March 14, 1950 H. McMILLAN 2,500,848

CARRYING DEVICE

Filed Sept. 18, 1946 2 Sheets-Sheet 1

Fig. 1

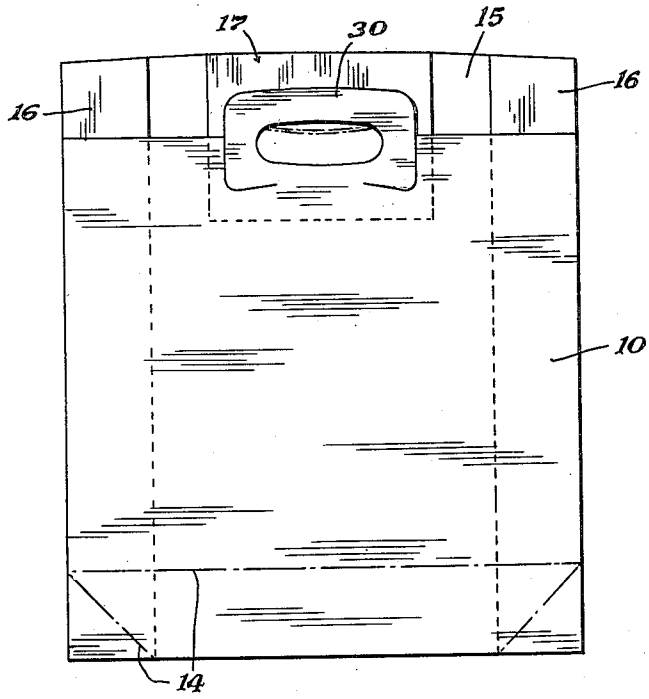
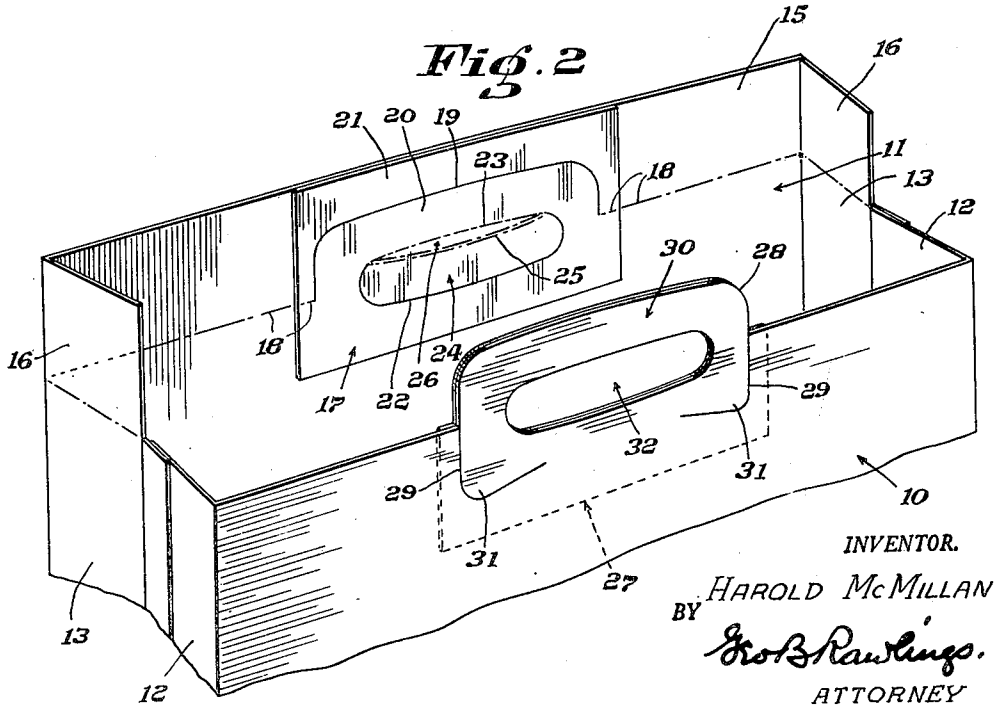


