(Model.)

B. H. KOECHLING.

OPERA CHAIR.

No. 265,103. Patented Sept. 26, 1882.

Fig. 2.

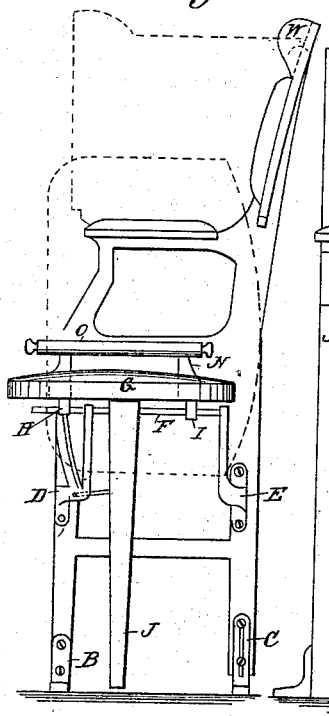

Fig. 1.

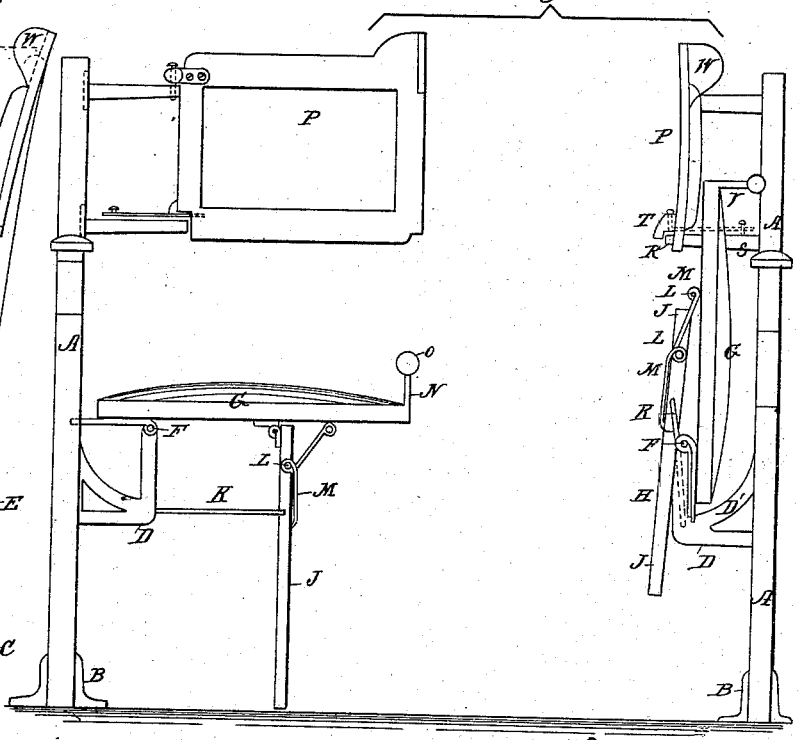

Fig. 4.

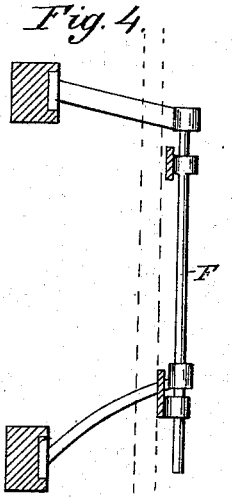

Fig. 3.

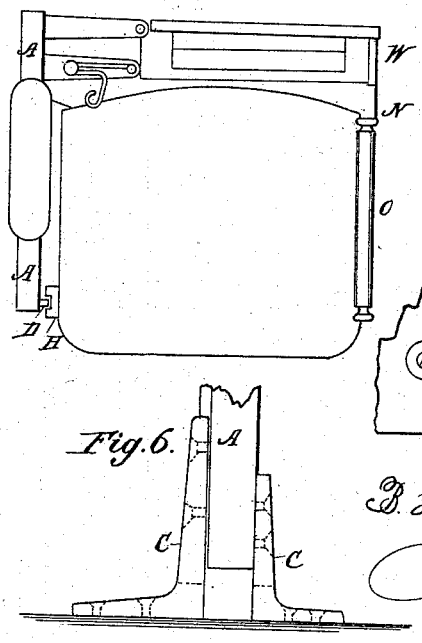

Fig. 5.

