from the Norwegian Sea; the boundary between these layers lies deeper at Station 106 than at the neighbouring stations, the difference of level amounting to 200 metres. In order to get as true a picture of the conditions as possible the stations were placed at short intervals of only 20 nautical miles; there may be great differences within 20 miles, as from Station 105 to Station 106, and fewer stations at longer intervals might have given a totally false representation. Knowing the distribution of salinity and temperature, we may now draw conclusions as

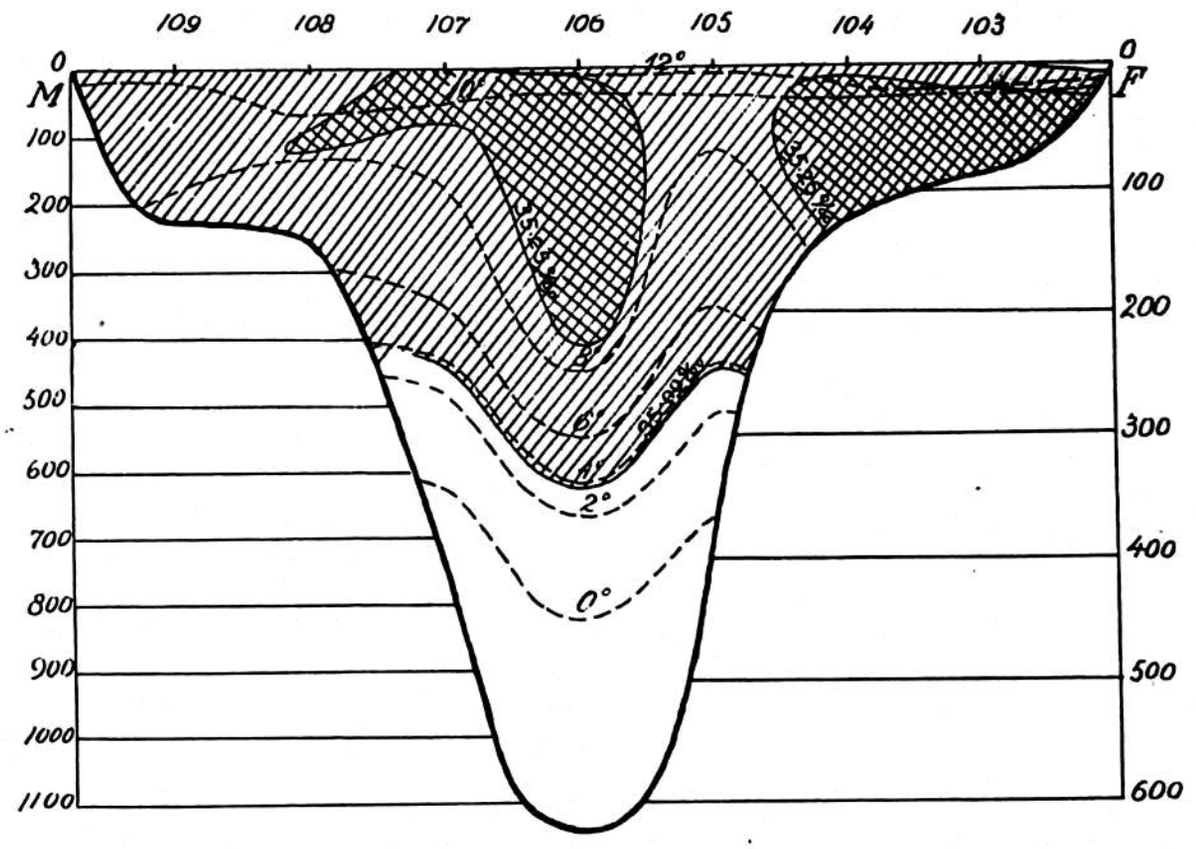

FIG. 190.—THE SOUTHERN SECTION IN THE FAROE-SHETLAND CHANNEL (10th-11th August 1910).

to the nature of the currents, their direction, breadth, and depth. Our section has a rather irregular look, suggesting complicated conditions; it seems, for instance, as if the Gulf Stream were divided into two branches, one close to Shetland, and one in the middle of the channel. In the present case the variations from one station to another are probably in part caused by the vertical oscillations mentioned, but they are evidently in part due also to another important phenomenon, viz. vortex movements.

Vortex movements.

One of the objects of our joint-research with the Scottish investigators in the Faroe-Shetland Channel was to throw light