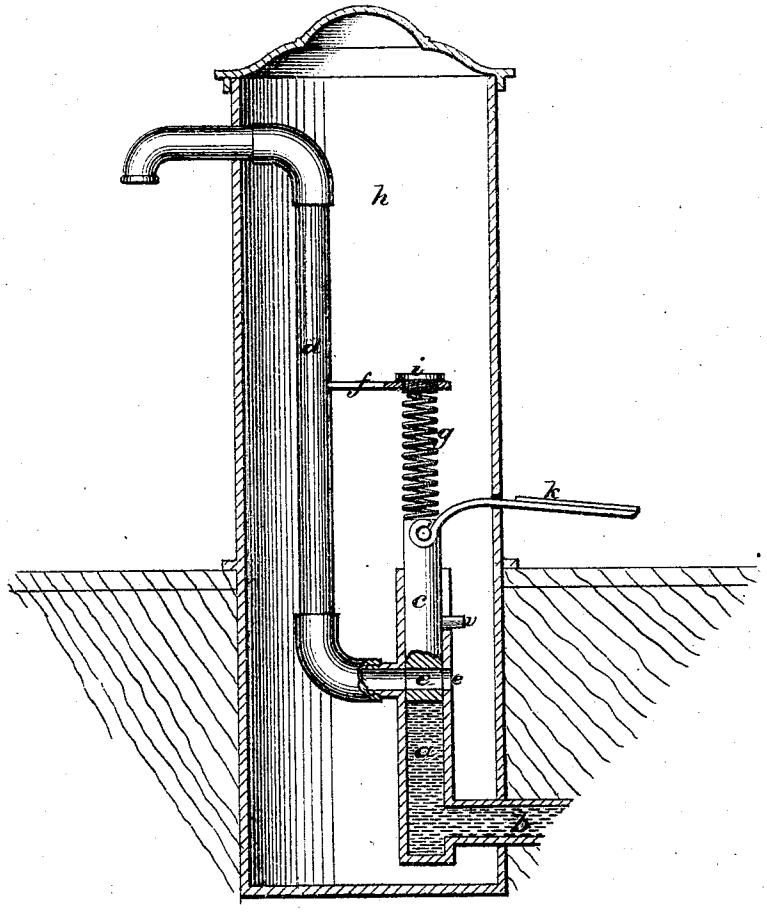
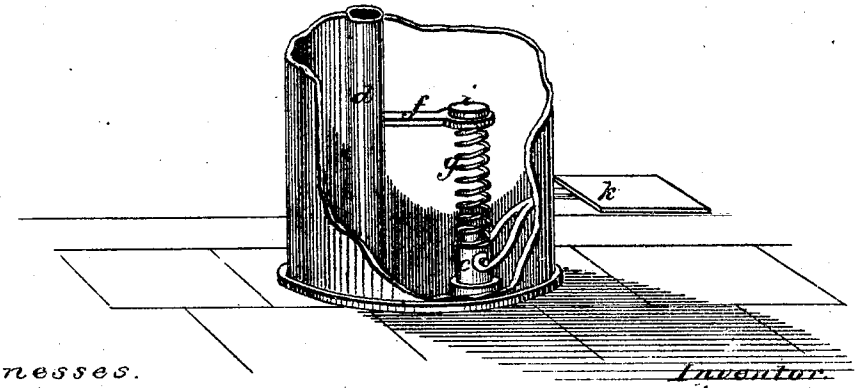
(167.)

JAMES SMALL.

Improvement in Hydrants.

No. 121,429. Patented Nov. 28, 1871.





Witnesses.
C. F. Brown
N. K. Ellsworth,

Inventor.
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By Hill Ellsworth
his Attys.

UNITED STATES PATENT OFFICE.

JAMES SMALL, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN HYDRANTS.

Specification forming part of Letters Patent No. 121,429, dated November 28, 1871.

To all whom it may concern:

Be it known that I, JAMES SMALL, of the city and county of Washington, District of Columbia, have invented an Improved Hydrant; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a vertical section, and Fig. 2 a portion of the hydrant, shown in perspective.

Similar letters of reference in the accompanying drawing denote the same parts.

The object of this invention is to simplify and improve the construction of hydrants, so that they can be manufactured more economically and operated more conveniently than heretofore; and, to this end, the invention consists in the construction hereinafter described.

In the drawing, *a* represents an upright pipe, connected with the main by a branch, *b*, and provided with a discharge-spout, *d*, the whole being cast in one or more pieces, as may be preferred. *c* is a slide-valve, working in the pipe *a* in such a manner that, when raised, it allows the water to flow freely from the pipe *b* to the discharge *d;* but when depressed it stops such flow and allows the water remaining in the discharge-pipe to run out through an aperture, *e*, so as to prevent the freezing of the pipes. *f* is a bracket cast upon or attached to the pipe *d*, and provided with an enlarged outer end, which stands directly over the tube *a*. *i* is a screw-cap or plug inserted in an opening in said bracket in line with the pipe *a*. *g* is a spring adjusted between the cap *i* and the valve *c*, so as to hold the latter down, the tension of the spring being sufficient to overcome the upward pressure of the water in the pipes. *h* is the casing of the hydrant; and *k* is a lever or treadle by which valve can be operated from outside of the box *h*. In the construction of this hydrant that part of the pipe *a* in which the valve operates is ground to a perfect joint with the valve, the tool being introduced through the opening in the bracket *f*, which is provided for that purpose. The plug or cap *i* may be elongated more than is shown in the drawing, and employed for the purpose of regulating the tension of the spring. The valve is prevented from turning by means of a lug, *v*, cast upon one side of it and working in a narrow vertical slot in the upper part of the pipe *a*, as represented. The pipe may be supported at its lower end or sides in any suitable manner. The dimensions and arrangements of the several parts may vary considerably from those shown in the drawing. In practical construction the space between the pipes *b d*, for example, may be diminished, and the upright stem of the discharge-pipe will be brought nearer to the line of pipe *a* than is shown, so that the bracket *f* will be shorter and stronger. The bracket may be any suitable form, and may be supported by a brace, if preferred, The pedal *k* may be placed below the level of the ground. The case or box *h* may be sunk in the ground to any desirable extent, and may be supported upon a foundation prepared in any suitable manner to prevent it from settling or getting out of plumb.

Having thus described my invention, what I is—

The bracket *f* and screw-cap *i*, in combination with the spring *g*, the valve *c*, and the pipes *a b d*, substantially as set forth, for the purpose specified.

JAMES SMALL.

Witnesses:

NATHAN K. ELLSWORTH,

C. F. BROWN.

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