

A. WANNER, JR.
 OPERA CHAIR.
 APPLICATION FILED FEB. 21, 1910.

981,338.

Patented Jan. 10, 1911.

3 SHEETS—SHEET 1.

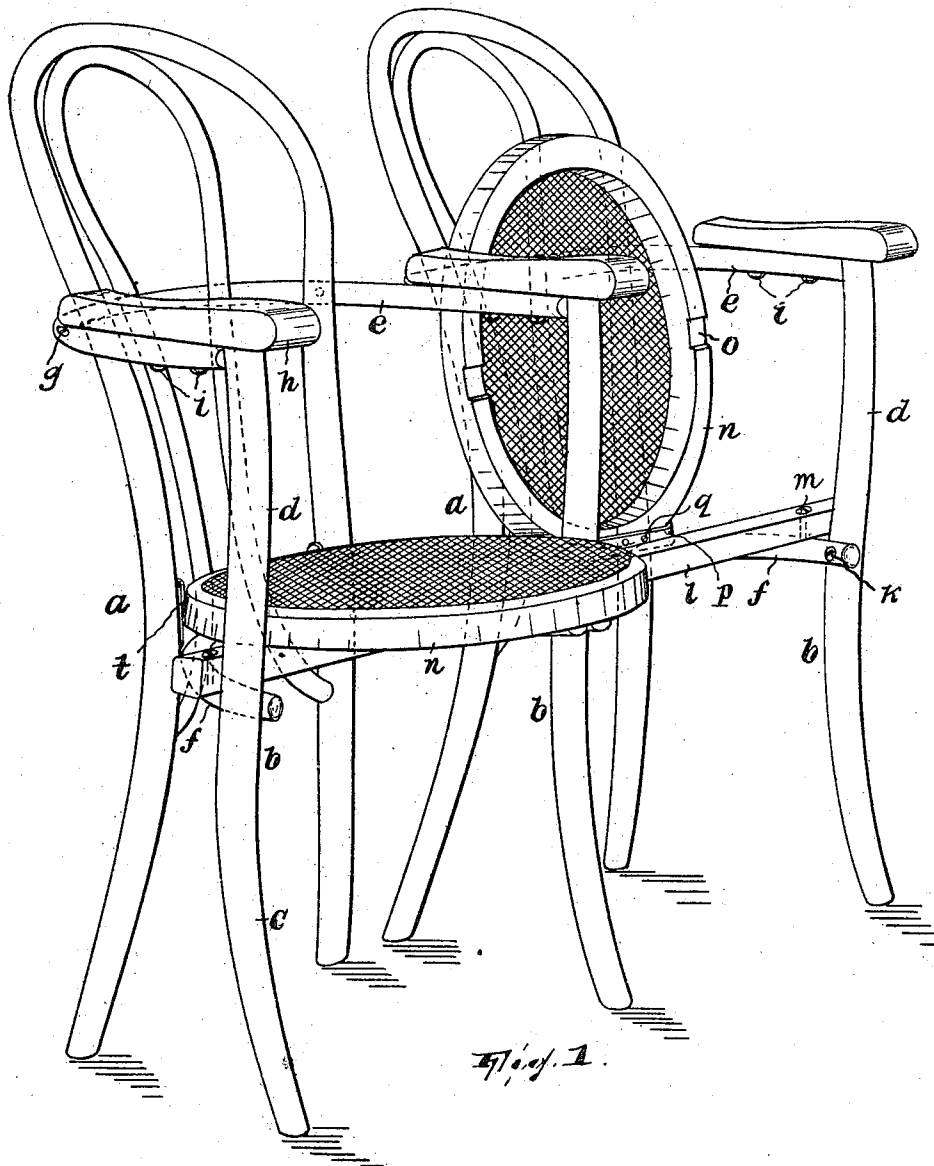


Fig. 1.

WITNESSES:

Wm. Drell.
 Elise Kaufmann.

