

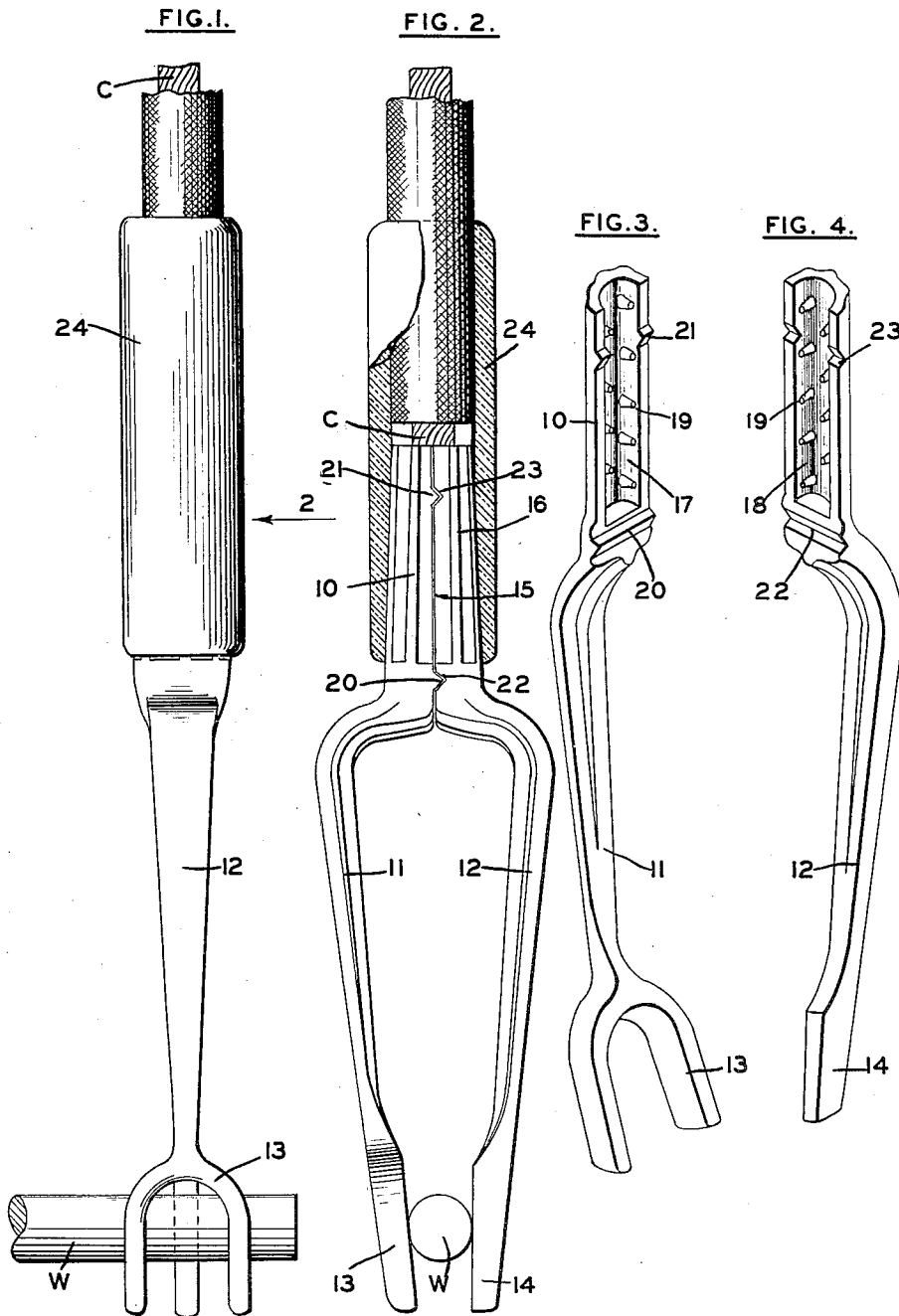
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ELECTRODE HOLDER

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ELECTRODE HOLDER

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This invention relates to improvements in electrode holders used in welding operations. It may be considered an improvement over the construction disclosed in U. S. Letters Patent No. 1,550,229, issued August 18, 1925, in which I am one of the joint inventors.

