(No Model.) 2 Sheets—Sheet 1.

C. C. REID.

BURGLAR ALARM.

No. 413,867. Patented Oct. 29, 1889.

Fig. 1.

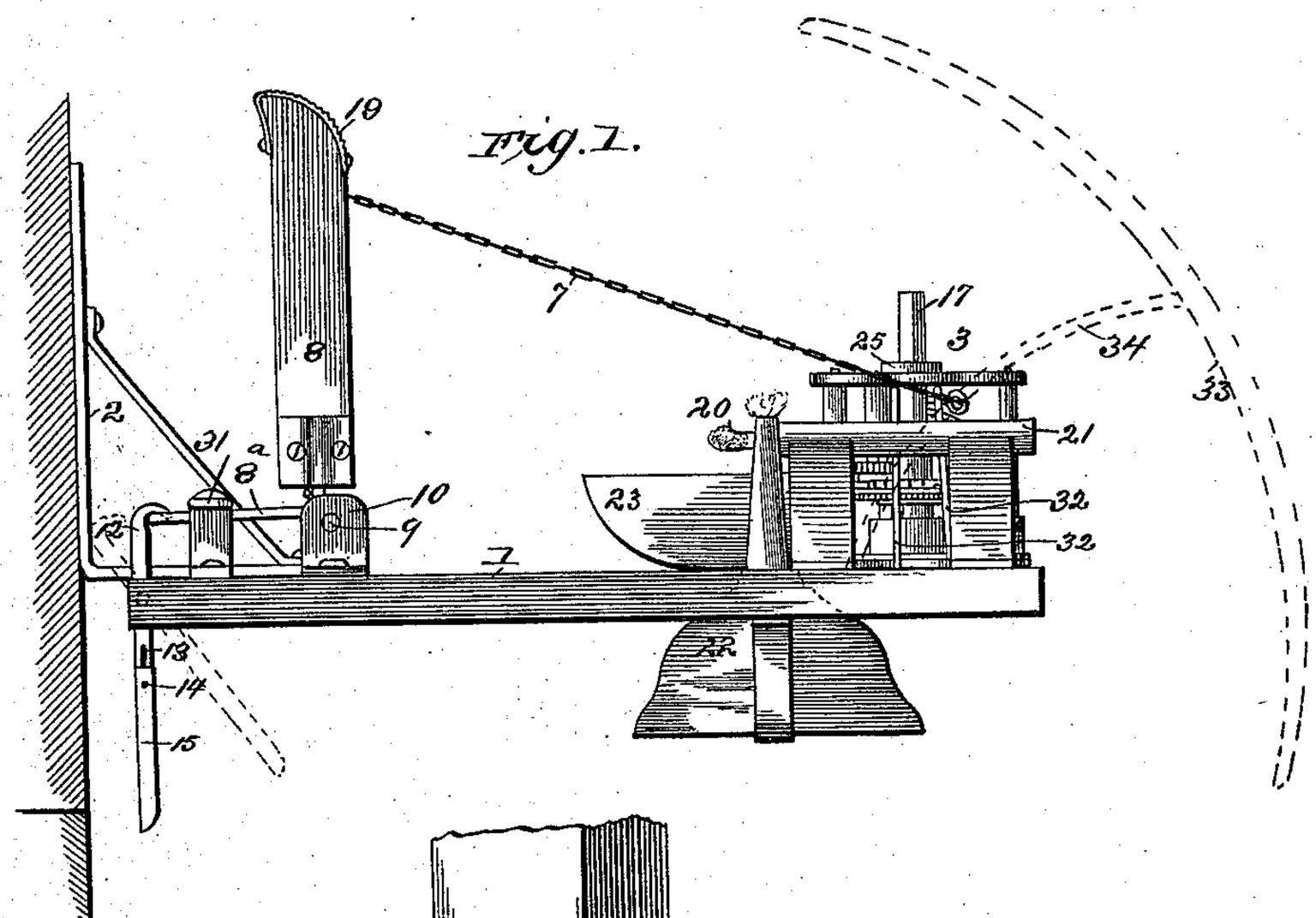

Fig. 3.

