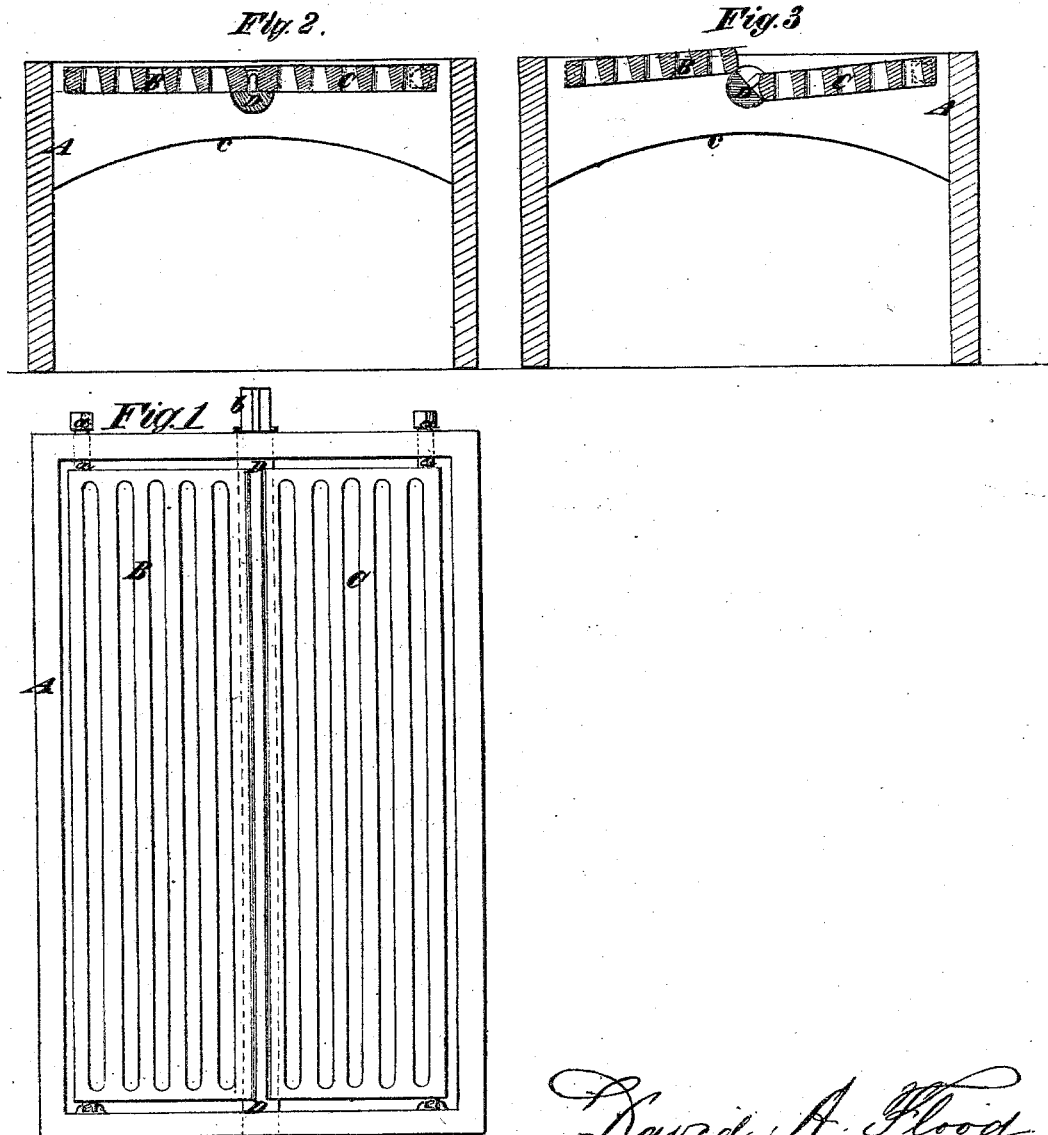


DAVID A. FLOOD & DANIEL W. BROWN.

Improvement in Stove-Grates.

No. 115,590.

Patented June 6, 1871.



Witnesses.
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UNITED STATES PATENT OFFICE.

DAVID A. FLOOD AND DANIEL W. BROWN, OF WOODBRIDGE, NEW JERSEY.

IMPROVEMENT IN STOVE-GRATES.

Specification forming part of Letters Patent No. 115,590, dated June 6, 1871.

To all whom it may concern:

Be it known that we, DAVID A. FLOOD and DANIEL W. BROWN, of Woodbridge, in the county of Middlesex and State of New Jersey, have invented a new and Improved Grate for Stoves, Ranges, &c.; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing forming a part of this specification.

The object of this invention is to provide for the raking out and removal of dust, ashes, and clinkers from the lower part of the fire-chamber of the stove without disturbing the live coal above them. To this end it consists in a divided grate, hinged to opposite sides of the fire-place of the stove or range, and so supported at the line of division as to provide for either half or division falling away from the center and being let down while the other remains in place to support the fuel. It also consists in a supporting-bar of peculiar construction, for the purpose of supporting the grate at its line of division, whereby facility is afforded for letting down either half or division of the grate separately, while the other is still supported by said bar for the purpose of supporting the fuel; or for letting down the whole grate when it is necessary to let out the fire.

In the accompanying drawing, Figure 1 is a plan of a grate constructed according to our invention, showing it applied to the fire-place of a cooking-stove. Fig. 2 is a transverse section of the same, showing the halves in place, and Fig. 3 is a similar section thereof, showing one of the halves in the act of dropping.

Similar letters of reference indicate corresponding parts in all the figures.

A represents that portion of the stove in which the grate is supported, having the halves or divisions B and C, of which the grate is composed, pivoted to its front and back, near the sides thereof, by pivots *e e* and *a a*. The pivots *a a* project through the front of the fire-place, and have square heads formed on them. D is the bar, by which the adjacent

edges of the halves or divisions B C of the grate are supported. This bar is of semicircular form in its transverse section, and is fitted to turn in bearings provided for it at the ends of the fire-place or ash-pit, and has formed on its forward end a head, *b*, of suitable form, to receive a wrench or handle by which to turn it.

In order to drop one of the halves of the grate to remove the dead fuel above it the bar D is turned, by means of a wrench applied to its end to bring its flat side toward that half of the grate which it is desired to drop, as shown at the right side of Fig. 3, and as soon as it is sufficiently turned for the edge of the said half to clear it that half will be dropped, while the other half remains supported by the bar, and is slightly raised by reason of the curved portion of the bar having been brought under it.

To drop both of the grate-halves for the purpose of letting out the fire, the bar must be first turned to drop one of the halves, and then turned in an opposite direction to drop the other.

The halves or divisions of the grate are brought to their place again, one at a time, by a wrench applied to their heads while the bar is in the same position, respectively, as it was when they dropped, after which the bar is turned to bring its flat side uppermost in order to support both the halves.

Heretofore the common practice of partly letting down the grate to rake out the ashes and clinkers from the stove has been accompanied by the danger of having the whole contents of the fire-place drop out, but by our grate this danger is obviated.

When one division or half of the grate is let down the contents of the stove are always supported to such an extent by the other half or division as to be beyond danger of dropping through.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The divided grate, pivoted to opposite sides of the fire-place, and supported at its line of division by a movable support, sub-

stantially as herein described, which provides for either half or division of the grate falling from the center, and being let down separately from the other.

2. The combination, with the divided grate, of the semicircular supporting-bar D, arranged to provide for the dropping of either or both

of the halves or divisions of the grate, substantially as described.

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