A. B. STEVENS.

CHAIR.

No. 171,186. Patented Dec. 14, 1875.

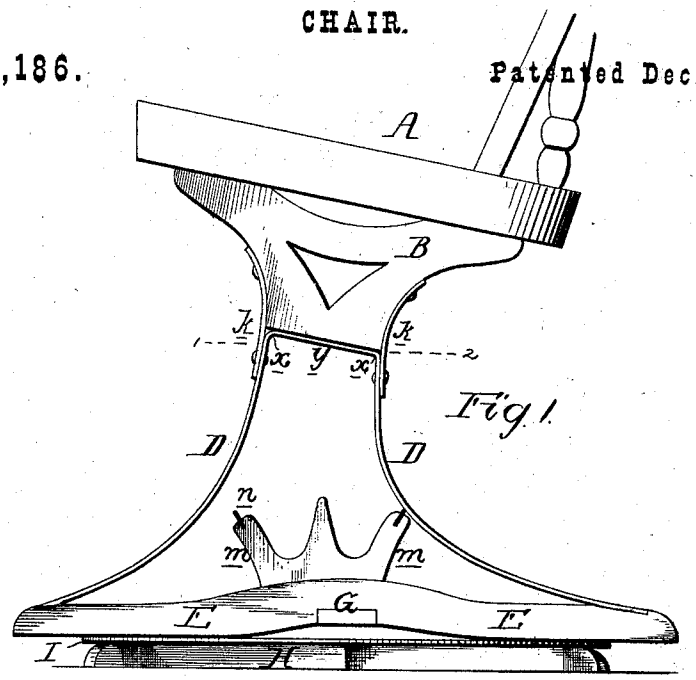


Fig. 1.

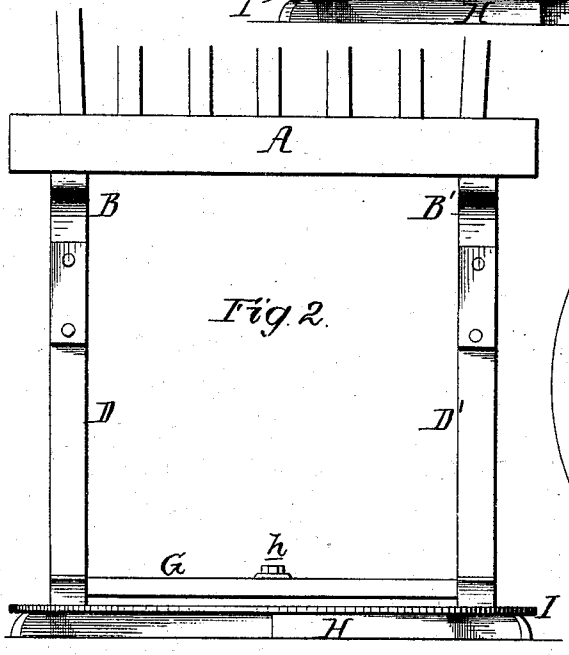
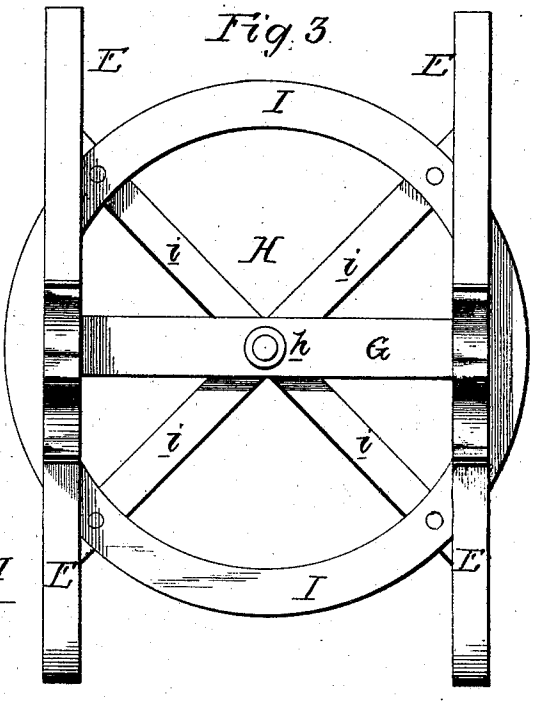


Fig. 2.

Fig. 3.



Witnesses, Harry Smith
Thomas McElvain

Asher B. Stevens
by his Attorneys
Munn & Co

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

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 CHAIRS.

Specification forming part of Letters Patent No. **171,186**, dated December 14, 1875; application filed November 6, 1875.

To all whom it may concern:

Be it known that I, ASHER B. STEVENS, of Philadelphia, Pennsylvania, have invented certain Improvements in Chairs, Stools, &c., of which the following is a specification:

My invention consists of certain improvements, fully described hereafter, in chairs and other articles of furniture supported by springs.

In the accompanying drawing, Figure 1 is a side view of my improved chair, Fig. 2 a front view, and Fig. 3 a sectional plan on the line 1 2.

A is the seat of the chair, and on the under side of this seat are secured two rigid hangers, B and B′, of wood or metal. To each of these hangers are secured, in the peculiar manner fully explained hereafter, two curved springs, D D′, the lower ends of which are attached to one of the bars E, the two bars being connected together by a cross-piece, G, through which passes a pin or bolt, *h*, on the base H, the latter resting on the floor and consisting, in the present instance, of two bars, *i i*, crossing each other at right angles, and connected together at their outer ends by a light ring, I, of metal, on which bear the two bars E E, so that while the chair can be turned freely on the central pin while bearing on the base, the latter forms a steady support for the chair, the four springs permitting the free vibration of the seat. Projections *m m* are secured to each bar, E, and are so arranged as to limit the movement of each spring, each projection having a rubber pad, *n*, so as to obviate any disagreeable jar when the occupant of the chair leans backward and forward so far that the front or rear springs will be arrested.

I prefer to make the two springs D D′ of one bar of steel bent abruptly at *x x*, Fig. 1, the hanger B bearing on the straight portion *y*.

As the weakest portion of the spring-bar, however, will be at the corners *x*, I re-enforce them by metal plates *k*, one being secured to each end of the hanger and to each spring, as shown, so as to effectually counteract the tendency of the springs to break at the abrupt bends.

It has been the practice in constructing chairs of this class to secure the upper ends of the springs directly to the under side of the seat, and to extend the springs to the base, the entire support of the seat from the base upward being thus made elastic. I have found in practice, however, that a much more comfortable and durable chair can be made by springs restricted in length by the interposition of rigid mediums between the upper ends of the springs and seat; hence the employment of the hangers B as the said rigid mediums, which also afford a means of more securely fastening the upper ends of the springs than the usual screws by which the springs are ordinarily secured directly to the seat.

It will be evident that the spring-support may be applied to stools, cradles, and other articles to which it is desirable to impart a rocking motion.

I claim as my invention—

1. A flexible supporting-structure, consisting of two curved springs, D D′, the hangers B B′ attached to the object to be supported and secured to the upper ends of the springs and bars E, to which the lower ends of the springs are attached, all substantially as set forth.

2. The springs D D′ made of one bent bar, in combination with the hangers B B′ and re-enforcing-plates *k*, through the medium of which the said springs are secured to the hangers, all substantially as described.

3. The combination of the projections *m m*, secured to the bars E, and having rubber pads *n*, with the springs D D.

4. The combination of a chair, having spring-supports, with a base, H, having a ring, I, and a central pin or bolt, on which the chair can turn, all substantially as described.

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.