D. B. CHASE.

FOUNTAIN-NOZZLES.

No. 182,413. Patented Sept. 19, 1876.

Fig. 1

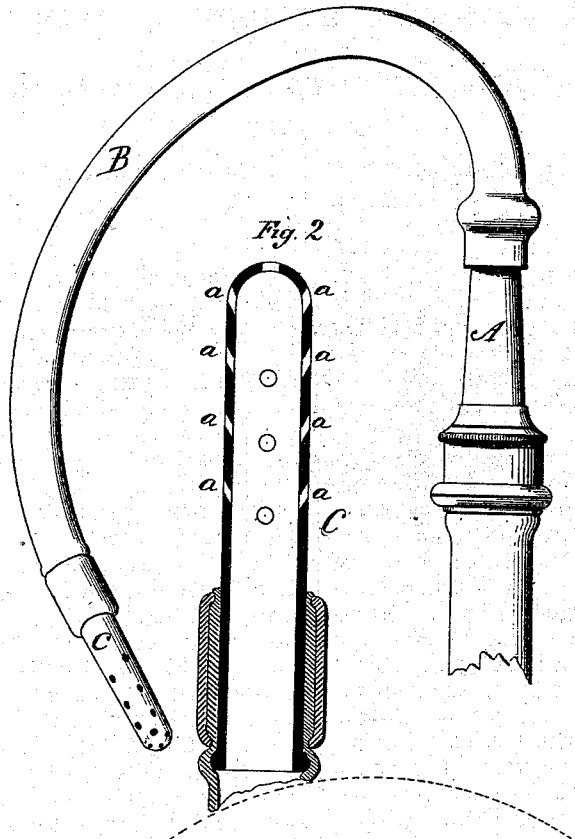


Fig. 2

Fig. 3

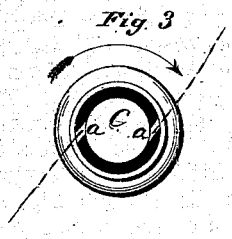
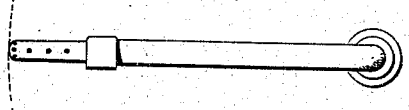


Fig. 4



Witnesses.

J. W. Chinnery

Clara Broughton.

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UNITED STATES PATENT OFFICE.

DAVID B. CHASE, OF WEST WINSTED, CONNECTICUT.

IMPROVEMENT IN FOUNTAIN-NOZZLES.

Specification forming part of Letters Patent No. **182,413**, dated September 19, 1876; application filed August 21, 1876.

To all whom it may concern:

Be it known that I, DAVID B. CHASE, of West Winsted, in the county of Litchfield and State of Connecticut, have invented a new Improvement in Fountain-Nozzles; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the nozzle when the flow is cut off; Fig. 2, a vertical central section of the nozzle enlarged; Fig. 3, a transverse section of the same; and in Fig. 4, a plan illustrating the operation of the nozzle.

This invention relates to an attachment for fountain-nozzles, the object being to discharge a spray, and by the force of the discharge cause the nozzle to rotate. It consists in combining, with a stationary nozzle or discharge, a flexible tube, terminating with a nozzle perforated transversely, the said perforations inclining both longitudinally and radially, as more fully hereinafter described.

The device is shown as applied to a common hose-pipe, A, made fast in vertical position; but it may be applied to any discharge similarly arranged. B is a flexible tube or common india-rubber hose, of such a nature as to be extremely flexible. One end of this flexible part B is drawn on over the tip of the nozzle. To the other end the discharge or nozzle proper C is attached. This nozzle C consists of a cylindrical tube, its outer end wholly or partially closed, and on the sides of the nozzle several perforations, *a*, are made. These perforations incline longitudinally inward from the end, or downward, as seen in Fig. 2. They also have a radial incline, as seen in Fig. 3, the radial incline all being in the same direction. This completes the device.

The loose pipe having been secured in a vertical position, and the flexible tube applied, as described, water is let on in the usual manner, flowing with force through the perforations in the tube C. The jets discharging, as indicated in broken lines, Fig. 3, through the inclined perforations, react upon the tube, and impart to it a rotating or revolving force, while the longitudinal incline causes a reactionary force upon the tube C toward the fixed nozzle A.

As the rotary or revolving motion of the tube C would twist the flexible tube, this force, combined with the longitudinal force, causes the flexible tube to swing around the fixed nozzle, the tube performing one full revolution to each full swing around the fixed point. The twist, therefore, which would be put into the flexible tube by the revolution of the discharge-tube, will be taken out by the swinging around the fixed point—that is to say, the swinging of the flexible tube around this fixed point would twist the tube once around, if the free end did not revolve, and as the revolution of the tube by the force of the water is in the same direction as the twist which would be imparted to the tube by such swinging around the fixed point, one twist counteracts the other, the twisting force of the discharge causing the tube to swing in order to free itself from the twist given it by the discharge.

I claim—

In combination with a flexible discharge-tube, the tubular discharge, perforated with openings inclined both longitudinally and radially, substantially as described.

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Witnesses:
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