No. 644,055. Patented Feb. 27, 1900.

C. F. BUTZ.

BOTTLE SPRINKLER.

(Application filed Dec. 4, 1899.)

(No Model.)

Fig. 1.

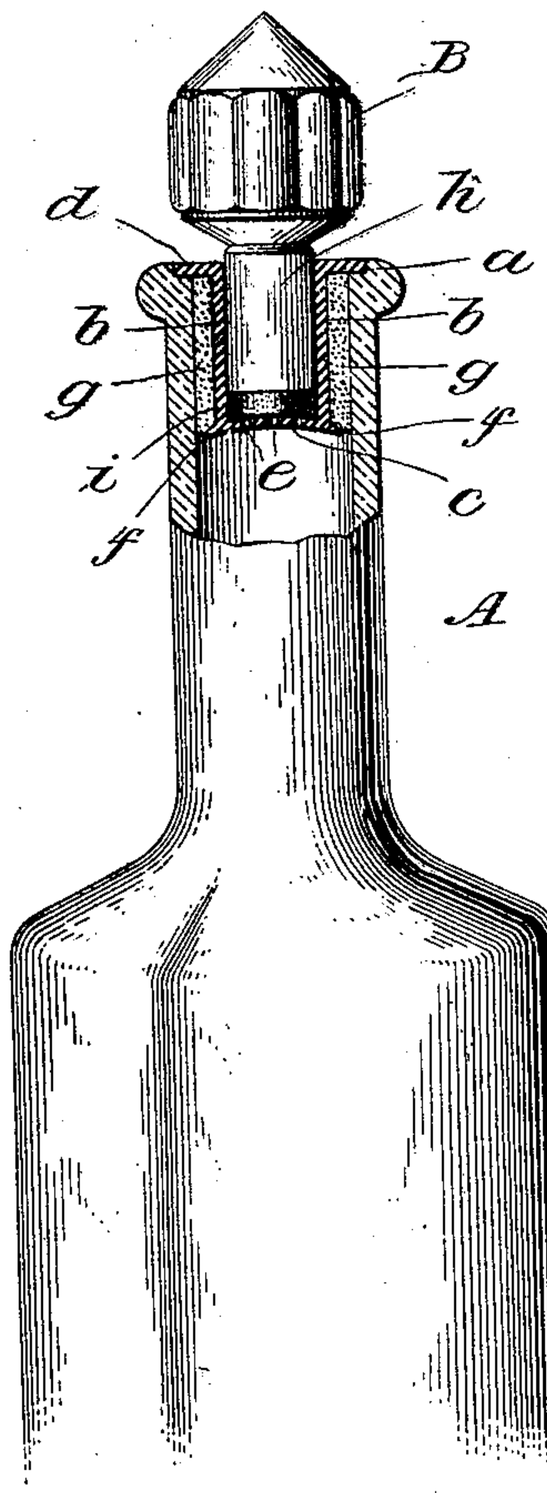


Fig. 2.

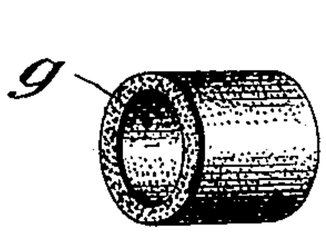


Fig. 3.

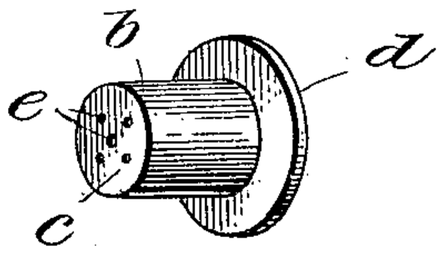
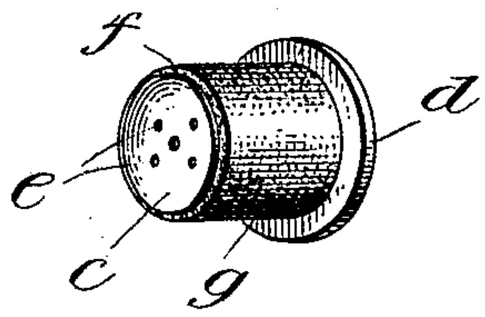


Fig. 4.



Witnesses:
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Inventor:
Charles F. Butz,
by Hine & Peck,
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UNITED STATES PATENT OFFICE.

CHARLES F. BUTZ, OF NEW YORK, N. Y., ASSIGNOR TO COLGATE & CO., OF SAME PLACE.

BOTTLE-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 644,055, dated February 27, 1900.

Application filed December 4, 1899. Serial No. 739,135. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. BUTZ, a citizen of the United States, and a resident of the city of New York, State of New York, have invented certain new and useful Improvements in Bottle-Sprinklers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention has relation to sprinklers for bottles; and it consists in the construction hereinafter particularly described and claimed.

