July 26, 1960 M. BETHEA 2,946,108

CABLE CLAMP

Filed March 8, 1957

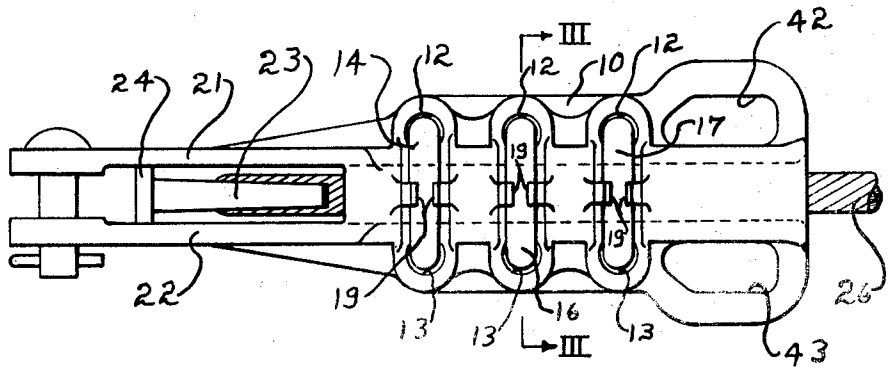


Fig. 1

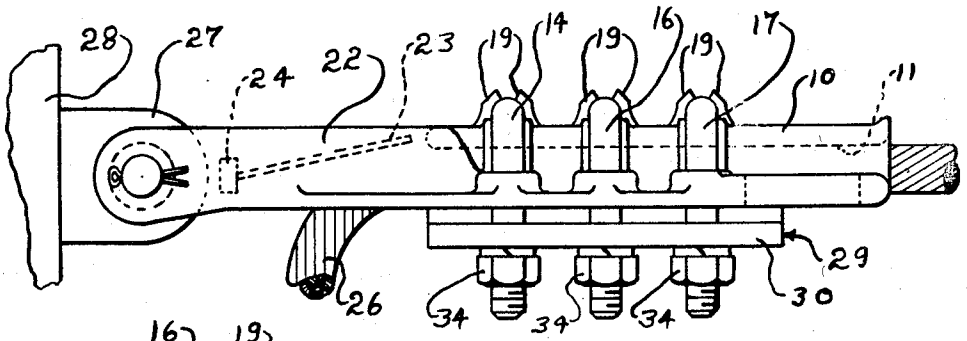


Fig. 2

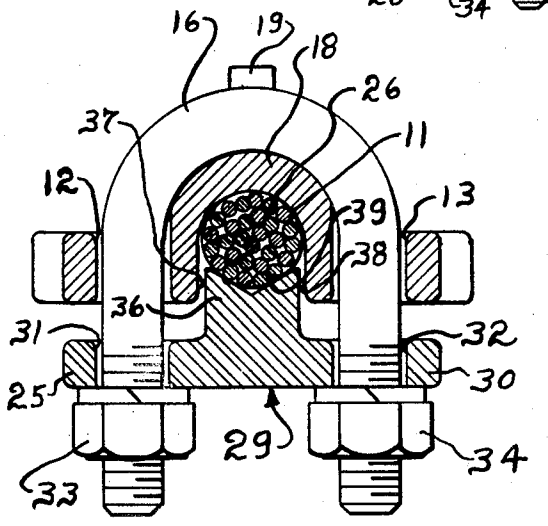


Fig. 3

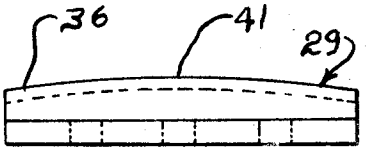


Fig. 4

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CABLE CLAMP

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1 Claim. (Cl. 24—135)

This invention relates to a cable clamp and more particularly to that type of clamp known as a dead end clamp and has for an object the provision of a device of the character designated which shall be simple of design, economical of manufacture, and one which may be readily installed and worked with a minimum of inconvenience and danger to the workmen, especially as applies to live line work.

My improved cable clamp, among other things, embodies the following improved features and advantages.

(*a*) The body of the clamp is inverted with respect to the groove within which the cable is seated, with a keeper having a seat which bears upwardly against the cable. This tends to eliminate the collection of corrosive matter in the cable groove as occurs in conventional clamps with upwardly opening grooves.

(*b*) The keeper is held in position by downwardly extending U-bolts which straddle the clamp body and pass through ribs on the sides of the keeper, the U-bolts being firmly peened to the clamp body, thereby facilitating work on a live line and preventing any of the U-bolts getting out of line when assembling or working the clamp.

(*c*) The relationship of the keeper and the groove in the body of the clamp is such that when the U-bolts are loosened to remove or insert a cable in the clamp, the keeper does not drop completely free of the groove and cannot hang on the sides of the groove when retightened.

(*d*) The keeper being located beneath the clamp body, drops away from the conductor groove of its own weight when the nuts on the U-bolts are loosened. This obviates the necessity of a lifting eye as heretofore used on the clamps having a keeper above the body of the clamp.

(*e*) The seat of the cable in the keeper is of V-shape rather than arcuate and is bowed slightly upwardly intermediate its ends which produces a concentration of pressure on the cable midway the ends of the keeper and the V-shaped seat and causes collapsing of the cable helix at relatively low bolt pressures thereby effecting greater pressure on the central strands of the cable.

