No. 666,605. Patented Jan. 22, 1901.

M. E. GRIFFITH.

APPARATUS FOR SIGNALING FROM GRAVES.

(Application filed Mar. 8, 1900.)

(No Model.) 2 Sheets—Sheet 1.

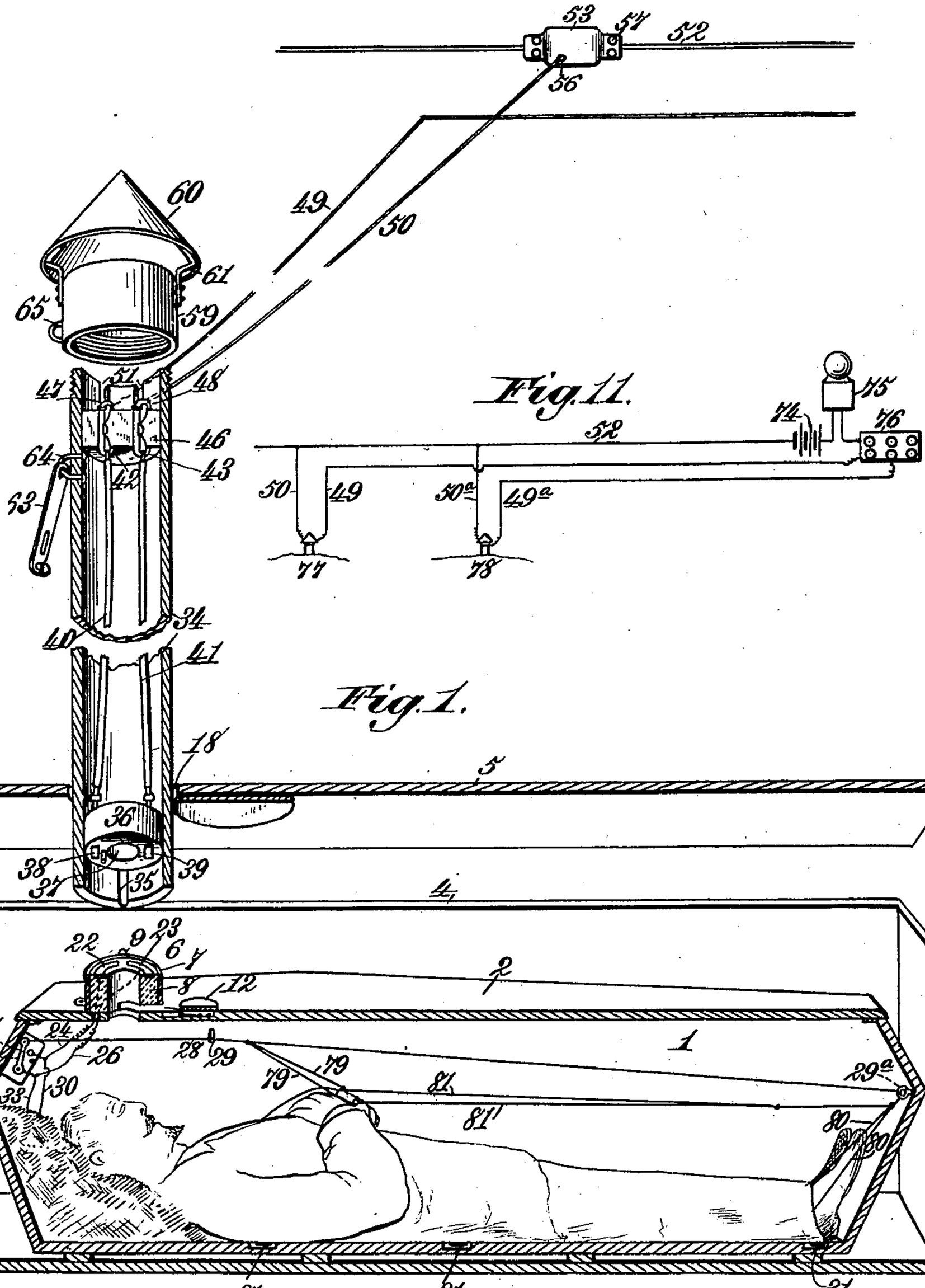

Fig. 1.

