

(Model.)

S. L. WIEGAND.
BOTTLE STOPPER AND FASTENING.

No. 379,623.

Patented Mar. 20, 1888.

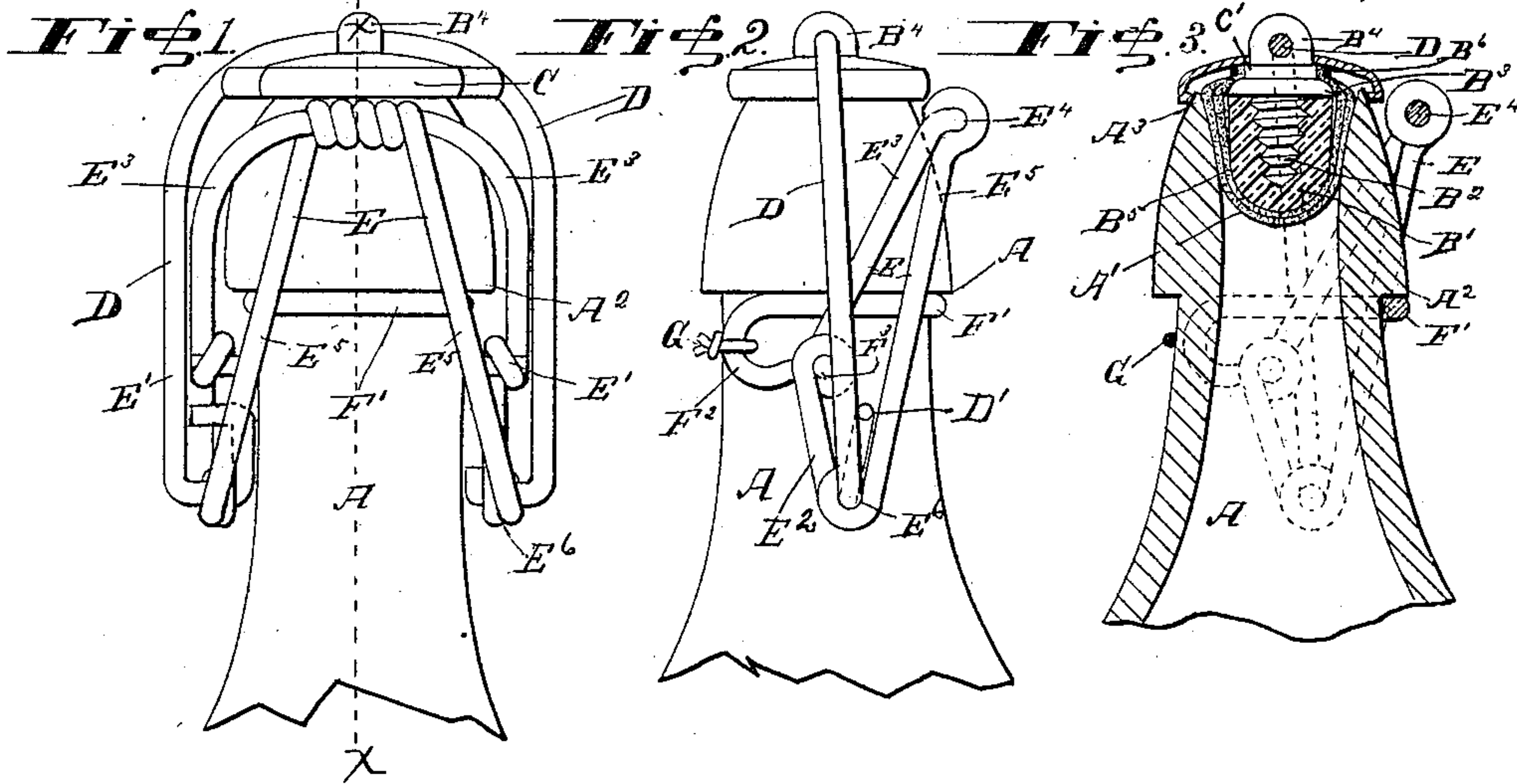


Fig. 4.



Fig. 5.

