F. SHRIVER.

HYDRANT-VALVE.

No. 193,188. Patented July 17, 1877.

Fig. 1.

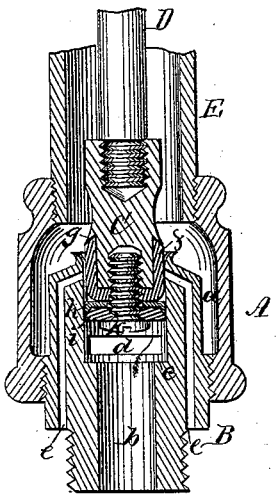
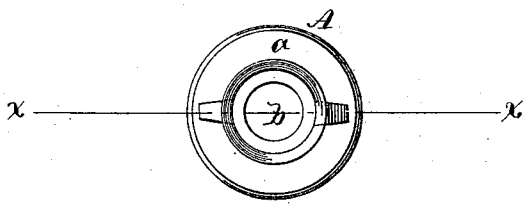


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK SHRIVER, OF GRAND RAPIDS, MICHIGAN.

IMPROVEMENT IN HYDRANT-VALVES.

Specification forming part of Letters Patent No. **193,188**, dated July 17, 1877; application filed June 25, 1877.

To all whom it may concern:

Be it known that I, FREDERICK SHRIVER, of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and Improved Hydrant-Valve, of which the following is a specification:

Figure 1 is a longitudinal section of my improved valve taken on line *x x* in Fig. 2. Fig. 2 is an inverted plan view.

Similar letters of reference indicate corresponding parts.

The object of my invention is to construct a hydrant-valve that cannot freeze or become obstructed so as to be inoperative.

In the drawing, A is a metallic casing, into the lower portion of which the part B is screwed, which projects upward into the said casing, leaving around it the annular chamber *a*. The part B also projects below the casing A, and is bored longitudinally to form the water-passage *b* and to receive the valve C. The bore of the part B is of two diameters, the upper portion that contains the valve C being largest. A valve-seat, *c*, is formed in the part B, against which the valve C closes. Above the valve-seat *c* openings *d* are made through the sides of the part B, and passages *e* are formed in projections on opposite sides of the part B, which extend downward below the casing A, to permit the escape of waste water. The valve C consists of a follower, which is reduced in diameter to receive the packing *f*, which caps over its end and extends upward to the shoulder *g*, which is undercut to retain the edges of the packing. Below the packing *f* a centrally-perforated disk, *h*, is placed, which is provided with a lip around its outer edge that projects downward. Below the disk *h* there is a leather or rubber packing-disk, *i*, and a screw, *k*, passes through the disks *h i* and packing *f* into the follower, holding all of the parts together. Above the shoulder *g* the follower is reduced in diameter to permit the waste to escape through the passages *e* when the valve rests on its seat. A rod, D, is screwed into the valve C for operating it. The part B is connected with a supply-pipe, and the casing A with the upper portion of the hydrant by the pipe E. When the valve C is raised it closes the waste-passages *e* and allows the water to pass from the passage *b* through the openings to the chamber *a*, and thence through the pipe E. When the valve is closed the water remaining in the pipe E escapes through the waste-passages *e*, and should one of the passages become clogged the other is sufficient for the escape of the waste water.

The valve-casing, as shown, may be made partly from pipe-fittings, or it may be cast entire from steam metal or other suitable material.

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

1. The part B, containing the valve-seat *c*, and having one or more lateral openings, *d*, and passages *e*, the casing A, having the annular space *a*, and the valve C, in combination, substantially as shown and described.

2. The valve C, having the under-cut shoulder *g*, packing *f*, metallic disk *h*, and packing-disk *i*, substantially as shown and described.

FREDERICK SHRIVER.

Witnesses:

F. E. PULTE,

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