

No. 646,349.

Patented Mar. 27, 1900.

H. O. BRAWNER.
SPRINKLER FOR BOTTLES.

(Application filed Jan. 22, 1900.)

(No Model.)

Fig. 1.

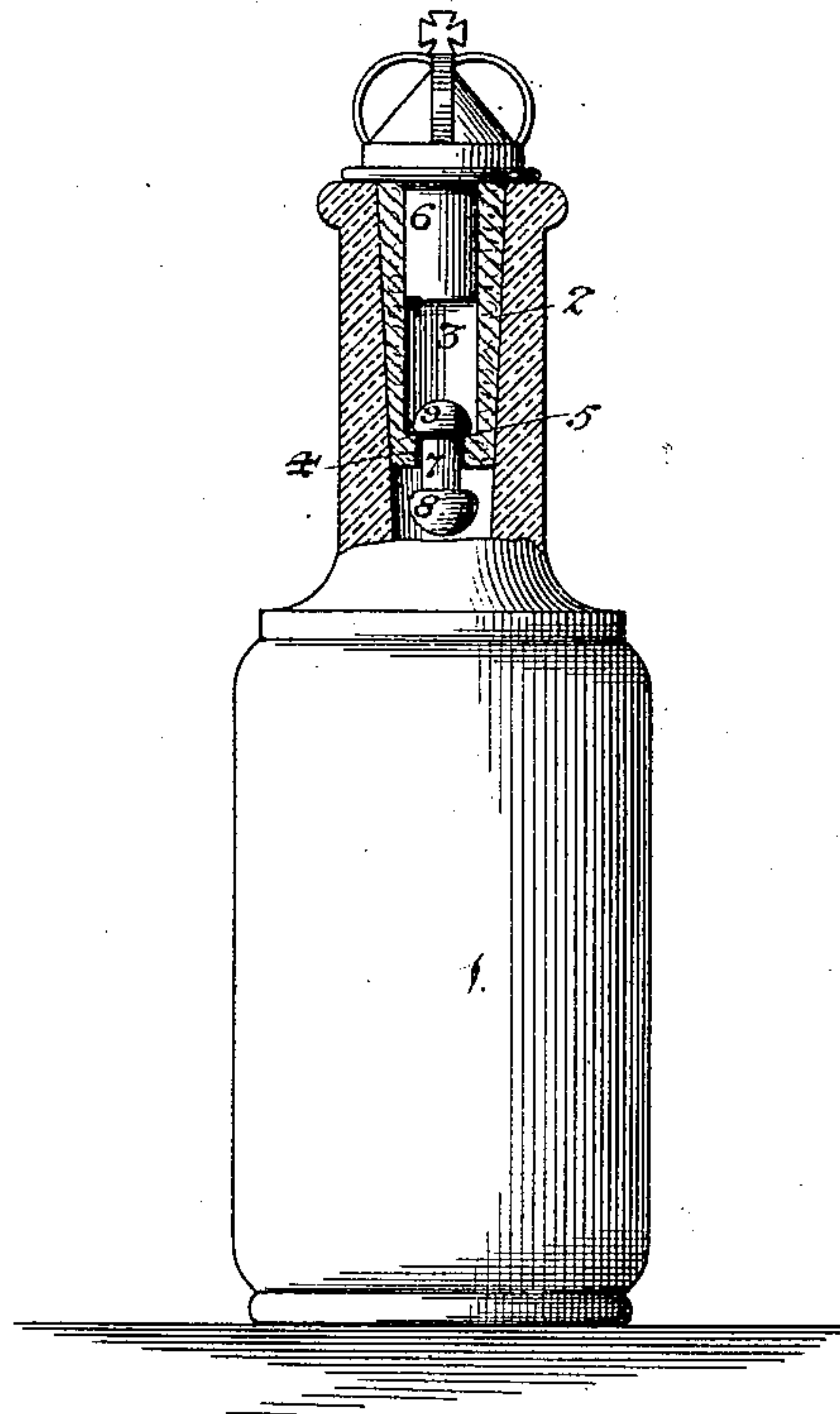


Fig. 2.

