

(No Model.)

2 Sheets—Sheet 1.

C. E. DARLING.
COOKING RANGE.

No. 509,654.

Patented Nov. 28, 1893.

Fig. 1.

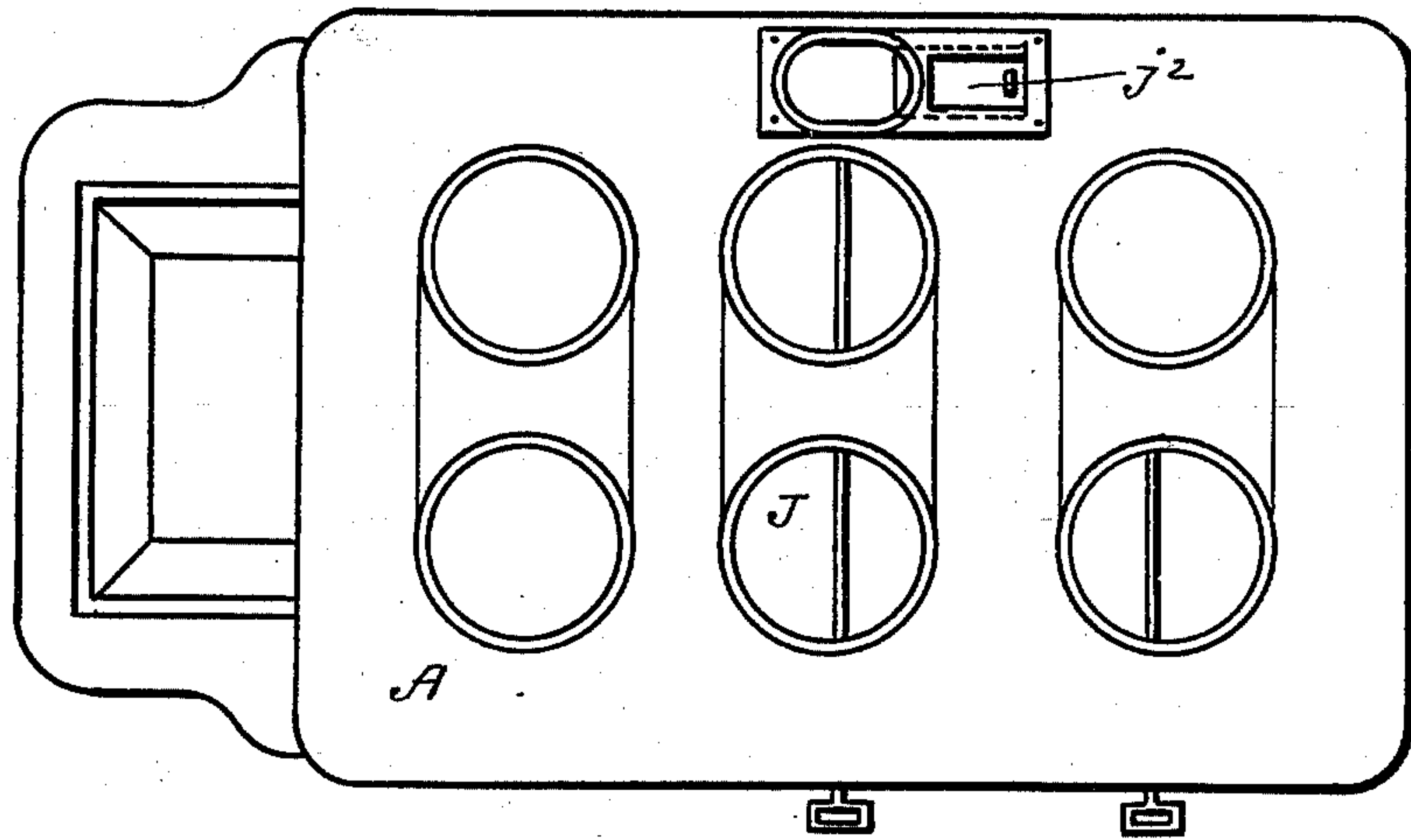


Fig. 2.

