

(No Model.)

P. H. RUCKER.
BURGLAR ALARM.

No. 497,347.

Patented May 16, 1893.

Fig. 1.

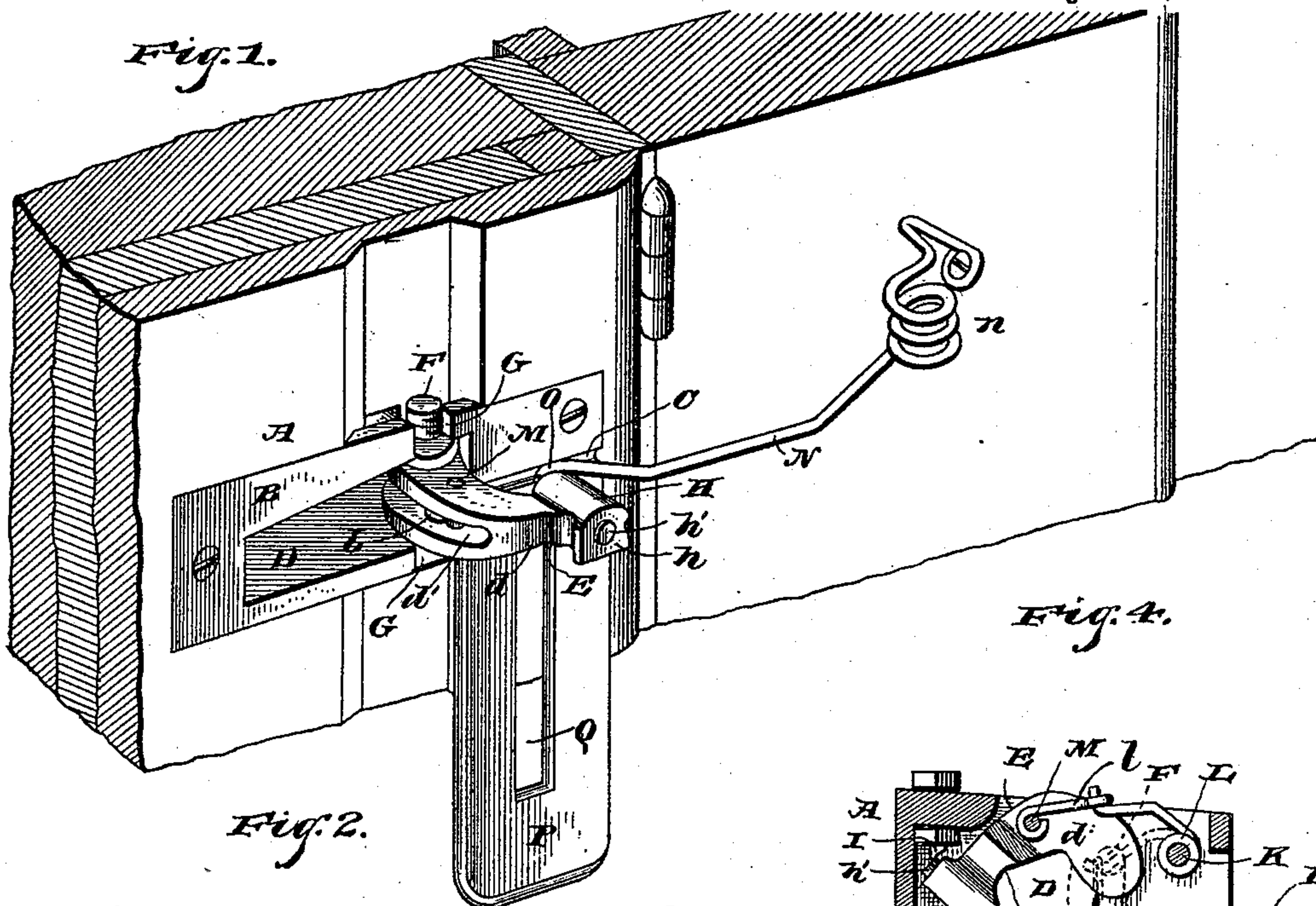


Fig. 2.

