

No. 845,008.

PATENTED FEB. 19, 1907.

L. C. McADAMS.
SEAT REMOVING APPARATUS.
APPLICATION FILED APR. 10, 1906.

2 SHEETS—SHEET 1.

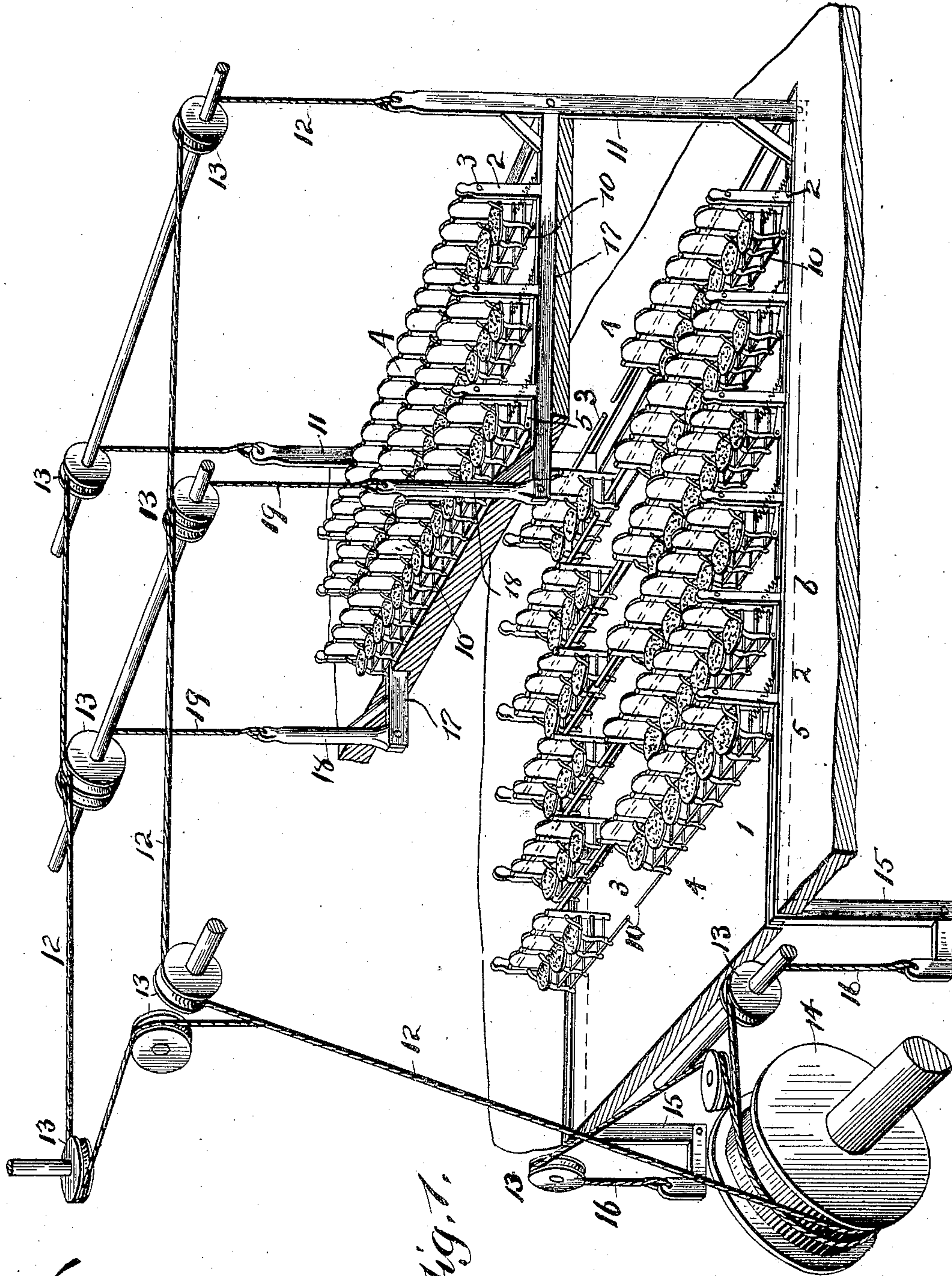


Fig. 1.

