Aug. 13, 1940. W. J. GEIMER 2,210,937

CARRYING HANDLE FOR BAGS

Filed Dec. 19, 1938

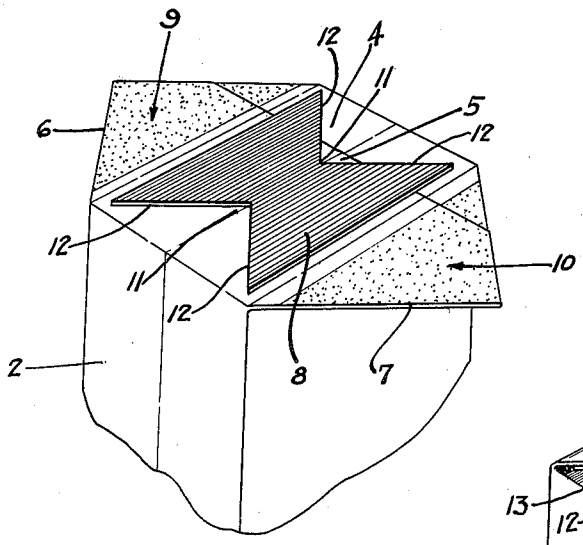


FIG. 2

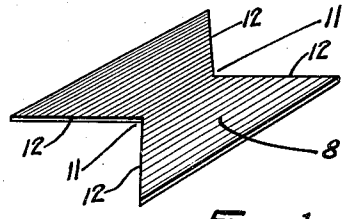


FIG. 1

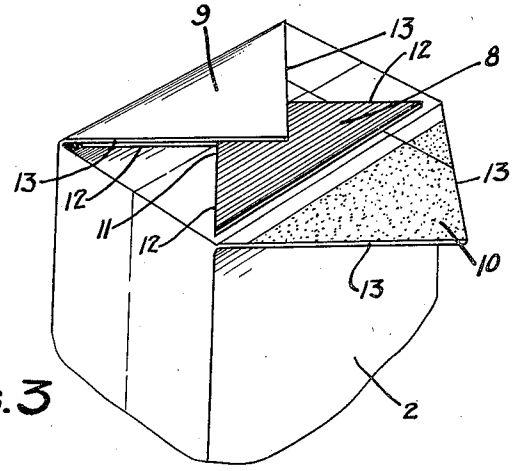


FIG. 3

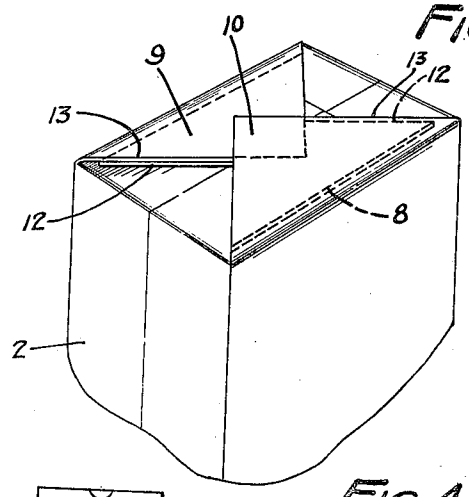


FIG. 4

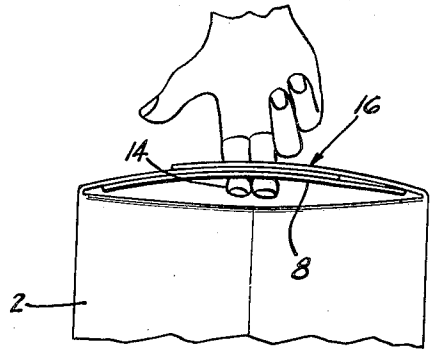


FIG. 5

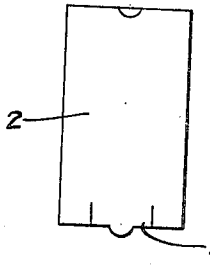


FIG. 6

INVENTOR
WILLIAM J. GEIMER
By Paul, Paul Thomas & Gius
ATTORNEYS

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CARRYING HANDLE FOR BAGS

William J. Geimer, Minneapolis, Minn., assignor to Bemis Bro. Bag Co., Minneapolis, Minn., a corporation of Missouri

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8 Claims. (Cl. 229—54)

This invention relates to new and useful improvements in bags made of flexible material such as paper, and more particularly to a bag closure having means embodied therein to facilitate carrying the bag, when filled.

