L. K. MOBLEY.

AUTOMATIC SPRAYING BOTTLE.

APPLICATION FILED JULY 29, 1918.

1,298,543.

Patented Mar. 25, 1919.

Fig. 1.

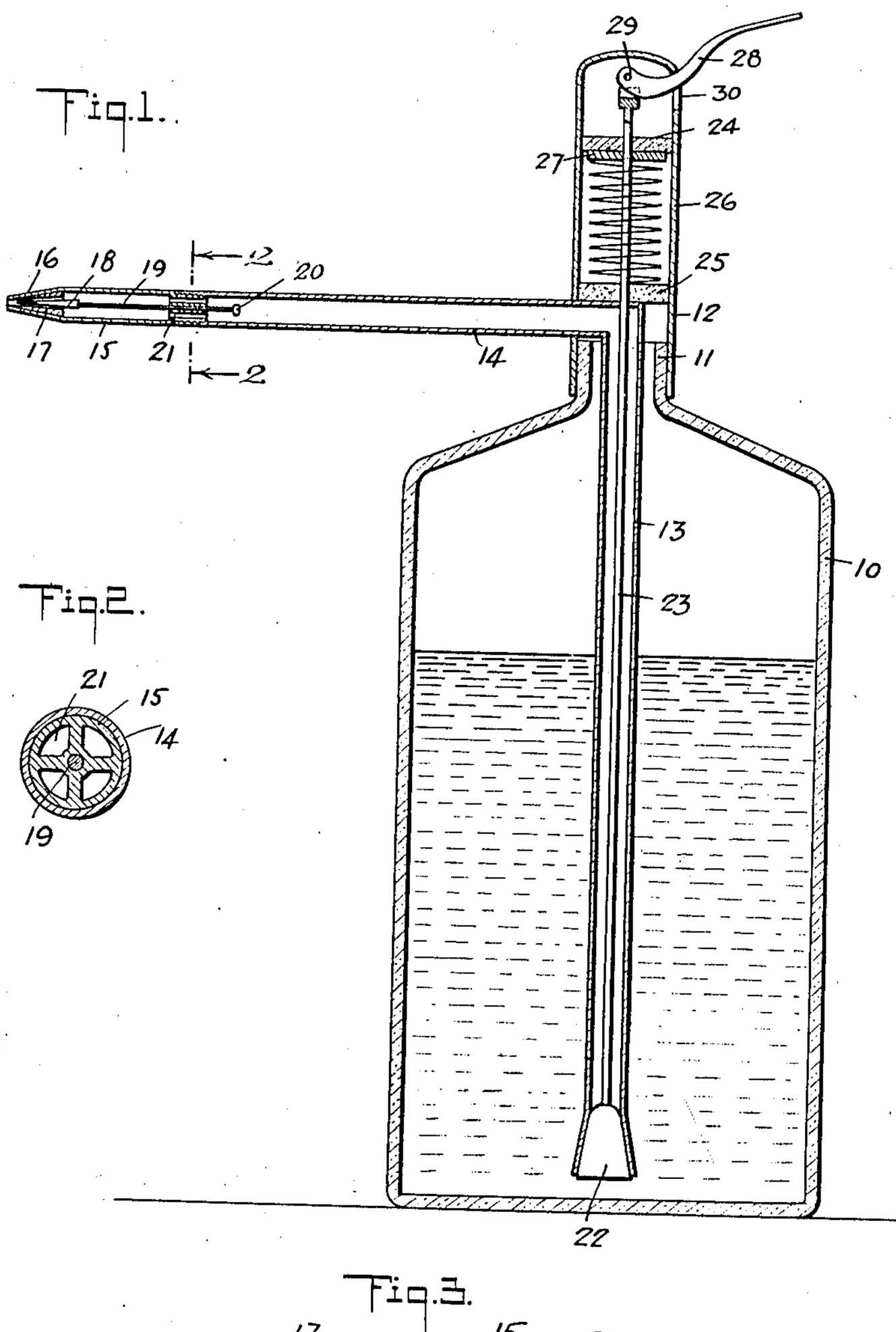
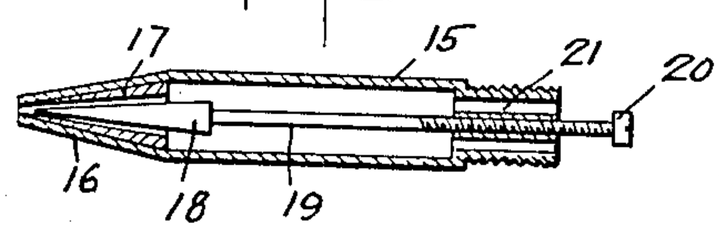


Fig. 2.

