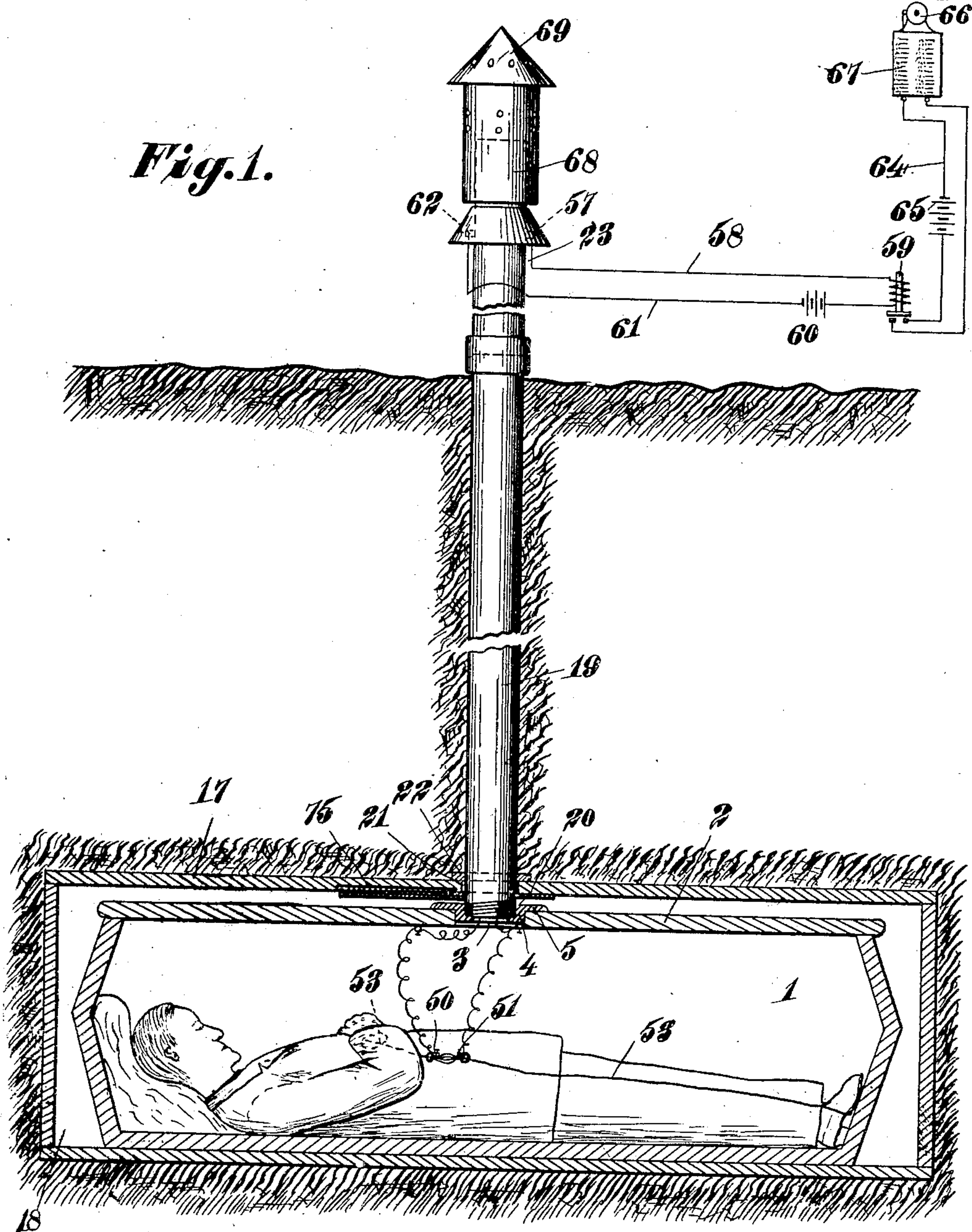


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 SIGNALING DEVICE FOR GRAVES.  
 APPLICATION FILED MAY 9, 1908.

925,260.

Patented June 15, 1909.

2 SHEETS—SHEET 1.



Witnesses;  
 A. A. Olson  
 P. J. M. Ellister.

