

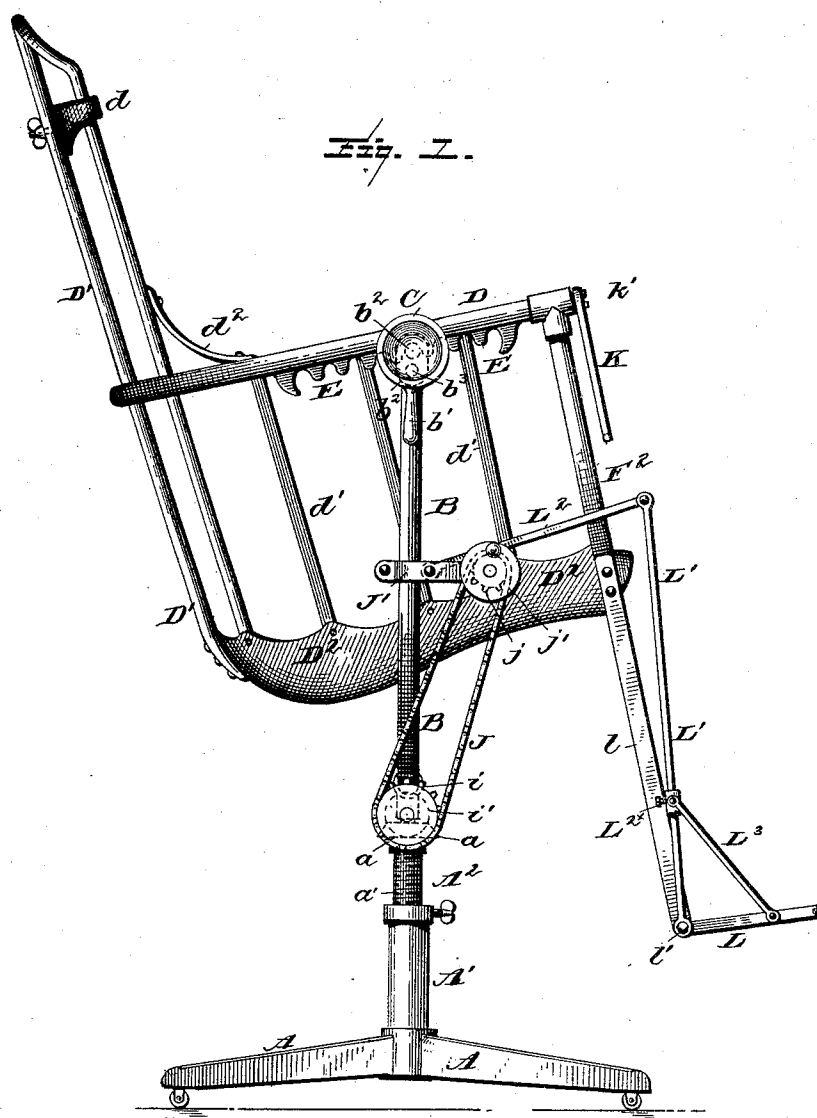
(No Model.)

3 Sheets—Sheet 1.

W. OSWELL.
CHAIR.

No. 437,235.

Patented Sept. 30, 1890.



Witnesses
L. C. Hills.
E. H. Bond.

