Sept. 1, 1964 A. C. S. CHENNELL 3,147,337

CABLE TERMINAL BOARD

Filed July 28, 1961 2 Sheets-Sheet 1

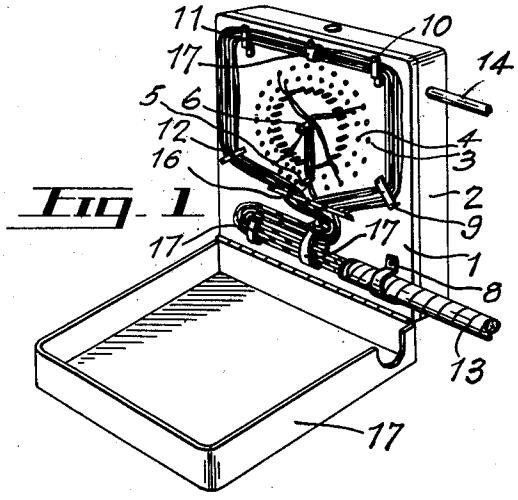


Fig. 1

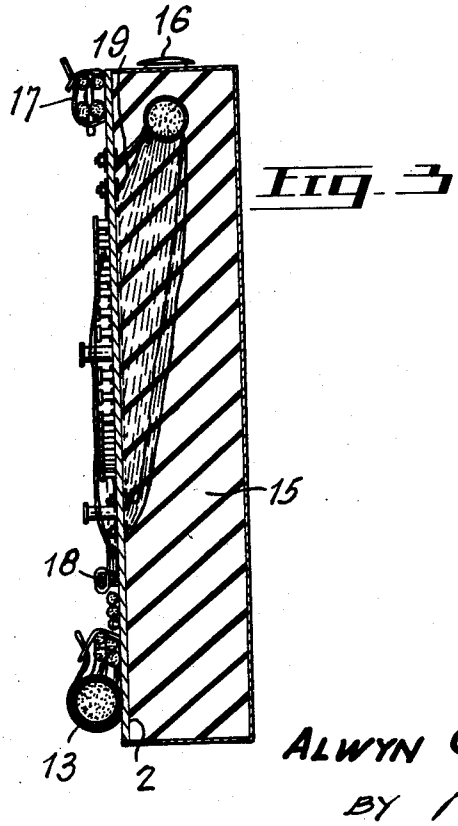


Fig. 3

INVENTOR
ALWYN C.S.CHENNELL
BY Robert B. Haimon
ATTORNEY

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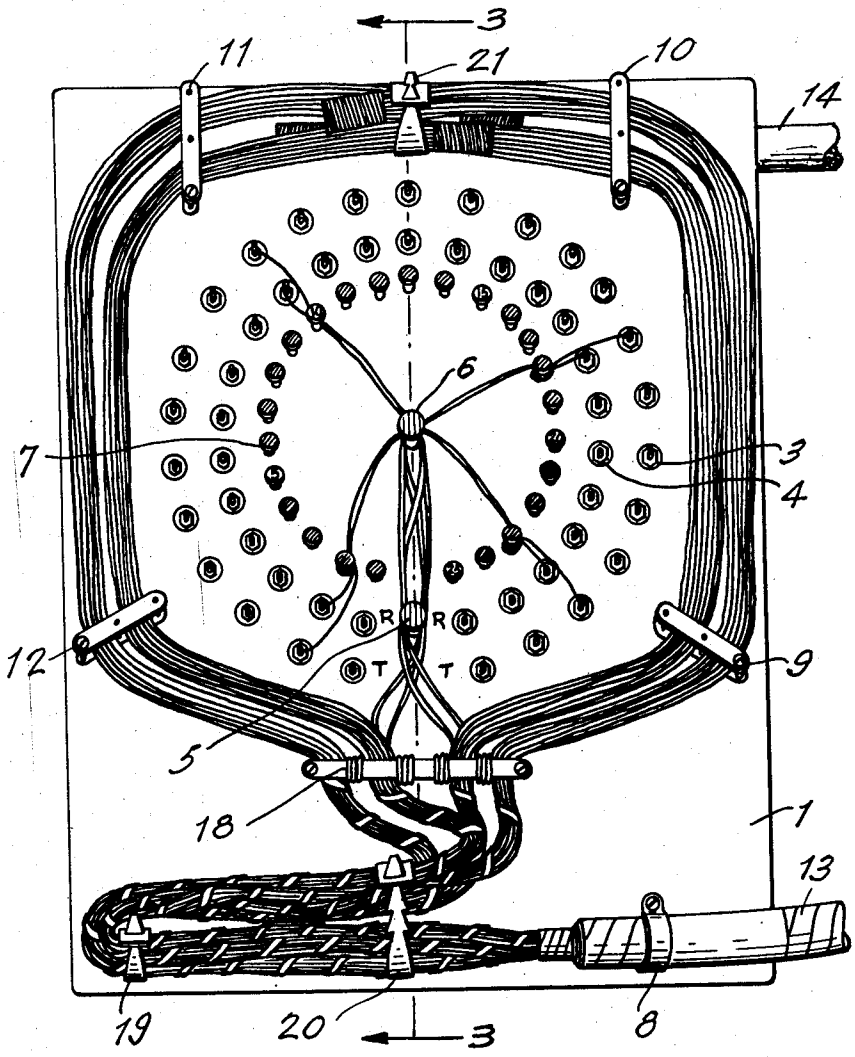


Fig. 2.

