

At first the etiquette and usages of naval every-day life seemed particularly vexatious and annoying; but after a while, when fine weather again set in, and the sea-sickness had been got over, one and all perceived, to a certain extent, the necessity of order. Scrubbing, washing, and holystoning of the decks, cleaning brass and wood-work, mustering at quarters and divisions, are all measures which tend to enforce the discipline so essential to good government. From the hour of four o'clock in the morning, the bustle and activity begin, lasting throughout the day. Pumps are manned, and water is splashed over decks in all directions. By six o'clock the washing is nearly finished, when all hammocks are piped up and stowed; it is now time for breakfast, consisting of cocoa and biscuit. The hands dress in the rig of the day, and all preparations are made for sounding and dredging. Sails are furled, and steam is ready, for it is essential to keep the vessel's head on to the sea during these operations.

It has been found that in all deep soundings it is absolutely necessary to use steam power. No trustworthy results can be obtained from a ship under sail, as even in the calmest weather the heave of the sea, or the surface current, is sufficient to drift the ship in a very short time a considerable distance from the place where the lead was originally let go. It is thus impossible to obtain a perpendicular sounding.

The first thing, therefore, to be done is to shorten and furl all sails, and bring the ship's head to wind, regulating the speed in such a manner as to avoid forcing her through the water. The sounding apparatus is then got ready. A block is placed on the main-yard and a rope rove through it to trice up the accumulator. These accumulators are indiarubber bands, $\frac{3}{4}$ inch in diameter and 3 feet in length. They are capable of stretching 17 feet, when they each exert a pressure of 70 lbs. Twenty pairs of these accumulators have been found sufficient for most of the soundings obtained, as they are strong enough to withstand the strain of the weights on the lead line without being too strong to give readily with the motion of the ship; their greatest use being to keep the sudden jerks of the ship's motion from bringing too great a strain on the lead line. The end of the line is secured



SOUNDING
APPARATUS.