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J. H. TANGES, JR
SHIELDED CABLE TERMINATION
Filed June 19, 1967

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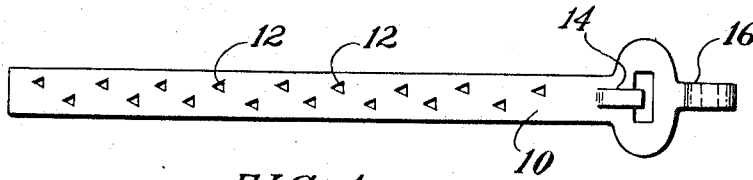


FIG. 1

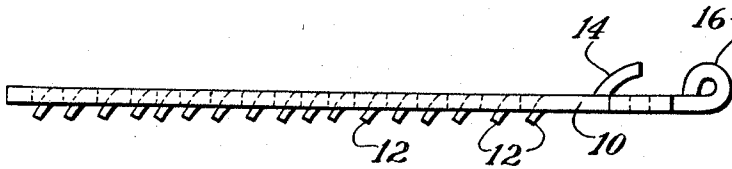


FIG. 2

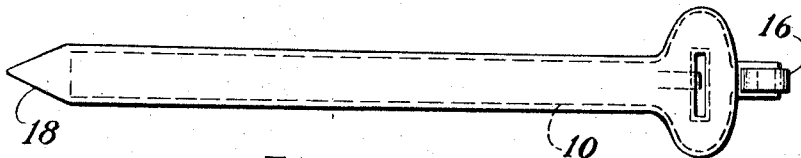


FIG. 3

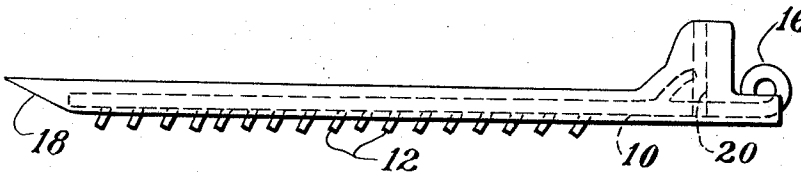


FIG. 4

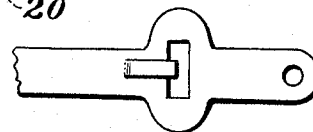


FIG. 7

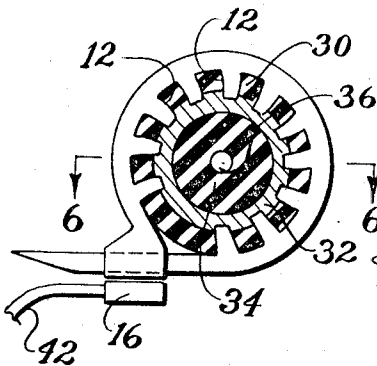


FIG. 5

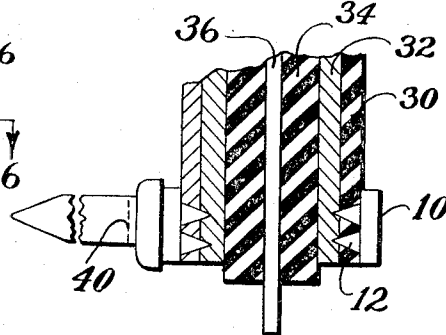


FIG. 6

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SHIELDED CABLE TERMINATION

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2 Claims

ABSTRACT OF THE DISCLOSURE

A terminal for a shielded cable which permits attachment of a ground terminal to the cable shield without the need for stripping of the shield or soldering.

This invention relates to a cable termination.

Cables and single conductors are frequently provided with a metal shield which is generally of a braided wire construction. Over the braided shield an insulator covering is provided, as, for example, by the extrusion of a plastic coating. It has been usual practice to provide a termination for such shields by stripping the plastic covering, slipping an outer ferrule over the shield, inserting an expanding ferrule under the shield and then drawing the outer ferrule over the shield by either screw means or by means of a crimping tool to provide a mechanical and electrical bond. Still other prior art approaches required removal of the outer covering loosening or unbraiding the shield to accommodate the ferrules and adding when required by the installation a pigtail lead wire which was then crimped between the inner and outer ferrules. These operations have been generally time consuming and required a measure of skill in order to perform the operation without destroying or damaging the cable. It is the general practice to cut the cable to a precise length with relatively little tolerance. If the operator makes a mistake, requiring the cutting away of a section of the cable, it is very likely that the cable must be replaced. The cables are frequently quite costly and therefore production losses of this type are extremely undesirable.

