April 5, 1932. A. G. STEINMAYER 1,852,031

CABLE CLAMP

Filed Sept. 22, 1930

Fig. 1

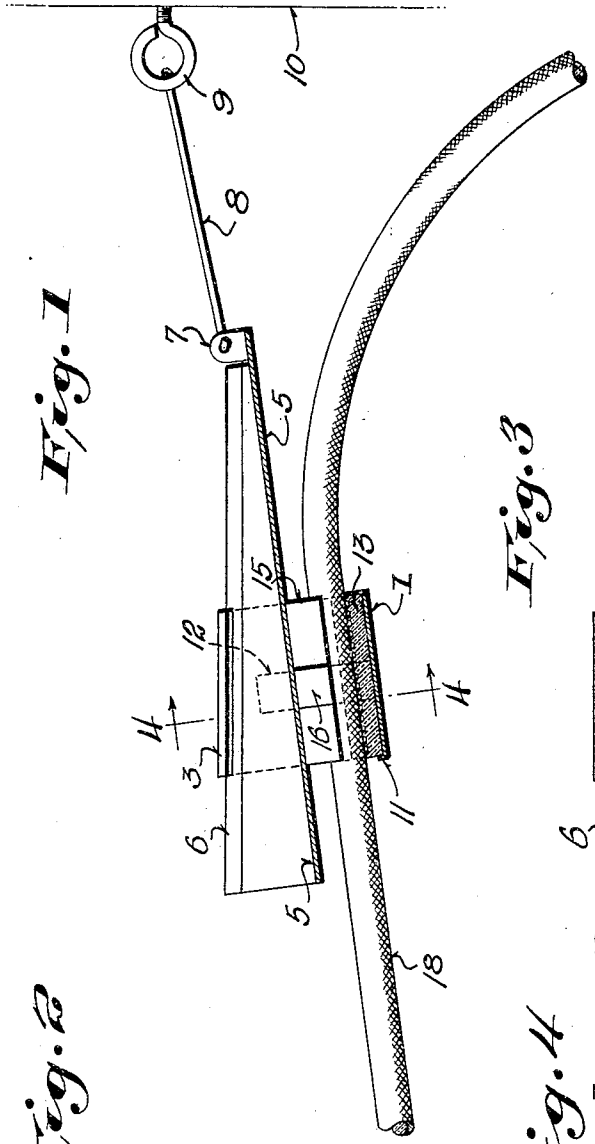


Fig. 3

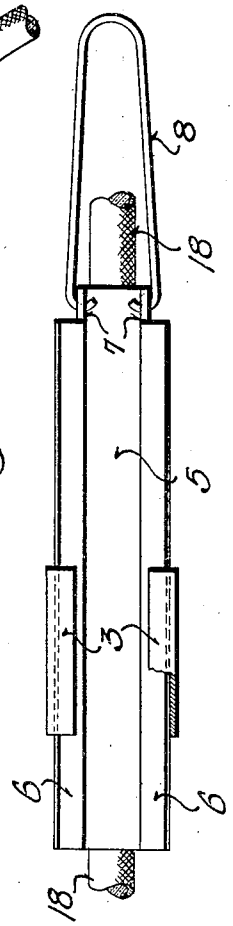


Fig. 2

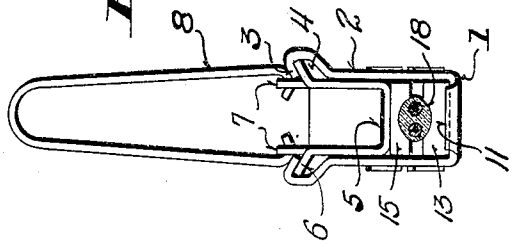
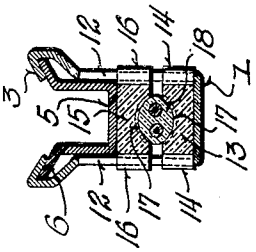


Fig. 4



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UNITED STATES PATENT OFFICE

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CABLE CLAMP

Application filed September 22, 1930. Serial No. 483,564.

This invention relates to clamps for cables, and is particularly directed to a clamp construction which may be used with a two, three, or other multiple conductor cable, such, for example, as are used for house drops and replace the single conductor cables heretofore used, although the invention in its broader aspects is not limited for use with a multiple conductor cable.

This invention is an improvement over that disclosed in my copending application, S. N. 379,604, filed July 20, 1929, for cable clamps, and, in general, has the same objects as those set forth in such application.

Objects of this invention are to provide a cable clamp which will not damage the waterproof wrapping although it securely grips and firmly helds the cable, whether of single or multiple construction, which avoids all chance of short-circuiting or grounding, which will not produce a sharp kink in the cable, which may be easily attached to a hook or closed eyelet, and which will freely adjust itself in approximate alignment with the cable so that the minimum strain is placed upon the several parts.

