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WEATHER REPORTS AND FORECASTS IN THE DAILY NEWS-PAPERS.

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INFORMATION about the weather, or respecting instruments available for popular use, as indicators of changes in our ever-varying atmosphere, has been extensively diffused during late years, and especially since the telegraph has extended its electrical intelligence in every frequented direction.

The Board of Trade having arranged telegraphic and frequent communication between widely separated stations, and a central office in London, a means of feeling if not seeing successive simultaneous states of atmosphere over the greater extent of our islands was established, and an insight into its laws has been obtained, to which each passing month has added value.

Extensions of our arrangements to the Continent are contemplated in France, in Hanover, and in Prussia; and it may now be desirable to circulate amongst life-boat men and others a brief description of the basis and nature of the forecasts and occasional warnings which are given by the Meteorological Department.

These forecasts are not prophecies; they are carefully-drawn estimates of average probabilities, obtained by intercomparison of facts, observed, telegraphed, and duly weighed, according to known laws.

To explain the chief grounds on which they are based, and to assist in rendering the published tables or reports of weather more generally available by those whose interests are affected by atmospheric changes, the following passages are offered:—

Air-currents sometimes flow side by side, though in opposite directions, as “parallel streams,” for hundreds, or even thousands of miles. Sometimes they are more or less superposed; occasionally, indeed frequently, crossing at various angles; sometimes combining, and by the composition of their forces and qualities, causing those varieties of weather that are experienced as the wind veers more toward or from the equator, or the nearest pole; and sometimes so antagonistic in their angular collision, as to cause those large circling eddies or rotatory storms called cyclones, which are really like the greater storms in all parts of the world, although they do not quite assimilate to those local whirlwinds, dust storms, and other commotions of atmosphere which seem to be more electrical in their characteristics, if not in their origin.

When a polar current prevails at any place, or is approaching, the air becomes heavy, and the barometer is high or rises. When the opposite (equatorial or tropical) prevails or approaches, the mercury is low or falls, because the air is, or is becoming, specifically lighter, and these changes take place slowly.

Whenever, from any causes—electrical, chemical, or simply mechanical—either current or any combination of currents ceases to press onward without being opposed, a gradual lightening of the atmosphere, through a greater or less area of hundreds, or perhaps thousands, of miles, occurs, not suddenly, but very gradually, and the barometer falls. There is less tension.

To restore equilibrium, the nearest disposable body of air (so to speak), or most

moveable, advances first; but an impulse at the same time may be given to other and greater masses that, though later in arriving, may be stronger, last longer, and cause greater pressure, mechanically, as well as by combination. Air, like water, mingles slowly, either from above or laterally.

Taking, with Dové, north-east and south-west (true) as the "wind-poles," all intermediate directions are found to be more or less assimilated to the characteristics of those extremes as they are nearer one or the other; while all variations of pressure, or tension—many of those caused by temperature—and all varieties of winds, may be clearly and directly traced to the operations of two constant principal currents—equatorial or tropical, and polar—our north-east and south-west.

It has been proved that storms, indeed all the greater circulations of atmosphere in the zone between the tropics and polar regions, have an eastward motion, bodily, while circulating around a central area. Within the tropics it is otherwise, or westward, till they recurve, moving first toward the nearer pole direct, and then eastward with more or less direction toward the same pole.

Clear distinction should be made between those ever-alternate, and often-conflicting main currents, tropical or polar, and the local effects of their union, or antagonism, namely, mixed winds, whether westerly or easterly, with occasional eddies or cyclones, on a larger or on a smaller scale.

The lower current does not ordinarily extend far upward (only some few thousand yards), and high land, mountains, especially ranges of mountains, alter and impede its progress, so that a variety of eddy winds, or streams of wind, with local and apparently anomalous effects are frequently caused.

Electrical action, condensation of vapour into hail, snow, rain, or fog, causing heat; or its other changes, namely, evaporation, rarefaction, and expansion, absorbing heat, and therefore causing cold, immediately affect currents of air in a degree proportional to such influence, inducing horizontal motion and dynamical force.

The polar current always advances from

the polar quarter, while laterally moving eastward (like a ship making lee-way) being pressed towards the east by the tropical flow, which advances from the south-westward, usually above and at an angle with the polar stream, or current of air, often mixing with it, but at times separately penetrating downward, then sweeping and warming the earth's surface, uncombined with the polar current, even while feeling its approaching influence: and thus, as it were, forcing passages between streams of chilling polar air that at the same time are moving in opposite and nearly parallel directions.

At times, after a continuance of tropical air-current, or during its general prevalence, a polar flow, or separate stream, of air (electrical, cold, dry, and of greater pressure, or tension, than the prevailing body of air then next the earth) passes above, chilling, and otherwise influencing the lower air, through which, at some places, it penetrates completely.

These movements of air-currents are shown, by clouds crossing the heavenly bodies, by the visible characteristics of those clouds, and by simultaneous observations of temperature, tension, force of wind, with its true direction, at many places.

It is very interesting, as well as practically useful, to mark how these inroads or mixtures of air-currents occur, and to note their beginnings, or endings, at a few places considerably separated; such, for instance, as Copenhagen and Lisbon, Galway and Heligoland, Jersey and Aberdeen, Queens-town, or Valencia, and Berwick or Yarmouth, with intermediate places.

But this special feature may be better referred to after a few other considerations have been submitted as preliminary.

Dynamical force, or pressure of air in motion, is generated by disturbed equilibrium; whether electrically, by heat or cold; mechanically, by aqueous expansion in gas, by contraction in rain, snow, or ice; or by previously induced action of air-currents among themselves, and by their inertia.

Hence it follows that no great disturbance of equable temperature, tension, dryness, or moisture, can occur without a proportionate dynamical force, tending to cause

currents of air, or wind, however resisted, deflected, or otherwise affected by similar and simultaneous actions, more or less in opposition, or in combination.

Sometimes their opposition is so equal, and equilibrium is so complete, that a calm is the result, no sensible movement horizontally along the earth's surface being perceptible.

Frequently combination occurs, and effects are produced in proportion. These are particularly evident in the meetings of the tropical and polar winds, by the west, by their subsequent continuance in strength, as mixed winds, and by the concurrence of following cyclones:—

Successive, or rather consecutive, gyrations, circuits, or cyclones, often affect one another, acting as temporary mutual checks, until a combination and joint action occurs, their union causing even greater effects, as may be seen even in water currents, as well as in the atmosphere itself.

Between the tropics and the polar regions, or in temperate zones, the main currents are incessantly active, while more or less antagonistic, from the causes above mentioned; besides which, wherever considerable changes of temperature, development of electricity, heavy rain, or these in combination, cause temporary disturbance of atmospheric equilibrium (or a much altered tension of air), these grand agents of nature, the two great currents, speedily move by the least resisting lines to restore equilibrium, or fill the comparative void. One current arrives, probably, or acts sooner than the other; but invariably collision occurs of some kind or degree, usually occasioning a circuit, a cyclonic gyration, however little noticed when gentle, or moderate in force.

Great and important changes of weather and wind are preceded, as well as accompanied, by notable alterations in the state of the atmosphere. Such changes being indicated at some places sooner than at others around the British islands, give frequent premonitions; and, therefore, great differences of pressure (or tension) shown by barometer, of temperature, of dryness, or moisture, and direction of wind, should be considered as signs of changes likely to occur soon.

It will be observed, on any continued comparison of weather reports, that during the stronger winds, a far greater degree of uniformity and regularity is shown than during the prevalence of moderate or light breezes; and this should be remembered.

When neither of the greater and more extensive atmospheric currents is sweeping across the British islands, currents of which the causes are remote, and on a large scale, the nature or character of our winds approaches, and is rather like that of land and sea breezes in low latitudes, especially in summer.

Either the cooler sea wind is drawn in overland, heated by the summer sun, or cold air from frosty heights, snow-covered lands, or chilly valleys, moves towards the sea, which is very uniform in temperature for many weeks together, changing slowly, and but little, in comparison with the land, during the year. These light variables may at such times be numerous, simultaneously, around the compass, on the various coasts of the British islands.

Frequently it has been asked, "In this country, how much rise or fall of the glasses may foretel remarkable change, or a dangerous storm?"

To which can now be replied, great changes or storms are usually shown by falls of the barometer exceeding an inch, and by differences of temperature exceeding about fifteen degrees. A tenth of an inch an hour is a fall indicating a storm, or very heavy rain. The more rapidly such changes occur, the more risk there is of dangerous atmospheric commotion.

As all barometric instruments often, if not 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 for hours to come.

The general effect of storms is felt unequally in our islands, and less inland than on the coasts. Wind is diminished or checked by its passage over land. The mountain ranges of Wales and Scotland, rising two to four thousand feet above the

ocean level, must have great power to alter the direction, and probably the velocity of wind, independently of alterations caused by changes of temperature.*

Extensive changes, showing differences of pressure, above or below the normal or mean level, amounting to an inch or thereabouts, are certain to be followed by a marked commotion of the elements in the course of a few days.

If the fall has been sudden, or the rise very rapid, swift but brief will be the resulting elementary movement; if slow or gradual, time will elapse before the change, and the altered state of the weather will take place more gradually but last longer.

Notice may thus be obtained and given a few hours, or a day, or even some days before any important change in the weather actually occurs.

Having such knowledge, it obviously follows that telegraphic warning may be sent in any direction reached by the wires, and that occasionally, on the occurrence of very ominous signs, barometric and other—including always those of the heavens—such cautions may be given before storms as will tend to diminish the risk and loss of life so frequent on our exposed and tempestuous shores.

Barometers show the alterations in tension, or, so to speak, the pulsations, on a large scale, of atmosphere, and diagrams express to practised observers what the "indicator-card" of a steam cylinder shows to a skilful engineer.

Our own islands have very peculiar facilities for meteorological communication by telegraph between outlying stations on the sea coast and a central place—all being at nearly the same level, and nearly all comparatively uninfluenced by mountain ranges.

And now the results are, that having daily knowledge of weather (including ordinary facts of a meteorological nature), at the extreme limits and centre of our British islands, we are warned of any great change taking place; the greater atmospherical changes being measured by days rather than by hours.

Only local changes, however violent they

* In Norway are ranges of 8,000 feet.

may be occasionally (and dangerous in proportion to their suddenness and violence)—only such changes are unfelt at a distance, and do not influence great breadths, such as hundreds of miles' area of atmosphere.

Some special, and to many persons entirely new, considerations should here be mentioned, as they are now practically valuable in connection with forecasting weather.

When opposing currents of air meet, their masses must continue in motion a certain time, either rotatory or ascending, or going onward horizontally in combination.

Masses of air, either of polar or tropical origin, so to speak, returning, when driven back by stronger opposition, at first, and for a certain time, retain the characteristics of their peculiar and very different natures.

In our latitudes there is a continuous alternation of air-currents, each specifically different, and denoting approach by marked characteristics; and we have proved by successive series of simultaneous statistical observations, over a wide range—embracing Scotland, Ireland, all England, and adjacent islands—that while these alternating or circuitously-moving currents are thus incessantly passing, the whole body of atmosphere filling our temperate zone is moving gradually towards the east, at an average rate of about five geographical miles an hour.

During strong westerly winds this eastward motion is greatly increased, and in easterly gales it is proportionally diminished, as measured by its passage along a horizontal surface of earth or ocean.

[In our next Number this Article, accompanied by illustrations of the Day and Night Storm Signals, will be continued.]

SERVICES OF THE LIFE-BOATS OF THE ROYAL NATIONAL LIFE-BOAT INSTITUTION.

LOWESTOFT.—On the night of the 2nd November, 1861, the schooner *Fly*, of Whitby, was in a leaky state, and in danger of foundering near Lowestoft, in a heavy gale from the north. On her making signals

of distress, the life-boat of the NATIONAL LIFE-BOAT INSTITUTION, at Lowestoft, was launched through a tremendous surf, and proceeded to her assistance. Some of the life-boat's crew were placed on board, and succeeded in taking her safely into Lowestoft Harbour. The vessel and her crew of 4 men would probably have been lost but for this aid.

On the 10th November, the Lowestoft life-boat was again instrumental in saving lives. The barque *Undaunted*, of Aberdeen, struck on the Newcombe Sand, in a south-westerly gale, and hoisted a signal of distress. The Lowestoft and Pakefield life-boats, both put off to her aid, and together took off her crew of 11 persons, landing them safely. The barque shortly after became a total wreck.

Again on the 14th November, two small vessels, the pilot cutter *Whim*, and the lugger *Saucy Lass*, were seen to be at anchor on the weather side of the Holm Sand, in an extremely dangerous position, and with signals of distress flying. A steam-tug was seen to be near them, but unable to approach near enough to render them any assistance, as the wind was blowing a heavy gale at the time, and a high surf was breaking on the Sand. The Lowestoft life-boat was quickly launched, proceeded under sail to the Sand, and succeeded in rescuing the crews of both vessels; the steamer towing her to windward after her rescue of the crew of the cutter, to enable her again to drop down into the broken water to the aid of those on board the other vessel. 7 men were taken from the cutter by the life-boat, and 11 from the lugger.

On the 26th February the services of this valuable life-boat were again called into requisition. Early in the morning the boat of the brigantine *Matilda*, of Stockholm, with 4 of her crew, and a Lowestoft pilot on board, found their way into Lowestoft Harbour, and reported that their vessel, with 6 more men on board, was ashore on the Corton Sand, and fast breaking up. The Harbour steam-tug had, fortunately, her steam up at the time, and the Lowestoft life-boat having been manned, she took her in tow and conveyed her to windward of the Sand,

where they found the unfortunate vessel a broken-up wreck. The life-boat quickly made sail to the spot, and dropping her anchor amidst the broken fragments of the wreck, succeeded in rescuing 4 of the unfortunate vessel's crew, the remaining 2 having been washed off the wreck and drowned before her arrival. Captain RIVERS, Harbour Master of Lowestoft, went out in charge of the tug, without the aid of which the life-boat would not have reached the wreck in time to have been of service.

