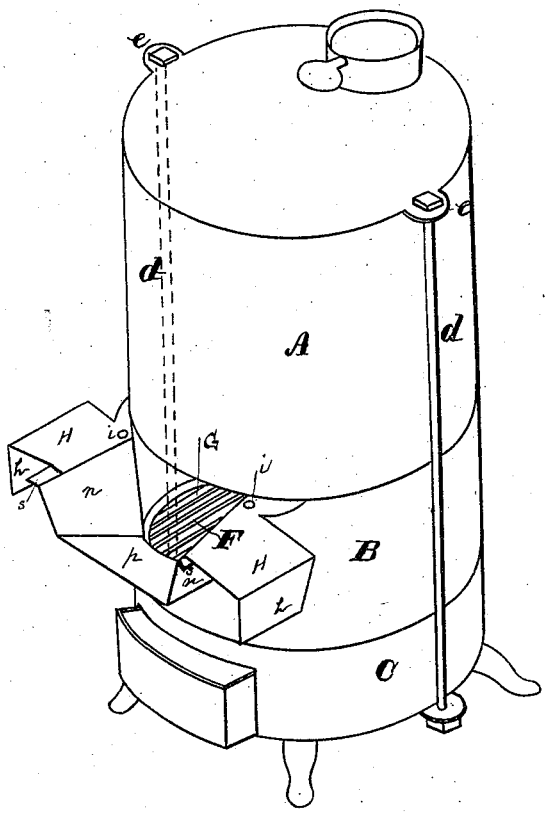
F. C. & C. E. SMITH.

SOLDERING FURNACE.

No. 181,489. Patented Aug. 22, 1876.



Witnesses

Geo. H. Strong

Jno. L. Boone

Inventors

Ferdinand C. Smith

Charles E. Smith

by Dewey & Co.

Attys.

UNITED STATES PATENT OFFICE.

FERDINAND C. SMITH AND CHARLES E. SMITH, OF PORTLAND, OREGON.

IMPROVEMENT IN SOLDERING-FURNACES.

Specification forming part of Letters Patent No. **181,489**, dated August 22, 1876; application filed May 16, 1876.

To all whom it may concern:

Be it known that we, FERDINAND C. SMITH and CHARLES E. SMITH, of Portland, in the State of Oregon, have invented an Improved Soldering-Furnace; and we do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use our said invention without further invention or experiment.

Our invention consists in certain details of construction of soldering-furnaces, as more fully hereinafter set forth and claimed.

Our invention is fully described in the following specification, and illustrated in the accompanying drawings, in which Figure 1 is a perspective view of our furnace.

In constructing a soldering-furnace we make the upright body or cylinder in two or more sections, so that the sections can be secured together in the proper position by means of binding-rods, and thus form a complete furnace—in the present instance, three sections, marked, respectively, A B C. The upper section, A, comprises all that portion of the furnace which is above the fire-place. The middle section, B, constitutes that portion which immediately surrounds the fire-place, while the section C forms the ash-pit and bottom of the furnace. These sections are placed one upon another in their proper order, and are then secured together by two or more binding-rods, *d d*, which extend upward on the outside of the furnace, their upper and lower ends being secured in lugs *e e* on the upper and lower sections A C, or they could pass through the top and bottom of the furnace, and thence down inside of the wall. By this arrangement the sections are bound strongly together, so as to form a complete furnace-body. The grate F is secured in the lower section C, while the opening G, through which the irons are introduced into the fire, is made in the middle or short section, B. This section being the most liable to burn out because it immediately surrounds the the fire is made short, so that when it burns out it can be removed, thus renewing the furnace at small expense. Attached to the short section and projecting from the lower side of the opening G is a hearth-support, *p*, which has perpendicular wings *n n* at each of its ends, the upper edges being bent outwardly to form lips *s s*. Pivoted to the lips *s*, at *i i*, are movable doors H, having depending aprons *h h*. When it is desired to close entirely the opening for the irons the doors H H are brought close together and the depending aprons close the front of the hearth. It is manifest that in this arrangement the opening can be made of any desired size, according to the location of the doors.

This manner of constructing this class of portable furnaces enables us to make them of cast-iron instead of sheet-iron, as heretofore, as the sections can be easily cast and put together, as above described.

By making the furnace of cast-iron we are not only able to make them more durable, but can make them at a less expense, while they will serve a better purpose for retaining the heat.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

In a solder-iron furnace, the removable section B around the fire-box, and provided with the opening G and hearth *p u*, in combination with the pivoted doors H H, having the depending aprons *h h*, substantially as set forth.

In witness whereof we have hereunto set our hands.

FERDINAND C. SMITH.
CHARLES E. SMITH.

Witnesses:

STEPHEN L. POLLOCK,
WILLIAM COLLIER.