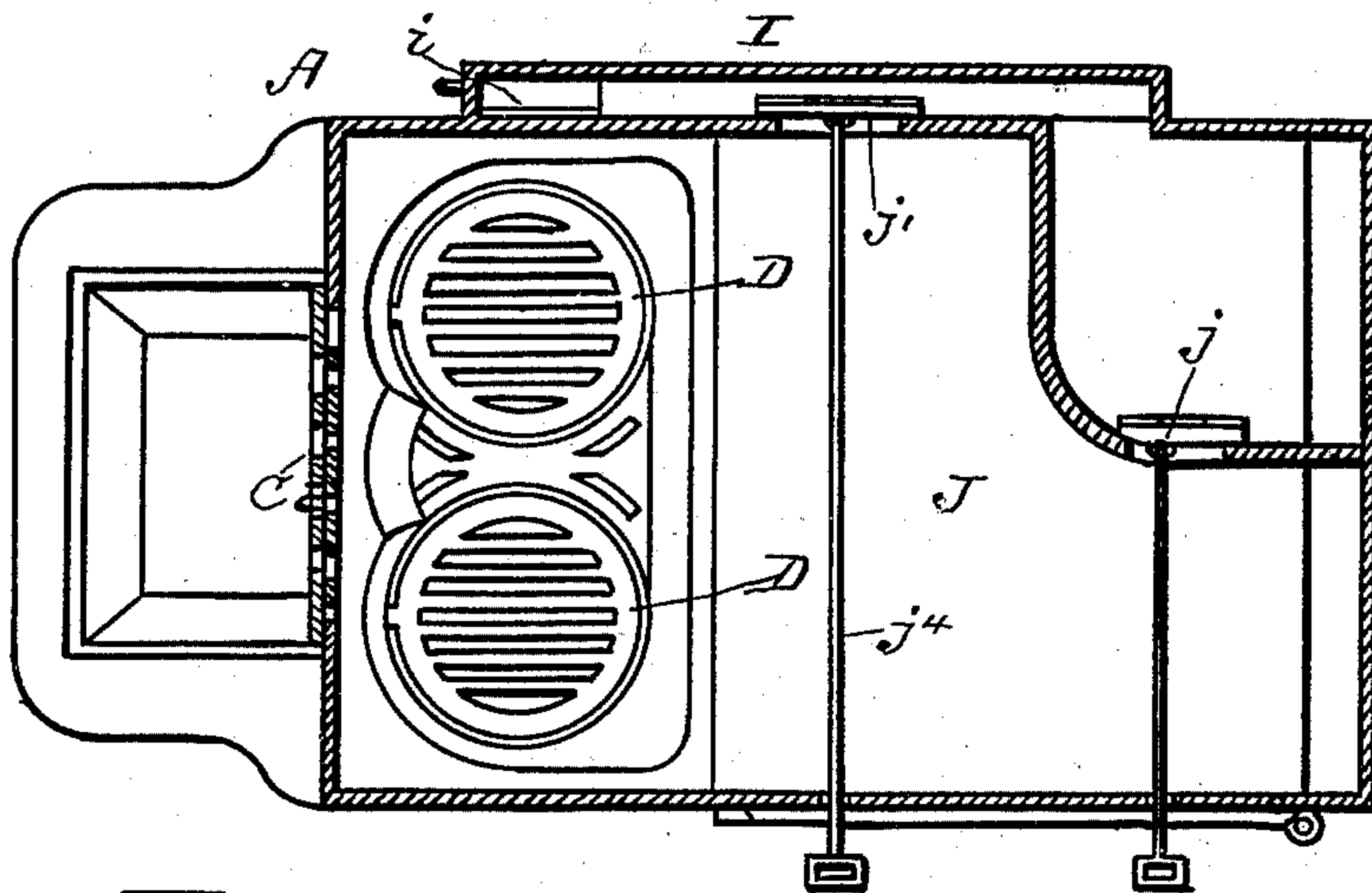
