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## ON WEATHER GLASSES.

By Admiral FRIZ-ROX, F.R.S.

As an excuse for writing rather positively about weather and its premonitory indications, I beg to say that nearly half a century ago I was taught by my father, a farming, gardening, and fox-hunting country gentleman, the use of barometers, thermometers, and hygrometers, as "weather glasses;" and it is more than 40 years since I began to use such instruments regularly in the South Pacific Ocean.

"Weather glasses" were used in the 17th century. Among others, De Foe watched and registered them in 1703 (see "The Storm"); but it is an instance of the necessity for repeating information, that, generally speaking, even now little real use is made of these instruments, however familiar, common, and inexpensive they have become.

Like seamanship, ability to foretell weather is acquired, by degrees, practically, and has not been hitherto attained by books; but it may now be so, in consequence of numerous recorded observations and opinions, brought together in late years and very carefully considered.

Instructions are now available, based on scientific as well as practical conclusions, with which help, properly studied, any one may become "weather-wise" who will notice, even once a-day, the indications of the heavens, of thermometers, and of a barometer.

Marked distinction is advisable between such observations and instructions as are intended only for indicating changes of weather, or its duration, and those of a

superior kind required for comparisons and elaborate deductions for scientific purposes.

Want of such sufficient distinction has been hitherto prejudicial.

Unduly mixing scientific objects with mere practical notices of weather has had a tendency to repel the less educated, or to accumulate inferior records unavailable for really scientific purposes.

To require that a perfect barometer, equal to the demands of modern science in an observatory, should be used as a mere "weather glass" at a life-boat station or fishing village, might remind one of putting a racehorse in a cart, or using a razor to cut sticks.

As discussion has arisen about "boiling mercury" and "inspecting the process," I think it a duty to endeavour to throw some light on this subject.

To know whether a tube with mercury has been well boiled, as it is called (by holding and turning it over a charcoal fire), it is unnecessary to watch the tedious process, as examination of the metal in the tube, with a lens, and its "click" at the top of the tube, give unfailing evidences of the presence or absence of air, whether boiled or otherwise treated.

To verify the graduation thoroughly (not at a few casual heights only, by comparison with another barometer), artificial pressure or exhaustion must be obtained by placing the instrument under the receiver of an air-pump.

This is done at Kew, very completely: and it is necessary for accurate scientific barometers, but not for mere weather glasses.

In buying delicate and elaborate instruments, some consideration is indispensably due to the reputation of the makers; and, when operating largely, if more than one house be employed, each is a check on the other, and on pecuniary arrangements. It should be remarked, that only a few opticians manufacture instruments on their premises under their own eyes.

While saying so much of the mercurial barometer, it would be an injustice to the aneroid did I not mention that ten years' experience of this small and very portable barometer at sea, on land, and travelling, has induced me to recommend it (when set properly) as an excellent weather glass for small vessels or boats.

As all these barometric instruments usually show what may be expected a day or even days in advance, rather than the weather of the present or next few hours; and as wind, or its direction, affects them much more than rain or snow, due allowance should always be made for days as well as many hours to come.

Subjoined is a table of average temperatures at 9 A.M. near London, which may be used (with allowance for usual differences between Greenwich temperatures and others) for assistance in foretelling the direction of coming wind, and nature of weather.

The thermometer (shaded and in open air) being much higher at 9 A.M. than the average, indicates southerly or westerly wind (say tropical); but when considerably lower, the reverse or northerly (polar) current of air.

These indications are not yet generally familiar—as they ought to become, being easily marked, and very useful.

Average temperatures at Greenwich:—  
In the shade, open air, at about 9 A.M., being nearly the mean temperature of each twenty-four hours, taking the year through, in the British Islands—

	Fahr.		Fahr.
January . .	37°	July . .	62°
February . .	39°	August . .	61°
March . .	41°	September . .	57°
April . .	46°	October . .	50°
May . .	53°	November . .	43°
June . .	59°	December . .	39°

### WRECK ASHORE.\*

Is a man's life worth four pounds seven shillings and twopence?

The wind moans and pipes through the trees in the garden, and comes rumbling down the chimneys of our lodging by the sea. There rises from the beach a solemn roar of waters. Through splashes of rain on the window-pane, through the twilight gloom of a spring evening wrapped in the wild night of storm, we look out on the glancing of white lines of surf, and at the upward lightning of the rockets from a vessel in distress. As if defiant of the little flash of man's distress, the black cloud is ablaze; and, for an instant, we make out a brig distinctly. Had we time, we could count the men upon her deck. Darkness descends again as the floor under us is shaken by the mighty jarring of the thunder. Our hearts beat in the presence of no holiday spectacle. We came hither for sea air and health, choosing a spot where there is a bold coast, a fine sea, and only a small fisher hamlet near us. Here, we learn, there are many wrecks. The frail child we brought with us has fled from the window to her sofa in the farthest corner of the room, and lies there panting with her hands before her eyes. I dare not leave her to go down to the wild shore. And what can I, weak invalid, do when the very boatmen can do nothing but assemble in a hopeless crowd upon the beach? About them are hovering their mothers, wives, and daughters, who will resist by entreaty and force any attempt to put out through such a surf. The women on the shore here have their way; and so God comfort the wives and mothers of those out at sea.

I did not lift next morning the corner of the sail covering that by which my old pilot was watching solemnly. He sat on the great heap of sea-weed that now fringed the shore.

"How many, Jem?" I asked, after I had stood by him for a long time in silence.

"Change for six fi'-pun' notes under yon sail," Jem answered.

"How can you jest—"

"Four tight sailors, a boy, and—" he turned the sail from the face of a drowned seven-year old girl, her hair like that of our own ailing little Ethel. Jem finished his pipe gloomily.

I sat beside the spread sail in a reverie of selfish pity.

"When you preached for the vicar, sir, last Sunday," presently said Jem, "you talked something like as if money was dirt. Perhaps it is. Perhaps that's dirt under the sail."

The nurse was bringing Ethel in her arms towards us, and I motioned her away, although the child cried bitterly to come to me and her rough sailor friend. This morning her walk must not be upon the shore.

"To be sure," said Jem, a little grimly, "it's not dirt when there's life in it. What a many sorts of change people may take out of five pounds."

\* From DICKENS'S *All the Year Round*, July 21, 1860.

"What do you mean?"

"Why, there was all hands lost last night for want of a life-boat here. My son-in-law is coxswain of the nearest life-boat, but that's thirty miles from us. We've lots of wrecks, but never a boat yet. There are boats wanted, belike, in hundreds of other places where there are only poor people ashore, though there are none the kinder rocks and shoals at sea. We can't set up a boat."

"A few five-pound notes," I said, "would not have done it for you."

"Look here, sir," said Jem. "My son-in-law, he's but a rough fisherman who knows his trade, a stout lad, and not stupid on salt water. He gets 8*l.* a-year for being coxswain of the life-boat at his place, and very proud he are for so to be. Once a-quarter he goes out with the boat's crew, men like himself, for exercising in rough weather, and they get their day's pay too, as is fitting. They've a boat that'll do anything but go out walking ashore by itself, and that lives in a home of its own, handy to the sea, ready to slip out on a wreck at a minute's notice. What he tells me is, which is the only learning he's got from books kep' in the boat-house, that when the money that has been spent in setting life-boats up about the coast is squared against the lives saved, there's a life for every four pound seven and two-pence. That's the sum. So, the more five-pound notes go that way, the fewer of us will go this way;" and he laid a wrinkled finger on the sail. "But you couldn't tell 'em anything from the pulpit, sir, unless it wor in charity sermons, about what is to be bought with fi'-pun' notes. Ah, dear! I wish I had a lot of 'em!"

When, a week after the storm, I went in search of a physician to the seaport Jem had named, and, whilst waiting his time to return with me when he had seen his patients on the spot, I walked sadly by the ripple of a placid sea, and came by accident upon the life-boat house. It was a neat stone building with some show of architecture in it, with a verandah east and west sheltering forms upon which pilots and others might sit under cover in foul weather. I had been told that, at this town, boat-house and boat were the gift of a lady of fortune, and it was evident that she was one who did not give with two fingers. The wide folding-doors opening upon the sea were closed and locked. A boy with a shrimp-basket, at my request, went off in search of Bill the coxswain, who had charge of one of the keys; and Bill was talkative enough when he found whence I came, and whither I was about to return that evening, also that I would take a bit of parcel back with me from his wife to her old father, and that I did really care very much to know what he could show and tell me. But what he told me caused me to make more inquiry, to get books and papers, and, at last, to write as I now do, while I sit watching the night through by the bedside of my little Ethel, with the moan of the night wind and the measured dash of the sea filling up all pauses in my thoughts.

Upon our island coast touch, in each year, ships that afford permanent employment to about 250,000 men and boys. Every year, about 1,000

vessels suffer upon the shores of Britain, wreck total or partial, and sometimes 500, sometimes 1,500 (in the very last year 1,646) lives have been lost. In the first half only of this current year, the average of twelve months of disaster has already been attained. Of the total wrecks, nearly one-half the number is found to arise from errors in seamanship or other preventable causes, and 17 in 100 have occurred to unseaworthy vessels. Some also are lost (there have been eight lost in one year) because they have been provided with defective charts or compasses. It is the duty of some one to secure the timely condemnation of old vessels, which are now sent out until they sink at sea, and bring to an untimely death the men they carry. Of the ships lost, only 1 out of 4 is lost in a storm. Oversight, ignorance, neglect, and false economy, are more cruel than storms. Wrecks themselves are in a great degree preventable. But here only the question is, how to prevent loss of life by wreck within sight of the British shores?

The wrecks on our coasts last year were more numerous than they have been in any former year of which record is kept. The excess was caused by two violent gales. In the gale of the 25th and 26th of October, there were 133 total wrecks and 90 casualties. The number of lives lost in that one gale on our shores was within 2 of 800. The loss of life would have been great had the dead-list not been more than doubled by the loss of 446 lives in the *Royal Charter*. After a rest of five days, the winds blew again on the 1st of November; and, in that second gale, 29 lives were lost in the wreck of 38 vessels. There were also 2 great wrecks on other days to swell the death-list. In the beginning of spring, more than 400 lives were lost at once in the *Pomona*, 56 were lost in midwinter with the *Blerwie Castle*. These were all deaths on our shore. Of wrecks at sea nothing is said. It has been found that the proportion of accident has become much greater than it used to be in British, as compared with foreign vessels. Putting out of account the coasting-trade, and reckoning the oversea trade only, the chance of accident to a British ship is once in 175 voyages; but that, to a foreign ship, the average of accident is only once in 335 voyages; accidents upon our coasts, therefore—strange fact!—are twice as likely to occur to a vessel that is at home as to the vessel of a stranger.

One accident occurred to a vessel aged more than a century, one to a ship between 80 and 90, and another to a ship between 90 and 100 years of age. Sixty-four wrecks were of ships more than 50 years old; but it is between the ages of 14 and 20 that ships have appeared to suffer most. The age next in liability to misfortune was between 20 and 30; then the comparatively new ships, between 3 and 7, suffered most. Of the wrecks last year, more than 600 were on the east coast, less than 500 on the west coast, and less than 150 on the south coast. On the Irish coast there were but 99 wrecks against 68 in the preceding year, but wrecks on the Isle of Man increased in number from 6 to 28.

The value of the property lost by the wrecks on our coast last year was nearly 2,000,000*l.*, the lives lost were, as before said, 1,645; but as there were more wrecks, and more losses than ever, so were there also more lives saved from wreck than ever. About 300 were saved by life-boats—nearly as many by the rocket and mortar apparatus—1,000 by luggers, coast-guard or fishermen's boats, and small craft—nearly 800 by ships and steam-vessels, and 6 by the heroism of individuals.

Last year, as in the previous year, it was the south-west wind that proved most disastrous. Of the two most fatal gales, Admiral Fitz-Roy has pointed out that they were foretold by both thermometer and barometer, and that their advance could have been telegraphed from the southern to the eastern and northern coasts in sufficient time to insure full preparation. "It is proved," writes the admiral, "that storms are preceded by distinct warnings, and that they advance in particular directions towards places where their influence is felt some time after it has become marked elsewhere. Therefore, information may be conveyed by telegraph in time to caution those at a distance who are likely to be visited by bad weather." Of the message, swifter than the wind, no use has yet been made for the protection of our sailors.

Warning was again neglected of the yet more terrible gales of this year. In the lost Yarmouth fishing-boats alone and the adjacent dozen miles of coast, nearly 200 men perished, and they have left 200 children fatherless.

The courage and humanity of the boatmen of our coast appear in the return of lives saved. We must not think of the rocket and mortar apparatus and the life-boat stations as the sole dependence of the shipwrecked mariner whose eye strains towards British ground expecting help. But the life-boat can brave storms in which a coast-guard boat or fisher-boat could not venture to put out; it has a trained crew, and every provision for the rescue of men from a wreck; it is ready to slip out to its work at a minute's warning, and the men saved by a life-boat very commonly are men whom nothing but a life-boat could have saved.