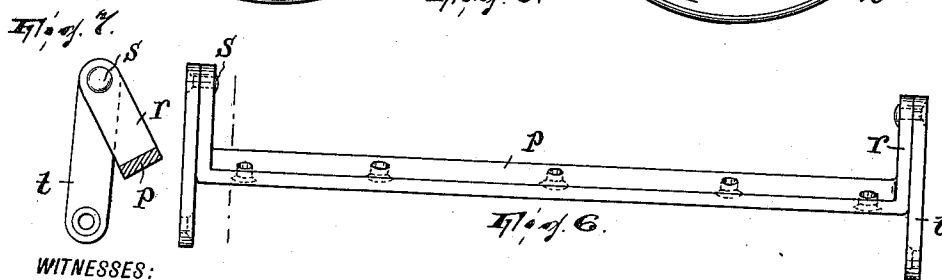
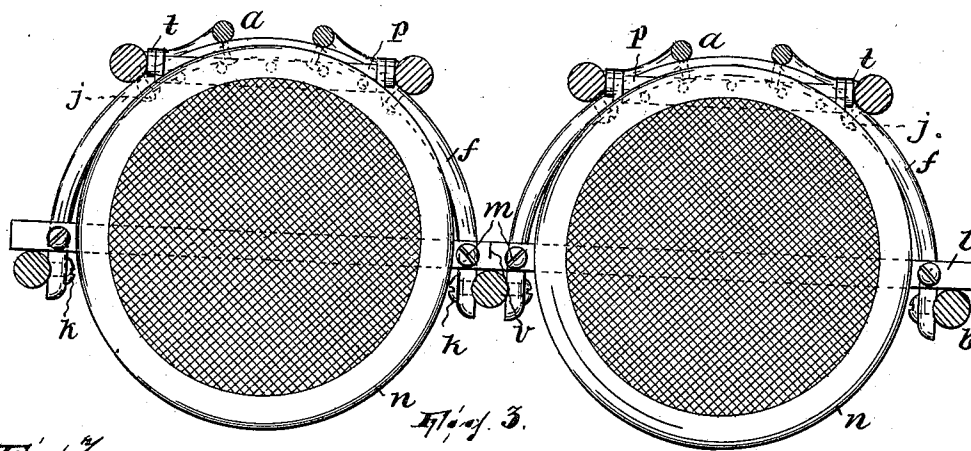
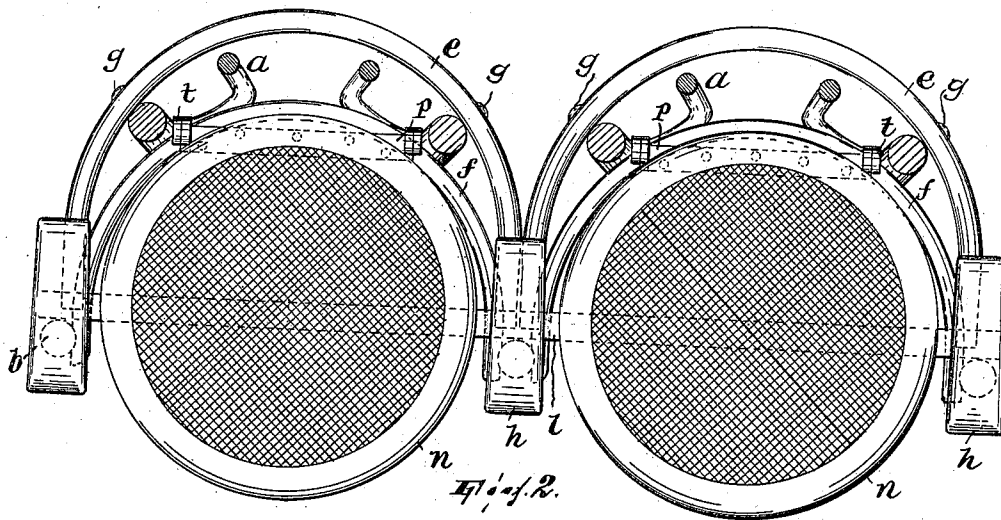
INVENTOR,

Albert Wanner, Jr.,
 BY
 John F. Howard,
 ATTORNEY.

981,338.

A. WANNER, JR.
OPERA CHAIR.
APPLICATION FILED FEB. 21, 1910.

Patented Jan. 10, 1911.
3 SHEETS—SHEET 2.



