Dec. 30, 1969 S. KAMINS ET AL 3,486,683

BAG AND CLOSURE MEANS THEREFOR

Filed Sept. 8, 1967 2 Sheets-Sheet 1

FIG. 1.

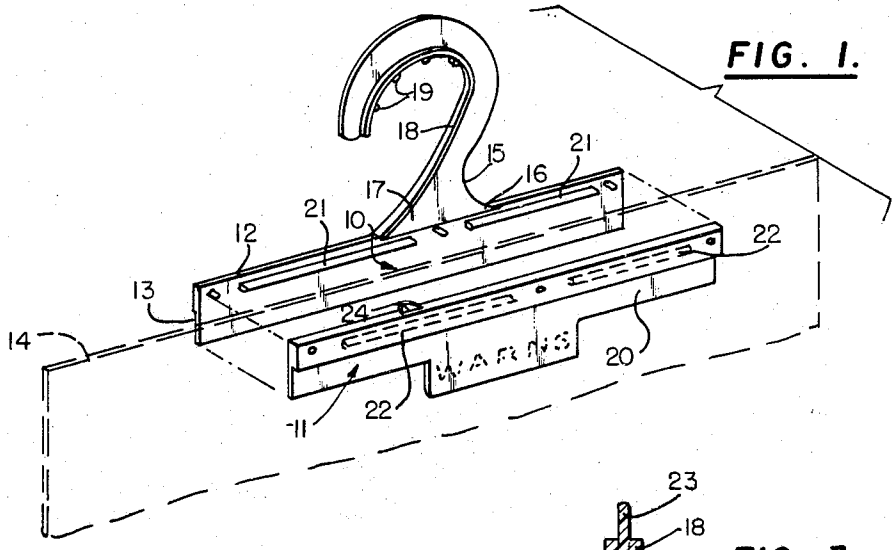


FIG. 3.

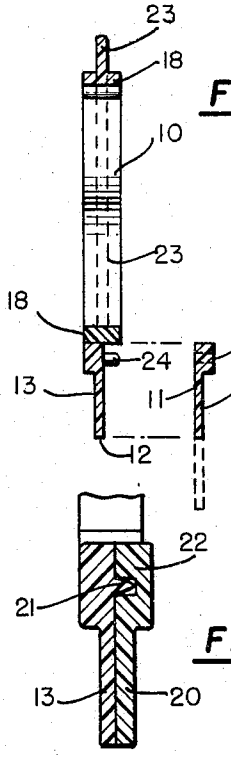
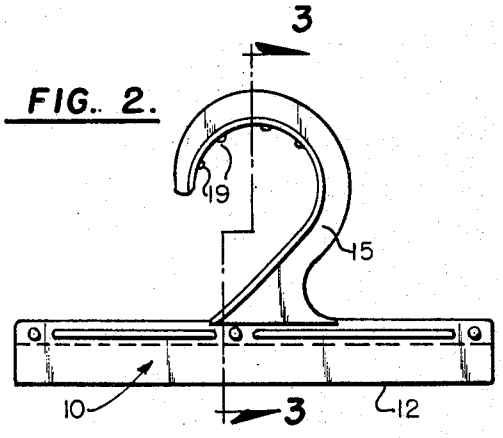


FIG. 3A.

FIG. 4.

FIG. 2.



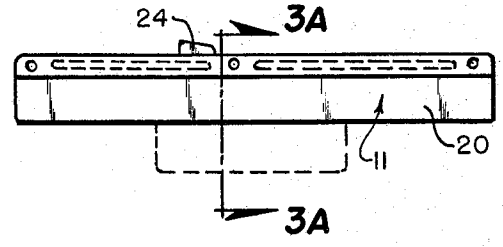


FIG. 2A.

INVENTORS

SEYMOUR KAMINS

NORMAN ROSENBERG

BY

Hall, Pollock & Vande Sande ATTORNEY

Dec. 30, 1969 S. KAMINS ET AL 3,486,683

BAG AND CLOSURE MEANS THEREFOR

Filed Sept. 8, 1967 2 Sheets-Sheet 2

FIG. 5.

