T. L. TALIAFERRO.

HERMETIC FRICTION CLOSURE FOR JARS.

APPLICATION FILED JULY 8, 1920.

1,386,742. Patented Aug. 9, 1921.

FIG. 1.

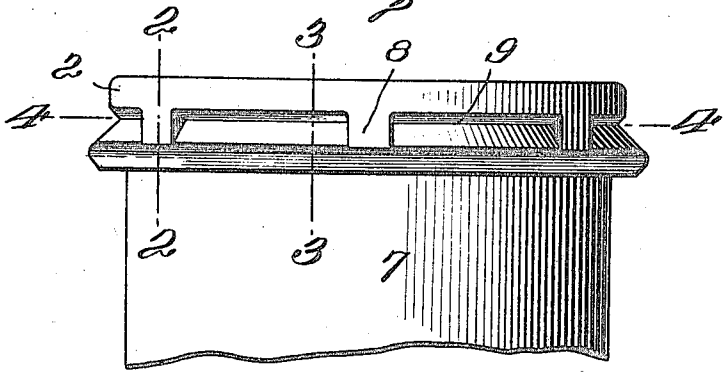


FIG. 2.

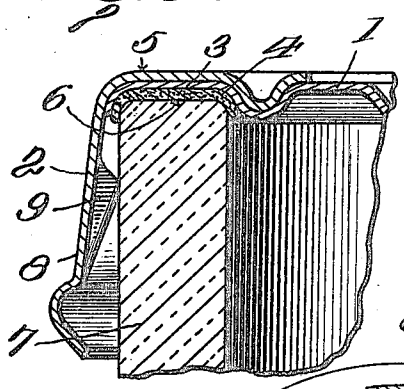
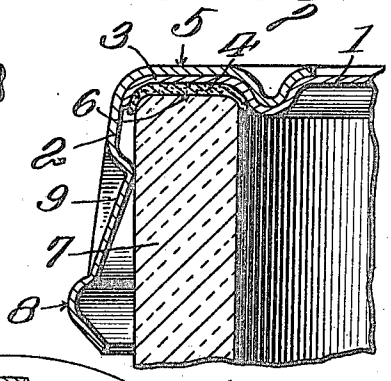


FIG. 3.



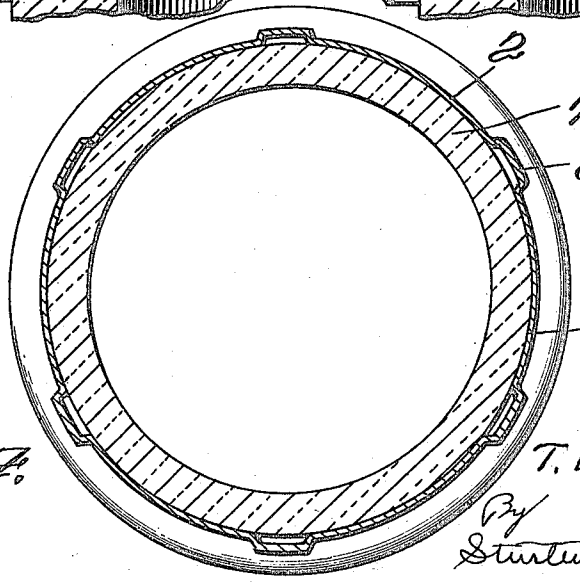


FIG. 4.

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HERMETIC FRICTION-CLOSURE FOR JARS.

1,386,742. Specification of Letters Patent. Patented Aug. 9, 1921.

Application filed July 8, 1920. Serial No. 394,632.

To all whom it may concern:

Be it known that I, THOMAS L. TALIAFERRO, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Hermetic Friction-Closures for Jars, of which the following is a description, reference being had to the accompanying drawing and to the figures of reference marked thereon.

The invention relates to new and useful improvements in hermetic closures for containers, and more particularly to a closure for a jar having an outer smooth vertical wall.

An object of the invention is to provide a friction closure wherein a sealing disk is held on the jar by a friction band so formed as to permit said disk to seat on the jar by vacuum pull independently of the pressure of the friction band.

A further object of the invention is to provide a closure having means for frictionally gripping the outer smooth wall of the jar for clamping the sealing material forming the gasket against the upper edge of the jar, which frictional gripping means is so constructed and arranged that any distortion thereof, due to the out-of-round contour of the mouth of the jar will not relieve the sealing material from pressure at any point, thereby causing a leak.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings which show by way of illustration one embodiment of the invention:—

Figure 1 is a side view showing a portion of a jar with my improved closure applied thereto;

Fig. 2 is an enlarged sectional view on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged sectional view on the line 3—3 of Fig. 1, and

Fig. 4 is a sectional view on the line 4—4 of Fig. 1.

