

[54] **PLASTIC BAG WITH INTEGRAL POUCH AND METHOD FOR MAKING SAME**

[72] Inventor: **Barney Warren, Brooklyn, N.Y.**

[73] Assignee: **Cellu-Craft, Inc., New Hyde Park, N.Y.**

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[51] Int. Cl.**B65d 31/12**

[58] Field of Search**229/56, 72, 74, 87.5; 150/1, 150/39; 206/DIG. 29, 37-39; 190/52; 40/159, 16, 359, 16.2, 16.4, 17**

[56] **References Cited**

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Primary Examiner—Joseph R. Leclair

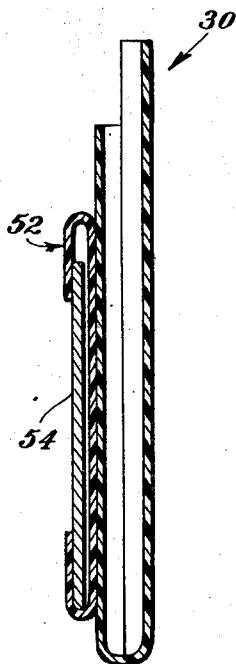
Assistant Examiner—Stephen Marcus

Attorney—Leonard H. King

[57] **ABSTRACT**

A plastic bag that is closed along three side edges and open at one edge for receiving an article is provided with a pouch on one outer surface. The pouch is formed of a second plastic layer that is heat sealed to the bag, preferably coincidentally with two side edges thereof. The upper and lower unsealed edges of the plastic layer are folded over to define a member having spacedly confronting edges. A sheet bearing appropriate indicia may be positioned in the pouch and be removably captured by the folded over edges of the second plastic layer. The indicia bearing sheet is readily removable from the pouch without disturbing the contents of the bag.

