

(No Model.)

P. M. CHILD.
SPRINKLING NOZZLE AND SPRAYING NOZZLE.

No. 580,251.

Patented Apr. 6, 1897.

Fig. 1.

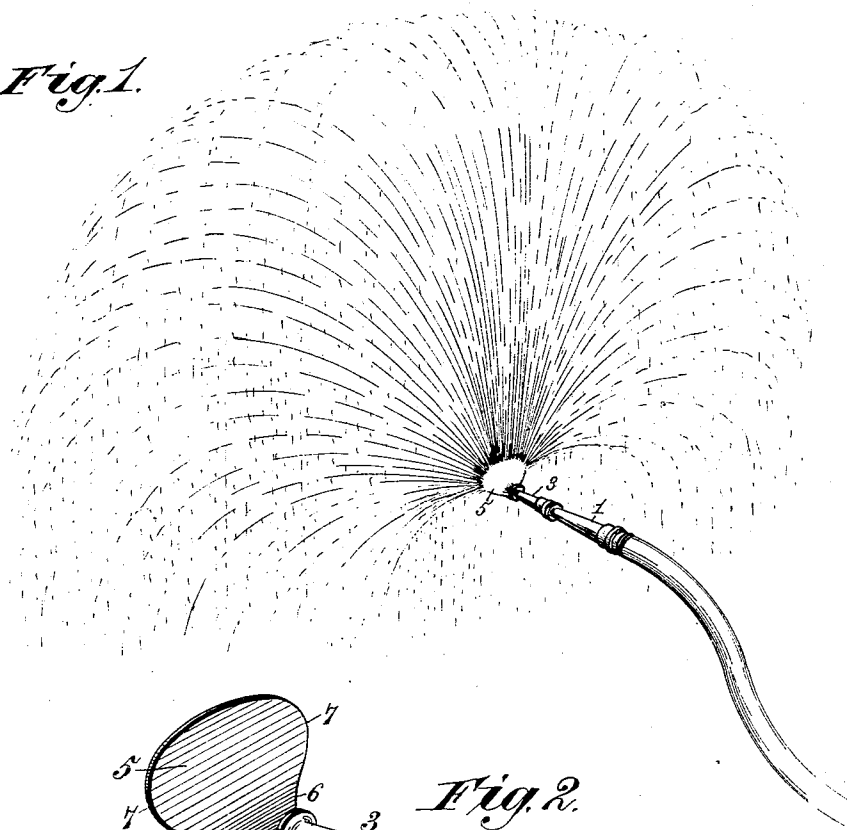


Fig. 2.

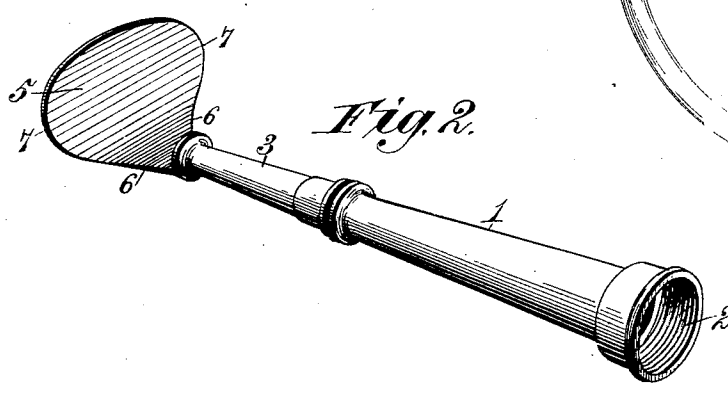
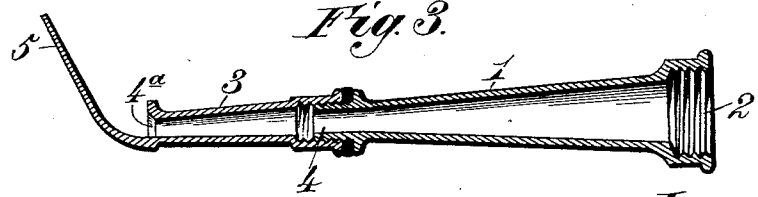


Fig. 3.



Witnesses:
Phet Everett,
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UNITED STATES PATENT OFFICE.

PARKER M. CHILD, OF GRAND RAPIDS, MICHIGAN.

SPRINKLING-NOZZLE AND SPRAYING-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 580,251, dated April 6, 1897.

Application filed February 8, 1896. Serial No. 578,498. (No model.)

