(No Model.)

A. E. QUINLAN.

TILTING CHAIR IRON.

No. 455,866. Patented July 14, 1891.

Fig. 1.

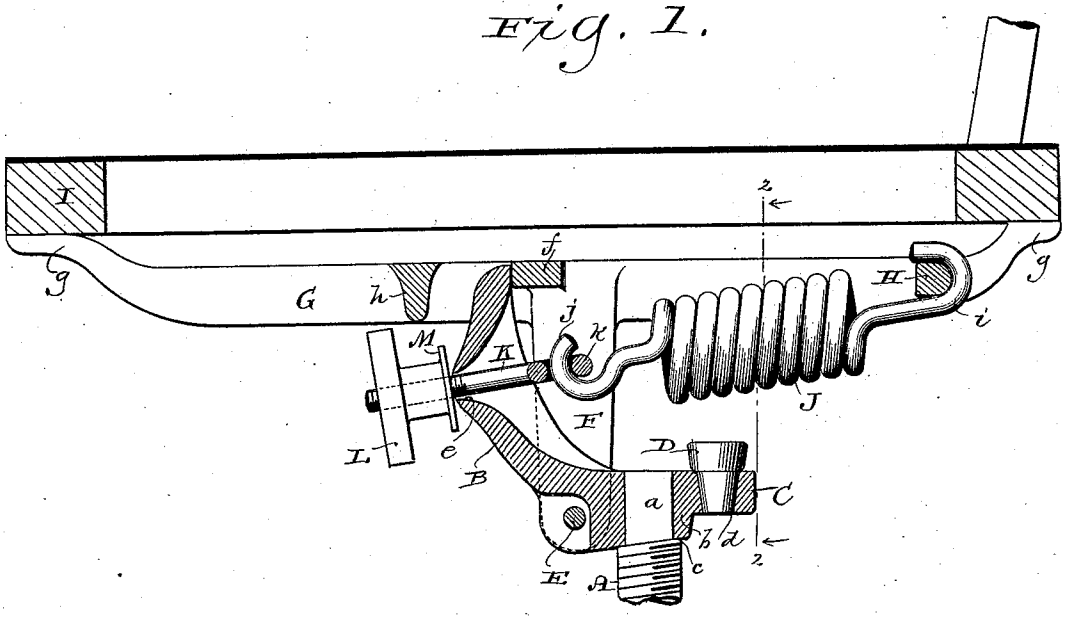
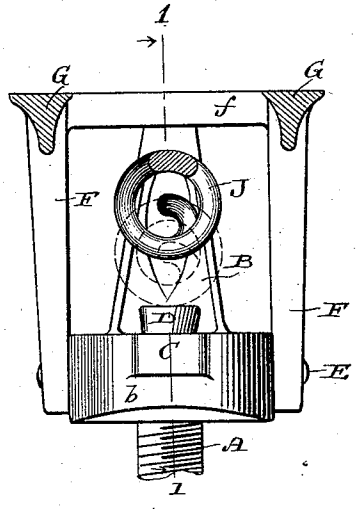


Fig. 2.



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UNITED STATES PATENT OFFICE.

ALFRED E. QUINLAN, OF SHEBOYGAN FALLS, WISCONSIN, ASSIGNOR TO BYRON H. SANFORD AND JOE SANFORD, OF SAME PLACE.

TILTING-CHAIR IRON.

SPECIFICATION forming part of Letters Patent No. 455,866, dated July 14, 1891.

Application filed May 5, 1890. Serial No. 350,718. (No model.)

To all whom it may concern:

Be it known that I, ALFRED E. QUINLAN, a citizen of the United States, residing at Sheboygan Falls, in the county of Sheboygan and State of Wisconsin, have invented certain new and useful Improvements in Tilting-Chair Irons; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to tilting-chair irons; and it consists in certain peculiarities of construction, as will be fully set forth hereinafter, and subsequently claimed.

In the drawings, Figure 1 is a side elevation of my improved device applied to a chair-bottom, partly in section, on the line 1 1 of Fig. 2. Fig. 2 is a transverse vertical section on the line 2 2 of Fig. 1.

A designates a supporting screw or spindle of ordinary construction, designed to fit and work in the base or stool (not shown) of the chair in the usual manner. The upper end of this spindle is preferably reduced, as shown at *a*, to enter a bore in the base *b* of the standard B, the lower surface of said base and the shoulder *c* of the spindle A, formed by reducing its upper end, being preferably inclined, as best shown in Fig. 1, to insure a firmer union of these parts. The rear of the standard-base *b* is provided with a projection C, preferably formed with a bore or recess *d* for the reception of a flexible or elastic bumper or back-stop D, formed preferably of rubber.

The standard B is provided with an opening *e* therethrough, and the forward part of the standard-base is transversely bored for the reception of a journal E, to which are pivoted the lower ends of the arms F F, depending from a frame or spider comprising two horizontal arms G G, having upturned ends *g g*, united by transverse braces H *h f*. The chair-bottom I is designed to rest upon the upturned ends *g g* of the spider-arms G G, as shown in Fig. 1, and the brace *f* forms a front stop normally in contact with the upper inner edge of the standard B, as shown in the same figure.

J is a spring having preferably hook-shaped ends *i j*, the former of which is designed to engage with the rear brace H of the described frame or seat-spider, while the end *j* engages with the inner or rear end or ring *k* of a screw-rod K, whose forward screw-threaded end passes through the described opening *e* of the standard B and receives a nut or hand-wheel L, a washer M being preferably interposed between the inner end of said nut or hand-wheel L and the outer surface of the standard B.

The operation of my device will be readily understood from the foregoing description of its construction. When the chair is tilted backward, the spring J comes in contact with the bumper or back-stop D, and hence the stoppage is without shock or jar, as would be the case if any unyielding part of the frame or spider came against a rigid stop, and the backward tilting is thus rendered easy and comfortable to its full limit, which results in a springy cushioning action, which is greatly increased by reason of the flexible or elastic nature of the said bumper D.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a tilting-chair iron, the combination, with a seat-standard having a rear projection, of a flexible or elastic bumper or back-stop projecting upward therefrom, a frame or seat-spider pivoted to said standard, and a spring connected to said frame and standard and normally located over and in line with said bumper, substantially as set forth.

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