Jan. 24, 1939. S. C. CHILDERS 2,145,041

TEST TERMINAL

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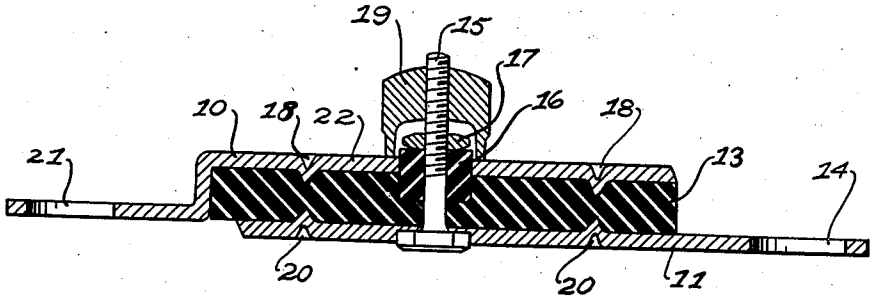



Fig 2

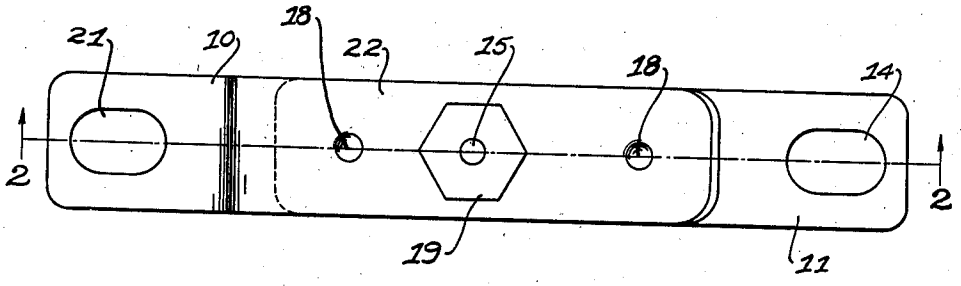



Fig 1

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## TEST TERMINAL

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3 Claims. (Cl. 200—158)

This invention relates to means, commonly termed test terminals, wherein a normal connection is made between two terminals and provided with means for quickly intercepting the circuit therebetween for test purposes, to meet the practice arising particularly in the testing of railway signalling circuits which require frequent testing in the interests of safety.

An important object of the invention is to provide an extremely simple and cheaply constructed unit for the purpose above indicated and at the same time provide a structure which is extremely durable and has a minimum number of parts.

A still further important object of the invention is to provide such a structure in a form that is readily usable and which will be very positive in its operation in both the connected and disconnected uses.

These and other objects and advantages of the invention will become apparent to those versed in the art in the following description of one particular form of the invention as illustrated in the accompanying drawing, in which

Fig. 1 is a top plan view of a structure embodying the invention; and

Fig. 2, a longitudinal vertical section on the line 2—2 in Fig. 1.

Like characters of reference indicate like parts in the two views in the drawing.

Referring to the drawing, I form a pair of connector bars 10 and 11 to be separated by an insulating block 13. The bar 11 is provided with a slotted hole 14 toward one end so as to permit quick engagement over a circuit terminal (not shown). The bar 11 receives the insulating block 13 over its major area, the end only of the bar 11 remaining uncovered which carries the slot 14. The bar 11 is further provided with a hole through which a bolt 15 may be passed. Spaced from the bolt 15 on each side thereof longitudinally of the bar 11 are depressions 20 formed in the bar 11 to cause the metal to project correspondingly on the opposite face in the nature of detents. The insulating block 13 is provided with recesses into which these detents may fit snugly.

The other conductor bar 10 is provided with a slot 21 adjacent one end thereof for engagement over another circuit terminal (not shown). The bar is provided with a major offset portion 22 to extend over the block 13. This major part 22 is provided with a hole therethrough to receive an insulating collar 16 which is preferably carried down into a counterbore in the block 13. The collar 16 surrounds the bolt 15 so as to insulate the part 22 from the bolt 15. The part 22 is further provided with a detent 18 spaced longitudinally on each side of the bolt 15 to engage in depressions formed in the insulating block 13. The purpose of the detents on both of the bars 10 and 11 is to prevent rotation of those members and also the insulating block 13 about the bolt 15. This is accomplished without having to provide additional pins or bolts entirely through the three members thus brought together.

A securing nut 17 is run down on the bolt 15 against the collar 16 so as to unite firmly the insulating block 13 and the bar 11 and also to seat the insulating collar 16 against displacement. A test terminal nut 19 is provided to screw-threadedly engage the bolt 15 and its under side is counterbored so as to provide clearance around the nut 17 and the collar 16 to permit the nut to be brought into contact against the face of the bar portion 22 and thereby squeeze that portion against the insulating block 13 and form, to all intents and purposes, a fixed member providing an electrical circuit from the bar 10, through the nut 19, and bolt 15, to the bar 11.

When this device is to be used for test purposes, and the circuit is to be interrupted between the bars 10 and 11, the nut 19 is turned to bring it out of engagement with the bar 10 so as to interrupt the circuit just described. Normally the various parts will remain in engagement one with the other even when the nut 19 is loosened or even withdrawn since the detents 18 and 20 bite into the insulating block 13 and tend to adhere thereto.

While I have herein shown and described my invention in the one particular form, it is obvious that structural variations may be employed without departing from the spirit of the invention, and I, therefore, do not desire to be limited to that precise form beyond the limitations as may be imposed by the following claims.

I claim:

1. In a test terminal, a pair of conductor bars, an insulating member therebetween, one of said bars at least having an offset portion engaging over said member, an insulating sleeve received in said member and extending through one of said bars, a bolt placed through the other of said bars, said member, and said sleeve to extend a distance therebeyond, a securing nut on the bolt carried into abutment with said sleeve, and a terminal nut also carried on said bolt counterbored for clearance over said securing nut and said sleeve to bear against the bar therearound.

2. In a test terminal, a pair of conductor bars, an insulating member therebetween, one of said

bars at least having an offset portion engaging over said member, an insulating sleeve received in said member and extending through one of said bars, a bolt placed through the other of said bars, said member, and said sleeve to extend a distance therebeyond, a securing nut on the bolt carried into abutment with said sleeve, and a terminal nut also carried on said bolt counterbored for clearance over said securing nut and said sleeve to bear against the bar therearound, one of said bars at least having extensions therefrom engaging said insulating member to maintain that member and bar in fixed positions about said bolt.

3. In a test terminal, a pair of conductor bars, an insulating member therebetween, one of said bars at least having an offset portion engaging over said member, an insulating sleeve received in said member and extending through one of said bars, a bolt placed through the other of said bars, said member, and said sleeve to extend a distance therebeyond, a securing nut on the bolt carried into abutment with said sleeve, and a terminal nut also carried on said bolt counterbored for clearance over said securing nut and said sleeve to bear against the bar therearound, one of said bars at least having extensions therefrom engaging said insulating member to maintain that member and bar in fixed positions about said bolt, said extensions consisting of integral detents pressed into said insulating member.

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