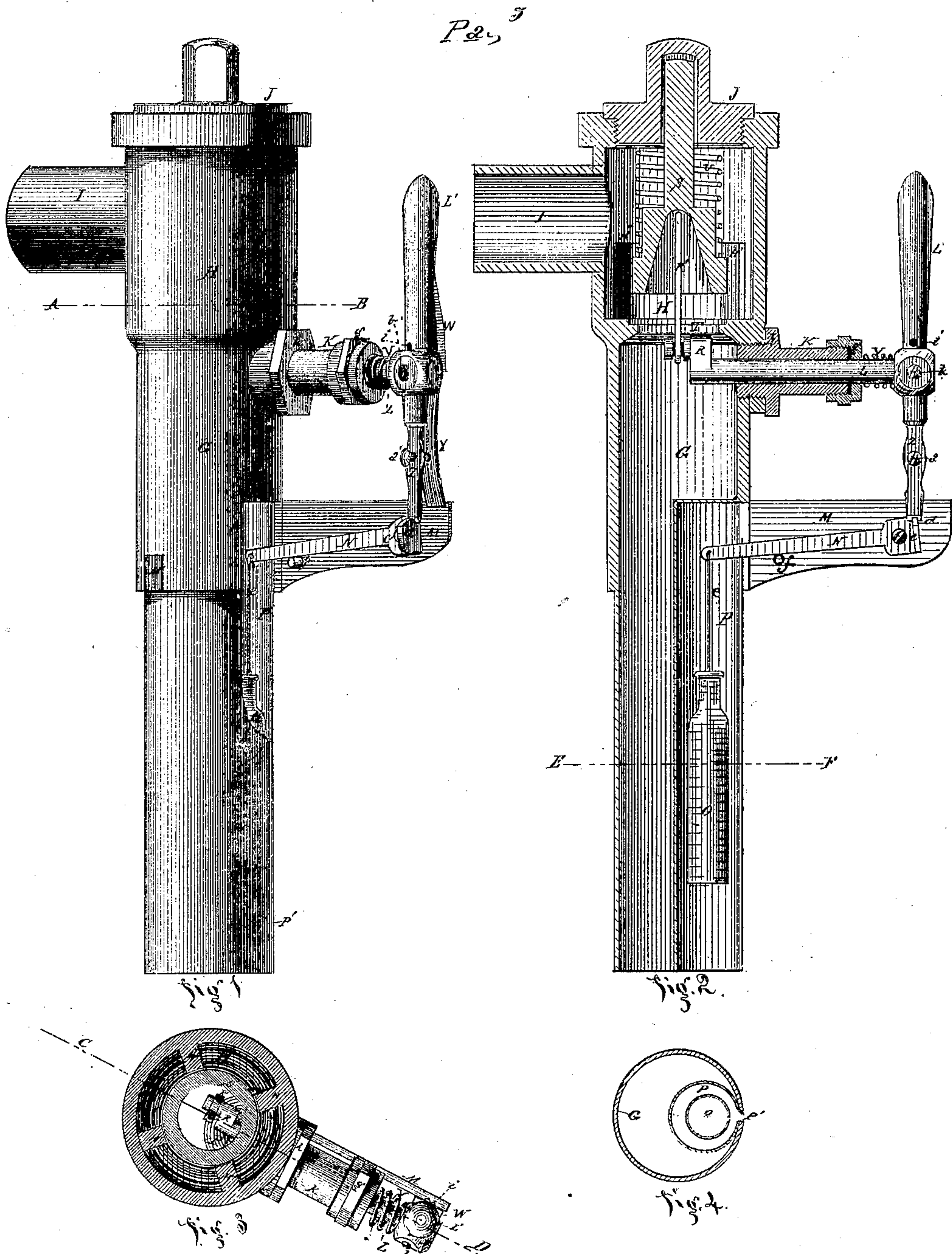


*L. H. Watson,*

*Barrel Filler.*

*No. 113,954.*

*Patented Apr. 18, 1871.*



Witnesses { *Manis L. Clark*      Inventor  
                  *Chas. D. Butler*

*L. H. Watson*



# United States Patent Office.

LEWIS H. WATSON, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 113,954, dated April 18, 1871.

## IMPROVEMENT IN BARREL-FILLERS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, LEWIS H. WATSON, of the city of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented an Improved Barrel-Filler; of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is an external view of my barrel-filler;

Figure 2, a vertical central section through the section line C D of fig. 3;

Figure 3, a horizontal section through the section line A B of fig. 1; and

Figure 4, a horizontal section through the section line E F of fig. 2.

Similar letters of reference in the drawing indicate like parts.

H G represent the cylinder or tube through which the liquid flows into the barrel, and which is internally divided into two chambers by the valve-seat T.

