(No Model.) 2 Sheets—Sheet 1.

C. H. MEDDINS.

CONVERTIBLE CHAIR.

No. 374,802. Patented Dec. 13, 1887.

Fig. 2.

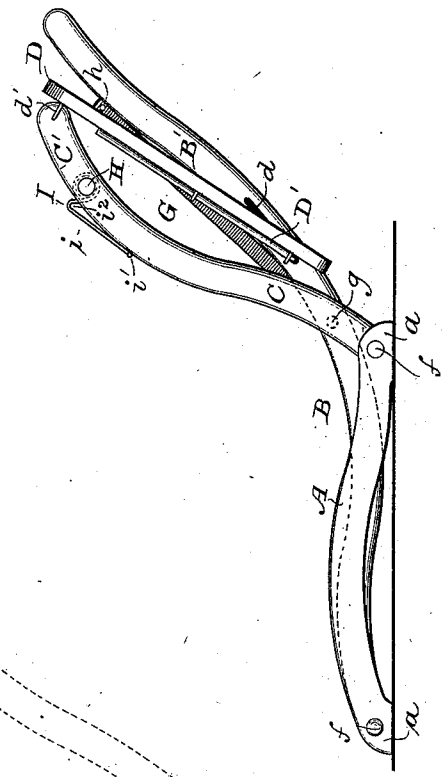
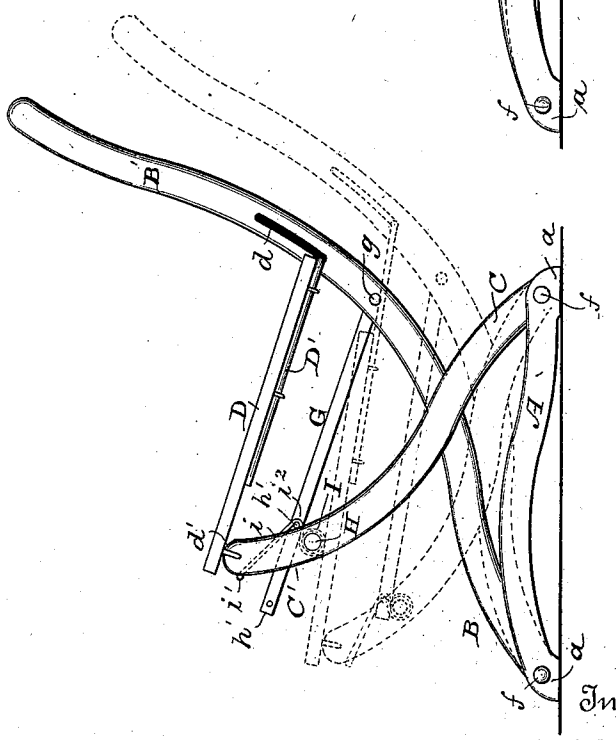


Fig. 1.



Witnesses
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Henry A. Lamb.

Inventor.
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By his Attorneys
Parkinson & Parkinson

(No Model.) 2 Sheets—Sheet 2.

