

D. C. MEEKER.  
Tilting Chair.

No. 198,655.

Patented Dec. 25, 1877.

Fig: 1.

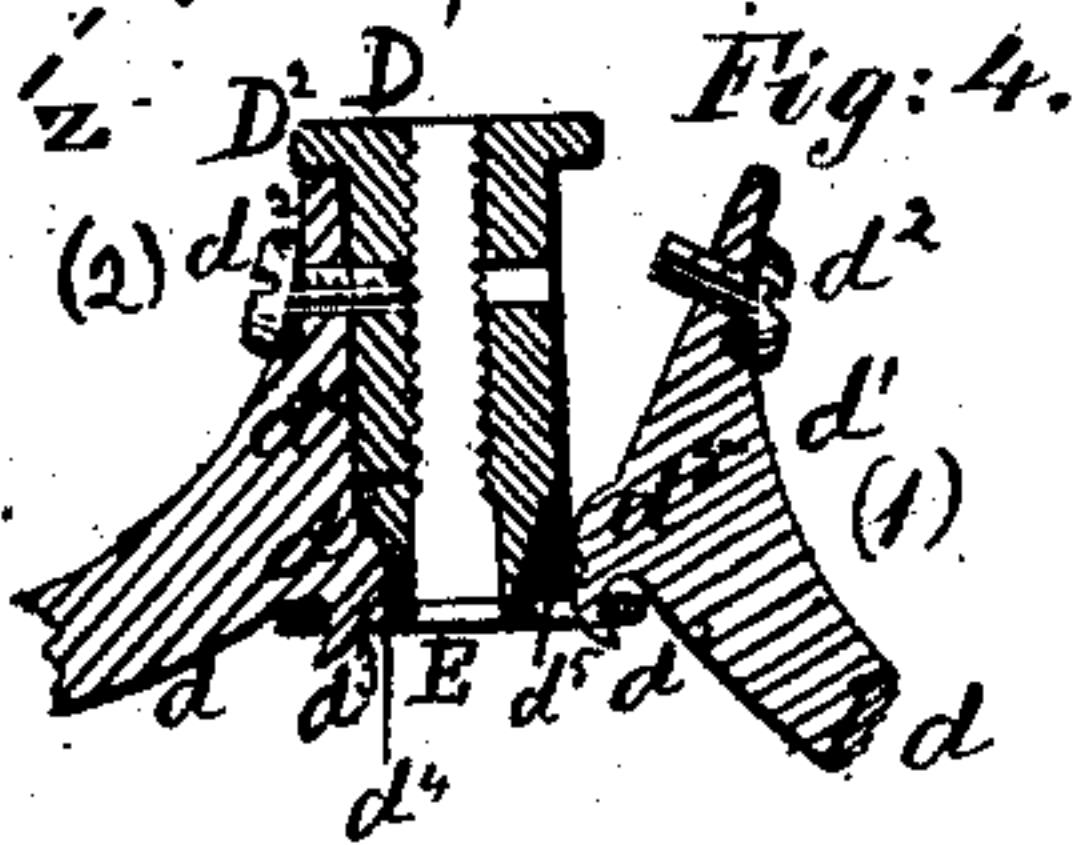
