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(54) **CONTAINER AND CLOSURE WITH IN-TURNED SEAM**

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(73) Proprietor: **POLYSTAR PACKAGING  
INCORPORATED**

**Norwalk, CT 06854 (US)**

(72) Inventor: **HEKAL, Ihab**

**Stamford, CT 06903 (US)**

(74) Representative: **Goddard, David John et al**

**HARRISON GODDARD FOOTE**

**Orlando House**

**11c Compstall Road**

**Marple Bridge**

**Stockport SK6 5HH (GB)**

(56) References cited:

**EP-A- 0 408 268**

**WO-A-89/03790**

**GB-A- 1 017 558**

**US-A- 1 700 742**

**US-A- 1 866 488**

**US-A- 2 146 226**

**US-A- 2 598 962**

**US-A- 3 366 309**

**US-A- 3 504 817**

**US-A- 5 125 528**

**US-A- 5 328 045**

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**EP 0 775 074 B9**

## Description

**[0001]** This invention relates in general to new and useful improvements in end closures for containers, and more particularly to an end closure that includes an annular frame member which carries a peelable end panel.

**[0002]** It is well known to double seam metal end closures onto metal or plastics containers utilising a double seaming operation. Such a double seam is often turned radially outwardly so that the material of the end closure encapsulates the peripheral end portion of the container. However, UK Patent Specification 1,017,558 (Frangia) illustrates a process for producing a double seam radially inward of the container, although in this case the closure is a single piece closure member.

**[0003]** It is also known to provide end closures with peelable end panels. A typical example is shown in US Patent Specification No. 3,366,309 (Scharre) in which the aperture of a rigid frame is covered by a heat shrinkable film extending to a tag at the frame periphery. The frame is rested on a flange of the container, which is then folded about the periphery of the frame, without altering the shape of the frame in any way, to seal the container. Other examples of peelable end panels will be found in US Patent Specifications No. 5,085,339 and 5,125,528 (Polystar Packaging).

**[0004]** In a first aspect the present invention provides a two-piece end closure for closing an open end of a container, said end closure comprising a frame member and an end panel, said frame member having a continuous peripheral inner ledge portion and a peripheral outer border portion terminating in a free edge, said inner ledge portion defining an opening in said frame member for providing a passage for a packaged product therethrough, characterised in that said end panel has a marginal outer edge portion secured to said inner ledge portion for closing said opening, and said outer border portion is turned upwardly and capable of being turned radially inwardly when securing said end closure to a container body. The frame member may be of plastics, e.g. moulded, metal, paper or plastics coated paper, which may be die cut or stamped.

**[0005]** In a second aspect the invention extends to a container which has an open end defined in part by a seaming flange and which comprises an end closure according to the first aspect of the invention received by said seaming flange, said seaming flange and said peripheral border portion being turned radially inwardly together for forming a seam securing said end closure in said open end in sealed relation.

**[0006]** In a container according to the second aspect the seaming flange may be first reversely folded over said free edge of said peripheral outer border portion, and then said seaming flange and said peripheral outer border portion are turned radially inwardly to form said seam by being enfolded together in overlying relation to said peripheral inner ledge portion.

**[0007]** Alternatively, in a container according to the

second aspect the seam may be in the form of a curl seated on said peripheral inner ledge portion radially outwardly of said end panel.

**[0008]** In the container the frame member and said seaming flange may be adhered together as by the application of heat. Thus, after inwardly curling or seaming, the plastics of the frame portion of the end closure could be heated and fused to the metal in the curl without axial pressure on the container because the curl would hold the end closure in place on the container during heating and cooling of the curl and the encapsulated plastics. This feature provides for the use of containers having thinner walls than formerly possible, as well as providing a seal having enhanced integrity.

**[0009]** Additionally or alternatively where the seaming flange includes a raw edge this may be buried in said frame member.

**[0010]** The invention also provides a method of closing a metal container having a generally outwardly extending support flange terminating in a seaming flange, said method including the steps of providing an end closure, said closure comprising a plastics frame member and an end panel said frame member having a continuous peripheral inner ledge portion and a peripheral outer border portion terminating in a free edge, said inner ledge portion defining an opening in said frame member for providing a passage for a packaged product therethrough, and locating said frame member upon said support flange, characterised in that said seaming flange is curled or folded radially inwardly together with said peripheral portion to capture said outer portion between said support flange and said seaming flange.

