Jan. 16, 1940. J. L. WOLF 2,187,004

COLLAPSIBLE WARDROBE CABINET

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Fig. 2.

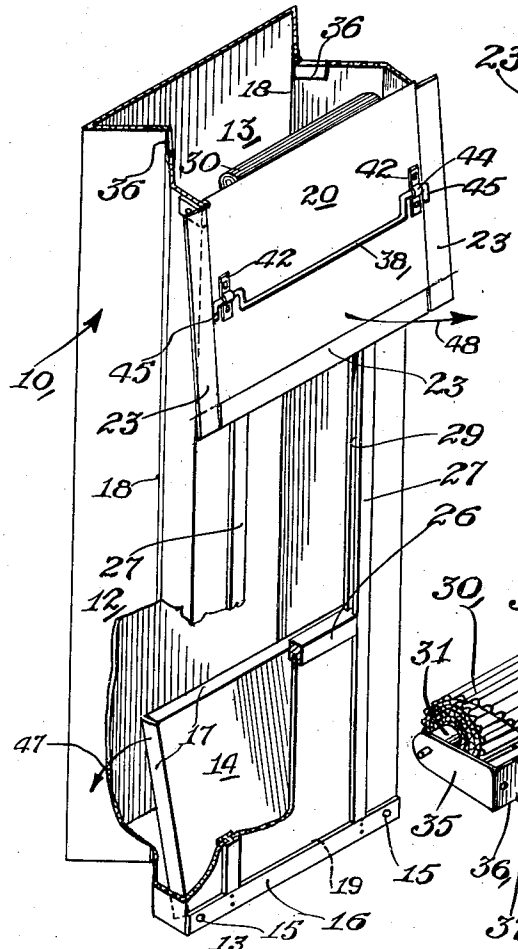


Fig. 6

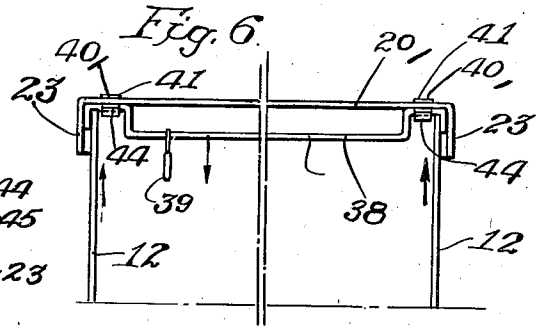


Fig. 8.

