

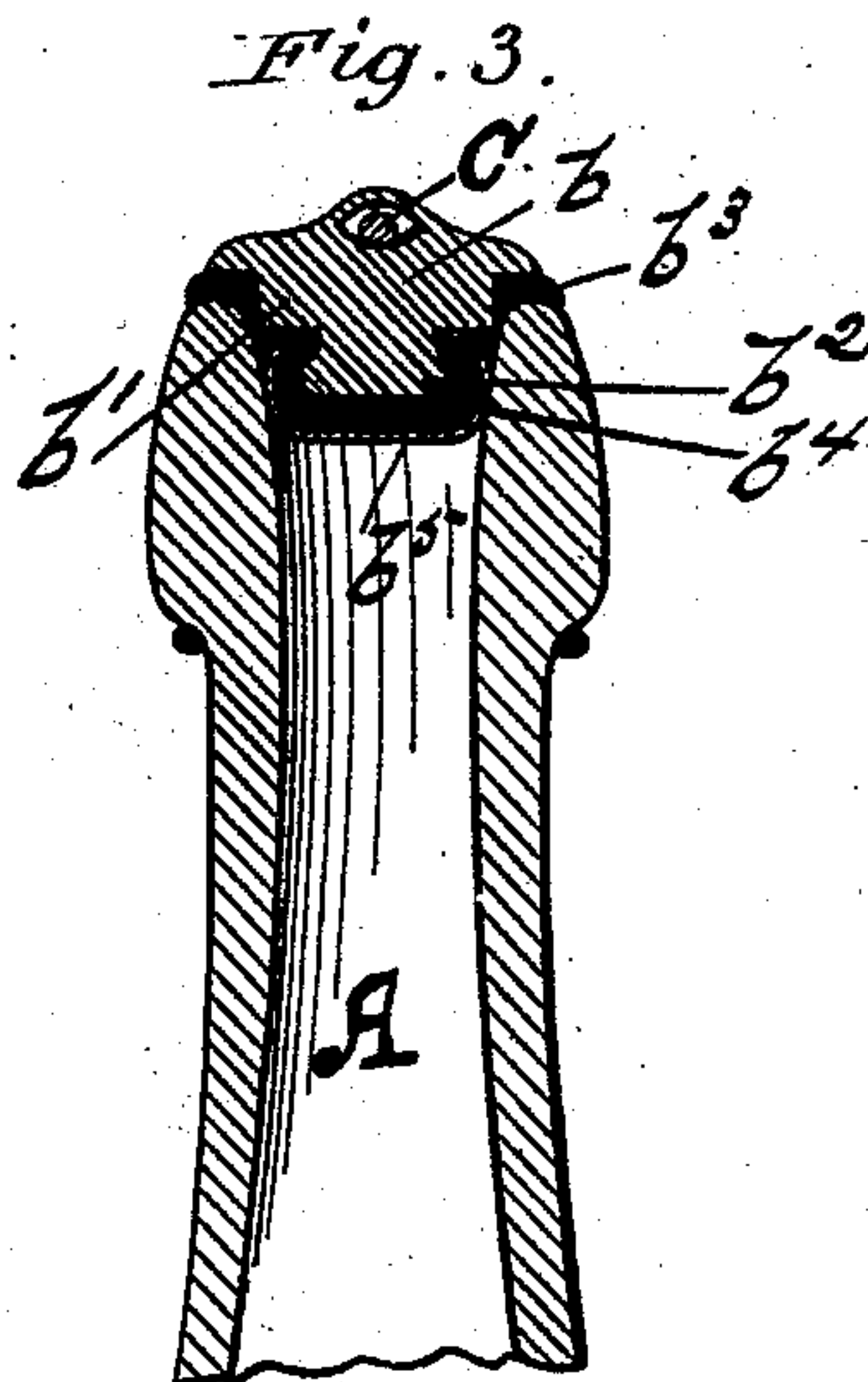
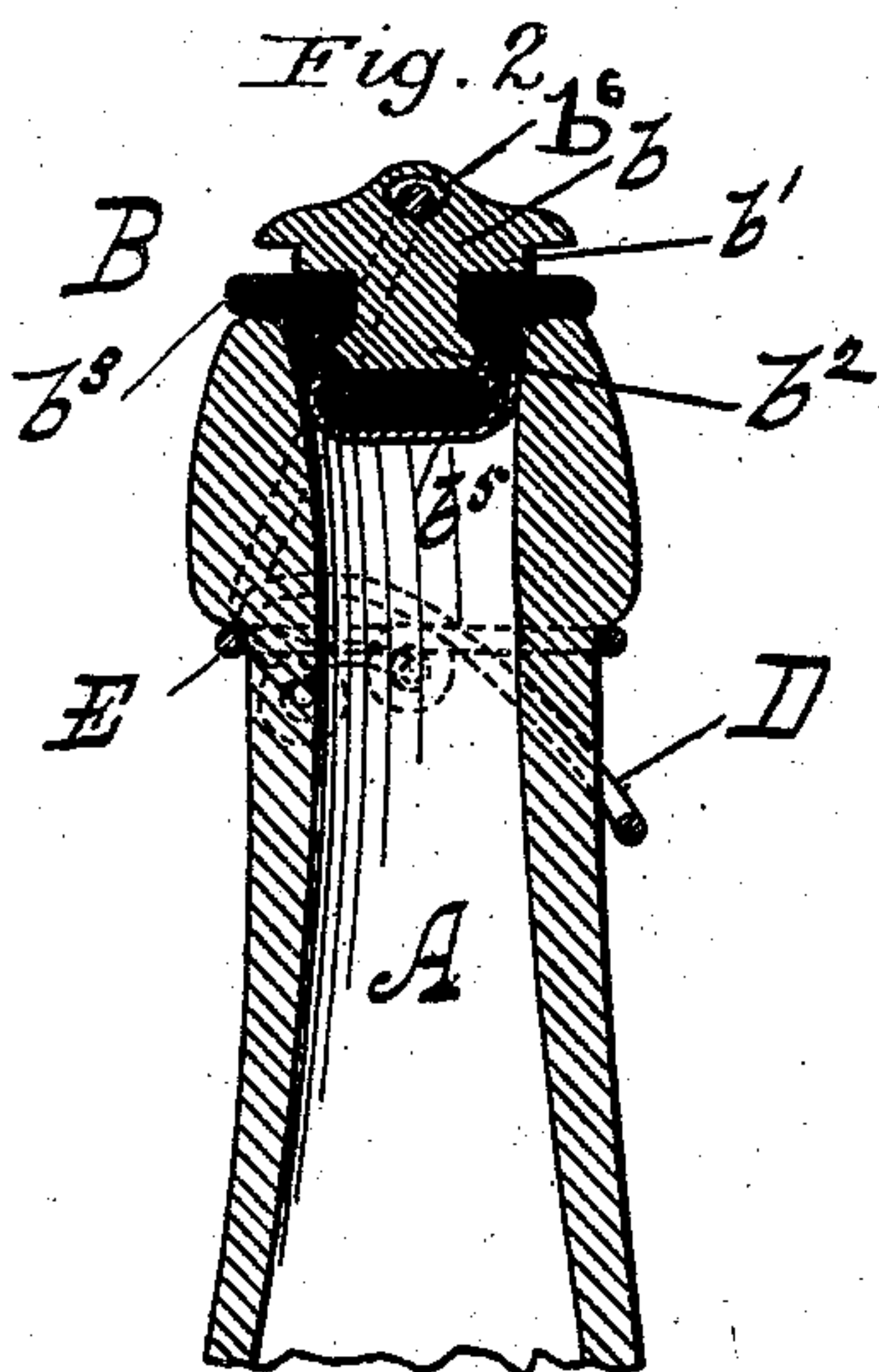
