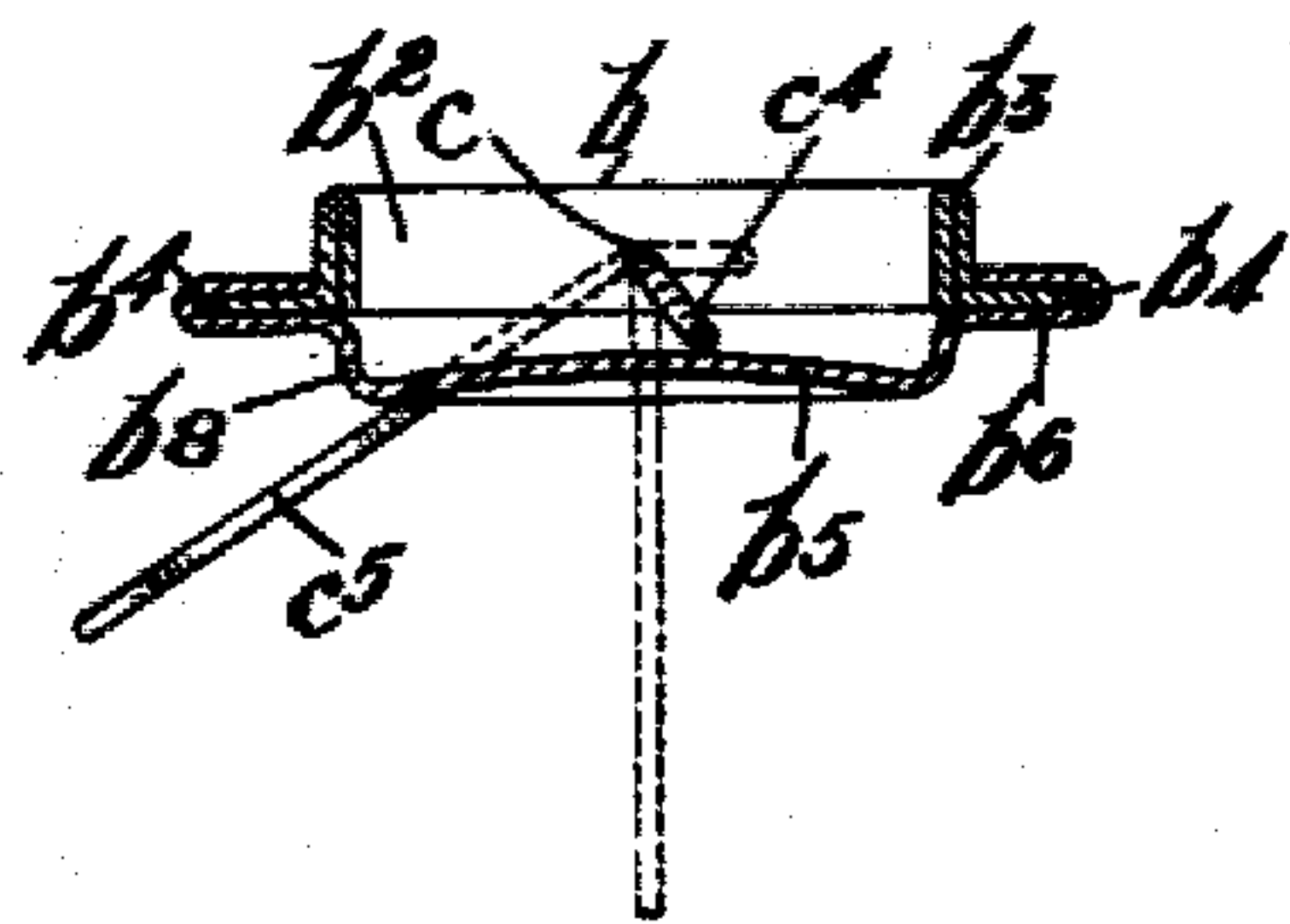
