

(No Model.)

R. BLOESER.
BOTTLE STOPPER.

No. 417,139.

Patented Dec. 10, 1889.

Fig. 1.

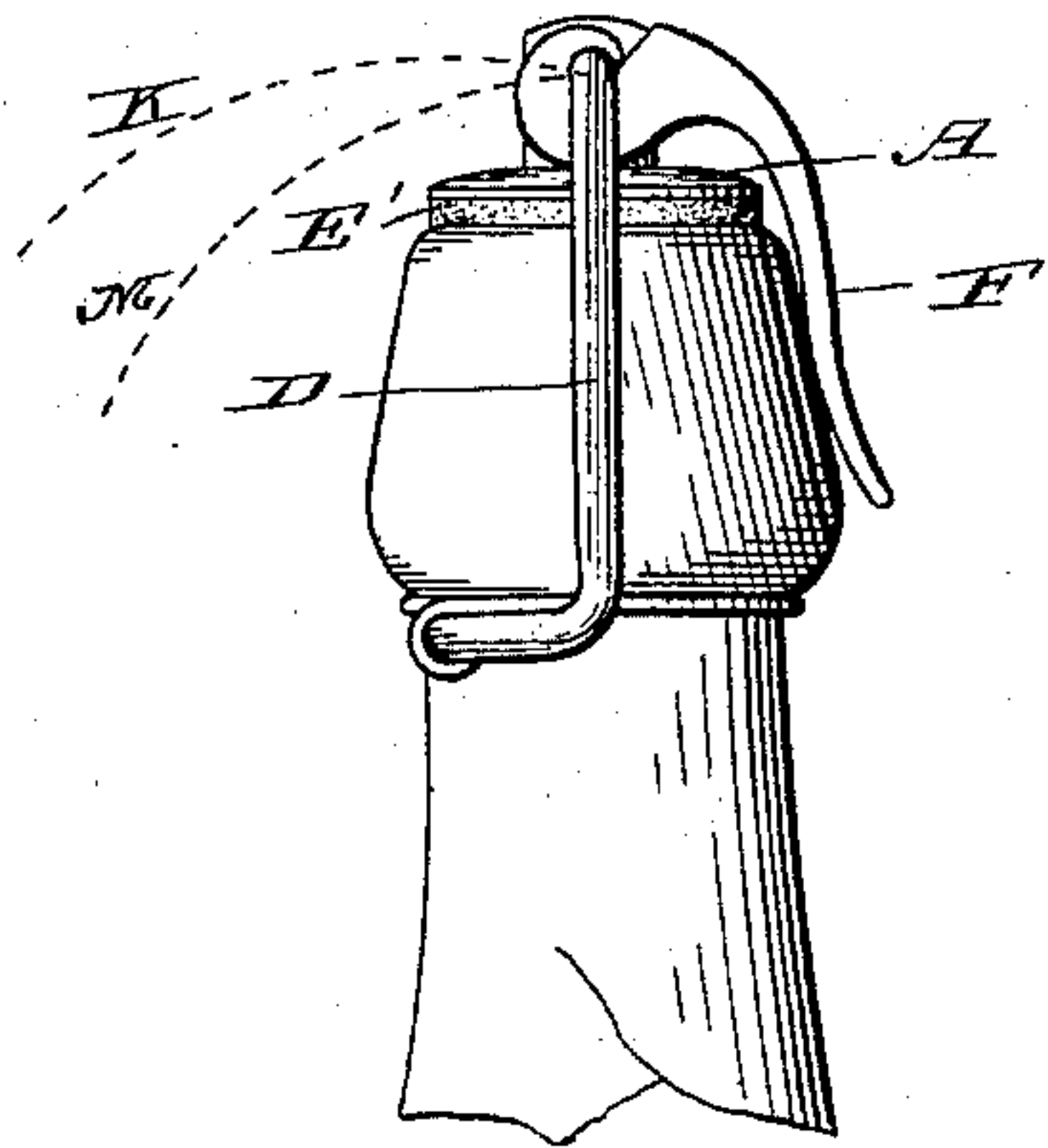


Fig. 2.

