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L. J. WAHL

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ELECTRIC CORD PLUG ADAPTER

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Fig. 1

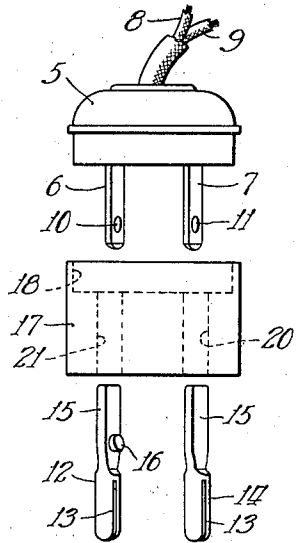


Fig. 2

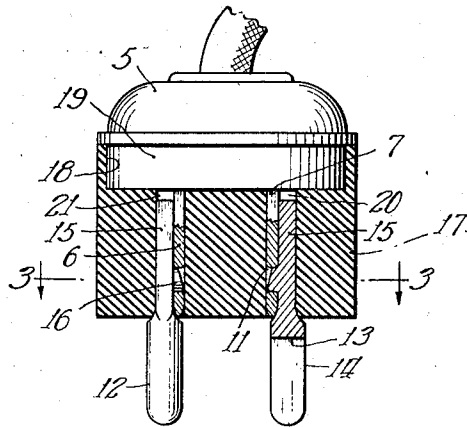


Fig. 3

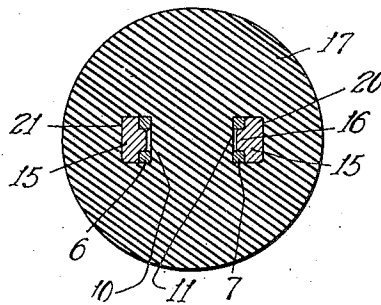
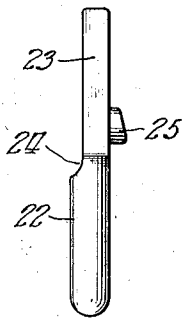


Fig. 4



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*Cliffs*

# UNITED STATES PATENT OFFICE

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## ELECTRIC CORD PLUG ADAPTER

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5 Claims. (Cl. 173—344)

My invention relates to attachment plugs or connectors for electrical cords and more particularly to an adapter which is for the purpose of changing a standard plug of one type to a standard plug of another type.

In plug connectors for electrical cords, the side spacing and shape of the connecting prongs are different in the different countries. For example, in the United States, a standard plug utilized for most all electrical devices that are operated from the ordinary supply lines consists of a body having mounted therein two prongs which are spaced apart a certain definite distance and which are flat or, to be more correct, rectangular in cross section. These prongs may be provided adjacent their free ends with apertures. In other countries, the system of using two prongs on a plug is also employed, but the spacing may be different, and the shape of the prongs is also different. For example, the English type plug employs round slotted prongs having a spacing somewhat greater than the United States type. The German type prong is similar to the English type except that the prong is smaller in diameter and the spacing is somewhat different.

The present invention contemplates an adapter structure whereby prongs of the English or German or other different types may be readily provided in conjunction with a standard United States type of plug.

I will describe the preferred form of the invention by reference to the accompanying drawing wherein—

Fig. 1 is a view in side elevation showing the several parts of a device embodying the invention separated from each other;

Fig. 2 is a vertical sectional view through an assembly of the parts in Fig. 1 after they have been placed together;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2; and

Fig. 4 is a view in side elevation of a modified form of prong.

Referring now in detail to the drawing, the numeral 5 indicates an insulating body or base for a connector plug. This body has fixed therein two prongs 6 and 7 which prongs are connected in any well known manner to a pair of electrical conductors 8 and 9. In the standard United States form of plug, the prongs 6 and 7 are substantially rectangular in cross section and have their wider surfaces parallel to each other. Also, usually these prongs are provided with apertures 10 and 11 adjacent the free ends thereof.

A foreign prong for plugs of this type is shown

at 12. It will be noted that this prong is substantially cylindrical in cross section, and it may be slotted at 13 as will be readily understood. In the foreign plugs, of course, this prong is mounted is a base such as 5 with a proper spacing from a similar prong 14 to fit the sockets provided in that particular country. Therefore, the devices 12 and 14 shown herein are not actual reproductions of the foreign prongs. They merely have the socket engaging portions of the same size and shape as the foreign prong. Each of the devices 12 and 14 has a shank portion 15 which is substantially rectangular in cross section and which may or may not be aligned with the axis of the rounded portions of the devices 12 and 14. The degree of offset of the shanks 15 determines the spacing which the prongs 12 and 14 will ultimately have. Each of the shanks 15 has formed thereon a lug 16 which lug is shaped to fit the apertures 10 and 11 and to prevent the plug coming apart on the U. S. standard side.