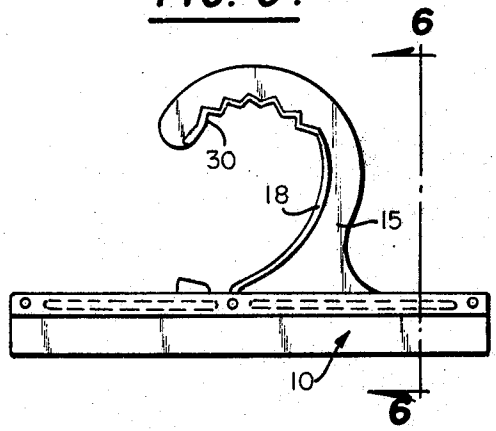


FIG. 6.

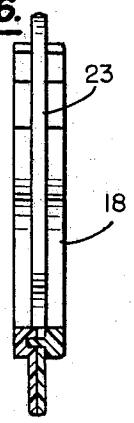


FIG. 7.

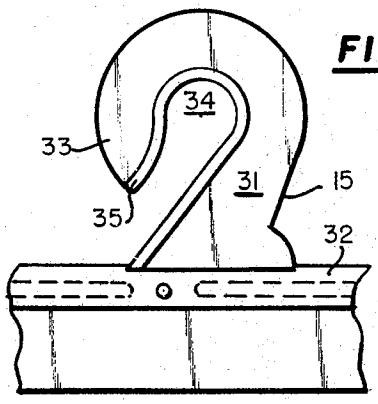


FIG. 8.

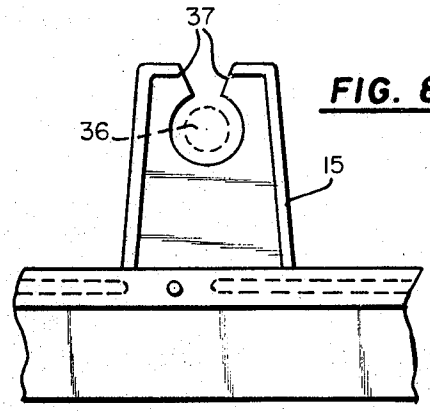
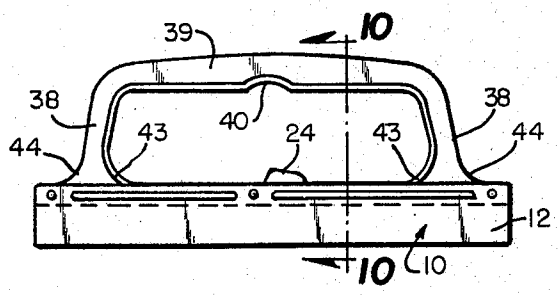


FIG. 9.



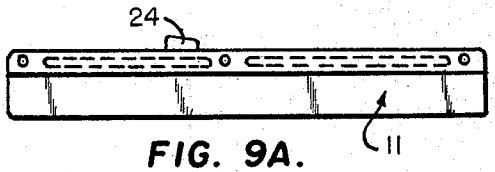


FIG. 9A.

FIG. 10.

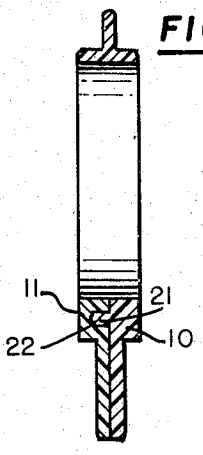
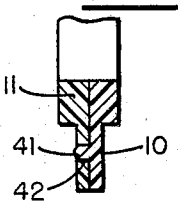


FIG. 11.



INVENTORS

SEYMOUR KAMINS

NORMAN ROSENBURG

BY

Hall, Pollock & Vande Sande,

ATTORNEY

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3,486,683

BAG AND CLOSURE MEANS THEREFOR

Seymour Kamins, Oceanside, and Norman Rosenberg, Bayside, N.Y., assignors to CTP Industries, Inc., Brooklyn, N.Y., a corporation of New York

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Int. Cl. B65d *33/06, 77/14;* A45c *13/26*
U.S. Cl. 229—54 4 Claims

ABSTRACT OF THE DISCLOSURE

The disclosure relates to a two-piece handle and/or hook for a thin-film, thermoplastic bag. Each of the two handle members comprises an elongate bar portion having a flat surface adapted for sealing to one of the open mouths of the bag and with one of the two members having a handle grip which is integrally connected with the elongate bar portion. Only one of the two members has a handle grip and/or hook portion integrally connected therewith, but such member is constructed in such manner that when the two members are placed in juxtaposition for closure of the mouth of the bag, the handle and/or hook of this invention presents the same solid and substantial appearance and feel as does a conventional two-piece handle and closure means of the prior art.

