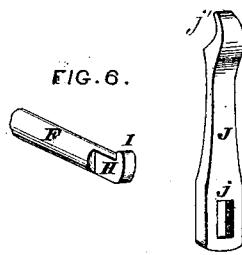
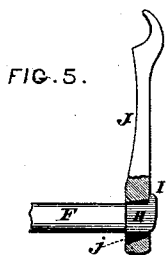
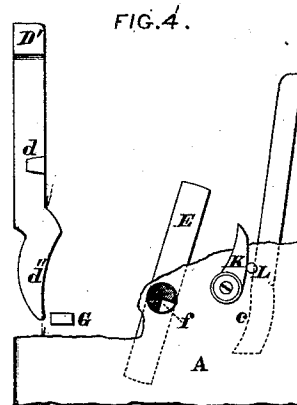
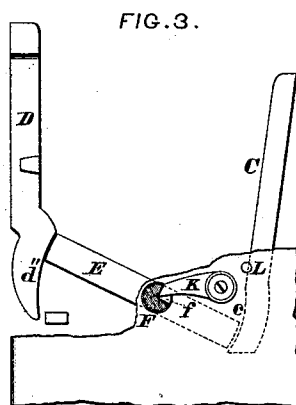
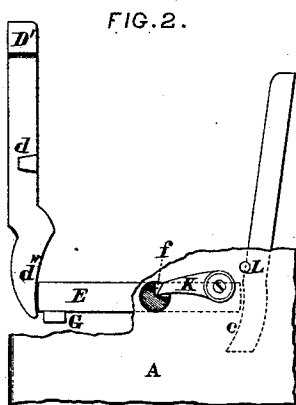
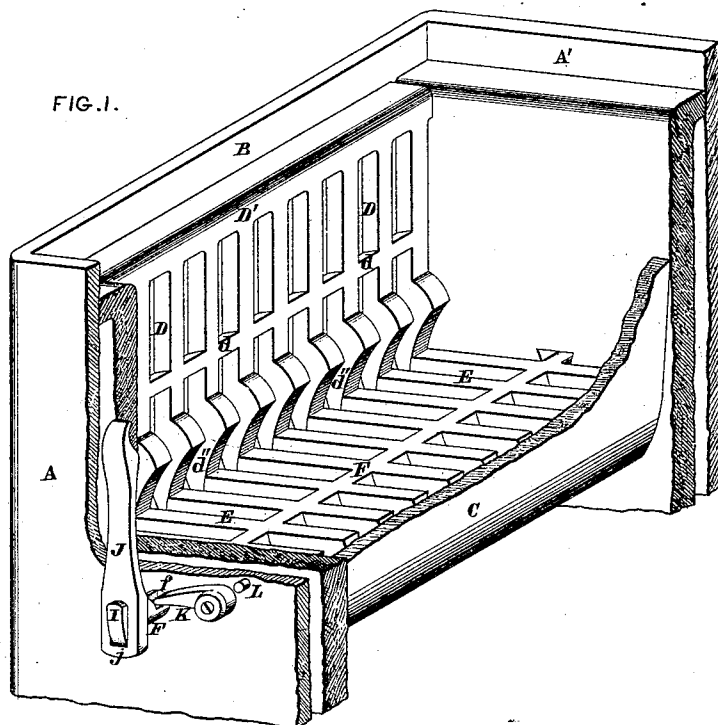


C. TRUESDALE.

STOVE GRATE.

No. 96,743.

Patented Nov. 9, 1869.



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ATTEST.  
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Saml. Wright*

# United States Patent Office.

CHARLES TRUESDALE, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF  
AND WILLIAM RESOR & CO., OF SAME PLACE.

Letters Patent No. 96,743, dated November 9, 1869.

## STOVE-GRATE.

The Schedule referred to in these Letters Patent and making part of the same.

I, CHARLES TRUESDALE, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a certain Improved Fire-Grate, of which the following is a specification.

My present invention relates to certain improvements on the class of shaking and dumping-grates, described in my patent of July 20, 1869; and

My said improvements consist in—

First, a certain form and arrangement of the front and bottom bars, which, while allowing the necessary agitation of the latter, for separation of the ashes, preserve a practical continuity of said bars, so as to prevent the escape of cinders, and the clogging of the bars thereby.

