

(Model.)

F. S. TAGGART.

DOOR SPRING.

No. 246,351.

Patented Aug. 30, 1881.

Fig. 1.

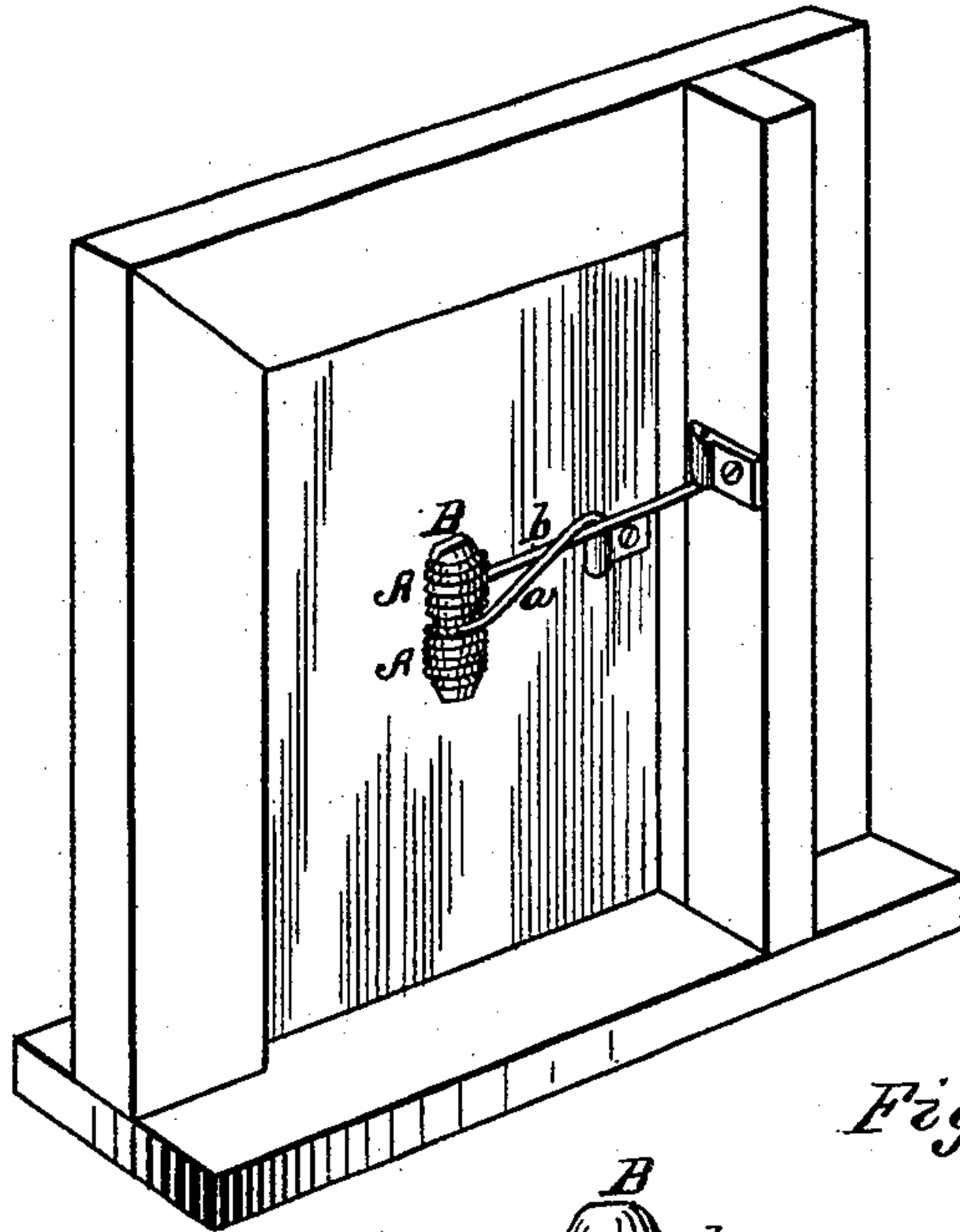


Fig. 2.



Fig. 3.

