

(No Model.)

A. T. WILLIAMS.
HINGE.

No. 415,083.

Patented Nov. 12, 1889.

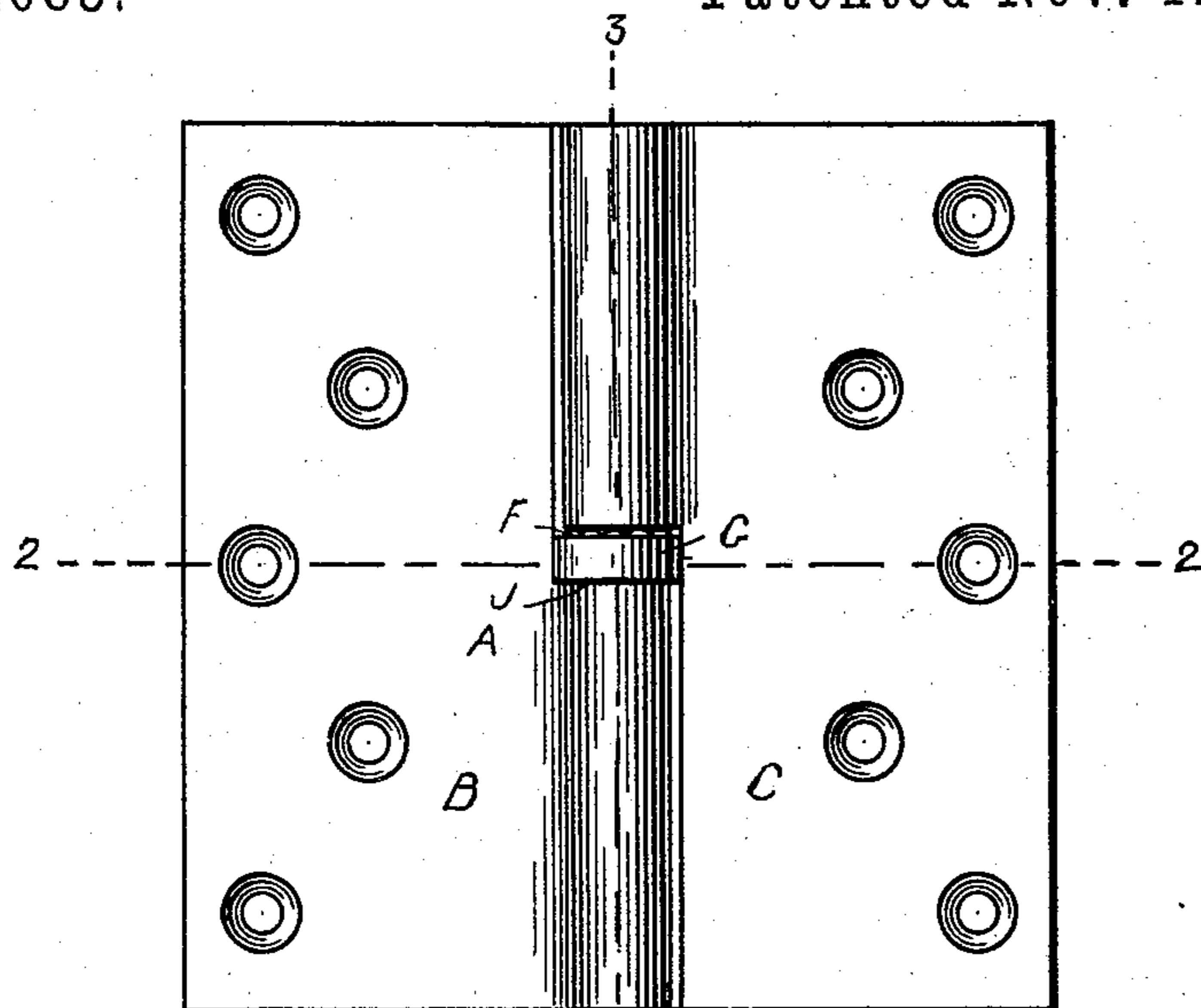


Fig. 1.

