Jan. 21, 1930. M. KURTEN 1,744,646

DRAWER LOCKING DEVICE

Filed March 19, 1926

Fig. 1.

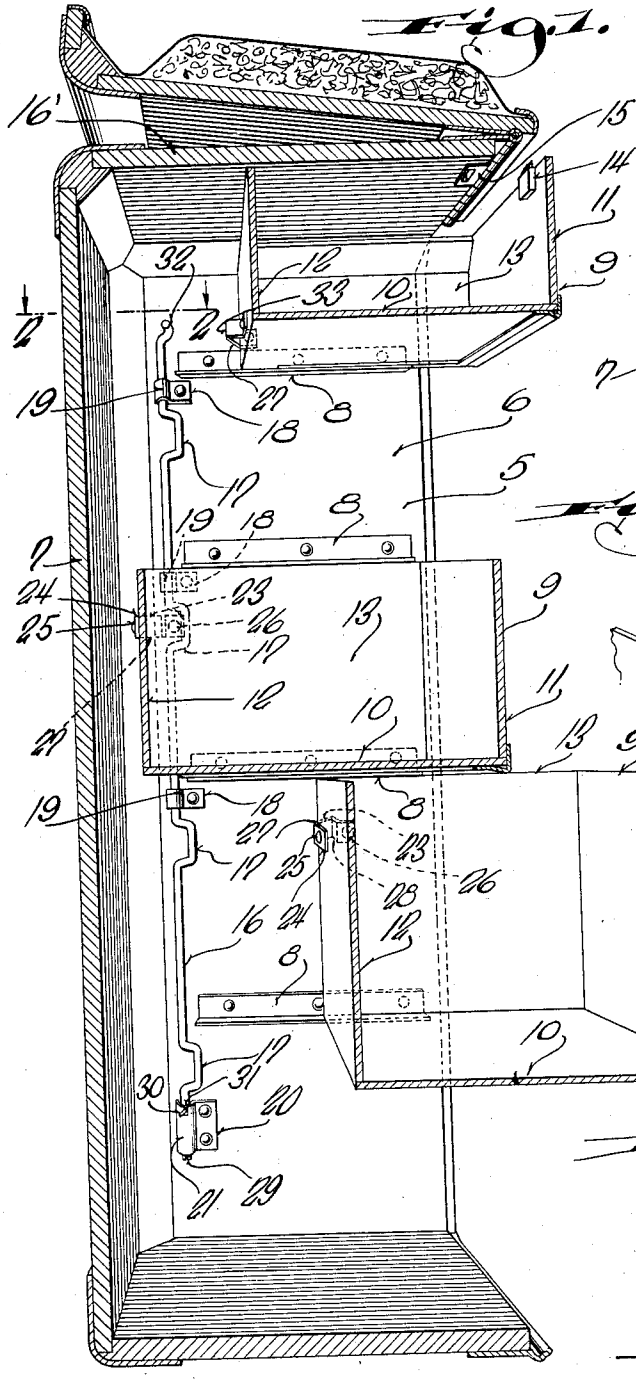


Fig. 2.

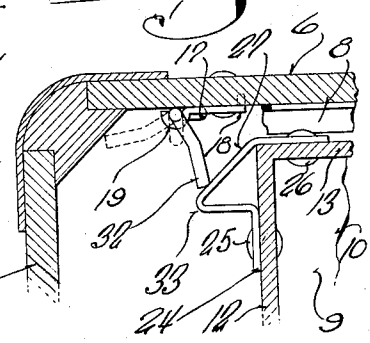


Fig. 3.

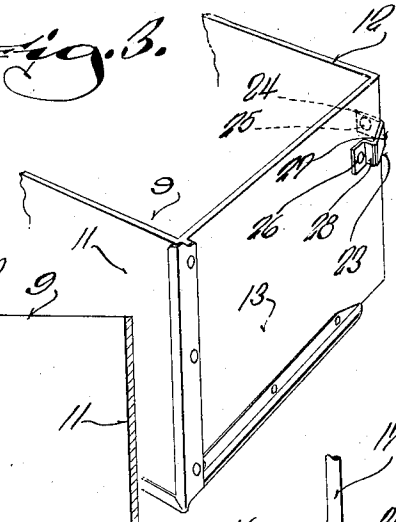
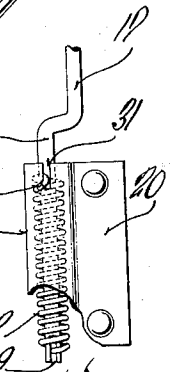


Fig. 4.



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Patented Jan. 21, 1930

1,744,646

# UNITED STATES PATENT OFFICE

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## DRAWER-LOCKING DEVICE

Application filed March 19, 1926. Serial No. 95,986.

In the wardrobe trunk art, it is highly desirable that means be provided for readily locking the drawers in closed position and one type of drawer lock commonly used consists of means concealed in the section and operable by a drawer having a master lock to secure the remaining drawers closed. It is also essential that the locking means not only be reliable in operation and of strong construction, but that it be sufficiently light in construction to prevent an undue increase in the total weight of the trunk and be capable of production at a low cost.

