(No Model.) 2 Sheets—Sheet 1.

D. W. MILLER.

ADJUSTABLE RECLINING CHAIR.

No. 287,769. Patented Oct. 30, 1883.

Fig. 1.

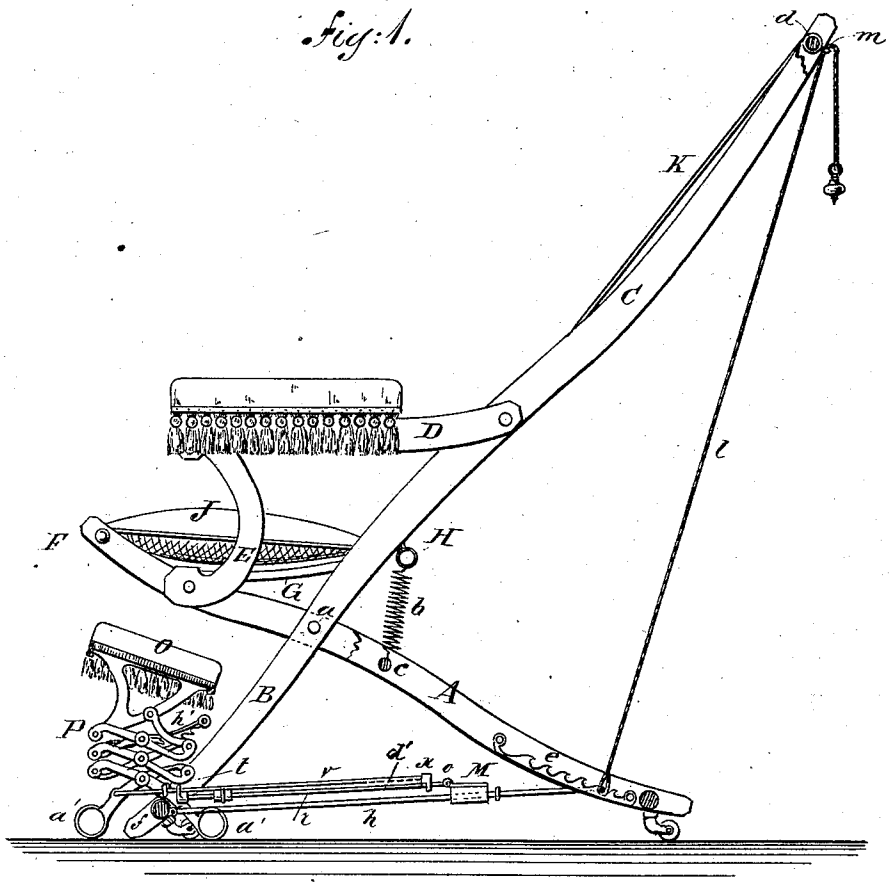


Fig. 4

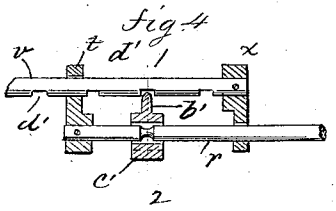
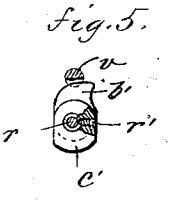


Fig. 5.



WITNESSES:

Chas. Nida.

Jno. A. Bruns.

INVENTOR

David W. Miller

BY Munn & Co

ATTORNEY

(No Model.) 2 Sheets—Sheet 2.

D. W. MILLER.

ADJUSTABLE RECLINING CHAIR.

No. 287,769. Patented Oct. 30, 1883.

