June 28, 1932. K. A. HAWLEY 1,864,651

GROUND WIRE CLAMP MOUNTING

Filed June 19, 1931

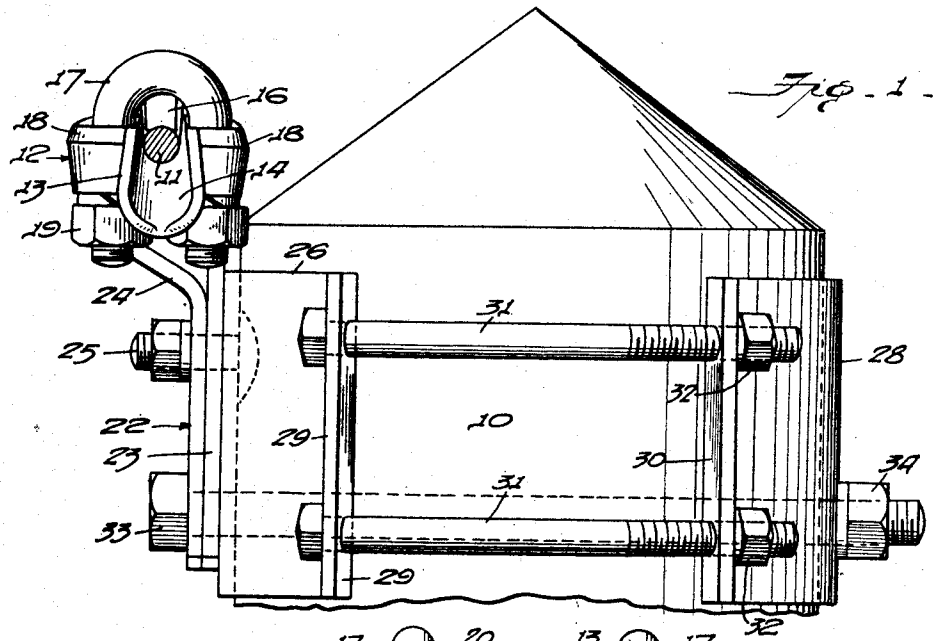


Fig. 1.

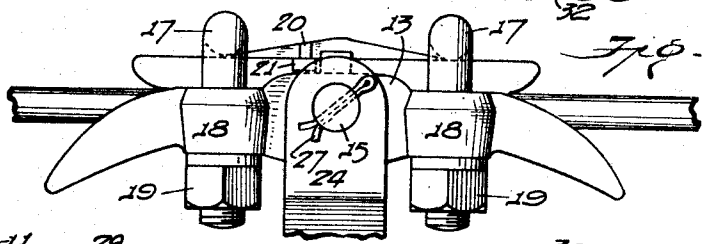


Fig. 3.

