(No Model.) 2 Sheets—Sheet 1.

M. KARNICKI.

APPARATUS FOR SAVING PERSONS BURIED ALIVE.

No. 584,876. Patented June 22, 1897.

Fig. 1.

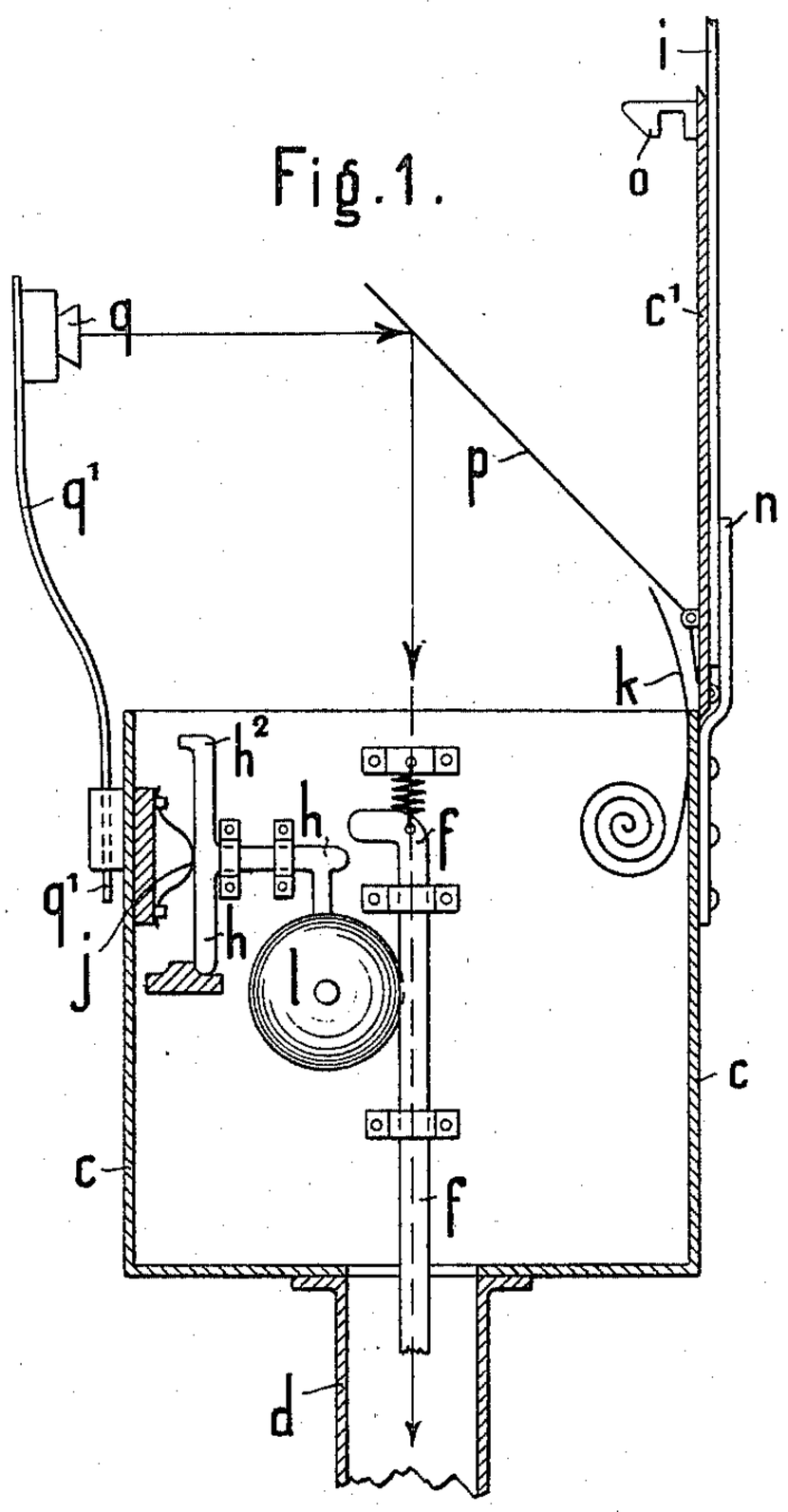
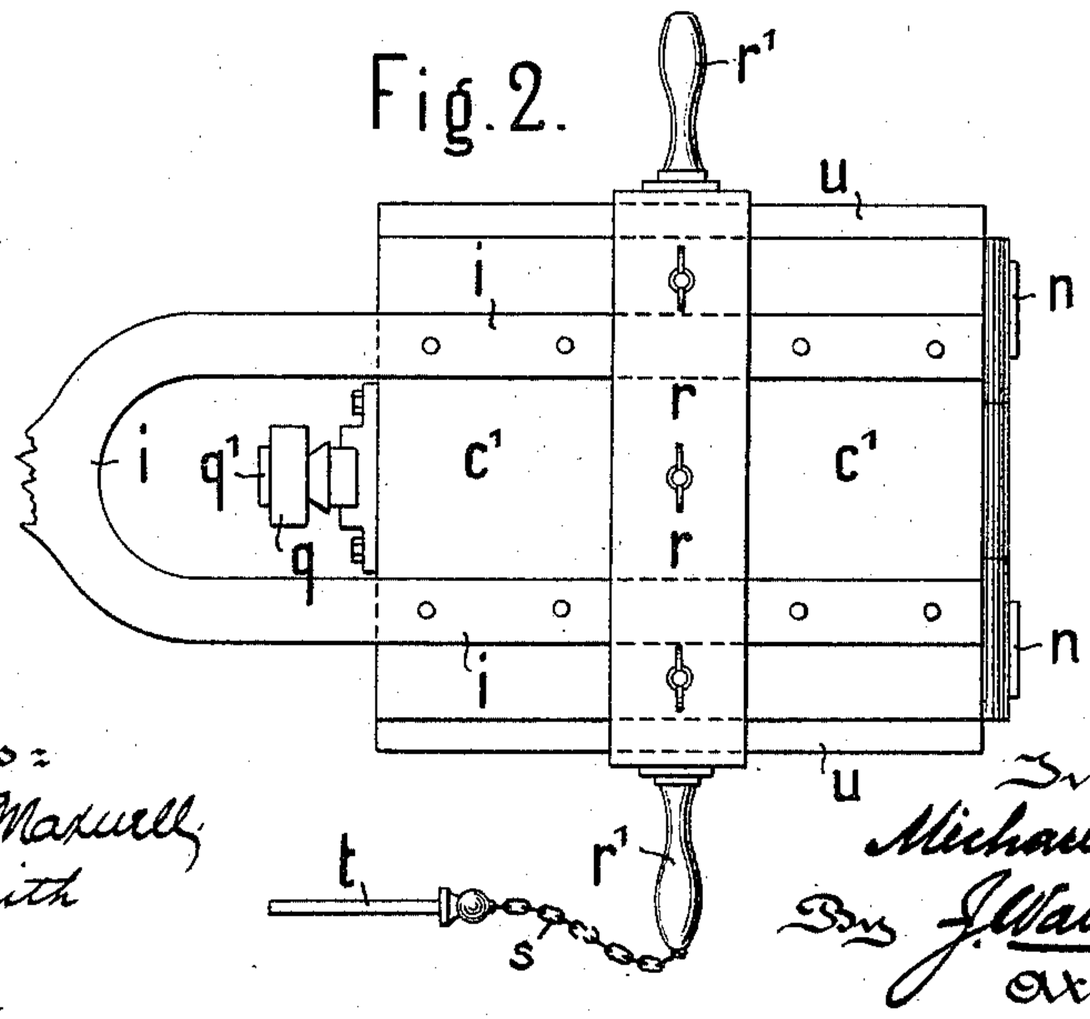


