

No. 639,534.

Patented Dec. 19, 1899.

R. W. CROCKER.

COVER FASTENER FOR VESSELS.

(Application filed Dec. 27, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 2.

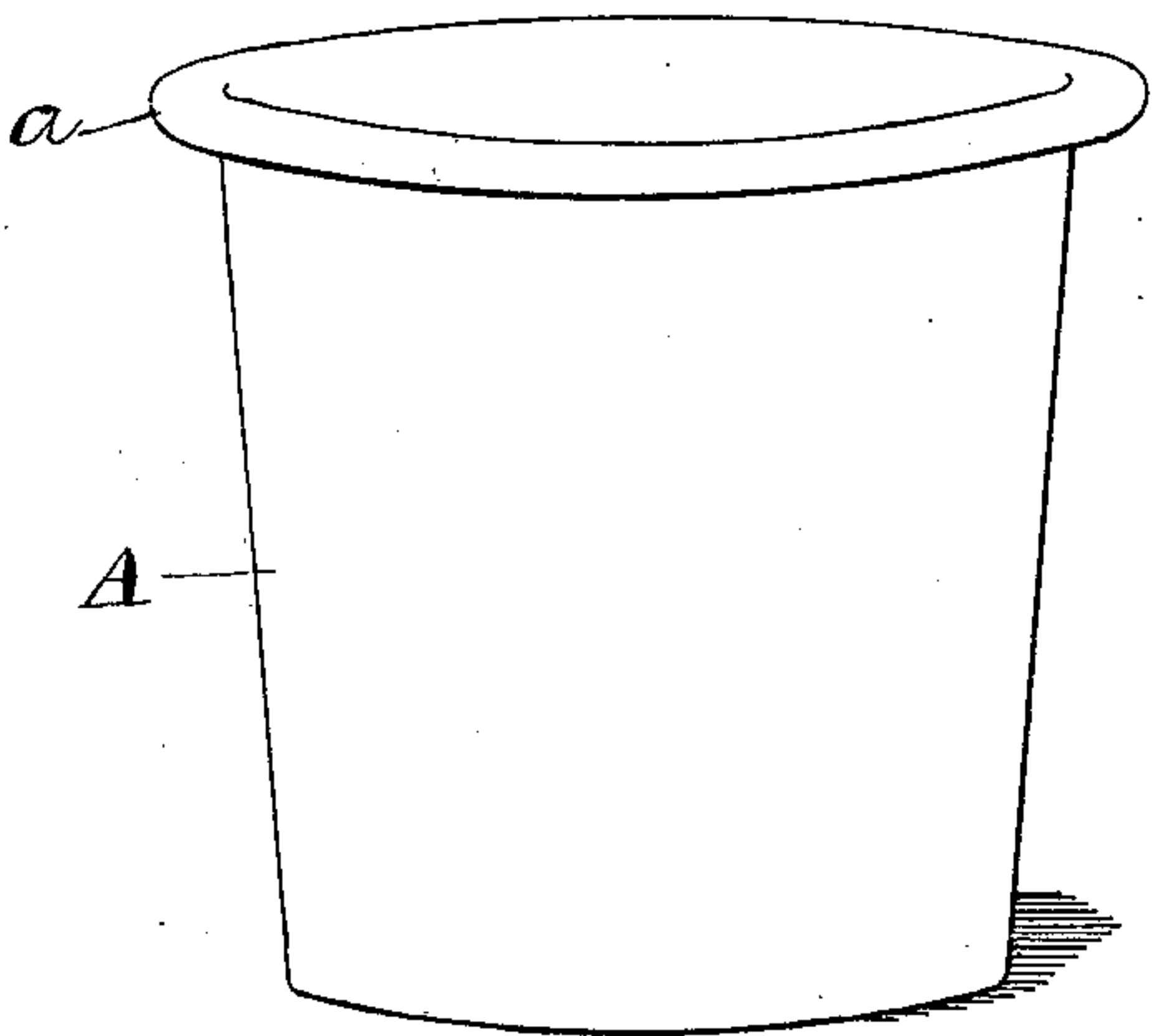


Fig. 1.