Fig. 11.

Witnesses.
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(No Model.) 2 Sheets—Sheet 2.

Fig. 2.

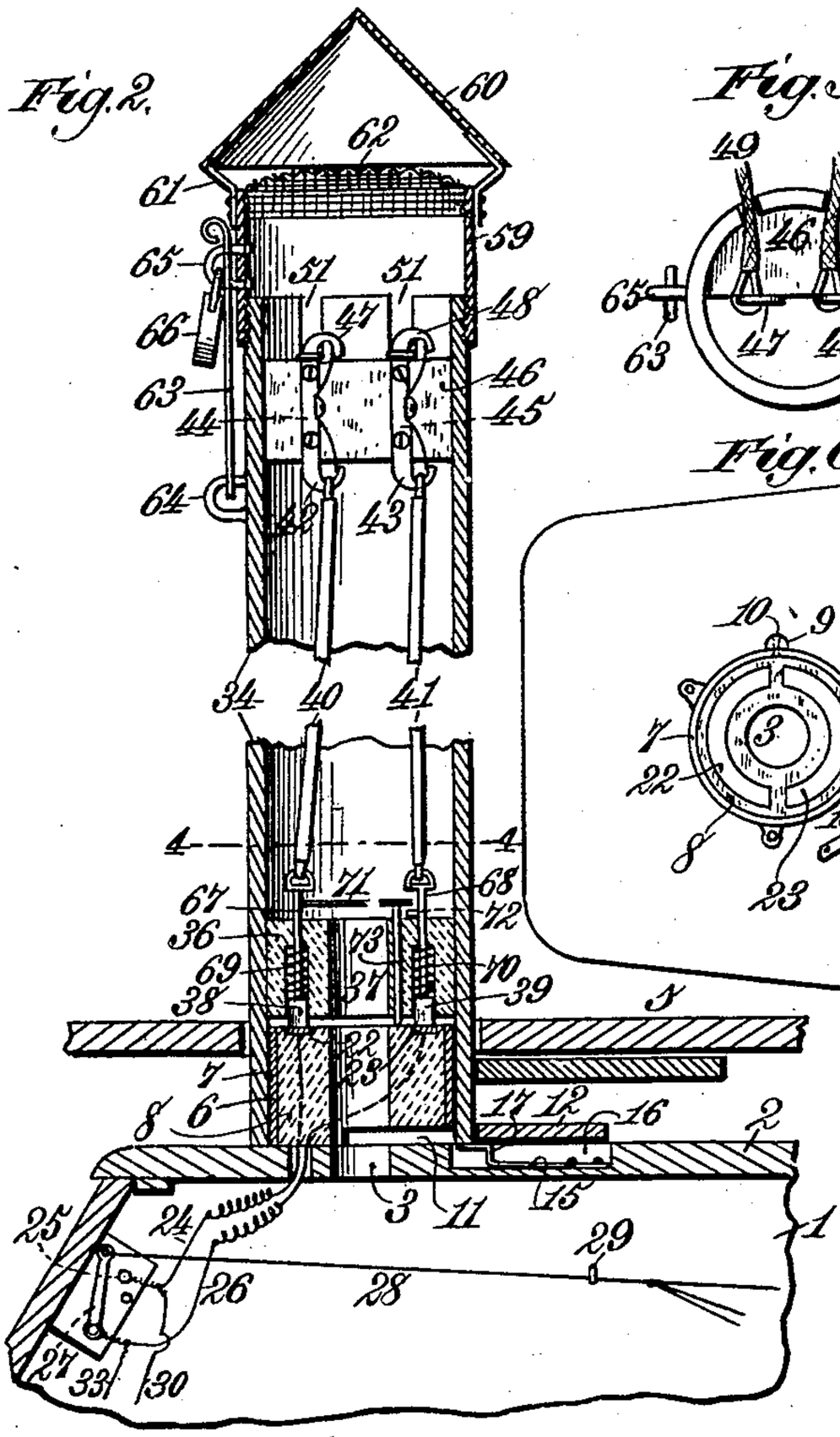

Fig. 3.

