

(No Model.)

J. P. LYON.
JAR.

No. 603,911.

Patented May 10, 1898.

Fig. 1,

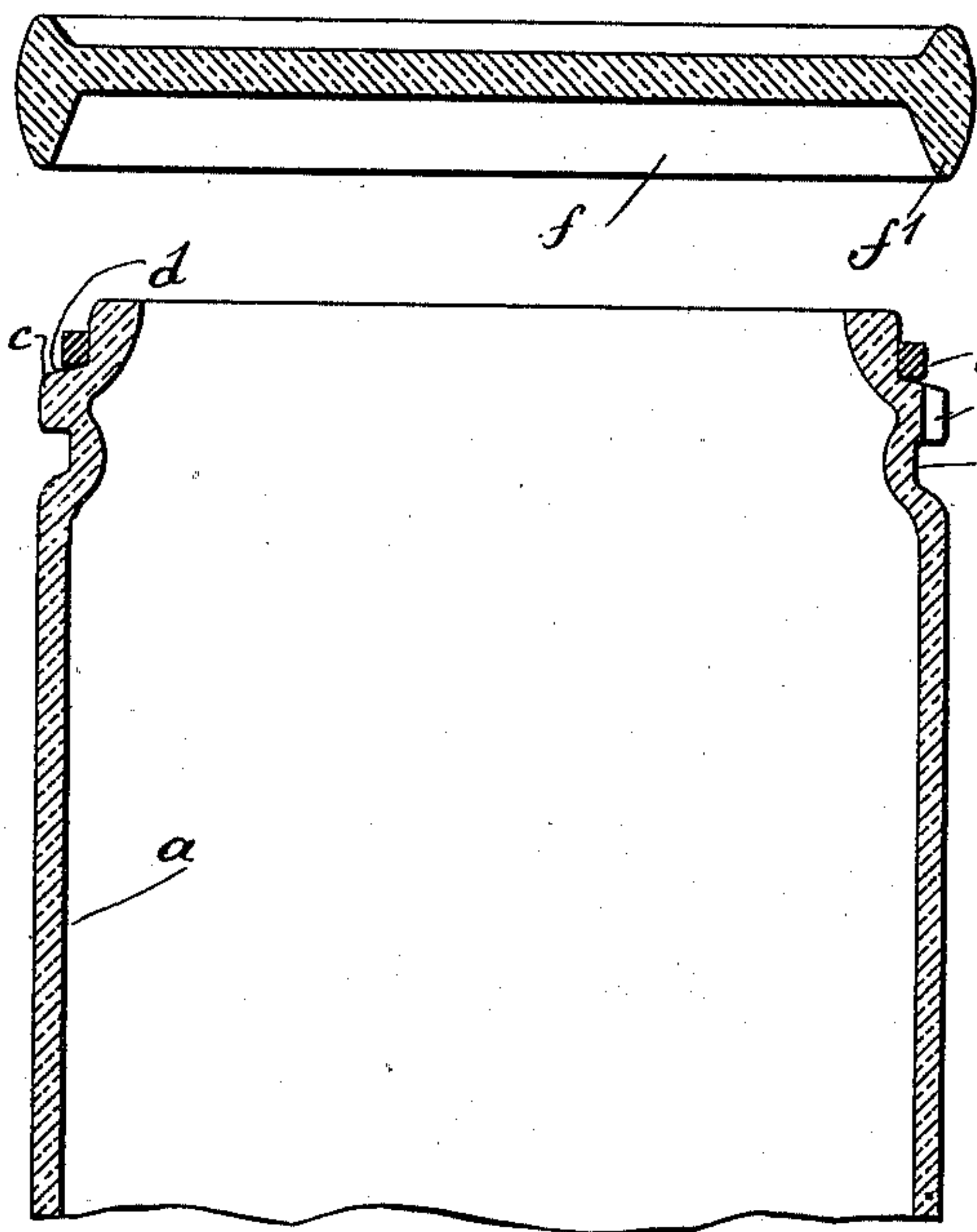


Fig. 2,

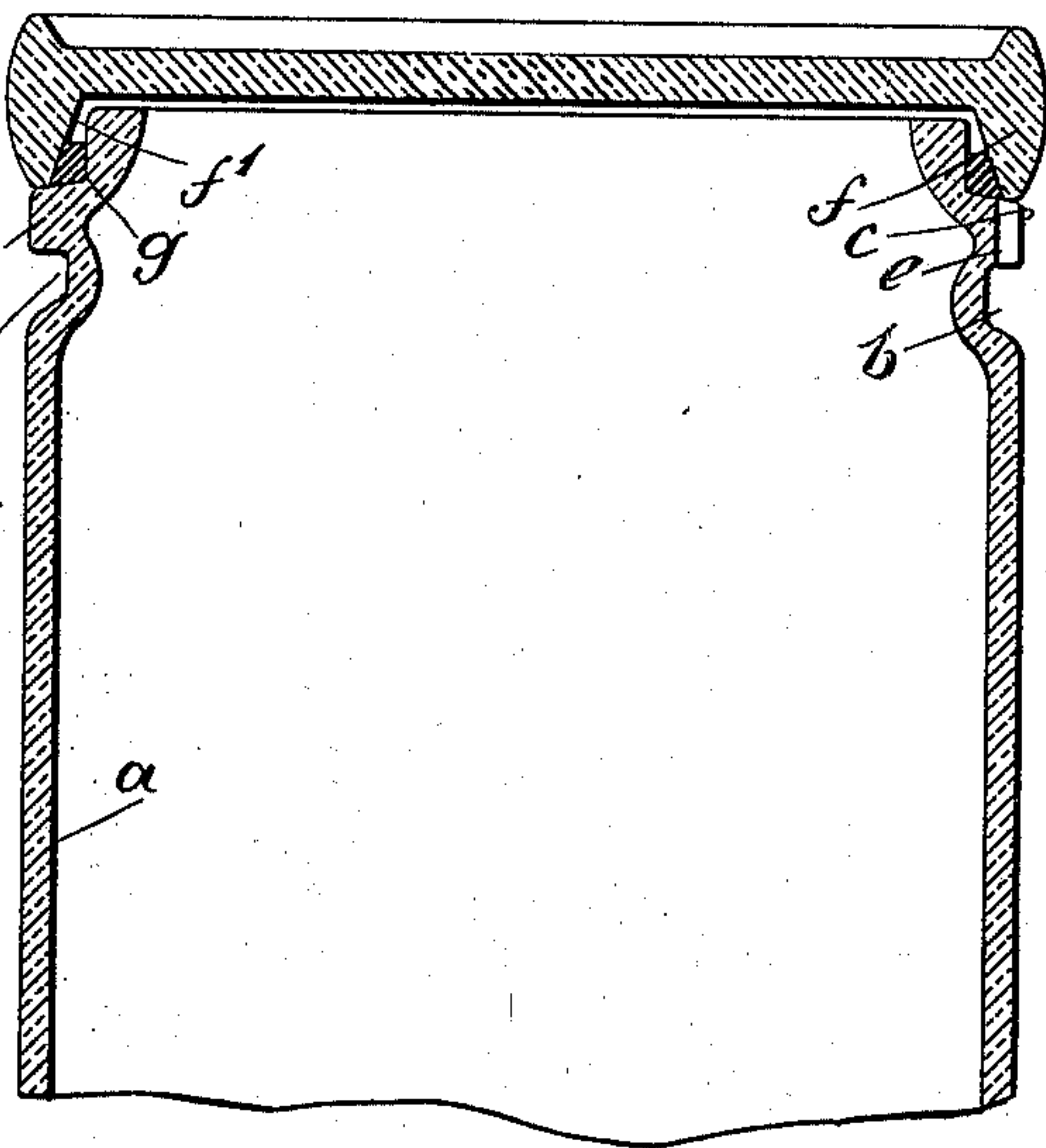


