

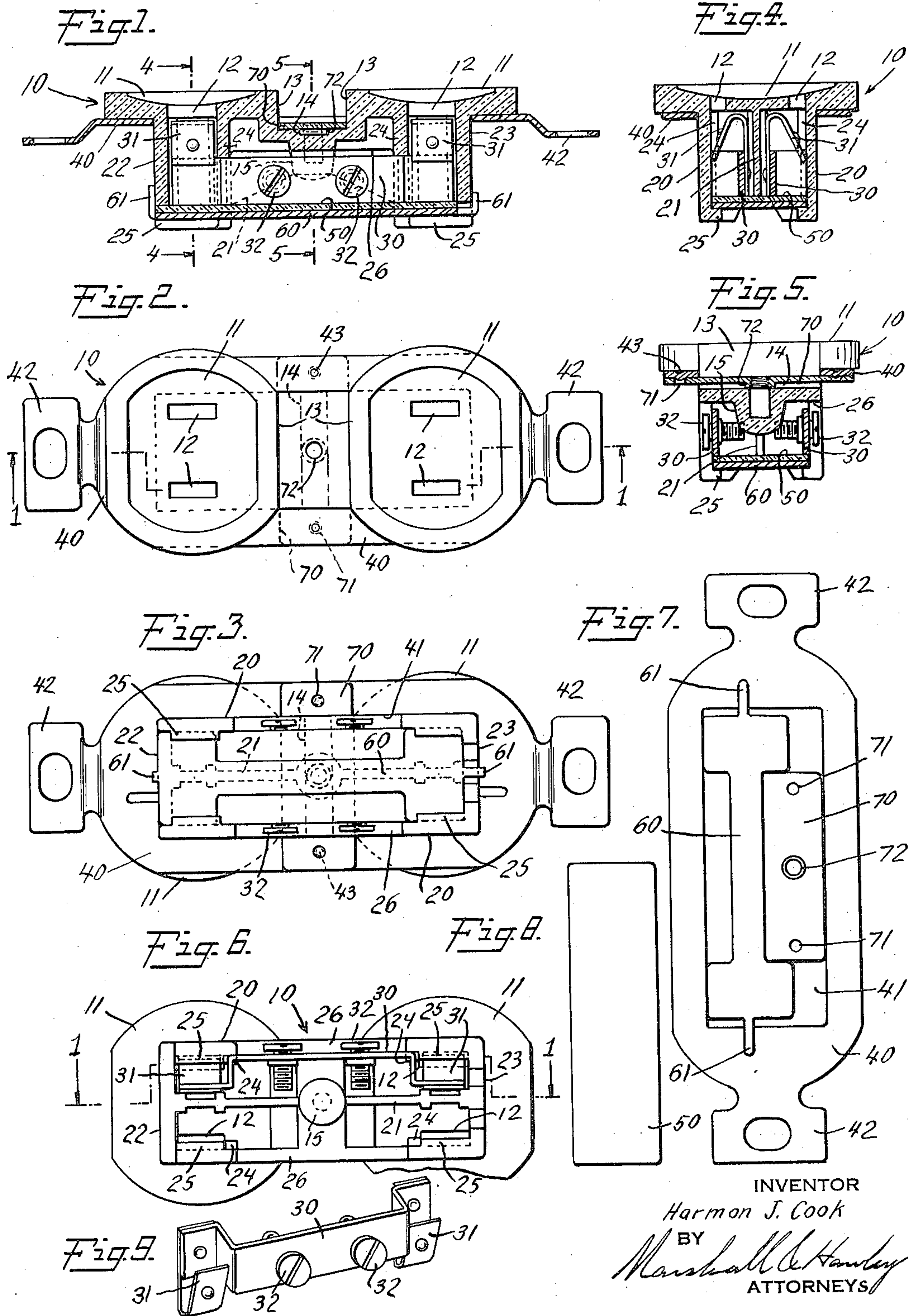
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ELECTRIC RECEPTACLE

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## UNITED STATES PATENT OFFICE

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## ELECTRIC RECEPTACLE

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5 Claims. (Cl. 173—330)

This invention relates to improvements in duplex receptacles for electrical circuit plugs.

Its object is to provide a new arrangement of parts which may be readily assembled to provide a device of sturdy construction at low cost without sacrificing any of the desired characteristics of devices of this kind.

I will describe my invention in the following specification and point out its novel features in appended claims.

