No. 781,252. PATENTED JAN. 31, 1905.

G. W. WHEELER.

FOUNTAIN BRUSH.

APPLICATION FILED MAY 31, 1904.

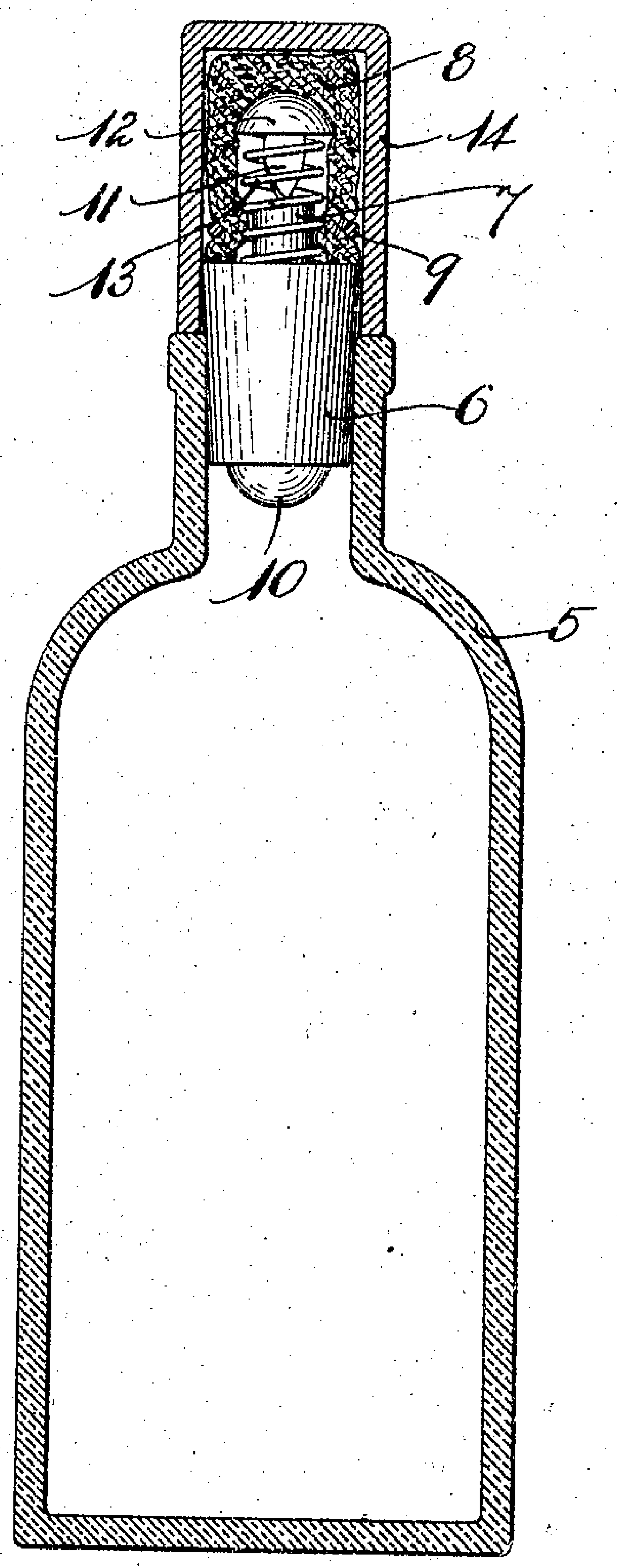

Fig. 1.