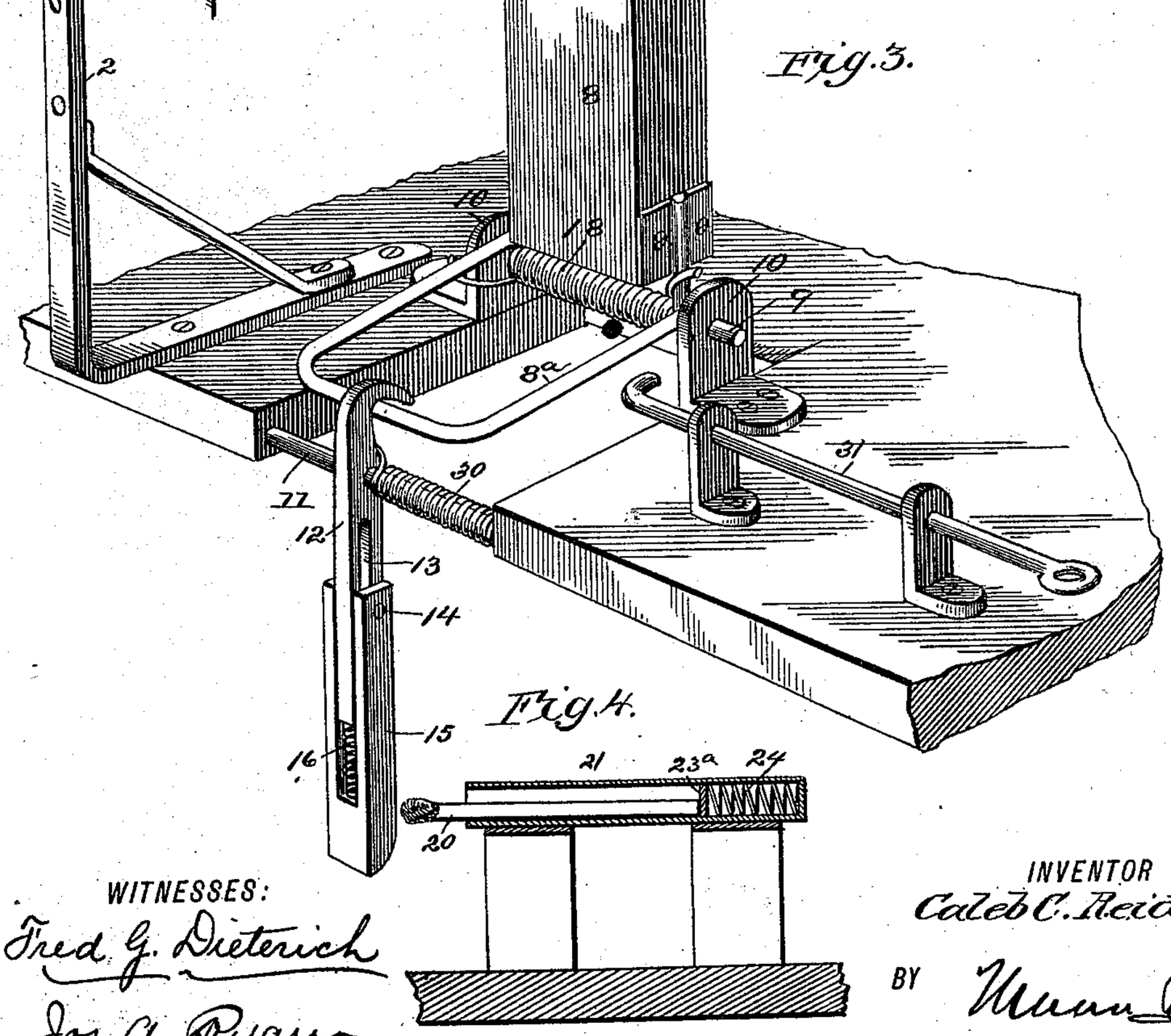

Fig. 4.