Inventors;  
 Carl R. Zimmermann  
 and Victor G. Gustafson  
 by Joshua K. Potts  
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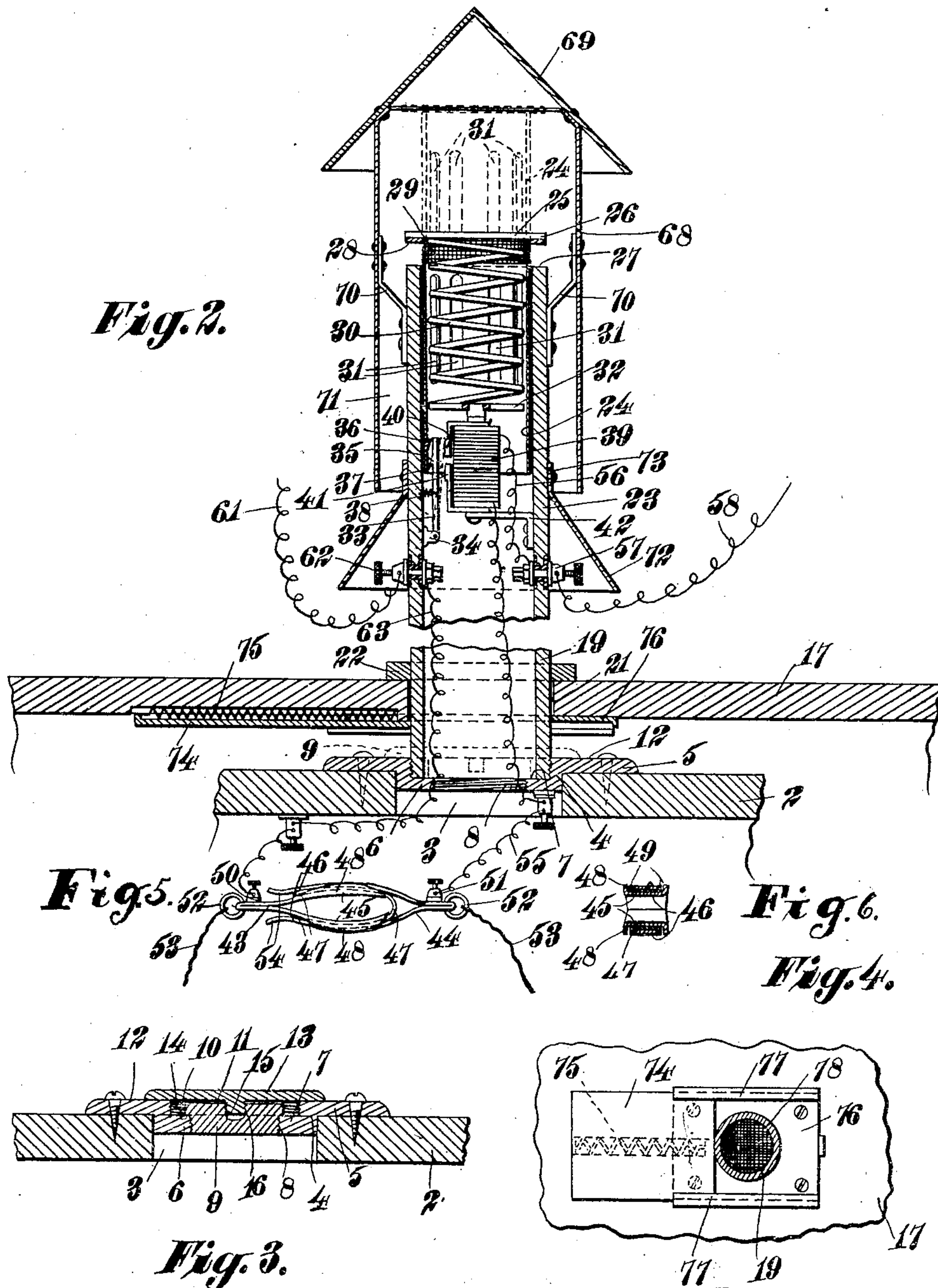
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# UNITED STATES PATENT OFFICE.

CARL R. ZIMMERMANN AND VICTOR G. GUSTAFSON, OF JOLIET, ILLINOIS.

## SIGNALING DEVICE FOR GRAVES.

No. 925,260.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed May 9, 1908. Serial No. 431,890.

*To all whom it may concern:*

Be it known that we, CARL R. ZIMMERMANN and VICTOR G. GUSTAFSON, citizens of the United States, residing at Joliet, county of Will, and State of Illinois, have invented certain new and useful Improvements in Signaling Devices for Graves, of which the following is a specification.

Our invention relates to signaling devices for graves for announcing at a central station any revivification or disturbance which may occur to a recently buried body.

The object of our invention is to provide a device which will be readily operated by any appreciable movement of the limbs of the buried person to sound an alarm at a central station, and to operate a device for admitting air to the grave until the person may be rescued.

Other objects will appear hereinafter.

Our invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a view of the device, partially in elevation and partially in section illustrating in diagram the arrangement of the circuit. Fig. 2 is a detail vertical sectional view, Fig. 3 is a detail sectional view of the apertured portion of the casket illustrating the closures for the same in place, Fig. 4 is a bottom plan view of the adjacent portion of the rough box, illustrating a closure for the aperture therein in place thereon. Fig. 5 is an elevation of one of the circuit closers, and Fig. 6, is a section of the same.

