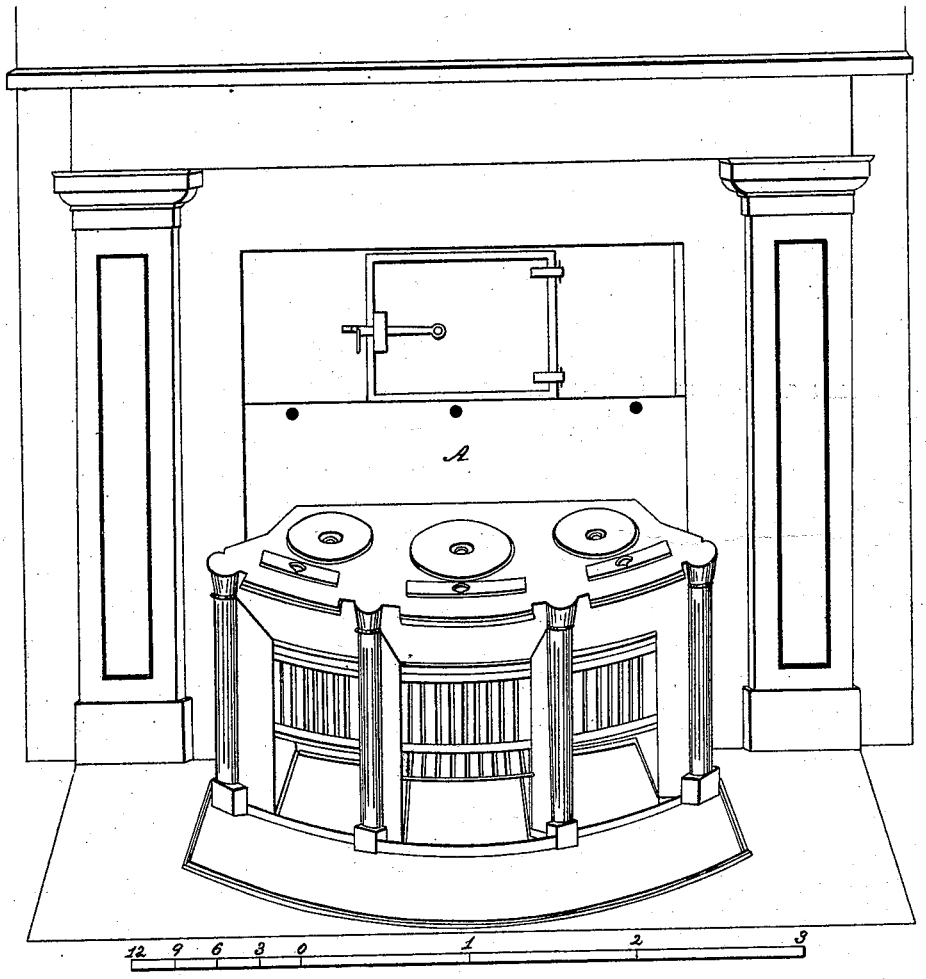
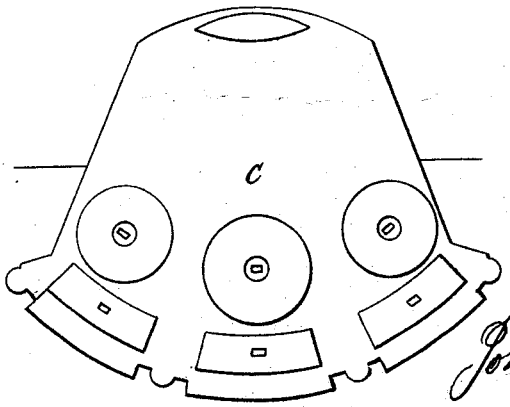
2 Sheets—Sheet 1.

J. MORRIS.

Range.

No. 455. Patented Nov. 4, 1837.