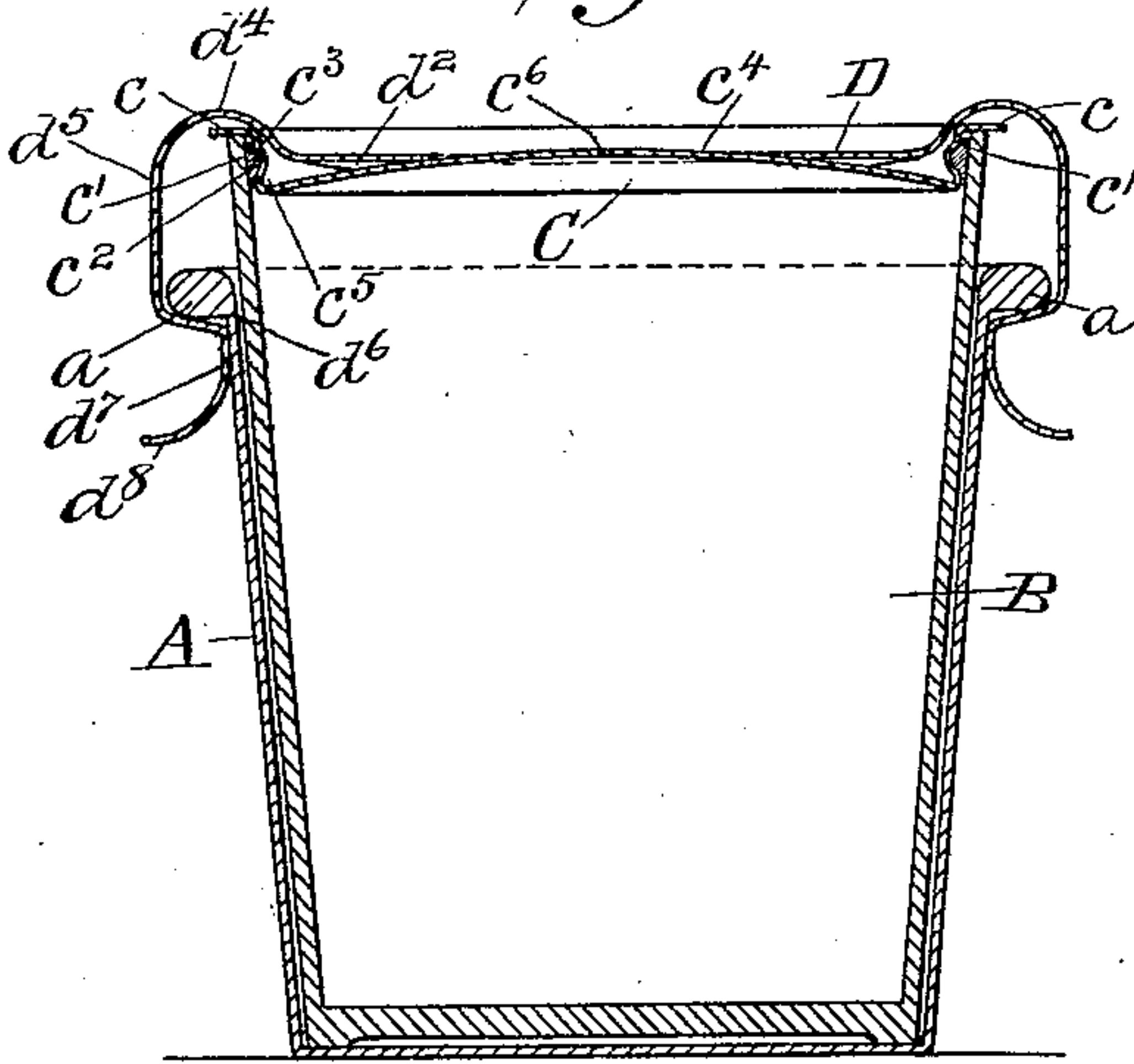


Fig. 3.

