VK
1445
R78
1883
FISH

ISSUED BY AUTHORITY

PAPERS OF THE CONFERENCES

Held in connection with

*The GREAT INTERNATIONAL
FISHERIES EXHIBITION*

SAVING LIFE AT SEA

BY

RICHARD ROPER

LONDON

WILLIAM CLOWES AND SONS, LIMITED

13 CHARING CROSS, S.W.

PRICE SIXPENCE

OFFICIAL PUBLICATIONS.

The following Handbooks upon subjects cognate to the International Fisheries Exhibition are already published, or in active preparation:—

NOW READY.

Demij 8vo., in Illustrated Wrapper 1s. each ; or bound in cloth 2s. each.

THE FISHERY LAWS. By FREDERICK POLLOCK, Barrister-at-Law, M.A. (Oxon.), Hon. LL.D. Edin.; Corpus Christi Professor of Jurisprudence in the University of Oxford.

ZOOLOGY AND FOOD FISHES. By GEORGE B. HOWES, Demonstrator of Biology, Normal School of Science, and Royal School of Mines, South Kensington.

BRITISH MARINE AND FRESHWATER FISHES. (*Illustrated.*) By W. SAVILLE KENT, F.L.S., F.Z.S., Author of Official Guide-books to the Brighton, Manchester, and Westminster Aquaria.

APPARATUS FOR FISHING. By E. W. H. HOLDSWORTH, F.L.S., F.Z.S., Special Commissioner for Juries, International Fisheries Exhibition; Author of "Deep Sea Fisheries and Fishing Boats," "British Industries—Sea Fisheries," &c.

THE BRITISH FISH TRADE. By His Excellency SPENCER WALPOLE, Lieut.-Governor of the Isle of Man.

THE UNAPPRECIATED FISHER FOLK. By JAMES G. BERTRAM, Author of "The Harvest of the Sea."

THE SALMON FISHERIES. (*Illustrated.*) By C. E. FRYER, Assistant Inspector of Salmon Fisheries, Home Office.

SEA MONSTERS UNMASKED. (*Illustrated.*) By HENRY LEE, F.L.S.

THE ANGLING CLUBS AND PRESERVATION SOCIETIES OF LONDON AND THE PROVINCES. By J. P. WHEELDON, late Angling Editor of "Bell's Life."

INDIAN FISH AND FISHING. (*Illustrated.*) By FRANCIS DAY, F.L.S., Commissioner for India to International Fisheries Exhibition.

A POPULAR HISTORY OF FISHERIES AND FISHERMEN OF ALL COUNTRIES, FROM THE EARLIEST TIMES. By W. M. ADAMS, B.A., formerly Fellow of New College, Oxford; Author of 'Zenobia: a Tragedy,' and inventor of the Coelometer.

FISH CULTURE. (*Illustrated.*) By FRANCIS DAY, F.L.S., Commissioner for India to International Fisheries Exhibition.

SEA FABLES EXPLAINED. By HENRY LEE, F.L.S. (*Illustrated.*)

ANGLING IN GREAT BRITAIN. By WILLIAM SENIOR ("Red Spinner").

FISHES OF FANCY: their Place in Myth, Fable, Fairy-Tale and Folk-Lore, etc. By PHIL ROBINSON.

LITERATURE OF SEA AND RIVER FISHING. By J. J. MANLEY, M.A.

IN THE PRESS.

THE PLACE OF FISH IN A HARD-WORKING DIET. By STEPHEN MITCHELL, M.A. (Cantab.)

LONDON:

WILLIAM CLOWES AND SONS, LIMITED,
13, CHARING CROSS,

VK
1445
R78
1883
FISH

International Fisheries Exhibition

LONDON, 1883

SAVING LIFE AT SEA

BY

RICHARD ROPER

LONDON

WILLIAM CLOWES AND SONS, LIMITED

13 CHARING CROSS, S.W.

1883

LONDON :
PRINTED BY WILLIAM CLOWES AND SONS, LIMITED,
STAMFORD STREET AND CHARING CROSS.

International Fisheries Exhibition

LONDON, 1883

SAVING LIFE AT SEA.

THE number of ships, the aggregate armament, steam power, tonnage, crews, and equipment throughout, that comprise the Royal Navy of the United Kingdom; the number of vessels, and the aggregate power, tonnage, and crews of the English Mercantile Marine, the number of persons it conveys, and the quantities and values of the freights and cargoes it carries to and from all parts of the globe, combine to place England at the head of the maritime nations of the world. The feeling of national pride that this supremacy naturally inspires, is tempered by a sense of humiliation because of wanton waste of human life in connection with it; of culpable neglect on the part of shipowners in failing to supply, and of the responsible authorities in failing to enforce, such provisions and conditions for saving life at sea, in certain emergencies, as passengers and crews may reasonably claim, and as Government authority alone can prescribe and enforce.

The subject of saving endangered life at sea is one that enlists the sympathies of men of all classes and conditions; it commands great and ever-growing interest and attention; its discussion, like "a good maxim, can never be out of place;" reference to the subject in the permanent records of "The Great International Fisheries Exhibition, 1883" is deemed fit and appropriate, in its relation to the important

maritime industry that the Exhibition was organised and carried out to promote. The subject has its bearing on the Fisheries, if not very direct or apparent upon actual fishing craft, certainly upon the vessels that bear home the harvest of the sea from the fishing grounds. In any case, discovery and application of the most trustworthy means of saving life and of reducing the perils of the sea to a minimum, must be an object of universal desire.