**[0011]** This method may include the step of applying heat to cause said peripheral portion and flange to adhere together. Additionally or alternatively where the seaming flange terminates in a raw edge, this may be buried in said outer portion.

**[0012]** In embodiments of the invention, a reverse seaming approach is made wherein the open end of a container is provided with a support flange which is radially outwardly directed and which, in turn, carries an axially extending seaming flange. This permits an end closure having a frame member carrying a peelable end panel to be seated on the support flange with a peripheral border portion that is secured to the container by way of a seam between the container seaming flange and the peripheral border portion or flange on the end closure.

**[0013]** The radially inwardly directed seam may be in the form of a double seam folded flat, or a curl, in overlying relation to the support flange. The frame member may be moulded and/or have an undersurface which conforms to the contour of a closing flange portion of the container

**[0014]** Thus in essence the present invention teaches a reverse approach from most prior art, in that a reverse seaming or curling is used to affix an end closure, and the outer border of the frame is incorporated in such a

step. If a seaming flange on a metal can is heavy enough, it is feasible to reverse seam a plastic lid to a metal can; on the other hand, if the flange on the can, or on a container such as a tray, is relatively thin, a reverse or inwardly formed curl is likely to be more appropriate.

**[0015]** The end closure comprises two parts or components, one being an annular frame portion formed of strong or heavy material such as moulded, stamped or die cut sheets of plastics, metal or coated paper which is intended to be permanently affixed to the can or container, and the other part being a peelable member which is to be peeled away from the frame portion for opening the container and gaining access to the contents thereof. The peelable member, or end panel, may be made of various materials such as plastics sheet, paper or metal foil, which may be coated or uncoated, or a laminate such as plastics coated aluminium laminate, in the form of a peelable layer to be attached to the frame portion through the use of heat, or adhesives, or suitable solvents, or during an injection moulding operation for forming the frame portion and adhering it to the removable end panel.

**[0016]** Further features of the invention may be identified by a consideration of the appended claims to which the reader is referred, and by a consideration of the following description of exemplary embodiments of the invention made by reference to the accompanying drawings, in which:

Figure 1 is a vertical sectional view through a container having in place an end closure for sealing in accordance with the invention, the various components being illustrated in spaced relation so as to distinguish them;

Figure 2 is a fragmentary sectional view on a larger scale showing most specifically the configuration of end closure and the container with the end closure in position within an open end of the container and a seaming flange of the container being partially folded;

Figure 3 is a sectional view similar to Figure 2, but showing the container seaming flange being folded around an outer and upper end of the end closure peripheral border position as a first step in the seaming operation;

Figure 4 is another sectional view, showing the completion of the seaming operation wherein the peripheral border portion and the container seaming flange are further folded into overlying relation to the frame member peripheral inner ledge portion;

Figure 5 is a fragmentary sectional view identified in Figure 1 and shows a typical end panel construction having plural layers;

Figure 6 is a vertical sectional view taken through a modified container configuration and a modified form of end closure with the end closure seated on the supporting flange of the container in position ready for a curing operation to secure the end closure to the container;

Figure 7 is a sectional view similar to Figure 6 showing the end closure secured to the container by a radially inwardly directed curl;

FIG. 8 is a fragmentary sectional view of an end closure and container with the end closure being assembled during a closing operation wherein the container includes an upstanding seaming flange inclined, or tapered, slightly outwardly.

FIG. 9 is a fragmentary sectional view similar to FIG. 8 and shows the end closure seated upon a support flange of the container which is resting upon an anvil portion of a closing tool.

FIG. 10 is a fragmentary sectional view similar to FIGS. 8 and 9 and shows a seaming flange of the container and a peripheral border portion of the end closure folded inwardly for closing the container and producing a seam wherein the free edge of the container is buried in the material of the end closure.

**[0017]** Referring now to the drawings in detail, reference is first made to the embodiment illustrated in FIGS. 1 through 4 wherein there is shown a container 10, generally in the form of a can 12 having an upstanding body 14 and a bottom 16. The can 12 has an open upper end first receiving a product to be packaged and for closing by an end closure generally identified by the numeral 18. The open end of the can 12 is generally identified by the numeral 20 and includes a peripheral inner ledge portion or support flange 22 which, in turn, carries an outer axially directed flange or seaming flange 24.

**[0018]** As is best illustrated in FIG. 2, the end closure 18 includes a frame member generally identified by the numeral 26 which carries a peelable panel 28. The frame member 26 includes a continuous peripheral inner ledge portion 30 and an outer upstanding peripheral border portion 32. The inner peripheral edge of ledge portion 30 defines an opening 34 through which a product packaged within the container 10 may be readily dispensed. This opening is normally closed by the panel 28 which has a peelable bond with the ledge portion 30.

