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S. B. HOPKINS.

MEANS FOR FASTENING COVERS TO JARS.

(Application filed Apr. 19, 1901.)

(No Model.)

Fig. 1.

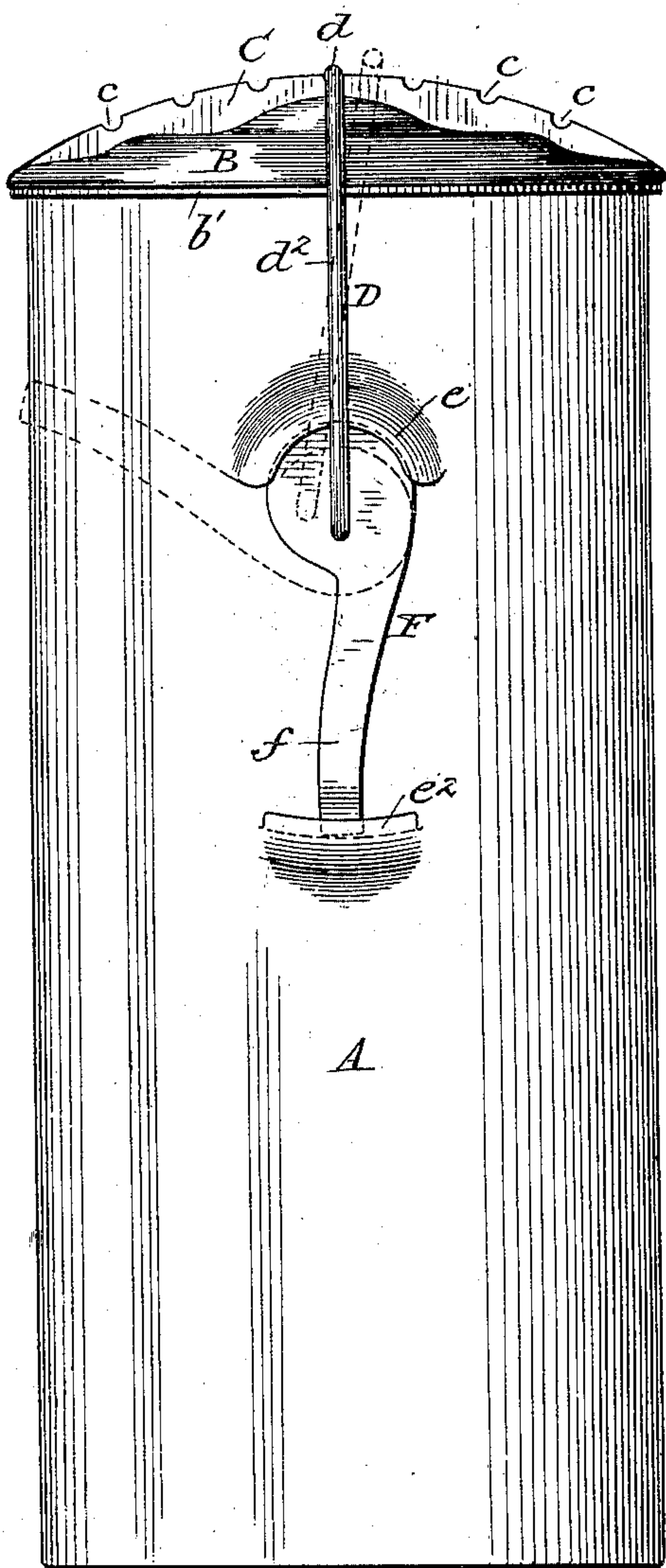


Fig. 2.