Further objects are to provide a construction in which the cable is gripped between insulating jaws in such a manner that a pull upon the cable serves to tighten the gripping of the jaws, in which the jaws are formed of insulating material and are held in accurate alignment thereby preventing the slipping of one jaw past the other although permitting relative adjustment of the jaws, at least one of the jaws being freely guided to permit ready adjustment of this jaw to secure clamping of the cable between the jaws.

Further objects are to provide a construction in which the major portion of the clamp is formed from easily produced stampings, in which the insulating jaws are readily assembled within or removed from the clamp, in which the entire body of each jaw bears the strain at all times, and in which the strain is not borne by any relatively delicate or fragile parts.

Further objects are to provide a construction of clamp which permits the sliding of the wedge completely from the body portion or bracket so that a cable, already in place, may be received by the clamp without the necessity of threading the cable through the clamp, and in which the construction is such that it is possible to use the clamp for a cable even up to a size whose diameter is equal to the full width of the space between the walls of the clamping member.

Further objects are to provide a clamp which is cheap to make, which is rugged and reliable, and which is easy to manipulate.

An embodiment of the invention is shown in the accompanying drawings, in which:—

Figure 1 is a longitudinal sectional view through the clamp showing the clamp in place and holding a cable.

Figure 2 is an end view of the clamp with the cable in section and with the bail turned up.

Figure 3 is a plan view, partly in section, of the clamp and cable.

Figure 4 is a transverse sectional view on the line 4—4 of Figure 1.

Referring to the drawings, it will be seen that the body portion comprises a channel shaped sheet metal member 1, which is provided with upturned side portions 2, which terminate at their upper edges in inwardly turned lips 3. These lips 3, it will be seen from Figure 1, slant downwardly towards one end of the clamp with respect to the bottom of the body portion 1. The lips 3 do not overhang the channel or space between the walls 2, as is apparent from a reference to Figures 2 and 4, and it is to be noted further from these figures that a small groove 4 is formed by the lips.

A wedge or clamping member 5, also formed of sheet metal, is provided with outwardly turned lips 6, which fit within the grooves 4 and beneath the lips 3, and form therewith a means for forcing insulating jaws or clamping jaws, hereinafter described, towards each other.

The wedge-shaped member 5 is provided with apertures in upturned ears 7 adjacent the smaller end, into which the hooked ends of a bail 8 are passed. These hooked ends may be detached from the ear 7 by slightly springing the relatively resilient bail. There-

after, such bail may be passed through a closed eyelet 9 attached to a suitable support or wall 10. Obviously if a hook is employed in place of the eyelet, it is not necessary to even temporarily separate the bail from the wedge.

It is to be noted particularly from Figure 2 that the upturned ears 7 are in alignment with the side walls of the wedge 5, and consequently, will pass inside of the inturned lips 3 of the body portion. Further it is to be noted from Figure 2 that the hooked ends of the bail 8 pass above the ears 3 when the wedge is slid rearwardly, thereby permitting the free sliding of the wedge completely from the body portion.

Referring again to the body portion, it will be seen that it is provided with a small upturned lip 11, see Figures 1 and 2. Further the side walls of the body portion are provided with rectangular slots 12, which extend upwardly a material distance, as shown most clearly in Figures 1 and 4.

A pair of insulating jaws are provided. The lower jaw 13 seats against the bottom of the body portion and has its rear end in contact with the upturned lip 11, if desired. Obviously a forward upturned lip could be provided if required. Also and for further security against displacement of the lower jaw, it is provided with outwardly projecting lugs 14, which fit within the slots 12. It is clear that these lugs constitute retaining and guiding means which hold the lower jaw in place, in addition to the support furnished by the lip 11.

An upper insulating jaw 15 is also provided and is equipped with outwardly projecting lugs 16, which freely slide within the rectangular slots 12, as shown most clearly in Figure 4. This upper jaw is movable towards and from the lower jaw, and each jaw is provided with recessed portions 17, which may have corrugated faces, and which are adapted to receive the cable 18. Such cable obviously may be a multiple conductor type or a single conductor type.

It is obvious that when it is desired to use the clamp with a cable already in place, it is merely necessary to slide the wedge 5 rearwardly with respect to the body portion 1 and to thereby completely remove the wedge from the body portion. Thereafter the uppermost insulating gripping jaw 15 may be removed from the body portion by rocking one side of this upper jaw upwardly and thereafter lifting it from the body portion, a sufficient amount of clearance being provided, as indicated in Figure 4. Thereafter the cable may be seated against the lower gripping or insulating jaw 13 and the upper jaw replaced. The wedge is subsequently slipped into place, and the bail is attached to the hook or eye or other holding means, as has been previously described. It is apparent that the pull on the cable merely serves to tighten the grip of the clamping jaws, as the wedge slides forwardly with respect to the body portion, see Figure 1. It thereby forces the movable jaw towards the stationary jaw.