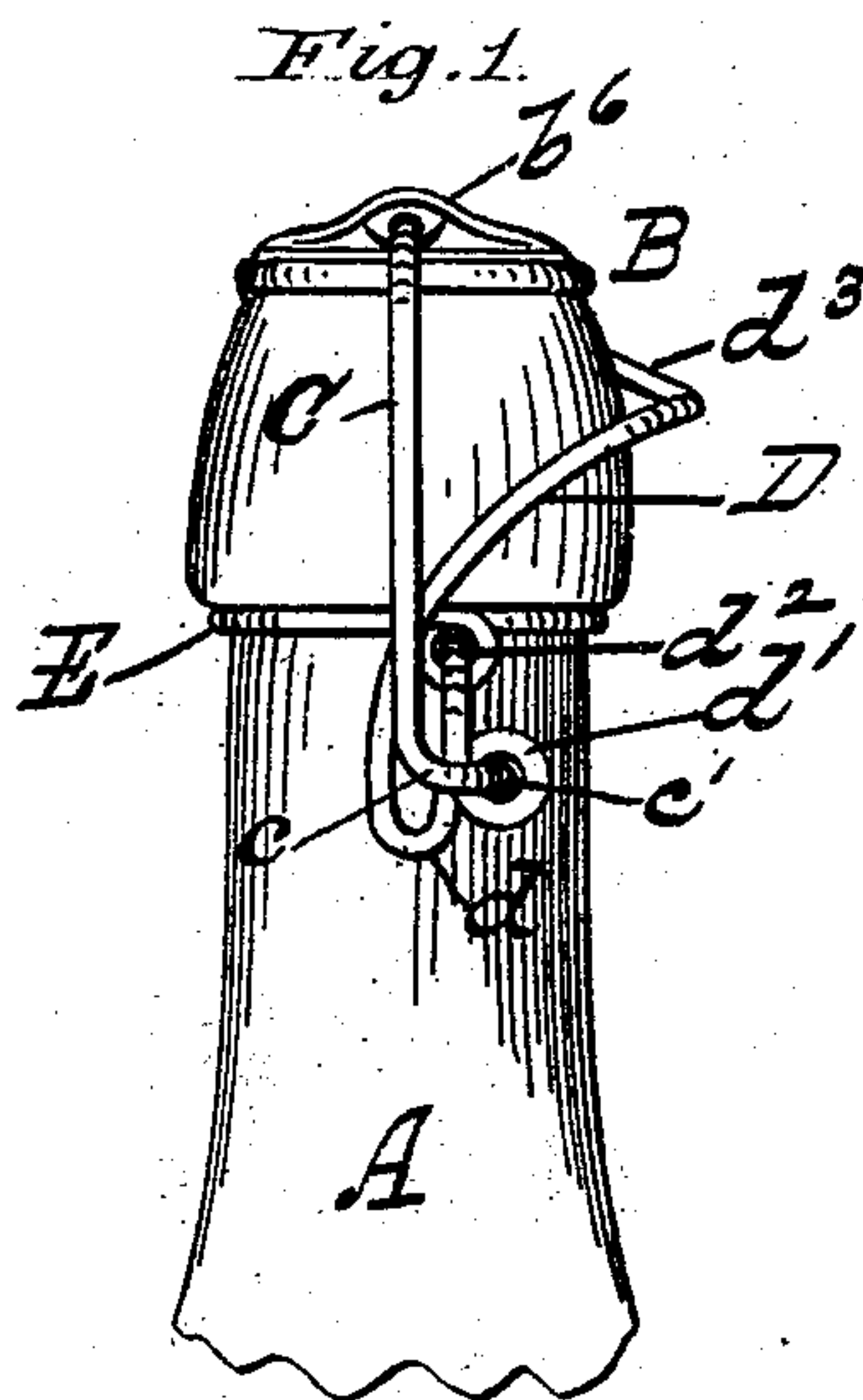
(Model.)

