J. BURGESS.

Furnace for Heating Soldering-Irons.

No. 205,049. **Patented June 18, 1878.**

Fig. 1.

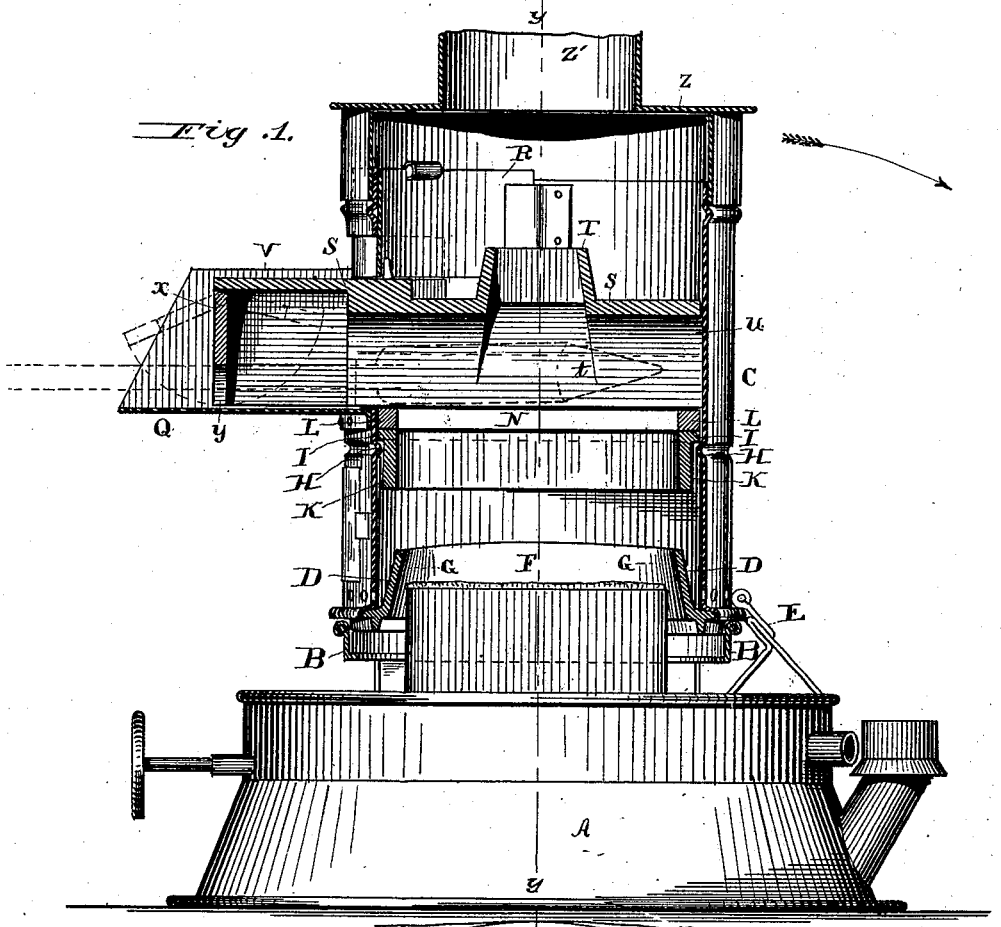
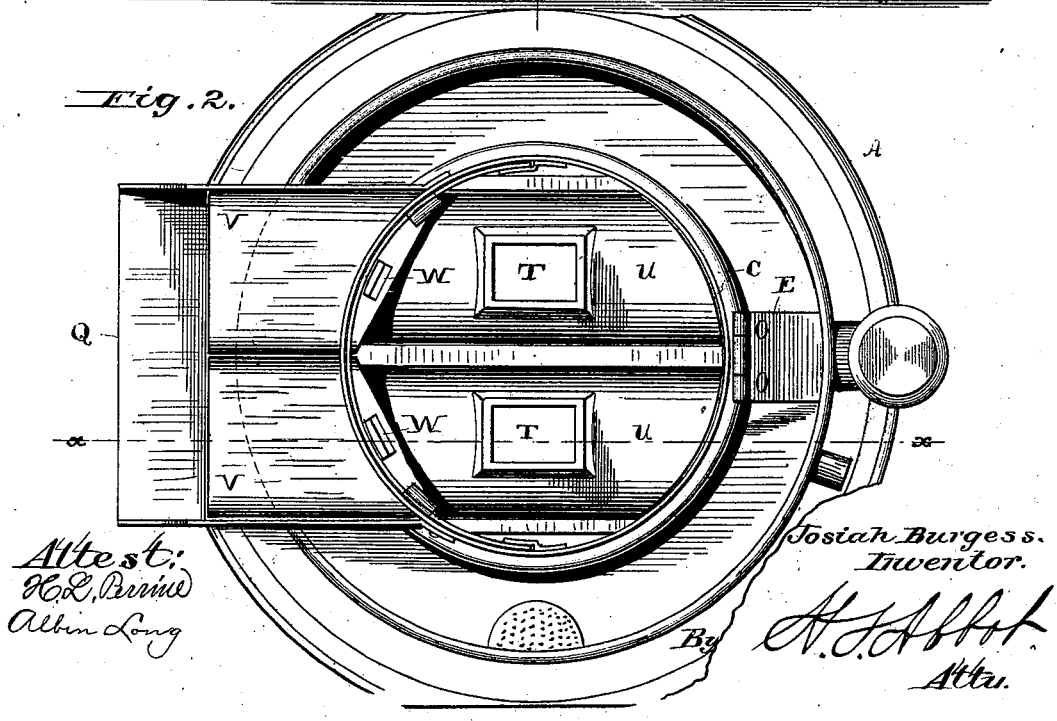


