Aug. 28, 1923. 1,466,370

H. N. MORAN ET AL

SPRAYING CONTAINER

Filed May 21, 1920

Fig. 1.

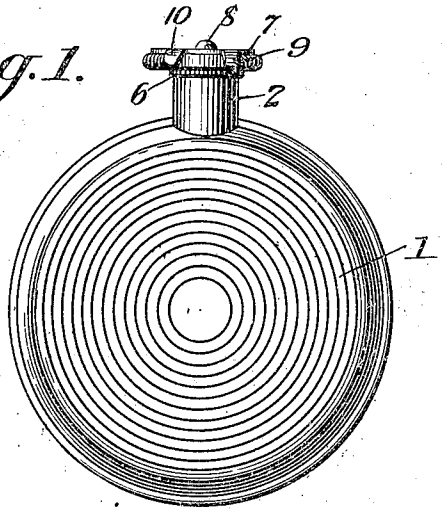


Fig. 2.

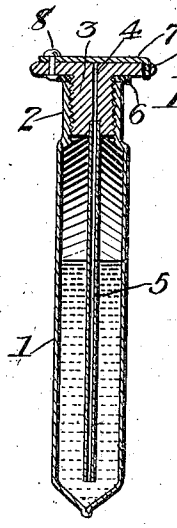


Fig. 3.

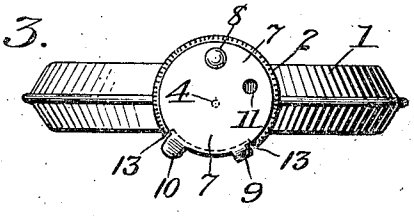


Fig. 4.

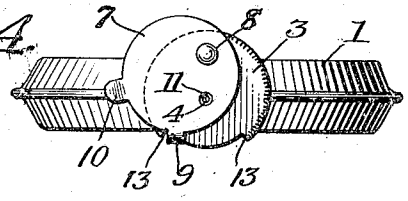
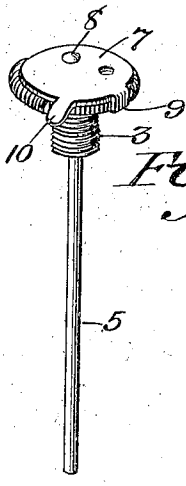


Fig. 5.



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Patented Aug. 28, 1923. 1,466,370

UNITED STATES PATENT OFFICE.

HENRY N. MORAN AND CHRISTY A. CELLEA, OF WOONSOCKET, RHODE ISLAND.

SPRAYING CONTAINER.

Application filed May 21, 1920. Serial No. 383,126.

To all whom it may concern:

Be it known that we, HENRY N. MORAN, a citizen of the United States, and CHRISTY A. CELLEA, a subject of the King of Rumania, both residing at 351 East School Street, city of Woonsocket, county of Providence, State of Rhode Island, have invented certain new and useful Improvements in Spraying Containers; and we 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.

The invention relates to spraying containers and has for its object to provide a simple, cheap and efficient device of the character indicated, preferably made of metal, and adapted to spray or atomize liquids such as perfumes, disinfectants, deodorants and the like by air pressure produced within the container by compressing or deforming the sides of the latter with the fingers, as will be more particularly set forth in the next specification, based upon the accompanying drawings, in which:—

Fig. 1 is a vertical front elevation of the container;

Fig. 2 is a vertical transverse cross section of the same;

Fig. 3 is a plan view with the associated valve or closure in closed position;

Fig. 4 is a similar view illustrating the valve in open position; and,

Fig. 5 is a perspective view showing the vented plug or stopper with the supply tube and valve device secured thereto.

Referring to the drawings, 1 indicates the body of the container, which is preferably made of thin sheet metal, substantially circular in general outline and having flat sides provided with a circular series of corrugations or flutes, which latter increase the resilient or spring like character of the sides, so that when the latter are deformed by pressure inward and the pressure is released the sides will immediately resume their normal position. Secured at one edge of the circular body portion 1 is a neck 2 which is internally screw threaded to receive a plug or stopper 3 having a screw threaded section engaging the neck and a flat top extended laterally to form a circular flange. Preferably a packing washer or gasket 6 is provided between the under surface of the stopper flange and the upper edge of the neck 2.

The plug or stopper 3 is provided with a longitudinal discharge passage 4, preferably of relatively small diameter, which opens through the top of the plug and is in communication at its bottom with an inlet pipe 5, which is screwed into the bottom of the plug 3 and extends to a point near the bottom of the receptacle, as shown in Fig. 2.

Pivoted eccentrically at 8 to the upper flat surface of the plug 3 is a cover plate 7 which is provided with an eccentric opening 11 adapted to be moved into and out of registry with the discharge passage 4 in the stopper. In order to limit the movement of the plate 7 the peripheral edge of the flange on the stopper 3 is cut away to provide two shoulders or stops 13—13, adapted to be engaged by a downwardly turned lug 9 formed on one edge of the plate. The plate is also provided with a lug 10, diametrically opposite the pivot point 8 to serve as a finger piece, by means of which the plate is swung on its pivot. When the plate 7 is in the position as shown in Fig. 3 the opening 11 is out of registry with the end of passage 4 in the plug and the plate effectively seals or closes the receptacle, as the under side of the plate is held in close frictional engagement with the upper face of the plug by means of the rivet like pivot pin 8. When, however, the plate 7 is swung to the position as shown in Fig. 4 the opening 11 therein passes into registry with the end of the discharge passage 4, thereby opening up communication with the interior of the container.

To operate the device, as described the body is filled or partially filled with the liquid to be sprayed or atomized and the container grasped by the fingers and pressure exerted on the opposite flat sides of the body portion 1 which deforms the sides and forces them toward each other, thereby compressing the air in the container and forcing the liquid up through the tube 5 and into the relatively small discharge passage 4 of the plug, whence it is discharged in a fine, mist like or atomized condition through the opening 11 in the cover plate 7. As soon as the pressure on the sides is released the latter resume their normal position, due to the inherent resiliency of the metal, which is increased by the corrugations in the sides of the container, thereby permitting air to enter the container through the discharge passage 4 and pipe 5. By repeating the op-

eration of compressing and releasing the sides of the container a substantially continuous and uniform atomizing or spraying of the liquid may be effected. After the spraying operation has been completed the cover plate 7 is swung on its pivot 8 to displace the opening 11 therein from registry with the end of the discharge passage 4 and the device will be effectively sealed against leakage or evaporation of the fluid within the container.

What we claim is:—

A container for spraying liquids, comprising an integral neck, a screw threaded plug having a flanged head engaging the neck having a discharge opening passing therethrough, a pipe carried by the plug communicating with said passage and extending towards the bottom of the container, a closure plate pivoted to the top of the plug having an opening adapted to be moved into and out of registry with the passage in the plug, a peripheral recess formed in the flanged head of said plug and a lug carried by the closure plate working in said recess for limiting the movement of said plate on the plug in either direction.

In testimony whereof we affix our signatures.

HENRY N. MORAN.
CHRISTY A. CELLEA.