Dec. 19, 1950 E. D. McELHANEY ET AL 2,534,786

WELDER'S INSPECTION LIGHT

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Fig. 1.

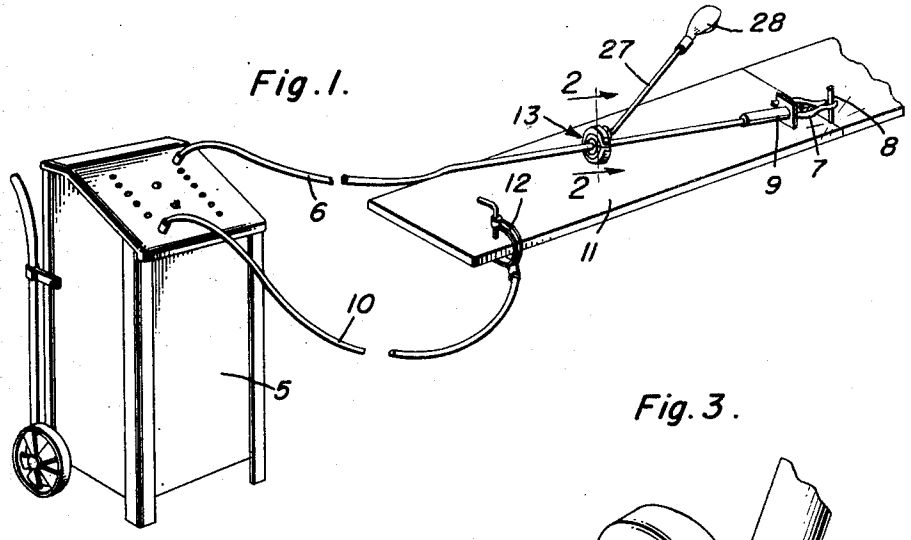


Fig. 3.

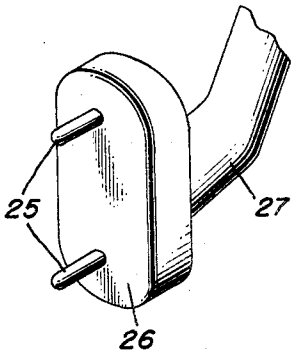
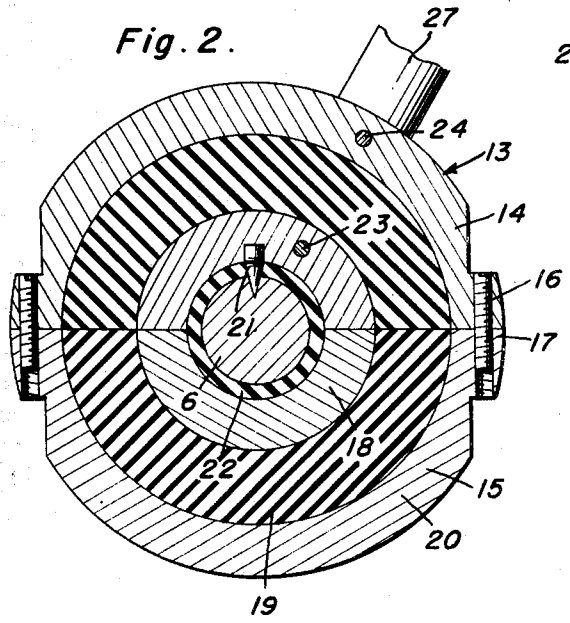


Fig. 2.



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WELDER'S INSPECTION LIGHT

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4 Claims. (Cl. 173—340)

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The present invention relates to new and useful improvements in inspection lights and more particularly to means for connecting an electric lamp to a cable such as used by welders or other electrical workers.

An important object of the invention is to provide a connector constructed for clamping to an electric cable and embodying means for plugging a light to the connector.

A further object of the invention is to provide a connector which may be easily and quickly clamped in position to an electric cable at any desired point without injuring or destroying the effectiveness of the insulation sheathing of the cable.

A still further object is to provide a novel inspection lamp connector and plug-in lamp support for attaching to the connector whereby the lamp may be easily and quickly disconnected without removing the connector from the cable.

A still further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view showing the connector and plug-in lamp support connected to a welder's cable;

Figure 2 is an enlarged sectional view of the connector taken substantially on the line 2—2 of Figure 1; and

Figure 3 is an enlarged fragmentary perspective view of the plug at the inner end of the lamp support.

Referring now to the drawing in detail, wherein, for the purpose of illustration, we have disclosed a preferred embodiment of the invention, the numeral 5 designates a portable electric welding machine having a welding cable 6 by means of which current is supplied to a holder 7 for a welding electrode 8, the holder 7 being provided with a handle 9. The welding machine 5 is also provided with a ground cable 10 attached to the work 11 by means of a clamp 12.

The lamp connector, forming the subject matter of the present invention, is designated generally at 13 and is constructed of a pair of semicircular sections 14 and 15 secured to each other

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in closed or clamping position by means of screws 16 threaded in bosses 17 at the meeting edges of the sections.

The connector 13 is constructed of an inner conductive split ring 18, an intermediate insulation split ring 19 and an outer conductor split ring 20 formed by the clamping sections 14, 15, the rings 18, 19 and 20 being assembled in coplanar relation to each other.

A prong 21 is embedded or otherwise fixed to one part of inner ring 18 to project inwardly thereof for penetrating through the insulation sheathing or cover 22 of the cable 6 to provide an electrical connection therewith when the sections 14 and 15 of the connector 13 are clamped to the cable.

One side of inner ring 18 is formed with an opening 23 and a similar opening 24 is formed in the section 14 of the outer ring 20 for receiving the conductor prongs 25 of a plug 26 carried at the inner end of a lamp supporting rod or tube 27 on the outer end of which a lamp 28 is mounted.

In the operation of the device, the ring sections 14 and 15 of connector 13 are clamped in position on cable 6 in a desired position with respect to electrode holder 7 and with the outer ring 20 of the connector resting on the work 11. Plug 26 for lamp 28 is then inserted in the openings 23 and 24 to electrically connect lamp 28 with cable 6, the lamp being grounded through outer ring 20 and the work 11.

The lamp 28 will thus provide a low voltage inspection lamp to illuminate the weld and no extension cord is necessary.

In view of the foregoing description taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A circuit connector for cables comprising a clamp adapted for embracing a cable and including inner and outer concentric conductor rings and an intermediate insulation ring, a prong carried by the inner ring contacting the cable

upon clamping engagement of the clamp therewith, said outer ring constituting a ground, and recesses in the inner and outer rings for an electric plug.

2. A circuit connector for cables comprising a clamp adapted for embracing a cable and including inner and outer concentric conductor rings and an intermediate insulation ring, a prong carried by the inner ring contacting the cable upon clamping engagement of the clamp therewith, said outer ring constituting a ground, and electric socket means in one side of the inner and outer rings.

3. A circuit connector for cables comprising a split clamping ring composed of inner and outer concentric conductor rings and an intermediate insulation ring, and a prong carried by the inner ring for contacting an electric cable when embraced by the clamping ring, said inner and outer conductor rings having sockets in one side for receiving the prongs of an electric plug.

4. A circuit connector comprising inner and outer concentrically spaced apart split conductor rings adapted for embracing an electric cable, insulation means spacing said rings apart, and a contact carried by the inner ring for electrical connection with the cable, said inner and outer rings having recesses providing an electric socket.

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