

E. MAYNARD.
BURGLARY SAFEGUARDING APPARATUS.
APPLICATION FILED APR. 18, 1910.

991,219.

Patented May 2, 1911.

2 SHEETS—SHEET 1.

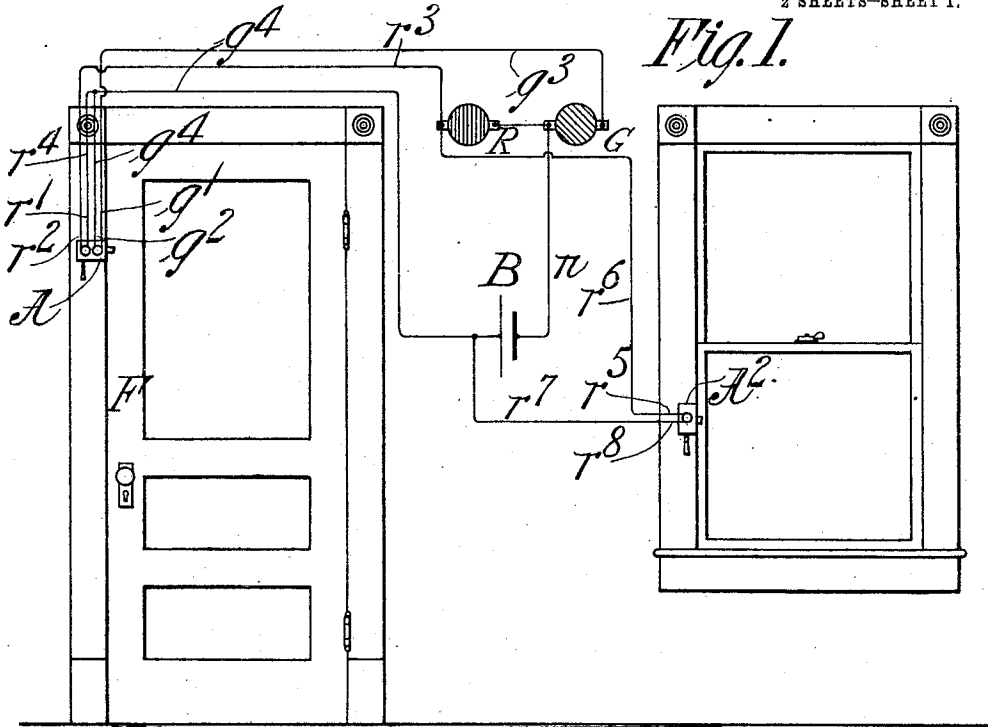


Fig. 2.

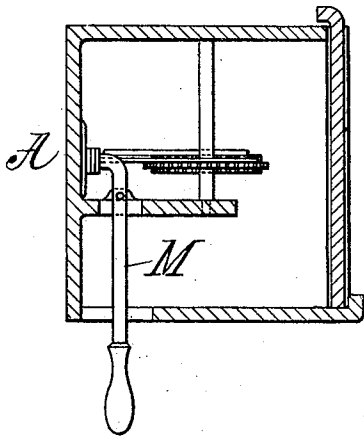
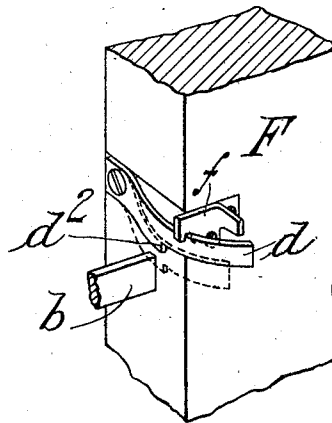


Fig. 3.



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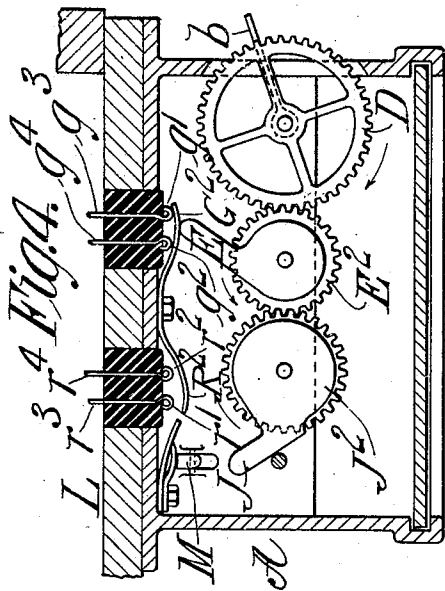


Fig. 4.

