Oct. 24, 1933. S. P. BECKER 1,932,010

LINE TAP CONNECTER

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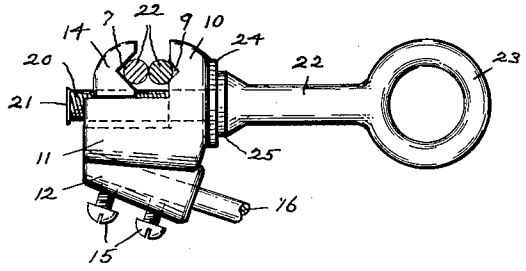

Fig 1

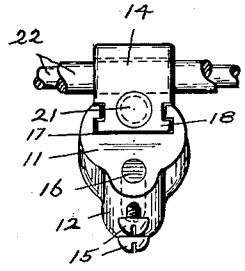

Fig 2

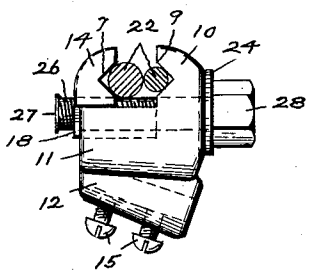

Fig 3

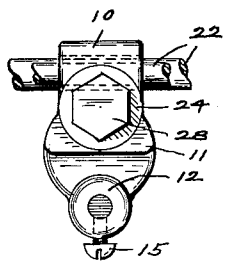

Fig 4

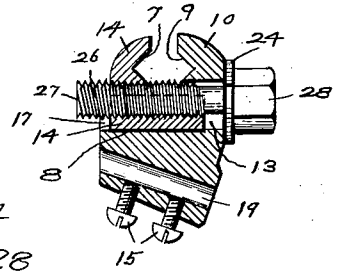

Fig 5

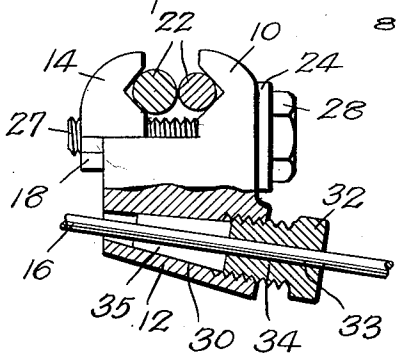

Fig 6

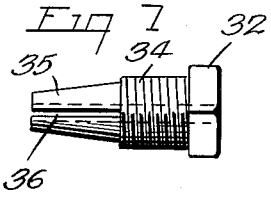

Fig 7

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LINE TAP CONNECTER

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Serial No. 577,741

3 Claims. (Cl. 173—273)

My invention relates to a wire clamp of that class known as a hot line top connecter which is employed for the purpose of taking a lead off of a main line, or making other taps to live wires such as connecting transformers and meters, or the device may also be used for clamping one or more wires together with or without the use of the lead wire.

In clamps for this purpose it is important that a secure grip of the wires is provided and that when two or more wires are secured together, that this is done in a parallel manner especially when the wires are of different sizes so that the wires can not be moved at an angle to become loosened.

It is also important that the device be of such shape as to be readily taped if desired, and also that there are no loose parts to become lost, and that the movable jaw and the clamping bolt are always in threaded relation.

The object of the invention is to provide a device of this kind that shall be simple, durable and efficient, resist vibration and give a positive clamping effect of the wires.

Another object being to provide a device that shall be easily applied or installed in places that are not easily accessible.

Also to provide a device that is applicable to a hot line or live wire without endangering the person making the installation to physical injury.

With these and other objects in view, my invention consists in certain construction and combination of parts as will hereafter be fully described and claimed, and illustrated in the accompanying drawing, in which like figures of reference refer to corresponding parts in all of the views, and it is understood that slight changes may be made without departing from the spirit of the invention.

In the drawing—

Figure 1 shows a side elevation of the device, with a special clamping screw, and indicating two wires in a clamped position and a lead wire attached.

Figure 2 shows an end view of the device as used with the usual cap screw or bolt.

Figure 3 shows a side elevation of the same, with two wires of different sizes clamped therein.

Figure 4 shows the other end of the device.

Figure 5 shows a sectional view of Figure 3.

Figure 6 shows a view partly in section to illustrate a modified means for clamping the lead wire.

Figure 7 shows a detail view of the clamping member.

