March 23, 1971 R. B. JOHNSON 3,572,251

MERCHANDISE CARRIER BAG

Filed April 25, 1968 2 Sheets-Sheet 1

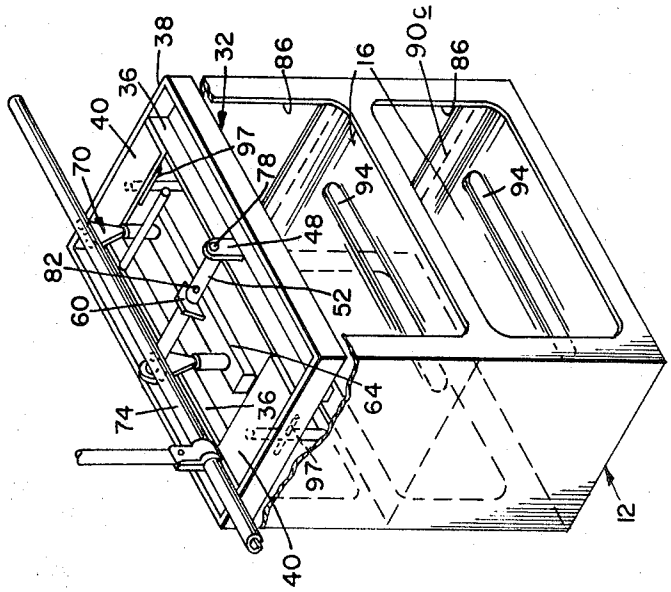


FIG. 2

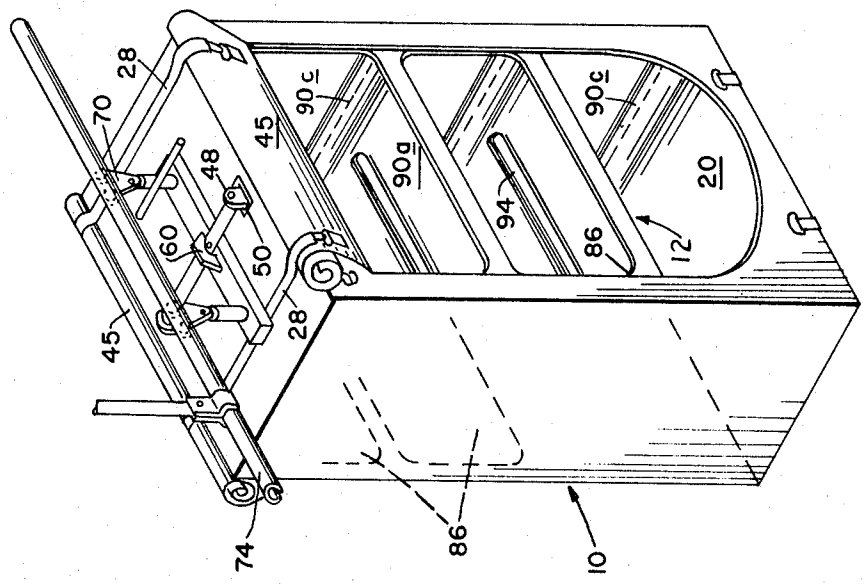


FIG. 1

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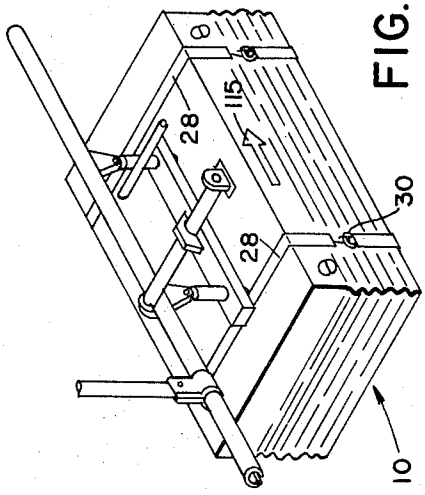