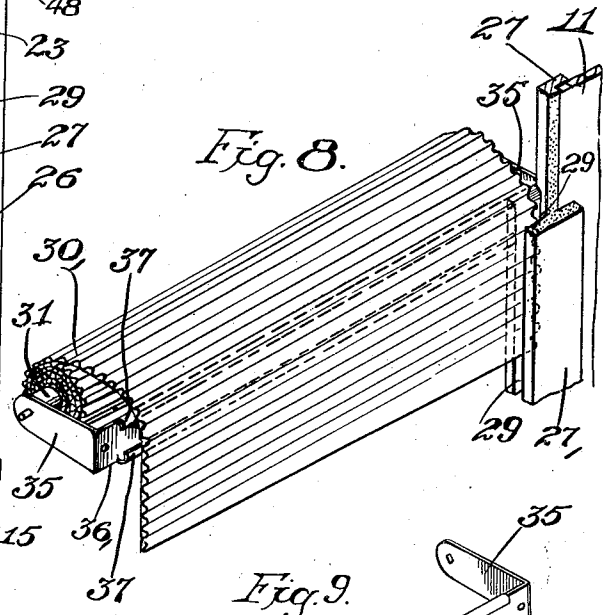


Fig. 1

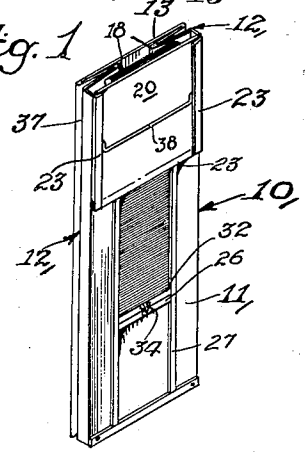
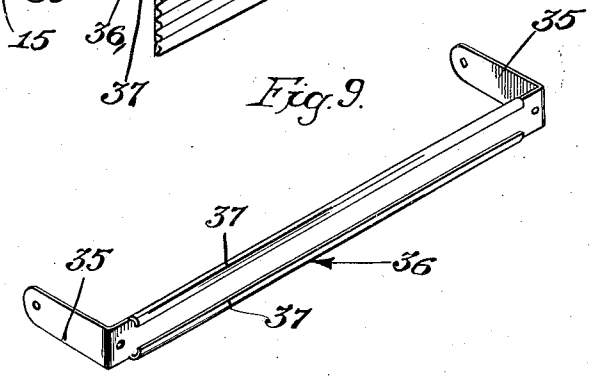


Fig. 9.



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Fig. 3.

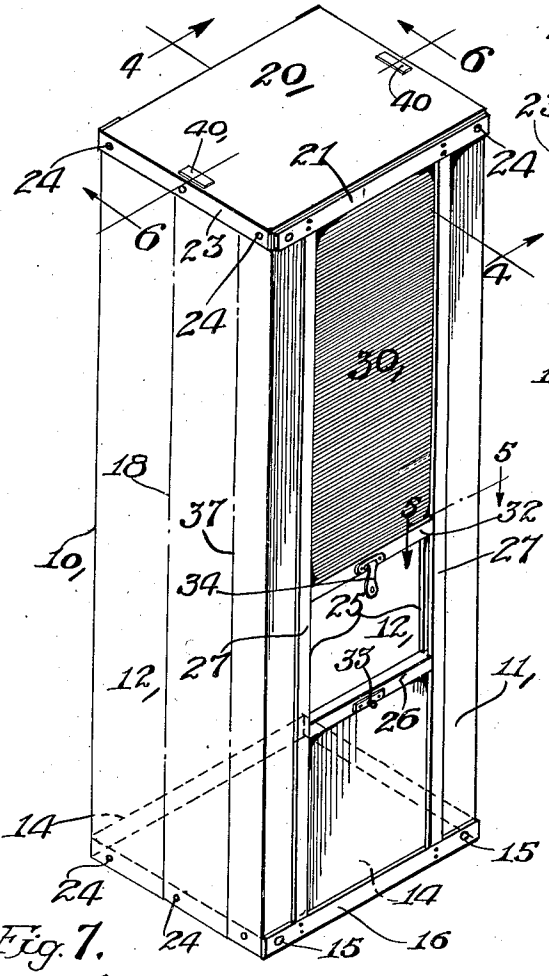


Fig. 4.

