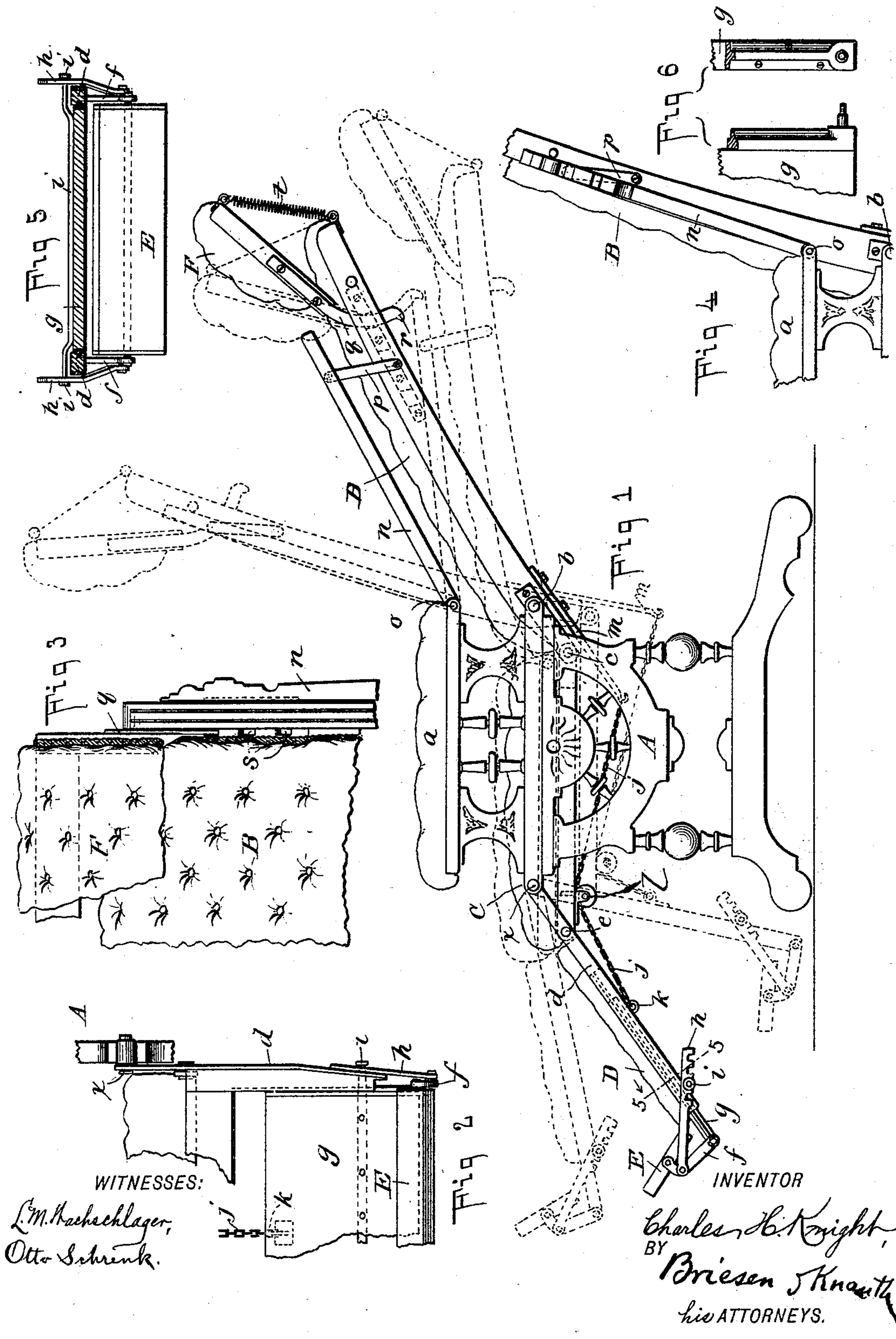


(No Model.)

C. H. KNIGHT.  
ADJUSTABLE CHAIR.

No. 516,493.

Patented Mar. 13, 1894.





# UNITED STATES PATENT OFFICE.

CHARLES H. KNIGHT, OF RONDOUT, ASSIGNOR TO THE NATIONAL CHAIR MANUFACTURING COMPANY, OF CHICHESTER, NEW YORK.

## ADJUSTABLE CHAIR.

SPECIFICATION forming part of Letters Patent No. 516,493, dated March 13, 1894.

Application filed April 21, 1893. Serial No. 471,264. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. KNIGHT, of Rondout, Ulster county, State of New York, have invented an Improvement in Adjustable Chairs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of my improved adjustable chair. Fig. 2 is a plan detail showing the sliding frame for the foot-rest. Fig. 3 is a plan detail showing the adjusting means for the head rest. Fig. 4 is a side view in detail showing the position the extension arms assume when the back is raised. Fig. 5 is a sectional detail on the line 5—5 Fig. 1. Fig. 6 shows in detail the end of the sliding frame to which the links *f* are attached.

My invention relates to that class of easy or invalid chairs, wherein the foot-rest and various other parts move to accommodate themselves to the various positions assumed by the person occupying the chair, when it is adjusted in different positions; and my invention consists in the arrangement and combination of parts hereinafter described and claimed.

