

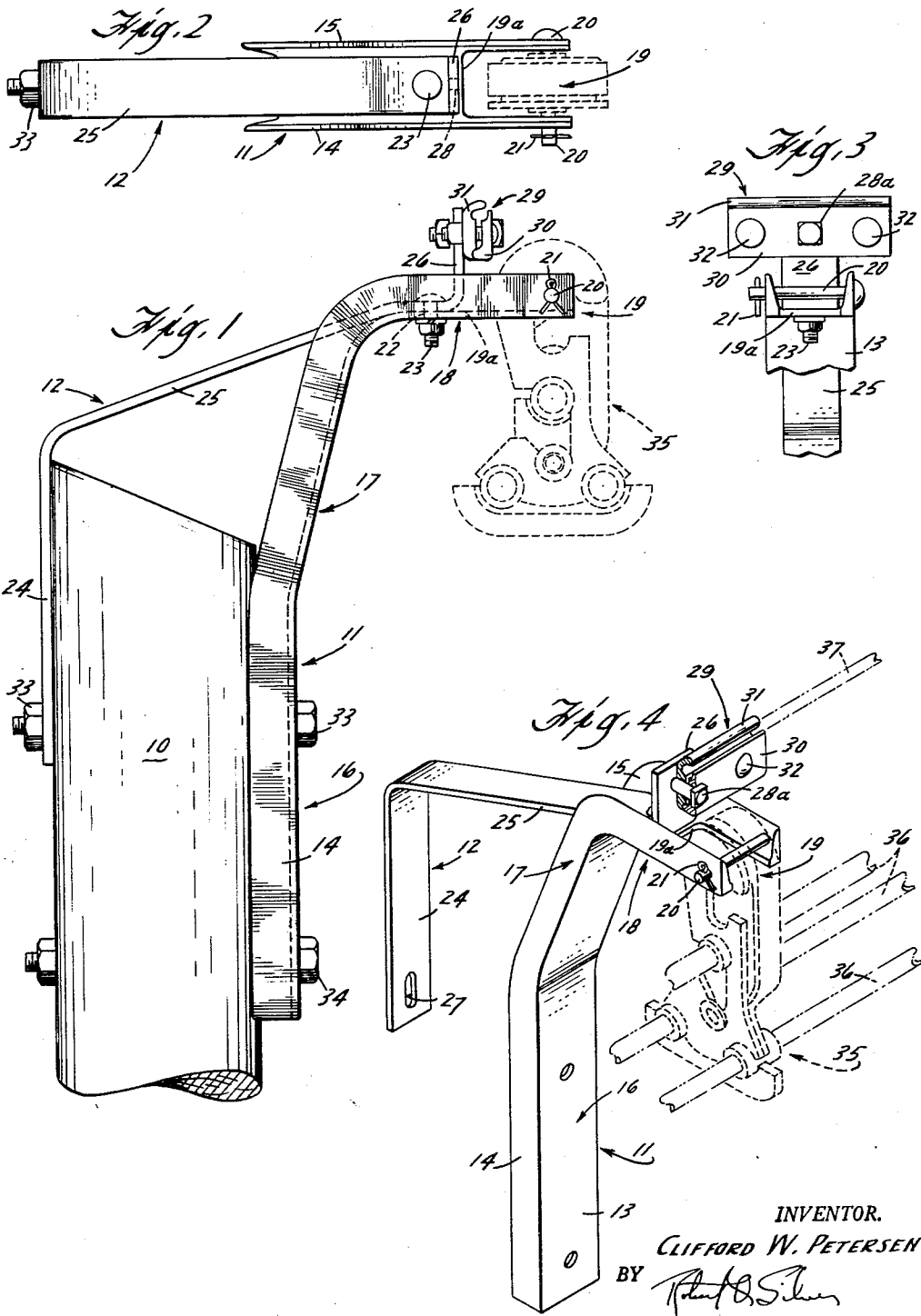
Sept. 26, 1961

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3,001,749

POLE TOP EXTENSION FOR AERIAL CABLE

Filed Feb. 25, 1959



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3,001,749

POLE TOP EXTENSION FOR AERIAL CABLE  
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Filed Feb. 25, 1959, Ser. No. 795,533  
5 Claims. (Cl. 248-49)

This invention relates in general to pole top extensions for aerial cable and more particularly relates to a horizontally offset extension adapted to be attached to the top of a utility pole and the like.

