

No. 816,513.

PATENTED MAR. 27, 1906.

F. B. THATCHER.

CLOSURE FOR SEALING BOTTLES OR SIMILAR ARTICLES.

APPLICATION FILED DEC. 27, 1905

Fig. 1.

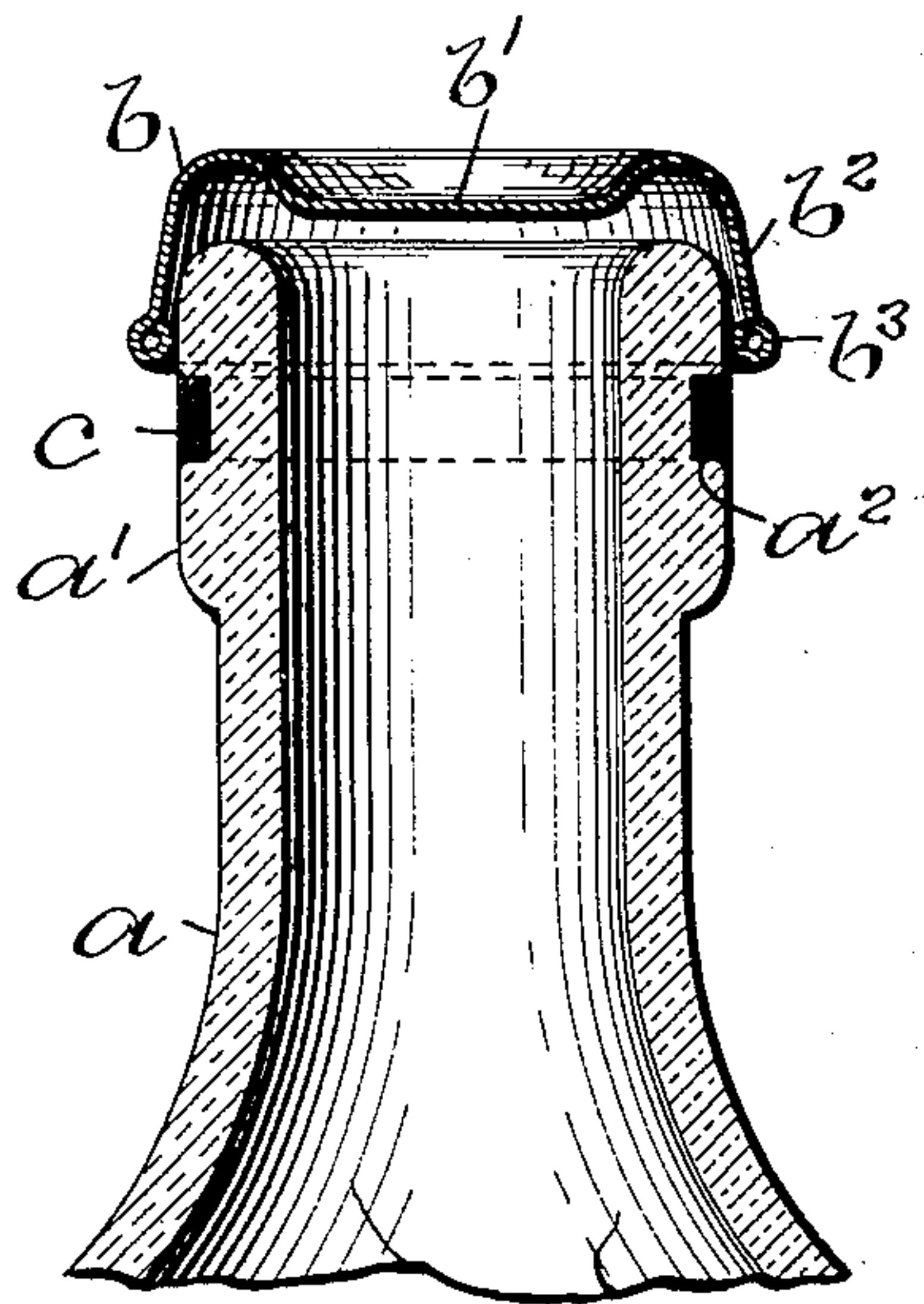


Fig. 2.

