

(No Model.)

R. A. BROOKS.
HYDRANT.

No. 494,318.

Patented Mar. 28, 1893.

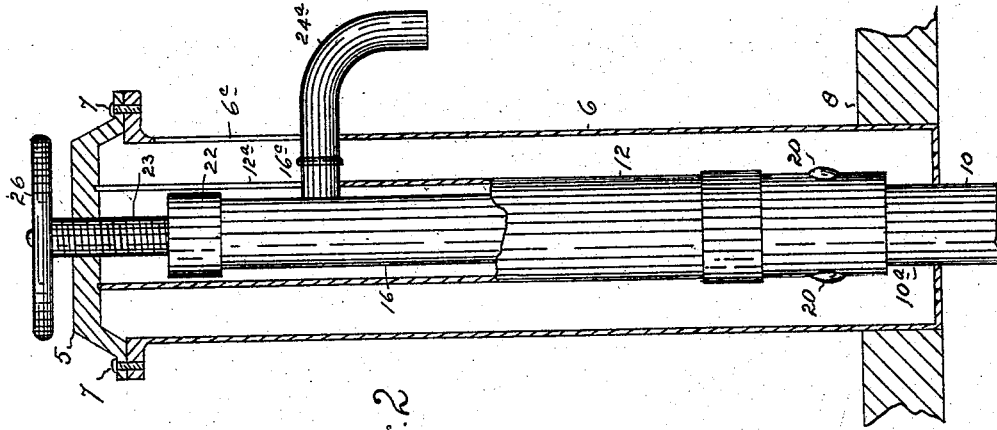


Fig. 2

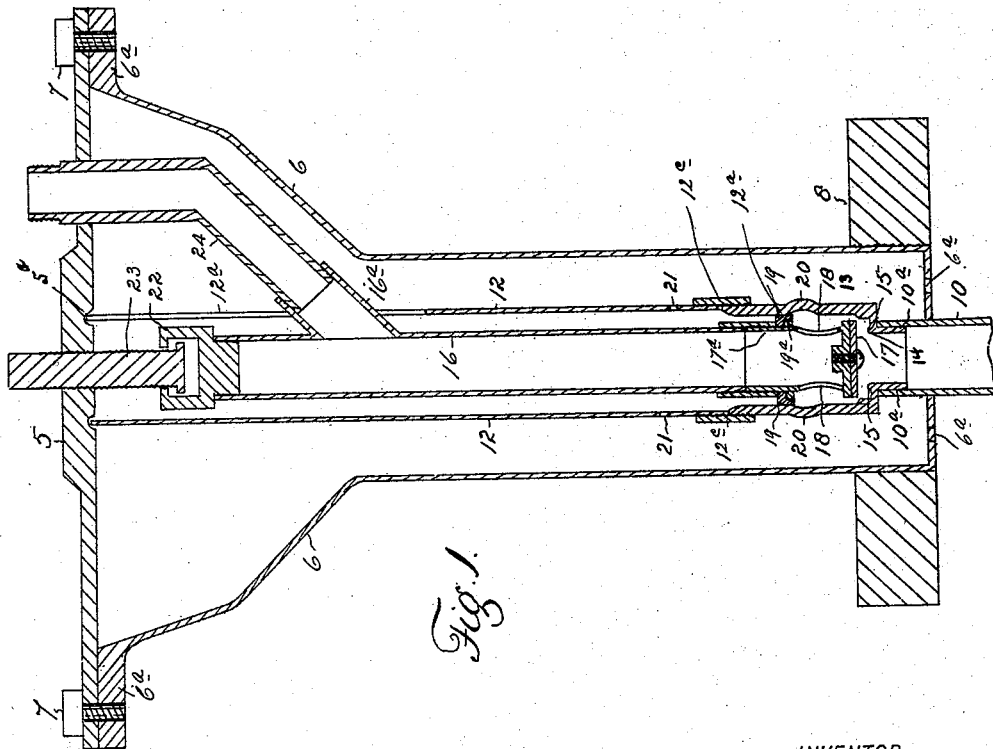


Fig. 1

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HYDRANT.

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To all whom it may concern:

Be it known that I, ROBERT A. BROOKS, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Hydrants; and I do declare the following to be a full, clear, and exact description of the invention, such as 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 figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in hydrants and the object of the invention is to provide a construction in which both the valve and valve seat may be readily removed or lifted out of the ground for repairs, said construction being at the same time simple, economical and thoroughly practicable.

To this end the invention consists of the features, arrangements and combinations hereinafter described and claimed, and will be fully understood by reference to the accompanying drawings in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a longitudinal vertical section of a hydrant adapted for use as a street washer or fire plug and embodying my improvements. Fig. 2 shows my improved hydrant adapted for ordinary domestic use and provided with a spout. This view shows the construction partially in elevation and partially in section.

