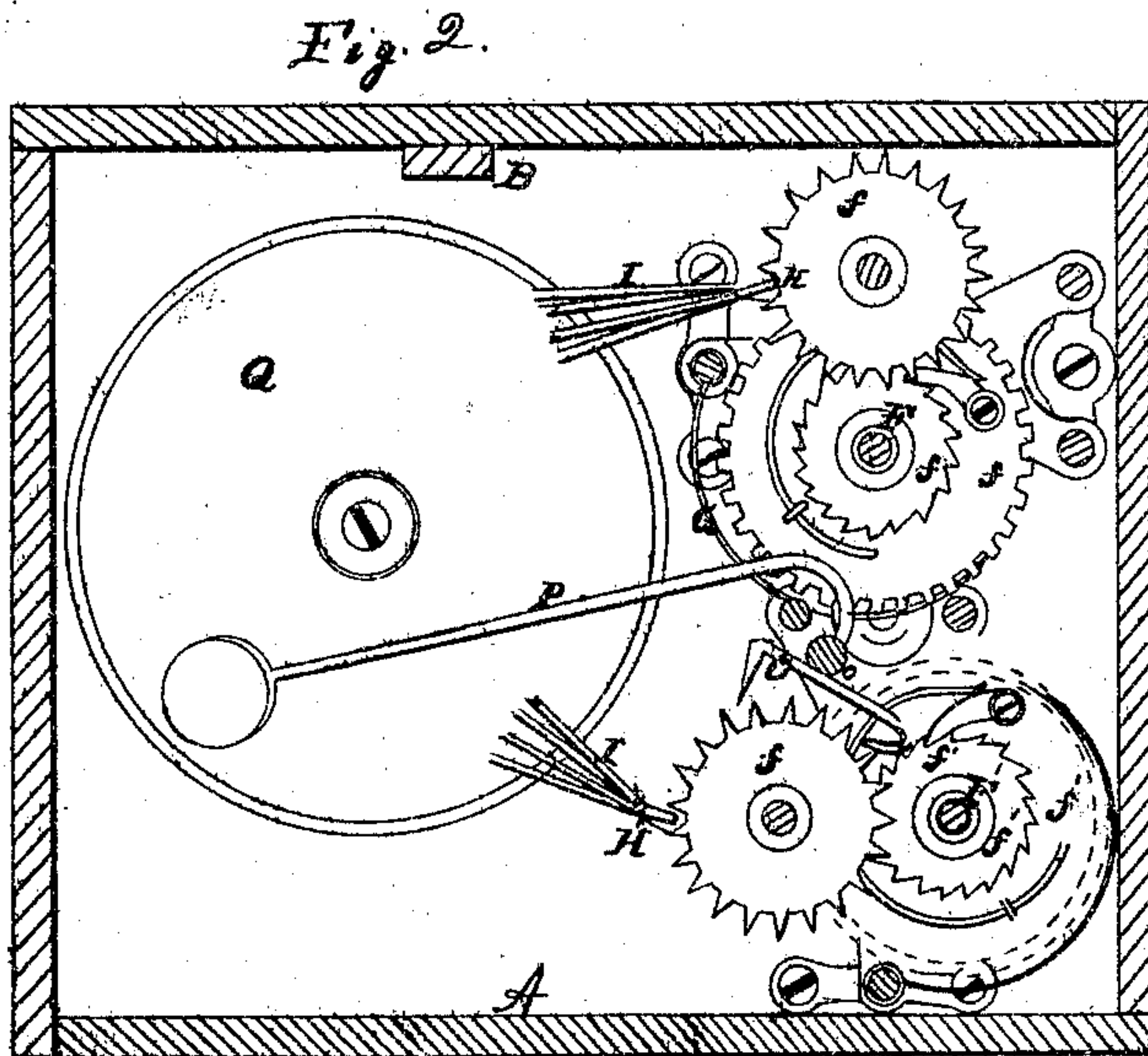
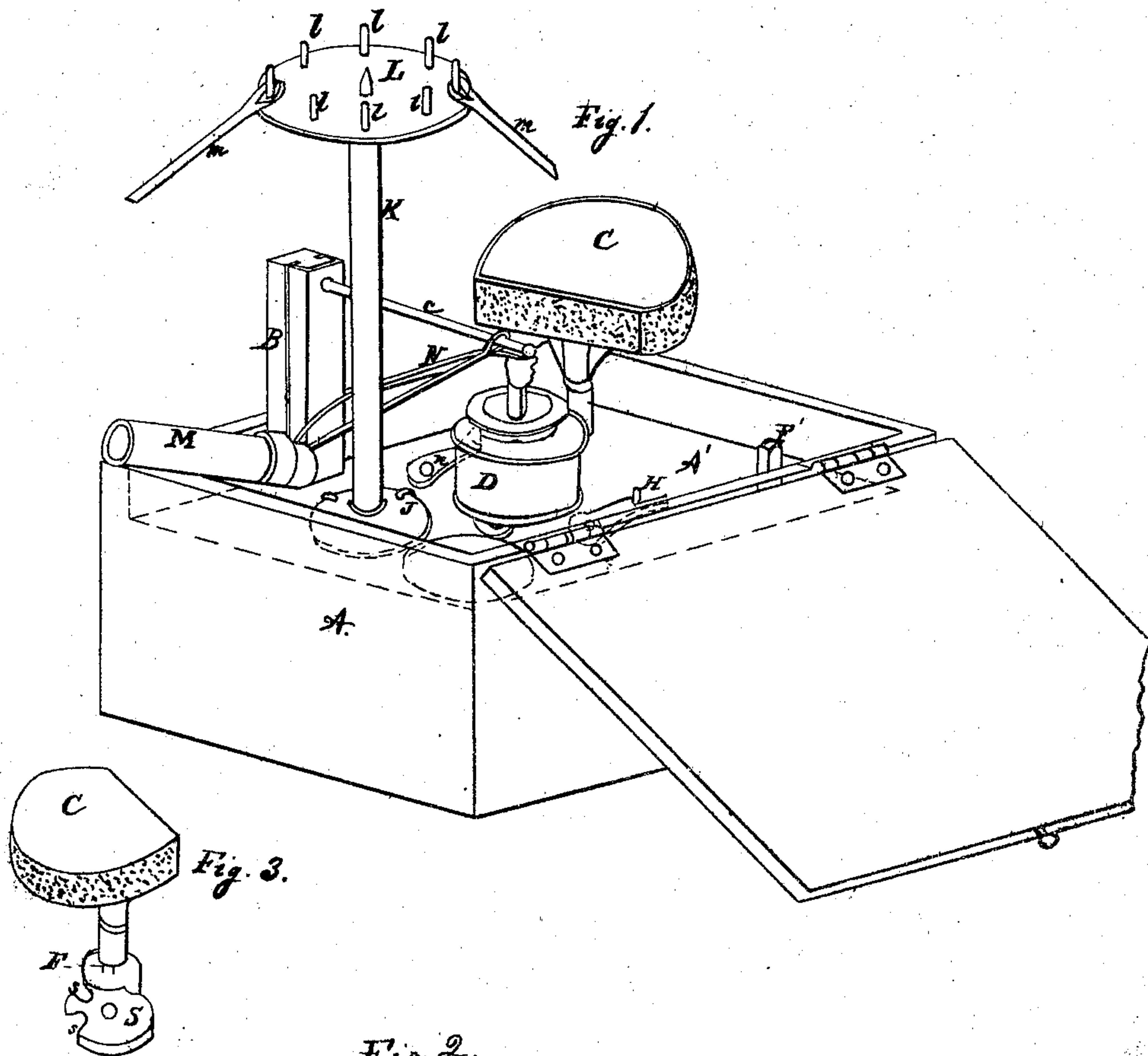


