Jan. 7, 1936. C. J. KURTZ 2,026,743

SPRAY NOZZLE

Filed Nov. 26, 1934

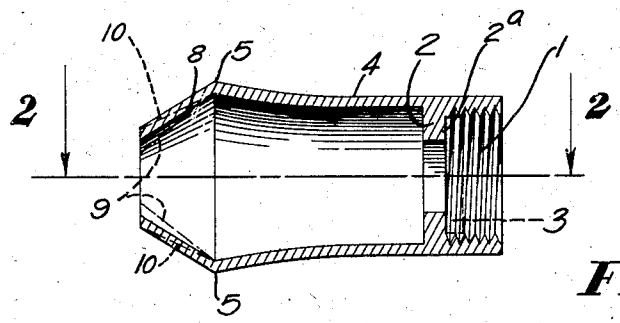


FIG. 1

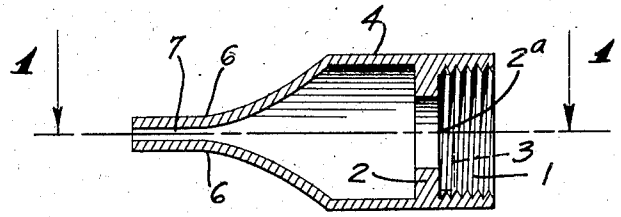


FIG. 2

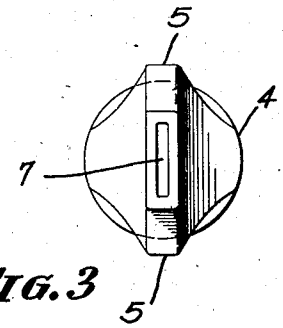


FIG. 3

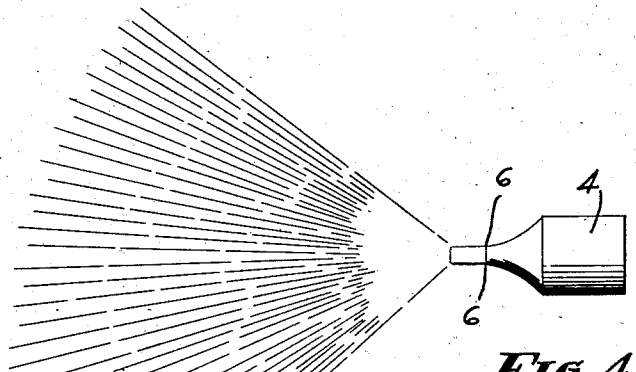


FIG. 4

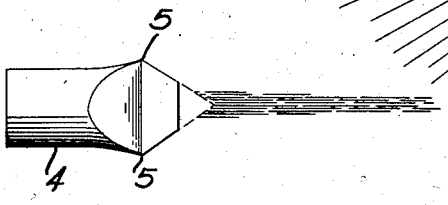


FIG. 5

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SPRAY NOZZLE

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6 Claims. (Cl. 299—154)

My invention relates to spray nozzles for spraying liquids such as water for irrigation purposes or the like, and the objects of my invention are:

First, to provide a spray nozzle that produces a diverging thin fan like spray from the exit of the nozzle;

Second, to provide a spray nozzle of this class in which a large volume of water is equally distributed over a fan like area from the exit of the nozzle;

Third, to provide a spray nozzle of this class in which the width of divergence of the fan like spray is varied by varying the angle of the nozzle immediately preceding the exit therefrom;

Fourth, to provide a spray nozzle of this class which provides a fan like spray of approximately equal distribution throughout the area of the spray with varying pressures, and

Fifth, to provide a spray nozzle of this class which is very simple and economical to manufacture, efficient in its action, and which will not readily deteriorate or get out of order.

With these and other objects in view as will appear hereinafter, my invention consists of certain novel features of construction, combination and arrangement of parts and portions as will be hereinafter described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawing and to the characters of reference thereon which form a part of this application, in which:

Figure 1 is a sectional elevational view of the nozzle shown in its normal operating position for spraying water and taken through 1—1 of Fig. 2; Fig. 2 is a sectional view at right angles thereto through 2—2 of Fig. 1; Fig. 3 is a front elevational view of the spray nozzle; Fig. 4 is a reduced top view of the nozzle and showing the form of the spray in connection therewith, and Fig. 5 a side elevational view thereof.

Similar characters of reference refer to similar parts and portions throughout the several views of the drawing.

My spray nozzle consists of a single piece, a portion of which is in cylindrical form, the one end of which is provided with an internal thread 1 which is adapted to screw on the male end of a hose or faucet. It is provided with an internally extending flange 2 forming a shoulder 2a against which is adapted to rest a gasket 3. The shell 4 extends forwardly at approximately the same diameter as the exterior portion at the connecting end. The end is swedged so that it is broader at point 5 at its upper and lower sides in its normal position for spraying and narrows down at a position at right angles thereto, as shown at 6—6, leaving a relatively narrow oblong channel portion 7 from there to the end of the spray nozzle. From the points 5 the walls converge to the end of the channel, as shown best in Fig. 1 of the drawing. It will be here noted that if the angle of the inside wall of the angular portion 8 is converged more toward the end, as shown by 9 in dotted lines in Fig. 1, then the fan like spray will be wider and diverge more, while if the inner surface is as shown at 10 by dotted lines in Fig. 1, it will be reversed and the fan like spray will be narrower.

It will also be noted that the wider diverging spray is emitted from the nozzle at right angles to the longer portion of the opening in the nozzle, as shown best in Figs. 4 and 5 of the drawing.

It has been found that the inner wall of the angular portion 8 may be curved so that there is provided a general curve in angular form and the results are substantially the same.

Though I have shown and described a particular construction, combination and arrangement of parts and portions, I do not wish to be limited to this particular construction, combination and arrangement, but desire to include in the scope of my invention the construction, combination and arrangement substantially as set forth in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a water spray nozzle, a hollow member provided with a relatively thin flat exit and with the side walls at right angles to the flat portion converging toward the exit end.

2. In a water spray nozzle, a hollow member provided with a relatively thin flat exit and with the side walls at right angles to the flat portion converging toward the exit end, the side walls of the narrow portion being substantially parallel.

3. In a water spray nozzle, a hollow member provided with a relatively thin flat exit and with the side walls at right angles to the flat portion converging toward the exit end, the side walls of the narrow portion being substantially parallel, and means for connecting said nozzle to a hose or faucet.

4. In a water spray nozzle, a substantially cylindrical hollow member provided with a flattened parallel walled exit end, and with converging walls at right angles thereto, and providing an oblong opening at the exit and with its major axis in a vertical position.

5. In a water spray nozzle, a substantially hol-

low cylindrical member provided at one end with means for connection with a hose or faucet, its upper wall diverging at its upper and lower sides, then converging toward the exit end, its side walls converging then parallel to its exit end.

6. In a water spray nozzle, a substantially hollow cylindrical member provided at one end with means for connection with a hose or faucet, its upper wall diverging at its upper and lower sides, then converging toward the exit end, its side walls converging then parallel to its exit end, whereby the opening at the exit end of said nozzle is elongated with its major axis normally in vertical position and whereby the spray emitting therefrom is fan like and its widest portion at right angles to the opening.

CLINTON J. KURTZ.