

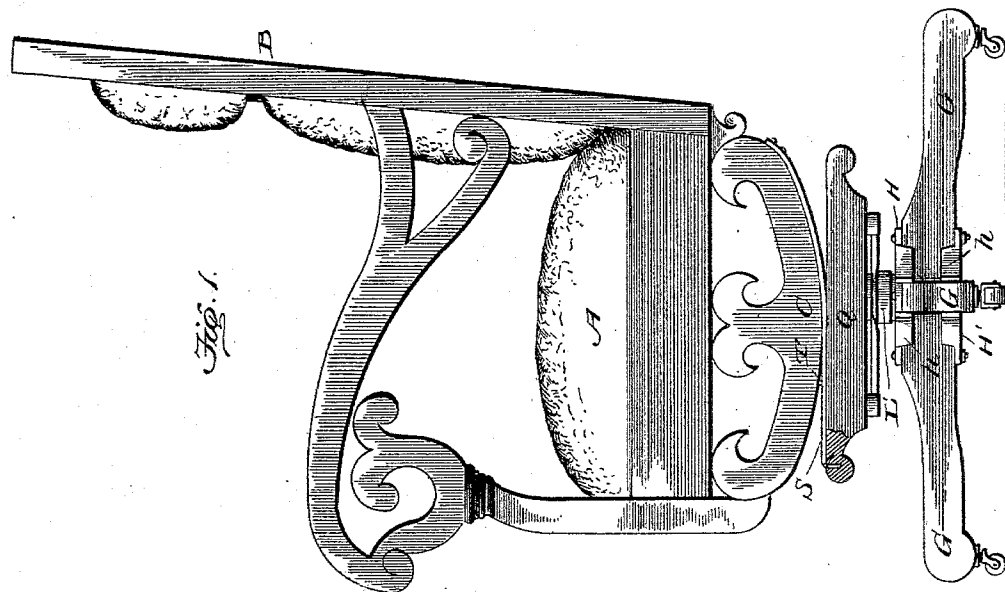
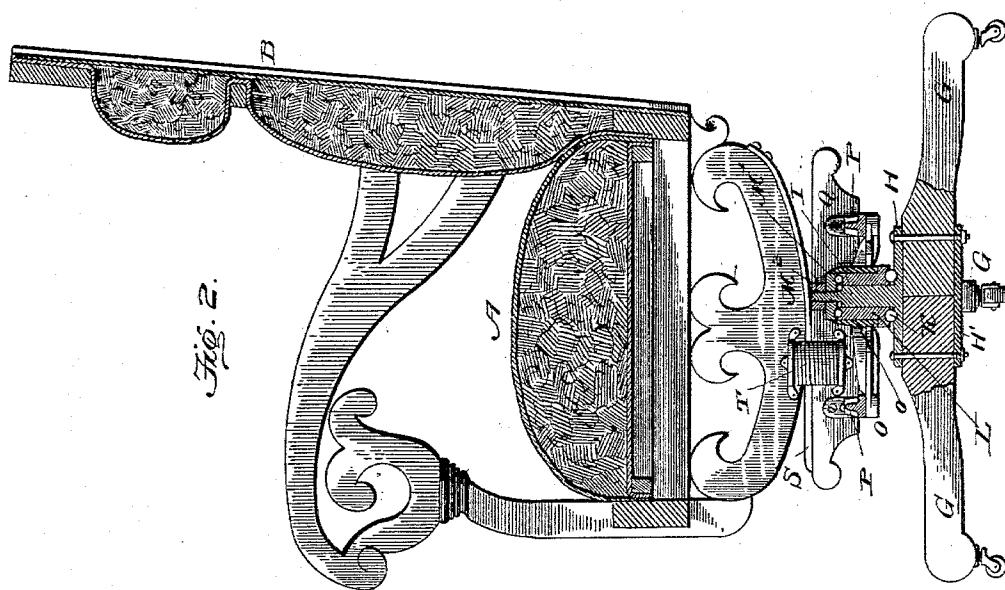
(No Model.)

3 Sheets—Sheet 1.

V. A. MENUEZ.
REVOLVING ROCKING CHAIR.

No. 561,719.

Patented June 9, 1896.



