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T. H. BARNARD ET AL

INSULATOR SUPPORTING BRACKET

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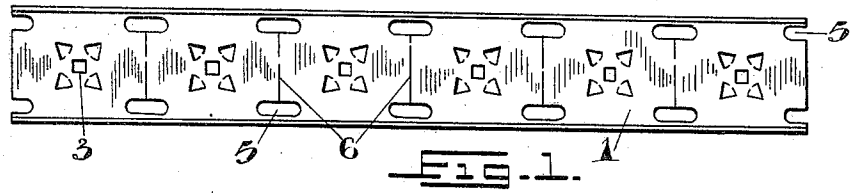


Fig. 1.

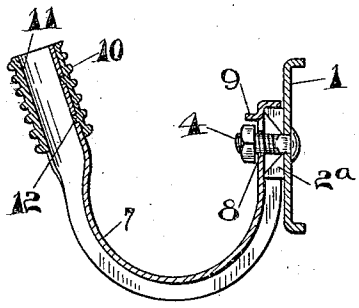


Fig. 2.

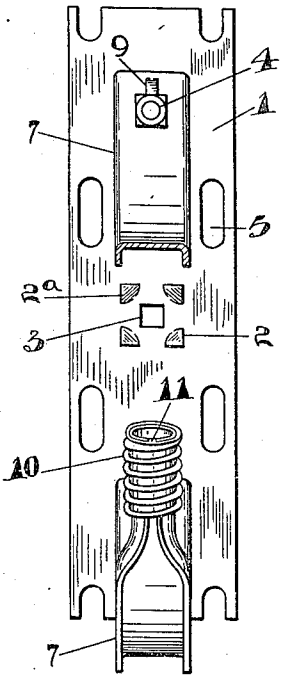


Fig. 3.

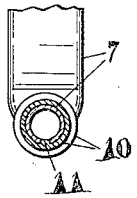


Fig. 5.

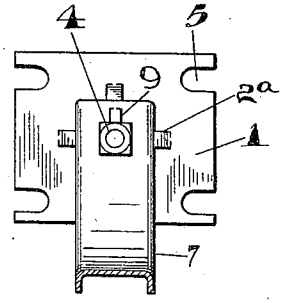


Fig. 6.

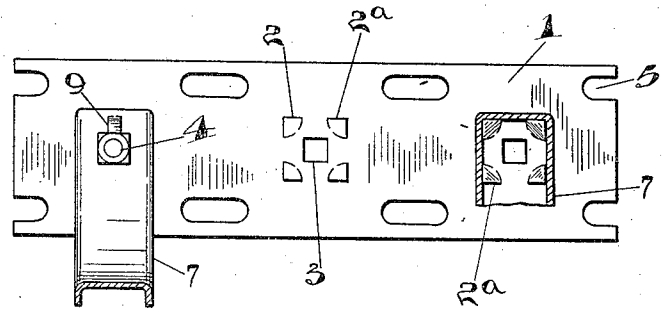


Fig. 4.

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UNITED STATES PATENT OFFICE.

THOMAS H. BARNARD AND HERBERT M. TAYLOR, OF BRIGHTON, ONTARIO, CANADA.

INSULATOR-SUPPORTING BRACKET.

Application filed February 18, 1921. Serial No. 446,028.

To all whom it may concern:

Be it known that we, THOMAS H. BARNARD and HERBERT M. TAYLOR, of the town of Brighton, in the county of Northumberland, Province of Ontario, Canada, subjects of the King of Great Britain, have invented certain new and useful Improvements in Insulator-Supporting Brackets, of which the following is a specification.

This invention relates to improvements in brackets for supporting insulators for carrying electric wires. As these brackets are used in varying positions and are required to carry a varying number of wires, it has been the custom heretofore to make up numerous styles of brackets according to the position in which they are used and the number of wires to be carried thereby. This has necessitated the making up and carrying of a large stock of different styles of brackets both by the manufacturers and users, some of which styles were perhaps very rarely used.

