

(No Model.)

A. H. PETERSON.

BOTTLE STOPPER.

No. 360,467.

Patented Apr. 5, 1887.

FIG. 1.

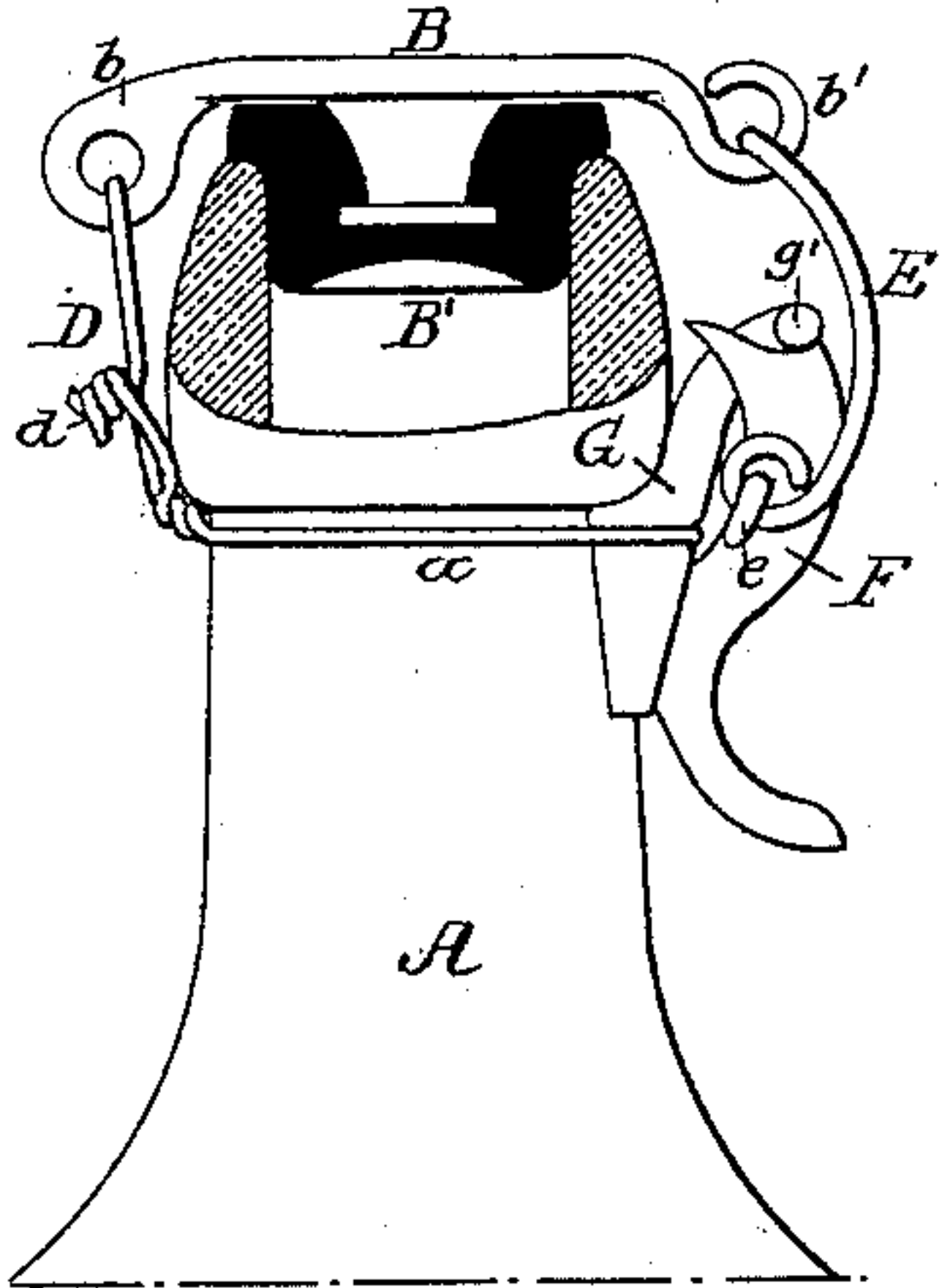


FIG. 2.

