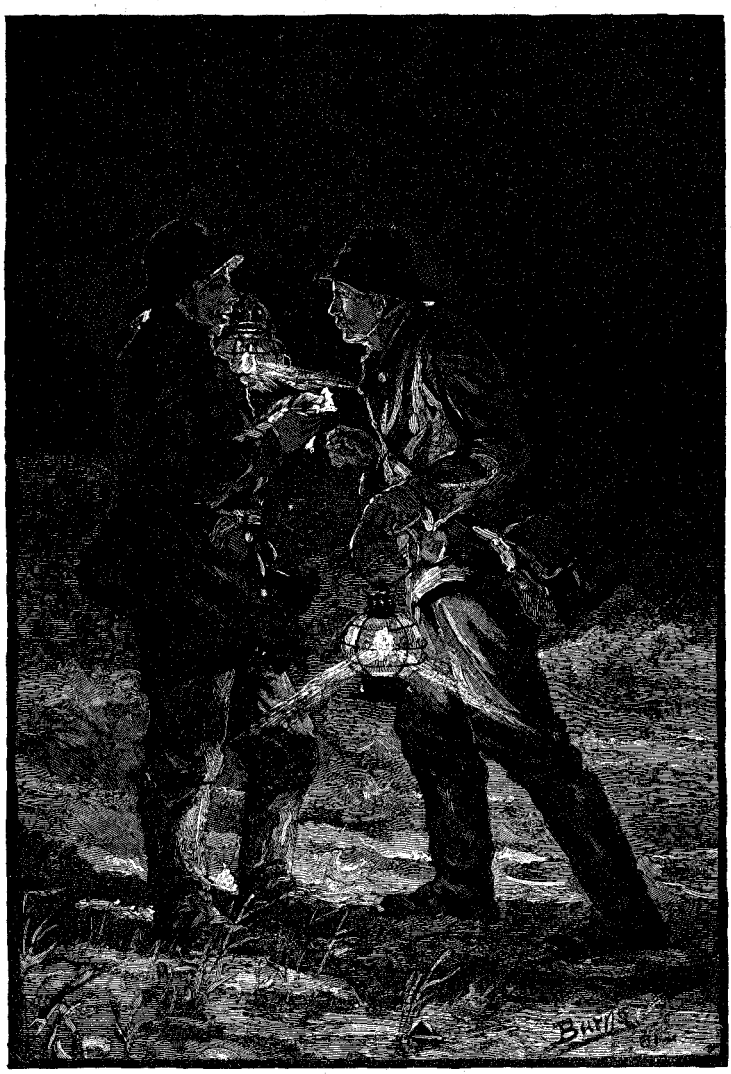


PATROLMEN EXCHANGING CHECKS.

THE AMERICAN LIFE-SAVING SERVICE.

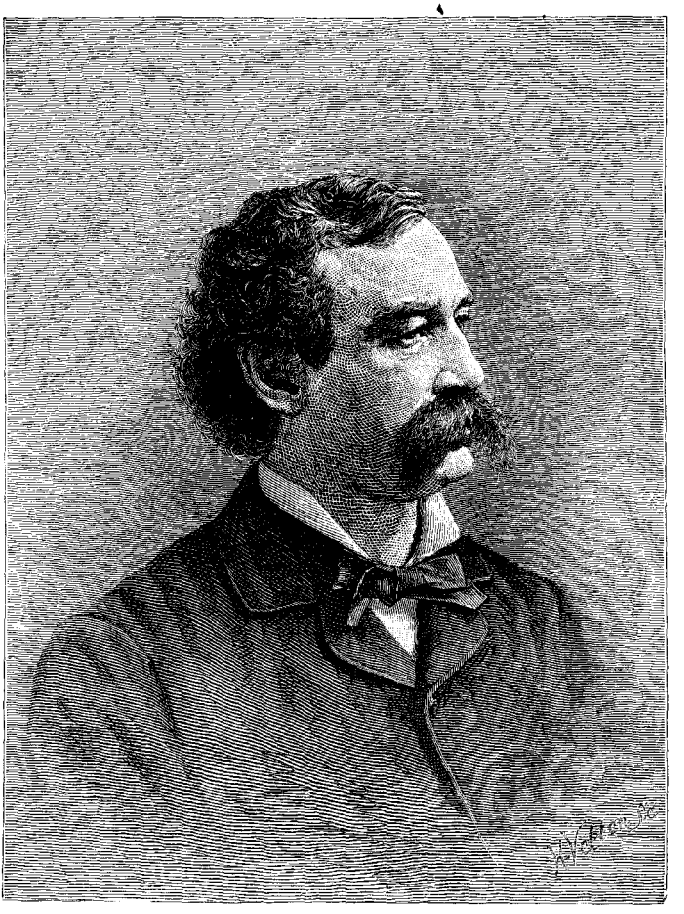
NO subject at the present moment is more replete with vital and romantic interest at home and abroad than that of the American Life-saving Service. Its brief history teems with incident and instruction. Its wonderful achievements have given it wide celebrity the world over, and foreign journals are advocating the adoption of its methods in European countries. While the operations of the Coast Survey and Light-house Board have greatly diminished the hazards of ocean travel, those who go out in ships are painfully aware that the elements are beyond human control, and that the bewildering dangers of night tempests confound the most careful reckoning.

The coasts of the United States are more extended than those of any other maritime country on the globe, and are fraught with peculiar dangers to navigators. Unlike the coasts of Great Britain, which are thickly populated, the coasts of the United States where wrecks most

frequently occur—notably those of Massachusetts, Long Island, New Jersey, and North Carolina—are desolate and far removed from human habitations. Notwithstanding the magnitude of the undertaking, our young nation has been foremost among the nations of the earth to establish a branch of government for the specific purpose of rescuing the shipwrecked along her borders. All life-saving institutions elsewhere are supported by voluntary contributions. The subject has attracted more or less attention ever since the times of antiquity. In China, centuries ago, was organized the first humane society for the salvage of human life from the perils of the sea; in civilized Europe, however, no regular system for rewarding the life-saver, or any published directions for the instant treatment of the partially drowned, existed prior to the establishment of the Royal Humane Society in Great Britain in 1774. Ten years later the first life-boat was invented by Lionel Lukin, a coach-builder in Long Acre, London, and tried on the Thames under the auspices of the Prince of Wales, afterward George IV., but it was not brought into use; and in 1789 another was constructed by Henry Greathead, a boat-builder, which performed no special service until 1791, when it saved the crew of a Sunderland brig wrecked at the entrance of the Tyne. In the course of the next dozen years thirty or more life-boats were constructed, and when two hundred persons had been rescued from death through their means at the mouth of the Tyne alone, Parliament voted twelve hundred pounds to the inventor. But the work languished until 1823, when a stirring appeal to the English public from Sir William Hillary, Bart., who, while residing on the Isle of Man, had witnessed some of the harrowing scenes attending the loss of vessels and their crews, struck a sympathetic chord in many hearts, and resulted in the formation of the "Royal National Institution for the Preservation of Life from Shipwreck," which included in its active membership scions of the nobility, gentry, and merchants of the kingdom. Algernon, Duke of Northumberland, became its president in 1851, and threw his whole heart into the work. At his death, in 1866, the office was filled by the present Duke of Northumberland. At this time three large and liberally supported branches of British life-saving effort extend succor to the shipwrecked upon the shores of the British Isles, and within the half-century have saved upward of twenty-five thousand lives. In France, Germany, Austria, Italy, and Turkey are similar organizations. In Russia a "Society for Assistance at Shipwreck" was formed, in imitation of that of Great Britain, a few years since, under the patronage of one member of the imperial family. And in Norway, Portugal, and some other foreign countries the humane work has progressed to a moderate extent.

