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MERCHANDISE CONTAINER

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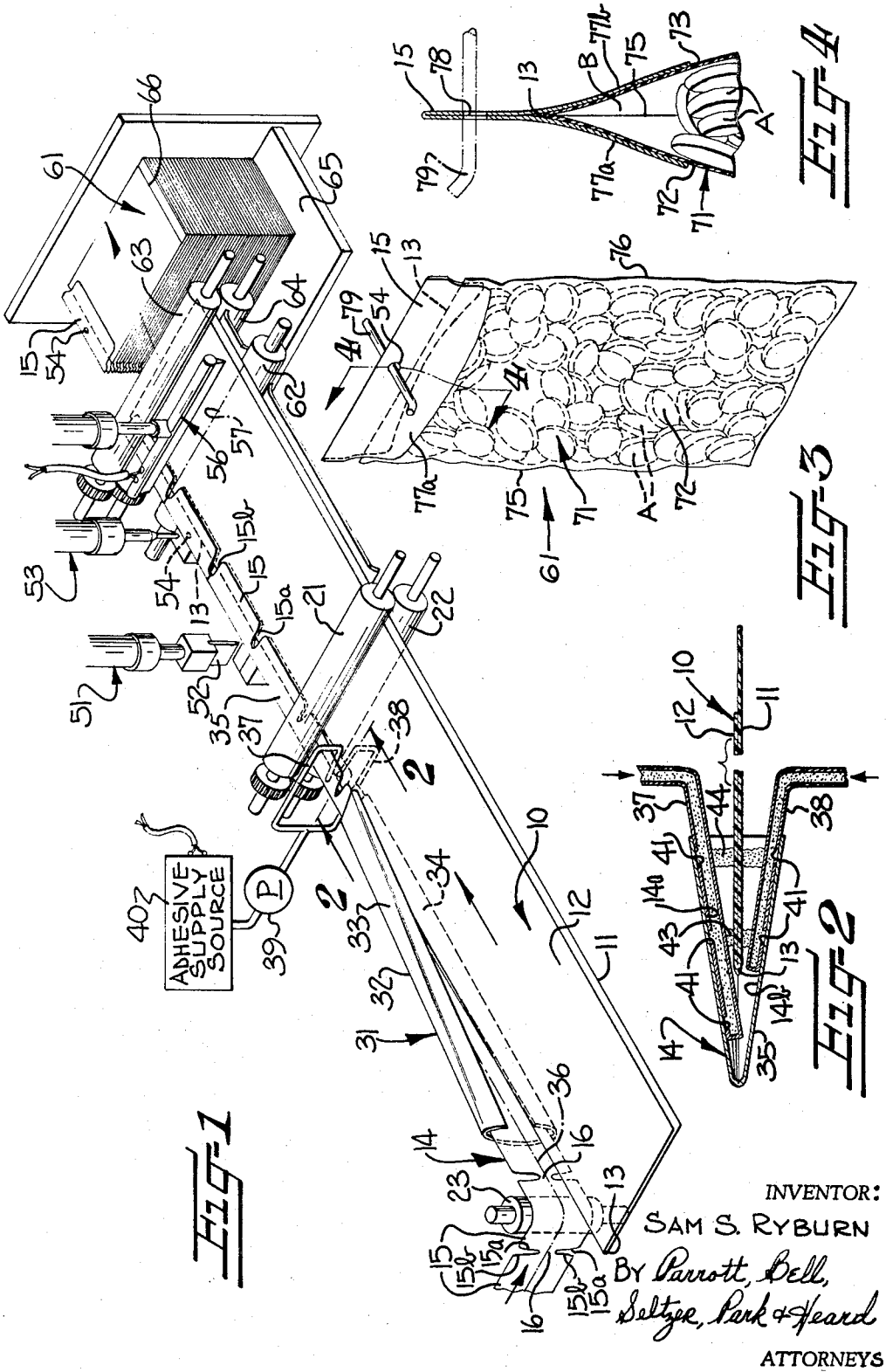


Fig-1

Fig-2

Fig-3

Fig-4

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MERCHANDISE CONTAINER

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ABSTRACT OF THE DISCLOSURE

A container for merchandise comprising a bag-like main body of heat-sealable thermoplastic material having a display label secured to a closed end thereof and having an open end opposite thereto for the insertion of merchandise articles therein; and wherein side edges of the bags are joined by heat sealing and wherein the side edges of the display label attached thereto are inset from the side edges of the bag to permit unrestricted contact of the side edges by a heated surface to heat seal the same.

