(No Model.) 2 Sheets—Sheet 1.

# H. A. J. RIECKERT & L. F. KWIATKOWSKI.

## OPERA CHAIR.

No. 489,328. Patented Jan. 3, 1893.

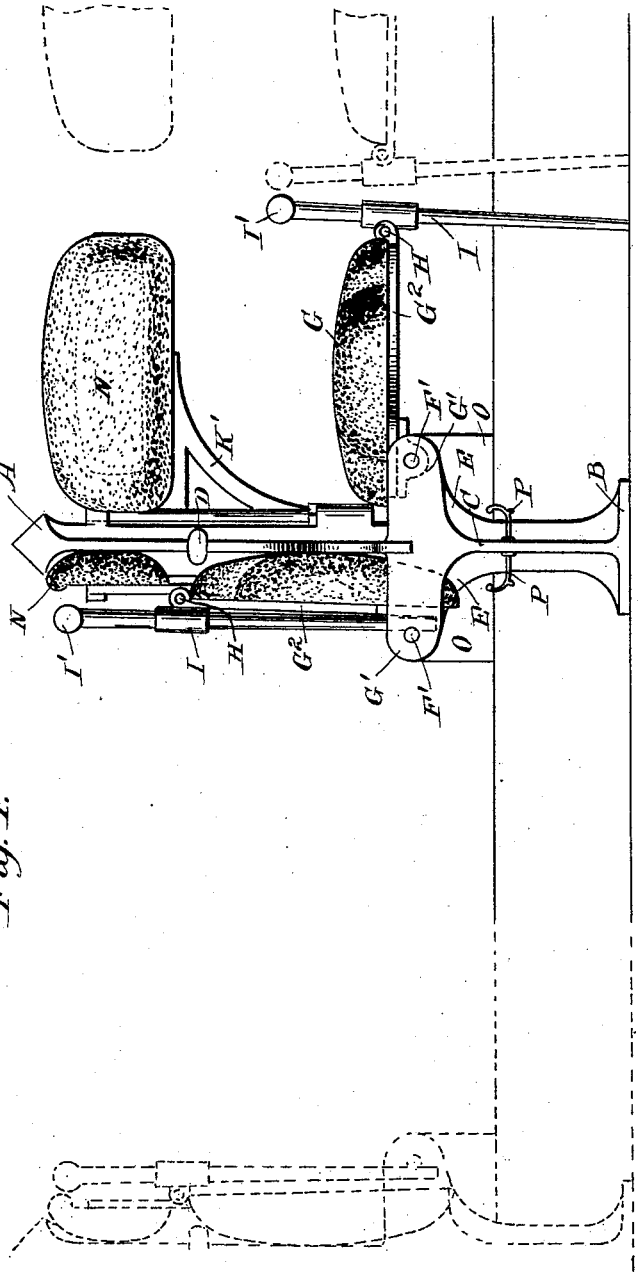


Fig. 1.

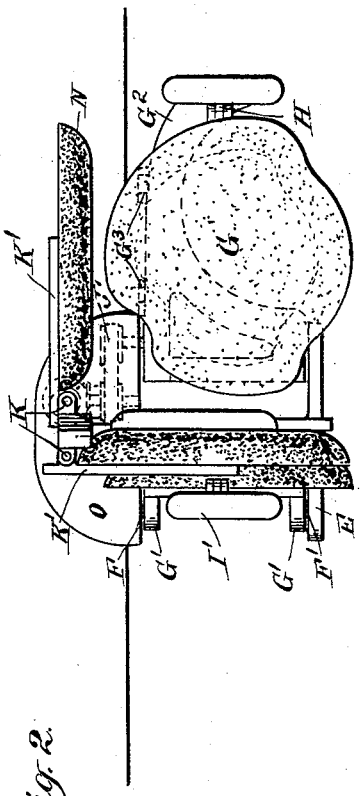


Fig. 2.

