J. Farman,

Hydrant.

No. 113,507. Patented Apr. 11. 1871.

Fig. 1.

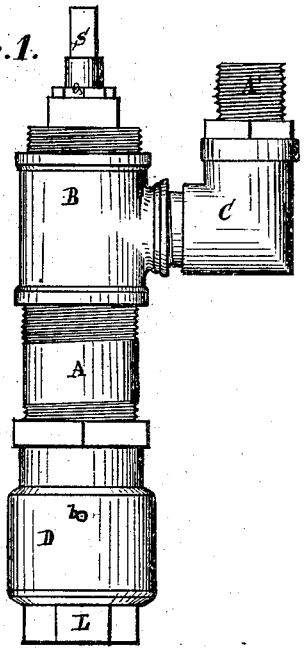


Fig. 2.

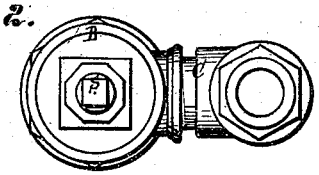


Fig. 4.

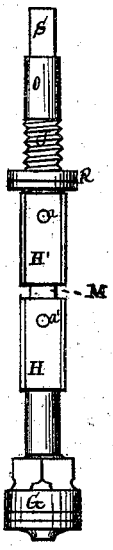


Fig. 3.

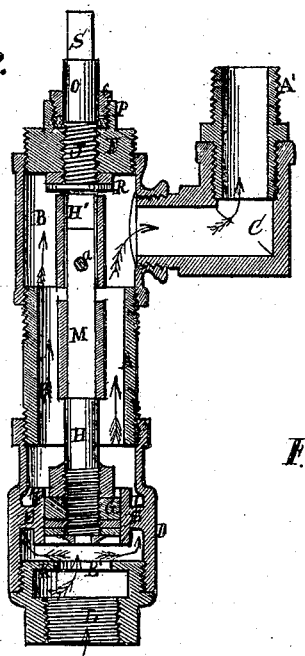
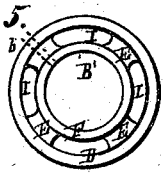


Fig. 5.



Inventor.
James Farman

Witnesses.
J. H. Burridge.
L. L. Humphrey.

United States Patent Office.

JAMES FARNAN, OF CLEVELAND, OHIO.

Letters Patent No. 113,507, dated April 11, 1871.

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, JAMES FARNAN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and improved Combined Hydrant and Street-Washer; and I do hereby declare that the following is a full, clear, and complete description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side view of the apparatus.

Figure 2 is an end view.

Figure 3 is a vertical transverse section.

Figures 4 and 5 are detached sections.

Like letters of reference refer to like parts in the several views.

The nature of this invention relates to that class of water-dischargers known as hydrants; and

The object of the same is to produce an efficient, simple, and safe means of drawing water from the water-mains for sprinkling the streets, lawns, and other needful purposes.

A full and complete description of the same is as follows:

In the drawing, fig. 1—

A represents a section of pipe, the length of which being more or less, as may be required, to connect the upper part of the apparatus above the ground to that part in the ground, and by which it is attached to the water-mains.

To the upper end of the connection-pipe A referred to is attached a chamber, B, from the side of which projects a pipe, C, from which the water is discharged.

To the lower end of the pipe A is attached a chamber, D, fig. 3.

Vertically in the center of said chamber is secured (by the lugs E) a cylinder, F, an end-view of which is shown in fig. 5, in which it will be seen that there is an annular space, I, between the cylinder and the inside of the chamber D, so that a direct communication exists between the parts of the chamber above and below the cylinder therein.

In said cylinder is fitted a valve, G, attached to the lower end of a stem, H, a detached view of said valve and stem being shown in fig. 4.

The lower part of the valve referred to is made of leather or of other suitable material, which, when the valve is screwed down by means of the thread J, at the upper end of the stem, is forced upon the seat K, fig. 3, screwed into the end of the chamber.

Said seat also answers as a coupling, whereby the apparatus is connected to the water-main, the valve-seat and coupling being a screw-nut, L, as shown.

The valve-stem referred to is constructed in two sections H H′, and which are connected to each other by means of a link, M, secured to each section by pins *a*.

As aforesaid, the upper end of the valve-stem is provided with a screw, J, of a coarse pitch, so that it will move the stem and valve quickly.

Said screw is fitted in a nut, N, fig. 3, screwed into the upper end of the chamber B.

The part of the stem immediately above the screw is plain, as shown at O, figs. 3 and 4, and which passes through a stuffing-box, P, fig. 3, forming a part of the nut N, and into which is fitted a jaw-nut, Q, whereby the packing in said box is compressed around the said stem.

By this means the upper end of the stem in its passage from the chamber to the outside is made water-tight. Also contributing to this end is a collar, R, fig. 4, immediately below the thread J, which, when the valve is screwed up from its seat, as shown in fig. 3, presses against the under side of the nut N, thereby preventing any escape of water from the chamber B around the stem or valve-rod to the outside.

Having described the construction of the apparatus I will now proceed to explain the operation of the same, which is as follows:

As above said, this device is connected to the water-main, buried in the ground, by means of the nut L.

On applying a key to the external end S of the valve-stem the valve, by means of the screw J, will be raised from its seat, as shown in fig. 3.

The water will now flow into the chamber D, thence through the pipe A into the chamber B; from thence through the pipe C to the outside or into a hose attached thereto by means of the screw A′. The course of the water is indicated by the arrows in fig. 3.

It will be obvious that the water flows into the chamber D through the annular space I surrounding the cylinder F, and that it can be shut off therefrom by screwing down the valve, which will close the opening B′ of the valve-seat, and again be let on by screwing it up, as shown in fig. 3.

As before stated, the pipe A may be of any length necessary to reach from the water-main to the surface of the ground. Hence, to adjust the valve-stem to the length of the pipe, it is made in two sections, and which are connected to each other by a link, M, referred to.

On closing the valve, thereby shutting off the water, more or less will remain above the valve, which is allowed to escape from the pipe through a small hole, *b*, fig. 1, bored in the side of the chamber D through one of the lugs E into the cylinder, as indicated by the dotted lines *b* in fig. 5. The position of said hole in its relation to the valve is such that, when the valve is shut down, it will be above the valve, so what water

may have remained in the pipe and chamber will flow out therefrom; and whereas, when the valve is open, as shown in fig. 3, the hole is covered by the valve, thereby preventing water from flowing out therefrom or air to enter. By this relative position of the hole for the escape of the waste water no water is allowed to remain in the pipe to freeze and obstruct the working of the valve when shut down, and there is no waste of water through the hole when the valve is open, as the hole is then covered by the lifted valve.

Claims.

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

1. The chamber D, in line with the pipe A and chamber B, cylinder F, and outlet *b*, in combination with the valve G and nut L, arranged and operating in the manner and for the purpose substantially as set forth.

2. The stuffing-box P, nut N, chamber B, screw J, collar R, and stem H, as arranged to operate in combination with the valve G and chamber D, in the manner substantially as described, and for the purpose specified.

JAMES FARNAN.

Witnesses:
W. H. BURRIDGE,
J. H. BURRIDGE.