

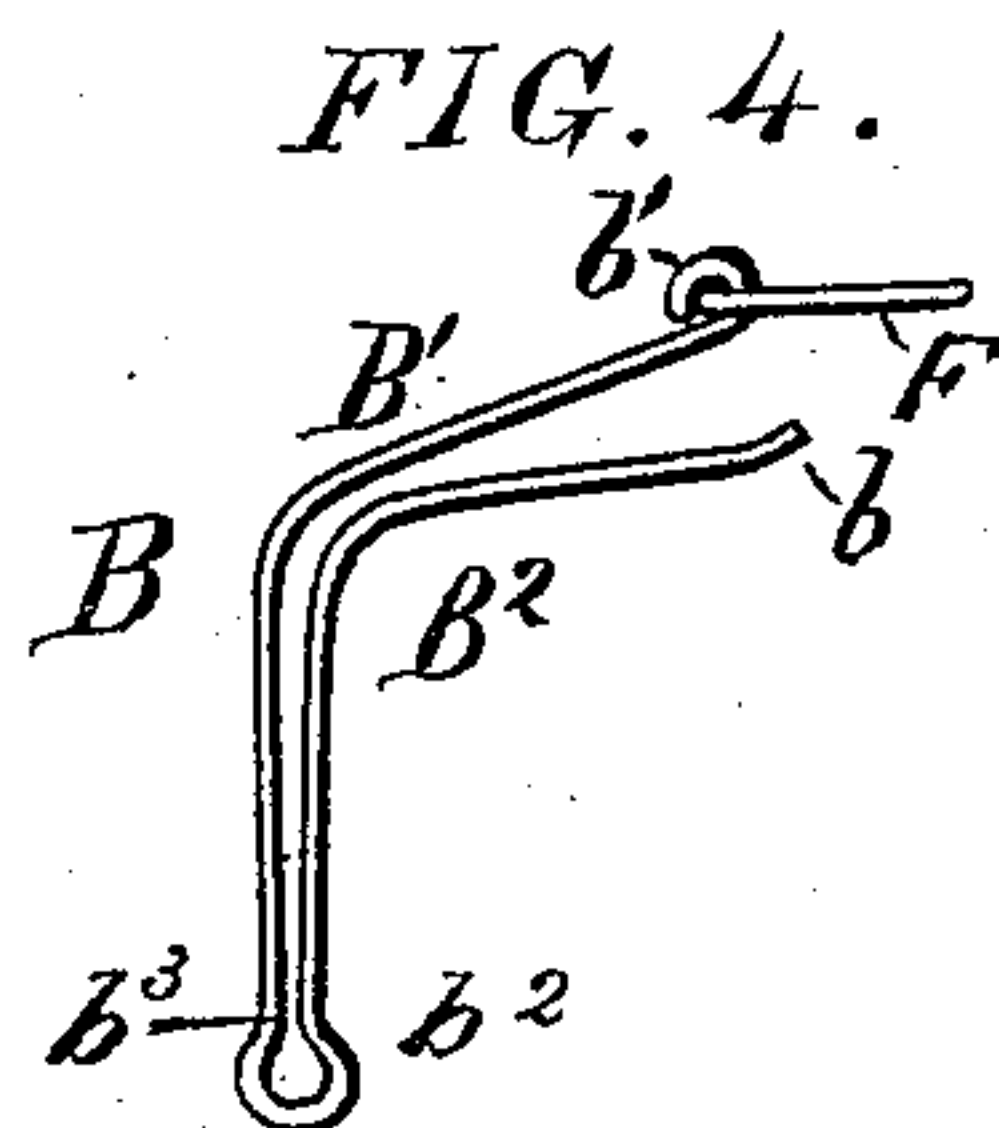
