such matters should be very careful to cite the exact sections of law violated, and to impose the penalty provided for the offense in the case, and no other. The Department disapproves of the practice, which is too frequent, of cumulating penalties upon a single offense.

Very respectfully,

JOHN SHERMAN,
Secretary.

COLLECTOR OF CUSTOMS,
Philadelphia, Pa.

Steamboat Inspection Service—Penalties for violation of Rules and Regulations, Board of Supervising Inspectors.

TREASURY DEPARTMENT, *July 31, 1884.*

SIR: In reply to your letter of the 21st instant, you are informed that the Rules and Regulations of the Board of Supervising Inspectors, when approved by the Secretary of the Treasury, as required by section 4405, Revised Statutes, have all the force of law. The penalty for a violation of any such rule or regulation, unless otherwise provided for, is \$500 (sections 4499 and 4500, Revised Statutes).

The penalty for violating rule 44 (section 9, Rule V, reclassified rules, 1884), not being specially provided for, would be that named in the sections of law quoted, namely, \$500. In addition thereto, the master or pilot violating the rule would subject himself to the charge of misconduct, for which his license might be revoked or suspended.

Very respectfully,

CHAS. E. COON,
Acting Secretary.

JOHN H. MCNEELY, Esq.,
River Reporter, Daily Journal, Evansville, Ind.

7516.

Section 4465, Revised Statutes—Who is to sue for penalty therein prescribed; case of steamship Thomas J. Cochran.

TREASURY DEPARTMENT, *May 15, 1886.*

SIR: The Department duly received your letter of the 23d ultimo, transmitting the sworn application of William Weatherford, master of the steamship *Thomas J. Cochran*, for the remission of a fine of \$40 and of the forfeiture of the fare of four passengers brought from Havana and landed at your port on the 11th ultimo.

These penalties, it is understood from your communication, were exacted under section 4465, Revised Statutes, the \$40 taken being the aggregate arising from the exaction of \$10 for each passenger. The amount exacted as the equivalent of the fares collected of them you do not report. (Fines Nos. 679 and 680.)

These penalties accrued, as you supposed, from the revocation of the steamer's license to carry passengers, drawn up on the 5th ultimo by the supervising inspector of the Tenth district, and on that date addressed to Captain Weatherford, but which, it appears, was not received by him till the 13th ultimo, after his return from Havana.

18251.—17

The Supervising Inspector-General of Steam Vessels denies the validity of the revocation of the license in this case, as the notice of the revocation did not specify the repairs and alterations required on a steamer by section 4453, Revised Statutes.

As the Department concurs in this opinion of the Supervising Inspector-General, it holds that the license was still valid when the four passengers from Havana were landed at your port. You will, therefore, refund the owners of the vessel or their agent the \$40 and the amount of the passenger fares exacted as penalties under section 4465, Revised Statutes.

Your attention is called to the fact that the penalty specified in Title 52, Revised Statutes, for the offense of carrying an excess of passengers, for which the Government, or a collector in behalf of the Government, should sue, is prescribed by section 4499. The penalty for the same offense prescribed in section 4465, Revised Statutes, is one which private parties may *sue for* and recover, and it should not be taken by a collector on the voluntary payment of the offenders.

Respectfully yours,

C. S. FAIRCHILD.
Acting Secretary.

COLLECTOR OF CUSTOMS,
Key West, Fla.

11114.

Chief officers of customs to impose penalties on steam vessels for violation of steamboat laws.

TREASURY DEPARTMENT, May 6, 1891.

SIR: In reply to your letter of the 23th ultimo, you are informed that, in cases of violation of the steamboat laws such as referred to, and others coming under your own notice or through your officers, you should impose and demand the penalties provided in Title LII of the Revised Statutes of the United States.

A steamer run without a licensed pilot is a violation of section 4438 of that Title, the penalty being \$100 each on the vessel and on the person acting as pilot without a license.

Carrying more passengers than allowed by the certificate of inspection (and not having an excursion certificate), would be a violation of section 4465, Revised Statutes, penalty stated in the statute; and also liable to penalty under sections 4499 and 4500 of Title LII.

These penalties are all liens upon the vessel, which should be held until the penalties are paid or bonds given therefor.

When action has been taken, a full report should be made to the Department of all the facts in the case.

Under the provisions of section 5294, Title LXVIII, Revised Statutes, the Secretary of the Treasury has the power to miti-

gate or remit any penalties accrued under the steamboat laws, which fact should be communicated to any party aggrieved by the imposition of such penalties.

Inclosed please find circular having special reference to collector's duties in the matter of excursion steamers.

Respectfully yours,

O. L. SPAULDING,
Assistant Secretary.

COLLECTOR OF CUSTOMS,
Corpus Christi, Tex.

13748.

Investigation of casualties to steam vessels.

TREASURY DEPARTMENT, *February 27, 1893.*

SIR: This Department is in receipt of your communication of the 17th instant, containing what purports to be "specific charges regarding neglect of local inspectors of steam vessels to investigate possible violations of the Law and Rules Relating to Steam Vessels on the part of licensed officers thereof," said purported charges being a citation from the records of the local inspectors at New York of twenty-five cases of collisions or other accidents to steam vessels at the port named, extending over a period covered by the dates of October 4 and December 19, 1892.

In reply thereto, I have to state that investigations into the conduct of licensed officers of steam vessels are held under section 4450, Revised Statutes of the United States, which section is quoted in part as follows:

"The local boards of inspectors shall investigate all acts of incompetency or misconduct committed by any licensed officer while acting under the authority of his license."

This the Department construes, first, that it is mandatory on the local inspectors to investigate all formal charges against licensed officers of the nature referred to in the law; second, that it is obligatory on the inspectors to investigate all accidents to steam vessels where life has been lost or seriously endangered, if they believe such accidents have occurred through the "incompetency or misconduct" of the licensed officers in charge of such vessels; and third, that in cases where no formal charges have been made against licensed officers in navigating vessels meeting with accidents, in which life has not been lost, or, in the judgment of the local inspectors, jeopardized by such accidents, and the reports of the accidents in their opinion develop all the facts in the case, it is within the discretion of the local inspectors to omit any formal investigation, unless directed to the contrary by the supervising inspector of the district, who, if he "ascertains to his satisfaction that any master, mate, engineer, pilot,

or owner of any steam vessel fails to perform his duties according to the provisions of this title (LII, Revised Statutes), * * * he shall cause the negligent or offending party to be prosecuted," by reporting "the facts in writing to the board of local inspectors in the district where the vessel was inspected or belongs."

In conclusion, you are informed that the Department holds that the cases referred to by you were acted upon by the inspectors at New York, under the discretionary power referred to in the third clause of the Department's construction of the law under which they were acting.

Respectfully yours,

CHARLES FOSTER,
Secretary.

ALEX. R. SMITH, Esq.,
No. 3 Grummond Block, Detroit, Mich.

INSPECTORS OF STEAM VESSELS, SUPERVISING.

6401.

Steamboat Inspection Service — Appeals from decision of supervising inspectors.

TREASURY DEPARTMENT, June 12, 1884.

SIR: The Department is in receipt of your letter of the 4th instant, inclosing printed newspaper slip containing the decision of Supervising Inspector Norton, of the Tenth district, in the case of appeal of James D. Vick, pilot of steamer *Maggie F. Burke*, from the decision of the local inspectors at Mobile, in the collision case between the above-named steamer and the steamer *Mary Ida*, commanded by yourself. The supervising inspector's decision reverses that of the local board, to which reversal you except, and appeal to the Department, on the ground that you were exonerated from blame by the local inspectors in the first decision rendered.

In reply, you are informed that under the law as heretofore adjudicated by the Department, the action of the supervising inspector of the Tenth district is final, and that there can be legally no appeal to the Department in cases such as indicated, section 4452, Revised Statutes, providing that, upon an appeal to the supervising inspector from a decision of a local board, the supervising inspector may "revoke, change, or modify the decision of such local board." In changing the decision in your case, therefore, he has not exceeded his powers, and, according to the former decision of the Department, it can not interfere.

Very respectfully,

CHAS. J. FOLGER,
Secretary.

J. W. McDOWELL, Esq.,
Master and Pilot, steamer Mary Ida, Mobile, Ala.

Instruction to supervising local and assistant local inspectors of steam vessels.

* * * * *

Each supervising inspector is cautioned against interfering with the official action of the local boards in his district, except in cases of appeal made to him *in writing*, or where he may observe failures to promptly execute the law; in which case he will give the necessary instructions *in writing*.

Official communications from the Department should be acknowledged by inspectors *immediately* upon their receipt. Greater care must also be taken by inspectors in the preparation of their official statements and returns to the Department (Circular, April 5, 1872. Navigation Division.)

Suspension of pilot's license—Case of collision between steamers El Paso and Statesman.

TREASURY DEPARTMENT, December 22, 1885.

SIR: The Department is in receipt of a letter from Pilot Daniel Taylor, dated the 10th instant, in which he claimed that injustice has been done to him by the local inspectors at New Orleans in their decision, rendered October 5, 1885, in the case of the collision between the steamers *El Paso* and *Statesman* on September 18, last, they having suspended the license of Mr. Taylor (who was pilot of the steamer last named) for a period of fifteen days, which decision was sustained by yourself upon appeal November 11, 1885.

You are informed that while the Department has decided (decision 6401, June 12, 1884) that it can not interfere with a decision of a supervising inspector, such ruling was only meant to apply in cases where all the forms of law have been duly complied with by the supervising inspector.

In the case now under consideration there has been a departure from the law in this, that no specific charge of "misbehavior, negligence, or unskillfulness," or that Mr. Taylor had "endangered life or willfully violated any provisions" of the steamboat laws in his management of the *Statesman* in the collision with the *El Paso* is alleged, as the law (section 4450, Revised Statutes) requires should be done as a cause for suspension or revocation of an officer's license, in either the decision of the local board which suspended Mr. Taylor's license, or in your own appeal sustaining the action of the local board. In view of the facts stated, you are

hereby directed to order the local inspectors at New Orleans to reinvestigate the *Statesman-El Paso* collision case, and to render a decision thereon according to the forms of law.

Respectfully yours,

C. S. FAIRCHILD,
Assistant Secretary.

MATTHEW O'BRIEN, Esq.,
Supervising Inspector Steam Vessels, New Orleans, La.

[1881—Department No. 93—Steamboat inspection.]

Circular—Verification of the serial numbers of licenses.

TREASURY DEPARTMENT, November 29, 1880.

Supervising inspectors of steam vessels are hereby instructed to verify the serial numbers of licenses issued by their local inspectors, as contained in the monthly statements of receipts and deposits, by an actual examination of the license books in the possession of the local inspectors. Such examinations will be made as soon as practicable after the dates of March 31 and September 30 of each year, and a written report thereof will be forwarded to the Department, giving the serial number of the last license of each grade issued upon the dates named.

Special blanks for this purpose will be furnished by the Department.

JOHN SHERMAN,
Secretary.

9600.

Circular letter to supervising inspectors.

[Treasury Department, Office of Supervising Inspector-General of Steam Vessels.]

WASHINGTON, August 31, 1889.

DUTIES OF SUPERVISING INSPECTORS WHEN VACANCIES EXIST
IN A LOCAL BOARD OF INSPECTORS.

The attention of supervising inspectors of steam vessels is called to the following opinion of the Solicitor of the Treasury, in regard to the status of local inspection districts in which there is not a full board of inspectors, either through vacancy in the office of either the hull or boiler inspector, or inability of either local inspector to perform the duties of his office, through sickness or absence, the opinion of the Solicitor deciding substantially that, under such circumstances as stated, the local board of inspectors have *pro tempore* ceased to exist, and the remaining inspector would have no legal authority to perform any of the duties lawfully required of the board of inspectors.

Following is a copy of the decision of the Attorney-General (Brewster, January 4, 1884), referred to in the last paragraph of the Solicitor's opinion :

* * * "Section 4409, Revised Statutes, invests the supervising inspector with the same authority. As regards districts wherein local boards exist, this authority is not meant to be concurrent with that of such boards under any and all circumstances. It is intended to be exercised only in cases where the local board can not be resorted to without inconvenience ; and the sort of inconvenience contemplated is indicated by the express mention of 'distance' as the cause thereof. It is inconvenience growing out of the situation of the boat, or of the parties, viewed with reference to the location of the board, whereby access to the latter is rendered difficult or expensive. Where such inconvenience exists, the authority of the supervising inspector to perform the duties imposed upon the local boards by section 4450, Revised Statutes, is, by virtue of section 4409, concurrent with that of those boards ; and in cases acted upon by him under and pursuant to that authority, *there is no appeal or review provided for*, the provisions of section 4452, Revised Statutes, not applying thereto." * * *

In districts where local boards of inspectors have temporarily ceased to exist, the supervising inspectors have legal authority, under section 4456, Revised Statutes, to detail, under their direction, the local board of another district, who can be spared for the purpose, to "inspect steamers," and grant certificates therefor, pending the legal disability of any other local board in the supervising inspection district.

JAMES A. DUMONT,
Supervising Inspector-General.

Approved :

GEORGE S. BATCHELLER,
Acting Secretary.

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., August 29, 1889.

SIR : I have considered the questions submitted in your communication of the 27th instant relating to a vacancy that now exists on a board of local inspectors of steam vessels for the collection district of New York. You submit the following inquiries, viz :

* * * "When, for any reason, such, for instance, as a vacancy in one of the two officers composing the board, or inability through sickness, or unavoidable absence of either inspector of hulls or boilers, can the remaining inspector, under the circumstances stated, legally perform the duties of the full board, in issuing licenses to officers, inspection certificates, and, particularly, can

the remaining officer hold investigation and render judgment under the provisions of sections 4450 and 4451, Revised Statutes, or, in such case, does the board, as a board, cease to exist *pro tempore*? In case it is decided that in no case a local inspector can act singly in any manner in which the law requires the performance of duty by the board, does the law (section 4409, Revised Statutes) authorize or contemplate that the supervising inspector of the district shall act concurrently with the remaining inspector in performing the duties of local boards of inspectors, or must the supervising inspector act in such cases independently, and perform all the duties of such board of local inspectors." * * *

Section 4415, Revised Statutes, expressly provides that the inspector of hulls and the inspector of boilers shall, from the date of their designation and appointment, approved by the Secretary of the Treasury, constitute a board of local inspectors.

This board, by the provisions of section 4450, Revised Statutes, is authorized to investigate all acts of incompetency or misconduct committed by licensed officers, and, when acting as a board, are authorized to hear and determine such cases, but the law makes no provision by which one inspector can perform the duties assigned to the board.

If Congress had intended to vest the powers conferred on the board of local inspectors, under any circumstances, on one member thereof, it would have so provided.

In my opinion, the statute contemplates that all questions submitted for decision under the provisions of section 4450 shall receive the consideration of both members of the board.

The second inquiry relates to powers and duties of a supervising inspector where, as in the case submitted, a vacancy exists in the board of local inspectors.

There being no local board having power to act as such, at this time, in the district of New York, the supervising inspector is, under the provisions of section 4409, required to perform, in person, all the duties imposed by law upon the local board. On this question, see opinion of the Attorney-General, dated January 4, 1884.

The inclosure accompanying your letter is herewith returned.

Very respectfully,

F. A. REEVE,
Acting Solicitor.

The SECRETARY OF THE TREASURY.

10279.

Supervising inspectors must investigate and decide cases referred to them under section 4452, Revised Statutes, by local inspectors.

TREASURY DEPARTMENT, October 14, 1890.

SIR: Referring to your action in the collision case between the steamers *City of Vicksburg* and *Joseph Walton*, as communicated to the Supervising Inspector-General in your letter dated the 8th

instant, the Department is constrained to decide that, upon an appeal of the local inspectors of a district to the supervising inspector, in case of a disagreement between the first-named officers, in the case of an investigation, the law (section 4452, Revised Statutes) declares that the supervising inspector "shall investigate and decide the case."

In the case under consideration it seems that instead of investigating and deciding the case referred to you, because of a disagreement between the local inspectors, that you returned the testimony to the local inspectors, dictating to them, in substance, a decision to be rendered by themselves, and which they did render over their official signatures, thereby disregarding the law in the case, as well as giving just grounds of complaint to the pilots of the steam vessels whose licenses were suspended, and who were entitled, when the case was appealed to the supervising inspector, to be represented before that officer by counsel (see decision, p. 161 of the Manual of 1887), if they so wished, as well as to being consulted as to their wishes in the matter as to whether the case should be wholly retried *de novo*, or whether they were willing to abide your judgment on the evidence taken by the local inspectors.

Under the state of facts as cited, the Department is compelled to declare that the suspension of the licenses of the masters and pilots of the *City of Vicksburg* and *Joseph Walton* by the local inspectors, after having submitted their differences of opinion to the supervising inspector as to their judgment in the case of the officers named, was illegal and therefore void and of no effect; and you will please notify Captain Richey, of the *City of Vicksburg*, and Capt. James Richardson, of the steamer *Joseph Walton*, whose licenses were illegally suspended fifteen and thirty days respectively, to that effect.

Very respectfully,

WILLIAM WINDOW,
Secretary.

FRANK BURNETT, Esq.,
Supervising Inspector of Steam Vessels, St. Louis, Mo.

INSPECTORS, LOCAL.

1631.

*Relative to the appointment and qualification of local inspectors of steam vessels.**

Under the provisions of sections 11, 23, 65, and 67 of the act of February 28, 1871 (chapter 100), the following regulations concerning the appointment and qualification of local inspectors of

* For method of convening Board of Designators see page 278.

steam vessels are hereby established and promulgated for the information and guidance of all concerned :

I. Every person designated and approved as a local inspector, and when notified so to do, will, as soon as may be, execute his official bond and transmit the same forthwith to this Department, together with the official oath required by law.

II. On approval of the bond, and it appearing that the proper oath has been taken, a commission in the usual form will be issued.

III. Until such commission shall have been duly issued to the person designated and approved as aforesaid, his appointment shall not be deemed legally complete ; nor until it, or official notice of its issue, shall have been received by him, shall he be deemed officially qualified to perform the duties of his office.

IV. Supervising inspectors will not in any case authorize or require any person, designated as aforesaid, to enter upon the performance of any official duty until officially qualified as aforesaid.

The foregoing regulations will take effect from and after this date, and be operative in each district as soon as received. (Circular July 16, 1873. Steamboat Division.)

4756.

Inspection of Government steam vessels.

TREASURY DEPARTMENT, *January 31, 1881.*

SIR: In reply to your letter of 26th instant, requesting Department instructions in the case of Mr. Phil. J. Schopp, superintendent Louisville and Portland Canal Company, who has asked that the boiler inspector of Louisville should inspect the boilers of steamers in Government service under his (Mr. Schopp's) direction, you are informed that local inspectors may inspect Government steamers upon the application of the proper officers, and provided such services do not interfere with the official duties of the inspectors.

