J. ANNEAR.
Bottle-Stopper.

No. 217,764. Patented July 22, 1879.

Fig. 1.

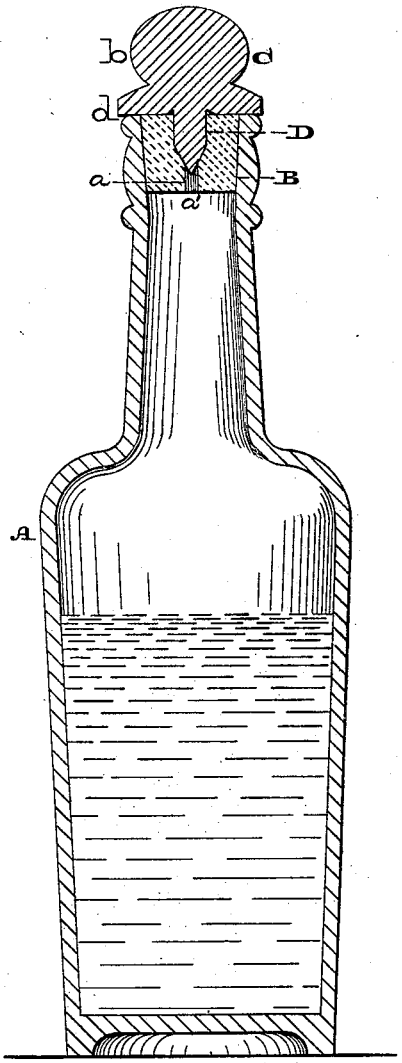


Fig. 2.

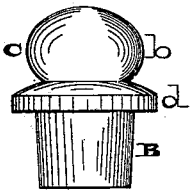


Fig. 3.

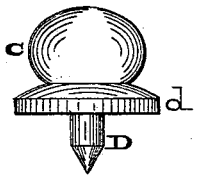


Fig. 4.

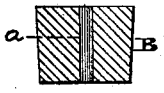


Fig. 5.

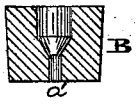
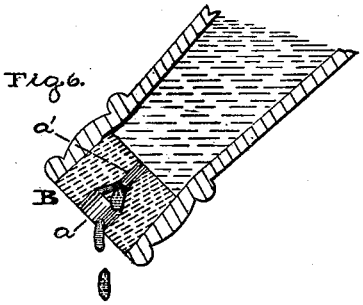


Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN ANNEAR, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. **217,764**, dated July 22, 1879; application filed December 26, 1878.

To all whom it may concern:

Be it known that I, JOHN ANNEAR, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Bottle-Stoppers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a vertical section of the stopper embodying my invention, and applied to a bottle, likewise in section. Fig. 2 is a side view of the stopper and cork bushing. Fig. 3 is a side view of the stopper. Figs. 4 and 5 are vertical sections of the cork bushing. Fig. 6 is a sectional view, showing the operation of the device.

Similar letters of reference indicate corresponding parts in the several figures.

Stoppers of bottles, especially those designed for sauce, have been made of glass and cork; but the edges of the head are often sharp and liable to cut, and the cork has a large opening, which permits waste and extravagant use of the sauce, and retains what should be run out, but which becomes sediment.

My invention consists of a flexible bushing having a duct narrower at bottom than at top, in combination with the stopper, constructed of a head, a stem occupying a part only of said duct, and a flange or base which covers the top of the bushing and rests on the upper edge of the neck of the bottle, whereby several advantages are attained, as will be hereinafter fully set forth.

Referring to the drawings, A represents a bottle, which may be of ordinary form and construction.

B represents a bushing, which, applied to the neck of the bottle, is formed of cork or other suitable yielding substance, having a perforation, *a'*, which constitutes a duct for the discharge of the contents of the bottle.

C represents a wooden head, consisting of a bulbous top portion, *b*, and base *d*, and from the center of the lower face of the head projects a stem, D, which is partly or entirely tapering, and the length of said stem is less than that of the duct *a'*.

The operation is as follows: The bushing is firmly applied to the inner face of the neck of the bottle, and the stem or plug D inserted in the duct *a'*, thus closing the bottle.

In practice, the duct *a'* will be of small diameter throughout, and when the stem is introduced thereinto the portion occupied by the same will be enlarged or countersunk. This compresses the bushing, and insures its hold on the neck of the bottle; but the countersink may be formed by a proper tool prior to the original insertion of the stem.

It will be seen that the lower or inner portion of the duct *a'* is of less diameter than the upper portion, and it is free from the stem of the stopper, so as in no wise to be occupied, altered, or disturbed thereby.

When the contents of the bottle are required the head C is removed and the bottle inverted. The fluid now enters the contracted portion of the duct, and escapes through the wider portion thereof, and the escape will be accelerated by an impulse of the bottle or shaking the same. While a limited amount of the fluid is discharged it is uniform, and there is furthermore a sufficiency of discharge for all practical purposes, and waste and extravagant use are prevented. Moreover, the sediment passes out with the fluid, whereby a bottle of substance, as in the case of sauce, goes farther, and the sediment—a collection otherwise undesirable and thrown away—is used with the fluid.

The head, being formed of wood, presents no cutting-edges, and possesses strength, so as not to break in handling and falling.

An important feature is the base *d*, which covers the bushing and overlaps the top edge of the neck of the bottle, so as to be supported thereon.

Now, while the stem D prevents escape of the fluid, should there be any disposition to leak at the duct *a'* or the joint of the bushing and neck of the bottle, the base *d* closes the several joints and prevents the leakage.

Furthermore, the base rests on the neck of the bottle and prevents the bushing being forced in when the stem is inserted. The soft nature of the base also prevents leakage of the neck of the bottle, and the head can be

driven home to full extent without much danger of becoming broken or breaking or chipping the neck of the bottle.

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

A bushing having a duct, *a'*, narrower at bottom than at top, in combination with the stopper, consisting of the head *b*, the stem D, occupying a part only of said duct *a'*, and the flange or base *d*, covering the top of the bushing, and resting on the upper edge of the neck of the bottle, substantially as and for the purpose set forth.

JOHN ANNEAR.

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