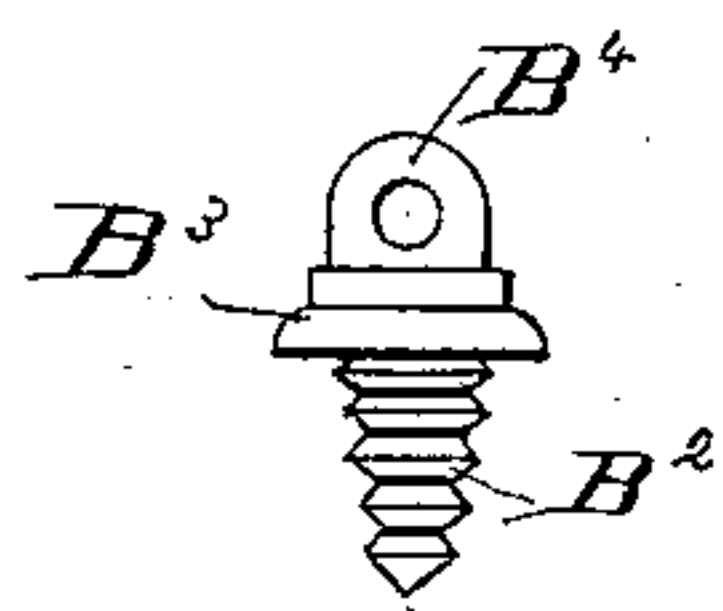


Fig. 6.

