

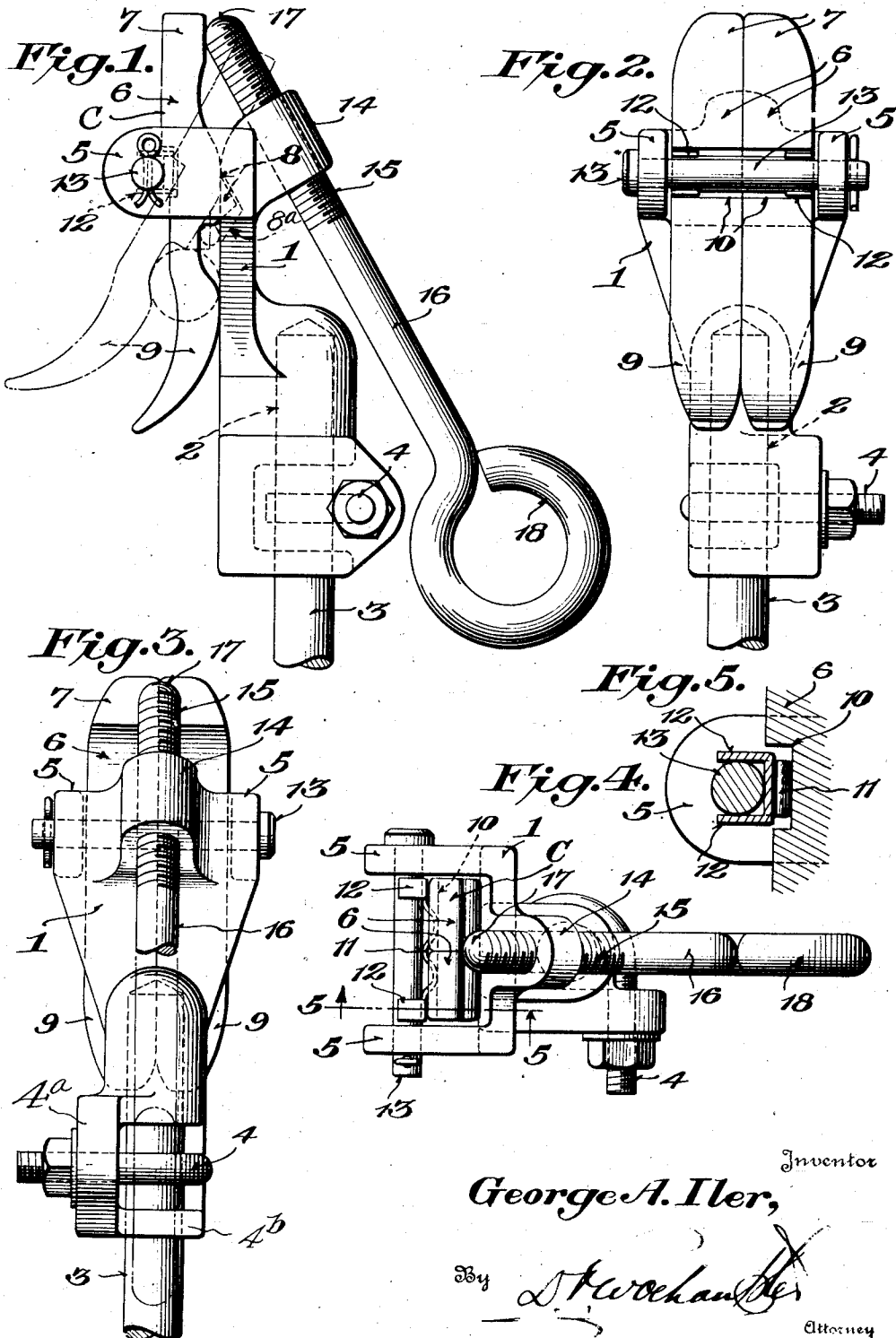
May 8, 1928. .

1,669,337

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LIVE LINE CLAMP

Filed Sept. 30, 1925



Patented May 8, 1928.

1,669,337

UNITED STATES PATENT OFFICE.

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LIVE-LINE CLAMP.

Application filed September 30, 1925. Serial No. 59,683.

This invention relates to clamps for live-line electric wires.

A primary object is to provide a novel device possessing features of construction which make it possible to produce a clamp that functions in a simple, practical and reliable manner, and which may be made at a minimum cost.

In addition to the foregoing general object the invention contemplates a line-wire clamp having wire gripping jaws arranged to obtain maximum clamping leverage, and the means for actuating the jaws so disposed and arranged that an operator standing on the ground below the line can more readily manipulate the same than in devices heretofore used for this purpose.

A further object of the invention is to provide a clamp without coil springs or other readily fusible parts which is capable of handling all wire sizes, and also permits of obtaining a positive grip on wires of different diameter to not only secure a tight engagement but also effect a superior electrical contact to prevent overheating.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawings, in which:—

Figure 1 is a side elevation of the improved clamp.

Figure 2 is an end elevation.