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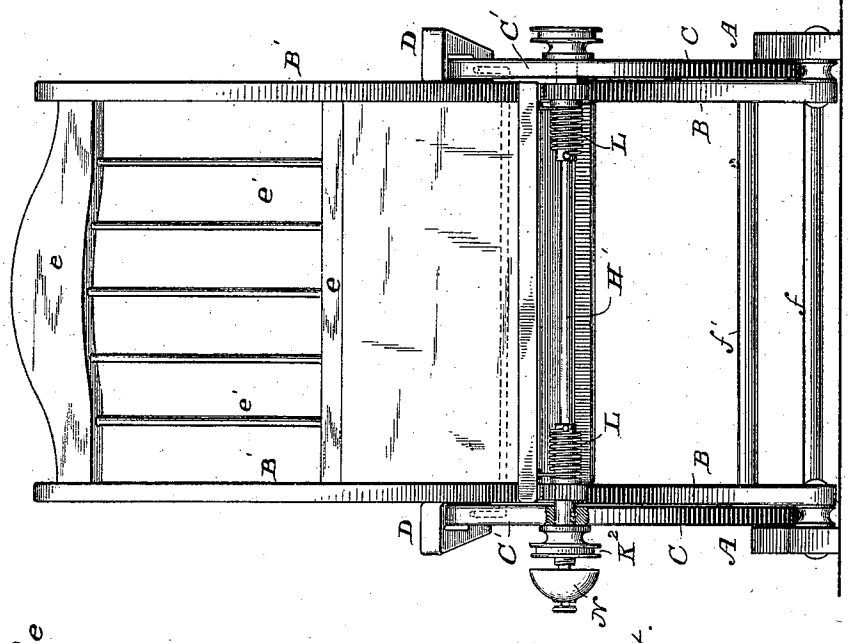

Fig. 4.

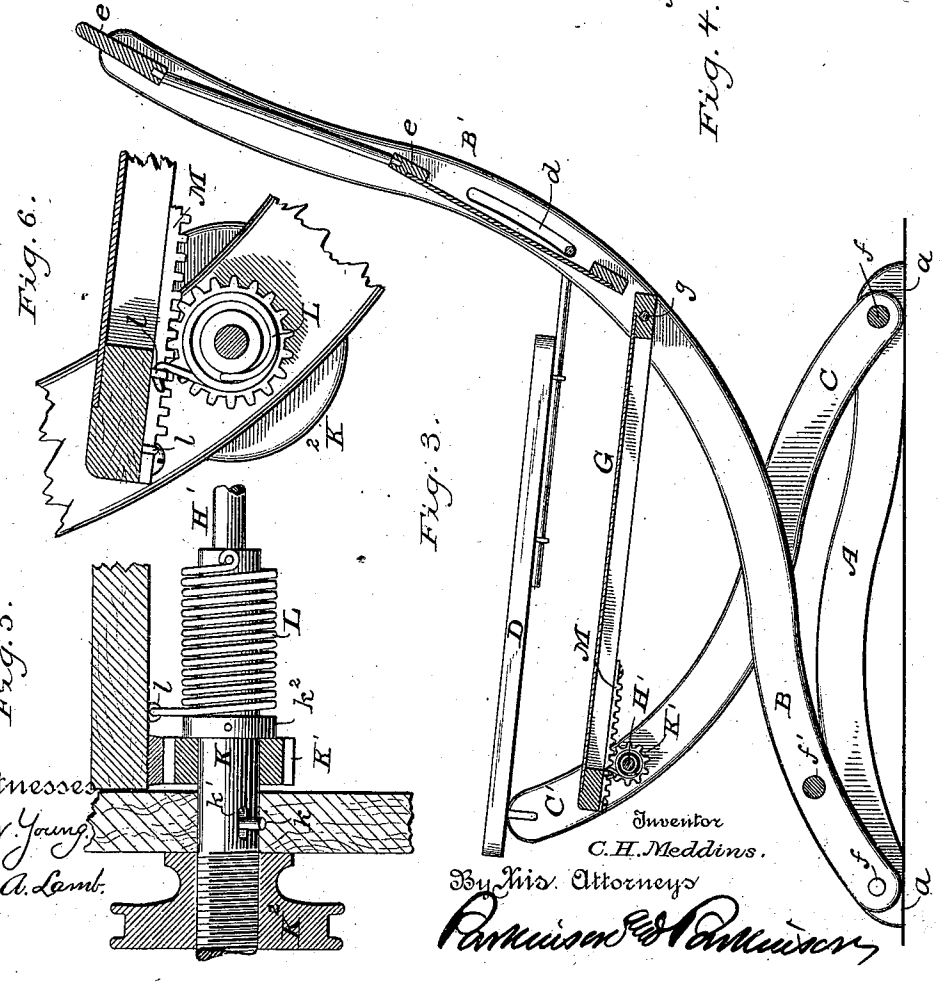

Fig. 3.

