

[54] **BLISTER PACKAGE**

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206/78 B, 79, 80 R, 80 A, 461-463, 470; 53/29

[56] **References Cited**

**UNITED STATES PATENTS**

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*Primary Examiner*—William I. Price

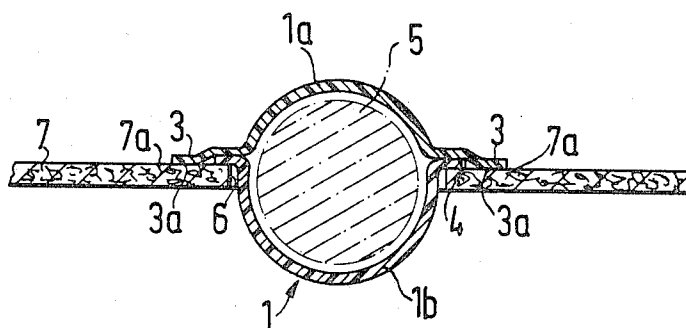
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[57] **ABSTRACT**

A blister package is described which comprises a double blister serving to enclose an article and consisting of two halves each with a securing flange and foldable along a common folding edge and a display card provided with an opening into which the double blister fits, the double blister after its mounting in the opening not protruding at all from the surface of the display card, protruding on one side only, or, preferably, protruding on both sides, the securing flange of the one half of the blister being wider than that of the other half, with both securing flanges of the closed double blister containing the article resting on one and the same side of the display card and in the vicinity of the opening, the narrower flange being located directly against the surface of the display card and covered by the wider flange, the outer section of which likewise rests on the same surface of the display card and is fixed to this surface in a manner enabling the outer section to be pulled off to thus effect the easy removal of the double blister from the display card or carrier object.

