

No. 618,338.

Patented Jan. 24, 1899.

T. H. EULASS,  
STOVE OR FURNACE.

(Application filed Aug. 2, 1898.)

(No Model.)

Fig. 1.

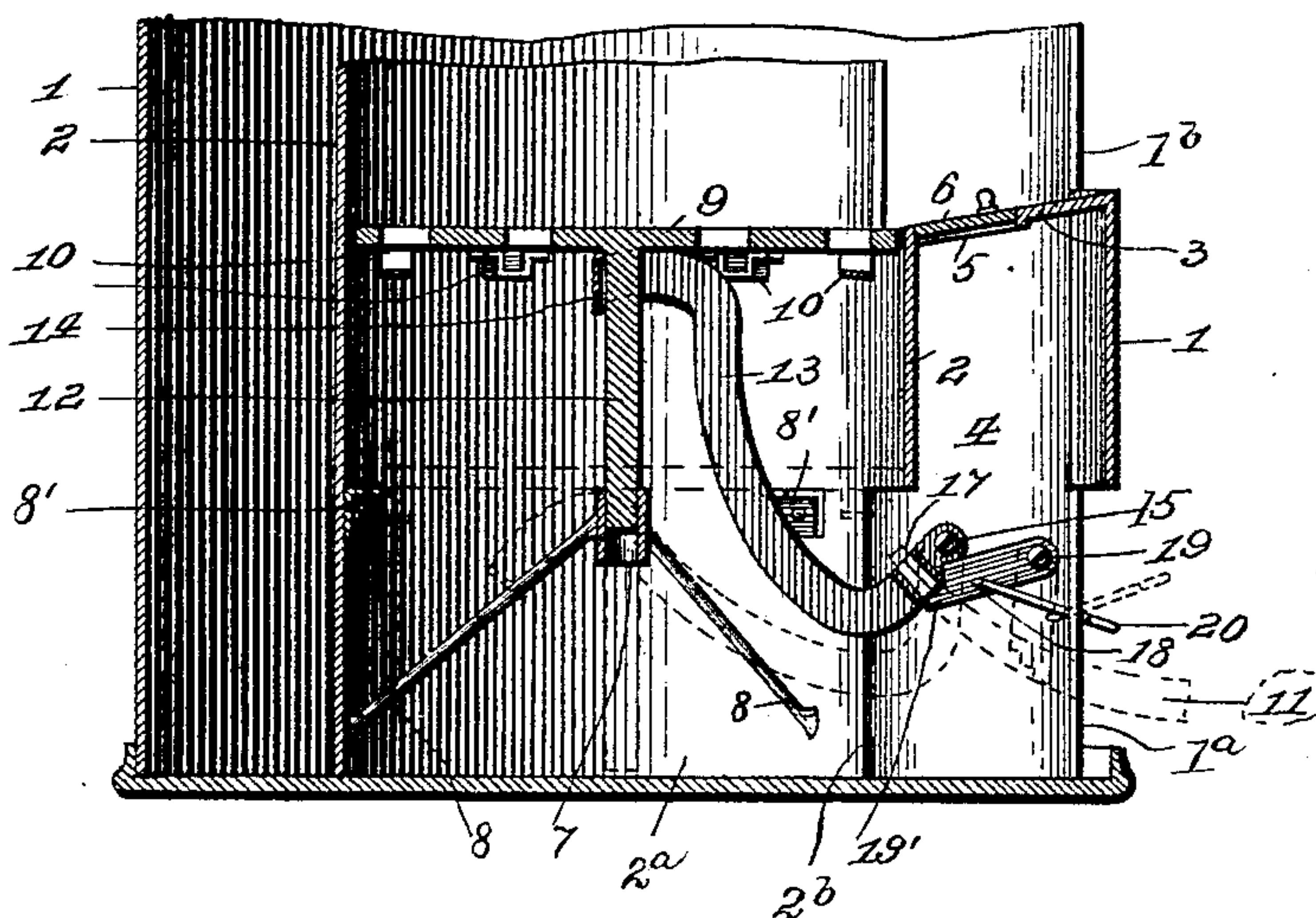
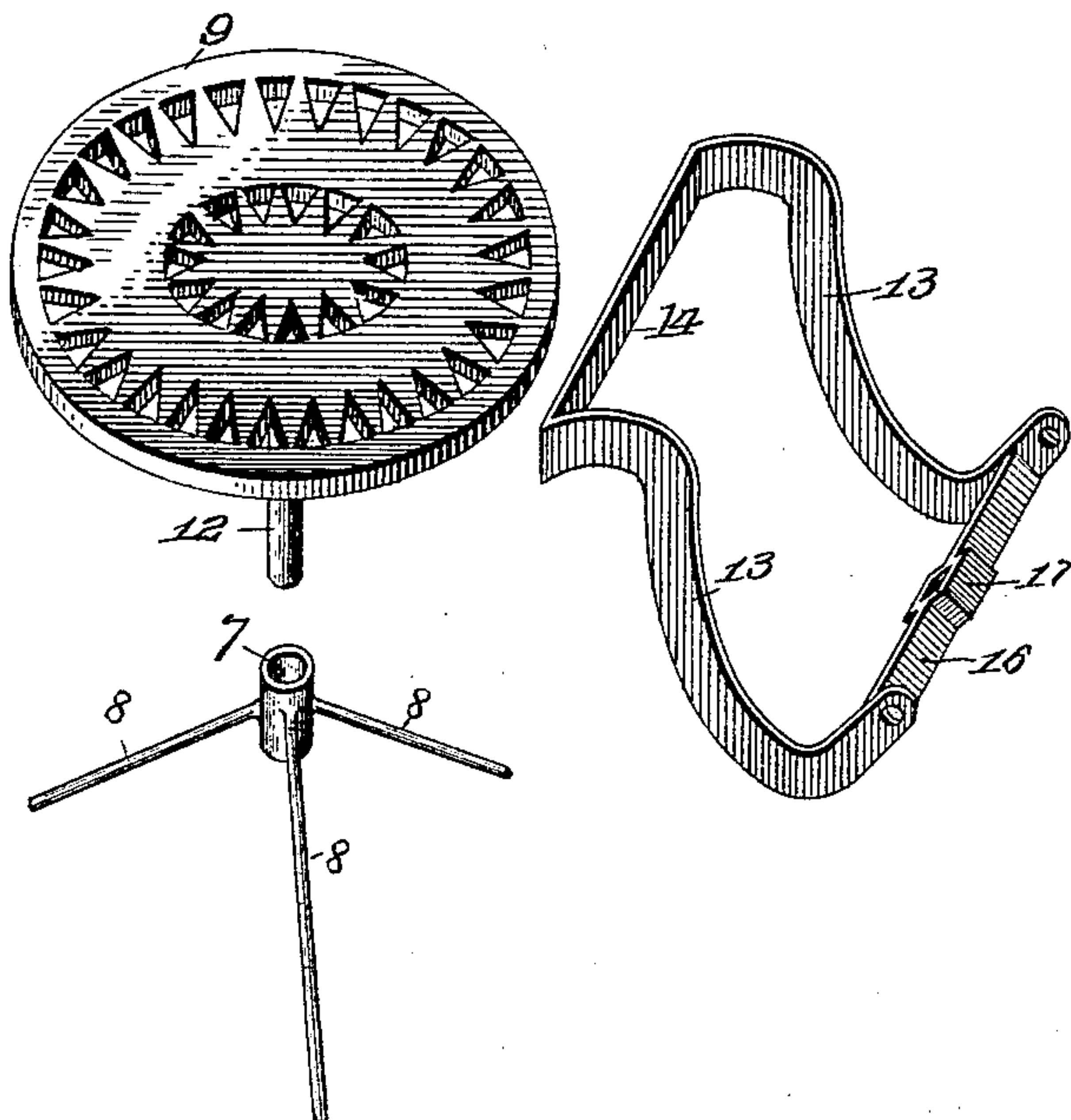


