

(No Model.)

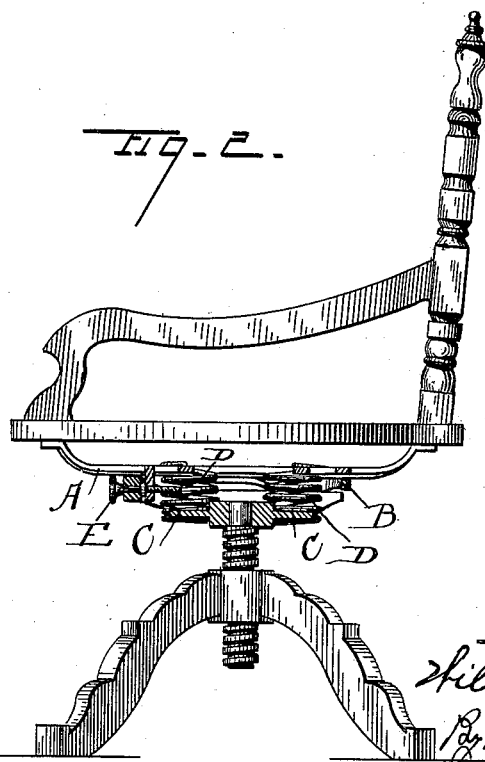
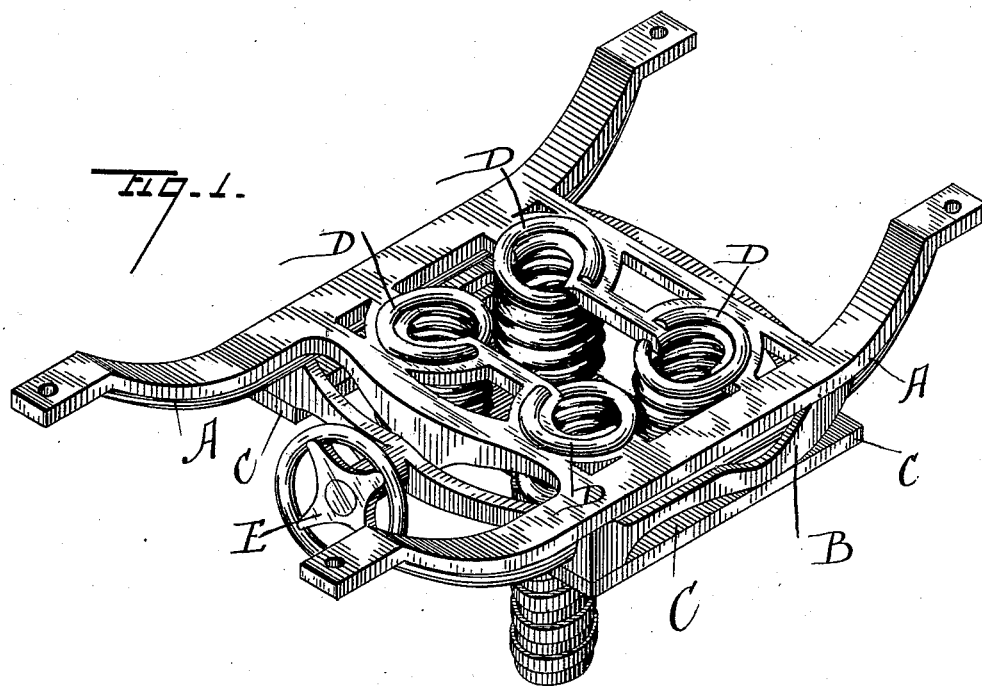
2 Sheets—Sheet 1.

W. I. BUNKER.

CHAIR.

No. 384,608.

Patented June 19, 1888.



Witnesses

as. Pari
W S Bates

Inventor

William I. Bunker,
By Banning & Banning,

Attorneys.

(No Model.)

