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FASTENING MEANS FOR CABLES

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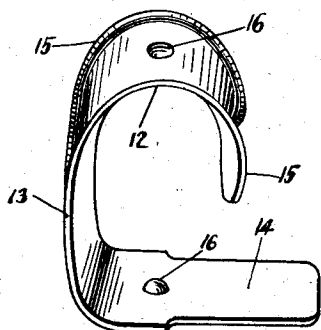


FIG. 1

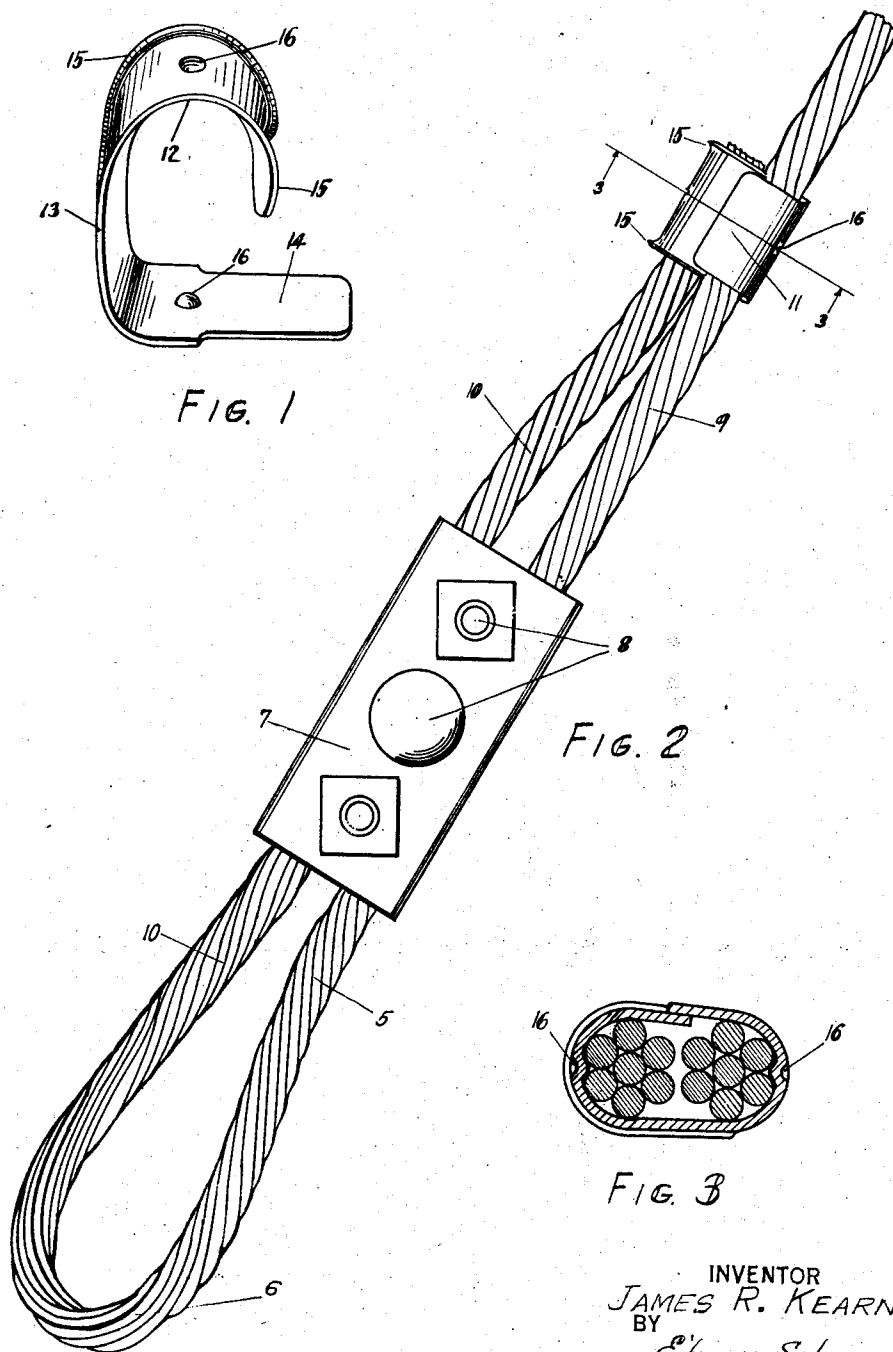


FIG. 2

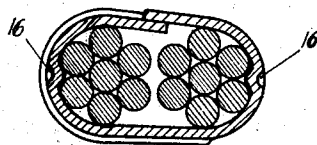


FIG. 3

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FASTENING MEANS FOR CABLES

Application filed February 7, 1929. Serial No. 338,249.