Witnesses
R. A. Boswell
V. S. Boswell

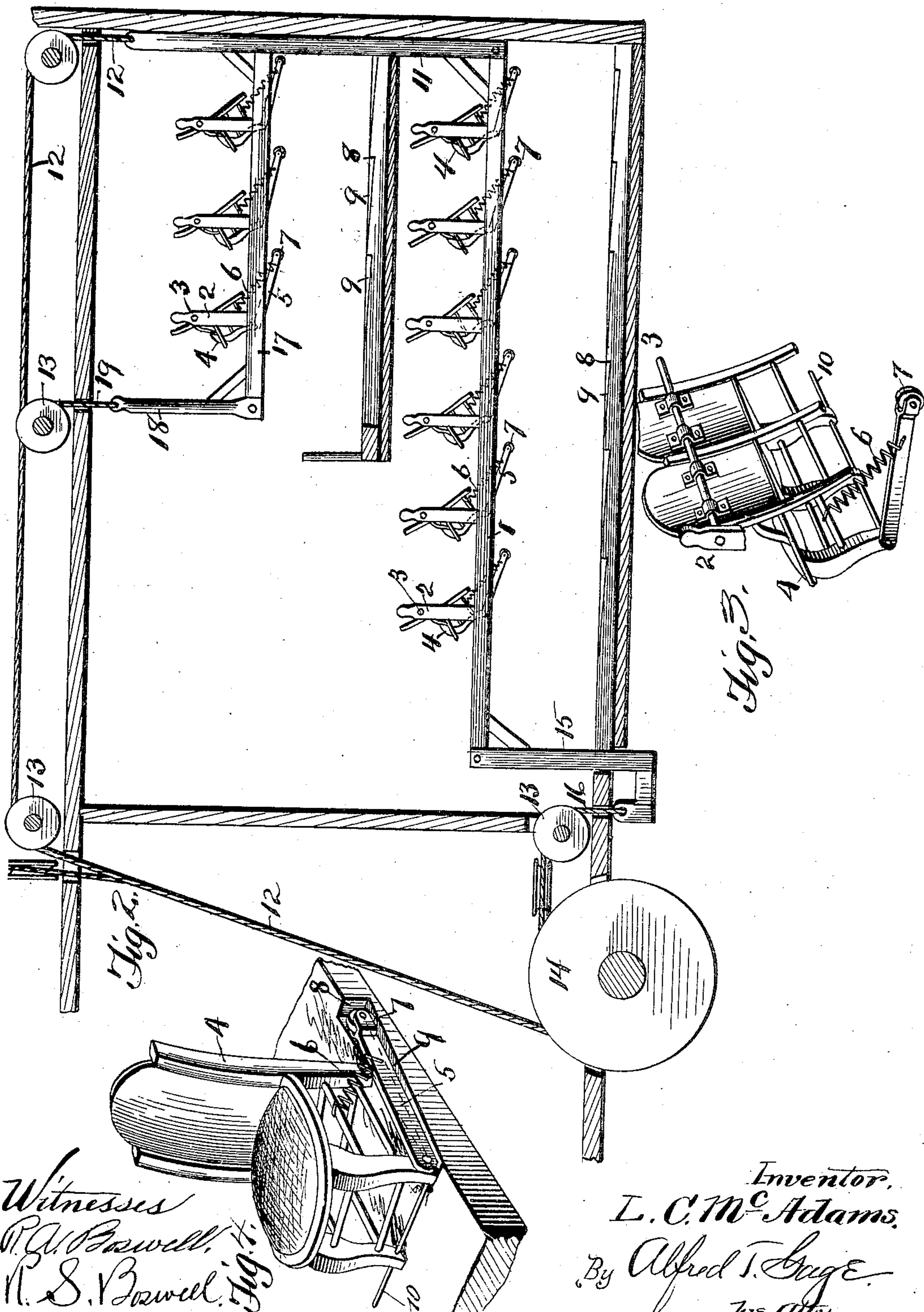
Inventor
L. C. McAdams.
By Alfred T. Gorge
his atty.

