A. P. JAMES.

WARDROBE TRUNK DRAWER LOCKING DEVICE.

APPLICATION FILED SEPT. 20, 1916.

1,240,048.

Patented Sept. 11, 1917.

2 SHEETS—SHEET 1.

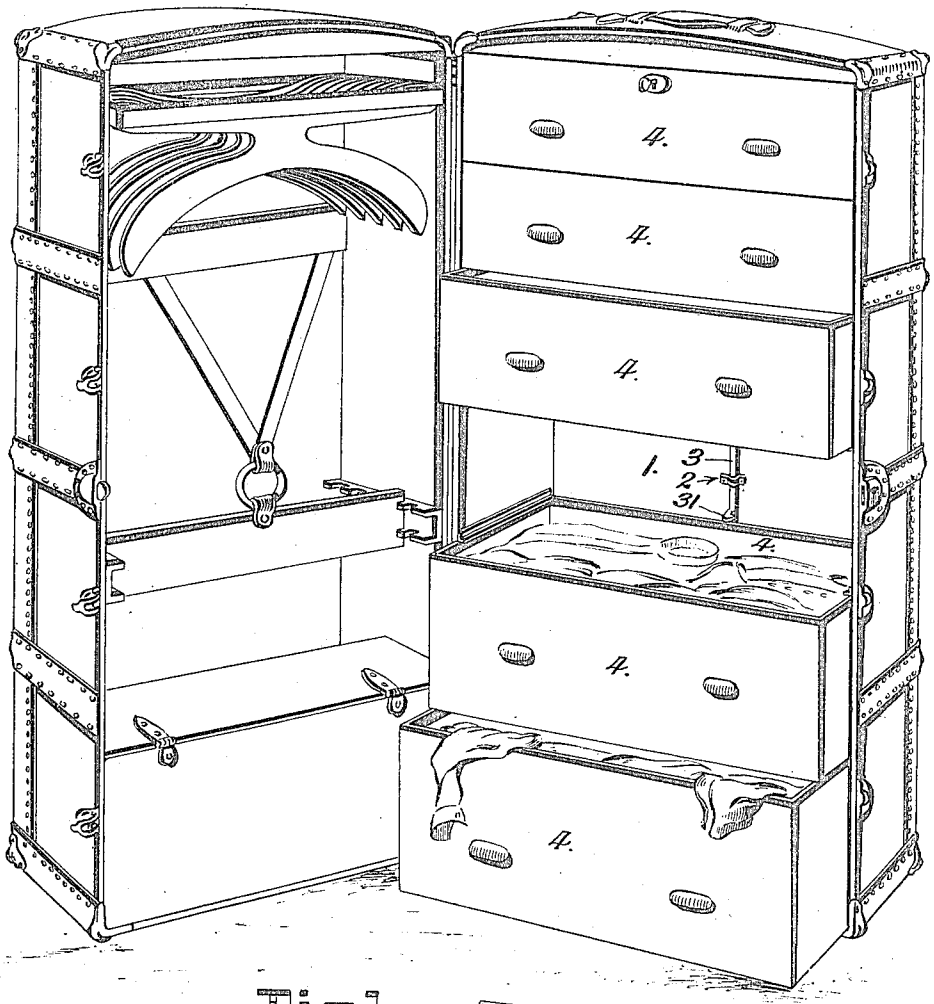


Fig. 1.

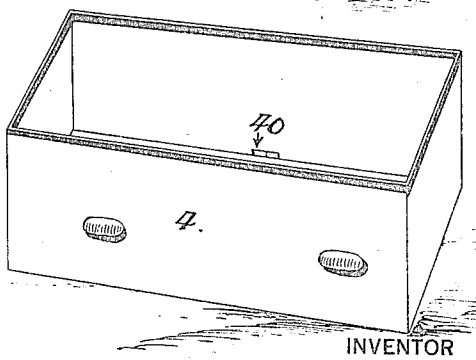
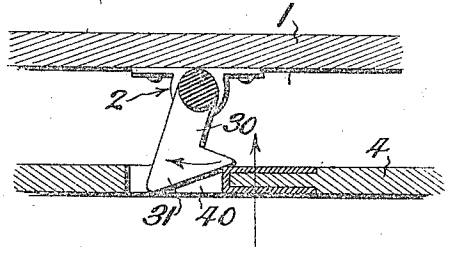


Fig. 2.



