PROCEEDINGS OF THE
MERCHANT MARINE COUNCIL

The printing of this publication has been approved by the Director of the Bureau of the Budget, January 14, 1955.

UNITED STATES COAST GUARD

CG 129

Vol. 14 July 1957 No. 7

Proceedings of the

MERCHANT MARINE COUNCIL

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The Merchant Marine Council of the United States Coast Guard

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BIENNIAL INSPECTIONS CLARIFIED

Since enactment of the Biennial Inspection Law in June 1956 it was found that the changing of an annual inspection routine to a two-year basis for cargo and tank vessels needed some additional clarification. This has been done by amendments to regulations printed in the May 17, 1957 Federal Register.

Temporary instructions issued on June 28, 1956 provided that certificates issued to cargo vessels (including tank vessels) and all safety equipment certificates issued under provisions of the International Convention for Safety of Life at Sea, 1948, should be issued for a two-year period, subject to certain exceptions.

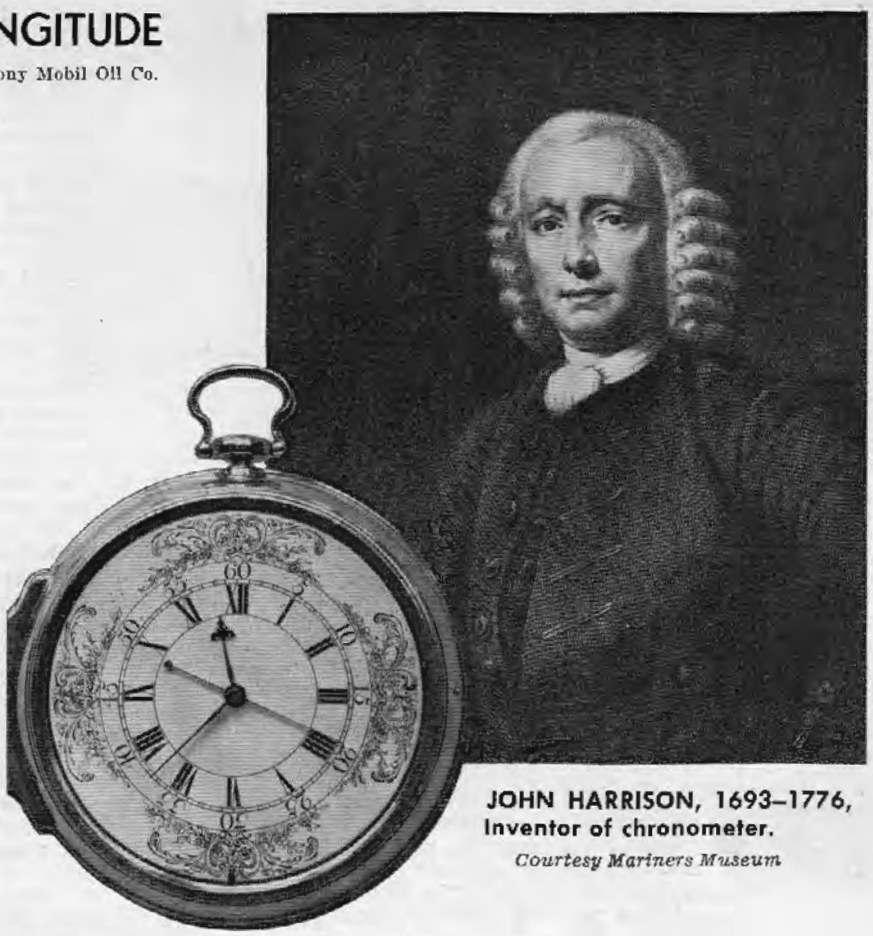
The May 17, 1957 Federal Register makes these requirements permanent and specifically spells out the responsibilities of the owner, master, and officer in charge of any vessel subject to inspection. New requirements are not imposed in these regulations, but rather reaffirm the owners' and masters' responsibilities for the continued safe operation of their vessels.

For instance, the Coast Guard did not change the requirement that all fire extinguishers be tested and inspected annually. If this function becomes due at a date when no Coast Guard inspection is scheduled, the master is required to have the necessary tests performed and make suitable logbook entries made to that effect. Similarly, this applies to distress signals and lifeboat equipment which requires renewal or replacement at certain intervals.

An excerpt from the May 17th Federal Register is printed in the Appendix of this issue with information on procedure to obtain this and other Federal Registers.

FINDING THE LONGITUDE

Reprinted From *The Compass*, Socony Mobil Oil Co.



JOHN HARRISON, 1693–1776, Inventor of chronometer.

Courtesy Mariners Museum

Chronometer No. 4, completed 1769. Actually a large watch, it was instrument which actually won the Board of Longitude's prize.

Photographs of Harrison's chronometer from originals in National Maritime Museum. Crown copyright. Reproduced by permission of British Admiralty.

FROM the dawn of maritime history to the middle of the 18th century, navigators had no way to determine the longitude of a ship at sea. It was easy to find latitude by taking a celestial observation with a cross staff, astrolabe or quadrant. But a ship's progress east or west was estimated by sheer guesswork. The problem had to remain unsolved until a timepiece of suitable accuracy could be invented.

Courses were sailed during the early period by dead reckoning. Because this method gave only an approximate idea of position, many disasters occurred. For instance: several warships were lost off Plymouth because their dead reckoning position caused them to mistake Deadman for Berry's Head; several transports came to grief in the Gulf of St. Lawrence during 1711 as a result of a dead reckoning error of some 45′ in longitude during an interval of 24 hours. Unquestionably, the lack of an accurate way for determining longitude was a major problem to mariners.

Columbus, during his first voyage to the New World, was confronted with it. At best, his knowledge of how far west he traveled was only a guess. But his crew could guess almost as well. Actually, the forecastle knew just about as much as the captain about the little fleet's position. This factor may have done much to foster unrest among the crew.

Soothsayers, self-styled magicians and charlatans of all kinds claimed to have magical methods of finding longitude. Even Sebastian Cabot, the great explorer, was guilty of divination. On his death bed he claimed to have received a divinely inspired method. He did not reveal it because, as he said, he was not permitted to by heavenly order. None of the magical revelations helped in finding a suitable method, but they did point up sharply the overpowering need for a ready solution.

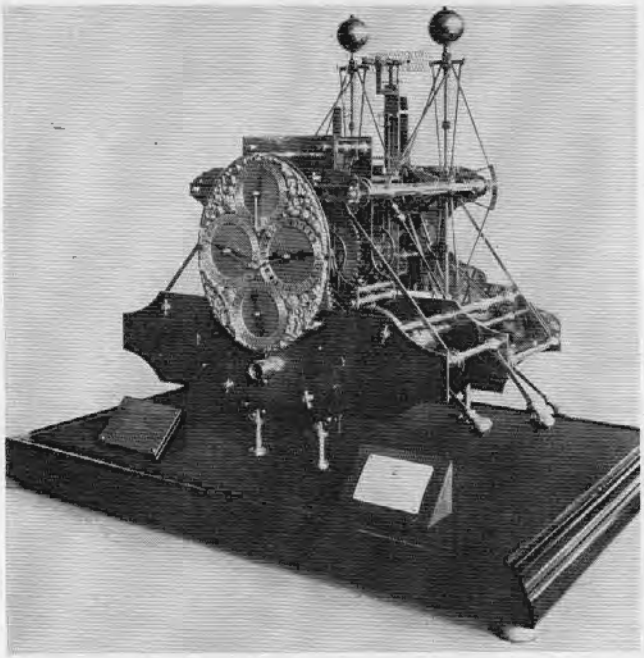
DEFIED SOLUTION

Finding longitude defied solution for almost three centuries from the time of Columbus, Cabot, Vespucci and the other early explorers. Mariners, astronomers, mathematicians and geographers worked on it. Several methods were advanced, tried and discarded because they were too complicated. In short, the world's best brains were baffled by the problem.

Columbus may have tested one of the first theories on his later voyages. This made use of changes in magnetic variation. A thorough knowledge of the different values of variation all over the world would be needed to make this method work and such values are not completely known yet. As a matter of fact, a present day navigator using variation would consider himself very lucky to come within 1° of correct longitude.

How totally useless and impractical suggestions could get was shown in the 1714 proposal made by Whiston and Ditton. It was so impractical that Jonathan Swift criticised it in his satirical poem, "Ode to Music on Longitude". These two gentlemen recommended the establishment of lightships at fixed points in the North Atlantic shipping lane. Rockets were to be fired from them at specified intervals to a height of 6,440 feet. The time interval between a rocket's flash and its report would determine the distance to a lightship. Anchoring lightships would not be difficult, since the North Atlantic, according to Whiston and Ditton, was no deeper than 300 fathoms. They of course erred badly, since the Atlantic actually has depths ranging to 3,500 fathoms and that much anchor chain would be quite a load even for the *Queen Elizabeth*.

Because observation of terrestial phenomena did not provide a sufficiently promising means of obtaining longitude, attention was turned toward observation of heavenly bodies. Declination of these bodies was



John Harrison's chronometer No. 1, 1735. This 72-pound giant was first clock to have temperature compensating balance.

known and applied to get latitude. The question must have been asked, "How can we get longitude by using the same or a similar method?" The famous scientific minds of the period applied their thinking toward finding an answer.

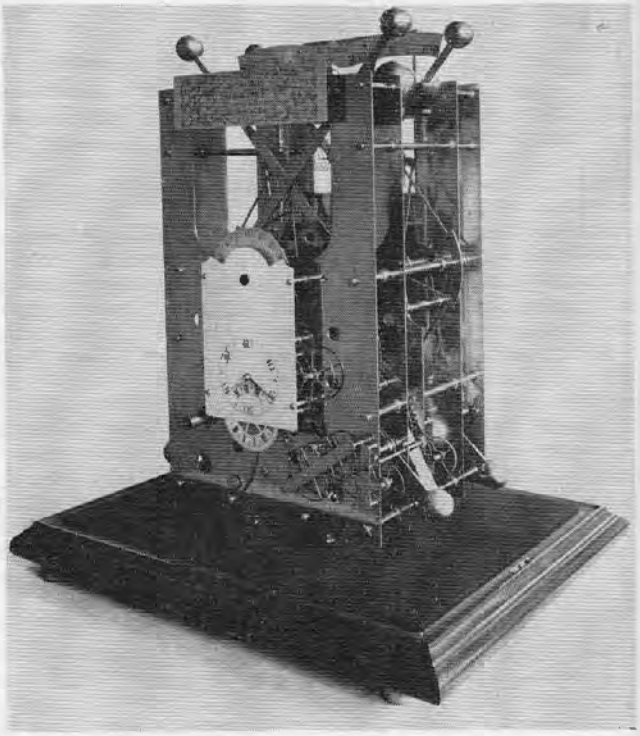
TIME IS THE KEY

Rather early in the search it was determined that the difference between a ship's local time and the time at its place of departure would give the change in longitude. The ship's local time was easy to find. Determination of time at the point of departure or, for convenience sake, at some standard meridian, remained to be solved. Scientists endeavored to apply celestial observation to this equation to time problem.

