

W. O. Reynolds.

NUMBER IV.

SEPTEMBER, 1889.

Fire, Watch and Station, and Quarter Bills

ADAPTED TO THE USE OF REVENUE-CUTTERS.

CONTRIBUTED BY

LIEUTENANT HENRY B. ROGERS,

U. S. Revenue-Marine.

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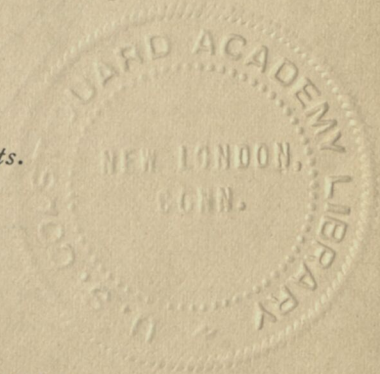
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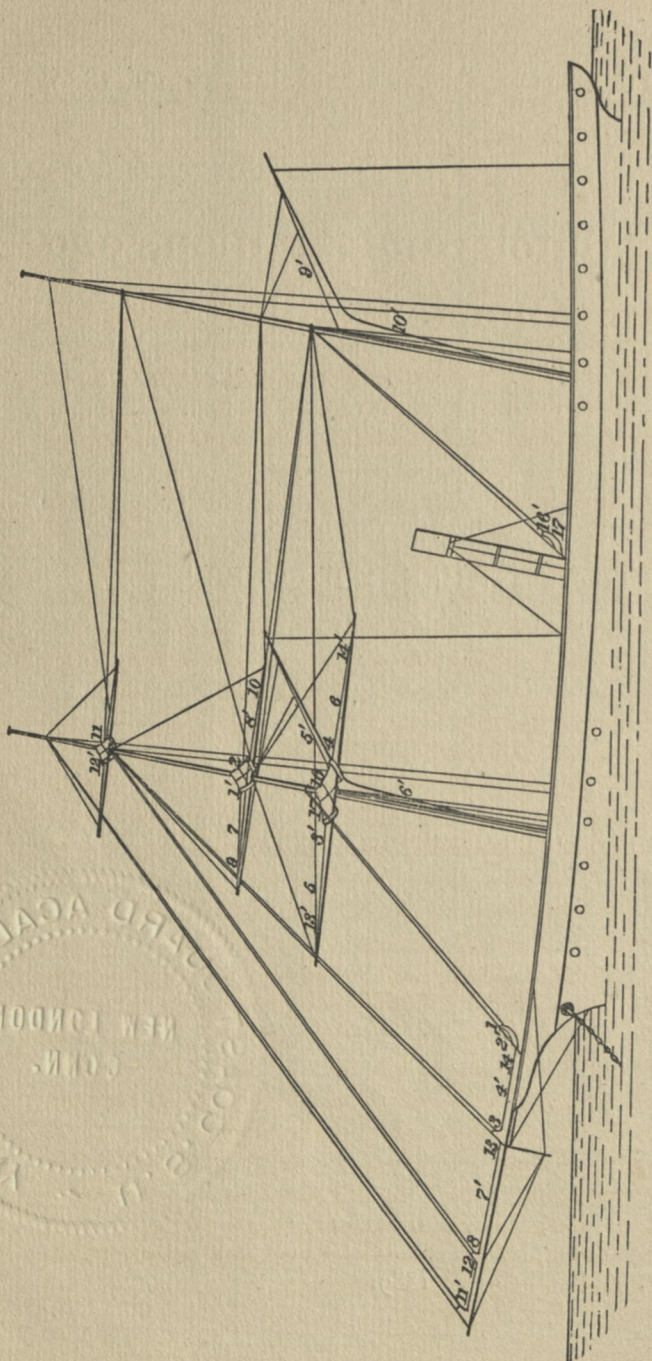
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SKETCH SHOWING METHOD OF STATIONING CREW FOR LOOSING AND FURLING SAILS
LOOSERS' NUMBERS THUS ' ALL NUMBERS ARE FURLERS.

• Fire Bill.

In all Government vessels the crew is divided into watches, arranged in such a way that they shall be as nearly as possible physically and numerically equal, and in making out the various station bills for the different evolutions, care should be taken to arrange the crew so that all the duties may be performed by one watch. Then, in case one watch is absent, the other may, by systematic stationing and exercise, be able to care properly for the vessel.

To do this, it is suggested to the officer making out a fire bill to divide his crew into watches, station one watch, and then double the force at each necessary point with the other watch. By proceeding in this way he is tolerably sure to provide for everything, and will have an organized force on board when the number is reduced from any cause.

