April 24, 1951 R. GLEAVE ET AL 2,550,464

DRAW CORD ANCHORAGE

Filed Dec. 26, 1946

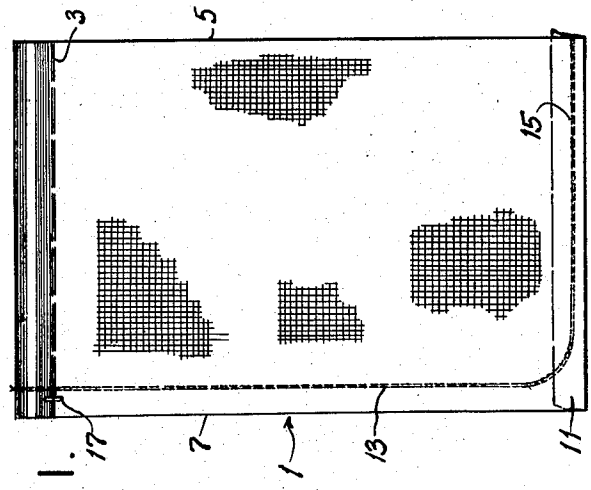


FIG. 1.

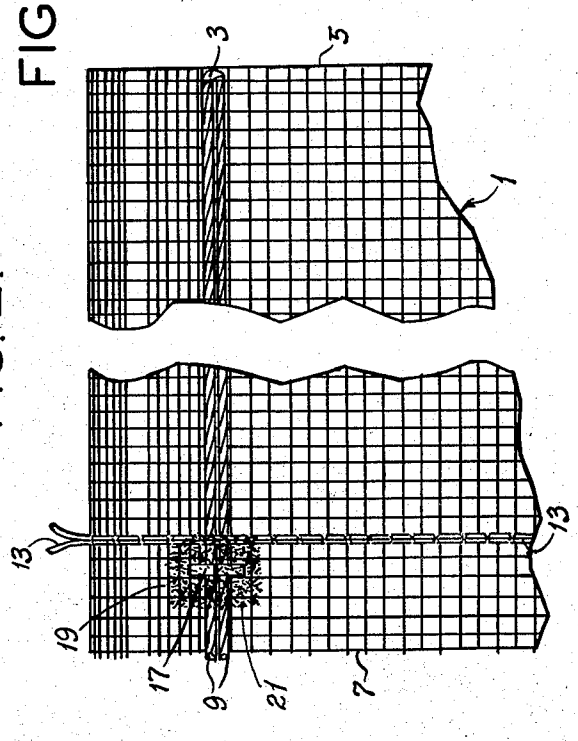


FIG. 2.

Russell Gleave,
Edwin A. Dickmann,
Inventors.
Haynes and Thomas,
Attorneys.

Patented Apr. 24, 1951

2,550,464

UNITED STATES PATENT OFFICE

2,550,464

DRAW CORD ANCHORAGE

Russell Gleave and Edwin A. Dickmann, St. Louis, Mo., assignors to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri

Application December 26, 1946, Serial No. 718,308

4 Claims. (Cl. 150—11)

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This invention relates to a draw cord anchorage, and more particularly to an anchorage for the ends of draw cords of open-mesh bags.

Among the several objects of the invention may be noted the provision of an improved, more secure anchorage for the ends of a draw cord in an open-mesh bag to prevent the draw cord from being pulled out of the bag when it is drawn up to close the mouth of the bag. Other objects will be in part apparent and in part pointed out hereinafter.

The invention accordingly comprises the elements and combinations of elements, features of construction, and arrangements of parts/which will be exemplified in the structures hereinafter described, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawings, in which one of various possible embodiments of the invention is illustrated,

Fig. 1 is a view of a completed bag embodying the improved draw cord anchorage of the invention; and,

Fig. 2 is an enlarged fragmentary view of the bag of Fig. 1 particularly illustrating the improved draw cord anchorage.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

Fruits, vegetables and the like are often packed in open-mesh bags, such as illustrated at 1 in Figs. 1 and 2, which have draw cords 3 for closing the mouths of the bags after filling. These bags are generally formed from lengths of open-mesh fabric, such as a leno-weave fabric, cut from a continuous web in which the draw cord is pre-woven along one margin. A bag is formed by folding such a length of fabric at 5 to bring the cut ends 7 of the length of the fabric and the cut ends 9 of the draw cord together, and then stitching the ends 7 and the bottom margins 11 to form side and bottom seams 13 and 15, respectively. This results in an open-mouthed bag having draw cord 3 loosely interwoven therein adjacent its mouth.

