

W. WINKEL.
Bottle Stopper and Stopper Fastener.
No. 229,850. Patented July 13, 1880.

Fig: 1.

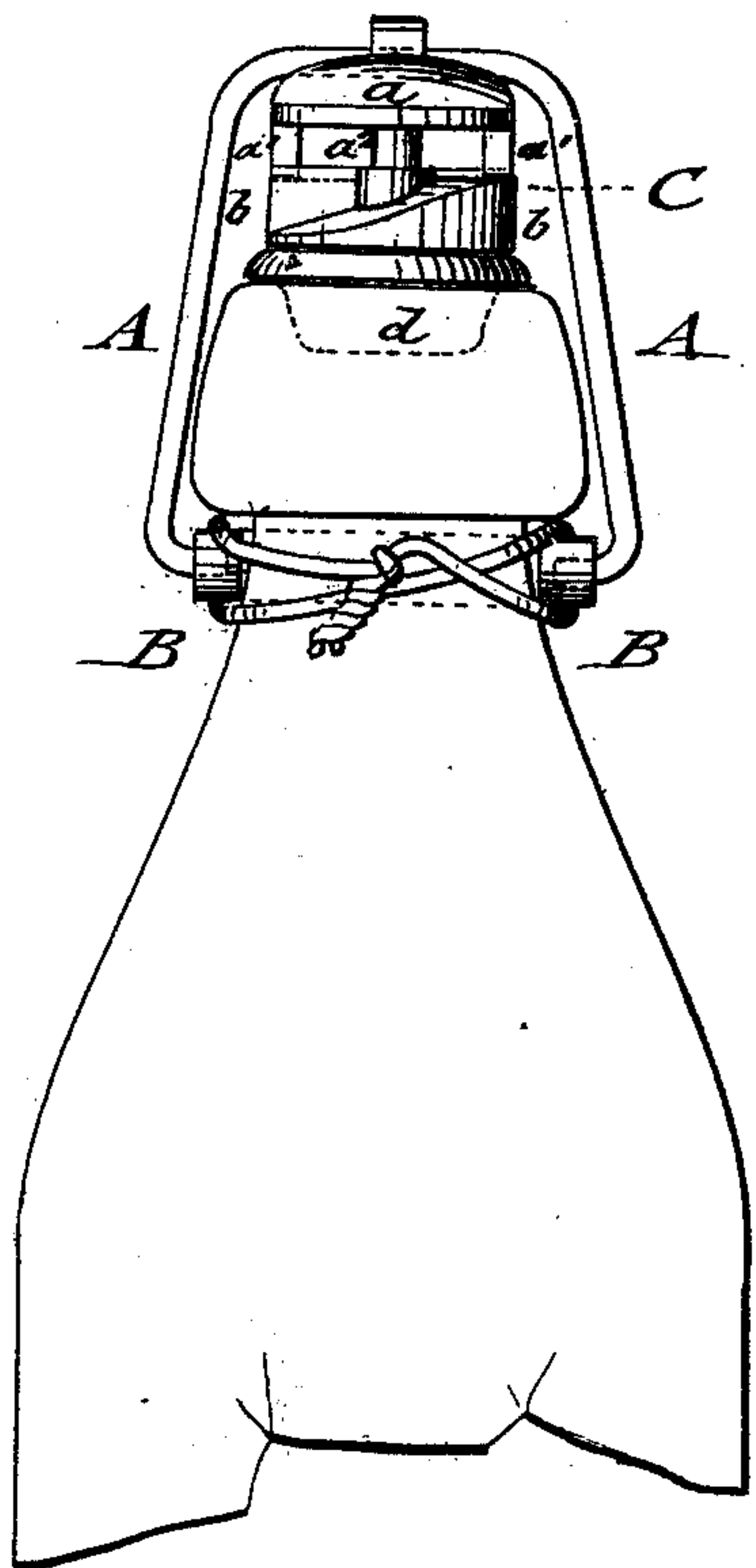


Fig: 2.