Galileo proposed the use of Jupiter's satellites soon after he discovered them in 1610. He devised a means of determining the difference in time between two points on the earth from the movement of the moons around that immense planet. But there was only one Galileo. Only he could use this very complicated method.

Lunar transits were also proposed. Theoretically this looked like a good method. In practice, however, it failed completely because of no known way to determine accurately when the moon was on the meridian. A solution based on using lunar distances also came under consideration. This method of finding time difference had some merit. It was proposed by Werner in 1514, Morin in 1633 and St. Pierre in 1674. The moon, however, was and still is unreliable. Not only was information on it incomplete but at progressive acceleration existed for which there was no explanation. As Newton pointed out in 1713, lunar distances determined a ship's position within two or three degrees but not much better. St. Pierre's proposal, made to Charles II, did have one vitally important outcome. It brought about the establishment of Greenwich for the purpose of "rectifying the tables of motion of the heavens and the places of the fixed stars so as to find out the so much desired longitude of places for perfecting the art of navigation."

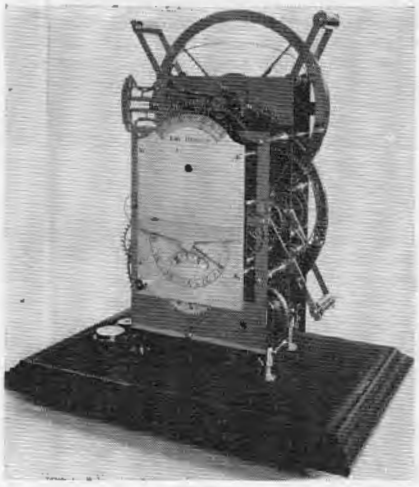
At no time up to this point was a solution offered that could be used satisfactorily by all mariners. The lunar distance method was fine in the hands of a skilled operator. For general use, however, it was unreliable. Extreme accuracy had to be the watchword and the calculations were long and intricate. Since no other way of obtaining difference in time through celestial observation seemed feasible, the inquiry toward finding some other means suggested the use of a shipboard clock.



Harrison's No. 2, completed 1739. A massive 102-pound instrument, it was never used at sea.

ACCURATE CLOCK NEEDED

Gemma Fresius proposed this method as far back as 1530. It lay dormant mainly because extremely accurate timepieces were unknown during the 16th, 17th, and early 18th centuries. An accurate timepiece, as all navigators know, is most important when converting from time to arc. Since 1′ of time equals 15′ of longitude (arc), the total clock error must not be more than 2 minutes during a 6-week voyage if longitude is to be determined within half a degree. Ancient clocks, standing on firm, steady bases and equipped with pendulums never kept time as accurately as this. Even clumsy portable watches and sand glasses, the only practical timekeepers for shipboard use, were inaccurate by 3 minutes a day, much more than the 3 seconds required. So, until an accurate marine timekeeper was developed, this method of finding the longitude, like lunar distances, remained in the realm of theory.



Chronometer No. 3, completed 1757 and weighing 66 pounds was the one Harrison hoped to win the £20,000 with, but it never was actually tested.

As commerce between the old and new world grew, the problem became so pressing that it prompted governments to offer rewards for its solution. The first of these awards dates from 1598 and was made during the reign of Phillip III of Spain for "the discovery of longitude". The idea was picked up by other governments to varying degrees. Some in their eagerness to win the "longitude derby" gave financial support to virtually anyone who had even the slightest germ of an idea. As might also be expected, little or no inquiry was made into the nature of any such work. The ready money prompted cranks and charlatans from all walks of life to dip into national treasuries.

Chronometer by John Arnold, circa 1780.
Courtesy Mariners Museum

The largest and most famous reward was the one offered by the British Government. The award owes its origin to Whiston and Ditton, of lightship fame. They submitted a petition to Parliament, March 25, 1714, in the name of "Several Captains of Her Majesty's ships, Merchants of London and Commanders of Merchantmen". The petition set forth the importance of finding a method of obtaining longitude at sea and prayed that a public reward be offered. Parliament referred the petition to its Scientific Commission, which included Newton and Halley as members. Newton observed "That, for the determining of the longitude at sea, there have been several projects, true in theory but difficult to execute", adding "One is by watch to keep time exactly: but, by reason of the motion of the ship, variations of heat and cold, wet and dry, etc., such a watch has not been made".

REWARD OFFERED

Whiston's and Ditton's proposal resulted in the enactment of a law, 12 Anne, cap 15 which put into the hands of a Board of Longitude the following offer:

£10,000 for any method capable of determining a ship's longitude within 1 degree at the end of a 6-week voyage.

£15,000 if within 40′.

£20,000 if within half a degree.

Not more than £2,000 for experimental work.

The commissioners were literally swamped with all kinds of schemes, most of which had little or no merit. As a matter of record, the Board paid out some £101,000 in public money during its existence, 1714 to 1828. The big reward, however, remained unpaid for the first 50 years of its existence. That longitude was a matter of great national concern is shown by the general use of "discovery of longitude" as an expression of something completely beyond the realm of practical possibility. Magazines and newspapers used it as a stock satirical cliché and writers such as Goldsmith and Marlow referred to it in some of their works. The problem, however, was soon to be solved, a problem of such magnitude that it completely stymied Newton, Halley, and many other scientists.

Chronometer No. 37 by Ferdinand Berthoud. Made in 1785.
Courtesy Mariners Museum

ANSWER ARRIVES

The answer came in the form of a large 72-pound ticking device, the invention of a Yorkshire carpenter named John Harrison. Harrison was born at Foulby parish of Wragby,

Chronometer No. 5, a later improvement on No. 4.

(*Continued on page 110*)

STATE DEPARTMENT AFFIRMS POSITION ON GULF OF AQABA

AN OFFICIAL statement of this country's position regarding free and innocent passage of United States merchant shipping in the Gulf of Aqaba and Strait of Tiran is printed below for all concerned:

"The Department of State calls to the attention of United States Shipping companies and shipmasters of vessels under United States registry "Notice to Mariners No. 44" issued by the United States Navy Hydrographic Office, October 29, 1955, which is based upon "Ports and Lighthouses Administration Circular to Shipping No. 4 of 1955," issued by the Government of Egypt. These notices relate to passage through the Strait of Tiran into the Gulf of Aqaba.

"The United States position is that the Gulf of Aqaba comprehends international waters and that no nation has the right to prevent free and innocent passage in the Gulf and through the Straits giving access thereto. A denial of free and innocent passage through those waters to vessels of United States registry should be reported to the nearest available United States diplomatic or consular officer. The most readily accessible officers in the area are stationed at Port Said, Alexandria, Asmara, Jidda, and Aden. If this procedure is inconvenient, a report may be made to the owners or agents, who in turn should inform the Department of State, Washington, D. C.

"Copies of "Notice to Mariners No. 44," issued by the United States Navy Hydrographic Office, October 29, 1955, and of "Ports and Lighthouses Administration Circular to Shipping No. 4 of 1955," issued by the Government of Egypt follow:

NOTICE TO MARINERS NO. 44

October 29, 1955

U. S. Navy Hydrographic Office

(5046) RED SEA—Gulf of Aqaba—Strait of Tiran—Information.

1. Vessels calling at Port Said or Suez, bound for the Gulf of Aqaba, should contact the Customs Administration regarding their destination.

2. Ships heading northward in the Red Sea, bound for the Gulf of Aqaba should notify the Regional Boycotting Office for Israel, Bulkeley Ramleh, Alexandria (Telephone No. 62927) at least 72 hours prior to entry in the Gulf of Aqaba. The cable should contain the following information:

(a) Name of vessel.
(b) Nationality.
(c) Type (cargo or passenger).
(d) International code signal letters indicating vessel's name.
(e) Expected time of entering Gulf of Aqaba (state date and time).
(f) Port of destination in the Gulf of Aqaba.

3. Ships should hoist their signal letters and reduce speed when 3 miles off the Naval Signal Station (27°59'57" N. 34°25'54" E.). Vessels shall be permitted to proceed if the Signal Station has been previously notified or ordered to stop for inspection by the Customs Authorities.

4. The permit to proceed will be valid for 48 hours.

5. Should any vessel be unable to pass within the permitted time, the shipping companies, agents or masters should renew the application to pass, giving new expected time of passage.

(See H. M. 40 (4560) of 1955. H. O. Doc. EE8/EF24, Oct. 13, 1955 H. O. Chart 2812 H. O. Pub. 157, 1952, page 173.)

GOVERNMENT OF EGYPT
MINISTRY OF WAR

PORTS AND LIGHTHOUSES ADMINISTRATION
CIRCULAR TO SHIPPING No. 4 OF 1955

Alexandria, 5th September 1955

* * * * *

Regarding Standing Orders to Vessels Heading Towards the Gulf of Aqaba.

* * * * *

In accordance with the Orders, dated 7th of July 1955, issued by the Minister of War and the Commander-in-Chief of the Armed Forces, the Regional Boycotting Office for Israel is appointed to be the only authority for issuing permission to vessels to pass through the Egyptian Territorial Waters in the Gulf of Aqaba.

Therefore, all Shipping Companies, Agents and Master Mariners, whose ship or ships will call at either Port Said or Suez, are requested to contact the Customs Administration at either ports regarding vessels heading towards the Gulf of Aqaba.

In case of vessels heading Northward from the Red Sea towards the Gulf of Aqaba, notification should be communicated directly to the Regional Boycotting Office for Israel at the undermentioned address:

BULKELEY RAMLEH—ALEXANDRIA

(Telephone No. 62927)

In both cases, notification should be given early enough at least 72 (Seventy-two) hours prior to the entry of the vessel through the gulf.

The notification should include the following information:

1. Name of Vessel.
2. Nationality.
3. Type (cargo or passenger).
4. International Code Signal Letters Indicating Her Name.
5. The Expected Time of Entering the Gulf of Aqaba (state Date and Time).
6. Port of Destination in the Gulf of Aqaba.

All Master Mariners should pay close attention to the Naval Signal Station at RAS-NOSRANI in the strait of Tiran (Lat. 27°59'56" N.) (Long. 34°25'55" E.).

Furthermore, all vessels should hoist their International Code Signal Letters indicating their names, and reduce speed—Three Miles off the Signal Station—to facilitate recognition of signals. Vessels shall be permitted to proceed if previous notification had been communicated to the Signal Station or ordered to stop for inspection by the Custom Authorities.

The permission granted to any vessel for passing through the Egyptian Territorial Waters in the Gulf of Aqaba will be valid for 48 (forty-eight) hours starting from the expected time of passage.

Should any vessel be unable to pass within the permitted time above-mentioned, the shipping Companies Agents and Master Mariners concerned should renew the application for permission to pass, giving the new expected time of passage.

