

Dec. 17, 1968

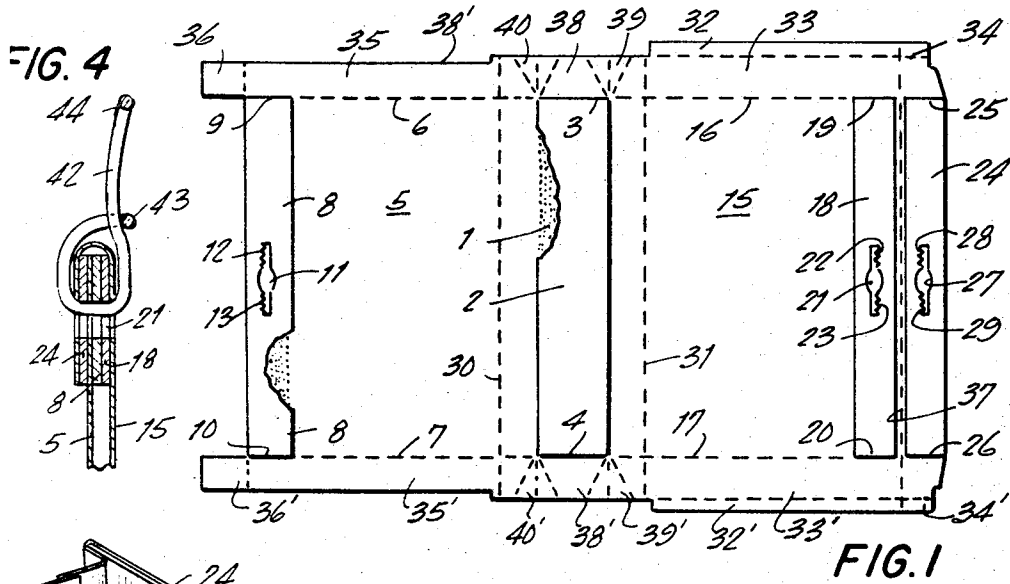
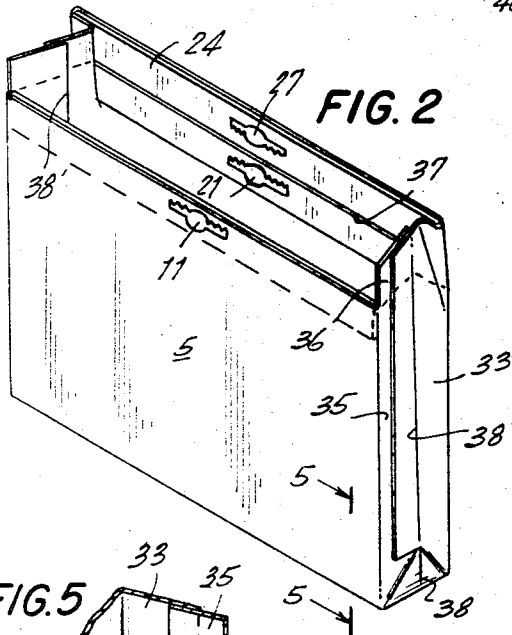
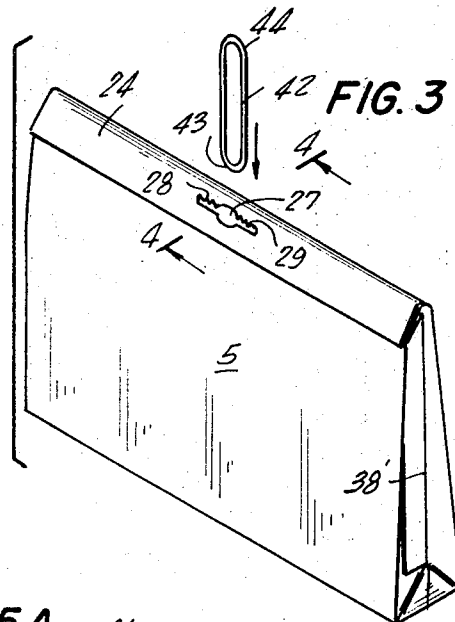
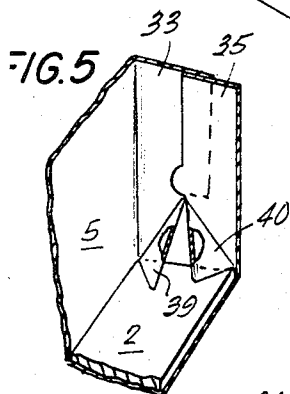
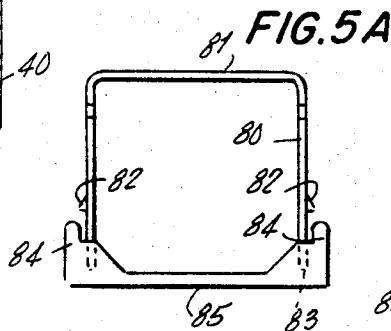
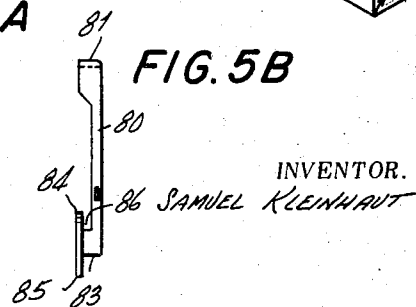
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3,416,720

