Aug. 30, 1949. G. A. MOORE 2,480,500

BAG FOR MERCHANDISING

Filed March 16, 1946

Fig. 1.

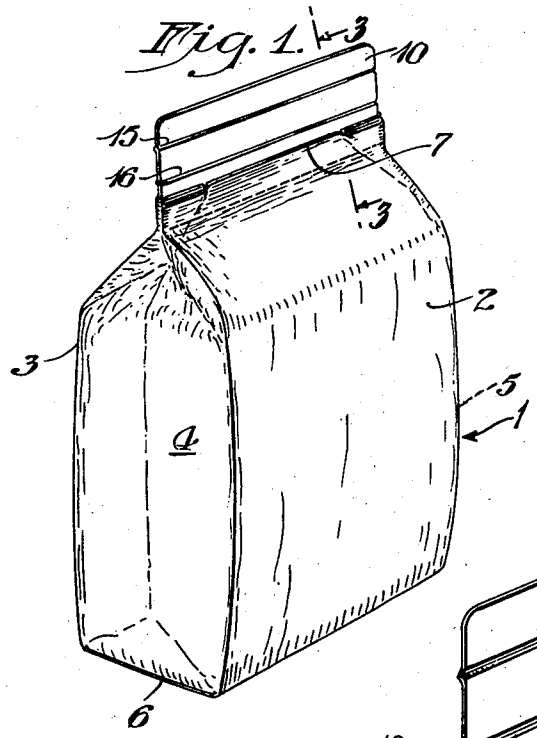


Fig. 2.

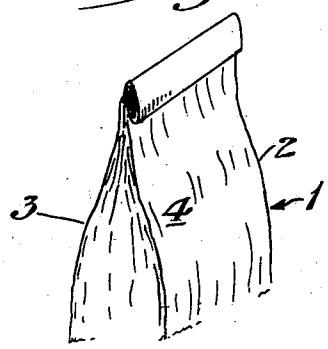


Fig. 5.

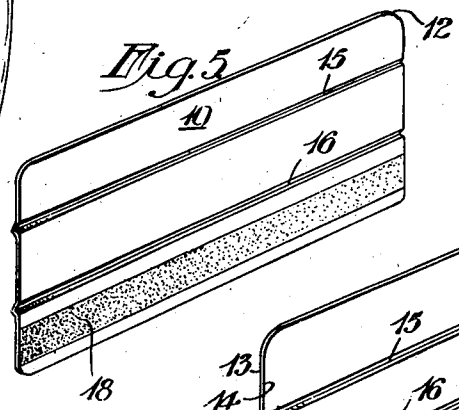


Fig. 6.

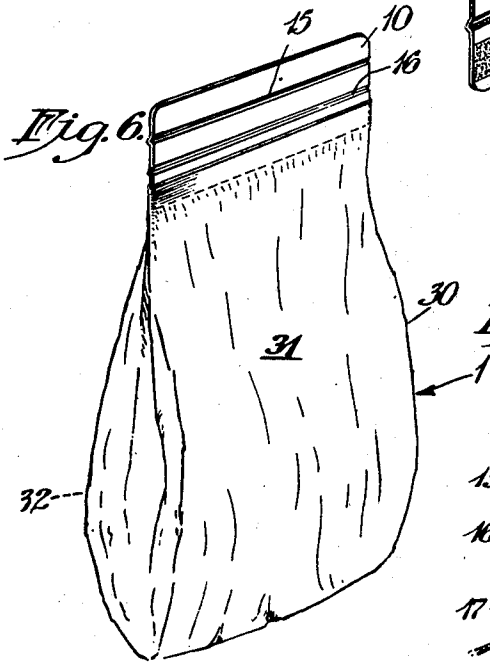


Fig. 4.

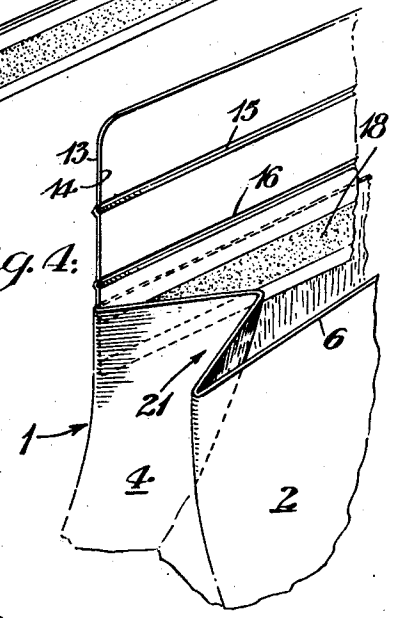
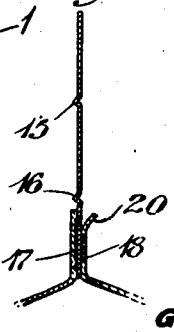


Fig. 3.



