(No Model.)

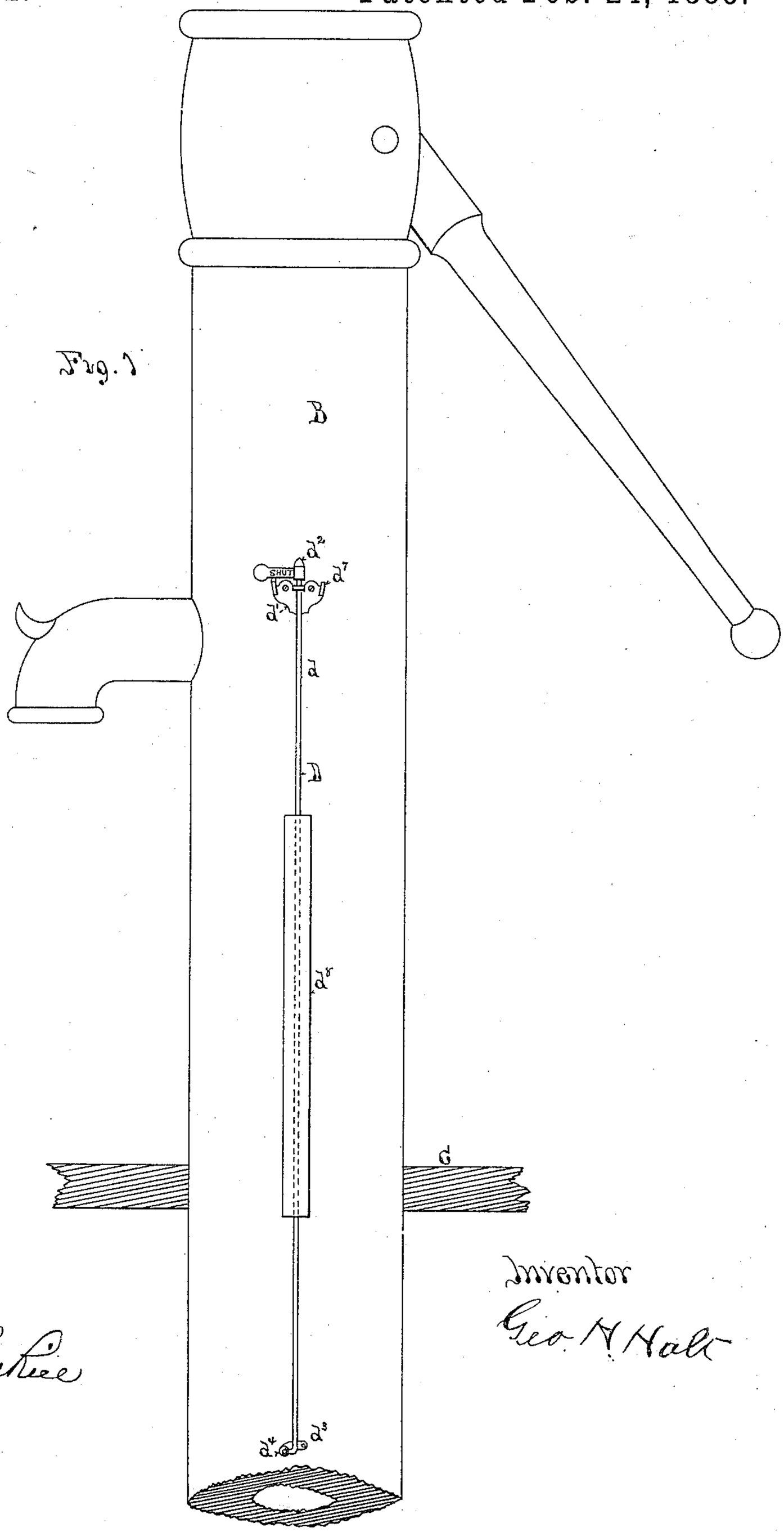
2 Sheets—Sheet 1.

G. H. HOLT.

PUMP.

No. 312,852. Patented Feb. 24, 1885.

Fig. 1.