Fig. 2



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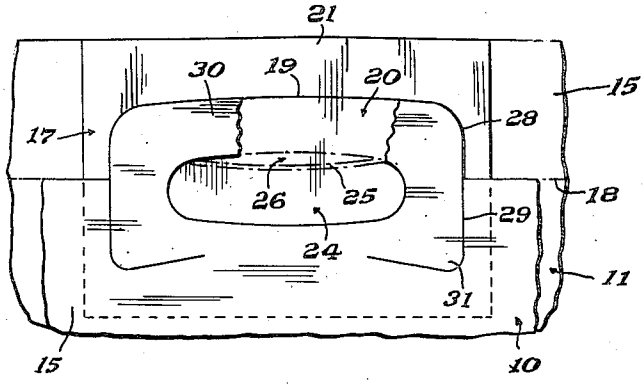


Fig. 3

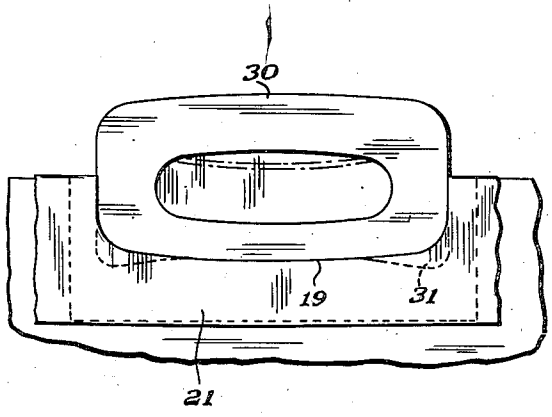


Fig. 4

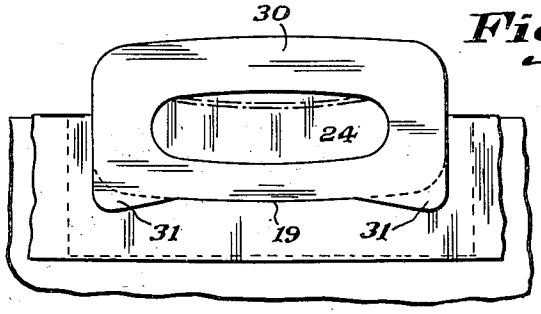


Fig. 5

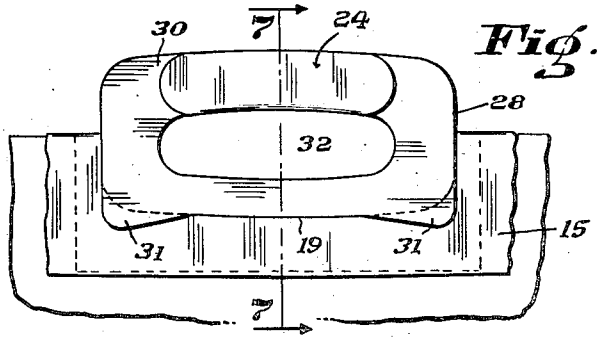
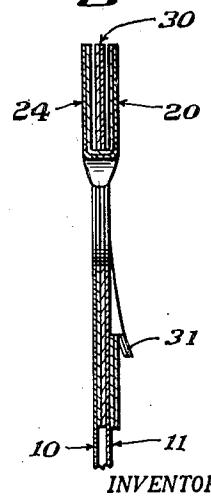


Fig. 6

Fig. 7



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UNITED STATES PATENT OFFICE

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CARRYING DEVICE

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Application September 18, 1946, Serial No. 697,730

2 Claims. (Cl. 229—54)

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My present invention relates to carrying devices, particularly of the foldable type made from flexible sheet material, as for example, paper.

The principal object of my invention is an improved bellows type of carrying bag made from flexible sheet material, and having a carrying handle formed integral therewith and in which the handle, when in folded position, conforms generally with the shape of the hand of the person using the same.

Another object is a bag of the above type having a closure for the top which is locked in closed position by the handle.

Other objects and novel features of the construction of parts comprising the invention will appear as the description of the invention progresses.