YARMOUTH, NORFOLK.—On the night of the 3rd November, the smack *Adventure*, of Harwich, ran ashore on the North Sand, near Yarmouth. The Institution's smaller life-boat at that place was quickly launched through a high surf, and succeeded in taking off her crew of 10 men, landing them in safety at Yarmouth. Captain WARREN, the Inspecting Commander of Coastguard, and Mr. PETTS, Chief Officer, went off in the life-boat.

THORPENESS, SUFFOLK.—On the morning of the 12th December, the brig *Content*, of Sunderland, coal laden, struck on a sunken wreck near Sizewell Bank. Becoming very leaky, it was necessary to run for the shore, when, hoisting a flag of distress, the Thorpe life-boat proceeded to her aid, and took off the Master and 4 men, landing them in safety; 1 man had previously got on board a smack. The vessel shortly after filled, and became a total wreck.

FISHGUARD.—On the 12th December, in a heavy gale from S.S.W., the smack *Ellen Owens*, of Cardigan, at anchor in Fishguard Bay, was observed to be driving, and to have a signal of distress hoisted. The Fishguard life-boat was soon launched, and proceeded to her through a high surf. As certain destruction was before the vessel's crew of 3 men if she continued to drag her anchors until getting into the breakers, they were taken off by the life-boat, and safely landed. The vessel's anchors fortunately brought her up again before getting into the surf, and on the weather moderating, the crew were able to get on board her again.

BERWICK-ON-TWEED.—On the 18th December, the Dutch galliot *Epimachus*, of Amsterdam, was seen to be running for the shore, with a flag of distress up, 4 miles north of Berwick-on-Tweed. The life-boat at that place was at once launched, and proceeding to her, succeeded in taking off the crew, 5 in number, through a high surf: the vessel became a total wreck.

EASTBOURNE.—On the 11th January, 1862, the barque *Druid*, of Sunderland, anchored in a leaky state off Eastbourne, in a gale of wind, and hoisted a signal of distress. The Eastbourne life-boat proceeded to her, but the Master required assistance only, and would not allow his crew to leave the vessel. The crew of the life-boat accordingly remained on board the vessel with their boat alongside during the night, and kept continually pumping her out. At eight o'clock on the following morning a steam-tug arrived and took her in tow.

At eight, p.m., she however returned, water-logged, and with a signal of distress at her mast-head. The life-boat was again launched with some difficulty, and took off her crew of 9 men, landing them safely.

DUNDALK.—On the 16th January, the schooner *Rook*, of Liverpool, in making the Harbour of Dundalk, struck on the North Bull shoal, near the bar of the river. The Dundalk life-boat was quickly launched, and proceeded to her aid, putting a portion of the life-boat's crew on board, who succeeded in piloting her into the harbour: without this assistance, she would probably have been lost during the night, with her crew of 5 men.

TYRELLA, DUNDRUM BAY.—On the 17th January, the schooner *Bellona*, of Red Bay, was driven ashore in a heavy gale off the bar of Dundrum, and almost immediately became a total wreck. Owing to the thickness of the weather and darkness of the morning, she was not seen until 3 of the crew had been swept away, with the rigging, by the sea. The Tyrella life-boat, two miles and a half distant, was then quickly got out on her carriage, and drawn by horses abreast of the

wreck, when, launching through a very high surf, she succeeded in rescuing the master of the schooner, who had lashed himself to a rail on the fore-castle, and still survived.

The Institution's life-boat at Newcastle was also launched, and proceeded to the wreck, but did not arrive until the master had been saved. A fishing-boat also attempted to get off, but she was upset and her crew nearly drowned immediately after leaving the shore.

SOUTHWOLD.—On the 28th January, at daylight, a boat, with 5 men in it, was seen from Southwold, drifting towards the shore. There was a very high surf on the coast, which would have made it impossible for her to land, or for any ordinary boat to go to her aid. The Southwold life-boat was therefore launched through the surf, and reached her, taking on board the 5 men, and landing them safely. They proved to be the crew of the schooner *Princess Alice*, of Ipswich, coal laden, which had gone ashore on Sizewell Bank, and had become a total wreck, her crew having taken to their boat in time to save their own lives.

CARDIGAN.—On the 24th January, the brig *Pioneer*, of Carnarvon, laden with grain, becoming water-logged in a S.S.W. gale, the master and 6 of the crew took to their boat, the "painter" of which broke before the remaining man could get into her. As they were never again heard of, the boat was, no doubt, shortly after swamped, with the loss of all on board.

On a signal of distress being seen on board the brig from the shore, the Cardigan life-boat put off to her assistance, and succeeded in rescuing the 1 man left on board the vessel, and landed him safely at Aberforth, a small port seven miles from Cardigan, through a high surf.

DROGHEDA.—On the 7th February, the brig *Minerva*, of Workington, coal laden, ran ashore in a strong E.S.E. wind, on the South Bull Sand, at the mouth of the River Boyne. The Drogheda life-boat proceeded to her assistance, and taking off her crew, 4 in number, landed them in safety.

BUDDONNESS, DUNDEE.—On the 21st February, the schooner *Elizabeth and Hannah*, of Newburgh, laden with guano, ran ashore, in thick weather, on the Gaa Bank, at the mouth of the Tay, when the sea immediately broke with violence over her. Being seen by some fishermen, then running up the Tay, they, as soon as possible, proceeded to the Buddonness life-boat, lying afloat in the river, and manning her, were taken in tow by the steamer *Hamburgh*, which conveyed her to within a short distance of the wrecked vessel. Five of the crew were got into the life-boat, but the 6th and last was washed overboard by the sea; being a good swimmer, however, he was able to reach the boat, and was got into her, and with the others taken safely to the shore:

CAISTOR, NORFOLK.—On the night of the 26th February, the brig *Sisters*, of Whitby, laden with coals, was driven on shore on the South Barber Sand, off Caistor. Her signals of distress being seen from the shore, the Caistor boatmen proceeded to launch the life-boat there through a tremendous surf, the wind blowing a heavy gale from the E. at the time, and the night being intensely dark. Under these difficult circumstances, although more than 100 persons were engaged in helping to launch the boat, an hour elapsed before she could be got off the beach and warped to the hauling-off anchor laid down outside the surf. Sail being then made on her, she worked to windward to the scene of the wreck, where the anchor being let go, she was veered down, but owing to the darkness and the fearful sea breaking over the vessel, it then took an hour to get the crew of 9 men into the boat, and that at very great risk, as she was often lifted by the sea high above the vessel's sides, and several times dashed violently against her and on the sand, thereby incurring considerable damage; also losing one hundred fathoms of her rope gear, which had to be cut away on hauling off from the wreck. The wrecked crew were ultimately got safely in, and landed through a heavy surf. This was a splendid service, and may serve as a suitable illustration of the dangers that have to be encountered by the skill,

courage, and endurance that are often required of the brave fellows who man our life-boat fleet. Forty-five pounds were paid by the NATIONAL LIFE-BOAT INSTITUTION for this service, viz., 40*l.* to the 20 men forming the life-boat's crew, and 5*l.* to the parties assisting to launch the boat.

TEIGNMOUTH.—On the evening of the 5th March, the sloop *Elizabeth*, of Teignmouth, was observed outside the bar of the river in an unmanageable state, having lost her rudder. The wind was blowing a gale from the S.S.W.; there was a heavy sea on the bar, and it was coming on very dark. The Teignmouth life-boat was speedily launched, and proceeded to her, when by towing her head round, and otherwise assisting her, they succeeded after two hours' hard work, in getting her safely within the bar, and up the river. Had the life-boat not gone to her help, she must have gone on shore, when her crew of 4 persons would probably have perished.

PALLING, NORFOLK.—On the night of the 5th March, the brig *Jane*, of North Shields, stranded three miles and a quarter south of Palling, in a strong gale from S.S.W. The Palling life-boat was taken to the spot, on her transporting-carriage, and launched to her assistance. An attempt had been made to go to her in another boat, but it had to be given up on account of the heaviness of the sea. On boarding the vessel, the master and mate determined on remaining on board her, but the crew, 10 in number, with their clothing, and that of the master and mate, with the ship's papers, were all taken ashore and safely landed. On the following day, the weather having moderated, the boatmen from the shore succeeded in getting the brig off, and in taking her to Yarmouth.

For the before-mentioned services of its life-boats, the Institution paid the sum of 289*l.*

We reserve for a future Number later life-boat services and the additional life-boat stations.



THE ROYAL NATIONAL LIFE-BOAT INSTITUTION AND THE INTERNATIONAL EXHIBITION OF 1862.

OUR Great Exhibition—nay, the World's Great Exhibition—is open to the world's view at last. The most numerous, the grandest collection of the useful works of man that was ever brought together within the walls of a single edifice is now in this metropolis, spread out before the curious and inquiring gaze of the thousands on thousands who daily throng that vast building.

There may be traced out, as on a chart, the great outlines of human progress; the channels through which it has run and is running; the rocks and shoals and counter-currents which have impeded its even flow, but which the intellect and industry and perseverance of man have overcome; and there, with much distinctness, may be seen the point at which it has arrived.

There, as one of the phases of that progress, the Committee of the NATIONAL LIFE-BOAT INSTITUTION had hoped to have seen the great philanthropic object of saving human life from shipwreck worthily represented. Especially they thought it desirable in order that foreigners of every nationality who should at this time visit the shores of this the greatest maritime power of the world, should carry away with them a knowledge of the effectual manner in which a great national duty was provided for.

The Committee accordingly, at an early period of *last year*, made application to the Commissioners of the International Exhibition for space to exhibit a full-sized life-boat, fully equipped for service, and placed on her transporting-carriage, as a "fac-simile" of one of the numerous boats of the Society on our coasts. The Committee considered that a small model of a boat partakes too much of the character of a mere toy to convey any adequate impression of so practical and striking an object as a fully-equipped life-boat.

Knowing that every species of agricultural implement—of steam-engine—of railway-carriage, and of vehicle of pleasure,

would be here presented to the world's view, they thought it impossible that space for so important and interesting an object would be denied them, and accordingly a boat and carriage, were prepared in readiness for admission. To their disappointment, however, the Royal Commissioners decided not to admit the boat, and the Committee were informed that the Institution must be content to be represented by models only.

Nevertheless the Committee persevered—renewed applications were made, and the importance and the national character of the object in view, fully explained, yet without effect.

On intimation from the head of one of the departments that space had been found in an open court, adjoining the Eastern Annexe, the boat was even conveyed on her carriage to the doors of the great building, where she remained three days, pleading, as it were, for admission, but without avail—the orders were peremptory that she should not be admitted. Yet the space that had been selected, above referred to, remained unoccupied for several weeks afterwards, and we believe is so still.

Failing in their object to obtain a position for the life-boat amongst the other useful works of the day, the Committee made application to the Council of the Royal Horticultural Society for permission to exhibit it, contiguous to the International Exhibition, in the beautiful grounds of that Society, which application was most kindly acceded to, and there she may now be seen by every one who takes an interest in the great philanthropic work of saving lives from shipwreck.

SCHOOLS FOR SAILORS.

FIRST ARTICLE.

EVERYTHING that concerns the moral welfare and improvement of the sailor is of primary importance to a Maritime Power, such as that of the British Empire. Her strength and her commercial prosperity are alike dependent on her strength at sea, whether in ships destined for purposes of war, or in vessels intended only for the operations

of commerce. And it may be taken for an axiom that as with all other classes of men, so with the seafaring, their physical force is closely related to, and dependent upon, their moral worth. In the long-run, a sober, steady, and intelligent class of seamen will produce greater results than one depraved in mind, and enfeebled, through vice, in body. The better the men in their minds, the more courageous, the more enduring, the more industrious, and the more intelligent they are likely to be. Such is the class of men which every captain would like to have for his crew. Give a skipper his choice, and he will reject the drunkards and profligates, and choose in their stead the sober and well-conducted.

Now, without dwelling any further on a subject the truth of which will not now be denied by the oldest "salt" amongst us, it is certain that the readiest way to produce a class of good men is to form first of all one of good boys. If boys are well trained, able-seamen will come from them: if boys are allowed to remain sunk in idleness, ignorance, and corruption, the task of converting them into first-class seamen is rendered infinitely more difficult. If we wish to maintain amongst us a large population of thoroughly good seafaring men, we must turn our attention to the early training of our boys. In fact, we can hardly begin too soon to mould the young sailor from the little lads that frequent the schools, or play on the quays and shores, of our maritime towns. No one will dispute this: everybody, connected either with the navy or with the merchant service, will assent to so self-evident a proposition; but though they will agree to it, it does not follow that they will act upon it, or take the proper steps for carrying their conviction into practice. Partly from the want of unity of purpose and system, which is so unfortunate a characteristic of our nation, and which has so often caused us the most serious losses; and partly from the culpable apathy and indifference of the legislature and the Government; very little, if anything, is done upon a proper scale for the education of young sailor lads, though much talk takes place about the naval reserve

and the maintenance of the shipping interest. We all call out loud enough for able seamen in the time of need, but we give ourselves hardly any trouble to train up lads for such a purpose in times of prosperity and peace. In other words, while everybody professes to be anxious about the condition of our grown-up able-bodied seamen, nobody thinks of the sailor's child—of the little fishing-boy—of the young apprentice. We build Sailors' Homes, but we do not provide Sailors' Schools.