The subject offers three divisions for discussion :—

I. The need for extended and improved means for saving life at sea when the ship fails to provide a place of safety.

II. The distinctive qualities and capabilities that such improved means should possess. And,

III. The mode and authority by which such improved means should be applied.

First, then, as to the need for extended and improved means for saving life at sea when the ship fails to afford a place of safety. There is, alas ! a bewildering abundance of heartrending evidence in proof of this need. Narratives of disasters at sea, in which indescribable sufferings and appalling loss of life have been endured and sustained—calamities that have sent their successive quivering thrills of pain throughout the civilised world from its centre to its circumference, rush unwelcome into mind. Even a selection from what may be regarded as typical cases that have occurred within the lifetime of the present generation, even within comparatively few years past, would require more space than can be spared for a bare catalogue of names of ships, and the dates and localities of the disasters. Amongst these would be the *Atlantic*, *Kent*, *President*, *London*, *Royal Charter*, *Schiller*, *Deutschland*, *Northfleet*, *Avalanche*, *Eurydice*, *Princess Alice*, *Waitara*, &c. In little more than

the first month of the current year (1883), as many as three emigrant ships have been engulfed, and numerous other appalling disasters have occurred in various parts of the ocean's domain that have proved conclusively an urgent and clamorous need for extended and improved means for saving life. An endeavour will be made to prove, by a few illustrations, that the means provided are greatly inadequate in extent, and that even to the extent of their limited capacity these fail to warrant trust and to render service in the last extremity.

The general observation may be made, *in limine*, that in an indefinite number of instances vessels of various kinds are allowed, unquestioned and unimpeded, to cast off from quays and ports to commence their voyages or trips with freights of human beings on board, for floating whom, should their ship fail, no provision whatever is made by boats or otherwise. There is not even a pretence of such complete provision made by the owners. In the case of ocean-going steamships, and some passenger and emigrant ships, there *is* a pretence of boat accommodation for passengers in case of need, but it is a pretence, and nothing more. The rows of nicely-painted canvas-covered boats of outward-bound liners ("Jack" probably thinks them lumber and in the way), look very pretty, almost imposing, and are apt to impress with a sense of forethought and a feeling of security; but they are really, in view of possible requirements, a delusion, almost a fraud and a false pretence, and the intending passenger who trusts to such appearances can be but little wiser than the hunted ostrich that hides its head in the sand. The boats provided for ocean-going passenger and emigrant steam or sailing ships, and transports, are never sufficient in numbers and carrying capacity to float more than a fraction of the persons in the ships respectively.

It is notorious, indeed, that owners are not required to make full provision, and in case of wreck a majority of those on board must inevitably perish unless, if in mid-ocean, they are equal to a greater feat than swimming the Channel or of shooting Niagara. On the subject of insufficient boat accommodation Admiral Jasper Selwyn has said: "With regard to our passenger steamers, few people understand the discrepancy between the Board of Trade requirements and actual practice. I have been across the Atlantic several times in 6000-ton vessels, carrying actually from 1500 to 2000 passengers, capable of carrying with ease 3000 passengers. There were, probably, boats on board, which, in case anything happened to the ship, would have carried from 200 to 300 passengers, supposing all those boats had been got into the water without damage, a thing you can scarcely expect from an undisciplined crew, and still less disciplined passengers, and supposing that every precaution had been taken." * It might have been added, and "supposing wind and weather favourable, much the reverse being the prevailing condition." In further illustration of the inadequacy of boat provision, it may be mentioned that Captain G. E. Price, R.N., M.P. for Devonport, some time since obtained from the President of the Board of Trade the information that the popular Channel steamboat, the *Calais-Douvres*, was licensed for 1088 passengers, and had boats for 110. Captain Price also ascertained that the *Albert Edward*, a Channel steamboat belonging to the South Eastern Railway Company, that narrowly escaped wreck near Cape Griznez last summer, was licensed for 364 passengers and had boat accommodation for 83. The accident involved a narrow escape from a wholesale

* Transactions of United Service Institute : Meeting, 18th March, 1878.

fatality. In addition to this defect of inadequacy in number and capacity, the boats are little better than ghastly "properties" in the terrible dramas enacted when ships are lost by collision, fire, or wreck. The boats should be always, but they seldom are, in perfect condition, readily accessible and available. They are usually treated with contempt and neglect, and as though they would never be wanted.

Delay occurs, and difficulties, sometimes insuperable, present themselves in attempts to lower, launch, and disengage some of the boats; to release others from the chocks by which they are secured, from the tarpaulin under which they are lashed; to clear them one from another, and to empty them of the stores, live stock, &c., that have been placed in them; to find plugs and rowlocks, and to launch them haphazard by a tumble over the bulwarks. Got into the water anyhow, and crowded with a living freight that sinks the boat to the gunwales, the poor little craft, unfit and frail, is often staved in, swamped, or turned keel up on the crest of an angry wave. As providing means of saving life in case of shipwreck, as offering refuge or deliverance, the boat system has utterly failed and hopelessly broken down.

