Sept. 16, 1941. S. P. BECKER 2,255,961

DEAD END ANCHOR

Filed March 23, 1940

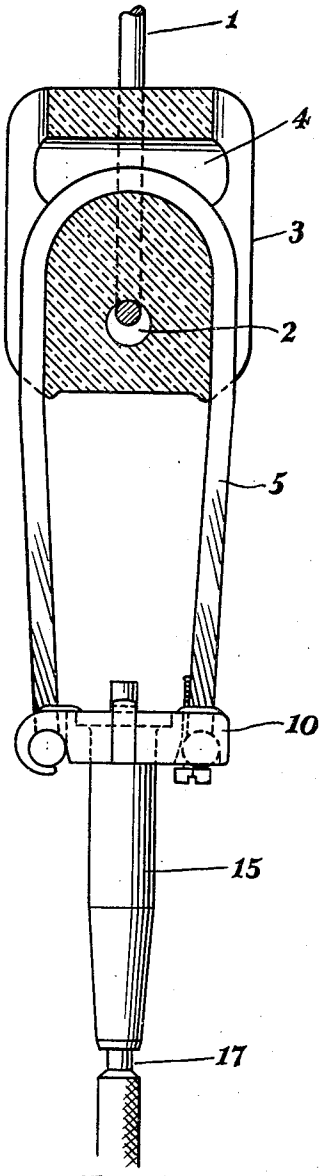


FIG. 1

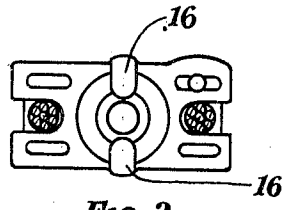


FIG. 3

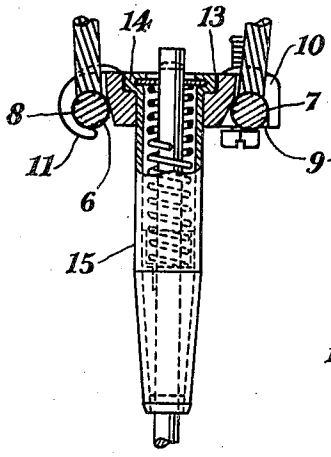


FIG. 2

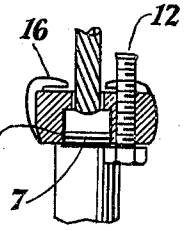


FIG. 4

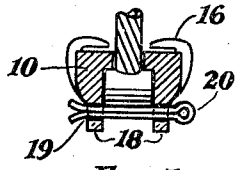


FIG. 5

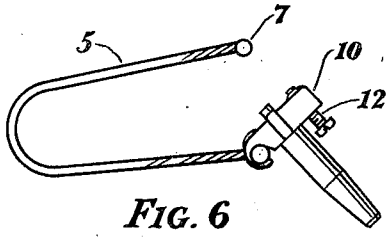


FIG. 6

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WITNESS

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UNITED STATES PATENT OFFICE

2,255,961

DEAD END ANCHOR

Stephen P. Becker, Poughkeepsie, N. Y.

Application March 23, 1940, Serial No. 325,645

8 Claims. (Cl. 287—75)

My invention is an improved device for attaching a wire, such as an electrical conductor, to some anchoring means. It is particularly directed to improvements in that which is generally known to the trade as a "flexible clevis dead end" anchor. Such dead end anchor usually consists of a short length of wire or cable, adapted to be passed around a portion of some substantial support or through a hole in an insulator attached to such a support, and having its ends attached, at least one of them detachably, to a yoke holding a wire gripping clamp at its center. The wire gripping clamp is usually some one of the numerous well known devices including a tapered tubular shell, a set of complementarily tapered jaws with serrated inner faces and a spring tending to urge the jaws toward the small end of the taper.

The present invention is directed particularly to the yoke and its connections to the short wire and to the wire gripping clamp.

All "dead end" devices previously known to me consist of several pieces which may become separated in storage bins and which must necessarily be separated and reassembled during the process of placing in service.

An object of my invention is to provide a "dead end clevis" in which all members are so permanently fastened together, when manufactured, they they cannot be accidentally or intentionally separated, yet can be easily opened to the extent needed to permit the short wire to be placed around the support or threaded through an insulator and then so permanently fastened to the yoke that it cannot become loose in service.

In the accompanying drawing which illustrates an embodiment of my invention:

Fig. 1 is a side view of one of my dead end clevices with a strain insulator shown in section.

Fig. 2 is a view, partially in section of the yoke, the wire clamp and the ends of the short wire.

Fig. 3 is a top view of the yoke and the end of the wire clamp.

Fig. 4 is a view of the end of the yoke that holds the detachable end of the short wire.

Fig. 5 is a similar view of an alternative construction.

Fig. 6 is a side view, to a smaller scale showing the short wire in open position ready for threading through an insulator.

