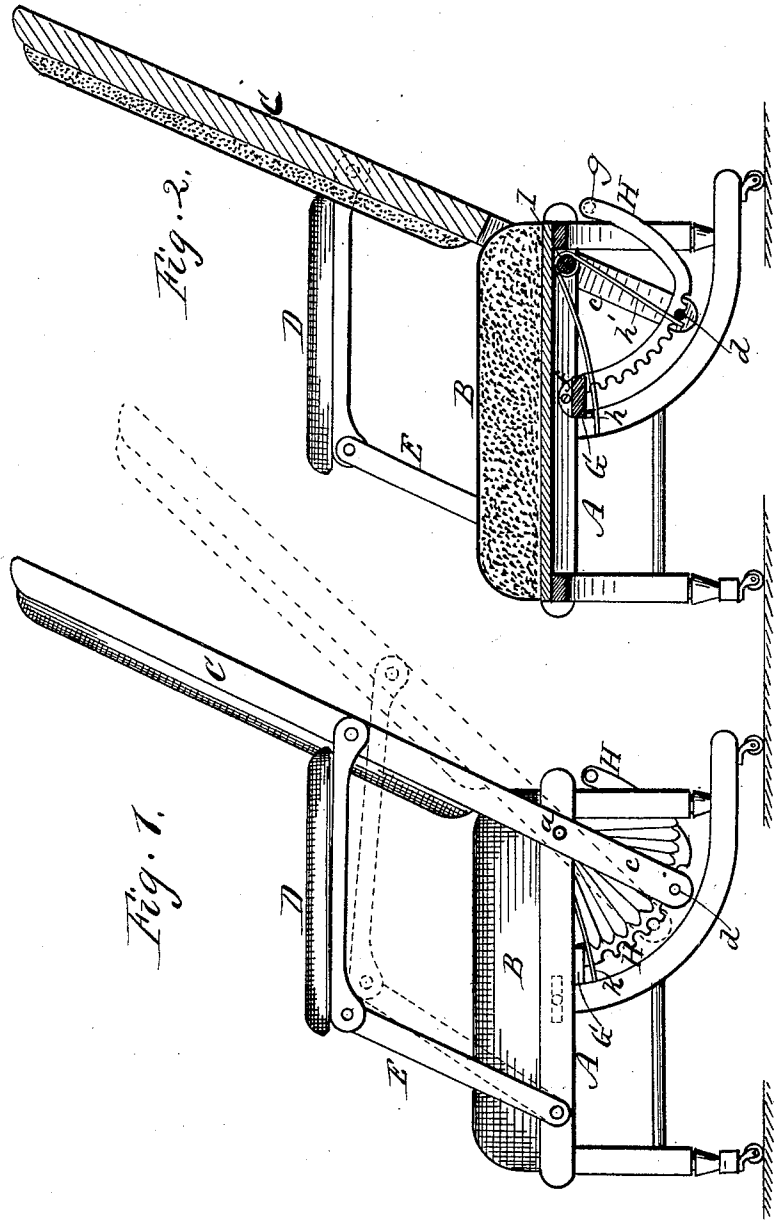
(No Model.) 2 Sheets—Sheet 1.

W. RICHARDS.

ADJUSTABLE CHAIR.

No. 480,743. Patented Aug. 16, 1892.



Witnesses
R. F. Osgood.
Geo. B. Selden.

Inventor.
William Richards

(No Model.) 2 Sheets—Sheet 2.

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ADJUSTABLE CHAIR.