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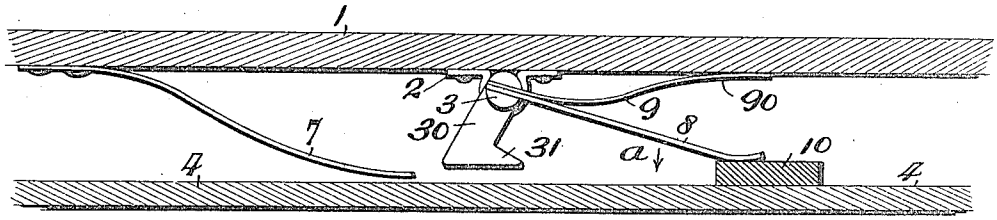


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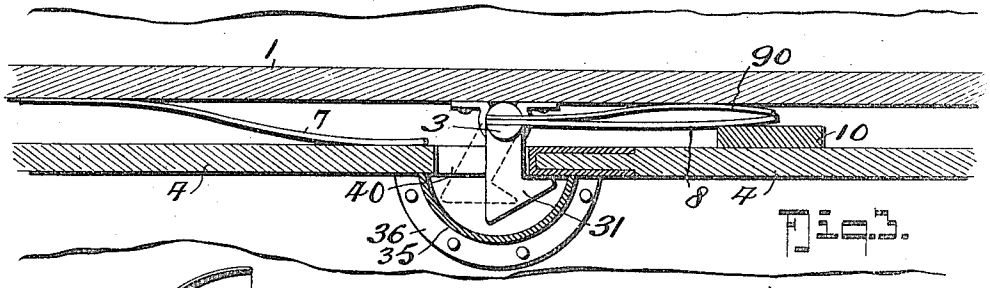


Fig. 3.

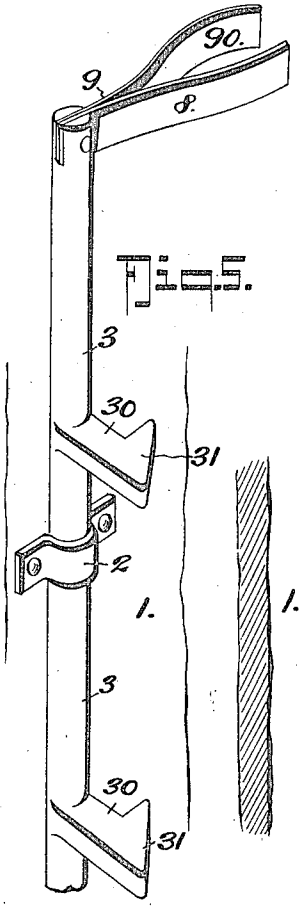


Fig. 5.

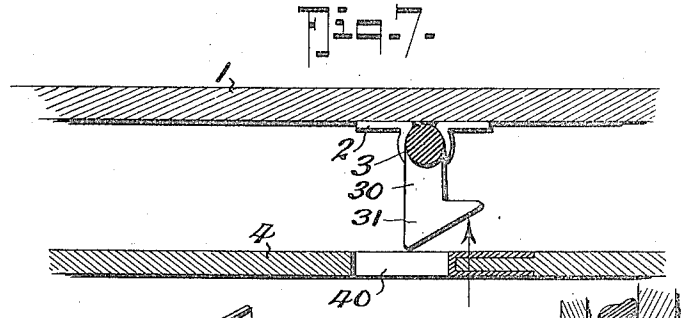


Fig. 7.

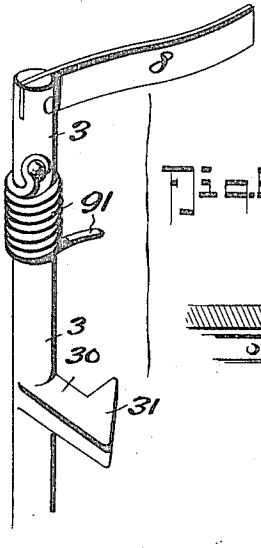


Fig. 6.

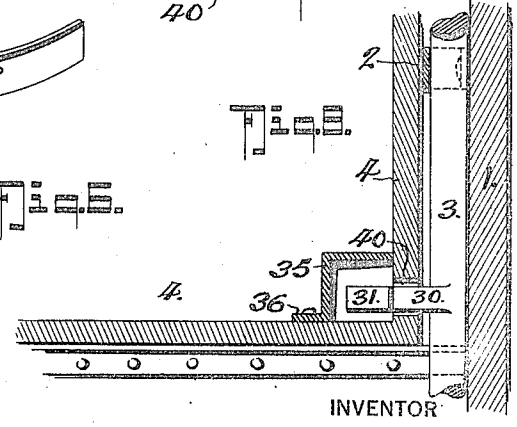


Fig. 8.

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UNITED STATES PATENT OFFICE.