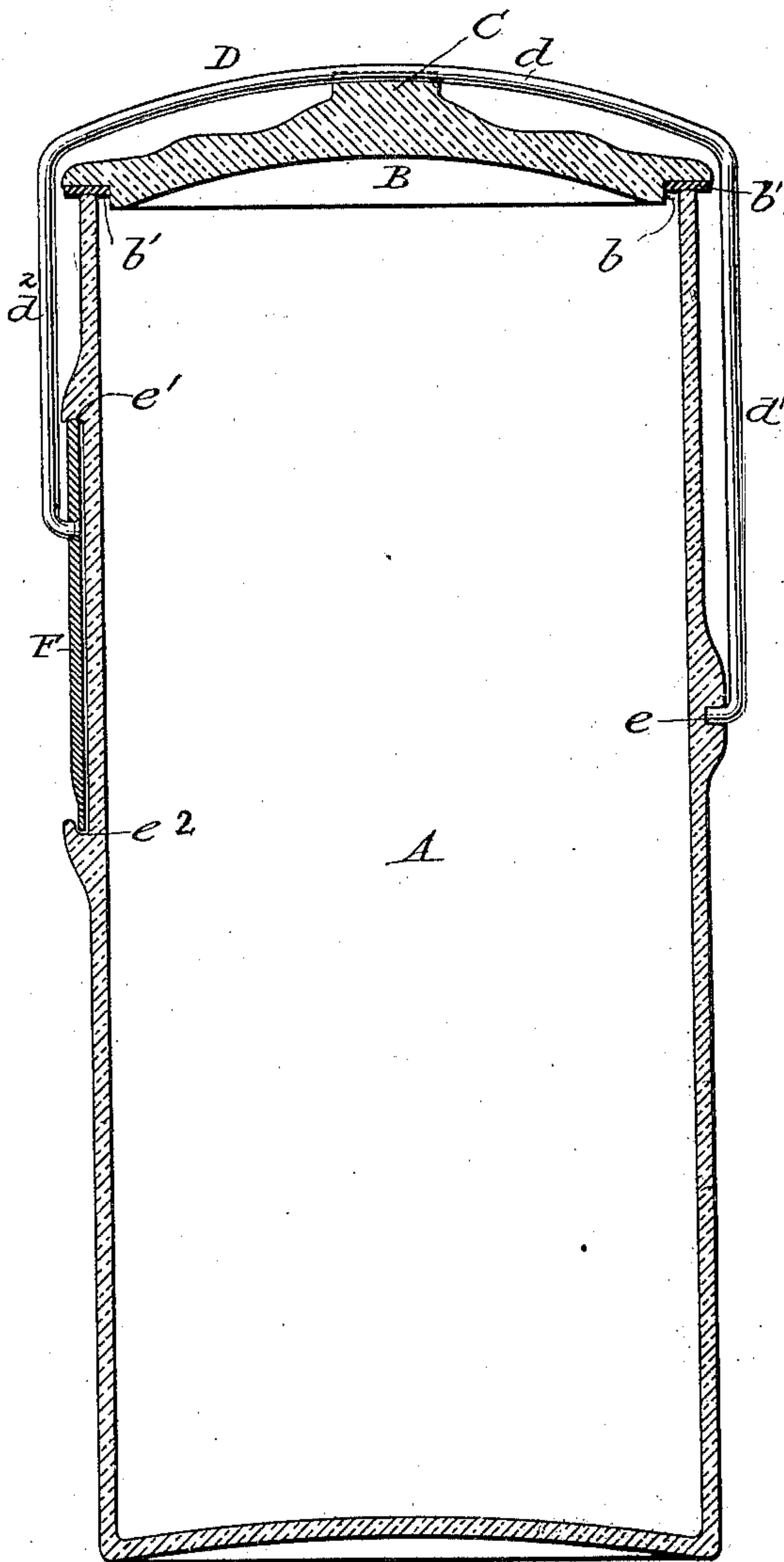
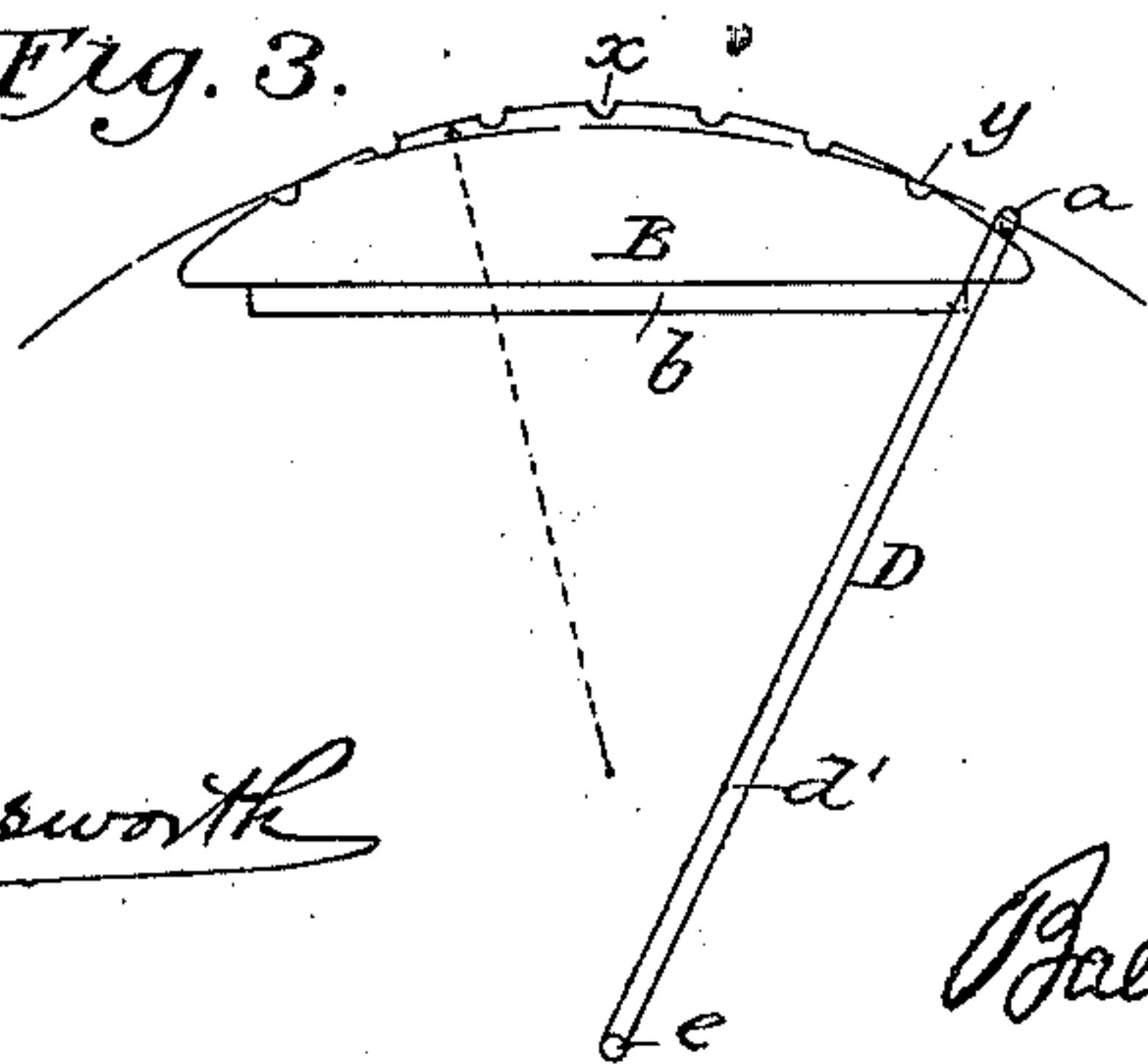


