

sudden jerks of the ship's motion from bringing too great a strain on the lead line. At the bottom of the accumulators, which are kept separated from each other by being passed through holes in a

Fig. 2. circular disk of wood, a 9-inch block is hooked, and through this block the lead line is rove. The end of the line is then secured to the sounding-rod, to which is attached the number of iron weights required to sink it rapidly. A short distance above the rod the slip water-bottle is fastened, and above that a deep-sea thermometer.



Two descriptions of sounding-rods have been in use during the cruise. The one first employed is known as the "Hydra" rod (Fig. 2), and consists of a brass tube $1\frac{1}{3}$ inch in diameter, and 42 inches in length, having at its extreme end a butterfly valve, and at its top a sliding rod 30 inches in length. On the upper part of this rod is a small stud, with a spring reaching to its head (when there is no pressure on it); to this rod the weights are attached, and, by means of the spring, disengaged, when at the bottom, in the following manner.

The sinkers are of cast iron, and average one hundredweight each. They are cylindrical in form, having a hole through the centre; through this hole the rod is