

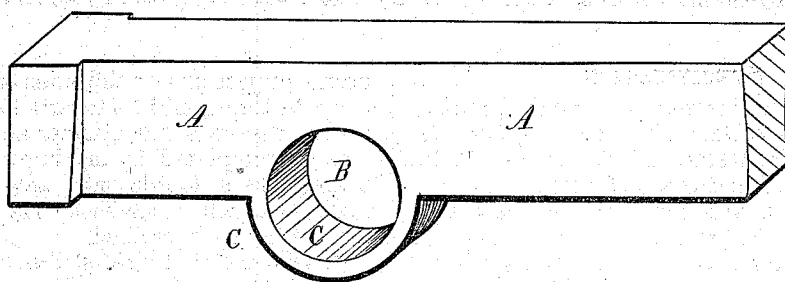
A. RAWSON.

Improvement in Grate-Bars for Furnaces.

No. 129,862.

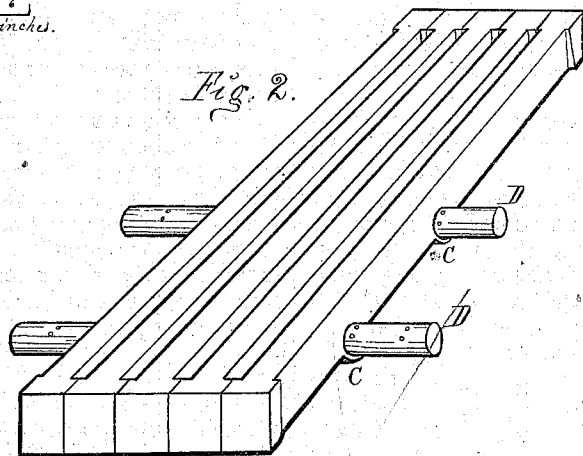
Patented July 23, 1872.

Fig. 1.



1 2 3 4 5 6
Scale for Fig. 1, - inches.

Fig. 2.



Witnesses.

S. W. Young,
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UNITED STATES PATENT OFFICE.

ALONZO RAWSON, OF DES MOINES, IOWA.

IMPROVEMENT IN GRATE-BARS FOR FURNACES.

Specification forming part of Letters Patent No. 129,862, dated July 23, 1872.

SPECIFICATION.

Specification describing certain Improvements in Grate-Bars for Furnaces, invented by ALONZO RAWSON, of Des Moines, in the county of Polk and State of Iowa.

My invention is an improvement of my grate-bar for furnaces patented June 4, 1872, No. 127,428. It consists in forming a grate-bar with an opening and a rim on the under side, in such a manner that when a series of the bars are placed together to form a grate an open passage is provided for the reception of an air-distributing tube, as hereinafter fully set forth.

Figure 1 of my drawing is a perspective view of the front end of a bar, and illustrates the manner of forming the opening and rim on the under side. A A represent a common bar. B is a half-round cavity extending across the under half of the bar. The position, size, and shape of this cavity may vary. C C is a half-circle rim cast solid with the bar. It conforms in shape and position with the cavity B to produce an opening for a blow-pipe or air-distributing tube. This rim C C may be left off, and the tube D inserted and secured in the cavity B in any common way to accomplish the results contemplated by the combination of the tube and the grate.

Fig. 2 is a miniature perspective view, showing a series of bars placed together and two air-distributing pipes, D D, inserted in the passage provided by the half-round openings B and the half-circle rims C.

In my patent above referred to I produce an air-distributing chamber or tube extending across the under side of the grate by casting

lateral projections on the sides of the bars. A separate tube could be inserted in that chamber or passage in the manner and for the purpose contemplated by my improvement; but it would be a double tube and a double expense, that can be saved by the use of the invention herein described.

I am aware that air-distributing tubes and chambers have been attached under furnace-grates in various ways for the purpose of cooling the bars and blowing the fire. I claim, however, that my mode of forming a bar to produce a passage for a tube within the grate, as set forth, is new and greatly advantageous. The perforated tube D can be inserted or withdrawn whenever desired. The metal taken from the cavity B forms the rim C C. The bar is not weakened and the cost is not increased, and a simple and substantial means is thereby provided for combining an air-distributing tube with a furnace-grate by simply inserting the tube and connecting it with a conducting-pipe and a fan.

Claims.

I claim as my invention—

1. The grate-bar A A with cavity B and rim C C, substantially as described, and for the purposes set forth.
2. The combination of the air-distributing tube D D with a series of grate-bars, A A, in the manner described, for the purpose of keeping the bars cool and to blow the fire.

ALONZO RAWSON.

Witnesses:

L. A. CRAIN,
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