nected, over a pulley or otherwise, a weight H sufficient to overbalance the weight of the water in the tube C, and to raise the piston F when the piston B is lifted: thus, suppose the piston B is drawn up by its rod, there will be a vacuum made in the pump cylinder D, below the piston F; this vacuum will be filled with water through the suctionpipe, by the pressure of the atmosphere, as in all pumps fixed in air. The return of the piston B, by being pressed downwards in the cylinder A, will make a stroke of the piston in the pump cylinder D, which may be repeated in the usual way by the motion of the piston B, and the action of the water in the tube C. The rod G of the piston F, and the weight H, are not necessary in wells of a depth where the atmosphere will overbalance the water in the suction of the pump cylinder D, and that in the tube C. The small tube and cock in the cistern I, are for the purpose of charging the tube C."\*

and how water may be raised out of wells of any depthy and

to may distance from the place where the operating power

ni sanoismomile hardopen vasalto relegione, in

Which is the working places II, as in the foregoing ex-

supplies; into the bottom of this refinder is inserted the

the C, which may Le of less hore than the cylinder A.

the pump cylinder 13, suggested to be fixed in the deep well

and terms a junction therewith above the piston I's

pieton loss a real Cr. averding shrough the studing.

-non et de bou ales o'll regente nacueron at leuren al co de

Tay 7. is a section, showing another instance of com-



<sup>\*</sup> A full account of Bramah's hydrostatic crane, with correct drawings, taken from Mr Bramah's own machine, will be found in the Edinburgh Encyclopædia, Article CRANE.—ED.