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BAG WITH ATTACHED DRAW-STRING

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3 Claims.

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The present invention relates to bags and more particularly to bags which have a draw-string member attached thereto in such manner that the open end of the bag may be at least partially closed thereby.

Draw-string bags are well known, but such well-known, conventional draw-string bags suffer from several major deficiencies. One of these deficiencies resides in the manner of associating the draw-string member with the body portion of these conventional bags. Heretofore, the draw-string member has been either enclosed in a turned-over hem portion with a suitable area of the draw-string member free for grasping and pulling, or threaded under or through suitable spaced loops or grommets secured to the body portion of the bag adjacent the open end thereof.

The formation of such a turned-over hem portion enclosing the draw-string member or the attachment of the loops or grommets and the threading of the draw-string member thereunder or therethrough requires separate and distinct operations from the formation of the bag body and substantially increases the labor, time and expense involved in the manufacture of conventional draw-string bags. Also, in conventional plastic bags, the attachment of the draw-string members has been particularly acute due to the difficulty of handling plastic material to form a hem or attached loops or grommets.

With the foregoing in mind, it is an object of the present invention to provide a novel bag with an attached draw-string member which obviates the deficiencies of conventional bags and wherein the novel bag is simple in construction and inexpensive to manufacture.

A more specific object of the present invention is to provide a novel heat-sealable plastic bag of the draw-string type wherein the draw-string member is also of heat-sealable plastic material and is attached to this body portion during the formation thereof.

Some of the objects of the invention having been stated, other objects will appear as the description proceeds, when taken in connection with the accompanying drawings, in which—

FIGURE 1 is an isometric view of a bag incorporating the features of the present invention;

FIGURE 2 is a transverse sectional view taken substantially along line 2—2 in FIGURE 1;

FIGURE 3 is a perspective view of the bag shown in FIGURE 1 and illustrating the manner of inserting the draw-string member through the opening in one side of the bag;

FIGURE 4 is a view similar to FIGURE 3 showing the draw-string member inserted through the openings in both sides of the bag and with the draw-string members pulled upwardly through the open end of the bag to close the normally open end of the bag, and

FIGURE 5 is a transverse sectional view similar to FIGURE 2 illustrating the manner of inserting the draw-string member through the openings in the body portion of the bag.

Referring now more specifically to the drawings, there is shown a bag generally indicated at 10 which comprises a body portion 11 defined by opposing walls 12 and 13 of suitable pliable material, which is preferably plastic material such as polyethylene. In the embodiment illustrated in the drawings, the walls 12 and 13 are integral at one end 14 of body portion 11 so that the same are joined together along one end thereof to form the closed end or bottom 14 of the bag 10. Walls 12 and 13 are sealed together along the side edges thereof as indicated at 15 and 16, respectively, but remain separated at the other ends thereof to define the open end 17 of bag 10. However, it is contemplated within the scope of the present invention that walls 12 and 13 may be integral along one or both sides and sealed together along the bottom and the other side or only along the bottom.

Walls 12 and 13 have openings 20, 21, respectively, in the medial portion thereof adjacent open end 17 of bag 10, but spaced a small predetermined distance therefrom. In the embodiment illustrated in the drawings, openings 20 and 21 are vertically elongated.

A draw-string member 22 surrounds body portion 11 adjacent open end 17 of bag 10 and has portions thereof disposed in overlying relation to openings 20 and 21. Draw-string member 22 is preferably of the same pliable material as body portion 11 and is secured thereto at least one point remote from openings 20 and 21 a sufficient distance to provide free unattached portions which may be inserted into and pulled therethrough to gather the open end portion of the bag. In the embodiment illustrated in the drawings, draw-string member 22 comprises two elongate strips 23 and 24 which extend transversely of walls 12 and 13, respectively. Draw-string strips 23 and 24 are only secured to body portion 11 at opposite side edges of walls 12 and 13 and preferably are thusly secured thereto by the heat-seals 15 and 16 which join the walls 12 and 13 together along their side edges. Therefore, these strips have the portion thereof extending between the heat-seals 15 and 16 free and unattached so that the same may be inserted into and pulled through openings 20 and 21.

The above-described novel bag with attached draw-string member is of such construction that the same may be folded, the openings punched, the draw-string strips fed into position and heat-sealed in a continuous automatic operation on a conventional bag forming machine with only minor additions or modifications. Bags 10 may therefore be machine formed with very little or no manual handling which is a substantial departure from the formation of conventional draw-string bags.

In use, bag 10 may have any desired and suitable articles or materials placed therein and the open end 17 thereof may be at least partially closed by inserting the medial unattached portions of draw-string member 22 through the openings 20 and 21, substantially as illustrated in FIGURE 5. These medial portions of draw-string member 22 are then drawn upwardly through the open end 17 of bag 10 and serve to gather the pliable material of body portion 11 and to at least partially close the open end of the bag. Also, the upwardly extending looped portions of draw-string member 22 serve as handles for carrying the bag 10.

It is therefore believed apparent that the present invention provides a novel bag with attached draw-string member which is easily and quickly formed, very simple in construction, and inexpensive to manufacture.

In the drawings and specification there has been set forth a preferred embodiment of the present invention and, although specific terms are employed, they are used in a generic and descriptive sense only, and not for purposes of limitation, the scope of the invention being defined in the claims.
I claim:

1. A bag having an open end comprising a body portion defined by opposing walls of pliable material, each of said walls being of a single thickness of material and having a pair of openings in opposite sides thereof adjacent but spaced from the open end of the bag and communicating with the interior thereof, and a draw-string member of pliable material surrounding said body portion adjacent to the open end of the bag and in overlying relation to said openings therein, said draw-string member being fixedly secured to the outer surface of said side walls and at the opposite side edges of said walls to provide free unattached portions of said draw-string member adjacent and in juxtaposed relation to said openings, said unattached portions of said draw-string member being adapted to be inserted through said openings in said body portion and to be pulled upwardly through the open end of said bag to gather the open end portion of the bag to at least partially close the open end thereof.

2. A bag having an open end comprising a body portion defined by opposing walls of pliable heat-sealable plastic material, each of said walls having an opening in the medial portion thereof adjacent to but spaced a predetermined distance from the open end of the bag, said openings being in opposing aligned relation, and a draw-string member also of pliable heat-sealable plastic material surrounding said body portion adjacent the open end of the bag and in overlying relation to said openings in said walls, said draw-string member being heat-sealed to said walls at the opposite side edges of said walls and having the portions thereof between the side edges of said walls and said unattached said unattached portions being adapted to be inserted through said openings and pulled upwardly through the open end of the bag to gather the open end portion of the bag to close the open end thereof and to serve as carrying handles for the bag.

3. A bag according to claim 2 wherein said walls and said draw-string member are of polyethylene, wherein said walls are integral at the closed end of the bag and are heat-sealed together along the side edges thereof, and wherein said draw-string member is heat-sealed to said walls at their side edges by the heat-seals along the side edges thereof.

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