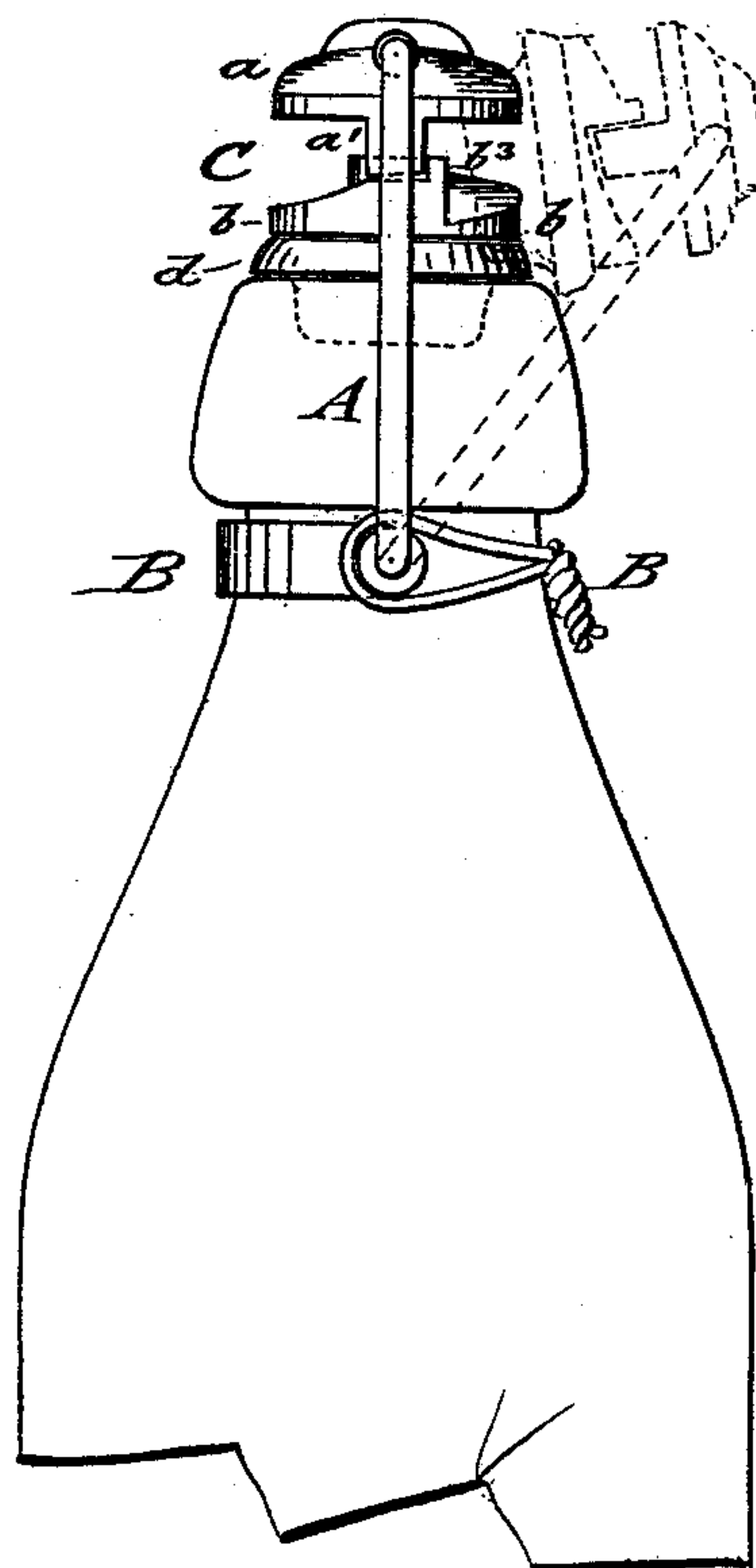


Fig: 3.