Witnesses:

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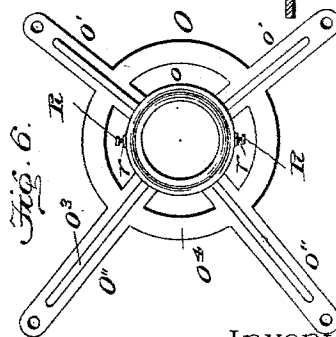
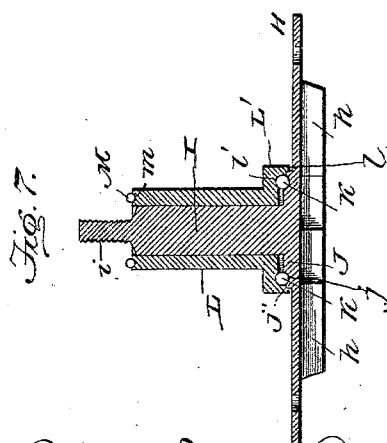
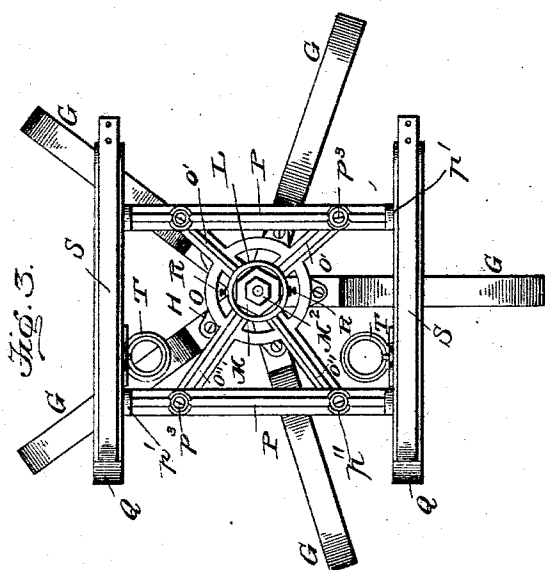
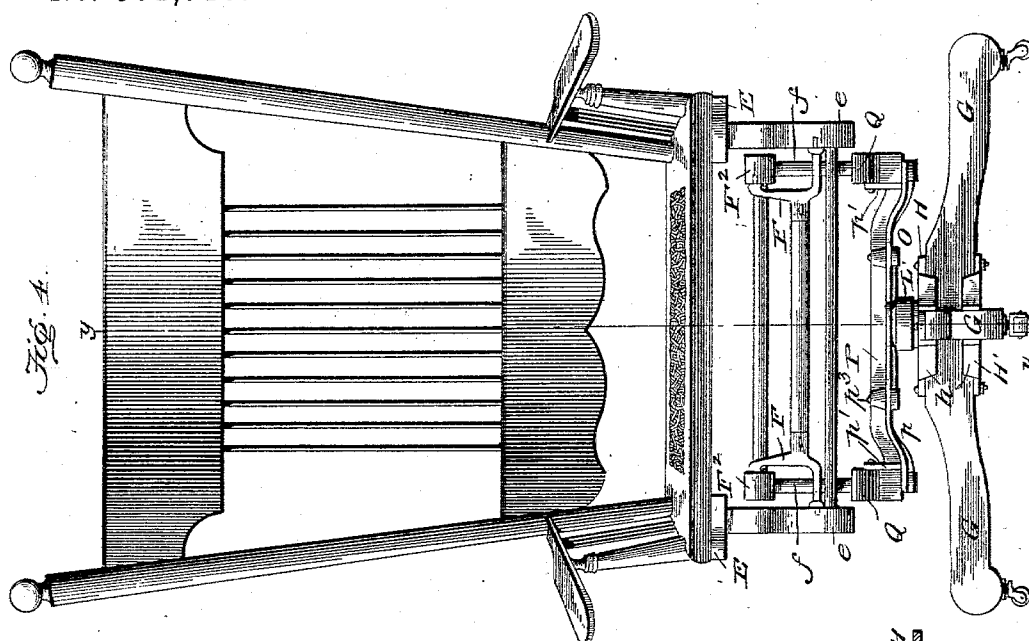
(No Model.)

3 Sheets—Sheet 2.

V. A. MENUEZ.
REVOLVING ROCKING CHAIR.

No. 561,719.

Patented June 9, 1896.