Fig. 2.



Attest:
H. L. Perrine
Albin Long

Josiah Burgess.
Inventor.

By A. J. Abbot
Attu.

J. BURGESS.

Furnace for Heating Soldering-Irons.

No. 205,049. Patented June 18, 1878.

Fig. 3.

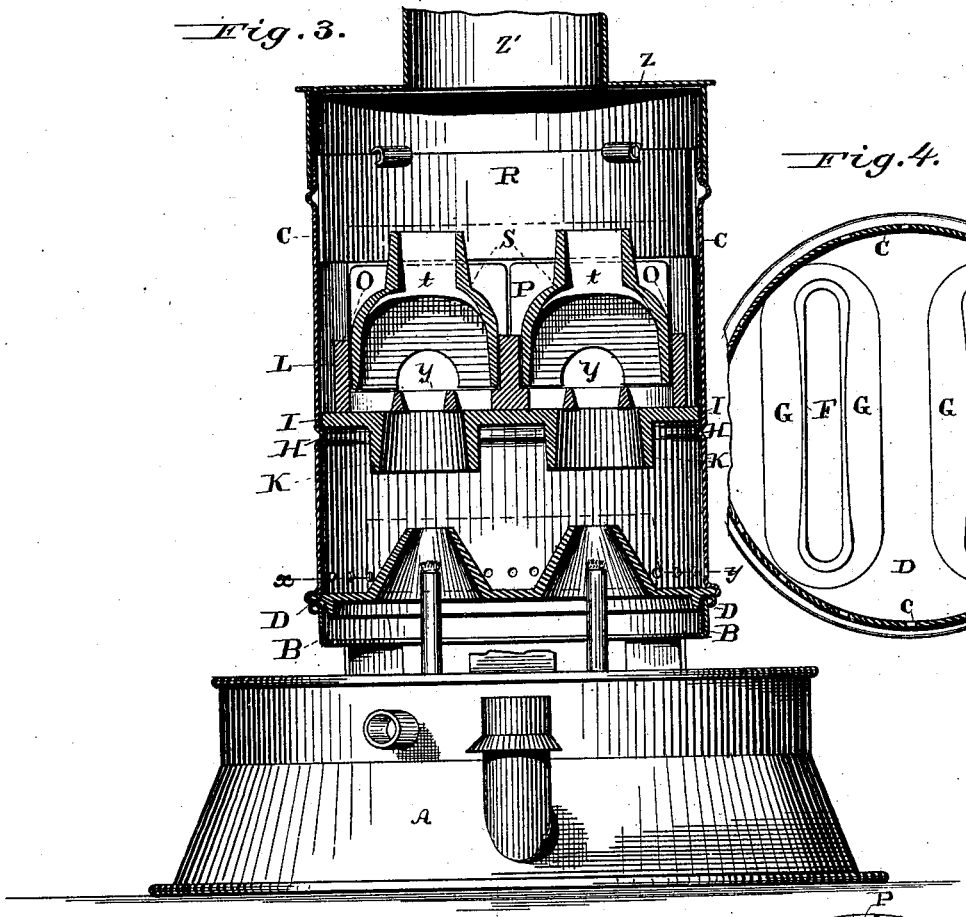


Fig. 4.