Accordingly, it is an object of this invention to provide a termination which can be readily attached to the shield of an insulated shielded cable without the use of tools or the need for removing the insulation.

Another object of this invention is to provide a self-locking insulated grounding cam for a shielded cable or the like.

A further object of this invention is to provide a termination of the type disclosed which is insulated.

Still a different object of this invention is to provide a rapidly installed termination for a cable of the type described.

These and other objects, features and advantages of the invention will, in part, be pointed out with particularity and will, in part, become obvious from the following more detailed description of the invention, taken in conjunction with the accompanying drawing which forms an integral part thereof.

In the various figures of the drawing like reference characters designate like parts.

Description of the drawing

FIG. 1 is a plan view of a metal insert;

FIG. 2 is a view taken in elevation of the insert shown in FIG. 1;

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FIG. 3 is a plan view of the insert of FIG. 1 encapsulated in a protective plastic shield;

FIG. 4 is a view taken in elevation of the apparatus of FIG. 3;

FIG. 5 is a plan view of a shielded cable with the termination of this invention applied;

FIG. 6 is a side elevation taken along lines 6-6 of FIG. 5; and

FIG. 7 is a plan view of a portion of a clamp showing a terminal means.

Referring now to FIG. 1 of the drawing, there is shown a body portion 10 provided with insulation piercing tabs 12. A holding tab 14 and an eyelet portion 16 is adapted to receive a pigtail lead wire when required, which is then crimped into place. Alternatively, the end of the member may be provided with a hole for receiving other conventional connection means. Such an arrangement is shown in FIG. 7. The metal body portion 10 is then insert molded in a suitable insulator plastic to provide a protective coating as shown in FIG. 3. A typical plastic suited for this purpose is polyethylene, nylon or polypropylene. If desired, the coating may be applied by dipping in a suitable resin solution. It will be noted that the tabs 12 are of sufficient length so as to extend through the insulator coating.

In order to attach the termination to a shielded conductor, it is necessary only to take the tongue portion 18 and feed it through the mouth 20. Latching member 14 ratchets on the tongue and will not permit its removal in the reverse direction. As the clamp is tightened, the tab 12 will cut through the insulation 30 of the shielded cable and will make contact in the braided or solid conductor shield 32. By way of example, the cable is shown with an inner insulator 34 and a center conductor 36, by it will be appreciated that the same principles would apply to a multiconductor cable. If desired, the excess length of tongue may be cut off along line 40 as shown in FIG. 6.

A pigtail lead 42 may be inserted into eyelet 16 and the eyelet may then be crimped to the pigtail lead for mechanical and electrical bonding.

There has been disclosed heretofore the best embodiment of the invention presently contemplated and it is to be understood that various changes and modifications may be made by those skilled in the art without departing from the spirit of the invention.

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

1. A termination for a shielded conductor comprising:
 - (a) a metal strip consisting of:
 - (1) an elongated body portion;
 - (2) a tongue portion at one end of the body portion;
 - (3) an enlarged head portion at the other end of the body portion having a slot dimensioned to receive said tongue portion to form a loop;
 - (4) a connection means extending from the head portion for receiving an external lead; and
 - (5) a plurality of tab members extending from the body portion and oriented to face inwardly of the loop formed when the tongue portion is inserted in the slot;
 - (b) an electrically non-conductive material covering said metal strip other than said tab members and said connector member; and
 - (c) locking means carried located at said head portion

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cooperating with said tongue portion for permitting passage of the tongue portion through the slot in but one direction.

2. In combination with the apparatus of claim 1, a metal electrical conductor having an electrical insulator plastic sleeve thereover, said connection means being clamped about said conductor with the tabs extending through the insulator plastic sleeve and engaging said shield in an electrical and mechanical connection.

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24—16, 129; 339—177, 251

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