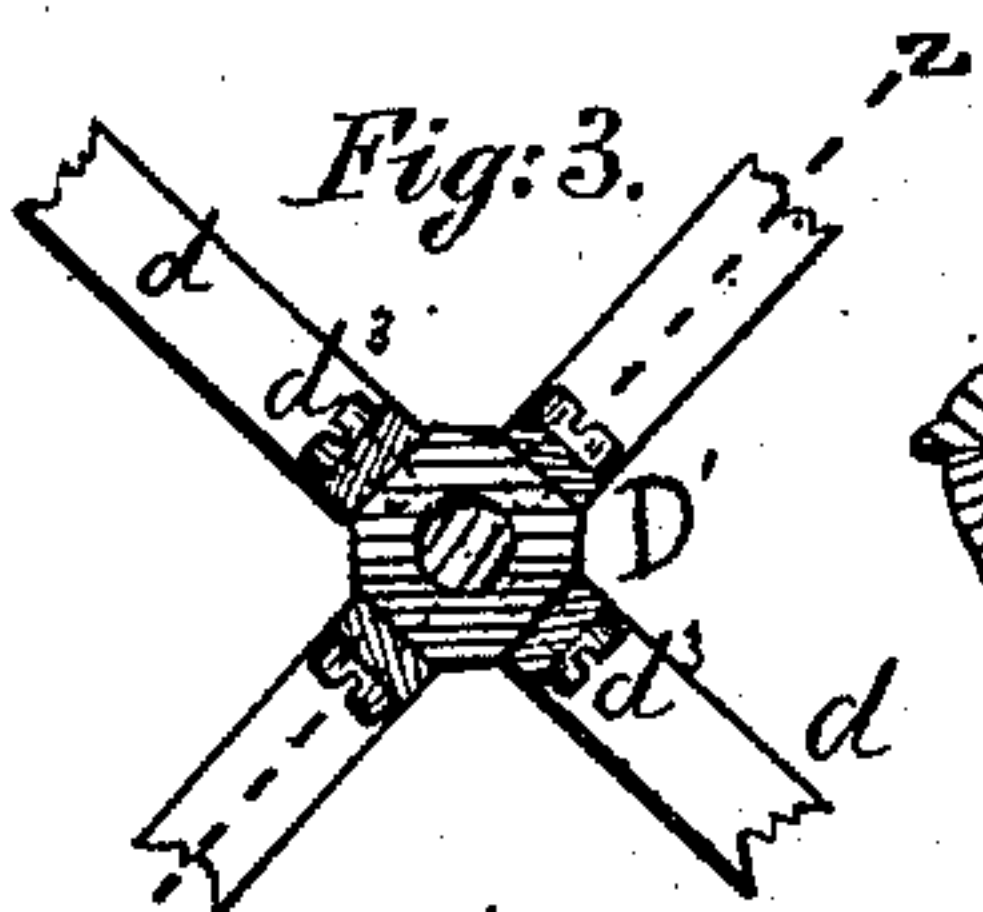
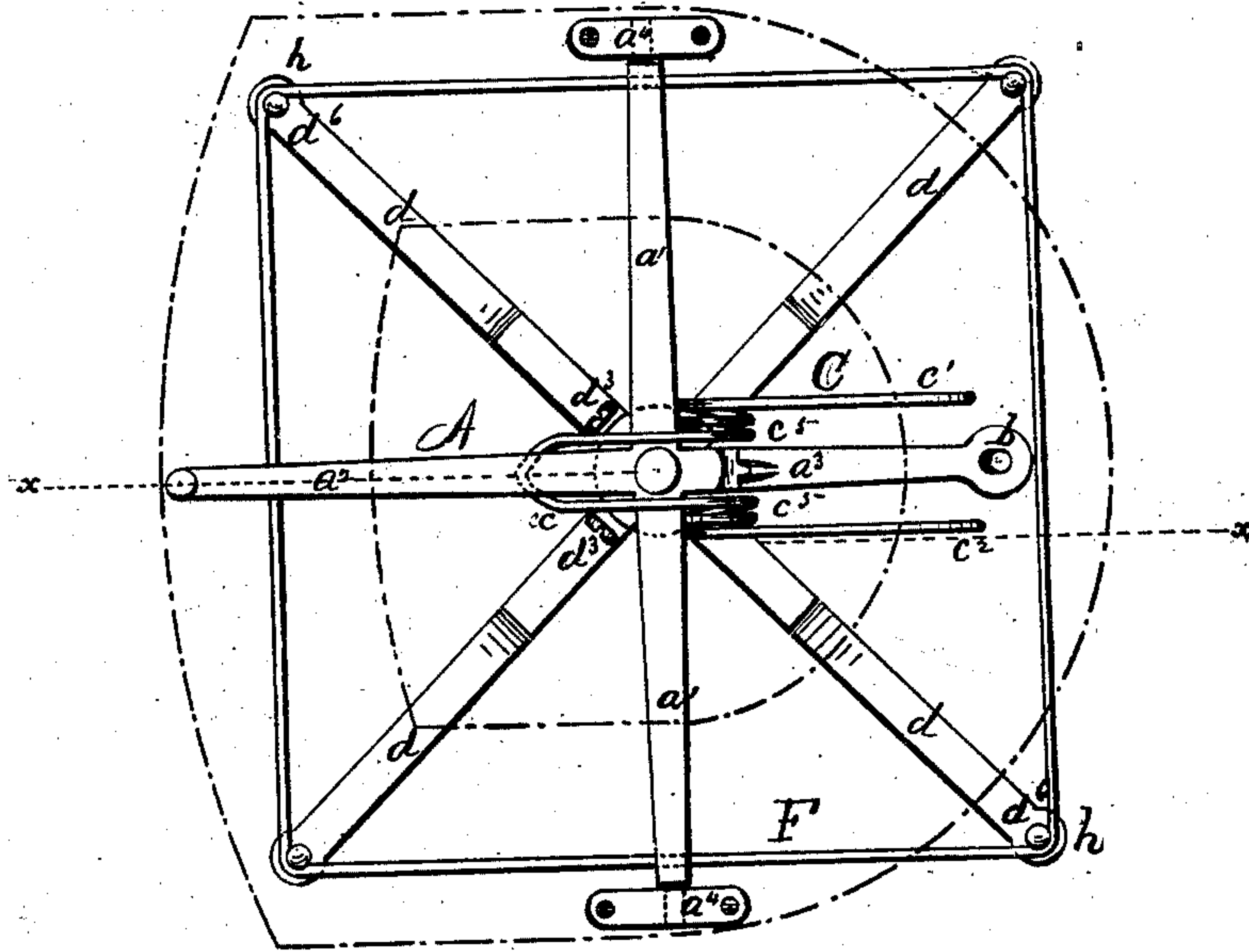