Referring now to Fig. 2, the auxiliary prongs 12 and 14 are shown attached to the standard prongs 6 and 7. A retaining body 17 is utilized as the means for holding the prongs 6 and 7 and their auxiliary prongs 12 and 14 assembled together. This body 17 is substantially cylindrical in cross section and is constructed of a resilient material such for example as rubber. The body 17 has a recess at 18 in which a reduced portion 19 of the plug body 5 is seated. The body 17 also has a pair of apertures 20 and 21 which apertures are spaced to receive the prongs 6 and 7. The apertures 20 and 21 are slightly smaller in dimensions than the combined thickness of the prongs 6 and 7 and the associated shanks 15 of the auxiliary prongs 12 and 14.

The manner of assembly, it is believed, will be clear from Figs. 1 and 2. The body 17 is first shoved into the position shown in Fig. 2 over the prongs 6 and 7. After this has been done, the auxiliary prongs 12 and 14 are shoved into the openings 20 and 21 along side the prongs 6 and 7 until the lugs 16 on the shanks 15 drop into the openings 10 and 11. The resiliency of the body 17 permits the insertion of the shanks 15 without great difficulty, and, after the shanks are inserted, the body 17 will hold them tightly against the prongs 6 and 7.

In Fig. 4, I have illustrated an auxiliary prong 22 for the purpose of showing how the spacing between the auxiliary prongs may be changed by the mere substitution of different auxiliary prongs. In the auxiliary prong 22, a shank 23 thereof is offset in the formation of the prong so

that one side of the shank is aligned with the surface of the prong while the other side is set in as indicated at 24. A lug 25 is provided the same as in the form shown in Figs. 1 to 3. It will be obvious that, if two prongs such as 22 are utilized in place of the prongs 12 and 14, a different spacing between prongs will result. The diameters and shapes of the socket engaging portions of the auxiliary prongs may be made such as to fit the sockets with which they are to be used.

Having thus described one specific form of my invention, what I claim as new and desire to secure by Letters Patent is:

1. An adapter for electric cord plugs of the type having spaced parallel prongs shaped and spaced to seat in one socket, said adapter comprising a body of resilient material having spaced openings extending through the body, one end of each opening being adapted to receive one of the prongs of a plug, auxiliary prong members having shank portions entering the body at the other end of said openings, and contacting with the plug prongs to establish electrical contact with the plug prongs in the openings, said auxiliary prong members having prong portions projecting from the body and shaped and spaced to seat in a different socket, said prongs being held in place by the pressure of the resilient body thereon.
2. An adapter for electric cord plugs of the type having spaced parallel prongs, said adapter comprising a body of resilient material having spaced openings extending through the body, one end of each opening being adapted to receive one of the prongs of a plug, auxiliary prong members having shank portions entering the body at the other end of said openings, and adapted to establish electrical contact with the plug prongs in the openings, said auxiliary prong members having prong portions projecting from the body and adapted to seat in a socket, said prongs being held in place by the pressure of the resilient body thereon, the shanks of the auxiliary members and the prongs of the plugs having cooperative interlocking portions.
3. An adapter for electric cord plugs of the type having spaced parallel prongs, said adapter

comprising a body of resilient material having spaced openings extending through the body, one end of each opening being adapted to receive one of the prongs of a plug, auxiliary prong members having shank portions entering the body at the other end of said openings, and contacting with the plug prongs to establish electrical contact with the plug prongs in the openings, said auxiliary prong members having prong portions projecting from the body and adapted to seat in a socket, said prongs being held in place by the pressure of the resilient body thereon, the prong portions of said auxiliary members being of a different shape than the plug prongs.

4. An adapter for electric cord plugs of the type having spaced parallel prongs, said adapter comprising a body of resilient material having spaced openings extending through the body, one end of each opening being adapted to receive one of the prongs of a plug, auxiliary prong members having shank portions entering the body at the other end of said openings, and contacting with the plug prongs to establish electrical contact with the plug prongs in the openings, said auxiliary prong members having prong portions projecting from the body and adapted to seat in a socket, said prongs being held in place by the pressure of the resilient body thereon, the prong portions of said auxiliary members being provided with a different spacing than the plug prongs when assembled with the body and the plug.

5. An adapter for electric cord plugs of the type having spaced parallel prongs, said adapter comprising a body of resilient material, said body being apertured to receive the prongs of the plug, auxiliary prong members having shank portions inserted in the apertured body from the end thereof opposite the plug, said shank portions being overlapped with the plug prongs and held in place by the pressure of the body thereon, said auxiliary prong members having prong portions formed to seat in a socket incapable of receiving the plug prongs.

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