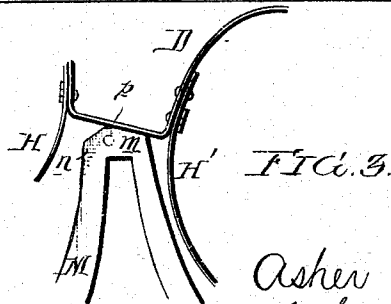
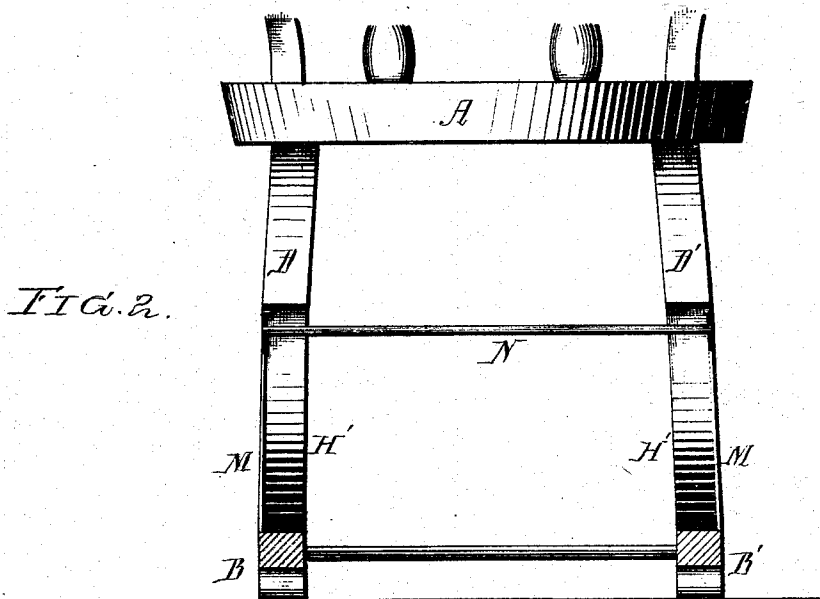
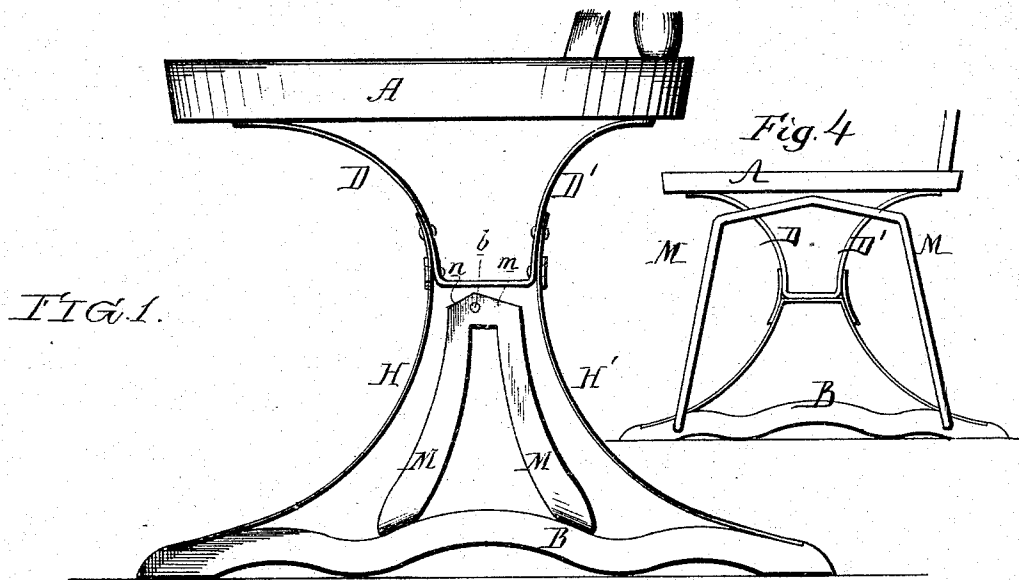


A. B. STEVENS.
 SPRING TILTING-CHAIR.

No. 172,198.

Patented Jan. 11, 1876.



Witnesses.

Harry Smith
 John M. Deemer

Asher B. Stevens
 by his Attorneys
 Howson & Son

UNITED STATES PATENT OFFICE.

ASHER B. STEVENS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO HENRY S. HALE, ARTEMAS KILBURN, J. WARREN HALE, CHENEY KILBURN, AND WARREN HALE, OF SAME PLACE.

IMPROVEMENT IN SPRING TILTING CHAIRS.

Specification forming part of Letters Patent No. **172,198**, dated January 11, 1876; application filed November 30, 1875.

To all whom it may concern:

Be it known that I, ASHER B. STEVENS, of Philadelphia, Pennsylvania, have invented an Improved Spring-Chair with Tilting Seat, of which the following is a specification:

My invention relates to that class of chairs in which the seats are secured to elastic supports; and the object of my invention is to arrest the tilting movement of the seat without subjecting the springs and their fastenings to undue strain, and to prevent injury to the springs by excessive vertical pressure thereon. These objects I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a side view of my improved chair; Fig. 2, a transverse section on the line 1 2; and Fig. 3, a detached view, illustrating one of the advantages of my invention.

A is the seat of the chair, and B B' the two bars, which rest on the floor, or which may be supported on a turn-table, for permitting the chair to be adjusted laterally to any desired position. To the under side of the seat are secured two rigid frames, D D', of a character substantially as shown in the drawing, and to each frame are attached the upper ends of two curved springs, H H', the lower ends of which are secured to one of the supporting-bars B B', the two bars being connected together by any suitable cross bar or bars. To each of the supporting-bars is secured a rigid standard, M, the top edge of which has two inclinations, *m* and *n*, meeting in a comparatively sharp or rounded projection, *p*.

As long as the seat of the chair is not loaded to an extent sufficient to subject the springs to undue strain the lower ends of the frames D are free from contact with the tops of standards M. At the same time the inclinations on the top of the latter frames will restrict the movement of the seat, whether it be tilted forward or backward, as will be readily understood by referring to the detached view, Fig. 3, thereby preventing the undue bending or straining of the springs.

Should there be a heavy pressure on the

seat, the lower ends of the frames D D' will come in contact with the tops *p* of the standards M, which thus prevent the undue straining of the springs by vertical pressure. Under these circumstances, however, the seat is still at liberty to be rocked to an extent limited by the inclinations *m* and *n*.

As the arresting of the seat when tilted is dependent upon the contact of the rigid frames D with the rigid standards, it will be evident that the springs at their junction with the frames (the weakest points) will not be subjected to such severe strains as if the arresting of the seat was effected by the springs themselves coming in contact with the arresting-standards.

In some instances the frames D D' may be dispensed with, and the upper ends of the springs secured directly to the seat, in which case simple plates on the under side of the said seat may be arranged, in respect to the tops of the standards, for performing the same duty as the lower ends of the frames, the standards being carried upward to a proper height to accord with this change, as shown in Fig. 4.

It will be observed, on reference to Fig. 2, that the two standards M M are connected together by a rod, N, which adds to the strength of the structure.

I claim as my invention—

1. The combination, in a chair, of the seat A, the springs H H', and standards M, constructed and adapted to the frames D D', or to the seat, for the protection of the springs, all substantially as and for the purpose herein set forth.

2. The combination of the bars B B', the seat-supporting springs H H', the standards M, and the rod N, by which the said standards are connected together.

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

ASHER B. STEVENS.

Witnesses:

HARRY HOWSON, Jr.,
HARRY SMITH.