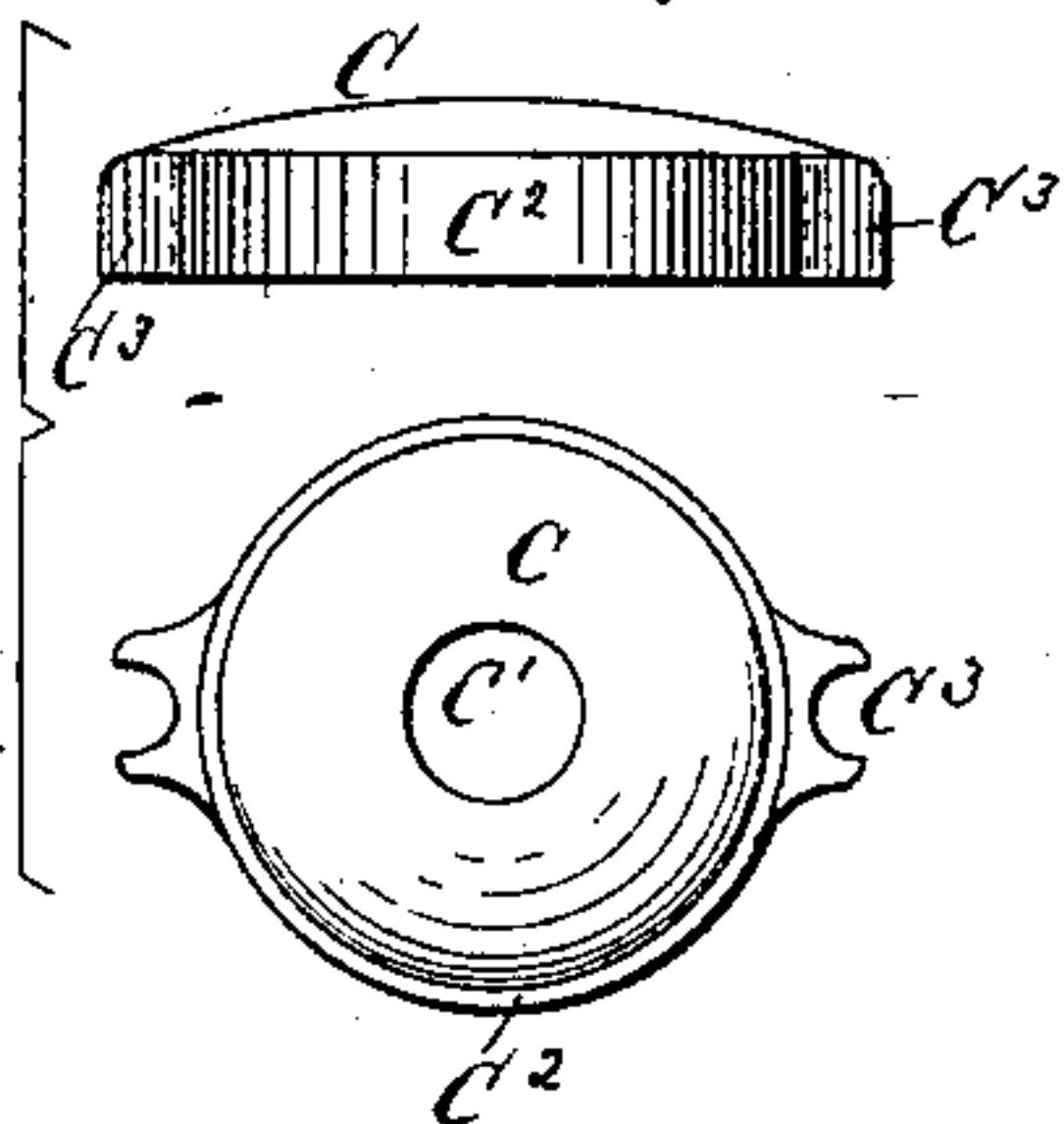


Fig. 7.