It is to be distinctly understood that the terms "upper" and "lower" as applied to the jaws, are merely for the purpose of clearness of description, and in no way are to be construed as limiting this invention, as obviously the cable clamp can be used in any position desired.

The metal body portion, wedge and bail of the clamp are preferably formed from non-rusting material, or are coated with a non-rusting coat. The clamping jaws 13 and 15 are formed from bakelite, fibre, or other suitable insulating material.

It will be seen that a very secure attachment of the wires or cables to the supporting structure is obtained, and one which may be readily manipulated with the utmost ease.

It is to be noted also that the construction is such that the jaws cannot, even through improper handling, become misplaced or positioned out of alignment with each other. The construction is such that one jaw cannot slip forwardly of the other jaw with consequent excessive pressure upon the gripped portion of the cable. Instead, the jaws are always maintained in alignment and consequently the maximum bearing area is always presented between the jaws and the cable.

It will be seen further that the device is very simple, is easy to construct and apply, and may be most cheaply made.

Although this invention has been described in considerable detail, it is to be understood that such description is intended as illustrative rather than limiting, as the invention may be variously embodied and is to be interpreted as claimed.

I claim:

1. A cable clamp comprising a body portion, a pair of gripping jaws within said body portion, and a wedge cooperating with said body portion and jaws to force said jaws into clamping engagement with a cable, said body portion being of channel shape and being open approximately the full width of the channel.

2. A cable clamp comprising a channel shaped body portion having a bottom and a pair of side walls, the channel between said side walls being open upwardly to receive an intermediate portion of a cable, and a wedge for clamping the cable relatively to said body portion, said body portion being substantially free from projections overhanging the channel between said side walls, said wedge having a substantially continuous edge contacting with said body portion.

3. A cable clamp comprising a shell-like body portion, clamping jaws carried by said

body portion and adapted for positioning on opposite sides of a cable, and a wedge slidable within said body portion for forcing said jaws into clamping engagement with the cable, said wedge being freely removable from said body portion.

4. A cable clamp comprising a shell-like body portion, a pair of clamping jaws carried by said body portion for gripping a cable, and a wedge slidably carried by said body portion for forcing said jaws into binding engagement with a cable, said wedge being slidable directly from said body portion.

5. A cable clamp comprising a shell-like body portion, a pair of clamping jaws carried by said body portion for gripping a cable, and a wedge slidably carried by said body portion for forcing said jaws into binding engagement with a cable, said wedge being slidable directly from said body portion, and said jaws being normally held in alignment by said body portion in all positions of adjustment.

6. A cable clamp comprising a body portion, a pair of cable-gripping jaws carried by said body portion, said jaws being relatively movable and being held in alignment by said body portion and being freely removable from said body portion, and a wedge removably carried by said body portion for forcing said jaws into cable-gripping position.

7. A cable clamp comprising a channel shaped body portion having a bottom and a pair of side walls, a pair of cable-gripping, relatively movable jaws carried within said body portion, said side walls having slots and said jaws having lateral projections located within said slots, and a wedge slidable within said body portion for forcing said jaws into cable-gripping position.

8. A cable clamp comprising a channel shaped body portion having side walls provided with inturned spaced lips, a pair of cable-gripping jaws carried within said body portion, and a wedge for forcing said jaws into cable-gripping position, said wedge having upper lips engaging said first mentioned lips.

9. A cable clamp comprising a channel shaped body portion having side walls provided with inturned spaced lips, a pair of cable-gripping jaws carried within said body portion, and a wedge for forcing said jaws into cable-gripping position, said wedge having upper lips engaging said first mentioned lips, said first mentioned lips being spaced outwardly beyond the channel of said body portion, and said second mentioned lips being outwardly turned.

10. A cable clamp comprising a channel shaped body portion having a pair of side walls provided with slots and terminating in inturned upper lips, said lips having edges spaced apart, the channel of the body portion being substantially free from any overhanging of said lips, a pair of clamping jaws for gripping a cable, said jaws being formed of insulating material and having lateral projections loosely held within said slots, and a wedge having means adapted for attachment to a support, said wedge being slidable within said body portion for forcing said jaws into clamping engagement with the cable and having outwardly turned lips slidably fitting beneath the lips of said side walls.

11. A cable clamp comprising a channel shaped body portion having a pair of side walls provided with slots and terminating in inturned upper lips, said lips having edges spaced apart, the channel of the body portion being substantially free from any overhanging of said lips, a pair of clamping jaws for gripping a cable, said jaws being formed of insulating material and having lateral projections loosely held within said slots, and a wedge having means adapted for attachment to a support, said wedge being slidable within said body portion for forcing said jaws into clamping engagement with the cable and having outwardly turned lips slidably fitting beneath the lips of said side walls, said wedge being of channel shape and said wedge and body portion being formed of sheet metal stampings.

In testimony whereof, the signature of the inventor is affixed hereto.

ALWIN G. STEINMAYER.