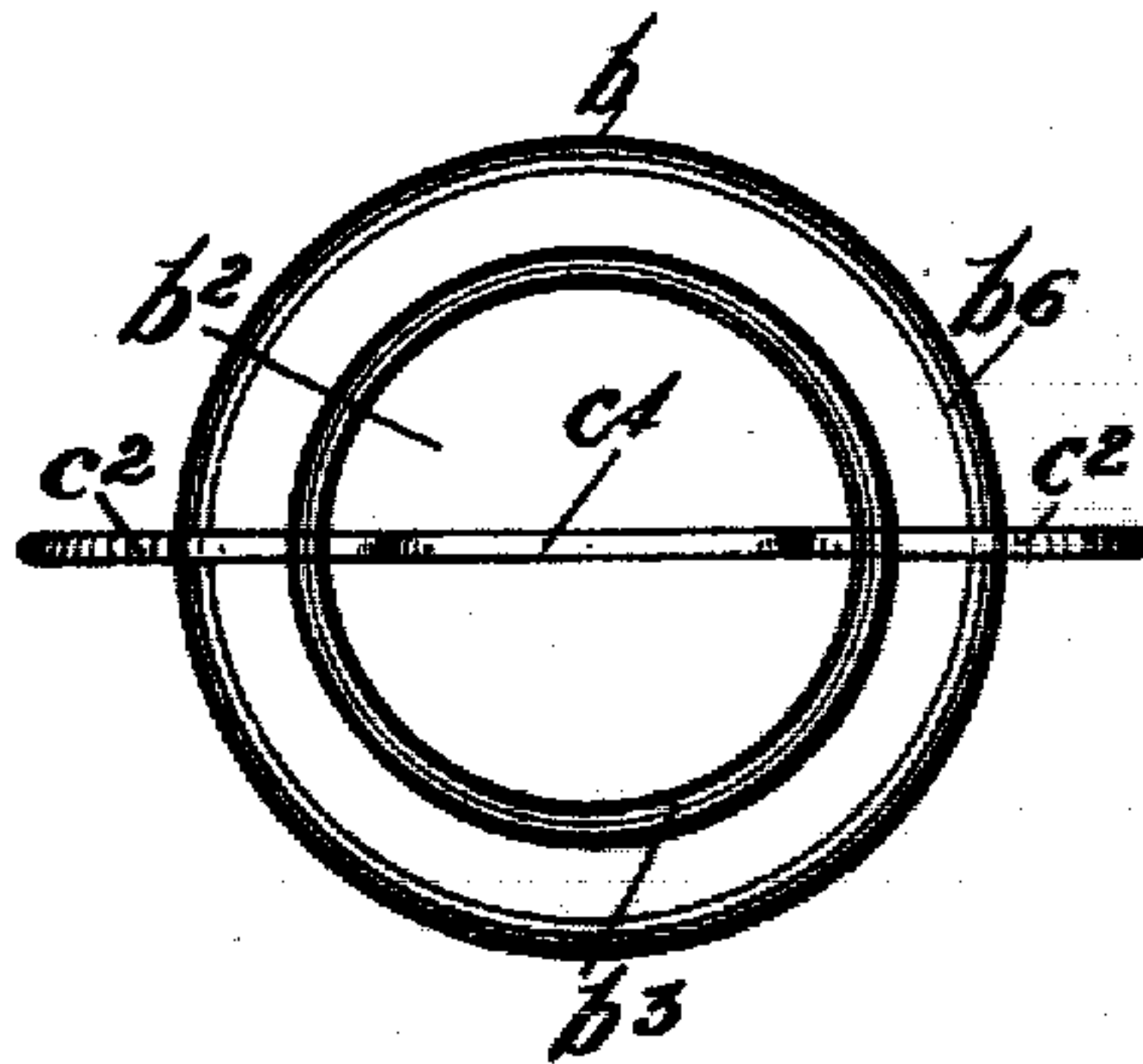
