

Feb. 27, 1968

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3,370,733

DISPLAYS

Filed May 12, 1965

2 Sheets-Sheet 1

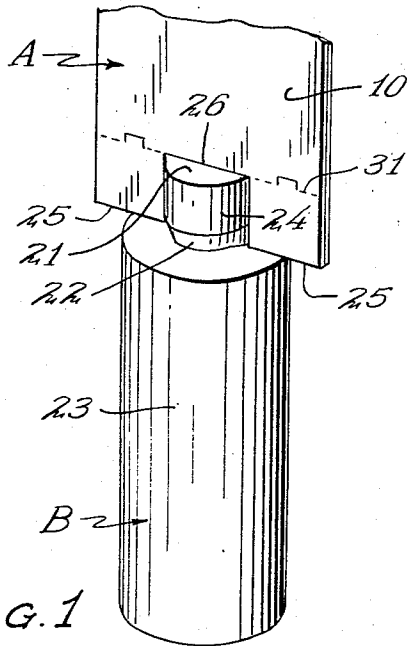


FIG. 1

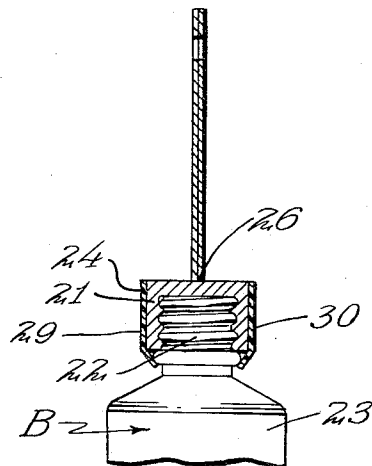


FIG. 2

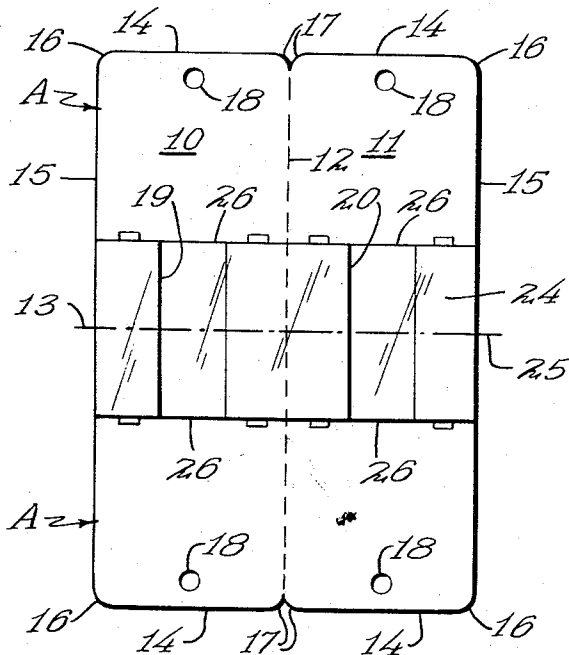


FIG. 3

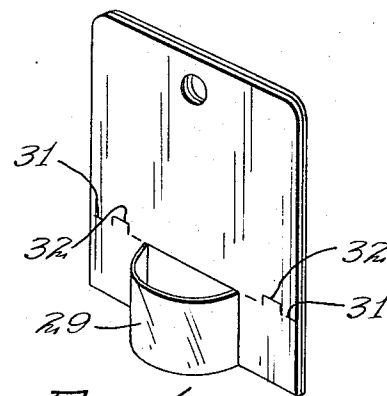


FIG. 4

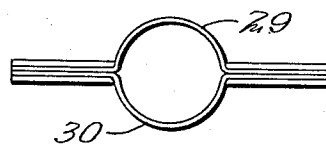


FIG. 5

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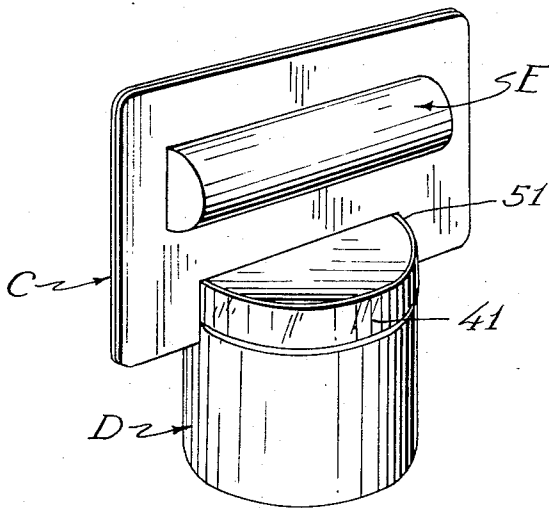


