

(No Model.)

J. GILSON.
CHAIR.

No. 560,615.

Patented May 19, 1896.

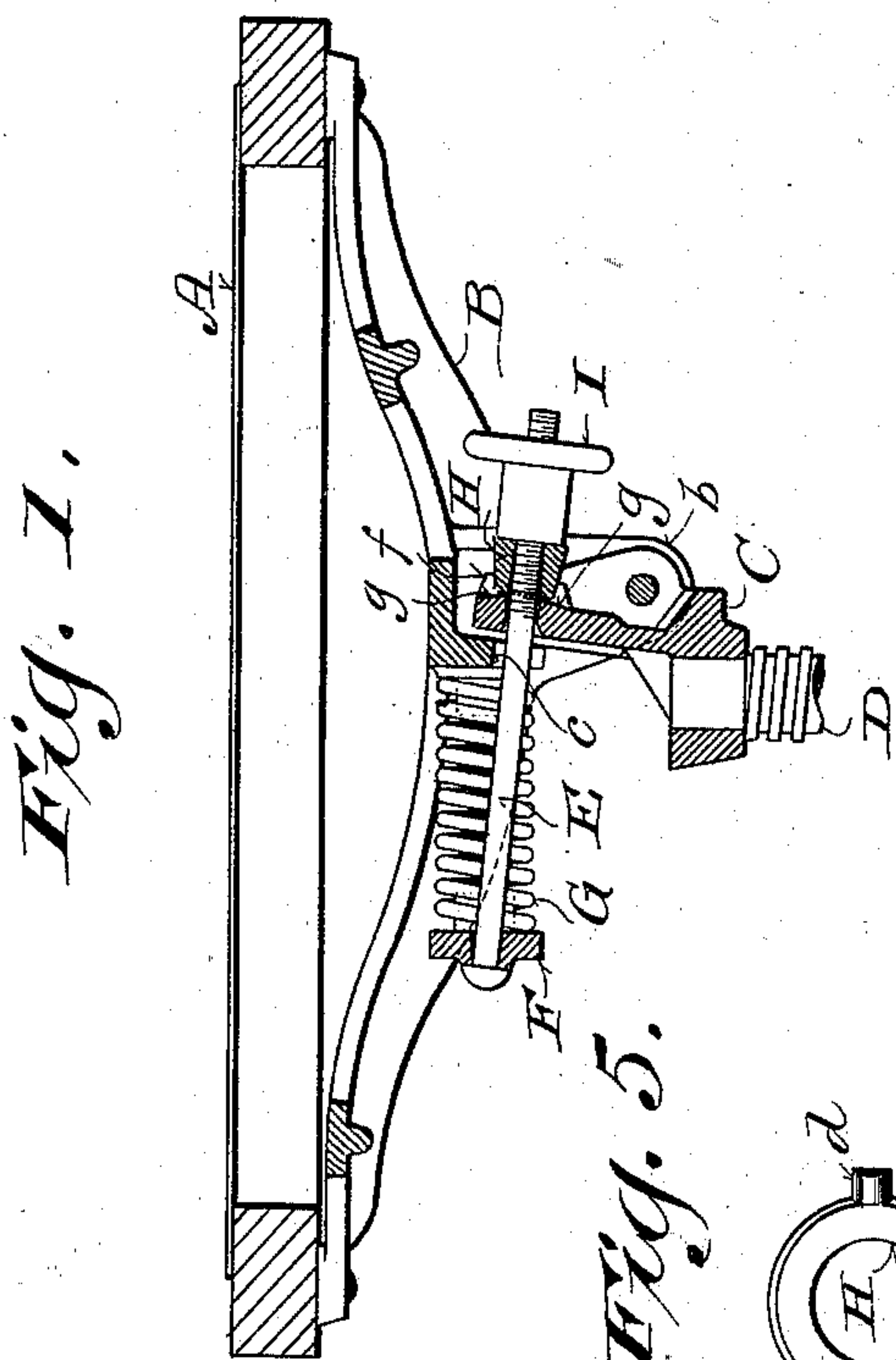


Fig. 6.

