Jan. 27, 1931. C. W. AUSTIN 1,790,130

LOCKING MECHANISM FOR LOCKERS

Filed Aug. 30, 1929 3 Sheets-Sheet 1

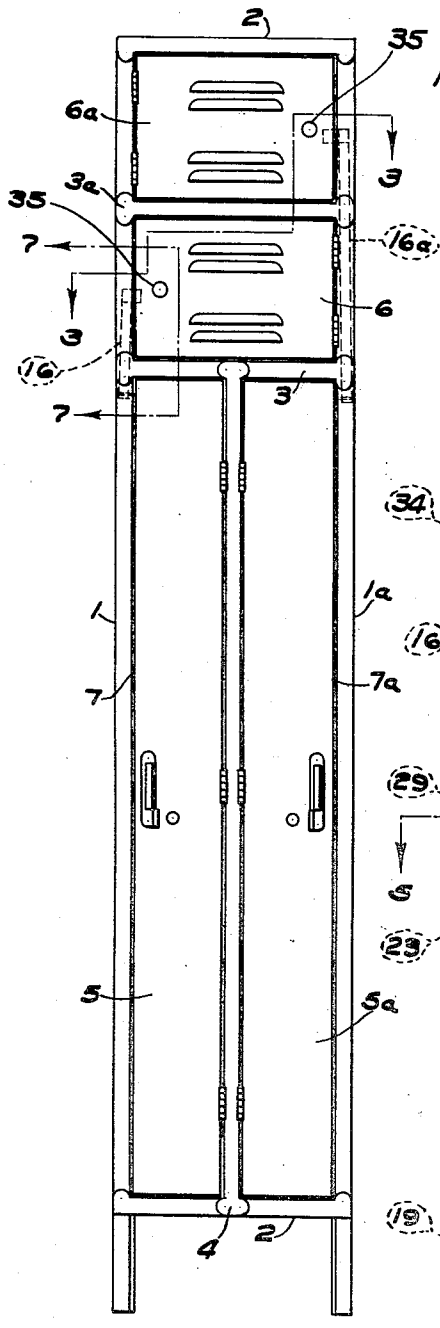


Fig. 1

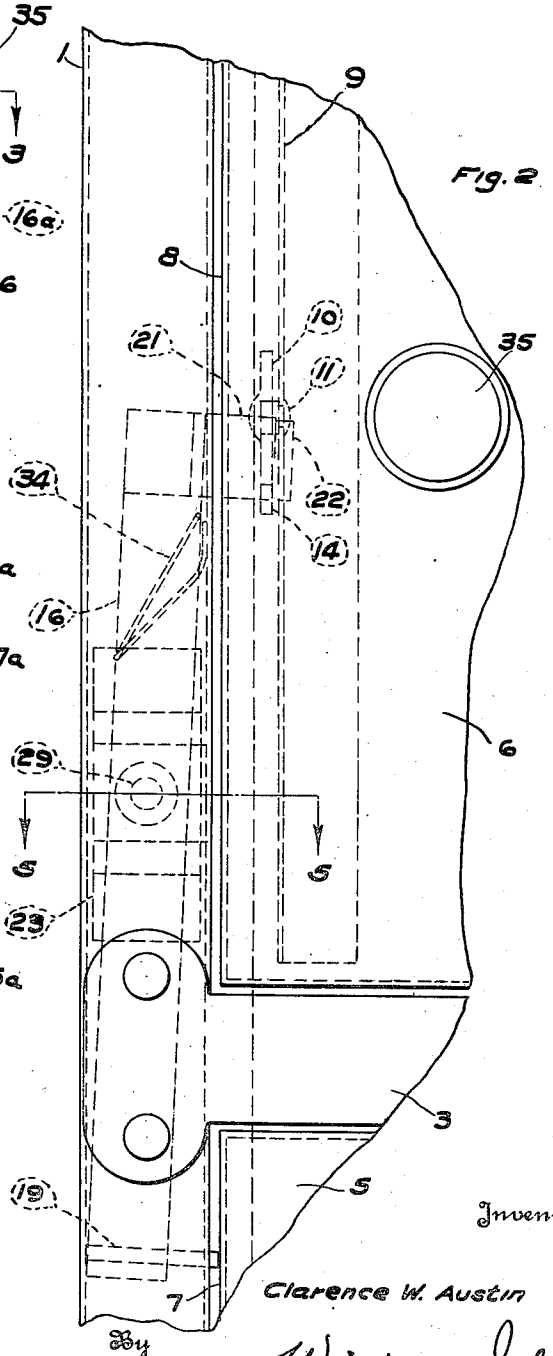


Fig. 2

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LOCKING MECHANISM FOR LOCKERS