FIG. 6

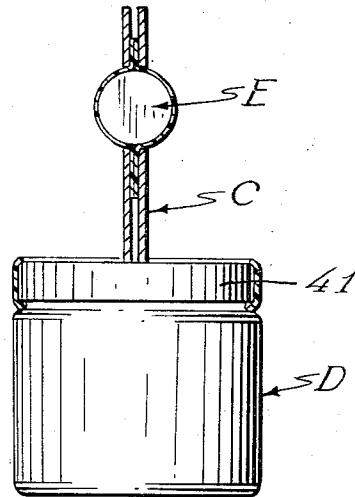


FIG. 7

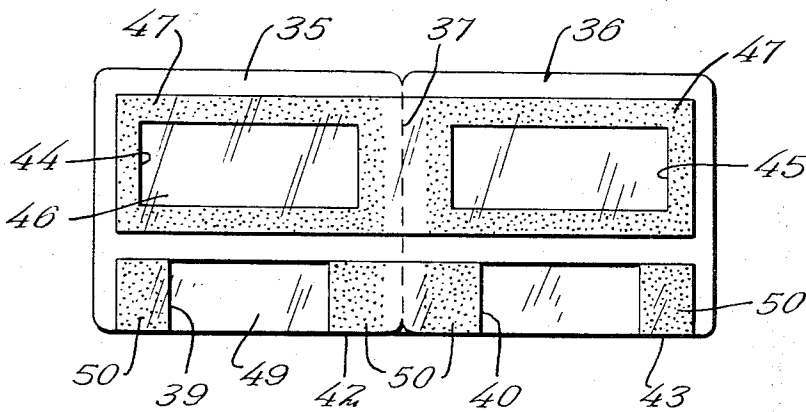


FIG. 8

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3,370,733
DISPLAYS

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12 Claims. (Cl. 215—100)

This invention relates to an improvement in displays, and deals particularly with a paperboard attachment to a bottle or other receptacle designed to describe the product being displayed and to provide a means of racking the product if it is so desired.

During recent years, the use of combination paperboard and plastic film packages has become increasingly popular. Some such packages include a bubble or tray of plastic material attached to a paperboard backing sheet, the paperboard providing a display area. In other instances, the display has comprised a doubled panel of paperboard, the panels having registering openings cut to the approximate shape of the contents, the apertures being closed by a film of plastic material secured to the marginal edges of the sheet. When the film is heated, the two panels of the display card may be folded together, the plastic film stretching to conform to the shape of the product and the marginal edges of the sheet being heat sealed together. One of the drawbacks of packages of this latter type lies in the fact that they are quite expensive to produce due to the large area of the plastic film which is involved. Thus while the structure has been commonly used for a relatively expensive product, it is not usually practical for use in packaging inexpensive items.

A further difficulty often involved lies in the fact that packages of this type are usually relatively slow to produce. Each item packaged must be individually formed by heating the film to the point where it will conform to the shape of the object and the panels of the package must then be folded together and sealed. This process also is relatively expensive due to the time consumed. As a result, if the product is formed in a large volume, a tremendous amount of equipment is necessary to package the product for shipment.

I have found that a very practical display may be formed economically by applying a relatively small area of transparent film to a pair of foldably connected panels, and to enclose only a relatively small area of the product in the film. For example, bottles and jars of the product may be effectively packaged between a pair of panels by means of a strip of plastic film which is of an area considerably less than the total area of the panels. As an example, the panels may be provided with registrable notches in an edge thereof, and the plastic film may cover only the notched edge in such a manner as to span the notches. When the display is attached to the product, the notches may be folded to accommodate the cap of the bottle or jar so that only a relatively small area of the product is enclosed. As a result, the display may be attached to the cap only thereby greatly reducing the cost of the completed display.