Various types of bags are known in the art, including numerous kinds made of thermoplastic material. Many of the prior art bags include a combination handle and closure means for the bag which makes it possible to provide a tight closure therefor.

It is also well known in the art to provide bags whose main body portion is formed of a thin film or thermoplastic material such as the more common vinyl or polyethylene plastics. The prior art further teaches the use of a combination handle and closure means for such a thin-film plastic bag which is welded or cemented or otherwise fastened to the thin film forming the bag walls. It is also common to fabricate the handle and closure means from a thermoplastic having a substantially heavier gauge than that of the thin film used for the main portion of the bag since this provides greater strength and provides a desirable rigidity to the mouth of the bag, thereby making it more convenient to open the bag and to maintain it open for obtaining access to its interior.

In addition to the foregoing, it is also known in the art to provide a combination handle and closure means which comprises two substantially similar members formed of a semi-rigid material such as a fairly heavy gauge plastic which are each welded or heat sealed to the mouth of the bag. To open the bag, it is then only necessary to grasp the two handle portions with one's right and left hands, respectively, and separate the two handle portions.

Quite often, a securing or locking means is employed which tends to hold the two oppositely disposed handle portions together, thereby effectively maintaining a tight closure of the mouth of the bag. In its most practical form, such a fastening means may comprise a small protuberance on one member which frictionally engages an indentation or recess in the opposite member as is, for example, shown in the patent to Harrah, No. 2,978,769. To open a bag which is provided with such a closure means, it is again only necessary to separate the two handle portions, but now, obviously, somewhat more force is required to accomplish this because the fasteners must first be unsnapped.

The bag handle and closure means of this invention provides substantially all the advantages of the prior art handle but does this in a considerably more economical

manner. Thus, instead of employing two quite similar members to form, when juxtaposed, a single handle (and/or hook) and closure means, it is contemplated by the present invention to form the handle (and/or hook) and closure means of two quite differently shaped parts. One of the parts comprises an elongate bar or strip having a surface thereon adapted for heat sealing to the thin-film thermoplastic material of the bag itself. Such member also has a handle grip portion extending upwardly from the elongate strip. The other member comprises essentially only an elongate strip having no handle and/or hook grip secured thereto but having a face or surface thereon which is adapted for heat sealing or similar type of engagement to the thin-film plastic material of the bag mouth. The opposite faces of the elongate strips are adapted to be detachably secured together by frictionally engaging elements on the two opposed adjacent faces. The hnadle (or hook) and closure means of this invention may, if desired, be used in connection with the pilfer-proof type of carrier bag construction as disclosed and claimed in the Kamins U.S. Patent No. 3,282,493.

In the closed position, the handle (and/or hook) and closure means of this invention gives the appearance of a prior art type of handle and/or hook as previously described. The single handle grip (and/or hook) portion integrally formed as part of the one member is of such a thickness as to extend beyond the plane of the elongate strip portion of the member so as to substantially overlie the other member and thus give substantially the same appearance as if the handle grip and/or hook were formed of two generally similar overlying portions.

In describing the invention, reference will be made to the drawings in which like reference characters designate corresponding parts throughout the several views and in which:

FIGURE 1 is an exploded, perspective view of a typical bag and handle closure means of the present invention showing particularly the two-part handle;

FIGURE 2 is a side view of one member of the handle and closure means of FIGURE 1;

FIGURE 2A is a side view of the other member of the handle and closure means of FIGURE 1;

FIGURE 3 is a sectional view of the handle member of FIGURE 2 taken along the section line 3—3;

FIGURE 3A is a sectional view of the handle member shown in FIGURE 2A and taken along the section line 3A—3A;

FIGURE 4 is a partial cross-sectional side view of the two handle members of FIGURE 1 with the two parts in assembled relationship;

FIGURE 5 is a view of one member of a modified closure and handle means of the present invention;

FIGURE 6 is a cross-sectional side view of the handle portion of FIGURE 5;

FIGURE 7 is a view of a modified form of the invention comprising a hook;

FIGURE 8 is a view of a further modified form of hook of the invention;

FIGURE 9 is a side view of one handle portion of a modified form of the invention;

FIGURE 9A is a side view of a handle portion adapted to mate with the handle portion of FIGURE 9;

FIGURE 10 is a side cross-sectional view taken along the section line **10—10** of FIGURE 9; and

FIGURE 11 is a side cross-sectional view showing the portions of FIGURES 9 and 9A in assembled relationship.