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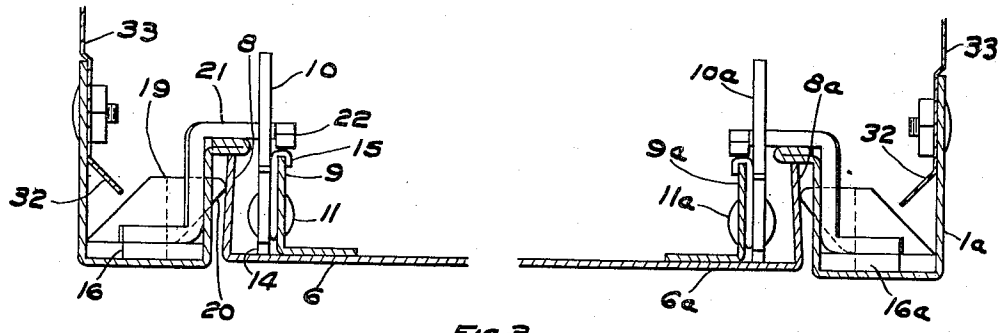


Fig. 3

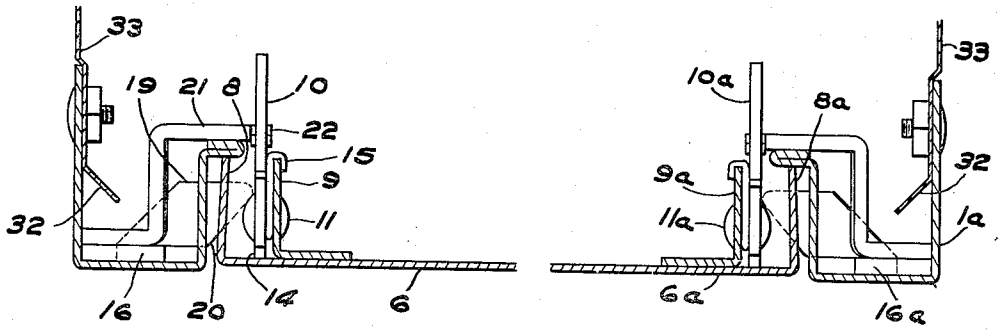


Fig. 4

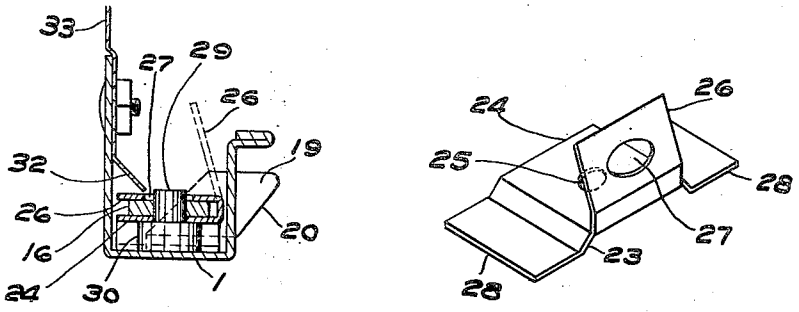


Fig. 5

Fig. 6

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LOCKING MECHANISM FOR LOCKERS