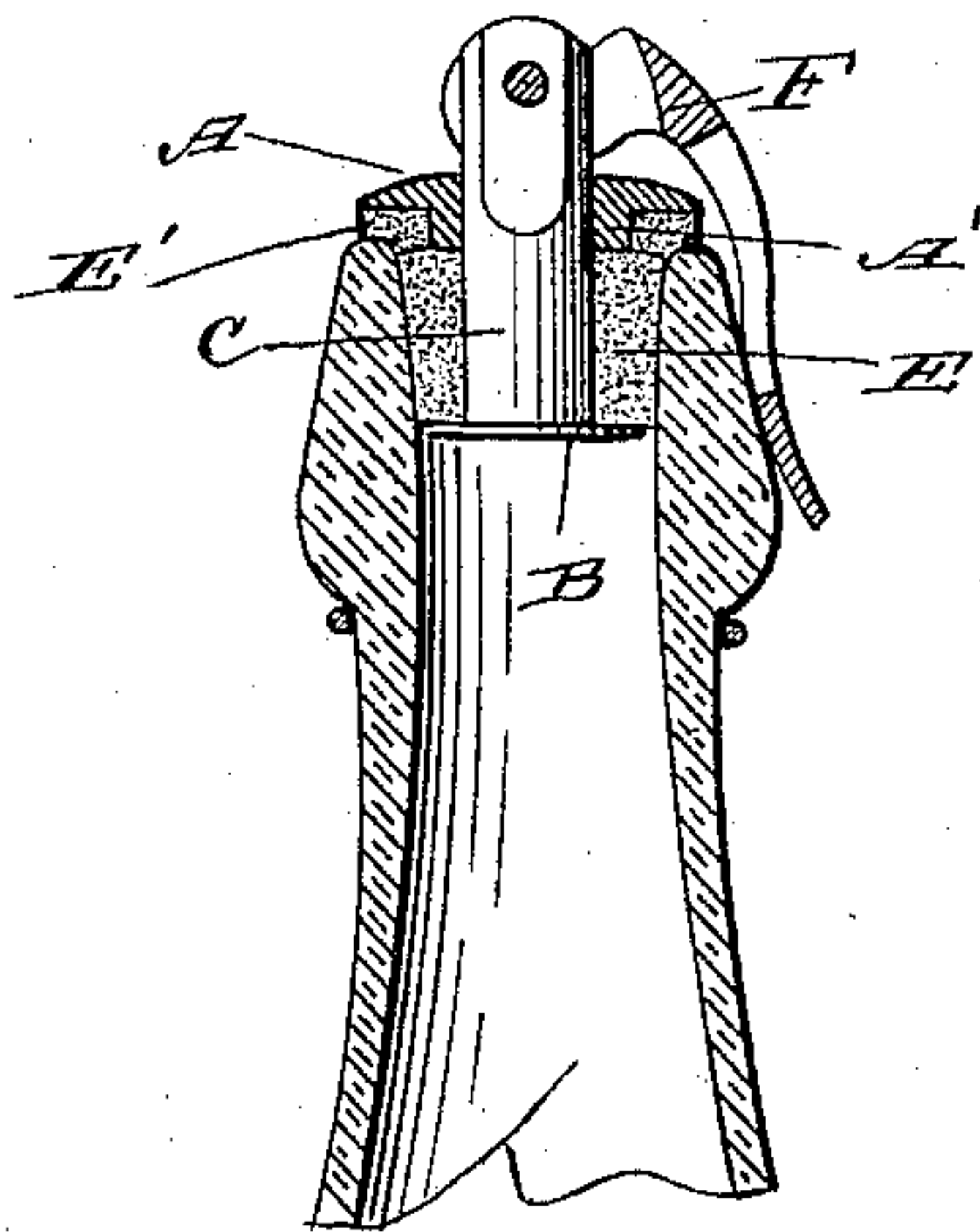


Fig. 3.