FIGURE 1 illustrates, in exploded, perspective view, a bag and a handle and closure means therefor, with the handle and closure means comprising a two-part construction including the member **10** and the mating mem-

ber **11**. Member **10** comprises in part a longitudinal strip **12** having a longitudinal, recessed sealing portion **13** for sealing to the mouth of the bag wall **14**. The portion **13** may be knurled or otherwise roughened to facilitate sealing with the thermoplastic bag material. Integrally formed with the elongate strip portion **12** is a handle grip or hook portion **15** which is shaped in the form of a hook and which joins with the elongate strip **12** by means of curved stress-distributing profiles **16** and **17**. The handle or hook **15** is formed primarily of a relatively thin piece **23** of flexible plastic material having a gauge substantially the same as that of the maximum gauge of the material of strip **12** as shown more particularly in FIGURE 3. However, the handle or hook **15** is also formed in part of a wider, transverse web of material as indicated at **18**, and this portion **18** gives extra rigidity to the handle or hook **15**, substantially preventing its flexing in the overall plane of the handle member **10** in normal use.

It will be appreciated that the handle or hook **15** is adapted to be hung over a rod or the like, such as a clothes rod, and the inner curved surface of the portion **18** is provided with ridges or similar protuberances **19** which facilitate gripping the bag and also ensure spaced, multi-point contact with the rod over which the hook is hung to thereby minimize friction and permit free sliding and rotation of the handle and/or hook about the rod.

The mating member **11** is similarly provided with an elongate depressed face **20** as particularly shown in FIGURE 4 which is adapted for the affixing thereto of the opposite mouth of the bag wall. It will be understood that the thin, thermoplastic material used for the bag wall may be secured to each of the handle members by heat sealing, gluing, stitching, etc.

The two members **10** and **11** have provision for frictional engagement with each other comprising elongate protuberances **21** on one of the two members such as the member **10** and mating recesses **22** in the other member. These are particularly shown in the cross-sectional view of FIGURE 4 which shows that the protuberance **21** may be of generally V-shaped construction fitting into a generally rectangular slot **22** formed in member **11**, thereby locking members **10** and **11** against lateral movement relative to each other and also providing a dust-proof closure of the mouth of the bag. The members **10** and **11** are also secured together by means of protruding studs **24** on either or both of the members which fit into a respective complementary recess **25** on the other member as shown in FIGURE 3.

The member **11** is also preferably provided with a small upstanding tab **26** on the member **11**. Tab **26** is provided to facilitate opening of the bag. Thus, to open the bag, the user need merely grip in one hand the handle grip or hook portion of member **10**, and in the other hand laterally pull on the tab **26** so as to separate the two members **10** and **11** from each other against the frictional effect of the locking means provided for these two members. A tab **24***a* may also be integrally formed on the bottom edge of member **11** for displaying thereon a trademark or the like.

An alternative embodiment of the invention is illustrated in FIGURES 5 and 6. This embodiment differs from that of FIGURES 1–4 previously discussed in that the inner curved portion of the handle or hook **15** is provided with an essentially scalloped configuration as indicated at **30**. Such scalloped configuration takes the place of the integrally formed protuberances **19** as shown in FIGURE 1. As with the embodiment of FIGURES 1–4, the embodiment of FIGURES 5 and 6 has the handle grip or hook portion **15** of member **10** formed of a relatively thin material as indicated at **23** but also is provided with a substantially thicker web portion **18** which, as shown in FIGURE 6, extends outwardly beyond the plane of the inner face of member **11**.

