

H. J. Bailey.

Hydrant.

N<sup>o</sup> 78,917.

Patented June 16. 1868.

Fig. 1.

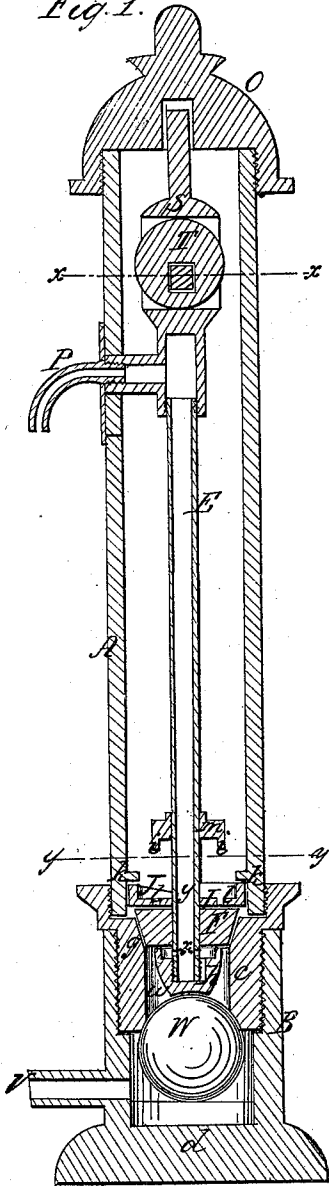


Fig. 2.

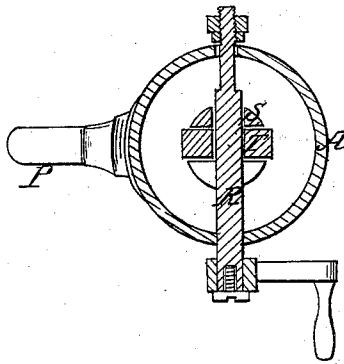
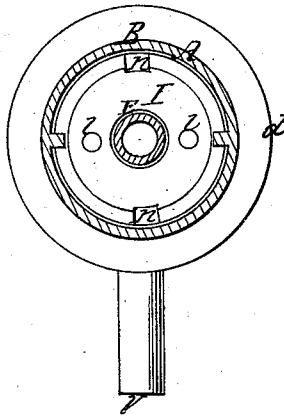


Fig. 3.



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H. J. BAILEY, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 78,917, dated June 16, 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, H. J. 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 that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to new and useful improvements in hydrants, which improvements embrace the construction and general arrangement of parts, the provision made for preventing the oxidation of the outer casing, and for removing the working parts from the case, for purposes of inspection or repairs.

And the invention consists in forming the case of the hydrant of galvanized iron, or protecting it from rust and consequent decay by galvanizing or coating the same with zinc, and in the arrangement of the operating parts of the hydrant, as will hereinafter be more fully described.

Figure 1 represents a vertical longitudinal section of the hydrant, showing the parts of which it is composed, and the manner of their arrangement.

Figure 2 is a cross-section of fig. 1, through the line *x x*, showing the crank-shaft and its connection with the cam for operating the discharge-tube.

Figure 3 is a horizontal view from the line *y y*.

Similar letters of reference indicate corresponding parts.

A is the outer casing of the hydrant, which is a tube formed of wrought or cast metal, and protected from rust by galvanizing or coating it with zinc inside and out.

B is the base of the hydrant, to which is attached the supply-pipe of the hydrant, forming a chamber for the valves and seats.

This section is formed of two pieces or in two parts, secured together, as seen in the drawing, the parts being marked *c* and *d*.

E is the discharge-tube.

This tube extends into the part *c* of the section B.

F is a valve-seat, which is made to fit the enlarged part of *c*, as seen at *g*.

*h* is a valve on the lower end of the tube E.

I is a slotted adjusting-plate, with two inclined surfaces on the upper edge of its flange, as indicated in the drawing at J.

These inclined surfaces bear against the under sides of the lugs *k k* on the case A, whereby the plate is crowded down against F, forcing it tightly into its place, *g*, when the tube E is turned.

There are holes in the plate I, marked *l*.

*m* is a nut on the tube E, with pins *i*, which enter the holes *l* as the rod is pressed down, for making the proper adjustment or fastening the seat F in its place.

*n* are slots in the plate, which allow it (when properly turned) to be drawn up past the lugs *k k*, with the seat F and valve *h*, when it is necessary to repair or inspect the same.

For adjusting the seat F, and for removing the same with the tube and other parts, as mentioned, the cap of the hydrant *o*, the spout P, and the cam-shaft R are removed.

The upper end of the discharge-tube E is connected with the part marked S, in which the cam T works, and to which the spout P is attached.

The cam is revolved in a slot or recess in S, and it will be seen in the drawing that as the shaft R has its bearings in the casing A, the throw of the cam will raise or lower the tube to open or close the valves.

*u* is a ball-valve, which has its seat in the lower part of *c*, in the base of the hydrant, as seen.

The pressure of the water from the supply-pipe *v* keeps this valve closed in its seat, except when it is pressed down by the tube in operating the hydrant.

The valve-seat F being fixed and properly adjusted, the throw of the cam, when the shaft is turned, will

depress the tube and valves *h* and *u*, which will allow water to pass into the space *w*, around the valve *h*, and through the apertures *x* into the tube *E*.

A counter-movement of the cam closes the valves.

*y* is a waste-hole in the tube *E* to prevent freezing.

It will thus be seen that by constructing a hydrant in the manner described, provision is made for preserving the metal of which it is composed, and for removing the entire operating parts from the casing whenever desired, without the trouble and expense of digging up the hydrant or disturbing its connection with the supply-pipe.

The action is sure; there being no springs employed, the movements are all positive.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The construction of the tube *e*, valve *h*, removable seat *F*, and plate *I*, arranged to operate in connection with the valve *u*, substantially as shown and described.
2. The hollow valve-tube *E*, the nut *m*, the plate *I*, and the valve-seat *F*, constructed, arranged, and operating substantially as and for the purposes described.

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