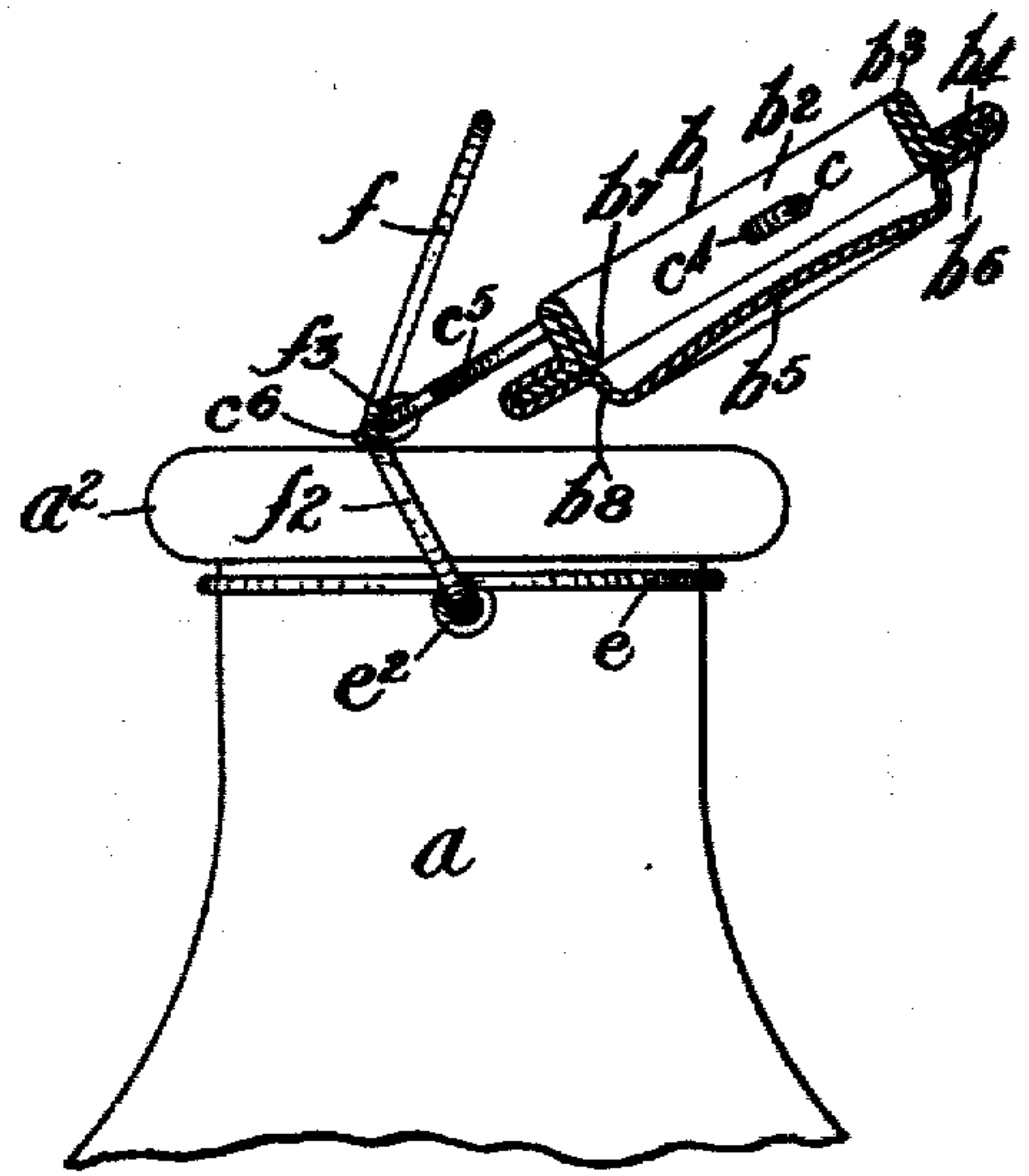