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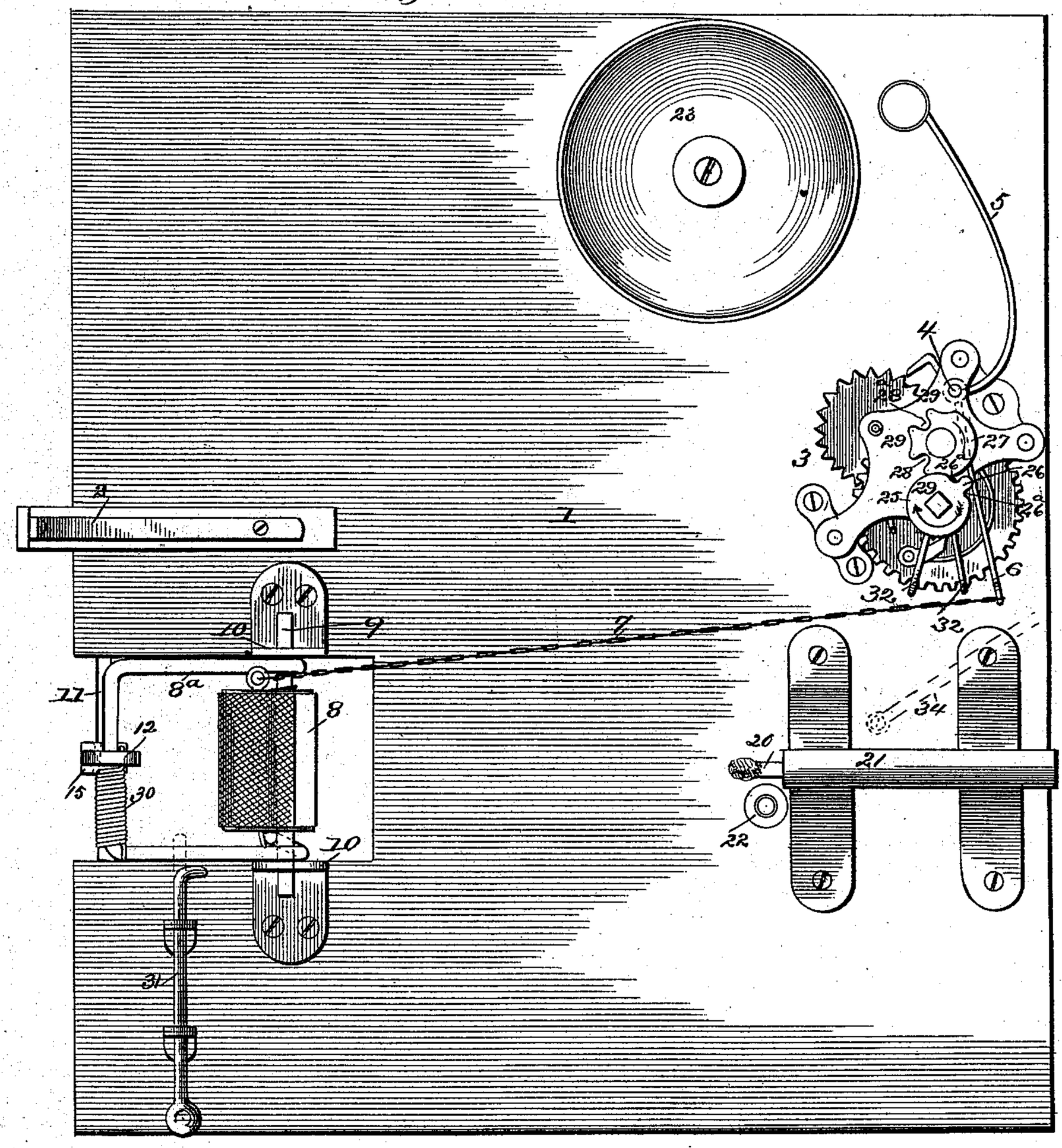
Fig. 2.



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CALEB C. REID, OF NEW BURNSIDE, ILLINOIS.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 413,867, dated October 29, 1889.

Application filed June 20, 1889. Serial No. 315,014. (No model.)