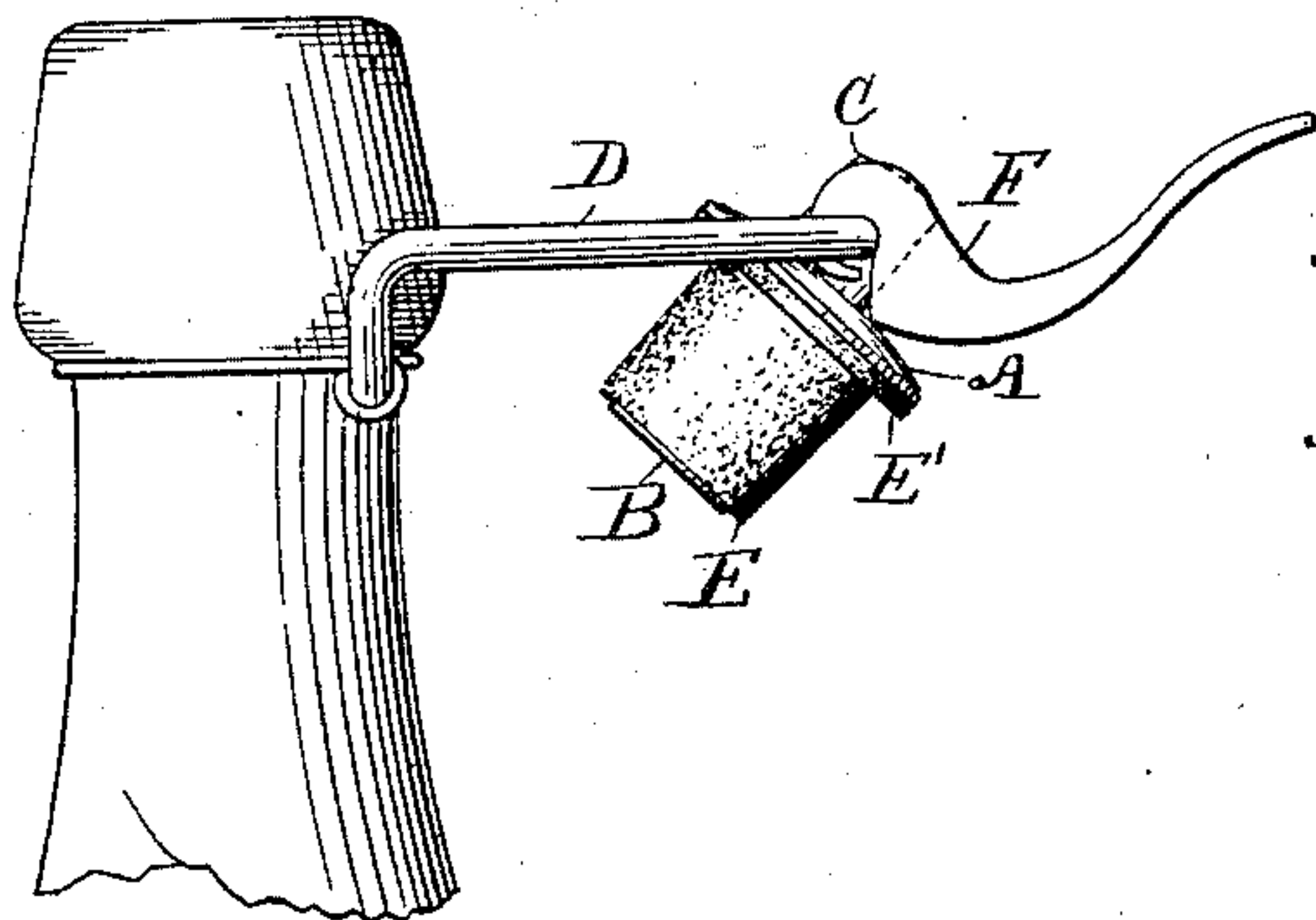
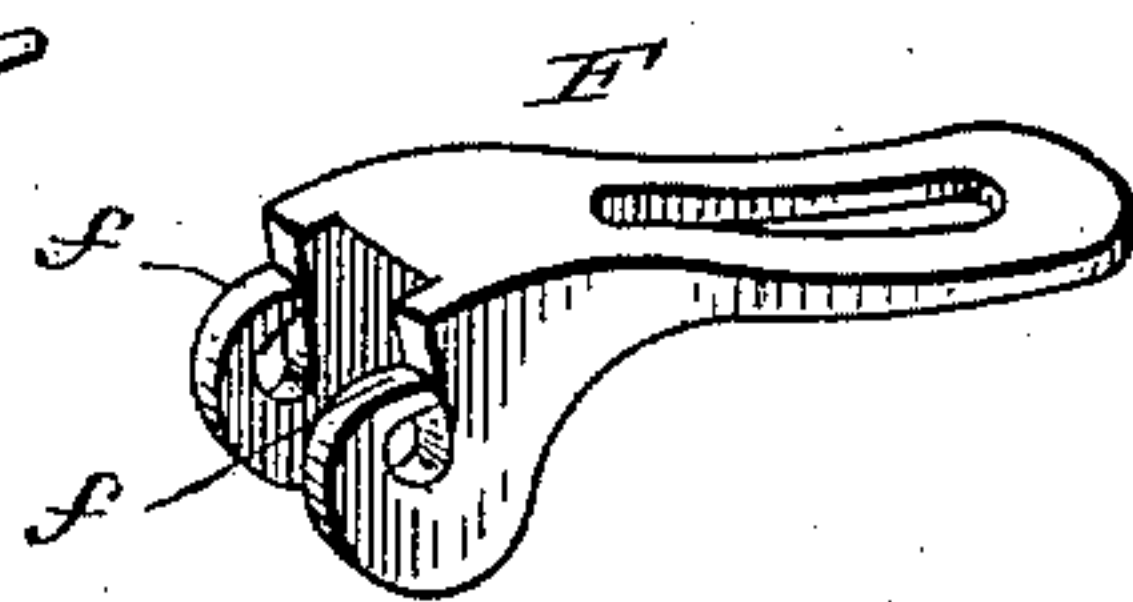