In the drawings A represents a side framing of the stationary portion of my improved chair, to which is attached the arm rest *a*.

B represents the back of the chair, which is pivoted at a point above the lower end to the stationary sides A of the chair, as shown at *b*.

The rear of a seat C is pivotally connected to the lower end of the chair-back B, as shown at *c*, the forward end of said seat being pivotally connected to the sides *d* of the leg-rest D, as shown at *e*, below their upper ends, while the upper ends of said side pieces *d* are pivoted to the stationary framing A, as shown at *x*. By this means the back B can be lowered without the slightest exertion, causing the seat to be raised or moved upward and forward and the leg-rest D to be raised, as shown in dotted lines in Fig. 1.

E designates a foot-rest which is connected by pivoted arms or links *f* to a sliding frame *g* carried by the leg-rest D. Pivoted to the links *f* of the foot-rest, is a notched bar *h* adapted to be secured at different points in its length by placing one of the notches therein over a pin *i* secured to the sliding frame *g*

of the foot-rest, as shown in Fig. 5. This affords an adjusting means for retaining the foot-rest at different lengths or at any desired angle to leg-rest D. To the sliding frame *g* of the foot-rest is attached at *k* a chain, rope or other flexible connection *j*; the other end of said rope or chain, after having been preferably passed over a pulley *l* carried by the seat C or frame A, is secured to an arm *m* extending down from the back of the chair below its pivot. It will be seen that as the chair-back is raised, the foot-rest will be drawn up by the chain *j* attached to the sliding frame *g*, and that as the chair-back is lowered the foot-rest will be allowed to descend, thus making it conform to the different positions assumed by the occupant of the chair.

*n* designates the extension-arms of the chair which are pivoted to the arms *a* as shown at *o* and are connected to the back of the chair by means of the links *p*. When the back of the chair is in an upright position, the extension-arms coincide with and form part of the back (as shown in Fig. 4), but when the back is lowered, the arms *n* come into play as extension-arms, as shown in Fig. 1.

F is an adjustable head-rest provided with a curved arm *q* on each side thereof, which arm terminates in a lug *r*. These arms *q* form supports for the head-rest and are adapted to protrude through and be held in frictional contact in any of a series of openings *s* in the chair-back by a spring *t* attached at one end to the back of the chair and at the other end to the head-rest F. The lug *r* on the end of each arm *q* prevents it from being readily withdrawn from the openings *s* without first releasing the spring *t*. It will be seen that by this adjusting means I am enabled to place the head-rest at any desirable point on the chair and can, on account of the curvature of the arms, adjust it at any angle; furthermore, that said rest can be readily removed when it is desired to dispense with the use thereof.

I deem of especial importance the direct rope or chain connection between the sliding frame of the foot-rest, and the back, since by this means I am enabled to produce a simple, reliable and effective device, which will



beself-adjusting. For, if the occupant of the chair leans back, he will not only bring the back to the required inclination, but will also at the same time extend the distance between the front of the seat and the foot-rest. As he straightens in his seat and raises the chair-back, the foot-rest will be correspondingly drawn up. In other words the chair-back and the foot-rest being connected (by the chain connection *j*) a movement of one will allow or cause a movement of the other, thus a pressure exerted upon the foot-rest will assist in forcing the chair-back into an inclined position.

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

1. In an adjustable chair, the combination with the pivoted back *B*, the seat *C* and the leg-rest *D*, of a movable foot-rest *E* carried by said leg-rest, rope or chain *j* connected with said foot-rest and with the back *B* of the chair, whereby when the back *B* is raised the foot-rest will be drawn up, substantially as and for the purposes set forth.

2. In an adjustable chair, the combination with the pivoted back *B*, seat *C* and leg-rest *D*, of a movable frame *g* carrying an adjustable foot-rest *E*, chain *j* connected to said movable frame *g*, and to an arm *m* extending from the chair-back *B*, substantially as and for the purpose specified.

3. In an adjustable chair, the combination

of stationary arm-rests *a*, extension arm-rests *n* pivoted to the rests *a*, chair-back *B* and links *p* for connecting said extension arm-rests *n* with the back of the chair, whereby the extension arm-rests are maintained parallel with the chair-back when the same is in an inclined position and coincide with and form part of said back when the same is in an upright position, substantially as described.

4. The combination of a chair-back having slots *s* therein, removable head-rest *F* having curved arms *q* connected therewith for supporting the same, said curved arms being adapted to protrude through and be held in frictional contact in the slots *s* of the chair-back by spring *t*, as and for the purposes described.

5. In an adjustable chair, the combination of the back *B*, seat *C*, leg-rest *D*, movable foot-rest *E* carried by said leg-rest, flexible connection *j*, connected with said foot-rest, and with the chair-back *B* and extension arm-rests *n*, so arranged that they are parallel with the chair-back, when the same is in an inclined position and coincide with and form part of said back when the same is in an upright position, as and for the purpose specified.

CHAS. H. KNIGHT.

Witnesses:

CHARLES BRAY,

WILLARD VAN KEUREN.