

No. 799,084.

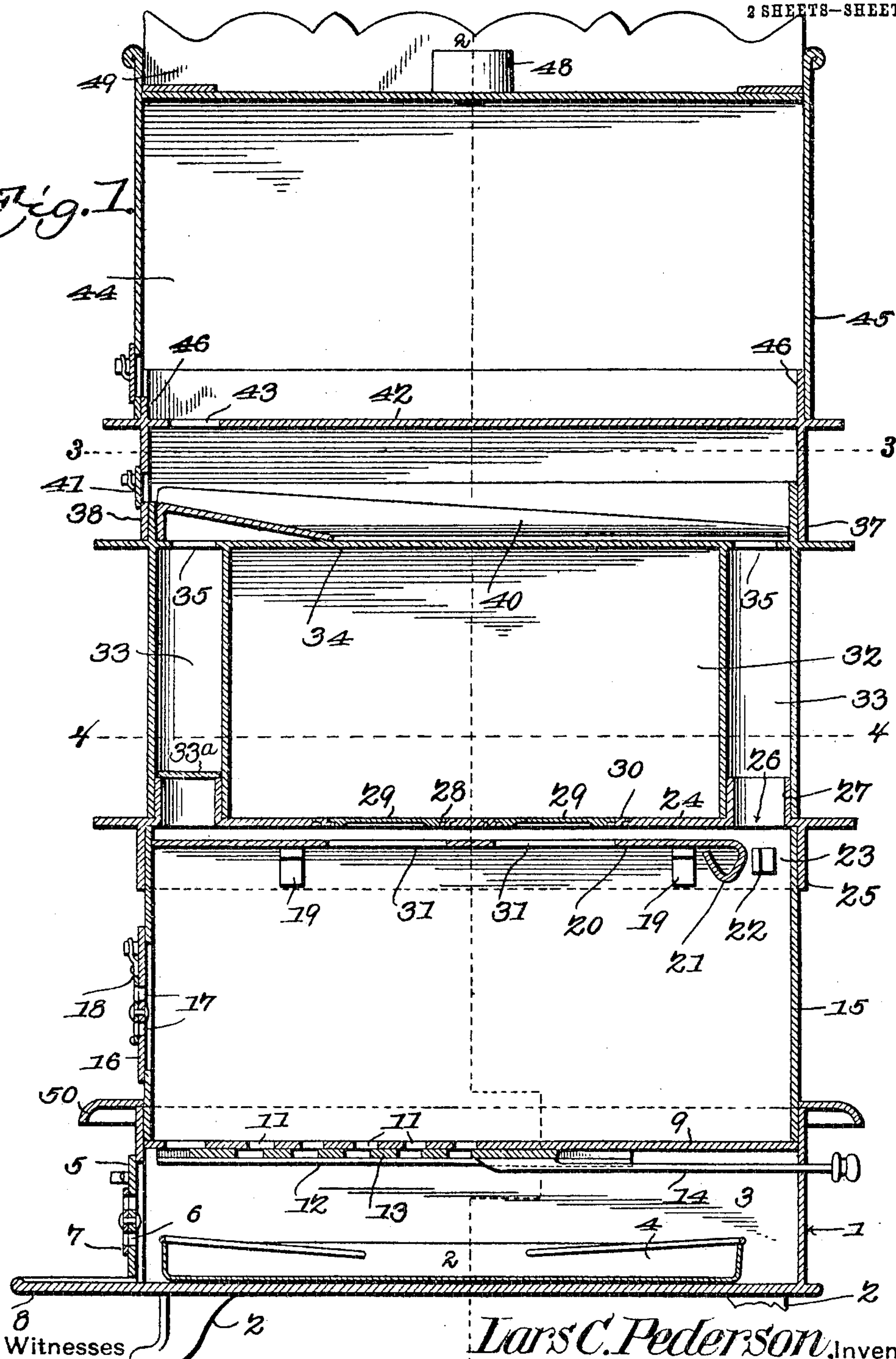
PATENTED SEPT. 12, 1905.

L. C. PEDERSON.
COMBINED HEATING AND COOKING STOVE.

APPLICATION FILED APR. 1, 1905.

