L. STEINBERGER.

WIRE CLAMP.

APPLICATION FILED DEC. 8, 1913.

1,212,708.

Patented Jan. 16, 1917.

Fig: 1.

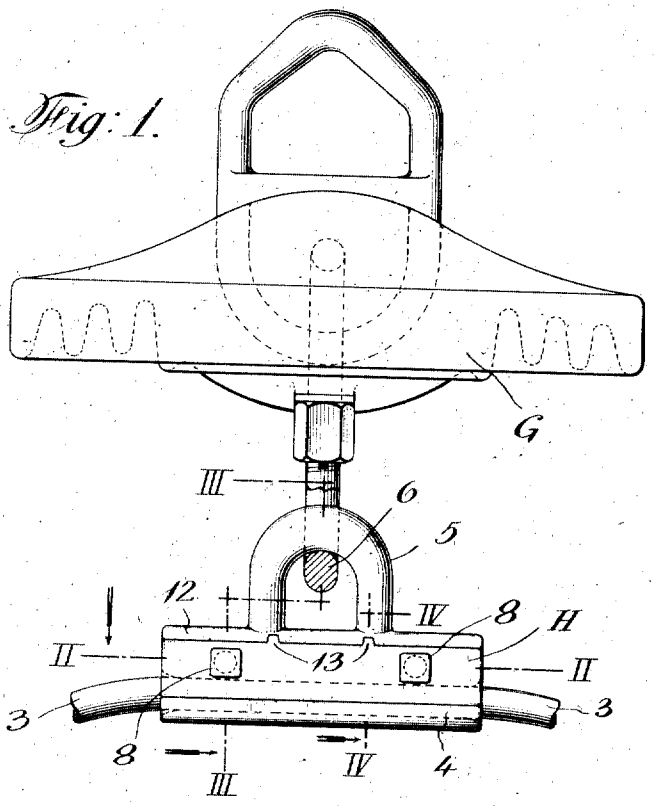


Fig: 3.

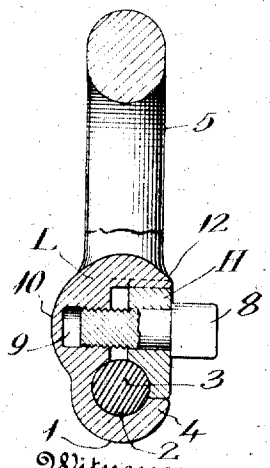


Fig: 2.

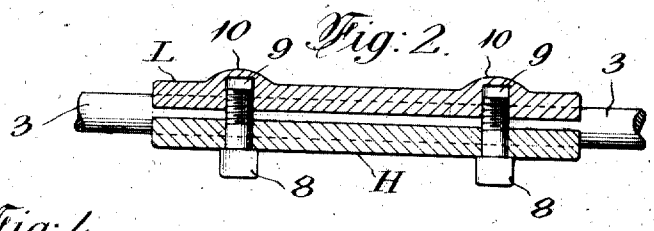


Fig: 4.

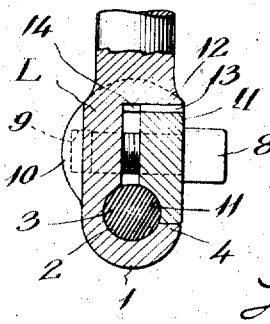
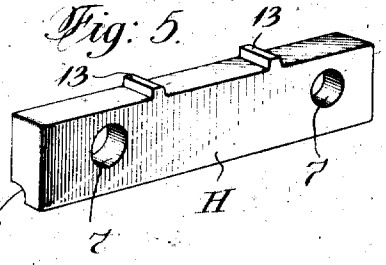


Fig: 5.



Witnesses:

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WIRE-CLAMP.

1,212,708. Specification of Letters Patent. Patented Jan. 16, 1917.

Application filed December 8, 1913. Serial No. 805,868.

To all whom it may concern:

Be it known that I, LOUIS STEINBERGER, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Wire-Clamps, of which the following is a specification.

This invention relates to a clamping device particularly adapted for engaging and retaining a line wire, the particular type of the device being such as is commonly attached to the lower end of a chain or other type insulator for supporting the line wire in suspended relation from a tower or the like. It will be obvious, however, that the principles of construction of the clamping device illustrated may be employed in a clamp adapted for use in other specific relations.

A particular object of the invention is to provide a simple and efficient clamping device which may be manufactured at small cost, and the parts of which may be easily, accurately, and quickly assembled when desired.

A further object is to provide the clamping device with means whereby a portion thereof may serve as a positive temporary support for the line wire, pending adjustments of the line wire and prior to the application of the clamping member of the device for retaining the line wire in an adjusted position.

Other objects and aims of the invention, more or less specific than those referred to above, will be in part obvious and in part pointed out in the course of the following description of the elements, combinations, arrangements of parts and applications of principles, constituting the invention; and the scope of protection contemplated will be indicated in the appended claim.

In the accompanying drawings which are to be taken as a part of this specification, and in which I have shown a merely preferred form of embodiment of the invention: Figure 1 is a side elevational view of a clamping device constructed in accordance with the principles of this invention, the same being illustrated in suspended relation from a support, the support illustrated being the lowermost unit of a chain type insulator; Fig. 2 is an enlarged, horizontal, sectional view taken substantially on the plane of line II—II of Fig. 1; Fig. 3 is a further enlarged, vertical, sectional view taken substantially on the plane of line III—III of Fig. 1; Fig. 4 is a view similar to that shown in Fig. 3, but being taken substantially on the plane of line IV—IV of Fig. 1; and Fig. 5 is a perspective view of the clamping member of the device illustrated.