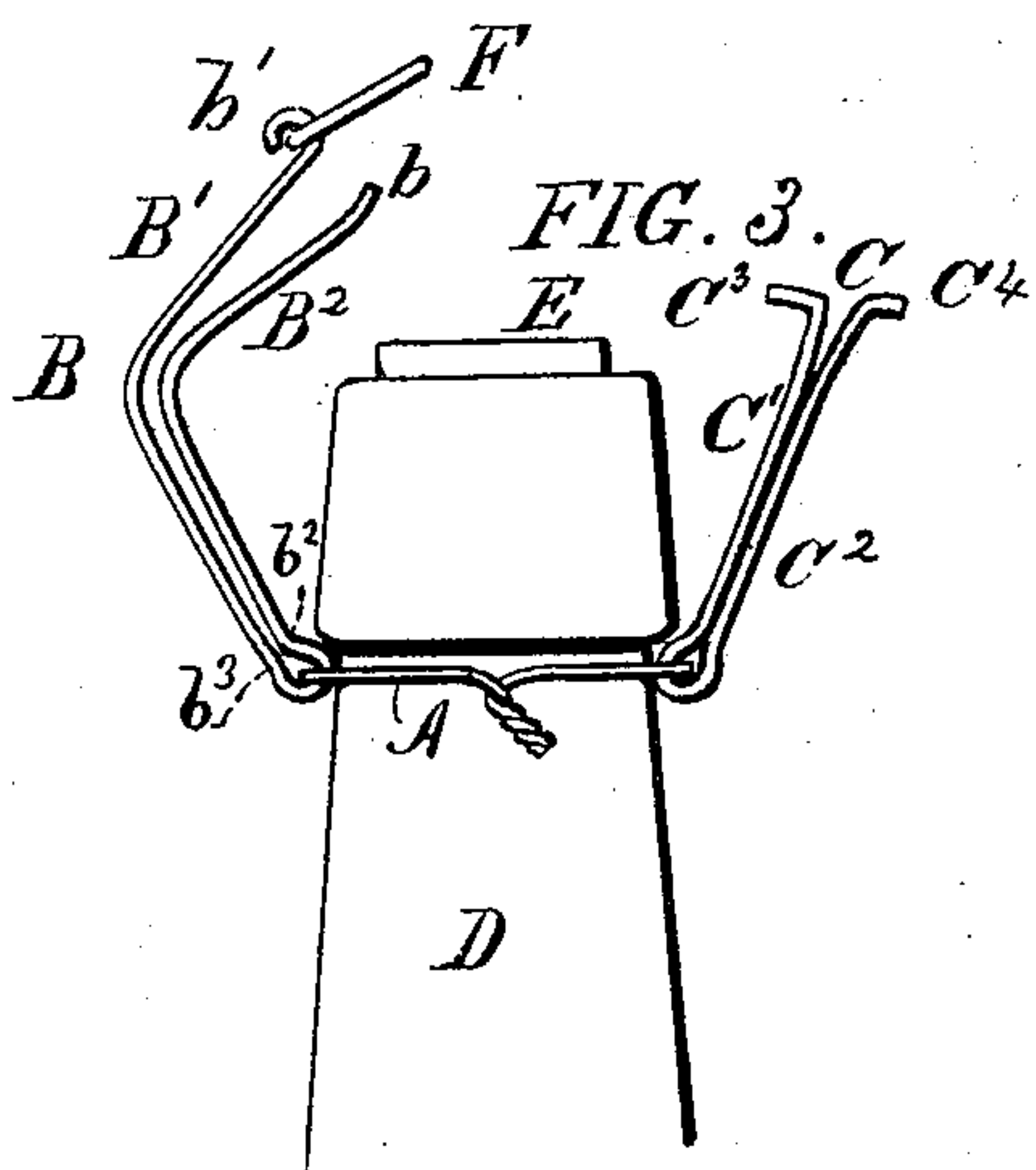