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*Fig. 3.*

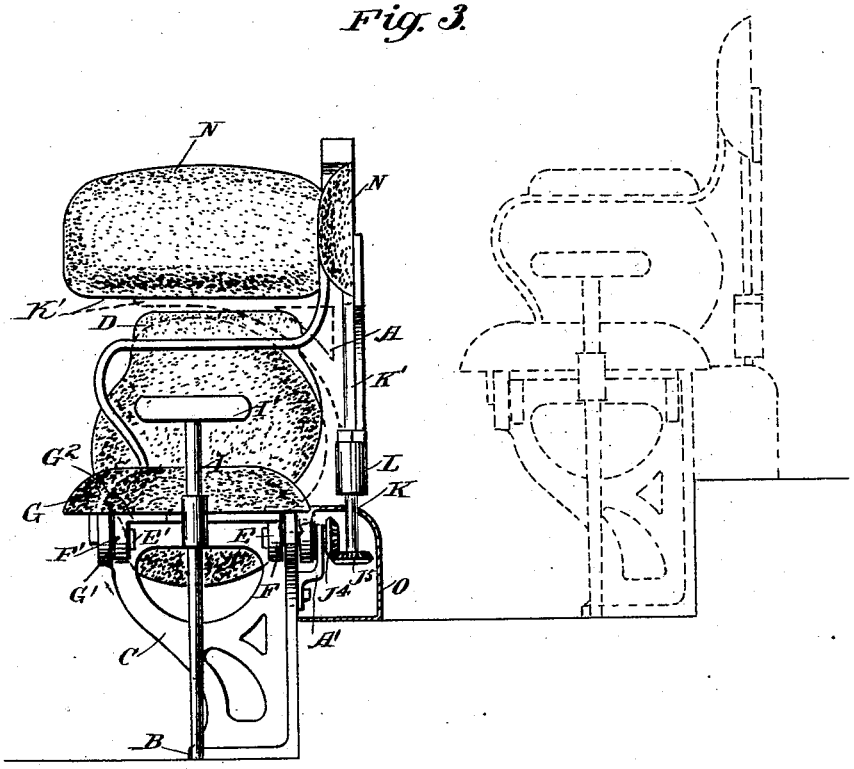
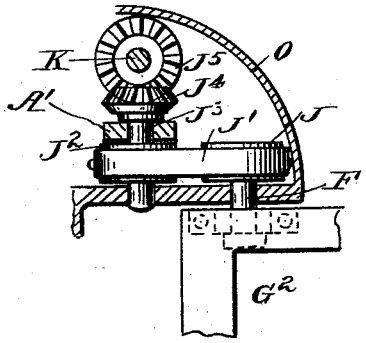



*Fig. 4.*

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# UNITED STATES PATENT OFFICE.

HERMAN A. J. RIECKERT AND LOUIS F. KWIATKOWSKI, OF NEW YORK, N. Y.

## OPERA-CHAIR.

SPECIFICATION forming part of Letters Patent No. 489,328, dated January 3, 1893.

Application filed November 2, 1891. Serial No. 410,693. (No model.)

*To all whom it may concern:*

Be it known that we, HERMAN A. J. RIECKERT and LOUIS F. KWIATKOWSKI, of New York, in the county and State of New York, have invented a new and Improved Opera-Chair, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved opera chair, which is simple and durable in construction, and arranged to conveniently fold for forming longitudinal passage ways or aisles in the theater in addition to the ordinary transverse aisles.

The invention consists of certain parts and details and combinations of the same, as will be described hereinafter and then pointed out in the claims.

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

Figure 1 is a front view of the improvement; Fig. 2 is a plan view of the same; Fig. 3 is a side elevation of the same; and Fig. 4 is an enlarged sectional plan view of the mechanism for operating the back from the seat.

