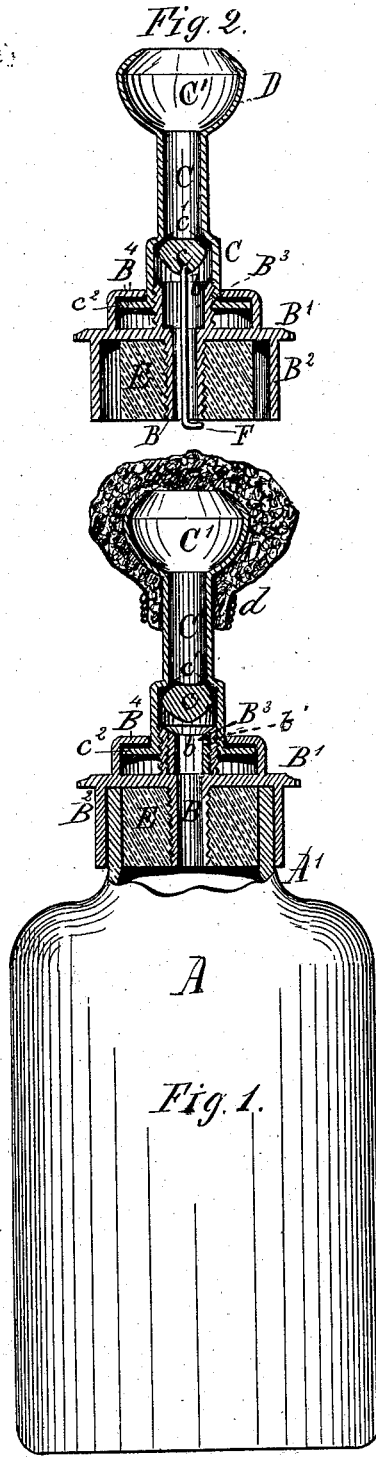


S. S. NEWTON.
STOPPERS FOR MUCILAGE-HOLDERS.

No. 193,024.

Patented July 10, 1877.



Witnessed
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UNITED STATES PATENT OFFICE.

STEPHEN S. NEWTON, OF BINGHAMTON, NEW YORK.

IMPROVEMENT IN STOPPERS FOR MUCILAGE-HOLDERS.

Specification forming part of Letters Patent No. 133,024, dated July 10, 1877; application filed March 19, 1877.

To all whom it may concern:

Be it known that I, STEPHEN S. NEWTON, of Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Bottle-Stoppers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is an elevation, partly in section, of a bottle having my improvement applied thereto; and Fig. 2 shows a modification of the same.

A is the body of a bottle, and A' the neck, of any desired material, and of any configuration which may be adapted to receive the stopper. B B³ is the central discharging-tube, mounted in a cap-plate, B¹. B² is a flange projecting downwardly from the cap-plate, and fitting closely the outside of the neck A'. E is a plug of cork or other suitable material, filling the annular space between the part B of the tube and the inside of the bottle-neck, the tube being, by preference, screwed into the plug.

In practice I make the plug to fit so closely to the bottle and the tube as to prevent leakage, the object of the depending flange B² being only to cover up the plug, and prevent it from being seen, thus ornamenting the bottle.

From an examination of the drawings, it will be seen that this flange B² extends down to a line with the lower end of the plug E, and thus hides the plug from view, and being made of metal, its exterior can be burnished and made to add very much to the finish and appearance of the bottle.

I do not claim, broadly, a metal flange or band upon the outside of a bottle-neck, as this is admitted to be old; but I believe I am the first to combine such a metal cap and flange with an internal elastic stopper-plug, which secures the entire stopper to a bottle having a neck of uniform thickness—that is, without a lip on the outside, the elastic plug serving, in addition, to prevent leakage around the discharging-tube.

The upper end B³ of the discharging-tube is also screw-threaded externally and internally, and has a valve-seat, *b*. *b'* is a supplemental elastic or yielding packing or seat inserted within the upper end of the discharging-tube. In consequence of its being made of rubber, or other equivalent material, it can be screwed on the threaded end of the tube, and will keep its place firmly, but can be easily removed or adjusted vertically.

The sponge-carrier C C' is enlarged at its lower end, and is screw-threaded internally to engage with the upper end of the discharging-tube.

c is a globular or conical valve in the sponge-holder, which fits the valve-seat *b*. *c'* are ports above the valve *c*.

The upper end of the sponge-holder is expanded into a cup-shaped cavity or bulb, which serves the double purpose of forming a large opening for the delivery of liquid to the sponge D, and of facilitating, in consequence of its external shape, the securing of the sponge in proper position.

*c*² is a flange projecting outwardly from the lower end of the sponge-support. B⁴ is a corresponding flange rising from the cap-plate B¹, and fitting closely the outside of the sponge-support.

The distance between the lower face of the flange B⁴ and the upper face of the cap-plate B¹ is such as to permit sufficient vertical movement of the sponge-support to open and close the valve *c*, as will be readily understood from an examination of Fig. 1 without further explanation.

In Fig. 2 a stem or shank, F, projects from the valve *c*, down through the discharge-tube, its lower or inner end being bent at a right angle, as shown, so that it engages with the inner end of said tube, and serves as a stop to limit the upward movement of the sponge-holder, in substantially the same manner as do the flanges *c*² B⁴ in Fig. 1.

One of the advantages incident to constructing the lower end of the sponge-holder to go over the upper end of the discharging-tube is the increased size of which the ports *c'* and the space around the valve *c* can be made, and this advantage is quite important when the bottle is to be used for some purposes—as, for

instance, liquid blacking—because it is in such cases desirable that the valve should be attached to and operated by the sponge-holder, to insure that the valve shall be lifted from its seat by the positive action of the screw-threads; otherwise the liquid would sometimes “set” the valve, and thereby prevent the discharge of the liquid from the bottle.

This attaching the valve to the sponge-support necessitates the use of ports c^1 , and as such liquids contain more or less sediment, or from other cause do not flow freely, it is very desirable that the size of these ports be increased, as has been explained.

What I claim is—

1. The combination, with the discharging-tube $B B^3$ of a bottle-stopper, of the removable elastic lining or seat b' and the depending valve c , attached to the sponge-holder, substantially as set forth.
2. The sponge-holder consisting of the tube C and the cup or hollow bulb C' , in combination with sponge D , secured to the bulb, substantially as set forth.

3. The combination, with the tubes $B^3 C'$, the valve c , and the valve-seat, of the flanges c^2 and B^4 , substantially as set forth.

4. The combination, in a bottle-stopper, of the following elements, namely: a central discharging-tube, a metal cap supported upon the tube, and extending horizontally over the mouth of the bottle, an elastic plug attached to the discharging-tube below the metal cap, and serving to close the mouth of the bottle, and to secure the discharging-tube in position, and a metal flange depending from the metal cap to hide the internal plug from view, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

STEPHEN S. NEWTON.

Witnesses:

JEROME DE WITT,
JAMES C. ELDREDGE.