Fig. 3,

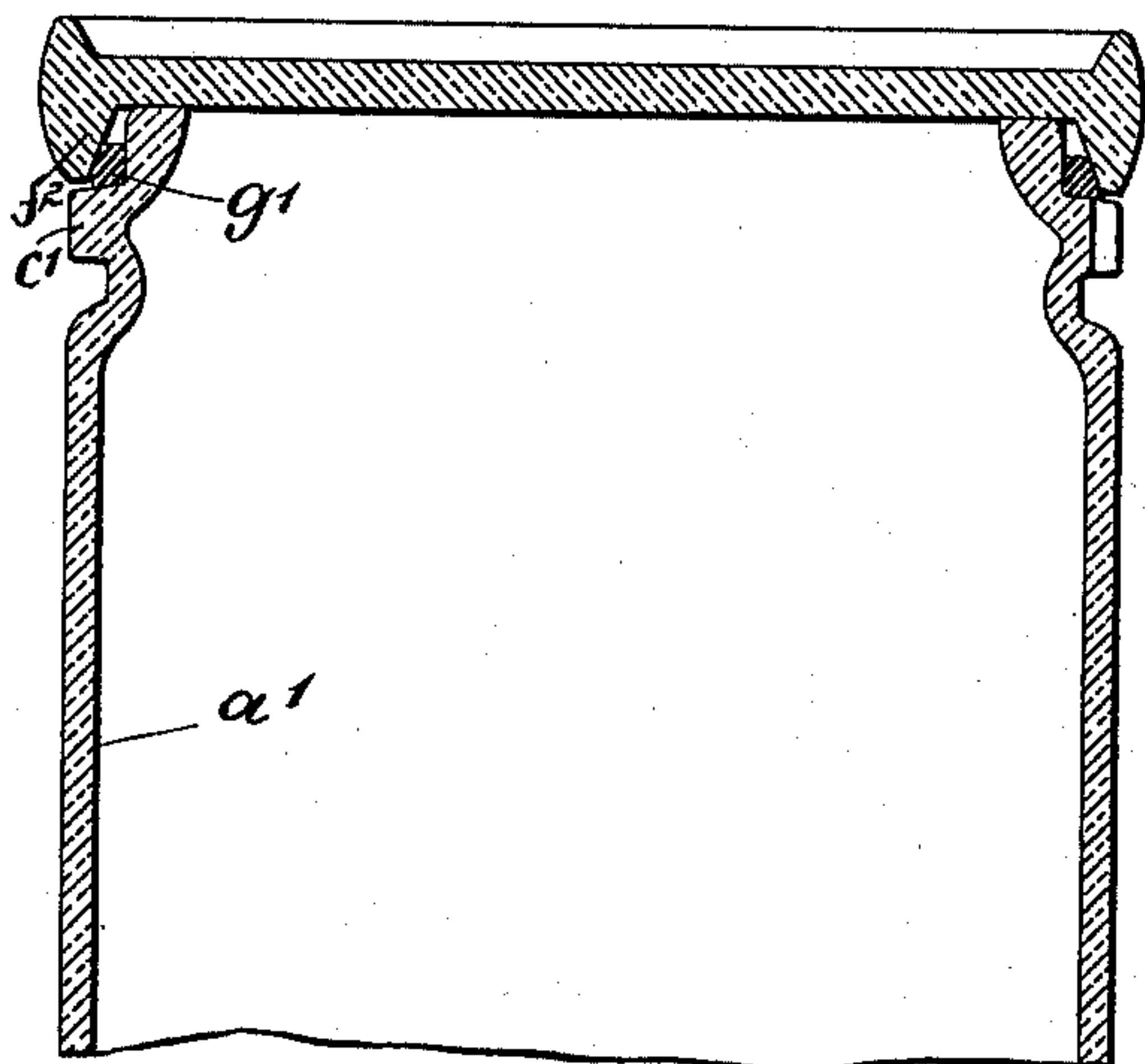


Fig. 4,