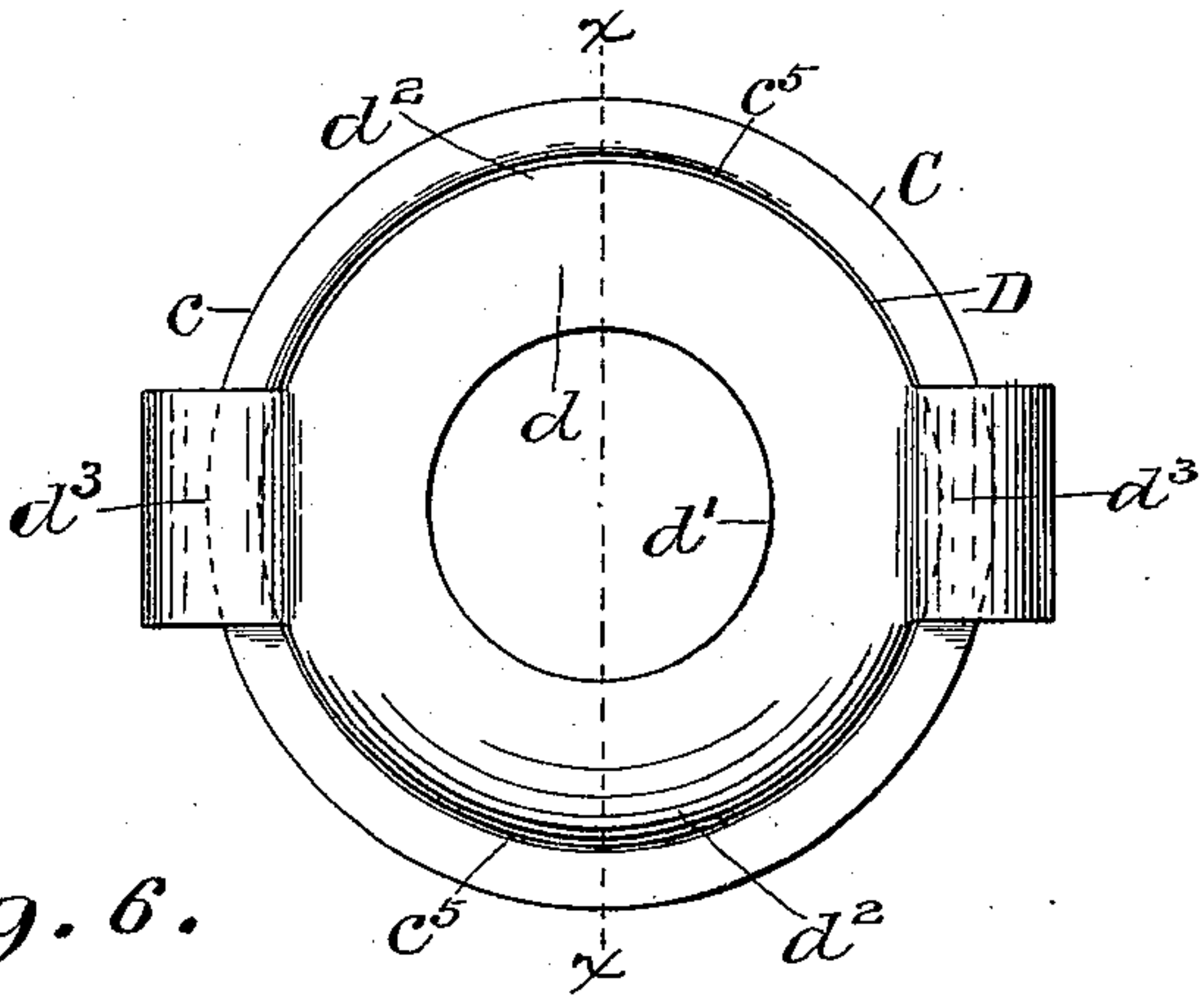


Fig. 6.