Fig. 4.



Witnesses

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BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 417,139, dated December 10, 1889.

Application filed July 8, 1889. Serial No. 316,742. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH BLOESER, of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain
5 new and useful Improvements in Bottle-Stoppers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked
10 thereon.

The present invention relates to certain improvements in that class of closures for bottles commonly known as "swing-stopper
15 fasteners"—that is to say, those in which the stopper is mounted on a bail attached to the neck of the bottle, and adapted, when opened, to swing down out of the way to permit of the free escape of the contents. While stoppers
20 of substantially this general description have heretofore been constructed, it has been found impractical to employ stoppers which extended any distance down within the mouth of the bottle without also making use of complicated and objectionable combinations of
25 links and bails which enable the stopper to be raised vertically the necessary distance to clear the mouth of the bottle when being opened or closed; and it is the object of my
30 present invention to overcome this defect and to provide a stopper employing, if desired, but a single bail for its attachment to the neck of the bottle, and which may extend well down into the mouth of the bottle and not only
35 clamp over the mouth, but expand within the same, thus forming a most efficient and practical stopper of the class mentioned.

To the end above indicated the invention consists in certain novel details of construction and combinations and arrangements of
40 parts, as will be hereinafter described, and pointed out particularly in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is
45 a side elevation of the top of a bottle having a stopper applied thereto constructed in accordance with my invention. Fig. 2 is a vertical sectional view of the same, taken through the bail. Fig. 3 is a view of the stopper thrown
50 open. Fig. 4 is a perspective view of the locking-lever.

