

(No Model.)

G. R. TAXIS.
SPRING HINGE.

No. 428,974.

Patented May 27, 1890.

Fig. 1.

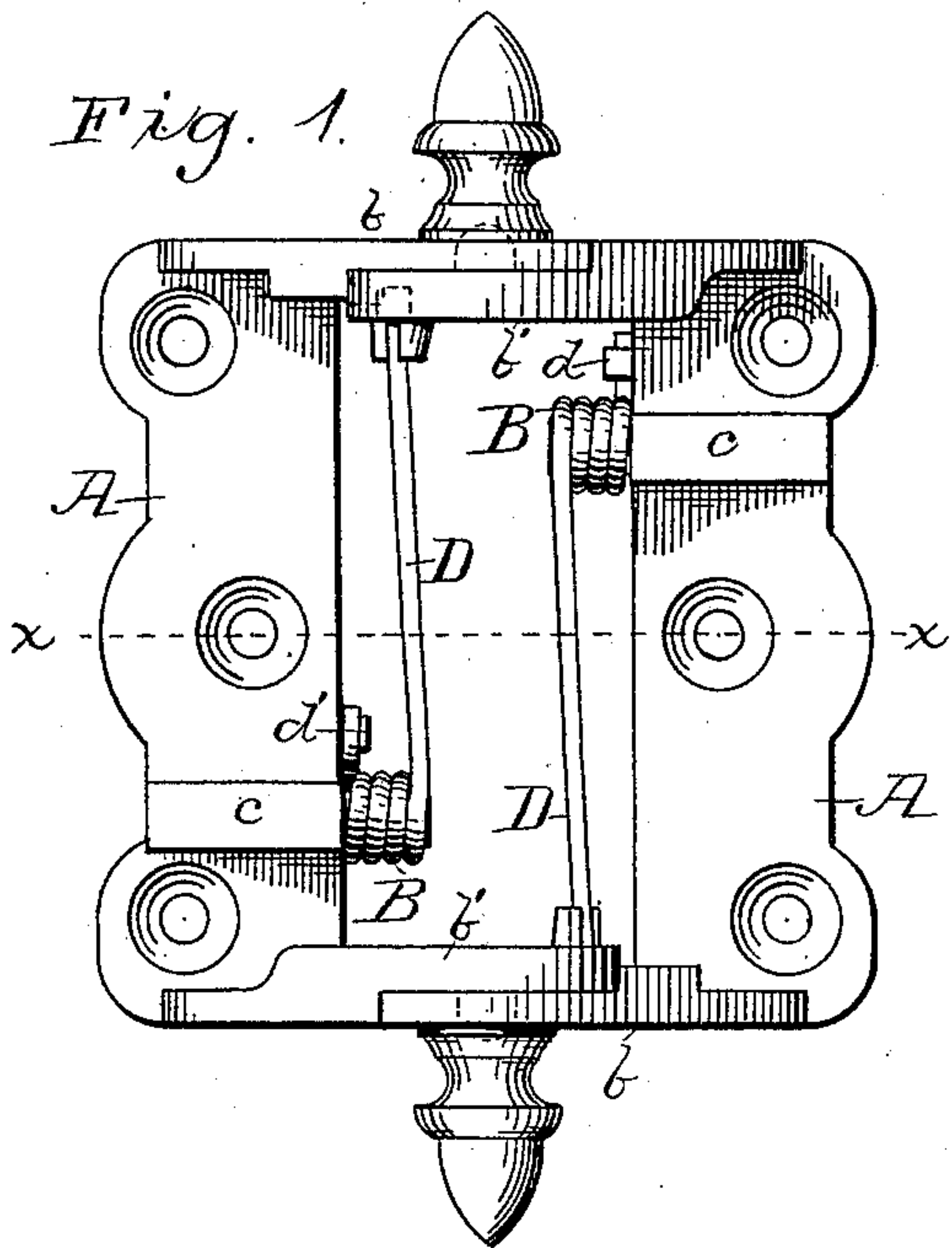


Fig. 2.