There is a fund annually granted by this nation for the acknowledgment of gallant services in saving life at sea. It is spent, not in reward, but in thankful recognition of a generosity bounded by no national distinctions. Now, it is an American captain who saves 30 English lives, maintains them in his ship for 40 days, and joins his owners in refusing compensation. Now, it is a French custom-house officer, himself unable to swim, who has plunged into the sea to save a drowning Englishman, or who totters from a sick-bed to help in the rescue of an English wreck upon his coast. Now, it is a Genoese captain who saves a crew of 14 men, maintains them for three weeks, and will not be paid. Now, it is a Greek and now a Dutchman, now a Dane and now a Portuguese, who has braved death and storm for the help of imperilled Englishmen. The Maltese seaman of the *Royal Charter* none forget.

The public recognition of the duty for which all

hearts are so ready, as regards the saving of wrecked men upon our shores, has for its best evidence the life-boat. There were last year 158 life-boat stations on the coasts of the three kingdoms. Many of these are maintained by the harbour commissioners, dock trustees, or other local representatives of shipping interests, of the ports at which they are found. One or two are maintained by the generosity of individuals; but the great majority—92 last year, and after a few months this year, 103—are under the management of the NATIONAL LIFE-BOAT INSTITUTION. This Institution relies on the public for its means, but has a subsidy of about 2,000*l.* a-year from the BOARD OF TRADE, which spends also another 2,000*l.* on the maintenance and use of the mortar and rocket apparatus. On the Institution just named, the country depends for the maintenance and advancement of an efficient life-boat system. What is its history, and what is it about?

It was founded six-and-thirty years ago, and is actively represented by a committee mainly composed of mercantile men and officers in the navy, including the Chairman of Lloyd's, the Comptroller-general of the Coast-guard, the Hydrographer of the Admiralty, Deputy-master of the Trinity-house, and others, presided over by His Grace Admiral the Duke of Northumberland. The committee sits in London, and, on the part of the Institution, its business is to build, station, and maintain in repair life-boats of the most perfect description; to furnish them with all necessary appurtenances, including boat-houses, and carriages for the conveyance of boats to the sea; also to provide, through a local committee, for the proper management of each boat and the exercising of its crew. The Institution also grants money, medals, and votes of thanks to those who have risked life in the effort to save shipwrecked men. It collects and turns to account the newest and best information on the construction of life-boats, the management of boats in surf and storm, the best method of restoring animation to drowned men in whom a spark of life may linger, and whatever else may be found serviceable to the cause it represents.

It has been reported to the committee of this Institution, by coast-guard officers and Lloyd's agents, that there are many points upon our coast at which a life-boat station is still urgently required. Two years ago, the Institution possessed 70 boats. A year ago, it possessed 81 boats. At the annual meeting held this year, it was reported that the Institution had placed on the coast 12 more boats (one of which is the free gift of Miss BURDETT COURTS\*), and had others in course of building, which would raise the force of their fleet to 103,

\* The following ladies and gentlemen have presented the cost of life-boats and their equipments to the Institution:—Lady ROLLE, for Exmouth life-boat establishment, 375*l.*; Members of the Royal Thames Yacht Club, for Walmer life-boat, 160*l.* 7*s.*; Mrs. ANN WOOD, of Eltham, for Hornsea life-boat, 150*l.*; a Friend, per Admiral HARGOOD, for the Skerries life-boat, 150*l.*; Miss BURDETT COURTS, for Silloth life-boat, 180*l.*; JAMES KNOWLES, Esq., Eagley Bank, for Southport life-boat, 190*l.*; W. M'KERRELL, Esq., Bath, for Seaton Carew and Fraserburgh life-boats, 360*l.*; a Lady whose life was saved from drowning, for Carnsore life-boat establishment, 300*l.*; Royal Victoria Yacht Club, for Grange, Isle of Wight, life-boat and car-

the largest life-saving fleet that the world has ever seen. Each boat, apart from any help it might give to a wreck, has been out once a-quarter in picked rough weather, if possible, for exercise of the men, and for test of the efficiency of all its tackling. For such exercise, in stormy weather, every man has had a day's pay of 5s., and for duty at wrecks the payment has been 10s. a man per day, and 1l. for night-work. 5,000 stout men of the coast manned the life-boat fleet, and pulled oars during the last year in its service. The cost of managing is as little as it can be. But the exertions made last year compelled a large expenditure in excess of income. Great care is taken, by a minute system of reports and frequent inspection, to secure the constant readiness and sustain perfectly the right equipment of each boat.

Except a little interest from funded capital, and the subsidy before mentioned, from the Mercantile Marine Fund of the BOARD OF TRADE, the LIFE-BOAT INSTITUTION is obliged to look wholly to the public for augmenting the life-boat fleet. But it is to be remembered, also, that this kind of expenditure does not represent all that has been done; the central Institution often grants its funds in aid of local efforts, and of the life-boatmen's pay, about 1,000l. a-year collected from among their neighbours never enters into the accounts of the Society. The sympathy of all hearts with the work also produces savings that are, in fact, gifts, not represented on the balance-sheet. A railway company, for example, or a steam-packet company, is proud to convey a life-boat to its destination free of charge.

The cost of a life-boat is not much under 200l. It should be strong, buoyant, as swift as possible in a heavy sea, constructed to discharge at once the water that it ships, and to right itself when upset, and it must also supply the greatest possible amount of stowage-room for passengers. The ingenious carriage contrived for its transport along the coast, as well as for its run to the sea and instant launching, costs from 60l. to 100l., and the boat-house about another 140l. Every man of the crew is supplied with a cork life-belt, which he is bound to wear whenever he goes afloat in the craft. The belts hang against the walls of the boat-house, and the boat's equipment is there kept always ready for immediate use. The establishment of a life-boat station having once been set up on the coast, 30l. a-year is the average cost of its maintenance.

Among the publications of the Institution is a

risge, 277l.; M. A. C. S., for Porthcawl and Portrush life-boats, 400l.; A. W. JAFFRAY, Esq., for Llandwynn, St. Andrews, and Thurso life-boats, 560l.; MESSRS. JAFFRAY and SONS, London, for North Berwick life-boat, 180l.; the Hon. Mrs. AGAR and T. J. AGAR ROBERTS, Esq., M.P., for Lizard life-boat establishment, 269l. 13s. 7d.; WM. RASHLEIGH, Esq., and the Hon. Mrs. RASHLEIGH, towards the cost of the Fowey life-boat, 100l.; MESSRS. MACFIE and SONS, Liverpool, for Banff life-boat, 180l.; a Friend, for Newquay and St. Ives (Cornwall), Tyrella (Co. Down), and Buckle, Banffshire, life-boats, 720l.; GEORGE GAY, Esq., Bristol, for Penarth, Glamorganshire, life-boat, 200l.; some members of the Society of Friends, for Selsea, Sussex, life-boat, 150l.; The Misses BROWN, in memory of a deceased relative, for Llandudno life-boat, 200l.

set of Instructions for the Recovery of the Apparently Drowned, which cannot be too widely diffused. They are founded upon principles laid down by the late Dr. MARSHALL HALL, and had been made the subject of extensive inquiries by the Institution before they were officially presented by it as the best practical advice that science can afford. These rules are easily remembered and easily acted upon, and there is no person to whom the knowledge of them may not, by some unhappy chance, become a matter of the deepest consequence. So here is the substance of them:—

Cause no delay by removing the body to a dwelling-house, but act instantly, in the open air.

Send for a doctor, blankets, and dry clothes, but wait for nothing. Endeavour at once to restore breathing and maintain warmth, and persevere in the endeavour, not for minutes but for hours.

To Restore Breathing, clear the throat by placing the body on the ground, face downwards, with one arm under the forehead. Fluid will escape by the mouth, the tongue will fall and leave the windpipe open. Cleanse and wipe the mouth. If breathing do not follow, or be very faint, endeavour to excite it artificially. To do this, first turn the body rapidly upon its side and stimulate the nostrils with snuff or smelling-salts, or the throat with a feather. If that fail, instantly replace the body on its face, setting a folded coat under the chest to press upon it and aid in forcing out the air. Then turn the body gently to one side and a little beyond, and briskly back upon its face, keeping up these two movements alternately, at the rate of about fifteen to the minute, now and then varying the side. Aid the expulsion of air from the chest by brisk simultaneous pressure with the hand upon the back between the shoulder-blades each time that the body is placed on its face.

Let the body never be turned on its back.

To Maintain Warmth, dry the body and wrap it in a blanket, leaving, except in severe weather, the face, neck, and chest exposed.

After Breathing has been Restored, and not until then, rub the limbs upwards; use hot flannels, &c. Give first a teaspoonful of warm water, afterwards small quantities of wine, brandy and water, or coffee. Keep the patient in bed, and encourage sleep.

Another of the publications of the Society, founded upon inquiry among the expert boatmen on our coasts, gives clear directions for the Management of Open Boats in Heavy Surf and Broken Water. This little book has been translated into French, Spanish, and Swedish, and has been circulated extensively throughout Her Majesty's fleet. In putting out to sea, or in coming to land when the weather is rough, all the peril is upon the broken sea, and life depends on a distinct understanding of the dangers to be battled with, and the right way of overcoming them.

I could say more; but Ethel is awake, and, wandering in fever, talks with the child drowned in the storm that scared away her little rest of health.

## NOBLE EXAMPLE.

AT the Annual Meeting of the ROYAL NATIONAL LIFE-BOAT INSTITUTION in March last, Admiral Sir GEO. F. SEYMOUR, K.C.B., some time since Commander-in-Chief of H.M.'s Squadron on the North American Station, read the following interesting letter from Miss D. L. DIX, an American lady, well known for her universal philanthropic labours. We feel assured that its perusal will be as gratifying to our readers as the noble conduct of the benevolent lady herself is creditable to her.

In appreciation of Miss DIX's long and valuable services in the cause of humanity, the ROYAL NATIONAL LIFE-BOAT INSTITUTION has presented to her its special thanks inscribed on vellum.

*New York,*  
*November 28th, 1853.*

SIR,

WHEN I was last summer in Nova Scotia an opportunity occurred of visiting Sable Island, the seat of a provincial humane establishment. I found it deficient in libraries, opening a source of amusement and instruction to isolated mariners stationed there, and that there was no lighthouse for warning passing vessels, nor life-boats for rescue in the event of perilous shipwrecks. The first and last deficiency I was confident I could, by myself and my friends at home, supply; but the second, a lighthouse, I could only hope to see established through your Excellency's influence, met and sustained by the gubernatorial authority of SIR GASPARD LE MARCHANT. This measure has more than once been favourably commended to your Government; and is, I think, sustained by the opinions of naval experience. I believe that I am correct in quoting the views of the surveying officer, CAPTAIN BAYFIELD, in support of this position: and his judgment upon such questions, I am led to believe, is received as authority. The opinions of most members of the civil Government differ; but as they suffer none of the exposures, and encounter none of the dangers of maritime life, I presume they will concede the decision to those who unite prudence with courage, and who, while they unshrinkingly meet perils, do not despise aids for averting destruction. I shall regard elaborate argument unseasonable in presenting this subject to your Excellency for cordial support; and in the confidence which your reputation for humanity and energy inspire, I leave this work in your hands, for early accomplishment.

I may inform you that a library of several hundred volumes, the joint gift of some of my friends, and of several liberal publishers and booksellers in Boston, unostentatiously made, has already been forwarded to Halifax to constitute a mari-

ner's library for Sable Island. In view of supplying life-boats to meet a pressing necessity—and in a spirit of neighbourly good will and “fraternal kindness” for “the humane establishment” already referred to—I asked a few of my mercantile friends in the cities of Boston, New York, and Philadelphia, informally for a contribution, to purchase four life-boats, a life-car, with mortar, waggons, cables, &c., with every appliance for the use of the boats at these several stations. These at my request have all been constructed expressly for this object, and the cables, &c., all wrought and selected with the special view to permanent use and durability. In Boston, the work has been directed by the experience and judgment of R. B. FORBES, Esq., a name well known in England, associated with liberal and humane endeavours, and at home, in the United States, for nautical skill and liberal action. I am under great obligations to Mr. E. MERRIAM, of New York, for efficient service in selecting apparatus and aiding in such parts of this business as it was neither suitable nor possible for me to direct. The Philadelphia boat has been constructed in New York. I have named the Philadelphia boat *The Grace Darling*. The New York boats severally, *The Reliance*, and *The Samaritan*; the life-car, *The Rescue*; and the Boston boat, *The Victoria*. The mortar, dedicated for ever to the life-car service, I have called “The Life Preserver.” I have written to you, dear sir, in the belief that you would sympathise in my interest and exertions, in procuring these means for the assisting mariners in perilous positions, and in saving human life. I intend that the boats should reach Halifax in a few weeks. Inevitable delays have prevented the accomplishment of my wish at an earlier season—for I had hoped to have anticipated the autumnal storms.