Now this is a serious fault; for it is evident that the more means we can give sailor lads of acquiring a general knowledge of their business, and other useful information, at an early period, the better will be our apprentices, the better our men, the better our mates, the better our masters. To put on examinations, and yet not to prepare lads for them, that is to say, not to provide special means of teaching them for the purpose, is a contradiction. If we want to secure our object, we must cast about to find the best, the readiest, and the earliest means of preparing for its attainment. We cannot begin to attend to the training of our sailor lads too soon.

It would be a very desirable, and by no means a difficult thing, to provide special means of instruction in all seaports, even through the medium of the common parochial schools. The ordinary schoolmaster can give lads all the instruction they require, even to become sailors, up to the age of 12 years, or so; and the imparting of special instruction after that age might be secured by attaching a schoolmaster skilled in navigation, &c., to each town, who might instruct able-bodied coasting seamen while ashore in the winter months, and might keep school for the boys and lads, not yet apprenticed, during the summer. It would be easy to attach a special school of this kind either to the Sailors' Home in any port (as the master of the Home might at the same time be the schoolmaster), or to any one of the parish schools, by making an arrangement to that effect with the local authorities. All that would be required would be that some constituted body, such as the Trinity House, or Lloyd's, or the Admiralty, or the Board of

Trade, should organize a plan for supplying competent teachers for schools of this kind. The schoolmaster should be *thoroughly able* to teach, or the school would be worse than useless. Not much difficulty would be found in the payment of expenses; for besides the circumstance that sailors and seafaring men are always willing to pay for really good professional instruction, there could not be a more legitimate appropriation made of some portion of the Harbour dues, or of the Mercantile Marine Fund, than in subsidizing schools of this description.

Is it desirable to diminish the casualties which swell the sad records of our Marine Insurance Offices? Would the underwriters at Lloyd's like to see the number of wrecks diminished by a certain notable annual percentage? Then one of the readiest ways to effect this is to improve the skill and knowledge of the seaman; to ameliorate his moral habits; to have fewer drunkards on board, since from that cause alone numerous ships run on the first shoal they near during a gale after leaving port; and to have men before the mast who can understand the master's instructions and act up to his orders with intelligence. Well, then, if this is to be done, let Government support the schools for boys; let the owners pay towards the Sailors' Schools of their ports; let Lloyd's contribute something towards them in every port of the kingdom; and let the Admiralty lend a hand, and draft off skilled teachers from Greenwich, who may be stationed all round our coasts for this laudable purpose.

At some of our largest ports, such as Liverpool, &c., schools of this kind do exist; and even a vessel is moored off the quays in which boys are received and trained. But all this is not on a scale of sufficient magnitude. For instance, in Liverpool alone it may be safely assumed there are from 5,000 to 8,000 young boys available, all of whom might, by early training, be made into good apprentices and sailors; but the means of training are not for 5,000—they are not even for 500! And yet how much better would it be for the interests of that port if, instead of picking up the scum of the streets, owners could always depend on a steady supply of boys, well taught and well dis-

ciplined for their ships! How well would it pay the Liverpool owners if they would, even at their own sole cost, provide means of education for the seafaring families of that enormously wealthy port!

It may be objected by some, that Government is not averse to providing teachers for schools of this kind; and that the Committee of Council has even offered premiums for certificated masters who will act in this capacity. It is uncertain at present how many teachers have availed themselves of the encouragement thus held out; but the following specimen of what this encouragement is may be found in the 'Official Calendar' for 1862, issued by the Government, the only information known to be printed upon the subject:—

"The certificate allowance will be dependent on the average number of *bond-fide* sailors—seamen and apprentices—who attend during 200 evenings in the year, and will be paid at the rate of 10s. per head of the average up to the maximum which the teacher is qualified to earn by the grade of his certificate. The payments on results, which are unlimited, are dependent on the number of prizes taken by the pupils when examined by the Inspector, and will be at the rate of 5s., 10s., and 1l., according to the grade of the certificate."

With all submission to the heads of the "Science and Art Department of the Committee of Council on Education," it is pretty clear that the above regulation was drawn up by some one not practically acquainted with maritime affairs. What! sailors and apprentices to attend on shore *two hundred* evenings in the year! Tailors, not Sailors, should have been printed! Catch an able-bodied seaman or an apprentice on shore 200 days out of the 365!

This is just the way in which a body of landmen might be expected to attempt to work a seafaring institution; but it would be far better for the Government not to interfere with any of the details of the business, and to confine themselves to providing the teachers. It would also be better that either the Admiralty or the Board of Trade should take the matter in hand; and that only professional men should have the framing of any regulations affecting such a class of teachers.

All this sort of thing would be better managed by a board of practical navigators, not by one of landsmen, who may scarcely know a ship's head from her stern.

The peculiar kind of instruction to be given to young boys intended for sailors should turn mostly upon geometry and calculation, after the essential qualifications of good useful reading and writing are secured. Arithmetical *correctness* and *readiness* are two points that should be most particularly attended to; not the faculty of working hard abstract problems, but that of handling tables of logarithms and numbers with perfection and certainty. In other words, a sailor boy need not be troubled much with mercantile arithmetic; but he must be early and well grounded in his vulgar and decimal fractions. A knowledge of the properties of the principal geometrical figures may be imparted to a clear-headed boy, and even to one of moderate abilities, at an early age. Boys like geometrical figures when they are not made too complicated, and when they see something useful in them. Without, therefore, taking a boy into anything like 'Euclid,' he may very well be grounded in an easy and elementary course of practical geometry, such as will stick by him when afloat, and will prepare the way for his advancing to trigonometry when he begins his regular treatises on navigation. Nearly all the time which is now wasted by navigation teachers in preparing young seamen for their *Norie*, &c., might be saved if they had been taught a *little* geometry, and a *good deal* of decimals, when they were boys in school.

Besides this, an equally elementary and easy kind of geographical and astronomical instruction might be attempted. The subject, in the hands of clear, sensible teachers, might be made attractive; and, without trying at anything grand or fine—without pretending to any such nonsense as the "use of the globes," &c., the young sailor boy might be made to understand thoroughly the forms, the subdivisions, the climates, the products of the globe, the currents and tides of the ocean, the leading phenomena of the atmosphere, the winds, &c., and the motions of the heavenly bodies. It is true that the book, which is to serve them for a text in all this, has still to be written; but it can and it ought to be written, and its publication would be an event of importance for the young sailor population of the whole country.

THE CHAPLAIN TO THE ROYAL WELSH
YACHT CLUB.

SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVO- LENT SOCIETY.

THE Twenty-third Annual Meeting of this Institution was held on the 23rd May, at Willis's Rooms, his GRACE THE DUKE OF MARLBOROUGH, President of the Society, in the Chair.

The Chairman observed that it had been well said, that the great nursery for our seamen was to be found in the sailors engaged in the coasting-trade, and every one was aware of the perils and dangers to which that class were exposed. The returns made by the Board of Trade to Parliament of the annual number of shipwrecks were something frightful, but it was gratifying to know the strenuous and gallant efforts made to save life on such lamentable occasions. Still the sailor was always exposed to casualties against which no foresight could provide. Tables had been made out by Mr. FINLAISON for the purpose of forming the basis of a provident institution, under the direction of the Society, which it was intended should assume a national character, and should include, not only mercantile seamen, but seamen of the Royal Navy as well.

Mr. LEAN, the Secretary, read the Report of the Committee, wherein it was stated that, during the past year, the Society had relieved 7,647 shipwrecked persons, natives and foreigners, and 3,774 widows and orphans of fishermen and mariners, making a total of 11,421; that 48,516 mariners voluntarily subscribed 3s. each per annum; that the income had been 18,012*l.*, including 715*l.* 3s. 6*d.* legacies, an increase over 1860 of 4,022*l.*, in connection with which certain large donors were mentioned. The Tables for a Pension Fund for Worn-out Merchant Seamen are to be published in a few weeks, the name of which is to be "The Mariners' National Pension Fund;" an Annuity Fund for Mariners' Widows will accompany it. It appears the plan is, to call on the benevolent public to aid these funds, and also in establishing a hospital, or asylum, for poor aged sailors who have no relations, and whose pension is not sufficient under the care of hirelings. The Report concluded with an earnest appeal to the nobility, gentry, and public at large, for help to carry out the Society's great objects, which were calculated to bind our seamen to their country, of which they are its outer and principal wall of defence.

The Report was unanimously adopted, and the claims of the Institution having been ably advocated by Admiral the EARL OF SHREWSBURY, Capt. the Hon. F. MAUDE, R.N., M. GORE, Esq., Rear-Admiral the Hon. JOS. DENMAN, Capt. Sir E. PERROTT, Capt. SULLIVAN, R.N., C.B., and Admiral BERTIE CATOR, the Meeting terminated by a unanimous vote of thanks to the noble Chairman.

LECTURE ON LIFE-BOATS.*

I.—*Preliminary Remarks.*

In a country bounded on all sides by the sea, whose earliest associations are connected with it, through the medium of which it has derived its civilization, its wealth, its grand political status, and probably to a great extent the energy, enterprise, and indomitable spirit of its inhabitants;—in a country whose almost innumerable ships ceaselessly traverse every sea, and are harboured in well-nigh every port on the globe we inhabit!—and, above all, in a country whose shores in every winter's storm are strewn with the wrecks of its ships and the corpses of its sailors;—in such a country it may well be presumed that an instrument devised to save the helpless castaway from an untimely end will be an object of general interest.

Such an instrument is a life-boat! I feel therefore under no other embarrassment in offering some explanations on its character and specialities than that which arises from the fear lest I should not do justice to so important a subject.

I propose, successively, to explain the general principles on which life-boats are constructed as compared with other boats—the peculiar properties of the principal descriptions of life-boats now in use on the coasts of the United Kingdom—the character of their equipment—and the system under which they are provided and managed in this country, especially those belonging to that noble institution to which I have the privilege and happiness to be attached—the NATIONAL LIFE-BOAT INSTITUTION.

II.—*Distinctions between Ordinary Boats and Life-boats.—Properties of Life-boats: Extra buoyancy, self-discharge of water, stability, self-righting, internal capacity, speed, weight, strength of build, material, &c.*

Although the word life-boat has not in itself any definite meaning, it is pretty generally understood as signifying a boat especially constructed for saving lives in storms and heavy seas, when ordinary open boats could not attempt to do so except at the imminent peril or certain destruction of those within them.

What, then, are the causes which make ordinary open boats unsafe in rough seas? And in what manner are those causes removed in life-boats?

The principal causes of a common open boat being unsafe in a heavy broken sea are, its liability to fill with water and swamp from a wave breaking into it or by its upsetting, and loss of stability from all water within it falling to one side with every motion of the boat. It is therefore obvious that the chief requirement of a life-

boat is the counteraction, as far as possible, of these defects.

Extra Buoyancy.—The first essential property, then, in a life-boat is what is termed extra buoyancy; which property is in a greater or less degree common to all life-boats, excepting to some of the so-called life-boats which, to meet the requirement of a loosely-worded clause in an Act of Parliament, are placed on the decks or hoisted up to the sides of many of our merchant vessels.

Extra buoyancy may intelligibly be defined as the excess of floating property in any body immersed in a fluid, the expression of which in pounds indicates the number of pounds' weight of any other body that it is capable of floating in addition to itself. Thus a log of fir timber, the specific gravity of which wood is about half that of water, will float with only half its body immersed, the remaining half representing its extra buoyancy. A piece of dry fir wood has therefore extra buoyancy about equivalent to its own weight.

This important property in a life-boat should be sufficient in amount to enable it to be loaded with people, and nearly filled with water, without its then being so deeply immersed as to be unmanageable.

Extra buoyancy in all our coast life-boats is now chiefly obtained by occupying a sufficient portion of the interior with enclosed water-tight compartments or boxes. These compartments, by being placed along the sides of a boat, and at its extreme ends, are made to serve the further purpose of adding to stability, by confining all water that may be shipped to the central part of the boat, where it is in some boats made to perform the office of ballast.

The mode in which this property is applied to the different descriptions of life-boats will be best explained by diagrams and models.

In Plate I., representing transverse sections of the five principal descriptions of life-boats in use in this country, the air-tight compartments which form the extra buoyancy are marked A.

It will be observed that in figs. 1, 2, and 3, this extra buoyancy occupies a large portion of the interior of the several boats, so that if filled with water they would evidently still float buoyantly; whilst fig. 4 represents a section of a tubular boat, which, having no interior corresponding with that of an ordinary-shaped boat, can contain no water. Fig. 5 is a section of one of WHARRE's ship's life-boats. It has not so much extra buoyancy as figs. 1, 2, and 3, but has sufficient for an ordinary ship's life-boat.

By the proper application of this principle, we have then not only an insubmersible boat, but the possession of other valuable properties, which are so mingled with it as to make it difficult to separate the one from the other. Thus, as in figs. 1, 2,

* Delivered by Capt. J. R. WARD, R.N., at the Royal United Service Institution, Jan. 17th, 1862.

FIG. 1.

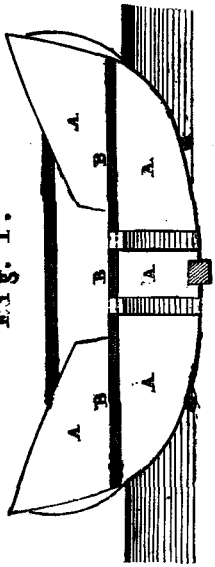


FIG. 2.

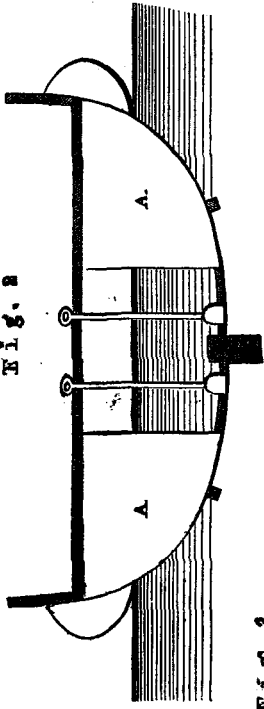


FIG. 3.