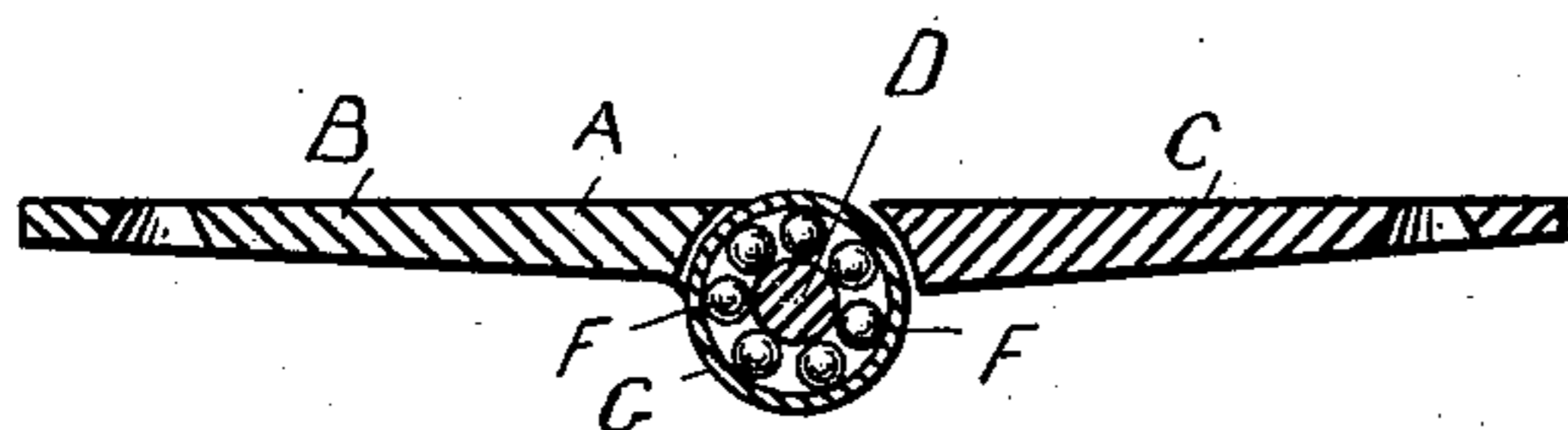


Fig. 2.