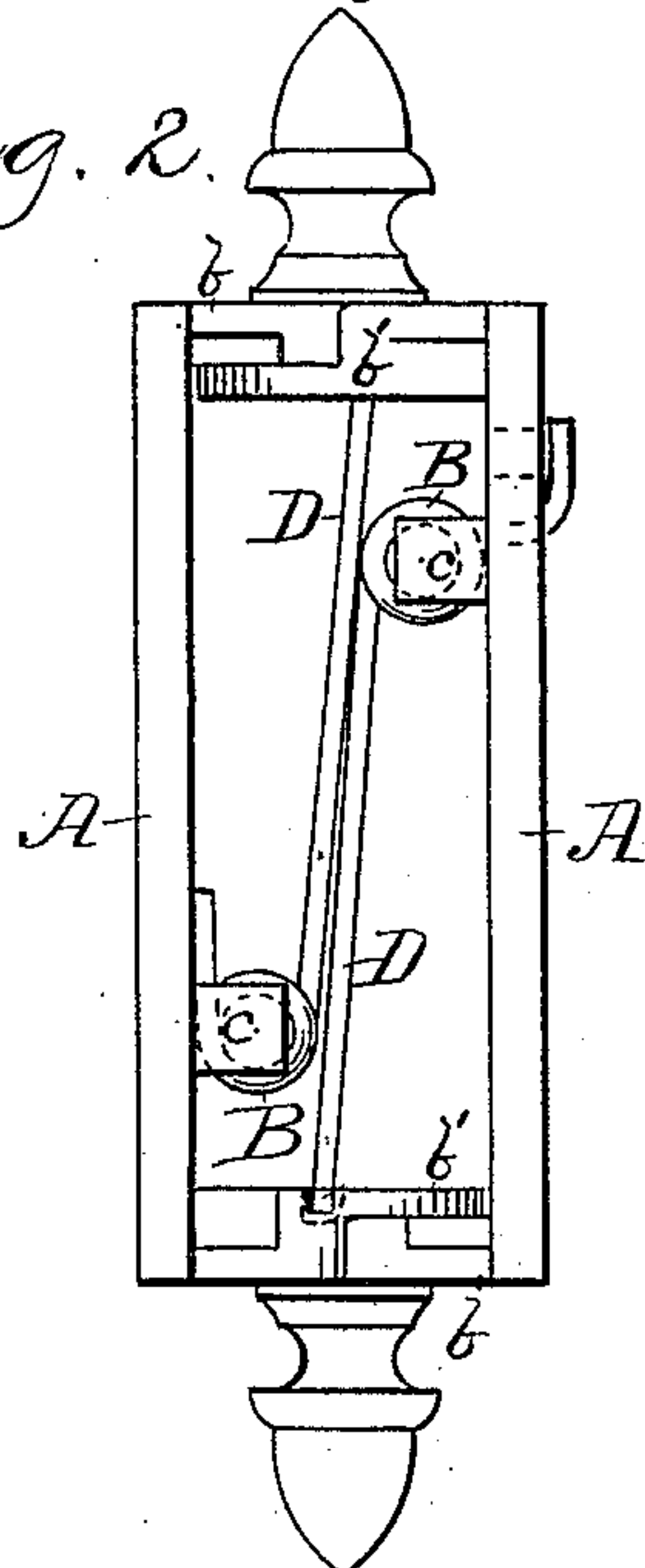


Fig. 3.

