G. W. GILMORE.

DETACHABLE CONTACT PLATE.

APPLICATION FILED SEPT. 14, 1915.

1,225,433. Patented May 8, 1917.

Fig. 1.

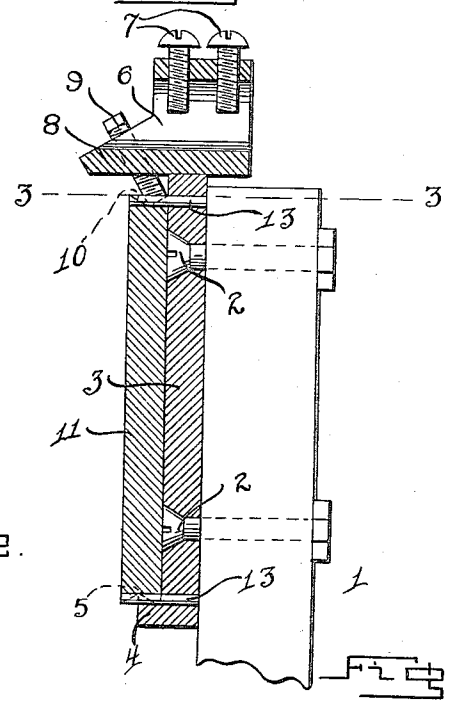


Fig. 2.

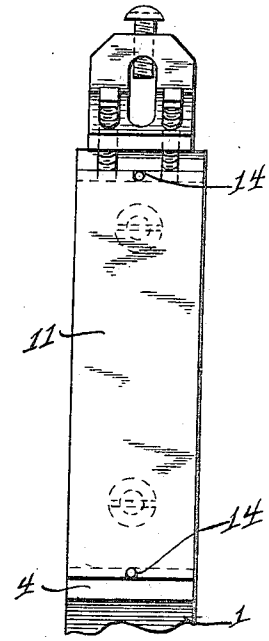


Fig. 3.

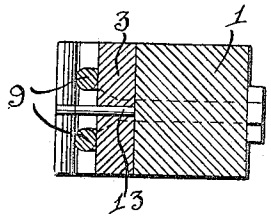
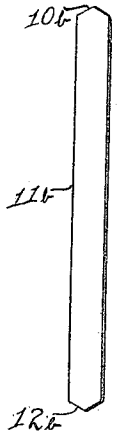


Fig. 4.



Fig. 5.



WITNESSES

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DETACHABLE CONTACT-PLATE.

1,225,433. Specification of Letters Patent. Patented May 8, 1917.

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To all whom it may concern:

Be it known that I, GEORGE W. GILMORE, a citizen of the United States, residing at Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Detachable Contact-Plates, of which the following is a specification.

This invention has relation to certain new and useful improvements in detachable contact plates for electric switches, and has for its primary object, the provision of a contact plate which may be readily detached from the support provided for the same and replaced, as desired.

The invention has for another object, the provision of a detachable plate of this character and improved and novel supporting and securing means for the same.

With the above and other objects in view, the invention resides in the novel construction, combination, and arrangement of parts as hereinafter set forth in the specification, pointed out in the claims, and shown in the drawings, in which—

Figure 1 is a vertical section through the contact plate and securing means for the same with the supporting base shown in elevation;

Fig. 2 is a front elevation of the complete device;

Fig. 3 is a transverse section on the plane of line 3—3 of Fig. 1;

Fig. 4 is a side elevation of a slightly modified form of contact plate;

Fig. 5 is a side elevation of a further modified form of contact plate.

Referring to the drawings in which similar reference characters designate corresponding parts throughout the several views, 1 designates the supporting base which may be formed of slate or any other suitable non-conducting material and to one face of which is secured, by means of securing members 2, the terminal base plate 3 which has a bottom flange 4 having an inclined upper face 5.