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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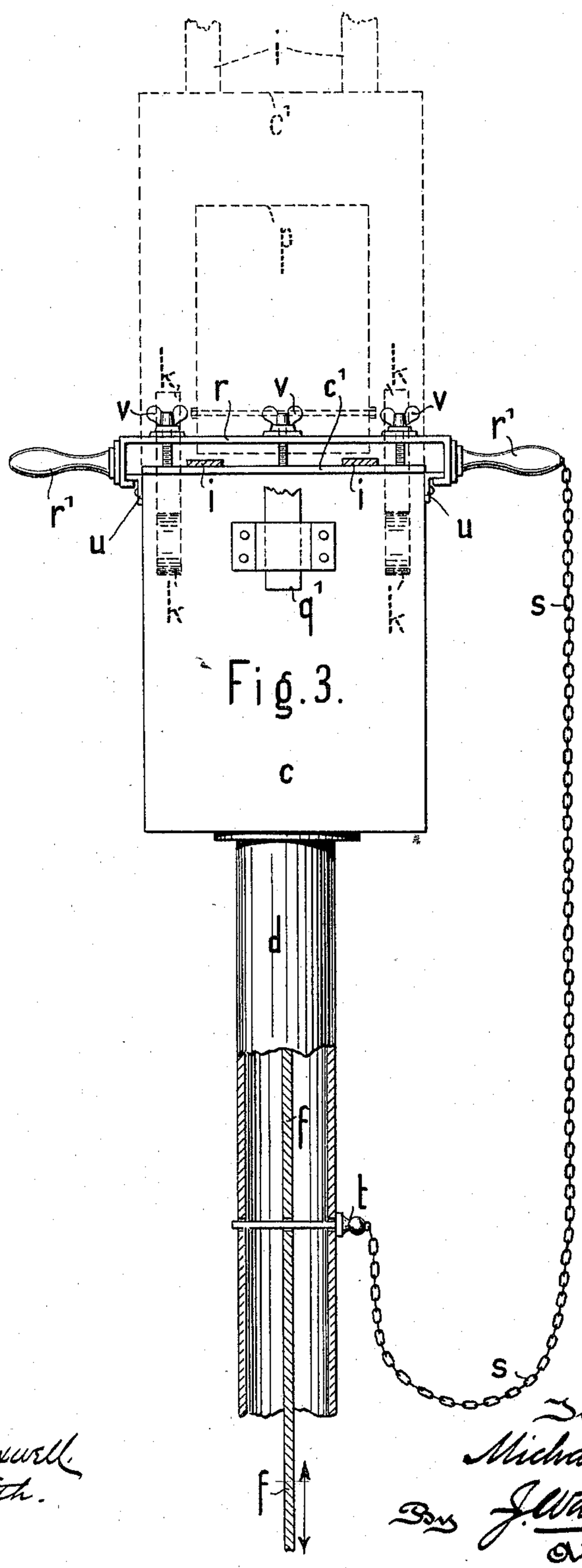


