

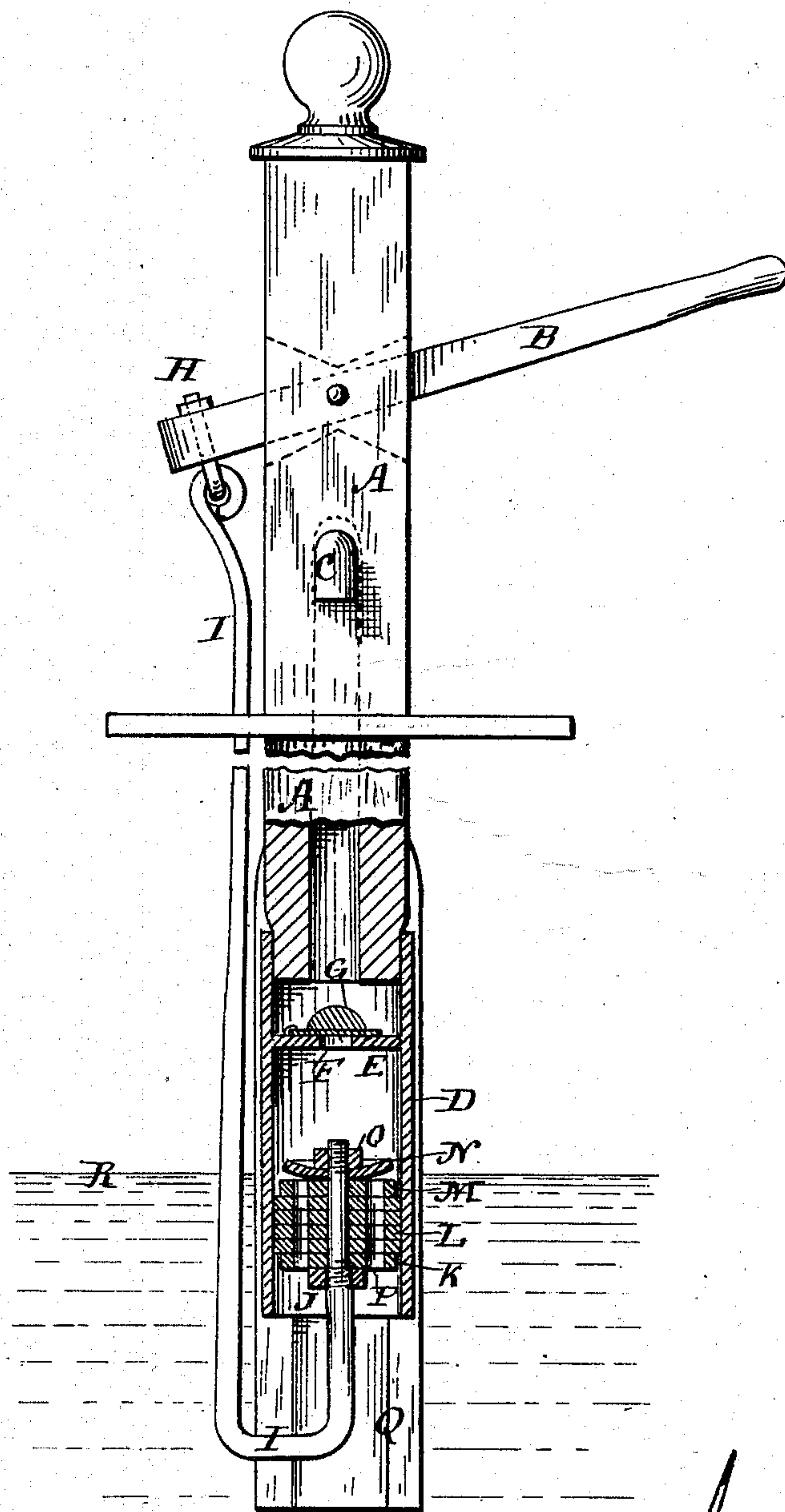
(No Model.)