Fig. 3.



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UNITED STATES PATENT OFFICE.

SPENCER B. HOPKINS, OF PROVIDENCE, RHODE ISLAND.

MEANS FOR FASTENING COVERS TO JARS.

SPECIFICATION forming part of Letters Patent No. 688,733, dated December 10, 1901.

Application filed April 19, 1901. Serial No. 56,585. (No model.)

To all whom it may concern:

Be it known that I, SPENCER B. HOPKINS, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Means for Fastening Covers to Jars, of which the following is a specification.

My invention particularly relates to means for fastening covers to jars of the kind that are used for packing or storing fruit, preserves, meats, vegetables, &c.; and the object of my invention is to provide fastening devices which while being simple in construction are efficient in operation.

In carrying out my invention I provide a cover having a rib extending across its upper surface and a bail which is pivotally connected with the jar and engages the rib. The bail is provided with means for tightening it, so as to firmly hold the cover in place on the jar, and the rib is so formed that different degrees of strain may be placed on the cover when desired.

Preferably I apply my improvements to a jar which is of uniform diameter from top to bottom, so as to provide a receptacle which can be readily filled and emptied and also thoroughly cleaned, and the cover is preferably formed with an annular recess around its edge to receive a rubber gasket or packing-ring adapted to fit on the upper edge of the jar. The bail consists of a horizontal cross-piece adapted to engage the rib on the cover and two downwardly-projecting arms of different lengths, the longer arm being pivoted in a seat or socket or connected to a projection formed on one side of the jar, while the shorter arm is pivotally connected with a cam-lever which has a bearing in a socket on the opposite side of the jar. The curve of the rib on the top of the cover, with which the bail engages, is struck from a radius somewhat shorter than the radius of the arc described by the bail when not under tension, the effect of which is to enable me to place different degrees of strain or tension on the cover when desired.

Further particulars as to the details of construction and as to the mode of operation of my invention will be hereinafter set forth.