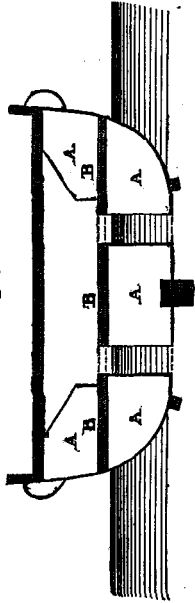


FIG. 4.

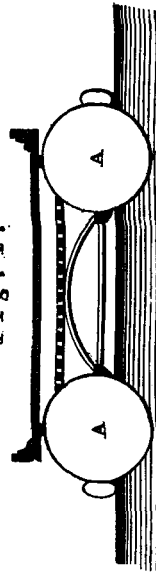


FIG. 5.

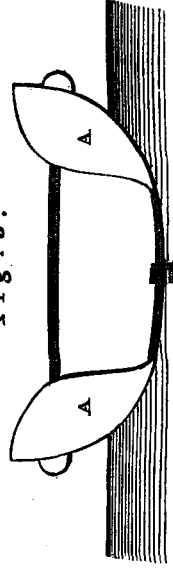


Fig. 1.

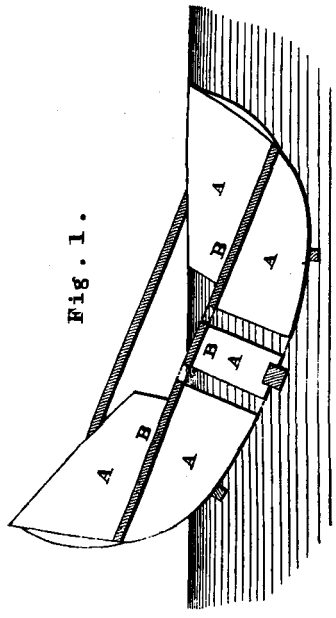


Fig. 2.

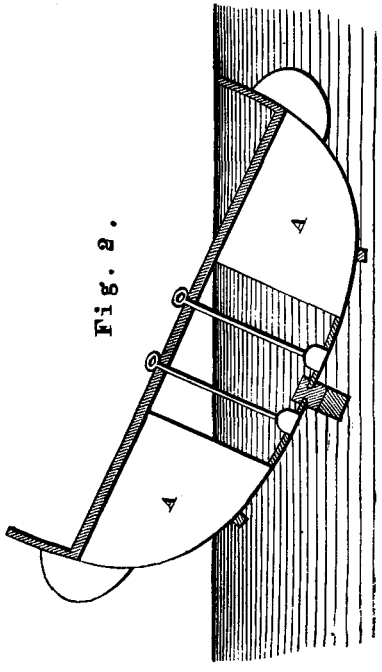


Fig. 3.

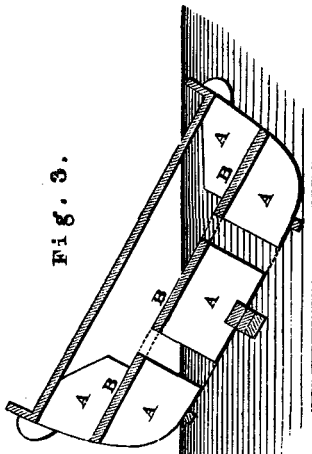


Fig. 4.

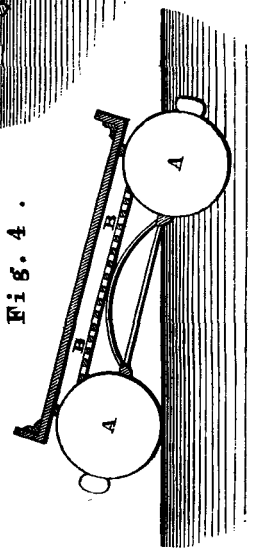
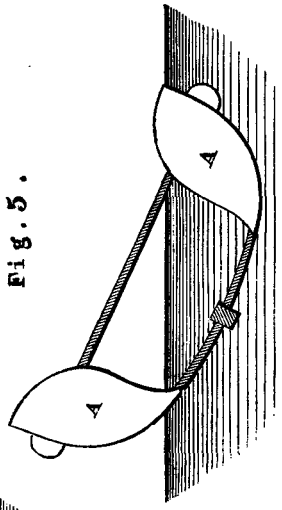


Fig. 5.



3, and 5, by occupying the interior space along the sides of a boat with air-tight compartments, the water within her is, in varying degrees, prevented from falling over to the lower side; and lateral stability in a rough sea is thereby much increased. Again, as shown in figs. 1 and 3, by placing the greater part of the extra buoyancy beneath a water-tight deck, means are provided for self-discharge of all water falling into the boat above the deck, through the instrumentality of connecting tubes between that part and the open sea below.

And again, as in fig. 2, by attaching large buoyant wales, or fenders, or pads, as they are variously termed, round the exterior sides of a boat, both lateral buoyancy and resistance to sudden heeling over, and thereby lateral stability, are increased.

Lastly, by occupying the extremities at bow and stern with enclosed air-compartments, the properties of self-righting and longitudinal stability are provided.

Self-discharge of Water.—Since, however, notwithstanding great extra buoyancy, it would be inconvenient and unsafe for so large a quantity of water to remain in a boat as often falls into one from a single broken sea or surf, another requisite property is at once apparent, viz., that of self-discharge or self-relief of water. Indeed, without this property, the full advantage of that of extra buoyancy is not realized, as without it all water breaking into a boat must remain in her, and become a shifting cargo, settling more or less on one side or at one end with her every motion.

Having then already the property of extra buoyancy, nothing more is needed, in order to effect the self-discharge of all water above the level of the outside sea, than to have a sufficient number of open holes in the bottom of the boat. Through such openings, all water shipped from above must then pass out by its own gravitation, until lowered to the outside level.

In some descriptions of life-boats, as in figs. 1 and 3, self-relief of water is total, unless they are very heavily laden with passengers or other weights; in others, as in fig. 2, it is only partial, a large quantity of water below the outside level remaining in the central part of the boat, where it serves as ballast.

In figs. 1 and 3, the watertight deck before alluded to, which is there shown by the line B, forms the inside floor of the boat; it is laid with considerable sheer,—i.e., curved upwards at bow and stern, so that all water over it should settle to its central part. Between this central part of the deck and the floor of the boat below, passing through the intermediate space, tubes of metal are fixed, varying in size and number in different boats, and open at both ends; thus opening passages between the space above the deck and the sea below the boat, but excluding all communication with the space between the deck and the floor—just as a chimney open at both ends passes from a ground-floor to the exterior of a building above the roof through intermediate apartments, whilst excluding communication with them.

These tubes vary in size, from three to six inches in diameter. The smaller they are, the more are required. As a single wave breaking into a boat will often fill her to the thwarts, there should be a sufficient number of relieving tubes to clear her of that quantity in twenty or thirty seconds. These relieving tubes in all the old classes of boats, as above stated, are open at both ends, and therefore freely admit the ingress of water from below, as of its egress through them from above. To remedy this defect, which is not an unimportant one in some boats, an ingenious self-acting valve has been invented, which valves are fitted in all the life-boats on the plan of the NATIONAL LIFE-BOAT INSTITUTION. It is a simple plate, fitting the tube at its upper end, and made to turn on an axis on one side of its centre, as does an eccentric wheel. It is so balanced as of itself to remain shut, and on the slightest pressure of water from below, to shut still closer, whilst, on water falling on it from above, the pressure on the larger division of the plate, being necessarily greater than on the smaller, opens it downwards. Valves, unless self-acting, and of very simple construction, are objectionable; but these are found to answer admirably, and some which have been ten years in use are still efficient, and have never got out of order.

In the Norfolk and Suffolk water-ballasted life-boats, fig. 2, Plates I. and II., which have no decks, there are merely holes in the floor, with large plugs to them. There are two of these holes, with corresponding plugs, at every thwart. The plugs have long handles, similar to those of common spades, so that the men sitting on the thwarts can insert or withdraw them at pleasure. Being large, powerful sailing boats, and very heavy, it is a great convenience to be able to handle them on the shore without the weight of the larger portion of their ballast: they are therefore launched empty; but as soon as they are clear of the beach, and before entering the heavier part of the surf, the plugs are withdrawn, and the water admitted until it rises to the outside level. The water thus let in varies in amount from four to seven tons in different boats. Through the open holes, the water within, after a sea being shipped, will always subside to the level of the outside water, all below that level remaining as a constant quantity. In some life-boats, as in fig. 5, and in all other ships' life-boats now in use, no provision is made for the relief of water except by baling. It must be acknowledged that all such boats are without one of the most requisite qualities of a good life-boat.

In the tubular life-boat, fig. 4, it will be seen that this property is attained in the greatest perfection, as, having no open interior, no water can lodge within her.

Stability.—The next quality of essential importance is lateral stability, or resistance to upsetting sideways. Stability may be obtained by three modes:—1st. By great breadth of beam; 2nd. By occupying the interior with air cases, as described already, in such a manner as to leave no space for water to remain in the interior, into whatever

position the boat may be thrown, or to so confine it to her central part that it cannot fall much to one side above the centre of buoyancy; 3rd. By ballast. There is a limit to the application of each of these modes, which requires careful consideration.—1st. Great breadth of beam, in proportion to length, is a certain mode of securing great stability, but it adds to weight, above the centre of buoyancy, and by increasing the area of the "midship section," entails loss of speed, requiring proportionally greater propelling power. It also prevents the application of another important property—that of self-righting in the event of being upset.

The widest rowing life-boats are those of the north country, or Greathead plan (fig. 1, Plate I.), some of which have 10½ and 11 feet beam to 30 feet length. The Norfolk and Suffolk boats (fig. 2) have also great beam, the largest having 12 feet to 46 feet length; they are, however, exclusively sailing-boats.

In sailing-boats, increase of beam can be very well given, as greater power of propulsion can be obtained by enlarged sails; but in rowing-boats this power can only be had by using longer oars, with two men to each, which thereby incurs the risk of an unnecessary number of lives. In one of such boats twenty-two men out of a crew of twenty-four perished at Shields by her being upset in the year 1850.

2nd. A most valuable means of adding to the stability of a life-boat, as intimated under the last heading, is by occupying its sides with buoyant cases. By an examination of Plate II., the relative properties of different life-boats in this respect will be readily perceived. It will be noticed that the north country life-boat (fig. 1) is possessed of this property to the fullest extent; as, if thrown over with one gunwale to the water's edge, there will only be space for a very small quantity of water to lie in her at the level of the outside sea, and that little but slightly on one side of the centre of gravity.

The continuation of the side air-cases to the gunwales, as in those boats, is, however, in another respect detrimental, by occupying space which is valuable for the stowage of wrecked persons.

In fig. 2, a greater quantity of water is retained, but the larger portion of it is on the windward or higher side of the centre of buoyancy, where it serves the purpose of ballast, and thereby adds to the stability of the boat.

In fig. 3 there is space for a larger quantity of water, some sacrifice of this important quality being made, to enable the scarcely less valuable property of self-righting to be brought into play, which great side buoyancy, placed high, would prevent.

In fig. 4 it is evident that no water can remain in any position.

In fig. 5 a large quantity of water might lie on one side of the centre of buoyancy, but the loss of stability arising therefrom is counteracted by large side buoyancy, placed high.

Ballast.—There remains the third principle of stability—ballast. Ballast may be either solid or

liquid. Solid ballast is most frequently applied in the shape of an iron keel, in which position, at the lowest part of a boat, it acts with the most powerful leverage. Iron keels in life-boats vary from 3 to 17 cwt. Ballast formed of wood, and of cork enclosed in water-tight cases, is also used in the self-righting life-boats of the NATIONAL LIFE-BOAT INSTITUTION, of nearly equal weight to the iron keel. Thus a 10-oared boat 32 feet long has an iron keel of 9 cwt. and nearly the same weight of wood, or of cases of cork stowed beneath the deck.

It is difficult to some persons to imagine that wood or cork can partake of the nature of ballast. In fact, however, any substance heavier than air may be used as ballast, a pound of cork being as much ballast as a pound of iron or lead. The advantage of employing a ballast of less specific gravity than water is, that in the event of a boat being stove in and the spaces below the deck filling with water, the extra-buoyancy of the material then comes into play, and prevents the boat from becoming so deeply immersed as to become unmanageable.

In February, 1858, the NATIONAL LIFE-BOAT INSTITUTION'S life-boat at Youghal, in County Cork, in launching, got stove on a rock, and a hole was made in her floor as large as a man's head: she became at once much more deeply immersed, and the water rose to five or six inches above her deck, the spaces beneath it having filled with water; nevertheless she proceeded on her mission of mercy; her gallant crew rowed her two miles to a wrecked Austrian ship, and in the midst of a very high surf which frequently broke over and filled her, she took fourteen men from off the vessel's bowsprit and conveyed them safely to the land: had all her ballast been of metal, she would undoubtedly have become so deeply immersed after being stove, that she could not have proceeded to the wreck, and all those poor men would have perished.

As, however, a large quantity of fixed ballast causes great extra labour and difficulty in land transport and launching, water-ballast is occasionally employed. It is sometimes enclosed in water-tight tanks, but more frequently, as in the Norfolk and Suffolk boats, is unconfined.

In consequence of the liability of enclosed tanks to leak from decay or injury, and of the water thereby spreading over the whole floor of the boat, water-ballast has been discontinued in most rowing life-boats. I am however of opinion that, if properly applied and secured, it would be free from any risk, and might often be employed with much advantage.

