

(No Model.)

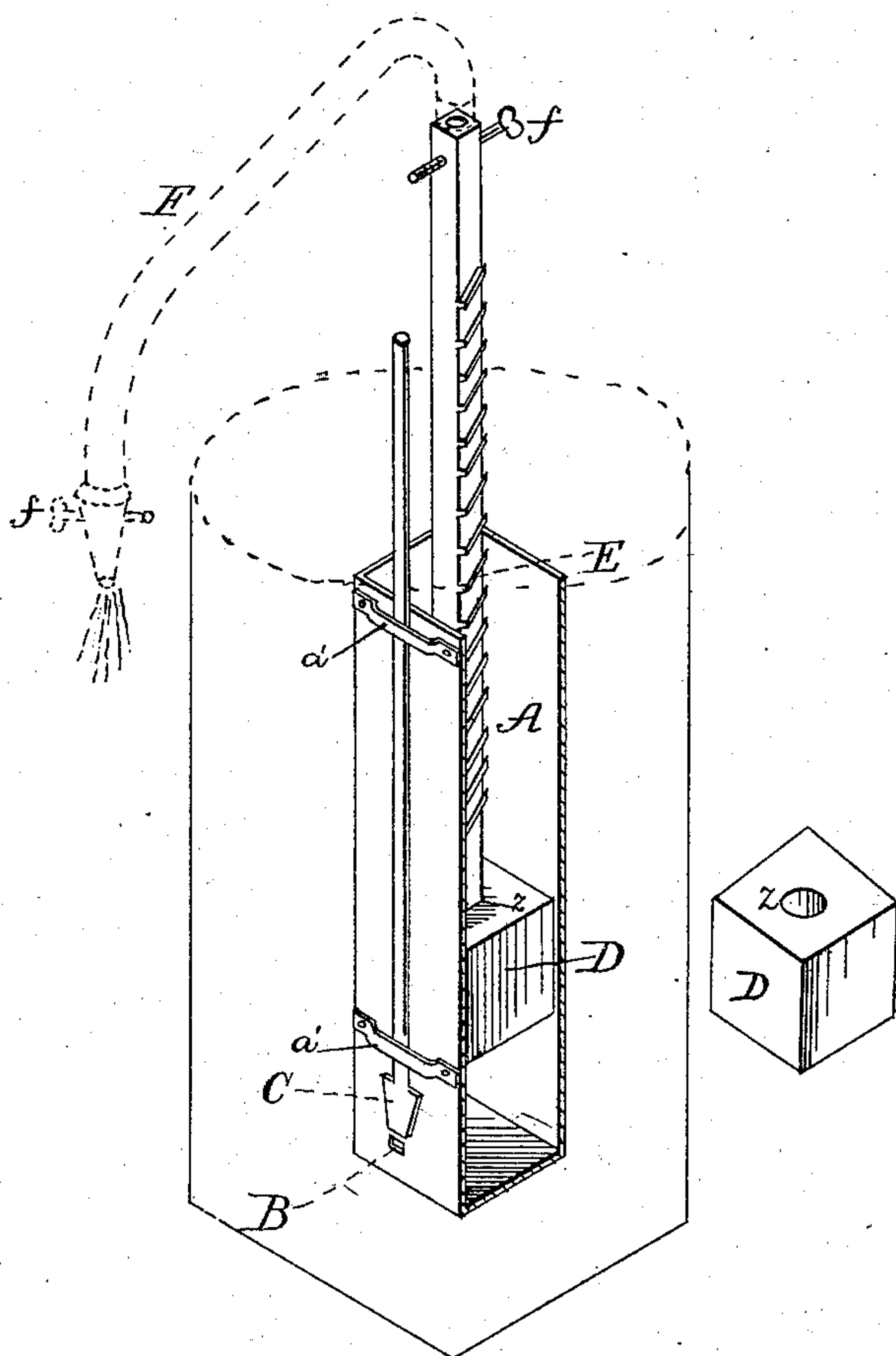
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M. COOPER.
Pressure Fountain Pump.

