

(No Model.)

2 Sheets—Sheet 1.

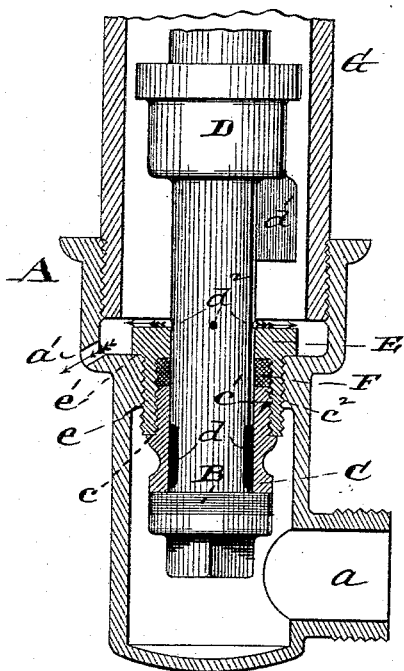
O. B. WILSON.

HYDRANT VALVE.

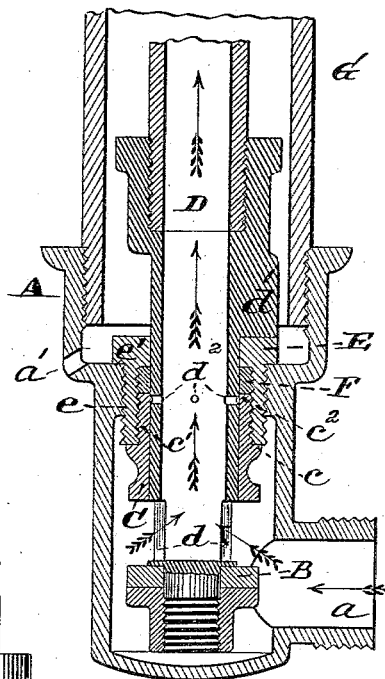
No. 381,662.

Patented Apr. 24, 1888.

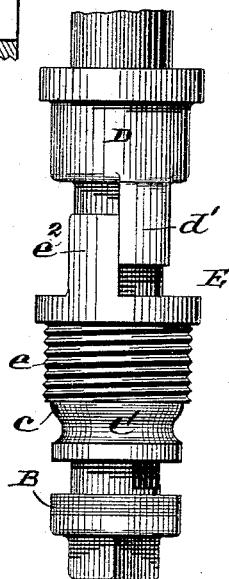
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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(No Model.)

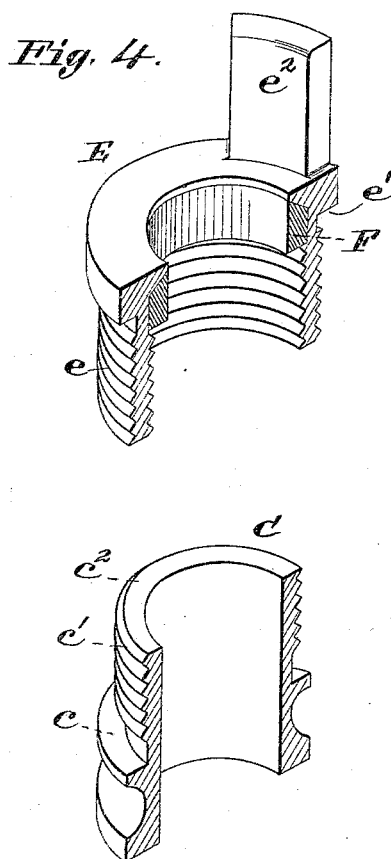
2 Sheets—Sheet 2.

O. B. WILSON.

HYDRANT VALVE.

No. 381,662.

Patented Apr. 24, 1888.



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# UNITED STATES PATENT OFFICE.

OSCAR B. WILSON, OF COLLINSVILLE, ILLINOIS.

## HYDRANT-VALVE.

SPECIFICATION forming part of Letters Patent No. 381,662, dated April 24, 1888.

Application filed December 12, 1887. Serial No. 257,571. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR B. WILSON, of Collinsville, Illinois, have made a new and useful Improvement in Hydrant-Valves, of which the following is a full, clear, and exact description.

The improvement relates to that class of hydrant-valves in which the valve-seat and valve, together with any removable parts thereto attached, can, by rotating the valve-stem, be detached from the valve-chamber and made capable of being lifted out therefrom.