ARTHUR P. JAMES, OF RICHMOND, VIRGINIA, ASSIGNOR TO H. W. ROUNDTREE & BROTHER TRUNK AND BAG CO., INCORPORATED, OF RICHMOND, VIRGINIA.

WARDROBE-TRUNK-DRAWER-LOCKING DEVICE.

1,240,048. Specification of Letters Patent. Patented Sept. 11, 1917.

Application filed September 20, 1916. Serial No. 121,289.

To all whom it may concern:

Be it known that I, ARTHUR P. JAMES, a citizen of the United States, residing in the city of Richmond and county of Henrico and State of Virginia, have invented a new and Improved Wardrobe-Trunk-Drawer-Locking Device, of which the following is a specification.

This invention, which has general reference to drawer locking means, is more particularly directed to the production of a new and improved locking means or device particularly adapted for use in connection with wardrobe trunk drawers and other like arrangements of nests of drawers, and which embodies a simple, inexpensive and effective arrangement of parts adapted for being readily applied to the conventional forms of wardrobe trunks now in use without any material change in their structure.

Among other objects, my invention seeks to provide a simple and automatically operated locking device for wardrobe drawers and the like, in which the locking elements are especially designed for taking care of the sidewise and jarring movements of the drawers caused by rough handling while the trunk is in transit and in such manner that the said locking elements are relieved of strain and held from being readily clogged or otherwise shifted out of the proper operative condition.

Another and essential feature of my invention lies in an improved construction of locking device, of the general character stated, in which is included simple and positively operating means for permitting any and all of the drawers, other than the operating drawer, to be pushed in and locked after the operating drawer has been previously pushed in and key locked.

With the above and other objects in view, my invention consists in a locking device or means of the character stated that embodies the peculiar features of construction and novel arrangement of the parts hereinafter explained, specifically outlined in the appended claims and illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of a wardrobe trunk, with my improved locking devices operatively applied thereto, the operating or key locked drawer and some of the other drawers being at their pushed in or locked position and the remaining drawers at their partly opened or pulled out position.

Fig. 2 is a horizontal section taken through the upper key lock drawer, the drawer being at its forward or unlocked position.

Fig. 3 is a similar view that shows the key locked drawer closed and at its locked position.

Fig. 4 is a horizontal section of one of the lower drawers and indicates the drawer as being pushed inwardly and engaging the automatically operating locking latch member that coöperates therewith.

Fig. 5 is a perspective view of my improved trunk drawers locking means, a portion of the trunk casing being shown to illustrate the manner in which my said locking device or means is applied.

Fig. 6 is a detail perspective view of a modified form of spring device for turning the rock shaft or rod of the locking device in position for being engaged by the master or operating drawer hereinafter more specifically referred to.

Fig. 7 is a detail horizontal section that illustrates the position of one of the locking latches, with respect to the slot in the adjacent drawer, after the upper or operating drawer has been closed and locked and the latch carrying rod rocked to the initial locking position.

Fig. 8 is a vertical section of one of the lower drawers and illustrates the projecting housing device for the latch heads, hereinafter referred to.

In wardrobe trunks now on the market, so far as I know, the drawers in the bureau side usually have separate locking means and, by reason thereof, frequently in the handling of the said types of trunks, the individual locks readily become more or less strained and rendered inoperative while the wardrobe is in transit.

Again, in the use of wardrobe trunks having individual key locked devices, when the trunk drawers are hastily pushed back to permit of closing the two sections of the wardrobe, the locking of one or more of the drawers is often overlooked and hence dur-

ing travel the unlocked drawers are more or less jolted, often injured and the contents of the drawers more or less disturbed.

In carrying out my invention, the bureau part of the trunk casing is provided on the inner side of the back 1 with a series of horizontally disposed brackets or bearings 2 in vertical alinement.

3 designates a rock shaft in the nature of a stout steel rod, and the said shaft, at suitable intervals, is provided with horizontally disposed forwardly projecting crank members 30 that terminate in latch heads 31.

One of the latch members 30 is provided for each of the drawers 4, excepting the key locked drawer, and each of the drawers 4 adjacent their respective latch crank members 30, is provided with a horizontally elongated slot 40 for the reception of the latch heads 31, that edge of the slot 40 engaging the head 31 being metal sheathed to avoid wear and provide for a close fit of the parts when the drawers are at their in or locked position.

35—35 designate cup shaped sheet metal housings, and each includes a base flange 36 for conveniently securing the same to the drawer bottom, adjacent the latch slot 40, as shown.

The housings 35 are provided for preventing the articles packed in the drawers from engaging or interfering with the latch heads 31 of their respective locking members 30.