Very respectfully,

H. F. FRENCH,
Acting Secretary.

BYRON O. CARR, Esq.,
*Supervising Inspector, Sixth District,
Louisville, Ky.*

TREASURY DEPARTMENT, *February 9, 1878.*

Supervising and local inspectors of steam vessels are hereby notified that their whole time must be devoted to their official duties, and that they will not, under any circumstances, be

allowed to superintend the repairs on any steam vessels, or draw the plans for the construction of boilers or machinery, or act as experts in any such matters for the agents or owners of steam vessels, either with or without pay, under the penalty of dismissal from office: *Provided, however*, That officers whose salaries are less than \$1,000 per annum may, when not officially employed, engage in other occupations that do not approximate their official duties, when the same can be done without detriment to the public service. Inspectors are also notified that the second paragraph of Department Circular No. 32, Navigation Division No. 10, April 5, 1872, constituting the hull inspector chairman of the local board of inspectors, is hereby revoked, and the inspector of hulls and the inspector of boilers will be held jointly responsible for the proper conduct of the official affairs in their district.

JOHN SHERMAN,
Secretary.

8743.

Circular letter—Instructions in regard to registry of documents by officers Steamboat-Inspection Service.

[Treasury Department, Office of Supervising Inspector-General of Steam Vessels.]

WASHINGTON, D. C., March 22, 1888.

To supervising inspectors of steam vessels:

GENTLEMEN: The recent examination of the office of the local inspectors at New York revealed the fact that papers and documents that should be found upon the files of that office were not so found, and many of those properly filed were without evidence, by indorsement or otherwise, to indicate the dates of their receipt or the action taken thereon.

You will, therefore, notify the various local boards in your district that all papers, letters, or communications received by them, upon which they are or may be expected to take official action, must be numbered upon the back in regular numerical succession, also have placed thereon the date of receipt of such paper, letter, or communication, and also a note indicating the action taken thereon, with the date thereof, such indorsements to be registered in a book that will be furnished by the Department as soon as a sufficient number can be got ready.

The first page of said book will contain an example showing, for the information of the local inspectors, the form of registry the Department desires should be kept.

Supervising inspectors should examine the registry book whenever they shall visit any of the local boards in their districts outside their home ports. At the home port the register

should be examined at least once a month, and in case a supervising inspector shall find the register improperly kept or neglected, they should report the same to the Department forthwith.

Supervising inspectors are also directed to keep a register of papers, letters, and documents received, the same as provided for local inspectors.

In all cases where no record of documents has been previously kept, the inspector shall commence the record from the 1st of January, 1888.

Respectfully yours,

JAS. A. DUMONT,
Supervising Inspector-General.

Approved :

C. S. FAIRCHILD,
Secretary.

Local inspectors can not act within the jurisdiction of another local board.

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., October 11, 1872.

SIR: I have the honor to acknowledge the receipt of your letter of the 8th instant, in which you state that in the investigation in relation to the loss of the steamer *Metis* by the local board of inspectors at New London, Conn., Mr. L. H. Boole, inspector of hulls at New York, was ordered to act as a member of this investigating board, and ask whether this board, so constituted, had the power to revoke or suspend the licenses of the officers of the *Metis*, and whether the notices of suspension or revocation should be signed by the local board of inspectors at New London, or by the three members of the investigating board.

In reply, I have to say that the board of local inspectors only, by the terms of section 19 of the act of February 28, 1871, are authorized to investigate acts of incompetency or misconduct committed by any licensed officer.

The material question, then, is, of whom is this board composed? Section 11 of the same act answers, it seems to me, this question. That section, after providing for the appointment of an inspector of hulls and an inspector of boilers for each district, and defining their qualifications, declares that "these two persons, when approved by the Secretary of the Treasury, shall, from the date of designation, constitute a board of local inspectors, and shall be empowered and required to perform the duties specified."

Section 19 then enacts that "the said local boards of inspectors" shall investigate all acts of incompetency or misconduct committed by any licensed officers, and if satisfied "that such licensed officer is incompetent or has been guilty of any misbe-

havior, negligence, or unskillfulness, *they* shall immediately suspend or revoke his license."

The statute, then, is positive that the boards of local inspectors are the persons alone authorized to act under section 19.

I can not find authority in any part of the statute to join to this board as a part of it, in the investigation of acts of incompetency or misconduct committed by licensed officers, any other person.

From other provisions of the statute, there seems to be no necessity for so doing; for section 20 provides that in any investigation where there shall be a *disagreement* between the local inspectors, the supervising inspector, when so requested, shall investigate and decide the case.

And by the same section, any person deeming himself wronged by the action of this board may, within thirty days, "on application to the supervising inspector of the district, have his case examined anew by such supervising inspector;" the supervising inspector, on such rehearing, having the power "to revoke, change, or modify the decision of the local board."

If, therefore, the inspector of hulls at New York made a part of the board of local inspectors for the district of New London in the investigation of the *Metis*, and acted in the rendition of the decision reached in that case with regard to the revocation or suspension of the licenses of the officers of that vessel, such decision is, I think, of no effect, and can not be carried out under the statute.

Having reached this conclusion on the ground that the inspector at New York can not act at all in this case with the board of inspectors at New London, it seems unnecessary to answer the second question.

I am, very respectfully,

J. H. ROBINSON,

Acting Solicitor of the Treasury.

HON. GEO. S. BOUTWELL,
Secretary of the Treasury.

Bond sureties can not be released from liability.

TREASURY DEPARTMENT, June 15, 1878.

SIR: Your letter of the 12th instant, asking to be released from the bond of John W. Blake, assistant inspector of boilers at New York, was duly received and referred to the Solicitor of the Treasury for his opinion as to the power of the Secretary to grant your request. That officer furnished an opinion on the 12th instant, from which I make the following extract, that you may see the Secretary of the Treasury has no authority to release you:

* * * "The bond of an inspector of boilers is given to the United States, and is a continuing bond, binding principal and sureties, their heirs, executors, administrators, and assigns.

The principal obligee (the United States) only can release a surety in such a bond. No officer of the Government can act for the United States unless authorized by law. Congress has never, by any law, given to the Board of Designators, who are authorized to appoint inspectors of boilers, nor to the Secretary of the Treasury, who is to approve the appointment and also the bond required, or to any other officer, authority or power to release a surety on the bond of an inspector of boilers, nor can this power be inferred from any general power given."

* * * * *

Very respectfully,

H. F. FRENCH, *Assistant Secretary.*

G. G. YOUNG, Esq.,

No. 42 Cortlandt street, New York City.

4445.

Steam vessels—Return of local inspectors to collectors and surveyors of customs.

TREASURY DEPARTMENT, *March 10, 1880.*

SIR: The Department has received your letter of the 6th instant. Its inquiry whether the blank spaces upon certificates of inspection of passenger steamers, namely, for "date of inspection," "tons burden," "date when built," "number of passengers," and "pressure of steam allowed," shall be written in full or filled with figures only, as per printed instructions on the back of such certificate, will be referred by the Supervising Inspector-General to the supervising inspector, seventh district, for consideration, who will issue to the local boards in his district such instructions as he may deem proper, he being the officer designated by law to perform that duty.

In reply to the latter part of your letter, as to whether you shall return to the inspector, for correction, original certificates, when the blank spaces referred to are in figures only, you are informed that, in the matter of certificates of inspection, the duties of collectors or other chief officers of customs are confined to retaining on their files the original certificates which inspectors are required to deliver to them, and to furnish the master or owner of the steamer with three copies thereof. (See section 4423, Revised Statutes.) "In issuing marine papers under section 1, Revised Statutes, 4458, based on a previous compliance with the law, a collector is concluded by the decision of the local or supervising inspector, which he is not expected to interfere with, nor is he under any legal obligation to review."

(Synopsis of Decisions, 1094, April 10, 1872.)

Very respectfully,

JOHN B. HAWLEY, *Assistant Secretary.*

SURVEYOR OF CUSTOMS,

Wheeling, W. Va.

*Steam vessels—Appeals from decisions of local inspectors.*TREASURY DEPARTMENT, *May 10, 1881.*

SIR: The Department has received, by reference from yourself, a letter from Mr. George D. Hayden, of Alton, Ill., in which complaint is made that the inspectors of steam vessels at St. Louis have imposed needless restrictions upon the new ferry steamboat of Mr. H. B. Starr, and Mr. Hayden asks that the Department order a suspension of prosecution until the present high waters have subsided.

In reply, I have the honor to inform you that section 4421, Revised Statutes, requires that when the inspectors refuse to grant a certificate of approval "they shall make a statement in writing and sign the same, giving the reasons for their disapproval." Under the provisions of section 4452, Revised Statutes, the master or owner then has the right of appeal from the action of the local board to the supervising inspector of the district (Frank Burnett, St. Louis), upon whom the law confers the power of deciding the case. The Department would not be justified in interfering with the matter until the aforesaid legal forms have been complied with.

The letters of Messrs. Hayden and Hayford are herewith returned, as requested.

Very respectfully,

H. F. FRENCH,
Acting Secretary.

HON. JOHN A. LOGAN,
United States Senate.

3268.

Local inspectors must decide number of passengers steamers can carry with safety.

[Treasury Department, Office of Supervising Inspector-General of Steamboats.]

WASHINGTON, D. C., *June 20, 1877.*

The attention of supervising and local inspectors of steam vessels is directed to the following extract from Department letter, June 18, to the supervising inspector second district, in reply to his request that the Department establish a standard rule defining the number of passengers that can safely be carried on excursion steamers, based either upon their tonnage or measured deck space. The Department's reasons for declining to establish such standard being deemed especially important at this time, which is the season for excursions, are hereby published in circular form for the benefit and guidance of all officers

in the Steamboat-Inspection Service, as showing the construction of rule 78* of the Revised Rules and Regulations, 1877.

Very respectfully,

JAS. A. DUMONT,
Supervising Inspector-General.

[Extract.]

Therefore, rule 78* wisely leaves to each inspector the responsibility of limiting the number of passengers for each steamer, and in assuming it he simply complies with the statute under which the hull inspector is appointed, which requires that he shall be fully competent to make a reliable estimate of the strength, seaworthiness, and other qualities of the hulls of steam vessels and their equipment deemed essential to safety of life in navigation; section 4415, Revised Statutes, which accords with section 4466, conferring on inspectors the right to issue special permits for excursions and making them the judges of the carrying capacity of steamers.

You are informed the Department has no authority to relieve inspectors from statutory obligations, or to make rules for their guidance, that being a matter primarily devolving upon the board of supervising inspectors, subject, however, to the approval of the Department. Rule 78, having received such approval, has now the force of law, and the Department will exact from inspectors a strict fidelity to the true intent and meaning of that rule and the statutes on which it is founded.

You are directed to enjoin upon the inspectors in your district the necessity of frequent visits to excursion steamers, in order to have personal knowledge of the fact that the equipments are kept up to the original requirements, and that the hull and boilers are entirely safe.

Very respectfully,

H. F. FRENCH,
Assistant Secretary.

3360.

Reports to Supervising Inspector-General of Steam Vessels.

TREASURY DEPARTMENT, September 3, 1877.

United States local inspectors of steam vessels are hereby directed to furnish the Supervising Inspector-General, for his information, a copy of all reports made to their supervising inspectors under rule 70,+ Revised Rules and Regulations, 1877, which requires them to report forthwith, "in detail, all accidents

* Now section 1, Rule VIII, page 150.

+ Now section 10, Rule IX, page 153.

of a serious character, such as collisions, foundering, sinking, fires, and all other casualties of interest to and affecting the steamboat service in their respective districts."

They are also directed to report to the same officer all violations of the steamboat laws by any licensed officer of a steamer, or the owners thereof, that may come to their knowledge, the latter report to be made upon blank form No. 47.*

Inspectors not having a supply of the blank form referred to, will, upon the receipt of this circular, immediately supply themselves by making the usual requisition.

A strict compliance with these instructions will be required of all officers to whom this circular is addressed.

JOHN SHERMAN, *Secretary.*

UNITED STATES LOCAL INSPECTORS
OF STEAM VESSELS.

10803.

Local inspectors to notify supervising inspectors when unable to perform duty.

TREASURY DEPARTMENT, *March 2, 1891.*

SIR: The attention of the Department has been called by the Supervising Inspector-General to the fact of the neglect of the local inspectors at Portland, Oreg., Messrs. Edwards and McDermott, to notify you, as they should have done, of the sickness of Mr. McDermott, boiler inspector, in September last, in order that the supervising inspector of the district might perform the duties of the local board as the law, section 4409, Revised Statutes, requires. * * *

In view of the fact stated, you are hereby directed to instruct the local boards of inspectors in your district that they must, in case of the serious sickness of any member of the local board, disabling them from performing their official duties, immediately notify you of the fact, in order that, pending the inability of the local board to legally perform the duties of such board, the supervising inspector himself may perform in person the duties of the local board, as required under the section of law heretofore referred to, and by Department decision 9600,† pages 233 to 236, inclusive, of the Manual [1890].

You are also directed to notify the local inspectors of your district that a failure in any case to comply with the direction given herein will be deemed by this Department as a sufficient cause for removal.

Very respectfully,

A. B. NETTLETON, *Acting Secretary.*

HENRY S. LUBBOCK, Esq.,

Supervising Inspector, First District, San Francisco, Cal.

* Now form 2161.

† See page 262.

Constructing the steamboat inspection laws in regard to licensed officers, section 4463, and carriage of passengers under excursion permits and on barges, sections 4466 and 4492, Revised Statutes.

TREASURY DEPARTMENT, July 9, 1889.

SIR: In reply to so much of your letter of the 29th ultimo as asks for instructions in the matter of construction of the steamboat laws, section 4463, Revised Statutes, in the case of the steamer *New Idea*, being navigated with one pilot and one mate short of the number required by her certificate of inspection, you are informed that such action is in violation of law, and makes the vessel liable for the penalties provided therefor, notwithstanding, in your judgment, the vessel is sufficiently manned for the business she is engaged in. The question of deciding the proper number of officers a steamer shall carry is one wholly within the discretion of the inspectors of steam vessels who granted the certificate; and, by Department decision 4445, March 10, 1880, a collector is "concluded by the decision of the local or supervising inspector (as to the conditions under which a steam vessel is certificated), which he is not expected to interfere with, nor is he under any legal obligation to review."

Inspectors also have the power, upon application, to change the character of a steam vessel at any time by indorsement on the certificate; and may at the same time reduce, if they deem it proper, the number of officers required.

The Department decides, in reference to the second paragraph of your letter, that a certificate of inspection for the waters of the Ohio and Mississippi rivers and tributaries between Pittsburgh, Pa., and New Orleans, would not be violated by navigating the Mississippi River above the mouth of the Ohio, the most dangerous part of navigation on that river being included within the terms defining the terminal points of route named in the certificate, these points simply indicating the trade the steamer was engaged in at the time of inspection. Synopsis 9316, referred to by you, is applicable to ferryboats only; which, by specific law, are confined to certain ferry routes, because while on such ferry routes they are not restricted in the number of passengers they may carry, but they are restricted in that respect when navigated elsewhere, which they can only do legally by first obtaining from the inspectors a special excursion permit.

In the matter of granting permits to carry passengers on barges, inspectors find full warrant therefor under section 4492, Revised Statutes, and sections 19 and 20, rule 3, Rules and Regulations of the Board of Supervising Inspectors; and no barge, whether enrolled or not, can carry passengers while in tow of a steamer without complying with the terms of the section of law and rules quoted.

So much of your letter as refers to the enrollment of the barges referred to therein, under the navigation laws, will be answered by the Commissioner of Navigation.

Respectfully yours,

WILLIAM WINDOM,
Secretary.

SURVEYOR OF CUSTOMS,
Dubuque, Iowa.

Steam vessels—Investigations of alleged offenses by licensed officers to be made by the local inspectors.

TREASURY DEPARTMENT, *October 26 1881.*

SIR: The Department has received your letter of the 19th instant, transmitting a copy of a communication from the local inspectors at New York, in which they inquire concerning the limits of their jurisdiction in the investigation, under provisions of sections 4413 and 4450, Revised Statutes, of infractions of law by licensed officers of steam vessels.

Section 4450, Revised Statutes, provides that the local inspectors shall investigate all acts of incompetency or misconduct committed by licensed officers, and describes the mode in which such investigations shall be conducted. It further provides that if an officer shall be found incompetent or "guilty of misbehavior, negligence, or unskillfulness, or has endangered life, or has willfully violated any provision of this Title (Title 52, Revised Statutes), they shall immediately suspend or revoke his license." The provisions of the statute in regard to the penalty are mandatory, and no discretion is left with the local inspectors.

If, from the nature of the testimony, the inspectors are satisfied that an officer has committed an infraction of law involving a fine, the papers should be transmitted to the United States attorney, unaccompanied by any testimony, opinion, or finding of the local inspectors, or any information beyond the fact that the charge is for violation of some section or sections of law, which shall be specified; it is for the court to decide, at the trial of the case, whether the violation is sufficiently clear to warrant a fine being imposed.

The fact as to whether a collision has or has not occurred should not conclude the inspectors in their judgment of the case, as the law recites, if an officer has been guilty of "negligence or unskillfulness, or has endangered life," the penalty shall be suspension or revocation of license. In the findings which require such suspension or revocation no reference should be made to other sections of law involving fine or graver penalties.

Very respectfully,

H. F. FRENCH,
Acting Secretary.

SUPERVISING INSPECTOR,
Second District, New York.

Inspectors furnishing testimony.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, D. C., November 18, 1879.

SIR: The Department is in receipt of your letter of the 17th instant, in which you request, as counsel to one of the parties interested, to be furnished with copies of the testimony taken by the United States local inspectors of steam vessels at Baltimore in the recent investigation of the collision between the steamer *Falcon* and the schooner *J. C. Tryon*, and also a copy of their decision in the case, and to be informed as to the amount of reasonable charges therefor.

In view of the fact that insufficient clerical force is allowed to boards of local inspectors to enable them to furnish copies of proceedings of investigations had before them to the many persons applying therefor, without serious detriment to current official business, and there being no authority in the Department to permit compensation to inspectors for extra services, it being a penal offense for them to accept any fee or reward except such as is allowed them by law (section 5482, Revised Statutes), the Department is obliged to deny your request.

There is no objection, however, to authority being given them to allow yourself or your representative to have access to such testimony and decision, in their presence, at such times during their regular office hours as they are not required to be absent in performance of official duties.

* * * * *

Very respectfully,

JOHN SHERMAN,
Secretary.

JOHN H. THOMAS, Esq.,
No. 55 Saratoga street, Baltimore, Md.

9667.

Steam vessels—Inspectors of, to determine what are their lawful equipments and their location.

TREASURY DEPARTMENT, October 23, 1889.

SIR: The Department is in receipt of your letter, with inclosures, referring to an alleged violation of law (section 4483, Revised Statutes), by the steam ferryboat *Benicia*, in that her water tank was inaccessible for fire purposes, as reported by Deputies Minor and Hulse, while the owners of said steamer deny the violation, claiming that the water tank is located to the satisfaction of the inspectors who granted the certificate, and that no change of location had been made since the inspection of the vessel, and you ask the Department's advice as to further proceedings in the matter.

