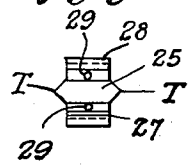
Feb. 18, 1936. H. P. DILLIG 2,030,856

PLUG CONNECTER

Filed March 1, 1933

Fig. 7.



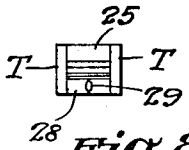


Fig. 8.

Fig. 5.

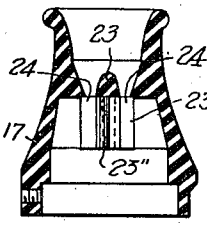
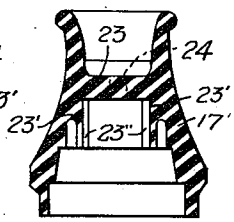


Fig. 6.



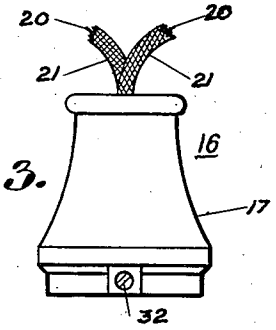


Fig. 3.

Fig. 1.

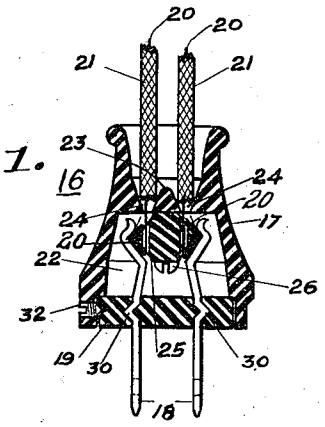


Fig. 4.

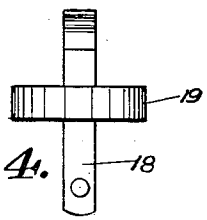
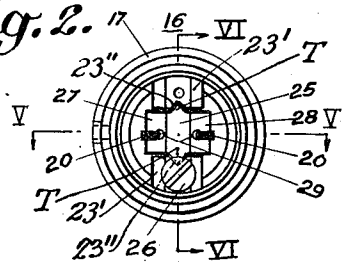


Fig. 2.



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PLUG CONNECTER

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Application March 1, 1933, Serial No. 659,099

3 Claims. (Cl. 173—361)

This invention relates to plug connecters and more particularly to that type of plug employed for connecting electric appliances to service outlets of electric circuits.

An object of this invention is the provision of efficient, inexpensive plug connecters to which electric conductors may be connected conveniently and with ease.

Another object of the invention is the provision of a plug connecter that shall dispense with the practice of utilizing the heads of screws for making the connection between the electric conductors and the prongs of the connecter.

Other objects of the invention will, in part, be apparent and will, in part, be obvious from the following description taken in conjunction with the accompanying drawing in which:—

Fig. 1 is a view in vertical section of a plug connecter embodying a form of the invention;

Fig. 2 is a bottom plan view of the body of the connecter shown in Fig. 1;

Fig. 3 is a view in side elevation of the body of the connecter of Figs. 1 and 2;

Fig. 4 is a view in side elevation of a cap or base and the contact prongs of the connecter shown in Fig. 1.

Figs. 5 and 6 are views, in section, of the body of the connecter, taken on lines V—V and VI—VI, respectively, of Fig. 2; and

Figs. 7 and 8 are views in bottom plan and upright side elevation, respectively, of a detail embodied in the connecter and shown in Figs. 1 and 2.

Throughout the drawing and the specification, like reference characters indicate like parts.

In Figs. 1 to 8, inclusive, a plug connecter **16** and its component parts are illustrated, as embodying a form of the invention. This connecter comprises a body **17** made of moldable insulating material, and a pair of prongs **18** formed in a base **19**, which is removable from the body and when in operative position, forms a closure for the body. As will presently be made apparent, means within the body **17** and in conjunction with the upper ends of the contact prongs, coact to form a clamp adapted to provide electrical connection between the exposed ends of conductors **20** enclosed in insulating sheaths **21**.

