United States Patent

Tangredi et al.

[15] **3,670,947**

[45] **June 20, 1972**

[54] HANGER BAG WITH FLAP CLOSURE

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[21] Appl. No.: **62,322**

[52] **U.S. Cl.** .....**229/54 R,** 150/12, 206/7 K, 229/62

[51] **Int. Cl.** **B65d 31/00,** B65d 33/06

[58] **Field of Search** .....229/54 R, 62, 68 C; 150/3, 150/7, 12; 226/7 H, 7 K

[56] **References Cited**

UNITED STATES PATENTS

1,454,953	5/1923	Bunker et al.	229/54 R
3,549,085	12/1970	Hart	229/54 R
3,429,498	2/1969	Dorfman	229/54 R

FOREIGN PATENTS OR APPLICATIONS

23,056	10/1913	Great Britain	229/54 R
1,489,296	6/1967	France	150/3

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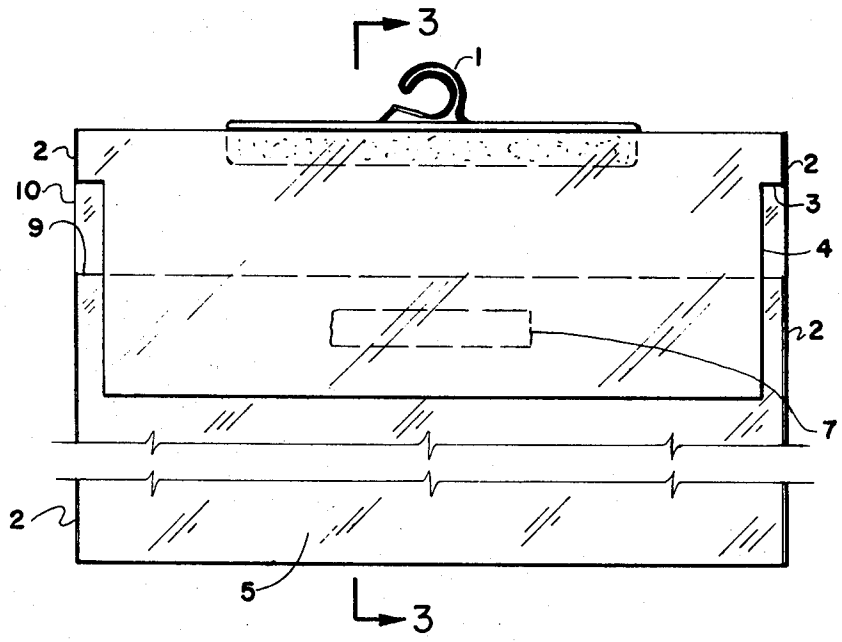
[57] **ABSTRACT**

A hanger bag is formed from a single, elongated, sheet of flexible thermoplastic film by cutting a series of spaced apart notches in one of the longitudinal edges of said film, the distance between said notches being the desired width of the finished bag; doubling back the opposite longitudinal edge of the sheet to the desired height of the finished bag; folding the notched edge over the opposite edge; heat-sealing a hanger or handle member to the upper folded over edge between the spaced apart notches; and, heat-sealing and severing the folded film transversely, said heat seal passing through said notch, whereby a finished bag is formed.