Referring now to the drawings, 1 indicates a casket, and 2 the lid thereof, which is provided with a suitable aperture 3 at any desired position therein. The aperture 3 is provided with a metal bushing which comprises the internally threaded cylindrical portion 4 adapted to fit snugly within the aperture 3, an annular plate or flange portion 5 secured to the upper face of the lid 2, and an inwardly extending flange 6 at the lower end of the portion 4. The flange 6 is of annular form and forms a shoulder 7, the purpose of which will appear hereinafter. The annular flange 6 is internally threaded as at 8 to receive a threaded plug or closure 9, which is provided with a peripheral flange or shoulder 10 to limit its inward movement. When the plug 9 is in place, its upper face 11 is in a plane with or

preferably slightly below the plane of the upper face 12 of the annular plate portion 5.

13 indicates a plate for covering the threaded recess or socket 14 of the bushing, and the plug 9. To secure the plate in position, it is provided with a depending threaded lug or screw 15 which is tapped into a recess 16 in the center of the plug. This gives a neat appearance to the casket. The plate 13 is removed before placing on the cover 17 of the rough box 18. After the plate 13 is removed, and the lid 17 placed in position on the box, a stand-pipe or conduit 19 having a threaded lower end 20 is screwed into the socket 14 of the bushing, the shoulder 7 of the flange 6 limiting its inward movement. The conduit 19 extends above the level of the ground and after it is in position the plug 9 is removed by an instrument having a threaded end adapted to enter the threaded recess 16. The threads of the recess 16 are opposed to those of the recess 14, that is one is right hand and the other left, so that by turning or screwing in the instrument, the plug will be unscrewed and may be readily removed. The lid 17 is provided with an aperture 21 to permit the conduit to pass therethrough, and a rubber ring or gasket 22 is arranged about the conduit to tightly close the space between the same and the walls of the aperture.

The pipe 19 as before stated extends to or above the surface of the ground, and to its upper end is secured an extension 23. The extension 23 is provided with a telescopic member which in one position serves as a closure for the conduit, and in another position, acts as a ventilator to admit air through the same to the casket. The extension is also provided with electrically controlled means for operating the ventilator and a hood closing the upper end against the weather. The telescopic member comprises a sleeve 24 slidably mounted in the upper end of the extension 23 of the conduit and has a circular closure 25 which extends beyond the rim of the sleeve 24 forming an annular flange 26 which is adapted to rest upon the upper end 27 of the conduit when entirely depressed, a gasket 28 being provided on the underface of the flange for tightly closing the joint, if necessary. The upper end of the sleeve 24 is formed of fine mesh wire netting 29 forming a slight ventilator, and we prefer that the sleeve be held normally in the posi-



tion shown in Fig. 2 with the ventilator 29 above the edge 27, of the extension to admit fresh air into the casket. The sleeve 24 is held in this position or entirely closed by an electrically operated latch, and a spring 30 is provided for raising the sleeve into the position shown in dotted lines in Fig. 2 when the latch is released. The portion of the sleeve 24 immediately below the netting 29 is provided with a plurality of longitudinal slots 31 which admit air in large volumes when the device is raised. The spring 30 is arranged within the sleeve 24 and is interposed between the top 25 and a spider 32 supported within the device in a manner hereinafter described.

33 indicates the latch which is pivotally mounted as at 34 within the sleeve 3 and provided with an ear or lug 35 which engages lugs or ears 36 and 37 upon the sleeve 24 to hold the device in closed or partially opened positions respectively.

38 indicates a spring for normally holding the latch in engagement with the lug 36 or 37. The end of the latch forms an armature of an electro-magnet 39 of which 40 and 41 are the poles.

42 is a bracket arranged within the extension 23 for supporting the magnet, and the spider 32 is supported upon the upper end of the magnet as illustrated in Fig. 2.

Suitable means are provided whereby appreciable movement of the limbs of the buried person, will establish a circuit through the magnet releasing the latch and permitting the ventilator to be fully opened and will also sound an alarm. To this end, circuit closers are provided which are adapted to be secured to the person so that perceptible movement will operate the same. In practice a plurality of circuit closers are employed in order to detect movement in any direction, but in the drawings, but one is illustrated for the sake of clearness. The circuit closer comprises a pair of spring clips 43 and 44 having the curved arms 45 and 46 respectively which interlock, the arms 45 being arranged within the arms 46 and held in position by the resiliency or tension of the several parts.

47 indicates a U shaped member or loop of fiber or other suitable insulating material interposed between the adjacent faces of the arms 45 and 46. The arms 45 are flanged as at 48 to prevent lateral disengagement of the members and the insulating member 47 is flanged as at 49 to prevent contact with the arms by lateral movement.