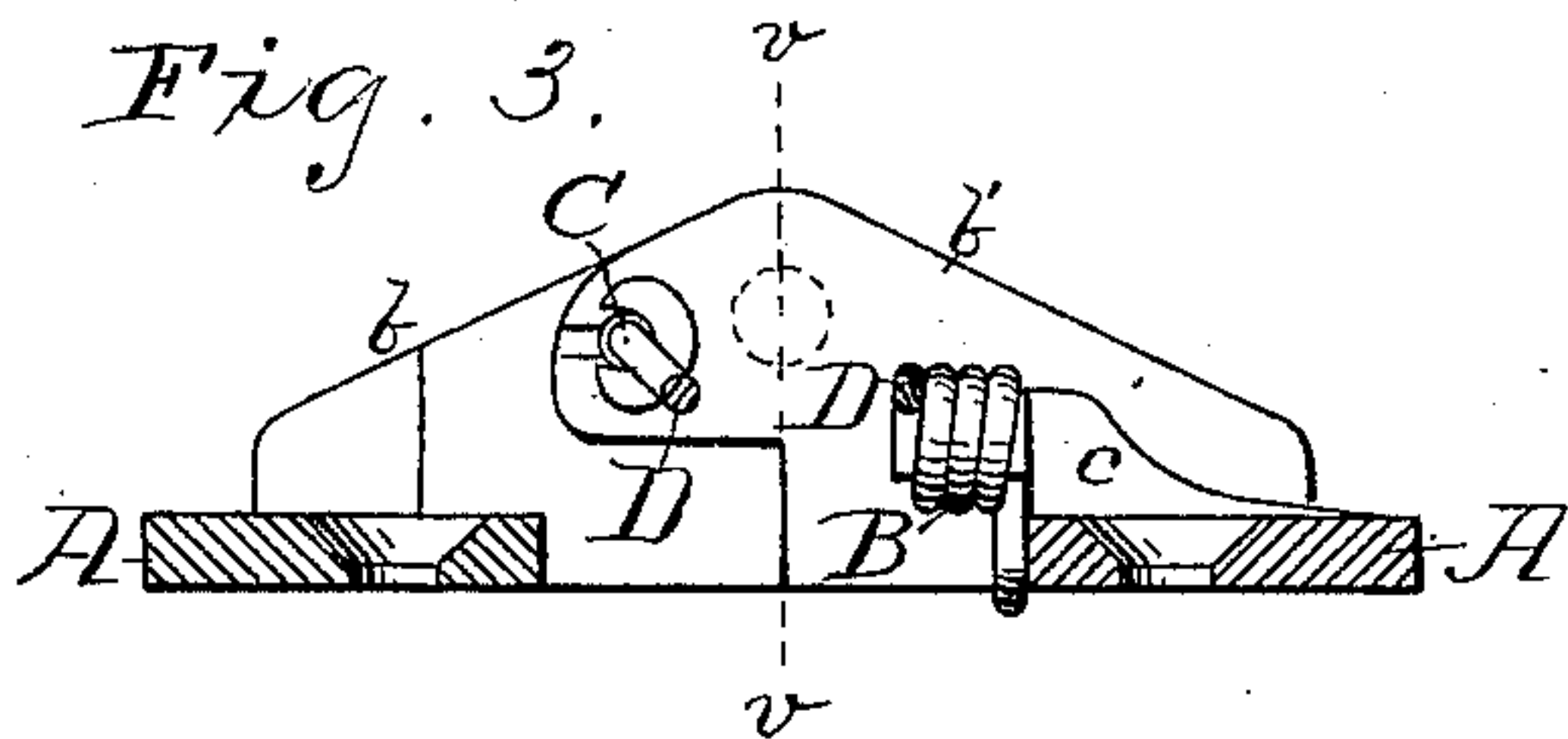
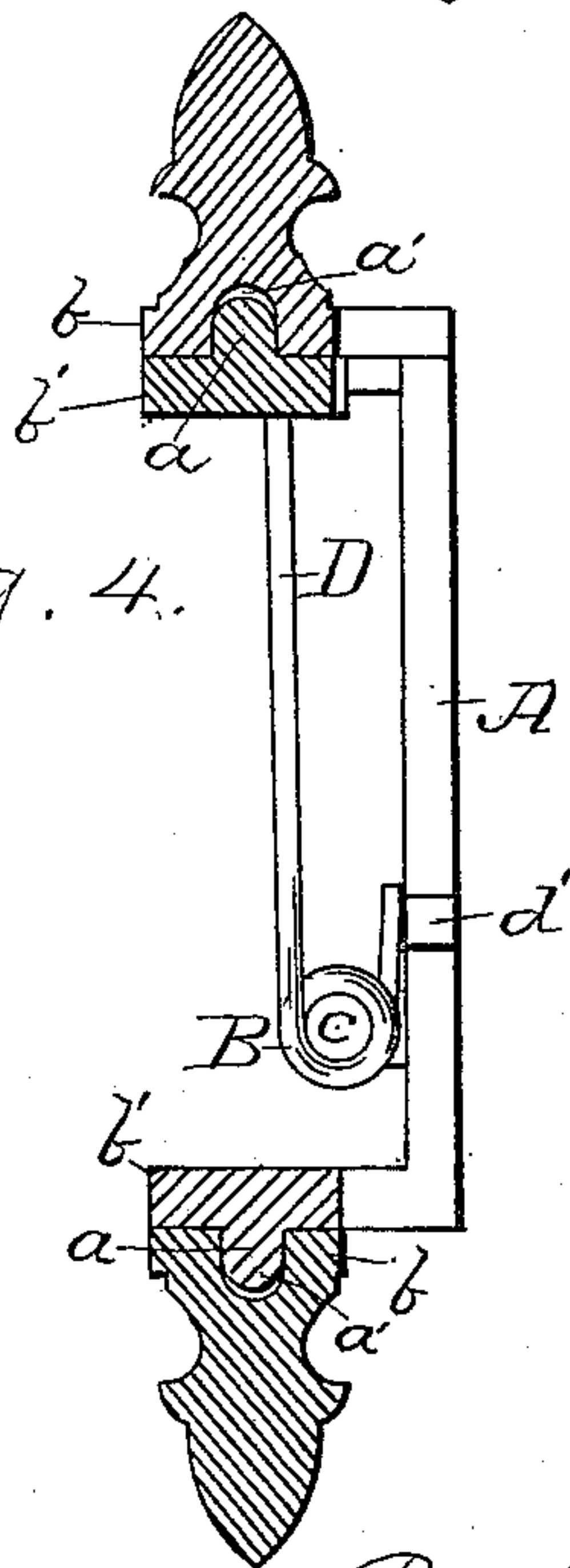


