

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

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

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

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

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

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

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

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