

A. T. & J. H. KLIEGL.
ELECTRIC CUT-OUT BOX.
APPLICATION FILED AUG. 4, 1904.

2 SHEETS—SHEET 1.

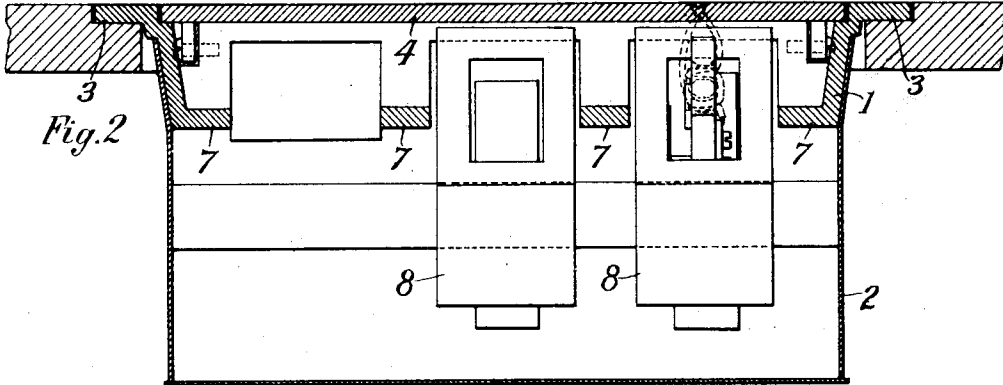


Fig. 2

Fig. 1

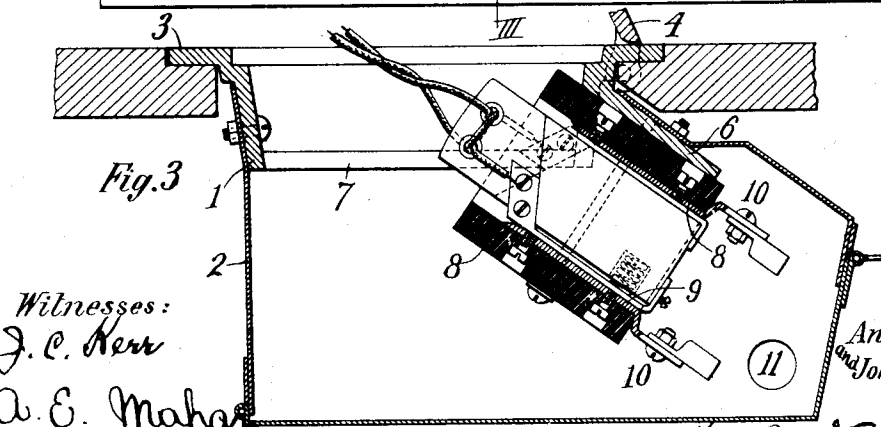
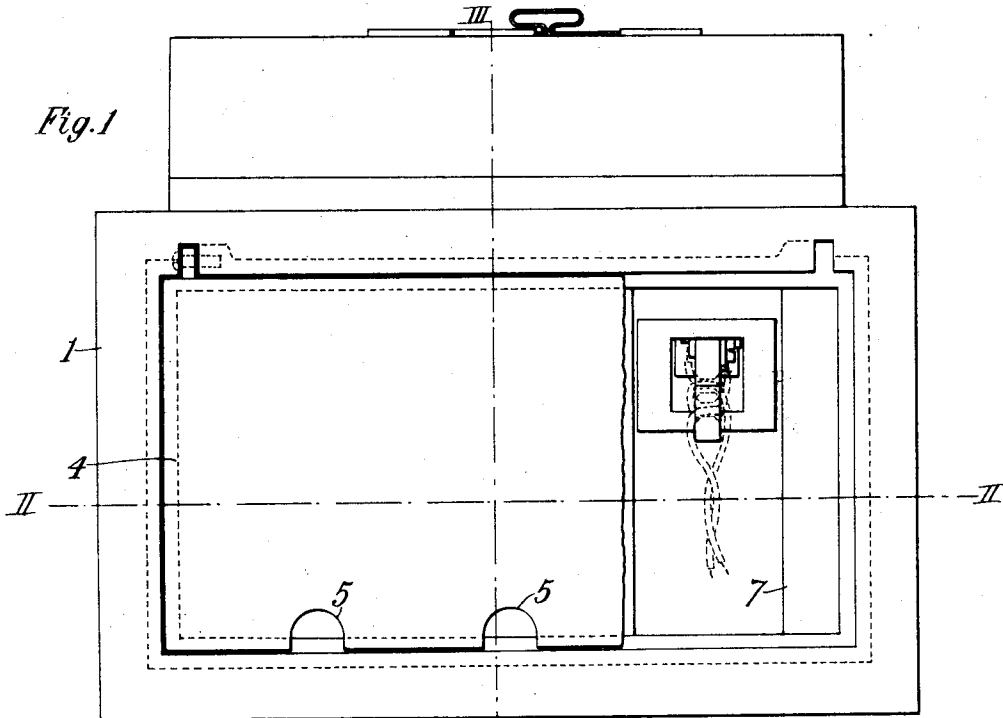