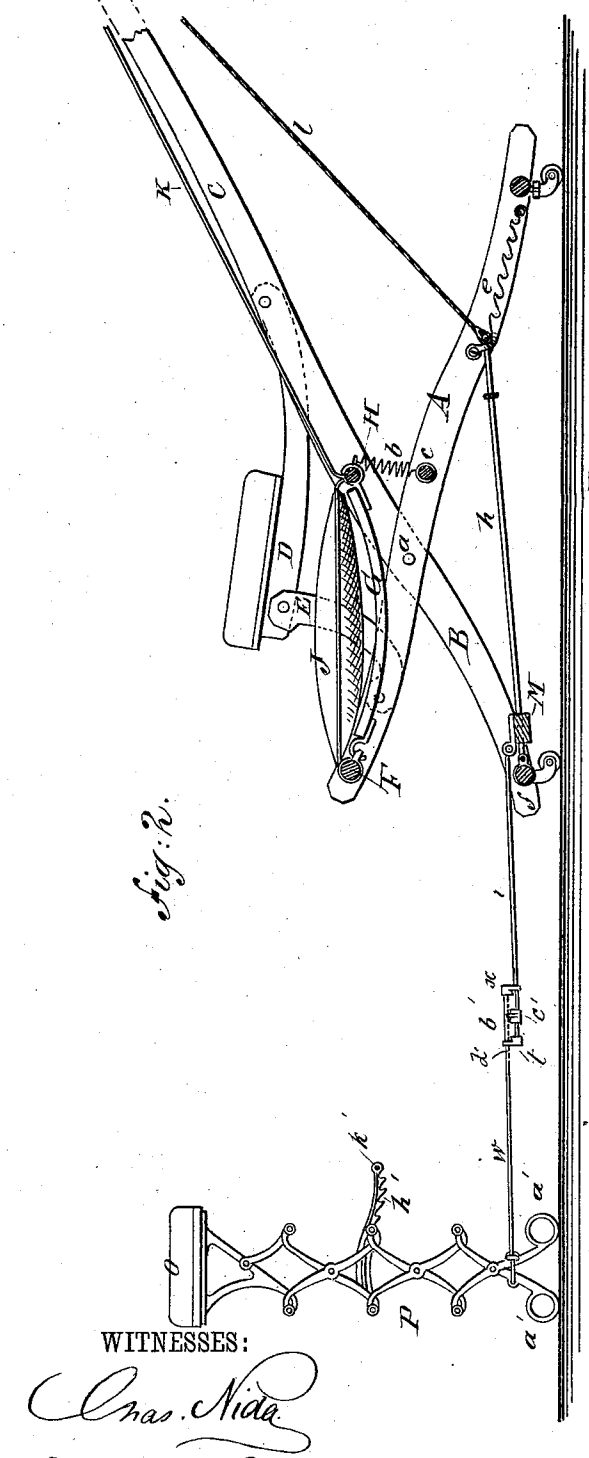


Fig. 2.

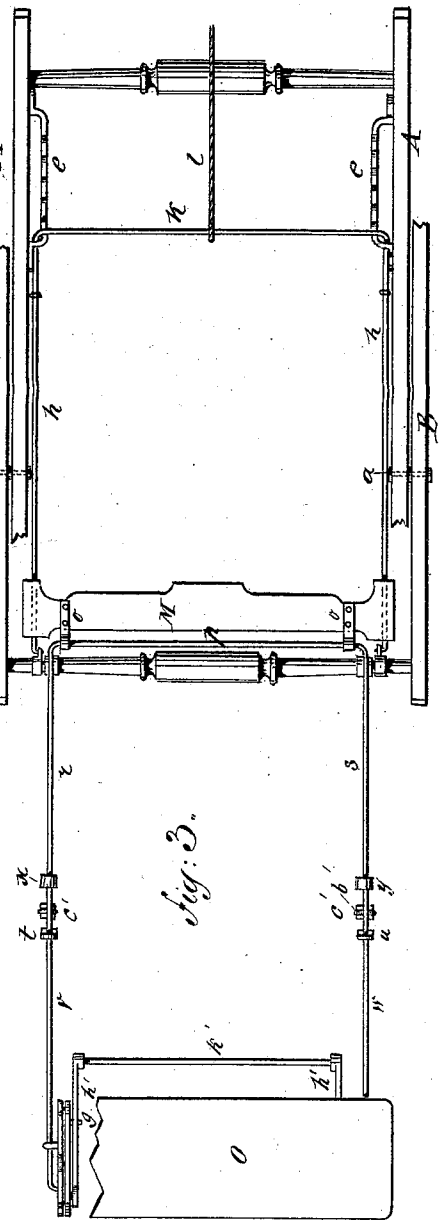


Fig. 3.

WITNESSES:

Chas. Nida.

Jno. A. Bruns

INVENTOR

David W. Miller

BY Munn & Co

ATTORNEY

UNITED STATES PATENT OFFICE.

DAVID W. MILLER, OF NEW YORK, N. Y., ASSIGNOR OF TWO-THIRDS TO CHRISTOPHER S. DAVISON, OF NEWTON, AND OLIVER B. BADGLEY, OF WESTFIELD, NEW JERSEY.

ADJUSTABLE RECLINING-CHAIR.

SPECIFICATION forming part of Letters Patent No. 287,769, dated October 30, 1883.

Application filed January 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, DAVID W. MILLER, of the city, county, and State of New York, have invented a new and useful Improvement in Adjustable Reclining-Chairs; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying sheet of drawings, forming part of the specification.

