

(No Model.)

2 Sheets—Sheet 1.

M. A. WEBLEN.
SHEET IRON HEATING STOVE.

No. 540,934.

Patented June 11, 1895.

Fig. 1.

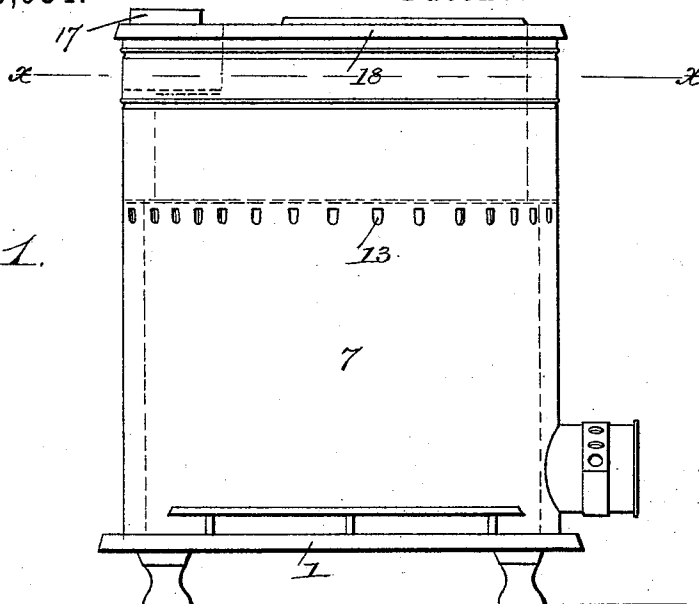
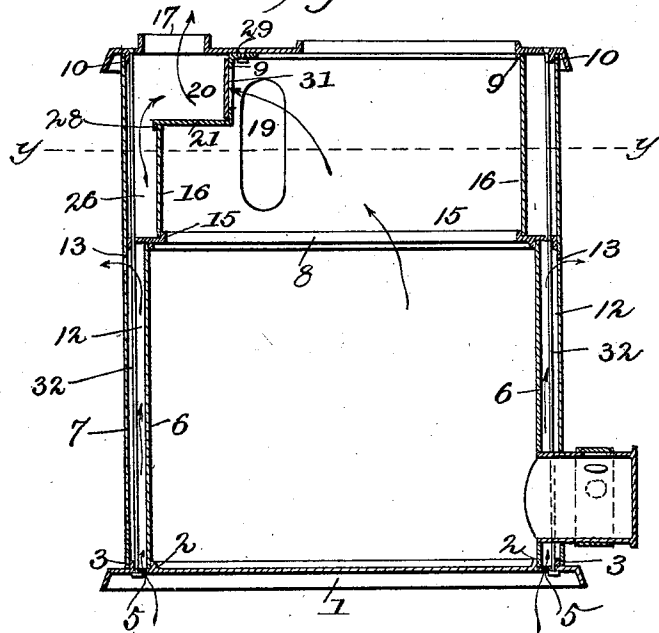


Fig. 2.



Witnesses:

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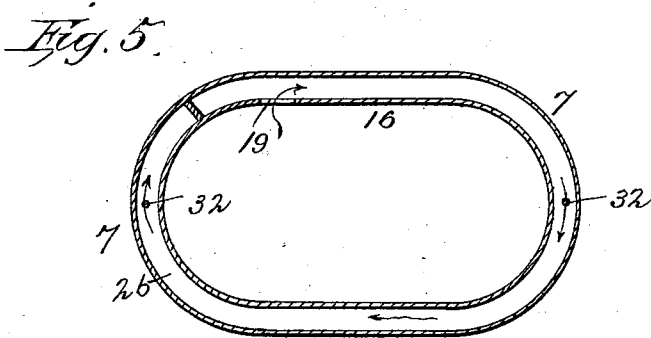
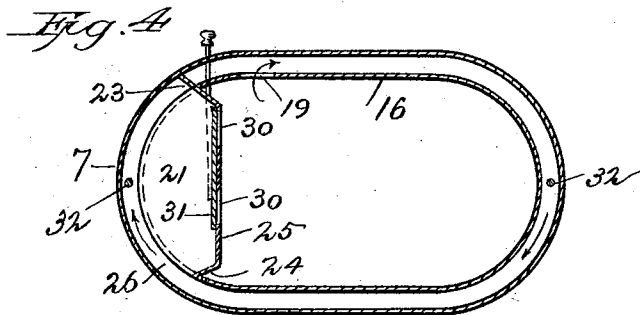
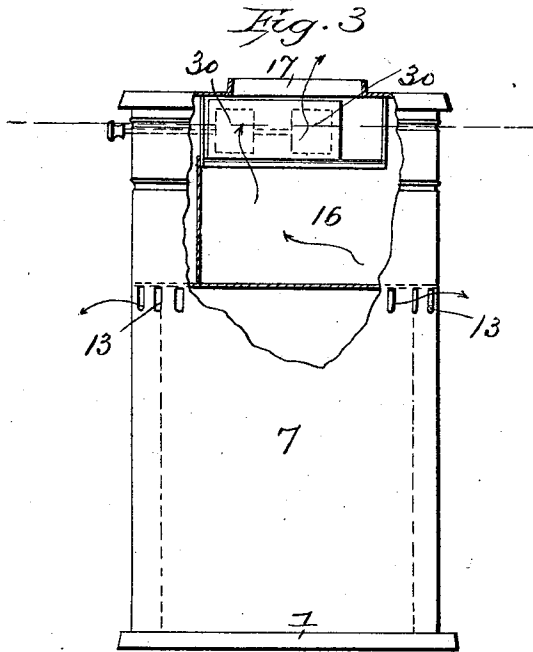
(No Model.)

