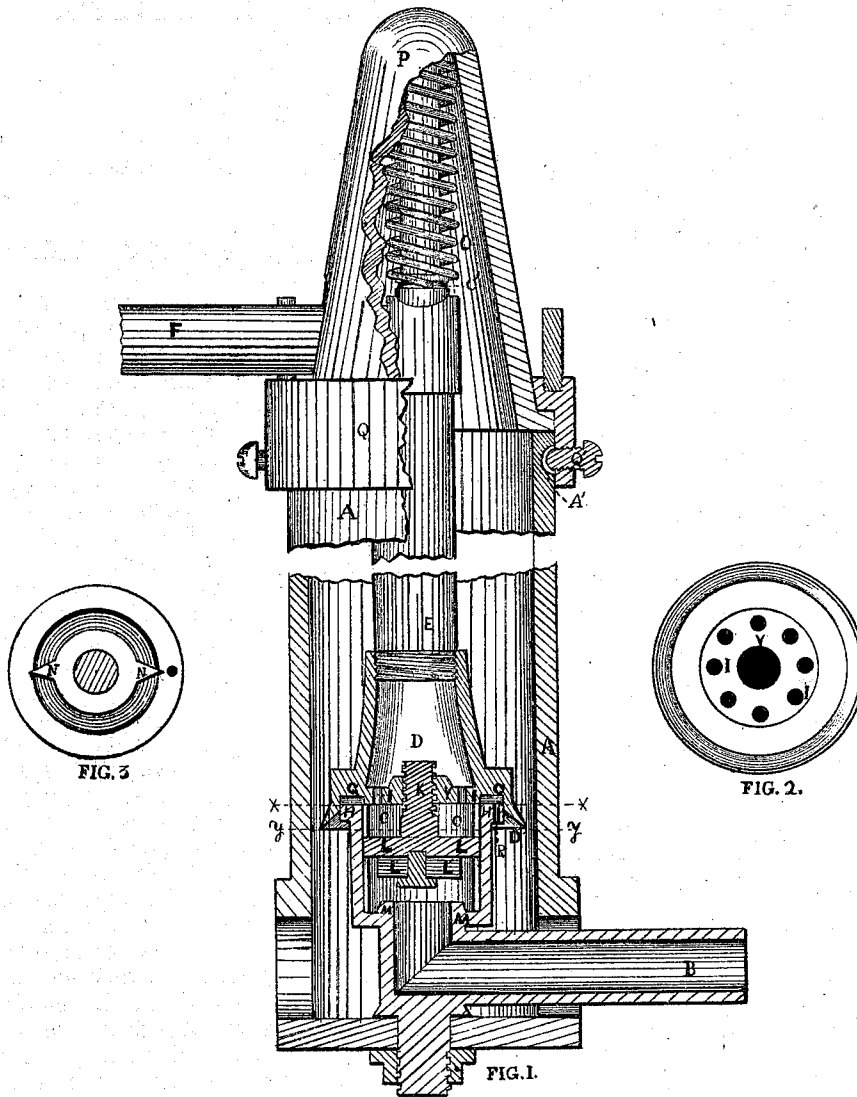


GEORGE C. BAILEY.
Hydrant.

No. 124,777.

Patented March 19, 1872.



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GEORGE C. BAILEY, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN HYDRANTS.

Specification forming part of Letters Patent No. 124,777, dated March 19, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, GEORGE C. BAILEY, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Hydrants; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a vertical sectional view of a hydrant embodying my improvement. Fig. 2 is a cross-section through the line *xx*, Fig. 1. Fig. 3 is a cross-section through the line *yy*, Fig. 1; and Fig. 4 shows another application of my improvement.

My invention consists in improvements in the cut-off and water-escape arrangements of hydrants and stop-cocks.

To enable others skilled in the art to make and use my improvement, I will describe its construction and operation.

