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O. W. BRENIZER

1,698,531

CABLE SUPPORT

Filed April 14, 1927

Fig. 1.

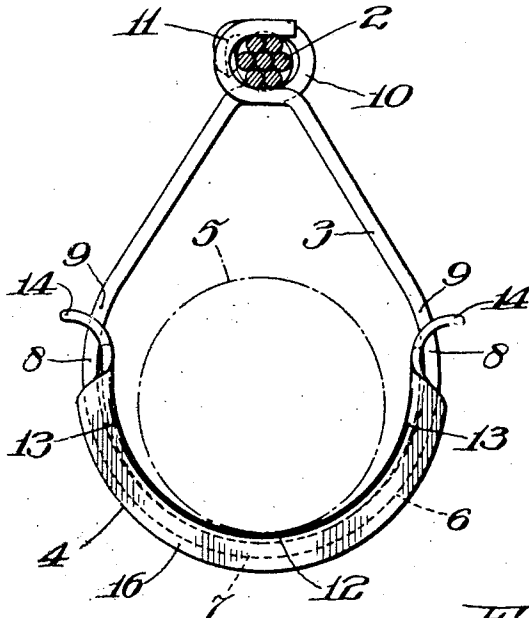


Fig. 2.

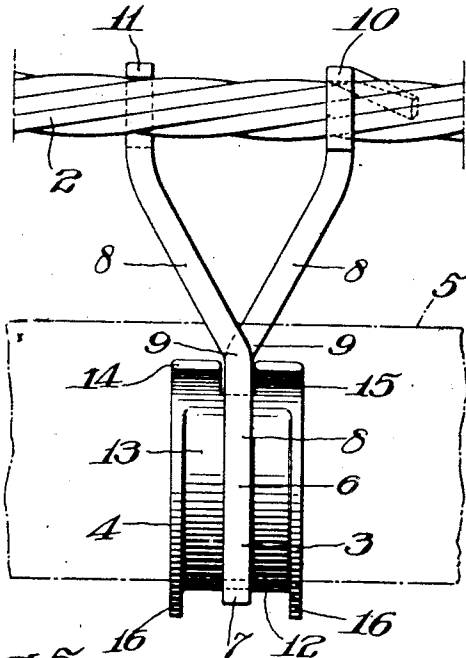


Fig. 5.

Fig. 3.

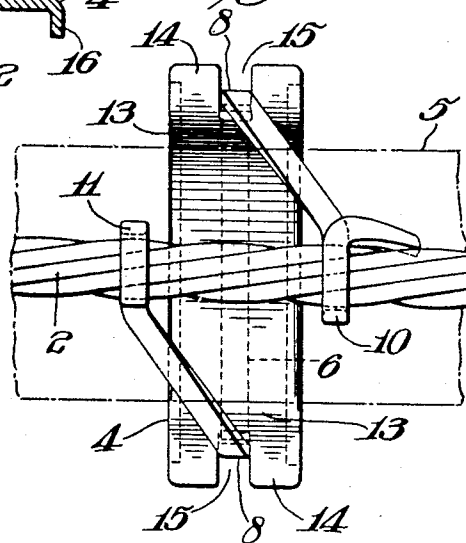
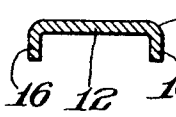
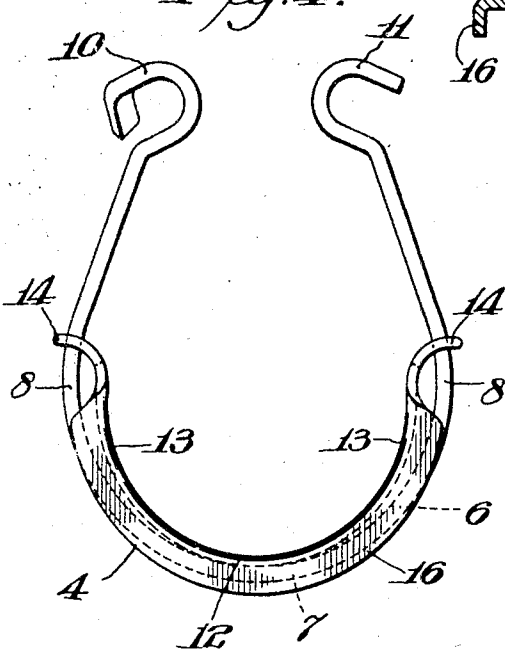


Fig. 4.



