

Aug. 17, 1926

1,596,684

M. PROPP

ELECTRIC PLUG SOCKET

Filed Feb. 11, 1924

Fig. 1.

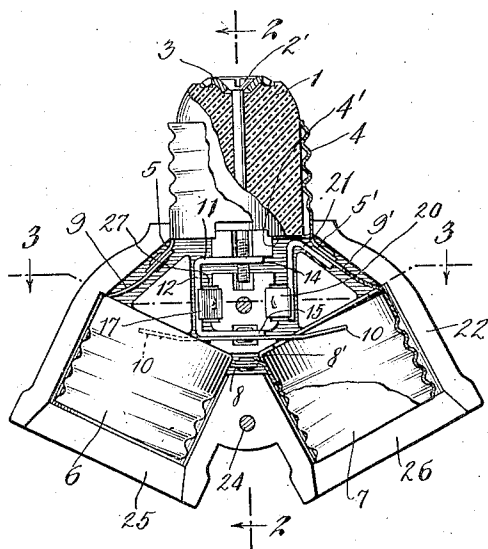


Fig. 2.

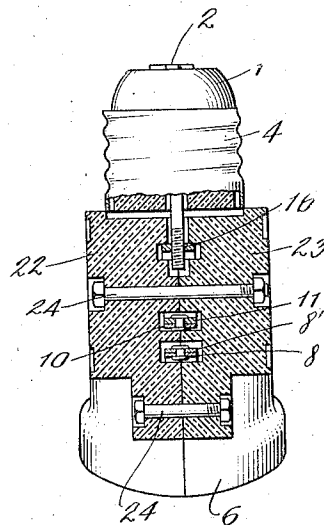


Fig. 3

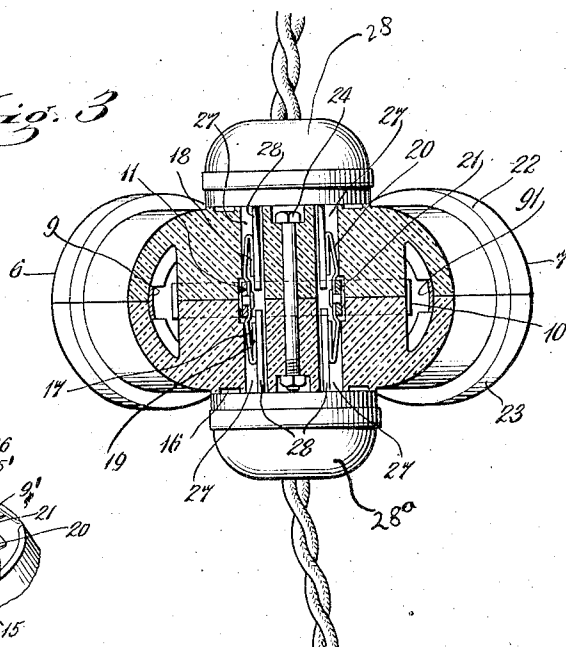
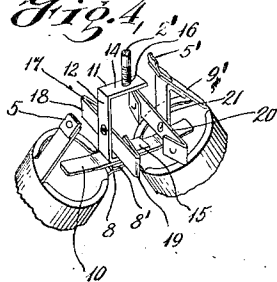


Fig. 4.



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Patented Aug. 17, 1926.

1,596,684

UNITED STATES PATENT OFFICE.

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ELECTRIC PLUG SOCKET.

Application filed February 11, 1924. Serial No. 691,923.

This invention relates to improvements in electrical plug sockets. More particularly, it is directed to multiple electrical sockets adapted for making connection with a plurality of electrical appliances or devices.

Among the objects of the invention is the provision of a multiple socket of the character described adapted for both the screw and knife blade types of electrical connection so as to permit the use with a single plug socket unit of a number of connectors of either of the types mentioned, and which shall be simple and durable in construction and efficient in operation to a high degree.

Other features of the invention reside in the novel manner of connecting the various sockets to the plug by the least possible number of parts and also in the construction of the sectional shell enclosing the various parts formed of insulating material and provided with suitable integral projections by means of which the movable contact elements are spaced and insulated.

Other objects of the invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter described and the scope of the application will be indicated in the following claims.

In the accompanying drawings forming a part of this specification illustrating one embodiment of this invention,

Fig. 1 is a vertical sectional view through the shell, parts of the interior being broken away in section;

Fig. 2 is a section on line 2—2 of Fig. 1;

Fig. 3 is a sectional view on line 3—3 of Fig. 1; and

Fig. 4 is a partial perspective view of the screw shell socket portions of the device.

The main elements of the present invention are connected to and supported by a plug 1 made of suitable insulating material and provided with the central contact 2. The contact 2 comprises a screw member 2', the shank of which is threaded and projects through a central bore in the plug, and the conical washer plate 3, the latter being held in position in a suitable recess by means of the head of the screw. It will be noted that the threaded shank extends through and well below the plug body.

A threaded brass shell 4 which forms the

outer contact encloses the plug 1 from a point spaced from its outer end and is provided with a series of lips 4' projecting inwardly against the bottom of the plug, and lateral extensions 5—5' through which contact is made with the two sockets 6 and 7 as will hereinafter more clearly appear.