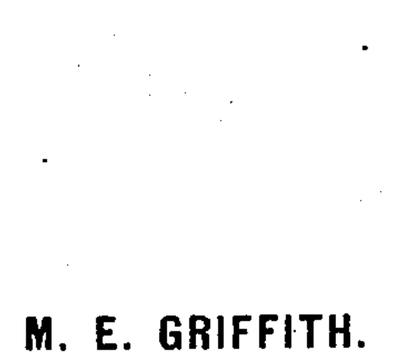

Fig. 4.

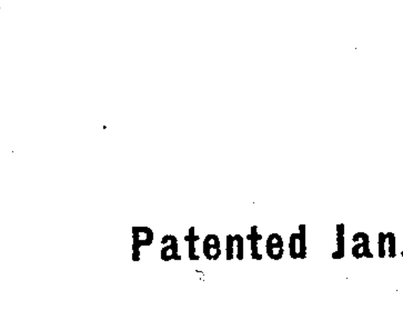

Fig. 5.

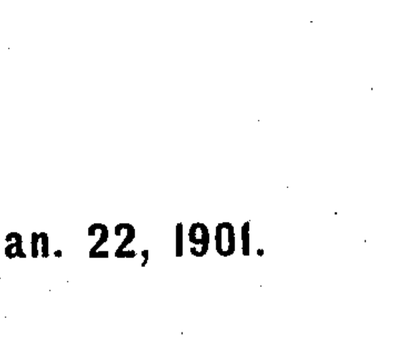

Fig. 6.