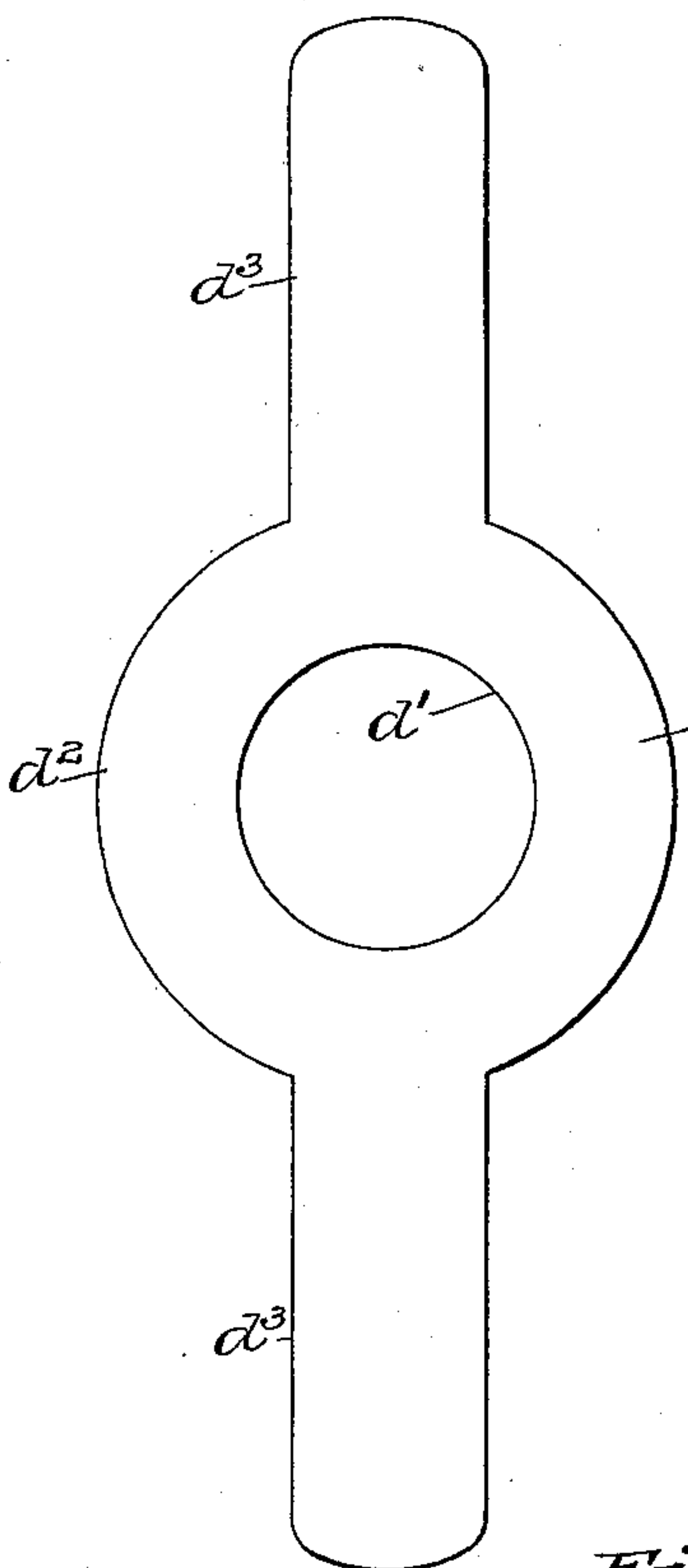


Fig. 5.