Witnesses:

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UNITED STATES PATENT OFFICE.

VINCENT A. MENUEZ, OF ELKHART, INDIANA.

REVOLVING ROCKING-CHAIR.

SPECIFICATION forming part of Letters Patent No. 561,719, dated June 9, 1896.

Application filed September 12, 1894. Serial No. 522,822. (No model.)

To all whom it may concern:

Be it known that I, VINCENT A. MENUEZ, a citizen of the United States, residing at Elkhart, in the county of Elkhart and State of Indiana, have invented certain new and useful Improvements in Revolving Rocking-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 revolvable chairs in which a swing or rocking chair seat or body is combined with a platform mounted to rotate in a horizontal plane about a vertical pivot on a bed-plate to which the legs are attached. In chairs of this style it is desirable to compactly dispose the various parts, so as to bring the seat and body as close to the supporting-legs as possible to avoid making the chair top-heavy and to bring the weight of the occupant directly over the vertical pivot around which the platform revolves in order to equalize the distribution of the weight and strain to reduce to a minimum the strain on the vertical pivot.

The object of this invention is to provide a revolving chair which will attain the desirable results above enumerated, and a further object is to provide a simple, strong, and cheap contrivance by which the friction and wear between the vertical pivot and the hub of the revolving platform are reduced to a minimum.

With these and such other ends in view as pertain to my invention, it consists in the combination of devices and in the peculiar construction and organization of parts, as will be hereinafter fully described and claimed.

To enable others to understand my invention, I have illustrated different embodiments thereof in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a rocking-chair embodying my invention. Fig. 2 is a vertical sectional view taken centrally through the chair, the revolving platform, and the bed-plate to which the legs are attached. Fig. 3 is a plan view of the base and platform, with the chair-body omitted, illustrating the construction of the revolving platform and

the position of the springs which connect the chair-rockers to the head-blocks of the revolvable platform. Fig. 4 is a front elevation of a swinging revolving chair embodying my invention. Fig. 5 is a vertical central sectional view through the chair shown in Fig. 4, the plane of the section being indicated by the dotted line *y y* on Fig. 4. Figs. 6 and 7 are detail views, in top plan and vertical section, respectively, of the revolvable spider and the vertical pivot of my chair. Fig. 8 is a detail view of one of the cross-bars to be attached to the spider and form a part of the platform. Fig. 9 is a modified construction of the bearing or vertical pivot and the spider forming parts of the revolvable platform.

Like letters of reference denote corresponding parts in all the figures of the drawings.

The chair shown by Figs. 1, 2, and 3 relates to that class known in the trade as "platform" or "base" rocking-chairs from the fact that the chair-seat *A*, the back *B*, and the curved bars *C C*, known technically as the "rockers," are all united rigidly together, and said curved bars or rockers *C C* are fitted upon "head-blocks" of a base or platform to oscillate and play thereon instead of upon a floor.

In the style of chair shown in Figs. 4 and 5 the connected seat and body are mounted upon and fastened to the side rails *E*, from which depend the hangers *e e*, and these hangers and side rails are connected by swinging stirrups *F F* to the head-blocks of the chair base or platform. No novelty is herein claimed for these devices, as they are of a style and construction well known to those skilled in the art; but with these devices I have combined my improved revolving platform and bed, so that my chair combines the desirable and convenient properties of a revolving and swing or rocking chair.

G designates the legs, which may be of any suitable number or material. I may use three, four, or five legs, of wood or other material, and the inner ends of these legs are secured to and clamped between the castings or plates *H H'*, which constitute the bed of the chair-base. These plates are cast with flanges *h* and arranged so that the flanges thereon face

toward each other to form sockets for the reception of the inner ends of the legs G, and through perforations provided near the ends of the plates are passed the screws or bolts that rigidly fasten the legs and bed-plates together. From the upper plate II of the bed rises a cylindrical pivot-pin I, which may be made integral with the plate II, but which is preferably made of steel and secured to the plate II, and the upper free extremity of this vertical pivot I is reduced and provided with an external screw-thread *i* for a purpose to be explained. The upper surface of the plate II around the base of the vertical pivot is raised in the form of an annular flange to form the bearing J, and in this bearing J is formed a groove or channel *j*, which is concentric with the vertical pivot. This groove or channel *j* provides a raised circumferential flange *j'* around the annular bearing J, which serves to retain in place the ball-bearings K, on which bearings rides the sleeve or hub L. This sleeve or hub is bored to accurately fit the cylindrical pivot I, on which the hub is free to rotate, and the lower end of this sleeve or hub is enlarged to form the base L'. This base L' has an annular pendent flange *l*, which fits to and around the flange *j'* on the bearing J, and in the lower face of the base L' is formed a channel *l'*, which is concentric with the channel *j* in the bearing J, so that the ball-bearings K fit in the channels *j l'* of the bearing J and sleeve L and are held and confined loosely in place by and between the parts, whereby the friction between the bed-plate II and the rotary sleeve or hub is reduced to a minimum.