WITNESSES:

W. M. Dell.
Chas. Kaufmann.

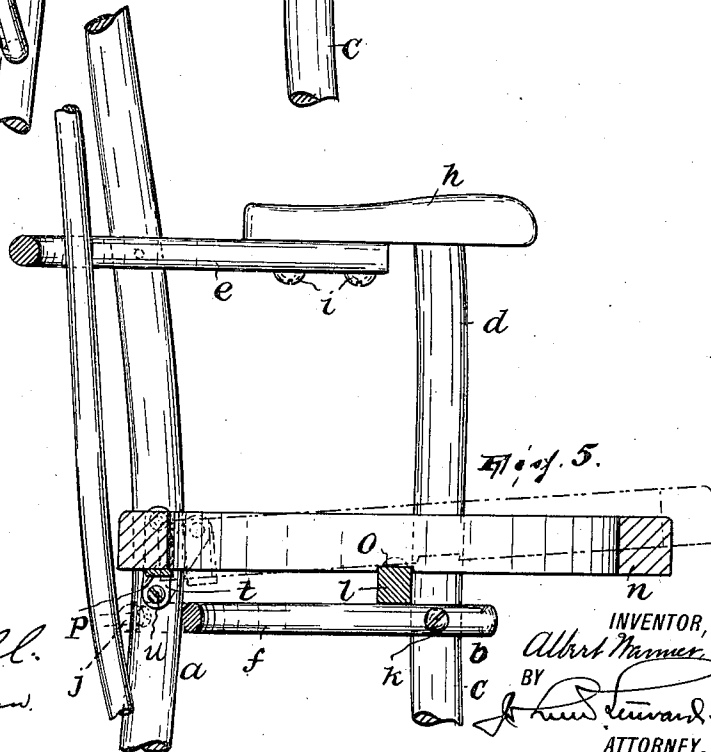
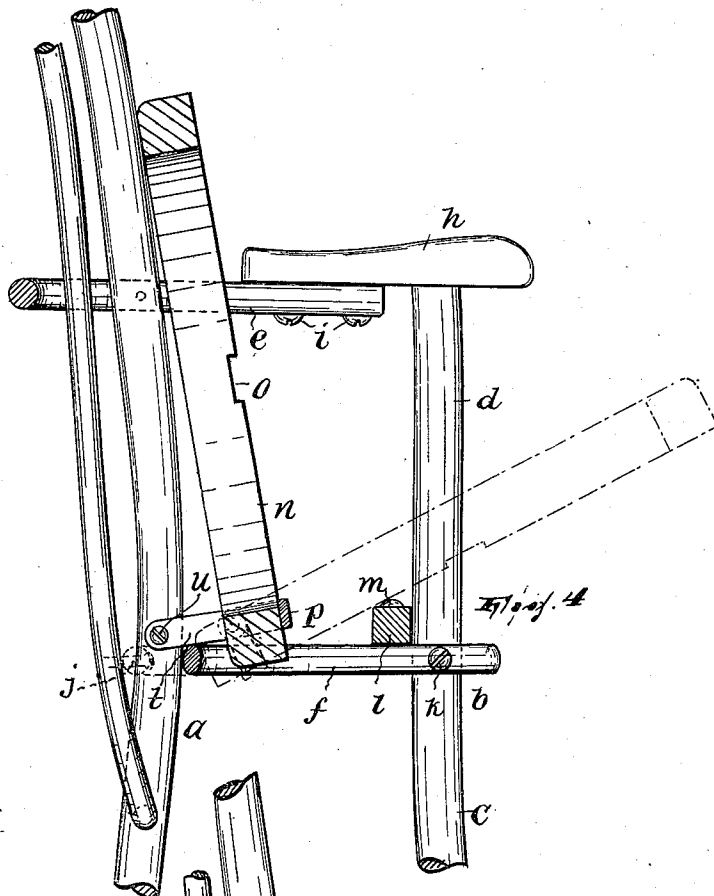
INVENTOR,
Albert Wanner, Jr.
BY
John H. Leland
ATTORNEY

A. WANNER, JR.
 OPERA CHAIR.
 APPLICATION FILED FEB. 21, 1910.

981,338.

Patented Jan. 10, 1911.