It is, therefore, an object of this invention to provide an improved drawer locking device which will very effectively lock the drawers and which, by virtue of its construction, will not unduly increase the weight of the trunk, but, at the same time, will be strong and durable to withstand the rough usage to which a device of this character is subjected.

A further object of this invention resides in the provision of a durable and efficient drawer locking device especially adapted for use with wardrobe trunks which is extremely simple in construction to facilitate its ready manufacture and application to wardrobe trunks at a very low cost.

And a still further object of this invention resides in the provision of an improved locking bar actuating member carried by the master drawer and keeper for cooperating with the locking bar which is so constructed and designed as to materially strengthen the drawers at the connection between the side and rear walls.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawing, I have illustrated one complete example of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective, sectional view taken through the drawer section of a wardrobe trunk, some of the drawers being removed and others being in opened or partly opened position;

Figure 2 is an enlarged, fragmentary, sectional view taken through Figure 1 on the plane of the line 2—2, the top or master drawer being in its position prior to engagement with the locking rod or bar to lock the remaining drawers;

Figure 3 is a fragmentary, perspective view illustrating one of the lower drawers, and

Figure 4 is an enlarged, fragmentary, detail view, with parts broken away, illustrating the improved spring housing and mounting member for the lower end of the rod.

Referring now more particularly to the accompanying drawing, in which like numerals designate like parts throughout the several views, the numeral 5 designates the drawer section of a wardrobe trunk or the like including side and rear walls 6 and 7, respectively, the side walls having series of drawer supports or slides 8 fixed thereto to slidably mount a series of drawers 9. The drawers are of substantially box shape having a bottom 10 and front, rear and side walls 11, 12 and 13, respectively.

The uppermost drawer is preferably what may be termed a master drawer having a key controlled lock 14 fixed to its front wall adjacent the upper edge and having a locking bolt adapted to be engaged with a keeper 15 carried by the top wall 16′ of the drawer section to secure the master drawer closed. Suitable locking means, adapted to be operated by the master drawer, are mounted in the drawer section and lock the remaining drawers in closed position when the master drawer is fully closed. The locking means for the remaining drawers consists of a device preferably secured to each side wall 6 adjacent its inner edge and having means whereby closing the master drawer actuates the locking device to engage the remaining drawers. If desired for the purpose of

economy in the lower priced trunks, but a single locking device may be employed, although in the higher grade trunks two are employed to provide a more rigid lock for the drawers. As each locking device is identical, but one has been shown and but one will be described.

A locking bar or rod 16, preferably formed from a single length of rod metal having a plurality of locking tongues 17 formed therein at intervals equal to the heights of the respective drawers, is rotatably secured to the section side wall by means of one or more attaching members 18 having a bearing portion 19 for rotatably receiving the rod 16 and a combined spring housing and mounting member 20 having a portion 21 in which the rod 16 is received together with a spring 22, to be later described. The locking tongues 17 are formed by bending or striking the rod 16 outwardly, as clearly illustrated in the drawing, and form cranks pivoting from the axis of the vertical portions of the rod and adapted to normally rest against the side walls 6 out of the path of locking lugs 23 carried by the adjacent side walls of the drawers at their inner ends. The master drawer has an actuating member 33, to be later described, arranged to rotate the rod 16 and moves the locking tongues 17 into the paths of the locking lugs 23 and thus restrain the opening of the drawer as long as rod 16 is held against rotation by the master drawer.

The locking lugs 23 are each preferably formed from bendable metal having one end portion 24 secured to the rear wall 12 of the drawer to which it is secured, as at 25, and its other end being bent about the drawer side wall and there secured, by a flange 26, that portion of the member 23 along the side wall being inclined outwardly and forwardly, as at 27, from the rear drawer corner to provide an abrupt angular portion 28 forming an abutment which cooperates with the adjacent locking tongues 17. It will be apparent that the locking lug construction illustrated provides a brace for connecting the side and rear walls of the drawer thus considerably strengthening the construction and when the drawers are closed and the rod 16 rotated to position the locking tongues 17 angularly from the section side wall, the locking tongues 17 extend transversely between the section side wall and the drawer into the path of the abutments or shoulder portions 28 of the drawer locking lugs and thus lock the drawer closed until the rod 16 is left free to rotate. In this position of the tongues 17, they bear against the flanges 26 with a slight camming action whereby the tongues serve not only to lock the drawers but serve as rigid transverse braces extending between the section side walls and the inner ends of the side walls of the drawers to maintain a definite spaced relation between the side walls of the section and the drawers under all conditions of handling in transportation. These tongues 17 are substantially arched for greater rigidity in their locking and bracing position, having an intermediate area to provide a flat bearing contact against the adjacent flange 26 on the drawer catch.

A spring 22 normally urges the rod 16 to a position with the locking tongues 17 against the drawer section side wall to permit the unrestricted opening and closing of the drawers. Spring 22 is coiled about the lower end portion of the rod and has one end directed inwardly into a slot 29 formed in the rod 16 and its other end directed outwardly, as at 30, and engaged in a slot 31 formed in the portion 21 of the mounting member 20, the spring 20 being normally under tension to tend to rotate the rod 16, as previously described.