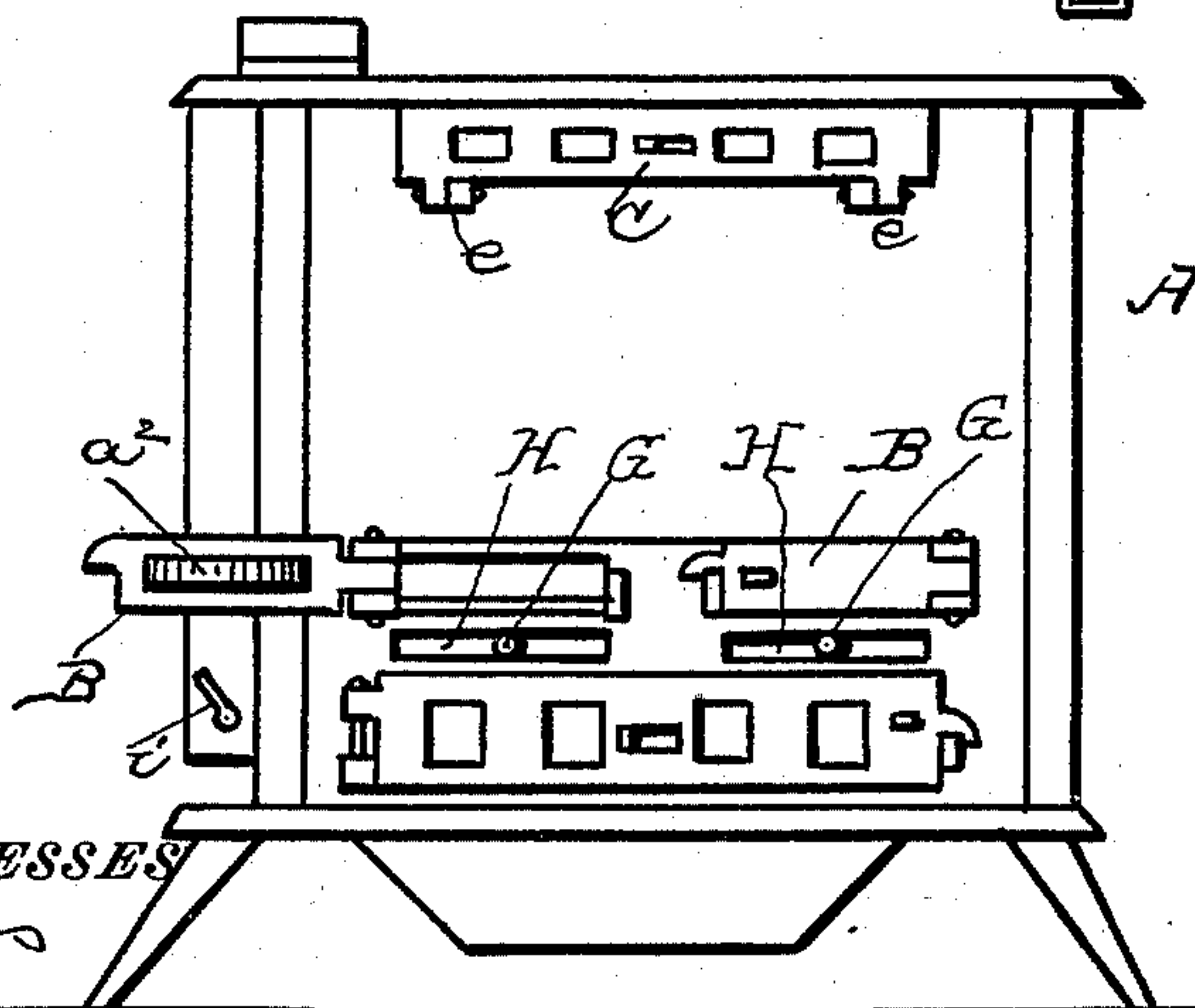


