

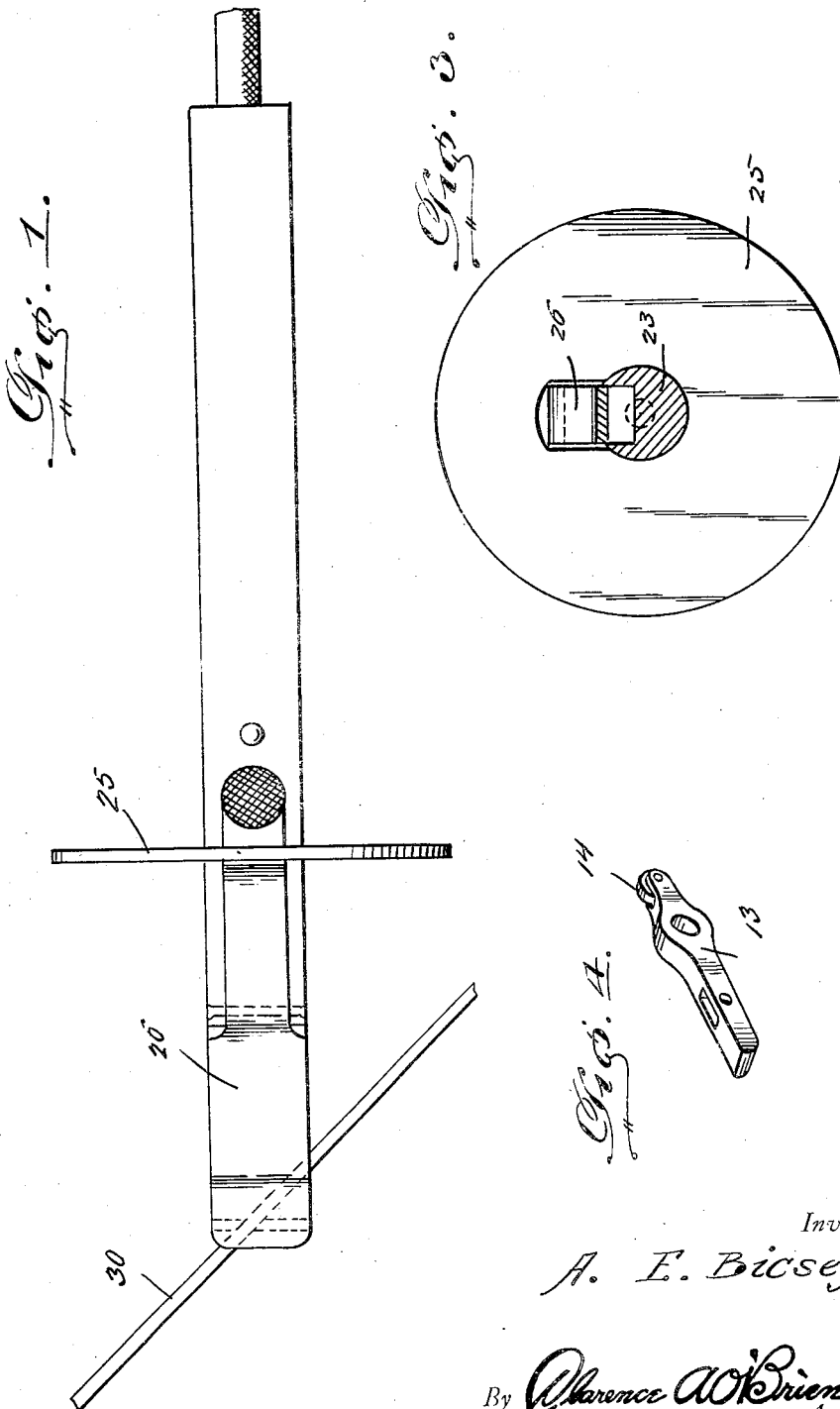
Sept. 24, 1929.

