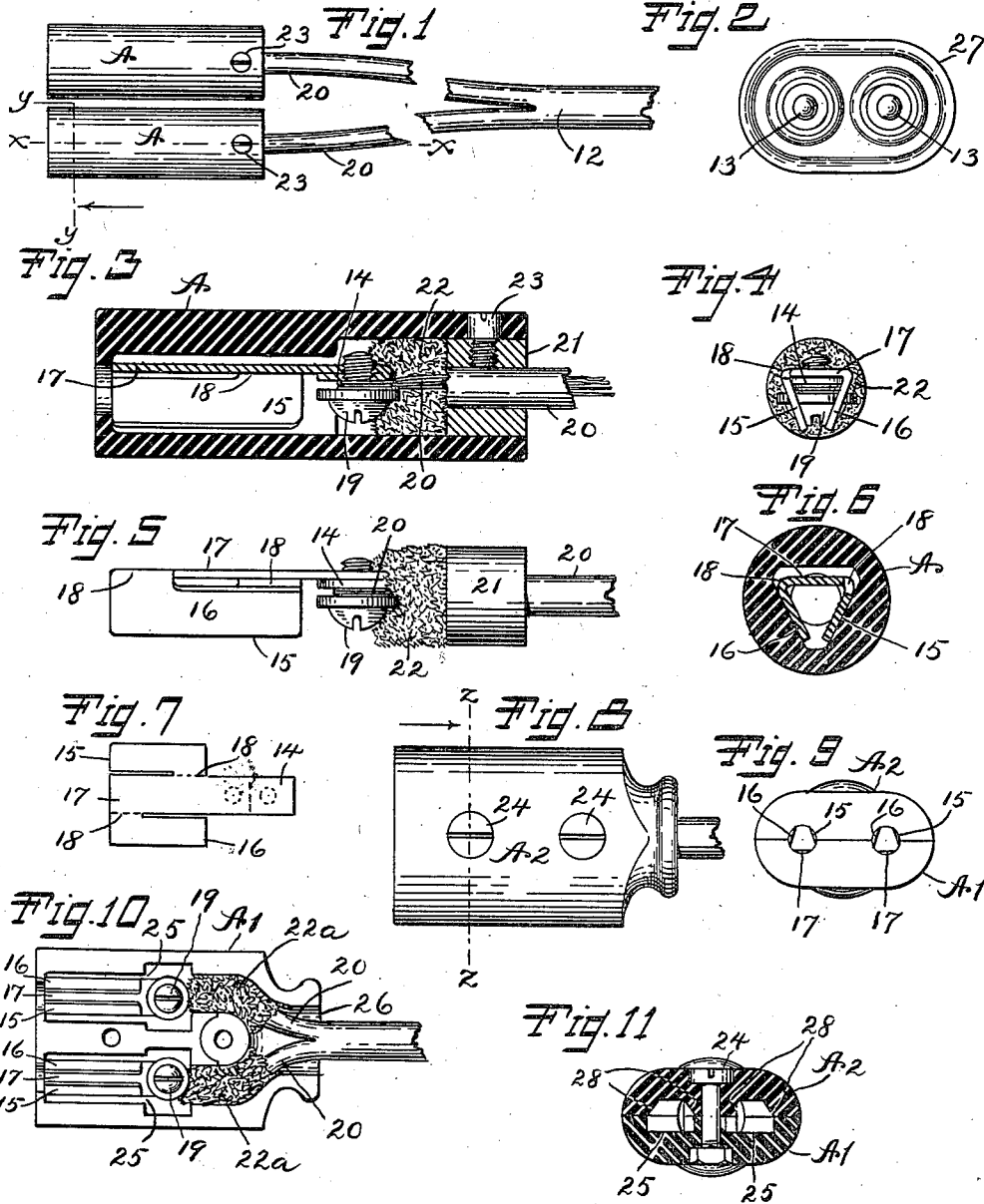


A. A. WARNER.
 PLUG CONNECTION FOR ELECTRICAL WORK.
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Witnesses:

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UNITED STATES PATENT OFFICE.

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To all whom it may concern:

Be it known that I, ALONZO A. WARNER, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Plug Connections for Electrical Work, of which the following is a specification.

My invention relates to improvements in plug connections for electrical work and the objects of my improvement are efficiency in operation and simplicity and economy in construction.

In the accompanying drawing:—Figure 1 is a side elevation of the two plug receptacles of my connection, together with a broken view of a portion of the covered wires to which they are attached. Fig. 2 is an end view of the plug members of my connection together with a hood within which they are mounted. Fig. 3 is an enlarged sectional view of one of the receptacles shown in Fig. 1, the same being taken on the line *x x*. Fig. 4 is an end view of the same less the case or shell. Fig. 5 is a side elevation of the same. Fig. 6 is a transverse section on the line *y y* of Fig. 1. Fig. 7 is a plan view on a smaller scale of the blank from which the yielding jaws and shank of the plug receptacle are formed. Fig. 8 is a plan view of a double case or shell for two plug receptacles of my connection, together with a portion of the wires attached thereto. Fig. 9 is an end view of the same. Fig. 10 is a plan view of the same with one-half of the case or shell removed. Fig. 11 is a sectional view of the said case or shell on the line *z z* of Fig. 8.

