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2,011,861

TERMINAL POST

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Fig. 1

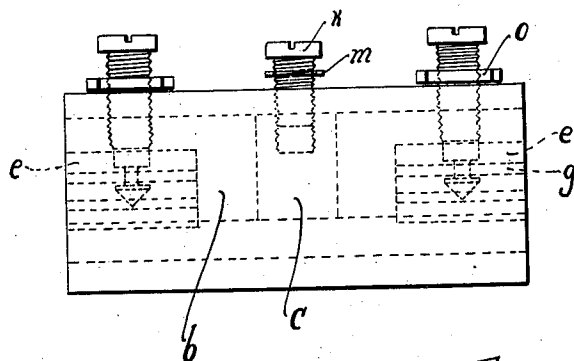


Fig. 2

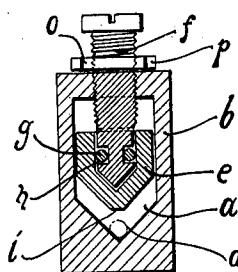


Fig. 3

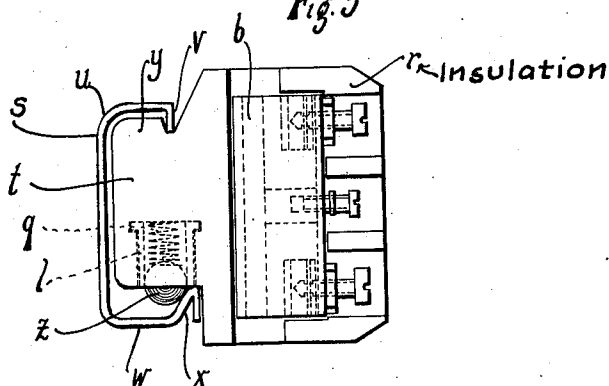
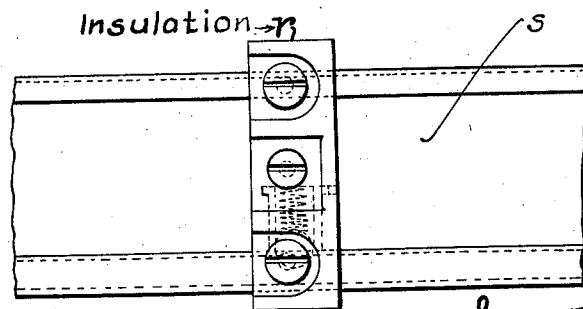


Fig. 4



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## UNITED STATES PATENT OFFICE

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## TERMINAL POST

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1 Claim. (Cl. 173—324)

This invention relates to terminal posts for electric circuits and consists in an improved construction of a device of this kind, especially with the object in view to provide a reliable contact between a conductor and the terminal post and to secure the pressure-screw which is ordinarily used for effecting said contact and for mechanically keeping said conductor in position. In addition, an object of this invention is to provide instrumentalities for preventing said pressure-screw against falling out of the terminal post, thereby rendering the terminal post as a whole more reliable as a contact and connecting member for the leads of electric circuits.

For the connection of electric leads, for instance in case of terminal posts which are mounted in a row upon a ledge or terminal board, there are ordinarily used terminal posts each having an aperture or bore within which the ends of the leads to be conductively connected with the terminal post are kept in mechanical as well as electrical contact with the body of the terminal post solely by action of a plain pressure-screw. This mode of connecting leads with the terminal post, however, has the drawback that the contact surfaces between the lead and terminal post are only rather small. In addition to this, the lead will be liable to be crushed or otherwise damaged in case of turning too tightly the pressure-screw.

These disadvantages which are inherent to known constructions of terminal posts are successfully avoided by my present invention, in the first place by providing a special pressure-member within the bore of the terminal post, in the second place by properly constructing said pressure-member to secure the end of the lead in proper contact thereto and to the terminal post as a whole and in the third place by providing on said pressure-member suitable pressure or contact-surfaces for securing a reliable contact with said lead. Preferably, according to my invention the terminal post is further so arranged and constructed that the end of the pressure-screw is connected with the aforementioned pressure-member in such a manner that the former may be rotated relatively to and within the latter, at the same time preventing separation of said pressure-screw from the body of the terminal post. The pressure-screw will thus be positively prevented against being incidentally separated from the terminal post and protected against loss. The practical value of the terminal post as a whole will thus be considerably enhanced by my present invention.

Preferably, according to my invention the aper-

ture or bore of the main terminal body is subdivided centrally by means of a transverse wall for the purpose of causing only one of the pressure-members to positively act upon the end of a single conductor to be connected with the terminal post.

When using my new terminal post in the manner above indicated in a row on a ledge or terminal board, the main body of the terminal post is inserted in the ordinary manner into an insulating body and the latter is now inserted into a profiled ledge or terminal board in a manner to immediately engage with the latter by means of a projection on the one hand and to be secured to the latter by means of a catch on the other hand. Thus, for instance, the insulating body may immediately engage the upper part of the said profiled ledge or board, while a resilient catch is fixed to the under part of said insulating body, said catch consisting preferably of a spring-driven ball projecting partly from the insulating body. This construction offers the advantage that every terminal post may be immediately inserted into and taken out of said board or ledge from the front thereof.