In the accompanying drawings:

Fig. 1 is a front elevation of a complete bellows bag embodying my invention.

Fig. 2 is a perspective view of the top or handle portion of the bag shown in Fig. 1.

Fig. 3 is a fragmentary view of the handle and locking means in position prior to closing the bag.

Fig. 4 is a view, similar to Fig. 3, but showing the closing flap folded into closing position.

Fig. 5 is a view, similar to Fig. 4, but showing the closing flap in locked position.

Fig. 6 is a view, similar to Fig. 5, and showing the holding member of the handle folded into operative position, and

Fig. 7 is a cross-section, taken on the line 7—7 of Fig. 6, and looking in the direction of the arrows.

Referring to the drawings, and particularly to Figs. 1 and 2, 10 designates the front and 11 the back walls of my bag, which may be made from a single piece of sheet material, such as paper or the like. The front 10 is provided at each side edge with a folded-in portion 12, adhesively secured to the similar folded-in portions 13 at the side edges of the back 11, this construction forming a bellows bag of relatively large carrying capacity.

At the juncture of the front 10 and back 11 are the folding lines 14 (see Fig. 1) whereby the bellows effect of the sides is reproduced on the bottom of the bag.

As shown in Figs. 1 and 2, the back 11 has formed integral therewith an extension 15, provided at its ends with members 16, coextensive with the folds 13, and which serve to strengthen the bag structure.

Adhesively secured to the inner face of the extension 15 and back 11 is a reinforce 17. This reinforce may be of any suitable dimensions, but I prefer to make it of such size as to enable

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me to provide therein, and therefrom, a substantial four-finger holding member. In the back 11 and reinforce 17 I provide a line of fold 18 (see Fig. 2) while in the major portion of the reinforce 17 and the adhering portion of the extension 15 I make a line of cut 19, thus separating the extension 15 into practically two portions, one a handle portion 20 and the other a locking portion 21.

In the handle portion 20, I make a cut 22 substantially oval in form and of suitable length. The lower portion (see Fig. 2) of the cut 22 passes entirely through the reinforce 17 and back 11, while the upper portion thereof is marked by line of fold 23, thus forming a tab or flap 24 foldable out of the plane of the reinforce 17. Also, there is a line of fold 25 formed in the tab 24, similar to the line of fold 23, but opposite thereto, thus producing a zone 26 wide in the middle and tapering toward each end. This double scoring results, when the device is in assembled position, in a handle having a slightly rounded or arched portion for comfortable engagement by the hand of the person carrying the bag.

Adhesively secured to the inner face of the front 10 and symmetrically disposed thereon with the front and with the reinforce 17 on the back 11, is a reinforce 27. The central portion of the front 10 and the reinforce 27 extend upwardly above the upper edge of the front 10 to a height substantially equal to the height of the line of cut 19 in the reinforce 17. Such central portions are cut at 28, above the upper edge of the front 10 to conform with the line of cut 19 (see Fig. 2). Also and as a continuation of each side of the line of cut 19, such cuts extending downwardly and then inwardly and upwardly as shown at 29 in Fig. 2. There is thereby defined a handle portion 30 similar to the handle portion 20 but with the lower portion thereof having locking members 31 formed therein by the extension cuts 29. Further, the handle portion 30 has formed therein an oval shaped hand or finger hole 32, of size similar to the tab 24 on the back 11 and which finger hole the tab 24 passes through when the bag is closed.

A bag made according to my present invention ordinarily would come to the user folded flat as in Fig. 1 and the user opens the bag so that it will be in the form shown in Fig. 2.

When the bag is filled, the upper ends of the front and back are brought together as close as may be, folding the portions 12 and 13 to accomplish such end, and the parts assume the position shown in Fig. 3, that is with the handle portions 30 and 20, respectively, on the front and back walls opposite each other and with the extension 15 rising above said handle portions.

The user will now fold the extension 15, together with the extension 16 of the folds 13 over into engagement with the outer face of the front 10, as viewed in Fig. 4, the handle portion 30 of the front wall 10 passing through the opening defined by the cut 19 in the back wall 11, and lying flatly against the handle portion 20 of the back wall. It will be noted that the locking members 31 of the handle portion 30 now lie under the extension 15 in readiness to be moved by the user into locking position, as shown in Fig. 5.