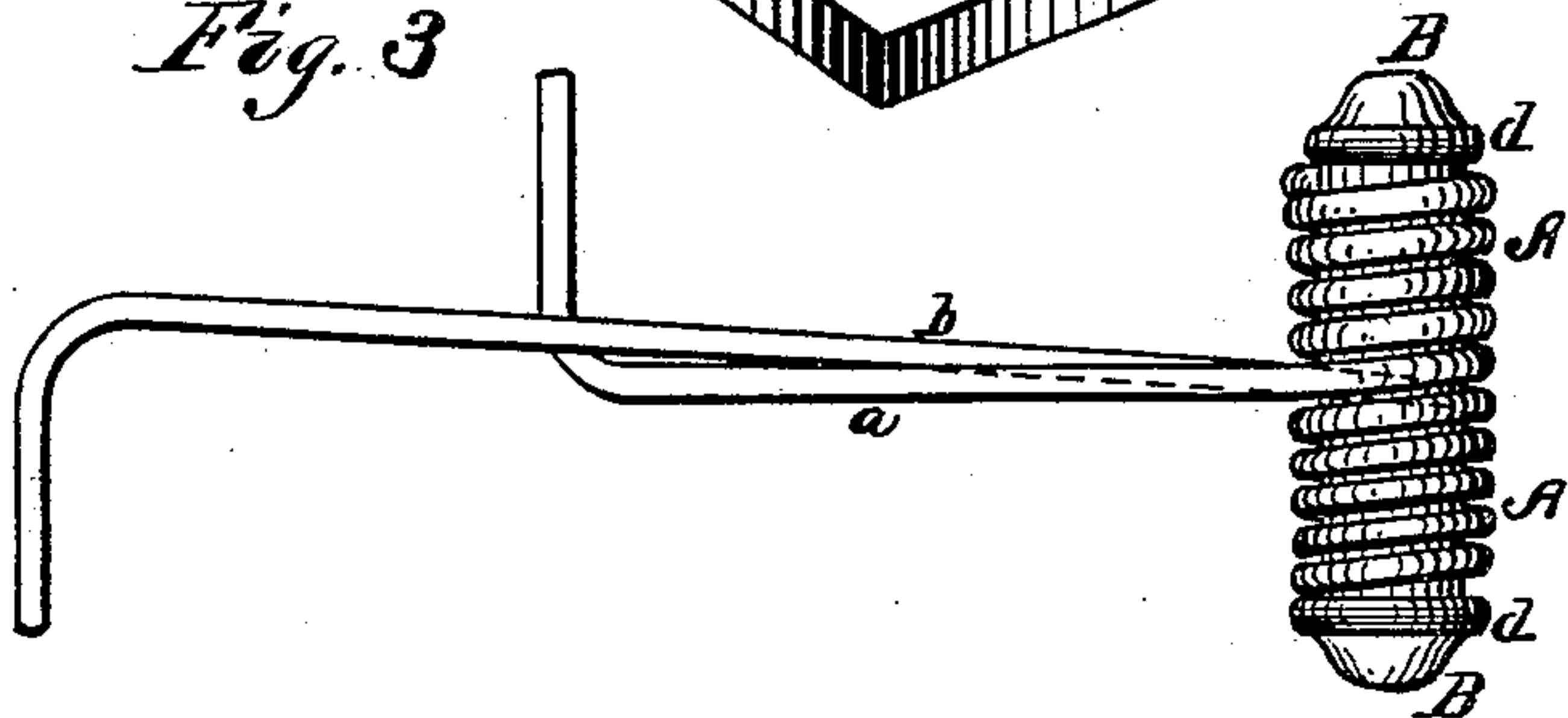


Fig. 4.