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CABLE SUPPORT.

Application filed April 14, 1927. Serial No. 183,682.

This invention relates to improvements in cable supports wherein spaced hangers each formed of wire and having a cable receiving loop are suspended at intervals from a messenger wire for receiving and supporting a cable, the messenger wire being supported at widely spaced points throughout its length.

The object of the invention is to provide a hanger and a cable supporting saddle therefor of novel, efficient and advantageous construction which will present a broad area of supporting surface for the cable, which will permit the hanger and the saddle to be readily assembled and disassembled, which will permit the hanger with the saddle therein easily to be applied to the messenger wire, which will permit the saddle to adjust itself within the hanger in accordance with the lines of the superposed cable, and which will permit the use of a rigid saddle with a resilient hanger without providing means to permanently attach the saddle to the hanger.

The invention is particularly useful in the regions of the poles or other supports of the messenger wire where great difficulty has been experienced in providing hangers or supports which will not cut the lead sheathing of the cable. The greatest strain occurs in such regions due to the sagging of the messenger wire and the cable and the hangers carried thereby between the points of support of the messenger wire.

The invention consists in the novel construction, combination and arrangement of elements hereinafter described and claimed.

In the accompanying drawings, illustrating the invention,

Figure 1 is a transverse section through a messenger wire provided with a hanger and a saddle embodying the invention, showing by dot-and-dash lines the position of the cable upon the saddle.

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

Figure 3 is a top view of the parts shown in Fig. 2.

Figure 4 is a view of the hanger and the saddle showing the relation of the parts thereof before the hanger is applied to the messenger wire.

Figure 5 is a transverse section through the bottom portion of the saddle.

Referring to the drawings, 2 designates the messenger wire, 3 the cable hanger, 4 the cable supporting saddle and 5 the cable.

The hanger 3 is formed of suitable wire and it includes a cable receiving loop 6 having a bottom portion 7 and upwardly extending side portions 8.

The upper end portions of the side portions 8 of the loop may be connected to the messenger wire 2 by any suitable means. The means herein illustrated for this purpose comprises hooks 10 and 11 which are formed on the respective upper end portions of the side portions 8 of the hanger loop 6 and which are constructed and applied to the messenger wire 2 to connect the hanger thereto and to prevent displacement of the hanger relatively to the messenger wire the same as the similarly designated hooks of the cable support or hanger shown and described in my previous Letters Patent No. 1,373,166, dated March 29 1921, to which reference may be had.

The lower portion of the loop 6 or that portion thereof which receives the saddle 4 extends transversely at right angles to the messenger wire 2 and cable 5. The side portions 8 of the loop 6 are bent forming shoulders 9 immediately above the upper ends of the side portions of the saddle 4, and the side portions 8 of the hanger diverge above the shoulders 9 from the plane of the lower portion of the loop 6 to properly space the hooks 10 and 11 longitudinally of the messenger wire, as shown in Figs. 2 and 3.

Before the hanger 3 is applied to the messenger wire, as shown in Fig. 1, the hooks 10 and 11 of the hanger are spaced apart, laterally of the messenger wire, as shown in Fig. 4, and the hanger loop 6 is more open with its side portions 8 more widely

separated than as shown in Fig. 1 when applied to the messenger wire. This is the normal condition of the hanger, as shown in Fig. 4; and, when the hanger is applied to the messenger wire 2, the side portions 8 of the loop 6 are sprung toward each other and the hooks 10 and 11 are caused to grip the messenger wire by the tendency of the hanger loop to resume its more open or normal condition shown in Fig. 4, the character of the wire forming the hanger being sufficiently resilient to permit the side portions 8 of the loop 6 to be sprung toward each other from the position shown in Fig. 4, more than enough to permit the application of the hanger to the messenger wire without springing the hanger loop 6 beyond its elastic limit.

The cable supporting saddle 4 is U-shaped in general formation as seen in Figs. 1 and 4, for the reception of the cable 5 and to conform generally to the lower portion of the hanger loop 6, and the saddle 4 comprises a bottom portion 12 and upwardly extending side portions 13.

