In August 1906, a series of current-measurements was made by the "Michael Sars" on the Ling Bank in the North Sea. Fig. 179 shows the currents at depths of 2, 20, and 75 metres (the depth of water being 80 metres). In the lower row the direction and velocity of the current are indicated by arrows for every hour from 5 P.M. on the 7th August to 6 A.M. on the 8th August. It is seen how the water moved at the different depths, varying in direction and velocity; in the course of twelve or thirteen hours the direction of the current had passed through all the points of the compass. In the top row all the arrows are joined, thus forming a line which shows roughly the motion of the water during the period of thirteen hours. The course proved to be somewhat elliptic, the water returning very nearly, but not quite, to its point of departure. This is a typical case, for tidal currents are, as a rule, characterised by this turning, the water arriving at its starting-point again after a period of about twelve and a half hours. The displacement in the course of this time, as exhibited by the current-lines, is attributable to a general motion of the water, towards the east at 2 metres, north-east at 20 metres, and north-north-east at 75 metres. But this

Current-measurements in the North Sea.

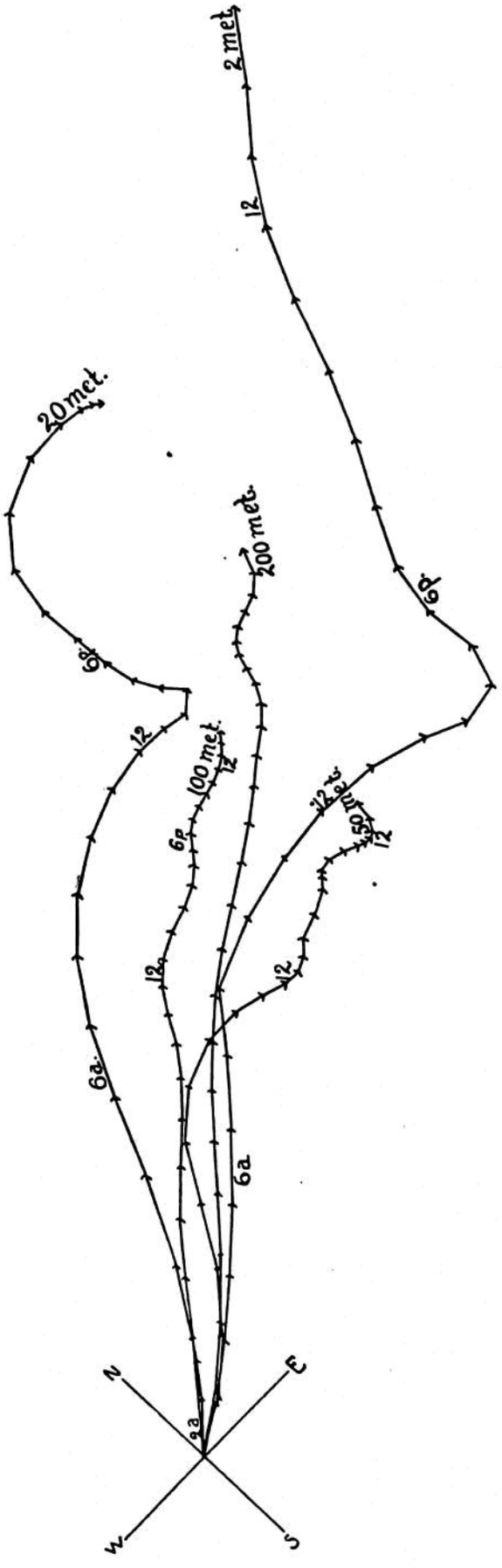

Fig. 180.—The Currents at different Depths on Storeggen (12th-13th July 1906).