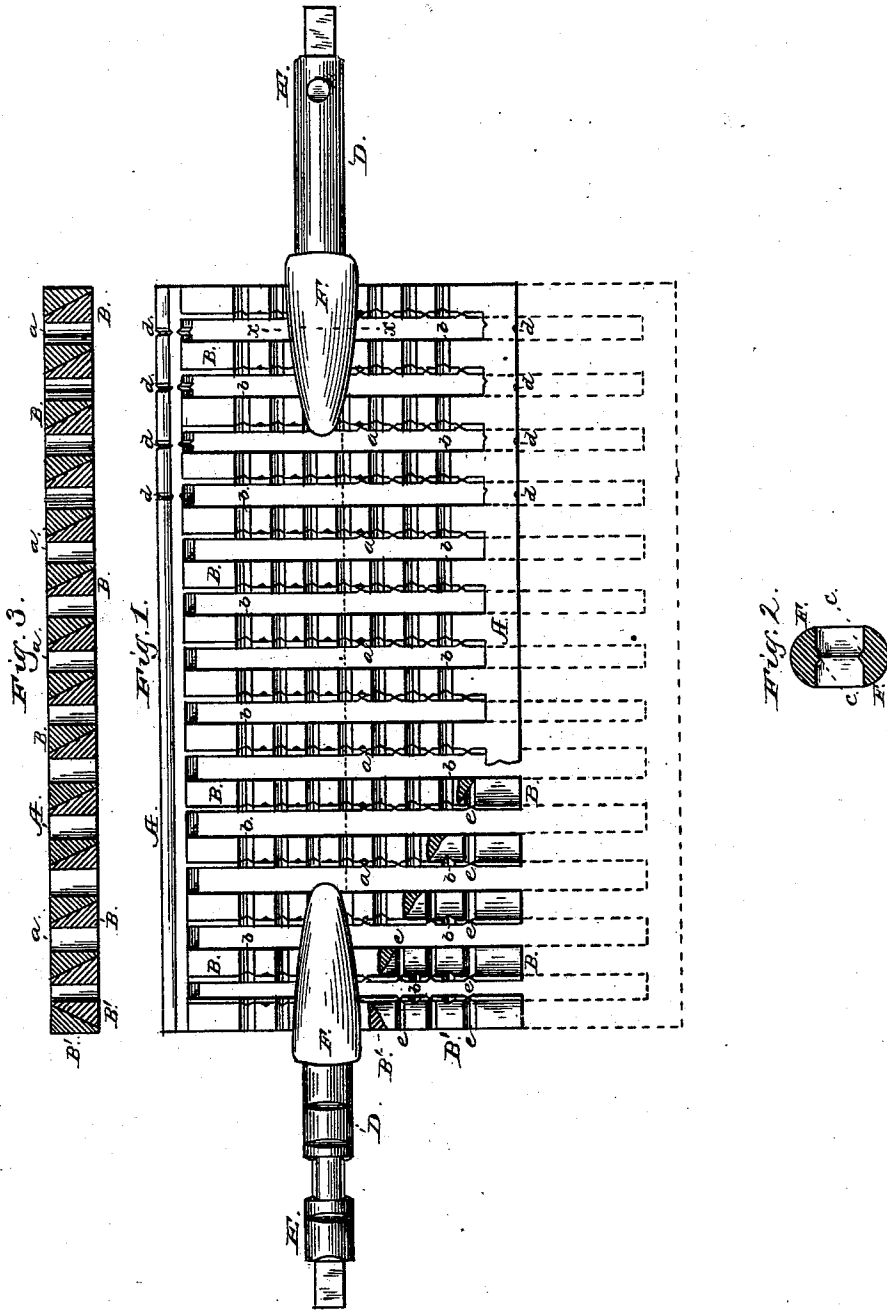


(Model.)

E. E. BUNKER.
STOVE GRATE.

No. 273,251.

Patented Mar. 6, 1883.



WITNESSES
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UNITED STATES PATENT OFFICE.

EDGAR E. BUNKER, OF DUBUQUE, IOWA.

STOVE-GRATE.

SPECIFICATION forming part of Letters Patent No. 273,251, dated March 6, 1883.

Application filed June 20, 1882. (Model.)

To all whom it may concern:

Be it known that I, EDGAR E. BUNKER, of Dubuque, in the county of Dubuque and State of Iowa, have invented a new and useful Improvement in Stove-Grates; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The invention involved in the subject-matter of this specification relates to an improvement in stove-grates adapted to be longitudinally and transversely adjusted to fit within the various lengths and widths of fire-boxes, and further adapted to the connection therewith of means by which it is supported in the fire-box, and whereby, when properly adjusted, it will be restricted from any lateral movement or tendency toward displacement.

The invention therein consists in composing the grate of two sections, each consisting of a longitudinal bar or head provided with a series of bars or fingers extending outwardly at right angles thereto, and corrugated to receive a correspondingly-shaped ridge on the inner faces of the jaws of a pin, which is applied to the fingers at each end of the grate to support it in the fire-box and prevent any lateral movement of the same after located; and it consists, further, in the construction, arrangement, and combination of the parts composing it, as will be more explicitly hereinafter set forth, and pointed out in the claim.