It is recommended, inasmuch as a vessel is always in danger from fire, that when she is first placed in commission, that emergency should first be provided against. To do this, one will have to examine the pumps, ascertain their location, the quantity of hose, number of fire-buckets, etc.; and as the fire may not be successfully combated, he must examine the boats in order that a means of retreat in an orderly manner may be available. In this connection it may be said that generally the vessels of the Revenue-Marine Service have two force-pumps, one forward, the other aft, which are made to work by hand; a steam-pump, usually near the middle of the vessel; ample hose for all; twelve fire-buckets, and four boats (gig, cutter, launch, and dinghy) which are sufficient to carry the entire complement of officers and crew.

Having made the above examinations and fixed them well in mind, the arrangement of the Fire Bill may now be undertaken.

Supposing the vessel to carry seven officers, a pilot, and a crew of thirty men, the crew being divided into watches, a list of them with their stations would appear as follows:

STARBOARD WATCH.

No.	Name.	Rate.	Stations.
	Boatswain	Branch pipe, forward pump.
1	Coxswain	Sentry on boats, armed with cutlass.
3	Seaman...	Pumpman, forward pump.
5	" ...	Connect hose; then pumpman, forward pump.
7	" ...	Lead out hose; then pumpman, forward pump.
9	" ...	Midship section of hose, couple and tend.
11	" ...	Pumpman, forward pump.
13	1st C. Boy	Messenger.
15	M.-at-A....	Close air ports, release prisoners.
17	Q.-M.	Branch pipe, after pump.
19	Cabin Std.	Pass water or hammocks, starboard side.
21	2d C. Boy.	Pass water or hammocks, starboard side.
23	Fireman...	Engineer Department.
25	Coal-pas'r	Engineer Department.
27	"	Engineer Department.

PORT WATCH.

	.....	Carpenter	Attend 1st Lieut. at fire with an axe.
2	.....	Coxswain	Sentry on boats, armed with cutlass.
4	.....	Seaman...	Pumpman, after pump.
6	.....	" ...	Pumpman, after pump.
8	.....	" ...	Lead out hose; then pumpman, after pump.
10	.....	" ...	Connect hose; then pumpman, after pump.
12	.....	" ...	Draw water or pass hammocks, starboard side.
14	.....	1st C. Boy	Pass water or hammocks, port side.
16	.....	Q.-M.	Wheel, provide compasses and lanterns.
18	.....	W. R. Std.	Magazine flood-cock.
20	.....	Cook	Pass water or hammocks, port side.
22	.....	2d C. Boy.	Draw water or pass hammocks, port side.
24	.....	Fireman...	Engineer Department.
26	.....	Coal-pas'r	Engineer Department.
28	.....	"	Engineer Department.

It will be seen that, by this arrangement, the starboard watch works the fire-apparatus forward, and the port watch aft.

In exercising both watches, all hands should be drilled together. When they are familiar with their duties, each watch should be exercised separately at a supposed fire either forward or aft. In the watch exercise a few alterations will have to be made. If starboard watch is drilling, No. 15 will go to magazine flood-cock after attending to his own duties, and No. 17 will become an axe-

man ; if port watch, No. 18, will attend to the duties of No. 15, and then go to his station, and No. 16 will become a pipeman. Of course it is to be understood that for fire aft the after pump and hose are to be used, and for fire forward the forward pump and hose.

Now decide upon the fire-alarm. This is usually the rapid ringing of the ship's bell. It is next suggested to divide the vessel into two districts to avoid confusion, and to arrange that a simple alarm may be given which will inform the force of the location of the fire. One system that has been successfully tried on the *Dallas* is, after the alarm has been sounded, an interval of three or four seconds is allowed to elapse, then two strokes on the bell indicate that the fire is forward, three strokes that it is aft. If, while at work on fire forward, three strokes are sounded, it indicates that the streams are to be changed for fire aft. Of course this could be reversed by having the fire aft at the start. The exact location of the fire would be given by the officer (properly the 1st Lieutenant) heading the fire divisions.

It has been noticed by the writer that hose is not as readily run out when kept on a reel as when rolled up in a coil, and that with a little practice a man may take a section (50 feet) and, by holding the female coupling in his hand, heave the roll out nearly straight along the deck ; therefore it is suggested that one section of hose be kept near each pump, rolled up with the female coupling out.

As it is evident that one section will not reach from after pump to a fire located forward, or *per contra* from forward pump to a fire aft, another section of hose is necessary, which should be rolled up in the same manner as the others, located amidships, and having an intelligent man stationed by it.

Have two canvas draw-buckets, with lanyards attached, made and hung up for the men stationed to draw water.

Having now provided and located the fire-apparatus and distinguished the specified fire-districts by appropriate signals, arrange for one more signal, which will signify *Fire out, Secure!* A single stroke of the ship's bell will answer for this.

Every officer knows that the highest efficiency is secured when absolute silence is observed during an exercise ; therefore, when stationing the crew, it would be well to impress this necessity upon them.