Fig: 2.

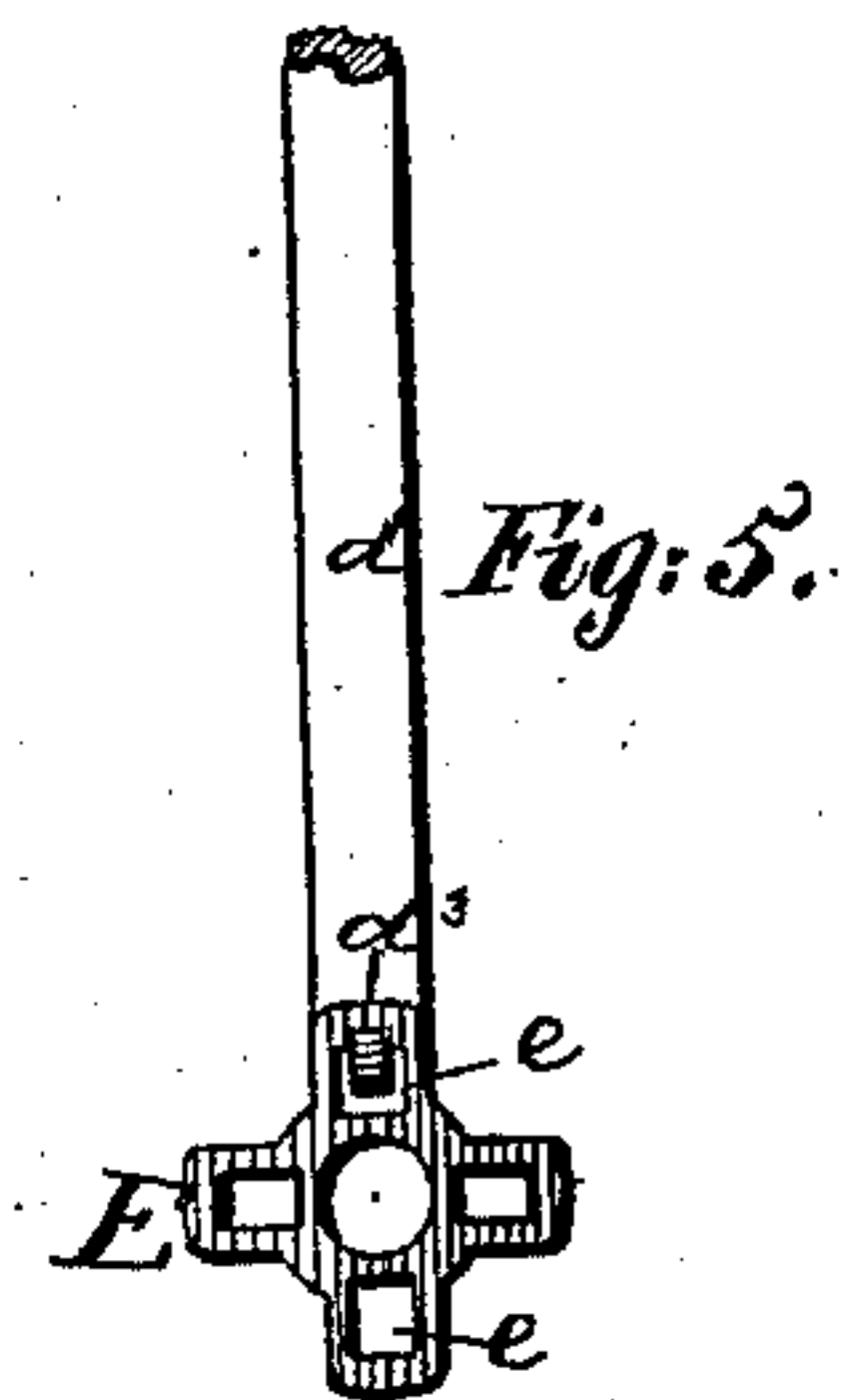
