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J. HENCHERT

2,979,224

PACKAGE CLOSURE AND METHOD OF FORMING SAME

Filed June 6, 1957

Fig. 1.

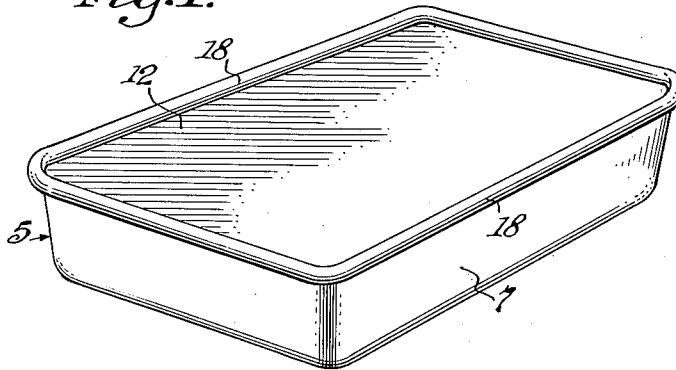


Fig. 2.

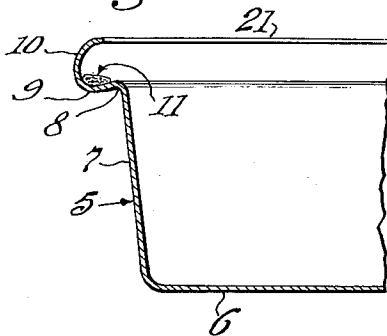


Fig. 3.

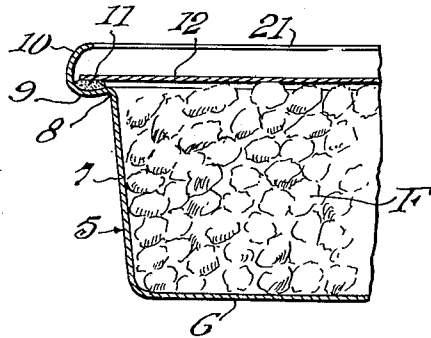


Fig. 4.

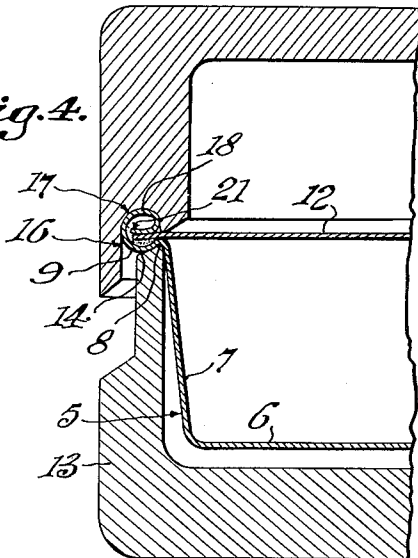
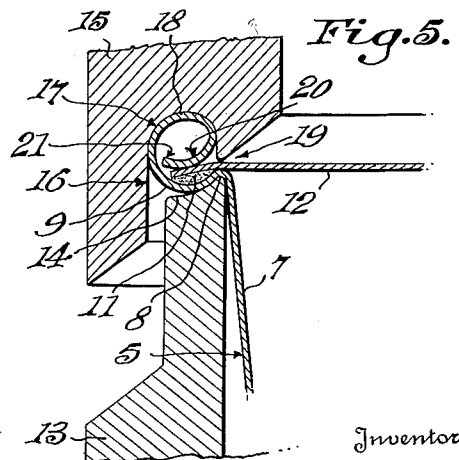


Fig. 5.



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PACKAGE CLOSURE AND METHOD OF FORMING SAME

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2 Claims. (Cl. 220—67)

The invention relates generally to the packaging of products for the market and primarily seeks to provide a novel closure for such packages, preferably a transparent closure for display purposes, and a novel method of forming such a closure.

Packages of the general character stated are known and have been accepted with approval by the buying public, but there is room for marked improvement in appearance and security of the closures and also in general structure. A purpose of the invention is to provide such improvement in the form of a drawn metal container body and a transparent flexible cover sheet secured on the body by a metal edge curl serving to hold the marginal portions of the cover sheet in place and in sealing contact over a sealing compound.

An object of the invention is to provide an improved container structure of the character stated including a product packaging body having a perimeter ledge merging outwardly into a flange turned downwardly outwardly and upwardly to provide a sealing compound receiving channel and a closure securing flange, sealing compound in the channel, and a closure sheet overlying the ledge and the sealing compound, the securing flange being turned inwardly then downwardly over and against the sheet as an open curl holding the margin of the sheet taut and in tight sealing contact with the sealing compound.

Another object of the invention is to provide a closure of the character stated wherein the raw metal edge of the curl is placed out of sight and out of rupturing contact with the closure sheet, well back in the curl.

A further object of the invention is to provide a novel method of forming a package closure of the character stated comprising providing a sheet metal body having a bottom and a surrounding side wall with a perimeter ledge merging outwardly into a flange turned downwardly outwardly and upwardly from the ledge thereby to form a sealing compound receiving channel and a closure securing flange surrounding said channel, applying sealing compound in the channel, placing a closure sheet over a product fill in the body and over the ledge and sealing compound and within the securing flange, and curling the securing flange inwardly then outwardly over and against the sheet to draw it taut over the ledge and press and hold it in tight sealing contact with the sealing compound.