Various types of carrying handles have heretofore been developed for small paper bags to facilitate carrying them. These adequately serve the purpose, when embodied in a relatively small bag such, for example, as 5 or 10 pound bags. They have not been found suitable for larger and heavier bags as, for example, 24½ pound paper flour bags. Large filled bags are usually awkward to handle or move about from place to place, particularly paper bags because they are not, as a rule, provided with any means whereby they may be conveniently grasped by the hand. It is usually customary to use both hands to move such a bag. It is therefore desirable that the bag be provided with some means whereby the bag may be conveniently grasped by one hand, to facilitate conveniently moving it about from place to place, when necessary.

An object of the present invention, therefore, is to provide a simple device which may readily be embodied in the closed top of the bag and cooperates with certain walls of the closed bag mouth to provide a carrying handle for the bag.

A further object is to provide a plate-like reinforcing member adapted to be inserted between the first and last folded wall portions of the bag mouth, which member is secured only to the last-folded wall portions, whereby one or more fingers may readily be inserted between the first-folded wall portions and said plate-like reinforcing member to facilitate carrying the bag, said reinforcing member and last-folded walls cooperating to provide a carrying handle for the bag.

A further and more specific object of the invention is to provide a plate-like reinforcing member adapted to be used in bag closures of the type commonly known to the trade as a "Delta-seal," whereby said reinforcing member and the last folded walls of the bag top walls will cooperate to provide a carrying handle for the bag.

A further object is to provide a plate-like reinforcing member having its ends provided with V-shaped notches, the edges of which are shaped to coincide substantially with the corresponding edges of the triangular flaps formed by the side walls of the bag mouth, when the end walls thereof are initially folded inwardly over the contents of the bag body, whereby when said triangular flaps are folded inwardly over the reinforcing member, and secured together and to said member, said member and flaps cooperate to provide a carrying handle for the bag, it being understood that the flexibility of the bag walls is such as to readily permit a finger to be inserted between the first-folded walls of the bag mouth and said plate-like member.

Other objects of the invention will appear from the following description and accompanying drawing and will be pointed out in the annexed claims.

Figure 1 is a perspective view showing the plate-like reinforcing member before being embodied in a bag top.

Figure 2 is a perspective view showing the upper portion of a filled bag with a pair of its bag mouth walls folded inwardly, one over the other and suitably secured together to close the bag mouth, and the reinforcing member being shown positioned thereon;

Figure 3 is a view showing one of the flaps formed by the side walls, folded inwardly and secured to the top surface of the reinforcing member;

Figure 4 is a view showing the bag top completed;

Figure 5 is an end view of the upper portion of a filled bag showing the first folded wall portions of the closed bag top and the plate-like reinforcing member separated to permit the insertion of a finger therebetween; and

Figure 6 is a view showing a tube blank from which the bag is constructed.

In the selected embodiment of the invention herein disclosed, there is illustrated in Figure 6, a flat paper tube **2** from which the bag is formed. The lower wall portions of the tube, generally indicated by the numeral **3**, are adapted to be folded inwardly into overlapping relation to form the bottom of the bag, as is customary in articles of this kind. The wall portions at the opposite end of the tube which cooperate to provide the bag mouth, are adapted to be folded into closing relation to seal the bag mouth, when the empty bag has been filled.

As shown in Figure 2, the body of the bag in the present instance, is rectangular in cross-section, whereby oppositely disposed end walls **4** and **5** are provided and side walls **6** and **7**. It is to be understood that the invention is not limited to bags which are rectangular in cross-section, as obviously it may be used in connection with any type or form of bag having a plurality of walls forming the bag mouth, and wherein oppositely disposed walls of the bag mouth are first folded inwardly into overlapping relation

and secured together to close the bag top, and the remaining walls thereafter being folded inwardly over said first folded walls.

As clearly illustrated in Figure 2, the end walls 4 and 5, after having their contacting surfaces suitably gummed, are first folded inwardly over the contents of the filled bag in overlapping relation and suitably secured together, whereby the bag top is closed and sealed. In the usual operation of closing the bag top, the side walls 6 and 7 are then folded inwardly over the first folded end walls and secured thereto. When the bag top is thus formed, all of the walls are so united together that a finger cannot be inserted between the walls of the bag top to facilitate carrying the bag. This type of bag closure is commonly known to the trade as the "Deltaseal."

