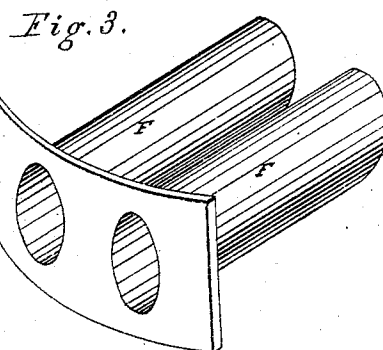
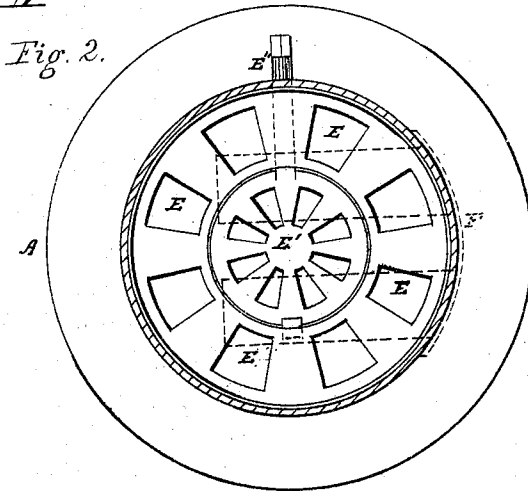
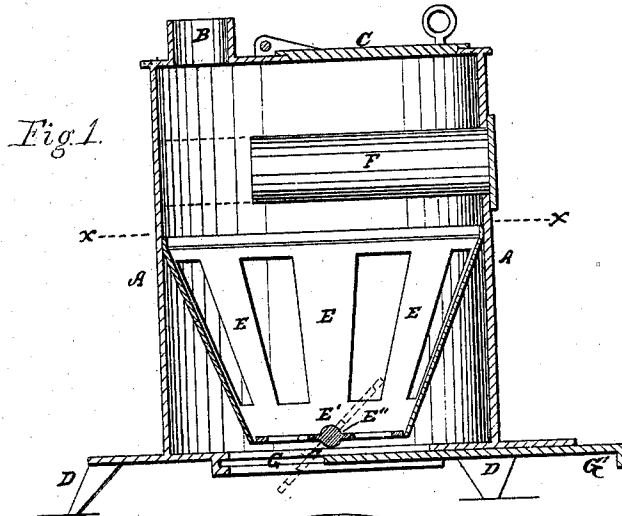


W. S. POTWIN.
Soldering-Furnaces.

Patented August 19, 1873.

No. 141,889.



WITNESSES—
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WILLIAM S. POTWIN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SOLDERING-FURNACES.

Specification forming part of Letters Patent No. **141,889**, dated August 19, 1873; application filed February 10, 1873.

To all whom it may concern:

Be it known that I, WILLIAM S. POTWIN, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Soldering-Pots, of which the following is a full, clear, and exact description, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a central vertical section of a soldering-pot in which my invention is embodied; Fig. 2, a horizontal section of the same in the plane of the line *x x*; and Fig. 3, a perspective view of the tool-receiving chambers detached.

Similar letters of reference indicate like parts.

The objects of my invention are, to economize in the use of fuel, prevent the soldering-tools from the injurious effects of intense heat, and improve the operation of the pot in other respects. To this end my invention consists in providing the pot with a grate and fire-pot, constructed substantially as hereinafter described, and with one or more tool-receiving chambers arranged over the fire-pot, and with a damper or sliding door arranged under the grate.

In the drawing, A represents the pot. B is the chimney, and C is a lid in the top of the pot. D D are legs for the purpose of supporting the pot. E is the fire-pot, consisting of bars converging toward each other, as shown. The part E' is an ordinary movable grate attached to the bar E'', which has suitable bearings in the pot. One end of the bar E'' extends through the pot, and is formed so that the part E' may be shaken and dumped, in the usual manner, by means of a shaker applied to the extended end of said bar. The bars E incline outwardly as they extend upward from the part E', so as to render the fire-pot dish-shaped, as shown, whereby I am enabled to use coke as fuel, the peculiar shape of the fire-pot admitting of a free combustion of the coke.

Heretofore the part E' only, or its equivalent, so far as I am aware, has constituted the grate in soldering-pots. Without the employ-

ment of the part E, charcoal has been used as a fuel with the greatest advantage; but by using the part E, constructed as described, I find that coke—a much cheaper fuel—may be used with still greater advantage, as it requires less care and less frequent replenishing in order to keep up a sufficient degree of heat.

I am aware that grates consisting substantially of the parts E and E' have heretofore been employed in furnaces and stoves, and I do not here intend to claim either the construction of the grate and fire-pot herein shown and described, or their application to any use except in connection with a soldering-pot.

F F are tool-receiving chambers arranged over the fire-pot, and may extend partly through the pot, in which case I deem it preferable to close their inner ends; or they may extend entirely through it, as indicated by the lines in Fig. 1. Instead of adapting each chamber to receive one tool only, there may be but one tool-receiving chamber, made sufficiently large to receive a number of tools; or there may be more than two chambers, F, arranged in the pot and radiating from its center. By providing the pot with the chambers F, the tools, when inserted therein, are sufficiently heated, and the tinning on the points of the "coppers" is less liable than heretofore to become melted off by a too intense heat. G is an opening in the bottom of the pot. This opening G is large enough to admit of dumping the contents of the fire-pot with facility, as indicated in Fig. 1. G' is a slide constructed and arranged to close the opening G. This slide operates as a door, through which the contents of the fire-pot may be discharged, and also as a damper for the purpose of regulating the draft.

In the soldering-pot now in general use, the tools are inserted through a permanent opening into the fire-pot, through which is a constant draft, and consequently causes a large consumption of fuel. By my construction of a soldering-pot, as shown and described, the tools do not come in direct contact with the fuel, and after the fuel is properly ignited, the slide or damper G' is closed, thereby shutting off the draft, and causing a slow but sufficient

combustion of the fuel, and for a greater length of time, than is the case with the ordinary charcoal soldering-pot.

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

In a soldering-pot, the combination, construction, and arrangement of one or more

tool-receiving chambers, F, fire-pot E, grate E', opening G, and damper G', all substantially as shown and described, and for the purposes set forth.

WILLIAM S. POTWIN.

Witnesses:

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F. F. WARNER.