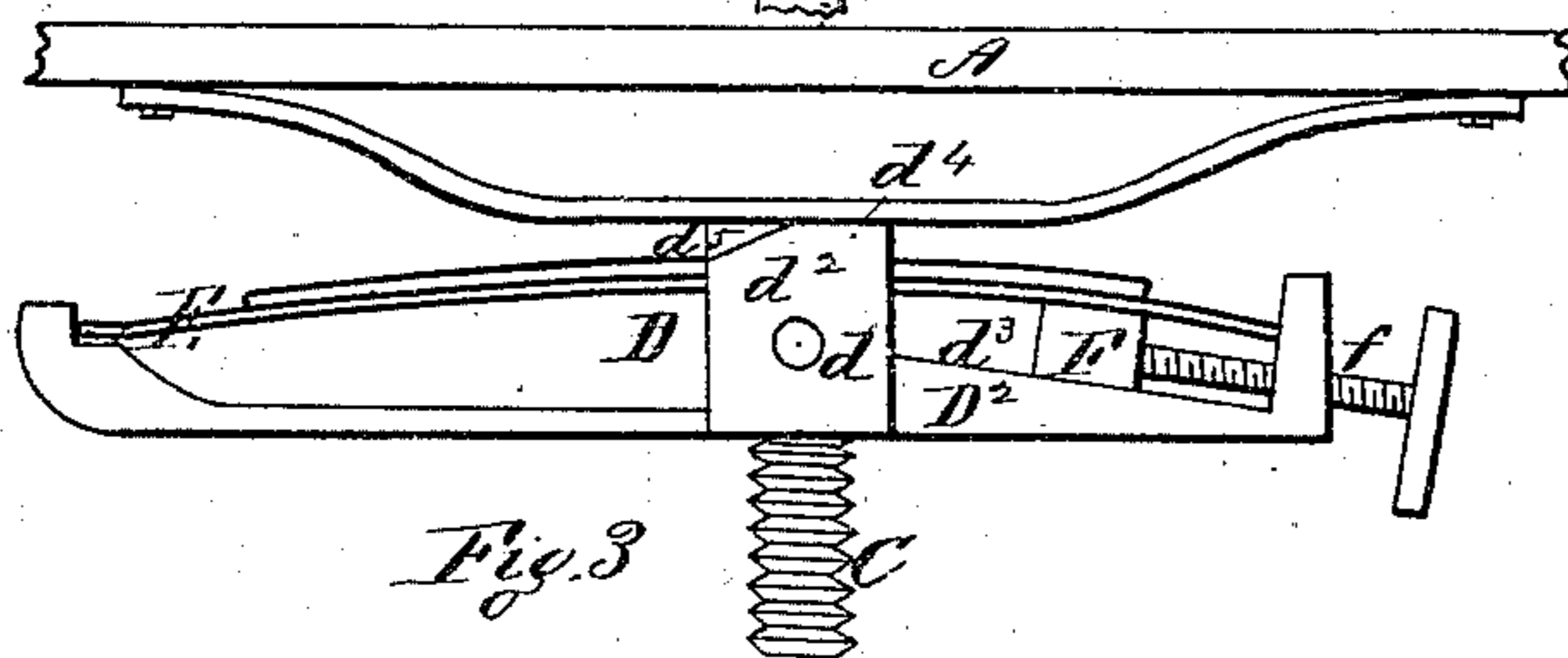
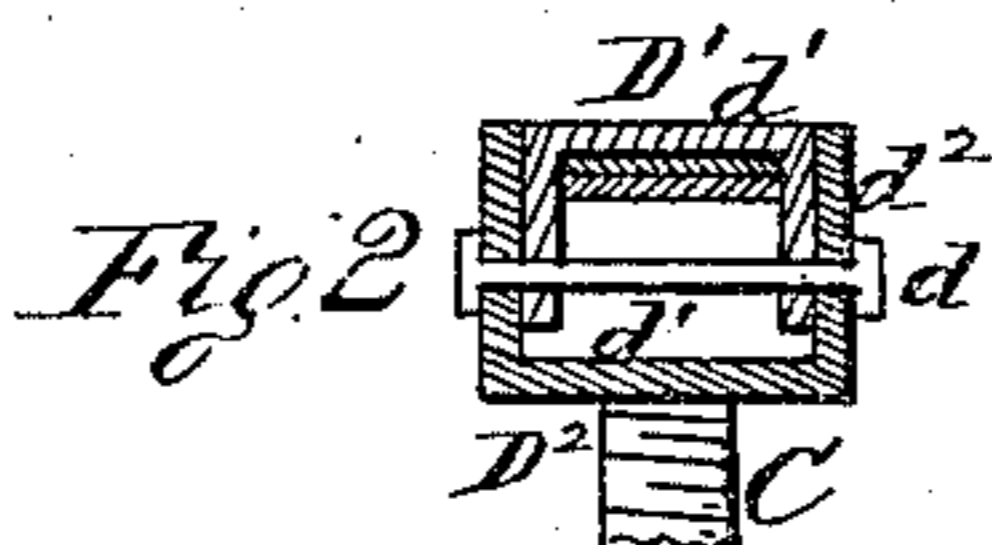