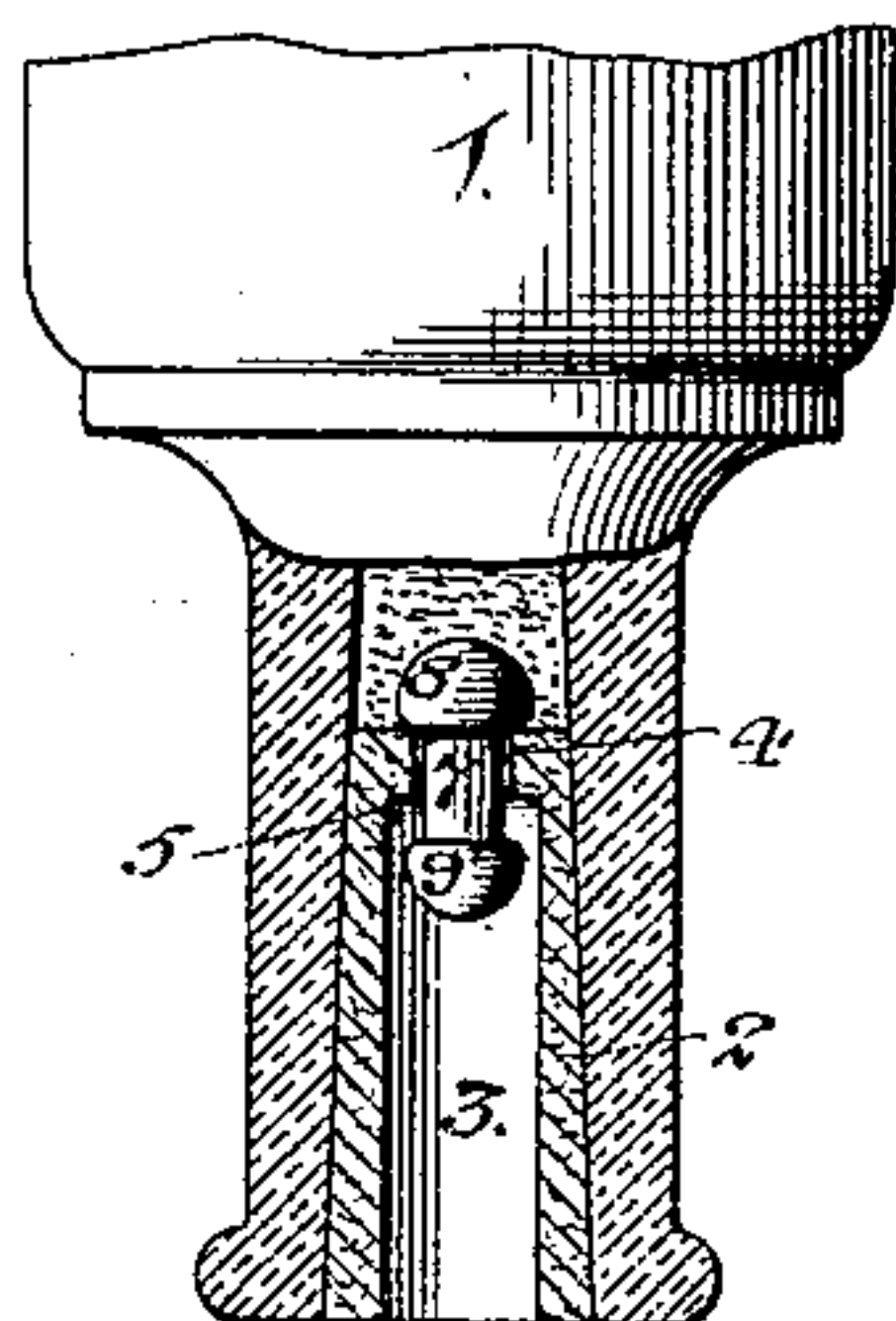
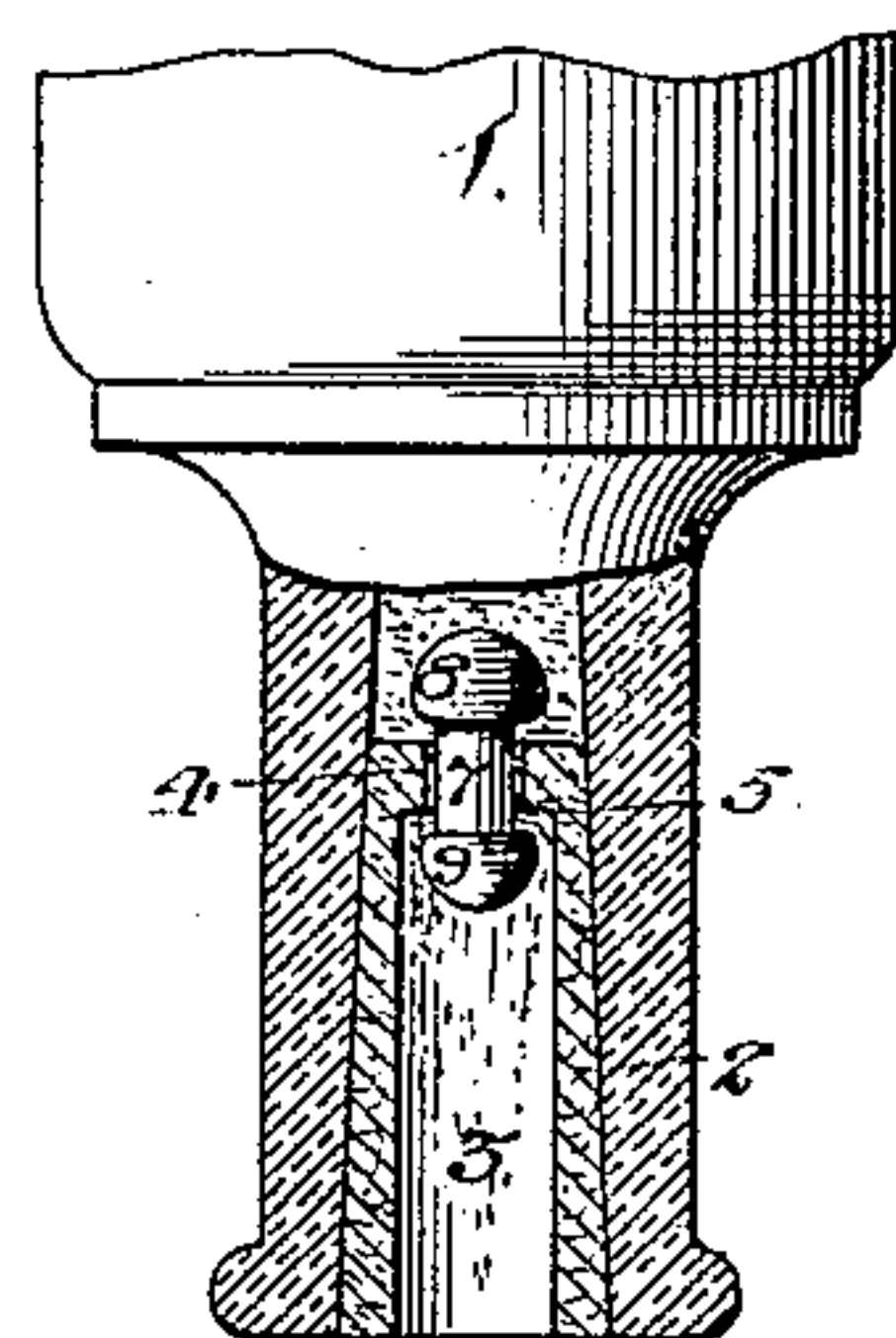