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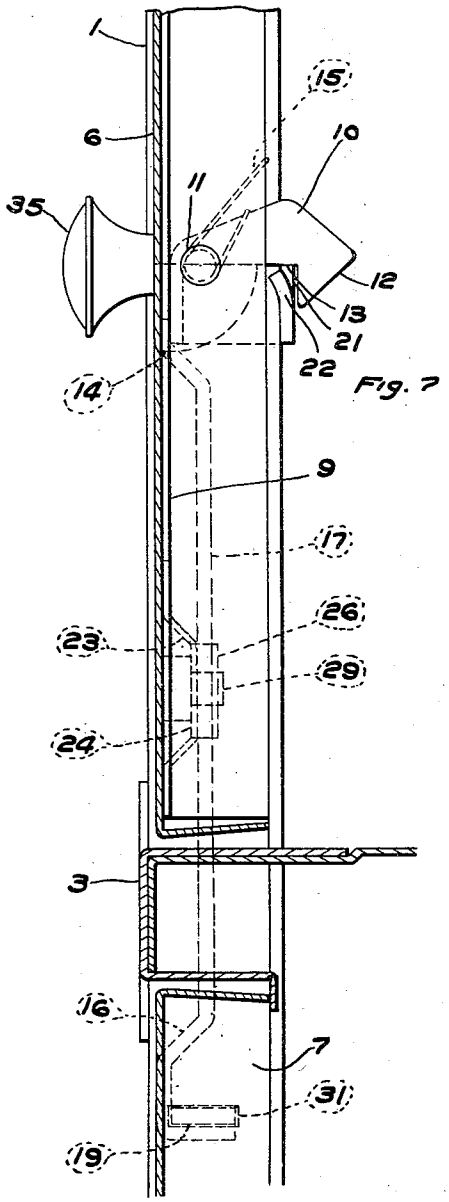


Fig. 7

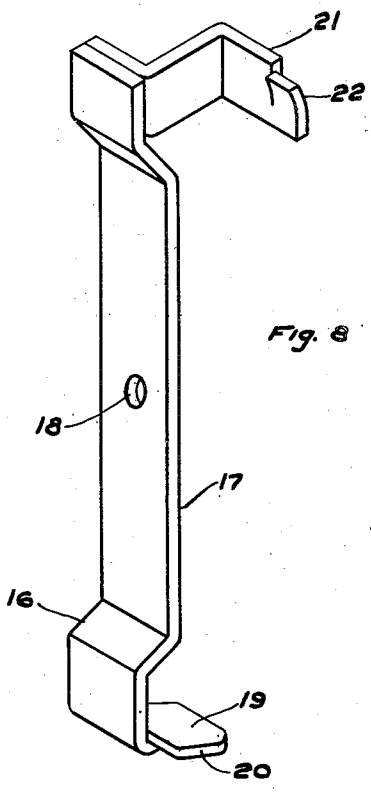


Fig. 8

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UNITED STATES PATENT OFFICE

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LOCKING MECHANISM FOR LOCKERS

Application filed August 30, 1929. Serial No. 389,410.

This invention relates in general to lockers and the like, and more particularly to a novel locking mechanism therefor.

An object of the invention is to provide locking mechanism which is capable of being used generally in multi-compartment lockers and the like, but which is particularly adapted to be used for so-called "two-person lockers", that is, lockers provided with locked compartments which are used by two persons, neither of whom has access to the compartments of the other. Such lockers usually consist of two comparatively long and narrow compartments, arranged side by side, and two smaller compartments, arranged one above the other, at the upper end of the locker, each of such compartments being of a width equal to the aggregate width of the two narrow compartments.

Another object of the invention is to provide locking mechanism for a two-person locker of the above described type, in which opening of one of the lower compartment doors will serve to unlock the door of one of the upper compartments.

A further object of the invention is to provide locking mechanism for a two-person locker of the above described type, including interlock bars which will serve not only to lock the doors of the upper compartments when the doors of the lower compartments are closed, but which will also prevent accidental opening of the doors of the upper compartments, when the doors of the lower compartments are open.

A still further object of the invention is to provide a novel method of mounting the interlock bars on the side frames of the locker, whereby the use of unsightly rivet or bolt heads on the face of the locker is avoided, unauthorized removal of the interlock bars is prevented, and ready access thereto for purposes of repair or replacement is afforded.

With the above and other objects in view, which will be more readily apparent as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawings, wherein

Fig. 1 is a front elevation of a two-person locker in which is embodied the novel locking mechanism of the present invention;

Fig. 2 is an enlarged front elevation of a portion of the locker, showing the novel locking mechanism in dotted lines;

Fig. 3 is a cross-section through the front portion of the locker, taken on the line 3—3 of Fig. 1, and showing the interlock bars in door locking position;

Fig. 4 is a view similar to Fig. 3, but showing the interlock bars in door unlocking position;

Fig. 5 is a fragmentary section through one of the side frames of the locker, taken on the line 5—5 of Fig. 2, and showing the novel manner in which the interlock bar is mounted on said frame;

Fig. 6 is a perspective view of the saddle on which the interlock bar is mounted;

Fig. 7 is a fragmentary cross-section through the locker, taken on the line 7—7 of Fig. 1, and

Fig. 8 is a perspective view of one of the interlock bars.