SHOPPING BAG OR THE LIKE

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2 Sheets-Sheet 1



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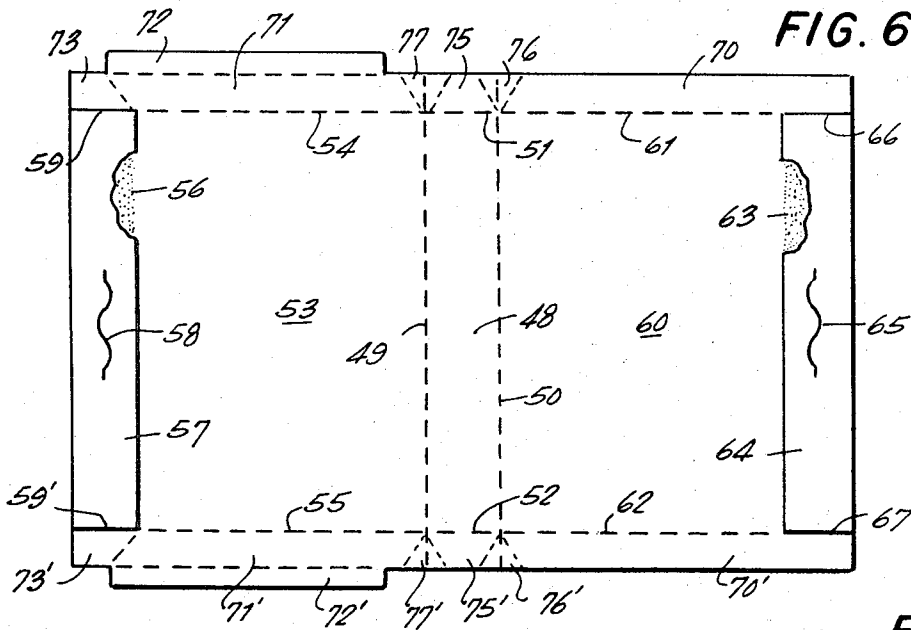
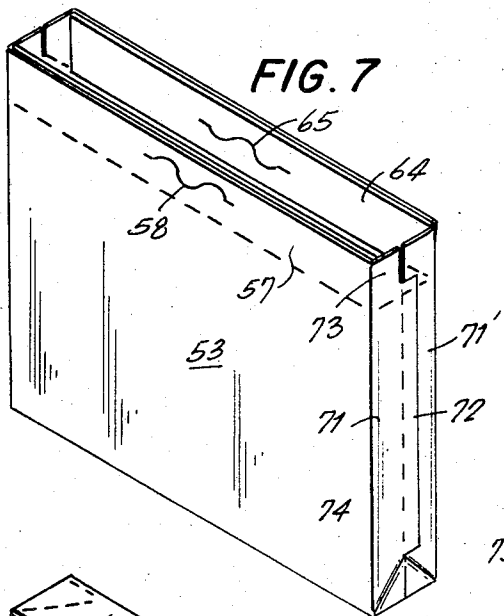
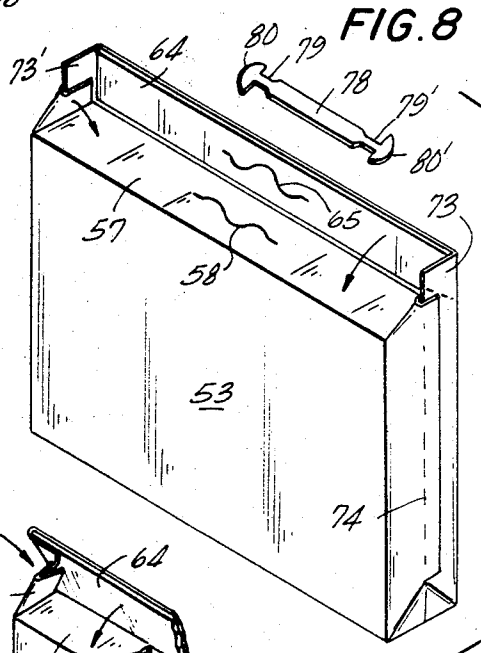
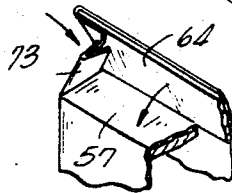
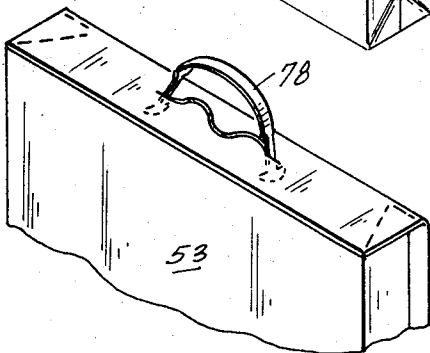
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SHOPPING BAG OR THE LIKE

