

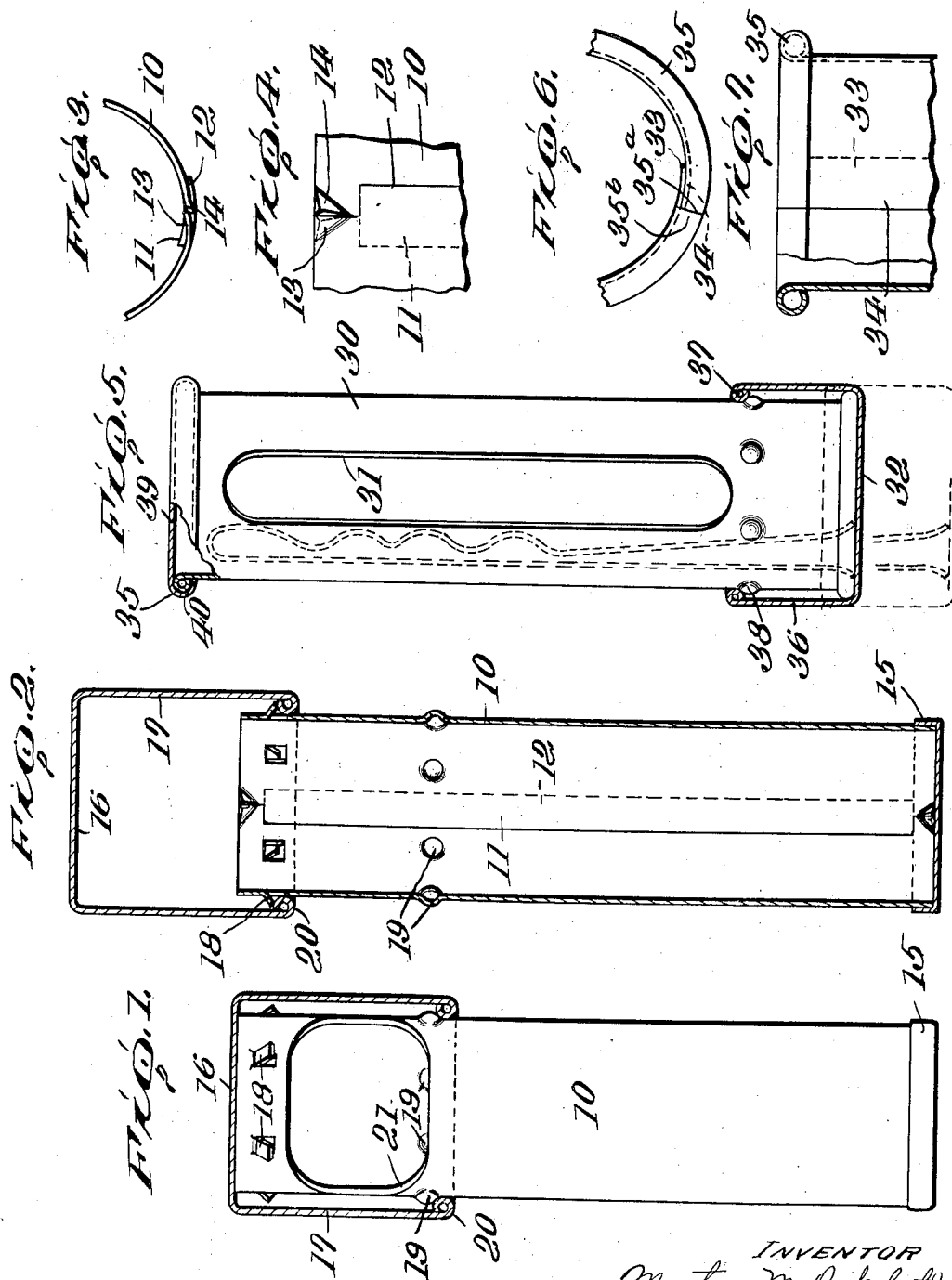
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CONTAINER

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CONTAINER

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The present invention relates to new and useful improvements in containers and more particularly to improvements in a sheet metal container which is adapted to permit the dispensing or removal of articles therefrom by limited relative movement between the container body and a closure member.