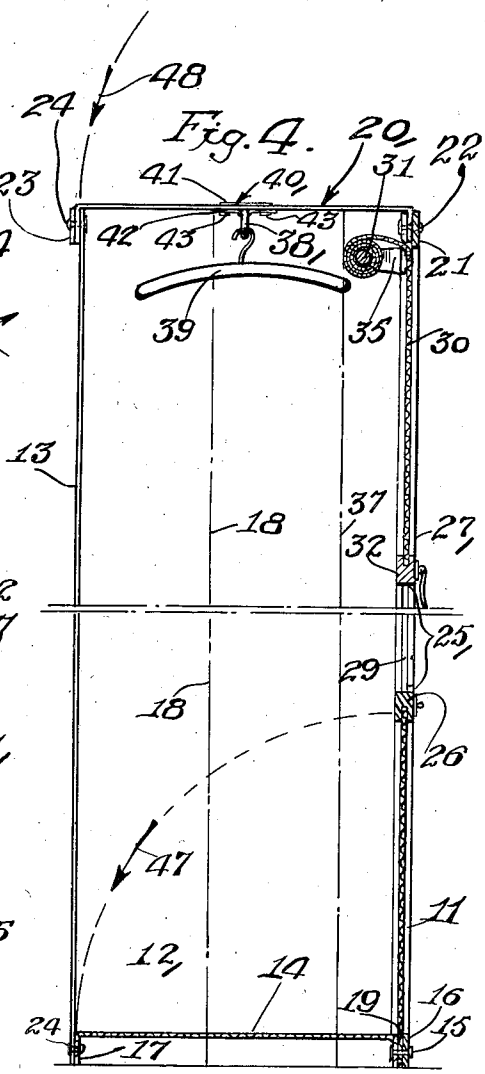


Fig. 7.

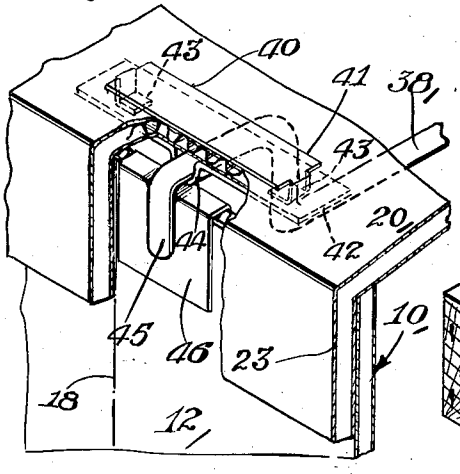
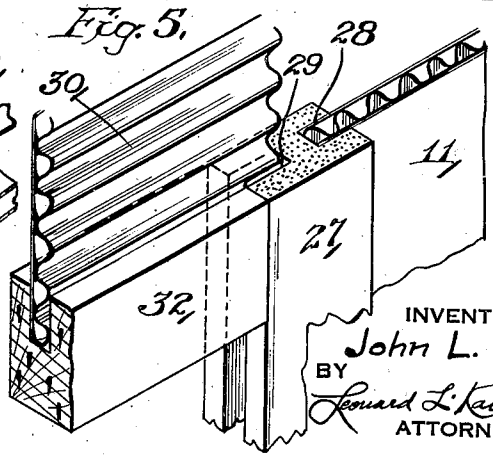


Fig. 5.



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Patented Jan. 16, 1940

2,187,004

UNITED STATES PATENT OFFICE

2,187,004

COLLAPSIBLE WARDROBE CABINET

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Application November 9, 1938, Serial No. 239,694

2 Claims. (Cl. 312—144)

The present invention relates to collapsible or knockdown wardrobe cabinets which are sold and delivered to the consumer in a folded condition, thereafter to be operatively erected by the purchaser.

An object of the present invention is to provide a collapsible wardrobe cabinet which includes front, side, rear, top and bottom panels, the front panel having a roller mounted closure curtain slidable in an opening located in said front panel, and the top panel having a hanger rod associated therewith, which cabinet, when collapsed, will comprise a single unitary structure, having all its various elements interconnected in proper relation, so as to permit an inexperienced person to readily unfold and erect the collapsed cabinet without having to assemble or fit together any separate disconnected elements.

Another object of the present invention is to provide a collapsible wardrobe cabinet, having an enclosed hanger-rod, with means for automatically guiding said rod into an operative position, wherein it rests over upper edges of the cabinet side walls.

Another object of the present invention is to provide a collapsible wardrobe cabinet, having a flexible closure curtain mounted on a spring-wound roller, with improved means for supporting and operatively guiding said curtain along its path of travel.

With the above and other objects in view which will appear more fully from the following detailed description and accompanying drawings, the present invention consists of a collapsible wardrobe cabinet constructed from corrugated paper board or the like, and including vertical front, rear and side panels permanently interconnected along their meeting edges and preferably foldably related at or near said meeting edges, a bottom panel permanently connected along its front edge to the inner lower edge of the vertical front panel, said bottom panel being pivotally related to said front panel at said lower edge and being adapted to be swung from a vertical position in proximity to said front panel downwardly into an operative horizontal position wherein its periphery will simultaneously and intimately contact the inner lower marginal portions of said front, rear and side panels, and a top panel permanently connected along its front edge to the upper edge of the vertical front panel, said top panel being pivotally related to said front panel at said upper edge and being adapted to be swung from position in proximity to said front panel into an operative horizontal position wherein the peripheral portion of said top panel will be supported by upper edges of the rear and side panels.

