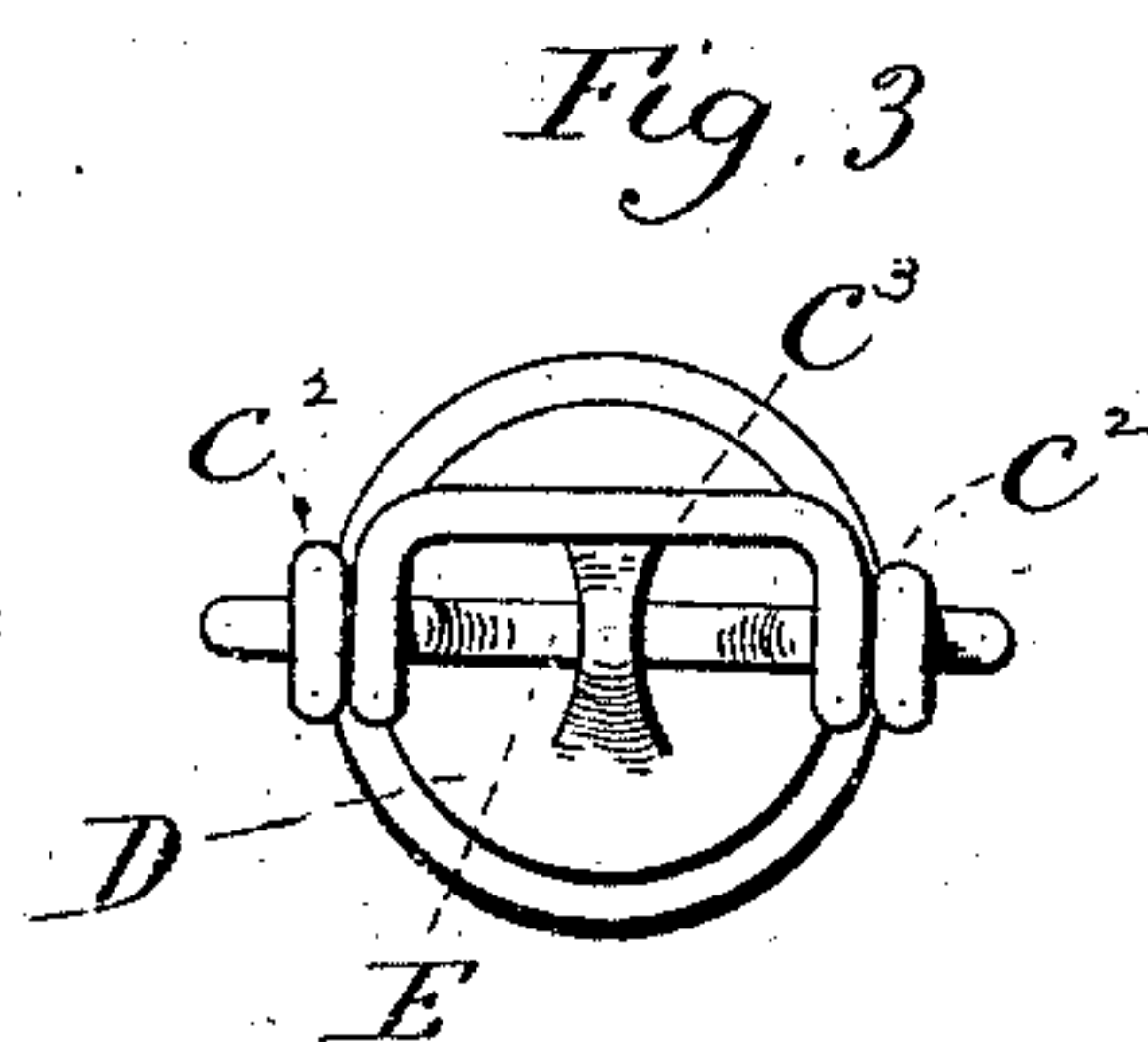
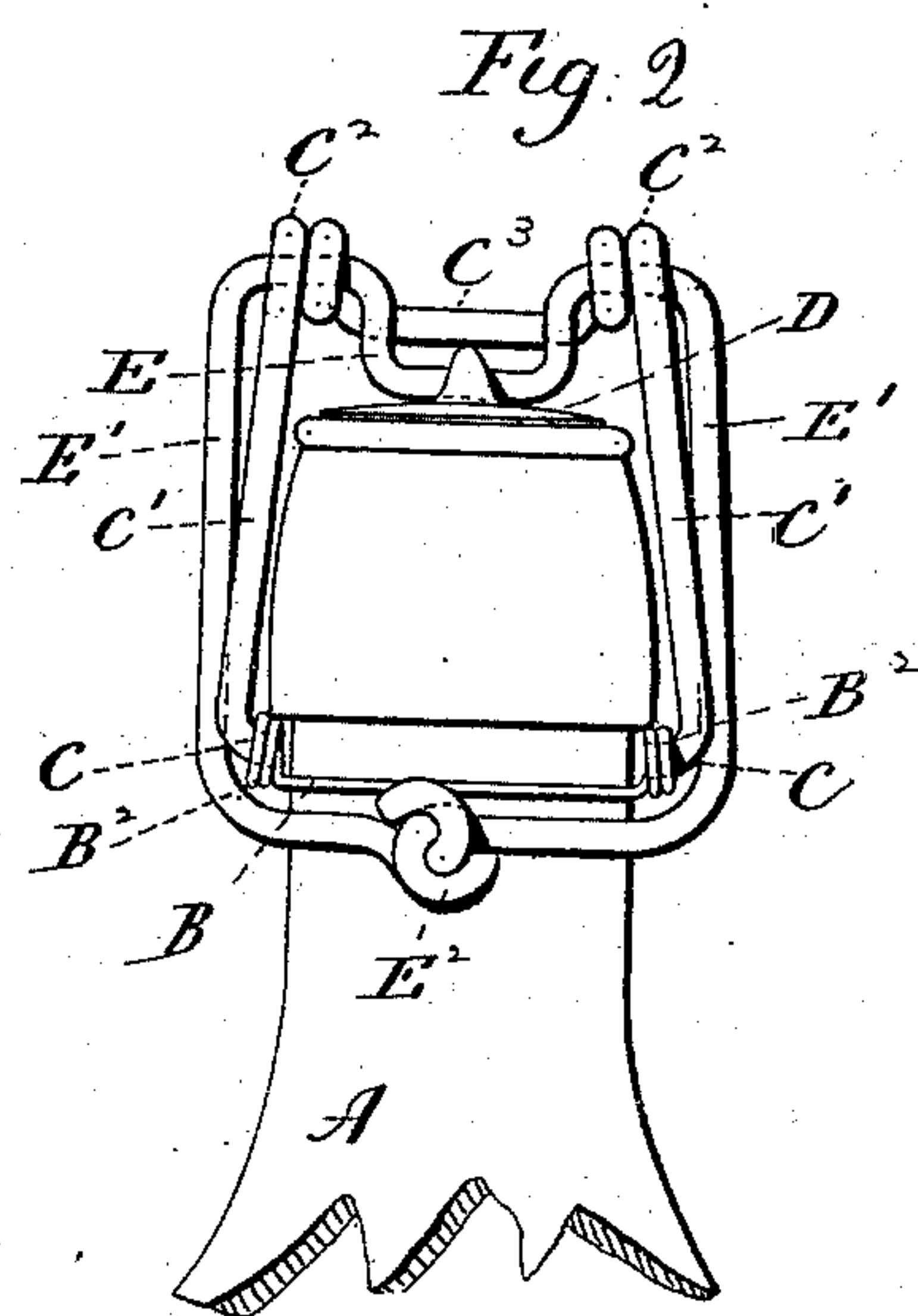