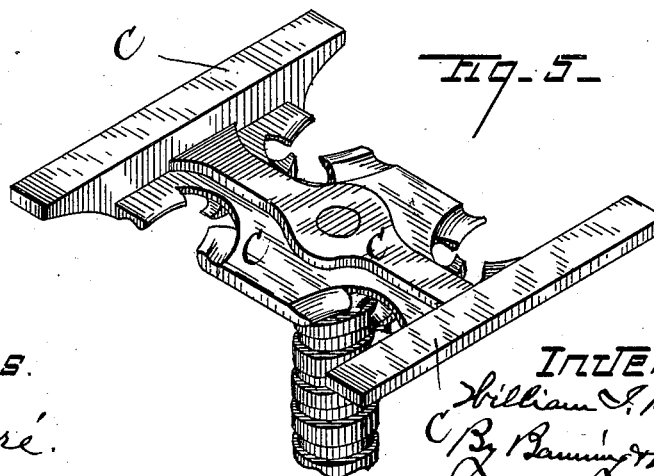
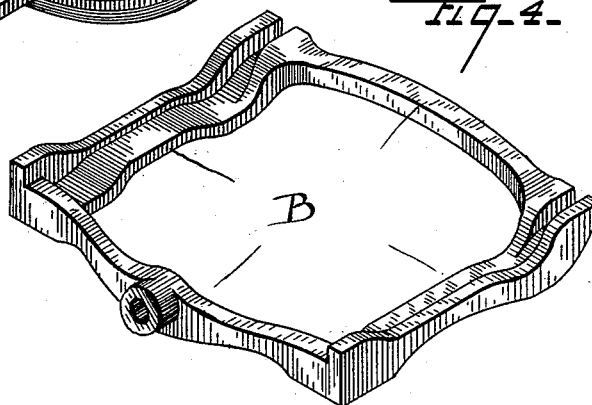
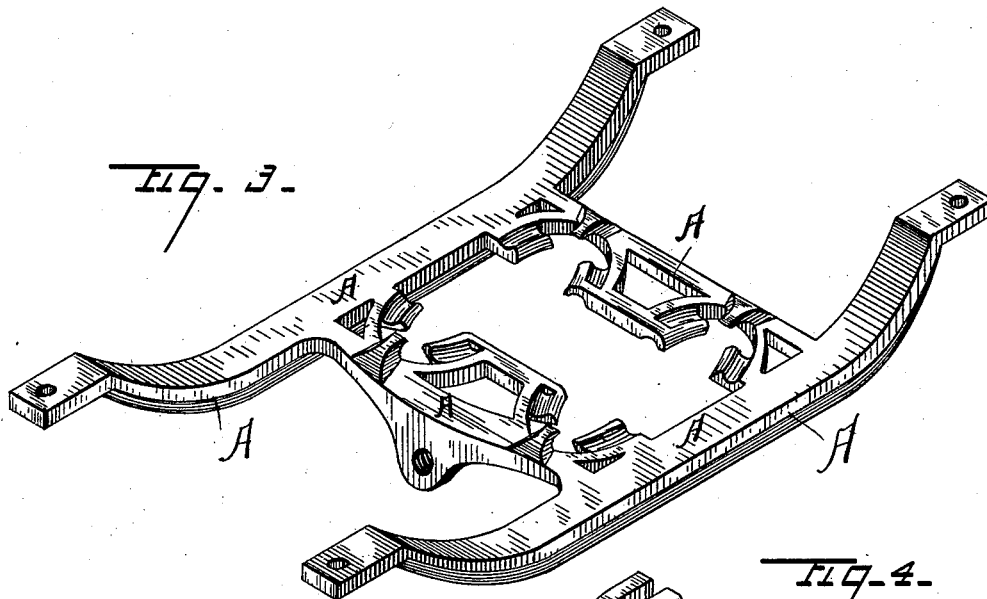
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INVENTOR.
William I. Bunker,
By Banning & Banning,
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM I. BUNKER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ROCKER
SPRING COMPANY, OF SAME PLACE.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 384,608, dated June 19, 1888.

Application filed March 29, 1887. Serial No. 232,839. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM I. BUNKER, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Chairs, of which the following is a specification.

The object of my invention is to make a rocking or tilting chair which shall have the center of oscillation of its seat part or point of contact from which it takes its motion adjustable back and forth; and the invention consists in the features and combinations herein-after described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of parts of my improved chair when constructed as hereinafter described; Fig. 2, a side elevation of such chair, the rockers and base-rails being shown in section, and Figs. 3, 4, and 5 perspective views of parts in detail.

A designates the frame attached to the chair, and irons to which the upper end of each spring is attached; B, the rockers adapted to receive the frame; C, the base-rails, on which the rockers rest and move, and the irons to which the lower end of each spring is attached; D, the springs connecting the upper and lower parts of the chair together, and E a screw-bolt for adjusting the rockers back and forth to change the center of oscillation of the chair-seat.