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UNITED STATES PATENT OFFICE

2,480,500

BAG FOR MERCHANDISING

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Application March 16, 1946, Serial No. 654,850

2 Claims. (Cl. 229—62)

1

This invention relates to bags formed of sheet material for merchandising various articles of commerce and has for its object the provision of an improved bag of this character. More particularly, the invention is concerned with bags which may be hermetically sealed by the manufacturer to protect the merchandise from moisture, dirt, insects and the like, and provides an improved bag of this type which may be opened and closed repeatedly by the user. One of the important features of my invention is the provision of a card for insertion into the mouth of a bag and which is so constructed and arranged with respect to the bag mouth that it serves as a sealing member and closure for the bag as initially filled and as a sort of valve means for opening and closing the bag during use. Advantageously the card may serve the additional use as a medium for advertising and the like.

My invention pertains to various types of bags advantageously formed of transparent or translucent sheet material, such as regenerated cellulose, rubber hydrochloride, waxed or oiled paper, or resinous materials. The well-known heat-sealing cellophane is especially suitable for the purpose of the invention.

In accordance with my invention, I attach the card to the sides or panels of the bag mouth with a suitable adhesive, such as heat-sealing thermoplastic materials, leaving a part of the card extending beyond the bag mouth quite an appreciable distance. I so construct and arrange the card as to serve the important function of a closure for the bag by means of which the bag may be opened and closed repeatedly. I have found that a card formed of a stiff but non-resilient material having one or more score marks along which the card may be folded, serves the dual purpose of a closure for the bag and a base on which I can print the necessary names, trade-marks, colors, slogans, etc. to advertise and identify the merchandise. When the bags are set on display shelves or counters, the cards stand upright above the bag and have considerable "attention value." I have found it advantageous to form the card as a laminated structure with a core of fibrous material, such as ground wood or kraft paper, covered, preferably on both sides, with soft metal foil, such as aluminum, copper or lead foil. When foil of such metals is cemented to the fibrous material and the card is creased with score lines, the card may be bent along the score lines like a hinge. There is this important distinction, however, the card remains where bent, and by this means, I

2

am able to fold the card upon itself and to close the mouth of the bag which remains closed until the card is unfolded.

That portion of the card to be inserted into the bag is preferably provided on both sides with a strip of adhesive, preferably a thermoplastic material, such as ethyl or nitro-cellulose, to provide a medium for attaching the card to the bag and sealing the bag mouth. Such sealing strips are easily dried and do not become sticky unless heated. By means of heating rolls or the like, the sides of the bag may be sealed to the card.

The card is preferably inserted into the mouth of the bag sufficiently to bring the strips of adhesive below the edges which define the bag mouth. This leaves a free lip on the bag which may be grasped with the fingers to peel the edge off the adhesive. I may, however, so space and proportion the strips as to seal the rear panel of the bag to the very edge while leaving the front edge sealed with a narrow weak strip and the lip free. The bag is symmetrical in all respects with the exception of the score lines and the direction of folding the card. I designate that part of the bag the front over which the card folds to close the bag. The opening of the mouth along the front edges does not, however, remove the card since it remains attached along the rear edge. After a portion of the contents are removed from the bag, the card can be folded along the score line or lines, as the case may be, to clamp the mouth of the bag, thus affording adequate protection to the remaining contents in the bag.

These and other novel features of the invention will be better understood after considering the following discussion taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a perspective of a gusset type bag of the invention;

Fig. 2 is a perspective of the top portion of the bag of Fig. 1 with the card folded to close the bag;

Fig. 3 is a view along line 3—3 of Fig. 1;

Fig. 4 is a fragmentary perspective of the top of the bag of Fig. 1 showing the folding of the bag mouth in preparation for sealing;

Fig. 5 is a perspective of a card of the invention, and

Fig. 6 is a perspective of an envelope-type bag of the invention.