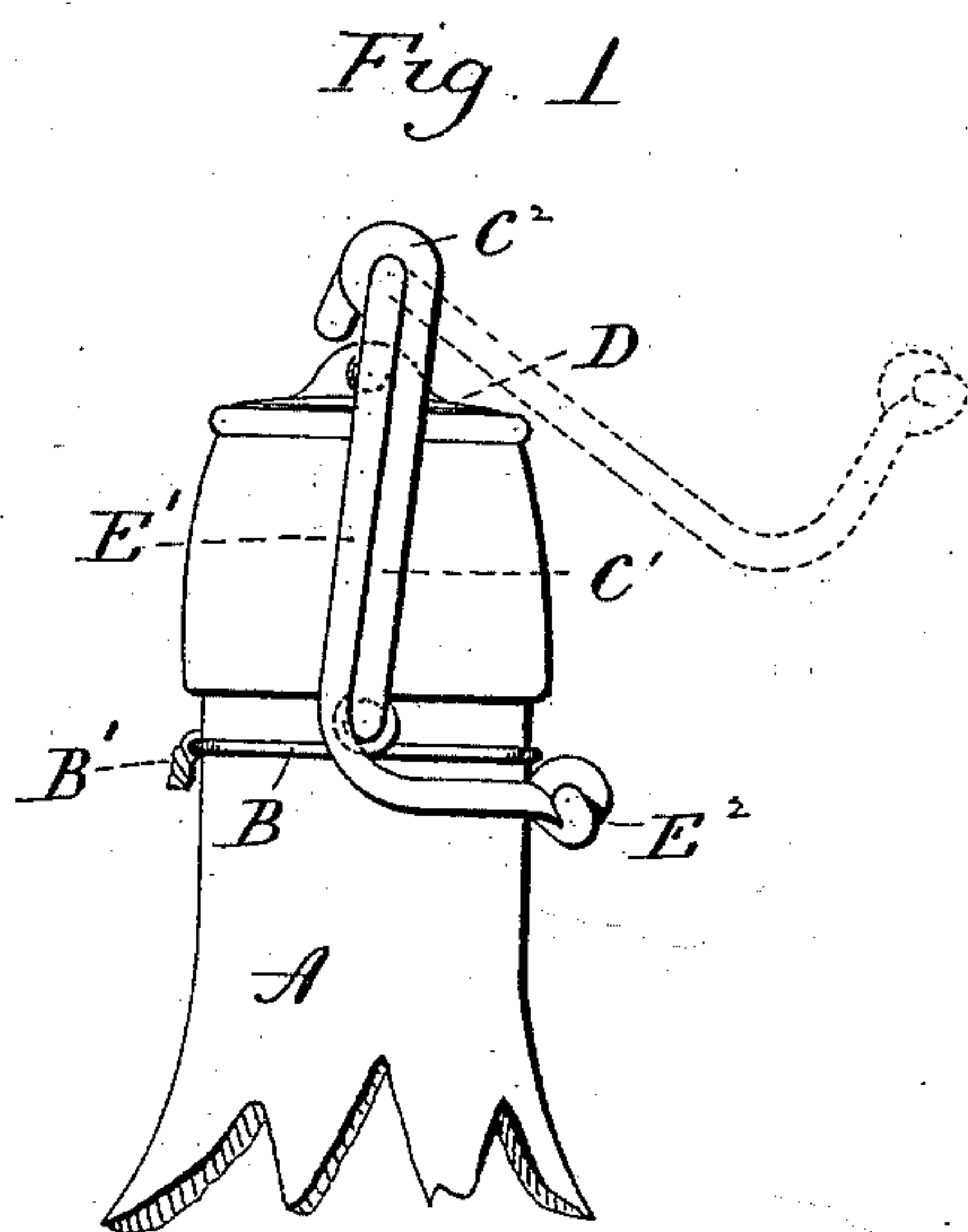


