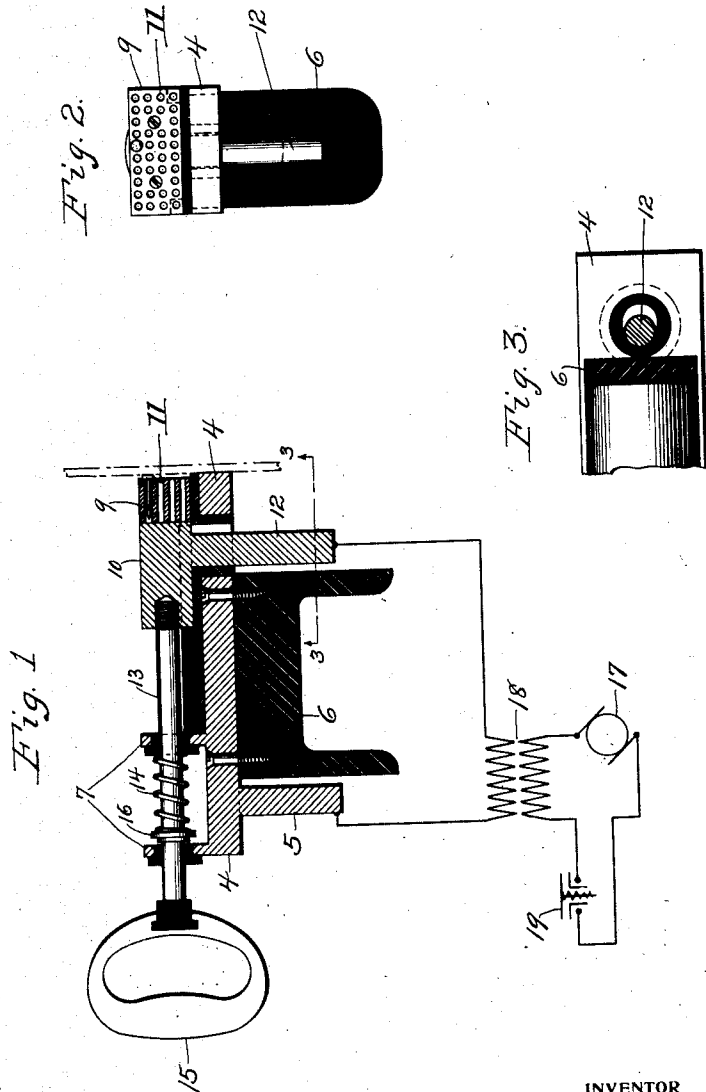


J. W. SHEFFER.
 PORTABLE ELECTRIC WELDING TOOL.
 APPLICATION FILED MAY 13, 1912.

1,045,332.

Patented Nov. 26, 1912.



WITNESSES
L. Almquist.
H. N. Kennerly

INVENTOR
John W. Sheffer
 BY
F. H. Gibbs ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN W. SHEFFER, OF BERWICK, PENNSYLVANIA, ASSIGNOR TO AMERICAN CAR AND
FOUNDRY COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

PORTABLE ELECTRIC WELDING-TOOL.

1,045,332.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed May 13, 1912. Serial No. 697,092.

To all whom it may concern:

Be it known that I, JOHN W. SHEFFER, residing at Berwick, Pennsylvania, and being a citizen of the United States, have invented certain new and useful Improvements in Portable Electric Welding-Tools, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and to use the same, reference being had to the accompanying drawings, which illustrate the preferred form of the invention, though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof will occur to persons skilled in the art.

In said drawings: Figure 1 represents a sectional side view of a hand electric welding tool. Fig. 2 is a front view of the same showing the electric contact faces of the tool. Fig. 3 represents a fragmental section of Fig. 1 on the lines 3—3 looking in the direction of the arrow.

This invention comprises in its adaptation a portable hand electric welding tool, and comprehends an electric welding tool comprising two electrodes insulated from each other, the one being attached to and insulated from a suitable handle and the other being movable upon the first electrode, and carrying a tip provided with fastener recesses, all arranged so that the tool can be held in one hand and operated by the other. The fixed electrode is attached to the handle and adapted to be held in contact with the metal side wall and the movable electrode operating thereon and carrying the fastener is so spaced as to be held out of contact with the side wall. An electric switch is provided preferably controlled by the foot of the operator for supplying the current to the electrodes. This device forms a welding tool small, compact and capable of being employed with great facility.