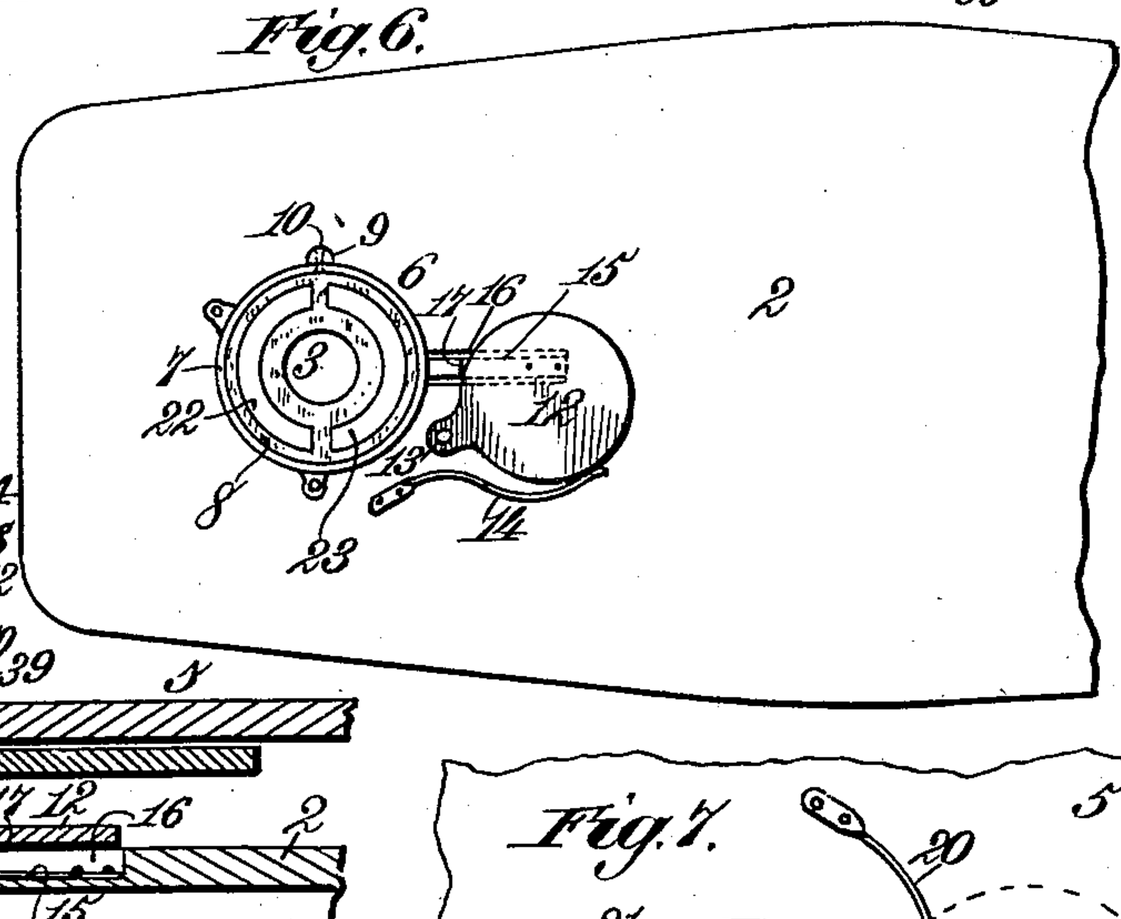

Fig. 7.

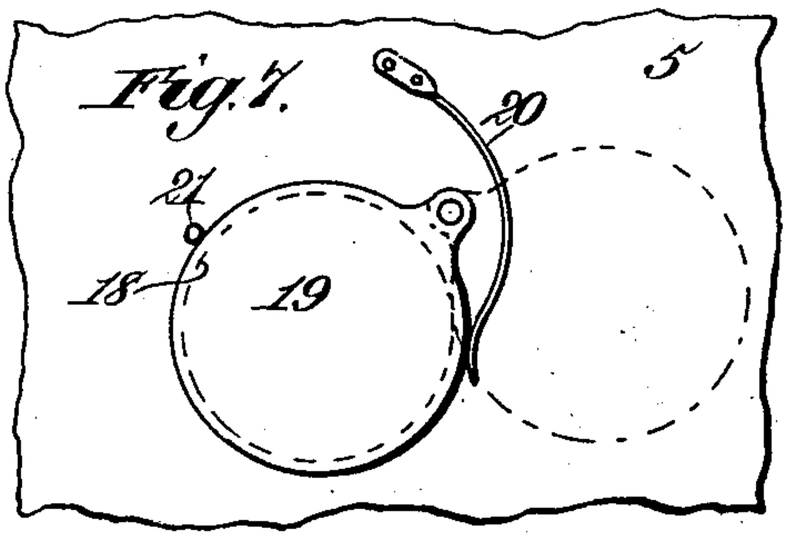

Fig. 9.

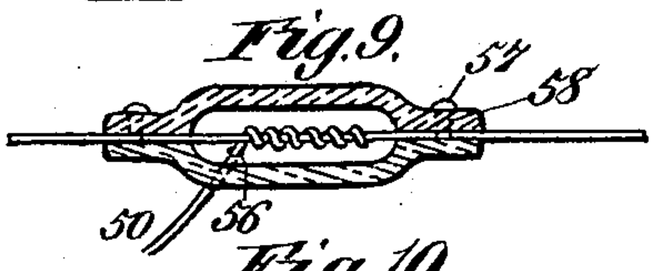

Fig. 10.

Fig. 8.

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UNITED STATES PATENT OFFICE.

MONROE E. GRIFFITH, OF SIOUX CITY, IOWA.

APPARATUS FOR SIGNALING FROM GRAVES.

SPECIFICATION forming part of Letters Patent No. 666,605, dated January 22, 1901.

Application filed March 8, 1900. Serial No. 7,884. (No model.)

To all whom it may concern:

Be it known that I, MONROE E. GRIFFITH, a citizen of the United States, residing at Sioux City, in the county of Woodbury and State of Iowa, have invented new and useful Improvements in Apparatus for Signaling from Graves, of which the following is a specification.

My invention relates to apparatus for signaling from graves, the objects of the same being to provide means for promptly indicating or announcing any disturbance of the grave, vault, or of the body previous to burial, to provide means for automatically sending in a signal to a central office in the event of a slight movement of the extremities of the body after a seeming cessation of life, and to provide means whereby visual indications will be made of any tampering with the grave, whether in quest of the cadaver or for the purpose of carrying off the body with a view to reward.

A further object of the invention is to provide means whereby a supply of fresh air may be furnished to a revivified person within a grave and means whereby openings in the coffin and the box in which it is inclosed may be automatically covered when the air-supply conduit is removed.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be set forth in the claims.

