

(No Model.)

2 Sheets—Sheet 1.

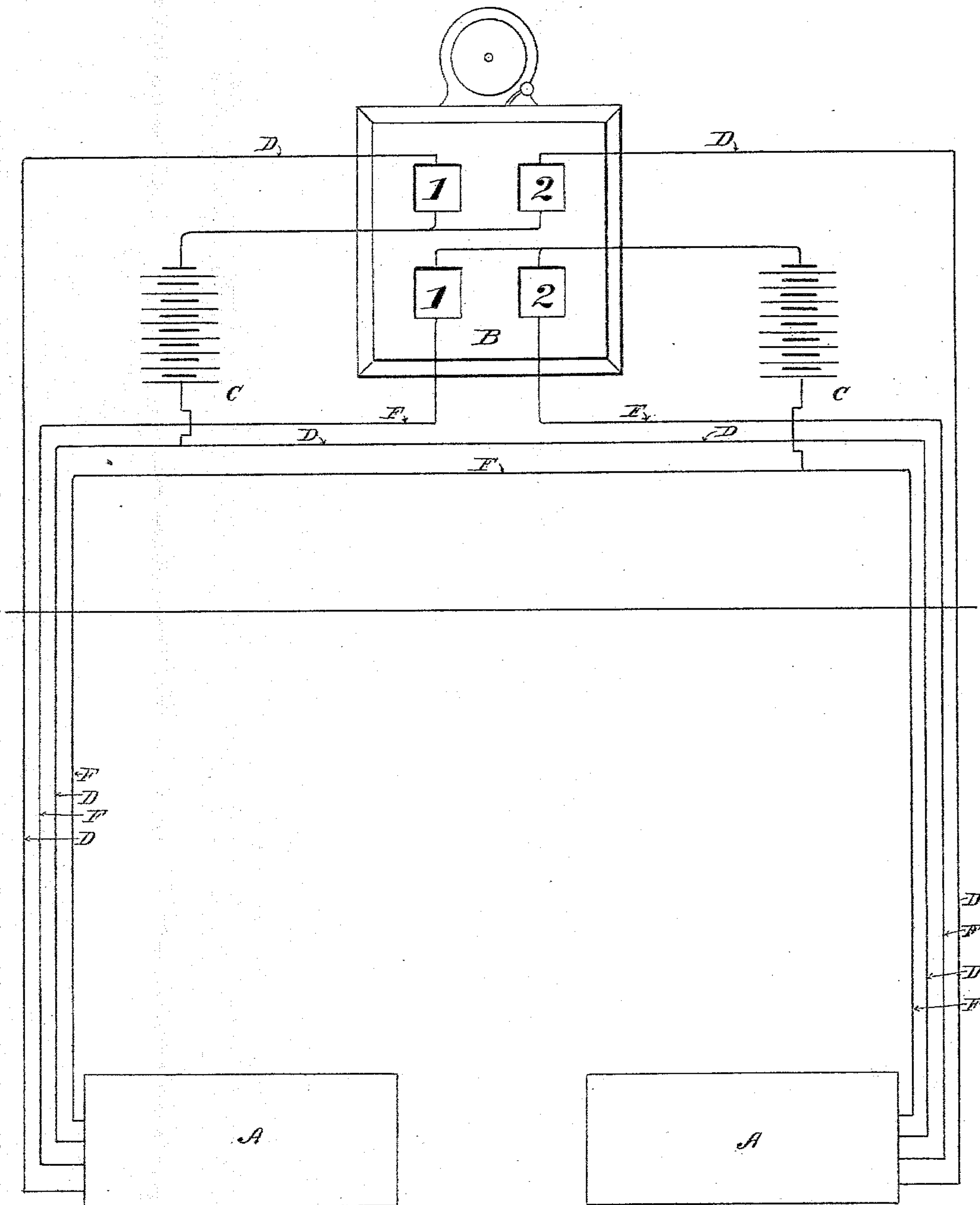
W. H. FARNHAM & C. B. ASKEW.

ALARM FOR THE PROTECTION OF GRAVES.

No. 356,756.

