

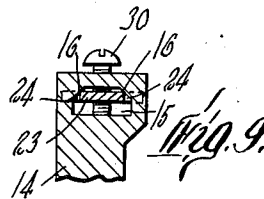
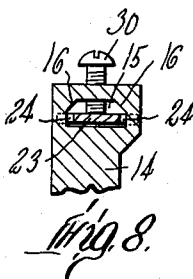
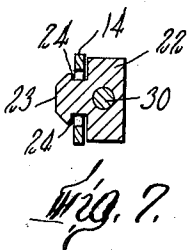
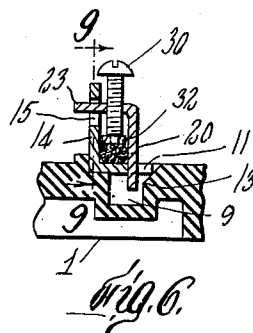
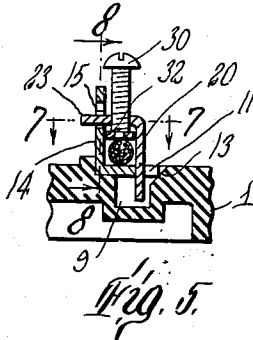
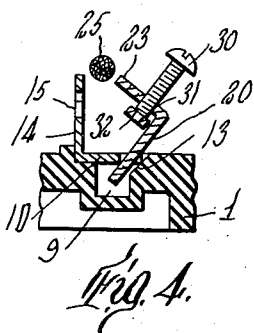
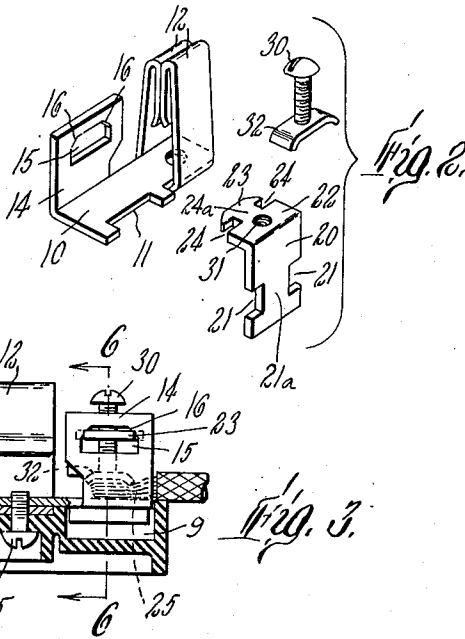
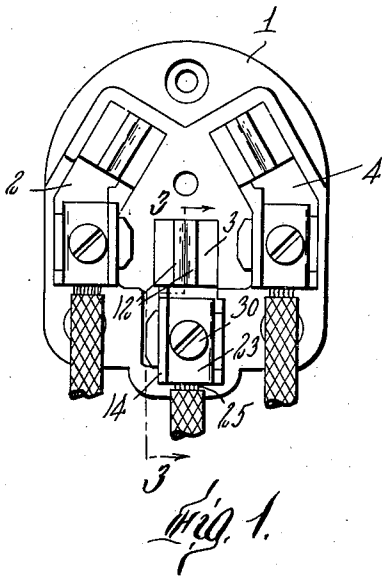
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2,900,618

CONTACT TERMINAL

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2,900,618

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1 Claim. (Cl. 339--272)

This invention relates to terminals to which the ends of conducting wires may be attached and while not restricted thereto is particularly suitable for use with stranded conductors, strands of such conductors being likely to become separated from the mass when they are attached to the terminals. Under such conditions they may contact with other parts than those for which they are intended and cause short circuits. It is also useful where the bared portion of a solid wire is short or is of such large size that it cannot readily be bent to engage around a terminal screw as it facilitates the making of a connection.

In accordance with the present invention, the terminals are arranged to be opened widely to permit the wire ends to be laid in laterally rather than being pushed axially.

The terminals are then closed upon the wires and then firmly clamped thereto in such a manner that there is no tendency for individual strands of stranded wires to become displaced and cause trouble.

