

A. E. JACOBSON.

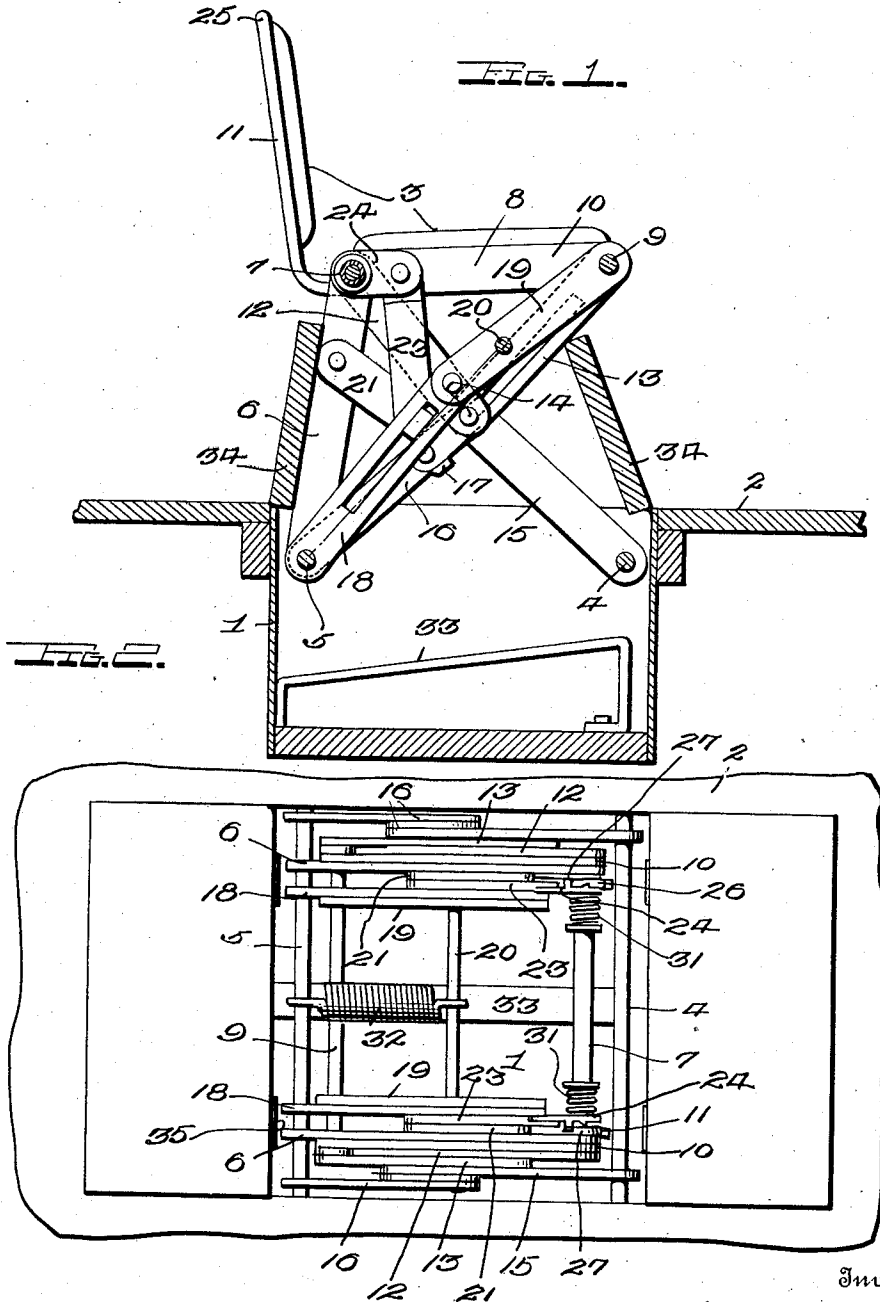
CHAIR.

APPLICATION FILED JULY 31, 1912.

1,062,010.

Patented May 20, 1913.

2 SHEETS-SHEET 1.



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2 SHEETS—SHEET 2.

FIG. 3.

