J. T. BATTS.

TRUNK GARMENT HOLDING RACK.

APPLICATION FILED MAY 7, 1921.

1,424,333.

Patented Aug. 1, 1922.

2 SHEETS—SHEET 1.

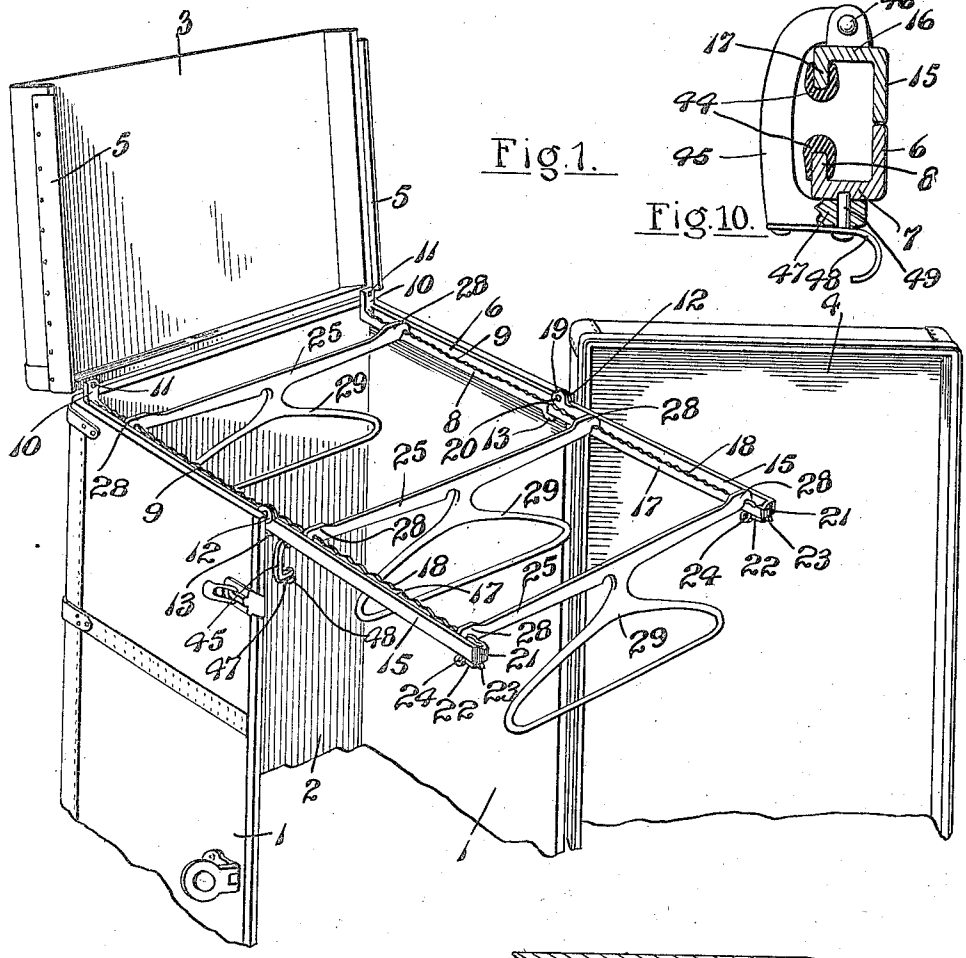


Fig. 1.

Fig. 10.

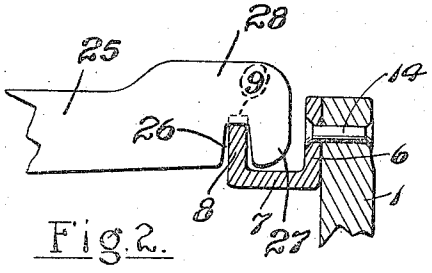


Fig. 2.

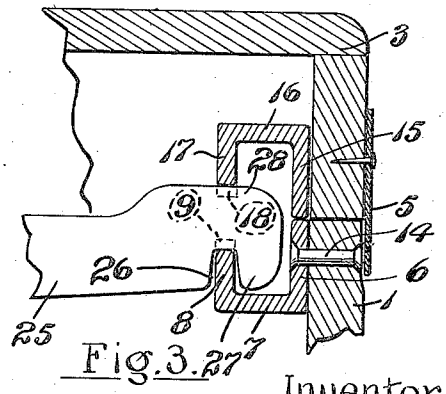


Fig. 3.