A further feature of the present invention resides in the fact that the construction may lend itself very well to an automatic packaging line in the customer's plant. If desired, the cards may be formed with an area of heat-shrinkable plastic spanning the apertures or notches in the panel. The area of the film overlying the apertures or notches may then be formed by vacuum forming or otherwise, and the two panels heat sealed together if desired. If the paperboard panels are notched; for example, to accommodate the cap of a bottle or jar, the film may be vacuum formed to produce, in effect, a socket of a size slightly greater than is necessary to ac-

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commodate the cap of the jar or bottle. The displays may be furnished to the producer in this form, and the displays may be applied to the bottles or jars by merely dropping the display over the cap of the bottle or jar either mechanically or manually. By passing the bottles or jars supporting the display past a heat source, or through a heated chamber, the film is automatically shrunk about the cap, and also about the adjoining portion of the bottle neck if desired. As a result, not only is the cap sealed, but the display is simultaneously attached thereto.

A further feature of the present invention resides in the fact that the displays, when used with heat shrinkable plastic, may serve the double purpose of sealing the cap from removal and attaching the display. Many bottles are sealed by placing a sleeve of heat shrinkable material about the cap and bottle neck and then applying heat. The present display may readily serve this additional result.

A further feature of the present invention lies in the fact that the display may, if desired, be used to support a second article to be sold or given away upon purchase of the product displayed. In this event, the plastic film which is used to secure the display to the object displayed may also be used to enclose the auxiliary object.

These and other objects and novel features of the invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of the specification,

FIGURE 1 is a perspective view of a bottle with a display attached thereto.

FIGURE 2 is a vertical section view through the top of the bottle with the display attached thereto.

FIGURE 3 is a diagrammatic view of a typical blank, showing the manner in which the display blanks may be formed and cut apart for use.

FIGURE 4 is a perspective view of a display showing a formed socket of heat shrinkable plastic film attached thereto.

FIGURE 5 is a bottom plan view of the display illustrated in FIGURE 4.

FIGURE 6 is a perspective view of an alternate form of display package.

FIGURE 7 is a vertical sectional view through the attached display panel structure.

FIGURE 8 is a diagrammatic view of the blank from which the panel display is formed.

In view of the fact that the display may assume various shapes and forms for attachment with articles of one type or another, the drawings are only illustrative of the manner of attaching the display to one item. For example, a display of the type illustrated in the drawings may be used in conjunction with items such as jars, tubes, or many other articles of this general type.

As indicated in FIGURE 3 of the drawings, the blanks A may comprise a pair of paperboard panels 10 and 11 connected along an edge by a fold line such as 12. The panels 10 and 11 could similarly be connected along their upper edges 13 to fold into contiguous relation. The display panels may also be formed in sheets of considerable size and the display panels 10 and 11 may be cut apart to form a series of similar displays in a single sheet. For the purpose of illustration, FIGURE 3 of the drawings shows two displays A connected along their lower edges. By cutting the sheet along the broken line 13, two separate displays are formed.

In the particular form illustrated, the panels 10 and 11 are of similar shape and area, and are generally rectangular, the upper edges 14 of the display panels 10 and 11 being connected to the outer side edges 15 of the display panels along rounded corners 16, and similarly connected to the folded edges 12 of rounded corners 17. Registrable apertures 18 may be provided in the panels

10 and 11 so that the products may be racked upon projecting arms or hooks if so desired.

Each of the panels 10 and 11 is notched as indicated at 19 and 20, respectively, the notches being in registry when the panels are folded into face contact, and being of a width to snugly accommodate the cap 21 of a bottle B. The notches 19 and 20 provide a duplex panel structure having a bifurcated end to straddle the cap 21. The bottle cap 21 is attached to a neck 22 extending from the upper end of the bottle body 23. As a result, the neck 22 is usually of smaller diameter than the cap 21.

In the arrangement illustrated, a strip 24 of plastic film is applied to the panels 10 and 11 to extend from the lower edge 25 of the panels (which coincides with the broken line 13 in FIGURE 3) to the upper extremities 26 of the notches 19 and 20. The film may extend beyond the bases 26 of the notches if the top of the bottle caps is to be covered. However, the film may be neatly formed if the strip of plastic merely spans the notches illustrated. Where the displays are connected in a sheet, as shown in FIGURE 3, the plastic strip 24 applied is twice the width of the strip attached to each display, and the strip is centrally cut along the broken line 13 simultaneously with the cutting of the paperboard.

