J. READE.

SPRAY NOZZLE.

APPLICATION FILED MAR. 22, 1910.

969,657.

Patented Sept. 6, 1910.

Fig. 1.

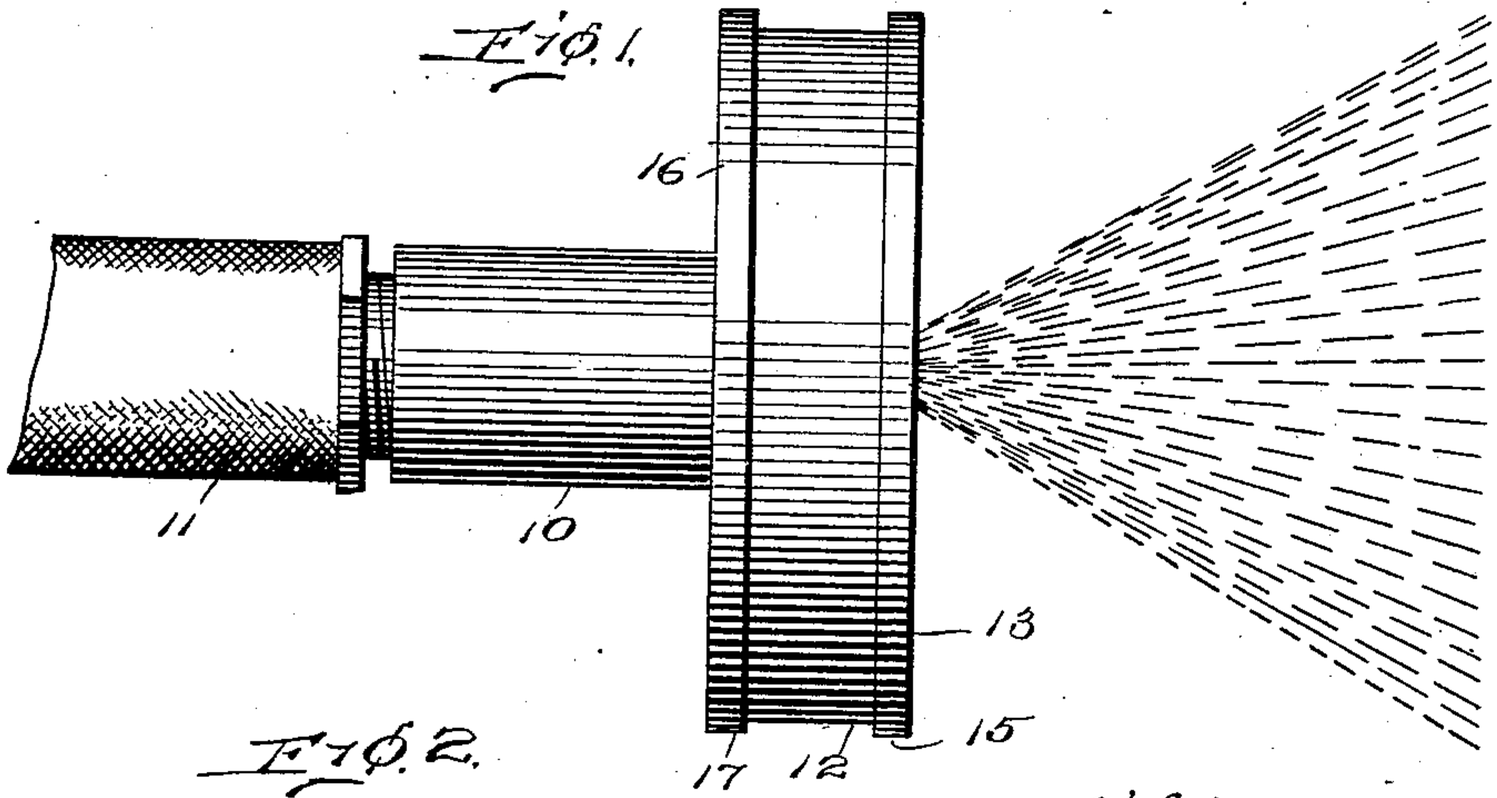


Fig. 2.