3 SHEETS—SHEET 3.



WITNESSES:

Wm. Drell.
Chas. Kaufmann.

INVENTOR,

Albert Wanner, Jr.,

BY

J. H. Edward.
 ATTORNEY.

UNITED STATES PATENT OFFICE.

ALBERT WANNER, JR., OF HOBOKEN, NEW JERSEY.

OPERA-CHAIR.

Specification of Letters Patent. Patented Jan. 10, 1911.

981,338.

Application filed February 21, 1910. Serial No. 544,959.

To all whom it may concern:

Be it known that I, ALBERT WANNER, JR., a citizen of the United States, residing in Hoboken, Hudson county, and State of New Jersey, have invented a certain new and useful Improvement 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My object in and by the present invention is to improve chairs of the type employed in auditoriums and the like public places principally in respect to reducing the cost of manufacture thereof while retaining them neat, attractive and substantial in appearance, and in other respects, for instance, that, while they may be light in construction and therefore readily portable, they will be strong and durable; that they may be adapted to occupy as little space as possible when not in use (their seats being then folded or swung up into flatwise relation with their backs), affording free access to any chair in a row in passing between rows; that a row of the chairs may be readily adapted to different curves according to a predetermined seating plan; that different styles of backs may be utilized without materially altering the other parts of the chairs to adapt them to them; that the individual width of the chairs may be varied, etc. etc. To these ends I employ, as one of the salient features of my invention, a substantially U-shaped member serving in connecting the back and back-leg structure of a chair with standards arranged forward of said structure, said member occupying approximately the seating plane of the chair and having its end-portions projecting substantially forwardly. Given a construction of this character said member may, in addition to the function above indicated, serve in the supporting of the seat.

In the adaptation herein specifically shown and described another substantially U-shaped member is employed, disposed in a plane above the first and serving in connecting the back and back-leg structure with said standards, its ends also projecting forwardly. It of course coöperates with the

first member in giving stability to the chair frame and, in addition, affords arms for the chair.

In the preferred construction a bar traverses the end-portions of the first member and serves directly to sustain the seat. An arm-proper, forming an extension of each end-portion of the second member, directly connects the same with the side-standard.

In a unitary group of two or more chairs, a single standard is used between each two chairs; likewise a single arm-proper, which is made sufficiently wide so that the adjoining end-portions of the upper members for the two chairs may be secured thereto at different distances apart to vary the center-to-center dimension of the chairs and so as to suit the chairs to the proper row-radius, as the circumstances may require. In such a construction a single bar may serve for the two or more chairs.

Referring to the accompanying drawings, in which the invention is fully illustrated, Figure 1 is a perspective view of a group of two of the chairs, the seat of one being lowered and that of the other raised; Fig. 2 is a horizontal sectional view taken in a plane just above the arms of the chairs; Fig. 3 is a similar view taken in a plane just above the seats of the chairs, the seats being shown in their normal positions in both Figs. 2 and 3; Fig. 4 is a vertical sectional view of one of the chairs, the seat being raised; Fig. 5 is a view similar to Fig. 4, the seat being depressed; and, Figs. 6 and 7 are details of the means for pivotally connecting the seat with the back and back-leg structure.

In the drawings, *a* designates the back and back-leg structures; these are preferably of the bentwood type and may be of any desired style.

b designates the aforesaid standards, the same being arranged forward of the legs of the back and back-leg structure and somewhat farther apart; each standard includes a front leg *c* and an extension *d* which projects above the plane of the seat. The legs *c* curve forwardly, somewhat, and this curvature, taken with the rearward curvature of the back-legs, gives the necessary stability to the chairs which, it will be understood, may be either fixed or not to the floor by suitable means. *e* is the upper and *f* the lower U-shaped member.

The member *e* is secured to the back of the back and back-leg structure *a* at a suitable height so that its ends, which project forwardly, will be conveniently disposed to afford arms for the chairs. In the present instance it is secured to the back at the points *g*, by screws or the like, and on it rests the arms-proper *h*, the same being secured thereto by screws *i* or the like and having the upper ends of the extensions *d* of the standards doweled into or otherwise rigidly fixed to them. The back portion of the member *e* being extended around the back of the back and back-leg structure, is incidentally useful as a support for wraps, coats, etc.