With the exception of three or four of the old boats on the north country plan, which still retain water-tanks, the only boats in the United Kingdom now ballasted with water are the Norfolk and Suffolk boats, fig. 2, already alluded to.

These latter boats deserve especial notice. They are only eleven in number, nine of them being exclusively sailing-boats varying from 39 to 46 feet in length, and from 10½ to 12 feet in breadth.

As they are unmanageable in a heavy sea under oars, and as they have often to work to windward

against the heaviest gales to the rescue of the crews of vessels wrecked on the numerous outlying banks which exist off that part of the coast, it is indispensable that they should be heavily ballasted, and have considerable draught of water, to give them good weathery qualities. In order, then, to make this requisite provision, without involving too much weight for convenient launching, they are provided with water-ballast, in addition to having iron keels. This water is let in by the same apertures that serve for self-relief of water, the plugs which close them not being withdrawn until the boat has got off the beach. The water thus let in is of very large amount, being in the largest boat of this class not less than seven tons—which water is not retained in an enclosed tank, but left to fill every unoccupied space up to the level of the plane of flotation. By the representation of a cross-section of one of these boats in fig. 3, Plate I., it will be seen that this unoccupied space is chiefly confined to a narrow channel of about one-third of the boat's width. Cross air-cases at bow and stern, to the level of the thwarts, also confine it lengthwise. The average area of these channels is about 20 feet long by 4 feet wide, in which the water lies to an average depth of $2\frac{1}{2}$ feet, in amount equal to about 200 cubic feet, or $5\frac{1}{2}$ tons.

A great quantity of water also settles between the large timbers of these boats, beneath the side and end air-cases, which cases are moveable separate boxes, and cannot be made to fit so closely as to fill up those spaces. These boats have also iron keels varying from 12 to 17 cwt.

At first thought it would appear highly dangerous to have so large a quantity of water loose within a boat: the truth is, however, that the safety of the principle consists in the largeness of the quantity, taken together with the circumstance of its being cut off from access to the ends and sides of the boat. If these boats were less heavily ballasted, they would be more lively, rising and falling with every motion of the sea, and the water within them would be constantly in motion towards the lowest level; but thus heavily weighted and propelled by powerful sails, they cut deeply through every sea instead of rising to it—they, in nautical phraseology, make much worse weather of it than a lighter and a more lively boat would do; heavy bodies of "green sea" break over them so as sometimes to altogether submerge their crews, and to hurl them from one end of the boat to the other, but their stability is so great that the boatmen have unbounded confidence in them; and they are protected against being washed overboard by "ridge ropes" rove through iron stanchions round the boat, fixed in the gun-wales.

The only boat of this class which has ever upset was the Southwold life-boat in February, 1858, the then most recently-constructed boat of the class. She was taken out, through a rather high surf, for the quarterly exercise of her crew. On returning to shore, before entering the surf, the crew injudiciously inserted the plugs and pumped out about two-thirds of the water ballast. They then ran her under sail, with too much way, into

the surf, when, a sea overtaking her, threw her stern up; the ton and a half of water still in her then rushed to the bow, which became completely submerged, and, broaching-to across the surf, she immediately upset. Her masts broke off on coming in contact with the ground, and not being a self-righting boat, she remained keel up. Her crew of 15 men, all having on their life-belts, in accordance with the rules of the NATIONAL LIFE-BOAT INSTITUTION, were saved; but three gentlemen—who had gone off as amateurs, and had refused to put on life-belts which had been offered to them—were drowned, although one at least of them was known to be a good swimmer. Had this boat been full ballasted, the sea would probably have broken over the stern instead of lifting it, and the accident would not then have occurred.

In this life-boat—in consequence of the crew having withdrawn their confidence from her after the accident, and as they also thought she floated too deeply in the water—the water-ballast channel was at my suggestion filled in with portable solid blocks of fir timber up to the level of the former water-ballast, she being thus provided with fixed ballast of half the weight of the former water. Since that alteration she has given every satisfaction to her crew. I have thought this circumstance deserving of mention, since the question as to the relative merits of water and solid ballast will, I have no doubt, continue to be a disputed one.

Although, however, this principle of ballasting with a large quantity of unconfined water has on the whole answered well in the large sailing-boats above referred to, I consider it to be inapplicable to rowing-boats, which, being of smaller size, and only slowly propelled against high surfs, would be liable to be thrown so much out of a horizontal position as to cause the water to settle at one end, as in the Southwold boat, and thereby endanger upsetting. I feel sure that I have many times been through heavy surfs in the self-righting rowing life-boats of the NATIONAL LIFE-BOAT INSTITUTION, which would have proved fatal to any rowing-boat so ballasted. It is also a serious drawback to such boats that their crews, whilst rowing, must sit with their feet in the water, which in a protracted service in cold weather, cannot but be very trying to them.

(To be continued.)

SUMMARY OF THE MEETINGS OF THE COMMITTEE.

Thursday, 5th December, 1861. 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-Committees.

Read letter from the CHEVALIER DE SCHAEFFER, Director of the Austrian Consulate, of the 3rd Dec., forwarding, on behalf of His Imperial Majesty the EMPEROR OF AUSTRIA, a donation of 10l. 10s. in

aid of the funds of the ROYAL NATIONAL LIFE-BOAT INSTITUTION.—*To be thanked.*

Read and approved the Inspector's Report, of the 2nd Dec., of his recent visit to the life-boats of the Institution on the Irish Coast, and also on his visit to Plymouth and Dartmouth.

Read letter from PHILIP DE ST. CROIX, Esq., of Jersey, of the 7th Nov., reporting the safe arrival of the Jersey life-boat, transporting-carriage, and stores, on their station on the 4th Nov. The life-boat and carriage are on the plan of this Institution, and their cost had been defrayed by the States of Jersey.

Also from Miss WASEY, of the 13th Nov., forwarding an additional munificent contribution of 25*l.* in aid of the general funds of the Institution.—*To be thanked.*

Also from Capt. Sir EDWARD PERROTT, Bart., V.P., of the 19th Nov., transmitting a cheque for 1*l.* 4*s.* 7*d.*, which he had received from M. K. BRAUND, Esq., of Furnival's Inn, being the amount realised from a collection made in the Smoking Saloon on the North Kent Railway, on behalf of the Institution.—*To be thanked.*

Also from Lord Chief Justice ERLE, of the 25th Nov., forwarding a contribution of 10*l.* 10*s.* in aid of the funds of the Institution.—*To be thanked.*

Also from the Secretary of the Dundee Local Life-boat Committee, of the 19th Nov., giving an account of a wreck which took place off Dundee, on the 11th Nov., when the Dundee life-boats were found to be very inefficient. He forwarded a copy of a Resolution passed by the Local Committee, regarding their two life-boats, and requesting this Institution to take the boats under its management.

Decided—That the Dundee life-boat establishments be taken into connection with the Institution, and that they be completely renovated forthwith.

Also from Mr. J. WILLIAMS, Hon. Sec. of the Aberystwyth Branch, of the 7th Nov., giving an account of the very satisfactory demonstration on the occasion of the launch of the new life-boat just sent there by the Institution.

Also from Capt. ABBOTT, R.N., of the 16th Nov., stating that His Excellency THE LORD LIEUTENANT OF IRELAND had become an annual subscriber of 10*l.* in aid of the Irish Branch of the Institution.—*To be thanked.*

Also from Z. C. PEARSON, Esq., Mayor of Hull, of the 2nd Dec., stating that he had decided to convene a Public Meeting in Hull, for the purpose of promoting the objects of the Institution.—*To be thanked.*

Reported—The transmission, on application, of life-boat plans and drawings, to the following foreign places:—Marseilles, Constantinople, Hamburg, Emden (Hanover), and Santander, Spain.

Also that the Contribution Box at the office of the Royal Mail Steam Packet Company had been opened and found to contain 6*l.* 16*s.* 6*d.*

Also that Capt. PILKINGTON, R.N., Hon. Sec. of the Selsey Branch, and W. WILKIE, Esq., of Ackworth, near Pontefract, had delivered lectures on the life-boats and operations of the Society.—*To be thanked.*

Ordered the thanks of the Institution to be presented to JAMES BURMAN, Esq., and W. A. RYAN, Esq., the late Hon. Secretaries of the Castletown and the Cahore Branches.

Paid 1,364*l.* 13*s.* for sundry charges on various life-boat establishments.

Voted six Silver Medals, the Third Service Clasp, the thanks of the Institution inscribed on vellum, and 168*l.* 13*s.* for various services rendered by the life-boats of the Society, and by shore boats, to several wrecks, the particulars of which will be found detailed in the Annual Report of the Institution, published in April last.

Thursday, 2nd Jan. 1862. 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-Committees.

It was moved, seconded, and carried unanimously, that the following vote of condolence of the ROYAL NATIONAL LIFE-BOAT INSTITUTION, on the occasion of the much-lamented death of the Prince Consort, be presented to Her Majesty THE QUEEN:—

“TO THE QUEEN'S MOST EXCELLENT MAJESTY,
“We your Majesty's most dutiful and loyal subjects, the ROYAL NATIONAL LIFE-BOAT INSTITUTION, for the Preservation of Life from Shipwreck, incorporated by Royal Charter, humbly approach your Majesty, with profound sorrow and affectionate sympathy, on the occasion of the bereavement with which it has pleased the Almighty to visit your Majesty, by the death of your illustrious and beloved Consort.

“While the death of his Royal Highness is deeply and universally lamented by all classes of your Majesty's subjects on account of his high personal character and rare intellectual abilities, this Institution has especial reason to deplore his loss, inasmuch as during the past twelve years the Prince had been, in conjunction with your Majesty's uncle THE KING OF THE BELGIANS, the Vice-Patron of the Institution, your Majesty having been their Patron since 1837.

“This Institution can never forget the obligations which His Royal Highness conferred on them when the Institution was renovated in 1850, and subsequently by his liberal support to them.

“The ROYAL NATIONAL LIFE-BOAT INSTITUTION humbly express a hope that the recollection of the Prince Consort's eminent virtues and important public services may, with the Divine help, tend in this time of tribulation, to soften in some measure the intensity of your Majesty's affliction.

“That your Majesty may long reign over a loyal and attached people is the prayer of your dutiful and loyal subjects and servants.

“By order of the Committee, Sealed with the seal of the ROYAL NATIONAL LIFE-BOAT INSTITUTION this 8th day of January, 1862.

“NORTHUMBERLAND,
“President.

“RICHARD LEWIS, Secretary.”

Read letter from JACOB WILSON, Esq., of Woodhorn, near Morpeth, of the 7th Dec., stating that a

Bazaar had been held at Newbiggin, in aid of the Institution's life-boat there in the previous summer, and that the proceeds had realised 301*l.* 16*s.*, a draft for which he forwarded.—*To be thanked.*

Also from the Inspector of Life-boats, of the 30th Dec., transmitting his Reports on the state of the three Dublin Bay life-boats, and on his recent visit to Hull.

Decided—That the Dublin life-boat establishments be completely renovated.

Ordered the account books of the Institution for the past year to be sent to the Auditor, Mr. BEGBIE, Public Accountant.

Paid 59*4l.* 15*s.* 8*d.* for sundry charges on various life-boat establishments.

Voted 6*l.* 10*s.* to pay the expenses of the Thorpeness life-boat in putting off and rescuing the crew of 5 men from the brig *Content*, of Sunderland, which had sunk, during rough weather off Sizewell, on the 12th Dec. last.

Also 6*l.* to pay the expenses of the Fishguard life-boat in going off and rescuing, during a terrific gale of wind, the crew of 3 men from the smack *Ellen Owens*, of Cardigan, which had a signal of distress flying in Fishguard Bay, on the 12th Dec. last.

Also 8*l.* 2*s.* to pay the expenses of the Berwick life-boat, in putting off and saving the crew of 5 men from the schooner *Epimachus*, of Amsterdam, which was on shore in a sinking state, during a heavy gale of wind off Scremerston, three miles south of Berwick harbour, on the 18th Dec. last.

Also the thanks of the Institution inscribed on vellum, to Capt. ROBERT W. WILSON, of the steam ship *Clarence*, belonging to the General Steam Navigation Company, in testimony of his humane and skilful exertions in rescuing, at the risk of his vessel, during a gale of wind, the crew of 8 men from the brig *Virago*, of Hartlepool, which was wrecked on the Middle Sand, at the mouth of the Thames, on the 2nd Nov. last.

Also 32*l.* to pay the expenses of the Newhaven, Rye, Penarth, and Orme's Head life-boats, for putting off with the view of rescuing the crews of various vessels, which, on the approach of the life-boats, had either got out of danger, or declined the services of the boats.

Mr. CHAPMAN was cordially thanked by the Committee for his able conduct in the Chair during the past year, and for his continued valuable services to the Institution.

Capt. Sir EDWARD FERROTT, Bart., V.P., was also thanked for his valuable and assiduous services as Chairman of the Sub-Committees of the Institution during the same period.

Thursday, 6th Feb. 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-Committees.

Read letter from Sir GEORGE GREY, Bart., M.P., Principal Secretary of State for the Home Department, acknowledging the receipt of the vote of condolence of the Institution, and stating that he

would take an early opportunity of laying it before Her Majesty THE QUEEN.

Also from the Secretary of the Dublin Board of Works, of the 4th Feb., stating that every assistance would be rendered to the Society by them in providing sites for the houses for the Dublin Bay life-boats.—*To be thanked.*

Approved of the Draft of the Annual Report, and the proposed list of officers of the Institution for the ensuing year, and ordered the same to be laid before the Annual Meeting, to be held at the London Tavern on the 18th March.—(Vide April Number of the *Life-boat Journal*).