To all whom it may concern:

Be it known that I, PARKER M. CHILD, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented new and useful Improvements in Sprinkling and Spraying Nozzles, of which the following is a specification.

This invention has for its object to provide a novel, simple, efficient, and economical spraying or sprinkling nozzle for hose, which possesses such characteristic features of construction that when in use the discharging water is raised and showered precisely like rain and begins to fall from a point in proximity to the delivery edge of the nozzle-blade throughout the distance that the shower is projected.

To accomplish this object my invention consists in a spraying-nozzle having a conoidal or flaring delivery-orifice and provided with a fan-shaped blade longitudinally curved in an upward direction with the curved portion directly in front of the conoidal or flaring delivery-orifice, said blade being flangeless at its sides and having its top surface substantially flush with the lower edge of the conoidal or flaring delivery-orifice of the nozzle.

Figure 1 is a perspective view of the improved nozzle represented as in use. Fig. 2 is a similar view, omitting the representation of the showering water; and Fig. 3 is a longitudinal sectional view.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates the tapering body of the nozzle, having at one end a screw-threaded socket 2 for attachment to a hose, and at the opposite end a removable and replaceable section 3, adapted to screw into and out of engagement with the screw-threaded nipple 4 on the body of the nozzle. The removable and replaceable section 3 is tapering and constructed with a conoidal or flaring delivery-orifice 4^a, by which the water passing through the nozzle is capable of spreading and striking the improved showering, spraying, or sprinkling blade 5. This blade is fan-shaped and formed integral with or firmly

and permanently attached to the delivery end of the removable and replaceable nozzle-section 3. The blade is abruptly curved in an upward direction from its junction with the delivery end of the nozzle-section 3, and the curved portion rises upwardly directly in front of the circular delivery-orifice 4 of this nozzle-section. The blade is very wide at its top portion as compared to the point where it joins the nozzle-section 3, and this peculiar construction is obtained by converging the side edges 6 from the rounded ends 7 of the blade to the point where the latter joins the removable and replaceable nozzle-section.

The lower edge of the circular delivery-orifice 4^a in the nozzle-section 3 is flush with the upper surface of the blade where the latter joins the nozzle-section 3, so that the water emerging from the circular orifice glides smoothly over the top surface of the blade and is directed almost perpendicularly in a curved path from the point where the water emerges from the circular orifice. The curve of the blade is uniform at the lower portion, where it joins the removable and replaceable nozzle-section 3, and the remaining portion of the blade is approximately straight and stands at an obtuse angle to the nozzle-body, all in such manner that the discharging water is raised and showered precisely like rain and begins to fall from a point at or in proximity to the top delivery edge of the blade throughout the distance that the shower is projected.

My improved construction of spraying or sprinkling nozzle secures a rain-like shower, which is very desirable when watering grass, plants, and the like, in that all danger of washing out flower or other beds and boxes is avoided.

If the nozzle is held approximately horizontal in a fixed position, the nozzle-blade of the peculiar construction described and shown will produce a rain-like shower over a comparatively large area.

The fan-shaped blade, curved in the manner explained and arranged in front of the conoidal or flaring delivery-orifice of the nozzle-body, is fixed at such an angle that the stream of water is deflected and sent upward to such height that it descends in a perfect

spray and covers considerable space, so that it is in effect the same as a shower of rain. The curved blade is flangeless at its side and is constructed with a perfectly smooth top surface, so that the water passes over in a spray or in drops.

When the nozzle is secured to a hose through which a strong current of water is driven, the water strikes the longitudinal and upwardly-curved blade and is sprayed immediately on striking the center of the blade, from whence it is deflected laterally and upwardly, so that a portion of the water leaves the blade on either side in proximity to the conoidal or flaring delivery-opening 4^a , and a portion of the water passes along the blade over the top edge thereof, thus causing a broad and uniform stream to be discharged over the entire front of the blade, the upward curve of the blade raising the water so that

it falls like rain-drops upon the surface to be irrigated.

Having thus described my invention, what I claim is—

A spraying-nozzle having a conoidal or flaring delivery-orifice 4^a and provided with a fan-shaped blade longitudinally curved in an upward direction with the curved portion directly in front of the conoidal or flaring delivery-orifice, said blade being flangeless at its sides and having its top surface substantially flush with the lower edge portion of the conoidal or flaring delivery-orifice of the nozzle, substantially as described.

In witness whereof I have hereunto set my hand in presence of two subscribing witnesses.

PARKER M. CHILD.

Witnesses:

EDWARD TAGGART,
CHRISTOPHER HONDELINK.