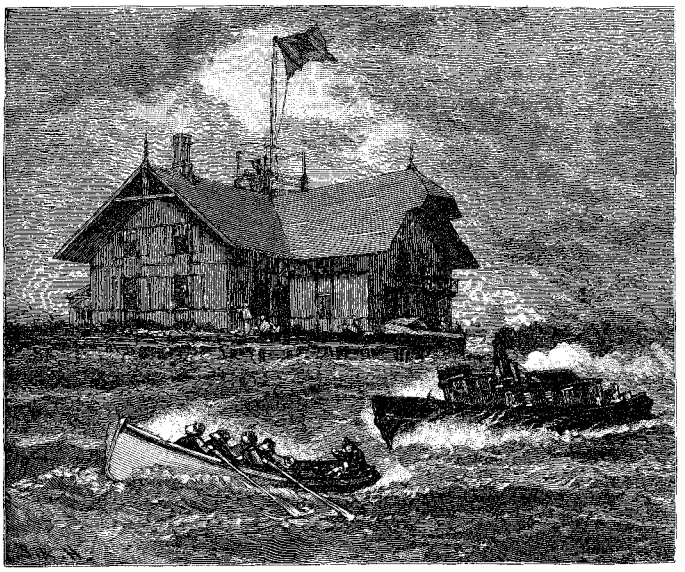
The American Life-saving Service under its present elaborate system of relief is ten years old. Its development covers nearly a century. The initiatory movement was the organization by a few benevolent persons of the Massachusetts Humane Society in 1786. In attempting to alleviate the miseries of shipwreck on the Massachusetts coast, small huts were built; and in 1807 the first life-boat station was established at Cohasset. The Society depended upon voluntary crews, but so much was accomplished of value that some pecuniary aid was received, as time wore on, from both State and general governments. The magnificent work of the Coast Survey, begun in earnest in 1832, absorbed the resources of Congress for a decade and a half, during which period nothing was attempted in the way of life-saving except through voluntary societies. A few public vessels were, indeed, authorized in 1837 to cruise near the coast for the assistance of shipping in distress, but it was through the movement in aid of commerce, which extended to the light-house system. In 1847, five thousand dollars were appropriated by Congress toward furnishing light-houses on the Atlantic with the facilities for aiding shipwrecked mariners. The money, after remaining in the Treasury two years unused, was permitted to be expended by the Massachusetts society upon Cape Cod. In the summer of 1848, the Hon. William A. Newell, then a member of the House of Representatives from New Jersey, incited by some terrible shipwrecks on the coast of that State, induced Congress, through his eloquence, to appropriate ten thousand dollars for providing surf-boats and other appliances "for the protection of life and property from shipwreck on the coast between Sandy Hook and Little Egg Harbor." During the next session a

still larger appropriation was obtained. Twenty-two station-houses were erected on the coasts of New Jersey and Long Island, and although no persons were paid or authorized to take charge of them, and they were manned by extemporized crews, their value in several cases of shipwreck was so great that Congress made further appropriations from year to year, and stations and life-boats gradually multiplied. Through the pressure of a shocking event in 1854—the loss of three hundred lives off the New Jersey coast—a local superintendent was employed, a keeper assigned to each station, and bonded custodians placed in charge of the life-boats, which had been repeatedly stolen; but the absence of drilled and disciplined crews, of general regulations, and of energetic central administration, rendered the record of the institution unsatisfactory, and its benefits checkered by the saddest failures.



SUMNER I. KIMBALL.

In the year 1871, Sumner I. Kimball succeeded to the head of the Revenue Marine Bureau of the Treasury Department, under the charge of which were the life-saving stations. He made it his first business to ascertain their condition. Captain John Faunce was detailed to make a tour of inspection, and was accompanied a portion of the way by Mr. Kimball himself. The buildings were found neglected and dilapidated, the apparatus rusty or broken, portable articles had been carried off, the salaried keepers were often living at a distance from their posts, some of them too old for service, and others incompetent, and the volunteer crews were in a quarrelsome temper with each other and with the coast population. Then commenced that vigorous prosecution of reform which has crowned the humane work with unprecedented success. Making the most of slender appropriations, and in the face of perpetual discouragements, this one man, the chief of a bureau, pushed on by philanthropic impulses and guided by unerring judgment, brought a complete and orderly system into effect. It was not the work of a day, nor of a year. It required patience, sagacity, and rare powers of organization and government. He knew no office hours, working day and night at what many were pleased to consider a hopeless task. In his brain originated the idea of guarding the entire coasts of the nation through the planting of a chain of fortresses to be garrisoned by disciplined conquerors of the sea. It is a mat-



LIFE-BOAT STATION ON LAKE MICHIGAN.

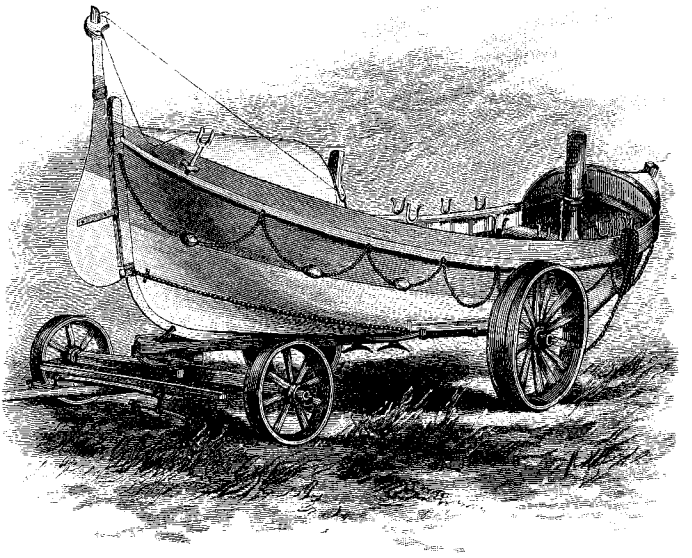
ter of public record, and generally known to the country, that through his practical devotion to the cause this has been so nearly accomplished.

In reorganizing what there was of the Service, he prepared a code of regulations for its absolute control. The duties of every man employed were minutely defined. The lazy, the careless, and the unworthy were dismissed, and men chosen to fill their places with sole reference to integrity and professional fitness. Politics was abolished. That is, experts in the surf were regarded as of more consequence to drowning victims than voters of any particular political ticket. The station-houses were repaired, and increased in numbers as fast as the means afforded by Congress would allow; the appliances for life-saving were restored, and improved from year to year through the best inventions and discoveries in this or any other country, and a rigid system of inspection and of patrol was inaugurated.

The steps by which the institution reached its present plane of usefulness would furnish an interesting chapter. The record of the first season on the New York and New Jersey coasts, where the new system first went into actual operation, showed that every person imperiled by shipwreck was saved. Consequently a commission, consisting of Mr. Kimball, Captain Faunce, and Captain J. H. Merryman, of the Revenue Marine, surveyed in 1873, by order of Congress, the vast and varied coasts of the oceans and lakes, investigating personally the characteristics of the dangerous localities, and holding consultations with underwriters, ship-owners, captains of vessels, and veteran surfmen. The report of this commission placed before Congress a minute account of the disasters to vessels on every mile of coast for the previous ten years; a bill based upon it, prepared by Mr. Kimball, became a law June 20, 1874. It provided for the extension of the field of this great national work of humanity; for the bestowal of medals of honor upon persons risking their lives to save others; and empowered the collection and tabulation of statistics of disaster to shipping, which, by reference to the periodicity of marine casualties, aided in determining the points most needing protection, and in various other ways benefited both government and maritime interests.