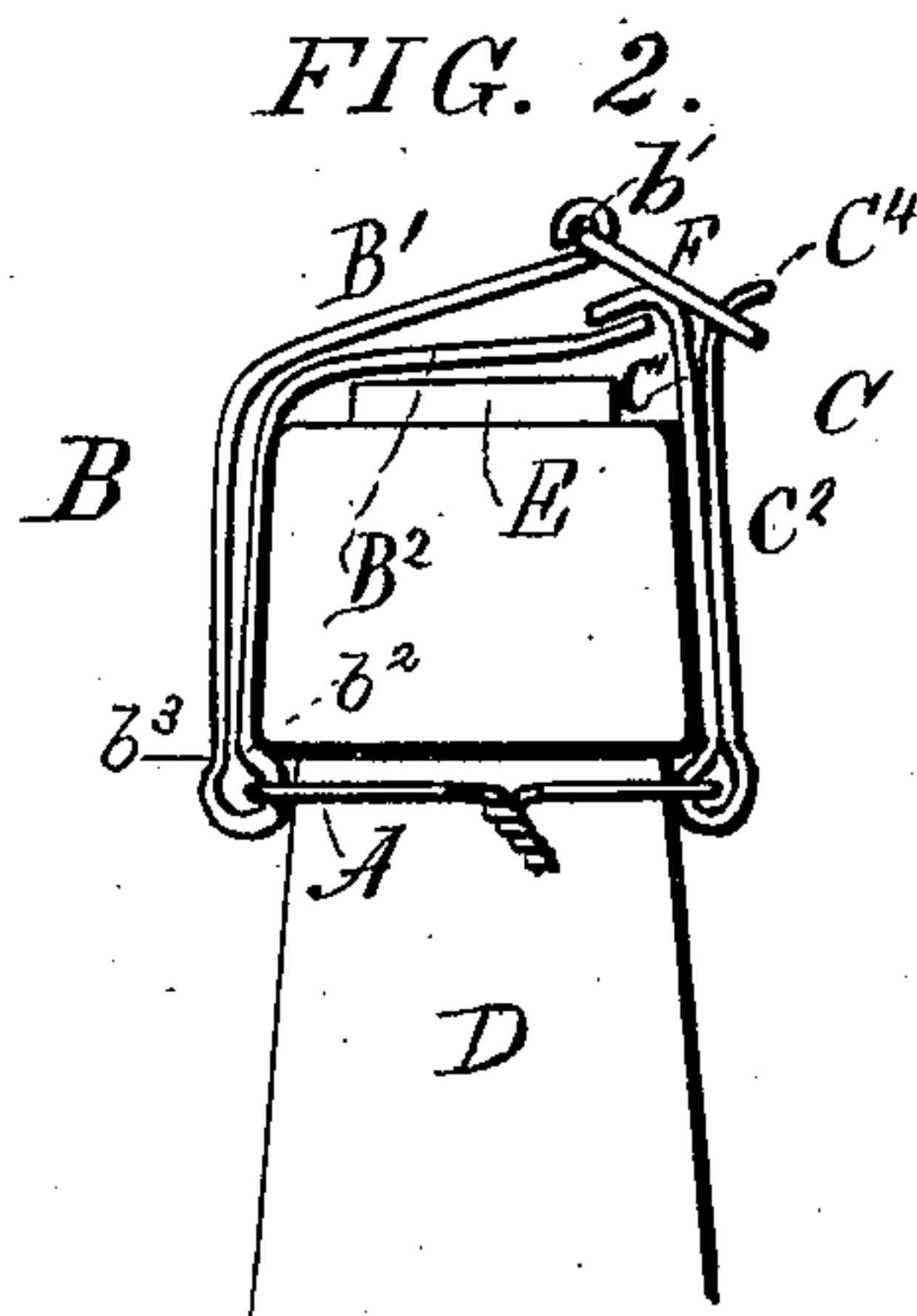