Extending from said plug 1 are screw shell sockets 6 and 7 adapted to receive the usual screw plug and being formed with integral radiating extensions 8 and 8' which are riveted or otherwise secured together to permit an adjustable joint. At diametrically opposite points to the extensions 8 and 8' are the elongated integral extensions 9 and 9' which are fastened at their extremities to the extensions 5, 5' of the shell 4. By the foregoing arrangement of parts an assembly is provided including a plug and two sockets, the shell from the plug being in circuit with the two screw sockets and forming a common terminal therewith.

The central contacts for the sockets 6 and 7 are formed by means of the contact bar 10 supported by the contact screw 2' through the medium of the element 11. The element 11 which is the direct supporting means for the contact bar 10 includes the intermediate portion 12 and the arms 14 and 15 projecting in the same direction at right angles thereto. The upper arm 14 is provided with a threaded perforation 16 through which the screw 2' passes and by means of which the support 11 is positioned, it being obvious that the threaded screw shank permits suitable adjustment of the support 11 and through the latter of the contact bar 10. It will also be noted that by this construction and arrangement the intermediate portion of the element 11 is offset with respect to the vertical axis of the plug 1 so as to provide for the proper positioning of the double contact element 17 which is supported thereby. This contact element is formed by bending the end portions of a piece of spring metal inward upon the central portion thereby forming spring contact elements 18 and 19. These contact elements 17 and 20 are adapted to make contact with the knife contacts 28 of the usual knife plug such as 28^a as will hereinafter appear. Another contact element 20, similar in construction to element 17 is supported from the lower end of the angular hanger element 21, the latter being secured in position by engagement with the rivet which likewise fastens together the members 5' and

9. With regard to both of the double contact elements 17 and 20, their arrangement is such that their spring contact faces are properly spaced for engagement by the spaced arms of the usual plug, and it will be obvious from the foregoing description that the connections between the various parts is such that current is carried for proper circuits to the plugs in use.

10 For enclosing, spacing and insulating the various parts heretofore described, I provide an insulating shell or casing comprising two similar sections 22 and 23. Each section of this shell is provided with suitable registering central perforations for the reception of suitable fastening means such as bolts 24. Likewise, cylindrical pockets 25 and 26 are provided for the threaded socket member 6 and 7, it being understood that all irregular surfaces for seating the various parts of the device are formed similarly in each half of the shell and in such a manner as to register when the shell sections are assembled. The registering grooves for accommodating the support and contact elements will be best seen from Fig. 2, and it will be noted in this figure that the various conducting elements of the invention are spaced and insulated from each other wherever necessary by the novel construction of the shell sections. The shell sections 22 and 23 are perforated at 27 to form seats for the double contact elements 17 and 20 and likewise to provide a guide-way for the knife contact elements 28 of a knife plug socket such as 28^a. (See Fig. 3.) In this figure will also be clearly seen the arrangement of the double contacts and the engagement of the plug contact there-with.

From the foregoing description it will be seen that there is provided a device which is capable of carrying from a single line two screw plugs and two knife plugs, and the various elements comprising my device are comparatively few in number and are arranged to be cheaply and conveniently and compactly assembled, and suitably insulated in a novel insulating casing or shell. As various possible embodiments might be made of the above invention and as various changes might be made in the disclosures above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention. I claim as new and desire to secure by Letters Patent:—

60 1. A multiway socket comprising a plug having a central contact member and an

outer shell, an integral extension depending from said shell, a supporting arm fixed to said extension, a contact member carried by said support, a supporting arm carried by the central contacting member, a contact member carried by the last mentioned supporting arm, and a sectional shell formed with apertures for the reception of said contact members.

2. A multiway socket comprising a plug of insulating material, a central contact member extending longitudinally there-through, a threaded shell for said plug, a series of lips projecting from said shell and engaging the bottom of said plug, a pair of depending arms extending from said shell, a pair of threaded sockets carried by said depending arms, a central contact member for said sockets comprising a bar having flexible terminals, means for supporting said bar from the central contact of said plug, double contact members arranged in spaced relation between the sockets and plug, one of said contact members being in circuit and supported by the central contact of said plug and the other of said contact members being in circuit and supported by said shell.

3. A multiway socket comprising a plug having a central contact member and a threaded external shell, screw sockets supported by and in circuit with said shell, a common central contact member for said sockets, a support for said contact member having an offset central portion, a double spring contact member fixed to the offset portion of said support, a bracket fixed to said shell, a double contact member carried by the lower extremity of said socket, and an insulating casing member formed with integral spacing extensions.

4. A multiway socket comprising a plug having a central contact member extending therethrough and a threaded shell formed with spaced extensions, screw socket members provided with spaced extensions and having their adjacent edges connected together, the spaced extensions on said threaded shell being connected to the extensions of said socket members, a support having an off-set portion carried by the central contact member of said plug, a central contact member for the sockets carried by said support, a contact member fixed to the offset portion of the support, a support fixed to one of the extensions of said shell, and a contact carried by said support.

In testimony whereof I affix my signature.

MORRIS PROPP.