

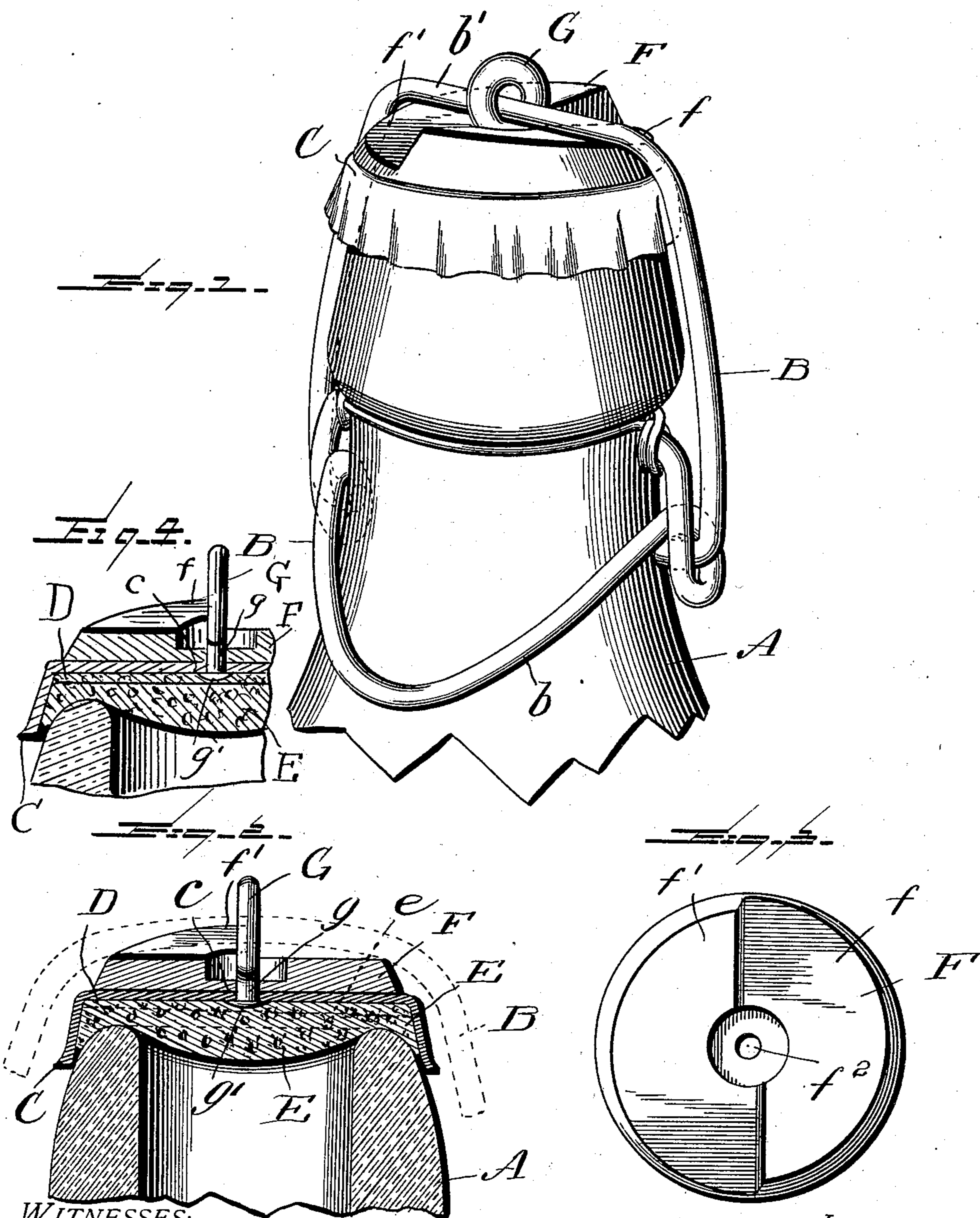
No. 722,978.

PATENTED MAR. 17, 1903.

G. F. HARDINGE.
BOTTLE STOPPER.

APPLICATION FILED OCT. 13, 1902.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE F. HARDINGE, OF VINELAND, NEW JERSEY.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 722,978, dated March 17, 1903.

Application filed October 13, 1902. Serial No. 127,079. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. HARDINGE, a citizen of the United States, residing at Vineland, in the county of Cumberland and State of New Jersey, have invented certain new and useful Improvements in Bottle-Stoppers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the class of bottle-stoppers designed to seal bottles whose contents are somewhat gaseous or otherwise, and has for its primary object to provide a means whereby an extra amount of pressure can be placed upon the stopper in addition to the old wire lever device which is so well known, this high degree of pressure being obtained by the use of a cam.

