

the LOOKOUT

SEAMEN'S CHURCH INSTITUTE OF NEW YORK



JULY-AUGUST 1971

THE PROGRAM OF THE INSTITUTE

The Seamen's Church Institute of New York, an agency of the Episcopal Church in the Diocese of New York, is a unique organization devoted to the well-being and special interests of active merchant seamen.

More than 753,000 such seamen of all nationalities, races and creeds come into the Port of New York every year. To many of them the Institute is their shore center in port and remains their polestar while they transit the distant oceans of the earth.

First established in 1834 as a floating chapel in New York harbor, the Institute offers a wide range of recreational and educational services for the mariner, including counseling and the help of five chaplains in emergency situations.

Each year 2,300 ships with 96,600 men aboard put in at Port Newark, where time ashore is extremely limited.

Here in the very middle of huge, sprawling Port Newark pulsing with activity of container-shipping, SCI has provided an oasis known as the Mariners International Center which offers seamen a recreational center especially constructed and designed, operated in a special way for the very special needs of the men. An outstanding feature is a soccer field (lighted at night) for games between ship teams.

Although 55% of the overall Institute budget is met by income from seamen and the public, the cost of the special services comes from endowment and contributions. Contributions are tax deductible.

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COVER: Stokehold of a coal-burning ship.



by Edward Carpenter

About the author

"I have very pleasant memories of New York, as during the last war I was engaged in trooping in the <u>Isle de</u> <u>France</u> when we carried 10,000 American servicemen to the U. K.

"During our stay in New York between voyages we all were most grateful to the Americans who were most kind in arranging entertainment, i. e., free tickets to the cinemas, visits to the homes of local residents, dances, etc. "I am now 75 years of age, very thankful to be in good health."



Before the advent of oil fuel the crews of all ships included a complement of "firemen" and "trimmers," their numbers varying according to the tonnage and boiler capacity of the ship. Collectively they were known as "the black gang," and they worked in such conditions of heat, dirt and back-breaking toil that few ashore, with the possible exception of miners, could comprehend them. Even miners went home every night, but the black gang in a tramp steamer might be on the go for a year or more.

Most of the black gang drew an advance of pay when signing on — and joined the ship with a hangover. But they had to turn to in watches set by the second engineer upon leaving the dock. A succession of steel ladders known as the "fiddley" led down through the engine room to their domain in the stokehold. Here they had to tend the fires.

In most ships the firemen were responsible for three fires, two high and one low. At the end of each watch one of the fires had to be prepared for cleaning out by a process known as "burning down." The cleaning was the first duty of the new watch, who had to clear the fire-bars of foreign elements or clinkers.

Trimmers were different. They worked in the hot, airless bunkers where, in a gloomy atmosphere thick with coal dust, they filled steel barrows with coal and wheeled them into the stokehold. Here they dumped their loads on the "plates" or steel decking below the furnace mouths.

There were other bunkers, on the deck above, where the coal was tipped into hoppers, which resembled elevator shafts, leading down to the stokehold floor. Inside the bunkers coal was gradually cleared back toward the rear bulkheads, which meant that eventually the trimmers had to cover a longer distance.

The floor would be strewn with different-sized lumps of coal so that the

Mariners International Center (SCI) Export and Calcutta Streets Port Newark, N.J. El ter provis

Seamen's Church Institute

State and Pearl Streets

Manhattan

barrows had to be wheeled along narrow planks placed in position across the steel decking. This was called "being on the long run."

After changing watches, the first task following "burning down" was to dispose of the raked-out ashes and clinker fragments which littered the deck. Short-handled hammers were used to break them up, then the barrows would be filled and their contents emptied into the "blower."

The blower was an open metal receptacle to one side of the stokehold into which was tipped the broken-up debris. From it a connecting pipe led to the side of the ship and by way of this pipe water pressure forced or blew the waste material into the sea. This procedure was known as "shooting the ashes."

During the First World War U-boat commanders sometimes took advantage of this procedure to stalk their prey and attack—often 'round about four o'clock in the afternoon when they were also helped by the early evening light. With some furnaces not at full blast, engines would be unable to increase speed at short notice and so the ship was handicapped and became easier to overtake.

While the trimmers were shooting the ashes, the firemen would also be busy. First, the burned down furnace was fed with a "pitch" of small coal about a dozen shovelsful. This was known as "coaling the bars" and gradually the fire was worked up to full capacity.