In the accompanying drawing which forms part of this specification I have shown an example of a terminal post constructed according to the principles of my present invention. In the drawing, Fig. 1 is a side-view of one form of terminal post constructed according to my invention, Fig. 2 a cross-section of Fig. 1, Fig. 3 a side-view showing the terminal post according to Fig. 1 mounted on a profiled ledge or terminal-board, and Fig. 4 a view taken on Fig. 3 from the right-hand side thereof.

Referring more particularly to the drawing, the aperture or bore *a* which is preferably divided at its center by a wall *c* is of wedge-shaped conformation at its under part, as indicated at *d* in Fig. 2 for the purpose of providing possibilities of inserting the ends of conductors or wires having different diameters into the terminal. Proper contact between the said ends of the conductors or wires so inserted and the terminal is effected by means of the pressure-members *e* which are fastened to the end of the pressure-screw *f*. A transverse pin *g* is carried by the pressure-member and inserted therinto from the side thereof, said pin *g* engaging with a groove *h* in the under part of said pressure-screw *e*. This pin *g*, as may easily be seen from Fig. 3, serves to lift the pressure-member *e* while unscrewing the screw, that is during turning the same in backward direction. The under part of

the pressure-member is likewise of wedge-shaped conformation and flattened at its undermost end as shown in Fig. 2. Instead of flattening the pressure-member *a* at its under part, also a groove may be provided at this place. It may be noted that the pin *g*, in addition to the purpose above indicated, will serve to prevent the pressure-member *e* against being separated from the screw *f* and against falling out of the terminal post or being lost which is frequently the case in terminal posts of ordinary construction. A counter-nut *o* with slots *p* therein permitting rotation by means of a proper implement, such as a key or the like, serves for securely locking the screw *f* in any desired condition. In order to connect a plurality of terminal posts of the same construction with each other, there may be used a screw *k* with a washer *m* which is preferably provided with resilient prongs or the like.

If it is desired to use a plurality of the new terminal posts in the manner above indicated in connection with a terminal board or ledge, the terminal post *b* is inserted into a body *r* of insulating material, said body of insulating material being provided at its rear part with an extension *t* which serves for mounting and fastening the same within a profiled ledge or terminal board *s*. This profiled ledge or terminal board consists of a metal strip having at its upper part two bends, a forward bend *u* and an inward bend *v* and at its under part a forward bend *w* and a further double bend forming a flange *x*, as shown in Fig. 3. The upper part *y* of the extension *t* on the insulating body *r* engages immediately by means of a groove therein, as shown in Fig. 3, with the bend *v*, while a catch having the form of a ball *z* engages from the inside of the ledge or terminal board *s* with the double bend or flange *x* thereon by action of a spring *q*, said ball projecting out of the under aperture of the sleeve *l* which is inserted into the extension *t* of the insulating body *r*.

The double bend or flange *x* has the inner portion thereof which is connected to the forward bend *w* disposed on an oblique angle to the forward bend *w*, and the remaining or outer portion of the flange *x* is adapted to abut against

the shoulder formed at the junction between the longer side wall of the extension *t* with the body *r*. The spring-pressed ball *z*, when the extension *t* is within the support *s*, engages against the oblique portion of the flange *x* and thereby yieldingly holds the other portion of the flange *x* in abutting relation against the shoulder, so that the body *r* will be firmly held in the support *s*.

In order to fasten the terminal post at the ledge or terminal board *s*, it will be sufficient to move the upper part *y* of the extension *t* into the rear of the bend *v* in oblique position of the insulating body *r* and to thereupon press the terminal post into its final position, the ball or resilient catch *z* first yielding and thereupon engaging with the flange *x* at the inside thereof. In a similar manner the terminal post may be taken off the profiled ledge or terminal board *s* in direction towards the front without in any way affecting the other terminal posts which may be mounted on the ledge or terminal board *s* in proximity to the terminal post so removed.

I claim:

In combination, a removable insulated body for a terminal post, a reduced extension integral with the body, said extension having one side wall thereof shorter than the other and the junction between the longer side wall and the body forming a shoulder, said body at the junction of the shorter side wall therewith having a notch therein, a support for said body substantially U-shaped in transverse section, one leg of said support being shorter than the other, an inwardly extending flange on said short leg engageable in said notch, a substantially V-shaped flange carried by the other leg of said support, one portion of said V-shaped flange being oblique to the longer leg of the support and the remaining portion of the V-shaped flange abutting against said shoulder, and a spring-pressed ball carried by said extension and projecting through the longer side wall thereof in a position to engage said oblique portion of said V-shaped flange to thereby maintain the remaining portion of the V-shaped flange in abutting relation against said shoulder.

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