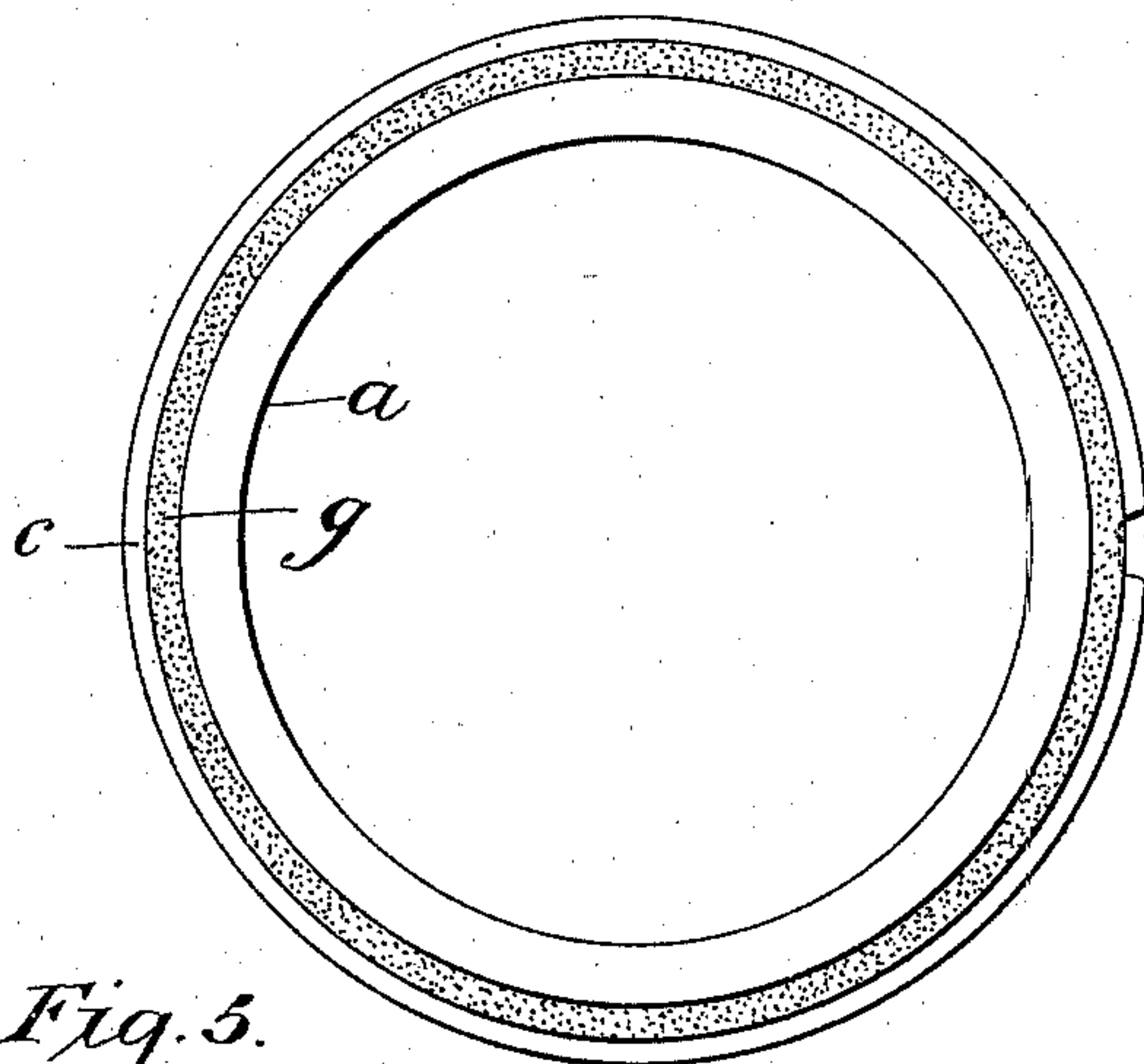
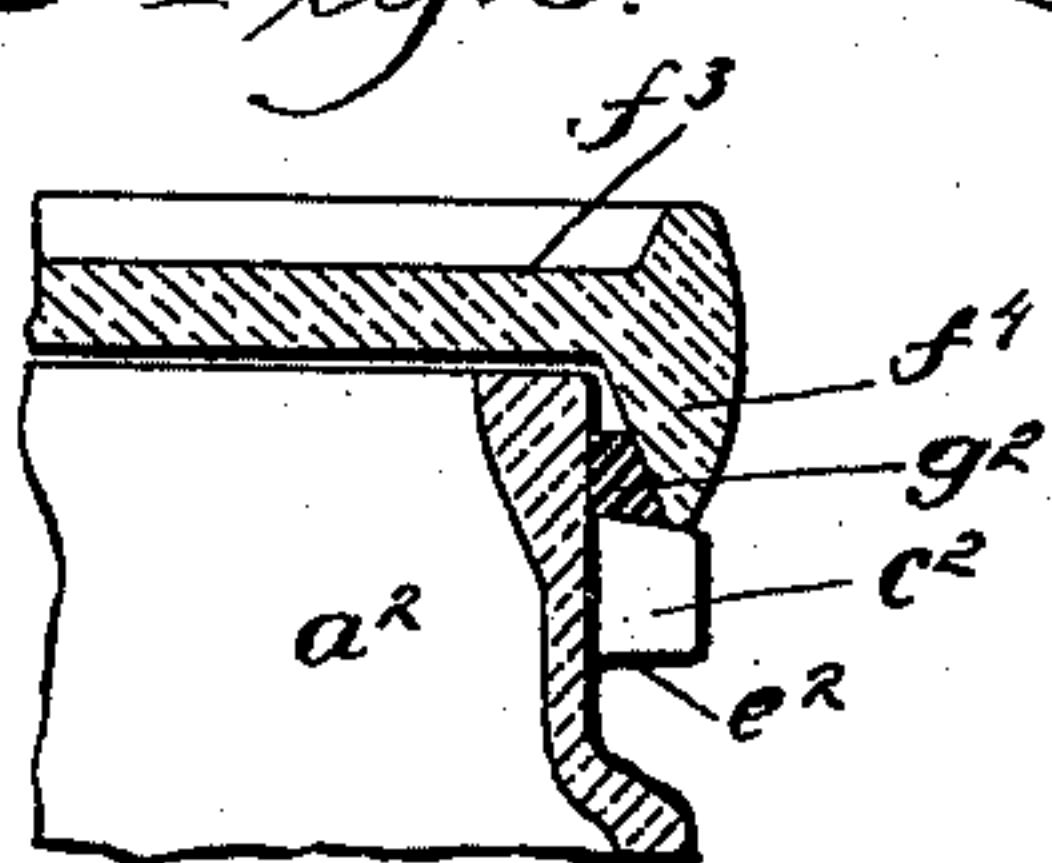


