

also Fig. 22), drives a big reel with 6000 metres of wire, 3.5 mm. in diameter, for the hydrographical instruments and the Lucas sounding machine (6 and 5), and it can also be used to drive the big centrifuge (10) by means of a hemp line. By a similar arrangement the aft winch drives two drums with 2000 metres of wire, 3 and 4 mm. in diameter, for the vertical nets and hydrographical work in moderate depths.

In calm weather and when the currents are slight all the appliances may be operated simultaneously, provided care be

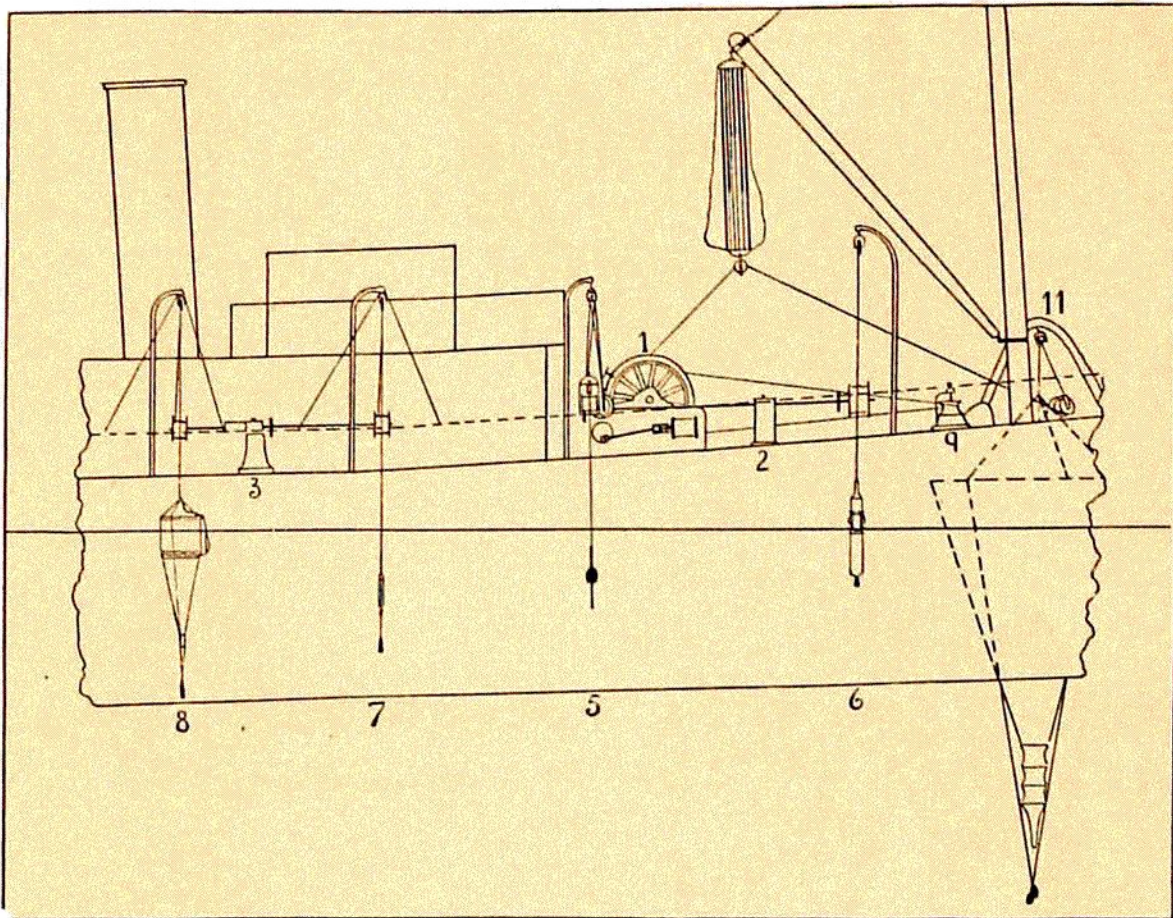


FIG. 21.—SIDE VIEW OF ARRANGEMENT OF GEAR ON BOARD THE "MICHAEL SARS."

taken that one appliance, let us say, is lowered while others are being hauled in. But when there are strong currents there is always a danger of the appliances colliding, and it is best in that case to work one at a time from each winch.

For the larger nets and the trawl we use the big winch (1), which takes the long steel line, 9000 metres in length, increasing from 34 mm. to 44 mm. in diameter. When trawling the line passes round the big reel (9), on which there is a register, and from there it is led to the gallows (12 and 13) and paid out astern. When operating the big vertical nets, the line is passed round a block in the accumulator, which hangs from