Fig. 6.

Fig. 5.

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UNITED STATES PATENT OFFICE.

CHARLES H. MEDDINS, OF NEENAH, WISCONSIN.

CONVERTIBLE CHAIR.

SPECIFICATION forming part of Letters Patent No. 374,802, dated December 13, 1887.

Application filed April 25, 1887. Serial No. 236,104. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HENRY MEDDINS, a citizen of the United States of America, residing at Neenah, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Convertible Chairs, of which the following is a description.

The object of my improvement is to provide a chair that, while primarily intended as a rocking-chair, may be adjusted as to height and length of rock, or may be converted into a reclining rocker, or else in a more complete form into a stationary tilting-chair, or, finally, may be folded for storage or transportation. To this end I construct the chair with front and rear legs which cross each other beneath the seat, but are not united together at the point of intersection, and are retained or pivoted at the foot to side bars or sills, and combine therewith arms which are attached in front to the upper ends or posts of the rear legs, and are so connected with the front legs at a point where they are prolonged into the back posts as to be adjustable to some extent up and down therealong, and also to telescope, that their own length may be decreased or increased, and hinge a seat to the rear posts or to a round connecting said rear posts, at a proper distance beneath the arms, and support it upon a roller or sliding surface uniting the front posts, against which it is kept by a spring, allowing it to ride back and forth upon said roller or surface as the legs are flexed by the pressure of the occupant alternately against the back and seat; finally, providing means whereby said seat may be locked to the roller or sliding surface at any time and at any point of its movement thereover, and permitted only to vibrate thereabout, whereby the chair may be caused to tilt from any desired stationary adjustment as to height.

In the drawings, Figure 1 is a diagrammatic side elevation of a chair embodying certain features of my invention, representing it in position for use at different degrees of adjustment or flexion; and Fig. 2, a side elevation of said chair folded for storage or transportation; Fig. 3, a side elevation in vertical section of a chair embodying the same and additional features, but with different and equivalent although improved means for rolling and adjusting the seat between the front posts; Fig. 4, a front elevation of the chair shown in the preceding figure; and Figs. 5 and 6, enlarged details in front and side elevation of the special mechanism for connecting the seat with the front posts, for holding it to its support and permitting it to roll therealong, and for locking it thereto.

A represents the side bars or sills, slightly bridged, and having at each end feet to rest upon the floor. At the forward end of each of these is pivoted one of the front legs, B, of the chair, curving or inclining thence rearwardly and upwardly, and finally prolonged into the uprights or posts B′ of the chair-back. To the rear end of the side bars are also pivoted the rear legs, C, of the chair, which incline or curve thence forwardly and upwardly, passing the front legs, but without being connected thereto, and finally rising sufficiently high in front to form the front supports or posts, C′, for the arms of the chair.

In each side post of the back, continuous, as before indicated, with the front legs, is formed a longitudinal slot, *d*, in the plane of said back, at the same height and of the same length in each of said posts, and at the top of each of the front posts, conversely continuous with the rear legs, is secured by a pivot or bail, *d′*, one arm, D, of the chair, extending thence rearwardly to the back posts. A yoke or U-shaped frame, D′, is passed through the two slots in said back posts, and each arm thereof is secured to the corresponding arm or rest of the chair in such manner as to telescope therewith. Instead, however, of this U-frame, each arm or rest may be separately connected to its corresponding post by any suitable telescoping device, with some sacrifice, however, of the proper rigidity of the parts. The rear posts are connected by cross-bars *e* at the top and behind the arms, and these cross-bars in turn connected by uprights *e′*; or any other suitable construction is given to the back to adapt it for its purpose. The pivots *f*, which connect the legs with the foot-bars, may also serve as rounds of the chair; but additional rounds may be located, as at *f′*, to connect each pair of legs and give sufficient stiffness.

