

No. 627,527.

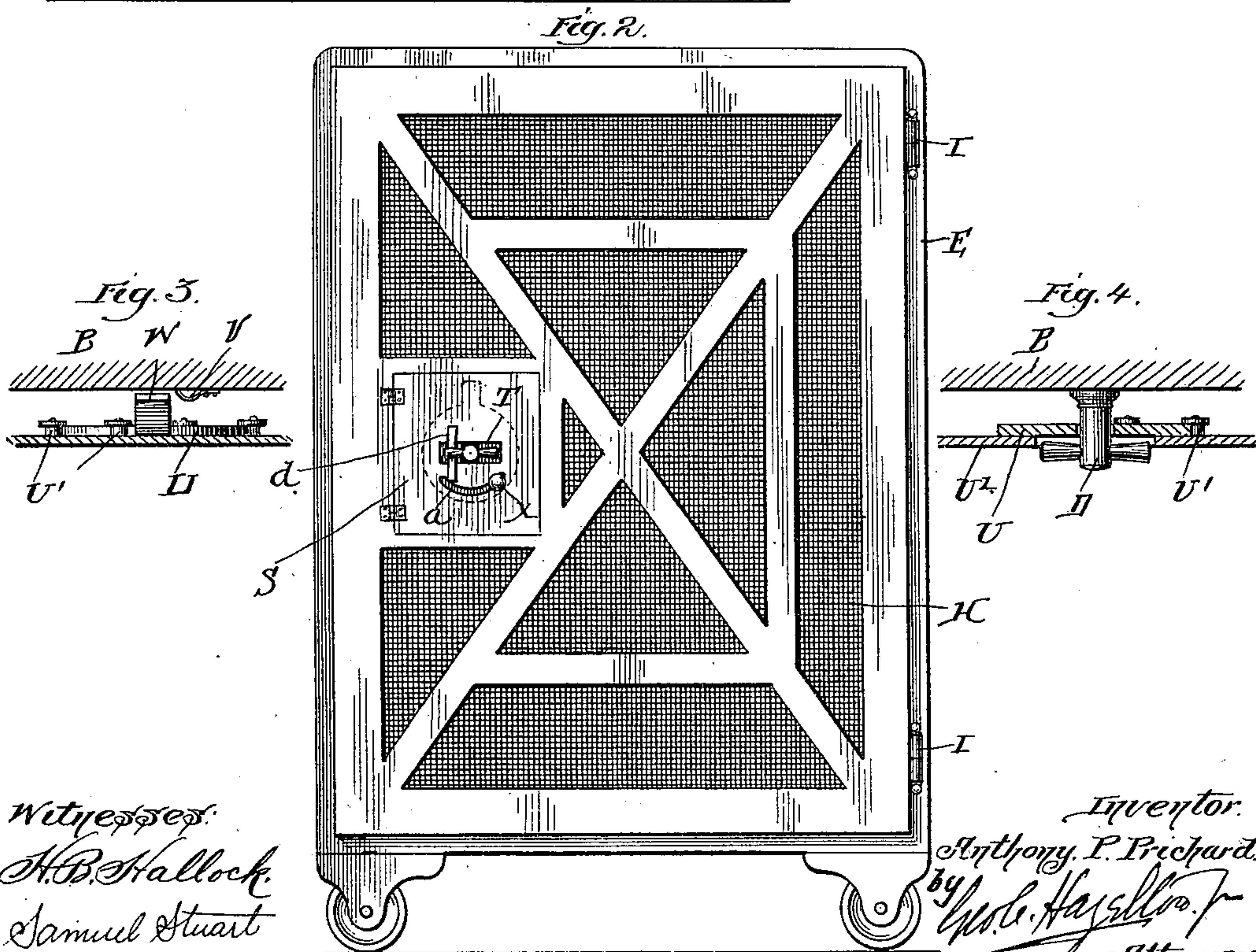