E. HAAS.

BOTTLE STOPPER AND FASTENER.

No. 273,356.

Patented Mar. 6, 1883.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWIN HAAS, OF PHILADELPHIA, PENNSYLVANIA.

BOTTLE STOPPER AND FASTENER.

SPECIFICATION forming part of Letters Patent No. 273,356, dated March 6, 1883.

Application filed January 29, 1883. (Model.)

To all whom it may concern:

Be it known that I, EDWIN HAAS, 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 Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to that class of stoppers and fasteners which comprise a compound stopper consisting of a core of metal seated in the stopper proper, of rubber, the whole pivotally connected with a bottle by a bail pivotally secured to an operating-lever, which is pivotally connected to a neck-ring, by which means the stopper is removed from and securely seated within the mouth or neck of the bottle; and my invention consists in certain features hereinafter described, and specifically set forth in the claims.

Figure 1 is an elevation of a portion of a bottle provided with my improved stopper and fastener, and represented as in a closed and locked position. Fig. 2 is a section of the same, represented as unlocked; and Fig. 3 is a section of the same, hereinafter described.

Like letters refer to like parts in all the figures.

A represents the neck or mouth portion of a bottle of usual construction.

B represents the stopper, which consists of a metal core, b , having a depending flange or shoulder, b' , adapted by its diameter to enter somewhat loosely the mouth of the bottle, and also having a central stud connecting the body portion of the core with its head or button-like projection b^2 .