The object of our invention therefore mainly is to devise standard material which may be used to form brackets to answer all ordinary requirements, which brackets may be made up on the job as required in quick time, and which will not cost any more than the brackets now on the market.

A further object is to devise an improved method of forming the thread on the supports or points for carrying the insulators. Further objects will hereinafter appear.

We attain our objects by means of the constructions hereinafter described and illustrated in the accompanying drawings in which—

Fig. 1 is a rear view of a piece of the material from which the bases or backs of the brackets are formed;

Fig. 2 a section through the back material and support before the nut is tightened down on the bolt;

Fig. 3 a front elevation of a bracket showing the insulator supports arranged vertically;

Fig. 4 a front elevation of a bracket showing the insulator supports arranged horizontally; and

Fig. 5 a detail showing the method of casting the thread on the insulator support; and

Fig. 6 a front elevation of a bracket showing a modified arrangement of the tongues.

In the drawings like numerals of reference indicate corresponding parts in the different figures.

1 is the back member, preferably formed in section as a wide shallow channel. At regular intervals along its length are formed a plurality of projections 2 forming abutments directed both longitudinally and transversely of the back member. These projections might simply be formed on the back by stamping, but we prefer to form the same by stamping out and bending up four triangular-shaped tongues 2^a arranged so that their apexes form the corners of a square as shown in Fig. 1. These tongues, however, might be arranged to point inwardly as indicated in Fig. 6 with their free edges touching the sides of a square. In the center of this square is formed a hole 3 for the passage of a bolt 4.

At each side of the back, preferably intermediate these projections, are formed slots 5, and on the under-side of the back lines of weakness 6 are formed transversely of the back connecting the slots 5.

From this construction it follows that any length of back may be cut from the stock bar by cutting the bar from the outer edges in to the slots 5 by means of any suitable tool, such, for example, as a hack saw, and then bending the back material on the line of weakness 6, when the part desired may be readily separated.

To the back 1 we secure one or more insulator supports 7. These supports are preferably of channel shape in cross section, and the end by which the support is secured to the back is preferably closed. The support 7 has a hole 8 formed near its closed end, and the support is secured to the back by setting up a bolt 4 through the holes 3 and 8. The tongues 2^a will fit tightly against the sides of the recess in the support 7, and when the nut on the bolt 4 is tightened up the tongues 2^a will prevent any rotary movement of the support 7 on the back.

To prevent the nut on the bolt 4 jarring loose, we stamp up a tongue 9 adjacent the hole 8, and after the nut on the bolt 4 is screwed down tightly, the tongue 9 is bent over to engage the side of the nut, serving as a lock to prevent the nut from turning unless the tongue is first bent back.

The point of the support 7, for approximately $1\frac{1}{2}''$ of its length, is deformed until it is of approximately annular shape in cross

section, although the sides are left slightly spaced apart. The cylindrical section is then packed with suitable material, such as asbestos, and a thread 10 of lead or similar soft metal is cast directly thereon. Part of this lead extends down between the sides of the cylindrical section as shown in Fig. 5 to form a rib 11. We also form holes 12 in the cylindrical end of the support and part of the lead extends into these holes when the thread is being cast. The rib 11 and the lead which has entered the holes 12 are of material assistance in preventing the thread from becoming disengaged from the point of the support.

It will be seen that the supports 7 may be secured to the back in any one of four positions, two of which positions are shown in Figs. 3 and 4, and that the back may be made of any length and any number of supports may be secured thereto spaced apart any distance which may be found desirable to adapt the bracket for any particular use.

It will also be seen that in some cases three stamped up tongues 2^a may be sufficient, or even two, as the bolt 4 would serve to take the place of the tongues which were omitted to keep the support from rotating.