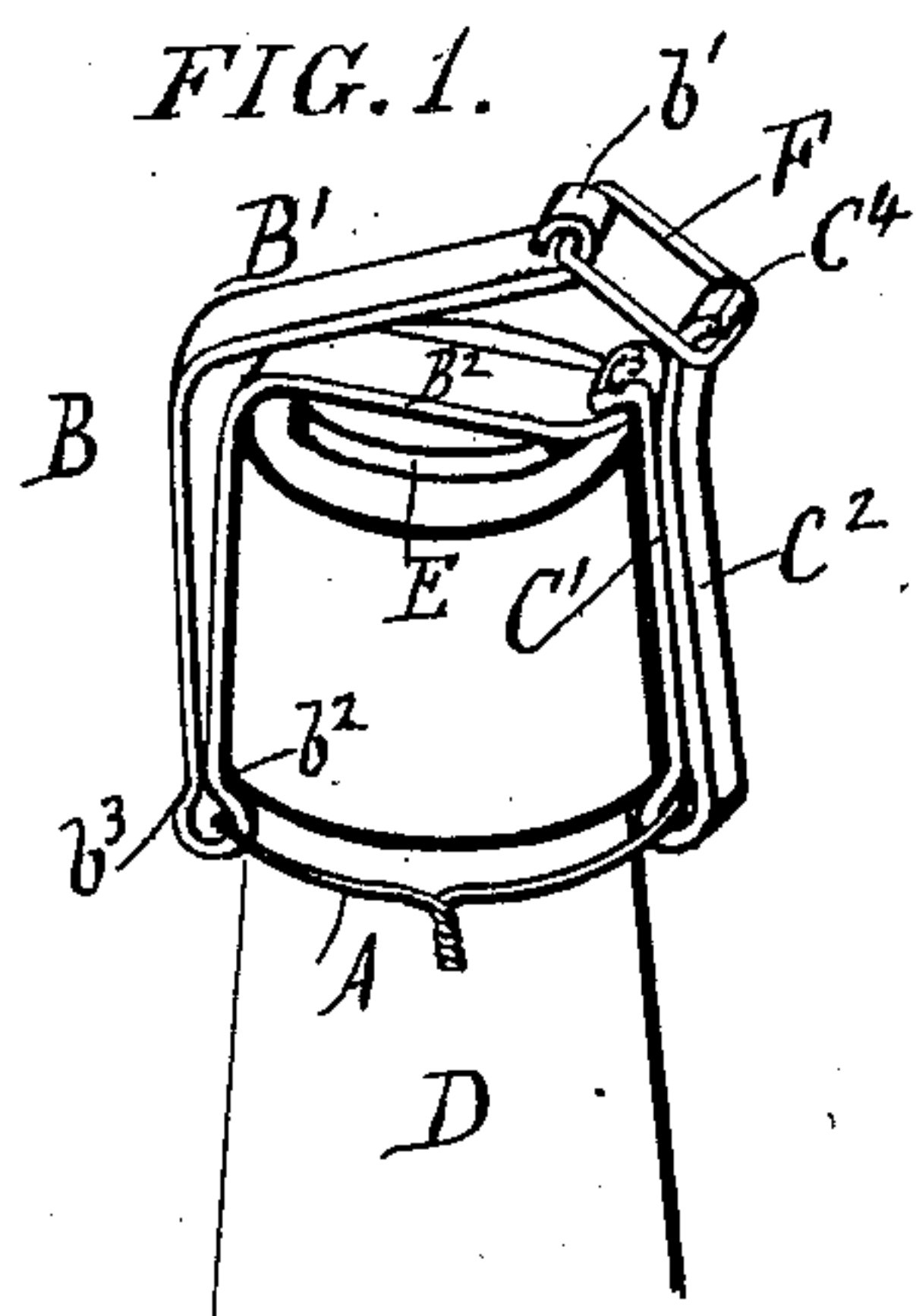
(Model.)