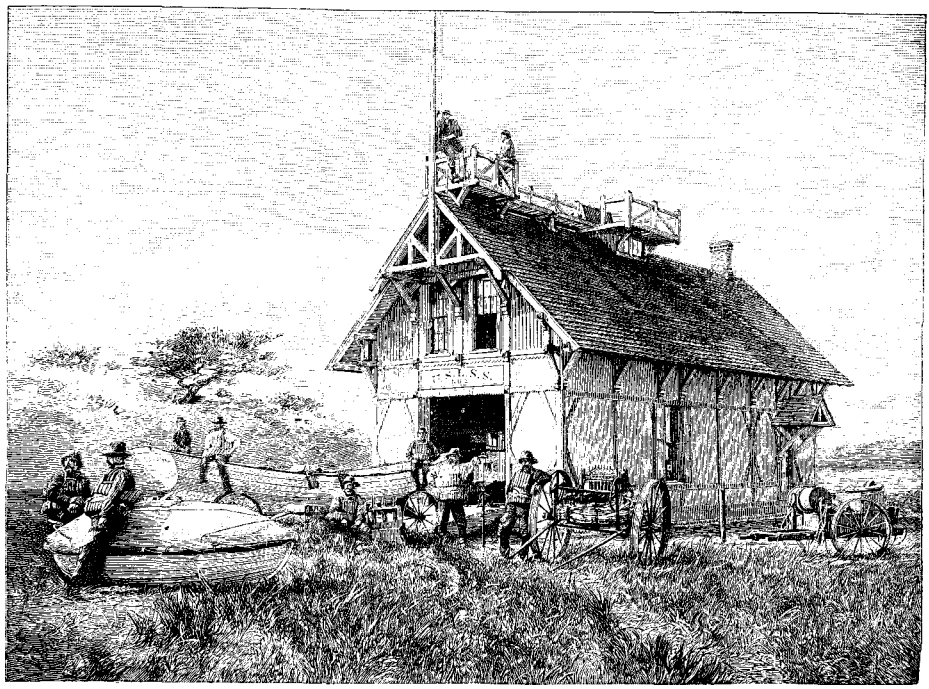
It is impossible to exaggerate the awful circumstances attending a shipwreck. The important machinery which human genius has contrived for saving life and property confided to the waves is hardly less remarkable than the courage and skill required to manage it successfully. A room has been set apart in the Treasury Building at Washington for a collection of models of all known life-saving appliances. This is free to the public, and is visited daily by crowds. The polite colored custodian answers all questions with sublime enthusiasm, and explains, when desired, the various merits and uses of the exhibits. Upon the wall hangs the India-rubber life-saving dress invented by Clark S. Merriman in 1852, which he tells you was introduced into our stations long before the exploits of Paul Boyton gave it celebrity, and that "it is impious to the air, and therefore

its wearer can neither drown nor freeze"; and adjusting the cork life-belt, designed by Rear-Admiral Ward in 1854, about his body to illustrate how perfectly the wearer has the free use of his limbs in any position, he says, "It possesses the life-saving property of three persons, the one by whom it is worn, and the two he assists in the water." Then, again, in forcible, if not always classic, Saxon, he describes the model of the wonderful English life-boat: "It is built upon the principles of sheer and gravitation. It will not upset; but if it does upset, it will right itself again immediately. It shoots into the maddening element with all the grace of a duck from the grassy lawn."



SELF-RIGHTING LIFE-BOAT.

The dangers to which the crew of a life-boat are exposed entitle those who encounter them to the greatest credit. The English life-boat is in general use upon our great lakes, where piers or steep shores command deep water, and upon the Pacific coast; but its heavy weight (from two to four tons) and draught render its use impracticable along the flat beaches of the Atlantic and Gulf coasts. Its self-righting and self-bailing properties comprehend nearly a century of study and experiment, outgrowing from the original invention of Lukin; the former is effected by a ponderous false keel of iron, which gives the lower part a constant determination toward the water, while an equal determination from the water is maintained for the upper portion of the boat by air-cases at the sides and ends, scientifically proportioned. The self-bailing advantage is gained by a deck adjusted according to the draught of the boat; thus, whatever the load, the deck is above the load line, and is fitted with tubes through the boat's bottom, with self-acting valves opening downward to the pressure of water shipped by the boat, and closing from the pressure of the jets from below. It is launched through mechanical contrivances from piers or high places directly into deep water; but it is so heavy, and makes such resistance to the wind, that its towage by steam-tug is often necessary to enable it to reach a wreck at a distance. Two masts, made detachable, are provided, fitted with two lug-sails and a jib. The lighter six-oared surf-boat, weighing from seven hundred to one thousand pounds, is the American product which best suits the shallow waters of our Eastern beaches, varied somewhat in construction, usually of cedar, with white-oak frame, without keel, and air-cases at the ends and along the interior sides under the thwarts, which make it insubmergible. It is drawn upon wheels to a point opposite the wreck by the men themselves where no horses are provided. When launched, it is guided by a long steering oar, the helmsman standing erect in the stern. The surfmen, with their backs to the sea, fix their eyes upon him, and ply their oars in obedience to his directions, and mark his slightest gesture. It is the refinement of human dexterity to mount the breakers in this little shell, and no sight is more impressive. The wreck reached, whether by day or night, the most careful management is necessary to avoid collision with the plunging hull and floating and falling wreckage;



UNITED STATES LIFE-SAVING STATION ON THE EASTERN COAST.

and the taking off the people from a dismantled and sinking ship, and safe return with them to the shore, is indeed a picture for the imagination.

