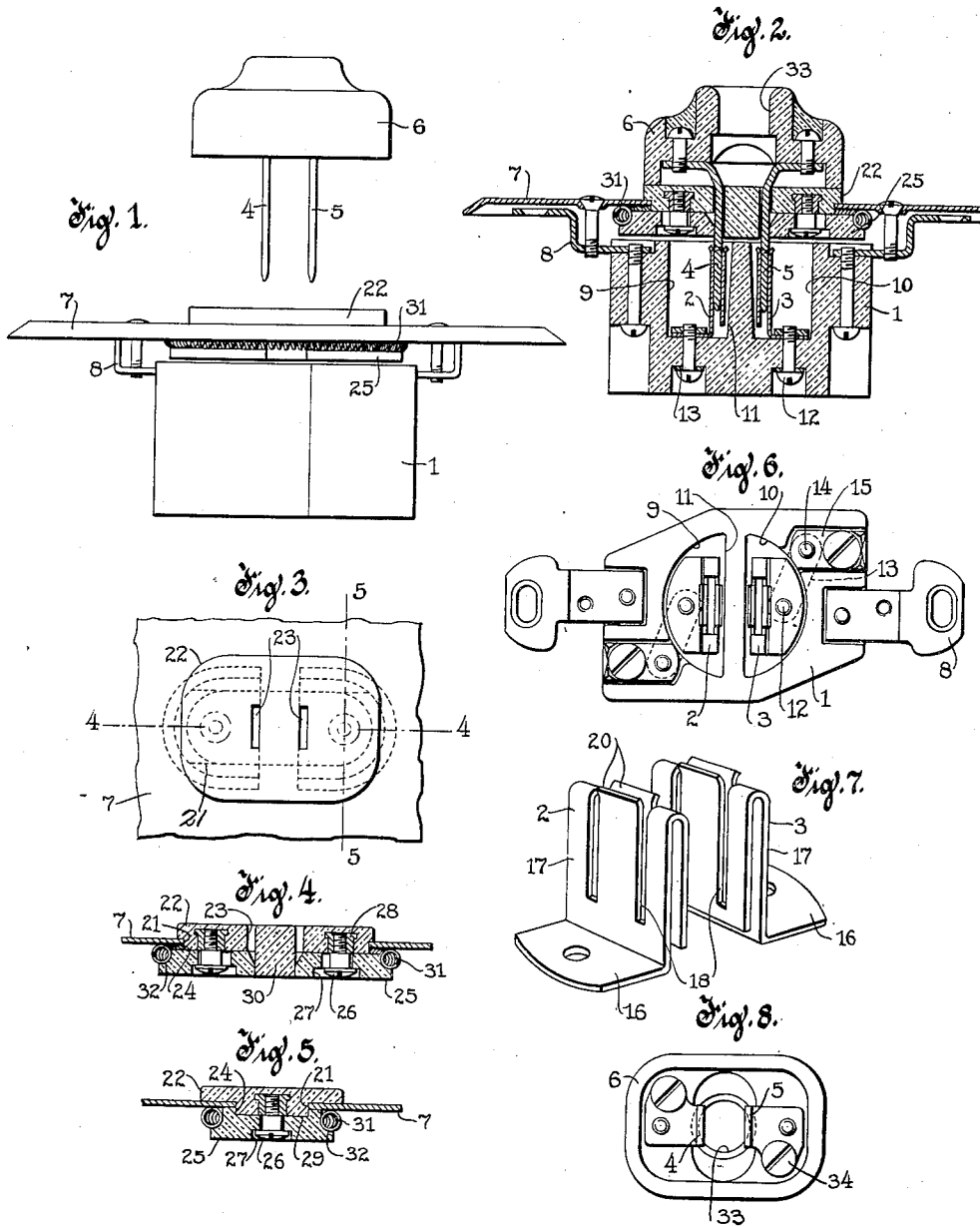


C. J. KLEIN.
 FLUSH RECEPTACLE.
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1,288,922.

Patented Dec. 24, 1918.



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FLUSH RECEPTACLE.

1,288,922.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES J. KLEIN, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Flush Receptacles, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

This invention relates to electric flush receptacles and plugs therefor.

One of the objects of the invention is to provide compact and improved receptacles and plugs of the character mentioned.

Another object is to provide an improved closure for the face plates of such receptacles.

