

(No Model.)

R. C. BECKER.
SOLDERING IRON.

No. 558,759.

Patented Apr. 21, 1896.

Fig: 1.

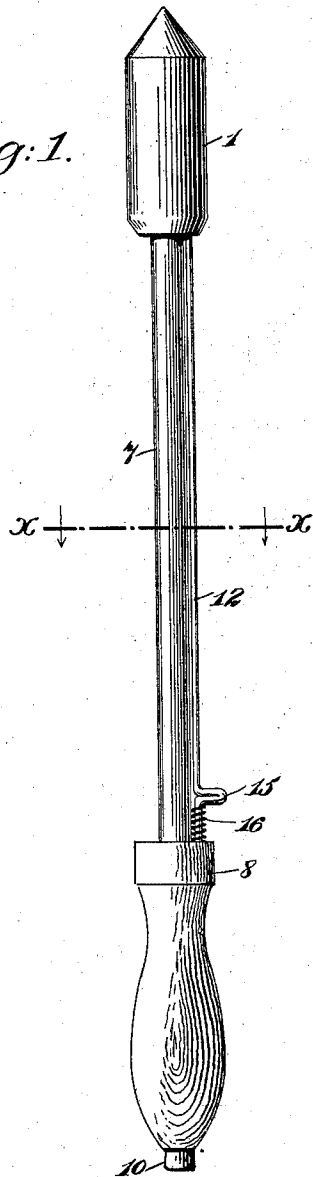


Fig: 2.

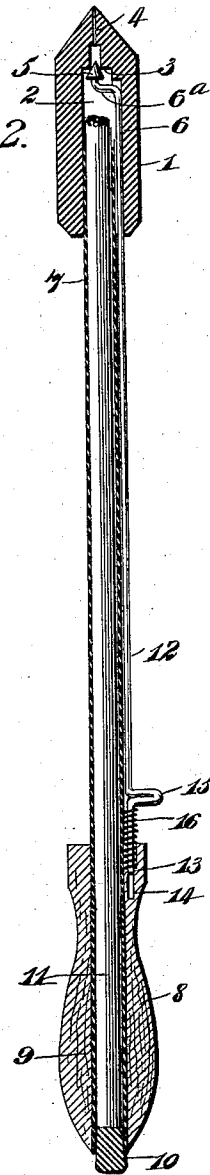
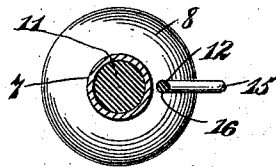


Fig: 3.



WITNESSES:

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RUDOLPH C. BECKER, OF SPRINGFIELD, OHIO.

SOLDERING-IRON.

SPECIFICATION forming part of Letters Patent No. 558,759, dated April 21, 1896.

Application filed August 9, 1895. Serial No. 558,724. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH C. BECKER, of Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Soldering-Irons, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in soldering-irons, such as are used by tinner, plumbers, &c., for soldering joints in metallic articles; and the object of the invention is to provide a device of this character of a simple and inexpensive construction, which shall be adapted for convenient and effective use.

The invention consists in a soldering-iron having a hollow formed in it and provided with a valve-seat and a valve, a tubular handle for the iron, having its hollow communicating with that of the iron, and a valve-stem for said valve guided on said handle and provided with means for holding the valve normally in its closed position.

The invention also contemplates certain novel features of the construction, combination, and arrangement of the various parts of the device, whereby certain important advantages are attained, as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a view showing the soldering-iron constructed according to my invention. Fig. 2 is a longitudinal section taken axially through the same, and Fig. 3 is a transverse section taken in the plane indicated by the line *x x* in Fig. 1.

