

R. HAM.
Stove Grate.

No. 106,154.

Patented Aug. 9, 1870.

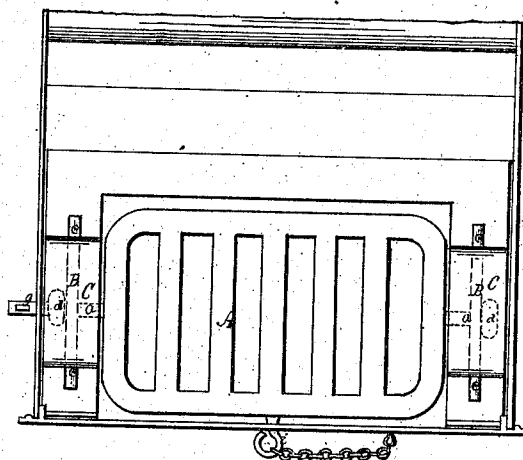


Fig. 1.

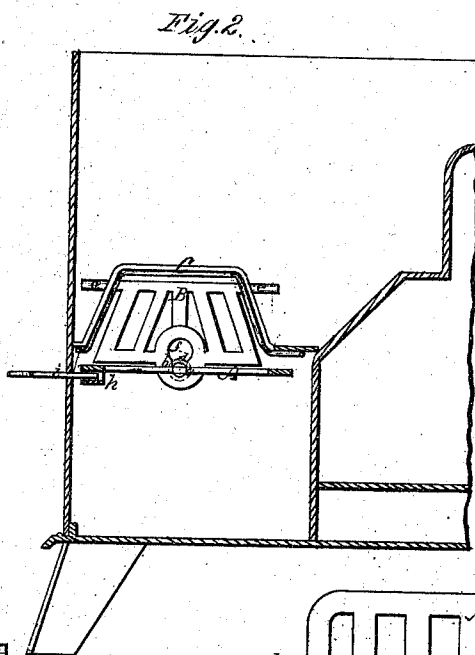


Fig. 2.

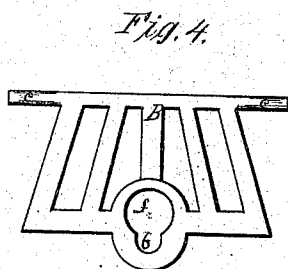


Fig. 4.

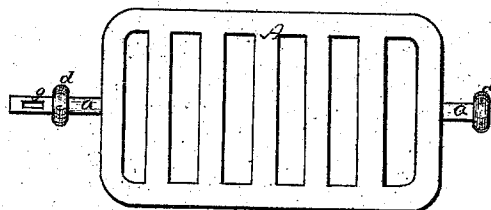


Fig. 3.

Witnesses:-
D. J. Brown
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By his atty,
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United States Patent Office.

ROBERT HAM, OF TROY, NEW YORK, ASSIGNOR TO COX, CHURCH & CO.,
OF SAME PLACE.

Letters Patent No. 106,154, dated August 9, 1870.

STOVE-GRATE.

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, ROBERT HAM, of Troy, in the county of Rensselaer and State of New York, have invented an Improved Grate for Cooking-Stoves; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making part of this specification.

Figure 1 being a top view of the whole grate as situated in a cooking-stove.

Figure 2, a cross-section of the horizontal or main grate, together with the adjacent portion of the stove, showing also one of the vertical swinging grates in elevation.

Figure 3, a plan of the horizontal or main grate.

Figure 4, a side elevation of one of the vertical swinging grates.

Like letters designate corresponding parts in all of the figures.

The nature of my invention consists in the employment of vertical, suspended, swinging, or oscillating grates, in combination with the main horizontal grate, or grate proper, the said vertical grates being placed transverse to the said main grate, at the ends thereof having bearings in which the journals of the main grate turn, and being themselves provided with journals by which they are suspended, so as to oscillate in a direction longitudinal to the direction of the main grate, all substantially as hereinafter specified.

The main horizontal grate, or grate proper, A, is provided with journals *a a*, respectively, on its two ends, as usual; but these journals, instead of turning in the sides of the stove, for bearings, as in the ordinary way, are suspended in bearings *b b*, formed in the lower edges, near the middle of the length, of vertical grates B B, which are arranged transversely to the main grate at the ends thereof, and extend entirely or nearly across the fire-chamber of the stove, at a little distance from its ends.

They are themselves provided with journals *c c*, on the ends at the upper edges thereof, and these journals turn in bearings of a supporting frame or brackets C, mounted inside of the stove fire-chamber, as shown, or by any other suitable means, so that the grates can

swing or oscillate sidewise freely, and thus allow easy longitudinal movement to the main grate A to any extent desired.

Upon the journals *a a* of the main grate A are heads or equivalent enlargements or stops *d d*, outside of the suspended grates, to prevent the said journals from slipping out of the bearings *b b* in the latter grates in oscillating; and in order to provide for the insertion and withdrawal of these journals, into and from their bearings, the upper part of these bearings are enlarged at *f f*, substantially as shown, sufficient to freely admit the passage of the enlargements *d d* of the journals through them when raised a little, but, when the journals are resting therein, they cannot slip out.

One of the journals *a a* has an extension, *g*, long enough to reach through the adjacent side of the stove, and project somewhat outside thereof. It terminates in a square portion, or a slot, for attaching a key or handle to shake and turn the grate in the usual manner; besides, or instead of, this arrangement for shaking the grate, there may be a socket, *h*, in or under the front edge of the grate, to receive a handle or key, *i*, fig. 1, there being a longitudinal slot in the front plate of the stove to allow the proper movement in shaking the grate.

These vertical, transverse, oscillating grates B B not only allow a freer and more extended oscillation of the main grate A, but, being themselves open grates, furnish a free exit to the ashes and cinders from the extreme ends of the fire-chamber within the grates, an effect very imperfectly accomplished by means heretofore employed.

What I claim as my invention, and desire to secure by Letters Patent, is—

The vertical, transverse, suspended, or oscillating supporting grates B B, in combination with the horizontal or main grate A, substantially as and for the purpose herein specified.

ROBT. HAM.

Witnesses:

H. A. MERRILL,
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