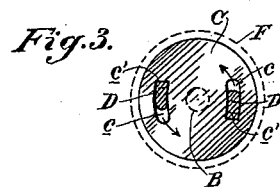
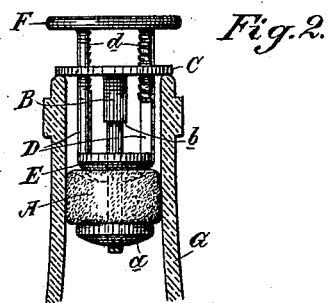
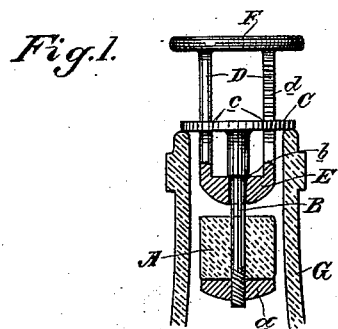


(No Model.)

J. M. SCHOFIELD.
BOTTLE STOPPER.

No. 419,477.

Patented Jan. 14, 1890.



Witnesses,
R. H. Hourse
H. C. Lee.

Inventor,
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UNITED STATES PATENT OFFICE.

JAMES M. SCHOFIELD, OF MERCED, CALIFORNIA.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 419,477, dated January 14, 1890.

Application filed October 26, 1889. Serial No. 328,295. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. SCHOFIELD, a citizen of the United States, residing at Merced, Merced county, State of California, have invented an Improvement in Bottle-Stoppers; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of bottle-stoppers which are more particularly applicable to bottles from which the regular corks have been removed during the period of use of the bottle; and my invention consists in the novel construction of stopper hereinafter fully described, and specifically pointed out in the claims.

The object of my invention is to provide a simple and effective stopper of this class which is adapted to be readily inserted in the neck of the bottle and there confined, and as easily removed therefrom.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a view of my stopper, showing it free in the bottle-neck. Fig. 2 shows it expanded to fit tightly in the neck and locked therein. Fig. 3 is a plan to show the engagement of the teeth of arms D with the teeth *c'* of the slots *c*.

A is a stopper, made of some suitable elastic material, such as rubber. This is fitted upon the end of a spindle or shank B and is held thereon by a nut *a*, screwed on the end of the spindle or shank. On the top of the spindle or shank is a bearing-plate C. Through slightly-elongated slots *c* in this bearing-plate pass the arms D, having on their edge the ratchet-teeth *d*. The lower ends of these arms are formed or connected with a presser-foot E, which is loosely fitted on the spindle or shank B, and is adapted to bear down upon the top of the stopper. The top of these arms carries a head-plate F. One end of the elongated slots *c* in the bearing-plate C is beveled, so as to form teeth *c'*, with which the ratchet-teeth of the arms are adapted to engage. A small shoulder *b* on the spindle or shank serves to limit the play of the presser-foot E, so that the movement of the latter shall not be too free toward the upper end, thus holding the parts well together.

The operation of the stopper is as follows: When free of the neck of the bottle, the parts hang loosely together, and no pressure being upon the stopper it is contracted to its smallest diameter, thereby enabling it to pass down readily into the neck G of the bottle. The bearing-plate C of the spindle or shank, on which the stopper is carried, rests upon the top of the bottle-neck. Now, to fasten this stopper in place, the hand is placed over the head-plate F, and as much pressure downwardly is applied as to carry and force the presser-foot E of the arms D down upon the top of the elastic stopper, which resists this pressure by the bearing of its plate C on the top of the bottle-neck. This pressure, however, expands the stopper, so that it completely and tightly fills the bottle-neck, thereby closing it. In order to lock and hold it in this expanded condition, the head-plate is turned slightly by the hand while still pressing it, so as to carry the ratchet-teeth *d* of its arms into engagement with the teeth *c'* of the bearing-plate C, whereby all the parts are firmly locked. To release the stopper sufficient pressure is again placed upon the head-plate to force it down enough to release the ratchet-teeth of its arms from their engagement, and then a slight turn backwardly will permit the arms to move up through the slots *c*, thereby relieving the stopper and allowing the entire device to be readily taken out. By setting up the nut *a* on the bottom of the spindle or shank the position of the stopper with relation to the presser-foot may be nicely regulated.

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

1. A bottle-stopper consisting of the shank or spindle having the elastic stopper upon one end and the slotted bearing-plate upon its upper end, the head-plate having arms extending freely through the slots of the bearing-plate and provided with ratchet-teeth adapted to engage the edges of said slots in order to lock the parts in position, and the presser-foot on the lower ends of the arms, fitted upon the shank or spindle and bearing against the top of the elastic stopper, substantially as herein described.

2. A bottle-stopper consisting of the shank

or spindle, the elastic stopper, and the regulating-nut on the lower end of said shank or spindle, the slotted bearing-plate on its upper end, the head-plate having the arms passing
5 down through the slots of the bearing-plate, a presser-foot upon the ends of the arms, fitted upon the shank or spindle and bearing on the elastic stopper, and the ratchet-teeth on the edges of the arms for engaging the

ends of the slots of the bearing-plate, where- 10
by the parts are held in a locked position, substantially as herein described.

In witness whereof I have hereunto set my hand.

JAMES M. SCHOFIELD.

Witnesses:

S. H. NOURSE,

H. C. LEE.