

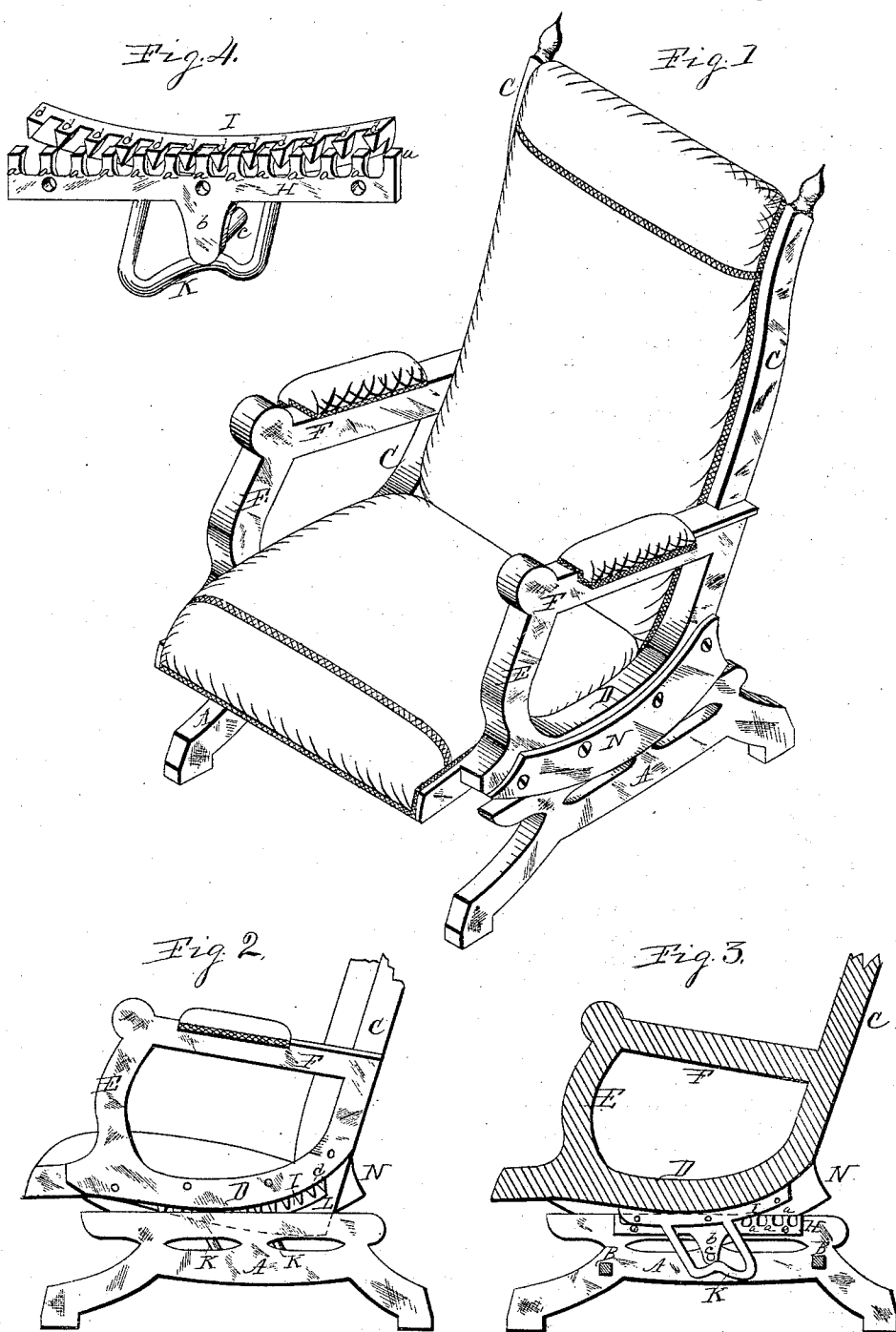
(No Model.)

J. W. H. DOUBLER.

CHAIR.

No. 317,933.

Patented May 12, 1885.



Witnesses.
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CHAIR.

SPECIFICATION forming part of Letters Patent No. 317,933, dated May 12, 1885.

Application filed September 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. H. DOUBLER, a citizen of the United States, residing in the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Chair, of which the following is a specification.

This invention relates to rocking-chairs of that class mounted to rock on a pedestal. Its object is to produce a well-balanced rocker without the use of springs, and to so connect the rocker with the pedestal that in lifting, shifting, or handling the chair it will not separate from the base, and to limit its rocking movement, so as to prevent overtopping or displacement of the rocker on its pedestal. These and other improvements, all of which will be hereinafter more fully described, constitute the subject-matter of this specification.

