Oct. 9, 1934. L. D. TITUS 1,976,673

METHOD OF ATTACHING A CLOSURE TO A CONTAINER

Filed July 29, 1931

FIG. 1.

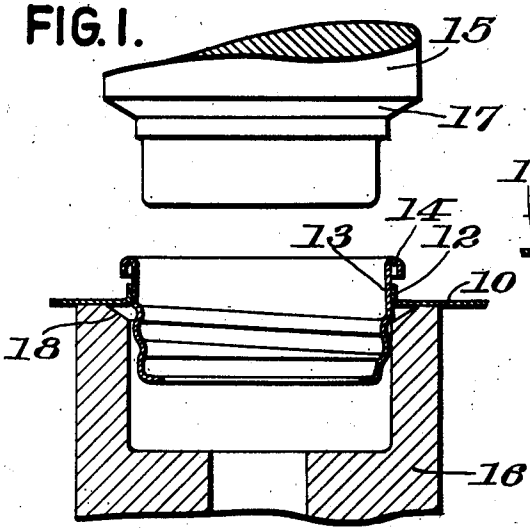


FIG. 2.

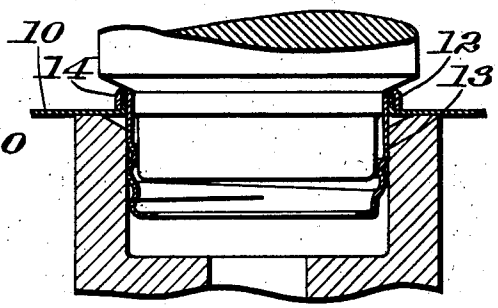


FIG. 3.

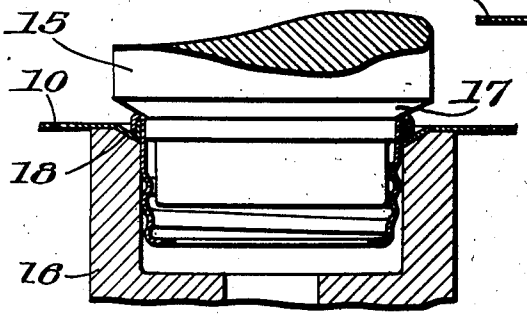


FIG. 4.

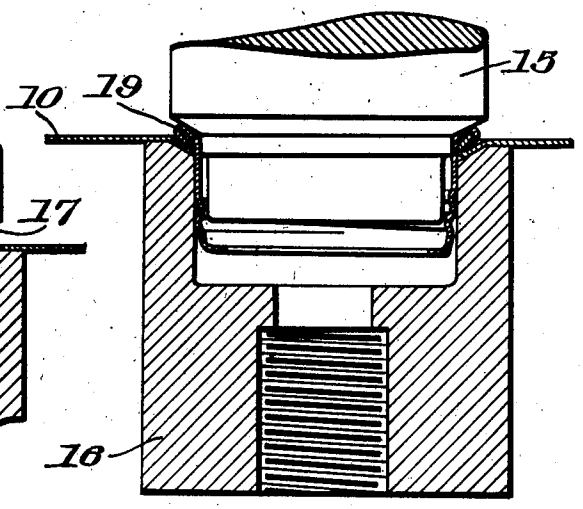
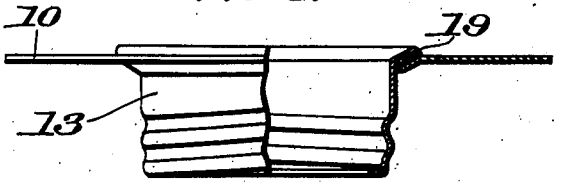


FIG. 5.



LEON D. TITUS
Inventor

By HIS Attorney
R. J. Dearborn

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METHOD OF ATTACHING A CLOSURE TO A CONTAINER

Leon D. Titus, Port Arthur, Tex., assignor to The Texas Company, New York, N. Y., a corporation of Delaware

Application July 29, 1931, Serial No. 553,717

1 Claim. (Cl. 113—121)

This invention relates to closures for containers and has special reference to closure means for metallic receptacles.

An object of the invention is to provide a method of attaching a closure element to a can body which will be simple, efficient and inexpensive. The invention further contemplates a method of crimping into a body member having an opening formed therein, a neck which may be used in conjunction with a spout, cap or plug.

The invention will be better understood in connection with the accompanying drawing wherein:

Fig. 1 is a sectional view showing a body member and a closure element before crimping, and a preferred form of apparatus for carrying out the object of my invention.

Figs. 2, 3, 4, show the successive steps in the crimping operation.

Fig. 5 shows the body member and the closure after crimping.

Referring to the drawing, a body member 10, preferably a can top, may be formed with an opening therein and a peripheral upwardly extending flange 12 may be provided at the opening. A closure element comprising a neck or thimble 13, is provided with an annularly bent peripheral flange 14 adapted to hook over and rest against the flange 12. The neck 13 may be threaded so as to receive a suitable spout, cap or plug, as may be desired.

In carrying out the object of my invention, a movable punch 15 and a stationary die 16, mounted in a suitable press, not shown, may be employed. The punch 15 preferably has a beveled surface at 17, while the die 16 is beveled as at 18.

The neck 13 and the body member 10 may be assembled by hand and then placed in the press as shown in Fig. 1. Fig. 2 shows the neck 13 in position with the flange 14 hooked over and resting against the upstanding flange 12 of the body member 10. As indicated in Fig. 3, the punch 15 may then be advanced toward the die 16, whereby the body member 10 will be bent downwardly in annular fashion around the peripheral flange 12, due to the shape of the beveled portion 18. The application of pressure by means of the punch 15, will then be continued as in Fig. 4 whereby the juxtaposed flanges 12 and 14 will be folded back on the bent annulus of the body member 10 at an angle, preferably less than a right angle, to the plane of the body member 10 to thereby form a seam 19, securely attaching the closure element or neck to the body member.

It has been found that the closure described herein is very efficient. If desired, however, a suitable sealing composition may be employed to make the container leak tight. This sealing material may be inserted underneath the annularly bent flange 14, for example, prior to the crimping operation. In the case of containers intended for volatile or inflammable fluids, such as petroleum oils, particularly the lighter products thereof, it is generally desirable to use a sealing material.

Obviously many modifications of my invention may be made without departing from the spirit and scope thereof, and I therefore intend no limitation except as imposed by the appended claim.

I claim:

The method of attaching a closure element to a container which comprises, providing a body member having a circular opening therein and an upwardly extending flange about said opening, providing a cylindrical closure element having at one end thereof an outwardly extending flange folded back over said element, inserting the closure element through the opening in the body member so that the flange of the closure element enfolds the flange of the body member, exerting pressure to force the body member and the closure element tightly together, continuing the application of pressure to depress and bend the body member downwardly about said opening, continuing the application of pressure to fold the flanged end of the closure element and the enfolded flange of the body member outwardly at an acute angle against the bent annulus of said body member to thereby form a flat seam attaching the closure element to the body member, and continuing the application of pressure to further flatten the seam.

L. D. TITUS.