In the accompanying drawings, Figure 1

shows a front elevation of a jar with my improvements applied. Fig. 2 shows a vertical central section of the same, and Fig. 3 is a diagram showing the peculiar form of the rib on the jar-cover.

The jar proper, A, may be of any suitable form; but preferably it is circular in cross-section and is of uniform diameter from top to bottom. This form of jar is more easily filled and emptied than those having a neck or otherwise formed, and it is more easily cleaned.

The cover B is formed with an annular recess *b*, in which is arranged a rubber gasket or other suitable packing-ring *b'*, adapted to bear on the upper edge of the jar; but it is so applied to the cover as to be removable therewith. The cover is provided on its upper surface with a curved rib C, which extends across its center from opposite sides of its periphery. This rib is preferably formed integrally with the cover, and it is provided with a series of notches *c*.

The bail D has a horizontal portion *d*, adapted to engage the rib C, and two downwardly-projecting arms *d'* *d''*, of unequal lengths. The longer arm *d'* is formed with a lug *e*, engaging a seat or socket on the side of the jar, which is preferably made somewhat thicker at this point. The shorter arm *d''* of the bail is pivotally connected with a cam-lever F, which bears in a socket *e'*, formed on the side of the jar. The lever F is preferably provided with an arm *f*, by means of which it may be readily operated, and in order to lock the lever and prevent it from springing outwardly when tension is applied its outer end is made to extend into a guide *e''*, formed on the jar below the socket *e'*.

It will be observed by reference to Fig. 3 that the radius of the arc corresponding with the curved surface of the rib is somewhat shorter than the radius of the arc described by the bail when not under tension. Therefore when the bail is seated in one of the upper notches—for instance, notch *x*—a greater tension is produced on the cover than is produced when the bail is seated in one of the notches, such as *y*, near one end of the rib.

The bail is preferably made of wire which will spring to some extent, and thus exert a pressure on the cover when the lever F is

turned to the position shown in Fig. 1, whether the bail be in one of the notches near the end of the rib or whether it be in one of the notches near the central portion thereof, the greater tension being applied when the bail is in one of the central notches. The object of this arrangement is to enable the jar to be closed so as to cover the contents without hermetically sealing the jar while the jar and its contents are being boiled to expel the air, as it is found desirable to gradually effect the hermetical sealing of the jar, so that a better exclusion of air may be obtained.

By my improvements the cover may be so applied and held at first that it will stay in place, but will permit air to escape, and afterward by moving the bail toward the center of the rib greater pressure may be brought upon the cover, and a final pressure may be then applied and the cover firmly seated and secured in place.

While I prefer to employ a bail having arms of different lengths and a cam-lever of the kind illustrated, my invention is not necessarily limited to the precise form of these parts which is illustrated in the drawings.

It will be observed that the devices which I employ for closing the jar comprise only a few parts, and these are very simple. The jar may be readily molded in such manner as to provide sockets for the bail and lever, and the cover may be readily molded to provide a recess to receive an ordinary rubber gasket, and the rib may also be formed in the process of molding. The wire bail and sheet-metal lever are of simple construction and may be made at trifling cost.

I claim as my invention—

1. The combination of a jar having molded on one of its sides a seat for one end of the

bail, and on its opposite side a socket for a clamping-lever, a cover, a rib on the cover having a curved notched surface, a bail having one end pivoted in the seat on one side of the jar, and a clamping-lever pivoted to the opposite end of the bail and seated in the socket therefor on the jar.

2. The combination of a jar of uniform diameter from top to bottom, and having a seat on its upper edge for the cover, a cover resting on the upper edge of the jar, and having a rib on its upper surface provided with a series of notches arranged in an arc across the rib, a bail pivotally connected with one side of the jar, and a clamping-lever seated in a socket on the jar, and pivotally connected with the opposite end of the bail.

3. The combination of a jar, its cover, a curved rib on the cover provided with a series of notches, a seat on one side of the jar for one end of a bail, a socket formed on the opposite side of the jar which is curved in such manner as to extend in opposite directions across the vertical central plane of the jar, a clamping-lever seated in said socket, and a bail pivoted to the jar and to the lever.

4. The combination of the jar, the cover, the curved notched rib on the cover, the bail, one arm of which is pivoted to the jar, the cam-lever to which the other arm of the bail is pivoted, the socket in the jar for the cam-lever, and the guard on the jar for receiving the end of the lever.

In testimony whereof I have hereunto subscribed my name.

SPENCER B. HOPKINS.

Witnesses:

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