The object of my invention is to provide a neat, compact, and efficient sprinkler construction within the neck of the bottle to which it is adapted without any visible protruding portions above the mouth of the bottle other than the stopper when it is in position, giving to the bottle the appearance of an ordinary bottle without sprinkler attachment. Bottle-sprinklers are largely used for toilet purposes, both in the home and in hairdressing establishments, and it is quite important not only that the sprinkler shall be particularly efficient for the purposes for which it is designed, but also that the appearance of the bottle shall be neat and attractive and as free as possible from any protruding unsightly portions, such as are usually present in sprinkler-bottles.

I also provide in my invention novel features of construction, which tend to render the device particularly efficient for the purposes for which it is adapted.

In the accompanying drawings, Figure 1 is a partially-sectional view of my improved device with the stopper inserted as in the closed position. Figs. 2 and 3 are detached perspective views of detail parts. Fig. 4 is a perspective view of the parts illustrated in Figs. 2 and 3 assembled.

A represents the bottle, having a recess portion *a* provided around the mouth of the bottle. The downwardly-projecting tubular portion formed of the vertical walls *b* is of a diameter somewhat less than the interior diameter of the neck of the bottle at the mouth portion and is provided at its base with the bottom piece *c*, which is integral with the walls *b* and has several perforations *e* provided therein. The upper portion of the walls *b* is provided with an outwardly-extending flange *d* of a diameter equal to or slightly less than the diameter of the recess *a*, formed in the mouth of the bottle. Around the tubular walls *b* is provided a casing *g*, of cork or other suitable material, operating as a packing between the outer portion of the tubular walls *b* and the inner walls of the neck of the bottle to prevent leakage. The casing *g* is preferably of a length slightly less than the length of the tubular walls *b* and is adjusted in position beneath the flange *d*. When in position, the bottom portion *c* is spread or spun so as to provide a small circumferential projection or flange *f*, as illustrated in Fig. 1, so as to retain the casing *g* firmly in position between the flanges *d* and *f*. The tubular walls *b*, with the flanges and bottom portion, are preferably formed of soft metal.

The stopper B is provided with a lower stem *h* of a diameter equal to the inner diameter of the tubular portion *b* and of a length about equal to the same and has provided upon its lower end a disk *i*, of cork or other suitable material, for effectually closing the perforations *e* in the plate *c* when the stopper is in position to prevent leakage.

In my improved construction a material advantage is secured in that the perforated plate *c* in being suspended within the neck of the bottle is brought into immediate and direct contact with the main body of the toilet fluid in the neck of the bottle, receiving the full force of the impact of the body of liquid as it is shaken against the perforated plate, and the divided liquid is consequently sprayed with force directly therethrough and out through the tubular section *b*. In constructions where the perforated plate is mounted in the top of a tube projecting above the mouth of the bottle such projection is objectionable, as being not only awkward and unsightly, but also for the reason that the friction of the liquid in the tube prevents as efficient and effective a spray being formed by the shaking of the bottle, which is the only means in sprinklers of this class available for expelling the liquid and spraying it on the parts being treated.

I am aware that numerous constructions of

bottle-sprinklers have heretofore been invented, and do not claim the same, broadly, my invention residing in the special construction herein described and claimed.

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

1. A bottle-sprinkler comprising a bottle, A, having recess, *a*, formed around the mouth thereof, downwardly-projecting tubular section, *b*, a bottom portion, *c* at the base of said tubular section integral therewith, having perforations formed in said bottom portion, flange, *d*, formed in the upper portion of the section, *b*, adapted to said recess, *a*, formed around the mouth of the bottle, compressible casing, *g*, provided upon the tubular portion, *b*, and flange, *f* formed around the bottom portion, *c*, for securing the casing, *g*, in position between the flange, *d*, and the said flange, *f*, substantially as described.

2. A bottle-sprinkler comprising a bottle, A, having a recessed mouth, downwardly-projecting tubular section, *b*, a bottom portion, *c*, provided in the lower portion of said tubular section integral therewith and having perforations formed in said bottom portion, flange, *d*, formed in the upper portion of said walls, *b*, casing, *g*, provided upon the tubular portion, *b*, and flange, *f*, formed around the bottom portion, *c*, for securing the casing, *g*, in position between the flange, *d*, and the flange, *f*, and removable stopper, B, having the downwardly-projecting cylindrical portion, *h*, provided on the lower end thereof, substantially as described.

3. A bottle-sprinkler, comprising a bottle A, downwardly-projecting tubular section *b*, a bottom portion *c*, provided in the lower portion of said tubular section integral therewith and having perforations formed in said bottom portion, flange, *d*, formed in the upper portion of said walls, *b*, casing *g*, provided upon the tubular portion *b*, and flange *f*, formed around the bottom portion *c*, for securing the casing *g*, in position between the flange *d*, and the flange *f*, and removable stopper B, having the downwardly-projecting cylindrical portion *h*, and compressible disk *i*, provided on the lower end thereof, substantially as described.

In witness whereof I have hereunto set my hand this 29th day of November, A. D. 1899.

CHARLES F. BUTZ.

Witnesses:
GILBERT COLGATE,
WALTER C. BRUSH.