Filed Oct. 17, 1967

2 Sheets-Sheet 2



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3,416,720  
**SHOPPING BAG OR THE LIKE**  
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 3 Claims. (Cl. 229—54)

## ABSTRACT OF THE DISCLOSURE

The present invention is directed to shopping bags or the like made of flexible materials, usually paper or fabric. The bag is made of a substantially rectangular elongated sheet which is folded on itself and cemented to form the bag. Stiffening elements are provided in a plurality of areas, particularly at the top of the bag, these areas being superposed to make a strong structure. A handle is provided by inserting a suitable element through slots in the stiffeners.

Shopping bags of such a type are known and used. They have a disadvantage in that it is difficult to close the bag completely and protect the contents thereof from the elements. Also, the prior bags had portions which were intended to be folded inwardly but, due to the construction thereof, they often extended outwardly, giving an unsightly effect. The present invention overcomes these defects.

It is more fully described in conjunction with the accompanying drawings constituting a part hereof, in which like reference characters indicate like parts, and in which:

FIG. 1 is a plan view of a sheet from which the bag is to be formed;

FIG. 2 is a perspective view of the bag in open position in FIG. 3 shows it in closed position;

FIGS. 4 and 5 are fragmentary cross-sectional views taken along lines 4—4 of FIG. 3 and 5—5 of FIG. 2, respectively;

FIGS. 5A and 5B are front and side elevational views, respectively, of a handle for the bag of FIGS. 1—4;

FIG. 6 is a view similar to FIG. 1 illustrating a modified form of the invention;

FIG. 7 is a perspective view of the completed bag of FIG. 6 showing it in the open position and FIG. 8 shows it in the partially-closed position;

FIG. 9 is a fragmentary perspective view of an upper corner of the bag as seen in FIG. 8; and

FIG. 10 is a perspective view of the completely closed bag with the handle thereof in operative position.