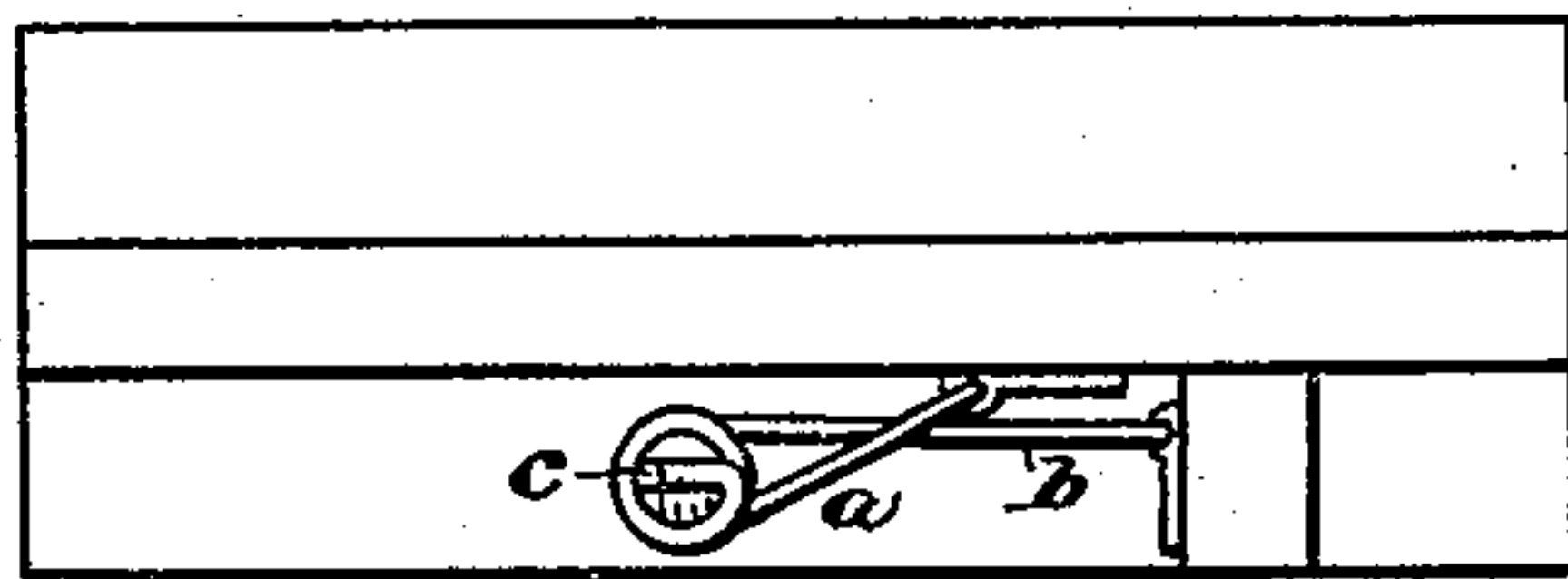
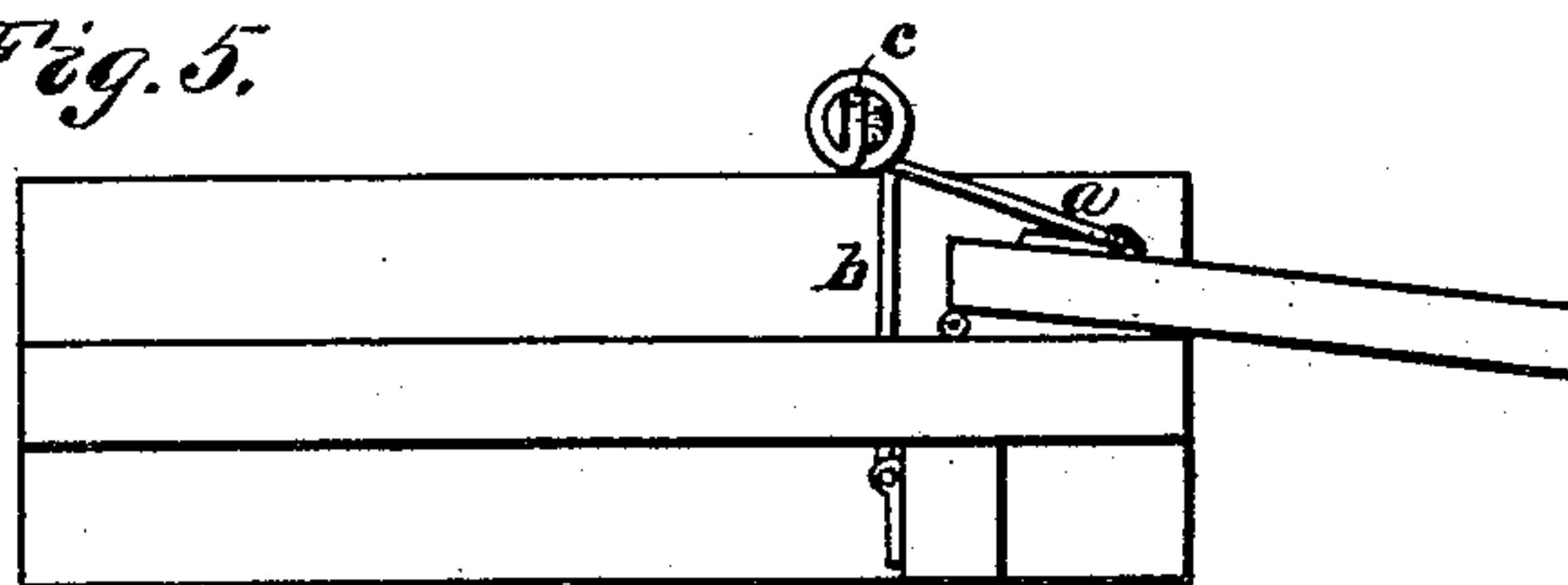


