This invention relates to a novel construction of a clamp-type of terminal suitable for use in making electrical connections. The terminal, although useful generally in the electrical arts, is particularly adapted to use in connection with attachment plug receptacles, switches, pilot lights and related types of electrical wiring devices.

It is an object of my invention to provide an improved construction of clamp-type terminal which will more effectively grip electric wires to hold them against twisting and from being pulled out of position.

Other objects and advantages of my invention will become apparent as it is described in connection with the accompanying drawings.

In the drawings—

Fig. 1 is a perspective view of the clamp member of my new clamp-type terminal.

Fig. 2 is a plan view of the assembled terminal gripping an electric wire.

Fig. 3 is a section view taken along line 3--3 of Fig. 1.

Referring to the drawing, the terminal comprises a clamping member 10, preferably stamped from sheet metal into the form illustrated in Fig. 1, having a back 12a with a screw-threaded aperture 12 therein. From each corner of the back, fingers 10b and 10c extend. The fingers 10b at the right hand edges are struck into substantially perpendicular relation to the back while the fingers 10c—at the left hand edge—are struck at an oblique angle to the back to accommodate various sizes of wire. Between the fingers 10c and the screw-threaded aperture 12, the inside surface of the back is provided with divergent scorings 14a and 14b. The scorings 14a are inclined downwardly from the horizontal center line of the back, being directed preferably beneath the aperture 12, while the scorings 14b are inclined upwardly from the center line being directed preferably above the aperture 12. The individual ribs or teeth of the scorings preferably are parallel. Of course, the two series of scorings can be reversed in direction so as to diverge outwardly.

The clamp member 10 is designed to be clamped to any fixed terminal part of a switch, receptacle, or other electric device, by means of a terminal screw 6 whose shank threads into the aperture 12 and whose head may abut one side of a conductive plate or strip of metal 18—such as, for example, the connecting bar between the contact fingers of a conventional duplex attachment plug receptacle. (Those skilled in the art will understand that in conventional duplex attachment plug receptacles, the contact fingers and the connecting bar portion are customarily stamped as one piece from sheet metal.) The shank 18 of the terminal screw passes through an aperture in the connecting bar 18, the aperture being slightly larger in diameter than the diameter of the shank.

When the parts are assembled, a wire 20 may be inserted between the clamp member 10 and the connecting bar 18 in position to be engaged and gripped by the divergent scorings 14a and 14b on the clamp member when the terminal screw is turned to move the clamp member toward the plate 18. Due to the oblique character of the fingers 10c, the clamp member may accommodate wires of different diameters so that the terminal is adaptable in many fields of use and may be used without particular regard to the size of conductor to be connected to the electrical device.

I have found by actual use and test, that the provision of the divergent scorings affords a gripping action upon the conductor which is far superior to any of the many means of frictional holding that I have known. The wires are held very firmly against twisting, as well as against any pull which would tend to move the wires axially out of their position. The gripping action is so firm that an effort to turn the wire about its own axis will result in the wire itself twisting while the portion which is gripped by the divergent scorings remains fixed.

I do not limit the invention to the specific form or number of divergent scorings illustrated, since modifications within the scope of the invention will occur to those skilled in the art.

I claim:

In a clamp type terminal, a fixed electrically conductive member having an opening therethrough, an electrically conductive terminal screw having a shank passing through said opening, an electrically conductive clamp member having one end bent in a direction substantially perpendicular to the main body of said clamp member and the other end bent in a direction oblique to the main body of said clamp member to accommodate bare metal conductor wires of different sizes, one of said electrically conductive members having a screw threaded aperture for the reception of the shank of said terminal screw, said electrically conductive clamp member having a plurality of series of parallel sharp edged ribs directed in divergent directions from the center line of said clamp member and nonradial with respect to said screw threaded aperture, said ribs being formed in the underside of said clamp member between the aperture thereof and said obliquely bent portion thereof, to afford means to bite into and grip said bare metal conductor wires of different sizes, between said clamp member and said fixed member in metal-to-metal contact therewith and cause the conduction of electrical current from said bare metal conductor wire through said ribs into said clamp member.

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