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WARDROBE BOX AND HOLDER HANGER THEREFOR

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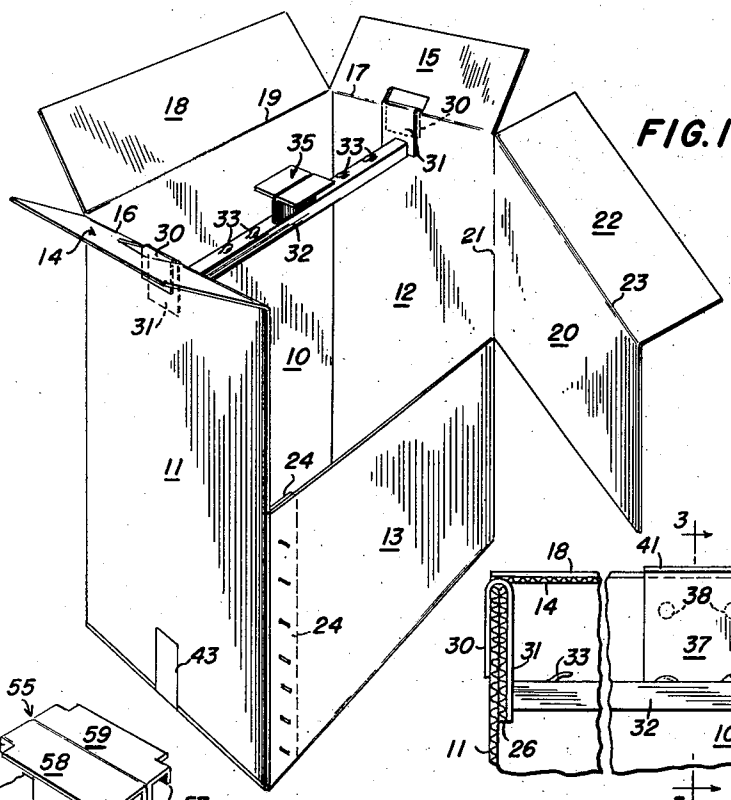


FIG. 1

FIG. 2

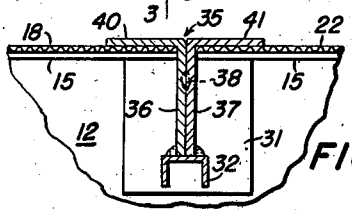


FIG. 3

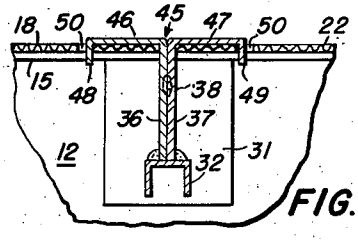


FIG. 4

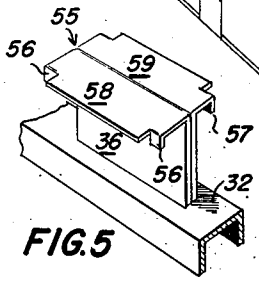


FIG. 5

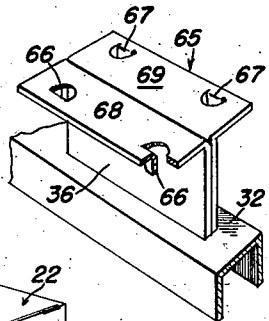


FIG. 6

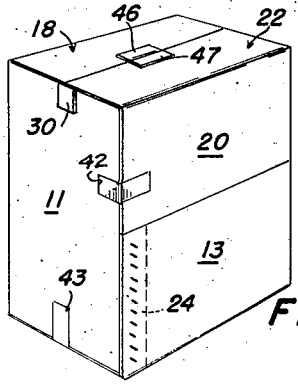


FIG. 7

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WARDROBE BOX AND HOLDER HANGER THEREFOR

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6 Claims. (Cl. 206—7)

This invention relates to improvements in wardrobe boxes and hanger bars therefor, adapted for supporting clothes hangers.