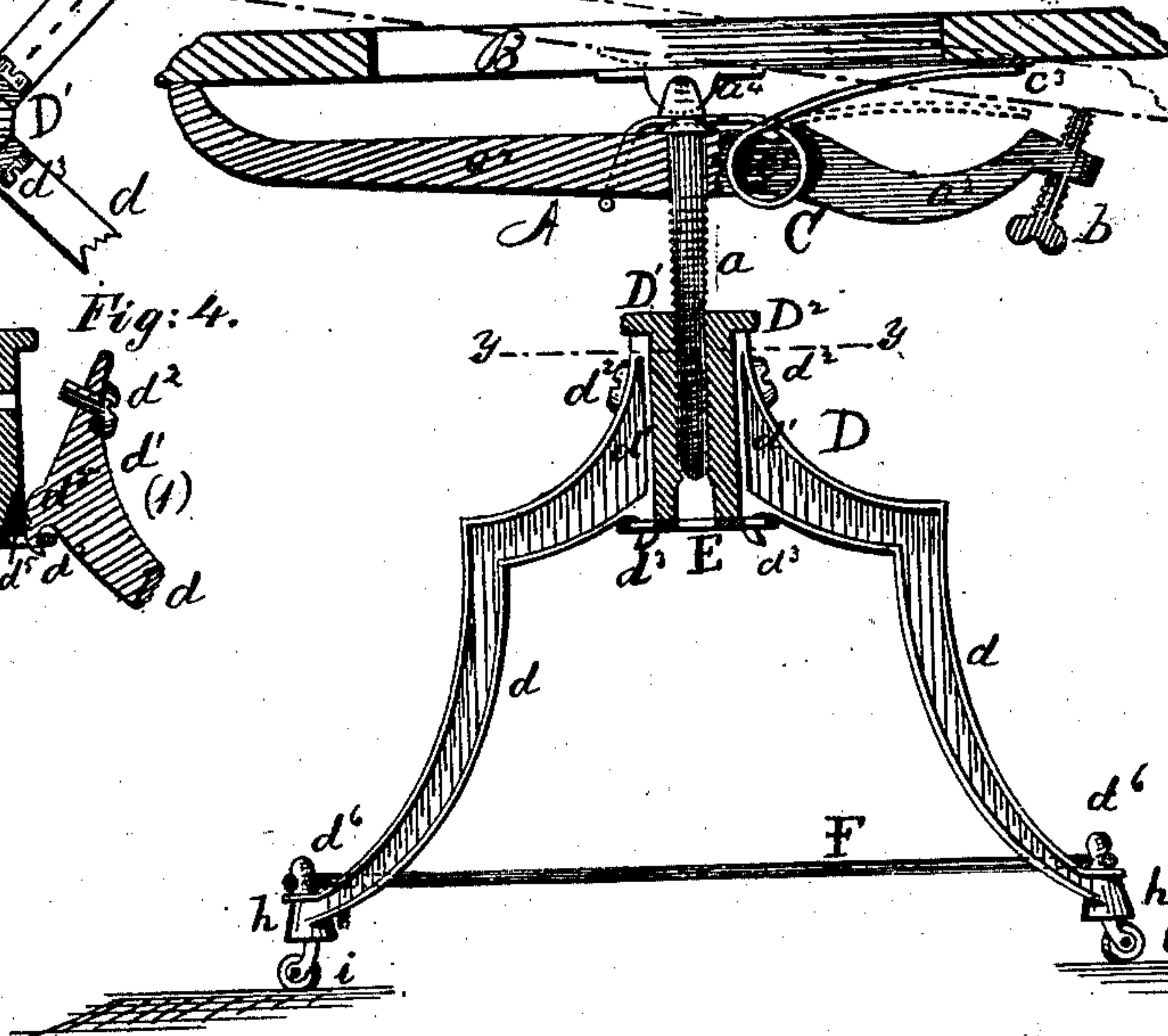
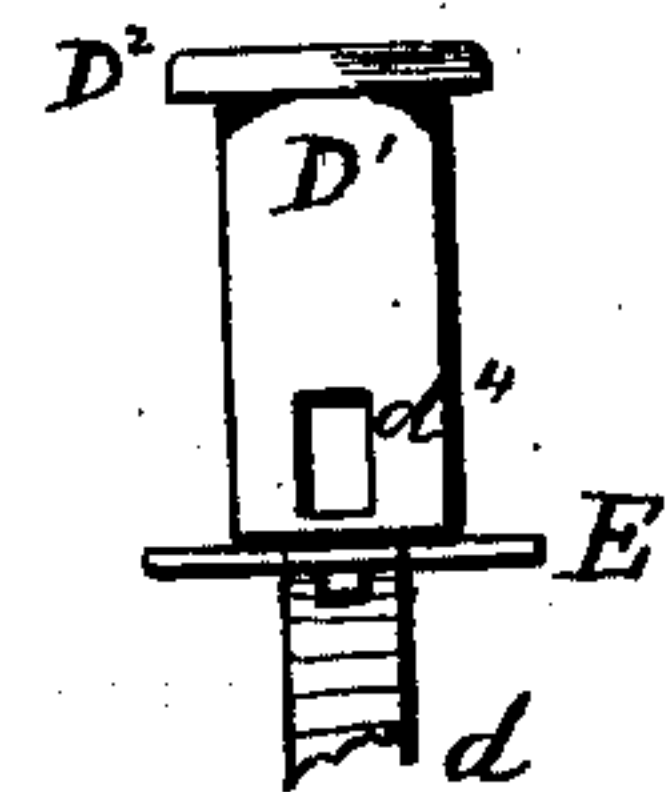


