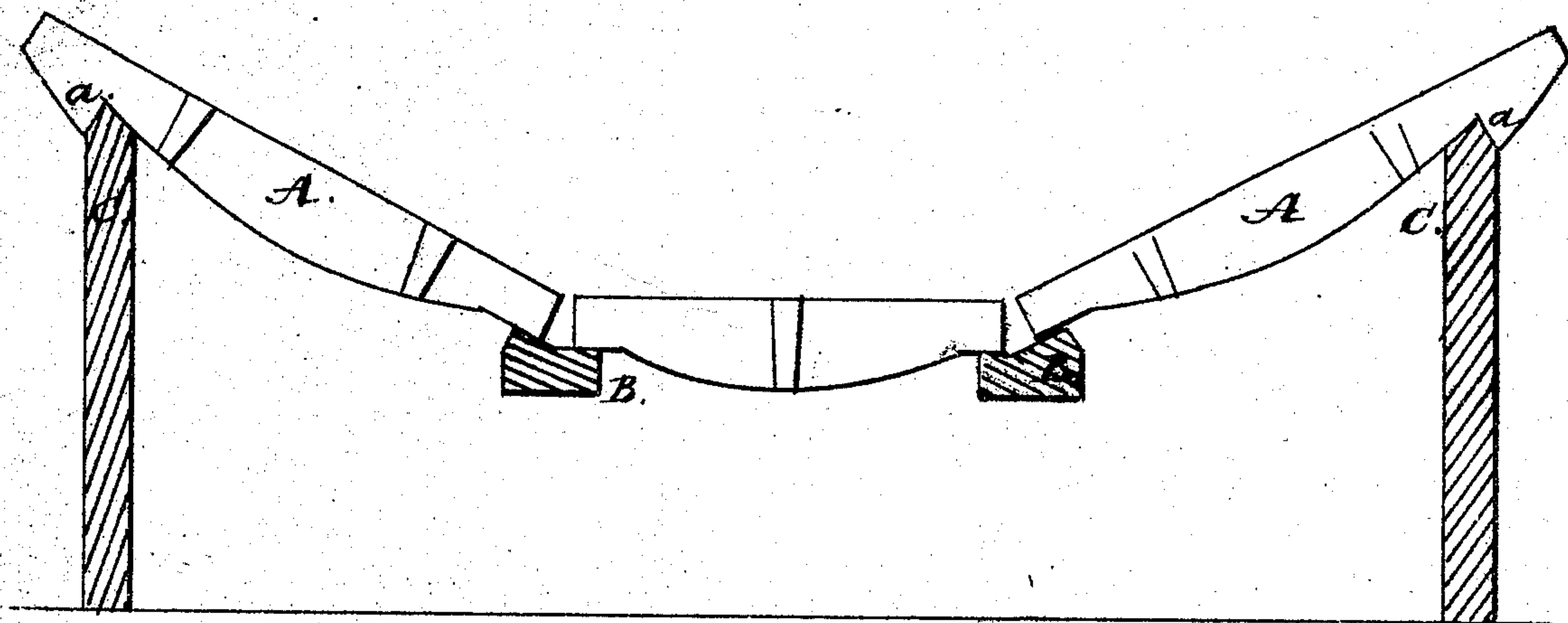


J. L. Babbitt.

Grate.

N^o 75830

Patented Mar. 24, 1868



Witnesses

J. M. Connelley

A. H. Clary

J. L. Babbitt

United States Patent Office.

J. L. BABBITT, OF GLEN COVE, NEW YORK, ASSIGNOR TO THE FUEL-SAVING FURNACE COMPANY, OF NEW YORK CITY.

Letters Patent No. 75,830, dated March 24, 1868.

IMPROVEMENT IN GRATES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. L. BABBITT, of Glen Cove, in the county of Queens, and State of New York, have invented a new and useful Improvement in Grates, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and which represents a transverse section of a grate illustrating my improvement.

My invention has reference to an inclined arrangement of fire-bars, whether used separately or in connection with other bars differently arranged, as, for instance, with a lower range of horizontal bars, such as are used to make up a basket-form of grate; and my invention consists in so constructing and supporting said inclined bars as that they lie or are suspended from or at their upper ends, but free or loose below, or, in other words, so suspended as that, while horizontally supported at or near either end, they are restrained from sliding or slipping downwards in direction of their length, but free to move upwards in said direction; and said invention further consists in constructing said bars with a hook or lip-formation at or near their upper ends in such manner as that, while the bars have their motion lengthwise restricted as described, provision is by the same means established for guiding or directing them in moving or adjusting them transversely.

Referring to the accompanying drawing, which represents the improvement applied to a basket-form of grate, A A are the inclined bars, that may either be made single or be cast or formed in sections of two, three, or more, side by side, at suitable distances apart. These bars are shown as resting loosely at their lower ends on bearers, B, and as suspended at or near their upper ends on supports, C, in such manner as to restrain said bars from slipping downwards in direction of their length, but leaving them free to move upwards in such direction. To accomplish this, said bars may be formed, at or near their outer ends, with hook-shaped clips, *a*, arranged to lap over the outside edge of the supports C, and so shaped as to constitute guiding-surfaces for sliding the bars transversely to their places, either for changing their position when necessary to replace certain of them, or otherwise.

By suspending the bars so that they are only capable of being slid or moved upwardly in direction of their length, space being afforded outside the supports C for such motion, they are restrained from clogging and binding at their ends, or buckling by the heat expanding them; likewise, and which is a very important feature in connection with a basket-grate, or when an inclined grate is used in conjunction with a horizontal one, there is no binding or locking by the inclined grate of or against the horizontal grate, which, when heated, is free to expand without buckling, not simply by the space left between the ends of the horizontal and inclined bars, that may become clogged with dust or fuel, but by the freedom with which the inclined bars are allowed to move upwards or away from the horizontal bars by the expansion of either or both, inducing strain or pressure the one upon the other.

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

1. An inclined grate in which the bars are so suspended and supported as that they are restrained from sliding or slipping downwards in direction of their length, while they are free to move upwards in such direction, substantially as specified.

2. The inclined bars A, suspended and supported for motion or action as described, when formed with clips *a*, that, in addition to their effecting the suspension of the bars, also serve as guiding-surfaces for transverse adjustment of the latter along their supports, essentially as shown and described.

J. L. BABBITT.

Witnesses:

J. W. COLE,
A. LE CLERC.