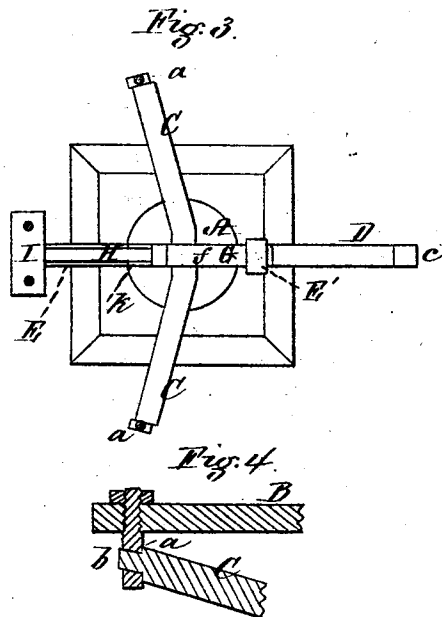
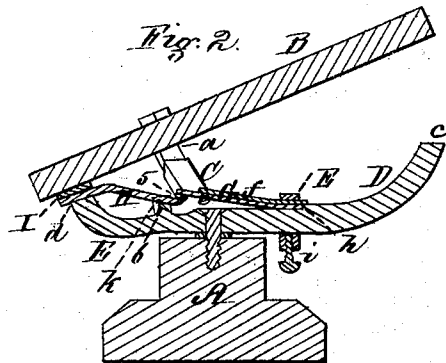
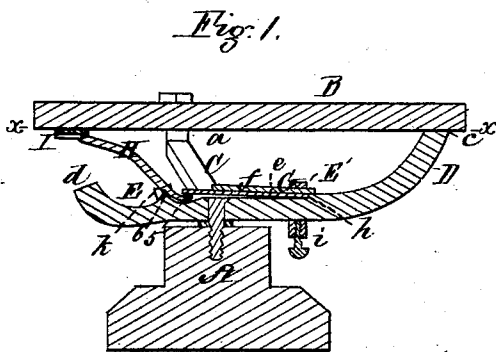


H. MATTHEWS.
Tilting-Chairs.

No. 151,994.

Patented June 16, 1874.



Witnesses,
H. J. Cambridge
J. E. Cambridge

Inventor,
Hezekiah Matthews
Per his Attorneys
Teschmacher & Stearns.

UNITED STATES PATENT OFFICE.

HEZEKIAH MATTHEWS, OF SOUTH ASHBURNHAM, MASSACHUSETTS.

IMPROVEMENT IN TILTING CHAIRS.

Specification forming part of Letters Patent No. **151,994**, dated June 16, 1874; application filed March 5, 1874.

To all whom it may concern:

Be it known that I, HEZEKIAH MATTHEWS, of South Ashburnham, in the county of Worcester and State of Massachusetts, have invented certain Improvements in Tilting Chairs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a vertical section through a tilting chair constructed in accordance with my invention, the seat being in its normal position. Fig. 2 is also a vertical section through the same, the seat being inclined or tilted back. Fig. 3 is a horizontal section on the line *xx* of Fig. 1; Fig. 4, sectional detail.

My invention consists in a tilting chair in which the seat is pivoted to projecting arms, the rear of the under side of the seat resting on the upper end of a pivoted lever brought up against it by the pressure of a spring on the lower end of the lever, suitable arms, serving as stops, being provided for supporting the front of the seat when in its horizontal or normal position, and for arresting the back of the seat on being tilted down by the weight of the occupant when exerted in that direction.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents a circular socket formed at the junction of the tops of the legs of a chair. B is the seat, provided on its sides with lugs *a*, extending down from its bottom at points back of the center. These lugs are provided with circular openings for the reception of circular projections *b*, formed at the upper extremities of two arms, C, which extend up from opposite sides of the junction of two arms, D E, the several arms being formed in one and the same piece, which is pivoted to the socket in such manner as to be free to swivel or turn loosely therein. The forward end of the arm D is turned up, as shown, and serves as a stop or rest, *c*, for the front of the seat to bear upon when down in its horizontal or normal position. (See Fig.

1.) The rear end of the arm E is also turned off or curved upward slightly, and is beveled off on its upper surface, serving as a stop, *d*, for supporting and arresting the motion of the back of the seat when tilted down into the position seen in Fig. 2.

I will now describe the mechanism which allows the seat to yield gradually when tipped back by the weight or pressure of the occupant, and which returns the seat to its original position when such weight or pressure is removed. *e f* are two leaves of a short flat spring, G, the front end of the leaf *e* fitting against a shoulder, *h*, formed in the upper side of the arm D, and the front end of the leaf *f* resting on the leaf *e*, both of their front ends being held securely down in this position by means of a clamp, E', provided with a screw, *i*, and by which it may be tightened when slid along and adjusted in place. The rear end of the under leaf *e* rests upon the lower extremity 5 of a bent lever, H, pivoted on a knife-edge, 6, formed between two lugs, *k*, rising from opposite sides of the arm E, the lever being provided with a notch on its under side to keep it in place on the knife-edge. The upper end of this lever is flattened, in order that the under side of the seat may rest squarely thereon, a grooved guide-plate, I, being provided, if necessary, to prevent any tendency of the lever to move in a lateral direction.

From the foregoing it will be seen that the action of the spring on the lower end of the lever is sufficient to keep the seat in a horizontal position, with its front resting on the stop *c*, until the weight of the occupant is moved or disposed to a point to the back of the points *b*, where the seat is pivoted, when the back of the seat is brought down till its motion is arrested by the upper end of the lever H coming into contact with the stop *d*, as seen in Fig. 2.

By casting or otherwise forming the several arms C D E in one and the same piece the chair is rendered strong and durable, and may be cheaply constructed, while the arrangement of the bent lever and its spring is sim-

ple and effective, and the parts are not liable to get out of order.

What I claim as my invention, and desire to secure by Letters Patent, is—

In combination with the seat of a tilting chair, the arms C C D E, the lever H, pivoted on the knife-edge 6, as described, and the short spring-leaves *ef*, the whole constructed

to operate substantially as and for the purpose set forth.

Witness my hand this 28th day of February, A. D. 1874.

HEZEKIAH MATTHEWS.

In presence of—

E. J. WHITNEY,
M. R. JEWELL.