H. GIBBS.

HOSE NOZZLE.

APPLICATION FILED AUG. 20, 1909.

1,085,120. Patented Jan. 27, 1914.

Fig. 1.

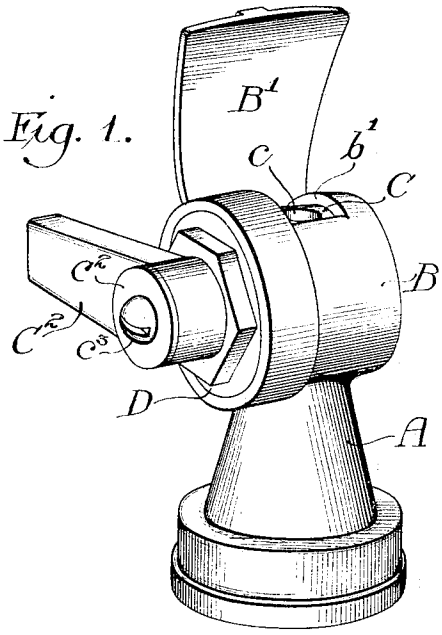


Fig. 2.

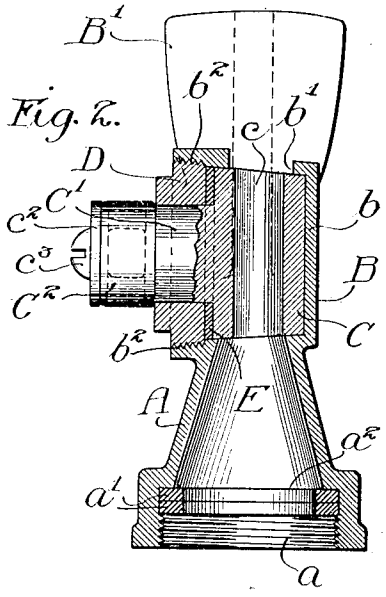


Fig. 3.

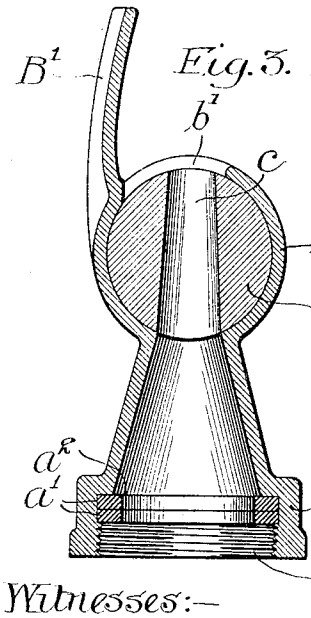


Fig. 4.

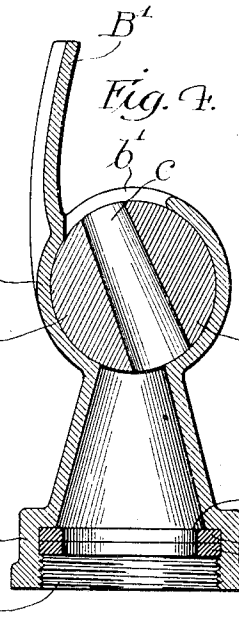
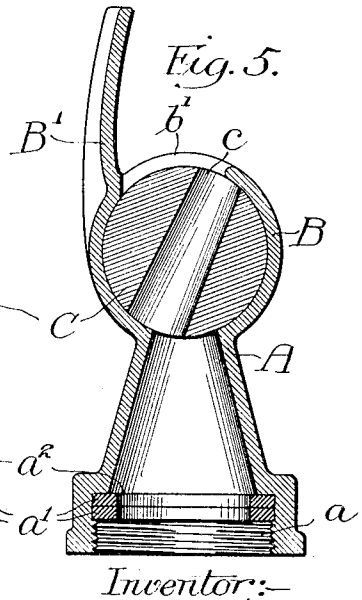


Fig. 5.



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HOSE-NOZZLE.

1,085,120. Specification of Letters Patent. Patented Jan. 27, 1914.

Application filed August 20, 1909. Serial No. 513,730.

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 for its object to provide an improved construction of hose nozzle, whereby water may be thrown from the nozzle either in a straight and solid stream or in a stream of broken or spray-like formation.