Decided—That the thanks of the Society be given to Miss S. H. BERTIE CATOR, and the contributors to her life-boat fund. It had realised 210*l.*, and was appropriated in defraying the cost of the Kingstown life-boat, which was called the *Princess Royal*.

Read letter from Admiral Sir GEORGE SARTORIUS, of the 1st. Feb., requesting, on behalf of the Portuguese Government, that the ROYAL NATIONAL LIFE-BOAT INSTITUTION would order six single-banked life-boats to be built for it.

Decided—That the boats be ordered accordingly.

The Inspector of Life-boats of the Institution read his Report on his recent visit to the life-boat stations on the Suffolk coast. He stated that the coxswain and crew of the Thorpeness life-boat urged that their boat might be replaced by a more powerful one.

Decided—That the Thorpeness life-boat be replaced by the *Ipswich* boat.

Read letter from the Secretary of the ROYAL THAMES YACHT CLUB, of the 4th Feb., stating that the Club had granted an additional donation of 10*l.* in aid of the funds of the NATIONAL LIFE-BOAT INSTITUTION.—*To be thanked.*

Also from Lieut. NARES, R.N., of H.M.S. *Bri-tannia*, of the 5th Feb., presenting six of his patent kites for communicating from wrecked vessels to the shore.—*To be thanked.*

Also from the Secretary of the ADMIRALTY, of the 16th Jan., stating, in reply to the inquiry of this Institution, that the Lords Commissioners of the Admiralty would allow the officers and men of H.M.'s Navy, to whom the Medals of the Society had been presented, to wear the same.

Also from the Rev. P. J. SAFFERY, of Tottenham, of the 30th Jan., stating that Miss BRIGHTWELL, of Norwich, wished to present the cost (180*l.*) of the Blakeney life-boat to the Society. She desired that the boat might be named *The Brightwell*, after her father.—*To be thanked.*

Reported that the Kingsgate life-boat and transporting carriage had been forwarded to their station, and had safely arrived there on the 16th Jan. They were taken to Margate, free of charge, by the South Eastern Railway Company.—*To be thanked.*

Ordered life-boat houses to be built for the reception of new life-boats at Blakeney and Dundee.

Paid 539*l.* 8*s.* for sundry charges on various life-boat establishments.

Voted 26*l.* to pay the expenses of the East-

bourne life-boat in putting off twice, and rescuing, on the second occasion, the crew of 9 men from the barque *Druid*, of Sunderland, which was stranded off Eastbourne during a heavy gale of wind on the 12th Jan. last.

Also 6*l.* 10*s.* to pay the expenses of the Tyrella, Dundrum Bay, life-boat, in going off and saving the master of the schooner *Bellona*, of Red Bay, Co. Antrim, which, during a very heavy gale, was totally wrecked in Dundrum Bay, on the night of the 17th Jan. last. The remainder of the crew, 3 in number, had unfortunately been washed overboard during the night.

Also 15*l.* to pay the expenses of the Cardigan life-boat in going off and rescuing one of the crew of the brig *Pioneer*, of Carnarvon, which was waterlogged during very rough weather in Cardigan Bay on the 24th Jan. Seven of the crew had previously perished by taking to the ship's boat, which had instantly capsized. The boat had broken away from the wreck before the man left on board had time to jump into her.

Also 8*l.* 10*s.* to pay the expenses of the Southwold life-boat, in putting off and saving 5 men from a boat which had been observed drifting outside the outer shoal off Southwold, in a very heavy sea and strong wind, on the 28th Jan. The 5 men comprised the master and crew of the schooner *Princess Alice*, of Ipswich, which, having struck on Sizewell Bank, afterwards became a total wreck.

Also 76*l.* 5*s.* 6*d.* to pay the expenses of the Aberystwyth, Tenby, Southport, Lytham, Carmarthen Bay, Dundalk, Tyrella, Newcastle, and Youghal life-boats, in either rendering assistance to vessels in distress or putting off with that view.

Also 5*l.* to a boat's crew of 5 men for putting off and saving the crew of 7 men from a boat belonging to the steam ship *Kangaroo*, which was in a dangerous position in a very heavy sea, off Rhoscolyn, Anglesea, on the 23rd Jan. last.

Reported the services of the Filey life-boat in going off and escorting safely into port several fishing-boats which had been overtaken by a sudden gale of wind on the 20th Jan.

Also the services of the Lytham life-boat, in going off and bringing safely into port the schooner *Chance*, of Preston, which had grounded on the Horse Bank, during a gale of wind on the 17th Jan. The vessel's crew had succeeded in reaching the shore in their own boat. The life-boat's crew received salvage for this service.

Thursday, 6th March. 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-Committees.

Decided—That the portrait of Her Majesty THE QUEEN, Patroness of the ROYAL NATIONAL LIFE-BOAT INSTITUTION, be substituted for that of GEORGE IV., its first Patron, on the Medal of the Institution.

Read letter from Mrs. HARTLEY, of Biddeford, of the 5th March, approving of the *Mary Hartley* life-boat being placed at Dundee.

Reported the receipt of 20*l.* 10*s.* 7*d.*, as a thank-offering, from P. A. W.; A. G. W.; M. G. W.; E. T. W.; and S. G. W.

Also that an influential meeting had been held at Barking, on the 20th Feb., in aid of the objects of the NATIONAL LIFE-BOAT INSTITUTION, at which a deputation from the Society, consisting of Sir EDWARD PERROTT, Mr. MONTAGUE GORE, and the Secretary, had attended. GURNEY FRY, Esq., had occupied the Chair on the occasion, and the proceedings passed off most satisfactorily.

Also that the Plymouth life-boat and transporting carriage had been forwarded to their station on the 21st Feb., by express goods trains, the Great Western, Bristol and Exeter, and South Devon Railway Companies, liberally taking them over their lines free of charge.—*To be thanked.*

The Secretary and the Inspector had attended at Plymouth on the 24th and 25th Feb., when a public inauguration and exhibition of the life-boat took place.

Miss BURDETT CUTTS had presented to the Society the cost, amounting to 240*l.*, of the Plymouth life-boat.—*To be thanked.*

Decided—That the thanks of the Institution be given to Admiral KINGCOME; Capt. PUCKFORD, R.N.; THOMAS STEVENS, Esq.; and THOMAS RESTARICK, Esq.; in testimony of their very great exertions in aiding to establish the Plymouth and Devonport Branch.

Read letter from G. J. FENWICK, Esq., of Sea-ton Burn, Northumberland, of the 21st Feb., forwarding a cheque for 250*l.* to pay the cost of a double-banked life-boat, thoroughly equipped for a station on the north-east Coast of England.—*To be thanked.*

Also from Capt. ISACKE, Hon. Sec. of the Kingsgate Branch, of the 10th Feb., forwarding a very favourable report of the chief boatman of the Coast-guard, who is the coxswain of the Kingsgate life-boat, on the first trial made with the life-boat, which had given the crew great satisfaction.—*To be acknowledged.*

Also from J. BARNES, Esq., Hon. Sec. of the Silloth Branch, of the 21st Feb., giving an account of a very satisfactory trial they had had with their new life-boat in a gale of wind and a very rough sea.

Also from S. SANDERSON, Esq., Hon. Sec. of the Berwick Branch, stating that an amateur theatrical company in that town had given a performance in aid of the funds of the branch, and that it had realized the sum of 4*l.* 5*s.*—*To be thanked.*

Paid 505*l.* 14*s.* for sundry charges on various life-boat establishments.

Voted 7*l.* 11*s.* to pay the expenses of the Drogheda life-boat, in putting off and rescuing the crew of 4 men from the brig *Minerva*, of Workington, which had stranded near Drogheda Bar in stormy weather, on the 7th Feb.

Also 17*l.* to pay the expenses of the Buddon Ness (Dundee) old life-boat in rescuing, with some difficulty, the crew of 6 men from the schooner *Elizabeth* and *Hannah*, of Newburgh, which was totally wrecked on the Gaa Bank during a strong gale of wind on the 21st ult. Capt. SPEEDY, of the steamer *Hamburg*, had kindly towed the life-boat

to the vicinity of the wreck.—Capt. SPEEDY to be thanked.

Also 45*l.* to pay the expenses of the Caistor life-boat in going off and rescuing, at great risk of life, the crew of 9 men from the brig *Sisters*, of Whitby, which had sunk, during a gale of wind, on the Barber Sands on the night of the 26th Feb. It was intensely dark, and the surf on the beach was tremendous, while the boat was being launched.

Also 19*l.* 5*s.* to pay the expenses of the Lowestoft life-boat, in going off and saving 4 out of 10 of the crew of the brigantine *Matilda*, of Stockholm, which was totally wrecked during a gale of wind on the Corton Sand, on the night of the 26th Feb. The Lowestoft harbour steam-tug, under the command of Captain RIVERS, Harbour Master, rendered important service to the life-boat in the performance of this service. Voted the thanks of the Institution, inscribed on vellum, to Captain RIVERS, and 3*l.* 15*s.* to the crew of the steam-tug.

Also 2*l.* to two coast-guard boatmen, for putting off three times in a small boat, and assisting to rescue, at considerable risk of life, 7 persons whose boat had capsized amongst some rocks off Spiddal coast-guard station, County Galway, during stormy weather, on the 30th Jan.

Also 1*l.* to a young man named GEO. WILLIAMS, for rescuing, by means of a small boat, 4 men who had been capsized from their boat amongst some rocks near Dunree Fort, about six miles from Buncrana, on the Irish coast, during a heavy ground swell, on the 29th Jan.

Also 12*l.* to two boats' crews, consisting of 12 men, for putting off and rescuing, at some risk of life, 27 persons from the American ship *Tiger*, which had struck, during a heavy gale of wind, on the shoals off Templetown, in Waterford Harbour, on the 22nd Jan.

Also 4*l.* to a boat's crew for putting off, and rescuing 13 persons from a ferry-boat which had capsized off Tallaghan, Belmullet, county Mayo, on the 19th Jan.

Also 5*l.* to a boat's crew of 5 men, for putting off in a boat, in a very heavy sea, and saving the crew of 3 men from the schooner *Diligent*, of Caernarvon, which had sunk in Abersoch Bay, near Pwllheli, on the 23rd Jan. The poor men had been clinging to the rigging of the vessel for fifteen hours before they were rescued from their perilous position.

Also 7*l.* 11*s.* to pay the expenses of the Carmarthen Bay and Teignmouth life-boats in putting off with the view of succouring vessels in distress, but which did not require their services.

Reported the services of the Redcar life-boat, in going off and bringing into Hartlepool the derelict schooner *Banff*, of Harwich, which was found abandoned off Redcar on the 2nd Feb.

Tuesday, 18th March. The Annual General Meeting of the friends and supporters of the ROYAL NATIONAL LIFE-BOAT INSTITUTION was held this day, at the London Tavern, Bishopsgate Street, the Right Hon. the LORD MAYOR of London, in the absence of his Grace the DUKE of NORTHUM-

BERLAND, President of the Institution, taking the Chair.

The Chairman having opened the Meeting with some remarks,—

The Secretary read the Annual Report of the Committee.

Various Resolutions were afterwards moved, seconded, and carried unanimously, pledging the meeting to renewed exertions on behalf of the benevolent objects of the Institution. [The Resolutions will be found in the preceding Number of the *Life-boat Journal*, p. 23.]

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

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

Elected the Members of the Sub-Committees for the ensuing year.

The Inspector of Life-boats read his Report on his recent visit to the life-boats of the Institution on the West of England and Welsh coasts.

Decided—That the various recommendations of the Inspector be carried out.

Reported—That the LORD CHANCELLOR had ordered, on the recommendation of Her Majesty's Attorney-General, Sir WILLIAM ATHERTON, M.P., 400*l.* to be given to the ROYAL NATIONAL LIFE-BOAT INSTITUTION from a lapsed Chancery fund.—To be thanked.

Also that a gentleman, who would not give his name, had called at the Institution, and had left a Bank of England note for 200*l.*, in aid of its general objects.—To be acknowledged.

Also that a friend of the Society at Newcastle-on-Tyne had presented it with a legacy that had been left him, amounting to 1*l.*—To be thanked.

Read letter from Lieut. SIMMONS, R.N., Hon. Secretary of the Southwold Branch, of the 21st March, stating that in a severe N.E. gale the previous evening, the life-boat house had been undermined by the sea and partially blown down, and that some of the stores belonging to the life-boat had been swept away by the surf.

Ordered the house to be re-erected in a more secure position as soon as practicable, and the stores to be replaced.

Reported that the Rev. W. JACKSON, of Heathfield, near Hurst Green, had delivered lectures on the life-boats of the Institution at one or two places.—To be thanked.

Also the transmission of the new Broughty Ferry (Dundee) life-boat to her station on the 17th March, and her safe arrival there. She was conveyed, free of charge, on board one of the vessels of the London and Dundee Steam Packet Company. The boat was tried in the surf on the Gaa Sandbank on the 22nd March, when her performances elicited the warmest admiration of her crew and of all who witnessed her.

Ordered—The Steam Packet Company to be thanked.

Decided—That the thanks of the Institution, inscribed on vellum, be presented to Capt. W. R.

MENDS, R. N., C. B., late Deputy Controller-General of the Coast-guard, in testimony of his valuable and cordial co-operation in assisting to carry out the important and philanthropic objects of the Institution.

Also to Capt. M'DONALD, R. N., Inspecting-Commander of the Coast-guard, and late Hon. Sec. of the Banff Branch, in acknowledgment of his valuable and zealous services in aiding the Society to establish life-boats at Banff and Buckie, on the North-east Coast of Scotland.

Read letter from Miss BROWSE, of Brixham, of the 12th March, requesting, on behalf of the fishermen of that place, that the Society would furnish them with one of its barometers.

Decided—That a barometer be presented to the port of Brixham.

Paid 790*l.* 3*s.* for sundry charges on various life-boat establishments.