Fig. 3

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2 SHEETS—SHEET 2.

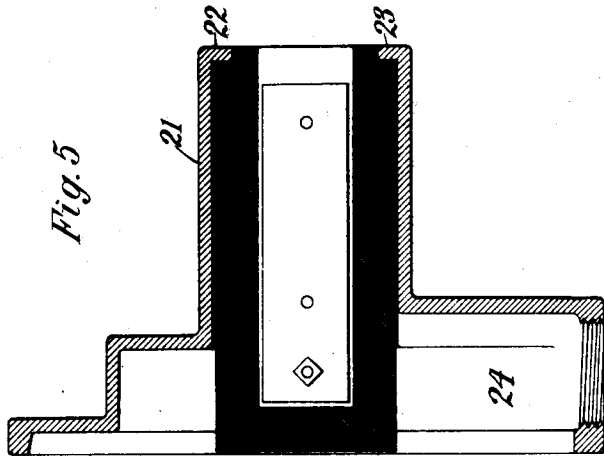


Fig. 5

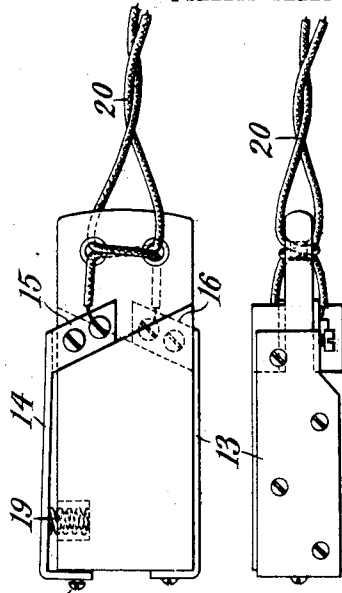


Fig. 7

Fig. 8

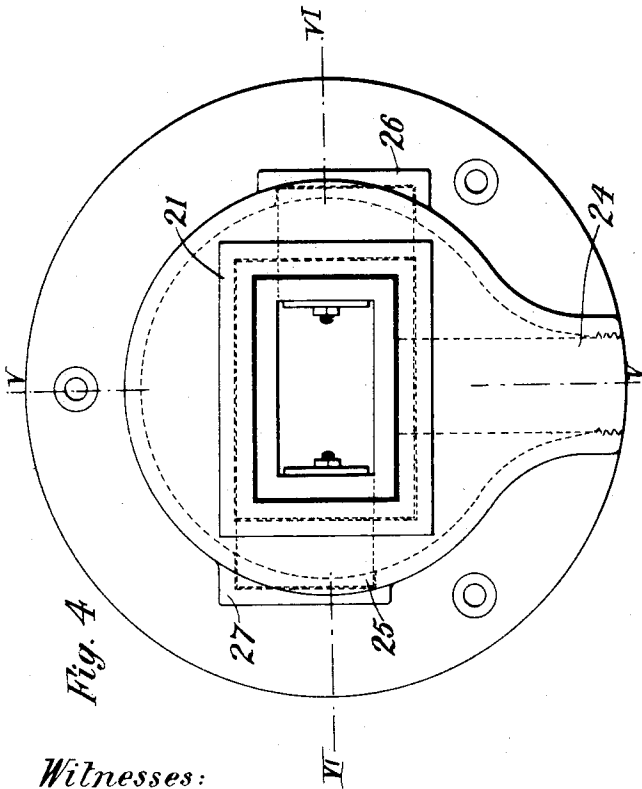


Fig. 4

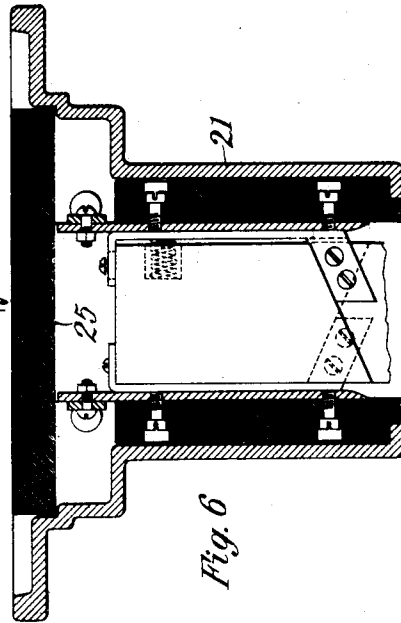


Fig. 6

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UNITED STATES PATENT OFFICE.

ANTON T. KLIEGL AND JOHN H. KLIEGL, OF NEW YORK, N. Y.

ELECTRIC CUT-OUT BOX.

SPECIFICATION forming part of Letters Patent No. 792,425, dated June 13, 1905.

Application filed August 4, 1904. Serial No. 219,428.

To all whom it may concern:

Be it known that we, ANTON T. KLIEGL, a subject of the Emperor of Germany, and JOHN H. KLIEGL, a citizen of the United States, both residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Electric Cut-Out Boxes, of which the following is a specification, reference being had to the drawings accompanying and forming part of the same.

Our invention relates to cut-out boxes or switches of the type in which connection is made by means of a removable plug bearing metallic contacts which engage corresponding contacts in the receptacle; but we contemplate certain improvements which have for their object to render the apparatus more compact, effective, and economical to manufacture.

To these and other ends the invention consists of the novel features, combinations of elements, and arrangements of parts herein-after described, and more particularly pointed out in the claims.