Patented Feb. 1, 1887.

Fig. 1.



Witnesses
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2 Sheets—Sheet 2.

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Fig. 2.

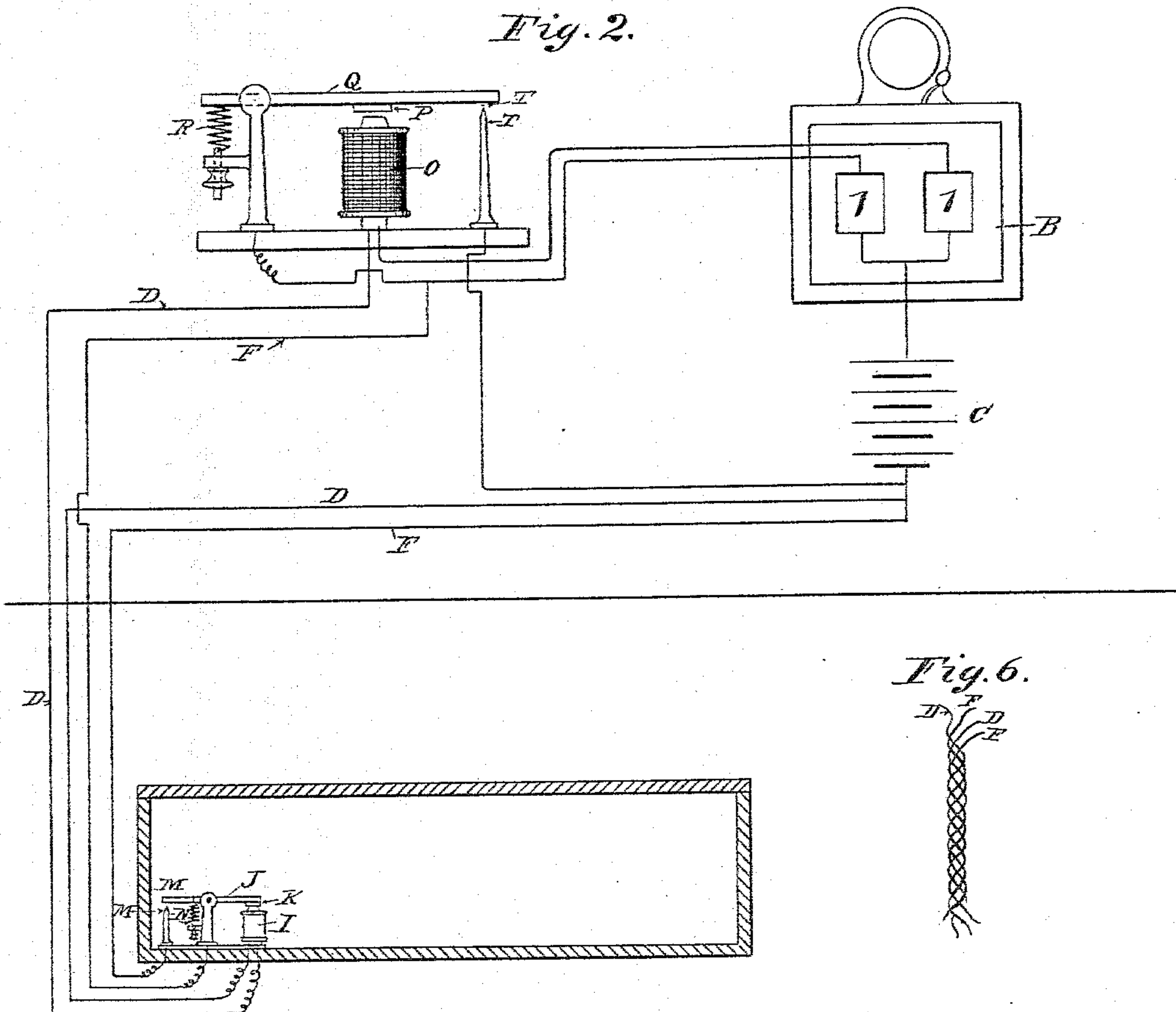


Fig. 6.

