

Jan. 15, 1929.

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1,698,820

CURRENT TAP FOR INSTALLATION ON ELECTRIC SUPPLY CORDS

Original Filed March 5, 1921

Fig. 1.

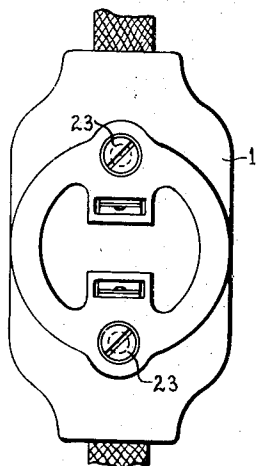


Fig. 2.

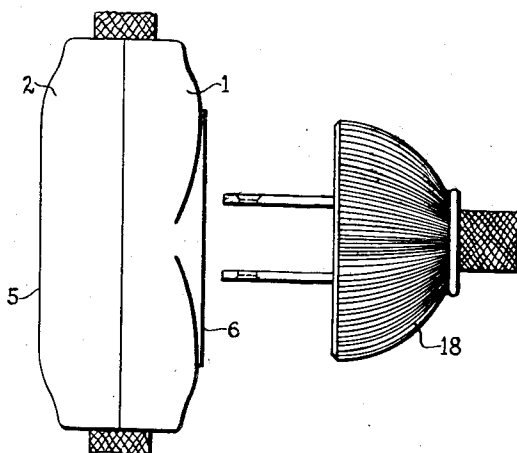


Fig. 3.

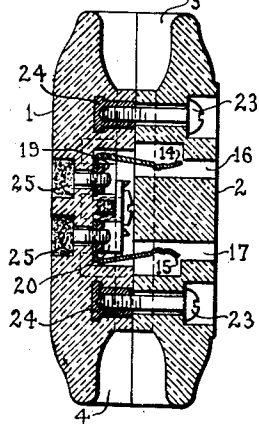


Fig. 4.

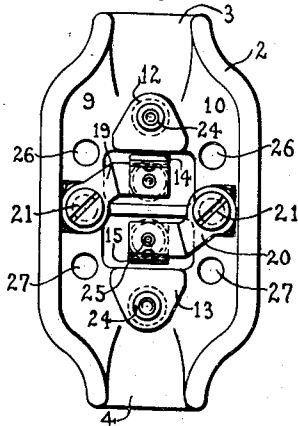


Fig. 5.

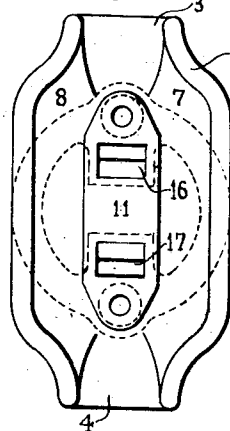


Fig. 6.

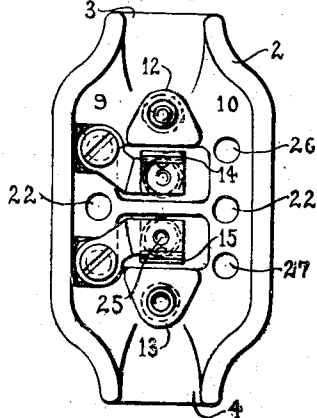


Fig. 7.

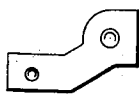


Fig. 8.



Fig. 9.



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UNITED STATES PATENT OFFICE.

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CURRENT TAP FOR INSTALLATION ON ELECTRIC-SUPPLY CORDS.

Application filed March 5, 1921, Serial No. 449,750. Renewed April 6, 1928.

This invention relates to current taps for installation on electric supply cords.

An object of the invention is to provide a simple, safe and neat appearing device of such character which may be easily and quickly installed on a cord to utilize the latter for supplying an additional circuit.

Another object is to provide a device of the character set forth which by a very slight modification may be converted into a series tap.

Various other objects and advantages will hereinafter appear.

The accompanying drawing illustrates certain embodiments of the invention which will now be described, it being understood that the embodiments illustrated are susceptible of various modifications without departing from the scope of the appended claims.

In the drawing,

Figure 1 is a plan view of one form of device exclusive of the cap;

Fig. 2 is a side view of the same device inclusive of the cap but separated therefrom;

Fig. 3 is a longitudinal sectional view through the device shown in Fig. 1;

Figs. 4 and 5 are views of the sections of the device showing the interior construction thereof;

Fig. 6 is a view of the section shown in Fig. 4, but with a modified arrangement of the terminals thereof; and

Figs. 7, 8 and 9 are views of certain contact parts.

Referring to Figs. 1 to 5 the device comprises two insulating sections 1 and 2 forming an interiorly recessed block having registering grooves forming end openings 3 and 4 of suitable size to receive a supply cord. The block may in practice assume any desired shape but it is preferred to provide the same with tapered ends and with flat faces 5 and 6 as shown.

The insulating section 1 has formed therein grooves 7 and 8 connecting the end openings 3 and 4 and the section 2 has formed therein grooves 9 and 10 registering with the grooves 3 and 4 to form through passages for both wires of the usual supply cord. Also member 1 has a part 11 between grooves 7 and 8 which registers with parts 12 and 13 provided within member 2 between grooves 9 and 10.

The insulating section 2 is centrally re-

cessed and has mounted therein a pair of contacts 14 and 15 which project into the section 1 which has restricted openings 16 and 17 rendering said contacts accessible to the contacts of a conventional plug cap 18. The contact 14 has a terminal plate 19 projecting into wire groove 9 while contact 15 has a terminal plate 20 extending into wire groove 10, both of said terminal plates being provided with binding screws 21 extending into recesses 22 (Fig. 6) provided in section 2.

