(No Model.)

I. W. McGAFFEY.

HOSE NOZZLE.

No. 382,099. Patented May 1, 1888.

Fig. 1.

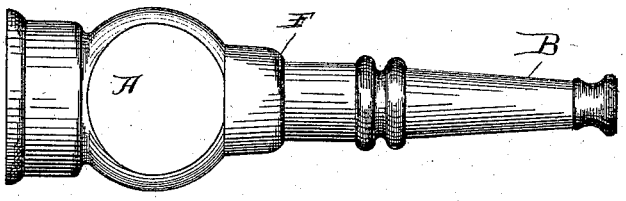


Fig. 2.

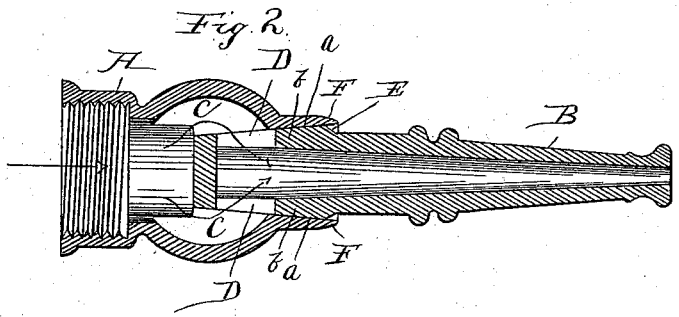
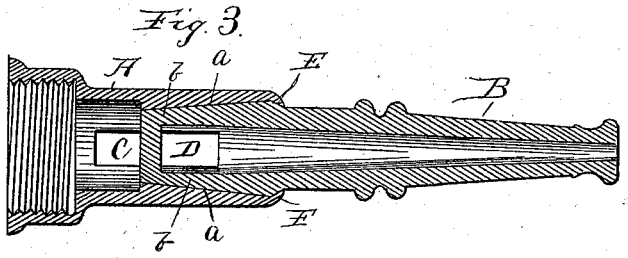


Fig. 3.



Witnesses:
Lew. C. Curtis.
W. W. Munday.

Inventor:
Ives W. McGaffey
By Munday Evarts & Adcock
His Attorneys.

UNITED STATES PATENT OFFICE.

IVES W. McGAFFEY, OF CHICAGO, ILLINOIS, ASSIGNOR TO JOHN H. BROWN, OF SAME PLACE.

HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 382,099, dated May 1, 1888.

Application filed December 12, 1887. Serial No. 257,679. (No model.)

To all whom it may concern:

Be it known that I, IVES W. McGAFFEY, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Hose-Nozzles, of which the following is a specification.

This invention relates to the improvements in the construction of hose nozzles capable of throwing a solid stream or spray, and in which the entire nozzle may be made of only two pieces of metal, constituting together both the pipe itself and its valve without any pins, bolts, nuts, packing, or screw-threads other than the ordinary thread by which the pipe is coupled to the hose. These two parts are fitted together to turn one upon the other axially with the bore of the nozzles, and are held together by a lip from one being spun or turned down over a shoulder on the other. By this simple means a valve is formed, as will be explained, capable of changing the stream from a solid jet to a spray or entirely cutting off the water with a very slight rotary movement of one part upon the other, and all small parts and pieces, threads, screws, bolts, and packing are thereby dispensed with, making an exceedingly simple, effective, and cheap device not liable to get out of order or leak.

In the accompanying drawings, which form a part of this specification, Figure 1 is a view of my improved nozzle. Fig. 2 is a vertical longitudinal section of Fig. 1, and Fig. 3 is a horizontal longitudinal section of same.

The pipe, as shown in the drawings, consists of two pieces of metal, the butt A and the point B. In the butt A is a conical seat, *a*, and in the point B is a conical part, *b*, fitted or ground to turn smoothly in said seat. In the butt are lateral passages C C, forming a course for the water, and in the conical part of the point are ports or apertures D D, corresponding to the passages C C. The end of the conical plug *b* is closed or imperforate, so that the course of the water will be through the lateral passages and into the bore of the point by way of the ports. In order to secure the two pieces together, I form a shoulder, E, on the point at the base of the cone and spin the lip F down over the shoulder, said lip being thin enough for this to be done. The two pieces being concentrically mounted in a lathe, this act of spinning the lip down over the shoulder is done very easily and quickly, producing a close joint. The pressure of the water tends to make this joint close in use, so that packing is unnecessary.

A quarter-turn of the pipe suffices to fully close or open the ports, and any condition of stream between a solid jet and fine spray may be produced by varying the position of one part relative to the other between full open ports and wholly closed ones, as the water escapes in a winding course.

The shape of the ports and the passages may of course be varied, as desired, without departing from the spirit of my invention.

I am aware that it is not new with me to combine in a nozzle a tapering section or point having lateral ports with a butt having a conical seat and lateral passages where the parts are secured together by a bolt or screw, and I do not claim such as my invention, the purpose of which is to dispense with all bolts, packing, &c., and reduce the nozzle to a simple construction.

I am also aware that a nozzle made in one piece has heretofore been provided with a cap at its orifice acting as a valve, such cap being secured by turning its rear rim inward over a head cast upon the point of the nozzle.

I claim—

A hose-nozzle consisting of a butt-section and a rotatable point-section, the butt-section receiving and forming a seat for the point-section and having a lip, F, at its outer end, the point-section having a shoulder, E, and both sections having ports and passages for the water adapted to be opened and closed by the rotation of the point-section, and being secured together by the turning down of the lip F over shoulder E, substantially as set forth.

IVES W. McGAFFEY.

Witnesses:
H. M. MUNDAY,
JOHN W. MUNDAY.