W. T. GARRATT.

HYDRANT.

No. 192,062. Patented June 19, 1877.

Fig. 1.

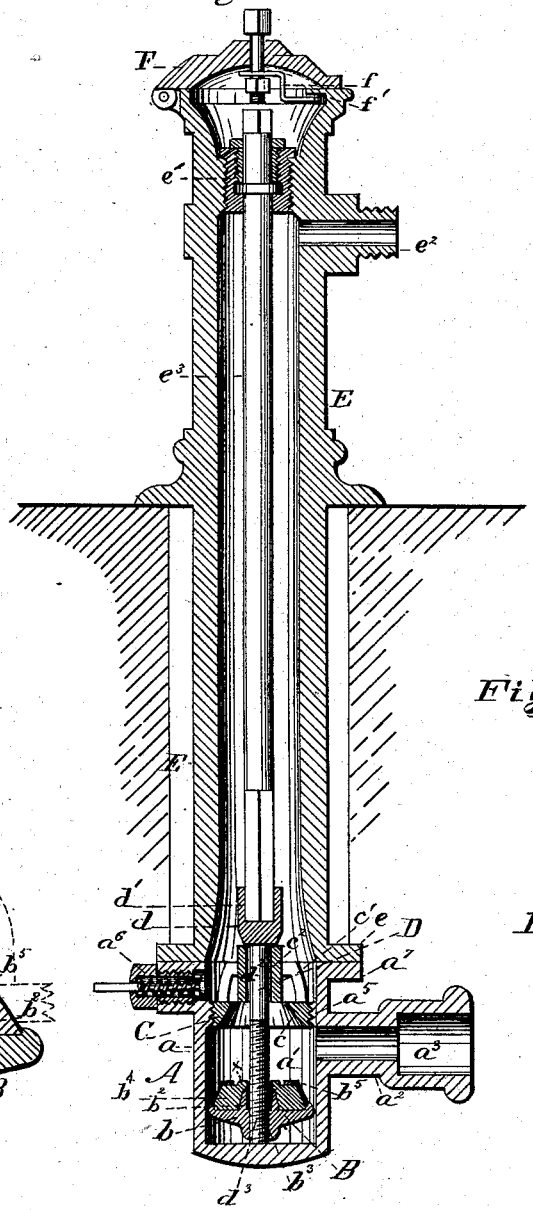


Fig. 2.

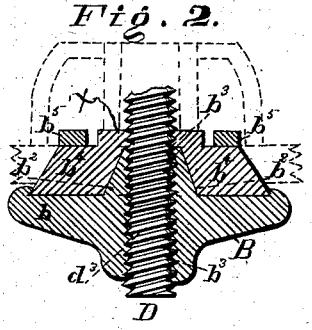


Fig. 3.

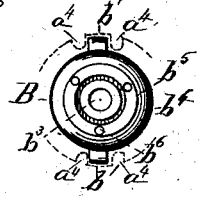


Fig. 4.

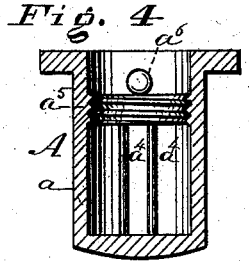
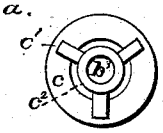


Fig. 1a.



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UNITED STATES PATENT OFFICE.

WILLIAM T. GARRATT, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN HYDRANTS.

Specification forming part of Letters Patent No. **192,062**, dated June 19, 1877; application filed April 14, 1877.

To all whom it may concern:

Be it known that I, WILLIAM T. GARRATT, of San Francisco, in the county of San Francisco and State of California, have invented a new and useful Improvement in Hydrants; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention consists, mainly, in constructing the hydrant in two independent sections, the bottom one of which is designed to remain permanently in the ground, after once being set, while the top one may be readily removed to permit access to the valve, or to permit the insertion of a new top, when the necessities of the case require it.

In the drawings, Figure 1 represents a central vertical section of my improved hydrant; Fig. 2, a similar section of the valve enlarged; Fig. 3, a plan view of the valve, and Fig. 4 a central vertical section of the bottom portion of the hydrant detached.