The present invention further may consist of a collapsible wardrobe cabinet having a top panel swingable from a generally vertical inoperative position into an operative horizontal position to contact the upper edges of the vertical rear and side panels of said cabinet, and a hanger-bar permanently associated with said top panel and swingable therewith, said bar having end portions adapted to rest operatively over the upper edges of said side panels when the top panel is swung into an operative horizontal position, whereby the hanger-bar may be supported by, and directly transfer its garment load to, said vertical side panels.

The present invention further may consist of a collapsible wardrobe cabinet having a rectangular opening disposed at the front thereof, said opening being defined by a generally rectangular frame, a flexible closure curtain having opposite vertical edges slidable within generally vertical grooves disposed along the vertical members of said frame on either side of said opening, said curtain being mounted on a spring-wound roller more or less permanently associated with, and disposed inside of, said collapsible cabinet, and joint means for supporting said roller and for operatively guiding the flexible closure curtain into and out of said vertical grooves comprising a rigid guide bar horizontally traversing said opening near the upper end thereof and having the ends thereof extended and bent rearwardly, to rotatably support therebetween said spring-wound roller, said guide-bar being operatively secured to said frame in non-conflicting relation to the walls of said collapsible wardrobe cabinet.

For the purpose of illustrating the invention, there is shown in the accompanying drawings one form thereof which is at present preferred, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which the invention consists can be variously arranged and organized and that the invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

Referring to the drawings in which like reference characters indicate like parts:

Figure 1 represents a perspective view of a collapsed wardrobe cabinet constituting one embodiment of the present invention.

Figure 2 represents an enlarged perspective view of the same cabinet when partially erected or

unfolded;—portions of the front and side panels being broken away to expose to view the as yet inoperative bottom panel.

Figure 3 represents a perspective view of the same cabinet when fully erected.

Figure 4 represents an enlarged sectional view taken on line 4—4 of Figure 3, looking in the direction of the arrows.

Figure 5 represents an enlarged fragmentary perspective view taken on line 5—5 of Figure 3, looking in the direction of the arrows.

Figure 6 represents an enlarged fragmentary sectional view taken on line 6—6 of Figure 3, looking in the direction of the arrows.

Figure 7 represents an enlarged fragmentary perspective view showing the manner in which an end portion of the hanger-rod may rest over and be directly supported by the upper edge of the cabinet side panel;—portions of the top panel being broken away to expose to view the end portion of said hanger-rod.

Figure 8 represents an enlarged perspective view of the flexible closure curtain and its associated support and guide means, disassociated from the rest of the cabinet.

Figure 9 represents an enlarged fragmentary perspective view of the curtain support and guide means, per se.

The various panels constituting the collapsible wardrobe cabinet 10 illustrated in the drawings are each preferably constructed from three ply corrugated paper board, preferably preliminarily scored or indented along the requisite fold lines, to facilitate factory assembly, folding and subsequent erection thereof. The sheets of corrugated paper comprising the various panels are preferably arranged with their corrugations running in predetermined directions, so as to afford maximum strength where needed.

The collapsible wardrobe cabinet 10 may include the generally vertical and preferably composite front panel 11, the side panels 12, 12 and the rear panel 13, preferably permanently interconnected along their generally vertical meeting edges, which constitute the vertical corners of said wardrobe cabinet. These panels are preferably formed integrally with each other.