FIG. 4

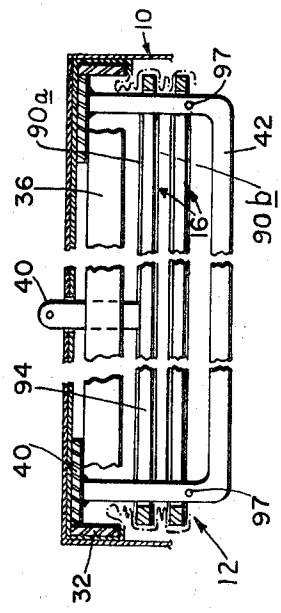


FIG. 5

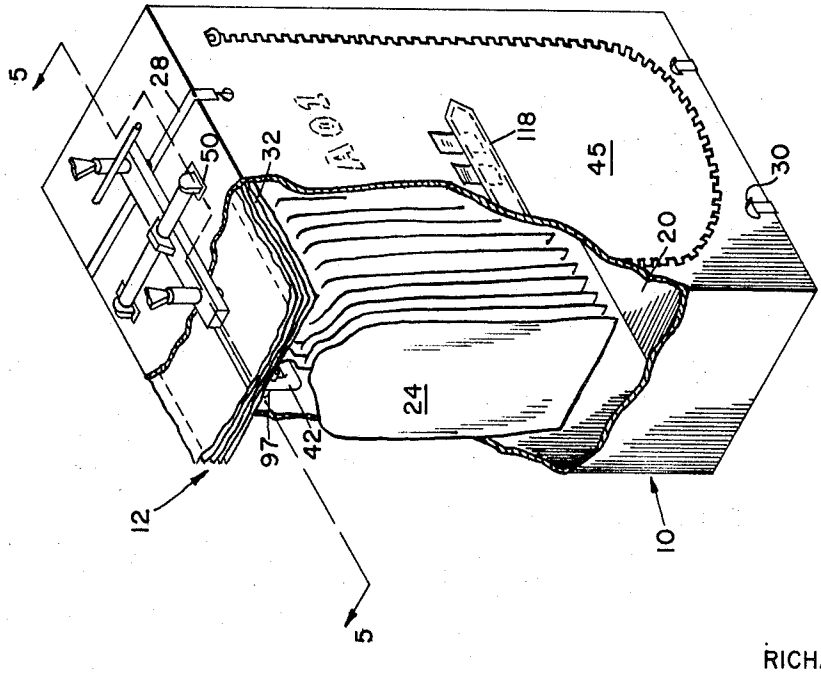


FIG. 3

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United States Patent Office 3,572,251 Patented Mar. 23, 1971

3,572,251

MERCHANDISE CARRIER BAG

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Filed Apr. 25, 1968, Ser. No. 724,209
Int. Cl. B61b 3/00; B65d 85/18; E01b 25/22
U.S. Cl. 104—89 10 Claims

ABSTRACT OF THE DISCLOSURE

This invention relates to carrier bags for conveying systems as used in clothing warehouses and dry cleaning plants, laundries, and in other facilities. A collapsible carrier is provided optionally useable for garments hanging full-length therein or for flat work articles placed on shelves therein. The particular feature of the invention resides in an arrangement wherein the shelves are carried by an inner bag carried within the outer bag. The inner bag being foldable into the upper portion of the outer bag so as to leave the entire volume of the outer bag available for full-length hanging of garments.

Briefly, the invention provides a simple and economical selective use of carrier bags for garments and a multiplicity of articles where such bags are suspended from a power-driven conveying system and traverse a storage or work area. By providing a construction subject to dual use in a manner to be disclosed a considerable saving in equipment and space is made since the same carrier bag can be used for a variety of purposes, this being a basic object of the invention. Other objects and features will be subsequently apparent. The invention comprises a dual construction of collapsible textile or flexible plastic superimposed bags having a hanger bar disposed at the top of the combined structure from which bar a number of garments may be hung within the outer bag with the inner bag folded out of the way. The inner bag, however, has one or more shelves in a horizontal position within its interior at predetermined levels. Each such shelf is made of rigid material and provided with an elongated slot such that the inner bag can be collapsed or folded and moved to the top of the outer bag, the hanger bar then protruding through the shelf slots. Locking pins are provided which pass through apertures in the hanger bar so that once the shelves have been moved into the upper position with the hanger bar protruding therethrough, the pins can be placed through the bar to hold the shelves in position and thus lock the inner bag in folded condition. The hanger bar is then exposed below the shelves and is accessible for the purpose of receiving hooks of garment hangers.

