May 3, 1966 W. S. PEPPLER 3,248,842

CARD DISPLAY PACKAGING

Filed April 9, 1963

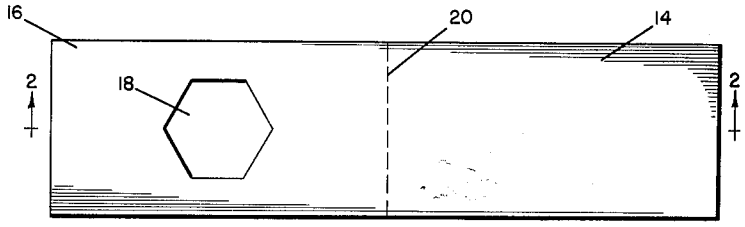


FIG. 1

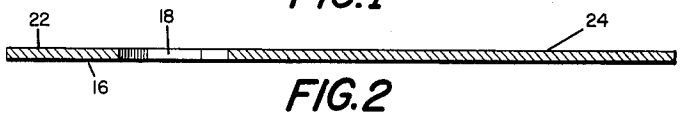


FIG. 2



FIG. 3

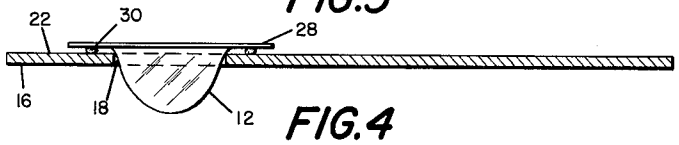


FIG. 4

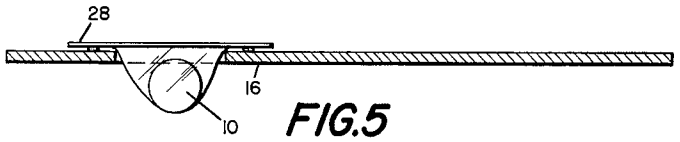


FIG. 5

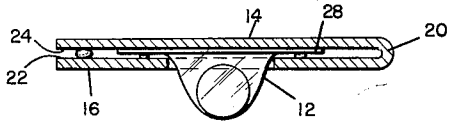


FIG. 6

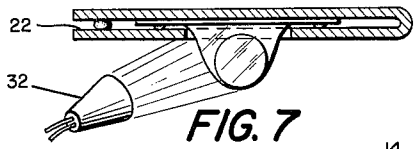


FIG. 7

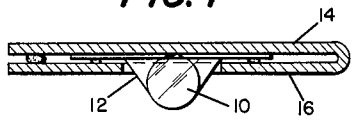


FIG. 8

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CARD DISPLAY PACKAGING

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This invention relates to the packaging of three dimensional articles and more particularly to card display methods of packaging wherein the resultant package enables the articles to be displayed or viewed.

The earlier display packages were generally formed of cardboard and cellophane and required that the package be fabricated to fit the particular product being packaged. Subsequently blister packages were developed which consisted of a preformed plastic blister which was inserted into a windowed card. Further development provided equipment which formed a film cavity or blister in the plastic sheet as part of the assembly packaging line. However, even these later developed methods required elaborate cavity forming equipment and complex processing arrangements. In addition these prior methods are able either to provide a blister for only one package size or provide relatively inflexible devices for altering the size and shape of the blister.

Therefore it is an object of the present invention to provide a new and improved method of assembling and forming display packages of the stretchable film, skin, or blister packaging types.

It is another object of the present invention to eliminate the necessity of cavity forming equipment and complex assembly arrangements in providing display packages.

It is another object of the present invention to provide a highly flexible packaging method for changing package sizes.

It is another object of the present invention to provide a new and improved display packaging method which is simple and economical to practice and yet results in a highly desirable and attractive package.

These and other objects and the nature and advantages of the present invention will be apparent from the following description taken in conjunction with the accompanying drawing wherein:

FIG. 1 is a plan view of a stiff supporting card in accordance with the present invention.

FIG. 2 is a vertical section taken along lines 2—2 of FIG. 1; and

FIGS. 3–8 are views similar to FIG. 2 showing schematically the sequence of the method of the present invention.

The resultant card-display package of the method of the present invention is shown in FIG. 8. The article **10** is contained in a conforming plastic bag **12** and is supported at the rear by backing card **14** which seals the mouth of the bag **12**. Providing support for the assembly is stiff card **16** which is preferably (as shown by the drawing) a folded section of the same sheet as backing card **14**. Stiff card **16** and backing card **14** are preferably formed of stiff paper or cardboard but may be formed of any suitable material such as plastic.

