

(No Model.)

C. DE QUILLFELDT.
BOTTLE STOPPER.

No. 344,638.

Patented June 29, 1886.

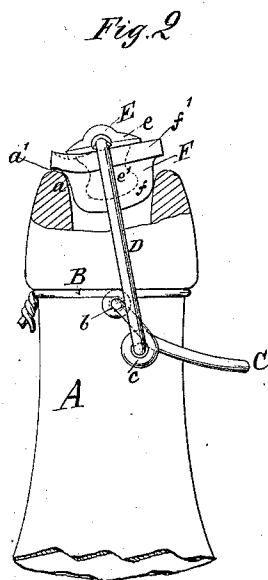
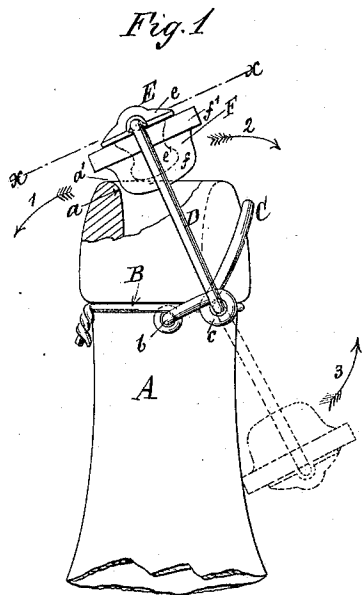


Fig. 3

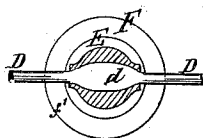
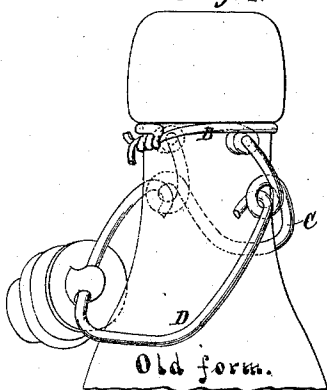


Fig. 4



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES DE QUILLFELDT, OF NEW YORK, N. Y.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 344,638, dated June 29, 1886.

Application filed December 28, 1885. Serial No. 186,868. (No model.)

To all whom it may concern:

Be it known that I, CHARLES DE QUILLFELDT, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented a new and useful Improvement in Bottle-Stoppers, of which the following is a specification.

My invention relates to bottle-stoppers of that class invented by myself, and described in Patent No. 158,406, dated June 5, 1875, in which the stopper proper is suspended to a bail or yoke pivoted with its ends to opposite eyes in a lever, which latter is pivoted with its ends to the bottle-neck, or a band attached thereto.

The object of my present invention is to provide an essential improvement upon my aforesaid previous invention, which will overcome the annoyance and waste of time frequently attendant upon the closing of a bottle when the bail and the lever happen to be down at opposite sides of the bottle-neck and the cap has slid laterally upon the bail; also, to obviate the necessity of turning the cap upon the bail to get it in position for insertion in the bottle-neck, and thus generally to facilitate the operation of the stopper.

In the accompanying drawings, Figure 1 represents a side elevation of a bottle provided with my present improvement, the stopper being shown in a position ready to enter into the bottle-mouth by simply depressing the lever. Fig. 2 is a similar view of the same in position, with the lever depressed so far that the stopper is almost wholly entered. Fig. 3 is a detail section on the line $x x$ through the cap, showing how the same is secured to the bail. Fig. 4 is a perspective view of a bottle-stopper of the general construction described and shown in my aforesaid previous patent, the parts being shown in the positions relative to each other which they often assume, and which make it most inconvenient to close the bottle.

A is the bottle, and B the neck-band.

C is the lever, pivoted with its ends through opposite eyes, b , of the neck-band.

D is the bail or yoke, pivoted with its ends to opposite eyes, c , of the lever C, at points between the pivots b and the handle end of the lever.

