T. DOWLING.

Pump.

No. 167,881. Patented Sept. 21, 1875.

Fig. 1.

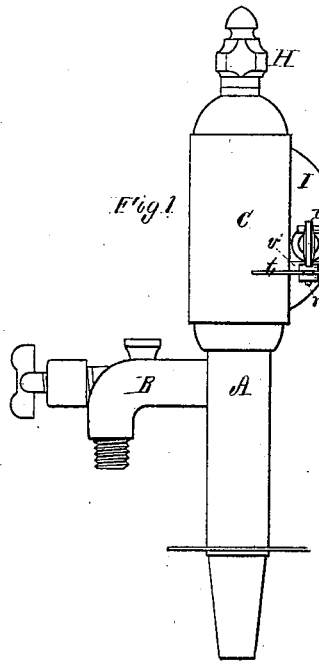


Fig. 2.

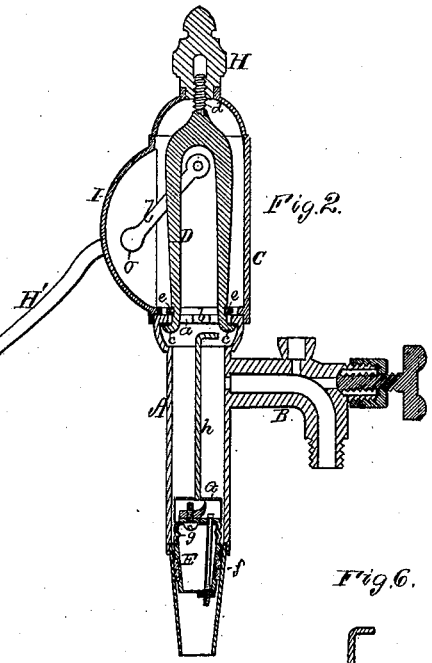


Fig. 3.

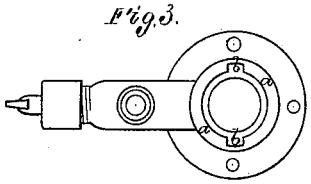


Fig. 4.

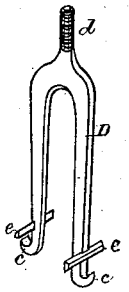


Fig. 5.

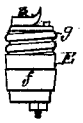


Fig. 6.

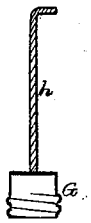


Fig. 7.

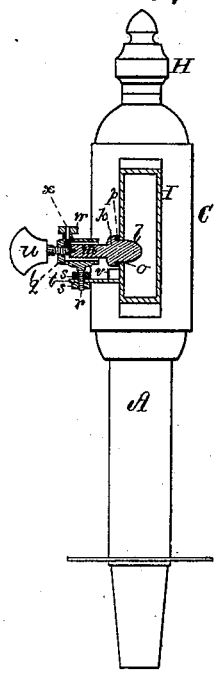


Fig. 8.

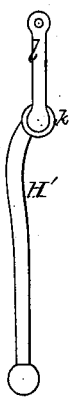
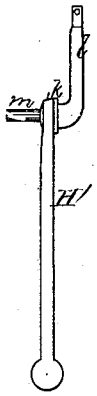


Fig. 9.



Witnesses.

S. N. Piper.

L. N. Höller.

Thomas Dowling.

by his attorney.

R. M. Eddy

UNITED STATES PATENT OFFICE.

THOMAS DOWLING, OF GLOUCESTER, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND ISRAEL C. MAYO, OF SAME PLACE.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **167,881**, dated September 21, 1875; application filed April 2, 1875.

To all whom it may concern:

Be it known that I, THOMAS DOWLING, of Gloucester, of the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Pumps; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, and Fig. 2 a longitudinal and vertical section, of a pump having my invention. Fig. 3 is a top view of the part below the rotary air-chamber. Fig. 4 is a perspective view of the coupling of the rotary air-chamber. Fig. 5 is a side view of the lower box. Fig. 6 is a vertical section of the lower box lifter or extractor. Fig. 7 is a vertical section through the pump-handle and its supporting devices. Figs. 8 and 9 are side views of the handle or upper box-operating lever, the said box not being represented in the drawings.

My present invention relates to mechanism for coupling the air-vessel with the pump-barrel; also, to mechanism for supporting the pump-handle and preventing leakage of water at the joint. In some respects this pump resembles that illustrated in the United States Patent No. 150,544, granted to myself and Israel C. Mayo, May 5, 1874.

In the drawings, A denotes the pump-barrel, provided with a nose, B. The said barrel, at its top, when the air-vessel C is to rest in it, has a flange, *a*, extending inward around it, on which flange, at opposite points thereof, are two notches, *b b*, through which the hooked feet *c c* of the coupling D are to enter. This coupling, formed somewhat like a tuning-fork, has a screw, *d*, on its stem. It also has a shoulder or support-piece, *e*, fixed to each leg, as represented. The coupling, on being inserted in the two notches *b b*, and turned around at right angles to them, will extend underneath the flange, and couple with the barrel. The air-vessel C, on being put in place, as shown, encompasses the coupling, whose screw extends up through the top of the said vessel, and there receives a nut, H, by which and the coupling the pump-barrel and its air-vessel or head C are fastened firmly together, the coupling being wholly within the air-vessel. The lower box (shown at E) is provided with a groove extending around it to receive an india-rubber packing-ring, *f*, and, furthermore, the said box has a screw, *g*, on and around its upper part, to receive an extractor, G, composed of a rod, *h*, and a tubular nut, *i*, arranged as represented, the nut being to screw upon the upper part of this box. By means of such extractor the box may be readily inserted in or withdrawn from the barrel, as occasion may require. The pump-handle (shown at H′) has a head, *k*, a bent arm, *l*, and a journal, *m*, all arranged as shown. The bent arm is passed into a hole, *o*, made in one side of a hollow projection, I, of the air-vessel, such arm, when the pump is in use, being provided with an encompassing washer, *p*, and jointed at its upper end to the stem or rod of the upper box. The journal *m*, having its end countersunk, enters a tubular box or bearing, *q*, provided with a clamp-screw, *r*, and nuts *s s* thereto, to fix it to a notched shelf, *t*, projecting from the air-vessel C, as shown. A screw, *u*, screwed endwise into the bearing, and against the journal, serves to force the head *k*, with its washer, close up to the projection I, in order to prevent leakage, there being below the said head, on the shelf, a small stationary cup or vessel, *v*, to catch any water that may leak from the junction of the washer with the side of the extension I. A set-screw, *w*, having an oiling-hole, *x*, extending down through it, screws downward into the bearing and against the pivotal screw *u*.

I do not herein claim an air-vessel fixed to the pump-barrel by screws and nuts arranged on the outside of the vessel, nor a pump-handle composed of a tubular shaft, a head, and two arms, all as shown in my said patent.

Although I have hereinbefore specified that the lower box is provided with a screw, *g*, and have also described what I term the extractor G, to couple with the screw, for purposes hereinbefore explained, and have also described said box as having an elastic ring-packing, *f*, I do not herein claim such, as I intend to do so in a separate patent or application therefor.

I claim—

1. The coupling D, substantially as described, arranged within the air-vessel C, con-