**[0019]** At this time it is pointed out that, as is best illustrated in FIG. 5, the panel 28 is preferably of a laminated construction including an inner plastic layer 36 and an outer metal foil layer 38 which are suitably bonded together.

**[0020]** Also, it is to be understood that the frame member 26 may be formed of a plastic material, such as by injection molding, and the panel 28 peelably bonded

thereto by an insert-injection molding operation. However, the invention is not to be so limited. It is feasible that the panel 28 be of a single layer construction and may be formed of either plastic or metal foil and will be suitably bonded to the frame member 26 by injection molding of the frame member 26 or by way of a suitable peelable adhesive (not shown).

**[0021]** It is also feasible that the frame member be stamped of sheet metal and the panel 28 peelably bonded thereto in any conventional known way.

**[0022]** While the container 10 has been specifically illustrated, it is to be understood that in accordance with the present practice, the wall thickness of the can, and most particularly of the seaming flange 24 will be 6 mils or greater. On the other hand, the container 10 could be in the form of a basket (not shown) formed of a metal foil or the like and having a thickness less than 6 mils.

**[0023]** As will be apparent from FIGS. 2-4, it is necessary that the seaming flange 24 be of a thickness and flexibility so as to permit the folding thereof by itself, as shown in FIGS. 2 and 3, and thereafter with the border portion 32 as shown in FIG. 4. The resulting seam, which is generally identified by the numeral 40 includes two seaming steps and thus may be broadly identified as "a double seam". However, the seam 40 is not a conventional double seam in that the seaming or folding steps are radially inwardly directed into the interior of the seaming flange 24. On the other hand, the seam 40 may be automatically formed by a series of chucks and cams (not shown) in the same general manner as a conventional double seam. As is best shown in FIG. 4, an elongated seal is created between the underside of ledge portion 30 and support flange 22 and extending from an inner bend 44 and an outer bend 46 thereof. Likewise, an elongated seal is created between the border portion 32 and seaming flange 24.

**[0024]** It is to be understood that the peelable panel 28 will preferably be provided with a suitable pull tab 42, as shown in FIG. 1, so as to facilitate the peeling of the panel 28 from the frame member 26.

**[0025]** It will also be understood that the opened container 10 closed with the end closure 18 will be void of any raw edge on which a user may cut oneself.

**[0026]** A second embodiment of the invention is illustrated in FIGS. 6 and 7 wherein a container, generally identified by the numeral 50, and including an upper side wall portion 52 which has a formed top portion, generally indicated by the numeral 54. Top portion 54 includes a support flange 56 extending between an inner curve or bend 58 and an outer curve or bend 62 and terminates at its outer periphery forming a seaming flange 60.

**[0027]** Wall portion 52, of container 50, is shown as extending upwardly and outwardly. It is to be understood, however, that the wall portion may extend axially in the same manner as body 14 of can 12, as is shown in FIG. 1. Also, container 50 can be of other shapes and may be in the form known in the art as a tray.

**[0028]** Container 50 is to be closed and sealed with

an end closure, generally indicated by the numeral 64. It will be seen that the end closure 64 includes a frame member 66 having a continuous peripheral inner ledge portion 68 and an outer upstanding peripheral border portion 70. Further, as is best shown in FIG. 7, the border portion 70 is seamed relative to the seaming flange 60 by way of a curled-type seam 72. Heat is to be applied to curl 72 in those instances in which great assurance of a complete seal is necessary or desired; the process step of applying heat may occur during the seaming or curling operation, or subsequent thereto, such as during a retorting operation for processing the contents of the sealed container.

**[0029]** At this time it is to be understood that such a seam 72 could have been incorporated in conjunction with the container 10 and the closure 18. However, in the embodiment shown in FIGS. 6 and 7, in lieu of the frame member 66 being of a generally constant wall thickness as in the case of the frame member 26, the frame member 66 is definitely of a molded construction and the peripheral ledge portion 68 has an undersurface 74 of a contour matching the upper or outer surface of the support flange 56 including the portions of the curves 58 and 62. This provides not only a good seat of the frame member 66 onto the container 50 during initial assembly, but also an elongated secondary seal in addition to the seal formed by the curled seam 72.

