

D. H. NATION.

Stove Grate.

No. 29,300.

Patented July 24, 1860.

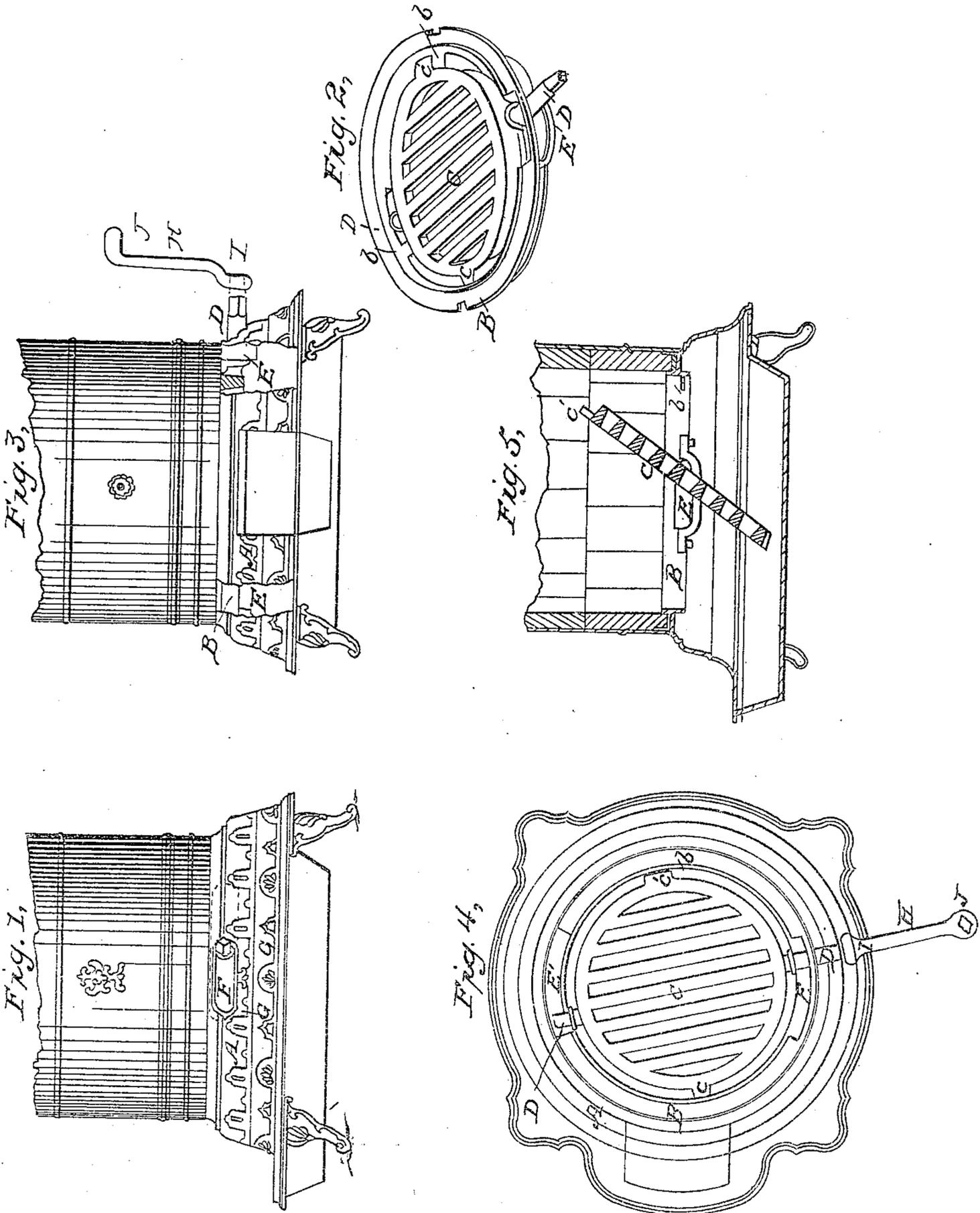


Fig. 1,

Fig. 2,

Fig. 3,

Fig. 5,

Fig. 4,

WITNESSES  
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# UNITED STATES PATENT OFFICE.