The body **17** is formed with a hollow neck into which the insulated strands of the electric cord may be placed. This neck terminates in a chamber **22** formed in the lower part of the body. A strut **23** formed at the base of the neck provides two passageways **24** through which the exposed ends of the cord conductors may pass. At each end of strut **23**, the body is formed with depending lugs **23'** having grooves **23''** therein, the purpose and function of which will appear later herein.

A backing member, support, or barrier **25** is secured to lugs **23'** by means of screws **26**, (only one of which is shown), and is provided with ridged or angular sides or faces **27** and **28**, preferably of V-shape, disposed on opposite sides of a plane VI—VI containing the strut **23**. These V-shaped sides or faces form a part of the clamping means above referred to. The ends of member **25** have tongues T that register in grooves **23''** of lugs **23'**, thus rigidly fixing the operative position of this member.

Member **25**, lugs **23'** and strut **23** form an effective barrier that serves to insulate conductors **20** from each other and to prevent loose strands of one of these conductors from engaging the other conductor and causing a short circuit within the plug.

The support **25** is drillled as at **29—29** to permit the exposed conductor ends to be passed through the same and folded back on themselves across the V-shaped sides **27** and **28** in position to be engaged by the upper ends of the prongs.

Prongs **18** may be formed from strips of resilient material, with the upper ends thereof shaped to conform substantially to the contour of the ridged, angular, or V-shaped sides of member **25**. These prongs may be molded in base **19** and to insure that they shall be firmly anchored therein, V-shaped offsets **30** may be formed at about the middle thereof so as to be embedded in the base.

With the exposed ends of the conductors lying in place on the V-shaped sides of member **25**, the base **19** is moved upwardly to the position shown in Fig. 1, whereby the upper or jaw ends of the prongs are caused to snap over the V-shaped sides of member **25** and make contact with the conductors by pressure. A small set screw **32** or dowel may be employed to lock base **19** and the contact prongs in operative position, if desired. However, it is not essential that the dowel or screw be employed because the jaws of the conductor prongs grip member **25** and the exposed conductors lying therebetween so firmly that considerable force must be exerted to disengage the prongs therefrom.

As may be seen by inspection of Figures 1, 2 and 5, the conductors are insulated from each other by the barrier formed by strut **23**, lugs **23'** and support **25**, and this barrier prevents loose conductor strands of one conductor from engag-

ing the other conductor or strands thereof, whereby the possibility of short circuits occurring within the plug is rendered quite remote.

It is to be noted that in both forms of plug connecter illustrated herein, connection is made between the contact prongs and the conductors by clamping pressure and that no screws are employed having actual or direct contact with these conductors.

Having thus described the invention, it will be apparent to those skilled in this art, that various modifications and changes may be made in the connecters illustrated without departing either from the spirit or the scope of the invention as indicated by the appended claims.

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

1. A plug connecter comprising a body of insulating material having a spacer and backing member on the opposite sides of which are ridges and over which, exposed ends of wires may be placed, and a closure member having connecter prongs embodied therewith so as to form a movable unit, said prongs being formed with jaws having snap engagement with said ridges on said spacer and backing member, and when in such position to have pressure contact with the exposed ends of said conductors.

2. A plug connecter comprising a hollow body having a barrier within the same of insulating material and provided with V-shaped faces on opposite sides thereof and spaced passageways through each of which a wire may be passed from one end of the body and folded across said faces, and a closure for said body having prongs extending therethrough, each of said prongs having a jaw portion at its inner end shaped to have snap engagement with one of said V-shaped faces and to clamp said folded wire ends when the closure is placed in position to close the end of the body.

3. A plug connecter comprising a hollow body having a barrier within the same of insulating material and having V-shaped faces on opposite sides thereof, said body having a strut of insulating material extending across the top of said barrier in a plane between said V-shaped faces, the barrier having spaced vertical passageways disposed on opposite sides of said plane through which wires may be passed and folded across one of said V-shaped faces, and a closure for said body having connecter prongs secured thereto and provided with jaw portions adapted to have snap engagement with the V-shaped faces of the barrier and to clamp the wires therebetween.

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