United States Patent

[11] 3,629,804

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[54] **TELEVISION LEAD-IN WIRE CONNECTOR**
8 Claims, 4 Drawing Figs.

[52] **U.S. Cl.** **339/98**
[51] **Int. Cl.** **H01r 9/08**
[50] **Field of Search** 339/97–99

[56] **References Cited**

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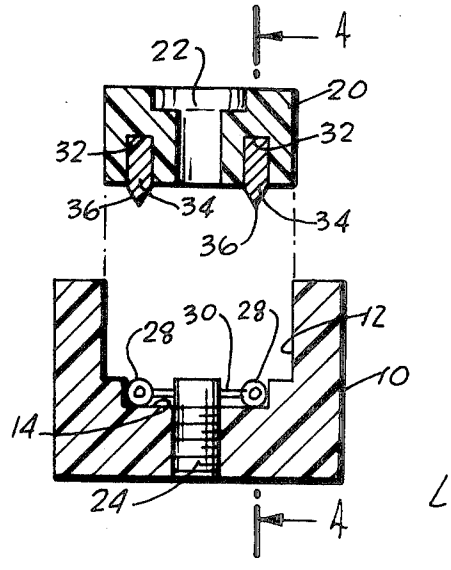
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ABSTRACT: A connector for interconnecting two spaced but abutting ends of separate insulated conductors in such manner as to form the electrical connection without stripping insulation, soldering, twisting wires together or the like.



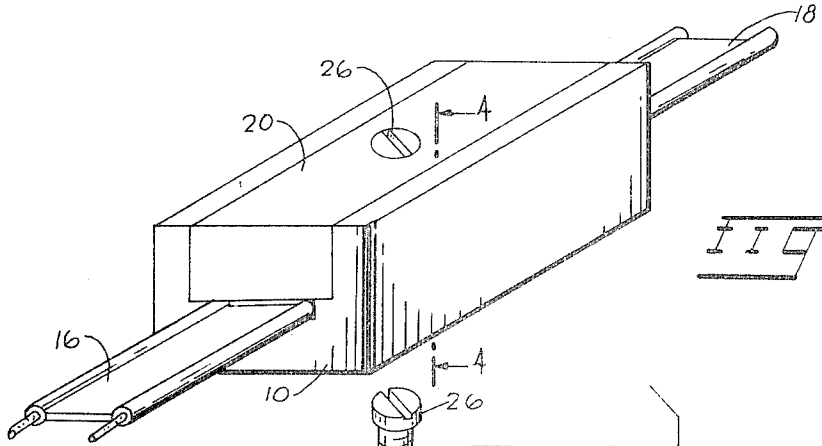


FIG. 1.

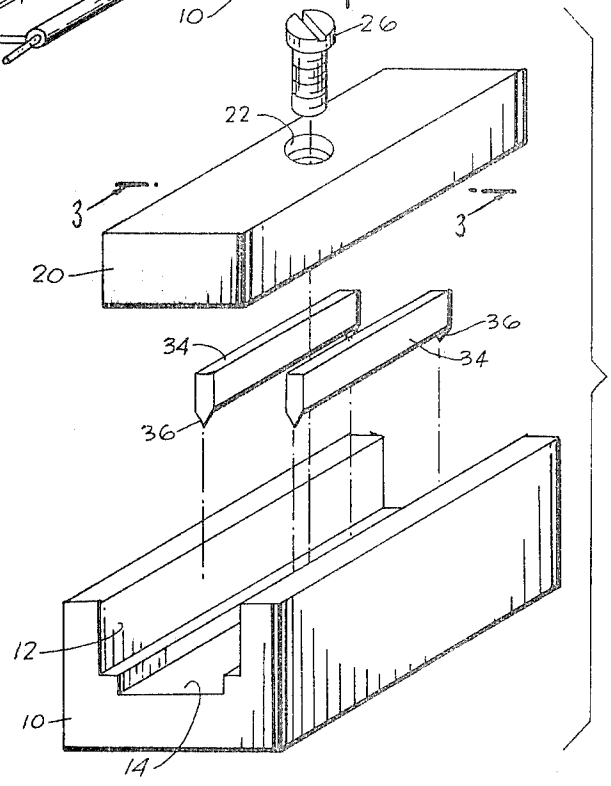


FIG. 2.

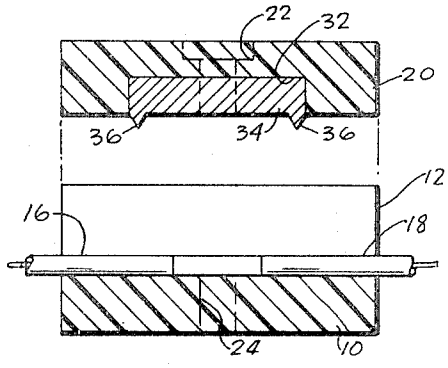


FIG. 4.

