F. S. ROBINSON.

Soldering-Apparatus.

No. 200,875. Patented March 5, 1878.

Fig. 1.

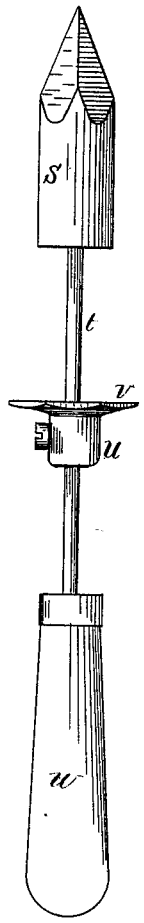


Fig. 2.

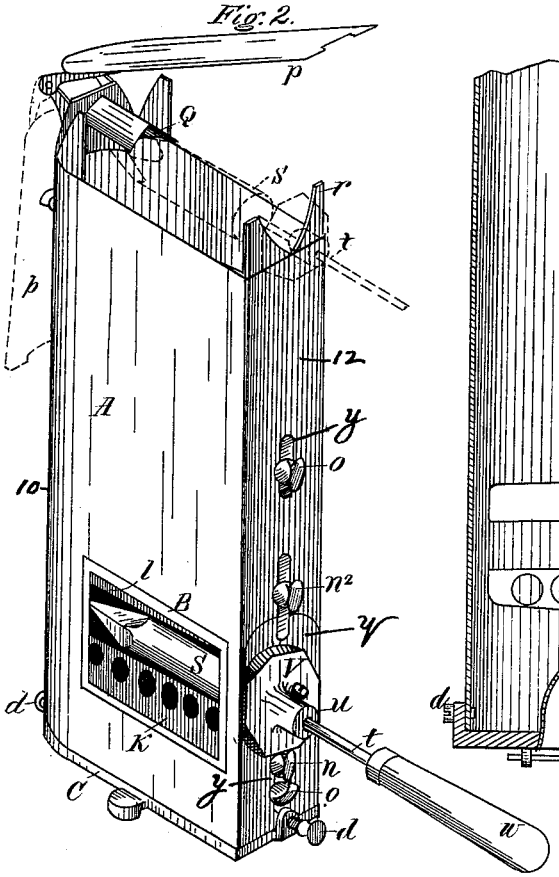


Fig. 3.

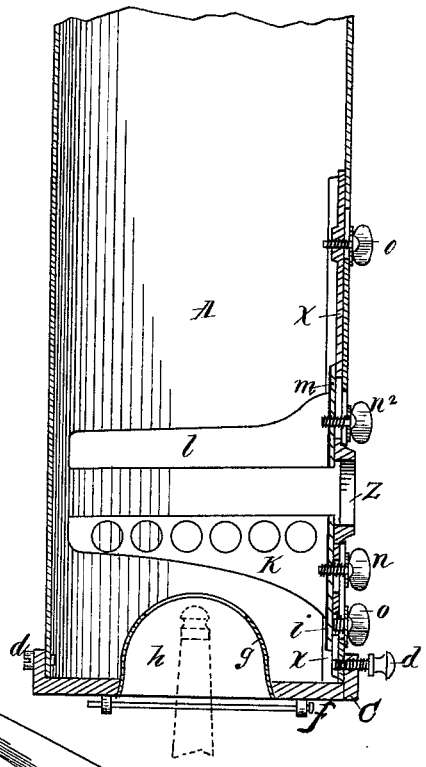


Fig. 4.

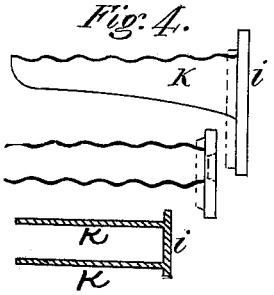
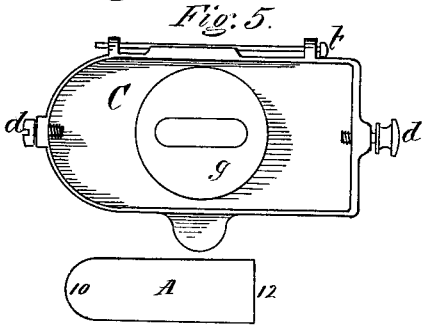


Fig. 5.



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UNITED STATES PATENT OFFICE.

FAYETTE S. ROBINSON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SOLDERING APPARATUS.

Specification forming part of Letters Patent No. **200,875**, dated March 5, 1878; application filed December 24, 1877.

To all whom it may concern:

Be it known that I, FAYETTE S. ROBINSON, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Soldering Apparatus, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a side elevation of the soldering-iron; Fig. 2, a perspective view of the apparatus; Fig. 3, a longitudinal vertical section of the same; Fig. 4, sectional views of the arms or holders; Fig. 5, a plan view of the chimney-holder, and also a reduced transverse section of the chimney.

Like letters of reference indicate corresponding parts in the different figures of the drawing.

My invention relates to that class of soldering apparatus in which the iron is heated by means of the flame of a lamp or a gas-jet; and consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a simpler, cheaper, and more effective device of this character is produced than is now in ordinary use.