For the purpose of gripping shovel handles or hot steel implements, a handrag was used to prevent burns. This consisted of a small square piece of canvas — or carpet, if this could be procured from the catering department and which was grasped in the left hand.

Meanwhile, other firemen would be stoking up. First, the draught lever had to be pushed over before opening the furnace door. If this were not done, a searing flame was liable to shoot out across the stokehold. A pitch of coal would then be thrown on each fire and the door slammed tight.

This stoking up demanded a fair degree of precision because the furnace opening was only just wider than the shovel, or "banjo" as it was called. If the banjo's edge struck the rim of the aperture it could cause a painful jar to arm or shoulder, besides spilling the coal.

The coal was allowed to burn for a while; then it was time for the "rake" to be used. This was a ten-foot-long steel implement, similar in appearance to a garden hoe, and with it the spread of coal was levelled off.

After another short spell the "slice" was brought into action. This heavy steel poker—weight about forty pounds —was driven under the burning coal, which was thus lifted several times to allow the air to assist combustion. The point of the slice was forced upward, usually by leaping up and bearing down on the handle with the stomach muscles, a strenuous task which could become very tiring toward the end of a fourhour stint.

The temperature down below, especially in the tropics, could rise to anything between 120 and 140 degrees Fahrenheit.

A few men were overcome sometimes by heat exhaustion but they soon recovered after a short spell on deck. Burns were unavoidable at times — the affected skin area would then be smeared with a liberal application of black tartaric acid ointment. Thick leather boots and an old pair of trousers were mostly worn in the stokehold, but the trimmers in the bunkers sometimes wore boots and nothing more.

The multi-purpose sweat-rag was always tied loosely round the neck, and was in constant use for wiping perspiration from the face and eyes and for clearing lips and nostrils from a clogging, sticky accumulation of sweat and coal dust.

On the whole, food was fair and adequate, though complaints were common during a protracted voyage. In passen-(Continued on page 7)



The annual Maritime Day was observed in noontime ceremonies in Battery Park of Manhattan with a parade, review and precision drill by contingents from Kings Point and Fort Schuyler merchant marine academies. Admiral Chester R. Bender, Commandant of the U. S. Coast Guard, gave the address of the day. The Rev. Dr. John M. Mulligan, Institute director, gave the invocation and benediction in his capacity as the Protestant Chaplain of the Port of New York. Admiral John M. Will was master of ceremonies.

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The Case of

Some of the Caroline crewmen in front of SCI building. Institute staff with group are: Peter Van Wygerden (extreme left, rear) and John Shea (third from right, rear), SCI station wagon transported men about city.



The Institute, during its long history, has participated in many rescues of seamen from difficult situations through its shore-based facilities whether from Manhattan, Brooklyn or Port Newark bases. And in these cases, "rescue" is probably an inadequate word.

One of SCI's memorable rescues occurred three years ago when the *Indonesian Star*, under Panamanian registry, became harbor-bound for several months off Staten Island. Its crew of 27 Korean nationals became the pawns and victims of a court order attached to the ship because of claims against the owners by creditors.

The crew underwent deprivations and hardships because their wages were not paid and tried to make-do on the "dead" ship without water, food and the other amenities.

It was the staff of the Institute which pitched in to enlist help and aid from community sources as well as giving generously from its own resources so that the despairing crewmen were eventually repatriated to their homeland.

Now, as this is written, history appears to be repeating itself. The locale is the same: Staten Island. The ship, this time, a motor vessel *Caroline*, under Cypriot flag and owned by the Fos Shipping Co. of London and Cyprus. Again, like the *Indonesian Star*, the *Caroline* is under a writ of attachment because of a chartering dispute and thus cannot leave port.

The crew, made up originally of 27 men, now comprises 24 men from the Dominican Republic, Nicaragua, Colombia, Monaco, France, Greece, Portugal and Spain; the consulates of each country — with some exceptions contending they are unable to help their nationals because of the complexities of maritime laws. The seamen are unpaid and were trying to survive and live on the dead *Caroline* until the Institute staff learned of the case and went into action.

The Black Gang

ger ships the black gang fared somewhat better than their mates in cargo vessels and tramp steamers. Large trays of unconsumed food left over from the first-class saloon dinner would be collected from the galley every evening by the firemen's "Peggy."