Referring to the drawings for a detailed description of the structure illustrated, the reference character L indicates generally the main or body portion of the device, which as shown, is preferably longer than wide, and is formed with an upturned flange or hook-shaped portion 1 extending continuously along its lower edge so as to define a semi-circular pocket 2 longitudinally thereof, of a diameter substantially that of the wire 3 to be supported. The forward end, as 4, of the portion 1 extends upwardly to a level considerably above the plane of the lower wall of the pocket 2, so that likelihood of the wire being accidentally displaced after being once engaged in the pocket is avoided.

Any suitable attaching means may be formed upon the portion L, such for instance, as the closed loop 5 illustrated. The eye formed in the loop 5 may be engaged about any suitable support, as for instance, the loop 6 of the strain member of the insulator unit G illustrated.

The clamping member of the device is designated by the reference letter H, and this comprises a rectangular piece of metal preferably of a length equal to the length of the body portion L. A pair of apertures 7 are formed through the clamping member in spaced relation to receive the clamping

bolts 8, which extend therethrough and into threaded relation with suitable threaded sockets 9 formed in the body portion L, suitable bosses 10 being preferably provided upon the rear surface of the body portion L so as to receive and close the ends of the sockets 9.

The lower edge of the clamping member H is intended to rest substantially upon the upper edge of the portion 4 of the body, and said clamping member is provided with a semi-circular groove 11 longitudinally thereof at its lower edge in continuation of the roundness of the pocket 2, so as to rest closely against the wire being clamped.

The body portion L is provided with a shoulder or overhanging part 12 for engaging against the upper surface of the clamping member H, and the upper surface of said clamping member is provided with one or more guide ribs 13 extending transversely thereof, and adapted to slidably engage within suitable guide-ways 14 formed in the under surface of the overhanging portion 12. These guide-ribs and guide-ways provide a convenient, easily operated, and efficient means for enabling the operator to adjust or place the clamping member H into proper relation, so that the apertures 7 thereof are alined with the sockets 9 of the body. The subsequent insertion and quick engagement of the bolts 8 with the threads of the sockets becomes a relatively easy matter as compared with the uncertain and tedious task which would be involved in the engagement of the bolts with the threads of the sockets, were it not for the guiding efficiency of the guides and guide-ways. Obviously, a single guide and its coöperating guideway may be used if desired, though, it has been found that two or more provide a greater degree of accuracy without necessity for milling the engaging surfaces of the guides and guide-ways. The small degree of roughness in the casting may destroy the alinement where a single guide and guide-way is employed, but with two or more, the inaccuracy of one of them is corrected by the other. The guide-ways 14 and ribs 13 also serve to retain the clamp member in proper position for any reasonable length of time pending the insertion of the bolts.

The space between the lower surface of the shoulder 12 and the upper edge 4 of the flange 1 is sufficient to easily accommodate passage of the wire 3, when the clamp member H and clamping bolt 8 are removed.

Whenever one of the bolts, without the clamp member, is inserted, it will then be impossible to entirely detach the wire. This may constitute a permanent retaining means for the wire, though it will not clamp the wire against longitudinal movement. The insertion of the clamp member H is necessary in order to positively clamp the wire. The clamp member is of a width to fit between the shoulder and the upper edge of the flange so as to be easily movable, and, it may be noted, that the wire cannot possibly become disengaged except after the total disengagement of the bolts from the sockets, whether the clamp member H is employed or not. Slight loosening of the bolts from the sockets will permit longitudinal movement of the wire, however, and this is of a decided practical advantage, in that it permits easy adjustment, without likelihood of the wire becoming detached.

In using the structure illustrated, an operator may string his line wire over a considerable distance and support it temporarily at one or more intermediate points in the pockets 2 of this device, the clamping member being entirely removed and the wire being simply held by gravity within the pockets and being easily movable longitudinally thereof. After the wire has been properly adjusted longitudinally, then the clamping members of all of the devices may be applied and screwed home to positively clamp the wire against further relative movement. In carrying out this work, the operator usually works from above, that is, he supports himself upon the cross arm or the like of a tower, and raises the insulator to a convenient working position. Clamping devices of this type, as heretofore constructed, have been of such a character that it has been necessary for him to lift the insulator bodily and adjust and hold the wire relatively to the clamp, while the parts of the clamp are being assembled. With the present invention, however, he has merely to reach down at arm's length and place the wire within the pocket 2, and this temporary support for the wire will be sufficient until the whole length of the wire is ready to be positively clamped. The operation of applying the clamping part H may be also accomplished without raising the insulator, for the reason that the guide-ribs and guide-ways assist him materially in this operation as above set forth.

As many changes could be made in the above described construction, and various embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description, or shown in the accompanying drawings, shall be interpreted as illustrative only, and not in a limiting sense, and that the following claim is intended to cover all the generic and specific features of the invention which may be said to fall within the language of said claim.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is:

A device of the class described, compris-

ing a body member terminating at its lower end in an outwardly and upwardly turned flange forming a pocket adapted to receive and support a length of wire, said pocket being of a depth so that the wire projects above said flange, a clamp member having a portion adapted to engage said wire, said clamp member being provided with openings and said body member with sockets, and bolts passing through said openings and into said sockets for clamping said parts together.

In testimony whereof I affix my signature in the presence of two witnesses.

LOUIS STEINBERGER.

Witnesses:
L. GESSFORD HANDY,
NATHALIE THOMPSON.