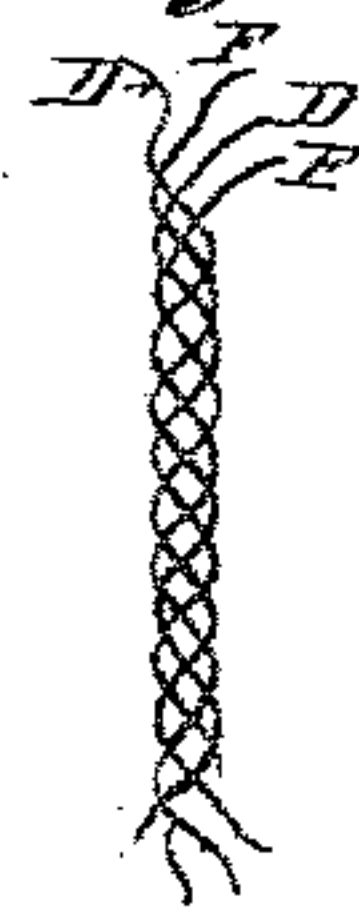


Fig. 3.

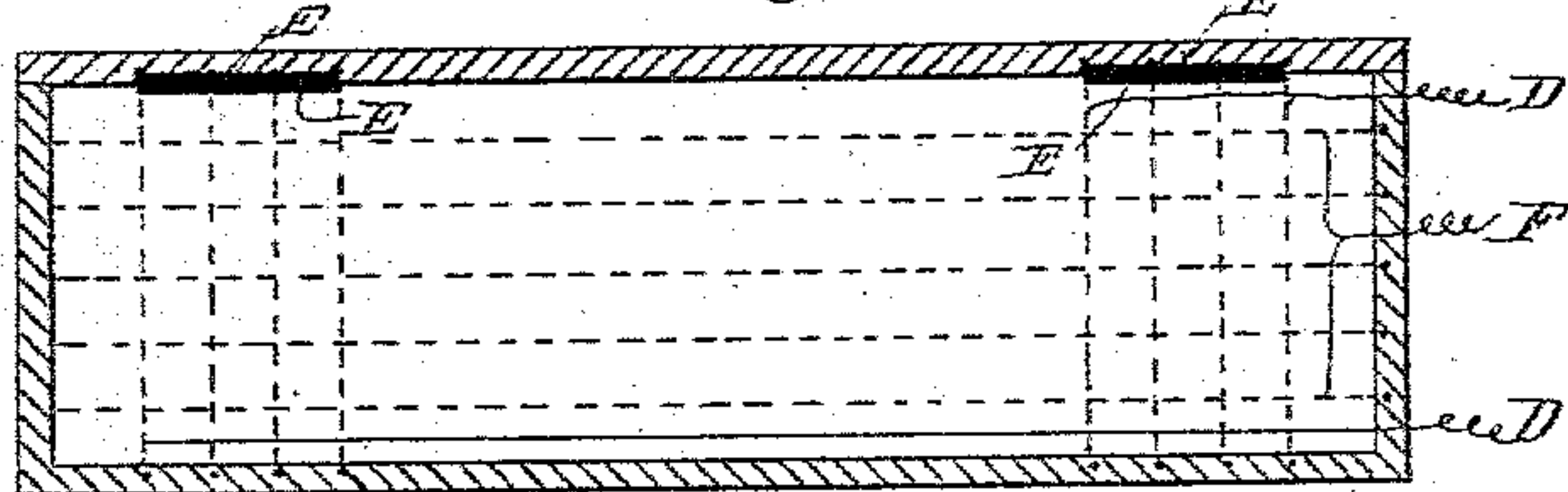


Fig. 4.