Thus by separating the sections 1 and 2 the contacts are rendered accessible for connection respectively to cord wires of opposite polarity, said wires being stripped at intermediate points for attachment to the terminal plates of said contacts and being spread to respectively lay in the grooves 9 and 10 of section 2. Thereupon the section 1 may be fitted to the section 2 to conceal the connections so made and to confine both wires in each of the end openings, said sections being secured together in any preferred manner as by screws 23 extending through the section 1 and threading into inserts 24 molded or otherwise secured in section 2. When so installed the device obviously provides for tapping of the cord by the cap 18 to provide a parallel circuit.

The contacts 14 and 15 and their terminal plates are preferably formed as illustrated, the former comprising suitable resilient material and the latter comprising stampings, each contact and its respective terminal plate being secured together and fixed to section 2 by a small bolt or screw 25. As shown the contacts are identical and the same is also true of the terminal plates shown in Figs. 3 and 4, said plates being blanked as shown in Fig. 7 and subsequently formed as shown in Fig. 8.

On the other hand the same terminal plate blanks may be formed as shown in Fig. 9 and as shown in Fig. 6 the section 2 is so formed as to permit the contacts 14 and 15 to be respectively equipped with the terminal plates of Figs. 9 and 8. Thus the binding screws of both contacts may be located in the same conductor groove, the section 2 being provided with additional recesses 26 and 27 in each groove to receive the binding screws when arranged as in Fig. 6, or when similarly arranged in groove 10.

The arrangement shown in Fig. 6 provides a series tap, one wire being passed through

the block without tapping thereof and the other wire being severed for connection to each of the contacts. In this connection it is to be noted that the spacing of the terminal plates enables the adjacent ends of the severed wire to be wrapped around the binding screws to a proper degree without producing slack in the other wire and hence the latter wire serves to protect the connections against strains thereon.

The sections 1 and 2 are preferably formed of molded insulation although they may be otherwise formed if desired. Also the sections are preferably flattened for appearance and for stability of the device when resting upon a support. While the device shown is provided with so-called "parallel" contacts it is to be understood that the contacts might be arranged in tandem or in any other preferred relation.

What I claim as new and desire to secure by Letters Patent is:

1. A tap to be mounted on an electric supply cord medially of the ends thereof comprising an insulating block divided into sections having their adjacent faces grooved to provide a plurality of separate through-wire passages merging at opposite ends of said block, and contacts mounted with said block and accessible through spaced openings in the latter, said contacts each having means for alternatively connecting the same to a wire located within either of said passages.

2. A tap to be mounted on an electric supply cord medially of the ends thereof comprising an insulating block divided into sections having their adjacent faces complementally grooved to provide a plurality of separate through-wire passages merging at opposite ends of said block, contacts each mounted within said block midway between said passages, and terminals for said contacts located within the respective passages, said block having spaced openings therein to give access to said contacts.

3. A tap to be mounted on an electric supply cord medially of the ends thereof comprising a divided insulating block and contacts mounted within and accessible through spaced openings in said block, the latter having adjacent faces formed to provide a plurality of separate through-wire passages merging at opposite ends thereof, and said block having means to support the terminal parts of a plurality of said contacts in one of said wire passages or to support the terminal parts of the respective contacts in different wire passages.

4. A tap to be carried by an electric supply cord comprising an insulating block and contacts mounted centrally therewithin and provided with terminal parts, said block being divided into sections having their adjacent faces formed to provide a plurality of separate through-wire passages extending around

said contacts and merging at opposite ends of said block, one of said sections having spaced openings into which said contacts project, and means to provide for location of the terminal parts of all of said contacts in a spaced relation in one of said wire passages or for alternatively locating each of the respective terminal parts in a different wire passage.

5. A tap to be carried by an electric supply cord comprising an insulating block having parallel flat faces, contacts mounted centrally within said block and extending into spaced openings perpendicular to said faces thereof, said block being divided in a plane parallel to said faces thereof and its sections having their adjacent faces formed to provide a plurality of separate through-wire passages equally spaced from each of said contacts and merging at opposite ends of said block, and terminals for said contacts, said terminals being located within the respective passages midway of the length of the latter.

6. A tap to be carried by an electric supply cord comprising an insulating block divided into sections having their adjacent faces formed to provide a plurality of separate through-wire passages merging at opposite ends of said block, and contacts mounted within said block between said wire passages and extending into spaced openings in one of said sections, each of said contacts having a detachable terminal plate adapted to project alternatively into one or another of said wire passages.

7. A tap to be carried by an electric supply cord comprising an insulating block divided into sections having their adjacent faces formed to provide a plurality of separate through-wire passages merging at opposite ends of said block and contacts mounted within said block between said wire passages and extending into spaced openings in one of said sections, each of said contacts having a detachable terminal plate to project into one of said wire passages, said block being recessed to receive differently formed terminal plates for said contacts whereby said contacts may each be connected to a different wire passing through said block or all may be connected to the same wire.

8. A device of the character described comprising an elongated flat-faced block of insulating material, said block being divided longitudinally thereof into sections having co-operating grooves forming a plurality of separate through-wire passages merging at opposite ends of said block, contacts extending outwardly into spaced openings in one section of said block, terminals for said contacts, and means whereby a plurality of said terminals may be positioned in one of said through-wire passages or each of said terminals may be positioned in a different through-wire passage.

9. A device of the character described comprising co-operating elongated sections of insulating material, each of said sections having a plurality of longitudinal grooves merging at opposite ends thereof and adapted to form through-wire passages, contacts extending outwardly into spaced openings in one of said sections, a plurality of terminals for said contacts respectively, and attaching means whereby said terminals may be alternatively positioned all in either of said wire passages or each in a different wire passage. 10

In witness whereof, I have hereunto subscribed my name.

GEORGE J. MEUER.