SHIP MASTERS URGED TO REPORT TROPICAL STORMS

FROM NOW UNTIL November 30 shipmasters are urged to cooperate with the U. S. Weather Bureau in reporting the development and progress of tropical disturbances along their course tracks.

These reports during the hurricane season form the basis for issuing warning broadcasts to ships at sea and for distribution to inland and coastal communities.

Masters within the areas listed below are requested to furnish a special report by radio giving the weather conditions experienced:

(a) North Atlantic Ocean, Gulf of Mexico and Caribbean Sea, between 3° and 35° North Latitude and west of 35° West, and

(b) North Pacific waters west of Central America and Mexico, between 5° and 35° North Latitude.

F. W. Reichelderfer, Chief of the Weather Bureau, emphasized that due to serious danger to shipping and to coastal sections when a hurricane is in progress, radio weather reports from ships in the vicinity of a storm are exceedingly valuable. Shipmasters are urged, regardless of nationality, when encountering a tropical storm or hurricane in the areas indicated above, to furnish weather observations from the North Atlantic to "Observer Washington" and from the Pacific to "Observer San Francisco." Toll charges on these messages, if any, will be paid by the Weather Bureau.

As soon as a tropical storm is reported, the Weather Bureau broadcasts via government and commercial radio shore stations requests for all ships in the vicinity of the storm to furnish additional reports. Such requests will always include information relative to addressing these special messages; i. e., "Observer Miami, Observer New Orleans, Observer San Juan, Observer Washington, or Observer San Francisco," depending on the Hurricane Forecast Center originating the request.

All radio weather reports furnished by ships should be sent in the International Meteorological Code, but if the code is unavailable, the report should be sent in plain language.

Information on how to code weather messages is given in "International Code for Radio Weather Reports from Ships," which may be obtained upon application to the Chief, U. S. Weather Bureau, Washington 25, D. C., or from H. O. 206, Vol. II, "Radio Weather Aids."

BARGES, TUGS and fishing vessels are piled one atop the other as a result of hurricane "Carol" during the 1954 season. Shipmasters are urged to radio any tropical disturbances in their area so other vessels and coastal communities may be alerted.

It is pointed out that these special messages *are not requests for all ships to furnish daily reports by radio.* The Weather Bureau has established a certain number of United States and foreign registry vessels as Selected and Supplementary Ships which are authorized to furnish daily radio weather reports. Ships not so designated should not send radio weather reports except when the conditions warrant.

Mr. Reichelderfer concluded, "The Weather Bureau is deeply appreciative of the cooperation of shipmasters and will endeavor to acknowledge by letter the receipt of special observations furnished by ships in connection with tropical storms."

SELL DON'T TELL

The Safety Bulletin published by Isthmian Lines, Inc., hits the problem of shipboard safety squarely on the head by pointing out that safety must be *sold* not *told.*

Seamen resent being told how to do a job. It may deflate their ego or indicate a reflection on their professional technique, but safety is a "do it yourself" job.

Two casualties reported to Coast Guard Headquarters from widely separated points were the result of accidents that it seems almost fantastic a seaman would have to be warned against. In both cases—and both were fatal—crew members attempted to fetch a bucket of sea water aboard with their vessels going full speed.

In fact, in one incident an effort was made to rinse a 10-gallon garbage can over the side. As you can guess, the inevitable happened. The container filled and plucked the unthinking seaman into the sea with astonishing finality.

One man announced "Watch me get a bucket of water," wrapped the free end of the line around his wrist, plunked the bucket into the brine, and when the slack in the rope picked up, over the stern he flew.

These *Lessons from Casualties* are hoped to be just that—object lessons in talking safety, in teaching safety. If a crew member is endangering himself or others by an unsafe act, it becomes mandatory to stop him right now. Don't wait!

Don't let your crew members join the statistic column by attempting to rinse out a bucket from a moving vessel.

MASTER IS KEY IN SHIPPING CONTROL

PART III of the *Emergency Procedures and Communication Instructions for U. S. Merchant Ships* has been released by the Hydrographic Office as Notice to Mariners No. 20 and Change No. 6 to H. O. 205, Radio Navigational Aids.

This part of the instruction deals with *Shipping Control Procedures* and explains the responsibilities of Masters of vessels sailing under the operational control of the Naval Control of Shipping Organization (NCSORG). While under this control Masters will comply with the provisions outlined in this section which supersede any conflicting instructions they have received previously from their owner, operator, or normal operational commander.

It was stressed that if Masters have a thorough knowledge of the part they play in the system of shipping control, the utmost protection can be afforded their ship against enemy operations or other possible dangers. *The Masters' cooperation is absolutely essential to the success of the task of shipping protection.*

The April 1957 *Proceedings* outlined Parts I and II and a chartlet was printed showing U. S. MERCAST areas for peacetime use. This chart has been revised by the Hydrographic Office and the corrected version is printed below.

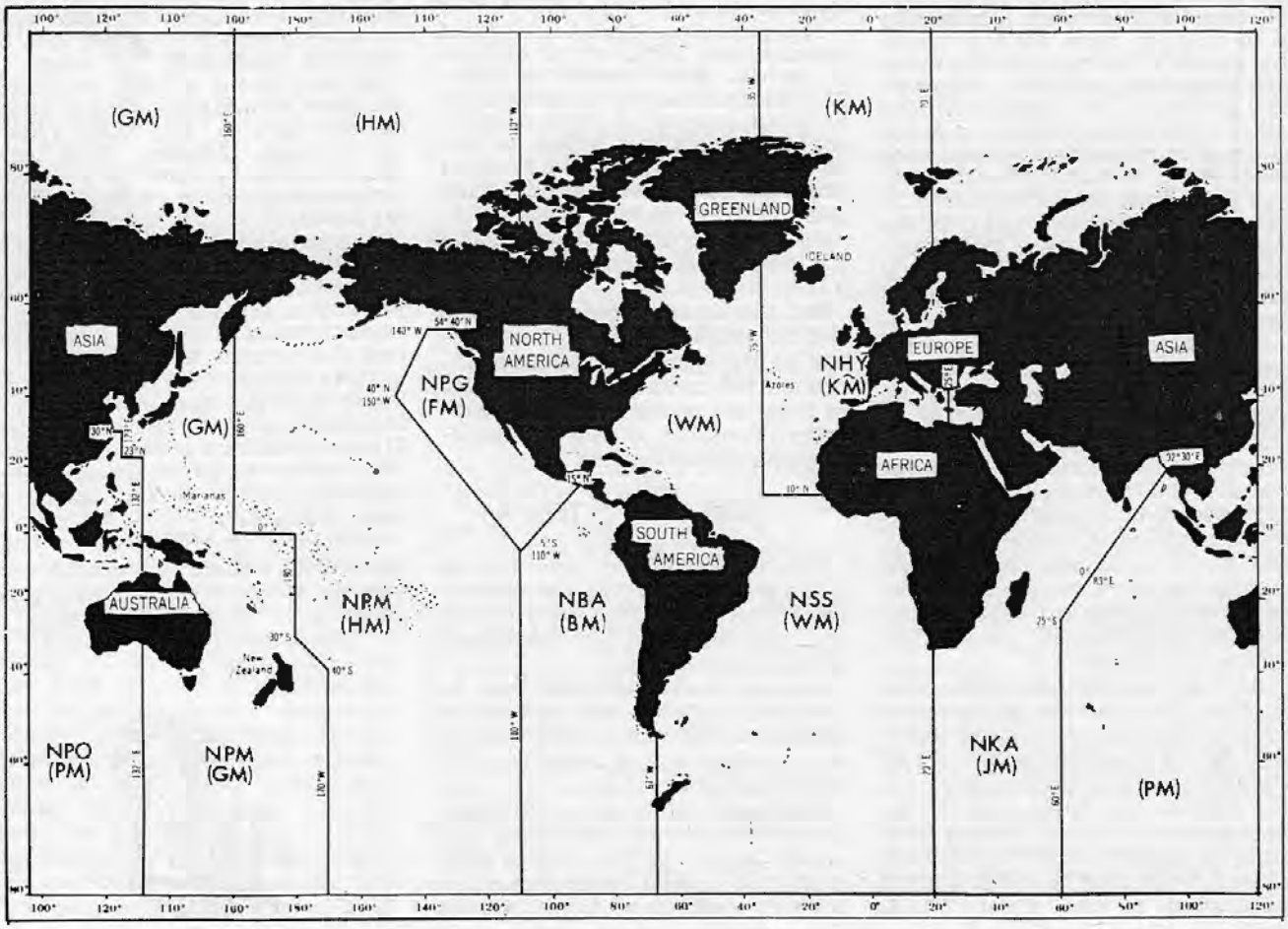
A Hydrographic spokesman pointed out that the general call for all U. S. Controlled merchant vessels has been designated as WGBC.

The mission of the Naval Control of Shipping Organization is to provide for the safety of merchant vessel movements in time of war or emergency. Where possible enemy operations make peacetime routes and sailing procedures unsafe, selected routes are used, a system of communications is organized, and ship movements are plotted closely so that naval authorities responsible for protection of shipping will, at all times, know the location of each ship.

This section, dated 13 April 1957, includes information relative to sailing orders, evasion, estimated time of arrival, and general instructions pertaining to the voyage. This part of the Appendix points up the answers to problems of security, bills of health, corrected position reports, darken ship arrangements and many others.

Masters and Radio Officers are urged to maintain H. O. 205 in up-to-date condition and become conversant with the provisions of Appendix A.

U. S. MERCAST AREAS (PEACETIME)



28 MARINERS IN PRIVATE OPERATION

OPERATING mainly on long-ocean hauls, 28 of the original 35 C4–S–1a Mariner class cargo vessels constructed for Maritime Administration account, are in service for private operators.

Of the remaining 7 vessels, 1 was lost in Korea, 1 is undergoing conversion as a private passenger vessel, and the United States Navy either operates or has control of 5.

An indication of the capabilities of these vessels is reflected in the trip made by an American President Lines Mariner from Karachi, Pakistan, to Marseille, France, via Capetown, South Africa. The vessel, drawing 27 feet, 4 inches mean draft, steamed 10,454 miles in 21 days, 9 hours, and 6 minutes for an average speed of 20.37 knots.