Referring to the embodiment shown in FIGS. 1—5, there is provided an elongated, substantially rectangular sheet of a flexible material such as paper or fabric. At a central area of the sheet there is a transverse section 1 which is the bottom of the bag. A bottom stiffener 2 is attached to the bottom and its ends 3 and 4 terminate within the lateral edges of the sheet.

Extending longitudinally from one side of bottom 1 is a panel 5 integral therewith, the ends 6 and 7 thereof being in alignment with ends 3 and 4, respectively. Beyond panel 5 is a primary stiffener 8 transversely of the sheet and at the one end thereof. Ends 9 and 10 are in alignment with ends 6 and 7, respectively. An opening 11 is provided through the central portion of stiffener 8. Extensions 12 and 13 of opening 11 constitute slots having sawtooth edges on the far side of said slots.

On the other side of bottom 1 is a panel 15, the ends 16 and 17 of which are in alignment with ends 3 and 4, respectively. Spaced inwardly from the right-hand end of the sheet is a first transverse stiffener 18, the ends 19 and 20 being in alignment with ends 16 and 17, respectively. It has a central opening 21 adapted to be aligned with

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opening 11. Slot-like extensions 22 and 23 have sawtooth edges on the right-hand edge of each slot. At the extreme right-hand end of the sheet is a second transverse stiffener 24, the ends 25 and 26 thereof being in alignment with ends 16 and 17, respectively. It has central opening 27 adapted to be in alignment with opening 21 and it has slots 28 and 29 extending laterally and having sawtooth edges facing those of slots 22 and 23. Creases 30 and 31 extend transversely across the sheet adjacent to and spaced from bottom 1. In FIG. 1, the distances between creases 30 and 31 and stiffener 2 have been exaggerated for clarity.

There are provided edge strips 33 and 33' on opposite sides of the sheet having extensions 34 and 34' respectively on the right-hand ends thereof. Similar strips 35 and 35' are provided along the left-hand edges of the sheet terminating in tabs 36 and 36' at the extreme end of the sheet and extending beyond the outer edge of stiffener 8. A crease 37 between stiffeners 18 and 24 constitutes a hinge fold.

Between strips 33 and 35 there is formed a trapezoid 38 by two creases in the material of the sheet. On opposite sides thereof are a pair of right-angled triangles also formed by creases in the sheet as indicated by dotted lines. Similarly, between strips 33' and 35' along the opposite edge of the sheet there are formed trapezoid 38' and pairs of right-angled triangles 39' and 40'.

In forming a bag from the sheet of FIG. 1, the sheet is folded inwardly along creases 30 and 31. The lateral strips 33—39—38—40—35 and 33'—39'—38'—40'—35' are also folded inwardly. Then panels 5 and 15 are brought adjacent to each other and strips 33 and 35 are cemented together forming a crease 38' extending inwardly as seen in FIG. 2. Similarly, strips 33 and 35' are cemented together. Trapezoids 38 and 39 also extend inwardly and pairs of right triangles 39—39' and 40—40' are located within the bag as seen in FIG. 5. Tab 36 is cemented to extension 34 and tab 36' is cemented to extension 34'.

As indicated in FIGS. 2 and 3, in closing the top of the bag, the upper edge of panel 5 is moved into contact with the upper edge of panel 15 with stiffeners 8 and 18 in contact, the infolded elements 33—35 and 33'—35' being first collapsed. Then stiffener 24 is folded over stiffener 8 forming a strong top consisting of three layers. Openings 11, 21 and 27 are in alignment and the several slots have the teeth thereof facing down from the upper edges of the slots.

Turning to FIGS. 3 and 4, there is provided a cord 42, preferably in the form of a loop. End 43 thereof is threaded through openings 11, 21 and 27. End 43 is then expanded so that the loop is held in the teeth of the slots. Usually the cord is braided and of a thickness greater than the minimum width of the slots so that the loop is held against accidental displacement. Then end 44 is passed through end 43 and constitutes a carrying handle. The loop may, in the alternative, be inserted through the openings until it projects equally on opposite sides of stiffeners 18 and 24; its central portion is then spread so that it engages the teeth of the slots, and the ends 43 and 44 together constitute the carrying handle.