I suppose the boats will be landed temporarily on the Queen's Wharf, and I shall be gratified if you will do me the honour of inspecting them. I have seen them mount the breakers in a heavy sea, without shipping a bucket of water, but I must add that they were admirably manned. I should like that such of your officers as have judgment and skill in these matters should test their sea-worthiness proved in the hands of those who are subjects of Her Majesty's sovereignty.

I have the honour to be, &c.,

(Signed) D. L. Dix.

*To His Excellency Admiral  
Sir George Seymour, K.C.B., &c.*

#### ADDITIONAL STATIONS AND NEW LIFE-BOATS.

ST. ANDREW'S, FIFESHIRE.—A new life-boat and transporting-carriage have been placed at *St. Andrew's*, and a Branch of the NATIONAL LIFE-BOAT INSTITUTION has been established there. This boat is on the self-righting plan adopted by the Institution,

and is 32 feet long by 8 feet wide, rowing ten oars, double-banked.

The cost of this life-boat was generously presented to the Institution by A. W. Jaffray, Esq., of London, and the expense of the boat-house and carriage has been liberally defrayed by the residents of the neighbourhood, who have undertaken to maintain the same in conjunction with the Institution, forming a Branch of it at St. Andrew's, in conformity with its usual custom.

**CARMARTHEN BAY, SOUTH WALES.**—A life-boat station has been recently established at Ferryside, in Carmarthen Bay, in connection with the NATIONAL LIFE-BOAT INSTITUTION. The life-boat is on the self-righting plan, 30 feet long by 7 feet wide, and rowing six oars, single-banked. She is provided with a transporting-carriage, and a handsome boat-house has been provided by local subscription for her reception. Wrecks frequently occur in Carmarthen Bay; and the establishment of this life-boat will add much to the security of mariners frequenting that part of the coast in the winter months.

Funds for the establishment and maintenance of this Branch of the Institution have been most liberally contributed in the locality.

**SILLOTH, CUMBERLAND.**—A life-boat station has been recently established at Silloth, near Carlisle, in connection with the NATIONAL LIFE-BOAT INSTITUTION. The cost of the life-boat was presented to the Institution by the well-known benevolent lady MISS BURDETT COURTS. The boat complete, with transporting-carriage, &c., is similar in all respects to that at Carmarthen Bay above described. The inhabitants of the locality, who have liberally contributed towards the cost of the boat-house and carriage, will maintain the establishment jointly with the parent Institution.

**PORTHCAWL, SOUTH WALES.**—A life-boat station complete, similar to the two above named, has been founded at Porthcawl, in connection with the NATIONAL LIFE-BOAT

INSTITUTION. Many wrecks have occurred in this neighbourhood; and the station will doubtless prove an important additional security to vessels trading in the British Channel. This Branch Establishment has also been very liberally contributed to by the residents of the neighbourhood. The cost of the life-boat was generously presented to the Institution by a lady resident in Staffordshire.

**ISLE OF WIGHT.**—Two life-boats have been recently placed by the NATIONAL LIFE-BOAT INSTITUTION on the S. W. coast of the Isle of Wight. The one is stationed at Brooke, near Freshwater Bay, the other at Grange Chine, in Brixton Bay. The cost of the Grange life-boat and carriage was presented to the Institution by the members of the Royal Victoria Yacht Club; whilst the cost of the Brooke and Grange life-boat houses have been subscribed by the inhabitants of the island. Local Committees of Management have been formed, and substantial boat-houses have been erected for their reception. Lying near the track of all vessels passing up or down the Channel, the coast on this part of the island has always been liable to wrecks, and the want of a life-boat has been greatly felt on it. Three vessels and several lives were lost here during last winter, which awoke a general local interest in the subject, and led to the establishment of these boats, which, it is to be hoped, will be the means of rescuing the crews of any vessels lost in this locality in future years.

All the above life-boats, with their carriages, were liberally conveyed to their destinations free of charge by the several Railway and Steam Packet Companies, on their lines of transit, as follows:—

Railways: Great Western—South Wales  
—North Western—Lancaster and Carlisle  
—South Western.

Steam Packet Companies: London and Dundee—Isle of Wight.

### BAROMETERS FOR LIFE-BOAT STATIONS.

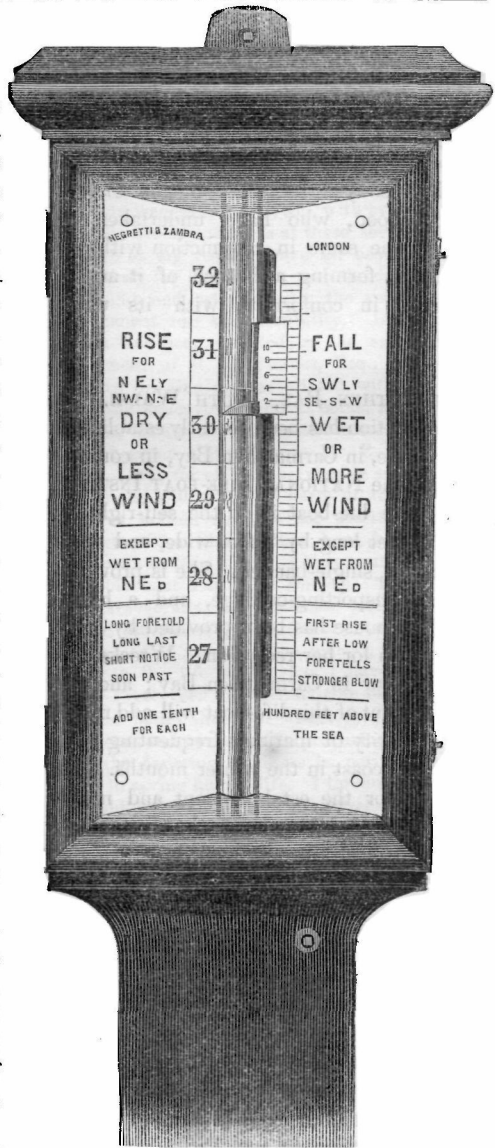
PUBLIC attention has frequently been called to the invaluable use of a barometer for indicating a coming storm. It not unfrequently happens that a notice of a gale is given by a barometer two or three days before it actually takes place. It seems plain that with such powers placed providentially in our hands the calamities now endured by our fishermen and coasters might in many instances be avoided. A good barometer in a public situation would warn them in time what to expect, and they could thus be frequently able to avoid the terrible consequences of storms, so often at present proving fatal to them.

Rear-Admiral FITZ-ROY, F.R.S., has compiled so thoroughly practical a Manual for the use of a barometer, that seafaring men or fishermen may soon become perfectly familiar with the indications of the instrument. Some time since, as Chief of the Meteorological Department of the Government, he obtained the sanction of the BOARD OF TRADE to supply some forty of our poorer fishing villages with barometers, some of which have been of great service to the fishermen.

His Grace the DUKE OF NORTHUMBERLAND, K.G., has also, jointly with the Meteorological Society, recently provided barometers for some of the principal fishing-stations on the Northumberland coast, under the superintendence of JAMES GLAISHER, Esq., F.R.S., of the Royal Observatory, Greenwich.

It is, however, evident that something more is absolutely required, in order to make barometers generally available for our fishing and seafaring population: it is therefore satisfactory to find that this important subject has been taken up practically by the NATIONAL LIFE-BOAT INSTITUTION.

Admiral FITZ-ROY, who is a Member of its Committee, and Mr. GLAISHER, have promised to give the undertaking their cordial and valuable co-operation. Admiral



FITZ-ROY's own Manual, as well as large placards containing extracts from it, will be extensively circulated on the coast, fully explaining the working of the barometer.

It is proposed to fix such instruments, wherever found useful and practicable, in suitable positions at the Society's life-boat houses, which are situated on most parts of the coasts of the United Kingdom.



To carry out effectually this plan, the Institution has, fortunately, the machinery at hand, for to each of its life-boats is attached a permanent coxswain, who receives a small annual salary for his superintendence of the working part of the life-boat establishment. It is proposed to instruct such of these men as are found capable, in the indications of the barometer, so that they may act as so many storm-warners in the towns or villages in which they reside.

It will be readily conceived what beneficial results may accrue to life and property among our hardy sea-coast population from this important step. It is notorious that at the present day the masters of our smaller coasting and fishing craft hardly ever think of consulting a barometer, if indeed they have opportunity to do so.

It is estimated that a good barometer cannot be fixed at a life-boat house under 6*l.*, so that it will require a considerable sum to carry out effectually the above plan of the INSTITUTION.

A benevolent gentleman has presented to the Institution 50*l.*, to be applied specially to the purchase of barometers for its life-boat stations; and we cannot doubt that the public will readily make up what may be further required.

The making of the barometers will probably be intrusted to Messrs. NEGRETTI and ZAMBRA, who have supplied the before-named 40 instruments to the BOARD OF TRADE, for various fishing stations on the northern coast, and also a number to the British Meteorological Society, for the coast of Northumberland. The object of the Institution will be to obtain a good instrument, and one that will not easily get out of order in travelling, or require renovating at frequent intervals; in short, a barometer that, having been once set up at a life-boat station, will be a permanent instrument of instruction, and one that will not entail any future expense to the Society. In order to meet these requirements, the makers have, therefore, introduced the following changes in the regular instruments, which, we think, may fairly come under the head of important improvements. The brass or ivory scales

that barometers are generally furnished with are here replaced by a substantial plate of porcelain, on which the degrees and figures are legibly engraved, and permanently blackened in, so that, as far as the divisions and figures are concerned, there will be no danger of their becoming faded or obliterated. This is a very important improvement, especially for an instrument that has of necessity to be placed in an exposed position, where the mariner may be able to consult it at any time, even in the middle of the night, should he wish to do so.

The mercurial tube of the barometer is of large diameter, so as to render the mercury easily visible, and show the slightest variation; and is so constructed that the liability of air entering it, is, we may say, entirely obviated: for if air by any means find its way *up* the tube of a barometer, let the quantity be ever so minute, the indications of the instrument are erroneous, and no longer to be relied on. To prevent the admission of air to the vacuum above the mercurial column, a trap is laid at the bottom of the tube, near the part called the cistern, so that if any air should find its way into the tube, it cannot possibly pass the trap, but is there detained, and the instrument is in no way deteriorated or injured by its presence. These tubes are, moreover, "boiled." The size of the mercurial column averages four-tenths of an inch: so that, altogether, instruments of the greatest efficiency will be obtained. A great change has also been effected in the old system of marking the scales with Fair, Change, Rain, &c.—words which in reality have often a tendency to mislead, and to throw discredit on barometrical indications. The plan to be adopted in the life-boat barometer is shown in the accompanying engraving. This has been arranged systematically.

The NATIONAL LIFE-BOAT INSTITUTION has recently diffused useful information on the treatment of the Apparently Drowned, and on the Management of Boats in Heavy Surfs and Broken Water, which has already been productive of public benefit, not only on the coasts of the British isles, but also over other parts of the globe.

It may, also, be fairly anticipated that similar beneficial results will ensue from the establishment of these barometers at its life-boat stations.

We subjoin a synopsis of Admiral FITZ-ROY'S Instructions on the use of Barometers. These instructions will be printed on large placards for use on the coast, wherever the barometers of the NATIONAL LIFE-BOAT INSTITUTION are placed, and elsewhere:—

“The barometer should be set regularly by a duly-authorized person, about sunrise, noon, and sunset.

“The words on *old* scales of barometers should not be so much regarded for weather indications as the *rising* or *falling* of the mercury; for if it stand at *changeable*, and then rise towards *fair*, it presages a change of wind or weather, though not so great as if the mercury had risen higher; and, on the contrary, if the mercury stand above *fair* and then fall, it presages a change, though not to so great a degree as if it had stood lower: besides which, the direction and force of wind are not therein noticed.

“It is not from the point at which the mercury may stand that we are alone to form a judgment of the state of the weather, but from its *rising* or *falling*; and from the movements of immediately *preceding* days as well as hours—keeping in mind effects of change of *direction*, and dryness, or moisture, as well as alteration of force or strength of wind.

“It should always be remembered that the state of the air *foretells coming* weather, rather than shows the weather that is *present*—(an invaluable fact too often overlooked)—that the longer the time between the signs and the change foretold by them, the longer such altered weather will last; and, on the contrary, the less the time between the warning and the change, the shorter will be the continuance of such foretold weather.

“If the barometer has been about its ordinary height, say near thirty inches at the sea-level, and is steady or rising, while the thermometer falls, and dampness becomes less,—north-westerly, northerly, or north-

easterly wind, or less wind, less rain or snow may be expected.

“On the contrary, if a fall takes place with a rising thermometer and increased dampness, wind and rain may be expected from the south-eastward, southward, or south-westward.

“A fall with low thermometer foretells snow.

