(No Model.)

A. P. OLMSTEAD.

SOLDERING IRON.

No. 277,601. Patented May 15, 1883.

Fig. 1.

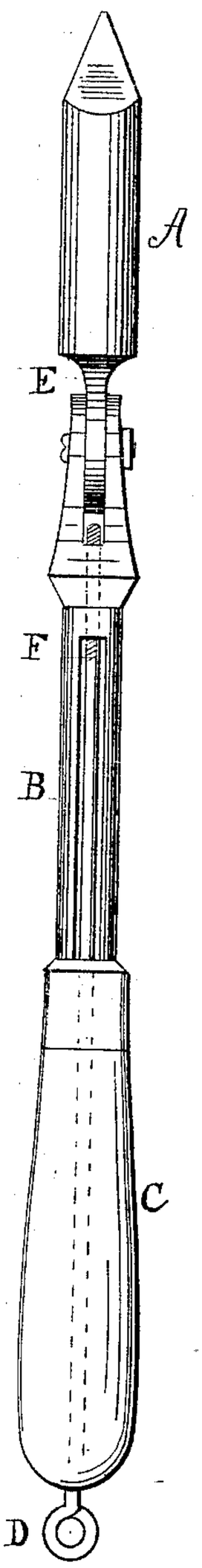


Fig. 3.

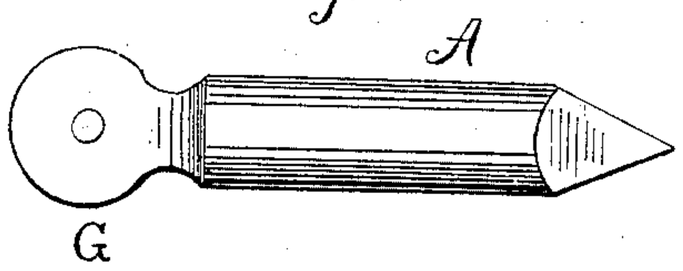


Fig. 2.

