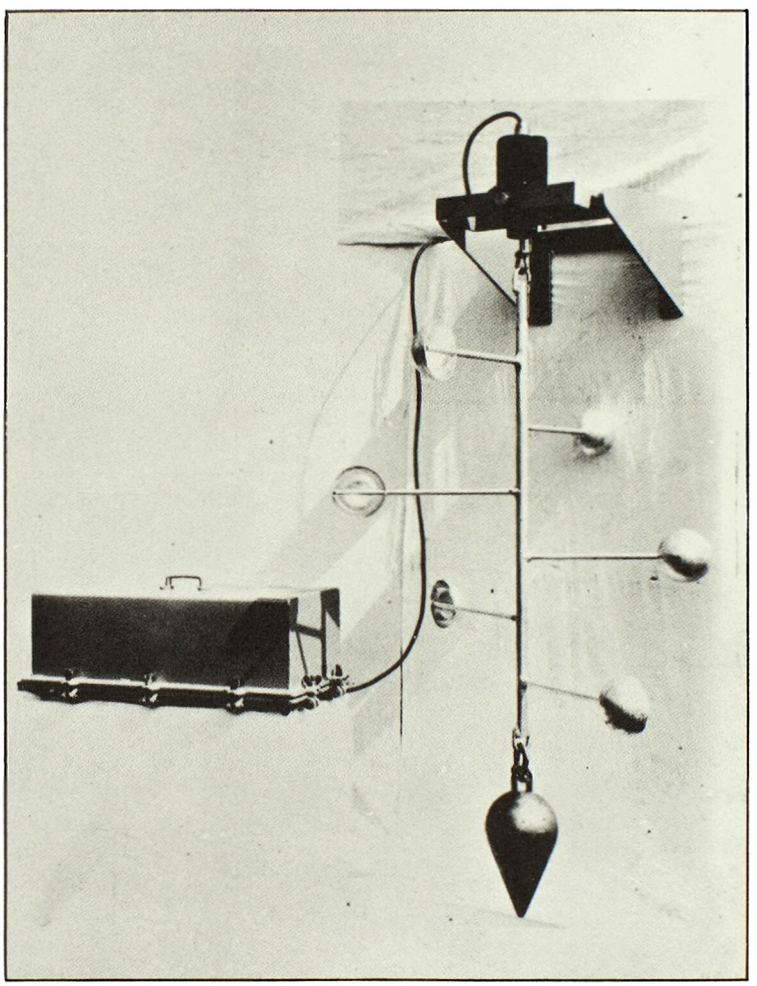
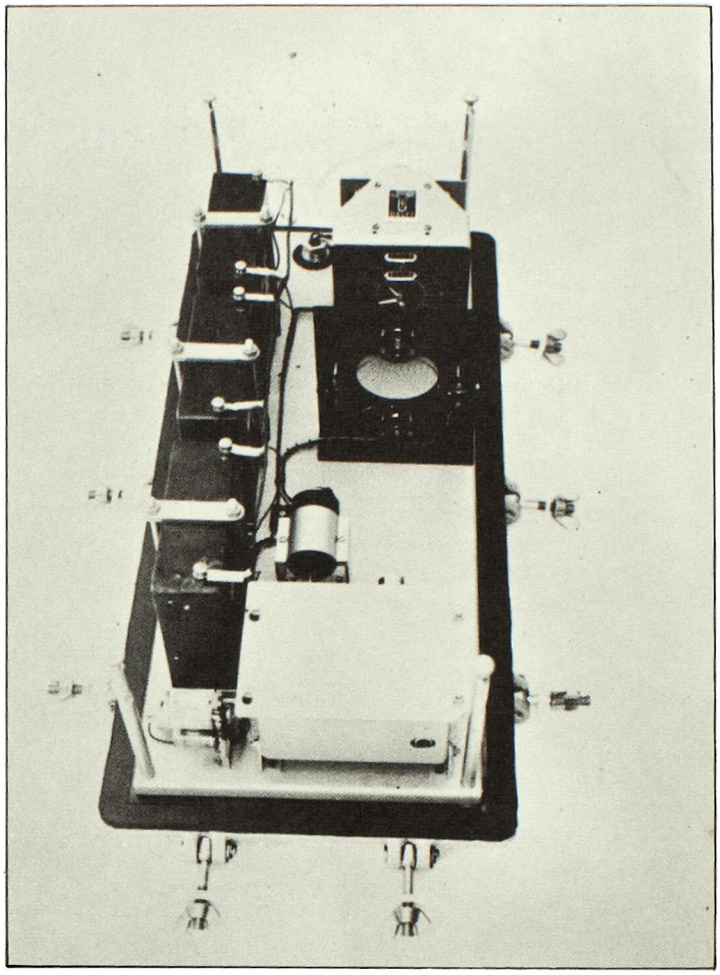
CURRENT METER OF THE NETHERLANDS HYDROGRAPHIC OFFICE

