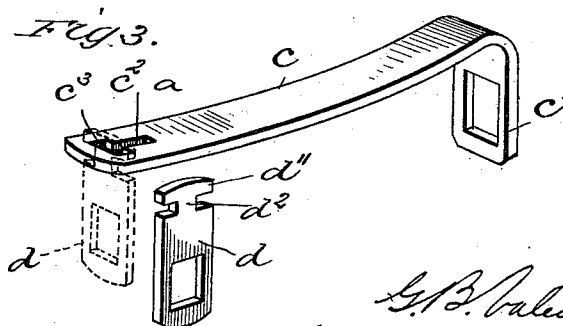
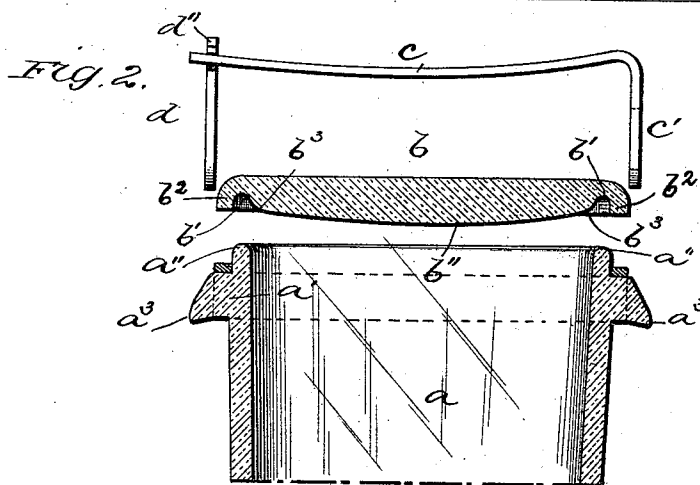
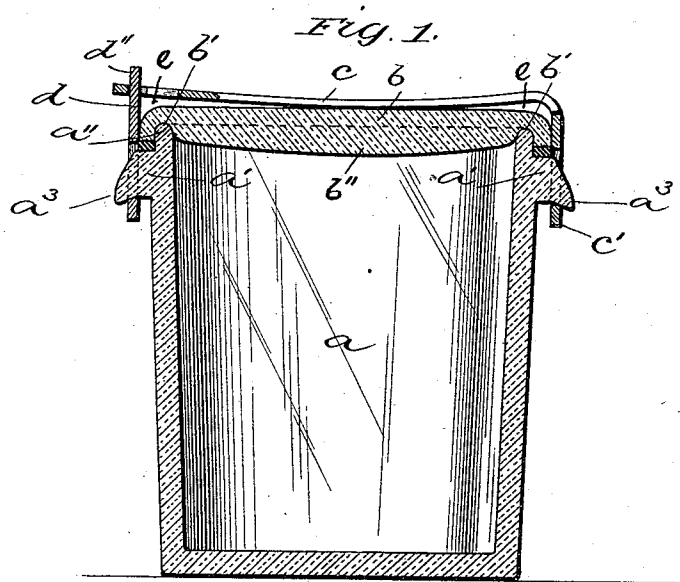


(No Model.)

G. B. VALENTINE.
JAR FASTENER.

No. 471,917.

Patented Mar. 29, 1892.



Witnesses
W. R. Davis,
O. J. Bureau.

Inventor,
G. B. Valentine
By his Attorneys
Alexander Davis

UNITED STATES PATENT OFFICE.

GORDON B. VALENTINE, OF CHICAGO, ILLINOIS.

JAR-FASTENER.

SPECIFICATION forming part of Letters Patent No. 471,917, dated March 29, 1892.

Application filed December 4, 1891. Serial No. 414,018. (No model.)

To all whom it may concern:

Be it known that I, GORDON B. VALENTINE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Jar-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 represents a vertical sectional view of my improved jar and cover, Fig. 2, a similar view of the parts separated; and Fig. 3 a detail perspective view of the fastening devices.

This invention relates to certain improvements upon jars and other vessels used to preserve fruits, jellies, condensed milk, and various other articles which require for their preservation in prime condition that all air be excluded from the inclosing vessel; and it consists of certain novel features of construction, which fully hereinafter appear, and are particularly pointed out in the claim appended.