**[0030]** Further, it is to be noted that the peripheral inner ledge portion 68 has an inner edge surface 76 which may form a continuation of the inner surface of the body 52 so as to facilitate dispensing of the product from the container 50.

**[0031]** The end closure 64 further includes an end panel 78 which is peelably sealed to the upper surface of the peripheral inner ledge portion 68 in the manner described with respect to peelable panel 28. The panel 78 may be either a laminated construction as shown in FIG. 5 or a single thickness panel construction, such as in the earlier described panel 28. **[deletion(s)]**

**[0032]** A still further embodiment of the invention is shown in FIGS. 8, 9 and 10 wherein a container, generally indicated by the numeral 130, includes a tubular side wall 132, an outwardly extending support flange 134, and a seaming flange 136 which is shown extending outwardly and upwardly terminating at an edge portion 138, for providing a tapered lead-in of approximately 5 or 6 degrees for receiving an end closure, generally indicated by the numeral 140, and including an annular frame member 142 having an end panel 144 peelably secured to a top portion thereof. Container 130 is shown resting upon an anvil portion 146 of a closing tool. Frame member 142 has a lower surface 148 and an upstanding seaming portion 149 shaped to conform with corresponding portions of container 130, in the manner best shown in FIG. 9, incident to the seaming process wherein seaming flange 136 is folded or bent radially inwardly and downwardly for interlocking end closure 140 with container 130 and container edge portion 138 is buried

within the material of end closure 140. In the same manner as previously described, it is to be understood that heat may be used to create a fused interface for enhancing the integrity of the final seam.

## Claims

1. A two-piece end closure (18, 64, 140) for closing an open end of a container, said end closure comprising a frame member (26, 66, 144) and an end panel (28, 78, 144), said frame member having a continuous peripheral inner ledge portion (30, 68, 148) and a peripheral outer border portion (32, 70, 149) terminating in a free edge, said inner ledge portion defining an opening (34) in said frame member for providing a passage for a packaged product there-through,

**characterised in that** said end panel has a marginal outer edge portion secured to said inner ledge portion for closing said opening, and said outer border portion is turned upwardly and capable of being turned radially inwardly when securing said end closure to a container body.

2. A closure according to claim 1 wherein said frame member is of plastics.
3. A container which has an open end defined in part by a seaming flange (24, 60, 136) and which comprises an end closure according to claim 1 or claim 2 received by said seaming flange, said seaming flange and said peripheral border portion being turned radially inwardly together for forming a seam securing said end closure in said open end in sealed relation.
4. A container according to claim 3 wherein said seaming flange is first reversely folded over said free edge of said peripheral outer border portion, and then said seaming flange and said peripheral outer border portion are turned radially inwardly to form said seam by being enfolded together in overlying relation to said peripheral inner ledge portion.
5. A container according to claim 3 wherein said seam is in the form of a curl (72) seated on said peripheral inner ledge portion radially outwardly of said end panel.
6. A container according to any one of claims 3 to 5 wherein said frame member and said seaming flange are adhered together.
7. A container according to any one of claims 3 to 6 wherein said seaming flange includes a raw edge (138) which is buried in said frame member.

8. A method of closing a metal container having a generally outwardly extending support flange (22, 56, 134) terminating in a seaming flange (24, 60, 136), said method including the steps of providing an end closure (18, 64, 140), said closure comprising a frame member (26, 66, 144) and an end panel (28, 78, 144), said frame member having a continuous peripheral inner ledge portion (30, 68, 148) and a peripheral outer border portion (32, 70, 149) terminating in a free edge, said inner ledge portion defining an opening (34) in said frame member for providing a passage for a packaged product there-through, and locating said frame member upon said support flange

**characterised in that** said seaming flange is curled or folded radially inwardly together with said peripheral portion to capture said outer portion between said support flange and said seaming flange.

9. A method according to claim 8 including the step of applying heat to cause said peripheral portion and flange to adhere together.
10. A method according to claim 8 or claim 9 wherein said seaming flange terminates in a raw edge (138), and said raw edge becomes buried in said outer portion.