The present invention relates to merchandise containers or bags made of thermoplastic material and having advertising labels attached thereto, and also to merchandise containers having a label attached to a closed end thereof and an open end for filling of the container.

It is a current practice to package certain merchandise articles in heat-sealable, thermoplastic bags. Such bags are highly desirable because of their low cost, the ease by which articles may be enclosed and sealed therein, and the high transparency of the material which facilitates display of the packaged articles to prospective purchasers. Such bags are generally formed of a thin flexible film of polyethylene, polypropylene, or the like, and may be provided with a small hole or opening to permit the bags to be conveniently hung from a display rack.

To assist in identifying merchandise contained in the bags, it is desirable to apply printed indicia to the bags describing the articles enclosed therein. Because of the nature of thermoplastic material, any printing which is placed directly on the bag requires special processes and relatively expensive equipment and, for this reason, such printing is presently performed only by the bag manufacturer. In one type of printed bag manufacture, the bag maker fabricates a large number of bags of a particular type while varying the print placed on the bags during fabrication to cover the various sizes, prices, etc. of merchandise articles to be placed therein. This type of preprinted bag is not entirely satisfactory since it requires the manufacturer to change printing equipment repeatedly during fabrication of a particular package type, and also requires the packager to maintain a large inventory of differently printed bags in order to accommodate a merchandise article.

As an alternative method of identifying the contents of thermoplastic containers, the bag manufacturer may supply the packager with unprinted bags or bags printed with a more general form of indicia, such as brand name or merchandise type, and the packager then applies an additional advertising label to the bags during the packaging operation to identify the particular size, color, price, etc. of the merchandise placed therein. This form of merchandise identification also has disadvantages since it requires the packager to maintain an inventory of both bags and labels, and necessitates individual relabeling of the bags during or after packaging. The attachment of labels by the packager is also limited to stapling or heat sealing, since rewettable type adhesive labels cannot be satisfactorily adhered to thermoplastic material and the pressure-sensitive type adhesives are too expensive. Attachment by stapling and heat sealing is somewhat undesirable since

metal staples are quite dangerous to use in bags containing comestibles because of the possibility of a customer inadvertently swallowing the same, and heat sealing the labels to the bags fuses the thermoplastic material underlying the label and reduces the capacity of the compartment area of the bag for the reception of merchandise.

It is therefore an object of the present invention to provide a heat-sealable merchandise container or bag having a preprinted advertising label attached thereto which is formed of suitable material to facilitate the application of additional printing or writing thereon which overcomes the disadvantages of the prior art.

It is another object to provide a merchandise container product of the type described having a preprinted label attached to a closed end thereof, with the other end of the bag left open for the reception of articles, and wherein the label is attached to the closed end of the bag in such a manner as to permit full use of the interior of the bag and to provide an opening in the label to facilitate support of the container without affecting the sealed condition of the bag of the container, thereby insuring the protection of the contents of the bag against contamination.

It is another object to provide novel merchandise containers or bags having a printed label secured to one end thereof and having the other end open for filling the container.

It is a more specific object to provide novel merchandise containers or bags which are preferably formed by folding a sheet thermoplastic material, applying a printed label web in straddling relation over the fold therein, severing the label web and cutting and sealing the plastic sheet material at corresponding intervals to form a plurality of merchandise receiving containers or bags having an opening in the end thereof opposite the label.

Some of the objects of the invention having been stated, other objects will appear as the description proceeds, when taken in connection with the accompanying drawings, in which—

FIGURE 1 is a fragmentary, schematic isometric view which illustrates the continuous process of the present invention;

FIGURE 2 is an enlarged fragmentary sectional view taken along line 2—2 of FIGURE 1 and looking in the direction of the arrows;

FIGURE 3 is an enlarged perspective view of a merchandise container of the present invention containing articles and hanging on a projection of a display rack;

FIGURE 4 is a fragmentary, sectional view of the merchandise bag, taken generally along line 4—4 of FIGURE 3.

