

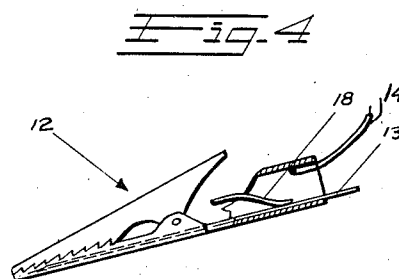
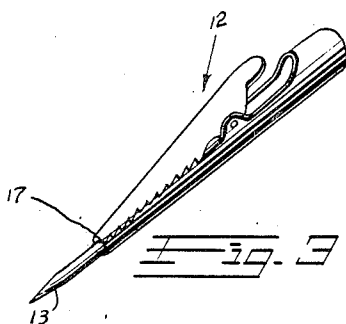
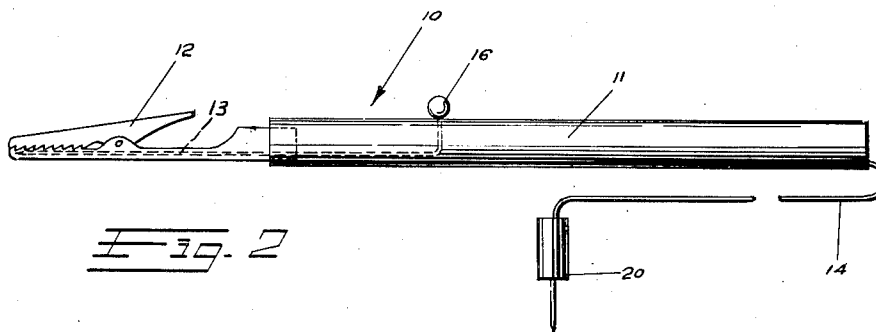
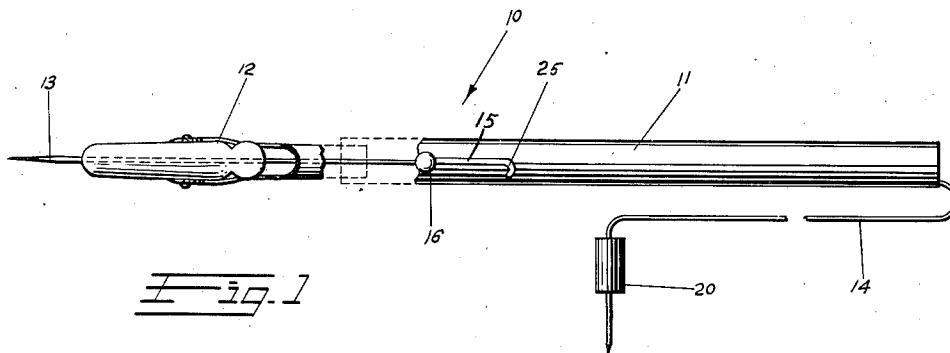
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2,477,642

CLAMP TYPE ELECTRICAL TERMINAL

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CLAMP TYPE ELECTRICAL TERMINAL

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4 Claims. (Cl. 173-273)

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This invention relates in general to an electric terminal and in particular to a plug and clamp type electric terminal.

It is frequently desirable to have a plug-type electric terminal which is capable of making contact in comparatively inaccessible places and which can be releasably clamped in position. The common clamp type of electric terminal has the drawback that it often is incapable of reaching within narrow openings, and on the other hand, terminals adapted to reach within narrow openings generally have the disadvantage that they cannot be securely positioned to make firm electric contact.

Accordingly it is an object of this invention to provide an electric terminal adapted to make a firm electric contact with electric connections located within small openings.

Further objects and advantages of this invention, as well as its construction, arrangement and operation, will be apparent from the following description and claims in connection with the accompanying drawings, in which

Figure 1 is an elevation, partly broken away, illustrating an electric terminal embodying the present invention,

Figure 2 is an elevation viewed upwardly in Figure 1, with parts occupying different relative positions of operation,

Figure 3 is a detailed perspective, and

Figure 4, is an elevation of the detail in Figure 3, partly in section.

The electrical terminal of the disclosed embodiment, generally designated 10, comprises an insulating tube or handle 11, having an alligator-type clamp 12 mounted at one of its ends, and having a point of pin 13 adapted to be alternatively projected out of the clamp or withdrawn into the clamp.

