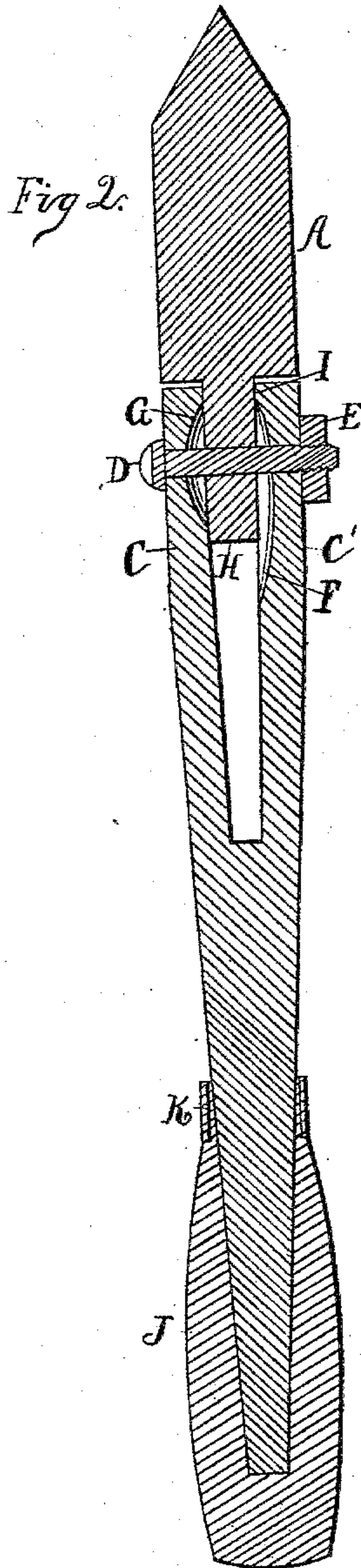
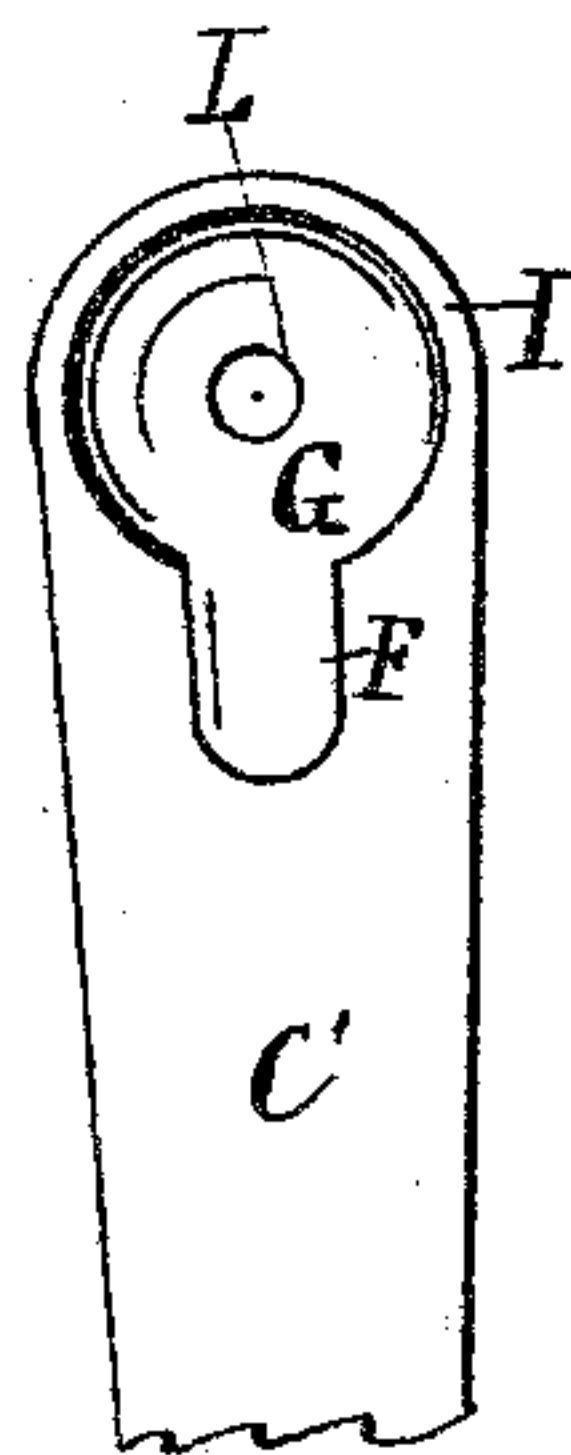
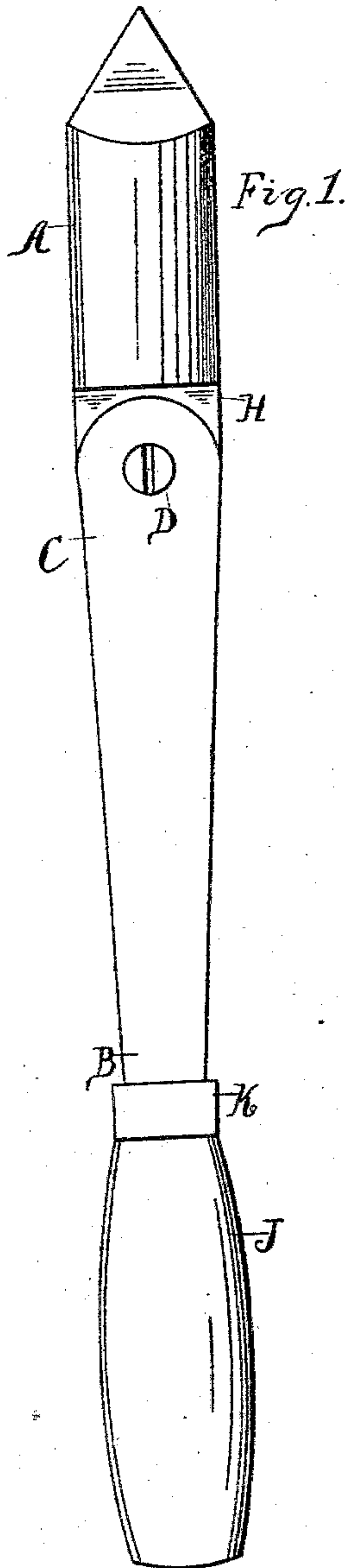