2 SHEETS—SHEET 1.

Fig. 1



Witnesses

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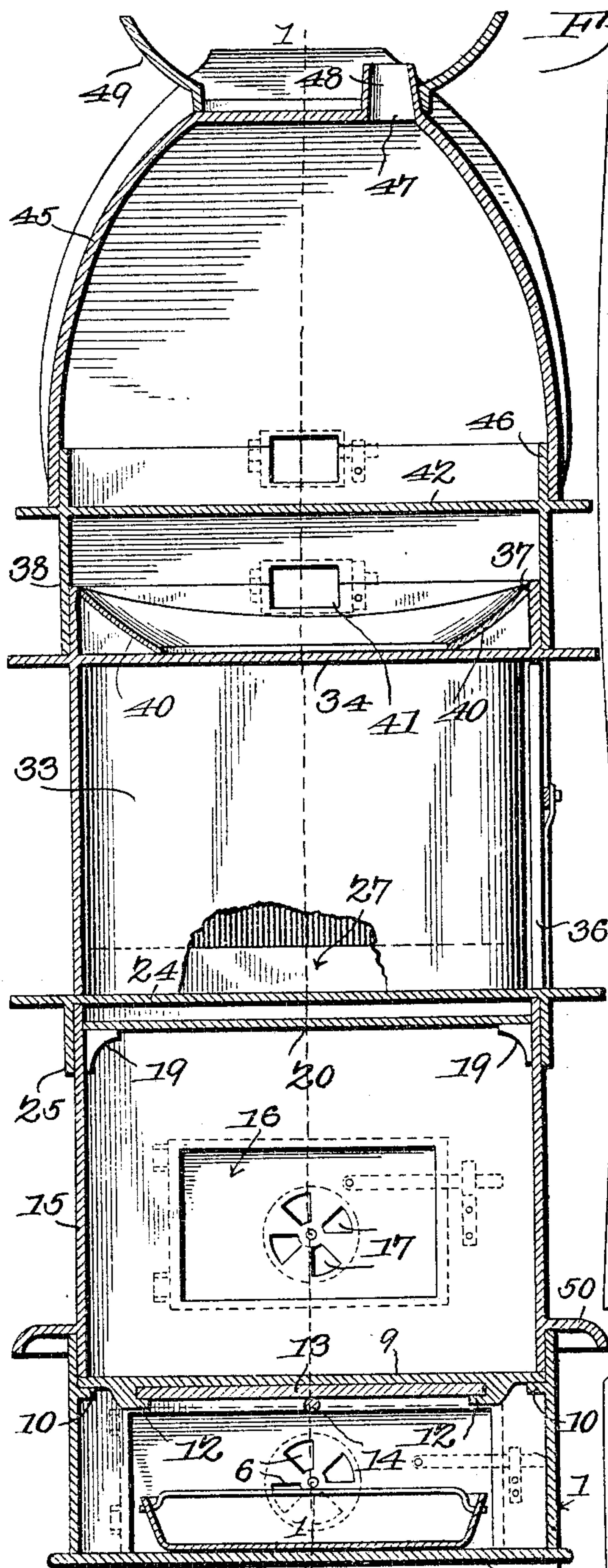