There was no ice chest for general use, and butter became a liquid mess. Tinned condensed milk and poor quality jam were issued at regular intervals. Haricot beans, dried peas and lumpy tapioca pudding, all indifferently cooked, were favorite dishes. Maritime regulations enforced a twice-weekly issue of a stodgy plum pudding which was called Board of Trade duff.

Cockroaches abounded in the food lockers, and fresh vegetables were rarely seen. Potatoes were stored in openair lockers, usually on the poop deck for coolness, but more often than not the heat reduced them to a pulpy, tasteless mess.

Crew accommodation was always for'ard under the fo'c's'le head, the firemen and trimmers usually on the port side and the seamen to starboard. One large compartment housed most of the black gang, a long fixed table and wooden forms running down between the two-tier bunks. A number of metal lock-

(Continued from page 4)

ers for clothing and working gear were situated alongside another bulkhead.

In rough weather the quarters were often flooded out and sea water mixed with coal dust would swill about on deck below the lower bunks. Lifelines were sometimes rigged along the main deck to enable the men to reach the engine room in safety. Since all portholes were screwed up tight, an unpleasant stale body atmosphere pervaded all enclosed parts of the ship.

Not all parts of the crew quarters were wired for electricity, so candles stuck in the tops of empty beer bottles were not an uncommon means of light. Washing was done in the fo'c's'le washhouse, and just before the end of each watch a trimmer would come up and fill several buckets with hot fresh water. Sweat-rags would be used as flannels, and then wrung out and used for drying off.

Oil has now superseded coal, as coal superseded sail and as, one day perhaps, atomic power will supersede oil. The black gang, I hope, have gone for good, but they should not be forgotten, for they really earned their wages by the sweat of their brow as they fired, raked, sliced and trundled their barrows in the stokeholds of yesterday.

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The Case of the Caroline (Continued from page 6)

The Institute is hard at work attempting to untangle the red tape and alleviate the miserable status of the mariners. It is providing money with which to feed the men, coordinating volunteer offers of aid, providing shelter, showers, laundry service, transportation about the city, individual and group counseling and, in short, doing everything within its power to see that the seamen's rights are protected and they are made comfortable.

The crewmen were invited to attend the regular evening dances at the Institute's Seamen's International Club. On one of these occasions a Korean ship captain who happened to be present arose to his feet and recounted for his audience the generous aid given the crew of the Korean-crewed *Indonesian Star* during the summer of 1968 and drew a parallel between the cases of the two distressed sets of crewmen from the two ships.

The final outcome of the *Caroline* case is unpredictable, informed observers say. Meanwhile SCI staff is working vigorously under the direction of Dr. John M. Mulligan, Institute director, to repatriate the crew.

The Most Remarkable Woman of the Sea



Patten Hospital on the grounds of the U. S. Merchant Marine Academy, Kings Point, L. I., New York, named in honor of Mary Patten, "the most remarkable woman of the sea."

Mary Ann Brown was the pretty, petite sixteen-year-old daughter of Mr. and Mrs. George Brown of Boston, Massachusetts, when she married Captain Joshua Adams Patten, twenty-six years of age, on April 1, 1853.

Captain Patten, a very able mariner from Rockland, Maine, assumed command of the first and only clipper ship built in Virginia, *Neptune's Car*, in the fall of 1854, a year and a half after his marriage to the charming young Bostonian.

It was not unusual in those days for the Master of a clipper ship to take his wife on a voyage, but what was unusual is the fact that when Mrs. Patten boarded the vessel she proceeded to study navigation and acquaint herself with the 1,616-ton *Neptune's Car* that was 216 feet long, 40 feet in beam and 23¹/₂ feet from deck to keel. Mrs. Patten made her first voyage with her husband to San Francisco, China, London and back to New York. All went well on that voyage for the sea-going couple with the ship coming very close to setting new records. Captain Patten's next voyage was to San Francisco and his pretty young wife was aboard for the trip, but this one proved disastrous for the man from Maine.

Like all clipper ship Masters of the time, Captain Patten wanted to reach port ahead of other ships; namely, *Romance of the Seas* and *Intrepid*. Both vessels had left New York about the same time as *Neptune's Car*.

Captain Patten's troubles started when he found his First Mate slept half his watch time on the quarterdeck, keeping *Neptune's Car* under reefed sails during this period.