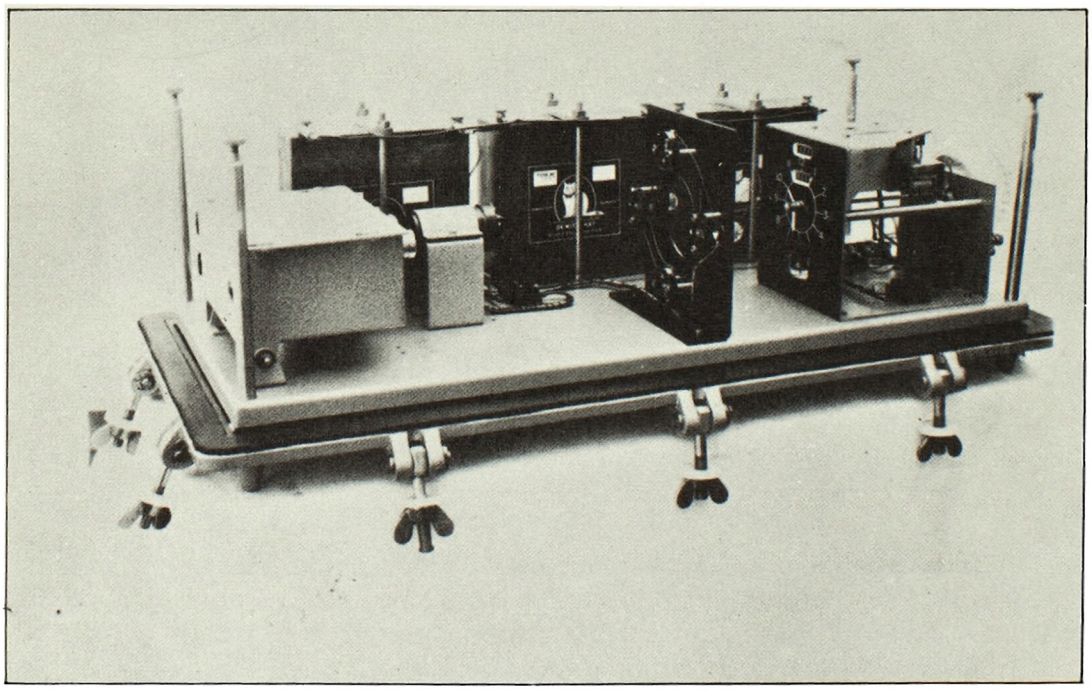
This instrument has been developed by the Netherlands Hydrographic Office over the past 5 years.



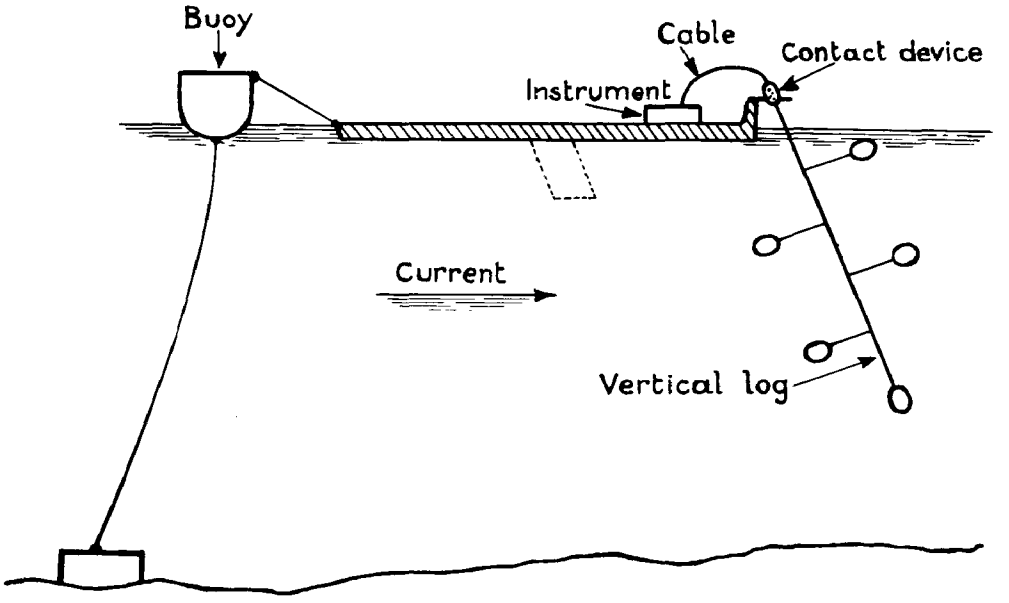
The construction of the instrument is very simple.

Every thirty minutes it photographs the time, the reading of a liquid compass and, by means of a revolution counter, the rotations of the recorded vertical log during that interval of time.





The instrument is placed on a raft which is made fast to a moored buoy. The vertical log is fixed to a contact device by means of a chain 5 metres long. The contact device is hung on gimbals at the end of the raft and connected to the registering apparatus by an electric cable. A contact is closed and the revolution counter in the instrument shifts one number at each rotation of the vertical log.



The number of revolutions in 30 minutes gives the *mean* current during that period. The relationship between the number of revolutions and the current is approximately linear, so that if the instrument has been checked and the observations have been plotted on a diagram, the result is almost a straight line.

An 8-mm film is used. The photographs of the clock, the counter and the compass are 4×4 mm. The film is 7.5 metres long, so $\frac{7\,500}{4} = 1\,875$ photos may be taken. Every day 2×24 photographs are obtained, so it is possible to register the current during $\frac{1\,875}{48} = 39$ days.

The results of the trials carried out in the Scheldt River in April 1963 were quite satisfactory. In the summer months of 1963 trials are carried out for current observations in the open sea.

The results of these trials will be reported to the IHB in due time.