A detailed description of the invention now follows in conjunction with the appended drawing, in which:

FIG. 1 is a perspective view of the carrier of the invention showing the dual bag construction, with the sides of the outer bag rolled up to expose the inner bag and shelves;

FIG. 2 is a perspective drawing showing the inner bag per se and its supporting framework;

FIG. 3 is a cut-away perspective drawing showing garments suspended from the hanger bar with the inner bag in collapsed condition;

FIG. 4 shows the inner and outer bags in collapsed condition and strapping to hold them in such condition;

FIG. 5 is a section taken generally in a vertical plane illustrating the collapsed condition of the inner bag and the locking of the shelves with respect to the hanger bar, taken on line 5—5 of FIG. 3.

Referring now to the drawing, and in particular to FIGS. 1 and 2, the invention comprises a composite or

dual carrier bag consisting of an outer bag **10** and an inner bag **12** such that flat articles can be placed on the rigid shelves **16** of the inner bag as well as on a rigid bottom panel **20** of the outer bag, when the inner bag is extended full-length within the outer bag as shown in FIG. 1. The shelves **16** and panel **20** may be of formed aluminum sheet, hardboard, plywood, or the like. However, both bags being made of flexible material such as textile or plastic or the like, the inner bag **12** can be compressed into an accordion pleated formation as shown in FIG. 5, leaving the entire volume of the outer bag **10** available for hanging garments such as **24** (FIG. 3). The bags are superimposed, having the outer bag top resting on the inner bag top and being preferably stitched together at their tops.

Further, as shown in FIG. 4, both bags may be simultaneously collapsed and compressed, being held in such condition by a pair of straps **28**, so that the folded assembly utilizes the least amount of space for return shipment or for storage. The straps have clasps as shown which secure to respective rings **30**, FIG. 4, fastened at the bottom of the outer bag.

Referring particularly to FIG. 2, a bag suspension frame structure is provided comprising a suspension support frame **32** of wood or metal having spaced longitudinal joists **36** secured between opposite end members **38**, and comprising spacer panels **40** secured to the top edges of the joists and abutting respective side strips for bracing attachment thereto. Panels **40** secure the legs of a suspended U-shaped hanger bar **42** for garments **24** (FIG. 3).

It will be apparent from the structure described that any suitable construction of wood or metal members or plastic channels, etc., may be provided to effect assembly which can be nailed, welded or otherwise made integral so as to form a sturdy framing. The hanger bar legs can be secured by welding if members **40** are of metal, but any suitable securement can be used. As an example, the framing disclosed is of welded metal parts.

The framing is closed at the top by the superimposed bags, one on the other, and preferably stitched together as mentioned, but not actually fastened to the frame, being draped or suspended over it, which effects a sealing envelope as shown in FIG. 3. Bag **10** has zipper flaps **45** which can be rolled up and strapped open as shown in FIG. 1. Certain suspension members protrude through the tops of the bags, as will be described.

Referring again to FIG. 2, suspension members are provided passing through suitable bag apertures **50**, such as ears **48** attached to respective joists **36**. Ears **48** locate and retain the position of the dual bag structure on the frame **32**. A tube **52** carried by ears **48** passes through a bracket **60** fastened to a bar **64** having secured at its ends trolley wheel arrangements, such as **70**, which roll in a conveyor tube **74** having a slitted bottom to permit entrance thereinto of the suspension members for the trolley wheel arrangements. The dual carrier bag can be suspended from the tube **52** by juxtapositioning it so that the ears **48** slide into position with respect to the ends of tube **52** and a rod **78** may then be slid through the ears and tube and pinned as by a pin **82** to lock the carrier bag to the conveying system. The bags can be readily removed by removing rod **78**.

