

(Model.)

A. DIDION.
LATCH.

No. 468,040.

Patented Feb. 2, 1892.

Fig. 1.

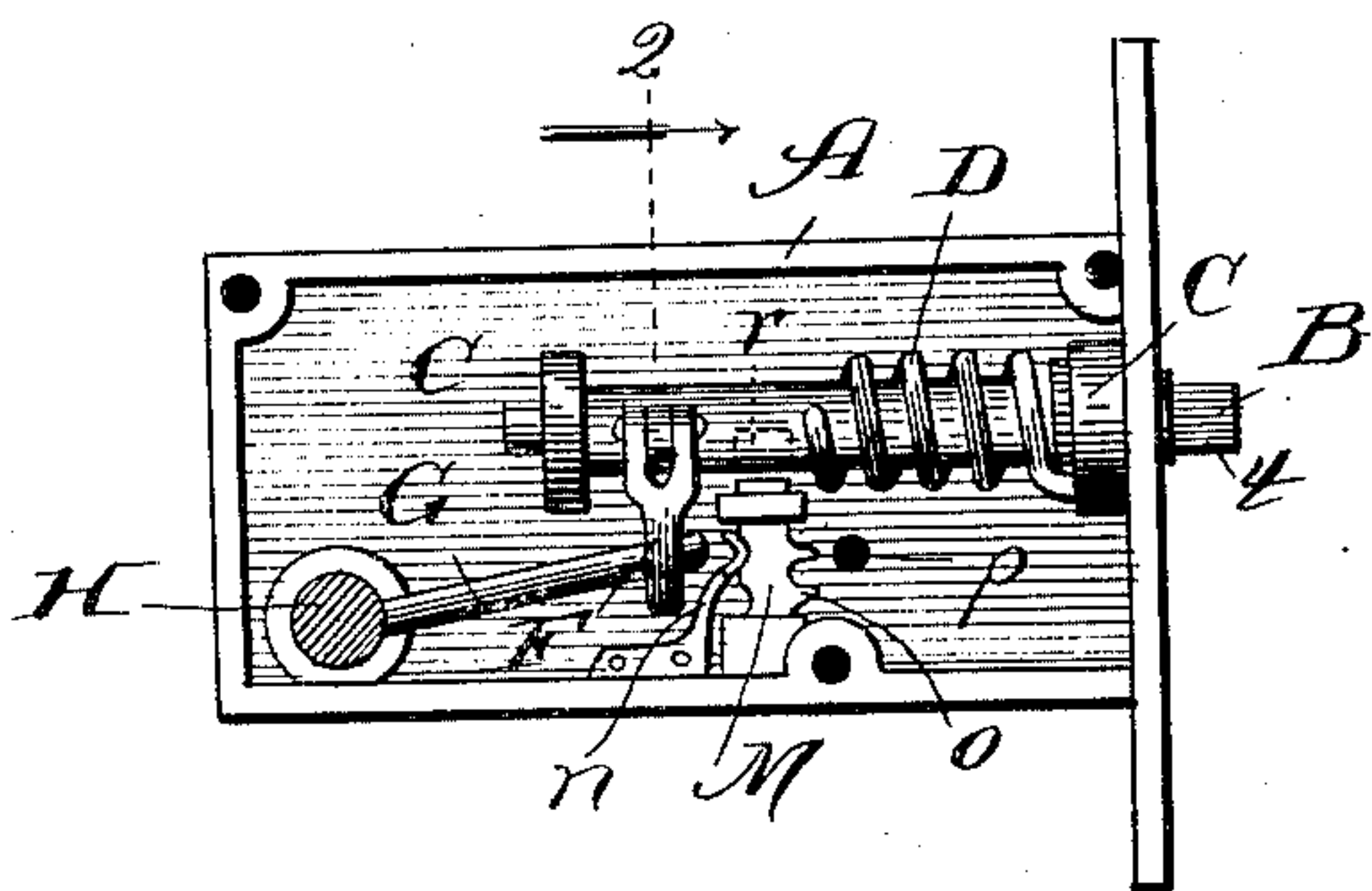


Fig. 2.