Fig: 6.



WITNESSES

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By R. B. & A. Lacey

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Fig: 7.

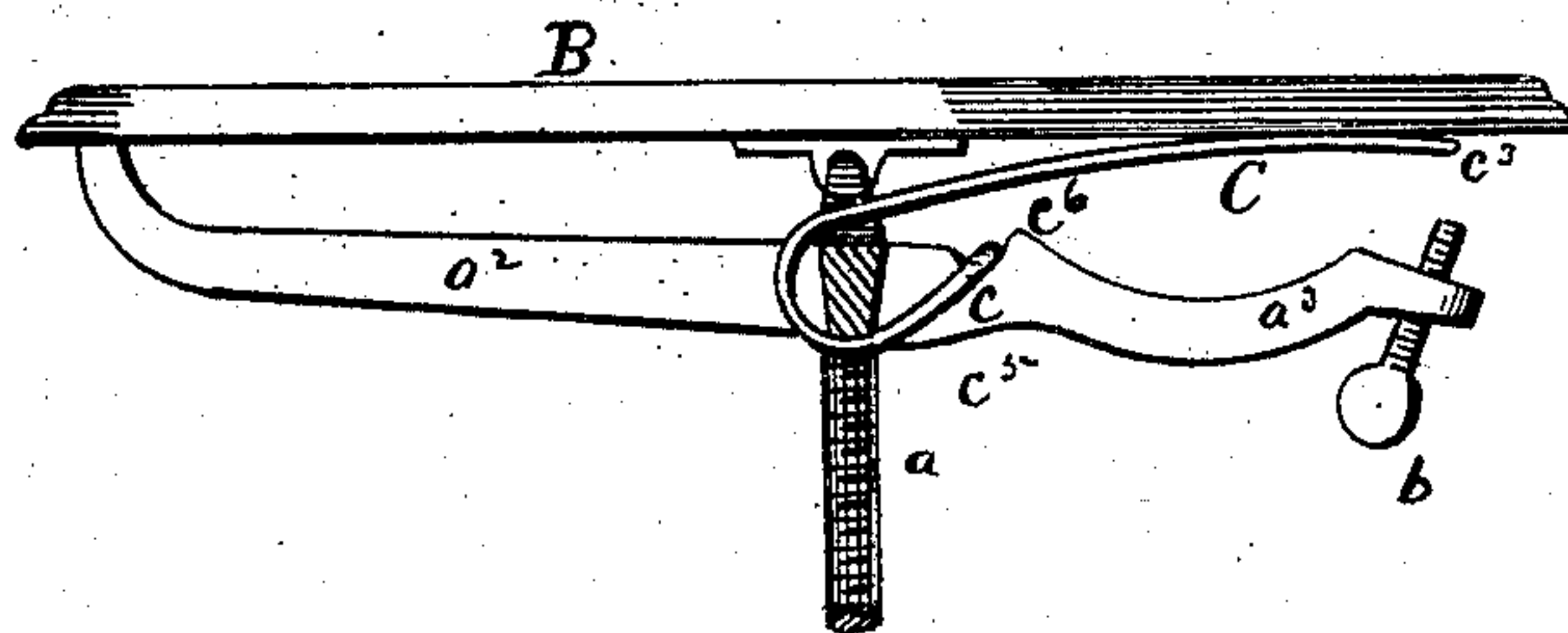


Fig: 8.

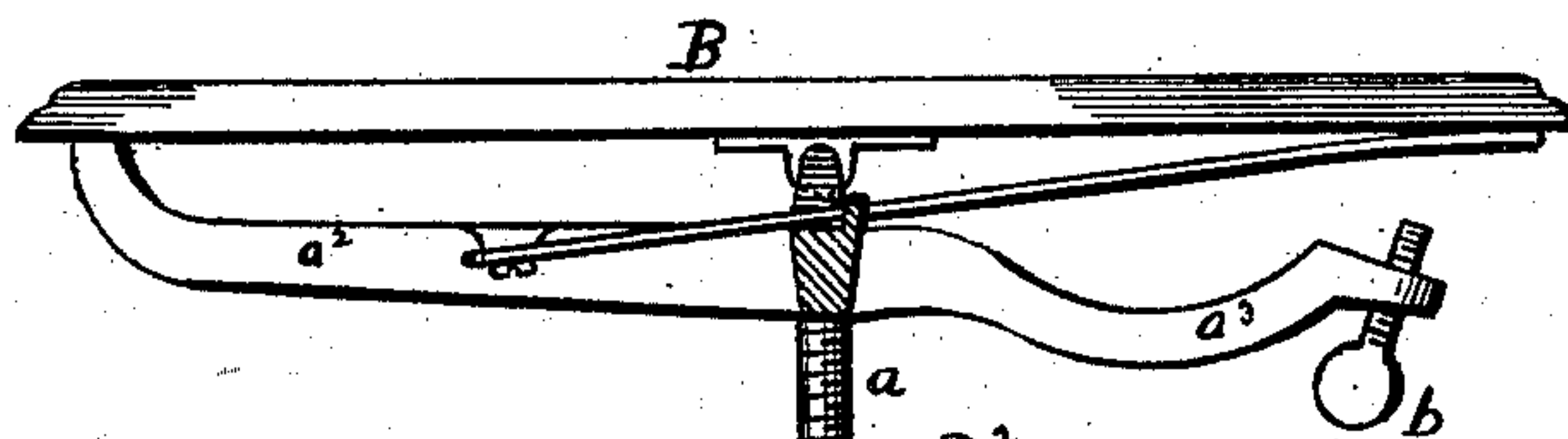
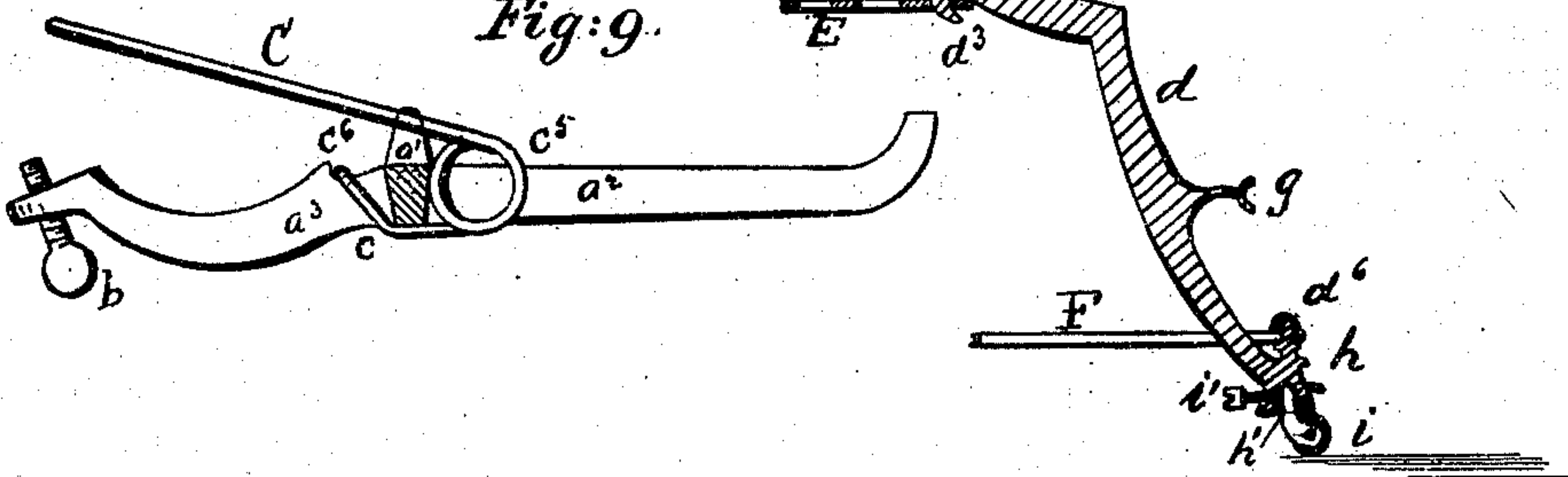