Witnesses
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4

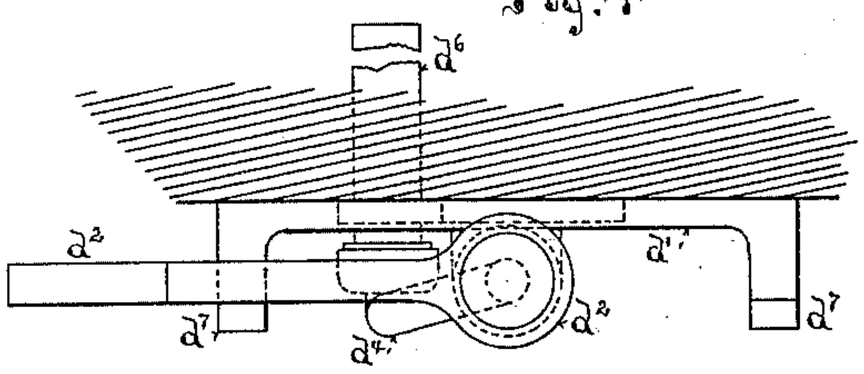


Fig. 5

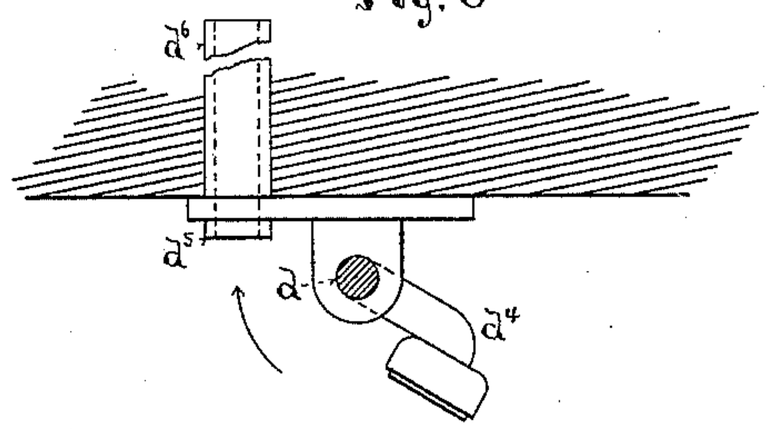


Fig. 2

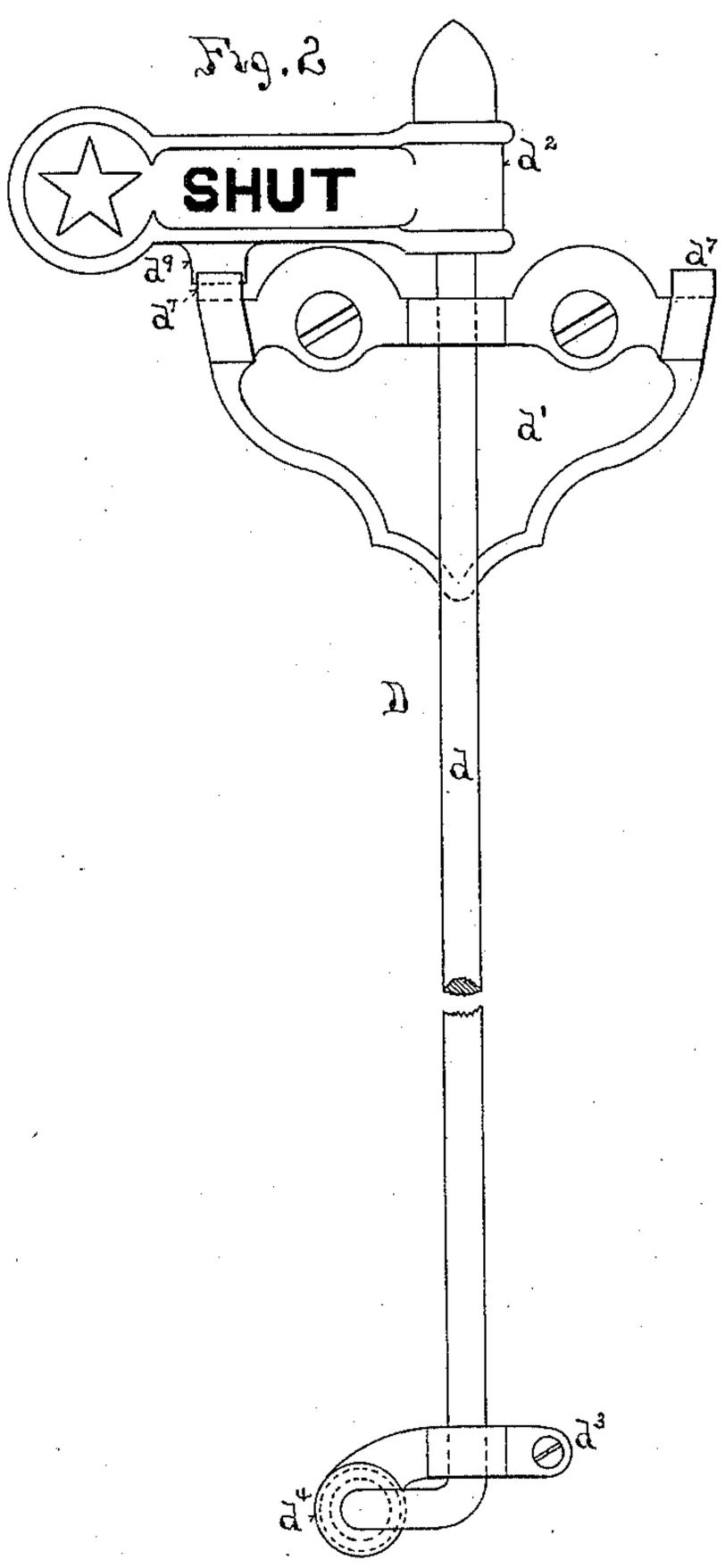
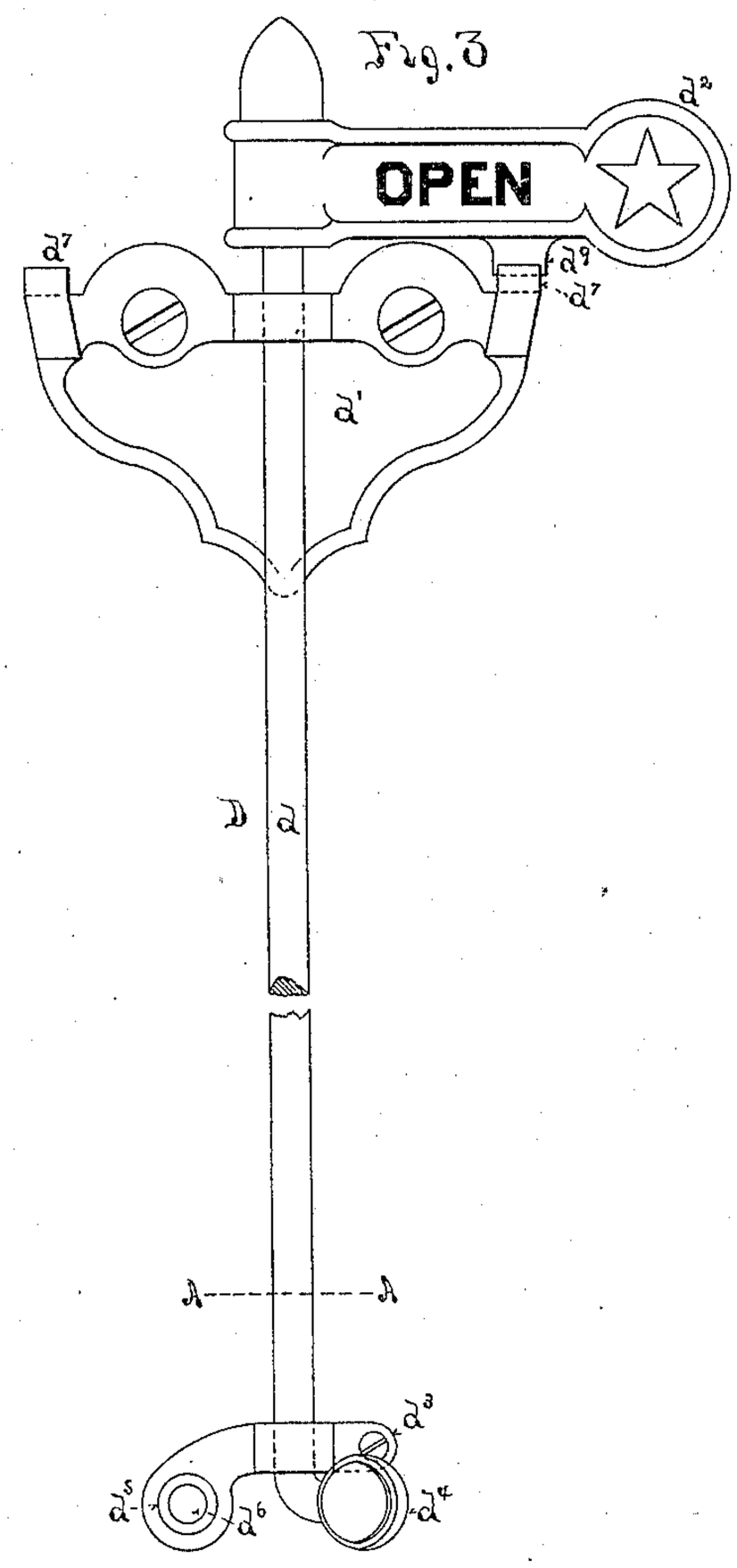


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE H. HOLT, OF WEST CHELMSFORD, MASSACHUSETTS.

PUMP.

SPECIFICATION forming part of Letters Patent No. 312,852, dated February 24, 1885.

Application filed March 21, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. HOLT, of West Chelmsford, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Pumps, of which the following is a specification.

