

book provided for that purpose. These intervals gradually increase in duration as more line is run out, the weights having to overcome the friction of the line in the water, which becomes greater with the amount run out. The intervals are found, however, to extend in regular proportion, so that when four minutes are taken up by one interval, the weights have reached the bottom, or a depth of between 2000 or 3000 fathoms has been obtained.

The time intervals having informed us that the weights are at the bottom, the line is brought to the engine, and hove in, gently at first, but faster as the quantity out decreases; care being taken to keep the ship still in her position over the line, as, if allowed to fall off, the line has not only to bear its own friction, and that of the attached rod, water-bottle, and thermometers, but also the additional friction of the drift of the ship. Eventually the rod, water-bottle, and thermometers reach the surface, the thermometer is carefully read and registered, the water-bottle is sent down to the laboratory, where the specific gravity of the water is taken, and the contents of the sounding-rod are examined to ascertain the nature of the bottom, after which they are dried and bottled.

The soundings having been obtained, and the line hove in, the next proceeding is to register the temperature of the ocean from the surface to the bottom. This is done by attaching thermometers with equal spaces between them to the sounding-line; a cup-lead