S. VAN SYCKEL.

Grate-Bars.

No. 166,951. Patented Aug. 24, 1875.

Fig. 1.

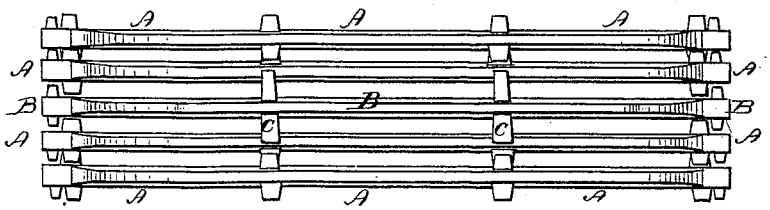
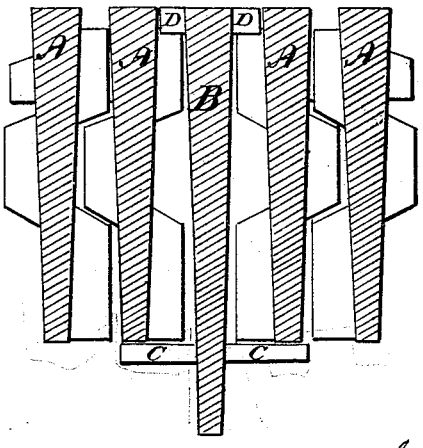


Fig. 2.



WITNESSES—

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SAMUEL VAN SYCKEL, OF TITUSVILLE, PENNSYLVANIA, ASSIGNOR TO GEORGE H. CLARKE, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN GRATE-BARS.

Specification forming part of Letters Patent No. **166,951**, dated August 24, 1875; application filed July 29, 1875.

To all whom it may concern:

Be it known that I, SAMUEL VAN SYCKEL, of Titusville, Crawford county, State of Pennsylvania, have invented certain Improvements in Furnace Grate-Bars, of which the following is a specification:

My invention relates to that class of grate-bars known as interlocking bars, in which a central or key bar is provided to facilitate the removal or insertion of the bars; and it consists in a novel construction, combination, and arrangement of parts, which have for their object to hold the key-bar in its proper place, and prevent it from springing or warping out of proper relation with the other bars, as will be fully hereafter described.

Figure 1 is a plan view of the under side of a number of bars placed together. Fig. 2 is a transverse section, enlarged, of the same.

The construction and operation of the interlocking bars and the key-bar being well known, and described in certain Letters Patent, I will avoid prolixity herein by simply stating that the interlocking bars are cast with projections on their sides and ends, so that when put together they interlock, one over, under, between, or behind the other, and thus prevent the bars from moving vertically or horizontally beyond the natural expansion of the metal, or from warping or twisting; and that, to facilitate the insertion and removal of these bars, a plain bar is used, called a key-bar, which is inserted at about the middle of the set, so that it can at any time be removed, and the interlocking bars taken out.

Heretofore, so far as known to me, there have been no means of preventing the key-bar from springing up or down, and thus rising above or sinking below the plane of the grate. To supply this deficiency I employ removable stops, which, after the key-bar has been put in its place, are inserted in holes at the bottom of the bar, so as to act against the adjacent bars, and thus prevent the key-bar from rising; and I also cast projections or stops on each side of the key-bar at its upper edge, which rest on the lugs of the adjacent bars, and thus prevent the bar from sinking.

In the drawings, A A represent the interlocking bars, and B the key-bar. This bar is made somewhat deeper than the others, as shown at Fig. 2, and has holes near its lower edge, into which the removable stops C C are inserted. D D are the projections or stops, cast near the upper edge of the key-bar, and which act on the projections *a a* on the adjacent bars, to prevent the key-bar sinking.

When it is desired to remove the key-bar the removable stops are withdrawn, and the bar is free to be taken out.

I claim—

1. The combination, with the interlocking bars A A and key-bar B, of the adjustable or removable stops C C, for preventing the key-bar from springing upward, constructed and operating substantially in the manner described and specified.

2. The combination, with the interlocking bars A A and key-bar B, of the adjustable or removable stops C C and stationary stops or projections D D, constructed and operating substantially in the manner described and specified.

SAMUEL VAN SYCKEL.

Witnesses:
E. H. JOHNSON,
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