Similar reference characters indicating corresponding parts or elements in the several views let the numeral 5 designate the metal top or cap secured to the casing 6 by screws 7 which enter threaded apertures formed in a flange 6^a of the casing 6. The lower extremity of this casing which surrounds the valve mechanism, is screwed into a stationary plate 8 and provided with waste apertures 9 which are located in the bottom of the casing. The supply pipe 10 enters the bottom of casing 6 and projects upward thereinto a short distance as shown at 10^a and is engaged by the lower extremity 12^a of a pipe 12, the two parts being connected by a union 12^c. The upper extremity of pipe 12 engages a circumferential recess 5^a formed on the under

side of plate 5. This recess holds the top of the pipe securely in position against lateral displacement when screws 7 are in place. When these screws are removed the plate may be lifted from the pipe, the two parts being detachable. The lower extremity 12^a of pipe 12 is provided with a horizontal inwardly projecting flange 13 which engages the top of the supply pipe, and a depending portion 14 which fits nicely into the top of the supply pipe. Upon the lower extremity of pipe 12 is formed a valve seat 15. Within pipe 12 is located the discharge pipe 16, the lower extremity of which is attached to the valve tube 17^a provided with valve 17, ports 18 and the cup leather 19 engaging a circumferential shoulder 19^a formed on the valve tube. When valve 17 engages its seat 15, the cup leather lies in the same horizontal plane with an inner enlargement 20 of pipe 12, which permits the waste water from the discharge pipe to pass the cup leather and move upward out of ports 21 formed in pipe 12. The waste water then passes down and out of ports 6^a formed in the bottom of casing 6. The upper extremity of pipe 16 is provided with a socket head 22 in which is swiveled the enlarged lower extremity of a threaded stem 23, which passes upward through a correspondingly threaded aperture in top 5, and extends therethrough far enough to permit the use of a key which is slipped over the free extremity thereof whereby the latter is turned in either direction according as it is necessary to raise or lower pipe 16, or what is the same thing, open or close valve 17. From pipe 16 and communicating with the opening therein, leads a discharge spout 24 or 24^a. The street washer is provided with spout 24 which is screwed into a branch or Y 16^a formed integral with pipe 16, and extending upward through top plate 5, and is provided with a threaded projection above the plate for the attachment of the nose extremity. Branch 16^a extends through a slot 12^a formed in pipe 12, which is of sufficient length downward to permit the necessary vertical adjustment of pipe 16 for the purpose of opening and closing the valve attached to its lower extremity and extends upward to the top of the pipe as shown. Spout 24^a is screwed into a branch 16^c formed on pipe 16 of the domestic

hydrant shown in Fig. 2. Branch 16^c extends through the slot 12^a formed in pipe 12 which is of sufficient length downward to allow pipe 16 the required movement, and extends upward through the top of the pipe the same as in the street washer form of the hydrant shown in Fig. 1. Spout 24^a also projects through a slot 6^c formed in casing 6, which slot is of sufficient length to allow the spout 20 to move vertically with pipe 16, to which it is attached for the purpose of opening and closing the valve. In the form of hydrant shown in Fig. 2 the outer extremity of stem 23 is provided with a hand wheel or lever 26 which takes the place of the key or wrench applied to the stem of the street washer.

From the description heretofore given it will be seen that if the valve or valve seat of the hydrant is injured or out of repair, pipes 16 and 12 with their attachments may both be raised bodily out of the casing by removing screws 7 which hold the top 5 in place. The injured parts may then be readily repaired, the pipes replaced and the top again screwed to position upon the casing, thus obviating the necessity of opening the ground or digging down to the valve seat, as must be done when said seat is stationary.

In the form shown in Fig. 2 it will be seen that spout 24^a must be unscrewed to permit the removal of the pipes, since said spout projects through the stationary casing 6, or the slot 6^c may extend upward through the top of the casing, which would permit the removal of the pipes without taking out the spout.

Having thus described my invention, what I claim is—

1. In a hydrant the combination of the sta-

tionary outer casing, the bottom plate to which it is made fast, the supply pipe or conduit passing through said plate, the removable top plate secured to the casing, the vertically movable valve pipe 16, and the intermediate pipe 12 carrying the valve seat, its lower portion being horizontally shouldered to rest upon the top of the supply pipe and terminating in a depending vertical portion which dips into the top of the supply conduit forming a water tight joint, while its upper extremity engages the top plate which is grooved to receive it, thus preventing displacement, pipe 12 being vertically slotted to receive the outlet spout connected with pipe 16, whereby the last named pipe is allowed the necessary movement for opening and closing the valve, substantially as described.

2. In a hydrant the combination of the stationary outer casing, the bottom plate to which it is made fast, the supply pipe or conduit, the removable top plate secured to the casing, the vertically movable valve pipe 16 and the intermediate pipe 12 carrying the valve seat, its lower portion being shouldered to rest upon the top of the supply pipe and terminating in a depending portion adapted to slip into the top of the supply conduit forming a water-tight joint, while its upper extremity engages the top plate to which it is loosely connected but in such a manner as to prevent both vertical and lateral displacement, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT A. BROOKS.

Witnesses:

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OLIVER F. RHODS.