(Model.)

J. C. COVERT.  
SOLDERING IRON.

Patented Aug. 21, 1883.

No. 283,575.



Witnesses

*Wm. H. Hallister Jr.*  
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*J. C. Covert*  
*by Geo. A. Mosher*  
*att'y.*



# UNITED STATES PATENT OFFICE.

JAMES C. COVERT, OF WEST TROY, NEW YORK.

## SOLDERING-IRON.

SPECIFICATION forming part of Letters Patent No. 283,575, dated August 21, 1883.

Application filed July 17, 1883. (Model.)

*To all whom it may concern:*

Be it known that I, JAMES C. COVERT, a resident of the village of West Troy, in the county of Albany and State of New York, have invented certain new and useful Improvements in Soldering-Irons; and I do hereby declare that the following is a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

My invention relates to soldering-irons in which the copper point is pivoted upon the handle and adjustable to different angles; and it consists in limiting the contact-surfaces of said copper and handle to a narrow rim surrounding the pivot upon which the copper swings.

The object of my invention is to provide a soldering-iron in which the angular position of the copper point relatively to the handle may be changed at will and retained in any desired position without any readjustment of connecting or retaining parts.

My invention is intended as an improvement upon the soldering-iron described in Letters Patent No. 277,601, issued to A. P. Olmstead, May 15, 1883.

Figure 1 is a plan view of my improved device. Fig. 2 is a central longitudinal section vertical to Fig. 1. Fig. 3 is a plan view of the inner surface of handle-fork C'.

