Aug. 16, 1927. 1,639,541

W. A. STACEY

ELECTRIC FITTING

Filed June 9, 1924

Fig. 1.

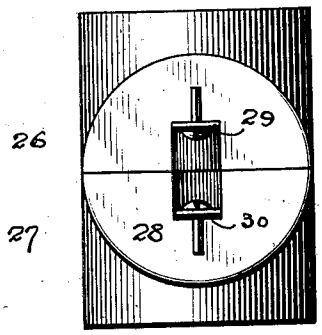
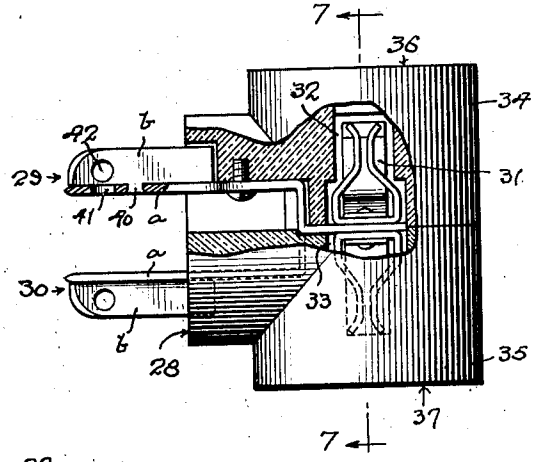


Fig. 2.



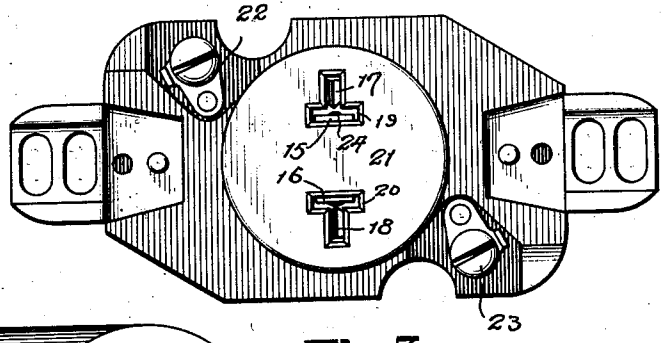
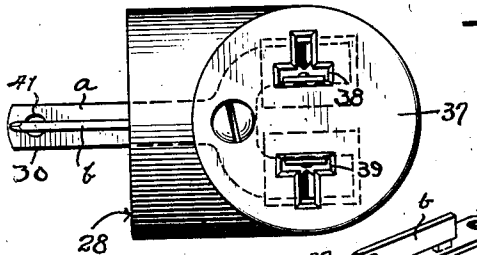


Fig. 3.



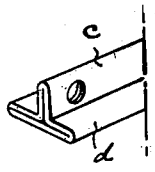


Fig. 6.

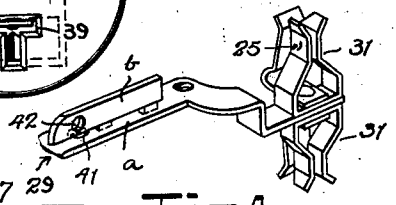


Fig. 4.

Fig. 5.

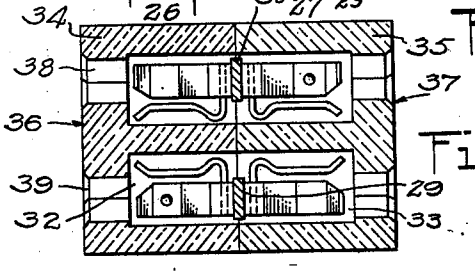


Fig. 7.

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UNITED STATES PATENT OFFICE.

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ELECTRIC FITTING.

Application filed June 9, 1924. Serial No. 718,907.

My invention relates to electric fittings, and particularly to a plug fitting adapted for cooperation with an outlet receptacle of the T-slot type. The object of my invention is to provide a plug fitting having blades which anchor the fitting more rigidly and securely to the contacts of a standard T-slot receptacle, than has been the practice heretofore.

In the accompanying drawings—

Fig. 1 is an end elevation of a plug fitting of one type, provided with blades which embody my invention in one form;

Fig. 2 is a broken side elevation thereof;

Fig. 3 is a plan view of a standard receptacle of the T-slot type with which the plug fitting is adapted for use;

Fig. 4 is a perspective of one of the blade elements of the fitting shown in Figs. 1 and 2;

Fig. 5 is a side elevation of the fitting at right angles to Fig. 2;

Fig. 6 is a fragmentary view of a modified blade construction; and

Fig. 7 is a section on the line 7—7, Fig. 2.

Receptacles of the type shown in Fig. 3 provide a pair of parallel receptacle contacts 15 and 16, and a pair of tandem contacts 17 and 18, so arranged that both contacts of the same polarity, viz, 15 and 17 on the one hand, and 16 and 18 on the other hand, are accessible through a single T-slot opening 19 or 20 in the face of the insulating body 21. The contacts 15 and 17 are both connected, in a manner well understood in the art, to the wire terminal 22, while the contacts 16 and 18 are similarly connected to the wire terminal 23. The contacts 15 and 16 are adapted for cooperation with parallel blades on a cooperating attachment plug. The contacts 17 and 18 are adapted for cooperation with tandem blades of a cooperating attachment plug. The receptacle thus affords means for establishing connection with attachment plugs of different types.