In the embodiment shown in FIGS. 6 to 10, there is provided an elongated substantially rectangular flexible sheet having a transverse central section 48 constituting the bottom of the bag and defined by crease lines 49 and 50. The bottom terminates at its ends 51 and 52 short of the lateral edges of the sheet. On one side of said bottom is side panel 53, the lateral edges 54 and 55 of which are in alignment with ends 51 and 52, respectively. The left-hand end 56 of the sheet has a first stiffener 57 attached thereto, the ends 59 and 59' thereof being in alignment with ends 54 and 55 respectively.

On the right-hand side of the bottom is a panel 60, the ends 61 and 62 thereof being in alignment with ends 51 and 52, respectively. The right-hand end 63 of the sheet has a second stiffener 64 attached thereto. A sinuous slot 65 in the central part of said stiffener 64 is adapted to coincide with sinuous slot 58 of stiffener 57. Ends 66 and 67 of stiffener 64 are in alignment with ends of 61 and 62, respectively.

Along the lateral sides of the sheet is a pair of strips 70 and 70' adjacent to the right-hand end of the sheet and a similar pair of strips 71 and 71' is adjacent to the left-hand end thereof. Projections 72 and 72' carry adhesive for cementing to strips 70 and 70'. Tabs 73 and 73' are located at the outer ends of strips 71 and 71'.

To form a bag from the sheet of FIG. 6, it is folded along lines 48 and 49 and a crease is formed along line 54-51-61 and along line 55-52-62. The panels are brought together and projections 72 and 72' are cemented to strips 70 and 70', respectively. Trapezoids 75 and 75' and triangle pairs 76-77 and 76'-77' are folded as in FIGS. 1-5.

A handle of molded plastic material has a relatively wide flat central portion 78 with neck portions 79 and 79' terminating in widened ends 80 and 80' respectively. It is inserted underneath stiffener 57 and through slot 58 so that handle 78 projects upwardly (FIGS. 8 and 10); it is retained in the slot by ends 80 and 80'. Then it is threaded through slot 65 and stiffener 64 is pushed down into contact with stiffener 57 as shown in FIG. 10, thus providing a double reinforced closure.

Referring to FIGS. 5A and 5B, the handle 80 has a wide portion 81 to act as a hand grip. Projections 82 extend laterally and the lower end 83 of frame 80 merges with offsets 84 which are integral with bottom 85. A recess 86 is formed between offset 84 and frame 80. In use this form of handle replaces loop 42. Handgrip 81 is threaded through openings 21, 11 and 27 until the upper edges of the openings nest into recesses 86. Projections 82 extend over the ends of the slots and prevent accidental displacement of the handle. Suitable materials for the handle are various plastics having flexibility, such as polyethylene, and the like.

What is claimed is:

1. A bag of flexible material and of pyramidal shape comprising an elongated substantially rectangular sheet, a transverse bottom panel having a stiffener therein, a side panel extending laterally from each side of said bottom panel, the end of said one side panel having a primary transverse stiffener and an opening in said stiffener, the end of said other side panel having a first transverse stiffener and an opening therein and a second transverse stiffener beyond said first stiffener and an opening therein, a fold between said first and second stiffeners constituting a hinge, the end of said one side panel being shorter than the end of said other side panel by an amount substantially equal to the width of said second stiffener, a tab extending from the end of each strip adjacent to said primary stiffener, said tab being cemented to said strip at said second stiffener when erected said three openings being in alignment, means passing through said openings for closing said bag, an end strip along each of the longitudinal edges of said sheet folded inwardly and cemented to form a pleat to allow expansion of said bag.

2. A bag according to claim 1 characterized in that said primary stiffener is adapted to be embraced between said first and second stiffeners.

3. A bag according to claim 1 characterized in that said means is a unitary frame passing through said openings and held therein, the upper end of said frame constituting a handgrip.

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