

F. ROHRBACHER & F. HORMANN.

Improvement in Glass-Furnaces.

No. 130,154.

Patented Aug. 6, 1872.

FIG. 1.

FIG. 2.

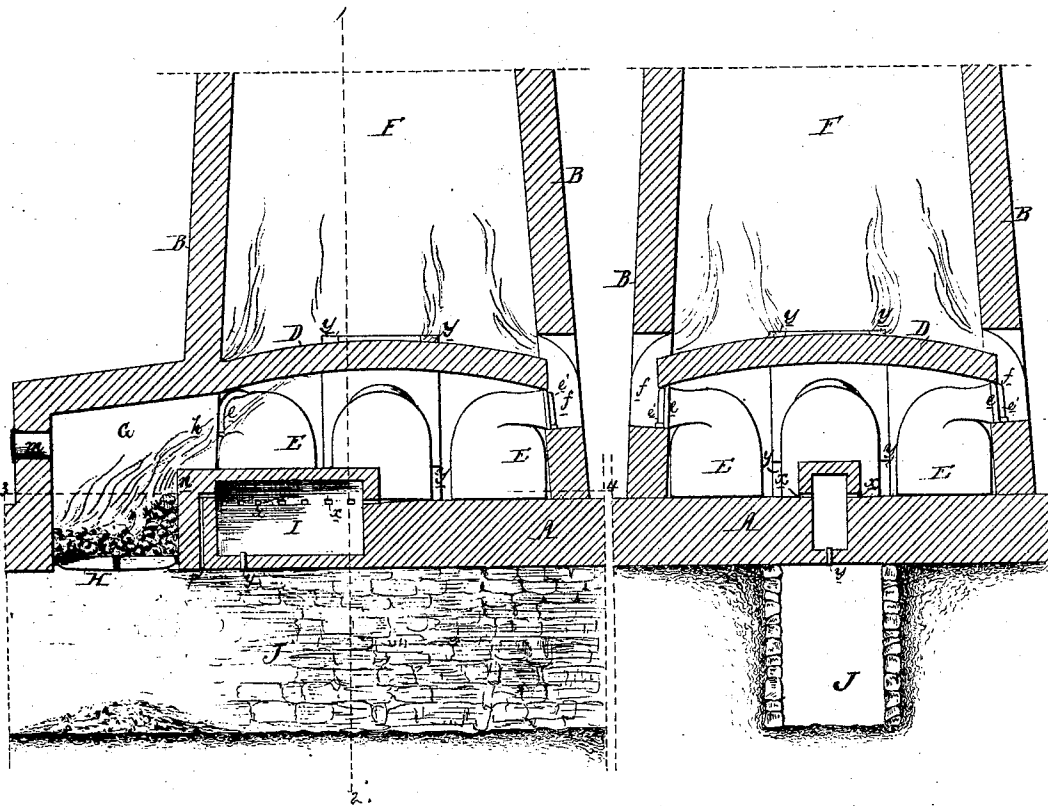
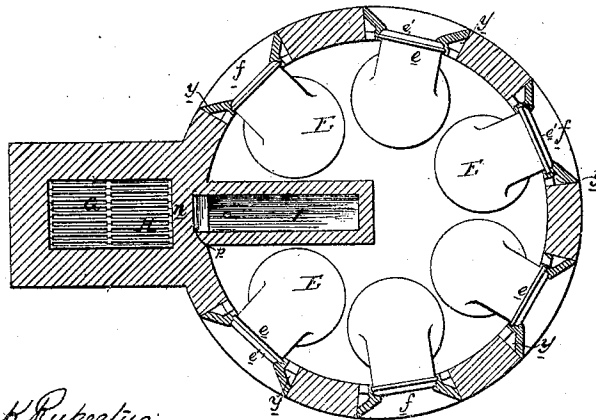


FIG. 3.



WITNESSES } Johann Rupertus
 Thomas McNeill

Frederik Rohrbacher
 and Ferdinand Hormann
 by their Attys. Horwath and Son

UNITED STATES PATENT OFFICE.

FREDERICK ROHRBACHER AND FERDINAND HORMANN, OF PHILADELPHIA,
PENNSYLVANIA.

IMPROVEMENT IN GLASS-FURNACES.

Specification forming part of Letters Patent No. 130,154, dated August 6, 1872.

Specification describing an Improved Glass-Furnace, invented by FREDERICK ROHRBACHER and FERDINAND HORMANN, both of the city and county of Philadelphia, State of Pennsylvania.

Improved Glass-Furnace.

Our invention consists of certain improvements in glass-furnaces, too fully explained hereafter to need preliminary description, the said improvements having been designed especially with the view of enabling ready access to be obtained to the fire-place or fire-places, and of causing a uniform and intense heat to pervade the whole interior of the furnace, and to preserve from injury the contents of such pots as may be broken.

In the accompanying drawing, Figure 1 is a vertical section of a glass-furnace with our improvement; Fig. 2, a vertical section on the line 1 2, Fig. 1; and Fig. 3, a sectional plan on the line 3 4, Fig. 1.

A is the base of the furnace; B, the circular wall of the same; D, the roof or dome; and E, the pots, arranged in a circle on the bench *a*, the nose *e* of each pot projecting into a working hole, *f*, and the opening of each pot being furnished with a cover, *i*. On the outside of the glass-furnace is built a fire-place, G, furnished with the usual grate-bars H, this fire-place communicating, through a passage, *h*, and over a bridge-wall, *n*, with the interior of the glass-furnace, and having in front an opening, *m*, for the admission of fuel. Within the glass-furnace, and separated by the walls *n* from the fire-place G, is built an air-chamber, I, communicating through a passage or passages, *p*, with a pit, J, formed beneath the base of the furnace, and communicating with the interior of the furnace through holes *x x*, which are on a level, or nearly so, with the bench *a*. The interior of the furnace communicates with the stack F through the usual angular flues *y*, formed at the edges of the working-holes *f*.

The products of combustion, after reaching

the interior of the furnace, are dispersed in every direction, and are consequently brought to bear on the whole of the pots in their attempts to escape to the numerous flues *y*. As the products of combustion, however, enter the furnace, they are met by numerous jets of heated air escaping through the openings *x*, and these jets of heated air tend to ignite the unconsumed products of combustion, so that a clear flame of intense heat pervades the whole interior of the furnace.

The chamber I is supplied with air, through the passage or passages *p*, from the pit J, which is made of considerable length in order to produce a draft, and as the air, before passing from the said chamber through the apertures *x* into the furnace, is considerably heated, it will have no tendency to chill and crack the pots. If a pot should become burnt out or broken, the molten glass from the same would flow through the apertures *x* into the chamber I, from which the whole could be withdrawn through an opening, *y*, communicating with the cave, and the glass thus saved would be but slightly deteriorated, as the interior of the furnace can be kept comparatively clean and free from cinders.

We claim as our invention—

1. The combination, in a glass-furnace, of an exterior fire-place or fire-places and openings *x*, through which heated air is introduced into the interior of the furnace, substantially as described.

2. The chamber I, arranged above the ash-pit and below the floor of the furnace, and communicating with the latter, as and for the purpose set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

FREDERICK ROHRBACHER.
FERDINAND HORMANN.

Witnesses:

WM. A. STEEL,
HARRY W. DOUTY.