

J. H. COWL.
Glass-Furnaces.

No. 153,810.

Patented Aug. 4, 1874.

Fig. 1.

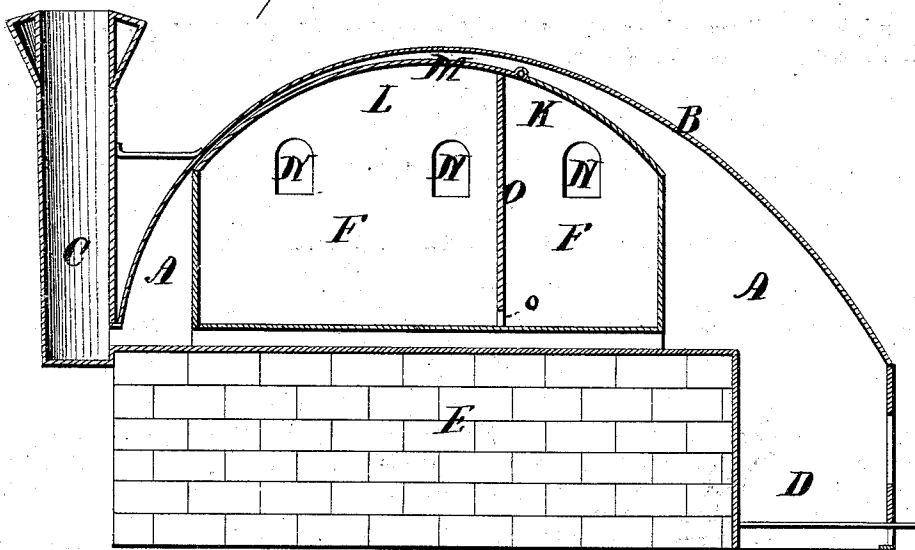
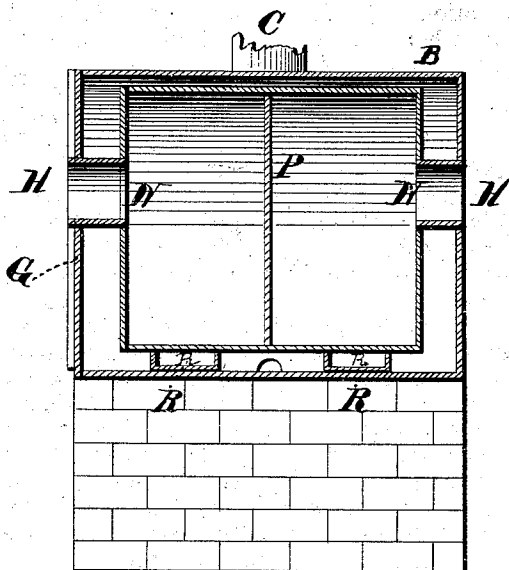


Fig. 2.



WITNESSES

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JOSEPH H. COWL, OF NEWARK, OHIO.

IMPROVEMENT IN GLASS-FURNACES.

Specification forming part of Letters Patent No. **153,810**, dated August 4, 1874; application filed June 6, 1874.

To all whom it may concern:

Be it known that I, JOSEPH H. COWL, of Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Glass Furnace and Pot; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention relates to a new and improved glass furnace and pot, in which the melting and working of a charge may be carried on at the same time, or, in other words, in which a previous charge may be worked off while a subsequent one is being melted; and it consists, first, in a furnace somewhat resembling an ordinary reverberatory furnace, with a fire box or chamber in front, and an elevated bed or hearth at the rear, in which one or more peculiar pots may be arranged and exposed to the action of the flames, as will be hereinafter described; and, second, in the peculiar construction of said pots, which consist of an open or covered melting-chamber, arranged next to the fire, and a covered receiving-chamber at the rear of this, the two communicating by apertures at the bottom, as will be hereinafter fully specified.

In the drawings, Figure 1 represents a longitudinal vertical section of my apparatus, and Fig. 2 a transverse vertical section of the same.

A represents the furnace, with an irregular dome-shaped top, B, and smoke-stack C at the rear. D is the fire-box, situated at the front of the furnace and below the elevated bed or hearth E, upon which the glass pot or pots F are placed. G is a door upon one side of the furnace, opposite the elevated bed or hearth E, through which the pots may be inserted or removed, or charged when necessary. The door and the opposite side of the furnace are provided with windows H, through which the charge of glass in the receiving-chamber of the pot or pots may be worked off. Below the fire-box is the usual ash-pit, for the reception of ashes, cinders, &c., and

through which the air is admitted to the fire. F represents the glass-pot, consisting of a melting-chamber, K, and a covered receiving-chamber, L, having a dome-shaped top, M, and apertures N on opposite sides, through which the charge in the receiver may be worked off. These apertures are directly opposite the windows in the door and side of the furnace, for a purpose which is obvious. The melting and receiving chambers are separated by a partition, O, with apertures o at the bottom, through which the melted charge passes from the melting-chamber to the receiver. The glass-pot may be divided by a longitudinal partition, P, so as to form two melting chambers and receivers, which will be worked from opposite sides of the furnace, or one or more single pots, with single melting and receiving chambers may be employed. The pots may be provided also with longitudinal flues R R underneath, extending from the front to the back of said pots, for the purpose of heating the bottom of the same, if desired.

The smoke-stack leads from the furnace, at a point near the elevated hearth or bed, in order that the flame may play entirely over the top of the pots, as will be evident.

The operation of my apparatus will be obvious to those skilled in the art of working glass from the foregoing description of the apparatus, and need not be set forth in detail.

What I claim, and desire to secure by Letters Patent, is—

1. The glass-furnace herein described, constructed with the arched top B, side doors G, furnace D at the lower front end, hearth E, elevated some distance above the furnace, and extending from near the front to the rear, upon which the glass-pots are placed, and smoke-stack C, communicating at the bottom rear end with the chamber A, whereby the heat is made to pass entirely around the pots and through the chamber A before escaping to the chimney, substantially as and for the purposes described.

2. The pot F, consisting of the open or covered melting-chamber K, arranged within the chamber A, next the furnace D, and receiving-chamber L, separated by a perforated par-

tition, O o, provided with a hinged dome-shaped top, M, and side doors or apertures N, substantially as and for the purposes described.

3. The combination, with the furnace A, constructed as described, of the pot F, divided into one or more melting-chambers by means of the longitudinal partitions P, and provided with the side doors N and lower longitudinal flues R R, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of May, 1874.

JOSEPH H. COWL.

Witnesses:

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