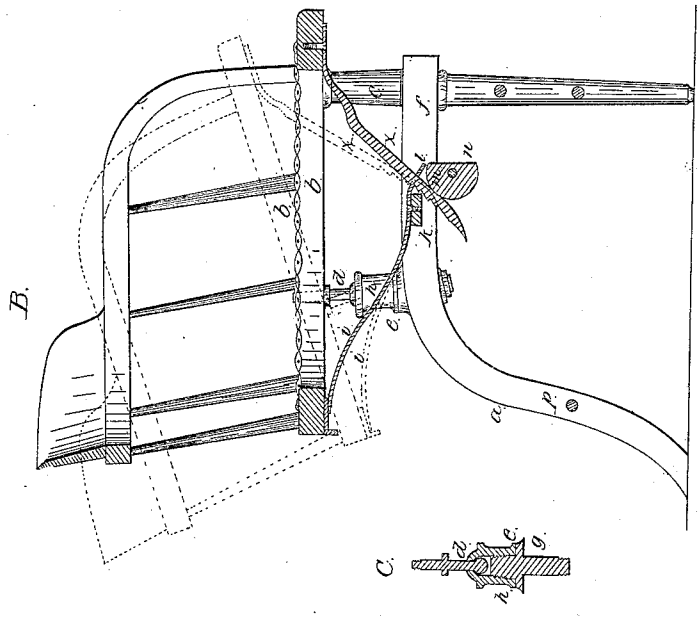
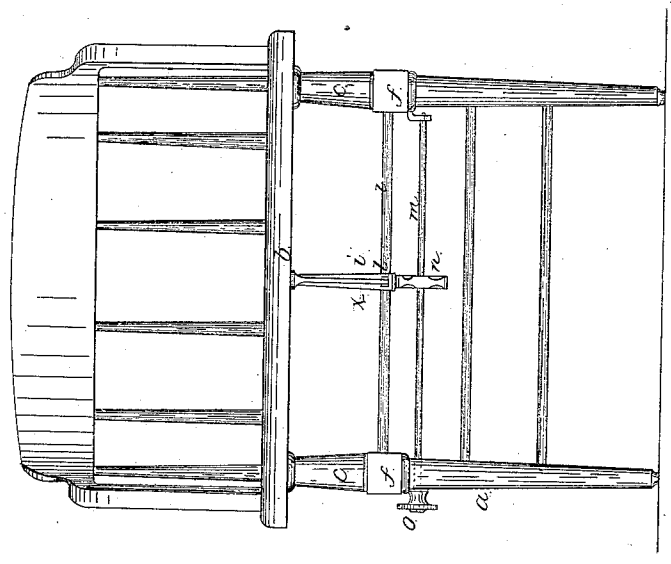
Winchester & Howe,

Tilting Chair.

No. 60,978. Patented Jan. 1, 1867.





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GEORGE C. WINCHESTER AND MARTIN V. B. HOWE, OF ASHBURNHAM, MASSACHUSETTS, ASSIGNORS TO C. & G. C. WINCHESTER, OF SAME PLACE.

Letters Patent No. 60,978, *dated January* 1, 1867.

IMPROVEMENT IN CHAIRS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, GEORGE C. WINCHESTER and MARTIN V. B. HOWE, all of Ashburnham, in the county of Worcester, and State of Massachusetts, have invented an improved Chair; and we do hereby declare that the following, taken in connection with the drawings, which accompany and form part of this specification, is a description of our invention sufficient to enable those skilled in the art to practise it.

The invention relates principally to the construction of that class of rocking-chairs in which the seat alone is made capable of rocking movement, the stool upon which the seat is mounted being stationary, as in the common chair; and the invention consists in the manner of connecting the seat with the stool with reference to its provision for rocking, and in the mechanism by which the seat is locked in horizontal position to constitute a common chair, or in tipped position to form a reclining chair; also in forming the rear leg and top side rail of a chair of one piece of bent wood.

