June 10, 1958 D. T. LANE 2,838,356

REINFORCING HANGER MEANS FOR A COLLAPSIBLE WARDROBE

Filed Jan. 17, 1955 2 Sheets-Sheet 1

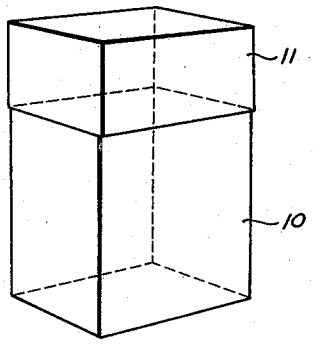


Fig. 1

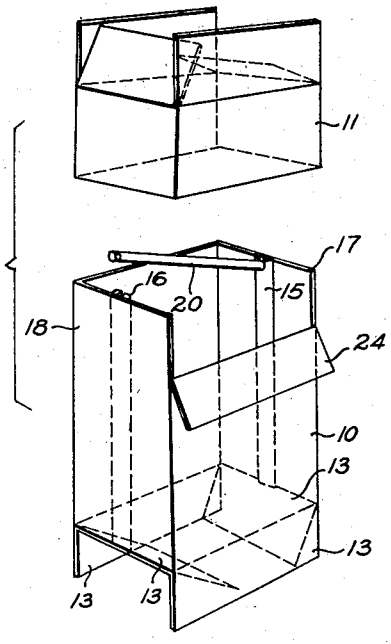


Fig. 2

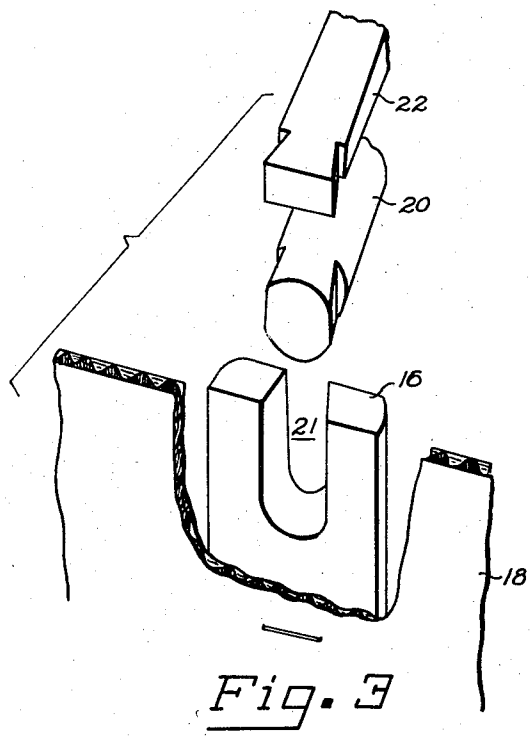


Fig. 3

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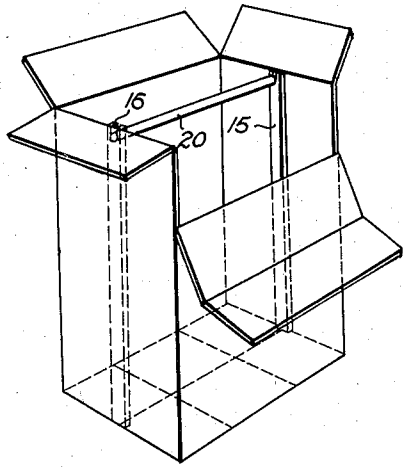


Fig. 5

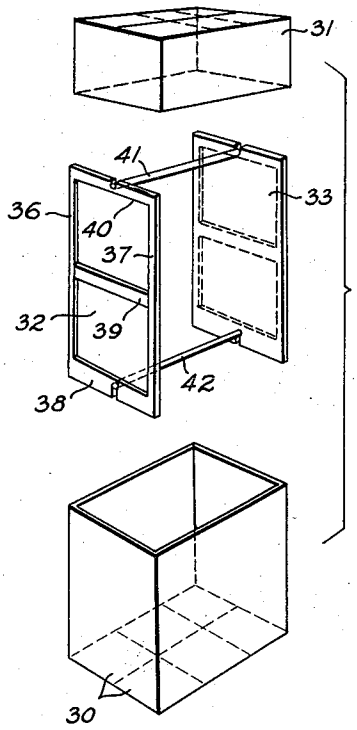
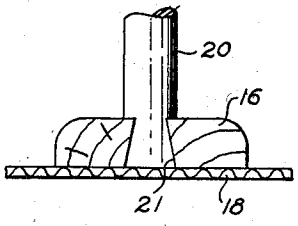


Fig. 6

Fig. 4



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REINFORCING HANGER MEANS FOR A COLLAPSIBLE WARDROBE

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Application January 17, 1955, Serial No. 482,245

5 Claims. (Cl. 312—259)

This invention relates to a shipping container of reinforced corrugated fiberboard, and more particularly to a wardrobe having a hanger bar and side cleats which are mutually interlocking.