Warning after warning went unheeded until the Mate was removed from his duties. Taking on the First Mate's duties as well as his own caused the ship's Master to come down with fatigue.

After passing through the straits of LeMaire, around the Horn, brain fever struck Captain Patten.

Mary Patten, now pregnant, started to do double duty herself, as a nurse and a navigator. The Second Officer, who had been moved to the First Mate's position, totally lacked a comprehension of navigation so Mrs. Patten took observations, worked up the reckoning by chronometer, laid the ship's courses and performed most of the functions of a captain.

Further trouble aboard developed when the removed First Mate tried to stir up the crew to mutiny against Mrs. Patten.

Learning of the plot against her, she called upon the other officers and members of the crew to support her in her hour of trial. This, to a man, they did!

Other troubles plagued the plucky girl. The ship battled strong westerly gales for 18 days, was becalmed, then ran into strong, northeasterly winds. Meanwhile her husband's health steadily declined.

Off the coast of Valparaiso, Captain Patten suffered a relapse and blindness overcame the young Master. Mrs. Patten, now deeply fearful of her husband's life and safety of the ship, slept but little, and did not undress for fifty days.

After a voyage of 120 days, San Francisco was reached. *Neptune's Car* beat the *Intrepid* into port by eleven days but Mary Patten's ship was twenty-two days behind the *Romance of the Seas*.

In a letter to the Committee of New York Insurance Officers, thanking them for a check of a thousand dollars, Mrs. Patten wrote in part, "I have endeavored to perform only the plain duty of a wife towards a good husband, stricken down by what we now fear to be a hopeless disease."

The Daily News, London, reported the following: "One day in February of the year 1857 the people of New York observed a litter, evidently containing a sick person, carried up from the shipping to the Battery Hotel. Beside the litter walked a young creature who, but for her careworn countenance and her being near confinement, might have been taken for a little school girl. Her story soon became known and it presently reached all hearts."

Records in the State House at Boston show that a boy, Joshua Adams Patten, was born on March 10, 1857. Captain Patten, with deafness added to his other afflictions, died at the hospital for the insane, Somerville, Massachusetts, without ever having seen his baby boy.

At the age of 24, Mary Patten died of tuberculosis in Boston on March 17, 1861.

In all of America, there is but one tangible tribute to "Mrs. Captain Patten, skipper of *Neptune's Car.*" It stands on the grounds of the United States Merchant Marine Academy at Kings Point, New York, and is known as Patten Hospital, in memory of this "Florence Nightingale of the Sea."

Rear Admiral R. R. McNulty, former superintendent of the Academy, who named the buildings at Kings Point, said, "While discussing a name for the new hospital at Kings Point in 1942 with my wife, she expressed the view that there should be at least one 'female of the sea' and that the hospital would be a most appropriate place for it.

"Mrs. McNulty had read Rear Admiral Samuel Morrison's Maritime History of Massachusetts and pointed out that Sam had written 'Mrs. Captain Patten (skipper) of Neptune's Car was the most remarkable woman of the sea,' — and so — I named the hospital as Sue Alice, my wife, desired. I am very glad I agreed with her."

SCI's Port Newark Mariner's Center Host to International Sports Event

The Scandinavian countries have, as is well known, been extensively engaged in the maritime for centuries past; and the welfare of Scandinavian seamen has come to be among the primary concerns of these governments.

Norway, among these nations, has a world-wide organization known as the Norwegian Government Seamen's Service. Each Norse seaman is assessed fifteen cents a day for the Service, the ship operator contributes on the same basis — and there are other money sources of grants, so that around seventy-five cents a day per seaman accrues for the operation of the Service.

With this money the Norwegian government maintains many recreational seamen's clubs in ports throughout the world; provides home-town newspapers to its ships (wherever they are) within two days of publication; distributes the latest movie films to its ships at sea or in port; coordinates a seamen's athletic program of world-wide scope for mariners of all nations. There are other features not described here.

Groups of the Norwegian Government's Service officials travel continually throughout world ports conducting — year-round — a program of standardized competitive athletic events between the crews of ships which happen to be in port at the time of the visit.

(Continued on page 12)

Chaplain G. B. Hollas (left), manager of the Center, observes the sports events with other spectators.