“When the barometer is rather below its ordinary height, say down to near twenty-nine inches and a half (at sea-level), a rise foretells less wind, or a change in its direction towards the northward—or less wet; but when it has been very low, about twenty-nine inches, the first rising usually precedes or indicates strong wind—at times heavy squalls—from the north-westward, northward, or north-eastward; *after* which violence a gradually-rising glass foretells improving weather, if the thermometer falls; but if the warmth continue, probably the wind will back (shift against the sun's course), and more southerly or south-westerly wind will follow, especially if the barometer's rise is sudden.

“The most dangerous shifts of wind, or the *heaviest* northerly gales, happen *soon* after the barometer *first* rises from a very low point; or if the wind veers *gradually*, at some time afterwards.

“Indications of approaching changes of weather, and the direction and force of winds, are shown less by the height of the barometer than by its falling or rising. Nevertheless, a height of more than thirty (30·0) inches (at the level of the sea) is indicative of fine weather and *moderate* winds; except from east or north, *occasionally*.

“A rapid rise of the barometer indicates unsettled weather; a slow movement, the contrary; as, likewise, a *steady* barometer, which, when continued, and with dryness, foretells very fine weather.

“A rapid and considerable fall is a sign of stormy weather, and rain or snow. Alternate rising and sinking indicates unsettled and threatening weather.

“The greatest depressions of the barometer are with gales from S.E., S., or S.W.; the greatest elevations, with wind from N.W., N., or N.E., or with calm.

" A sudden fall of the barometer, with a westerly wind, is sometimes followed by a violent storm from N.W., or N., or N.E.

" If wind sets in from the E. or S.E., and the gale veers by the south, the barometer will continue falling until the wind is near a marked change, when a lull *may* occur; after which the gale will soon be renewed, perhaps suddenly and violently, and the veering of the wind towards the N.W., N., or N.E., will be indicated by a rising of the barometer, with a fall of the thermometer.

" After very warm and calm weather, a storm or squall, with rain, may follow; likewise at any time when the atmosphere is *heated* much above the *usual* temperature of the season.

" Not only the barometer and thermometer, but appearances of the sky and clouds should be vigilantly watched.

" SIGNS OF WEATHER.

" Whether clear or cloudy, a rosy sky at sunset presages fine weather; a red sky in the morning bad weather or much wind, perhaps rain; a gray sky in the morning, fine weather; a high dawn, wind; a low dawn, fair weather.\*

" Soft-looking or delicate clouds foretell fine weather, with moderate or light breezes; hard-edged, oily-looking clouds, wind. A dark, gloomy, blue sky is windy; but a light, bright blue sky indicates fine weather. Generally the *softer* the clouds look, the less wind (but perhaps more rain) may be expected; and the harder, more "greasy," rolled, tufted, or ragged, the stronger the coming wind will prove. Also, a bright yellow sky at sunset presages wind; a pale yellow, wet; and thus, by the prevalence of red, yellow, or gray tints, the coming weather may be foretold, if aided by instruments, almost exactly. Small, inky-looking clouds foretell rain; light scud clouds driving across heavy masses show wind and rain; but if alone, may indicate wind only.

" High upper clouds crossing the sun, moon, or stars in a direction different from that of the lower clouds, or the wind then felt below, foretell a change of wind.

" After fine clear weather, the first signs in the sky of a coming change are usually light streaks, curls, wisps, or mottled patches of

\* A high dawn is the break of day seen above clouds, instead of the horizon.

white distant clouds, which increase, and are followed by an overcasting of murky vapour that grows into cloudiness. This appearance, more or less oily or watery, as wind or rain will prevail, is an infallible sign.

" Light, delicate, quiet tints or colours, with soft, undefined forms of clouds, indicate or accompany fine weather; but gaudy or unusual hues, with hard, definitely-outlined clouds foretell rain, and probably strong wind.

" When sea-birds fly out early and far to seaward, moderate wind and fair weather may be expected. When they hang about the land, or over it, sometimes flying inland, expect a strong wind, with stormy weather. As many creatures besides birds are affected by the approach of rain or wind, such indications should not be slighted by an observer who wishes to foresee weather.

" Remarkable clearness of atmosphere near the horizon; distant objects, such as hills, unusually visible; or raised (by refraction), and what is called 'a good *hearing* day,' may be mentioned among signs of wind, if not wet, to be expected.

" More than usual twinkling of the stars, indistinctness or apparent multiplication of the moon's horns, halos, 'wind dogs' (fragments or pieces of rainbows, sometimes called 'wind-galls'), seen on detached clouds, and the rainbow, are more or less significant of increasing wind, if not approaching rain, with or without wind.

" Lastly, the dryness or dampness of the air, and its temperature (for the season) should *always* be considered, *with other* indications of change, or continuance of wind and weather.

" On barometer-scales, the following contractions may be useful:—

RISE FOR N. E.LY. NW.-N.-E. DRY OR LESS WIND.	FALL FOR S.W.LY. SE.-S.-W. WET OR MORE WIND.
EXCEPT WET FROM N.ED.	EXCEPT WET FROM N.ED.

When the wind shifts against the sun,  
Trust it not, for back it will run.

*First rise after very low  
Indicates a stronger blow.*

*Long foretold, long last;  
Short notice, soon past."*



### THE WRECK REGISTER AND CHART OF 1859.

IN accordance with our annual custom, we are called on to chronicle the fearful and, in the present instance, unprecedented effects, both on life and property, of the terrific storms of the preceding twelve months in the seas and on the shores of the United Kingdom.

Truly these statistics, which have been so clearly tabulated by the Board of Trade, and presented to Parliament, are of a dry and uninviting character; but we deem them, nevertheless, of the utmost national importance, for they tell, with unmistakable accuracy, that 3,977 shipwrecked persons were placed, last year, in imminent danger on our coasts, of whom 1,645 unfortunately met with a watery grave; and that the value of the property destroyed was upwards of a million and a half sterling. The lives thus sacrificed and property destroyed on the coasts of the British Isles represent a state of things which, within one short year, is without a parallel in our maritime annals; and which loudly invokes the help of every Christian philanthropist to aid in the mitigation of similar sad results in future years.

To realize, however, the desolating scene, at one view, it is indispensable to place before one the accompanying Wreck Chart, which represents all round so many small shot, hollow shots, red-hot shots, and crosses. It will be observed that in some spots, such as the whole of the east coast, where 621 wrecks took place last year, near projecting headlands, and the sites of lighthouses, the cannonade seems to have been the most furious, just as though they were salient angles of some bastion made special marks of by marine artillery,—and on investigation such turns out to be the fact. But the artillery in this case is the wild force of storms, and the expended shot represent noble ships hurled against the solid bastion of our cliffs, or the more treacherous earthworks of sand-banks and quicksands. To survey the map, it would seem as though all the ships of the world had been attracted to our shores as

by some magnetic mountain, and then shattered helplessly upon them.

When we remember, however, that England is the centre of the commercial world—that hither are attracted the mercantile navies of all nations, as well as of our own—that last year alone the number of vessels which entered inwards and cleared outwards (including their repeated voyages), from the different ports of Great Britain, was 300,580, representing a tonnage of 31,712,500, and probably having more than a million of people on board—that it is not an unfrequent occurrence to see 400 or 500 vessels at one time coming down the east coast, and equally as many at the mouth of the Thames and Mersey—we say that when one considers all this enormous shipping and number of men which crowd, day after day, our narrow channels, skirted as they are by dangerous rocks, headlands, and sand-banks, it is not a matter of surprise that so many lamentable catastrophes should occur, year after year, amongst them. However, last year was one of the most disastrous on record to ships on our coasts, as many as 1,416 wrecks having occurred with the loss, as we said before, of 1,645 poor creatures.

We shall now proceed to analyze the causes of these shipwrecks, taking for our guide the Board of Trade Wreck Register. This states that the increase of these disasters is mainly to be traced to the very heavy storms of October 25 and 26; and of October 31, and November 1 and 2 last. In the former gale there were 133 total wrecks and 90 casualties resulting in serious damage, and 798 lives were lost. This number, however, includes the loss of 446 lives in the *Royal Charter*, which will always be remembered as one of the most melancholy shipwrecks that ever occurred on British shores.

During the gale of November 1 and 2 there were 27 total wrecks, and 27 casualties resulting in partial damage, and there was a loss of 51 lives. Besides these, 424 lives were lost at one time in the *Pomona*, on the 28th of April, and 56 in the *Blervie Castle* on or about the 20th of December.

Although the work of destruction, as





**SUMMARY.**

In 1850 the Number of Vessels wrecked on the coasts and in the seas of the United Kingdom was 1436  
 Of these 524 were total wrecks 538 sunk by collision, making the number totally lost 386  
 Vessels stranded and damaged so as to require to discharge Cargo 540 by Collision 281 total 821 making the whole number of wrecks 1416 and the Loss of Life as far as can be ascertained 1646.

There are	Life Boats	Persons and Indian Nations	
	122	153	in England
	14	21	Scotland
	21	27	Ireland
		276	

# WRECK CHART OF THE BRITISH ISLES FOR 1859.

Compiled from the Board of Trade Register.

SHOWING ALSO THE PRESENT  
LIFE BOAT STATIONS

- Signifies Total Loss by Stranding or Foundering
- x Partial loss by Stranding, Dismasting or Leakage
- Sailing Vessels in Collision with Total Loss
- Sailing Vessels in Collision with partial Loss.
- Collision of Sailing with Steam Vessels with Total Loss.
- Collision of Sailing with Steam Vessels with partial Loss.
- † Steam Vessels in Collision with partial Loss.
- † Ditto Total Loss.
- ✕ Represents a Life Boat.

Scale of Nautic Miles.

10 0 50 100







thus officially recorded, is fearful to contemplate, yet it must be remembered that had it not been for the services of the life-boats on our coasts, and of the rocket and mortar apparatus of the BOARD OF TRADE, and other means, it would have been much more disastrous in its consequences. It is somewhat singular that whilst the number of casualties to British ships trading to, from, or between places in the United Kingdom has greatly increased, viz., from 927 in 1858 to 1,187 in 1859, the casualties to foreign ships similarly employed have decreased from 209 to 188. It surely cannot be creditable to British seamen that foreigners should beat them in safely navigating ships in British waters.

Again, it appears that in 1 voyage out of every 175 voyages made by British ships employed in the oversea trade, a casualty has happened; whilst in only 1 voyage out of 335 has a casualty happened to a foreign ship similarly employed. We fear this unfavourable contrast would be still more strikingly illustrated if the per centages of casualties, compared with voyages made by vessels in ballast in our coasting-trade were given; but, unfortunately, the Register is silent on that important point, as no record is kept of coasting-voyages made by British ships in ballast. Some of the most distressing and fatal wrecks are often occurring amongst our coasters in ballast.

In the classification of the casualties according to the cargoes of the ships, it appears that the ships which have suffered most are as follows, viz., laden colliers, 506 in 1859 against 377 in 1858; light colliers, 71 against 41; ore ships, 130 against 101; and ships with passengers and a general cargo, 42 against 14.

It will be observed that our ill-built colliers continue to maintain their fatal pre-eminence for their frequency of wrecks on the east coast. When overtaken by a storm off Flamborough Head, no shelter is afforded them until they reach Yarmouth Roads, where, alas! too frequently the bodies of their unhappy crews are found floating on the outlying sandbanks. No facts can speak louder than this simple record of the absolute necessity that exists, that measures

should be taken, as early as practicable, to improve our natural harbours of refuge on the east coast, and elsewhere.

The services of life-boats are most frequently called into use on the east coast of the United Kingdom. Who that has seen the Lowestoft, Pakefield, Southwold, and other boats belonging to the NATIONAL LIFE-BOAT INSTITUTION put off during the past few months, in the very fury of the storm, has watched their successful fight with the elements, and has seen the same boats return, laden with human life, that has not felt a deep emotion, such as one cannot but experience when witnessing some heroic and self-denying act!

The whole of the wrecks are divided clearly into classes, according to their rig and tonnage; and it appears from the Register that those which have suffered most are as follows, viz., schooners, 491; brigs, 292; sloops, 127; and barques, 123; that the number of casualties to vessels between 100 and 300 tons is 493; between 50 and 100 tons, 455; and below 50 tons, 306; whilst the number to vessels from 300 tons to 1,200 tons and upwards is only 160.