Fig. 3.



WITNESSES

E. H. Bates

M. M. Martin

INVENTOR

Charles E. Darling

By Wm. H. Bates Attorney

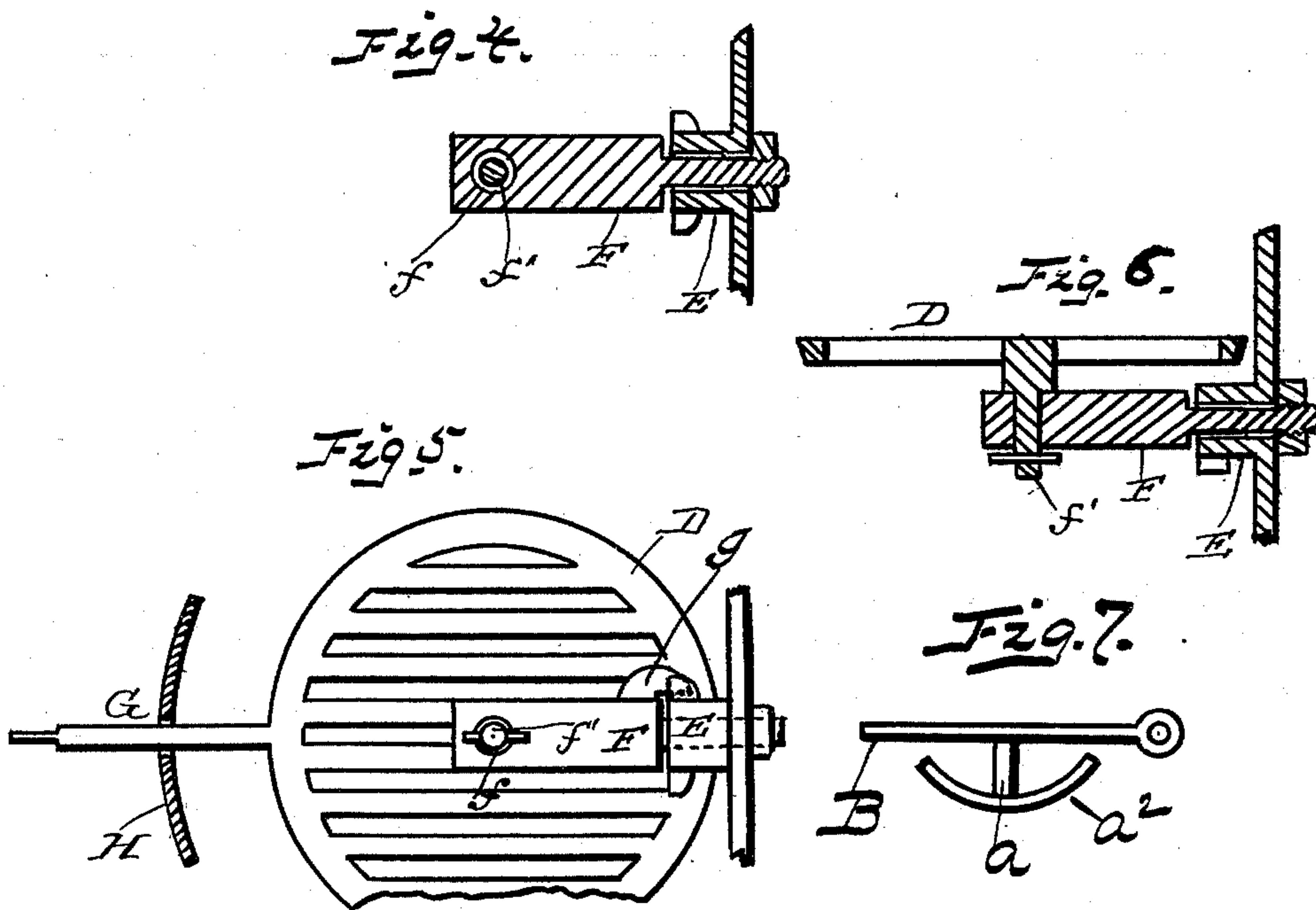
(No Model.)

2 Sheets—Sheet 2.

C. E. DARLING.
COOKING RANGE.

No. 509,654.

Patented Nov. 28, 1893.



WITNESSES.

E. H. Bates

W. M. Martin

INVENTOR:

Charles E. Darling

By Wm. H. Bates Attorney

UNITED STATES PATENT OFFICE.

CHARLES EDWIN DARLING, OF AUBURN, ASSIGNOR OF ONE-HALF TO JAMES FRANKLIN BOOTHBY, OF LEWISTON, MAINE.

COOKING-RANGE.

SPECIFICATION forming part of Letters Patent No. 509,654, dated November 28, 1893.

Application filed June 6, 1893. Serial No. 476,708. (No model.)

To all whom it may concern:

Be it known that I, CHARLES EDWIN DARLING, a citizen of the United States, residing at Auburn, in the county of Androscoggin and State of Maine, have invented certain new and useful Improvements in Cooking-Ranges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide primarily a cooking range which will be complete in itself and which will embrace therein the several features enumerated below: first, a series of two or more horizontally oscillating and tilting grates each acting independently of the other and having separate actuating means therefor; secondly, in clinker doors for the said range, and, lastly, in other material improvements in cooking ranges all of which will mark a departure from those in vogue, and the details of which will be more fully set forth in the accompanying specification, in which—

Figure 1 represents a plan view of my stove. Fig. 2 is a horizontal sectional view of the same. Fig. 3 is a front view. Fig. 4 is a horizontal sectional detail view of the grate support. Fig. 5 is a bottom view of the grate and its support detached from the stove. Fig. 6 is a detail vertical sectional view of the same. Fig. 7 is a plan or edge view of one of the clinker doors.

