

J. FLINDALL.
TILTING CHAIR.
APPLICATION FILED MAY 8, 1907.

958,998.

Patented May 24, 1910.

2 SHEETS—SHEET 1.

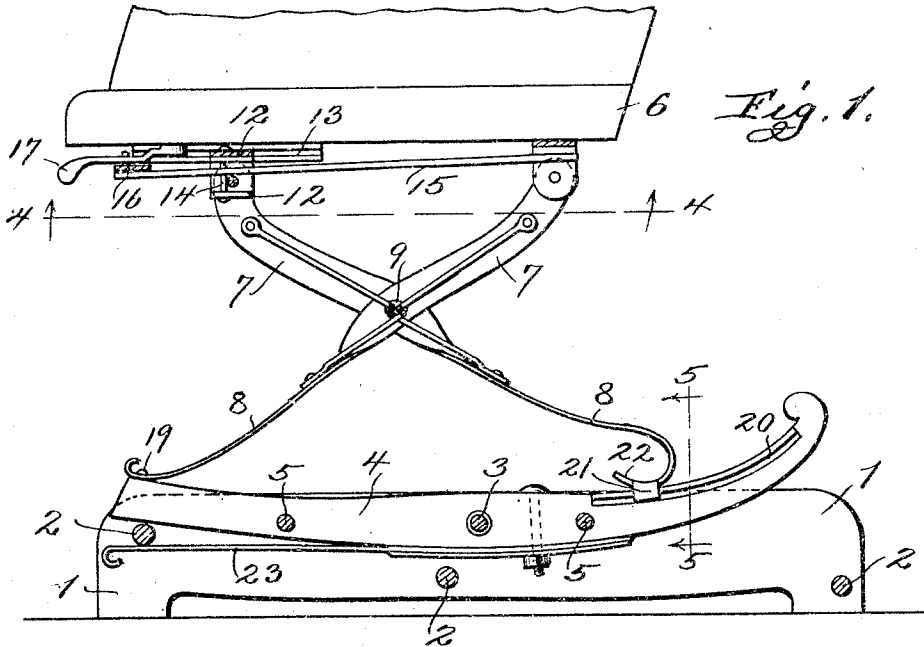
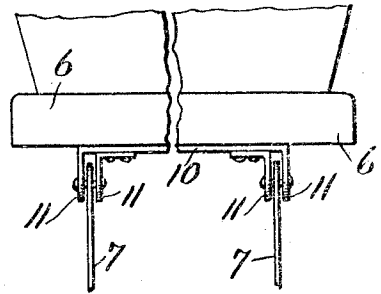
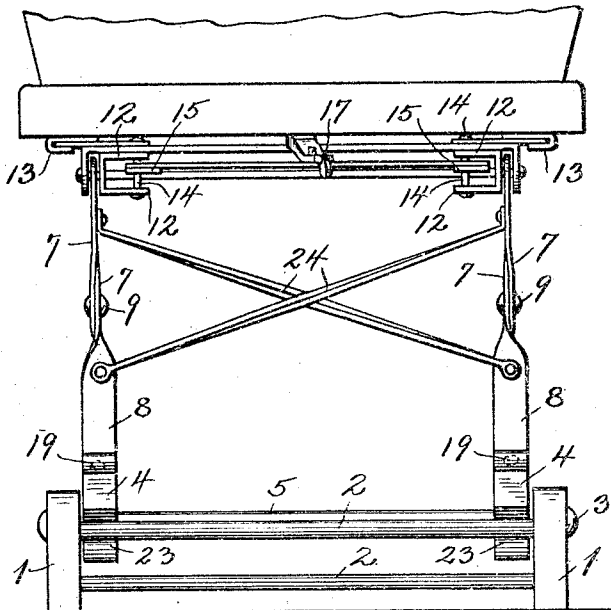


Fig. 2.

Fig. 3.



Witnesses:
R. J. Jacker
Florence E. Dennis.

Inventor:
John Flindall
By J. H. Whipple
att'y.

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2 SHEETS—SHEET 2.

Fig. 4.

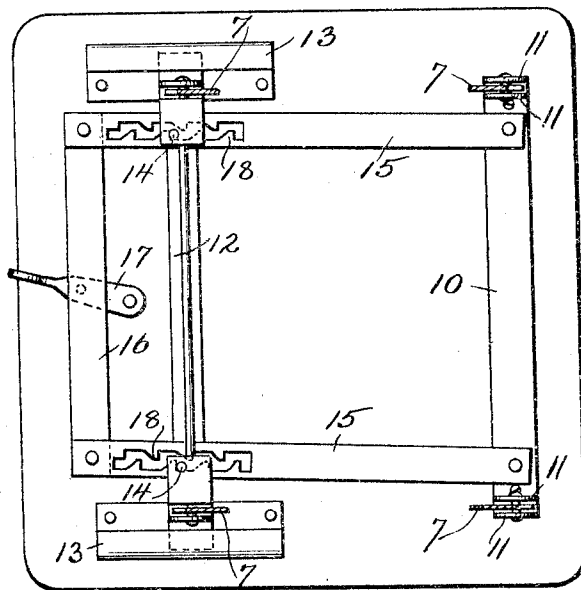
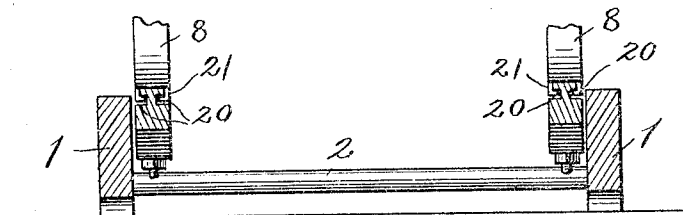


Fig. 5.