E. H. MORGAN.

BOTTLE STOPPER.

No. 321,236.

Patented June 30, 1885.



Witnesses:  
E. P. Houston  
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Inventor:  
Edward H. Morgan  
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# UNITED STATES PATENT OFFICE.

EDWARD H. MORGAN, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO  
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## BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 321,236, dated June 30, 1885.

Application filed October 16, 1884. (Model.)

*To all whom it may concern:*

Be it known that I, EDWARD H. MORGAN, a resident of the city of Cincinnati, in Hamilton county and State of Ohio, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification.

The object of my invention is to provide a device for retaining corks in bottles, which shall combine in itself the properties of simplicity in structure, cheapness in manufacture, ease in application to the bottle, readiness of adjustability, and certainty in action.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of the upper portion of a bottle provided with my device. Fig. 2 shows the same device in side elevation. Fig. 3 is a side elevation showing the device unlocked and the cork ready to be withdrawn. Fig. 4 is a detail view showing the mechanism of the spring.

Encircling the neck of the bottle D at its most contracted part is a piece of wire or strip of metal or cord, A, which in this manner holds close to the neck of the bottle two narrow strips or limbs of thin metal, B and C. These strips of metal B and C are made of suitable material, preferably of tin.

The strip B is bent into two leaflets, B' and B<sup>2</sup>, which unite with each other at the wire A, which they encircle. The leaflet B<sup>2</sup> terminates in a head, b. A convenient mode of forming this head b is by turning over the ends of the leaflet, so as to make a projection, pointing slightly upward. This leaflet, when in position, as shown in Figs. 1 and 2, fits snugly over the cork E. The other leaflet, B', rises above the leaflet B<sup>2</sup>, and terminates in an eye or ring, b', which holds the swinging loop F.

A very important feature of the device is shown in Fig. 4. Here is brought out more distinctly the exact shape of the leaflets B' B<sup>2</sup> at the point where they encircle the wire A. The leaflet B<sup>2</sup> is so bent as to form a shoulder, b<sup>2</sup>, which presses against a corresponding shoulder, b<sup>3</sup>, on the leaflet B'. This ar-

rangement gives a springiness to the structure, which serves a very important function in its operation.

It is easily seen that if the leaflet B<sup>2</sup> is held steady, as by pressure against the cork, then pressure brought to bear on the leaflet B' will be resisted by the spring produced by the shoulders b<sup>2</sup> b<sup>3</sup>.

The strip C is bent into two arms, C' C<sup>2</sup>, the former terminating in a hook, C<sup>3</sup>, and the latter in a projection, C<sup>4</sup>.

In using the device, the leaflet B<sup>2</sup> is first slipped over the cork and the strip C brought up into position, so that the projection C<sup>3</sup> of arm C<sup>2</sup> slips over the head b of leaflet B<sup>2</sup>. This steadies the device, and the loop F is now brought down and caught over the hook C<sup>4</sup>. Some straining of the leaflet B' is necessary in order to accomplish this, owing to the resistance of the spring formed by the shoulders b<sup>2</sup> b<sup>3</sup>. In this way a double holder is made, the leaflet B<sup>2</sup> and arm C' doing some part in holding the cork in. A smaller portion of the pressure from within the bottle is resisted by the guard formed by the leaflet B', loop F, and arm C<sup>2</sup>.

The main function of the leaflet B' and loop F and arm C<sup>2</sup> is to securely retain the hook of arm C' in engagement with the head b of leaflet B<sup>2</sup> until unlocked through human agency.

In opening the bottle, the loop F is first unhooked, and the arm C' is then slipped back off of the head b, and the pressure from within is free to force out the cork. These manipulations are much more readily accomplished than in the opening and closing of a bottle provided with the ordinary wire cork-retainer.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination of the strip B, having leaflets B' B<sup>2</sup>, loop F, strip C, having leaflets C' C<sup>2</sup>, and cord or wire A, substantially as and for the purposes specified.

2. The combination of cord or wire A and strip B, consisting of leaflet B', provided with shoulder b<sup>3</sup> and with eye or hook b', leaf-

let B<sup>2</sup>, having shoulder b<sup>2</sup> and lip or head b,  
strip C, consisting of leaflet C', having hook  
C<sup>3</sup>, and leaflet C<sup>2</sup>, having hook C<sup>4</sup>, hook C<sup>3</sup>  
engaging head b, and loop F, connecting, when  
5 the stopple is closed, the strip b' and the  
hook C<sup>4</sup>, substantially as and for the purposes  
specified.

3. The spring-limb B' and cork limb or

strip B<sup>2</sup> and strip C, for engaging limb B' and  
strip B<sup>2</sup>, and cord or wire A, substantially as 10  
and for the purposes specified.

EDWARD H. MORGAN.

Attest:

WM. E. JONES,  
O. M. HILL.