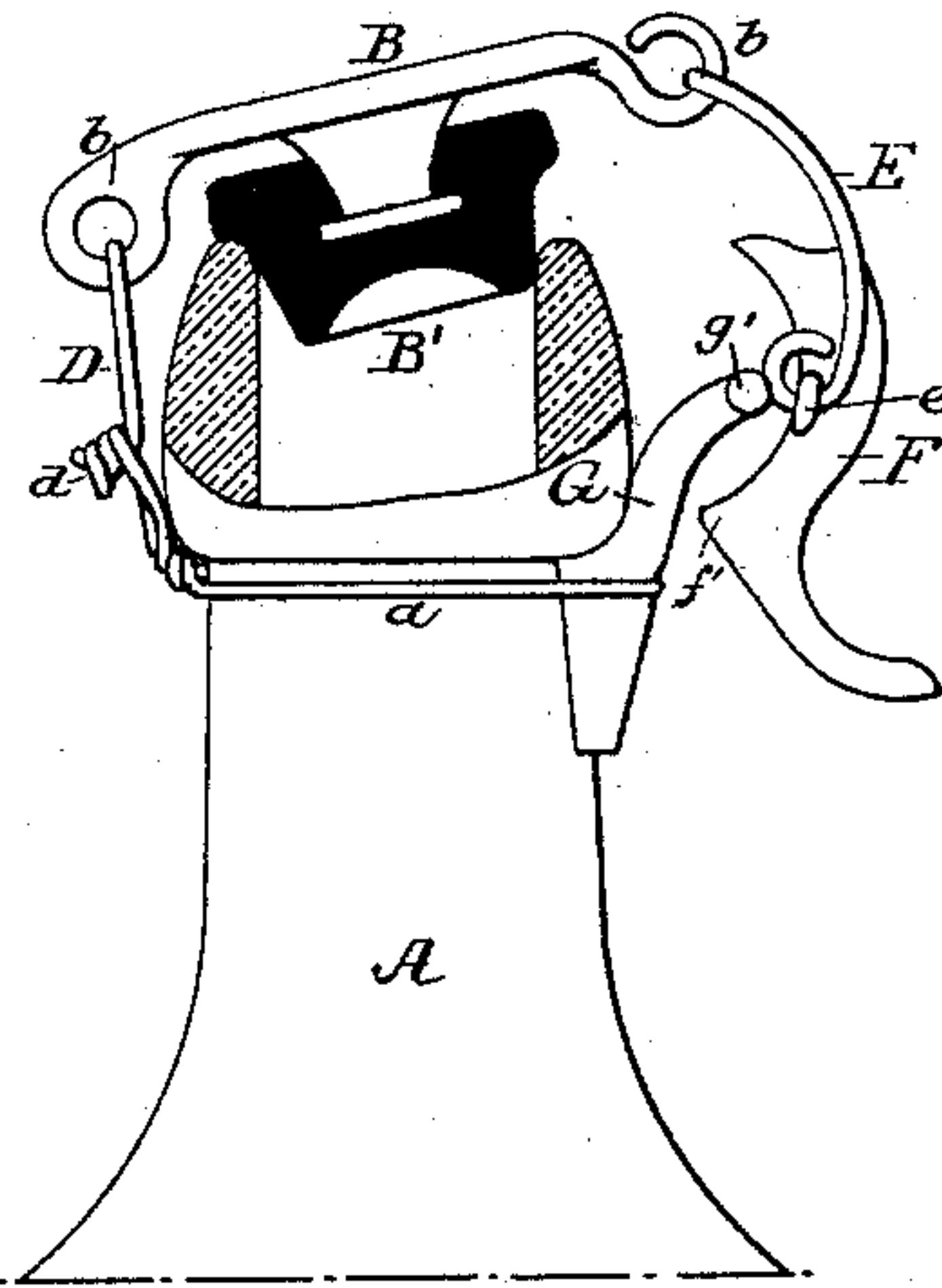


FIG. 4.