It was amongst these numerous wrecks, which occurred often during fearful storms, that the life-boat was busily engaged. It is a long list of noble services, and a few of them will be enough to show what strong claims the NATIONAL LIFE-BOAT INSTITUTION has on the public sympathy and support. Here is April 15, Goodwin Sands—terrible name of ill omen to sailors—wind W.N.W., sloop *Liberal*, of Wisbeach, 1 man saved by the Walmer life-boat. September 17 and 18, Misner Haven, wind N. and W., strong gale, brig *Lucinde*, of Memel, 11 men saved by the Southwold life-boat. February 28, Jack's Hole Bank—brig *Louise*, of Genoa, ship assisted by the crew of the Padstow life-boat. March 8, Doom Bar Sands—a hideously-suggestive designation—brig *Gonsalve*, of Nantes, 7 men saved by the Padstow life-boat. November 1, Holm Sands, wind S., heavy gale, steamer *Shamrock*, of Dublin, 14 men saved by the Lowestoft life-boat. November 2, Whitburn, blowing a hurricane, schooner *Anton*,

of Denmark, 6 men saved by the Whitburn life-boat. November 26, Redcar, wind S.E., heavy gale, brig *Fortuna*, of Memel, 11 men saved by the Redcar life-boat. December 30, Barmouth, wind from the S.W., blowing a gale, ship *Britannia*, of Bath, United States, 14 men saved by the Barmouth life-boat. December 21, Lytham, weather stormy, the brigantine *Hannah Jane*, of London, 7 men saved by the Lytham life-boat. And so the record goes on through a long list, enumerating services of the most humane and sterling character, in words and figures, as simple as an ordinary entry in a merchant's ledger.

Old age tells on ships as it does on human beings; and the ship that was once able to weather the fierce gale, bends under the influence of advancing years and rotten timbers. The Register states that the greatest number of casualties have happened to ships between 14 and 20 years old, next between 20 and 30, and then to comparatively new ships, or ships between 3 and 7 years of age. It also appears that 64 were upwards of 50 years old, 3 of this number being between 80 and 90, 1 between 90 and 100, and 1 above 100 years old.

A comparison of the wrecks that have occurred during the past two years, on the coasts and in the seas of the British Isles, gives the following result:—

On the east coast are 621, against 514 in 1858; on the south coast 136 against 89; and on the west coast 466 against 304. On the Isle of Man, 6 wrecks took place in 1858; but in 1859, they had increased to 28. This is a point where the Commissioners on Harbours strongly recommended the erection of a Harbour of Refuge. The Castletown life-boat, belonging to the NATIONAL LIFE-BOAT INSTITUTION, has several times been instrumental, during the past year, in saving life from wrecks off that island.

The wind, which has been most disastrous to shipping during 1859, was the S.W. wind; this was also the case during 1858. The casualties during the S.W. wind were, in 1858, 110, and in 1859, 166. Next comes the W.S.W., which shows 104 casualties in 1859 against 65 in 1858. Then follow the S.S.W., the N.E.,

the W., and the W.N.W., which show a marked prevalence as compared with the previous year.

From the force of the wind when each casualty happened, it appears that a marked increase has taken place in those which happened during force 11 (or "storm"), viz., 88 against 57 in 1858, and at force 12 (or "hurricane"), 87 against 11.

Knowledge and ignorance hold also an unequal strife in these alarming records; for it shows that the number of ships to which casualties happened, commanded by masters possessing certificates of competency was 217, against 344 commanded by masters holding certificates of service only; and 597 commanded by masters not required by law to have certificates. It is only reasonable to expect that every one who professes to navigate a vessel should give some proof of his ability to perform so important a work.

It is computed that the loss of property caused by wrecks and casualties on the coasts of the United Kingdom during the year 1859, was in cargoes about 893,000*l.*, and in ships of 870,000*l.*, being a total loss of nearly two millions. Although covered mostly by insurance, this is none the less so much wealth lost to the nation at large!

An analysis of the 1,416 wrecks gives the following result:—

In 1859 the wrecks and strandings involving total loss amounted to 527 against 354 in 1858, and those involving partial loss to 540 against 515 in 1858. The total number of strandings, &c. being 1,067 against 869 in 1858. The total number of collisions being 349 against 301 in 1858. 116 of these happened in the daytime, between 6 A.M. and 6 P.M., against 76 in the daytime in 1858; and that 233 happened in the night, between 6 P.M. and 6 A.M., against 225 in the night in 1858; also, that only 89 happened between April and September inclusive, and that 260 collisions happened between October and March inclusive.

It appears that, exclusive of passengers, there were 10,538 on board these 1,416 wrecks; and of these persons, 3,977 were actually imperilled, and 2,332 have been

saved from a watery grave by life-boats, the rocket and mortar apparatus, ship's own boats, and other craft; the remainder, 1,645, having unhappily been drowned. This is the largest number on record that have perished from wrecks in one year on the coasts of the British Isles. It should, however, be remembered that 926 of the unfortunate creatures, who were thus sacrificed, belonged to the *Royal Charter*, the emigrant ship *Pomona*, and the *Blervie Castle*.

Sir DAVID BREWSTER, in a recent publication, alluding to the operations of the NATIONAL LIFE-BOAT INSTITUTION, thus speaks in eloquent terms of the "fate of those who in mid-ocean are overtaken by the thunder-bolt or the tornado, or who, within sight of their native shore, are dashed upon the wild shelves by which it is surrounded. The merchant returning to his home—the traveller to his country—the emigrant to his friends—the soldier to his family—and the mariner to his haven—all instinct with life and hope, become the sudden victims of those disasters at sea which science alone can counteract or alleviate. Escaping from the fatal cyclones of the tropical seas, and unscathed by the lightning-bolt that has rushed through its masts into the deep, the joyous vessel approaches its destination at midnight, anticipating the greetings of a happy morning. A cloud-spot in the azure vault reveals an element of danger. The stars disappear in the rising haze; the beacon-lights shine feebly or falsely; the gentle breeze freshens into a gale, and amid the discord of rending canvas, creaking timbers, clanking chains, and raging waves, the startled passenger rushes from his couch to witness his ship in the arms of breakers—to welcome the life-boat that has been sent to save him, or to bid God-speed to the rope of mercy that is to connect him with the shore. In contrasting the fate of the thousands who are annually lost at sea with the more numerous victims of war, our Christian sympathies are very unequally divided. To each of us, of whatever caste, death is the greatest of physical evils—the severest punishment which society awards to crime; but in its relation to the future it wears very different aspects. Even in the battle-field

the prayer for mercy may be breathed and answered; but on board the ship in flames, or the plunging life-boat, or the sinking raft, the interests of the future are merged in the exigencies of the present, and in the last struggle for life, the cry of help from man is louder and more earnest than that of mercy from heaven. Hence it is that the victims of sudden death by shipwreck have ever excited the warmest sympathies of the Christian philanthropist, and that it has always been regarded as one of the most urgent of social and religious duties to provide for the safety of the sea-faring traveller—to protect his ship from the electric fire of the tropics—to light up our headlands for his safe return, and to place a life-boat for his use at every point of danger."

Few men have done more for lighting up "our headlands," than Sir DAVID BREWSTER. His method for building large polyzonal lenses, and his apparatus for increasing the intensity and the size of the refracted beams, will probably be more appreciated in after-ages than they are at the present time; but his name can never be dissociated from the invention of the polyzonal lenses, as Lord BROUGHAM truly remarked about twelve months ago at Aberdeen. .

It happens that more lives have been saved by ordinary boats than by the life-boats on our coasts; fishing-smacks and other craft being much oftener at hand when disasters happen; nor, indeed, are the services of life-boats generally called into requisition, when it is safe for other kinds of vessels to approach a wreck. To despairing mariners in their shattered hulk, however, grinding upon some rocky barrier, or sinking into some treacherous quicksand, these boats are life-boats indeed. For instance, on the 30th of January last, the ship *Ann Mitchell*, of Glasgow, was wrecked on Arklow Banks. Several fishing-smacks attempted in vain to approach her. The steamer *Ruby*, bound for Bristol, laid-to for five hours, with the laudable view of succouring the crew; but the sea was so very heavy that neither smacks nor steamer could even come within hail of the wreck. The Arklow life-boat, belonging to the National Institution, made her appearance. She nobly ran through

the heavy breakers, and succeeded in taking off the whole nine men from the wreck.

While we might thus amplify the services of the life-boats of the Institution, we must not omit to do full justice to the Marine Department of the BOARD OF TRADE in the same cause of humanity. From the Mercantile Marine Fund they have expended, in support of life-boats, the rocket and mortar apparatus, and rewards for saving life, nearly 4,600*l.* during the past year.

There are altogether 158 life-boats on the coasts of the United Kingdom—about 100 of these are under the management of the NATIONAL LIFE-BOAT INSTITUTION, and are manned and inspected in conformity with its regulations. They were manned last year, on occasions of service and of quarterly exercise, by about 5,000 persons. With the exception of three individuals who perished from the extreme coldness of the weather and the water, by the upsetting of a life-boat, not a single accident happened either to the boats or their brave crews.

Surely the claim of such a Society for public support will be acknowledged when it is stated that, during its thirty-six years of existence, it has expended on life-boat establishments nearly 40,000*l.*, and has voted 82 gold, and 658 silver medals for distinguished services, besides pecuniary grants, amounting to almost 14,000*l.*; while during the same period it has granted rewards for preserving, by its life-boats and other means, no less than 11,601 of our fellow-creatures from a watery grave.

#### SERVICES OF LIFE-BOATS.

REDCAR, YORKSHIRE.—On the 26th October, 1859, the coble *Isabella*, of Hartlepool, was seen in great danger off Redcar, the wind blowing a strong gale from N. by W., and a heavy sea running. The Institution's Redcar life-boat went off to her, and taking on board her crew, 2 in number, conveyed them safely to the shore.

On the night of the 26th of November, the brig *Fortuna*, of Memel, stranded on the East Scar Rock, off Redcar. The Redcar life-boat proceeded to her, through

a high sea, and took off her crew of 11 men, landing them in safety.

THORPENESS, SUFFOLK.—On the 10th December, at 8 P.M., the brig *Henry Morton*, of Sunderland, got on shore on the Sizewell Bank, there being a heavy surf on the bank at the time. The Institution's Thorpeness life-boat was launched, and went to the aid of her crew, who were about to attempt leaving in their own boat. These, 8 in number, were taken into the life-boat, and landed in safety; their own boat being taken in tow, and upsetting in the surf on nearing the beach.

On the 13th December, the sloop *Sybil*, of Goole, got ashore on Thorpeness, when the life-boat was launched to her aid, and landed her crew of 3 men in safety: 1 man was washed out of the life-boat by a heavy surf.

On the night of the 24th January, the brig *Pallas*, of Shields, stranded on the Sizewell Bank, in a strong gale from S.S.E., at daylight: being seen from the shore, the Thorpe life-boat proceeded to her, through a very high sea, and succeeded in taking off 3 of her crew. Her master and 3 others had unfortunately previously taken to their own boat, and the boat upsetting, they were all drowned.

ARKLOW, IRELAND. — On the 30th January, 1860, the ship *Ann Mitchell* ran ashore on the Arklow bank. The Arklow life-boat proceeded to her, and found the Bristol steamer *Ruby* lying near her, but unable to approach sufficiently near to take off her crew, the sea running very high at the time on the bank. A portion of the crew of the wrecked vessel had succeeded in getting on board the steamer in their own life-boat, the remainder, 9 in number, were taken off by the Arklow life-boat, and, at their own request, taken on board the steamer for conveyance to Bristol.

GREAT YARMOUTH, NORFOLK.—On the 17th February, the smack *John Bull*, of Yarmouth, parted from her anchors, and went ashore on the beach at that place. The smaller Yarmouth life-boat was soon launched, and proceeded to her through a

heavy surf. Captain DAVIES, R.N., Inspecting-Commander of Coastguard going off in her. Of the crew of the wrecked smack, 5 in number, 4 were taken off, when the boat was driven to the beach; a second time she was launched and the last man was rescued, the Coxswain of the life-boat, GEORGE MILLIGAN, having at considerable risk got on to the rigging of the vessel, to which he had taken, and helped him to descend from it to the boat. For this service Captain DAVIES and the Coxswain MILLIGAN received the silver medal of the Institution.

On the 28th February the brig *Zephyr* parted her anchors and drove on the Scroby Sand. The larger Yarmouth life-boat proceeded under sail to the assistance of her crew, whom she succeeded in taking off, and with one exception landed them in safety. Owing to the violence of the sea alongside the wrecked vessel, the life-boat could not go alongside, but anchoring and veering down to within a short distance of her, lines were thrown on board, and the wrecked men hauled into the boat through the sea. A poor boy had died from exhaustion on board the vessel, and one of the crew also died on his passage ashore in the life-boat.

AYR, SCOTLAND.—On the 19th of February the barque *Niagara*, of Troon, was driven ashore in a heavy N.W. gale, 3 miles north of Ayr harbour: the life-boat quickly proceeded thence to her aid, and first landed the master, who had been disabled and was in need of medical assistance, but who wished his crew to remain by the vessel as long as possible with the hope of getting her off. The danger to their lives increasing, the life-boat again put off and rescued the crew, 11 in number, landing them all in safety. The vessel afterwards became a total wreck.

WINTERTON, NORFOLK.—On the 28th February, the brig *George and James*, of London, ran ashore near Winterton. The life-boat was soon launched and proceeded to her, taking off her crew, 8 in number, and landing them safely at Winterton.

