March 26, 1929. J. RITTER, JR 1,706,822

TRUNK DOOR LOCKING DEVICE

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Fig. 1.

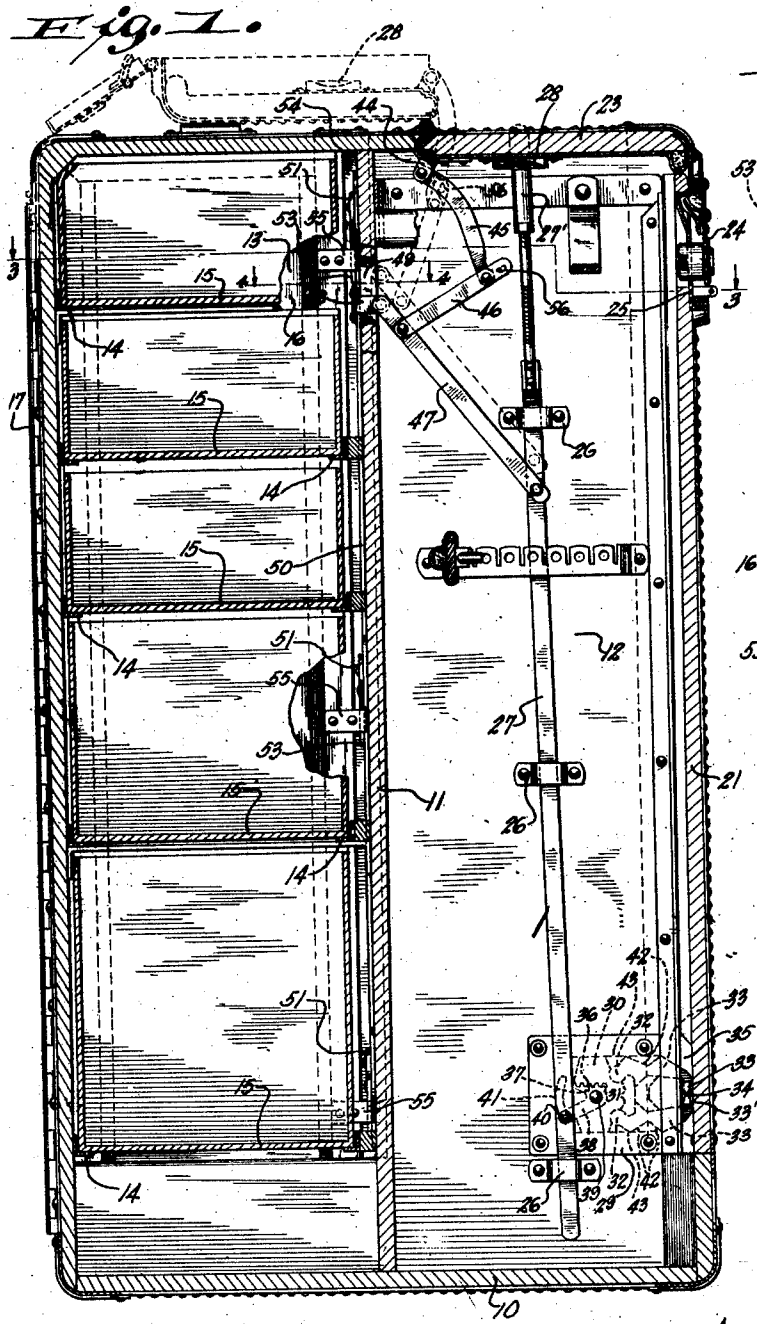

Fig. 2.

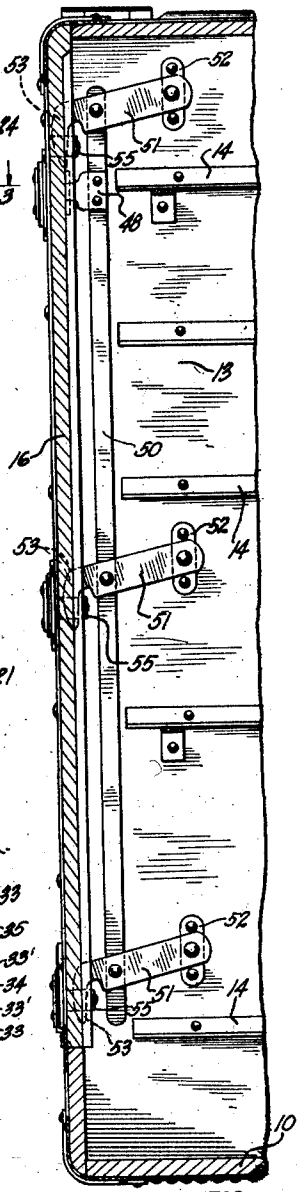

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Fig. 3.

