

(No Model.)

J. McDONALD.

DOOR CLOSER.

No. 316,283.

Patented Apr. 21, 1885.

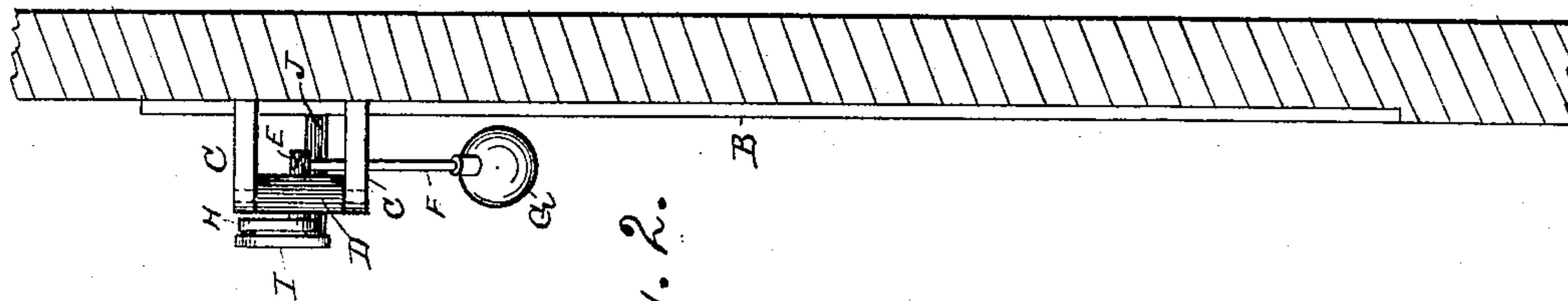


fig. 2.