It is also common practice to provide means supplemental to the frictional engagement between the receptacle contacts and the plug blades to hold the plug against escape after the insertion of the blades. A common practice for this purpose is to provide a bump 24 projecting from the blade-engaging faces of the contacts 15 and 16, and a similar bump 25, such as indicated in Fig. 4, on one or both members of the contacts 17 and 18 adapted for the reception of the tandem blades. In both instances the blades of the attachment plugs (not shown) are provided with apertures adapted to receive these bumps and thus to increase the physical engagement between the blades and the contacts.

For most purposes such an engagement between either parallel or tandem blades and the receptacle contacts is sufficiently secure. But for fittings of the type to which the present application is particularly applicable, the anchorage is too weak to maintain the fitting in position under the strains to which it is subjected. The object of my invention is to provide a fitting with blades of such character that their physical engagement with the contacts of the receptacle is so increased that the fitting is held firmly against rocking, and the danger of accidental disengagement from the receptacle contacts is minimized.

While the invention is particularly applicable to an extension outlet fitting of the type shown, it will be readily recognized that it is applicable to any plug fitting which requires very secure anchorage.

As here shown, the fitting comprises an insulating body formed of mating blocks 26 and 27 cooperating to afford a base, from the face 28 of which project the blades 29 and 30. Secured to the base strap of each blade are pairs of contacts 31 which project into contact chambers 32 and 33 in the opposed bosses 34 and 35, through the end faces 36—37 of which open pairs of T-shaped guide apertures 38—39. The bosses 34 and 35 thus form in effect two receptacles for the reception of the blades of independent attachment plugs.

The blades 29 and 30 of the present fitting are of T-shape, and are thus adapted to enter and engage both contact pairs 15—17 and 16—18 of the receptacle 21. The webs *a* of each blade lie in parallel planes and engage the contacts 15 and 16. The portions *b* of the blades constitute fins projecting at right angles to the webs *a* and engage the contacts 17 and 18 of the receptacle. The fins *b* are secured to the webs *a* by means of integral studs 40 which enter corresponding apertures in the webs *a* and are spread therein to rivet the parts together. The parallel webs *a* have formed therein

openings 41 adjacent their free ends adapted to engage the bosses 24 on the receptacle contacts 15. The tandem fins *b* have apertures 42 therein adapted to engage the bosses 25 of the contacts 17 and 18. It will thus be seen that the engagement afforded by the present blades, more than doubles the engagement of the usual parallel blades with the contacts 15 and 16, since the fins *b* are frictionally gripped by the contacts 17 and 18 as well as mechanically engaged by the bosses 25, while the frictional grip of the contacts 17 and 18 upon the fins *b* exceeds the frictional grip of the contacts 15 and 16 with the webs *a*. Moreover, the right angular arrangement of the webs *a* and fins *b* with respect to each other, and their engagement with the similarly arranged contacts 16 and 18 of the receptacle 21, prevents rocking of the fitting with respect to the receptacle incident to strains to which it is subjected to use, and maintains the necessary electrical and physical connection between the parts. Of course it will be realized that the electrical connection is doubled, and that the supply of current to the contacts of the fitting is thus assured. There is consequently less danger of burning the blades incident to a poor electrical connection between the parts.

In Fig. 6 a modified construction of the contact is shown, in which the fin *c* is integral with the web *d*. The contact is formed from lighter sheet metal folded to provide the fin *c*, and the web *d*—both of double thickness of stock. Various other ways of constructing the blade will readily occur to those dealing with the problem.

While as above stated, the invention is particularly applicable to an extension outlet fitting of the plug type shown, blades of the present type may be used with any type of attachment plug in which a very secure anchorage in the receptacle is desired.

With this understanding, and the further appreciation of the fact that the blades may be formed otherwise than in the precise manners indicated, I claim as my invention:—

1. A plug fitting comprising blades T-shaped in cross section having parallel webs and longitudinally extending fins arranged on the remote faces of said webs, said blades being adapted to engage both tandem and parallel contacts of a standard T-slot receptacle.

2. A plug fitting having parallel blades, together with a fin projecting at right angles from a single face of each blade intermediate the side margins of the latter and extending longitudinally of the blade, said fins being located on the remote faces of the parallel blades to afford a pair of jacks T-shaped in cross section, the plane faces of the parallel blades of which are adjacent.

3. A plug fitting having an insulating body, blades projecting therefrom, each of said blades being of T-shape in cross section and comprising a web and a fin projecting at right angles thereto, one element of said blade being extended beyond the other into the plug body, together with electrical connection devices associated with said blade extension.

4. A plug fitting having an insulating body, blades T-shaped in cross section projecting therefrom, certain webs of said blades being parallel and extending into the plug body, fins extending at right angles to the exposed portions of said webs and located on their remote faces together with electrical connections associated with said extended parallel webs.

5. A plug fitting having an insulating body recessed to form a pair of inner chambers, blades T-shaped in cross section projecting from one face of the body and extending respectively into the chambers thereof, together with receptacle contacts associated with the portions of said contacts extended into the chambers of the insulating body, the latter being apertured on opposite faces at right angles to the face from which the blades project, to admit the blades of cooperating attachment plugs to the contacts in said chambers.

In testimony whereof I have signed my name to this specification.

WILLIAM A. STACEY.