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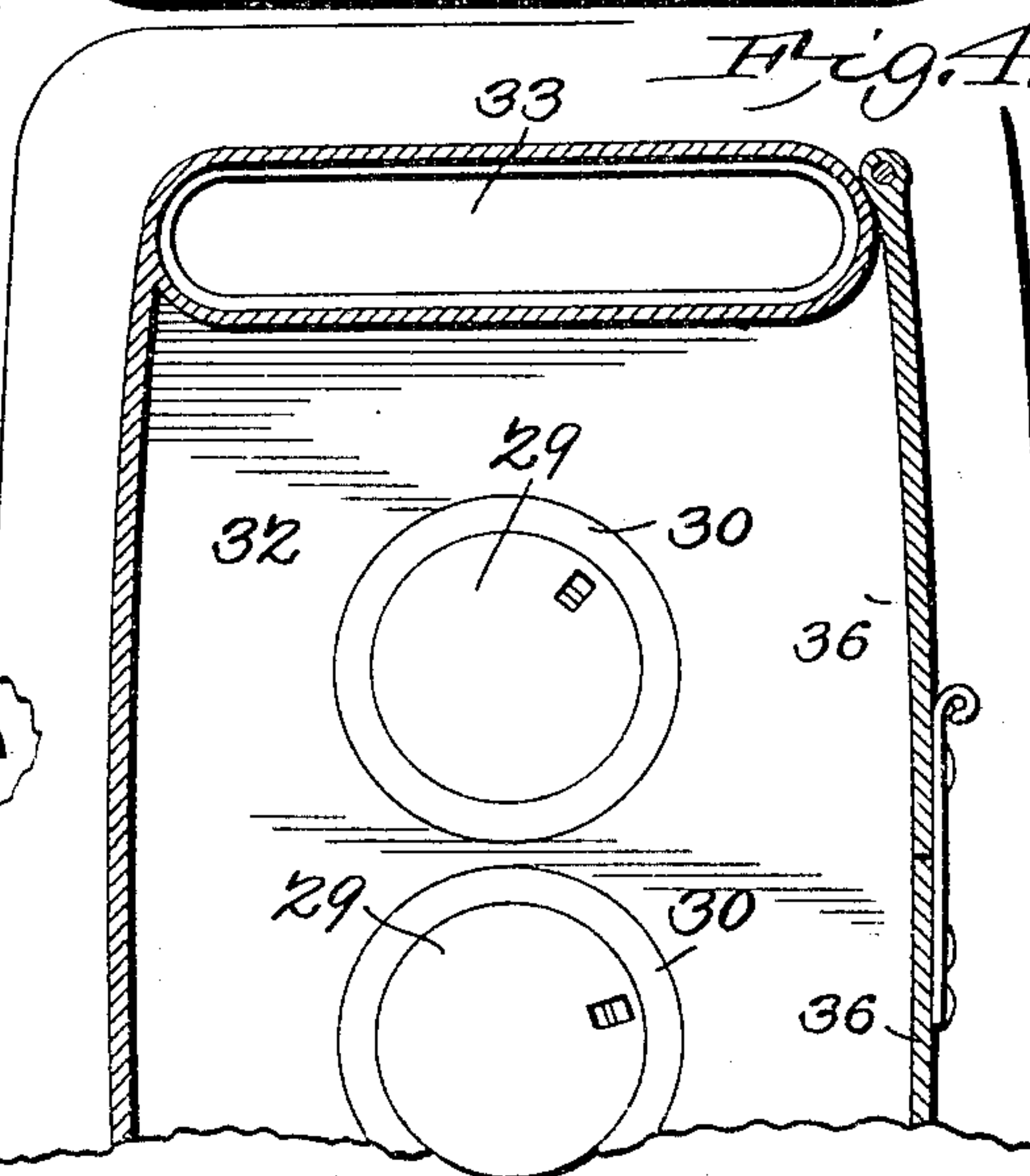
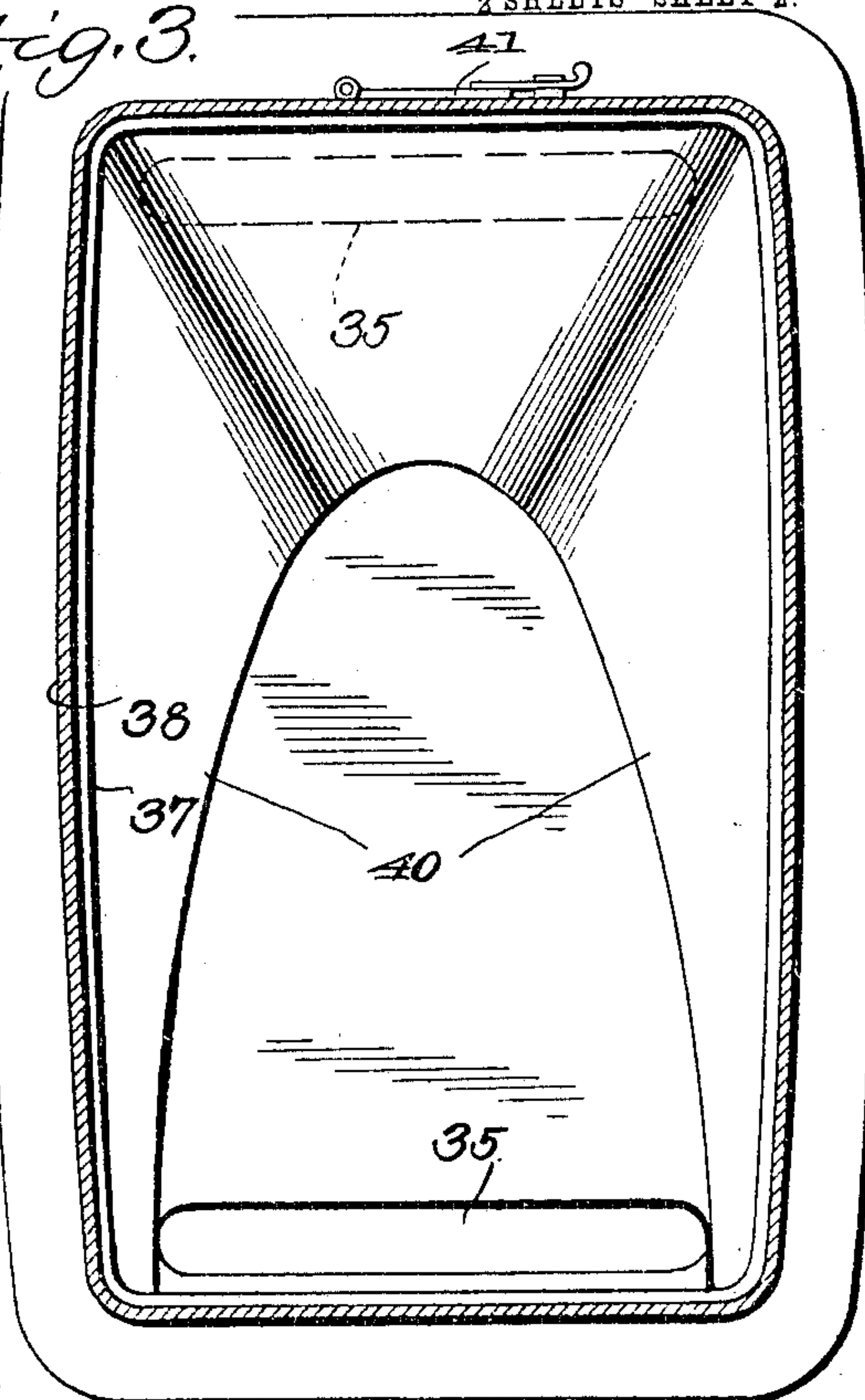
APPLICATION FILED APR. 1, 1905.