A few illustrations of the inadequacy of life-saving appliances hitherto provided for ships, in anticipation of distress, conclusively prove, we venture to think, the first proposition. The "o'er-true tales" are very sad, but some of them are happily relieved, almost glorified, by the aureola, so to say, with which the heroism of the expiring actors has invested them. The noble and pitiful story of the loss of the *Birkenhead* troopship is now rather old, but

Oft should the tale be told,
E'en when our babes are old,
How calm went those soldiers bold
Down to their death!

The ship had on board, belonging to many different regiments, 13 officers, 9 sergeants, and 466 men ; 20 women and children ; and a crew of 130 officers and men. The ship struck upon a rock near Simon's Bay, South Africa, on the 25th February, 1852. It was a calm starlight night, favourable for floating those on board if they had had readily available anything whereon to float, but they had not. There were boats for a small fraction only of their number, and of these some were so stowed away, as usual, that they could not be got out and put to use. Three boats, however, were lowered, and in these the women and children were calmly rowed off from the fast-sinking ship.

Captain Wright, a survivor, says of the noble fellows left on the wreck, "Every one did as he was directed, and there was not a murmur or a cry among them until the vessel made her final plunge. The officers had their orders, and had them carried out as if the men were embarking and not going to the bottom ; there was only this difference, that I never saw an embarkation carried out with so little noise and confusion." "So died they, heroes and men complete." Many of the gallant fellows fell victims to the ravenous sharks with which the sea swarmed. Land was in sight when the ship struck. Of about 640 souls on board only 97 escaped with their lives.

The loss of the *La Plata* telegraph cable steamship in the Bay of Biscay in 1874, conveys also its distinctive lessons on the subject in hand. The boats that should have contributed benefit and have given some sense of safety, actually increased the danger of the situation, and did mischief on their own account. A heavy sea tore away one of the boats from the davits, and the davits again turned in upon and rent the ship's side, admitting the destroying flood and accelerating the ship's doom. One of the boats was smashed in lowering, another fortunately got clear, and

saved 15 men. The *La Plata* was provided with so-called life-rafts, that were stowed one above another, and duly secured upon the forebridge. When the ship went down the despairing crew were seen clustering round these mocking, maddening, life-preservers (?), struggling frantically, but in vain, to get them out and afloat. Sixty-four men, electricians, engineers, seamen, &c., sank with the life-rafts. Knowledge of the provision on board the *La Plata* of "means for saving life" inspires us both with pity and indignation for those who made the arrangements, and with unfeigned grief for the hapless victims.

The *Singapore*, another wrecked ship, gives this record touching her boats' performances in the hour of need. The ship had seven boats which, with the exception of the gig, were stowed in chocks on the bridge, and covered with canvas. The jolly-boat, with 11 persons, capsized soon after leaving the ship. The majority of the crew and passengers who left in the gig were also drowned. After two hours' momentarily precious time wasted, the attempt to get the lifeboat over the side had to be abandoned. In the case of the collision in the Channel between the *Forest* and the *Avalanche*, two of the three boats that left the *Forest* were swamped, and all who were in them were drowned; the boat that survived left the ship with only three oars, and with no rowlocks or rowing crutches, or plug for the draining-hole in the floor.

There is considerable variety in the horrors that attend the destruction of ships at sea, but an unsatisfactory and depressing uniformity in one feature—the miserably small part the boats perform in mitigating the disasters by saving life. The loss of the *Cospatrick* emigrant ship, burned to the water's edge in mid-ocean, near the end of 1874, was pronounced at the time even a greater disaster than the

loss of the *Kent* East Indiaman. The 500 hopeful human beings speeding their way to begin life again with bright prospects in a new world, were suddenly offered, on the trackless deep, without means of escape, the terrible alternatives of death by fire or water. They could only have had time for a short shrift, and a compendious sentence closes the history of their lives. A message from Madeira curtly announced, "The *Cospatrick* burnt at sea ; only three of the crew saved." Disasters at least equally appalling to this have occurred since that date. In September 1878 the saloon steamboat *Princess Alice* was returning to London at eventide, freighted with 700 men, women, and children, who had been indulging in a day's excursion trip. The pleasure-boat was struck in the river, opposite Woolwich, only a few yards from the river-bank, by a screw-collier, the *Bywell Castle*, and sank immediately, leaving the whole of the men, women, and children, who had covered the entire deck and saloon roofs, struggling in the water. The struggle was short ; the helpless creatures perished miserably, asphyxiated by the loathsome Nempenthe, rather than drowned. These citizens of the "greatest city in the world" had their last and fatal bath in the sewage London contributes to its "noble river." They perished miserably—close to the seats of imperial and municipal wisdom and power. The ultimate agent in their destruction enforced upon the victims a hideous substitute for what, under almost any other circumstances, they would have exhibited—beauty, "the rapture of repose."