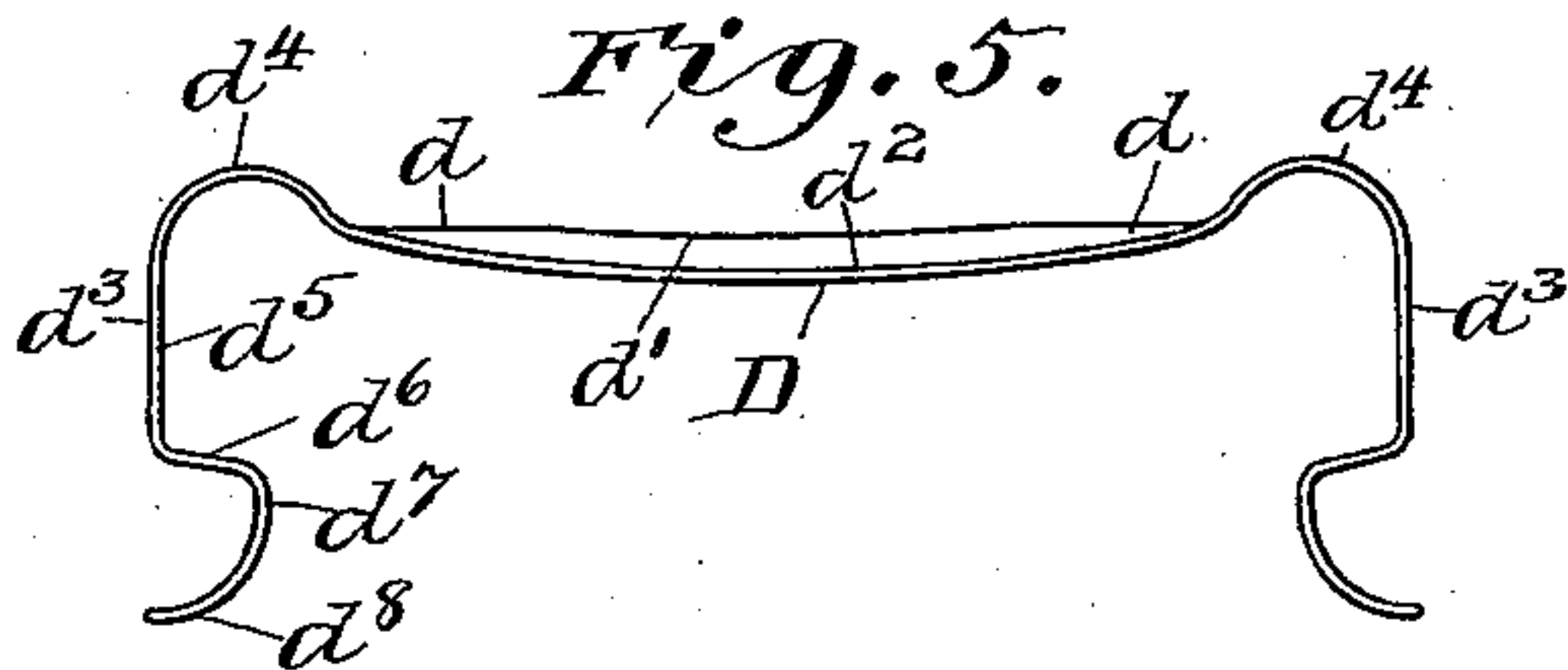
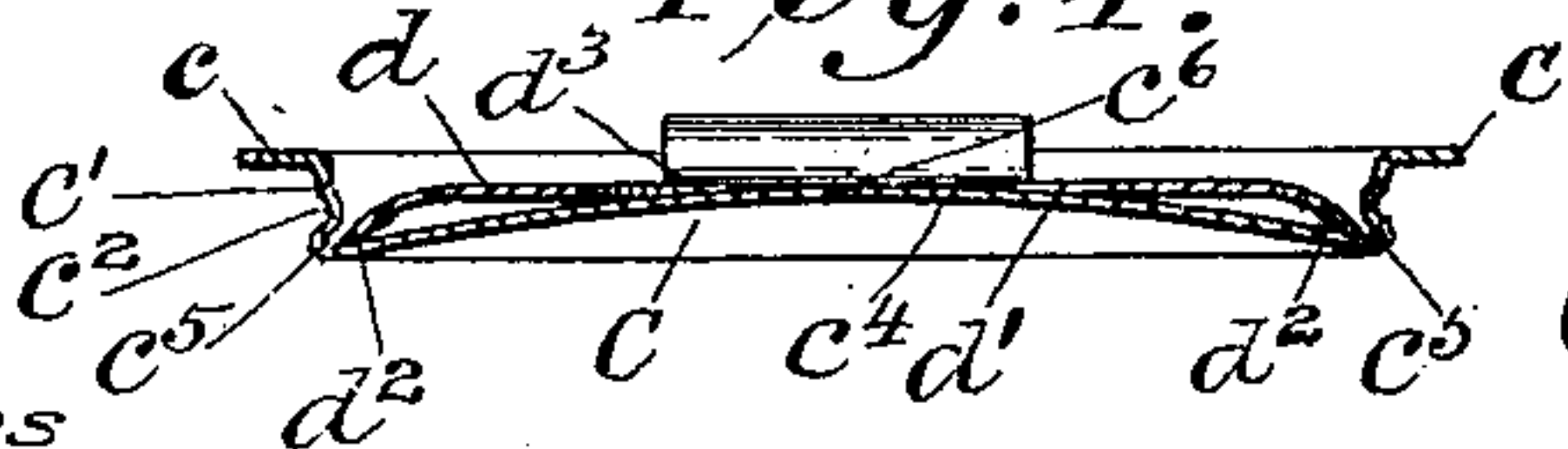


