

No. 644,353.

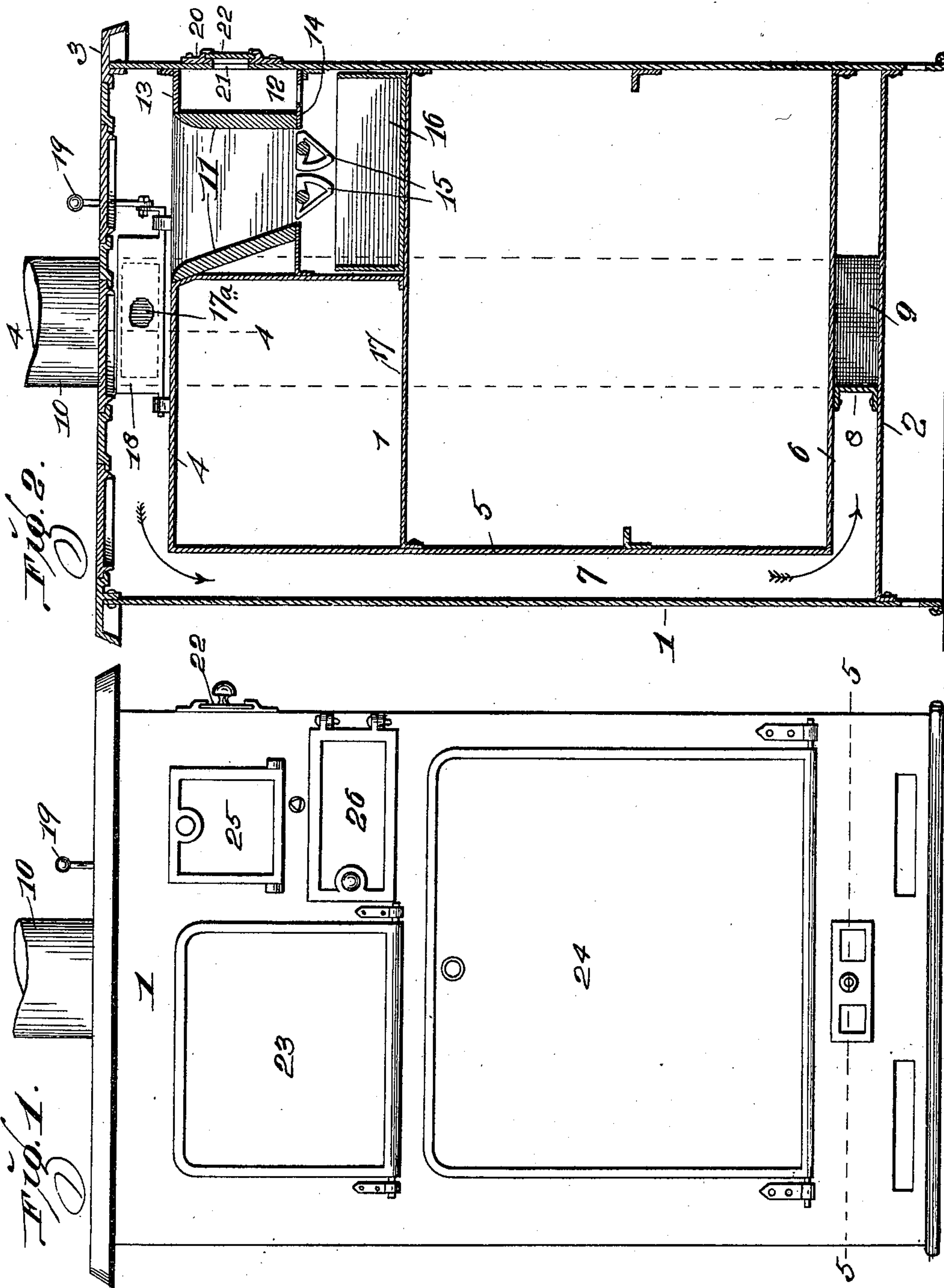
Patented Feb. 27, 1900.