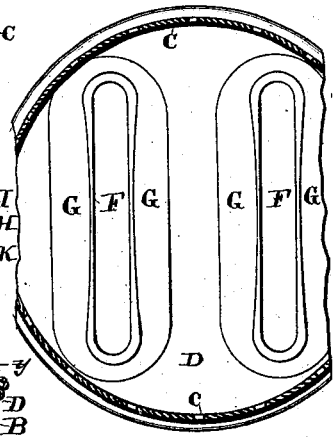


Fig. 5.

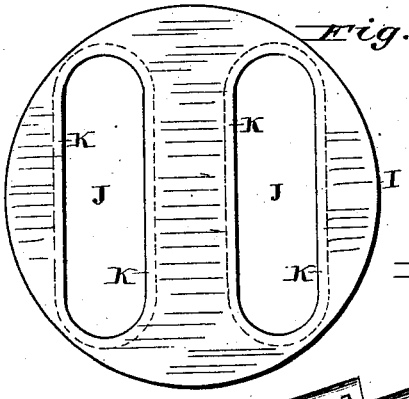


Fig. 6.

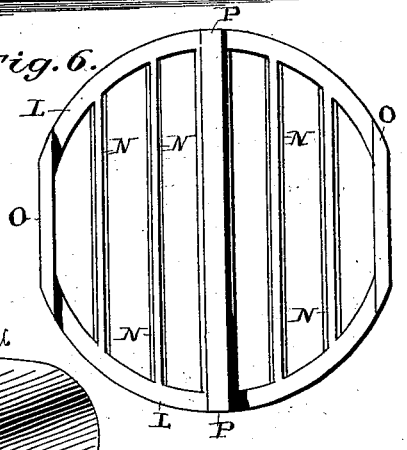
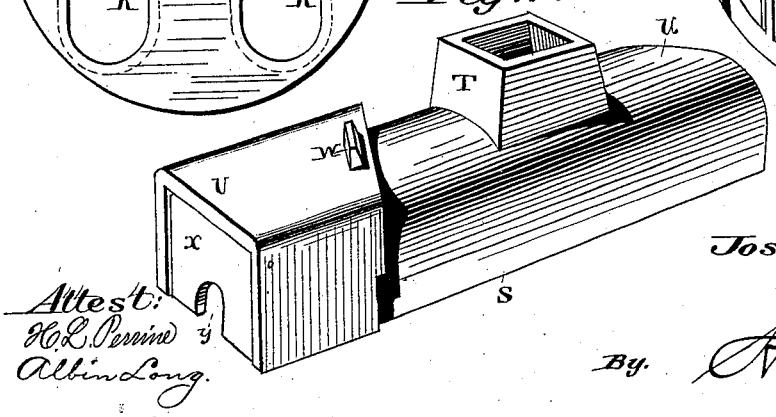


Fig. 7.



Attest:
H. C. Perrine
Albin Long.

Josiah Burgess.
Inventor.

By. A. C. Paul
Atty.

UNITED STATES PATENT OFFICE.

JOSIAH BURGESS, OF ZANESVILLE, OHIO.

IMPROVEMENT IN FURNACES FOR HEATING SOLDERING-IRONS.

Specification forming part of Letters Patent No. **205,049**, dated June 18, 1878; application filed March 4, 1878.

To all whom it may concern:

Be it known that I, JOSIAH BURGESS, of Zanesville, in the county of Muskingum and State of Ohio, have invented certain new and useful Improvements in Furnaces for Heating Soldering-Irons; and I do hereby declare that the following is a full, clear, and exact description thereof.

This invention relates to certain improvements in furnaces for heating soldering-irons; and the invention consists in the construction and arrangement of parts, which will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and arrangement, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a vertical section taken on line *x x* of Fig. 2. Fig. 2 is a top view of the furnace, with the top of the cylinder removed. Fig. 3 is a section taken on line *y y* of Fig. 1. Fig. 4 is a section taken on line *z y* of Fig. 3, showing the bottom casting with the elongated projecting burners. Fig. 5 is a top view of the heat-receiver. Fig. 6 is a top view of the grate upon which the hoods rest; and Fig. 7 is a perspective view of one of the hoods.