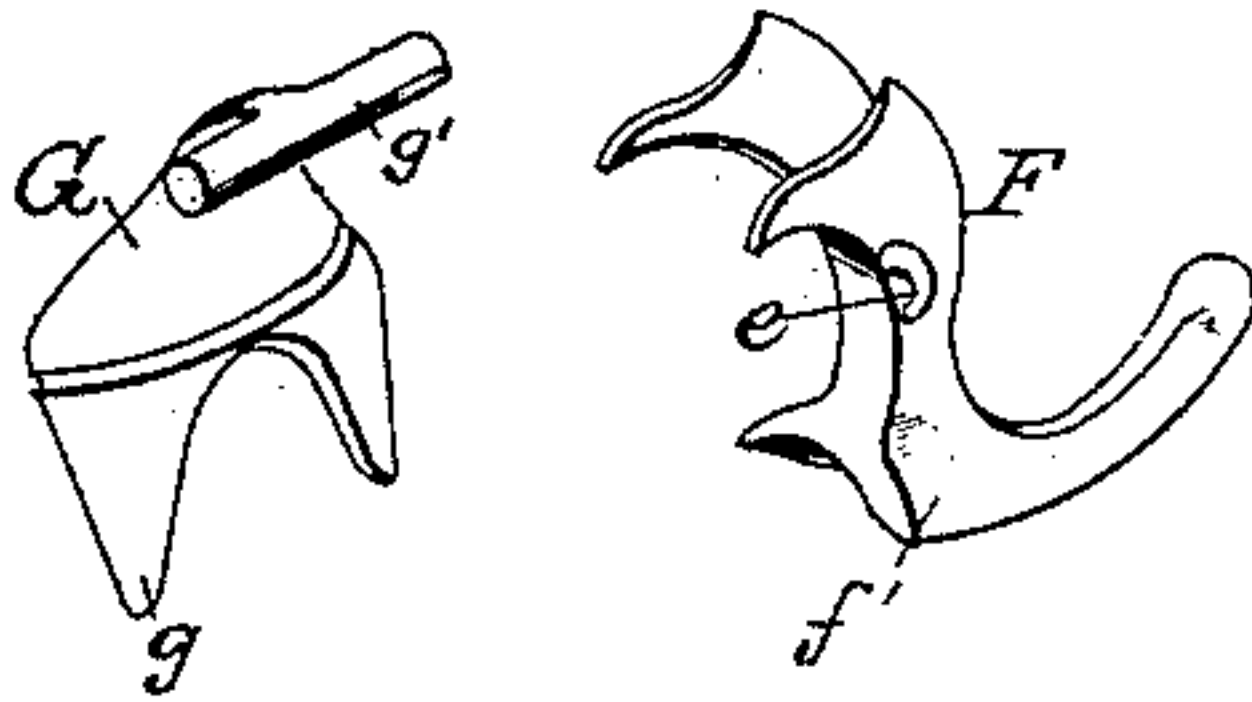


FIG. 3.