The clips 43 and 44 are provided with binding posts 50 and 51 by which they are electrically connected in the circuit of the magnet 39 and are also provided with rings or eyelets 52 to which cords 53 are attached. The cords 53 are secured to the limbs of the body so that movement of the latter will par-

tially separate the clips 43 and 44 by bringing the uncovered or non-insulated ends 54 of the clip 44 into engagement with the arms 45 establishing the circuit to the magnet, operating the ventilator and sounding the alarm. One of the spring clips as 44, is connected by a wire 55 leading to the magnet, from thence a wire 56 leads to a binding post 57 mounted upon and insulated from the extension 23. From the post 57 a wire 58 leads to a relay 59 a battery 60 and back by a line 61 to a post 62 similar to the post 57 and also mounted upon the extension 23, the circuit being completed through a wire 63 connecting the post 62 with the post 50 on the clip 43. The relay 59 closes a circuit 64 of a battery 65 in which is interposed an alarm bell 66 and an indicator 67 arranged at a central office and which designates the particular grave from which the signal is sent.

The upper end of the extension 23 is covered by a hood. This comprises a sheet metal cylindrical member 68 having a conical roof or top 69 secured thereto. The lower edge of the portion 68 extends a considerable distance below the upper end of the conduit and the hood is tightly closed except at the bottom, in this way preventing all weather from entering the conduit. The hood is supported by a plurality of arms 70 secured both to the hood and the adjacent portion of the extension 23. It should be understood that the hood is large enough to form an ample air passage 71 between the same and the conduit pipe. The posts 57 and 62 are arranged below the hood above mentioned and are covered from the weather by a conical hood 72 secured to the extension 23 and having its flanged upper end 73 extending upwardly into the portion 68 of the hood.

The device above mentioned is left in position several days after the interment, after which it is removed when it is certain that there is no chance of revivification. In removing the device, the top section or extension 23 is removed, the plug 9 reinserted in the bushing and the conduit 19 unscrewed and removed. It is obvious that the plug 9 will prevent the dirt from entering the casket and suitable means are provided for automatically closing the aperture 21 in the lid 17 as the pipe is withdrawn. This comprises a metal plate or door 74 which is closed by a spring 75 when the pipe is withdrawn. Secured to the underface of the lid 17 is a plate 76 having its edges turned over forming ways or guides 77 for the door 74. The plate 76 is arranged beneath the aperture 21 and is provided with a similar aperture 78. The door is held in opened or retracted position by the pipe 19 but as soon as the pipe is removed, the spring 75 automatically shuts the same, closing the opening through the lid.

Having described our invention what we



claim as new, and desire to secure by Letters Patent, is:

1. In a device of the class described, a casket having a bushed opening in the lid thereof, in combination with an air conduit detachably connected thereto, and a plug for closing said opening, said plug being adapted to be removed after the pipe is in position and to be replaced before the pipe is removed, substantially as described.

2. A casket having an aperture in its lid, in combination with a bushing for said aperture comprising an internally threaded cylindrical portion, an annular plate extending therefrom and secured to the upper face of the lid, and an inwardly extending annular flange at the lower edge thereof, a removable plug threaded into the opening defined by the last said flange, and a removable plate detachably secured to said plug, substantially as described.

3. A casket having an aperture in its lid, in combination with an internally threaded bushing arranged in said aperture, an annular flange extending inwardly upon the lower edge of said bushing, a plug threaded through the opening defined by said flange, said plug having an annular flange adapted to be seated in the threaded flange of said bushing to limit its movement inwardly, substantially as described.

4. In a device of the class described, a casket having an aperture in its lid, and a rough box having a lid correspondingly apertured, in combination with an air pipe extending upwardly from the first said aperture and detachably connected thereto, and a

slide for automatically closing the aperture in the rough box as the pipe is removed, substantially as described.

5. In a device of the class described, a casket having an aperture in its lid, in combination with an air pipe extending upwardly therefrom to a point above the ground, a ventilator slidably mounted upon the upper end of said pipe, a spring normally tending to raise said ventilator, a latch for holding said ventilator in depressed position, and means operable by movement within said casket for retracting said latch, substantially as described.

6. In a device of the class described, a casket having an aperture in its lid, in combination with an air pipe extending upwardly therefrom to a point above the ground, a ventilator slidably mounted in the upper end of said pipe and comprising a cylindrical sleeve arranged within the pipe and closed at the top, an annular flange around the upper edge thereof adapted to rest upon the upper end of said pipe when in one position, said cylindrical sleeve being provided with a plurality of longitudinal apertures which extend above said pipe when the ventilator is raised, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CARL R. ZIMMERMANN.  
VICTOR G. GUSTAFSON.

Witnesses:

L. L. SCHOMSTEDT,  
J. SHREEVE.