Wardrobes utilized by moving vans must be rigid when in use to protect clothing and the like from forces developed in handling and yet must be amenable to compact packaging for shipment and for storage. Collapsible wardrobes have heretofore been used in which hanger bars extending across the wardrobe structure have been relied upon together with folded end sections or reinforced lids to impart the necessary rigidity.

Applicant has developed a combination of elements to provide a new structure of high rigidity particularly suited to the transport of clothing and which may readily be collapsed for shipping or storage when not in use.

In accordance with the present invention there is provided a rectangular corrugated fiberboard tube having a closed end and an open end together with wooden cleats extending inside and along the full height of said tube and adhesively secured parallel to the sides thereof. The upper end of cleats are provided with dovetailed notches. A hanger bar, and if desired, a latching bar having dovetailed ends, are adapted for registration in the dovetailed notches, not only to provide a hanger bar which extends the length of the rectangular tube, but also to impart substantial rigidity to the structure, the hanger bar being so designed as to form a forced fit in the dovetailed notches.

In accordance with another aspect of the invention an insert is provided for supporting a rectangular fiberboard tube and comprises a pair of end elements having dimensions corresponding to opposed sides of the fiberboard tube and having hanger bars interconnecting the ends of the end sections to maintain them in a fixed spaced-apart relation. The hanger bars have a length equal to the length of the fiberboard tube. The ends of the hanger bars are dovetailed and adapted for a force fit in complementary notches in the ends of the end members.

For a further understanding of the present invention and for a more complete description thereof reference may now be had to the following description taken in conjunction with the accompanying drawings in which:

Figure 1 is an isometric view of a closed wardrobe container;

Figure 2 is an exposed view of the wardrobe of Fig. 1;

Fig. 3 is a detailed view of the end locking means for the hanger bars;

Fig. 4 is a top view of one of the supporting members;

Fig. 5 is a view of a modified wardrobe; and

Fig. 6 is an exposed view of a wardrobe having a removable insert.

Referring now to Figs. 1 and 2, a collapsible wardrobe is illustrated as comprising a rectangular tube **10** of corrugated fiberboard and a telescoping cover **11**. Tube **10** is closed at the bottom thereof by folding flaps **13** which meet at the edges thereof when folded, completely to close the bottom. When in use the flaps **13** may be glued or stitched to maintain them in place, but a preferred practice is to interleave them to mutually lock them and yet permit collapsing the tube **10** by unfolding the flaps **13** without damage thereto as to permit storage or shipping when not used as a wardrobe.

While the flaps of tube **10** and cover **11** contribute to rigidity of structure, applicant has found that two wooden cleats adhesively secured along the full height of the tube together with a dovetail connection at the upper ends of the cleats with the ends of a hanger bar not only provides a support for clothes hangers, but also permit greater loads to be carried, greatly to strengthen the structure. More particularly cleats **15** and **16** are secured by adhesive in the region of the upper end of the cleats on to the side panels **17** and **18** respectively. In a preferred form the cleats **15** and **16** are secured by covering the entire area of panels **17** and **18** which is occupied by cleats **15** and **16** with an adhesive and then securing the cleats in that position as by staples while the adhesive dries. By this means large areas of the tube are bonded to the cleats.

A hanger bar **20** is supported at the ends thereof by cleats **15** and **16**. A self-locking coupling between the bar **20** and cleats **15** and **16** is shown in Fig. 3. A top view of one of the cleats is shown in Fig. 4. The end of cleat **16**, glued to side **18** (shown partially cut away), is provided with a dovetail notch **21**, the notch being wider adjacent side panel **18**. The end of hanger bar **20** is complementarily shaped as to fit snugly into notch **21**. If desired, a locking bar **22** may be used, with suitably shaped ends to fit into notch **21**. Bar **22** prevents clothes hangers supported by bar **20** from being unlatched. A snug or press fit of bars **20** and **22** in their associated notches is provided greatly to contribute to the rigidity of the wardrobe. A flap **24** is provided at the upper end of one side of the rectangular tube to facilitate filling the wardrobe. More particularly a line parallel to bar **20**, when in normal position, is embossed in the side of the tube to permit flap **24** to be folded away from the open end, and the corners of the tube are slit or scored from the extremities of said line to the end of the tube.