Following is breakdown showing disposition of C4–S–1a, Mariner Class cargo ships:

- **American President Lines, Ltd., 8**
  - SS *Old Dominion Mariner* now SS *President Hayes*
  - SS *Volunteer Mariner* now SS *President Jackson*
  - SS *Palmetto Mariner* now SS *President Adams*
  - SS *Cracker State Mariner* now SS *President Coolidge*
  - SS *Hoosier Mariner*
  - SS *Hawkeye Mariner*
  - SS *Magnolia Mariner*
  - SS *Lone Star Mariner*
- **United States Lines Company, 9**
  - SS *Cotton Mariner* now SS *Pioneer Main*
  - SS *Gopher Mariner* now SS *Pioneer Minx*
  - SS *Nutmeg Mariner* now SS *Pioneer Muse*
  - SS *Pelican Mariner* now SS *Pioneer Myth*
  - SS *Mountain Mariner* now SS *Pioneer Moor*
  - SS *Peninsula Mariner* now SS *Pioneer Mist*
  - SS *Show Me Mariner* now SS *Pioneer Mill*
  - SS *Sunflower Mariner* now SS *Pioneer Mart*
  - SS *Silver Mariner* now SS *Pioneer Ming*
- **Pacific Far East Lines, Inc., 7**
  - SS *Beaver Mariner* now SS *Golden Bear*
  - SS *Sooner Mariner* now SS *Korean Bear*
  - SS *Grand Canyon Mariner* now SS *Japan Bear*
  - SS *Golden Mariner*
  - SS *Keystone Mariner*
  - SS *Old Colony Mariner*
  - SS *Tar Heel Mariner*
- **Oceanic Steamship Co., Inc., 2**
  - SS *Free State Mariner* now SS *Monterey*
  - SS *Pine Tree Mariner* now SS *Mariposa*
- **Pacific Transport Lines, Inc., 2**
  - SS *Buckeye Mariner* now SS *C. E. Dant*
  - SS *Wolverine Mariner* now SS *M. M. Dant*
- **Converted to Navy** *AKA–112, EX SS Evergreen Mariner.*
- **Transferred to Navy**
  SS Garden Mariner, SS Diamond Mariner, SS Empire State Mariner
- **Preparing for passenger ship conversion for Bernstein's Banner Line** *SS Badger Mariner.*
- **In MA Reserve Fleet, allocated to Navy** *SS Prairie Mariner.*
- **Casualty**, *SS Cornhusker Mariner.*

"DON'T GO NEAR THE WATER"

Swimming is a grand sport and thousands of young Americans have learned to love it and practice it at every opportunity. Going in over the side from a merchant ship cannot qualify as an "opportunity".

There are a lot of unpleasant things under the surface of inviting water that inexperienced fellows don't know or don't think about. There are many varieties of sharks, barracudas up to 8 feet long, and other voracious fish. In the Persian Gulf, there are numerous poisonous aquatic snakes scooting around. In many places, seaports are located at or near the mouths of rivers that, in effect, are nothing but huge open sewers. They have swept through thousands of miles of densely populated lands and carry the accumulated corruption, pollution, and infection of millions. It is not healthy to swim in such water in spite of the innocence with which it sparkles under a blue sunlit sky.

We noticed a case the other day where a cook in his early thirties, joined three or four shipmates swimming over the side about noon, while the ship swung from a buoy in port at the mouth of a great Asiatic river. It was a river with all the drawbacks mentioned above except no barracudas. But there was a 5-knot tide running and the survivors said the undertow was bad. The cook lasted about 2 minutes and then became a statistic. His body was recovered 5 days later. He left a widow and two children.

When swimming is not authorized, it must be forbidden. Notices and signs must be posted, stating clearly that it is forbidden. It might do no harm to pass the word around as to why it is forbidden. If you fail to carry out such precautions, your inertia may cost your ship a valuable man—and your owners a lot of money.

U. S. P & I Agency, Inc.

MSTS TRANSPORT WINS AWARD FOR 1956 RESCUE

IN A YEAR highlighted with dramatic open sea rescues, the USNS *General H. B. Freeman* was singled out by the Marine Section of the National Safety Council and the American Merchant Marine Institute as the 1956 winner of its DISTINGUISHED SEA RESCUE AWARD.

The *Freeman*, a Military Sea Transportation Service vessel manned by civilian employees of the Navy Department, won the award for saving all 60 survivors in the sinking of the SS *Washington Mail* on March 3, 1956. (Ed. Note: See Dec. 1956 *Proceedings* for details of the foundering.)

Less than five hours after receipt of the first distress signal from the *Washington Mail*, Captain Robert T. Fulton of the *Freeman* maneuvered his vessel alongside the floating after section. All survivors, in good spirits, were taken aboard without casualty.

The award reads in part: "This Award is emblematic of the highest traditions of safety beyond the call of duty which have characterized American Ships and American seafarers since Colonial Times."

Winners of the three ship safety achievement awards were announced by Captain Jones F. Devlin, general chairman of the Marine Section, United States Lines. First in the passenger division was the SS *America;* the SS *Cape Ann*, United Fruit Company, was first in the cargo ship class; and the SS *Gulfoil* of the Gulf Oil Corporation was first in the tanker group.

A joint award was made to the Farrell Lines SS *African Grove*, and Captain John Bassett of the Moran Towing and Transportation Company for their swift and concerted action during the fire and explosion that rocked Pier 35, Brooklyn, last December. (Ed. Note: See March 1957 *Proceedings* for details of this outstanding bit of seamanship and cooperation.)

Two tankers, the Texas Company's SS *New Jersey* and the SS *Dynafuel*, Sun Oil Company, were cited by the Marine Section for their long periods of accident-free operation.

PREPARING TO BOARD the USNS *General H. B. Freeman* in Seattle are, left to right, Captain R. T. Fulton of the *Freeman*, Mr. A. Lintner, President American Mail Line; Captain C. R. Dudley, USN,, Commander MSTS, North Pacific; Mr. S. P. Jenkins, President, Pacific American Tankship Association; Vice Admiral A. C. Richmond, Commandant of the U. S. Coast Guard; Vice Admiral J. M. Will, Commander MSTS; and Mr. R. E. Casey, President, American Merchant Marine Institute.

Photo Courtesy U. S. Navy.

IN CEREMONIES aboard the SS *Hawaiian Packer* in San Francisco Bay, Matson Navigation Company officials smilingly accept the National Safety Council first place award for their fleet of ships. Left to right are Iver C. Larson, Executive Vice President, and Paul J. Fanning, President, of the San Francisco Chapter of the Council; Captain J. E. Dollard of the *Packer*, Captain J. H. Berendsen, Port Captain, and Harry E. Avery, Safety Engineer for Matson.

LESSONS FROM CASUALTIES

WHAT'S IT WEIGH?

They were lowering a vessel's turbine casing in the shipyard. The heavy top was a few inches from its bed. One workman was guiding it into place with both hands when the chain falls cracked. The cover snapped down, and the workman lost his right hand and three fingers of his left hand.

Just seconds before, the foreman and another man had their heads under the cover, looking at the rotor to ensure that all was o. k. Had the chain parted while those necks were stretched, the men might have lost their heads.

Chain hoists look rugged but they may be weak. Their failures are infrequent compared with manila or wire rope but are more dangerous because they occur without warning. Since chain hoist failures occur under heavy loads—once-a-year or once-in-a-lifetime operations—not only is the load damaged but whatever is under it is demolished. Too often that is part of a man.

The engine department use chain hoists more than the deck force and usually are more alive to limitations of the hoists and more careful about maintenance. They are more likely to realize that no smart operator ever attempts to lift a load in excess of rated capacity of the hoist. Even if the hoist does not give way under excess load, it inevitably is weakened by the experience and may fail next time with a load of less than rated capacity.

Always calculate lifts before hooking on to a chain hoist and ensure that they are within rated capacity. Loads are not hard to calculate. If you want to raise one end of a lifeboat, play safe and always use a chain hoist of capacity rating at least equal to the boat's full weight. If you want to raise a hinged metal hatch cover, don't forget that your hoist will be pulling at an angle and thereby increase the load. Don't increase the load still more by standing on the cover while it is being raised. (One boatswain did and suffered a broken leg for his booboo.) Adequate hoists may be heavier and more awkward to handle but are safety wise.

Inspect chain hoists frequently and before using for stretch, wear, gouge marks, open welds, or fractures indicated by fine surface cracks, kinks, or opened hooks. Keep a gear record book showing date of supply of chain hoists, capacity, type of material in chain, and date of last inspection. Don't forget to lubricate the sheaves and chain periodically. Stow chain hoists so they will not be damaged by other gear.

Replace defective chains promptly. Never try to effect makeshift repairs on a broken chain by splicing it with a bolt, nail, or wire seizing. If a chain does not run smoothly over the sheave, it usually means that the links have been stretched. If a link is stretched more than 5 percent or if its thickness is reduced more than 25 percent by caliper measurement, it should be discarded.

U. S. P & I Agency, Inc.

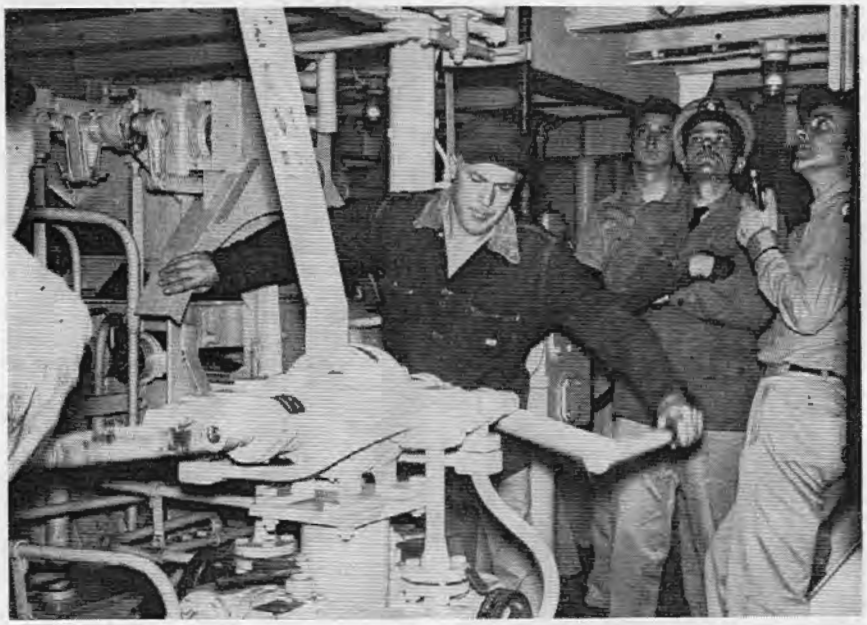
DOES YOUR EMERGENCY GEAR WORK?

Tests of emergency steering equipment aboard ship are not part of the routine drills required by Coast Guard regulations, but the ability to make use of this vital gear speedily and smoothly may play a vital part in time of emergency.

Reports indicate that in a great many cases with time of the essence, there is much confusion and delay while unfamiliar personnel trace out lines and adjust valves necessary to activate the emergency steering controls.

The regulations do require that instructions in at least half-inch letters and figures shall be posted in the steering engineroom, relating in order, the different steps to be taken in changing to the emergency steering gear. In the picture below, courtesy *United States Lines*, a group of key personnel aboard the SS *American Scout* are taking part in an emergency steering casualty drill which is held periodically aboard this ship. In this manner, deck as well as engine personnel can see at first hand how the changeover is made.