## Patentansprüche

1. Zweiteiliger Endverschluss (18, 64, 140) zum Verschließen eines offenen Endes eines Behälters, wobei der Endverschluss ein Rahmenteil (26, 66, 144) und eine Endplatte (28, 78, 144) umfaßt und das Rahmenteil einen durchgängigen, peripheren, inneren Absatzbereich (30, 68, 148) und einen peripheren äußeren Randabschnitt (32, 70, 149) umfaßt, der in einer freien Kante ausläuft, wobei der innere Absatzbereich eine Öffnung (34) in dem Rahmenteil festlegt, um durch dieses für ein verpacktes Produkt einen Durchlaß zu bilden, **dadurch gekennzeichnet, daß** die Endplatte einen äußeren Randkantenabschnitt aufweist, der am inneren Absatzbereich befestigt ist, um die Öffnung zu verschließen, und daß der äußere Randabschnitt nach oben gerichtet sowie radial nach innen verdrehbar ist, wenn der Endverschluss an einem Behältergehäuse befestigt wird.
2. Verschluss nach Anspruch 1, wobei das Rahmenteil aus Kunststoff besteht.
3. Behälter, der ein teilweise durch einen Falzflansch (24, 60, 136) festgelegtes, offenes Ende und einen Endverschluss nach Anspruch 1 oder Anspruch 2 umfaßt, der von dem Falzflansch aufgenommen wird, wobei der Falzflansch und der periphere

Randabschnitt zusammen radial nach innen gedreht werden, um einen Falz zum Befestigen des Endverschlusses in dichtender Weise in dem offenen Ende auszubilden.

4. Behälter nach Anspruch 3, bei dem zunächst der Falzflansch über die freie Kante des peripheren äußeren Randabschnittes herumgeschlagen wird und dann der Falzflansch und der periphere äußere Randabschnitt radial nach innen umgeschwenkt werden, um den Falz dadurch zu bilden, daß sie relativ zu dem peripheren inneren Absatzbereich übereinanderliegend zusammen umgefaltet werden. 5
5. Behälter nach Anspruch 3, bei dem der Falz in Form einer Einwölbung (72) vorliegt, die auf dem peripheren inneren Absatzbereich radial auswärts von der Endplatte sitzt. 10
6. Behälter nach einem der Ansprüche 3 bis 5, bei dem das Rahmenteil und der Falzflansch miteinander verklebt sind. 15
7. Behälter nach einem der Ansprüche 3 bis 6, bei dem der Falzflansch eine raue Kante (138) aufweist, die in das Rahmenteil eingesenkt ist. 20
8. Verfahren zum Verschließen eines Metallbehälters mit einem allgemein nach außen ragenden Tragflansch (22, 56, 134), der in einem Falzflansch (24, 60, 136) ausläuft, wobei dieses Verfahren die folgenden Schritte umfaßt: Bereitstellen eines Endverschlusses (18, 64, 140) mit einem Rahmenteil (26, 66, 144) und einer Endplatte (28, 78, 144), wobei das Rahmenteil einen durchgängigen, peripheren inneren Absatzbereich (30, 68, 148) und einen peripheren, äußeren Randabschnitt (32, 70, 149) aufweist, der in einer freien Kante ausläuft und eine Öffnung (34) in dem Rahmenteil festlegt, um durch diese einen Durchlaß für ein verpacktes Produkt zu bilden, und Anbringen des Rahmenteils auf dem Tragflansch, 30  
**dadurch gekennzeichnet, daß** der Falzflansch zusammen mit dem peripheren Abschnitt radial nach innen eingewölbt oder umgefaltet wird, um den äußeren Abschnitt zwischen dem Tragflansch und dem Falzflansch einzufassen. 35
9. Verfahren nach Anspruch 8, das den Schritt umfaßt, Wärme einzusetzen, um zu bewirken, daß der periphere Abschnitt und der Flansch aneinander haften. 40
10. Verfahren nach Anspruch 8 oder Anspruch 9, bei dem der Falzflansch in einer rauen Kante (138) ausläuft und die raue Kante in den äußeren Abschnitt eingesenkt wird. 45