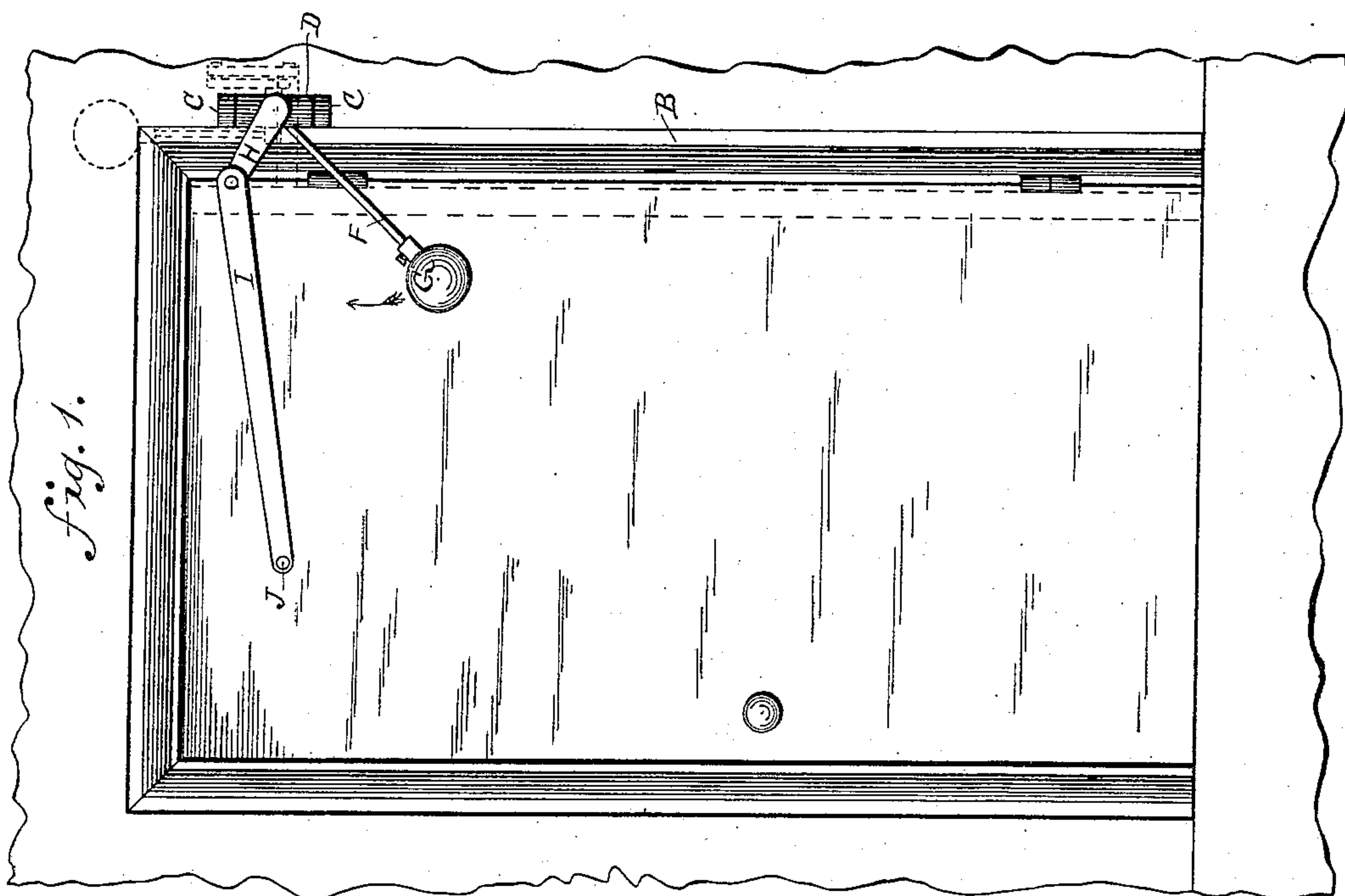


fig. 1.

