

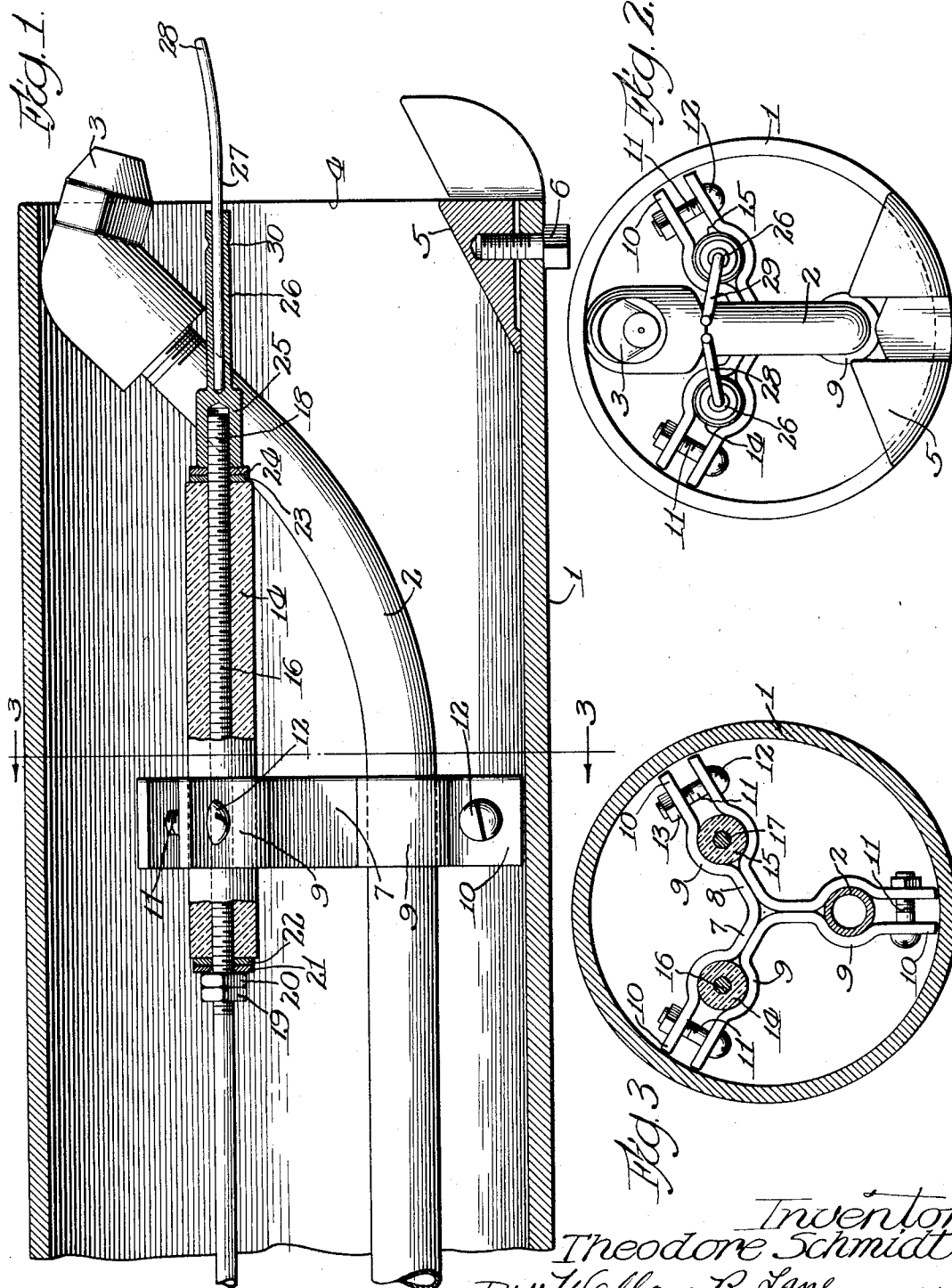
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ELECTRODE DEVICE

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ELECTRODE DEVICE

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The present invention relates to electrode devices.

Among the objects of the invention is to provide a novel electrode device. In such devices when used with a curved or bent terminal, it is usual to curve or bend the end portion of the conductor to which the terminal is secured. This makes it difficult or impossible to pass a tubular insulator over the conductor to a locus where the insulator may be held in a suitable support. Likewise, one cannot use securing means, such as nuts, on the conductor for abutting and binding against the ends of the insulator for maintaining proper relation thereof.

The present invention comprehends eliminating such disadvantages, as also others, by providing a terminal holder or carrying member adapted to be connected to the straight end of the conductor and also act or serve as an abutting or binding element or member for an end of the insulator. In this case a more properly fitting insulator may be used with the attendant better alinement of the conductor, and more stable locating or positioning of the electrode and less liability of the terminal changing its relation with its companion terminal.

Another object of the invention is to provide a novel support for a pair of electrodes and capable of connection to a duct, such as an oil pipe leading to a nozzle with which the electrode terminals may be associated. In a specific illustrative embodiment of the invention, such support comprises a trinity of like parts, interchangeably or universally connectible to make up the assembly having counter-part arm or limb portions opposed to each other and having opposed off-set curved parts adapted to enclose the electrode insulators and the duct. Binding elements, such as bolts, may be used to press or bind the opposed counter-part limbs of each arm, against the enclosed insulator or duct.