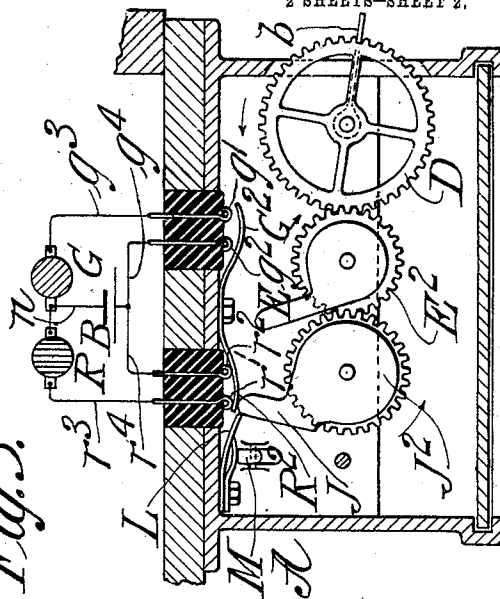


Fig. 5.

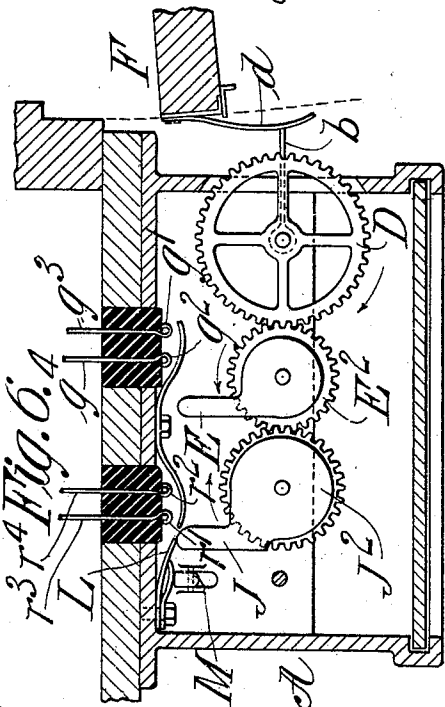


Fig. 6.

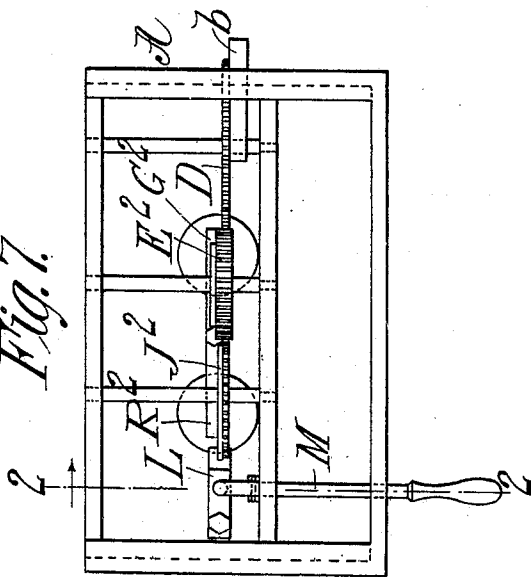


Fig. 7.

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BURGLARY SAFEGUARDING APPARATUS.

991,219.

Specification of Letters Patent.

Patented May 2, 1911.

Application filed April 18, 1910. Serial No. 556,219.

To all whom it may concern:

Be it known that I, ED MAYNARD, a British subject, and resident of Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Burglary Safeguarding Apparatuses, of which the following is a full, clear, and exact description.

This invention relates to a signaling or alarm apparatus which in a preferred exemplification thereof comprises two electric lamps of different colors, or characters, visible at the front of a store, bank or other premises where the apparatus is to be used and which is to be safeguarded against intrusion of burglars, having circuits therefor so that when either is closed the lamp corresponding thereto will be lit, and having devices for controlling the lamp circuits which are automatically operated by the opening of a door leading into the store, the operative effect being that at night when the door of the store is closed and locked the conditions will be such as to cause the burning of, for instance, a green lamp visible from the outside of the store; and moreover, in case the door is unwarrantably opened, the opening movement of the door will effect the putting out of the green light,—indicating proper or safety conditions,—and the lighting of the red lamp, indicating, to a policeman or watchman that the door has been opened whereby need of investigation is caused.