Does your crew know how to make this changeover?



CONVENTION

The Secretary of State informs the Secretary of the Treasury, for the attention of the United States Coast Guard and the Bureau of Customs, that the British Embassy notified the Department of State by note No. 361 of May 14, 1957, that the instrument of acceptance by the Government of the Czechoslovak Republic of the International Convention for the Safety of Life at Sea signed at London on June 10, 1948, was deposited in the archives of the Government of the United Kingdom on March 25, 1957, and that, in accordance with the provisions of Article XI (c) of the Convention, the Czechoslovak acceptance became effective on June 25, 1957.

USE CARE WITH ROTTMER TYPE RELEASE GEAR

IN SPITE of designed safety features, distinctive colors, and other precautions, there remains one element of danger in the use of Rottmer type lifeboat releasing gear which cannot be eliminated—the seaman who irresponsibly or stupidly releases the gear with the boat suspended in the air.

The gear, which is presently found on the majority of American ships, is a dependable and efficient automatic apparatus for the simultaneous release of both lifeboat falls. Any seaman who has ever been lowered into a rough sea in a lifeboat with independent hooks will never forget the hair-raising thrill when one end did not get unhooked, the other end fell deep in the trough between seas, and the boat stood on end. The Rottmer type release gear, along with wire falls, winches, and gravity davits, allows the uniform and smoothly controlled lowering of lifeboats under almost any conditions.

SEEN ABOVE is a Rottmer type release gear handle properly secured in place by toggle pin and several turns of small line to prevent the inadvertent operation of the installation.

This installation, known as the Rottmer type releasing mechanism, consists essentially of a pivoted open hook whose foot reposes in an open cup-shaped device. To release the lifeboat, the cup is turned to an open position by means of shafting which is rotated with an operating handle in the after end of the boat. (See diagrammatic presentation on opposite page.)

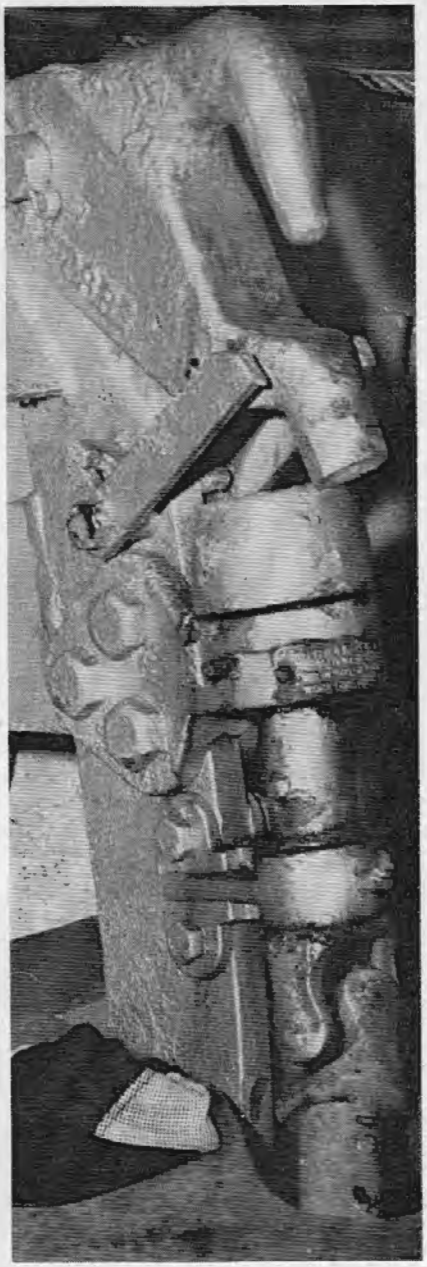
The ability of this gear to release under tension requires that care be exercised to insure that the release gear lever is not thrown to the open position until the boat commander feels it is safe to do so. Similarly, the lever should not be touched when cleaning or painting a lifeboat aboard ship. The Rottmer releasing gear operating handle is required to be readily accessible and held in position by a toggle pin. In addition, this handle is required to be painted red and have in raised letters the words: "DANGER—LEVER RELEASES HOOKS."

Another safety feature is provided by preventer bars which act not only as an automatic mousing device but also permit the release of the falls when the lifeboat is water-borne in the event the gear is not operable. This mousing feature is advantageous when lowering the lifeboat since a premature release of either end of the boat due to a slack in the falls caused by sea conditions cannot occur. The feature is also desirable when retrieving a lifeboat since the link under the block can be thrust into the hook without fear of subsequent unhooking.

Despite all these safety features, there is a continuing increase in lifeboat casualties fitted with this gear.

● During drills on a passenger vessel one boat was delayed at the embarkation check when the other boats were almost down to the water. A man in the boat rotated the releasing gear handle, apparently in the belief that this would expedite the lowering of his boat. It did—but 9 persons were seriously injured and 1 died.

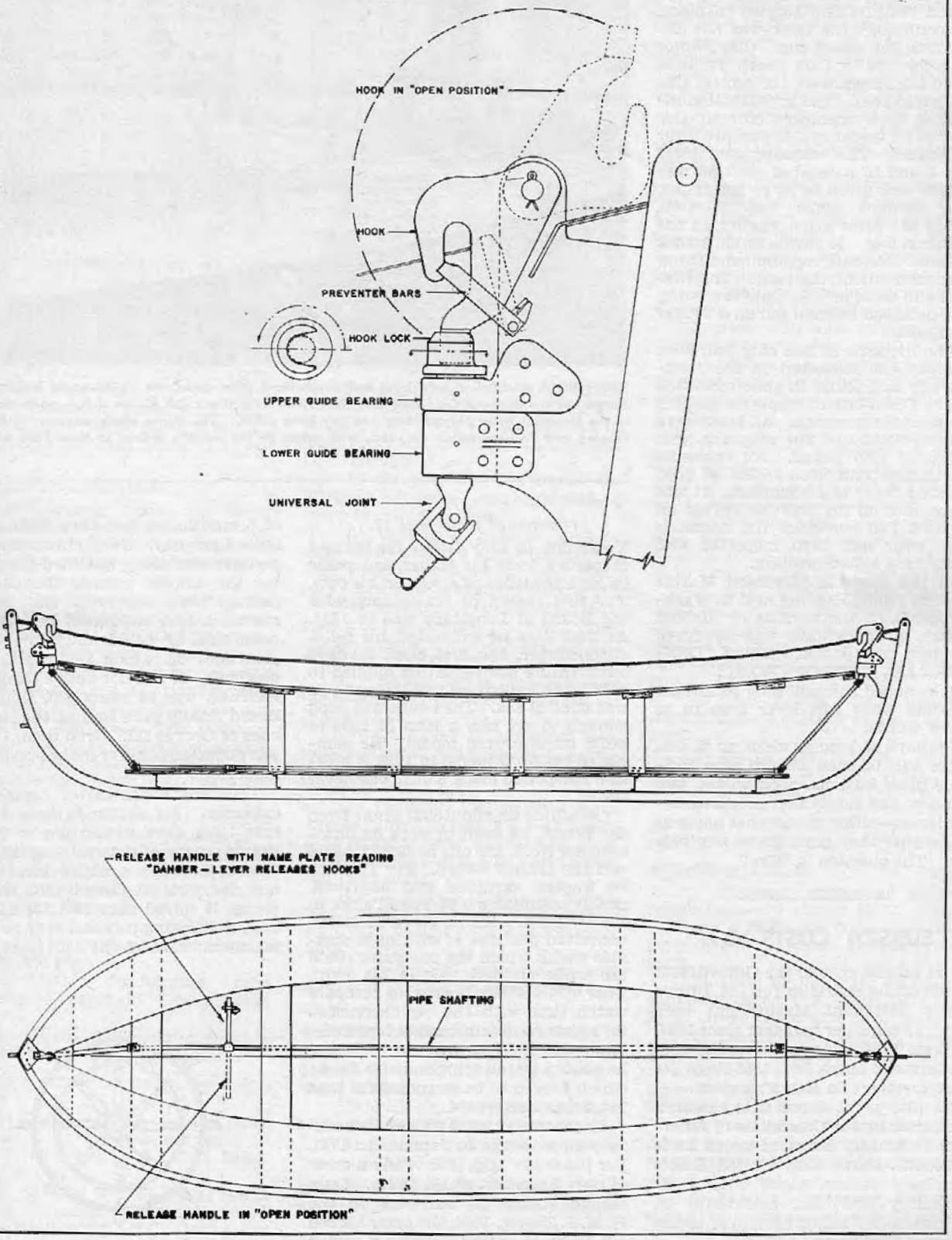
● On a freighter holding boat drill in a foreign port the disengaging apparatus on No. 3 lifeboat was tripped, sending the boat plummeting downward 24 feet and injuring three seamen. One man admitted tripping the gear but could not explain his action other than that he had become confused by the activity in lowering another lifeboat and felt it was time to release his boat.



THIS ROTTMER type installation is in the closed position, but the shank of the hook is *outside* the cup-shaped device. For all practical purposes the gear has been tripped and the fact the release handle is secured in the closed position means nothing.

● Another lifeboat accident from a similar cause occurred on a transport in a West Coast port. A workman entered a lifeboat to paint the releasing gear handle red as a warning against operating it prematurely. In the painting process he unthinkingly lifted the handle, the boat dropped and three men were injured.

LIFEBOAT RELEASING GEAR



• In another casualty reported to Coast Guard Headquarters, the Rottmer release handle was secured in the closed position and toggled in place. Unfortunately the hook was not engaged in the closed cup. (*See Photos on page 108.*) One death resulted when the gripes were thrown off this unhooked boat. The investigation indicated crew members entered this boat at a lifeboat drill to prepare it for launching. The releasing gear lever was found in a secured position and orders were given to let go the gripes. The forward gripe was released. When the after gripe was let go the boat ran free. It gave a lurch, struck the boat deck rail, capsized, and threw four men out of the boat. The lifeboat and three men fell into the water. The deceased seaman fell on a lighter alongside.

The lifeboats of this ship had been stripped and inspected on the previous trip and found in good condition by the Coast Guard inspector making the annual inspection. All boats were weight-tested and the releasing gear inspected and tested. All releasing mechanism had been found in good working order and condition. It was found that on the previous voyage on at least two occasions the releasing gear lever had been inspected and found in a closed position.

At the May 7th Merchant Marine Council Public Hearing held in Washington, D. C., the wording on lifeboat release gear handles was approved for new installation reading "DANGER—LEVER DROPS BOAT."