For a more complete understanding of the invention reference may be had to the accompanying drawings in which:

Figure 1 is a plan view of a triple terminal member embodying the invention;

Figure 2 is an exploded perspective of one of the terminals shown in Figure 1;

Figure 3 is a detail sectional view on line 3-3 of Figure 1, the connector being shown in clamping position;

Figures 4, 5 and 6 are detail sectional views taken on the line 6-6 of Figure 3, but showing the connector in the open position in Figure 4, initially closed in Figure 5, and in wire-clamping position in Figure 6;

Figures 7 and 8 are detail sectional views on the correspondingly numbered section lines of Figure 5; and Figure 9 is a detail sectional view on line 9-9 of Figure 6.

Referring to the drawings, at 1 is illustrated a base of insulating material supporting three clip terminal members 2, 3 and 4. These members are similar to one another except that their clip jaws are differently located with respect to the terminal clamps. The member 3 comprises a horizontal conductor plate 10 having a notch 11 in one edge as shown in Figure 2 and a pair of spring jaws 12 rising therefrom between which a mating plug blade may be thrust. Each terminal member is secured to the base 1 by a screw 5.

The base 1 is formed with three rectangular recesses 9 in its upper face, each of which has on one side an inclined face 13. The notch 11 of the plate 10 overlies a portion of this inclined face 13. Each terminal member has a vertical wall 14 rising from the side of the plate 10 opposite to the notch 11. This vertical wall 14 has a slot 15 therethrough which is wider at its lower portion but at its upper portion is formed by inwardly inclined walls 16 which taper this portion of the opening. Cooperating with each contact member is an angle member 20 (see Figure 2) comprising a vertical wall which is provided with oppositely disposed notches 21

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forming a neck 21a therein, and an angularly related plate portion 22 having a tapered head 23 and neck 24a formed by oppositely disposed notches 24. The neck 21a is engaged within the groove 11 of the plate 10 and is held loosely between the edge of the plate 10 and the inclined face 13 of the base 1 so that the member 20 may be rocked away from the wall 14 as shown in Figure 4, the recess 9 providing room for the movement of the lower end of the member 20, so that a wire 25 can be laid in sideways to engage in the angle between the plate 10 and the wall 14. A stranded wire may thus be inserted or removed without danger of any of the individual strands becoming separated from the mass. When a wire 25 is located in this angle, the member 20 is rocked back toward the wall 14 to the position shown in Figures 5 and 6, the head 23 being thrust through the opening 15.

A terminal screw 30 is threaded through a hole 31 in the member 20 and it may be provided at its lower end with a clamping member 32 which may be pressed down against the wire when the wire is in clamped position. This member 32 is pivotally connected to the end of the screw 30 and is prevented by the wall 20 from turning with the screw.

When a conductor is inserted into the terminal as in Figure 4 and the member 20 is rocked to the position shown in Figure 5, the screw 30 may be turned down to clamp the wire against the plate 10. This lifts the member 20, bringing the neck 24a into the narrowed upper portion of the slot 16 as shown in Figure 9, whereupon the member 20 is locked against rocking away from the wall 14, and the conductor wire is clamped therebetween as shown best in Figure 6. When it is desired to release the conductor wire, it is only necessary to retract the screw 30, whereupon the member 20 may be lowered to permit the head 23 to be withdrawn through the slot 16, and the member 20 may then be tilted away from the wall 14 into the position shown in Figure 4, permitting free removal of the conductor wire from between the members.

From the foregoing description of certain embodiments of this invention it should be evident to those skilled in the art that various changes and modifications may be made therein without departing from its spirit or scope.

I claim:

In combination a base with a recess therein, said recess having a face outwardly inclined at one side near its upper edge, an angle conductor plate having a portion overlying said recess and having a notch in an edge thereof facing said inclined face of the recess, a second angle plate having a neck portion in loose engagement with said conductor plate in the notch thereof, said second plate then being separable from said conductor plate for the lateral insertion of a conductor wire therebetween, said conductor plate having an opening therethrough the upper portion thereof being tapered in width and said second plate having a tapered head adapted to be thrust through the lower portion of said opening and a neck adapted to engage in the narrower upper portion of said opening for locking together the adjacent portion of said plates, and a screw threaded through said second plate for engagement at its inner end with a conductor placed between said plates and effective to move said second plate into locking engagement with said first plate when the neck of said second plate is in said opening.

References Cited in the file of this patent

UNITED STATES PATENTS

2,145,556 Rypinski _____ Jan. 31, 1939
2,780,793 Gambale _____ Feb. 5, 1957