## Revendications

1. Fermeture terminale en deux éléments (18, 64, 140) pour fermer l'extrémité ouverte d'un récipient, ladite fermeture terminale comprenant un élément cadre (26, 66, 144) et un panneau d'extrémité (28, 78, 144), ledit élément cadre ayant une partie de bord intérieure périphérique continue (30, 68, 14) et une partie de bordure extérieure périphérique (32, 70, 149) se terminant en un bord libre, ladite partie de bord intérieure définissant une ouverture 34 dans ledit élément cadre pour réaliser un passage du produit emballé au travers, **caractérisée en ce que** ledit panneau d'extrémité présente une partie de bord terminal marginal fixée à ladite portion de bord intérieure pour fermer ladite ouverture, ladite portion de bordure extérieure étant tournée vers le haut et susceptible d'être tournée radialement vers l'intérieur lorsque l'on fixe ladite fermeture terminale sur un corps de récipient. 5
2. Fermeture selon la revendication 1, **caractérisée en ce que** ledit élément cadre est réalisé en matière plastique. 10
3. Récipient présentant une extrémité ouverte définie en partie par un flanc de jonction (24, 60, 136) et comprenant une fermeture terminale selon la revendication 1 ou 2 reçue par ledit flanc de jonction, ledit flanc de jonction et ladite partie de bordure périphérique étant tournés radialement vers l'intérieur ensemble, pour réaliser une jonction fixant ladite fermeture d'extrémité dans ladite extrémité ouverte en position scellée. 15
4. Récipient selon la revendication 3, **caractérisé en ce que** ledit flanc de jonction est d'abord plié à l'envers sur ledit bord libre de ladite partie de bordure extérieure périphérique, et ensuite ledit flanc de jonction et ladite partie de bordure extérieure périphérique étant tournés radialement vers l'intérieur pour former ladite jonction en étant pliés ensemble en relation de recouvrement par rapport à ladite partie de bord intérieure périphérique. 20
5. Récipient selon la revendication 3, **caractérisé en ce que** ladite jonction est sous la forme d'une courbe (72) assise sur ladite portion de bord intérieure périphérique radialement vers l'extérieur dudit panneau d'extrémité. 25
6. Récipient selon l'une des revendications 3 à 5, **caractérisé en ce que** ledit élément de cadre et ledit flanc de jonction adhèrent ensemble l'un à l'autre. 30
7. Récipient selon l'une des revendications 3 à 6, **caractérisé en ce que** les bords de jonction incluent 35

un bord brut (138) qui est enfoui dans ledit élément de cadre.

8. Procédé pour la fermeture d'un récipient en métal présentant un bord de support s'étendant d'une manière générale vers l'extérieur (22, 56, 134) et se terminant en un flanc de jonction (24, 60, 136), ledit procédé incluant les étapes de fournir une fermeture terminale (18, 64, 140), ladite fermeture comprenant un élément cadre (26, 66, 144) et un panneau d'extrémité (28, 78, 144), ledit élément cadre représentant une partie de bord intérieure périphérique continue (30, 68, 148) et une partie de bordure extérieure périphérique (32, 70, 149) se terminant en un bord libre, ladite partie de bord intérieure définissant une ouverture 34 dans ledit élément cadre pour réaliser un passage destiné à un produit conditionné, et l'étape de disposer ledit élément cadre sur ledit flanc de support,
- 5
- 10
- 15
- 20
- 25
- 30
9. Procédé selon la revendication 8, incluant l'étape d'appliquer de la chaleur pour provoquer l'adhésion ensemble de ladite partie périphérique et dudit flanc.
- 35
10. Procédé selon la revendication 8 ou 9, **caractérisé en ce que** ledit flanc de jonction se termine en un bord brut (138), ledit bord brut étant enfoui dans ladite partie extérieure.
- 40
- 45
- 50
- 55