6 Claims, 6 Drawing Figures



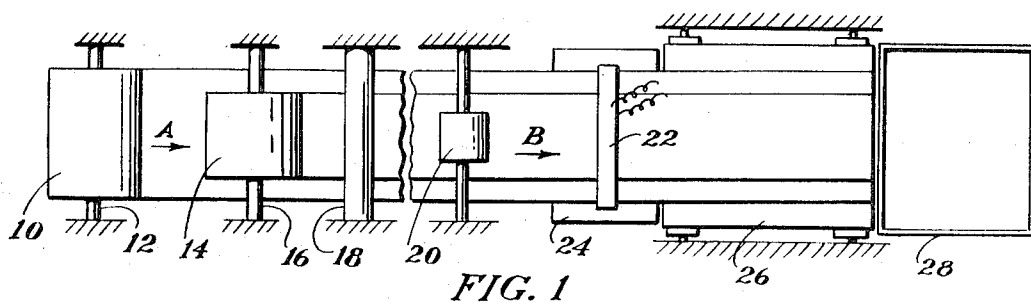


FIG. 1

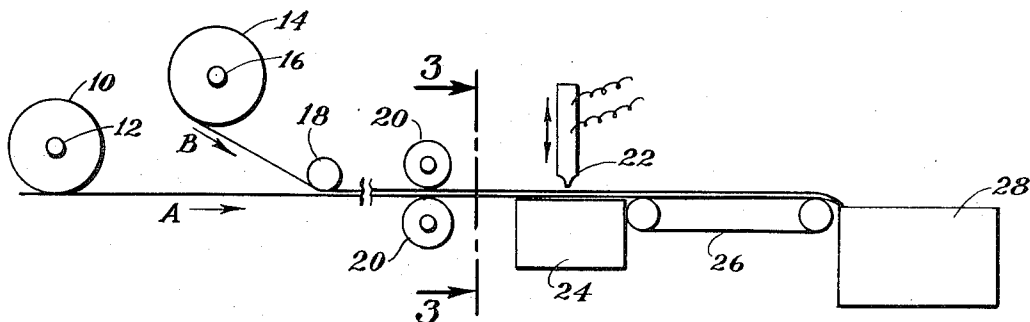


FIG. 2

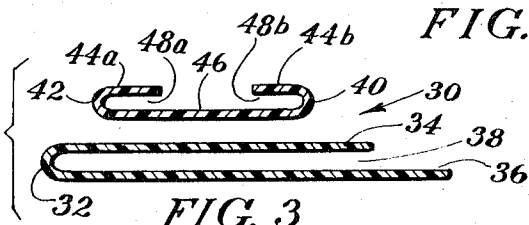


FIG. 3

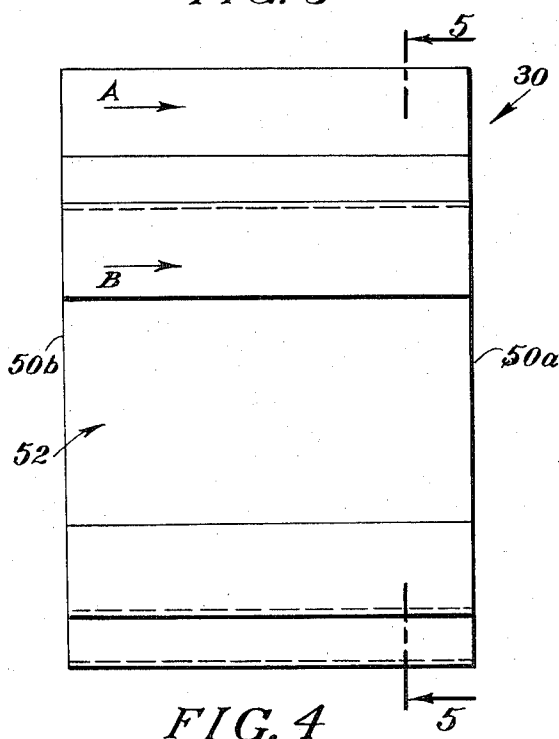


FIG. 4

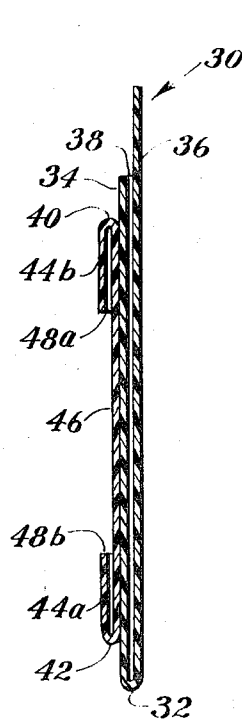


FIG. 5

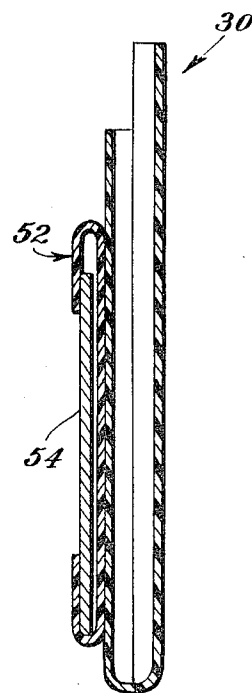


FIG. 6

INVENTOR.
BARNEY WARREN

BY

Leonard H. King

ATTORNEY

PLASTIC BAG WITH INTEGRAL POUCH AND METHOD FOR MAKING SAME

The foregoing abstract is neither intended to define the invention of the application which, of course, is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

The present invention relates generally to plastic containers and more particularly to an improved bag having a pouch integral therewith as well as a method for assembling the bag and the pouch.

BACKGROUND OF THE INVENTION

There is a trend in merchandising today to package relatively small articles of clothing, for example, in plastic bags. This type of packaging maintains the article clean and fresh looking. Frequently it is desired to include some removable indicia bearing tag or sheet for purposes of inventory control. In the past these sheets were affixed to the bag with appropriate fasteners. However, the fasteners had a tendency to mutilate the bag and thereby subject the article therein to contaminants that would make the article undesirable. Moreover, when pins were used as the fasteners there was an element of danger in handling the bag. Further there was the possibility that the fastener could damage the article in the bag.

The present invention obviates the shortcomings in the prior art by means of a simple yet effective structure. A bag is formed from a suitable sheet of plastic in a conventional manner. That is, a single sheet of plastic is folded longitudinally and then heat sealed transversely, the space between the transverse heat seals defining the width of the bag. The construction just described provides three closed side edges and one open end for the bag. A second layer of plastic is moved in suitably timed relationship with the first layer, the second layer of plastic having two longitudinal folds whereby the longitudinal edges of the second plastic layer are in spacedly confronting opposition to each other. The second layer of plastic is superimposed over the first plastic layer and heat sealed transversely during the formation of the bag.

The present invention thus provides means for inserting a relatively large sheet or card into a pouch defined by the two transversely heat sealed edges and the two longitudinally folded edges of the second layer of plastic.

Accordingly, it is the primary object of the present invention to provide an improved plastic bag with an integral pouch.

Another object of this invention is to provide an improved plastic bag having a pouch substantially the same width as the bag.

A further object of this invention is to provide an improved plastic bag having a pouch secured thereto, the pouch having an enlarged opening in the front surface thereof.

Still another object of this invention is to provide a method for integrally forming an improved plastic bag and a plastic pouch.

These and other objects, features and advantages of the invention will, in part, be pointed out with particularity and will, in part, become obvious from the following more detailed description of the invention taken in conjunction with the accompanying drawing which forms an integral part thereof.

In the various figures of the drawing like reference characters designate like parts. In the drawing:

FIG. 1 is a schematic plan view illustrating the relationship of the apparatus for performing the steps comprising the method of the present invention;

FIG. 2 is a side elevational view of the apparatus shown in FIG. 1;

FIG. 3 is a transverse elevational view taken along line 3—3 of FIG. 2 showing the elements of the article comprising the present invention in exploded relationship with the structure shown in FIG. 2 omitted for purposes of clarity;

FIG. 4 is an elevational view of the improved plastic bag and integral pouch comprising the present invention;

FIG. 5 is a sectional elevational view taken along line 5—5 of FIG. 4; and

FIG. 6 is a sectional elevational view similar to FIG. 5 but showing an indicia bearing sheet positioned in the pouch of the bag comprising the present invention.

