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JACOB FRICKER.
Hydrants.

No. 121,771.

Patented Dec. 12, 1871.

Fig. 1

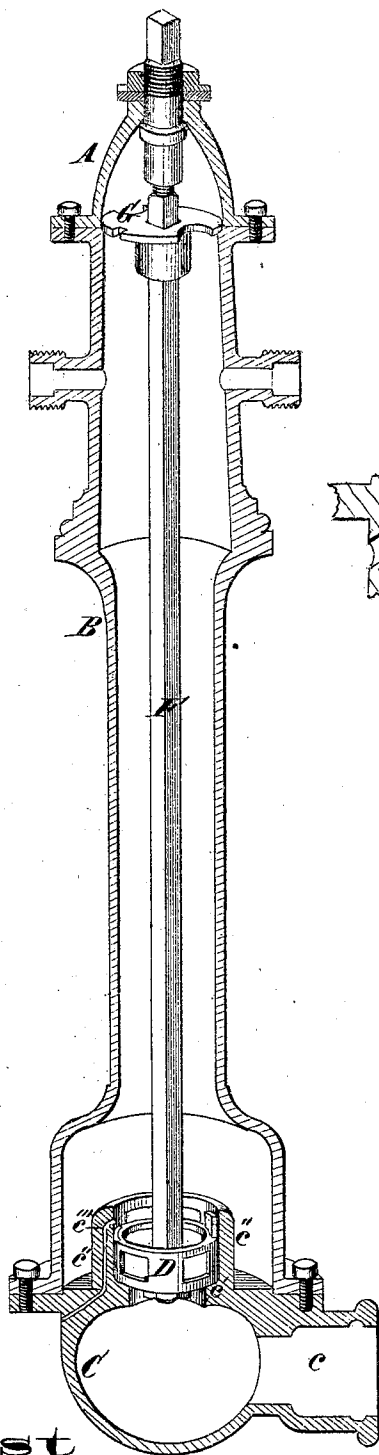


Fig. 2

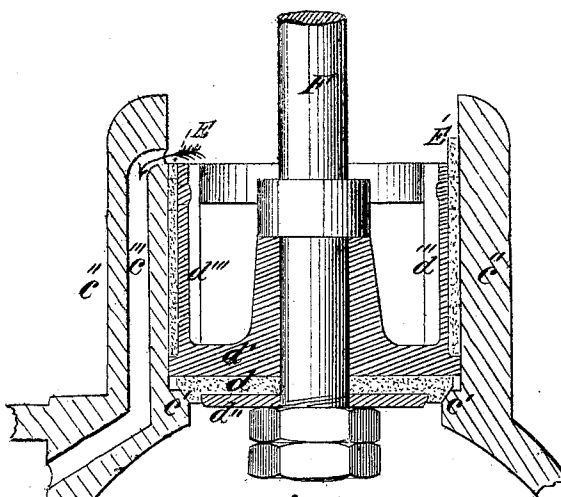


Fig. 3

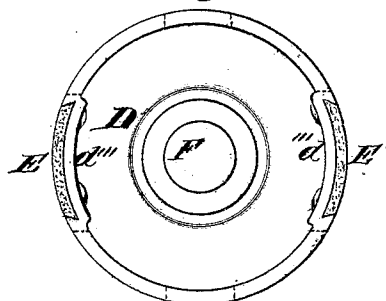
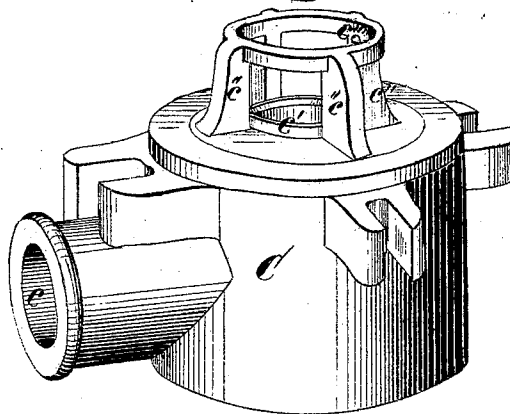


Fig. 4



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UNITED STATES PATENT OFFICE.

JACOB FRICKER, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND AMERICUS WARDEN.

IMPROVEMENT IN HYDRANTS.

Specification forming part of Letters Patent No. 121,771, dated December 12, 1871.

To all whom it may concern:

Be it known that I, JACOB FRICKER, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Fire-Hydrants, of which the following is a specification:

My invention relates to improvements upon the fire-hydrant for which Letters Patent No. 104,012 were granted to Jacob Fricker and Americus Warden June 7th, 1870; and consists: First, in a peculiar construction of the stock of the hydrant and valve of the same which will permit the withdrawal of the main valve and vent-valve entirely from the stock for repairs, leaving nothing but the stock and valve-seats in the ground. Second, in a certain construction of the main valve and vent, which provides for the stoppage of the vent whether the main valve be open or closed by the simple reversal in the position of the valve, the object of this part of the invention being to provide means for the stopping of the waste in summer weather.

Figure 1 is a vertical section of a hydrant embodying my invention. Fig. 2 is an enlarged section of the valve and seat. Fig. 3 is a plan of the valve. Fig. 4 is a perspective of the shoe of the stock.

A is the cap of the stock or top piece constructed for convenient removal with flange and bolt connection. B is the stock or body through which the water is discharged above the ground surface. C is the shoe or bottom piece, which embodies in one piece the inlet aperture *c*, the main valve-seat *c'*, the cage-guides *c''*, and waste-outlet *c'''*. The seat of the waste-outlet is formed by the bored surface of the guides *c''*. D is the valve. It is composed of rubber valve *d*, and metallic disks *d'* *d''*. The upper disk is formed with wings *d'''*, turned to fit the bored guides *c''*, and both these wings have dovetailed into them the leather valves E E'; one, E, to govern the waste vent in frosty weather, when it is necessary to empty the stock after the

stoppage of the flow, and the other, E', to govern the same waste aperture, after a reversal of the valve by turning half way round, when in summer time there is no need of waste. The valve E is made of the same length as the wings *d'''*, so that when the valve *d* is closed the waste-vent is open and the valve E is sufficiently longer to close the vent at all times whether the valve *d* be open or closed. The waste-vent *c'''* is formed as shown in one of the legs of the seat or guides *c''*, and in such a way as to have its inner end terminate in the bored surface of the guide for the purpose of enabling the bored guide to form the valve-seat for the waste-vent. By the provision of the plate G, which is constructed with a square hole through which the valve-stem F slides, and fastened to the stock by notch and pin device, as in the Letters Patent No. 104,012, before referred to, the valve D can be turned a half revolution on its seat, so as to make either of the valves E E' govern the waste-vent *c'''*.

By simply removing the cap A the rod and complete valves can be drawn out of the stock B for repairs, leaving nothing in the ground but the stock and shoe.

I claim—

1. In combination with the shoe C of the stock formed with main valve-seat *c'*, guides *c''*, and waste-outlet *c'''*, constructed substantially as described, the valve D, when formed with wings *d'''*, and fitted with vent-valve E, operating substantially as and for the purpose specified.

2. In combination with the elements of the preceding clause the prolonged vent-valve E, adapted in the manner described to close the vent *c'''*, whether the valve *d* be open or closed.

In testimony of which invention I hereunto set my hand.

JACOB FRICKER.

Witnesses:

FRANK MILLWARD,
HENRY MILLWARD.

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