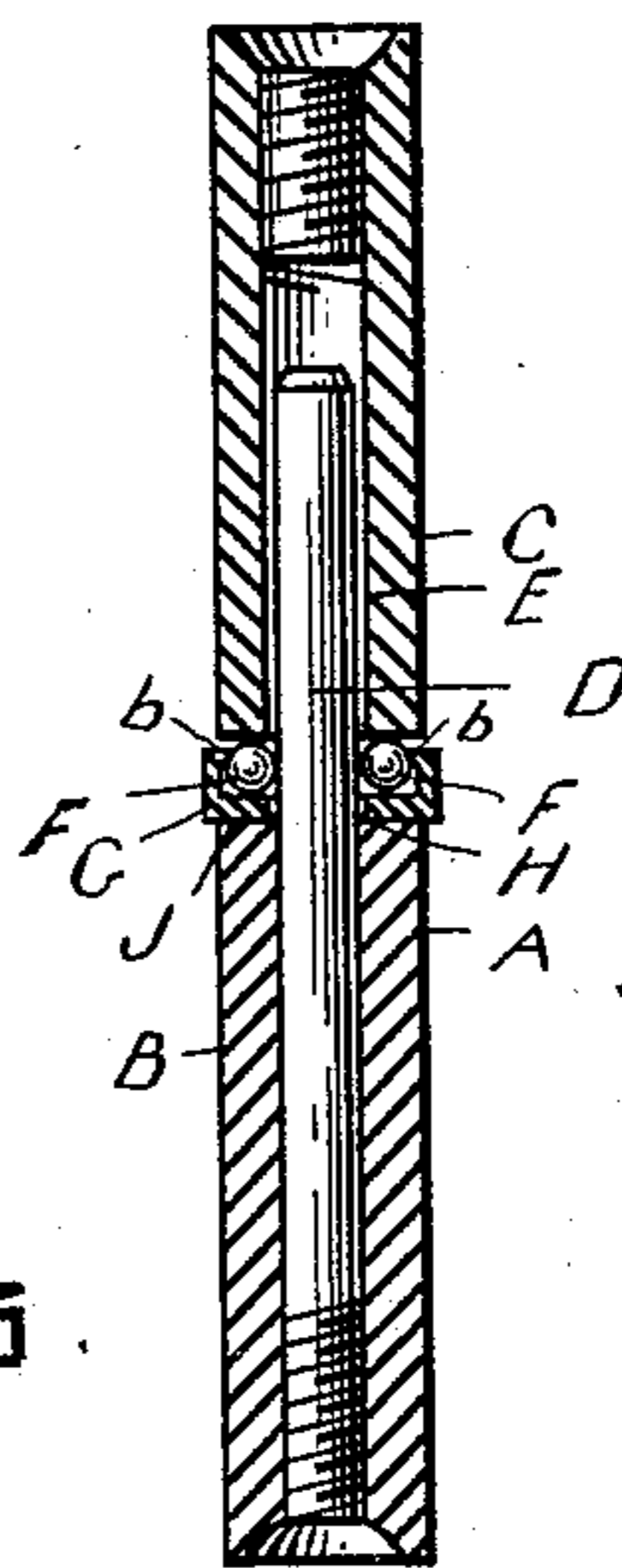


Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

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HINGE.

SPECIFICATION forming part of Letters Patent No. 415,083, dated November 12, 1889.

Application filed July 2, 1889. Serial No. 316,295. (No model.)

To all whom it may concern:

Be it known that I, ALLEN T. WILLIAMS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Hinges, of which the following is a full, clear, and exact description.

This invention consists, in the combination with a hinge, of a number of balls arranged in a suitable casing or receptacle about or around the pintle, between the two leaves of the hinge, for operation, all substantially as hereinafter fully described, reference being had to the accompanying sheet of drawings, in which—

Figure 1 is a front view of a hinge having this invention applied thereto; Fig. 2, a cross-section on line 2 2, Fig. 1; and Fig. 3, a longitudinal section on line 3 3, Fig. 1.

In the drawings, A represents a hinge, B C being its two leaves, and D the pintle to the leaf B, over which fits the socket E of the leaf C, all constructed and arranged as usual in hinges, and needing no particular description herein.

F F are balls, of steel or any suitable metal, disposed in a circular casing or receptacle G, the casing having a central opening H in its bottom, arranged to loosely fit over the hinge-pintle, and resting, when in place thereon, upon the upper end of the portion J of the hinge-leaf B, the leaf C resting by the lower end of its socket portion E on the balls, as shown more particularly in Fig. 3. The sides of the casing at its upper edge project inwardly a

sufficient distance so as to form a flange or rim *b* over the balls, to prevent their accidental escape therefrom if the leaf C should be detached from the leaf B. The door or other part to be swung has the leaf C secured to it, and thereby rests on the balls, which, in the movement of the hinge, reduces friction, as is obvious. The opening H in the casing G is large enough for the casing to be placed on and taken off the pintle at pleasure when desirous of replacing the balls or for other purposes. The inwardly-projecting flange *b* of the casing can be dispensed with, if desired, although it is preferable to use it for the purpose stated.

Having thus described my invention, what I claim is—

1. The combination, with a hinge, of a series of balls arranged around or about the pintle in an independent casing or receptacle suitably secured thereon, for the purpose specified.

2. The combination, with a hinge, of a series of balls arranged around and about the pintle in an independent casing or receptacle, having at its upper part or edge an inwardly-extending flange or rim, and suitably secured thereon, for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ALLEN T. WILLIAMS.

Witnesses:

EDWIN W. BROWN,
CARRIE E. NICHOLS.