The conveying system may be either power driven or a gravity-run type, but in any event it is believed to be conventional and does not form part of the claimed invention, being merely described here for the sake of completeness.

The inner bag **12** is provided with windows **86** at two parallel sides in planes parallel to direction of motion when the carrier bag is conveyed. Such windows render

it convenient to place articles, flat work, etc., on shelves **16**. The shelves may be suitably carried encased in panels **90***a*, **90***b*, upper and lower, respectively, having vertically disposed margins **90***c* stitched to the adjacent walls of bag **12** (FIGS. 1 and 5), the panels being of the same material as the bag. The panels can have margins such as **90***c* stitched to the bag on all four sides of each shelf. The bottom shelf **16** rests on the bag bottom and needs no lower panel. The shelf **20** could likewise be secured by a stitched upper panel in bag **10** as indicated in FIG. 1 by the panel **90***c*. All shelves are preferably of formed aluminum sheet for strength and tightness.

Although, all shelves could be permanently locked in place by stitching of all four margins such as **90***c* to the respective bags, it will be understood that the shelves could be rendered removable by eliminating a stitched margin at an edge of each shelf. Thus, due to the flexibility of the bag material, shelves could be slipped in or out of suspension between respective panels **90***a* and **90***b*.

Referring to FIGS. 1 and 2, it will be noted that the shelves **16** are provided with slots **94** which are of a length at least equal to the length of hanger bar **42** and the respective panels **90***a*, **90***b* have registering slots. Thus, when bag **12** is collapsed, the hanger bar **42** can protrude through the slots as illustrated in FIGS. 3 and 5. A removable pin is stored (FIG. 2) in a bore in each of the vertical legs of the U-shaped hanger bar and these pins are removed in order to telescope the shelves past the horizontal section of the hanger bar, the pins then being replaced in their bores in order to lock the shelves in position as will be evident from FIG. 5.

From the above it will be obvious that the inner bag **12** can either be extended full length as in FIG. 1 so as to utilize the shelves or it can be compressed as in FIG. 3 to hang garments from bar **42** within the bag **10**.

In order to orient operators using the invention so that the carrier bags will be properly disposed with respect to direction of travel, an arrow such as **115** (FIG. 4) may be applied as by printing or any other way, to the outer surface of bag **10**. A strap **118** (FIG. 3) stitched to flap **45** provides pockets for tags, labels, etc., to be conveyed with the merchandise.

It is claimed:

1. A merchandise carrier for a conveying system, comprising an inner container disposed within an outer container; said inner container being comprised of a flexible material and being extendible within said outer container to carry goods or alternatively foldable therein whereby substantially all volume is available in said outer container for carrying goods; said inner container having apertured shelf means for receiving goods to be carried; retaining means for maintaining said inner container in folded condition within said outer container at an end thereof, and hanger means in said outer container at said end insertable through said apertured shelf means when said inner container is folded, said hanger means being thus accessible for suspending merchandise therefrom.

2. A merchandise carrier as set forth in claim **1**, said shelf means comprising at least two shelves and said inner container having openings for rendering said shelves accessible.

3. A merchandise carrier as set forth in claim **1**, said outer container being of flexible material and having a rigid bottom spaced below said inner container in order to effect another shelf, and said outer container having an opening and a flap therefor to form an enclosure for said inner container.

4. A merchandise carrier as set forth in claim **1**, means comprising a frame for effecting a rigid top for said inner container, said outer container being made of a flexible material and being supported by said rigid top, whereby both of said containers may be collapsed into a compressed condition to minimize their bulk when not in use.

5. A merchandise carrier as set forth in claim **1**, including a trolley suspension system secured at the top of said inner container for supporting said merchandise carrier for movement in a given direction, said containers having openings for loading transversely of the direction of travel of said merchandise carrier.