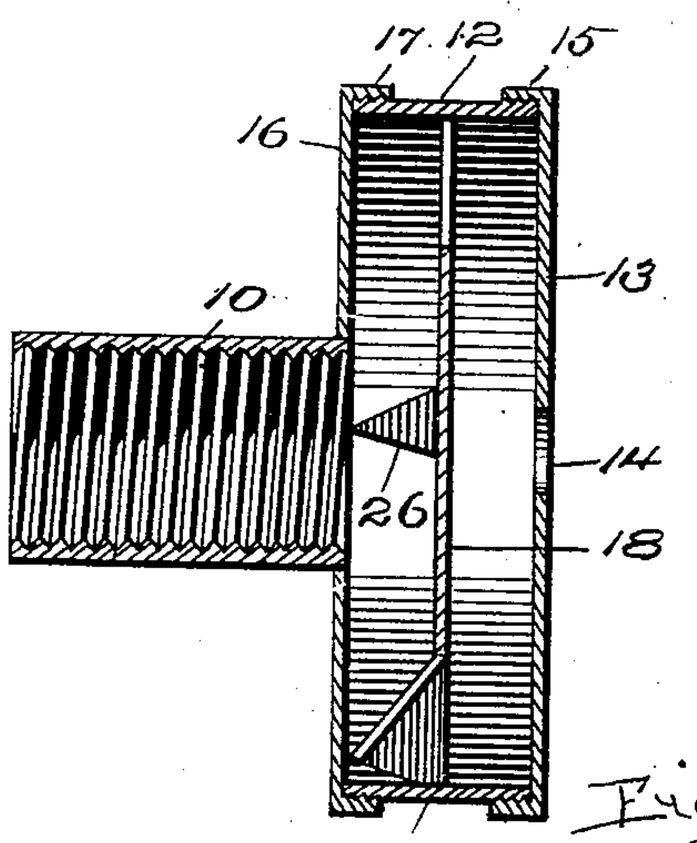


Fig. 3.

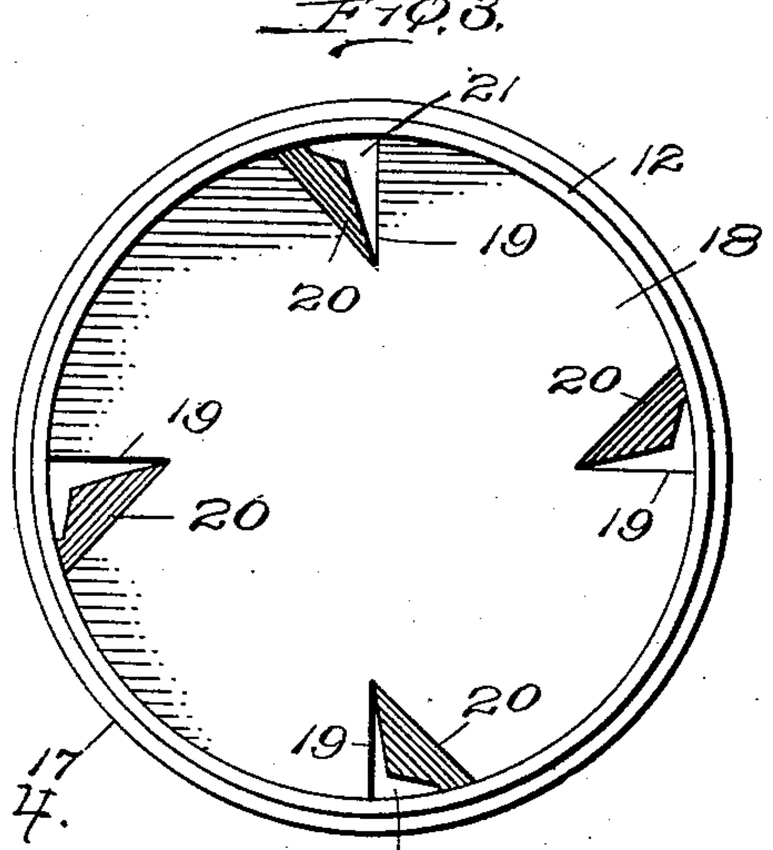
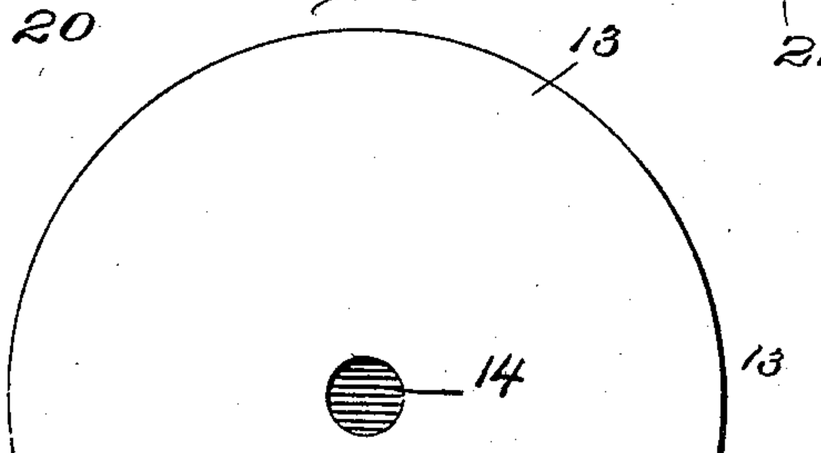