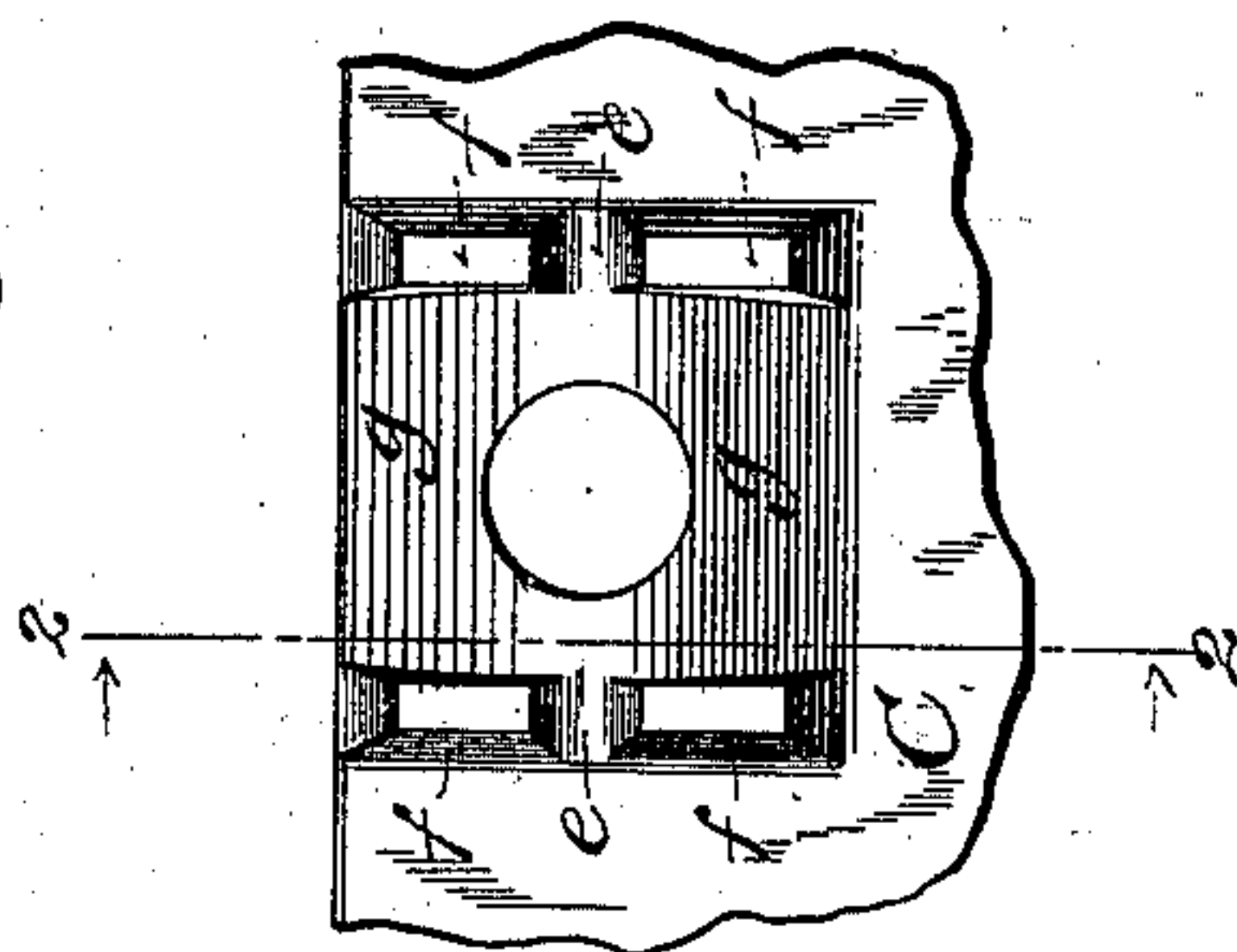


Fig. 2.