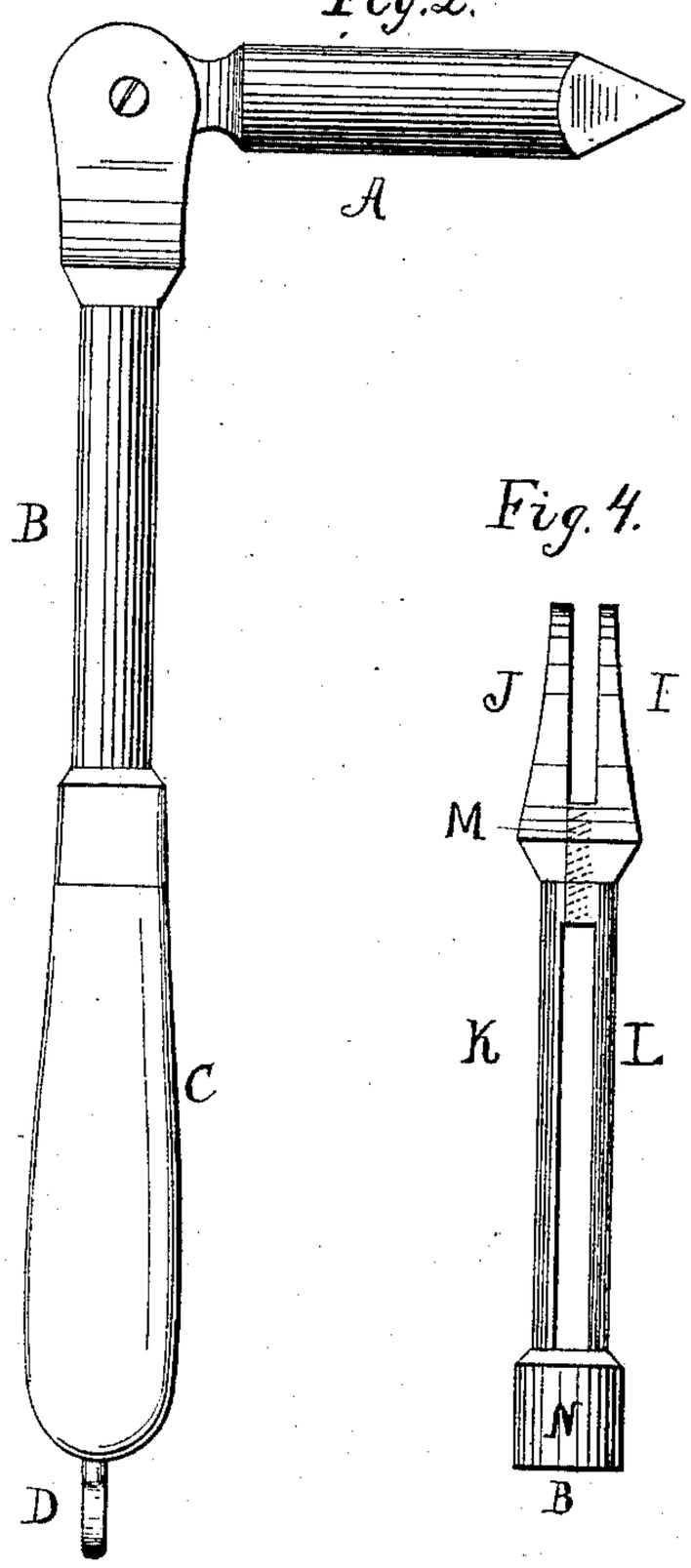
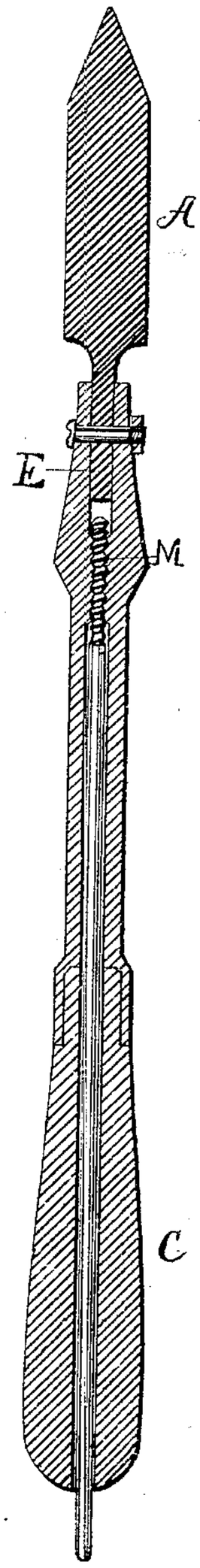


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

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SOLDERING-IRON.

SPECIFICATION forming part of Letters Patent No. 277,601, dated May 15, 1883.

Application filed January 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALBERT P. OLMSTEAD, a citizen of the United States, residing at the village of West Troy, county of Albany, and State of New York, have invented a new and useful Improvement in Soldering-Irons, of which the following is a specification.

My invention relates to improvements in soldering-irons in which the copper point is adjustable at different angles to the handle; and it consists in pivoting the copper itself to the handle, and forming the handle from cast-iron made malleable, and providing the threaded rod which passes through the handle to secure the copper in position with a hook or eye at the end projecting from the handle.

The objects of my invention are, first, to lighten the tool and shorten the distance between the tip of the copper and its joint by doing away with the head-block heretofore employed to hold the copper; second, to cheapen the handle by making the metallic part all in one piece of cast metal and doing away with all metallic tubes, which retain and conduct to the hand a greater amount of heat; third, to provide the tool at one end with a hook or eye by which the same may be hung up when not in use, and also to afford the means of applying power to turn the threaded rod by inserting a lever in said eye, by which the rod may be forced firmly against the copper tongue to secure it in position.

My said invention is an improvement upon the device described in my application for Letters Patent of the United States for improvements in pointed tool holders filed November 15, 1882, when applied to soldering-irons.

