Nov. 10, 1964 J. S. DAVIS 3,156,166

SHOPPING BAG

Original Filed March 3, 1958

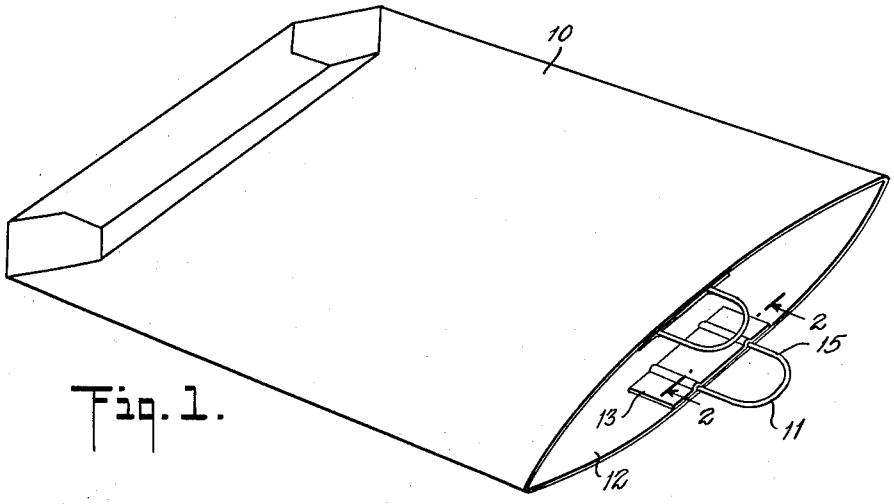


Fig. 1.

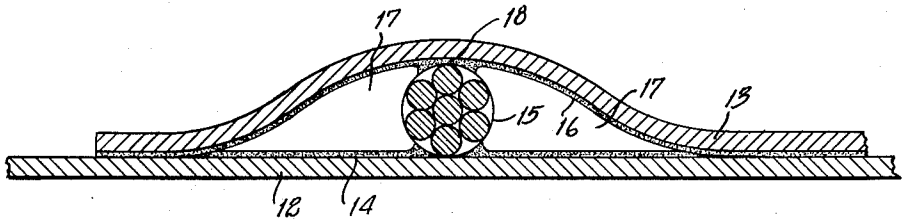


Fig. 2.

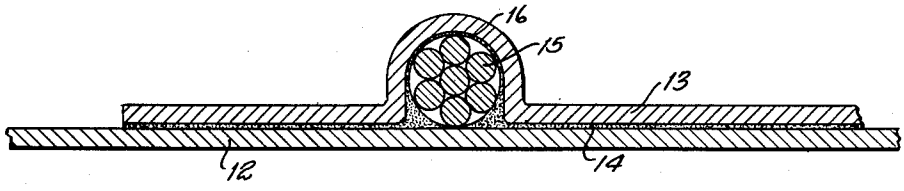


Fig. 3.

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SHOPPING BAG

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3 Claims. (Cl. 93—35)

This invention relates to new and useful improvements in shopping bags, and more particularly to a new and improved shopping bag having cord carrying handles attached to the paper web in a novel manner.

The advent of high speed machinery for manufacturing paper bags has enabled the ordinary paper bag to be utilized for many applications where it is desirable to provide a receptacle for carrying a number of items and to discard the receptacle after one use if necessary. A typical example of this is the so-called super market where it is desirable to provide the consumer with a bag or placed for convenient transport, and which may be discarded once the consumer has reached his destination.

Paper bags provided for this purpose, however, have the disadvantage that they must be carried, supported or cradled in the shopper's arm. This is particularly disadvantageous for such places as department stores where the patron upon entering the store is given a bag in which to carry the merchandise purchased in the store at the various departments. For applications such as this, it is highly desirable that the paper bag be provided with handles or other provisions such that the bag can be carried or supported in the same manner as a suitcase.