**3 Claims, 4 Drawing Figures**



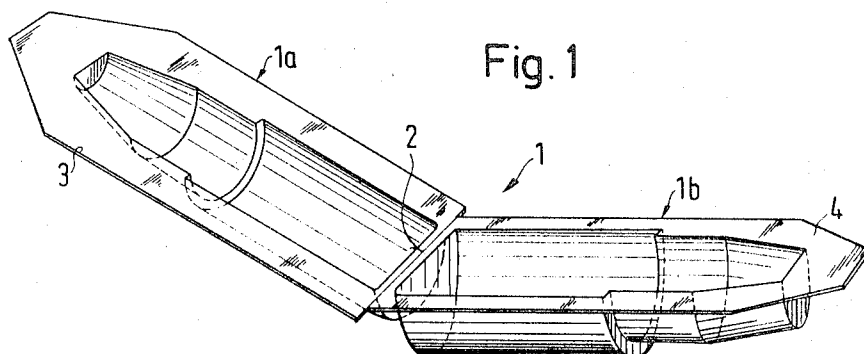


Fig. 1

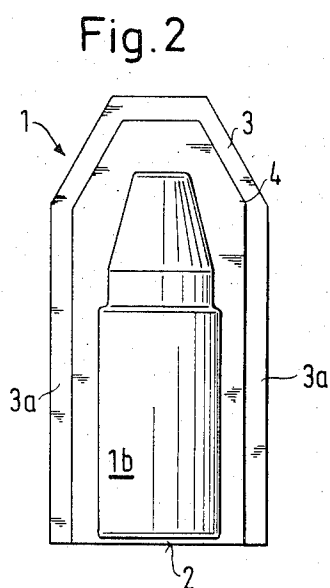


Fig. 2

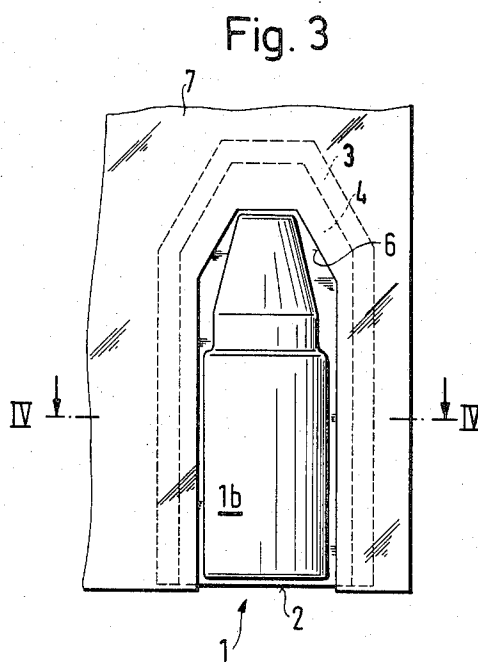


Fig. 3

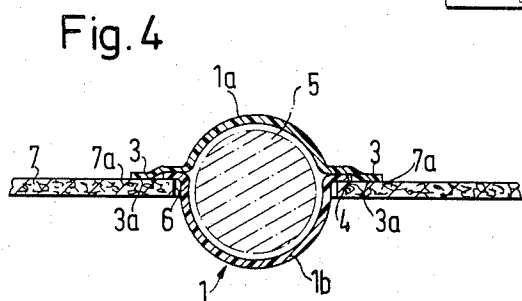


Fig. 4

**BLISTER PACKAGE****BACKGROUND OF THE INVENTION**

The invention relates to a blister package, and particularly to one in which an article, whether it be a shaped mass or a container, is enclosed by a double blister and this located in an opening in a display card, or in a similar flat carrier, the opening preferably being shaped to suit the contour of the enclosed article, the arrangement being such that the article does not protrude from the surface on either side of the carrier, or it does so on the one side or on both sides.

Packages of this kind are described in U.S. Pat. Nos. 2,809,863 (Curran), 3,185,295 (Crane) and 3,301,395 (Swezey), but in these cases the mounting of the article in the carrier is in general either one which is relatively loose, so that an unintentional removal of the article from the carrier can occur, or one which can be produced only in a comparatively complicated and hence also expensive manner. The object of the present invention is the provision of a blister package which, compared with these known packages, can be produced in a simple and cheap manner, and which is moreover easy to open. Whereas previously articles such as fountain-pens, inkcartridges, bottles containing medicinal or cosmetic, pulverulent or liquid products, pastilles, tablets, small tools of all kinds such as scissors and tweezers, nails, screws, tooth- and other brushes, tubes filled with toothpastes, paints, or other substances, and other such articles, were firstly mounted on display cards in such a way that a dome-shaped or convex blister could be placed over the article(s) to be enclosed, the peripheral edge or rim extending round the domed part of the blister serving as a welding or gluing surface for the obtainment of a firm bond with the material of the one side of a display card or object (see, e.g. U.S. Pat. No. 2,884,127 [Nearly]), the practice more recently is to provide in the display card, or in some other equivalent carrier surface, an opening or cutaway portion, the shape of which preferably corresponds approximately to that of the article(s) to be mounted in the display card.

The securing of a double blister enclosing an article is effected in the case of the known packages preferably by the display card being designed as a foldable double card or carton, such as is described, e.g. in the U.S. Pat. No. 3,301,395 (Swezey). A thin plastic sheet or film is placed on the inner face of the opened card or carton, and, after positioning of the article to be packaged and folding together of the card or carton, the portion of the plastic material situated over the provided opening is shrunk by heating onto the article, the two halves of the plastic sheet extending beyond and around the article becoming, as a result of heating, simultaneously welded or glued together and glued to the two halves of the carrier material.

Furthermore, there has already been produced also a double blister from two deep-drawn parts, which double blister possesses a wide marginal or rim flange extending around both halves, except along their common folding edge, the marginal flange being inserted between the two halves of the foldable double cardboard of a display card provided with a cutaway portion or opening corresponding to the contour of the double blister.

The two halves of the cardboard are stuck together in such a manner that at least an appreciable section of the outer rim of the double blister is firmly wedged between the two halves, or can be easily glued between.

Whereas in the case of the first described known embodiment, the double blister and the display card have to be destroyed in order to remove the article, it is in the case of the last described known embodiment only necessary to take or tear the double blister out of the display card, whereupon the two halves of the blister can be opened up along the common folding edge and the article removed.

However, the mounting of the double blister in the display card is not completely secure, and the folding and gluing or welding of the two halves of the cardboard of the display card complicate manufacture.

**SUMMARY OF THE INVENTION**

The present invention therefore has as an object the provision of a blister package comprising a double blister with an article contained therein and a display card, wherein the mounting of the double blister in the display card is greatly simplified.

This object is attained by a blister package according to the invention, which comprises a double blister serving to enclose an article and consisting of two halves each with a securing flange and being foldable along a common folding edge and a display card provided with an opening into which the double blister fits, the double blister after its mounting in the opening preferably protruding from the surface on both sides of the display card, the blister package being characterised in that the securing marginal flange of one half of the blister is wider than that of the other half, with both securing flanges of the closed blister containing the article resting on one and the same side of the display card and in the vicinity of the opening, the narrower flange being located directly against the surface of the display card and being covered by the wider flange. The outer portion of the latter flange likewise rests on the same surface of the display card and is fixed to this surface in a manner enabling such outer portion of the wider flange to be pulled off when desired.

Also the underneath narrower flange is preferably joined in the same manner to the surface of the display card on which it rests, so that it too can be pulled off when desired. On the other hand, a gluing or welding of the inner section of the wider flange to the outer side of the narrower flange, on which the wider flange rests, is advantageously avoided, in order to ensure an easy opening of the double blister and removal of the article after pulling off of the double blister from the display card.