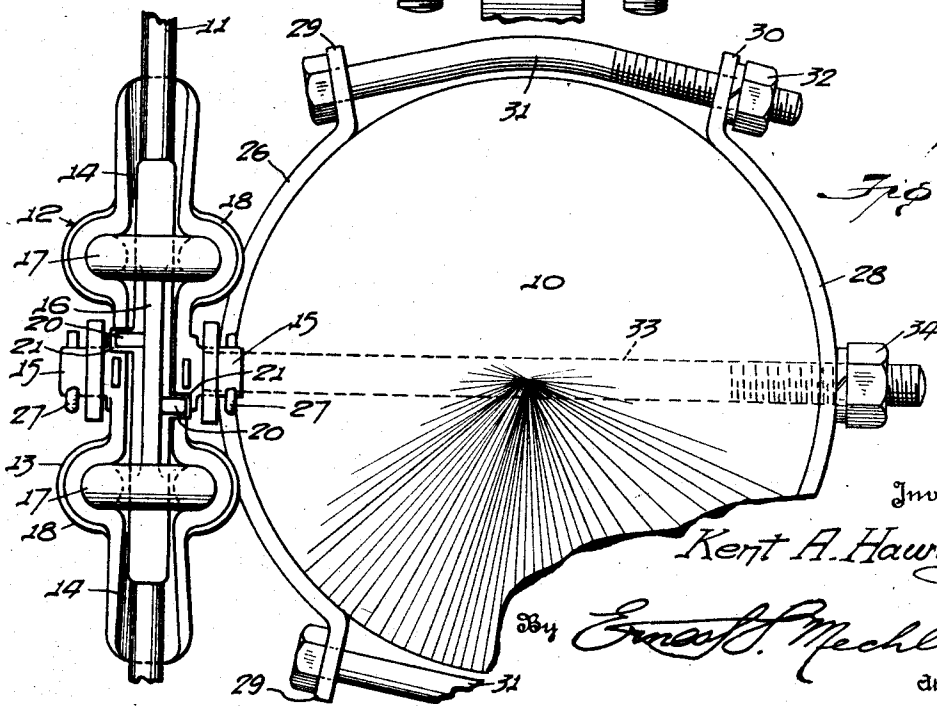


Fig. 2.

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UNITED STATES PATENT OFFICE

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GROUND WIRE CLAMP MOUNTING

Application filed June 19, 1931. Serial No. 545,532.

The invention relates to conductor clamps and has for its principal object the provision of a novel clamp adapted and designed to be mounted at the top of a wooden pole for the purpose of securing a ground wire.

In my co-pending application for patent for conductor clamps, filed June 17th, 1927, Serial No. 199,512, I have disclosed a suspension clamp provided at its opposite sides with trunnions pivotally engaged with suspension links. The clamp in this prior application is intended for supporting the conductor of a high tension transmission line. However, in numerous instances it is not only desirable but necessary to have a ground wire connection and it is to take care of this situation that I have devised the present invention which contemplates the use, broadly, of a trunnion clamp such as that disclosed in the co-pending application mentioned together with the necessary hardware or means for mounting it upon the top of the wooden pole which is customarily used in such a capacity.

An important object of the invention is to provide a clamp of this type and means for mounting the same which will not only operate to support the clamp adequately for pivotal movement but which will also act to brace the pole and prevent it from splitting from the ravages of the weather.

A further object of the invention is to provide a novel bracket arrangement or construction for supporting the clamp upon the pole in such manner that it will have the necessary free movement.

An additional object is to provide an arrangement of this character which will be simple and inexpensive to make, easy to install, positive in action, efficient and durable in service, and a general improvement in the art.

To the attainment of the foregoing and other objects and advantages, the invention preferably consists in the details of construction and the arrangement and combination of parts to be hereinafter more fully described and claimed, and illustrated in the accompanying drawing in which:

Figure 1 is an elevation of the upper end of a wooden supporting pole showing the clamp and its mounting means in position thereon,

Figure 2 is a top plan view, and

Figure 3 is a fragmentary elevation at right angles to Figure 1.

Referring more particularly to the drawing the numeral 10 designates a wooden pole such as is customarily used for the mounting of a ground wire or conductor 11. It is of course necessary to support this conductor upon the pole and to effect this I make use of a clamp device indicated broadly by the numeral 12 which is preferably constructed in accordance with the disclosure in said co-pending application above identified. However, in order that the present application may stand upon its own feet, I have illustrated this clamp in detail and have shown it as comprising a lower or body member 13 of elongated form constructed easily as a casting and formed with a longitudinally extending transversely curved seat 14 for the conductor, it being preferable that this seat have its ends flaring or bell-mouthed as indicated so as to avoid the bringing of abrupt bending strains upon the conductor when it vibrates, as it is bound to do, under the influence of wind, etc. At opposite sides this body or lower member is formed with trunnions 15 by means of which it may be mounted in a manner to be described. Located above the conductor in clamping relation thereto and extending longitudinally with respect to the lower member 13 is a keeper 16 grooved for conforming engagement upon the conductor and held in clamping relation thereto by means of a plurality of U-bolts 17 arranged in embracing relation thereto and having their arms passing through bosses 18 on the lower member 13 and equipped with nuts 19

for maintaining the necessary holding action. Relative longitudinal movement of the keeper with respect to the main or lower member 13 may be prevented by means of laterally extending lugs 20 on the former engaging within recesses 21 in the latter as clearly indicated in Figure 2. Any additional details as to the exact formation or construction of the clamp itself can be ascertained by reference to said co-pending application, inasmuch as the essential features of the present invention reside in the means for mounting this clamp device upon the wooden pole 10.

