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G. M. HUGHES.

TIGHTENING ATTACHMENT FOR JAR CLOSURES

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NO MODEL.

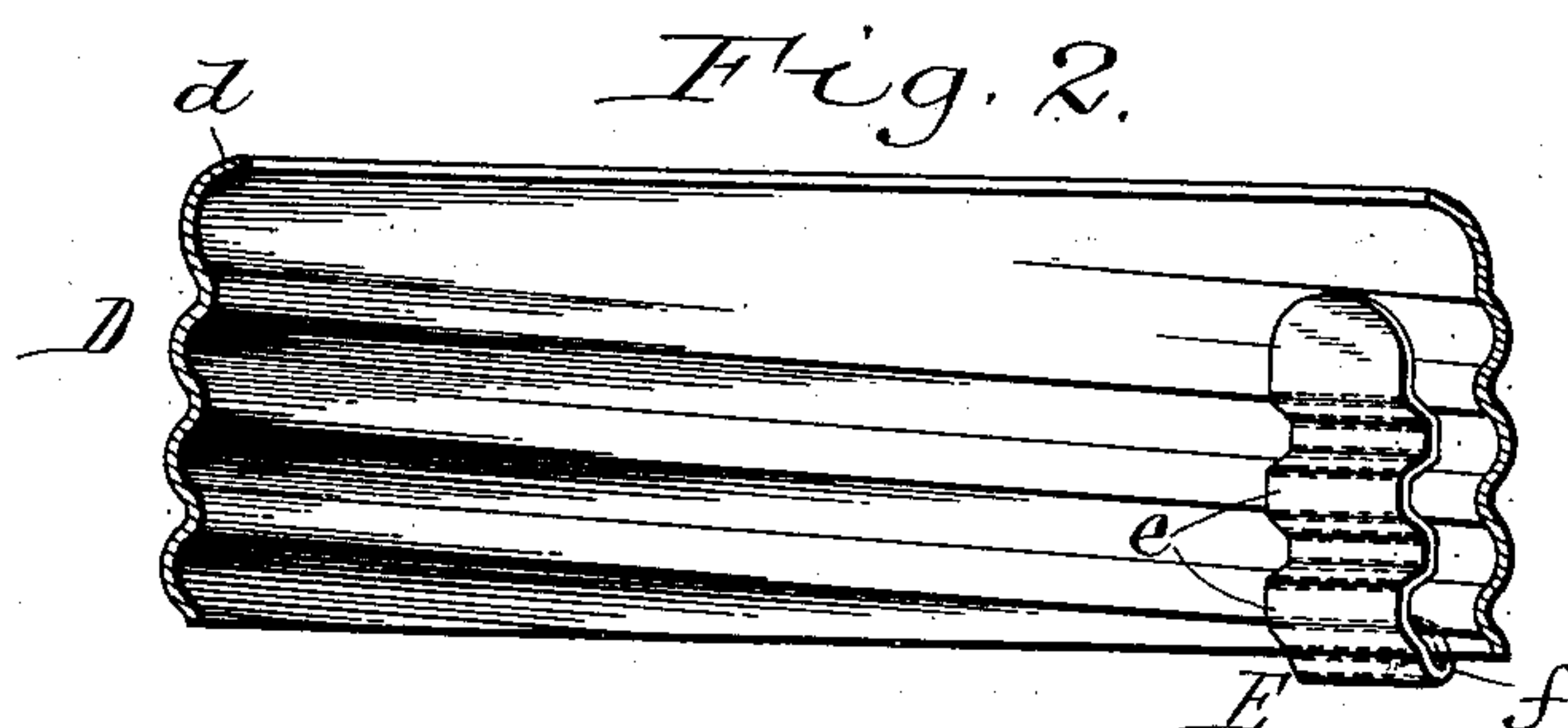
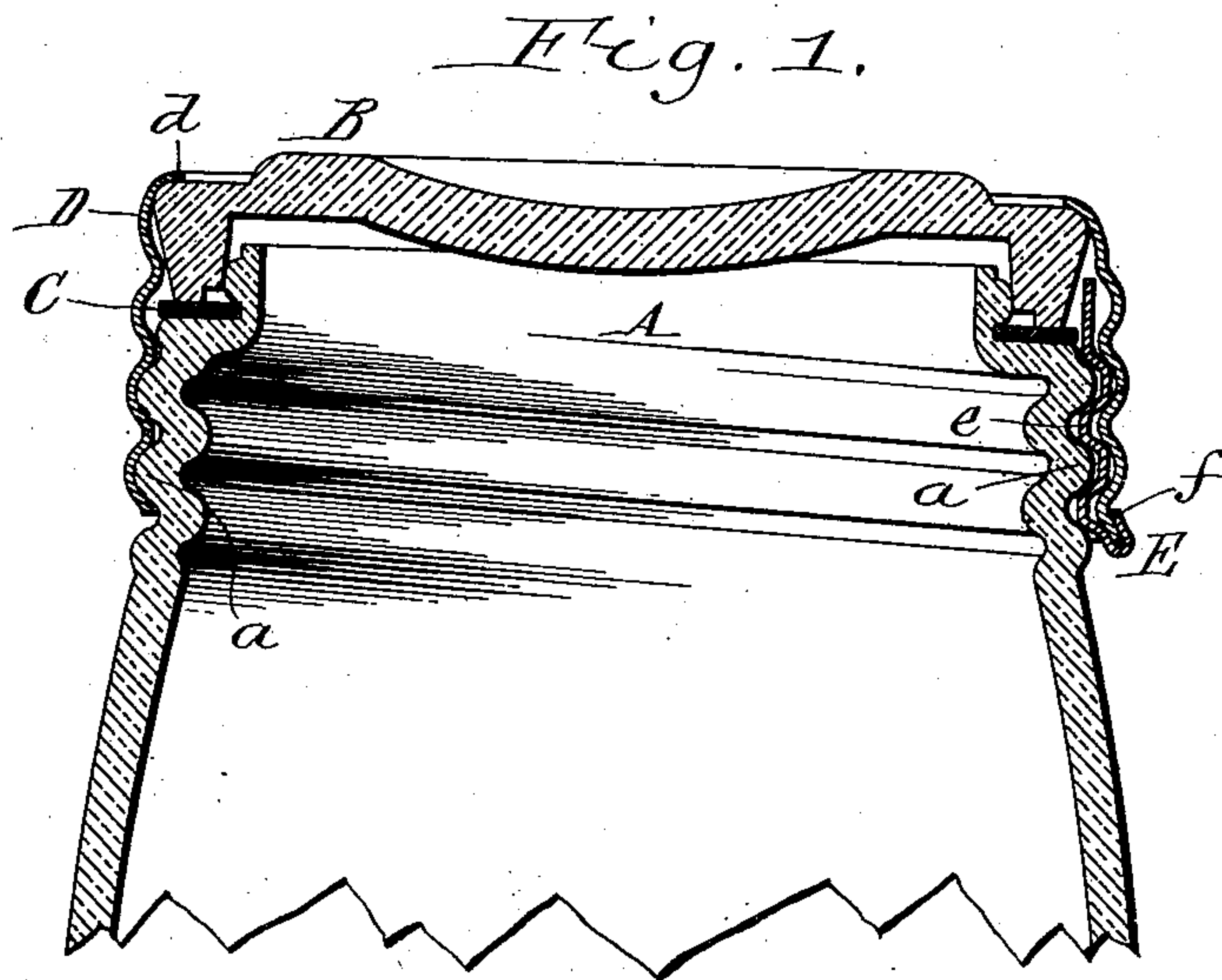
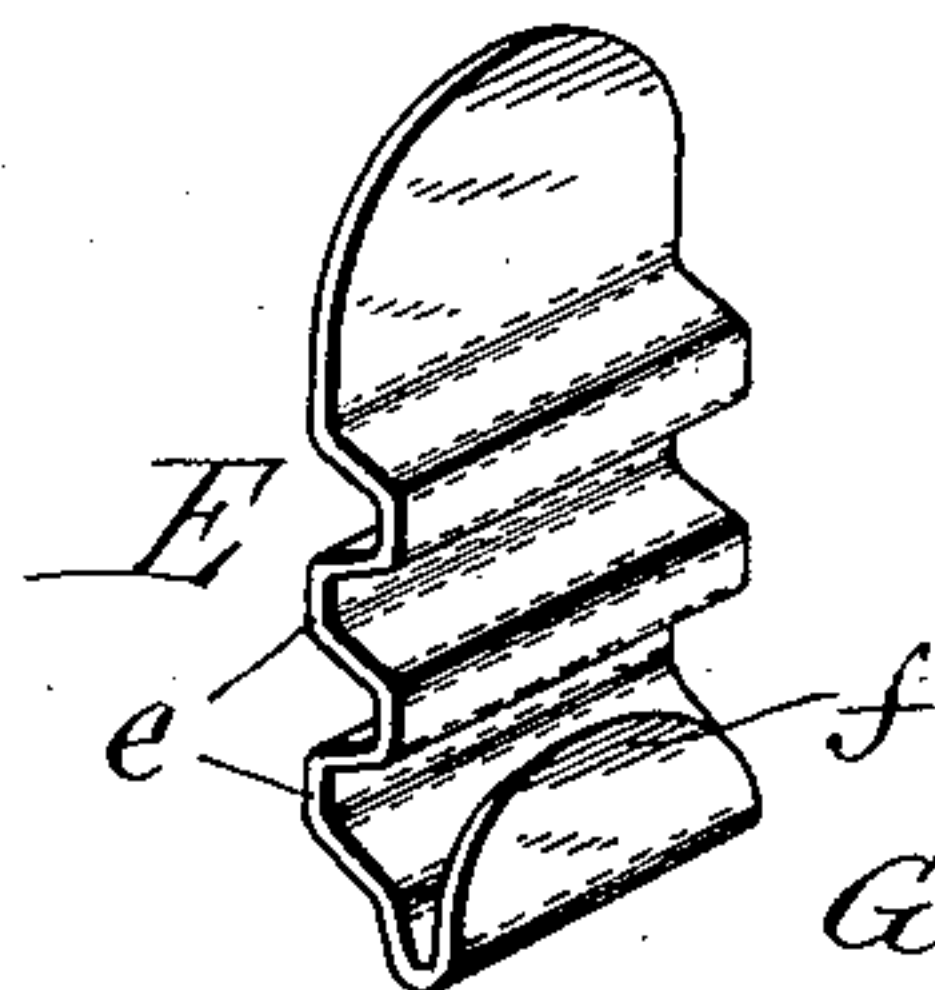