The complete bag illustrated in Figs. 1, 2 and 4 comprises the bag 1 which is the usual gusset type with front panel 2, rear panel 3, and end gussets 4 and 5. The bottom 6 is substantially

flat when filled and the mouth is, of course, the open top defined by the edge 7. The bag may be formed of sheets of such non-opaque materials as clear cellulose or cellophane, rubber hydrochloride, polyvinyl compounds, lined paper, waxed glassine paper, and the like. Materials suitable for the purpose of the invention permit the merchandise to be seen, but such materials, especially cellulosic material, are difficult to print upon. As a result, printed cellophane costs about double the unprinted cellophane. Moreover, the printing obscures the merchandise, defeating the purpose for which a clear sheet material is used.

The other member of the bag is the card 10, the horizontal length of which is preferably equal to the width of the front and rear panels 2 and 3, and the height is proportioned to provide for insertion into the bag mouth, say, around one-half inch for small bags, leaving a sufficient amount of the card extending beyond or outside the bag to provide space for the desired number of spaced score crease lines 11. Advantageously, the projecting portion of the card should be large enough to accommodate display printing, such as trade-names, directions, and the like.

I have found it advantageous to form the card of a fairly heavy grade of paper, such as groundwood or kraft paper, say, 25 to 40 pound stock. At least one surface, and preferably both surfaces, are covered with an adhering layer of metal foil. I have found that a soft non-resilient metal, like lead, copper or aluminum, which stays where it is bent, gives the card a combination of properties which are extremely suitable for the purpose of the invention. These metals, especially aluminum, lend themselves to attractive printing, provide a good base for adhesion of the bag, and impart non-resiliency to the card permitting it to be folded and to close the bag. The metal surfaces may be attractively printed on both surfaces, as by gravure printing. When the filled bag stands in the erect position, the card projects above the bag and the bag is easily identified whether seen from the front or the rear.

Each card 10 preferably comprises a core of paper 12, two exterior faces of metal foil 13 and 14 bonded to the paper, two score lines 15 and 16 and two strips of adhesive 17 and 18 of a thermoplastic material, such as ethyl or nitrocellulose, applied over the metal foil. In forming a laminated card with aluminum foil for example, the foil is bonded or cemented to the paper with a cement, such as silicate of soda or a polyvinyl acetate. Preferably the card stock is manufactured in great lengths and wound into rolls. In the same operation, the roll of stock may be scored, gravure printed, the strips of thermoplastic adhesive applied, and cut into separate cards.

As clearly shown in Figs. 1 and 4, the card length is exactly the width of the bag panels and the card is inserted into the bag a short distance, say, one-half inch. I may insert the card into the bag such a distance that the extreme upper edges 7 of the bag extend above the adhesive strips and are unsealed, at the very edges. I may, however, so space the strips on the card or use a wider strip of adhesive on the back of the card than on the front, so that the back panel is sealed to the very top edge while the front panel has a free edge or lip 20 which may easily be grasped with the fingers to open the bag along the front (Fig. 3). The score lines 15 and 16 are preferably so positioned that when the card is folded therealong it folds over the open side, as shown in Fig. 2. It will thus be apparent that the bag, as described, is completely symmetrical, with the exception that the score lines permit folding in one direction more advantageously than in the other, and that the side to be opened is the one most easily closed when the card is folded.

In forming a gusset type bag of the invention with a bag formed of a sheet material, such as heat-sealing cellophane, the bag may be formed in one of two ways. The card may be inserted into the open mouth of the empty bag and attached to but one panel by the bag manufacturer. By the application of heat to the rear this panel is bonded to the card while the front panel remains free.

The upper edge of the front panel 2 being free, the bag mouth may be folded as shown in Fig. 4. A bag of this type is made for the purpose of delivery in complete form to the one who bags the merchandise. The bags are opened merely by pulling out the front panel, as shown in Fig. 4. Manual or any suitable mechanical filling equipment may be used to fill the bags. The entire operation may be carried out on a conveyor and the filled bags may be guided between heated pressure rollers which seal the front panel to the card, thereby completely sealing the bags.

When the bag is formed of a material such as self-sealing cellophane, the folds 21 of the gussets become fused together in a homogeneous mass and the entire mouth of the bag is sealed to the card. The invention, accordingly, provides a gusset type bag with an hermetically sealed mouth.