The handle B is preferably made of malleable cast-iron, spindle-shaped at one end to receive an ordinary wooden handle, J, and provided at the other end with the forks C C', having holes adapted to receive the bolt or pivot D and form a joint with the copper point A upon the tongue H. The inner surfaces of the forks are provided with saucer-shaped depressions surrounding the pivot D, and shown in Figs. 2 and 3. These depressions may be round and regular, as shown at G in Fig. 2, or may extend out along the surface of the fork, as shown at F in Figs. 2 and 3, provided only that the narrow rim I is formed to come

in contact with the tongue H. The tongue and forks are provided with suitable apertures, L, for receiving the pivot D, which is passed through the same and held therein by the nut E upon the threaded end of the pivot. By means of the nut the contact-surfaces of the forks at rim I and the tongue may be held together with great pressure, which will prevent the copper point A from swinging upon the pivot unless it is subjected to a corresponding pressure. All that is required, therefore, to secure adjustability of the copper point is to give the joint-surfaces such a degree of pressure that the copper point will not swing when in use, but that a slight blow of the implement upon a bench or other object will swing the copper upon its pivot. If the copper swings too easily, by reason of wear or otherwise, the contact-pressure is increased by turning up nut E, and it may be made to swing more easily by turning the nut back. The rim I may be of any suitable width. Thus we have a soldering-iron the point of which can be adjusted to any desired angle with the handle by a simple blow or blows, and without any other adjustment of parts. By reducing the contact or bearing surfaces between the copper-point tongue and the forks of the handle to the portions farthest removed from the pivot, more leverage is obtained to prevent the copper from swinging and to hold it firmly in position, so it will not vibrate or "wobble."

In the practical manufacture of jointed soldering-irons the inner surfaces of the forks C C' and the contact-surfaces of the tongue H cannot be made perfectly smooth and true, and the annealing process employed in malleablizing the forks frequently warps and twists them from their original position. It will be readily seen, therefore, that if it were attempted to make the inner surfaces of the forks plane without the depressions G the portion of these surfaces which would come in contact with the tongue H would be governed by chance, and might be limited to one side of the pivot D, or to that portion immediately surrounding the pivot. In the latter case the leverage of the frictional contact would be so small it would be impossible to securely retain the copper at the desired angle with the handle,



and the copper point would more easily tip from one side to the other—that is, from one end of the pivot toward the other—in which case it is said to wobble; but when the forks  
 5 are provided with the recesses G, as shown, the contact-surface with tongue H is limited to the rim I, which may be narrowed to a sharp or blunt edge, as desired, and the leverage of the frictional contact is the greatest possible  
 10 to resist any force applied to cause the copper to revolve or tend to revolve upon the pivot, and also to resist any tendency to wobble. If it were possible to make the inner surfaces of the forks and the corresponding surfaces of  
 15 tongue H perfectly plane and smooth, the contact-pressure of said surfaces could not be made sufficient to prevent the copper from turning on the pivot when in use. That portion of the surfaces near the pivot, where the  
 20 leverage is small, absorbs so much of the pressure there is not enough at the points of greater leverage to render the device operative for continuous use. In my improved device the narrow rim I cuts into the copper at the points  
 25 of best leverage, and any unevenness in the surfaces is soon worn away.

The forks C C' are made considerably longer than the tongue H, which permits of their being sprung sufficiently to easily insert the  
 30 tongue, and of their being closed tightly upon the tongue by the pivot or bolt D and nut.

One of the apertures in the forks may be threaded and nut E dispensed with. The saucer-shaped depression may be made in the tongue, instead of in the forks, when desired. 35  
 My invention enables me to dispense with the threaded rod extending through the handle to the copper point, as described by said Olmstead, which is a great saving in the expense of manufacture and in time occupied in adjustment. 40

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

1. The forks C C', recessed to form a circular rim, I, and provided with a suitable handle, 45 in combination with threaded pivot D, and nut E, or its described equivalent, and copper point A, provided with tongue H, substantially as and for the purposes set forth.

2. A jointed soldering-iron having the contact-surface between the tongue and ears or forks which form the joint limited to a circular rim, I, of said tongue or forks, substantially as described, and for the purposes set forth. 50

In testimony whereof I have hereunto set my hand this 28th day of June, 1883. 55

JAMES C. COVERT.

Witnesses:

GEO. A. MOSHER,

W. H. HOLLISTER, Jr.