L. EDEL.
RANGE.

(Application filed Oct. 3, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Attest
M. Smith
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Inventor:
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By Higdon & Logan
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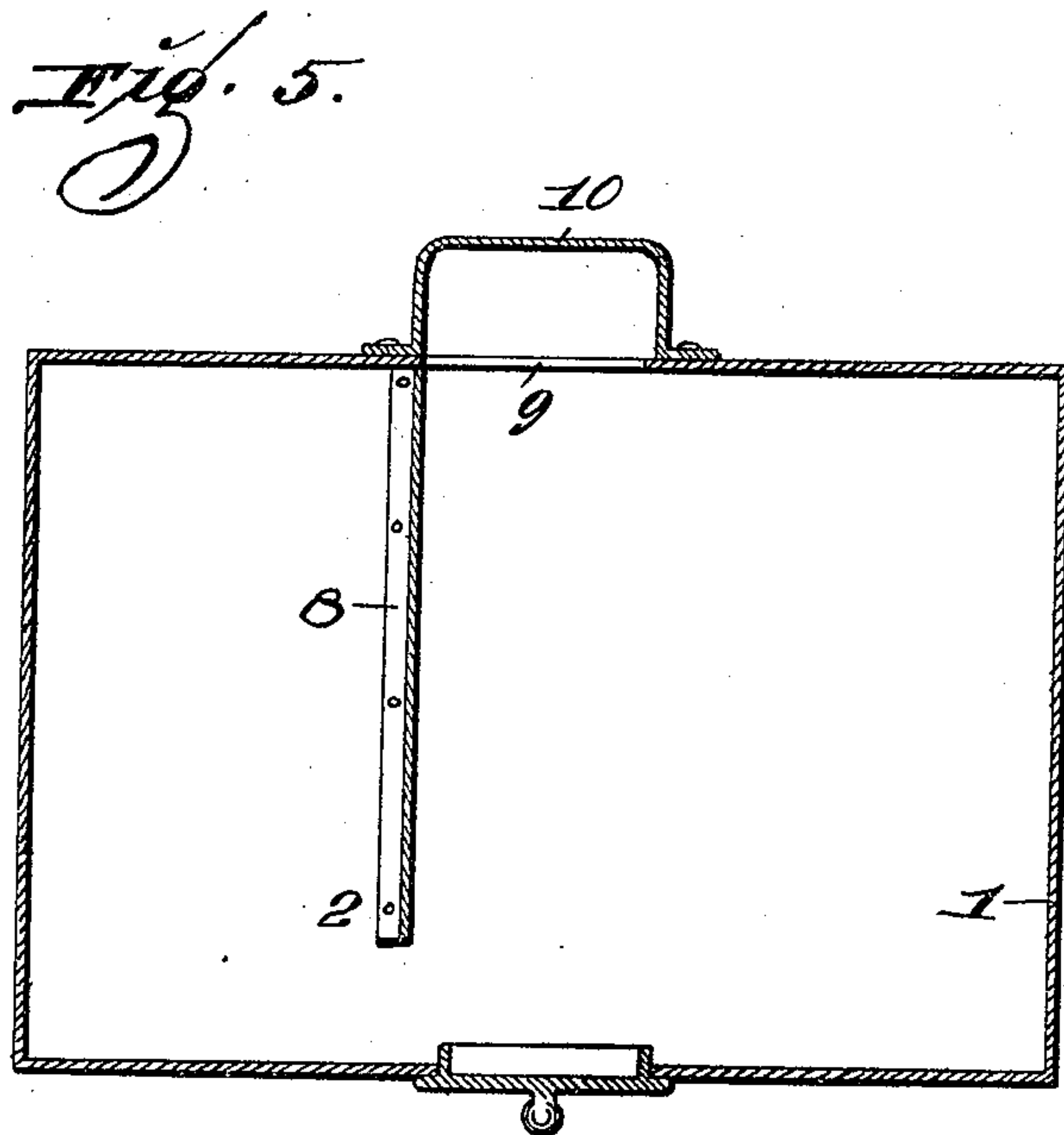
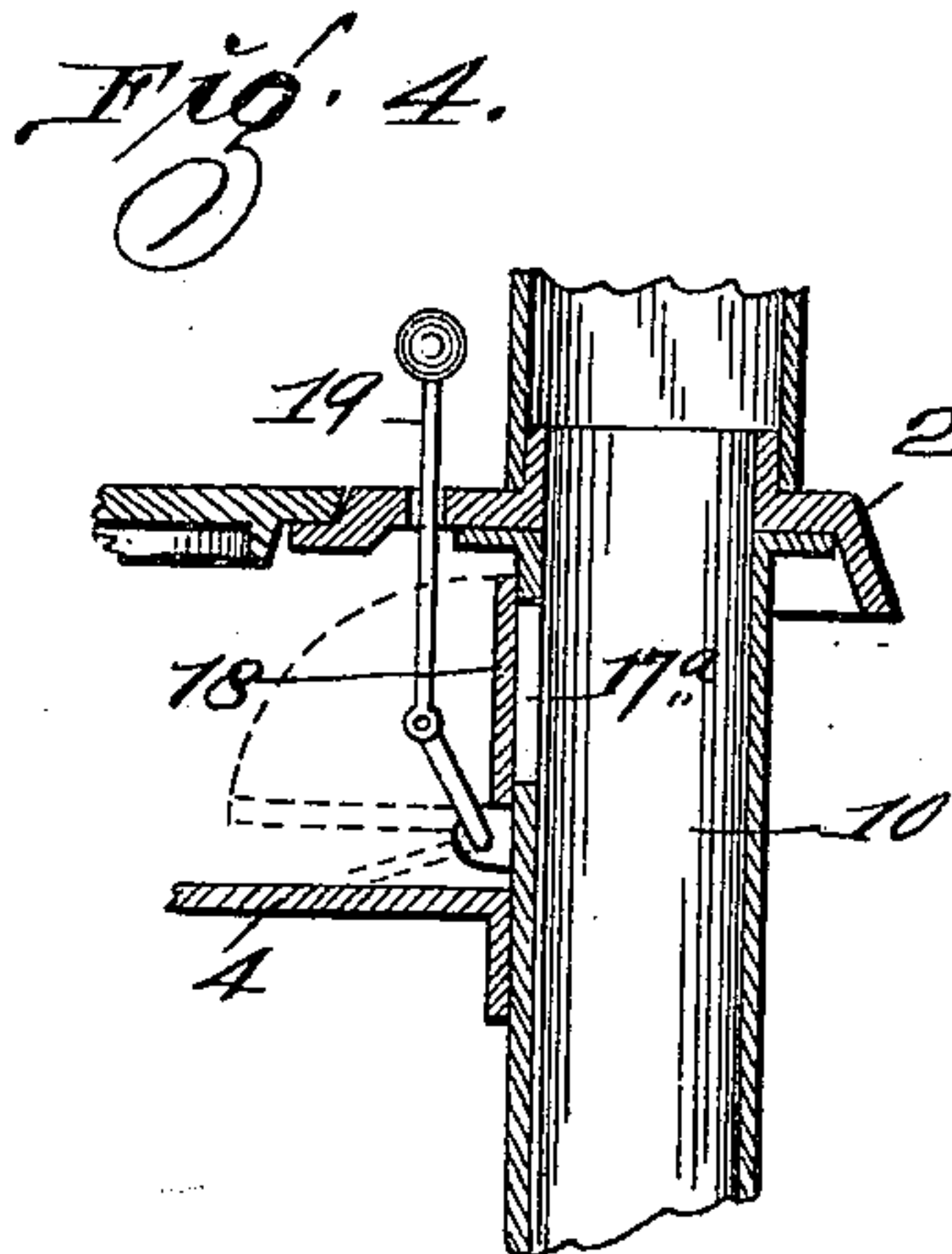
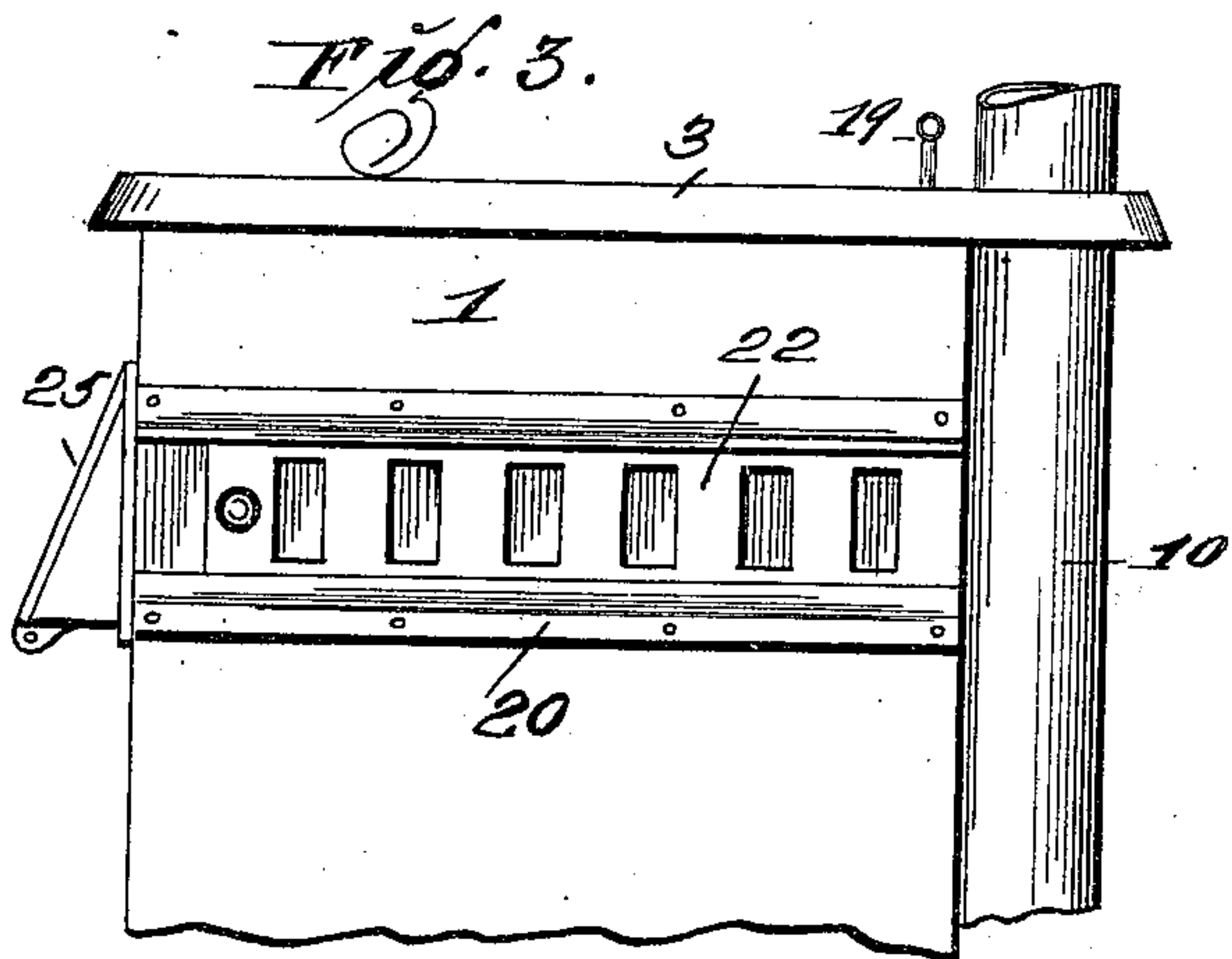
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2 Sheets—Sheet 2.