Fig. 4.



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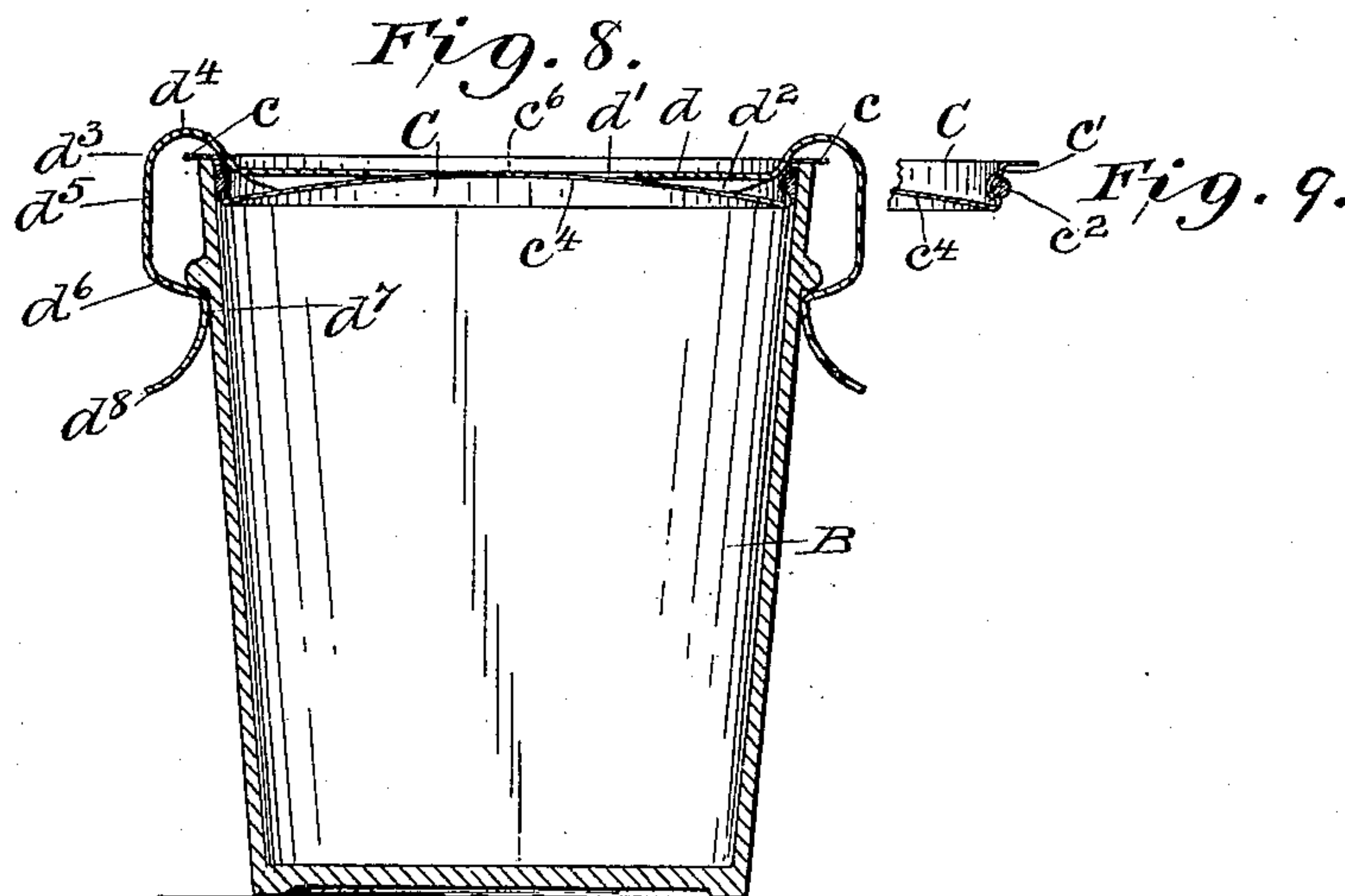
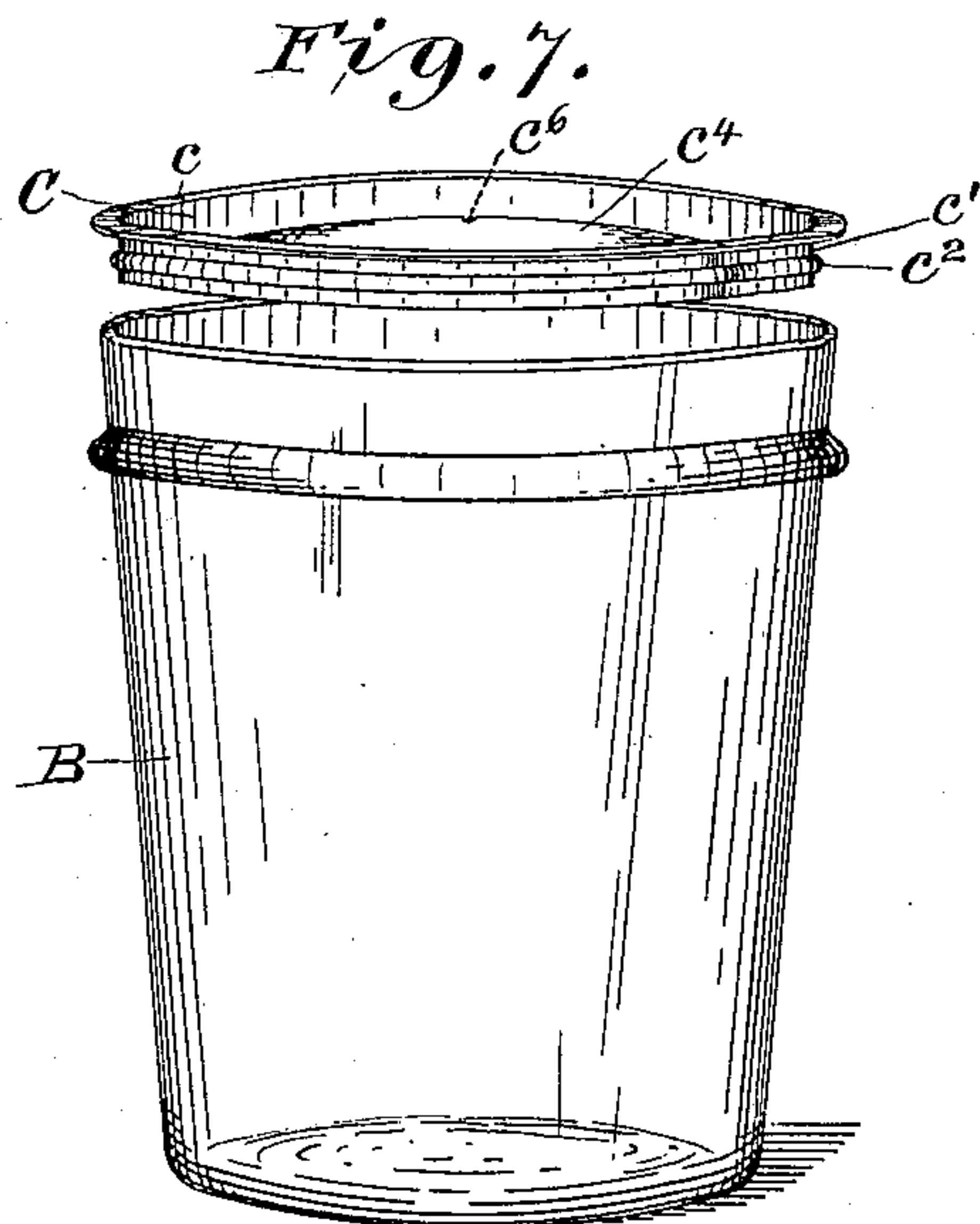
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UNITED STATES PATENT OFFICE.