Fig. 3.

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UNITED STATES PATENT OFFICE.

MICHAEL KARNICKI, OF WARSAW, RUSSIA.

APPARATUS FOR SAVING PERSONS BURIED ALIVE.

SPECIFICATION forming part of Letters Patent No. 584,876, dated June 22, 1897.

Application filed March 17, 1897. Serial No. 627,975. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL KARNICKI, a subject of the Czar of Russia, residing at Warsaw, in the Province of Poland and Empire of Russia, have invented certain new and useful Improvements in Apparatus for Saving Persons Buried Alive, of which the following is a specification.

My invention has relation to an apparatus adapted to be attached to a coffin or casket, whereby when a buried person comes to life he can attract the attention of passers-by and can receive air and light until rescued from the grave; and in such connection it relates more particularly to an improvement upon the apparatus patented to me by Letters Patent No. 572,119, dated December 1, 1896, whereby a mirror or other reflector is so arranged as to reflect light, either natural or artificial, into the coffin when the apparatus is operated by the awakening person.

The principal objects of my invention are, first, to provide in an apparatus for rescuing people buried alive, in connection with visual and audible signals inclosed in a box and adapted to be operated by the opening of the lid of said box, a reflecting-surface adapted when the box is open to assume a position of approximately forty-five degrees to the box and adapted to reflect downward into the coffin a vertical ray or rays of light, and, second, to provide in an apparatus of the character described, in connection with a box containing visual and audible signals adapted to be operated by the opening of the lid of said box, a rod adapted to open said lid and extending to the coffin, a bar adapted to be removably secured to the sides of said box and provided with handles, and a pin or bolt secured by a chain to said bar and adapted to lock the rod in inoperative position.

My invention, stated in general terms, consists of an apparatus for saving persons buried alive constructed and arranged in substantially the manner hereinafter described and claimed.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a vertical section of the box disconnected from the coffin and showing the lid in open position and embodying main features of my invention. Fig. 2 is a top or plan view of the box with its lid in closed position and showing the bar connected with the sides of the box, and Fig. 3 is a side view of the box and of the bar secured thereto and illustrating also the rod adapted to open the lid of the box and locked in inoperative position by the bolt or pin.

Referring to the drawings, *c* represents a box adapted to be mounted upon a grave-mound and connected by a tube *d* with the coffin. (Not shown.) Within the box is arranged a slide *h*, having a hooked end h^2, adapted to engage a notched catch *o*, secured to the cover or lid *c'* of the box *c* and to lock said lid down upon the box. The slide *h* is adapted to be actuated by a leaf-spring *j* when released from contact with the rounded angular end of a rod *f*, which traverses the tube *d* and enters the coffin. The lid is adapted to be thrown open by suitable springs *k* when the slide *h* is actuated by its spring *j*, and the movement of the slide *h* causes the gong or bell *l* to give an audible signal, all as more fully described in my aforesaid patent, No. 572,119. The lid *c'* is provided with a rod or support *i*, to which the visible signal is secured, and the lid is arrested in upright position by stops *n*, projecting from the rear of the box.