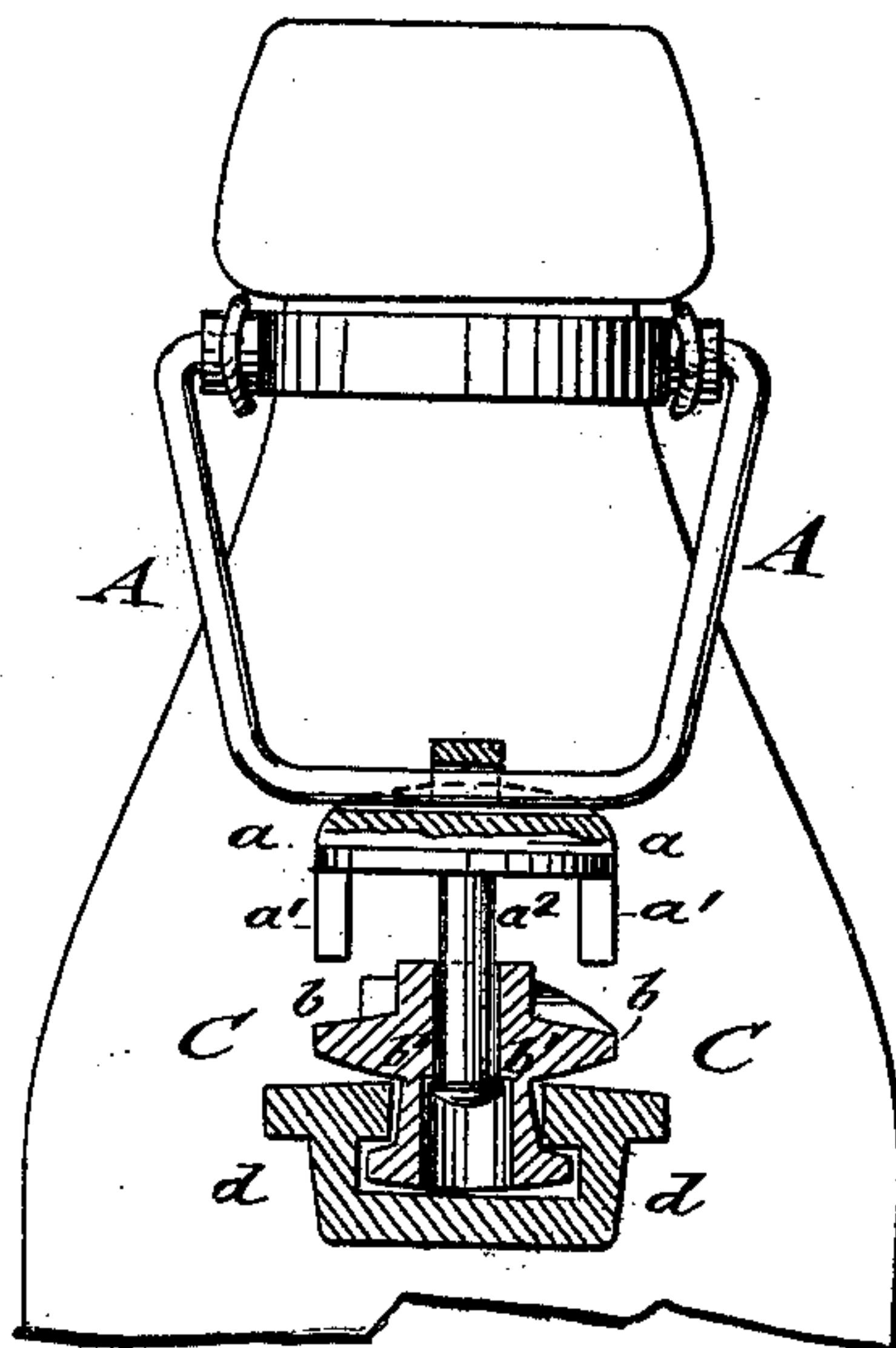


Fig: 4.

