

very much, and enables us to dispense with the big projecting structures, or sounding platforms, that were formerly necessary, is the fact that in our little ship we are so near the surface of the sea that the person taking observations stands only a few feet above the water, and it is consequently much easier to get the appliances on board as soon as they come up. It is much easier also to manœuvre with a little steamer, so as to humour the appliances and keep the lines perpendicular whilst being lowered or hauled in. Obviously these are great advantages, not merely at the moment of taking observations, but also in our whole system of working; being able to operate a number of appliances simultaneously, for instance, means a great saving of men and time.

In the case of both sounding machine and hydrographical apparatus we are able to haul in the line at the rate of 120 metres per minute, or 6000 metres in fifty minutes. But the forward starboard winch was unfortunately too weak to keep up this



FIG. 23.—THE OTTER TRAWL.