

M. D. WELLMAN.

Stove Grate.

No. 99,041.

Patented Jan. 18, 1870.

Fig. 1.

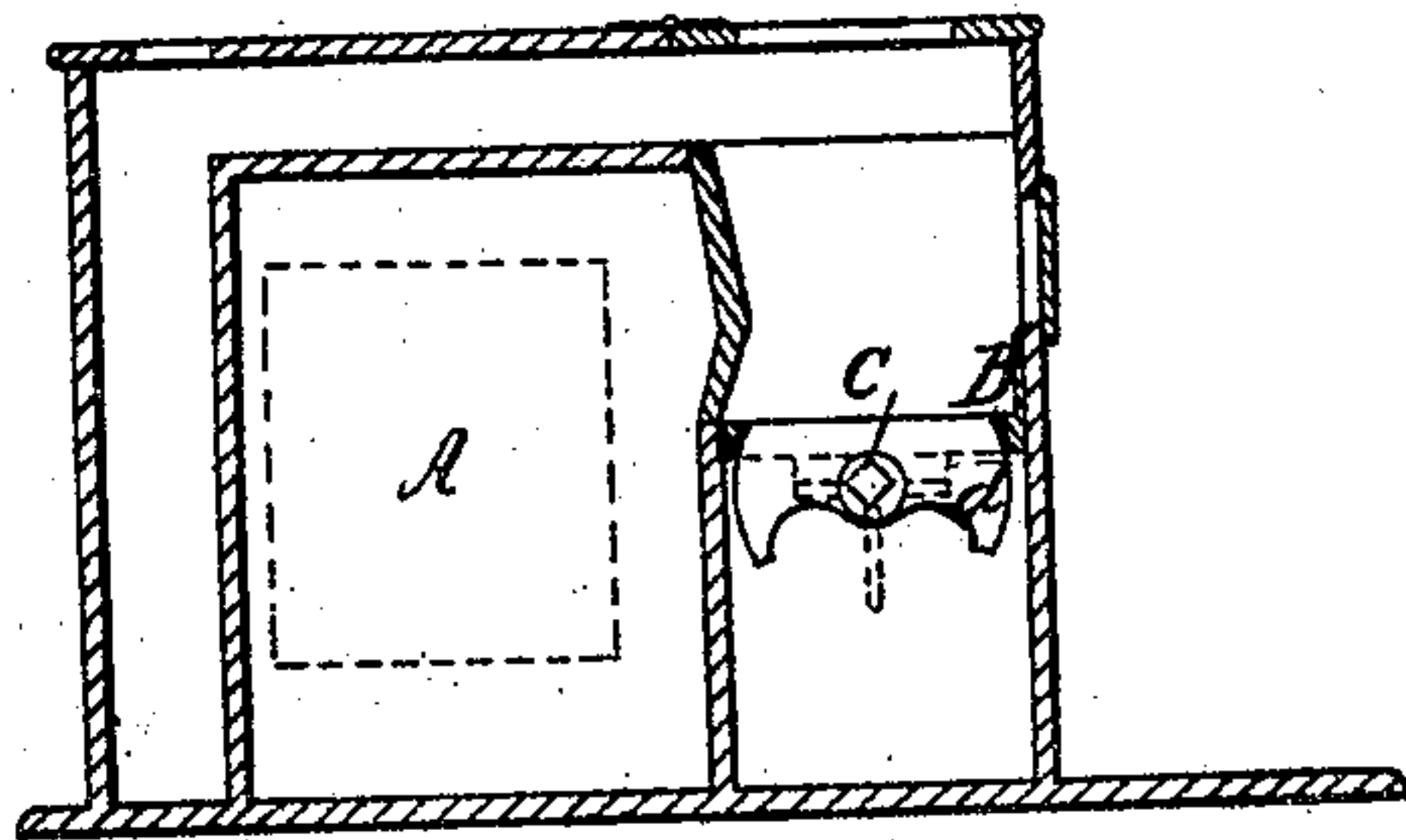


Fig. 2.