Witnesses:
R. J. Gaeker
Florence E. Dennis.

Inventor:
John Flindall
By Geo. H. Whipple
att'y

UNITED STATES PATENT OFFICE.

JOHN FLINDALL, OF CHICAGO, ILLINOIS.

TILTING-CHAIR.

958,998.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed May 8, 1907. Serial No. 372,582.

To all whom it may concern:

Be it known that I, JOHN FLINDALL, of Chicago, in the State of Illinois, have invented certain new and useful Improvements in Tilting-Chairs, of which the following is a specification.

This invention relates to chairs in which the seat is vertically adjustable; and the objects are, first, to provide a seat so supported upon a frame as to be vertically adjustable relative to the same; and, second, to provide a spring support for the seat upon the frame, and also to provide a rocking frame for the seat. I attain these objects by the means illustrated in the accompanying drawings in which—

Figure 1 is a fragmentary side elevation partly in section. Fig. 2 is a front elevation. Fig. 3 is a detail showing a broken elevation. Fig. 4 is an inverted horizontal section taken on the plane 4—4 of Fig. 1. Fig. 5 is a detail showing a vertical section at 5—5 Fig. 1.

Referring to the drawings, a base or support comprising side pieces 1 connected by rungs 2 is provided. Centrally pivoted to the side pieces of the base at 3 are two inner pieces 4 connected by rungs at 5 to form an inner, rocking frame. The seat 6 is mounted on the rocking frame by means of lazy-tongs 7 made preferably of sheet steel which have the lower members 8, below the pivotal connection at 9, turned with the sides facing downward toward the rocking frame, so as to form a spring support for the seat on the rocking frame. At the rear the upper ends of the lazy-tongs are preferably connected by a piece 10 (Figs. 3 and 4) having lugs 11 between which the said upper ends enter and are secured by a rivet or pin. The piece 10 is secured to the bottom of the seat. At the front, the upper ends of the lazy-tongs are similarly connected to a slidable piece 12, the opposite ends of which slide in grooves formed in metallic pieces 13 (Figs. 2 and 4) secured to the under side of the seat. A rack pin 14 is provided at each end of the sliding piece 12. A slotted ratchet plate 15, pivoted at its rear end, is provided in connection with each of the rack pins and a cross bar 16 pivotally connects the front ends of the ratchet plates. A short lever 17 is pivoted to the seat and to the cross bar. The teeth 18 are staggered in opposite sides of the slots and are beveled on one side so that the rack pins can pass the

teeth when approaching the bevel side, and square on the opposite side to stop the rack pin. The sliding piece 12 is thus made movable toward the front and rear the length 60 of the slots in the plate 15, carrying the front upper ends of the lazy-tongs along with it, and may be set at the square side of each of the teeth.

The foot of the lazy-tongs at the front is secured at 19 to the rocking frame so as not to be movable toward the front or rear thereon, but at the rear a slidable connection is provided. In the construction illustrated the side pieces 4 are provided with a groove 70 20 on each side in which a clasp 21 applied over the foot behind the upwardly curved end 22 at the foot will hold the foot on the top of the rocking frame at the rear and permit it to slide back and forth thereon. 75

A spring 23 is connected with the rocking frame and adapted to engage with the front rung of the base to limit the backward tilting of the rocking frame, and a suitable stop is provided to check the forward movement. 80

The lazy-tongs are also suitably braced by cross pieces 24 to prevent lateral play or swaying.

The rack pins move in the slots of the bars 15 toward the rear when the seat is raised and toward the front when the seat is lowered. The beveled sides of the teeth are toward the rear so that by lifting on the seat it may be raised without working the lever 17, and remain fixed against downward pressure at any point to which it may be raised; but to lower the seat the lever must be worked to release the rack pins from the square face of each tooth. 95

The invention is distinguished from all others by an inseparable, slidable, adjustable connection of the ends of one member of each lazy-tongs with the bottom of the seat and a free-sliding connection of the opposite end of the same member of each lazy-tongs with the supporting frame. The first mentioned of these connections is found in the sliding piece 12 to which the said ends are permanently pivoted, the grooved parts 105 13 fixed to the bottom of the seat and forming ways in which the ends of part 12 can move freely back and forth on the bottom without being separated or disjoined therefrom and the rack-pins 14 on said part 12 110 and ratchet plates 15 adapted to cooperate with said ways for regulating the adjustabil-

ity of such connection; and said free-sliding connection is found in the grooves 20 and clasp 21 whereby said opposite ends are secured to the supporting frame and controlled simultaneously with said first named connection by the ratchet-plates 15.

The invention is also distinguished from others in that the rocking is on a pivotal connection of the inner rocking frame with the base instead of on rockers, and a spring connection 23 is so applied as to restrain or limit the tilting on the pivotal connection only in one direction and tends to return it in the opposite direction.

I do not wish to be understood that the invention is limited to the special form of the parts as illustrated and described, but rather that it includes the combination and arrangement of parts whereby a vertically

adjustable substantially horizontal seat is connected by a yielding connection with a rocking frame in any substantially similar way.

This is a new application filed in place of my rejected application for a patent for the same invention, filed June 27, 1904, Serial No. 214,239.

What is claimed is—

In a chair of the class described the combination with slidable piece 12 provided with rack pins at its opposite ends of oscillating plates 15 provided with slots set with staggered teeth, connecting bar 16 and hand lever 17.

JOHN FLINDALL.

Witnesses:

EDWARD J. KELLEY,
FLORENCE E. DENNIS.