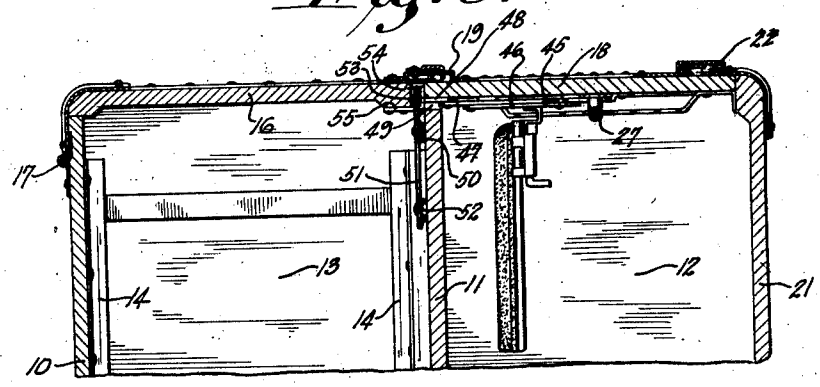


Fig. 5.

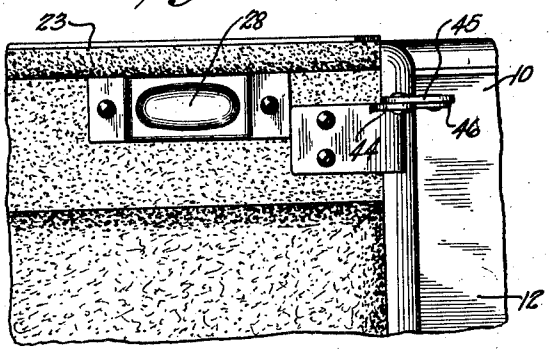


Fig. 6.

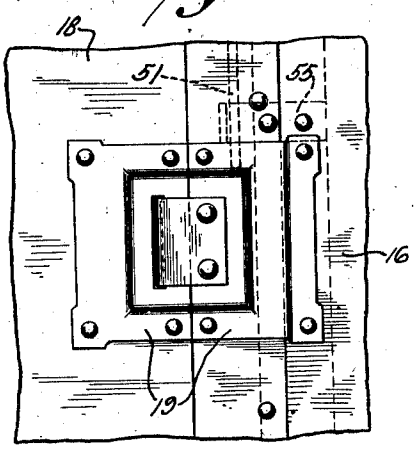


Fig. 4.

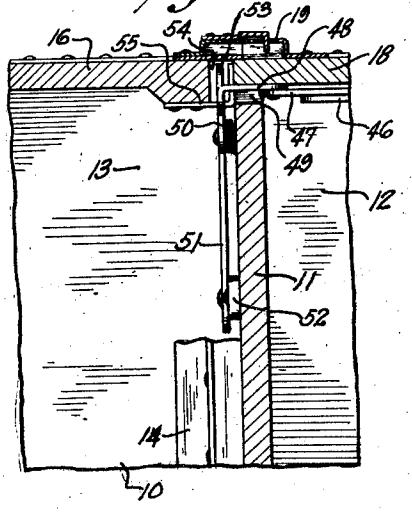
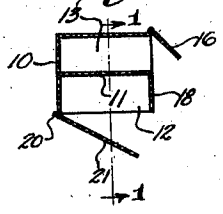


Fig. 7.



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Patented Mar. 26, 1929. 1,706,822

UNITED STATES PATENT OFFICE.

JULIUS RITTER, JR., OF RACINE, WISCONSIN, ASSIGNOR TO HARTMANN TRUNK COMPANY, OF RACINE, WISCONSIN, A CORPORATION OF WISCONSIN.

TRUNK-DOOR-LOCKING DEVICE.

Application filed June 11, 1928. Serial No. 284,504.

This invention relates to improvements in trunk door locking devices.

It is one of the objects of the present invention to provide a wardrobe trunk of the one-section type wherein the wardrobe compartment is separated from the drawer compartment by a central fixed partition and having a cover and doors controlling access to each of the compartments, there being jointly operated locking means for both of said doors and the cover.

A further object of the invention is to provide a trunk of the class described in which locking and unlocking of both of the compartment doors is controlled by movements of the trunk cover.

A further object of the invention is to provide a trunk of the class described having jointly operating door locking mechanism which is of very simple construction, is strong and durable, is easy and efficient in operation, and is well adapted for the purpose described.

With the above and other objects in view, the invention consists of the improved trunk door locking device, and its parts and combinations as set forth in the claims, and all equivalents thereof.