In the drawings forming part of this specification, Figure 1 is a sectional elevation illustrative of my invention, certain of the parts being slightly removed from those with which they coöperate to more clearly show the construction thereof. Fig. 2 is a similar view of the conduit and one end of the coffin, on an enlarged scale, showing the parts in their assembled operative positions. Fig. 3 is a plan view of the upper end of the conduit leading into the coffin. Fig. 4 is a cross-section on the line 4 4 of Fig. 2. Fig. 5 is a bottom plan view of the lower end of the conduit leading into the coffin. Fig. 6 is a top plan view of one end of the coffin, showing the cut-off slide for the opening therein in its open position. Fig. 7 is a similar view of the under side of the lid of the box in which the coffin is inclosed. Fig. 8 is a detail perspective view of the interior of the coffin. Fig. 9 is a longitudinal sectional view of the coupling or protecting device for the connection between the main and branch circuit wires. Fig. 10 is a cross-section of the same, and Fig. 11 is a diagrammatic view showing the circuit connections between an annunciator and an alarm at a central station and a plurality of graves.

Like reference-numerals indicate like parts in the different views.

The coffin 1 may be of any suitable form and construction, the same being provided with a lid 2, having an opening 3 at one point therein and inclosed within the usual box or casing 4, having a lid or cover 5. Secured to the upper side of the coffin-lid 2 is a box or stem 6, consisting of an outer metallic sleeve 7, secured by screws or otherwise to the lid 2, and an inner sleeve 8, of porcelain or other suitable insulating material. Secured to the outside of the sleeve 7 is a vertical projecting centering-rib 9, held in place upon the sleeve 7 by lead rivets or break-pins 10, the said rivets or pins being provided for the purpose of enabling said rib to be stripped from the sleeve 7 without breakage or mutilation of the other parts of the coffin. Adjacent to the upper surface of the lid 2 the stem 6 is provided with a horizontal recess 11, in which is adapted to move the cut-off slide 12 for controlling the passage through the opening 3. The said cut-off slide is disk shape in form and is pivoted at 13 to the lid 2. It is acted upon by a spring 14, which tends to normally urge the same into its closing position over the opening 3. It is, however, adapted to be retained in its open position, as shown in Fig. 6 of the drawings, by a detent-spring 15, which is secured at one end in a recess 16 in the lid 2 and has a shoulder 17, which projects above the surface of said lid and within the path of movement of the slide 12. When in its open position, said slide engages the shoulder 17 and is retained in this position until the spring 15 is depressed. The box-lid 5 is provided with a circular opening 18 in line with the stem 6 on the lid 2, which opening 18 is controlled by a cut-off slide 19, pivoted to the under side of said lid 5 and acted upon by a spring 20, which tends to urge the same into its closing position. A stop 21 limits the movement of the slide 19 in one direction. When said slide is engaged with said stop, it covers the opening 18, preventing the ingress

of any foreign matter to the inside of the box 4 and of the coffin 1.

In the upper end of the sleeve 8, which constitutes a part of the stem 6 on the coffin-lid 2, are a pair of segmental contacts 22 23, the former of which is connected by the wire 24 with the switch-contact 25 and the latter of which is connected through the wire 26 with the switch-lever 27. The free end of the switch-lever 27 has connected to it a cord 28, which leads through eyes or guides 29 29ª, secured to the inside of the coffin 1, and is divided and connected to the arms and feet of the body in said coffin. By this construction any movement of the extremities of the body due to a revivification of the same will shift the switch-lever 27 until it is brought into engagement with the contact 25, when the circuit between the wires 24 and 26 will be closed through and by the switch. Leading from the wire 24 is a wire 30, which is connected to a plurality of contact-springs 31 31, arranged at suitable points along the bottom of the coffin 1 and coöperating with contacts 32 32, which are connected through the wire 33 with the wire 26 or the switch-lever 27. When the body is placed in the coffin 1, the springs 31 are depressed into recesses in the bottom of the coffin and held out of engagement with the contacts 32, with which they respectively coöperate. If, however, the body be lifted from the coffin in any way and for any purpose, the springs 31 will be raised and brought into engagement with the contacts 32 and the circuit between the wires 24 and 26 and the contacts 22 and 23 will be closed through one or more of said springs 31 and said contacts 32.

