

G. SCHMAUCH.
GRATE-BARS FOR FURNACES

No. 182,290.

Patented Sept. 19, 1876.

Fig. 1.

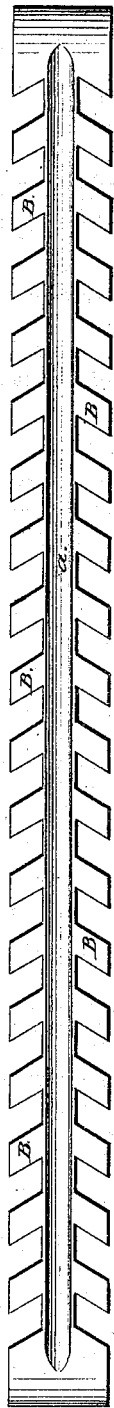


Fig. 2.

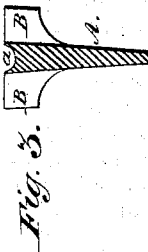
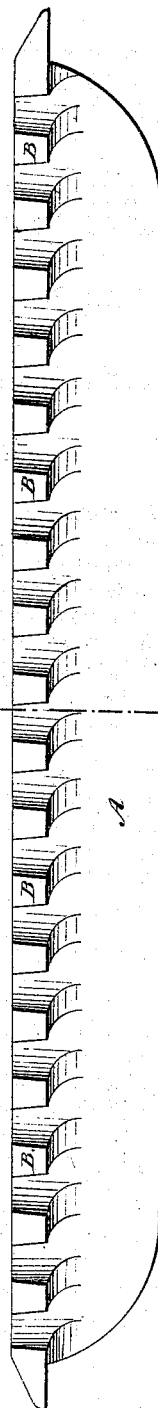


Fig. 3.

Witnesses:

Chas Foubler
S. W. Tracy

Inventor:

George Schmauch

UNITED STATES PATENT OFFICE.

GEORGE SCHMAUCH, OF MAUCH CHUNK, PENNSYLVANIA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO SAMUEL H. TACY, OF SAME PLACE.

IMPROVEMENT IN GRATE-BARS FOR FURNACES.

Specification forming part of Letters Patent No. 182,290, dated September 19, 1876; application filed June 30, 1876.

To all whom it may concern:

Be it known that I, GEORGE SCHMAUCH, of Mauch Chunk, in the county of Carbon and State of Pennsylvania, have invented certain new and useful Improvements in Grate-Bars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to furnish a grate-bar that will give more bearing-surface for the fuel, more air space, and allow a freer circulation, and that is not so liable to be burned or become warped as the grate-bars as ordinarily made, which are defective from the fact that by being plain, they must be placed close together in order to give the proper amount of bearing-surface for the fuel, they thus being easily burned or warped, and the air-space is greatly reduced, while the cost per pound per square foot is greatly increased.

The invention consists of a central web hollowed out on its upper face, with angular projections on both sides diverging in opposite directions, by which the air-supply is greatly increased and the number of bars reduced.

In the accompanying drawing, Figure 1 is a plan view of my grate-bar. Fig. 2 is a side view of the same. Fig. 3 is a cross-section on line *x x*.

In the drawing, A represents the central or main part or web of the grate-bar, which is hollowed out on its upper surface, as shown at *a*, and thus gives an additional air-supply to the fuel. On each side of this central web are arranged a number of lugs, B, diverging in opposite directions from the central web, and extending only a short distance in depth. They may be arranged in a staggering manner if preferred—that is, a lug opposite a space.

By my improved grate-bars it will be readily seen that the number is greatly reduced, as the webs are placed farther apart, while the angular projections give a greater bearing-surface for the fuel, and at the same time give a greater air-supply and freer circulation of air, while reducing the number of bars per square foot, as well as the cost, and also preventing the liability of warping and burning.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The grate-bar herein described, consisting of the central web A, hollowed on its upper surface and the plain surface, angular projections B, diverging in opposite directions, each bar being independent, substantially as described.

GEORGE SCHMAUCH.

Witnesses:

S. H. TACY,
A. G. PETERS.