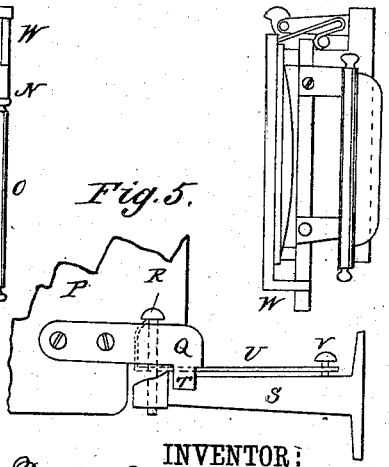

Fig. 6.

WITNESSES:

W. W. Hollingsworth

Solon C. Kemon

INVENTOR:

B. H. Koechling

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

BERNHARD H. KOECHLING, OF NEW YORK, N. Y.

OPERA-CHAIR.

SPECIFICATION forming part of Letters Patent No. 265,103, dated September 26, 1882.

Application filed February 8, 1882. (Model.)

To all whom it may concern:

Be it known that I, BERNHARD H. KOECHLING, of the city, county, and State of New York, have invented a new and useful Improvement in Opera-Chairs, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of my improvement, showing one seat raised and another lowered. Fig. 2 is a side elevation of the free side of a chair, the seat and back being shown in position for use. Fig. 3 is a plan view of the arrangement shown in Fig. 1. Fig. 4 is a plan view of the seat-hinges and slide, the side frame being shown in section. Fig. 5 is a rear elevation of the lower hinge of a chair-back. Fig. 6 is a rear elevation of the lower part of a rear leg and its angle-iron fastenings.

The object of this invention is to provide opera-chairs constructed in such a manner that the seats, when not in use, will turn up laterally against the side frames and the backs will swing forward against the seats, leaving a clear space.

A represents the side frame, which may be made of any desired style. The forward leg of the side frame, A, rests upon the floor, and is held in place by angle-irons B, secured to it and to the floor. The rear leg of the frame A is made shorter than the forward leg, and is held in place by angle-irons C, secured to it and to the floor. The upper arms of the angle-irons C are slotted longitudinally to receive the fastening-screws, so that the chair-frame A can be secured to a level floor or an inclined floor without change.

To the front and rear parts of the seat-frame A are attached the brackets D E, the inner parts of which project upward vertically, and have eyes in their upper ends to receive and hold the rod F, which serves as a hinge-pivot and as a slide for the seat, and which is made a little longer than the distance between the brackets D E, so that its forward end will project in front of the forward bracket, as shown in Figs. 2 and 4. The outer arm of the rear bracket, E, inclines forward slightly from its outer end, as shown in Fig. 4, and is horizontal, or nearly so. The outer arm of the forward bracket, D, inclines to the rearward from its outer end, and has its upper edge, or the upper edge of an arm, D′, formed upon or attached to it, curved upon the arc of a circle having its center in the axis of the rod F.

To the lower side of the outer part of the seat G are attached metal straps H I in such positions as to be at the forward sides of the inner ends of the brackets D E. The straps H I have eyes formed upon their inner ends to receive the rod F and turn and slide upon the said rod F. The outer end of the forward strap, H, projects beyond the outer end of the seat G, and is notched or recessed to receive the curved edge of the arm D′ on bracket D, so that the seat will be carried forward while being lowered into a horizontal position, and will be moved to the rearward while being turned up into a vertical position. The seat G is supported, when turned down into a horizontal position, by a leg, J, which is hinged at its upper end to the middle part of the lower side of the said seat G. The leg J is held in a vertical position while the seat G is being swung up and down by a connecting-rod, K, the inner end of which is pivoted to the leg J at a little distance from its upper end. The outer end of the connecting-rod K is pivoted to the bracket D at its angle.