As an extension of the idea of means referred to as above, the apparatus may comprise further provisions whereby the lamp circuits may be controlled by the surreptitious opening of a back door or window as well as the opening of the front door.

The invention is described in conjunction with the accompanying drawings and is set forth in the claims.

In the drawings:—Figure 1 is an elevation showing the location of the improved devices in relation to the front door of a store with a diagrammatic representation of the signal lights and the circuit connections therefor. Fig. 2 is a vertical cross section through the incased portion of the apparatus as taken on line 2—2, Fig. 7. Fig. 3 is a perspective view of a portion of a door understood as having swinging movements adjacent the devices including the circuit closers and showing an appliance on

the door for securing shifting movements of the circuit closers. Fig. 4 is a horizontal sectional view through the casing and a plan view of the circuit closers and the operating or shifting devices therefor,—the parts being shown in what is herein termed the “normal” or initially set position. Fig. 5 is a view similar to Fig. 4 but showing the parts as in shifted positions for the establishment of the circuit for the other lamp than the one which according to Fig. 4 would be in circuit. This figure also includes a wiring diagram. Fig. 6 is a view similar to Figs. 4 and 5 but showing still different relations of the shiftable parts. Fig. 7 is an elevation of the shiftable parts as seen within the casing therefor,—the front of the latter being understood as removed.

In the drawings, A represents a box or casing to be located on, or within the case-ment or frame for the door of a building.

R and G represent, diagrammatically, two electric lamps, which may, as a matter of selection include respectively red and green globes. These lamps are connected in circuits,—comprising a battery or generator B,—the slightly separated terminals of which circuits have their locations, and are exposed at, the back of the box or casing A; the wiring or conductors which compose the circuits may be variously arranged according to the election of an electrician; but in the example of the wiring here given, the connections for the green lamp circuit are in Fig. 5 traceable as follows: From its terminal g' the wire g^3 runs to and through the green lamp G, thence by wire n to the battery B and by wire g^4 back to the terminal g^2 ; and from the terminal r' the wire r^3 runs to and through the red lamp R, thence by wire n to the battery B, and by wire r^4 back to the terminal r^2 .

G^2 represents the circuit closer which coacts with the terminal of the green lamp circuit and R^2 represents a circuit closer which coacts with the terminals of the red lamp circuit,—both of these circuit closers have the form of flat spring plates and both are by their reactions operative to spring away from connections with the adjacent pairs of terminals, so that, except when the circuit closing springs are forced against, and form metallic connections between, the pairs of terminals the circuits will be open and the lamps dead.

D represents an oscillatory part, here a spur gear wheel, having unitary therewith a member b which extends across the path of movement of the closure (the door) for the building; and E represents an arm which is formed unitary with a gear wheel E^2 which is in mesh with the gear wheel D. The arm E is arranged for coaction with the circuit closer G^2 , and for coaction with the other circuit closer R^2 is an arm J made as a unitary portion of a spur gear wheel J^2 which is in mesh with the spur gear wheel E^2 and in train with the first named spur gear wheel D. The arm carrying gears are so set as represented in Figs. 4 and 5, that when the arm E has its position for impingement against and for closing the circuit closer G, the other arm J will be free and disengaged from the circuit closer R and vice versa.

On the door F a spring plate d is provided, which, as represented in Fig. 3, may be sprung close to the edge of the door or the base of a recess in which it may be set and so held by a movable detent or latch f ; but at night when the premises are vacated and the front door locked the spring plate may be released from its confinement by the detent so that the notch or shoulder d^2 in the edge thereof will engage, upon the opening swinging movement of the door, against the arm b (it being understood that the circuit closing devices will at this time be set as represented in Fig. 4 whereby the arm E will be positioned to crowd the circuit closer G^2 to contact against both of the terminals g' , g^2 , of the circuit for the green lamp which will be lighted and by so showing indicate safe and proper conditions within the premises so far as any improper opening of the door affects the same).

