mile per hour, and on the 13th March, at Station 21, the drag was lowered to 100 fathoms, when no movement of the water could be detected.

Anemometer observations were obtained whenever circumstances were favourable, that is, when the ship was stationary whilst sounding, and the instrument was not masked by an awning, a sail, or any part of the rigging. When first used it was placed on the top of the small deck charthouse on the pilotage bridge; but as it was in that position so frequently masked by the awnings or rigging, it was shifted to the top of the foremost davit of the weather quarter boat, where it was quite clear of such obstructions. On the 17th February, at Station 2, the force of the wind being registered as 2 in the Meteorological Register, the velocity by the anemometer was 10 miles per hour. On the 21st, at Station 5, the force of the wind being registered as 3, the velocity by the anemometer was 16 miles per hour from noon on that day to 8.40 A.M. on the 22nd. On the 23rd, at Station 6, from 4 to 6 P.M., the velocity was 30 miles per hour, and the force was registered as 5 to 6. On the 24th February, at Station 7, from 3 to 6 P.M., the force of the wind 4 to 5, the velocity was 17 miles per hour. On the 25th February, at Station 8, the force of the wind being 4 to 5, the velocity was 19 miles per hour; and on the 26th February, at Station 9, the force of the wind being registered as 5, its velocity was 23 miles per hour.

The observations with respect to the position of the ship, wind, currents, temperature, and depth, are represented graphically on Sheets 6 and 7, and Diagram 1. With respect to the Diagrams accompanying this Narrative, they are designed with a view of showing the distribution of temperature in the part of the ocean traversed, and the horizontal and vertical scales have been chosen accordingly. Horizontal lengths or distances from Station to Station are on a scale of 200 miles to the inch, which gives the diagram a convenient length; and depths are on a scale of 500 fathoms to the inch, which separates the isothermal lines to a convenient distance from each other. Hence, depths or heights, as compared with horizontal distances are exaggerated in a proportion of 400 to 1. In looking, therefore, at the plan as one of the bed of the area, it must be remembered that the inclines as observed were 400 times less steep than they are represented. The diagram shows the isotherms for every five degrees. The positions of the isotherms for each whole degree as represented were found by plotting the observations and drawing the curve as referred to in the preceding chapter[1] (see page 120).

The dredgings and trawlings in the deeper water of the Mid Atlantic did not yield a large number of animals. An Annelid (*Myriochele*) was obtained from 2975 fathoms, several Polyzoa and two small Lamellibranchs from 2740 fathoms, and Sponges, Brachiopods, Polyzoa, small Lamellibranchs, and Gasteropods, and several Crustaceans from 1900 and 1950 fathoms. In 450 fathoms, however, close to Sombrero Island, a large number of animals—Alcyonarians, Echinoderms, Annelids, Molluscs, Crustaceans, and Fishes—were obtained.

[1] See Phys. Chem. Chall. Exp., part iii., 1884.