C. E. Frazier,

Hydrant,

No. 84,104. Patented Nov. 17, 1868.

Fig: 1.

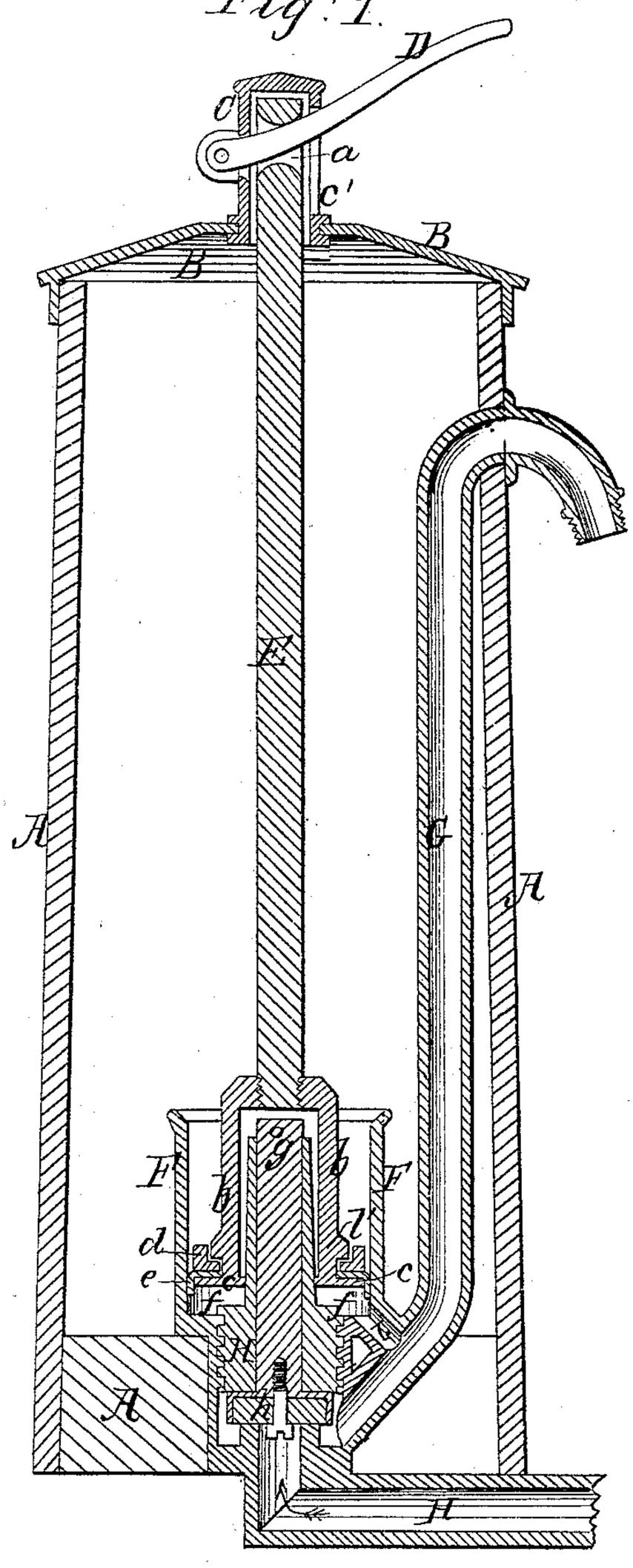
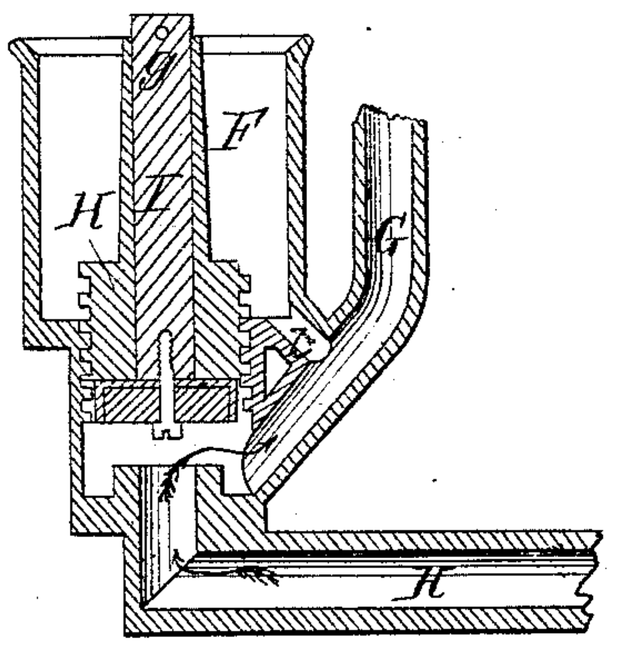


Fig: 2.