The improved opera chair is provided with a frame A, formed with a base or foot B, adapted to be secured to the floor in the theater or other building in which the chair is used. The frame A is provided with a longitudinally extending web C, formed into an arm rest D, located a suitable height above the base B. From each side of the web C, extend lugs E, E′ carrying pivots F, F′ respectively, engaging lugs G′ secured to the under side of the seat frame $G^2$ carrying the usual seat G. The latter is connected by hinges $G^3$ with the rear edge of the seat frame $G^2$, so that the seat proper can be swung upward and rearward independently of the frame and can also be swung, with the latter, sidewise, turning on the pivots F, F′ to fold against the side of the frame A upon the side of the web C. The seat frame $G^2$ is arranged in such a manner that the front part is curved, as is plainly shown in dotted lines in Fig. 2, so that when the seat G is swung upward and rearward on the hinges $G^3$ sufficient space is formed for a person to step backward into the curved front of the chair seat to make sufficient room for others to pass in front of the seat. The pivots F, F′ extend longitudinally in line with the web C and are arranged on one side of the frame $G^2$, so that the seat G, with its frame $G^2$ can be swung upward to a vertical position, as is plainly shown at the left in Fig. 1, so as to form, in connection with the front and rear chairs in the same line, a longitudinal aisle in addition to the transverse aisle in the front and rear of the chair. The outer side of the seat frame $G^2$ is connected by a pivot H with a support I resting with its lower end on the floor and formed at its upper end into a longitudinally-extending arm rest I′. The rear pivot F for the seat G, is made in the form of a shaft which carries at its rear end a pulley J, over which passes a belt J′, also passing over a pulley $J^2$ secured on a shaft $J^3$ mounted to turn in suitable bearings A′ at the rear of the frame A, the said belt being secured to the pulleys J, $J^2$ as shown in Fig. 4. The shaft $J^3$ carries a bevel gear wheel $J^4$ in mesh with a bevel gear wheel $J^5$ secured on the lower end of a vertically arranged shaft K mounted in turn in suitable bearings L, attached to the back of the frame A as is plainly shown in the drawings. The upper part of the shaft K is formed with sidewise extending arms K′, supporting a back N, located in the rear and above the seat G and arranged to swing horizontally upon the side of the web C above the seat G when the latter is folded. It will be seen that when the frame $G^2$ is swung upward and inward toward the side of the frame A the shaft F turns in its bearings and thus turns the wheel J, which, by the belt J′ and the pulley $J^2$, rotates the shaft $J^3$, and the latter, by the bevel gear wheels $J^4$ and $J^5$, imparts a rotary motion to the vertical shaft K, so that the latter, by its back swings the back N to the side of the web C. When the seat G is swung downward, the shaft K is turned in an opposite direction and the back N swings back into its normal position, as is shown at the right in Fig. 1.

We do not limit ourselves to the especial construction of the mechanism for operating the back N from the seat G, as other devices may be used—for accomplishing the same result. The transmitting mechanism for moving the back N from the seat G is inclosed in

a suitable casing O attached to the back of the frame A. On the web C, below the seat G are secured sidewise extending hooks P, for hanging up hats and other articles.

As shown in Fig. 1, each frame A is preferably provided at opposite sides with a seat and corresponding back, each set operating independently. By arranging each frame, with two seats, a very wide longitudinal aisle can be had as two adjacent seats of two frames, when swung up into a folded position form an aisle of a width equal to two seats. It will be seen that by this arrangement a very large longitudinal aisle may be formed in the theater to give ready entrance or exit to the visitors, at the same time giving the occupant of the chair all desired comfort.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is—

1. An opera chair comprising a longitudinally extending frame, a seat frame arranged transversely on the side of the said frame, and a seat proper hinged on top of the seat frame, the hinges extending transversely, substantially as shown and described.

2. In an opera chair, the combination with a longitudinally extending frame provided with a transverse seat frame having a curved front portion, of a seat hinged to the rear edge of the seat frame, the said seat resting upon the frame and projecting beyond the front portion thereof substantially as and for the purpose set forth.

3. In an opera chair, the combination with a longitudinally extending frame, of a seat frame pivoted thereto to swing vertically, and a seat hinged to the upper rear edge of the seat frame to swing vertically and in a direction at right angles to the direction in which the seat frame swings, substantially as described.

4. An opera chair, comprising a longitudinally extending frame, a transversely extending seat frame pivoted to swing vertically, a support hinged to the outer side of the seat frame, a seat hinged to the seat frame, in a direction at right angles to the direction in which the seat frame swings a back mounted on the frame to swing horizontally, and mechanism connecting the back and seat frame for operating them simultaneously to fold them one above the other against the frame, substantially as herein shown and described.

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Witnesses:
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