No. 787,337. PATENTED APR. 11, 1905.

A. LAZARUS.

OPERA CHAIR.

APPLICATION FILED JUNE 13, 1904.

2 SHEETS—SHEET 1.

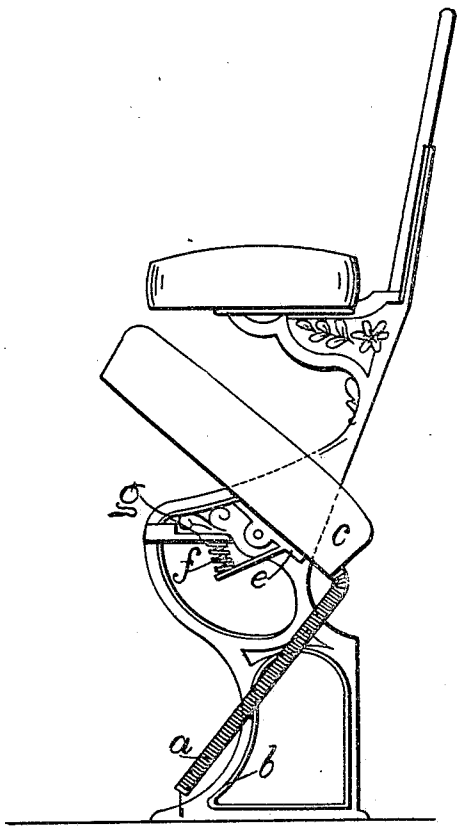


Fig. 1

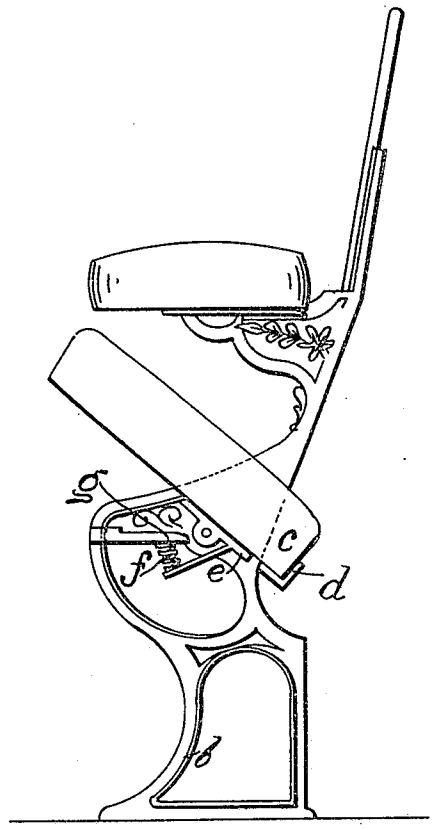


Fig. 2

Witnesses:
Stephen Sinnott
M. Grace Durall

Inventor
A. Lazarus,
by Wilkinson & Fisher
his Attorneys.

No. 787,337. PATENTED APR. 11, 1905.

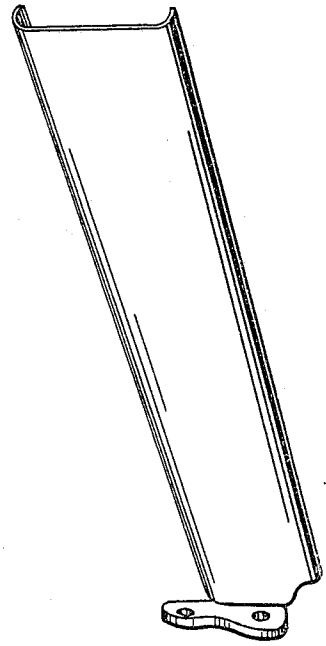
A. LAZARUS.

OPERA CHAIR.

APPLICATION FILED JUNE 13, 1904.

2 SHEETS—SHEET 2.

Fig. 3



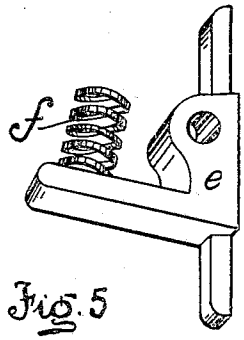


Fig. 5

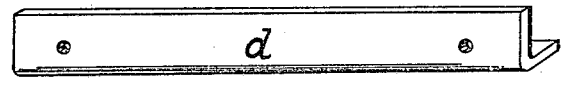


Fig. 4.

Witnesses:
J. Stephen Kinsto.
W. Mat. Duvall.

Inventor
A. Lazarus
by Wilkinson & Fisher
his attorneys.

PHOTO-LITHOGRAPHED BY SACKETT & WILHELMS LITHO. & PTG. CO. NEW YORK.

No. 787,337. Patented April 11, 1905.