An object of the invention is the provision of a wardrobe box having a hanger bar with a supporting means thereon effective for detaining hinged top flaps of the wardrobe box.

Another object of the invention is the provision of a wardrobe box having a hanger bar therein with a supporting piece secured thereto for receiving the weight of superimposed lading.

A further feature of the invention is the provision of a unitary hanger bar for a wardrobe box, including a portion for receiving garment hangers, end members for supporting the load of the bar and garments upon the end walls of the box, and a supporting piece effective for detaining flaps constituting the top wall of the wardrobe box, and for receiving a weight superimposed upon the box.

Illustrative forms of the invention are shown in the accompanying drawings, in which:

Fig. 1 is a perspective view of a wardrobe box having a hanger therein, with the supporting piece thereon;

Fig. 2 is an upright sectional view showing the relationship of parts of the hanger bar and of the wardrobe box;

Fig. 3 is an upright section substantially on line 3—3 of Fig. 2;

Fig. 4 is a view corresponding to Fig. 3, and showing a modified form of construction;

Fig. 5 is a perspective view showing a further modified form of construction;

Fig. 6 is a perspective view showing a further modified form of construction;

Fig. 7 is a perspective view, on a smaller scale, showing the closed and sealed wardrobe box.

Wardrobe boxes have been proposed for the storage and transportation of clothing, in which parts of the box wall structures may be opened for the insertion or removal of the garments, and with provision of hanger bars supported by the box walls and adapted to receive the upper hooks of clothes hangers upon which the garments have been placed.

Illustratively such a box may be made as shown in Fig. 1, in which a closed-bottom box of corrugated paperboard has the rear wall **10**, the end walls **11**, **12**, and a lower front panel **13**. A pair of top flaps **14**, **15** are respectively connected at hinge lines **16**, **17** with the side walls **11**, **12**, and a rear top flap **18** is likewise connected to the rear wall **10** at hinge line **19**. The upper front or door panel **20** is connected at an upright hinge line **21** to the end wall **12** and complements the lower panel **13** to provide a front closure. A top flap **22** is connected at a hinge line **23** to the top of the door panel **20**. Such a box may be made from a single blank, with a stapling strip **24** formed integral with the side wall **11** and secured to the lower front panel **13** in assembly. Cuts are formed at the hinge lines **16**, **17**, to provide tabs **26**, **27** which can be folded down inside the box.

A hanger bar according to this invention is shown in Figs. 1, 2 and 3, comprising the end hooks **30**, **31** formed of folded sheet metal, to engage over the upper edges of the end walls **11**, **12**, passing over the tabs **26**, **27**. These end hooks are connected by a bar **32** also formed of folded sheet metal as a downwardly open channel which is welded at its ends to the end hooks. The bar **32** may be provided on its top with struck-up portions **33** for limiting sliding of garment hangers along the bar.

In a first embodiment, a support piece **35** is provided by a T-shaped structure which is secured to the top of the bar **32**. This structure **35** is cheaply made by folding two sheet metal pieces **36**, **37** at right angles to form L-shaped members which are then placed together and rigidly connected by spot welds **38**. This assembly **35** is then secured, illustratively by welding, to the bar **32**.

In service, with the parts assembled in the position of Fig. 1, packing can be done. The side wall flaps **14**, **15** are then swung down about their hinge lines **16**, **17**: preferably these panels have widths at their centers of length, in the directions away from the hinge lines **16**, **17**, such that they fit closely against the ends of the T-shaped structure **35**. The rear flap **18** is then swung down, and its front edge brought beneath (Fig. 3) the upper part **40** of the piece **36**, this being permitted by slight rockings of the bar **32** and its end hooks in the openings of flaps **14**, **15**. The door panel **20** is swung into place, with its top flap **22** depressed so that it moves beneath the top portion **41** of the piece **37**. The flaps **18**, **22** overlie the flaps **14**, **15**, and provide a closure as shown in Fig. 7. If desired, the door panel **20** may be secured by a short length of glued paper tape **42**. The lower end panels may be sealed and secured by a like tape **43** in setting up the box for use and prior to packing (Figs. 1 and 7).

