Jan. 10, 1933. R. S. McNEIL 1,894,112

EXTENSION OUTLET

Filed May 4, 1931

Fig. 1.

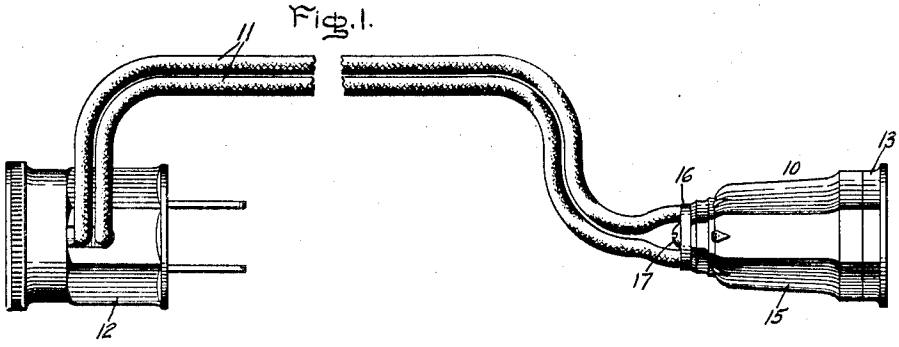


Fig. 2.

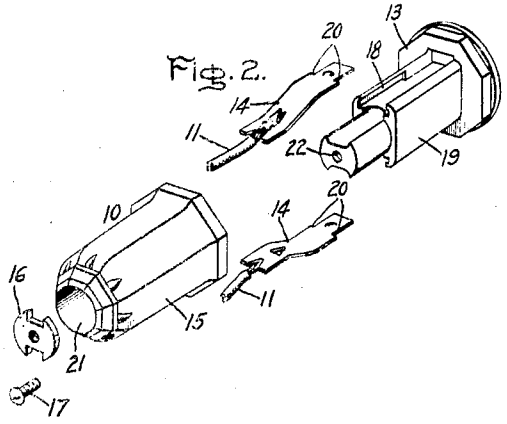


Fig. 3.

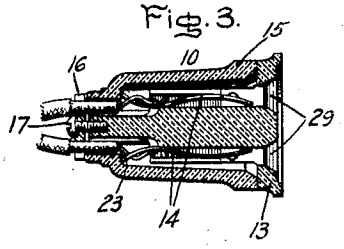
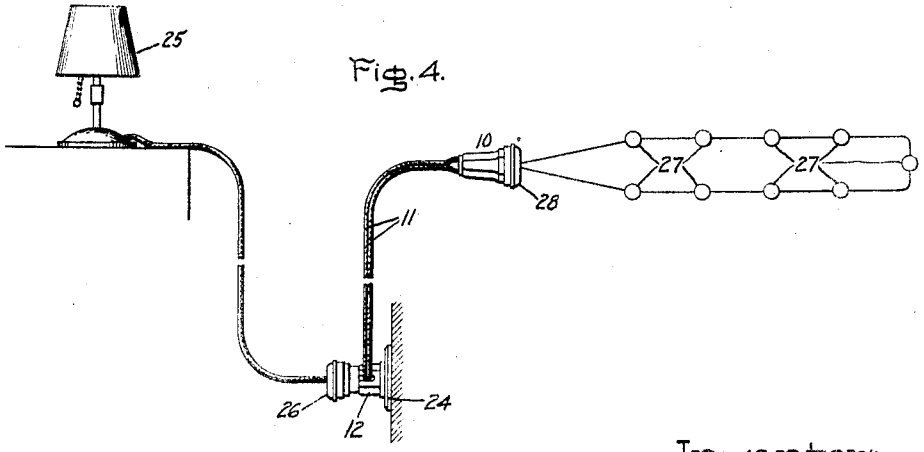


Fig. 4.



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UNITED STATES PATENT OFFICE

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EXTENSION OUTLET

Application filed May 4, 1931. Serial No. 534,935.

My invention relates to an extension outlet which may be connected at any point in an electrical circuit to provide an outlet to which an attachment plug may be connected to energize another circuit.

The object of my invention is to produce an extension outlet consisting of a minimum number of parts which will be of low cost of manufacture and which will be easy to assemble and durable.

In the accompanying drawing, Fig. 1 shows in elevation an attachment plug; Fig. 2 is an exploded view of the extension outlet; Fig. 3 is a cross-sectional view of the extension outlet assembled, and Fig. 4 shows a circuit in which my extension outlet may be utilized.

Referring to the drawing, Fig. 1, extension outlet 10 is shown connected by means of conductors 11, through a side opening to an attachment plug 12. When used in this way, extension outlet 10 permits the connection of a circuit at any distance from a convenience outlet to which attachment plug 12 may be connected, depending upon the length of conductors 11.