Inventor
William Oswell.
per *Chas. H. Fowler*
Attorney

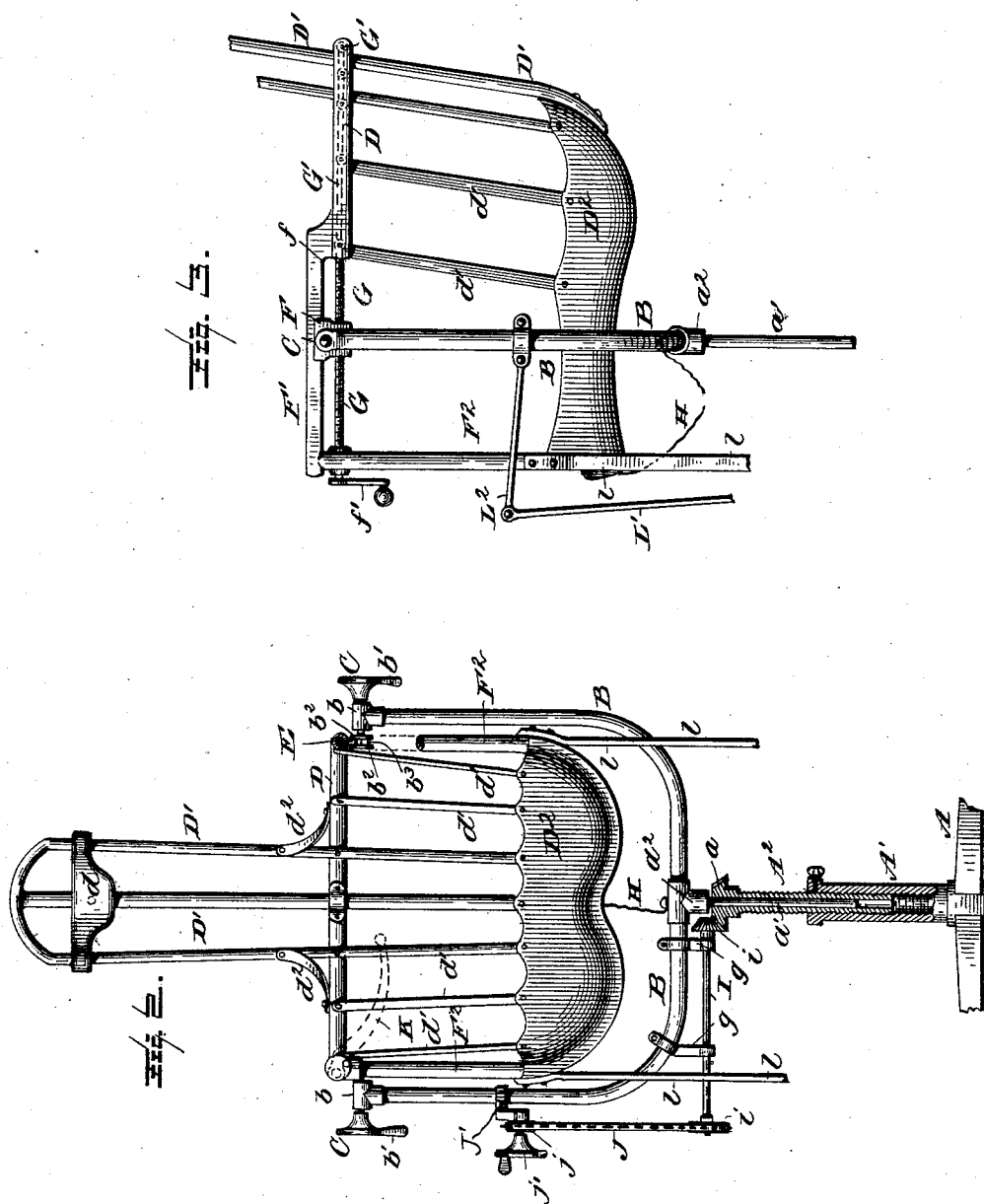
(No Model.)

3 Sheets—Sheet 2.

W. OSWELL.
CHAIR.

No. 437,235.

Patented Sept. 30, 1890.



Witnesses

L. C. Hills
E. H. Bond.

Inventor
William Oswell.
per Cha. H. Fowler
Attorney

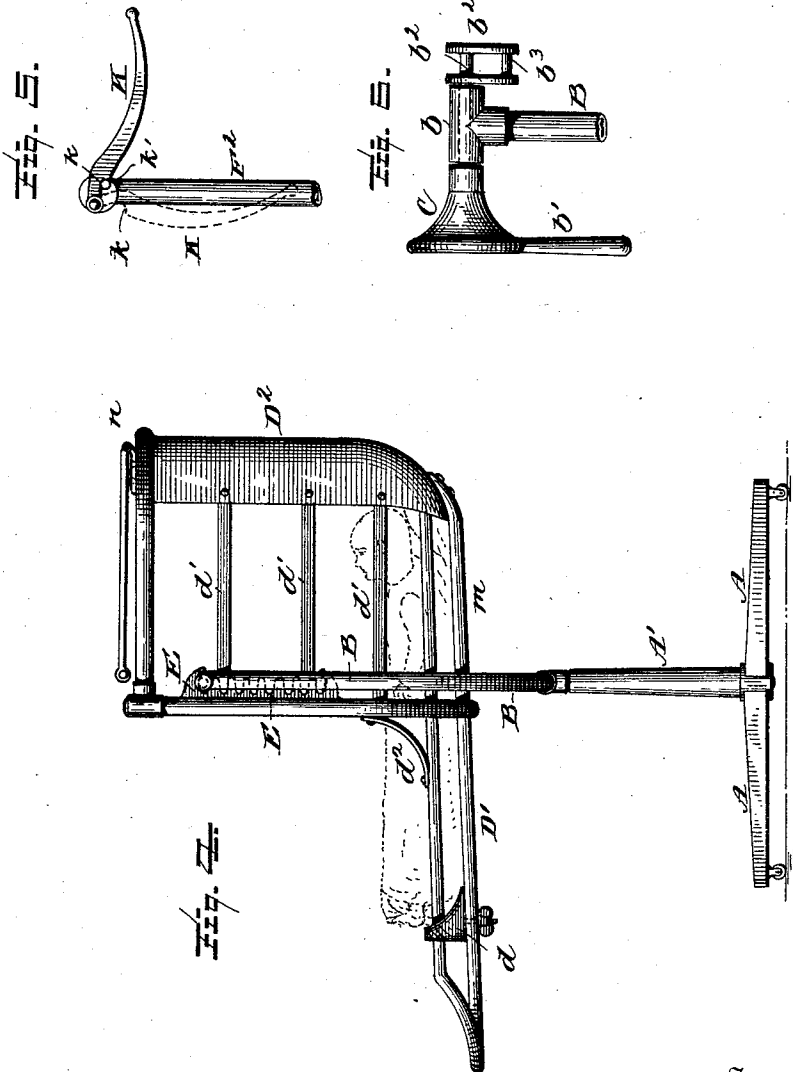
(No Model.)

