

LEVI HEYWOOD.
Improvement in Tilting Chairs.

No. 120,382.

Fig. 1

Patented Oct. 31, 1871.

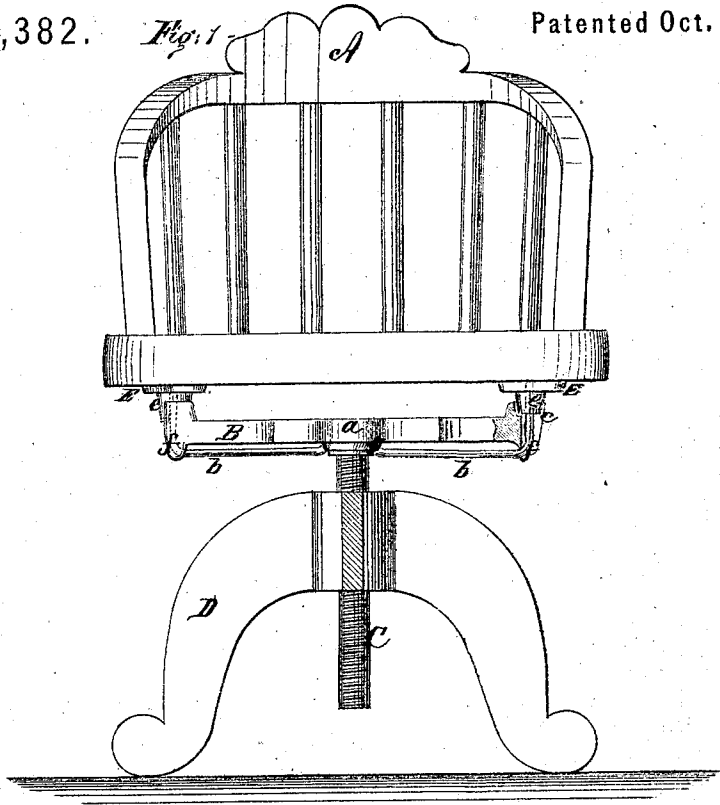


Fig. 2

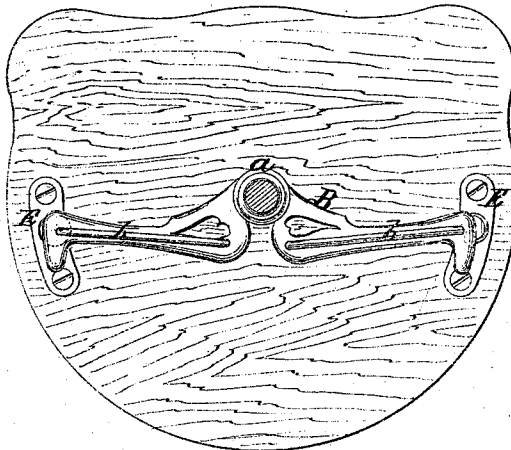
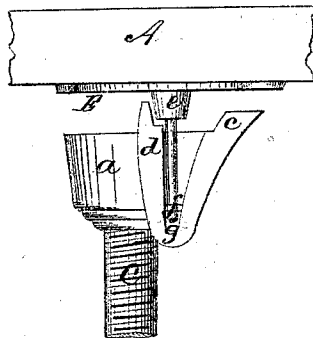


Fig. 3.



Witnesses:

Chas. Nida
H. H. Wattenberg

Inventor:

Levi Heywood
Per
Wm. H. Simpson
Atty

UNITED STATES PATENT OFFICE.

LEVI HEYWOOD, OF GARDNER, MASSACHUSETTS, ASSIGNOR TO HEYWOOD BROTHERS & COMPANY.

IMPROVEMENT IN TILTING-CHAIRS.

Specification forming part of Letters Patent No. 120,382, dated October 31, 1871.

To all whom it may concern:

Be it known that I, LEVI HEYWOOD, of Gardner, in the county of Worcester and State of Massachusetts, have invented a new and Improved Span or Spider for Tilting-Chairs; and that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The object of this invention is to construct a tilting-chair that shall be strong in all its parts and easily operated. The invention consists in a span or spider for a tilting-chair which shall be substantial and simple in its construction and operation; and also consists in the application of steel-wire rod springs to tilting-chairs, so that a torsional strain applied thereto may be made available for the purposes of a tilting-chair.

In the accompanying drawing, Figure 1 represents a front view of my invention; Fig. 2, a plan view; and Fig. 3, a detached view of span or spider.

Similar letters of reference indicate like parts in the several figures.

A represents an ordinary arm-chair. In order to make this a tilting-chair a span, B, is constructed of any suitable material, having a boss, *a*, formed thereon, into which is firmly secured the pivotal screw C, (if it is designed that the chair shall revolve,) which passes through the legs or support D. Immediately in the rear of the boss *a* are affixed the ends of two steel-wire rod springs, *b b*. The rods are then bent in a direction parallel and in line with the length of the span B, and the ends thereof bent at right angles over the ends of said span, (see Fig. 1,) the ends thus bent being firmly affixed to the plates E E, said plates being fastened to the bottom of the chair by screws or otherwise; and in this way the springs are confined to the span and the span secured to the bottom of the chair. In applying the span and springs above described to a chair it is necessary that the points of attachment of

the ends of the springs to the span and of the ends to the plates E E should not be in the same line; for, by applying them slightly out of line, a twist is given to the rods *b b*, which is increased as the chair is tilted back, in their effort to recover from which restores the chair to a horizontal position, with but little exertion from the occupant. To prevent the chair from being tilted too far back the ends of the span B are provided with stops *cc*, against which the plates E E come in contact, and thus regulate the throw or tilting of the chair; and, as a means of preventing the chair from being thrown forward by the action of the springs when it recovers its horizontal position, the stops *dd* are formed on the ends of the span B, which come in contact with the projections *ee* of the plates E E and effect this result. When the chair is occupied the angles *ff*, formed by bending the outer ends of the springs, are brought in contact with the pockets *gg* formed on the ends of the span, which thus become a bearing upon which said angles turn, enabling them to act as pivots when the chair is tilted.

I do not wish to limit myself to the application of the above spider and springs to a revolving chair only, for it may be applied with equal facility to chairs that do not revolve; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. The span or spider B with the springs *b b* and stops *ee* and *dd*, when applied to a tilting-chair constructed in the manner and for the purposes hereinbefore described.

2. The application of one or more torsional rod-springs to a tilting-chair, substantially in the manner and for the purposes set forth.

3. The combination of the span or spider B with the springs *b b* and plates E E.

LEVI HEYWOOD.

Witnesses:

CHS. HEYWOOD,
CHARLES A. COWER.

(62)