This invention relates to fastening means for cables, and particularly to improvements in a fastening clip adapted for use as a substitute for the prevailing practice of serving or mousing the dead-ends of guy cables and the like.

The customary practice in dead-ending a guy cable, or the like, is to loop the cable, and to position the loop by means of a clamp such as the usual guy clamp at present extensively used in connection with overhead line work. The dead-end of the cable is not usually severed beyond the clamp, but is customarily positioned next and parallel to the main strand of the cable by means of serving or mousing the dead-end. This practice consists in wrapping a comparatively small wire around the parallel cables. It is the major purpose and object of this invention to create a small, permanent clip of improved, inexpensive form, to serve as a substitute for this present unsatisfactory process of serving the dead-end of a guy cable. The present invention embodies certain improvements over the guy clip shown and described in my copending application of Serial No. 218,482, filed September 9, 1927.

A further general object of this invention is to provide an improved, quickly attachable fastening device for securing together a plurality of cables, ropes or the like, the device including means for maintaining adjacent cables or ropes in substantially parallel relation to each other; and which further includes means for preventing any tendency of the fastening device to move about or along either or both of the cable portions to which it is secured.

A further object is to provide a fastening of the type and for the purpose mentioned, which is capable of ready attachment or removal in a single operation, without special tools, and which provides a material reduction in the cost of serving or mousing cables according to hitherto prevailing methods, by effecting a saving in the time required for the purpose.

Besides the objects herein particularly set forth, further general objects as set forth in the above noted copending application, will

apply in like manner to the present subject matter.

Still further objects and advantages of the invention will appear from the following detailed description and the accompanying drawings, in which Fig. 1 is an enlarged view in perspective, showing a preferred form of cable clip constructed in accordance with the present invention; Fig. 2 is a side elevation of a dead-ended cable, showing the manner of application of my improved guy clip, for the purpose of serving the dead-end beyond the clamped portion of the cable; and Fig. 3 is a section along the line 3—3 of Fig. 2.

It will be understood that the specific example of the invention described and illustrated in this disclosure, as well as the suggested uses and application of the device described, may be varied substantially without departure from the spirit and intended scope of this invention; the subject matter herein set forth constituting merely a single executional embodiment of the invention, which is submitted in compliance with the statutory requirements relating to applications for Letters Patent.

Referring now by reference characters to the drawings, 5 indicates a stranded cable of the sort ordinarily used for guy purposes in overhead line construction. The cable 5 is bent or folded upon itself at 6 to form a fastening end. At this point an eye may be inserted, or the fastening end may be used to engage a hook, strain insulator, or the many other cable receiving devices employed in connection with electrical lines. The fastening end 6 is shaped and positioned by means of a guy clamp 7 of any conventional type, which may include a pair of the usual plates, for example, one thereof on each side of the stranded cables, the plates being positioned and frictionally retained by means of studs or bolts 8 as shown. In the double cable assembly as shown, 9 indicates the main strand, and 10 that portion which is ordinarily designated as the dead end. In lieu of the usual practice of serving the dead-end by wiring it into position next to the main strand, I employ a guy clip indicated generally at 11. This clip may be formed of alu-

minum, galvanized iron, copper or other material of suitable gauge and stiffness. The details of construction of the clip 11 will be readily apparent from Fig. 1 of the drawings, in which it will be seen that I provide, by preference, a semi-cylindrical portion 12 adapted to receive and engage one of the cables, either the main strand or the dead-end. By preference, the portion 12 is so constructed and proportioned to the size of cable to be engaged, that the clip will be retained in any chosen position, when located on one of the cables to be secured thereby, thus enabling the lineman or operator to manipulate the clip for fastening with but one free hand, and preferably by the use of only a single tool. Where employed on overhead work, this feature enables the clip to be positioned in the desired location on one of the cables, and provides means whereby the clip maintains its position until clamped permanently in place, as will hereinafter appear.

The portion 12 is connected with a relatively flat portion 13, which forms a plane side of the clip, and which, in use, is adapted to engage one side of the pair or more of strands to be positioned by the clip. The flat portion 13 is, in use, bent upwardly to form an overlapping lip 14. It will be noted that the lip 14 is somewhat restricted in width, as compared with the remainder of the band forming the clip, for a purpose hereinafter appearing. The semi-cylindrical portion 12, and, if preferred, the flat portion 13, may be provided with upwardly turned, marginal flanges 15, which serve to retain and laterally to position the lip 14, as well as to prevent the raw edge of the clip from coming into contact with the cable.