Referring to the drawing—

The device comprises a body member 11 formed with a jaw 10 provided with the transverse V-notch 9, and the bore 13 which is formed with the dovetail 17, within which is mounted the movable jaw member 14 which is formed with the dovetail 18 and a central bore 8 which is threaded; the movable jaw member 14 being also provided with the transverse V-notch 7.

The movable jaw member 14 is also formed with a tongue portion having a half-threaded groove and a dovetail guide upon its outer sides; the dovetail entering the dovetailed guideway in the stationary member, and the half-threads being a continuation of those in the body of the movable member and tending to increase the strength of the hold.

The dovetail guides 17 and 18 are very important, in that they at all times provide a guide for the movable jaw 14, preventing any tilt or tip of the same as it is forced against the wires 22 in clamping, and preventing its binding on the threads of the bolt 28.

For moving the movable jaw member 14 with respect to the jaw member 10 and retaining the same in a clamped position on the wires 22, or upon a single wire in the V-notches 7 and 9, a bolt of cap screw 26 is provided which has a head 28 and which passes through the bore 13 and is threaded into the bore 8, the end of said bolt 26 being slightly upset as at 27 to prevent its removal; a washer 24 being placed under the head 28.

As shown in Figure 1, this clamping bolt 22 may be provided with an eye head 23 for the reception of a bar or other tool which may be employed for tightening the same; this form of bolt being formed with a shoulder 25 and the upset end 21.

For the purpose of securing the lead wire 16, the device is formed with the boss 12 which is placed at an angle to the body portion 11 and is formed with a bore 19 for the reception of the lead wire 19, which is retained therein by the set screws 15 which are threaded into the boss 12 and enter the bore 19.

It is understood however that I do not confine myself to this construction, as other means may be employed to secure the lead wire to the clamp, such as a tapered nut threaded into the bore 19, or the use of a split bore and cap, or other suitable means.

It is also to be understood that more than one

lead wire may be employed, and that the boss 12 may have more than one bore 19 for this purpose, also that the bore 19 may if desired be parallel to the bore 13 or at any desired angle thereto, and that said bore 19 may be of any desired size depending upon the size of wire for which it is to be used, and that the clamp device may be made for any desired size of wire or wires, and of any suitable material.

As shown in Figure 6, the lead line 16 may be secured by a special clamp bolt 32 which is formed with an axial bore 33 through which the wire 16 is passed, and a threaded portion 34, and a tapered portion 35 which is provided with a number of saw cuts to form a collet; while the boss 12 is formed with a tapered bore 30 and a threaded portion 31 within which the bolt 32 is mounted, and by screwing up on said bolt 32 the collet end will tighten on the wire 16 and hold it in place.

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

1. A line tap connecter, comprising a body member having a clamping jaw and a bore at right angles thereto and below said jaw, a guide-way of channel formation with recessed side walls formed in said bore, a movable member formed with a clamping jaw and a tongue at right angles thereto, said movable jaw having a threaded bore said bore extending the length of the tongue in the form of a half-threaded groove, a guide formed on said tongue to slide within said guide-way and having projections to engage the recessed portions of the side walls of the guide-way of said bore, a clamping bolt extending through the bore in said stationary member and threaded into the tongue and bore of said movable member, a boss formed on said stationary member at an angle thereto and formed with a bore therethrough and provided with means for clamping a lead wire therein.

2. A line clamp, comprising a body member having a clamping jaw and a bore at right angles thereto and below said jaw, a guide-way of channel formation with recessed side walls formed in said bore, a movable member formed with a clamping jaw and a tongue at right angles thereto, said movable jaw having a threaded bore, said bore extending the length of the tongue in the form of a half-threaded groove, a guide formed on said tongue to slide within said guide-way and having projections to engage the recessed portions of the side walls of the guide-way of said bore, and a clamping bolt extending through the bore in said stationary member and threaded into the tongue and bore of said movable member.

3. A line clamp, comprising a body member having a clamping jaw and a bore at right angles thereto and below said jaw, a guide-way of channel formation with recessed side walls formed in said bore, a movable member formed with a clamping jaw and a tongue at right angles thereto, and below said jaw, said tongue having a half-threaded groove extending therealong, a guide formed on said tongue to slide within said guide-way and having projections to engage the recessed portions of the side walls of the guide-way of said bore, and a clamping bolt extending through the bore in said stationary member and threaded into the tongue of said movable member.

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