The owners of the *Princess Alice* made no pretence of providing boats or life-saving appliances. If the great fragile floating shell got cracked or broken, those who trusted to it must scramble out of the Stygian flood as best they

could. Incredible though it may seem, we believe it is true, that nothing has been done to prevent a recurrence of a like horrible catastrophe. Should it unhappily recur, there would be once again the destruction of 700 lives ; weeping and wailing among survivors ; the laying out and exposure of the long lines of bloated corpses for identification ; an unprecedentedly tedious coroner's inquest ; a stolid official enquiry as to which vessel was to blame ; a farcical assessment of damages ; the burial of the hecatomb of victims ; the wrangle as to who should pay the costs of burial ; and then—*da capo* ! The way is again clear for a repetition of the horrible drama !

Circumstances connected with the loss of the *Teuton*, September 3, 1881, especially in relation to the performances of the boats, is painfully interesting. The following is extracted from a message sent from Cape Town, South Africa, to the Union Steamship Company's office in London :—

“ September 3, 7.20 P.M.—Ship struck off Quoin Point ; land apparently four miles distant ; moonlight ; fine, clear over-head, hazy over-shore. Neither breakers nor beach observed. *Teuton* stood off, then returned towards Simon's Bay.

“ 9 P.M.—Boats lowered to rail and provisioned.

“ 10 P.M.—Water was over 'tween decks hatch in No. 2 hold. Ship was stopped to lower boats. Seven boats lowered ; only one loaded, women and children and two sailors. Second boat commencing to load when ship foundered at 10.50 P.M., sucking in everything.

* * * * *

“ Two boats reached Simon's Bay, one Table Bay. Captain at dinner when ship struck ; thereafter remained on bridge until ship foundered.

“Good discipline ; no confusion. Passengers behaved splendidly.”

There were 162 passengers on board, of whom only 11 were saved ; the total saved was 36, and the lost 236. It may be presumed that four out of the seven boats lowered were swamped ; and it may be that the greater part of the time that intervened between 7.20 P.M., when the ship struck, and 10.50 P.M., when she foundered, that is $3\frac{1}{2}$ hours, was occupied in getting out the boats. It seems strange that with seven boats and a “crew 85 strong” a larger number of persons were not saved, the night being “moonlight, fine, clear overhead, no breakers,” and shore only four miles distant. The circumstances probably admit of satisfactory explanation.

The case of the steamer *Bahama*, lost when about a week out from Puerto Rico in April 1882, is another melancholy illustration of failure of the boats as means for saving life. Two of her four lifeboats were swept away in a gale, and the captain took command of one of the two remaining. It proved a deceptive refuge, incapable of keeping keel downwards for many moments, although a so-called “self-righting lifeboat.” The captain and twenty men with him in the boat were drowned. Thirteen men were saved in the fourth lifeboat ; the remainder of the passengers and crew perished. In the case of the barque *Langrigg Hall*, wrecked near the Tuskar in December 1882, three out of the four boats carried were smashed before the captain’s order to get them out could be carried into effect.

In January last the *Cimbria* emigrant ship was struck by the *Sultan*, and sank in the North Sea. Heartrending accounts of the sufferings of the passengers were published at the time. The ship carried eight boats, but notwith-

standing this, 416 out of 522 on board were drowned. One account states that "the people in the boats had to repulse the drowning to prevent over-filling. Of the four starboard boats that got off one capsized." "One boat," says another account, "was lowered, and capsized immediately. The second one also capsized, and all who were in it, chiefly women, were drowned." "Boat 3 capsized with about thirty inmates, a few of whom saved themselves by taking refuge in the rigging. The highest praise must be given to the ship's captain, officers, and the whole of the crew, most of whom perished in endeavouring to save the passengers and to do their duty."

On the 2nd February last the steamship *Kenmure Castle* bound from London to Shanghai, foundered in a gale in the Bay of Biscay. One boat only could be launched; one man only of the ten Europeans belonging to the crew was saved. The captain, first and third mates, and twenty-three Chinamen belonging to the crew perished. Eight of the passengers, including several ladies, were saved, and endured horrible sufferings from hunger and thirst, and cold and nakedness, during exposure for three days and two nights in an open boat. "The crew were in the act of launching the lifeboat when the ship went down."

The illustrations given, which could be extended indefinitely, may be taken as sufficing to prove that boats, or any other appliances for saving life at sea, in cases of fire, foundering, collision, or wreck from whatever cause, are not supplied to an adequate extent, and that they are inefficient and unworthy of confidence in their capabilities to perform even partial and fractional service. We proceed to consider,

II. The distinctive qualities and capabilities that such improved means should possess.

It is not within the scope of this Paper to recommend any particular invention or inventions, patented or other, for saving life at sea ; or to urge dogmatically that it is the duty of Government to make it compulsory for the owners of all vessels carrying persons by water to provide to the full duplicate floating power for the whole of the persons they carry : that is to say, floating power in the ship, boat, or vessel itself, and, in addition, means sufficient that may be used extraneously for floating all the persons carried. We are and may probably remain for a time at a vast distance from this point. Our object is to urge the transcendent importance of the subject ; to press its imperative claims for consideration upon the attention of Government and the nation ; to incite, if haply we may, to practical action, and the removal of a national stigma and disgrace, that ships of various kinds, viz., the sailing conditions of which the Board of Trade does already interfere with and in some degree control, are allowed to leave our ports and our shores daily, carrying with them subjects of the United Kingdom for whose lives no better provision is made than will make it possible *for one in ten at most* to escape death in case of disaster to the ship.