As a means for most effectively positioning the clip with respect to the pair of cables to which it is attached, I prefer to provide, preferably centrally of the body of the clip, one or more portions 16, each constituted, in the present example, by an exteriorly formed depression or upset part of the clip body; such upset portion providing inwardly extending projections. The purpose of the projections 16 is to engage the spiral or other grooves normally existing between the adjacent surface strands of a stranded cable. Since the trend of each of the spaces between adjacent outer strands of the guy cable, is normally spiral, and exterior of the cable itself, it will be obvious that, when the clip is secured in place, the projections 16 will tend to prevent movement of the clip along the cable, since such movement cannot take place without twisting the clip about the pair of cable portions to which it is affixed. For a like reason the projections 16 will tend to prevent rotation or twisting of the clip about the cable without any relative endwise movement, although if properly applied,

such tendency is minimized because of the usual non-circular shape of the clip, when clamped in place.

The application and manner of use of the described clip will be apparent to those skilled in the art. The clip may be almost instantly attached for securing a dead-end of a cable, by inserting the portion 12, for example, over the dead-end of the cable as shown. With a pair of pliers, or any other suitable tool ordinarily available to a lineman, the lip 14 is bent over and about the pair of cable portions, in such a manner that the lip 14 falls between the marginal flanges 15 and preferably overlaps the portion 12. The strip of material from which the clip is formed, is, by preference, sufficiently rigid to position the clip by friction; but by engagement of the portions 16 with the cable, a positive locking means is provided to maintain the clip in its predetermined position, and further, to position a pair or more of the cable portions in their predetermined relation.

It will occur to those familiar with the art, that the cable clip as described, is excellently adapted not only for use in original installations, but also for replacement use. It will be obvious from the drawings and description that the described example of the invention may be employed to serve a single cable or rope end, to prevent ravelling or separation of the strands thereof. The device described not only serves its purpose better and more economically than existing methods, but effects a substantial saving in time and labor expense over the older practice, and makes for greater neatness in appearance of the finished fastening end.

I claim as my invention:

1. A flexible cable clip having a side opening, and adapted to engage a double cable; the clip having a preshaped portion offset from the side opening and normally conforming, substantially, with the shape of one cable, and an internal projection formed on the shaped portion of said clip.
2. In a cable clip having ends adapted to be overlapped, upstanding flanges near one end, for preventing the lateral displacement of the lapped ends, and means formed on opposite side portions of the clip, for maintaining the position of the clip with respect to the cable to which it is attached.
3. A cable clip having preformed marginal flanges projecting outwardly from a portion thereof and adapted to have one end disposed on said portion between the flanges, and an internal projection formed on said flanged portion.
4. A cable clip having upstanding marginal flanges on an end portion thereof and adapted to have the opposite end disposed on said portion between the flanges, and an in-

ternal projection formed adjacent each end portion, and coacting with such portions to position the clip on a cable.

tion to lock the clip around the cables, one of said end portions being preformed to position the clip on one cable, irrespective of the locking engagement of said end portions.

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5 5. A cable clip adapted for serving a dead-end, and comprising a sheet metal member having a side opening and adapted to receive the cable and its dead-end; means integral with the member adapted to position the cable and end relative to each other, and
10 adapted to be disposed upon the body of the clip; and means integral with the member and extending from the surface thereof for engagement with a cable portion, and adapted to position the clip relative to the cable
15 portions secured thereby. 80

6. A sheet metal clamp for parallel cables, comprising a cable receiving portion curved to grip one of the cables to be secured, a flexible end portion adapted to be bent about and
20 conformed to the cables, and an internally upset portion, said last mentioned portions adapted to coact to secure the members together, and to secure the clamp to the cables.

7. A sheet metal clamp adapted to fasten
25 together a pair of cables, the clamp having a portion adapted to receive one of the cables and support the clamp thereon, and a second portion bent about the other cable to contact with the first named portion, and an internal
30 projection formed on said clamp and coacting with said second portion to position the cables relative to each other, and to position the clip relative to the cables. 90

8. In a metallic band adapted to serve the
35 dead-end of a cable, a portion having oppositely disposed upstanding marginal projections, and a projection between the margins; and another portion adapted to be seated between the opposed projections, in overlapping
40 ping relation, and upon said first named portion. 100

9. A sheet metal end clip for a rope or cable, comprising end portions adapted to be overlapped, around the cable; a preformed
45 portion, extending outwardly of the clip, adapted relatively to align the end portions, and means extending inwardly of the clip, and adapted to prevent movement of the clip along the rope or cable. 110

50 10. A sheet metal clip adapted to be wrapped about a pair of cables, and having an internal projection coacting with the end portions of said clip to prevent movement of said clip on the cables; one of said end portions having outwardly projecting marginal
55 flanges thereon, and the other end portion being restricted in width and adapted to be engaged by said flanges. 115

60 11. A metal clip formed to be wrapped about a pair of parallel, stranded cables, and including an internal projection adapted to engage a space between the outside cable strands; said clip including an end portion
65 adapted for seating upon another end por- 120

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