The embodiment of FIGURE 7 differs principally in the configuration of the hook portion **15**. Thus, the hook **15** comprises a portion **31** which is upstanding relative to the elongate strip **32** and further comprises a downwardly extending portion **33**, thereby defining a generally circular central aperture **34** having a narrowed entranceway **35**. This construction makes possible the hanging of a plurality of bags from a rod (not shown) in a secure fashion particularly if the rod is of such diameter as to be only slightly greater than the width of the constricted entranceway **35** while still readily fitting loosely within the larger aperture **34**. An individual bag can be readily removed from such a rod only by the exertion of an upward force upon the handle so that the rod can slip through the constricted portion **35**.

Concerning the embodiment of FIGURE 8, the hook portion **15** is again particularly adapted for hanging the bag upon a rod such as a circular rod which may be indicated, for example, by the dotted line circle **36**. When one or more bags are intended to be hung from the rod **36**, each hook portion **15** is pushed upwardly against the rod and is snapped in place as the opposed portions **37** are flexed outwardly by reason of the force exerted thereagainst. To remove the bag from the rod **36**, this can be accomplished by merely pulling downwardly upon the bag or the handle so as to again flex the member **37** outwardly and thereby permit the hook to be detached from the rod.

A further embodiment of the invention is illustrated in FIGURES 9, 9A, 10 and 11. In this embodiment, the member **10** comprises the elongate strip **12** as in the other embodiments, but the handle grip portion comprises two upstanding portions **38** each of which is provided with stress-relieving profiles **43** and **44** at the point of juncture with the strip **12**. The two upstanding portions **38** are each connected at their upper ends by a portion **39** which is generally parallel to the elongate strip **12**. Portion **39** is provided with a curved cut-out portion **40** which permits one or more of the bags provided with the handle of FIGURE 9 to be held in a balanced position upon a supporting rod or the like. As with the previously described embodiments, the handle portion **11** is adapted to be secured by frictional engaging means with the portion **10** as shown in FIGURE 10. Thus, one or a plurality of studs are provided in either or both of the members such as member **10**, and each stud **41** is frictionally engaged within a complementary recess **42** in the other handle member as shown in FIGURE 11. FIGURE 10 illustrates the elongate protuberance **21** in member **10** and the corresponding slot **22** in the member **11**.

Each of the members **10** and **11** in the embodiment of FIGURES 9–12 is provided with an upstanding tab **26**. These are positioned so as to be closely spaced laterally along the respective longitudinal strip portions when members **10** and **11** are brought into registry to close the mouth of the bag.

In each of the embodiments of FIGURES 5, 6, 7, 8, and 9–12, the handle grip and/or hook portion **15** of member **10** is preferably formed of a relatively thin piece of flexible plastic **23** and a thicker transverse web portion **18**. Also, in each case, the handle grip and/or hook portion **15** overhangs the associated longitudinal strip just as in FIGURES 1–4.

What we claim is:

1. In a carrier bag having front and back walls formed of a thin-film thermoplastic material the improvement which comprises:

a combined carrying and closure means for said bag including first and second members each formed of a flexible material having a thickness and tensile strength substantially greater than the thin-film material of the bag walls, each said member having an elongate generally planar strip portion attached to a respectively opposite wall of the bag at the mouth thereof,

only one of said two members having a carrying means integrally formed with and upstanding from the respective elongate strip portion,

at least one fastener means comprising first and second engaging elements on facing surfaces of the elongate strip portions of said two members when in register for securing together said two members,

said carrying means being generally planar and laterally offset from the general plane of the elongate strip portion to which it is integrally attached so as to be centrally disposed of the juxtaposed combination of said elongate strip portions of said two members.

2. The carrier bag of claim 1 in which said upstanding carrying means further includes an integrally formed transverse web extending along a peripheral edge of said carrying means.

3. The carrier bag of claim 2 in which the other of said members includes an integrally formed upstanding tab disposed along the top edge of said elongate strip portion in such manner as to be spaced from said carrying means on said one member when said two members are juxtaposed.

4. The carrier bag of claim 1 in which said first engaging element of said fastener means comprises a longitudinal protuberance and said second engaging element comprises a complementary longitudinal recess for receiving said protuberance.

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DAVIS T. MOORHEAD, Primary Examiner

U.S. Cl. X.R.

150—33; 190—57; 248—340