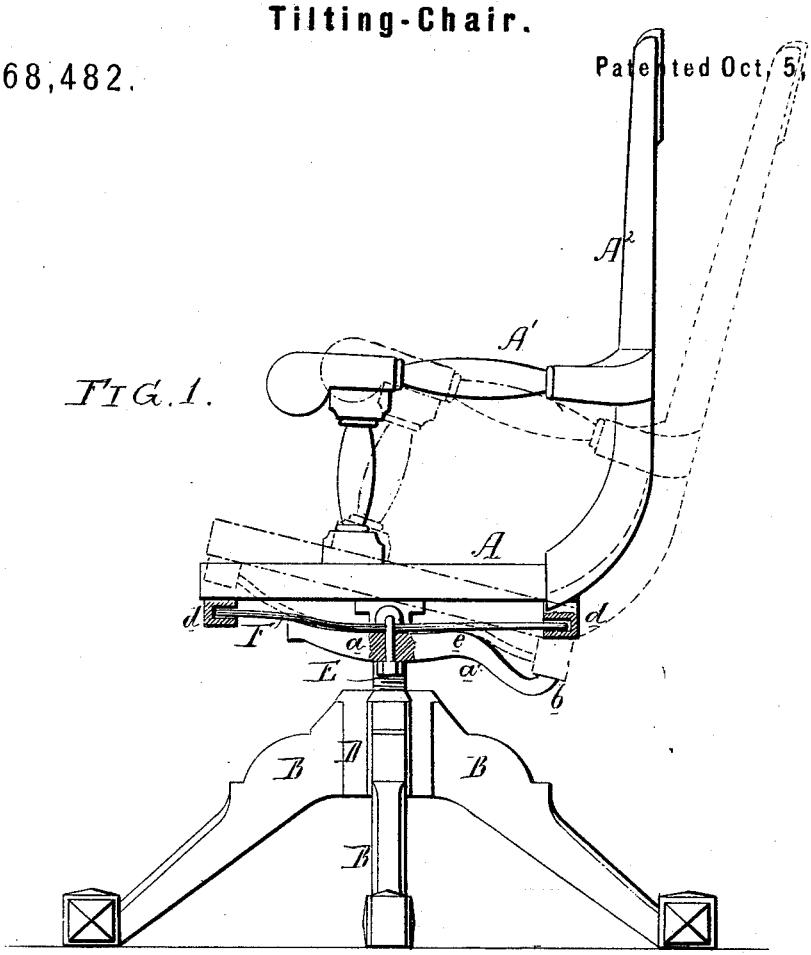
H. S. HALE.

Tilting-Chair.

No. 168,482. Patented Oct. 5, 1875.

FIG. 1.



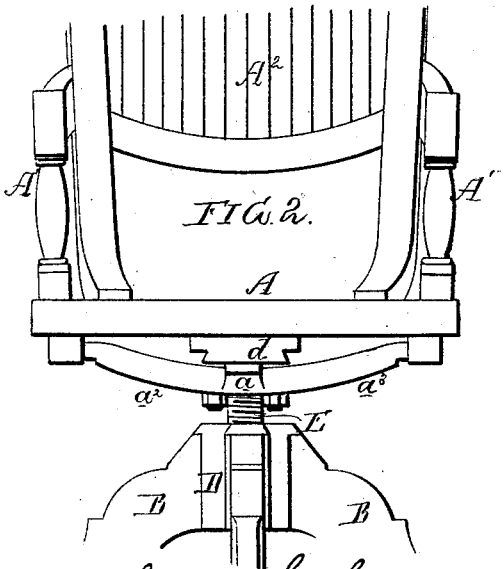


FIG. 2.

Witnesses:—
Edward H. Eckfeldt
Harry Smith

Henry S. Hale
by his Attorneys
Howson & Sons

UNITED STATES PATENT OFFICE.

HENRY S. HALE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN TILTING CHAIRS.

Specification forming part of Letters Patent No. **168,482**, dated October 5, 1875; application filed July 14, 1875.

To all whom it may concern:

Be it known that I, HENRY S. HALE, of Philadelphia, Pennsylvania, have invented certain Improvements in Chairs with Tilting Seats, of which the following is a specification:

My invention relates to improvements in chairs having spring-seats which admit of being tilted. an early example of chairs of this class appearing in the patent of Peter Ten Eyck, No. 15,853, granted March 15, 1853; and the object of my invention is simplicity in the construction of chairs of this class—an object which I attain in the manner about to be described, reference being had to the accompanying drawing, in which—

Figure 1 is a side view, partly in section, of my improved tilting chair; Fig. 2, a front of a portion of the same.

A, A^1, and A^2 represent the seat, arms, and back of the chair; and B, the legs, which are secured at their upper ends to a nut, D, the latter receiving the screw-stem E. To the upper end of this stem is secured a metal frame, consisting of four arms, *a*, a^1, a^2, and a^3, the two latter extending to the opposite edges of the seat A, to which they are secured, the arm *a* being curved slightly upward, and extending half-way, or thereabout, toward the front edge of the seat, and the rear arm a^1 being curved downward and backward, and terminating in a stop, *b*, as seen in Fig. 1. To the top of this frame, at or near the center of the same, is secured, by a yoke and nuts or other suitable means, a flat elastic bar, F, which extends from the front to the back edge of the seat, its ends being contained within socketed studs *d d*, secured to the under side of said seat, as shown in Fig. 1. The spring bears on the rounded portion *e* of the arm a^1, and as the seat is tilted backward it is resisted by the bar, the rigidity of which increases in proportion to the angle assumed by the seat. The stop *b* is so arranged that an ordinary backward movement of seat will not bring the stud *d* into contact with the said stop; hence the backward movement of the seat, being under the control of the spring, will be easy and free from all disagreeable jars. I discontinue the front arm *a* of the frame at a point about halfway, or thereabout, between the center and front edge of the seat, thus allowing the spring to project beyond the said arm, the spring thus acting as a cushion to absorb the shock when the front edge of the seat is depressed.

I do not desire to claim, broadly, a chair having a spring-seat capable of being tilted and restricted in its tilting movement, as this is shown in the aforesaid patent of Ten Eyck, patented March 15, 1853; but

I claim as my invention—

The combination, in a chair with a tilting seat, of a spring-bar, F, attached to the seat and to the support of the same, with the long rear arm a^1 and its stop *b*, and the short front arm *a*, all as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY S. HALE.

Witnesses:

EDWARD H. ECKFELDT,

HARRY SMITH.