In recent years there has been a tremendous increase in interest in aerial cable suspension systems which obviate the use of crossarms and the like. The aerial cable systems in essence comprise two major components i.e., a wire spacer unit (generally made of plastic) which maintains the conductors in close spaced relation yet spaced at a sufficient dimension to maintain dielectric values, and a method of mounting the so-called wire spacers to a utility pole and the like.

It is the general object of this invention to provide a pole top mounting for wire spacers of the aforescribed type which is compact in size, has the requisite strength to support the heavy cables, has a minimum number of parts, and which is well adapted to mass manufacturing techniques.

It is a further object of this invention to provide a mounting means for aerial cables which affords a maximum amount of climbing room for a lineman, offsets the aerial cables both vertically and horizontally from the end of the utility pole to which it is attached and is otherwise well designed for its intended purposes.

The novel features that are characteristic of the invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and its method of operation, together with additional objects and advantages thereof, will best be understood by the following description of specific embodiments when read in connection with the accompanying drawings in which:

FIG. 1 is a plan view of the novel pole top extension shown in assembled relation from the top of the utility pole;

FIG. 2 is a top view of the assembly shown in FIG. 1;

FIG. 3 is a right hand end view of the top portion only of the assembly shown in FIG. 1;

FIG. 4 is a perspective view, a portion of which is in section, showing the novel apparatus apart from the pole.

As shown in FIG. 1 of the drawings the pole top extension is adapted to be attached to the top of the pole 10, the end portion 18 thereof being offset laterally and vertically from the top thereof. More particularly, the pole top extension bracket comprises a channel support means 11 and angular tension brace means 12.

The channel support means 11 comprises a configured channel member having a base or webbed portion 13 and a pair of parallel extending side portions 14 and 15. It will be noted that the channel brace means 11 has a relatively long pole engaging portion 16, an angular offset portion 17 and a generally horizontally extending end portion 18. A clevis 19 is formed at the end of the portion 18 by removing the web 13 at the end of the channel. The end surface of the remaining web is denominated with reference numeral 19a. To complete the clevis 19, a suitable aperture is drilled or punched near the ends of sides 14 and 15 and a clevis pin 20 inserted therewithin, there being a cotter pin 21 to retain the clevis pin 20 in the apertures.

Quite close to the end surface 19a of the web 13, an aperture 22 is formed for receipt of a mounting means such as a bolt 23 for attachment of the brace means 12.

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The brace means 12 is formed of strap material and comprises a relatively straight pole engaging portion 24, an offset angularly divergent portion 25 and a vertical extending end portion 26 which is generally parallel to portion 24 although considerably shorter in dimension. It will be noted that the end portion 26 extends above the arms 14 and 15 of the channel member for supportingly engaging the neutral messenger cable. The overall width of the brace means 12 is slightly less than the width of the web portion 13 of the channel member. Thus, brace member 12 fits within and against the upper portion 18 of the channel member, vertical portion 26 being generally vertically aligned with the end of the web 19a. It will be further noted that the brace member has a slight curvilinear portion near the confluence of portions 25 and 26 for adaptation to the curvilinear configuration of the channel member at that point. A suitable aperture is formed in the brace member for insertion of the fastening means 23 for fixedly mounting the brace member to the channel member 11 and to thereby give tension support to a load on the clevis portion 19. The bottom end of portion 24 of brace member 12 is formed with an elongated slot 27 for purposes of accommodation of a variety of sizes of poles within the normal tolerances generally found with such poles. This together with a slight flexibility of member 12 allows disposition of the brace on any of a variety of poles.

Suitable through bolts 33 and 34 extend through the pole and fixedly attach the brace member and the channel support member to the pole and relative to each other, through bolt 33 extending through the channel member and through the elongated slot 27 in portion 24 of the brace means.

Attached in aperture 28 in portion 26 of the brace member 12 is a ground clamp means 29 which is fixedly mounted by a bolt 28a. The ground wire clamp means comprises two clamping jaw members 30 and 31 which upon tightening of suitable bolts 32 confine and keep a neutral messenger cable 37 in tight supported engagement therewith.

As shown semidiagrammatically in dash lines, the aerial cable means 35 comprises a plastic member which is adapted to confine and hold the three conductors 36 in spaced relation. The aerial cable holder 35 per se forms no part of the instant invention but is shown for purposes of identifying the actual usage of the pole top extension bracket.