This invention is an improvement in adjustable reclining-chairs; and the invention consists in an adjustable reclining-chair with pivoted legs, arms, and arm-supports, in combination with two or more seat spring-bars hinged to a stretcher uniting the upper ends of the back legs, and fixed also to a bar supported by springs and the fabric of the back; and the invention also consists in an adjustable reclining-chair with a foot-rest provided with lazy-tong joints, whereby the same is made vertically adjustable, in combination with a series of rods and stops, whereby said foot-rest may be horizontally adjusted; and the invention consists, in combination with the horizontal sliding bars, of the foot-rest, and two or more automatic stops, whereby the horizontal adjustment of the foot-rest is regulated, all as hereinafter specified and claimed.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of my chair with foot-rest under the seat. Fig. 2 is a side elevation of same with foot-rest extended and elevated. Fig. 3 is a plan or top view of same. Fig. 4 is a longitudinal section, showing the details of the catches and eyes of the rods *r* and *v* on a larger scale; and Fig. 5 is a section on line 1 2 of Fig. 4.

Similar letters of reference indicate like parts in the several figures.

This invention pertains particularly to an adjustable reclining-chair—that is, to that class of chairs which are constructed to permit the back of the chair to be placed at any suitable angle between the vertical and the horizontal, and provided with a foot-rest to receive the feet of the occupant.

As is well known, many chairs of this general character have heretofore been made and patented, all of them more or less efficacious, but most of them complicated and expensive.

To construct, therefore, a chair which shall be cheaper and possess all the advantages inherent in adjustable reclining-chairs, I provide my chair with cross-legs A and B, pivoted together as at *a*, the front legs, B, extending upward and forming the back posts, C. To these back posts, at suitable distances, are pivoted arms D, and to the forward part of the back legs are pivoted supports E for these arms, which supports are also hinged or pivoted to the under side of the arms D.

Extending across from the front end of one of the back legs, A, to the other is a stretcher, F. To this stretcher are hinged, at their front ends, seat-springs G, of bent wood, with their curvature downward. These seat-springs extend backward beneath the seat of the chair, and their rear ends are firmly fixed to a bar, H. To this bar are also fixed two or more coil-springs, *b*, which springs are also fixed to a stretcher, *c*, extending between the back legs, A. Also, to this bar H is secured the rear ends of the cushioned seat J, the front end of which seat is also united to the stretcher F. Also, to the bar H and to the rear edge of the cushion J is fixed the lower edge of the fabric of the back K, the upper end of which fabric passes around and is united to a stretcher, *d*, at the upper end of the back posts, C, of the chair.

To the inner surfaces of the back legs, A, are secured ratchets *e*. To the lower ends of the front legs, B, and uniting them, is fixed a stretcher, *f*. To this stretcher is pivoted the front ends of a rod, which rod is bent to extend backward from said stretcher, forming thereby two parallel rods *h* and *h* and a cross-rod, *k*, which unites the rear end of these two parallel rods, and which rests within the ratchets *e*. To this cross-rod *k* is secured one end of a cord, *l*, which cord extends upward, passing through an eye, *m*, screwed onto the stretcher *d*. Onto the parallel rods *h* and *h* is fitted a cross-bar, M, so that such cross-bar may slide on the parallel rods *h* and *h*. To this cross-bar M is fixed, by suitable hinges or pivots, *o*, the rear part, *p*, of a rod, which is bent to

form two parallel rods, *r* and *s*, which extend forward from the cross-bar M. To the front ends of these parallel rods *r* and *s* are firmly fixed two eyes, *t* and *u*. Passing through these eyes *t* and *u* are two bars, *v* and *w*, with eyes *x* and *y* secured to their rear ends, through which last-named eyes are passed the parallel rods *r* and *s*. The front ends of these rods *r* and *s* are firmly fixed to the lower part or feet, *a'*, of the foot-rest O.

In the under side of the parallel rods *v* and *w* are formed notches *d'*, and onto the parallel rods *r* and *s* are fitted weighted catches *c'*. These catches are made to slide freely on the rods *r* and *s*, and they are provided at their upper end with a projection, *b'*. The projection *b'* of these catches is a cam-like device, (see Fig. 5,) and the weightiest part of said catches is at the bottom, so as to automatically keep said projection up and in engagement with the notches *d'*. Instead of sliding, the catches are preferably arranged to oscillate or rotate about the rods *r* and *s*, to permit the disengagement of the rods *v* and *w*, and set-screws *r'*, entering circumferential grooves in the rods *r* and *s*, keep the catches in place on the rods *r* and *s*, and may be used to fix said catches in any position. (See details, Figs. 4 and 5.)

