Feb. 14, 1933. C. C. COON 1,897,464

WIRE TAPPING TOOL

Filed April 10, 1931

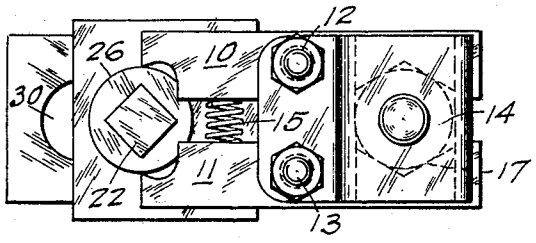

Fig. 1.

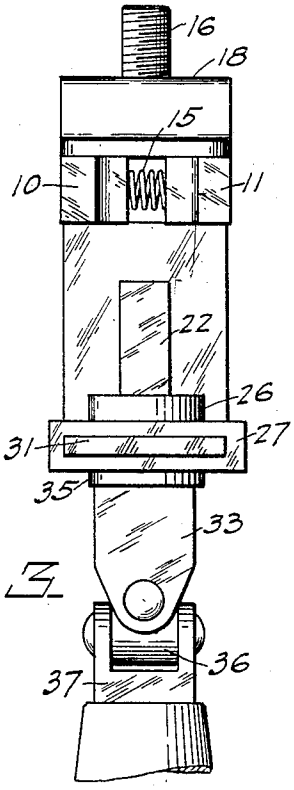

Fig. 3.

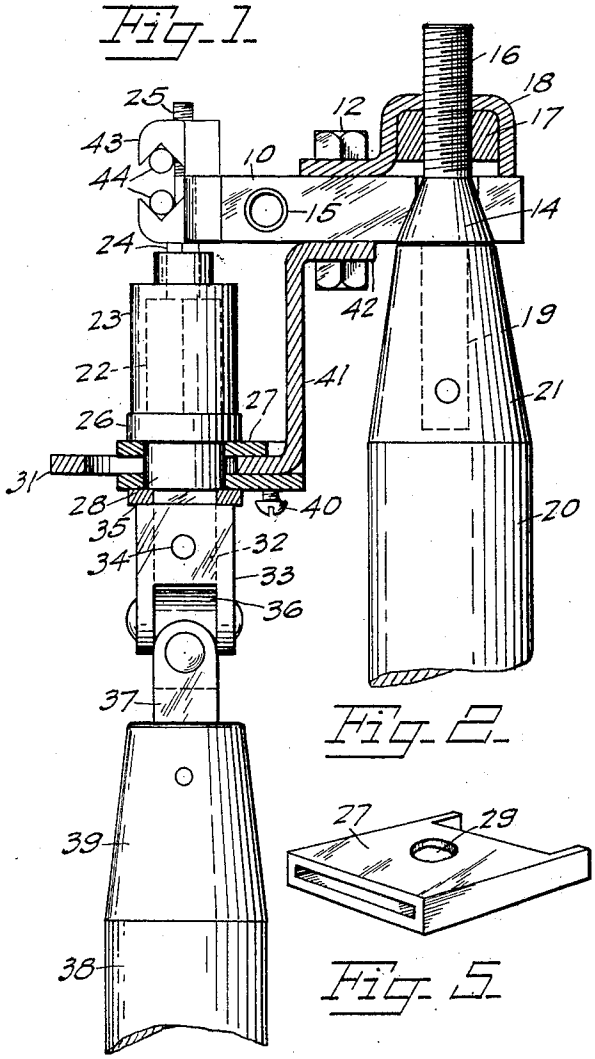

Fig. 2.

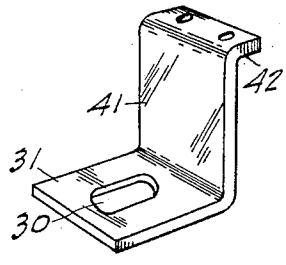

Fig. 4.

Fig. 5.

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Patented Feb. 14, 1933 1,897,464

UNITED STATES PATENT OFFICE

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WIRE TAPPING TOOL

Application filed April 10, 1931. Serial No. 529,133.

This invention is for a wire splicing device, and has special reference to a device for tapping high tension power lines.

The main object of the invention is to provide means by which a high tension power line may be tapped with perfect safety to the lineman.

Another object of the invention is to provide a device as outlined which is provided with means for holding the usual wire clamps of different sizes and additional means whereby the clamp screw may be tightened, and operable from a remote point, so as to obviate the possibility of shock to the operator.

Other objects and advantages of the invention will become apparent as the following description is read on the drawing forming a part of this specification.

The invention consists primarily of a vise for holding a wire clamp and a wrench supported in adjusted relation to the vise jaws, a supporting and operating handle for the vise and another for the wrench.

The invention is adequately illustrated in the accompanying drawing in which similar reference characters are used to indicate similar parts throughout the several views, and in which:

Fig. 1 is a top plan view of the invention;

Fig. 2 is a sectional side elevation showing a wire clamp and a wrench socket in position;

Fig. 3 is a front elevation of the invention;

Fig. 4 is a perspective view of the wrench supporting bracket; and

Fig. 5 is a perspective view of the wrench supporting slide.

