July 1, 1958 C. E. SLOOP 2,841,772

TRANSFORMER MOUNTING BRACKET

Filed June 25, 1954

FIG. 1

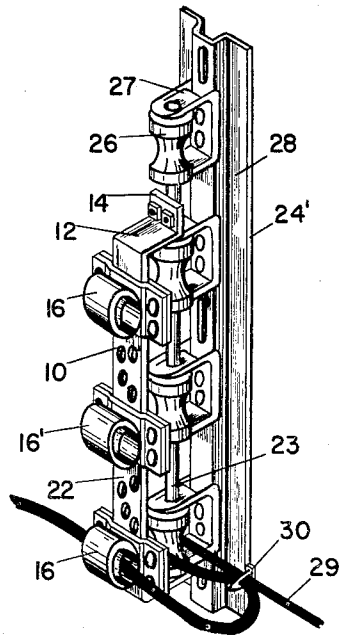
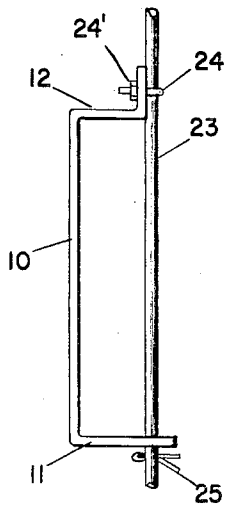


FIG. 2



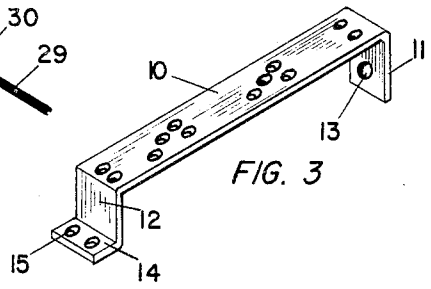
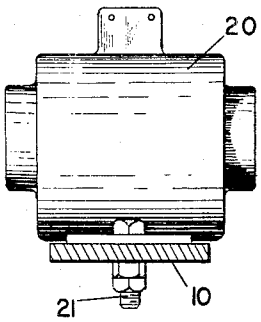


FIG. 3

FIG. 5



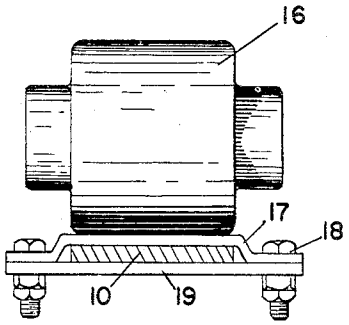


FIG. 4

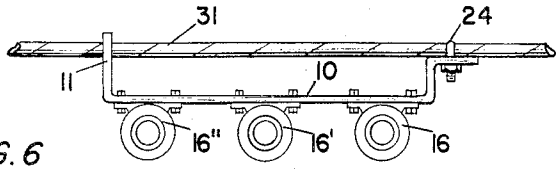


FIG. 6

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2,841,772

Patented July 1, 1958

2,841,772

TRANSFORMER MOUNTING BRACKET

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Application June 25, 1954, Serial No. 439,269

10 Claims. (Cl. 336—67)

This invention relates to a transformer mounting bracket, and more particularly to an arrangement for installing low voltage window-type current transformers, particularly useful in metering overhead electrical services. According to my invention, the current transformers are mounted on a novel bracket which is installed on secondary wire racks of known construction which are customarily mounted on the outside of building walls or on utility poles.

An object of my invention is to provide a mounting for window-type current transformers which is neat in appearance and affords a saving in labor and space.

Another object of my invention is to provide a mounting for window-type current transformers economical to manufacture, easy to install, and permanent in character.

Another object of my invention is to provide an arrangement for mounting current transformers which is adaptable for mounting in all positions.

Another object of my invention is to provide an arrangement of affixing a window type transformer to a secondary wire rack without interfering with the normal function of the wire rack and without requiring additional supporting area for the wire rack.

Another object of my invention is to provide an arrangement for mounting current transformers in a position where the wires from the secondary wire rack may pass through these transformers regardless of the position of the incoming wires with respect to the secondary wire rack and regardless of the position of the rack itself with respect to the supporting structure.