PALLING, NORFOLK.—On the night of the 16th March, the schooner *Eliza*, of Shields, missed stays and was driven ashore three-quarters of a mile from the Palling life-boat station. The life-boat was quickly launched and proceeded to her, landing her crew, 7 in number, in safety.

PORTMADOC.—On the 1st of April the barque *Oberon*, of Liverpool, ran ashore on the Causeway Bank in Cardigan Bay. She was seen from Portmadoc, and a large boat was also observed at a great distance from the land, apparently full of people. The Portmadoc life-boat was as soon as possible manned, and proceeded in the direction of the boat, which, after two hours' hard rowing they reached, and found her to be the *Oberon's* boat, with 15 of her crew on board in an exhausted state, they having been rowing seven hours in a heavy sea, and their boat having then become almost unmanageable.

The life-boat conveyed the whole safely to land; but one of their number died from exhaustion soon after reaching the shore. The captain and crew stated that they had lost all hope of being saved, until they saw a flag hoisted at the life-boat station, prior to the life-boat being seen by them.

TEIGNMOUTH.—On the night of the 1st of May, the smack *Wonder* was swamped, off Teignmouth Harbour. The cries of her crew, 2 in number, were heard from the shore, but nothing could be seen from it, the night being very dark. The Teignmouth life-boat was soon launched, and proceeded through a high surf in the direction of the cries, when she happily succeeded in rescuing the unfortunate men, and landed them in safety.

RAMSGATE.—On the 13th February, the Spanish big *Samaritano* ran ashore on the Wedge Sand, off Margate. The two Margate life-boats having failed to reach the wreck, and become disabled, intelligence of the disaster was conveyed to Ramsgate, together with the information that the crew were in great danger. The Ramsgate life-boat, belonging to the Harbour Commissioners, was soon manned and taken in tow

by their steam-tug, which in bad weather has always her steam up, in readiness to assist vessels in distress.

After long and arduous efforts, having twice carried away the towing-hawser, she arrived near the wrecked vessel, and having slipped from the tug, ran across the sand through a very heavy broken sea, a violent snow-storm occurring at the time. The men on the wreck were found to be all in the fore-rigging, the mainmast having been carried away, and the hull being under water. Having anchored to windward of the vessel, the life-boat was veered down in the midst of a tremendous broken sea, and the Spanish crew, 11 in number, with 6 Margate boatmen and 2 from Whitstable, 19 in all, were safely got into the boat and conveyed to Ramsgate.

LOWESTOFT.—At noon on the 28th May, the brig *Scotia*, of Sunderland, with flag of distress flying and mainmast gone, was observed in Corton Roads, the wind blowing a hard gale from W.N.W. all the time. The Lowestoft life-boat was quickly launched, and proceeded to her, taking off her crew of six men. She had no sooner got them on board than the sloop *Three Brothers*, of Goole, was seen drifting on to the Corton Sands. She was soon also reached, and her crew taken off, both crews being then landed in safety at Lowestoft.

Several other life-boats have, during the last few months, been indirectly instrumental to saving lives, by assisting vessels into port. They have also on many occasions gone off to vessels apparently in distress, which have either got out of danger or not needed their services.

#### SUCCESSFUL TREATMENT OF THE APPARENTLY DROWNED.

In the year 1857 the NATIONAL LIFE-BOAT INSTITUTION, as will be remembered by its supporters, appealed to the medical profession in this country and, through foreign ambassadors, to the public medical authorities of several other countries, for their opinion on the merits of the late Dr. MAR-

SHALL HALL'S proposed new method of treatment of the apparently drowned.

That appeal was readily responded to, and the verdict given on the relative merits of the old plan and the newly proposed one of MARSHALL HALL, was so almost unanimously given in favour of the latter, that the Committee of the Institution determined at once to adopt the same. Accordingly a series of new rules, in accordance with the plan of the above eminent physiologist, and especially designed for the use of non-professional persons, were prepared and circulated at the life-boat stations of the Institution and on the coast generally.

So great was the public interest taken in the subject, and so general the appreciation of the step taken by the Institution, that applications flocked in from all directions for the supply of the new rules, many thousand copies of which have since been circulated, not in this country alone, but in the colonies and other dependences of the British empire. Already have several, and in some instances, remarkable cases occurred of their successful application in the hands of non-professional persons. Some of those cases have been related in previous Numbers of this Journal. Further proof of their value has been afforded this summer. No less than three lives have been saved in the lake at the Victoria Park, London, by the swimming-master there, Mr. WOODBRIDGE, two in July last, and another on the 5th of the present month. The three cases are described in the newspapers as follows. We add, likewise, Mr. WOODBRIDGE'S own modest report of the last case to the Secretary of the Institution:—

On Tuesday last (24th July) a lad, whilst bathing in the lake in Victoria Park, was taken out to all appearance perfectly dead. Mr. WOODBRIDGE, the swimming-master, who had previously familiarized himself with the important and clear Directions for the Treatment of the Apparently Drowned, issued by the NATIONAL LIFE-BOAT INSTITUTION, and based on those of the late Dr. MARSHALL HALL, proceeded without loss of time to treat the boy according to those directions. After fifteen minutes had elapsed, symptoms of returning animation appeared, and in about an hour the boy had sufficiently recovered to be sent home. About three weeks ago another boy, who appeared quite dead, was brought from the lake to Mr. WOODBRIDGE. He had been in the water

eight or nine minutes. The Directions of the Institution were instantly resorted to, and the restoration of the boy, after a short time, was most complete.

Another narrow escape from drowning occurred on Sunday morning last (5th August). A lad named JAMES PARKER attempted to swim across the lake, but when about half way over, his strength failed him, and he sank. He was brought out in a few minutes by some persons bathing near, and was soon restored by the use of Dr. MARSHALL HALL'S method, under the superintendence of Mr. WOODBRIDGE, the swimming-master. This is the third occasion within a month on which Mr. WOODBRIDGE has restored to life, by the same method, persons apparently drowned in the above lake."

"2 Grove Street, Victoria Park,  
9th Aug., 1860.

"SIR,

"I think it my duty to inform you, that on Sunday morning last (5th), I restored a lad apparently drowned, at the new bathing lake, by the use of Dr. MARSHALL HALL'S method as published by the NATIONAL LIFE-BOAT INSTITUTION.

"I am, &c.,  
"W. WOODBRIDGE."

"A fourth case occurred this summer on the Irish coast. A boat was capsized, and one of the three persons who had been in her was picked up apparently dead. While bringing him ashore the sailors commenced treating him according to the before-mentioned Instructions, and before he was brought to land he had been restored to consciousness. Had they not done anything to him until he reached the shore, he would no doubt have been past recovery."

The circumstance that this mode of treatment can be safely and efficaciously intrusted to the administration of non-professional persons is an important element in its character, since it necessarily follows that in the majority of cases of rescue from drowning, medical attendance cannot be available in time to be of service.

#### SUMMARY OF THE MEETINGS OF THE COMMITTEE.

Thursday, 5th April, 1860. THOMAS BARING, Esq., M.P., F.R.S., V.P., in the Chair.

Read and approved the Minutes of the previous Meeting, and those of the Finance, Correspondence, and Wreck and Reward Sub-Committee.

Elected Capt. N. DE ST. CROIX, H.C.S., a Member of the Committee of Management of the ROYAL NATIONAL LIFE-BOAT INSTITUTION.

Produced an extract from the will of the late MRS. ANNA BRAITHWAITE, of Kendal, Westmoreland, in which she gave 10*l.* to this Society.

Read letter from A. B. VIDLER, Esq., Hon. Sec. of the Rye and Camber Branch, of the 14th March, calling attention to the severe but satisfactory test which the Camber life-boat had recently undergone during a very heavy gale of wind and snow-storm.—*Ordered a double payment to be made to the crew for extra work.*

Reported that Lieut. PARKER, R.N., of Newark, had kindly promised to collect contributions in that town in aid of the funds of this Institution.—*To be thanked.*

Produced a circular letter and printed bill which had been issued to all the agents of the SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY, soliciting their co-operation in bringing the objects of the NATIONAL LIFE-BOAT INSTITUTION under the notice of the Seamen Members of that Society.

Read letter from WILLIAM RASHLEIGH, Esq., stating that the Duchy of Cornwall had, on his application, granted 25*l.* in aid of the cost of the Fowey Life-boat establishment.

Also from Mr. W. VINCENT, of Birmingham; Mr. GILBERT YOUNG, of North Shields; Mr. R. A. JEFFERSON, of St. John's Wood; Mr. RICHARDSON, of Wivenhoe; and Mr. SAMUEL WYNNE, of Upper North Place, Gray's Inn Road, calling attention to their several plans for saving life from shipwreck.—*To be acknowledged.*

Voted 3*l.* to 3 fishermen for rendering assistance, at considerable risk of life, to the crew of the barque *Batanga*, of Bristol, which was wrecked on the Hook Sands, off Clevedon, near Bristol, on the 12th October last.

Also 5*l.* to two boats' crews of 10 men, for rendering assistance to the crew of the galliott *Anna*, of Delfzel, which was wrecked during a severe hailstorm off West Scars, Robin Hood's Bay, on the 14th December last. The men had also received rewards from local subscriptions.

Read letters from H. PAUL, Esq., M.P., Lieut. PEARSON, R.N., Chief Officer of Coastguard at St. Ives, and from JAMES YOUNG, Esq., of that town, promising their cordial co-operation in aid of the establishment of a life-boat station at St. Ives.—*To be thanked.*

Also from the Inspector of Life-boats, of 2nd April, recommending that a life-boat be stationed at St. Ives.

Resolved—1. That a life-boat station be established at St. Ives.

2. Also that a life-boat be stationed at Buckie, on the north-east coast of Scotland.

3. Also that a life-boat house be built at North Berwick.

Read letter from the Rev. JAMES WILLIAMS, of Anglesey, of 3rd March, expressing his admiration of the behaviour of the Holyhead life-boat on a recent occasion.

Also from Mr. GODFREY SINCLAIR, of Edinburgh, of the 8th March, calling attention to his plan of Marine Traveller, constructed with the view of affording assistance to sailors and others in their attempts to reach the shore when the ship was amongst the breakers.—*To be acknowledged.*

Also from Capt. BRADFIELD, of Falmouth, of the 2nd April, stating that he had collected

2l. 15s. in small sums, from 6d. and upwards, in aid of the funds of the NATIONAL LIFE-BOAT INSTITUTION.—*To be thanked.*

Paid 86l. 10s. for life-boat stores, and 190l. 9s. 8d. for sundry charges on various life-boat establishments.

Voted 9l. to pay the expenses of the Yarmouth small surf life-boat, in putting off and rescuing the crew of 5 men from the schooner *Feronia*, of Exeter, which was wrecked, during a heavy gale of wind, in Yarmouth Roads, on the 5th November last.

Also 17l. 2s. to pay the expenses of the Palling life-boat, for putting off and rescuing, in a heavy sea, the crew of 7 men of the schooner *Eliza*, of North Shields, which was totally wrecked off Palling, on the 16th March last.

Also 10l. 3s. to pay the expenses of the Winterton life-boat, for putting off and rescuing the crew of 8 men from the brig *George and James*, of London, which had grounded off Winterton, during a very heavy gale of wind, on the 28th February.

Also 17l. to pay the expenses of the Portmadoc life-boat, in putting off and rescuing, during a heavy gale of wind, 15 men from a boat belonging to the barque *Oberon*, of Liverpool, which was stranded on Sarn Badrig, in Cardigan Bay, on the 1st April last.

Also 34l. to pay the expenses of the Yarmouth large life-boat, with a crew of 18 men, for putting off and rescuing, at much risk of life and difficulty, the crew of 6 men from the brig *Zephyr*, of Whitby, which was totally wrecked, during a terrific gale of wind, on the Scroby Sand, on the 28th February last.

Reported the services of the Cullercoats life-boat, in putting off and safely bringing into Tyne-mouth Haven, in a heavy sea, the fishing-coble *Honor*, of Cullercoats, and her crew of 3 men, which was in distress off that place, on the 8th March last.

Voted 7l. to pay the expenses of the Teignmouth life-boat for putting off, with the view of rendering assistance to the crew of the ship *Caroline*, of Charlestown, United States of America, which was totally wrecked in Babbicombe Bay during foggy weather, on the 21st March last.

Also 8l. to 2 boats' crews, for putting off and rescuing, at much risk of life, the crew of 4 men from the schooner *Hope*, of Gloucester, which was wrecked off Malin Head Coastguard station, on the coast of Donegal, on the 27th January last.

Also 2l. to 4 men, for wading into the surf and saving, at some risk of life, the crew of 5 men of the schooner *Cezemfra*, of Falmouth, which was wrecked on the back of Bude Breakwater, on the 27th February last.

Also 2l. 10s. to 4 men, for putting off in their boat to the assistance of a fishing-boat which had sunk at the entrance of Arklow river, on the 22nd January last.