Appliances for saving life endangered at sea are of two classes, one applicable to saving individual, the other to saving collective lives in danger. Of the first, the various improved life-belts, life-jackets, life-buoys, floating mattresses, and portable articles of various kinds, the merits of which are pressed upon public attention, it is not necessary to say more than that they are well worthy of attention, and that it would be a reasonable obligation to impose upon owners of passenger-carrying vessels, that they should provide a certain number and proportion of approved portable life-saving appliances, which

should be kept in carefully selected places in the respective ships. Our concern herein is with means for saving the lives of numbers of persons collectively, of the passengers and crews of ships they are compelled to desert, or perish.

No top hamper or deck lumber.—Boat-service in connection with ships will never probably be dispensed with, but it has been shown satisfactorily, we trust, that dependence upon boats as the principal or best means of saving shipwrecked passengers and crews must be abandoned. The points in which the boat system is weak or breaks down suggest the distinctive qualities that the improved means that should supersede them ought to possess. It is simply impossible to carry as many boats, and of sufficient capacity, as would take off the whole of a large well-filled passenger or emigrant ship's passengers and crews; they could neither be swung on davits around the ships above the bulwarks, nor stowed away on deck, without impeding the working of the ship and prejudicially affecting its navigation. The improved means must not contribute *top hamper or deck lumber*. It would be well to reduce the boats carried on davits to a minimum; as boats so carried sometimes fail to resist the fierce attacks made upon them in their exposed situation. Ships have been seen coming out of a storm with fragments of boats hanging by the falls. In the case of the *La Plata* the davits proved powerful weapons of attack upon the ship that carried them. Inasmuch, however, as no description of life-saving appliances is likely to entirely supersede boats and davits, the materials, lines, and principles of construction of boats, the form and other characteristics of davits, and the most efficient arrangements and action of gear for lowering and disengaging boats, should be carefully considered, and the

best adopted. It would be an important advantage if life-saving appliances could be provided to the supersession of the greater number of the boats now provided, either slung on davits or stowed away on deck, without adding in any considerable degree, structurally or otherwise, to the dead weight at present carried on or above the deck.

Always ready.—It would be a gratuitous infliction to say more on the subject of the difficulty and delay that so often occurs in emergencies at sea in getting the boats released, lowered, disengaged, loaded, and got clear of the ship. Cases occur, as has been shown, of ships going down with so-called life-rafts on them, and boats left in the chocks have been sucked down with the drowning people they should have saved.

Launching.—An essential quality of any effective life-saving appliance must be that it can be launched with celerity. In many instances not more than five minutes have elapsed between the time a ship has struck or been struck and has gone down.

The *Northfleet*, an outward-bound emigrant ship lying at anchor near Dungeness, a few years ago, was struck during a calm night by a passing steamer, and rapidly filled and sank, drowning nearly the whole of the passengers and crew. If the *Northfleet* had been provided with life-saving appliances always ready, and that could have been launched in a few seconds, every one of the poor creatures that perished might have been saved. The method of launching must depend upon the form and character of the object to be lowered into the water. It ought to be something made in such a manner that, although admitting of the most rapid movement, will require something simple and ready, yet more scientific, or

at least precise, than the rude haphazard operation of flinging overboard broadside or end-on. A proper life-saving appliance ought to be contrived to launch transversely, and to either side of the ship.

Provisioning. — Shipwrecked mariners or others who escape from a wrecked or already sunk ship, are little likely to suppose that they are starting upon a pleasure cruise. In most cases the fury of the elements is expended upon their hapless heads, keen suffering and terrible privation may have to be borne, continuous drenching, possibly drowning and death, although still afloat. Accounts of the sufferings from cold and nakedness, hunger and thirst, of the poor creatures that have escaped from shipwreck with their lives only, are agonising to read; how much more so to have suffered! But possibly the skill that can contrive some life-saving appliance that will ride out any storm may be accompanied by the less imposing quality of forethought, that may prevent the saved from suffering the dreadful privations endured by some of the escaped in recent cases. The remnant of the crews of the *Centaur* and the *Mogul*—two colliers burned down in the Pacific—escaped with only as much biscuit and water as would, with a 2000-miles voyage before them, allow a biscuit and a half and a pint of water per man per day. They made their rations serve till they got picked up. In the more recent case of the *Kenmure Castle*, already referred to, one of the ladies who was saved states that “there were no provisions or water in the boat. I remember reading that flannel was a good thing to assuage thirst; our sufferings from this cause becoming very great, Mr. Horrocks found a piece, which we divided into fragments about $1\frac{1}{2}$ inches square, and these we sucked. Our tongues were very much swollen, and we felt thirst more

than hunger." Amid the horrors of the situation Mr. Higgins, third officer, went mad and drowned himself. The sufferers were thus exposed for three days and two nights. Efficient life-saving appliances should assure bread and water, at least for a few days, and secure the pitiable waifs against suffering from the horror of having "Water, water everywhere, and never a drop to drink."