To the rear posts, beneath the arms and the

slots for the latter in said posts, is pivoted the seat G by means of a rod, *g*, which may serve as an additional tie for the posts, said seat thence extending forward and resting—in the form represented in the first two figures—upon a bar or roller, H, which connects the front posts at such a distance beneath their tops as to preserve the proper relation of the arms and seat at that point. To each side of the seat, in the instance now being considered, there are fixed two pins, *h h'*, one at the extreme front and the other somewhat distant from it toward the pivot of the seat and both projecting laterally. Coiled around the supporting bar or roller is a spring, I, which at one end is secured against rotation and at the other first bent rearwardly, then upwardly and forwardly, as at *i*, and finally outwardly, as at *i'*, that it may hook or catch over and be braced and also prevented from too far unwinding by the front posts. Now, when the rear pins projecting laterally from the seat are caught in the socket i^2, afforded at the angle of the rear and forward bends of the spring, and the outward bend or stop *i'* of the spring is hooked over the posts in front, as represented in Fig. 1, the chair will be elevated—that is, it will be adjusted in such a position that it cannot well be rocked back of or below a definite height. When, however, the rear pins are sprung out from the socket i^2 and the front pins allowed to fall therein, the legs will be allowed to fold farther down, carrying the front posts to the front and the rear posts to the rear, elongating the telescoping arms, sinking the seat to the normal position represented by broken lines, and enabling the occupant by the swaying of his body to carry the seat farther forward and back over its front support in the rocking movement. When the springs, on the other hand, are thrown entirely out of connection with the pins on the seat and permitted to assume the position shown in Fig. 2, this seat can be folded up against the back, and the legs and arms themselves also folded, so as to bring the chair in the position shown in said latter figure.

For the purpose of positively locking the seat-bars to the roller or sliding surface over which they run when rocking, and thereby preventing them from other than a vibratory motion thereabout, thus changing the chair into a tilting-chair, and also in order to give greater utility and finish to the structure, I have adopted the construction shown in other and subsequent figures, and will now proceed to describe it. In this construction the base bars or sills, the legs and front and rear posts, and also the connection between the arms and said front and rear posts, are or may be the same as in that just described.

The seat is also hinged or pivoted to the rear posts, and extends thence to the front. The shaft or support, however, upon which it ultimately rests, and which serves to connect the front posts, and is here, to vicariously distinguish it from its congener in the first-described construction, lettered H', instead of being directly secured to the latter, passes into and is pinned to metallic sleeves K, mounted in said post and permitted endwise movement therethrough, but prevented from turning by a pin, *k*, that enters a longitudinal slot, *k'*, in each sleeve, or otherwise arranged to secure this result. Inside of each post and a little removed therefrom each sleeve has pinned to it a collar, k^2, and between the collar and the post a cog-wheel, K', is journaled thereon. Outside of the posts the sleeves are screw-threaded and receive thumb-nuts K^2, with broad base-flanges that press against the exterior of the posts. By turning the thumb-nuts the cog-wheels may be clamped between the inner surface of the posts and the collar upon the sleeves and prevented from revolving. Coiled springs L, encircling the sleeve at a proper point—say upon a prolongation thereof outside of the collar—are pinned at one end to the sleeve and at the other end enter eyes *l*, depending from the side rails of the seat near its front, and serve to hold this seat down upon the cog-wheels, and assist in its return after it has been carried far back and the rocking movement again becomes forward—that is, they wind up as the chair is pressed back and unwind by their own resilience as the chair is released or moved forward, bringing or assisting in bringing the seat again forward. Racks M, secured to the end of each side bar of the frame, mesh with the cog-wheels and serve, when these wheels are prevented from movement, to hold the whole chair rigid. Thus it will be seen that so long as the pinions are loose and allowed to play or revolve the chair can be rocked at will; but whenever the thumb-nuts are turned to clamp the pinions and prevent them from movement the chair will be held in whatever adjustment has been purposely given it, and can only tilt therefrom. If the pinions are clamped when at the outer end of the rack, the seat will be low down and the front and rear posts far apart while the arms or rests are extended; but if clamped when at the inner end of the racks the front and rear posts will be held much nearer together and the seat consequently be higher.