Fitting around the stem 6 on the coffin-lid 2 and resting upon said lid is a tubular conduit 34, the same being provided on its inside, adjacent to its lower end, with a vertical groove 35, adapted to receive the rib 9 on the sleeve 7 for the purpose of properly centering said conduit on said stem. Adjacent to the lower end of said conduit is a cylindrical insulating-block 36, having a central passage 37 therein and provided with contacts 38 39, adapted to engage the contacts 22 and 23, respectively, on the sleeve 8. The upper ends of the contacts 38 and 39 have secured to them the insulated conducting-wires 40 and 41, the upper ends of said wires being connected to snap-hooks 42 43 on the lower ends of brackets 44 45, of conducting material, secured to a semicylindrical insulating-block 46, mounted in the conduit 34. The upper ends of said brackets 44 and 45, respectively, are further provided with snap-hooks 47 48, to which the circuit-wires 49 and 50 are respectively connected. Said wires 49 and 50 pass through grooves or slots 51 in the upper end of the conduit 34. The wire 49 leads to an annunciator or other signaling device at a central station—such as the house or office of the sexton of the cemetery, a police-station, or the like—and the wire 50 is connected with a line-wire 52, as clearly shown. The connection between the wires 50 and 52 is effected, preferably, by winding the former upon the latter and inclosing the joint thus made in a coupling-piece or protector 53, made entirely of glass, the same comprising two semispool-shaped members 54 55, one of which is provided with an opening 56 for the passage of the wire 50 to the chamber on the inside thereof and with lateral projections or pins 57 at its opposite ends and the other of which is provided with holes 58 for receiving the pins 57. The two members are secured together by welding, this being effected, preferably, by directing flame to the projecting ends of the pins 57 in the holes 58, and thereby upsetting or heading up the ends of said pins. In this way should any one attempt to disconnect the wires 50 and 52 one from the other it would be necessary to break the protector 53 or otherwise injure the same, and a visual indication of the fact that the device had been tampered with would be given to the proper attendant of the cemetery.

The upper end of the conduit 34 is provided with screw-threads adapted for the attachment of a cap or cover consisting of a sleeve 59 and a hood 60, secured to the upper end of said sleeve by means of bracket-arms 61, which provide a space between the sleeve 59 and the hood 60 for the entrance of air to the conduit 34. The upper end of the sleeve 59 is covered by a strip 62, of wire-gauze or other like material, provided for the purpose of preventing the entrance of extraneous matter to the conduit 34, and beneath said wire-gauze is adapted to be placed a sponge containing suitable disinfecting or other material for the purpose of preventing the escape of obnoxious gases from the coffin through the conduit 34 or for other purposes. The sleeve 59 is secured to the conduit 34 by means of the hasp 63, staples 64 65, and the lock 66. The lock 66 is preferably a seal-lock and is provided for the purpose of preventing the disconnection of the sleeve 59 and the hood 60 from the conduit 34 without detection.

The contacts 38 and 39 heretofore referred to are mounted in sockets or recesses in the block 36 and are provided with stems 67 68, to which the conducting-wires 40 and 41 are respectively connected. The said contacts are also acted upon by the springs 69 70, which serve to hold the said contacts in engagement with the contacts 22 23, respectively, even though the conduit 34 does not lie exactly at right angles to the coffin-lid 2. The stem 67 of the contact 38 is further provided with a spring-arm 71, adapted to engage a contact 72 on the stem 68 and carrying a pin or projection 73, which extends down through an opening in the block 36 and engages the upper surface of the sleeve 8. When the parts are in the position shown in Fig. 2 of the drawings, the free end of the spring 71 is held in

its elevated position away from the contact 72 by reason of the fact that the pin or projection 73 rests upon the sleeve 8 of the stem 6. If, however, the conduit 34 should be forcibly removed or elevated, the pin 73 would move out of engagement with the sleeve 8 and the spring-arm 71 would be free to move downwardly into engagement with the contact 72. When this takes place, the circuit would be closed between the wires 40 and 41 by way of the stem 67, spring-arm 71, contact 72, and stem 68 and an alarm would be sent in to the central station.

