

(No Model.)

F. GUILLEAUME & E. GOLTSTEIN.
JAR LID FASTENER.

No. 501,418.

Patented July 11, 1893.

Fig. 1.

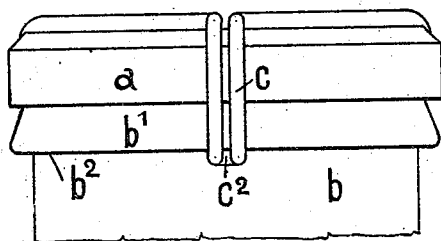


Fig. 2.

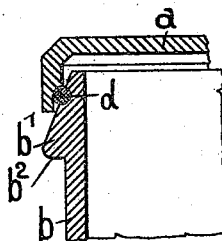


Fig. 3.

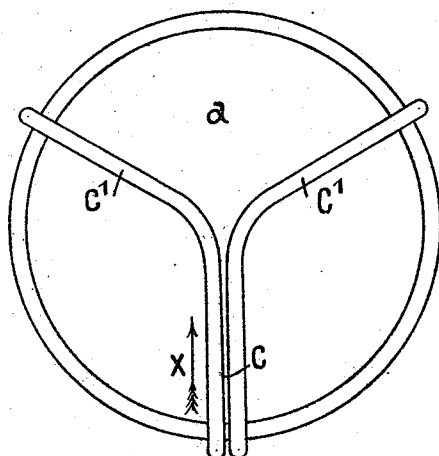


Fig. 4.

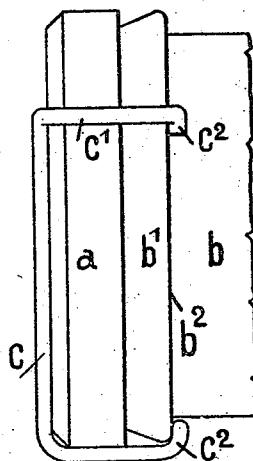


Fig. 5.

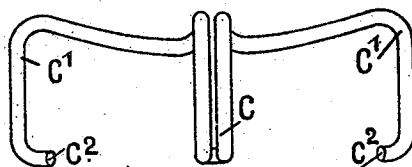


Fig. 6.

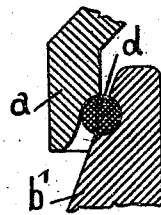


Fig. 7.



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UNITED STATES PATENT OFFICE.

FRANZ GUILLEAUME AND EWALD GOLTSTEIN, OF BONN, GERMANY.

JAR-LID FASTENER.

SPECIFICATION forming part of Letters Patent No. 501,418, dated July 11, 1893.

Application filed May 21, 1892. Serial No. 433,871. (No model.) Patented in Belgium April 30, 1892, No. 99,246; in France August 1, 1892, No. 220,934; in Austria-Hungary August 31, 1892, No. 19,218 and No. 33,901, and in Germany January 30, 1893, No. 66,767.

To all whom it may concern:

Be it known that we, FRANZ GUILLEAUME and EWALD GOLTSTEIN, subjects of the King of Prussia, residing at Bonn, in the Kingdom of Prussia, Germany, have invented a new and useful Improvement in Jar-Lid Fasteners, (for which we have obtained Letters Patent in Germany, No. 66,767, dated January 30, 1893; in Belgium, No. 99,246, dated April 30, 1892; in France, No. 220,934, dated August 1, 1892, and in Austria-Hungary, No. 19,218 and No. 33,901, dated August 31, 1892,) whereof the following is a specification.

Our invention relates to the means for securing the lids of jars, such as are used for keeping preserves. The device which we employ for this purpose consists in a metallic clamp having the form of a star with three or more radii or arms, which are bent downward at their ends and then inward again so as to form hooks. Moreover the clamp is made of such resiliency that two of the arms may be spread apart for allowing the clamp to be slipped over the lid of the jar. Preferably the same is constructed of a single wire bent to the required shape. The jars to which these clamps are to be applied, must be provided below their rim with a peripheral collar or shoulder with which the said hooks may engage. After the lid has been placed on the jar together with an india-rubber tightening-ring, the clamp is sprung over the lid and the top of the jar, so that the hooks catch under the collar or shoulder of the latter. In order that the clamp may exercise a resilient pressure on the lid, its central portion is bent downward in a curve, or the lid is made convex or formed in the center with a projection for the clamp to bear on.

