Sheet 1-2 Sheets.

J. Regester,

Hydrant,

No. 55,712. Patented June 19, 1866.

Fig. 1.

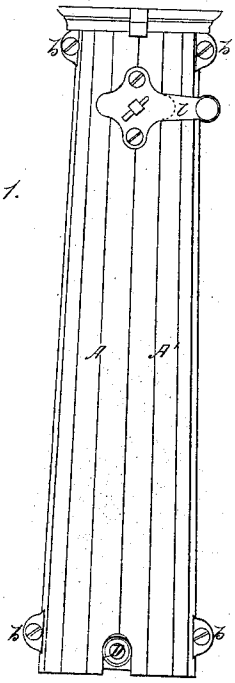


Fig. 2.

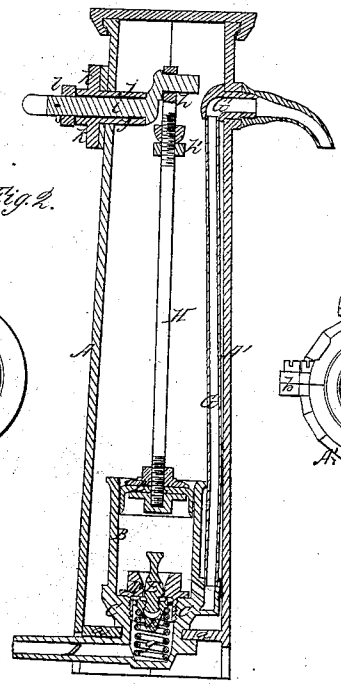


Fig. 5.

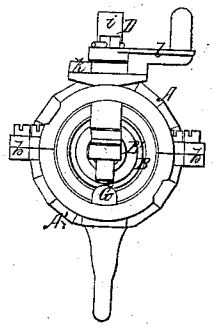


Fig. 6.

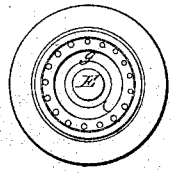


Fig. 3.

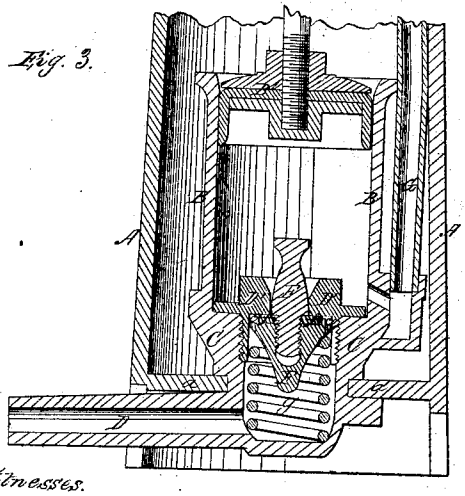
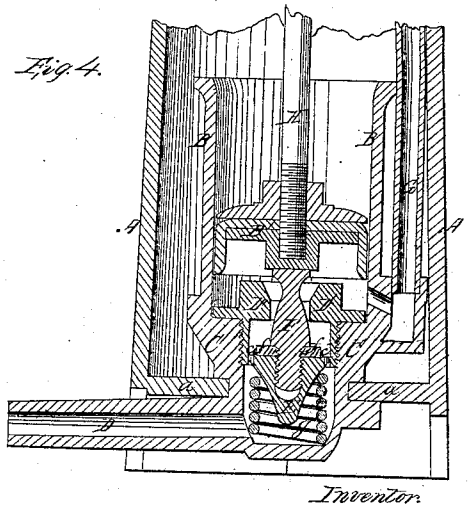


Fig. 4.



Witnesses.

R. Campbell

Chas. Schafer

Inventor.

J. Regester

by Atty's

Wm. Thomson & Co.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

Sheet 2-2 Sheets.

J. Regester,

Hydrant,

No. 55,712. Patented June 19, 1866.

Fig. 5.

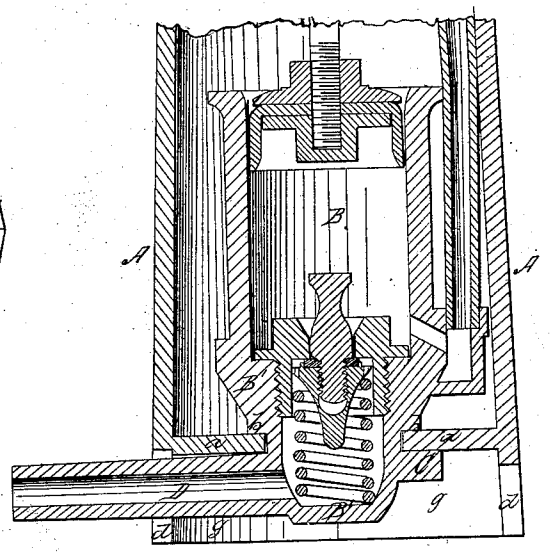


Fig. 6.