All of the drawers, excepting the top or operating drawer, are of such width that when pushed inwardly to their limit, their front edges will be flushed with the front edge of the bureau casing and the top drawer is of sufficiently less width to allow for a supplemental back movement thereof for effecting the operation of adjusting the locking devices to their drawer locking position, but the said top drawer, when not at its key locked or operative position, has its front flushed with the front edge of the bureau casing, it being forced forwardly to such position by a leaf spring 7 that is attached to the back wall of the casing and which engages the rear end of the drawer, as is clearly shown in Fig. 2.

While I have shown the top or operating drawer as of less width than the casing and the other drawers, the said top drawer may be of the same width as the casing and the other drawers contained therein, it being understood, that when of practically the same width as the trunk casing, the front end of the said top or operating drawer will be extended beyond the front of the casing to allow the unlocking device to work.

8 designates a stout leaf spring arm fixedly attached to the upper end of the crank rod 3 and the said arm 8, forms as it were, a crank member that projects from the rod in a direction substantially at right angles to the crank latches 30 and the said member 8 is normally forced outwardly in the direction of the arrow *a* on Figs. 2, 3 and 4, by another leaf spring 9 that is also attached to the upper end of the crank rod 3 and has its free end 90 held to bear against the back of the bureau casing, as shown.

Instead of using the leaf spring 9, the spring tension device for normally forcing the crank like spring member outwardly in the direction of the arrow *a* (see Figs. 2, 3 and 4), may be in the nature of a wire spring 91 coiled about the rock shaft or rod 3, and held with one of its ends attached to the rod 3 and the other end to bear against the back wall of the casing, as is clearly shown in Fig. 6 of the drawings.

The straight spring member 8, as will be readily seen from the drawings, is heavier than the spring 9 and hence by pushing the operating drawer, usually the upper one as shown, into the recessed position as shown in Fig. 3, a block 10 attached to the back of the said upper drawer contacts with the spring arm and thereby causes the shaft 3 to turn in an opposite direction to which it is normally turned by the spring 9 and thereby brings the locking latches to the position best shown in Fig. 4, by reference to which it will be readily understood that when the locking latch 30 is thus positioned, the beveled head 31 thereof is then in position for being engaged by that edge of the slot in a lower drawer with which it interlocks when said lower drawer is pushed back.

One of the essential advantages in providing a drawer locking means arranged as stated and particularly forming the crank element at the upper end of the latch rod in the nature of a stout spring arm 8, is, that it permits of a supplemental rocking of the latch rod in the direction to which it normally tends to rock under the action of the spring tension device 9 and in the opposite direction from that caused by pressure exerted on the resilient crank member 8 by the closed master drawer, and thereby permits the locking latch head 31, when its beveled edge is engaged by the lower drawer, to spring back under pressure and thus allow any and all of the drawers, below the top or operating drawer, to be pushed back and locked, even though the top or operating drawer has been previously locked by a suitable key actuated device.

Another advantageous feature in my invention is, that the spring members 8 and 9 take care of the jarring and sidewise movements of the drawers incident in the rough handling of my wardrobe trunk when in transit.

From the foregoing description taken in connection with the drawing, the complete construction, the manner of operation and

the advantages of my invention will be readily apparent to those skilled in the art to which it appertains.

What I claim is:

1. In a trunk drawer locking means of the character stated, the combination with a master or operative drawer and a subsidiary drawer; of a rotary locking device mounted on the trunk casing, the said locking device including a flexible member projected into the path of the said master drawer for rotating the said locking device to the locking position, said locking device also including members adapted to be engaged by the subsidiary drawers to flex said flexible member when said subsidiary drawers are closed after the master drawer is closed, the said locking device also including a spring element for rotating it to the unlocking position when the master drawer is open.

2. In a trunk drawer locking means of the character stated, the combination with a master or operative drawer and a subsidiary drawer; of a rotary locking device, the said locking device including a member projected into the path of the said master drawer for rotating the said locking device, the said locking device also including a spring element for rotating it to the unlocking position when the master drawer is open, the said rotary locking device including a shaft having latch heads, the subsidiary drawer having notches for interlockably engaging the said latch heads, said heads and the shaft being adapted for being turned to a limited degree to the unlocking position as the notched ends of the drawers engage the latch heads during the operation of pushing the said subsidiary drawers inwardly for interlocking with the said latch heads.