In reply, you are informed that the law (section 4417, Revised Statutes) makes the local inspectors of steam vessels the judges of the suitability of the equipments of all steam vessels inspected by them, and of which *they* must be satisfied before they issue the certificate of inspection. It seems, therefore, to the Department that the only matter for you to decide in the present case is, has the *Benicia* all the equipments required by the inspectors and as located by them. If she has, as is claimed by the owners, then no penalty can attach. A difference of opinion between your own officers and the inspectors of steam vessels as to the proper location of equipments on a steamer should not be inconsiderately made a cause of annoyance to steam-vessel owners, the lawful discretion in the case, as previously explained, belonging to the inspectors of steam vessels.

Respectfully yours,

GEORGE S. BATCHELLER,
Acting Secretary.

COLLECTOR OF CUSTOMS, *San Diego, Cal.*

13720.

Regulation in regard to entries in Book Forms 2112 A, B, and C.

TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE,
OFFICE SUPERVISING INSPECTOR-GENERAL,
Washington, D. C., February 9, 1893.

To supervising and local inspectors of steam vessels :

The attention of the Department has been called to a seeming neglect or misunderstanding on the part of some of the local and assistant inspectors to a strict and intelligent compliance with the last paragraph of the letter of the Supervising Inspector-General, printed on the first page of Book Forms 2112 A, B, and C, which paragraph reads as follows: "Under the head of remarks on the tenth and following pages, inspectors must note all changes that may have occurred in the outfit and general conditions of the hull (Book 2112 B, boilers and engines), giving in detail the nature of the repairs made since last inspection; also of all repairs made at the time of inspection under their direction."

The object of Books 2112 A, B, and C is for the purpose of keeping in the office of the inspectors, for the use of the inspection service generally, a complete record of the condition of the hulls, boilers, and engines of steamers at the time of their inspection from year to year, as a ready reference to determine therefrom the actual condition of any inspected steam vessel when such information may be desired by the Department without the necessity of an examination of the vessel itself, and is also intended as a protection to the officers who make the inspection, in case such vessels shall meet with disaster after inspection, as record

evidence of the proper performance of duty on their part at the time of inspection.

On the first pages of "Remarks" should be entered in detail a full description of all repairs that may have occurred, if any, since date of previous inspection. On the following pages should be entered in detail a full description of repairs ordered by the inspectors to hull, boilers, or engines.

All orders to steam vessels for repairs of any kind whatever, or for replacing outfits of any kind found short, must be in writing, and a copy made for the office records, to be referred to by date in Form 2112. Inspectors are further informed that they must not, in any case, issue a certificate to a steamer until they are satisfied that all shorts and repairs ordered have been supplied, which fact must also be noted in Form 2112 A, B, or C.

A failure on the part of any officer of the inspection service to comply with the foregoing requirements will subject such officer to the extreme discipline of the Treasury Department.

Supervising inspectors, when visiting the local boards in their districts, will examine the record books referred to herein to see that they are kept in the proper manner, and are directed to report to the Department any failure to comply with the instructions therein on the part of their subordinates, so that the Department may take cognizance of such neglect.

JAS. A. DUMONT,
Supervising Inspector-General.

Approved :

CHARLES FOSTER,
Secretary of the Treasury.

10207.

Local inspectors of steam vessels—What constitutes a legal meeting of Board of Designators for appointment of.

TREASURY DEPARTMENT, September 20, 1890.

The attention of supervising inspectors of steam vessels is called to the following opinion of the Acting Attorney-General of the United States as to what constitutes a legal meeting of "the Board of Designators," provided for in section 4415, Revised Statutes of the United States, for filling vacancies in boards of local inspectors, or for appointing local inspectors for new districts:

DEPARTMENT OF JUSTICE,
Washington, D. C., September 16, 1890.

SIR: By letter of the 9th instant, you ask an opinion upon the construction of section 4415 of the Revised Statutes, by an answer to the following questions:

"First. Must the notification of the supervising inspector to the collector and district court judge convening the Board

of Designators," provided in said section, "be formal and in writing?"

"*Second.* Must the board, when notified, actually 'meet together' and organize as a board, to make a designation legal, or may the supervising inspector without previous notice call on and confer with the collector of customs at his office or residence, and agree with him as to the candidate, and then upon the district judge at his residence or place of business in the same or another city, and so agree upon a candidate for designation, thus in each case having a majority of the board at a meeting, but of different personality, excepting the supervising inspector himself?"

The part of the section referred to in these questions is as follows:

"Whenever any vacancy occurs in any local board of inspectors, or whenever local inspectors are to be appointed for a new district, the supervising inspector shall notify the collector, or other chief officers of the customs for the district, and the judge of the district court for the district in which such appointment is to be made, who, together with the supervising inspector, shall meet together as a board of designators, and fill the vacant or new inspectorship."

The answer to your first question is, that the notice for convening the Board of Designators, to the persons who by law are required to act as members thereof, should be such as to give each one a reasonable time to be present at the meeting and a knowledge of its object. The fact that such notice is not in writing would not invalidate the proceedings of the meeting, but it would be much better, it seems to me, by regulation to require written notice.

The answer to your second inquiry is that the law requires the persons designated in the section to meet together as a board, and to take action as such. The action of the board is presumed to be and should be the result of joint consultation between its members. Joint consultation as a board can not be had without a meeting of the board, of which all the members shall have received legal notice. The members of the board should organize as a board, and should act as a board. The informal conferences between different members of the board, without previous notice, when the members of the board taking part are not all present at the same time, is not a meeting of the board, and is not a compliance with the statute.

Very respectfully,

WILLIAM H. TAFT,
Acting Attorney-General.

THE SECRETARY OF THE TREASURY.

Supervising inspectors are directed, when authorized to convene a board of designators, to conform in all respects with the suggestions contained in said opinion, attention being called to

the fact, however, that, under the law, the supervising inspector and either of the other members of the board would constitute a quorum for the transaction of business, provided the other and absent member had received due notice of the meeting.

Very respectfully,

GEORGE S. BATCHELLER,
Acting Secretary.

Examination and qualifications required of local inspectors of steam vessels.

[Extract from the minutes of the Board of Supervising Inspectors of Steam Vessels, annual meeting of 1894.]

WASHINGTON, D. C., February 5, 1894.

Mr. O'Brien, supervising inspector of the Tenth district, offered the following resolution :

"Resolved, That this Board having carefully examined Department Circular No. 163, dated October 19, 1893, entitled, 'Examination and qualifications required of assistant inspectors of steam vessels,' and believe it would improve the service if similar examinations to that required of assistant inspectors were applied to local inspectors, such examinations to be sanctioned by Department authority, respectfully submit our views in this respect to the honorable the Secretary of the Treasury for his consideration, with a request that he will, under the authority conferred upon him by section 4462, Title LII, Revised Statutes, to 'make such regulations as may be necessary to secure the proper execution of this title,' make regulations that will require applicants for the position of local inspector to pass a written examination as to his qualifications, in addition to the evidence he may present of practical experience as a licensed master, pilot, or engineer of steam vessels of at least five years' actual experience under a license of the highest grade granted upon the waters upon which he has been employed."

Which was adopted.

Attest :

JAS. A. DUMONT,
Supervising Inspector-General, President of the Board.

Approved February 12, 1894.

W. E. CURTIS,

Acting Secretary of the Treasury.

14953.

Examination of applicants for appointment to office of local inspector of hulls of steam vessels.

TREASURY DEPARTMENT, May 2, 1894.

SIR: The Department is in receipt of your communication of the 21st ultimo, transmitting, without recommendation of the

Board of Designators, the examination papers of Charles J. Dufour and Charles F. Kendall, applicants for appointment to the office of local inspector of hulls of steam vessels for the district of Cincinnati, Ohio, who appeared before the board, authorized by Department letter of the 11th ultimo.

Under authority conveyed by Department letter of even date, you will again convene the board for the purpose of holding another examination.

It is not the intention of the Department to restrict said board in its examination of applicants to those whose papers have been filed in the Department; such papers are merely forwarded for its information and consideration.

Respectfully yours,

J. G. CARLISLE, *Secretary.*

SUPERVISING INSPECTOR OF STEAM VESSELS
OF THE SEVENTH DISTRICT, Cincinnati, Ohio.

14774.

Governing employment of stenographers and typewriters as clerks to the local boards of inspectors of steam vessels.

TREASURY DEPARTMENT, March 7, 1894.

To the Supervising Inspector-General and other inspection officers of steam vessels:

In view of the requirements of the Steam Vessel Inspection Service, it is hereby ordered that when clerks are appointed to local boards of inspectors, under the authority of section 4414, Revised Statutes, such clerks shall be competent stenographers and typewriters in every case where only one clerk is employed, and when more than one clerk is employed at the office of any local board, at least one of such clerks shall be a competent stenographer and typewriter.

J. G. CARLISLE, *Secretary.*

INSPECTORS, ASSISTANT.

Assistant inspectors.

[1879.—Department No. 139.]

TREASURY DEPARTMENT,
Washington, D. C., September 9, 1879.

The attention of supervising and local inspectors is hereby directed to the following extract from a decision of the Solicitor of the Treasury, addressed to the Secretary of the Treasury, and dated September 26, 1872, relating to the duties of assistant inspectors:

[Extract.]

* * * "The fourth paragraph of section 11 (section 4421, Revised Statutes) enacts that 'when the inspection is completed

and the (local) inspectors approve the vessel and her equipments throughout, *they* should make and subscribe a certificate to the collector or other chief officer of the customs of the district in which such inspection shall be made.' * * *

"The act contemplates a personal responsibility and supervision on the part of the local inspectors as regard the matters relating to the inspection and equipment of a vessel, all of which are made conditions precedent to the issuing of this certificate.

"It is a rule of law that an authority to do acts merely ministerial and mechanical may be delegated; but not so when the act involves the exercise of judgment or discretion.

"The duties assigned by the act to local and supervising inspectors require the exercise of judgment and discretion. They are not authorized to appoint deputies, nor are assistant inspectors empowered to perform any of their official duties.

"My opinion, therefore, is that the duties of assistant inspectors are confined to aiding the local inspectors in the performance of their duties, and that in so doing they must act under the immediate supervision and direction of a local inspector.

"They can not, in the absence of the local inspector, or at any time, sign certificates of inspection, grant and sign licenses, or exercise functions and perform duties which by the act are specially conferred upon or assigned to local inspectors." * * *

The above decision, which is concurred in by the Department, decides that assistant inspectors are incompetent, under the steamboat laws, to sign certificates of inspection; and they are hereby notified that the practice of doing so, heretofore in vogue under the authority of Department Circular No. 32, Navigation Division, No. 10, dated April 5, 1872, issued previous to said decision, must be discontinued from the date of the receipt of this circular; and all certificates of inspection issued thereafter must be signed by the local inspectors, except when inspections are made by the supervising inspectors, under the authority conferred by section 4409, Revised Statutes, when such certificate must be signed by those officers.

JOHN SHERMAN,
Secretary.

14429.

Examinations and qualifications required of assistant inspectors of steam vessels.

TREASURY DEPARTMENT, October 19, 1893.

To supervising inspectors of steam vessels:

The following requirements in relation to the examinations and qualifications of persons who are applicants for appointment as assistant inspectors of steam vessels, whose employment is pro-

vided for under the provisions of section 4414, Revised Statutes, is printed for your information and others whom it may concern.

No examination is to be held except of persons duly designated by the Secretary of the Treasury.

When such designations are made you will be duly notified through the Office of the Supervising Inspector-General of Steam Vessels.

CHARLES S. HAMLIN,
Acting Secretary.

TREASURY DEPARTMENT, *October 13, 1893.*

SIR: You are directed hereafter to cause all applicants for the position of assistant inspector in the various supervising inspection districts, whose names may be referred to you for that purpose, to be examined by the supervising inspector of the district in which application is made.

The examination shall be noncompetitive and cover their practical qualifications only, and pertain to the duties of assistant inspectors required by law and by the rules and regulations of the board of supervising inspectors.

Each applicant must write a fair, legible hand, spell correctly, and be able to calculate the various problems and examples relating to his particular branch of the service set forth in the "General Rules and Regulations prescribed by the Board of Supervising Inspectors" (Form 2101).

Each applicant shall, in the presence of the supervising inspector conducting the examination, write a letter, without help or suggestion from any person whatsoever, addressed to the Secretary of the Treasury, stating his experience and qualifications. The letter shall contain not less than 100 words, which shall include the address and signature.

During the course of the examination the candidate may have access to the Rules and Regulations, but shall have no assistance from any person whatever to aid him in his work. The time of the examination shall not in any case exceed a single continuous session of six hours.

Upon the conclusion of the examination the papers used therein shall be sealed up by the supervising inspector conducting the examination, and transmitted to the Supervising Inspector-General.

As soon as practicable after their receipt an examination of the papers shall be made, and the Supervising Inspector-General shall then transmit them to the Secretary, and report the standing of the candidate, as shown by the papers, with such recommendation in the case as he shall consider justified by the circumstances.

Every applicant shall, before entering upon the examination, satisfy the supervising inspector that he has had, if an applicant

for assistant inspectorship of hulls, at least three years' experience as a practical master shipbuilder and superintendent of construction of hulls of steam vessels, either wood or iron, or has been a licensed master or pilot of the highest grade granted upon the waters upon which he has been employed of not less than three years' actual practical experience, under license, which fact must be of record in the Treasury Department. If an applicant for assistant inspectorship of boilers, he must satisfy the supervising inspector, before examination, that he is a practical master boiler-maker, having had at least three years' experience as superintendent of construction of marine boilers, or is a licensed engineer of steam vessels of the highest grade on the waters upon which he has been employed of not less than three years' actual practical experience, under license, which fact must be of record in the Treasury Department.

Respectfully yours,

J. G. CARLISLE,
Secretary.

JAMES A. DUMONT, Esq.,
*Supervising Inspector-General,
Steamboat Inspection Service.*

15775.

Qualifications and examination of assistant inspectors of hulls and boilers of steam vessels.

TREASURY DEPARTMENT, *March 19, 1895.*

It is hereby ordered that before recommending action on the nomination, by a supervising inspector of the Steamboat-Inspection Service, of an assistant inspector of hulls or boilers, the Supervising Inspector-General of the Steamboat-Inspection Service shall cause the applicant for the position of assistant inspector, to be examined by the supervising inspector of the district in which application is made.

The applicant shall, before entering upon an examination, satisfy the supervising inspector that he has had, if an applicant for assistant inspectorship of hulls, at least three years' experience as a practical master shipbuilder and superintendent of construction of hulls of steam vessels, either wood or iron, or has been a licensed master or pilot of the highest grade granted upon the waters upon which he has been employed of not less than three years' actual practical experience, under license, which fact must be of record in the Treasury Department. If an applicant for assistant inspectorship of boilers, he must satisfy the supervising inspector, before examination, that he is a practical master boiler-maker, having had at least three years' experience as superintendent of construction of marine boilers, or is a licensed engineer of steam vessels of the highest grade on the

waters upon which he has been employed of not less than three years' actual practical experience, under license, which fact must be of record in the Treasury Department.

The examination shall be noncompetitive, cover practical qualifications only, and pertain to the duties of assistant inspectors required by law and by the Rules and Regulations of the Board of Supervising Inspectors.

The applicant must write a fair, legible hand, spell correctly, and be able to calculate the various problems and examples relating to his particular branch of the service set forth in the "General Rules and Regulations prescribed by the Board of Supervising Inspectors" (Form 2101).

The applicant shall, in the presence of the supervising inspector conducting the examination, write a letter, without help or suggestion from any person whatever, addressed to the Secretary of the Treasury, stating his experience and qualifications. The letter shall contain not less than one hundred words, which shall include the address and signature.

During the course of the examination the candidate may have access to the Rules and Regulations, but shall have no assistance from any person whatever to aid him in his work. The time of the examination shall not in any case exceed a single continuous session of six hours.

Upon the conclusion of the examination, the papers used therein shall be sealed up by the supervising inspector conducting the examination and transmitted to the Supervising Inspector-General.

As soon as practicable after their receipt an examination of the papers shall be made and the Supervising Inspector-General shall then transmit them to this office with his recommendations thereon.

J. G. CARLISLE,
Secretary.

LICENSED OFFICERS OF STEAM VESSELS.

Licensed officers may be tried together or separately.

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., October 5, 1872.

SIR: I have the honor to acknowledge the receipt of your letter of the 1st instant, in which you inquire if each officer of the steamer *Metis* derelict in the performance of his duties must be tried separately in an investigation as to his conduct, under section 19, act of February 28, 1871, or whether the investigation may be conducted as to all at the same time.

In reply, I have to say that in every case arising under said section it is within the discretion of the board who make the

investigation to decide whether they will conduct it as to all together or as to each separately.

In a case like the present, where the same evidence as to guilt or innocence must apply alike to all, it would seem to be entirely proper to include all the officers in the same hearing.

I am, very respectfully,

J. H. ROBINSON,

Assistant Solicitor of the Treasury.

HON. W. A. RICHARDSON,

Assistant Secretary of the Treasury.

7908.

Defense of licensed officers of steam vessels.

TREASURY DEPARTMENT, December 8, 1886.

SIR: Referring to your letter of the 20th ultimo, in which you inquire whether a licensed officer of a steam vessel, being tried on charges preferred before a local board of inspectors in the manner provided in section 4450, Revised Statutes, may not be defended by counsel before such local board, you are advised that your communication was referred to the Solicitor of the Treasury for an opinion upon the question presented.

That officer reports, in substance, in a letter dated the 7th instant, that an accused officer in an investigation before the local inspectors has no legal right to appear by counsel, but advises that the board, "in its discretion," may allow counsel to appear specially in cases where the accused can not appear in person, "and that it may be advisable to allow counsel to appear in cases where, in the judgment of the board, the object to be obtained by the proposed investigation will be promoted by so doing, and when the rights of the defendant "would seem to require it."

The conclusion of the Department, therefore, is founded upon the Solicitor's opinion, partially quoted above, that the whole question of admitting counsel to appear at an investigation under section 4450, Revised Statutes, is wholly discretionary with the officers holding such investigation.

Your attention, however, is called to the fact that any officer feeling aggrieved at a decision of a local board in suspending or revoking his license may, within thirty days, appeal to the supervising inspector of the district for a rehearing. In such rehearing the Department has decided that the accused officer may be represented by counsel.

Respectfully yours,

C. S. FAIRCHILD,

Assistant Secretary.

J. W. WARTMANN, Esq.,

Evansville, Ind.

*Revocation of licenses of officers of steam vessels.*TREASURY DEPARTMENT, *February 5, 1887.*

SIR: You are hereby directed to notify the officers of your service that the decision of the Department dated July 9, 1883 (Synopsis Decision No. 5807), which held that a licensed officer of steam vessels whose license had been revoked by local boards of inspectors might resume his duties pending an appeal to the supervising inspector, has upon review by the Solicitor of the Treasury been reversed, that officer now stating it to be his opinion "that an appeal to the supervising inspector would not have the effect of restoring the officer to duty pending its consideration."

The opinion in full of the Solicitor of the Treasury is inclosed herein for your information, to be placed in the files of your office.

Respectfully yours,

DANIEL MANNING,
Secretary.

