

(No Model)

S. TWITCHELL.  
BOTTLE STOPPER.

No. 582,446.

Patented May 11, 1897.

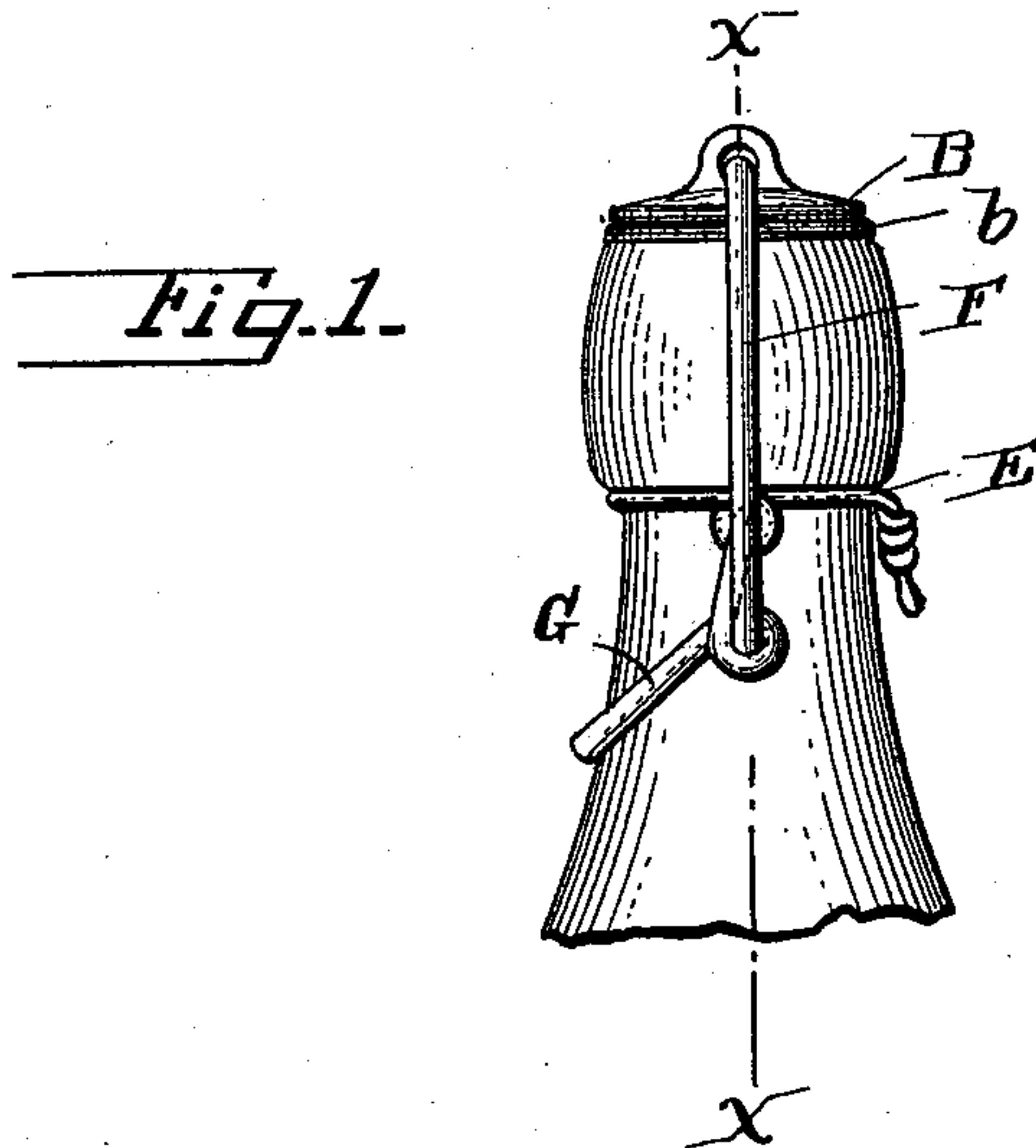


Fig. 2.