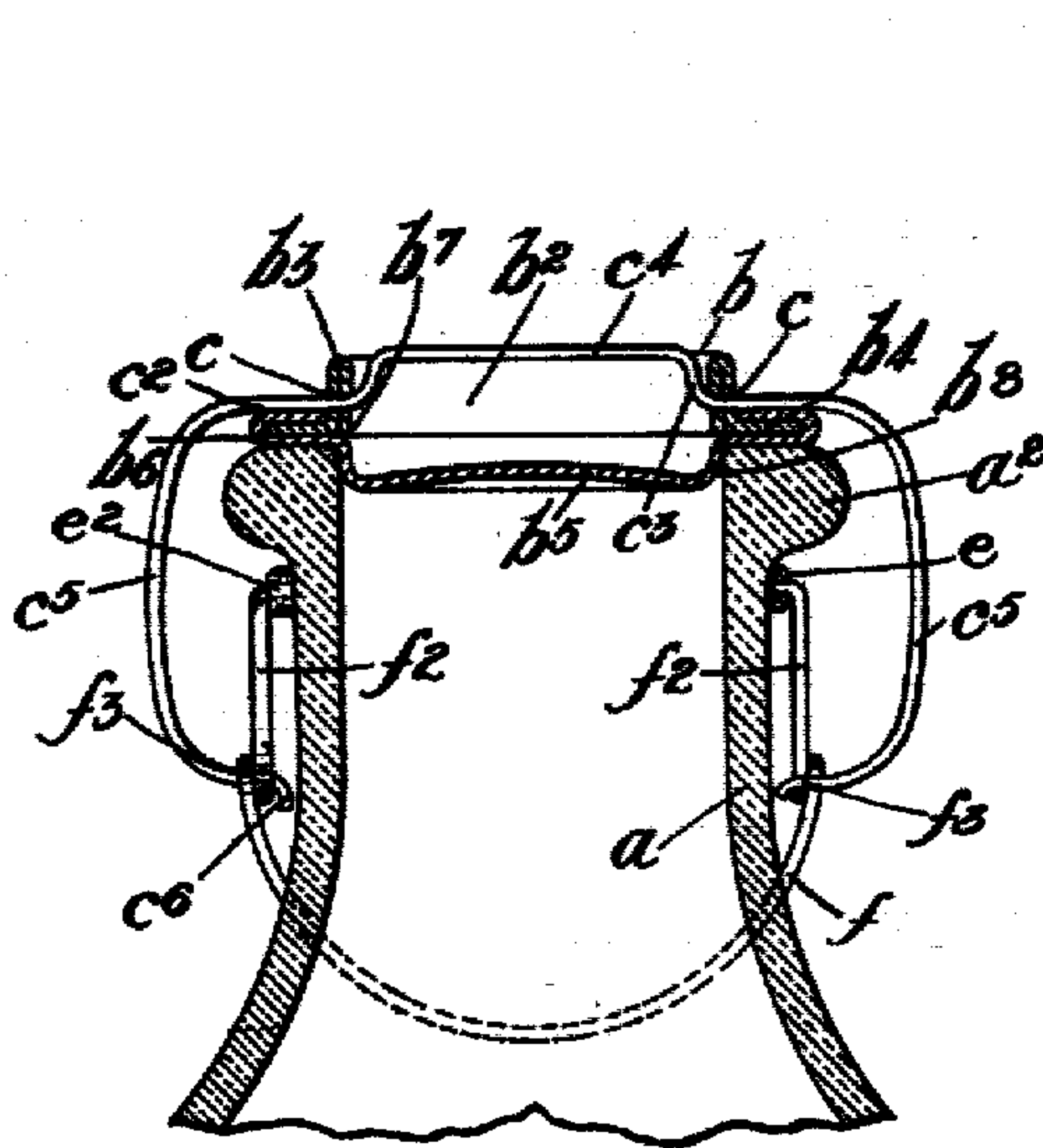