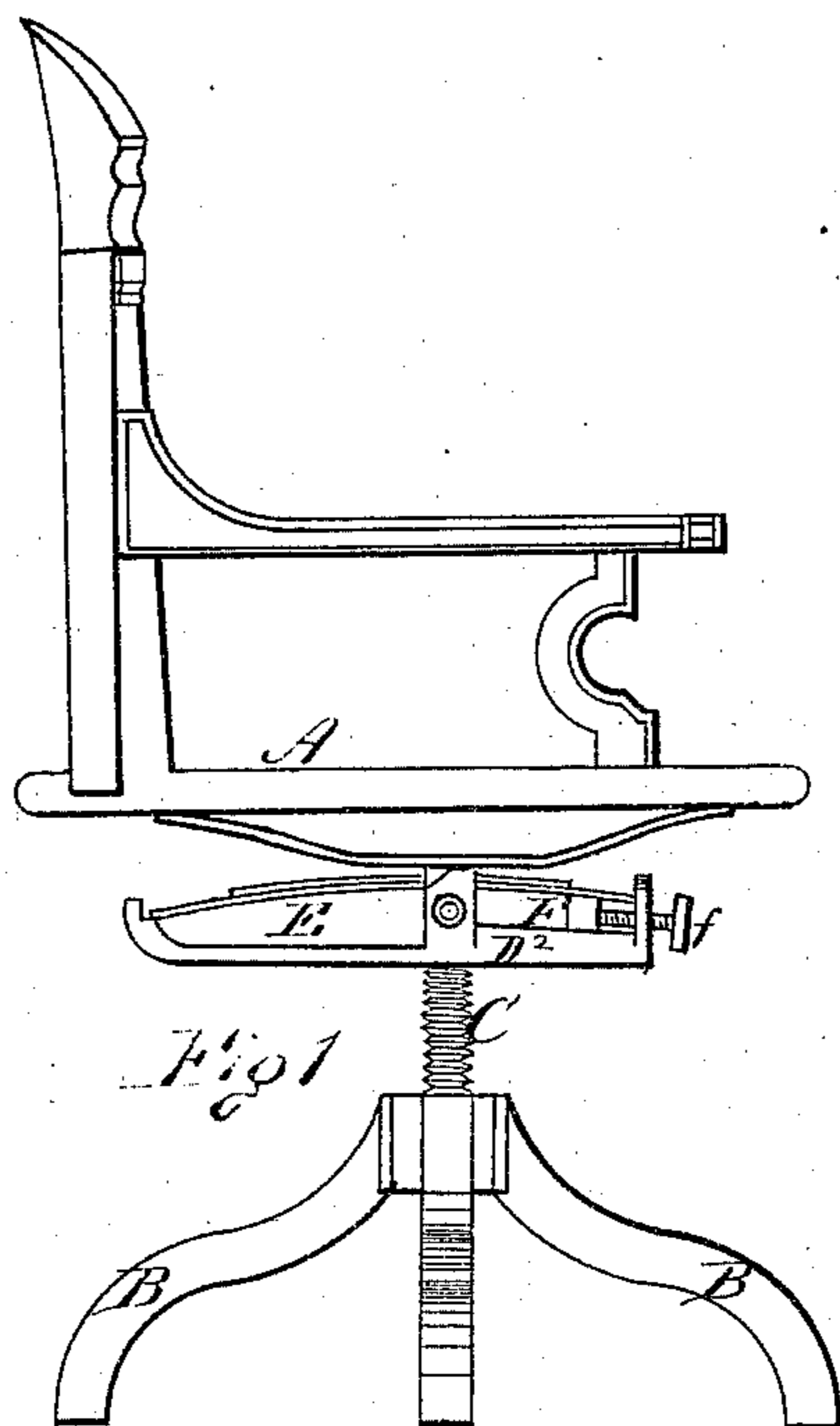