An object of this invention is to provide an improved electrode holder construction which is so constructed that the cable supplying current to the electrode holder may be easily and quickly attached and detached. While the improved construction has been designed and is intended to be used on an electrode holder embodying features of the construction disclosed in the prior patent, above mentioned, it is to be understood that the improvement can very easily be incorporated upon various other forms of electrode holders.

Another object of the invention is to provide an electrode holder which may be easily, quickly and cheaply constructed and which can be easily assembled and disassembled, thus enabling welders to quickly assemble the electrode holder and attach the cable thereto.

With the foregoing and other objects in view which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Fig. 1 is a view in side elevation of the improved electrode holder.

Fig. 2 is a view taken in the direction of the arrow 2 upon Fig. 1, parts being broken away and shown in vertical section.

Fig. 3 is a perspective view of one of the parts of the improved electrode holder.

Fig. 4 is a perspective view of another of the parts of the improved electrode holder.

Referring to the accompanying drawings, wherein similar reference characters designate similar parts throughout, the improved electrode holder comprises two parts, preferably castings although the manner in which they are formed may vary. These parts cooperate to form a shank, generally designated at 10, and two converging resilient arms indicated at 11 and 12. One arm has its end

bifurcated or forked, as indicated at 13, while the end 14 on the other arm is adapted to be positioned between the tines of the forked end 13. The end structure at 13 and 14, on the ends of the arms 11 and 12, is disclosed in the prior patent and, as the advantages of such a construction are set forth therein, these need not be repeated.

The invention comprises having the shank 10 longitudinally split, as at 15, so that it is divided into two semi-cylindrical sections, one section being integral with each arm 11 and 12. The exterior surfaces of the sections of the shank preferably taper toward its end and may be grooved or fluted, as indicated at 16. The interior of the shank is hollow, as clearly shown upon Figs. 3 and 4 at 17 and 18, and a plurality of projections 19, which extend toward each other on the two sections, are formed on the interior surfaces of the sections. These projections are adapted to be caused to penetrate or deform the strands of the cable C and, while they are preferably given the pin shape shown, it is obvious that various other forms of projections may be substituted therefor.

On one of the sections there are formed two transversely extending ribs 20 and 21 and complementary grooves 22 and 23 are formed on the other section. This rib and groove construction forms an interlock between the two parts of the electrode holder to prevent longitudinal relative displacement. A suitable handle 24, formed of insulating material, such as hard rubber, is provided, this handle being cylindrical in form and being adapted to be slipped on or driven on to the shank 10 longitudinally.

The operation and advantages of the improved electrode holder are as follows:

In assembling the electrode holder the two parts are positioned together with the sections of the shank disposed on opposite sides of the cable C. The handle 24, having first been slipped onto the cable, is then slid along the cable and caused to slip onto the shank. By driving the handle onto the shank it will cause the two sections of the shank to be firmly bound together and to clampingly engage the cable C with the projections 19

penetrating the cable and establishing a good electrical connection. The electrode holder is then ready for use and a welding rod W or the like can be positioned between the ends of the resilient converging arms 11 and 12 in the conventional manner.

The cable C frequently becomes broken or badly worn so that from time to time it is necessary to replace it. This is easily accomplished by driving the handle 24 off of the shank, enabling the sections of the shank to be separated and thus detached from the cable. The handle 24 can then be slipped onto a new cable and the sections of the shank placed about the exposed end of the new cable, after which the handle can be driven onto the shank to cause the sections of the electrode holder to be held together in clamping engagement with it as before. By virtue of the fact that the length of the handle 24 is materially greater than the length of the shank, it will be appreciated that the exposed surfaces of the cable, which are not covered by insulating material, are all disposed within the handle so that the welder on grasping the handle will never have occasion to accidentally contact with the cable where it is fastened to the shank.

From the above described construction it will be appreciated that an improved electrode holder is provided which can be easily, quickly and cheaply constructed, and easily and quickly assembled, and which provides for an easy attachment of the cable C and detachment therefrom for replacement purposes.

The advantages of the end structure on the arms of the electrode holder, as disclosed in the prior patent previously referred to, are at the same time preserved.