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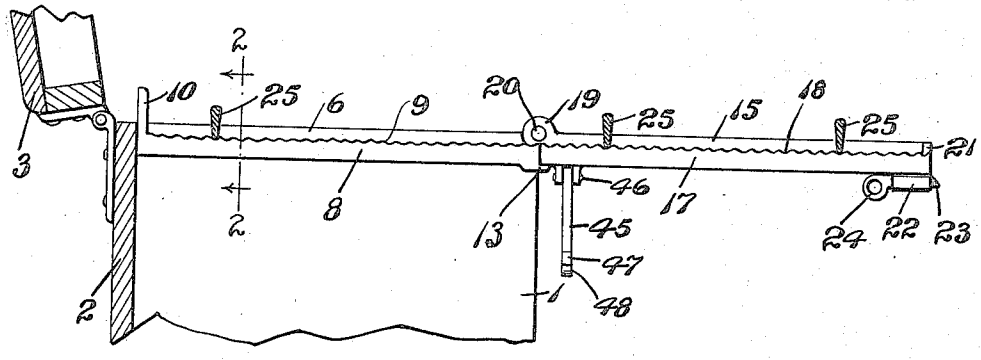


Fig. 4.

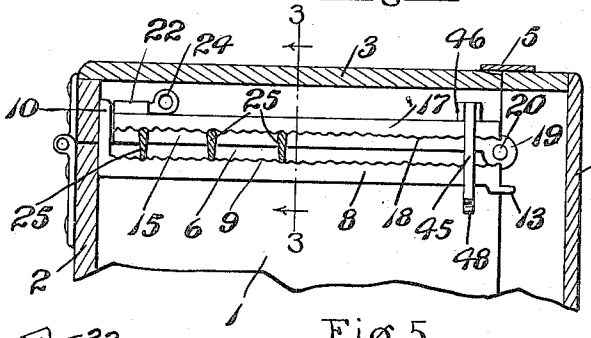


Fig. 5.

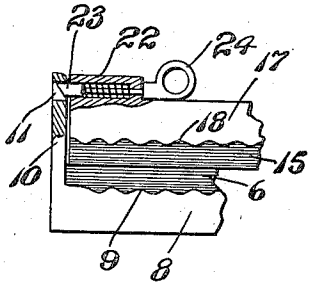


Fig. 6.

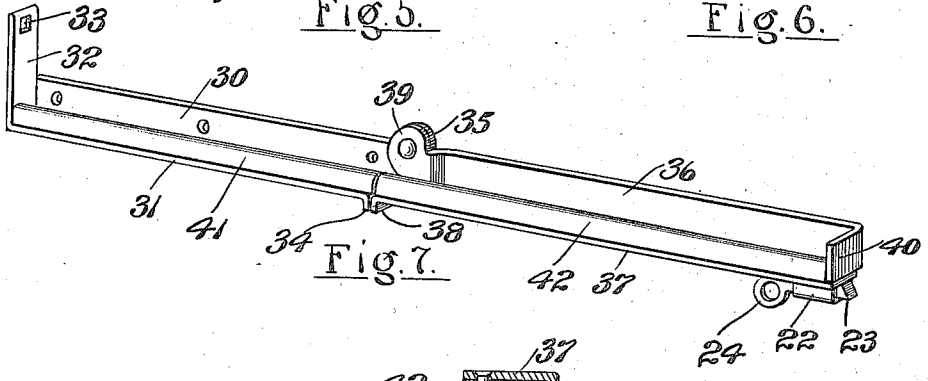


Fig. 7.

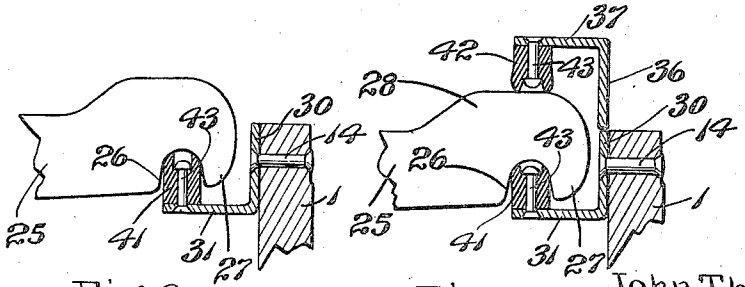


Fig. 8.

Fig. 9.

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TRUNK GARMENT-HOLDING RACK.

1,424,333. Specification of Letters Patent. Patented Aug. 1, 1922.

Application filed May 7, 1921. Serial No. 467,625.

