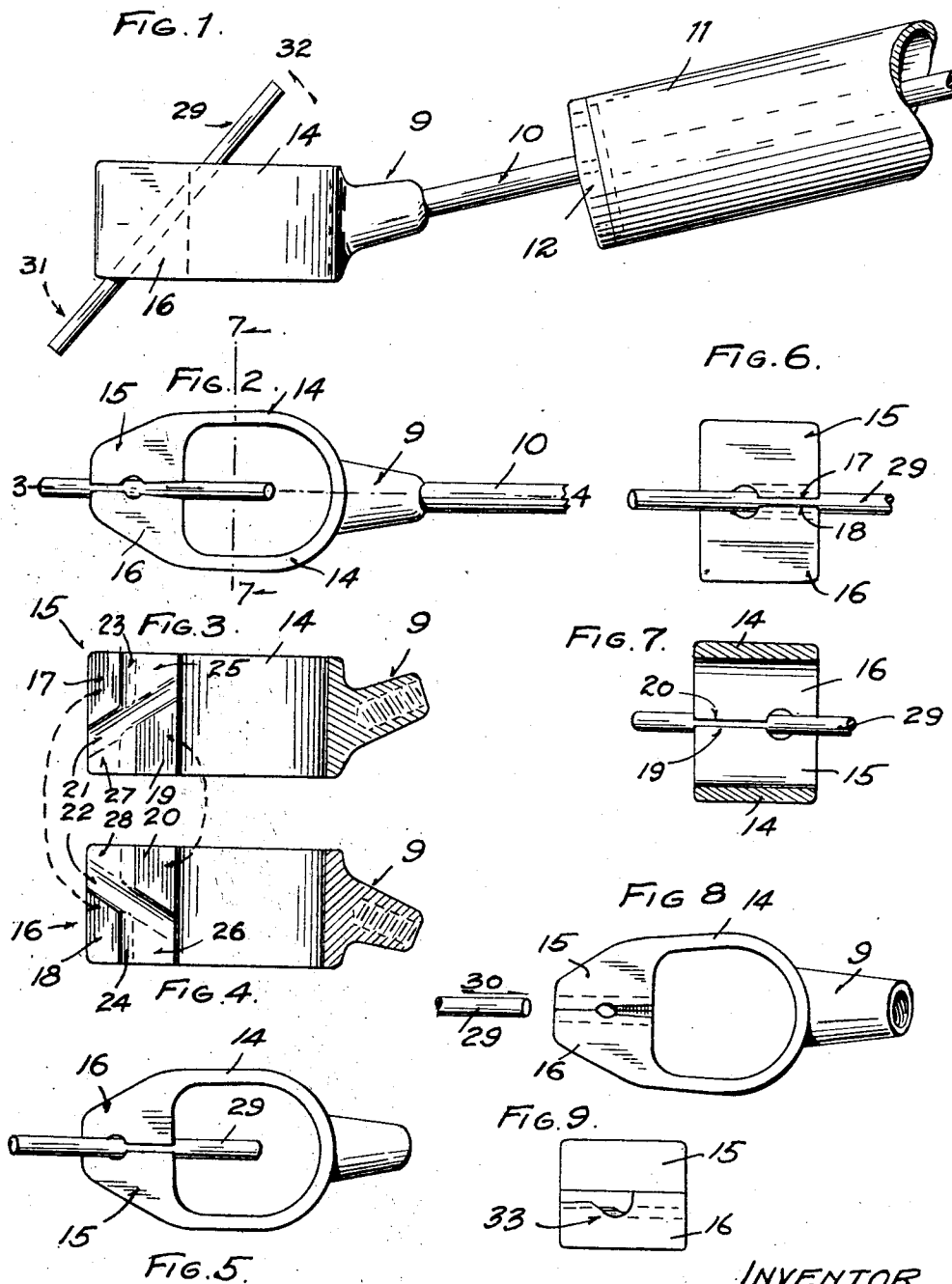


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HOLDER FOR WIRE

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HOLDER FOR WIRE.