3. In a drawer locking mechanism of the character described, the combination with a casing and a master or operative drawer and one or more subsidiary drawers slidable within the casing; of a rock shaft journaled vertically on the back wall of the casing, said shaft having a number of horizontally projected crank-like latch heads, one for each subsidiary drawer, means tending to normally rotate the shaft to bring the latch heads to the unlocked position, a crank arm on the rock shaft positioned for being engaged by the master or operative drawer when pushed to the limit, to thereby rock the shaft to turn the latch heads to their drawer locking position, the subsidiary drawers each having a slot for interlockably receiving the latch heads on the rock shaft when the said heads are turned by engagement of the crank member on the rock shaft with the back of the master drawer, the said rock shaft having a limited rotation to the open position when the latches are engaged by the edges of the slots in the respective subsidiary drawers, and means on the master drawer for holding it locked to the rocking shaft locked position.

4. In a wardrobe trunk drawer locking device of the character stated, the combination with the casing, a master or operative drawer and one or more subsidiary drawers slidably mounted in the casing, each of the subsidiary drawers having a horizontal slot in the rear wall and the operative drawer having a key locked connection with the casing; of a rotary locking shaft journaled on the rear wall of the casing, said locking shaft including a series of crank-like latched heads, one for each subsidiary drawer, and adapted for being projected through the slots in the respective drawers, a resilient crank member on the upper end of the shaft, a spring element attached to the said shaft and engaging the back of the casing and tending to normally rock the shaft in the latch unlocking direction, the said crank member on the upper end of the rod being adapted for being engaged by the operative drawer when the latter is pushed in, to thereby rock the shaft against the tension of the spring element that normally rotates it to the unlocking position, said latch members on the shaft having beveled impacting edges for being engaged by the subsidiary drawers when they are pushed in, whereby to rock the shaft to a limited degree against the tension of the resilient crank member on the upper end of the shaft.

5. In a wardrobe trunk drawer locking device of the character stated, the combination with the casing, a master or operative drawer and one or more subsidiary drawers slidably mounted in the casing, each of the subsidiary drawers having a horizontal slot in the rear wall and the operative drawer having a key locked connection with the casing; of a rotary locking shaft journaled on the rear wall of the casing, said locking shaft including a series of crank-like latch heads, one for each subsidiary drawer, and adapted for being projected through the slots in the respective drawers, a resilient crank member on the upper end of the shaft, a spring element attached to the said shaft and engaging the back of the casing and tending to normally rock the shaft in the latch unlocking direction, the said crank member on the upper end of the rod being adapted for being engaged by the operative drawer when the latter is pushed in, to thereby rock the shaft against the tension of the spring element that normally rotates it to the unlocking position, said latch members on the shaft having beveled impacting edges for being engaged by the subsidiary drawers when they are pushed in, whereby to rock the shaft to a limited degree against the tension of the resilient crank member on the upper end of the shaft, and means engaging the operative drawer secured to the

back of the casing for forcing the said operative drawer to its outermost position when it is unlocked.

6. In a drawer locking mechanism of the character described, the combination with a casing and a master or operative drawer and one or more subsidiary drawers slidable within the casing; of a rock shaft journaled vertically on the back wall of the casing, said shaft having a number of horizontally projected crank-like latch heads, one for each subsidiary drawer, means tending to normally rotate the shaft to bring the latch heads to the unlocked position, a crank arm on the rock shaft positioned for being engaged by the master or operative drawer when pushed to the limit, to thereby rock the shaft to turn the latch heads to their drawer locking position, the subsidiary drawers each having a slot for interlockably receiving the latch heads on the rock shaft when the said heads are turned by engagement of the crank member on the rock shaft with the back of the master drawer, a housing on each subsidiary drawer for receiving the latch heads, the said rock shaft having a limited rotation to the open position when the latches are engaged by the edges of the slots in the respective subsidiary drawers, and means on the master drawer for holding it locked to the rocking shaft locked position.

7. The combination with a master drawer and subsidiary drawers, of a rockable latch bar having bevel-headed latch members, said subsidiary drawers having means to receive said latch members for securing purposes, and a yieldable bar rocking device adapted to be engaged by the master drawer when closed for holding the latch bar in the latching position, said bevel-headed latch members and said rockable bar adapted to yield when said subsidiary drawers are being closed after the master drawer has been closed.

8. The combination with a master drawer and subsidiary drawers, of a rockable latch bar having bevel-headed latch members, said subsidiary drawers having means to receive said latch members for securing purposes, and a yieldable bar rocking device adapted to be engaged by the master drawer when closed for holding the latch bar in the latching position, said bevel-headed latch members and said rockable bar adapted to yield when said subsidiary drawers are being closed after the master drawer has been closed, and means tending to normally move the latch bar to the unlatching position.

ARTHUR P. JAMES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."