E. R. JONES.

HYDRANTS OR WATER-PLUG.

No. 181,076. Patented Aug. 15, 1876.

Fig. 1.

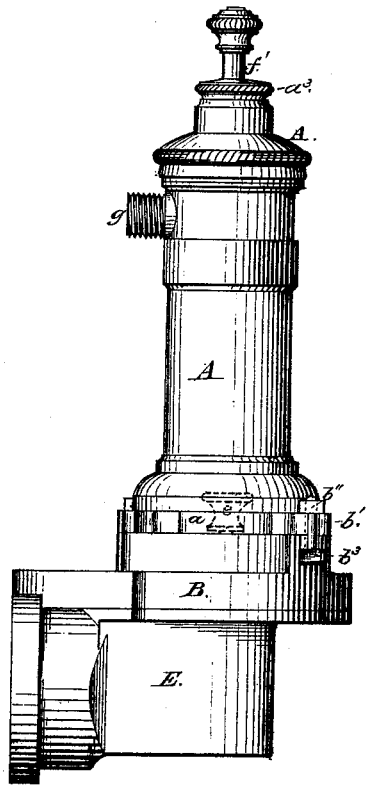


Fig. 2.

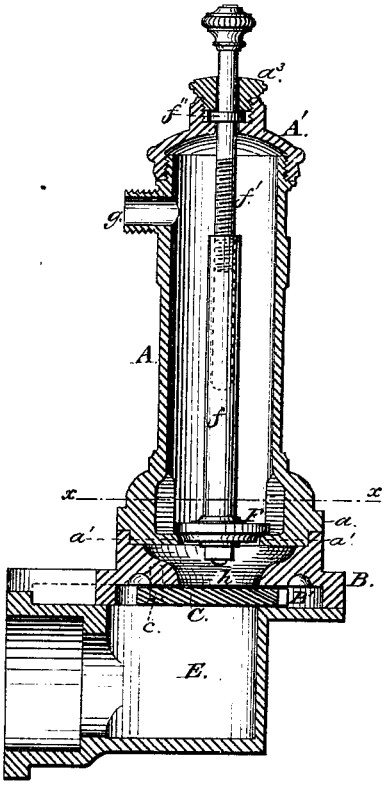


Fig. 3.

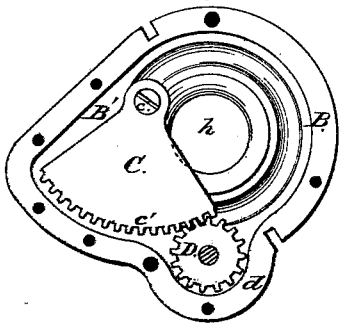


Fig. 4.

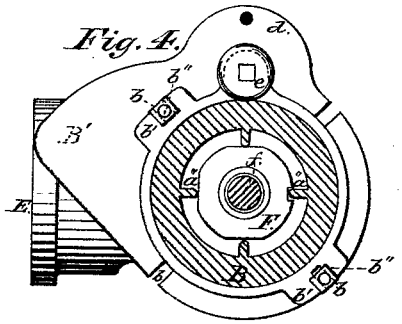
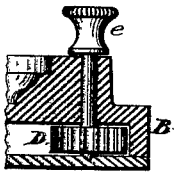


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

EZEKIEL R. JONES, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN HYDRANTS OR WATER-PLUGS.

Specification forming part of Letters Patent No. **181,076**, dated August 15, 1876; application filed June 29, 1876.

To all whom it may concern:

Be it known that I, EZEKIEL R. JONES, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Hydrants or Water-Plugs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to produce a hydrant or water-plug that can be readily detached from its base for repairing or replacing any of its parts without interfering with the water-main.

The invention consists in a segmental radially-sliding valve, arranged in a chamber between the bottom of the hydrant or water-plug and the connection to the water-main, and said valve is provided on its periphery with teeth, into which a pinion meshes, and operates the valve. By arranging the valve to slide horizontally into the recessed base the strain or pressure of the water is greatly diminished, and the valve is therefore very easily operated.

