METHOD OF FORMING METAL CLOSURES FOR PAPER CONTAINERS


Application October 7, 1943, Serial No. 505,346

1 Claim. (Cl. 93—55.1)

The invention relates generally to container structures and primarily seeks to provide a simple, novel and inexpensively constructed container having a paper body and metallic end closures which are so constructed and applied as to provide an efficient seal and great resistance to internal pressure.

In a more detailed nature the invention relates to providing a container having a paper body and a metallic end closure having a tapered heel portion forming the inner wall of an annular body end receiving channel, the other or outer wall of said channel being formed by a flange extending from said heel portion and bent over the end of the body and against the exterior thereof in substantially parallel relation to said heel portion as a body end embracing and clamping skirt so as to draw the body end wall into a tapered end and tightly clamp it in the channel completed by the bending over of said flange.

An object of the invention is to provide a novel method of forming a closure on containers which consists in inserting in an open end of a paper container body a metallic end closure having a central body closure portion merging into a tapered heel and an outwardly turned flange, then bending said flange down over the open end of the body and against the outside wall of the body end in the form of a skirt to dispose said skirt in substantially parallel spaced relation to said heel and clamp the body end portion between said heel and skirt in endwise tapering relation to the main body of the container.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more fully understood by following the detailed description, the appended claim and the several views illustrated in the accompanying drawings.

In the drawings:

Figure 1 is a side elevation and part vertical cross sectional view illustrating a container formed by practicing the invention.

Figure 2 is an enlarged fragmentary sectional view illustrating the improved closure inserted in the end of the container body prior to completion of the closure by bending in of the end wall portion of the container body.

Figure 3 is a fragmentary cross sectional view illustrating the step of completing the closure of the container.

In the drawings, 5 designates a paper body and 6 the metallic end closures which complete the container structure.

Each end closure generally designated 6 includes a central, depressed or main body portion 7 which merges into an upward or endwise tapered heel 8 which in turn merges into an outwardly directed flange 9. The flange is best illustrated in Figure 2 and terminates at its outer edge in a downwardly or inwardly rolled bead 10.

In applying the end closures, or in effecting the closure of the container, each closure generally designated 6 is applied by inserting the heel 8 thereof in the end of the container body in the manner clearly illustrated in Figure 2, after which the flange 9 is bent down into parallel spaced relation to the heel 8 to form an annular channel and tightly grip or clamp the end wall portion of the body 5 therein. During the bending of the skirt the end wall portion of the body is drawn into a tapered end of less diameter than the main body portion 5 and in this manner a closure is effected which will offer great resistance to internal pressure.

The completion of the closure in the manner above described can be efficiently effected by inserting a flared chuck 11 in the depression in the end closure in the manner illustrated in Figure 3, and opposing the flange 5, 10 by a roll 12. It will be observed by reference to Figure 3 that the maximum diameter of the chuck 11 is smaller than the minimum diameter of the heel 8, and engagement of the heel 8 and the flange 9, 10 in rolling contact between the chuck 11 and the roll 12 serves to turn down the flange 9 in the form of a body end embracing skirt 13 in the manner above described, and also to indent the flange bead 10 in the body 5 as at 14.

It is, of course, to be understood that the steps of the method may be variously changed and modified without departing from the spirit and scope of the invention.

I claim:

The herein described method of forming a metal end closure on a paper container body which consists in inserting in an open end of a paper container body a metallic end closure having a central body portion merging into an inwardly and endwise tapered heel end and an outwardly turned flange, then bending said flange down over the open end of the body and against the outside wall of the body end in the form of a skirt to dispose said skirt in substantially parallel spaced relation to said heel and clamp the body end portion between said heel and skirt in inwardly and endwise tapering relation to the main body of the container.

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