To all whom it may concern:

Be it known that I, CALEB C. REID, of New Burnside, in the county of Johnson and State of Illinois, have invented a new and useful Improvement in Burglar-Alarms, of which the following is a specification.

My invention consists in a new and improved burglar-alarm, which will be hereinafter fully described and claimed.

Referring to the accompanying drawings, Figure 1 is a side view. Fig. 2 is a plan view. Fig. 3 is a detail perspective view; and Fig. 4 is a detail section, hereinafter referred to.

The same numerals of reference indicate corresponding parts in all the figures.

Referring to the several parts by their designating-numerals, 1 indicates the plate or platform on which the several parts of the device are supported, this plate having a bracket 2, by means of which it, is secured in position. On this plate is secured a clock mechanism 3, the escapement-shaft 4 of which has a hammer 5 secured to it and also an arm 6. The outer end of this arm is connected by a chain 7 with a lever or arm 8. This arm 8 has a curved frame 8^a at its lower end, which is pivoted on a rod 9 in bearings 10 on the plate 1, as shown.

On a rod 11 at the edge of the plate 1 is pivotally mounted a trigger 12, having a hooked upper end which hooks over the free end of the frame 8^a when the alarm is "set." The lower end of this trigger is formed with a longitudinal slot 13, through which passes a transverse pin 14 in the upper end of a longitudinally-slotted frame or rod 15, which may be called the "trigger-frame," the lower end of which is rounded or curved on its inner side. A weak spiral spring 16 holds the frame 15 normally down.

To set the alarm, the spring of the clock mechanism 3 is wound up by applying a key to the winding-shaft 17, and the arm 8 is raised and the hooked upper end of the trigger 12 caught over the free end of the arm-frame 8^a, as shown in Figs. 1 and 3. The upper edge of the door, when closed by the owner on going out, comes in contact with the beveled curved side of the lower end of the trigger-frame 15, and raises the said end by compressing the spring 16 until the door slides under the trigger and closes, when the frame 15 is pushed down by the spring 16, without disturbing or unhooking the trigger. When the door is opened from the outside, its top strikes against the straight side of the lower end of the trigger-frame 15, turning the pivoted trigger and freeing its hooked upper end from the frame 8^a. A coiled spring 18 then throws down the arm 8, when a serrated plate 19, secured on its curved free end, scrapes against the head of a match 20, which is held in a tube 21, lighting the match, when its flame will light the wick of a lamp 22, which is secured in the plate 1 at the point shown. As the arm 8 falls, it slackens the chain 7, when the escapement of the mechanism 3 will be rapidly vibrated by the uncoiling spring of the clock mechanism, and as the escapement-shaft is thus vibrated the hammer 5 will continuously sound a bell 23 on the plate 1. It will thus be seen that on a burglar opening the door a continuous alarm will be sounded and the lamp 22 will be automatically lighted.

In the rear end of the match-holding tube 21 is a loose disk 23^a, and a small spiral spring 24 between this disk and the end of the tube. This spring will give to the pressure of the falling arm 8 sufficient to prevent the breaking of matches of different lengths when the end of the falling arm strikes them, enabling the match to be pushed slightly in the tube if it is too long.

The alarm can be regulated to ring for a shorter or longer time by the following device: On the winding-shaft 17 is secured a disk 25, having a tooth or projection 26 on one side, and a slight notch 26^a on each side of said tooth, and on the top plate of the clock mechanism 3 is pivoted a disk 27, which is formed with the two notches 28 28^a and the recesses 29, 29^a, and 29^b. When the winding-shaft is turned in the direction indicated by the arrow to turn its disk 25 for one revolution, the projection 26 will rest in the first notch 28 of the disk 27, and when the escapement is freed by the falling of arm 8 the disk 25 will turn for one revolution, when its projection 26 will come in contact with the solid edge of the disk 27 and the alarm be stopped. By winding the spring-shaft 17 for two revolutions the projection 26 will turn disk 27 for one revolution, when it enters the first notch 28, and at the end of the second revo-

lution will rest in the second notch 28ª. On the alarm being sprung the disk 25 will turn for two revolutions until its projection 26 comes in contact with the solid edge of the disk 27, as before, when the alarm is stopped. The alarm will thus ring twice as long as when set at the first notch 28. By turning the spring-shaft 17 for three revolutions the projection 26 will turn the disk 27 until it rests against the solid edge of the disk 25, as shown in Fig. 2. The alarm will thus ring three times as long when the alarm is sprung as when the projection is set in the first notch 28.