A convenient embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 shows the device in plan, part of the cover being broken away to show interior parts. Fig. 2 is a section on line II II; and Fig. 3, a section on line III III, Fig. 1. Fig. 4 is a plan view of another form. Fig. 5 is a section of the same on line V V, and Fig. 6 a section on line VI VI in Fig. 4. Figs. 7 and 8 are side elevations of the plug used in the device.

The form shown in Figs. 1, 2, and 3 is adapted more especially to be located in a floor or foot-way—as, for example, on the stage or in the wings of a theater—where it is desirable that no rigid projecting parts appear above the surface. It is composed of a rectangular frame 1, preferably of heavy cast metal, to which is secured a shallow box or receptacle 2, preferably of sheet metal. The frame is provided with suitable flanges 3 to support the same in an opening in the floor or wall, as shown. A cover 4 is hinged to one side of the frame and is provided with openings or notches, as 5, through which the conductors or cords may be led out.

The side of the frame adjacent to the cover-hinges is inclined, as shown at 6, and across the same extends a plurality of ribs or bars 7. Between the latter and secured to the inclined side of the frame are insulating-sockets 8, two being shown in the drawings. Each socket has on opposite sides contacts 8 9, to which the terminals of the current source may be connected, as by means of the ordinary binding-screws shown at 10. The leads may be introduced into the casing through an aperture in one end, as 11. By hinging the bottom of the casing to the side wall, as at 12, the terminal connections are made readily accessible.