Fig. 5.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRANCIS S. TAGGART, OF FREEPORT, ILLINOIS.

DOOR-SPRING.

SPECIFICATION forming part of Letters Patent No. 246,351, dated August 30, 1881.

Application filed February 24, 1881. (Model.)

To all whom it may concern :

Be it known that I, FRANCIS S. TAGGART, of the city of Freeport, in the county of Stephenson and State of Illinois, have invented a new and useful Improvement in Door-Springs, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to that class of door-springs formed of coiled wire in which the diverging ends of the wire form arms for attachment to the door and jamb, to the former of which is applied through the arms the actuating force derived from the elasticity of the compressed coil.

The invention is shown in detail in the accompanying drawings, in which Figure 1 shows the spring applied to the door. Fig. 2 is the core of the spring. Fig. 3 shows the springs detached. Fig. 4 shows the door maintained in a closed position by the spring, and Fig. 5 shows the door maintained in an open position, the two latter being top views, like letters indicating like parts in the different figures.

A A are two coils of wire, one end of the wire in each coil diverging from the coil to form the arms *a b*, one of which is preferably shorter than the other, both being bent at right angles near their extremities to form shanks for attachment to the door and jamb. The other end of the wire in each coil is bent so as to extend transversely across the opening of the coils, as at *c c*, the bent ends being of a length equal to the diameter of the coils.

B is a core, the body of which is of the proper size to fit easily in the center of the coils. At each end of the core is a shoulder, *d*, slightly larger than the interior diameter of the coils. Extending transversely across each end of the core is a slot. The coils A A are slipped upon

the core so that the ends from which the arms *a b* diverge are in juxtaposition, the coils and the core being adjusted at such lengths that the coils fill the body of the core between the shoulders. The elasticity of the coils permits them to pass over the shoulders *d d*, and is sufficient to secure them upon the core. The ends *c c* of the wires engage in the slots at either end of the core and secure the coils from turning thereon. This manner of securing the coils upon the core has an advantage over the method of inserting the ends of the wire in holes in the core, in that in the latter the coil cannot be first formed and afterward placed upon the core. The coils are wound upon the core in opposite directions, so that as the arms *a b* vibrate toward or from each other the coils are compressed or expanded simultaneously. The short arm *b* is attached to the door and the long arm *a* to the jamb in such a manner that the opening of the door spreads the arms and compresses the springs, the actuating force derived from the tension of which operates through the arms to resist the opening of the door until the point to which the power is applied has passed the center around which it operates when the force of the spring operates to retain the door open, as shown in Fig. 5.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a door-spring, the combination of two coiled-wire springs with a central core provided with shoulders at its extremities, and with slotted ends for the purpose of securing the coils upon the core, substantially as and for the purposes set forth.

FRANCIS S. TAGGART.

Witnesses:

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