In the annexed drawings, Figure 1 is an elevation of the upper portion of a jar provided with our lid-fastener. Fig. 2 is a vertical section through a portion of the jar and the lid. Fig. 3 is a top-view corresponding to Fig. 1, and Fig. 4 a view from the right hand side of the jar relatively to Fig. 3. Fig. 5 shows the clamp detached from the jar. Fig. 6 represents on a larger scale the joint between the jar and the lid. Fig. 7 is an enlarged view of the joint between the jar and lid, showing the washer deformed as hereinafter specified.

The jar *b* is molded with the conical rim *b'*, forming at its bottom the shoulder *b²* and provided with a groove in which is placed the india-rubber ring *d*, serving to produce a tight joint between the jar and the lid *a*. The clamp *c c'* is made of wire bent to form a star with three arms, whereof the arm *c* consists in a doubled portion of the wire, while the arms *c' c'* consist each in a single part. The ends of the arms are bent downward and then inward so as to form hooks adapted to grasp over the lid *a* and to catch with their tips *c²* under the shoulder *b²*. Toward the middle of the clamp the arms *cc'* are curved downward to press on the lid.

For applying the clamp, the lid is pressed well down upon the jar, so that the hooks on arms *c'* are capable of engaging with the shoulder *b²* when the arms bear on the lid. The clamp is then pushed from the side, *i. e.*, in the direction of arrow *x*, over the lid, the arms *c'* bending apart and then springing together again, until arm *c* touches against the lid, whereupon a pressure in inclined direction puts the hook on arm *c* also in engagement with the shoulder *b²*, the lid being then secured through the pressure of the central portion of the clamp. For removing the clamp, it only requires to be drawn off in the opposite direction.

As shown in Fig. 6 of the drawings the rim is conical and provided with a groove for the reception of the india rubber ring *d*. The flange of the lid is formed with an internal corner or shoulder. The internal face of that part of the flange which we term the extension or lower part, extends below the shoulder or corner, is made perfectly smooth so as to permit of free movement over the washer and the pressure of the shoulder at the proper point. When the cover is placed in position the inclined shoulder or corner, presses against the washer at a point slightly to one side of its center and in this way the washer is deformed and caused to extend both upward and downward beyond the groove in which it is placed, thereby closing the space between the jar and cover and forming a tight joint. The lid or cover being slightly larger in area than the jar, a space is formed between the two when in place which permits of the rubber ring,

when deformed, assuming the position above described. In this arrangement, if the filled jar (the jar being closed by lid and the lid held in position by the clamp or other force) is heated the expansion of the contents will create an internal pressure, which without being very great will slightly lift the lid against the pressure of the clamp or other force used, and will allow steam or gases to escape. If now the jar is cooled and the clamp removed there will be a vacuum in the interior of the jar, and the pressure of the external air will so force down the lid that the washer is totally deformed and forms so tight a joint that the pressure of the air alone is sufficient for securing the lid in place. If now it be desired to remove the lid or cover thus secured in place, it is only necessary to pierce a small hole in the same, so that air may pass into the jar, or again heat the contents of the jar. In this instance if the contents of the jar should become impure or spoiled from fermentation or other causes, an internal pressure is created thereby, which will cause the cover or lid to become loose and easily lifted. Thus the purchaser can thereby at once ascertain whether the contents of the jar are in good condition.

We claim as our invention—

1. The combination with a jar having a

peripheral shoulder, and a lid to said jar, of a lid-fastener consisting in a resilient clamp constructed of a single wire bent into the shape of a star with a plurality of arms, which at their ends form hooks adapted to grasp over the lid and to engage with said shoulder, while toward the middle of the clamp the arms are formed to press on the lid, substantially as described.

2. The combination of the jar having a conical shaped rim, grooved for the reception of a washer and a shoulder b^2 , with a lid or cover, the flange of which is provided with an internal corner or shoulder and an extension or lower part having its surface that comes next to the washer made perfectly smooth, whereby the internal shoulder or corner is permitted to press against the washer to deform the same both above and below said groove substantially as and for the purposes set forth.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

FRANZ GUILLEAUME.
EWALD GOLTSTEIN.

Witnesses:

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