The package so completed may be moved easily by hand-truck, placed in vans or cars for shipment, and stored, in the upright position as packed. Other goods may be placed on top, noting that the weight of a superposed like box can be carried partly by the upright walls of the boxes, and that part of the weight exerted by the upper box is received by the upper parts **40**, **41** of the structure **35** and thereby transferred to the bar **32** and thence to the side walls of the lower box. Other superposed lading is likewise in part supported by the structure **35** and thence by the side walls.

The upper parts **40**, **41** of the structure **35** also serve to prevent upward swinging of the top flaps **18**, **22** which in turn retain the flaps.

The packing can also be done, with the flaps **14**, **15**, **18** in closed position; and thus additions may be made to the contents without disturbing these three flaps. Unpacking can be accomplished by opening the door panel **20** with its flap **22**, with or without opening the other top flaps.

In the modified form of Fig. 4, the bar **32** has the structure **45** secured to its top, this structure **45** being formed by spot-welding two pieces as before. In this form, the free edges of the top portions **46**, **47** are turned downwardly to provide flanges **48**, **49** which engage in slots **50**, **50** provided in the top flaps **18**, **22**, and thereby serve to prevent a swinging of the door panel **20** and its flaps **22** toward open position, and to strengthen the box against horizontal blows near its top.

In the modified form of Fig. 5, the structure **55** resembles the structures **35**, **45** of Figs. 3 and 4, but the downturned portions **56**, **57** are localized at the free corners of the top portions **58**, **59**, for engagement in like slots formed in the top flaps **18**, **22**.

In the modified form of Fig. 6, the structure **65** has downturned portions **66**, **67** formed within the areas of the top portions **68**, **69**.

The illustrative embodiments of the invention are not

restrictive: and this invention can be practiced in many ways within the scope of the appended claims.

What is claimed is:

1. A hanger for a wardrobe box which has side walls and a flexible top wall, comprising a bar with hooks at its ends for supporting it upon opposed upright walls of the box, and a support piece on said bar and extending through the top wall of the box, said support piece including a horizontally extending portion located above the said top wall for receiving the weight of an article overlying the box.

2. A hanger as in claim 1, in which the bar is of metal, and the support piece is a T-shaped metal member rigidly connected at its foot to said bar.

3. A hanger for a wardrobe box which has side walls and a flexible top wall, comprising a bar with means on its end for supporting it on the box, and a support piece secured on said bar and extending through the top wall of the box and having a horizontal projection above the top wall for detaining portions of the top wall against upward movement.

4. A hanger as in claim 3, in which the said detaining bars are horizontal portions extending from opposite sides of the support piece.

5. A hanger for a paperboard wardrobe box having end and rear walls and a swinging front upper panel, said walls and panel having hingedly connected flaps which

together form a top wall, the end wall flaps having openings at the hinge lines, the combination of a bar, end hooks connected to the bar for engaging the tops of the box end walls, a support piece secured to the bar and extending upwardly therefrom to a level above the top wall, and horizontal flanges on the top piece overlying and engaging the upper flaps of said top wall.

6. A wardrobe box and hanger bar assembly, comprising a box having a bottom, rear and end walls, and a lower front wall portion, top flaps hinged to said rear and end walls, an upper front wall panel hinged to a said end wall and having at its top a flap hinged thereto, said box having slots at the hinge lines of the top flaps associated with the end walls, a hanger bar having at its ends hooks engaged in said slots for supporting the hanger bar upon the end walls, and a T-shaped structure secured to the top of the hanger bar at mid length thereof, said T-shaped structure having downwardly extending projections, said top flaps on the rear wall and said front wall panel having apertures for receiving said projections whereby to restrict swinging movements of said top flaps.

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