J. FLOWER.

Street-Hydrant.

No. 162,370. Patented April 20, 1875.

Fig. 1.

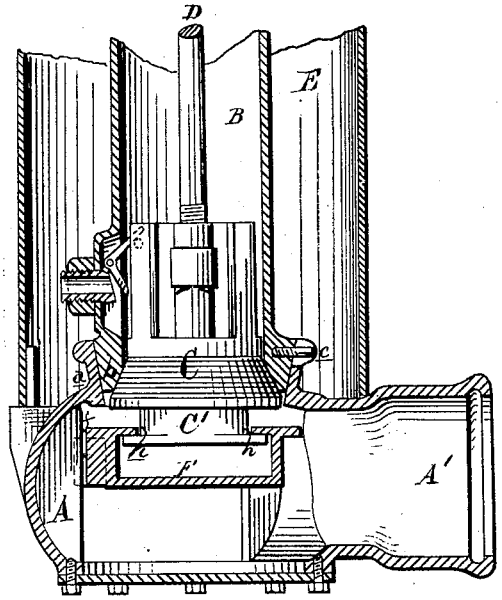


Fig. 2.

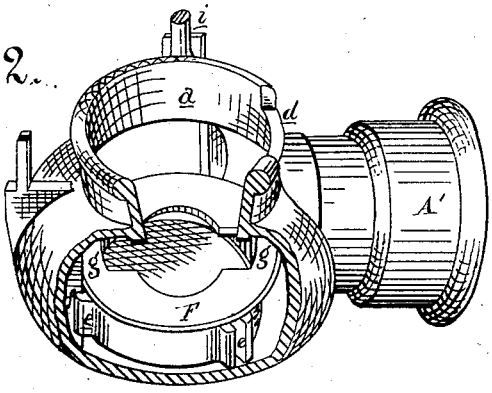


Fig. 3.

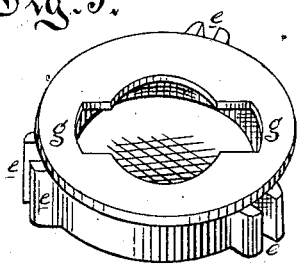
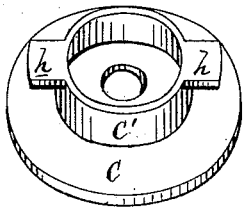


Fig. 4.



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JAMES FLOWER, OF DETROIT, MICHIGAN.

IMPROVEMENT IN STREET-HYDRANTS.

Specification forming part of Letters Patent No. **162,370**, dated April 20, 1875; application filed January 22, 1875.

To all whom it may concern:

Be it known that I, JAMES FLOWER, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Street-Hydrants, of which the following is a specification:

The nature of my invention relates to an improvement in hydrants that are connected with the street-mains for supplying water to fire-engines, and has for its object to supply a supplementary valve which will close the water-outlet when the hydrant and its valve proper are removed for repairs, thereby precluding the necessity of shutting off the water-supply of a given district in which the hydrant is located.

The invention consists in an auxiliary valve placed in a chamber under the seat of the hydrant-valve, which latter is provided with a hook or a pair of hook-lugs at the bottom to engage with the said auxiliary valve, such engagement being effected by a partial rotation of the hydrant, while the auxiliary valve is only allowed to move vertically by guides in the chamber, as more fully hereinafter set forth.

Figure 1 is a vertical section of the lower part of a hydrant, chamber, and socket, and of the auxiliary valve hooked to the main valve. Fig. 2 is a detached perspective view ot the socket-chamber, with a portion broken out to show the auxiliary valve lying on the bottom thereof. Fig. 3 is a perspective view of the auxiliary valve. Fig. 4 is a bottom perspective view of the hydrant-valve, showing the lugs which engage it with the auxiliary valve.

In the drawing, A represents a flattened spherical chamber, which forms a base for the hydrant B to rest upon, and has a lateral socket, A′, to receive the end of a water-main. The bottom of the chamber is a circular removable plate, secured to the bottom flange by tap-bolts. The neck *a*, at the top of the chamber, is made flaring to receive the tapered lower end *b* of the hydrant, which may be faced with soft metal, so as to readily be ground to a joint in the neck. The hydrant has a partial axial rotation in its socket, which is limited by a pin, *c*, projecting into a notch, *d*, in the top of the neck. The hydrant is held seated by two bolts from the base, rising through a flange at the surface of the ground. The lower part of one holding-down bolt is shown in Fig. 2, at *i*. C is the valve, which opens downwardly into the chamber by rotating its screw-threaded stem D. E is a casing or jacket to protect the hydrant from the effect of frost. F is an auxiliary valve having three pairs of guide-lugs, *e*, projecting from its body to embrace vertical guides *f* in the chamber, into which it is inserted by removing the bottom plate. Its upper surface is faced to seat against the flange at the bottom of the neck-opening of the chamber. The top of this valve has a circular opening with two slots, *g*, diametrically opposite each other. The main valve C has a pendent prolongation, C′, either cast in one piece with it or bolted thereto. This prolongation has two horizontally-projecting stud-plates, *h*.

When the hydrant and valve are removed from the casing the pressure of the water in the mains forces up the valve F to its seat, and thus prevents the outflow of water. Where the head is low, a spring may be placed under the valve to assist it to its seat.

When the hydrant is replaced, it is turned to one side as far as the pin *c* in the slot *d* will allow, which will bring the studs *h h* of the valve-prolongation C′ just right to drop through the slots *g* of the auxiliary valve, when the hydrant is turned a little to lock them under the top plate of the auxiliary valve. The hydrant may now be secured by the holding-down bolts. The two valves being locked together, it follows that when the main valve is lowered to open the hydrant the auxiliary valve will be moved down its guides.

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

The combination, with the chamber A, of the valve C having the part C′ which is provided with studs *h* for locking it with the valve F, substantially as described.

JAMES FLOWER.

Witnesses:

H. S. SPRAGUE,

WM. P. SPALDING.