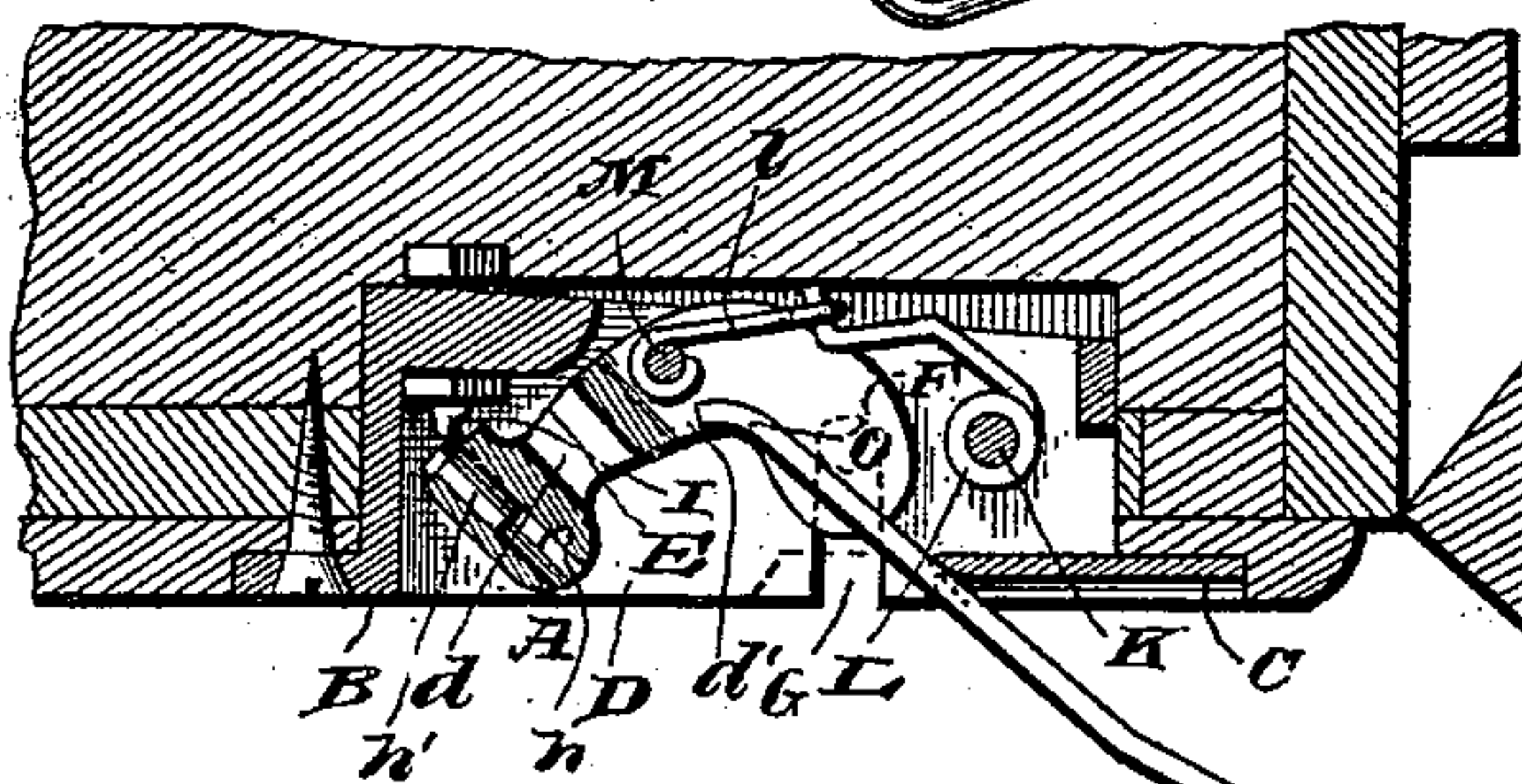


Fig. 4.

