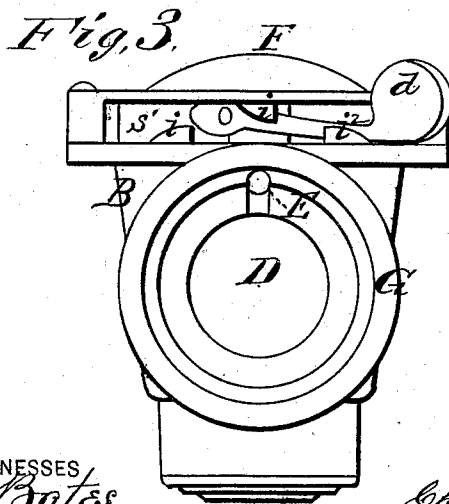
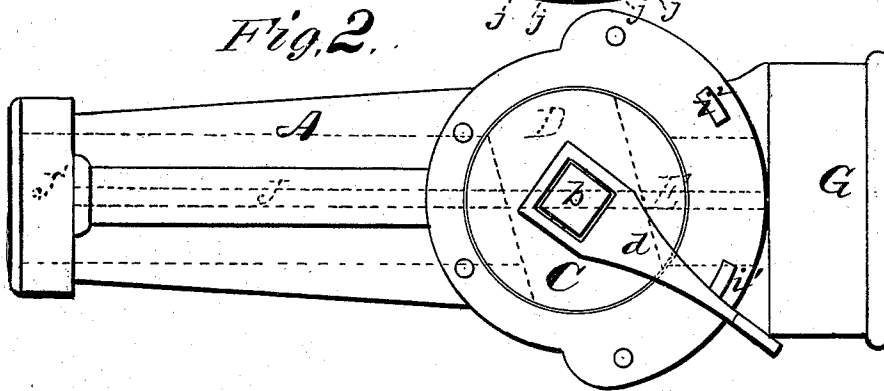
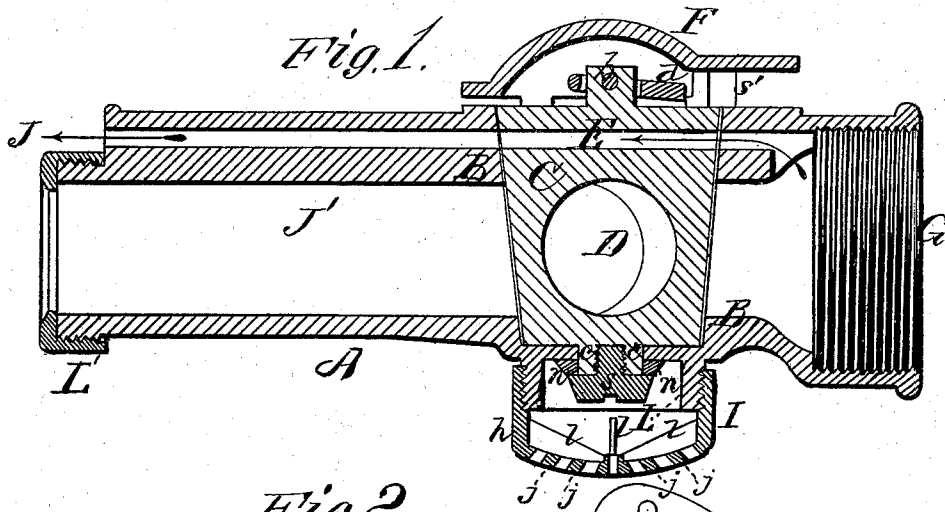


C. S. WESTLAND.

HOSE-NOZZLE.

No. 170,138.

Patented Nov. 16, 1875.



WITNESSES
E. H. Bates
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ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES S. WESTLAND, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR OF ONE-HALF HIS RIGHT TO THE ALLEN FIRE DEPARTMENT SUPPLY COMPANY, OF SAME PLACE.

IMPROVEMENT IN HOSE-NOZZLES.

Specification forming part of Letters Patent No. **170,138**, dated November 16, 1875; application filed October 23, 1875.

To all whom it may concern:

Be it known that I, CHARLES S. WESTLAND, of Providence, in the county of Providence and State of Rhode Island, have invented a new and valuable Improvement in Hose-Nozzles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal section of my hose-nozzle, and Fig. 2 is a plan view of the same. Fig. 3 is an end view thereof.

This invention has relation to hose-nozzles; and it consists in the construction and novel arrangement of a nozzle designed to be screwed on the free end of a discharge-pipe, and provided with large and small water-ways, in combination with a valve to close one when the other is open, for a purpose hereinafter described. It also consists in combining with a nozzle a hinged handle or key and a slotted cap for protecting this key from blows, having stops arranged for the purpose of allowing the valve to be opened quickly, and, at the same time, preventing it from being closed suddenly, and thereby giving an injurious blow to the hose. My invention also consists in the novel construction of a detachable cap for throwing a spray, and in providing the valve-case with a screw-seat for holding the cap when not in use, all as hereinafter shown and described.