In order that the height of this chair may be increased to make it a high rocker or decreased to make it a low rocker, in manner similar to that in the first-described construction, two or more eyes may be employed beneath the chair and alongside the rack in a row parallel therewith, and the end of the spring may be hooked so as to be caught securely in one or the other eye. Thus when the springs are hooked into the extreme front eyes the chair will be low down, as when the bent springs in the first construction are sprung over the front pins, but when hooked into pins farther back the chair will be rendered higher, as when the bent springs in the other are sprung over the front pins, the spring in each case checking the seat, so as to

practically decide the normal height of the chair.

The shaft which passes through the sleeves and serves to stiffen them and hold them in alignment or support them against the pressure of the seat may receive a call-bell, N, upon one of its ends beyond the thumb-nut upon the sleeve at that end. This call-bell, besides furnishing a convenient means of calling assistance, will serve as a cap or finisher to the shaft and sleeve, concealing the screw-threads of the projecting end of the sleeve when the thumb-nut is turned up against the post. Such bell will be conveniently placed at the right hand of the chair, and a dummy bell, to form a similar cap, may, if desired, be placed at the other end.

I have mentioned slots in the back posts of the chair which receive the U-frame, that affords by its arms the inner telescoping members of the elbow-rests. These slots are only required when it is intended that the chair shall be capable of adjustment to a reclining position, with the seat sloping downward and forward. Such arrangement may bring the front and rear posts so near together that the arms or elbow-rests will no longer telescope, and in that case the rear member of the arms will slide up toward the top of these slots until the proper adjustment is reached, and there remain so long as the chair is held in the reclining position.

I claim as my invention—

1. The combination, substantially as hereinbefore set forth, in a chair, of lateral base bars or sills, legs pivoted, respectively, at front and rear of said bars and free to move independently upon said pivots, front and rear posts formed, respectively, as continuations of the rear and front legs, telescoping arms or elbow-rests connecting the rear posts with the front posts and free to hinge thereon, a seat hinged or pivoted to the rear posts, and a shaft or round connecting the two front posts and upon which said seat rests.

2. The combination, substantially as hereinbefore set forth, in a chair, of lateral base bars or sills, legs pivoted, respectively, at front and rear of said bars and free to move independently upon said pivots, front and rear posts formed, respectively, as continuations of the rear and front legs, telescoping arms or elbow-rests connecting the rear posts with the front posts and free to hinge thereon, a seat hinged or pivoted to the rear posts, a shaft or round connecting the two front posts and upon which said seat rests, and springs holding the front of said seat to said shaft or round, but permitting it to play back and forth thereon.

3. The combination, substantially as hereinbefore set forth, in a chair, of lateral base bars or sills, legs pivoted, respectively, at front and rear of said bars and free to move independently upon said pivots, front and rear posts formed, respectively, as continuations of the rear and front legs, telescoping arms or elbow-rests connecting the rear posts with the front posts and free to hinge thereon, a seat hinged or pivoted to the rear posts, a shaft or round connecting the two front posts and upon which said seat rests, and springs secured at one end to said round and coiled thereabout and at the other connected with said seat to hold it to the round and allow it to play elastically thereon.

4. The combination, substantially as hereinbefore set forth, in a chair, of lateral base bars or sills, legs pivoted, respectively, at front and rear of said bars and free to move independently upon said pivots, front and rear posts formed, respectively, as continuations of the rear and front legs, telescoping arms or elbow-rests connecting the rear posts with the front posts and free to hinge thereon, a seat hinged or pivoted to the rear posts, a shaft or round connecting the two front posts and upon which said seat rests, springs holding the front of said seat to said round, but permitting it to play back and forth thereon, and means whereby said springs may be connected with the seat at points nearer to or farther from the rear posts, that the chair may be rocked from a higher or from a lower level.

