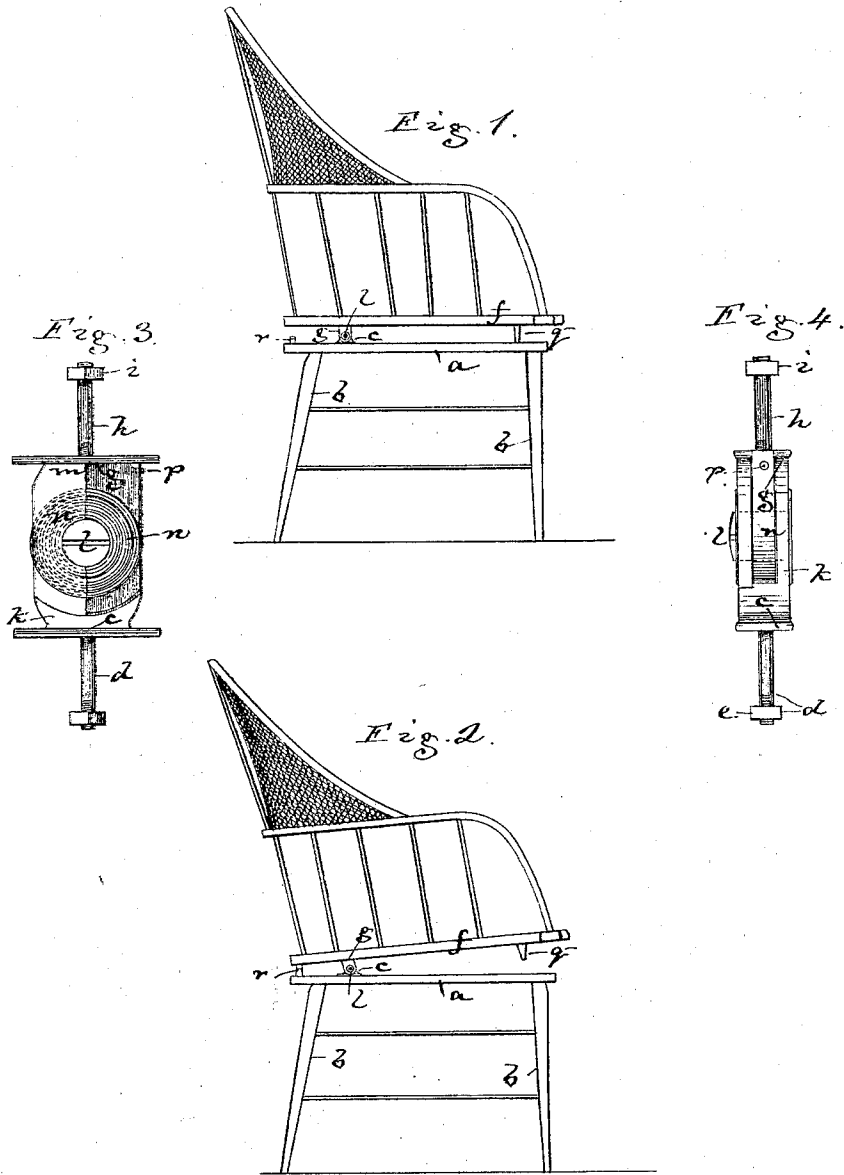


O. A. BINGHAM.
Tilting-Chairs.

No. 147,891.

Patented Feb. 24, 1874.



Witnesses.
M. M. Frothingham.
L. H. Catimer.

Inventor
Osmore A. Bingham.
By his Atty.
Crosby & Gould.

UNITED STATES PATENT OFFICE.

OSMORE A. BINGHAM, OF KEENE, NEW HAMPSHIRE, ASSIGNOR TO GEORGE C. WINCHESTER, OF ASHBURNHAM, MASSACHUSETTS.

IMPROVEMENT IN TILTING CHAIRS.

Specification forming part of Letters Patent No. 147,891, dated February 24, 1874; application filed July 24, 1873.

To all whom it may concern:

Be it known that I, OSMORE A. BINGHAM, of Keene, in the county of Cheshire and State of New Hampshire, have invented an Improved Tipping Chair; 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.

The invention relates to that class of tipping chairs in which the seat is mounted upon, or with respect to, a stationary stool or frame by a pivotal connection, which admits of tipping movement of the seat, suitable stops being employed to limit the extent of movement in either direction, and suitable springs to bring the seat to its normal position.

In my invention the pivotal connection is effected by means of two pins at opposite sides of the chair, each of which pins extends through two ear-plates, one fixed to and extending from the bottom of the chair-seat frame, and the other from the top of the stool, and boxed in between the plates of each pivot-pin is a strong clock-spring or coiled spring, one end of which spring is fastened to the chair-seat plate and the other to the pivot-pin. The pin is stationary and is fixed to the stool-plate, and the stress of the springs throws the front of the seat-frame down, keeping the seat normally in horizontal position; but, as the occupant of the chair tips back, the seat tips against the stress of the springs, the coils of the springs tightening, and the back of the frame being arrested by a suitable stop, preferably a spring-stop.

My invention consists primarily in the peculiar construction and arrangement of the pivotal and spring connections.

The drawing represents a chair embodying my invention.

Figure 1 shows the chair in side elevation. Fig. 2 is a similar view of it, the seat being tipped back. Figs. 3 and 4 show the pivot and spring mechanism detached.

a denotes the horizontal top rail or frame of the stationary stool, supported on legs *b*. Toward the rear part of the frame *a* are two op-

posite plates, *c*, resting upon the top of the rail, and each preferably fastened in position by being made with a screw-shank, *d*, which passes through the rail, and is secured by a nut, *e*. *f* denotes the seat-frame, to the under side of which are attached plates *g*, corresponding to the plates *c*, each plate *g* being preferably secured in position by a screw-shank, *h*, and nut *i*. From each plate *c* extends an ear or bearing, *k*, that supports a horizontal pivot-pin, *l*, and from each plate *g* an ear or plate, *m*, extends down, said plate being supported and rocking upon the pivot-pin *l*. Around each pin *l*, and so as to be boxed in between each two ears or plates *k m*, is a wound coiled or clock spring, *n*, the inner end of which is made fast to the pin, preferably by entering a slot cut diametrically through the pin, and the other end of which is fastened or connected to the plate *g* by a pin, *p*, which passes through the spring and into the plate. The stress of the spring tends to throw the front part of the seat down, and to keep it in normal (horizontal) position, and it is provided with stops *q*, which strike the frame *a*, as seen at Fig. 1, these stops being preferably fastened to the seat-frame *f*.

From this position the seat-frame can tip, as seen at Fig. 2, by a person sitting upon the seat and leaning back, the tipping being against the stress of the springs, which stress always brings the seat back to its normal position when the pressure to tip it back is removed.

The extent of tipping movement may be limited by a stop, *r*, which may be an elastic cushion.

I claim—

In combination with the seat-frame *f* and a common stool-frame, *a*, the described pivotal and spring connection, the same consisting of the pivotal pins *l*, the opposite plates *k m*, and coiled spring *n*, the parts being relatively arranged, and applied to the seat and stool, as shown and set forth.

OSMORE A. BINGHAM.

Witnesses:

AMOS J. BLAKE,
GEORGE C. CAMPBELL.