The rod 16 is rotated against its spring to wind the same thereon by cooperating means on the upper end portion of the rod and on the inner end portion of the master drawer. The upper end of the rod 16 is directed laterally to form a crank portion 32 to normally extend into the path of the actuating member 33 mounted on the master drawer. The member 33 is substantially identical in construction with the locking lugs, except that the inclined portion 27 thereof is at an increased angle and is located at the rear wall of the drawer to function as a cam for engaging the crank portion 32 of the rod. Closing of the master drawer causes the cam portion 27 to engage the crank arm of the rod moving it and the locking tongues 17 to the dotted line positions illustrated in Figure 2, the locking tongues 17 extending angularly from the wall of the drawer section and into the path of the locking lug shoulders 28 of the drawers in closed position.

After the master drawer has been moved to full closed position and its lock 14 engaged with the keeper 15, the drawers are locked and to gain access to the drawers it is necessary to first unlock the master drawer and open the same sufficiently to permit the crank portion 32 of the locking bar to move to its position illustrated in Figure 2, the spring 22 tending to move the master drawer to open position immediately upon release of the lock 14.

From the foregoing description taken in connection with the accompanying drawing it will be readily obvious to those skilled in the art to which an invention of this character appertains that I have provided a very simplified and improved type of drawer locking device which will provide an effective lock for the drawers and which will by reason of its extremely simplified construction be very economically manufactured.

What I claim as my invention is:

1. In a drawer locking device having a

drawer slidably mounted in a drawer section, a locking device mounted in the section, a drawer carried part cooperating with the drawer locking device and including a member formed from bendable metal and embracing adjacent sides of the drawer to strengthen the same, and a locking device engaging part extending laterally from one side of said member.

2. The combination with a trunk drawer section having a drawer slidable therein, of a bar rotatably mounted on said section at one side of said drawer and having a substantially arched portion for locking engagement with said drawer on rotation of the bar, and means for rotating said bar to dispose said arched portion transversely between the section and drawer to maintain a fixed spaced relation therebetween in locked position.

3. The combination with a trunk drawer section having a drawer slidable therein in spaced relation to the side walls thereof, of a bar rotatably mounted on a section side wall between said wall and the drawer, said bar having a laterally extending substantially arched portion for locking engagement with the drawer, and means for rotating said bar to dispose said arched portion transversely between said section side wall and the drawer for locking engagement against a side wall of the drawer.

4. A drawer locking device comprising a drawer section having a drawer slidable therein in spaced relation from the side walls of the section, a corner brace on the drawer and extending into the space between said section side walls and the drawer, a locking bar rotatably mounted on a side wall of the section, a locking tongue extending laterally from said bar and adapted normally to lie against the section side wall between said wall and the drawer, and means for rotating said bar to engage said locking tongue in locking engagement with the extending portion of said drawer corner brace, said locking tongue having a bearing engagement against a portion of said drawer corner brace to form a rigid spacing element extending transversely between said section side wall and the drawer.

5. A drawer locking device comprising a drawer section having a plurality of drawers slidable therein between the side walls thereof, a locking bar rotatably mounted on a side wall of the section between said wall and the drawers, substantially arched portions extending laterally from said bar at spaced intervals adjacent certain of said drawers, means carried by one of said drawers for rotating said bar to force said arched portions into engagement with the adjacent sides of said drawers transversely between said drawers and the section side wall, and means on said drawers engageable with said arched portions upon movement of said arched portions into engagement with the drawers for locking said drawers within the section.

6. A drawer locking device comprising a drawer section, a bar mounted on one side wall thereof for rotation on its major axis, said bar having substantially arched drawer engageable tongues extending laterally therefrom and in a common plane, a terminal portion on said bar and extending laterally therefrom at an angle relative to said tongues, and a resilient support for said bar biased to retain said tongues against said section side wall to dispose said bar terminal portion in the path of a drawer slidable in the section.

7. A device of the character described comprising a trunk drawer section having a plurality of drawers slidable therein in spaced relation from the side walls thereof, lugs extending laterally from said drawers on the opposite side walls thereof, a locking bar rotatably attached to each side wall of the section between said wall and the drawers, supports for said bars, means biased to rotate said bars on their axis, drawer operated means for imparting an opposite rotation to said bars, and drawer engaging locking members extending laterally from said bars, said members having bearing portions for engaging opposite sides of the drawers transversely of the drawer section when in locking position to provide braces at opposite sides of the section.

8. A drawer locking device comprising the combination with a drawer section having drawers slidably mounted therein, of a locking bar, means for supporting said bar on a wall of the section, drawer operated means for rotating said bar in one direction, means biased to rotate said bar in an opposite direction, and drawer engageable locking means carried by said bar, said drawer engageable locking means cooperating with the section side wall to arrest rotation of said bar under influence of said biased rotating means.

In testimony whereof I affix my signature.

MATHIES KURTEN.