In the views, 1 represents the head of the iron, which may be constructed of copper of the usual pointed form and is provided with a recess or cavity 2, formed at its larger end, at the base of which cavity is provided a valve-seat 3, beyond which a passage 4 of small diameter extends through to the top or point of the iron, as clearly seen in Fig. 2. The valve-seat 3 is arranged to be engaged by a valve or plug 5, carried on one end of a valve-stem 6, which is bent laterally, as seen at 6^a, the

valve 5 being arranged in the axis of the head 1 and the stem 6 being carried through the end of the head at one side of the center thereof to permit the insertion in the cavity or recess 2 of a tubular shank 7, having at its upper end a handle 8, of wood or equivalent material. The handle 8 is provided with a hollow 9, extending through it, as clearly seen in Fig. 2, and the said hollow receives the tubular shank 7, which is closed at its outer end by means of a plug or stopper 10, and said bore serves to receive, when said plug 10 is removed, a supply of solder 11, which may be in stick form, as shown, or in any other form desired.

The stem 6 of the valve 5 is carried up alongside the tubular shank 7, as indicated at 12, and has its upper end 13 so arranged as to engage a recess 14, formed in one side of the handle 8. Said stem is, as herein shown, formed of a wire rod of suitable thickness having a bent-out portion 15, forming a handle or thumb-piece to be conveniently engaged by the finger of the user when it is desired to raise the valve 5 from its seat in using the iron, and between said handle or thumb-piece 15 and the handle 8 of the tool a spring 16 is coiled on said stem, being adapted to hold said valve 5 normally against its seat.

In using the device for soldering the iron is heated in any preferred way, so as to melt or fuse the solder, which is thereby held in liquid form in the chamber or cavity 2 of the head, and when so heated the tip of the iron is applied to the joint to be soldered and the valve 5 lifted from its seat by manipulating the stem 6, so as to permit the liquid solder to pass through the passage 4 to the tip of the iron, as will be readily understood. When the iron becomes cold, any liquid solder remaining in the cavity or hollow 2 will, of course, solidify; but this will in no way impair the usefulness of the device, since such solidified solder will at once fuse when next the iron is heated.

From the above description it will be seen that the soldering-iron constructed according to my invention is of an extremely simple and inexpensive character and is very convenient for use, since it does not require the operator to use one hand to hold the solder while making a joint, so that the hand thus left free may be employed for holding the work or for

other purposes. Furthermore, it will be obvious that a considerable economy is effected in the use of solder by the employment of my improved iron, and the work is made much
5 more easy and comfortable.

From the above description of my improvements it will be obvious that some modification may be made in the construction of the improved soldering-tool without material departure from the principles and spirit of my
10 invention, and for this reason I do not wish to be understood as limiting myself to the exact construction herein set forth.

Having thus described my invention, I
15 claim as new and desire to secure by Letters Patent—

1. A soldering-iron, having a head formed with a cavity having a valve-seat and a passage beyond the same leading to the outside
20 of the head, a tubular open-ended shank having its bore connecting with said cavity, and adapted to receive at its open end a supply of solder, a valve in said cavity, having a stem extending up alongside the shank, and a
25 spring for holding said valve normally in a closed position, substantially as set forth.

2. A soldering-iron, having a head formed with a cavity having a valve-seat and a passage beyond the valve-seat leading to the out-
30 side of the head, a tubular open-ended shank

having its bore in communication with said cavity, and adapted to receive a supply of solder at its open end, a handle on the shank, a stopper for the outer end of the hollow in the shank, a valve to engage the valve-seat, 35 a stem therefor extending up alongside said shank and guided at its upper end in said handle, and a spring for holding said valve normally in a closed position, substantially as set forth. 40

3. A soldering-iron, having a head formed with a cavity, a valve-seat and a passage beyond the valve-seat leading to the outside of the head, a tubular open-ended shank having its bore in communication with the cavity, a
45 handle on said shank, said bore of the shank being adapted to receive a supply of solder at its open end, a valve to engage the valve-seat, a stem therefor extending up alongside the shank and guided at its upper end in said
50 handle, said stem having a bent-out portion forming a finger-piece, and a spring held on the stem between the said finger-piece and the handle and adapted to hold the valve normally in a closed position, substantially as set forth. 55

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Witnesses:

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