My invention is applicable to all kinds of chairs having a rocking or tilting part and a base or support on which the seat rests and moves; but for convenience I will describe it as applied to an ordinary office-chair having rocking features or motions. In this construction I provide base-rails having smooth surfaces, and on these base-rails I place the rockers. These rockers are of course of a width corresponding to the base-rails and are adapted to receive the frame and hold the same in place.

The irons extending across from one base-rail or one side of the frame to the other are provided with suitable grooved or flanged projections to receive and hold the last coils of the connecting-springs. Any desired number of these springs may be used; but for an ordinary chair of the kind which I am now de-

scribing four will be found convenient and abundantly sufficient. Each of the springs is rigidly secured to the cross-irons of the frame and base-rails by having its last coil or terminal wire at each end screwed into or otherwise inserted in the grooves of the projecting parts above mentioned, and, being thus secured, they form the connection between the rocking and base parts of the chair. When four springs are used—two in front of the center of oscillation and two in or about such center—it will be apparent that, as the rockers are adjusted back and forth, so as to change or vary the point on which the weight of the chair and its occupant rests, the function or operation of these several springs is correspondingly changed. For instance, when they are moved back the leverage of the springs is increased, and when moved forward diminished, and the operation of the chair correspondingly changed. This changing or shifting of the position or weight of the seat thus enables one pair of springs to perform the main part of the work whenever the other pair becomes weakened or it becomes desirable for any reason to relieve them from any strain or work.

As already stated, the rockers B are made of a width and form to correspond with the frame and base-rails, and are adapted to move lengthwise whenever the adjusting-screw is operated. They may also have a bar at each end extending across from one side to the other, the whole being preferably cast integral, like the frame and its connecting-irons or the base-rails and their connecting-irons, above described.

The adjusting-screw may pass through a hole in the front bar of the rockers and a threaded hole in a downward projection in the front bar of the frame-irons; and in this arrangement at the inside of the front bar of the rockers a shoulder or other securing device may be used to prevent the adjusting-screw from being unscrewed or taken out. Being thus secured and passing through the threaded hole in the downward projection of the frame-irons above mentioned, the screw whenever operated will bring the front bar of the rockers and the downward projection of the front bar of the frame nearer to each other or farther apart, de-

pending on the way in which it is turned. For instance, this adjusting-screw being at the front of the chair, whenever it is screwed up it will serve to force the rockers back, and whenever unscrewed to bring them forward on their base rails or supports. This adjustment of the rockers causes the rocking or tilting part of the chair to change its points of contact with the base-rails, and in this way the center of oscillation of the chair-seat may be changed or varied at pleasure, and of course this changing of the center of oscillation operates to change the position and weight of the seat and its occupant relative to the springs and lower part of the chair, and thus to lessen the strain on some of the springs and increase it on others, as above mentioned.

As above stated, my invention is applicable to all kinds of chairs having a tilting or rocking part and a base or support therefor, and hence when applied to other forms of chairs than the one above described the construction of the parts will naturally be varied accordingly. For instance, the point from which the movements of the seat of a mere tilting-chair are obtained may be varied in the way above described, but of course no rockers technically will be necessary or used in such a case. It is also apparent that slight mechanical changes will have to be made in applying my invention to ordinary base rockers, the seat parts of which do not usually have irons specially adapted to be secured to their under sides; but all these changes can readily be made without departing from the spirit of my invention.

I am aware of the Lemman patent of Jan-

uary 11, 1876, and the Barry patent of July 27, 1886, and of course do not intend to claim or cover the constructions therein shown respectively.

I claim—

1. The combination, in a tilting or rocking chair, of a seat part, a base part, connectors for securing and holding said parts together, and a movable portion forming the rockers interposed between the seat and base parts for changing the center of oscillation of the chair-seat, substantially as described.

2. The combination, in a tilting or rocking chair, of a seat part, a base part, connectors for securing and holding said parts together, movable rockers interposed between the seat and base parts, and means for moving such rockers back and forth to change the center of oscillation of the chair-seat, substantially as described.

3. The combination, in a tilting or rocking chair, of a seat part having projecting parts to receive and hold the ends of a coiled spring, a base part having base rails or supports and projecting parts to receive and hold the ends of a coiled spring, connectors for securing and holding said parts together, movable rockers interposed between the seat part and the base-rails, and means for moving said rockers back and forth on the base-rails to change the center of oscillation of the chair-seat, substantially as described.

WILLIAM I. BUNKER.

Witnesses:

EPHRAIM BANNING,
GEORGE C. COOK.