The upper end of the sleeve or hub L is formed with an annular channel *m*, in which are placed the ball-bearings M, and to confine the upper balls M in place I provide a cap M', the lower face of which is channeled at *m'* to receive the bearings M. This cap M' is provided with a central screw-threaded aperture to enable the cap to be screwed on the threaded reduced end *i* of the vertical pivot I, and in order to hold the cap M' in position against working loose on the vertical pivot and permit of the loss of the ball-bearings I provide a jam-nut M², which is designed to be screwed on the protruding end *i* of the pivot I, so as to bear upon the top of the cap, as shown. In the preferred embodiment of the invention shown in Figs. 1 to 8, inclusive, this cap M' is made of a diameter equal to or a little less than the diameter of the hub or sleeve L, so that the cap lies flush with or within the surface of the loose sleeve or hub, which is important, as it enables the spider and revoluble platform of the chair to be lifted off or removed from the hub without interference from the cap M' and without disarranging the hub and the ball-bearings thereof.

It is well known that when furniture is to be shipped from one place to another it is necessary to disconnect the parts and pack them compactly together. In my chair the base

consisting of the legs, the bed-plates II II', and the ball-bearing sleeve or hub can be packed and shipped without danger of loss and disarrangement of the balls K M' from the fact that the hub and bearings are in place between the cap and the bed-plate.

In adjusting the cap M' and the jam-nut on the threaded extremity of the vertical pivot the cap is liable to be screwed down until it bears too tightly upon the bearings M and the hub L, and thus increase the friction between the parts, and to overcome this objection I may make the perimeter of the cap with angular faces—as, for instance, hexagonal in shape—to adapt a wrench to be applied to the cap, so that the latter can be held stationary while the jam-nut is being tightly screwed against the cap.

The revolving platform of my improved chair consists of the spider O, the parallel bars P P, and the head-blocks Q Q. The spider is shown in Fig. 6 of the drawings as consisting of a central hub *o* and a series of arms *o' o''*, radiating from the hub *o*, all of which are cast or formed in a single piece of metal. The radial arms *o' o''* of the spider are reinforced by the radial webs *o³* and the segmental webs *o⁴*, (shown in the detail view,) and I may employ three, four, or more of these radial arms, as may be desired. I prefer to employ four radial arms arranged in groups, as shown, the arms *o' o'* forming one group and the remaining arms *o'' o''* forming the other group, and the arms *o'' o''* of one group are made somewhat longer than the group *o' o'*, so as to produce a spider, which will bring the weight of the occupant forward over the vertical pivot I.

The longitudinal horizontal bars P P are each cast in a single piece of metal, and the ends of each bar P is bent or curved downward, as at *p*, the extremities of the bars beyond the downward-curved parts *p* being formed with the right-angled seats *p'* to receive the head-blocks Q Q. One bar P is laid across the outer extremity of the short arms *o' o'* of the spider, and the other bar P is similarly disposed on the long arms *o'' o''* of the spider, said bars being parallel to each other. The bars P P are formed with threaded bosses *p''*, and into these bosses are screwed the headed bolts *p³*, which pass through the openings at the extremities of the arms of the spider, whereby the spider and the bars are rigidly united together. The head-blocks Q Q are fitted snugly in the right-angled seats *p'* on the bars P P, so that the head-blocks are at right angles to the bars P, and the head-blocks and bars are rigidly fastened together by screws or bolts that pass through the seats *p'* and into said head-blocks. These head-blocks Q are preferably made of wood to harmonize with the chair and rockers C C; but they may be made of metal or any other suitable material.