When the conduit 34 is first inserted into place, the cut-off slide 19 on the box-lid 5 is moved back into the position shown in dotted lines in Fig. 7 of the drawings and said conduit fits within the opening 18 in said box-lid. The cut-off slide 19 is also held in its open position by its engagement with the side of said conduit. Said conduit in its further downward movement into the box 4 is fitted upon the stem 7, and the lower end thereof comes in contact with the free end of the spring 15. Said spring is thereby depressed and the cut-off slide 12 released. The movement of said slide 12, however, toward its closing position is checked by its engagement with the side of the conduit 34. Further movement of said slide is therefore prevented until the conduit 34 is elevated. When this is done, it is free to move to its closing position over the opening 3, and it does so move to such position through the action of the spring 14. The slide 19 is also closed through the action of its spring 20 as soon as the conduit 34 is lifted out of the box 4. It will thus be seen that as soon as the connection between the conduit 34 and the inside of the coffin 1 is broken the openings in the box-lid 5 and in the coffin-lid 2 will both be automatically closed, and thereby prevent the entrance into the coffin of any dirt or other foreign matter.

It will be observed that a normally open circuit is employed and that when said circuit is closed at any of the different points above referred to a signal will be sent in to the central station, indicating either a movement of the body within the coffin or a tampering with the grave by an unauthorized person.

In Fig. 11 of the drawings I have shown, diagrammatically, the circuit connections such as will be used in a system where a number of different graves are connected up with a signaling device at a central station. In this figure the main line-wire 52 is connected with the battery 74, the bell 75, and the annunciator 76, all being of any suitable form or construction. One of the wires 50 50ª from each grave 77 78 is connected with the line-wire 52, while the other wires 49 and 49ª lead, respectively, from the graves 77 78 to different drops of the annunciator 76. In this way when the circuit is closed in any one of the graves the bell or alarm 75 will be actuated, and the drop of the annunciator 76 corresponding with said grave will also be actuated, indicating to the attendant at which grave the trouble exists.

I have heretofore referred to the contacts 22 and 23 on the sleeve 8 as being segmental in form. This construction is provided for the purpose of closing the circuit through the signaling device at the central office in the event that the conduit 34 is twisted through the agency of pipe-tongs or the like, so that the rib 9 on the sleeve 7 is stripped off, each of the contacts 22 and 23 being of sufficient width to bridge the circuit between the contacts 38 and 39, as will be readily understood. I have also described the stem 6, surrounding the opening 3, as being located on the upper side of the coffin-lid 2, adjacent to the head thereof. It is obvious that this stem may be located at any other suitable point, and, indeed, it may be desirable to locate it elsewhere than as shown, as the window in the coffin-lid may be obstructed by said stem and the parts coöperating therewith if located at the point shown in the drawings. I therefore do not limit myself to the exact location and arrangement of the stem 6 and the parts cooperating therewith, nor do I limit myself to the exact construction and arrangement of the other parts herein shown and described, except as defined by the claims, as many minor changes and modifications may be made without departing from the nature or spirit of my invention or sacrificing any of its advantages.

It will be noted that the cord 28, leading from the switch-lever 24, passes first through the eye or guide 29, thence to the eye or guide 29ª, and back, as clearly shown in Fig. 1 of the drawings. Adjacent to the eye 29 the cord 28 has the branches 79 79 leading therefrom, which are connected to the wrists of the body in the coffin. Adjacent to the eye or guide 29ª branches 80 80 lead off and are connected to the ankles of the body in the coffin. Similar branches 81 81 lead from the lower part of the cord 28 to the wrists of the body. By this construction it will be observed that a movement of the arms either toward the head or feet of the body will serve to move the switch-arm 27 and close the circuit and that a movement of the feet toward the head of the body will have a similar effect. It will also be observed that when the circuit has once been closed by the actuation of the switch-arm 27 it cannot be opened by any movement of the body in the coffin.