A feature of the present invention resides in so folding the walls at one end of the bag into closing relation, that a carrying handle is formed therein to facilitate carrying the filled bag. The present invention, as hereinbefore stated, relates more particularly to large, heavy bags such, for example, as 24½ pound flour bags, although the invention may obviously be used in connection with other sizes of bags, and regardless of the material to be packaged therein, without departing from the scope of the invention.

After the end walls 4 and 5 have been folded inwardly into overlapping relation and suitably secured together, a plate-like reinforcing member, generally indicated by the numeral 8, is loosely positioned on top of the inwardly folded end walls, as illustrated in Figure 2. When the end walls are inwardly folded as shown in Figure 2, the side walls 6 and 7 of the bag mouth are formed into triangular flaps 9 and 10. These flaps may be extended outwardly, as shown in Figure 2 to facilitate gumming their upper surfaces, and they are then folded inwardly over the reinforcing plates, as shown in Figures 3 and 4, whereby they become firmly bonded to the upper surface of the member 8, because of the gum applied to the upper surfaces of the flaps, when viewed as shown in Figure 2. The tips of the flaps 9 and 10 also overlap as shown in Figure 4, whereby the flaps are also secured together, as well as being secured directly to substantially the entire upper surface of the reinforcing plate 8. The flaps 9 and 10 thus cooperate with the reinforcing member 8 to provide a strong, durable handle for the filled bag.

The plate-like reinforcing member 8 is formed with oppositely disposed recesses 11, the edges 12 of which are adapted to substantially coincide with the edges 13 of the flaps 9 and 10, when the flaps are folded inwardly and secured to the member 8, as shown in Figure 4.

Because of the flexibility of the bag top walls, when the bag has been filled and its top is closed, as shown in Figure 4, a finger may readily be inserted between the first folded walls of the bag top and the plate-like member 8 as indicated at 14 in Figure 5, whereby the filled bag may be conveniently carried about from place to place with one hand.

The reinforcing plate 8, in addition to cooperating with the flaps 9 and 10 to provide a carrying handle for the bag, also strengthen the closed bag top and serves to prevent wet paste from getting onto the bag body. It also greatly strengthens the flaps 9 and 10, and because of its size and shape, distributes the strain exerted on the flaps when the weight of the bag is imposed on the carrying handle generally indicated by the numeral 16, to the outer enlarged portions of the flaps, whereby danger of tearing is substantially eliminated.

While I have herein referred more particularly to the plate-like member as being used in connection with the bag mouth walls to form a carrying handle, when said walls are folded into closing and sealing relation, it is to be understood that in some instances, it may be found desirable to insert the plate-like member between the first and last folded wall portions of the lower end of the tube 2, in the operation of forming the bag bottom. When the handle is embodied in the closed end of the tube which originally forms the bottom of the bag, the usual printed matter applied to the bag body may be inverted with respect to the remaining open end of the bag, whereby when the bag has been filled and the walls of the remaining open end thereof are folded into closing and sealing relation, the filled and sealed bag is inverted, whereby the end of the tube which was first closed and which has the carrying handle embodied therein, becomes the top of the filled bag as will readily be understood. In common practice, however, the first closed end of the tube usually serves as the bottom of the filled bag, and the reinforcing plate is then inserted between the inwardly folded wall portions forming the bag top, as herein described.

The plate-like reinforcing member is extremely simple in construction and may be manufactured in large quantities by ordinary blanking dies. It is preferably made of cardboard, although it is to be understood that it may be made of any material suitable for the purpose. It is so configurated that when imposed between the walls of the bag mouth, as shown in Figure 4, it is practically concealed, and cooperates with the flaps 9 and 10 to provide a strong, convenient, carrying handle, as clearly indicated in Figure 5, to facilitate carrying the bag from place to place.

I claim as my invention:

1. A bag formed from a tube of flexible material, wall portions at one end of said tube being folded inwardly, one over the other, to partially close one end of the tube, a plate-like reinforcing member of relatively stiffer material being positioned on said first folded wall portions, and other wall portions being folded inwardly over said reinforcing member and secured together and to said reinforcing member, said reinforcing member being unsecured to the first folded wall portions, whereby the reinforcing member may be separated from said first folded wall portions by the insertion of a finger therebetween, and whereby the reinforcing member and said last folded walls may serve as a carrying handle for the bag, when the bag is subsequently filled and the wall portions at the opposite end of the tube are folded into closing and sealing relation.