5 Claims, 8 Drawing Figures



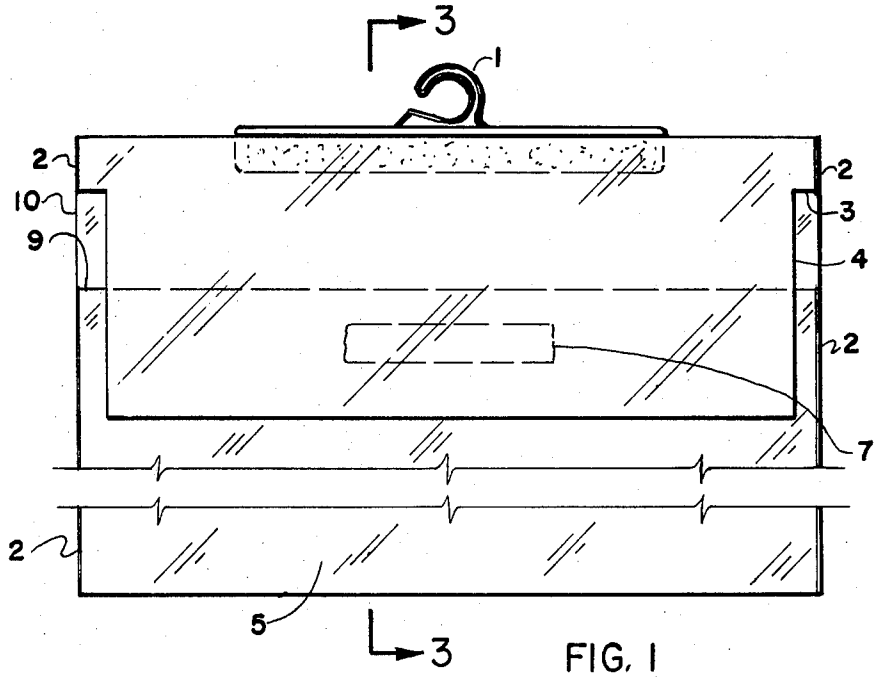


FIG. 1

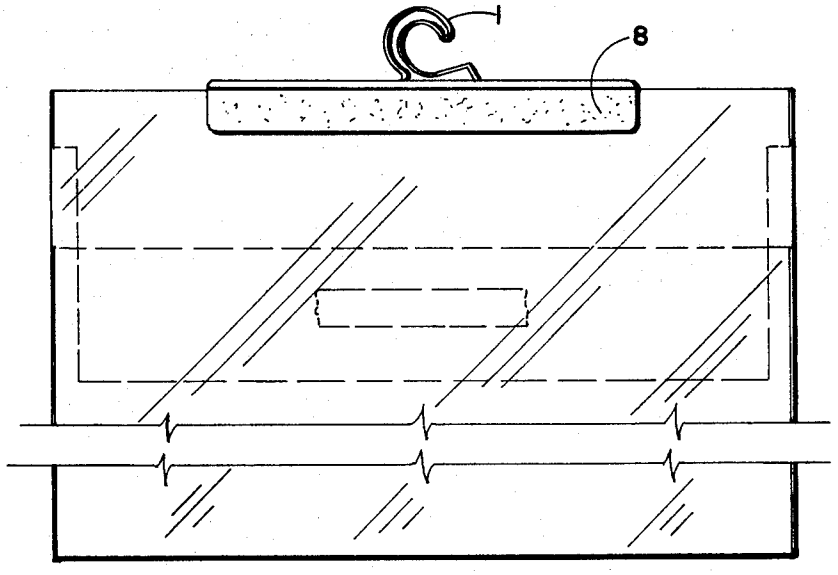


FIG. 2

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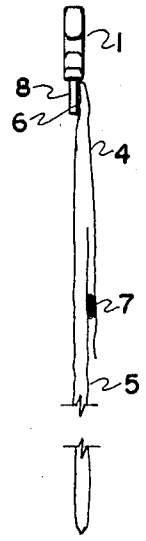