Referring to Fig. 2, extension outlet 10 comprises a socket 13, contact blades 14, shell 15, washer 16 and stud 17. Socket 13 is made of insulating material and is provided with recesses 18, extending longitudinally throughout a portion of the tongue 19. Contact blades 14, when assembled are located in recesses 18. Contact blades 14 are curved to provide a resilient contact to engage the blades of an attachment cap and produce a firm engagement between the blades of the extension outlet and attachment cap. Shoulders 20 are provided on the contact blades 14 to seat against the ends of recesses 18, which ends form cooperating shoulders. Conductors 11 are attached to the contact blades by soldering or other suitable means. Shell 15 is of insulating material and adapted to enclose the contact blades. Opening 21 is provided in the base of shell 15 through which conductors 11 may be inserted. Opening 21 is sufficiently large to permit the insertion of contact blades 14 therethrough so the contact blades may be connected to conductors 11 before the assembly of the extension outlet 10. Insulating washer 16 is provided with recesses which engage conductors 11 to hold them in spaced relationship and to serve as a strain reliever for the connection with the contact blades 14. At the center of insulating washer 16, is an opening for the insertion of stud or screw 17. Socket 13 is provided with a screw threaded hole 22 for the insertion of stud 17. Shell 15 is provided with an inwardly extending shoulder 23 (Fig. 3) to provide a seat for contact blades 14. As may be clearly seen in Fig. 3, the component parts of the extension outlet 10 are held in operative relationship solely by stud or screw 17. Contact blades 14 are clamped in position in the recesses between the seat at the end of the recesses and the shoulder 23 on the shell 15. For the reception of the contact blades of an attachment cap, openings 19 are provided in socket 13.

In Fig. 4, extension outlet 10 is connected to an attachment plug 12, which is inserted in a convenience outlet 24. In the present instance a table lamp 25 is shown as being connected by means of an attachment plug 26 to a socket outlet in attachment plug 12. A group of series connected lamps 27 are connected by means of an attachment plug 28, to the extension outlet 10. It is obvious that extension outlet 10 may be connected to any electrical circuit in multiple or in series to provide an outlet to which another circuit may be connected by means of an attachment plug. As an example, the extension outlet may be connected in multiple with a group of Christmas tree lights at the opposite extremity of the group from the attachment plug. In such a case, another group of Christmas tree lights might be connected by means of the extension outlet and thus extend the distance from the convenience outlet to which the Christmas tree lights may be connected. In the example shown in Fig. 4, the distance that the group of lights 26 may be located with respect to convenience outlet 24, is only dependent upon the length of the conductors 11.

By my invention I provide an extension outlet wherein the several parts are held in

assembled relation by means of a single screw, no screws being required to fasten the contact blade in position, since such blades are held firmly in place between the shoulders on the socket member and the end of the shell. The washer 16 serves as a strain reliever for the connection between the cord and the contact blades so that in use, a conductor is not likely to be pulled loose from a contact blade. Also, the assembling of the outlet is a simple operation, easily and quickly performed and readily carried out by relatively unskilled workers. In assembling, the contact blades to which the conductors have been attached are passed through the opening 11 in the end of the shell and laid in the recesses 18, after which the shell 15 is slipped over the tongue 19 into engagement with the head of the socket 13. The parts are then fastened by washer 16 and screw 17, the washer abutting the end of shell 15 serving to cover opening 21.

What I claim as new and desire to secure by Letters Patent of the United States, is:

1. An extension outlet comprising an insulating shell having internal shoulders at its base, contact blades with one end engaging the internal shoulders of said shell and the other end having shoulders at either side, and an insulating socket member provided with a tongue having longitudinal recesses to receive said contact blades and seats for the shoulders of said contact blades whereby the contact blades are clamped in position between the shell and socket member.

2. An extension outlet comprising a socket member having a tongue provided with recesses having shoulders at their inner ends, contact blades seated in said recesses and having shoulders which engage the shoulders at the ends of the recesses, a shell which fits over the tongue and contacts and engages the ends of the contacts to hold them in engagement with the shoulders of the recesses, and means for fastening the shell in position on the tongue.

3. An extension outlet comprising a socket member having a tongue provided with recesses having shoulders at their inner ends, contact blades seated in said recesses and having shoulders which engage the shoulders at the ends of the recesses, a shell which fits over the tongue and contacts and engages the ends of the contacts to hold them in engagement with the shoulders of the recesses, a washer abutting the end of the shell, and a stud passing through the washer and in threaded engagement with the socket member.

In witness whereof I have hereunto set my hand.

RODERICK S. McNEIL.