Near the center of the lower part G there are two lugs, M', cast, so as to prevent the tube from passing too far into the barrel.

In the upper chamber H is placed the valve S, which is pressed upon its seat T by the spring U.

Around the valve is a number of guides, H', so as to hold it in place, while just above it is a removable cap, J, large enough to allow the valve to be removed, and which has a hole drilled in it, so as to receive the end of the valve-stem.

In the chamber G is placed a smaller tube, P, open at its lower but closed at its upper end, and in which is suspended the float O.

To the upper end of this float is secured a rod, e, which has its other end attached to the lever N extending outward at right angles to it.

To the side of the chamber G is cast an ear or projection, M, to which the lever N is pivoted at the point e, and which is provided with the pin f, upon which the lever N rests.

The outer end d of the lever is turned at right angles, and has a notch cut in its top so as to catch and hold the end of the handle L'.

This handle is secured to the outer end of the shaft L by the screw k, and has a small vertical slot, b, in its side, so that the end of the handle can be raised from the catch d before it begins to turn.

To the side of the handle is secured, by means of the clamp W at the point i, the flat spring Y, so as to cause the end of handle to press against the catch d, and in order to regulate this pressure I employ the set-screw a', which extends through the handle, as shown in fig. 1.

The lower end of the handle is made V-shaped, so as to make it the more easily slip from the catch d.

The inner end of the shaft L has the crank R attached, and to this crank is secured the rod R', for the purpose of raising the valve from its seat.

In the side of the pipe P is cut a slot or opening, P', as shown in fig. 4, greatly enlarged at its top, so as to allow a free escape of the air from the barrel as it is being driven out by the fluid.

K is a sleeve surrounding the shaft L, screwed into the upper part of the chamber G at h, and provided with a stuffing-box, g.

Around the end of the shaft is a coiled spring, V, so as to prevent any movement endwise.

The pressure in the source of supply is always varying, dependent upon the quantity contained therein.

When the tank is nearly empty there will be but a very slight pressure upon the valve S, but when full a very heavy one. This varying pressure causes friction on the shaft L, making it more or less difficult to be released from the catch d.

When the supply-tank is full the friction is so great that it is very difficult to regulate the handle so that it will be released from the lever at the proper moment, and the consequence is that the barrel often fills and runs over.

In order to make this friction always the same upon the end of the handle, I cut the slot b in its side, so as to allow it a slight vertical movement just sufficient to clear the catch before it begins to turn; the spring Y, as soon as the end of the handle is released, throws it upward and away from the catch.

The operation is as follows:

A piece of tubing, connected to the supply-tank, is placed over the inlet-tube I, and the lower end of the tube G placed in the barrel to be filled. The handle L' is then turned around until its end catches in and is held by the catch d. In turning this handle the shaft L is made to partly revolve, and in doing so the crank R causes the rod R' to lift the valve S from its seat, and to hold it suspended, so as to allow the fluid to pass freely into the barrel. As soon as the fluid has filled the barrel it rises into the tube P, and acting on the float O raises the end of the lever N so as to release the handle L' from the catch d. As soon as the end is released the spring Y throws the handle around, drawing the crank R downward, and allowing the spring U to instantly close the valve so as to stop the flow of the fluid.

By means of the set-screw a the hold of the end of the handle in the catch d can be made so sensitive that it will be released as soon as the liquid reaches any desired point on the float.

Having thus described my invention,

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

1. In apparatus for filling barrels, the slot P' in the



tubes G and P, made to form a communication with the interior of the barrel and the air without for the escape of the air from the barrel, and also to admit the free play of the outside tripping-lever N, as described.

2. A turning handle, L', having a tripping-arm, z, in combination with a cranked spindle, L, the tripping-lever N, and float O, as described.

3. The turning handle L' and its arm z, in combination with the spring Y, its regulating-screw a, and the tripping-lever N, as described.

4. In a barrel-filling apparatus, in which its cut-off valve S is operated by a turning spindle, L, having both a crank, R, and handle L' tripped by the action of a float, the said handle L' made to have a movement independent of its spindle L and in advance of the action of the valve S, to allow the turning handle and

tripping-lever to be tripped without regard to the pressure upon or friction of the turning spindle L, as and for the purpose described.

5. The combination of the arm z of a turning handle L' and the notched tripping-lever N with the shaft L, crank R, rod R', and valve S, as described.

6. The combination of the turning handle L', spring Y, regulating-screw a, tripping-lever N, float O, spring valve S, crank R, crank-rod R', spindle L, tube G with its air-communicating slot P', and the float-tube P, the several parts being constructed, arranged, and operating as described.

L. H. WATSON. [L. s.]

Witnesses:

FRANCIS L. CLARK,  
J. DONALDSON.