W. THOMSON.

Hose-Nozzles.

No. 166,654. Patented Aug. 10, 1875.

Fig. 1.

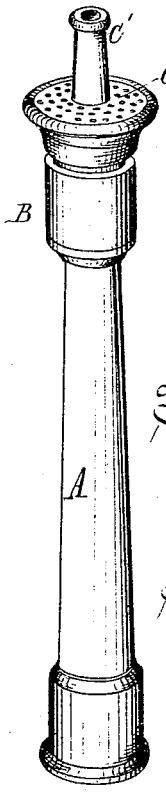


Fig. 2.

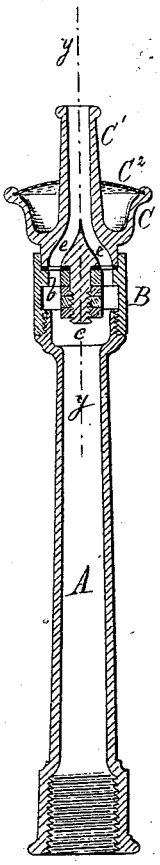


Fig. 5.

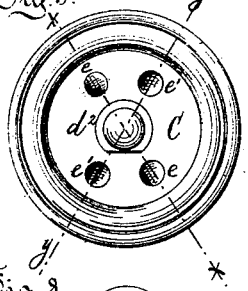


Fig. 8.

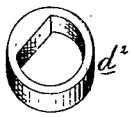


Fig. 4.

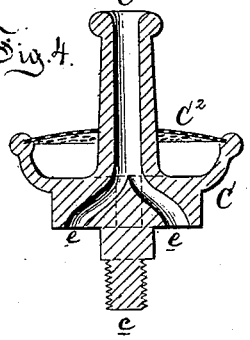


Fig. 6.

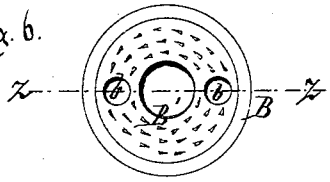


Fig. 7.

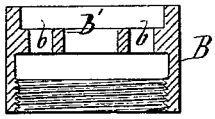
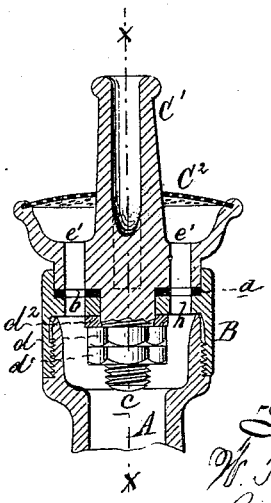


Fig. 3.



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By Atty
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UNITED STATES PATENT OFFICE.

WALTER THOMSON, OF DETROIT, MICHIGAN.

IMPROVEMENT IN HOSE-NOZZLES.

Specification forming part of Letters Patent No. **166,654**, dated August 10, 1875; application filed May 4, 1875.

To all whom it may concern:

Be it known that I, WALTER THOMSON, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Hoze-Nozzles, of which the following is a specification:

The nature of my invention relates to an improvement in nozzles of that class that are to be used on a garden-hose, and are so constructed that, at the will of the operator, the water can be discharged as a single jet or in the form of spray; and its object is to so construct the nozzle as to dispense with all external cocks or valves. To this end it consists in the peculiar construction of the nozzle-head and a flanged diaphragm, to which it is axially pivoted, the said diaphragm being screwed on the end of the nozzle-pipe proper.

Figure 1 is a perspective view. Fig. 2 is a longitudinal section, showing the head to discharge in a single jet, the section being taken through *x x* in Fig. 3, which is a longitudinal section at *y y*, the nozzle-head being turned so as to discharge the water through the rose. Fig. 4 is a detached longitudinal section through the nozzle-head at *x x*. Fig. 5 is a plan of the base or inner end of the nozzle-head. Fig. 6 is a plan of the face or outer end of the flanged diaphragm. Fig. 7 is a section of the same at *z z*. Fig. 8 is a perspective view of the washer between the nut and the diaphragm.

In the drawing, A represents a nozzle-pipe, threaded at the outer end to receive a ring or flange, B, in which is formed a diaphragm, B′, serrated on the outer face to receive and hold stationary a leather washer or packing, *a*. C is a cup-shaped nozzle-head, having a screw-stem, *c*, at the center of its base, which projects through a hole in the center of the diaphragm, in which there are two ports, *b b*, diametrically opposite each other. The head is secured on the diaphragm by a nut and jam-nut, *d* d^1. Between the nut and the under side of the diaphragm a lock-washer, d^2, is interposed, and so fitted to the spindle that the head may be rotated without screwing up or loosening the nuts. In the outer end of the head there is a central jet-pipe, C^1, which projects through the center of a rose, C^2, sprung into a groove in the outer end of the cup. Two curved passages, *e e*, are cored in the base of the head, which unite and intersect the bore of the pipe C^1. Two other passages, *e′*, diametrically opposite each other, are drilled through the head into the space under the rose. All the passages have the same radius as the ports *b*. The base of the cup is received within the upper flange of the diaphragm B, and rests upon the packing-leather *a*, which prevents the leakage of water around the outside of the cup-base.

To discharge a single jet of water, the head should be turned so as to bring the passages *e e* coincident with the ports *b b*. To discharge water through the rose, turn the head so that the water will pass from the ports *b* through the passages *e′ e′* to the rose. If the head be turned to any other position the flow of water will be shut off.

What I claim as my invention is—

In a hose-nozzle, substantially as described, the combination of the rose and jet head with the double-flanged diaphragm, pivoted thereto, and an intervening packing-leather, severally provided with the ports and passages, substantially as described, for the purposes specified.

WALTER THOMSON.

Witnesses:

H. S. SPRAGUE,

EDWARD BARTHEL.