

D. Hager.

Furnace.

N^o 96,001.

Patented Oct. 19, 1869.

Fig. 1.

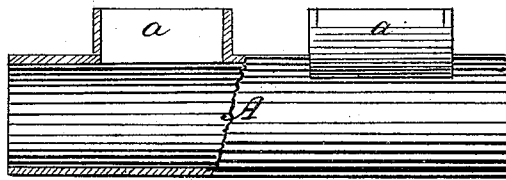


Fig. 2.

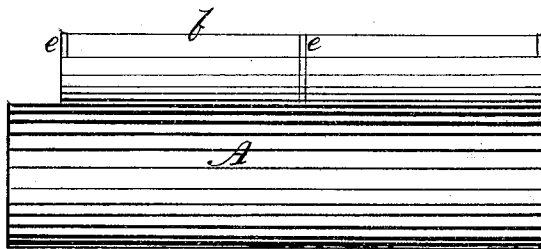
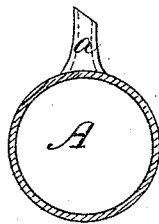


Fig. 3.



Witnesses.
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per
Alexander Thasdy
Atty.

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DAVID HARGER, OF DES MOINES, IOWA.

Letters Patent No. 96,001, dated October 19, 1869.

IMPROVEMENT IN FURNACES FOR STEAM AND OTHER DEVICES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DAVID HARGER, of Des Moines, in the county of Polk, and in the State of Iowa, have invented certain new and useful Improvements in Furnaces; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention is intended as an improvement upon the improvement in furnaces, for which a patent was granted to me, November 5, 1867, and consists in providing the pipe therein described, through which the air is distributed to the fire, with box-apertures, or with a slot-aperture having partitions.

In order to enable others skilled in the art to which my invention appertains, to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side view, part in section, of the pipe with box-apertures, and

Figure 2 is a side view of the pipe with slot aperture.

Figure 3 is a transverse section of the pipe.

A represents a portion of the pipe that extends under and across the fire-box in a furnace, said pipe extending and leading to a fan, situated at any convenient place in the same or another building, or outside,

for the purpose of conducting cold air to the furnace or grate, and distributing it properly to the fire.

The upper side of the pipe A is provided with a series of elongated apertures, from which project nozzles *a a*, as seen in fig. 1, forming, as I call them, "box-apertures," through which the air is discharged.

In fig. 2, I have represented the pipe A as having an open joint or slot extending the whole length of the same, from which flanges extend upward, forming an elongated box, *b*, which, by partitions *e e*, is divided into any number of channels, through which the air is distributed.

I do not confine myself, in the use of my invention, to furnaces alone, as it is equally applicable to stationary steam-mills, vessels, locomotives, or in fact any place where a fire is to be kept up.

Having thus fully described my invention,

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

The pipe A, constructed, as described, with box-apertures *a a*, or a slotted aperture, *b*, with partitions *e e*, substantially as herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 2d day of June, 1869.

Witnesses:

DAVID HARGER.

ADAM HOWELL,
M. H. DEMENT.