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2 SHEETS—SHEET 2.



Witnesses
R. G. Powell.
H. S. Powell.

Inventor,
L. C. McAdams.
By Alfred T. Gage.
His atty.

UNITED STATES PATENT OFFICE.

LEWIS CLARK McADAMS, OF SACRAMENTO, CALIFORNIA, ASSIGNOR OF ONE-FOURTH TO ALBERT O. EWERS, OF SACRAMENTO, CALIFORNIA.

SEAT-REMOVING APPARATUS.

No. 845,008.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed April 10, 1906. Serial No. 310,951.

To all whom it may concern:

Be it known that I, LEWIS CLARK McADAMS, a citizen of the United States, residing at Sacramento, in the county of Sacramento and State of California, have invented certain new and useful Improvements in Seat-Removing Apparatus, of which the following is a specification.

This invention relates to a seat-removing apparatus, and particularly to means by which the seats in a hall or room may be quickly and completely removed from the floor thereof.

The invention has for an object to provide a novel and efficient construction for elevating a seat or section of seats above their normal position upon the floor of a theater or other building, so as to leave the floor perfectly clear for the use of persons passing out of the building or when it may be desired for use for other purposes than seating an audience.

Another object of the invention is to provide means for tilting the seats as they are raised and also for restoring them to their normal position when lowered upon the floor.

Other and further objects and advantages of the invention will be hereinafter set forth and novel features thereof set forth in the appended claims.

In the drawings, Figure 1 is a perspective of a section of seats resting upon the floor of the building; Fig. 2, a sectional elevation showing the seats raised above the floor; Fig. 3, a perspective of one of the seats with its restoring-arm, and Fig. 4 is a detail perspective of one of the seats in contact with the floor.

Like numerals of reference refer to like parts in the several figures of the drawings.

The numeral 1 indicates the beam or girder which carries the seat or plurality thereof comprising the section to be elevated. This beam is preferably inlaid or sunk beneath the surface of the floor, so as to offer no obstruction when in the position shown in Fig. 1. One of these beams is disposed at each side of the section of seats to be raised, and opposite each row of seats or chairs a post 2 is provided upon each beam. These posts are connected by a cross-rod 3, pivotally connected with each of the seats 4 at the upper portion of the back thereof, so that the chairs will swing free upon the rod

when lifted above the floor. Each chair or row thereof is also provided with a restoring-arm 5, preferably pivotally connected at the lower portion of the front leg of the chair and held in proper suspended position beneath the chair by means of a spring 6, connected to the chair and arm, as shown in Fig. 3. This arm also has pivoted at its free end a friction-roller 7, adapted to engage with the end wall 8 of a recess 9, formed in the floor adjacent to the position of the chair when it rests thereon. When this arm engages the wall of the recess, the front of the chair or seat is tilted upward, so as to bring the seat into horizontal position when the chair reaches the floor. When a row of the chairs are connected together, the pivot for the arms, which may be duplicated at each end, comprises a rod 10, extending through each chair.

Any desired means may be provided for elevating the beams and seats carried thereby; but a desirable form is herein shown consisting of a standard 11, from which a cable 12 extends over idler-pulleys 13 to a suitable winding-drum or windlass 14, operated by any desired power. The opposite end of the beam is provided with a depending standard 15, connected by a cable 16 with the drum 14. When it is desired to operate seats in a gallery or balcony simultaneously with those upon the floor, a gallery-beam 17 may be extended from the standard and provided at the front with a standard 18, connected with the cable 12 by a cable 19. The construction and arrangement of the seats in this gallery is identical with those upon the floor of the building.