The ends 9 of the draw cord must be anchored to the bag to prevent the cord from being pulled out when it is drawn up to close the mouth of the bag. The stitching 13 cannot be relied upon for anchoring these ends since it is too coarse, due to the open-mesh characteristic of the bag fabric. Heretofore, the ends have been anchored either by knotting them, or by folding over the corner of the bag prior to stitching, or by having

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the ends adhered to an adhesive splicing strip as in Geimer U. S. Patent 2,416,747. Knotting is a tedious and time-consuming procedure. The folding procedure is more satisfactory then knotting, but is time-consuming. The Geimer anchorage is available only when a splicing strip is used in the bag seam. This invention provides an improved, secure anchorage for the ends of the draw cord which may be quickly and easily formed without any knot-tying, folding or the like, and without requiring use of a splicing strip.

As illustrated in Fig. 2, the draw cord anchorage of this invention comprises a staple 17 driven through the bag fabric and clinched around the ends of the draw cord. and a mass of adhesive 19 adhesively bonding the ends of the cord to the bag. The adhesive is applied over a substantial area surrounding the staple and not only bonds the ends of the cord to the bag but also fills or tends to fill the interstices of the open-mesh bag fabric, as indicated at 21, to form a stiff matrix in which the staple and the ends of the cord are adhesively embedded. This locally stiffens the bag weave, prevents displacement of the staple relative to the bag by preventing sliding of the staple along the individual strands of the open-mesh bag fabric around which it is clinched, and distributes the load to increase the resistance of the anchorage to pulling out of the cord. The result is an anchorage wherein the ends of the cord are securely affixed to the bag to prevent the cord from being pulled out of the bag under the usual amount of force applied to the cord in drawing it up to close the bag mouth. The staple and adhesive are applied outside of the side seam 13, so as not to obstruct the bag mouth.

Cross reference is made to our copending divisional application entitled Method and Apparatus for Anchoring Draw Cords, Serial No. 119,914, filed October 6, 1949, now U. S. Patent No. 2,520,395, issued August 29, 1950.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As many changes could be made in the above construction without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

We claim:

1. In an open-mesh fabric bag having a draw cord in the bag fabric adjacent the mouth of the bag, a staple driven through the bag fabric and clinched around the ends of the draw cord, and

a mass of adhesive applied over a substantial but local area surrounding the staple bonding the ends of the draw cord to the bag and forming an adhesively-stiffened matrix portion of the bag in which the staple and the ends of the cord are embedded.

2. In a bag formed from a length of open-mesh fabric having a draw cord pre-woven therein along one margin and folded to bring the ends of the length of fabric and the ends of the cord together, said bag having stitched side and bottom seams, a staple driven through the bag fabric and clinched around the ends of the draw cord, and a matrix of adhesive applied over a substantial area surrounding the staple bonding the ends of the draw cord to the bag and filling the interstices of the open-mesh fabric to form an adhesive-stiffened portion of the bag in which the staple and the ends of the cord are embedded.

3. In a bag formed from a length of open-mesh fabric having a draw cord pre-woven therein along one margin and folded to bring the ends of the length of fabric and the ends of the cord together, said bag having stitched side and bottom seams, a staple driven through the bag fabric and clinched around the ends of the draw cord, and a matrix of adhesive applied over a substantial area surrounding the staple bonding the ends of the draw cord to the bag and filling the interstices of the open-mesh fabric to form an adhesive-stiffened portion of the bag in which the staple, the ends of the cord and a part of the side seam are embedded.

4. In a bag formed from a length of open-mesh fabric having a a draw cord pre-woven therein along one margin and folded to bring the ends of the length of fabric and the ends of the cord together, said bag having stitched side and bottom seams, a staple driven through the bag fabric and clinched around the ends of the draw cord, and a matrix of adhesive applied over a substantial area surrounding the staple bonding the ends of the draw cord to the bag and filling the interstices of the open-mesh fabric to form an adhesive-stiffened portion of the bag in which the staple and the ends of the cord are embedded, said staple and adhesive being disposed outside of said side seam.

RUSSELL GLEAVE.
EDWIN A. DICKMANN.

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