In the annexed drawings, the letter A designates my improved nozzle, which is designed to be screwed upon a supply-pipe, and is provided with a small water-way, J, and a large water-way, J', for the purpose of throwing a large and a small stream. B designates a valve-seat of the form of a conical frustum, arranged at right angles to water-ways J J', and designed to receive a plug-valve, C, of corresponding form, through which are made, at right angles to each other, orifices D E, one of large and the other of small size, adapted to register, respectively, with the large and with the small water-ways J J'. The smaller

end of valve-plug B is provided with a central polygonal projection, c, which passes through an opening on the corresponding end of the valve-seat, and is secured thereto by means of a screw, s, passing into a threaded recess in the said projection, and a washer or nut, n, of suitable shape, which is passed over the projecting end of the projection c, and bears against the end of the casing or seat, and thus serves as a clamp for taking up wear. The other end of this valve is provided with another projection, b, to which is hinged or pivoted an operating-handle, d, which will enable the valve to be conveniently rotated, for the purpose of causing its large opening to register with the large water-way J', or the small opening with the small way J, as the necessities of the case may require. F indicates a metallic plate, which is secured on the larger end of the valve-case, and covers the operating-handle d, which projects through a slot, s', formed in the side of the said cap for the purpose. This cap is sufficiently strong to protect the operating-arm d from being broken by a casual shock occasioned by a fall or other accident, and it is provided upon its under side with an angular downwardly-projecting lug, i, situated intermediately to two similar lugs, i¹ i², projecting upward from the valve-case, which lugs are designed to act as stops or guides to regulate the discharge of water from the large water-way J', and to cut it off entirely from both the small and the large water-ways. This will be accomplished in the following manner, to wit: The nozzle being attached to the supply-pipe by means of a screw-threaded coupling, G, on its larger end, if the operating-lever be thrust to the left to a position just outside of the lug i¹, the small orifice in the valve will be brought registering with the small eduction-way J in the nozzle, causing a small stream to be thrown. If the said handle be thrust to the left as far as possible the small stream will be instantly cut off, and the large one also, thus stopping the flow of water altogether; but if, now, the lever d be thrust to the right, past lugs i¹ i², to the opposite end of slot s', the large opening in the valve-plug

will register accurately with the large educt J' in the nozzle, and a very large stream will be produced. Should this stream prove excessive it may be reduced slightly by thrusting the said lever to the left back against lug i^2 , more by thrusting it in contact with the central lug i , still farther when moved to lug i^1 , and finally cut off altogether by causing it to pass the said lug i^1 , when the very small stream before described as issuing from the small educt J will be restored. The lugs, as shown in Fig. 3, are of angular form, one face being perpendicular to the length of the slot, and the other at an inclination thereto, thus greatly facilitating whatever changes may be requisite in the position of lever d for producing the above-described streams.

It will be seen in practice that, the perforations D E in the valve C being at right angles to each other, it is impossible to have a small stream and a large one at the same time, as, when perforation D is opposite the large water-way J' , the smaller water-way J is cut off and no water can pass through. The large water-way is to be used in case of fire, while the smaller one is intended for the purpose of sprinkling the street and washing the pavement. I designates a rose-cap, which is intended to be used for the purpose of throwing a spray, and is designed to be screwed on the end of large water-way J' , above described, and L designates a screw-seat on the reduced end of the valve-case, which is designed to hold this rose when not in use. L' designates a detachable annulus, which is intended to be screwed on and serve as a protection to the screw-seat L when the cap I is on the screw-threaded end of the large way. This annulus and rose are interchangeable, and when the rose is on the large water-way J' the annulus may be on the screw-seat and the reverse.

Rose I consists of concentric spaced rings or annuli j , which are each of the general shape of the frustum of a cone, as shown in cross-section, Fig. 1, and are arranged in an inverted position, and are supported from below by means of diametrical bridges l , subtending the screw-threaded rim h , so when the stream is turned on it diverges in every direction from the center, and spreads over a broad surface.

I claim—

1. In a hose-nozzle, the combination of the large and small water-ways J J' with the plug-valve C , having at right angles to each other orifices D E , adapted to register with large and small ways J J' in the nozzle, and corresponding diameters therewith, substantially as specified.

2. The combination, with the valve-plug C , having hinged operating-arm d , of the guard cap or plate F , having slot s , substantially as specified.

3. The combination, with the large water-way J' and the small water-way J in a hose-nozzle, and the valve-plug C , having a large orifice, D , and a small orifice, E , corresponding therewith, of the hinged operating-handle d and angular spaced stops i i^1 i^2 in the slot s of a guard.

4. The combination, with the hinged handle d on a valve-plug, C , of the guard cap or plate F , for protecting the said handle from casual injury, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES S. WESTLAND.

Witnesses:

JOHN C. PURKIS,
HENRY MARTIN.