Fig: 9.



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# UNITED STATES PATENT OFFICE.

DE WITT C. MEEKER, OF COLUMBUS, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO MICHAEL HALM, CHARLES C. BELLOWS, AND C. P. L. BUTLER, OF SAME PLACE.

## IMPROVEMENT IN TILTING CHAIRS.

Specification forming part of Letters Patent No. **198,655**, dated December 25, 1877; application filed July 6, 1877.

*To all whom it may concern:*

Be it known that I, DE WITT C. MEEKER, of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Tilting and Revolving Chairs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in tilting and revolving chairs, the nature of which will be fully explained by reference to the accompanying drawings, in which—

Figure 1 is a plan view of the spider and pedestal of a chair constructed according to my invention; Fig. 2, a central vertical section taken on line *xx* of Fig. 1; Fig. 3, a horizontal section taken on line *yy* of Fig. 2; Fig. 4, a vertical section taken on line *zz* of Fig. 3, showing the mode of attaching the legs. Fig. 5 represents a plan view of the bottom of the base-plate, showing three legs removed. Fig. 6 is a side view of the central coupling and base-plate. Figs. 7 and 9 show my improved spring applied to the spider, and Fig. 8 shows in section one of the legs and the central coupling-block of a chair constructed according to my invention.

In each of the views similar letters are employed to indicate corresponding parts wherever they occur.

A represents the spider, which is supported on a screw, *a*, of the ordinary construction and operation. The spider A is provided with four arms, *a*<sup>1</sup> *a*<sup>1</sup> *a*<sup>2</sup> *a*<sup>3</sup>, the arms *a*<sup>1</sup> *a*<sup>1</sup> being pivoted in bearings *a*<sup>4</sup> affixed to the under side of the seat B, while the arm *a*<sup>2</sup> is turned up to support the front of the seat B in its normal position, the arm *a*<sup>3</sup> being so formed that its rear end shall be considerably lower than the rear of the seat B when at rest. The arm *a*<sup>3</sup> is provided with an adjustable set-screw, *b*, for the purpose of regulating the amount of tilt to the seat B.