Other objects and advantages will appear hereinafter in connection with a description of the accompanying drawing which illustrates a preferred embodiment of the invention.

In the drawing,

Figure 1 is an elevational view of a flush receptacle and attachment plug therefor.

Fig. 2 is a central sectional view thereof with the plug inserted in the receptacle.

Fig. 3 is a plan view of a closure for the receptacle face plate.

Fig. 4 is a sectional view on the line 4—4 of Fig. 3.

Fig. 5 is a sectional view on the line 5—5 of Fig. 3.

Fig. 6 is a plan view of the receptacle.

Fig. 7 is a perspective view of the receptacle contacts, and

Fig. 8 is a bottom view of the plug.

The device illustrated comprises, in general, an insulating casing or base 1 which houses suitable contact terminals 2 and 3 adapted to releasably engage complementary contact terminals 4 and 5 of an attachment plug 6 for thereby establishing circuit connections between a source of current and a translating device associated with the plug. A metallic face plate 7 of suitable design is provided to cover the casing 1 and is secured thereto through the medium of brackets 8.

Referring more specifically to the drawing, the casing 1 is shown as substantially rectangular and provided with a central recess divided into two semi-cylindrical compartments 9 and 10 separated by a bar-

rier wall 11 preferably integral with the molded insulation of the casing. The receptacle contacts 2, 3 are snugly seated in said recesses and are maintained therein by securing screws 12 which penetrate the bottom wall of the casing and electrically connect said contacts and conducting strips 13. The latter are in turn secured to the base by screws 14 which also penetrate the base and take into conducting strips 15 arranged at diagonally opposite corners of the casing and provided with binding screws for attachment of supply wires. In practice, the screws 12 and 14 and the conducting strips 13 and 15 are counter-sunk in suitable base recesses.

The receptacle contacts 2, 3 are illustrated as formed of one piece metal stampings, and each contact comprises a base portion 16 and an upright reflexed body portion 17 with spaced parallel sides. Said body portion is provided with two limited vertical slots 18 and the metal between the slots is severed at the bend and flared divergently to provide resilient fingers 20. The contacts 4, 5 on the plug are arranged to enter between said flared fingers 20 of the receptacle contacts, as clearly shown in Fig. 2, so that electrical contact is made on both sides of each of the plug terminals. Furthermore, such contact is insured over a relatively large area at all times since the two spaced receptacle contact fingers are independently resilient and are biased to grip the plug terminals.

The face plate 7 has a central substantially rectangular opening 21 immediately in front of the receptacle contacts, and an insulating means is provided to normally close said opening. This means as illustrated, includes an insulating face piece 22 of suitable design having two spaced apertures 23 in alinement with the respective receptacle contacts and adapted to receive and guide the plug terminals. The inner surface of the member 22 is provided with a rectangular offset portion 24 fitting within the plate opening 21 and thus maintaining the closure against angular displacement. Two additional insulating pieces 25 are slidably mounted on the inner face of the member 22 by means of screws 26 which extend through slots 27 in the members 25 and take into threaded taps 28 molded in the piece 22. Said sliding members 25 are

also provided with guiding channels 29 which fit the offset portion 24 and with beveled inner extremities abutting a central lug 30 of the member 22. The members 25 are normally biased together to close the block apertures 23 by means of a coil spring 31 which encircles the closure on the inner side of the face plate 7 and which is seated within a groove 32 of the insulating pieces.

10 The plug 6 is substantially cup-shaped and has a central aperture 33 communicating with opposite grooves which lead to binding posts 34 of the plug terminals 4 and 5. Said plug terminals are rigidly secured to the plug by screws counter-sunk in the insulation. The contour of the plug preferably conforms to the contour of the closure plate 22 so that when the parts are united the sides of the plug lie flush with the margins of the closure plate whereby the conducting parts of the plug are effectively insulated from the metallic receptacle cover.

When the attachment terminals 4 and 5 are plugged into the receptacle, the same enter and pass through the closure apertures 23, spread the beveled insulating members 25 and respectively wedge between the resilient fingers 20 of the receptacle contacts 2 and 3. The members 25 are, however, still biased together by the spring 31 and thus grip the sides of the plug terminals with a tendency to retain the latter against removal. It is to be noted further that the contacting areas of the inter-engaging terminals are relatively large and that said terminals are effectively insulated from each other by the receptacle barrier wall 11, so that the device described is well adapted for use with currents of relatively high value.

