Aug. 29, 1961 W. L. HOLLANDER 2,998,477

INSULATOR BRACKET

Filed Oct. 21, 1958

FIG. 1.

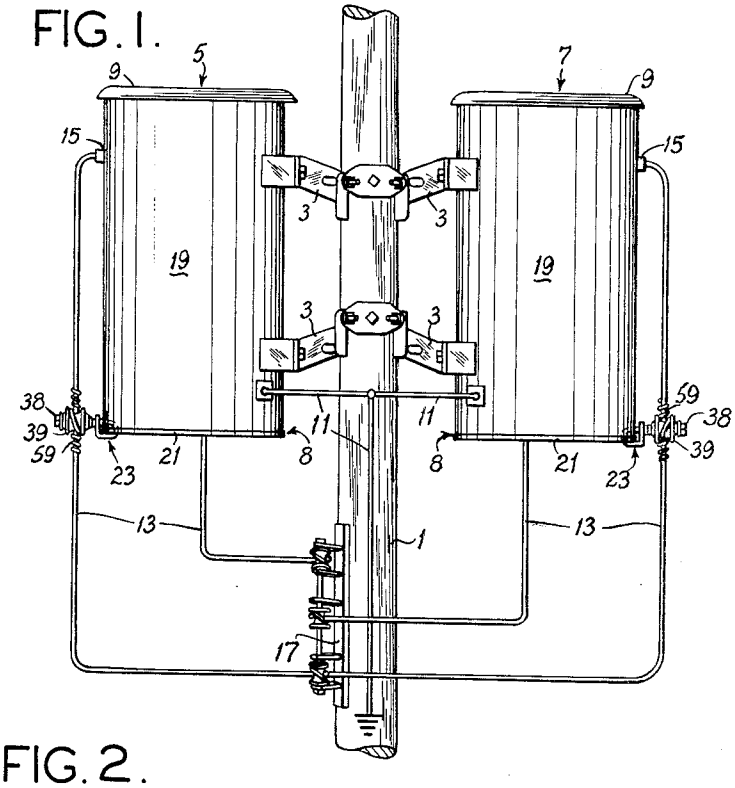


FIG. 2.

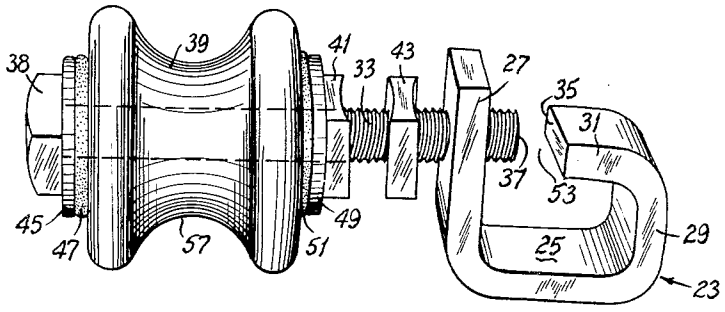
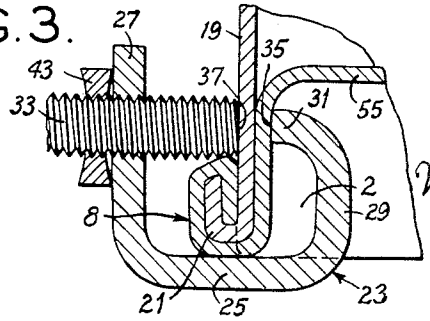


FIG. 3.



William L. Hollander,
Inventor.
Koenig and Pope,
Attorneys.

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INSULATOR BRACKET

William L. Hollander, Centralia, Mo., assignor to A. B. Chance Company, Centralia, Mo., a corporation of Missouri

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2 Claims. (Cl. 174—163)

This invention relates to insulator brackets, and with regard to certain more specific features, to safety brackets of this class adapted for convenient application to and removal from transformers, being an improvement upon that disclosed in the United States patent application of Charles Holland Nix, Serial No. 768,707, filed October 21, 1958, for Insulator Bracket.

Among the several objects of the invention may be noted the provision of an improved, more compact form of transformer insulator bracket for supporting secondary risers therefor, in which the number of parts required and the cost thereof are reduced; and the provision of an insulator bracket of this class which may be more conveniently installed. Other objects and features will be in part apparent and in part pointed out hereinafter.

The invention accordingly comprises the elements and combinations of elements, features of construction, and arrangements of parts which will be exemplified in the structures hereinafter described, and the scope of which will be indicated in the following claims.

In the accompanying drawings, in which one of various possible embodiments of the invention is illustrated,

FIG. 1 is a side elevation of a transformer bank showing the invention applied thereto;

FIG. 2 is a perspective view of my new insulator bracket in an open position; and,

FIG. 3 is a fragmentary detailed section showing a clamped position of bracket parts on the roll-seamed bottom rim of a transformer.