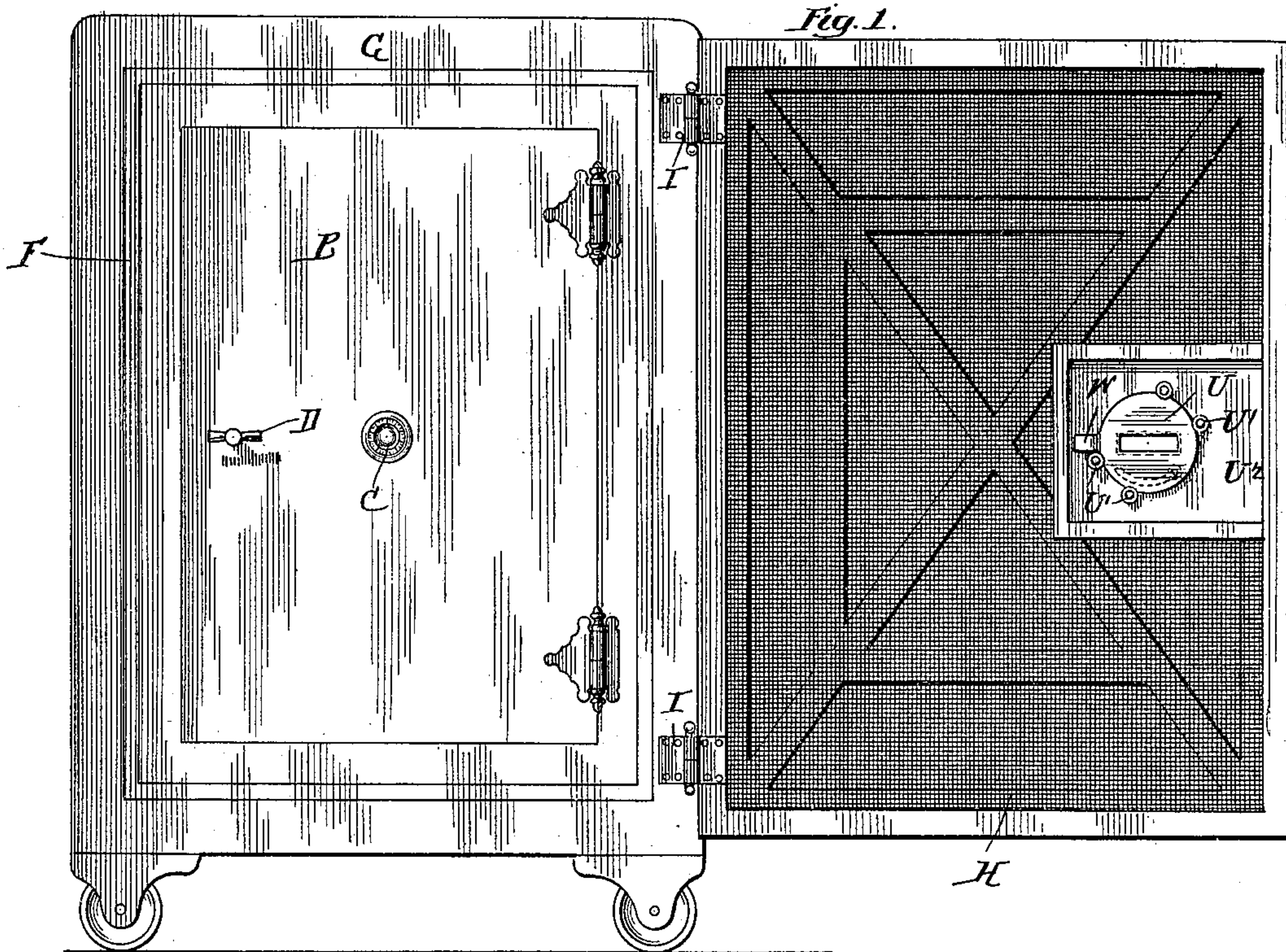
Patented June 27, 1899.

