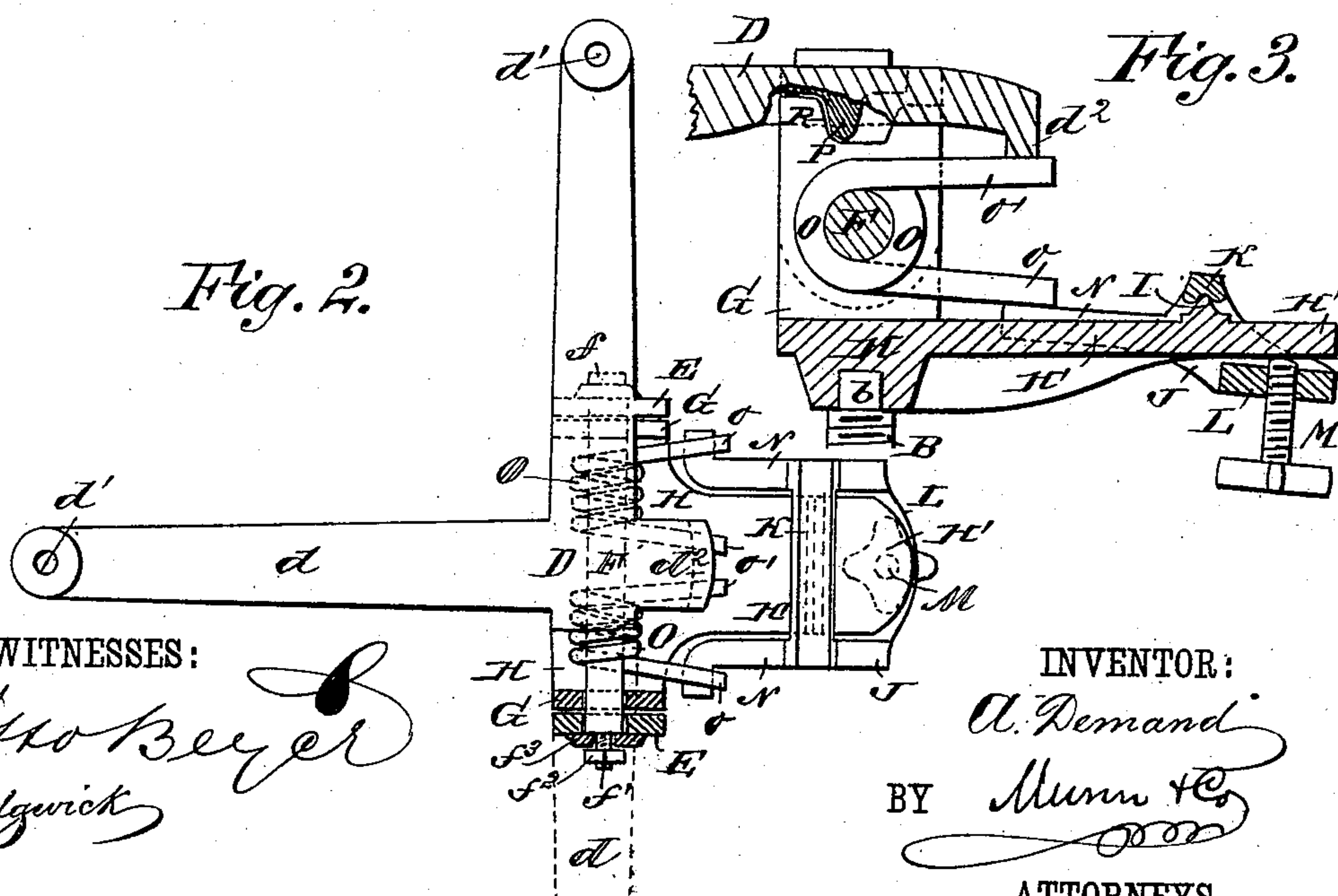