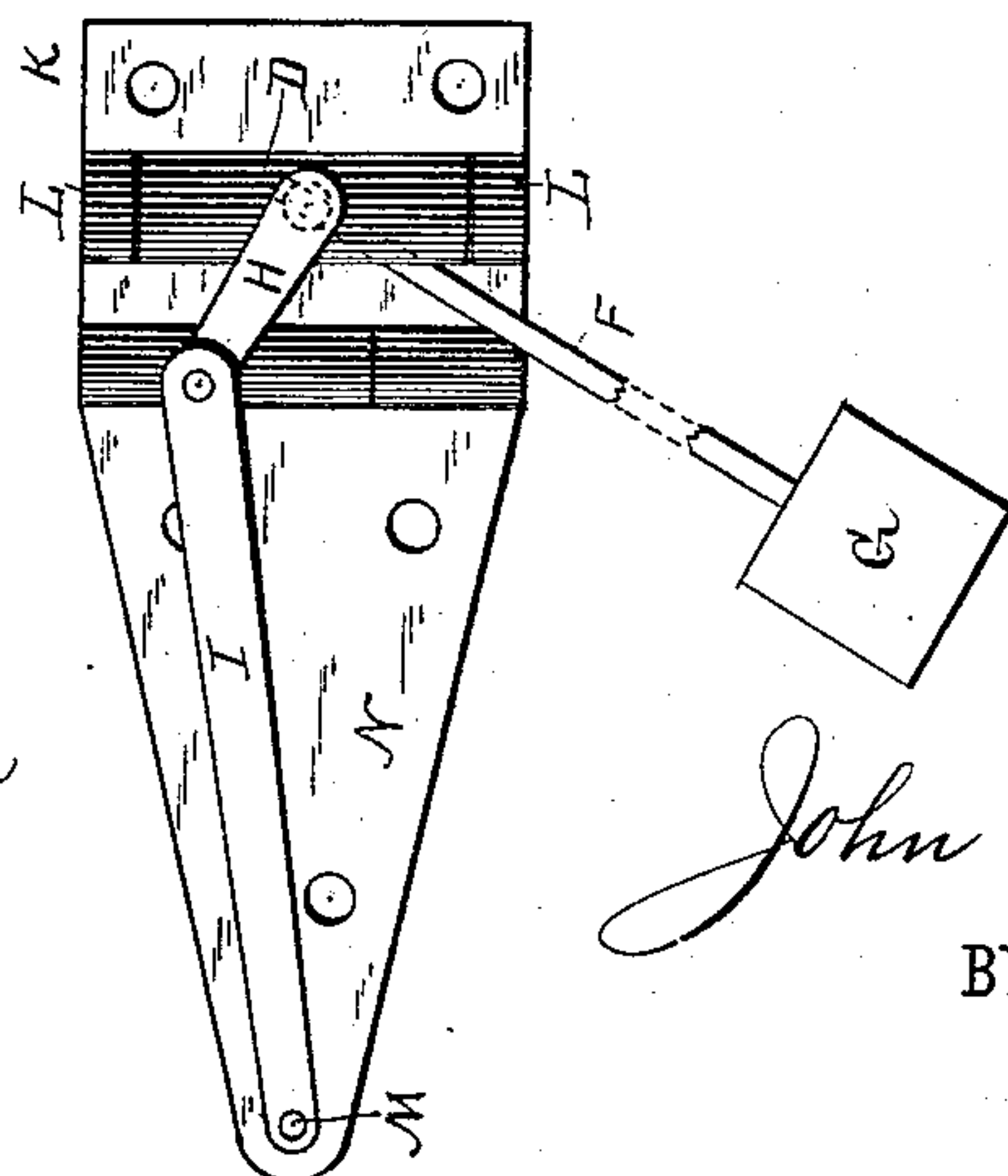


fig. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN McDONALD, OF MIDDLETOWN, ASSIGNOR TO HIMSELF AND GEORGE
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DOOR-CLOSER.

SPECIFICATION forming part of Letters Patent No. 316,283, dated April 21, 1885.

Application filed June 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN McDONALD, of Middletown, in the county of Butler and State of Ohio, have invented a new and useful
5 Improvement in Gate and Door Closers, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, in which—

Figure 1 is a side elevation of a door and
10 frame showing my invention. Fig. 2 is an edge view of the same; and Fig. 3 is a modification.

A indicates the door, and B the door-frame, to which the former is hinged.

15 To the door-frame behind the door are secured two brackets, C C, in which are journaled the ends of a vertical cylindrical bearing-block, D. In this bearing-block is journaled a transverse shaft, E, passing through
20 the middle thereof at right angles to the plane of the door, and to the inner end of the shaft E is secured an arm, F, carrying an adjustable weight, G, which arm is arranged parallel to the plane of the door. The outer end of the
25 shaft E is provided with a crank, H, which is connected by means of a link or bar, I, with a support, J, secured to the door.

With this construction, as the door is opened the link I rotates the bearing-block to turn
30 the weight out of the way of the door, and at the same time turns the crank to lift the weight to a position for acting on and closing the door.

Instead of making the device a separate attachment applicable to any door, as in the
35 form above described, it may be made in one piece with the door-hinge, as shown in Fig. 3, in which case the part K of the hinge is provided with ears L for supporting the bearing-block D, and the link I is connected to a pro-
40 jection, M, on the part N of the hinge.

The general arrangement of the several parts of the device may also be modified without departing from the spirit of the invention.

What I claim is—

45 1. The combination of a rotary bearing-block, a crank-shaft journaled transversely in said block, a weight attached to one end of said shaft, and means, substantially as described, for connecting the crank-shaft with
50 a door, substantially as and for the purpose specified.

2. The combination, with a hinge, of a rotary bearing-block supported in connection
55 with a part of the hinge, a weighted crank-shaft journaled in said block, and a pivoted link connecting the crank of said shaft with another part of said hinge, substantially as shown and described, and for the purpose specified.

JOHN McDONALD.

Witnesses:

A. G. LYNE,
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