Fig. 3.



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UNITED STATES PATENT OFFICE.

HARRY O. BRAUNER, OF BALTIMORE, MARYLAND.

SPRINKLER FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 646,349, dated March 27, 1900.

Application filed January 22, 1900. Serial No. 2,345. (No model.)

To all whom it may concern:

Be it known that I, HARRY O. BRAUNER, a citizen of the United States, residing in Baltimore, State of Maryland, have invented certain new and useful Improvements in Sprinklers for Bottles, of which the following is a specification:

The object of my invention is to provide a cheap and simple form of bottle-stopper devised for the purpose of preventing the escape of the contents of a bottle except when the same is held in an inverted position and is shaken or agitated, the stopper also tightly closing the bottle when the same is not being used to discharge the contents.

In the accompanying drawings, Figure 1 is a side view, partly in section, of a bottle with cork or stopper therefor constructed in accordance with my invention. Fig. 2 is a similar view of part of the bottle, showing the same inverted and illustrating the manner in which the stopper prevents the escape of the contents of the bottle under such conditions; and Fig. 3 is a view illustrating the manner in which the contents of the bottle are permitted to escape in limited quantity at the time the inverted bottle is shaken.

In Fig. 1 a bottle, which may be of any suitable size or shape, is represented at 1, the mouth of this bottle being closed by a cork 2, which has a central opening extending through it, the upper portion 3 of this opening being of somewhat greater diameter than the lower portion 4, so as to form at a point adjacent to the lower end of the cork an internal shoulder 5. The enlarged portion 3 of the opening in the cork is closed at the top by a plug 6, preferably of glass and having an ornamental head or top of any desired character, this plug serving to prevent access of air to the contents of the bottle.

It is desirable in a certain class of bottles—such as those intended for tooth-powder, tooth-washes, condiments, &c.—to provide means whereby a free flow of the contents from the bottle is prevented when the bottle is inverted, a flow limited in quantity being permitted when the bottle while held in an inverted position is shaken or agitated.

