J. H. GOODFELLOW.

Stove.

No. 209,557. **Patented Nov. 5, 1878.**

FIG. 1.

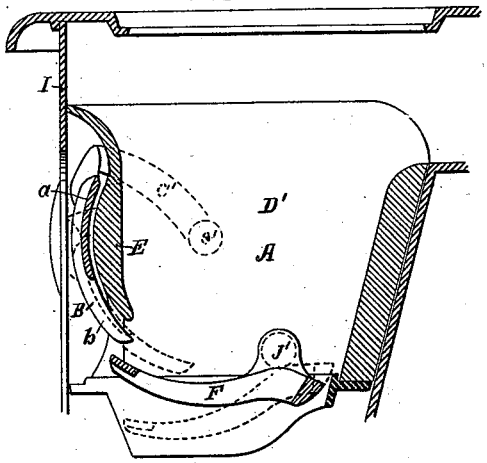


FIG. 3.

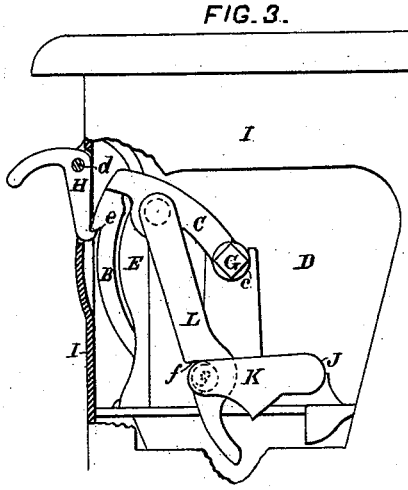


FIG. 2.

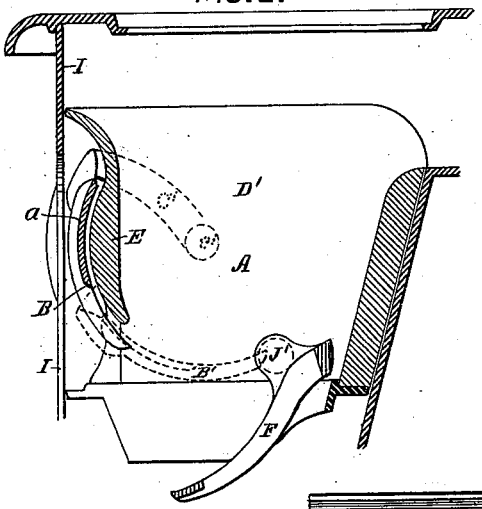


FIG. 4.

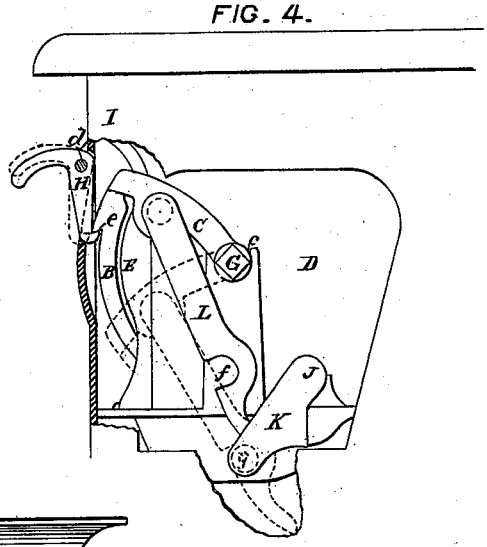
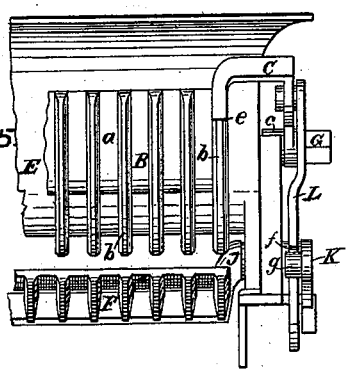


FIG. 5.



WITNESSES:

James T. Goodfellow.

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INVENTOR:

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UNITED STATES PATENT OFFICE.

JOHN H. GOODFELLOW, OF TROY, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO PHILIP F. MILLER, OF SAME PLACE.

IMPROVEMENT IN STOVES.

Specification forming part of Letters Patent No. **209,557**, dated November 5, 1878; application filed April 9, 1878.

To all whom it may concern:

Be it known that I, JOHN H. GOODFELLOW, of the city of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Stoves, described in the following specification, reference being had to the accompanying drawings, in which—

Figures 1 and 2 represent a vertical section of a portion of a cooking-stove crosswise of the fuel-chamber, with which is shown a portion of my invention. Figs. 3 and 4 represent an elevation of a part of a cooking-stove, with portions of its casing broken away to more clearly show other parts of my invention at one end and outside of the fuel-chamber. Fig. 5 represents a front elevation of one end portion of the fire-box as removed from the stove, with my invention embodied therewith, and shown in the same position as shown in Figs. 1 and 3.

My invention relates to that class of stoves in which the fuel-chamber is rectangular, or nearly so, in form; and its object is to facilitate the removal from such chamber of ashes and clinkers, resulting from the combustion of coal therein, without materially disturbing the burning fuel thereinabove.