3 Sheets—Sheet 3.

W. OSWELL.
CHAIR.

No. 437,235.

Patented Sept. 30, 1890.



Witnesses
L. C. Hills.
E. H. Bond.

Inventor
William Oswell.
per *Chas. H. Fowler*
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM OSWELL, OF AKRON, OHIO.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 437,235, dated September 30, 1890.

Application filed March 3, 1890. Serial No. 342,370. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM OSWELL, a citizen of the United States, residing at the city of Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Chairs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in chairs, and more particularly to that class of chairs which are adapted to be tilted or adjusted to bring the same into various positions, adapting it for use by invalids or as an easy-chair.

The novelty resides in the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation of a chair constructed in accordance with my invention. Fig. 2 is a front view of the same with the foot or leg rest removed and with parts broken away and other parts in section. Fig. 3 is a side elevation in detail of a modification. Fig. 4 is a side elevation of the chair with slight modifications shown adjusted to form a crib. Figs. 5 and 6 are details, which will be more particularly referred to hereinafter.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates a suitable base, which may be in any desired shape and preferably upon rollers, as shown in Fig. 1. Rising from this base is a hollow standard A', internally threaded, as shown in Fig. 2, to which is fitted a threaded spindle A², as also shown in said Fig. 2. This threaded spindle carries at its upper end a bevel-pinion *a*, and is centrally bored for the reception of a spin-

dle *a'*, to the upper end of which is affixed a fork or coupling *a*², to which the yoke B is secured, as shown best in Fig. 2. The yoke B has at its upper ends couplings *b*, through the horizontal portions of which, which are in line with each other, are formed holes for the reception of the balance-pins C, the construction of which is shown on an enlarged scale in Fig. 6. The pin consists of a shank, which passes through the opening in the horizontal portion of the said coupling *b*, and at its outer end is provided with a handle *b'*, by which it may be operated when desired, and two flanges or disks *b*², through which the shank passes, a pin *b*³ connecting the said disks eccentrically with the shank, as shown clearly in Fig. 6.

The seat-frame may be formed of any suitable material—such as wood or wicker-work, or metal, or wood and metal—light tubular metal being preferred. The main frame of the seat consists of a bow-shaped bar D, a back D', to which is secured a head-rest *d*, adjustable thereon in any suitable manner, preferably by means of a set-screw, as shown best in Fig. 1, the seat D² being connected with the said frame by means of hanging stays or straps *d'*. The back is braced by means of the braces *d*², which are attached to said back and to the bow-shaped bar D, as shown in Figs. 1 and 2.

Upon the under side of the bow-shaped bar D, upon each side of the chair, is a rack-bar E. The teeth or cogs of these bars are engaged by the balance-pins and the chair-seat suspended thereby. The teeth of the rack-bars work between the flanges or disks of the balance-pins, and by turning the handles of the said balance-pins the connections between the flanges will pass over the next tooth of the rack-bar, and the chair-frame will be lifted over the balance-pins by the action of the eccentric connected therewith backward or forward, as desired, simultaneous movement of the balance-pins on each side of the chair of course being required to effect the desired adjustment. The pin *b*³ is the connection between the two flanges or disks of each balance-pin.