No. 820,032.

PATENTED MAY 8, 1906.

A. C. WITZEL.
BOTTLE CLOSING DEVICE.
APPLICATION FILED MAY 21, 1906.



WITNESSES

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ANDREW C. WITZEL, OF NEW YORK, N. Y.

BOTTLE-CLOSING DEVICE.

No. 820,032.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed May 31, 1905. Serial No. 262,987.

To all whom it may concern:

Be it known that I, ANDREW C. WITZEL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Bottle-Closing Devices, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to bottle-closing devices, and particularly to devices of this class which are designed for use in connection with milk-bottles and similar vessels; and the object thereof is to provide an improved closure device for vessels of this class which is simple in construction and operation and comparatively inexpensive and which may be swung into position and locked therein so as to close the vessel by depressing a yoke-shaped lever or thrown out of position so as to open the vessel by raising said lever, a further object being to provide a closure device of the class specified which has no internal chambers, cavities, or recesses and which may be easily and thoroughly cleaned at all times, and thus kept free of microbes, dirt, filth, and the like; and with these and other objects in view the invention consists in a device of the class specified constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a central vertical section of the neck of an ordinary milk-bottle provided with my improved closure device, the closure device being also shown in section and in position to close the bottle; Fig. 2, a view at right angles to Fig. 1 and showing the neck of the bottle in full lines and the closure device in section; Fig. 3, a plan view of the closure device as shown in Fig. 1; and Fig. 4, a section thereof similar to that shown in Fig. 2, but showing a slight modification.

In the drawings forming part of this specification I have shown my invention applied to a milk-bottle, the neck of the bottle being shown at *a* in Figs. 1 and 2, and the said neck is provided in the usual manner with an annular bead *a*² at the top thereof, and in the practice of my invention I provide a closure device proper which is designated by the

reference character *b* and which comprises a cup-shaped body portion *b*² open at the top and closed at the bottom and composed of an annular top portion *b*³, having a bottom flange or rim *b*⁴ and a bottom portion *b*⁵, having a flange or rim *b*⁶, which is about twice as wide as the flange or rim *b*⁴ and which is folded around the flange or rim *b*⁴ so as to form a perfectly tight joint, and the annular top portion *b*³ is formed by folding a sheet of metal, one edge of said sheet being folded downwardly and inwardly, as shown at *b*⁷, and the other edge thereof being extended outwardly to form the flange or rim *b*⁴, and the bottom portion *b*⁵ inwardly of the flange or rim *b*⁶ is depressed so as to form an annular depending and beveled wall *b*⁸, which fits within the top of the neck of the bottle when the closure device is in position.

The annular body portion *b*³ of the closure device is provided at its opposite sides with holes *c*, through which is passed a bail *c*², the central portion of which is bent out of line with the side portions thereof to form angular portions *c*³ and a yoke or loop shaped intermediate portion *c*⁴, and the bail *c*² is provided with depending side arms *c*⁵.

Below the bead *a*² of the neck of the bottle is placed a ring or band *e*, provided at the opposite sides thereof with eyes or rings *e*², in which are pivoted the opposite sides *f*² of a yoke-shaped lever *f*, and said sides of said yoke-shaped lever *f* are bent, as shown at *f*³, at an angle and are provided at *f*³ with rings or eyes in which are pivoted the ends of the side portions *c*⁵ of the bail *c*², and in this operation one of said side portions *c*⁵ of the bail *c*² is bent to form a hook *c*⁶, which is passed through the corresponding ring or eye at *f*³, and the opposite end portion of the opposite side *c*⁵ of the bail *c*² is sprung into and through the opposite eye or ring at *f*³, as clearly shown in Fig. 1, and this construction prevents the accidental disconnection of the parts at *f*³ and the loss thereof, the hook *c*⁶ serving to hold said parts in connection at all times, and the yoke-shaped or offset portion *c*⁴ of the bail *c*² between the opposite sides of the top portion of the closure device prevents the closure device from moving longitudinally on the bail.