In the operation of the invention when it is desired to clear the building in the event of panic or alarm or when it is desired to use the floor for other purposes than seating all of the seats or chairs may be elevated clear of the floor and above the heads of the persons thereon by operating the windlass to raise the beams. When the seat leaves the support upon the floor, its pivotal mounting at the back permits it to slightly tilt by gravity, as shown in Fig. 2, so as to assist the occupant thereof to alight upon the feet, while when the seat returns to the floor the arm carried thereby first engages the floor and gradually restores it to a horizontal position. This arm is yieldingly supported in proper position by the spring connection and also

properly balances the weight of the seat to prevent its tilting too much to the rear in its movement. When the seats are elevated, the floor is clear to permit the egress of persons from the building or for dancing or other purposes for which it may be desirable to use the same.

The invention provides a simple and efficient construction of parts adapted to be easily operated and avoiding any complicated construction of the seat or building in which it is used. The parts are adapted to be quickly and silently operated, and by elevating the seats all congestion and accident incident to a number of persons leaving the building at one time is avoided, which is particularly important in the event of fire or other alarm causing a panic among the audience.

Having described my invention and set forth its merits, what I claim, and desire to secure by Letters Patent, is—

1. In a seat-removing apparatus, opposite supporting devices, a connecting member extending between the same, a series of chairs mounted upon said member and having legs adapted to normally rest upon a floor, and overhead means for elevating said supporting devices and chairs to leave said floor entirely unobstructed.

2. In a seat-removing apparatus, a seat provided with means to normally engage a support when in use, means to elevate said seat above its position of use, and a pivotal connection between said seat and elevating means adapted to effect an automatic tilting of said seat when thus elevated above said support.

3. In a seat-removing apparatus, a seat, means for elevating the same, means for effecting a tilting of said seat relative to its normal position, and means to restore said seat to its normal position when lowered.

4. In a seat-removing apparatus, opposite supporting-beams, a connecting member extended between said beams, a series of seats suspended from said member, cables extending upward from the opposite ends of said beams, and means for simultaneously operating said cables.

5. In a seat-removing apparatus, a supporting-beam, a post carried by said beam, and a seat pivotally connected at its rear to said post to freely swing thereon when elevated and provided with means to engage a floor when lowered.

6. In a seat-removing apparatus, a supporting-beam, a post carried by said beam, a seat pivotally connected at its rear to said post to freely swing thereon when elevated

and provided with means to engage a floor when lowered, a free arm depending from the front of said seat, and means upon the floor to engage said arm to restore the seat when lowered.

7. In a seat-removing apparatus, a plurality of supporting-beams disposed in parallel horizontal planes and connected together, seats carried by said beams, and means for jointly raising and lowering said beams.

8. In a seat-removing apparatus, a supporting-beam, a post carried thereby, and a chair pivotally connected at the upper portion of its back to said post to swing by gravity thereon when elevated.

9. In a seat-removing apparatus, a supporting-beam, a post carried thereby, a chair pivoted at the upper portion of its back to said post to freely swing thereon when elevated, a free arm pivoted to the front of said chair, and a stop to engage said arm and swing the chair.

10. In a seat-removing apparatus, a supporting-beam, a post carried thereby, a seat pivotally connected to said post, a depending arm pivoted to the front of said seat, a spring connection between the free end of said arm and the seat, and a bearing-roller upon the free end of said arm.

11. In a seat-removing apparatus, parallel supporting-beams disposed in the same horizontal plane, a post carried by each of said beams, a pivoting-rod extending between said posts, and a series of seats pivotally mounted upon said rod.

12. In a seat-removing apparatus, the combination with a floor, of a beam normally disposed thereon, a seat supported in horizontal position by said floor, means for mounting said seat upon said beam to permit the seat to tilt as the beam is elevated above the floor, and means for elevating said beam.

13. In a seat-removing apparatus, the combination with a floor, of a supporting-beam, cables connected to the opposite ends of said beam for elevating the same, a winding-drum to receive said cables, and a chair carried by said beam and having legs to engage the floor when the beam is lowered and to be supported above the floor when the beam is elevated.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEWIS CLARK McADAMS.

Witnesses:

HENRY C. MAY,
PATRICK FORD.