

Sept. 15, 1953

H. K. STEEN ET AL
PAPER BAG HANDLE

2,652,187

Filed July 8, 1950

2 Sheets-Sheet 1

Fig. 2

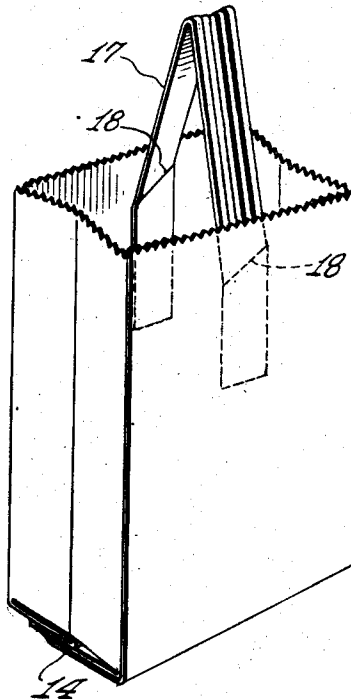


Fig. 1

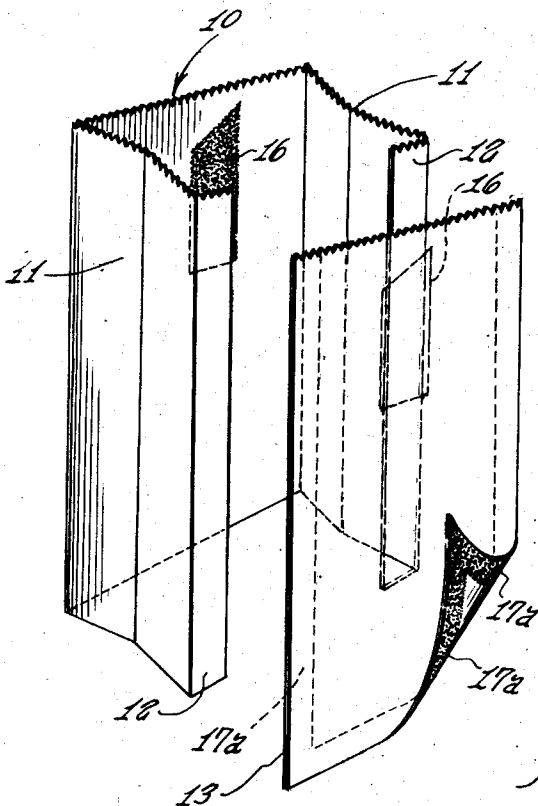


Fig. 3

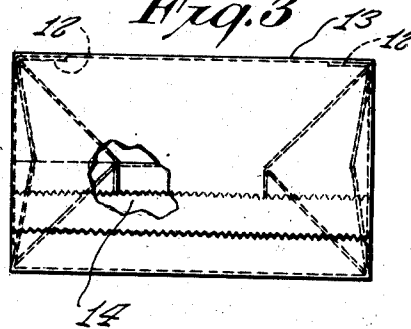


Fig. 1a



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Fig. 4

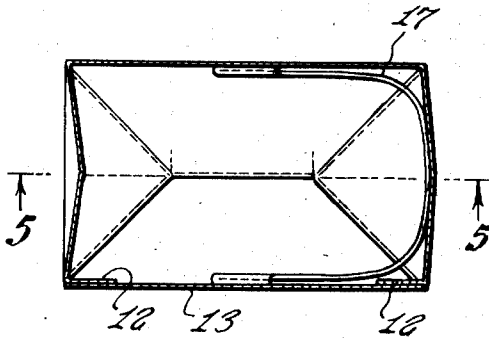


Fig. 5

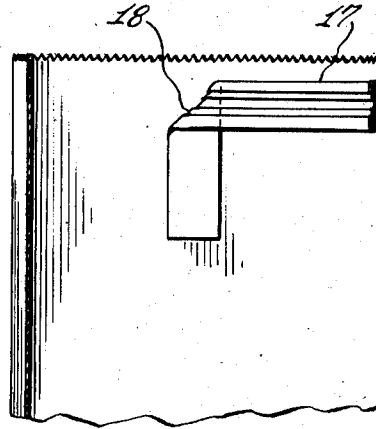


Fig. 6

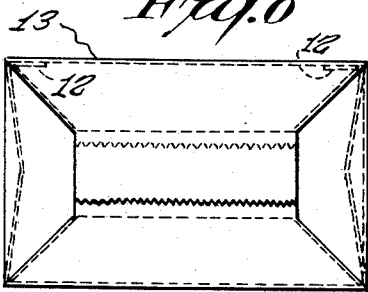


Fig. 8

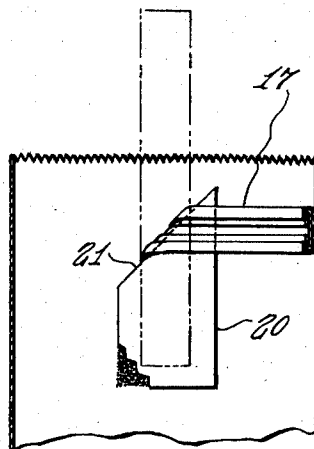
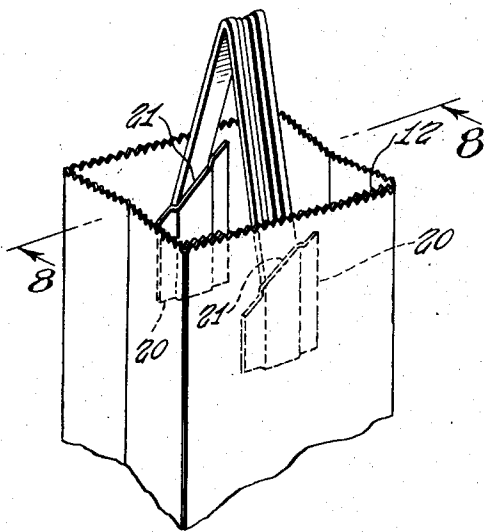


Fig. 7



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UNITED STATES PATENT OFFICE

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PAPER BAG HANDLE

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Application July 8, 1950, Serial No. 172,736

8 Claims. (Cl. 229—54)

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Our present invention relates to handled paper bags, especially to the type in which the handle is secured to the bag by pasting. More particularly it has to do with the type of handled bag in which the handle consists of a single member, the ends of which are secured to opposite sides of the bag.

It has long been recognized that for such a bag having a single handle, it would be desirable to secure the ends of the handle adhesively to the inner surfaces of the bag. This is because when the bag is loaded and lying on its side, it is quite easy to peel off the handle when adhesively secured to the outside of the bag especially when gripping the handle below the upper mid-section thereof. However, when the handle is secured to the inside, this peeling action is very much reduced when the bag is similarly lifted. Furthermore, having the handle on the inside enhances the appearance of the bag and makes the outer surface much easier to print on.

It is, however, difficult to attach the handles to the inside of a bag which is already tubed or otherwise formed.