G. R. HUNTER.

PUMP.

No. 252,468.

Patented Jan. 17, 1882.



Witnesses:
W. B. Masson;
Geo. Hunt

George R. Hunter
Inventor
By *[Signature]* Atty.

UNITED STATES PATENT OFFICE.

GEORGE R. HUNTER, OF HAWLEYVILLE, IOWA.

PUMP.

SPECIFICATION forming part of Letters Patent No. 252,468, dated January 17, 1882.

Application filed August 2, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. HUNTER, a citizen of the United States of America, residing at Hawleyville, in the county of Page and State of Iowa, have invented certain new and useful Improvements in 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 drawing, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of pumps in which the water is lifted or directly forced, in contradistinction to the lifting of the water by the force of suction; and it consists in certain devices and combinations of devices hereinafter described, and specifically set forth in the claims.

Referring to the drawing, which is a front elevation partly in section, A represents the body of the pump, which is transversely mortised for the reception of the handle B.

C is the delivery-spout, and communicates with the channel of the body (shown by dotted lines) which leads to the cylinder D, (shown in section, as is a portion of the body A,) which cylinder is attached to or connected with the body by simple friction, the latter being rounded and driven snugly into the cylinder; or they may, if desired, be connected by a screw-thread or by bolts or screws. The cylinder is provided with a diaphragm, E, having an aperture, F, surmounted with an ordinary flap or hinge valve, G.

At the end of the shorter arm of the lever or handle, and passing therethrough, is an eyebolt, H, and connected therewith is the bent rod I, which passes down the outside of the body of the pump, and is abruptly bent inwardly and upwardly into the cylinder D. The rod I is furnished with a piston and valve composed of the following parts: a base-nut, J, base-plate K, packing L, cap-plate M, a circular flap-valve, N, and an outer nut, O. The rod I is threaded for the reception and retention of the nuts J and O, and the packing

and base and cap plates are centrally perforated for the passage of the rod therethrough. The packing and plates are also provided with perforations or passages P, which are covered by the circular flap-valve N.

At the front and back of the body A of the pump are attached supports Q, (one of which only is shown,) which serve to support from and upon the bottom of the well the body and cylinder, as clearly shown, and the sides, being left open, permit a free passage of the water to the cylinder D and a free space for the operation of the rod I, and serving also to keep the cylinder in line with the body by means of grooves formed in the surface thereof.

The operation of the pump is as follows: The cylinder being submerged, the water-line being not lower than the line R, the lever at its longer arm is elevated, which depresses the rod I, with its piston and the valve N thereto attached. The water during this movement, rising through the passages P, lifts the valve N and occupies the space in the cylinder above said valve and below the diaphragm E. Upon depressing the long arm of the lever B the movements of the rod I and its piston are reversed and the resistance or weight of the water closes the valve N, and as this reversed movement continues the water is lifted and forced through valve G and into the channel of the body A and out of the exit or delivery spout C.

The advantages of this construction are simplicity, durability, and the obviation of the necessity of air-tight and carefully fitted joints; so requisite in suction-pumps, and the location of the essential working parts in a submerged position, thus securing protection from freezing.

I am fully aware that lifting-pumps are well known, and do not broadly claim such; but

What I do claim, and wish to secure by Letters Patent, is—

1. The combination of the body A, cylinder D, having the diaphragm E and valve G, with the handle B, bent rod I, piston K L M, and valve N, substantially as shown and described.
2. The combination, with the body A and

cylinder D, provided with diaphragm E and valve G, of the supports Q, substantially as shown and described.

3. The bent rod I, adapted to operate on the
5 outside of the pump-body and to enter the cylinder D, and provided with the base-nut J, perforated base-plate K, packing L, perforated cap-plate M, valve N, and cap-nut O, said base-plate, packing, and cap-plate having passages

P therethrough, substantially as shown and described.

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

GEORGE R. HUNTER.

Witnesses:

GEORGE M. UNDERWOOD,
H. F. MILLS.