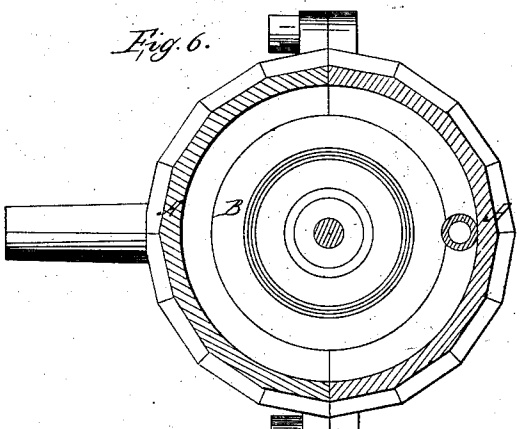
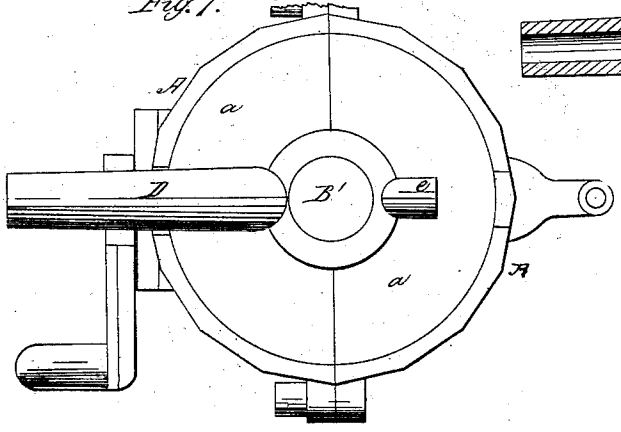


Fig. 7.



Witnesses.

R. Campbell

Edw Schaefer

Inventor.

J. Regester
by Atty's
Munn Brinck & Semmes

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSHUA REGESTER, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN HYDRANTS.

Specification forming part of Letters Patent No. **55,712**, dated June 19, 1866.

To all whom it may concern:

Be it known that I, JOSHUA REGESTER, of the city and county of Baltimore, in the State of Maryland, have invented certain novel and useful Improvements in Hydrants; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an elevation of the hydrant. Fig. 2 is a vertical central section of the hydrant. Fig. 3 is an enlarged sectional view of the bottom portion of the hydrant, showing the valve closed. Fig. 4 is a similar view, showing the valve open. Fig. 5 is a top view of the hydrant. Fig. 6 is a bottom view of the cone which supports the valves.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain improvements on hydrants which have arranged within an outer shell or case a cylinder with a plunger working in it for the purpose of effecting the opening and closing of the valve which lets on the water.

The object of my invention is mainly to prevent the bursting of pipes leading to and from the hydrant, which frequently occurs in consequence of a too sudden movement of the valve in letting on and shutting off water, which causes a recoil and shock of the water in the main and service pipes.

Another object of my invention is to prevent the passage of sand, gravel, or other substances to the valve which would be likely to injure or prevent this valve from closing, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

The case which incloses the devices used for letting on and shutting off water may be constructed in any well-known manner; but for various reasons I prefer to make this case of two sections, A A′, each one of which has a half base-support, *a*, and a suitable number of perforated lugs, *b*, formed on it, so that, when the two sections are secured together by means of bolts passing through said lugs, the base-support *a* will sustain and hold in place the cylinder B, as shown in the drawings, Figs. 3 and 4. The cover of the case may be secured in place by clamp-fastenings or by means of a hinge and latch.