Fig. 3.



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UNITED STATES PATENT OFFICE.

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TIGHTENING ATTACHMENT FOR JAR-CLOSURES.

SPECIFICATION forming part of Letters Patent No. 742,435, dated October 27, 1903.

Application filed August 7, 1903. Serial No. 168,668. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. HUGHES, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Tightening Attachments for Jar-Closures, of which the following is a specification.

In the class of jar-closures in which the cover is secured in place by a sheet-metal screw ring or collar the threads of the ring in time become flattened to such an extent that they do not properly engage the threads of the jar, in which case the threads slip past each other and the ring fails to tighten the cover. The same difficulty is sometimes experienced with new screw-rings, owing to imperfections of their threads. Such rings are usually not sold separate from the jars, and when a ring is defective or becomes unserviceable it is therefore necessary to discard the jar as well as the ring.

The object of my invention is to provide a simple and inexpensive attachment for such defective screw-rings which can be readily applied and which will take up the play between the ring and the neck of the jar and insure the tightening of the cover.

In the accompanying drawings, Figure 1 is a vertical section of the upper portion of a fruit-jar provided with my improved attachment. Fig. 2 is a vertical section of the screw-ring with the attachment applied thereto. Fig. 3 is a perspective view of the attachment.

Similar letters of reference indicate corresponding parts throughout the several views.

A is the neck of the jar, having the customary screw-threads *a*.