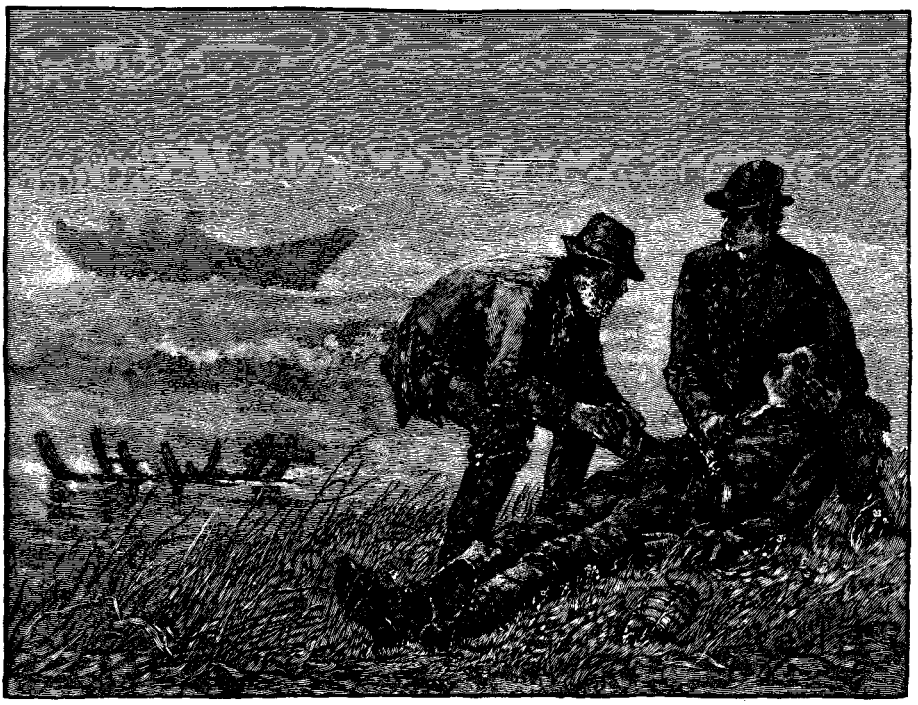
Through what seemed magnanimous legislation the work of the service was crowned with brilliant success, and the creation of new stations steadily continued until 1877. The storm-signal system of the Signal Service was also connected with several of the life-saving stations on the New Jersey coast, and subsequently extended to other stations. The signal officer was allowed to occupy a room in the life-saving buildings, and in turn the Signal Service granted the use of its telegraph lines for life-saving purposes. But in the rapid development of the efficiency of the Service the law-makers were outdistanced, failing to keep pace with the demands upon the national purse. Doubting Thomases had taken their seats in Congress, and until they could be educated on the subject by the more enlightened, the business of life-saving must be curtailed, even if the whole world suffered. The appropriation for 1877–8 was considerably below the modest estimates submitted by the management of the Service, which prevented the stations from being opened earlier than December 1. The result was a disaster in the North Carolina district on the 24th of November, six days prior to the opening of the stations, so tragic and enormous in its proportions that the whole nation was roused into interrogation. The steamer *Huron* stranded near Nag's Head, a dreary point upon a coast distinguished for its monotony of desolation, and ninety-eight persons perished, all of whom would doubtless have been saved had the service been in active operation. And as if one calamity were not enough to teach the needed lesson, another followed swiftly. The steamer *Metropolis*, bound from Philadelphia to Brazil, laden with railroad iron and materials and two hundred and forty-five sailors and passengers, was dashed into fragments on the Currituck Beach, only sixty-six days later, and eighty-five lives were lost, in consequence of the stations in that region being then twelve miles apart. The patrol had passed the point where the wreck occurred some two hours before. Peculiar cries, like that of many human voices mingled with the shrieks of the sea, led to the discovery of the

NAG'S HEAD—SCENE OF THE "HURON" DISASTER.

stranded vessel by persons on the shore, who could see nothing through the fog. A boy was sent running to the nearest house, half a mile inland, the occupant of which mounted his horse and galloped to the nearest station, some four and a half miles away. The mortar cart, with apparatus, a dead-weight of more than a thousand pounds, was hauled through the wet, yielding sand, into which the wheels cut four or five inches, as fast as six strong, willing surfmen could hurry along. They were overtaken within a mile and a half of the scene by a man with a horse and cart—one of the features of the North Carolina beach—who, finding them worn down with their burden, hitched on and helped them through.

Three or four precious hours had already been consumed; the water was filled with floating fragments of the wreck. Efforts to throw the shot-line failed, and the despairing people, giving up all hope of rescue before the ship should break entirely in pieces, accepted their last alternative, plunging into the treacherous waves. The surf was running high, and the struggling, drowning mass of human beings

WRECK OF THE "HURON."



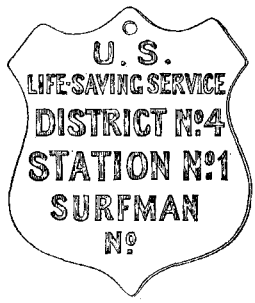
"THEY FOUND HIM NEARLY DEAD."

drifted toward the shore. The life-savers and citizens ran into the water to meet and save them, and strove nobly in the inner breakers and under-tow, dragging them ashore in great numbers. The incidents of that awful hour defy any attempt at description. The air was filled with encouraging shouts and agonizing screams. Upward of a hundred were rescued, and many were restored from apparent death. A handsome Newfoundland dog participated in the work, incited by the example of his master, and came dripping through the surf, bringing safely ashore a half-drowned man. As this page of horrors came before the national legislature, it was remembered that the chief of the Service had been laboring in vain for two years to convince the Congressional mind of the unreasonable distances between stations on the North Carolina coast, and the consequent extent of patrol. The tide of public sentiment was with the Service, and misplaced economy was universally condemned. Before the end of the following June, a bill, under the championship of Hon. S. S. Cox, of New York, and Hon. Charles B. Roberts, of Maryland, was carried through both Houses which elevated the institution to its proper rank as a separate establishment, instead of a branch of the revenue marine, with provisions of grave importance. The President immediately nominated Mr. Kimball as General Superintendent, who was promptly and unanimously confirmed, without the usual formality of reference to a committee. The stations have since been increased, until their number is one hundred and ninety-six. Thirteen were immediately projected between Cape Henry and Hatteras Inlet. But the fearful hurricane of the 22d and 23d of October, 1878, swept away a portion of the material of the contractors, and seriously retarded the completion of the buildings. This tempest came near causing the utter demolition of some of the existing stations, one of which was lifted bodily from its foundation and borne half a mile away, where it was left standing erect.

In another instance the sea suddenly invaded one of the stations at two o'clock in the morning, filling the house, and the crew rowed out in the surf-boat through the portal, their heads nearly grazing the

lintel. The wind was blowing, according to the register of the Signal Service, eighty-four miles an hour at the time. Nothing living was abroad, except here and there, miles apart, the solitary patrolmen staggering on through the utter darkness, in the forlorn endeavor to maintain their watch—drenched by the cataract of rain, half suffocated by the blasts, and repeatedly and with great violence thrown from their feet. No eye could look to windward for the flying sand. At this very moment the *A. S. Davis*, a large, nearly new, strongly built vessel, returning from South America to Hampton Roads, Virginia, was racing through the darkness with headlong velocity, chased by the roaring hurricane. Suddenly, with a shivering shock, she plunged aground. At once, behind the vessel, held by her bows as in a vise, the sea lifted itself up like a mountain, and came down with a stunning crash upon the stern, which it stove in at one blow; an instant of horrible confusion and uproar, and the ship was literally torn in pieces. Of the twenty men aboard but one escaped—thrown bruised and bleeding upon the shore, where he was found and tenderly cared for by the patrolman. Had an army of life-savers been present, no help could in this instance have been rendered to either vessel or crew. These hapless voyagers had been out three months, and over ten thousand miles, to perish within three hours' sail of their haven. The extraordinary fury of this storm was such that thirty churches and hundreds of dwellings were unroofed or seriously injured in Philadelphia, and a schooner in Chesapeake Bay was carried sheer up into the woods from her anchorage. On the Virginia beach a patrolman failed to return to the station in the morning, and his comrades went out in a surf-boat to search for him. The beach was flooded in every direction, but after proceeding a mile and a half they found him lying prone upon a sand-hill, nearly dead, completely surrounded by water, which had hunted him from place to place for hours.