Fig. 5,



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JULIAN P. LYON, OF DETROIT, MICHIGAN.

JAR.

SPECIFICATION forming part of Letters Patent No. 603,911, dated May 10, 1898.

Application filed September 20, 1897. Serial No. 652,303. (No model.)

To all whom it may concern:

Be it known that I, JULIAN P. LYON, of Detroit, in the county of Wayne and State of Michigan, have invented a new and Improved Jar, of which the following is a full, clear, and exact description.

This invention is an improvement in that class of jars in which the cap or closure is held securely by atmospheric pressure and without the use of a fastening device, the invention having such peculiar construction that the cap may be readily displaced without injuring the gasket and without the liability of chipping the material of which the jar is composed and the invention also having such peculiar construction that the gases may be automatically and more effectively exhausted during the process of preserving the contents of the jar.

This specification is the disclosure of several forms of my invention, while the claims define the actual scope of the invention.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional view of my invention, showing the cap raised above the jar. Fig. 2 is a sectional view showing the cap in place. Fig. 3 is a sectional view with the cap in place and illustrating a slightly-different construction. Fig. 4 is a plan view of the invention, and Fig. 5 is a detail section of a second variation of the invention.

The form of the invention shown in Figs. 1 and 2 has a jar the body *a* of which may have any desired form and the upper portion or mouth of which has an annular groove *b* extending around it. Above the groove *b* is an annular rib *c*, forming an upper horizontal shoulder *d* and having a recess *e* therein, which leads from the groove *b* to the space above the rib *c*.

The cap is shaped to fit the mouth of the jar and is provided with a downwardly-extending flange *f*, the inner wall *f'* of which is inclined outwardly and downwardly, so as to embrace the mouth of the jar above the rib *c* and so that the lower edge of the flange *f* will lie in engagement with the top of the rib *c* near the outer edge thereof.

The gasket *g* is seated on the rib *c* and en-

circles the mouth of the jar. The cap when in position bears down upon the rib *c*, and the inclined wall *f'* of the flange *f* engages the outer side of the gasket and crowds the gasket inward. The perpendicular outer wall of the mouth of the jar and the inclined wall *f'* of the flange *f* on the cap form when the cap is in place an upwardly-tapering space, into which the gasket *g* is forced by an atmospheric pressure when a vacuum or partial vacuum exists within the jar. Consequently as soon as the air within the jar is rarefied inward pressure on the gasket is exerted and the gasket is crowded firmly into the tapering space referred to, so as to effect a hermetic sealing of the jar. Simultaneously with this action the cap is crowded down on the jar in a manner to oppose the upward movement of the gasket. In such a position the parts remain until the vacuum within the jar is broken. This is effected by pushing a knife, pin, or other slender instrument upward through the recess *e* and between the wall *f'* of the flange *f* and the outer side of the gasket *g* or between the jar and the inner wall of the gasket. The instant that air passes through the orifice thus formed the pressure on the gasket and cap is relieved and the cap may be readily lifted from the jar.

