

down the line until it is brought up by the toggle. By this plan the dredge takes a somewhat longer time to go down; but since we adopted it we have not had a single case of the fouling of the dredge in the dredge-rope — a misadventure which occurred more than once before, and which we were inclined to attribute to the weights getting ahead of the dredge in going down, and pulling it down upon them entangled in the double part of the line.

For the first two or three hauls in deep water, off the coast of Portugal, the dredge came up filled with the usual "Atlantic ooze," very tenacious and uniform throughout, and the work of hours in sifting gave the smallest possible result.

We were extremely anxious to get some idea of the general character of the fauna, and particularly of the distribution of the higher groups; and, after various suggestions for modifying the dredge, it was proposed to try the ordinary trawl. We had a compact, well-balanced trawl with a fifteen-foot beam on board, and we sent it down off Cape St. Vincent to a depth of 600 fathoms. The experiment looked hazardous, but, to our great satisfaction, the trawl came up all right, and contained, along with many of the larger invertebrata, several fishes. The plan seemed to answer so well that we tried it again a little farther south, in 1090 fathoms, and again it was perfectly successful. Since that time we have used the trawl frequently, and particularly in very deep water, where there is a certainty of finding a smooth bottom, free from rocks, and where the large area covered by the trawl greatly increases the chance of bringing up some record of the scanty and sparsely scattered fauna. The deepest haul taken with the trawl was on the voyage from Halifax to Bermudas, at a depth of 2650 fathoms.

Fig. 18 represents the deep-sea trawl at present in use. A conical bag, 30 feet in length, is suspended by one side to a beam of hard wood by half a dozen stops; the other side of the mouth of the net hangs loose, and is weighted with close-set