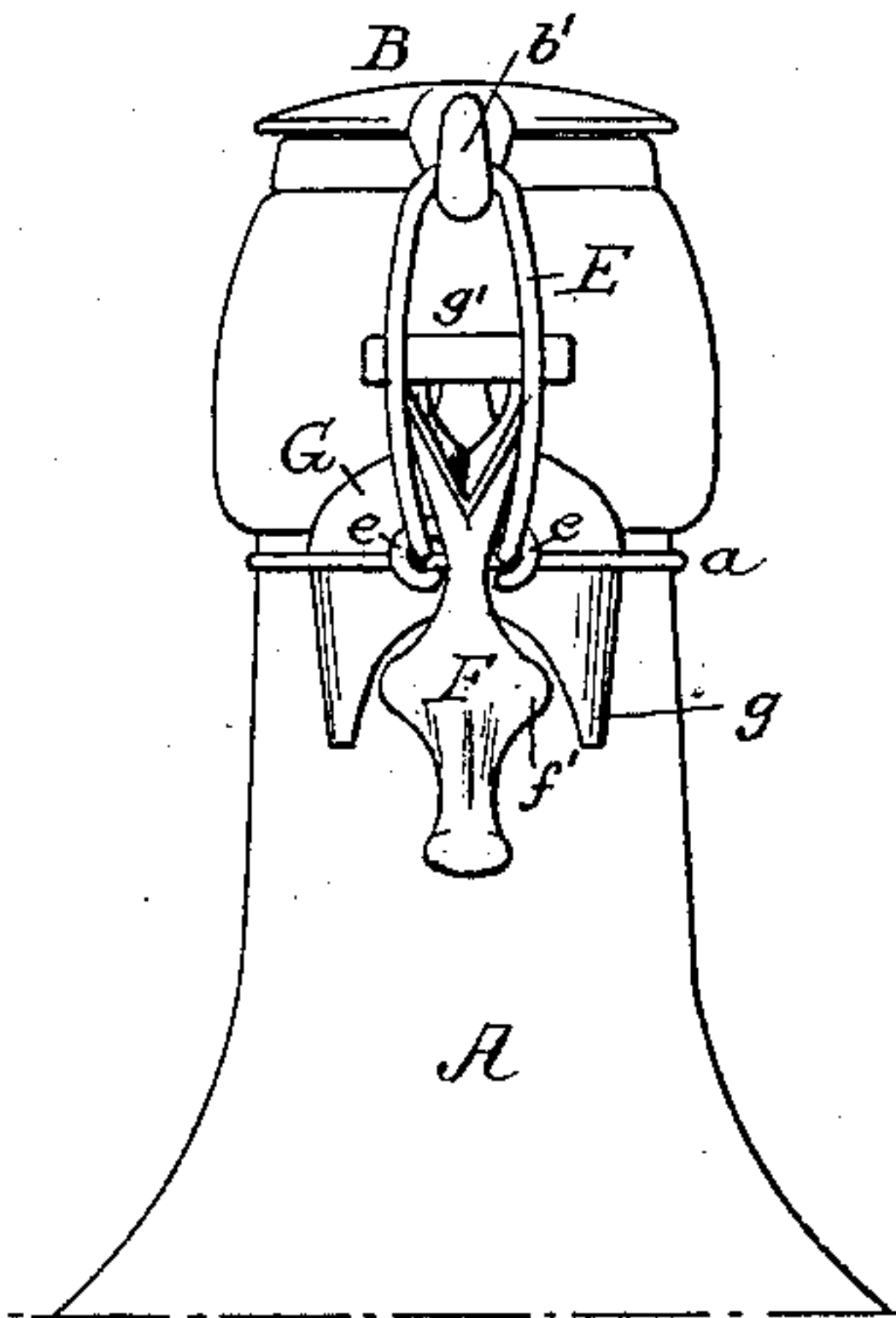


FIG. 5.