40 What I claim as new and desire to secure by Letters Patent is:—

1. In combination, an insulating base having an open recess, spaced terminal contacts mounted in said recess, a cover plate for said base having an opening registering with said contacts, and a member carried by said plate across said opening and having spaced apertures in alinement with said contacts and removed from the sides of said plate opening.

2. In combination, an insulating base having an open recess, spaced terminal contacts mounted in said recess, each contact comprising a base portion and a reflexed body portion partially severed and spread at the sides of the severance, a cover plate for said base having an opening registering with said contacts and a member carried by said plate across said opening and having spaced apertures in alinement with said contacts.

3. In combination, an insulating base having an open recess, a terminal contact mounted in said recess, said contact comprising a reflexed strip having an aperture at the point of bending and its edges about

said aperture divergingly flared, a cover plate for said base having a relatively large opening registering with said contact, a member carried by said plate over said opening and having a relatively small aperture in alinement with said contact and an insulating member carried by said formerly mentioned member and normally closing the aperture thereof.

4. In combination, an insulating base having a recess, spaced terminal contacts mounted in said recess, a metallic cover plate for said base having an opening registering with said contacts, and an insulating member carried by said plate across said opening and having spaced apertures in alinement with said contacts and removed from the sides of said plate opening.

5. In combination, an insulating base having a recess, a pair of terminal contacts mounted in said recess, a metallic cover plate for said base having an opening registering with said contacts, an insulating member carried by said plate across said opening and having apertures in alinement with said contacts, and a plurality of insulating members carried by said first mentioned member and normally closing said apertures thereof.

6. In combination, an insulating base having an open recess, a pair of terminal contacts mounted in said recess, a metallic cover plate for said base having an opening registering with said contacts, an insulating member carried by said plate across said opening, a plurality of insulating members slidably mounted on said first mentioned member, and means biasing said second mentioned members together to close said apertures.

7. In combination, an insulating base having an open recess, a pair of terminal contacts mounted in said recess, a metallic cover plate for said base having an opening registering with said contacts, an insulating member carried by said plate across said opening and having apertures in alinement with said contacts, a plurality of insulating members associated with said first mentioned member and relatively movable in the plane of said plate, and a coil spring encircling said members and biasing the same to close said apertures.

8. In combination, an insulating base having a recess, a pair of spaced terminal contacts mounted in said recess, a metallic cover plate for said base having a relatively large opening registering with said contacts, an insulating member carried by said plate across said opening and having relatively small apertures in alinement with said contacts and removed from the sides of said plate opening, a plurality of insulating members associated with said first mentioned member and movable relatively thereto for obstructing said apertures thereof, and

means biasing said members to normally obstruct said apertures.

9. In combination, an insulating base having spaced recesses therein, a terminal contact mounted in each of said recesses, a metallic cover plate for said base having an opening registering with all of said contacts, an insulating member carried by said plate across said opening and having a restricted passage therethrough in alinement with each of said contacts, a plurality of insulating members slidably mounted on the inner face of said first mentioned member, each of said members being movable to close one of said passages at its inner end and common means biasing said members to normally close said passages.

10. In combination, an insulating base having a plurality of spaced recesses, a terminal contact mounted in each of said recesses, a metallic cover plate for said base having an opening registering with all of said contacts and a single insulating member carried by said plate across said opening and having restricted passages therethrough in alinement with each of said contacts and spaced from the sides of said plate opening.

11. In combination, an insulating base having a recess, terminal contacts mounted in said recess, a metallic face plate for said base having a polygonal opening registering

with said contacts, an insulating member carried by said base across said opening and having an offset portion interfitted with said opening, said member having a passage therethrough in alinement with said contacts, and a pair of insulating members slidably attached to said offset portion of said first mentioned member on the inner side of said face plate.

12. In combination, an insulating base having a recess, terminal contacts mounted in said recess, a metallic face plate for said base having a polygonal opening registering with said contacts, an insulating member carried by said base across said opening and having an offset portion interfitted with said opening, said member having passages therethrough in alinement with said contacts, and a pair of insulating members slidably attached to said offset portion of said first mentioned member on the inner side of said face plate and means biasing said members together to close said passages.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

CHARLES J. KLEIN.

Witnesses:

H. WATSON,
TEKLA BAST.