The nature and operation of my invention will be readily obvious to all conversant with such matters from the following description.

In the drawings, A represents the chimney or body of the apparatus, which is preferably composed of sheet metal, and is provided with a glazed opening, B, and hinged cover *p*. The chimney is secured to the holder C by the screws *d d*, and is a parallelogram in cross-section, as seen at A, Fig. 5, one of its edges, 10, being rounded, and the other, 12, at right angles with its sides.

Through the edge 12 there is an oblong aperture, *y*, designed to receive and admit of the vertical adjustment of the circular lip or flange *z*, surrounding an opening in and forming a part of the plate *x x*. This plate is arranged on the interior face of the edge 12 of the chimney A, and is secured thereto by the screws *o o*, which pass through elongated slots *y y*, as shown.

Attached to the plate *x*, by the screw n^2, there is a plate, *m*, provided with two inwardly-projecting parallel arms or holders, *l*, one only being shown. These arms are about three-fourths of an inch apart, being straight on their lower edges, and so constructed and arranged that their inner ends are slightly lower than the outer ends, or that part nearest the opening surrounded by the flange *z*.

A corresponding pair of arms, K, project from the plate *i*, which is attached to the plate *x* by the screw *n*, the inner ends of the last-named arms being also lower than the outer ends of the same, and their upper edges straight.

The plates *i* and *m* are both rendered adjustable on the plate *x* by their respective screws *n* n^2 and the slots in which they work, the plate *i* being arranged below, and the plate *m* above, the opening in the plate *x*, which is surrounded by the flange *z*.

Attached to the inner face of the curved edge 10 of the chimney A there is a stud or stop, Q, having two downwardly-sloping sides, as shown, and immediately opposite this stop or stud the top of the edge 12 of the chimney is provided with a V-shaped notch, as seen at *r*. The broad or flattened sides of the chimney A are not so long or do not rise so high as the edges, so that when the cover *p* is closed ample spaces are left under the same for the passage of the smoke and heated air to keep up a proper draft.

The soldering-iron S is of the ordinary construction, having the shank *t* and handle *w*; but on the shank *t* there is an adjustable collet, *u*, provided with the flange or face-plate *v*.

In the use of my improvement, the chimney A is jointed to a lamp (not shown) by the hinge *f*, the plate C being provided with a cone, *g*, for directing and controlling the flame. The arms or holders K *l* having been properly adjusted on the plate *x* by means of the screws *n* n^2, with reference to the aperture surrounded by the flange *z* and the size of the soldering-iron S, the plate *x* is then adjusted by means of the screws *o o*, with reference to the cone *g*, to bring the arms K *l* to a proper

distance above the flame of the lamp. The iron S is then inserted through the aperture in the plate *x*, as seen in Fig. 2, until the flange of the collet *u* comes into contact with the outer edge of the flange *z*, where it will be held by the arms K *l*, and readily heated; or it may be heated by inserting the point under the stud Q, and dropping the shank *t* into the notch *r*, as shown by the dotted lines in Fig. 2.

The object of constructing the chimney in the form shown, viz., with flattened sides and one straight and one rounded edge, is to make it conform, as nearly as practicable, to the shape of the body of the soldering-iron, and thus concentrate the heat more directly and uniformly upon the same than could otherwise be done.

The object of depressing the inner ends of the arms or holders K *l* is to compensate for the gravitation of the handle *w*, and thus bring the squared faces of the flanges *v z* into perfect contact, and completely close the opening in the plate *x*, through which the iron is inserted into the chimney, the flange *v* serving as a door for this purpose, and also as a rest to prevent the iron from coming into contact with the bench of the workman when not in use.

In place of the lamp-flame for heating the iron, the chimney may be used with a gas-jet, if preferred, the burner being arranged as shown by the dotted lines *h*.

The arms K are perforated, as seen in Figs. 2 and 3, to enable the flame and heated air to pass more readily to the iron; but instead of this they may have their edges corrugated, as shown in Fig. 4, if desired. It will also be obvious that a series of openings can be made in the chimney, and provided with arms or holders, in such a manner that several irons may be heated at the same time, if necessary.

Having thus explained my invention, what I claim is—

1. In a soldering apparatus, the chimney A, provided with the holders *l* K and an opening through which the iron is inserted, substantially as and for the purpose specified.

2. In a soldering apparatus, the holders *l* K, having their inner ends depressed, substantially as and for the purpose set forth.

3. In a soldering apparatus, the chimney A, and flange *z*, in combination with the flange *v*, substantially as and for the purpose set forth and specified.

4. In a soldering apparatus, the chimney A provided with the stud Q and notch *r*, substantially as and for the purpose specified.

5. In a soldering apparatus, the adjustable plate *x*, provided with the flange *z*, in combination with the chimney A, substantially as and for the purpose set forth and specified.

6. The cover *p*, hinged to the top of the chimney A, said chimney being provided with a lateral opening, through which the soldering-iron is inserted, and with the holders *l* K, substantially as and for the purpose specified.

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