Another thing, firemen and deck-people do not work well together; each department, with pardonable pride, tries to get the first stream of water; therefore, attention should be given to where the steam-pump delivery is located, and provision made that none of the crew but the firemen shall go on that side of the vessel during fire-drill; neither should any fireman be allowed on the other side.

Everything being now arranged, assemble the crew, explain what they are to do, and then station them. Read off each man's station, have him repeat it until he understands it, and then let him repair to the place designated. When all are assigned, visit each station, have the men again repeat their duties, and, after being satisfied that they understand them thoroughly, pipe down.

Officers are usually stationed so that the 1st Lieutenant is at the scene of fire, 2d Lieutenant in charge of the forward division, and 3d Lieutenant of after division. If there should be four Lieutenants, 2d Lieutenant takes charge of the deck, the next in rank being stationed forward, and the junior officer aft.

The fire alarm may now be sounded and the system tried, when any needed alterations will suggest themselves.

At *Secure!* each man replaces the article he provided, returns to his station, and stands fast. After division officers have reported their divisions secure, directions to pipe down may be given.

In connection with the Fire Bill, there should also be a bill which will show each man's station at the boats in the event of being obliged to abandon ship. On the *Dallas* the following detail was made, which worked satisfactorily:

GIG.

Captain and Pilot.

No.	Rate.	Duties.
1	Coxswain	In the boat, clear after end, put in plug, unhook aft.
4	Seaman	In the boat, clear forward end, unhook forward.
5	"	Clear away and lower forward fall.
7	"	Clear away and lower after fall.
8	"	Provide provisions and sails.
19	Cabin Steward	Provide compass, secure ship's journal.
24	Fireman	Provide water and sails.

LAUNCH.*1st Lieutenant, Chief Engineer, 2d Assistant Engineer.*

No.	Rate.	Duties.
	Boatswain.....	Pipe <i>Lower!</i> when all boats are ready.
16	Quartermaster.	Coxswain of boat, provide compass.
20	Cook	Clear away and lower after fall.
15	Master-at-arms	Serve provisions for all boats.
26	Fireman.....	Put in plug, clear after end, unhook aft.
25	"	Clear away and lower forward fall.
23	"	Clear forward end, unhook forward.
27	Coal-passer	Break out boat-spars.
14	1st Class Boy..	Assist in getting out boat-spars.
21	2d Class Boy..	Provide water.
13	1st Class Boy..	Provide provisions.
22	2d Class Boy...	Provide sails.

CUTTER.*2d Lieutenant and 1st Assistant Engineer.*

	Carpenter.....	Provide compass.
2	Coxswain	In the boat, clear after end, put in plug, unhook aft.
3	Seaman	In the boat, clear forward end, unhook forward.
6	"	Clear away and lower forward fall.
11	"	Clear away and lower after fall.
12	"	Provide sails.
18	W. R. Steward.	Provide provisions.
28	Coal-passer	Provide water.

DINGHY.*3d Lieutenant.*

17	Quartermaster.	Provide compass, lower forward.
9	Seaman	Provide provisions, lower aft.
10	"	Provide water, clear away boat, put in plug.

If, during fire-drill, it is desired to exercise at *Abandon Ship!* the bell rapidly struck, or some other preconcerted signal, calls all hands to the boats, and each man, leaving his fire-station, executes the duties of his boat-station in lowering away. The order *Lower!* would, of course, be given only by the commanding officer, to whom officers report their boats when ready for lowering. When not at fire-quarters, the boats are called away by the boat-swain.

By this system it will be seen that a fire may be combated, and,

if not successful in extinguishing it, the means for leaving the vessel are provided.

I will close this article on the Fire Bill by inviting friendly criticism from my brother officers, and by offering a few hints: "Haste is not speed;" do not allow the pumps to be worked until the hose is properly attached, as much water will be wasted which should go through the hose; always have spare washers on a hook near the hose and hose-pipes; never allow the hose to remain kinked, as it puts an unnecessary strain on them, thereby weakening them so that, should a fire occur, they might be valueless; impress on the men stationed to draw and pass water the importance of their stations, as a few bucketfuls well placed may be the means of saving the vessel. The time of getting the water through each hose should be taken whenever possible, and, when the exercise is over, the record may be posted on the berth-deck as an incentive to rivalry.

Watch and Station Bill.

The accompanying bill is offered as a specimen bill for a vessel rigged like the *Gallatin*, as a topsail schooner, and shows the stations of the crew for the ordinary evolutions of the vessel.

The column "Boat" gives the detail in abandoning ship in accordance with the Boat Bill; the seamen comprise the working boats' crews, the idlers not being called upon to perform ordinary boat-duty.

The column "Part of ship" gives the detail for the ordinary washing and cleaning of the vessel.