The upper end portions 14 of the saddle side portions 13 are bifurcated and turned outwardly in opposite directions providing openings 15 therein for the reception of the side portions 8 of the hanger loop 6; and the saddle 4 is provided with two laterally spaced parts or flanges 16 below the upper end portions 14 thereof, forming a channel for the reception of the lower portion of the hanger loop 6.

When herein I speak of lateral direction I mean a direction or directions lengthwise of the messenger wire 2 and the cable 5 and transversely of the lower portion of the hanger loop 6 and the saddle 4.

The lower portion 12 of the saddle 4 rests upon the lower portion 7 of the hanger loop 6, and the main body of the saddle 4 is of plate-like form, presenting a broad bearing surface in all parts thereof which face or receive the cable 5 or which are likely to come into contact with the cable while it is being drawn through the saddle or being supported thereby.

The open outer ends of the openings 15 of the saddle permit the saddle to be easily and quickly applied to the hanger 3 and permit the hanger and the saddle to be shipped separately to destinations for use; and the side walls of the openings 15 are fitted to the sides of the hanger therein in a manner to prevent any substantial lateral movement of the upper ends of the sides of the saddle and to permit the bottom portion 12 of the saddle to move laterally by a rocking action over the bottom portion 7 of the hanger loop 6, the space between the saddle projections or flanges 16 being sufficient to permit such rocking action within certain limits, and the flanges 16 preventing lateral dis-

placement of the lower portion of the saddle from the lower portion of the hanger loop.

This rocking action of the saddle relatively to the hanger permits the broad bearing surface of the saddle to adjust itself to the opposing surface of the cable when the cable is being drawn through the saddle, when the cable is finding its seat upon the saddle after being drawn through the same and when the cable is swayed by the action of wind or moved by other forces.

The saddle 4 is rigid and substantially unyielding, and, as previously described, the hanger 3 is resilient to permit its application to and removal from the messenger wire 2 and to cause it to grip the messenger wire. When the hanger loop 6 is in the open or normal condition, as shown in Fig. 4, the saddle 4 may be easily applied thereto, and when the hanger 3 with the saddle therein is applied to the messenger wire 2, the side portions 8 of the hanger are sprung from the spaced relation to the side portions 13 of the saddle 4, as shown in Fig. 4, to the close relation thereto, as shown in Fig. 1, thus closely confining the saddle 4 within the hanger loop 6. If desired the side portions 8 of the hanger loop 6 may exert inward pressure against the side portions 13 of the saddle after the hanger is applied to the messenger wire.

When the parts are assembled, as shown in Figs. 1 and 2, the side portions 8 of the hanger loop 6 extending inwardly over the side portions 13 of the saddle, prevent accidental bodily upward displacement of the saddle relatively to the hanger, and the shoulders 9 on the hanger prevent the saddle 4 from sliding in a circular direction on the rounded lower portion of the hanger loop.

The saddle 4 is preferably made from a sheet metal punching formed as illustrated and having the flanges 16 formed by bending the lateral edge portions of the main body of the saddle flatwise to extend therefrom substantially at right angles thereto around the major portion of the saddle so that the flanges 16 will have a U-shaped form following the form of the main body of the hanger and providing a U-shaped groove between them through which the lower portion of the hanger loop 6 extends. The flanges 16 stiffen the entire saddle and terminate before reaching the upper end portions 14 of the sides of the saddle, and the end portions 14 are formed by bending the sheet metal flatwise to extend outwardly from the upper ends of the U-shaped body of the saddle so that each end portion 14 forms an ogee curve with the main body portion of the saddle. By thus forming the saddle of sheet metal smooth, rounded surfaces are presented to the cable where the flanges 16 and the upper end portions 14 of the saddle 4 are joined to the main body

thereof so that no rough or sharp corners can come in contact with the cable at any time to mar or injure the same.

I claim as my invention:

5 1. The combination of a wire cable hanger comprising a resilient cable receiving loop having a bottom portion and upwardly extending side portions provided with hooks on the upper end portions thereof for connecting them to a messenger wire, and a substantially rigid cable supporting saddle comprising a body having a bottom portion resting upon the bottom portion of the hanger loop and having upwardly extending side portions within the hanger loop adjacent to the side portions thereof, the side portions of the hanger loop being normally spaced from the side portions of the saddle and being movable within the elastic limit of the loop toward and from each other relatively to the side portions of the saddle for permitting the hooks to be applied to a messenger wire without springing the loop beyond its elastic limit, and the saddle having means to prevent lateral displacement thereof from the hanger loop.