Another way to form a bag of the invention is to fill the bag completely with the merchandise and thereafter insert the card into the mouth of the bag. This may be done in several different ways. The cards may be mechanically or manually inserted into the mouths of the filled bags and sealed both front and rear by passing them through heated pressure rollers. The various specific arrangements of the two members may be as previously described.

In forming a bag of the type illustrated in Fig. 6, I may use a card similar to the one just described, and a bag 30 of the so-called envelope type which is characterized by having the front and back panels 31 and 32 in direct connection with each other throughout their length. There is no gusset in such bag, especially at the top, because the front and back panels join at the edges. It will be noted, therefore, that the length of the card is equal to the width of the front and back panels, and preferably forms a snug or close fit in the mouth when the bag is flat. This bag may also be formed in one of two different ways. It may be formed by the bag manufacturer who seals merely one panel to one side leaving the other panel unsealed. The filler of the bag bends the card to bulge the front panel outwardly ready for filling. This permits mechanical filling through a tube, or manual filling. When the bag is filled, it may be completely sealed by sealing the free panel to the card as previously described.

The bags may be supplied to the packer with the envelopes and cards not attached. The bags are filled and then the cards are inserted and sealed. I may use the same arrangement of adhesive strips as described in connection with

Fig. 1. The bags, constructed as shown in Fig. 6, may be formed of various kinds of sheet material, including those which are not self-sealing because the card contacts and seals the entire inner surface of the bag mouth.

By reason of the way cellophane is manufactured, it has a much greater tensile strength in one direction than in the other with the result that one edge is weak and easily split while the other is tough. When using cellophane, I prefer to arrange the sheet with the tough edge forming the mouth, thereby facilitating opening the bag without injury.

The consumer can open the bags very easily without injuring them merely by grasping the lip **20** and pulling it off the adhesive. Since a thermoplastic adhesive is used, the bag does not again stick to the card and it is a very simple matter to remove the contents, even a small amount at a time such as is common practice in using candy, cookies, and the like. In order thereafter to protect the merchandise from moisture, insects, and dust, the card is folded over along the score lines, as shown in Fig. 2, thereby closing the mouth. By reason of the laminated structure and the materials from which the card is made, and the weakening along the score lines, the card remains in its folded position. It may be folded and unfolded repeatedly to close and open the bag.

One of the advantages of the bags of the invention is that they are admirably suitable for the use of materials that are extremely difficult to print, such as cellophane or the waxed glassine papers. All of the necessary printing in the way of display advertising, instructions, and the like may be on that portion of the card which extends above the bag proper. Regardless of which position the bags may be placed upon a shelf, the cards serve their display and identification purposes.

I claim:

1. A gusset type bag for merchandise having side gussets and front and rear panels which comprises a closure card inserted into the mouth of the bag a short distance leaving a substantial portion of the card outside the bag which is suitable for display advertising media, adhesive means permanently sealing the rear side of the card to the rear panel near the mouth edge, thermoplastic adhesive means for sealing the card to the front panel, said bag being formed of material which is self-sealing when heated under pressure, whereby the operation of sealing the card to the front panel seals the gusset folds at the mouth hermetically sealing the mouth, means for pulling the front panel free of the card to open the bag said card being formed of a laminated structure having a paper core and a soft metal foil exterior, and at least one score line across the card parallel to and above the bag mouth, said card being foldable along the score line to close the bag in which position it remains.

2. A gusset type bag for merchandise having side gussets and front and rear panels which comprises a closure card inserted into the mouth of the bag a short distance leaving a substantial portion of the card outside the bag which is suitable for display advertising media, adhesive means permanently sealing the rear side of the card to the rear panel at the mouth edge, thermoplastic adhesive means for sealing the card to the front panel along a narrow strip leaving a free lip which may be grasped to open the bag, said bag being formed of a material which is self-sealing when heated under pressure, whereby the operation of sealing the card to the front panel seals the gusset folds at the mouth hermetically sealing the mouth, said card being formed of a stiff laminated structure having a paper core and aluminum foil bonded to each exterior flat surface, at least one fold line extending across the card parallel to the mouth edges of the bag, the length of the card being equal to the width of the panels, said card being nonresilient and when folded over along the score line to close the bag it remains in that position.

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