

**SIGNALS AVAILABLE TO MEN WHO ARE
ADrift ON WRECKs AT SEA.**

TO THE EDITOR OF THE TIMES.

Sir,—In *The Times* of to-day (Thursday) I have read with deep interest the fearful sufferings endured by a crew who were drifting about the Atlantic upon the wreck of their vessel. There is the old sad story repeated afresh by them, how, after days of anxious watching, first one vessel and then another were seen to approach hopefully, and then how each vessel, like its predecessor, passed by without noticing the low waterlogged wreck in which the sufferers were huddled, almost level with the sea, in the far distance. A distressed crew has little means of rigging up an object of sufficient size to attract the attention of distant ships; but there is one signal, which is often a very practicable one, and which seems well worthy of a sailor's notice. I do not for a moment suggest its use to the exclusion of any other methods, but only as a valuable addition to them; and, as the means for making it are simple and accessible, I should think no sailor or passenger should forget them, who, in the moment of impending disaster, makes a hasty rush down below deck to secure such light objects as may appear likely to be of service to him when adrift on a boat, raft, or wreck upon the wide ocean.

All that is wanted is a common looking-glass, even of the smallest size—a broken bit as large as two half-crowns will do—and with this he should glitter the rays of the sun towards the ship whose attention he wishes to attract. Even at a distance of ten miles the glitter from a looking-glass no larger than the mouth of a teacup appears as a radiant and glistening star, and would at once cause many eyes on board ship to be attentively directed upon it. It is a matter of some nicety to direct the glitter from a looking-glass either steadily or accurately; and, as a sort of guide to the degree of accuracy required, I may remark that if such a thing were possible as that a man could actually see the glitter of the looking-glass in his hand against the blue vault of the sky, just as he may see it against the walls or ceiling of his room, that it would in all cases appear to him to be (within a most trivial degree of difference) of precisely the same size and shape as the sun itself, though excessively inferior in brightness.

The plan I use for directing the glitter with a just aim is to cut a small hole with a pocket knife in the middle of the board, or, it may be, of thin zinc plate, which forms the back of the looking-glass, and also to scratch away the quicksilver from below it, so as to leave a little round space of clear transparent glass as an eye-hole. Looking through this hole, I direct the centre of the glitter as truly as possible by watching the play of its edge upon some object that may happen to lie on one side or another of a line between the eye and the person I signal to. Thus, if a boat was being rowed in a direction somewhere towards a ship, a man sitting low down in the stern could direct the glitter of his looking-glass by watching its play upon the bows of the boat at the moment when he could just catch sight of the ship over them. If a looking-glass be used without first cutting a hole in its back in the way I have mentioned it is necessary to hold it close up under the eye, and to make a more careful allowance for the height of the eye above it than a person who has not had a good deal of practice is likely to succeed in accomplishing.

Salt water spoils a looking-glass, and it would therefore be necessary to wrap it up well out of harm's way; and, if it were greased thoroughly over its back and edges, it could be carried with still less risk. Finally, the mirror could only be used in moderate and sunshiny weather, but, with these restrictions, I believe it to afford a most valuable signal.

Obediently yours,

FRANCIS GALTON.

April 24: