

J. TOOMEY.
HOSE-NOZZLE.

No. 170,604.

Patented Nov. 30, 1875.

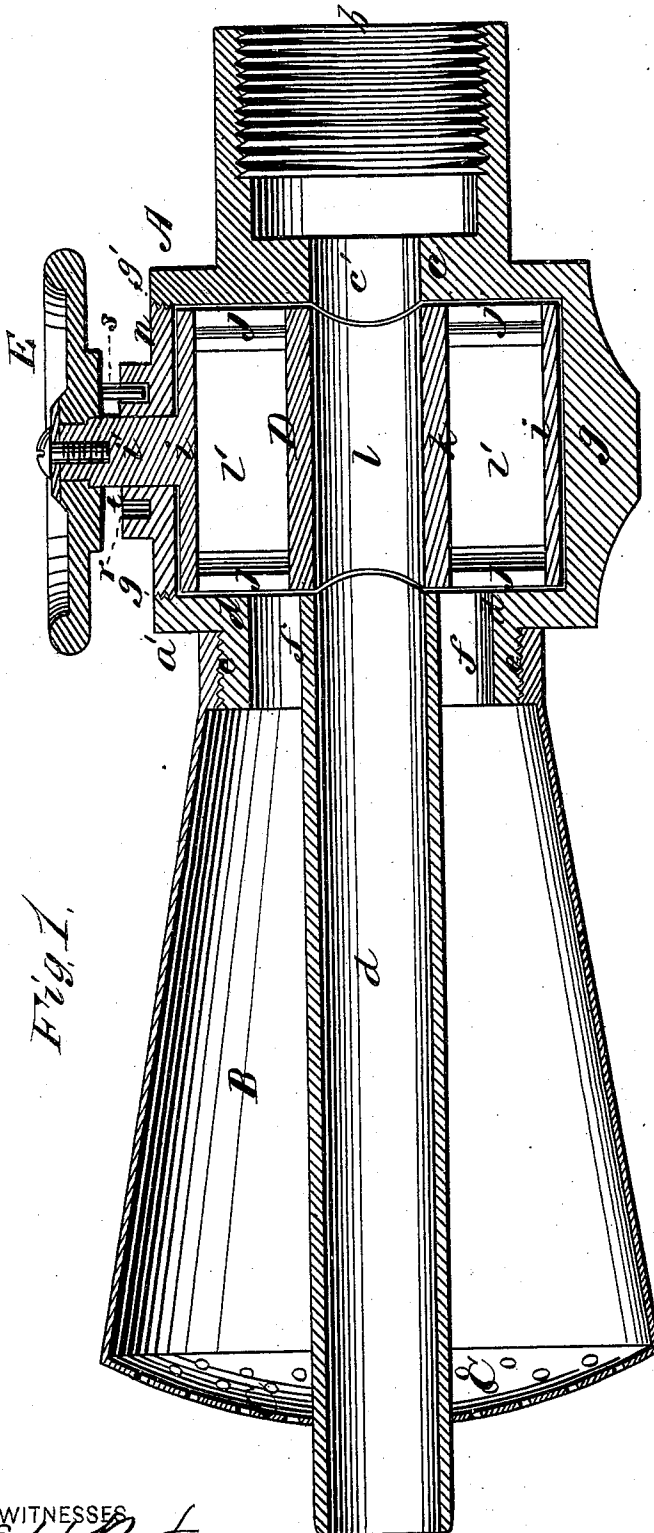


Fig. 1.

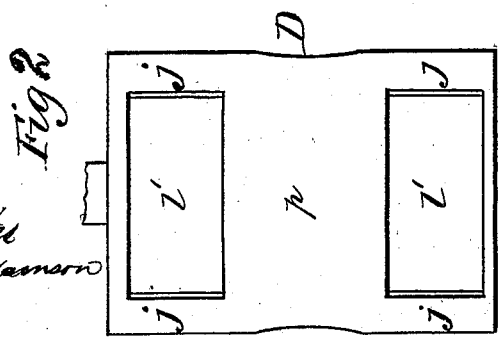
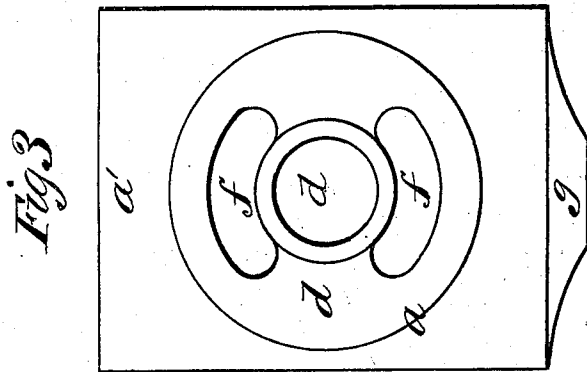
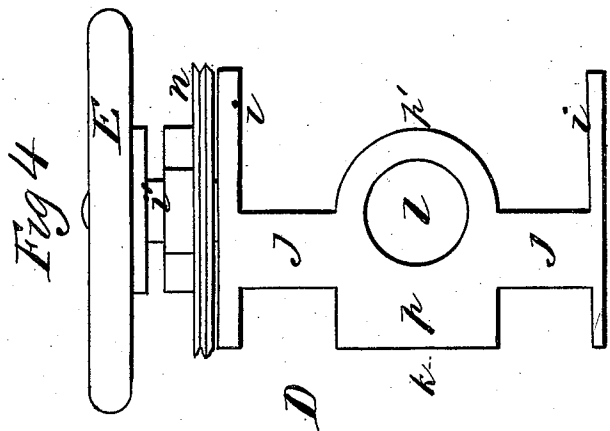
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UNITED STATES PATENT OFFICE.

JEREMIAH TOOMEY, OF WOONSOCKET, RHODE ISLAND.

IMPROVEMENT IN HOSE-NOZZLES.

Specification forming part of Letters Patent No. **170,604**, dated November 30, 1875; application filed September 30, 1875.

To all whom it may concern:

Be it known that I, JEREMIAH TOOMEY, of Woonsocket, in the county of Providence and State of Rhode Island, have invented a new and valuable Improvement in Hose-Nozzles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a central longitudinal section of my hose-nozzle, and Figs. 2, 3, and 4 are detail views thereof.

This invention has relation to improvements in that class of hose-nozzles which are capable of throwing a solid stream, convertible at pleasure into a sprinkler; and it consists in certain arrangements, and in the novel construction, of the various parts or devices employed, whereby very useful results are obtained, substantially as hereinafter more fully explained and claimed.

In the annexed drawings, A designates the body of my improved hose-nozzle, consisting of two tubular branches, *a a'*, of any suitable metal, crossing each other at right angles, and communicating with each other. Branch *a* is provided at one end with a female screw-thread, *b*, by means of which it is coupled to a hose-pipe; also, with a diaphragm, *c*, having a central perforation, *c'*. At its other end it is closed by a diaphragm, *d*, from which rises a preferably cylindrical pipe, *d'*, through which diaphragm two openings, *f*, of oblong form are made, and it is provided with a male screw-thread, *e*, by means of which a chamber, B, is attached thereto. When this chamber is screwed into position pipe *d'* projects centrally through an opening in a rose, C, forming the outer end of a chamber, B. The body of the nozzle communicates with chamber B by means of openings *f*, through which water will be discharged into the said chamber, finding its exit in small diverging streams through the openings of the rose. Branch *a'* is closed at one end by a wall, *g*, the other end being open, and provided with a screw-thread, *g'*, by means

of which a rotating plug or valve, D, is introduced into the said valve, and is secured thereto by means of a nut, *n*. This valve has at each end a disk, *i*, fitting snugly into the bore of branch *a*, which disks are connected with a central part, *k*, by means of metallic strips *j*. This central part is of semi-cylindrical form upon one side, *p*, and conforms strictly to the concavity of the interior of branch *a*, its other side *p'* being semi-cylindrical also, but in a plane at right angles to the first side, and of considerably less diameter, by which an enlargement is formed, through which is cut a cylindrical opening, *l*, (shown in Fig. 1,) and two openings, *l'*, at right angles thereto. Disk *i* is provided with a cylindrical shank, *i'*, projecting through nut *n*, and forming a close joint therewith, upon the outer projecting end of which is secured in any suitable manner a hand-wheel, E.

When this wheel is turned in a proper direction the cylindrical opening *l* will register with pipe *d'* and aperture *c'* in diaphragm *c* of branch *a*; and, if water be turned on, a solid stream will issue from the said pipe, the flow being directed and guided through the said openings and pipe without interruption, as though from an ordinary hose-pipe. In this position pipes *d'* and apertures *c'* form a continuous tube; and their joints being ground true no water will escape through them into the rose, by this means preventing drip, and the unnecessary wetting of the clothing of the pipeman. If the movement of the valve be continued, its cylindrical surface *p* will close the lower end of pipe *d'*, thus cutting off water therefrom, and opening a communication with rose C by bringing openings *f* in the branch, and openings *l'* in the valve, in line with each other. The cylindrical surface *p'* of enlargement *o* being of less diameter than the valve-casing, water will readily enter through induct *c'*, pass around the enlargement, and find an entrance into the rose-chamber through openings *l'* and *f*. By then reversing these movements the cylindrical surface *p* of the valve will close induct *c'*, and entirely cut off communication of water with the nozzle, either with pipe *d'* or the rose-chamber B. In order that these movements may be regulated accurately the outer surface of nut *n* is provided with an annular groove, *r*, into

which a pin, *s*, projecting inward from the wheel *E*, is received. Within this groove are secured at proper intervals stop-pins *t*, which will arrest the movements of the valve, and secure the desired result.

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

In a cut-off hose-nozzle the combination, with the body *A*, having induct *c'*, induction-openings *f'*, and pipe *d*, and the rose-chamber *B*, of the rotating valve *D*, having openings *l* and

l' at right angles to each other, and the semi-cylindrical surfaces *p p'*, also at right angles to each other, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JEREMIAH TOOMEY.

Witnesses:

GEORGE A. WILBUR,
EDWIN ALDRICH.