The drawings represent a chair embodying the invention, A showing a front, and B a sectional elevation of the same.

a denotes a stationary stool, composed of the legs, top rails, and cross-bars or stretchers. *b* is the seat, supported on the frame by short legs or feet, *c d*, the rear ones, *d*, of which rest and play at their lower ends in bearings made in uprights *e*, fixed on the rear of the top rails *f*. A section through one of the uprights is seen at C, it being composed of a screw spindle, *g*, fastened upon the top rail, (said spindle having a cup or socket in its upper end,) and a cap or cylinder, *h*, to screw over or down upon the spindle. The foot *c* has a ball or enlargement at its lower end, which rests in the socket on the screw, the spindle forming, with the socket in the spindle, a ball-and-socket joint, the shank of the foot extending through a slot in the cap *h*, the foot being held down upon the upright by said cap, the hole through the top of which is such as to permit the foot *d* to swing backwards and forwards in the direction in which the rocking movement of the seat takes place. The two uprights *e*, and feet *d*, so constructed and arranged, form together a compound hinge or joint, upon which the rocking movement is effected, and by which this movement can only take place in a backward and forward, and not in a lateral, direction. It will be obvious that the ball-and-socket joints, constructed substantially as described, have functions beyond those of simple hinges, inasmuch as by screwing down the caps thereof any looseness of the parts can be taken up, and thus noises and irregular movements will be prevented; furthermore, by unscrewing the caps of the ball-and-socket joints, the two parts of the chair, its top and base, can be sundered without use of tools, for convenience in packing and transportation. To keep the seat in its normal or horizontal position when not being used, and to aid in bringing it back when tipped up by the sitter, a spring, *i*, is fastened to a cross-bar, *k*, and extends upward and backward, so that its end bears against the under surface of the rear side of the seat with stress enough to keep the seat in position when not being used, and with such force beyond that as may be desirable.

In a chair of this kind it is desirable to be able to constitute the chair at will into an ordinary stationary seat, or one incapable of rocking movement, and this I effect as follows: A ratchet or toothed bar, *x*, extends from the front rail of the seat down through a slot in a plate, *l*, formed by the front end of the spring *i*, (which projects out from the bar *k*,) or in a plate fastened to and projecting from said bar *k*. The teeth of the ratchet-bar are kept normally out of connection with the plate or pawl, or by the spring of the bar, (or may be so kept by a separate spring or by gravity.) Below the plate *l* is a horizontal shaft, *m*, hung in bearings below the top rails of the frame; and on this shaft is a cam, *n*, which, by turning the shaft, forces the upper tooth of the ratchet under the plate, and locks the seat to the frame, a head, *o*, being fixed on the end of the shaft, so that the sitter can reach and turn the shaft when desirable. By the same means, the seat may be locked in tilted position, as seen at B, the cam forcing the lower tooth of the ratchet over the pawl-plate at the inner end of the slot, and by holding it there, maintaining the seat in tilted position; and through the intermediate teeth of the ratchet the seat may be fixed in whatever inclined position may be desired. Each rear leg, *p*, is formed from an extension of the adjacent top rail *f*, or, in other words, a strip of wood is bent into shape to form the said leg and rail without any piecing. This construction is cheaper, stronger, and more ornamental in appearance than a construction in which separate pieces of wood are joined together to form respectively the leg and rail.

We do not claim broadly a rocking seat applied to a stationary frame, as such an arrangement has been in use for many years; nor do we claim broadly a means for locking such a seat in horizontal or inclined position, as this *per se* is not new. We claim—

Combining the seat *a* with the stationary stool or base *b* by means of ball-and-socket joints, arranged not only to act as hinges but otherwise, substantially as described.

Also, combining with such arrangement or construction the spring *i*, fixed to the bar, and bearing against the rear part of the seat, substantially as shown and described.

Also, the combining of the ratchet-bar, pawl-plate, shaft, and cam, when arranged to lock the seat in horizontal or inclined position, substantially as set forth.

Also, forming each side rail *f* and its leg *p* from a single strip of wood bent into shape, substantially as shown and described.

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