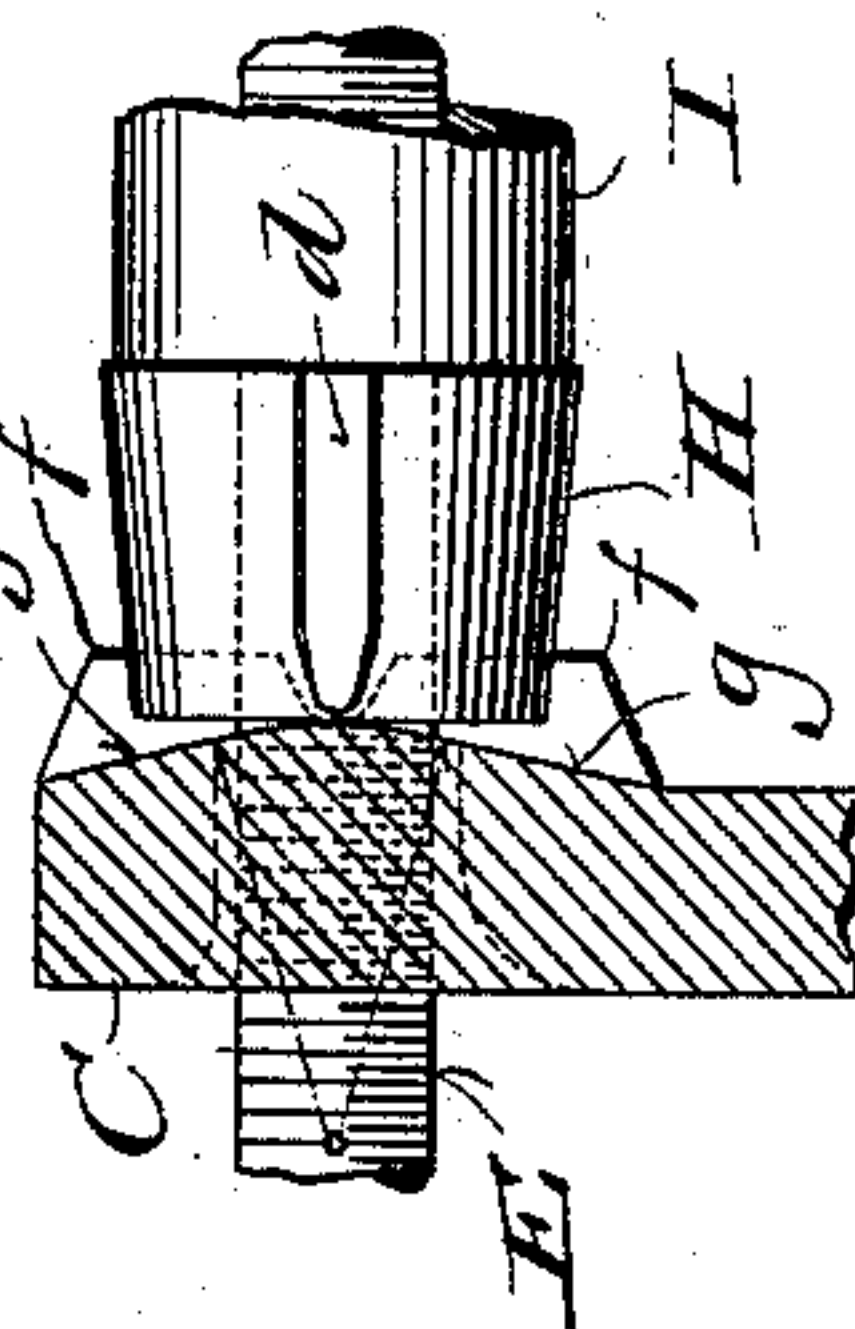
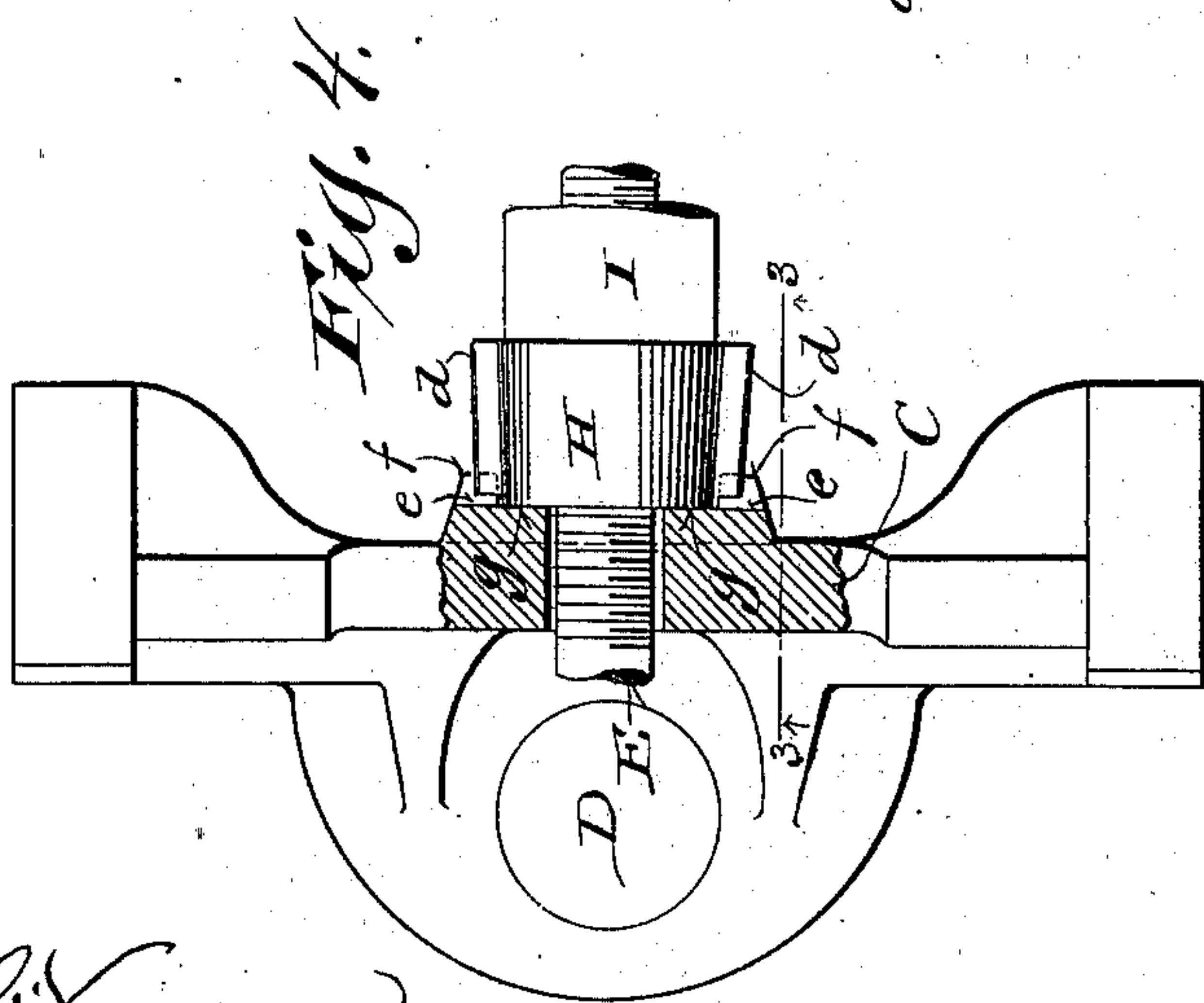