JAMES A. DUMONT,
Supervising Inspector-General of Steam Vessels.

[Opinion of the Solicitor of the Treasury referred to above.]

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., February 3, 1887.

SIR: I am requested to review the opinion given by my predecessor, under date of July 7, 1883, with regard to the status of an officer whose license has been revoked or suspended by a local board pending an appeal to the supervising inspector.

Section 4450, Revised Statutes, provides that—

"The local boards of inspectors shall investigate all acts of incompetency or misconduct committed by any licensed officer while acting under the authority of his license, and shall have power to summon before them any witnesses within their respective districts and compel their attendance by a similar process as in the United States circuit or district courts, and they may administer all necessary oaths to any witnesses thus summoned before them; and after reasonable notice in writing given to the delinquent, of the time and place of such investigation, such witnesses shall be examined, under oath, touching the performance of his duties by any such licensed officer; and if the board shall be satisfied that such licensed officer is incompetent, or has been guilty of misbehavior, negligence, or unskillfulness, or has endangered life, or willfully violated any provision of this Title they shall immediately suspend or revoke his license."

Section 4452 further provides that—

"Whenever any board of local inspectors refuses to grant a license to any person applying for the same, or suspends or revokes the license of any master, mate, engineer, or pilot, any person deeming himself wronged by such refusal, suspension, or revocation may, within thirty days thereof, on application to the supervising inspector of the district, have his case examined anew by such supervising inspector; and the local board shall furnish to the supervising inspector, in writing, the reasons for its doings in the premises; and such supervising inspector shall examine the case anew, and he shall have the same powers to summon witnesses and compel their attendance, and to administer oaths, that are conferred on local inspectors; * * * and such supervising inspector may revoke, change, or modify the decision of such local board." * * *

It is the intention of the statute, in my opinion, that where the license of an officer is suspended or revoked by the local board, it shall continue suspended or revoked until their action is reversed by the supervising inspector. The statute was enacted to afford a prompt and summary remedy, as exigencies may arise, for the care and protection of human life, and should therefore be given a liberal interpretation in the interest of public safety. Regard for the public welfare is the highest law. (Broom's Man., p. 1.) Professor Lieber, in his work on Legal and Political Hermeneutics, says: "Let everything in favor of the security of the citizen and the protection of the individual be liberally and comprehensively interpreted."

A statute made *pro bono publico* shall be construed in such manner that it may, as far as possible, attain the end proposed. (Dwar. on Stat., p. 234; Pierce v. Hopper, Str. 253, 10 Modern R.)

If Congress had intended that, pending an appeal, the officer suspended by the local board should be restored to duty, it would have so expressed its intention. The fact that an appeal is taken from the decision of the local board does not *ipso facto* operate to restore the license. There is no analogy in either civil or criminal actions opposed to an interpretation calculated to "meet the mischief and advance the remedy in this class of cases." In civil suits an appeal from the judgment below does not suspend execution unless a supersedeas, or other restraining process, is issued or bond given. In criminal actions an appeal from the judgment of the lower court does not operate to release the prisoner from custody pending proceedings in the appellate court, and it would be difficult, upon principle, to perceive why a drunken or incompetent officer—an engineer or pilot, for instance—should be restored to his responsible position in the steam-navigation service, to the imminent danger of the traveling public, pending an appeal from the decision of the local board, who, upon investigation, had deemed it prudent to revoke or suspend his license.

I am, therefore, of the opinion that an appeal to the supervising inspector would not have the effect of restoring the officer to duty pending its consideration; and I do hereby so far modify the rule laid down in the opinion of my predecessor as to make the same conform to what I understand to be a proper construction of the statute.

The papers referred are herewith returned.

Very respectfully,

A. McCUE,
Solicitor.

The SECRETARY OF THE TREASURY.

3814.

Steamboat-Inspection Service—Issue of license to minors.

TREASURY DEPARTMENT, December 10, 1878.

SIR: In your letter of August 2, addressed to the Secretary, inadvertently overlooked in the Supervising Inspector-General's office, you ask if you may legally issue a license as engineer to a person who fulfills the conditions prescribed by section 441, Revised Statutes, but who is a minor. In reply, you are informed that the Department could not pronounce the issuing of an engineer license under such circumstances illegal, but it would consider such action contrary to the purpose of the law, and productive of much abuse. It is proper that a man should not be intrusted with responsibilities, such as, for instance, pertain to the position of a licensed steamboat officer, until he is legally responsible for his actions, namely, when he is 21 years old; and, as this consideration has hitherto governed the administration of law in all the supervising districts, the Department decides against the issue of a license to a minor.

Very respectfully,

JOHN SHERMAN,
Secretary.

SUPERVISING INSPECTOR,
First District, San Francisco, Cal.

Steam vessels that do not require a licensed master.

TREASURY DEPARTMENT,
Washington, D. C., September 1, 1879.

SIR: The Department is in receipt of your letter of the 28th ultimo, in which you call attention to the fact that Captain Irish, of the revenue cutter *Hamilton*, reports boarding the steamer *Margaret Ann*, of 34 tons burden, and that he found said steamer in charge of P. Dougherty, a licensed second-class pilot, and that though Dougherty is of record as master of said steamer, he has no license as master from the steamboat inspectors.

18251—19

You state that you have called the attention of the local inspectors at your port to the above facts, and that those officers admit that they are in the habit of issuing second-class pilot's licenses to persons in charge, as masters of steamers of less than 100 tons burden, and they refer to the second clause of rule 44,* Rules and Regulations of the Board of Supervising Inspectors, as their authority for so doing.

You further state that you construe said rule to mean that a second-class pilot may act in charge of a steamer, such as is described as pilot only, and that he could not act as master of such steamer without a license as master, or a joint license as master and pilot, as provided for in section 4433 (4438), and you add that if it were otherwise, "a steamer might have one man as master according to her documents, and another man licensed as second-class pilot in charge, and hence master, an anomaly not contemplated in the law," and you ask for the decision of the Department upon the subject.

You are informed that section 4426, Revised Statutes, contemplates a class of vessels whose masters do not require to be licensed under the steamboat laws; namely, ferryboats, canal boats, yachts, and other small crafts of like character, a licensed pilot and a licensed engineer only being required. The Department would include in the class last described all steam vessels of 100 tons or less, not sailing under register. This corresponds with the class of vessels that may be navigated with second-class pilots in charge, described in rule 44, above mentioned; and the decision of the Department is, that the pilot in charge of such described vessels may be named in the documents as master, or the owners may place therein the name of some other person as master, without requiring such person to be licensed.

On vessels of the class described in section 4426, a licensed pilot and a licensed engineer on watch would constitute the full complement of licensed officers required by section 4463, Revised Statutes.

Very respectfully,

JOHN B. HAWLEY, *Acting Secretary.*

A. P. TUTTON, Esq.,

Collector of Customs, Philadelphia, Pa.

9417.

Construing section 12, of Rule V, Rules and Regulations of Steam Vessels, regarding term of preliminary service of licensed officers.

TREASURY DEPARTMENT, June 4, 1889.

SIR: Complaint has been made to the Supervising Inspector-General that the local inspectors at Marquette, Mich., have rejected the application for pilot's license of Walter G. Stewart,

* Now section 7, Rule V, page 142.

for lack of the three years' experience required under section 12 of rule 5, Rules and Regulations.

An examination of this case reveals the fact that Mr. Stewart, the applicant referred to herein, has served three full seasons of navigation as wheelsman on steam vessels, and one full season as a sailor on sail vessels; but, as the seasons of navigation on the lakes is but about eight months, and the actual service of Mr. Stewart is only thirty-one months and a half, the inspectors decide that he has not served the full term of thirty-six months—or three years—required by the rule. The rule referred to reads as follows:

"No original license for any route shall be issued to any person, except for special license on small pleasure steamers and ferry-boats navigating outside of ports of entry and delivery, who has not been employed in the deck department of a steamer or sail vessel for the term of at least three years preceding the application for license."

The Department, after a careful consideration of the subject, has come to the conclusion that the inspectors at Marquette have erred in their construction of the rule under consideration; which rule should be interpreted as requiring an applicant for pilot's license to have served continuously during the full season of navigation on the waters upon which he has been employed during three calendar years only, and not thirty-six months of actual employment, which, on the lakes, would require an actual term of four and a half years of preliminary employment, instead of three years, as the Department believes the rule intended.

You will, therefore, instruct the local inspectors at Marquette that if Mr. Stewart has the legal qualifications required of pilots by section 442, Revised Statutes of the United States, that the Department decides that the experience of Mr. Stewart as shown in his application complies with the technical requirements of section 12 of rule V, and they (the inspectors) should issue the license.

Respectfully yours,

GEORGE S. BATCHELLER,
Acting Secretary.

WM. M. DALY, Esq.,
Supervising Inspector Eighth District, Detroit, Mich.

5787.

Steam vessels—Licensed masters and mates.

TREASURY DEPARTMENT, June 30, 1883.

SIR: The Department is in receipt of your letter of the 28th instant, submitting for such action as it may deem advisable the correspondence of John W. Fraizer, special inspector of customs, and the United States attorney for the eastern district of

Pennsylvania, relating to suits instituted against the following steamers, viz: *Ann Eliza*, *Edward C. Biddle*, and *M. Massy*.

The suits referred to having been brought to recover penalties and forfeitures alleged to have been incurred as charged by Inspector Fraizer, for violation of sections of 4438 and 4499, by the *M. Massy* (canal boat) not carrying a licensed master, and, by the *Ann Eliza* and *Edward C. Biddle*, for not carrying a licensed mate. All the papers in the case having been submitted to the Supervising Inspector-General of Steam Vessels, that officer informs me that the *M. Massy*, being a steamer of less than 100 tons burden, is exempt from carrying a licensed master, by rule 44* of the Rules and Regulations of the Board of Supervising Inspectors, also by decision of the Department (Synopsis No. 4172, dated September 1, 1879), from which there is quoted as follows: " * * * section 4426 contemplates a class of vessels whose masters do not require to be licensed under the steam-boat laws, namely: Ferryboats, canal boats, yachts, and other small craft of like character, a licensed pilot and a licensed engineer only being required. The Department would include in the class last described all steam vessels of 100 tons, or less, not sailing under register. * * * On vessels of the class described in section 4423 a licensed pilot and a licensed engineer on watch would constitute the full complement of licensed officers required by section 4463, Revised Statutes."

Referring to the charges against the *Ann Eliza* and *Edward C. Biddle* (canal boats) for not carrying licensed chief mates, the Supervising Inspector-General reports that the "licensed chief mate" referred to in the laws is, in his opinion, the chief mate and navigating officer of an ocean steamer, next in command to the master, and who would, in the case of sickness or death of the master, succeed him in those duties. This view of the case is confirmed by the law (section 4440, Revised Statutes) that requires inspectors, before granting a chief mate's license, that they shall examine the candidate "as to his knowledge and ability in navigation and managing such [steam] vessels," clearly indicating an officer with qualifications of a character certainly not required on a canal boat, and, in the opinion of the Supervising Inspector-General, not upon river steamers, the law, section 4487, making the pilots of such steamers the controlling navigating officer.

Under the circumstances stated it is the opinion of the Department that, as shown by the Supervising Inspector-General, no law has been violated by the steamers named in the complaint. It is advised that the United States attorney for the eastern district of Pennsylvania be instructed to discontinue the suits against the same, the Department coinciding with the opinion of the United States attorney, that "citizens should not be prosecuted for penalties for alleged violation of the law in cases in

* Now section 7, Rule V, page 142.

which they have been informed by the proper authorities (local inspectors) that they have done or are doing all that the law requires."

The papers in the case are returned herewith.

Very respectfully,

JNO. C. NEW,
Acting Secretary.

HON. KENNETH RAYNER,
Solicitor of the Treasury.

8755.

Relating to renewal of officers' licenses under amended regulations.

TREASURY DEPARTMENT, March 29, 1888.

SIR: The Department has received a letter from Capt. Frank J. Oakes, of Cincinnati, appealing from your construction of section 19, Rule V, Rules and Regulations, as recently amended, under which he is deprived of the privilege of renewing his license as master of steam vessels because of not presenting his claims for renewal "within twelve months after the date of expiration" of the license formerly held by him, and that he is ineligible to receive an original license because of the restriction contained in amendment to section 14 of Rule V, requiring that no original license as master of lake, bay, or river steamers "shall be issued hereafter to any person who has not been licensed and served at least one year as first-class pilot or chief mate on such steamers, such service as pilot or chief mate to have been within three years preceding the application for license." Captain Oakes further states substantially that he has been a licensed master for eight years, and therefore, in his judgment, entitled to have such license renewed.

The case having been before the Supervising Inspector-General for consideration, that officer reports it as his opinion that the amendment was not intended to prevent the renewal of a license when the old license should not be presented within twelve months, but simply to compel the personal presence of the applicant for examination, to determine that his qualifications had not deteriorated since he last held a license, whereas under the former rules a license sent by mail at any time after its expiration entitled the holder per se to a renewal without the inspectors having opportunity for the examination contemplated in the law when it made the term of a license extend to but one year.

It is further the opinion of the Supervising Inspector-General, in which the Department concurs, that Captain Oakes should be examined by the local inspectors, and if found with the same qualifications as when he was previously licensed, they should

renew his license, as it is not intended in any amendments to the rules applying to the Steamboat-Inspection Service to make them retroactive.

Respectfully yours,

C. S. FAIRCHILD,
Secretary.

AMERICUS WARDEN, Esq.,
Supervising Inspector, Seventh District, Cincinnati, Ohio.

9139.

Licensed officers of steam vessels—Sustaining action of local inspectors in revoking license.

TREASURY DEPARTMENT, November 27, 1888.

SIR: There is inclosed herein for your information a decision of the Solicitor of the Treasury in relation to an appeal of the local inspectors of San Francisco, Cal., from a decision of the supervising inspector of the first district, declaring the action of the local inspectors in revoking the license of Captain Wallace, late of steamer *City of Chester*, null and void.

The decision of the Solicitor of the Treasury supports the appeal of the local inspectors.

Respectfully yours,

HUGH S. THOMPSON,
Acting Secretary.

JAMES A. DUMONT, Esq.,
Supervising Inspector-General of Steam Vessels.

[Treasury Department, Office of the Supervising Inspector-General of Steam Vessels.]

WASHINGTON, D. C., November 28, 1888.

Following is the full text of the decision above referred to, which is published for the information of local and supervising inspectors of steam vessels, and licensed officers of such vessels.

JAS. A. DUMONT,
Supervising Inspector-General.

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., November 19, 1888.

SIR: I have the honor to return herewith a letter dated 3d instant, addressed to the Supervising Inspector-General of Steam Vessels, by the supervising inspector residing at San Francisco, Cal., with inclosures, relating to the revocation of a license

granted to Thomas Wallace as captain and pilot under the statutes relating to inspection of steam vessels.

It appears from the papers submitted that the board of local inspectors at San Francisco, recently instituted an investigation under the authority conferred by section 4450, Revised Statutes, with a view of determining the responsibility, if any, on the part of licensed officers for a collision that occurred on the 22d of August between the steamers *Oceanic* and the *City of Chester*.

Wallace was, at the time of this accident, captain of the latter vessel. In reporting their action to the Treasury Department, the local inspectors say :

* * * "We made a very thorough inquiry as to the cause of the disaster, taking the testimony of officers and a portion of the crew of the respective steamers and that of other witnesses.

"Captain Wallace, at our request and his own desire, was present throughout our examination of the witnesses, and had the privilege, and exercised it as he saw fit, to propound questions and cross-questions to witnesses on the stand through one or other of the local inspectors. * * *

"The taking of testimony was not concluded until we received from Captain Wallace a written statement that he had no further testimony to offer." * * *

The action taken by the local board in revoking the license of Mr. Wallace was set aside by the supervising inspector under and by virtue of the power conferred on him by section 4452, Revised Statutes, for the reason, as alleged, that the local inspectors did not follow the rules prescribed by the board of supervising inspectors requiring that : * * * "The inspectors shall furnish the accused with a copy of the charges setting forth specifically the character of the charges and the section of the statute or rules of the board that have been violated."

Upon this state of facts you request my opinion as to whether it is not mandatory upon a board of local inspectors, when investigating the conduct of licensed officers in charge of steamers that have been in collision, to suspend or revoke the license of such officers, who may, by such investigation, be shown to have been negligent or incompetent, without further trial, upon regular formulated charges, of which the delinquent has been furnished a copy in writing.

Section 4450, Revised Statutes, confers judicial powers upon the local boards of inspectors when investigating alleged acts of incompetency or misconduct committed by licensed officers acting under the authority of a license.

In such cases the law empowers them to summon witnesses and compel their attendance, but before such witnesses can be legally examined the statute requires that reasonable notice, *in writing*, shall be given to the alleged delinquent of the time and place of such investigation.

No formal charge setting forth the particular acts of incompetency or misconduct, as required by the rules prescribed by

the Board of Supervising Inspectors, are necessary to give the local board jurisdiction when acting under the provisions of section 4450, Revised Statutes.

The serving of a copy of any charges made against the accused is a reasonable and proper regulation of the Department, but is outside of the provision of the statute. The supervising inspector, in overruling the decision of the local board of inspectors, seems to have placed his decision upon the fact that no written notice of the time and place of hearing and no copies of the charges were served upon the captain. But it must be borne in mind that the facts as presented show that the captain did appear before the board and participate in the examination. So the question to be considered is this: Does this appearance of the accused and his participation in the examination operate to waive the nonservice of notice and the copy of charges? It is a well-settled rule of law that the voluntary appearance of a person who is subject to legal proceedings does operate as a waiver of the service of process. (See 3 Cranch, 496; 8 Wheaton, 699; 4 Cranch, 421; 9 Wheaton, 391; 3 Id., 459; 17 Wall., 445; 10 Id., 308; 18 Id., 272; 21 Id., 455.)

It is apparent that the notice required must be regarded as in the nature of process, the object of its requirement evidently being to give notice to the accused, so that he may have an opportunity of appearing before the board and defending himself from the accusation. But when the accused voluntarily appears before the board at the time and place appointed, and takes part in the examination, and at the close of it informs the board that he has no further evidence to produce, and practically submits to the closing of the examination, he can not be heard to raise objection, after a decision by the board under such circumstances, because he did not have notice as to the time, place, etc. In other words, his voluntary appearance, under the circumstances presented to me, operates as a waiver of service of notice, etc. If he had not appeared, then the board would have been without jurisdiction, and a condition precedent to their examination, namely, the service of a notice, would clearly have rendered their proceeding void. Or if the accused had appeared and objected that this provision of the statute had not been complied with, then the action of the board would have been irregular and void. I do not think he should now be heard, under the facts presented to me, to object that notice was not served. It is too late. He has waived that point by his voluntary appearance. There is no merit in the objection as now made, because he has had as complete an opportunity to defend himself against the accusation as if the notice had been served.

It follows that the decision of the supervising inspector, to the effect that the license of the captain was not properly revoked, should be set aside, and the decision of the local board of inspectors stand in full force and effect. The result, of course, is the

continued revocation of the captain's license; and in case he should assume to act as captain, he will be liable to prosecution for the recovery of the penalties prescribed by the statute.