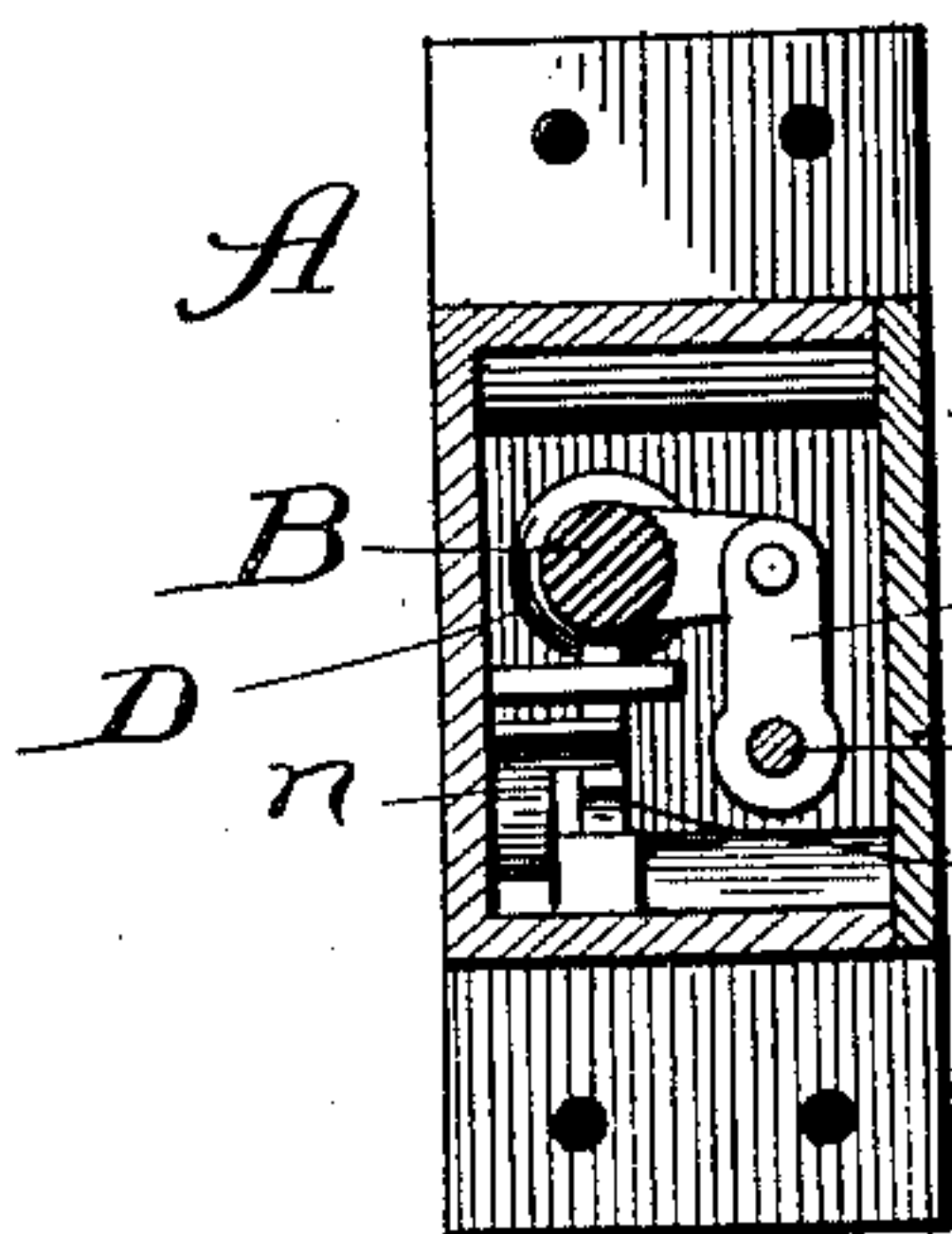


Fig. 3.

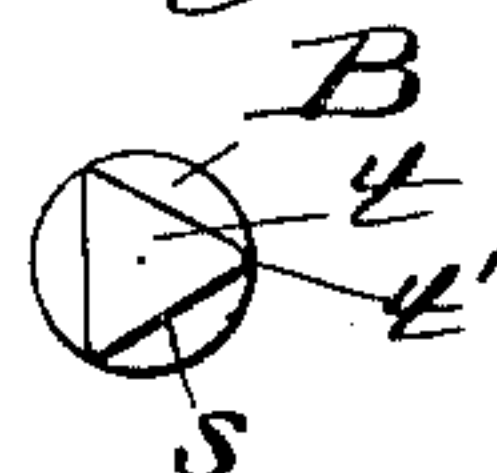


Fig. 4.