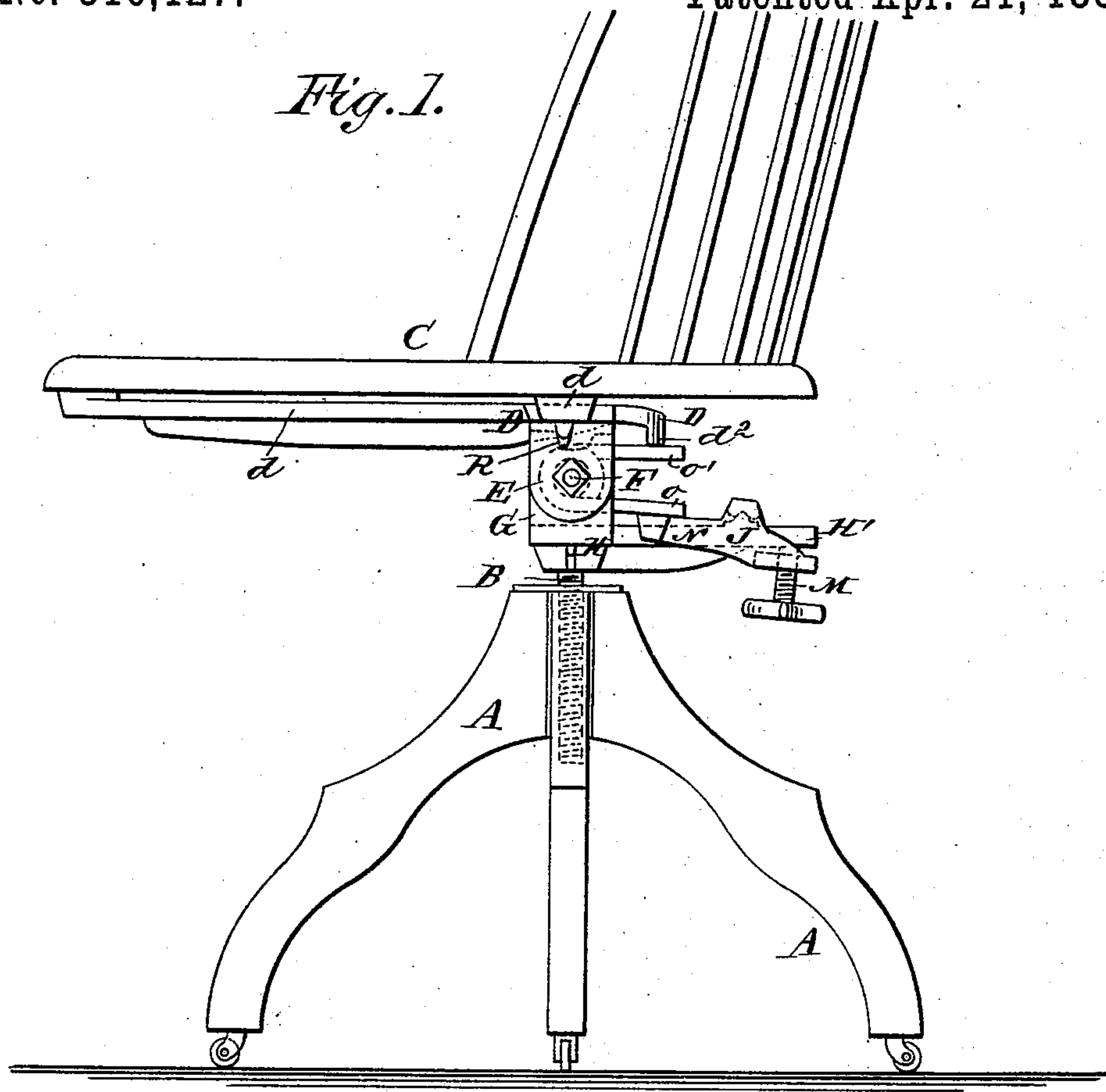


