W. H. & W. J. CLARK.

SOLDERING-IRON.

No. 178,837. Patented June 20, 1876.

Fig. 1

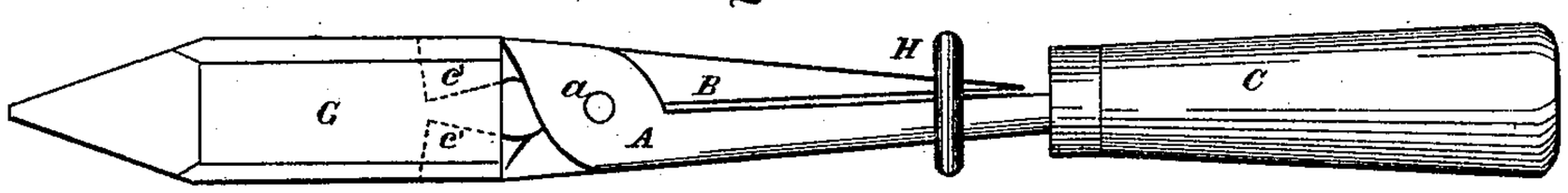


Fig. 2

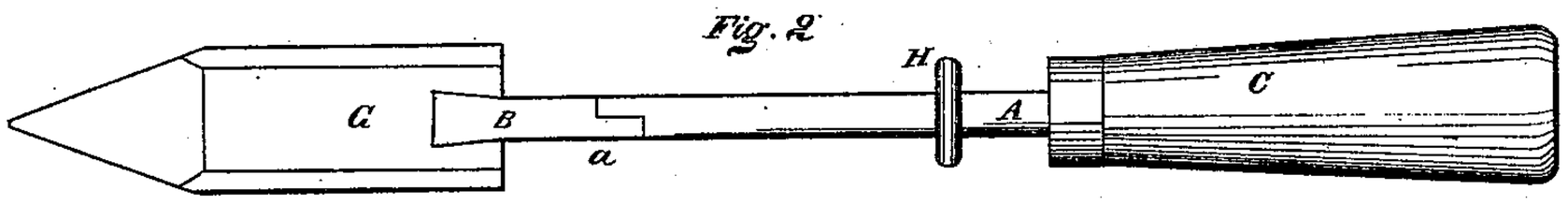


Fig. 3

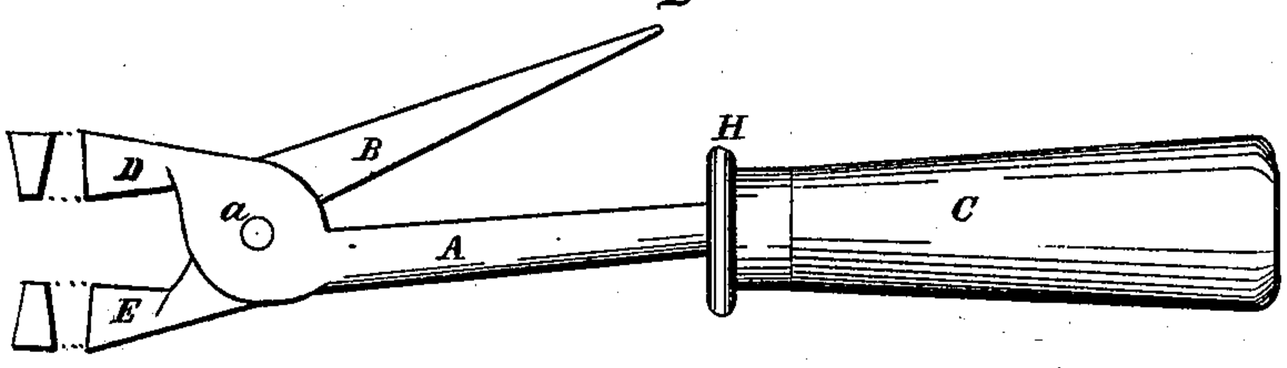


Fig. 4

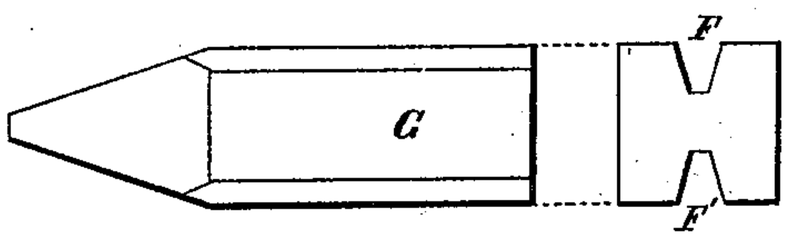
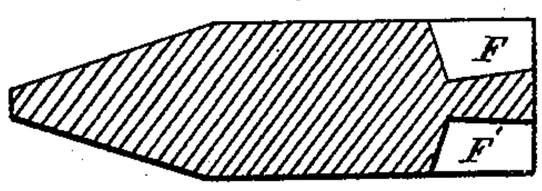


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM H. CLARK AND WILLIAM J. CLARK, OF SALEM, OHIO.

IMPROVEMENT IN SOLDERING-IRONS.

Specification forming part of Letters Patent No. **178,837**, dated June 20, 1876; application filed April 1, 1876.

To all whom it may concern:

Be it known that we, WM. H. CLARK and WM. J. CLARK, of Salem, in the county of Columbiana and State of Ohio, have invented a certain new and Improved Soldering-Iron; and we do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawings, making a part of the same.

Figures 1 and 2 are side views of the soldering-iron. Figs. 3 and 4 are detached sections.

Like letters of reference refer to like parts in the several views.

This invention is an improvement in soldering-irons, whereby the shank may be used when the copper is worn out for holding a new copper, and so on repeatedly, thereby avoiding the expense of a new shank for each new copper.

Ordinary soldering-irons are usually made with the shank permanently fixed into the copper, both of which are sold at a price per pound equal to the market-value of the copper itself. When the copper is worn out the stump left attached to the iron shank and the shank itself are both a loss to the purchaser, as the copper cannot be separated from the iron, so as to make either fit for scraps, except at a cost equal to the value of both when separated.

Detachable shanks have been made that serve to wear out several coppers. These shanks often become loose in the coppers in consequence of the frequent heating and cooling of them, and from the reforging of the coppers to "dress" them.

To avoid the expense of the first and the inconvenience of the latter is the purpose of this invention, which consists of a pair of nippers comprised of two sections, A and B, pivoted to each other at the point *a*.

To section A is attached a wooden handle, C, whereby the tool is held. D and E are the jaws of the nippers, the sides of which are beveled or dovetailed in shape, that they may fit in the corresponding gains or notches F F′, Fig. 4, of the copper, respectively, as indicated by the dotted lines *c*, Fig. 1.