A. P. PRICHARD.
BURGLAR ALARM FOR SAFES.

(Application filed May 2, 1898.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

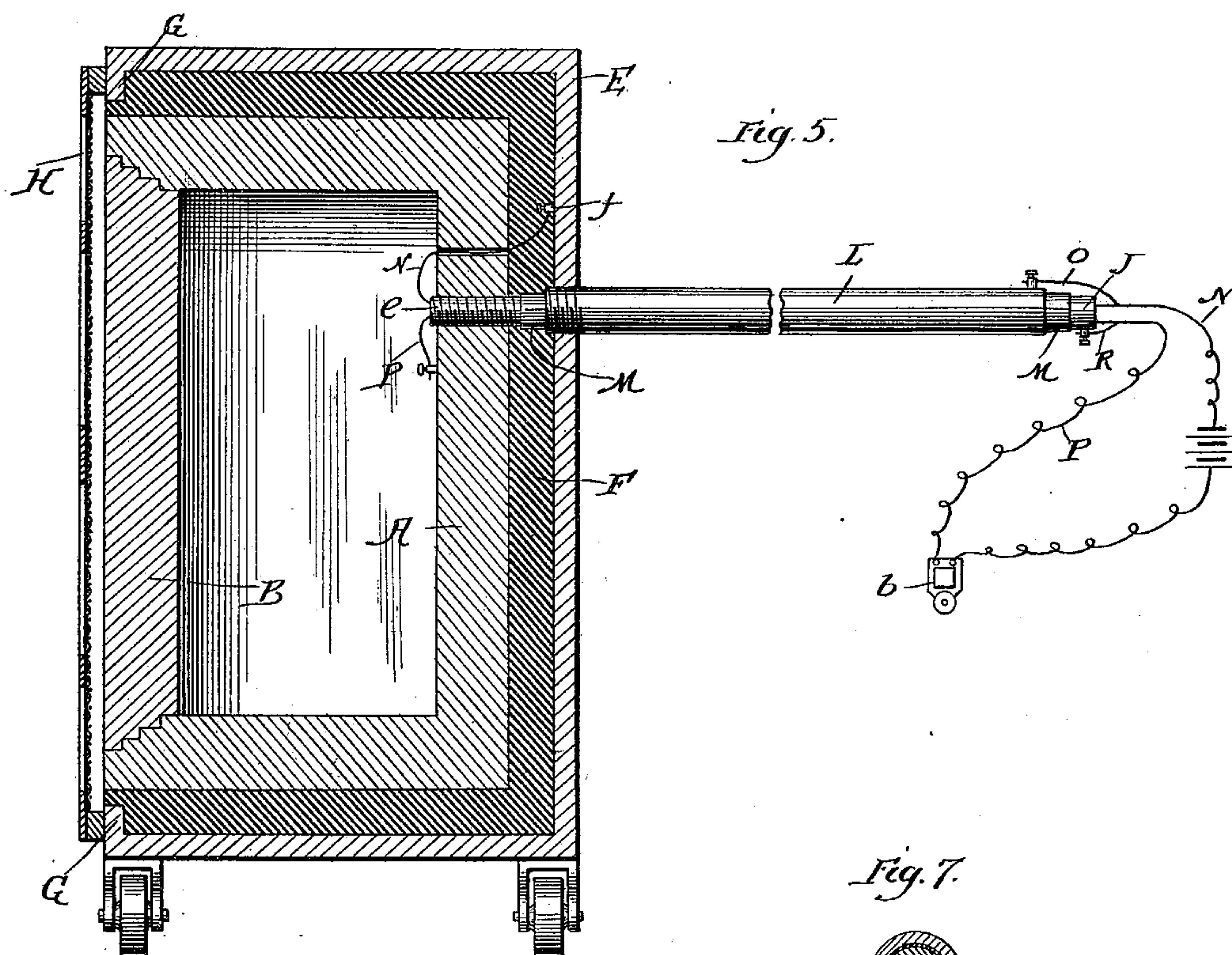


Fig. 7.