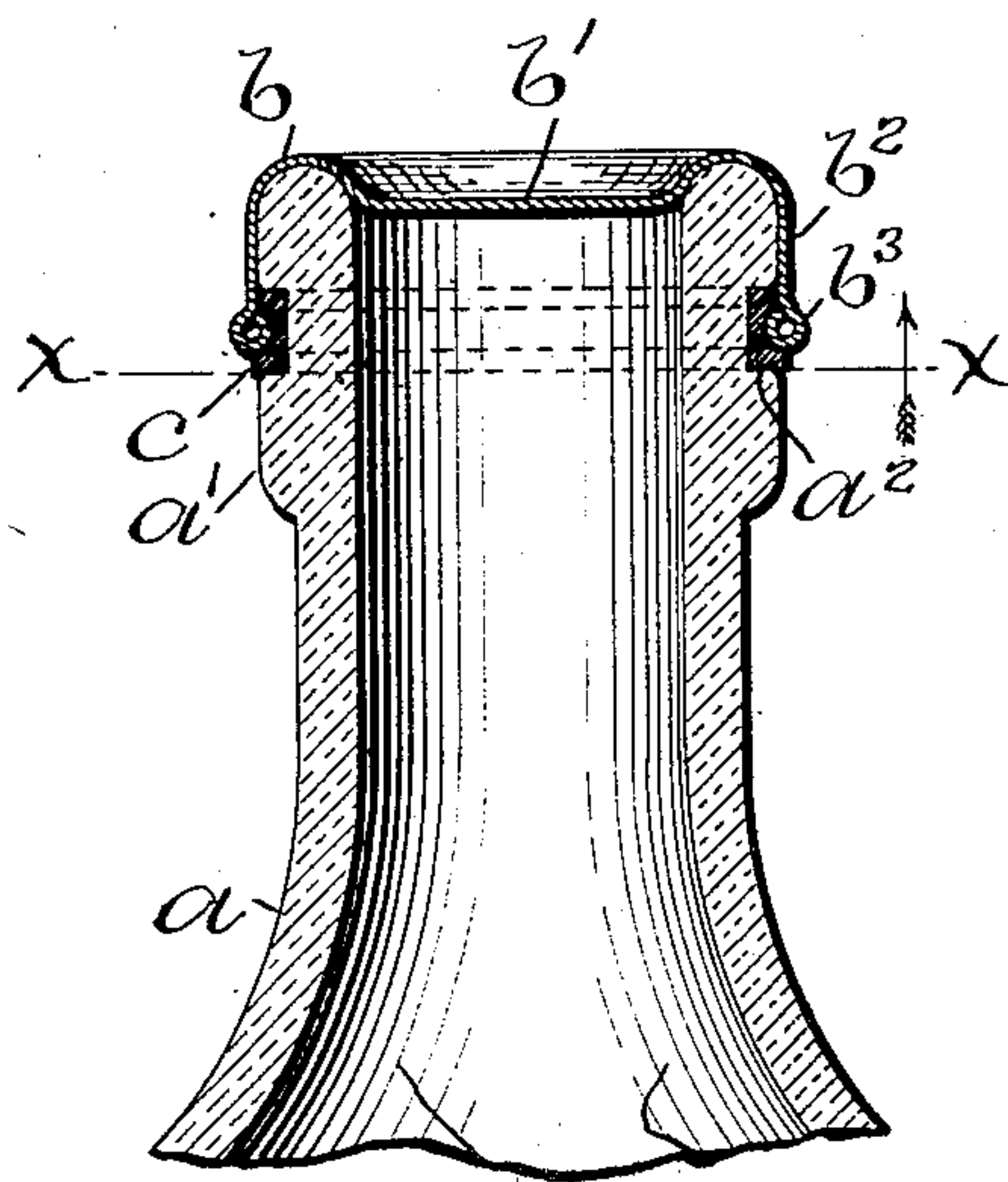
