



FIG. 42.—The 'Hydra' Sounding Machine.

apparatus is so adjusted, that when the weight is attached and the instrument hanging ready for use, as represented in the figure, the rod F maintains a horizontal position. When the instrument strikes the ground, the tension on the bar F is relieved, the weight draws the rod D off the claw and slips off, at the same time filling the scoop. When hauling up, all the instrument falls into a nearly vertical line, and the scoop comes up full in the middle, the weight of D keeping its mouth closed up against its lid.

The apparatus used during the cruise of the 'Porcupine,' where sounding was carried on to the utmost attainable accuracy and at great depths, was a somewhat elaborate modification of Brooke's sounding machine which had been previously employed by Captain Shortland in the voyage of H.M.S. 'Hydra,' sounding across the Arabian Gulf preparatory to laying the Indian Cable.

This special modification, which certainly answered remarkably well, appears to have been due entirely to Mr. Gibbs, the blacksmith on board the vessel.¹ We christened it the

¹ Sounding Voyage of H.M.S. 'Hydra,' Captain P. F. Shortland, 1868. Published by order of the Lords Commiss. of the Admiralty. London: 1869.