bags. Raw buffalo- and cow-hides are very strong, but they are apt to become offensive. When these are used it is necessary to punch holes here and there to let the water through or to leave the seams which are sewed with thongs a little open. Another bag which I have used frequently is made of sail-cloth, with a window of strong brass wire gauze let in on either side. Nothing, however, seems to me so good as strong cord netting. The water passes easily through and carries with it a large part of the fine mud, while enough mud is retained by the bread-bag lining in the bottom to give a fair sample of its contents. It may be said that many small valuable objects may be washed through the meshes of the upper part of the dredge along with the mud, and thus lost; but, on the other hand, if the bag be very close it is apt to get filled up with mud at once, and to collect nothing more.

It is always well when dredging, at whatever depth, to ascertain the approximate depth with the lead before casting the dredge; and the lead ought always to be accompanied by a protected thermometer, for the subsequent haul of the dredge will gain greatly in value as an observation in geographical distribution if it be accompanied by an accurate note of the bottom temperature. For depths under 100 fathoms the amount of rope paid out should be at least double the depth. Under thirty fathoms, where one generally works more rapidly, it should be more nearly three times. This gives a good deal of slack before the dredge if the boat be moving very slowly, and keeps the lip of the dredge well down; and if the boat be moving too quickly through the water, by