In the accompanying drawings in which the same reference characters indicate the same parts in all of the views:

Fig. 1 is a vertical sectional view of a trunk embodying the improved door locking device taken on the line indicated at 1—1 in Fig. 7 only with the main door in closed position, and on a larger scale;

Fig. 2 is a fragmentary vertical sectional view of the trunk showing the locking mechanism for the drawer compartment door;

Fig. 3 is a cross-sectional view taken on line 3—3 of Fig. 1;

Fig. 4 is a fragmentary detail sectional view on a larger scale showing a portion of the locking device and indicated by line 4—4 in Fig. 1;

Fig. 5 is an enlarged fragmentary plan view of the trunk with the cover in open position;

Fig. 6 is an enlarged fragmentary side view of the trunk showing one of the catch members provided for the drawer compartment door; and

Fig. 7 is a cross-sectional diagrammatic view of the trunk to illustrate the door arrangement, and on a smaller scale.

Referring now more particularly to the drawings, it will appear that the numeral 10 indicates the trunk body portion which is divided by a vertical partition 11 into a wardrobe compartment 12 and a drawer compartment 13. Garments are adapted to be suspended from hangers within the upper portion of the wardrobe compartment, and the drawer compartment is provided with horizontal angled tracks 14 to slidably support drawers 15 for smaller articles.

One side of the drawer compartment is closed by means of a drawer compartment door 16 which is hinged to a side edge portion of the trunk body, as at 17. The free edge portion of said door meets an edge portion of a side wall 18 of the wardrobe compartment, and complementary securing clasps 19 are provided which exert a drawing effect on the door when it is closed.

Hinged to a corner edge portion of the trunk body, as indicated at 20, diagonally opposite to the hinge connection of the door 16, is a door 21 controlling the opening to the wardrobe compartment and extending entirely across one side of the trunk. The free edge portion of said door and the adjacent trunk portion are provided with complementary clasp members 22.

A cover 23 is hinged to the top portion of the trunk body intermediate its ends and is adapted to close the upper end portion of the wardrobe compartment. The front edge portion of said cover carries a hinged, depending hasp member 24 adapted for locking engagement with an escutcheon 25 mounted in the upper portion of a side wall of the wardrobe compartment.

Slidably mounted in brackets 26 against an inner wall of the wardrobe compartment is a vertical bar 27, which, when the cover 23 is closed, is in the full line position shown in Fig. 1, and when the cover is opened the bar is raised, through a link arrangement later to be described, to the dotted line position in Fig. 1. The upper end portion of said bar is enlarged or knob-like, as at 27′, and is adapted to be engaged by a pressure plate 28 mounted on the inner side of the cover.

A latch casing 29 is mounted on the lower portion of the side wall of said wardrobe

section and a slidable member 30 is mounted within said casing, said member being formed with semi-circular edge recesses 31 into which pivotally extend the inner rounded ends 32 of a pair of locking dogs 33. The outer end portions of said dogs are formed with locking shoulders 33' which engage the lug portion 34 of an escutcheon plate 35. The escutcheon plate is mounted on the inner lower portion of the door 21 and when the parts are thus engaged the door is drawn inwardly and locked against the adjacent trunk body portions. The slidable member 30 is formed with an inner serrated edge 36 engaged by the semi-circular toothed portion 37 of a lever 38 which is pivotally mounted, as at 39. The outer end portion of the lever 38 carries a headed pin 40 extending through a curved slot 41 in the latch casing 29 and pivotally connected with the lower end portion of the bar 27. Due to the angular portions 42 of the dogs 33 and the engagement of the same with the edges 43 of the casing 29, when the bar 27 moves upwardly, through the lever 38 the slidable member will be moved to the right in Fig. 1 and the dogs will be pivotally moved to open positions to release the escutcheon lug 34 and open the door 21. Conversely, when the bar is depressed, the dogs, through the means described, will be pivotally moved to engaging positions to lock the door.

The cover 23, near its inner edge portion, is provided with a depending lug 44 to which is pivotally attached the upper end portion of a curved link 45. The other end portion of said link is pivotally secured to a link 46 inwardly of its outer end portion, and the other end portion of the last-mentioned link is pivotally secured to a long link 47, inwardly of its upper end portion, the other end portion of said long link 47 being pivotally secured to an intermediate portion of the bar 27. Through these connections, closing and opening movements of said cover impart vertical movements to the bar 27 for the purpose of operating the latch mechanism for the door 21, as previously described.

The upper end portion of the link 47 is pivotally connected to the short end portion of an angular lever 48 which projects through and is movable in a slot 49 in the trunk partition 11. The other end portion of said lever is elongated and extends within the drawer compartment along the adjacent wall of the partition 11. A vertically movable bar 50 is riveted near its upper end portion to the last-mentioned end portion of the lever 48 and is adapted to be moved thereby. Medially pivotally secured to opposite end portions of the bar 50 are a pair of latch dogs 51, and a similar dog is pivotally connected to said bar intermediate its ends. Each latch dog is pivotally mounted at its inner end portion on a lug 52 secured to the partition 11. The outer end portions of said latch dogs are formed with depending, curved hook portions 53 to enter a vertical recess 54 in the trunk body for hooking engagement with angled plates 55 projecting from the side edge portion of the drawer compartment door 16.