2. The combination of a wire cable hanger comprising a resilient cable receiving loop having a bottom portion and upwardly extending side portions provided with means for connecting upper end portions thereof to a messenger wire, and a substantially rigid cable supporting saddle comprising a body having a bottom portion resting upon the bottom portion of the hanger loop and having upwardly extending side portions within the hanger loop adjacent to the side portions thereof, the side portions of the hanger loop being movable toward and from the side portions of the saddle and the saddle having means to prevent lateral displacement thereof from the hanger loop, the side portions of the hanger loop having bent portions forming shoulders above the side portions of the saddle to prevent upward displacement thereof.

3. The combination of a wire cable hanger comprising a resilient cable receiving loop having a bottom portion and upwardly extending side portions provided with hooks on the upper end portions thereof for connecting them to a messenger wire, and a cable supporting saddle comprising a body having a bottom portion laterally movable upon the bottom portion of the hanger loop and having upwardly extending side portions within the hanger loop adjacent to the side portions thereof, the side portions of the saddle having means on the upper end portions thereof to prevent lateral movement thereof relatively to the side portions of the hanger loop and to permit the bottom portion of the saddle to move laterally, the side portions of the hanger loop being normally spaced from the said portions of the saddle and being movable within the elastic limit of the loop toward and from each other relatively to the side portions of the saddle for permitting the hooks to be applied to a messenger wire without springing the loop beyond its elastic limit.

4. The combination of a wire cable hanger comprising a resilient cable receiving loop having a bottom portion and upwardly extending side portions provided with hooks on the upper end portions thereof for connecting them to a messenger wire, a cable supporting saddle comprising a body having a bottom portion laterally movable upon the bottom portion of the hanger loop and having upwardly extending side portions within the hanger loop adjacent to the side portions thereof and having means on their upper end portions to prevent lateral movement thereof relatively to the side portions of the hanger loop and to permit lateral movement of the bottom portion of the saddle, the saddle having projecting flanges on the respective sides of the hanger loop to engage the same and limit the lateral movement of the bottom portion of the saddle, the side portions of the hanger loop being normally spaced from the side portions of the saddle and being movable within the elastic limit of the loop toward and from each other relatively to the side portions of the saddle for permitting the hooks to be applied to a messenger wire without springing the loop beyond its elastic limit.

5. The combination of a wire cable hanger comprising a resilient cable receiving loop having a bottom portion and upwardly extending side portions provided with hooks on the upper end portions thereof for connecting them to a messenger wire, and a cable supporting saddle comprising a body having a bottom portion resting upon the bottom portion of the hanger loop and having upwardly extending side portions having bifurcated, outwardly turned upper end portions the furcations of which are spaced apart sufficiently to permit the entrance of the side portions of the hanger loop between them, the side portions of the hanger loop being normally spaced from the side portions of the saddle and being movable within the elastic limit of the loop toward and from each other relatively to the side portions of the saddle for permitting the hooks to be applied to a messenger wire without springing the loop beyond its elastic limit.

6. The combination of a messenger wire, a cable hanger comprising a cable receiving loop having a lower portion extending transversely below the messenger wire and having side portions diverging upwardly from the plane of the lower portion and having means connecting them to the messenger wire in spaced relation for bracing

7. The combination of a messenger wire, a cable hanger comprising a cable receiving loop having a lower portion extending transversely below the messenger wire and having side portions diverging upwardly from the plane of the lower portion and having means connecting them to the messenger wire in spaced relation for bracing

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and preventing movement of the hanger longitudinally of the wire, and a cable supporting saddle within the hanger loop and resting upon the lower portion thereof and being movable relatively to the hanger, the hanger and the saddle having abutment parts limiting the extent of the movement of the saddle relatively to the hanger.

7. A cable hanger saddle comprising an oblong plate-like body having a bottom por-

tion and upwardly extending side portions having outwardly turned, bifurcated end portions for the reception of a cable hanger and having marginal flanges at its longitudinal edge portions forming stop abutments for the reception of a cable hanger between them. 15

In testimony whereof I affix my signature.

ORSON W. BRENIZER.