Now if a thief or burglar succeeds in opening the door the latter will in its swinging movement by engagement against the arm b oscillate the gear wheel D and through it oscillate the gear wheel E^2 and the arm E carried thereby, move the latter off from engagement with the circuit closer G whereupon the green light will be extinguished and concurrently therewith by reason of the oscillation of the gear wheel J^2 and the arm J carried thereby the circuit closer R will be forced to contact against, and to electrically connect both of the terminals r' and r^2 for the establishment of the other circuit and the showing of the red light to indicate danger, or conditions to be investigated by the patrolman or watchman.

The arm J in moving against the circuit closer R clicks past a flat spring plate detent L, which latter, as represented in Fig. 5, assumes a position to prevent by any ordinarily known manipulation of the parts a restoration of the latter to their position shown in Fig. 4, so that in all human probability the intruder would not be able to

effect a relighting of the green lamp and an extinguishment of the red one. But in conjunction with this detent L, a detent operating lever M is provided which when by its lower end is swung forwardly (as would be performed by a person rightfully having a knowledge of the intricacies of the devices) will secure by its upper extremity a rearward forcing of the detent spring plate L to place the latter out of the path of movement of the arm J; and the spring reaction in a forward direction of the circuit closer R will throw the arm J with considerable impetus rotatively so as not only to force it off from the circuit closer R^2 , but through the gearing to throw the other arm E back onto the circuit closer G^2 . This releasing of the detent and restoration of the lighting of the green lamp and simultaneous putting out of the red lamp is to be accomplished whenever the conditions are found to be appropriate therefor. And as an extension or enlargement of the capabilities of the safety apparatus, provision may be made as indicated in the diagram, Fig. 1, whereby without effect on the devices in the box or casing A, as would be insured by the opening of the store door, the red lamp would be lighted while the green lamp remains lighted by any movement of another closure for the store or premises such as a window, and substantially a duplication of the circuit closing devices already described as appurtenant to the red lamp may be provided as represented at A^2 in Fig. 1, so that a closer for the terminals of additional circuit wires will be operated upon the opening of the window; and it will be understood that from one terminal r^5 a wire r^6 runs to the red lamp R and thence by the aforementioned wire n^2 to the battery b , the wire r^7 thence running from the battery back to the other terminal r^8 . And so the lifting of the window (or the opening movement of a rear door) will cause a closing of the red lamp circuit and the showing of the red light which by being seen in conjunction with the green light will indicate that an entrance has been made otherwise than through the front door.

I claim:—

1. In an apparatus of the character described, in combination a closure for a building, a pair of electric lamps of dissimilar character, circuit conductors individual to the respective lamps having their pairs of terminals in adjacent relations and separate circuit closers movable relatively to the pairs of terminals, an oscillatory part having a member extending across the path of movement of the closure for the building, an arm having a gear connection with said oscillatory member and for normally engaging and closing one of said circuit closers, another arm arranged for coaction with the other circuit closer, and having a gear

connection with the gear on said first named arm, whereby when the latter is disengaged from the first circuit closer the second named arm will acquire an engagement with
5 the second circuit closer.

2. In an apparatus of the character described, in combination with a closure for a building, a pair of electric lamps of dissimilar character, circuit conductors individual
10 to the respective lamps having their pairs of terminals in adjacent relations and separate circuit closers movable relatively to the pairs of terminals, an oscillatory part having a member extending across the path of
15 movement of the closure for the building, an arm having a gear connection with said oscillatory member and for normally engaging and closing one of said circuit closers, another arm arranged for coaction with the
20 other circuit closer, and having a gear connection with the gear on said first named arm, whereby when the latter is disengaged from the first circuit closer the second named arm will acquire an engagement with
25 the second circuit closer, a detent for automatically engaging the gear connected devices, after a circuit changing operation thereof, and manually operative means for

displacing said detent from its engaging position.

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3. In an apparatus of the character described, in combination with a closure for a building, a pair of electric lamps of dissimilar character, circuit conductors individual
35 to the respective lamps, having their pairs of terminals in adjacent relations, and separate circuit closers respectively for, and movable relatively to, said pairs of terminals, an oscillatory part having a member extending
40 across the path of movement of the closure for the building, a pair of movable members adjacent said circuit closers, arranged to alternately engage and release the latter, connections between said oscillatory part
45 and said movable circuit closing members whereby on the swinging movement of said part said members will be moved in unison and the positions of the circuit closers will be reversed.

Signed by me at Springfield, Mass., in
presence of two subscribing witnesses.

ED MAYNARD.

Witnesses:

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WM. S. BELLOWES.