(No Model.)

B. GUNNORSON.
BOTTLE STOPPER FASTENER.

No. 505,291.

Patented Sept. 19, 1893.



Witnesses.
J. H. Shumway
Chas. E. Beck.

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UNITED STATES PATENT OFFICE.

BENGT GUNNORSON, OF WEST HAVEN, CONNECTICUT.

BOTTLE-STOPPER FASTENER.

SPECIFICATION forming part of Letters Patent No. 505,291, dated September 19, 1893.

Application filed April 14, 1893. Serial No. 470,330. (No model.)

To all whom it may concern:

Be it known that I, BENGT GUNNORSON, of West Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Bottle-Stopper Fasteners; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent in—

Figure 1, a view in side elevation of a bottle-stopper fastener constructed in accordance with my invention, being represented in full lines in its locked adjustment; Fig. 2, a view of the device in front elevation; Fig. 3, a plan view of the device.

My invention relates to an improvement in bottle-stopper fasteners of that class which provide for the permanent attachment to a bottle of its stopper so as to be preserved therewith for repeated use, being clamped in position and released by lateral pressure.

The particular object of my present invention is to provide a simple, convenient and effective device which shall be adapted to be positively locked so that it will not become accidentally unlocked in handling the bottles.

With these ends in view, my invention consists in the construction as hereinafter described and particularly recited in the claims.

