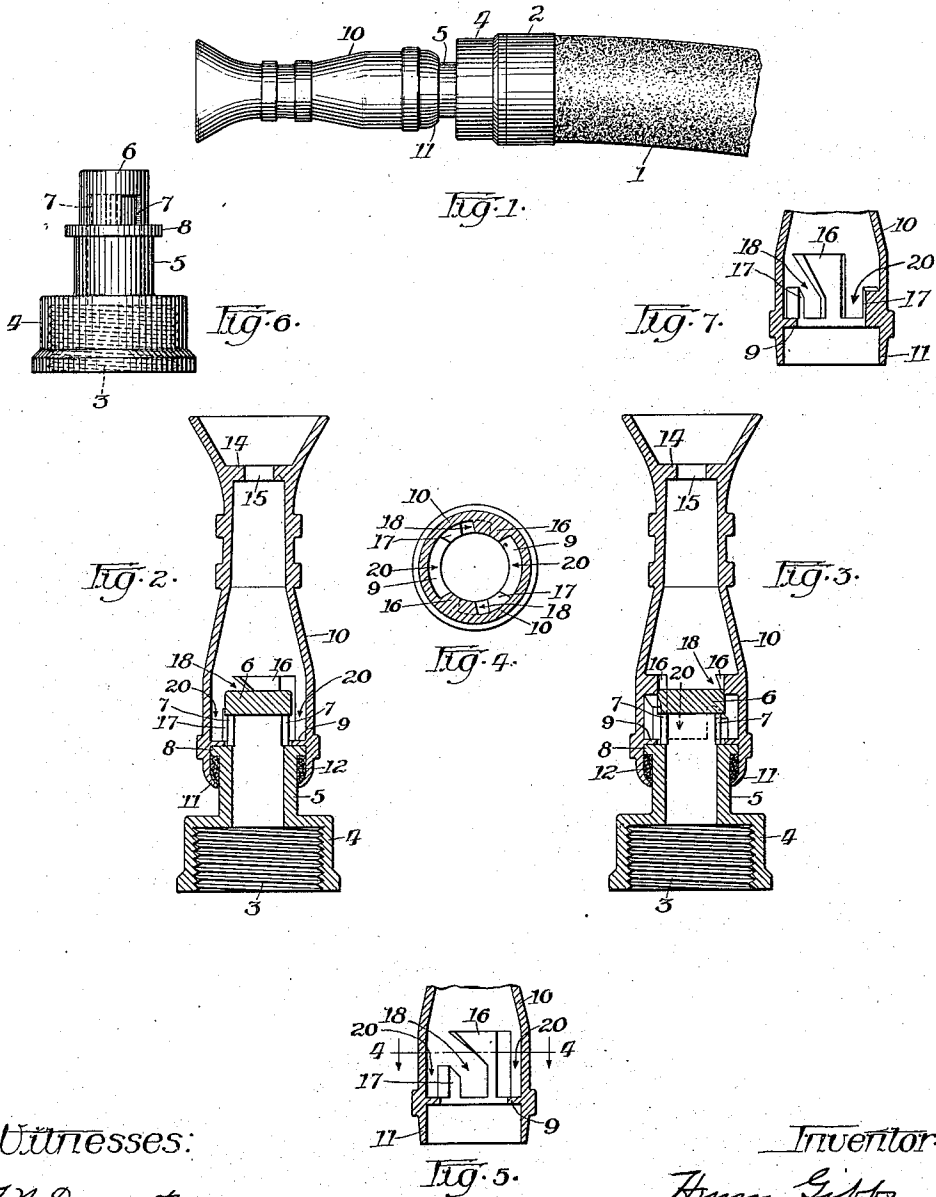


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HOSE NOZZLE.
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1,014,386.

Patented Jan. 9, 1912.



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UNITED STATES PATENT OFFICE.

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HOSE-NOZZLE.

1,014,386.

Specification of Letters Patent.

Patented Jan. 9, 1912.

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To all whom it may concern:

Be it known that I, HENRY GIBBS, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Hose-Nozzles, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification.

The present invention has relation more particularly to that class of hose nozzles in which provision is made whereby the water may be caused to issue from the nozzle, either in a solid stream or more or less in the form of spray.

The object of this invention is to simplify and cheapen the construction of such type of hose nozzle, and the invention consists in the features of improvement hereinafter described, illustrated in the accompanying drawing and particularly pointed out in the claims at the end of this specification.