DAVID H. NATION, OF ALBANY, NEW YORK.

## STOVE-GRATE.

Specification of Letters Patent No. 29,300, dated July 24, 1860.

*To all whom it may concern:*

Be it known that I, DAVID H. NATION, of Albany, in the county of Albany and State of New York, have invented a new and  
5 useful improvement in the construction of a stove-grate, by means of which the spindle or shaft cast to the same is made to perform the double purpose of shaking and  
10 dumping the fuel, thereby dispensing with the use of separate contrivances for each purpose and producing a less complicated grate than others, consequently lessening the  
expense of construction, and possessing other advantages which will be herein clearly  
15 specified.

The nature of my invention consists in suspending the spindle or shaft cast to the grate, in two loops or elongated bearings  
20 which are secured by means of bolts to a circular frame surrounding said grate, and are made of sufficient length to allow the spindle or shaft to reciprocate freely horizontally, their upper edges being made thin  
to lessen friction and prevent dirt or cinders  
25 from lodging thereon. These loops or elongated bearings can be easily detached from the frame for the purpose of removing the grate without disturbing the stove bricks or lining. In ordinary grates with fixed  
30 bearings or centers a very small opening is provided for dumping as the shaft is placed so much at one side to overbalance. But by my arrangement the grate while being  
dumped slides to the ends of the openings  
35 in the loops or elongated bearings and gives an opening of about two thirds of the whole space, the spindle or shaft being provided with sufficient end play between the shoulders to clear itself from clinkers or other  
40 obstructions. A slot or opening is cut in the base through which the shaft or spindle projects, it is made long enough to allow it to reciprocate freely, a sliding plate provided with a hole to receive the shaft or  
45 spindle covers this opening it is supported and kept in place by guides cast on the base and slides with the motion of the shaft or spindle thereby effectually preventing the escape of dust into the room while shaking  
50 the grate and dispensing with the use of a door thereby lessening the expense of mounting. The outer end of the shaft or spindle is squared to fit a socket formed on one end of a lever or handle, the other end is made  
55 with an offset forming a crank which is also

provided with a socket and is used for dumping the grate.

Having thus shown the novelty in my grate and to enable others skilled in the art to make and use the same, I will now proceed to describe it and certify that the accompanying drawings are a full and correct  
60 representation of the same, like letters corresponding with like parts.

Figure 1, represents a side elevation of  
65 the stove. Fig. 2, is a perspective view of the grate and circular frame removed from the stove to show the loops or elongated bearings. Fig. 3, is a side elevation with part of the base broken away to show the  
70 shaft or spindle and the loops or elongated bearings, the lever or handle is shown in position for dumping the grate. Fig. 4, is a plan of the same showing the position of the handle or lever for shaking the grate.  
75 Fig. 5, is a longitudinal section with the grate dumped.

A Figs. 1, 3, 4 and 5, represents the base of a stove.

B is a circular frame surrounding the  
80 grate C and on which is cast the projections *c, c'*, one of which rests on a flange (*b*) cast to the frame B to support the grate C.

D D is the shaft or spindle cast to the grate and suspended in the elongated bear-  
85 ings or loops E E' and in which it moves freely for the purpose of agitating the grate C.

F is a sliding plate which covers an opening in the base A through which the shaft  
90 or spindle D passes. G G are the guides to keep it in place.

H is the handle or lever provided with a socket I on one end to fit the squared part  
95 of the shaft D the other end is bent to form a crank J which is used for dumping the grate.

I claim—

1. The loops or elongated bearings E E in combination with the reciprocating shaft  
100 or spindle D substantially and for the purpose specified.

2. The sliding plate F, when used in combination with the elongated bearings (E,) and the shaft or spindle D, substantially as  
105 and for the purpose specified.

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Witnesses:

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