It will be noted from Fig. 2 of the drawings that the tongues 2^a are stamped up in such a manner that when the support is placed in position the tongues will first engage the bottom of the channel and hold the support spaced from the back 1. When the nut is screwed up on the bolt 4, to force the support tightly against the back, the tongues are bent over until they engage tightly in the angles between the bottom and sides of the channel support. With this tight jambing of these tongues in the angles there will be no possibility of the support wobbling on the back.

From the above description it will be seen that we have devised constructions which will satisfactorily attain the objects of our invention as set forth in the preamble of this specification.

What we claim as our invention is:—

1. In an insulator supporting bracket, the combination of a back member having insulator support engaging means on its front surface; an insulator support adapted to be engaged with said means in any one of a plurality of positions at right angles to another position to resist turning movement in a plane parallel to the surface of the back member, said means comprising a set of tongues stamped out and bent up on the front surface of the back member, said tongues tending to resiliently hold the support spaced from the back; and means for securing said support to the back adapted to draw the support towards the back.

2. In an insulator support bracket, the combination of a back member having insulator support engaging means on its front surface; an insulator support having a portion thereof channel-shaped in cross section adapted to be engaged with said means in any one of a plurality of positions at right angles to another position to resist turning movement in a plane parallel to the surface of the back member, said means comprising a set of tongues stamped out and bent up on the front surface of the back member, said tongues being adapted to engage the web of the channel-shaped portion to resiliently hold the support spaced from the back; and means for securing said support to the back adapted to draw the support towards the back and the points of the tongues against the sides of said channel-shaped portion.

3. In an insulator supporting bracket, the combination of a back member having a substantially plane front surface, said member having a hole formed therein and a set of stamped up tongues surrounding said hole; an insulator support of channel section adapted to be engaged with said set of tongues in any one of a plurality of positions at right angles to another position to resist turning movement in a plane parallel to the surface of the back member, said support having a hole therethrough, and a bolt passing through said last mentioned hole and the hole in the back member in a direction normal to the surface of the back member.

4. In an insulator supporting bracket, the combination of a back member having a substantially plane front surface, said member having a hole formed therein and a set of stamped up tongues surrounding said hole; an insulating support of channel section adapted to be engaged with said set of tongues in any one of a plurality of positions at right angles to another position to resist turning movement in a plane parallel to the surface of the back member, said support having a hole therethrough, and a bolt passing through said last mentioned hole and the hole in the back member in a direction normal to the surface of the back member, two opposite edges of said back member being bent rearwardly a distance at least substantially equal to the thickness of the head of the bolt.

5. In an insulator supporting bracket, the combination of a back member having a substantially plane front surface having a longitudinal series of holes formed therein and a longitudinal series of slots at each side of the series of holes, the slots in each series being arranged opposite one another and in staggered relationship to the holes; and lines of weakness connecting the opposite slots in each series, said member also having a set of tongues stamped up therefrom surrounding each hole; an insulator support adapt-

ed to be engaged with any one of said sets of tongues in any one of a plurality of positions at right angles to another position to resist turning movement in a plane parallel to the surface of the back member, said support having a hole therethrough, and a bolt passing through the hole in the support and a hole in the back member.

6. In an insulator supporting bracket, the combination of a back member having a substantially plane front surface having a longitudinal series of holes formed therein and a longitudinal series of slots at each side of the series of holes, the slots in each series being arranged opposite one another and in staggered relationship to the holes; and lines of weakness connecting the opposite slots in each series, said member also having a set of tongues stamped up therefrom surrounding each hole; an insulator support adapted to be engaged with any one of said sets of tongues in any one of a plurality of positions at right angles to another position to resist turning movement in a plane parallel to the surface of the back member, said support having a hole therethrough, and a bolt passing through the hole in the support and a hole in the back member, the side edges of said back member being bent rearwardly a distance at least substantially equal to the thickness of the head of the bolt.

Signed at Brighton this eighth day of February 1921.

THOMAS H. BARNARD.
HERBERT M. TAYLOR.

Witnesses:
W. W. PIRTE,
WM. M. MCKINNON.