Referring to the drawing, 1 is a wire secured to a pole or other stationary object and passing through a hole 2 in an insulator 3. Through another hole 4 in the insulator and in a manner to surround the portion thereof around the hole 2, there is passed a short wire or cable 5 having, welded or otherwise secured to its ends, larger terminals 6 and 7, which are shown as short bars but may be of other shapes such as ball or acorn shaped, that enter sockets 8 and 9 in a yoke 10. The metal at the outer side of the socket 8 is bent around, as shown at 11, to secure the terminal 6 permanently in its socket. At one side of the socket 9 there is a screw 12 which may be backed out to permit disengagement of the terminal 7 with its socket or screwed in to prevent such disengagement. As plainly shown in Figs. 2 and 4, the end of the screw 12 is, after insertion in the yoke, upset to prevent accidental removal therefrom.

Fig. 5 shows an alternative construction with ears 18 extending downward from the sides of the socket 9 and having holes 19 through them to receive a cotter pin 20 which will prevent escape of the terminal 7 from the socket 9.

As shown in Fig. 2, the yoke 10 has, at its upper side, a counterbore 13 to loosely receive an enlarged head 14 on a wire gripping clamp 15 and, attached to the yoke at the sides of the counterbore, two lugs 16, more plainly shown in Fig. 3, which are bent over the head 14 and prevent its escape from the counterbore 13. The clamp 15 is free to rotate, about its axis, in the yoke 10.

No details of the wire gripping clamp 15 are given as it is of a well known type, examples of which are shown in Patents 2,041,108, issued May 19, 1936, and 2,158,892, issued May 16, 1939, both to Robert A. Becker, Sr., and Stephen P. Becker.

With the screw 12 backed out, as shown in Fig. 6, the terminal 7 can be disengaged from its socket 9 and the wire 5 opened up, as also shown in Fig. 5, so that it can be threaded through a hole 4 in an insulator 3, then bent down and reengaged with its socket 9. The screw 12 can be screwed up until its head touches terminal 7 and prevents its disengagement.

A wire 17 may be forced into and gripped by the clamp 15 either before or after, as may be more convenient, the short wire 5 is secured to the insulator 3, or other support.

From the foregoing it may be seen that I have provided a "flexible clevis dead end clamp," which, during the process of manufacture, has all its parts so secured together that they cannot be accidentally or intentionally separated, which can be easily opened to the extent required for threading through a hole in a strain

insulator or passing around another support, and which, after so passing, can be secured in a manner that prevents any danger of accidental loosening or disengagement.

Where in the claims the words "short wire" are used, they are intended to include either a short solid wire, a stranded cable, or other suitable tension member.

Where the word "hingedly" is herein used, it is intended to mean free rotation of the member referred to, through a considerable angle, about an axis at right angles to its length but not to necessarily exclude rotation about other axes.

The word "unitary," as used in the claims, is intended to specify that all parts are so secured together as to prevent detachment of any one from the others without non-elastic distortion. The words "permanently secured" or "non-detachably secured" are also intended to specify that the parts are non-separable without non-elastic distortion.

Having described my invention and the manner in which it is used, that which I claim as new and desire to secure by Letters Patent is:

1. A clamp for attaching a wire to an anchor comprising a short wire with two terminals, a yoke having, at one end, a socket permanently attached to one terminal, at the other end, a socket attachable to the other terminal and, at the center, a hole and counterbore loosely enclosing a wire gripping clamp having a head permanently secured in the counterbore by lugs on the yoke bent over its head.

2. In a unitary dead end clamp the combination of a wire having an enlarged terminal on each end and a wire gripping clamp with a yoke having, at its center, means for loosely permanently holding said wire gripping clamp, means at one end to non-detachably hold one enlarged terminal and means, at the other end, to detachably hold the other enlarged terminal.

3. In a clamp as described in claim 2 means to prevent accidental disengagement of the detachably held terminal.

4. A unitary flexible clevis dead end including a yoke, a wire gripping clamp permanently swivelly secured to said yoke, a short wire having two enlarged terminals, means to permanently secure one terminal to one end of the yoke with a hinge joint having its axis for movement at right angles to the axis of the adjacent portion of the short wire and means to detachably secure the other terminal to the other end of the yoke with a hinge joint having its axis for movement at right angles to the portion of the short wire adjacent thereto.

5. In a clevis dead end as described in claim 4 means to secure said detachably secured terminal against accidental detachment.

6. A dead end wire anchoring device including a wire gripping clamp, a yoke and a short wire all permanently secured together in one unit by means including a loose fitting non-detachable swivelled connection between the wire gripping clamp and the yoke, a non-detachable hinged connection between one end of the short wire and the yoke, and a detachable hinged connection between the other end of the wire and the yoke.

7. A unitary dead end anchor comprising a yoke, a tension member having one end non-detachably, hingedly secured to one end thereof, means to detachably secure the other end of said member to the yoke, a wire gripping clamp loosely fitting in the hole and having a head larger than the hole, and lugs on the yoke bent over the head to prevent escape of the clamp from the yoke.

8. A unitary flexible dead end anchor including a yoke, a tension member having one end non-detachably hingedly secured to one end thereof, means to detachably hingedly secure the other end of said member to the other end of the yoke and a wire gripping clamp non-detachably swivelly secured to the center of the yoke.

STEPHEN P. BECKER.