Other objects, advantages, capabilities and features are comprehended by the invention as will later appear and as are inherently possessed thereby.

Referring to the drawing:

Fig. 1 is a longitudinal sectional view with parts in elevation of an oil burner using the invention.

Fig. 2 is an end view of the same; and

Fig. 3 is a transverse sectional view taken in a plane represented by line 3—3 in Fig. 1 of the drawing.

Referring now more in detail to the drawing, the embodiment chosen to illustrate the inven-

tion is shown in connection with an oil burner comprising an air duct or passage 1 in which is disposed an oil duct 2 leading to a nozzle 3 at the outlet 4 of the air duct 1. In the lower part of the air duct outlet is disposed a deflector 5 secured in place by a screw 6, as shown.

Within the air duct 1 is located a supporting device composed of a trinity of like or identical pieces. Each piece comprises limb portions 7 and 8 forming an angle of 120°. Each limb portion has a curved off-set 9 and an extension 10 provided with an aperture for the passage of a bolt 11 having a head 12 and a nut 13. These pieces are of the same form or shape and capable of connection together at the angle portions and secured together, as by spot welding or the like. This forms a rigid structure and in the holes provided by the juxtaposed or opposed counter-part curved portions 9, are passed or located the insulators of the electrodes and the duct 2, as clearly shown. The ends of the extensions 10 contact the inner surface of the duct 1 and hence the device is self centering and maintains the parts in proper and fixed relation.

The duct 2 passes through one of the three holes provided by the off-sets 9. In the other two holes provided between the opposed off-sets of the other two arms of the device, are located tubular and elongated insulators 14 and 15, which are preferably of porcelain, but other insulating material may be used.

Through these insulators and fairly closely fitting therein are conductors 16 and 17, with a short portion 18 of each conductor projecting or extending beyond the outer end of each insulator. Each conductor may be threaded to a point beyond the rear end of the insulator and binding nuts 19 and 20 there located with interposed washers 21 and 22 for abutting and binding against the rear end of the insulator. The nut 19 will act as a lock nut.

At the other end of the insulator are located washers 23 and 24 to abut or bind against the forward end of the insulator. To the extension 18 is threaded a socket portion 25 of a terminal carrier 26. In the latter is carried a terminal 27 having a bent end 28 directed toward its companion 29 as shown in Fig. 2. The electrodes are secured in the carrier by swaging the latter as shown by groove 30 in Fig. 1.

In assembling, the nuts 19 and 20 with washers 21 and 22 are passed over the threaded portion of the conductors 16 and 17, and then the insulators 14 and 15. Washers 23 and 24 are then located on the extension 18 and the socket por-

tion 25 threaded thereon until the insulator is tightly clamped. To bring the terminal ends 28 and 29 in proper relation, the nuts 19 and 20 may be manipulated to permit proper angular adjustment of the carrier 26, and then nuts 19 and 20 tightened.

The electrodes are passed through the holes of offsets 9 so that the insulators fit therein and duct 2 is also likewise passed into and fitted in one of such holes, after which the bolts 11 are operated to press the extensions 10 mutually toward each other and hence cause the off-sets 9 to clamp the insulators 14 and 15 and duct 2. The whole assembly can be inserted in the duct 1.

While I have herein described and upon the drawings shown an illustrative embodiment of the invention, it is to be understood that the latter is not limited thereto, but may comprehend other structures, arrangement of parts, details, and features without departing from the spirit thereof.

Having thus disclosed the invention,
I claim:

1. An electrode device, a support therefor, a conductor, an adjustable insulator on said conductor and carried by the support, adjustable means on said conductor for abutting the opposite ends of said insulator, an extension on one of said adjustable means, and a terminal carried by said extension.

2. An electrode device comprising a support, an insulator in said support, a conductor adjustably passing through said insulator, abutting members for said insulator and adjustably secured to said conductor, one of said members carrying a terminal.

3. An electrode device comprising a support, an insulator adjustably positioned in said support, a conductor adjustably passing through said insulator, means secured to said conductor and abutting an end of said insulator, a terminal carrying member secured to the end of the conductor and abutting the other end of said insulator, said means and said member being adjustable on said conductor.

4. An electrode device comprising a support, an elongated insulator adjustably positioned in said support, a conductor passing through said insulator, adjustable means on said conductor for abutting an end of said insulator, said conductor extending beyond the other end of said insulator, an adjustable terminal carrying member secured to said end of said conductor and serving as an abutting means for said other end of said insulator.

5. An electrode device comprising a conductor, an insulator slidable on said conductor, adjustable means at each end of the insulator and on the conductor for adjustably securing the insulator in place on the conductor, a terminal member carried by one of said means, and means for supporting the insulator.

6. An electrode device comprising a conductor, an insulator slidable on said conductor, abutting means for said insulator and adjustably engaging said conductor, one of said members having a socket, a terminal member in said socket, and means for supporting the insulator.

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