Referring to the drawings A represents the stove or range embodying my improvements and B the clinker doors. These doors are located preferably at the front of the range, as shown in this instance, and they are provided with shanks α which are secured in a central position to the outer doors and to these are affixed the inner doors known more properly as clinker doors which will be more fully hereinafter described. At the upper part of the range front is pivoted the draft door C. This door is hinged or pivoted horizontally to the range by a rod which is passed through eyes e , which are each integral both with the door and the range in the usual manner. The door is provided with the usual openings and cut-off slide.

D, represents the grates which are pivoted in the fire box by means of sleeves E, secured to the rear wall of the ash box. Supported within the sleeves E are studs F, said studs having one of their ends screw threaded and held within the sleeves by nuts. The studs F are perforated at their outer ends as at f and through these perforations pass the pin-tle or pivot pins f' by which the grates are held in position on the studs. The grates are provided with the usual shank G for engagement with the shaker. Upon this shank G are secured cut-offs or deflectors H, which prevent the exit of dust from the fire when the grates are being actuated. The advantage of this arrangement will be obvious, as the precipitated ashes which, having, while heated, a tendency to diffuse themselves and arise, will, by this means, be effectually cut off and retained in the ash box. The operation of this portion of my improved range will be obvious.

I represents the soot discharge duct which is of the usual form and connects with the ash pit in the ordinary manner. This duct is provided with a damper or valve i , which is designed to regulate the draft from the fire box and through the escape pipe.

In the hot air chamber J, are located the several dampers designated by the letters j , j' , j^2 . The damper j is one of the kind which serves to concentrate or diffuse the heat in different parts of the hot air chamber.

j' designates a damper which is located in the stove pipe opening and is operated by means of the rod j^4 . This damper serves to cut off all draft from the fire box A through the air duct or to intensify the chimney draft and thereby the combustion, by its being thrown open.

The damper j^2 is fitted in the top plate of the range, and slides in grooves cast integral therewith. The free end of this slide passes beneath the stove pipe collar and serves as a cut-off to the pipe. By this means a certain predetermined amount of draft may be fixed for the range, and this may be increased or diminished at will.

The clinker doors B, with their shanks α and their segments α^2 are designed to afford a ready and easy access to that part of the

fire box in which clinkers are most liable to gather and from which in this instance they may be easily reached. The segments serve to complete that part of the fire box in which
5 they are located and the fuel is thereby kept in place.

The draft door C, is hinged so as to drop down instead of being swung open as is ordinarily done and this arrangement saves space
10 and avoids the liability of the door being broken off or injuring any one when it is open.

By the arrangement of the grates in the manner herein set forth, it will be perceived that a part only of the fuel in the fire box
15 may be disturbed at a time. Less effort will be required to operate each one singly as in this improvement the shaking and dumping of these grates may be more readily and effectually accomplished than by the grates of
20 ordinary construction.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A horizontal rotary grate pivoted to a
25 stud said stud being socketed in a sleeve supported on the wall of the ash pit substantially as described.

2. In a stove or range a horizontal sleeve projecting from the rear wall of the ash-pit,

a stud pivoted in said sleeve, a rotary grate 30 pivoted on said stud having the shank G, and shield H, substantially as described.

3. A rotary grate having a shank or stem thereon, a horizontal stud having a lug adapted to engage a lug on the sleeve and a shield 35 on the grate stem conforming to the shape of the fire box and covering the opening therein to prevent the escape of ashes when said grate is agitated, substantially as described.

4. A clinker door having a stud secured to 40 its inner face and shield projecting therefrom and into the fire box substantially as described.

5. In a stove or range the combination of the sleeve supported on the wall of the ash 45 pit provided with lugs, the stud F, pivoted in said sleeve, having the side lug *g* adapted to engage the lugs on said sleeve and the grate D, having the shanks *f'* and G, and pivoted to the outer end of said stud all substantially 50 as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES EDWIN DARLING.

Witnesses:

CHAS. A. LITCHFIELD,
CYRUS GREELY.