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CHARLES E. FRAZIER, OF BALTIMORE, MARYLAND.

Letters Patent No. 84,104, *dated November* 17, 1868.

IMPROVEMENT IN HYDRANTS.

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, CHARLES E. FRAZIER, of the city and county of Baltimore, in the State of Maryland, have invented a new and improved Hydrant; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon, in which like parts are indicated by like letters in the several figures.

The nature of my invention consists in constructing a simple, adjustable, economical, non-wasting, and non-freezing hydrant, to be hereafter more fully described, in order that those skilled in the art should be able to make and use the same.

In the drawings—

Figure 1 represents a vertical section through my hydrant, as closed;

Figure 2, a partial section of same, the valve being open, or raised;

Figure 3 is also a partial section of the lower part of my hydrant, as modified, the valve being closed; whilst

Figure 4 is a still more limited section of said modification, the valve being open.

Figure 5 is a top view of a perforated nut, as shown in section in fig. 3, whilst

Figure 6 is a section, on line *a–b*, fig. 3.

A, fig. 1, is a vertical section of my hydrant-box, having a metallic or other suitable cap, B. Working on or in this (so as to be capable of being rotated) is a metallic or other durable tube, C, the same being slotted, and in which slot, *c′*, the handle D works up and down. A side recess at the top, and one at the bottom of this slot, keep the handle in the position desired.

The handle D is secured to tube C in any suitable manner, as seen in fig. 1, and it passes through a rod, E, which is perforated as at *a*, and this rod extends down to a hollow metallic piston, *b*, having a lip, *c c*. Between this lip, or circular flange, and a ring, *d*, is compressed a leather or other suitable washer, *e*, bearing against the inside of chamber F, which is open at the top. The ring *d* has slots in it which pass over lugs *l′*, on the outside of the piston *b*, and by turning the ring under the lugs, the packing or washer *e* is held firm. The piston *b* is shown in fig. 1, in a raised position, leaving a space, *f*, below it for the water in discharge-pipe G to fall back into when the hydrant is shut off, thus preventing any freezing.

H is a hollow screw, the top of which is so shaped that it can be rotated by means of *b*, the rod E, and handle D.

Passing upward, through H, is the valve-stem I, supported or held by a pin, *g*, at the top, and at the lower end is secured the valve *h*, which may be confined in a cylindrical or other-shaped cup, and which is shown in fig. 1 as pressed or screwed down upon its seat, the top of supply-pipe K. The valve is shown secured by a screw.

The operation is as follows:

In fig. 1, the hydrant is shown in its normal or closed position, the supply-pipe G supposed to be empty, and the shut-off water having fallen back into the space *f*, in chamber F, below piston *b*. To open it, the handle D is lowered to the bottom of the slot *c′*, in top C, which forces the water below the piston into the supply-pipe G, through connection-pipe *t;* then, by pushing the handle in a proper direction, laterally, rotating the top C, and the hollow screw H, this latter will be raised, and, with it, the valve *h*, thus permitting a flow of water out from under it, into and up through the discharge-pipe. By reversing the motion of handle D, the valve is screwed down upon the top of supply-pipe K, which "shuts off" the water, and then, by raising the handle to the top of its slot, *c′*, the piston is raised, and the water in G falls back into the space *f*, underneath *b*. The handle should rest in the upper side recess, at the top of *c′*.

The rotation of piston-rod E is limited by a pin, *p*, projecting from it, or tube C, coming in contact with another underneath the cap B, as seen in fig. 1.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The cap or top B C, constructed and operated in the manner substantially as shown and described, and for the purpose set forth.

2. The combination of the hollow screw H, and the valve-stem I, arranged, constructed, and operated in the manner substantially as shown and described, and for the purpose set forth.

3. The combination of chamber F, screw H, rod I, and hollow piston *b*, arranged, constructed, and operated in the manner substantially as shown and described, and for the purpose set forth.

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