RALPH W. CROCKER, OF SEATTLE, WASHINGTON, ASSIGNOR TO THE
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COVER-FASTENER FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 639,534, dated December 19, 1899.

Application filed December 27, 1898. Serial No. 700,383. (No model.)

To all whom it may concern:

Be it known that I, RALPH W. CROCKER, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Cover-Fasteners for Vessels; and I do 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 an improvement in cover-fasteners for vessels, more especially for preserving vessels.

My invention has for its object to provide a fastening device for temporarily holding the cover of a preserving glass or jar in place while the contents (which are placed in the jar in a heated state) are cooling and a vacuum is being formed therein by which said cover is finally held in place after the fastening device has been removed, to provide a fastening by which the cover can be secured on an ordinary plain jar or glass or on one provided with a rim or bead, and also in the construction of the cover adapted for use with the fastening device.

It consists in the construction, combination, and arrangement of the several parts, as hereinafter more fully described and specifically claimed.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section of my invention shown in connection with an ordinary glass or jar without a rim or bead. Fig. 2 is a side view of the inclosing cup. Fig. 3 is a top plan view of the spring-clamp and cover. Fig. 4 is a cross-sectional view on line *xx* of Fig. 3. Fig. 5 is a side elevation of the spring-clamp. Fig. 6 is a plan view of the spring-clamp as it appears when stamped out and before being bent into shape. Fig. 7 is a perspective view of the glass or jar provided with a rim or bead, the cover of same being removed. Fig. 8 is a vertical section of same with the cover in place and the spring-clamp applied. Fig. 9 is a detail section of the cover.

In the drawings, in which like letters of reference denote like parts throughout the sev-

eral views, A represents the inclosing cup, provided with a rim or bead *a* at or near its upper edge. In the cup A is placed an ordinary or perfectly plain glass or jar B, provided with a cover C, which consists of a horizontal portion or flange *c*, adapted to rest on the top of the glass or jar, a vertical downwardly-extending portion or wall *c'*, provided with a groove *c''*, adapted to receive a rubber gasket or packing-ring *c'''* to insure a perfectly airtight joint between the glass or jar and said cover, and a central convex portion *c''''*, extending upwardly from the vertical wall or portion *c'* and forming a groove *c'''''* at the point of juncture with said wall.

c'''''' is a hole which is preferably made in the cover before closing the same for the purpose of allowing the gases or vapor to escape, and thus prevent fermentation.

D is the spring-clamp, consisting of a circular horizontal body portion *d* with a central hole *d'*, downwardly-extending flanges or lips *d''*, and spring-arms *d'''*, extending upward above the body portion *d* and rounded, as at *d''''*, then extending downward vertically at *d''''''*, bent inwardly to form shoulders *d''''''''*, extending vertically at *d''''''''''*, and finally bent outwardly to form finger-pieces *d''''''''''''*. The shoulders *d''''''''''* are adapted to engage the rim or bead *a* of the cup and the body portion *d* to embrace the central convex portion *c''''* of the cover C and the downwardly-extending flanges *d''* to engage and be seated in the groove *c'''''* of said cover.