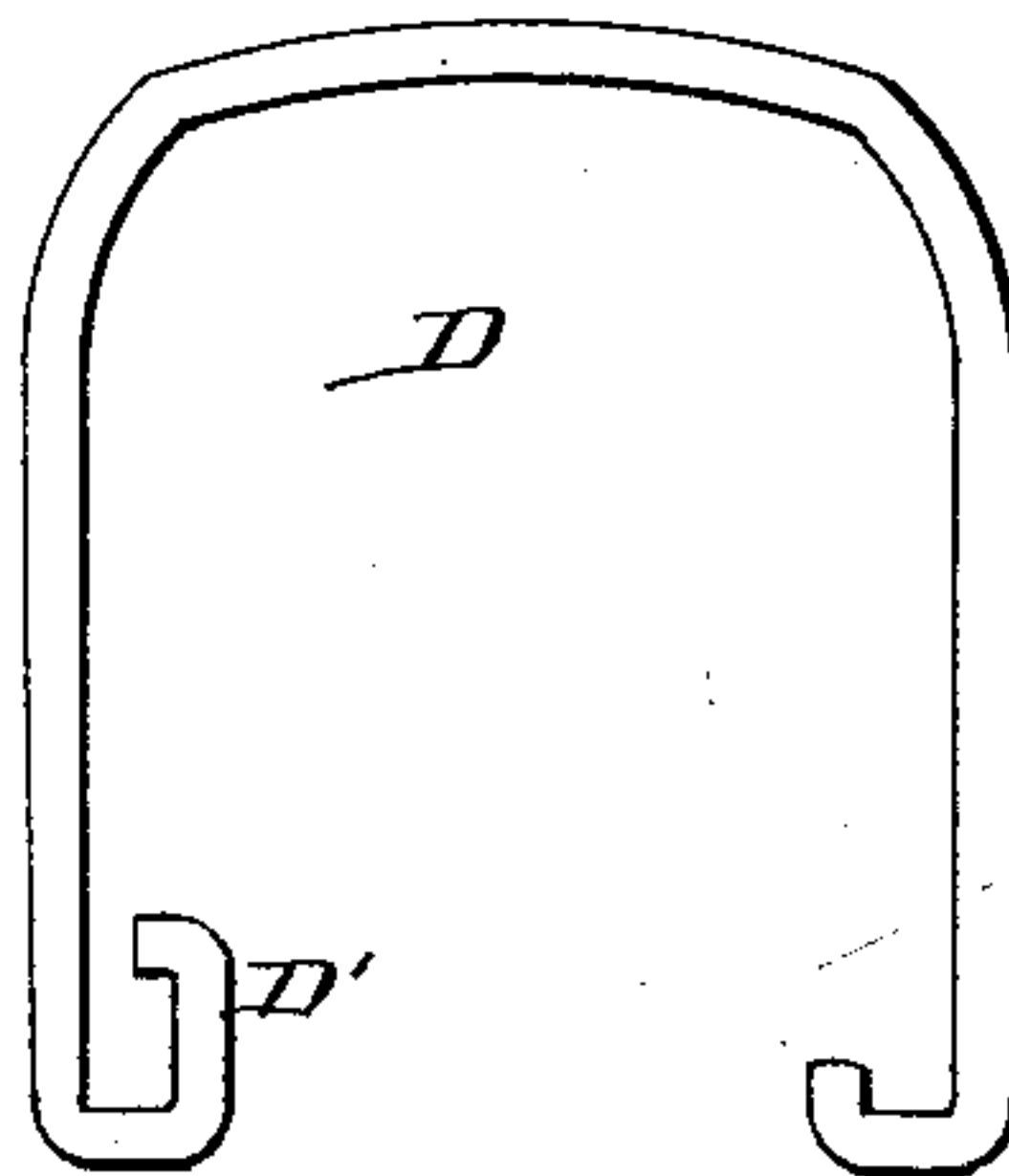


Fig. 8. Fig. 9. Fig. 10.

