

(No Model.)

E. J. DOLAN.
HAND SOLDERING IRON.

BEST AVAILABLE COPY

No. 399,387.

Patented Mar. 12, 1889.

Fig. 1.

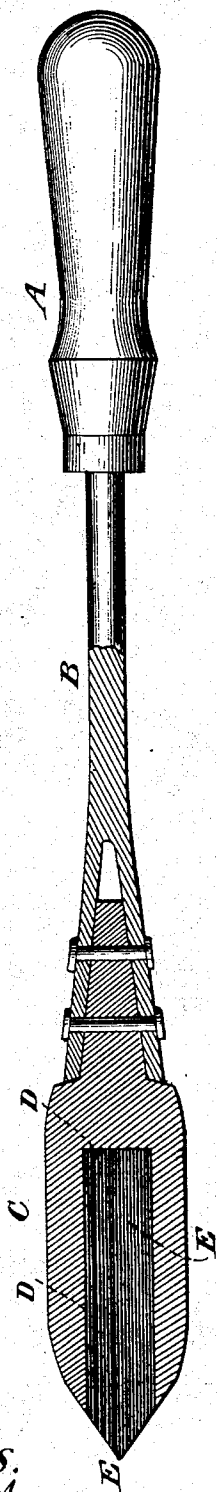


Fig. 2.

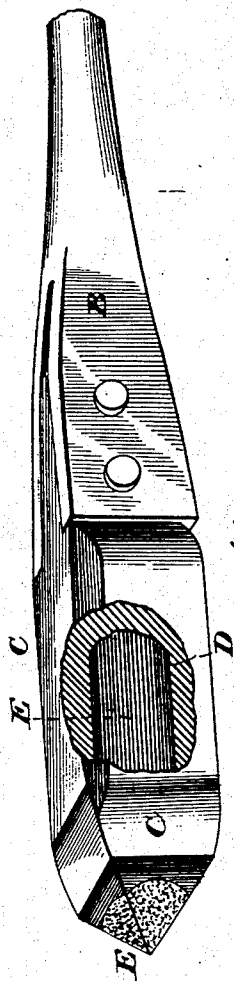
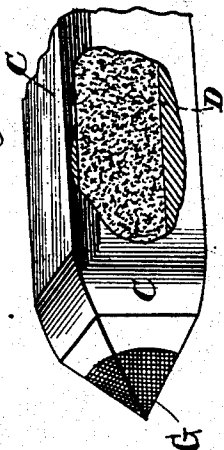


Fig. 3.



Witnesses.
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Inventor.
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UNITED STATES PATENT OFFICE.

EDWARD J. DOLAN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY
MESNE ASSIGNMENTS, TO THE BUREAU CAN AND MANUFACTURING
COMPANY, OF DELAWARE;
HAND SOLDERING-IRON.

SPECIFICATION forming part of Letters Patent No. 399,387, dated March 12, 1889.

Application filed October 13, 1888. Serial No. 288,001. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. DOLAN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Hand Soldering-Irons; and I do declare the following to be a full, clear, and exact description of the invention, such as 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 and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in hand soldering-irons; and it has for its object to provide a soldering-iron of this class which shall be provided with an absorbent core terminating in a point or other suitable form of soldering-surface.

A serious objection to the use of the ordinary copper soldering-irons heretofore used has been raised from the fact that in the heating of the iron great care has been necessitated, as when heated to a high degree the tin is burned off from the contact-point, thus rendering retinning necessary. It has also been found that when the copper soldering-surface is used it rapidly wears away, and in consequence it is found to be necessary to frequently reforge or otherwise sharpen the tool, which operation consumes a great amount of time and results in a loss of copper. I have discovered that all of these objections can be obviated and a much more durable and serviceable soldering-iron can be produced by providing the soldering-iron of the ordinary and well-known form of construction with a central longitudinal opening, and by filling such opening with a mass of granulated metal, iron filings, sheet-tin, or other metal rolled into a compact bunch, or by providing a filling composed of a series of wires gathered into a compact mass, and while any of these substances may be employed, and my invention contemplates their use, still I prefer the use of the wires, as I have found that the best results follow such use, and in the accompanying drawings I have illustrated this preferable form of construction only, as it is at

once evident that any of the other fillings or cores may be substituted for the wires. In case granulated metal or iron filings is used, it will be necessary to provide a wire screen or other suitable guard at the end of the iron, which will serve to retain the core or filling in place.

The invention is clearly illustrated in the accompanying drawings, which form a part of this specification, and in which, in Figure 1, I have shown a longitudinal central section through a soldering-iron constructed in accordance with my invention. Fig. 2 is a perspective view, partly in section. Fig. 3 is a perspective view of a modification, the same being shown partly in section.

Reference now being had to the details of the drawings by letter, A represents the handle, B the shaft, and C the head, of a soldering-iron. The head C of the iron is provided with a central longitudinal opening, D, extending from a point near the base of the head to the extreme outer end of the same.

E represents a mass of parallel wires, which are preferably, though not necessarily, of platinum. These wires are gathered into a compact mass, and when in place within the opening D they serve to completely fill the opening, and the end of the mass of wires is extended beyond the outer end of the iron, and is sharpened or otherwise suitably fashioned into a soldering-surface.

From the foregoing description the operation of the device will be readily understood.

In Fig. 3 of the drawings I have shown a modified form of iron, in which in lieu of the wires I have shown the chamber within the iron filled with iron filings. In order to retain the filings within the chamber, I provide a screen, G, of wire. This screen may be secured in place in any suitable manner; but in the present instance I have shown the outer end of the chamber as contracted or of less diameter than the body of the chamber, and the screen, which is inserted within the end of the chamber, is held in place by the bearing of its outer face at its enlarged inner end against the inner faces of the contracted walls of the outlet of the chamber. After heating the iron the point is inserted into the molten solder. The solder is at

once taken up by capillary attraction and fills the capillary spaces between the wires. The iron is then in readiness for use, and upon applying the iron to a surface to be soldered a free and uniform flow of solder is at all times assured.

In lieu of the iron illustrated I may adopt any known form of hand soldering-iron.

The form of the handle or holder may be varied; or, if for any reason it should be found to be desirable, the handle and recessed head C of the soldering-iron may be omitted and the mass of wires used alone, in which case any suitable handle or holder may be employed, and instead of the iron head other means may be used in connection with the plurality of wires to hold them compressed.

Having thus described my invention, what I claim as new is—

1. A hand soldering-iron composed of a

head, a handle, and a plurality of separate metallic bodies forming an absorbent core and projecting beyond said head, substantially as described.

2. As a new article of manufacture, the herein-described hand soldering-iron, comprising, in combination, a handle, a head provided with a central chamber open at the end of the iron, and a series of parallel wires held within the chamber, the ends of the wires being extended beyond the open end of the chamber and formed into a soldering-point, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD J. DOLAN.

Witnesses:

EDW. W. MAGILL,

CHAS. E. PERKINS.