To this end the invention consists in the features of novelty hereinafter described, illustrated in the accompanying drawing and particularly pointed out in the claims at the end of this specification.

Figure 1 is a perspective view of my improved nozzle. Fig. 2 is a view in central vertical section. Figs. 3, 4 and 5 are views in vertical cross section showing the valve in different positions.

In the preferred form of my invention the improved nozzle consists of a casting A that is threaded interiorly, as at a, to permit it to be readily coupled to the end of the hose or pipe, a rubber gasket or gaskets a' being preferably placed adjacent the interior shoulder a^2 to insure a water tight coupling. Preferably, also, the casting A is of conoidal shape and has formed integral therewith the valve chamber B that communicates with the interior of the casting A. The valve chamber B is shown as having one side b closed and having an oblong opening b', diametrically opposite the opening that communicates with the interior of the casting A, and at one end of this oblong opening b', and preferably cast integral with the valve chamber, projects a deflecting plate B'. Within the valve chamber B is placed the valve C, the periphery of which is ground to snugly fit the interior of the casing B. Through the valve C is formed a transverse discharge channel c, the inner end of this channel being preferably somewhat larger at its induction end than at its discharge end. The valve C is retained within the valve casing B by means of a collar D that is screw threaded to engage corresponding screw threads b^2 upon the interior of the casing B. A packing ring E is interposed between the retaining collar D and the end of the valve C, this packing ring E encircling the stem C' of the valve. The outer end of the stem C' of the valve is preferably square or of polygonal shape to receive a handle C^2 that fits over the stem and is held thereon by means of a cap plate c^2 and screw c^3. The handle C^2 affords a convenient means whereby the valve C may be turned to any desired position.

When the valve C is in the position shown in Fig. 3 of the drawing the water from the casting A will pass directly through the valve and through the oblong port b' of the valve chamber and will be discharged as a solid stream. When, however, it is desired to throw a broken or spray-like stream of water the valve C will be turned to the position shown in Fig. 4 of the drawing; and when the valve is in this position the water issuing from the port c of the valve will be directed against the face of the deflecting plate B' which will cause the stream of water to be broken up into a fan-like shape, the extent to which the stream will be thus broken depending upon the angle at which it is directed by the valve against the surface of the deflecting plate.

If it be desired to throw a stream of a rounder, spray-like form the valve C will be turned to the position shown in Fig. 5 of the drawing, in which position the stream of water passing through the channel c of the valve will contact with the curved wall of the casing, as at b^4 where this wall partially intercepts the channel c and this will cause the spray to be deflected down upon the deflecting plate B' with the result that the stream will be broken up into a body of spray of a rounder form than will occur when the stream of water is directed, as in Fig. 4, down upon the deflecting plate B'.

It should be noted that the axis of rotation of the valve C and the working surface of the deflector plate B' is substantially parallel so that the axis of the transverse channel c swings in a plane substantially perpendicular to the working surface of the deflecting plate and the stream of water projected from the channel can be directed against the plate in an infinite variety of different angles to thereby widely vary the spray projected from the nozzle. It is obvious that the details set forth may be varied without departure from the essentials of the invention as set forth in the claims.

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 a valve casing having induction and discharge ports in its opposite side walls, a rotary plug valve in said casing having a transverse channel, and a deflecting plate projecting laterally from the wall of said casing on one side of said discharge port, said deflecting plate having a working face substantially parallel to the axis of rotation of said valve against which the stream of water from said channel may be projected at different angles, the wall of the casing on the opposite side of said discharge port being arranged, in certain positions of said valve, to deflect the water from said channel against said projecting deflecting plate, substantially as described.

2. A nozzle of the character described comprising a body portion having a conical channel therethrough and provided at its end with an integral, cylindrical valve casing with its axis transverse to the axis of said nozzle, said valve casing having a segmental discharge port in its outer side wall, a rotary plug valve in said casing having a transverse channel and a deflecting plate integral with said casing and projecting laterally therefrom on one side only of its discharge port, said deflecting plate having a concave working face substantially parallel to the axis of rotation of said valve and against which the stream of water from said channel can be projected at a variety of different angles, the opposite side of said discharge port having a rounded edge arranged in certain positions of said valve to deflect the stream of water from the channel against said deflecting plate, substantially as described.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."