Room enough for all.—Life-saving appliances provided in any given ship should be sufficient to accommodate and save every one in that ship. It is true that self-preservation is the first law of nature—"Skin for skin, all that a man hath will he give for his life." In certain circumstances, for his life a man will even surrender his humanity: care of self dominates over pity for others.

The inadequate supply of boats for crises is unfavourable to the exercise of the ordinary attributes of humanity. The steamship *Pacific*, belonging to a New York company, recently wrecked with 250 persons on board, gives occasion for the record—"Great confusion, the passengers crowding each other off the deck, and crowding the boats. One boat with fifteen women capsized." It is peculiarly horrifying to conjure up the scene at the wreck of the *Cimbria*, where "the people in the boats repulsed the drowning to prevent over-filling." It is much to be desired that some mode of saving life may be devised and adopted in which the struggle of one life against another will not be provoked, but that will give room enough for all.

Any efficient and acceptable appliance for saving life at sea, that is intended to supersede boats wholly or in part, must be able to compete favourably with boats in first cost, weight, strength, capacity, simplicity, and strength of fittings, if any; readiness for use when wanted; ease, celerity, and certainty of action; non-liability to get out of

order ; and the small requirements in work, trouble, or money to maintain in perfect working order.

Finally—III. The mode and authority by which such improved means shall be applied.

It is obviously, if extended and improved means for saving life at sea are to be employed, the function of Government to initiate action. It devolves upon Government to select the best means, and to exercise its authority in enforcing their application. Its powers in the matter are exclusive, and they are not transferable. Unless Government takes action, slow and uncertain improvement only, if any, is to be expected. Shipowners, like railway directors, or others at the head of great interests, have ever a bewildering variety of inventions, notions, and improvements persistently forced upon their attention. The trouble given to them begets a dislike to novelties and "improvements." To get quit of the importunities of all, they "make a rule" to listen to none, making no exception, lest they should "establish a precedent." Government is differently situated ; it can take counsel with, and command the services of, the most eminent scientific men and experts, and determine, through inquiry by a Royal Commission or otherwise, whether every provision is made that can be made for saving life in case of shipwreck ; whether the inadequate provision at present made does not involve, in case of shipwreck, inevitable death to a great majority of all on board ocean-going passenger or emigrant ships, or Government transports. By its professional and skilled agents Government can select speedily and satisfactorily efficient means for diminishing the loss of life at sea, and through its departments—the Board of Trade or the Admiralty—it can enforce the application of such means. "Grandmotherly legislation," or too much of the paternal in Government, is

not desirable, but some better protection and care for the lives of the lieges is demanded than is given. It is surely discreditable that ships should be allowed to leave our shores, the owners of which provide no better means of natation, or possible escape from death, in the case of wreck, foundering, fire, collision, or other cause of disaster, than will suffice at most, and under the most favourable conditions, for one in ten of the persons on board. It is surely eminently unsatisfactory that any complaint concerning the inadequacy of such provision should be met with the Government explanation that "owners have complied with the letter of the law, and cannot be compelled to do more." Lost lives, if attributable to lax laws, are a shame and a reproach to the law-makers of a great civilised country; a testimony to their (heartlessness, weakness, and) unfitness to discharge their foremost function as the chosen protectors of life and property.

INDEX.

- ADMIRALTY, proposed enforcement of regulations by, 19, 20
Albert Edward, boats provided for the channel steamer, 6
 Appliances for saving life at sea, inadequacy of present, 7, 14, 18
 " " " life-belts, 14
 " " " " buoys, 14
 " " " " jackets, 14
 " " " " mattresses, 14
 " " " " portable, 14
Atlantic, loss of the, 4
Avalanche, 4, 9

Bahama, loss of the, 12
Birkenhead, " 7, 8
 Board of Trade, requirements for protection and safety of life at sea, 6, 14, 19,
 20
 Boat-lowering and disengaging gear, 15
 Boats for saving life, 5
 " " accommodation of, 5
 " " *always ready*, 16
 " " insufficient number of, 5, 6, 18
 " " launching of, 16
 " " materials, lines and principles of construction of, 15
 " " provisioning, 17
 " " weakness of system of, 15
Byrwell Castle, collision between the *Princess Alice* and the, 10

Calais Douvres, boats provided for the Channel steamer, 6
 Causes of the delays and difficulties in launching and lowering boats, 7
Centaur, loss of the, 17
Cimbria, collision between the *Sultan* and the, 12, 13, 18
 Collision between the *Avalanche* and the *Forest* in the English Channel, 9
Cospatrick, loss of the, 9, 10
 Culpable neglect on the part of shipowners, 3

 DAVITS, form and other characteristics of, 15
Deck lumber, 15

Delays and difficulties in lowering and launching boats, causes of the, 7
Deutschland, loss of the, 4
 Disasters at sea, 4-11
 Discovery and application of the most trustworthy means of saving life, 4
 Distinctive qualities and capabilities of means of saving life at sea, 4, 13, 15

EFFICIENT life-saving appliances, 17, 18
 Emigrant sailing and steam ships, boats provided for, 5
 England, the head of the maritime nations of the world, 3
 English Mercantile Marine, 3
Eurydice, loss of the, 4