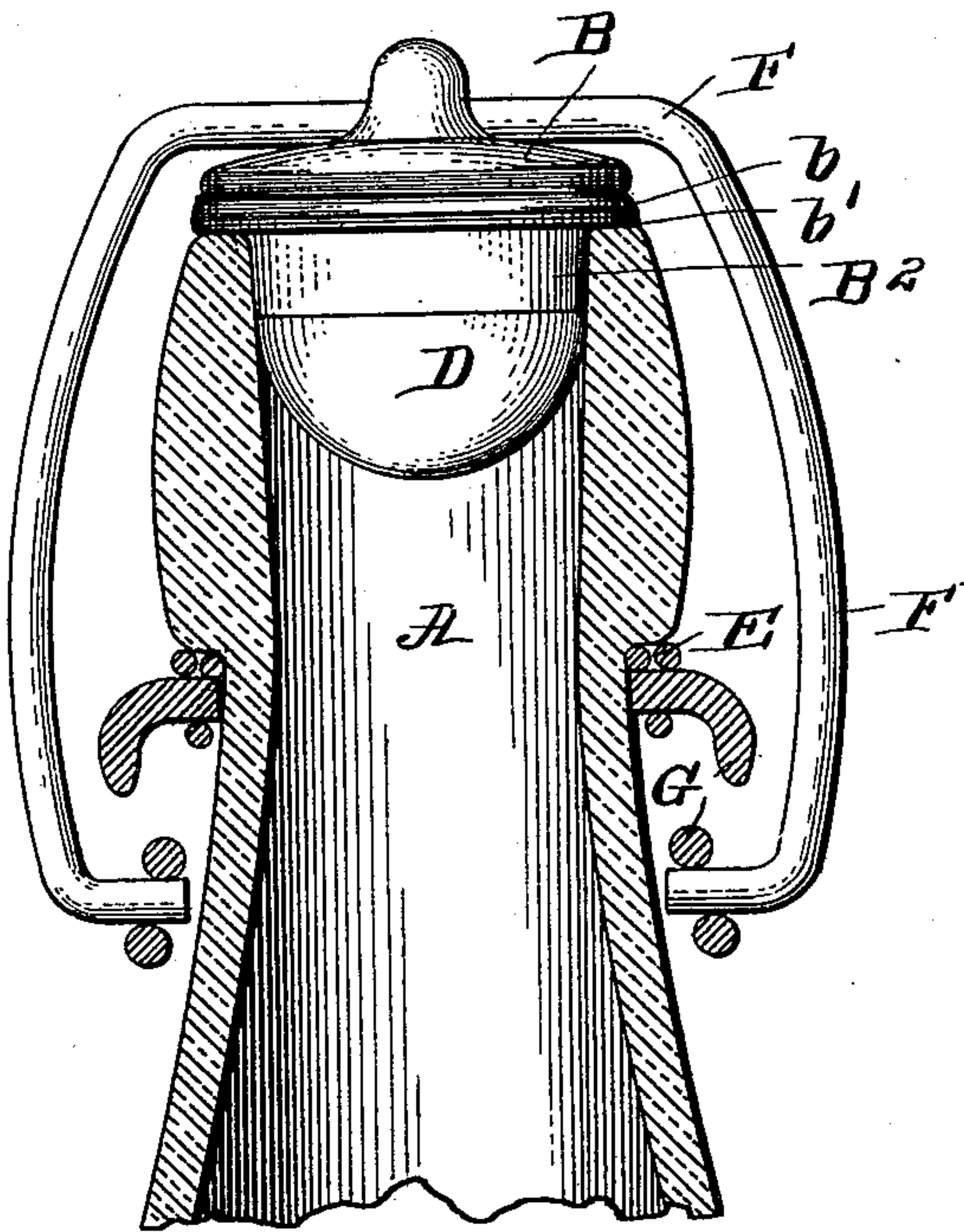
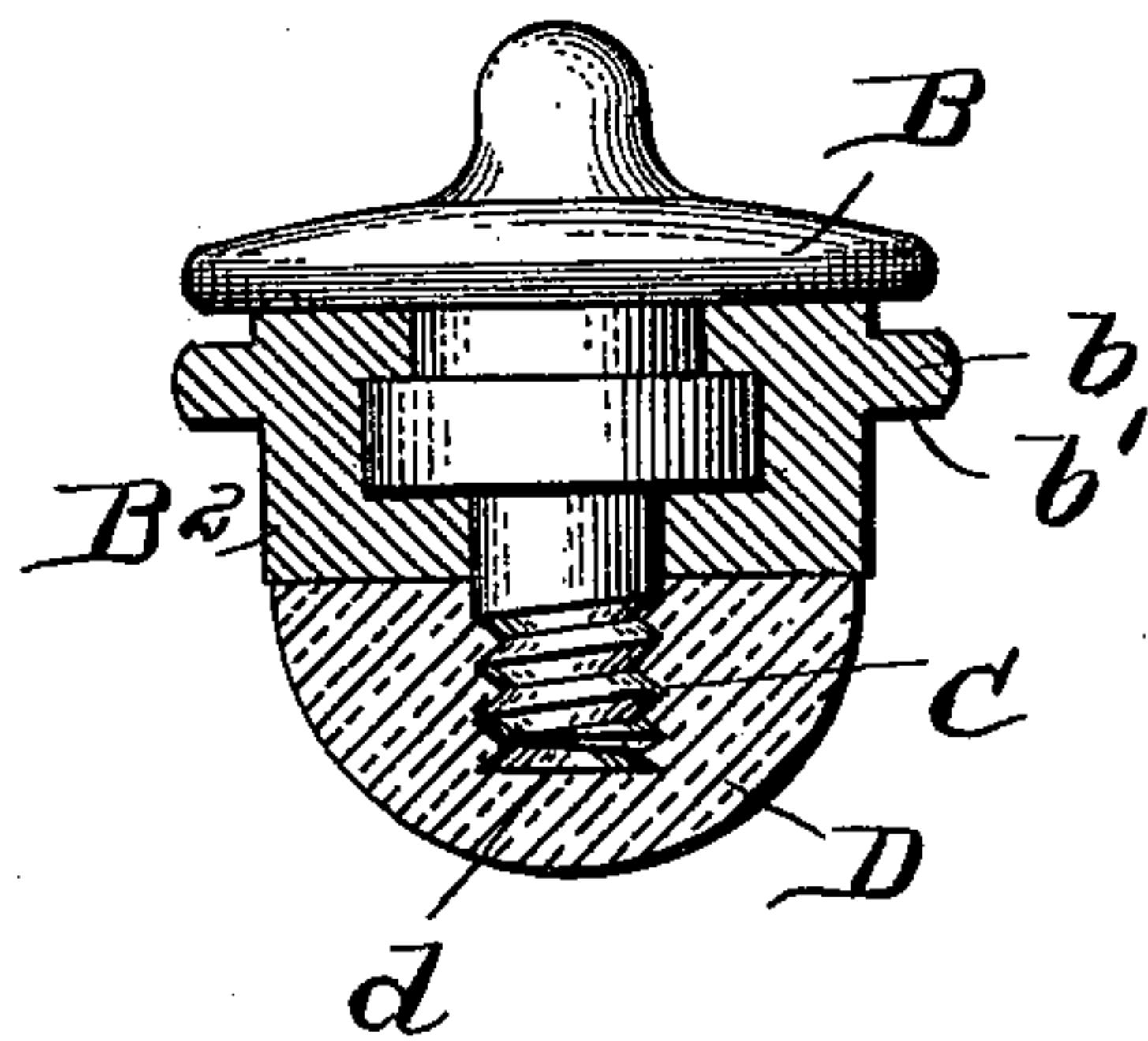


Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

SELDEN TWITCHELL, OF PHILADELPHIA, PENNSYLVANIA.

## BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 582,446, dated May 11, 1897.

Application filed July 31, 1896. Serial No. 601,166. (No model.)

*To all whom it may concern:*

Be it known that I, SELDEN TWITCHELL, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Bottle-Stoppers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to a certain improvement to be applied to a stopper provided with a metallic cap, which is forced down upon the top of the neck of the bottle, there being an interposed rubber washer, which has a downwardly-projecting portion which is wedged in the inclined neck of the bottle. With this class of stopper two troubles arise. The material in the bottle contacts with the rubber, which affects the material in the bottle unless the rubber be perfectly pure, which it very seldom is. Further, with constant use the resiliency of the rubber becomes lessened, so that the seal is imperfectly made. It is the purpose of my invention to cure these. To that end I provide the shield of non-corroding material, the upper surface of which contacts with the lower surface of the washer. This shield is of size sufficient to practically cover the entire surface of the washer, it being only sufficiently less in size that when the stopper is out of the bottle sufficient rubber projects beyond the porcelain shield to form a bearing-surface against the neck of the bottle. However, when the stopper is in the bottle this projecting surface is compressed, so as to leave practically no rubber projecting beyond the porcelain shield. In place of porcelain any non-corroding material may be used for the shield, and in this case I understand such material to be the equivalent of porcelain. This porcelain shield, when the stopper is in place, prevents the material from contacting with the rubber, as the porcelain shield is preferably secured to the cap through the medium of a threaded rod secured to the cap, upon which a threaded socket in the shield works, so that when the resiliency of the rubber decreases the porcelain may be screwed farther on the rod against the rubber washer, compressing it against the metal cap and increasing its resiliency.

I will now describe the embodiment of my

invention illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of bottle, neck, and stopper. Fig. 2 is a section on line *x x*, Fig. 1. Fig. 3 is a section of stopper removed from bottle.

A is the neck, the bottle having an internal tape, as shown.

B is the cap of the bottle-stopper, having the rubber washer *b* secured to it.

C is the threaded rod, secured to the cap B and projecting through the washer *b*.

D is the shield, having the internal threaded portion *d*, by means of which it is secured to the rod.

E is the neck-wire, F the bail, and G the lever for securing the stopper in the bottle.

The portion *b'* of the washer rests on the top of the neck of bottle, and downwardly-projecting portion *B'* in forcing the stopper in the bottle is compressed to such an extent as to be practically within the surface of the shield D, so that contact between the material in the bottle and the rubber washer is prevented. Further, as stated before, by screwing the shield farther the rubber washer will be compressed against the cap and its resiliency increased.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

In a bottle-stopper, the combination with a rubber washer having a laterally-projecting portion, adapted to rest on the upper surface of the neck of the bottle, and a downwardly-projecting portion adapted to be secured in the neck, a metallic cap having a stem extending through and projecting beyond the washer, the stem having an enlarged portion within the washer, the projecting end of the stem being threaded, of a substantially semi-spherical-shaped shield of non-corrosive material having an interior threaded portion adapted to work on the threaded end of the stem, the flat side of the shield being of a size to substantially cover the downwardly-projecting portion of said washer.

In testimony of which invention I have hereunto set my hand.

SELDEN TWITCHELL.

Witnesses:

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