Means for Protecting and Insulating Electric Rod Holders

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1 Claim. (Cl. 219—138)

This invention relates to improvements in welding electrode holders and has for the primary object the provision of means for protecting and insulating the upper tong handles and thus prevent shorting to the metal being welded which often causes injury to the welder. The operators of conventional type of electrode holders have a tendency to hang their stingers by the upper tong handle. The present invention would eliminate a certain insulator and the danger entailed when removing and replacing the conventional spring and cups after the new fiber insulator is in place.

A further object of the present invention is the provision of a new and improved insulation covering on the upper tong handle of electrode holders whereby the grounding and shorting of the stinger handle would be positively eliminated. A still further object of the present invention is the provision of an electrode stinger insulated holder handle employed in welding, which handle is durable, simple in construction, economical to manufacture, safe and efficient in operation and highly serviceable in use. Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawing forming a part of the specification, wherein for the purpose of illustration like numerals designate like parts throughout the same, Fig. 1 is a side elevational view of a conventional welding electrode holder and the insulator mounted on the upper handle thereof, which insulator is shown as being formed in two separate pieces, Fig. 1 is a front elevational fragmentary view of the tong handle looking in direction of the arrows 11 in Fig. 1, Fig. 1 is a vertical sectional view taken on 11—11 of Fig. 1 looking in direction of the arrows, Fig. 2 is a side elevational view of an electrode holder showing a specially formed insulation cover on the top handle thereof, Fig. 2 is a front and elevational view of the illustration shown in Fig. 2, Fig. 2 is a vertical sectional view taken on line 2—2 of Fig. 2, looking in direction of the arrows, Fig. 3 is a side elevational view of an electrode holder with a modified form of insulator thereon, Fig. 3 is a front elevational view of the illustration shown in Fig. 3, Fig. 3 is a vertical sectional view taken on line 3—3, looking in direction of the arrows, and Fig. 4 is a strip of flexible insulation material that may be of any width or thickness and employed as a shim for tightening the tong handle in different sizes of sleeves. Referencing in detail to the drawing and numerals thereon, wherein for the purpose of illustration, like numerals designate like parts throughout the same, the numeral 5 designates the lower tong handle portion of a conventional welding device and the numeral 6 the top handle thereof, which top handle is secured to a sleeve 7 slidably mounted in a cup 8 fixed to the lower tong handle 5 and in which is mounted a coil spring 9 compressed against the upper tong handle for retaining the same in its upper normal position. The lower handle 5 is formed with an outer extending reduced portion 10, which reduced portion is provided with an insulation strip 11 on the back thereof and secured thereto by suitable screws 12 and 13. A gripping member 14 preferably corrugated on the top face thereof as at 15 is provided on the front portion of the said extension 10 and may be integral therewith or formed separately therefrom and secured thereto by the screw 12 or a plurality of screws. The numeral 15 designates the electrode gripping element provided on the outer front portion of the handle 6. The foregoing description merely sets forth the construction of one type of welding tong holder upon which the invention is employed, the holder itself not being considered a part of the invention.

As hereinbefore stated the primary object of the present invention is the provision of means for electrically insulating the handle of the electrode holder and thereby protecting the hands of the welder. A preferred form of such means consists in the provision of two sleeves 16 and 17 as shown in Fig. 1, which sleeves are formed of any suitable type of dielectric material and are capable of being slidably mounted on the said handle 6 and are removably secured thereto by conventional screws 18 and 19, respectively. In the drawing illustrated in Fig. 2 an insulation sleeve 20 capable of fitting the handle 6 is provided and is formed with a gripping element 22, whereby the holding of the tongs by the welder is greatly facilitated.

In Fig. 3 an angular form of handle is illustrated and is designated by the numeral 23 and is shown covered by two insulation sleeves 24 and 25 and as being secured to the handle by conventional screws 26. In Fig. 4 there is illustrated an elongated strip of flexible insulation material designated by the numeral 27 and is provided with a slot 28 and an aperture 29 for enabling the strip to be fastened to the sleeves or handle by suitable screws or other fastening elements not shown. It is to be understood that the form of my invention herewith shown and described is to be taken as the preferred example of the same and that various changes relative to the shape, size, material and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus illustrated and described my invention, I claim:

A welding electrode holder embodying in its construction two spring controlled handles spaced in parallelism one above the other and adjustable connected one to the other, said handles having jaws adapted to grip the electrode, the upper handle being formed with a straight portion and terminating in a curved portion at the outer end thereof and in proximity to the jaw thereon, a heat insulating sleeve mounted on the upper handle, the said heat insulating sleeve being vertically divided in proximity to the said curved portion and formed with a hand hold gripping means on the straight portion, and a shim made of flexible insulating material positioned in the sleeve for tightening the handle in varying sizes of sleeves.

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