The stopper proper is compound, as usual,

consisting of a metallic portion, E, and an elastic or rubber portion, F. The metallic portion consists of a cap or flange, e , cast in one piece with the stem or core e' , which should be shaped about as shown in the drawings to properly retain the elastic portion F and tighten the same in the mouth of the bottle. The elastic portion consists of two distinct parts, the shank or stem f and the top flange, f' . The stopper is not pivoted or movable upon the bail, but is rigidly secured to the same, so as to prevent sliding and turning. This may be done by flattening the bail-wire at d into about the shape shown in Fig. 3, and casting the metallic portion E upon it, or by making the parts E D in one piece. The length of the bail from its pivoting-point at c to the point at which it is secured to the cap E is so proportioned (as shown in Fig. 1) that when the lever C is raised, with its handle end in the highest position, the stopper cannot be swung down in the direction of arrow 1, but is free to swing in the direction of arrow 2 until it assumes the dotted position, with the rubber flange f resting against the neck or side of the bottle. It will be noticed, inasmuch as the stopper cannot turn upon the bail, the metallic portion E can never strike against the glass, as in my previous stopper, above referred to; but the contact is always formed by the soft elastic flange.

If it is desired to close a bottle when the parts of the old construction are in the position shown in Fig. 4, the cap has first to be moved down to its proper place on the central portion of the bail. Then the stopper cannot be applied until the bail is swung over to the same side as the lever C, and this cannot be done until the said lever is raised. Consequently the next step is to raise the lever, next to swing the bail over to the same side as the lever, then to swing the stopper around and move it to the proper central position upon the bail, insert it in the bottle-neck, and, finally, depress the lever. By my present simple, though important, improvement, in which the lever and bail never can swing to opposite sides of the bottle-neck, all that is necessary to close the bottle is simply to swing the bail from its dotted position in direction of arrow 3, Fig. 1, as far as it will go, when it will assume the position drawn in full lines, and to

depress the lever C. Thus only two movements, instead of five movements, are needed to do the same with the old construction when in a position similar to that shown in Fig. 4.
 5 In depressing the lever to close the bottle the flange f' touches the bottle first at a' , and is compressed, as in Fig. 2. The pressure is then gradually distributed until, when the lever is completely depressed and the bail has assumed
 10 the vertical position, it is equal on the entire flange.

For the purpose of facilitating the entering of the stopper the metallic cap e is considerably smaller in diameter than the rubber flange
 15 f' , and slightly smaller than the opening at the extreme end of the bottle-mouth, and this latter is slightly bell-shaped, and the stem f , shaped in accordance therewith, is rounded and tapering downward, as shown, so as to
 20 insure a tight fit with very little effort to press on the lever.

I am aware that a stopper rigid upon a bail is in itself not new.

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

1. The combination, substantially as described, of a lever, C, pivoted to the bottle-neck, a bail, D, pivoted to the said lever, and a stopper rigidly secured upon the said bail,
 30 the length of the said lever and bail being so proportioned that when the lever is raised in its highest position the bail allows of swinging the stopper down upon the bottle-neck toward the same side as the lever, but not to-

ward the side opposite, for the purpose set forth.

2. The combination, substantially as described, of a lever, C, pivoted to the bottle-neck, a bail, D, pivoted to the said lever, and having its central portion flattened, substantially
 40 as shown, and a stopper having its metallic portion cast upon the said central part of the bail, substantially as set forth.

3. The combination, substantially as described, of a lever, C, pivoted to the bottle-neck, a bail, D, pivoted to the said lever, and a compound stopper having the cap e of its metallic portion E of the same or of a slightly smaller diameter than the extreme outer
 50 end of the bottle-mouth, and rigidly secured upon the said bail, the flange f' of the elastic portion of the stopper being of larger diameter than the cap, the length of the said lever and bail being so proportioned that when the
 55 lever is raised in its highest position the bail allows of swinging the stopper down upon the bottle-neck toward the same side as the lever, but not toward the side opposite, substantially as hereinbefore set forth.

In testimony that I claim the foregoing as
 60 my invention I have signed my name, in presence of two witnesses, this 24th day of December, 1885.

CHAS. DE QUILLFELDT.

Witnesses:

A. W. ALMQVIST,
 T. M. CROSSMAN.