Norwegian Government Seamen's Service officials (woman is a member of the Service staff) confer on the data-keeping. Man at right is a holder of several Olympic skating records.









This competitor is not leaping over a railroad boxcar à la Superman. It just looks that way. He is a high-jump contestant attempting to clear the bar.



A ship's captain, wife and child enjoy the Center's hospitality.

(Continued from page 10)

The events include 60-meter and 100meter dashes, shot-put, high jump, long jump and a relay race when appropriate facilities exist. Precise records are kept and awards are given periodically to both individuals and ships which excel.

For a week in mid-May the athletic field of the Institute's Port Newark Mariner's Center was the scene of athletic competitions between ships of various nations and conducted by the Norwegian officials.

This special week (Seamen's International Sports Week) was co-sponsored by Seamen's House YMCA, American Seamen's Friend Society, Associated Seamen's Agencies and Seamen's Church Institute of New York.

The competitors at the May event represented such diverse countries as Sweden, Norway, Finland, Liberia, Great Britain, Rumania, Chile, Korea, Israel, Japan, Denmark, and Greece.

At least one woman from the crew of a Finnish ship insisted on competing on even terms with the men in all events. A stocky, somewhat rotund woman, she ran and jumped with as much verve and abandon as her much younger male compatriots.

She is fifty-seven years old, she said at the time!



Socker Wave by George R. Berens

On April 16, 1966, the big white Italian passenger liner moved slowly up New York Harbor. It was soon noticed that her green, white and red flag was at half mast and that the forward part of her superstructure was covered with huge tarpaulins. Not many hours after docking, her name made the headlines.

Some fifteen-hundred miles eastward of New York the *Michelangelo* had encountered a fierce storm with winds of fifty knots, and seas averaging thirty feet in height. Her captain, a veteran of over forty years of sea service, had slowed her down to about half speed, and had altered course to take the seas on the starboard bow which had been found to be the best way for her to ride out the storm. Such procedure was standard practice in powered ships.

On the morning of the fourth day before arriving in New York the Michelangelo had been struck by a huge wave nearly twice as high as the average storm waves she had been ploughing into. Estimated as between fifty and sixty feet high, this wave crumpled the bulwarks at the bow, inundated the foredeck, and smashed with terrific force into the forward superstructure. The half-inch steel plating just below the bridge was smashed in. Twenty passenger staterooms located there were demolished. The sea flooded the area beyond them. Three persons were killed, and a number injured.

As this phenomenal sea struck the bridge the captain and all his staff there were thrown off their feet. Five heavy plate-glass windows were smashed, and one officer was badly cut by the flying glass. That is why the ship arrived in New York two days late with a huge hole in her steel housing some



seventy feet above the waterline. And this was a ship of 46,000 gross tons, only a year old, built to the latest standards.

There are numerous other cases on record of ships smashed, and sometimes left foundering by these king-sized waves variously termed "freak seas," "killer waves," or, as named by Sir Francis Chichester when his worldgirdling Gypsy Moth IV was knocked flat by one in the Tasman Sea, "socker wave"!

For many years a misleading term has been applied to these destructive waves — "tidal waves." Many of the gigantic, seething walls of water encountered by ships at sea actually have nothing to do with the tides. Ocean waves are mainly caused by the wind, and the stronger the wind, the longer it blows over an ocean area the larger the waves will be.

Scientists tell us that wind waves can grow no higher than fifty feet high, for when they reach that height their own weight and roaring energy topples them over, and the wind tends to sweep their crests off.

The explanation, then, for these socker waves — the largest ever reliably measured was 112 feet high — is that they are formed in the open ocean by the meeting of waves from two or more storm areas. The waves, moving in different directions, are super-imposed on each other, and, depending upon the angle at which they meet, may produce a wave, or set of waves of greatly increased height and energy. Such conditions are often encountered in stormlashed areas.

For many years marine scientists were inclined to scoff at mariners' reports of gigantic waves, classing them as exaggerations. But with the increase in recent years of observations of sea phenomenon from well-equipped oceanographic vessels it has been proved that socker waves of great size and immense power are no figments of the imagination of a storm-harassed shipmaster.

Besides these super waves produced by the wind in storm conditions, there are oversized waves initiated by tidal movements — real tidal waves. These occur in places where the range of tide is great, and where the tidal flow is forced into constricted, or obstructed locations, mainly in the deltas of large rivers.