FIG. 3

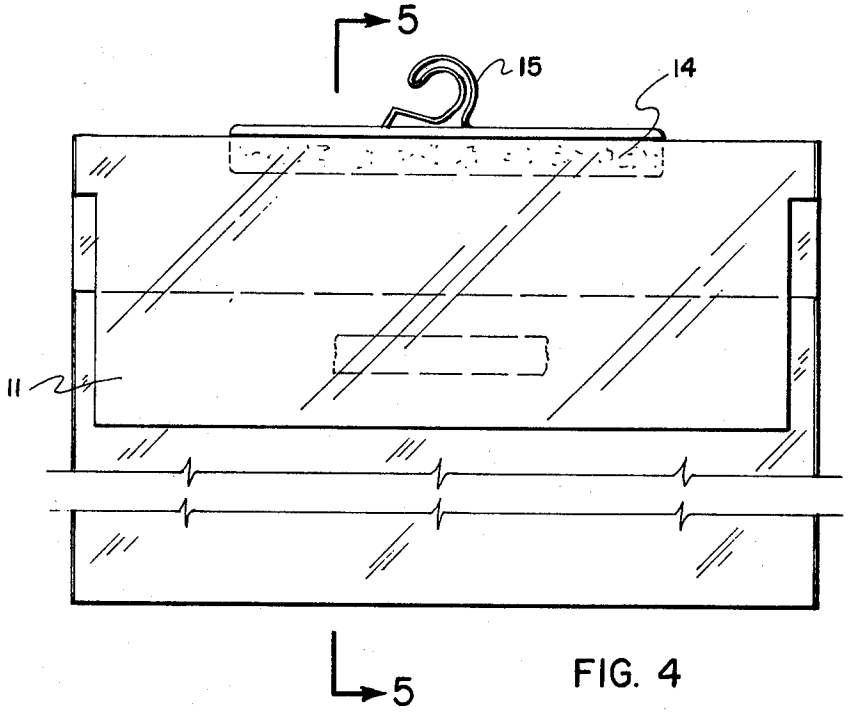

FIG. 4

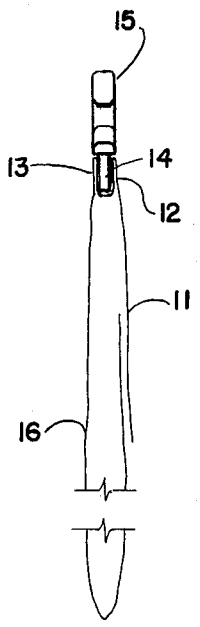

FIG. 5

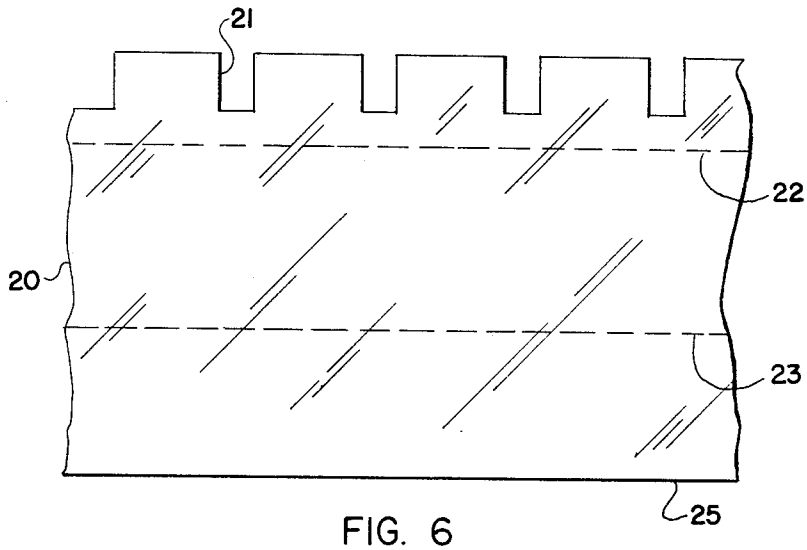

FIG. 6

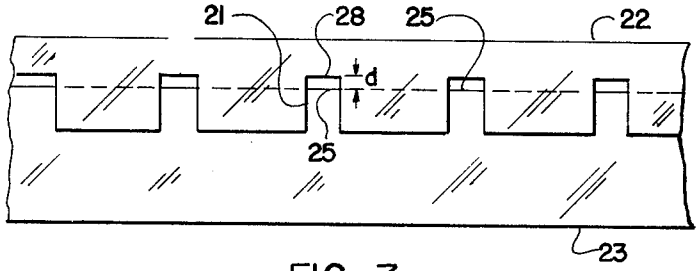

FIG. 7

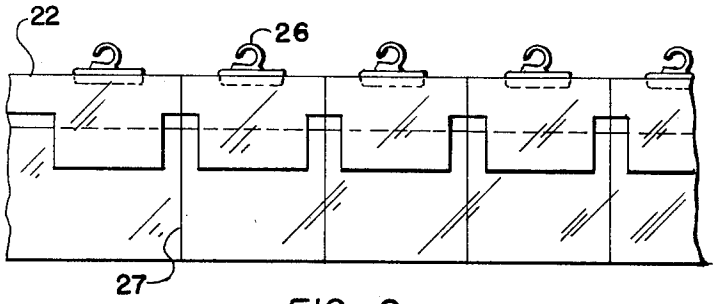

FIG. 8

HANGER BAG WITH FLAP CLOSURE

FIELD OF INVENTION

This invention relates to a hanger bag with a flap closure and to the method for producing same. The bag may be hung in a retail display rack and may be reused after opening. Typically, soft wear items such as shirts, blouses, pajamas, and the like will be packed and displayed in the hanger bag. The bags are made from a transparent, flexible, thermoplastic material such as polyethylene or polypropylene film and the hanger member also can be molded from a thermoplastic material such as polypropylene or polyethylene.