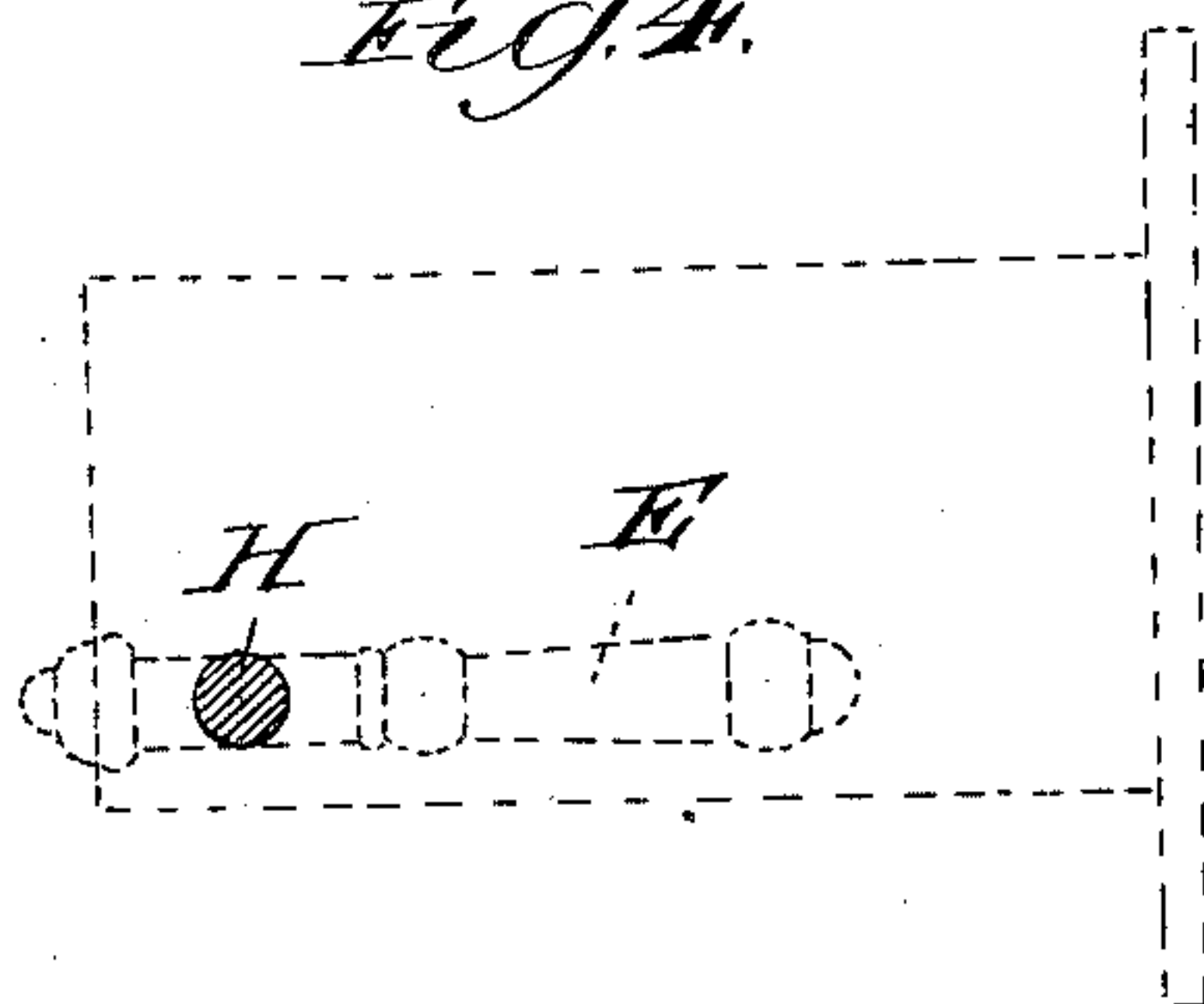
