metres (25 fathoms) below the surface between 6 A.M. and 2.20 P.M. In the forenoon the current ran east in the same manner as at a depth of 10 metres; about 8 A.M. the velocity was more than 90 cm. per second (1.8 knot per hour); about 11 A.M. it was slackening considerably, and at 2.20 P.M. it was merely 9 cm. per second (0.2 knot per hour); the current then set to the north. The variations in velocity correspond to those found at 10 metres.

Similar results (Fig. 194, 3) were obtained at 91 metres (50 fathoms), where the current ran into the Mediterranean in the forenoon with velocities attaining 105 cm. per second (2 knots per hour); but between 2 and 3 P.M. it turned to the north-west, that is, mainly towards the Atlantic and contrary to the current at 10 metres.

Fig. 194, 4, shows the results obtained by sending down the current-meter with 183 metres (100 fathoms) of wire. The observations were made between 6.40 A.M. and 11.26 A.M., and all this time the current ran out from the Mediterranean in the direction opposite to that of the higher layers, the greatest measured velocity being rather more than 40 cm. per second (0.8 knot per hour). The transition from the current running into the Mediterranean to that running out must have been somewhere above 100 fathoms.

The observations with the apparatus out with 274 metres (150 fathoms) of wire are particularly interesting (see Fig. 194, 5). They were made from 2.15 A.M. to 3.30 P.M., and the current all that time ran west, from the Mediterranean into the Atlantic. At 2.15 A.M. the enormous velocity of 227 cm. per second (4.4 knots per hour) was observed; at this time the current at 10 metres had also a westerly set. Then the velocity decreased; at 8.49 A.M.—half a tide-period later—a velocity of only 17.5 cm. per second (rather more than 0.3 knot per hour) was measured; at this time the current in the opposite direction at 10 metres ran its fastest. Later on, the deep current increased in velocity, running at 3.27 P.M.—after another half-tide period—83 cm. per second (1.6 knot per hour). There was a similar difference between two successive tides at 274 metres and at 10 metres. These observations gave this important result: that when the surface current ran fastest to the east the under current setting west was at its slowest, and *vice versa*.

At 12.22 P.M. one of the current-meters was sent down with 366 metres (200 fathoms) of wire, but after working for ten and a