J. FLOWER.
Fire Hydrants.

No. 196,000. Patented Oct. 9, 1877.

Fig. 3.

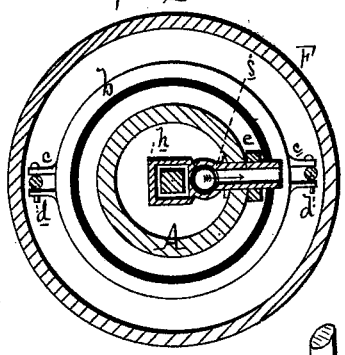


Fig. 4.

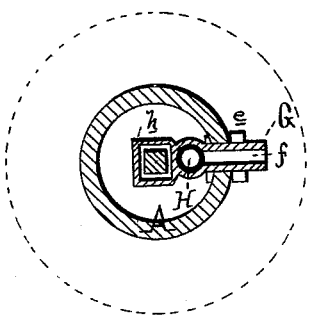


Fig. 1.

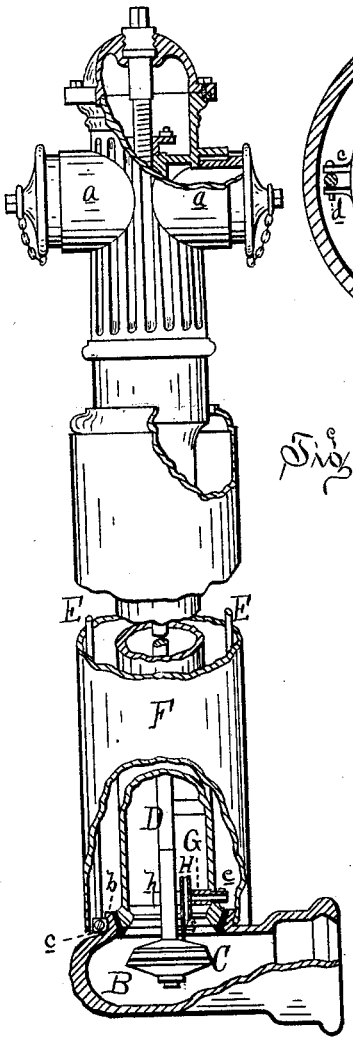
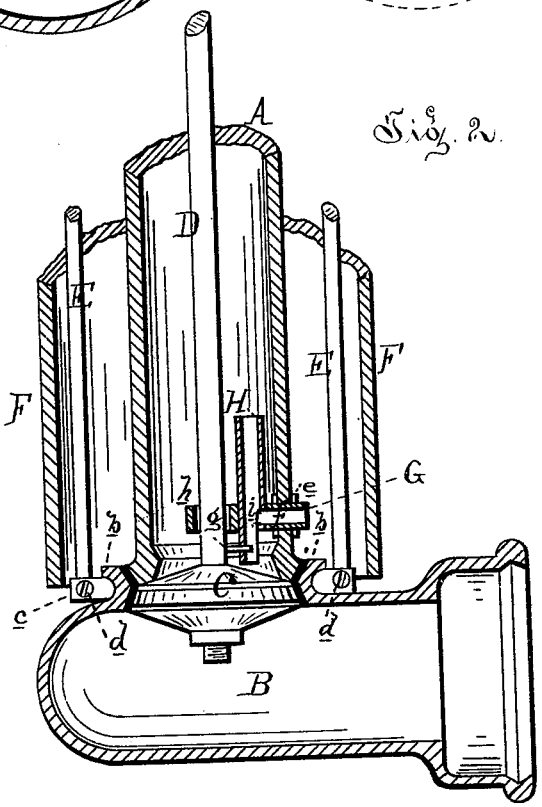


Fig. 2.



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JAMES FLOWER, OF DETROIT, MICHIGAN.

IMPROVEMENT IN FIRE-HYDRANTS.

Specification forming part of Letters Patent No. **196,000**, dated October 9, 1877; application filed July 30, 1877.

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 Fire-Hydrants, of which the following is a specification:

The first part of my invention relates to an improvement in fire-hydrants of that class wherein the stand-pipe is inclosed in a frost-case, and the lower end is fitted into a self-packing socket in a separate valve-case; and the object I have in view is to so construct the hydrant that in setting it the workman can turn the stand-pipe so as to face its nozzle or nozzles in any required direction.

To this end it consists in casting the valve-case with a flange on its top socket, below which a divided clamp-collar may turn on the neck. The lower ends of the holding-down bolts have an eye formed in each, through which the collar-bolt passes, the said eyebolts being interposed between the gears of the collar.

The second part of my invention relates to an improved waste for a fire-hydrant, having for its object to do away entirely with the waste-valve; and it consists in a slotted tube moving with the valve-stem through what may be termed a "cock and guide," tapped through the lower part of the stand-pipe. The said waste-tube is perforated at such a point that when the main valve is closed this perforation will be coincident with the bore of the cock, and thus waste the water in the stand-pipe.

Figure 1 is a sectional perspective view of my hydrant. Fig. 2 is an enlarged vertical section of the lower end of the hydrant, showing the main valve closed and the waste open. Fig. 3 is a cross-section of the same at *x x*. Fig. 4 is a similar section on a different plane, where the main valve is open and the waste closed.

In the drawing, A represents the stand-pipe, whose foot is received in a socket on the top of the valve-case B, connected by a branch with the street-main, and in which a downwardly-opening valve, C, is actuated by the stem D, passing through the top of the stand-pipe, which is cast with one or more screw-nozzles, *a a*. E E are the holding-down rods, which secure the stand-pipe to the valve-chamber, and which are inclosed in the frost-case F.

The top socket of the valve-case is cast with a flange, *b*, below which a divided clamp-collar, *c*, encircles the neck, the two parts being held together by the ear-bolts *d d*, one at each side. The ears do not come together, however, a space being left for the reception between each pair of the lower end of a holding-down rod, E, in which is an eye, through which the bolt *d* passes.

In setting the hydrant, the stand-pipe can be turned so as to face the nozzles in the required direction, after which the clamp-collar can be adjusted so as to take the lower ends of the rods between the ears, as described.

G is a cock-body, tapped through the foot of the stand-pipe from the inside, with a lock-nut, *e*, on the outside to keep it in place. *f* is its bore in the horizontal axis, intersected by a cylindrical bore in a vertical plane, through which plays a brass tube, H, whose foot is engaged with the valve-stem by a stud, *g*.

The lower part of the valve-stem is square, and is embraced by an extension, *h*, of the cock, through which it plays, the said extension serving as a guide, or to steady the body of the cock in position with relation to the tube H. The latter has at one point a perforation, *i*, which, when the valve C is closed, is coincident with the bore *f* of the cock, so as to waste the water in the stand-pipe. When the stem is moved down to open the valve, the tube is carried down also through the cock, whose bore *f* it closes, and then prevents the waste through the latter.

To cause the tube to fit snugly in the vertical bore, it is longitudinally slotted nearly to the bottom on the side farthest away from the bore *f*, so that it will naturally spring open enough to fill the vertical bore and prevent leakage when the hydrant-valve is open.

What I claim as my invention is—

1. The valve-case B of a hydrant, cast with the flange *b*, and the combination therewith of the clamp-collar *c*, adapted to receive the ends of the holding-down bolts E, substantially as and for the purpose set forth.

2. The cock-body G, tapped through the stand-pipe of a fire-hydrant, and the perforated tube H, moved in it by the hydrant-valve stem, substantially as and for the purpose set forth.

JAMES FLOWER.

Witnesses:
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H. L. AULLS.