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S. M. DEL CAMP

2,314,855

ELECTRICAL TERMINAL AND TERMINAL INSTALLATION

Filed Dec. 6, 1940

Fig. 1.

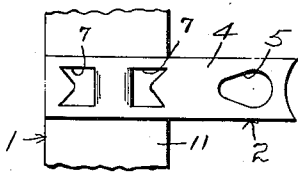


Fig. 2.

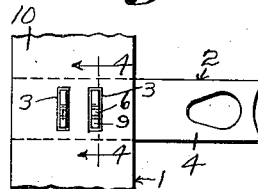


Fig. 3.

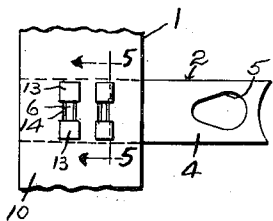


Fig. 4.

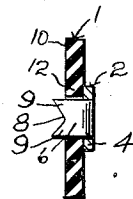


Fig. 5.

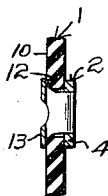


Fig. 6.

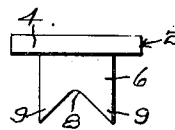


Fig. 7.

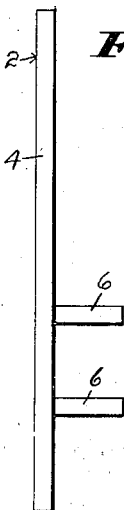
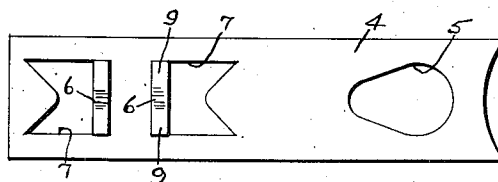


Fig. 8.



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UNITED STATES PATENT OFFICE

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ELECTRICAL TERMINAL AND TERMINAL
INSTALLATION

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Application December 6, 1940, Serial No. 368,894

1 Claim. (Cl. 173—324)

This invention relates to improvements in soldering terminals and to installations wherein soldering terminals are secured in assembly with insulating supporting strips.

The object of my invention is the provision of a soldering terminal which is constructed to be attached to a strip of "Bakelite" or similar compound of phenolic condensate material so as to be secured against a tendency to loosen when heat is applied to the terminal for soldering a wire thereto. It is well known that resinous materials have low heat resistance with the result that when "Bakelite" or the like is subjected to heat, the component phenolic resin is apt to liquefy. Thus, with soldering terminals now in common use providing an attaching portion in the form of an integral eyelet, which is extended through a hole of the "Bakelite" strip and headed over, it has been found that the resin immediately around the eyelet has a tendency to melt during the operation by which a lead wire is soldered to the terminal with the result that the eyelet becomes loose permitting the terminal to move laterally.

The terminal of my present invention provides attaching portions of rectangular shape projected into rectangular openings of the strip and operable to be actually forced into the walls of the strip surrounding the openings in final application of the terminal to the strip so as to effect a tight binding engagement with the strip.

Other objects and uses of my invention will be apparent from inspection of the drawing and specification hereinbelow set forth.

Referring to the drawing, in which I have illustrated a preferred embodiment of my invention:

Fig. 1 is a top plan view of a portion of a strip of "Bakelite" or the like material showing a soldering terminal secured thereto;

Fig. 2 is a bottom plan view of the installation shown in Fig. 1 before the attaching portions of the terminal are upset to secure the terminal in final applied position;

Fig. 3 is a view similar to Fig. 2 showing the attaching portions upset to secure the parts in fixed relation;

Fig. 4 is a section taken on the line 4—4 of Fig. 2;

Fig. 5 is a section taken on the line 5—5 of Fig. 3;

Fig. 6 is an enlarged end view of my improved soldering terminal per se;

Fig. 7 is a side elevation of the soldering terminal shown in Fig. 6; and

Fig. 8 is a bottom plan view of my improved soldering terminal per se.

Referring to the drawing, I have shown a preferred installation comprising a strip of insulating material 1 and a soldering terminal 2 secured in fixed engagement therewith. The strip 1 is preferably formed of "Bakelite" or other suitable phenolic condensate material and has a pair of rectangular apertures 3 therein disposed in spaced parallel relation, as most clearly shown in Fig. 2. The terminal 2 has a flat elongated body 4 providing an opening 5 adjacent one end for receiving lead wires (not shown) to be soldered to the terminal. As a means for securing the terminal to the strip 1, I have provided a pair of attaching portions in the form of lugs 6 which are stamped from material entirely within the marginal edges of the body 4 of the terminal so as to leave a pair of openings 7 in the body (Figs. 1 and 8). The lugs 6 are generally rectangular in shape and spaced apart a predetermined distance so as to extend through the openings 3 when the terminal is applied to the strip. Each of the lugs 6 has a V-shaped slot 8 (Fig. 6) at its outermost end providing a pair of prong-like portions 9 which extend below the lower surface 10 of the strip in initial application of the terminal to the strip.

Application of the terminal to the strip is a relatively simple matter and is carried out by moving the body 4 of the terminal into abutting relation with the upper surface 11 of the strip with the lugs 6 extending through the respective openings. Next, the prongs 9 at the outer end of each of the lugs 6 are upset by a suitable tool (not shown) causing them to spread longitudinally of the respective opening 3 to embed themselves in the walls adjacent the longitudinal ends 12 of the opening, as most clearly shown in Fig. 5. In the same operation by which the prongs are upset, they may be swaged by a suitable tool (not shown) so as to flatten out in directions transverse to the normal planes of the broad sides of the lug, as most clearly shown in Figs. 3 and 5, with the result that the flattened portions 13 overlie at least one of the longitudinal edges 14 of the respective opening 3, as most clearly shown in Fig. 3.

Thus, it will be seen that by my invention I have provided a terminal of simple and inexpensive construction providing attaching portions which may be forced into embedded relation with the walls of the opening through which they extend so as to minimize the possibility of relative loosening as a result of liquefaction of the

walls of the strip around the openings through which they extend. At the same time, even if the lugs should loosen slightly within the openings, the rectangular relation of the lugs and openings would operate to prevent lateral movement of the terminal.

Although I have illustrated and described a preferred embodiment of my invention, I do not wish to be limited thereby because the scope of my invention is best defined by the following claim.

I claim:

In combination with an insulating support of resinous material, such as a phenolic condensate and the like, provided with a plurality of rectangular openings therein; of a wiring terminal of heat-conducting material comprising a body of substantially rectangular cross-section engaging said support along one of its flat sides, said body being formed with an integral wire attaching means beyond the support, and a plurality of

large apertures in the part thereof engaging said support and substantially rectangular shaped attaching lugs formed from material taken from said body in forming said apertures and disposed at right angles to said body for positioning within the apertures of said support, said attaching lugs being of less width than said body providing marginal portions of said body surrounding said lugs and engaging said support, at least one of said openings being interposed between an attaching lug and wire-securing means to reduce transfer of heat applied to said wire-securing means directly to and in line with said attaching lug, the free ends of said lugs being formed with a central notch providing end prongs therein, said prongs being upset over the face of the support opposite the terminal body to grip said support between the upset prongs and the marginal portions of the terminal body.

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