No. 241,621.

Patented May 17, 1881.

Fig. 1.



Witnesses:

J. M. Burnham.
W. D. Burrard

Inventor:

Nontraville Cooper
per J. S. Duffie
attorney

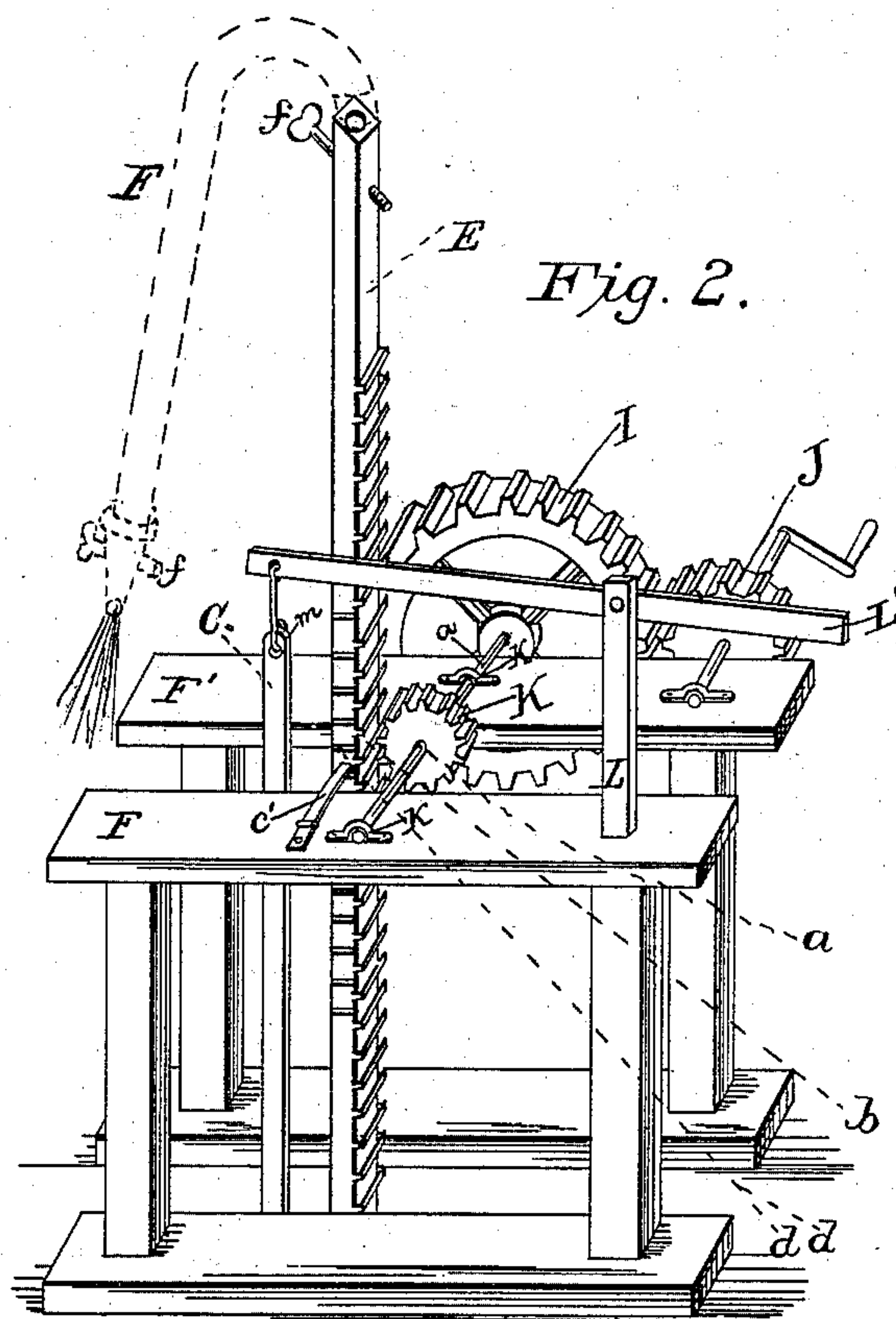
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UNITED STATES PATENT OFFICE.