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

In the preferred form of stopper shown in the drawings the portion extending down into
55 the mouth of the bottle is made to expand laterally to fill and tightly close the same by being compressed between the top and bottom plates A and B, respectively, the latter being connected to the end of the central pin or
60 stud C, which extends up through top plate A, and is provided with an aperture above said plate through which the bail D passes. The top plate A is provided at the center
65 with a downwardly-extending annular projection A', around which fits the washer or flanged upper portion E' of the elastic center
portion E, the body of the latter being held directly between the said projection and the
70 bottom plate.

A cam-lever F, preferably having arms extending on each side of the central pin or stud, is pivoted on the bail and adapted to
75 co-operate with the top plate and central pin or stud to bring the two plates toward each other, and compress and expand the elastic center portion, as well as force the top plate and flange E', which is of substantially the
80 same diameter, down over the mouth of the bottle, forming a double seal, as will be readily understood.

As before intimated, the locking-lever may be of any approved style, but is preferably so formed as to be capable of application to the
85 bail after the same is bent up into shape, for which purpose the bearings in the lever for the bail are formed open, and are adapted to be closed by having the arms f bent around, as illustrated in Fig. 4.

A stopper constructed as thus far described
90 would in a large measure be open to the objection heretofore pointed out—i. e., the difficulty experienced in removing the stopper from the mouth of the bottle—and particularly is this the case where the stopper extends down into the mouth of the bottle some
95 distance, as shown. In order to overcome this difficulty and enable the stopper to be easily withdrawn, the bail H, instead of being pivoted, as heretofore, on a line taken through
100 the vertical center of the bottle-neck, is pivoted to one side thereof, whereby the arc de-

scribed by the top of the bail, instead of passing nearer to the edge of the bottle-mouth as it moves off to the side, passes farther away from the same as illustrated clearly in Fig. 1, the line K representing the arc described by a bail constructed in accordance with my present invention and the line M the arc described by bail as ordinarily constructed. From this it will be seen that the stopper is given plenty of room to clear the mouth of the bottle, even though it be quite a long one, in which instance it will be necessary to tilt the stopper as it is opened, and by extending the locking-lever on the side of the bottle opposite to that on which the bail is pivoted, as shown, it will be seen that a continuous movement of the lever first to release the compression of the elastic center portion and then to throw the stopper to the side, serves to open the bottle almost instantaneously, preventing all danger of the contents, when aerated, from being showered around by coming in contact with the stopper when partially opened.

In the preferred form of bail illustrated it is extended straight down in lines substantially parallel with the vertical center of the bottle, and at the level of the neck is bent at substantially right angles and extended out to the side, as shown, the ends being pivoted in eyes formed by coils of the neck-wire or in any other preferred or well-known manner.

I am aware that expanding stoppers have been connected to the mouth of the bottle by a loop connected to the stopper at one side and surrounding a bail or neck wire at one side of the vertical center; but the connection so formed is a loose one, the loop being in no sense a bail nor adapted to assist in holding the stopper in the mouth, nor does it guide the stopper into position, as does the bail herein described.

Having thus described my invention, what I claim as new is—

1. In a bottle-stopper, the combination, with the swinging bail pivoted at one side of the vertical center of the bottle and the stopper pivoted directly on and held against outward movement by the bail when locked, of the locking-lever, also pivoted on the bail, and engaging the stopper to close the mouth of the bottle, substantially as described.

2. In a bottle-stopper, the combination, with the bail pivoted at one side of the vertical center of the bottle and the stopper carried and held against outward movement by the bail when locked, having the central pin or stud through which the bail passes, with the top and bottom plates and the elastic center portion, of the locking-lever pivoted on the bail and engaging the top plate to bring said plates toward each other and expand the elastic center portion within the mouth of the bottle, substantially as described.

3. In a bottle-stopper, the combination, with the bail hinged at one side of the vertical center of the bottle and the stopper having the central pin or stud through which the bail passes, the bottom plate secured thereto, the top plate having the central downwardly-extending annular projection, and the central elastic portion below said projection, having the top flange surrounding said projection, of the locking-lever pivoted on the bail and engaging the top plate to move said plates toward each other and clamp the said flange against the mouth of the bottle and expand the central portion within the same, substantially as described.

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Witnesses:

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