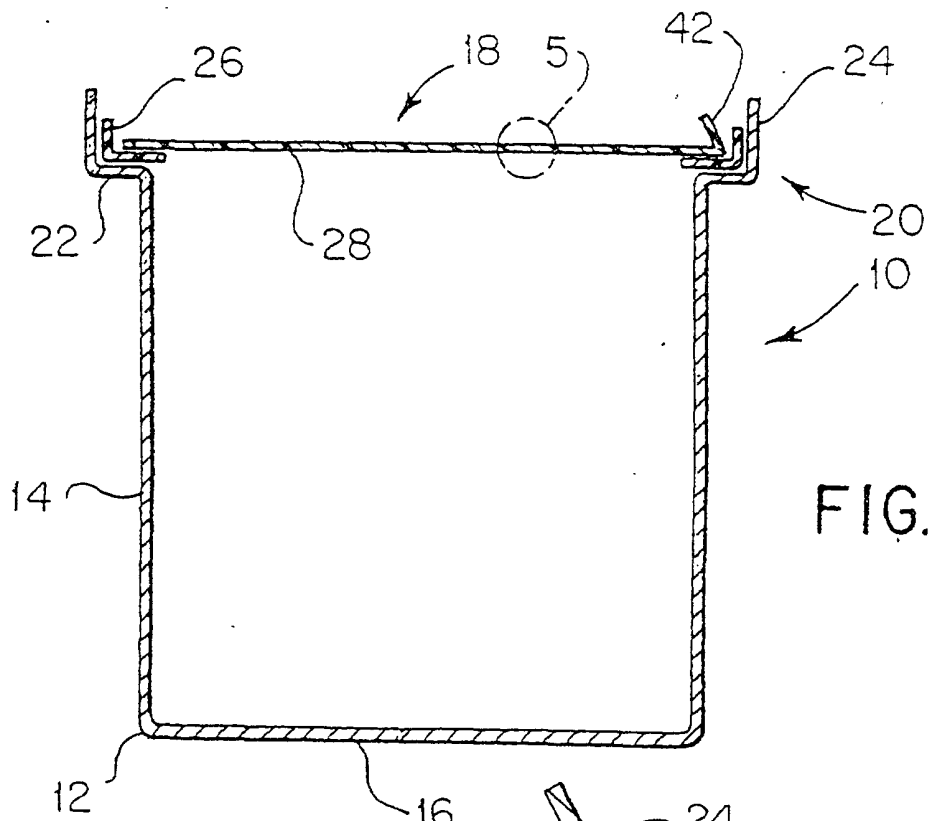


FIG. 1

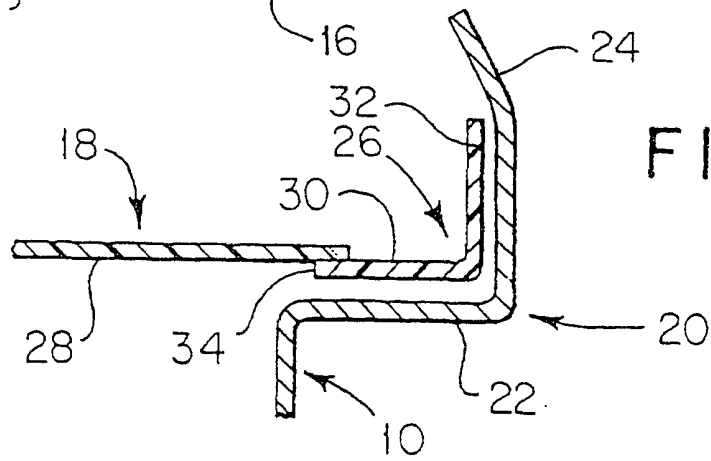


FIG. 2

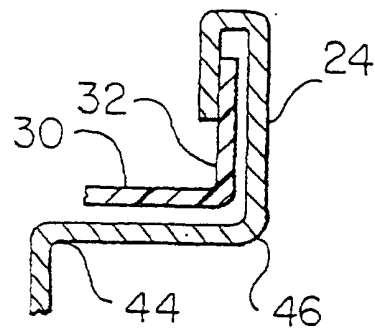


FIG. 3

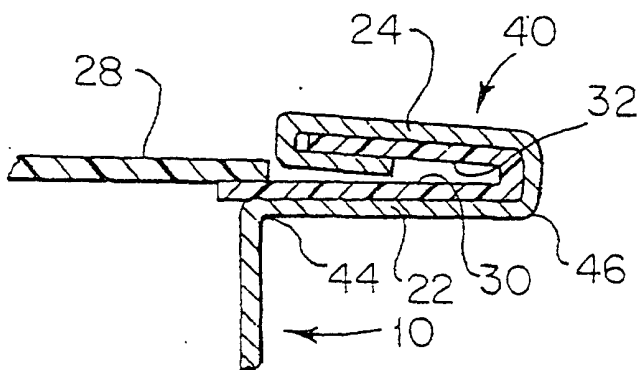


FIG. 4



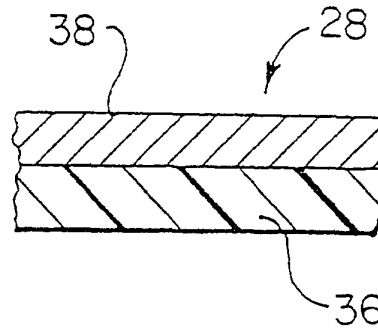


FIG. 5

