

J. McBOYLE.
HOSE NOZZLE.
APPLICATION FILED SEPT. 22, 1914.

1,152,652.

Patented Sept. 7, 1915.

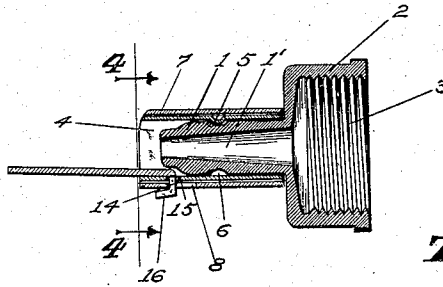


Fig. 3.

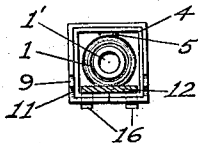


Fig. 4.

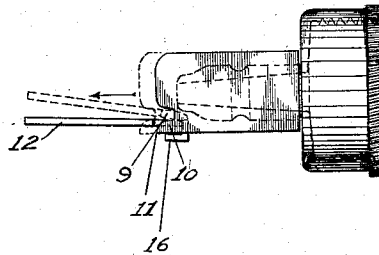


Fig. 1.

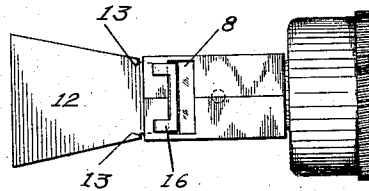


Fig. 2.

WITNESSES:
Albert Brummer
W. S. Brown

INVENTOR,
Joseph McBoyle
BY
Cox & Totten
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH McBOYLE, OF OAKLAND, CALIFORNIA.

HOSE-NOZZLE.

1,152,652.

Specification of Letters Patent.

Patented Sept. 7, 1915.

Application filed September 22, 1914. Serial No. 862,913.

To all whom it may concern:

Be it known that I, JOSEPH McBOYLE, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Hose-Nozzles, of which the following is a specification.

This invention relates to improvements in spray nozzles and particularly to that type of nozzle adapted for attachment to garden hose whereby an unbroken stream may be employed or the stream may be transformed into a spray.

The invention has for its principal objects to provide a pivotally mounted spray plate having a novel form of mounting and operating means whereby the plate is locked in a position to intersect the stream issuing from the nozzle and when said locking means is released, the force of the stream forces the spray plate to its normal position, to provide a spraying device which consists of but few parts, one which may be constructed at little cost, and one which is simple in operation and efficient for the purposes designed.

With the above mentioned and other objects in view, the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

To more fully comprehend the invention, reference is directed to the accompanying drawings, wherein—

Figure 1 is a view in side elevation of the invention. Fig. 2 is a bottom plan view. Fig. 3 is a longitudinal sectional view. Fig. 4 is a sectional view taken on line 4—4 of Fig. 3.

In the several views of the drawings, wherein like characters of reference designate corresponding parts, the numeral 1 indicates a suitable nozzle formed with a tapered opening 1' and having an enlarged base 2 interiorly threaded as at 3 for attachment to a threaded coupling. A shell or guide 4 is fitted over the nozzle 1 and the same is preferably square in cross section and of a length to extend from the base 1 a

slight distance beyond the end of the nozzle and said shell is attached to be rotated around the nozzle by an inset portion 5 adapted to lie in a groove 6 surrounding the outer surface of the nozzle. Surrounding said shell and slidably mounted thereon is a sleeve 7 formed in one wall with the elongated transverse opening 8 and in the front end of the opposite side walls adjacent said opening with the cut out portions 9 which provide the cam extensions 10 formed with rounded faces 11.

A substantially flat outwardly flaring spray plate 12 extends outwardly from the inner surface of the shell 4 and the inner side edges of the same are cut inwardly, as at 13, and extend parallel with each other to a point beneath the end of the nozzle 1 where the plate is bent at right angles, as at 14, and extends through a transverse opening 15 in the shell 4 and the opening 8 in the sleeve 7. The extreme inner end of the plate after passing through the openings 15 and 8 is bent forwardly, as at 16, and assists in locking the plate 12 in position.

It will be apparent that the operator sliding the sleeve 7 outwardly will cause the rounded edges 11 of the cam extensions 10 to ride under the cut-in portions 13 of the spray plate 12 and force the same upwardly into the dotted line position, as in Fig. 2, causing the same to intersect the line of discharge from the nozzle and diffuse the flow of liquid therefrom. On the sliding of the sleeve inwardly the outer end of the plate 12 will drop by gravity and will be assisted in assuming a position parallel with the line of the sleeve by the force of the fluid issuing from the nozzle.

By constructing the device as above described, the spray plate, shell and sleeve are capable of movement circumferentially of the nozzle to direct the spray in any direction without turning the nozzle, the outer end of the nozzle 1 assists in maintaining the spray plate in position in the shell and the bent inner end of the plate extending through the slot in the sleeve limits the inward movement of the sleeve.

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

1. In a device of the class described, the combination with a nozzle, a guide carried by the same, a spray plate pivotally mounted at its inner end to said guide and formed

on its opposite side edges with laterally projecting portions, and a sleeve slidably mounted on said guide and carrying cam surfaces for engaging under said laterally projecting portions for forcing the outer end of said spray plate within the path of the stream issuing from said nozzle.

2. In a device of the class described, the combination with a nozzle, a guide surrounding the same and formed with a slot in one side, a sleeve slidable on said guide and formed in one side with a slot and provided at its opposite outer side edges with cam surfaces, and a spray plate adapted at its inner end to extend through said slots in said guide and sleeve and capable of a pivotal movement, said cam surfaces adapted to engage under said spray plate for forcing the outer end thereof within the path of the nozzle.

3. In a device of the class described, the combination with a nozzle, a guide surrounding the same and formed with a slot in one side, a sleeve slidable on the guide and cut away at its front edge forming cam surfaces, and a spray plate adapted at its inner end to extend through said slot in said guide and capable of pivotal movement, said cam surfaces adapted to engage under said spray plate for forcing the outer end thereof within the path of the nozzle.

4. In a device of the class described, the combination with a nozzle, a plate bent therearound and having flat faces, said plate forming a guide, a spray plate projecting

beyond the discharge end of said nozzle and pivotally mounted at its inner end to said guide, a plate bent around said guide and having flat faces to correspond with the faces of said guide, and forming a sleeve slidably mounted on said guide, and a cam carried by said sleeve for engaging under said spray plate when said sleeve is moved outwardly on said guide, the cam adapted for moving the end of said spray plate into the path of said nozzle.

5. In a device of the class described, the combination with a cylindrical nozzle formed with an annular groove, a plate bent around said nozzle and having flat faces, said plate forming a guide rotatably mounted on the nozzle and provided with an indentation for coöperation with said annular groove to prevent the movement of the guide from the nozzle, a spray plate pivotally mounted at its inner end to said guide and projecting beyond the discharge end of the nozzle, a sleeve surrounding the said guide and slidably mounted thereon, said sleeve formed with cam surfaces for engaging under said spray plate for moving the free end thereof into the path of the nozzle.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH McBOYLE.

Witnesses:

HARRY A. TOTTEN,
W. F. DREW.

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