2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

LARS CHRIST PEDERSON, OF MILLTOWN, WISCONSIN.

COMBINED HEATING AND COOKING STOVE.

No. 799,084.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed April 1, 1905. Serial No. 253,298.

To all whom it may concern:

Be it known that I, LARS CHRIST PEDERSON, a citizen of the United States, residing at Milltown, in the county of Polk and State of Wisconsin, have invented a new and useful Combined Heating and Cooking Stove, of which the following is a specification.

This invention relates to stoves, and especially to that class of combined heating and cooking stoves which are usually known as "parlor cooking-stoves."

The invention has for its object to simplify and improve the construction and operation of this class of stoves, to present a stove in which various kinds of fuel (coal as well as wood) may be consumed, to provide in a stove of this class a bake-oven which shall be well heated, so that the best results in baking may be attained, and, generally speaking, to present a device of the class referred to which shall possess superior advantages in point of simplicity, durability, economy of operation, and general efficiency.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications to which recourse may be had within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a vertical sectional view of a stove constructed in accordance with the principles of the invention, the same being taken on the plane indicated by the line 1 1 in Fig. 2. Fig. 2 is vertical sectional view taken on the plane indicated by the line 2 2 in Fig. 1. Fig. 3 is a horizontal sectional view taken on the line 3 3 in Fig. 1. Fig. 4 is a horizontal sectional view taken on the line 4 4 in Fig. 1.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

The base 1 of the improved stove is supported upon legs, 2 2, and said base consti-

tutes the ash-pit 3, in which may be placed an ash-pan 4, which is accessible through a door 5, having a draft-opening 6, controlled by a valve 7. A shelf 8 has been shown as projecting beneath the door.