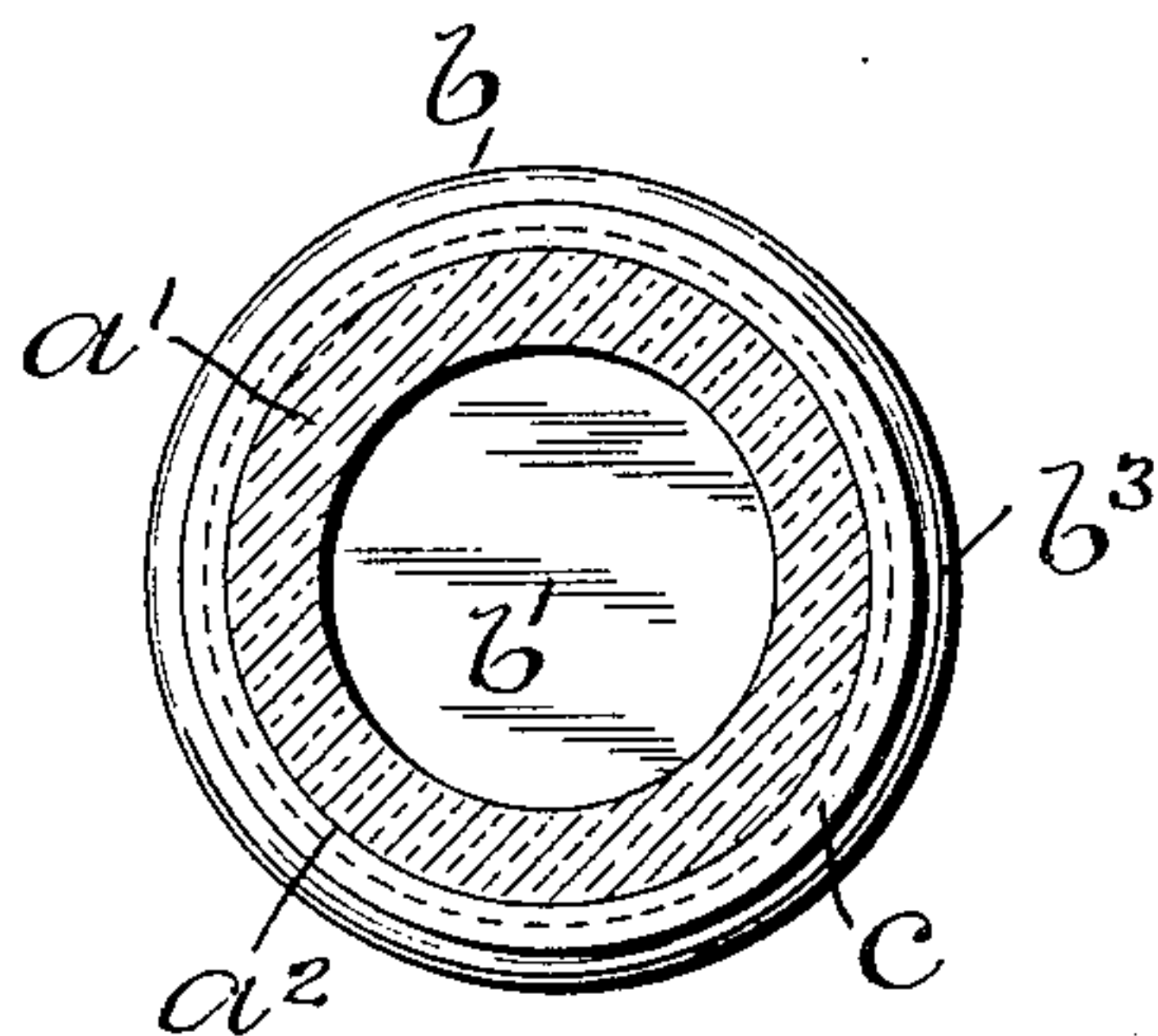