Voted 19*l.* 11*s.* 6*d.* to pay the expenses of the Palling life-boat, in putting off and rescuing 8 of the crew of the brig *Jane*, of North Shields, which had stranded during a strong gale of wind about three miles from Palling on the 6th March.

Also 11*l.* 11*s.* to pay the expenses of the Teignmouth life-boat, in putting off and rendering assistance to the sloop *Elizabeth*, of Teignmouth, which was in distress off that place during a gale of wind on the 5th March.

Also 40*l.* 9*s.* 6*d.* to pay the expenses of the Caistor, Walmer, Rye, Camber, Whitby, and Dundalk life-boats, in putting off in reply to signals of distress from various vessels, which, on the arrival of the life-boats, had either got out of danger, or did not require their services.

Also 9*l.* to the crew of a Pakefield yawl for saving, at some risk of life, the crew of 6 men from the brig *Adonis*, of Colchester, which, during a strong southerly breeze, had got on the Newcome Sand, Lowestoft, on the 6th March.

Also 4*l.* 10*s.* to the crew of the steam-tug *Enterprise*, of Margate, for rescuing the crew of 7 men from the brigantine *Joseph*, of Guernsey, which had sunk on the Black Tail Spit Sand off Margate during a gale of wind on the 5th March.

Also 6*l.* to a boat's crew of 6 men for putting off and saving, at great risk of life, the crew of 4 men of the schooner *Elizabeth*, of Aberdeen, which, during a fresh breeze and cloudy weather, was wrecked near Kingstown on the 3rd March.

Also 1*l.* to 2 men for putting off and picking up 2 other men whose boat had sunk during squally weather in Gristhorpe Bay, near Scarborough, on the 7th March.

Also 3*l.* to a boat's crew for going off and rescuing, at some risk of life, the crew of 5 men from the sloop *Jupiter*, of Cherbourg, which had sunk on the Hasboro' Sands during a gale of wind on the 19th March.

Also 6*l.* to the crews of two pilot galleys for putting off and saving the crew of 6 men from the brigantine *Good Intent*, of Bridport, which had sunk, during a heavy gale of wind, on the Mizen Reef, near Selsey, on the 6th March.

Also 4*l.* to 4 Coast-guard men, for putting off in a boat and rescuing the crews of the sloop *Ceres*, of Watchet, and smack *Francis and Tudor*, of

Berry, which had foundered off Watchet, during a gale of wind on the 20th March.

Also 10*l.* to the crew of the lugger *Eclipse*, of Margate, for rescuing, at midnight, during a strong wind and heavy sea, the crew of 8 men from the brig *Raby Castle*, which had sunk on the Kentish Knock Sand, on the 14th March.

Thursday, 8th May. His Grace the DUKE OF NORTHUMBERLAND, K. G., President of the Society, in the Chair.

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

Read letter from the Secretary of the ROYAL HORTICULTURAL SOCIETY, of the 29th April, stating, in reply to the application of this Institution, that the Council of that body had decided to grant space in their gardens for the life-boat and carriage. This kind and graceful permission of the Council had accordingly been accepted, and the boat placed there, thoroughly equipped, an awning being provided for their protection.—*To be thanked.*

Reported the receipt of an additional contribution of Two Hundred Guineas from the Corporation of the City of London, in aid of the funds of the ROYAL NATIONAL LIFE-BOAT INSTITUTION.—*To be thanked.*

Also that N. L., a gentleman residing in Manchester, had given the Society the cost (250*l.*) of the Kirkeudbright life-boat and transporting carriage.—*To be thanked.*

Also the transmission to their stations of the Kingstown and Poolbeg life-boats and transporting carriage. They were conveyed to Dublin, free of charge, on board steamers belonging to the British and Irish Steam Packet Company and the Messrs. Malcolmson.—*To be thanked.*

The Inspector of Life-boats of the Institution had proceeded to Dublin to attend the trial of the two boats, which took place on the 12th May, and went off very satisfactorily. The Inspector recommended that new boat-houses be erected for the boats.—*Decided that the boat-houses be erected forthwith.*

Read letter from Capt. WOODALL, the Hon. Sec. of the Scarboro' Branch, of the 13th April, stating that, while the life-boat was being exercised on the 14th April, she was suddenly struck on her broadside by a heavy sea and thrown on her beam-ends. Capt. WOODALL, who was on board, was thrown out with some of the crew, but, having on life-belts, they all quickly regained her. The crew continued to have the greatest confidence in the life-boat.—*To be acknowledged.*

Decided—That MESSRS. PEACOCK and BUCHAN, of Southampton, be employed to supply sufficient of their Composition Paint No. 3, to paint all the life-boats of the Institution.

Read letter from the Inspector of Life-boats, of the 5th May, recommending that the Dungarvan life-boat house should be removed from the west to the east side of the Bay at Ballinacourty, for various reasons given by him and the Local Committee.—*Approved.*

Paid 1, 114*l.* 5*s.* 5*d.* for sundry charges on various life-boat establishments.

Voted 17*l.* 11*s.* to pay the expenses of the Brighstone Grange (Isle of Wight) life-boat, in going off and rescuing, in eight trips, 134 persons from the barque *Cedarine*, of Bermuda, which had stranded during thick weather under Tar Barrel Hill, in Brighstone Bay, Isle of Wight, on the 2nd April. The Rev. J. PELLEW GAZE and Mr. JOSEPH CUTAJAR, R.N., Chief Officer of the Coast-guard, were thanked for their valuable services on the occasion.

Also 4*l.* 10*s.* to pay the expenses of the Aberdovey life-boat, in putting off on the 22nd April, and afterwards bringing safely into port the smack *Merrion Lass*, of Aberystwyth, and her crew of 3 men. The vessel had stranded during very stormy weather off Aberdovey. Mr. D. WILLIAMS, Hon. Sec. of the Aberdovey Branch, and Capt. JENKINS, C.B., went off in the life-boat on this occasion, Voted the thanks of the Institution, inscribed on vellum, to Mr. D. WILLIAMS, in acknowledgment of his general valuable services in putting off on all occasion of wrecks in the life-boat, and the thanks of the Institution to Captain JENKINS, for going off in the life-boat on the above occasion.

Also 45*l.* to pay the expenses of the Caistor life-boat, in putting off and rescuing, with great difficulty, the crew of 7 men from the schooner *Trial*, of Poole, which had struck on the Barber Sands, during a strong wind and very heavy sea, on the night of the 4th May. The brig got on the Sands but a few yards from the remains of a vessel wrecked there on the 5th March last. She was in the midst of the breakers, and had burnt lights and made signals till the boat reached her. The wind was blowing a gale from the east, causing a very heavy sea. The waves broke into the life-boat without intermission, so that she seemed in danger of being driven under water, being unable to clear herself fast enough. Some of the beachmen got aboard the ship, fearing that from the violence of the waves breaking so unremittingly into the life-boat, and keeping her so low in the water, she was actually sinking. The men spoke of the case as one in which they never experienced so much danger from the effect of the sea upon the boat. Holding on by the rigging and side ropes, they were at times standing in water up to their breasts, but they succeeded in rescuing the crew, who otherwise must inevitably have perished. The life-boat sustained serious damage in the performance of this service, by repeatedly striking against the wreck.

Voted 7*l.* to a boat's crew for putting off and rescuing, at great risk of life, the crew of 3 men from the smack *Lion*, of Cardigan, which had stranded, during a heavy gale of wind, in Fish-guard Bay, on the night of the 12th April.

Also 4*l.* to a boat's crew of 4 men, for putting off in a shore-boat and saving 3 men from the smack *John and James*, of Chester, which had stranded during a strong wind and heavy sea, while entering Aberystwyth Harbour on the 15th March. One of the salvors had his finger broken while assist-

ing to rescue the shipwrecked men.—Voted 1*l.* extra to him.

Also 10*l.* to two boats' crews for putting off and rescuing, at some risk of life, the crew of 5 men from the billiboy *Emerald*, of Hull, which had stranded, during a strong wind, on Blakeney West Sand, on the 20th March.

THE LAUNCH OF THE "IPSWICH" LIFE-BOAT.

IN our January Number we gave an account of the spirited and philanthropic exertions of the inhabitants of Ipswich, headed by Mr. BATEMAN BYNG, to raise a fund for the establishment of a Life-boat station on the coast, and stated that so successful had those exertions been, that no less than 500*l.* had been raised to effect the desired object, 206*l.* of that sum having been the response to a general appeal and collection in the various places of worship in the town.

We have now to supplement that account by a recital of the very interesting circumstances attendant on the public presentation of a first-class Life-boat and Transporting Carriage, the result of the Ipswich subscription to the Institution, and the exhibition and trial of the boat at Ipswich.

The 29th May had been appointed for the ceremony to take place, and the boat and carriage, which had been made in London by the builders of the Institution, were conveyed gratuitously to Ipswich by the Eastern Counties Railway Company, two days previous to that date. So general an interest had been felt in the undertaking, that we believe almost every man, woman, and child in the place had for days previously looked forward to the arrival and exhibition of the Life-boat as a thing in which the honour and credit of the town were intimately concerned, and it was determined to do a good thing in good style. Accordingly preparations were made on a large scale for a procession through the streets, for the decoration of the town, and for a public launch of the boat, and a suitable trial and exhibition of some of her qualities in her own element. Almost at break of day it was evident that there was to be a general holiday in Ipswich, and, despite of a wet, inauspicious morning, that the town was to put on its holiday attire. At an early hour the firing of spontaneous salutes from peaceful, impromptu ordnance of one description or another awoke some of the still sleeping portion of the community from their slumbers, soon followed by the ringing of bells from churches and chapels, proclaiming, as it were, a work of mercy and of "goodwill towards men." Flags of every hue shortly after spanned the streets from house to house, and hung suspended from their windows. Knots of the working classes of the population began to assemble—the country folks commenced arriving, and ere long it seemed that the majority of the good people of Ipswich were in the streets, bent on taking a part in the celebration of a good work in which they could all jointly feel an honest

pride. By 11 o'clock the various public bodies who were to take part in the procession had assembled in the barrack square, a large and suitable enclosure, where, under the direction of the marshal, Mr. J. ALLOWAY, each fell in to his appointed place. It will suffice to say, without going into full details, that the procession was of an imposing character, and of especial interest as showing how universal a sympathy was felt in the day's proceedings—that the boat herself was drawn by eight magnificent horses, lent for the occasion by the celebrated Ipswich firm of RANSOME & SIMS—that in the procession were the high functionaries of the town and county, the members for each—the High Sheriff and High Steward—the Mayor and Corporation—the Suffolk Militia Artillery and Walton Volunteer Artillery, with their flags, guns, and bands of music—that there were surviving members of the Old Volunteers of 1806, with their flags—long deputations of the "Odd Fellows" and "Foresters," gay with paraphernalia, banners, and devices. That the Chairman, several members of the General Committee, and the officers of the ROYAL NATIONAL LIFE-BOAT INSTITUTION were also there, having come from London expressly for the occasion—that the Captain of H.M.S. *Pembroke*, the Coast-guard ship at Harwich, with detachments of the "blue jackets" and marines of that ship, to represent the Government, were also there, and, finally, that the coxswain and crew who will have to work the boat on the coast, when on her station, had been brought 30 miles now to take charge of her, to be drawn in her through the streets in their life-boat dress, and to assist at her experimental trial.

Thus preceded and followed by this long and imposing procession, surrounded by the general populace, saluted by the cannon, and greeted from the windows and housetops, the "Ipswich" Life-boat was borne joyfully, if not triumphantly, through the winding and narrow streets of this old English country town, and then conveyed to the water's side, where an artificial beach had, with much pains and labour, been made, to enable her to be launched, with her crew on board, as she would hereafter be on her station on the coast.

Here, at the head of that beautiful estuary through which the river Orwell passes to the sea, was to be the climax of the day's proceedings. On suitable platforms, on either side of the boat, were assembled on the one side the public functionaries, and the leading inhabitants of the town who had taken a prominent part in the undertaking, and on the other, the Chairman and Members of the NATIONAL LIFE-BOAT INSTITUTION, &c. The life-boat's crew were seated in her, oars in hand, and belted with cork—her carriage-wheels at the water's edge, and her bow overhanging the water's surface, into which she was about to plunge. The launching ropes were in the hands of seamen from

the *Pembroke* man-of-war. Around, the quays, and banks and shore, nearly as far as the eye could reach, were swarming with human beings—the numerous steamers, yachts, and trading-vessels were decked in flags: and lastly, on an open space at the boat's side, in readiness to perform the christening ceremony, stood the lady of the High Steward, Mrs. AUSTIN, attended by twelve young ladies dressed in white, who most worthily represented the feminine grace and beauty of the town of Ipswich and its neighbourhood: and there stood also the minister of the gospel of peace, the Rector of the parish, in the robes of his office, ready, on the part of those assembled, to invoke a blessing from the Great Ruler of all Events on this work, undertaken for the benefit of his creatures.

All being now in readiness, the EARL OF STRADBROKE, Lord-Lieutenant of Suffolk, addressing himself to Mr. THOMAS BARING, M.P., Chairman of the NATIONAL LIFE-BOAT INSTITUTION, in a suitable speech, formally presented the life-boat to that Society on the part of the town of Ipswich.

In an equally suitable address, Mr. BARING, on the part of the Institution, accepted the same, and expressed their grateful appreciation of the noble gift, and of the extremely gratifying manner in which it had been made.

The Rector, the Rev. W. W. WOODHOUSE, now offered up before the uncovered multitude an appropriate prayer,—the lady sponsor stepped forward and breaking against the boat's side the usual bottle of wine, named her the *Ipswich*, and then, almost with a bound, the life-boat darted from her carriage, and in another second, amidst the firing of guns and the cheers of the assembled thousands, she was under full command of her stalwart crew, and gliding rapidly along by the force of their oars.