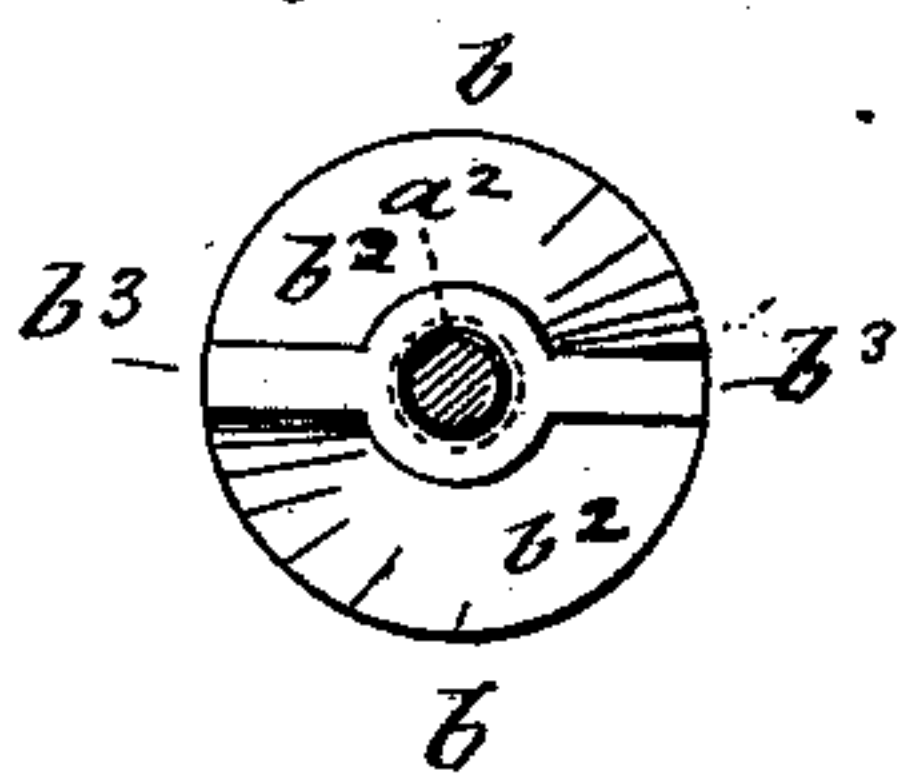
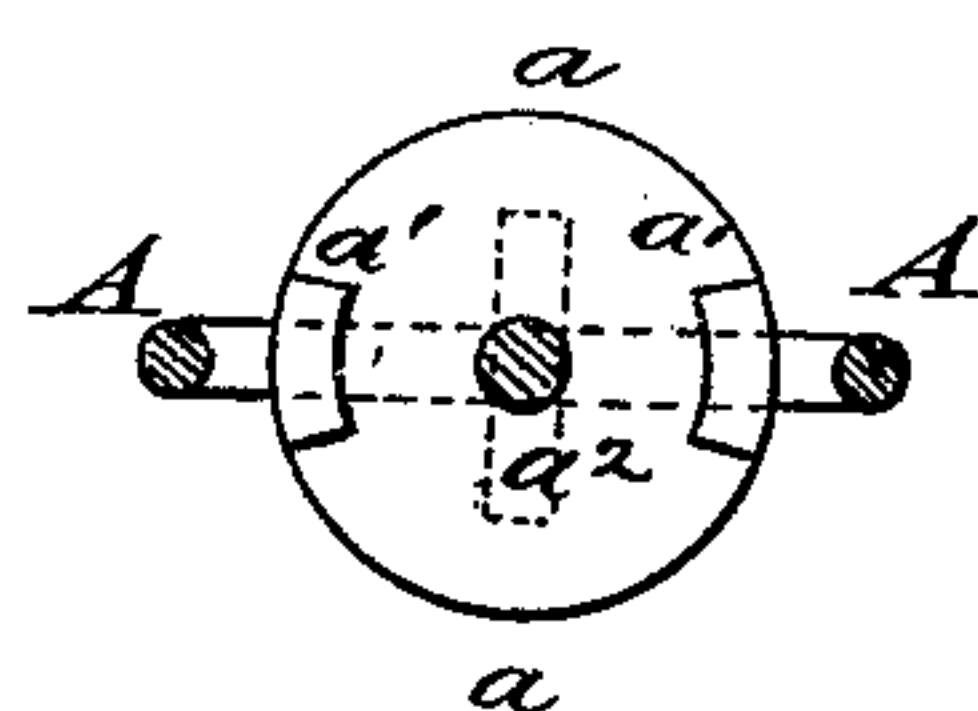


Fig: 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM WINKEL, OF EAST NEW YORK, N. Y.

BOTTLE-STOPPER AND STOPPER-FASTENER.

SPECIFICATION forming part of Letters Patent No. 229,850, dated July 13, 1880.

Application filed November 20, 1879.

To all whom it may concern:

Be it known that I, WILLIAM WINKEL, of East New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification.

In the accompanying drawings, Figures 1 and 2 represent front and side elevations of my improved bottle-stopper, showing the same in closed position on the bottle. Fig. 3 is a side elevation of the same, partly in section through the stopper, shown in open position; and Figs. 4 and 5 are respectively a top view of the lower cap-piece and a bottom view of the upper cap-piece of the stopper.

Similar letters of reference indicate corresponding parts.

This invention relates to improvements in that class of bottle-stoppers which are permanently secured to the neck of the bottle for opening or closing the same; and the invention consists of an axially-sliding neck-band and pivoted yoke, to which a compound stopper is hung, of such a construction that by turning the yoke and upper cap-piece of the same the lower cap-piece and rubber stopple are forced into the bottle-mouth, as will be more fully described hereinafter, and finally pointed out in the claims.