The object of my invention is to provide simple, cheap, and effective means whereby this result may be attained; and the invention

consists in the use, in connection with the internally-shouldered cork 2, of a stopper, such as shown in the drawings, this stopper being shaped something like a dumb-bell and having a central shank or stem 7, a lower head or enlargement 8, and an upper head or enlargement 9, these heads being preferably flattened on the sides adjoining the shank or stem, so as to seat firmly upon the under side or internal shoulder of the cork.

The stem or shank 7 of the stopper is of a diameter somewhat less than the diameter of the contracted opening 4 at the lower end of the cork, and the diameter of the head 9 of the stopper is somewhat less than the diameter of the enlarged portion 3 of the opening in the cork.

It should be observed that the difference in diameter between the stem or shank 7 and the opening 4 is such as to provide a dropping-orifice for the contents of the bottle. By this means, therefore, a simple and effective sprinkler for bottles is provided which will permit the sprinkling of the contents of the bottle when the latter is inverted and agitated and in which the contents will be seated against discharge when the bottle is at rest in any position. When, therefore, the bottle is held in the inverted position, as shown in Fig. 2, the head 8 of the stopper seating upon the inner end of the cork will prevent escape of the contents from the bottle; but if the bottle is agitated, so as to cause the stopper to move up and down, a certain portion of the contents of the bottle will on each rise of the stopper find its way around the stem 7 and head 9, as shown in Fig. 3, and escape from the opening 3 in the cork, the plug 6 of course having previously been removed. The head 9 of the stopper is of somewhat less size than the head 8, so that in inserting the stopper undue expansion of the inner end of the cork will not be caused by thrusting said head 9 through the opening 4 at said lower end of the cork, and the diameter of the enlarged upper portion of the opening 3 in the cork may be reduced as much as possible, so as to avoid cutting away too much of the material of the cork, the head 8 of the stopper being larger than the head 9 in order to give the stopper the desired weight.

The stopper is preferably made of glass, so

that it will not injuriously affect nor be injuriously affected by the contents of the bottle.

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

1. A bottle-stopper and sprinkler consisting of a cork having formed therein a longitudinal opening contracted in diameter at the inner end so as to form an internal shoulder in the cork, and a stopper comprising a simple stem or shank with enlarged heads at the ends of the same, the stem of said shank occupying a contracted opening at the inner end of the cork and being slightly less in diameter than said opening, and the upper head of the stopper being adapted to seat upon the internal shoulder of the cork and to occupy the enlarged upper portion of the opening which is of greater diameter than said head whereby when the bottle is inverted and agitated a portion of the contents thereof will be sprinkled and the said contents sealed against discharge when the bottle is at rest, substantially as specified.

2. A bottle-stopper and sprinkler comprising a cork with central longitudinal opening contracted in diameter at the inner portion of the cork so as to form an internal shoulder in said cork, and a stopper comprising a stem or shank with enlarged heads at its opposite ends, said stem or shank occupying the contracted opening at the inner end of the cork and being of slightly-less diameter than said opening and the upper head seating upon the internal shoulder of the cork and being of less diameter than the enlarged upper portion of the opening in said cork and said heads having flat faces on the sides adjacent to the stem whereby when the bottle is inverted and agitated a portion of the contents thereof will be sprinkled and the said con-

tents sealed against discharge when the bottle is at rest, substantially as specified.

3. A bottle-stopper and sprinkler comprising a cork with central longitudinal opening therein contracted at the inner end of the cork so as to form an internal shoulder in said cork, and a stopper comprising a central stem or shank with enlarged heads at its opposite ends, said stem occupying the contracted opening at the inner end of the cork and being of slightly less diameter than the same, and the upper head seating upon the internal shoulder of the cork and being of less diameter than the enlarged portion of the opening in said cork and also of less diameter than the head at the other end of the stem or shank of the stopper, whereby when the bottle is inverted and agitated a portion of the contents thereof will be sprinkled and the said contents sealed against discharge when the bottle is at rest, substantially as specified.

4. A bottle-stopper and sprinkler consisting of a cork having formed therein an opening, and a stopper comprising a simple stem with enlarged heads, the said stem occupying said opening and being sufficiently less in diameter than said opening to provide a dropping-orifice, whereby when the bottle is inverted and agitated a portion of the contents thereof will be sprinkled in drops through the said dropping-orifice, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRY O. BRAWNER.

Witnesses:

ARTHUR E. SEALES,
F. C. VAN LONE.