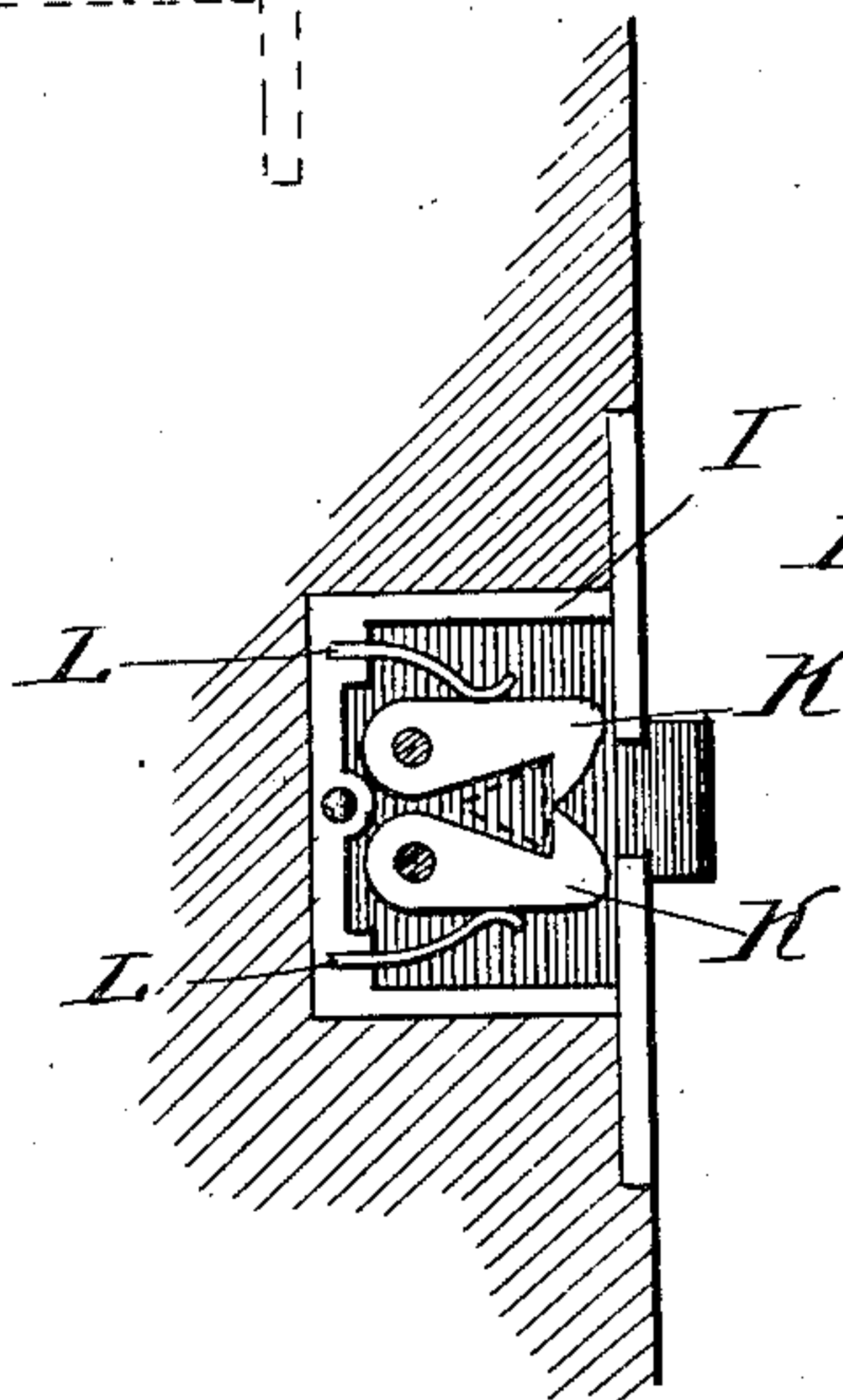