Witnesses:
Baldwin
John M. Heagle

Inventor:
John Morris

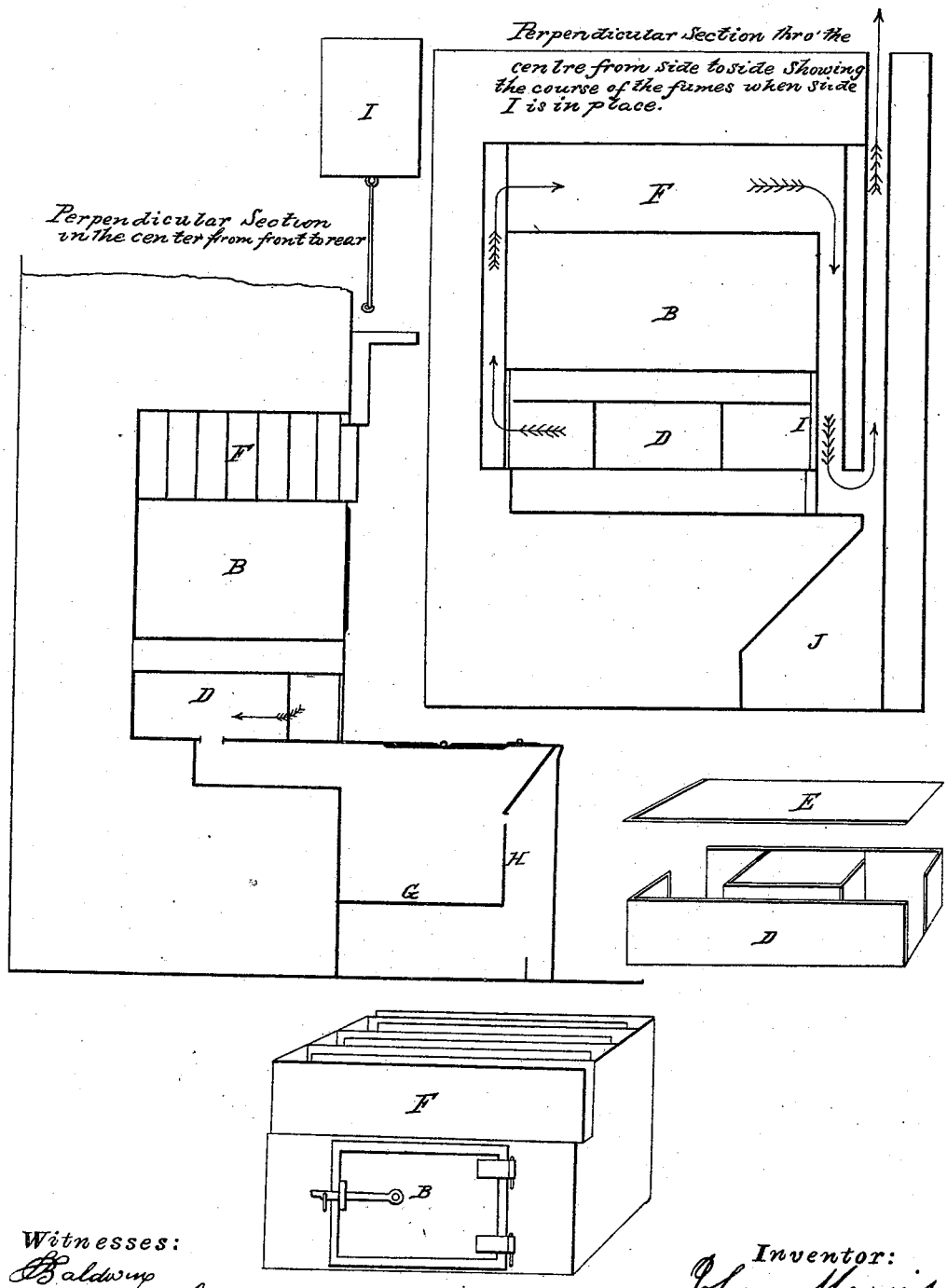
2 Sheets—Sheet 2.

J. MORRIS.

Range.

No. 455.

Patented Nov. 4, 1837.



Witnesses:
Baldwin
John M. Heagle

Inventor:
John Morris

UNITED STATES PATENT OFFICE.

JOHN MORRIS, OF DERBY, CONNECTICUT.

COOKING AND WARMING STOVE.

Specification of Letters Patent No. 455, dated November 4, 1837.

To all whom it may concern:

Be it known that I, JOHN MORRIS, of Derby, in the county of New Haven and State of Connecticut, have invented a new and Improved Stove Calculated for Cooking and also for Warming Parlors on a New and Improved Plan.

The body of my stove for common use is about three feet in front and when to be used for cooking is divided into three furnaces, with open grates arranged in the segment of a circle; the funnels all concentrating to one discharging orifice, and are calculated for coal or wood fuel. They may be used separately, or all at the same time. Each furnace may have a roaster in front, a boiler on the top, and the insulated oven above is heated by the reverberation of the fumes around it.

For a more particular specification, and to enable others skilled in the art to make and use my improved stove, I will more particularly describe its construction and operation, observing that the stove is calculated to be set in any fireplace of suitable size to receive it and the chambers between the jambs and under the mantle.