BACKGROUND OF INVENTION

Hanger bags have enjoyed great commercial success in recent years, but many of these are relatively expensive to manufacture because they are of unnecessarily complicated designs. On the other hand, in order to achieve economy, some hanger or display bags are manufactured with cumbersome and undesirable features. For example, U.S. Pat. No. 3,348,761 issued to Erich Vetter on Oct. 24, 1967 shows a hanger bag in which the top of the bag is completely sealed and closed in order to securely attach the hanger member to the bag and access to the bag must be had through the bottom. Accordingly, it is one object of the present invention to provide a hanger bag whose interior is accessible from the top.

In U.S. Pat. No. 3,429,498 issued to J. J. Dorfman on Feb. 25, 1969 a handle bag is shown wherein the interior of the bag is accessible through a flap at the top of the bag. However, the Dorfman bag is assembled by passing the handle through a slot in the flap so that it protrudes at the top of the bag. This results in unnecessary production steps such as the slitting of the flap and then the passing of the grip portion of the member through the slot. Accordingly, it is another object of the present invention to provide a hanger or handle bag in which the hanger member is attached to the outside of the bag and the bag does not have to be slit in order to accommodate the hanger member.

U.S. Pat. Nos. 3,313,470 issued to G. Renner et al, on Apr. 11, 1967 and 3,495,763 issued to J. Schmidt et al. on Feb. 17, 1970 show bags in which the handle or hanger member is in two pieces and must be made to register. Accordingly, it is an object of the present invention to provide a one-piece hanger or handle member which does not require registering.

The foregoing enumerated objects and others are achieved by the present invention which is better understood by reference to the following description and drawings.

SUMMARY OF THE INVENTION

The hanger or handle bag of the present invention has a bag portion which is formed from a single sheet of folded, flexible thermoplastic material, and the hanger which is attached to the outside of the bag is formed from a relatively rigid plastic material. One of the walls of the bag extends beyond the other at the bag mouth to form a fold-over closure flap. The width of the flap is reduced above the bag mouth so that the flap will not be sealed when the longitudinal edges of the sheet are sealed to form the bag. The hanger is heat sealed to the outside of the bag and the folded flap portion above the bag mouth.

The method of forming the bag from an elongated, single sheet of flexible thermoplastic film is by cutting a series of spaced-apart notches in one longitudinal edge of the sheet of film, the space between notches being that of the desired width of the finished bag; doubling back the opposite longitudinal edge to the desired height of the finished bag; folding the notched edge over the opposite edge; attaching the hanger member to the upper folded-over edge intermediate said notches; and thereafter heat sealing and severing the sheet of film transversely with the heat seal passing through the notch thereby removing the finished bag from the folded sheet of film.

The bag has the advantage that it can be made in large quantities with a minimum of manufacturing steps, it can be opened from the top and reused, the bag material may be either transparent or it may be printed with advertising media; and a hanger member alone may be attached or a member which can be used as both a hand handle and hanger may be attached. These features may be more fully appreciated by reference to the drawings, a description of which follows.

DESCRIPTION OF THE DRAWINGS

In describing the present invention reference will be made to the accompanying drawings in which:

FIG. 1 is a front view of the bag of the present invention showing the bag's closure flap and the handle member attached to the bag;

FIG. 2 is a rear view of the bag shown in FIG. 1;

FIG. 3 is a view of the section taken along line 3—3 of FIG. 1;

FIG. 4 shows the front view of an alternate embodiment of the present invention;

FIG. 5 shows a section taken along line 5—5 of FIG. 4;

FIG. 6 shows the notched sheet of film from which bags of the present invention can be made;

FIG. 7 shows a notched sheet of film shown in FIG. 6 with the longitudinal edges of the sheet folded over; and,