In order that the invention may be thoroughly understood, and to enable those skilled in its relative art to know how to construct and use the same, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a plan view of a grate constructed in accordance with my invention, with the supporting-pins applied thereto and a portion of the upper section of the grate broken away to show the breaking-grooves on the bars or fingers of the lower section thereof, and also showing the reversed bar or finger on one and the same end of each section; Fig. 2, sectional view of the jaws of one of the supporting-pins, taken on the line xx of Fig. 1; and Fig. 3, a longitudinal section of the grate.

Referring to the drawings, A represents the

longitudinal box or head of each section composing the grate, having cast therewith or secured thereto in any desirable and suitable manner a series of bars or fingers, B B', which extend outward from said bar or head at right angles thereto, and are parallel to each other, with an intervening space, a , (when the two sections are closed,) of a width a little less than that of the contiguous bars or fingers. These bars or fingers are the shape, or nearly so, of a right-angle triangle, and are provided on their top and bottom surfaces with a series of V-shaped grooves or corrugations, b , equidistant apart and parallel to each other, for a purpose hereinafter to be explained. When the two sections thus constructed are fitted together to form the grate, the hypotenuse of the right angle of each bar or finger of both sections is in contact, thus coinciding and forming square bars or fingers, with the intervening spaces, a , of equal width the entire depth of the grate. In order to prevent any lateral movement of the two sections of the grate, the bar or finger B' at one end of each section is accordingly reversed in position, as illustrated in Figs. 1 and 2; otherwise the two sections would easily become displaced and be of no service whatever. The grate is adapted to be suspended in the fire-box and restricted from transverse movement after having been properly adjusted to fit the same by means of two pins, D D, one of which is applied to each end of the grate, and which also serve as shakers to free the stove from ashes and the like. They are of similar construction, and consist of a rod, E, suitably constructed at one end to engage with any of the well-known devices usually employed for operating the grate to free the stove from ashes, and provided at the opposite end thereof with two jaws, F, having a space between them of a sufficient width to admit the end of the grate, which they embrace when applied thereto. Each of these jaws is provided on its inner or contact surface with a ridge, c , arranged as shown, and of a size and shape corresponding with the grooves or corrugations on the top and bottom surfaces of the bars or fingers B B', in order that when the two sections are adjusted accordingly as desired, and the pins are applied to the ends of the grate, these ridges of the jaws may enter the grooves or corruga-

tions *b* on the bars or fingers of both sections, and thereby enable such sections to retain their given position, exempt from any lateral movement or tendency toward displacement.

5 The description of the invention to this point limits the grate to transverse adjustment only and alone to fire-boxes of a greater width; and in order that it may be readily adjusted for accommodation in fire-boxes of a less width
10 and length, it is provided with breaking-grooves *a*, cut in each bar or head *A* opposite to the end provided with the reversed bar or finger *B'*, and similar grooves, *e*, cut in the vertical side and incline of each bar or finger *B* and *B'*,
15 midway the grooves or corrugations *b*, as illustrated by Fig. 1.

The manner of adjusting is as follows: If the fire-box to be fitted is of a less length than the grate, the bars or fingers *B* of each section, of a
20 number required to make it fit, are broken off from the bar or head *A*. Then, if the fire-box is wider than the grate, the two sections are drawn apart to make the required width, and if narrower than the grate when closed, the
25 ends of the bars or fingers *B B'* are broken off at the grooves the distance required. The pins are then applied to each end of the grate, with the ridges of the jaws resting in the grooves or corrugations *b* of the bars or fingers,
30 and thus the heads will be prevented from drawing apart and the entire grate from sagging. From the foregoing description it will be apparent that this grate is simple in construction, can be easily and readily adjusted to fit nicely
35 the various sizes of fire-boxes, and can be manufactured and placed upon the market at a small cost, comparing its advantages with those of the grates at present in use.

Having thus described my invention, what I

claim, and desire to secure by Letters Patent, 40 is—

1. A grate composed of two sections, each having a series of bars or fingers, the sides of which form a right-angled triangle, substantially as and for the purpose set forth. 45

2. A grate composed of two sections, each having a series of bars or fingers, the sides of which form a right-angled triangle, and adapt such sections, when fitted together, to form rectangular bars, with intervening spaces for the
50 passage of the ashes and draft, substantially as set forth.

3. A grate composed of two sections, each having a series of bars or fingers, constructed as described, with the bar or finger at one and the same end of each section reversed, substantially as and for the purpose set forth. 55

4. A grate composed of two sections, each having a series of bars or fingers, the sides of which form a right-angled triangle, and are provided with a series of transverse grooves or corrugations, substantially as and for the purposes set forth. 60

5. The combination, with a grate composed of two sections, each having a series of bars or
65 fingers provided with a series of grooves or corrugations, substantially as described and shown, of a pin adapted to be applied to each end of the grate for supporting it in the fire-box and preventing any lateral movement of
70 the two sections composing such grate, substantially as and for the purposes set forth.

This specification signed and witnessed this 10th day of June, 1882.

EDGAR E. BUNKER.

Witnesses:

MONROE M. CADY,
WILLIAM GRAHAM.