The rubber portion of the stopper comprises a plain flange, b^3 , projecting from a substantially spherical portion, b^4 , adapted to fit or cover the projection b^2 of the core. This portion b^4 of the rubber is coated covered by or inclosed in a hollow case, b^5 , of tin, in order that when closed the contents of a bottle are prevented from coming in contact with the rubber portion of the stopper. By this means any deleterious effect of the rubber upon any liquid contained by the bottle is avoided. With this purpose in view other metal than tin or other non-oxidizable material may be

employed, and in any case, as preferred, said material may be in sheet, foil, or cast form, the material requisite being to prevent the contact of the contents with the rubber. In this instance the material, being a foil of tin, is capable of being expanded by the rubber b^4 somewhat snugly against the inner wall of the bottle-neck. I do not claim broadly the use of a non-oxidizable covering as of my invention. As regards the operation of the core and rubber in sealing the mouth of the bottle, it will be seen that the flange or shoulder b' of the core presses sharply against the plain flange b^3 of the rubber and compresses it with a drawing or stretching action between said flange b' and the inner wall of the mouth, while the outer extreme flange of the core compresses the plain flange of the rubber directly against the edge of the mouth of the bottle, thus retaining at that place the usual advantages of a rubber-packed joint, there being no foil or its described equivalent material interposed to render the joint in the least ineffective.

The stopper-core is grooved and provided with a loop, b^6 , which is preferably wide, to give sufficient surface-contact therewith of the bail C to insure strength and a steady carriage of the stopper thereon. The bail C is bent laterally at substantially a right angle, as at c , and terminates in another similar bend to form a trunnion or pivot, c' . This formation is duplicated at each side of the bottle, as are the remaining formations, illustrated clearly in Fig. 1.

D represents the lever, which, after being formed into a straight handle portion, d^3 , which partly embraces the neck of the bottle, is curved back upon or toward its main portion, as at d , and is then bent to form an eye, d' , and at a short distance therefrom is bent to form a trunnion or pivot, d^2 , which is entered into and operates in an eye formed in the neck-wire E, as usual. These bends in the bail and lever are so formed that when closed, as shown in Fig. 1, the strain of the bail falls in a straight line, passing from the loop b^6 to the eye d' , and, as shown, to the right of the pivot d^2 , so that the usual locking function of the parts is effected. If the lever D is now depressed, as shown in Fig. 2, dotted lines, the free end of

the bail is carried under and by the pivot d^2 , and the stopper is unseated, and by a further movement of the bail the stopper is removed from the mouth. A reversal of this movement of the bail closes and locks the parts.

It is evident that the bail C may be straight; but by forming the bend c it is adapted to pass into and out of the locked position with a yielding or spring action.

The straight or handle portion d^3 of the lever D prevents its lying too closely to the neck, and facilitates operating it by means of the projecting corners or bends which connect the main and handle portions, these corners being always readily accessible; but this feature is not essential to the operation of the remaining features of the fastening and closing devices, so that, if desired, I may curve the handle portion d^3 to fit more or less snugly the bottle-neck when the lever is elevated or when it is depressed.

Having described my invention and its operation, what I claim is—

1. A lever for a stopper-fastener, having at each end a portion bent upon or toward itself, in which portion are formed means for the pivotal connection therewith of a bail and of a neck-wire or bottle, the means being in the order from the bend in which they are herein mentioned, substantially as and for the purpose set forth.

2. A lever for a stopper-fastener, having at each end a portion bent upon or toward itself, in which portion are an eye and a pivot or

trunnion in the order from the bend as herein named, substantially as and for the purpose set forth.

3. The combination of a lever bent at each end upon and toward itself, and having an eye and means for pivotal connection to a neck-wire or bottle, with a bail having at each end a lateral bend and means for pivotal connection with the lever, substantially as and for the purpose set forth.

4. The combination of the bottle A, stopper B, bail C, having the bends c , and the lever D, bent upon itself and having the eye d' and trunnion d^2 , pivotally connected with the neck-wire or bottle, substantially as specified.

5. The combination of the bottle A with the stopper-core having a flange or shoulder, b' , adapted to enter the mouth of the bottle, and also having a depending button-shaped projection, b^2 , a rubber stopper having a portion, b^4 , secured to the core by the projection b^2 , and also having a plain flange and a non-oxidizable covering, b^5 , secured about the portion b^4 only of the rubber stopper, and with means for forcing the stopper, as a whole, within and against the mouth of the bottle, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN HAAS.

Witnesses:

J. R. MASSEY,

FRANK H. MASSEY.