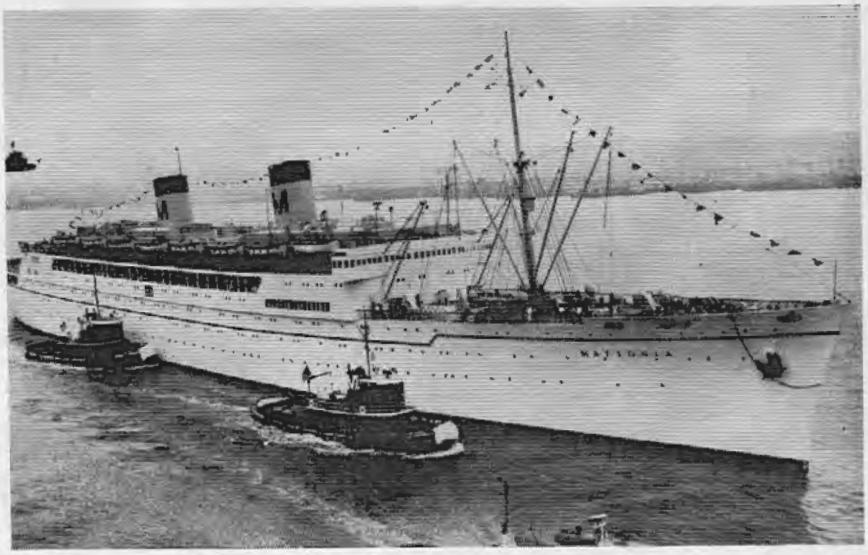
It is hoped this will help to further indicate what this lever does in so many words.

Perhaps as long as ships go to sea, there will be men aboard who foolishly press buttons, open valves, pull handles, and rotate lifeboat disengaging levers—either to see what happens or because they don't know any better. The question is, Why?

SUBSIDY COSTS LOW

Net annual cost to the Government of operating subsidies for the United States Merchant Marine has been about 12 cents per taxpayer since 1946, William T. Moore, president of Moore-McCormack Lines, Inc., told Propeller Club members in San Francisco.

He also pointed out that research conducted by the Committee of American Steamship Lines, of which he is president, shows that United States merchant vessels, along with their subsidiary activities, contribute an estimated $5.3 billion each year to the American economy.



SPORTING A modified clipper bow and streamlined after decks, the SS *Matsonia* began passenger service between California and Hawaii in June after a 20 million dollar modernization in the Newport News Shipbuilding and Dry Dock yards. The above photo, courtesy of *Moran Towing and Transportation Co., Inc.*, was taken on the vessel's arrival in New York harbor.

(*Continued from page 101*)

Yorkshire, in May 1693. He learned carpentry from his father, but came by his knowledge of clocks on his own. The first record of his contact with the Board of Longitude was in 1737. At that time he submitted his No. 1 chronometer, the first clock to have temperature compensation applied to a balance controlled timekeeper . It was tried at sea. The result was good enough to get him a loan of £500 to build an improved model. He completed his No. 2 model in 1739, a massive 102-pound clock which was never tested.

Obtaining an additional grant from the Board, he went to work on chronometer No. 3, the one he hoped would win the £20,000 award. For 17 years he worked, modified and improved, finally submitting a 66-pound clock in 1757. While working on it, Harrison conceived the idea of making a portable watch which the navigator could use while on deck taking his sight. This would make it easy to compare watch time with the big chronometer's time to obtain correct longitude. With the help of his son, William, he made a watch (chronometer No. 4) which proved to be so successful that No. 3 was never used.

Chronometer No. 4 proved its accuracy on a voyage to Jamaica in 1761. For the entire trip, it showed an error of only 5 seconds or 1¼ miles. On a second voyage to Barbados in the H. M. S. *Tarter*, 1764, the error turned out to be 15 seconds during a period of 5 months, or less than 1/10th of a second per day. No. 4 chronometer's performance easily qualified Harrison for the £20,000 award. Instead of paying him, however, the Board started a long argument because he could not, or would not, explain the principles on which his timekeeper was built. It was not until 1773, when Harrison was 80 years old, that the Board finally paid him at the insistence of George III. Even then, £1,250 was deducted to cover loans previously made.

Thus the chronometer came into existence. Its ability to keep accurate time gave navigators a quick, simple means of determining the difference between a ship's local time and the time at Greenwich. By so doing, it solved once and for all the most perplexing problem ever to face mariners: finding the longitude.

UNSAFE PRACTICE SUMMARY

The following is a brief summary of some of the unsafe practices observed by Coast Guard Marine Inspectors on oceans, rivers, and Great Lakes vessels during the period from 1 July 1956 through 31 December 1956:

● Lack of proper officer supervision

(1) Working with lines or rigging—1 case in a Gulf port.

(2) Improper stowage of cargo, stores, gear, etc.—28 cases; 6 in Atlantic ports, 3 in Pacific ports; 12 in Gulf ports and 7 in Great Lakes and river ports.

(3) Poor supervision of emergency drills—15 cases; 1 in a Pacific port and 14 in Great Lakes and river ports.

(4) Use and maintenance of equipment—38 cases; 34 in Atlantic ports, 1 in a Gulf port and 3 in Great Lakes and river ports.

(5) Other—17 cases; 4 in Atlantic ports, 3 in Pacific ports, 6 in Gulf ports and 4 in Great Lakes and river ports.

● Unsafe access to vessel

(1) Gangway inadequate as to length, width, strength, etc.—23 cases; 7 in Atlantic ports, 1 in a Pacific port, 6 in Gulf ports and 9 in Great Lakes and river ports.

(2) Gangway improperly secured—16 cases; 1 in an Atlantic port, 2 in Pacific ports, 3 in Gulf ports and 10 in Great Lakes and river ports.

(3) Gangway improperly rigged—27 cases; 8 in Atlantic ports, 2 in Pacific ports, 10 in Gulf ports and 7 in Great Lakes and river ports.

(4) Gangway angle too steep—36 cases; 1 in an Atlantic port, 11 in Gulf ports and 24 in Great Lakes and river ports.

(5) Gangway not clear at either end—1 case in a Great Lakes port.

(6) Ring lifebuoy with lanyard not at hand—25 cases; 12 in Atlantic ports, 4 in Gulf ports and 9 in Great Lakes and river ports.

(7) Insufficient number of gangways—2; 1 in an Atlantic port and 1 in a Pacific port.

(8) Water discharging onto gangway—2 cases in Great Lakes ports.

(9) Other—9 cases; 3 in Atlantic ports and 6 in Great Lakes ports.

● Unsafe access to spaces on board vessels

(1) Loose or jury rigged ladders—21 cases; 5 in Atlantic ports, 10 in Gulf ports and 6 in Great Lakes and river ports.

(2) Missing or loose ladder rungs or steps—26 cases; 5 in Atlantic ports, 1 in a Pacific port, 8 in Gulf ports and 12 in Great Lakes and river ports.

(3) Ladders deteriorated to a weakened condition—46 cases; 10 in Atlantic ports, 2 in Pacific ports, 22 in Gulf ports and 12 in Great Lakes and river ports.

(4) Cluttered doors or passages—25 cases; 1 in an Atlantic port, 2 in Pacific ports, 18 in Gulf ports and 4 in Great Lakes and river ports.

(5) Blocked or locked escape doors or ladders—10 cases; 4 in Atlantic ports, 1 in a Pacific port, 2 in Gulf ports and 3 in Great Lakes and river ports.

(6) Ladders without hand rails—8 cases; 2 in Gulf ports and 6 in Great Lakes ports.

(7) Other—15 cases; 2 in Atlantic ports, 1 in a Pacific port, 1 in a Gulf port and 11 in Great Lakes and river ports.

● Hazards at deck openings, ship's sides, catwalks, etc.

(1) Inadequate or no lifelines, rails or chains—28 cases; 5 in Atlantic ports, 1 in a Pacific port, 10 in Gulf ports and 12 in Great Lakes and river ports.

(2) No provision for removable lifelines or rails where needed—2 cases in Atlantic ports.

(3) Weakened lifelines, rails or chains—37 cases; 6 in Atlantic ports, 3 in Pacific ports, 21 in Gulf ports and 7 in Great Lakes and river ports.

(4) Hatch covers and beams improperly maintained or dangerously piled—8 cases; 5 in Atlantic ports and 3 in Great Lakes ports.

(5) Hatch beam locking lugs missing or defective—2 cases in Atlantic ports.

(6) Catwalks or gratings not provided or in a deteriorated condition—6 cases; 3 in Gulf ports and 3 in Great Lakes ports.

(7) Defective fuel oil tank vents, screens, check valves, etc.—42 cases; 10 in Atlantic ports, 3 in Pacific ports, 20 in Gulf ports and 9 in Great Lakes and river ports.

(8) No guards or rails at 'tween deck openings—7 cases; 2 in Atlantic ports, 2 in Pacific ports and 3 in Gulf ports.

(9) Other—17 cases; 3 in Gulf ports and 14 in Great Lakes and river ports.

● Hazardous cargo handling gear

(1) Safe load not marked on booms—10 cases; 2 in Atlantic ports and 8 in Gulf ports.

(2) Jury rigged winch controls—1 case in a Pacific port.

(3) General poor maintenance—1 case in a Gulf port.

● Hazardous conditions in use and maintenance of lifesaving equipment

(1) Faulty controls (limit, disconnect and control switches)— 5 cases; 3 in Atlantic ports and 2 in Gulf ports.

(2) Safety devices by-passed—1 case in a Great Lakes port.

(3) Faulty boat releasing gear—16 cases; 4 in Atlantic ports, 2 in Pacific ports, 6 in Gulf ports and 4 in Great Lakes and river ports.

(4) Defective pulleys or wheels on davits—8 cases; 1 in an Atlantic port, 4 in Gulf ports and 3 in Great Lakes ports.

(5) Improperly located or secured life ring buoys—4 cases; 1 in an Atlantic port, 1 in a Pacific port and 2 in Gulf ports.

(6) Lifeboat not properly secured—2 cases; in a Great Lakes port.

(7) General poor maintenance—25 cases; 10 in Atlantic ports, 2 in Pacific ports, 5 in Gulf ports and 8 in Great Lakes and river ports.

(8) Other—14 cases; 4 in Atlantic ports, 4 in Pacific ports, 3 in Gulf ports and 3 in Great Lakes ports.

● Ventilation hazards

(1) Improper ventilation of confined spaces—11 cases; 4 in Atlantic ports, 1 in a Pacific port and 6 in Great Lakes and river ports.

(2) Accumulation of grease, dust, etc. in vents—29 cases; 4 in Atlantic ports, 4 in Pacific ports and 21 in Great Lakes and river ports.

(3) Gas masks, flame safety lamps or oxygene breathing apparatus improperly maintained or inaccessible—5 cases; 2 in Pacific ports, 2 in Gulf ports and 1 in a Great Lakes port.

(4) Use of toxic solvent in confined spaces—2 cases in a Great Lakes port.

(5) Faulty ventilating equipment—9 cases; 4 in Pacific ports, 3 in Gulf ports and 2 in Great Lakes ports.

(6) Other—6 cases; 3 in Atlantic ports, 1 in a Pacific port, 1 in a Gulf port and 1 in a Great Lakes port.