In the spider-hub *o* are tapped two sockets *r r*, situated at diametrically opposite points, and in these tapped sockets are fitted the

binding-screws R R, which are adapted to be tightened against the sleeve or hub L, the inner ends of the binding-screws R being fitted in cavities provided therefor in the surface of the hub or sleeve L. The revoluble platform is designed to be supported by the anti-friction-bearing formed by the hub L and the balls K M, and the spider O is fitted snugly around the sleeve L, so that the lower face of the spider-hub rests upon the base L' of the sleeve L, after which the screws R are tightened, so as to clamp the spider tightly to the sleeve, whereby the platform and the sleeve L are adapted to rotate together around the vertical pivot I, and the platform is prevented from being accidentally lifted off the vertical pivot because the platform and sleeve are clamped together, and the sleeve is held by the cap M' and the jam-nut against vertical displacement. It is evident, however, that the platform and chair seat and body can be easily taken off for transportation or storage, because the screws R can be released and the spider O easily slipped along the sleeve L and the cap M', and it is also evident that when the parts are fitted and connected together for use the chair can turn easily, noiselessly, and with a minimum of friction because of the employment of the sleeve and ball-bearings.

In the "base-rocker" style of chair shown by Figs. 1, 2, and 3 the rockers C are applied to the head-blocks Q, so as to oscillate thereon, and in this style of chair I employ the retaining-straps S to hold the chair and rockers from slipping endwise or sidewise on the head-blocks. Each strap S is attached at one end to its head-block, at or near the front or middle part thereof, and at its other end to the lower face of the rocker-bar C, near the rear end thereof. These retaining-straps may be made of sheet metal, fabric, or other preferred material, and as they pull on the rockers C C uniformly on both sides of the chair when it is oscillated said straps serve to prevent both lateral and endwise displacement of the rockers C and the chair on the head-blocks Q, carried by the revoluble platform.

The rockers C C of the chair are connected to the head-blocks Q of the revoluble platform by the springs T, which may be of any preferred construction known to the trade.

In ordinary styles of base-rocker chairs the springs T are placed at about the middle of the rockers and base; but in a revolving chair embodying a rocking seat of the class to which my invention relates I have found that if the arms of the spider O are made of equal length and the springs T are connected to the rockers and the head-blocks, at the middle thereof, the weight of the occupant is thrown too far in the rear of the vertical pivot I, and hence the weight will be unequally distributed, and too much strain will be brought upon the pivot I, with the consequent result that the pivot is likely to be broken. I overcome these serious defects by

prolonging the arms $o'' o''$ of one group of the spider O somewhat longer than the other arms $o' o'$, and by placing the springs T on opposite sides of the long arms $o'' o''$ of the spider and in advance of a line drawn through the pivot I, parallel to the bars P, as clearly shown by Fig. 3 of the drawings. By thus arranging the spider and springs I am able to effect an equal distribution of the weight in the chair, and by providing the bars P with the downward bent or curved ends p , which sustain the head-blocks Q, on which rest the rocker-bars C, I am able to bring the chair down close to the legs, so that the chair will not be top-heavy and liable to tilt over.

In the chair shown by Figs. 4 and 5 of the drawings I employ the stationary side rails $F^2 F^2$, which are provided with pendent bars $f f$, the latter being rigidly fastened to the head-blocks Q Q of the revoluble spider. To these fixed rails $F^2 F^2$ are connected the upper ends of the swinging stirrups F, usually provided in chairs of this kind, and the lower ends of said stirrups are connected to the swinging side rails $e e$, on which the chair-seat is fastened. In the chair shown in Figs. 1 to 3 the revoluble spider has its hub fitted and clamped to the loose sleeve or hub L, which is mounted on the ball-bearings and on the vertical pivot I of the bed-plates H H', the legs being fastened to the plates H H'.

In the modified construction illustrated by Fig. 9 of the drawings the loose sleeve between the vertical pivot I and the spider is omitted, and in lieu thereof I employ another form of hub U, which is fitted loosely around the pivot and upon the ball-bearings K. The hub of the spider is fitted down upon this hub U, to which it is detachably connected by the pins u on the spider fitting in sockets u on the hub U, so that the spider rests upon and is supported by the hub U, which is adapted to rotate freely on the pivot I with the spider and platform, and the hub of the spider is in turn provided at its upper end with the ball-bearings M, upon which bears the cap, held in place by the jam-nut. Although this construction is well adapted to the purposes of my invention, yet I prefer the construction shown in Figs. 2, 3, 6, and 7, because the sleeve or hub L and cap permit the spider and platform to be detached without disturbing the ball-bearings for the purposes of transportation or storage of the chair.

