G. W. HERRICK.
Stove-Grate.

No. 221,556. Patented Nov. 11, 1879.

Fig. 1

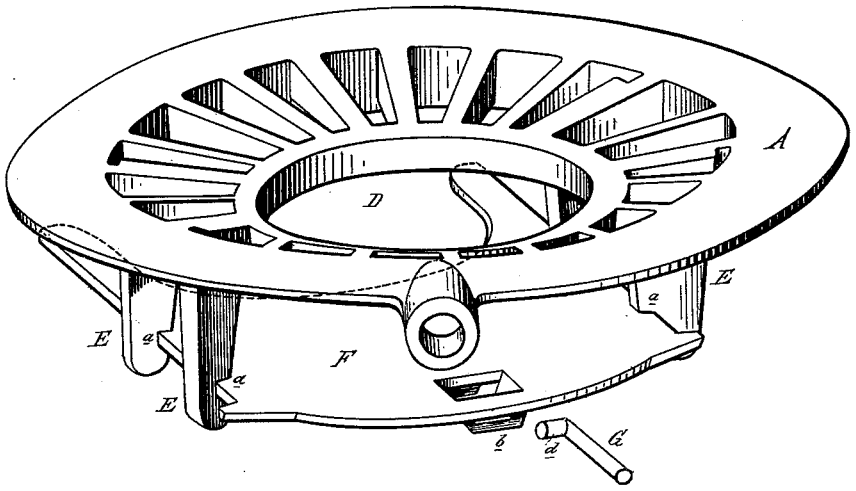

Fig. 2

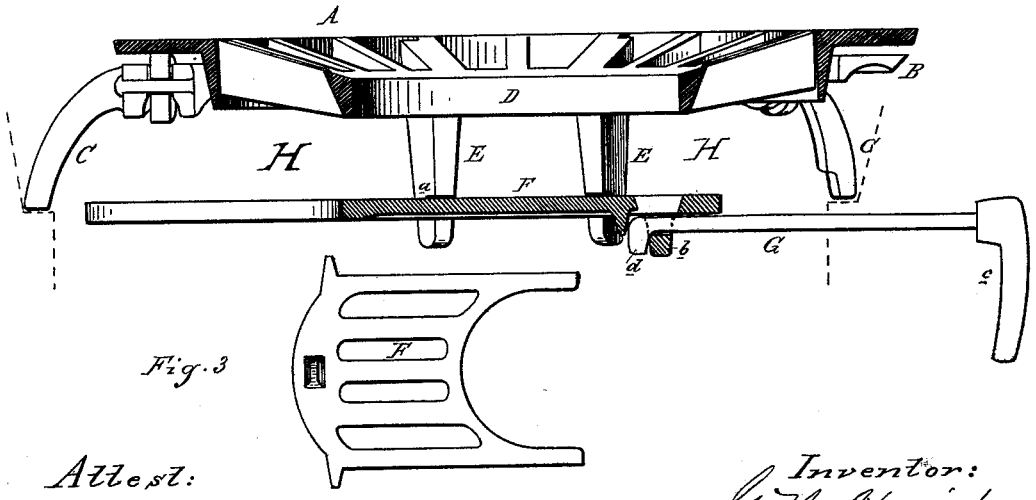

Fig. 3

Attest:
A. Barthel
E. P. Sprague

Inventor:
G. W. Herrick
By atty
Thos. L. Sprague

UNITED STATES PATENT OFFICE.

GEORGE W. HERRICK, OF DETROIT, MICHIGAN, ASSIGNOR TO MICHIGAN STOVE COMPANY, OF SAME PLACE.

IMPROVEMENT IN STOVE-GRATES.

Specification forming part of Letters Patent No. **221,556**, dated November 11, 1879; application filed July 10, 1879.

To all whom it may concern:

Be it known that I, GEORGE W. HERRICK, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Stove-Grates, of which the following is a specification.

The nature of this invention relates to certain new and useful improvements in the construction and operation of that class of stove-grates usually denominated "anti-clinker grates," wherein a space is left between the bottom of the fire-pot and the upper surface of the grate for the purpose of allowing the upper surface of the grate to be cleared through such space by slicing.

The object of my invention is to prevent the formation of clinker, and provide a means for removing the débris of the coal from the center of the grate, and thereby prevent the formation of clinker, which is made by the melting of such débris near the center of the fire; hence my invention consists in the peculiar construction and arrangement of parts to accomplish this end, as more fully hereinafter described.

Figure 1 is a perspective of the vibrating or movable part of the grate. Fig. 2 is a vertical central section of Fig. 1 and its support. Fig. 3 is a plan view of my dumping-slide on a smaller scale.

In the accompanying drawings, which form a part of this specification, A represents a slightly-dishing vibrating grate having its support upon a ring, B, which, in turn, is supported by means of lugs or legs C upon the inner wall of the ash-chamber of a stove. This grate A is provided with a central aperture, D. Cast with and projecting below the grate on each side of this aperture are the lugs E, coincidently grooved, as shown at *a*, to receive the dumping-plate F. This plate F is constructed, as shown in Fig. 3, with one part slotted or solid, as may be desired, and the rear end opened, so that when in place the imperforate or slotted part will be presented immediately and at some distance below the central aperture in the grate proper, thereby forming a shelf below said aperture, upon which the débris of the fire at the center will fall. This dumping-plate, being supported at some distance below the bottom of the grate, allows the draft-currents of air to pass freely over its edges, where it is brought into contact with the débris on the plate, thereby preventing the same from melting into clinker.

Withdrawing the sliding plate presents the opening in the rear end thereof to and below the central aperture of the grate, and allows the débris of the fire to pass into the ash-pit without disturbing the fire on the grate.

To facilitate such withdrawal and replacing of the dumping-plate, a lug-socket, *b*, is cast on the lower front thereof, in which is inserted the handle G, the outer end of which should project through a suitable aperture in the wall of the ash-pit section. This handle is provided at its outer end with a knob or sub-handle, *c*, arranged or constructed to act as a counter-balance which will hold the hook *d* in engagement with the socket on the plate.

The pendent lugs E are of such length that a clear open space, H, is left between the sliding plate and the grate, through which clinkers from the center of the grate can be raked when it is not desired to dump the whole central portion of the fire.

What I claim as my invention is—

1. A rotating or vibrating grate having an open center, in combination with a sliding plate supported by lugs projecting downwardly from such grate and rotating or vibrating therewith, and a clinker-cleaning space between such grate and the said sliding plate, substantially as described and shown.

2. In combination, a ring having legs for supporting it from the walls of the stove, a grate having an open center rotating or vibrating upon such ring, and a sliding plate supported from such grate by lugs and rotating or vibrating therewith, a clinker-cleaning space being left between the grate and such plate, substantially as described and shown.

3. The combination, with grate A and sliding plate F, having lug-sockets *b*, of the rod G, constructed with hook *d* and gravity-handle *c*, substantially as described and shown.

GEORGE W. HERRICK.

Witnesses:
A. BARTHEL,
H. S. SPRAGUE.