● Lighting hazards

(1) Exposed wiring as fixture connections—70 cases; 16 in Atlantic ports, 4 in Pacific ports, 8 in Gulf ports and 42 in Great Lakes and river ports.

(2) Long or defective extension cords—25 cases; 5 in Gulf ports and 20 in Great Lakes and river ports.

(3) Insufficient light at gangway, ladders, deck openings, etc.—10 cases; 1 in an Atlantic port, 2 in a Pacific port, 1 in a Gulf port and 6 in Great Lakes ports.

(4) improperly secured or jury rigged wiring—27 cases; 4 in Atlantic ports, 9 in Pacific ports, 7 in Gulf ports and 7 in Great Lakes ports.

(5) Defective switches, fixtures, wiring, etc.—25 cases; 5 in Atlantic ports, 13 in Gulf ports and 7 in Great Lakes ports.

(6) Other—15 cases; 6 in Atlantic ports, 2 in Pacific ports and 7 in Gulf ports.

● Electrical equipment hazards

(1) Use of portable equipment without provision for grounding—24 cases; 4 in Atlantic ports, 4 in Pacific ports, 3 in Gulf ports and 13 in Great Lakes ports.

(2) Absence of guard rail or rubber matting at switchboards or other installed equipment such as controllers, resistors, etc.—32 cases; 12 in Atlantic ports, 1 in a Pacific port, 5 in Gulf ports and 14 in Great Lakes ports.

(3) Overfused circuits—7 cases; 6 in Great Lakes ports and 1 in a Gulf port.

(4) Other—44 cases; 10 in Atlantic ports, 2 in Pacific ports, 19 in Gulf ports and 13 in Great Lakes and river ports.

● Hazardous "hot work"

(1) Disregard of precautions while welding, burning or riveting—7 cases; 1 in an Atlantic port and 6 in Gulf ports.

(2) Lack of valid gas-free certificate for "hot work" around oil tanks—5 cases; 1 in an Atlantic port and 4 in Gulf ports.

(3) Other—1 case in a Gulf port.

● Hazardous deck conditions

(1) Oil spills on deck—41 cases; 12 in Atlantic ports, 1 in a Pacific port, 15 in Gulf ports and 13 in Great Lakes and river ports.

(2) Loose or oily floor plates, gratings, etc.—20 cases; 5 in Atlantic ports, 1 in a Pacific port and 14 in Gulf ports.

(3) Cluttered decks—18 cases; 1 in an Atlantic port, 12 in Gulf ports and 5 in Great Lakes and river ports.

(4) Hose, wire, etc. carelessly led along decks—4 cases in an Atlantic port.

(5) No deck battens or wooden gratings where needed—4 cases; 2 in Atlantic ports and 2 in Great Lakes ports.

(6) Floor plates, gratings on their supports wasted to a weakened condition—3 cases; 1 in a Gulf port and 2 in Great Lakes ports.

(7) Oil and debris in bilges—25 cases; 16 in Atlantic ports, 1 in a Pacific port, 3 in Gulf ports and 5 in Great Lakes ports.

(8) Other—22 cases; 1 in an Atlantic port, 1 in a Pacific port, 5 in Gulf ports and 15 in Great Lakes and river ports.

● Machinery hazards

(1) Guards on moving parts of machinery inadequate—50 cases; 13 in Atlantic ports, 3 in Pacific ports, 19 in Gulf ports and 15 in Great Lakes and river ports.

(2) Boiler water gage glass not shielded—6 cases; 2 in Gulf ports and 4 in Great Lakes ports.

(3) Steam lines not lagged or improperly secured—10 cases; 2 in Atlantic ports, 1 in a Gulf port and 7 in Great Lakes or river ports.

(4) Relief valves faulty in operation or set down to too high a pressure setting—20 cases; 5 in Atlantic ports, 1 in a Pacific port, 6 in Gulf port and 8 in Great Lakes and river ports.

(5) Improper maintenance of equipment—10 cases; 2 in an Atlantic port, 1 in a Pacific port and 7 in Gulf ports.

(6) No relief or reducing valve—4 cases; 3 in Gulf ports and 1 in a Great Lakes port.

(7) Defective or missing pipe guards—16 cases; 11 in Atlantic ports, 1 in a Pacific port, 3 in Gulf ports and 1 in a river port.

(8) Other—50 cases; 6 in Atlantic ports, 4 in Pacific ports, 11 in Gulf ports and 29 in Great Lakes and river ports.

● Tank vessels

(1) Ullage holes open without flame screens—54 cases; 16 in Atlantic ports, 10 in Gulf ports and 28 in Great Lakes and river ports.

(2) Improper loading of cargo—6 cases; 3 in Atlantic ports and 3 in river ports.

(3) Cargo tanks open but not gas free—5 cases; 1 in an Atlantic port and 4 in river ports.

(4) Faulty PV valves and flame screens—14 cases; 6 in Atlantic ports, 1 in Pacific ports, 3 in Gulf ports and 4 in river ports.

(5) Other—55 cases; 18 in Atlantic ports, 12 in Pacific ports, 9 in Gulf ports and 16 in river ports.

● In addition to the foregoing, there were a total of 63 other cases of unsafe practices noted, including 56 cases of improper maintenance of fire-fighting equipment.

● Discussion

The number of unsafe practices reported during the last six months of 1956 (1483 cases) more than twice exceeds the number reported during the previous 12-month period (709 cases). An unsafe practice—that of breaking the strapping bands on a load of dunnage by bouncing it up and down—recently cost the life of a longshoreman. The load with one end on deck, being not quite under the boom, swung toward him after he had hooked one of the straps and signalled the winchman to hoist. Just as he ducked under it the clip holding the ends of the strap together pulled apart spilling the load and killing him instantly. This method of breaking straps is not ordinarily used by stevedores nor is it permitted by stevedoring management. In this case arrangements had been made by the walking boss to have carpenters work ing on the ship provide cutters for breaking the straps. Whether through inattention, forgetfulness, or other motivation, this simple precaution was not taken and another human life was forfeited.

APPENDIX

AMENDMENTS TO REGULATIONS

[EDITOR'S NOTE.—The material contained herein has been condensed due to space limitations. Copies of the Federal Registers containing the material referred to may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.]

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

[CGFR 57-18]

BIENNIAL INSPECTION OF CARGO AND TANK VESSELS AND LIFESAVING EQUIPMENT FOR CERTAIN VESSELS ENGAGED IN OFFSHORE DRILLING OPERATIONS

A notice regarding proposed changes in the navigation and vessel inspection regulations was published in the Federal Register dated September 22, 1956 (21 F. R. 7250), as Items I through III on the Agenda to be considered by the Merchant Marine Council. These items were considered at a public hearing held on October 15, 1956, at Washington, D. C. This document is the second and last of a series of documents covering the regulations considered at this hearing.

All the comments, views, and data submitted in connection with the items considered by the Merchant Marine Council at this public hearing have been helpful to the Coast Guard and are very much appreciated. The first document contained amendments to the regulations based on Item III in the Agenda and was published in the Federal Register dated November 17, 1956 (21 F. R. 8972, 8273). The following items considered at the public hearing held October 15, 1956, as revised, are adopted and included in this document: Item I—Biennial Inspection of Cargo and Tank Vessels, Item II—Lifesaving Equipment for Vessels Engaged in Offshore Drilling Operations.

The changes in 46 CFR Parts 2, 31, 33, 34, 38, 39, 52, 55, 61, 71, 75, 78, 91, 94, 97, 111, and 167, with respect to inspection of vessels are to give force and effect to the act of June 4, 1956 (Public Law 549, 84th Congress, 2d Session; 70 Stat. 223–226), which amended sections 4417, 4418, 4453, and 4454 of the Revised Statutes (46 U. S. C. 391, 392, 435, 436), and section 10 of the act of May 28, 1908, as amended (46 U. S. C. 395). These changes also make permanent the temporary instructions issued on June 28, 1956, providing that certificates of inspection issued to cargo vessels (including tank vessels) and all safety equipment certificates issued under the provisions of the International Convention for Safety of Life at Sea, 1948, should thereafter be issued for a two-year period from date of issue, subject to certain exceptions. Annual inspections will be made and certificates of inspection valid for one year will be issued to vessels with certain types of fire-tube boilers, including river type lap-seam boilers, and vessels in special services or whose operations are confined to specific areas.

The amendments to 46 CFR 75.10–10 and 94.10–20 revise the requirements regarding lifeboats and flotation equipment on certain vessels engaged in operations for the purpose of exploring for, developing, removing, and transporting resources of the outer continental shelf of the United States.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Order No. 120, dated July 31, 1950 (15 F. R. 6521) Treasury Department Order 167–14, dated November 26, 1954 (19 F. R. 8026), and Treasury Department Order CGFR 56–28, dated July 24, 1956 (21 F. R. 5659), to promulgate regulations in accordance with the statutes cited with the regulations below, the following amendments are prescribed and shall become effective on the date of publication of this document in the Federal Register:

(Federal Register of Friday, May 17, 1957.)

TITLE 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of the Treasury

PART 19—WAIVERS OF NAVIGATION AND VESSEL INSPECTION LAWS AND REGULATIONS

DEEPER LOADING OF COASTWISE TANK SHIPS

CROSS REFERENCE: For cancellation of waiver order in § 19.40, see Title 46, Chapter I, Part 154, *infra*.

EXECUTIVE ORDER 10707

ESTABLISHING A SEAL FOR THE UNITED STATES COAST GUARD

WHEREAS the Commandant of the United States Coast Guard with approval of the Secretary of the Treasury has caused to be made, and has recommended that I approve, a seal for the United States Coast Guard, the design of which accompanies and is hereby made a part of this order, and which is described in heraldic terms as follows:

On a white disk the shield of the Coat of Arms of the United States (paly of thirteen pieces argent and gules a chief azure) between the motto "SEMPER PARATUS" in red; circumscribed by a white annulet edged and inscribed "UNITED STATES COAST GUARD 1790" in blue all in front of two crossed anchors with stock, arms, and flukes in slight perspective in gold; superimposed upon a light blue disk with gold rope rim. The central device of the seal is the emblem of the United States Coast Guard.

AND WHEREAS it appears that such seal is of suitable design and appropriate for establishment as the official seal of the United States Coast Guard:

NOW, THEREFORE, by virtue of the authority vested in me as President of the United States, I hereby approve such seal as the official seal of the United States Coast Guard.

DWIGHT D. EISENHOWER

THE WHITE HOUSE,
May 6, 1957.

[F. R. Doc. 57-3809; Filed, May 6, 1957; 2:25 p. m.]

