

H. K. WHITE.
Tipping Chairs.

No. 139,639.

Patented June 3, 1873.

Fig. 2.

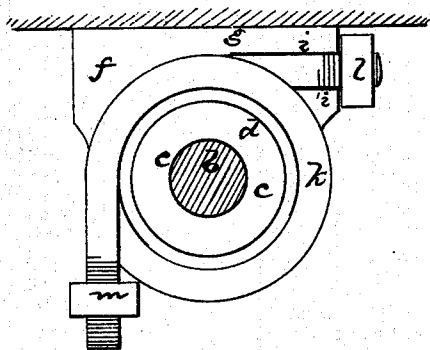


Fig. 3.

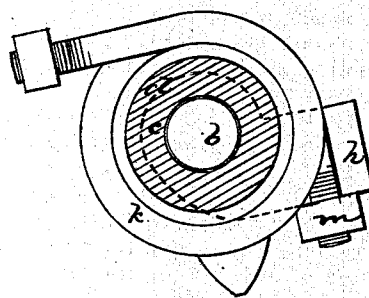
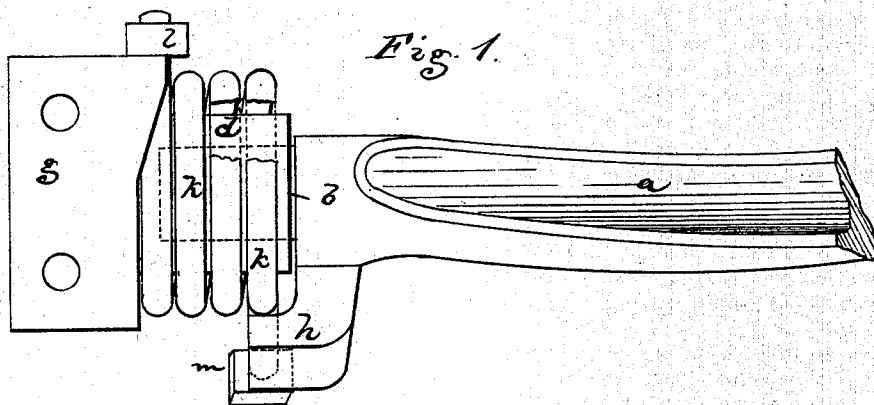


Fig. 1.



Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY K. WHITE, OF CHELSEA, ASSIGNOR TO PARKER, WHITE & CO., OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN TIPPING-CHAIRS.

Specification forming part of Letters Patent No. **139,639**, dated June 3, 1873; application filed May 6, 1873.

To all whom it may concern:

Be it known that I, HENRY K. WHITE, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Applying Springs to Tipping-Chairs; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates to an improved construction of the spring mechanism of tipping-chairs, of that class in which a spider, fastened to the stool or pedestal, is connected with the chair-bottom or seat, and the seat tips against the stress of springs interposed between the chair-seat and the spider.

In my invention I pivot the outer ends of two of the spider-arms in bearings fixed to the under side of the seat, and in one side of the ear or plate from which the bearing extends I form a notch, while from the spider-arm adjacent to the pivot I extend a shoulder. Around the pivot I place a stout coiled spring with one end held in said notch, and the other by said shoulder, each end of the spring having a suitable nut. The bearing-plates being fastened to the under side of the seat, and the spider-pivots being in their bearings or sockets, the seat when tipped causes the springs to contract, the seat tipping against the stress of the springs, while, when the seat is released, the expansion of the springs returns the seat to its normal or horizontal position.

My invention consists in the combination and arrangement of the pivotal connections and the spring-holding and controlling notches and shoulders.

The drawing represents the pivoted end of one of the spider-arms, and the bearing and spring combined with such pivot.

Figure 1 shows the mechanism, partly in section and partly in plan. Fig. 2 is an end view of the bearing and spring. Fig. 3 shows the spring in end view, looking toward the pivot.

a denotes a part of one of the spider-arms, having at its end the gudgeon or pivot *b*, said pivot being journaled in a bearing, *c*, formed in a boss or cylinder, *d*, extending from an ear, *f*, that projects down from a plate, *g*, which plate *g* is fastened to the bottom or under surface of the chair-seat. Extending from the spider-arm *a* is the arm or shoulder *h*, the end of which is turned, as seen in Fig. 1, and in the inner side of the ear is formed a notch, *i*. Around the bearing-tube or cylinder is placed the coiled spring *k*, and while one end of the spring extends into the notch *i* a nut, *l*, bearing against the end of the ear to confine the spring. The other end of the spring passes behind the shoulder *h* and is confined by a nut, *m*. When the chair tips, the ear *f*, acting against the nut *l*, contracts the spring, the opposite end of the spring being held by the nut *m*, and the spring expanding to bring the seat to normal position, suitable stops determining the movement of the seat for this normal or horizontal position.

To apply the spring or effect the connection (one of the bearings and its spring being in position, and the spider in readiness) the spring is slipped upon the bearings, and the bearing over the pivot, and the bearing-plate *g* is then screwed to the chair-seat, the connection being thus readily and easily effected, and needing no tools, other than an ordinary screw-driver.

By turning the nuts *l m* the stress of the spring may be increased or diminished, as may be desirable.

I claim—

The spider-arm pivot *b*, having the shoulder *h*, and the bearing-cylinder *d* encompassed by the spring *k*, and having the notch *i*, the respective ends of the springs being arranged with relation to the shoulder *h* and notch *i*, substantially as shown and described.

Executed this 22d day of April, A. D. 1873.
HENRY K. WHITE.

Witnesses:

FRANCIS GOULD,
M. W. FROTHINGHAM.