In the construction shown in Figs. 1 to 3, inclusive, the intermediate loop-shaped or yoke-shaped portion *c*⁴ of the bail *c*² is in the same plane as the arms *c*⁵ of said bail, and with this form of construction the closure de-

vice proper may make a complete turn on the bail when it is not in position on the bottle; but in Fig. 4 I have shown a modification in which the part c^4 is at right angles to the arms c^5 of the bail c^2 , and with this form of construction the closure device proper cannot make a complete turn on the bail when said closure device is not in position on the bottle, and with this form of construction the closure device is always held in proper position on the bail and may be swung in position on the bottle or out of position whenever desired, and this operation, as will be understood, of swinging the closure device into position and locking it in position is performed by turning down the yoke-shaped lever f , and in opening the bottle the said lever f is raised, as shown in Fig. 2. In closing the bottle, as hereinbefore stated, all that is necessary is to turn the yoke-shaped lever f downwardly into the position shown in Fig. 1, the closure device b being held in proper position, and in opening the bottle all that is necessary is to swing the yoke-shaped lever upwardly, as shown in Fig. 2, and lift the closure device f off of the neck of the bottle, both of these operations being similar to those employed with other devices of this class, and although I have shown my improved closure device as applied to milk-bottles only it will be apparent that the same may be applied to similar bottles or vessels of any kind or class. By means of the form of my improved closure device a bottle or vessel of this class may be securely closed without the aid of a packing, the beveled part b^8 , which fits within the top part of the neck of the vessel, serving to accomplish this result, while the annular rim around the closure device and formed by the parts b^4 and b^8 rests snugly on the top of said neck; but, if desired, a packing-gasket or similar device may be employed under the said annular rim, and while I prefer to provide the bottom part of the closure device with the beveled portion b^8 this part of the device may be modified, if desired, and a packing-disk may be placed on the bottom of the closure device.

By making the body portion of the closure device cup-shaped in form and open at the top the top portion or rim thereof forms a bearing or support for the bail which passes therethrough, and there are no internal chambers, cavities, or recesses to become filthy or serve as a housing or breeding-place for microbes, and the closure device may be perfectly cleansed at all times or whenever necessary.

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

1. A closure device for bottles and other

vessels which comprises a circular body portion open at the top and closed at the bottom and provided with an annular flange or rim adapted to rest on the neck of the vessel, a bail passed through the top portion of the closure device and on which said closure device is adapted to turn, said bail being provided between the opposite sides of the closure device with an offset or yoke-shaped portion, substantially as shown and described.

2. A closure device for bottles and other vessels, comprising a circular hollow body portion open at the top and provided at a predetermined distance below the top with an annular flange or rim adapted to rest on the neck of the vessel, a bail passed through the top portion of the closure device above said flange or rim and on which the closure device is adapted to rotate, said bail being provided between the opposite side walls of the closure device with an offset or yoke-shaped portion, and the bottom of the closure device being depressed below said flange or rim and adapted to fit within the neck of the vessel, substantially as shown and described.

3. A closure device for bottles and other vessels, comprising an annular top portion and a closed bottom portion, each of said parts being provided with a flange one of which is wider than and folded around the other so as to form an annular rim around the closure device, and the bottom portion being depressed below said annular rim and adapted to fit within the neck of the vessel, and a bail passed through the annular top portion of the closure device and provided between the opposite sides thereof with an offset or yoke-shaped portion, substantially as shown and described.

4. A closure device for bottles and other vessels, said closure device being composed of an annular top portion and a closed bottom portion, said annular top portion and said bottom portion being provided with flanges one of which is folded around the other to form an annular rim which is adapted to rest on the top of the neck of the vessel and below which the bottom portion is depressed, and a bail passed through the top portion and provided between the opposite side walls thereof with an offset or yoke-shaped portion, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 29th day of May, 1905.

ANDREW C. WITZEL.

Witnesses:

F. A. STEWART,
C. J. KLEIN.