A still further object of the invention is to provide a method of the character stated including the step of carrying out the curling of the closure sheet securing flange so as to turn its raw metal edge away from contact with the sheet to avoid rupturing of the sheet and conceal said edge in the curl.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claims and the several views illustrated in the accompanying drawing.

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In the drawing:

Figure 1 is a perspective view illustrating the improved container structure and method.

Figure 2 is a fragmentary vertical cross section illustrating the container body and an application of sealing compound in the receiving channel.

Figure 3 is a view similar to Figure 2 showing the container filled and with a transparent closure sheet applied over the fill.

Figure 4 is a fragmentary sectional view illustrating the method of curling the flange over the container body ledge, transparent closure sheet and sealing compound in the sealing of the container.

Figure 5 is an enlarged fragmentary sectional view illustrating the completion of the closure sealing step.

In the practical development of the invention, a thin metal blank, preferably of aluminum, or optionally of tin plate or the like is drawn to provide a tray-like container, generally designated 5 and having a bottom 6 and a surrounding side wall 7. It is to be understood that the body may be of various shapes, but preferably is rectangular as illustrated in Figure 1. The shaping of the container body also includes the formation of a well rounded ledge 8 about the perimeter of the body wall 7, said ledge merging outwardly and downwardly into a flange forming a sealing compound receiving channel 9 and an upstanding closure securing flange 10. A sealing compound 11 is placed in the receiving channel 9 as illustrated in Figure 2.

After the filling of the container body with the product to be packaged as indicated at F in Figure 3, a closure sheet 12 is placed over the fill, the marginal portions of the sheet extending over the body ledge 8 and resting upon the sealing compound 11 in the channel 9. Various forms of closure sheeting may be employed, but it is preferred that the sheeting be formed of transparent flexible material so as to provide an attractive closure and one through which the fill within the container body is attractively displayed. An example of an acceptable form of closure sheeting is Saran.

The filled container body with the closure sheet 12 applied in the manner previously described is placed in a die member 13 as shown in Figure 4, said die member having a suitably shaped supporting ledge 14 at the top for engaging with the undersurface of the ledge 8 and the surrounding sealing compound bearing channel 9 in the manner clearly illustrated. The die member 13 is then opposed to or brought into cooperative relation with a cooperating die member 15 having a depending upright confining wall 16 and a curling channel surface 17. By bringing about relative movement between the cooperating die members 13 and 15 a reshaping of the upstanding closure securing flange 10 and the compound bearing channel 9 can be brought about in the manner clearly illustrated in Figures 4 and 5. As the die members are brought together the flange 10 will be turned into a curl 18, the same being turned downwardly and inwardly then outwardly and upwardly, engaging the marginal portions of the closure sheet 12 and drawing the same taut over the ledge 8 as at 19, with the well rounded curl portion 20 pressing and holding the marginal portions of the closure sheet in tight sealing contact against the sealing compound 11 as illustrated in Figure 5.

It will be observed that in the formation of the closure sheet margin securing and sealing curl the raw metal edge extremity of the securing flange 10 is out of contact with the closure sheet 12 and concealed within the curl in the manner clearly illustrated in Figure 5, and the securing flange 10 remains above the plane of the ledge 8. In this manner, tearing or rupturing of the closure sheet 12 is avoided and the raw metal edge 21 is concealed and placed so that it is impossible for a user

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of the package to contact the same and sustain an injury from the raw edge.

While one form of the invention has been shown for purposes of illustration, it is to be clearly understood that various changes in the details of construction and arrangement of parts may be made without departing from the spirit and scope of the invention as defined in the appended claims.

I claim:

1. In a container of the character described, a body having a bottom and a surrounding side wall defining a product receiving space, said body being defined at its upper extremity by a perimeter ledge merging outwardly into a flange turned downwardly outwardly and upwardly to provide a shallow sealing compound receiving channel and a closure securing flange, sealing compound in said channel, and a closure sheet overlying said ledge and sealing compound within said securing flange, said securing flange being turned inwardly then outwardly over and against said sheet outwardly of said ledge as an open curl holding the margin of said sheet in tight sealing contact with the sealing compound, said curl being disposed entirely above the plane of said ledge whereby said sheet is deflected only a minor amount by said curl, and said curl being spaced from said ledge and said channel in the area of said sheet a distance greater than the thickness of said sheet whereby direct clamping of said sheet between portions of said body is avoided.

2. The herein described method of forming a package closure which comprises, providing a sheet metal body

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having a bottom and a surrounding side wall with a perimeter ledge merging outwardly into a flange turned downwardly outwardly and upwardly from the ledge thereby to form a shallow sealing compound receiving channel and a closure securing flange surrounding said channel, applying sealing compound in said channel with the sealing compound projecting above the ledge, placing a closure sheet over a product fill in the space within the side wall and above the ledge and engaging the sealing compound and within the securing flange, and curling the securing flange inwardly then outwardly over and against the sheet and pressing and holding the sheet in tight sealing contact over the sealing compound while simultaneously reforming the sealing compound receiving channel to be of an increased depth.

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