N. R. PACKARD.

DEVICES FOR SUPPLYING BLAST TO FURNACES.

No. 183,509. Patented Oct. 24, 1876.

Fig. 1.

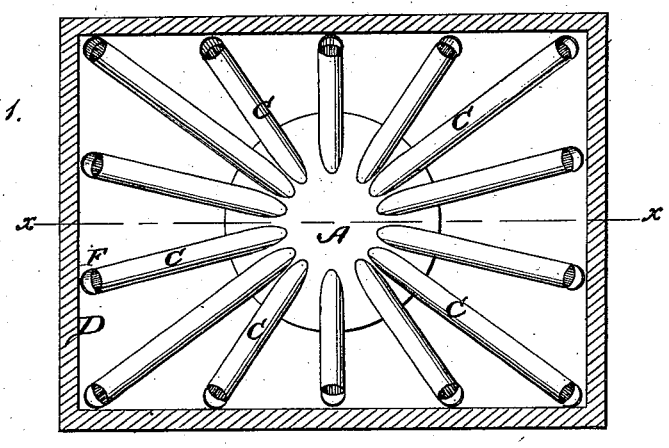
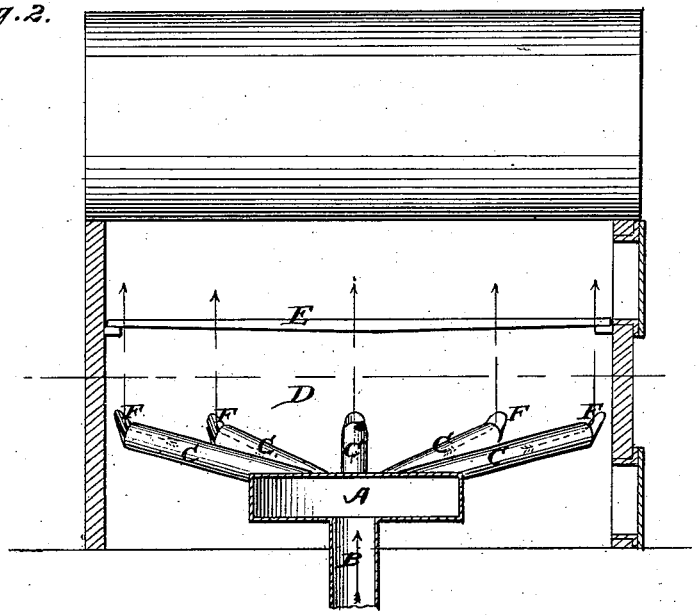


Fig. 2.



Witnesses.
A. E. Davison
Sam'l M. Barton

Inventor
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UNITED STATES PATENT OFFICE.

NATHANEL R. PACKARD, OF BROCKTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND WILLIAM AUSTIN, OF SAME PLACE.

IMPROVEMENT IN DEVICES FOR SUPPLYING BLAST TO FURNACES.

Specification forming part of Letters Patent No. **183,509**, dated October 24, 1876; application filed April 12, 1876.

To all whom it may concern:

Be it known that I, NATHANEL R. PACKARD, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain Improvements in Blasts for Furnaces, &c., of which the following is a specification:

In the accompanying drawing, forming a part of this specification, Figure 1 represents a top-plan view of my invention located in the ash-pit of a boiler-furnace. Fig. 2 represents a section on the plane of line *x x*, Fig. 1.

This invention has for its object to provide an improved blast-distributer for furnaces, which shall divide the blast into a number of separate jets or currents, and direct them simultaneously against the bottom of the grate at various points along the outer edge or margin of the fire, thereby promoting the combustion of the coal near the furnace-walls, where it is most liable to be retarded. To this end, my invention consists in a blast-distributer of such construction as to produce the desired result, as I will now proceed to describe.

In carrying out my invention I employ a central chamber, A, of any suitable form, located in the ash-pit of a furnace, and connected, by a pipe, B, with a blower. Diverging from the chamber A are a series of pipes, C, which communicate with the interior of the chamber, and are open at their outer ends, which are turned upwardly, or provided with upwardly-inclined deflectors F, which give an upward direction to currents of air coming from the chamber A through the pipes G. These pipes are of different lengths, their outer ends being in close proximity to the walls of the ash-pit below the grate, as shown in Fig. 1. The pipes are thus adapted to deliver the currents driven through them from the chamber A at different points along the outer portion or margin of the grates, thus promoting combustion of the coal lying around the walls of the furnace, where the fire is liable to be lowest.

This arrangement of blast-pipes obviates the necessity of directing a blast against the center of the fire, as the quickening it receives around its edges insures free combustion at the center. Uniform combustion is thus insured in all parts of the grate.

I claim—

The blast-distributer, consisting of the central chamber A and the radiating pipes C′, which are of varying lengths, and are adapted to deliver jets or currents of air at various points along the outer edge or margin of a furnace-grate, substantially as shown and described.

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

NATHANEL R. PACKARD.

Witnesses:

SAML. M. BARTON,

C. F. BROWN.