The further object of my invention is to provide a construction which will require but the substitution of a thin disk of cork or other like material to make a practically new stopper after being previously used, thus making a cleanly stopper.

The accomplishment of these results is procured by the construction clearly and fully described in the annexed specification and drawings.

In the drawings, Figure 1 is a perspective view of my improved bottle-stopper applied to a bottle. Fig. 2 is a sectional view of my improved stopper applied to the mouth of a bottle. Fig. 3 is the top view of a section of my improved stopper. Fig. 4 is a view of a modified form.

In the several views like letters represent similar parts.

A represents the neck of a bottle adapted to the use of the old wire lever and bail device B, being so constructed that when the lever *b* is depressed the stopper is depressed by bail *b'* in the well-known manner.

C is a metal cup-shaped cap of suitable size to tightly fit over the mouth of the bottle.

c is a circular hole in the center of the top of cap C.

D is a disk of cork of suitable thickness fitted into C; but, if desired, D may be made thinner and an additional disk of cork E be

placed over it to produce the desired thickness of cork, as is shown in Fig. 4. The latter is the more preferable device, as the substitution of the disk E would be all that is necessary before using the stopper for a second time, thus causing less expense than would be incurred by renewing the thicker disk D each time.

F is a circular piece of metal of suitable thickness and of about the same diameter as the top of cap C, upon which it rests. The piece F either rests loosely upon the cap C or is rigidly secured thereto, as may be preferred. The upper side of F is divided into two oppositely-extending inclines *f* and *f'*, the upper extremities of which are parallel and far enough apart to permit the wire *b'* to rest between them. The outer edges of *f* and *f'* are beveled at a suitable angle.

*f*² is a circular converging hole coinciding with *c* and of suitable size to permit the eyelet G to rest in it.

G is an eyelet with a stem portion *g*, the eyelet portion surrounding the wire *b'*, while the stem portion *g*, passing through the holes *c* and *f*², is pivotally secured to C, and consequently to F, by any suitable means *g'*.

Having fully described my device, its operation will be evident from the following. Ordinarily when the old wire lever device is used rubber is employed in the stopper to make it air-tight, whereas in my device when it is desired to seal a bottle, *b'* is placed in the depression between *f* and *f'* and then the lever *b* is depressed and locked in the old manner, whereupon a considerable amount of pressure is obtained; but when more pressure is desirable the plate F is gradually turned by any suitable means until the desired pressure is obtained, which operation is explained by the fact that as the inclines strike *b'* additional pressure is produced, and since *b'* is stationary the cork must give, so that as great a degree of pressure as desired can be procured by turning F.

When it is desired to open a sealed bottle, the operation is accomplished in a well-known way. When it is desired to reseal a bottle, whereas in the old device the same rubber is used many times, thus in time becoming un-

clean, in my device a new disk of cork is substituted for the old one, thus always keeping a clean and tasteless stopper.

What I claim, and desire to secure by Letters Patent, is—

1. In a bottle-stopper the combination with the eccentric lever and bail, of a cap for covering the mouth of the bottle carried by said bail, the connection between them permitting the said cap to revolve upon the mouth of the bottle when held thereto by said bail, substantially as described.

2. In a bottle-stopper the combination with the eccentric lever and bail, of a cap for covering the mouth of the bottle carried by said bail, the connection between the two permitting the said cap to rotate upon the mouth of the bottle when held thereon by said bail, said cap being also provided with a cam construction whereby the rotation of said cap will increase its pressure upon the bottle, substantially as described.

3. In a bottle-stopper the combination with the eccentric lever and bail, of a cap for covering the mouth of the bottle, the eyepiece engaging said bail and pivoted to said cap, said cap being provided with cams to engage said bail, substantially as described.

4. In a bottle-stopper, the combination with a bail secured below the mouth of the bottle, of a cap for covering the mouth of the bottle, carried by said bail, the connection between the two permitting said cap to rotate upon the mouth of the bottle, and said cap also provided with a cam construction whereby the rotation of the cap will cause the same to be pressed upon the mouth of the bottle, substantially as described.

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

GEORGE F. HARDINGE.

Witnesses:

WILLIAM G. HISLOP,
FRANK WANSER.