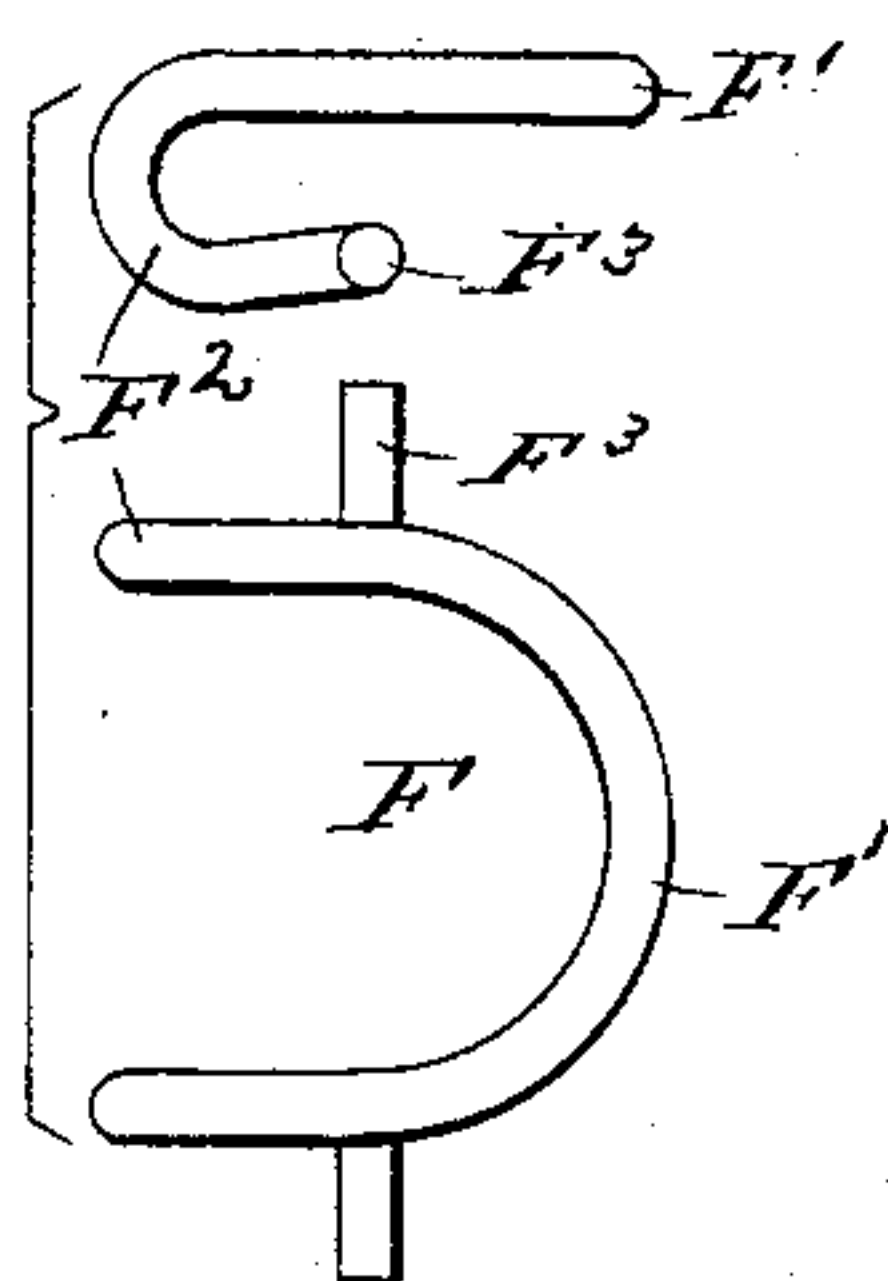
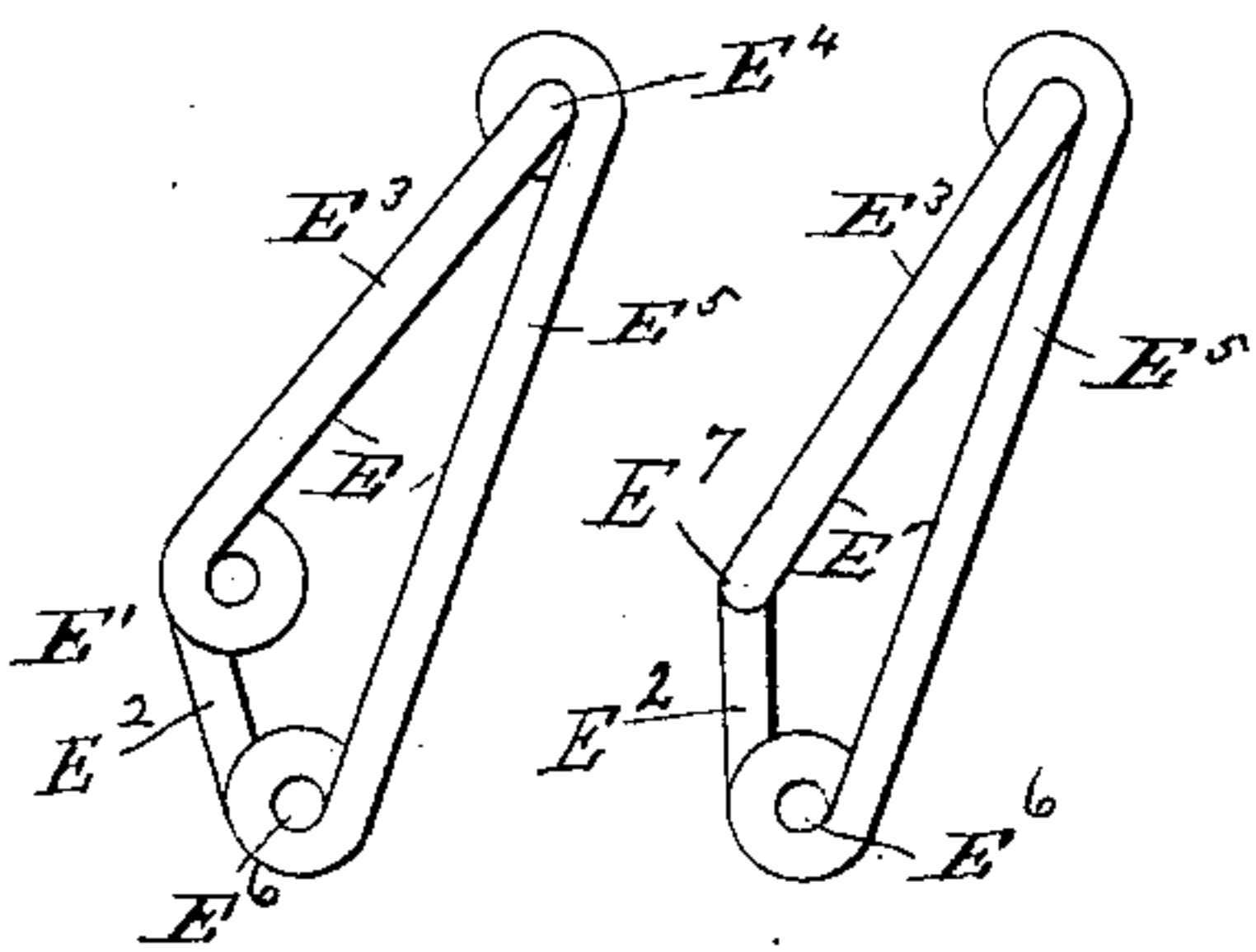