B is the cover, C the usual gasket between the cover and the top of the jar, and D the screw-ring, provided at its upper edge with the usual lip *d*, which overlaps the margin of the cover.

E indicates the improved attachment, which consists of a comparatively thin strip or plate, preferably of resilient steel, adapted to be applied to the inner side of the defective screw-ring, so as to take up the play or looseness of the ring. This plate is provided with transverse corrugations *e*, corresponding to the screw-threads of the ring and forming

practically raised continuations of the same. The corrugations are properly spaced to fit the threads of the jar and the ring, and preferably extend straight across the plate E; but, if desired, they may be arranged obliquely to follow the pitch of the screw-threads. At its lower end the plate is provided with suitable means for attaching it to the ring. The preferred device consists of a lip or hook *f*, which snugly embraces the lower edge of the ring and permits the attachment to be slipped laterally on the cap to the desired position.

The corrugated plate compensates for any play or looseness of the screw-ring due to flattening or other imperfections of its screw-threads and causes the ring to properly screw upon the threaded jar and tighten the cover. The corrugations of the plate engage with the jar-threads like the threads of a new or perfectly threaded screw-ring and cause the portions of the ring-threads not covered by the plate to be snugly drawn into engagement with the jar-threads. As the hook of the attachment bears against the straight lower edge of the screw-ring and the corrugations of the same engage the inclined threads of the ring the attachment is tightly clamped or wedged upon the ring upon screwing the latter down on the jar-neck, thereby preventing the attachment from slipping on the ring in tightening the cover. In order to more effectually prevent the plate from slipping on the threads of the jar, the grooves or corrugations of the plate are deeper than the height of said threads, and the sides of the corrugations are somewhat flat-sided or angular, as shown in Fig. 1. This causes the threads of the jar to wedge into the corrugations of the plate and bind against the sides thereof, thereby insuring the tightening of the ring and the cover. The resilience of the steel plate also increases the security of the ring, as its corrugations are compressed between the ring and the jar-neck and by their tendency to expand draw the threads of the ring into close engagement with the threads of the jar.

In applying the attachment to the screw-ring the same is placed against the inner side of the ring, and its hook *f* is engaged over the lower edge of the ring at the starting-point of

its thread, after which the attachment is slipped laterally to a position about two inches from that point.

The cost of producing the attachment is very small, being considerably less than that of a screw-ring, and as the same prolongs the life of the ring and avoids the necessity of replacing the entire jar when its ring becomes defective it is an exceedingly useful device.

I claim as my invention—

1. A tightening attachment for the screw-ring of a jar-closure, consisting of a plate having means for attaching it to the inner side of the screw-ring and transverse corrugations arranged to engage the screw-threads of the jar, substantially as set forth.

2. A tightening attachment for the screw-ring of a jar-closure, consisting of a transversely-corrugated plate adapted to be interposed between the ring and the threaded neck of the jar and provided at one end with a fastening device, substantially as set forth.

3. A tightening attachment for the screw-ring of a jar-closure, consisting of a transversely-corrugated plate adapted to be interposed between the ring and the threaded neck of the jar and provided with a lip or hook adapted to embrace the lower edge of the ring, substantially as set forth.

4. A tightening attachment for the screw-ring of a jar-closure, consisting of a resilient plate adapted to be interposed between the screw-ring and the threaded neck of the jar and having transverse corrugations which are deeper than the height of the threads of the jar-neck and arranged to engage said threads, substantially as set forth.

5. A tightening attachment for the screw-ring of a jar-closure, consisting of a plate provided with flat-sided transverse corrugations which are deeper than the height of the screw-threads of the jar-neck, and means for attaching the plate to the inner side of the screw-ring, substantially as set forth.

6. The combination with a jar or similar vessel having a screw-threaded neck, a cover and a screw-ring engaging said threaded neck and the cover, of a tightening-plate interposed between the threaded jar-neck and the screw-ring and having transverse corrugations arranged to engage the threads of the jar-neck, substantially as set forth.

Witness my hand this 3d day of August, 1903.

GEORGE M. HUGHES.

Witnesses:

CARL F. GEYER,
EMMA M. GRAHAM.