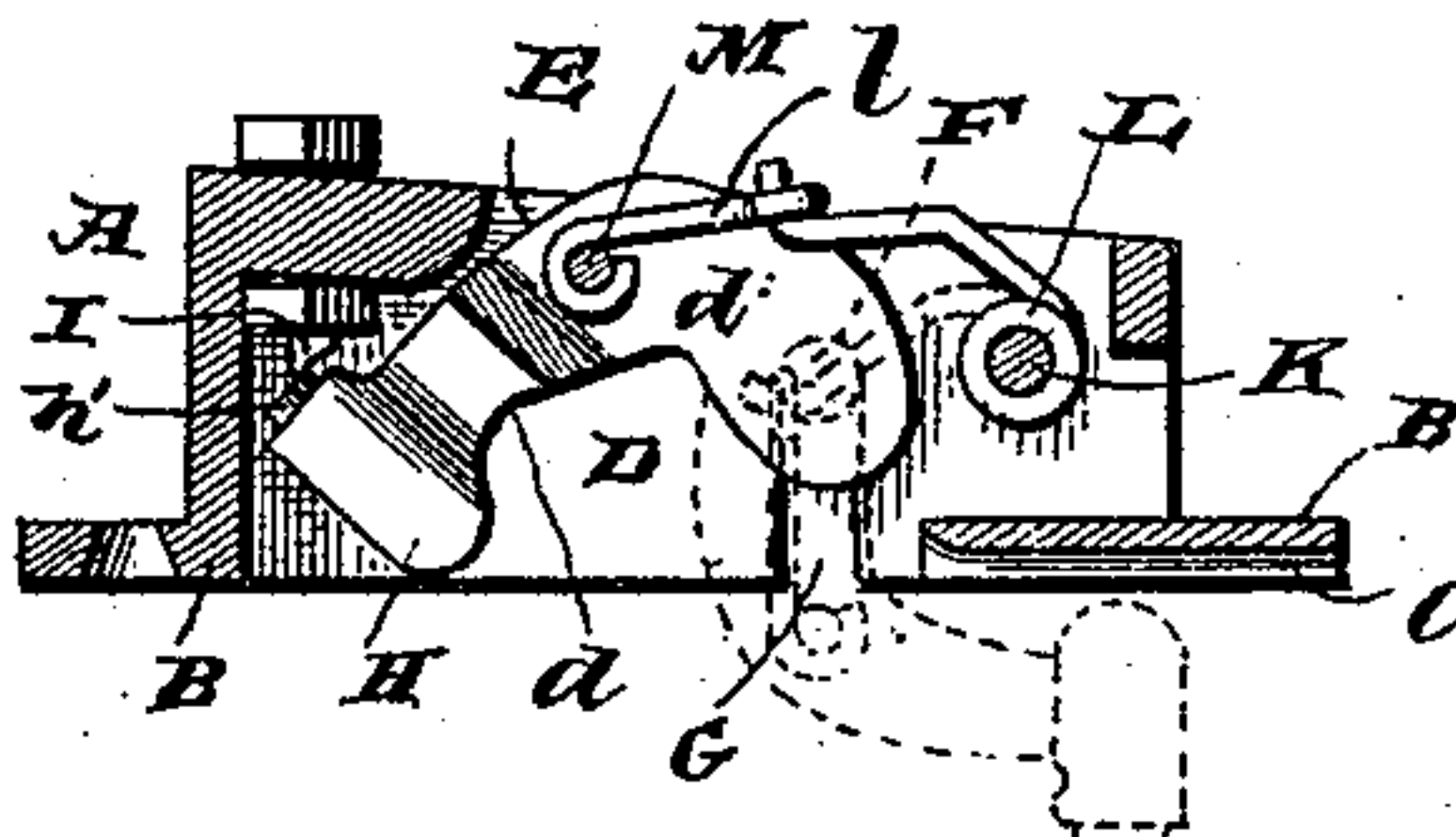
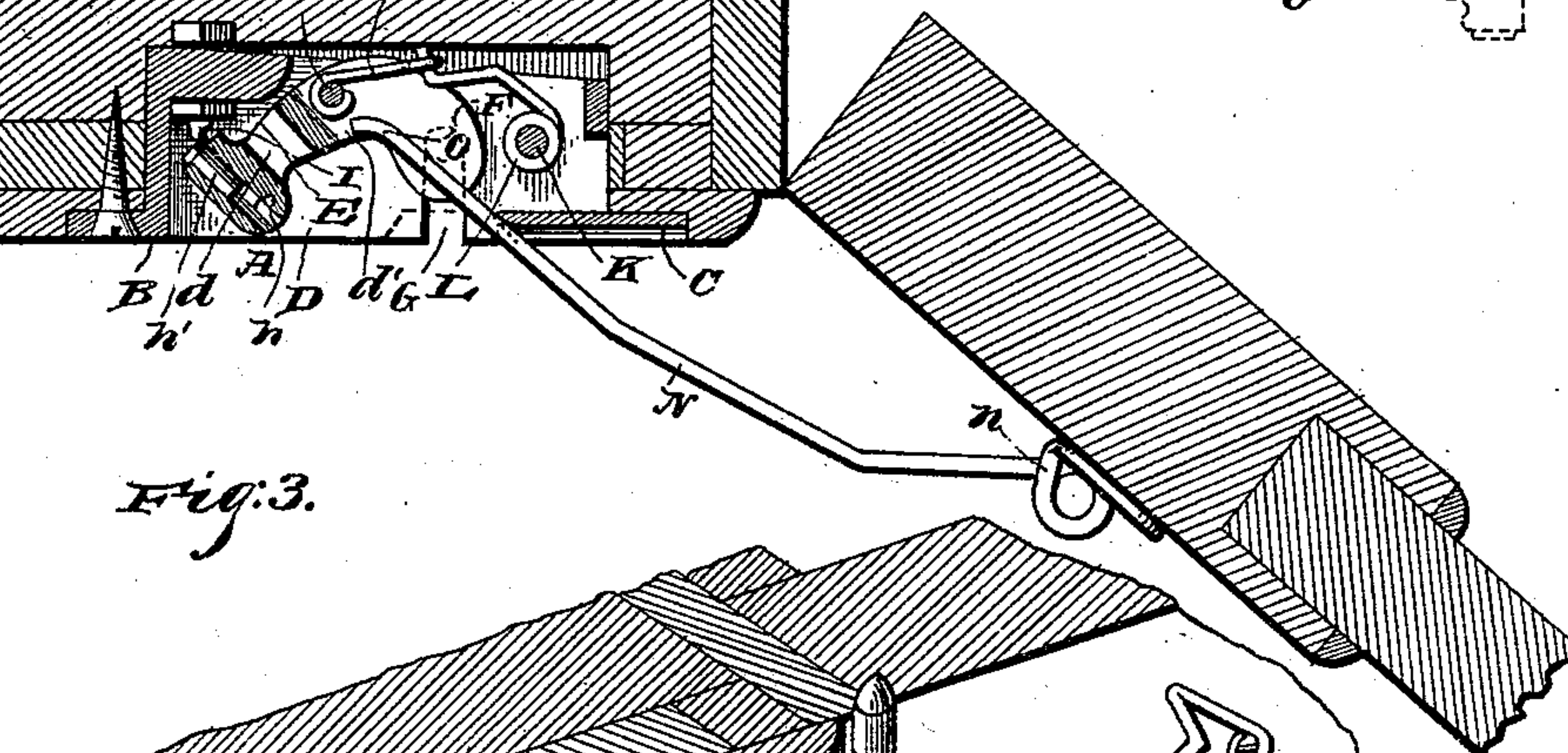