Prior art methods of providing paper bags with handles or carrying means, or so-called shopping bags, have generally involved either providing cut out portions in the side walls of the paper bag through which the fingers could be inserted in order to support and carry the bag, or else gluing paper or cord handles to the paper web during manufacture. Both of these types of shopping bags have the disadvantage that the bag is weakest at the points where the handles are attached to the bag. With these prior art shopping bags the weight of the contents in the bag is concentrated at the support points or where the handles are secured to the paper bag web. This has resulted in the handles being torn away from the web if too much merchandise is carried in the bag or if the bag is jostled or lifted quickly.

In view of the foregoing it is the primary object of the present invention to provide an improved shopping bag which overcomes the disadvantages of prior art shopping bags.

More specifically it is an object of this invention to provide a shopping bag in which the cord handles are secured to the bag web in a novel manner to prevent the handles from slipping or tearing away from the bag web.

It is another object of the present invention to provide a shopping bag in which the cord handles are secured to the bag web in a manner such that the weight of the bag and contents are not concentrated at the points of attachment of the handles to the web but distributed over a large area.

Briefly stated the present invention accomplishes these objects by securing the cord handles to the paper bag web by means of a patch web. One side of the patch web as well as a portion of the paper bag web is coated with a fast drying adhesive and after the cord handles are placed on the paper bag web the patch web is placed over the ends of the cord handle with the adhesive coated side in contact with the cord handles and the paper bag web. The patch web is then formed such that portions of the patch web in contact with the cord handles conform to

the contours of the cord handle. In this manner a uniform bond is created between the cord handles, the patch web and the paper bag web and as a consequence when the shopping bag is lifted or carried the weight of the bag, rather than being concentrated at the points of attachment of the cord handles to the paper bag web is distributed throughout the contiguous areas of the patch web and paper bag web.

For a better understanding of the present invention as well as further objects and features thereof reference is made to the following detailed description to be read in conjunction with the accompanying drawings wherein like components in the several views are identified by like reference numerals.

In the drawings:

FIGURE 1 is a perspective view of a shopping bag with the cord handles attached thereto.

FIGURE 2 is a cross-section taken on lines 2—2 of FIGURE 1 and illustrating the inter-relation of the patch web, cord handle and paper bag web after the patch web has been placed in position over the cord handles and paper bag web but before it has been formed to the contours of the cord handles and,

FIGURE 3 is similar to FIGURE 2 but illustrating the inter-relation of the patch web, cord handle and paper bag web after the patch web has been formed to the contours of the cord handle.

Referring now to the drawings, FIGURE 1 illustrates a completed shopping bag generally denoted by the numeral **10** with the cord handles **11** secured to the paper bag web **12** and held in position by the patch web **13**. The bag **10** may be formed on any conventional bag machine.

In order to secure the cord handles **11** to the paper bag web **12** the area of the paper bag web underlying the cord handle **11** is first coated or printed with a fast drying adhesive **14**, the adhesive **14** being applied in a generally solid rectangular pattern approximating the area of the patch web **13** for a purpose to be presently described. The cord handles **11** are placed on the paper bag web **12** such that the ends of the legs **15** of the cord handles **11** are positioned in contact with the adhesive coating **14**. The width of the adhesive coated area **14** is greater than the distance between the legs **15** of the cord handles **11** for a purpose to be presently described. The legs **15** of the cord handles **11** are positioned on the adhesive coated area **14** such that substantially uniform areas are exposed on each end.

When the legs **15** of the cord handles **11** have been properly positioned on the paper bag web **12** in relation to the adhesive coated area **14** the patch web **13** is applied such that it is substantially in registration with the adhesive coated area **14**. The inner side of the patch web **13**, or the face in contact with the cord handle **11** and adhesive coated area **14** is also coated or printed with a fast drying adhesive **16**. The patch web **13** is preferably rectangular with a width slightly greater than the width of the adhesive coated area **14** for a purpose to be presently described. The patch web **13** is preferably completely coated on one side with adhesive **16** or if desired lines of adhesive may be placed on one side of the patch web, with these lines of adhesive positioned such as to be in registration with the legs **15** of the cord handles **11** when the patch web **13** is positioned on the paper bag web **12**.