5. The combination, substantially as hereinbefore set forth, in a chair, of lateral base bars or sills, legs pivoted, respectively, at front and rear of said bars and free to move independently upon said pivots, front and rear posts formed, respectively, as continuations of the rear and front legs, telescoping arms or elbow-rests connecting the rear posts with the front posts and free to hinge thereon, a seat hinged or pivoted to the rear posts, a shaft or round connecting the two front posts and upon which said seat rests, and means whereby the seat may be locked to the supporting-round.

6. The combination, substantially as hereinbefore set forth, in a chair, of lateral base bars or sills, legs pivoted, respectively, at front and rear of said bars and free to move independently upon said pivots, front and rear posts formed, respectively, as continuations of the rear and front legs, telescoping arms or elbow-rests connecting the rear posts with the front posts and free to hinge thereon, a seat hinged or pivoted to the rear posts, a shaft or round connecting the two front posts and upon which said seat rests, sleeves mounted loosely upon said shaft or rod near each end and passing through the respective front posts at said ends, a slot-and-pin connection between said sleeves and the posts to prevent the sleeves from turning, collars pinned to said sleeves inside of the adjacent post, pinions mounted between said collars and the post, racks secured to the under side of the seat to engage with said pinions, springs holding the seat down to maintain the racks in engagement with the pinions, and means whereby the pinions may be locked against rotation on the shaft.

7. The combination, substantially as hereinbefore set forth, in a chair, of lateral base bars or sills, legs pivoted, respectively, at

front and rear of said bars and free to move independently upon said pivots, front and rear posts formed, respectively, as continuations of the rear and front legs, telescoping arms or elbow-rests connecting the rear posts with the front posts and free to hinge thereon, a seat hinged or pivoted to the rear posts, a shaft or round connecting the two front posts and upon which said seat rests, sleeves mounted loosely upon said shaft near each end and passing through the respective front posts at said ends and connected thereto in such manner as to be prevented from turning, collars pinned to said sleeves inside the adjacent post, pinions mounted between said collars and the post, racks secured to the under side of the seat to engage with said pinions, springs holding the seat down to maintain the racks in engagement with the pinions, and nuts mounted upon the screw-threaded ends of the sleeves outside the posts, whereby said pinions can be clamped between the inner sides of the posts and the collars upon the sleeves to prevent their rotation.

8. The combination, substantially as hereinbefore set forth, with the pivoted legs, hinged seat, and front support therefor, of eyes or catches near the front of the seat and secured thereto, and springs secured to the chair-frame and at one end hooked to engage with said catches.

9. The combination, substantially as hereinbefore set forth, with the pivoted legs, hinged seat, and front support therefor, of a series of eyes or catches secured to side bars of said seat at varying distances from the rear hinge, and coiled springs secured at one end to said front support and at the other hooked to engage with either catch of the adjacent series.

10. The combination, substantially as hereinbefore set forth, with the pivoted legs, hinged seat, and front support therefor, of the U-frame secured to the rear posts, the arms or elbow-rests hinged to the front posts, and the telescoping connection between said rests and the arms of said frame.

11. The combination, substantially as hereinbefore set forth, of the lateral sills, the legs pivoted thereto, but arranged to play freely past each other, the hinged seat and front support therefor, the rear posts having unobstructed longitudinal slots, and the arms or elbow-rests hinged to the front posts and free to play up and down along the slots of the rear post.

12. The combination, substantially as hereinbefore set forth, with the rod which connects the front posts for the support of the seat, and with the sleeves thereon and the thumb-nuts upon the exterior screw-threaded ends of said sleeves, of the call-bell mounted upon the end of said rod outside of the adjacent thumb-nut, and serving as a cap or finisher.

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