Fig. 3.



Witnesses

Inventor

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UNITED STATES PATENT OFFICE.

PRESLEY H. RUCKER, OF PLEASANT PLAINS, ILLINOIS.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 497,347, dated May 16, 1893.

Application filed November 12, 1892. Serial No. 451,801. (No model.)

To all whom it may concern:

Be it known that I, PRESLEY H. RUCKER, a citizen of the United States, residing at Pleasant Plains, in the county of Sangamon and State of Illinois, have invented a new and useful Combined Door Spring and Alarm, of which the following is a specification.

My invention relates to a combined door spring and burglar alarm, and it has for its objects to provide a cheap, simple, effective and durable detonating alarm mechanism in combination with a simple and direct-acting closing spring, which, in addition to performing the functions of an alarm and a closing spring, will hold the door open when thrown back beyond a certain point, will act as a door-stop to prevent the marring of the plaster and wood-work, and which may be applied, with advantage, to a window sash to operate as an alarm.

Further objects and advantages of my invention will appear in the following description and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings:—Figure 1 is a perspective view of a door with my improved spring and alarm mechanism applied thereto in the operative position with the hammer set. Fig. 2 is a horizontal section, showing a portion of the door and the jamb, and indicating the position of the alarm, and the spring, when the door is partly open and the alarm has been tripped. Fig. 3 is a perspective view of the alarm and spring mechanisms applied in their operative positions to a door, and indicating in full lines the position of the covering plate when closed over the alarm mechanism, and in dotted lines the position thereof when thrown back preparatory to setting the alarm. Fig. 4 is a detail longitudinal sectional view of the alarm mechanism.

A represents the casing, which is countersunk into the door jamb adjacent to the hinged edge of the door, and preferably near the top, the face-plate, B, of the casing being flush with the surface of the jamb and being provided with a longitudinal groove, C, which communicates, at one end, with the opening, D, in which operates the hammer, E.

