(No Model.)

J. O'DONNELL.

HOSE NOZZLE.

No. 334,800. Patented Jan. 26, 1886.

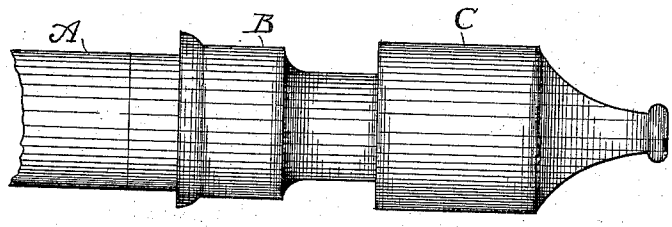


FIG. 1.

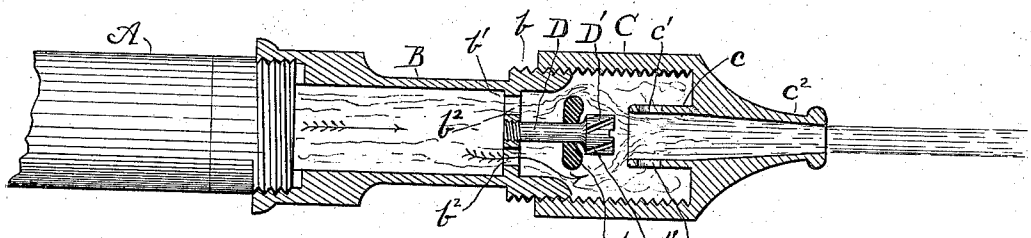


FIG. 2.

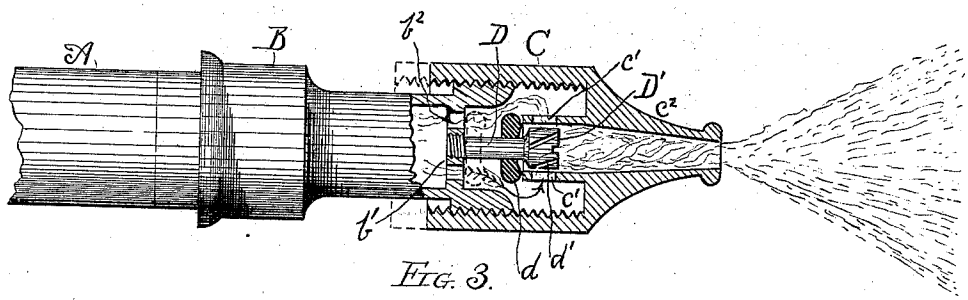


FIG. 3.

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UNITED STATES PATENT OFFICE.

JOHN O'DONNELL, OF CHICAGO, ILLINOIS.

HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 334,800, dated January 26, 1886.

Application filed November 27, 1885. Serial No. 184,062. (No model.)

To all whom it may concern:

Be it known that I, JOHN O'DONNELL, of Chicago, in the county of Cook and State of Illinois, have invented a certain new, useful, and Improved Hose-Nozzle, of which the following is a description, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of said nozzle when the valve is closed. Fig. 2 is a longitudinal sectional view of said nozzle when fully open, and as adjusted to throw a straight stream; and Fig. 3 is a like sectional view of a part of the same as adjusted to form a spray.

Like letters of reference indicate like parts in the different figures.

The object of my invention is to provide a hose-nozzle which may be cheap and durable in its construction, simple in its operation, and so arranged that the water may be readily turned off without the use of the ordinary stop-cock, or may be caused to spray or flow in a straight smooth stream at will, all of which is hereinafter more particularly described, and definitely pointed out in the claims.

In the drawings, A represents a hose, which is attached in any secure and well-known manner to a metallic cylindrical shell, B, the latter being provided upon its outer end with a screw-thread, *b*, Fig. 2, to which is attached, by means of an internal screw-thread, a secondary shell, C, which constitutes the nozzle proper. The parts B and C are preferably cast in brass, and the former is provided with a partition, *b'*, near its outer end, in which is formed a series of perforations, b^2, Figs. 2 and 3, preferably arranged in a circle near the outer edge of the shell, and through which the water flows in its exit, as indicated by the arrows shown in said figures. A stem, D, provided with an enlarged head, D', is screwed into or otherwise rigidly attached to the center of said partition, upon which is loosely placed, so as to slide back and forth thereon, a valve, *d*, preferably formed from rubber or other flexible or fibrous material. Into the head D', I cut a series of grooves, *d'*, which may be straight and arranged obliquely to the axis of the stem, as shown in the drawings, or they may, if preferred, be in a spiral form, the one being in effect the equivalent of the other.

Within the shell C, and concentric with the stem D, I provide an annular flange, *c*, the inner diameter of which is somewhat larger than that of the head D', said annular flange being provided with lateral perforations *c'*.

When the part C is screwed up to its limit upon the shell B, as in Fig. 1, the end of the flange *c* presses the valve *d* back upon its seat and closes the ports b^2, thus cutting off the flow of water; but upon unscrewing the part C, as in Fig. 2, the pressure of water from the hose pushes the valve *d* outwardly until it strikes against the head D'; and so long as said head is in the position shown in said figure the water flows around the valve and outwardly in a straight stream through the outer end, c^2, of the nozzle, as indicated in Fig. 2.

Upon turning the part C and adjusting it by means of the screw, as stated, so that the head D' is brought within the annular flange *c* and opposite the perforations *c'*, the valve *d* closes the end of the flange *c*, and the water is caused to flow through the lateral openings *c'*, from which it is projected directly against the grooved head D', thereby imparting to it a rotary or swirling or spiral motion, and causing it to issue from the end of the nozzle c^2 in the form of a spray, as clearly shown in Fig. 3. The dotted lines in said figure indicate the limit of backward movement of the part C.

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

1. A hose-nozzle formed in two parts connected by a screw-thread, whereby the same may be shortened or elongated, the former being provided with a perforated partition near its outer end, and a stationary central stem provided with a valve movable longitudinally thereon, and an obliquely-grooved head, while the latter is provided with an internal annular flange, into which said head may be intruded, said flange being provided with lateral openings *c'*, substantially as and for the purposes specified.

2. In a hose-nozzle, the combination of the part B, provided with perforated partition *b'*, a stationary central stem provided with a movable valve, and an enlarged obliquely-grooved head extending outwardly therefrom, and the adjustable part C, having annular flange *c* and perforations *c'*, substantially as and for the purposes set forth.

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