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This invention relates to holders for electric welding wire or pencils and the principal object is to provide a simple resilient clamp for that purpose.

5 It is also an object to provide a holder for wire that can be used in corners or small spaces readily.

It is a further object to provide a clamp for holding current bearing wire securely and
10 electrically form good contact therefor.

It is also an object to provide a holder in which the wire is readily inserted and as easily removed.

In the drawings accompanying this ap-
15 plication,

Fig. 1 is a side elevation of the device and a portion of the preferred form of insulated handle.

Fig. 2 is a plan view of the above view with
20 a wire in one of the positions that can be assumed.

Figs. 3 and 4 are views on either side of the section line 3—4 of Figure 2, the dotted lines joining the contacting surfaces when the jaws
25 are closed as in Figure 8.

Fig. 5 is a bottom view, and

Figs. 6 and 7 are front and rear views of the jaws, the clamp being sectioned on the line
7—7 of Figure 2 for Fig. 7.

Fig. 8 is a plan view of the device in normal position ready for the insertion of the wire, and

Fig. 9 is a front view of a modification.

More specifically in the drawings numerals
35 are used to designate the detailed parts, 9 being the shank or base of the preferred form, tapped to receive the end of the conductor 10 which is preferably surrounded by the hollow insulated handle 11 supported at each end by
40 perforated discs 12 (one only shown) to form a light and cool handle for the device when used to hold an electrode when welding.

Extending in the other direction from the handle, from the shank 9 are the resilient arms
45 14—14, preferably formed of spring steel and of wide thin construction, so as to disperse the maximum amount of heat and may be formed integral with the shank and the jaws 15 and 16 as desired or found most expedient.

50 The jaws for convenience in describing the device are numbered differently, as each is different as to contour of face but the same in exterior form, and are preferably paired to form a complete clamp though applicant

does not wish to be limited to the exact construction shown to carry out the spirit of the invention, one modification being shown in Figure 9.

Taking the face of jaw 15 the two shaded areas 17 and 19 are in one plane and correspond with a plane longitudinally disposed and centrally placed of the device, and are normally in contact with companion faces 18 and 20 on the face of jaw 16.

Again between areas 17 and 19 is a semi-cylindrical groove 21 preferably at the angle shown, and a shallower groove 23, the areas 25 and 27 diagonally disposed from those first described, are cut away in a plane below the others and inclined at a slight angle outward of the device, so as to form a true gripping surface and enable the object to be gripped to be more readily forced into the locking position, as later described.

On jaw 16 the groove 22 is identical with that numbered 21 and together form a bore acting as the entrance for the wire 29, groove 24 falling opposite 23 to form a terminal locking position, this bore being necessarily less in diameter than the smallest object to be clamped, and faces 26 and 28 are opposed to similar areas on jaw 15, as 25 and 27 and are similar in relation to the central plane.

In the modification shown in Figure 9 the entrance bore 33 and its companion planes are all cut on one jaw, the other being entirely flat or one plane.

The use and operation of the device will be readily understood, the wire 29 being held in one hand and the holder in the other, the wire is inserted in the front end of the entrance bore 21 and 22 in the direction of the arrow 30 the distance shown in the figures or more, then using the intersection of the grooves as a fulcrum and forcing down on the wire or in the direction of the arrow 31 in Figure 1, the wire is pivoted on the fulcrum, the upper end moving in the direction of the arrow 32 and the portion within the jaws forces the same apart against the resiliency of the arms 14 and the wire is firmly gripped. Continuing the movement beyond that shown in Figure 1, brings the wire into the locked position in grooves 23 and 24.

With this compact and efficient device there is less waste of wire, greater speed in loading, less effort in manual operation and an equal speed in unloading, by engaging the lower

hot end against any surface, the movement of loading may be reversed and the wire released without use of hands or tool.