Before applying the cover-fastening device the glass or jar is filled with the hot material to be sealed therein and the cover inserted in the same, which will cause some of the material therein to press through the hole in the center of the cover. The glass or jar is then placed in the cup, the spring-clamp applied by causing the shoulders thereof to engage the rim or bead on the cup, thereby seating the flanges of the body portion of said spring-clamp in the groove in the cover and securely holding the same in place. When the material in the glass or jar begins to cool and contract and the vapors have escaped through the hole in the cover, a drop of solder is placed over the said hole in the cover and a vacuum forms below the cover, which forces the cover

tightly in place, and the greater the pressure the more the gasket is caused to spread and the more perfect is the sealing of the glass or jar. Thus by atmospheric pressure the glass or jar is hermetically sealed. The glass or jar can be instantaneously opened by simply puncturing a small hole in the cover, thus destroying the vacuum.

By the use of the cup, in connection with the spring-clamp and cover, it will be seen that any ordinary plain glass or jar of any form—that is, one without a rim or bead—can be used, and at the same time this cup will catch and hold any material that may accidentally leak out of the glass or jar.

When the spring-clamp is used with a glass or jar with a rim or bead thereon, the cup C is not necessary, and the shoulders are adapted to engage the said rim or bead on the glass or jar.

The clamp or the inclosing cup are not either of them to be used or remain permanently on the glass or jar, but only temporarily during the process of sealing the cover of the same. After the cover is sealed they are adapted to be removed and are then ready to be applied to another glass or jar, and so on.

Although I prefer to make the several parts of my invention of metal, they may be made of any suitable material.

It will be seen, especially by reference to Figs. 3 and 4 of the drawings, that the downwardly-extending flanges of the body portion of the spring-clamp are of such shape as to fit the circular groove in the cover and are seated therein, and thereby the cover is held with equal pressure around its periphery, where the most strain comes, and thus prevents any disturbance of the vacuum in the glass or jar.

Having thus described my invention, what I claim is—

1. In a cover-fastening device for vessels, a clamp consisting of spring-arms provided with shoulders, and a body portion projecting laterally beyond said arms, and provided with downwardly-extending flanges or lips on its periphery, said shoulders on the arms adapted to engage the rim or bead of a vessel, and thereby cause the flanges or lips on the body portion of said clamp to press against the cover of said vessel, substantially as described.

2. In a cover-fastening device for vessels, a clamp consisting of spring-arms provided with shoulders, a body portion projecting laterally beyond said arms, and provided with downwardly-extending flanges or lips on its periphery, in combination with a cover having a groove in which said downwardly-extending flanges are adapted to be seated, substantially as described.

3. In a cover-fastening device for vessels, a

clamp consisting of spring-arms provided with shoulders, and a body portion projecting laterally beyond said arms, in combination with a cover having a recess, said body portion seated in and conforming to the shape of said recess, the shoulders on said arms adapted to engage a rim or bead of a vessel thereby holding the body portion of the clamp in the recess of the cover and clamping said cover in place, substantially as described.

4. A cover-fastening device for vessels, consisting of an inclosing cup having a rim or bead, a clamp with spring-arms adapted to engage said rim or bead, said clamp having a body portion projecting laterally beyond said arms and provided on its periphery with downwardly-extending flanges or lips, adapted to be seated in a groove in the cover of a glass or other vessel held in said cup, and hold the cover in place, substantially as described.

5. In a cover-fastening device for vessels, a spring-clamp having a circular horizontal body portion, with a hole in the center, and provided on its edge with downwardly-extending flanges or lips, and spring-arms the upper portions of which project above said body portion, and the lower ends of which extend down vertically and are provided with shoulders, and finally terminate in finger-pieces, substantially as described.

6. In a cover-fastening device for vessels, a spring-clamp having a circular horizontal body portion with a hole in the center, and spring-arms, and a cup for holding a glass or jar provided with a flange or rim, adapted to be engaged by the said spring-arms and hold the cover of a glass or jar, substantially as described.

7. In a cover-fastening device for vessels, a spring-clamp consisting of a circular body portion having a hole therein, a portion of the periphery of said body portion being bent downward to form flanges or lips, and the spring-arms extending above said body portion and rounded, extending vertically downward and formed with a shoulder, then extending below said shoulder and terminating in finger-pieces, substantially as described.

8. In a cover-fastening device for vessels, a clamp having spring clamping-arms, and a cup for holding a glass or jar provided with a flange or rim adapted to be frictionally engaged by the said spring-arms and hold the cover on the glass or jar, substantially as described.

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

RALPH W. CROCKER.

Witnesses:

R. S. JONES,

J. J. MACGEE.