My invention relates to pumps; and it consists in providing the pumps with an improved let-off or run-down for letting off the water in the body of the pump, substantially as hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of a pump provided with my improved let-off. Fig. 2 is an enlarged view of the let-off in a closed position. Fig. 3 is an enlarged view of the same in an open position. Fig. 4 is a top view of Fig. 2. Fig. 5 is a view of Fig. 3 through a section of the pump and improvement on the line A A.

B is the pump, constructed in the ordinary manner. C is the platform over the mouth of the well. D is my improved let-off, which is constructed in the following manner: Two iron brackets, d' d^3, are screwed to the side of the pump, the upper one, d', at a convenient height above the platform C to bring the handle of the let-off within convenient reach of the hand, and the lower one, d^3, at a sufficient distance below the platform to bring the let-off hole below the freezing line and to suit the convenience of the user. The upper bracket, d', has an ear in the line of its vertical center, through which is made a vertical hole, in which the rod d fits, so as to revolve freely. The lower bracket, d^3, also has a vertical hole through it, to receive this rod near its lower end and allow it to revolve.

Through the bracket d^3, near one end of it, is secured the tube d^6, which extends through the wood of the pump-barrel and establishes a communication to allow the water in it to escape into the well. This tube d^6 has a projecting end, d^5, which extends beyond the outer face of the bracket and forms an annular lip. These parts d^6 and d^5 may be made in one piece with the bracket, if desired. Just below where it passes through the bracket d^3 the rod d is bent at a right angle, and a cup-shaped stopper or disk, d^4, is attached to it in a position to cover the lip d^5 of the tube d^6 when the rod d is revolved in the right direction. In the cupped-out part of disk d^4 is attached a small disk of leather to close the tube d^6 water-tight.

On the upper side of the bracket d', and projecting vertically upward on each side at equal distances from the rod d, are two catches, d^7 d^7, and attached to the upper end of the rod d is a lever, d^2, projecting at right angles, and having upon its lower side the nose d^9, which will engage with one of the catches d^7 when the lever is swung round in either direction. The lever d^2 is attached to the rod d at just the right height to enable the springing of the rod to allow the nose d^9 to pass over the catches, and when it has so passed over the elasticity of the rod draws down the nose behind the catch d^7 and holds it there until the end of the lever is forcibly raised to release it and turn the rod d around.

In attaching the lever d^2 to the rod d, I so apply it that when the disk d^4 is closed over the tube d^6, as shown in Fig. 2, the lever will project radially from the rod in a direction nearer toward the observer than what it has when its nose d^9 is caught behind catch d^7, as shown in that figure. Then, in order to lock the nose d^9 behind the catch d^7, as shown in that Fig. 2, it is necessary to spring and twist upon the rod d by crowding against lever d^2, and this brings a strong spring-pressure to bear upon the disk d^4 and closes it upon the lip d^5 water-tight. By thus utilizing the elastic qualities of the rod d both to hold the lever d^2 in place and to close the tube d^6 water-tight, I have a very simple and durable as well as powerful spring, and one not likely to get out of order.

In order to enable the user to always know whether the run-down, which is out of sight beneath the platform C, is open or closed when about to use the pump, I cast in plain letters upon the outer face of the lever d^2, which is exposed when the run-down or let-off is closed, the word "Shut," and I cast on the opposite face the word "Open;" but any other appropriate letters or signs may be used which will accomplish the purpose. I also box or case the rod d with a tubular casing, d^8, for some distance above the platform C, to protect it from being injured by blows or otherwise.

What I claim as new and of my invention is—

1. In a pump, in combination with the let-off pipe d^6, the stopper d^4 and the revolving rod d, substantially as described.

2. In a pump, in combination with the let-off pipe d^6, the stopper d^4, rod d, and lever d^2, substantially as described.

3. In a pump, the combination of the pipe d^6, stopper d^4, rod d, lever d^2, and catch d^7, substantially as described.

4. In a pump, the combination of the pipe d^6, stopper d^4, rod d, lever d^2, and catches d^7 d^7, substantially as described.

5. In combination with the pump B and platform C, the let-off pipe d^6, its stopping device d^4, and the rod d, adapted to revolve to open and close the let-off, and to act as a spring to bear upon said closing device with pressure, substantially as described.

6. The combination of the pump B, the platform C, and the let-off mechanism located below the platform, and controlled by a rod, d, and swinging lever d^2, above the platform, the said lever and rod being provided with suitable letters or signs to indicate the open or closed position of the let-off mechanism, substantially as described.

7. In combination with the pump B, the platform C, the revolving rod d and its lever d^2 above the platform, the let-off mechanism controlled thereby below the platform, and the casing of said rod d^8, substantially as described.

GEO. H. HOLT.

Witnesses:
LEPINE H. RICE,
DAVID HALL RICE.