FLOATING mattresses, 14
Forest, collision in the English Channel between the *Avalanche* and the, 9

GEAR for lowering and disengaging boats, 15
 Great International Fisheries Exhibition of 1883, lessons with regard to life-saving apparatus to be learned from, 3

IMPROVED means for saving life at sea, necessity for, 15
 „ „ mode and authority by which they should be applied, 19, 20
 Inadequate means provided for saving life at sea, 3, 5, 6, 13
 „ „ illustrations of the, 5-13
 Inventions for saving life at sea, 14, 17

Kenmure Castle, loss of the, 13, 17
Kent, loss of the, 4, 10

Langrigg Hall, loss of the, 12
La Plata, loss of the, 8, 9, 15
 Life-belts, 14

„ buoys, 14
 „ rafts, 16
 „ jackets, 14
 „ saving appliances, invention of, 14, 17, 18
 Limited extent of means provided for saving life at sea, 5
London, loss of the, 4
 Lowering and disengaging gear for boats, 15

METHOD of launching life-boats at sea, 16, 17
 Mode and authority by which improved means of saving life at sea should be applied, 19, 20
Mogul, loss of the, 17

Narratives of disasters at sea, 4-13
 „ of the collision between the *Avalanche* and the *Forest* in the English Channel, 9

- Narratives of the loss of the *Birkenhead* at Simon's Bay, 7, 8
 „ of the loss of the cable steamship *La Plata* in the Bay of Biscay,
 8, 9
 „ of the loss of the *Teuton*, 11, 12
Northfleet, loss of the, 4, 16
 Number and capacity of boats provided for saving life at sea, inadequacy of
 the, 6, 7

OCEAN-GOING steam and sailing ships, boats provided for, 5

- Pacific*, loss of the, 18
 Passenger steam and sailing ships, boats provided for, 5
 Portable life-saving appliances, 14, 18
President, loss of the, 4
 Price, G. E., Captain, R.N., M.P., report on inadequacy of provision of boats
 by, 6
Princess Alice, loss of the, 4, 10, 11
 Provisions and conditions for saving life at sea, 3, 5, 6
 „ government authority for enforcement of, 3

- Royal Charter*, loss of the, 4
 Royal Commission to inquire into the means provided for saving life in cases
 of shipwreck, &c., proposed appointment of, 19, 20
 Royal Navy, ships of the, 3
 „ „ aggregate armament, 3
 „ „ crews, 3
 „ „ equipment, 3
 „ „ steam power, 3
 „ „ tonnage, 3

SAVING life at sea, 3-20

- „ „ appliances for, 7, 14, 18
 „ „ provisions and conditions for, 3, 18-20
Schiller, loss of the, 4
 Selwyn, Admiral Jasper, on insufficient boat accommodation, 6
Singapore, loss of the, 9

- Teuton*, narrative of the loss of the, 11, 12
 "Top Hamper," 15
 Transactions of the United Service Institute, Meeting of 17th March, 1878, 6
 Typical cases of disasters at sea, 4

- Waitara*, loss of the, 4
 Wanton waste of human life in connection with the English Mercantile
 Marine, 3

LONDON:
PRINTED BY WILLIAM CLOWES AND SONS, LIMITED,
STAMFORD STREET AND CHARING CROSS.

Microformed by
Preservation
Services

6-72.07

5/95

OFFICIAL PUBLICATIONS
OF THE
INTERNATIONAL FISHERIES EXHIBITION,

PUBLISHED BY

WM. CLOWES & SONS, Limited, 13, Charing Cross, S.W

OFFICIAL GUIDE BOOKS, &c.

LARGE PLAN and TOUR of the BUILDINGS, 1d.;
post-free 1½d.

GUIDE to the EXHIBITION, 3d.; post-free 4d.

PROGRAMME of MUSIC, &c., 2d.; post-free 3d.

OFFICIAL CATALOGUE, Second Edition, 1s.; post-free 1s. 4d.

CHEAP RECIPES for FISH COOKERY. Prepared
by Mrs. CHARLES CLARKE. 3d.; post-free 4d.

THE FISHERIES PORTFOLIO :

CONTAINING

Ten Original Etchings of Scenes on the British Coast.

TITLE.	ARTIST.
1.—Bait Gatherers	R. W. MACBETH, A.R.A.
2.—Running Ashore	COLIN HUNTER.
3.—A Fisher Girl	J. D. WATSON.
4.—Fishing Boats off Hastings . .	DAVID LAW.
5.—Going for Bait	OTTO LEYDE, R.S.A.
6.—Boat Building on the Yare . .	C. J. WATTS.
7.—Preparing for Sea—Hastings .	C. P. SLOCOMBE.
8.—Ramsgate Harbour	J. P. HESELTINE.
9.—Fisherman's Haven	J. MACWHIRTER, A.R.A.
10.—Stranded—Rye.	WILFRID W. BALL.

Price 15s. the complete set.

LONDON : WILLIAM CLOWES & SONS, LIMITED,
13, CHARING CROSS, S.W.

PAPERS OF THE CONFERENCES

Held in connection with the GREAT INTERNATIONAL FISHERIES EXHIBITION.