I. M. Wells

Alarm

No. 74779

Patented Feb 25. 1868



Witnesses.

Chas. D. Smith.  
James A. Smith.

Inventor.

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# United States Patent Office.

ISAAC M. WELLS, OF JEFFERSONVILLE, OHIO.

*Letters Patent No. 74,779, dated February 25, 1868.*

## IMPROVED BURGLAR-ALARM.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, ISAAC M. WELLS, of Jeffersonville, Fayette county, State of Ohio, have invented a new and useful Improved Burglar-Alarm; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to certain improvements in burglar-alarms, designed chiefly to be applied to the alarm for which Letters Patent of the United States were granted to me, on the 11th day of June, 1867. The operating parts receive motion from springs and gearing analogous to clock-work; the springs being wound up by a key in customary manner.

My present improvements consist, first, in a novel device for igniting a friction-match, for affording temporary illumination or lighting a lamp; second, in combining the match-igniter with the winding-up key of the apparatus, so that the former is rotated by the key which is mounted upon the main spring-shaft, when the alarm is set; third, in a match-holder of peculiar construction; fourth, in the combination with the match-holder of a fuse, for exploding the charge of a pistol or pistol-barrel. In the drawings—

Figure 1 is a perspective view of a burglar-alarm, illustrating my invention.

Figure 2 is a horizontal section, showing the impelling-mechanism.

Figure 3 is a detached view.

Similar letters of reference indicate corresponding parts in the two figures.