The display A may be attached to the bottle B in either of two ways depending upon the type of film which is employed. If the film is of the type which stretches with heat, the film is heated sufficiently to make it stretchable and the two panels 10 and 11 are folded into face contact, the film stretching about the cap 21 and bottle neck 22. In this case, the displays are furnished to the producer in flat form and the stretching operation used to attach the display to the bottle B takes place at the producer's plant. On the other hand, if the film is of the heat shrinkable type, the film is formed by suction or other means into two sockets, and the panels 10 and 11 are heat sealed together by the plastic film at the point of production of the displays. Where, for example, the object to which the display is attached comprises a bottle, jar, or tube having a removable cap, each side of the portion of the film spanning the notches 19 and 20 is formed outwardly to form semicylindrical sockets 29 and 30 which combine to form a cylindrical socket of slightly greater internal diameter than the outer diameter of the cap. With this form of construction, the display may merely be dropped over the cap as the bottles, jars, or the like move along a conveyor. Heat is then directed to the film, the heat shrinking the film about the cap and neck of the bottle and forming a protective seal about the cap and neck as the display is attached thereto.

It has been found that displays formed by either of the methods described engage the cap sufficiently well so that a product of quite considerable weight may actually be lifted or supported by the display. Accordingly, it is possible for the display to form a means of supporting the objects on hooks or arms extending through the aligned apertures 18.

In preferred form, fold lines 31 extend in alignment across the panels 10 and 11 in alignment with the bases 26 of the notches 19 and 20. These fold lines permit the display to be folded into right angular relation for packaging. U-shaped cut lines 32 terminating at the fold lines 31 interrupt this fold line and provide a means of holding the parts of the display panels 10 and 11 on opposite sides of the fold lines 31 in a common plane when desired.

While the cap 31 has been described as generally cylindrical, this term should be considered broad enough to include caps of other shapes. The caps may, for example, be hexagonal, octagonal, or otherwise shaped as long as the plastic film may engage about the same to hold the display panels attached to the object being displayed.

The modified form of display package is shown in FIGURES 6 through 8 of the drawings. The display C is similar to this display A with the exception of the fact that

the display C may be used on a bottle or jar D and may support an auxiliary article E.

The display panel structure C includes a pair of similar panels 35 and 36 hingedly connected along a fold line 37 and foldable substantially into face contact in contiguous relation. The panels 35 and 36 are provided with generally rectangular notches 39 and 40, respectively, which register when the panels are folded together. The notches 39 and 40 are of a width slightly in excess of the diameter of the cap 41 of the jar D. Thus, in effect the lower edges 42 and 43 are bifurcated to straddle the cap 41 on a plane generally through the axis of the jar D.

The panels 35 and 36 are also provided with apertures 44 and 45 therethrough, the size of these apertures being slightly in excess of the outline shape of the auxiliary article E. The apertures 44 and 45 fall into registry when the panels 35 and 36 are folded together.

A flexible sheet of plastic 46 is secured in face contact with what will form the inner surfaces of the panels 35 and 36 when these panels are folded together. The film is adhered or otherwise attached to areas surrounding the window apertures 45 and 46 as indicated by the dotted shaded areas 47 in FIGURE 8. A second strip 49 may be applied to the inner surfaces of the panels 35 and 36 to bridge the notches 39 and 40. The second strip 49 is adhered to the panels on opposite sides of the notches 39 and 40 as indicated by the shaded areas 50.

The flexible sheets 46 and 49 can be combined or applied as a single strip if preferred. However, in this case, the film must be stretched to overlie the top surface 51 of the cap 41. Such an arrangement is more practical when the caps 41 of jars or bottles D are of relatively small diameter.

In forming the display, the display is normally heated to soften the plastic film. The display may be placed over a suitable form where the objects D and E are placed over the film attached to one panel, deforming the film to encircle the object E and jar cap 41. The other panel is then folded to overlie these objects and the two panels are heat sealed or otherwise secured substantially in face contact. The film itself may act as the heat sealing agent. Alternatively, the heated film may be formed to the desired shape by vacuum, the objects D and E put into position, and the film shrunk about the objects.

By using a film of polyvinyl chloride, the film may be both stretched by heat and shrunk by heat. While heated, the film may be formed to the proper shape to receive the objects. When reheated the film tends to return to its flat form, shrinking tightly about the objects.