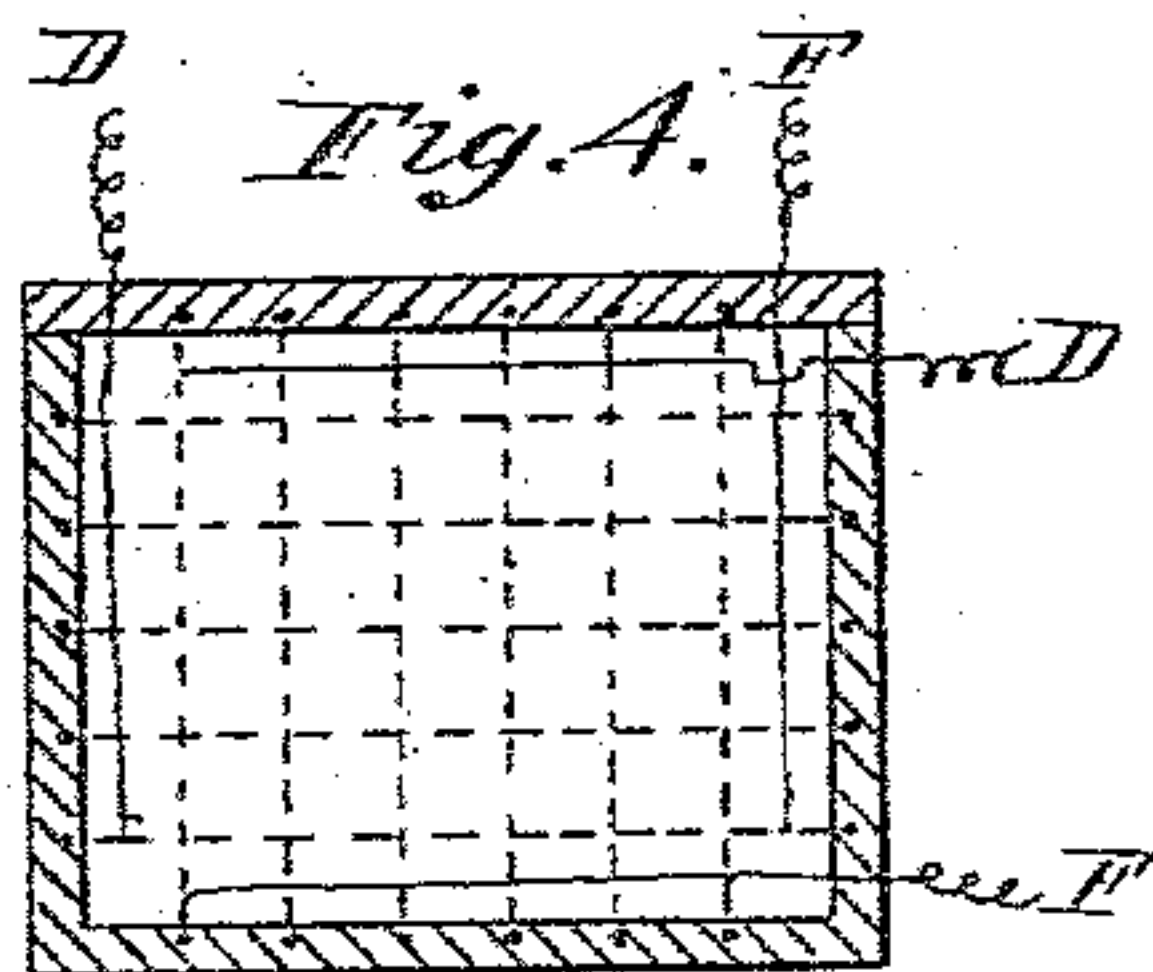
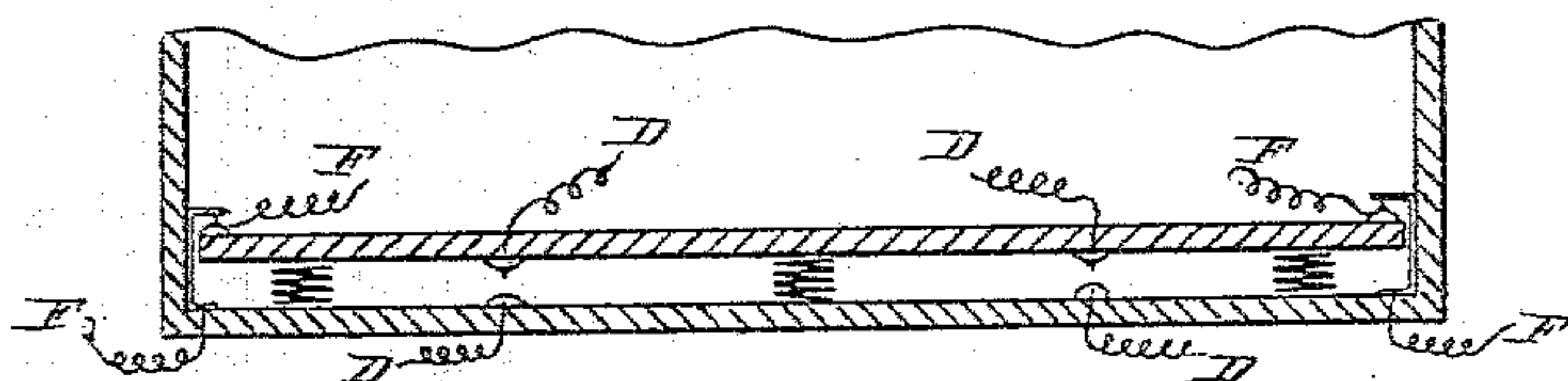