It will be understood that the terminal sleeve 6 is mounted upon the upper end of the terminal base plate 3 and has suitable terminal securing screws 7 secured therein for holding the terminal in proper position within said terminal sleeve 6. The terminal sleeve 6 has a lower extension 8 through which inclined binding screws 9 are threaded, the lower inner ends of said binding screws 9 being engaged with the inner inclined wall of the transverse channel 10 formed in the upper end of the contact plate 11, while the inclined upper wall 5 of the bottom flange 4 of the terminal base plate 3 is engaged in the corresponding transverse channel 12 formed in the lower end of said contact plate 11. It will therefore be seen that the binding screws 9 and the flange 4 serve to prevent the contact plate 11 from moving outwardly from the terminal base plate 3.

In order to prevent movement of the contact plate 11 transversely of the terminal base plate 3, I provide upper and lower supporting pins 13 which are carried by the terminal base plate 3 and have their extended outer ends engaged in the recesses 14 formed in the upper and lower ends of the contact plate 11 and preferably near the longitudinal center of the same, and between the binding screws 9.

From the foregoing, it will be readily seen that the contact plate 11 may be readily secured in position or removed, and when secured in position will be securely held against movement in any direction. It will be understood that the contact plate 11 may be formed of carbon, copper, or any other suitable material, and the terminal base plate 3, as well as the terminal sleeve 6, may be formed of metal or any other current conducting material, and the parts are so constructed and connected that they are especially adapted for use as a part of an electric switch. It will be understood, however, that the contact plate 11 and the supporting and securing means for the same may be employed at practically any terminal and possibly at other points in an electric circuit, and I therefore do not wish to limit the use of the contact plate 11 and its supporting and securing means.

In Fig. 4 I have shown a slightly modified form of contact plate 11^a, in which the upper end 10^a and lower end 12^a are oppositely beveled for engagement, respectively, with the ends of the binding screws 9 and the inclined upper edge 5 of the flange 4.

In Fig. 5 I have shown a still further modified form of contact plate 11^b, in which the upper end 10^b and lower end 12^b are both beveled from the transverse center of the opposite side edges thereof, in order that the contact plate may be readily and securely fastened in position against the terminal base plate 3.

While the preferred embodiments of the invention have been shown and described, it will be understood that minor changes in the details of construction, and arrangement of parts may be resorted to within the scope of the appended claims without departing from the spirit of the invention or sacrificing any of the advantages of the same.

What is claimed is:

1. In a device of the class described, the combination with a contact plate, of a supporting terminal base plate having a projecting flange for engaging one edge of the contact plate, adjustable means for engaging the other end of the contact plate and clamping it against said projecting flange in electrical contact with the terminal base plate, and means for preventing transverse movement of said contact plate.

2. A device of the class described comprising the combination with a contact plate; of a terminal base plate having means for supporting one end of said contact plate, a terminal sleeve carried by said terminal base plate, means carried by said sleeve for engaging the opposite end of said contact plate and retaining the latter in engagement with said terminal base plate, means for preventing movement of said contact plate upon said terminal base plate, and means for supporting said terminal base plate.

3. A device of the class described comprising the combination with a contact plate having notched ends, of a terminal base plate in electrical contact therewith and having a projecting flange for engaging one end of the contact plate, a terminal socket carried by said terminal base plate, means for supporting said terminal base plate, adjustable means on the terminal socket for engaging the other end of said contact plate and clamping it securely against said terminal base plate flange, and members projecting from said terminal base plate and engaging said notches to prevent lateral movement of said contact plate between its clamping members.

4. A device of the class described comprising the combination with a contact plate; of a terminal base plate, a terminal upon said terminal base plate and provided with an extension, means carried by said terminal base plate for supporting said contact plate, means mounted in the extension of said terminal for securing said contact plate against said terminal base plate, means for preventing movement of said contact plate upon said terminal base plate, and means for supporting said terminal base plate.

5. A device of the class described comprising the combination with a contact plate having channels formed in its opposite ends, and a notch extending across each of said channels, of a terminal base plate in electrical contact with said contact plate and having a projecting flange for engaging one of the channels of the contact plate, a terminal socket carried by said base plate at the end opposite said projecting flange, screws carried by said terminal socket engaging the channels in the unsupported end of said contact plate for clamping said plate securely to the base plate, pins projecting from the base plate and through the notches in the end of the contact plate for preventing transverse movement of said contact plate, and means for supporting said terminal base plate.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. GILMORE.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."