In the accompanying drawings, Figure 1 is an isometrical representation of a chair embodying my invention. Fig. 2 is a side elevation. Fig. 3 is a vertical section cut lengthwise of the sides of the pedestal-base and about on the vertical plane of the inner face thereof, and Fig. 4 is an isometrical representation of the toothed racks.

In the figures, A represents the side, and B the transverse bars, of the pedestal, which are of the usual form, framed and joined in the usual manner, producing a pedestal, substantially such as are now in use, and to be found in the trade.

The frame proper of the chair consists of like side frames composed of pillars C, rockers D, front pillars, E, and arms F, suitably framed and joined to each other, and are supported and held in their separated relative position by means of suitable transverse bars framed or otherwise securely fixed to the side frames, producing a main frame substantially the same as chair-frames now in use and to be found in the trade, except in the relative position and curve of the rockers.

The face of the rocker D of my improved chair, designed to engage the upper face of the pedestal, is produced in a regular varying curve increasing in curvature from its forward end rearward, substantially in the segment of an ellipse, as clearly shown in Figs. 2 and 3. By this form of rocker I am enabled to pro-

duce a chair in which the rocking movement will be more nearly uniform throughout its entire movement than can be obtained by the employment of a segment-rocker in which the curve is substantially regular or uniform throughout. In the employment of this varying curvature of the rocker I am enabled to produce a chair equally balanced under the varying weights of parties requiring its use.

At H is represented a gear-toothed rack, preferably with gear-teeth *a* of the peculiar form shown at Fig. 2, having their pitch-line and greatest dimensions at or near their peripheral face. This toothed rack H is provided with a pendant, *b*, depending from the central portion of its lower edge, and from the lower end of its inner face projects a pin-stud, *c*. The outer face of this rack is fixed to the inner face of the sides A of the pedestal by means of screws or otherwise, and preferably in such position thereon that the face ends of the teeth shall be slightly below the rocking-surface of the pedestal.

At I is represented a segment-toothed rack of a regular varying curvature to conform to the curve of the rocker D. The teeth *d* of this rack are of the peculiar V form represented in Fig. 4, having their pitch-line and greatest dimensions on its inner curved surface forming the base of the teeth. The pitch of the teeth of this segment, and of the toothed rack H, are such that they shall engage each other in the rocking movement with the least practical lost motion, to prevent endwise and side-wise movement of the rocker on the pedestal. This toothed segment I is provided with a cam-formed loop, K, depending centrally from its lower edge, and of a conformation to receive the stud-pin *c* of the rack-bar H in a manner to permit a limited back-and-forth free rocking movement of the chair, and serves to hold it in position on the pedestal to prevent accidental displacement, and to hold the parts together in handling. This toothed segment I is fixed in position in this instance to the central portion, L, of the chair depending below the rockers, and in such a manner that its curved inner face shall engage the rocking-surface on its inner-edge portion.

From the foregoing it will be seen that in this construction and arrangement of the parts

the curved surface of the rocker engages the pedestal, and the gear-teeth of the respective toothed racks, by means of their respective peculiar conformation, engage each other only at the contact-point of the rockers, and serve to hold them in their relative position to permit of a free noiseless rocking movement; and the connection of the cam-formed loop with the stud-pin operates to prevent displacement and limit the throw of the rocker.

At N is represented a shield or guard-plate, fixed to the outer face of the rocker to overlap the joint between the rocker and the pedestal, to prevent the clothes of the occupant entering between them. It will further be seen that the curved rear portion of the rockers D rises above the seat portion L of the chair, as shown in the dotted lines at Fig. 2. By this construction, in connection with the peculiar curve of the rocker, I am enabled to produce a rocker better balanced and better adapted to occupants of various weights than any chair known to me. In this instance I have shown and described the rocker of my improved chair as consisting in its peculiar construction and placed upon the chair above the seat, at

its rear end, all of which I prefer, but do not wish to confine myself strictly to these particulars, as substantially the same results may be obtained by a rocker varying slightly in its curvature, and may be placed higher or lower upon the chair and still be within the scope of my invention so long as the chair is held balanced upon the pedestal and limited in its rocking movement thereon, substantially as hereinbefore stated.

I am aware that it is not broadly new to combine a rack and toothed segment with a pedestal chair; hence I do not broadly claim such a combination; but

I claim as my invention—

The combination, with a pedestal, and with a chair mounted thereon, of a toothed rack fixed to the pedestal and a toothed segment fixed to the chair and provided with depending loops to engage inwardly-projecting pins of the pedestal, substantially as set forth.

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Witnesses:

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