Very respectfully,

C. S. CARY,
Solicitor.

HON. SECRETARY OF THE TREASURY.

8434.

Circular defining term of suspension or revocation of steamboat officers' licenses.

[Treasury Department, Office Supervising Inspector-General of Steam Vessels.]

WASHINGTON, D. C., September 15, 1887.

To supervising and local inspectors of steam vessels :

The Solicitor of the Treasury having rendered an opinion upon the powers conferred upon local inspectors of steam vessels under section 4450, Revised Statutes of the United States, contrary to that held and practiced by the officers of the inspection service, they are directed hereafter to conform to the Solicitor's opinion, which is, that inspectors can not legally suspend or revoke an officer's license beyond the time for which the license was issued. In cases of investigation of an officer for misconduct while acting under an unexpired license, but which license shall expire previous to the conclusion of the investigation, the duties of the inspectors in the case will be concluded by referring the case to the United States district attorney for prosecution for recovery of the penalties provided by law, if such are provided for the misconduct charged.

Officers whose licenses have been revoked, or whose licenses have been suspended pending the whole unexpired term of the license, are entitled to a reexamination for reinstatement after the expiration of such term, and should in no case be denied reinstatement except for reasons that would have debarred them from an original license, which reasons must be furnished the applicant in writing, and a copy of the same retained upon the inspector's official records.

Following is the full text of the opinion of the Solicitor referred to above.

JAS. A. DUMONT,
Supervising Inspector-General.

Approved :

HUGH S. THOMPSON,
Acting Secretary.

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., September 10, 1887.

SIR: I have considered the question submitted in a communication addressed to you * * * whether or not a local board of inspectors, appointed under the steamboat-inspection laws, has authority to indefinitely suspend a pilot or engineer's license.

The license issued to this class of officers authorizes them to discharge their respective duties for a term of one year, but the statute under which the same is granted reserves the right to suspend or revoke the license upon satisfactory proof of bad conduct, intemperate habits, incapacity, inattention to duty, or any willful violation of the statute.

Section 4450, Revised Statutes, requires the board of local inspectors to investigate all acts of incompetency or misconduct committed by any licensed officer while acting under the authority of his license, and if upon the evidence taken at such investigation the board is satisfied that the officer is incompetent, or has been guilty of misbehavior, negligence, or unskillfulness, or has endangered life, or willfully violates any provision of the statute, it becomes its duty to immediately suspend or revoke his license. While the officer stands suspended he can not exercise the duties of his office, but such suspension can not extend beyond the date at which his license will expire by its own limitation. Should the suspension expire before that date, the officer becomes again vested with all the rights and duties appertaining to his office for the balance of the time for which he was licensed, without any further action on the part of the inspectors, and no suspension, although it cover the entire period for which the officer was licensed, will operate to disqualify him for reexamination and appointment.

When the license of an officer is revoked he can not be reinstated without a reexamination and appointment, but this may take place at any date subsequent to the revocation.

Whether the board in any case shall suspend or revoke a license is a matter purely within its discretion, acting, as it does, in a quasi judicial capacity, when conducting an investigation. But, in my opinion, the suspension or revocation can not in any case extend beyond the time for which the officer was appointed under the statute. In other words, the law does not empower the board of local inspectors, for any cause, to permanently disqualify a person from holding any one of the offices in question. * * *

Very respectfully,

A. McCUE,
Solicitor.

The SECRETARY OF THE TREASURY.

*Steam vessels—Licensing of naturalized citizens residing in
Canada.*

TREASURY DEPARTMENT, May 19, 1883.

SIR: The Department has received your letter of the 4th instant, saying complaint had been made that naturalized citizens who had been licensed as masters, mates, pilots, and engineers, reside in Canada when navigation is suspended on the lakes, and in one case a master of a steamer is said to have voted in Canada. You inquire if such persons are entitled to receive licenses from the Steamboat-Inspection Service. In reply you are informed as follows: The act of April 17, 1874 (Statutes at Large, vol. 18, p. 30), assumes that an alien could not be licensed as a pilot. It provides a way for him to become capacitated to apply for a license as a pilot. One of the conditions is that he must have been a permanent resident of the United States for six months prior to the granting of the license. Taking it as conceded that every pilot must be a citizen, save as the contrary is indicated by the act above cited, which does not apply to the cases in hand, then we proceed. A certificate of naturalization is *prima facie* evidence of citizenship; it may be attacked for fraud or want of jurisdiction in the court that assumed to grant it, but that must be done in a judicial or quasi judicial proceeding. It can not be done in such a proceeding as that of licensing a pilot. Every one, then, that presents a certificate of naturalization is to be taken to be a citizen; and every citizen is entitled to a license if he meets the requirements of the statute. The persons whose right is questioned in the paper submitted to me seem to have produced certificates of naturalization and to have shown themselves to be citizens. Whatever may have been their subsequent conduct, as, for instance, going back into Canada, holding property there, and voting there, does not invalidate their certificate nor take away (so far as the local inspectors are concerned) their citizenship. It may be a violation of the laws of Canada. It may be a fraud upon our steam-vessel laws. It does not take away *per se* their United States citizenship and give power to deny or revoke a license. If the grievance is great it may give good reason for an amendment of law.

Please give a copy of this decision to Mr. Charles Cullen, president Lake Pilots' Association.

Very respectfully,

CHAS. J. FOLGER,
Secretary,

JNO. D. SHEPARD, Esq.,
Supervising Inspector Ninth District, Buffalo.

Steam vessels—State pilots not to interfere with United States pilots except on steamers sailing under register.

TREASURY DEPARTMENT, *October 24, 1879.*

SIR: The Department is in receipt of your letter of the 21st instant, in which you request a decision from the Department as to your right to pilot the steamers of the Merchants' and Miners' Transportation Company in and out of Narragansett Bay, under the license held by you from the United States local inspectors, without interference by State pilots; the steamers you refer to touching at Providence on their trips between Boston and Baltimore, and the owners of said steamers desiring your service as such pilot.

You are informed that section 4401, Revised Statutes of the United States, requires that all coastwise seagoing steam vessels not sailing under register shall, when under way, except on the high seas, be under the control and direction of pilots licensed by the United States; section 4444, Revised Statutes, prohibits any State or municipal government from imposing upon pilots of steam vessels any obligation to procure a State or other license in addition to that issued by the United States, or to make any regulations which shall impede such pilots in the performance of their duties, or compel steam vessels, except those sailing under register to and from foreign countries, to take on board a State pilot.

It is the opinion of the Department that no State pilot can interfere with your employment by the Merchants' and Miners' Transportation Company in the manner described by you, if said steamers are exclusively confined to the coastwise trade and are not sailing under register.

Very respectfully,

JOHN B. HAWLEY, *Assistant Secretary.*

MARTIN S. PEARSON, Esq.,
Providence, R. I.

6416.

TREASURY DEPARTMENT,
Washington, D. C., June 21, 1884.

SIR: In reply to your letter of the 12th instant, forwarded through the office of the Supervising Inspector-General, you are informed, first, that steamers of 103 tons and upward must have a licensed master, also a licensed pilot, or pilots, as the inspectors may determine in their certificate of inspection.

Second, a master holding a joint license as master and pilot may act in both capacities upon the same steamer, such double duty being clearly authorized by section 4443, Revised Statutes, which reads as follows: "Where the master or mate is also pilot

of the vessel he shall not be required to hold two licenses to perform such duties, but the license issued shall state on its face that he is authorized to act in such double capacity."

In cases where the inspectors deem, on account of the size of the vessel or the length of the route, that the safety of the vessel requires the whole time of the master to be devoted to the duties of master, a joint license as master and pilot should not be issued. When joint licenses are issued, the permission to act in both capacities should be made special by indorsement to the vessel upon which such joint license shall be used. This would be in strict harmony with the statute quoted, namely: "When the master or mate is also pilot of the vessel," which must be primarily by consent of the inspectors, who are to determine in their certificates of inspection the complement of officers required upon any steamer licensed by them.

In case joint licenses are issued without restriction as to the vessel upon which the person holding such license is to be employed, the officer holding such license can not be debarred the privileges indicated in the Department decision to which you refer, and which has since been printed in synopsis decisions for May, page 228, No. 6366.

Very respectfully,

H. F. FRENCH,
Acting Secretary.

S. S. GARRETT, Esq.,

Supervising Inspector, Sixth District, Memphis, Tenn.

4623.

Steam vessels—Requirements as to pilots

TREASURY DEPARTMENT, *July 24, 1880.*

SIR: The Department has received your letter of the 20th instant, with inclosure addressed to you and signed by Michael Stevens and others, Massachusetts State pilots, referring to their right to pilot coastwise steamers into the harbor of Newburyport.

In reply, you are referred to Department Decisions No. 4257, dated October 24, 1879, and No. 1241, dated September 28, 1872, which seem to cover all the points in the case you present.

It is further the opinion of the Department that coastwise vessels are not obliged to accept the first pilot that offers, that matter being one entirely within the discretion of the masters or owners of the vessels. The only obligation imposed by law is that every such steamer shall have on board a regularly licensed United States pilot, except when navigating on the high seas.

Very respectfully,

JOHN SHERMAN, *Secretary.*

COLLECTOR OF CUSTOMS,
Newburyport, Mass.

Declaring that officers' licenses must be exposed upon vessel, and in what part.

TREASURY DEPARTMENT,
OFFICE OF SUPERVISING INSPECTOR-GENERAL
OF STEAMBOATS,
Washington, D. C., September 30, 1879.

SIR: The Department is in receipt of your letter of 29th instant, in which you inquire whether night engineers on the various ferryboats at the port of Philadelphia are required to carry their "certificates of license" from one boat to another of the various boats belonging to the same company upon which they are employed, you stating as an objection thereto that the engineers referred to are never for two consecutive nights upon the same vessel, and, further, that they never know upon what boat they are to serve until they report for duty at 7 o'clock each evening.

You also desire to be informed as to what portion of the vessel your "certificate of license" should be exposed to view, to comply with the intent of the law.

In reply to your first question, you are informed that the statute is imperative that the license of an officer of a steam vessel shall be exposed to view upon the vessel upon which he is employed, under section 4446, Revised Statutes, which reads as follows: "Every master, mate, engineer, and pilot who shall receive a license shall, when employed upon any vessel, place his certificate of license, which shall be framed under glass, in some conspicuous place in such vessel, where it can be seen by passengers and others at all times; * * *," from which it will be seen that the Department, while appreciating the inconvenience to which you refer, is powerless to furnish a remedy in the matter.

In answer to your second question, the Department is of the opinion that the certificate of license of an engineer of a ferryboat would be sufficiently exposed to meet the requirements of the law if hung in the engine room of the vessel when such room is located on or above the main deck. But when such room is in the hold of the boat, and not easily accessible to passengers and others, the certificate of license should be hung in the cabin. Your objection that if hung there on a night boat it is in danger of being stolen is scarcely a reasonable one in view of the fact that the statutes require on such boats "a suitable number of watchmen in the cabin to guard against fire or other dangers" (section 4477, Revised Statutes).

Very respectfully,

JOHN SHERMAN,
Secretary.

R. T. BENDER, Esq.,
Foot of South street, Philadelphia, Pa.

*Interlineations upon officers' licenses.*TREASURY DEPARTMENT, *November 29, 1884.*

GENTLEMEN: The Department is in receipt of your petition dated the 10th instant, in which you charge J. T. Butler, inspector of hulls, and William Applegate, inspector of boilers, at New Orleans, with altering and changing the licenses issued to the petitioners under section 4442, Revised Statutes of the United States, to their detriment as pilots, under the navigation laws of the United States, such change or alteration consisting in indorsing in red ink across such licenses the words, "This license does not confer authority to pilot steamers under register, or foreign steamers, or sailing vessels in tow, or otherwise."

In reply, you are informed that in the early part of the present year the Department received information that many pilots on the Lower Mississippi River erroneously conceived the idea that their United States licenses, received under the provisions of section 4442, Revised Statutes of the United States, conferred upon them unlimited right to pilot any vessel, registered or otherwise, requiring a pilot, entering the port of New Orleans, thereby encroaching upon the rights reserved to the States, and conceded in section 4444, Revised Statutes, as follows: "Nothing in this Title (LII, Revised Statutes) shall be construed to annul or affect any regulation established by the laws of any State requiring vessels entering or leaving a port in any such State, other than coastwise steam vessels, to take a pilot duly licensed or authorized by the laws of such State, or of a State situated upon the waters of such State."

In the case under consideration, the State of Louisiana (and the fact is conceded in your petition) has conferred the rights of pilotage upon a corporation known as the "Louisiana Branch Pilots," who are entitled, under the concessions of the United States above referred to, to pilot all United States registered steam vessels, sail vessels with or without register, and foreign vessels of all classes, whether steam or sail.

The rights of a United States licensed pilot, under section 4442, were fully explained in Department letter dated February 12, 1884 (Synopsis Decisions, No. 6177), addressed to H. R. Voght, New Orleans, as follows: "A United States license gives you authority to pilot any river or coastwise steamer upon the waters for which it is granted, but it does not confer any rights to pilot a sail vessel, or registered steamer, namely, one bound to or from a foreign port, the pilotage of the latter class of vessels being regulated by the State laws, if there be any."

In view of all the facts in this case as stated, the Department sustains the action of the local inspectors at New Orleans in indorsing upon the face of licenses issued to Lower Mississippi pilots, in substance, the qualifying clause of section 4444, Revised

Statutes, and can not see that such qualification interferes with any of the just rights belonging to the holders of such license.

Very respectfully,

H. McCULLOCH,
Secretary.

DANIEL TAYLOR, *et al.*,
New Orleans, La.

Issuing of licenses to women.

TREASURY DEPARTMENT,
Washington, D. C., February 2, 1884.

A woman * * * seeks to be licensed as a master of a steam vessel on the inland waters of the United States. I know of nothing imperative in the reason of things, in natural law, in public policy, or in good morals, why a woman, if she is skilled, honest, intelligent, hardy, and prudent enough, may not have command of a steam vessel, and navigate it, and manage and conduct the business carried on with it.

* * * * *

Let the local inspectors, putting behind them all thought of her sex, without antagonism and without partiality, make diligent inquiry as to her character, carefully examine her and the proofs she offers, and if they are satisfied that her capacity, her experience, her habits of life and character warrant a belief that she can be safely intrusted with the duties and responsibilities of a master of a steam vessel, let them grant her a license according to section 4439.

CHAS. J. FOLGER,
Secretary.

11478.

Confirming the right of the Board of Supervising Inspectors to make rules and regulations concerning the qualifications of persons for admittance as licensed officers of steam vessels.

TREASURY DEPARTMENT, *July 17, 1891.*

SIR: I have the honor to inform you that the letter of Mr. R. H. McCoy, dated June 16, and which was personally presented to the Department by yourself, in which Mr. McCoy appealed to the Secretary of the Treasury from the decision of the local and supervising inspectors at Cincinnati refusing to license him as a master of steam vessels on Western rivers because of his inability to comply with the provisions of section 14, Rule V, Rules and Regulations of the Board of Supervising Inspectors, was referred to the Attorney-General of the United States for an opinion as

to whether the rule referred to was in conflict, as claimed by Mr. McCoy, with section 4439, Revised Statutes.

That officer's opinion, just received by the Department, fully sustains the action of the supervising and local inspectors at Cincinnati under the rule, as well as the validity of the rule itself.

I have the honor to transmit herewith, for your information, a complete copy of the Attorney-General's decision.

Very respectfully,

CHARLES FOSTER,
Secretary.

HON. JOHN A. CALDWELL, M. C.,
Cincinnati, Ohio.

Following is the full text of the opinion of the Attorney-General of the United States above referred to :

DEPARTMENT OF JUSTICE,
Washington, D. C., July 15, 1891.

SIR: Your letter of the 3d instant, relating to the appeal of Robert H. McCoy, is received with inclosures.

It appears that Mr. McCoy applied to the local inspectors at Cincinnati, Ohio, in June last, to be licensed as master of steam vessels running on Western rivers; whereupon his case was examined, and the application refused on the ground that applicant had "not been licensed and served at least one year as first-class pilot or chief mate on lake, bay, or river steamers, as provided by section 14, Rule V, General Rules and Regulations."

Said McCoy then appealed to the supervising inspector of the Seventh district, asking that the decision of the local inspectors be set aside, and that a license to act as such master be issued.

The supervising inspector duly examined the case, and sustained the decision of the local inspectors.

Thereupon said McCoy appealed to the Secretary of the Treasury to set aside the findings or decisions of said inspectors, and to direct the issuance of a master's license to McCoy, in accordance with his original application.

Representatives and owners of important steamboat and transportation lines also represented the hardship of the rule adopted as applied to Western rivers, and requested that the license should be granted to McCoy.

The inquiry submitted to me is, whether said section 14 of Rule V is so far in conflict with section 4439 of the Revised Statutes, or is to such an extent in derogation of the rights of McCoy in the premises, that said section 14 should be held to be without effect as applied in the case under consideration.

The statute is as follows :

18251—20

SEC. 4439. Whenever any person applies to be licensed as master of a steam vessel, the inspector shall make diligent inquiry as to his character, and shall carefully examine the applicant, as well as the proofs which he presents in support of his claim, and if they are satisfied that his capacity, experience, habits of life, and character are such as to warrant the belief that he can be safely intrusted with the duties and responsibilities of the station for which he makes application they shall grant him a license authorizing him to discharge such duties on any such vessel for the term of one year."

Section 14 of Rule V provides as follows:

"That no original master's license on lake, bay, and river steamers shall be issued hereafter to any person who has not been licensed and served at least one year as first-class pilot or chief mate on such steamers, such service as pilot or chief mate to have been within three years preceding the application for license: *Provided, however,* That the foregoing clause shall not apply to persons who have served at least three years as master, mate, or pilot on sailing vessels on waters for which the applicant desires to obtain a license."

The rule referred to was adopted by the Board of Supervising Inspectors, January 25, 1888, and was approved by the Secretary of the Treasury the 7th of the month following.

Said rule was established under the authority of section 4405, Revised Statutes, which provides that: "The Board shall establish all necessary regulations required to carry out in the most effective manner the provisions of this Title [LII], and such regulations when approved by the Secretary of the Treasury shall have the force of law."

Upon this case my opinion is as follows:

Section 14 of Rule V is in compliance with section 4405 (R. S.), as a regulation "to carry out in the most effective manner" the provisions of Title LII, and is a carrying out of the requirement of section 4439 (R. S.) that the applicant shall have such capacity, experience, and habits of life that he can be safely intrusted with the duties and responsibilities of the position for which he applies.

Therefore, the Board was authorized to establish and declare said section 14, and the same now has the force of law.

As the decisions of the local inspectors and supervising inspector are in accordance with section 14, they are in accordance with the law and must stand.

Very respectfully,

W. H. H. MILLER,
Attorney-General.

THE SECRETARY OF THE TREASURY.

14205.

Licensed officers of steam vessels—Combinations of, "to the hindrance of commerce," unlawful.