It will be seen that the extreme ends of the jaws are also beveled to adapt them to the inclined end of the gains.

The inner edges of the jaws are beveled, that they may fit the bottom of the gains, as indicated by the dotted lines referred to, and as shown in Fig. 5.

Either one of the jaws D E may be made of the peculiar shape described, and the other shaped in various ways, to afford a bearing upon the copper, whereby the peculiar-shaped jaw may be forced into the gain provided for it, and a firm hold obtained upon the copper; but better results are experienced when both jaws are made of the peculiar shape described, and the latter construction is, therefore, preferred.

The application of the shank to the copper will be readily understood on examination of the drawings, in which it will be seen that the jaws D E are placed in the gains of the copper and clamped therein by the shank of section B, which is closed toward section A, and there secured by a ring, H, as will be seen in Figs. 1 and 2.

The peculiar shape of the jaws is such as to cause them to wedge in the gains when forced therein by the arms of section B, when brought toward the arm of section A, and thus secure a firm fit of the jaws in the gains. When the copper is attached to the shank the arms of sections A B should diverge slightly, so that by bringing them still closer together, and securing them by the ring H, a rigid attachment may be maintained, even though long use may deepen or otherwise wear the gains in the copper.

It will be observed, on examination of Figs. 1 and 2, that the arms of sections A and B are of unequal length, enabling us thereby to attach or detach the copper without displacing the handle C, or removing the ring H from the arm of section B.

What we claim as our invention, and desire to secure by Letters Patent, is—

In tinners' soldering-irons, the jointed sections A B, provided with one or more wedge-shaped or dovetailed jaws, D E, in combination with the copper G, having therein gains F F′, corresponding with said jaws, substantially as and for the purpose described.

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WILLIAM JARED CLARK.

Witnesses:
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PETER AMBLER.