Fig. 4.



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Witnesses
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SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 428,974, dated May 27, 1890.

Application filed April 4, 1889. Serial No. 305,943. (No model.)

To all whom it may concern:

Be it known that I, GIDEON R. TAXIS, of Morris, in the county of Grundy and State of Illinois, have invented certain new and useful Improvements in Spring-Hinges, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings and to the letters of reference marked thereon.

10 This invention is in hinges of the class in which the same spring or springs hold the hinge either shut or open, according as the latter is left in one or the other position.

15 In its more general features this hinge is not new, and it is therefore sought to cover only such novelty as may hereinafter appear.

Figure 1 is a plan view of my invention, showing it open. Fig. 2 is a similar view showing it closed. Fig. 3 is a transverse section taken on line *xx*, Fig. 1. Fig. 4 is a longitudinal section taken on line *vv*, Fig. 3.

Referring to the drawings, A A represent the two hinge plates or leaves, having knuckles *b* and *b'*, arising at right angles from their ends, so that those of one plate project toward the other plate, and so that the knuckles *b* of each plate lap over the outer surface of the knuckle *b'* of the other plate, as shown. These plates A are connected by means of pivotal studs *a* 25 *a*, projecting outward from the outer surface of knuckles *b* of each plate A in axial line of the hinge and enter corresponding bearings or sockets *a' a'*, made with reference thereto in the inner adjacent surface of the knuckles *b* of the other plate. As thus connected, the plates A when open are about an inch (more or less) apart.

40 Secured to or made integral with each plate, near the end thereof, from which knuckle *b'* projects, are transverse studs *c c*, which project from the inner longitudinal edge of each plate a suitable distance toward the opposite plate. While I do not consider it absolutely necessary, yet I prefer that the plane of the 45 projection of these studs should be slightly above the face of the plates A, as shown.

Wound around the projecting portion of each of these studs *c* is a coil-spring B, the inner end of which is passed under a lug *d* projecting inward from the inner longitudinal edge 50 of the plate A between stud *c* and knuckle *b'*, or over a similar lug *d'*, projecting from the plate on the other side of the stud. Either way will answer. Spring B takes one or two coils around stud *c*, and then its outer end D 55 takes a longitudinal straight course toward the farthest end of the plate from said stud, where it enters and terminates in a socket C, made in the knuckle *b'* of the opposite plate.

The most suitable location for the socket 60 C is at a point slightly below the center of oscillation of the hinge, and to the side thereof farthest from the plate A from which the knuckle in which said socket is made projects. Thus when said plates A are oscillated 65 the ends D of springs B are depressed until the two plates are about at right angles to each other, whereupon they gradually resume their normal tension as their ends approach the limit of their movements on the other side 70 of the axial line of the hinge, or, in other words, until the hinge is closed.

The knuckles *b* and *b'* are constructed in the manner usual with spring-hinges, so that when open they are prevented from going farther 75 than the position in Fig. 3.

What I claim is—

The combination, with the two hinge-plates having the usual pair of pivotally-connected knuckles at each end, and each provided with 80 the integrally-formed spring-core stud upon its inner edge, of springs coiled about said studs, respectively, each with one of its projecting ends reacting against the corresponding plate and the other engaging the knuckle 85 of the opposite plate upon its own side of the hinge-axis, substantially as set forth.

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Witnesses:

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