MONTRAVILLE COOPER, OF COLUMBIA, SOUTH CAROLINA.

PRESSURE FOUNTAIN-PUMP.

SPECIFICATION forming part of Letters Patent No. 241,621, dated May 17, 1881.

Application filed February 8, 1881. (No model.)

To all whom it may concern:

Be it known that I, MONTRAVILLE COOPER, a citizen of the United States, residing at Columbia, in the county of Richland and State of South Carolina, have invented certain new and useful Improvements in Pressure Fountain-Pumps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

This invention has relation to improvements in force-pumps or hydraulic apparatus for raising water.

The object of my invention is to provide a means for raising water from a well, cistern, or other body of water in a large or small volume, as may be desired, the flow being regulated by the size of the reservoir used and the hollow plunger, through which the water is forced, and by the weight of the plunger; and it consists in the construction and novel arrangement of parts, as hereinafter shown, described, and particularly pointed out in the claims.

In the annexed drawings, Figure 1 is a sectional elevation. Fig. 2 is a view of the operating mechanism with the hollow ratcheted plunger-rod attached.

In the accompanying drawings, the letter A represents the air-tight reservoir, made round or square, and wholly or partially of metal.

The letter B designates the inlet-opening in the side of the reservoir, near the bottom, for the purpose of admitting water into the said reservoir. This inlet is opened and closed by a slide, C, working in ways *a'*, attached to the side of the reservoir near the top and bottom portion thereof.

The letter D indicates the weighted plunger, fitting snugly and working on the inner walls of the reservoir, and having a central opening, *z*.

E represents the hollow toothed plunger-rod passed into the said opening of the plunger. This hollow plunger-rod is provided at or near

its top portion with a stop-cock, *f*, for the purpose of increasing or decreasing the flow of water from said rod.

The letters F F' designate two platforms mounted upon legs, and placed a suitable distance apart to admit between them the plunger-rod E, which enables it to move the plunger up and down in the reservoir. Upon these two platforms bearings *k* are secured for the reception of a shaft having a master-wheel, I. This shaft is also provided with a pinion, K, engaging the teeth *b* on the face of the plunger-rod. The master-wheel is operated by a crank-wheel, J, which imparts motion to the pinion K and moves the plunger up or down. The platform F is provided with an upright, L, having a lever, L', pivoted thereto. The far end of the lever is hinged to a perforation, *m*, in the slide to open and close the inlet B. A spring-pawl, *c'*, is also secured to the platform F, which engages the ratchets *d* at the side of the plunger-rod E to secure it in place.

The operation of my invention is as follows: The reservoir is solidly and securely placed in the bottom of a well, cistern, or other body of water. The slide is then drawn upward by the lever to admit water through the inlet into the reservoir, and then the weighted plunger, with its hollow ratcheted plunger-rod, is raised in said reservoir by means of the mechanism described. When the reservoir is sufficiently full the slide is let down by the lever, thus closing said inlet. When this is accomplished the hollow rod descends, and the water is forced upward through said rod by the downward pressure of the weighted plunger.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the reservoir A, having the inlet B in its side near the bottom, and provided with the slide C, having the lever L' to open and close said slide, of the weighted plunger D, having the hollow plunger-rod E, operated by a suitable mechanism, as shown and described.

2. The pressure-pump consisting of the reservoir A, having the inlet B at its base, and

the slide C to open and close said inlet, the weighted plunger D, having the central opening, *z*, the hollow toothed plunger-rod E, passed into said opening, and having the stop-cock
5 *f*, the platforms F F', provided with a mechanism for operating said rod and plunger, the ratchet *d*, and pawl *c'*, and the lever L', operating said slide, as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

MONTRAVILLE COOPER.

Witnesses:

BEN MOCK,

W. J. E. LOWRANCE.