In general, the invention contemplates the provision of a container which includes a body portion and a closure member secured thereto for relative longitudinal movement. The body portion is provided with an unsoldered lap seam and with an aperture through which the articles may be dispensed or removed. The closure member is of the captive slip type and is provided with an inward bead formed at the inner end thereof. The body wall of the container is provided with one or more outward projections spaced from the open end thereof and these projections cooperate with the bead on the closure member to provide an interengaging snap connection for maintaining the closure member in its closed position. The body wall of the container is also provided with outwardly projecting lugs or other suitable means adjacent the open end thereof and these lugs serve to prevent complete removal of the closure member from the container body when it is shifted to its open or dispensing position.

An object of the present invention is to provide a container of the above type wherein the body wall of the container is formed with an unsoldered lap seam having the ends thereof shaped to abut so as to prevent collapsing of the body wall and wherein the captive closure member serves to prevent expanding of the body wall.

A further object of the invention is to provide a container of the above type wherein the closure member is secured to the container body for limited longitudinal movement relative thereto by means of an inward bead which is formed at the inner end of the closure member after the closure member and the container body have been assembled, this inward bead being adapted to cooperate with suitably shaped portions on the body wall of the container to prevent complete removal of the closure member from its open position and to maintain the closure member in its closed position by a snap fit.

The invention still further aims to provide a container of the above type which is of simple construction, which is inexpensive to manufacture, and which includes an opening in the body wall thereof through which the articles may be removed or dispensed upon movement of the

closure member outwardly with respect to the container body.

The above and other objects of the invention will in part be obvious and will be hereinafter more fully pointed out.

In the accompanying drawing,

Figure 1 is a side elevation of the container body with the slip cover shown in section and in its closed position.

Figure 2 is a sectional view of the container body with the slip cover shown in its open position.

Figure 3 is a fragmentary plan view of the body wall of the container showing one form of lap seam with the edges thereof abutting to prevent collapsing of the body wall of the container.

Figure 4 is a side elevation of Figure 3.

Figure 5 is a side elevation, partly in section, showing a modified form of container, the snap cover being shown in its closed position by full lines and being shown in its open position by dotted lines.

Figure 6 is a fragmentary plan view of the container of Figure 5, showing another form of lap seam with the edge curled and abutting to prevent collapsing of the body wall of the container.

Figure 7 is a side view, partly in section, of Figure 6.

Referring more in detail to the accompanying drawing, and particularly to Figures 1 through 4, the container is illustrated as including a body wall 10 which is shaped to provide a cylindrical body portion. The longitudinal edges 11, 12 of the body wall 10 are lapped, as shown in Figures 2, 3 and 4. The extreme ends of the body wall in the region of the lap seam are notched to provide portions 13, 14 which terminate and substantially meet midway between the lapping edges 11, 12. The portion 13 is bent inwardly of the container and the portion 14 is bent outwardly of the container so that the edges of these portions abut against one another to prevent collapsing of the body wall. This form of connection is provided at the top and at the bottom of the body wall 10.

The bottom end of the body wall 10 is closed by means of a closure member 15 which is permanently secured thereto by a friction fit and the upper end of the body wall 10 is closed by means of a slip cover 16 which includes a depending skirt portion 17. The body wall 10 of the container is provided with outwardly extending lugs 18 around the open end thereof. Substantially below these lugs 18, the body wall of

the container is shaped to provide outwardly extending projections or dimples 19. The skirt portion 17 of the cover 16 is provided with an inward bead 20 which may be formed in any suitable manner.

Between the lugs 18 and the dimples 19, the body wall of the container is provided with an opening 21. The cover 16 is closed at the upper end thereof and the skirt portion 17 serves to close the opening 21 in the bottom wall of the container when in the position shown in Figure 1. In this position, the inward bead 20 on the skirt portion 17 of the cover 16 fits beneath the dimples 19 in the body wall so as to maintain the cover in its closed position. These dimples 19 only extend a slight distance outwardly from the surface of the body wall of the container so that they provide a snap connection and when it is desired to uncover the opening 21, the cover 16 may be shifted to the position shown in Figure 2. In this position of the cover, the lugs 18 extend outwardly from the body wall of the container a sufficient distance to prevent complete removal of the cover by engagement with the inward bead 20. The container may be used for holding pills or the like small articles which may be dispensed or removed from the container through the opening 21.