Thursday, 3rd May. THOMAS CHAPMAN, Esq., F.R.S., *V.P.*, in the Chair.

Read and approved the Minutes of the previous Meeting, and those of the Finance, Correspondence, and Wreck and Reward Sub-Committee.

Read letter from Lieut. NARES, R.N., of H. M. S. *Britannia*, Portsmouth, of the 1st May, forwarding two copies of his work on Seamanship, for the acceptance of this Institution.—*To be thanked.*

Read letter from Capt. SHAW, Harbour-master, Ramsgate, of the 1st inst., stating that the Ramsgate life-boat had, in conjunction with the Commissioners' steam-stug, been instrumental, on the 27th April last, in bringing safely into harbour the schooner *Omnibus*, of Aberystwith, which had been on shore on the Goodwin Sands.—*To be thanked.*

Also from T. B. POTTER, Esq., and A. H. HEYWOOD, Esq., of the Manchester Branch of the NATIONAL LIFE-BOAT INSTITUTION, of the 7th April, stating that that Branch had forwarded 400l. in aid of the funds of the parent Society.—*To be thanked.*

Also from R. T. REEF, Esq., Secretary of the ROYAL MAIL STEAM PACKET COMPANY, of the 27th April, stating that 7l. 16s. 4d. had been deposited by various persons in the box kept at the Office of the Company for the benefit of this Institution.—*To be thanked.*

Also from ROBERT RANSOME, Esq., of Ipswich, of the 25th April, stating that he had been engaged in collecting funds in that town, and that he had forwarded the same through Mr. JOSEPH BECK to Mr. A. B. WILKINSON, of Stoke Newington, who were engaged in collecting funds amongst the members of the Society of Friends, to purchase and permanently maintain a life-boat, through this Institution, on the coast.—*To be thanked.*

Ordered the thanks of the Institution to be presented to the Great Western, Bristol and Exeter, South Devon, and West Cornwall Railway Companies, for giving (with their usual kindness) a free conveyance to the Penzance life-boat and carriage.

Also to the London and North Western Railway Company, for carrying, on the same terms, the Silloth life-boat and carriage.

Read letter from Rev. EDWARD P. NICHOLL, Hon. Sec. of the Porthcawl Branch, of the 29th April, stating that the Porthcawl life-boat and carriage had safely arrived on their station, and that the entrance of the same into the town had been the occasion of much rejoicing. A free conveyance had as usual been readily given to the boat and carriage by the South Wales Railway Company.—*To be thanked.*

Resolved—That the thanks of the Committee, inscribed on vellum, be presented to Miss Dix, an American lady, in acknowledgment of her long and valuable services in the cause of humanity, and particularly of her zealous exertions in aiding to establish four life-boats on the British Possession of Sable Island, on the coast of America.

Also that a model life-boat be presented, through R. B. FORBES, Esq., to the HUMANE SOCIETY of Massachusetts, United States.

Read letter from Messrs. CLAYTON and SON, Solicitors, of Lancaster Place, Strand, of the 1st May, forwarding the Charter of Incorporation of the ROYAL NATIONAL LIFE-BOAT INSTITUTION, with the impression of the Great Seal of Eng-



land. The crown fees and stamp duty on the same had amounted to 134*l.* 10*s.* 2*d.* Messrs. CLAYTON added, that it was not their intention to make any charge on the Institution for their professional services in the matter.

Decided—That Messrs. CLAYTON be thanked for their liberality, and that they be requested to become the Hon. Solicitors of the Institution.

Paid 300*l.* to Messrs. FORRESTER for various life-boats. Also 441*l.* 16*s.* 2*d.* for sundry charges on various life-boat establishments.

Voted 6*l.* 10*s.* to pay the expenses of the Lytham life-boat in putting off, and rescuing the crew of 8 men and a boy from the brigantine *Nancy*, of Teignmouth, which had sunk on the Horse Bank, Lytham, during a heavy gale of wind, on the 9th April last.

Also 11*l.* 8*s.* to pay the expenses of the Teignmouth life-boat, in putting off, on a very dark night, and saving 2 men, in a very exhausted state, from the smack *Wonder*, of that port, which had sunk, during stormy weather, off Teignmouth, on the 24th April last.

Also 5*l.* to the crew of 10 men, of the Kessingland life-boat, for putting off, during a heavy gale of wind, and rescuing the crew of 7 men from the brigantine *Little Joe*, of North Shields, which had sunk off Kessingland, on the 17th April last.

Also 5*l.* 2*s.* to pay the expenses of the Lossiemouth life-boat, in going off, late in the evening, with the view of rescuing the crew of a boat off Lossiemouth, on the 2nd April last.

Also 2*l.* to 4 men for their laudable services in rescuing 4 men from a lighter, which had sunk on Arklow Bar, during a gale of wind, on the 2nd April last.

Also 1*l.* 10*s.* to a boat's crew, for putting off and rescuing Mr. W. W. WALKER, late Hon. Secretary of the Dungarvan Branch of the Institution, and 2 boys, whose boat had been capsized, off Dungarvan, on the 6th April last, owing to one of the boys ascending the boat's mast-head. One of the lads, when rescued, was found insensible, but after having been treated for about twenty minutes, according to the method for Restoring the Apparently Drowned, issued by this Institution, and based on Dr. MARSHALL HALL's plan, he was happily restored to consciousness.

Thursday, 7th June. THOMAS CHAPMAN, Esq., F.R.S., V.P., in the Chair.

Read and approved the Minutes of the previous Meeting, and those of the Finance, Correspondence, and Wreck and Reward Sub-Committee.

Elected Colonel TALBOT CLIFTON, and T. J. AGAR ROBERTS, Esq., M.P., Vice-Presidents of the ROYAL NATIONAL LIFE-BOAT INSTITUTION.

Read letter from Colonel the Hon. Sir CHARLES B. PHIPPS, K.C.B., of the 1st June, stating that he had been commanded to state that the photograph of one of the life-boats of this Institution, supposed to be proceeding off to a wreck on the east coast, which had been presented to Her Majesty THE QUEEN, as the Patroness of the Society, had been accepted by Her Majesty.

Also from MATTHEW BUTCHER, Esq., Hon. Secretary of the Yarmouth Branch, of the 1st

June, calling attention to the lamentable loss of life off Yarmouth during the heavy gale of the 28th ult., and to a dispute which had occurred between the coxswain and some of the beachmen, in manning the life-boat on the occasion. He also forwarded copies of resolutions passed at a Meeting of the Local Committee, convened to investigate the cause of the dispute.

Resolved—That, while admitting the valuable services of the beachmen last winter in the life-boats, the Committee could not but regret that the jealousy existing between the different companies should have given rise to the unfortunate circumstances attending the disastrous events on the 29th May, and that they trusted that the Local Committee, in whom was vested the authority, would frame such local regulations as would obviate a recurrence of the misunderstanding.

Also from Mr. W. BATEMAN BYNG, Cashier of Messrs. RANSOMES and SIMS, of Ipswich, of the 5th June, stating that he had visited several large firms in that town, in order to collect contributions from them in aid of the funds of this Institution. — *To be thanked.*

Reported—That the Rev. R. B. ROBINSON, of Lytham, had preached a sermon in the parish church of that town, on the 13th May, in aid of funds of this Society. The collection on the occasion had amounted to 20*l.* — *To be thanked.*

Read letter from T. H. STEVENS, Esq., of Plymouth, of the 19th May, forwarding contributions amounting to 5*l.* 15*s.* in annual subscriptions, and 5*l.* 5*s.* in donations, collected by him in that town, in aid of the funds of the ROYAL NATIONAL LIFE-BOAT INSTITUTION. — *To be thanked.*

Also from J. DAY, Esq., Mayor of Walsall, of the 6th June, forwarding contributions amounting to 10*l.* 16*s.*, collected by him at Walsall, in aid of the funds of the Society. — *To be thanked.*

Also from G. H. ACKERS, Esq., Commodore of the Royal Victoria Yacht Club, of the 5th June, forwarding a draft for 277*l.*, to pay the cost of the Grange, Isle of Wight, life-boat and transporting-carriage.

Reported—That Commodore ACKERS had been indefatigable in his exertions to obtain the support of the members to the humane undertaking. — *To be thanked.*

Also from Captain BOYD, R.N., of H.M.S. *Ajax*, of the 13th May, requesting permission to insert the Instructions of this Institution on the "Management of Boats in Heavy Surfs and Broken Water," in his *Naval Cadets' Manual.* — *To be granted.*

Also from R. B. FORBES, Esq., Chairman of the Massachusetts Shipwreck and Humane Society, of the 10th May, forwarding a list of the life-boats and mortar stations of that Society, and also a report of a Special Committee of the Philadelphia Board of Trade, in relation to the life-saving means on their coast. — *To be acknowledged.*

Also from Mr. B. THOMPSON, of Kessingland, of the 4th inst., stating the services rendered by the life-boat of that station, manned by himself and others, in rendering assistance during a recent gale, to the brig *Richard and Mary*, which they had safely brought into harbour. Although

they would receive salvage for their services, they could not refrain from expressing their thankfulness to this Institution for its kind assistance in helping them to provide their life-boat and boat-house.—*To be acknowledged.*

Paid 123*l.* 3*s.* for life-boat carriages; 34*l.* 3*s.* 8*d.* for life-boat stores; and 200*l.* 8*s.* 1*d.* for sundry charges on various life-boat establishments.

Voted 13*l.* 10*s.* 6*d.* to pay the expenses of the Brighton life-boat's crew in assisting to save, by means of the boat's gear, in conjunction with the rocket apparatus, ably worked by the Coastguard, the crews, consisting of 15 men, from the brigs *Transit*, of Shoreham, and *Atlantique*, of Nantes, which were wrecked off Brighton, during a heavy gale of wind, on the night of the 2nd June. Also voted 10*l.* in aid of local subscriptions for the widow of a poor man who had been unfortunately killed by the wheel of the life-boat carriage passing over his body while assisting to drag the life-boat along on the above occasion. He was engaged in aiding to draw the life-boat, by her outside life-lines, and his foot having slipped, the carriage wheel instantly passed over his body.

Reported—The services of the Filey life-boat, in putting off and safely bringing to land a fishing-yawl, of Filey, which, with 9 others, had drifted out to sea, during a terrific storm, on the 28th May last.

Also voted 14*l.* 5*s.* to pay the expenses of the Arklow life-boat, in putting off and remaining all night by the ship *Calcutta*, of Liverpool, which had stranded during foggy weather, on Arklow Bank, on the 11th May last.

Also 12*l.* 10*s.* to pay the expense of the Lowestoft life-boat in putting off and rescuing 6 persons from the brig *Scotia*, of Sunderland, and 5 from the sloop *Three Brothers*, of Goole, which were wrecked off Lowestoft during a very heavy gale of wind, on the 28th May last.

Also 7*l.* 7*s.* to pay the expenses of the Whitburn life-boat for putting off and saving 5 persons from the sloop *Charlotte*, of Woodbridge, which during a gale of wind was wrecked on the rocks off Whitburn, on the 3rd June last. This life-boat is called *The Thomas Wilson*, after one of the benevolent founders of the NATIONAL LIFE-BOAT INSTITUTION, and who was subsequently its indefatigable and respected Chairman for nearly thirty years.

Also 71*l.* 16*s.* to pay the expenses of the Yarmouth, Cahore, Rhyl, and Lowestoft life-boats, for putting off with the view of rendering assistance to vessels which were in distress during the gales of May and June.

Thursday, 5th July. Captain Sir EDWARD PERROT, Bart., V.P., in the Chair.

Read and approved the Minutes of the previous Meeting, and those of the Finance, Correspondence, and Wreck and Reward Sub-Committee.

Read letter from the Rev. W. YATE, Hon. Sec. of the Dover Branch, of the 22nd June, stating that two Russian young princes, the children of the Grand Duchess MARIE of Russia, had witnessed the trial of the Dover life-boat on the pre-

vious day, and that he had presented a photograph of one of the life-boats of the Institution, supposed to be proceeding off to a wreck, to HER ROYAL HIGHNESS, with which she was much pleased.

Read letter from His Grace the DUKE of NEWCASTLE, Her Majesty's Principal Secretary of State for the Colonies, of the 21st June, stating that he would have pleasure to forward to the Governors of the Colonies copies of this Society's Instructions for the Restoration of the Apparently Drowned.—*To be thanked.*

Reported the receipt of reprints of the Pamphlets of the Institution on the Management of Boats in heavy surfs and broken water, Instructions for the Treatment of the Apparently Drowned, and its Life-boat Regulations, published by the Government of Victoria, Melbourne.

Also the transmission to her station of a large life-boat, 32 feet long, built by Messrs. FORRESTER on the plan of the ROYAL NATIONAL LIFE-BOAT INSTITUTION, for the Liverpool Dock Trustees.