The cylinder B is open at its top for receiving a plunger, B′, and it is constructed with an extended base, C, having a circular chamber formed in it and a tubular connection, D, projecting from it. This chambered cylinder-base receives within it a hollow screw portion, which projects from a perforated cap, D′, as shown in Figs. 2, 3, and 4. Below this cap D′ is an inverted cone, E, which has a valve or plug, F, screwed into it so as to pass through the hole which is made through the center of the cap. This cone has a flange, *c*, projecting from its upper end and encircling the bottom of the plug F, and in the annular space formed by said flange a ring of india-rubber is compressed and held in place so as to form a valve for closing the opening through the cap D′ when the plunger B′ is raised, as shown in Figs. 2 and 3. A number of perforations are made through the outer edge of the cone E, which admit of the free passage of water, but prevent the passage through them of gravels or other substances which would prevent the valve *f* from closing snugly. This cone E is thus made to serve as a support and guide for the valve *f* and plug F, and also as a strainer for the hydrant. It is held up to its seat by means of a spring, *g*, together with the force of water acting below it when the plunger B′ is raised.

The plug or valve F is nearly or quite cylindrical at and near its base, which cylinder terminates in a tapering neck and an enlarged head, as clearly shown in Figs. 2, 3, and 4.

The hole through the cap D′ is cylindrical and flaring, the cylindrical portion being slightly larger in diameter than the corresponding portion of the plug F, so that when the latter is slightly depressed by the descent of the plunger B upon it, and the valve *f* is thus caused to leave its seat, water from the chamber below will gently flow through the opening through the cap D′. As the cone and plug are further depressed the flow of water will increase until the full opening is made, as shown in Fig. 4, when there will be a maximum flow. As the plunger rises again the flow of water through the hole through the cap D′ will be gradually diminished until it is finally cut off entirely by the closing of the

valve *f*. By this simple device there will not be any undue strain upon the service pipes or mains, as the flow of water cannot be suddenly let on or cut off in operating the hydrant.

An opening is made through the cylinder B, near its base, for receiving the discharge-pipe G, which leads up to an elbow, G′, that passes loosely through the case A′, and has a nozzle screwed on it, as shown in Fig. 2. The discharge-pipe G is made of lead, so that when desired the cylinder B can be turned one-half or one-quarter round. Holes should be made at four points equidistant from each other through the bottom of the case A A′, for receiving the pipe-connection D, when it is desired to make provision for adjusting this pipe.

The plunger-rod H is screwed into a loop, *h*, and secured by a jam-nut, *h′*, and this loop *h* receives a crank-pin which projects from a short crank-rod, *i*, as shown in Fig. 2. The rod *i* passes through a tubular bearing, *j*, which is formed on a flanged plate, *k*, and receives on its outer end a handle, *l*. The tubular bearing, with its crank-rod, is passed through a hole which is made through the case-section A, and the plate *k* is secured to this section by screws, so as to support the crank-rod firmly in position. The plate *k* has two lugs, *k′ k′*, projecting from it, which arrest the handle *l* when the crank is at its highest or lowest point. The handle *l* has a lateral lug, k^2, formed on it, and it is by means of this lug that the arrest of the handle, when the crank is at either its highest or lowest position, is insured. It is important, in connection with this crank arrangement, to employ stops which will indicate when the hydrant is fully open and fully closed.

The crank-rod, plunger, and screw-cap can all be removed or replaced at pleasure when it is desired to get at the valves for repairs. This object is chiefly attained by having the crank-rod *i* applied to a tubular bearing, which is constructed with a cap or flange on its outer end, as above described. By this device the crank-rod and plunger can be readily removed. Then by means of a wrench and hook the cap D′ can be unscrewed and lifted out of the hydrant-case.

I am aware of John Culver's patent of April 22, 1856, and my invention is an improvement on said Culver's hydrant.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The construction of the nut D′ with an external flange and with an internal flaring passage, in combination with the tapering plug-valve F, packing *f*, internal cylinder, B, and plunger B′, all substantially in the manner and for the purpose described.

2. Fitting the plug-valve F in a recess formed in a conical seat, E, which is perforated near its circumference, all substantially in the manner and for the purpose herein described.

3. The combination of the conical seat E, plug-valve F, packing *f f*, perforations in the seat E, and the nut D′, all constructed and arranged substantially as described.

4. Securing the packing *f* upon the seat E by means of a flange, *c*, and plug-valve F, substantially as described.

5. Applying the crank-rod *i* to a tubular bearing, *j*, having a flanged head, *k*, with stops *k′ k′* on its outer end, in combination with a crank arm or handle, *l*, which has a stop, k^2, formed on it, all used in connection with the foregoing features of invention, substantially as and for the purpose herein described.

JOSHUA REGESTER.

Witnesses:
ROBERT GARDINER,
S. W. REGESTER.