A. E. BICSEY
ELECTRODE HOLDER

1,729,059

Filed Dec. 2, 1927

2 Sheets-Sheet 1



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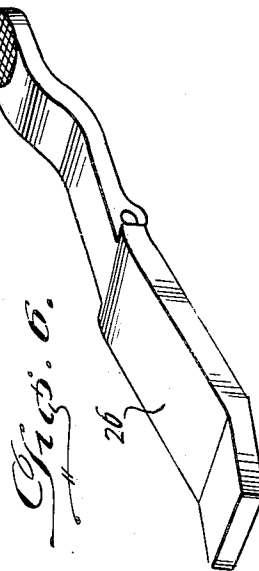
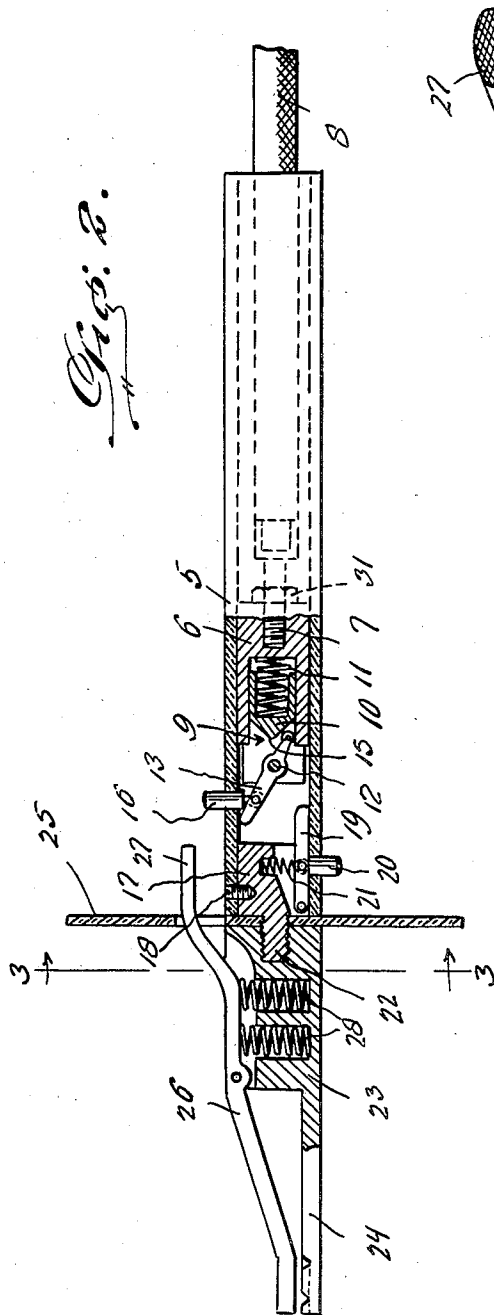
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UNITED STATES PATENT OFFICE

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ELECTRODE HOLDER

Application filed December 2, 1927. Serial No. 237,211.

The present invention relates to an electrode and carbon holder adapted particularly for use in connection with electric arc weldings and has for a principal object to provide an electric switch in the handle of the holder adapted to be normally maintained in open position for the purpose of disconnecting the circuit while the invention is not in use.

10 A further object of the invention is to provide an electrode holder of this character having a switch mounted therein within easy and convenient control by the operator of the device, which is secure against accidentally causing an arc between the electrode and the work while the device is not in use, which is of a simple and practical construction, efficient and reliable in performance, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the special construction and combination of the various elements comprising the invention, reference being had to the accompanying drawings forming a part hereof, wherein:—

Figure 1 is a top plan view of the holder,

30 Figure 2 is a longitudinal sectional view therethrough,

Figure 3 is a transverse sectional view taken along a line 3—3 of Figure 2,

Figure 4 is a perspective view of one of the switch contact members,

35 Figure 5 is a plan view of the gripping surface of the fixed jaw member, and

Figure 6 is a perspective view of the pivotally mounted jaw member.

Referring now to the drawing in detail, 40 the invention comprises a tubular member 5 constituting a handle and constructed of insulation material having a plug 6 snugly fitted therein approximately midway the end of the handle, one end of the plug having 45 a threaded bore for receiving a screw 7 at-

tached at the inner end of an electric cable 8. The opposite end of the plug 6 is formed with a smooth bore indicated at 9 within which a switch control member 10 is slidably carried and normally forced in a direction toward 50 the outer end of the bore 9 by means of a coil spring 11 arranged within the bore and engaging the inner end of the member 10.

Extending transversely of the plug 6 adjacent the outer end of the bore 9 is a pin 12 55 upon which is pivotally mounted a switch contact member 13 having one end extending inwardly with respect to the bore and provided with a roller 14 as more clearly illustrated in Figure 4 of the drawings and 60 engaging the outer tapered end 15 of the slidable member 10. As will be observed from an inspection of Figure 2 of the drawing, the outer end of the sliding member 10 extends in overlapping relation with respect 65 to the inner end of the contact member 13 whereby to secure the respective end of the contact member in upwardly or downwardly disposed position. The end of the contact member 13 opposite from the roller 14 is 70 provided with a manual operable plunger 16 extending laterally through an opening in the handle and adapted upon being depressed to move the outer end of the contact member downwardly in a direction toward the oppo- 75 site side of the handle.

