Sept. 30, 1952 F. G. RIDGERS ET AL 2,612,540

INSULATOR SECURED UNDER TENSION TO AN INSULATOR RACK

Filed July 18, 1950

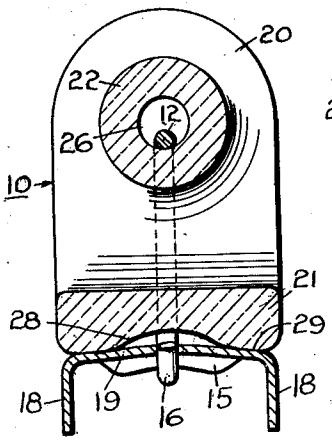


FIG 6

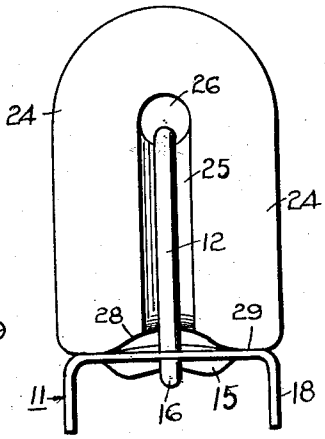


FIG 3

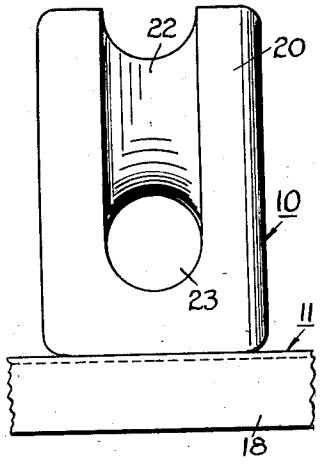


FIG 1

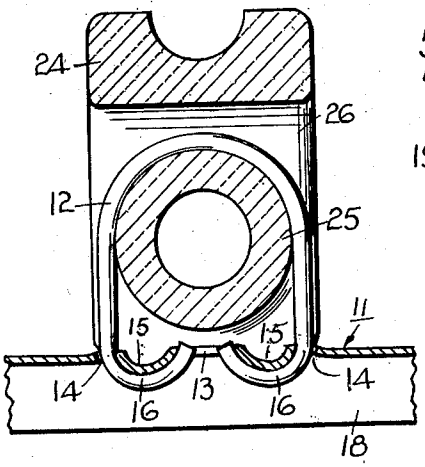


FIG 7

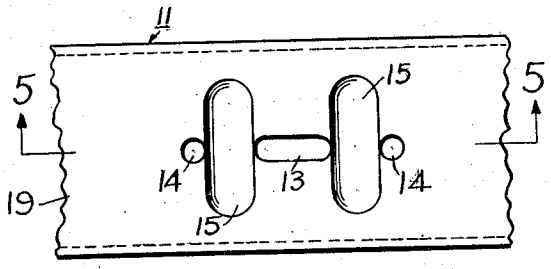


FIG 4

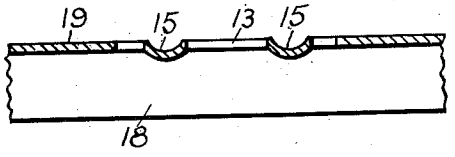


FIG 5

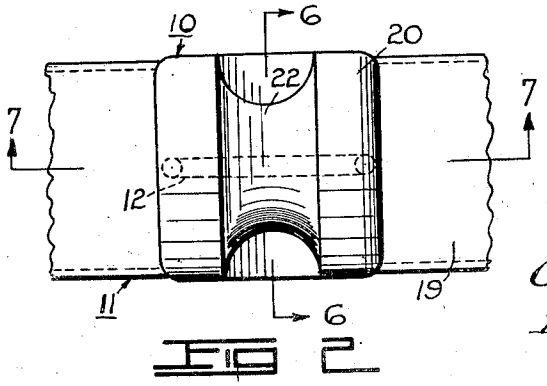


FIG 2

INVENTORS
Frederick G. Ridgers
Charlie W. Cassels
By J. P. Cassels
Atty.

Patented Sept. 30, 1952 2,612,540

UNITED STATES PATENT OFFICE

2,612,540

INSULATOR SECURED UNDER TENSION TO AN INSULATOR RACK

Frederick G. Ridgers and Charlie W. Cassels, Hamilton, Ontario, Canada, assignors to N. Slater Company Limited, Hamilton, Ontario, Canada

Application July 18, 1950, Serial No. 174,482

1 Claim. (Cl. 174—163)

1

This invention relates to a wire holder.

The objects of the invention, generally, are to improve on known wire holders, particularly of the type wherein the insulator is attached to a backing member or support by a U-shaped clamping member which has hooked, inturned or clinched end portions.