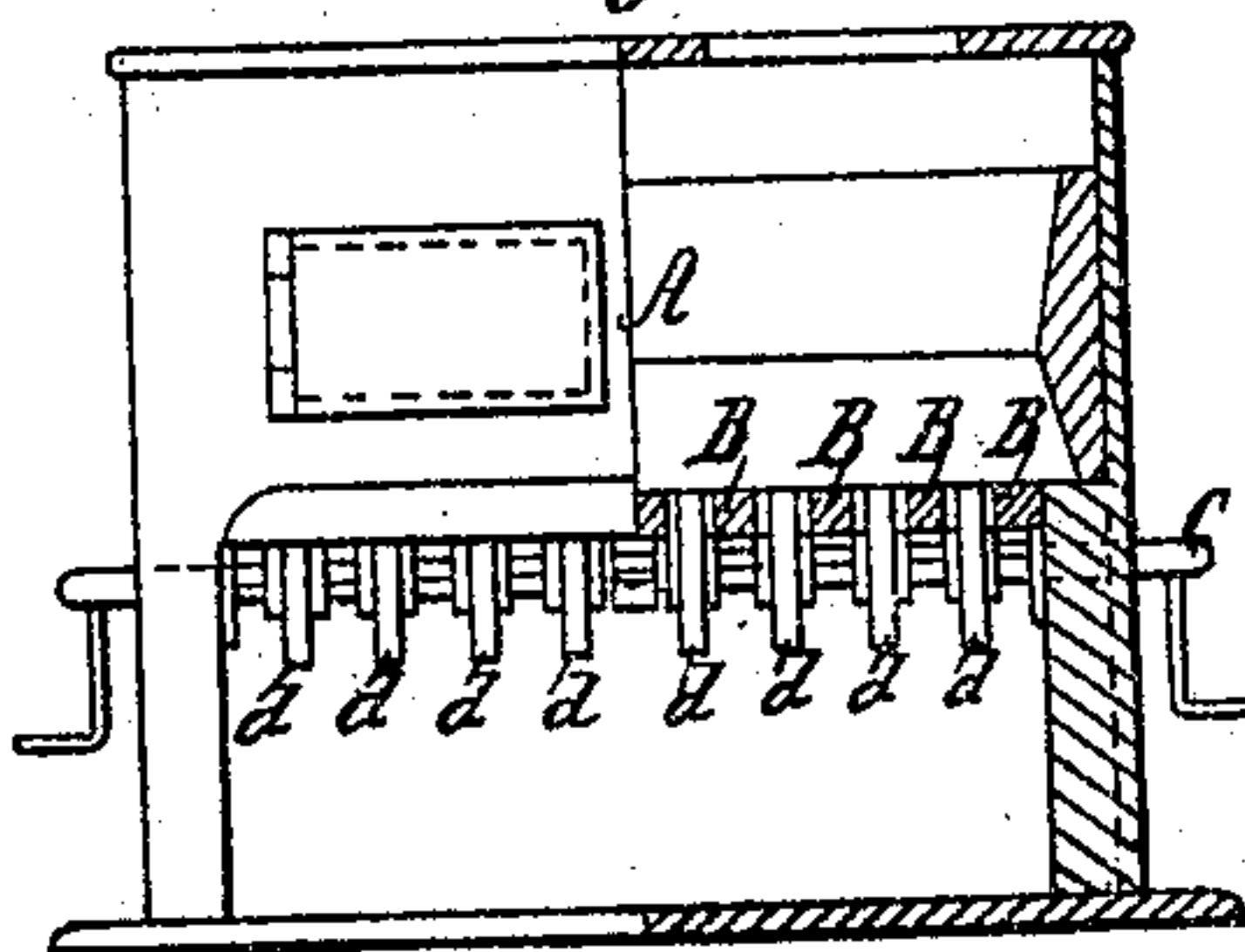


Fig. 3.