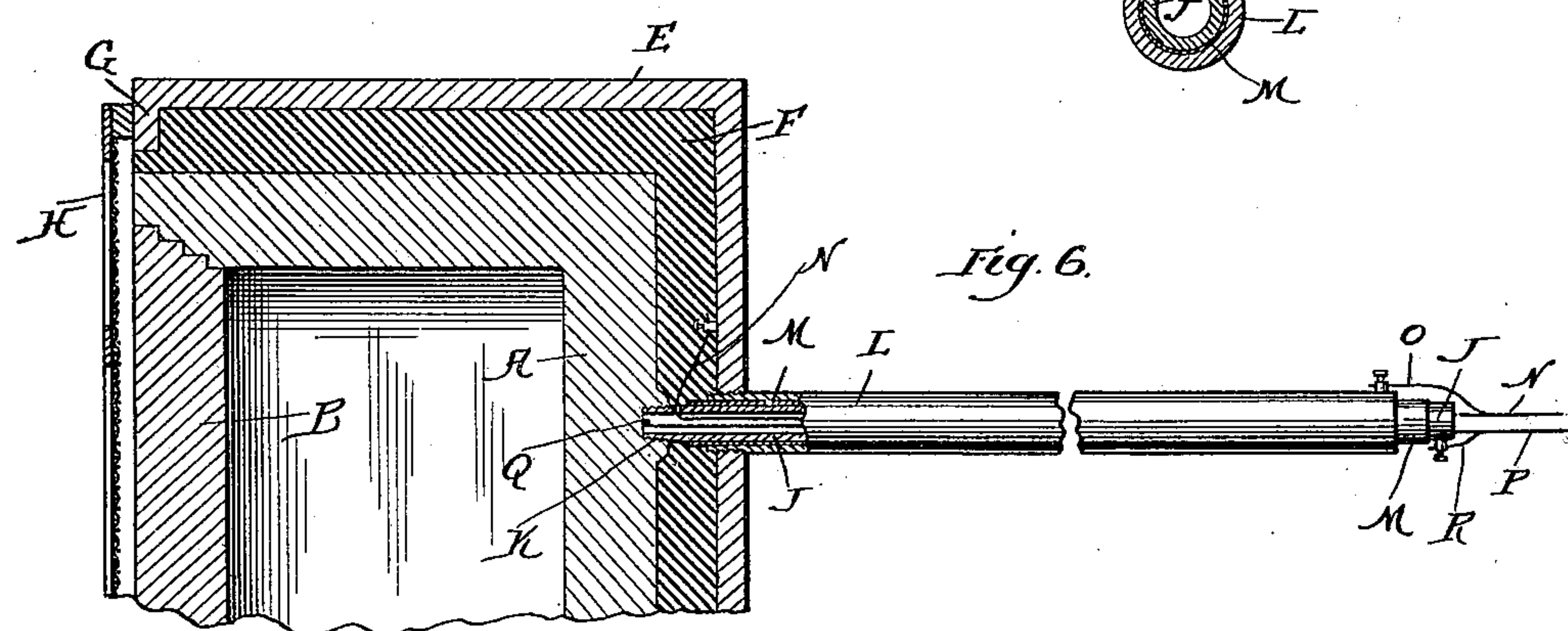
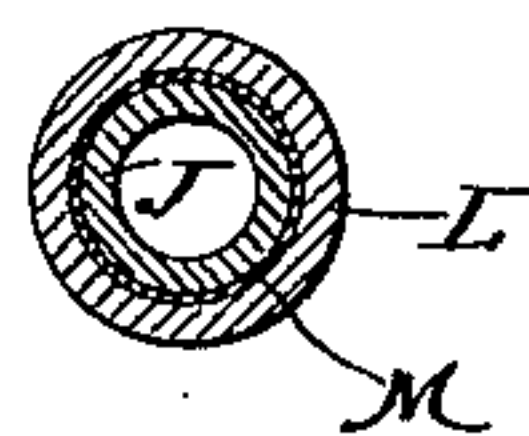
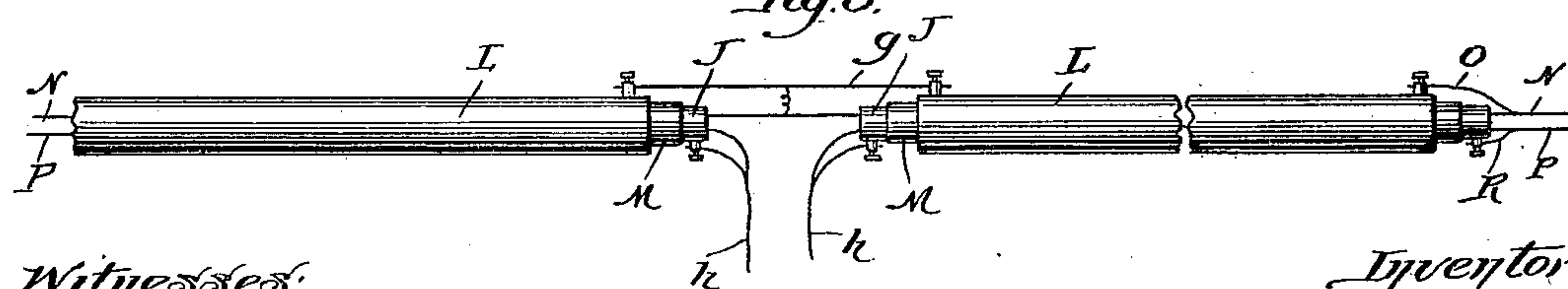