Referring now more particularly to my present improvement, I have found that for safely rescuing people buried alive or interred in a state of lethargy it is of the utmost importance that a sufficient amount of light should be forthwith shed on the awakening person, so as to prevent, in consequence of the anxious feelings caused by the darkness, life from being entirely extinguished, this exhibition of light taking place by night as well as by day.

In the arrangement described in the specification of the United States Patent No. 572,119, dated December 1, 1896, this condition could only be absolutely fulfilled when the buried person, by releasing the apparatus and sounding an alarm or bell, summoned the attendant, who was only able to cause rays of light to be reflected from a suitable lamp into the coffin by placing the lamp into the pipe *d*. Under these circumstances an

interval of long or short duration occurred between the awakening and the appearance of the attendant, which might prove fatal to the buried person. In order, therefore, to obtain absolute safety in this direction, there is arranged, according to my present invention, a reflector *p*, which assumes automatically an angle of forty-five degrees as soon as the lid slides open and reflects inside the coffin, either in the daylight or at night-time, the light from a lamp and secured adjustably to the box by a bracket or arm *g'*.

As shown in Fig. 1, the reflector *p* is fixed to the lid or cover *e'* by means of a hinge in such a manner as to automatically assume, when the lid flies open in a vertical direction, an angle of forty-five degrees with the body of the box and to remain fixed in such a position. Opposite this reflector the lamp *q* is so secured by an arm *q'* to the wall of the box that it can be shifted in a vertical position, this lamp casting its rays of light in the reflector *p*, from which the rays are cast back into and down the pipe *d* into the inside of the coffin, which is so lighted, as has been proved by experiments, that it would be quite easy for the awakened person to read a book.

In Figs. 2 and 3 are shown angle-irons *u u*, which are arranged at the two opposite sides of the box *c*, under which is adapted to be slid a bar *r*, provided on both ends with a handle *r'*. This bar *r* is firmly clamped to the box *c* by means of the thumb-nuts *v*, and when the bar *r* is thus secured the box can be readily transported and can be, moreover, readily manipulated in order to attach it to the coffin or to remove it from the grave-mound. Moreover, this bar prevents the lid of the box from flying open from any cause whatsoever when the apparatus is removed from the grave side, and hence the escape of noxious gases in proximity to the workmen is prevented. A bolt *t* is connected by means of a small chain *s* to one handle *r'* of the bar *r*, and when the apparatus is to be applied to the coffin this bolt is shot through an opening in the rod *f* and through corresponding openings in the pipe *d*, whereby the rod *f* is rendered inoperative, so that if the lower end of the rod were to meet with an obstacle when introduced in through the ground to the cover of the coffin the apparatus would not become disconnected. When the apparatus has been fixed in position, the nuts *v* are released, the bar *r* is withdrawn from the box *c*, and the bolt *t* is drawn out of the rod *f* and of the tube *d*, the mechanism being now ready to operate. The removal of the bolt could not be overlooked on account of its connection with the handle *r'* by means of the chain. The openings for the bolt *t* are formed at or near the center of the pipe *d*, so that they are hermetically closed by a sufficient quantity of earth, which is placed around the pipe when filling up the grave, and hence no noxious gases can escape.

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

1. In a device of the character described, a tube leading from the surface of a grave to the coffin, a box from which said tube extends and closed by a spring-controlled lid, a rod traversing said tube and adapted to release said lid from said box, visual and audible signals controlled by said lid, and a reflector hinged to said lid and adapted to assume a position at an angle of forty-five degrees to the box, when the lid is open and to reflect natural or artificial light down the tube, substantially as and for the purposes described.

2. In a device of the character described, a tube leading from the surface of a grave to the coffin, a box from which said tube extends and closed by a spring-controlled lid, a rod traversing said tube and adapted to release said lid from said box, visual and audible signals controlled by said lid, a bar adapted to engage the sides of said box and to lock the lid thereto, a pin adapted to enter the tube and rod and to lock the rod in inoperative position, said pin being secured by a chain or its equivalent to said bar, substantially as and for the purposes described.

MICHAEL KARNICKI. [L. S.]

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