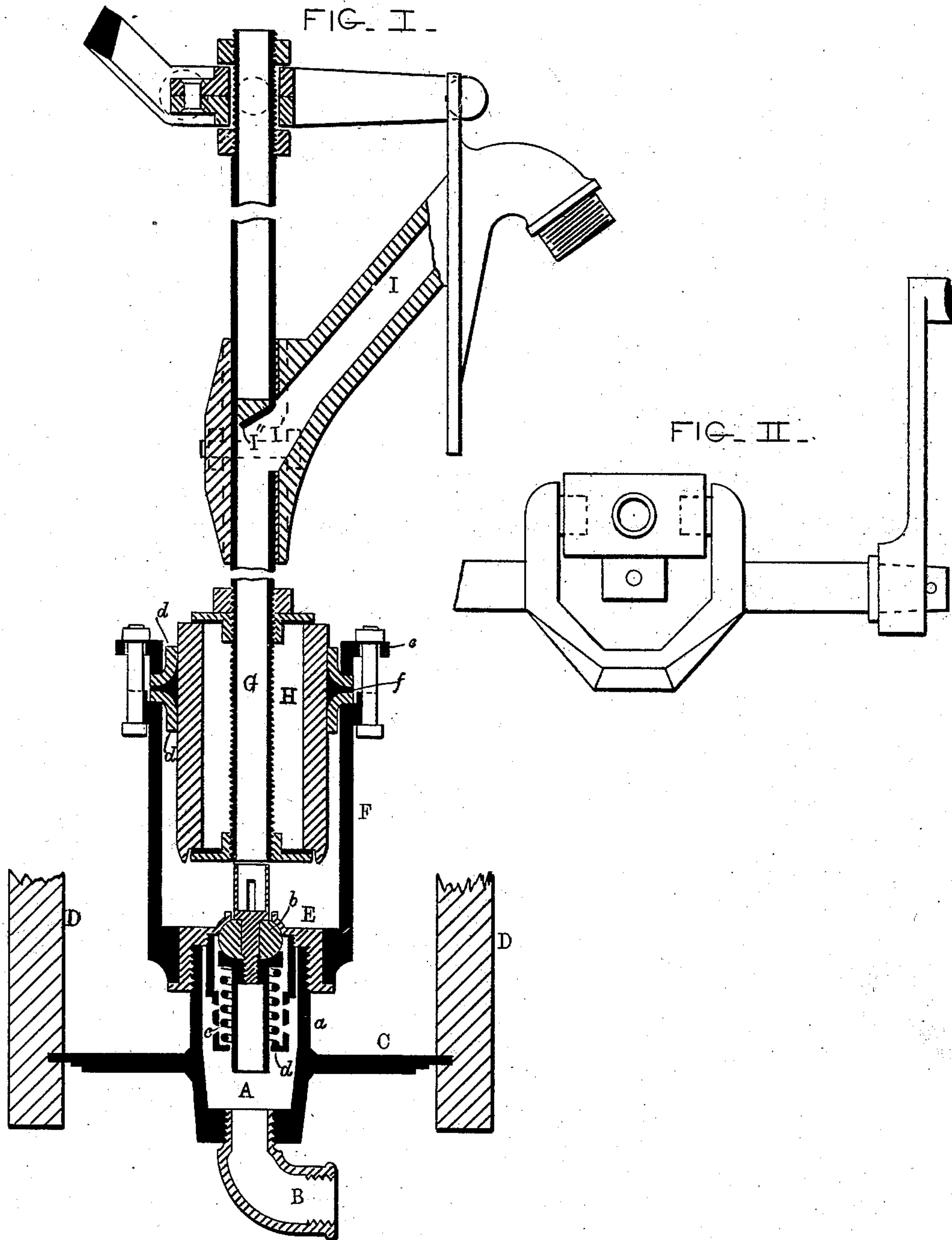


L. P. CLARK.  
Hydrant.

No. 209,460.

Patented Oct. 29, 1878.



—WITNESSES—

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN HYDRANTS.

Specification forming part of Letters Patent No. **209,460**, dated October 29, 1878; application filed March 29, 1878.

*To all whom it may concern:*

Be it known that I, LEVIN P. CLARK, of the city of Baltimore, and State of Maryland, have invented certain Improvements in Hydrants, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

This invention relates, first, to means for packing the plunger within the waste-water chamber of the hydrant; and, secondly, to the construction of the said plunger and other portions of the mechanism, as will hereinafter fully appear.

The object of the said invention is, first, to exclude from the waste-water chamber sand, dust, and other matter that may accumulate upon and around the plunger when elevated; and, secondly, to simplify and cheapen the construction of the apparatus.