To all whom it may concern:

Be it known that I, JOHN THOMAS BATTS, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Trunk Garment-Holding Racks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a rack construction for trunks, particularly wardrobe trunks, the rack being designed for the support of a large number of garment hangers and for the locking of the same against movement when the rack is folded within the limits of the trunk, said rack being adapted to unfold and extend outwardly in front of the trunk so that the garment hangers and the garments thereon may be separated and brought out in front of the trunk for better access thereto and for better examination thereof. It is a primary object and purpose of the present invention to construct a very simple rack for trunks of this character by means of which the above noted ends are effectively attained. A further object of the invention is to equip the rack with simple means for locking the rack in its folded condition and with further means for insuring the rack against damage from strain thereon when it is folded and clamps the garment hangers between the parts thereof. Various other objects and purposes than those enumerated will appear fully and in detail as understanding of the invention is had from the following description, taken in connection with the accompanying drawings, in which,

Fig. 1 is a fragmentary perspective view of a wardrobe trunk in open position, the rack of my invention being mounted in the upper end thereof and shown in its extended position.

Fig. 2 is a fragmentary transverse section through the lower relatively stationary member of the rack, one end of one of the garment hangers being shown connected therewith.

Fig. 3 is a similar transverse section through the rack in its folded position and the trunk closed, showing the end of the garment hanger locked between the upper and lower parts of the rack.

Fig. 4 is a side elevation of one side of the rack, the trunk being shown in fragmentary vertical section.

Fig. 5 is a vertical section through the upper part of the trunk, the rack being closed and locked and appearing in side elevation.

Fig. 6 is a fragmentary side elevation, partly in section, of the rear part of the rack folded, illustrating the locking or latching means used.

Fig. 7 is a perspective view of a modified form of construction of folding rack.

Figs. 8 and 9 are transverse sections, similar to Figs. 2 and 3, showing this modified form of construction, and

Fig. 10 is a transverse section through the folded rack, with a still further slight modification in construction.

Like reference characters refer to like parts in the different figures of the drawings.

The trunk shown has spaced apart vertical sides 1, a back 2, to which at its upper edge a top 3 is hingedly connected. The front of the trunk 4 is hingedly connected to the front vertical edge of one of the sides 1. It is apparent that the top may be raised and the front swung open to the positions shown in Fig. 1, or that the parts may be made to occupy the positions shown in Fig. 5, the trunk being entirely closed. In practice an overlapping strip 5 is connected to each side of the top 3 and also to the sides and top of the front 4 to cover the meeting edges of the same with the sides of the trunk. All of this construction is old and is shown only to furnish the environment for the invention which I have made.

Immediately below the upper edge of each side 1 and on the inner side thereof a rack bar is permanently secured. This rack bar is substantially channel-like in cross section having a flange 6 lying alongside the side of the trunk, a web 7 projecting inwardly from the lower edge of flange 6, and a second flange 8 of less width or height than the flange 6 extending upwardly from the inner edge of the web 7 paralleling the first flange. The upper edge of the flange 8 is corrugated throughout its entire length, as indicated at 9, there being a continuous series of alternate raises and depressions, as shown. The rear inner end of the rack bar is closed and extended upwardly above the flanges to form a projecting lug or post 10 through which an opening 11 is made. At the front end of

the rack bar the flange 6 is formed into an ear 12 and the web 7 is extended forward to make a projecting stop 13, the upper side of which is located in a plane substantially that of the lower side of the web. This rack bar has a length substantially equal to the width of the side 1 of the trunk to which it is attached, and is permanently secured to the trunk by pins 14 passing through the flange 6 and the adjacent side 1 of the trunk as shown in Figs. 2 and 3.

Coacting with the rack bar at each side of the trunk is a second rack bar, also of channel-like form having an outer flange 15, a web 16 and an inner flange 17, the free edge of which is likewise corrugated, as indicated at 18, similar or identical with the formation of the corrugated edge 9 of the first rack bar. At its inner end, the flange 15 is formed with an ear 19 which lies alongside of the ear 12 of the first rack bar, being pivotally connected thereto, a pivot pin 20 passing through the ears. At its outer end, the second rack bar is closed by an integrally cast cross section 21. On the web 16 at its free end a boss 22 is cast which has a longitudinal opening therethrough in which a latch bar 23 is slidably mounted, the same being spring actuated so as to normally project at one end beyond the boss, its opposite end being provided with a finger hold 24 for manual operation of the latch. When this rack bar is turned outwardly, it is stopped by the stop 13 in horizontal position and in alinement with the first rack bar and when it is turned backwardly to folded position, the latch bar 23 automatically enters the opening 11 in the projecting post 10, thereby holding the bars locked together, and releasable only by pulling on the part 24 to release the latch bar from said opening 11.