From the arrangement last described, when the bar 50 is in a lifted position, the dogs 51 will be raised out of engagement with the plates 55, permitting the door 16 to be opened. To lock the door, a lowering of the bar 50 will cause the hook portions 53 to engage the door plates 55 and due to the cam-like shape of said portions 53, the door will be drawn inwardly and locked.

It should be observed that when the cover 23 is in the open position shown in dotted lines in Fig. 1, the bars 27 and 50 are jointly lifted through the links 45, 46, and 47 which assume the dotted line positions shown in Fig. 1. Also, movement of said links in one direction is limited by a lug 56 at the outer end portion of the link 46 which engages an edge portion of the link 45. When the bars 27 and 50 are lifted by the common means described, the dogs 33 will be opened to disengage the escutcheon lug of the door 21 and also the dogs 51 will be raised to disengage the plates 55 of the door 16, unlocking the doors 16 and 21, permitting the same to be opened to afford access to the trunk compartments 12 and 13. To lock the trunk, the doors 16 and 21 are swung to closed positions and then the cover 23 is closed, operating through the links 45, 46 and 47 to lower the bars 27 and 50, whereby the dogs 33 are closed to draw inwardly and latch the door 21, and the dogs 51 are hooked into the plates 55 to draw inwardly and latch the door 16. When the hasp 24 of the cover lock is engaged with its escutcheon, the entire trunk is securely locked, as the doors cannot be opened unless the cover be first raised.

From the foregoing description it will be seen that the locking mechanism for both doors is jointly operating and is controlled by the trunk cover. Also, the trunk door locking device is simple and novel and is well adapted for the purposes set forth.

What I claim as my invention is:

1. The combination with a trunk body having a plurality of hingedly mounted closure members, of latching means for said closure members, comprising a latching member for each of two of said closure members connected to and jointly controlled by the movement of a third closure member.

2. The combination with a trunk body having a plurality of hingedly mounted closure members, of latching means for said closure members, comprising connected together latching members for two of said

closure members connected to and controlled by the movement of a third closure member, and an independent latching member for said third closure member.

3. The combination with a trunk body having a plurality of hingedly mounted closure members, of latching means for said closure members comprising a manually actuated latching member latching one of said closure members to the trunk body, and a pair of latching members securing two other closure members to the trunk body, the last-mentioned latching members being operated by movements of the first-mentioned closure member.

4. The combination with a trunk body having a pair of doors and a cover hingedly connected thereto, of latching means for said doors, comprising a latching member for each of said doors connected to and jointly controlled by movements of the cover.

5. The combination with a trunk body having a pair of side doors and a top cover, all of which are hingedly connected to the body, of latching means for said doors, comprising a latch member for each door, and operating mechanism for each latch member, said operating mechanisms being connected together and to said cover to be controlled by movements of the latter.

6. The combination with a trunk body having a hingedly mounted top cover, and a pair of side doors, said doors being hingedly connected to diagonally opposite side edges of said body, of lathing means for said doors, comprising a latch member for each door, and operating mechanism for each latch member, said operating mechanisms being connected together and to said cover to be controlled by movements of the latter.

7. The combination with a trunk body having a hingedly mounted top cover, and a pair of hingedly mounted side doors, of latching means for said doors, comprising latch members for one of the doors, latch members for the other of said doors, an operating member connected to each of said latch members, and link connections between both operating members and the top cover whereby said operating members are jointly moved by movements of said cover.

8. The combination with a trunk body having a hingedly mounted top cover, and a pair of hingedly mounted side doors, each of said doors being provided with a fixed latch element, of latching means for said doors, comprising movable latch members for each of said doors mounted interiorly of the trunk body, each movable latch member being engageable with the fixed latch element on an adjacent door, an operating member connected to each movable latch member, link connections between both operating members and the top cover whereby said operating member are jointly moved by movements of said cover, and an independent, manual latch member carried by said cover.

9. The combination with a trunk body having a hingedly mounted top cover, and a pair of hingedly mounted side doors, of means operable by the top cover for latching both of said doors to the trunk body, the means for one of the doors comprising a latch adjacent said door and a casing having an elongated angularly extending opening, a movable bar extending from the top cover to the elongated opening and having a portion extending through said opening and engaging the latch for actuating the same upon movements of the bar, the means for the other door comprising a bar, and a pivotally mounted hooking dog connected thereto, and link connections between both of said bars and the top cover.

In testimony whereof, I affix my signature.

JULIUS RITTER, JR.