The form of the invention shown in Fig. 3 differs in no essential feature from that above described. The only difference is that the construction shown in Figs. 1 and 2 is such as causes the lower edge of the flange *f* to bear in actual contact against the rib *c*, while that shown in Fig. 3 causes the upper edge of the jar to bear against the under side of the cap and prevents a contact between the rib *c'* and the flange *f*². The same tapering space is formed between the mouth of the jar *a'* and the flange *f*², so that the gasket *g'* is forced into the space and the sealing of the jar effected. Fig. 4, being a plan view of the jar, shows a construction adapted to either form of the invention. Consequently either form of the cap may be used on the jar. The especial advantage of the form shown in Fig. 3 is that by the contact between the mouth of the jar and the under face of the cap it is impossible for the contents of the jar to contact with the rubber gasket and thus incur the possibility of disflavor from the gasket.

In preserving fruits and vegetables the material is placed within the jar and the cap placed over the mouth thereof and secured by a temporary fastener. As the contents of the jar become heated the excess of pressure therein causes the cap to be raised, and the steam and hot air are discharged beneath the cap. This process goes on until the food is properly treated, whereupon there will be a partial vacuum within the jar, and upon lowering the temperature of the jar the atmospheric pressure will force the cap firmly down on the jar and seal the same, as described above. The temporary fastener may then be removed, to be used again. The peculiar construction of my invention makes this operation efficient and certain. The cap is lifted slightly, and the resilient character of the gasket permits the gasket to be crowded sidewise, so that the hot air and steam may escape. In order to still further facilitate the escape of the hot air and steam and the consequent relaxation of pressure within the jar, I provide the construction shown in Fig. 5, wherein the jar a^2 has a rib c^2 formed thereon. The rib c^2 has an opening e^2 , which extends entirely through the rib to the side of the jar, contradistinguished from extending partly into the rib, as in Figs. 1, 2, 3, and 4. The cap f^3 , with its flange f^4 , bears down upon the jar, as in the other forms of the invention, and the gasket g^2 is caused to operate in a manner the same as before described, excepting that the pressure within the jar tends to force the steam and hot air out of the jar, whereupon the rubber gasket is flexed down into the recess e^2 , thus forming a comparatively open space, through which the air and steam may pass. When the pressure is relaxed, the resiliency of the gasket causes it to return to its normal position, in which position the gasket will act to close the mouth of the jar. This forms, essentially, an automatic valve that acts to open and close automatically and at the proper times. The operation described with reference to the recess e^2 also takes place with reference to the recesses in the other forms of the invention, but the operation is not so effective or marked.

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

1. A jar having its outer wall adjacent to the mouth disposed perpendicularly and having an annular rib run around its outer side at the base of said perpendicular wall, and the rib having a recess at one point, the recess extending into the rib toward said perpendicular wall, and a cap having a web or main portion extending over the mouth of the jar to close the same, the cap having at its edges a downwardly-projected flange extending into proximity to the outer portion of the rib on the jar, and the inner side wall of the flange being disposed diagonally downward and outward, said wall extending from the upper edge of the perpendicular wall of the jar downward to the outer portion of the upper face of the rib, and beyond the inner wall of the recess in said rib, the space between the said perpendicular wall of the jar and the inner wall of the flange serving to accommodate a gasket.

2. A jar having its outer wall adjacent to the mouth disposed perpendicularly, the jar also having an annular rib running around said perpendicular wall and projecting out therefrom, the rib having a recess therein which extends inward to the perpendicular wall so as to completely cut away the rib at the point of the recess, and a cap having a web or main portion extending over the mouth of the jar to close the same, and a cap having at its edges a downwardly-extending flange running into proximity with the outer portion of the rib, and the flange having its inner side wall disposed diagonally and extending from the upper edge of the said perpendicular wall of the jar downward and outward to the outer portion of the upper face of the rib, the space between the said perpendicular wall of the jar and the inner wall of the flange serving to accommodate a gasket.

JULIAN P. LYON.

Witnesses:

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