

now steams slowly to windward, occupying successively the positions E, F, G, and H. The weights, to which the water offers but little resistance, sinks from W to W', and the dredge and bag move slowly from D to B. The vessel is now allowed to drift back before the wind from H towards C. The pull of the vessel, instead of acting immediately on the dredge, now drags forward the weight W', so that the dredging is carried on from the weight and not directly from the vessel. The dredge is thus quickly

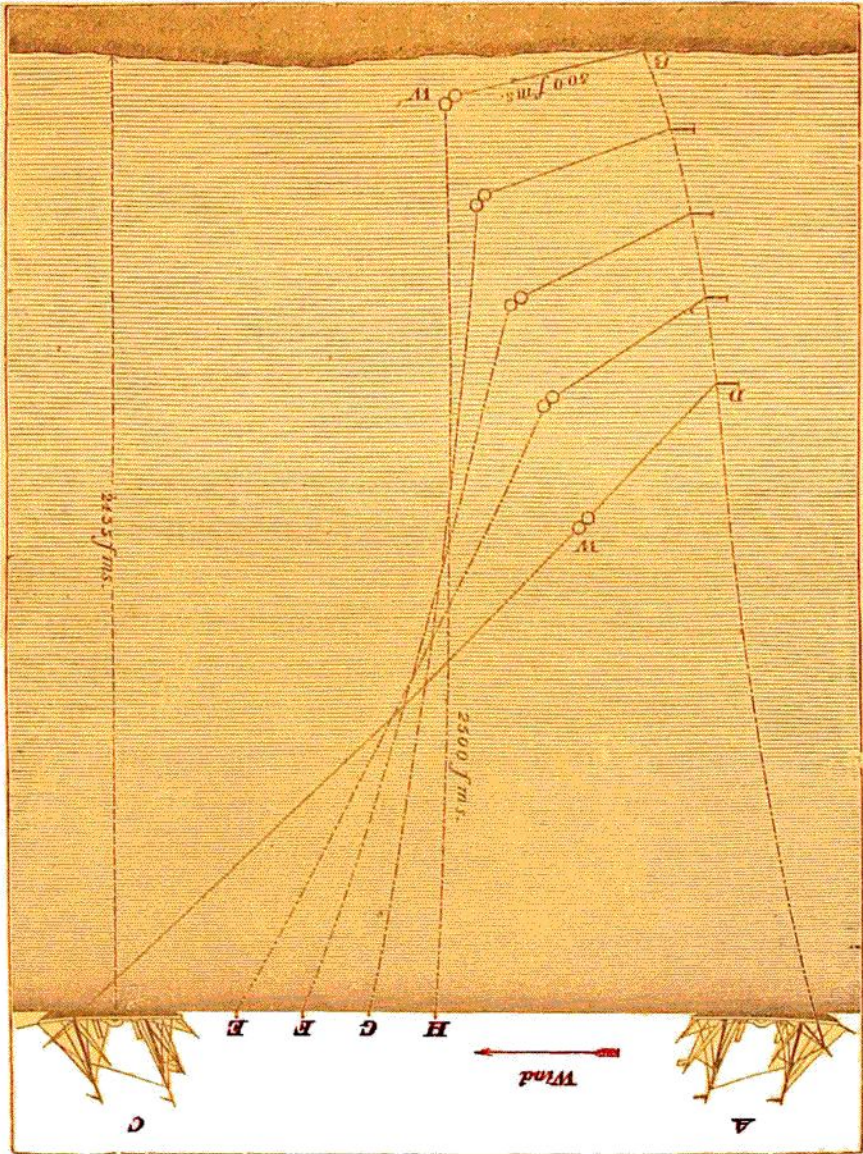


FIG. 6.—The relative positions of the Ship, the Dredge, and the Weights, at different stages of "Paying-out" from the Porcupine.

pulled along with its lip scraping the bottom, in the attitude which it assumes from the position of the centre of weight of its iron frame and arms. At 8.50 P.M. we began to haul in, and the pins to fill again. The donkey-engine delivered the rope at the rate of a foot per second without a single check. A few minutes before 1 A.M. the weights appeared, and a little after one in the morning,