(*f*) A cable guide formed with relatively light, bendable material, is mounted in the clamp body, between the sides thereof, which can be bent manually before work is started so as to turn the cable either upwardly or downwardly when being assembled.

(*g*) The clamp groove is made straight rather than wavy as is usual in clamps of this kind and the keeper is slightly bowed at the ends which construction, I have found, gives very high holding power and at the same time makes it easy to thrust the cable through the clamp without a tendency for it to hang on waves in the groove.

(*h*) Two pulling eyes are provided on the clamp body, one on each side, to simplify positioning of tensioning tackle when installing the clamp and providing a means whereby the tensioning tackle may always be attached to the pulling eye nearest the pole where a lineman may be located.

These and other features of my invention are illustrated in the accompanying drawing, forming a part of this application, in which:

Fig. 1 is a plan view of the clamp of this invention;

Fig. 2 is a side elevation of the same attached to a suitable support;

Fig. 3 is a sectional view taken along the line III—III of Fig. 1 and drawn to a larger scale; and,

Fig. 4 is a side view of the keeper, with the upward bow of the keeper slot exaggerated.

Referring now to the drawing for a better understanding of my invention I show a clamp body **10** having an elongated downwardly opening, straight cable groove **11** therein which, as shown, is arcuate in cross section with straight vertical sides extending downwardly below the groove. A plurality of bolt holes **12** and **13** extend through the sides of the clamp to receive U-bolts **14**, **16** and **17** which pass downwardly therethrough. The upper surface **18** of the clamp body is transversely curved, and the U-bolts are curved with a corresponding radius whereby the latter bear evenly upon the upper surface of the clamp body. The clamp body is cast with upwardly extending fingers **19** which, when the clamp is assembled, are peened over as shown in Figs. 1 and 2 to hold the U-bolts firmly in place.

The rear of the body **10** is open with sides **21** and **22** between which is formed a tongue or guide member **23** on a transverse partition **24** which is secured to side portions **21** and **22** at a position in longitudinal alignment with cable groove **11**. The guide member **23** may be bent manually either upwardly to deflect a cable **26** being inserted in the clamp downwardly as shown in Fig. 2, or downwardly to deflect cable **26** upwardly. The rear end of the clamp is provided with a clevis **27** for attaching it to a stationary support such as **28**, shown in Fig. 2 of the drawing.

My improved clamp embodies a keeper member **29** having lateral ribs **25** and **30** with holes **31** and **32** therethrough and through which the U-bolts **14**, **16** and **17** pass, the said holes being in alignment with the holes through the clamp body **10**. The tightening nuts **33** and **34** on the U-bolts are on the lower ends thereof, as shown. As will be seen the bolt **16** passes through the keeper midway between its ends. The keeper is provided with an elongated rib portion **36** which extends upwardly between the vertical sides **37** and **38** of the groove in the clamp body. The rib **36** is provided with an upwardly bearing V-shaped cable seat **39** on the upper surface of the keeper member **29** which, when the clamp is tightened against a cable, causes a slight collapse of the outer strands of the cable and provides for increased pressure between the center strands. As shown in exaggerated scale in Fig. 4 of the drawing, the mid-portion **41** of the rib **36** is bowed slightly upwardly so as to afford a concentration of pressure in the clamp mid-way between its ends when tightened on a cable. In actual practice, with a keeper five inches long the upward bow may be in the neighborhood of 1/16 inch. This slight upward bow of the keeper clamping surface, combined with the straight groove in the clamp body, gives very high holding power, yet when the keeper is loosened it is very easy to thrust the cable through the clamp without the tendency to hang on waves in the groove.

As will be seen from a consideration of Fig. 3 of the drawing, the bolt holes **12** and **13** in the clamp body and the bolt holes **31** and **32** in the keeper body are so spaced from the cable groove that they do not intersect the groove nor come in contact with the cable. This provides for ease in inserting the cable in the clamp.

As shown in Fig. 1 of the drawing, the clamp body **10** is provided with two pulling eyes **42** and **43** on the sides to simplify positioning of tensioning tackle which, with this arrangement, permits attaching the tackle to the pulling eye of the clamp nearest the pole where a lineman is located.

From the foregoing it will be apparent that I have devised an improved clamp which is simple and sturdy of design, easy to manufacture, and which combines maximum holding strength with ease of installation and working.

While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are specifically set forth in the appended claim.

What I claim is:

In a dead end cable clamp, an upper body member having at one end portion a cable groove on the under side thereof and having downwardly extending bolt holes on opposite sides of the cable groove and laterally spaced therefrom, laterally spaced vertical side portions on the other end portion of the body member adjacent the groove, a cable guide mounted at one end between the side portions at a position in generally longitudinal alignment with the cable groove, the other end of said cable guide being free and extending toward the cable groove, said guide being, selectively, bent upwardly to be engaged by the upper surface of a cable being inserted in the cable groove thereby to direct the cable downwardly from the clamp or bent downwardly to be engaged by the lower surface of the cable being inserted thereby to direct the cable upwardly from the clamp, means at the outer end of the side portions to secure the body member to a stationary support, a keeper member mounted beneath the body member and having bolt holes therethrough along its sides aligned with the bolt holes in the body member, U-bolts straddling the body member and extending downwardly through the aligned bolt holes, an upwardly extending rib on the keeper member having a cable seat on its upper surface for engaging a cable in the cable groove, and nuts on the lower ends of the U-bolts to draw the keeper seat into engagement with the cable in the cable groove.

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