

W. LEIGHTON, Jr.
Glass Furnaces.

No. 141,935.

Patented August 19, 1873.

Fig 1

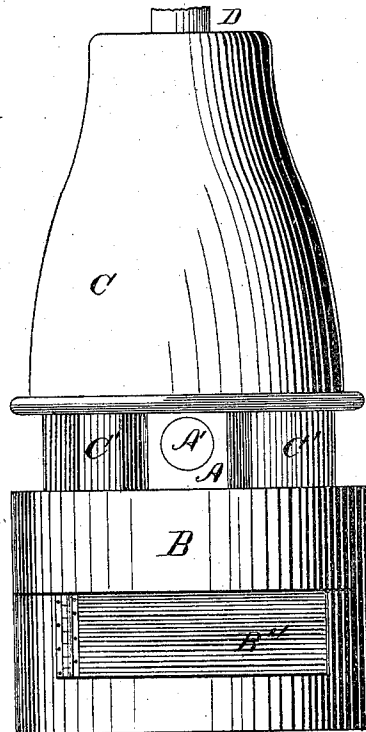


Fig 3

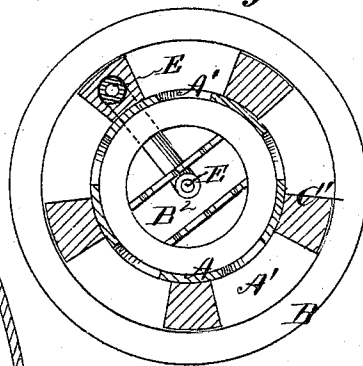
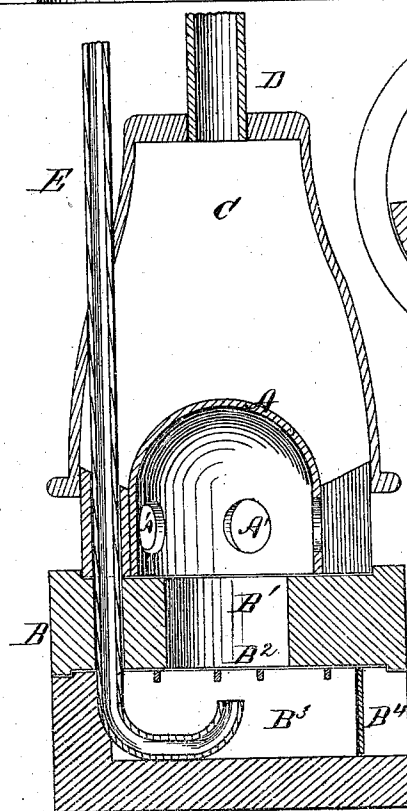


Fig 2



Attest
W. Bradford
Clerk of the Court

Wm. Leighton Jr
Inventor
D. P. Holdaway & Co.
Atty

UNITED STATES PATENT OFFICE

WILLIAM LEIGHTON, JR., OF WHEELING, WEST VIRGINIA.

IMPROVEMENT IN GLASS-FURNACES.

Specification forming part of Letters Patent No. **141,935**, dated August 19, 1873; application filed March 26, 1873.

To all whom it may concern:

Be it known that I, WILLIAM LEIGHTON, Jr., residing at Wheeling, in the county of Ohio and State of West Virginia, have invented a certain Improvement on Glass-Furnaces, of which the following is a specification:

This invention relates to that class of glass-furnaces which are used for fire-polishing or finishing glass-ware, and are composed of a reverberatory furnace with working-holes in the sides, through which the ware to be treated is inserted and removed, and the hot gases escape under a superimposed hood. My improvement consists in the employment of a blast of air introduced through a pipe into a tight chamber under the grate-bars, and forced into the body of the fuel, the pipe being passed through the space between the cupola and the hood, so that the air, in flowing through this portion of the pipe, will be heated, and thus be in better condition to aid in the combustion of the fuel.

Figure 1 is an elevation of my improved finishing-furnace. Fig. 2 is a vertical section of the same. Fig. 3 is a horizontal section.

The same letters of reference are employed in all the figures in the designation of identical parts.

The cupola A of the furnace is built upon a suitable base, B, containing the fire-pot B¹ centrally under the cupola-grates B², and chamber B³ underneath the latter. This chamber, serving the twofold purpose of air-chamber

and ash-pit, is walled in on three sides, and on the fourth side covered by a door, B⁴, so constructed and arranged that it will shut, practically, air-tight. The working-holes A', through which the articles to be finished are introduced into the cupola, also serve as draft-holes, through which the products of combustion escape under the circular overhanging hood C, which conducts them to the chimney D. The hood may be supported by pillars C' upon the base B, or in any other suitable manner. The blast-pipe E passes through the wall of the hood C, down between it and the cupola, so as to expose a section of it to the hot gases passing up the hood to heat the air before it enters the air-chamber B, where the blast-pipe terminates, forcing the blast directly through the grates into the body of the fuel thereon. The fuel used in this furnace will be bituminous coal.

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

In combination with a glass-furnace, the blast-pipe E, passing through the hood and leading into the air-chamber for conveying a heated blast to the furnace, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM LEIGHTON, JR.

Witnesses:

JOHN HEINLIN,
ZEEE LOHMANN.