

UNITED STATES PATENT OFFICE.

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ELECTRIC CUT-OUT BOX.

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

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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 hereinafter 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 footway—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