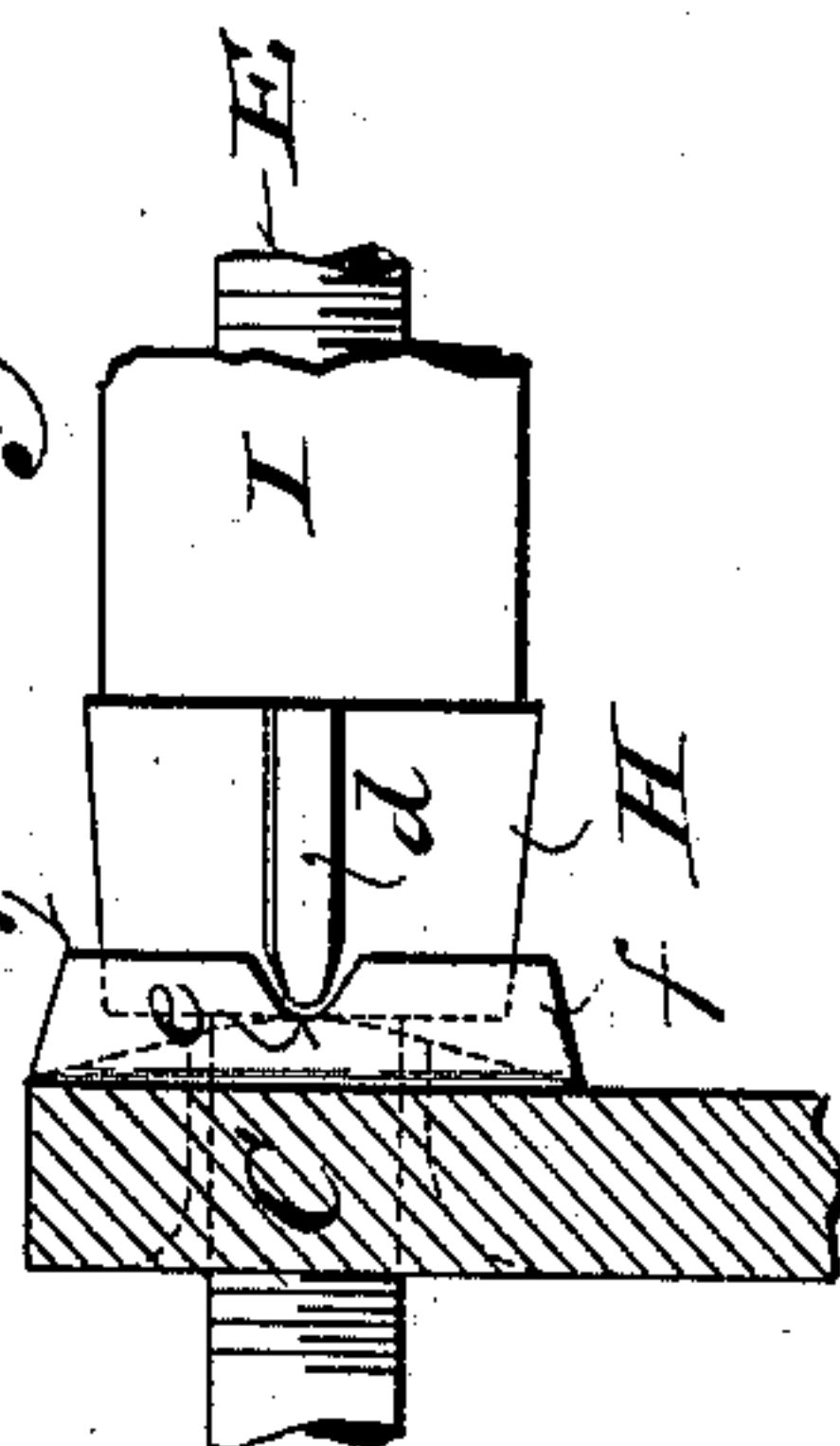