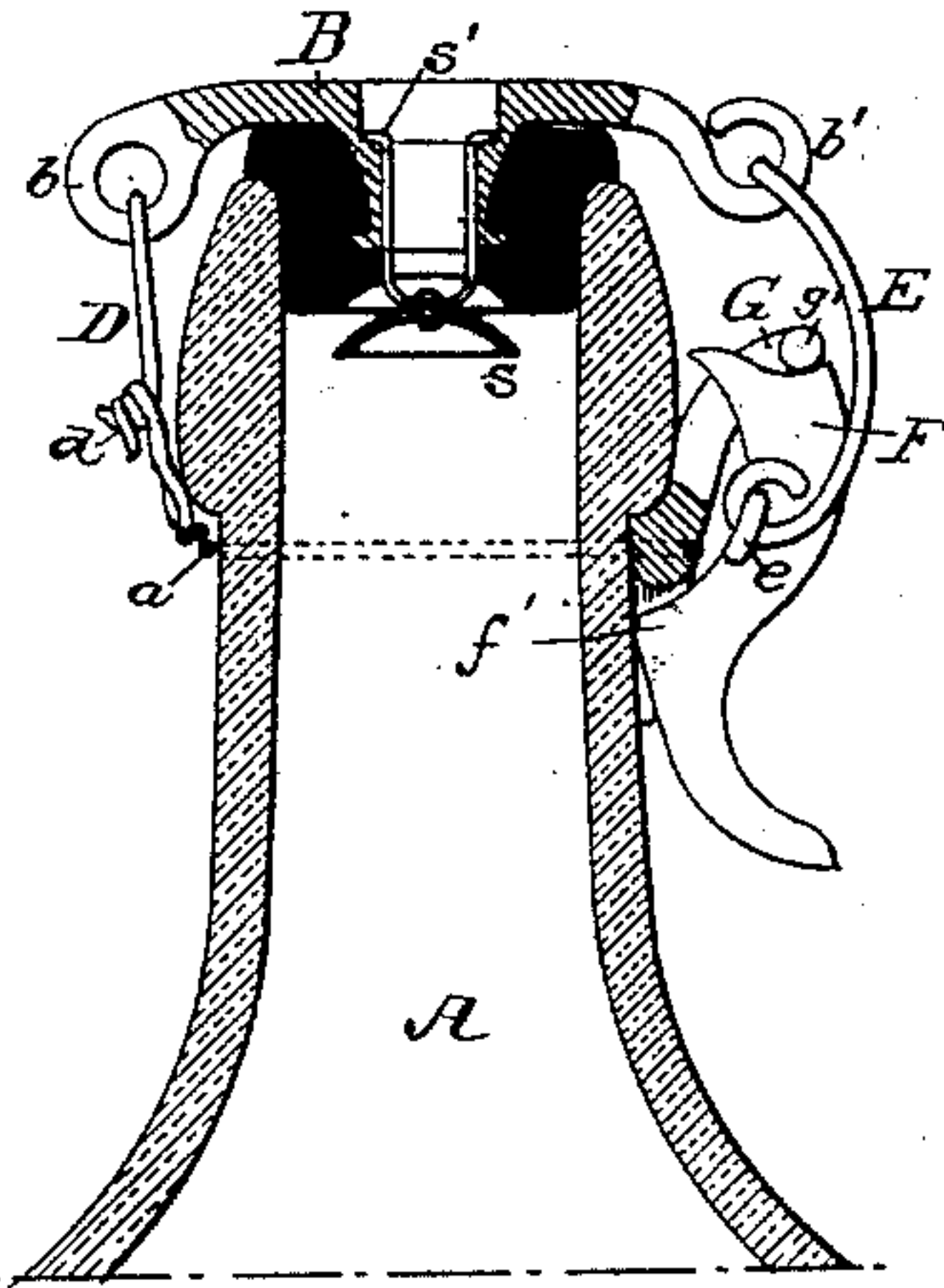
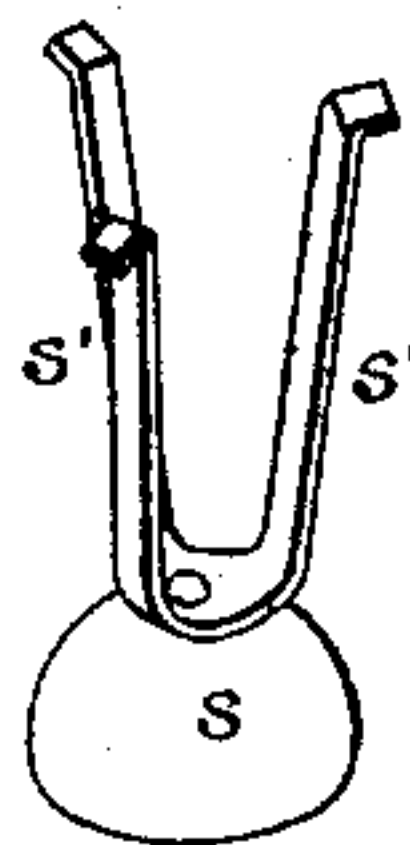


FIG. 6.



Witnesses:  
Hamilton A. Turner.  
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# UNITED STATES PATENT OFFICE.

ALBERT H. PETERSON, OF PHILADELPHIA, PENNSYLVANIA.

## BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 360,467, dated April 5, 1887.

Application filed August 18, 1886. Serial No. 211,226. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT H. PETERSON, a citizen of the United States, residing at Philadelphia, Pennsylvania, have invented certain  
5 Improvements in Bottle-Stoppers, of which the following is a specification.

My invention consists of certain improvements in the construction of bottle-stoppers for which I applied for Letters Patent of the United  
10 States April 8, 1886, Serial No. 198,220.

The main objects of my invention are to facilitate the closure of the bottle, to secure a tight closure, obviate liability of the stopper being opened by accidental blows, and to cheapen  
15 the construction. These objects I attain in the manner which I will now proceed to describe.