Second, a device, by which the grate-bottom is, in ordinary use, restricted to such agitation as is sufficient to separate and precipitate the ashes, but which, on removal of a pawl, enables the said bottom to be swung to a vertical position, so as to empty or dump the grate.

Third, a peculiarly-formed detachable lever or handle to the shaking-bottom, said handle also serving as a lifter for the stove-covers, hearth, &c.

Figure 1 represents, by rear perspective view, a cook-stove fire-place, embodying my improvements, a portion of the fire-back being broken away.

Figure 2 is a side elevation of such fire-place, with portions of the jamb removed, and with the grate-bottom in its normal or horizontal position, the rock-shaft being in section.

Figure 3 is a similar elevation, with the grate-bottom tilted, for precipitation of the ashes.

Figure 4 is a similar elevation, with the grate-bottom brought to the dumping-position.

Figure 5 is a longitudinal section of the operating-end of the grate-bottom rock-shaft.

Figure 6 is a perspective view of the same, the handle being detached.

A A represent the side plates or jambs; B, the front plate; and C, the back plate of the cook-stove fire-place.

The front portion of the grate consists of a series of bars, D, which depend perpendicularly from a horizontal bar, D'.

For a grate-front of considerable height, a cross-bar, *d*, may be added.

The lower extremities of the bars D are unconnected.

The bottom bars E are in the same vertical planes with the front bars, and are cast solidly, or otherwise firmly attached to rock-shaft F, whose ends are journalled horizontally in the jambs A A'.

The rock-shaft F is arranged slightly in the rear of the mid-distance from front to back of the grate-bottom, in order that said bottom may, when undisturbed, rest firmly in a horizontal position upon one or more lugs, G, projecting interiorly from the stove-side or front.

One extremity of the rock-shaft F projects outside of its supporting-jamb, and has a flattened portion, H, terminating in an upturned lip, I, to enter the correspondingly-shaped eye *j*, of a handle or lever, J, whose other end has a hook, *j'*, adapted for use as a lifter for the covers, hearth-plate, and other loose plates of the stove.

In order to enable the handle J to be used at will, for either of the purposes designated, it is readily detachable from the shaft F.

When not needed on the shaft, the eye *j* enables the handle J to be suspended from a nail or hook, if desired.

The portion of the rock-shaft F outside the plate has also a nick, *f*, to receive the point of a pawl, K, which nick and pawl serve to restrict the rocking action or shake of the grate-bottom to that shown in fig. 3, in ordinary use.

When it is desired to empty the grate, the pawl K is lifted, and the grate-bottom is, by means of the lever J, tilted to the position shown in fig. 4.

A stud, L, projecting from the jamb, may limit the backward movement of the pawl K.

In order to prevent any escape or lodgement of cinders between the ends of the bars E and front bars or back, during the shaking merely of the grate-bottom, I give the lowest portion of the inner edges of the pendent bars D, and the portion of the fire-back, opposite the rear ends of the bars E, the form of concaves *d''* and *c*, concentric with the axis of vibration.

The front and bottom bars D and E, being in common planes, may be of the ordinary distance apart, and oppose no unusual obstacle to the stirrer or poker.

I claim, as my invention—

1. In the described combination with the shaking-grate E, the concavities *d''*, on the front bars, for the purpose set forth.

2. The described combination of shaking-grate E and concavities *d''* and *c*.

3. The devices *f* and K, or their equivalents, for restricting the oscillation of a shaking or dumping-grate, substantially as set forth.

4. A grate-bottom, adapted to be tilted in the planes of its bars, and about an axis parallel with the grate front, said bars being unconnected at their front extremities, and having contiguous thereto, and in the same planes, a series of pendent front bars, whose lower extremities are likewise disconnected from each other.

5. In combination, or for use with a tilting grate-bottom, the convertible handle and lifter J *j j'*.

In testimony of which invention, I hereunto set my hand.

Witnesses: CHARLES TRUESDALE.  
GEO. H. KNIGHT,  
JAMES H. LAYMAN.