Other and further objects and advantages of my invention will be apparent from the following description taken in conjunction with the accompanying drawing in which like characters of reference designate corresponding parts throughout the several views, and wherein:

Fig. 1 is a perspective view of a bracket according to my invention carrying window-type current transformers and installed on the spool bolt of a secondary wire rack.

Fig. 2 is a side view of the bracket shown in Fig. 1.

Fig. 3 is a perspective view of the bracket shown in Fig. 1.

Fig. 4 is a cross-sectional view of a detail illustrating the mounting of a transformer on the bracket.

Fig. 5 is a cross-sectional view similar to Fig. 4 but showing the mounting of a different type of transformer.

Fig. 6 is an elevational view showing my bracket mounted directly on a conductor wire.

Referring now in detail to the drawings, the bracket 10 is made of metal, or other suitable material, and comprises an elongated strip-like central portion having opposite ends 11 and 12 bent at right angles thereto. The end 11 is provided with a hole 13 for a purpose to be hereinafter described, and the end 12 is provided with a flying end wing 14 which extends substantially parallel to the body portion of the bracket and outwardly in a direction away from the end 11. It will be noted that the portion of the end 12 at right angles to the body portion of the bracket is somewhat shorter than the end 11, so

that a bolt passing over the outer surface of the end wing 14 may be passed through the hole 13 in the end 11 and lie substantially parallel to the body portion of the bracket 10. The end wing 14 is provided with a pair of holes 15 for a purpose to be hereinafter described.

In Fig. 1, a plurality of window-type current transformers 16, 16' and 16'' are shown mounted on the body portion of the bracket 10, the base 17 being secured to the bracket 10 by means of bolts 18 and a plate 19 which extends beneath the bracket 10, as shown in Fig. 4.

Fig. 5 shows an alternate type of transformer 20 secured to the bracket 10 by means of bolts 21 which extend through holes 22 provided in the body portion of bracket 10. It will be understood, of course, that a bolt 21 is provided on each side of the transformer 20 for securing the same to the bracket 10, although only one such bolt is shown in Fig. 5.

As shown in Fig. 1, the bracket 10 may be conveniently mounted on the spool bolt 23 of a customary secondary wire rack. For this purpose, a U-bolt 24 is passed around the spool bolt 23 and extended through the holes 15 provided in the flying end wing 14 of the bracket 10 and secured thereto by means of nuts 24'. The spool bolt 23 also extends through the hole 13 in the end 11 of bracket 10, and the cotter pin 25 is inserted through the spool bolt in the usual manner.

As is well known in the art, the spool bolt 23 carries spool insulators 26 which are retained in U-shaped guides 27 which are riveted, or otherwise affixed, to channel member 28 for attachment to a utility pole or other structure, the spool bolt 23 being extended from the channel member 28 in a position substantially parallel thereto, as is well known in the art.

As shown in Fig. 1, when a secondary wire such as wire 29 is led to an insulator 26, it is looped around the same and clamped in place by a conventional clamp 30. Thence, wire 29 passes through an adjacent transformer such as transformer 16'' and to its usual connection. It is thus apparent that since bracket 10 which carries transformer 16'' is pivotally mounted by spool bolt 23, wire 29 may lead into insulator 26 from substantially any position. Furthermore, when wire 29 passes through the window of transformer 16'' the frictional engagement of the two members will be sufficient to arrest any tendency of bracket 10 to rotate about spool bolt 23.

Further, since the polarity of the transformers 16, 16', 16'' is important, the transformers may be properly affixed to bracket 10 before the bracket is positioned on the secondary wire rack, thereby eliminating the necessity of having a skilled electrician make the final installation.

Inasmuch as the bracket is not affixed to the spool bolt 23 other than by the U-bolt 24 and the hole 13 in end member 11, it will be obvious that the bracket 10, together with the transformers 16, can be swung through an arc of approximately 180° to the working position desired; that this means of mounting an electrical meter transformer does not require any pole, or wall surface, in addition to said surface required by other equipment or bolts into the pole or wall surface; that this mounting can be installed without disturbing existing equipment; and that this mounting does make full use of existing equipment; and that various other arrangements could be devised, such as mounting the bracket 10 on one of the electrical conductors instead of on the spool bolt 23, by clamping the bracket to the conductor 31 in exactly the same manner that it is clamped onto the spool bolt 23 by the U-bolt 24, with the conductor extending through the hole 13 in the end 11, all as shown in Fig. 6 of the drawing.

