

JACOB FRICKER, Jr.
Extension Fire-Hydrant.

No. 127,473.

Patented June 4, 1872.

Fig. 1

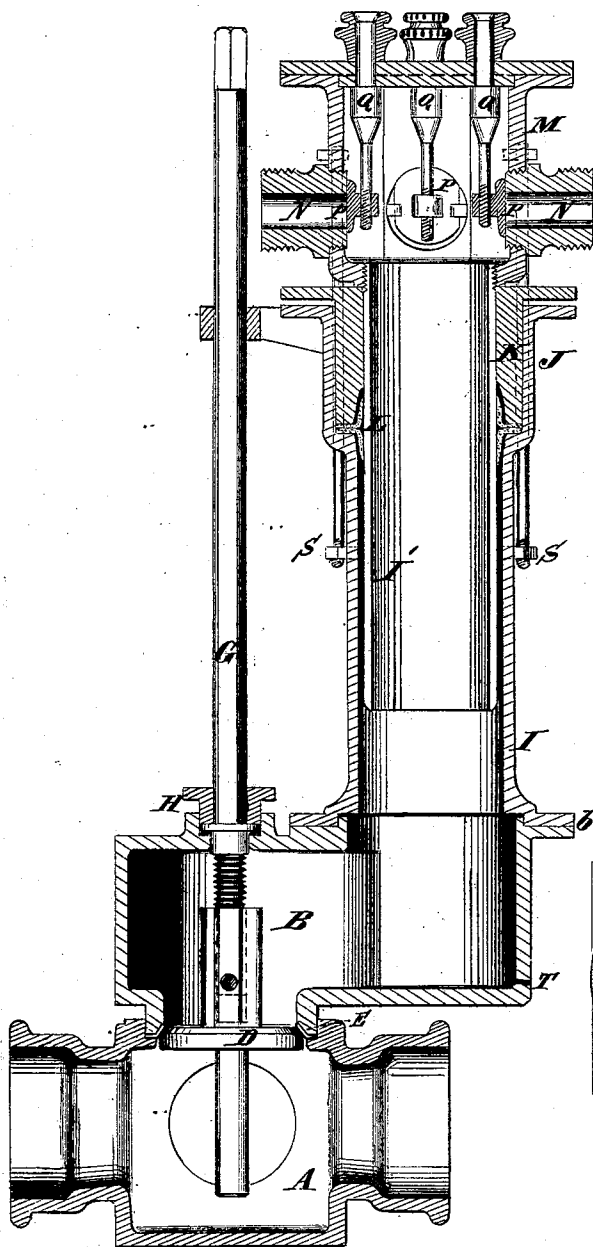


Fig. 2

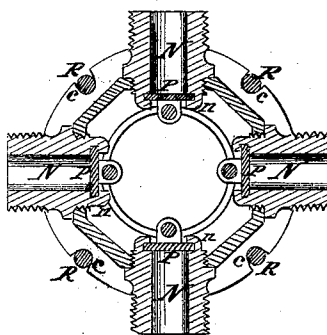
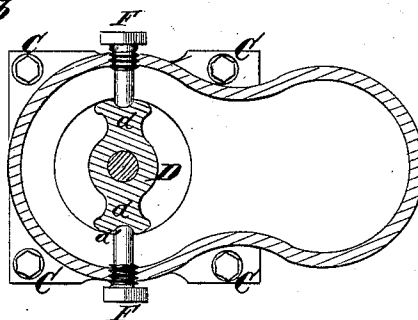


Fig. 3



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JACOB FRICKER, JR., OF CINCINNATI, OHIO.

IMPROVEMENT IN EXTENSION FIRE-HYDRANTS.

Specification forming part of Letters Patent No. 127,473, dated June 4, 1872.

I, JACOB FRICKER, Jr., of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Extension Fire-Hydrant, of which the following is a specification:

Nature and Objects of Invention.

My invention consists of a fire-hydrant having an extensible stock for the purpose of enabling the discharge-nozzles to project above the ground, when the hydrant is required for use, in the attachment and supply of fire-hose, and to fall below the ground when not required for use, in such a way that the pit in which it is situated may be covered by a cap on a level with the street. The object of my invention is the production of a hydrant adapted for direct attachment to the intersection of two or more water-mains of a street, which shall be complete in itself, and yet have no projection above the surface of the roadway when not in use.

Description of the Accompanying Drawing.

Figure 1 is a vertical section of my improved fire-hydrant connected to the intersection of four street mains. Figure 2 is a horizontal cross-section through the valves governing the discharge-nozzles. Fig. 3 is a horizontal cross-section through the valve-chamber governing the supply of water to the stock.

General Description.

A is the "cross," which serves as a connecting socket for all four pipes of the "intersection." B is the main valve-chamber, connected to the cross A by bolts C. The main valve D seats against the gasket E, and has grooved wings *d* formed upon it, which are prevented from rotating by set-screws F, whose points fit grooves *d'* of the wings *d*. The screw-threaded stem G of the valve rotates in the stuffing-box H in the manner shown, and is operated by a wrench or otherwise. The stock I is attached to the chamber B by flanges *b*, water-tight, and has a stuffing-box, J, at the upper end, whose gland K retains the double "cup-leathers" L in place, which I use preferably to pack the extension part I' of the stock. The latter is turned off smoothly on the outside to fit the bored gland K, and is kept water-tight by cup-leathers L. It is also secured to the head M of the hydrant, which is constructed with one or more discharge-nozzles, N, each fitted with an independent

valve, P, tapering in vertical section, retained between the tightening jaws *n*, and operated by the screw-spindle Q. The jaws serve to crowd the valve against its seat when closed. Rods R, attached to the head M, and sliding through notches *c* in the stuffing-box J, serve to prevent the head M from rotating, and also prevent by provision of nuts S on their ends, a too great extension of the stock, the nuts stopping when the stock is sufficiently extended against the flanges of the stuffing-box J.

The hydrant is so constructed and attached to the mains that when not extended at all, the top shall be below the surface of the street sufficiently to permit a cap to cover the pit the hydrant is located in, the face of the cap being flush with the roadway. When required for the attachment of hose the street cap is removed, the valve D opened, and the stock extended by the hydrostatic pressure of the water in such a way that the nozzles N are elevated above ground. As many lines of hose can then be attached as there are nozzles, and, owing to the stock receiving its supply from many directions, the hose is at all times fully supplied. When it is required to lower the extension part of the hydrant after use, the valve D is closed and a vent, T, will permit the extension I' to fall by its own gravity. The exterior surface of the part of the extension I' which slides in the stuffing-box may be plated with nickel, or otherwise protected from corrosion.

The hydrant may be used for the attachment of hose to be used directly upon a fire, or for the attachment of the "suction-hose" of a fire-engine, thereby dispensing with the use of cisterns, employed in many large cities.

Claim.

An extension fire-hydrant, constructed with a two-part stock, I I', one part moving within or about the other to enable the complete hydrant to occupy a position entirely below the surface of the ground when not in use, and to project sufficiently above the ground for attachment of hose or engines when required for use.

In testimony of which invention I hereunto set my hand.

JACOB FRICKER, JR.

Witnesses:

FRANK MILLWARD,
I. L. WARTMANN.