The top of the base is composed of a plate 9, detachably supported upon lugs or flanges 10. This plate, which constitutes the bottom of the fire-box, is provided with draft-apertures 11, and it is provided upon its under side with flanges 12, serving for the support of a movable grate 13, the solid portion of which may be so disposed as to close the apertures 11, thereby preventing upward draft through the ash-pit. When coal or other fuel is used, in the combustion of which a large quantity of oxygen is required, the grate, which is provided with an operating-handle 14, is adjusted in a position which will leave the draft-apertures 11 unobstructed. When wood is the fuel to be consumed, the grate will preferably be adjusted to obstruct the apertures 11.

A tubular section 15, constituting the fire-box, is fitted within the walls of the base and is supported upon the plate 9. The section 15 is provided with a feed-door 16, having draft-apertures 17, controlled by a valve 18. The fire-box section 15 is provided near its upper edge with interiorly-disposed lugs 19, supporting a plate 20, provided at its rear end with a downturned flange 21, which is spaced from the extreme rear end of the fire-box by an obstructing-lug 22, disposed in the path thereof. The space or opening 23 between the rear end of the plate 20 and the rear wall of the fire-box is for the upward passage of products of combustion, and owing to the presence of the lugs 22 it will not be possible for the plate 20 to become shifted so as to obstruct said passage. The fire-box section 15 supports a plate 24, which constitutes the bottom plate of the oven and which is provided with a downward-extending flange 25, exteriorly engaging the walls of the fire-box. The plate 24 is provided at both its ends with slots or openings 26, surrounded by collars 27. Said plate or oven bottom is provided with openings 28, which are flanged or shouldered to support detachable lids or griddles 29 of ordinary construction. These griddles may be used in connection with ordinary reducing-rings, as 30. The plate 24, which is spaced from the deflecting-plate 20 in the top of the fire-box, is thus adapted to support pots, kettles, or similar cooking

utensils, and the plate 20 is provided with openings 31, registering with the openings 28, so that the cooking utensils employed may be subjected to the direct action of the flames or the incandescent contents of the fire-box when the griddles are removed. Another important reason why the plates 20 and 24 are spaced apart is the provision thereby afforded for the products of combustion to rise through the openings 31, so that while the direct draft is upward through the opening 26, registering with the draft-passage 23, a considerable portion of the products of combustion will be deflected in a forward direction and caused to pass upwardly through the opening 26 at the front end of the plate 24.

The oven-section 32, which is supported upon the plate 24, is provided with flues 33, the lower ends of which exteriorly engage the collars 26. The top 34 of the oven-section is provided with openings 35 at the upper ends of the flues 33, and one side wall of said section is provided with doors 36, through which the interior, which constitutes the oven, is accessible. The oven-section is provided with an upwardly-extending flange 37, which is exteriorly engaged by the side walls 38 of a section constituting a smoke-chamber and into which the products of combustion may rise through the openings 35 at the upper end of one of the flues 33, the other flue being stopped or obstructed by a movable plate 33^a, said plate being movable in the sense that it is capable of being transferred from one to the other of the flues 23. This, however, may be accomplished only by separating the stove-sections, and this so-called "movable" plate is intended to be placed in the position which it is intended to occupy when the stove is set up. Within this section or smoke-chamber, however, is placed an approximately U-shaped plate having a concave upper surface and provided at one end thereof with supporting-lugs, as 39. This plate, which is designated 40, constitutes a deflector whereby the upper end of the flue in which the plate 33^a is placed may be further obstructed, and this plate or deflector is preferably made reversible, so that the opening 35, over which the plate 33^a has been placed, may be obstructed, the concave upper surface of said plate 40 serving to deflect the products of combustion in the direction of the walls of the smoke-chamber. This smoke-chamber is accessible through a door 41 to enable it to be cleaned occasionally, as required. The position of the deflecting-plate 40 and of the plate 33^a will be determined by the position of the stove in the room which is to be heated and various other considerations, the object being to deflect the products of combustion in the direction which shall be most favorable to the extraction and utilization of the heat units.

The top plate 42 of the smoke-chamber is provided near one end thereof with an opening 43 for the upward passage of the products

of combustion into a radiating-chamber 44, the side walls of which, 45, exteriorly engage a flange 46, projecting upwardly from the top plate 42. The top of the radiating-chamber has a smoke-exit 47, surrounded by a pipe-collar 48 for connection with a pipe through which the products of combustion may be conveyed to a point of final exit. The radiating-chamber also serves to support an ornamental top 49.

