T. B. SWAN.
Pump.

No. 213,005. Patented Mar. 4, 1879.

Fig. 1.

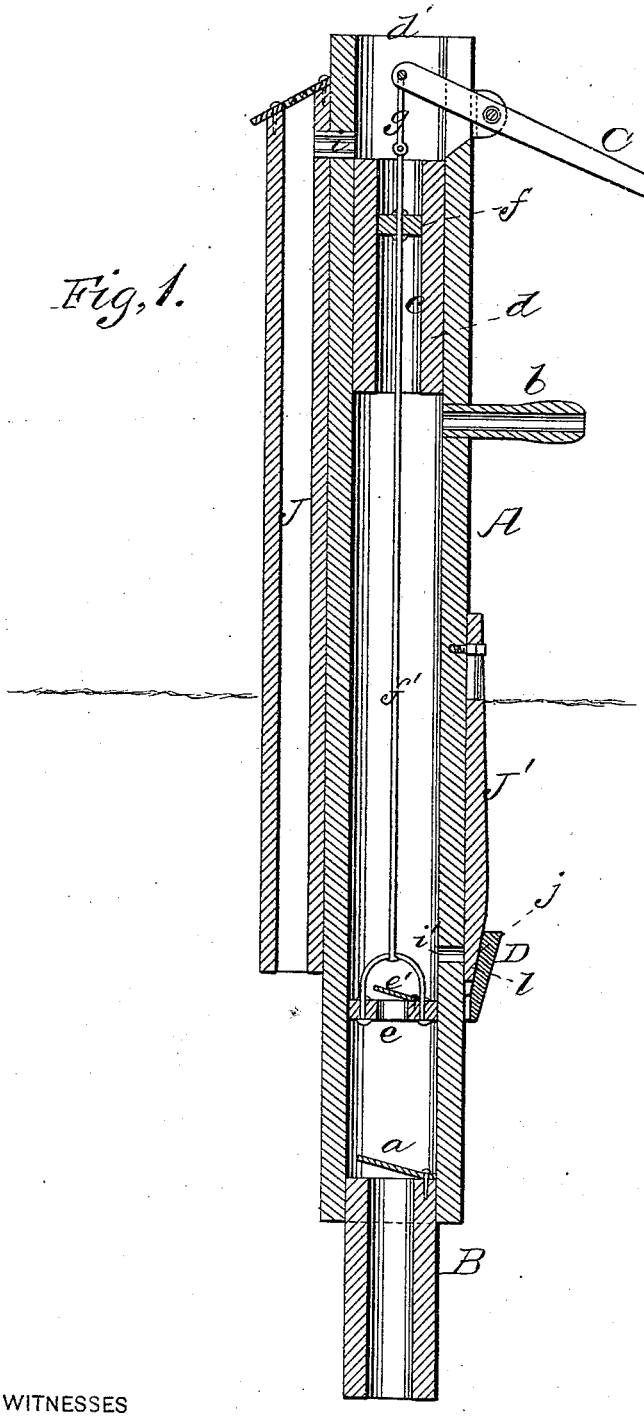
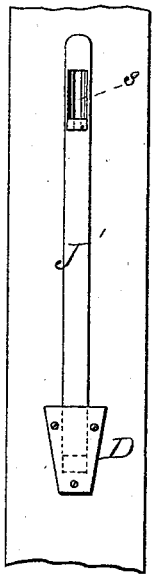


Fig. 2.



WITNESSES
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UNITED STATES PATENT OFFICE.

THOMAS B. SWAN, OF MECHANICS FALLS, MAINE.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **213,005**, dated March 4, 1879; application filed January 18, 1879.

To all whom it may concern:

Be it known that I, THOMAS B. SWAN, of Mechanics Falls, in the county of Androscoggin and State of Maine, have invented a new and valuable Improvement in Pumps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical central section of my improved pump, and Fig. 2 is a detail.

The nature of the invention consists in the combination, with a pump-barrel having a narrowed portion above the spout, a valved plunger working in the barrel below said spout, a solid piston working in the narrowed portion aforesaid, and a rod connecting the plunger and piston, of a ventilating-tube extending alongside the pump through the well-cover, and a passage above the piston leading into said tube, as hereinafter shown and described.

In the annexed drawings, the letter A designates an ordinary pump-barrel, having a supply-pipe, B, closed at its upper end by a valve, *a*, opening upward.

Above the spout *b* the bore of the barrel is reduced in diameter, as shown at *c*, usually by means of a sleeve, *d*, and above said narrowed portion resumes its original size, as at *d'*, in order to allow the lever C full play. In that portion of the barrel below the spout is arranged a plunger, *e*, having an upwardly-opening valve, *e'*, and in the reduced portion above the same a solid piston, *f*, the plunger being connected to the piston by means of a rigid rod, *f'*, and the piston being secured to the lever C by a connecting-rod, *g*.

It is evident that if a hose be applied to the spout and the lever vigorously operated, the pump will force water to a considerable distance; but as, in pumps of this description, it is very difficult to pack the piston *f* absolutely tight, the space above said piston soon fills with water and overflows, wetting the well-cover and all adjacent objects. To prevent this, a hole, *i*, is cut into the wall of the barrel above the sleeve, leading into a ventilating-tube, J, extending along the side of the barrel and through the well-cover. The water then runs back into the well.

About midway between the spout and the end of the barrel, under the well-cover, a hole, *i'*, is cut, through which water runs back into the well when the said hole is open.

On the outside of the barrel, on a level with the draining-hole *i'*, is rigidly secured a metallic plate, D, in which is a tapering recess, *j*, extending vertically through it. This recess gradually narrows from above downward, as shown.

J' indicates a slide having a tapering foot, *l*, adapted to enter the plate D, and provided with a slot, or slots, *s*, through which a bolt or bolts are passed into the barrel, thus allowing the slide free endwise movement. The slide J extends upward above the well-cover, and has a handle, by which it is operated. When it is thrust down the beveled foot enters the socket-plate, and the slide is forced against the side of the barrel, accurately closing the drain-hole *i'*, because of the wedging action thus produced.

Usually the face of the slide adjacent to the barrel will be covered with leather to render the closure air-tight.

By drawing up the slide the foot thereof is partly withdrawn from the wedge-plate, the hole *i'* reopened, and the contents of the barrel drained off into the well.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with a pump-barrel having a narrowed portion above the spout, a valved plunger working in the barrel below said spout, a solid piston working in the narrowed portion aforesaid, and a rod connecting the plunger and piston, of a ventilating-tube extending alongside the pump through the well-cover, and a passage above the solid piston leading into said tube, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

THOMAS B. SWAN.

Witnesses:

E. ADRON GAMMON,

EDGAR E. BENSON.