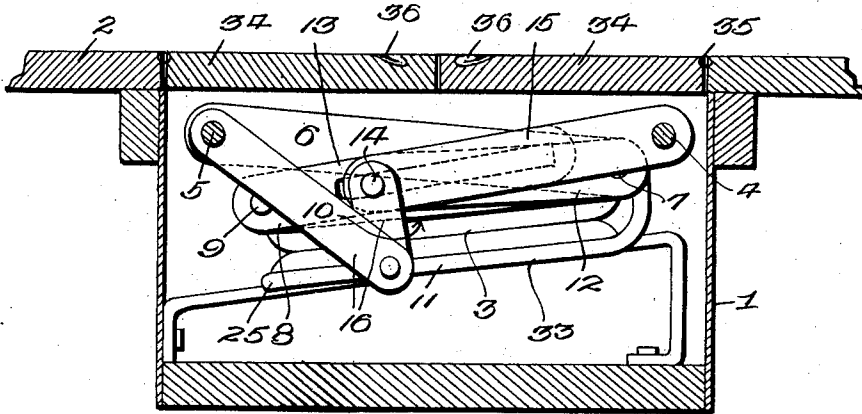


FIG. 4.

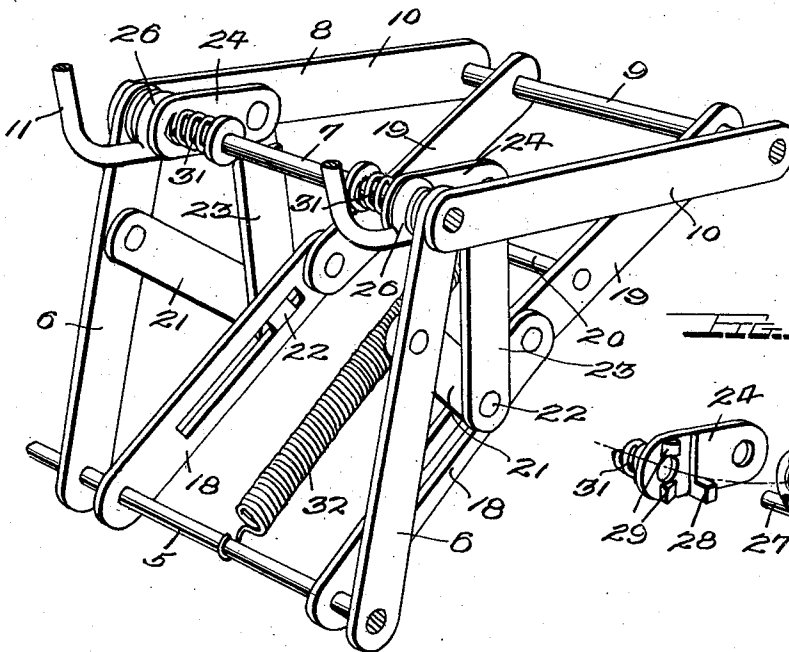
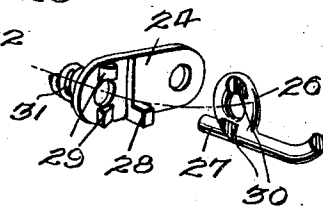


FIG. 5.



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UNITED STATES PATENT OFFICE.

ANDREW E. JACOBSON, OF KAMRAR, IOWA.

CHAIR.

1,062,010.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed July 31, 1912. Serial No. 712,556.

To all whom it may concern:

Be it known that I, ANDREW E. JACOBSON, a citizen of the United States, residing at Kamrar, in the county of Hamilton and State of Iowa, have invented certain new and useful Improvements in Chairs, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in chairs, and more particularly to that class of chairs which may be folded to the level of the floor of the auditorium or other building in which it is used.

15 An object of this invention is to provide a chair which will automatically fold when pressure is applied to the back of the chair.

20 Another object of this invention is the provision of the chair which is supported upon a collapsible frame, and which may be folded so as to extend below the level of the platform.

25 A still further object of this invention is the provision of a chair which may be folded below the level of the floor, and which may be covered by folding doors so that the surface of the floor will be perfectly level when the chair is collapsed.

30 With these and other objects in view, my invention resides in the novel arrangement, and combination of parts, which will hereinafter be more fully described, claimed and illustrated in the accompanying drawings, in which—

35 Figure 1 is a section illustrating the chair in raised position. Fig. 2 is a top plan view of the chair folded, the doors being open, and the back of the chair removed. Fig. 3 is a section of the chair when folded. Fig. 4 is a perspective view illustrating the collapsible frame when in raised position. Fig. 5 is a perspective view of the locking means.