It will be noted that the clevis portion of the assembly is formed by simply removing the web 13 at the end of the channel which is an exceedingly easy manufacturing operation and requires an absolute minimum of parts. Further, the device is exceedingly sturdy, is easy to assemble in field operation and provides a very minimum of interference to a person attempting to work on the assembly, when mounted on the pole, by conventional pole hooks and the like. It should also be pointed out that the aerial cable holder 35, when attached to the clevis 19 has freedom from engagement of any of the metallic parts of the assembly other than the clevis pin 20 and is conveniently offset yet close to the pole, thereby requiring minimum spacing from the standpoint of trees and other obstacles encountered in stringing cables. The described assembly obviates the use of a crossarm, is considerably more pleasing from an aesthetic viewpoint, while providing requisite durability and strength.

Although specific embodiments of the invention have been shown and described, it is with full awareness that many modifications thereof are possible. The invention, therefore, is not to be restricted except insofar as is necessitated by the prior art and by the spirit of the appended claims.

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What is claimed as the invention is:

1. A pole top extension bracket for attachment to an electrical utility pole comprising in combination, a channel like support member having a web portion and side portions, said channel like support member having a generally vertical pole engaging portion and an offset laterally extending end portion, strap like brace means formed of material having a width slightly less than the width of said web portion and configured to form a generally vertical pole engaging portion disposable on the side of the pole opposite from the pole engaging portion of said support member and a second portion fixedly mounted to the web portion of said offset portion of said support means, the end of the side portion of said offset end portion of said support member extending horizontally beyond the end of the web portion of said offset end portion and defining an integral clevis means.

2. A pole top extension bracket for attachment to a vertically aligned utility pole comprising in combination, a channel like support member having a web portion and side portions, said channel like support member having a generally vertically aligned pole engaging portion, an angularly divergent second portion and a generally horizontal extending end portion, brace means having a generally vertical pole engaging portion disposable on the side of the pole opposite from the pole engaging portion of said support member, a second portion fixedly mounted to said horizontal end portion of said support means, and a third portion extending vertically above said horizontal end portion, the end of said horizontal portion of said support member being characterized by removal of the web portion, the remaining side portions forming an integral clevis means, and neutral messenger wire clamp means attached to said vertically extending third portion of said brace means.

3. An extension bracket for a pole comprising, in combination, a channel support member having a first portion adapted to be fixedly attached to said pole in such a manner that the side portions of said channel member engage peripherally spaced apart portions of said pole, a second portion and a substantially horizontal end portion constructed and arranged to serve as an attachment for an aerial wire spacer, brace means having an elongate first portion fixedly attached along the major axis of said pole, a second portion fixedly attached to said horizontal end portion of said channel member between the sides thereof, and a third portion extending in a direction away from said horizontal end portion of said channel member and adapted to serve as a neutral messenger wire support.

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gate first portion fixedly attached along the major axis of said pole, a second portion fixedly attached to said horizontal end portion of said channel member between the sides thereof, and a third portion extending in a direction away from said horizontal end portion of said channel member and adapted to serve as a neutral messenger wire support.

4. A pole top extension bracket for a pole comprising in combination, a support member having a relatively elongate portion adapted to be disposed along the major axis of said pole and an offset laterally extending portion, a brace member having a relatively elongate portion adapted to be disposed along the major axis of said pole and adapted to be fixedly attached to the pole side opposite the point of attachment of said support member and a second portion fixedly attached to the offset portion of said support means, and means integrally associated with a portion of said offset portion to suspend aerial cable therefrom.

5. An extension bracket for an electrical utility pole comprising in combination, a channel like support member having raised sides and a web therebetween, said channel like support member having an elongate portion adapted to be rigidly affixed to said pole and an offset laterally extending end portion, a brace member having an elongate portion adapted to be affixed to the side of the pole opposite the point of attachment of said channel like support member and a second portion fixedly attached to said offset portion of said support means, the said side portions of said offset end portion of said support member extending longitudinally beyond the end of the web portion of said offset end portion and having aligned apertures therethrough so as to define a clevis.

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**UNITED STATES PATENT OFFICE**  
**CERTIFICATE OF CORRECTION**

Patent No. 3,001,749

September 26, 1961

Clifford W. Petersen

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 3, line 14, for "portion" read -- portions --;  
column 4, line 1, after "portion" insert -- adapted to be --.

Signed and sealed this 27th day of February 1962.

(SEAL)

Attest:

**ERNEST W. SWIDER**

Attesting Officer

**DAVID L. LADD**

Commissioner of Patents