(No Model.)

A. DEMAND.
TILTING CHAIR.

No. 316,127.

Patented Apr. 21, 1885.



WITNESSES:

Geo Beyer
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UNITED STATES PATENT OFFICE.

ADAM DEMAND, OF SHEBOYGAN FALLS, WISCONSIN.

TILTING-CHAIR.

SPECIFICATION forming part of Letters Patent No. 316,127, dated April 21, 1885.

Application filed September 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, ADAM DEMAND, of Sheboygan Falls, in the county of Sheboygan and State of Wisconsin, have invented certain new and useful Improvements in Tilting-Chairs, of which the following is a full, clear, and exact description.

The object of my invention is to provide a tilting-chair so constructed that the tension of the seat-leveling springs may be regulated to a nicety to adapt the chair to comfortably be tilted back by heavier or lighter persons.

The invention consists in particular constructions and combinations of parts of the seat-supporting devices of the chair whereby the tension of the springs which resist the tilting back of the chair is regulated by a yoke-piece, which bears on the one end of the springs, the other ends of which bear against the seat-supporting frame, which frame is pivoted to a plate having a backwardly-extending arm, on which the yoke-piece is fulcrumed, all as hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a chair, partly broken away and with my improvement applied. Fig. 2 is a plan view of the improvement detached from the chair and partly broken away and in section, and Fig. 3 is an enlarged detail central sectional side elevation of the improvement.

The letter A indicates the base or stool portion of the chair in which the seat-supporting screw B is held in the usual manner, and C is the chair-seat, which is made fast to the ends of the arms d of the frame D by screws or bolts passed through holes d' of the arms into the seat. Downwardly-projecting lugs E E are cast with or fixed on the frame D, through which lugs passes the pin or bolt F, which passes also through the upwardly-extending lugs G G of the base-plate H of the seat-support, to which plate H the upper end, b , of the screw B is fitted. (See Fig. 3.) The plate H has a backwardly-extending portion

or arm, H', on the upper face of which is formed or fixed the fulcrum-piece or rib I.

The letter J indicates a yoke-piece, which has an upper cross-bar, K, fitted to bear on the rib I, and a lower cross-bar, L, into which the screw M is threaded, so as to bear by its end on the under side of the arm H' of plate H, and the yoke J also has forwardly-extending side arms, N N, on which rest the lower arms or ends o of the spiral springs O, which are placed on the bolt F, and bear by their upper arms or ends o' against the rearward extension, d^2 , of the frame D. The springs O tend normally to throw the chair-seat C forward until a lug or rib, P, on the under side of the frame D comes in contact with the shoulders R, formed on the lugs G of the plate H to hold the chair-seat from tilting forward farther than about to a level position, as in Fig. 1, and the lugs G are cut away behind the rib P to allow the chair-seat to tilt backward by rocking on the bolt F.

It is evident that by turning the screw M inward and upward the arms N will be carried upward and will compress or increase the tension of the springs O, to adapt the chair for use by a heavy person, who naturally will tilt the chair backward too easily if the spring-tension is insufficient, and to adjust the chair for a lighter person the screw M will be turned outward or downward to decrease the tension of the springs and allow the chair to be tilted by the lesser weight on it, as will readily be understood.

By adjusting the screw M as above described the resistance offered by the springs O may be regulated to a nicety to suit persons of any weight.

The drawings show two springs O, which are preferred, as they equalize the lateral strains on the parts to better advantage than would a single spring, which, however, may be used, if desired.

I show the pivot-bolt F made in cast metal, with a solid head, f , forming a shoulder at one end, and with the wrought screw or bolt end f' set in the other end, on which screw the nut f^2 is run outside of a washer, f^3 , to hold the bolt F to place; but the pivot-bolt may have

any preferred construction suitable for its purposes, as above described.

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

1. The combination, with the frame D, having depending lugs E, and rearward extension d^2 , of the plate H, formed with vertical lugs G on its upper surface, and the rearward extension H', the pivot-bolt F, passing through the
10 lugs E G, the rocking yoke J, through which the extension H passes, an adjusting-screw for the same, and the torsional springs O on the piv-

ot-bolt, the ends of the said springs bearing on the yoke and extension d^2 , respectively, substantially as set forth. 15

2. In a tilting-chair, the combination, with the frame D, the plate H, pivoted thereto, the springs O, and the yoke J, of the stop and shoulder P R, substantially as shown and de- 20 scribed.

ADAM DEMAND.

Witnesses:

EGBERT RICHARDSON,
WALTER BODE.