In carrying out my invention, I encircle the neck of the bottle A, with a wire collar or ring B, the ends B' of which are twisted together to secure it in place. The wire of which this ring is made is bent to form two coils B² B², located directly opposite each other, and forming sockets for the reception of the inwardly turned lower ends C C of the bail-arms C' C', the upper ends of which converge a little. The said arms are formed by bending a single piece of metal, the central portion of which is further bent to form two coils C² C² located at the upper ends of the said arms, and in line with each other, and joined by a loop C³, which stands directly over the stopper D, when the same is in position in the mouth of the bottle, the said arms C' C', coils C² C² and loop C³ forming the bail of the device. The said stopper is hung so as to swing freely on the short arm E of an operating-lever, which is pivotally connected

with the upper ends of the bail-arms C, by the passage of the wire of which it is formed through the coils C² C² located at the upper ends of the said arms. The long arm of the said lever comprises two members E' E', adapted to be sprung apart, and having their lower ends bowed outward and inward, so as to embrace the neck of the bottle at a point below the ring or collar B, and terminating in hooks E², which are interlocked. I would have it understood, however, that it is not necessary that the members E' E' composing the long arm of the said lever be bent and joined together, for if desired they may be made even a little shorter than the bail-arms C' C', it being only necessary, so far as the particular construction of the said arms E' E' is concerned, that they be located outside of the bail-arms and adapted to be sprung over the same in either direction. I prefer, however, to connect the two members E' E' of the long arm of the operating lever, for in that way their undue lateral separation is prevented and their locking action made more positive and reliable.

I wish to call particular attention to the fact that by forming the bearing coils C² C² at the upper end of the bail-arms, and passing the wire forming the operating-lever through the said coils and thus locating the two members of the long crank-arm of the said operating-lever outside of the bail-arms, I am enabled to secure a long contact between the bail-arms and the two members of the long arm of the said lever. The long contact thus secured contributes largely to the efficiency of my improved device.

In constructing and combining my improved fastener, I also take advantage of the old principle of shifting the center of the short arm of the crank on opposite sides of a vertical plane passing through the coils or sockets, by means of which the lower ends of the bail-arms are attached pivotally to the ring or collar surrounding the neck of the bottle.

Heretofore it has been considered sufficient to move the members forming the long arm of the lever inward until they abut against the adjacent outer faces of the bail-arms, but I construct the said members of the long arm of the lever so that they will spring laterally apart and pass over the bail-arms, as shown

in Figs. 2 and 3 of the drawings, whereby the lever is positively locked in place in such a manner that no ordinary handling of a bottle provided with my device can possibly throw
 5 the lever into its unlocked position. In order to remove the stopper, the said members of the lever are pressed laterally by the thumbs, and sprung back from the inner to the outer faces of the bail-arms, after which
 10 the lever may be thrown into its unlocked position by using enough force to carry the crank to the opposite or forward side of a vertical line drawn through the center of the stopper and the coils or sockets B² B² of the
 15 ring or collar B.

I would have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to make such changes and alterations as
 20 fairly fall within the spirit and scope of my invention. I am aware, however, that it is old to construct a wire bottle-stopper with one or more locking arms adapted to be sprung over the bail-arms of the stopper for locking
 25 the stopper in its closed adjustment.

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

1. A bottle-stopper fastener comprising a
 30 bail having two arms adapted at their lower ends to be pivotally connected with the neck of a bottle, and having their upper ends united and provided with bearings, a lever journaled in the said bearings whereby it is pivotally
 35 connected with the bail, and comprising a

short crank-arm located between the said bearings, and a long crank-arm having two members which extend beyond the bearings of the bail and are thus located outside of the bail-arms, and adapted to be sprung lat- 40
 erally apart so as to pass over the bail-arms to lock the device in its closed position, and a bottle-stopper connected with the short crank-arm of the lever, substantially as described.

2. A bottle-stopper fastener comprising a 45
 bail having two arms adapted at their lower ends to be pivotally connected with the neck of a bottle, and having their upper ends united and provided with bearings, a lever journaled in the said bearings whereby it is pivotally 50
 connected with the bail, and comprising a short crank-arm located between the said bearings, and a long crank-arm having two members which extend beyond the bearings of the bail and are thus located outside of the 55
 bail-arms, and adapted to be sprung laterally apart so as to pass over the bail-arms to lock the device in its closed position, and having their lower ends connected together to prevent their undue separation, and a bottle- 60
 stopper connected with the short crank-arm of the lever, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

BENGT GUNNORSON.

Witnesses:

C. M. MILLER,
 SAMUEL J. BRYANT.