40 Referring more particularly to the drawings, the numeral 1 designates a compartment or box which is secured to the floor 2 of the building below the level thereof, and which is adapted to receive a chair 3 when folded, so as to provide smooth floor surface when the chair is not in use. Secured 50 in the box at the front and rear thereof are transversely extending rods 4 and 5 respectively which are adapted to receive the collapsible frame for supporting the chair. Pivotally mounted on the opposite ends of 55 the rod 5 are rods 6 which are adapted to support the rear rod 7 of the chair frame 8.

The chair frame 8 comprises the rear rod 7, front rod 9, the side bars 10, and the back 11, and extending from the sides of the frame are bars 12 and 13. The bars 13 are 60 slotted and are connected by guide pins 14 to the bars 12 and to the bars 15 which are pivotally mounted on the rod 4. Secured to the transverse rod 5 and to the guide pins 14 are foldable link members 16 one of 65 which members is formed with a stop 17 to limit the movement of the rods 15 in one direction. Mounted on the rod 5 are slotted bars 18 which are pivotally connected to the bars 19 which extend from the front rod 9 70 of the chair frame. The bars 19 are spaced and rigidly connected by the transverse rod 20. Adjacent the rod 7 and near the upper ends of the rods 6 are secured pivotal link members 21 which are connected by pivot 75 studs 22 to corresponding link members 23. The studs 22 are slidably mounted in the slots in the bars 18 and the upper ends of the link rods 23 are pivotally connected to plates 24 which in turn are loosely mounted 80 on the rear rod 7 of the chair frame.

The back 11 of the chair is formed of a substantially U-shaped strip of metal and the intermediate portion 25 thereof forms 85 the back rest, and the opposite ends are coiled around the rear rod 7 of the frame as at 26, and are formed with extensions 27 which bear against laterally extending lugs 28 formed on the plates 24. Formed on 90 the outer faces of the plates 24 are laterally extending lugs 29 which are adapted to engage recesses 30 formed in the extensions 27 of the back 11 of the chair. Mounted on the rod 7 are expansion springs 31 which are adapted to press the plates 24 outwardly 95 into engagement with the coils 26 so that the lugs 29 will engage the recesses 30 when the chair is in open position thereby preventing accidental closing of the chair.

Secured to the rods 5 and 20, is a con- 100 tractile spring 32 which is adapted to facilitate the folding of the chair when the lugs 29 are released from the recesses 30 in the coils of the back of the chair. Secured to the base of the box or compartments 1 105 is a preferably U-shaped member 33 which is adapted to support the chair when it is in closed position and which forms a stop for the downward movement of the chair.

When the chair is in folded position, 110 doors 34 will automatically close by reason of spring hinges 35, and these doors are

adapted to close the opening in the compartment. When the chairs are in folded position, and the doors are closed the surface of the floor will be absolutely smooth and the egress of the people in the hall or auditorium will not be delayed by reason of chairs or other obstructions on the floor. To facilitate opening of the doors countersunk hand holds 36 are secured in the doors in their upper face and when the chair has been raised in open position the doors are adapted to rest against the frame of the chair and immediately upon folding of the chair the doors are automatically closed.

From the foregoing description in connection with the accompanying drawings the operation of my improved folding chair will be apparent. In the practical use of this chair, when it is desired to raise it in operative position, the rod 7 of the chair frame is grasped and raised in perpendicular position whereupon the rod 9 of the frame is raised to a horizontal position with relation to the rod 7, and the back 11 of the chair frame is raised into perpendicular position whereupon the chair is ready for use. It is apparent that upon raising the rod 7 the bars 6 of the frame are raised to an operative position and when the bar 9 of the chair frame is raised to its full height, it is in a horizontal position and further movement of the chair frame is prevented by reason of the guide pins 14 engaging the ends of the slots of the bars 13. When the chair is in this position it will be seen that the slotted bars 18 and the bars 19 are not in longitudinal alinement with one another but that upon raising the back of the chair the link members 21 and 23 are drawn upwardly whereupon the pivot studs 22 slide in the slots of the link members 21 and force the said bars 21 and 23 in longitudinal alinement with one another. In this position the chair is fully extended. It will be seen that accidental movement of the back of the chair is prevented by reason of the lugs 29 of the plates 24 which engage the recesses 30 formed in the extension 27 of the back of the chair. When the chair is in extended position it will be seen that the doors 24 by reason of the spring hinges 35 will be forced against the opposite sides of the chair, and therefore will not annoy the occupants of the adjacent seats.