To describe this invention more in detail: The stationary electrode 4 is provided with a depending projection 5 and an insulated handle 6. The stationary electrode also carries perforated supports 7, 7 lined with insulation through which the movable electrode 8 slides. The stationary electrode is also provided with a perforation lined with insulation in which operates a guide 12 for the movable electrode.

The movable electrode comprises a flat removable portion 9 carrying perforation 11 for the insertion of the shank of the nail or fastener, a main body portion 10 carrying the guide 12, and a shank 13 attached to an operating handle 15, which is insulated from the said shank. The portion 9 is made removable so that other forms of headed fasteners may be used by altering the shape of the perforations 11 therein. The movable electrode is normally held in rearward position or out of contact with the metal wall by the spring 14, operating upon a shoulder 16 secured to the shank 13 thereof between insulated supports 7, 7.

The two electrodes are separated by suitable insulation. A high tension low volume current is supplied by the alternator 17 and reduced to a low tension, large volume current through the step-down transformer 18, the supply cables being attached to the electrode terminals 5 and 12. A primary switch 19 is provided in the circuit preferably controlled by the foot of the operator.

In the use of this device the operator grasps the handle 6 that carries the stationary electrode 4 and forces the same against the plate shown in dotted lines in Fig. 1, the primary switch 19 is then thrown into operative position by the foot of the operator until the head of the fastener or nail, which is shouldered against the movable face 9 of this electrode, contacts with the sheet thereby completing the electric circuit through the fastener and the movable electrode. As soon as the nail head has reached a welding heat, pressure is applied by the right hand of the operator upon the handle 15 and the nail head up-set and forced into the metal sheet. Removable face 9 is provided with a large number of perforations so that the nail can be positioned with greater facility.

It is obvious that the mechanical detail of the device can be changed, but in practice the device shown in the drawing has proved effective for the purpose for which it was designed.

What I claim is:

1. A tool of the class described, comprising a stationary electrode arranged for making contact with a metal wall, a movable electrode arranged to carry a fastener,

an electric current supply and means for completing the electric circuit through the metal wall and the fastener.

2. A tool of the class described, comprising a stationary electrode arranged for making contact with a metal wall, an electric current supply and means arranged to carry a fastener and for completing the electric circuit through the fastener and welding the same to the metal wall.

3. A tool of the class described, comprising a stationary electrode arranged for making contact with a metal wall provided with a handle, a movable electrode provided with a fastener holder, an electric current supply and means for operating the movable electrode and completing the electric circuit through the fastener.

4. A tool of the class described, comprising a stationary electrode arranged for making contact with a metal wall provided with a handle and with insulated guides for a movable electrode, a movable electrode arranged to carry a fastener operating upon the stationary electrode, an electric current supply and means for operating the movable electrode and completing the electric circuit through the fastener.

5. A tool of the class described, comprising a stationary electrode arranged for making contact with a metal wall, a movable electrode arranged to carry a fastener, an electric current supply and resilient means for maintaining the electric circuit open.

6. A tool of the class described, comprising a stationary electrode arranged for making

contact with a metal wall, provided with insulated guides for a movable electrode, a movable electrode provided with a removable fastener holder arranged to carry a fastener, an electric current supply, means attached to the movable electrode for completing the electric circuit through the fastener and resilient means for automatically breaking the electric circuit.

7. A tool of the class described, comprising a stationary electrode arranged for making contact with a metal wall provided with an insulated handle and with insulated guides for a movable electrode, an electric current supply, a movable electrode operating upon the stationary electrode and provided with a removable fastener holder arranged to carry a fastener, an operating shank and a handle and a spring located on the shank for normally maintaining the electric circuit open.

8. A tool of the class described, comprising a stationary electrode arranged for making contact with a metal wall, a movable electrode arranged to carry a fastener, an electric current supply, means for completing the electric circuit through the fastener and means for controlling the electric current.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOHN W. SHEFFER.

Witnesses:

FRED A. HOLLMAN,
HENRY F. TRAUGH.