In the description of the improved hydrant which follows reference is made to the accompanying drawing, forming a part hereof, and in which—

Figure 1 is a vertical section of the main parts of the hydrant, and Fig. 2 a detached view of parts of the same.

Similar letters of reference indicate similar parts in all the figures.

A is the water-supply chamber, to which the service-pipe B is secured. A plate, C, forming a part of and extending exteriorly from the walls *a* of the chamber A, constitutes the base of the entire apparatus within the box or case D, to which the said plate is attached, a tongue-and-groove joint being formed between the same and the box or case, as shown. E is a cap, screwed over the upper end of the chamber A, the exposed inner surface of which is adapted as the seat for the valve *b*. The said valve is held yieldingly in contact with its seat by means of a spiral spring, *c*, confined in a perforated shell, *d*, screwed into the lower part of the cap E.

The waste-water chamber F, secured exteriorly of the cap E, is of such size as to hold the water remaining in the vertical discharge-pipe G after the closing of the valve *b*, and hereby remove the said water from the action

of frost. To the lower end of the discharge-pipe G is affixed in a suitable manner the plunger H, which, as the said discharge-pipe is depressed to open the valve, displaces the water contained in the waste-water chamber, and causes it to again enter the discharge-pipe G, to be carried off as the hydrant is used.

The nozzle I, which conducts water from the pipe G to the outside of the hydrant-box, is formed in two parts, which are clamped around the said pipe G, and bolted together, as shown. The means of communication between the interior of the pipe G and the nozzle I is an aperture, *I'*, in the said pipe, and in order to close the pipe G above the said aperture, a tongue, *I''*, of metal is turned inwardly to form a partition, against which lead, solder, or other soft metal is poured. A piece of gum packing is used to effect a tight joint between the nozzle and the pipe G.

The mechanism for operating the pipe G, and through it the valve *b*, is of the ordinary description, and forms no part of the present invention.

The plunger is packed within the waste-water chamber by means of two cups, *d*, of india-rubber, the inner edges of which, in contact with the surface of the plunger, extend in opposite directions. The cups *d* are held to the waste-water chamber by means of a flange, *e*, and in order to retain them in their desired shape when the plunger is removed a ring, *f*, of triangular cross-section is applied between them, as shown in the drawing. This means of securing the rings in place admits of their being cut from a straight sheet of india-rubber, and they are found to answer the purpose for which they are intended fully as well as if molded in the form of cups, and are much less expensive. The advantage of having two cups in reversed positions, as shown, is that the edge of the upper cup prevents any dust, sand, or other matter adhering to the surface of the plunger from passing to the waste-water chamber, while the lower cup prevents the passage of water to the upper one, which would tend to extend it and cause leakage as the plunger is depressed.

When the plunger is removed from the waste-water chamber, the free or inner edges of the cups naturally close slightly. I there-



fore taper the lower end of the said plunger, in order to admit of its being easily entered to the upper cup. The valve *b* is provided with the ordinary slotted hollow stem, to give free passage of water from the cap *E*. In having the plate *C* constructed as a part of the supply-chamber, as before described, the number of connections to make in erecting the hydrant is lessened, and the cost of the hydrant reduced.

I do not claim supporting the supply-water chamber by a plate formed on the exterior thereof, and clamped by means of bolts between two parts of a box or casing, but in my invention form a groove in the inner sides of the box or casing, into which the plate, which is provided with a tongued edge, is slipped. The casing which I use for this purpose is generally constructed of wood, and the connection made between it and the plate is firm and permanent. The plate *C* entirely closes the base of the box, and keeps dirt from rising within the same, the hydrant mechanism within the casing being at all times clean and clear from extraneous substances.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. The india-rubber packing-cups *d*, formed from straight or flat rings, and having their inner edges turned outward by means of a ring of triangular cross-section, the whole being attached to the upper end of the waste-water chamber *F*, substantially as and for the purpose herein set forth.

2. The plunger *H*, having its lower end tapered or rounded, as described, combined with the rubber cup *d*, as specified.

3. The nozzle *I*, constructed in two parts, united by clamping-bolts, combined with the pipe *G*, having the perforation *I'*, substantially as set forth.

4. The pipe *G*, having a portion thereof turned inward, forming the tongue *I''*, combined with a body of lead, solder, or other metal inserted in said pipe and resting on the tongue *I''*, whereby the pipe is closed, as and for the purpose specified.

In testimony whereof I have hereunto subscribed my name this 29th day of January, in the year of our Lord 1878.

LEVIN P. CLARK.

Witnesses:

WM. S. HOWARD,  
NOAH CLARK.