We will not further recount the various experiments and tests to which, for the satisfaction of the public, she was afterwards submitted—the qualities of these valuable boats being now pretty generally known; neither need we relate the exhibition of the rocket life-saving apparatus by the coast-guard, and the bringing ashore, by its means, imaginary wrecked men from vessels anchored safely in the smooth waters of the Orwell. Neither need we allude to the usual public dinner with its appropriate toasts, all of which had been got up to give additional *éclat* to the great object of the day. Our object solely being to record that which we deem to be at all times a noble spectacle and worthy of admiration and imitation; viz., the fact of a whole community heartily responding to the call of a few individuals, in an unmistakably good and patriotic work, not for the immediate benefit of their own body, but in the general interest of strangers in adversity amongst their fellow-men.

PAINTING THE LIFE-BOATS OF THE ROYAL NATIONAL LIFE-BOAT INSTITUTION.

In order to insure regularity in painting the life-boats of the Institution, and the use of the best description of paint, its Committee have decided on forwarding the requisite supply of paint, each year, direct from the manufacturers.

Having made trial of Messrs. PEACOCK & BUCHAN's patent paint on some boats, and the same having been highly reported on, that description of paint has been selected, and a supply for this summer's painting has been forwarded to each station, accompanied by the following instructions :—

INSTRUCTIONS FOR PAINTING.

1. In the month of May every year a supply of paint, in tin canisters mixed ready for use, will be sent direct from the manufacturers; it will be sufficient in amount to paint the exterior and interior of the boat with one coat, including the detached air-cases and the oars, leaving some surplus: every other year paint will also be sent for the carriage.

2. The quantities of paint sent will be as follows :—

- Blue one 7 lb. canister.
- White one 14 lb. and one 7 lb. do.
- Red for carriage. one 14 lb. do.
- Red for wale . . 1 lb. Chinese red
- Thinnings. . . one small can.

3. The first year six paint-brushes, a cutter to open the canisters, a piece of pumice-stone to rub down rough surfaces, two pistons to exclude air from ullages of paint, and a copy of these Instructions will also be sent.

4. The detached air-boxes must always be taken out at least four or five days before the repainting of the boat, so as to let the deck and side beneath and behind them get thoroughly dry before the paint is applied, the whole boat being washed with fresh water and cleaned of all dirt as soon as the air-boxes are removed. Any of the iron work of the boat or carriage which has become corroded, to be also scraped and cleaned, and primed with a coat of paint before the whole is painted.

The colours of the Institution's life-boats, except in a few special cases, are as follows :—

Outside.—*Floor white to the load water-line, and sheered upwards at bow and stern: upper works, sky-blue to gunwale; moulding or wale, vermilion.*

Inside.—*Deck, thwarts, and air-cases, white.*

DIRECTIONS FOR USING PEACOCK AND BUCHAN'S No. 3 COMPOSITION.

1. Cut round the edge of the canister with the opening knife, leaving only the small round soldered part to form a hinge for the cover; beat down the ragged edge all round to form a rim; fix a laniard by piercing a couple of holes under the rim with the point of a marline-spike or a nail, and you have a ready paint-pot.

2. Stir the composition well from the bottom and sides with a bit of clean stick. Add no "thinnings" unless it should be found to work too stiff, as it covers better in a half-coagulated form, and if well rubbed in with the brush, dries quicker and harder.

3. Be careful to remove any grease, oil, pitch, tar, dirt, or salt from the old surface before painting, and if possible, rub down any roughness on the old surface with pumice-stone and wash it with fresh water, as this allows the composition to lie on much smoother, and gives the surface a more enamelled appearance when finished.

4. If any composition be left in the canister unused, push down the piston over it until it touches the surface, and then fill up the canister with water; in this way it will remain good for a twelvemonth, and it will keep in the sealed canisters for many years in any climate, and be then ready for immediate use without any admixture.

5. The brushes to be cleaned in soapy water, and placed in water after use.

THE SAILOR BOY.

HE rose at dawn, and, flushed with hope,
Shot o'er the seething harbour-bar,
And reached the ship and caught the rope,
And whistled to the morning star.

And while on deck he whistled loud,
He heard a fierce mermaid cry,
"Boy, though thou art young and proud,
I see the place where thou wilt lie.

"The sands and seas and surges mix
In caves about the dreary bay,
And on thy ribs the limpet sticks,
And in thy heart the scrawl shall play!"

"Fool," he answered, "death is sure
To those that stay and those that roam;
But I will never more endure
To sit with empty hands at home.

"My mother clings about my neck,
My sisters clamour, 'Stay, for shame!'
My father raves of death and wreck,
They are all to blame—they are all to blame

"God help me! sure I take my part
Of danger on the roaring sea;
A devil rises in my heart
Far worse than any death to me."

ALFRED TENNYSON.

Royal National Life-Boat Institution,

For the Preservation of Life from Shipwreck.

(Incorporated by Royal Charter.)

Patroness—HER MOST GRACIOUS MAJESTY THE QUEEN.

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

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

Deputy-Chairman—THOMAS CHAPMAN, ESQ., F.R.S., V.P.

Secretary—RICHARD LEWIS, ESQ.

Inspector of Life-Boats—CAPT. J. R. WARD, R.N.

APPEAL.

THE COMMITTEE OF MANAGEMENT have to state that, during the past two years and a half, the ROYAL NATIONAL LIFE-BOAT INSTITUTION has incurred expenses amounting to 21,560*l.* on various Life-boat Establishments on the Coasts of England, Scotland, and Ireland.

During the same period the Life-boats of the Institution have been instrumental in rescuing the Crews of the following Vessels:—

| | | | | | |
|--|----|--|----|--|-----|
| Schooner <i>Ann Mitchell</i> , of Montrose | 1 | Sloop <i>Thomas and Jane</i> , of St. Ives | 3 | Barque <i>Frederick</i> , of Dublin | 1 |
| Schooner <i>Jane Roper</i> , of Ulverstone | 9 | A Fishing-boat of Whitburn | 4 | Barge <i>Peace</i> , of London | 2 |
| Brig <i>Pallas</i> , of Shields | 3 | Brig <i>Arethusa</i> , of Blyth | 8 | Lugger <i>Saucy Lass</i> , of Lowestoft | 11 |
| Ship <i>Ann Mitchell</i> , of Glasgow | 9 | Schooner <i>Devi Wyn</i> , of Portmadoc | 8 | Smack <i>Adventure</i> , of Harwich | 10 |
| Smack <i>John Bull</i> , of Yarmouth | 5 | Flat <i>Cymraes</i> , of Beaumaris | 5 | Pilot cutter <i>Whim</i> , of Lowestoft | 7 |
| Schooner <i>Catherine</i> , of Newry | 4 | Schooner <i>William</i> , of Morecambe | 5 | Barque <i>Undaunted</i> , of Aberdeen | 11 |
| Barque <i>Nagara</i> , of Shields | 11 | Smack <i>Gipsy</i> , of Newry | 4 | Wrecked boat on Blackwater Bank, on the Irish Coast | 1 |
| A Barge of Teignmouth | 2 | Schooner <i>Margaret Anne</i> , of Preston | 4 | Schooner <i>Skylark</i> , of Folkestone | 6 |
| Brig <i>George and James</i> , of London | 8 | Brig <i>New Draper</i> , of Whitehaven | 8 | Brig <i>Lively</i> , of Clay, Norfolk | 5 |
| Brig <i>Zephyr</i> , of Whitby | 6 | Schooner <i>William</i> , of Liverpool | 5 | Barque <i>Robert Watson</i> , of Sunderland | 5 |
| Coble <i>Honour</i> , of Cullercoats | 3 | Lugger <i>Nimrod</i> , of Castletown | 3 | Schooner <i>Auchincruive</i> , of Grangemouth | 6 |
| Schooner <i>Eliza</i> , of North Shields | 7 | Brig <i>Providence</i> , of Shields | 8 | Schooner <i>Frienis</i> , of Lynn | 4 |
| Barque <i>Oberon</i> , of Liverpool | 15 | Brig <i>Mayflower</i> , of Newcastle | 8 | Schooner <i>Eliza Anne</i> , of Dublin | 5 |
| Brigantine <i>Nancy</i> , of Teignmouth | 9 | Schooner <i>Village Maid</i> , of Fleetwood | 4 | Brig <i>Content</i> , of Sunderland | 5 |
| Smack <i>Wonder</i> , of Teignmouth | 2 | Barque <i>Guyana</i> , of Glasgow | 19 | Smack <i>Ellen Owens</i> , of Cardigan | 3 |
| Brig <i>Scotia</i> , of Sunderland | 6 | Brig <i>Roman Empress</i> , of Shields | 10 | Schooner <i>Cedarine</i> , of Bermuda | 131 |
| Sloop <i>Three Brothers</i> , of Goolie | 5 | Brig <i>San Spiridione</i> , of Galaxide | 2 | Schooner <i>Epinachus</i> , of Amsterdam | 5 |
| Sloop <i>Charlotte</i> , of Woodbridge | 5 | Schooner <i>Voador du Vouga</i> , of Viana | 8 | Barque <i>Druid</i> , of Sunderland | 9 |
| Brig <i>Ann</i> , of Blyth | 8 | French Brig <i>La Jeune Marie Therese</i> | 6 | Schooner <i>Bellona</i> , of Red Bay | 1 |
| Sloop <i>Hops</i> , of Dublin | 3 | Barque <i>Perseverance</i> , of Scarborough | 5 | Brig <i>Pioneer</i> , of Carnarvon | 1 |
| Schooner <i>Druid</i> , of Aberystwyth | 5 | Schooner <i>Elizabeth</i> , of Bridgewater | 4 | Schooner <i>Princess Alice</i> , of Ipswich | 5 |
| Barque <i>Vermont</i> , of Halifax, U.S. | 18 | Ship <i>Danube</i> , of Belfast | 17 | Brig <i>Minerva</i> , of Workington | 4 |
| Schooner <i>Wm. Keith</i> , of Carnarvon | 2 | Schooner <i>Hortensia</i> , of Hanover | 4 | Schooner <i>Elizabeth and Hannah</i> , of Newburgh | 6 |
| Brig <i>Flying Fish</i> , of Whitby | 5 | Schooner <i>Oregon</i> , of Stonehaven | 4 | Brig <i>Sisters</i> , of Whitby | 9 |
| Smack <i>Elizabeth Ann</i> , of Lyme Regis | 3 | Brig <i>St Michael</i> , of Marans | 8 | Brigantine <i>Matilda</i> , of Stockholm | 4 |
| Steam Dredge, at Newhaven | 9 | Spanish Barque <i>Primera de Torrevega</i> —Saved vessel and 1 of the crew | 1 | Brig <i>Jane</i> , of North Shields | 8 |
| Schooner <i>Admiral Hood</i> , of Rochester | 6 | Schooner <i>Hurrell</i> , of Penzance—Saved vessel and crew | 4 | Schooner <i>Liberty</i> , of Dublin | 4 |
| Schooner <i>Susan and Isabella</i> , of Dundee | 5 | Brig <i>Anne</i> , of Plymouth—Saved vessel and crew | 8 | Brig <i>Trial</i> , of Poole | 7 |
| Schooner <i>Rose</i> , of Lynn | 3 | Schooner <i>Betsy</i> , of Peterhead—Saved vessel and crew | 6 | Schooner <i>Sylphiden</i> , of Nakskov—Saved vessel and crew | 7 |
| Brig <i>Prodroma</i> , of Stockton | 11 | Smack <i>Merrion Lass</i> , of Aberystwyth—Saved vessel and crew | 3 | | |
| Brig <i>Eliza</i> , of Middlesborough | 7 | Schooner <i>Fly</i> , of Whitby—Saved vessel and crew | 4 | | |
| Brigantine <i>Petra</i> , of Königsberg | 6 | | | | |
| Brigantine <i>Diana</i> , of Friedrichshamm | 7 | | | | |
| Brig <i>Gloucester</i> , of South Shields | 7 | | | | |
| Brig <i>Lovely Nelly</i> , of Seaham | 6 | | | | |
| Brigantine <i>Nugget</i> , of Bideford | 5 | | | | |
| Schooner <i>Prospect</i> , of Berwick | 6 | | | | |
| | | | | Total | 700 |

For these and other Life-boat services the Institution has voted 2,250*l.* as rewards to the crews of its Life-boats. It has also granted rewards amounting to 931*l.* 10*s.* for saving 507 shipwrecked persons, by shore-boats and other means, making a total of 1,207 persons saved from a watery grave during the last two years and a half.

The number of lives saved by the Life-boats of the Society, and other means, since its formation, is 12,600; for which services, 82 Gold Medals, 711 Silver Medals, and 15,926*l.* in cash, have been paid in rewards. The Institution has also expended 61,685*l.* on Life-boats, Life-boat Transporting-carriages, and Boat-houses.

The public cannot but sympathise with the vigorous efforts now being made by this Institution, to save the lives of Shipwrecked Crews. Their 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 Twenty-two 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.

Donations and *Annual Subscriptions* will be thankfully received by the Bankers of the Institution, Messrs. WILLIS, PERCIVAL and Co., 76 Lombard Street; Messrs. CUTTS and Co., 59 Strand; Messrs. HERRIES, FARQUHAR, and Co., 16 St. James's Street, London; by all the Bankers in the United Kingdom; and by the Secretary, RICHARD LEWIS, Esq., at the Office of the Institution, 14 JOHN STREET, ADELPHI, London,—W.C.

Payments may be made by Cheques or by Post-Office Orders (crossed), to Messrs. WILLIS, PERCIVAL, and Co., or to the Secretary.

1st July, 1862.