Referring more specifically to the drawings and more particularly to FIGURE 1, there is illustrated the preferred steps of the process of the present invention which include handling of an elongate sheet **10** of thermoplastic material, such as polyethylene or polypropylene, which has been longitudinally folded by conventional means (not shown) to form underlying and overlying portions **11, 12.**

Located adjacent the folded edge **13** of the sheet **10** is an elongate web **14** of preprinted labels **15.** The web **14** is preferably formed of material which may be readily printed or written upon such as paper, paperboard, aluminum foil or the like and is precut or notched in such a manner that side edges **15***a*, **15***b* of each of the individual labels **15** are longitudinally spaced from the side edges of the adjacent labels by thin interconnecting strips of material **16.** This spaced relation of the side edges of adjacent labels is highly important in the present manufacturing process, as will become apparent as the description of the process proceeds.

The sheet **10** and label web **14** are withdrawn from respective supply sources (not shown) and moved in longi-

tudinal direction by a pair of nip rolls **21**, **22** which are driven by conventional means, not shown. During movement of the label web **14**, it passes about a guide roller **23** and into generally parallel adjacent relation to the folded edge **13** of the sheet **10** where it enters a label folding device **31** composed of an elongate channel member **32** having joined side portions **33**, **34** of longitudinally-decreasing angular separation. As the web moves through the channel member, the side portions **33**, **34** force the web into a longitudinally-folded condition and place it in a straddling relation over the fold in the sheet **10** so that a substantial portion **35** of the web extends outwardly from the fold line in the sheet. As seen, the web may be scored or perforated along a midline **36** thereof to facilitate the folding operation.

Thusly positioned, the web and sheet move past a pair of adhesive applicator nozzles **37**, **38** which are connected, by means of a suitable pump **39**, to an adhesive supply source **40**. The nozzles are positioned to extend between the engaging faces of the web **14** and sheet **10** on both the top and bottom sides of the sheet, and as best seen in FIGURE 2, have a plurality of small orifices **41** through which an adhesive material is discharged against the inner faces **14***a*, **14***b* of the label web at a rate sufficient to deposit a plurality of small lines **43**, **44** of the adhesive therealong. Although the type of adhesive used may be varied, a molten, quick-drying type is preferred so that, as the web and sheet are immediately thereafter brought into contiguous relation by the nip rolls **21**, **22**, the adhesive dries to firmly bond the overlying portions of the web to the sheet. The opposing faces of the outwardly extending portion **35** of the label may be sealed, as shown, or left unsealed, as desired, by eliminating the orifice **41** positioned at that portion of the label web.

The thus united sheet and label web moves past a cutting device **51**, shown as reciprocating knife blade **52**, which is programmed by suitable means to sever the web at the narrow strips of material **16** extending between and connecting the side edges of the adjacent labels **15**.

It is sometimes desirable to provide an opening or openings in the label **15** to facilitate support of the container, such as when the container is to be hand carried or hung for display. In such cases, a punch device **53** having an appropriately shaped cutting element is provided and is vertically reciprocated to perforate each of the moving severed labels in the portion **35** thereof extending outwardly from the folded edge **13** of the thermoplastic sheet **10**, thereby providing an appropriately-shaped opening therein. By so locating the opening outside the folded edge of the thermoplastic sheet, the subsequently formed bags are not perforated by the opening and can thus be maintained in a hermetically sealed condition to protect the merchandise enclosed therein.

After cutting and punching of the labels, the folded sheet with the attached labels passes beneath a transversely-disposed, heated blade **56** which extends over the full width of the thermoplastic sheet **10** and is vertically reciprocated by suitable means (not shown) to contact the sheet along a transverse line **57** extending between the spaced side edges of the adjacent labels **15**. Due to the longitudinal spacing between the side edges **15***b*, **15***a* of the adjacent labels, the heated blade **56** is free to contact the full width of the sheet **10** without interference with the labels and melt the adjacent areas of the underlying and overlying portions **11**, **12** of the sheet to unite the same and sever the sheet into a plurality of individual bag-like containers **61**.

To insure that the supporting surface beneath the sheet material **10** does not become overheated by repeated engagement with the reciprocating heated blade **56**, a rotatable roller **62**, formed of suitable heat resistant, relatively deformable material, such as polytetrafluoroethylene, may be provided and rotated so as to present a fresh surface to oppose the heated blade **56** during its engagement with the sheet material. After separation, the labeled bags **61** are intermittently moved by a pair of nip rollers **63**, **64** and stacked on a collection shelf **65**. The bags **61** are of generally rectangular shape, three sides of which are closed and the fourth **66** of which, opposite the label **15**, is left open for the reception of merchandise.

