

the figure on the dredge-frame are only to protect the seizings of the loops. The dredge is suspended from an inch iron chain which forms the first few fathoms of the dredge line, and resists chafing more effectually than rope would do.

The chain is not, however, directly fastened to the ring at the end of the arms of the dredge, but is made fast to one of the end bars of the dredge-frame, and is strapped to the



FIG. 8.—The form of Dredge used on board the CHALLENGER.

ring by a single strand of bolt-rope, so that if the dredge by any chance catches, the seizing gives way, and, by altering its position and throwing the strain in a different direction, gives a better chance for its recovery. The iron bar which runs across the bottom of the dredge-bag is of inch square iron and about 5 feet long, and to it are attached about eight hempen tangles or swabs. In deep water a 28-lb. deep-sea lead is usually hung from the centre of the tangle-bar with four tangles on each side.