Comparatively few of the well-housed inhabitants of the land are alive to the fact that through the long, cold, blustering days and the dark, rainy, and tempestuous nights of the whole wintry season a cordon of sentinels is tramping the Atlantic coast from Maine to Florida on the look-out for endangered vessels. The hardships involved in these protracted marches, while all the world lies comfortably in bed, have no parallel in the employment of any other class of men. The beaches are often clad with ice, and at the best are pathless deserts in the night, and when lashed by storms are frequently cloven through with new inlets, while hills of sand are rent and torn away as the surf leaps furiously beyond its usual



SURFMAN'S SHIELD.

limits. The life-saving stations on the Atlantic sea-board are now within an average distance of five miles of each other, each crew consisting of a keeper and six surfmen. At sunset two men start from each station, one going to the right, and the other to the left. They are equipped with lanterns and Coston signals, and each pursues his solitary and perilous way through the soft sand, in spite of flooding tides, bewildering snow-falls, overwhelming winds, and bitter cold, until he meets the man from the next station, with whom he exchanges a check, to prove to the keeper on his return that he has faithfully performed his allotted task. The night is divided into four watches. The keeper is required to register in his log-book the name of each patrolman, his hours on patrol, the name of the patrolman from the next station whom he meets, the exact hour of meeting, and the direction and force of the wind at sunrise, noon, sunset, and midnight, together with the events of each day. This record is sent to the chief of the Service at Washington at the end of every week. These groups of seven beach guardians are, in a majority of instances, completely isolated upon the barren outlying strips of sand, separated from the mainland by intervening bays.

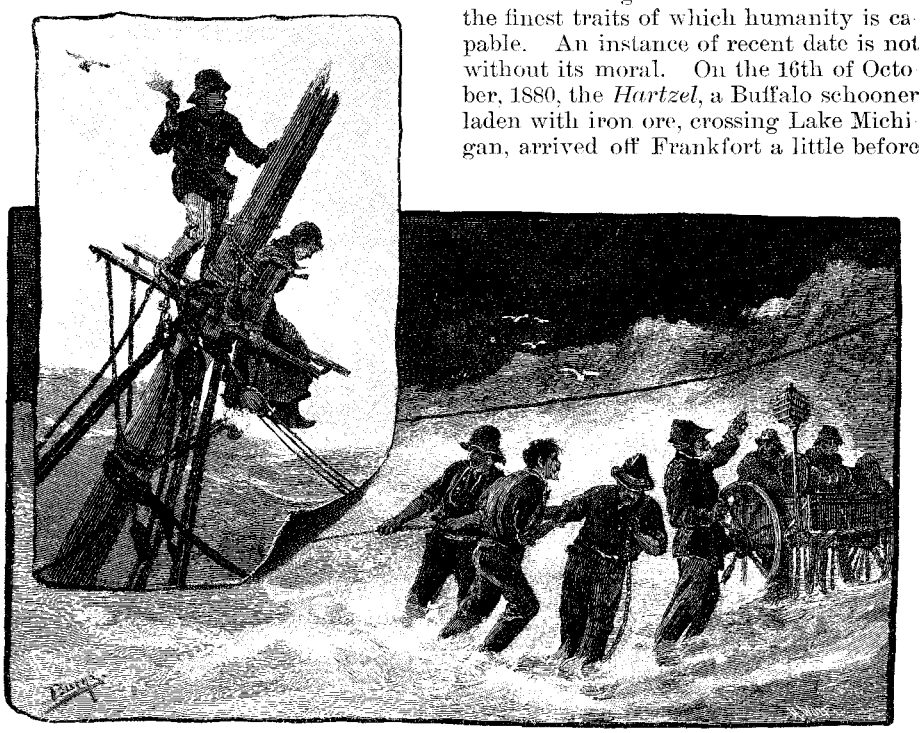
When the morning newspaper announces that one hundred and forty-sev-

en steam-ships have been lost at sea during the year 1880, the whole reading community looks up in startled amazement. The scenes at midnight when the *Narragansett* was burning and sinking in Long Island Sound, the blazing *Seawanhaka* a few days later, in full view of thousands of the inhabitants of New York city on a bright summer afternoon, and the foundering of the *City of Vera Cruz* in a hurricane off the coast of Florida, are recalled to mind with a shudder. But what of the remaining one hundred and forty-four calamities comprehended in the above statement, with which we are less familiar? How many vessels aside from steam-ships have been destroyed? And what proportion of the whole have met their fate in deep ocean waters, far from shore, and consequently beyond the pale of assistance from the life-savers of any country? We take up an English journal and read: "A further reason why we take especial interest in the Life-saving Service of the United States arises from the circumstance that consequent on our extensive trade with that country—amounting to more than sixty millions sterling of goods sent from it to Britain every year—a large proportion of the ships and crews which are saved through its instrumentality are British." Then we turn elsewhere and find that three hundred disasters to vessels have occurred along our coasts within the past year, and that nineteen hundred and eighty-nine persons have been imperiled upon these vessels, of whom all were saved except nine.

With such a record it is no longer a marvel that the American life-saving institution has taken so firm a hold of the public heart. The territory which it guards—ten thousand or more miles—is divided into twelve districts. The Atlantic coast presents one long succession of varied dangers, beginning with Maine, where the capricious currents are forever playing sly games about the narrow capes, reefs, sunken rocks, and peaks of islands half submerged, paving the coast like the teeth in a shark's jaw, taking in Cape Cod, that great arm of sand forty miles outward and upward, with its half-sunken, ever-shifting sand-bars, the islands and the rough rocky points on the Rhode Island coast—dreadful to mariners—and the long, unpeopled six hundred miles of beach from Montauk Point, Long Island, to Cape Fear, North Carolina, terminating with the arid coral formation of the coast of Florida, five hundred miles in extent. The great lakes, a group of enormous inland seas, with twenty-five hundred miles of American coast-line, are subject to sudden and violent gales, which pile up seas so stupendous that anchored vessels are swept fore and aft, often causing their complete destruction; while others, running for shelter in harbors, miss the narrow entrances, and are blown helplessly upon jutting piers, or the still more dangerous beach. The stations consist of three classes, severally denominated life-saving stations, life-boat stations, and houses of refuge. Each of the twelve districts is provided with a local superintendent, who must be a resident of the district and familiarly acquainted with its inhabitants. His compensation is one thousand dollars per annum, with the exception of those on the coasts of Long Island and New Jersey, who, having too many stations to look after to attend to other business, are paid fifteen hundred dollars apiece. These officers are required to give from twenty to thirty thousand dollar bonds as disbursing agents, being intrusted with the payment of the men under them in addition to their general duties. They are responsible for the selection of the keepers of the stations—a duty requiring much knowledge and excellent judgment—who are not, however, confirmed without the acquiescence of the inspector, who is supposed to have no local interests or prejudices. The crews are chosen by the keepers. The keepers and crews are examined by a board of inspectors, consisting of an officer of the revenue marine, a surgeon of the Marine Hospital Service, and an expert surfman whose qualifications are well known, to determine by a judgment wholly impartial their character, good health, and general fitness. This board is empowered to dismiss all incompetent men on the spot, and require the keeper to employ others without delay. The whole work is under constant inspection. An officer of the revenue marine, Captain James H. Merryman, is the chief inspector, and assigns from his office in New York an assistant inspector to every district. The stations are visited frequently, and the men examined in the exercises of the apparatus drill, and obliged to give verbal reasons for every step in their operations. They are trained with their life-

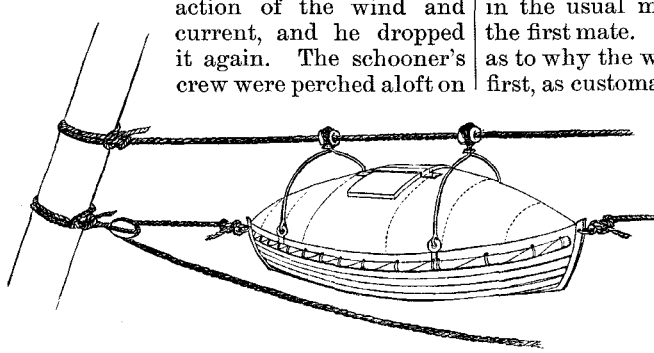
boats in the surf, in the use of the life-dress, in saving drowning persons by swimming to their relief, in the methods of restoring the partially drowned, and in signaling. Everything in and about the stations moves with military precision. When a wreck is attended with loss of life, a rigid examination follows to see if any of the men have been guilty of misconduct or neglect of duty. The keepers are empowered to protect the interests of the government from smuggling, and they guard all property that comes ashore from a wreck until its rightful owner appears. They are charged with the care and order of the stations and the boats and apparatus; and they must keep accurate accounts of all receipts and expenditures, journalize all transactions, and maintain all necessary correspondence with superior officers. Thus it appears they must possess a certain amount of education and high integrity, as well as surfmanship, intrepidity, and commanding qualities. They are paid four hundred dollars each per annum. The crews receive forty dollars per month during the active season, which upon the sea-coast is from September 1 to May 1, and upon the lakes from the opening to the close of navigation, or from about May 1 to December 15.