The shank, *d*, of the hammer is bifurcated at one end, to form a cavity, *d'*, and the arms

of said bifurcation are provided with lateral trunnions, F, which are mounted in open-sided bearings, G G, in opposite side-walls of the casing. The head, H, of the hammer is provided with a cartridge chamber, *h*, to receive the cartridge, *h'*, and secured to the rear side of the casing is a fixed striking-pin, I.

Upon a transverse rod, K, in the casing adjacent to the pivoted end of the hammer, is coiled a spring, L, the free end of which is connected by means of a link, *l*, with a transverse-pin, M, in the bifurcated end of the shank of the hammer. The shank of the hammer is curved or bowed, so that the draft of the actuating-spring, L, is out of the plane of the trunnions of the hammer, but when the hammer is set, or raised, as shown in full lines in Fig. 1 and in dotted lines in Fig. 4, the transverse-pin, M, is thrown in front of the trunnions and the hammer is held in its set position.

N represents the door-spring, provided at one end with a coil, *n*, which is attached firmly to the door, and provided at the opposite end with a curved nose, O, to slide in the groove C in the surface of the face-plate. The spring, N, is bowed as shown, from its ends toward the center.

P represents a covering-plate, which is provided with a longitudinal slot, Q, and is pivoted at one corner to the face-plate, whereby when in its normal, or closed position, as shown in full lines in Fig. 3, the alarm mechanism is concealed, the slot therein being in line with the spring to allow the latter to operate freely and perform its functions independently of the alarm mechanism, and when in its open position, as shown in full lines in Fig. 1 and in dotted lines in Fig. 3, the alarm mechanism is exposed.

In operation, the nose of the door-spring slides in the groove in the face plate of the casing and resists the opening of the door until the latter is thrown back sufficiently to cause the nose of the spring to slip into the opening, D, when the door will be held open. The operation of the door spring is the same whether the alarm mechanism is "set" or not, and its position upon the door is such as to prevent the latter from opening sufficiently to allow the door-knob to strike the wall. When the hammer is thrown back in its "set" position

as shown clearly in full lines in Fig. 1 and in dotted lines in Fig. 4, and the door is opened, the door-spring slides forward, or from the hinged edge of the door, and engages the free end of the hammer, thus raising the same to a position where the draft of its actuating spring is beyond its trunnions from which point it is operated by the spring, the hammer is thrown down and the cartridge is discharged.

This alarm mechanism may be applied to a window-sash to be operated in the same manner as above described.

Changes in the form, proportion and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. The combination with a casing adapted to be secured to a door casing and having a face-plate flush with the surface of the latter, and a door-spring attached at one end to the door and bearing slidably at its free end on the face-plate, of a pivoted hammer curved rearwardly toward its free end to overhang the face-plate when set, and an actuating-spring connected to the hammer, the latter being tripped by the door-spring engaging its free end, substantially as specified.

2. The combination of a hollow casing having a grooved face-plate, a detonating hammer pivotally mounted in the casing and at its free end overhanging the grooved face-plate, and an actuating-spring operatively connected to the hammer, with a door-spring slidably bearing at its free end in the groove of said face-plate, substantially as specified.

3. The combination with a casing having a central cavity and lateral open-sided bearings, of a hammer having a rearwardly curved bifurcated shank provided with lateral trunnions mounted in said bearings, a link loosely connected to a transverse pin in said bifurcation of the shank, an actuating-spring connected to the free end of said link whereby when the hammer is set its free end will overhang the face-plate of the casing and will be held in such set position by the draft of the actuating-spring falling in the rear of the pivot of the hammer, and means to trip the hammer by moving its free end sufficiently to bring the draft of the actuating-spring in front of the pivotal point of the hammer, substantially as specified.

4. The combination with the casing, having its face-plate provided with a groove, of a hammer pivotally mounted in an opening in the casing and provided with an actuating-spring, and a door-spring engaging at its free end in the groove in the face-plate and adapted to trip the hammer, substantially as specified.

5. In combination, the casing, the hammer pivotally mounted therein and provided with an actuating spring, a slotted covering-plate pivoted to the face-plate of said casing to cover the hammer, and a door-spring arranged to operate at its free end in the slot of the covering-plate, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

PRESLEY H. RUCKER.

Witnesses:

E. D. CRENSHAW,
H. C. MCGINLEY.