A blister package according to the invention is produced by a process comprising firstly the manufacture of a double blister consisting of two halves connected together along a common folding edge, each of the two halves possessing a securing flange, the securing flange of one half of the blister being made wider than that of the other half; the insertion thereupon of an article into the double blister and the closing of the latter by the folding together of the two halves; and, finally, the introduction of the double blister into the opening in a display card and the securing of the blister therein in such a manner that it does not protrude on either side, or protrudes on one side only or, preferably, protrudes

on both sides of the display card, and both securing flanges rest, as described above, on the surface of one and the same side of the display card and in the vicinity of the opening, the narrower flange being located directly against the surface of the display card and covered by the wider flange, the outer section of the wider flange likewise resting on the same face of the display card, with at least this outer section of the wider securing flange, and usually with it also the underneath smaller flange, being then joined to the material of the face of the display card, on which they rest, in a manner enabling them to be pulled off when desired.

Sheets made from polyhexamethylenedipamide (nylon), polyvinylidene chloride, copolymers such as Saran, and so forth, are applicable for the manufacture of the double blister.

The display card can be made from any desired material, preferably from materials which can be torn relatively easily, particularly cardboard, which can be covered with a printable layer of paper, and which is advantageously provided with a thin synthetic resin film as a coating.

Such a film coating for the sheet of cardboard or of other suitable material serving as the display-card carrier can be produced, e.g. in a manner known per se by application of a solution of 6 to 8 parts by weight of a polyvinyl chloride having a melting range of 90° - 110°C in 100 parts by weight of ethyl acetate. An amount of, e.g. 50 g of this solution per m<sup>2</sup> of cardboard surface is applied and the solvent then evaporated off.

If the double blister is of a polyvinyl chloride material having a softening range of 180° - 220°C, then a very short heating, e.g. from 1 to 1 1/2 seconds, at 180°C suffices to obtain a good welding of the outer section of the wider flange of the blister and, optionally, of the whole underneath contact surface of the inner narrower flange of the double blister to the film-coating of the display card, the bond being of such a nature that a separation of the bonded materials for the purpose of removing the double blister from the display card is possible with a minimum of effort.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Further details of the invention are illustrated by the attached drawings:

FIG. 1 shows in perspective a double blister of the invention, in the open position;

FIG. 2 is a front view of the closed double blister of FIG. 1;

FIG. 3 is a front view of a portion of a display card with an inserted blister; and

FIG. 4 shows a section along the line IV - IV through the arrangement of FIG. 3.

#### DETAILED DESCRIPTION OF THE INVENTION

As is shown in FIG. 1, the double blister (1) consists

of two halves 1a and 1b, which are connected together by a folding edge (2). The half (1a) of the blister is provided with a wide peripheral securing flange (3) and the half (1b) of the blister with a narrower securing flange (4). FIG. 2 shows the closed double blister from the front with a view of the blister component (1b). The wider securing flange (3) projects with its outer section (3a) beyond the narrower securing flange (4). In FIG. 3, the closed double blister (1) containing an article (5) [shown for the sake of clarity only in FIG. 4] is located in the opening (6) of a display card (7), the mounting of the blister being such that the narrower securing flange (4) and the wider securing flange (3), which covers flange (4), are resting on the side (7a) of the display card (7), the side (7a) being covered with a synthetic resin film, the flange (4) and the outer section (3a) of the flange (3) being thermally welded to the cardboard material of the display card.

It is possible, by lateral pressure against the half (1b) of the double blister for this to be pulled or torn away from the display card (1) with comparatively little effort, and for the blister to be then easily opened since the flanges (3) and (4) are not welded or glued together.

What we claim is:

1. A blister package comprising:

a double blister serving to enclose an article and consisting of two halves each with a securing flange and foldable along a common folding edge;

a display card provided with an opening into which the double blister fits;

the securing flange of one half of the blister being wider than that of the other half;

both of said securing flanges of the closed double blister containing therein an article resting on one and the same surface of said display card and in the vicinity of said opening therein;

the narrower of said flanges being located directly against said surface of said display card;

the wider of said flanges having an inner portion non-fixedly and loosely covering said narrower flange;

said wider flange having an outer portion directly resting on said surface of said display card; and

said outer portion of said wider flange being fixed to said surface in a manner enabling said outer portion to be pulled off to thus effect the easy removal of the double blister from said display card.

2. A blister package as claimed in claim 1, wherein said narrower flange is also fixed to said surface of said display card in a manner enabling said narrower flange to be pulled off when necessary.

3. A blister package as claimed in claim 1, wherein the inner face of said narrower flange in contact with said surface of said display card lies loosely and non-fixedly thereon.

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