It will be obvious to those skilled in the art that various

other modifications, changes and adaptations can be made without departing from the scope of my invention as defined in the following claims.

I claim:

1. A transformer mounting bracket comprising an elongated strip having two end portions at substantially right angles thereto, one of said end portions having a hole therein, the other of said end portions being provided with a terminal flying end wing extending substantially parallel to said elongated strip and outwardly away from said first mentioned end portion, said first mentioned end portion being longer than said other end portion and parallel thereto, the hole in said first end portion being so constructed and arranged as to provide an inner edge in substantially the same plane with the outer face of said flying end wing.

2. In combination with the spool bolt of a secondary wire rack, a transformer mounting bracket secured to said bolt to extend parallel thereto and in spaced relation therefrom, and a window type current transformer mounted on said bracket.

3. In combination with the spool bolt of a secondary wire rack, a transformer mounting bracket secured to said bolt, said bracket comprising an elongated strip having two end portions at substantially right angles thereto, one of said end portions having a hole therein through which said spool bolt passes, the other of said end portions being provided with a flying end wing extending substantially parallel to said elongated strip, the hole in said first mentioned end portion being positioned so that the bolt passing through said hole and lying substantially parallel to said strip will substantially contact said flying end wing, means for fastening said flying end wing to said spool bolt, and a plurality of current transformers mounted on said strip.

4. In combination with the spool bolt of a secondary wire rack, a transformer mounting bracket secured to said bolt, said bracket comprising an elongated strip having two end portions at substantially right angles thereto, one of said end portions having a hole therein through which said spool bolt passes, the other of said end portions being provided with a flying end wing extending substantially parallel to said elongated strip, said first mentioned end portion being longer than said other end portion so that the bolt passing through the hole in said first end portion and lying substantially parallel to said strip will substantially contact said flying end wing, means for fastening said flying end wing to said spool bolt, and a plurality of current transformers mounted on said strip.

5. In combination with the spool bolt of a secondary wire rack, a transformer mounting bracket secured to said bolt, said bracket comprising an elongated strip having two end portions at substantially right angles thereto, one of said end portions having a hole therein through which said spool bolt passes, the other of said end portions being provided with a flying end wing extending substantially parallel to said elongated strip and outwardly away from said first mentioned end portion, said first mentioned end portion being longer than said other end portion so that the bolt passing through the hole in said first end portion and lying substantially parallel to said strip will substantially contact said flying end wing, means for fastening said flying end wing to said spool bolt, and a plurality of current transformers mounted on said strip.

6. In combination with an electrical conductor, a transformer mounting bracket secured to said conductor, said bracket comprising an elongated strip having two end portions at substantially right angles thereto, one of said end portions having a hole therein through which said conductor passes, the other of said end portions being provided with a flying end wing extending substantially parallel to said elongated strip and outwardly away from said first mentioned end portion, said first mentioned end portion being longer than said other end portion so that the conductor passing through the hole in said first end portion and lying substantially parallel to said strip will substantially contact said flying end wing, means for fastening said flying end wing to said conductor, and a transformer mounted on said strip.

7. In combination with a secondary wire rack having a spool bolt and an insulator mounted thereon, a window-type transformer mounted adjacent thereto, support means extending between said rack and said transformer extending parallel to said bolt and spaced therefrom, and a wire leading from said insulator through said transformer.

8. The structure as claimed in claim 7 wherein said support means is pivotally mounted to said secondary wire rack, and said wire passing through said transformer frictionally engages the same to retain it in substantially a stationary position.

9. In combination with a secondary wire rack having a spool bolt, a window-type transformer, support means pivotally carried by said spool bolt for supporting said transformer, and a wire passing from said secondary wire rack through said transformer, said wire frictionally engaging said transformer to retain said transformer and said support means in substantially a fixed position with respect to said secondary wire rack.

10. A window type transformer bracket adapted to support a window type transformer with the axis of the transformer window disposed transversely of the bracket, including an elongate, flat, metal strip, a first end formed at right angles to said strip, said first end terminating in a flying end wing extending beyond said strip in a plane parallel thereto, and a second end at the opposite end of said strip formed at right angles to said strip and extending therefrom in the direction of said first end to be parallel thereto, said second end extending beyond said first end, said second end deferring an aperture the inner edge of which lies in the plane of the outer face of said flying wing whereby a member extended through said aperture to support one end of said strip may be secured against the outer face of said flying wing.

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