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F. A. WOOD
ELECTRICAL TERMINAL
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2,497,484

Fig. 1

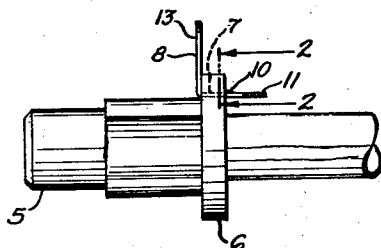


Fig. 2

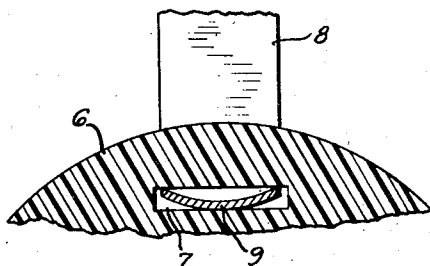


Fig. 3

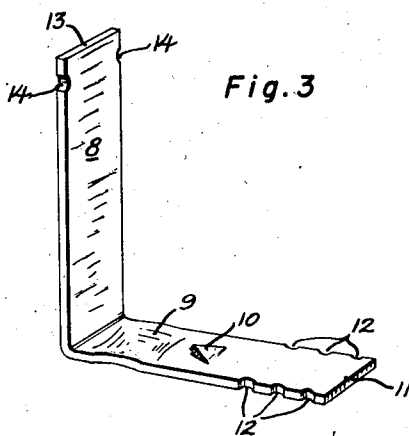


Fig. 5

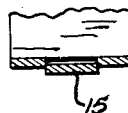
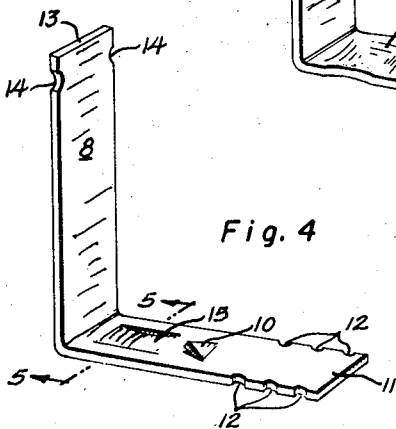


Fig. 4



FRANK A. WOOD
INVENTOR.

BY David M. Davis
HIS ATTORNEY

UNITED STATES PATENT OFFICE

2,497,484

ELECTRICAL TERMINAL

Frank A. Wood, Elmhurst, Ill., assignor to Zenith
Radio Corporation, a corporation of Illinois

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2 Claims. (Cl. 173—363)

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This invention relates to electrical terminals and has for an object the provision of an improved electrical terminal which is inexpensive to manufacture, simple to utilize and effective in the performance of its function.

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. The present invention itself, both as to its organization and manner of operation, together with further objects and advantages thereof may best be understood by reference to the following description taken in connection with accompanying drawings in which:

Figure 1 is a front view of one embodiment of the present invention;

Figure 2 is a sectional view taken on line 2—2 of Figure 1;

Figure 3 is a perspective view of a portion of the device of Figure 1;

Figure 4 is a perspective view of a modification of the device of Figure 1; and

Figure 5 is a sectional view taken on the line 5—5 of Figure 4.

In Figures 1 and 2, a coil form 5 has an integrally formed collar 6 having a rectangular slot 7 therein for the passage therethrough of a terminal 8.

As the coil form shown in Figure 1 is of the end-molded type, the slot 7 in the collar 6 is easily and economically formed in the molding operation.

In Figure 3, in detail, the terminal 8 includes a dished-in or U-channel portion 9 and an upstanding barb 10. A securing leg 11 of the terminal 8 has suitable notches 12 to facilitate the wrapping and soldering of a coil lead (not shown). A positioning leg 13, adjacent to the securing leg 11, is likewise provided with notches 14 to facilitate the wrapping and soldering necessary to incorporate the coil lead in any desired electrical circuit.

In mounting the terminal 8 in the collar 6 of the coil form 5, the securing leg 11 is inserted into the slot 7 and, by finger pressure of the operator, is pressed into a tightly locked position.