As a final step the user forces the locking flap or tab 24 on the back 11 through the oval hole 32 in the front 10 and bends such tab 24 upwardly into the position shown in Fig. 6. As the tab 24 folds on the two lines of fold 23 and 25, there is formed a smooth area or double arch (see Fig. 7) which follows the curve of the opening 32 and obviates the objection to the sharp cutting edge of the ordinary type of handle.

From the foregoing, it will be evident that my bag provides a double reinforced carrying handle having a four-finger wide carrying opening. When flap 24 has been pushed through the finger opening of handle portion 30 and bent upwardly to the carrying position of Figs 6 and 7, it will be seen that the arc or arch follows the curve of one of the double scored folding lines, giving a padded arched cushion or "suit-case" feel against the fingers carrying the weight of the bag and its contents. It will also be evident that the double scored fold lines are of advantage in that one of them assists the material in folding on that curve and the other curve has the assistance of the other handle in helping it to break along that scored line. The locking projections 31 assist in locking the bag in its closed position.

While I have described and shown by invention as applied to a bellows bottom bag, it will be understood that such treatment is illustrative rather than limiting and that the principles are applicable to various other types and styles and sizes of bags, boxes, packages, and other handled carrying devices.

Similarly various modifications in structure, materials, and design from that shown may obviously be made within the spirit and scope of my invention as defined by the appended claims.

Having thus described my invention, what I claim as new is:

1. A package carrier having front and back walls, means joining the back and front walls together and allowing for their relative movement towards and from each other, an extension including a locking portion on the back wall projecting upwardly beyond the upper edge of the front wall, a handle member projecting upwardly beyond the upper edge of said front wall and provided with a finger opening therethrough, the extension on said back wall being cut to provide a handle member opposite said first-named handle member and having an included locking flap, said first-named handle member extending through the cut which forms said second-named handle member when the extension on the back wall is overfolded upon the adjacent face of the front wall, its locking portion engaged with and lying in contact with said second-named handle member so that the locking flap of said second-named handle member may be pushed through the finger opening of said first-named handle member and bent upwardly towards the adjacent outer face thereof to provide a finger opening substantially coextensive with and in registration with the finger opening of said first-named handle member, and the parts locked in such position by the engagement of said locking portion of said extension with said second-named handle member, said second-named handle member being scored on a compound line of fold to form a cushion arch at the upper edge of the finger opening when said handle is in folded position and the first-named handle member being provided with spaced oppositely disposed locking tabs adjacent its connection with the front wall of the device for locking engagement with adjacent areas of the extension of the back wall of the device, after said extension has been overfolded upon said front wall.

2. A package carrier having front and back walls, means joining the back and front walls together and allowing for their relative movement towards and from each other, said means including two pairs of members forming side walls of bellows type fold of the carrier, one of said pair of wall members being secured to the front wall and the other of said pair of members being secured to said back wall, the latter wall members having an extension projecting upwardly beyond the upper edges of the other wall members and the front wall, an extension integral with said last-named extensions and said back wall projecting upwardly beyond the upper edge of the front wall, a handle member projecting upwardly beyond the upper edge of said front wall and provided with a finger opening therethrough, the extension on said back wall being cut to provide a handle member opposite said first-named handle member and having an included locking flap, said first-named handle member extending through the cut which forms said second-named handle member when the extension on the back wall and the extensions on the side wall members are overfolded upon the adjacent face of the front wall, its locking portion engaged with and lying in contact with said second-named handle member so that the locking flap of said second-named handle member may be pushed through the finger opening of said first-named handle member and bent upwardly towards the adjacent outer face thereof to provide a finger opening substantially coextensive with and in registration with the finger opening of said first-named handle member, said first-named handle member being provided with locking tabs at the base thereof, said back wall extension being folded down over the front wall into locking engagement with said locking tabs, whereby the carrier is locked in closed position.

HAROLD McMILLAN.

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