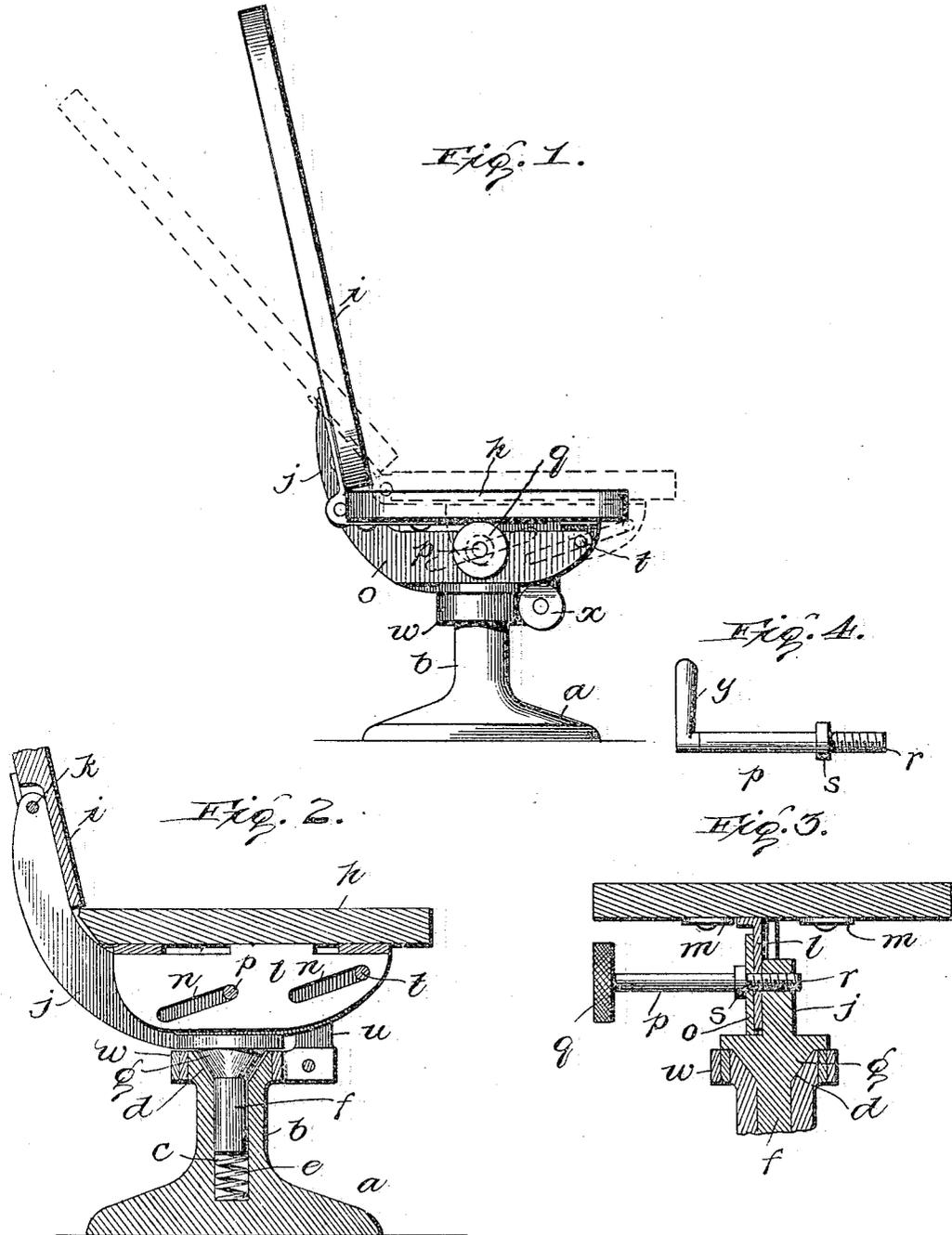


No. 809,944.

PATENTED JAN. 16, 1906.

J. E. HANGER.  
CHAIR.

APPLICATION FILED FEB. 1, 1904.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES E. HANGER, OF WASHINGTON, DISTRICT OF COLUMBIA.

## CHAIR.

No. 809,944.

Specification of Letters Patent.

Patented Jan. 16, 1906.

Application filed February 1, 1904. Serial No. 191,680.

*To all whom it may concern:*

Be it known that I, JAMES E. HANGER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in 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.

My invention relates to improvements in chairs; and the object of my invention is to produce a simple and cheap chair which may be revolved or tipped back and fastened in any particular position, being more especially applicable for reclining-chairs to be used in railway-cars.

With these objects my invention consists in the construction and combinations of parts, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of my improved chair, the dotted lines showing the position which it assumes when tilted back. Fig. 2 is a cross-section of the bottom portion of the same. Fig. 3 is a similar cross-section, but taken at right angles to the section shown in Fig. 2. Fig. 4 is a detail view of a modified form of the fastening device.

*a* represents the base of the chair, preferably made circular in shape and with an upwardly-extending hollow central portion *b*. This base may be fastened to the floor of the car, if desired, by means of screws or in any other way. The extension *b* is provided with a central recess *c*, made conical near the top, as shown at *d*.