Figure 3 is an end elevation of the opposite end of the clamp from that shown in Fig. 2.

Figure 4 is a top plan view.

Figure 5 is a detail vertical sectional view taken on the line 5—5 of Figure 4.

Similar reference characters designate corresponding parts throughout the several figures of the drawings.

As will be observed from the drawings the present clamp includes in its organization a body 1 provided with a socket 2 for receiving the end of the flexible side line conductor 3 which may be securely held in the socket by means of the clamping eye 4 operating in the yoke portion 4^a which includes the receiving eye 4^b. The upper end of the body 1 is provided with the offset arms

5 which receive therebetween the wire clamping means designated generally as C. This clamping means preferably consists of a pair of jaw elements 6—6 but a single jaw equal to the width of the double jaw may be used if desired. These jaws are preferably formed with the head portions 7; intermediate shoulders 8 which fit into the depressed seat 8^a of the body; and the wire gripping fingers 9 which have compound curved surfaces that are designed to clamp wires of various diameter thereto as will be clearly apparent from Figure 1.

For the purpose of holding the jaws in place, whereby the same may effectively clamp the wire to the body the rear faces of the jaws opposite the fulcrum point 8 are provided with the recesses 10 for receiving a corrugated leaf spring 11 both ends of which are provided with offset ears as at 12—12 thereby to straddle the fulcrum pin 13 which is fitted into the members 5 as shown in Figures 1 and 4 and held in position by a cotter pin or its equivalent.

As will be observed from Figures 1 and 4, in particular, the upper end of the body 1 is provided with an obliquely offset ear or lug 14 which is internally threaded to receive the threaded end 15 of the jaw manipulating member 16. The upper end 17 of this member bears against the heads 7 of the clamping jaws while the opposite end 18 is preferably of eye formation thereby to permit of conveniently gripping the member to manipulate the same through the threaded lug 14.

It will be noted that the lug 14 is inclined at an oblique angle to the body 1 which not only produces a wedging bearing effect between the manipulating screw and the jaws, but also enables the operator standing on the ground to hold the insulated stick with which he manipulates the eye 18 of the screw from a slight angle and readily twist the screw from a position standing on the ground. Heretofore, in wire clamps of this character it has been the practice to use a manipulating screw positioned at right angles to the jaws which necessitates the operator holding the tool in an awkward position, and furthermore does not permit of exerting a maximum pressure on the jaws. In the present construction I employ a jaw which operates as a lever of the first class and not as a lever of the third class wherein the power is applied between the fulcrum and the work.

By providing a jaw which is a lever of the first class and a relatively self-adjusting fulcrum great effectiveness is obtained.

Without further description it is thought
 5 that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will of course be understood that changes in the form, proportion and minor details of construction
 10 may be resorted to, without departing from the spirit of the invention or scope of the appended claims.

I claim:—

1. A live-wire line-clamp comprising a
 15 body having a conductor receiving socket at one end thereof, laterally extending spaced arms formed at the opposite end of said body, said body being provided with a depressed seat adjacent said arms, a clamping
 20 jaw pivoted between said arms and cooperating with said depressed seat, a threaded lug on said body adjacent said arms extending obliquely from and on the opposite side
 25 of said body from said arms, and operating means extending through said lug for holding said clamping jaw in the desired position.

2. A live-wire line-clamp comprising a
 30 body having a conductor receiving socket at one end thereof and laterally extending spaced arms at its opposite end, said body being provided with a depressed seat adjacent said arms, a clamping jaw pivoted between said arms and cooperating with said
 35 seat, resilient tensioning means for said jaw, a threaded lug extending obliquely from said body in an opposite direction from said arms, and a threaded operating member operable therethrough for engagement with

said clamping jaw for holding the same in
 40 the desired adjusted position.

3. A live-wire line-clamp comprising a
 body having a conductor receiving socket at one end thereof and laterally extending
 45 spaced arms at its opposite end, said body being provided with a depressed seat adjacent said arms, a clamping jaw pivoted between said arms and provided with a head portion and a gripping finger at its opposite
 50 ends and an intermediate clamping shoulder for cooperating with said seat, resilient tensioning means for said jaw, a threaded lug extending obliquely from said body in an opposite direction from said arms, a
 55 threaded operating member adjustable therethrough for engagement with the clamping jaw to hold the same in the desired adjusted position, and a gripping portion formed at the outer end of said operating member.

4. A live-wire clamp adapted for use on
 60 elevated wires comprising a body having a depressed jaw receiving seat in one face thereof, laterally extending spaced arms projecting from opposite sides of the body, a pivot pin supported in the arms and spaced
 65 from the face having said seat, a clamping jaw having a portion adapted to fit in said seat, a leaf spring between the jaw and the pivot pin, and a screw member carried by the body at an oblique angle to the said face
 70 having the seat and having one end slidably engaging with the jaw at the side of the pin opposite the clamping portion thereof and having the other end disposed for convenient manipulation from the ground.

In testimony whereof I hereunto affix my
 75 signature.

GEORGE ARTHUR ILER.