As illustrated in FIGURE 2 when the patch web **13** is in position in relation to the paper bag web **12** it overlies the ends of the legs **15** of the cord handle **11**, the adhesive coated area **14** and the paper bag web **12**, but is in contact with only a limited circumferential area of the legs **15** of the cord handles **11** due to the void spaces **17**. These void spaces between each leg **15**, the patch

web 13 and the paper bag web 12 are due to the fact that the patch web is not molded to the contours of the legs 15 of the cord handles 11, but rather merges or meets the paper bag web 12 in a generally arcing path. Due to the small contact area between the patch web 13 and the legs 15 of the cord handles 11 the weight of the bag 10, plus its contents, are concentrated at these areas of contact generally denoted by the numeral 18. It can therefore be seen that this is the weakest point or area of the shopping bag and the cord handles are therefore very easily dislodged from the paper bag web 12 if the shopping bag 10 is jostled or picked up quickly.

In order to prevent this from occurring, the patch web 12 in the area overlying the cord handle 11 is formed or molded to the contour of the legs 15 of the cord handles 11. As illustrated in FIGURE 3, when the patch web 13 is formed in this manner a greater area of the patch web is in contact with the legs of the cord handles. Due to the adhesive coating on the patch web 13 and on the paper bag web 12 as pressure is applied to the patch web 13 to conform it to the contour of the cord hand 11 the patch web will slideably move on the paper bag web 12. When this occurs the adhesive 14 on the paper bag web 12 is forced into the void spaces 17 thereby providing a continuous bond between the patch web 13, the legs of the cord handles 11 and the paper bag web 12. The completed handle is illustrated in FIGURE 3.

When the shopping bag of the present invention is held vertically and supported by the cord handles 11 the weight of the bag plus its contents is distributed through the area of the patch web 13 and the portion of the paper bag web in contact with the patch web. In this manner a considerably stronger bag is obtained.

The cord handles of the present invention may be applied to the paper bag web 12 either manually or by appropriate guides or rollers. A machine for forming and applying the cord handles of the present invention to a paper bag web and for molding the patch web to the contour of the handle legs is described in pending application Serial Number 473,949, now Patent 2,844,075, of which the present application is a continuation in part. If a machine is used to form and apply the cord handles to the web, it is preferable that the machine utilize two rollers to mold the patch web to the contour of the handle legs. The first roller has two annular grooves adapted to receive the cord handles as the web passes under the roller. The portion of the first roller between the grooves has a large diameter than the remainder. In this manner, the first roller presses the patch 13 down between the legs of the cord handle and since the outer portions of the roller are of smaller diameter they do not contact

the patch, thereby allowing the patch to adjust to the contours of the handle legs. The second roller also has annular grooves, but the diameter of the entire roller is uniform, thereby passing equally across the entire face of the patch.

This application is a continuation of my co-pending application, Serial No. 718,621, filed March 3, 1958, now abandoned.

What is claimed is:

1. The method of attaching cord handles to surfaces that form opposite side walls of a shopping bag, which method comprises applying adhesive in a soft condition directly to limited areas of said walls of the bag at opposite sides of a mouth of the bag, applying end portions of cord handles to the adhesive-coated areas of the side walls and with loop ends of the cords extending beyond the mouth of the bag, applying a patch web over the end portions of each handle and over the adhesive-coated area on each wall of the bag, and while the adhesive remains soft, shaping each patch web to the cord by pressing the patch web inward around both sides of each end portion of the cord handle and downward into contact with the side wall of the bag adjacent to the cord to shape the patch web to the cord and to draw side portions of the patch web in closer to the cord while the adhesive is soft and the patch web and the cord are free to move on the adhesive coated surface the wall of the bag.

2. The method described in claim 1 characterized by forcing soft adhesive into the space between the side of the bag and the curved surface of the cord that confronts the adhesive-coated area of the bag by the pressure with which the patch web is shaped to the cord.

3. The method described in claim 2 characterized by coating both of the limited areas of the side wall of the bag and the faces of both of the patch webs before the patch webs are applied to the handles and to the side wall of the bag.

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