The outer lower edge of the front panel 11 is preferably reinforced by a horizontal wooden frame member 16. A bottom panel 14 is preferably more or less permanently secured along its front marginal portion to the inner lower marginal portion of the front panel 11 by any suitable means, such as the rivets or fasteners 15, 15 or the like. These fasteners may simultaneously join together the adjacent portions of the front and bottom panels 11 and 14, and the frame member 16, and this frame member will thus reinforce the juncture between these panels.

The bottom panel 14 is preferably provided with the marginal flanges 17, 17, which are adapted to snugly engage the inner lower marginal portions of the side panels 12, 12 and the rear panel 13 when the bottom panel 14 has been operatively swung or lowered into its horizontal position. When the collapsed cabinet has been operatively unfolded and set up, as will be more fully described hereinafter, the marginal flanges 17, 17 may be more or less permanently secured to the adjacent lower marginal portions of the side and rear panels by any suitable means, such as the illustrated brass fasteners 24, 24 or the like.

It will be noted that the bottom panel 14, which is permanently affixed to the lower edge of the front panel 11, is hingedly or pivotally related thereto along the fold line 19. This bottom panel 14 may be readily swung in the direction of the arrow 47, from its vertical position adjacent the front panel 11, as illustrated in Figures 1 and 2, into an operative horizontal position between the vertical walls of the cabinet, as illustrated in Figure 4. Indeed, the very act of lowering this bottom panel 14 operatively unfolds the vertical panels by pushing outwardly the inwardly projecting folded portions 18, 18 of the collapsed side walls 12, 12, and by pushing rearwardly the rear panel 13.

The top panel 20 is preferably similarly pivotally related to and more or less permanently associated with the front panel 11. Thus, this top panel 20 is preferably more or less permanently secured along its front marginal portion to the upper edge of the front panel 11 by any suitable means, such as rivets or fasteners 22 or the like. A transverse wooden frame member or lintel 21, which partly defines an opening provided through the front panel 11, may reinforce this upper juncture.

The top panel 20 is preferably provided with downwardly foldable marginal flanges 23, 23, which are adapted to snugly surround the upper marginal portions of the side and rear panels 12 and 13 when the front panel 20 has been swung, in the direction of the arrow 48, from its inoperative vertical position illustrated in Figures 1 and 2 into the operative horizontal position shown in Figure 8. These marginal flanges 23, 23 may then be more or less permanently connected to the upper marginal portions of the side and rear panels by any suitable means, such as the illustrated brass fasteners 24, 24 or the like.

The front panel 11 is preferably provided with a rectangular opening 25, the horizontal edges of which may be defined and reinforced by the lintels 21 and 26, and the vertical edges by the jambs 27, 27. These jambs preferably transverse the entire length of the front panel 11, and each may be secured at opposite ends to the horizontal member 16 and lintel 21 in any suitable manner, as for instance, by being screwed, nailed, or adhesively secured thereto.

The jambs 27, 27 are each preferably provided with the oppositely disposed longitudinal grooves 28 and 29 illustrated in Figure 5. Grooves 28 are adapted to fixedly receive the edge of the material constituting sections of the front panel 11, and those portions of grooves 29 disposed above the lintel 26, are adapted to slidably receive the vertical edges of a flexible closure curtain 30 mounted on a spring-wound and freely rotatable roller 31. This curtain 30, which is preferably flexible solely in a transverse direction, may be constructed from any suitable material, such as the illustrated two-ply corrugated paper.

The lower marginal portion of the flexible curtain 30 is preferably anchored within a groove provided along the top of a vertically slidable horizontal strip 32. This strip is adapted to intimately contact the horizontal frame member 26 when the closure curtain is fully lowered. If desired, the opposite ends of the curtain strip 32 may be provided with projections slidable, jointly with the curtain edges, within the vertical grooves 29, 29.