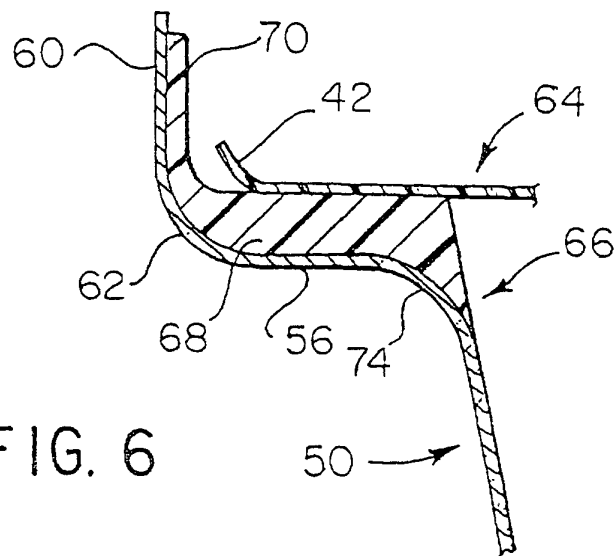


FIG. 6

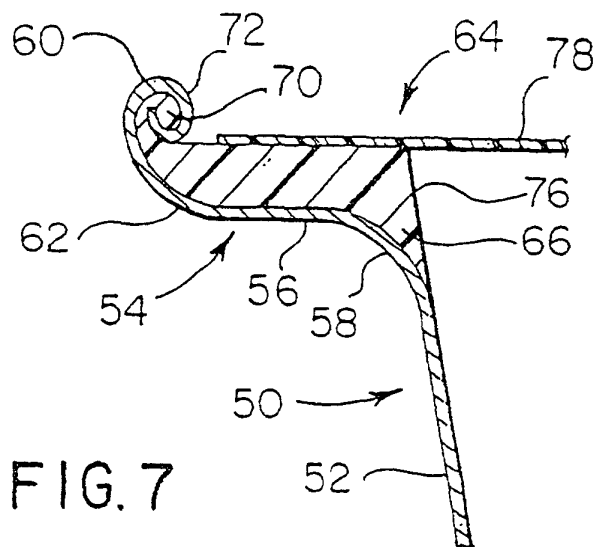


FIG. 7

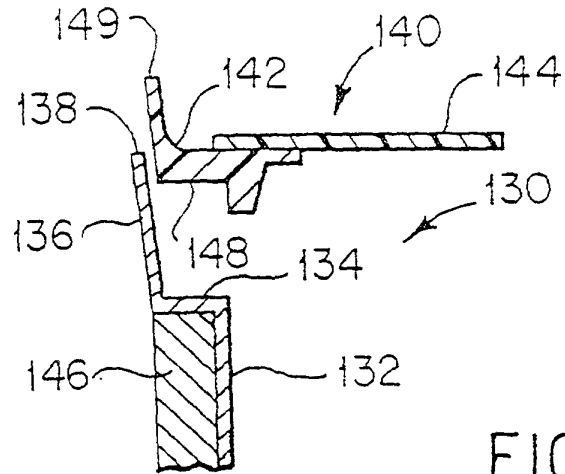


FIG. 8

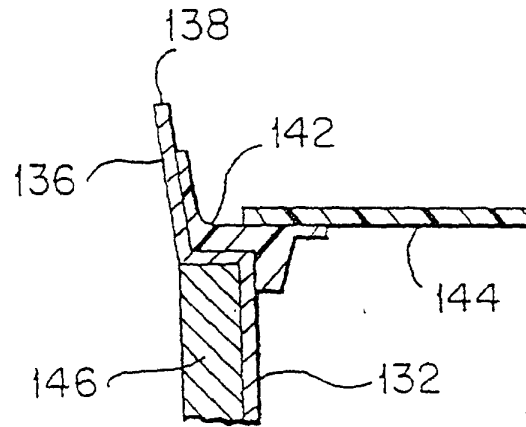


FIG. 9

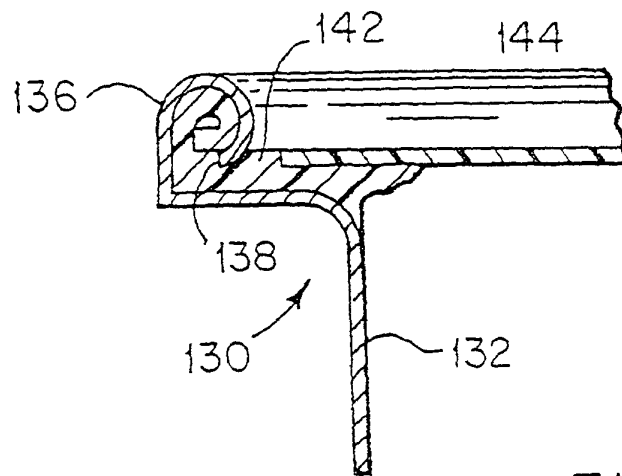


FIG. 10