The outwardly projecting lugs 18 on the body wall of the container serve to limit the complete removal of the cover 16 so that the cover can only be moved longitudinally of the container body a limited distance. The bead 20 on the skirt portion of the cover cooperates with the outwardly projecting lugs 18 on the body wall of the container to provide this form of captive slip cover. The dimples 19 on the body wall of the container cooperate with the inward bead 20 on the cover to provide a snap connection so as to maintain the cover in its closed position. As pointed out above, the end portions 13, 14 of the body wall of the container are positioned so as to abut against one another in order to prevent collapsing of the body wall of the container. Similarly, the closure 15 at the bottom of the container and the slip cover 16 at the opposite end of the container serve to prevent the body wall from expanding. It is important, therefore, that the inward bead 20 on the cover 16 be positioned immediately adjacent the outer surface of the body wall so as to prevent any expanding thereof.

In Figures 5, 6 and 7, there is shown a modified form of container which is adapted to hold relatively long articles, such as hair-pins or the like. In this form of container, the body wall 30 is provided with a longitudinal opening 31 which is relatively long and which serves as an opening through which the contents of the container may be observed. When the slip cover 32 is in the full line position of Figure 5, the articles must remain in the container, but when the slip cover 32 is moved outwardly of the container to the dotted line position, the articles are lowered in the container so that they may be removed through the opening 31. Thus, the slip cover 32 in this form of the invention serves as a movable bottom wall for the container.

In this form of container, there is shown a modified form of lap seam for the body wall 30. The longitudinal edges 33, 34 of the body wall 30 are lapped, as shown in Figures 6 and 7, throughout substantially the entire length thereof. However, the lapping portion 33 is cut away at the upper end thereof to form a notch. The ends of

the body wall above the lapping portions 33, 34 are curled outwardly, to provide an outward bead 35, and the end 35a of the bead 35 abuts against the end 35b of the bead 35, as shown in Figure 6. Thus, the cut-away portion of the lapping part 33 serves to provide a line of contact between the ends 35a and 35b of the bead 35 so that these ends abut against one another to prevent collapsing of the body wall of the container.

The slip cover is provided with a depending skirt portion 36 and the skirt portion is provided with an inward bead 37 which cooperates with the bead 35 on the body wall to prevent complete removal of the slip cover. The body wall of the container is also provided with outward dimples 38, similar to the dimples 19 shown in Figures 1 through 4, so as to provide a snap connection between the slip cover 32 and the container when the cover is in its closed position. The bead 35 is formed at both ends of the container and the top of the container is provided with a closure 39 which has the edges 40 thereof curled about the bead 35 so as to provide a permanent closure at this end of the container.

From the foregoing description, it will be seen that the invention provides a container of the above type which includes a body portion, a friction closure for one end thereof, and a slip closure for the other end thereof. The body wall of the container is provided with a lap seam, the ends of which are constructed and shaped to abut so as to prevent collapsing of the body wall. The permanent closure and the slip closure serve to prevent the body wall of the container from expanding. In one form of lap seam, the edges of the body wall are both notched and bent in opposite directions so as to provide an abutting line of contact to prevent collapsing. In another form of lap seam, one of the lapping portions is notched and the ends of the body wall are curled to provide an outward bead with the edges of the bead abutting to prevent collapsing of the body wall. While the container may be assembled in any suitable manner, it has been found advantageous to fit a slip cover over one end of the container and then employ suitable dies for curling the edge of the skirt portion of the cover to form the bead which cooperates with suitable lugs or other means on the container for preventing complete removal of the slip cover. In one form of the invention, the slip cover serves to close or open an opening through which pills or similar small articles may be dispensed. In another form of the invention, the container is provided with an elongated opening and the slip cover serves as a movable bottom wall to position relatively long articles such as hair-pins so that they may be removed through the elongated opening.

It is to be clearly understood that minor changes in the details of construction and arrangement of parts may be made without departing from the scope of the invention as set forth in the appended claims.

I claim:

1. A container comprising a body portion having a solderless side seam extending from one end thereof to the other including lap sections terminating short of the ends of the side seam, the portions of the body wall between the ends of the lap sections and the ends of the seam being shaped and disposed so as to abut one another and thereby prevent the collapsing of the body wall, and closure members for the body portion, each of which includes a depending skirt

making telescoping connection with the outer wall of the body portion and dimensioned so as to prevent the expanding of the body wall.