Prior to the present invention, it has been a common expedient to provide a hermetic closure for jars, wherein a gasket is drawn tightly into contact with the upper edge of the jar. This has been accomplished by means of projections or flanges which engage beneath threaded portions or shoulders formed on the outer wall of the jar. It has also been a common practice to provide a cover which has been held on the jar through the frictional contact of the metal of the cover with the outer smooth wall of the jar. These covers are made in one piece, and so far as I am aware, a gasket has not and cannot be efficiently used in connection with such a character of cover, for the reason that the outer wall of the jar is often considerably out-of-round in contour and this causes a distortion of the flange of the cover which would prevent the sealing material forming the gasket from being held by the cover forced at all points against the edge of the jar, and the result would be a leaky closure. I have found that by making the friction cover in two pieces, and placing the sealing material between one piece and the jar seat and providing the other with the frictional gripping means, that the distortion of the frictional gripping means will not be so conveyed to the portion of the closure pressing against the gasket as to disturb the perfect seal between the gasket and the edge of the mouth of the jar. Furthermore, this independent arrangement of the cover permits said cover to seat by the vacuum pull from the jar.

In the drawings, I have shown one specific embodiment of the invention wherein the closure for the jar consists of a cover portion 1 and a frictional gripping portion 2. This cover portion 1 is in the form of a metal disk which is bent as at 3 to form a seat for the gasket 4. This gasket 4 is preferably a plastic sealing material which is attached to and becomes a permanent part of the cover 1. The frictional holding means for the cover and gasket is preferably in the form of a band having a horizontal portion 5 overlying the cover 1 and serving as a means for clamping the gasket against the upper edge 6 of the jar 7. The band 2 is also provided with a depending flange 8. This flange 8 is provided with inset portions 9 which are not detached from the metal forming the flange, but are bent inwardly so as to provide a gripping shoulder adapted to engage the smooth outer wall of the jar 7. These inset portions are spaced from each other a sufficient distance so as to permit the metal in each portion to bend or re-shape itself independently of the other portion and thereby insure that the gripping surface of the cover will conform to the irregularities of the surface in the contour of the jar. This particular shaping

of the flange to form a gripping means for the side wall of the jar *per se*, is shown, described and claimed in my co-pending application, Serial Number 263,149, filed November 19, 1918, and is only shown and described herein as illustrating one way whereby an efficient frictional gripping contact may be secured between the holding band and the sealing disk for the jar. The outer wall of a jar very often is out-of-round or irregular in contour, and this causes the clamping band to be distorted and the band must be made so as to accommodate itself to these irregularities. This distortion of the band, owing to the out-of-round contour of the mouth of the jar may possibly slightly distort the horizontal portion 5 of the band. This horizontal portion 5 of the band does not, however, bear directly upon the sealing material, but upon the cover 1, and forces this cover against the sealing material, and the sealing material against the upper edge against the mouth of the jar. Therefore, any distortion in the flange 5 so as to produce a slight unevenness in the pressure applied against the cover 1 will not cause a leak. The metal part of the cover will take any unequal pressure caused by the distortion of the band and equally distribute this pressure throughout all points on the sealing material and thereby cause a perfect seal. Furthermore, the cover is free to move toward the jar seat independently of the friction retaining-band and therefore the cover may seat itself through the vacuum pull of the jar.

It is obvious that changes in the shape of the band and the character of the gripping means may be readily varied without departing from the spirit of the invention which consists broadly in a two-part closure, one of which carries the sealing gasket and the other the frictional gripping means which holds the sealing gasket against the mouth of the jar, and these two parts are so constructed and arranged as to secure a uniform pressure on the sealing gasket at all points, and still allowing the gripping means to conform to any irregularities in the shaping of the surface of the outer wall of the jar.

Having thus described the invention, what I claim as new and desire to secure by Letters-Patent, is:—

1. A hermetic closure for a jar having an outer smooth vertical wall, comprising a metal cover having a gasket seat in its lower face directly above the upper edge of the mouth of the jar, a gasket seated therein and adapted to engage the mouth of the jar, a holding band having a horizontal portion overlying the cover for forcing the gasket against the mouth of the jar, and a vertical portion having means for gripping the smooth vertical wall of the jar.

2. A hermetic closure for a jar having an outer smooth vertical wall, comprising a metal cover having a gasket seat in its lower face directly above the upper edge of the mouth of the jar, a gasket seated therein and adapted to engage the mouth of the jar, a holding band having a horizontal portion overlying the cover for forcing the gasket against the mouth of the jar, and a vertical flange having inset portions parallel with the lower edge of the flange for gripping the jar throughout the greater portion of its circular extent, said inset portions being spaced sufficiently to permit the metal in each portion to bend or re-shape itself independently of the other portions.

In testimony whereof, I affix my signature.

THOMAS LUCIEN TALIAFERRO.