UNITED STATES PATENT OFFICE.

ABRAHAM LAZARUS, OF LONDON, ENGLAND.

OPERA-CHAIR.

SPECIFICATION forming part of Letters Patent No. 787,337, dated April 11, 1905.

Application filed June 13, 1904. Serial No. 212,382.

To all whom it may concern:

Be it known that I, ABRAHAM LAZARUS, a subject of the King of England, residing at 21 Great Eastern street, in the city of London, England, have invented certain new and useful Improvements in Opera-Chairs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in automatic tip-up seats especially suitable for theaters, public halls, and other places of amusement and entertainment. With seats of this description as hitherto made accidents have frequently occurred, owing to the occupant of the seat rising for a moment for some purpose, the seat tipping up automatically and the occupant not observing this experiencing a dangerous fall on attempting to resume his or her seat. Again, with ordinary seats that tip up by hand considerable floor-space is wasted, owing to the regulations in force in many places prescribing a given space which must be left between the front of an unoccupied seat and the back of the seat immediately in front. To obviate these drawbacks, I construct an automatic tip-up seat in such a way that the seat may rise when unoccupied automatically into a position which will leave the necessary space required and yet remain in such a position that it shall be impossible for the occupant to fall on the ground when attempting to resume his or her seat.

According to one way of carrying out this invention I propose to mount the seat on an iron rod going through metal brackets under the seat and to employ a counterbalance-weight and also a stop which prevents the seat rising to a higher angle than necessary—say an angle of about fifty degrees—so that when the person attempts to sit down the seat must fall into the horizontal or sitting position without any attention on the part of the occupant.

In order that this invention may be better understood, I will proceed to describe the same with reference to the drawings accompanying this specification, in which—

Figure 1 shows a side view of a seat working on an iron rod going through brackets under the seat and tipped up to the required position by means of a spring. Fig. 2 shows a similar view, but having the seat arranged to tip up by means of a weight. Figs. 3, 4, and 5 show details hereinafter referred to.

The same letters of reference are employed to denote the same parts in all the views.

a shows a helical spring, one end of which is fixed to the lower part of the standard *b* and the other end to the back of the seat *c* for tipping such seat up automatically to the required angle when unoccupied.

The spring *a* may be protected by a metal case, such as that shown at Fig. 3.

In Fig. 2 instead of the spring *a* (shown at Fig. 1) I employ a piece *d*, forming a counterbalance-weight, fixed to the back of the seat *c* for tipping up such seat to the required angle. The piece *d* may be an angle-piece, such as that shown at Fig. 4 drawn to a larger scale. The seat in both cases is stopped at the proper angle, such as that shown on the drawings, by means of the brackets *e*, which are fixed under the seat *c*, and to each of these brackets is fixed one end of a helical spring *f*, so that the other end of such spring (which is left free) may butt against the projecting rest *g* on the standard *b* when the seat is unoccupied, as shown at Figs. 1 and 2.

The spring *f* gives as the seat is pressed against to allow full passage between the rows.

The bracket *e* and spring *f* are shown drawn to a larger scale (detached) at Fig. 5.

It will be seen that when the seat is vacated it will tip up automatically to the position shown at Figs. 1 and 2, and it is brought down to the horizontal or sitting position on any one sitting down.

By fitting seats as above described a great saving of space is effected without lessening the space required between the rows.

What I claim as my invention, and desire to secure by Letters Patent in the United States of America, is—

1. In an opera-chair, the combination with a suitable frame, of a seat mounted thereon, means constructed to tip said seat out of its horizontal position, and a bracket carrying a spring adapted to abut against said frame when said seat is tilted and maintain the same at an acute angle to the back, substantially as described.

2. In an opera-chair, the combination with a suitable frame, of a seat mounted thereon, means constructed to tip said seat out of its horizontal position, a lug on said frame, a bracket on said seat, and a spring mounted on said bracket adapted to engage with said lug when said seat is tipped and maintain the same at an acute angle to the back, substantially as described.

3. In an opera-chair, the combination with a suitable frame, of a seat mounted thereon, means constructed to tip said seat out of its horizontal position, a lug on said frame, a forwardly-projecting bracket on the bottom of said seat, and a spring mounted on the upper face of said bracket and adapted to engage with the under face of said lug when said seat is tipped and maintain the same at an acute angle to the back, substantially as described.

4. In an opera-chair, the combination with a suitable frame, of a seat mounted thereon, means constructed to tip said seat out of its horizontal position, and a coiled spring mounted on the bottom of said seat adapted to abut against said frame when said seat is tipped and of such tension that said seat is maintained at an angle of substantially fifty degrees to the back, substantially as described.

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

ABRAHAM LAZARUS.

Witnesses:
A. E. VIDAL,
A. BROWNE.