L. S. WOODBURY.

FIRE-HYDRANT.

No. 180,444. Patented Aug. 1, 1876.

Fig. 1.

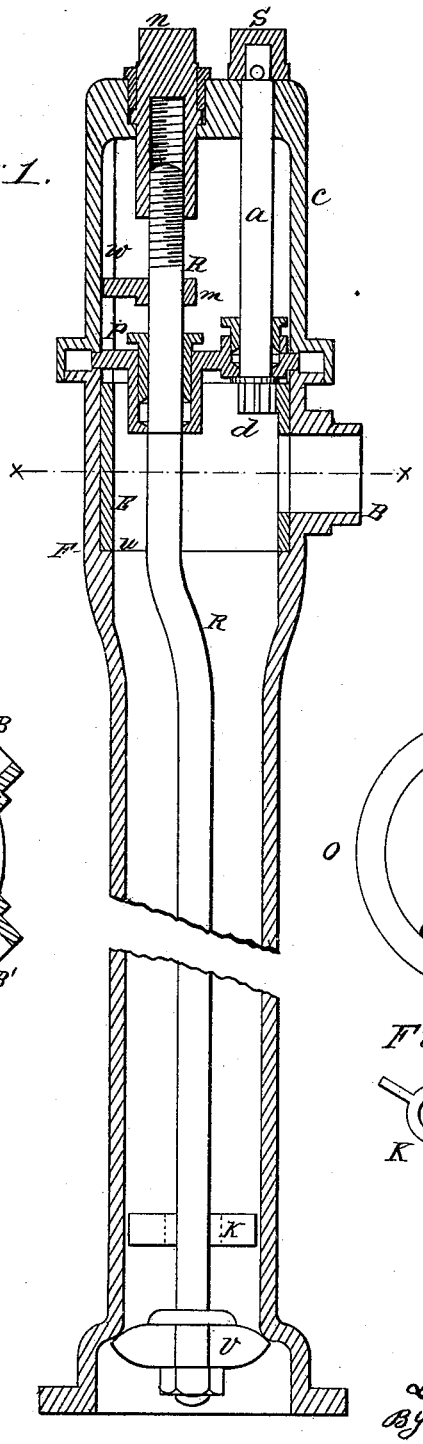

Fig. 3.

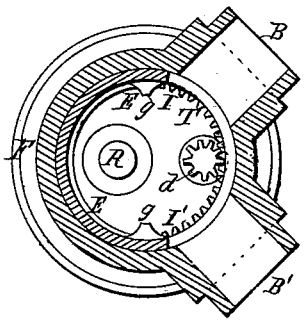

Fig. 2.

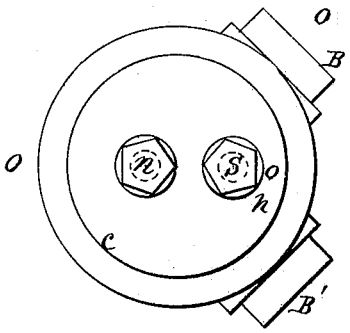

Fig. 4.

Witnesses

Ed Slater.
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Inventor

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UNITED STATES PATENT OFFICE.

LEANDER S. WOODBURY, OF BURLINGTON, VERMONT, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO B. S. NICHOLS AND F. G. COGGIN, OF SAME PLACE.

IMPROVEMENT IN FIRE-HYDRANTS.

Specification forming part of Letters Patent No. **180,444**, dated August 1, 1876; application filed September 25, 1875.

To all whom it may concern:

Be it known that I, LEANDER S. WOODBURY, of Burlington, in the county of Chittenden and State of Vermont, have invented a new and useful Improvement in Fire-Hydrants; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a vertical section of the whole hydrant on the line *o o o*, Fig. 2. Fig. 2 is a plan of the top of the hydrant. Fig. 3 is a horizontal section on line *x x*, Fig. 1, looking from the bottom. Fig. 4 is a plan of the guide K, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of my invention, as applied to hydrants having two or more openings, is to enable the operator to close either opening without disturbing the efficiency of the others, as must necessarily be the case with hydrants having but one valve at the bottom. The necessity for such control of the hydrant as my invention contemplates is obvious in the following instances. The first company that comes to the hydrant attaches one line of hose and opens the bottom valve, the other openings being closed with a cap screwed onto the outside. Soon it becomes necessary to attach a second line, but to do this with the ordinary hydrant, the line already in efficient service must be shut off, occasioning a delay oftentimes disastrous. The same is true where one of two or more lines of hose attached to the same hydrant bursts—the whole must be shut off to repair that one, and sometimes for such a length of time that the fire gets beyond control.

To accomplish the object of my invention I bore out that portion of the hydrant through which the discharge-openings B B′ pass, thereby forming a smooth surface or seat, upon which a valve or valves may be operated. To the surface or seat thus formed I fit a valve, E, so that it will easily move within the hydrant. On one side of this valve E I cut an opening that corresponds vertically with the openings B of the hydrant, and of sufficient length round the valve E to give a clear passage to all the openings of the hydrant, when desired. At the upper end of this valve E is a section of an annular gear, extending from I to I′, Fig. 3. Into this gear there is engaged a pinion, *d*, attached to the stem *a*, upon the top of which is pinned the nut S, upon which the wrench is applied. *g g* are stops at each end of the section of the annular gear, which strike against the pinion and regulate the amount of motion given to the valve E.

The operation is as follows: When the hydrant is not in use the lower valve *v* is closed as usual, and the position of the valve E is as shown in Fig. 3, *i. e.*, so that there is a clear passage to all the openings of the hydrant. The attachment of the hose is now made to either of the openings as desired, and the other openings are closed by applying the hydrant-wrench to the nut S and turning it to the right or left, as the circumstances require, until the stop strikes the pinion. The bottom valve *v* is then opened by applying the same wrench to the nut *n*. And so, when a line of hose is attached to each opening, and one bursts, the opening to which the broken line is attached is closed by the same operation, while the others are left running. The projection *h* on the nut S indicates that all the openings are clear when it corresponds with a similar projection on the cap of the hydrant. P, Fig. 1, is a plate, held between the cap *c* and the main body of the hydrant, in which are formed the stuffing-boxes, through which the stems A and R pass.

By taking out the bolts that secure the cap to the body of the hydrant, the cap is lifted off, and the plate P and the valve E are easily taken out for repairs when necessary. *m* is an arm fastened to the stem R, which slides up and down on the guide *w* to keep the stem R from turning.

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

1. A hydrant, having that portion of the barrel through which the discharge-openings pass bored out, or otherwise made smooth, thus forming a seat upon which the valve

may be operated within the hydrant, so as to close either of the discharge-openings independently of the others, or of the bottom valve, substantially as herein described, and for the purpose herein set forth.

2. A combination of the stem *a*, pinion *d*, valve E, and stops *g g*, operated substantially as herein described, and for the purpose herein set forth.

LEANDER S. WOODBURY.

Witnesses:
A. R. LEMON,
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