Another form of means for balancing the seat and tilting it back and forth is shown in Fig. 3, wherein—

F is a block, and the guide-rail F' constitutes the front part of the seat-frame, said guide-rail being provided with an offset f , as shown in Fig. 3, so as to bring the forward portions of the rail above and out of the way of the screw G. These blocks—there being one upon each side of the frame—have holes to receive the shanks of the balance-pins, and also holes to receive the screw-rod G—one upon each side of the chair—the said screw-rods being provided with suitable crank-handles f' , the said rods passing through bearings in the front portions F² of the frame and into the tubular bow-shaped rod D, the inner ends of the two screw-rods being connected by a flexible connection G', as shown in Fig. 3, and allow of the ready adjustment of the parts to accommodate the curve of the bar D. By the action of the screw G the chair and guide-rail may be moved back and forth in the block, as desired.

A suitable cord or chain H is provided to prevent the tilting of the chair too far.

The chair is raised and lowered by the mechanism shown in Figs. 1 and 2. The lower part of the yoke B is provided with two or more straps or hangers g , in which is supported a horizontal shaft I, carrying at its inner end a bevel-pinion i , meshing with the pinion a on the hollow screw-rod A², as shown best in Fig. 2, and at the other end carrying a sprocket-wheel i' , around which passes an endless sprocket-chain J, which also passes around a sprocket-wheel j , which is carried by the bracket J', held to the upright portion of the yoke by suitable clamps and provided with a suitable handle j' , by the turning of which the chair will be raised or lowered, as desired.

K are leg-rests pivoted to the front of the chair and provided with a stop-notch k , as shown best in Fig. 5, so that when they are thrown into position to support the legs, as shown by full lines in Fig. 5, this notch will engage a fixed pin or stop k' on the chair-frame, and by simply turning them over on their pivots into the position indicated by dotted lines in said Fig. 5 they will be out of the way.

The swinging motion of the chair is produced with the feet of the occupant on the foot-rest L, which is pivoted on the cross-bar l' . The main frame has on the front two downwardly-extending rods l , which are connected with a cross-bar l' at the lower ends, the cross-bar projecting at each end a little so as to receive the lower ends of the vertical bars or arms L', which at their upper ends are pivotally connected with the horizontal arms L², which are clamped on the yoke B, as shown best in Fig. 3.

L³ are brace-rods connecting the foot-rest with the arms L', and at their upper ends provided with tubular portions which embrace the said arms L' and which are adjustable thereon by means of the thumb-screws L^{2x} to allow of the adjustment of the foot-rest. It will thus be seen that, as the foot rest is pivoted to the cross-bar l' at the lower part of the seat and pivotally connected by the rods L' and connecting-rods L² to the yoke, by the slightest pressing with the toe part of the feet and releasing the same a swinging motion will be produced similar to that of a rocking-chair.

A chair constructed as above described can be used as a rocker upon sloping ground and soft places where an ordinary rocker could not be used.

I sometimes provide a chair (such as is shown in Fig. 4) which is readily convertible into a crib for a child. This chair may have the means for raising and lowering (such as is shown in Figs. 1 and 2 and above described) or not, as preferred, and may or may not have the other attachments above described, but which are not shown in said Fig. 4. In this form I use the head-rest for a foot-rest, simply turning the chair down into the position into which it is indicated in Fig. 4, the end teeth of the rack-bar E being made longer, as shown, and hooked to engage supports on the upper ends of the yoke B. The back is in this instance extended horizontally, as at m , and the foot-rest is pivoted, as shown at n , to turn over the face of the occupant to hold a net or the like.

What I claim as new is—

1. The combination, with the base and the yoke, of the seat arranged between the vertical portions of the yoke, and an endless chain, bevel-pinions, sprocket-wheels, and threaded spindles pivotally supported upon said yoke, arranged to be operated from the seat for raising and lowering the seat, and means upon the yoke for tilting the seat, as set forth.

2. The combination, with the base and the yoke supported thereon, of the seat-frame, the rack-bars thereon, and the eccentric balance-pins on the yoke and rotatable thereon and adapted to engage the teeth of the rack-bars, substantially as specified.

3. The combination, with the base and the yoke supported thereon, of the seat-frame, the rack-bars thereon, and the eccentric balance-pins on the yoke and rotatable thereon and provided with eccentric-pins adapted to engage the teeth of the rack-bars and lift the same as the pins are rotated, substantially as specified.

4. The combination, with the yoke, of the seat-frame provided with rack-bars having their end teeth hooked, and the seat-frame adapted to be turned from a horizontal to a

vertical position and supported by the hooked teeth engaging the pin on the yoke, as set forth.

5 5. The combination, with the yoke, of the seat-frame provided with rack-bars having hooked teeth, the frame adapted to be turned from a horizontal to a vertical position and supported on the yoke, and a foot-rest, substantially as specified.

In testimony that I claim the above I have 10 hereunto subscribed my name in the presence of two witnesses.

WILLIAM OSWELL.

Witnesses:

F. J. LIBIS,
O. W. HALE.