The member *f* is secured to the front side of the back and back-leg structure in a plane slightly below that of the normal plane of the seat. In the present instance, the points of securing are four in number, screws *j* or the like being employed as the securing means. The forward ends of the member *f* are secured to the standards *b* by screws *k* or otherwise, thus rigidly connecting the standards with the back and back-leg structure. Thus the connected standards, back and back-leg structure and members *e* and *f* afford a substantial and rigid supporting means of themselves.

A horizontal bar *l* is secured by screws *m* to the ends of the member *f*, on which it rests, giving additional rigidity and stability to the frame of the chair. The seat *n* is preferably attached to the back and back-leg structure and is supported by the bar *l* when in its normal position, at which time recesses *o* in the under side of the seat receive the bar *l*. In the present instance the seat is pivotally attached to the back and back-leg structure in the following way: A metallic strap *p* extending transversely of the seat is secured to the under side thereof at the back by screws *q*, the end-portions *r* of said strap being bent upwardly at right angles. By means of rivets *s* said end-portions *r* are pivotally connected with links *t* also pivotally connected with the back and back-leg structure by screws *u*. This pivotal arrangement of the seat allows a double pivotal movement, one on the part of the links *t* on the screws *u* and the other on the part of the seat on the rivets *s*. When the seat is raised the links rest on the back portion of the member *f*, which limits their downward pivotal movement; when the seat is depressed it swings on the rivets *s* as an axis until it bears against the bar *l*, whereupon further pressure on the front portion of the seat will force the latter into the position shown in Fig. 5 in full lines, where the links stand upright and the seat has its recesses *o* engaged with the bar *l*, thus limiting planiform movement of the seat. This part of my invention, involving the method

of pivoting the seat and supporting the same when depressed has been made the subject of claims contained in another application filed of even date herewith.

In the foregoing description I have explained the construction of a single chair comprising my improvements; as illustrated in the drawings, a group of two or more chairs may be constructed to form a unitary structure, in which case a single standard *b* and a single arm-proper *h* are common elements of each two adjoining chairs, the adjoining ends of the two members *e* being secured to the under side of the arm-proper, side by side, and the adjoining ends of the two members *f* being secured at opposite points of the standard *b*. By altering the positions of the members *e* and *f* relatively to each other in securing them to the common or intermediate arm-proper and to the common standard *b* the chairs may be adapted to the curvature of the row to which they are to be assigned. And the spacing of the standards *b* to correspond to any desired center-to-center dimension of the chairs may also be varied according to the distance apart at which the two end-portions may be secured to the common arm-proper.

Where two or more chairs are assembled as a unitary structure, the bar *l* may be of such length as to correspond to the entire width thereof, as shown in the drawings; a saw-cut *v* in the bar will permit its being bent to suit the radius of the curve of the row to which the chairs are assigned.

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

1. The combination of a back and back-leg structure, standards disposed forward of said structure, a seat pivotally attached in the back part thereof to said structure and movable on a horizontal axis, means for connecting said structure and the standards rigidly together and for supporting the seat in its forward part comprising a substantially horizontal U-shaped member attached to said structure and having its ends projecting forwardly and each attached to a standard and a cross-piece connecting and resting upon the ends of said member, said standards projecting above the seating plane of the seat, and means for connecting said structure and the standards rigidly together above the seating plane comprising a U-shaped member attached to said standard and having its ends projecting forwardly and each attached to a standard, substantially as described.

2. The combination, with a seat, of a back and back-leg structure, standards disposed forward of said structure and extending above the seat, means for rigidly connecting the standards and said structure together comprising a U-shaped member attached to said structure and having its end-portions

projecting forwardly and attached to said standards and other means for rigidly connecting the standards and said structure together disposed above the first means and
5 comprising a U-shaped member attached to said structure and having its ends projecting forwardly, and arms proper resting upon the ends of the second U-shaped member and also upon the standards and secured
10 both to said ends and to said standards and

rigidly connecting them together, substantially as described.

In testimony, that I claim the foregoing, I have hereunto set my hand this 18th day of February, 1910.

ALBERT WANNER, JR.

Witnesses:

CHAS. E. WALTER,
WM. H. KUNTZ.