The forces and processes by which a ship is reached when stranded within sight of land are among the most interesting studies of the present decade. From district superintendent to station surfman the business of saving human beings from death under such circumstances is no child's play. Every variety of accident and obstacle embarrasses operations, and can be overcome only by steady nerve and the most perfect discipline. Notable acts of heroism among our life-saving crews are of frequent occurrence; indeed, the work brings into bold relief some of the finest traits of which humanity is capable. An instance of recent date is not without its moral. On the 16th of October, 1880, the *Hartzel*, a Buffalo schooner laden with iron ore, crossing Lake Michigan, arrived off Frankfort a little before daylight in the morning, and finding it too dark to attempt to enter the harbor, cast anchor and waited for the sun to rise. The crew consisted of seven men and one woman—the cook. A storm came on, which increased in violence to a hurricane, accompanied with hail and sleet. The vessel would neither wear nor stay, and being close inshore the anchors were



WRECK OF THE SCHOONER "HARTZEL" IN LAKE MICHIGAN.

let go, but without avail. She drifted upon a bar about a mile and a half south of the pier, and opposite the "Big and Little Bald Hills." Her condition was discovered by the citizens, and the news carried swiftly to the nearest life-saving station. Keeper Matthews started at once with his crew for the scene; but the fury of the gale cut off all approach by the beach, and they were obliged to take a circuitous route of nearly ten miles. They were aided by a pair of good horses and a score of brawny lumbermen in dragging the apparatus up high sandy steeps, and through long winding ravines where fallen trees were lying in every conceivable position, and about eleven o'clock reached the brow of the heights opposite the wreck. But it was a long distance from the distressed vessel, hence they descended the sharp steep, two hundred or more feet, to a shelving point from which the Lyle gun might be used with effect. To accomplish this feat a portion of the whip-line was unwound from the reel, one end fastened to the cart, the other passed backward to some fifty men, citizen volunteers, who acted as a drag in lowering the cart (which weighed not less than fifteen hundred pounds) down the shifting sand-bluff, where all hands slid to the bottom, almost ingulfing those stationed lower down. The desired point gained, the gun was fired, but the line fell in the weather fore-rigging, and although caught by the master, the whip and pulley-block could not be drawn on board on account of the action of the wind and current, and he dropped it again. The schooner's crew were perched aloft on the only remaining mast—the mainmast having fallen—and nothing was visible below but the stern timbers occasionally between seas. The shot-line was promptly hauled in by the life-savers, the gun reloaded, and fired the second time, with success. It fell well up in the fore-rigging, just under the cross-trees, and was almost instantly caught by the sailors.



LIFE-SAVING CAR.

When the whip-line was sent out, few present believed the slender cord would stand the strain. In order to avoid the retarding effect of the surging current, as well as to clear the wreckage that lined the beach, the shore ends of the whip-line were taken well up the hill-side, and a certain strain kept on them. Upward of fifty were hauling in, then by a signal from the keeper would suddenly pay out, and the sailors on the lone mast in their turn would haul in, securing a few feet of line at a time. In this manner, after a sharp struggle of at least two hours, the tail-block was obtained by the despairing crew, and secured to the lower mast-head. Scarcely a vestige of the printed directions remained on the tally-board, owing to the scouring of the surf. Having accomplished what seemed highly improbable to the looker-on, the life-savers were confronted by another formidable obstacle. The whip, despite all efforts to prevent it, was full of turns between the block and the shore. The volunteers expressed themselves utterly baffled and discouraged. Not so Keeper Matthews and his gallant crew. Without a moment's indecision they proceeded to clear the whip, which occupied another hour. Meanwhile it was apparent that the foremast would soon fall with its living freight; and without waiting to send the hawser, the breeches-buoy was sent on the whip alone, rigged in the usual manner. It returned with the first mate. He was quickly catechised as to why the woman was not sent ashore first, as customary among sailors of every degree, and replied, "She does not want to come in this buoy," and then said she was wrapped in the gaff topsail, and secured to the mast. In the same breath, as it were, came a message from the surfmen stationed on the height, in charge of the extreme circuit of the hauling line, that the fallen tree used as a loggerhead for the whip was giving way, together with a portion of the bank. No time was to be lost, and the life-car was quickly substituted for the buoy. It capsized on the way, and

when it reached the wreck, was sent spinning into the air through coming into collision with the wreckage which was churning in the boiling caldron. When it returned, two of the sailors jumped out, and were sharply interrogated as to why the woman did not come. They said, "She don't want to get into that thing; it looks too much like a coffin," and "She'll come next time," with other contradictory remarks.

On the next trip the life-car brought the captain and second mate. A murmur of angry disappointment ran through the crowd. The horrible suspicion that the helpless woman was to be left lashed to the mast-head by a heartless crew took possession of every mind. Questions were asked with severe earnestness, to which the captain replied, evasively, "She's gone up," and "She's unconscious, and we could do nothing with her," and "They'll bring her next time." On its third trip the car remained some time at the wreck. Darkness had set in; thus it was impossible to discover what was going on. Finally the car was drawn in, but grounded, bottom upward, in the edge of the surf. At the call of the keeper for assistance, a dozen heroes plunged into the water, righted the car, and snatched off the cover. Two sailors jumped out, the last of the wrecked crew. "They haven't brought the woman!" shouted one of the surfmen, who had been knocked down several times by the drift-wood, and nearly lost his life in attempting to land the car safely. It was a moment of intense excitement. The citizens declared they would not have pulled a line to save the schooner's crew had they foreseen the dreadful climax. The sailors said the woman was dead. It was the merest folly to sacrifice life by sending out men to learn the truth of the story, with the mast likely to fall at any moment; and the saddened party clambered in the darkness, one by one, up the steep in the face of the blinding storm, burdened with the conviction that they had been defrauded in their labors of love, and faint for want of food, having eaten nothing since breakfast; and wearied beyond expression by the extraordinary exertions of the day, they tramped with their apparatus over the rough ten miles to the station, reaching it early the next morning. The mast fell soon after their departure, and seventeen days later the body of the woman was found on the beach at Frankfort.