At the forward end of the handle 5 is fitted a plug 17, retained in position therein by means of a set screw 18, said plug being formed of conductor material and having a 80 contact member 19 pivotally mounted thereto with its free end adapted for movement in a direction toward the contact member 13 and engageable therewith. A manual operable plunger 20 is attached to the contact member 85 19, extending laterally through an opening formed in the wall of the handle diametrically opposite from the plunger 16. The plunger 20 is normally retained in outwardly extended position by means with the coil spring 90

21 seated within the plug 17 and disposed against the inner end of the plunger.

The outer end of the plug 17 is formed into a threaded boss 22 adapted to threadedly support the butt end of a fixedly disposed jaw member 23 having a relatively flattened jaw 24 extending outwardly with respect thereto. Between the jaw member 23 and the adjacent end of the handle 5 is interposed an insulated plate 25 forming a guard for the hand of the operator. On one side of the fixed jaw member 23 is pivotally mounted a movable jaw member 26 having its rearwardly extended ends 27 protruding through an opening formed in the guard to a position adjacent the plunger 16 for convenient operation by the hand of the operator.

The jaw end of the jaws 24 and 26 are normally maintained in gripping relation by means of coil springs 28 interposed between the inner ends thereof.

As more clearly illustrated in Figure 5 of the drawing the gripping surface of the jaw 24 is formed with transversely disposed grooves 29 permitting the electrode 30 to be secured between the jaws at various angular positions with respect thereto to better enable contact with the work under varying conditions.

In the operation of the device it will be apparent that after the electrode 30 has been secured in the desired position between the jaws that the circuit therebetween and the cable 8 forming the connection with the source of current may be completed by depressing the plungers 16 and 20 whereby to engage the respective contact members 13 and 19. It will also be apparent that the sliding member 10 will effectively retain the contact member 13 out of position for engagement with the contact member 19 until after the plunger 16 has been depressed. Also upon depressing the plunger 16 the sliding member 10 will effectively retain the same in depressed position to enable the contact member 19 to engage the same. Thus the accidental depression of either of the plungers will be insufficient to close the circuit until the opposite plunger has likewise been depressed.

Provision is made for a suitable adjustment between the sliding member 10 and the adjacent end of the contact member 13 by means of an adjusting nut 31 carried on the screw 7 and adapted to adjust the plug 6 with respect to the contact 13.

It is obvious that the invention is susceptible of various changes and modifications, without departing from the spirit or scope of the invention or sacrificing any of its advantages, and I accordingly claim all such forms of the device to which I am entitled.

Having thus described my invention, what I claim as new is:

1. In a device of the class described, a

tubular handle, an electric cable secured in one end thereof, a jaw fixedly carried at the opposite end thereof, a movable jaw member pivotally mounted on said fixed jaw, said fixed jaw being formed of conductor material, a switch carried by the handle and comprising contact members connected respectively with said cable and said fixed jaw and movable independently toward each other and means engageable with one of said members for yieldably securing the same into or out of position for engagement by said other contacts.

2. In an electrode holder of the class described, a tubular handle, a plug fitted therein having one end adapted for connection with an electric cable, a contact member pivotally mounted within the handle adjacent the opposite end of the plug, a sliding member carried by the plug and engageable with said contact member for securing the same in oppositely disposed positions, a pair of electrode retaining jaws carried by said handle and a contact member pivotally mounted at the inner end of said jaws and engageable with said first named contact member when retained in a predetermined position by said sliding member.

3. In an electrode holder of the class described, a tubular handle having a plug fitted therein having cable attaching means at one end thereof, a pivotally mounted contact member arranged within the handle adjacent the opposite end of the plug, a sliding member carried by the plug and engageable with said contact member and arranged for securing the same in its oppositely disposed position, a plug secured in the handle opposite from the cable end thereof, a jaw member fixedly secured to said plug, a jaw member pivotally mounted on said first named jaw member, a guard interposed between said jaw member and the handle and a contact member pivotally mounted on said last named plug and engageable with said first named contact member, each of said contact members being operable independent of the other.

4. An electrode holder comprising a handle element having an electrode gripping element carried thereby, circuit control means arranged in the handle element including a pair of pivoted contacts engageable with each other for closing the circuit, one of said contacts being movable into and out of position for engagement by said other contacts and means yieldably securing the first named contact in either position.

5. An electrode holder comprising a handle element having an electrode gripping element carried thereby, circuit control means arranged in the handle element including a pair of pivoted contacts engageable with each other for closing the circuit, one of said contacts being movable into and out of position

for engagement by said other contacts and
yieldably securing the first named con-
tact in either position, said last named means
comprising a tapered plug slidably mounted
5 in the handle and spring means urging the
tapered end thereof into overlapping engage-
ment with one end of the first named con-
tact, each of said contacts carrying push but-
tons protruding laterally from opposite sides
10 of the handle for selective actuation thereof.

In testimony whereof I affix my signature.

ANDREW E. BICSEY.

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