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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SPRAY-NOZZLE.

969,657. Specification of Letters Patent. **Patented Sept. 6, 1910.**

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To all whom it may concern:

Be it known that I, JAMES READE, a citizen of Great Britain, residing at Huntington, in the county of Suffolk and State of New York, have invented certain new and useful Improvements in Spray-Nozzles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to spray nozzles, and has for an object to provide a nozzle embodying new and improved features of convenience, reliability and economy.

A further object of the invention is to produce a nozzle having a discharge orifice and with means interposed between the discharge orifice and the connecting hose adapted to produce a rotary motion of the water which, when discharged through the discharge orifice, will by centrifugal force expand into a conical spray.

With these and other objects in view, the invention comprises certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described and claimed.

In the drawings:—Figure 1 is a view in side elevation of the improved spray nozzle showing in broken lines the cone of discharge. Fig. 2 is a sectional view diametrically of the nozzle. Fig. 3 is a plan view of the nozzle with the front cap removed. Fig. 4 is a view of the nozzle in front elevation.

Like characters of reference designate corresponding parts throughout the several views.

The nozzle comprises a nipple 10 provided with means for connecting with the hose shown conventionally at 11 and has secured to and communicating with such nipple a casing 12.

The casing 12 may be integral or permanently connected together and provided in its front wall 13 with a central orifice 14 but preferably for convenience in manufacture and repair, and also to gain access to the casing the wall 13 is provided with a flange 15 which embraces the casing 12 and is connected therewith in any approved manner as by the screw threads as indicated at Fig. 2. The rear wall 16 may also be connected with the casing 12 by means of the flange 17 and the screw threads as indicated. By this arrangement parts may be separated as desired.

Centrally of the casing 12 a diaphragm 18 is rigidly secured being slitted radially as at 19, wings 20 bent downwardly at an angle toward the rear wall 16. It will be apparent that the wings 20 are disposed at an inclination to the wall 16 and also to the diaphragm 18 and that when water is admitted to the rear of the diaphragm through the nipple 10 it passes outwardly and engaging the inclined wings 20 is discharged through the openings 21 and thereby given a rotary motion. The continued passage of water up the inclined wings 20 continues the rotary motion until the chamber above the diaphragm is filled when the water is forced to pass through the discharge orifice 14, still in the rapidly rotating condition. As soon as it is discharged through the orifice 14 in such rotating condition it will be apparent that by centrifugal force the stream of water so discharged will be broken up into a spray as indicated at Fig. 1.

What I claim is:—

A nozzle comprising a casing with a front and rear wall, a central diaphragm dividing said casing into two opposite compartments, the rear wall having a water inlet, and the front wall having a water outlet, said diaphragm having triangular portions all bent rearwardly from the diaphragm to provide wings and openings whereby liquid passing through the nozzle issues in spray form.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES READE.

Witnesses:
MAY E. SEAMAN,
THERON H. SAMMIS.