J. MORRISON & H. M. HUTCHINSON.
Chairs.

No. 144,349.

Patented Nov. 4, 1873.



WITNESSES

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UNITED STATES PATENT OFFICE.

JACOB MORRISON AND HENRY M. HUTCHINSON, OF PHILADELPHIA, PA.

IMPROVEMENT IN CHAIRS.

Specification forming part of Letters Patent No. 144,349, dated November 4, 1873; application filed September 29, 1873.

To all whom it may concern:

Be it known that we, JACOB MORRISON and HENRY M. HUTCHINSON, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Chairs; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a side elevation. Fig. 2 is a cross-section of hinge and spring.

The nature of our invention consists in the construction and combination of parts, as hereinafter fully set forth.

Referring to the accompanying drawings, A is the seat, B are the legs, and C the center screw, of a revolving chair, these several parts being constructed in the usual or any suitable manner. D represents a hinge or joint between the seat and legs, designed to permit a rocking motion of the seat, the center screw C being secured to the lower section D² of this hinge in such manner that, when the seat is revolved, it will be raised or lowered by the movement of the screw. The hinge is composed of two sections, D¹ D², united by means of a swivel pin or bolt, said sections being fastened to the seat and legs by means of the frame and screw, as shown in the drawings. Each section is formed of a base, *d*¹, with side pieces or lugs *d*², through which latter the swivel-pin *d* passes. E represents an elliptical spring, formed of a single leaf or of several leaves, the latter being deemed preferable, having end bearings, as shown, on the extensions of the lower section of the hinge, its bow or arch pressing against the base of the upper section of the hinge. F represents a sliding block,

moved by a screw, *f*, and designed to increase or decrease, as desired, the tension of the spring E. The forward end of the said spring E resting upon said block, when the latter is moved toward the center of the hinge or pin *d*, the tension of the former will be increased, and vice versa. The block F also serves as a stop to prevent the front of the seat from descending too far. In order that this block may serve to adjust the tension, as described, of the spring, its upper surface and that part of the base *d*¹ upon which it moves should be beveled, as shown at *d*³, or made nearly concentric with the curve of the spring, having, however, a more sudden or abrupt sweep than the latter. The upper edges of the side pieces or lugs *d*² of the lower section of the hinge form each an angular line, being horizontal at *d*⁴ to afford a rest to the seat, and prevent its being depressed too far in front, and beveled or inclined at *d*⁵ to allow the seat to be tilted.

What we claim as our invention is—

1. In combination with the hinge D, the elliptical spring E, said spring having end bearings in the extensions of the lower section D² of the hinge, its center or bow pressing against the base of the upper section of the hinge, substantially as set forth.

2. In combination with the hinge D and spring E, the movable block F and inclined plane D², substantially as and for the purpose specified.

In testimony that we claim the foregoing we have hereunto set our hands this 25th day of September, 1873.

JACOB MORRISON.

HENRY M. HUTCHINSON.

Witnesses:

JAMES P. PETIT,

EUGENE P. EADSON.