As shown in Figure 2, the dished-in portion 9 of the terminal 8 cooperates with the lower edge of the slot 7 to force the upper edges of the open U-shaped channel against the upper edge of the slot 7 by reason of the inherent spring action of the metal in the terminal. Since the terminals presently being described are of extremely small mass and light in weight, such an engagement of the upper edges of the open U-shaped channel with the upper edge of the slot

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7 is sufficient to prevent any movement of the terminal 8 normal to its longitudinal axis. Such a relationship between the terminal and the slot allows for a relatively large tolerance on the width dimension of the slot. That is to say—snug anchorage of the terminal in its slot is not dependent upon the width of the slot and hence the tolerance on the width dimension can be held positive to provide ample working tolerance.

10 Likewise, but to a somewhat lesser degree, the tolerance on the height dimension of the slot 7 can be relatively liberal in both the plus and minus directions because slight variations in the height dimension are compensated for by the inherent spring action, or resiliency, of the open U-shaped channel of the dished-in portion 9.

In Figure 1, the securing leg 11 of the terminal 8 is threaded through the slot 7 and pushed through the slot to a point where its positioning leg 13 abuts the left side of the collar 6. At this point, the upstanding barb 10 is no longer depressed by the upper edge of the slot 7 and, by reason of its inherent resiliency, pops up slightly to resist any longitudinal backward movement of the terminal 8 in the slot 7.

The abutting of the positioning leg 13 of the terminal 8 against the left side of the collar 6 and the abutting of the upstanding barb 10 against the right side of the collar 6, plus the engagement of the upper edges of the open U-shaped channel of the dished-in portion 9 against the upper edge of the slot 7, results in the terminal being locked against movement in any direction in the coil form 5.

While the terminal 8 is shown locked in place in the collar 6 of the coil form 5, it is the intention to cover the use of this type of terminal in any insulation having sufficient thickness to adequately engage and support the dished-in portion of the terminal. Of course, the terminal can be designed to cooperate fully with insulation of various thicknesses.

In Figure 4, which is one modification of this terminal arrangement, a shear-formed portion 15 is substituted for the dished-in portion 9 illustrated in Figure 3.

In the sectional view Figure 5, the shear-formed portion 15, by reason of its resiliency, acts upon the bounds of a slot, similar to the slot 7 in Figure 2, to hold the terminal 8 tightly in its slot without up and down play.

The dished-in portion 9 of Figure 3 is preferred in particularly small terminals because it is easier to form. Also, relatively light gage metals are used in these small terminals, the portion 9,

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being dished-in all around, resists the bending down of the upper edges of the dished-in portion when the terminal is inserted in its slot.

The shear-formed portion 15 shown in Figures 4 and 5 is preferred in terminals that are appreciably wider and heavier than the terminals shown in Figures 1, 2 and 3, because the shear-formed portion 15 possesses a stronger restoring force in its resilient action.

While particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made without departing from this invention in its broader aspects, and, therefore, the aim in the appended claims is to cover all such changes and modifications as fall within the true spirit and scope of this invention.

I claim:

1. An electrical terminal having a pair of integral legs at an angle to each other, said terminal being mounted in a piece of insulation, said insulation having a slot therethrough for the passage of one of said legs, said one leg having a dished-in portion of resilient character, said portion having a depth dimension substantially greater than the height dimension of said slot, the other of said legs being disposed on one side of said dished-in portion, and a projecting barb on the other side of said dished-in portion; said dished-in portion of said terminal and the interaction of said other leg and said barb all

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cooperating to resist movement of said terminal in said slot.

2. In combination, an electrical terminal and a support for said terminal, said terminal having a pair of legs lying at an angle to each other, said support being of an electrical insulating material and having a slot therein for passage of one of said legs therethrough, said one leg having a portion intermediate its edges lying in a plane substantially spaced from the plane of its edges supported in said slot by resilient frictional engagement with the insulating material bounding said slot, the other of said legs being disposed on one side of said intermediate portion and a barb being spaced from said other leg and pointing toward the plane of said other leg, said barb projecting from said securing leg at a distance from said other leg which is substantially equal to the thickness of said insulating material bounding said slot.

FRANK A. WOOD.

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