When a tidal wave enters a river it is known as a 'bore.' The Amazon, the Hoogly, and the Tsientang Rivers are noted for their bores that often create much havoc among craft on the rivers, and habitations on its banks.

On his second voyage to the New World in 1493, Columbus' ships were in jeopardy twice in the waters near Trinidad. Of one occasion Columbus wrote: "I saw the sea rise up in the form of a gigantic swell as high as the ship, and roll slowly down on us. The crest of the wave produced a furious roaring noise; even today I can still feel my body tremble with fright."

This tidal wave was encountered in the narrow southern passage between the island of Trinidad and the mainland of Venezuela. Eight days later, running through the narrow northern channel between the island and the mainland, his ships were again battered by a tidal wave. They escaped destruction, but the size and power of these waves may be judged from Columbus' statement, for it would have taken something appalling to make such an intrepid and experienced mariner "tremble with fright."

There is yet another type of socker wave sometimes encountered at sea, one that has caused more destruction and loss of life on shore than on the open ocean. This is the giant wave engendered by undersea earthquakes. It is known today by its Japanese name 'tsunamis' probably because such seismic waves caused more death and destruction than ever before recorded when they struck the Japanese coast in 1896. The largest seismic wave on record is that resulting from the earthquake near Krakatoa, in Sunda Strait, in 1883 — 135 feet from trough to crest.

I have a first-hand account of an encounter with a seismic wave at sea, furnished by Mr. Brian Sutcliffe. In 1962 he was a crew member of the *La Estancia*, of London, a large, new bulk-carrier.

The *La Estancia*, loaded with maize, had sailed from Cape Town at the end of January, 1962, bound for Singapore. It was near midnight on the fourth day out that the officer on watch was surprised to see a long white line along the horizon. It was a calm night, the clear sky showing only a few scattered cumulus clouds, and the ship heaved easily into a low swell; a peaceful night in the Indian Ocean.

What then could be this clearly visi-

ble white streak far ahead? The captain was called, and by the time it was realized that it was probably a "tidal wave" — or, more technically, a tsunami — it was too late to take any action before it struck.

The ensuing moments were terrifying. Suddenly the ship took a terrific lurch, and rolled to starboard. Quickly she righted, then the bow started to climb skyward as the men on the bridge stared aghast at the towering, whitecrested wave that rushed toward them.

She met it with a crushing impact, and the foam-streaked top of the wall of water poured over the foredeck and rushed aft. Then the ship plunged down the reverse slope keeping over to port at a crazy angle at the same time. With an awful shock that left her trembling, the airborne bows crashed back into the sea as she came upright again, inundated with swirling water.

It being a calm, hot night, all the airports and doors in the quarters were open, as were the engine room skylights. Frothing sea water rushed through these openings, flooding the interior. Off-duty men sleeping in their cabins had been thrown out of their bunks, and were gasping as the sea sloshed over them. All loose gear was thrown adrift; crockery, and pots and pans crashed in the galley and messrooms. A hundred tons of water cascaded into the engine room through the open skylights four decks up from the main deck.

La Estancia escaped serious damage. She was pumped out, but it took several days to dry out the interior and put things shipshape again as she plunged on to Singapore.

"The ship was big and new, and well loaded," said Mr. Sutcliffe, "but under the very same conditions with a smaller or older ship, and perhaps a shift of cargo, another 'lost without trace'? Yes, many ships have disappeared at sea with all hands. Some of them, no doubt, due to the smashing destruction of socker waves.

SEAMAN EXTRAORDINARY

by Alan Major

sailed single-handed around the world. They have sometimes had the advantage of being financially supported by various organizations and commercial firms and have taken the latest modern aids to help them succeed.

The first man to sail solo around the world had neither. He was an American, 51-year-old Joshua Slocum, a retired ex-sea captain. In 1895 he set sail from Boston to sail his 37-foot sloop. Spray, to attempt a solo voyage around the world.

Reading his account of the trip today still gives an air of a boy's adventure yarn, full of dangers and excitements. While sailing through the Mediterranean making for Suez he was pursued by North African pirates. Slocum had as much sail on as he dared, without bringing down the mast. The strong wind blowing brought the pirates continually closer in their faster felucca. a small coasting vessel, three-masted with lateen sails.