In accordance with the process of the present invention a card **16** with an opening **18** therein, large enough for the article which is to be packaged to pass through, is positioned for either automatic or manual packaging. Stiff card **16** preferably has a fold line **20** and an extension beyond the fold line **20** which comprises backing card **14**. However, backing card **14** may be provided as a separate card.

The top surface **22** of card **16** may be coated with a heat sensitive adhesive. Such adhesives are commonly known and are commercially available. The heat sensitive adhesive coating may be continuous and exist over the entire top surface **22** of stiff card **16**, and, in fact, may extend to the upper or front facing surface **24** of backing card **14**. Alternatively, just surface **22** may be coated with the heat sensitive adhesive. The adhesive coating may be discontinuous if desired and may extend or be provided only at desirable portions, such as entirely or partially around the periphery of opening **18** or at either or both ends of card **16**. Instead of providing surface **22** with an adhesive coating, it may be desirable to instead coat only surface **24** with an adhesive coating. In this case the adhesive may, if desired, be a contact or pressure sensitive adhesive.

After positioning the card **16**, an oversized sheet of shrinkable film **26** is placed over the opening **18** in the card **16**. Shrinkable film **26** is preferably formed of a heat shrinkable plastic such as biaxially oriented polyethylene or polypropylene. However, any shrinkable type of plastic film may be used provided the film is relatively transparent. After positioning sheet **26** above opening **18**, the center of sheet **26** is pushed through opening **18** in card **16** without anchoring the edges of the sheet to provide a bag **12** extending through the opening **18**. The edges **28** of plastic sheet **26** remain adjacent the top surface **22** of sheet **16**. This configuration is shown in FIG. 4 with the top surface **22** of card **16** provided with a heat sensitive adhesive coating **30** extending about the periphery of opening **18**. The plastic bag **12** is maintained in position by frictional engagement with the wall of opening **18**.

The article to be packaged is next placed in bag **12** by passing it through the mouth of the bag and the opening **18** in card **16**. The next phase of the process involves placing the backing card **14** against the top or back facing surface **22** of stiff card **16** to effect sealing or closure of the open end of bag **12** and to seal or frictionally engage edges **28** of the bag **12**. The sealing engagement of cards **14** and **16** and edges **28** may be effected in any suitable manner such as by passing a rivot or staple through the two cards or by contacting the space between the two cards with a suitable adhesive such as a contact or heat sensitive adhesive as shown at **32**. If, as previously stated, the front facing surface **24** of the backing card **14** has been provided with a contact adhesive, then upon sealing the backing card **14** against the back or top surface **22** of the stiff card **16**, the card **16** as well as the edges **28** of the plastic bag **12** will be bonded to front top surface **24** of backing card **14**.

After the sealing of the open end of bag **12** with backing card **14**, the plastic bag is shrunk in order to conform to the contour of the packaged article. If the bag **12** is formed of a heat shrinkable plastic film, then the shrinkage is effected by applying heat. This may be carried out such as shown in FIG. 7 wherein radiant heat is applied via heat lamp **32**. As an alternative, the package may be exposed to blasts of hot air or passed through an oven. If the backing card and/or stiff support card have been coated with heat sensitive adhesives as described above, then the application of heat to effect shrinkage of bag **12** will also effect bonding in the areas of adhesive contact. In this manner edges **28** of bag **12** may be bonded to either or both of surfaces **22** and **24** of cards **16** and **14** respectively, and also in this manner card **14** may be bonded to card **16**.

It will be obvious to those skilled in the art that various changes may be made without departing from the scope of the invention and therefore the invention is not limited as to what is described in the specification but only as indicated in the appended claim.

What is claimed is:

A method of display packaging comprising:

(1) providing a relatively stiff card with an opening therein and with a heat sensitive adhesive provided on its back surface at least partially around the periphery of the opening;

(2) pushing an oversized, unanchored sheet of heat-shrinkable, transparent plastic film through the opening in said carton without anchoring the edges of the sheet to form an open ended plastic bag extending through the plane of said card;

(3) thereafter passing an article to be packaged completely through the open end of the bag and through the opening in the card and into said plastic bag;

(4) sealing a backing card against the back surface of said stiff card to close the open end of the bag and seal the film edges; and

(5) applying heat to simultaneously bond the film edges to the back surface of said stiff card and shrink the plastic film to contour the film to the shape of the article.

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