

(No Model.)

S. H. LAW.

DEVICE FOR OPENING DOORS.

No. 323,165.

Patented July 28, 1885.

Fig. 3.

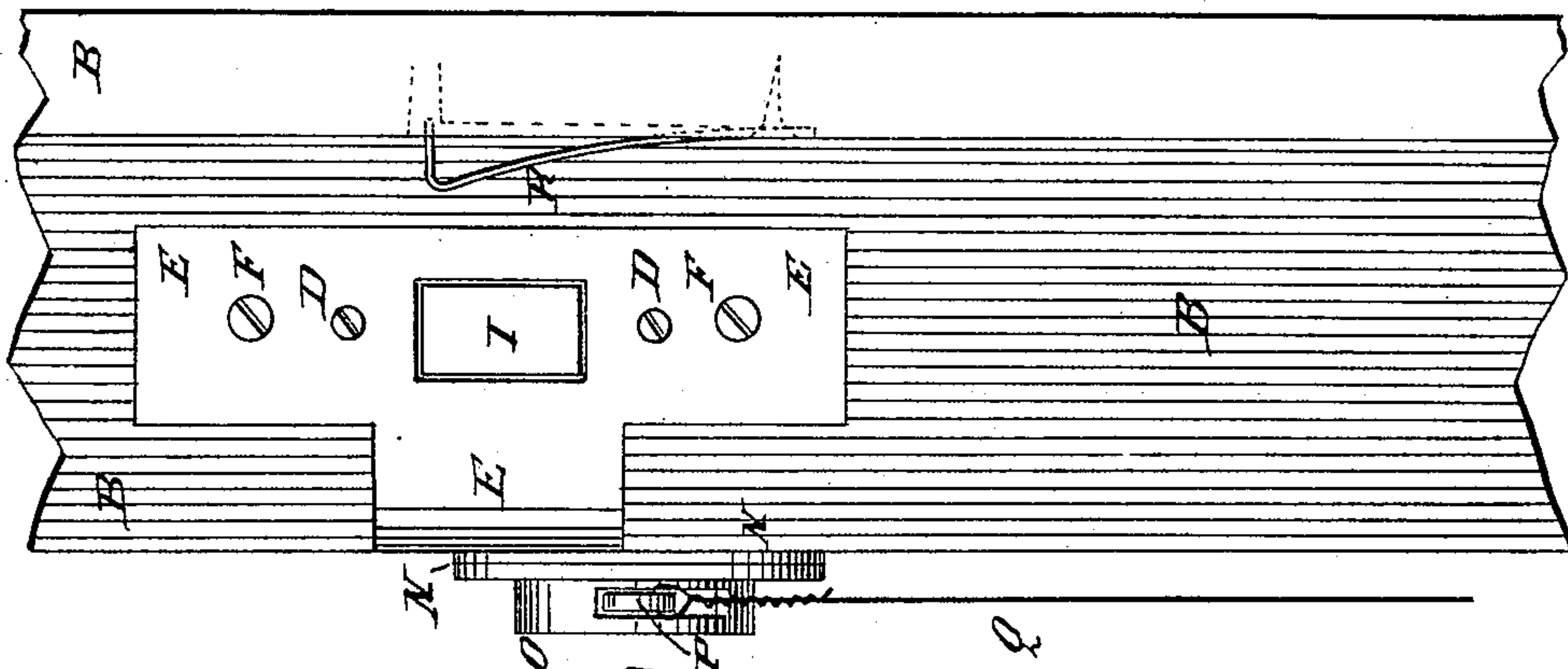


Fig. 1.