Referring more particularly to the drawings, wherein like parts are designated by like reference characters, the locker includes side frames 1 and 1*a*, to which are secured as by rivets cross frames 2 and center frames 3 and 3*a*. Secured at its ends as by rivets to lower cross frame 2 and center frame 3 is a partition frame 4. Doors 5 and 5*a* are hinged at one side to partition frame 4. A door 6 is hinged to side frame 1*a* and a door 6*a* is hinged to side frame 1. The doors are adapted to close compartments, which are made inaccessible, one from the other, by means of suitable partitions, not shown, but readily understood by those skilled in the art.

The doors 5 and 5*a* are provided at the edges opposite their hinges with flanges 7 and 7*a* respectively, and with suitable latching mechanism, such for example as described in the patent to Sturm et al., No. 1,671,328.

The doors 6 and 6*a* are provided at the

edges opposite their hinges with flanges 8 and 8*a* respectively, and are further provided near these edges with vertically disposed angles 9 and 9*a*, secured as by spot welding to the inner faces of the doors. These angles extend from the top to the bottom edges of the doors, and serve not only to reinforce the edges of the doors, but also as bearings for hooks 10 and 10*a*, mounted for pivotal movement intermediate the ends of the angles on shoulder rivets 11 and 11*a*, as shown in Figs. 2, 3, 4 and 7. These hooks are identical and therefore only one will be described, namely hook 10. This hook has a sloping edge 12, a seat 13 and a stop 14. A wire spring 15 serves to urge the hook 10 into the position shown in Fig. 7, further downward movement of the hook being prevented by the abutment of stop 14 against the inner face of the door.

The locking mechanism further includes interlock bars 16 and 16*a*, but since these bars are similar to each other in construction, differing only in length and relative position of the parts thereof, only bar 16 will be described in detail. This bar includes a body portion 17, having a centrally disposed opening 18. The body portion 17 terminates at its lower end in a laterally extending finger 19 having a rearwardly sloping edge 20, and is provided at its upper end with an offset laterally extending finger 21, a portion of which is parallel with the body portion 17 and the outer end portion of which is bent forwardly to provide an arcuate stop 22.

Interlock bar 16 is adapted to be mounted for rocking or pivotal movement on a saddle 23. As shown in Fig. 6, each saddle 23 comprises a seat 24 having a central opening 25 therein, a tongue 26 extending at an angle to the seat and having a central opening 27 therein, and wings 28, offset from but parallel with the seat 24.

The saddle 23 is secured to the side frame 1 as by spot welding the wings 28 to the inner face thereof, the tongue 26 occupying the position shown in dotted lines in Fig. 5. Prior to welding the saddle to the frame 1, a rivet 29 is positioned with its head 30 against the frame 1 and under the seat 24 of the saddle, the body of the rivet projecting through the opening 25 in the seat 24.

The interlock bar 16 is then positioned within the frame 1 in such manner that the finger 19 thereof projects through a slot 31 in the frame, and the body of the rivet 29 enters the opening 18 in the bar, providing a pivotal mounting therefor, as clearly shown in Figs. 2, 5 and 7. The tongue 26 of the saddle is then bent to the position shown in solid lines in Fig. 5, the body of the rivet 29 entering the opening 27 therein.

It will be noted that when the door frames are subsequently mounted on the body of the locker during the assembly thereof, the angularly extending flanges 32 of the sides 33 of the locker body are so disposed that they prevent lifting of the tongue 26 of the saddle 23 and removal of the interlock bar from its pivotal mounting. The use of the saddles 23 to position the rivets 29 also avoids the necessity of having the rivet heads show on the front of the locker, thereby improving the appearance of the locker as well as preventing tampering therewith. The aforesaid manner of mounting the interlock bar also permits ready access to and removal thereof for purposes of repair or replacement. In the event that it becomes necessary to repair or replace the interlock bar, it may be removed from the locker by first removing the door frames from the body of the locker, and bending the tongue 26 back to the position shown in dotted lines in Fig. 5.

