

he generally uses sackcloth, but a better fine-meshed material would undoubtedly be more desirable.

Hensen evolved various forms of apparatus for a quantitative study of the pelagic organisms, that is to say, for estimating the relative amounts of plankton organisms present in a given volume of water. He recommends vertical nets of the finest silk cloth, such as is used in the milling industry (see Chapter VI.).

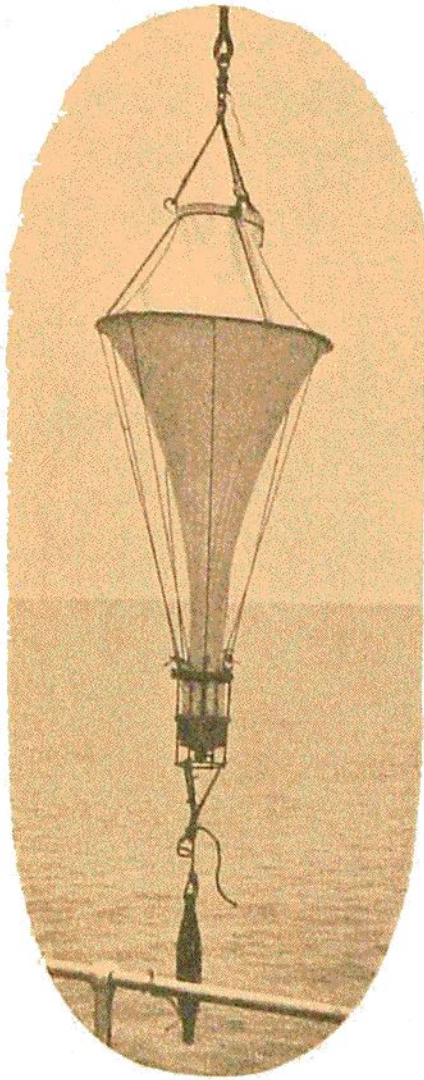


FIG. 19.—HENSEN'S LARGE PLANKTON NET. (From Chun.)

In actual practice, however, it has been found impossible to capture pelagic organisms of every sort with the same net; for the larger forms may escape the net altogether, while the smallest forms may pass through the meshes of even the finest silk. There are other objections to the method, for it is an almost impossible task to ascertain the total quantity of floating organisms in deep and shallow water where there are strong currents; and it is hardly likely that the larger organisms at any rate, even though the nets succeed in capturing them, are uniformly distributed throughout the water-masses over large areas, so that an estimation of their total number could not be arrived at with our present appliances. Still, Hensen's theoretical analysis of plankton problems has been of great service to oceanic research, and so, too, has his plankton net (Fig. 19), whose coefficient of capture naturalists have attempted to calculate. It has been of

Hensen
plankton net.

the utmost value, for instance, in investigating certain uniformly distributed minute species in less extensive areas. The apparatus consists of a filtration net of miller-silk, with a brass cylinder at the lower end of the net, and a large conical part made of canvas, the object of which is to control the amount of water entering and so enable the silk net to filter it.

The steamer "Michael Sars" was built in 1900 by the Norwegian Government to undertake researches in connection with the Norwegian fisheries, and to study the natural con-

The "Michael
Sars."