2. A bag formed from a tube of flexible material, wall portions at one end of the tube being folded inwardly and suitably secured together to partially close one end of the tube, a plate-like reinforcing member of relatively stiffer material being positioned on said first folded wall portions, other wall portions being folded inwardly over said reinforcing member and partially overlapping each other and secured together, said last folded wall portions also being secured to said reinforcing member, said reinforcing member being unsecured to the first folded wall portions whereby the reinforcing member may be separated from said first folded walls, by the insertion of a finger therebetween, and whereby the

reinforcing member and said last folded wall portions may serve as a carrying handle for the bag, when the bag is filled and its opposite end is closed and sealed.

3. A bag formed of substantially flexible material and adapted, when filled, to have its walls extend above the level of the contents of the bag and cooperating to form the bag mouth, certain of the bag mouth walls being adapted to be folded inwardly over the contents of the bag to close the bag mouth, and the remaining bag mouth walls being foldable over said first folded walls and suitably secured together, and a plate-like reinforcing member, of relatively stiffer material, being inserted between said first and last folded walls and secured only to the last folded walls, the flexibility of the bag mouth walls permitting a finger to be inserted between said first folded walls and said plate-like member, whereby said walls and said member cooperate to provide a carrying handle for the bag, thereby to facilitate carrying the bag, when filled.

4. A bag formed of substantially flexible material and adapted, when filled, to have its walls extend above the level of the contents of the bag and cooperating to form the bag mouth, oppositely disposed walls of the bag mouth being adapted to be folded inwardly over the contents of the bag to close the bag mouth, and the remaining bag mouth walls being foldable over said first folded walls and having overlapped portions suitably secured together, and a plate-like reinforcing member, of relatively stiffer material, being inserted between said first and last folded walls, the flexibility of the bag mouth walls permitting a finger to be inserted between said first folded walls and said plate-like member, whereby said walls and said member cooperate to provide a carrying handle for the bag, when the bag is filled, said plate-like member being of such size and shape as to substantially uniformly distribute over said last folded wall portions, the strain imparted thereto by the weight of the filled bag, when the bag is lifted by said handle.

5. A filled bag having flexible wall portions extending above the level of the contents of the bag body and cooperating to provide the bag mouth, certain of said wall portions being folded inwardly over the contents of the bag body to close the bag mouth, a plate-like reinforcing member loosely positioned on said first folded walls, and the remaining bag mouth walls being folded inwardly over said plate member and suitably secured thereto, whereby said last folded walls and said plate-like member may cooperate to provide a carrying handle for the bag, when the bag is filled, the flexibility of the bag mouth walls permitting a finger to be inserted between said first folded walls and said member thereby to facilitate carrying the filled bag.

6. A filled bag having flexible wall portions extending above the level of the contents of the bag body and cooperating to provide the bag mouth, a pair of said walls being foldable inwardly over the contents of the bag, one over the other to close the bag mouth and whereby the remaining bag mouth walls form triangular flaps, a reinforcing member having V-shaped notches in opposite ends thereof positioned on top of said first folded walls and unsecured thereto, said flaps being folded inwardly over said reinforcing member and secured thereto and to one another and cooperating with said member to provide an inseparable carrying handle for the bag, when filled, the flexibility of the walls of the bag body permitting a finger to be inserted between said first folded walls and said reinforcing member, whereby the carrying handle provided by said member and flaps, may readily be grasped.

7. A bag made of flexible material and comprising end and side walls cooperating to provide the bag mouth, the end walls being foldable inwardly over the contents of the bag body to close the bag mouth and whereby the side walls are partially folded upon themselves to form oppositely disposed triangular flaps, a reinforcing member of relatively stiffer material loosely positioned over said first folded walls, the width of said member being substantially equal to the width of the bag body, said reinforcing member having V-shaped notches in its opposite ends, whereby it is provided with a constricted central portion, said flaps being folded inwardly over the reinforcing member and having their terminals overlapped and secured together, said flaps also being secured to the upper surface of said member, the flexibility of the bag walls permitting a finger to be inserted between the first folded walls and said reinforcing member, thereby to facilitate carrying the bag, when filled.

8. A reinforcing member adapted for use in connection with a closed bag top formed by inwardly folding the side and end walls of an open bag top, one over the other said reinforcing member being inserted between the inwardly folded side and end walls of the bag top, whereby oppositely disposed edges thereof may be exposed, said oppositely disposed edges being formed to coincide with the edges of the bag top walls overlying said member, thereby to substantially conceal said member, said member being unsecured to the first folded walls, and the flexibility of the material from which the bag mouth walls are made, permitting a finger to be inserted between the first folded walls and said member to facilitate carrying a filled bag.

WILLIAM J. GEIMER.