The curtain-supporting spring-wound roller 31 may be operatively mounted inside the wardrobe cabinet between the rearwardly bent ends 35, 35 of the rigid guide bar 36. This guide bar, which may be secured to the jambs 27, 27 by wood-

screws or the like, preferably traverses the upper portion of the front opening 25, and serves to support and guide the movable closure curtain 30 into and out of the upper ends of the vertical grooves 29, 29 disposed on either side of said opening 25. The curtain contacting portion of the guide bar 36 may be rounded as at 37 in order to decrease the friction between the movable curtain and the stationary guide bar. It will be noted that this simple and compact member 36 provides a simple and effective means for guiding the curtain as well as a support for the spring-wound curtain roller.

After the spring-wound roller 31 is wound-up by unrolling the flexible curtain therefrom, it may unwind itself freely, or an end of the roller may be provided with a ratchet and pawl or dog arrangement whereby the rotation of roller 31 may be arrested at any point by merely decreasing the speed of rotation thereof (by retarding the movement of the curtain or material being rolled up over the roller) and permitting the pawl or dog to engage the ratchet. Thus, when co-acting latch elements 33 and 34, which may be centrally affixed to the curtain strip 32 and lintel 36, are manually disengaged, flexible curtain 30 may be raised either fully and freely in response to the unhindered unwinding action of the enclosed roller spring, or else the curtain 30 may be arrested at intermediate points along its path of travel, if the curtain roller 31 is provided with such ratchet and pawl or dog arrangement. If the arresting-type roller be employed, the latter is preferably set so that the flexible curtain will be under constant tension whenever the co-acting latch elements 33 and 34 are engaged. In other words, the pawl or dog preferably does not engage the roller ratchet wheel when the curtain completely closes the front panel opening 25.

A suitably bent hanger rod 38, from which may be suspended a plurality of garment hangers 39, is preferably permanently associated with the top panel 20. This hanger-rod 38 may be pivotally suspended from the underside of said top panel 20 by any suitable means, as for instance, by the strap-like anchorage 40 illustrated in Figure 7. The anchorage arrangement comprises the spaced generally parallel straps 41 and 42, disposed on either side of the material constituting the top panel 20. These straps may be pressed into intimate contact with the top panel by means of the bent end projections 43, preferably formed integrally with the outer strap 41 and projecting through the top panel 20 and through slots provided in the inner strap 42. This inner strap 42 may rotatably receive the round end of the hanger-rod 38, at the U shaped central portion 44 of said strap 42.

Wardrobe cabinets formed from corrugated board have been constructed wherein the ends of the garment hanger-bar were operatively supported solely by being suspended from the top panel 20. In the preferred embodiment of the present invention, the ends of the hanger rod 38 are each provided with small hook-like extensions 45 adapted to extend over and rest directly on the upper edges of the vertical side walls 12, 12. In this fashion, the weight of the garments hung from the hanger-rod 38 is transferred to the wardrobe side panels 12, 12, instead of being carried solely by the top panel 20. This permits a heavier load to be hung from the hanger-rod 38, and eliminates deformation or rupture of the top panel 20. If desired, added paper, cardboard, or bent metal blanks 46 may be glued, clipped or otherwise secured over the upper edges of the side panels 12, 12 and below the hanger ends 45, 45, to strengthen these edges. The distance between the strap-like anchorages 40 may be slightly increased to operatively position the lower straps 42 directly over the upper edges of these side panels. In this case, the U shaped central portions 44 would then rest directly on the upper edges of these side panels, instead of the rod end portions 45 resting thereon. In either case, however, the load applied to the hanger-rod 38 would be primarily borne by the side panels 12, 12 rather than the top panel 20, and may even be borne wholly by said side panels. It will be understood that the presence of the side panel fold lines 18, 18, in proximity to the hanger-rod ends will tend to vertically strengthen the side walls 12, 12 at those points where strengthening is most needed.

The wardrobe cabinet 10 may be shipped to the purchaser in the folded or collapsed condition, illustrated in Figure 1, wherein the hinged top and bottom panels 20 and 14 are respectively positioned generally adjacent to, and parallel with, the upper and lower portions of the composite front panel 11. The side panels 12, 12 are each preferably longitudinally folded along vertical fold lines 18 and 37, thereby to permit the rear panel 13 to be positioned near the front panel 11, when collapsed, and yet provide sufficient space therebetween to accommodate the curtain roller 31 and possibly, although not necessarily, the wound-up curtain 30.