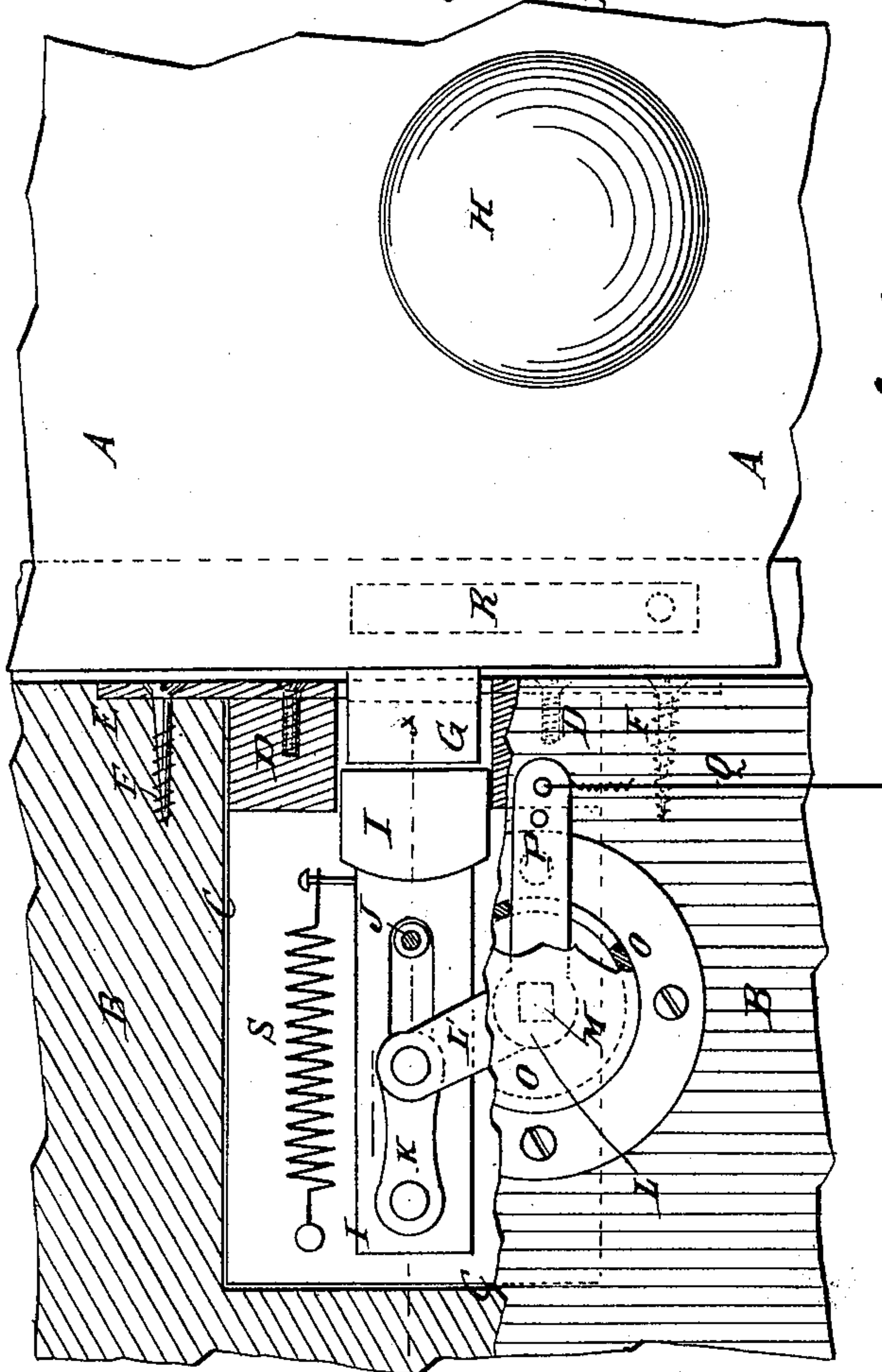
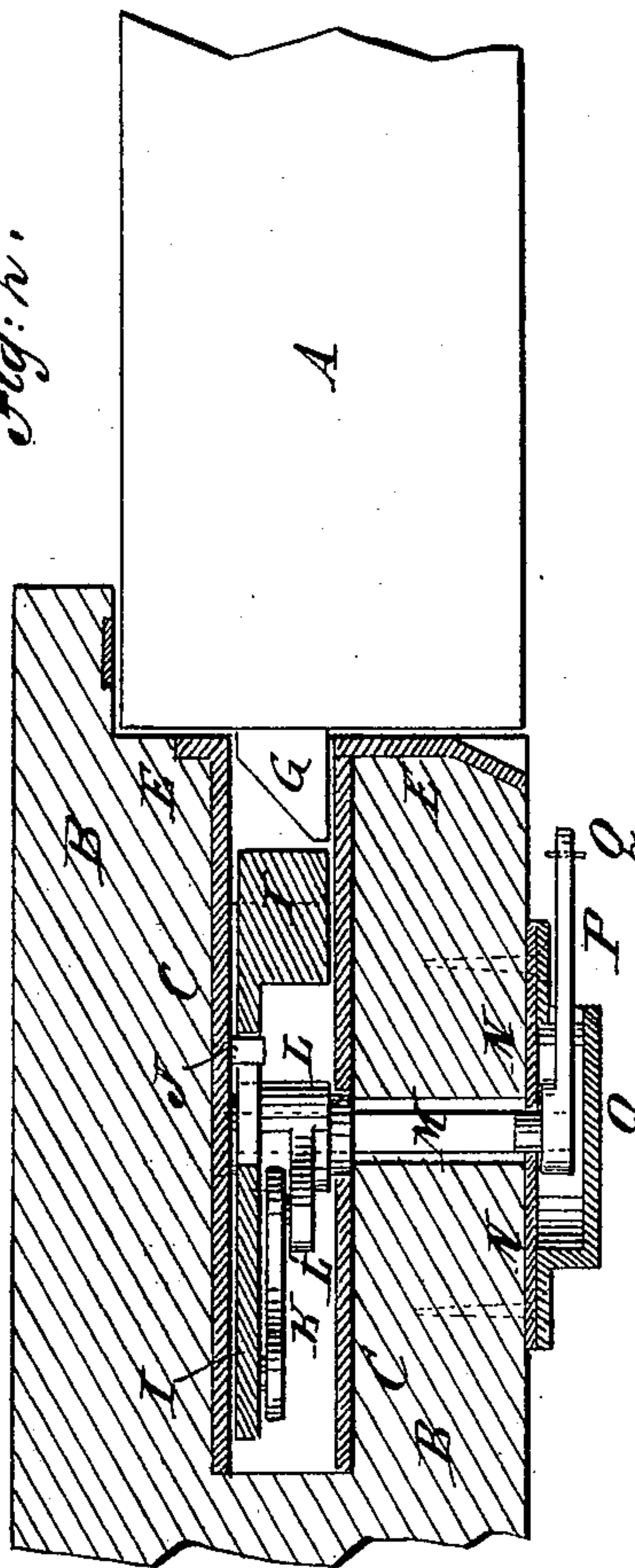