Fig. 3.



WITNESSES

Frederick Diehl.

L. L. McAuliffe

INVENTOR

L. K. Mobley.

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

LEWIS KEMPTON MOBLEY, OF NEW YORK, N. Y.

AUTOMATIC SPRAYING-BOTTLE.

1,298,543. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed July 29, 1918. Serial No. 247,205.

To all whom it may concern:

Be it known that I, LEWIS K. MOBLEY, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Automatic Spraying-Bottle, of which the following is a description.

My invention relates to devices for spraying the throat for example with an antiseptic or like solution, and more particularly has in view a sprayer for home use and employing a solution charged with carbonic acid gas, thereby promoting facility in the use of the sprayer over those sprayers of the type employing a bulb or the like.

The invention has also in view to provide a sprayer improved in various particulars with respect to the valve control and the regulation of the spray.

Reference is to be had to the accompanying drawings forming a part of this specification, it being understood that the drawings are merely illustrative of one example of the invention.

Figure 1 is a vertical section of a sprayer embodying my invention;

Fig. 2 is a cross section on the line 2—2, Fig. 1;

Fig. 3 is a longitudinal section of the spray point or nozzle with its adjustable needle valve.

In carrying out my invention in accordance with the illustrated example a suitable bottle 10 is tilized, having a short neck 11 receiving a cap 12 and disposed thereon is a vertical tube 13 open at its lower end and having a lateral branch 14 extending through the cap 12, whereby the complete attachment may be applied to the neck 11.

The discharge branch 14 receives a detachable spray point or nozzle 15, the front end 16 of which advantageously is tapered and may have a suitable lining 17. In the point 16 is a needle valve 18 which is carried by an elongated stem 19 extending through and beyond the rear end of the nozzle, the rear end of the stem having a head 20 for the convenient adjustment of the valve. The stem 19 as best seen in Fig. 3 is threaded at its rear end and engages a threaded bore in the rear end of the nozzle 15, said head in the form shown having a slot to receive a small screw driver for turning the valve to thereby regulate the spray. In the illustrated form the nozzle 15 has a threaded connection with the adjacent end of the lateral branch 14.

A valve 22 controls the flared lower end of the outlet tube 13, the stem 23 of the valve extending upwardly through said tube 13 and into the cap 12 to near the top of the latter. The valve stem 23 passes through upper and lower packing disks 24, 25 in the neck 12 between which disks is a compression spring 26 coiled about the stem abutting at its upper end against a collar 27 rigid with the stem. Thus, the spring normally tends to raise the valve stem and maintain the valve 22 closed. To open the valve, a cam lever 28 is pivoted as at 29 within the cap 12 near its upper end and extends laterally through an opening 30 in said cap to the exterior. The valve stem 23 is maintained by the spring 26 against the cam surface of the lever 28 so that the depression of said lever will depress the valve stem against the action of the spring thereby opening the valve and permitting a charged solution to issue in the form of a spray.

Reverting to the nozzle 15 the illustrated example shows the rear end of the same in the form of a spider as clearly shown in Figs. 2 and 3, the valve stem 19 passing axially through the spider while the latter presents a series of openings 21 for the free passage of the fluid.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of my invention, I do not limit myself strictly to the mechanical details herein illustrated, since manifestly the same can be considerably varied without departure from the spirit of the invention as defined in the appended claim.

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

A spraying attachment for bottles, including a cap adapted to fit the bottle neck, a tube supported by said cap above the lower end thereof to be thereby disposed in the bottle by the application of the cap thereto,

a lateral discharge branch extending from said tube through the side of the cap, a spray nozzle on said discharge branch, upper and lower packing disks in the cap above the tube, a valve controlling the lower end of said tube, a compression spring coiled about the stem between said disks, and acting on the stem in a manner tending to maintain the valve closed, and a cam lever pivoted in the cap for depressing the valve stem, said spring acting to maintain the valve stem in contact with the cam lever.

LEWIS KEMPTON MOBLEY.