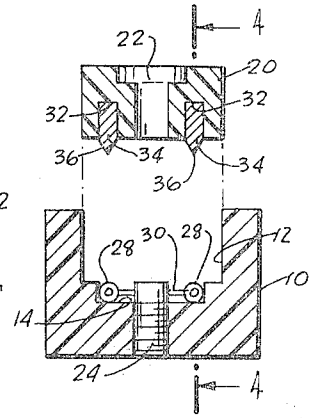


FIG. 3.

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TELEVISION LEAD-IN WIRE CONNECTOR

SUMMARY OF THE INVENTION

In my invention two mateable insulated sections define a hollow conduit in which two separate pieces of insulated conductors are disposed with abutting but spaced ends. At least one electrically conductive member having transversely extending spaced points is disposed in the conduit with each point being forced through the insulation of a corresponding piece to make electrical contact with the corresponding conductor whereby the member electrically interconnects the conductors in both pieces.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a perspective view of my invention in use;

FIG. 2 is an exploded view of my invention;

FIG. 3 is a cross-sectional view taken along line 3—3 in FIG. 2; and

FIG. 4 is a cross-sectional view taken along line 4—4 in FIG. 1.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Referring now to FIGS. 1–4, I provide an elongated nonconductive or insulator body **10** having a transverse slot **12** with a flat bottom groove **14**. Two pieces **16** and **18** of twin-lead flat television antenna cable are disposed in the groove **14** with abutting ends spaced apart.

An elongated nonconductive cap **20** is adapted to fit tightly in the slot **12** but not in the groove. A central bore **22** extending transversely through the center of cap **20** is aligned with a central transverse threaded bore **24** in body **10** whereby a screw **26** can be disposed in both bores to secure body and cap together.

Each piece of cable contains two spaced parallel conductors **28** imbedded in insulation **30**. Cap **20** has two parallel longitudinal slots **32** each overlying a corresponding conductor **28**. A separate elongated bar conductor **34** having opposite ends with transversely extending points **36** is disposed in each slot **32**.

When the entire connector is assembled into one piece, each point penetrates the insulation to make electrical contact with the imbedded conductor whereby each conductor in one piece **16** is electrically connected to the corresponding conductor in the other piece **18** without soldering, twisting of wires, use of tape, or need to strip insulation.

While I have described my invention with particular reference to the drawings, such is not to be considered as limiting its actual scope.

Having thus described this invention, what is asserted as new is:

1. A device for splicing a pair of ends of television lead-in cable of the type having a pair of conductors having surrounding electrical insulation and joined by an integral flat web of electrical insulation therebetween, comprising;

a. a body member of electrical insulating material having a slot therein forming a floor at one side thereof and open at the opposite side thereof, said slot being open at opposite ends thereof and being of a width to receive said pair of ends in longitudinal alignment with one side of each end abutting the floor of the slot,

b. a channel in the body member disposed adjacent the slot and communicating therewith at one side thereof, the channel also being open at its opposite side,

c. a closure member of electrical insulating material having a width to permit it to slide laterally within the channel,

d. said closure having a pair of laterally spaced electrical conducting bridging connectors fixed thereto, each having longitudinally spaced prongs thereon adapted to pierce the insulation surrounding said conductors and form bridging connectors between corresponding conductors in the ends of the cable, and

e. means for forcibly urging said closure member into said channel and toward said slot, said means effecting the piercing of the insulation by the prongs.

2. A device in accordance with claim 1 wherein said channel is sufficiently wider than said slot to permit the bridging connectors to be embedded in slots in the closure member.

3. A device in accordance with claim 1 wherein said means comprises a screw extending between said members and intermediate the ends thereof, said screw forming an abutment for ends of the webs of the cable.

4. A device in accordance with claim 1 wherein sidewalls of said slot and channel are parallel between opposite ends thereof.

5. A device in accordance with claim 1 wherein said slot and said channel are symmetrically constructed to permit the closure member to be reversibly inserted into said channel.

6. A device in accordance with claim 5 wherein said means comprises a screw extending between the body member and closure, the screw being disposed centrally between opposite ends thereof.

7. A device in accordance with claim 1 wherein said channel is sufficiently wider than said slot to permit the bridging connectors to be embedded in slots in the closure member, said means comprising a screw extending between said members centrally between ends thereof and forming a central abutment for ends of the webs of the cable, said slot and said channel being symmetrically constructed to permit the closure member to be reversibly inserted into said channel.

8. A device in accordance with claim 7 wherein sidewalls of said slot and channel are parallel between opposite ends thereof.

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