A suitable handle 24 formed of insulating material, such as hard rubber, is provided; which handle preferably presents a cylindrical exterior surface. At least one end of the handle has a tapered or conical bore on its interior so as to fit snugly about the sections of the shank 10. This handle is adapted to be slipped onto or driven onto the shank 10 longitudinally, firmly binding the sections of the shank together, and causing them to clamp upon the cable.

Various changes may be made in the details of construction without departing from the spirit or scope of the invention as defined by the appended claims.

I claim:

1. In an electrode holder, a shank divided longitudinally into two parts, means carried by the shank for holding an electrode, the two parts of the shank being adapted to receive a cable therebetween, and a handle serving to hold the two parts in clamping engagement upon the cable.

2. In an electrode holder, a shank divided into two parts, the two parts of the shank

being adapted to receive a cable therebetween, and a tubular handle formed of insulating material adapted to be slipped longitudinally over said parts to hold them in clamping engagement upon the cable.

3. In an electrode holder, a shank divided into two parts, said parts being adapted to receive a cable therebetween and presenting slightly tapering exterior surfaces, and a cylindrical tubular handle adapted to be driven longitudinally over said parts to hold them in clamping engagement upon the cable.

4. An electrode holder comprising a shank divided longitudinally into two parts, means carried by the shank for holding an electrode, said parts presenting opposed surfaces between which a cable is adapted to be clamped, portions adapted to interlock to prevent relative longitudinal displacement between the parts, and means for holding the parts in clamping engagement upon the cable.

5. An electrode holder comprising a shank divided longitudinally into two parts, means carried by the shank for holding an electrode, said parts presenting opposed surfaces between which a cable is adapted to be clamped, portions adapted to interlock to prevent relative longitudinal displacement between the parts, and means for holding the parts in clamping engagement upon the cable comprising a tubular insulating handle adapted to be moved longitudinally over the parts into engagement therewith.

6. An electrode holder comprising a shank divided longitudinally into two parts, means carried by the shank for holding an electrode, said parts presenting opposed surfaces between which a cable is adapted to be positioned, said surfaces carrying projections adapted to be caused to penetrate the cable, and means for holding the sections in clamping engagement with the cable.

7. An electrode holder comprising a shank divided longitudinally into two parts, means carried by the shank for holding an electrode, said parts presenting opposed surfaces between which a cable is adapted to be positioned, said surfaces carrying projections adapted to be caused to penetrate the cable, and means for holding the sections in clamping engagement with the cable comprising a tubular insulating handle adapted to be slipped longitudinally over the parts.

8. An electrode holder comprising a shank longitudinally divided into two parts, means carried by one part adapted to engage one side of an electrode, means carried by the other part adapted to engage the other side of the electrode, and means for holding said parts together in such a manner as to cause an electrode to be clamped between the parts when positioned therebetween.

9. An electrode holder comprising a shank longitudinally divided into two parts, means carried by one part adapted to engage one

side of an electrode, means carried by the other part adapted to engage the other side of the electrode, and means for holding said parts together comprising a tubular handle adapted to be slipped longitudinally over said parts.

10. An electrode holder comprising a shank longitudinally divided into two parts, means carried by one part adapted to engage one side of an electrode, means carried by the other part adapted to engage the other side of the electrode, said parts presenting opposed surfaces on which there are portions adapted to interlock, and means for holding said parts together.

11. An electrode holder comprising a shank longitudinally divided into two parts, means carried by one part adapted to engage one side of an electrode, means carried by the other part adapted to engage the other side of the electrode, said parts presenting opposed surfaces on which there are portions adapted to interlock, and means for holding said parts together comprising a tubular handle adapted to be slipped longitudinally over said parts.

12. An electrode holder comprising a shank longitudinally divided into two parts, means carried by one part adapted to engage one side of an electrode, means carried by the other part adapted to engage the other side of the electrode, said parts presenting opposed concave surfaces, there being projections on said concave surfaces adapted to penetrate a cable placed therebetween, means providing for locking the parts against longitudinal relative displacement, said parts presenting tapering exterior surfaces, and a tubular handle adapted to be driven onto the parts to hold them together in clamping engagement with the cable, said tubular handle being materially longer than the shank.

In testimony whereof I have signed my name to this specification.

SHELLEY M. STOODY.