2. A container comprising a cylindrical body portion having an opening through which the contents may be removed, the body wall of said body portion being joined by a solderless lap seam extending substantially the entire length thereof but terminating short of the ends of the body portion and with the portions of the body wall between the ends of the lap seam and the ends of the body portion shaped to provide abutting edges whereby to prevent collapsing of the body wall, and means closing the ends of the body portion for preventing expanding of the body wall, said means including a slip cover mounted on one end of the body portion for limited axial movement relative thereto and being adapted to control the removal of the contents through said opening depending upon the position of the slip cover with respect to the body portion.

3. A container comprising a body portion having the body wall thereof joined by a solderless lap seam extending substantially the entire length thereof but terminating short of the ends of the body portion and with the portions of the body wall between the ends of the lap seam and the ends of the body portion shaped to provide abutting edges whereby to prevent collapsing of the body wall, a friction closure at one end of the body wall for preventing expanding thereof, and a slip cover mounted on the opposite end of the body wall for limited movement longitudinally thereof, said slip cover serving to prevent expanding of the body wall and the body portion having an opening through which the contents of the container may be removed upon outward movement of said slip cover relative to the body portion.

4. A container comprising a body portion having the body wall thereof joined by a solderless lap seam extending substantially the entire length thereof but terminating short of the ends of the body portion and with the portions of the body wall between the ends of the lap seam and the ends of the body portion shaped to provide abutting edges whereby to prevent collapsing of the body wall, a friction closure at one end of the body wall for preventing expanding thereof, a slip cover mounted on the opposite end of the body wall for limited movement longitudinally thereof and also serving to prevent expanding of the body wall, said body wall having outward projections cooperating with said slip cover for maintaining the same in a closed position, and means providing an opening through which the contents of the container may be removed depending upon the position of the slip cover with respect to the body portion.

5. A container comprising a body portion having the body wall thereof joined by a solderless lap seam extending substantially the entire length thereof but terminating short of the ends of the body portion and with the portions of the body wall between the ends of the lap seam and the ends of the body portion shaped to provide abut-

ting edges whereby to prevent collapsing of the body wall, a friction closure at one end of the body wall for preventing expanding thereof, a slip cover mounted on the opposite end of the body wall for limited movement longitudinally thereof and having a skirt portion provided with an inward bead to also prevent expanding of the body wall, stop means on the body wall cooperating with the inward bead on said slip cover for preventing complete removal of the cover from the body portion, and means providing an opening through which the contents of the container may be removed upon outward movement of the slip cover relative to the body portion.

6. A container comprising a body portion having the body wall thereof joined by a solderless lap seam extending substantially the entire length thereof but terminating short of the ends of the body portion and with the portions of the body wall between the ends of the lap seam and the ends of the body portion partially cut away and bent across each other to provide abutting edges whereby to prevent collapsing of the body wall, and closure means at the ends of the body portion for preventing expanding of the body wall.

7. A container comprising a body portion having the body wall thereof joined by a solderless lap seam extending substantially the entire length thereof but terminating short of the ends of the body portion and with one of the lapping edges cut away between the ends of the lap seam and the ends of the body portion, the portion of the body wall above the lap seam being curled outwardly to provide a bead having the adjacent edges thereof abutting whereby to prevent collapsing of the body wall, and closure means at the ends of the body portion for preventing expanding of the body wall, said closure means including a slip cover at one end of the body wall and having an inward bead adapted to cooperate with the bead on said body wall to prevent complete removal of the cover therefrom.

8. A container comprising a body portion having the body wall thereof joined by a solderless lap seam extending substantially the entire length thereof but terminating short of the ends of the body portion and with the portions of the body wall between the ends of the lap seam and the ends of the body portion cut away and bent across one another to provide abutting edges whereby to prevent collapsing of the body wall, a friction closure at one end of the body wall for preventing expanding thereof, means providing outwardly extending lugs at the opposite end of the body wall, a slip cover mounted on the opposite end of the body portion for limited longitudinal movement relative thereto and having an inward bead formed thereon for cooperation with said stop lugs to prevent complete removal of the cover from the body portion, and means providing an opening through which the contents of the container may be removed upon outward movement of the slip cover relative to the body portion.

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