In the drawings annexed, the letter *a* designates the jar or other vessel, which is provided with a strong integral annular rib or flange *a'* on its exterior near its upper rounded edge *a''*, this flange being provided with a pair of diametrically-opposite outwardly-projecting integral lugs *a³*. The cover *b* is constructed to fit snugly upon this vessel, an annular groove *b'* being formed in its lower surface near its edge for the reception of the upper edge *a''* of the jar, the groove being preferably rounded to fit the edge of the vessel snugly. The outer edge of the cover extends down on the outside of the vessel, forming a flange *b³*, between which and the upper surface of flange *a'* is clamped the rubber packing-ring. The under side of the cover—that is, that portion inclosed within the annular groove *b'*—is thickened, as at *b''*, in order that when placed upon the vessel it will project into the same a short distance—say one-eighth of an inch. This projection has its surface preferably convexed and its edge *b³* rounded, although this edge and surface may be respectively square and flat without departing from the scope of this invention.

The fastening device for removably securing the cover consists, preferably, of a flat

spring-steel bar *c*, which is long enough to extend diametrically across the cover and which has one of its ends bent or turned downwardly to form a rigid loop *c'*, said loop being adapted to embrace one of the lugs *a³* on the vessel. This spring is curved or bowed substantially throughout its length and its convex side bears upon the cover. The other end of the spring has removably connected to it the other loop *d*, which is adapted to engage the opposite lug *a³*, the preferred method of connecting this loop thereto being shown. In this preferred construction the spring is provided with a central longitudinal slot *c²* near its end, this slot being in length substantially equal or a little less than the width of the upper end of the loop *d*. The slot *c²* has its outer end enlarged transversely, as at *c³*. The loop has a head *d''* connected to its upper end by a narrow neck *d²*. This loop is connected to the spring by passing its head lengthwise up through the slot *c²* and then sliding it outwardly until its neck is in the opening *c³*, when it is locked in the slot by turning it a quarter of a revolution in either direction, as shown in Fig. 3.

This new manner of constructing the vessel and the fastening devices has a number of important advantages. The fastening device is extremely simple and durable, and its parts may be easily and cheaply constructed by means of dies and readily attached together. The parts may be stamped out very rapidly and in large quantities and are so made as to readily fit together without filing or other finishing operations, thereby reducing the cost of production to a minimum.

The spring-bar, when fastened, is not flattened out entirely across the cover, but its central portion only bears upon the cover, spaces *e* being left between the end portions of the spring and the cover. This construction is particularly advantageous in cases when the fruits or other articles are first placed in the jar with suitable sirups and then cooked in a steam chest or boiler while the cover is secured by the fasteners. This construction permits the cover to raise automatically (in the manner of a safety-valve) and allow the steam generated within the vessel during the process of cooking to force the cover up against the action of the spring far

enough to let the steam readily escape. The pressure of the spring closes the cover down tightly again and securely holds it in place. This provision for the escape of the steam prevents the ears a^3 from being broken off by the outward pressure upon the cover and also avoids other injury to the vessel, as is evident. This spring-bar is also advantageous in that the full force of the spring is utilized and caused to exert itself upon the center of the cover, so that the pressure upon the packing will be uniform on all sides.

The special advantage of the form of the cover shown and described is that all air is expelled from the vessel during the closing operation and the material inclosed is prevented from coming into contact with the rubber packing-ring. The vessel is filled to within a short distance of its upper edge, and then the cover is placed on it and fastened down. The rounded extension of the body b'' of the cover entering the vessel expels the inclosed air over the edge of the vessel, the rounded edges b^3 facilitating the escape of the air. In this way the air may be entirely excluded from the vessel by the simple act of fastening on the cover.

The packing-ring is prevented from contact with the material by the flange or edge a'' projecting up into the groove in the cover, whereby the substance contained in the vessel is prevented from becoming tainted by disintegrating the packing-ring.

Besides the advantages enumerated this device is very compact, and therefore specially adapted for packing and shipping.

I claim nothing in this application embraced and covered by an application filed by me on the 24th day of August, 1891, and serially numbered 403,592.

The spaces under the ends of the spring—that is, the spaces left between the ends of the spring and the cover formed by bowing the same—are also advantageous in that they permit the ends of the spring to be depressed in removing the loops from the lugs, thereby avoiding the danger of breaking the lugs.

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

The combination of a jar provided with a pair of oppositely-projecting lugs and a cover and a spring fastening-bar bearing on the cover and carrying depending loops at its ends adapted to engage over the lugs on the jar, one of said loops being removably attached to the bar by a T-head formed on its upper end engaging in a T-slot in the bar, as and for the purposes described.

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

GORDON B. VALENTINE.

Witnesses:

E. G. FISH,
A. T. HOTALING.