In the drawings, A represents a box or case, in which the several operating parts are mounted. B b represent a device which sustains a friction-match, c, in position to have its igniting-end acted upon by the rotating segment, C. A lamp, D, may be supported upon the horizontal partition A', and may be held, by a suitable fastening, in such position that the flame of the match c will reach and ignite its wick. The standard B of the match-holder is held between the side of the box A and the partition A', and has a shoulder midway between its ends, resting upon the partition A', the lower end of said standard being stepped into a recess in the bottom of the casing. The plain end of the match is supported in a hole in the standard B, while its igniting-end is supported by the arm b, which projects from the standard B, to which it is attached, and which may consist of an elastic piece of wire, or a strip of metal adapted to yield somewhat to the pressure of the revolving segment C. The end of the arm b is bent, to form a rest for the end of the match, as shown. The sides, c', of the segment C are roughened with a coating of sand or vitreous matter, or otherwise, so that when said segment rotates upon its vertical axis E, the frictional contact of its sides with the end of the match produces the ignition of the match-composition. A lamp, D, may be employed, as above described, to produce a more permanent light, but, as the temporary light of the match might be sufficient, and preferable in some instances, the lamp is not regarded as an essential part. The key by which the shafts F F' (see fig. 2) are rotated to wind up the main-springs G G', forms the axis E, upon which the match-lighter C rotates. The match-lighter C is provided in its under side with a slot or elongated narrow opening, to receive the head of the key. When the key is to be used for winding up the springs G G', the match-lighter can be readily detached therefrom, if desired. The power which is stored up in the springs G G', by the rotation of the shafts F F', to which said springs are attached, is conserved by the engagement of the pivoted catches H H' with the wheel-work f f'. Attached to the catches H H' are cords, I I, which are connected with a movable disk, J, in which is socketed the lower end of a post, K, which carries at top a disk, L, studded with pins, l, for the attachment of cords or other connections, which are also attached to doors or windows.

M may represent a pistol or pistol-barrel, and N a fuse inserted into the touch-hole thereof, and extending thence through the eye or rest in the end of the arm b of the match-holder. The alarm being set, the latches n n' are turned aside, so as to permit the catches H H' to be retracted from the wheel-work, through the medium of the device I J K L l m, whenever a door or window may be opened. When this happens, the shafts F F' are rotated by their respective springs G G', and the key E being mounted upon its shaft, F, is rotated therewith, and carries round with it the segment C, whose roughened surface ignites the match c. The match lights the lamp, and ignites the fuse to explode the pistol-charge. O is an escapement-lever, attached to the



shaft *o* of which is the clapper *P*, which is caused to rapidly strike the bell *Q* by the motion of said escapement, derived from the wheels *f*, which are released and put in motion simultaneously with the wheels *f'*. The bell and the devices for ringing the same are seen in my previous patent, hereinbefore referred to. The rotation of the segment *C* is arrested after one or more turns by the device shown in fig. 3. The disk *R* is keyed to the shaft *F*, and has a stop or projection, *r*, corresponding with notches *s s*, in the rotary plate *S*, which is attached by a central pivot to the upper side of the top plate of the wheel-work *f*. In winding up the spring *G*, the disk *R* turns from left to right, and the notches *s*, which receive the projection *r*, and adapt *R* and *S* to rotate simultaneously, enable the disk *R* to be turned round as many times as there are notches in said plate *S*, but when, after engaging with both (or all) the notches consecutively, the projection *r* comes in contact with the outer periphery of the plate *S*, the further rotation of disk *R* is prevented. In like manner, when the match-lighter *C* is actuated by the spring *G*, its motion is arrested at a given point by the contact of the projection *r* with the outer edge of the plate *S*, as shown in fig. 3, said projection having engaged with one or more of the notches *s*, and the match-lighter *C* turned one or more times, according to the number of complete turns given the disk *R* in winding up. The spring *G* may be wound up to a greater or less extent, according as it is desired to rotate the match-lighter one or more times.

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

1. The rotary match-lighter *C*, applied to a burglar-alarm, and operating by a complete revolution, substantially in the manner and for the purpose described.
2. The combination of the match-lighter *C* with the key *E*, substantially as and for the purpose described.
3. The match-holder *B b*, mounted in the box *A A'*, and arranged and operating substantially as described.
4. The combination, with the match-holder *B b*, of the fuse *N*, as and for the purpose set forth.

To the above specification of my new and useful improved burglar-alarm, I have signed my hand, this 29th day of July, A. D. 1867.

ISAAC M. WELLS.

Witnesses:

J. E. M. BOWEN,  
CHAS. D. SMITH.