The baldheaded, bearded, sharp-eved Slocum, however, was determined to defend his craft to the last, hand-to-hand fighting if need be. Things looked even blacker as the wind got stronger and Slocum had to take in some sail.

But the pirates made the mistake of not doing so. As the pirates speeded towards the Spray a wave hit their felucca which caused the wind to slam her sails and dismast her. This halted the felucca and allowed Slocum to escape.

Off the South American coast one dark night a group of Fuegian Indians out for what they could plunder boarded the Spray — and got more than they bargained for. One of Slocum's seaman

In recent years a number of men have friends had advised him to carry on board a bag of carpet tacks. The friend had advised Slocum to scatter some of them on the deck at night when in certain piratical waters. But to remember not to go out on deck barefoot himself.

> The idea worked. On this particular dark night the Fuegian Indians' bare feet soon trod on the sharp pointed nails and they began to jump about in pained confusion. The more they leaped in the air the harder the nails punctured the soles of their feet. Their shouts awoke Slocum who helped them on their way, fleeing over the side of the Spray, with some shots from his rifle.

> Slocum navigated by the stars at night and used the experience of his seafaring years and intuition. coupled with the sun's course, by day. Sometimes he let the trade winds carry his sloop along after lashing the helm. To pass the time when he was not involved with the task of sailing the vessel or keeping his log, he read the books of Robert Louis Stevenson, the British novelist who had gone to live on Samoa in the South Seas. He also used to carry on conversations by talking to the birds that flew over, or the fish he saw in the sea's surface.

> Many of today's round-the-world voyagers arrived home to a tumultuous welcome. But in 1898 when old Captain Joshua Slocum arrived back, after surviving a tornado and having logged over 46,000 miles, little notice was taken of his epic voyage. Slocum quietly sailed into the Massachusetts shore, moored the Spray and went home. After three years he set foot again on dry land, having experienced the satisfaction of achieving his life's ambition.

THE **SWORDFISH**

by Dane John

Each year. here in the United States, 25-million pounds of swordfish have been eaten by sea-food lovers, most of this fish caught in the western Atlantic Ocean.

The fish gets its name from the flat, elongated, pointed, bony upper jaw or "sword." In color the swordfish, related to the mackerel, is bluish-black above the silvery-white underneath, the body being covered with very small scales and bearing spiny fins.

The fins are placed more forward on its streamlined body than in most other types of fish. These fins and the body shape enable the swordfish to turn itself in very tight circles when pursuing its prey, such as haddock, herring, whiting and other marine creatures.

It attacks a shoal of herring by swimming into them and using its jaw "sword" as a weapon, jerking its head to the right and left and striking at the fish. In this way it inflicts wounds on some of the herring, disabling them so the swordfish can devour them.

Unlike other fierce, predatory fish, such as sharks, the swordfish does not have any teeth, so it cannot crush its prey and instead has to swallow them whole. Swordfish measure from twelve to twenty feet in length, of which about one-fifth of this comprises the long jaw or "sword." A fifteen-foot fish would normally have a sword three feet long and three inches in diameter at its base. Swordfish have been claimed to at-

tack and kill small whales. They do occasionally attack small wooden fishing vessels and rowing boats. This they do by swimming at a tremendous speed to ram the boat's side so that the "sword" is forced through the boat's timbers and embedded so deeply that the fish is trapped because it cannot withdraw the "sword."



It can only escape if it manages to jerk violently enough to break off the "sword" and swim away. The British Museum. London, has a two-inch-thick plank of a whale boat with a portion of the broken "sword" of a swordfish still fixed firmly in position.

This large fish lives in the Atlantic Ocean and Mediterranean, spawning in spring and early summer. Much of the early life of the swordfish is a mystery; young fish have been captured in the open Atlantic between 20° and 39° North Latitude, but whether these are from eggs laid in the Atlantic or fish migrating from the Mediterranean is unknown.

Sometimes the swordfish swims close to the surface in a rapid, darting movement with the broad dorsal fin in front and upper half of the sickle-shaped tail fin showing above the water and appearing as if the latter is chasing the dorsal fin.

It is also caught by fishermen in the Mediterranean where it is considered a delicacy, but when one is hauled aboard, fishermen are careful to keep out of the way of its lashing sword and twisting body until it is dead.