To the under side of the foot-rest O, and near its ends, are secured the upper members of lazy-tongs joints P, the lower members of said joints forming the feet *a'* of the foot-rest O. To the inner side of these lazy-tongs are fixed pins, and also pivoted to the inner side of these tongues are ratchets *h'*, with a cross-bar, *k'*, uniting their front ends together.

Now, when my chair is constructed substantially as hereinbefore described, it is in this wise operated: The back is slightly tilted forward, its posts turning for that purpose on the pivots *a*, and the cord *l* is drawn through the eye *m* until the cross-rod *k* is raised clear from the ratchets *e*. The back then being inclined to any desired angle between the perpendicular and the horizontal, the cord *l* is slackened and the cross-rod *k* allowed to again drop into the ratchets *e*. When the desired inclination of the back is fixed, the foot-rest O is drawn outward from beneath the seat of the chair, in which operation the cross-bar M slides on the parallel rods *h* and *h*, carrying with it the parallel rods *r* and *s*, and when this cross-bar is brought in contact with the stretcher *f* the rods *v* and *w* slide on the rods *r* and *s*, in this way permitting, by the sliding or telescopic action of the several parts named, the foot-rest O to be drawn outward from beneath the chair to any desired distance. The top of the rest (in this way located) is next lifted upward, the lazy-tongs joints P yielding and permitting this upward movement, and when the rest O has been elevated to the desired height it is fixed to such height by allowing the ratchets *h'* to engage in the pins *g*, which engagement is effected by means of the cross-bar *k'*, the ratchets locking the several parts of the lazy-tongs joints P and preventing their spreading outward. Now, when the foot-rest is drawn outward and it is adjusted to the convenience of the occupant of the chair, this adjustment is retained by fixing the projections *b'* of the catches *c'* into the notches *d'* in the under side of the rods *v* and *w*. The adjustment once being made, it need not again be disturbed; but, to the contrary, it will remain during all the subsequent drawing out and pushing in of the foot-rest O; and since the catches *c'* freely slide on the rods *r* and *s* and the notches in the rods *v* and *w* are numerous, it is clear that the adjustment may be regulated to any reasonable extent. Now, when the chair is occupied, the weight of the occupant in its seat causes the seat-springs G to yield their elasticity, and also to yield somewhat on their hinges, and, the bar H also yielding, additional elasticity is imparted to the seat of the chair, the downward curvature of the seat-spring G permitting the seat to be depressed by the weight of its occupant. Now, the fabric of the back being made of a textile material, it will naturally wrinkle and fold. Therefore, to keep this back fabric at all times taut in whichever position the back of the chair may be placed, the springs *b* take up the slack of the back fabric by drawing downward the bar H, to which the back fabric is secured, when the fabric is loosened, and by yielding when this fabric is tightened. The bar M not only supports and enables the rods *r* and *s* to slide in and out, but it also acts as a stop to prevent those bars from having too much side play.

It will be observed that the seat of the chair is cushioned or upholstered, while the back is simply a strip of any suitable textile fabric.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An adjustable reclining-chair with pivoted cross legs and arms and arm-supports, in combination with bent wooden seat-springs G, cross-bar H, and coil-springs *b*, substantially as shown and described.

2. The combination, substantially as shown and described, with the reclining-chair and the adjusting-rods *h k h* and ratchets *e e* therefor, of the foot-rest O, provided with the lazy-tongs supports P, as specified, whereby said foot-rest is rendered vertically adjustable, and the rods *r s v w* and cross-bar M, sliding on the rods *h h*, as set forth, whereby said foot-rest is rendered horizontally adjustable to and from the chair.

3. In an adjustable reclining-chair, the seat thereof secured to a stretcher uniting the front ends of the back legs, and to a cross-bar, H, and the back fabric thereof fixed to the top of the back posts and to said cross-bar H, in combination with coil-springs *b*, as shown and described.

4. The combination, with the chair and its

foot-rest, of the rods *v w*, provided with notches *d'* and eyes *x y*, the rods *r s*, provided with eyes *t u*, and the weighted catches *c'*, arranged to oscillate or turn upon said rods *r s* to engage or disengage the notches in the rods *v w*, to admit of the horizontal adjustment of the foot-rest relatively to the chair, substantially as shown and described.

5. In an adjustable reclining-chair, the seat and the fabric of the back thereof, in combination with rod H and coil-springs *b*, substantially as shown and described.

DAVID W. MILLER.

Witnesses:
G. M. PLYMPTON,
JNO. N. BRUNS.