Read a draft of the Bye-Laws of the Institution, prepared by Messrs. CLAYTON and SON.—*Ordered the same to be submitted to a General Meeting of the Institution.*

Read letter from M. CHULLIER, of Havre, of 20th June, calling attention to his plan of life-boat.—*To be acknowledged.*

Reported that the Secretary and the Inspector of Life-boats to the Institution had attended public meetings at Sheffield and Bradford on 28th and 29th June last, which had been called to promote the formation of inland Branches of the Institution at those towns.

Paid 461*l.* 13*s.* for new life-boat, and for sundry charges on various life-boat establishments.

Voted 10*l.* 2*s.* to pay the expenses of the Almouth life-boat, in putting off, in a gale of wind and heavy sea, and rescuing the crew of 8 men from the brig *Ann*, of Blyth, which was stranded and masted, at the mouth of the river Ane, on the 11th June last. The crew had only been taken off a few minutes before the wreck's mast fell, fortunately clear of the life-boat.

Also 5*l.* to a poor man named EXLEY, who had been seriously injured by the carriage of this boat passing over him while engaged in aiding to launch her on the above occasion.

Reported—That the Newhaven life-boat had gone off on two occasions, and assisted by putting some of her crew on board to bring into harbour two vessels in distress off that place, during the heavy gales of the 2nd and 3rd June last. Also paid the expenses of assembling the crew a day and night on those disastrous occasions.

Also 8*l.* to the crew of the Shoreham life-boat, for putting off and rescuing, after three attempts, the crew of 9 men from the brig *Pike*, of Shoreham, which had grounded off the harbour of that place, during a strong gale of wind from S.S.W., on the 2nd of June last.

Also 11*l.* 15*s.* to some men for wading into the surf, and at some risk of life, rescuing 5 of the crew of the barque *Jane Green*, of Sunderland, which was totally wrecked on Gold Gush Stones, north of Hartlepool, during a gale of wind, on the 28th May last.

Also 17. to some men for rescuing 2 men from a boat which was capsized by a heavy sea, on the 8th May last, off Gweedore Bar, on the coast of Donegal.

Also Silver Medal of the Institution and 17. to Gunner CHARLES LEESE, and 21. to Corporals D. BANNISTER and ALLAN KAY, of the Coast Brigade Royal Artillery, in acknowledgment of their gallant conduct in aiding to rescue the crews of the brig *Annie*, of Shoreham, and schooner *Woodside*, of Shields, which were wrecked between Blatchington and Newhaven, on the Sussex coast, during the heavy gale of the 2nd June last. The humanity of LEESE had been very conspicuous on the occasion, in saving, at the peril of his life, a lad twelve years of age from a watery grave.

Also the thanks of the Institution to F. R. TOTHILL, Esq., Mayor of Seaford, for his valuable services and encouragement on the occasion of the before-mentioned wrecks.

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### THE HEAVY GALES OF MAY AND JUNE LAST.

THE disastrous effects of the heavy gales, or rather hurricanes, of the latter end of May and the beginning of June, can now with tolerable accuracy be ascertained. It appears, according to the official returns received by the BOARD OF TRADE, that 143 wrecks took place on the English coast on the 28th of May. Of these, 36 became total wrecks, some of their hapless crews were literally snatched from the jaws of death; and from the whole 143 wrecks, only 34 lives were lost. It is a gratifying feature in the returns to observe, that, by means of the life-boats of the NATIONAL LIFE-BOAT INSTITUTION, the mortar and rocket apparatus of the BOARD OF TRADE, shore-boats, and other means, 116 of our fellow-creatures were saved from these disastrous wrecks. The importance of such services as these cannot possibly be over-rated in a country like ours; but their real value can only be seen in many a sailor's home throughout these realms; where in their absence many a mother would to-day be a widow and her children orphans. It occurred in some places that the same life-boat was off twice on her mission of mercy on that dreadful day. As much as 50*l.* was paid by the NATIONAL LIFE-BOAT INSTITUTION to the crews of the Lowestoft and

Pakefield life-boats for their gallant services on that day alone.

Again, on the 2nd and 3rd of June 51 vessels were wrecked. Of these, 18 were totally lost; showing that this gale was, in proportion to the number of wrecks, more destructive to property than the previous storm; but the loss of life, again, on this occasion was happily small, 17 persons only having perished from the 51 wrecks, and 101 lives having been rescued by life-boats and other means—a most satisfactory result, and showing how laudable and courageous the exertions to save life must have been. It should be observed that these returns take no account of the lost fishing-boats belonging to Yarmouth, from which nearly 200 poor creatures are said to have perished. At Filey, 10 fine yawls were riding at anchor in the bay; 9 of them were totally lost, 1 only having been saved from destruction by the life-boat at that place belonging to the NATIONAL LIFE-BOAT INSTITUTION. If the unfortunate Yarmouth fishermen who perished in such large numbers during those fearful storms had had an aneroid or a storm-glass on board their boats, many of them would probably have escaped the dreadful calamity which has overtaken them; but it is a fact, that such a thing is never seen on board fishing-boats. Again, our coasters are generally so ill-found in everything, and particularly that which relates to the saving of life, that when they are overtaken by a storm, nothing seems to save them from destruction. But with all our foresight, wrecks will take place; and even at a period of the year when such events in these islands are seldom expected, heavy gales of wind will sometimes occur. Life-boats are now so built and managed that they can face nearly any sea; and it rests with the British public to say whether this Life-boat system shall be maintained and extended.

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# ROYAL NATIONAL LIFE-BOAT INSTITUTION.

(Incorporated by Royal Charter.)

*Patroness*—HER MOST GRACIOUS MAJESTY THE QUEEN.

*President*—VICE-ADMIRAL HIS GRACE THE DUKE OF NORTHUMBERLAND, K.G., F.R.S.

*Chairman*—THOMAS BARING, Esq., M.P., V.P., F.R.S., Chairman of Lloyd's.

*Dep. Chairman*—THOMAS CHAPMAN, Esq., F.R.S., V.P., Chairman of Lloyd's Register of British and Foreign Shipping Society.

## APPEAL.

THE COMMITTEE OF MANAGEMENT have to state that, during the past year, the INSTITUTION has incurred the following expenses, on either additional new Life-boat Stations, or the replacing of old boats, transporting-carriages, and houses, by new ones:—Berwick-on-Tweed, £149. 5s. 5d.; Cullercoats, £254. 10s.; Middlesborough, £110. 10s. 9d.; Redcar, £148. 10s.; Yarmouth, £180.; Isle of Wight (two boats, Grange and Brook), £406. 19s.; Exmouth, £237. 4s. 7d.; Fowey, £333.; Lizard, £314. 9s. 7d.; Braunton, £59. 18s.; Porthcawl, £323. 19s.; Carmarthen Bay, £375. 9s. 6d.; Aberdovey, £146. 15s. 1d.; Barmouth and Portmadoc, £409. 19s. 2d.; Rhoscelyn (Anglesey), £148. 0s. 1d.; Fleetwood, £174. 18s. 6d.; Silloth (Cumberland), £291. 19s. 6d.; Thurso, £203. 19s.; Banff, £203. 9s. 6d.; Lossiemouth, £180. 15s. 6d.; St. Andrew's, £261.; North Berwick, £203. 9s. 6d.; Ayr, £259. 14s. 8d.; Portrush, £203. 19s.; Dundalk, £117. 13s. 6d.; Carnsore, £124.; Dungarvan, £130. 2s. The Institution has also expended on the repairs, stores, alterations, and inspection of its numerous Life-boats, Boat-houses, and Transporting-carriages, £3,476. 16s. 2d., and £1,510. for exercising the Crews of its Life-boats; making altogether a total of £10,940. 7s. 0d.

It has also granted, during the same period, £1,108. 15s. 3d. as rewards for saving 499 persons from a large number of shipwrecks on our coasts. A most satisfactory result, and clearly showing how much has been accomplished by the well-directed efforts which the Life-boat Institution has brought to bear on this humane cause. This great and national work has, however, only been accomplished by the Society incurring liabilities to the extent of a further sum of £3,834.

The number of lives saved by the Life-boats of the Society, and other means, since its commencement, is 11,401; and for which 82 Gold Medals, 658 Silver Medals, and £12,759 in cash, have been paid in rewards. The Institution has also expended £36,948 on Life-boats, Life-boat Transporting-carriages, and Boat-houses.

With so sacred an object in view as the rescue of our fellow-creatures from an appalling death by Shipwreck, it might be supposed that the NATIONAL LIFE-BOAT INSTITUTION had claims which would come home to the heart of every one in this great maritime country. Such it may be hoped will be the case as its operations become more generally known, and thus an abundant harvest, not only of popular sympathy but of general pecuniary support, will be the permanent result.

The Committee of this Institution do not, therefore, hesitate to solicit most earnestly of all persons that support which they may be enabled to render. That help was never more needed than at the present time, when, through the extraordinary exertions the Society has made within the past few years, it has now One Hundred and Three Life-boats under its management, for the maintenance of which, in a state of thorough efficiency, a large permanent annual income is absolutely needed, if its humane mission is to be perpetuated.

*The Committee gratefully acknowledge the following recent Contributions:—*

	£.	s.	d.		£.	s.	d.
A Friend . . . . .	don.	20	0	Lornier, George, Esq., Westminster Club . . . . .	don.	5	0
Aldam, Wm., Esq., Frickley Hall . . . . .	don.	10	10	Manning, Capt. A. Portland Castle . . . . .	2nd don.	10	0
Baldwin, Admiral Augustus, Toronto . . . . .	don.	5	0	May, William, Esq., Fir Grove . . . . .	annual	1	1
Blegborough, Dr., Richmond, Yorkshire . . . . .	don.	50	0	Metcalfe, Wm. Esq., Clifton . . . . .	don.	21	0
Bonamy, Lieut.-Col. . . . .	annual	1	1	Moore, John, Esq., Whitehaven . . . . .	annual	1	1
Bordier, Jules, Esq., Throgmorton St. . . . .	2nd don.	10	10	Middleton, Mrs., York . . . . .	don.	5	0
Bromfield, Miss Eliza, Ebury Street . . . . .	annual	1	0	Peckover, Algernon, Esq., Wisbech . . . . .	2nd don.	3	0
Crombie, John, Esq., Edinburgh . . . . .	annual	1	1	Pepps, John, Esq., Lower Berkeley St. . . . .	2nd don.	50	0
Deane, Miss, Weston-super-Mare . . . . .	don.	5	0	Psalm 107th . . . . .	don.	2	0
Dent, Wm., Esq., Great Tower Street . . . . .	don.	10	10	Ralph, Miss, Halifax . . . . .	don.	2	0
Fox, Edw., Esq., Beaminster . . . . .	don.	10	0	Riddle, Miss M. A., Clifton . . . . .	2nd don.	10	0
Gay, George, Esq., Bristol (cost of a Life-boat and her Equipments) . . . . .	don.	200	0	Robinson, Wm., Esq., Settle . . . . .	annual	2	0
Gould, Rev. Joseph . . . . .	don.	2	0	Salter, Rev. John . . . . .	annual	2	2
Graham, Robert, Esq., the Isle . . . . .	don.	4	4	Sanders, Ralph, Esq., Exeter . . . . .	annual	1	1
Grainger, John, Esq., Wigton . . . . .	annual	1	1	Sanders, Robert, Esq., Exeter . . . . .	2nd don.	20	0
Griffiths, Tate, and Fisher, Messrs. . . . .	annual	2	2	Smee, Wm., Esq., St. Edmund's Terrace . . . . .	don.	2	2
Harris, Miss Sarah, Bradford . . . . .	don.	20	0	Smith, J. W., Esq., Oundle . . . . .	annual	1	0
Hutchesson, Rev. H. J. and Daughters . . . . .	don.	30	0	Sopwith, T., Esq., F.R.S., Cleveland Sq. . . . .	annual	1	1
Jackson, General George . . . . .	annual	1	1	Tetley and Son, Messrs, Leeds . . . . .	annual	2	2
Jejeebhoy, Sir Jamsetjee, Bart. . . . .	don.	10	0	Trist, R., Esq., Newton Abbot . . . . .	annual	1	1
Kingcome, Rear-Admiral . . . . .	annual	1	0	Tulloch, William, Esq., Copthall Court . . . . .	annual	1	1
Lambert, Miss Ellen . . . . .	6th don.	20	0	Wakefield, John, Esq., Kendal . . . . .	don.	10	0
				Waldron, Miss, Warrminster . . . . .	don.	5	0

Donations and Annual Subscriptions will be thankfully received by MESSRS. WILLIS, PERCIVAL, and Co., 76 Lombard-street, Bankers to the Institution; MESSRS. HERRIES, FARQUHAR, and Co., 16 St. James's-street; MESSRS. COURTS and Co., 59 Strand; by all the London and Country Bankers; by the several Metropolitan Army and Navy Agents; and by the Secretary, RICHARD LEWIS, Esq., at the Office of the Institution, 14 JOHN STREET, ADELPHI, London,—W. C.