Referring to the drawing,

Fig. 1 is a central sectional side elevation of a receptacle which is made according to and embodies this invention, the section being taken on the irregular line 1—1 of Fig. 2 and Fig. 6;

Fig. 2 is a front plan view and Fig. 3 a rear plan view of the device shown in Fig. 1;

Figs. 4 and 5 are sectional end elevations of the device, the sections being taken respectively on lines 4—4 and 5—5 of Fig. 1;

Fig. 6 is a rear plan view of the body upon which the other parts are assembled, with one of the contact members inserted in it;

Fig. 7 is a plan view of three of the parts showing how they are stamped out of one piece of sheet metal to conserve material;

Fig. 8 is a plan view of a piece of sheet insulation which is used as a part of the structure; and

Fig. 9 is a perspective view of one of the contact plates.

10 designates a body of molded insulating material, such as bakelite. This is a unitary structure comprising two spaced face plates 11 through each of which are spaced slots 12. The adjacent sides 13 of these plates are parallel and a rectangular space is left between them under which is a transverse groove 14 and a centrally disposed hollow boss 15.

20, 20 designate side walls, 21 a central web between them and 22, 23 designate end walls. These walls form pockets for the reception of the contact plates. Each of these comprises a metallic strip 30 with spring contact blades 31 affixed to its end and binding screws 32 intermediate its ends. When inserted in these pockets the inner edges of strips 30 are seated on lugs 24. For a purpose which will appear later, the web 21 and the central part of end wall 22 do not extend beyond the outer edges of strips 30, but the end wall 23 is higher. The ends of the side walls 20 are also higher and lugs 25 project inwardly from them. The central part of the side walls cut down as at 26 provides access to the binding screws 32.

40 is a supporting plate having an opening 41 which fits over the walls 20, 20, 22 and 23 back of the face plates 11 and having slotted ears 42.

50 is a flat piece of insulating material which is slid over the contact plate strips 30 and under the four lugs 25. Over this a metallic retaining plate 60 is placed between the insulating piece 50 and the lugs 25. This plate 60 has prongs 61 extending longitudinally from its ends.

70 is a metallic locking member, perforated near its ends as at 71 and having a central threaded boss 72. When the parts are assembled as described this member is slid transversely under supporting plate 40 into the space between the face plate sides 13. The groove 14 provides clearance for the boss 72. Now parts 43 of the supporting plate are indented into the perforations 71 as seen most clearly in Fig. 5. This prevents further movement of the member 70. At the same time the prongs 61 of retaining plate 60 are bent over the walls 22 and 23 so that it too is secured in place.

From Fig. 7 it may be seen that the supporting plate 40, the retaining plate 60 and the locking member 70 may be stamped out of a single piece of sheet metal of no greater dimensions than are needed to form the supporting plate. Thus, with a minimum of material and ease of assembly a receptacle is provided at low cost without sacrifice of strength, insulating properties, or any other characteristic which is desired of an electrical fixture of this kind.

The specific embodiment of the invention which has been shown and described is a duplex socket, but it is apparent that some of its novel features may be utilized in other devices and I intend no limitations other than those imposed by the following claims.

What I claim is:

1. A body of insulating material having pocket forming side walls, a current carrying device within said walls, a piece of insulation between the walls over said device, a metallic retaining plate between the walls over the piece, and lugs projecting inwardly from said walls over the retaining plate.

2. A body of insulating material having pocket forming side walls, a current carrying device within said walls, a piece of insulation between the walls over said device, a metallic retaining plate between the walls over the piece, lugs projecting inwardly from said walls over the retaining plate, and means for preventing longitudinal displacement of said plate.

3. A body of insulating material having pocket



forming side walls and end walls, a current carrying device within said walls, a piece of insulation between the side walls over said device, a metallic retaining plate between the side walls  
5 over said piece, and lugs projecting inwardly from said walls over the retaining plate, said retaining plate having portions bent down onto the end walls.

4. A body of insulating material having side  
10 walls, end walls and an intermediate web forming separate pockets, a current carrying device in each of said pockets, a piece of insulation between the side walls over said devices, a metallic retaining plate between the side walls and over  
15 said piece, and lugs projecting inwardly from the

side walls over the retaining plate, said retaining plate having prongs bent down upon the end walls.

5. A body of insulating material constructed to form spaced pairs of slots and having side walls, end walls and an intermediate web forming separate pockets, a contact bar in each of said pockets having spring contacts opposite said slots, a piece of insulation between the side walls over said contact bars, a metallic retaining plate between  
10 the side walls and over said piece, and lugs projecting inwardly from the side walls over the retaining plate, said retaining plate having prongs bent down upon the end walls.

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