An ornamental ring 50, constituting a foot-rest, is fitted upon the fire-box section of the stove and is supported upon the upper edge of the base. The bottom and top plates 24 and 34 of the oven and the top plate 42 of the smoke-chamber are extended beyond the side walls of the stove to intercept upwardly-moving currents of hot air and to deflect the same outwardly into the room or apartment where the stove is located.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood by those skilled in the art to which it appertains.

The construction of the stove is simple and inexpensive. The stove, while primarily a heating-stove, may be satisfactorily used for cooking or baking purposes. The stove may be easily maintained in a clean and operative condition, and it will be found economical with regard to the expenditure of fuel. As previously stated, the stove is also adapted for the consumption with equally satisfactory results of various varieties of fuel.

This improved stove may be manufactured of cast-iron, sheet metal—such as heavy Russia iron—or any other suitable material or combination of materials, and it may be made very neat and ornamental. As to the shape thereof, it may be of circular cross-section, although a quadrilateral shape having rounded corners will probably be preferred.

Having thus described the invention, what is claimed is—

1. A fire-box, a plate having a downward-extending flange exteriorly engaging the upper ends of the walls of the fire-box and constituting the bottom plate of an oven, said plate being provided at the ends thereof with apertures surrounded by collars, an oven-section having end flues engaging said collars, and side doors in said oven-section.

2. A fire-box, a plate supported thereon and constituting the top of the fire-box and the bottom plate of an oven, a griddle supported in an opening in said plate, and a deflecting-plate supported in the upper portion of the fire-box, spaced from the oven-plate, spaced from one end of the fire-box and having an opening registering with the opening in the bottom plate of the oven.

3. A fire-box, a top plate supported thereon and constituting the bottom plate of an oven, interior supporting-lugs in the fire-box near

its upper end, a deflecting-plate supported upon said lugs and spaced from the bottom plate of the oven, and an obstructing-lug disposed in the path of the deflecting-plate to
5 space the latter from one end of the fire-box.

4. A fire-box, a top plate supported thereon and provided with smoke-apertures at the ends thereof, an oven-section having flues connected with said smoke-apertures, said flues
10 being open at their upper ends, a smoke-chamber supported upon the oven-section for the reception of the products of combustion rising through the flues, and an end-for-end-reversible U-shaped deflector in said smoke-
15 chamber.

5. A fire-box, a top plate supported thereon and provided with smoke-apertures at the ends thereof, an oven-section having flues connected with said smoke-apertures said flues
20 being open at their upper ends, a smoke-chamber supported upon the oven-section for the reception of the products of combustion rising through the flues said chamber being provided with a door, and an end-for-end-reversible U-shaped deflector having a concave upper
25 surface and supporting-lugs at one end, said deflector being disposed within the smoke-chamber.

6. In a stove, a fire-box, an oven-section
30 supported thereon and having flues for the upward passage of the products of combustion, a smoke-chamber supported upon the oven-section and communicating with said flues, and a radiating-section supported upon
35 the smoke-chamber, communicating with one end of the latter, and having an exit-opening.

7. In a stove, a fire-box, an oven-section supported thereon and having flues for the

upward passage of products of combustion, a section constituting a smoke-chamber supported upon the oven-section and communicating with the flues, a deflector within said smoke-chamber, and a radiating-section supported upon the smoke-chamber, communicating with one end of the latter, and having
40 an exit-opening. 45

8. In a stove, a fire-box, a smoke-chamber supported above the fire-box and spaced therefrom by an intermediate oven-section the end walls of which constitute flues for the passage of products of combustion to the smoke-
50 chamber, a deflecting-plate in the fire-box supported below the bottom plate of the oven-section and spaced from one end of the fire-box said deflecting-plate being provided with
55 a downturned flange, and a stop-lug disposed in the fire-box to prevent longitudinal displacement of the deflecting-plate.

9. A stove including a plurality of superposed sections including a fire-box, an oven-
60 section, a smoke-chamber, and a radiating-chamber; the plates or partitions constituting the bottom and top plates of the oven-section and the top plate of the smoke-chamber being extended beyond the vertical planes of
65 the sides of the respective sections, constituting flanges to obstruct the upward passage of hot-air currents.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in
70 the presence of two witnesses.

LARS CHRIST PEDERSON.

Witnesses:

MORTEN RASMUSSEN,
CHRIST P. LEGAARD.