Demy 8vo., in Illustrated Wrapper. Price Sixpence each.

INAUGURAL MEETING: ADDRESS. By Professor HUXLEY, P.R.S.

H.R.H. the PRINCE OF
NOTES ON THE S
OF THE UNITED I
THE FISHERY IN

essor BROWN GOODE,
OYSTER CULTUR

SMITHSONIAN INSTITUTION LIBRARIES

3 9088 00723 5443

POPULATION

GH, K.G. is.

STATES. By Pro

THE NETHER-

LANDS. By Professor HUBBRECHT.

PRINCIPLES OF FISHERY LEGISLATION. By Right Hon. G. SHAW-
LEFEVRE, M.P.

**ON THE CULTURE OF SALMONIDAE AND THE ACCLIMA-
TISATION OF FISH.** By Sir JAMES RAMSAY GIBSON MAITLAND, Bart.

FISH DISEASES. By Professor HUXLEY, P.R.S.

ECONOMIC CONDITION OF FISHERMEN. By Professor LEONE LEVI.

THE FISHERIES OF CANADA. By L. Z. JONCAS.

**PRESERVATION OF FISH LIFE IN RIVERS BY THE EXCLU-
SION OF TOWN SEWAGE.** By the Hon. W. F. B. MASSEY MAINWARING.

MOLLUSCS, MUSSELS, WHEELKS, &c., USED FOR FOOD OR BAIT.

By CHARLES HARDING.

COARSE FISH CULTURE. By R. B. MARSTON.

ON THE FOOD OF FISHES. By Dr. F. DAY.

THE HERRING FISHERIES OF SCOTLAND. By R. W. DUFF, M.P.

LINE FISHING. By C. M. MUNDAHL.

FISH TRANSPORT AND FISH MARKETS. By His Excellency SPENCER
WALPOLE.

FOREST PROTECTION AND TREE CULTURE ON WATER

FRONTAGES. By D. Howitz, Esq.

SEAL FISHERIES. By Captain TEMPLE.

FISH AS FOOD. By Sir HENRY THOMPSON.

STORM WARNINGS. By R. H. SCOTT.

ON THE DESTRUCTION OF FISH AND OTHER AQUATIC

ANIMALS BY INTERNAL PARASITES. By Professor CORBOLD, F.R.S., F.L.S.

SCIENTIFIC RESULTS OF THE EXHIBITION. By Professor E. RAY

LANKESTER.

A NATIONAL FISHERY SOCIETY FOR GREAT BRITAIN. By

C. E. FRYER.

CRUSTACEANS. By T. CORNISH.

TRAWLING. By ALFRED ANSELL.

THE BASIS FOR LEGISLATION ON FISHERY QUESTIONS. By

Lieut.-Col. F. G. SOLÁ.

MACKEREL AND PILCHARD FISHERIES. By T. CORNISH.

ARTIFICIAL CULTURE OF LOBSTERS. By W. SAVILLE KENT.

FRESHWATER FISHING (other than Salmon). By J. P. WHELDON.

SALMON AND SALMON FISHERIES. By DAVID MILNE HOME, F.R.S.E.

THE FISHERIES OF IRELAND. By J. C. BLOOMFIELD.

ON IMPROVED FACILITIES FOR THE CAPTURE, ECONOMIC

TRANSMISSION AND DISTRIBUTION OF SEA FISHES, AND HOW THESE

MATTERS AFFECT IRISH FISHERIES. By R. F. WALSH, of Kinsale.

NOTES ON THE FISH SUPPLY OF NORWAY. By FREDRIK M. WALLEM.

THE FISHERIES OF SPAIN. By Lieut.-Col. FRANCISCO GARCIA SOLÁ.

THE SWEDISH FISHERIES. By Professor F. A. SMITT.

A SKETCH OF THE FISHERIES OF JAPAN. By NARINORI OKOSHI.

NEWFOUNDLAND; ITS FISHERIES AND GENERAL RE-

SOURCES. By Sir ANDROSE SHEA, K.C.M.G.

WEST AFRICAN FISHERIES; WITH PARTICULAR REFER-

ENCE TO THE GOLD COAST COLONY. By Captain C. A. MOLONEY, C.M.G.

RIVER POLLUTION BY REFUSE FROM MINES AND MANU-

FACTORIES, TOGETHER WITH REMEDIES PROPOSED. By V. B. BARRINGTON-

KENNETT, M.A., LL.M.

THE FISHERIES OF CHINA. By J. DUNCAN CAMPBELL.

FISH PRESERVATION AND REFRIGERATION. By J. K. KILBOURN.

PRACTICAL FISHERMEN'S CONGRESS. Under the Presidency of Mr.

EDWARD BIRKBECK, M.P.

THE FISHERIES OF THE BAHAMAS. By AUGUSTUS ADDERLEY.

NOTES ON THE FOOD FISHES OF NEW SOUTH WALES. By

E. P. RAMSAY.

SAVING LIFE AT SEA. By RICHARD ROPER, C.E., F.S.A.

TEACHINGS OF THE FISHERIES EXHIBITION. By A. J. R. TRENDALL.

WILLIAM CLOWES AND SONS, LIMITED, 13, Charing Cross, S.W.