A designates the case or shell of suitable non-conducting material and preferably cylindrical in form. That end from which the wire or cable 12 is extended is bored cylindrically for nearly half of its length and from the end of the bore toward the other end is provided with an axial opening or chamber of substantially a triangular form in cross section while a short portion at the end is round and of a size to admit one of the pins or plugs 13. I form the yielding jaws and shank 14 of the plug or pin receptacle of a single piece of resilient sheet metal from a blank of the form shown in Fig. 7, in which 15 is the shank that is doubled upon itself on the transverse broken line and then drilled and tapped to

receive a binding post as indicated by the two broken circles. The blank is slotted from its outer end inwardly between the jaws 15 and 17 and substantially in the line of the edge of the shank 14, and from its shank end outwardly between the jaws 16 and 17 leaving short connections 18 between the said jaws and at their opposite ends as shown. After doubling the shank on itself, as shown, in order to give sufficient depth of hole for the thread of the binding post 19 the blank is bent along the line of the connections 18 in the direction to turn the jaws 15 and 16 downwardly from the position shown in Fig. 7. An open space is left between the confronting edges of the jaws 15 and 16 as shown in Figs. 4 and 6. These yielding jaws and their integral shank in connection with a triangular chamber for them in the shell constitute the main feature of my invention. The wires 20 after passing through the collars 21 and asbestos wads 22, are connected with the shanks 14 through the binding post 19. The jaws and connected parts are then inserted within the shells or cases A A and secured therein by the screws 23.

If desired, instead of two shells or cases, the two wires may be connected with two plug receptacles, in a double case, as in Figs. 8 to 11, in which A¹ designates the lower half of the shell or case and A² the cap or upper half. These are divided longitudinally and held together by bolts 24. The lower half is chambered out with a flat face or bottom wall 25 to receive the back or middle jaw 17 as shown in Figs. 10 and 11. From this chamber there is a passage for the wires 20, the passages for the two wires running together at the middle where the two wires properly covered may extend out through a single opening 26 and both wires may be wadded with asbestos 22^a. The other half A² is similarly recessed only the side walls 28 of its jaw chamber are inclined to substantially the same angle as the jaws 15 and 16, the said walls being deep enough and far enough apart to freely accommodate the said jaws, the outer edges of which are not brought quite together as shown in Fig. 10. The two pins or plugs 13 are shown as mounted within a hood 27 at the rear end thereof, the said hood and plug being intended for application to electrically heated percolators or other elec-

trical devices. The two cases shown in Figs. 1 and 2, or the one case shown in Figs. 8 to 11, and their plug receptacles may either of them be connected with the said pins.

5 By my improvement the yielding jaws are of a simple and inexpensive construction and may be conveniently placed within the shell or shells. The shank for the binding posts may also be cheaply and readily
10 formed of sheet metal and in one piece with the jaws. The three jaws are in the form of a triangle in cross section or end view and the walls of the chambered case or shell are of an angular form so as to prevent rota-
15 tion of the jaws within the shell, while the said angular walls protect the jaws against being unduly bent out of shape. There is one wall in the chambered cases for each of the said three jaws. By constructing the
20 three jaws from a slotted blank, with the slots extended from the opposite ends of the jaws, the jaws are resilient for substantially their whole length and will yield in various directions as to insure a good connection for
25 the whole length of that portion of the pin or plugs received therein.

I claim as my invention:—

1. In a plug connection, the resilient jaws
30 formed of sheet metal bent into triangular form, the three sides thereof constituting three jaws, and a protecting case having a chamber for said jaws of an angular form in cross section with walls for the three sides of the said three jaws.

2. In a plug connection the resilient jaws 35 formed of sheet metal slotted from the opposite ends of the jaws on opposite sides of the middle jaw, one of the other jaws being connected to the said middle jaw by a connection at one end and the other end of the 40 other jaws being connected with the middle jaw at its opposite end.

3. In a plug connection, a set of resilient jaws formed of sheet metal and bent into a triangular form, the three sides of the said 45 connection being extended in the longitudinal direction of the same, and a shank formed on the same piece of metal with the said jaws and extended longitudinal from one of the said triangular sides and binding 50 post mounted on one end of the said shank.

4. In a plug connection, the resilient jaws and shank formed of sheet metal in triangular form in cross section, a binding post 55 mounted in the said shank, a shell or case having an axial opening therethrough, a portion of the said opening being of an angular form with walls for the three jaws, and a portion thereof being cylindrical, a collar for the wire within the said cylindrical por- 60 tion of the said opening, and means for securing the said collar within the end of the said case.

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