I will now more definitely describe my invention, referring to the accompanying drawing, in which Figure 1 is a side elevation of the hydrant. Fig. 2 is a vertical section of the same. Fig. 3 is a detail view of the lower side of the valve and pinion. Fig. 4 is a cross-section on line *x x*. Fig. 5 is a detail view of the pinion and shaft.

In the drawing, A represents the stock of a hydrant or water-plug, having a flange, *a*, at its lower end, with slots *b* in lugs *b'* to secure it, by bolts *b''* fitting into them, to the base B. In the bottom of the stock (which is enlarged slightly) is arranged a valve-seat, *a'*, upon which the valve F is seated. This valve is provided with a hollow stem, *f*, into which the screw-stem *f'* fits, and by which the valve F is opened or closed. A cap, A', is screwed or otherwise secured to the stock A, and has a screw-gland, a^3, which holds the stem *f'* by means of the collar *f''*. Suitable guides or ribs *a''* are arranged in the lower part of the stock, to guide the valve F to its seat, and allow sufficient space for the passage of the water when the valve is opened. The base B is recessed out on its lower side, and is extended toward one side, B', to receive the segmental valve C when it is opened. This valve C is pivoted on the under side of the base, as shown at *c*, and provided at its periphery with teeth *c'*. In another side extension, *d*, is centered a pinion, D, which meshes into the teeth *c'* of the valve C, and is operated by a thumb-screw, *e*, crank, or in any other suitable manner. The base B is secured to the elbow or connection E, by which the attachment is made to the water-main, or supply for the water, by the bolts *b''*, the heads of which fit into the T-head recesses b^3, for the reception of the bolts *b''*, by which the stock and base are firmly secured together. The stock is provided with a nozzle, *g*, which may be threaded to receive the coupling of hose, &c.; or it may be of any other construction. The different parts of this hydrant or water-plug may be made of any suitable material, and finished in any manner desired.

The operation is as follows: When at any time any of the parts of the hydrant or water-plug get out of order the valve C is moved by the pinion D from out of the recess B', in which it usually remains when everything is in order, to close the opening *h*, and thereby cut off the water-supply from the main. The bolts *b''* are then loosened and taken out, and the stock A can be removed with the valve, and any necessary repairs made, or any worn-out parts substituted by new ones.

The great advantages of my hydrant are, that the pressure of the water against the valve is greatly reduced by its sliding in a horizontal direction into the recessed base; the parts are all very simple, and easily accessible; the water-supply can be shut off very easily and quickly without disturbing any other hydrant, as each is entirely independent and separate from the main; no wrenches or other tools are necessary when the water is to be shut off; the stock, with the valve, can be removed to any place for repairs or replacing any worn-out parts; and it can be furnished at a very reasonable cost.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. A segmental horizontally-sliding valve, C, provided with teeth, and operated by a pinion, in combination with a hydrant or water-plug, substantially as set forth.

2. The combination of a segmental horizontally-sliding valve, C, pinion D, and base B with a hydrant or water-plug, and a connection, E, substantially as shown and specified.

3. The recessed base B, provided with recesses b^3, in combination with a horizontally-sliding valve, C, connection E, and stock A, having lugs *a*, substantially as shown, and for the purpose set forth.

4. In combination with a valve, C, provided with teeth c', and operated by pinion D, the base B, stock A, and valve F, arranged substantially as shown and described.

5. The hydrant or water-plug herein described, consisting of the stock A, base B, valve C, pinion D, valve F, and water-main connection E, all constructed and arranged substantially as specified.

In testimony that I claim the foregoing as my own, I hereby affix my signature in presence of two witnesses.

EZEKIEL RICE JONES.

Witnesses:
NEIL DEVER,
IRVING JONES.