A denotes the oil-reservoir of an ordinary lamp-stove, provided with a frame, B, which serves as a seat and support for my soldering-furnace. This furnace consists of a sheet-metal cylinder, C, provided with a cast-iron base, D, with which is connected a hinge, E, extending up from the oil-reservoir A, as shown. This casting is provided with two or more elongated burners, F, having converging projecting sides G extending up any desired height. A suitable distance above the base D the cylinder C has a bead spun upon the inside, forming a rib, H, as shown, upon which rests the heat-receiver I. This heat-receiver is made of cast-iron, and is provided with two or more elongated slots, J, having downwardly-projecting sides K, as shown in Figs. 1 and 3, which receive the heat and convey it to a point, immediately over which the soldering-iron is placed. Upon the heat-receiver I rests a grate, L. This grate is provided with any desired number of bars N. The grate L is also provided with two side guides, O, and a center guide, P, arranged parallel with the bars N, as shown. The cylinder C is provided with a side extension or apron, Q, and a vertically-sliding gate, R, which closes down in front of the projections W and shuts up the space necessary for the passage of the flues T and said projections W. Under this gate, through a suitable opening in the cylinder C, are placed two hoods, S, which are preferably cast from copper. These hoods S extend back between the guides O and P, resting on the grate L, to and fitting close up against the opposite side of the cylinder, as shown in Figs. 1 and 2, the ends U being curved so as to fit the inside of the cylinder.

The flues T may be placed immediately over the center, as shown, or over either or both ends, as may be desired. The hoods S are made larger at *t* on the inside, as shown in Figs. 1 and 3, in order to have a free draft when large soldering-irons are used.

The outer ends V of the hoods rest on the side extension Q and are made with a flat top and provided with projections W, on the outside of which passes the gate R, resting on the hoods, as shown. These projections W prevent the hoods from working out of place.

Each hood is provided at the front with a swinging door, *x*, constructed with openings Y, thereby enabling the door to close over the handle of the soldering-iron and shut off any draft from the front of the hood. These doors are arranged to swing either in or out, as the soldering-irons are inserted or withdrawn from the furnace. The inside of this end V of the hoods is made square, as shown in Fig. 1, to allow the door to swing in and up out of the way when the soldering-iron is passed under the hood.

The cylinder C is provided with a removable top, Z, which has a chimney, Z′, which may be extended as desired, to increase the draft of the furnace.

When it is desired to light the lamp, the cylinder C is thrown back on the hinge E, thereby exposing the wicks.

When the soldering-irons are in place under

the hoods, they rest on the two bars N, allowing the heat to pass up on each side and out at the flues T.

When irons larger than the recess under the hood are desired to be heated, the hoods are raised in the guides O and P, which prevent the heat from escaping, and the gate R adjusted to accommodate the hoods in their raised positions.

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

1. The heat-receiver I, provided with elongated slots J, having downwardly-projecting sides K, in combination with the grate L, substantially as described.

2. A grate, L, provided with guides O P, whereby the hoods are prevented from being displaced laterally when lifted by the insertion of the soldering-irons, substantially as shown and described.

3. A grate, L, constructed with two bars, N, on each side of the center guide P, substantially as described.

4. The hoods S, constructed with flues T and lugs W, as shown and described.

5. The hoods S, provided with self-adjusting door X, having opening Y, substantially as shown, constructed and operating to close around the handle of a soldering-iron, as set forth.

6. The hoods S, in combination with the cylinder C and gate R, substantially as shown and described.

7. In a furnace for heating soldering-irons, the combination of the cylinder C, constructed with a side extension, Q, with the hoods S, provided with self-adjusting door X, substantially as described.

8. In a furnace for heating soldering-irons, the combination of the oil-reservoir or lamp A, cylinder C, casting D, constructed with elongated burners G, heating-casting I, grate L, hoods S, cylinder side extension Q, and top Z, constructed to be extended, substantially as described.

9. The hoods S, constructed with flues T, and made larger at *t* in order to allow large soldering-irons to be heated without obstructing the draft, substantially as described.

10. In combination, with the heating-chamber of a soldering-iron heater, the hoods S, having rectangular extensions V, which are provided with swinging doors X, substantially as shown and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOSIAH BURGESS.

Witnesses:

ED. S. PALMER,

JAMES B. COX.