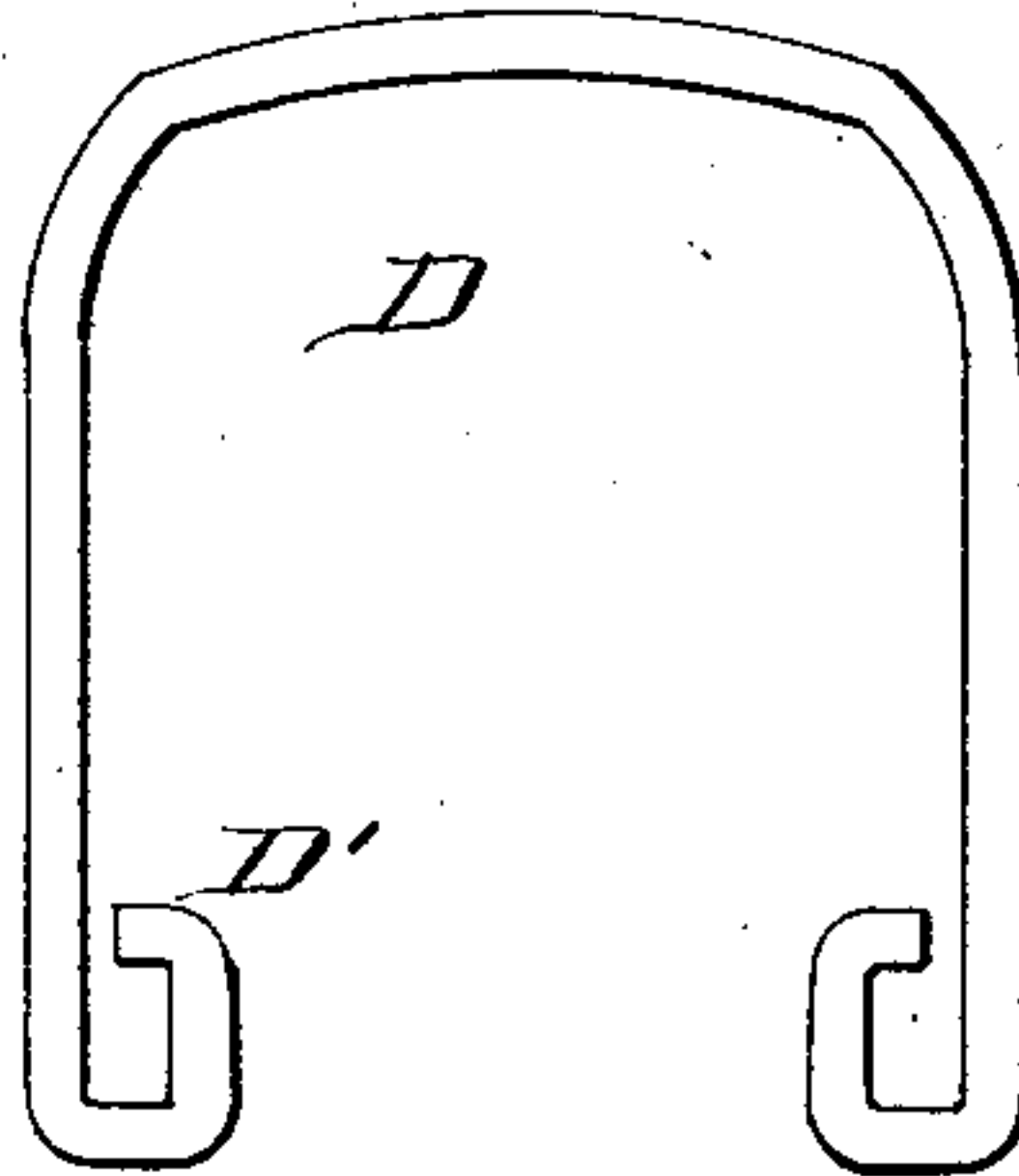
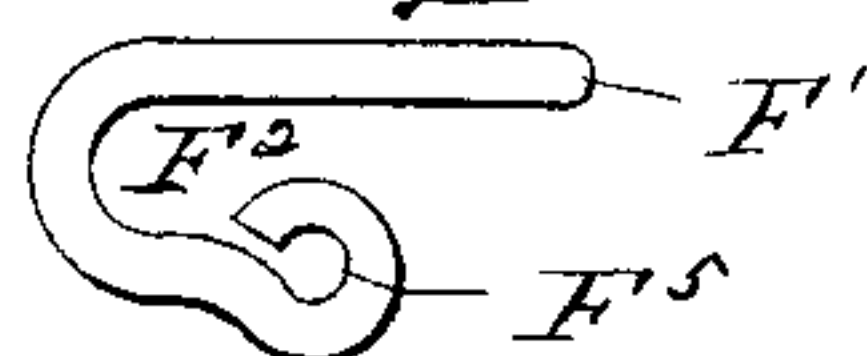