Having thus described my invention, what I claim is—

1. A device of the class described, comprising resiliently supported jaws having contacting, grooved and cut away faces providing a tunnel, a fulcrum and gripping means for a wire capable of entering said tunnel.
2. A device of the class described, comprising a pair of gripping jaws, resilient arms to normally hold said jaws in contact, the contacting faces of said jaws being recessed to afford a tunneled entrance for the object adapted to be held thereby and portions cut away to provide a fulcrum to permit the object to force apart the jaws to grip the same adjacent said tunneled entrance.
3. A wire clamping tool comprising a pair of jaws having contacting and cut away faces provided with aligned grooves to permit the entrance of a wire through the tunnel formed by said aligned grooves in said faces, said jaws being capable of being forced open by movement of said wire across said tunnel and between said cut away faces to grip the same in a position adjacent said aligned grooves forming a tunnel.
4. A device of the class described formed of resilient material compressing a pair of jaws with contacting faces and spaced opposed faces, said contacting faces and opposed faces being separated by grooves adapted to provide a tunneled entrance for an object adapted to be held adjacent thereto by said opposed faces.
5. A clamping device for elongated objects consisting of resilient arms provided with jaws normally contacting over a portion of their faces, said contacting portions of said faces being formed to provide a bore in one direction for the free passage of an elongated object and being cut away in other portions of their faces to provide gripping portions.
6. A device of the class described comprising resilient arms spaced apart to provide passage of cooling air, normally contacting jaws fixed to the ends of said arms, the faces of said jaws being grooved and cut away to provide contacting portions, an entrance for an object capable of being gripped therein, and gripping surfaces adjacent the contacting portions of said jaws.
7. A device of the class described adapted to the holding of elongated objects, comprising a pair of jaws having a portion of their opposed faces in resilient contact and provided with an entrance bore therebetween, other portions of said faces being grooved and recessed to provide a fulcrum and a locking portion for an object capable of passing through said bore.
8. An electrode holder comprising resilient arms supporting jaws having a plurality of faces formed thereon, certain of said faces contacting to hold other of said faces in spaced relation, certain of said faces forming a fulcrum for an electrode capable of passage between said faces in spaced relation.
9. A wire clamping device formed of resilient material comprising a pair of jaws with faces recessed and grooved and portions of said faces adapted to contact, certain grooves on said faces being aligned to provide a bore for the free entrance of a wire adapted to be clamped between said jaws, the recessed portions of said jaws being spaced to provide portions when movement of said wire from a non-resistant position in said bore in said jaws against a fulcrum formed by intersecting edges of grooves and recesses, forces said jaws apart to engage said recessed faces to clamp said wire.
10. A clamping device for elongated objects consisting of resilient arms provided with jaws normally contacting over a portion of their opposed faces, said faces being provided with registering grooves to form a bore for the free entrance of an elongated object in one direction, a fulcrum and gripping surfaces for said elongated object adjacent said contacting portions of the faces of said jaws.
11. A device of the class described comprising a pair of resiliently supported jaws, the adjacent faces of said jaws being provided with radiating grooves, a pair of said grooves in alignment forming a passage way for an object capable of being passed therein, a second pair of shallower grooves in alignment being adapted to grip said object capable of passage in said passage way.
12. A device of the class described adapted to the gripping of a rod, comprising a pair of resilient jaws having portions of their opposed faces in contact, portions of said faces being grooved, to provide a bore for passage of the rod, portions cut with inclined planes, to provide a fulcrum for a rod capable of passing freely within said bore, said rod adapted to be turned on said fulcrum over said inclined planes to overcome the resiliency of said jaws and other grooves in said jaws to grip and lock said rod in position.
13. A device of the class described comprising a pair of gripping jaws resiliently held in contact, the face of one of said contacting jaws being grooved to form a passage between said jaws for the passage of an object, a fulcrum formed on said face for an object adapted to be held between ungrooved portions of said face and the face of the other of said jaws.

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