Figure 1 is a view in elevation showing a hose nozzle embodying my invention, the nozzle being illustrated as applied to the end of a section of hose. Fig. 2 is a view in central longitudinal section through the hose nozzle with the parts in position for throwing a full stream of water. Fig. 3 is a view in central longitudinal section through the nozzle when its parts are turned to cause the water to issue in the form of spray. Fig. 4 is a detail view in horizontal section through the upper portion of the nozzle on line 4-4 of Fig. 5. Fig. 5 is a fractional view in longitudinal section through the base portion of the upper part of the nozzle. Fig. 6 is a view in elevation of the inner member of the improved nozzle. Fig. 7 is a sectional view similar to Fig. 5 but taken on another plane.

1 designates the section of hose to which the nozzle is attached, the end of the hose being shown as provided with a coupling 2 that will have a screw threaded portion adapted to enter and engage the correspondingly screw threaded portion 3 of the expanded part 4 of the inner member of my improved nozzle. The inner member of the nozzle has a hollow chambered portion 5, beneath the top 6 in the side wall of which are formed openings 7 through which the water will issue as it is delivered to the chambered portion 5. Beneath the openings 7 an annular flange 8 is formed on the reduced

portion 5 of the inner member of the nozzle and upon this annular shoulder 8 will set an inwardly projecting annular flange 9 that is formed upon the interior of the outer member 10 of the nozzle. The outer member 10 of the nozzle has a part 11 adapted to set over the flange 8, and when this part 11 has been placed in position, as shown in Figs. 2 and 3, the lower edge portion of this part 11 will be bent inwardly, as shown, in order to retain the suitable packing 12 between the flange 8 and the lower edge of the part 11, and prevent the escape of water at such point.

The outer member 10 of the nozzle is chambered and is shown as having its end flaring and as having a transverse wall 14 provided with a discharge port 15 for the passage of water therethrough. Upon the interior of the outer member 10, and above its flange 9 are formed two ribs or offsets 16 and 17. There are two ribs 16 and these are arranged diametrically opposite each other, and similarly there are two ribs 17 at opposite points of the member 10 of the nozzle. By reference more particularly to Fig. 5 it will be seen that the ribs 16 and 17 cooperate to form an inclined channel 18, the purpose of this channel being to impart a swirling or rotary motion to the stream of water as it passes through the chambered portion 10 of the nozzle. As shown, the inner end of each of the channels 18 is straight and by reference to Fig. 3 of the drawing it will be seen that when the upper or outer member 10 of the nozzle is turned by hand, so that the discharge ports or holes 7 are opposite the straight portions of the channels 18, water will pass through the ports 7 and into the channels 18 and will thus have a rotary or swirling motion imparted thereto. This will tend to break up the stream of water and as the water issues through the restricted discharge port 15 it will pass from the nozzle in the form of spray.

By reference to Fig. 7 it will be seen that between the straight face of the rib 16 and the straight face of the adjacent rib 17 there is formed a straight channel 20. When the outer portion 10 of the nozzle is turned so as to bring the ports 7 opposite the straight channels 20, the water will pass from the ports 7 into the chambered portion 10 of the nozzle without having a rotary

or swirling motion imparted thereto. Consequently, with the parts in the relative position seen in Fig. 2 of the drawing, the water will issue from the nozzle in an unbroken stream.

As shown, the nozzle consists simply of two parts, viz: the inner or lower member and the outer or upper member, and each of these parts is made as a single casting so that when the parts are assembled it is only necessary to place one upon the other; insert the packing 12 and crimp or bend inward the lower portion 11 of the upper member.

In using the nozzle the operator will turn the upper member 10 with his hand so as to bring the parts into either the position seen in Fig. 2 to throw an unbroken stream, or into the position seen in Fig. 3 to throw a stream more or less in the form of spray.

It is manifest that the precise details above described may be varied without departing from the scope of the invention.

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

1. A hose nozzle of the character described comprising an inner member having an upper portion provided with one or more side ports, and an outer member revolubly mounted upon said inner member and provided with one or more inclined passages adapted to be brought opposite said ports of the inner member.

2. A hose nozzle of the character described comprising an inner member having an upper portion provided with one or more side ports, and an outer member revolubly mounted upon said inner member and provided with one or more inclined passages and with one or more straight passages adapted to be brought opposite said ports of the inner member.

3. A hose nozzle of the character described comprising an inner member having an upper portion provided with one or more side ports, an outer member revolubly mounted upon said inner member and provided with one or more channels having inclined upper parts and straight lower parts adapted to be brought opposite said ports of the inner member.

4. A hose nozzle of the character described comprising an inner member provided with a peripheral flange and a part extending above said flange having one or more lateral ports, an outer member provided with an interior flange to engage the peripheral flange of said inner member and having a chamber of considerably larger diameter than the inner member, said outer member having upon its interior inclined and straight channels and having a restricted discharge port at its end.

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