In the accompanying drawings, Figure 1 is a side view, partly in section, of a bottle-neck provided with my improved stopper. Fig. 2  
20 is a similar view showing the stopper about to be closed. Fig. 3 is a view of the device on the fastening side. Fig. 4 is a perspective view of the improved form of yoke and lever. Fig. 5 is a vertical section of my bottle-stopper  
25 provided with an improved form of valve to adapt it for use with aerated liquids and showing the valve open, and Fig. 6 is a perspective view of the valve detached.

A represents the neck of the bottle, provided  
30 with the neck-wire *a*, to one side of which the stopper B is connected by a link, D, adapted to a loop or lug, *b*, on the stopper. I prefer to form this link of the same piece of wire as the neck-band *a* and to put a twist, *d*, in the link,  
35 so that should the fastening get slack it can be tightened at any time by increasing the twist. The lug *b'* on the opposite side of the stopper receives a curved link, E, for connection with the locking-lever F, which is adapted to act in  
40 connection with a yoke, G, secured to the outside of the bottle-neck by the neck-wire *a*.

The rubber portion B' of the stopper, which is fitted over and held by the metal button in the usual way, is made concave on the under  
45 side, as shown in Fig. 2, in order that when the stopper is forced down to its seat the rubber may more readily spread around the edge to form a tight closure, as shown in Fig. 1.

The link E, I make of the curved form illustrated in the drawings, and of spring-wire, so  
50 that it will constitute a spring, and when the

stopper gets loose by repeated use or stretching of the wires or links it may be tightened up, and an increased pressure obtained by increasing or restoring the bend of the wire-link E. 55

In my former stopper the link E is passed through an opening of the lever F; but in my present invention I dispense with the necessity of drilling this opening by casting on the sides of the lever fingers *e*, which can be cast in an  
60 open form, to be passed through eyes at the lower end of the two-armed link E, and then bent to form a closed eye, as illustrated in the drawings.

In my former stopper the yoke G was provided at its upper end with a notch for the introduction of the hooked nose of the lever F, and at its lower end with fingers *g*, for the protection and guidance of lateral projections *f'* on the lever F. In my present stopper I retain  
70 the protecting fingers and projections last referred to, but I replace the notch at the upper end of the yoke by a T-head, *g'*, and fork the upper hooked end of the lever F for engagement therewith, so that the forks engage opposite sides of the T-head. By this construction the lever can be more readily engaged  
75 with the yoke to close the stopper, and when closed it is more firmly held, so that there is less liability of the stopper being opened by  
80 accidental blows.

Where the stopper is to be used for aerated liquids, I make use of the form of valve illustrated in Figs. 5 and 6. This valve consists of a small inverted cup, *s*, having secured to it  
85 spring-fingers *s'*, hooked at their upper ends and preferably stamped out of sheet metal. These fingers are adapted to a vertical opening in the stopper, so as to allow a limited vertical play of the valve toward and from the  
90 seat in the rubber of the stopper. The upper hooked ends of the spring-fingers come in contact with a shoulder in the opening in the stopper when the valve is open, as shown in the drawings. 95

In filling the bottle with aerated liquid, the stopper is first closed and the filling-nozzle pressed into the opening in the top of the stopper, so as to keep the valve open during the filling operation. When the filling-nozzle is  
100 removed, the pressure on the interior of the bottle will close the valve by bringing its cup

s against the seat formed by the rubber lining of the stopper.

I claim as my invention—

1. The combination of a bottle and hinged  
5 stopper with a yoke carried by the bottle and having a T-head and a forked locking-lever carried by the stopper, as set forth.
2. The combination of a bottle, hinged stopper, and yoke with a double link having eyes  
10 at its lower end and a locking-lever provided with fingers *e e*.
3. The combination of a bottle, stopper, and

locking devices with a valve consisting of a cup, *s*, and hooked spring-fingers *s'*, adapted to a vertical opening in the stopper, all sub- 15  
stantially as set forth.

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

ALBERT H. PETERSON.

Witnesses:

JOHN E. PARKER,  
HUBERT HOWSON.