To the side of the upper part of the leg J is attached, or upon it is formed, a pin or arm, L, around which is spirally coiled a spring, M. The lower end of the spring M is attached to the leg J, and its upper end rests against the outer part of the lower side of the seat G, as shown in Fig. 1. The upper arm of the spring M is made of such a length that the descent of the seat G into a horizontal position will put the spring M under tension, so that when the said seat is released from a downward pressure the said spring M will give the seat G an upward impulse sufficient, in connection with the manner in which the said seat is hinged, to carry the said seat into a vertical position, as shown in the left-hand part of Fig. 1.

To the free end of the seat G are attached short uprights N, connected at their upper ends by a bar, O, to form a guard to prevent the occupant of the seat from sliding off the said end or upon or against the end of an ad-

jacent seat, to the annoyance of the occupant of the said adjacent seat. The guard N O also serves as a handle for convenience in lowering the seat.

P is the seat-back, to the outer corners of which are attached eye-straps Q, the eyes of which receive and work upon the pintles R, formed upon or attached to the ends of the arms or brackets S, attached to the upper rear parts of the side frames, A. The upper side of the end of the lower bracket, S, upon which the eye of lower eye-strap, Q, rests, is beveled, as shown in Fig. 5, so that the seat-back, when left free, will have a tendency to swing forward. The seat-back P is kept from swinging back any farther than to be parallel with the seat G by a toe, T, formed upon the eye of the lower eye-strap, Q, and which strikes against the bracket S, as shown in Fig. 5.

To the lower corner of the hinged end of the seat-back P is pivoted the end of a rod, U, which passes along the upper side of the lower bracket, S, and has its outer part bent to form a slot, as shown in Fig. 3, or has a slot formed in it to receive a guide-pin, V, attached to the upper side of the said bracket S. The end of the rod U is bent to form an arm, U′, or has an arm, U′, formed upon it, which projects forward into such a position as to be struck by the seat G as the said seat comes into a vertical position, to slide the rod U outward, and thus swing the seat-back P forward into a position parallel with the side frame, A.

To the upper corner of the free end of the seat-back P is attached, or upon it is formed, a guard, W, which projects forward, as shown in Figs. 1, 2, and 3, to prevent the occupant of the seat from slipping off the seat and upon or partly upon the adjacent seat. The guards W of two adjacent seats rest against each other, and thus give the seat-backs an additional support against being forced back any farther than to be parallel with the seats G. With this construction, as the occupant of a seat rises the seat swings upward and the seat-back swings forward automatically, leaving the space occupied by the seat free to be used as a standing-place or as a passage-way. With this construction, also, as the seat rises it moves to the rearward, so as to widen the space or passage-way in front of the seat.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an opera-chair, the combination, with the frame A and the laterally-hinged seat G, of the inclined bracket D, having curved upper edge, and the hinge eye-strap H, having projecting notched end, substantially as herein shown and described, whereby the said seat receives a forward and rearward movement while being lowered and raised, as set forth.

2. The combination, with the bracket D, laterally-hinged seat G, hinged leg J, and rod K, of the spring M, whereby the seat rises automatically into a vertical position as soon as released from downward pressure, as described.

3. The bracket D, having its outer arm inclined rearwardly from its outer end and arc-shaped upon its upper edge, the bracket E, inclined forwardly from its outer end, and the rod F, arranged in eyes at the upper ends of said brackets, in combination with the hinged seat G and the eye-straps H I, the straps H having a notch in the projecting ends, as shown and described, whereby the seat will be carried forward when it is being lowered and rearward when being turned up, as described.

4. In an opera chair, the combination, with the seat G, the seat-back P, and the pintle-bracket S, of the seat-back hinge of the pivoted and slotted trip-bar U, having arm U′, substantially as herein shown and described, whereby the upward movement of the seat will move the seat-back forward, as set forth.

BERNHARD H. KOECHLING.

Witnesses:
JAMES T. GRAHAM,
C. SEDGWICK.