In accordance with the patent statutes, I have described the principles of construction and operation of my display; and while I have endeavored to set forth the best embodiments thereof, I desire to have it understood that obvious changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A display comprising in combination:

an object having a projecting end including a neck portion and a body portion,
a pair of paperboard panels secured in face contact and having registrable notches therein in a free edge thereof into which said projecting end extends,
strips of flexible plastic sheeting each having its ends secured to a corresponding panel with its center portion bridging the notch therein,
said center portions of said strips extending around opposite sides of said projecting end and engaged therewith,
said panels fixed to said projecting end thereby with said free edge extending substantially on the plane of the connected end of said neck portion short of said body portion.

2. The structure of claim 1 and in which said strips are foldably connected at an end thereof.

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3. The structure of claim 1 and in which said panels include registering lines of fold extending across the panels parallel to the notched edges and adjacent to the ends of the notches most remote from said notched edges.

4. A display comprising:

an object having a generally cylindrical end and a body portion,

a display panel structure secured to said end and including a pair of hinged panels foldable into face contact and secured together,

said panels having notched free edges with the notches in registry and providing a bifurcated edge straddling said cylindrical end short of said body portion on substantially a plane through the axis of said end,

a strip of flexible plastic material secured to each said panel on opposite sides of the notch therein and spanning said notch,

said strips extending snugly about said cylindrical end on opposite sides thereof to hold the panel structure engaged on said cylindrical end.

5. The structure of claim 4 and in which said strip is secured to the inner opposed surfaces of said folded panels.

6. The structure of claim 4 and in which said strip is formed of plastic which is heat stretchable.

7. The structure of claim 4 and in which said strip is formed of plastic which is heat shrinkable.

8. A panel structure adapted for attachment to an object having a generally cylindrical end, the panel structure including:

a pair of panels foldably connected to fold into face contact,

a free edge of one panel being foldable into registry with a free edge of the other panel,

said edges having notches therein which are in registry when said panels are folded into face contact, and of a size to accommodate said cylindrical end,

said panels having attached thereto a strip of flexible plastic secured to each panel on opposite sides of said notch and bridging said notch adapted to provide an opening between said strips, and

said strip being formed of heat stretchable plastic, whereby when a said cylindrical end is inserted between said strips and said strip attached to each panel is heated, said panels may be folded together and said strip may stretch about said cylindrical end.

9. A panel structure adapted for attachment to an object having a generally cylindrical end, the panel structure including:

a pair of panels foldably connected to fold into face contact,

a free edge of one panel being foldable into registry with a free edge of the other panel,

said edges having notches therein which are in registry when said panels are folded into face contact, and of a size to accommodate said cylindrical end,

said panels each having attached thereto a strip of flexible plastic secured to each panel on opposite sides of said notch and bridging said notch, and

each said strip being formed of heat shrinkable material and preformed to provide a socket therebetween of a size at least equal to the diameter of the cylindrical end.

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10. A panel structure adapted for attachment to an object having a generally cylindrical end, the panel structure including:

a pair of panels foldably connected to fold into face contact,

a free edge of one panel being foldable into registry with a free edge of the other panel,

said edges having notches therein which are in registry when said panels are folded into face contact, and

of a size to accommodate said cylindrical end, said panels also having apertures therein which are registrable in folded form of said panels,

a plastic film secured to said panels overlying said notches and encircling said apertures, said film being deformable when heated,

whereby when said film is heated, the portion of film overlying said notches may stretch to encircle the generally cylindrical end of said object, and an auxiliary object may be enclosed by the portions of the film overlying said apertures upon the folding of said panels into substantial face contact.

11. The structure of claim 10 and in which the film shrinks about said objects when further subjected to heat to position said panels in relation to a said object and auxiliary object.

12. A display comprising:

an object having a projecting end including a neck portion and a body portion,

a pair of paperboard panels secured in face contact along one free edge and having registered notches in said panels along said one edge accommodating said neck portion,

stretchable flexible plastic sheeting secured on said panels spanning said registered notches,

said sheeting enveloped about said neck portion short of said body portion accommodated in said registered notches whereby said panels are held in fixed relation to said object by said enveloped neck portion, said free edge terminating substantially at the plane of the lower end of said neck portion.

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