When it is desired to fold my improved chair, the back thereof is moved forwardly whereupon the link members 21 and 23 are forced downwardly by reason of the engagement of the lugs 29 with recesses 30 of the extensions 27, whereupon the bars 18 and 19 are moved out of longitudinal alinement. Further movement of the back end will disengage the lugs 29 from the recesses 30 whereupon the contractile spring 32 will pull downwardly upon the rod 20 of the

frame whereupon the chair will automatically fold below the level of the floor surface. Immediately upon the folding of the chair the doors 34 will close the opening of the compartment, whereby the surface of the floor is comparatively smooth and no obstructions hinder the egress of the audience.

It will be understood that if desired, the chair may be upholstered in any desired manner, and with any desired material.

Having thus fully described my invention, what I claim is:—

1. A folding chair comprising a supporting rod, standards pivotally mounted on said supporting rod, a chair frame pivotally mounted on said standards, said frame consisting of side bars, a front and a rear rod, foldable members connecting said supporting rod and the front rod of the chair frame, plates pivotally mounted upon the rear rod of said chair frame, links connecting said foldable members and said plates, a back member pivotally mounted upon said rear rod, said plates adapted to lockingly engage the back member of the chair, and means mounted on said rod for removably locking said plates in engagement with the back member of the chair.

2. A folding chair comprising a supporting rod, standards pivotally mounted on said rod, a chair frame pivotally mounted on said standards, said chair frame comprising side bars and a front and a rear rod, foldable members connecting said supporting rod and the front rod of the chair frame, a chair back pivotally mounted on the rear rod of said chair frame, plates formed with lugs rotatably and slidably mounted on said rear rod adjacent the pivotal points of the chair back, said chair back being formed with recesses for engagement with the lugs on said plates, links connecting said foldable members and said plates, and means for limiting the movement of said foldable members, as and for the purpose described.

3. A folding chair comprising a supporting rod, standards pivotally mounted on said supporting rod, a chair frame pivotally mounted on said standards, said frame consisting of side bars, a front and a rear rod, foldable members connecting said supporting rod and the front rod of the chair frame, a plate pivotally mounted on the rear rod of said chair frame, links connecting said foldable members and said plate, a back member pivotally mounted upon said rear rod, said plate adapted to lockingly engage the back member of the chair, an expansion spring mounted on said rod for removably locking said plate in engagement with the back member of the chair, and means for automatically folding said chair when the plate is released from the back thereof.

4. A folding chair comprising a supporting rod, standards pivotally mounted on

said supporting rod, a chair frame pivotally mounted on said standards, said frame consisting of side bars, a front and a rear rod, foldable link members connected to said supporting rod and the front rod of the chair frame, plates pivotally mounted upon the rear rod of said chair frame, links pivotally connected at one end to said plates and slidably connected at their other end to said foldable members, a back member pivotally mounted upon said rear rod, said plates adapted to lockingly engage the back member of the chair, and means mounted on said rod for removably locking said plates in engagement with the back member of the chair, said links adapted to limit the movement of the back of the chair in one direction, as and for the purpose set forth.

5. A folding chair comprising a supporting rod, standards pivotally mounted on said rod, a chair frame pivotally mounted on said standards, said chair frame comprising side bars and a front and rear rod, foldable members connecting the supporting rod and the front rod of the chair frame, a chair back pivotally mounted on the rear rod of said chair frame, plates pivotally mounted on said rear rod of said chair frame and adapted to lockingly engage said chair back, links connecting said foldable members and said plates, said links being slidably con-

nected to said foldable members, means for limiting the sliding movement of said links, and means mounted on the rear rod of said frame for holding said plates in locking engagement with said chair, as and for the purpose described.

6. A folding chair comprising a supporting rod, standards pivotally mounted on said supporting rod, a chair frame pivotally mounted on said standards, said frame consisting of side bars, a front and rear rod, foldable members connecting said supporting rod and the front rod of the chair frame, a plate pivotally mounted upon the rear rod of said chair frame, a link pivotally connected at one end to said plate, one of said foldable members being formed with a longitudinal slot, a stud formed on the other end of said link for slidable engagement in said slot, a back member pivotally mounted upon said rear rod, said plate adapted to lockingly engage the back member of the chair, and means mounted on said rear rod for removably locking said plate in engagement with the back member of the chair.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

ANDREW E. JACOBSON.

Witnesses:

M. G. JONES,
BANKIE FLYGSTOD.