Attest:
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UNITED STATES PATENT OFFICE.

LUCAS EDEL, OF ST. LOUIS, MISSOURI.

RANGE.

SPECIFICATION forming part of Letters Patent No. 644,353, dated February 27, 1900.

Application filed October 3, 1898. Serial No. 692,570. (No model.)

To all whom it may concern:

Be it known that I, LUCAS EDEL, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in
5 Ranges, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to ranges; and it consists of the novel construction, combination; and arrangement of parts hereinafter shown, described, and claimed.

Figure 1 is a front elevation of my improved range. Fig. 2 is a longitudinal vertical sectional view of the range. Fig. 3 is a side elevation of the top portion of the range. Fig. 4 is a vertical sectional view taken approximately on the line 4 4 of Fig. 2. Fig. 5 is a horizontal sectional view taken approximately
20 on the line 5 5 of Fig. 1.

In the construction of my improved range I make use of a rectangular sheet-metal body 1, closed at the lower end by the sheet-metal plate 2 and at its top by the cast plate 3, in
25 which are located the ordinary stove-holes. A sheet-metal partition 4 extends across the upper portion of the range-body 1 a slight distance below the top 3 thereof, said partition being extended downwardly, as indicated by
30 5, a short distance from the left-hand wall of said body 1, and said partition being finally extended horizontally across the lower portion of the body 1, as indicated by 6, a slight distance above the bottom 2 thereof. Thus a
35 passage or flue 7 is formed that leads from the upper right-hand corner of the range-body to the bottom thereof.

8 indicates a vertically-arranged partition that is interposed between the bottom 2 and
40 the horizontal portion 6 of the partition at a point slightly to one side of the center of the range-body 1, said partition 8 extending from a point near the front wall of said range-body to the rear wall thereof. Formed in the rear
45 wall of the range-body, to the right hand of the partition 8, is an opening 9, that establishes communication from the passage or flue 7 to the vertically-arranged flue or pipe 10, that extends upwardly behind the range-body
50 and leads to the chimney.