Fig. 12.



Witnesses:
Alex H. Siegel,
Chas. W. Budd.

Fig. 11.



Inventor:

Lloyd Wiegand

UNITED STATES PATENT OFFICE.

S. LLOYD WIEGAND, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
GERMANIA BOTTLE STOPPER COMPANY, OF CAMDEN, NEW JERSEY.

BOTTLE STOPPER AND FASTENING.

SPECIFICATION forming part of Letters Patent No. 379,623, dated March 20, 1888.

Application filed September 13, 1887. Serial No. 249,601. (Model.)

To all whom it may concern:

Be it known that I, S. LLOYD WIEGAND, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Bottle-Stoppers and Fastenings Therefor; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof as to enable others skilled in the art to make and use the said invention.

This invention relates to bottles for storing and transporting effervescent beverages, and has for its object the tight closure of the bottle, the avoidance of any contamination from deleterious substances in the stopper, the safe retention of fluid when the bottle-lips are impaired by chipping, the greater facility of opening and closing the bottle, great durability, and cheapness of construction. These several desiderata are attained by the improved construction hereinafter fully described, and shown in the drawings annexed.

Referring to the drawings, Figure 1 shows in front view the neck of a bottle with this invention applied; Fig. 2, the same in side view; Fig. 3, the same in central section in the plane indicated by the dotted line in *xx* in Fig. 1. Figs. 4, 5, 6, 7, 8, and 10 show the several parts as detached, and Figs. 9, 11, and 12 show modifications in the form of parts.

The same letters of reference apply to the same parts in the several figures.

A represents the neck of a bottle, having an internal taper at A', an external shoulder at A², and a rounded lip or upper edge, A³, as shown in Fig. 3.

B is a stopper consisting of a central core, B', of elastic material, (cork being found in practice to be preferable,) secured upon a tapering screw, B², provided with a shoulder or collar, B³, and a perforated upper extension or eye, B⁴. The central core, B', and collar B³ are covered with one or more layers of cloth, B⁵, preferably of linen, bound above the collar B³ by a cord or thread, B⁶, over which the outer edges of the cloth B⁵ are spread. A cap, C, having a central opening, C', fits upon the upper side of the cloth B⁵, and the eye B⁴ of the screw B² extends upwardly through the central opening, C', in the cap C.

The stopper B is saturated with melted paraffine. The cap C is concave on the under side and convex upon the upper side, and is provided with a downwardly-projecting rim, C², at its circumference, of such diameter as to fit easily over the lip or upper edge, A³, of the bottle-neck, serving when the bottle is closed to center the stopper B and to protect the lip A³ and stopper B from dirt or mechanical injury. Upon opposite sides of the rim C² are two projecting lugs, C³, between which the bail D fits loosely.

D is a bail passing loosely through the eye B⁴, extending across the top of the cap C, and thence bent downwardly between the lugs C³ and secured pivotally at the lower ends to the pivots E⁶ of the lever E. D' is an arm of the bail D. The arm D' of the bail D acts as a stop. When the outer end of the locking-lever is raised to force the stopper into the mouth of the bottle, this stop D' comes in contact with the part E⁵ of the lever and holds the upper part of the lever away from the side of the bottle, thereby permitting the finger or any suitable instrument to be inserted between the bottle and the end E⁴ of the lever to open the bottle. When, in opening the bottle, the locking-lever has been moved some distance away from the mouth, thereby raising the stopper from its seat, the part E² of the lever comes in contact with the stop D' and carries the stopper off from over the mouth to the same side as that on which the operating-handle of the lever is situated.