I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the tool with the copper point extended in a straight line with the handle, the pivot of the joint being in a horizontal position. Fig. 2 is a plan view of the tool with the copper adjusted at a right angle with the handle, and in such a position that the joint-pivot is perpendicular instead of horizontal, as in Fig. 1. Fig. 3 is a plan view of the copper point. Fig. 4 is a plan view of the cast-iron handle. Fig. 5 is a longitudinal central section of the tool.

Similar letters of reference indicate like parts throughout the several views.

A represents the copper point, the butt-end of which is swaged down to form the tongue E, in which is made the hole G.

B represents the handle, made of cast-iron, in one piece, and rendered malleable. The handle is provided with the ears I and J, adapted to receive the tongue E, the pivot H passing through the ears and tongue to form a joint and permit the copper point to turn freely in either direction on said pivot. The junction of the ears is provided with the threaded aperture M, adapted to receive the threaded rod F. The other end of the iron handle is provided with a hollow cylinder, N, adapted to receive one end of the wooden handle C and the rod F. The ends of the iron handle are connected by the bars K L, integral therewith.

From the foregoing description the simplicity, durability, and facility of construction of the machine will be readily understood.

The copper point is pivoted to one end of the iron handle, and the hollow wooden handle C driven into the other end. The metallic rod F, threaded at one end and provided with the eye D at the other, is then passed through the handle C, along between the bars K and L, until the threaded end reaches the nut or threaded aperture M, when it is screwed into the same by means of the eye D, used as a handle. The copper point is then turned to the desired angle, where it may be firmly secured by turning the revolving rod F until it presses firmly against the tongue of the copper. If for any reason the fingers are not sufficiently strong to turn the rod, a lever may be inserted in the eye D and sufficient power thus obtained for any emergency. The eye D may also be used to hang up the device when not in use. Any desired substance may be employed instead of wood for the handle C, provided the same is not a good conductor of heat. By having the middle portion of the iron handle composed of two bars instead of a tube, less heat is conducted from the heated copper to the hand of the operator. By piv-

oting said copper directly upon the handle, the expense of a block to hold said copper is avoided, and the distance between the tip of said copper and the joint formed in the end of the handle is lessened, which permits a much more convenient and useful operation of the implement.

I am aware that soldering-irons have been constructed with reversible copper points jointed at their middle part to the end of a handle. It is impossible to secure so firm a joint when so constructed as when the joint is formed at one end of the copper, which permits of correspondingly short forks on the end of the handle to receive the copper. Long forks are likely to spring and twist when the copper is at an angle to the handle, which position it must at times assume, or the joint amounts to nothing. I do not claim a reversible point.

I am also aware that soldering-irons have been constructed with a head-block adapted to screw into and support a soldering-copper, which head-block was jointed to a handle. Such a construction renders it necessary to have the point of the copper as much farther from the joint than it would be if the copper itself were fulcrumed upon the handle as the head-block is long. It will not accomplish the desired result to correspondingly shorten the copper, as it must be of sufficient mass and length to retain heat when in use and not lose heat too rapidly by radiation or by conduction to the handle or head-block. Its use is much more convenient when the point is not far removed from the joint. I do not claim a jointed head-block adapted to support a soldering-copper.

What I claim as new, and desire to secure by Letters Patent, is—

1. A copper point, in combination with a soldering-iron handle, and pivot passing through one end of said handle and the butt-end of said copper point, whereby a joint is formed, substantially as described, and for the purposes set forth.

2. As a new article of manufacture, a soldering-iron handle made of a single piece of malleable cast-iron, provided at one end with a threaded nut, M, and means for forming a joint with a copper point, A, and at the other end with an opening adapted to receive a wooden handle, C, and adjusting-rod F, substantially as described, and for the purposes set forth.

3. In a jointed soldering-iron wherein a threaded rod, F, is employed in adjusting the position of the copper point, the eye D, attached to or forming a part of the projecting end of the rod, substantially as described, and for the purposes set forth.

ALBERT P. OLMSTEAD.

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