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Fig 3

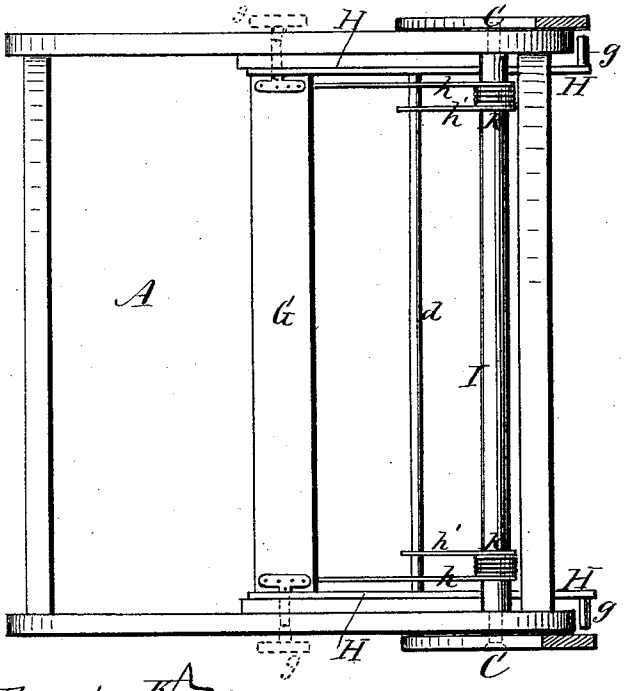


Fig. 4.

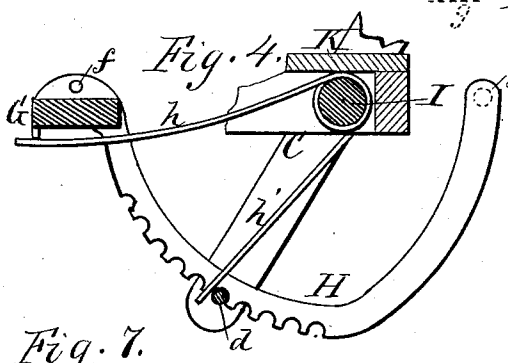


Fig. 5.

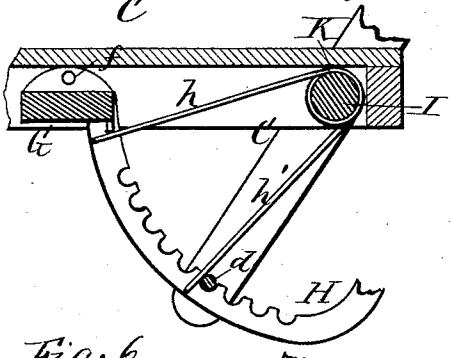


Fig. 7.

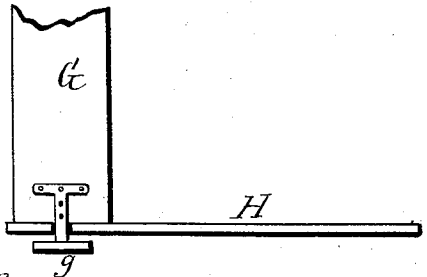
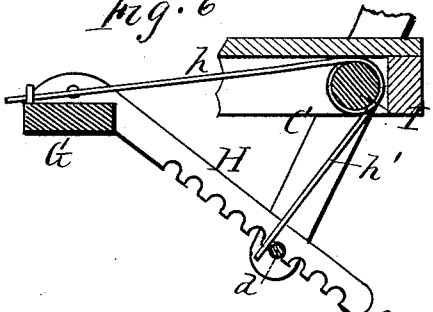


Fig. 6



Witnesses.
R. F. Osgood.
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Inventor.
William Richards

UNITED STATES PATENT OFFICE.

WILLIAM RICHARDS, OF ROCHESTER, NEW YORK.

ADJUSTABLE CHAIR.

SPECIFICATION forming part of Letters Patent No. 480,743, dated August 16, 1892.

Application filed April 16, 1891. Serial No. 389,229. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RICHARDS, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Adjustable Chairs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this application.

My improvement relates to adjustable chairs of that kind where the back, together with the arms, can be set at any desired angle without the occupant moving from the chair.

The invention consists in the mechanism connected with the body of the chair, combined and arranged as hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of the chair. Fig. 2 is a vertical cross-section of the same. Fig. 3 is an enlarged plan view of the bottom of the chair with the seat removed. Fig. 4 is a diagram showing a cross-section of the mechanism for producing the adjustment. Fig. 5 is a similar view showing a modification of the ratchets. Fig. 6 is a similar view showing another modification. Fig. 7 is a plan view of the bar G, showing a modification in the handle for operating the ratchets.