TREASURY DEPARTMENT, July 27, 1893.

GENTLEMEN: Referring to your letters of May 24 and June 24, respectively, in matter of complaint investigated by you against Capt. J. W. Rambo, for refusing to pilot steamer *Ten Broeck* over the Le Claire Rapids because the captain of the *Ten Broeck* was not a member in good standing in the Brotherhood of Upper Mississippi River Pilots, this in accordance with an alleged agreement entered into by said Captain Rambo with other masters and pilots named in a certain printed circular furnished by yourselves to the Supervising Inspector-General, in your letter to that officer dated May 24, 1893, said printed circular reading as follows:

"LE CLAIRE, IOWA, February 16, 1893.

"At a meeting called for the purpose of entering into an agreement with the rapids pilots and the Brotherhood of Upper Mississippi River Pilots, to not run over the rapids any steamer of any description which is piloted by any person who does not belong to a pilots' association, and is at the time not a member in good standing of the brotherhood, it was agreed on the part of the above pilots' association to pay any pilot who so refuses to pilot any steamer not piloted by an association member the price of his trip over the rapids.

"We, the undersigned rapids pilots, agree to the foregoing:

"J. W. RAMBO.	ZACH. G. SUITER.
"ORRIN SMITH.	ANDREW COLEMAN.
"J. G. SUITER.	DERWIN DORRANCE.
"W. D. HOLTZAPPLE.	D. A. DORRANCE.
"D. F. DORRANCE.	E. J. LANCASTER.
"J. W. SUITER.	

"We, the undersigned, delegated by the directors of the Brotherhood of Upper Mississippi River Pilots, agree to the foregoing for the association.

"FRED. R. BALDWIN.

"JOHN G. MOORE."

You are informed that your letter with the printed copy of circular above quoted was referred to the Solicitor of the Treasury for a report "whether or not, in his opinion, the within printed agreement of the licensed pilots named therein is not a conspiracy 'to the hindrance of commerce,' sufficient *per se* to warrant the suspension or revocation of the licenses of the persons named, under the provisions of section 4449, Revised Statutes, with or without proof of any overt act under such agreement, providing the agreement itself is susceptible of legal proof."

The Solicitor has decided, in an opinion rendered June 6, 1893, that "the parties to the contract in question have bound themselves 'without good and sufficient reasons' in law, to disregard the performance of their official duties in a given class of cases. In my opinion, such an agreement, which is in effect a conspiracy, to refuse to serve as pilots, must be considered 'to the hindrance of commerce,' within the meaning of section 4449, Revised Statutes, and for this reason renders the officers who are parties to the same justly liable to suspension or dismissal, by revocation of their license, under provisions of section 4450, Revised Statutes, without any further act of 'misconduct' on their part."

In pursuance of the suggestions contained in the opinion quoted, you are hereby directed to proceed in accordance with this opinion and in the manner provided in the statutes and regulations, in such a way as in your judgment may seem best to secure the vindication of the law, and prevent a future violation thereof.

Very respectfully,

W. E. CURTIS,
Acting Secretary.

UNITED STATES LOCAL INSPECTORS,
Dubuque, Iowa.

(Through the supervising inspector, fifth district.)

Following is a full text of decision referred to in above letter :

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., June 6, 1893.

SIR: I have considered the question submitted by your reference, dated 1st instant, relating to what purports to be a copy of an agreement entered into at Le Claire, Iowa, by and between the rapids pilots and the Brotherhood of Upper Mississippi River Pilots.

The parties to said contract, bearing date 16th of February last, a copy of which is submitted, promise and agree not to * * * "run over the rapids any steamer of any description which is piloted by any person who does not belong to a pilots' association and is at the time not a member in good standing in the brotherhood." * * *

It is further agreed on the part of the pilots' association that it will pay to any pilot who refuses to pilot a steamer not piloted by one of its members the price of his trip over the rapids.

You request my opinion as to whether said agreement does not amount "to the hindrance of commerce," as defined in section 4449, Revised Statutes, and therefore warrant the suspension or revocation of the licenses held by the persons who are parties to said agreement, without proof of any overt act on their part.

The section referred to is codified from an act of Congress, approved February 28, 1871, providing for the better security of life on board * * * "steam vessels navigating waters of the United States."

Public vessels of the United States, vessels of other countries, and boats propelled by steam for navigating canals are excepted from its provisions (16 Statutes at Large, 440).

The law directs that pilots and other officers navigating said vessels shall be licensed as therein provided, and the local boards of steamboat inspectors are directed to investigate all acts of "misconduct" committed by said officers, * * * "if the board (shall, upon such investigation) be satisfied, that such licensed officer is incompetent, or has been guilty of misbehavior, negligence, or unskillfulness, or has endangered life, or willfully violated any provision of the statute, they shall immediately suspend or revoke his license." (See section 4450, Revised Statutes.)

The law has for its object the protection of life and property, and should be strictly construed. The parties to the contract in question have bound themselves "without good and sufficient reasons" in law, to disregard the performance of their official duties in a given class of cases. In my opinion, such an agreement, which is in effect a conspiracy, to refuse to serve as pilots, must be considered "to the hindrance of commerce," within the meaning of section 4449, Revised Statutes, and for this reason renders the officers who are parties to the same justly liable to suspension, or dismissal by revocation of their license, under provisions of section 4450, Revised Statutes, without any further act of "misconduct" on their part.

Very respectfully,

F. A. REEVE,
Solicitor.

Hon. J. G. CARLISLE,
Secretary of the Treasury.

14264.

Suspension of license by inspector on ground of liability for stranding of steamer.

TREASURY DEPARTMENT, August 3, 1893.

SIR: The Department is in receipt of your letter of the 28th ultimo, with printed brief inclosed of Robert L. Harding, appellant, before the supervising inspector, second district, New York City, in which Mr. Harding asks that the findings of the local inspectors at Portland, Me., in suspending his license for sixty days from May 29, 1893, on the ground of his liability for the stranding of the steamer *Cottage City*, February 7, 1893, of which steamer Harding at the time was pilot and mate, be "set aside, because the inquiry and finding of said local board were conducted and

held not in accordance with the rules and regulations and laws in such cases made and provided, and for furthermore particular reasons;" in consideration of which assertions you request the Department "to have the supervising inspector at New York advised that the action of the local board of inspectors at Portland, Me., suspending the license of Capt. Robert L. Harding for negligence in allowing steamer *Cottage City* to run on Chatham Bar on February 7, 1893, was illegal and void.

In reply, you are informed that the Department can find no authority to instruct the supervising inspector as you request.

The supervising inspector, under the law, section 4452, Revised Statutes, is only authorized, when appeals are made to him by licensed officers "deeming themselves wronged" by the suspension or revocation of their licenses by a board of local inspectors, to "examine the case anew," the supervising inspector having the same powers to summon witnesses and compel their attendance that are conferred "on local inspectors," and after such new examination of the case, *and not before*, he "may revoke, change, or modify the decision of such local board."

The Department can suggest no remedy in Captain Harding's case for any alleged errors of the local board that suspended him than in an appeal to the supervising inspector, conducted by the officer as provided in the law heretofore quoted, where under the decisions of the Department he may have the assistance of counsel to protect his rights, a privilege not accorded him under the law, as interpreted by the Department (Decision 7908, December 8, 1886), when being investigated before a board of local inspectors.

Very respectfully,

W. E. CURTIS,
Acting Secretary.

EBEN WINTHROP FREEMAN,
Attorney and Counselor,
Union Mutual Building, Portland, Me.

Alien pilots and engineers of steam vessels.

TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE,
OFFICE OF THE SUPERVISING INSPECTOR-GENERAL,
Washington, D. C., May 25, 1895.

To supervising and local inspectors of steam vessels:

You are hereby informed that, the Attorney-General of the United States having rendered an opinion dated the 9th instant, declaring the provisions of the act of Congress approved June 26, 1884, known as the "Dingley bill," amending section 4131, Revised Statutes, as not inconsistent with the provisions of the act of Congress approved April 17, 1874, authorizing the licensing of certain aliens as engineers and pilots of steam vessels, and that

the latter act is still in force, thereby reversing the views previously held by the Department, and published in Department Circular No. 134, requiring that licensed officers of steam vessels must be American citizens, the provisions of said circular are hereby repealed, and inspectors will hereafter be governed by the provisions of the act approved April 17, 1874, which act reads as follows:

"AN ACT to authorize the employment of certain aliens as engineers and pilots.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any alien who, in the manner provided for by law, has declared his intention to become a citizen of the United States, and who shall have been a permanent resident of the United States for at least six months immediately prior to the granting of such license, may be licensed, as if already naturalized, to serve as an engineer or pilot upon any steam vessel subject to inspection under the provisions of the act entitled 'An act to provide for the better security of life on board of vessels propelled in whole or in part by steam, and for other purposes,' approved February twenty-eighth, eighteen hundred and seventy-one.

"Approved April 17, 1874."

JAS. A. DUMONT,
Supervising Inspector-General.

Approved:

S. WIKE,

Acting Secretary.

Following is the text of the Attorney-General's opinion:

DEPARTMENT OF JUSTICE,
Washington, D. C., May 8, 1895.

SIR: I have the honor to acknowledge yours of the 23d ultimo asking my opinion upon the question whether the statute known as the "Dingley bill," approved June 26, 1884, amending section 4131 of the Revised Statutes, repealed an act entitled "An act to authorize the employment of certain aliens as engineers and pilots," approved April 17, 1874.

As the law stood prior to the act of 1884 above cited, two classes of persons were competent to receive licenses as engineers or pilots on United States vessels. Citizens of the United States were one class. Aliens on the way to citizenship by having declared their intention to become citizens and by permanent residence in the United States for six months prior to the granting of licenses constituted another class. The amendatory act of 1884 did not affect, and was not meant to affect, either of these classes. Leaving them undisturbed, it was obviously designed to make provision for a third class of persons who might be

officers of United States vessels under peculiar circumstances and for brief periods.

The members of both the classes first named are regarded as in effect citizens of the United States and as being eligible as such to permanent employment—as officers of United States vessels generally under Revised Statutes, section 4131—and as engineers or pilots of such vessels under the act of April 17, 1874. The members of the third class, on the other hand, are aliens whom the law excludes from general and permanent employment on United States vessels and permits to serve on such vessels only temporarily and in emergencies.

The provisions of the act of June 28, 1884, being thus in no way in conflict or inconsistent with the provisions of the act of April 17, 1874, both statutes must be regarded as in force, and the latter did not have the effect of repealing the former statute.

Respectfully yours,

RICHARD OLNEY,
Attorney-General.

The SECRETARY OF THE TREASURY.

LIGHTS, STEAM AND SAIL VESSELS.

3638.

Range lights on small steamers without masts when towing.

TREASURY DEPARTMENT, *January 8, 1879.*

SIR: The Department has received your letter of the 3d instant, asking for an opinion upon the construction of section 4233, Revised Statutes, in its application to towing steamers without masts.

Your letter says that "there are many small tugboats employed on the inland waters; these boats have no masts, and are fitted with small flagstuffs, on which they hoist their lights, namely, while running without a tow carry one bright light forward and another aft, the one forward generally on the pilot house, and the one aft on a flagstaff somewhat higher. While towing it is the custom to carry two vertical lanterns at a conspicuous point." You say, also, that said lights are without screens because of the impossibility of carrying screened lights in the position described, and that you have applied to the Department for its opinion, because Captain Irish, of the Revenue Marine, insists that such lights must be screened to prevent their showing more than 20 points forward.

You are informed that the lights for the class of vessel you describe, when not towing, are specifically provided for in rule 7 of the section of law you refer to, as follows:

"The red and green lights as prescribed for ocean-going steamers; and, in addition thereto, a central range of white lights, the after light being carried at an elevation of at least 15 feet above the light at the head of the vessel.

"The headlight shall be so constructed as to show a good light through 20 points of the compass, namely, from right ahead to 2 points abaft the beam on either side of the vessel; and the after light so as to show all around the horizon."

The headlight described should be placed on the *stem* of the vessel, and not upon the pilot house, as you say is now done by the class of vessels you indicate, and it must be screened so as to show only from forward to 2 points abaft the beam on either side. The after light must show all around the horizon.

When *towing*, the law will be complied with by having an additional light aft 2 or 3 feet below the proper after light, also showing around the horizon, and from a flagstaff of sufficient height put anywhere abaft the pilot house.

Lights so displayed on towing vessels without masts are considered the equivalents of the two masthead lights required by rule 4, section 4233, Revised Statutes.

* * * * *

Very respectfully,

JOHN SHERMAN,
Secretary.

E. M. STODDARD,
Norfolk, Va.

Steam vessels—Lights on small craft.

TREASURY DEPARTMENT, *April 8, 1881.*

SIR: The Department has received your letter of the 2d instant relative to the construction to be placed on Department Circular No. 15, current series, governing lights on small craft.

The words "near the channel or fairway of any harbor" refer to the waters in or about a harbor which are public and are open for the navigation of any craft.

The rule governing lights on rowboats is peremptory in its terms, that the lights shall be placed 2 feet above the stem of the vessel. The regulations referred to took effect from and after the date of their approval.

Very respectfully,

H. F. FRENCH,
Assistant Secretary.

COLLECTOR OF CUSTOMS,
Newport, R. I.

*Steam vessels—Lights on small boats. **TREASURY DEPARTMENT, *May 19, 1881.*

SIR: In accordance with the petition of Messrs. Pettis, Freeman, Alein, and others, of Providence, R. I., authority is hereby given for boats in charge of such night watchmen as may be approved by yourself to patrol the oyster beds at or near that port without lights, not including the channels of Narragansett Bay and Providence River.

Very respectfully,

H. F. FRENCH,
Assistant Secretary.

COLLECTOR OF CUSTOMS,
Providence, R. I.

7757.

*Lights on towing steamers—Penalties for not carrying them.*TREASURY DEPARTMENT, *September 20, 1886.*

SIR: Your letter of the 10th instant was duly received and referred to the Solicitor of the Treasury for an opinion as to the penalty attaching to a towing steamer for failure to carry the lights required by rule 4, section 4233, Revised Statutes. That officer has rendered an opinion (copy inclosed), stating that the penalty is provided in section 4234, Revised Statutes.

Respectfully yours,

HUGH S. THOMPSON,
Assistant Secretary.

COLLECTOR OF CUSTOMS,
Chicago, Ill.

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., September 18, 1886.

SIR: I have considered the question presented by your reference, indorsed on a letter from the collector of customs for the port of Chicago, Ill., namely: "What penalty, if any, attaches to a steamer towing vessels and not carrying lights required by section 4233, Revised Statutes?"

Rule 4 of this section provides that steam vessels, when towing other vessels, shall carry two bright white masthead lights in addition to their side lights. In my opinion, the statute clearly contemplates that the penalty imposed by section 4234, Revised Statutes, shall apply to this class of cases. The only doubt that

* See resolution of Board, page 36, Proceedings of 1881.

can arise results from the wording of the last clause of the section, which, in terms, imposes the penalty therein provided for on "sail vessels." The two sections are in *pari materia*, and should be taken and construed together. They relate to but one subject and have one object in view, viz, the prevention of "collisions on the water," and in terms apply to vessels propelled by steam as well as by sail. To say that penalty imposed by section 4234, Revised Statutes, can not apply to steam as well as sail vessels is to defeat the principal object had in view by an enactment of the statute. Section 4234, Revised Statutes, provides that collectors shall require all "sail vessels" to be furnished with certain lights, and that every "such vessel" that shall be navigated without complying with the provisions of this and the preceding section (sections 4233 and 4234, Revised Statutes) shall be liable to a penalty of \$200, etc.

It would be impossible for a sail vessel to violate so much of section 4233 as is contained in rule 4, and therefore the evident intent of the statutes must and will govern the question presented. In this connection attention is called to the provision of section 3, Revised Statutes, which enacts that in determining the meaning of the Revised Statutes the word "vessel" shall include every description of water craft or other artificial contrivance used or capable of being used as a means of transportation on water.

I recommend that any steam vessel which is navigated without complying with the requirements of rule 4 of section 4233 be seized and proceeded against for the recovery of the penalty provided for in section 4234, Revised Statutes.

The papers covered by your reference are herewith returned.

Very respectfully,

A. McCUE.

Solicitor.

THE SECRETARY OF THE TREASURY.

8168.*

Lights on ocean-going steamers.

[Treasury Department, Office Supervising Inspector-General of Steam Vessels.]

WASHINGTON, D. C., April 9, 1887.

Capt. JOHN G. HULPHERS,

Steamer Wyanoke, Richmond, Va.:

SIR: I am in receipt of your letter of the 8th instant, with newspaper slip inclosed, containing a synopsis of the recent decision of Judge Andrews, of the supreme court of the State of

* Decision 8168 sustained by United States Supreme Court, No. 66, October term 1893, *William Belden v. Emory A. Chase, executor, et al.*

New York, in the *Vanderbilt-Yosemite* case, wherein it is held, in substance, that an ocean-going steamer should, when navigating inland waters, change the lights required by rule 2, section 4233, Revised Statutes, to those required upon harbor, lake, and inland steamers by rule 7 of the same statute, and you ask whether or not, in accordance with Judge Andrews's decision, you are to change the lights of your vessel, an ocean-going steamer, when she is navigating inland waters.

In reply, I have to inform you that this case having been previously presented to me by another correspondent, the subject was referred to the Solicitor of the Treasury for an opinion "whether officers of the Government were hereafter to administer the laws in accordance with Judge Andrews' decision." To which the Solicitor has replied in letter dated April 6, addressed to the Secretary of the Treasury, and now on file in this office, "that officers of the Government, in the administration of the navigation laws of the United States, should be governed by the laws of the United States," meaning, as understood by this office, that ocean-going steamers, even though such steamers may be incidentally navigated in harbors or inland waters, and notwithstanding the decision referred to, must carry the lights provided in article 3, "Revised International Rules and Regulations for Preventing Collisions at Sea," approved March 3, 1885, namely: (a) *On or in front of the foremast, at a height above the hull of not less than 20 feet, and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth, a bright white light, so constructed as to show a uniform and unbroken light over an arc of the horizon of 20 points of the compass, so fixed as to throw the lights 10 points on each side of the ship, namely, from right ahead to 2 points abaft the beam on either side, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least 5 miles.* (b) *On the starboard side a green light, so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass, so fixed as to throw the light from right ahead to 2 points abaft the beam on the starboard side, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least 2 miles.* (c) *On the port side a red light, so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass, so fixed as to throw the light from right ahead to 2 points abaft the beam on the port side, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least 2 miles.* Article 4. *A steamship when towing another ship shall, in addition to her side lights, carry two bright white lights in a vertical line, one over the other, not less than 3 feet apart, so as to distinguish her from other steamships. Each of these lights shall be of the same construction and character, and shall be carried in the same position as the white light which other steamships are required to carry.*

The central range lights provided in rule 7, section 4233, Revised Statutes, are never to be used on ocean steamers, as the white light aft required by that rule would be obscured by the masts, yards, and rigging of such a steamer, and therefore useless.

Respectfully yours,

JAS. A. DUMONT,
Supervising Inspector-General.