Fig. 2.



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# UNITED STATES PATENT OFFICE.

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## STOVE OR FURNACE.

SPECIFICATION forming part of Letters Patent No. 618,338, dated January 24, 1899.

Application filed August 2, 1898. Serial No. 687,541. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS H. EULASS, a citizen of the United States, and a resident of Mason City, in the county of Mason and State of Illinois, have invented certain new and useful Improvements in Stoves or Furnaces, of which the following is a specification.

The object of my invention is to produce improvements in those stoves and furnaces which are provided with vertically-movable grates; and it relates, first, to the construction of the body to provide a clinker-chute between the fire-box and the front thereof for receiving the clinkers from the grate when in its elevated position; secondly, to the grate and grate-mounting therefor, and, thirdly, to the lever-frame employed for raising and lowering the grate.

My invention consists in the novel features of construction as hereinafter described and claimed.

In the drawings, Figure 1 is a vertical cross-section of a stove or furnace with my improvements. Fig. 2 is a perspective view of my grate, grate-mounting, and lever-frame detached and separated.

1 is the outer jacket or front of a stove or furnace, having the usual ash-pit opening 1<sup>a</sup> and fuel-door opening 1<sup>b</sup>.

2 is the inner jacket, forming the fire-box and ash-pit 2<sup>a</sup>, having opening 2<sup>b</sup>.

3 is the usual shelf or casting connecting the two jackets at the bottom of the fuel-door opening.

4 are walls extending from the shelf 3 between the jackets to the bottom of the ash-pit, providing a clinker-chute and an extension to the ash-pit.

5 is an opening formed in said shelf, provided with a suitable cover 6.

7 is a suitable sleeve fixed in the center of the ash-pit by means of brace-rods 8, one end of which is secured to said sleeve, while the other end is secured to the inner jacket near the bottom of the same.

8 are grate-sustaining lugs secured to the inner jacket in a suitable manner.

9 is the grate, comprising an annular perforated plate, the arrangement and character of the perforations or openings varied according to the desire of the manufacturer.

10 are depending loops formed integral with the grate, and 11 is a lifter or shaker adapted to enter said loops, whereby the grate may be shaken.

12 is a central leg or standard extending downward from the grate, adapted to enter and work in the sleeve 7.

13 are ogee side bars of a lever-frame, the forward or upper ends of which are joined or connected by means of a connecting-rod 14. The rear ends of these side bars are provided with openings or holes.

15 are bolts by means of which the said side bars are pivoted to the walls 4. Immediately below the point of pivot the side bars 13 are connected by a rod 16, provided in its center with a socket or loop 17 of a size suitable to receive one end of the lifter or shaker 11.

18 is a dog or catch pivoted at 19 to one of the walls 4 and provided with notches 19'.

20 is an operating-rod passing through the outside jacket, one end of which is loosely secured to the dog or catch 18.

The operation is as follows: The normal position of the grate is upon the lugs 8', in which position the lifter or shaker 11 may be inserted in any of the loops 10, and by pushing the said lifter or shaker from side to side the grate may be shaken. When it is desired to clean the clinkers, stone, &c., from the bed of fire, the lifter or shaker 11 is inserted in the socket or loops 17 on the rod 16, and by pressing down upon said lifter or shaker the side bars are forced upward, thus raising the grate on the upper ends of said side bars until it is on a level with the shelf 3 of the fuel-door opening, and is held in this position by means of the dog or catch 18 engaging the connecting-rod 16. The cover 6 of the opening 5 of the shelf 3 is then removed, and by a suitable implement the clinkers, stone, &c., are raked from under and around the fire into the opening 5, whereupon they drop down through the clinker-chute into the ash-pit extension of the stove or furnace.

It is obvious that the grate may be held in positions intermediate of its highest and lowest positions by reason of the notches formed in the end of the dog or catch 18,



thus diminishing or decreasing the capacity of the fire-pot, according to the amount of fire desired.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A stove or furnace comprising an ash-pit, a fire-box, a front having an ash-pit opening and a fuel-door opening and spaced from the ash-pit and fire-box to provide a clinker-chute and an extension to the ash-pit, a shelf having an opening located above the clinker-chute and connecting the fire-box with the front, beneath the fuel-opening, a vertically-movable grate, and means for raising the grate to the top of the fire-box, for permitting clinkers to be drawn into the opening leading to the clinker-chute; substantially as described.

2. A stove or furnace comprising an ash-pit, a fire-box, a front having an ash-pit opening and a fuel-door opening, the vertical

sleeve, the brace-rods whereby the sleeve is supported from the ash-pit, the vertically-movable grate having a leg supported in the sleeve, the lever-frame pivoted to the front in the ash-pit extension and consisting of a pair of approximately ogee side bars and a connecting-rod having a lifter-socket, and means for supporting the lever-frame at the desired height; substantially as described.

3. A lever-frame, for raising a vertically-movable grate, formed with a pair of ogee side bars having openings at their lower ends whereby they are adapted to be pivoted to the front of a stove or furnace, with an upper connecting-rod, and with a lower connecting-rod having a socket for a lifter-bar; substantially as described.

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Witnesses:

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