We have now devised a bag composed of three parts including a handle, the handle being adhesively secured to the other of said parts and extending from the inside top central portion of the first part to the top inside central portion of the second part. Said bag has the advantage of easy assembly. Further, we have devised a handle which may be instantly folded out of the path of objects inserted into the bag and at the same time serve to maintain the bag in its open position. While useful in all types of bags, this feature is of particular usefulness when the ordinary square bottom is employed for the bag since this type of bag does not stand open readily as do other types such as the satchel bottom bag or the so-called "automatic" bottom.

Further objects of our invention and advantages will be apparent as the description proceeds. For the best understanding of our invention, reference may now be had to the following detailed description taken with the annexed drawing in which

Figure 1 is an exploded view of the bag showing the parts prior to assembly;

Figure 1a is a view on section 1a—1a of Fig. 1 showing the preferred form of handle construction;

Figure 2 shows the completed bag;

Figure 3 is a bottom plan view of the bag according to Fig. 2;

Figure 4 shows the bag as per Fig. 2 with the

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handle brought to its horizontal position where it is out of the path of the objects to be loaded into the bag, in which position it serves to keep the bag open;

5 Figure 5 shows a view in section along 5—5 of Fig. 4;

Figure 6 is a view similar to Fig. 3 showing the formation of a so-called automatic type bottom;

10 Figure 7 is a view of a modification in which patches are employed for reinforcing the handle at the areas where the ends of the handle are joined to the bag.

Figure 8 is a view on line 8—8 of Fig. 7.

As seen in Fig. 1, our improved bag is formed of a first piece 10, which in the form shown, has gussets 11, 11. The piece 10 is preferably provided with pasting flaps 12 at the longitudinal margins thereof upon which an adhesive of the proper character has been deposited as shown. 20 The second piece composing the bag 13 is a plain rectangular piece preferably of a length greater than the length of piece 10 so as to overlap the seam or fold 14 formed in sheet 10 after the bottoming operation has been performed. Pieces 10 and 13 are each spotted with an adhesive area 16 to receive the handle 17 and piece 13 is spotted with a marginal band of adhesive 17a around the three sides thereof as shown.