When the inmates of a station are notified by the patrolman that a ship is ashore, the keeper must determine instantly whether the condition of the sea will admit of the launching of the life-boat. In the several disasters on the New Jersey coast in the February storm there was not one instance where its use was possible. Upon the lakes, during the year just past, some of the deeds of rescue have enveloped the rough figures of the life-saving men in a blaze of heroism. One example was at the wreck of the *Amazon* off the Grand Haven piers, in Lake Michigan—a large four-masted twin-screw steamer, with sixty-eight persons on board, thirty-six of whom were passengers. The wind and waves were smashing the steamer in pieces, and it was beginning to sink, when, after almost superhuman exertions, the hawser and hauling lines were connected with the foremast, and the life-car was sent out, with one of the life-saving crew to superintend operations. In an hour and a quarter every one on board was landed. The first trip of the car brought ashore four ladies and a little girl, the second came with six ladies. It made fourteen trips in all, the last two or three being devoted to bringing ashore the United States mails and some of the baggage of the passengers. A dog was also brought ashore.

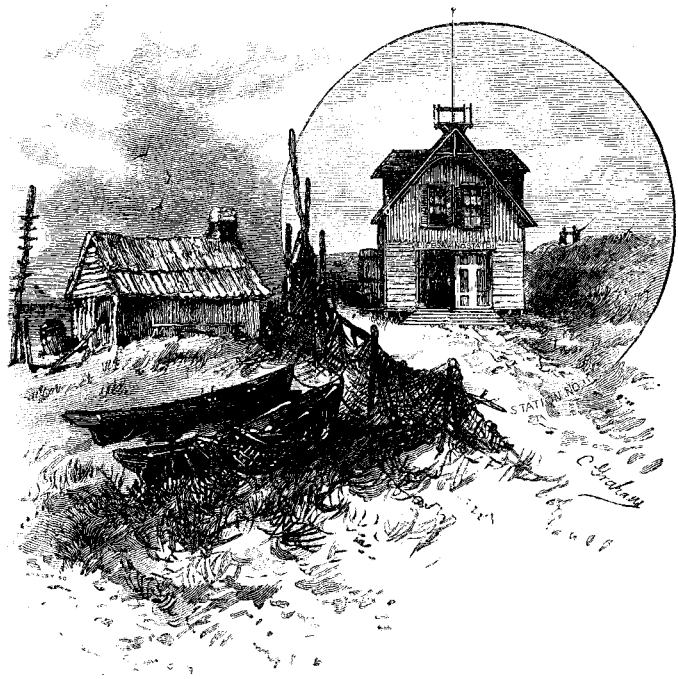
These men who confront danger and face death in the interests of the great public deserve something more than honorable mention. It is the unmistakable and solemn duty of this great, opulent country not only to compensate them handsomely, but to extend social protection in the form of pensions to the widows and orphans of those who perish in the performance of their humane work. More than once has a life-saving crew been lost outright. In 1876, at the wreck of the *Nuova Ottavia* on the North Carolina beach, the surf-boat went out, never to return. It reached the wreck, and it was supposed the Italians, seized with a panic, jumped toward it in a mass. In recognition of the gallant behavior of the surfmen, the Consul-General of Italy sent for the benefit of their families four hundred and eight dollars in gold, by order of the Department of Foreign Affairs and Marine of that nation, and of the Italian Society for Salvage. Again, one of the most gallant and skillful crews in the service was lost at Point aux Barques, Lake Huron, in October, 1880, and the

heart-rending details of the calamity are known to the world through its sole survivor. These loyal men went out in the surf-boat in prompt response to a signal of distress displayed upon a vessel three miles away. The boat was capsized and righted several times, but finally remained capsized, the men clinging to it; but the cold was such that one after another perished, until six were gone. The keeper drifted upon the beach, insensible, and was found steadying himself by the trunk of a tree, and swaying his body to and fro as if in the act of walking, without moving his feet. When he recovered consciousness, he said he thought he had walked a long distance since reaching the shore, and remembered to have shouted several times, not so much with the idea of attracting attention as to help the circulation of his blood. He was so much injured that he resigned his position; thus the station was in one day bereft of its entire crew. These heroic men had during the same year saved nearly a hundred lives. When the steamer *Bertchey* was wrecked near Grindstone City, seven miles from Point aux Barques, they had gone to the rescue as fast as a pair of spirited horses could draw the boat-wagon, and found five hundred people on shore watching the wreck as it was breaking up, powerless to help the hapless passengers and crew, who for ten hours had been lashed to the bulwarks and drenched by the flooding breakers. Some volunteers attempted to go to their relief in a fish-boat, but the sea was so terrible that they turned back. The life-savers coming up upon a run, were greeted with prolonged huzzas. Quickly their boat was launched, and they were on their daring voyage, disappearing in the troughs of the sea, then rising on the summit of the breakers, the crew working with might and main at the oars, and the bow of the boat ever pointed to the stranded steamer.

They reached it gloriously, threw a line by its heaving-stick aboard, which, being seized and fastened, held the boat in tow, which advanced and receded by her oars as the action of the sea allowed, and at the proper moment sheering up, and snatching away, as it were, the persons to be rescued. No sooner was the boat secured than two of the surfmen threw themselves into the water, and by the aid of ropes worked themselves with great exertion upon the steamer's deck, to aid and direct the difficult and dangerous labor of transferring those on board to the surf-boat. Eleven ladies were first lowered over the bulwarks, then a little boy, and the boat shoved off, and safely gained the pier. Four trips were made, and forty-four persons saved, being every soul on board; and such was the appalling need of haste that the men bent to their oars with a will, and accomplished the extraordinary rescue within one hour. And yet this same crew of life-savers died nobly at their post of duty a few months later, and—let us whisper it gently and with deep humiliation—our nation has forgotten its obligation to their families. No pension has yet been granted. Is it not a national duty to provide as well for those dependent upon a man killed in trying to save life as for the families of such as are seeking to destroy life? On the bleak Massachusetts coast, in a freezing temperature, and in the darkness just before the dawn of the last day of November, 1880, a surf-boat was struck and capsized by the boom of a stranded vessel, alongside which the dauntless life-saving crew were striving to rescue the captain and pilot. They had made one trip already, landing four of the sailors, and returning for those left behind, met with the fatal accident. Keeper Atkins, one of the most valuable officers in the service, and two surfmen perished, while of the survivors, one was disabled for life, and the other two badly injured. Keeper Atkins left a widow and four children, and the drowned surfmen left dependent families. There is no country in the world where money is given so freely for charities as in America. Congress fails to represent the feeling of the people at large if it withholds its generous care from those who in guarding its coasts contribute to the material prosperity of the nation.

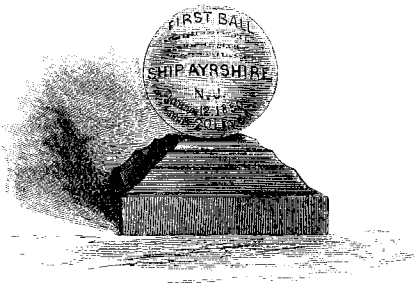
The life-saving stations are snug two-story buildings of the pointed order of architecture, with a small open observatory or look-out deck on the peak of the roof. The first floor contains the boat-room, where the apparatus is stored, and a second smaller apartment, which is the living-room of the crew. In the second story are three or four rooms; one is appropriated to the lighter apparatus, the medicine chest (which is an important feature of the work), the library, official books and papers, all of which undergo frequent inspection by the superior officers

to see that they are in regulation order; two are furnished with cot beds as sleeping apartments for the keeper and crew; and one small room is set apart for the signal officer wherever there is communication with the Signal Service. The life-boat stations are smaller buildings, and usually placed on piles at the water's edge, or set on the inner side of piers, and are furnished with an inclined platform, or a trap in the floor through which the life-boat is let down and launched into the water by means of a windlass. The houses of refuge have a capacity for twenty-five persons, and are kept supplied with provisions to feed that number for ten days. A boat-house is also attached. The inhabited stations are furnished with the utensils for cooking, but the crews find their own provisions out of their ten dollars per week, which, with the simplest coast fare, leaves them hardly ninety-three cents per day. A telephone line now connects a dozen or more of the North Carolina stations, and telegraph communication exists with many portions of the coast. The language of signals has become of great importance to the service. A vessel may not only ask for assistance, but state through this medium the nature of its distress. The international code, improved by additions for local purposes, has been introduced at the stations, and furnished to all masters of vessels entering or clearing from their respective ports. Ships in passing a station often inquire its number, which enables them, with the aid of the Coast Survey charts, to determine their exact position; and the men at the stations warn vessels of danger, and direct their movements. A special code of signals by which the stations may call assistance from each other has also been supplied.