*e* represents a spring located in the bottom of the recess *c*, and on this spring rests the spindle *f*, which is attached to the bottom of the chair-support. This spindle has a conical portion *g* to fit the conical recess *d*.

The chair proper consists of a bottom *h* and a back *i*, hinged thereto. Arms may of course be provided, if desired. The spindle *f* is attached to or made integral with a curved portion *j*, preferably made of metal. To the upper end of this curved piece *j* the back of the chair is hinged near the lower end of back. To the lower end of back the seat is hinged. To the bottom of the seat the downwardly-projecting plate *l* is firmly attached. This plate *l* extends from front to rear of seat, centrally located, and is provided with two-slots *n*. This plate *l* is adapted to lie along one side of curved plate *j*. On

the other side of plate *l* is a clamping-plate *o*, similar in shape to curved plate *j*, but not fastened to the spindle *f*—that is, the plate *l* lies between the plates *o* and *j*. Near front end of curved plate *j* a small stud *t* is permanently attached. This stud passes through slot *n* in front end of plate *l* and through hole in clamping-plate *o*. Near the center of plate *j* is a screw-threaded hole, and in clamping-plate *o* is a hole similarly located. These holes are opposite the rear slot *n* in plate *l*. The rod *p*, provided with the hand-wheel *q*, a threaded portion *r*, and a shoulder, passes through hole in plate *o*, slot *n*, and screws into threaded hole in plate *j*. By turning up hand-wheel the three plates *j*, *l*, and *o* are locked together, and when turned back the plate *l* is free to slide back and forth between plates *j* and *o*, limited only by slots *n*. The object of this construction is to lock or bind these three plates together, which also rigidly fixes the relative position of the back and seat. The same object can be obtained by placing the curved plate *j* between the other two plates *l* and *o*. Hence it is obvious that the back can be moved back and forth or rigidly secured at any inclination.

*t* represents a pin passing through the slot *n* and connected to the plates *j* and *o*. This is simply a guiding and limiting pin. The plate *o* is merely a clamping-plate, the weight of the chair and of the chair-back being mainly supported on the curved plate *j*. To the plate *j* is attached a downwardly-extending portion *u*, to which is pivoted an open-ended spring-collar *w*, which may be tightened or loosened by means of the screw *x*. The purpose of this collar is to fasten the chair against revolution, if it is desired. Under ordinary circumstances, however, the conical supports *d* and *g* offer enough frictional resistance to keep the chair from swinging freely. To make the action positive, however, I prefer to provide the clamping-collar, by which the chair-bottom may be firmly secured to the base, so that it will not rotate thereon. Instead of hand-wheel *q* the bolt *p* may be provided with an operating-lever *y*, as shown in Fig. 4.

The operation will be obvious from the foregoing description.

While I have thus described my invention, I wish it to be distinctly understood that I do not limit myself to the exact details shown and described, as these might be varied in many particulars without departing from

the spirit of my invention. For example, any desired fastening means might be used instead of the bolt *p*, as an eccentric-cam, for instance, or sets of engageable or disengage-

5 able ratchet-teeth.

I claim—

1. In a chair, the combination of a base, a support revolubly mounted on said base, a back hinged to said support, said support extending underneath said seat and being hinged to said back at or near a line passing through the vertical center thereof, means for adjusting said seat and back relatively to each other, and means for securing said back and seat against movement after the desired adjustment has been made, substantially as described.

2. In a chair, the combination of a perforated base, a chair-bottom, a back hinged thereto, a plate pivoted to said chair-back and supported by said base, a second plate carried by said chair-bottom, and means for adjustably securing said plates together, substantially as described.

3. In a chair, the combination of a hollow base, a chair-bottom provided with a downwardly-extending plate, a chair-back hinged to said chair-bottom, a curved plate hinged to said chair-back and provided with a spindle engaging said base, and means for adjustably clamping said plates together, substantially as described.

4. In a chair, the combination of a perforated base, a chair-bottom provided with a downwardly-extending slotted plate, a chair-back hinged thereto, a curved plate pivoted to said chair-back and provided with a spindle engaging said base, and means passing

through one of the slots in said first-named plate for clamping said plates together, substantially as described.

5. In a chair, the combination of a base provided with a central perforation, the upper part of which is reamed out to form an aperture the upper part of which is in the shape of an inverted cone a chair structure provided with a correspondingly-shaped spindle, a spring between the lower end of said spindle and said base, a plate carried by said chair structure and provided with a friction-collar, and means for tightening said friction-collar to prevent rotation of the chair structure upon said base, substantially as described.

6. In a chair, the combination of a base provided with an upwardly-extending central portion, said portion being provided with a cylindrical recess reamed out at the top, a chair-back, a curved plate attached to said chair-back and provided with a spindle engaging the recess in said base, a second plate parallel to said first-named plate and pivoted on said chair-back, a chair-bottom, a downwardly-extending slotted plate attached to said bottom, locking and guiding means for said three plates passing through said slots, a downwardly-extending part on said last-named plate, a friction-collar carried by said extension, and means for tightening said friction-collar, substantially as described.

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

JAMES E. HANGER.

Witnesses:

A. L. HOUGH,  
J. STEPHEN GIUSTA.