With one of these two-bar devices attached at each side of a trunk, garment hangers may be disposed across between them. The garment hangers shown comprise each an upper horizontal bar 25, at each end, and on its under side having a notch 26 cut therein so that there is left a hook portion 27 which extends downwardly into the space between the flanges 6 and 8 of the stationary rack bar or into the space between the flanges 15 and 17 of the movable rack bar when it is in extended position. Each bar 25 at each end is preferably formed with a raised portion 28 and each may be integrally formed with a depending centrally located coat hanger 29. Other types of garment hangers may be used, however, and in the present invention the particular form of the garment hanger is no part thereof, being the subject matter of a separate application.

With the trunk open and the rack bars extended and in alinement, the garment hangers may be moved to any desired position in the length thereof, riding over the raises and seating in the depressions in the corrugated edges 9 or 18. When the trunk is to be closed, the garment hangers are first all moved back on to the inner stationary rack bars and the outer movable bars turned to closed and latched position, in which case the corrugated edges 18 of the movable bars engage with the upper edges of the ends 28 of the garment hanger bars 25. It is designed that the depressions in the corrugated edges 18 shall come directly above the depressions in the edge 9 of the bar immediately below so that the garment hangers are held firmly and positively against movement.

In Figs. 7, 8 and 9, a modification in structure is shown. The structure first described comprises cast metal rack bars, preferably, while in the structure of Figs. 7, 8 and 9, the bars are formed from sheet metal. The inner stationary bar is of angle-iron formation, having a vertical leg 30, adapted to be permanently secured to the side 1 of the trunk, and a horizontal inwardly projecting leg 31. At its inner rear end, a post 32 with an opening 33 therethrough is turned upwardly from the horizontal leg 31. At the front end, the leg 31 is formed with a down-turned stop 34, and the leg 30 with an ear 35. The movable rack bar is likewise of sheet metal and of angle-iron formation, having a vertical leg 36 and a horizontal leg 37, the latter of which, at its rear end is formed with a down-turned stop 38, and the former of which has an ear 39 lying alongside ear 35 and pivotally connected therewith. At its free end, the leg 36 has an extension 40 turned at right angles to lie immediately above the end of the leg 37. The same latch mechanism consisting of boss 22, spring actuated latch bar 23 and finger hold 24 is attached to the leg 37 at its end, and for the same purpose, the latch bar automatically entering opening 33 when the bars are in closed position.

Rubber strips of the form shown at 41 and 42 are connected lengthwise of the horizontal legs 31 and 37 of the rack bars, securing pins 43 being used. These strips take the place of the flanges 8 and 17 of the first described construction and the hanger bars 25 are associated therewith in the same manner. The rubber being of yielding nature, the same may give when the bars of the rack are folded and locked together, holding the garment hangers securely against movement and eliminating any rattling or other undesirable noise.

The use of the rubber may be had with the first described structure, and the corrugation of the flanges 8 and 17 omitted, as shown in Fig. 10, in which a channel-like length of rubber 44 is secured to each flange 8 and 17, covering its free edge. It is apparent that the hangers are likewise firmly secured against movement with this construction

when the rack bars are folded and locked together.

In folding the outer rack bars to closed position, and pressing the hanger bars into the rubber, it is apparent that a considerable strain is put on the pivotal connection with a liability to distortion thereof. To relieve this and take a part, at least of the strain, a bar 45 is pivotally connected at 46 to the web 16 of the folding rack bar closely adjacent its point of pivotal connection to the stationary rack bar. At its free end, the bar 45 has a part 47 turned substantially at right angles which is adapted to pass under the web 7 of the stationary rack bar, thus serving to hold the two rack bars from separation at their open side and distortion with respect to each other. To maintain the engagement of the part 47 with the web, a leaf spring 48, adapted to be manually operated is attached to the under side of the part 47 and carries a locking pin 49 which passes upwardly loosely through said part 47 and is adapted to enter a recess formed for it in the under side of the web 7 as shown in Fig. 10. The same may be retracted by pulling on the curled end of the spring 48. When the rack is to be extended, not only is the latch bar 23 disengaged, but previously, the bar 45 is disengaged, it depending below the extended bar with which it is associated when the rack is in extended position.

The constructions described are practical and fully operative, simple and economical to manufacture, and easily installed in a trunk. Preferably, the rack bars are made of aluminum, though not necessarily so. Various other changes in structure may be resorted to without departing from the invention and I do not wish to be limited other than required by the scope of the appended claims defining the invention.