A Salute to Our Neighbors

Fifth in a series of brief articles on some of the organizations and institutions established in Lower Manhattan very early in its history, all of them nearby to Seamen's Church Institute of New York.

UNITED STATES ASSAY OFFICE

The first U. S. Assay Office in New York was established in 1854 at 32 Wall Street in a building erected for the New York branch of the Bank of the United States.

Initially, the Assay Office occupied only the upper floor and rented the lower floor to private bankers. Beginning in 1873 and until 1912, the Assay Office occupied the entire building together with a new building constructed directly in the rear at 23 Pine.

Then, in 1912, the building was vacated for demolition so that a new Assay Office could be built on the same site.

(The facade of the old building was carefully removed and has been preserved in the Metropolitan Museum of Art in New York as an excellent example of Colonial architecture.)

It was not, however, until after a series of delays that the new building was finally occupied, on March 3, 1921. The final delay was caused by the mysterious Wall Street explosion which occurred on September 16, 1920. The explosion occurred at midday, almost directly in front of the entrance to the



United States Assay Office

new building, which was just about to be occupied.

Considerable damage was done to both exterior and interior of the building. Fortunately, no lives were lost in the building although hundreds of people in the streets were killed or injured.

In September of 1932 the Assay Office moved to its present site at Old Slip and South Street on the East River waterfront. It occupies a five story steel and concrete building faced with granite and its granite-faced smokestack rises 160 feet above the roof. It covers an area of about 195 by 142 feet about three times that occupied by the Wall Street site.

The building itself is constructed, guarded and operated like a fortress which must be since it contains billions in gold (and some silver, platinum, etc.) bars at all times.

Security is intense. Armed guards all

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Facade of the American Wing of the Metropolitan Museum of Art; it was originally the facade of the old Assay Office at 15 Wall Street and dismantled, stone by stone, and reassembled at the new site.

about, around the clock. No one, employees included, may leave the building without being searched — by electronic devices which can reveal any metal on a person.

Workers engaged in handling the bars, or engaged in the melting and refining process, must not ever leave the premises in their work clothing which, when having become too worn for further use, is burned, the minute traces of gold and silver in the clothing fibers recovered chemically.

This category of workers must shower at the end of the work shift; precious metals are recovered from the used shower water.

Fundamentally, the Assay Office operates to produce gold and silver of extreme purity from the impure smeltered metals shipped to it from the various smelters in the country.

The impure metals are cast into silver anodes suspended in a solution containing nitric acid. A d. c. electrical current flows through the system producing refined silver.

The unattacked metals are cast into

gold anodes and suspended in a solution containing hydrochloric acid. A d. c. current flows through the system producing refined gold.

The metals are subsequently melted and cast into bars, each bar weighed by extremely accurate and precision scales, the weight stamped on each bar together with the Great Seal of the United States, facetiously termed the "goose" by Assay Office workers.

This description of the procedures followed is a greatly-simplified explanation and there are many more steps not described here.

The bars are stored in subterranean vaults on the premises pending their shipment to federal depositories such as Fort Knox. Silver bars are stored in the depository on the West Point Military Reservation and elsewhere in the country.

Those concerned with the quality of the air in Manhattan should know that devices in the Assay Office smokestack arrest the venting of unhealthy fumes and precious metal compounds and particles as well.

18

Seamen's Church Institute of N. Y. 15 State Street New York, N. Y. 10004

Address Correction Requested

ENIGMA

From scurrying along the low sea wall, Mr. Ching, Siamese cat, stops, and sits in silence, motionless. except for microscopic moving of his brown tail (tuned to secret cadences, no doubt) and for gentle stirrings where breeze lays back his fur. He stares, fawn-cream body arched. dark head hunched low. but ears lifted, antennae to catch the crack of breakers . . . Drenched with damp and scent of sea-spray, he probes, with glassine eyes, the tranquil blue of sea and sky and the turmoil on shore where breakers pounce with a staccato clack, scatter sand, and send helpless sea shells floundering. With all six senses, does he mediate the world's immensity? contemplate reality? Or is he still like man, half-taught, unwhole, unfree? Does he only ponder the propriety of pouncing on the sea?

IMAGE

The ocean chews the water And the wind wraps each wave like arms around a woman, Sliding deftly under the surface Carrying with it tides of strong emotion and also like a woman causing deep commotion! - Dorothy Mitchell Bechhold

- Emily Sargent Councilman

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