In Figs. 1 and 2 A indicates the body or base of the chair, and B the seat, which parts are of ordinary construction.

C is the chair-back pivoted at *a*, so as to be turned forward and back to different positions, as indicated by the full and dotted lines, Fig. 1.

D D are the arms pivoted at one end to the back of the chair at suitable height and at the other to supports E E, which in turn are pivoted to the sides of the body. This allows the arms to turn with the back in adjusting to different positions.

My improvement is as follows:

The side pieces of the chair-back C are extended down below their pivots, as shown at *c c*, and their lower ends are connected across the chair by a cross-rod *d*.

G is a bar which extends across the body of the chair at the top and is pivoted to the inner sides of the same, as shown at *f f*. The bar turns crosswise of its length and longitudinally of the chair.

H H are two ratchets attached fixedly to the ends of the bar G and extending downward either above or below the cross-bar *d* and engaging therewith to hold the rod, as shown. Fig. 4 shows the ratchets above the rod and Fig. 5 below it. The ratchets are preferably curved, as shown in said figures, but, if desired, may be made straight, as shown in Fig. 6. When made curved they are brought up at the rear of the chair and are provided with handles *g g* on one or both sides within reach of the occupant of the chair without removing from place. By reaching back he can seize the handles and disengage the ratchets, and then by leaning back in the chair he can adjust the chair-back to any incline. Instead of this form the handles can be carried out straight from the sides of the chair, as shown in Fig. 7 and by dotted lines, Fig. 3, being in that case attached directly to the bar G and forming the pivot upon which it turns. This form is particularly adapted to the straight ratchets shown in Fig. 6. The turning of the bar G by the handles at the side of the chair (shown in Fig. 7 and dotted lines, Fig. 3) disengages the ratchets, as desired. This form is effective with the use of but a single ratchet. I is a cross-round placed between the side frames of the base and connecting them together. The extensions *c c* of the chair-back are pivoted to the side frames opposite the cross-round. K K are springs at each side of the chair coiled around the cross-round I. Each of these springs has two projecting ends *h* and *h'*. The end *h* projects forward and bears against the bar G and tends to turn the same, so as to hold the ratchets in engagement with the cross-rod *d*. The other end *h'* passes downward and bears against the cross-rod and tends to throw the chair-back forward when the ratchets are released. The spring ends therefore serve a double purpose—one being to hold the ratchets in engagement with the cross-rod and the other to throw the chair-back forward automatically. The operator can adjust the chair-back without moving from the chair. To move it back,

he simply disengages the ratchets and presses against the back. To move it forward, he disengages the ratchets, leans forward, and the springs throw the back forward of their own action.

This device is simple, cheap, and easily applied.

By locating the cross-round I in axial line with the pivots *a a*, on which the chair-back turns, and attaching the springs K K thereto said springs exert elastic action on the ratchets and chair-back by torsion, and are so located that but little movement is required, and they are in compact form and out of sight. Furthermore, this construction enables the chair-back to be turned back to nearly a horizontal position.

This invention is applicable not only to chairs, but also to couches having adjustable ends, cots, and similar articles of furniture. If desired, the bar G and ratchets may be reversed—that is, the bar be attached at the rear and the ratchets project in front, in which case the handles come centrally of the chair.

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

The combination, with the chair-frame A and pivoted back C, provided with the cross-rod *d*, of the ratchet-bar G, pivoted to the frame, the ratchets H H, attached thereto, engaging with the cross-rod, the cross-round I, attached to the frame and lying in axial line with the pivots on which the chair-back turns, and the coiled springs K K, resting on the cross-round and provided each with two projecting ends *h h'*, one operating the ratchet-bar and the other the chair-back, as shown and described, and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM RICHARDS.

Witnesses:
R. F. OSGOOD,
CHAS. A. WIDENER.