The body of the stove I make of cast-iron plates somewhat circular in front and in shape like the section in the accompanying drawings marked C, exhibiting the top plate and in it the places for boilers, and in front of them orifices for fuel, with their covers. The body of the stove for cooking I divide into three apartments or furnaces, each furnished with a front and bottom grate as exhibited by the drawings, in the front view of the stove, the chamber of combustion in each being directly under the corresponding orifices for boilers, and for feeding in the top plate described above. The front grates are permanently fixed, standing perpendicularly and receding from the front about one third of the depth of the body. From the top of the grates a plate rises slanting to the outward rim of the top cover forming a hopper for the entrance of fuel. The bottom grate slides in grooves, and when drawn out discharges the ashes into a pan below. The furnaces extend back about half the depth of the top plate, and the fumes from each furnace are thence conducted in separate channels, armed with valves, under the top plate to a common orifice in the rear of the top plate, which when the stove is in place, opens into the chamber of the lower flues, under the oven hereafter described and passing with one or more revolutions in that chamber, thence up one end of the oven into horizontal flues on the top of the oven, through which they pass back and forth several times, and passing down the other end of the oven, are thence discharged into a flue in the jamb leading to the chimney, thereby in their course diffusing their heat to the oven, on the bottom, the top and on each end.

To prevent a burning heat at the bottom of the oven, I leave a space of about two inches between the lower flues and the bottom of the oven, covered with a sliding door in front, and to regulate the heat of the oven, I place a slide or valve upon the flue of direct draft to the chimney, which will close the whole or any part of it at pleasure. When the oven is not in use, this slide is thrown back and the heat and fumes pass directly up the chimney. When the slide is drawn forward so as to close that flue wholly, the heat and fumes necessarily pass around the oven, in the manner above described. If but partially closed, the heat will be in proportion.

The oven and all the flues and other appendages of the oven I make of sheet-iron, but they may be made of cast iron. The flues of the lower chamber are made by spiral or other partitions about five inches deep, made fast by one edge to the lower plate of the chamber and covered by a loose plate of cast iron of the size of the chamber. The flues of the upper chamber are made by partition plates about seven inches deep and placed about two and a quarter inches apart, alternately falling short of the end of the chamber about two and one half inches and riveted by flanges to the top plate of the oven. These flues are covered when in place by the mason work above and in front of them. The shape of the oven is an oblong square about 24 inches in length, about 10 inches deep and 9 inches high with a door 12 by 9 inches. The oven and the flues attached to it may be easily taken out for cleaning the flues when foul, by removing the sliding door in front, and the lower chamber of flues, and the slides supporting each end of the oven. The oven is then lowered down and easily taken out, and the flues of both chambers are then open for cleaning.

Another mode by which I have contem-

plated the application of the principle or character which distinguishes this stove and its appendages is in warming parlors, by thereby heating and diffusing heated air into the apartment to be warmed. To this end, I make the body of the stove designed to be used as a parlor stove for warming rooms merely with a single furnace or grate, without partitions and without orifices for boilers, but in other respects the shape may be the same as the stove above described; and instead of and in place of the oven for baking, I place in a similar manner a close chamber without a door for heating air—to be heated by the fumes from the chamber of combustion in the stove, in the same manner and by means of similar flues with those attached to the oven for baking as above described. This chamber is supplied with cold air by one or more pipes conducting it to the bottom of the chamber from the room or from without; and the heated air is conducted into the room, or elsewhere, by conducting pipes leading from the heated air chamber to the place where needed.

On the same principle the oven attached to the cooking stove, when not used for baking may with an open door, be used with great effect in heating and diffusing the air of the room where it stands. This stove in either form is connected with the chimney and fireplace in the following manner. A wall of masonry is raised from the hearth of the fire place, in a line with the front of the oven or of the air chamber, when in place, from jamb to jamb, as high as the under plate of the channels from the furnaces. The body of the stove is then placed in front of this wall, standing on the hearth, and the bottom plate of the channels resting on the wall, which is then carried up on the side of the channels even with the top plate of the stove. The oven or air chamber with its appendages is then placed upon it, in the manner above described, and the chimney above the oven and the upper chamber of flues, is closed with mason work excepting a flue in one jamb leading from the lower chamber of flues to the open chimney above. This flue in the jamb, is open to both chambers of flues, but may be closed against the lower chamber by a cast iron slide. The mason work above the oven, covers the front, and forms the top cover of the upper chamber of flues.

For further illustration, I refer to the drawings accompanying this specification as part thereof.

This stove is calculated for all kinds and every kind of fuel, and for large and for small operations, and when used for cooking will roast, boil and bake all together at the same time, or each separately, and it combines more facilities for cooking, and in a more neat and compact form, than any cooking stove heretofore invented: and when used as a parlor stove as above described, or as a cooking stove will save and diffuse usefully more of the heat of the fuel consumed than any stove now in use.

What I claim as my invention and improvement is—

The combination of these several parts as above specified, and exhibited in the accompanying drawings, and therefore I solicit Letters Patent.

March 15th, 1837.

JOHN MORRIS.

Witnsesses:

Simeon Baldwin,

Stanton Pendleton.