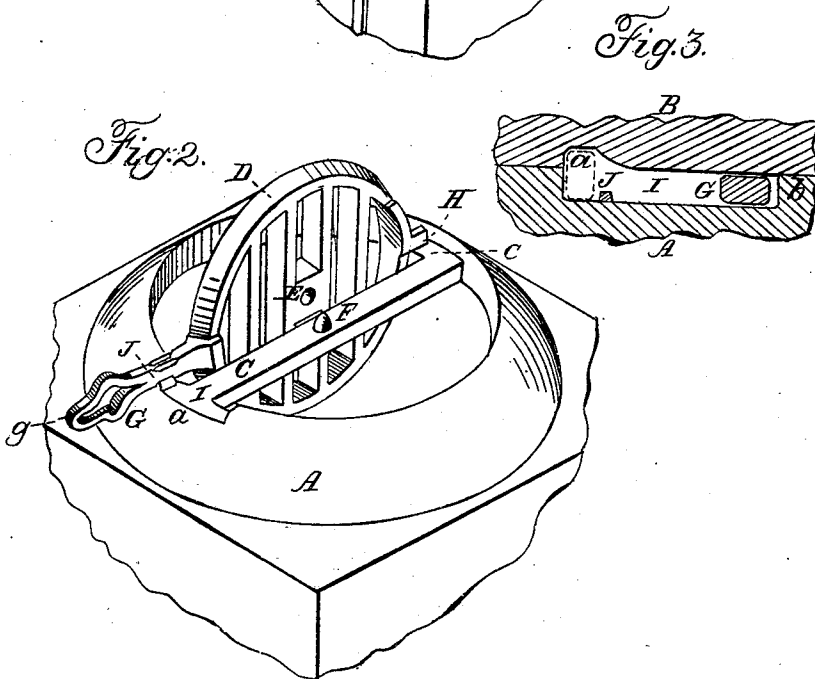
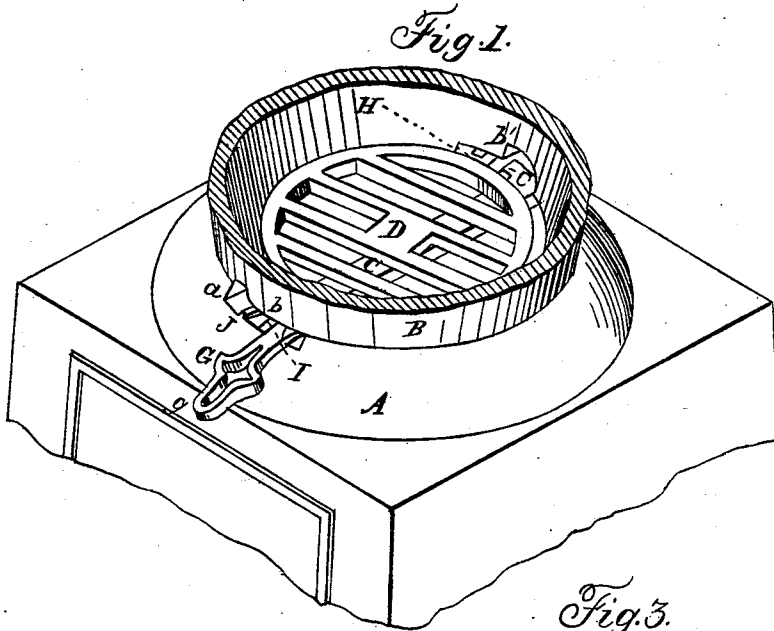


W. CAVEN.
Stove Grate.

No. 81,139.

Patented Aug. 18, 1868.



Witnesses:

*Just H. Layman
Chas. Barnes*

Inventor:

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By Knight Bros
att'y*

United States Patent Office.

WILLIAM CAVEN, OF CINCINNATI, OHIO.

Letters Patent No. 81,139, dated August 18, 1868.

IMPROVEMENT IN STOVE-GRATES.

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

TO WHOM IT MAY CONCERN:

Be it known that I, WILLIAM CAVEN, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Dumping and Shaking-Grate for Stoves; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention relates to a novel form and arrangement of circular grate for air-tight and other heating-stoves, which grate is rendered capable of being shaken horizontally about its axis for precipitation of its ashes, or, by a slight change of location, of being tilted into a vertical position for the purpose of dumping the spent fuel into the ash-pit.

Figure 1 represents, by perspective view, the lower portion of the fire-pot and the upper portion of the ash-pit of a "cannon"-stove provided with my improvement, the grate being in its normal or horizontal position.

Figure 2 represents the same parts, with the exception of the fire-pot, and with the grate in its vertical or tilted position.

Figure 3 is a section through the stove-side, at right angles to the grate-handle.

A represents the upper part of the ash-pit, and B the lower part of the fire-pot of a "cannon"-stove.

Extending transversely athwart the upper part of the ash-pit is a horizontal bar, C, which supports a circular grate, D, having, at the centre of its under side, a socket, E, for a stud or teat, F, on the top of the bar C. A handle, G, which projects from the edge of the grate, in the plane of the latter, enables the grate to be shaken or vibrated about its axis for precipitating the ashes in the common way.

Projecting from the edge of the grate, nearly opposite to its handle, is a pivot, H, upon which, in conjunction with the handle, the grate can be tilted at one extremity of its stroke or vibration, as seen in fig. 2.

Notches, *a* and *b*, in the upper edge of the ash-pit, and in the lower edge of the fire-pot, form collectively a slot, I, in which the handle vibrates, and a similar notch, *b'*, at the opposite side of the fire-pot, permits the traverse of the pivot H; the said notches also serving, in conjunction with the handle and pivot, to restrict the grate to a horizontal plane, except when being tilted.

A small ridge or stop, J, on the top of the notch *a*, near its left end, serves to limit the play of the handle in that direction, except when said handle is purposely lifted over said stop for the purpose of tilting.

The grate-handle is somewhat flattened on its upper and under sides, as shown in fig. 3, and this, in conjunction with the proximity of the sides of the slot to the right of the stop J, serves to hold the grate firmly to its horizontal position, while permitting of its being shaken.

To the left of the stop, the notch *b*, and the corresponding end of the notch *b'*, are enlarged or excavated, as shown in the figures, to permit of the grate, when the handle is shifted to the left of the stop, being tilted to a vertical position, as shown in fig. 2. In this position the pivot H rests upon a lateral extension, *c*, of the bar C.

The outer extremity of the grate-handle is preferably bent and perforated, in the manner shown at *g*, in order to enable the insertion of a poker, or like instrument, with which to vibrate the grate.

I have selected, to illustrate my invention, the form preferred by me, but reserve the right to vary the same; for example, the grate-handle may be round in its transverse section, and without the described bent and perforated extremity, and yet answer a good purpose; moreover, the stop J may be omitted, if desired.

I claim herein as new, and of my invention—

1. The combination of the grate D, provided with a central socket, E, handle G, and pivot H, the bar C, provided with the central stud F and extension *c*, and the slots or recesses I *b'*, all arranged and employed substantially as described for the purposes specified.

2. In combination with the elements of the preceding clause, the stop J, for the purpose explained.

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

WILLIAM CAVEN.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.