I do not strictly limit my invention to the employment of the ball-bearings at the top and bottom of the hub of the spider, because in cheaper grades of chairs the upper bearing-balls or the lower bearing-balls or both sets of ball-bearings may be omitted. I am also aware that other changes in the form and proportion of parts and in the details of construction of the devices herein shown and described as an embodiment of my invention can be made without departing from the spirit or sacrificing the advantages there-

of, and I therefore reserve the right to make such modifications and alterations as fairly fall within the scope of my invention.

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

1. In a revolving chair, the combination of a base provided with a vertical fixed pivot and a bearing around the base thereof, the sleeve L loosely fitted on the vertical pivot and having an enlarged flanged lower end which incloses the bearing on the chair-base, a spider O provided with a hub o which is removably fitted on the sleeve and provided with clamping means to hold the spider and sleeve L rigidly together, the side bars P, head-blocks Q and a chair-body, substantially as described.

2. In a revolving chair, the combination of a base provided with a fixed vertical pivot and a bearing, a vertical sleeve fitted loosely on said vertical pivot and having its lower end enlarged to fit upon the bearing, the spider fitted on and clamped to said vertical sleeve or hub, the cap fixed to the upper extremity of the pivot and of substantially the same diameter as the vertical sleeve or hub, the bars fixed to the spider and carrying the head-blocks, and a chair-body, substantially as and for the purposes described.

3. In a revolving chair, the combination of a base provided with the vertical pivot I and the bearing-surface J, the sleeve L fitted to the pivot and having the enlarged lower end and the grooved upper end, the cap fitted to the upper end of the pivot, the ball-bearings interposed between the bearing-surface and enlarged end of the sleeve and between the grooved upper end of said sleeve and the cap, a spider fitted to the sleeve, the bars, head-blocks, and chair-body, substantially as and for the purposes described.

4. In a revolving chair, the combination with a base having a vertical pivot, of a revoluble spider mounted on said pivot and provided with a pair of elongated arms o' , o'' and another pair of short arms o' , o' , the cross-bars P, P, which are fastened to the arms o' , o' and to the arms o'' , o'' respectively, the head-blocks Q, Q, fastened to the ends of the cross-bars P, P, and arranged at right angles thereto, and a chair-body having its rockers

fitted to the head-blocks, substantially as and for the purposes described.

5. In a revolving chair, the combination with a base provided with a vertical pivot, of the spider fitted loosely on said pivot and having the radial short arms o' on one side and the elongated arms o'' on the other side thereof, the transverse bars P, P, fastened to the arms o' and o'' respectively and having their ends beyond the points of attachment to the arms o' , o'' , carried or bent downward and forming seats at their lower free ends, the head-blocks Q, Q, arranged at right angles to the bars P, P, and secured in the seats at the free turned-down ends thereof, and a chair-body having its rockers mounted on the head-blocks, substantially as and for the purposes described.

6. In a revolving chair, the combination with a base having a vertical pivot, of a spider provided on its front and rear sides with the radial arms, o' , o'' of unequal length, the cross-bars P, P, fastened to the arms o' , o'' respectively and having their ends, beyond the points of attachment to said arms, deflected or bent downwardly to lie substantially in the plane of the base, the head-blocks arranged at right angles to the cross-bars and fastened to the deflected or bent-down ends of the same, a chair-body having its rockers mounted on the head-blocks, and the springs T situated in a line between the front side of the chair-body and a line drawn transversely through the pivot of the spider and having their ends attached respectively to the chair-rockers and the head-blocks, substantially as described.

7. A revoluble spider for chairs consisting of a center-piece or hub, the short and long arms o' , o'' , extending outwardly from said hub or center-piece, the bars P, P, fastened to said arms o' , o'' , respectively, and the head-blocks Q, Q, arranged at right angles to said bars and fastened thereto, for the purposes described, substantially as set forth.

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

VINCENT A. MENEZ.

Witnesses:

LIVY CHAMBERLAIN,
EMERY B. JONES.