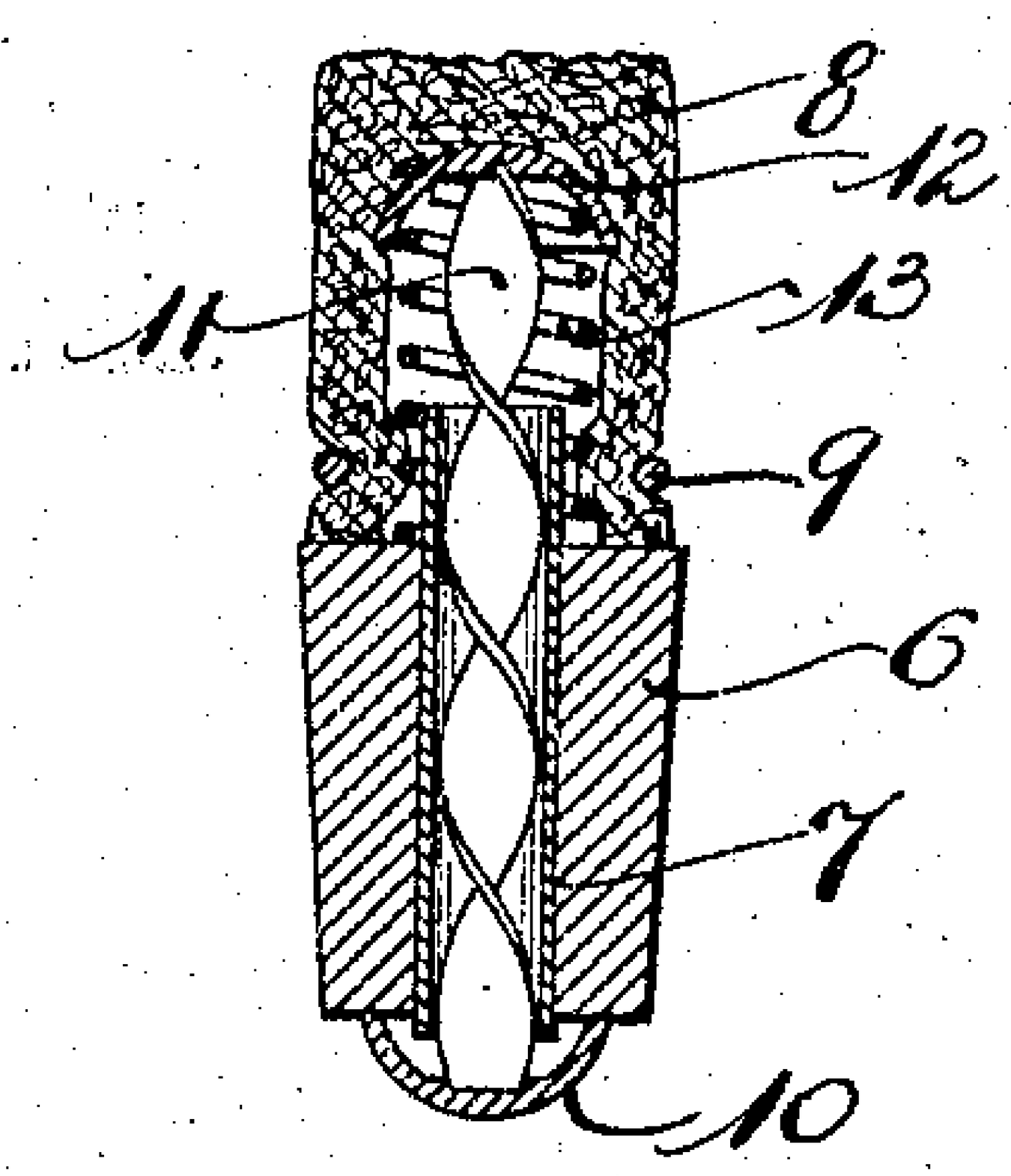

Fig. 2.