Corresponding reference characters indicate corresponding parts throughout the several views of the drawings.

Referring now more particularly to FIG. 1, there is shown at numeral 1 a pole having brackets 3 for transformers 5 and 7 having lower rims 8. The top closures of the transformers are indicated at 9. The primary wires of such transformers enter the tops 9 through suitable insulator bushings (not shown). Ground wire connections are shown at 11. So-called secondary riser wires are shown at 13. These usually enter the transformer at upwardly located bushings, such as shown at 15. The risers are supported at their lower portions upon a bracket 17.

Secondary risers such as 13 should not be allowed to hang free to become subjected to conditions of wind, weather and vibration. If so, it is not uncommon for them to be forced against the transformer casings, shown at 19. The result is a wearing away of the wire insulation and short-circuiting.

In said application is disclosed broadly a transformer insulator bracket for avoiding the above-mentioned dangers. In order to reduce the cost of the transformer bracket while making it stronger, and in order to make its application more convenient, I provide the structure shown in the present drawings. This consists of a metal loop 23 having a bottom wall 25, a first straight transverse finger member 27 at one end and a second curved finger member 29 at its other end, turned in as at 31 toward the finger member 27. Finger member 27 is drilled and tapped at the level of the turned-in portion 31, for the reception of a threaded bolt 33. The purpose of this is that the inner face 35 of the turned-in portion 31 shall form one jaw of a clamp and the inner face 37 of the threaded shank 33 shall form an opposite jaw thereof.

The loop 23 is preferably formed by bending from a flat stock of deformable steel.

The bolt 33 is provided with a wrench-engaging head 38. Its shank is adapted to pass through the central opening of a hollow spool-shaped insulator 39. At 41 and 43 are shown lock nuts. Between the head 37 and insulator 39 are provided a metal washer 45 and a resilient washer 47. Likewise, between the lock nut 41 and the insulator are provided a metal washer 49 and a resilient washer 51. The lock nut 41 is threaded into position to clamp the insulator and washers against the head 37. The lock nut 43 is then applied before bolt 33 is threaded into the hole in finger 27. Thereafter lock nut 43 is located between said finger 27 and lock nut 41.

For use, the bracket is assembled as shown in FIG. 2, wherein the insulator 39, washers 45, 47, 49 and 51 have been stacked and the bolt 33 passed therethrough, the lock nut 41 drawn up. The lock nut 43 is in loose position and shank 33 is partially threaded into the finger 27.

In order to apply the bracket, it is only necessary to back off the bolt 33. This is accomplished by hand-turning the insulator 39 until the gap 53 between the jaw portions 35 and 37 is opened sufficiently to receive the usual rolled seam 21 between the insulator casing 19 and its bottom 55. Then the bracket, after partial closure by screwing in the shank 33, may be moved around the insulator bottom until it is in the correct position with regard to whatever secondary riser is to be anchored. Then the bolt 33 may be quickly screwed in by hand action on the insulator 39 and finally clamped tight with the aid of a wrench on the bolt head 38. Then the lock nut 43 is turned down against the finger 27. Finally the riser wire is laid in the convex portion 57 of the insulator spool 39 and wired on by a short length fastener wire such as shown at 59.

The present bracket, which is quick-attachable, may be made stronger and more compact at considerably less cost than the one described in said application and, moreover, it may be much more conveniently applied, since it is not required to carry out any turning manipulations under the transformer. Thus it is apparent that the bare-hand and wrench manipulations may be carried out from outside positions relative to the lower ends of the transformers.

It should be noted that in some cases transformer bulged rim seams such as 21 may be rolled inward with respect to rim 8 of the casing 19, instead of outward, as shown in FIG. 3. The inward extension 31 is to provide space 2 for such conditions (see FIG. 3).

In view of the above it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As various changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I claim:

1. A quick-attachable insulator bracket for a suspended transformer having a downwardly extending rim terminating in a bulged seam; comprising a bottom wall adapted for placement under said rim and seam, first and second finger members extending up from said wall for placement outside and inside respectively of said rim when the bottom wall is under it, the first finger member extending a greater distance from said wall than the second finger member, said second finger member being turned toward the first finger member, an insulator spool having an axial hole therethrough and adapted to support a wire, a bolt member passing through said hole and threaded through the first finger member in line with the

turned-in portion of the second finger member, whereby a clamp is formed of the fingers, wall and bolt, said clamp being in the form of a loop adapted to accommodate said seam therein upon clamping engagement with said rim above said seam of the turned-in portion of the second finger member inside of the rim and of the bolt outside of the rim.

2. A quick-attachable insulator bracket according to claim 1, wherein said bottom wall and fingers are formed by integral bent portions of a continuous length of deformable metal, including a lock nut threaded on the bolt between the insulator and said first finger member

adapted to be threaded into engagement with said first finger member, and including on the bolt a head and an additional threaded lock nut adapted to clamp said insulator rigidly thereon.

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