Fig. 3.



WITNESSES:

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CLOSURE FOR SEALING BOTTLES OR SIMILAR ARTICLES.

No. 816,513.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed December 27, 1905. Serial No. 293,441.

To all whom it may concern:

Be it known that I, FREDERICK B. THATCHER, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Closures for Sealing Bottles or Similar Articles, of which the following is a specification.

This invention has reference to an improvement in closures for sealing the mouths of bottles, jars, or similar articles, and more particularly to an improvement in the construction of a closure in the form of a metallic cap.

The object of my invention is to seal the mouth of a bottle or jar with a metallic cap more perfectly than has heretofore been done.

A further object of my invention is to reduce the cost of hermetically sealing the mouths of bottles, jars, or similar articles.

My invention consists in the peculiar and novel construction of a sealing medium or closure which consists of a metallic cap, a compressible ring, and the head of a bottle or similar article having an outer annular semi-rectangular groove, as will be more fully set forth hereinafter.

Figure 1 is a vertical sectional view of the neck and head of a bottle broken away from the body portion and showing my improved closure in the position of being applied to the head over the mouth of the bottle. Fig. 2 is a sectional view similar to Fig. 1, showing my improved closure in the applied or closed position; and Fig. 3 is a transverse sectional view taken on line X X of Fig. 2 through the annular groove in the head of the bottle.

In the drawings, *a* indicates the neck of a bottle, *b* a metallic closure-cap, and *c* a compressible ring made of rubber or a similar material. The neck *a* merges into the usual head *a'*, in which is an outer annular semi-rectangular groove *a²*. The cap *b* is formed from sheet metal and is shaped to have the circular depressed portion *b'* in the top and the outwardly-flaring circular rim *b²*, the edge of which is rolled over to form the round beading *b³* on the edge of the rim, as shown in Fig. 1.

1. The compressible rim *c* is made of rubber

or other compressible material to loosely fit the annular groove *a²*, in which it is permanently held.

In the operation of sealing the mouth of a bottle a compressible ring *c* is placed in the groove *a²* in the head of the bottle. This ring now forms a permanent fixture of the bottle. A cap *b* is now placed over the head of the bottle and forced downward by a suitable tool, closing the mouth of the bottle. The rim *b²* on the cap is now contracted or compressed by spinning or other means and the beading on the edge of the rim forced into the annular groove *a²* onto the ring *c*, compressing the ring *c*, as shown in Fig. 2, and hermetically sealing the mouth of the bottle. By the use of the circular depressed portion *b'* in the top of the cap the cap is shaped to tightly fit the mouth of the bottle, thus materially assisting in sealing the same, and by the use of the annular beading *b³* on the rim of the cap *b* the cap is strengthened where it is required and firmly secured in the groove *a²* against any internal pressure or resistance in the bottle, the compressible ring *c* acting only as a sealing medium.

By the use of my improved closure for bottles or similar articles the cap is firmly and tightly secured and by virtue of the beading on the rim of the cap is easily removed when required.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a closure for bottles or similar articles, the combination of a bottle or similar article having an outer annular groove adjacent its mouth, a compressible ring in the annular groove, a metallic cap having a rim and a beading on the edge of the rim, whereby on compressing the beading on the rim of the cap into the annular groove and onto the compressible ring, the bottle or similar article is hermetically sealed.

2. In a closure for bottles or similar articles, the combination of a bottle having the neck *a* merging into the head *a'* in which is the outer annular groove *a²*, a compressible ring *c* in the annular groove *a²* and a metallic cap *b* having the depressed portion *b'* in the

top, the outwardly-flaring circular rim b^2 and
the round beading b^3 on the edge of the rim
 b^2 , whereby on compressing the beading b^3 on
the rim b^2 into the annular groove a^2 in the
5 head a' and onto the compressible ring c ,
the bottle is hermetically sealed.

In testimony whereof I have hereunto set

my name to this specification in the presence
of two subscribing witnesses.

FREDERICK B. THATCHER.

Witnesses:

ADA E. HAGERTY,
J. A. MILLER.