The plug which we prefer to use is shown in Figs. 7 and 8. It is made of any suitable insulating material, such as rubber or fiber composition, and is slightly smaller in cross-section than the socket. At one end it is cut away on each side to form a tongue 17, by which it may be inserted and withdrawn from the socket, the ends of the cut-away portions being oppositely inclined, as shown. On the narrow faces are contacts 13 14, provided with inwardly-turned fingers 15 16, secured to the tongue 17. One of the contacts, as 14, is rigidly secured at only one end, the other being free to move though limited by a screw 18, extending through a slot (not shown) in the downwardly-turned end. A spring 19 keeps the contact normally pressed outward to its full extent.

The tongue 17 is provided with a pair of openings through which the conductors or cords 20 may be laced before their bared ends are connected with the terminals 15 16 of the contacts. This method relieves the binding-screws of much of the strain thereon, since the conductors, being comparatively stiff, will stand a considerable pull before yielding at the bends sufficiently to permit much strain on the terminals.

From the foregoing the use of the devices will be readily understood. The lid of the casing having been raised, the plug may be inserted, the spring-contact yielding enough to permit easy operation, but making good electrical connection. To break the circuit and cut out the devices to which the plug-leads may be connected, the plug may be

pulled out of the socket by grasping the conductors without the necessity of reaching down and grasping the plug itself, since there is no danger of loosening the connection between the leads and plug-contacts.

The modification shown in Figs. 4, 5, and 6 is designed more particularly for use in unexposed places where a projecting part is not a disadvantage, or walls, &c., or where it is not desired to cut an opening to receive the casing. It therefore has an outstanding support 21 for the plug-socket, with inwardly-turned flanges 22 23 to hold the socket in place. A channel 24 is provided, leading to the socket to carry the leads thereto. The pipe which contains the leads may be screwed into the mouth of the channel, if desired. In order to insure that the parts will always be assembled in the same relative positions, the socket has a base or bottom 25, which extends beyond the walls of the same on two sides, as shown in Fig. 6. The extensions of the base are staggered and fit in staggered depressions 26 27 in the base of the casing. The device may be secured in place in any convenient manner, as by screws or bolts through suitable openings in the base or frame shown.

The two forms herein described are merely typical of the invention, which may be variously embodied without departure from its proper scope.

What we claim is—

1. The combination with a casing having an inclined wall, one or more sockets supported in an inclined position on said wall, contacts on the inside of the socket or sockets, and a plug or plugs having contacts arranged to engage those in the socket or sockets, as set forth.

2. The combination with a frame having an inclined side, a lid hinged to the frame, and

a plurality of ribs or bars extending across the frame from the inclined side, of a plurality of contact-bearing sockets supported in inclined position between the ribs or bars by the inclined wall of the frame, and a casing inclosing the sockets, as set forth.

3. The combination with a frame having an inclined side, a plurality of ribs or bars extending across the frame from the inclined side, and a plurality of contact-bearing sockets supported by the inclined side between the ribs or bars, of a casing having a hinged bottom, inclosing the sockets, as set forth.

4. The combination with a frame having an inclined side, a plurality of ribs or bars extending across the frame from the inclined side, and a plurality of contact-bearing sockets supported by said inclined side between the ribs or bars, of a casing inclosing the sockets, having a hinged bottom, and a hinged closure for the frame, as set forth.

5. A cut-out plug of rectangular prismatic form, having a flat, reduced portion at one end constituting a handle, said handle being provided with perforations located side by side, a contact rigidly secured on one edge of the plug and extending to a point adjacent to the perforation in the handle nearest the said edge, a contact yieldingly secured on the opposite edge of the plug and extending to a point adjacent to the perforation nearest the latter edge, and conductors electrically connected with the contacts, each conductor being threaded through the perforation adjacent to its contact, and also through the perforation nearest the other contact, as set forth.

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