Fig. 8.



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UNITED STATES PATENT OFFICE.

ANTHONY P. PRICHARD, OF TACOMA, WASHINGTON.

BURGLAR-ALARM FOR SAFES.

SPECIFICATION forming part of Letters Patent No. 627,527, dated June 27, 1899.

Application filed May 2, 1898. Serial No. 679,435. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY P. PRICHARD, a citizen of the United States, residing at Tacoma, county of Pierce, and State of Washington, have invented a certain new and useful Improvement in Burglar-Alarms for Safes, of which the following is a specification.

My present invention relates to a new and useful improvement in burglar-proof safes, and has for its object to provide electrical connection with a safe or vault by pipes in such a manner that the connection cannot be cut, sawed, or burned without instantly causing an alarm.

A further object of my invention is to so construct protecting elements of the safe or vault as to especially adapt them for use in connection with a metallic gate-screen of the construction shown in my application for Letters Patent of the United States bearing Serial No. 651,047, filed September 9, 1897, and allowed January 3, 1898.

My present improvement when used in connection with the above-named screen will effectually prevent tampering with a safe in any manner whatsoever either by drilling or burning at any point, whether top, bottom, or sides, without causing an alarm, the metallic screen protecting the door or doors and front of the safe in like manner.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a front elevation of a safe embodying my improvement, showing the metallic screen opened; Fig. 2, a similar view, the screen being closed; Fig. 3, a detail section through the screen, the safe-door showing the manner of locking the screen-door; Fig. 4, a similar view showing the safe door-knob and the screen-locking plate embracing the same; Fig. 5, a vertical section of the safe,

showing one manner of attaching the circuit wires and tubes thereto; Fig. 6, a similar view of a portion of the safe, showing the preferred manner of attaching said wires and tubes; Fig. 7, a section of these tubes; and Fig. 8 illustrates an arrangement of wires at a break in the pipe for a cut-off loop or extra alarm-loop, or both.

In carrying out my invention as here embodied, A represents the safe proper, which may be of the ordinary design or may be especially built for this purpose, and B represents the door to the safe, having the usual combination-lock C and handle D for actuating the bolts, and around this safe is placed a shell or casing E, which is finished to give the proper appearance, and this casing is separated from the safe by a suitable non-conducting material F, the front portion of the casing being flanged, as indicated at G, so as to come in close proximity to, but not in contact with, the safe at this point. The metallic screen H is hinged at I to the casing, so as to be in electrical connection therewith, for the purpose hereinafter set forth.

In the preferred construction (shown in Fig. 6) J represents a tube which acts as an electric conductor and is passed through the outer casing and insulating material F and is threaded or otherwise connected with the safe A, as indicated at K, this connection being made so as to insure passage of electric current from the body of the safe to and from the tube. A second or outer tube L surrounds the inner tube and is insulated therefrom by a thin layer of suitable material, (shown at M,) and this outer tube is connected with a casing by being threaded therein or otherwise attached thereto, and as a further precaution a wire N is connected with the inner wall of the casing and passes through a suitable hole in the inner tube and extends outward through said tube and is connected with the outer tube by a branch wire O at the end of the tubing. This is likewise true of the wire P, which passes through the inner tube and is connected to the inner end thereof, as indicated at Q, the outer end of the inner tube being also attached to this wire by the branch wire R. These two wires N and

P lead to a battery and alarm at any convenient point—say a station-house, sleeping-room, or both.