Fig. 3.



Witnessed:
Geo. W. Loring
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Invented by:
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UNITED STATES PATENT OFFICE.

JOHN GILSON, OF PORT WASHINGTON, WISCONSIN, ASSIGNOR TO THE
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CHAIR.

SPECIFICATION forming part of Letters Patent No. 560,615, dated May 19, 1896.

Application filed January 18, 1895. Serial No. 535,346. (No model.)

To all whom it may concern:

Be it known that I, JOHN GILSON, a citizen of the United States, and a resident of Port Washington, in the county of Ozaukee and State of Wisconsin, have invented certain new and useful Improvements in Chairs; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to improve that class of tilting-chairs in which spiral springs, adjustable as to tension, regulate the movement of the seat-iron about its pivotal connection; and it consists in the peculiarities of construction and combination of parts hereinafter described with reference to the accompanying drawings, and subsequently claimed, whereby a device arranged upon the tension-rod has a rocking action upon the standard on a changing fulcrum instead of fixed points, and is prevented from slipping in a vertical direction far enough to endanger the screw-thread on said rod.

In the drawings, Figure 1 represents a sectional view of a portion of a tilting-chair involving one form of my invention; Fig. 2, a detail elevation, partly in section, on line 2 2 of Fig. 6; Fig. 3, a similar view, partly on line 3 3, of the succeeding figure; Fig. 4, a detail plan view, partly in horizontal section, illustrating a rod-sustaining sleeve and its position relative to the seat-standard; Fig. 5, an end view of the sleeve, and Fig. 6 an elevation of a portion of said standard.

