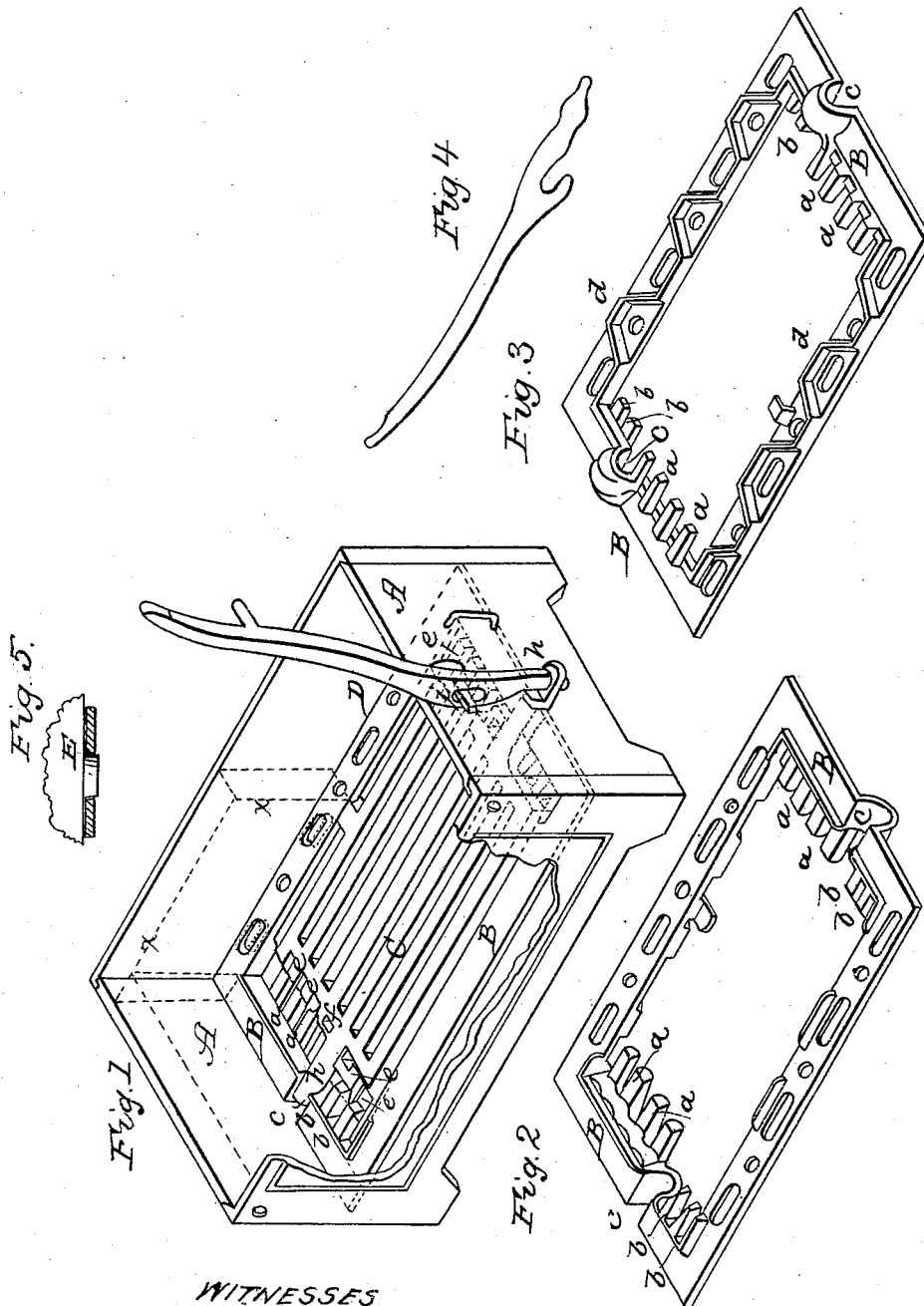


G. VANDER HEYDEN.

Stove Grate.

No. 45,881.

Patented Jan. 10, 1865.