The metallic screen H has a door S hinged thereto, and this door has a slot T formed therein, which is adapted to fit over the handles D of the safe-door when the screen and this door are closed, and the door S has a plate U arranged upon this inner surface by means of the guide-rolls U', so as to revolve about an axis, and this plate also has a slot U² therein, which corresponds with the slot T when the plate is in one position, but may be turned at right angles thereto by the turning of said plate, so that when the metallic screen is closed and the door thereof is also closed the turning of this plate so as to carry this slot out of alinement with the handles will lock both the screen-door and the metallic screen, so that they cannot be moved independently of the safe-door. A contact-spring V is secured upon the safe-door, and the projection W, carried by the plate U, is arranged to come in contact with said spring should the plate be revolved to disengage it from the handles of the safe-door, and the revolving of this plate is facilitated by the small knob X, which projects through the slot *a* in the door S. From this description it will be obvious that should an attempt be made to tamper with the safe, as by drilling, as soon as the drill touched the body of the safe proper electric current would be caused to flow through the circuit on account of the connection being then made between the outer casing and the safe, each of which is in one portion of the circuit, and thus the alarm *b* would be sounded, and when this alarm is placed at a distance from the safe the person tampering with the safe would not be made aware of the alarm, which would give ample time and facilitate for the surprising of such persons. Should an attempt be made to cut, saw, or burn the tubes at any point throughout their length, the crossing of the tubes would invariably take place on account of the thin layer of insulating material, and the alarm would be sounded. This is likewise true should an attempt be made to cut, burn, or saw the metallic screen, since the slightest movement thereof in either direction would close the circuit between the outer casing to which the screen is hinged and the safe-door through the knob or handles of said door, thereby sounding the alarm, and, further, should an attempt be made to open the screen-door by the turning of the plate U the projection W in passing the contact-spring V would also sound the alarm. As the alarm is sounded by a slight inward or outward movement of the screen I provide a small wooden or rubber pin *d* to balance the screen one way. When this pin is in place, this screen cannot be opened without removing the same and re-

volving the knob in the groove, and either of these operations will instantly sound an alarm.

In practice I provide insulating-wires of two colors, which run through the tubes as before described, so that the proper connections can be made at the terminal of the tubes where the screen-wire connects with the outer tube and the safe-wire with the inner tube. This insures two circuits, one by wire and the other by the tubes.

In Fig. 5 I have shown one method of embodying my improvement, which consists of the safe proper and connecting the wires which pass through said tube one to this safe and the other to the outer casing, as indicated at F; but under some circumstances this is disadvantageous—as, for instance, in case of fire, the burning away of the tubes might permit the flames to gain access to the interior of the safe and thereby damage the contents thereof. Nevertheless for some purposes this construction is equally as advantageous as the first described.

In Fig. 8 an arrangement is shown which provides for a cut-off loop or extra-alarm loop, in which case the tubes are separated and the separated portions of the outer tube connected by the wire *g*, which also branches to or connects with unbroken wire of the casing and outside of the pipe-circuit, (same as at terminal of pipes,) while the wires *h* lead to a switch or alarm and also branch near the break to the separated portions of inner tube.

I am aware that slight modifications might be made in the construction here shown without departing from the spirit of my invention, and I therefore do not wish to be limited to the exact details described.

Having thus fully described my invention, what I claim as new and useful is—

1. In combination with a safe, a casing insulated therefrom, a screen-door, a rotating plate carried by the screen-door, a contact-spring on the safe-door and means whereby an electrical connection is made between the plate and contact-spring and a circuit, battery and bell controlled through the action of the plate, substantially as described.

2. In combination with a safe-door and its handle, a screen having a slotted door to receive said handle, a plate inside the screen-door, a projection on the plate and a contact-spring on the safe-door adapted to engage the projection, a battery and bell having connections controlled by the plate, substantially as described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

ANTHONY P. PRICHARD.

Witnesses:

A. G. PRICHARD,
E. F. DUTCHER.