Filling of the individual bags by the packager can be accomplished in a very simple manner through the open lower end of the bag. As seen in FIGURES 1 and 2, the contiguous portions **11**, **12** of the thermoplastic sheet **10** are folded unevenly, so that the underlying portion **11** projects beyond the lower edge of portion **12** to facilitate opening of the bag to insert the merchandise. After filling, the open end may be heat sealed by suitable wire or cutting blade to hermetically seal the article inside the bag.

Although the foregoing description sets forth a preferred method of forming the merchandise containers of the present invention, it should be understood that the order of the individual steps of the process may be varied, depending on the particular equipment and type of production line desired. For example, the label punching step may occur prior to severing the labels from the web, or the operation may be omitted entirely, as previously mentioned. Similarly, other means may be employed to fold the label web over the thermoplastic sheet, e.g., one side of the label may be adhesively sealed to the sheet prior to folding, the web severed, and then the indivdual labels folded and their remaining side separately sealed to the underside of the sheet.

Although the labels of the containers of the present invention are shown as doubled-face labels and are applied by folding them in straddling relation over the closed end of the bag, a single-face label may also be applied to the folded end of the bag. In such case, the label folding step would be eliminated and the folding device replaced by a suitable label aligning guide so as to position the label correctly with respect to the folded edge of the thermoplastic sheet.

FIGURES 3 and 4 show an enlarged view of the one of merchandise containers **61** formed by the present process and containing a plurality of articles A sealed therein. The container **61** comprises a main body **71** formed of a pair of overlying panels **72**, **73** (FIGURE 4) of flexible thermoplastic material which are joined along an end **13** and opposing sides **75**, **76** to form a merchandise-receiving compartment or bag. A preprinted label **15** straddles the upper closed end of the bag and extends sufficiently above the closed upper end to be provided with hang opening **54** therein to facilitate hanging the container for display. As seen, the hang opening **54** is positioned so as to preclude perforation of the main body **71** of the container, thereby permitting merchandise in the bag to be maintained therein at all times in a hermetically sealed condition. By utilizing relatively rigid material for the label, the label **15** effectively reinforces the upper edge portion of the bag not only during filling of the bag, but also to permit the bag to hang evenly from the display projection **79**. By utilizing a molten, quick-sealing type of adhesive material to secure the label to the bag or main body, instead of heat sealing or stapling the label to the bag, the portion B (FIGURE 4) of the thermoplastic bag beneath the overlying portions **77***a*, **77***b* of the label can be retained to provide a larger bag capacity for the reception of merchandise.

As is apparent from the foregoing description of the invention, preprinted header label bags of the thermoplastic type may be manufactured in a continuous and inexpensive manner by maintaining the side edges of the portion of the label engaging the upper end of the bag spaced inwardly from the side edges of the bag so that the side edges of the thermoplastic bag are left free to be heat sealed during the manufacturing operation. Additionally, by providing the header label on the closed end of the bag, the open end of the bag can be left free and unrestricted for the reception of merchandise during the packaging operation.

In the drawings and specification there has been set

forth a preferred embodiment of the invention and, although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation, the scope of the invention being defined in the claims.

I claim:

1. A container for merchandise and the like comprising a pair of overlying panels of flexible thermoplastic material which are joined along an end and having opposing sides, a display label secured to and straddling said joined end of said panels with a portion of said label extending outwardly from said joined end, the side edges of the portion of said label extending outwardly from said joined end being aligned with the respective opposing sides of said panels, side edges of the portion of said label engaging the panels of said main body being spaced inwardly from respective side edges of said panels to leave said side edges of said panels unrestricted by said label throughout their length, and the opposing sides of said panels being heat sealed throughout their length.

2. A container as defined in claim 1 wherein said display label is formed of relatively rigid material compared to said main body material and serves to reinforce and shape said main body during reception of merchandise in said compartment and at times when said container is hanging for display.

3. A container as defined in claim 1 wherein said label has suitable indicia printed thereon, and is composed of a material selected from the group consisting of paper, paperboard and foil to facilitate the application of subsequent printing thereon.

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