Fig. 5 illustrates a wardrobe provided with closure flaps at both the upper and lower ends thereof. As in the modification of Figs. 1 and 2, the wardrobe is provided with cleats **15** and **16** which extend along the full height of the tube along with the hanger bar **20**. However, an extra top such as top **11**, Fig. 1, is not required.

In Fig. 6 there is illustrated a wardrobe which includes a tube of corrugated fiberboard which is adapted to be closed at its lower end by flaps **30** and is provided with a telescoping lid **31**. An insert adapted to support articles of apparel comprises two wood frame corrugated fiber side panels **32** and **33**, each of which is formed from a sheet of corrugated fiberboard adhesively secured to a flat rectangular wooden frame having upright members **36** and **37** and cross members **38**, **39** and **40**. Both of the cross members **38** and **40** have dovetailed notches provided therein. A pair of cross bars **41** and **42** are provided with notches ends which are complementary with the notches and are adapted to be received in the notches with a press fit. By this means the end members are coupled together with substantial rigidity and are thus adapted to be inserted as a single unit into the corrugated tube. Thus the hanger bars serve not only as a supporting member for articles of apparel, but also to give form and rigidity to the insert itself.

The overall strength of the structure is greatly enhanced by the combination of notched hangers in the complementary notches and the adhesive bonding between the corrugated panels and the wooden frame.

Having described the invention in connection with several modifications thereof, it is to be understood that further modifications may now suggest themselves to those skilled in the art, and it is intended to cover such modifications as fall within the scope of the appended claims.

What is claimed is:

1. In a collapsible wardrobe characterized by an elongated rectangular tube having a flap closure for one end and an open end, the combination therewith which comprises two inside cleats of length equal the height said tube and secured to opposed side panels thereof, the entire contacting surfaces between said cleats and said side panels in the region of the open end of said tube being intimately bonded by adhesive, notches in the ends of said cleats at the open end of said tube having dovetail configuration, a hanger bar having a configuration complementary with said notches of length equal to the distance between said panels and closure means for said open end.

2. The combination set forth in claim 1 in which said notches extend into said tube with smaller lateral dimension on the inside thereof than adjacent said panels.

3. Combination set forth in claim 2 in which the lateral dimension of said hanger bar nominally is approximately equal the greatest lateral dimension of said notches to provide shoulders for bearing against the inside faces of said cleats.

4. In a collapsible wardrobe characterized by an elongated rectangular tube having a flap closure for one end and an open end, a combination therewith which comprises two inside cleats of the same height as said tube secured to opposed side panels thereof, the entire contacting surface area between said cleats and said panels being intimately bonded by adhesive, dovetail notches in the ends of said cleats at the open end of said tube, hanger bar means of length equal to the distance between said panels and of depth equal to the depth of said notches and adapted at the ends thereof to register with a forced fit in said notches, and closure means for said open end adapted to contact said hanger bar means at the upper ends of said cleats.

5. In a collapsible wardrobe characterized by a rectangular tube having a flap closure for one end and an open end, the combination which comprises two inside cleats of length equal the inside height of said tube and secured to opposed side panels thereof, the entire contacting surface between said cleats and said side panels in the region of the open end of said tube being bonded by adhesive, the ends of said cleats at the open end of said tube having inwardly directed dovetail notches, a hanger bar having ends of shape complementary to said notches and of total length equal the spacing between said panels and positioned in said grooves with a press fit, one side of said tube being embossed for folding along a line parallel to said bar at a point spaced from said open end substantially below said hanger bar and two corners of said tube scored from the extremities of said line to said open end to permit ready access to said hanger bar, and a closure means for said open end.

References Cited in the file of this patent

UNITED STATES PATENTS

761,103	Richards	May 31, 1904
1,943,044	Stone	Jan. 9, 1934
2,031,477	Gianninoto	Feb. 18, 1936
2,054,764	Berkowitz	Sept. 15, 1936
2,065,133	Heppenstall	Dec. 22, 1936
2,107,828	Krantz	Feb. 8, 1938
2,122,999	Burke	July 5, 1938
2,455,739	Curtis	Dec. 7, 1948