To provide for handling the sails it is suggested that two columns be made, each with four divisions, the first column to show the stations at square-sails, the other at fore-and-aft sails. This arrangement is, in a measure, forced upon the maker of a station bill from the fact that the crew (30 men) is composed largely of cooks, firemen, and others, whom it would not be compatible with the ordinary routine of the vessel to station aloft. One way

WATCH AND STATION BILL.

STARBOARD WATCH

[illegible]

PORT WATCH.

[illegible]

of arranging for these stations is to make a plan of the vessel showing the spars and sails, similar to the accompanying sketch. The numbers of the available force may then be placed on the plan, the loosing numbers in red. [In sketch marked thus '.'] All the numbers are furlers. When all hands are called to loose sails each man should repair to his designated station; all the sails can be loosed at once. In furling it will be seen that all the sails cannot be furled at once; therefore it is advised to furl the square-sails first, then after the men are down from aloft, furl the fore-and-aft sails; hence the necessity of two columns for these stations.

It is recommended in exercising at loosing and furling sails that the same system of individual instruction regarding stations suggested with the Fire Bill should be followed; for instance, all hands are called to furl sails, and the square-sails are to be furled first. Let the men stationed aloft assemble at the fore rigging on their respective sides. If they are required to recite the duties of their stations as their numbers are called, the instructing officer will be assured that they know what they are going to do when ordered aloft, and a great deal of unnecessary noise, and sometimes vexatious delays, may be avoided. After being satisfied that all know their stations the sails may be loosed and furled; then if there are defects in the detail they can be remedied.

The columns "Getting under way" and "Anchoring" explain themselves.

Stations for mooring and unmooring are important, and the crew should be called to their stations and mustered; the minor details for heaving-lines, cork-fenders, etc., may then be made.

Quarter Bill.

Making the Quarter Bill will now be in order, and as most of the revenue vessels carry but two guns it is a very simple matter. Should the battery consist of four guns the "Small-Arm Division" would be dispensed with, and the numbers composing it

would make crews for the No. 2 guns. As the 3-inch B. L. rifle has been placed on some cutters, and will probably be furnished for some time to come, the stations as given in the Quarter Bill are for this gun.

Nothing original is claimed for these bills; they are rather a grouping of ideas that I have seen in practice in various vessels, both of the U. S. Navy and the Revenue-Marine Service, and if they should be of any assistance to my brother officers I shall feel highly flattered by seeing them adopted.

H. B. Rogers,

Lieutenant, U. S. R. M.



QUARTER BILL.

* GUN DIVISION.									
Watch No.	Rate.	Titles of Crew on Left Side of Gun.	Gun Nos.	Titles of Crew on Right Side of Gun.				No.	
				Cutlass.	Pistol.	Rifle.	Axe.	Duties.	Rifle.
6	Seaman.....	.....	.....	6	Tackelman, 2d Rifle man, Fireman & Wreck-clearer.	.....	1	Seaman....	Rifeman and Armoryman
5	Seaman.....	Shellman, Checkman, 2d Rifleman and Pumpman.	5	.....	.....	1	.....	11 Seaman....	Rifeman and Pumpman.
4	Seaman.....	.....	.....	.....	.....	.....	.....	10 Seaman....	Rifeman and Pumpman.
3	Seaman.....	Loader and 2d Boarder.....	3	.....	1	.....	.....	9 Seaman....	Rifeman and Pumpman.
2	Coxswain.....	.....	2	.....	1	.....	.....	8 Seaman....	Rifeman and Fireman.
1	Coxswain.....	1st Captain and 2d Boarder..	1	.....	1	.....	.....	7 Seaman....	Rifeman and Fireman.
13	1st C. Boy..	Powderman.....	.....	.....	.....	1	.....	14 1st C. Boy..	Rifeman.

SMALL-ARM DIVISION.

MASTER'S DIVISION.

POWDER DIVISION.									
No.	Rate.	Duties.	Cutlass.	Pistol.	No.	Rate.	Duties.	No.	Rate.
16	Bontswain.....	Forecastle.	1	1	15	Master-at-arms.....	Magazine and shell-room.	.....	.....
17	Carpenter.....	Big pumps, provide shot plugs.....	1	1	18	W. R. Steward.....	Magazine passage.	.....	.....
22	Quartermaster.....	Pinthouse, wheel.....	1	1	19	Cabin Steward.....	Receive and pass powder.	.....	.....
.....	Quartermaster.....	Signals, lead and after wheel.....	1	1	20	Cook	Receive and pass shell.	.....	.....
.....	2d Class Boy	Messenger.....	.....	.....	21	2d Class Boy.....	Pass powder and shell.	.....	.....

The call for assembling at Quarters will be by the Bontswain, followed by the verbal order, "All Hands to Quarters!" All persons will promptly take their stations and await orders. Perfect silence will be maintained.

* 3-inch B. L. Rifle.

