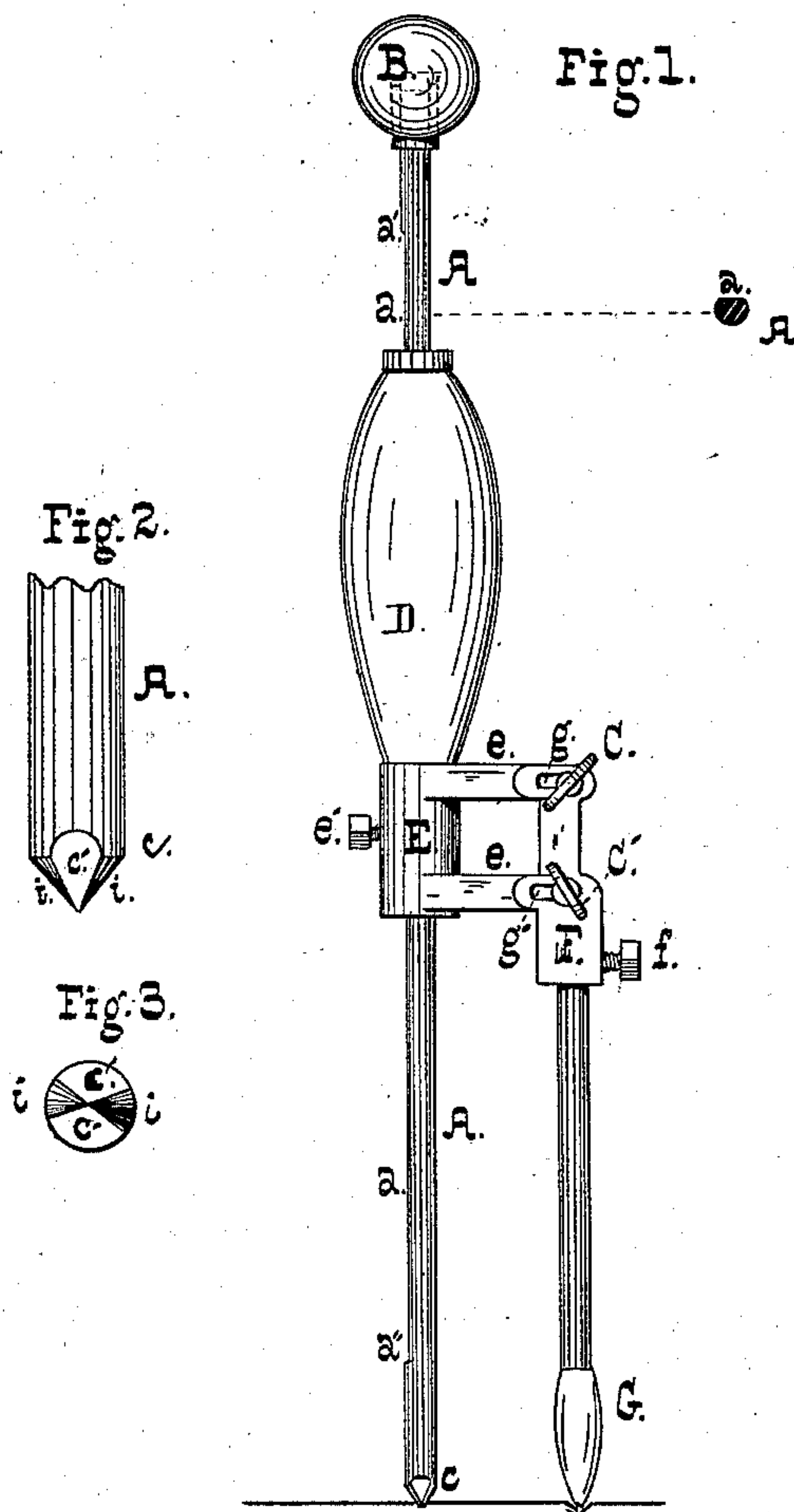


J. J. HENRY.
Soldering Iron.

No. 223,849.

Patented Jan. 27, 1880.



Witnesses,
D. L. Barclay
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Inventor,
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UNITED STATES PATENT OFFICE.

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

SOLDERING-IRON.

SPECIFICATION forming part of Letters Patent No. 223,849, dated January 27, 1880.

Application filed December 10, 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-Irons; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the device; Fig. 2, a similar view, enlarged, of the tip of the revolving rod; and Fig. 3 is an end view of the latter.

My invention relates to that class of soldering-irons in use for capping provision-cans; and it consists in certain improvements upon the invention described in Letters Patent No. 219,815, granted to me September 23, 1879.

In that class of capping-irons in which the handle revolves about the center-rod an obstacle was met in the wearing of the center-rod from the revolution of the handle, causing the soldering-point to have a shaky and uncertain motion in the cover-groove of the can.

In my patent above referred to is described an iron whose rod revolves with the handle, instead of the handle about the rod, whereby the wearing of the rod is prevented entirely.

The center-rod in the patented iron is provided with a swiveling tip having a pyramidal point, which is stepped in the center hole of the cap and permits the air to escape. An obstacle was, however, met in the practical working of the iron, which it is the object of my present invention to obviate. The tip was liable to rust and refuse to swivel, in which case its pyramidal point would ream the tin away from the edges of the hole in the cap, and the slightest rusting of the exposed iron would prevent the adhesion of the drop of solder used in sealing the can.

I now do away with the swiveling tip entirely, and so construct the end of the rod as to admit of its turning smoothly and without friction or reaming in the cap-hole, and at the same time admit of the escape of the air.

In the drawings, A is a rod, preferably of steel and cylindrical in shape, except that it has a flattened side, *a*, extending from *a'* to *a''*. As an alternative, the rod may be made polygonal in cross-section; but the flattened cylinder is more cheaply constructed and more readily fitted,

B is a terminal swiveling handle, of wood or some other bad conductor of heat.

D is the tool-holder handle, having a bushing at its upper end and a sleeve, E, at its lower, through which a screw, *e'*, passes, and, engaging with the flattened side of the rod A, prevents revolution of the handle D about the rod unless the screw is retracted. The latter is not driven into contact with the rod, whereby the handle may be slid back and forth upon the rod freely.

Arms *e e* extend from the sleeve E and sustain the tool-holder F, whose shank is slotted at *g g'*, and through the slots pass screws C C', whereby the holder may be adjusted parallel to the axis of revolution and at various distances therefrom.

The tip *c* of the rod A is designed to revolve smoothly in the cap-hole, and has the form of a cone flattened or grooved on one or more sides. The object of this construction is as follows: As the angle between the faces *c' c'* of the tip is less than that between the conical surfaces *i i*, the latter constitute the bearing-surfaces for the revolution of the rod, and apertures are left opposite the faces *c' c'* for the escape of the air.

As the faces *i i* are curved and smooth they do not abrade or ream away the tin, and the use of the iron keeps them true and smooth.

In operation, the iron G is heated, and the cap being laid in place on the can and solder applied to the groove, the rod A is slipped in the center hole and the iron is revolved by means of the handle D upon the solder until it is evenly spread and melted in the groove.

What I claim is—

1. In combination with the terminal swiveling handle B, the tool-holder handle D, mounted upon and arranged to rotate with the smooth-pointed rod A, as set forth.

2. The combination, in a soldering-iron, of a rod having a rounded tip adapted to rotate freely in the center hole of the can-cap, a tool-holder handle sliding freely on the rod, but rotating therewith, and a terminal swiveling handle, B, as set forth.

JOHN JOSEPH HENRY.

Witnesses:

R. D. WILLIAMS,
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