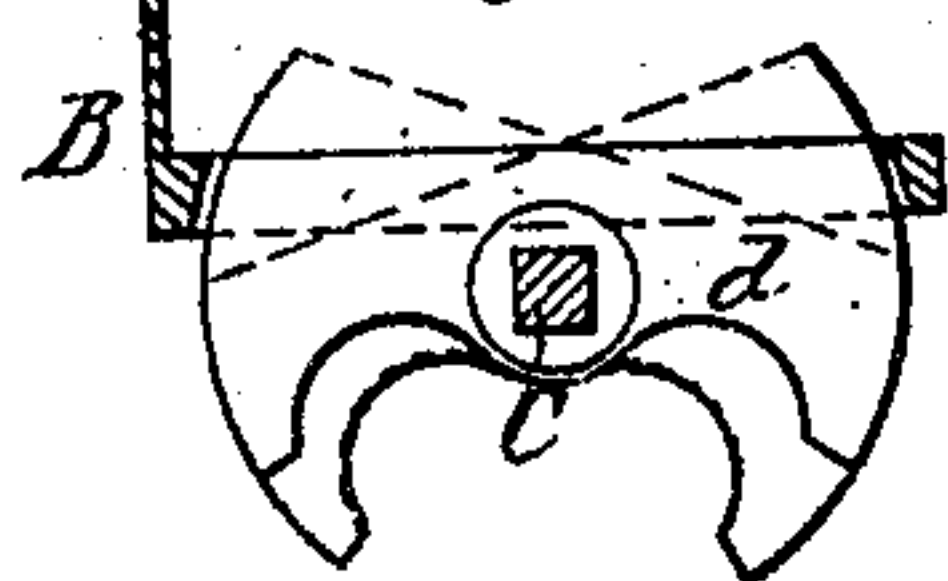
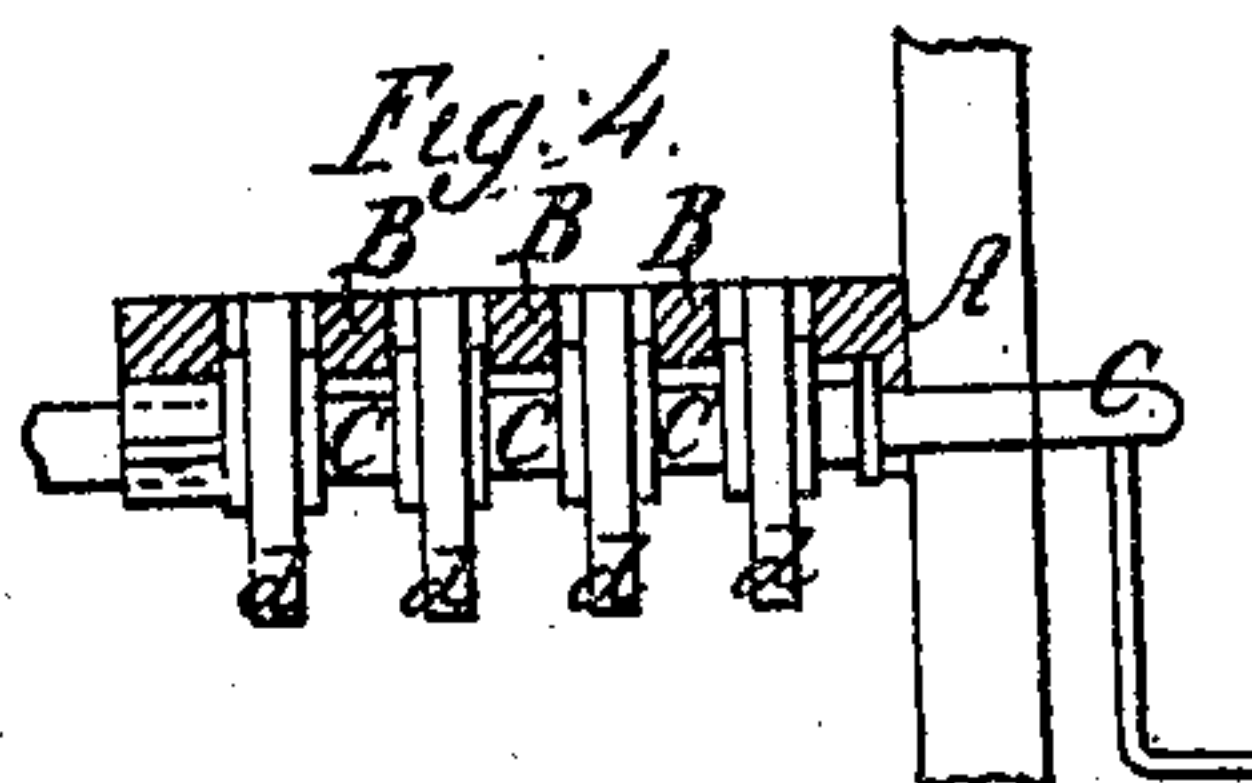