Fig. 2.



WITNESSES:

Chas. Nida
C. Sedgwick

INVENTOR:

S. H. Law

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

SAMUEL H. LAW, OF BROOKLYN, NEW YORK.

DEVICE FOR OPENING DOORS.

SPECIFICATION forming part of Letters Patent No. 323,165, dated July 28, 1885.

Application filed April 16, 1885. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL H. LAW, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Mortise Door Openers, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of one of my improved mortise door openers, partly in section and part being broken away, and part of the door-casing being shown in section. Fig. 2 is a sectional plan view of the same taken through the line *xx*, Fig. 1, and showing the door-casing in section. Fig. 3 is a front elevation of the same and of a part of the door-casing.

The object of this invention is to provide mortise door openers constructed in such a manner as to be readily applied, and which shall be more reliable in operation and less liable to get out of order than door-openers constructed in the ordinary manner.

The invention consists in the construction and combination of various parts of the door-opener, as will be hereinafter fully described, and then pointed out in the claims.

A represents a door, and B a door-casing.

C is a case similar to the case of an ordinary mortise-lock, and which is placed in a mortise formed in the jamb of the door-casing B.

To the forward end of the case C is secured, by screws D, the striking-plate E, which is fastened to the jamb of the casing B by screws F, so that the said striking-plate E can be readily reversed as the manner in which the door is hung may require.

G is the catch-bolt of the door, which is operated by the knob H in the ordinary manner, and which, when the door is closed, passes through the striking-plate E and enters the forward end of the case C.

In the case C, and directly opposite the opening for the catch-bolt G, is placed a bolt, I, which is slotted longitudinally to receive the guide-pin J, attached to the case C, so that the said bolt I will move forward and back in a horizontal line.

To the side of the rear end of the bolt I is pivoted the rear end of a short bar or link, K, the forward end of which is pivoted to the crank-arm L' of the tumbler L. The tumbler L rocks in bearings in the case C, and has a square hole formed through it to receive the spindle M, which passes in through a hole in the casing B, and is journaled in a hole in the plate N, secured to the casing B. The outer end of the spindle M is covered by a cap, O, attached to the casing B, and which has a slot in its side through which the crank-arm P of the spindle M passes, the said slot being made of such a length as to allow the said crank-arm to have the necessary movement.

To the end of the crank-arm P of the spindle M is attached the end of the wire Q, which is led by bell-levers in the ordinary manner to the place whence the door-opener is to be operated.

To the shoulder of the casing B is attached a spring, R, which is compressed by the door A when closed, and which is made of sufficient strength to throw the door so far open when the catch-bolt G is forced back as to prevent the said catch-bolt from again engaging with the striking-plate E. With this construction, when the door is to be unfastened the wire Q is drawn upon, which turns the spindle M and forces the bolt I forward, pushing the catch-bolt G out of the striking-plate E, when the door A is swung partly open by the tension of the spring R, so that the said door can be opened by the person wishing to enter the house or room to the door of which the opener is applied. The push-bolt I is drawn back, when the crank-arm P of the spindle M is released by a spiral or other spring, S, placed in the case C, and one end of which is connected with the said push-bolt I, and its other end is connected with the said case C.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a door-opener, the combination, with the case C, of the push-bolt I, the link K, pivoted to the said bolt, the tumbler L, having arm L', the spindle M, having crank-arm P, the operating-wire Q, attached to the said crank-arm, and the spring S, substantially as

herein shown and described, whereby the catch-bolt of a door can be pushed back and the door unfastened by operating the said wire, as set forth.

- 5 2. The combination, with the case C of a door opener, of the separate striking-plate E, substantially as herein shown and described,

whereby the said striking-plate can be readily reversed, when desired, as set forth.

SAMUEL H. LAW.

Witnesses:

JAMES T. GRAHAM,
C. SEDGWICK.