When the alarm is not set, a coil-spring 30 holds the trigger 12 swung up out of the way of the door, as seen in dotted lines in Fig. 1.

In order to prevent the alarm from being sprung when not desired after it is wound up, I employ a sliding rod 31, which can be slid over the free end of frame 8ª, and will hold the arm 8 up and prevent its falling.

32 indicates curved guard-rods which prevent the chain 7 from becoming entangled with the wheels of the clock mechanism. A reflector 33 is secured to the platform 1, by means of wires 34, at such an angle, as shown, so that when the lamp 22 is automatically lighted on a burglar forcing open the door, as before described, the light will be reflected down on the door, and not back in the house, being thrown on the burglar opening the door.

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

1. The combination of the bell, the clock mechanism having on its escapement-shaft the hammer and the arm 6, the pivoted arm, the chain 7, connecting the pivoted arm and the arm 6, and the pivoted trigger having the hooked upper end adapted to engage the pivoted arm and arranged to be operated by the opening door or window, substantially as set forth.

2. The combination of the bell, the clock mechanism having on its escapement-shaft the hammer and the arm 6, the arm having the serrated plate on its free rounded end and having at its lower end the curved frame 8ª, pivoted on the rod 9, the spring 18, arranged to throw down the arm 8, the pivoted trigger having the hooked upper end engaging the curved frame 8ª and arranged to be operated by the opening door or window, the lamp, the match-holder, and the match placed in the same, substantially as set forth.

3. The combination of the bell, the clock mechanism having on its escapement-shaft the hammer and the arm 6, the arm having the serrated plate on its free rounded end and having at its lower end the curved frame 8ª, pivoted on the rod 9, the spring 18, arranged to throw down the arm 8, the pivoted trigger having the hooked upper end engaging the curved frame 8ª and arranged to be operated by the opening door or window, the lamp, the match-holder, the match placed in the same, and the reflector, substantially as set forth.

4. In a burglar-alarm, the combination, with the bell, the clock mechanism having on its escapement-shaft the hammer and the arm 6, and the arm 8, having the pivoted frame 8ª at its lower end and connected by a chain 7 to the arm 6, of the pivoted trigger 12, having the hooked upper end engaging the pivoted frame 8ª and formed with the longitudinal slot 13, the slotted rod 15, having the rounded lower end, and the guide-rod 14 at its upper end, and the spring 16, substantially as set forth.

5. In a burglar-alarm, the combination, with the clock mechanism having on its escapement-shaft the arm 6, the pivoted arm 8, connected by a chain 7 to the arm 6, and having the serrated plate on its curved free end, the trigger engaging the arm, and the lamp 22, of the horizontal tubular match-holder 21, having the spiral spring 24 and loose disk 23ª in its closed end, substantially as set forth.

6. In a burglar-alarm, the combination, with the bell, the clock mechanism having on its escapement-shaft the hammer and the arm 6, and the arm 8, connected by a chain 7 to the arm 6, and having the pivoted frame 8ª at its lower end, of the trigger pivoted on the rod 11 and having the hooked upper end engaging the frame 8ª, and the spring 30, coiled on the rod 11 and engaging the pivoted trigger, substantially as set forth.

7. In a burglar-alarm, the combination, with the bell, the clock mechanism having on its escapement-shaft the hammer and the arm 6, and the arm 8, connected by a chain 7 to the arm 6, and having the pivoted frame 8ª at its lower end, of the pivoted trigger engaging the frame 8ª, and the sliding rod 31, adapted to engage the frame 8ª, substantially as set forth.

CALEB C. REID.

Witnesses:
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A. J. CALDWELL.