C is the spring, made from a single piece of

wire, bent centrally, so as to form a loop or stirrup, *c*, which is caught over the upper side of the rear arm *a*<sup>3</sup> of the spider. Its ends *c*<sup>3</sup> are passed under the arms *a*<sup>1</sup> *a*<sup>1</sup>, and curved upward on opposite sides of the front arm *a*<sup>2</sup>, and are bent backward and over the side arms of the spider, and extend to and bear against the under side of the rear part of the seat B, as shown. In Fig. 9 is shown the spring C formed with a coil, *c*<sup>5</sup>, in rear of the arms *a*<sup>1</sup> *a*<sup>1</sup>; but such construction and arrangement is one rather of taste than of actual utility.

A spring constructed and applied as above described possesses great elasticity and strength, is simple in form and economical in manufacture, and cannot be knocked or jolted out of place by the accidental upsetting or other severe handling of the chair, thus obviating one of the difficulties attending the handling of chairs provided with springs of ordinary construction.

D represents the pedestal, which is composed of a series of legs, *d*, the upper ends *d*<sup>1</sup> of which are arranged to fit around a head-block, D<sup>1</sup>. The upper ends of the ends *d*<sup>1</sup> rest against a rim or flange, D<sup>2</sup>, on the block D<sup>1</sup>, and are attached to the block D<sup>1</sup> by means of screws *d*<sup>2</sup>, while the under sides of the ends *d*<sup>1</sup> are provided with hooked projections *d*<sup>3</sup>, adapted to pass through holes *e* in a plate, E, fitting closely against the under end of the block D<sup>1</sup>. I, by preference, employ the removable plate E, formed with holes *e*; but it will be readily understood that suitable projecting flanges with holes *e* may be formed on end of block D<sup>1</sup>, or the projections *d*<sup>3</sup> may be provided with holes, through which screws may be passed into suitably-threaded holes in the lower end of the block D<sup>1</sup>.

*d*<sup>5</sup> are projections formed, by preference, on the legs *d*, and adapted to fit into grooves or recesses *d*<sup>4</sup> in the block D<sup>1</sup>, for the purpose of giving greater strength to the pedestal, and for preventing any lateral movement of the legs. It will be understood that the relative positions of the grooves *d*<sup>4</sup> and projections *d*<sup>5</sup> may be reversed.

The legs *d* are applied by first placing the hooks *d*<sup>3</sup> in the recesses *e*, as shown at 1, Fig.



4, and then screwing the same into position, as shown at 2. The legs  $d$  at their lower ends are spread out in order to give greater steadiness to the chair, and they are held together by a retaining brace or band, F, which passes around knobs or suitable projections or bearings  $d^6$  formed on the feet  $h$ .

The brace F in the drawing is represented as square in shape. It may, however, be formed in a circle, or other desired and suitable figure.

At Fig. 8 I have shown another projection,  $g$ , applied to each of the legs  $d$ , for the purpose of receiving and holding a second band, F.

The legs  $d$  are constructed with enlarged feet,  $h$ , in which are formed recesses  $h'$ , and provided with thumb-screws  $i'$ , arranged as shown. By this construction I am enabled to attach or remove at pleasure any ordinary swivel-caster; or, when it is desirable to have the chair fixed in its position, so that it will not slip or slide about, I can secure in the recesses short spikes with sharp projecting points, which will stick in the floor and hold the legs firmly to the spot.

I am aware of the existence of the patent to S. Hoffman for tilting chairs, bearing date October 11, 1875, and numbered 168,744; and I do not claim the invention set forth in his specification.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. In combination with the spider and seat of a tilting chair, the spring C, bent at its center, so as to form the loop or stirrup  $c$ , which is caught over the top of the arm  $a^3$ , and has its ends or arms  $c^3$  bent under and around the side arms  $a^1$  and extended backward, so as to support the rear side of the seat, substantially as shown and described.

2. In a tilting or revolving chair provided with a metallic pedestal composed of a series of legs secured to a single central block in which the screw of the seat turns, the leg  $d$ , constructed with a head,  $d^1$ , having projections  $d^5$ , and adapted to fit snugly the central block  $D^1$ , in which is formed the recess  $d^4$ , and having the projection  $d^6$  on the foot  $h$ , for holding the brace F, substantially as set forth.

3. The combination, with a spider, A, constructed with arms  $a^1$   $a^1$   $a^2$   $a^3$ , and hinged to a seat, B, as described, of the adjustable screw  $b$ , substantially as shown and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

DE WITT C. MEEKER.

Witnesses:

C. P. L. BUTLER,  
R. H. K. FOSTER.