The vise consists of a pair of jaws 10 and 11 which are pivoted on the bolts 12 and 13 and have oppositely formed conical faces adapted to cooperate with the conical member 14. A compression spring 15 urges separation of the jaws, which are adjusted by cooperation of the threaded projection 16 of the conical member 14 with a nut 17 which is secured in a bracket 18 which also forms a spacer member for the jaws and supporting member for the wrench section of the device. The conical member 14 has an integral tang 19 which is secured in the handle 20, the end of which is provided with a ferrule 21, the handle being made of any desired length and formed of an insulating material such as kiln dried wood, painted with waterproof insulating paint or enamel, shellac, or other medium or may be formed of "bakelite" or similar material.

The wrench consists of a rotatable member provided with a square shank 22 adapted to cooperate with interchangeable sockets 23 to suit the head 24 of clamp screw 25. An integral collar 26 rests on the slide 27 and supports the wrench. An integral shank 28 is rotatable in the aperture 29 in slide 27 and slidable in the slot 30 formed in the bracket 31. An integral tang 32 has a universal joint member 33 fixed thereto by means of a rivet 34, and a washer 35 cooperates with the underside of slide 27. The universal joint consists of the usual construction of knuckle 36 hingedly connected at right angles to two spanning members 33 and 37, member 37 being fixedly secured in a handle 38 with ferrule 39 secured on the end thereof, the handle 38 being substantially equal in length and of similar material to handle 20.

The slide 27 is adapted to fit over the bracket 31 and is provided with a set screw 40 by which the slide may be secured in adjusted position with the socket 23 in operative relation to the clamp screw 25. Bracket 31 has an integral upwardly extending leg 41, the end of which is flanged back as at 42, and which is secured by means of studs 12 and 13, which studs are formed with a shoulder at each end to form a spacer for jaws 10 and 11 between bracket 18 and flange 42 so the jaws may work freely while brackets 18 and 42 are securely fixed together.

The device is used as follows: A wire clamp 43 is placed between the jaws 10 and 11 and clamped by turning handle 20, which draws the threaded extension 16 up into nut 17, the conical portion 14 spreading the rear end of jaws 10 and 11 which are fulcrumed at the studs 12 and 13 and consequently retract the jaws to clamp the wire clamp.

A socket to fit the head of screw 25 is placed over the shank 22 and member 27 is

moved to a position in registry with the screw head and set screw 40 tightened.

The clamp 43 is then placed over the wires to be spliced or tapped, indicated at 44 and handle 38 turned or rotated, screwing the bolt 25 through the upper clamp member and drawing the jaws thereof together, securely clamping the wires 44 together. Handle 20 is then rotated to release the jaws 10 and 11 from the clamp 43 permitting removal of the tool.

Having described an operable method of constructing and using the device, it will be understood that variations in construction and arrangement of parts which are consistent with the appended claims may be resorted to without detracting from the spirit or scope of the invention or sacrificing any of the advantages thereof.

I claim:—

1. A wire tapping tool, comprising, in combination, a pair of handles of insulating material, a vise actuated by one of said handles and a wrench actuated by the other of said handles transversely to said vise, said wrench being floatably supported by a bracket fixed to said vise.

2. A wire tapping tool, in combination, a vise, a supporting and operating handle of insulating material for said vise, a bracket depending from and fixed to said vise, a wrench floatably supported by said bracket in adjustable relation transversely to said vise, and an operating handle of insulating material for said wrench.

3. In combination, releasable clamping means for a wire clamp, a handle of insulating material for supporting and actuating said clamping means, a bracket secured to said clamping means, a wrench socket shank adjustably supported transversely of said bracket in operative position relative to said clamping means, and a handle of insulating material for actuating said wrench.

4. In combination, releasable clamping means for a wire clamp, a handle of insulating material for supporting and actuating said clamping means, a bracket secured to said clamping means, a wrench socket shank floatably supported transversely by said bracket in operative position relative to said clamping means, a handle formed of insulating material for said wrench.

5. In combination, a supporting handle of insulating material, a vise actuated by rotation of said supporting handle and supported thereby, a wrench floatably supported transversely in cooperative relation to said vise, a universal joint for said wrench, and a handle of insulating material for said wrench.

6. A wire clamp applying tool comprising a pair of parallel independently rotatable handles, a vise transversely disposed and operable by one of said handles and adapted to removably secure a clamp for juxtaposedly clamping two parallel wires and a wrench socket axially disposed relative to the other handle and operated thereby and floatably mounted relative to the jaws of said vise.

7. A wire clamp applying tool adapted to position a clamp over two parallel wires and tighten a screw transversely thereof comprising a pair of handles, clamping means for said clamp actuated by rotation of one of said handles and a wrench actuated by the other of said handles and floatably supported in cooperative relation to the screw.

8. A wire clamp applying tool comprising a pair of vise jaws intermediately pivoted and resiliently urged apart, a handle transversely disposed and provided with means for actuating said jaws, a bracket secured to said jaws and depending therefrom, a wrench floatably supported by said bracket in parallel relation to said handle and an operating handle for said wrench.

9. A wire clamp applying tool comprising a pair of jaws intermediately pivoted and resiliently urged apart at one end, the other end being provided with semi-conical recesses, a bracket secured to said jaws and depending therefrom and having a portion parallel to said jaws, a wrench transversely related to said jaws and slidable in parallel relation to said jaws and supported by said bracket, a handle for operating said wrench and another handle having a conical portion adapted to cooperate with the semi-conical recesses in said jaws, said conical portion terminating in a threaded member, and a nut supported above said jaws adapted to cooperate with said threaded portion.

In testimony whereof I affix my signature.

CHESTER C. COON.