The apparatus used for forming the present invention is shown schematically in FIG. 1 and FIG. 2. There is provided a first roll of polyethylene sheet 10 supported for rotation on a shaft 12. A second roll of polyethylene sheet 14 rotatably is supported on a shaft 16 that is positioned downstream of the first roll 10. A guide roll 18, positioned downstream of the first and second rolls 10 and 14, positions the second layer of plastic sheet 14 in close proximity to the first layer of plastic sheet 10. Drive means 20, in the form of pinch rollers or their equivalent, for example, are used to move the two sheets of plastic in a suitably timed relationship in a longitudinal direction designated by the arrows A and B. Conventional heat sealing means 22 arranged for reciprocating, vertical motion is positioned directly above a table 24 over which the two layers of plastic 10 and 14 are arranged to pass. The heat sealing means 22 move in suitably timed relationship with respect to the movement of the sheets 10 and 14 in order to provide transverse heat seals in a manner to be described hereinafter. Conveyer means 26 remove the formed bags and deposit them in a container 28 positioned immediately downstream.

The structure hereinbefore described is conventional and as such does not form part of the present invention. As used herein the terms longitudinal and transverse refer primarily to the direction of movement of the plastic layers 10 and 14. As will be explained more fully hereinafter, the first roll of polyethylene 10 is provided with a single longitudinal fold whereas the second roll of polyethylene 14 is provided with two parallel longitudinal folds. The seals are provided by the heating member 22 in a direction transverse to the several longitudinal folds. It should be noted that conventional folding means for the two layers of plastic may be used but are not illustrated for purposes of clarity. Thus the two layers of plastic can be rolled in their folded form or the conventional folders can be used at some stage prior to the heat sealing of the two layers.

Turning now particularly to FIGS. 3, 4 and 5, there is shown the bag 30 comprising the present invention. The single longitudinal fold 32 of the first layer of polyethylene 10 defines front and rear surfaces 34 and 36, respectively. The rear surface 36 is longer than the front surface 34 to define an opening 38 for the bag.

Upper and lower longitudinal folds 40 and 42, respectively, of the second polyethylene sheet 14 define two spacedly opposed, coplanar front surfaces 44a and 44b and a rear surface 46, thus defining upper and lower openings 48a and 48b, respectively.

While the polyethylene sheet 10 and 14 are moving in the directions noted by arrows A and B in FIG. 4, the heating member 22 is reciprocated in a vertical direction, thus providing the heat sealed transverse side edges 50a and 50b. It will be appreciated by reference to FIG. 4 in particular, that a completed bag 30 is formed by the transverse heat seals 50a and 50b in combination with the longitudinal fold 32. Preferably, the pouch 52 formed by the second layer of plastic is the same width as the bag. However, it should be understood that other sealing means may be employed if it is desired to make the pouch 52 narrower than the bag 30.

Turning now to FIG. 6, there is shown the bag 30 with an indicia bearing card or sheet 54 positioned within the pouch 52. It will be appreciated that it is a very simple matter to either insert or remove the card 54 and yet, because of the two longitudinal folds 40 and 42, together with the heat seals 50a and 50b, the card 54 will not inadvertently fall out. It will be further appreciated that the surface 36, hereinbefore referred to as the rear surface, is unbroken and can be used either for a printed message or can be used to display the merchandise contained within the bag 30.

The bag described hereinabove may be manufactured with existing machinery without substantial changes thereto. The improved bag and pouch permits the simple removal and insertion of a relatively large card or sheet without the use of the fasteners. Thus the present invention is particularly adapted to carry inventory control sheets or the like or removable advertising messages or the like.

There has been disclosed heretofore the best embodiment of the invention presently contemplated. However, it is to be understood that various changes and modifications may be made by those skilled in the art without departing from the spirit of the invention.

What I claim as new and desire to secure by Letters Patent is:

1. An improved container comprising:

a. front and rear layers of flexible plastics sheet secured to each other along spaced side edges and a bottom edge to define an open end along a fourth edge; and

b. a pair of spaced apart strips of plastics secured to one of said first two sheets to form a pair of opposed, open pockets extending from one of said side edges to the other of said side edges, said strips being sealed to the spaced side edges to define a pouch.

2. The container in accordance with claim 1 wherein said spaced apart strips are defined by fold lines in a single sheet of plastic.

3. The container in accordance with claim 2 wherein said fold lines in said single sheet of plastic are substantially parallel to said bottom edge of said front and rear layers of plastic sheet.

4. The container in accordance with claim 2 wherein said first and second layers are defined by another single sheet, said bottom edge being a fold line therebetween.

5. The container in accordance with claim 2 wherein said spaced apart strips and said side edges of said first and second layers of plastic sheet are secured to each other by heat sealing.

6. The container in accordance with claim 2 wherein one of said two layers of plastic sheet is longer than the other of said layers of plastic sheet.

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