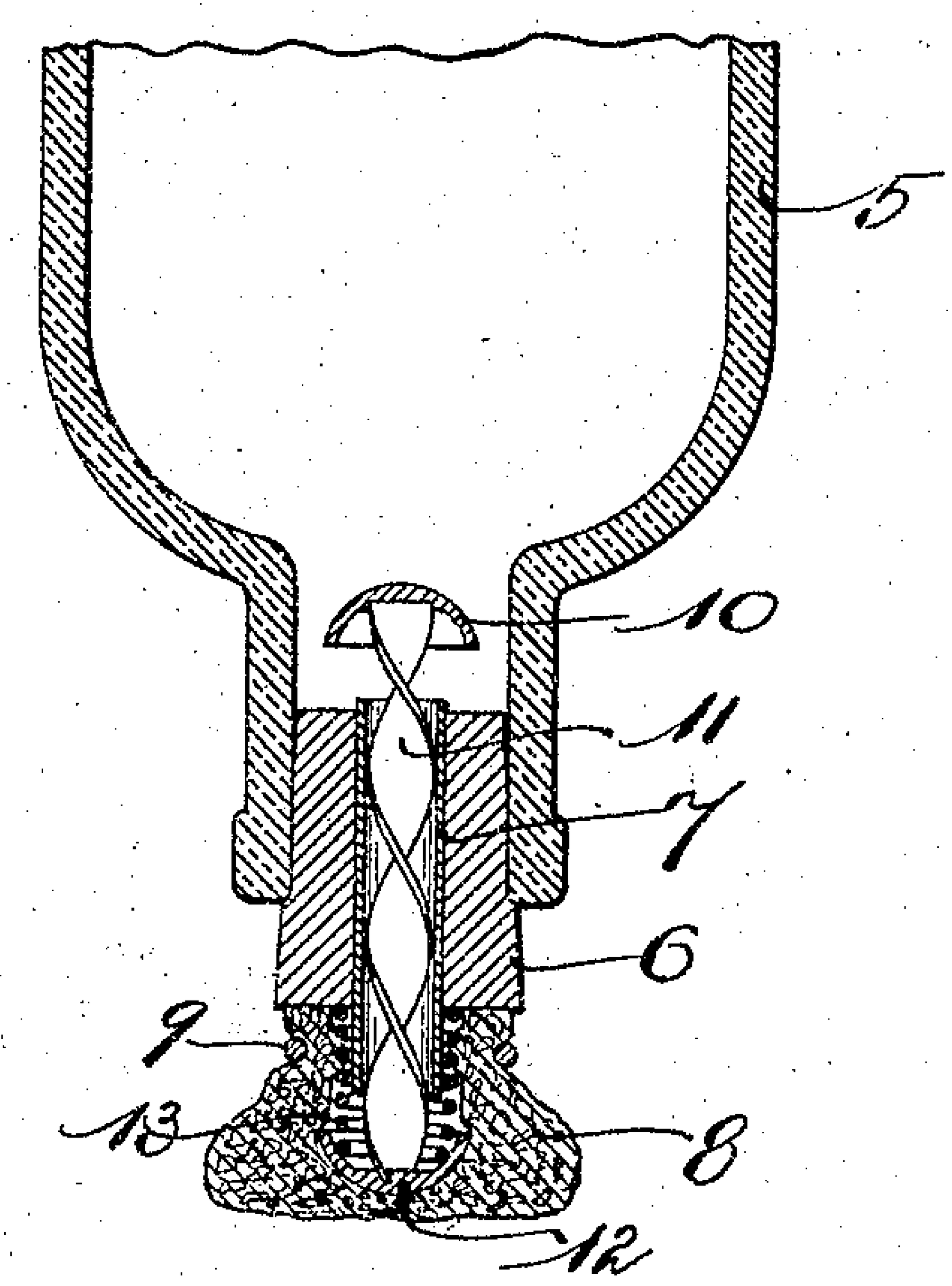

Fig. 3.

Witnesses:
Franklin E. Low
Louis A. Jones.

Inventor:
George W. Wheeler.
by his Attorney,
Charles S. Gooding.

No. 781,252. Patented January 31, 1905.

UNITED STATES PATENT OFFICE.

GEORGE W. WHEELER, OF HYDEPARK, MASSACHUSETTS.

FOUNTAIN-BRUSH.

SPECIFICATION forming part of Letters Patent No. 781,252, dated January 31, 1905.

Application filed May 31, 1904. Serial No. 210,382.

To all whom it may concern:

Be it known that I, GEORGE W. WHEELER, a citizen of the United States, residing at Hydepark, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Fountain-Brushes, of which the following is a specification.

This invention relates to a stopper for bottles containing liquid boot-blacking, mucilage, and the like, the object of the invention being to provide a stopper having a device attached thereto by means of which the liquid contained in the bottle may be fed in small quantities from the interior of the bottle at the will of the person using the same and, further, to provide such a device that, while perfectly practical and operative, it shall be very inexpensive in order that it may fulfil the requirements of the trade in which it is used.

The invention consists in the combination and arrangement of parts set forth in the following specification, and particularly pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a side elevation of my improved stopper, illustrating the same attached to a bottle adapted to contain blacking with a sponge attached thereto in section, said bottle being also shown in section. Fig. 2 is a section, partly in elevation, of my improved bottle-stopper, the feed device being shown closed. Fig. 3 is a section similar to Fig. 2, the feed device being shown open and inverted with a portion of a bottle attached thereto in section.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 5 is a bottle of any suitable shape and size. 6 is a stopper, preferably constructed of cork, adapted to fit the neck of said bottle, and 14 is a cylindrical cap which fits exactly around the periphery of said stopper and rests upon the top of the bottle-neck. A tube 7 projects longitudinally through the stopper 6 and is fastened thereto. The outer end of said tube projects beyond the top or outer end of the stopper 6 and opens into a piece of absorbent material 8, which is fastened to said tube by means of a wire 9, wound tightly therearound adjacent to the top of the stopper 6. Said absorbent material may be formed of a sponge, or it may be formed of knit fabric or of any material which will absorb the liquid blacking as it passes from the interior of the bottle through the tube 7 and into the interior of said absorbent material.