A specific object of the invention is to provide a wire holder of the type hereinbefore referred to, wherein the insulator is easily attached to the support, and once so attached, remains firmly held against and to the support without loosening or rattling, irrespective of the load or thrust imposed upon the insulator.

Another specific object is to provide a wire holder of the type hereinbefore referred to wherein the member fastening the insulator to the support is under tension once the insulator has been attached to the support.

Still another specific object of the invention is to provide a wire holder of the type hereinbefore referred to, wherein the base of the insulator engages the support along parallel relatively narrow portions spaced on either side of the plane of the clamp.

In the drawings, wherein like numerals of reference indicate corresponding parts in the various figures,

Figure 1 is a front elevation of a wire holder made in accordance with the invention;

Figure 2 is a top plan view of Figure 1;

Figure 3 is an end view of Figure 1, as seen from left to right in Figure 1;

Figure 4 is a top plan view of the insulator support;

Figure 5 is a section on line 5—5 in Figure 4;

Figure 6 is a section on line 6—6 in Figure 2; and,

Figure 7 is a fragmentary section on line 7—7 in Figure 2.

Referring now by numerals to the drawings, the backing member or support is shown as 11, and the insulator as 10. The insulator is attached to the support by a substantially U-shaped member or clamp 12. The support 11, of metal, is of channel cross-section, and its length is chosen so as to mount the selected number of insulators (one only is shown). The support is suitably attached to a supporting surface (not shown).

2

The web 19 of the support 11 is formed with an elongated longitudinal slot 13, and with circular apertures 14, one on each side of, and spaced from the adjacent end, of the slot 13. The web 19, between the apertures 14 and the opposite ends of the slot 13, is formed with pressed transverse ribs 15, the ribs extending appreciably beyond the longitudinal edges defining the slot. As best seen in Figure 5, the ribs 15 are formed by pressing or deforming the web downwardly, that is, toward the lower edges of the flanges 18 of the support 11.

The insulator 10, as will be easily seen by reference to the drawings, is substantially a conventional one, that is, one in current and wide use. For instance, as seen on two opposite faces (see Figure 1) it presents two spaced parallel portions 20 rising from a base 21, and a transverse, spool-like member 22 spaced from the base and formed to provide a circular opening 23 through which the wire to be attached is passed. As seen on the other two opposite faces (see Figure 3), it presents an inverted U defined by two parallel portions 24 and a transverse circular spool-like portion 25, spaced from the rounded base of the U to provide an opening 26. The upper periphery of the spool-like portion 25 is engaged by the fastening member 12 aforesaid. The insulator so far described is conventional

In a device according to the invention, however, the lower face of the base is formed with a recess 28 extending lengthwise of the base, that is, lengthwise of the slot 13 of the support 11, as best seen in Figures 3 and 6.

Such recess reduces the effective bearing surface of the lower face of the base, to two spaced, elongated, relatively narrow areas or portions 29, one on either side of the longitudinal axis of the recess 13. Such recess also provides a space or clearance which permits of the deflection upwardly of the web toward the base, as best seen in Figures 3 and 6.

The U-shaped clamp or fastening member 12 is passed through the aperture 26 of the insulator to engage the spool-like portion 22, its lower ends passed through the apertures 14 of the supporting member 11, and the ends turned or clinched partly around the ribs or anchor portions 15 as at 16, in a manner to cause the insulator tightly to engage the support while deflecting the web

upwardly into the recess 28. Conveniently, the extreme ends of the clamp are received into the slot 13, all as best seen in Figure 7. Thus, both the clamp and the web will be under tension, tightly holding the insulator in position.

As the insulator bears upon the support along spaced elongated and relatively narrow areas or portions, one on either side of the plane of the clamping member (or longitudinal axis of the slot 13), the insulator will be firmly held against the support, as already stated, and the insulator will not become loosened and will not rattle.

What we claim is:

A wire holder comprising a channelled metallic support including a web, said web having a pair of parallel spaced depressions extending transversely across said metallic support, a pair of circular apertures, one on either side of said depressions, an oval aperture midway between said depressions and at right angles thereto, an insulator having a central recess in its base, projecting legs on said base adapted to rest in said depressions, and a U-shaped fastening member passing through said insulator and having its ends passing through said circular apertures in said channelled support and clinched up through said central oval shaped aperture under such tension that said channelled support is resiliently forced upwardly into said central recess.

FREDERICK G. RIDGERS.
CHARLIE W. CASSELS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
928,709	Steinberger	July 20, 1909
1,225,460	McCarthy	May 8, 1917
1,832,138	Pounder	Nov. 17, 1931

FOREIGN PATENTS

Number	Country	Date
90,569	Switzerland	Nov. 24, 1920