When the lower door 5 is opened, the interlock bar 16 is urged to the door unlocking position by means of a wire spring 34, shown in Fig. 2 one end of which is removably secured to the interlock bar and the other end of which bears against the frame 1 of the locker.

While the locking mechanism for only one pair of doors has been described in detail, it will be readily understood that the operation of the locking mechanism for both pairs of doors is the same, and for purposes of brevity, the operation of only one locking mechanism will be described.

When the door 5 is closed, the finger 19 of the interlock bar 16 bears against the flange 7 of the door 5 and the interlock bar occupies the position shown in Figs. 2 and 3, with the finger 21 thereof in locking engagement with the hook 10.

When the individual to whom the compartments having doors 5 and 6 are assigned, desires access to the upper compartment, he first unlocks and opens the lower door 5. The opening of the door 5 withdraws the flange 7 from contact with the finger 19 of the interlock bar 16 and the spring 34 causes this bar to rock or pivot on rivet 29 to the position shown in Fig. 4. This pivotal movement withdraws the portion of the finger 21 which is parallel with the body portion 17 of the interlock bar 16 from locking engagement with the hook 10 and brings the arcuate stop 22 to a position within the seat 13 of the hook. The arcuate stop 22 is of such curvature that its point of contact with the hook 10 is below the line of application of the pull applied in opening the door and permits the hook to ride up over the stop, when a pull sufficient to overcome the resistance of the spring 15 is exerted upon the knob 35. By this construction, the door 6 is maintained against accidental opening after the door 5 has been opened.

If the door 6 is in closed position, and it is desired to lock both doors 5 and 6, it is only

necessary to close and lock the door 5. In closing the door 5, the flange 7 of the door bears against the sloping edge 20 of the finger 19 and rocks the interlock bar 16 to the position shown in Fig. 3. This movement of the interlock bar brings the portion of the finger 21 which is parallel with the body portion 17 of the interlock bar 16 into locking engagement with the hook 10, thus locking the door 6.

The door 6 may be left open until the door 5 has been closed, and in this event, it may be locked by merely closing it. In such closing movement, the edge 12 of the hook 10 rides up over the upper edge of the finger 21, against the pressure of the spring 15 until the seat 13 of the hook is directly over the finger 21. At this point, the hook is forced downwardly by the spring 15 into locking engagement with the finger 21, as shown in Figs. 3 and 7.

The individual to whom the compartments having doors 5^a and 6^a have been assigned, may in like manner have access to such compartments.

From the foregoing, it will be apparent that the present construction provides an arrangement which will fulfill the objects herein set forth, and provides a simple, practical and reliable locking mechanism for a locker of the type herein described.

Without further description, it is thought that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will of course be understood that changes in the form, proportion and minor details of construction may be resorted to without departing from the scope of the appended claims.

I claim:

1. In a locker having a plurality of compartments and doors therefor, one of said doors being provided with a hook, pivotally movable means operable by the closing of one of the other doors to engage said hook, when said first named door is closed.

2. A structure as defined in claim 1 in which said pivotally movable means is provided with means to prevent accidental opening of said first named door after said second named door has been opened.

3. In a locker having two superposed compartments and doors therefor, one of said doors being provided with a hook, pivotally movable means operable by the closing of the other door to engage said hook, when said first named door is closed.

4. A structure as defined in claim 3 in which said pivotally movable means is provided with means to prevent accidental opening of said first named door after said second named door has been opened.

5. In a locker having two superposed compartments and doors therefor, the upper door being provided with a hook, pivotally movable means operable by the closing of the lower door to engage said hook when the upper door is closed, said means being released from engagement with said hook upon opening of the lower door.

6. A structure as defined in claim 5 in which said pivotally movable means is provided with means to prevent accidental opening of the upper door after the lower door has been opened.

7. An interlock bar for lockers and the like comprising a member having a body portion and fingers extending laterally therefrom, at the extremities thereof, one of said fingers having a portion thereof bent forwardly to provide a door stop.

8. Locking mechanism for a locker including an interlock bar and means for mounting said bar on the locker to permit pivotal movement thereof, said means comprising a rivet and a saddle, said saddle securing said rivet to the locker and being provided with a tongue adapted to be bent to maintain the interlock bar in position upon the rivet, the locker being provided with a flange adapted to prevent unauthorized removal of the interlock bar.

In testimony whereof I affix my signature.

CLARENCE W. AUSTIN.