Approved :

C. S. FAIRCHILD,
Secretary.

9581.

Steamers navigating Long Island Sound to be governed by section 4233, Revised Statutes, and the Pilot Rules of the Board of Supervising Inspectors.

TREASURY DEPARTMENT, August 24, 1889.

SIR: In reply to your letter of the 21st instant, I have the honor to inform you that the rules of navigation in blue print, in the right-hand columns of circular referred to in your letter, are quoted from sections 4233-4234 of the Revised Statutes of the United States, and are applicable to all vessels of the Navy and the mercantile marine of the United States navigating the harbors, lakes, and inland waters of the United States, which would include the waters of Long Island Sound, upon which the steamers of your line are navigated; while the rules printed in black, on left-hand side of circular, are the international rules, governing vessels of all kinds being navigated upon the high seas, and therefore in no respect applicable to your steamers.

The two rules are substantially the same in effect, though in some cases different in form of expression. The rules are statute laws, and must be observed upon the waters to which they apply by all vessels, steam or sail, navigating them.

In addition to these rules are the rules of the Board of Supervising Inspectors of Steam Vessels, referred to by you, and published in pamphlet form, of which you have a copy; and they also have the force of law, but are only applicable to American steam vessels which are navigated subject to the statute rules for inland waters.

It is not known that these rules conflict in any manner with the statute laws, but are simply an addition thereto, but only in the respect that they compel American steam vessels when passing other vessels, in the manner provided in the inland-statute rules, to indicate their intention by a compulsory system of signals from the steam whistles; whereas the whistle signals, as laid down in rule 19, International Rules, are advisory only to the steamers subject to those rules; that is, steamers navigating the high seas, and therefore not applicable to the steamers of your or other lines whose navigation is confined to the same waters.

The authority for the rules of the Board of Supervising Inspectors is found in sections 4412 and 4413, Revised Statutes of the United States.

Rule 4 of the Board of Supervising Inspectors is substantially a copy of sections (a) and (c) of rule 15, right-hand column, page 6 of circular, excepting in the latter section the board has substituted in their rule *two* minutes as the time between bell-signals for steamers drifting in a fog, instead of *five* minutes as laid down in the law; the Board of Supervising Inspectors having construed the sections of law above referred to, under which they make regulations, as giving them the power to limit the time between the sounding of the bells, so long as their regulations did not exceed the maximum limit of the law.

The steamers referred to in rule 5 of both pamphlet and circular are those described fully in rule 7 of the circular, on right hand of same page as rule 5, which is made the subject of your concluding inquiry.

Respectfully yours,

GEORGE S. BATCHELLER,
Acting Secretary.

J. W. MILLER, Esq.,
President of the Providence and Stonington Steamship Company, New Pier 36, North River, New York, N. Y.

15109.

Complaints of nonobservance of rules relative to lights on barges should be made to collectors of customs.

TREASURY DEPARTMENT, *July 31, 1894.*

SIR: In reply to your letter of the 24th instant, alleging a general nonobservance at the port of New York of the provisions of Department Circular No. 27, February 13, 1894, providing a system of "Lights for barges and canal boats in tow of steam vessels," you are informed that this Department has no means of compelling the observance of the regulations referred to other than by the imposition of the penalties provided in section 4234, Revised Statutes, upon specific and duly authenticated complaints of non-observance, which complaints should be filed with the collector of customs, as you were previously informed in substance, by the Supervising Inspector-General, in a letter dated the 11th instant, in reply to your letter of the day previous upon the same subject.

Very respectfully,

J. G. CARLISLE,
Secretary.

Mr. JOHN K. WILLIAMS,
New York.

NAVIGABLE WATERS OF THE UNITED STATES.

Defining what are navigable waters of the United States.

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., September 29, 1874.

SIR: I have the honor to return herewith a communication addressed to you by the collector of customs at the port of Portsmouth, N. H., which was referred to me on the 12th instant.

The collector reports that the following vessels propelled by steam are navigating the waters of Lake Winnepesaukee, in that State, viz: *Mount Washington*, tonnage 378.75; *Lady of the Lake*, tonnage 116.03; *James Bell*, tonnage 66.52; *May Flower*, tonnage 65.45; *Winnepesaukee*, tonnage 61.99; *Ossipee*, tonnage 51.05; *Dolly Dutton*, tonnage 36.77; and *Morning Star*, tonnage not given. That these vessels are all engaged in carrying passengers, except the *Dolly Dutton*, and that the owners of the *May Flower*, *Ossipee*, *Winnepesaukee*, and *Morning Star* refuse to comply with the law relating to the inspection of steam vessels, and for this reason he caused the vessels to be seized and libeled. That the owners of the three vessels last above mentioned have given bonds for the release of their property, and have since caused the vessels to be inspected in accordance with the provisions of an act of Congress approved February 28, 1871, but that the owners of the *Morning Star*, a vessel of less than 5 tons burden, refuse to have the same inspected, or to otherwise comply with the law. The collector claims that these steamers clearly come within the provisions of the act above referred to, and I am requested to report whether, in my opinion, these vessels are liable to be enrolled and licensed or to be inspected as steam vessels under the laws of the United States.

To the first inquiry, I reply that the statutes do not absolutely require the registration or enrollment of any vessel. But until the owner of the vessel causes the same to be enrolled, or licensed, or registered, it can not be considered a vessel of the United States, nor is it entitled to the benefits and privileges appertaining to this class of ships or vessels when employed in the foreign or coasting trade, or fisheries. Unless the vessels in question are employed on a navigable water of the United States, the disadvantages and disabilities arising from a want of documents will not, in my opinion, attach, for the reason that the foreign and coasting trades, within the meaning of the statutes relating to the registration and enrollment of vessels, are confined to the public navigable waters. This fact was incidentally considered by the Supreme Court in *Veazie et al. v. Moore* (14 How., 575). In that cause, Justice Daniel, in delivering the opinion of the court, says:

"A license to prosecute the coasting trade is a warrant to traverse the waters washing or bounding the coasts of the United States. Such a license conveys no privilege to use, free of tolls or any condition whatsoever, the canals constructed by a State or the water courses partaking of the character of canals, *exclusively within the interior* of a State, and made practicable for navigation by the funds of the State, or by what she may have conferred for the accomplishment of the same end. The attempt to use a coasting license for a purpose like this is, in the first place, a departure from the obvious meaning of the document itself, and an abuse wholly beyond the object and the power of the Government in granting it."

In the recent case of the *Montello* (11 Wall., 411) this question was considered and definitely settled by the Supreme Court. The object of the proceeding in that case was to recover two penalties alleged to have forfeited to the United States, one by the neglect of the owners to procure the enrollment and license of the vessel while it was employed in navigating Fox River, in the State of Wisconsin, between Oshkosh and Portage City, and the other for a failure to comply with the inspection laws. In that case it was held by the court that if the river was not of itself a highway for commerce with the other States or foreign countries, or did not form such highway by its connection with other waters, and was only navigable between different places within the State, then it was not a navigable water of the United States, but only a navigable water of a State, and the acts of Congress for the enrollment and license of vessels had no application. These acts only require such enrollment and license for vessels employed upon the navigable waters of the United States.

The question of the liability of these vessels under the inspection laws must also depend upon the fact as to whether Lake Winnepesaukee constitutes a navigable water of the United States. Section 41 of the act of February 28, 1871, enacts "that all steamers navigating the lakes, bays, inlets, sounds, rivers, harbors, or other navigable waters of the United States, when such waters are common highways of commerce or open to general or competitive navigation, shall be subject to the provisions of this act."

In the case of *Daniel Ball* (10 Wall., 557) the Supreme Court defines what constitutes a navigable water of the United States within the meaning of the act of Congress. Justice Field, in delivering the opinion of the court in that case, says:

"Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used or are susceptible of being used in their ordinary condition as highways for commerce over which trade and travel are or may be conducted in the customary modes of trade and travel on water. And they constitute navigable waters of the United States within the meaning of the acts of

Congress in contradistinction from the navigable waters of the States when they form in their ordinary condition, by themselves or by uniting with other waters, a continued highway over which commerce is or may be carried on with other States or foreign countries in the customary modes in which such commerce is conducted by water."

Applying this test to Winnepesaukee Lake, it only remains to inquire whether it is so united with other waters as to afford a continued highway over which commerce is or may be carried on with other States or foreign countries. The collector's letter affords no information on this subject; however, from the examination I have made as to the character of this lake, I am satisfied that it does not constitute a navigable water of the United States within the meaning of the law (the act of February, 1871) under which the decisions to which I have referred were made, in that it requires that steamers navigating the lakes, bays, inlets, sounds, rivers, harbors, or other *navigable* waters of the United States shall be subject to its provisions when such waters are common highways of commerce or open to general or competitive navigation.

With the exception of this clause, the present and former acts are alike, and the decision quoted must settle the cases under consideration, unless the clause changes the construction to be placed upon the act of 1871. I do not think the clause enlarges the scope of the act of 1871. If such was the intention it fails in its purpose, because, although a water entirely within the limits of a State may be a common highway of commerce, and open to general and competitive navigation, before the provisions of the act of 1871 can apply, it must still be shown to be a navigable water of the United States; that is, in the language of the Supreme Court, a water which forms in its ordinary condition by itself, or by uniting with other waters, a continued highway over which commerce is or may be carried on with other States or foreign countries.

If the clause has any force it is one which rather restricts the meaning of the term "navigable waters of the United States," but in any view the clause does not affect the present cases.

Lake Winnepesaukee may be regarded a common highway of commerce and open to general and competitive navigation. It is, however, not a navigable water of the United States within the decision of the court.

I am, therefore, of opinion that the steamers under seizure are not liable to be enrolled and licensed, or to be inspected, under the laws of the United States.

I have the honor to be, very respectfully,

BLUFORD WILSON,
Solicitor of the Treasury.

HON. B. H. BRISTOW,
Secretary of the Treasury.

18251.—21

9175.

Steamers navigated on rivers under improvement by the United States must be inspected.

TREASURY DEPARTMENT, December 27, 1888.

SIR: Your letter inclosing a communication from Mr. O. H. Blocker, of Maxton, N. C., inquiring if a small steamer building by the Carolina Land and Lumber Company, to run on Lumber River and its tributaries, would be subject to the United States steamboat-inspection laws, is at hand.

You are informed that, though it is doubtful if Lumber River is at the present time a navigable water of the United States according to the Supreme Court decisions, yet the fact that Congress has made large appropriations to make the river navigable, and that it will be so when the appropriations have been fully expended, it is deemed advisable by the Department, in order to prevent complications in the future, to decide that steamers running on the Lumber River should be inspected under the United States laws.

There is inclosed herein a copy of Circular No. 54, dated May 15, 1888, showing what the law will require on a vessel such as building by the Carolina Land and Lumber Company.

Respectfully yours,

HUGH S. THOMPSON,
Acting Secretary.

COLLECTOR OF CUSTOMS,
Wilmington, N. C.

NAMES OF STEAM VESSELS.

Circular—Painting names of steamers upon their wheel and pilot houses.

[1879.—Department No. 164—Steamboat inspection.]

TREASURY DEPARTMENT,
Washington, D. C., November 11, 1879.

To inspectors of steam vessels:

Supervising and local inspectors of steam vessels are hereby informed that it is a part of their duty, when making the inspection of steam vessels, under the provisions of sections 4417 or 4453, Revised Statutes, to inform themselves that the names of steamers examined by them are painted upon the sides of their wheel and pilot houses as required in the following section of the Revised Statutes:

"SECTION 4495. Every steam vessel of the United States, in addition to having her name painted on her stern, shall have the same conspicuously placed in distinct, plain letters, of not less

than six inches in length, on each outer side of the pilot house, if it has such, and, in case the vessel has side wheels, also on the outer side of each wheel house, and if any such steamboat be found without having her name placed as required, she shall be subject to the same penalty and forfeiture as provided by law in the case of a vessel of the United States found without having her name, and the name of the port to which she belongs, painted on her stern."

In cases where pilot houses are too small to admit of the name being painted upon the sides thereof, such names may be painted upon signs permanently attached to the top and sides thereof, or upon the outsides of the screens for the colored signal lights, when such screens are placed as described in the following extract from Department decision No. 4209, dated September 23, 1879:

[Extract.]

"It is the opinion of the Department that where screens for side lights are attached permanently to the top, and only sufficiently free from the extreme outside of the pilot house to furnish the necessary room for the colored signal lights, * * * they are, to all intents and purposes, parts of the sides of the pilot house, and the vessel's name, if distinctly placed upon the outside of the screens, would be a sufficient compliance with the purpose of the statute."

Inspectors of steam vessels can not legally issue certificates of inspection unless every provision of chapters 1 and 2, Title LII, of the Revised Statutes are complied with, and they will in all cases withhold such certificate from any steamer failing to comply with the statute referred to.

JOHN SHERMAN,
Secretary.

OCEAN OR SEA GOING STEAMERS.

5289.

Steam vessels—Seagoing steamers.

TREASURY DEPARTMENT, June 27, 1882.

SIR: Your letter of the 6th instant, referring to the question as to whether your steamers *Columbia* and *Grand Republic* were seagoing steamers within the requirements of the provisions of section 4490, Revised Statutes, which requires such steamers, when used to carry passengers, to be furnished with three watertight bulkheads, was referred by the Department to the Solicitor of the Treasury. That officer, in an opinion inclosed, dated the 24th instant, decides that the steamers named are seagoing steamers, within the meaning of the statute named, and will,

therefore, have to be fitted with the water-tight bulkheads required therein.

There is transmitted herewith, for your information, a full copy of the Solicitor's opinion.

Very respectfully,

CHAS. J. FOLGER,
Secretary.

R. CORNELL WHITE, Esq.,
*New York and Rockaway Steamboat Co.,
New York City.*

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., June 24, 1882.

SIR: I have the honor to return herewith a communication addressed to you by R. C. White, as managing owner of two steamboats called the *Columbia* and *Grand Republic*, in which is presented the question whether said vessels are liable to the provisions of section 4490 of the Revised Statutes, which requires seagoing steamers built after the 28th day of August, 1871, to be constructed with not less than three water-tight cross bulkheads.

This communication is referred to me for an expression of opinion "as to whether a steamer carrying passengers on a route, indicated by the dotted lines on the inclosed chart, from the west end of Coney Island to Rockaway Inlet, is a seagoing steamer within the requirements of the statute." Mr. White, in his letter, states that the vessels in question were constructed with two water-tight bulkheads only. I am entirely satisfied that the descriptive words "sea-going," as used in the statute referred to above, are synonymous with the phrase "on the high seas," which is well understood at the common law, and defined by the authorities. The fact that "every steamer navigating the great Northern or Northwestern lakes, and carrying passengers," is covered by the provisions of the statute, can not affect the question as to the construction that should be placed on the words "sea going."

In the case of *The United States v. Ross*, the court, after summing up the facts, says: * * * "I am of the opinion that the words 'high seas' mean any waters on the seacoast which are without the boundaries of low-water mark, although such waters may be in the roadstead or bay within the jurisdictional limits of a foreign government." In this case the defendant, Ross, was indicted for murder under the eighth section of the act of April 30, 1790, chapter 9. The act provided that if any person should commit murder upon the "high seas" which, if committed within the body of a country, would by the laws of the United States be punishable with death, then that every such offender, being convicted, should suffer death.

Under this statute certain persons were indicted before the circuit court of Georgia for the piratical murder of Thomas Lunley. (See 5 Wheaton, at p. 200.) On the trial it was argued by the defense in the court below that a vessel at anchor in a road is not a vessel on the "high seas."

Justice Johnson, delivering the opinion of the Supreme Court, where the cause was heard because of a divided opinion by the judges in the court below, said: * * * "We are of opinion that a vessel in an open road may well be found by a jury to be on the seas. It is historically known that in prosecuting trade with many places vessels lie at anchor in open situations, under the lee of the land. Such vessels are neither in a river, haven, basin, or bay, and are *nowhere* unless it be on the seas." * * *

There are a large number of authorities to the same point, but I do not think it necessary to refer to them. When the vessels in question leave the west end of Coney Island and proceed on a voyage to Rockaway Beach, they are for the most part of the distance clearly on the high seas as defined by the authorities, and because of this fact they are, in my opinion, seagoing vessels, and subject to the requirements of section 4490, provided they carry passengers, as therein contemplated.

Very respectfully,

K. RAYNER,
Solicitor of the Treasury.

HON. CHAS. J. FOLGER,
Secretary of the Treasury.

PILE DRIVERS.

4439.

Steam vessels—Pile driver propelled by steam machinery.

TREASURY DEPARTMENT, March 8, 1880.

SIR: The papers sent here by you concerning the case of a steam pile driver, propelled from place to place upon navigable waters of the United States by the use of paddle wheels worked by steam, and upon which you requested the opinion of the Solicitor of the Treasury as to whether said pile driver is liable to the steamboat-inspection laws, were referred to the Attorney-General of the United States.

This officer, in a letter dated the 1st instant, gives the opinion that "sections 4426 and 4427, Revised Statutes, are intended to include all small craft propelled by steam, no matter how insignificant or for whatever purpose they may be used." He advises, also, notwithstanding the adverse decisions of the district and circuit courts of South Carolina, in which two cases of such small steamers had been previously litigated:

"That collectors of customs, or other officers of the Treasury having the matter in charge, should pursue the same practice that has prevailed hitherto (namely, to compel the inspection of *all* steam vessels) until, in cases brought into the circuit court of the United States, and thoroughly argued and tried, and, if the decision is unsatisfactory, carried, if possible, up to the Supreme Court, the question shall be authoritatively settled.*"

You are therefore hereby instructed to carry out the views of the Attorney-General as above expressed by imposing the penalties provided by law upon all vessels propelled in whole or in part by steam found navigating any navigable waters of the United States without being inspected in the manner required by Title LII, Regulation of Steam Vessels, Revised Statutes United States.

Very respectfully,

JOHN SHERMAN,
Secretary.

COLLECTOR OF CUSTOMS,
Jacksonville, Fla.

TOWING STEAMERS.

Towing steamers can not legally carry any persons except crew.†

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., December 19, 1874.

SIR: I have the honor to acknowledge the receipt of a letter, addressed by the local inspectors of steam vessels at Philadelphia to the Supervising Inspector-General, and referred from your Department to this office on the 4th ultimo for my opinion upon the following questions suggested therein, viz:

"Does a lawful *towing boat*, proceeding from her landing to a sail vessel at anchor, with the purpose of and under engagement to tow the sail vessel to sea, violate the steamboat act of February 28, 1871, by conveying the crew of said sail vessel from the landing to the anchorage (or from the anchorage to the landing in case of having towed the vessel from sea)? Would this be held to be the legitimate and lawful business of a tug, or would the persons thus conveyed be passengers in view of the law?

2. "May a *towing boat* lawfully carry at any time the owner, his family, and servants without equipping as a passenger steamer?"

The question involved in the first inquiry is, whether or not a vessel that is usually employed as a *towing boat*, and which has

* Opinion since sustained by Supreme Court, United States Reports, vol. 118, page 223.