A fire-pot 11, composed of suitable plates, is located in the upper right-hand corner of

the body 1, said fire-box extending from the front to the rear wall of the range-body, and the right-hand one of the side plates of the
55 fire-pot is located a slight distance away from the side wall of the range-body, thus forming a chimney 12. Extending from the upper edge of the right-hand plate to the side wall of the range-body is a plate 13, and extending
60 from the lower end of said right-hand side plate to the side wall of the range is a perforated plate 14. Arranged beneath the fire-pot are grate-bars 15, and immediately below said grate-bars 15 is removably located an
65 ash-pan 16, the same resting upon the horizontally-arranged partition 17, that extends from the vertical portion of the partition 5 to the right-hand side wall of the range-body. Formed in the top portion of the rear wall of
70 the range-body is a rectangular opening 17^a, the same establishing communication from the top portion of the flue or passage 7 with the interior of the pipe 10. A hinged damper 18 normally closes this opening, said damper
75 18 being operated by a short rod 19, that extends upwardly through a small opening in the range-top 3.

Located upon the right-hand side wall of the range-body is a perforated plate 20, the
80 perforations of which coincide with the draft-opening 21 formed in the side wall of the range-body, the same communicating with the chamber 12, and arranged to slide upon the face of the plate 20 is a perforated damper 22,
85 the perforations therein coinciding with the perforations in the plate 20 when said damper is moved to a certain position.

The rectangular spaces to the side and beneath the fire-pot may be utilized as ovens,
90 and oven-doors 23 and 24 are hinged upon the front of the range-body in positions to close the openings in the said spaces. An opening is formed in the range-front immediately in front of the fire-pot, which opening is closed
95 by the door 25, and an opening is formed in said range-front immediately in front of the ash-box 16, which opening is closed by the door 26.

By reason of the construction above de-
100 scribed an oven is spaced from the body at the top and bottom and on one side to form an indirect passage for the products of combustion, and said oven is spaced from the

body on the opposite side near the top to form a chamber. A fire-pot and ash-box are situated in said chamber, the ash-box resting on the said oven, and an air-heating chamber 5 is formed between the fire-pot and the said body and has communication with the outer air and with said fire-pot.

The use and operation of my improved range are as follows: When a fire is started 10 within the fire-pot, the damper 18 is caused to swing downwardly, as indicated by dotted lines in Fig. 4, and at the same time the sliding plate 22 is moved laterally until a portion of the draft-openings 21 are exposed. The 15 draft to said fire will then pass through these draft-openings 21 into the chamber 12, and thence downwardly through the perforated plate 14 into the ash-pan chamber, and from thence upwardly through the grate-bars, the 20 fire located thereon, and from thence through the opening 17^a into the pipe 10, this being the direct draft of the range. When it is desired to use the heat from the fire for cooking or baking purposes, the damper 18 is swung up- 25 wardly, so as to close the opening 17^a, and then the draft from the fire carrying the smoke and other products of combustion, together with a large amount of the heat from said fire, will pass through the passage or flue 7, 30 as indicated by the arrows in Fig. 2, and, finally, through the opening 9 into the pipe 10. The ovens and any vessels that may be located in the stove-holes in the range-top will become quickly heated.

35 The chamber 12 may be termed the "draft-heating" chamber, for the reason that the draft

entering the openings 21 strikes against the right-hand side plate of the fire-pot, which is of course heated by the fire within said fire-pot, and said draft after being heated passes 40 downwardly through the perforated plate and then into the ash-box 16 and then into the fire. By reason of the fact that the warm air (before entering the fire-pot) enters the ash-box 16 the latter becomes heated, and thereby 45 serves to preserve a higher temperature in the oven beneath than would be secured were the air cold.

A range of my improved construction is very simple, strong, and durable, can be 50 heated very quickly with a small amount of fuel, and is very efficient in use.

I claim—

In a range, the combination of the body, an oven spaced from the body at the top, the 55 bottom, and on one side, to form an indirect passage for the products of combustion; and spaced from the body on the opposite side near the top to form a chamber; a fire-pot and ash-box situated in said chamber, the 60 ash-box resting on the oven; and an air-heating chamber formed between the fire-pot and the body and having communication with the outer air and with the fire-pot, substantially 65 as described.

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

LUCAS EDEL.

Witnesses:

M. P. SMITH,
JOHN C. HIGDON.