25 The three parts of the bag, namely, the gusseted piece 10, the plain piece 13 and the handle 17 are assembled preferably as set forth in the application of Harford K. Steen and Harold L. Thompson, filed June 11, 1951, Serial No. 230,906, or the parts may be assembled by hand and any one of the two types of bag bottoms as exemplified in Figs. 2 and 3 and Fig. 6 formed preferably by mechanisms which are well known to the art and which do not need to be described. Heretofore the square bottom while having the advantage of ease and rapidity of formation has had the drawback that the bag does not open as quickly or stay open as easily. However, in our bag this drawback is largely overcome by the action of our improved handle whereby we are enabled to use the cheaper and more easily formed square bottom. 40

45 Preferably the handle 17 is also made of paper and while flexible has sufficient stiffness to accomplish the function illustrated in Fig. 4. Preferably this type of handle is that described in our copending application Serial No. 149,844, filed March 15, 1950, although our present invention is not restricted to this specific type of handle. As shown in Fig. 1a, the generally flat handle is composed of a plurality of plies, as for example 50

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three, of fibrous material preferably paper, which are bent in the form of a flattened C. The adhesive is supplied to the open face of the C whereby the adhesive penetrates between the plies and secures the plies to one another and the ends of the handle to the bag. Preferably and as shown the ends of the handle 17 are attached to the bag an appreciable distance below the top thereof, thereby lending greater stability to the bag when loaded and enhancing the action of the handle when it assumes the position of Fig. 4.

Preferably the handles are pre-scored at 18, 18, Fig. 1, such score lines preferably making an angle of 45 degrees to the vertical axis of the bag and being parallel to one another. Also the adhesive spot 16 preferably likewise has its upper edge 19 at approximately the same angle to the vertical axis as score lines 18, and furthermore the upper boundary of the spot 16 coincides with the score line 18.

After the bottoming operation is performed, the bag is in the usual flattened form with the opposite sides in contact with one another. When using the bag, it is customary for the user to reach into the bag and expand it to the shape of Fig. 2. Having done so, the user swings the handle from the position shown in Fig. 2 to that shown in Fig. 4. In the latter figure the handle because of its stiffness and resiliency not only holds the bag open but is itself kept out of the way of the filling operation. It is obvious that to accomplish this the handle 17 should be of a length to assume the position of Fig. 4, i. e., preferably slightly less than one-half the periphery of the bag opening. It will be noted that by virtue of the preformed score lines the handle is caused to assume a position in which it hugs the sides of the bag and exerts its maximum stiffening effect. It will be evident that in the preferred form of handle which is composed of folded flat plies of paper, the useful qualities of stiffness and springiness in addition to strength are present to a high degree.

A further advantage of our improved construction is that the part or plain piece 13 may be made of different color or type of paper than the gusseted piece 10. For example, it may be made of transparent material such as cellophane. It may also be separately printed upon.

As shown in Figs. 7 and 8, the region surrounding the union of the handle ends and the bag may for heavy duty bags be reinforced by patches 20 in which desirably the upper edges 21 may be substantially coincident with the score lines 18 of the handle.

While the invention has been illustrated by an embodiment in which the piece 10 is gusseted, it will be obvious that such gussets may be omitted where not desired and the advantages of the invention preserved. In omitting the gussets, the passing flaps 12 would however be retained.

We claim:

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1. A collapsible bag and a handle, the handle comprising a single generally U-shaped member of fibrous ribbon-like material possessing in addition to the tensile strength necessary to suspend the loaded bag substantial stiffness and resilience, said handle extending flatwise from the top central portion of one interior surface of the bag to the top central portion of the opposite interior surface thereof, means for attaching each end portion of the handle to the bag, said handle normally extending flatwise upwardly from the bag when it is collapsed, and having an obliquely extending score line adjacent each attaching means to enable said handle to be bent and assume a transverse position within the mouth of the bag, thereby assisting in keeping the bag open.

2. A bag according to claim 1 in which said handle is of a length to extend when bent around that portion of the bag periphery between the attached ends of said handle.

3. A bag according to claim 1 in which the bag is square-bottomed.

4. A bag according to claim 1 in which the score lines are substantially 45 degrees to the vertical axis of the bag whereby the handle when bent along such lines extends parallel with the top of the bag.

5. A bag according to claim 1 in which the handle ends are adhesively attached to the bag.

6. A bag according to claim 1 having reinforcing patches over the handle ends.

7. A bag according to claim 1 in which the sides connecting the sides to which the handle ends are attached are in the form of gussets.

8. A bag according to claim 1 in which said handle is thicker at its edges than it is in the middle.

HARFORD K. STEEN.
HAROLD L. THOMPSON.

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