Referring to the drawings, A represents the bail or yoke of my improved bottle-stopper. This bail is of the well-known U-shaped form, and is pivoted at its lower ends to eyes of the neck-band or wire B. The neck-band B is so applied to the neck of the bottle, below the enlarged head of the same, that it may be moved thereon axially around the neck, but not change its position upward or downward thereon. The bail or yoke A is of such height that it leaves between its upper transverse portion and the mouth of the bottle a sufficient space for the compound stopper C. The stopper C is hung to the transverse portion of the yoke, so as to swing readily thereon, the top portion or upper cap-piece of the stopper being provided with an eye or perforation and with a diametrical groove in line with the hole for the yoke.

The compound-stopper is made of three separate pieces—of the upper cap-piece, *a*, which

is hung to the yoke, the lower cap-piece, *b*, and the rubber cap or stopple *d*. The upper cap-piece, *a*, is provided at its under side with downwardly-projecting lugs *a'* at diametrically-opposite points, and with a fixed center pin, *a*², that is firmly embedded into the cap-piece when casting it. The lower cap-piece, *b*, has a central perforation, and is placed on the pin *a*² of the upper cap-piece, so as to slide and turn thereon, it being retained on the pin by a rim or bead at the lower end of the same, and by an enlargement of the central hole of the lower cap-piece, so that an interior shoulder, *b'*, is formed in the latter, as shown clearly in Fig. 3. The upper side of the lower cap-piece, *b*, is provided with two semicircular inclined planes, *b*², and raised stops *b*³ at the ends of the planes, as shown in Figs. 1, 2, and 4. The rubber cap or stopple *d* is retained on the lower cap-piece by being placed over a rim at the lower contracted portion of the latter.

The rubber stopple may be of any approved construction.

The stopper is operated for closing the bottle as follows: The yoke is swung up until the stopper is vertically above the bottle-mouth. The bottle is then held in one hand and the yoke taken hold of by the other hand, and either bottle or yoke, or both, turned in opposite direction to each other. The lugs of the upper cap-piece are thereby compelled to pass over the inclined planes of the lower cap-piece, and the latter is thereby forced along the center pin down into the mouth of the bottle and secured by the central position of the yoke with the rubber stopple in a reliable and positive manner in the bottle-mouth.

For opening the bottle the operation is reversed, the rubber and lower cap-piece released, and the stopper and yoke then easily thrown into position sidewise of the bottle-mouth, as shown in dotted lines in Fig. 2, in which position it is held without dangling for pouring out the contents. The manipulation is readily understood and the bottle quickly opened or closed.

By increasing the degree of inclination of the planes of the lower cap-piece a greater pressure and a deeper forcing in of the stopper is obtained.

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

1. In bottle-stoppers, the combination of an axially-sliding neck-band and pivoted yoke with a compound stopper composed of an upper cap-piece, a lower cap-piece, and a rubber stopple, the upper cap-piece being hung to the yoke and provided with side lugs, the lower cap-piece being hung to a center pin of the upper cap-piece and provided with inclines, and the stopple being applied to the lower cap-piece, so that by turning the upper cap-piece by the yoke the lower cap-piece and stopple are forced down into the bottle-mouth, substantially as set forth.

2. In bottle-stoppers, a compound stopper made of an upper cap-piece hung to the yoke and provided with a perforation and center groove for the same at the upper side, and with side lugs and a center pin at the under side, and of a lower perforated cap-piece with rubber stopple, the lower cap-piece being retained on the center pin and provided with inclines and stops at the upper side, all substantially as described.

3. The combination of an axially-movable neck-band and pivoted yoke with an upper cap-piece hung to the yoke, said cap-piece having a fixed center pin and side lugs or stays, and with a lower cap-piece that is re-

tained on the pin and provided with semicircular inclined planes and raised stops at the upper side, and with a rubber stopple at the under side, substantially as set forth.

4. In bottle-stoppers, a compound stopper made of an upper cap-piece which is hung to the pivoted yoke and provided with a center pin and side lugs of a centrally-perforated lower cap-piece that is retained on the center pin of the upper cap-piece and provided with semicircular inclined planes and raised end stops at the upper side, and of a rubber stopple secured to the under side of the lower cap-piece, substantially as described.

5. In bottle-stoppers, the combination, with an axially-turning neck-band and yoke, of a compound stopper the upper cap-piece of which is hung to the yoke and adapted to turn therewith and with the vertically-movable lower cap-piece, and the rubber stopple, whereby the lower cap-piece and stopple are forced into the bottle-mouth, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 1st day of November, 1879.

WILLIAM WINKEL.

Witnesses:

PAUL GOEPEL,
ADOLPH DENGLEB.