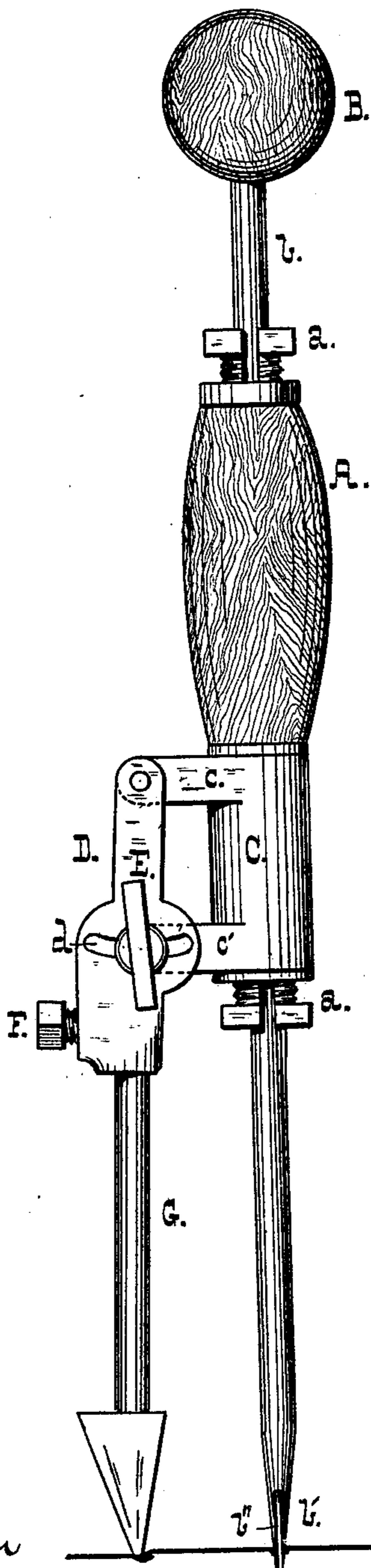


J. J. HENRY.
Soldering-Iron.

No. 213,902.

Patented April 1, 1879.



Witnesses,
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UNITED STATES PATENT OFFICE

J. JOSEPH HENRY, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF
HIS RIGHT TO FRANK K. TYLER, OF SAME PLACE.

IMPROVEMENT IN SOLDERING-IRONS.

Specification forming part of Letters Patent No. **213,902**, dated April 1, 1879; application filed
February 11, 1879.

To all whom it may concern:

Be it known that I, JOHN JOSEPH HENRY, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Soldering-Machines; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawing, in which the device is illustrated in side elevation.

This invention relates to that class of devices in use for soldering the caps of provision-cans; and it consists in certain features and details of construction, as hereinafter fully set forth.

Soldering-irons of the class named are constructed, as a rule, in one of two ways: an annular iron of a size to fit the can-cap and mounted upon a central spindle stepped in the central hole of the cap is brought down upon the solder and rotated or not; or else the soldering-iron, terminating in a point, is adapted to be rotated about the spindle after the manner of a pair of dividers. The device illustrated in the accompanying drawing belongs to the latter class and is constructed as follows:

A is an elongated handle, of wood or other substance, having a low heat-conducting power, longitudinally perforated, and provided at either end with an internally-threaded metallic bushing, to which is fitted a split spring-nut, *a*.

Through the central hole in the nuts, which is true and smooth, passes freely a rod, *b*, having a convenient handle, B. The lower end, *b'*, of the rod is tapered and split, as shown at *b''*.

To the end of the handle A is secured a metallic piece, C, having arms *c c'*. To the former is pivoted the holder D for the soldering-iron G, and the latter, *c'*, carries a set-screw, E, that passes through a slot, *d*, in the holder, the slot being formed in the arc of a circle described about the pivot, and the set-screw being provided with a shoulder, whereby the holder D may be clamped tightly against the arm *c'*.

F is a set-screw, which clamps the end of the soldering-iron and rigidly secures it in the holder D.

Such is in general terms a description of the construction of the device.

In operation, the end *b'* of the rod *b* is

slipped in the central hole of the can-cap, as shown, and being held vertical by one hand of the operator grasping the handle B, the iron G is rapidly rotated as the other hand is passed back and forth tangentially in contact with the handle A.

The set-screw F affords a ready vertical adjustment of the iron in the holder, and the latter may be radially adjusted to suit various sizes of can-caps by means of the screw E. This feature of vertical and radial adjustment is, however, old, and forms, broadly, no part of my invention.

The slit *b''* admits of the escape of air from the can as it becomes heated.

It has been found, in practice, that the rotation of the handle A about the rod *b* soon results in an amount of wear that prevents a true and accurate circular movement of the iron about the central rod or spindle. I therefore construct the rod of hard steel and confine the wear to the nuts *a a*, which, being split and slightly tapered, afford a ready means of taking up wear.

The shearing movement of the holder across the arm *c'*, and of the former upon the face of the shoulder on the set-screw E, remove any oxide resulting from the heating of the iron, and prevent any lost motion in that quarter.

When it is desired to heat the iron the rod *b* is withdrawn in order to prevent any corrosion of its point.

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

1. In combination with the rod *b*, having handle B, the handle A and holder D, pivoted thereto, laterally adjustable by means of the slot *d* and set-screw E, substantially as described.

2. In combination with the tool-holder, the rod *b* and handle A, bushed as described, and provided with split nuts, as and for the purpose set forth.

3. In combination with the rod *b*, the handle A, and piece C, the latter being provided with arms *c c'*, and the holder D, slotted as described, pivoted to the arm *c*, and adjustably clamped to the arm *c'* by the thumb-screw E, all substantially as described.

J. JOSEPH HENRY.

Witnesses:

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