Fig. 5.



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UNITED STATES PATENT OFFICE.

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ALARM FOR THE PROTECTION OF GRAVES.

SPECIFICATION forming part of Letters Patent No. 356,756, dated February 1, 1887.

Application filed March 22, 1886. Serial No. 196,042. (No model.)

To all whom it may concern:

Be it known that we, WILLARD H. FARNHAM, of Minneapolis, county of Hennepin, and State of Minnesota, and CHARLES B. ASKEW, of St. Paul, county of Ramsey, State of Minnesota, have invented an Alarm for the Protection of Graves, of which the following is a specification.

The object of this invention is to provide an apparatus for use in connection with graves, vaults, tombs, or other receptacles containing the remains of deceased persons, to operate an indicator or alarm, or both, in case an attempt is made to remove the remains from such graves, vaults, &c.

Our invention consists of an indicator or alarm, or both, together with suitable batteries or other suitable generators of electric currents, connected with one or more electric circuits, said circuits being in connection with the casket or other receptacle in which are placed the remains of deceased persons.

In the accompanying drawings, forming part of this specification, Figure 1 is a diagram illustrating our apparatus. Fig. 2 is a diagram illustrating an additional feature. Fig. 3 is a longitudinal section of the coffin we prefer to use. Fig. 4 is a transverse section of the same. Fig. 5 is a longitudinal section of a modified construction. Fig. 6 is a detail.

In Fig. 1 of the drawings, A A represent graves, vaults, or tombs in which the caskets or coffins containing the bodies of deceased persons are placed. B is an indicating device consisting of an ordinary indicator and alarm; C, suitable batteries. Circuit-wires connect the indicator, battery, and casket in such manner that the alarm is sounded and the indicator operated when any attempt is made to remove the coffins or to remove the bodies from the coffins. D D are the wires of a normally-closed electric circuit. The wires are connected with the battery and indicating device and with the casket. We prefer to form the connection with the casket in the following manner: The circuit-wires are extended around the casket, and are provided with contact-plates E at the upper edge of the casket-walls. Similar contact-plates are provided on the top or cover of the casket, and the circuit-wires are extended along the

cover from one contact plate to another. With this arrangement a closed circuit is formed which is broken when the cover is removed or the wires are broken in removing the casket. Any number of graves, tombs, vaults, &c., may be in circuit with the indicator, which is provided with numbers or characters to indicate the grave that is being disturbed. Ordinarily a single closed circuit for each grave, vault, &c., will afford sufficient protection. As, however, the wires D D might be connected outside the casket, in which case the casket could be opened or removed without breaking the circuit, we prefer to provide both an open and closed circuit in connection with each casket, so that the indicating device will be operated when one circuit is broken or the other is closed. In Fig. 1 we have illustrated this arrangement. The indicator is provided with two series of numbers, one series being connected with the wires D D of the closed circuits, and the other series being connected with the wires F of the open circuit. As the wires D and F are ordinarily alike, it will not usually be possible for any one to determine which are the wires of the closed circuit, and which the wires of the open, and which wires should be connected before the casket is opened or removed. If the closed circuit is broken the indicator will be operated, and if the open circuit is closed it will also be operated.