The unskilled purchaser may readily operatively unfold and erect the hereinabove described wardrobe cabinet, for the collapsed cabinet constitutes but a single unitary structure wherein all the elements are more or less permanently associated with each other in proper relation, and therefore cannot become separated, mis-arranged or lost. Moreover, by virtue of the inseparability of the various elements, the possibility that an inexperienced person might incorrectly or improperly assemble the cabinet elements has been completely eliminated. This is an important feature in collapsible wardrobe cabinets of the type described, for these are frequently assembled by mechanically inept persons.

The rear panel 13 may be manually pushed slightly rearwardly causing the wide walls 12, 12 to assume the partially unfolded positions illustrated in Figure 2, and these side walls thereafter may be fully unfolded by merely swinging the hinged bottom panel 14 downwardly in the direction of the arrow 47 into its operative horizontal position. The top panel 20 may then be swung in the direction of arrow 48 into its operative horizontal position, wherein it rests upon the upper edges of the rear and side panels. The hanger-rod hook-like ends 45 will automatically assume their proper positions over the slightly inwardly bent portions 18, 18 of the side panels 12, 12. The marginal flanges 23 may then be folded down over the upper portions of the side and rear panels, and a plurality of brass fasteners 24, 24, or the like, may then be operatively inserted through adjacent plies (top and bottom) to more or less permanently secure the movable panels, and to seal the cabinet.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and it is therefore desired that the present embodiments be considered in all respects as illustrative and

not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

Having thus described the invention, what is hereby claimed as new and desired to be secured by Letters Patent is:

1. A collapsible wardrobe cabinet of the class described including a front panel having a framed opening providing access to the interior of said cabinet, a rear panel, inwardly foldable opposite side panels, said rear and side panels being foldably related along their meeting edges, a bottom panel disposed interiorly of said cabinet and pivotally related to the lower portion of said front panel, said bottom panel being pivotable from an inoperative position in proximity to the inner side of said front panel downwardly into an operative horizontal position wherein its periphery simultaneously contacts lower marginal portions of said rear and said side panels, a top panel pivotally related to the upper portion of said front panel, said top panel being pivotable from an inoperative position in proximity to said front panel into an operative horizontal position wherein the peripheral portion of said top panel will be supported by the upper edges of said rear and said side panels when the latter are unfolded, said framed front panel access opening being provided with a transversely flexible closure curtain slidable within grooves vertically disposed along the frame defining said access opening on either side of said opening, said curtain being mounted upon a spring-wound roller generally permanently associated with the cabinet in proximity to the upper interior portion of said front panel, and joint curtain-guiding and roller-supporting means for guiding said slidable curtain into and out of said grooves and for operatively supporting said roller, comprising a guide bar traversing the upper end of said access opening, said guide bar being secured to said frame and having rearwardly bent end portions for supporting therebetween said spring-wound curtain roller;—said inwardly foldable side panels each having a non-folding portion adjoining the adjacent edge of said front panel, to provide space therebetween for said curtain roller and for said bottom panel, when the cabinet is collapsed.

2. A wardrobe cabinet including a front panel having a framed opening for providing access to the interior of said cabinet, a rear panel, opposite side panels, a bottom panel and a top panel, said framed opening being provided with a transversely flexible closure curtain slidable within grooves vertically disposed along elements of the frame defining said access opening, said curtain being mounted upon a spring-wound roller generally permanently secured to the cabinet in proximity to the upper inner portion of said front panel, and joint curtain-guiding and roller-supporting means for simultaneously guiding said slidable closure curtain into and out of said grooves and for operatively supporting said roller, comprising a guide bar traversing the upper end of said access opening and having rearwardly bent portions for supporting therebetween said spring-wound curtain roller, said guide bar being operatively secured to said frame.

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