E is a double lever, having fulcrum-eyes E', lower arms, E², attached pivotally at E⁶ to the bail D, upper arms, E³, united in the handle or bow E⁴, and braces E⁵, extending from the lower arms, E², to the handle or bow E⁴. The fulcrum-eyes E' of the lever E turn upon the pivots F³ of the fulcrum F. The fulcrum F consists of a wire centrally bent in a bow, F', partially embracing the neck A of the bottle under the shoulder A², having the ends recurved so as to form springs F², and terminating in pivots F³, on which the fulcrum-eyes E' of the lever E turn. The pivots F are susceptible of motion vertically by reason of the elasticity of the springs F². The fulcrum F is tied to the bottle-neck by a wire, G, applied by passing through the bends of the springs

F² and twisting the ends of the wire G together. By cutting and renewing the wire G, the fulcrum F, lever E, bail D, cap C, and stopper B, may without being separated, be
5 removed unimpaired and applied to another bottle.

The stopper B consisting of material having no deleterious properties and not susceptible of chemical change in contact with beverages,
10 no contamination of the beverage is possible. Being elastic and compressible and somewhat unctuous from the paraffine upon it, the stopper fits in the neck of the bottle, and will continue to work as a fluid-tight seal even when
15 applied to bottles in which the lip has been chipped so as to render them unfit for use with stoppers which seal by seating upon the end or lip of the neck. The fulcrum F, being elastic in a vertical direction, readily adapts itself
20 to slight variations in the distance between the shoulder A² and lip or upper edge, A³, of the bottles, and the lever E, being stiffly braced by its three sides forming a triangle, (consisting of the arms E² and E³ and brace E⁵), when
25 the handle E⁴ is raised, draws the bail D and cap C and stopper down and closes the bottle, the springs F² yielding sufficiently to permit the arms E² to pass under the fulcrum-eyes E', and afterward reacting exert a continuous
30 elastic pressure through the bail D on the stopper B.

The handle E⁴ is so proportioned as not to project above the cap C, but to rest closely against the side of it, and is not liable to accidental injury or release and opening. The
35 lever E, when the handle E⁴ is depressed, first raises the bail D, cap C, and stopper B, which are prevented from tilting by the lugs or projections C³ embracing the bail D, and upon
40 further downward motion of the handle E⁴ the

projection or arm D' of the bail D, engaging in the lever E, moves the stopper B toward the handle E⁴ and permits of the unobstructed emptying of the fluid from the bottle.

Figs. 4, 5, 6, 7, 8, and 10 respectively
15 show the core B', the screw B², the cap C, the bail D, the lever E, and the fulcrum F. The remaining figures—9, 11, and 12—respectively show the lever E with pivots marked E' instead of the fulcrum-eyes shown in Fig. 8, the
50 fulcrum F with eyes marked F⁵ instead of the pivots marked F³ in Fig. 10, and the bail D with projections or arm D' on both sides instead of upon one side, as shown in Fig. 7.

Having described this invention and the
55 mode of operating the same, what I claim is—

1. A stopper adapted to fit in the neck of a bottle, consisting of an elastic core secured upon a central shank, which is provided at its
60 upper end with an eye and has a flange resting upon the elastic core, both the flange and the core being covered by an envelope of textile fabric, secured by a ligature above the flange and saturated with paraffine, substantially as and for the purpose set forth.
65

2. The combination of a stopper secured by an eye-screw to the cap C, with the cap C, provided with lugs embracing the bail D, and a
70 triangularly-braced lever, E, pivoted to a vertically-elastic fulcrum, F, substantially as set forth.

3. In combination with the triangularly-braced lever E and vertically-elastic fulcrum F, the bail D, having arms D', engaging with the lever E, substantially as and for the purpose
75 set forth.

S. LLOYD WIEGAND.

Witnesses:

VAN WYCK BUDD,
ALEX H. SIEGEL.