The improvement consists in the combination of parts whereby the throw of the valve is determined and the removable parts of the construction kept in engagement with the valve-stem in all positions of the valve-stem, substantially as is hereinafter described and claimed, and as exhibited in the annexed drawings, making part of this specification, in which—

Figure 1 is a sectional elevation of the improved valve; Fig. 2, a longitudinal section, the valve being unseated; Fig. 3, a side elevation of the valve-stem, valve, valve-seat, and valve-chamber cap; and Fig. 4, a sectional perspective of the valve-seat and valve-chamber cap detached from each other.

A represents the valve-chamber. The inlet thereto is at *a*. The valve B seats with the pressure against the seat C, and when the valve is unseated, as in Fig. 2, the water flows through the openings *d* into the hollow valve-stem D, and thence upward to the top part of the hydrant (not shown) and there discharged in the customary manner.

The valve seat C has a shoulder, *c*, is threaded at *c'* to be screwed into the valve-chamber cap E, and at its upper end, *c''*, adapted to press a packing-ring, F, into the upper end of the valve-chamber cap, and thereby form a stuffing-box for the valve-stem to work through, as indicated by its different positions in the drawings. The valve-chamber cap at *e* is threaded to be screwed into the valve-chamber and at *e'* to form a ground joint therewith. It is also provided with the lug *e''*, which coacts in the manner presently described with the lug *d'* upon the valve-stem. Now, as such valves have hitherto been made difficulty has been experienced in this respect: The valve-

seat does not have a fixed position in the valve-chamber and it in consequence is liable to be screwed sometimes farther and sometimes not so far into the valve-chamber cap. If it is screwed too far thereinto, the valve-stem when raised is liable to be moved so far upward as to cause a disengagement of the lugs, respectively, upon the valve-chamber cap and valve-stem, and hence when the stem is in that position it and the other removable parts cannot be detached from the valve-chamber by means of the valve-stem. On the other hand, if the valve-seat is not screwed far enough into the valve-chamber cap, the valve-opening may be insufficient for the proper flow of the water. This difficulty is prevented in the present construction by providing the valve-seat with the shoulder *c* or other equivalent stop and otherwise so proportioning the parts and so relatively constructing the lugs upon the cap and stem, respectively, as in the first place to provide for always having the valve-seat in a certain position in the valve-chamber, so that both when the valve is originally sent out from the shop and also when it may be subsequently repaired by one not familiar with its design the valve-stem and valve always will move and open to just the proper extent, and in the second place to keep the lugs in engagement even when the valve is fully opened—that is, the shoulder *c* is arranged so that when it comes to a bearing against the valve-chamber cap the desired throw of the valve is obtained, and also in view of the fact that a shoulder or stop for the valve-seat is provided for a sufficient intimation to the person repairing the construction is given as to the proper position for the valve-seat, so that it shall always be replaced in the same position, and in connection with this fixed position of the valve-seat the lugs *e'' d'* are made, as shown, of such length as to prevent them from passing each other when the valve-stem is rotated to unscrew the valve-chamber cap even when the valve-seat is screwed to cause its shoulder to bear upward against the valve-chamber cap and the valve-stem is raised to cause the valve to bear against the valve-seat.

A suitable casing, G, is used to inclose the valve-stem. The water wastes when the valve is seated from the valve-stem through the

openings  $d^2$  into the space surrounding the valve-stem and inclosed by the casing, and thence through the opening  $a'$  to without the construction.

5 I claim—

1. The combination of the valve-chamber A, having the inlet  $a$ , as described, the valve within said chamber, the valve-seat C, having the stop  $c$  and screw-threaded at  $c'$ , the packing-ring F above the upper end of the valve, the valve-chamber cap E, having the lug  $e^2$  and screw-threaded to fit the valve-seat and the valve-chamber, and the valve-stem D, constructed as described and provided with the  
10 lug  $d'$ , said several parts being relatively arranged and proportioned substantially as and  
15 for the purpose described.

2. The combination, in a hydrant-valve, of the valve B, the valve-seat C, having the stop  $c$ , the valve-chamber, the valve-chamber cap 20 E, having the lug  $e$ , and the hollow valve-stem D, having the openings  $d$  at its lower end to admit the water and provided with the lug  $d'$ , all said parts being relatively arranged and proportioned and combined together as and 25 for the purposes described.

Witness my hand.

OSCAR B. WILSON.

Witnesses:

C. D. MOODY,

GEO. J. CHAPMAN.