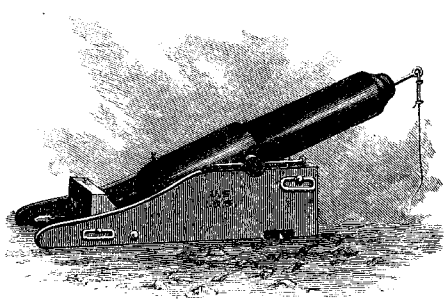
LIFE-SAVING STATION ON THE NORTH CAROLINA BEACH.

Upon the Atlantic coast, much more frequently than elsewhere, the sea is too heavy in a winter storm for the use of the boat, and resort is had, as has been seen, to the life-saving ordnance. The process of throwing a temporary suspension-bridge from the land to the wreck, first suggested by Lieutenant Bell, of the royal artillery, in 1791, and matured and carried into practical effect by Captain Manby, of the royal navy, has been greatly improved during the last few years. The first gun in use was of cast iron, weighing two hundred and eighty-eight pounds, and throwing a spherical ball with line attached, its extreme range being four hundred and twenty-one yards. This gave place to the Parrott gun, weighing two hundred and sixty-six pounds—a slight gain—with a maximum range of four hundred and seventy-three yards. The first ball fired in the United States to save life is preserved in the museum of the Life-saving Service with tender care. It was at the wreck of the *Ayrshire*, on Squan Beach, New Jersey, in 1850, and two hundred and one lives were saved by its means. The Lyle gun, of bronze, weighing one hundred and eighty-five



pounds, with a range of six hundred and ninety-five yards, or nearly half a mile, has recently superseded all others, and is universally conceded to be the best in existence. It was the result of experiments in 1878, Lieutenant D. A. Lyle, of the Ordnance Department at Springfield, Massachusetts, having been detailed, by request of the superintendent of the Service, to assist Captain Merryman in solving the problem of the extension of the shot-line and a reduction in the weight of the gun. The projectile has a shank protruding four inches from the muzzle, to an eye in which the shot-line is tied—a device which prevents it from being burned off by the ignited gases in firing. The rocket, so much used abroad, is uncertain, and the line is apt to break at its attachment to the shot, or become badly twisted on its way. The shot-line in use, like the gun, is the result of a series of careful experiments. It is made of unbleached linen thread, very closely and smoothly braided, and water-proofed. It is coiled into a faking box with such precision that it will pay out freely, and fly to a wreck without entanglement or friction. The projectile must be aimed so that the line falls over the ship—not an easy mark to hit in the night in the midst of a blinding storm; and in case of failure, the line is quickly drawn in, and French-faked, that is, laid out in loops upon a tarpaulin spread upon the beach, ready for the second shot. The sailors, as soon as it reaches them, pull upon it until the whip or hauling-line (an inch and a half in circumference), which is made fast to the shore end of the shot-line, is drawn on board with a pulley-block, or tail-block, and a tablet, or tally-board, with instructions how to arrange it for use. When this is fixed, the surfmen haul upon one part of the whip, and send the hawser, which rests on a crotch quickly erected on shore as a sort of temporary pier. The sand-anchor sustains this slender bridge of rope. It is two pieces of wood crossed at their centres and bolted together, and is buried in a trench behind the crotch, and connected with the hawser by a double pulley-block. The breeches-buoy is drawn to and fro upon these ropes, bringing one person at a time. All this seems very easy upon paper, particularly when the sun shines through the lattice, or the reader occupies a soft-cushioned chair before a warm, cheerful fire. But when darkness reigns, and the winds howl, and every drop of spray freezes until the rescuers are incased in ice, and the wreck rises and rolls and turns half-somersaults with each gust, in total disregard of the convenience of the surfmen, and a hundred possible mishaps lurk just beyond the borders of vision, the aspect changes, and the reality becomes more wonderful than any trick of fancy or fiction. The use of the life-car involves more labor and difficulty, but it is of great advantage when extreme haste is required, and many are to be brought ashore. It is a covered boat of sheet-iron, into which six or seven persons may be crowded at once.

The ladies of America have recently awakened to the necessity of supplying the wants of the shipwrecked after they are taken from the sea. The government has made provision for bringing them ashore, but none for keeping them alive afterward. They frequently remain ill or helpless for days. Sometimes they lose all their garments in the struggle for life. The charity of the surfman is unfailing, but his resources are extremely limited. The Woman's National Relief Association, with the wife of the President as its chief executive officer, Mrs. M. R. Waite, the wife of the Chief Justice of the United States, as its first vice-president, and Mrs. Gabriel



THE LYLE GUN.

Kent, of New York city, second vice-president, has undertaken to furnish the stations with warm clothing, beds and blankets, and sanitary aid and materials for those who have been rescued from a watery death. This philanthropic work, commenced in 1880, extends to every part of the country, and meets with the most cordial sympathy and approval.

Medals of honor in gold and silver are awarded for extraordinary acts of heroism in saving life. Several of these have been won by members of the New York Metropolitan Police. It reflects peculiar credit upon a man to spring at a moment's notice from a pier, in full uniform, and master the struggles of a drowning person, amid ice-floes in the darkness of night, and bring him safely to land. This happens more frequently than is generally known about our sea-girt island. One police officer saved eighteen lives in this manner within the space of three years. A silver medal was recently bestowed upon Edith Morgan, the young daughter of the keeper of the station at Grand Point au Sable, Michigan, in consideration of her brave conduct on two occasions, one of which was at the wreck of the steamer *City of Toledo*, a mile south of the station, in December, 1879. A gold medal was awarded to Lovell B. Reynolds, of the United States navy, in recognition of his daring exertions, protracted from eight o'clock in the morning until late in the darkness of the following night, through which he was instrumental in saving a company of twelve persons at sea during a heavy gale near the Azores. Deeds of magnificent gallantry in various regions and in every phase of peril, such as money can never repay, have been similarly recognized by the Life-saving Service. It is, indeed, an institution which calls into action the highest order of disinterested and genuine humanity. And its history reveals the most unceasing and closest vigilance, together with a firm control of its affairs by the officers in charge. The scrutinizing supervision of apparatus and equipments, to prevent waste, depredation, or neglect, the collection of statistics of wrecks, and indexing of the data for public convenience (the name of any person lost by casualty at sea can be produced at a moment's notice in the chief office at Washington), and the rigorous search into the causes and nature of marine disasters, and study of the scientific methods of preventing or alleviating them, are not less admirable than the drilling of the men employed into accomplished experts, and the judicious expenditure of the appropriations for so sacred a purpose. The area of work yearly increases, and the recommendations for an increase of means should not be allowed to pass by unheeded. Nowhere in the whole range of governmental administration does the money disbursed bring more satisfactory returns.