Fig. 5.



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UNITED STATES PATENT OFFICE.

AUGUSTE DIDION, OF CHICAGO, ILLINOIS.

LATCH.

SPECIFICATION forming part of Letters Patent No. 468,040, dated February 2, 1892.

Application filed May 28, 1891. Serial No. 394,341. (Model.)

To all whom it may concern:

Be it known that I, AUGUSTE DIDION, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Door-Locks, of which the following is a specification.

My invention relates to improvements in door-locks, more particularly to that species of door-locks which are known as "catch-locks;" and the object is to provide a construction by which engagement between the bolt and catch may be rendered at all times certain and secure, and is particularly directed to a construction by which the tendency to recoil when the door is closed with vigor shall not be permitted to reopen the door.

My invention consists in detail of a door-lock comprising a horizontally-arranged bolt capable of revolving under the operation of a handle and having an angular part caused to protrude from the edge of the door, and a catch located upon the jamb comprising spring-actuated jaws capable of opening to receive the bolt and held together by the springs until they are separated by the revolution of the bolt on its axis.

My invention further consists in the general and specific details of construction, all as hereinafter more fully pointed out.

In the drawings, Figure 1 is a sectional front elevation of the bolt-section of the lock, with the top plate removed to show the interior construction. Fig. 2 is a cross-sectional end elevation on the line 2 of Fig. 1, viewed in the direction of the arrow. Fig. 3 is an end view of the bolt. Fig. 4 is a front elevation of the bolt-section of the lock, showing the location of the handle; and Fig. 5, a detail view in elevation of the catch-section of the lock or that carried by the jamb.

A represents the case adapted to be screwed upon the door and carrying the revolving bolt B. The bolt B is supported in bearings C to revolve therein, as shown, and the projecting end *t* is made triangular in end elevation, as indicated in Fig. 3. A coiled spring D surrounds the bolt to return it to its normal position after it has been revolved under

the operation of the handle E, as presently shown. From a suitable point upon the bolt extends the jointed arm F, the opposite end of which is secured to a link G, extending through the stem H of the handle E. The arrangement of the parts is such that when the handle E is turned the bolt B is given a partial revolution, so as to present one of the angles *t'* to the front of the lock, while when the handle is released the bolt under the action of the spring D will return to its normal position to present one of the sides *s* to the front of the lock. The catch is inclosed in a metal shell I, bolted to the door-jamb, within which are mounted the oppositely-arranged pivoted jaws K, held together, as indicated in Fig. 5, by flat springs L. The interior faces of the jaws K present an angular space similar in outline to the projecting end *t* of the bolt B.

A tumbler of common construction is provided within the case A for the purpose of locking the bolt B to prevent its revolution under the operation of the handle. A simple form for this construction is illustrated in Fig. 1, in which the bolt B is represented in dotted lines as recessed at *r*, and a sliding spring-retained tumbler M is mounted in bearings to extend at right angles to the bolt. At *p* is represented a recess for the end of an ordinary door-key, the tang of which may engage the wards *o* on the tumbler M to withdraw the same against the resistance of the spring *m*.

The operation is as follows: By reason of the configuration given to the outer extremities of the jaws K on the closing of the door the edge *t'* enters within the jaws, so that the hypotenusal side *s* is presented to the inner face of the jaw-teeth. To open the lock, the handle is turned to turn the bolt, whereupon the broader part of the bolt becomes presented to the inner narrow part of the jaws of the catch, serving to separate them and permit the withdrawal of the bolt between the jaw-teeth.

Any convenient or suitable means may be adopted for turning the bolt B to withdraw it from the jaws without longitudinal displacement, and any convenient form of locking

catch or tumbler may be substituted for that shown without departing from the scope of my invention.

5 What I claim as new, and desire to secure by Letters Patent, is—

10 1. In a door-lock, the revolving bolt having the projecting angular end, said end being normally in position to cause one of its angular edges to be presented to the catch, in combination with a catch adapted to receive the bolt and be released therefrom by turning the bolt, substantially as described.

15 2. In a door-lock, in combination, the revolving bolt held against longitudinal displacement and having the angular projecting end, and a catch comprising pivoted jaws to receive the bolt and adapted to be opened to release the bolt by turning the latter, substantially as described.

20 3. In a door-lock, in combination, the spring-controlled revolving bolt held against longitudinal displacement and having the angular projecting end, and the catch adapted to receive the bolt and be opened by its revolution to release the same, comprising spring-

controlled pivoted jaws, substantially as described.

4. In a door-lock, in combination, the revolving bolt B, held against longitudinal displacement and having the triangular projecting end *t*, and a catch to receive and hold the projecting end on the closing of the door, comprising oppositely-arranged pivoted jaws K, presenting an interior configuration like that of the end *t*, substantially as described. 35

5. A door-lock comprising, in combination, the following elements: the bolt B, held against longitudinal displacement and having the triangular projecting end *t*, the handle for operating said bolt, a tumbler to engage said bolt, said parts being mounted on the door, and a catch located on the jamb and comprising spring-controlled co-operating jaws presenting the interior triangular space, substantially as and for the purpose described. 45

AUGUSTE DIDION.

In presence of—

FRANK WILTSHIRE,

DOUGLAS DYRENFORTH.