† For exceptions see foot note ‡ page 17.

been inspected as such under the act, can be employed in carrying passengers.

The fifty-ninth section of the act provides that the hull and boiler or boilers of every tugboat, towing boat, and freight boat shall be inspected under the provisions of the act, and it is made the duty of the inspectors to see that the boilers, machinery, and appurtenances of such vessels are not dangerous in form or workmanship.

No provision, however, is made requiring this class of vessels to be provided with life-preservers, floats, fire buckets, fire extinguishers, water tanks, and pumps of a certain description, which the law requires shall be on board all vessels propelled by steam and carrying passengers.

It is the occupation of the vessel that determines its responsibilities under the statute. If a vessel that is propelled by steam is engaged in the transportation of passengers, for hire, then it is responsible for a full compliance with all the conditions required by the statute for vessels in that service, whatever may have been, or whatever may subsequently be, her employment. (*Propeller Echo*, 4 Bl., 446.) There can be no exception to this rule, unless it be provided for in the act itself. Ferryboats, for example, are only required to have such appliances for the better security of life as shall be prescribed by the Rules and Regulations of the Board of Supervising Inspectors. The fifty-eighth section provides that the hull and boiler of ferryboats shall be inspected under the provisions of the act; and such other provisions of law for the better security of life as may be applicable to such vessels shall, by the Rules and Regulations of the Board of Supervising Inspectors, be required before a certificate of inspection can be granted.

But if a ferryboat leaves that business and engages in transporting passengers, otherwise than as a ferry, even for a single trip, it will, while thus engaged, lose the benefit of the exceptions allowed to that class of vessels, and become subject to all the conditions and penalties denounced in the act against vessels that are navigated with passengers on board without complying with the terms of the statute itself.

This question was considered by the court in the case of *The United States v. The owners of the Thomas Swan* (Law R., vol. 19, 201).

This suit was brought to recover the penalties denounced in the act of August 30, 1852, and July 7, 1838, both of which were repealed by the act of 1871. The libel charged that this steamer carried passengers without complying with the provisions of the law for the security of passengers.

It was argued that the penalty did not attach, because the statutes related to vessels propelled by steam and carrying passengers, and that this steamer was not a vessel engaged in that business; that the act was intended for such vessels as were

employed in the *business* of transporting passengers, and was not intended for such as occasionally carried passengers.

On this point the judge delivering the opinion says :

"I can find nowhere in the letter of the act, nor in the mischief which the act was intended to relieve, any such exception as is contended for. The great object was to save human life; the means adopted were certain safeguards and precautions which, in case of accident, would mitigate the horrors which attended the happening of those accidents. I can not consider that Congress intended to say that these safeguards should be provided in certain vessels and not in others. It intended to protect human life by these modes, so far as it could, and in all vessels which were subject to such accidents as these safeguards might avert, or at least mitigate, in their consequences.

"Whenever a vessel propelled by steam, and therefore liable to these accidents, undertook to carry passengers, and in doing so exposed them to the dangers against which Congress intended to provide, then, in every such case it was a vessel carrying passengers within the letter and the mischief of the act, bound by all the provisions and subject to all the penalties which are expressed in the act. It is said that such requisition on a vessel which does not generally carry passengers is oppressive. If it does so operate, the relief is very accessible; let it refuse to carry the passengers. But while it carries passengers and receives hire for it, it must conform to such requisitions as are by law imposed on vessels propelled by steam, with passengers on board."

I concur in the views expressed by the court in this case, and concede them in every particular, applicable to a correct construction, not only of the words, but of the spirit and intent of the act of 1871.

The reply that should be given to the second question submitted in your indorsement must depend upon a correct construction of the word "passenger," as made use of in the statute. It requires every vessel propelled in whole or in part by steam, and carrying passengers, to be provided with certain instruments, machines, and equipments for the better security of life.

It is clearly the occupation of the vessel that is to determine what shall constitute its equipments and liability under the statute.

The object of the act, as declared in the title, is to provide for the better security of life on board vessels propelled in whole or in part by steam.

I have been unable to find any decisions in which the term "passenger" has received a judicial construction. McCulloch, in his Commercial Dictionary, says that "a passenger, in commercial navigation, is an individual conveyed for hire from one place to another on board ship." Jacobson, in his work entitled Laws of the Sea, says that "every person who pays a stipulated

sum for his passage, or is on board in any shape, even free of charge, and has neither interest in the cargo nor belongs to the ship's crew, is a passenger."

In considering the question as to how far a common carrier can lawfully stipulate for exemption from responsibility for the negligence of himself or his servants, the courts have recognized persons who were conveyed without compensation as passengers.

Mr. Justice Grier, in the case of *The Philadelphia and Reading Railroad v. Derby* (14 How., 486), said :

"When carriers undertake to convey persons by the powerful but dangerous agency of steam, public policy and safety require that they be held to the greatest possible care and diligence. And whether the consideration for such transportation be pecuniary or otherwise, the personal safety of the passengers should not be left to the sport of chance or the negligence of careless agents."

That was the case of a person who was transported free—a stockholder of the company.

Although I have been unable to arrive at a satisfactory conclusion as to the meaning of the term "passengers," as employed by Congress in the act, still, upon a consideration of what I deem the true intent and meaning of the act and the mischief it was intended to provide against, I am of opinion that a towing boat can not lawfully carry persons other than the crew, under any circumstances, without first complying with the terms and conditions imposed by the act on ordinary passenger vessels.

Any other construction of the law would open the way to an evasion of its requirements.

Very respectfully,

BLUFORD WILSON,
Solicitor of the Treasury.

HON. B. H. BRISTOW,
Secretary of the Treasury.

VESSELS, SAIL, INSPECTION OF.

Vessels—Inspection of the hulls of sailing vessels prior to change of name.

TREASURY DEPARTMENT, *April 8, 1881.*

SIR: The Department has received your letter of the 5th instant, relative to your declination to inspect the sailing yacht *Sadie*, upon the application of Messrs. Herreshoff, of Bristol, R. I., with a view to a change of name of said vessel, under the provisions of the act of Congress approved March 2, 1881.

In reply, I inclose herewith a copy of Department Circular No. 22, current series, in which inspectors of hulls are, under the act of Congress, authorized to make examination of sailing vessels

and to certify to their seaworthiness. The Department has authorized the charge of \$5 to be made by inspectors for each inspection, in addition to their necessary traveling expenses.

Inspectors will report to the Department, in each case, the name of the vessel inspected and the date upon which the inspection is made.

Such employment will not conflict with Department Circular No. 15, of February 9, 1878, as the information forwarded to the Department is for the use of the Department in deciding upon the propriety of changing the names of the vessels inspected.

Very respectfully,

WILLIAM WINDOM,
Secretary.

UNITED STATES INSPECTOR OF HULLS,
New London, Conn.

9973.

Aliens owning small steam launches not exempt from provisions of section 4426, Revised Statutes.

TREASURY DEPARTMENT, *April 18, 1890.*

SIR: In reply to your letter of the 15th instant, in the matter of the American-built steam launch *Vivid*, whose owners claim to be British subjects, and for that reason—the *Vivid* being under 5 tons burden—they claim exemption from the steamboat-inspection laws, and decline to employ a licensed engineer and pilot, you are informed that unless the steamer referred to is sailing under the British flag, and with British registration papers duly issued by proper authority, the steamer *Vivid* must comply with the provisions of section 4426, Revised Statutes of the United States, as interpreted in inclosed circular, No. 54, May 15, 1888.

The interlineation of the words (who is an American citizen, and) interlined in ink in the circular referred to is hereby duly authorized.

In case of failure of the owners of the *Vivid* to comply with the laws as set forth in circular, you are directed to take the necessary steps to enforce the penalties.

Respectfully yours,

GEORGE S. BATCHELLER,
Acting Secretary.

COLLECTOR OF CUSTOMS,
Jacksonville, Fla.

INDEX TO DEPARTMENT DECISIONS

RELATING TO THE

STEAMBOAT LAWS OF THE UNITED STATES AND THE
RULES AND REGULATIONS OF THE BOARD OF SUPER-
VISING INSPECTORS, FROM APRIL 5, 1872, TO JUNE 28,
1895.

	Page.
<i>Application for inspection—</i>	
Must be in writing.....	201
<i>Bulkheads—</i>	
On steamers rebuilt.....	233
Not required on steamers on Lake Champlain.....	234
<i>Boiler plate and boilers—</i>	
Defective	217
Restamping at higher tensile strength	218
Stamping after construction.....	218
Unstamped can not be used.....	220
Overstamped	218, 219
Steam pressure on.....	221, 222, 223
Can not be stamped after being used.....	220
Use of coil.....	223
Drums, coil and pipe boilers.....	230
Inspection, iron and steel plate.....	231
Directions for inspection iron and steel plate.....	233
Used for other than marine purposes can not be inspected.....	225
Size of holes to be drilled when ten years old.....	226
What constitutes ten years' age of boiler—section 1, Rule II.....	227
Inspectors to personally inspect stamps on.....	228
Measurement for reduction of area	229
<i>Bond—</i>	
Sureties can not be released	269
<i>Changing name—</i>	
Reinspection not required	204
<i>Changing business—</i>	
In other districts	204
<i>Certificate of inspection—</i>	
When not to be granted.....	204, 209
To be returned in the district where vessel is inspected...	202
Period for which issued.....	201
Return of originals to customs officers.....	202
Defining routes on face of.....	205
Date of expiration.....	205

<i>Certificate of inspection—Continued.</i>	Page.
Posting of, on steam vessels.....	214
Steamers may be inspected previous to expiration of, when bound on foreign voyage.....	214
Steamers running after expiration of.....	215
<i>Casualties—</i>	
Investigation of.....	259
Reports of.....	272
<i>Canal boats, steam—</i>	
Inspection of.....	208
<i>Color blindness—</i>	
Indorsement on pilot's license, in regard to.....	235
Incomplete.....	236
Examination for, at places remote.....	236
Reexamination of pilots for.....	237
<i>Cotton—</i>	
Bales must be covered.....	237
<i>Dangerous articles—</i>	
Petroleum, transportation of.....	238
Inflammable articles.....	239
Carriage of inflammable oils.....	239, 240, 242
<i>Excursion steamers—</i>	
Overcrowding.....	245
Canadian steamers, passengers on.....	248
<i>Excursion permits—</i>	
For barges, sections 4466 and 4492, Revised Statutes.....	274
Jurisdiction of inspectors regarding.....	248
Issued for the season.....	246
<i>Expense accounts—</i>	
Owner must pay for special trip for examination of boiler under section 4429, Revised Statutes.....	249
Method of preparing mileage and other.....	250
Amended regulations, traveling and other.....	252
<i>Ferryboats—</i>	
Can not leave route with passengers except under excursion permit.....	253
<i>Fines—</i>	
By whom imposed.....	255
On expired certificate and failure to exhibit certificate.....	256
<i>Foreign steamers—</i>	
Passengers on.....	248
<i>Freight steamers—</i>	
Can not carry passengers.....	205
<i>Inspections—</i>	
Applications for must be in writing.....	201
May be made previous to expiration of certificate, when bound on foreign voyage.....	214
<i>Inspectors—</i>	
Qualifications of.....	280, 284
Appointments of.....	265

<i>Inspectors—Continued.</i>	Page.
Engaging in other business.....	286
To determine lawful equipments and their location....	276
<i>Inspectors, supervising—</i>	
May detail inspectors from one district to make inspections in another, when necessary.....	262
Reversing decisions of local inspectors.....	261
Registry of documents.....	267
Appeals from.....	260, 261
Decides case on appeal from local inspectors.....	271
Instructions to.....	261
Must investigate cases under section 4452, Revised Statutes.....	264
<i>Inspectors, local—</i>	
Jurisdiction limited to districts.....	268
Must decline to inspect steamer except upon application in writing.....	201
Sustaining action in revoking licenses.....	275
Appeal from decision of.....	271
Return of papers to customs officers.....	270
Registry of documents.....	267
Instructions to.....	261
What constitutes a legal meeting of Board of Designators for appointment of.....	278
Examination and qualifications of.....	280
Application papers for appointment as.....	280
Appointment and qualification of.....	265
Must notify supervising inspector when unable to perform duty.....	273
Clerks to, must be stenographers.....	281
Investigation of casualties by.....	259
<i>Inspectors, assistant—</i>	
Duties of.....	281
Qualifications and examination of.....	282, 284
<i>Licensed officers—</i>	
May employ counsel on appeal.....	286
Trials of.....	285, 287
Do not lose citizenship by temporary residence outside of United States.....	299
Investigation of misconduct of, by local inspectors.....	275
Licensed officers required under section 4463, Revised Statutes.....	274
Preliminary service of, section 12, Rule V.....	290
Master, when not required on steamer.....	289
Renewal of licenses.....	293
What constitutes a full complement of.....	274
Masters and mates.....	291
Certain aliens may receive license.....	310
Women may receive license.....	304

<i>Licensed officers—Continued.</i>	Page.
Combinations of, "to the hindrance of commerce," unlawful.....	307
Qualifications prescribed by Board of Supervising Inspectors.....	304
<i>Licenses—</i>	
Defining term of suspension or revocation.....	297
Suspension of, by local inspectors.....	309
Posted, and where.....	302
Verification of serial numbers of.....	262
Interlineations on.....	303
Renewal under amended regulations.....	293
Sustaining action of local inspectors in revoking same..	294
Women may receive.....	304
<i>Lights—</i>	
On small boats.....	313, 314
Range lights on small steamers.....	312
On ocean steamers.....	315
On towing steamers.....	314
Vessels navigating Long Island Sound, to be governed by section 4233, Revised Statutes, and Pilot Rules, Board of Supervising Inspectors.....	317
On barges and canal boats.....	318
<i>Minors—</i>	
License to.....	289
<i>Masters—</i>	
Acting as pilots.....	300
Licensed when not required.....	289
<i>Navigable waters—</i>	
What constitutes.....	319
<i>Names—</i>	
Requirements concerning.....	322
<i>Pleasure steamers—</i>	
Not exempt from inspection laws of United States.....	211
Documenting of yachts.....	216
<i>Passengers—</i>	
Freight steamers can not carry.....	205
Inspectors decide allowable number of.....	271
Precautions when granting extra number of.....	246
<i>Pilots—</i>	
Suspension of.....	261
License confers no right to pilot sail vessels or registered steamers.....	303
State not to interfere with United States pilots.....	300
Requirements as to.....	301
Examination of, for color blindness (modifying circular 14).....	236
Indorsement on licenses in regard to color blindness....	235
Not entirely color-blind.....	236
Reexamination for color blindness.....	237

<i>Pilots—Continued.</i>	Page.
Original examination for license.....	236
Interlineations on licenses.....	308
<i>Penalties—</i>	
Who may sue for	257
For violation of Rules and Regulations	257
Chief officers of customs to impose	258
<i>Petroleum—</i>	
New permits to use petroleum as fuel not necessary on vessels changing ownership.....	243
Transportation of, on passenger steamers	238, 242, 243
Empty barrels on passenger steamers.....	244
Transportation of.....	242
Carriage of explosive and inflammable oils.....	239, 245
Carriage of inflammable oils.....	240
<i>Pile drivers—</i>	
Propelled by steam machinery.....	325
<i>Pressure on towing and freight steamers, Western rivers</i>	223
<i>Reports—</i>	
Casualties	272
Preparation of	272
Entries in Book Forms 2112 A, B, and C	277
<i>Sailing vessels, inspection of.....</i>	329
<i>Steam vessels—</i>	
Navigated on rivers under improvement by United States to be inspected	322
Inspection of steamers partly built in one district and finished in another	207
Belonging to State must be inspected	208
Not to be reinspected when sold.....	209
Naturalization of foreign-built steamers wrecked in American waters	224
Used jointly by United States	209
Private vessels chartered to United States liable to requirements of Title LII.....	209
Inspection of Government vessels.....	206
Not liable to inspection on internal waters	319
Inspection not necessary prior to trial trips	210
Fines on	256
Use of illuminating oil on passenger	241
Seagoing, what are	323
Overcrowding passenger	246
Small steam launches owned by aliens not exempt from provisions of section 4426, Revised Statutes.....	360
<i>Trial trips—</i>	
Inspection not required prior to.....	210
<i>Testimony</i>	276
<i>Towing steamers shall carry crew only</i>	326
<i>Tugs must carry inspection certificate.....</i>	206

1895

		Page
Local Inspectors to inspect Foreign Strs.	15740	186

Boiler plate, Testing at the Mills. Inspectors to collect for extra trips	16442	868
---	-------	-----

Certain expenses to be paid by owners of vessels	16373	803
--	-------	-----

Employment for other service of a person already in the employ of the Dept at Washington or elsewhere	16273	723
---	-------	-----

Documents that have been officially acted upon and not be returned	16399	826
--	-------	-----

1896

Persons other than crew
can not legally be carried
on non-inspected str. - 16616 1009

In. re. boiler makers furnishing
blue prints before construction
of boilers 16714 39

Returns of Public Property - 17018 300

Steam Chain Ferry boats require
licensed officers 17041 316

Inspection of steam vessels
can not be anticipated more
than 30 days 17043 318

Relating to lifeboats and
rafts 17286 553
do 17297 564

Government rates for
Telegraphing 17318 590

Engineers licenses are
graded according to gross
tonnage 17368 680

1896

Vessels can not be exempted
from carrying equipment re-
quired by Rules & R. - 17370 681

Authority of Asst. Inspr. - 17429 726

1897

Notice that licenses will
hereafter be issued for five
years, and that aliens
must be fully naturalized
to hold license 17597 883

Defined Home Port of vessels 898

Ferry boats exempt from laws
restraining number of passengers
carried 17794 168

Traveling and other expenses
of inspectors of steam
vessels 17797 171

Relating to vessels propelled
by gas, fluid, naphtha or
electric motors-17798-18061-18135 174
453
562

May furnish public press
certain information-18134 561

Transcripts and Copies. How
furnished 18196 612

Gov't rates for Telegraph-
ing 18294 714

1897

Foreign Pleasure Strs. not to carry
passengers from U. S. unless
inspected

18300

724

Vessels of Naval Militia not
exempt from general provisions
of steamboat laws

18453

929

1898

Foreign built boilers placed in
American vessels, to be entitled to
inspection, must be constructed
in accordance with U. S.
laws 18989 282

U. S. licensed pilots not required
on vessels sailing under
register 19007 315

Vessels not to be licensed as
yachts while employed for
business purposes 19039 356

Fractions of tons of vessels
not to be reported 19053 366

Telegrams despatched by Gov't
officials, on official business,
need not be stamped (*See*
Sec. 18, Act of June 13-98) 19649 68

Revenue stamps to be 19809
placed on certain certificates pp. 1.
Regarding inspection certificates
see

Revenue Stamp Rules 19893 349

1898

Marine Boilers contracted for
previous to July 1, 1898, with
single riveted punched holes,
may be approved - 20147

654

Certain charges in expense
accounts not allowable 20333

902

Foreign excursion strd not to
transport passengers from place
to place in the U.S. (must confine
their business to trips between Canadian
& American, or all Canadian, ports 19148

476