In the aforesaid drawings, in which similar characters refer to corresponding parts in the various figures, A is the fuel-chamber. B is a cut-off, which may be formed of a plate or of grating, or, substantially as shown, formed of a plate, *a*, and grating or bars *b*, and is provided with arms C C′, extending from the upper and outer portions of the cut-off around and outside of the adjacent corners of the fire-box to supporting-bearings *c c′* at the outside of the end walls, D D′, of the chamber A, all constructed and arranged in relation to the fire-box in the manner substantially as shown, so as to permit the cut-off B to be moved to and fro edgewise in the arc of a circle from its position next to and outside of the front side wall, E, of the fuel-chamber to that indicated by dotted lines in Fig. 2 above the fuel-supporting grate, and across, or partly across, the lower part of the chamber A, in such a manner as to form, when in such latter position, a support to the fuel in such chamber above such cut-off, so that when the fuel-supporting grate is withdrawn or dumped the ashes and clinkers between it and the cut-off will fall into the receptacle beneath, the thickness of the layer of ashes so removed being regulated by the distance the cut-off B (when in position of dotted lines, Fig. 2) and the fuel-supporting grate are adjusted from each other.

G is a shank formed on one of the supporting-arms of the cut-off B, at or near its center of motion, to receive a wrench or lever with which to operate the cut-off and parts connected therewith, as herein described. The resistance of the fuel in the chamber A is generally sufficient to prevent the cut-off B from falling from its position at the side of the fire-box; but to otherwise retain the cut-off in this position, especially when the chamber A is empty, or nearly so, I employ a catch, H, attached at *d* to the casing I of the stove, and engaging with a notch or projection, *e*, on the said cut-off, or any device equivalent thereto.

Though the fuel-supporting grate may be constructed and arranged in its place in the stove so as to be removed or dumped in any suitable manner not to interfere with the above-described to-and-fro edgewise movement of the cut-off B, I prefer to construct such grate F with bearing-lugs J J′ at or near its side opposite to the cut-off B, and to so support and arrange it with reference to the chamber A and cut-off B that when such cut-off is caused to move toward the position indicated by dotted lines B′ in Fig. 2 this grate F can, if desired, be caused to move simultaneously to the position shown in the same figure by means of any suitable device therefor; but I prefer to operate the cut-off B and grate F simultaneously, by providing the journal J with a fixed arm, K, projecting forward, and connecting it with a strap or link, L, to the arm C of the cut-off.

The link L may be provided with a notch or recess, *f*, to receive a projection, *g*, on the arm K, so as to be readily disengaged therefrom when the grate F and cut-off B, and parts connected therewith, are in the position shown in Figs. 1, 3, and 5, to permit the side of the grate F next to the cut-off B, to fall away from the chamber A, as shown in Figs. 2 and 4, for the

purpose of allowing the whole contents of such chamber to fall into the ash-pit below, the link L having sufficient length beyond the recess *f* to rest against the lug *g* when disengaged therefrom, so that when the cut-off arm C, with link L thereto attached, is moved to the position indicated in dotted lines in Fig. 4, or the grate F is raised to the position shown in Figs. 1 and 3, the link will again engage with the arm K.

I am aware it has been heretofore proposed in a number of instances to support the fuel-sustaining grate of stoves at or near its rear edge, so as to permit its opposite side to fall away from the fuel-chamber; and I am also aware it has been heretofore proposed to support such grate in its horizontal position by means of a catch engaging therewith, neither of which devices do I claim as of my invention.

What I claim as my invention is—

1. In a stove, the cut-off B, constructed and arranged in combination with the fuel-chamber A, substantially as shown and described, so that when such cut-off is unemployed in sustaining the upper portion of the contents of the fuel-chamber A while a lower portion thereof is being removed, as herein set forth, the said cut-off can be retained or supported in a vertical, or nearly vertical, position next to and outside of one of the side walls of said fuel-chamber.

2. The edgewise-moving cut-off B, constructed, arranged, and supported in combination with the fuel-chamber A and a fuel-sustaining grate, substantially as shown and described.

3. The cut-off B and grate F, having supporting-bearings at or near its side opposite to said cut-off, constructed and arranged in combination with the chamber A, substantially as shown and described.

4. The cut-off B and grate F, having bearing-journals J J′, constructed and arranged in combination with the chamber A, substantially as shown and described, and provided with mechanism for simultaneously operating said cut-off and grate, in the manner set forth.

5. The cut-off B, grate F, having bearings J J′ and arm K, or its equivalent, and connecting-link L, constructed and arranged in combination with the chamber A, and to operate substantially as shown and set forth.

6. The cut-off B, provided with supporting-arms C C′, constructed and arranged together substantially as shown and described, so as to be capable of being employed in combination with the chamber A and its fuel-sustaining grate, in the manner substantially as set forth in the above specification.

JOHN H. GOODFELLOW.

Witnesses:

J. T. GOODFELLOW,

A. GOODSPEED.