The iron framework of the largest dredge was 5 feet[1] in length, 1 foot 3 inches[2] in breadth—its weight being 137 lbs.;[3] the next size, which was made much stronger, was 4 feet[4] in length, 9 inches[5] in breadth, and weighed 259 lbs.;[6] the smallest was 3 feet[7] in length, 1 foot[8] in breadth, and weighed 85 lbs.[9] The smallest was generally used in great depths, and with it a successful haul was obtained in 3875 fathoms.[10]

The trawls were of the kind known as beam-trawls, the length of the beams being 17, 13, and 10 feet;[11] the smallest was used in very deep water. Into the bottom of the bag of the dredge and into the bottom of the net of the trawl fine cloth was usually sewn, so as to retain some of the fine ooze or mud, as well as to capture very small animals. It frequently happened that many hundredweights of Globigerina Ooze, Diatom Ooze, or other deposit were brought up in the dredge and trawl, especially when a fine cloth was placed in the bottom of the bag or net. On the other hand, the greatest hauls of manganese nodules, sharks' teeth, bones of whales, fragments of rocks, mixed with red or chocolate-coloured clay occurred when no cloth was placed in the bag or net; on these occasions the fine clay evidently passed through the meshes, while the larger fragments were retained in the netting; there was occasionally a sufficient quantity of the above materials in the trawl to fill a 30-gallon cask.[12]

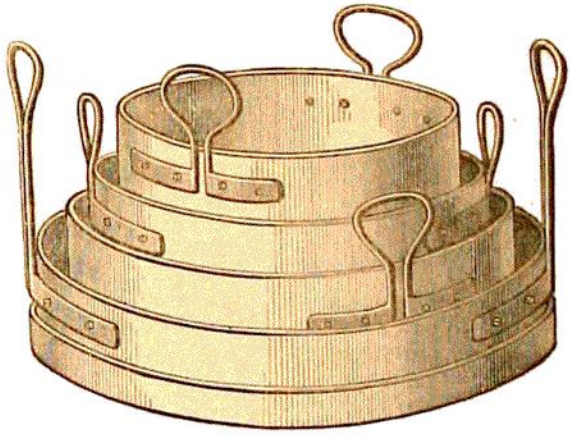

FIG. 14.—The Sieves.

When a large quantity was procured, the ooze or clay was passed through sieves of various sizes (Fig. 14), by working them up and down in large tubs of clean sea water; all the larger particles from these sieves were then carefully collected and placed in bottles with spirit, and labelled "coarse" and "fine washings."[13] A quantity of the deposit, just as it was taken from the dredge or trawl, was also preserved in bottles for examination at home. The operation of sifting the deposits took place on the dredging bridge immediately after the trawl or dredge was landed on board; the more detailed examinations were carried on in the laboratory on the upper deck.

The ordinary surface tow-net (Fig. 15), used for catching pelagic animals, made of coarse cloth of various kinds, the iron hoop having a diameter of 1 foot or 18 inches,[14]

[1] 1·524 metres. [2] 38·1 centimetres. [3] 62·1 kilogrammes. [4] 1·219 metres.
[5] 22·9 centimetres. [6] 117·4 kilogrammes. [7] 9·14 decimetres. [8] 30·48 centimetres.
[9] 38·6 kilogrammes. [10] 7088 metres. [11] 5·184, 3·964, and 3·05 metres. [12] 136 litres.

[13] The ooze which had been passed through sieves was sometimes sent home from the "Porcupine" and earlier expeditions without being properly labelled, or without a statement that all the finer particles had been washed away, hence some samples were described as *Orbulina ooze*, some of the siftings consisting largely of these Foraminifera.

[14] 30·48 or 45·7 centimetres.