

W. L. GREGG.
Hollow Grate-Bars.

No. 164,729.

Patented June 22, 1875.

Fig. 1.

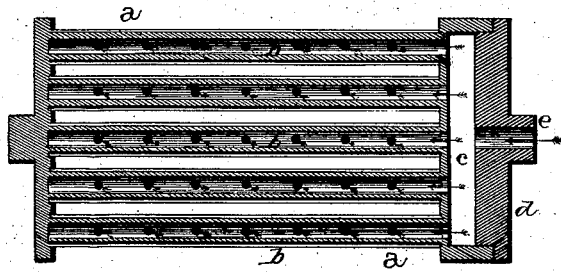


Fig. 2.



WITNESSES.

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INVENTOR.

Wm. L. Gregg
per
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att'y.

UNITED STATES PATENT OFFICE.

WILLIAM L. GREGG, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN HOLLOW GRATE-BARS.

Specification forming part of Letters Patent No. **164,729**, dated June 22, 1875; application filed February 20, 1875.

To all whom it may concern:

Be it known that I, WM. L. GREGG, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Grate-Bars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in hollow grate-bars; and it consists in casting the bars in sections, each one of which sections is provided with journals, so that they can be rocked in the usual manner. Each of the bars of each section is made hollow, communicates with an air-chamber in the end of the section, and has a series of holes through its upper side, so that the air forced into the air-chamber will escape out through them, and cause sufficient draft to enable sawdust, slack, and other such fuel to be burned in the furnace.

Figure 1 is a horizontal section of my invention. Fig. 2 is a vertical cross-section of the same.

a represents a section of grate-bars, which may consist of any number of bars, and either be in a single piece or constructed in any other way that may be preferred. Each one of the bars *b* is made hollow, is closed at one end, and communicates at its other end with an air-chamber, *c*, formed in the end of the section. The outer end of this air-chamber is

closed by a separate piece, *d*, which has a hollow journal, *e*, cast with it, which journal forms not only a support for the section, but the means through which a blast or current of air from any suitable air-engine is forced into the bars. The air enters the chamber, from whence it passes into each one of the bars, and escapes into the furnace through the series of holes *i* made in their upper sides or edges. Upon the opposite end of the section from the air-chamber is formed a second journal, and upon these journals each section can be rocked or tilted, as shown in dotted lines in Fig. 2, for the purpose of shaking down the fire.

By making the grate in sections, forming an air-chamber in each section with journals, so that it can be rocked or tilted, as shown, I am enabled to burn sawdust, slack, tan-bark, and other such fuel in an ordinary furnace as well as common coal.

Having thus described my invention, I claim—

1. In grate-bars, the section *a*, consisting of a number of hollow perforated bars, an air-chamber, and journals, substantially as shown.

2. A section of hollow grate-bars, having an air-chamber in one end communicating with all the bars, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of February, 1875.

WM. L. GREGG.

Witnesses:

A. T. GALT,
ANTHONY SMITH.