A valve 10 normally closes the inner or lower end of the tube 7 and has fastened thereto a valve-stem 11, which projects longitudinally through the tube 7 and beyond the upper or outer end of said tube. A flange 12 is fast to the top or outer end of the valve-stem 11, and a spiral compression-spring 13 encircles said valve-stem between the top of the stopper 6 and said flange 12, acting to normally hold the valve-stem and valve in the position illustrated in Figs. 1 and 2 with the valve resting against the inner end of the stopper 6, and thus closing the tube 7, so that no blacking can pass from the interior of the bottle through said tube into the absorbent material 8.

The valve-stem 11 is preferably formed, as shown in the drawings, of a flat piece of sheet metal twisted in helical form, and the outer periphery of said valve-stem fits the interior of the tube 7, so as to form a sliding fit therein, while at the same time the helical formation allows the blacking when the valve is opened, as illustrated in Fig. 3, to pass from the interior of the bottle through the tube 7 and into the interior of the absorbent material 8.

The operation of the device is as follows: Assuming the parts to be in the position shown in Figs. 1 and 2 and that it is desired to obtain blacking from the interior of the bottle and apply the same to the surface of a shoe, the person using said device inverts the bottle and presses downwardly thereon, thus compressing the spring 13 and moving the valve-stem 11, together with the valve 10, longitudinally of the tube 7 from the position shown in Figs. 1 and 2 to that shown in Fig. 3. The liquid blacking then flows around the helically-formed valve-stem 11, out of the outer end of the tube 7, and into the absorbent material 8, whence it is evenly and easily distributed over the surface of the shoe in a manner well known.

The hemispherical shape of the valve 10 insures a tight fit between the periphery of said valve and the bottom of the cork 6, and any blacking which may be left in the interior of the tube 7 when the valve closes will be absorbed by the absorbent material 8, so that the device will be at all times free from accidental leakage, which is a very important consideration in a device of the character described for the reason that it prevents it from becoming dirty and soiling the hands of the user and also renders it practical to carry the same in a traveling-case. Moreover, the absorbent material 8 being tightly wound upon the outer end of the tube 7 adjacent to the upper end of the stopper 6, it follows that if there should be a slight leakage from the interior of the bottle said leakage would pass into the absorbent material 8. It will also be seen and understood that on account of the helical formation of the valve-stem the inside of the tube 7 is kept clean by reason of said valve-stem acting as a scraper to remove any particles of blacking which may become deposited or hardened upon the interior of the tube, thus preventing the interior of the tube from becoming filled up and interfering with the free flow of the liquid blacking from the interior of the bottle to the absorbent material at the outer end of the tube.

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

1. As an article of manufacture, a stopper adapted to fit the neck of a bottle, a tube projecting longitudinally through said stopper and fast thereto, a piece of absorbent material into which the outer end of said tube opens, a spring-actuated valve adapted to normally close the inner end of said tube, and a valve-stem projecting longitudinally through said tube, laterally entirely across the interior of said tube and into said absorbent material.

2. As an article of manufacture, a stopper adapted to fit the neck of a bottle, a tube projecting longitudinally through said stopper and fast thereto, a piece of absorbent material into which the outer end of said tube opens, a valve adapted to close the inner end of said tube, a valve-stem projecting longitudinally through said tube, laterally entirely across the interior of said tube and into said absorbent material, a flange fast to the outer end of said valve-stem, and a spring encircling said valve-stem between said stopper and flange.

3. As an article of manufacture, a stopper adapted to fit the neck of a bottle, a tube projecting longitudinally through said stopper and fast thereto, a piece of absorbent material into which the outer end of said tube opens, a spring-actuated valve adapted to normally close the inner end of said tube, and a helically-formed valve-stem projecting longitudinally through said tube and into said absorbent material.

4. As an article of manufacture, a stopper adapted to fit the neck of a bottle, a tube projecting longitudinally through said stopper and fast thereto, a piece of absorbent material into which the outer end of said tube opens, a valve adapted to close the inner end of said tube, a helically-formed valve-stem projecting longitudinally through said tube and into said absorbent material, the outer periphery of said valve-stem forming a sliding fit in said tube, a flange fast to the outer end of said valve-stem, and a spring encircling said valve-stem between said stopper and flange.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE W. WHEELER.

Witnesses:
CHARLES S. GOODING,
ANNIE J. DAILEY.