Referring by letter to the drawings, A represents a chair-seat secured to a spider or seat-iron B, having depending ears *b* in pivotal connection with a standard C, fast on the upper end of a spindle D, the latter being screw-threaded or otherwise, according to the provision made for its vertical adjustment. The seat-iron has a depending forked portion *c* astraddle of a screw-threaded rod E, having a squared end supporting a tension-bar F for spiral springs G, opposing the depending portion of said seat-iron, and said rod is run through an opening in the standard C and a sustaining-sleeve H to engage a nut I, the latter being employed to regulate the compression of the springs.

The construction and assemblage of parts above specified does not differ from what is

common in the art of tilting-chairs, except so far as the standard and rod-sustaining sleeve are concerned, and I am aware that a pivotal plate or washer has been employed intermediate of the adjusting-nut and standard to sustain the tension-rod in such a manner as to compensate for radial shift or strain thereon incidental to the tilting movement of the chair-seat. The plate or washer to which reference is made has pivotal points or lugs engaging depressions in the standard, and while I obtain the same general result my rod-sustaining sleeve is necessarily in direct rocking contact with the standard on a changing fulcrum, as distinguished from a similar movement on pivot-points. I am aware of an instance where the adjusting-nut on the tension-rod bears against a washer in rocking contact with a nose of the standard; but in this construction and arrangement of parts there are no means to guard against slipping of the nut and washer in a vertical direction. Hence the screw-thread of said rod is liable to jam by contact with said standard.

In that form of my invention herein illustrated a face of the standard is beveled in opposite directions from the extremes of a curve having the radius thereof on a horizontal plane central of the rod-opening in the standard, and to prevent said sleeve and rod from vertical displacement the former is provided with longitudinal ribs or stops *d*, that come within notches *e* central of parallel vertical ribs *f* on the aforesaid standard adjacent to the surface thereof, that gradually recedes in opposite directions from the radius of the curve. It is also to be understood that the stops *d* do not touch on the opposing faces of the standard, nor do they come into contact with the ribs *f*, unless there is slipping action on the part of the rod-sustaining sleeve, the sole function of said stops being to prevent jamming of the screw-thread on the tension-rod should a slip of said sleeve take place. The inner end of the rod-sustaining sleeve is shown as presenting a flat surface that bears on the curve portion of the opposing face of the standard, and whether this sleeve rocks up or down the action takes place on a constantly-changing fulcrum. Hence said sleeve is extremely sensitive to tilting movement of

the chair-seat, and compensation for radial shift or strain on the tension-rod is readily effected without any tendency of the aforesaid sleeve to bind or cramp on said standard.

- 5 The contour of the standard-face opposed to the inner end of the sustaining-sleeve is immaterial so long as it presents the above-described curve and sufficient clearance for said sleeve in its rock on a changing fulcrum.
- 10 It is also practical to have the inner end of the rod-sustaining sleeve present a contour similar to that described in connection with the opposing portion of the standard, and in such a case this standard may be either flat or
- 15 curved opposite said inner end of the sleeve.

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

- 20 1. The combination of the standard provided with a curved bearing-face and parallel vertical ribs notched intermediate of their extremities, the spring-controlled seat-iron in pivotal connection with the standard, the screw-threaded tension-rod, the spring-adjusting nut, and a sleeve loose on the rod intermediate of the nut and standard in rocking contact with the face of the latter on a changing fulcrum and provided with lateral

projections that come within the notches of the aforesaid ribs but are out of contact with 30 the ribs themselves except in case of slip on the part of said sleeve in a vertical direction.

2. The combination of the standard provided with vertical ribs notched intermediate of their extremities, the spring-controlled 35 seat-iron in pivotal connection with the standard, the screw-threaded tension-rod, a sleeve loose on this rod against said standard, a curved bearing-face on one of these contacting members, whereby provision is had for a 40 rock of the sleeve on a changing fulcrum, the spring-adjusting nut run on said rod against said sleeve, and lateral projections on the aforesaid sleeve that come within the 45 rib-notches but are out of contact with the ribs themselves except in case of slip on the part of the sleeve in a vertical direction.

In testimony that I claim the foregoing I have hereunto set my hand, at Port Washington, in the county of Ozaukee and State of 50 Wisconsin, in the presence of two witnesses.

JOHN GILSON.

Witnesses:

WM. AHLHAUSER,
H. W. BOLENS.