Fig. 4.



Witnesses;

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Attors

United States Patent Office.

MARSHALL D. WELLMAN. OF ALLEGHENY CITY, PENNSYLVANIA.

Letters Patent No. 99,041, dated January 18, 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, MARSHALL D. WELLMAN, of Allegheny City, in the county of Allegheny, and in the State of Pennsylvania, have invented new and useful Improvements in Grates for Stoves, Ranges, &c.; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the construction of a grate for all kinds of stoves and ranges, and in the arrangement of certain devices, hereafter set forth and explained.

Figure 1 is a sectional view of my stove.

Figure 2 is a front view of the same.

Figure 3 is a side view of the agitators.

Figure 4 is a front view of the same.

Letter A represents the body or frame of an ordinary cooking-stove, to which my grate is attached.

Instead of constructing the grate in the usual manner, and having it open so as to allow a draught from the front, I close this part altogether, by forming it of a plate of iron, having no openings in it. This grate B is balanced at each end upon the same bar C, to which the agitators are connected, so that it can be tilted back, in order to empty or clean it.

Upon the bottom, in the middle, there is a projection cast, upon which part the ends of the bar C have their bearings, secured by a clamp, or any suitable device.

Passing through the sides of the stove, at each side, and meeting in the centre of the grate, are the two rods C, by means of which the agitators are operated. Attached to each of the outer ends there is a handle, for the purpose of turning them.

Cast upon, or attached to the rod, there is a number of flat plates, *d*, for the purpose of agitating or raking the coals, so as to clear them of ashes. These agitators, the shape of which is shown in fig. 3, by turning the handles on the ends of rod C, are made to tilt backward and forward, describing about an eighth of a circle, at each movement, thus completely

clearing the grate of all the burned portions, so as to cause the air to circulate more freely. As these two agitators are entirely independent of each other, one side of the fire can be raked so as to make it burn more rapidly upon that side, while the other will remain as it was before.

Just above the bottom of the grate, the tile is so formed as to extend backward, as seen in fig. 1, thus making the bed larger at the bottom than the top. By forming the bed in this manner, the clinkers will be prevented from forming or adhering to the wall, and will also add to the heat, while the air has a chance to circulate more freely, and thus cause a better combustion.

By forming the box, which holds the bars, so that it will be larger at the top and bottom than in the middle, the ashes will accumulate at the top, so as to prevent the burning out of the back of the stove. In furnaces, this has the effect to prevent the clinkers from sticking to the sides and back wall above the grate. This feature is seen in fig. 2.

This grate is intended to be used and applied in all kinds of cooking-stoves, ranges, or furnaces, as it is equally adapted to each.

Having thus described my invention,

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

1. The arrangement, within a closed-front stove, range, or other fire-place, of the agitators, as herein described, divided at the centre of the grate, so that either part may be operated separately, substantially as specified.

2. In combination with the grate-bar B, shaft C, and agitators *d*, the sloping lining, as herein described, all arranged and operating substantially as and for the purposes specified.

In testimony that I claim the foregoing, I have hereunto set my hand, this 7th day of April, 1869.

MARSHALL D. WELLMAN.

Witnesses:

L. R. LINDSAY,
JOHN CHESS.