FIG. 8 shows the folded notched sheet of film with the hanger members attached intermediate of the notches with the sealing and severing line passing through the notches.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The hanger bag which is the preferred embodiment of the subject invention can be seen in FIGS. 1 through 3. FIG. 1 shows a front view of the bag, FIG. 2 shows the rear view of the bag, and FIG. 3 shows a section taken along line 3—3 of FIG. 1. Referring now to these three figures, hanger or handle member 1 is shown attached to the bag 5 at the sealing face 8 of the hanger member thus forming hanger seal 6. The bag portion 5 has a front panel or fold member which terminates at edge 9. Flap member 4 folds over edge 9 and closes the opening to the bag. Pressure sensitive tape 7 may be used to keep flap 4 secured or other fastening means may be used. Flap 4 is not as wide as the bag 5, having notches 3 cut on both sides. The reduction in width of flap 4 prevents the sealing of the flap along edges 2, thus leaving an unsealed portion of the bag edge. The flap 4 will rotate about the uppermost portion of the notch 3 when the bag is opened.

The construction of the bag shown in FIGS. 1–3 can be better understood from FIGS. 6-8 which illustrate a preferred method of making the bag. FIG. 6 shows a sheet of film 20 having notches 21 cut in one of its longitudinal edges. These notches should be spaced apart a distance approximately equal to the desired width of the finished bag. The opposite longitudinal edge 25 of the film 20 is doubled back on the sheet of film by folding it along line 23. The distance between fold line 23 and the edge of the bag 25 represents the predetermined and desired depth of the bag pocket.

After edge 25 is doubled back on the sheet of film along line 23, the notched longitudinal edge of the film is folded over the opposite edge 25 along fold line 22 so that the film has the appearance shown in FIG. 7. Fold line 22 becomes the top edge of the bag and fold line 23 becomes the bottom edge of the bag. Edge 25 should be spaced apart from the uppermost portion 28 of notch 21 by a distance *d*. Distance *d* can be varied as desired.

After the sheet of film has been folded as shown in FIG. 7 handle members 26 may be attached intermediate the notches as shown in FIG. 8. In the preferred embodiment shown here, the handles are heat sealed to the rear portion of the bag adjacent or in the vicinity of upper edge 22. (FIG. 3 shows the attachment of the hanger member to the bag in better detail.) After the hanger members 26 are attached, the bags are sealed and severed along lines 27. The sealing and severing can be

accomplished in one step by a heated wire or heated bar and due to the nature of thermoplastic films such as polyethylene or polypropylene, the sealing and severing will occur simultaneously as the films melt under the influence of the heated severing wire and then fuse when cooled. In the arrangement shown in FIG. 8, the common edge of two adjacent bars are simultaneously sealed by the sealing and severing operation along line 27. Thus, only one sealing operation is necessary to seal two seams.

ALTERNATE EMBODIMENT

FIGS. 4 and 5 show an alternate embodiment of the subject invention in which the handle member 15 is placed into a gusset formed in the top of the bag so that both sides of the sealing area 14 of the member 15 may be sealed to respective sides 12 and 13 of the gusset or crease. Flap 11 and the rear wall of bag 16 depend from the gusset or crease area as shown in FIG. 5. This alternate embodiment gives a second sealing surface so that the handle member and bag are more securely fastened one to the other. This is advantageous when a heavy item is to be displayed in the hanger bag.

Having thus described our invention, we claim:

1. A hanger bag comprising:

a. a bag member formed from a single sheet of flexible, thermoplastic film, a first portion of said film being folded over on itself along a lower fold line defining the bottom of the bag and the side edges of said first portion of said sheet being sealed together to form a bag pocket;

b. a closure flap formed by the remaining portion of said sheet, said remaining portion being folded over along an upper fold line defining the top of the bag, said upper fold line being spaced apart from the opening to said bag pocket, the side edges of said remaining portion being sealed to each other for a portion of the distance from said top to said opening, the unsealed portion of said edges of said sheet forming the closure flap being narrower than said sealed portion and extending downwardly to cover said opening; and,

c. a handle member attached to said bag adjacent the top thereof.

2. The bag of claim 1 wherein said handle member is a hanger.

3. The bag of claim 2 wherein the thermoplastic sheet is polypropylene.

4. The bag of claim 2 wherein the thermoplastic sheet is polyethylene.

5. The bag of claim 2 wherein the hanger is formed from a relatively rigid thermoplastic material.

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