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

Subchapter O—Regulations Applicable to Certain Vessels During Emergency

[CGFR 57-21]

PART 154—WAIVERS OF NAVIGATION AND VESSEL INSPECTION LAWS AND REGULATIONS [1]

DEEPER LOADING OF COASTWISE TANK SHIPS

The purpose of this order is to cancel a general waiver designated as 46 CFR 154.40, as well as 33 CFR 19.40, regarding deeper loading of coastwise tank ships, effective May 16, 1957. The Secretary of Defense in a letter dated April 24, 1957, to the Secretary of the Treasury stated:

> On December 12, 1956, under the authority contained in the Act of December 27, 1950, 64 Stat. 1120, I requested that, in the interest of national defense, you waive compliance with the Navigation laws to the extent necessary to permit tankers of U. S. registry, in coastwise service, to load one mark deeper on the Plimsoll mark than is normally authorized when such deeper loading will not result in the maximum stress exceeding the limiting stress listed in the load tables for each tanker.
>
> Since the interest of national defense no longer requires this action, I hereby request that the waiver granted in response to the above letter be cancelled.

It is hereby found that compliance with the Administrative Procedure Act respecting notice of proposed rule making, public rule making procedure thereof, and effective date requirements thereof is impracticable and contrary to the public interest.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by an order of the Acting Secretary of the Treasury, dated January 23, 1951, identified as CGFR 51-1, and published in the Federal Register dated January 26, 1951 (16 F. R. 731), and the act of December 27, 1950, the waiver order in § 154.40 *Deeper loading of coastwise tank ships* is canceled effective May 16, 1957, except that any vessel which may be loaded under the terms of the waiver order and underway on a voyage before the effective date of this cancellation may continue its voyage to its port of destination and no penalties of law shall be imposed because of failure to comply with the provisions of law which were relaxed by this waiver order.

(64 Stat. 1120; 46 U. S. C., note prec. 1)

Dated: May 3, 1957.

[SEAL] J. A. HIRSHFIELD,
Rear Admiral, U. S. Coast Guard,
Acting Commandant.

[F. R. Doc. 57-3762; Filed, May 6, 1957; 11:03 a. m.]

[1] This is also codified—33 CFR Part 19.

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 1-57

May 13, 1957

Subj: Motorboats engaged in tender service at yacht clubs and marinas; application of 46 USC 526f to such operators.

1. *Purpose.* The purpose of this circular is to set forth the position of the Commandant with respect to the application of the provisions of Section 7 of the Act of April 25, 1940 (46 USC 526f) and the regulations issued under authority of the Act to the operators of motorboats engaged in tender service at yacht clubs and marinas.

2. *Background and Discussion.* Some confusion apparently exists as to whether the operators of such motorboats are required to be licensed by the Coast Guard in instances where individuals have leased or rented municipal facilities and thereafter service boats and provide transportation to and from boats at the moorings. In this particular situation, municipal authorities name the concessionaires and list the charges for the use of the moorings, the laying of moorings, miscellaneous charges for various services rendered, including the use of landing facilities and tender service. There has also been some question as to the application of the provisions of the statute and existing regulations in the case of vessels owned and/or operated by yacht clubs that furnish tender service for members and their guests.

It is the opinion of the Commandant that these tenders operated by marinas and yacht clubs are vessels carrying passengers for hire within the meaning of 46 CFR 24.10-3 and that accordingly the operators must be in possession of a valid license issued under authority of the statute. It is considered, however, a rigid enforcement of the requirements for licensed operators under present licensing regulations would work an undue hardship on the proprietors of marinas and yacht clubs, and to preclude this the requirements for obtaining a limited license for such service are put into effect particularly in regard to the one year of experience in the operation of motorboats as established in 46 CFR 10.20-3 (a) (1). Accordingly the Commandant has authorized the issuance of a limited license as a motorboat operator for tender service only, provided the applicant qualifies as follows:

(a) That the applicant satisfactorily establishes that he has a minimum of at least 4 months' experience in the operation of motorboats, or one full season as an operator of motorboats engaged in tender service.

(b) That the applicant satisfactorily passes an extensive professional examination stressing all aspects of the safe operation and navigation of motorboats.

(c) That the applicant satisfactorily proves by a demonstration in the actual operation of a motorboat that he is competent in the handling, operation and maneuvering of such craft and has a practical knowledge of motorboats, engines, the use and maintenance of life-saving and fire-fighting equipment, and other operational equipment on board and the proper safety precautions to be employed in embarking and discharging passengers.

If the applicant satisfactorily fulfills the foregoing conditions, the license issued will be limited in the following manner:

(a) To motorboats of less than 30 feet in length, engaged in tender service for a specifically named locality in the vicinity of the yacht club or marina where the tenders normally operate.

(b) To such further conditions as the Officer in Charge, Marine Inspection may consider warranted by the circumstances of any particular case.

The holder of a limited license such as authorized by this circular may be considered eligible for an unlimited license after acquiring the service specified by 46 CFR 10.20-3 (a) (1) provided his service fulfills the normal requirements for an unlimited license.

3. *Action.* All marinas and yacht clubs are hereby notified of this ruling and the relaxations with respect to the requirements for obtaining a limited license set forth herein. A reasonable time will be afforded marinas and yacht clubs and the operators of their vessels to obtain a regular motorboat operator's license or the limited license referred to herein prior to taking enforcement measures.

H. T. JEWELL
Rear Admiral, USCG
Chief, Office of Merchant Marine Safety.
By direction of the Commandant.

ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of ships' stores and supplies certificated from 1 April to 31 May 1957, inclusive, for use on board vessels in accordance with provisions of Part 147 of the regulations governing "Explosives or Other Dangerous Articles on Board Vessels" are as follows:

CERTIFIED

Penetone Co., Tenafly, N. J., Certificate No. 123, dated 11 April 1957, PENESOLVE #5.

Xzit Chemical Co., 158 14th St., Hoboken, N. J., Certificate No. 124, dated 30 April 1957, XZIT ELECTRICAL CLEANER.

Saniline Exterminating Service, 622 E. 16th Ave., San Mateo, Calif., Certificate No. 125, dated 8 May 1957, SANITOX–100.

Axion Chemical Co., Inc., 223 Erie St., Buffalo, N. Y., Certificate No. 129, dated 27 May 1957, AXION SMOKE TREATMENT.

Axion Chemical Co., Inc., Certificate No. 133, dated 27 May 1957, AXION BOILER WATER TREATMENT.

Axion Chemical Co., Inc., Certificate No. 136, dated 27 May 1957, AXION DUAL TREATMENT.

AFFIDAVITS

The following affidavits were accepted during the period from 15 April 1957 to 15 May 1957:

Mueller Brass Company, 1925 Lapeer Ave., Port Huron, Mich., NON-FERROUS PIPE AND TUBING.

Cooper Alloy Corp., Bloy St. & Ramsey Ave., Hillside, N. J., VALVES.

Jordan Corp., 6013 Wiehe Road, Cincinnati 13, Ohio, VALVES.

Marine Brass Foundry, 1221 Clinton St., Hoboken, N. J., FLANGES.

FUSIBLE PLUGS

The regulations prescribed in Subpart 162.014, Subchapter Q, Specifications, require that manufacturers submit samples from each heat of fusible plugs for test prior to plugs manufactured from the heat being used on vessels subject to inspection by the Coast Guard. A list of approved heats which have been tested and found acceptable during the period from 15 April 1957 to 15 May 1957 is as follows:

The Lunkenheimer Co., Cincinnati 14, Ohio, Heat Nos. 553, 554, 555, 556, 557, 558, 559 and 560.

MARINE SAFETY PUBLICATIONS AND PAMPHLETS

The following publications and pamphlets are available and may be obtained upon request from the nearest Marine Inspection Office of the United States Coast Guard, except for cost publications which may be obtained upon application to the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Date of each publication is indicated following title.

CG No.	*Title of Publication*
101	Specimen Examinations for Merchant Marine Deck Officers. 1–50
108	Rules and Regulations for Military Explosives. 5–15–54
115	Marine Engineering Regulations and Material Specifications. 3–1–56
118	Overtime Services. 8–46
123	Rules and Regulations for Tank Vessels. 10–1–56
129	Proceedings of the Merchant Marine Council. Monthly
169	Rules to Prevent Collisions of Vessels and Pilot Rules for Certain Inland Waters of the Atlantic and Pacific Coasts and of the Coast of the Gulf of Mexico. 1–2–57
172	Pilot Rules for the Great Lakes and their connecting and Tributary Waters and the St. Marys River. 1–3–55
174	A Manual for the Safe Handling of Inflammable and Combustible Liquids. 7–2–51
175	Manual for Lifeboatmen and Able Seamen, Qualified Members of Engine Department, and Tankerman. 3–5–54
176	Load Line Regulations. 11–1–53
182	Specimen Examinations for Merchant Marine Engineer Licenses. 5–49
184	Pilot Rules for the Western Rivers and the Red River of the North. 1–3–55
187	Explosives or Other Dangerous Articles on Board Vessels. 7–1–54 (Cost Pub. $2.50 from GPO)
190	Equipment Lists. 3–1–56
191	Rules and Regulations for Licensing and Certificating of Merchant Marine Personnel. 9–15–55
200	Marine Investigation Regulations and Suspension and Revocation Proceedings. 4–13–53
220	Specimen Examination Questions for Licenses as Master, Mate, and Pilot of Central Western Rivers Vessels. 6–51
227	Laws Governing Marine Inspection. 7–3–50
239	Security of Vessels and Waterfront Facilities. 6–16–52
249	Merchant Marine Council Public Hearing Agenda. Annually
256	Rules and Regulations for Passenger Vessels. 11–19–52
257	Rules and Regulations for Cargo and Miscellaneous Vessels. 6–1–55
258	Rules and Regulations for Uninspected Vessels. 7–1–55
259	Electrical Engineering Regulations. 6–1–55
266	Rules and Regulations for Bulk Grain Cargo. 2–13–53
267	Rules and Regulations for Numbering Undocumented Vessels. 1–15–53
268	Rules and Regulations for Manning of Vessels. 11–19–52
269	Rules and Regulations for Nautical Schools. 11–1–53
270	Rules and Regulations for Marine Engineering Installations Contracted for Prior to July 1, 1935. 11–19–52
290	Motorboats. 4–15–57
293	Miscellaneous Electrical Equipment List. 2–1–57

Official changes in rules and regulations are published in the Federal Register, which is printed daily except Sunday, Monday and days following holidays. The Federal Register is a sales publication and may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. It is furnished by mail to subscribers for $1.50 per month or $15.00 per year, payable in advance. Individual copies desired may be purchased as long as they are available. The charge for individual copies of the Federal Register varies in proportion to the size of the issue and will be 15 cents unless otherwise noted on the table of changes below.

Changes Published During May 1957

The following have been modified by Federal Registers:

CG–200 Federal Register May 4, 1957.

CG–115, CG–123, CG–256, CG–257, CG–259, CG–269 Federal Register May 17, 1957.

CG 190, Federal Register May 29, 1957.


PORTRAIT OF A MAN
Who Took One Stupid Chance Too Many