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

1. In a signaling apparatus for graves, a stationary bottom, contact-springs arranged at intervals along the bottom secured at one end to the upper side thereof extending across the same and having their other ends free but adapted to be depressed by the weight of the body thereon, contacts above the free ends of said springs adapted to be engaged thereby

when the body is elevated, and a normally open circuit including said springs and contacts.

2. In signaling apparatus for graves, a coffin having an opening therein, a stem surrounding said opening, a cut-off slide for said opening pivoted to said coffin, a detent for said slide, a spring for normally urging said slide to its closing position, and a conduit fitting upon said stem and adapted, when inserted into position, to release said detent and retain said slide in its open position, whereby when said conduit is removed, said slide will be free to close the opening in said coffin.

3. In signaling apparatus for graves, a coffin having an opening in the lid thereof, an upwardly-projecting stem surrounding said opening and provided with a recess adjacent to said lid, a cut-off slide for said opening adapted to fit within said recess, a detent-spring fitting within a recess in said lid and adapted to hold said slide in its open position, an actuating-spring for said slide, and a conduit adapted, when inserted into position, to depress said detent-spring, release the same from its engagement with said slide, and hold said slide in its open position, whereby when said conduit is raised, said slide will be free to move into said recess and close the opening in said lid.

4. In signaling apparatus for graves, a coffin having an opening therein, a stem surrounding said opening, contacts on said stem, a conduit surrounding said stem and having contacts therein adapted to engage the contacts on said stem, and a normally open circuit including said contacts and adapted to be closed by a movement of the body within the coffin.

5. In signaling apparatus for graves, a coffin having an opening therein, a stem surrounding said opening, segmental contacts on said stem, a conduit surrounding said stem, contacts carried by said conduit and adapted to engage the segmental contacts on said stem, and a normally open circuit including the contacts on said conduit and those on said stem, the said circuit being adapted to be closed by a movement of the body within said coffin and further adapted to be closed between the contacts on said conduit when the latter is turned so as to cause one of the contacts on said stem to bridge the circuit between the contacts on said conduit.

6. In signaling apparatus for graves, a coffin having an opening therein, a stem surrounding said opening, contacts on said stem, a conduit surrounding said stem, movable contacts thereon, springs adapted to engage said movable contacts for holding the same in engagement with the contacts on said stem, and a normally open circuit including said contacts and adapted to be closed by a movement of the body within said coffin.

7. In signaling apparatus for graves, a coffin having an opening therein, a stem surrounding said opening, contacts on said stem, a conduit surrounding said stem, contacts carried by said conduit and adapted to engage the contacts on said stem, a spring-arm on one of the contacts in said conduit, a lug on the other adapted to be engaged by said arm, a projection on said arm adapted to normally engage said stem and hold said arm out of engagement with said lug, and a normally open circuit including said contacts, the said circuit being adapted to be closed by a movement of the body within said coffin and also adapted to be closed through said spring-arm when said conduit is lifted off said coffin, and said projection is moved out of engagement with said stem.

8. In signaling apparatus for graves, a coffin having an opening in the lid thereof, an upwardly-projecting stem surrounding said opening and consisting of an outer metallic sleeve and an inner sleeve of insulating material, a projecting rib on said outer sleeve secured thereto by break-pins, contacts secured to the upper end of the insulating-sleeve of said stem, a conduit surrounding said stem and provided with a groove adapted to receive said rib, an insulating-block in said conduit, movable contacts mounted in sockets in said block and adapted to engage the contacts on the insulating-sleeve of said stem, springs for maintaining close engagement between said contacts, and a normally open circuit including said contacts adapted to be closed by a movement of the body within said coffin.

9. In signaling apparatus for graves, a normally open circuit leading to a signaling device, a switch controlling said circuit, a cord connected to a movable part of said switch for closing said circuit and passing through guides on the inside of the coffin, branches leading from different parts of said cord and connected with the wrists of the body in the coffin and similar branches leading from said cord and connected with the ankles of the body, whereby upon an upward movement of the feet, or a movement in either direction of the hands, said circuit will be closed at said switch through and by said cord.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MONROE E. GRIFFITH.

Witnesses:
CHAS. W. BLAGG,
C. W. TAYLOR.