With this construction, the usual follower is obviated, each garment hanger in itself being a follower as well as a hanger for garments, as it is positively held in place against movement when the trunk is closed. In every way the rack construction is particularly effective for the carrying of garment hangers and garments suspended therefrom, being simple, effective, and particularly advantageous in that no pressure is put on the garments to force them against parts of the garment hanger with the formation of deep creases in the garments because of such pressure. Also the elimination of follower pressure is a feature of particular merit. In fact each and every garment hanger, and the garments hung thereon are independent of the others, not pressed together by any follower, and the garments all hanging naturally and practically independently without pressing force applied thereto from the trunk or from any trunk follower which would distort the garments and destroy their form and lines.

I claim:

1. In combination with a trunk having a movable top, a rack bar secured to each side of the trunk on the inner side thereof adjacent the upper edges of said sides, a second rack bar pivotally connected to the outer end of each of the first rack bars and adapted to be extended outwardly in alinement with the first rack bars or folded to a position directly over the first rack bars, means for holding the second rack bars in horizontal alinement with the first rack bars, a plurality of garment hangers located between the rack bars and supported at their ends slidably on said rack bars, and means on the rack bars for holding the garment hangers against movement when the second rack bars are folded to position over the first rack bars.

2. In combination with a trunk having a movable top, a rack for holding garment hangers mounted on the trunk below the top including a relatively stationary rack bar and a second rack bar pivotally connected thereto at its outer end for movement from a folded position above the first rack bar to a horizontal position in alinement with the first rack bar, means on the rack bars for slidably carrying garment hangers thereon when they are in alinement, said means holding the garment hangers against movement when the rack bars are in folded position, and means for stopping the second rack bar when it has reached horizontal alinement with the first rack bar.

3. In combination with a trunk having a movable top, a rack for holding garment hangers mounted on the trunk below the top and including a relatively stationary rack bar fixed to the trunk and a second rack bar pivotally connected thereto at its outer end, for movements from a folded position above the first rack bar to a horizontal position in alinement with said first rack bar and vice versa, means on the rack bars for slidably carrying garment hangers thereon when the rack bars are in alinement, said means serving to hold the garment hangers against movement when the rack bars are in folded position, and means to releasably lock the rack bars in said folded position.

4. A rack adapted to be used with a trunk including a rack bar adapted to be secured to the trunk, a second rack bar pivotally connected to one end of the first rack bar and movable between one position where it lies in alinement with the first rack bar and another position where it lies above and parallel with the first rack bar, said bars having means for slidably carrying garment hangers when they are in alinement, said means serving to hold the garment hangers against movement when the rack bars are

in said second named parallel position, and interengaging means on the bars for releasably locking them in said second position.

5. A construction of the class described, comprising a rack bar of channel-like cross section having two spaced apart vertical flanges of different heights connected by a horizontal web, a second rack bar of substantially like construction pivotally connected with the first rack bar, said bars having ears formed at adjacent ends on the wider vertical flanges thereof and a pivot pin passing through said ears, stop means for holding the bars in alinement when unfolded, and interengaging means on the bars at their free ends for releasably locking them together in folded position.

6. A construction of the class described, comprising a rack bar of channel-like cross section having two spaced apart vertical flanges of different widths connected by a horizontal web, a second rack bar of substantially like construction, ears formed at one end of each of the bars as a continuation of the wider vertical flanges thereof, said ears overlapping and having a pivot pin passing therethrough whereby the bars are pivotally connected together and may be placed in alinement or folded one over the other, a post having an opening therethrough extending upwardly from the free end of one of the bars, and a manually operable latch on the other bar for engagement in the opening in said post when the bars are folded together.

7. A construction containing the elements in combination defined in claim 5, combined with rubber strips connected to and covering the free edges of each of the narrower flanges of the rack bars.

8. In combination with a trunk having a movable top, a rack for holding garment hangers mounted in the trunk below the top and including a relatively stationary rack bar and a second rack bar pivotally connected thereto at its outer end for movement from a folded position above the first rack bar to a position in alinement therewith, means on the rack bars for slidably carrying garment hangers when the same are in alinement, and interengaging means at the free ends of the bars for releasably locking the same in folded position.

9. In combination with a trunk having a movable top, a rack for holding garment hangers mounted in the trunk below the top and including a relatively stationary rack bar and a second rack bar pivotally connected thereto at its outer end for movement from a folded position above the first rack bar to a position in alinement therewith, and rubber strips located lengthwise of the rack bars and over which the garment hangers adapted to be hung on the bars pass, said strip on the upper bar in its folded position pressing against the garment hangers and forcing the same into engaging contact with the rubber strip on the lower bar, thereby securely holding them against movement when the rack bars are in folded position.

In testimony whereof I affix my signature.

JOHN THOMAS BATTS.