INVENTOR
ALWYN C.S.CHENNELL
BY Robert B. Harmon
ATTORNEY

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CABLE TERMINAL BOARD

Alwyn C. S. Chennell, Montreal, Quebec, Canada, assignor to Bell Telephone Company of Canada, Montreal, Quebec, Canada, a corporation of Canada

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This invention relates to cable terminal assemblies and more particularly to ready access terminals which provide ready connection for cable conductors for distribution purposes.

Present methods have posed problems in providing sufficient slack wire for transferring wires from one binding post to another after initial connections have been made. These methods involve provision of long lengths of wire to reach the most distant binding post, slack wire brackets to help store the excess wire and fanning strips to keep the wires properly separated.

An object of this invention is to provide a cable terminal arranged to provide minimum lengths of conductors at the terminal to permit original connections and re-arrangement of these connections without cutting or lengthening the conductors.

Another object of the invention is to provide a cable terminal with the foregoing characteristics having a symmetrical arrangement of the connectors.

An additional object of this invention is to provide a cable terminal having the foregoing characteristics having slack wire retainers associated with the connectors.

Another object of this invention is to reduce as much as possible the amount of space taken up by the cable terminal necessary to complete the connections.

A further object of the invention is to provide a cable terminal having the foregoing characteristics arranged so as to simplify the making or changing of the connections for the cable conductors and to minimize the liability of errors in such connections.

A still further object of this invention is to provide a cable terminal having the foregoing characteristics which is economical to manufacture.

These and other objects of the invention are attained in one embodiment by providing a cable terminal assembly consisting of a flat member on which is disposed, in one piece thereof, a plurality of spaced connectors, and slack wire retainers arranged in rings concentric with a projection disposed centrally on the flat member. Means are provided for securing a cable on the flat member, the flat member being contained within a moisture-proof housing.

A better understanding may be obtained by referring to the following description, taken in conjunction with the drawings in which like numbers refer to like parts, in which:

FIG. 1 illustrates cable terminal assembly in which the invention is represented;

FIG. 2 illustrates an enlarged view of the flat member shown in FIG. 1, and

FIG. 3 illustrates a sectional view taken along the line 3—3, of FIG. 2, in the direction of the arrows.

Considering the drawings, there is shown a cable terminal base 1 of insulating material contained within the housing 2. The terminal base 1 is provided with a plurality of spaced connectors 3, 4 arranged in rings concentric with a central guide post 6, disposed on one face of the terminal base 1. There is also shown a guide post 5 disposed on the terminal base 1, spaced apart from the guide post 6 in a gap in the concentric rings.

Also shown are a plurality of spaced slack wire retainers 7, arranged concentrically with the central guide post 6, disposed between the inner periphery of ring 4 and the central guide post 6. Disposed on the terminal base 1 are means 8, 9, 10, 11 and 12 adapted to secure a cable 13 to the terminal base 1. A connecting stub cable 14 is preconnected, at the rear of the terminal base 1, to connectors 3, 4 which project through the terminal base 1. The stub cable 14 is sealed in with a sealing compound 15 admitted through the opening 16. The housing is closed by cover 17. Group separators 18 and clasps 19, 20, 21 respectively, are used for segregating and holding the conductor pairs.

The rings of the connectors 3, 4 and slack wire retainers 7 may be arranged in other than circular form such as oval, square, etc.

In the assembly of the cable 13, the desired conductor pair is selected from one of the groups contained by the two side group separators 9, 10 or 11, 12 and the clasp 21 at the top. If this conductor pair is in the group nearest the central part of the terminal it is unnecessary to remove the other group. If, however, the conductor pair selected is not in the group nearest the central part of the terminal, it is advisable to remove and then replace this group so that the conductor pair will pass between this group and the terminal base 1 to insure that wires fed to the central portion of the terminal do not cross over this group of wires and tie it down.

The pair may be cut at the taped end of the group, as sufficient slack has been provided to allow for this.

The pair is then passed directly from the main group separator 18, around the furthest side of the guide post 5. If the group is in the left half of the group separator 18 it is preferable to pass it around the right side of the guide post 5 and vice versa, for groups in the right half of the group separator 18.

The pair is then directed partly, around the central guide post 6, so that it is held relatively taut in its run to the slack wire retainers 7 and connecting posts 3 and 4. Excess wire is stored around the slack wire retainers 7 and the wires terminated on the appropriate connectors 3 and 4.

What is claimed is:

1. A terminal board for interconnecting a pair of multiconductor cables comprising:
   (*a*) A flat member of insulating material;
   (*b*) Means to mount a first of said cables on a first side of said member adjacent to and in a plane parallel to said member;
   (*c*) A plurality of pairs of spaced terminal connectors mounted on said member in concentric circles, the said circles of connectors being discontinued along one area of the member by the omission of one or more connectors to define a gap, each connector extending through said member, the conductors of the first of said cables being connected with the connectors on a first side of the member;
   (*d*) Means to mount the second of said cables on the second side of the member exteriorly of the circles of terminal connectors adjacent to and in a plane parallel to said member; and
   (*e*) Guide means mounted on said member at the center of said circles of connectors on said second side of the member, said gap permitting conductors from said second cable to extend thorugh the gap for connection to certain of said connectors via said guide means substantially in the plane of the connectors.

2. A terminal as defined in claim 1 including a storage post individual to each connector pair arranged in concentric relation to the guide means for storing excess wire.

3. A terminal as defined in claim 1 wherein an additional guide post is placed in the gap in the circle of connectors.

4. A terminal as defined in claim 1 wherein pairs of conductors are connected to pairs of connectors, each

of said pairs of connectors being radially aligned with said guide means.

5. A terminal as defined in claim 4 including a storage post for each pair of connectors arranged in concentric relation to the guide means for storing excess wire.

6. A terminal as defined in claim 4 wherein an additional guide post is placed in the gap in the circle of connectors.

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