WITNESSES

{ Peter S. Nashell
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INVENTOR

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GEORGE VANDER HEYDEN, OF TROY, NEW YORK.

IMPROVED STOVE-GRATE.

Specification forming part of Letters Patent No. 45,881, dated January 10, 1865.

To all whom it may concern:

Be it known that I, GEORGE VANDER HEYDEN, of Troy, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in Stove-Grates; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification, in which—

Figure 1 is an isometrical perspective view of the grate and its bed-plate arranged within a fire-box in proper position for use. Fig. 2 is a view of the face side of the bed-plate separated from the grate. Fig. 3 is a view of the under side of the bed-plate. Fig. 4 is a view of a modification of the handle or lever for shaking the grate; and Fig. 5 shows a method of securing fire-brick lining of the fire-box to the bed-plate by means of a mortise-and-tenon joint.

The same letters refer to like parts in each figure.

The nature of my improvement consists in so constructing the bed-plate of the grate, and also the grate used in connection therewith, that when they are duly arranged for use in combination with each other in the fire-box of the stove the grate may be shaken or moved by means of a lever or shaker-handle in horizontal rectilinear reciprocal directions, for the purpose of freeing the grate and fuel thereon from the accumulations of ashes, and it may also be made to dump its contents, when desired, into the ash-pit of the stove.

The description of my improved fire-grate is as follows:

A A represent a fire-box with the grate and its appendages duly arranged therein for use.

B B is the bed-plate of the grate, and is constructed respectively at each end with the horizontal projecting direct bearings *a a* and the projecting reverse bearings *b b*, which are arranged or respectively proportioned to each other so that the boxes *c c* of the grate-journals may divide the said bearings and be placed enough one side or eccentrically to the central axis of the grate, in the manner substantially as shown in Fig. 2, as to insure the stability of the grate when in its proper position for use, and admit of a shaking or reciprocal rectilinear movement, in order to free the

gate from the collection of ashes and cinders, and also to admit of the grate's being dumped, when so desired, so as to slide its contents into the ash-pit.

The back or under side of the bed-plate, as shown in Fig. 2, may be strengthened by means of the zigzag flanges *d d*, or by other analogous means, in order to obtain lightness and strength in the castings of said plate.

The fire-grate C, Fig. 1, is constructed respectively at each end with the projecting ends *e e* or prolongations of the grate-bars beyond the cross or tie bars *f f*. These projecting ends are respectively arranged and proportioned into direct and reverse bearing ends, so as to correspond to and operate in conjunction with their counterparts in the bed-plate B, substantially as shown in Fig. 1, and to thus attain the desired operation of the grate, in the manner as before described.

h h are the journals of the grate, one of which is of sufficient length to pass through an opening in the side of the fire-box, and has an eye in which to place the end of the shaker-handle D, the said handle having a fulcrum or bearing on the stud or horn *i*, so that leverage is obtained to shake the grate with more ease.

It is important that the projecting direct bearings of the grate and the reverse bearings of the bed-plate should be more or less sloped or pointed, according to the nature of the fuel used, so that the fuel, when the grate is shaken, may not become wedged or jammed between the ends of the bed-plate and grate, but may slide up and over the sloped or pointed ends, and thus allow a free shaking motion to be given to the grate at all times.

The dotted lines *x x*, Fig. 1, show the outlines of a part of the fire-box lining of fire-brick or soapstone, and in Fig. 5 E represents a section of fire-brick, and F represents a section of bed-plate B, with a mortise hole, within which sets the tenon *y* of the fire brick, thereby holding the fire-box lining securely in position.

Having fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The bed-plate B, when constructed respectively at each end of said plate with the direct bearings *a a* and reverse bearings *b b*,

in the manner substantially as herein shown, for the purpose of supporting and operating stove-grates, in the manner as herein set forth.

2. In combination with the bed-plate B, the fire-grate C, when constructed substantially in the manner as herein described and shown, so that the said grate can be operated in

combination with said bed-plate, fully in the manner and for the purposes as herein specified.

GEORGE VANDER HEYDEN.

Witnesses:

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GEO. BRISTOL.