In order to mount this clamp assembly upon the pole, I provide a bracket device 22 including an upstanding strip or bar 23 which may be straight throughout its length and an angular strip or member 24, both being secured, as by a carriage bolt 25 or the like, to a saddle member 26 of curved form lying against one side of the pole at the upper end thereof. The upper ends of the members 23 and 24 are apertured for the reception of the trunnions 15 which project from the opposite sides of the clamp and it is preferable to provide cotter pins 27 which pass through these trunnions for preventing their withdrawal from the openings in the bracket members.

The mounting means further includes a curved saddle member 28 which lies against the pole diametrically opposite the saddle member 26. The members 26 and 28 are formed at their ends with outturned ears 29 and 30, respectively, through which pass angular bolts 31 equipped with nuts 32. These bolts 31 will operate effectually to clamp the saddle members 26 and 28 against the pole but in order to make sure that there will be no possible vertical displacement I preferably make use of a long bolt 33 which passes through the lower ends of the members 23 and 24, through the saddle member 26, through the pole itself and also through the saddle member 28, this bolt carrying a nut 34. By this particular means it will be clear that the clamp assembly 12 will be securely held at the upper end of the pole and yet will be free to have its pivotal movement by virtue of the engagement of the trunnions 15 through the openings provided for their reception in the upper ends of the bracket members 23 and 24. The ground wire or conductor 11 is of course held securely in the clamp by virtue of the bolts 17 cooperating with the keeper 16. On account of the provision of the saddle members and the securing bolts cooperating therewith it is possible to make use of the standard type of clamp disclosed for the specific purpose set forth. The parts are easily made by stamping or bending sheet metal of suitable gauge and there is consequently no necessity for making elaborate and expensive castings.

From the foregoing description and a study of the drawing it is believed that the construction, operation and advantages will be readily apparent to one skilled in the art without further explanation.

While I have shown and described the preferred embodiment of the invention, it should be understood that the disclosure is merely an exemplification of the principles involved as the right is reserved to make all such changes in the details of construction as will widen the field of utility and increase the adaptability of the device provided such changes constitute no departure from the spirt of the invention or the scope of the claims hereunto appended.

Having thus described the invention, I claim:

1. Means for supporting a ground wire upon a pole, comprising a clamp engaged upon the wire and provided at its opposite sides with trunnions, a bracket device pivotally receiving said trunnions, a saddle member to which said bracket device is attached, said saddle member being disposable against a pole, and means for securing said saddle member to the pole.

2. Means for supporting a ground wire upon a pole, comprising a clamp engaged upon the wire and provided at its opposite sides with trunnions, a bracket device pivotally receiving said trunnions, a saddle member to which said bracket device is attached, said saddle member being disposable against a pole, means for securing said saddle member to the pole comprising a second saddle member disposable against the pole opposite the first named saddle member, and bolts connecting both saddle members.

3. Means for supporting a ground wire upon a pole, comprising a clamp engaged upon the wire and provided at its opposite sides with trunnions, a bracket device pivotally receiving said trunnions, a saddle member to which said bracket device is attached, said saddle member being disposable against a pole, means for securing said saddle member to the pole, comprising a second saddle member disposable against the pole opposite the first named saddle member, bolts connecting both saddle members, and an additional bolt passing through the bracket device, both saddle members and the pole.

4. Means for mounting a ground wire upon a pole, comprising a multi-part clamp engaged upon the wire and having laterally extending trunnions at its opposite sides, bracket members extending below the clamp and apertured at their upper ends for pivotal engagement with said trunnions, a saddle member secured to said bracket members and disposable against one side of a pole, a second saddle member disposable against the other side of the pole, and means connecting said saddle members.

5. Means for mounting a ground wire upon a pole, comprising a multi-part clamp en-

gaged upon the wire and having laterally extending trunnions at its opposite sides, bracket members extending below the clamp and apertured at their upper ends for pivotal engagement with said trunnions, a saddle member secured to said bracket members and disposable against one side of a pole, a second saddle member disposable against the other side of the pole, and means connecting said saddle members, comprising a plurality of bolts, both saddle members having their ends extending outwardly and apertured for the passage of said bolts.

In testimony whereof I affix my signature.

KENT A. HAWLEY.