The handle 11 is constructed of any suitable dielectric material and is hollow to permit passage of an electric wire 14 or similar member.

Near the end proximate to the alligator clamp 12 there is a slot 15 in the wall of the handle 11, the slot 15 being extended lengthwise of the tube 11 and including a hooked end 25 as shown forming a bayonet slot. The pin 13 is disposed lengthwise in the tube 11, and is bent to project through slot 15, where it terminates in an enlarged head 16 positioned exteriorly of tube 11 for manual operation to actuate the head 16 along the slot and outwardly towards the clamp 12 or to retract the head 16 and lock it in the hooked end 25 of slot 15. The pin 13 extends from the end of head 16 towards and into the

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alligator clamp 12 and is adapted to be projected through the nose of the clamp through a hole 17 therein when the head 16 is actuated lengthwise of slot 15 in the direction away from the hook 25. See Figures 1 and 3. The pin 13 is just long enough so that its point is retained within clamp 12 when the head 16 of the pin is retracted in slot 15 and locked in the hook 25. See Figures 2 and 4. In its projected position, as illustrated in Figures 1 and 3, the point or tip of the pin 13 is adapted to be inserted into a narrow opening to make electric contact there-within.

Opening 17 in the nose of the clamp 12 is somewhat smaller in diameter than the body of pin 13, and accordingly, when the pin 13 is projected to its position shown in Figure 3, the clamp serves to secure the pin in its extended position. The spring 18, Figure 4, is positioned inside the clamp 12, and resiliently presses the pin 13 in electrical contacting engagement with the metal of the clamp. The spring 18 thus operates to hold the pin 13 in position of adjustment lengthwise of the slot 15, and the clamp 12 is free for making separate electrical contact by being clamped to an exposed body that is near the body to which the pin 13 is electrically connected. Thus, for example, the clamp 12 may make firm electric contact with an external surface of an opposing electric connection while the pin 13 projects to make electric contact with an internal portion of the same opposing electric connection.

An electrical lead 14, in the form of a suitable wire for example, is electrically connected to the clamp 12 at its end in any suitable manner, and extends away from the clamp through the tube 11 and out of the opposite end thereof. The free end of the lead 14 is preferably provided with any suitable terminal, such as the jack plug 20. By this means there is provided a probing electric contact 10 which is adapted and constructed to make firm contact with inaccessible electric connections and to carry this electric contact to a conventional type electric terminal. The new electric contact is easily connected and disconnected and because of the adjustable nature of its point is adapted to safe use and operation.

It is to be understood that various modifications and changes may be made in this invention without departing from the spirit and scope thereof as set forth in the appended claims.

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental

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purposes without the payment of any royalties thereon or therefor.

What is claimed is:

1. An electric terminal comprising a tubular insulating body having a clamp mounted on one end thereof, the clamp comprising jaws, a slot in the body near the end on which the clamp is mounted, a pin-like member slidably passing through said slot and terminating in an enlarged head against the external surfaces surrounding said slot, said pin-like member being positioned to slide to project the point of said pin to extend from between the jaws of said clamp to project from the end thereof, and to be withdrawn within said clamp, and an electric lead connected to said clamp and said pin-like member.

2. A device of the character described consisting of a two-jawed spring clamping means, a prod or pick, and means slidably mounting the prod or pick on one of the jaws of the clamping means so that the prod or pick is adapted to be manually extended well beyond the end of the jaws on which it is mounted, or retracted to be housed within said jaws, and means for mechanically and electrically connecting one of said jaws with a conductor.

3. The invention according to claim 2, wherein the jaws, under pressure of the spring, engage

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the prod or pick to hold the same frictionally in any extended position.

4. A combination clip and pick comprising a pair of pivoted jaws, at least one of which is hollow, and a spring urging said jaws together at one end; means mechanically and electrically connecting one of said jaws with a conductor; a prod or pick; means slidably mounting the prod or pick on the hollow jaw; and means facilitating manual movement of the prod or pick from a retracted position wherein it is enclosed wholly within the hollow jaw to an extended position wherein it projects outwardly beyond the extremity of and substantially aligned with the hollow jaw.

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