The outer shell *A* is of the ordinary construction, and has an opening near the bottom for the admission of the supply-pipe *B*, which leads up into a valve-chamber, *C*. The upper end of the chamber *C* opens into a bell-mouthed water-way, *D*, which is secured to the end of the pipe *E* leading to the discharge-pipe *F*. In a groove just inside of the overlapping-lip *D'* of the bell-mouthed water-way *D* is washer *G*, which, when the hydrant is open, rests upon the seat *H*. At the mouth of the water-way *D* are a number of openings, *I*, through which the water passes up to the pipe *E*. In the center of the mouth of the water-way is a threaded aperture, *Y*, into which is screwed a threaded stem, *K*, made loose so as to work easily. On the lower end of the stem *K* is a valve, *L*, having a washer, *L'*, which, when the valve is closed, rests on the valve-seat *M*, making a tight joint. Projecting from opposite sides of the valve *L* are two pins or lugs, *N*, which enter and operate in corresponding vertical grooves in the sides of the chamber *C*, to prevent the valve *L* from turning therein. Around the upper part of the pipe *E* is placed a spiral spring, *O*, which, pressing against the shoulder *O'*, holds the water-way *D* down upon the seat *H*. The same purpose may be attained by placing sufficient weight upon the rod, but a spring is preferable. The

top or cap-piece *P* of the hydrant, against which the upper end of the spring *O* passes, is secured to the shell *A* by means of the collar *Q* in such a way as to leave the collar free to turn. The discharge-pipe *F* projects from the cap *P* through a proper opening. The collar *Q* is secured in place by means of the screws *Q'*, which enter the grooves *A'*, and can be adjusted at any desired point. The valve *L* is opened by rotating the water-way *D*, which, turning upon the thread on the stem *K*, causes the valve to raise off the seat *M*. The water-way *D* is turned by means of the discharge-pipe *F*, which is used as a handle, being rigidly attached to the pipe *E*. The cap *P* is loosely held in place by the collar *Q*, so as to turn with the pipe *F* and not interfere with its operation. If the water-way is rotated in the opposite direction, the valve *L* will be closed and the flow of water stopped. The further rotation of the water-way in the same direction causes it to be raised off of the seat *H*, and opens a passage between the seat *H* and washer *G* for the escape of the water remaining in the pipe *E*. If so desired, small holes, as at *R*, can be made through the seat *H*, to facilitate the escape of the water.

By this means all the water remaining in the hydrant above the valve-chamber is allowed to escape without the employment of independent devices for that purpose. By the arrangements above described the stream of water from the discharge-pipe *F* may be directed to any desired point.

Fig. 4 shows a modification of the same device as applicable to a stop-cock in that class of faucets or cocks in which it is necessary to make provision to allow the escape of the waste-water.

The application of the hereinbefore-described device is as follows: The water being stopped off by rotating the stem *Z*, the washer *G* is closed upon the seat *H*, shutting the waste-escape. The further rotation lifts the valve *L* with its washer *L'* from off the seat *M*, and allows the passage of the water from the supply *B* into the discharge-pipe *F*. Reversing the motion of the stem *Z* brings the different parts into the position shown in the drawing—the supply-pipe closed at *M M*, and the washer *G* raised from its seat *H*—allowing the water in the discharge-pipe *F* to escape, as shown

by the small arrow, through the waste-passage R. Instead of closing the waste by the washer G, the same purpose may be attained by having the seat H and flange on the stem Z ground, so that they will fit against each other and form a perfect joint.

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

1. A vertically-lift non-rotating valve, L, in combination with the valve-seat M and revolving water-way, substantially as described.

2. In combination with a bell-mouthed water-way, D, which, in operation, performs the function of a water-waste, and the annular seat H, a spring, O, or equivalent device, substantially as described.

3. The combination of the spring O, bell mouth D, and seat H, with the screw K, valve L, valve-chamber C, and seat M, when arranged as shown.

4. A revolving top, swiveled to the hydrant-case and having no vertical motion, in combination with a revolving spout and water-way and spring O, substantially as described.

In testimony whereof I, the said GEORGE C. BAILEY, have hereunto set my hand.

GEO. C. BAILEY.

Witnesses:

W. N. PAXTON,
JAMES I. KAY.