As it might be possible for skillful persons to separate the wires and then test them to determine whether they form closed or open circuits, we prefer in some instances to braid or twist together all of the wires that are connected with each coffin, as shown in Fig. 6, so that it is impossible to separate them for the purpose of testing.

If desired, the apparatus may be connected with a suitable circuit-testing device, and with a large alarm-bell, that may be heard at some distance.

In Fig. 2 we have shown an additional device that may be used in connection with the closed and open circuits to render it impossible to remove or open the casket even after the wires of the closed circuit have been successfully connected and those of the open circuit have been cut. I is an electro-magnet

that is located within the coffin, and forms part of the closed circuit. A pivoted bar, J, carries an armature, K, that is held against the magnet I. Contact-points M M are connected with the open circuit. A spring, N, brings these points into contact and closes the open circuit when the armature is released by the magnet. Should the wires D D be connected outside the coffin the current will pass through this short circuit, the armature will be moved from the magnet I, and the open circuit will be closed, operating the indicating device. A magnet, O, is placed in the closed circuit, near the indicator. An armature, P, is supported by a pivoted bar, Q, having a spring, R, that normally holds the armature away from the magnet.

The resistance in the circuit is such that the magnet O does not overcome the spring R. As soon, however, as a short circuit is made by connecting the wires D D the circuit is free from the resistance of the magnet I, and the current is now strong enough to bring the armature P against the magnet O. The open circuit is connected by wires S with contact-points T, which are brought together when the armature P is held against the magnet O.

With this device, in connection with the open and closed circuits, the indicating device will be operated when the wires D are connected outside the coffin, whether the wires F F are cut or not.

Where the apparatus is used with a single coffin, the indicator may be omitted and the alarm used alone.

In Fig. 5 we have shown a coffin having a spring-supported bottom, upon which the body is supported. The wires D of the closed circuits are connected to points that are in contact when the bottom is depressed by the weight of the body thereon, and wires F F are connected to points that are in contact when the bottom is pressed up by the spring. With this construction, if a body is removed from the coffin, the closed circuit is opened and the open circuit is closed, thereby operating the alarm and indicator.

As an equivalent for the magnet O and the circuit-closing device in connection therewith, we may use a galvanometer so arranged that

when the needle swings out of its normal position it will close the open circuit.

The device may be applied to any other receptacles—such as vaults, safes, &c.—that it is desired to protect.

We claim as our invention—

1. The combination, with a receptacle and open and closed circuits connected with conductors in said receptacle, of an indicating device connected with said circuits and constructed to be operated when the closed circuit is opened or the open circuit is closed, for the purpose set forth.

2. The combination of an indicating device, a closed electric circuit, and a coffin having conductors forming part of said circuit connected with its walls and its cover, with contact-plates between said walls and cover, whereby the circuit is broken and the indicating device operated when said cover is removed, for the purpose set forth.

3. The combination, with an indicating device, of a coffin and a braided strand of circuit-wires forming open and closed electric circuits connecting said coffin with said indicator, for the purpose set forth.

4. The combination, with the indicator and the coffin, of the open and closed circuit wires D D and F F, connecting said coffin and indicator, the electro-magnet I in said coffin, connected with said wires D D, the armature K, the pivoted bar J, spring N, and contact-points M M, connected with said wires F F, substantially as described.

5. The combination, with the indicating device, of the coffin, the electro-magnet I, located therein, the open and closed circuit wires F F and D D, the magnet O, located in the closed circuit, the armature P, the pivoted bar Q, the spring R, contact-points T, and wires S S, connecting said contact-points with said wires F F, substantially as described.

In testimony whereof we have hereunto set our hands this 17th day of March, 1886.

WILLARD H. FARNHAM.
CHARLES B. ASKEW.

In presence of—

A. C. PAUL,
R. H. SANFORD.