To enable others skilled in the art to make and use my invention, I will now proceed to describe fully its construction and manner of operation.

A represents the base or bottom piece of the hydrant, consisting of the vertical portion a having the valve chamber a^1, and horizontal branch a^2 having the bell a^3, adapted to receive the connecting-pipe leading to the main, as shown. The valve-chamber, it will be observed, is located below the horizontal portion a^2, by means of which the valve, when depressed to open the hydrant, is held in a recess below the water-current, and is thus protected from its action. a^4 a^4, Figs. 3 and 4, represent vertical ribs or flanges formed upon opposite sides of the valve-chamber in the vertical portion a, by means of which proper ways are formed to guide the valve in its vertical movements, as will be hereinafter described.

a^5, Figs. 1 and 4, represents an annular flange located near the top of the valve, which is provided with screw-threads, as shown. a^6 represents a waste-valve of any proper construction, for drawing off the water remaining in the hydrant after the flow has been cut off. a^7 represents a flange, having proper openings, by means of which the upper part or body of the hydrant may be properly secured in place.

B, Figs. 1, 2, and 3, represents the valve proper, consisting of a metal disk, b, having the lugs or ears b^1 b^1, Fig. 3, central vertical projection b^2, and central opening with screw-threads b^3, a rubber disk, b^4, having a central opening, and a ring, b^5, by means of which, and proper bolts or rods b^6, Fig. 3, the parts are strongly clamped together to form one complete whole.

The rubber ring b^4, it will be observed, is so constructed at its upper surface x as to tightly surround the spindle D, for the purpose of effectually packing the same.

This valve, when in its proper place in the valve-chamber, is held from revolution by the projection of its lugs b^1 into the recess between the guideways a^4, but is freely moved in a vertical direction.

C, Figs. 1 and 1^a, represents a collar or ring, secured in place by means of screw-threads engaging with the threaded portion of the flange a^5, Fig. 4, which is provided with the valve-seat c and arms c^1, supporting the valve-spindle socket or bearing c^2, as shown.

D represents the valve-spindle, consisting of an angular head, d, having an angular socket, d^1, adapted to receive a corresponding key, a journal-bearing, d^2, adapted to turn in the socket c^2, and a threaded portion, d^3, adapted to engage with the corresponding portion of the valve, as shown.

E represents the body of the hydrant, constructed generally in any proper manner, but provided below with a flange, e, adapted to rest upon the corresponding flange a^7 of the bottom piece, and be secured thereto by proper bolts, and above with the plate or partition e^1 and the discharge-nozzle e^2, as shown. e^3 represents a valve-rod extending through the partition e^1, which is adapted above to receive any proper key to give it revolution, and below to enter the socket of the valve-spindle, as shown. This rod, it will be understood, is free to revolve in either direction, but is held against vertical movement.

F represents the hinged cover of the hydrant, and f a revolving latch attached there-

to, which latter is capable of being turned beneath the projecting portion f' of the hydrant to lock the cover in its closed position.

The operation will be readily understood. The valve being held against revolution, and the valve-spindle being incapable of vertical movement, it follows that when the latter is revolved, the valve, by means of its screw-threads, will be caused to travel in a vertical direction upon the threaded portion of the valve-spindle, the direction of its movement being determined, of course, by the direction of the revolution. By this means the valve is moved up or down, to let on or shut off the flow of water, according to circumstances.

If the top should become broken in any manner it may be readily removed, and a new one be inserted in its place, without disturbing the bottom piece, and without shutting off the water at the main, the hydrant-valve itself, which remains undisturbed, serving to check the flow. If the valve itself should require attention it also may be removed without disturbing the bottom piece.

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

1. The valve described, consisting of the disk B, having ears b^1 and projection b^2, rubber ring b^4, having an extended portion, x, to pack the spindle, and clamping-ring b^5, with bolts b^6, as described.

2. In combination with the section A, having the portion a^5, the removable valve-seat c, having arms c^1 and socket c^2, as described.

3. In combination with the valve held from revolution by the part A, the spindle D and the seat c, having the socket c^2, as described.

This specification signed and witnessed this 24th day of March, 1877.

WM. T. GARRATT.

Witnesses:

WILLIAM NARNEY,

HARRY COUSINS.