6. A merchandise carrier for a conveying system, comprising a pair of telescopically related containers having an inner container disposed within an outer container; said inner container being comprised of a flexible material and being extendible within said outer container to carry goods or alternatively foldable therein whereby substantially all volume is available in said outer container for carrying goods; said inner container having at least one shelf for receiving goods to be carried; and retaining means for maintaining said inner container in folded condition within said outer container, said retaining means comprising a bar secured at the top of said inner container and said shelf having a slot whereby said shelf can encompass said bar when said inner container is folded and lock means for locking said shelf to said bar for maintaining the folded condition of said inner container, said bar being exposed in said outer container for supporting goods therein when said inner container is folded.

7. A merchandise carrier for a conveying system, comprising a pair of telescopically related containers having an inner container disposed within an outer container; said inner container being comprised of a flexible material and being extendible within said outer container to carry goods or alternatively foldable therein whereby substantially all volume is available in said outer container for carrying goods; said inner container having at least one shelf for receiving goods to be carried; and retaining means for maintaining said inner container in folded condition within said outer container, a rigid framing at the top of said inner container to which said inner container is secured, a U-shaped hanger bar secured to said rigid framing and extending into said inner container, said inner container having shelf means comprising respective slots through which said bar can pass when said inner container is in folded condition, and pin means insertable into the legs of said U-shaped hanger bar to lock said inner container in folded condition with the remainder of said hanger bar exposed within said outer container for receiving goods to be hung thereon.

8. A merchandise carrier for a conveying system, comprising a pair of telescopically related containers having an inner container disposed within an outer container; said inner container being comprised of a flexible material and being extendible within said outer container to carry goods or alternatively foldable therein whereby substantially all volume is available in said outer container for carrying goods; said inner container having at least one shelf for receiving goods to be carried; and retaining means for maintaining said inner container in folded condition within said outer container, said outer container being of flexible material and having a rigid bottom spaced below said inner container in order to effect another shelf, and said outer container having an opening and a flap therefor, to form an enclosure for said inner container; a rigid framing at the top of said inner container to which said inner container is secured, a U-shaped hanger bar secured to said rigid framing and extending into said inner container, said inner container having shelf means comprising respective slots through which said bar can pass when said inner container is in folded condition, and pin means insertable into the legs of said U-shaped hanger bar to lock said inner container in folded condition with the remainder of said hanger bar exposed within said outer container for receiving goods to be hung thereon.

9. A merchandise carrier for a conveying system, comprising a pair of telescopically related containers having an inner container disposed within an outer container; said inner container being comprised of a flexible material

and being extendible within said outer container to carry goods or alternatively foldable therein whereby substantially all volume is available in said outer container for carrying goods; said inner container having at least one shelf for receiving goods to be carried; and retaining means for maintaining said inner container in folded condition within said outer container; said retaining means comprising a bar secured at the top of said inner container and said shelf having a slot whereby said shelf can encompass said bar when said inner container is folded and lock means for locking said shelf to said bar for maintaining the folded condition of said inner container, said bar being exposed in said outer container for supporting goods therein when said inner container is folded, means comprising a frame for effecting a rigid top for said inner container, said outer container being made of a flexible material and being supported by said rigid top, whereby both of said containers may be collapsed into a compressed condition to minimize their bulk when not in use.

10. A merchandise carrier as set forth in claim **9**, said outer container being directly superimposed on said inner

container and resting thereon, said frame comprising ear means protruding through said containers at contiguous portions thereof and serving to locate and lock said containers to said frame whereby said frame forms a rigid top for both of said containers, and means comprising a member extending between said ears and secured thereto for suspending said carrier in a conveying system.

References Cited

UNITED STATES PATENTS

1,300,921	4/1919	Briggs	190—51
1,460,016	6/1923	Emery	190—51

FOREIGN PATENTS

1,049,105	8/1953	France	201—7K

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U.S. Cl. XR

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