2 Sheets—Sheet 2.

M. A. WEBLEN.
SHEET IRON HEATING STOVE.

No. 540,934.

Patented June 11, 1895.



WITNESSES:
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UNITED STATES PATENT OFFICE.

MARTIN A. WEBLEN, OF MINNEAPOLIS, MINNESOTA.

SHEET-IRON HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 540,934, dated June 11, 1895.

Application filed March 18, 1895. Serial No. 542,210. (No model.)

To all whom it may concern:

Be it known that I, MARTIN A. WEBLEN, a citizen of the United States, and a resident of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Sheet-Iron Heating-Furnaces; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in sheet iron heating stoves and its object is to provide a novel stove of this character which shall possess superior advantages with respect to efficiency in use.

The invention consists in the novel construction and combination of parts herein-after fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a stove constructed in accordance with my invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is an end view partly broken away. Fig. 4 is a horizontal section on the line *x x*, Fig. 1. Fig. 5 is a similar section on the line *y y*, Fig. 2.

In the said drawings the reference numeral 1 designates a cast iron base preferably oval in form and provided on its upper side with inner and outer concentric flanges 2 and 3, and on its lower side with a flange 4, and intermediate of said flanges 2 and 3 is formed a series of holes or apertures 5.

The numeral 6 designates an inner sheet iron casing, forming the fire chamber, which rests upon said base with its lower end abutting against the outer side of flange 2. This casing is oval shaped, conforming to the contour of the base, and is surrounded by an outer sheet iron casing 7, which also rests on said base with its lower end abutting against the outer side of flange 3. Mounted upon the inner casing is a cast metal ring 8, formed with downwardly extending oval shaped flanges 9 and 10 against which the upper end of said inner casing and the side of the upper casing abut. There is thus formed a space 12 between said casings, which receives air from the outside through the holes in the

bottom of the base, which air is heated by radiation from the inner casing or fire box and escapes into the room through holes or apertures 13 near the upper end of the outer casing. The inner edge of said ring 8 is formed with an upwardly extending flange 15, against which abuts the lower end of an inner casing 16, provided with a smoke opening 17 at one side. The space between said outer and inner casings is somewhat greater than that between the casings of the lower sections and forms a smoke chamber. The upper ends of the said casings 7 and 16 are closed by a casting 18, provided with an opening 19, communicating with a cast iron box 20 below. This box is provided with a bottom 21, inclined sides 23 and 24, and an inner side 25. One of these inclined sides extends to and contacts with the outer casing 7, while the other only extends to the inner casing 16, leaving a passage 26, for the escape of smoke to the pipe 27. The outer end of the bottom 21 of said box rests upon the cut away portion 28 of the casing 16, while the upper edge of the side 25 is formed with a flange 29, which is bolted to the casting 18. This side is also formed with two ports or openings 30, and also with a sliding damper 31 by which said ports may be opened and closed. Tie rods 32 connect the base, the ring and top casting together thereby holding the casings in place.

A partition 34, which forms a continuation of the inclined side 23 is interposed between casings 7 and 16, closing the smoke chamber so that the smoke will be directed around the casing 16 into the smoke box at the opposite side.

The operation is as follows: Fire is made in the fire box and air is heated and circulated between the inner and outer casings 6 and 7, entering through the holes in the base and escaping through the openings in the upper part of the outer casing. Smoke and unconsumed products of combustion escape into the upper inner casing 16, and (in case the damper is closed) escape through the opening in the side thereof, into the smoke chamber and escape therefrom through passage 26 into box 20, and from thence to the exit pipe 27. In case the damper is opened the smoke escapes directly into the box through the ports or openings in the inner side thereof. By means

of the damper the size of these openings may be regulated so as to permit a portion of the smoke to escape through said ports and a portion to be directed around the smoke chamber and escape through the passage 27.

Having thus fully described my invention, what I claim is—

1. In a sheet metal heating stove the combination with the base having openings in its bottom, the sheet metal inner casing forming a fire-box, and the sheet metal outer casing having openings intermediate its ends, of the cast iron ring, the inner upper sections resting on said ring, having an opening on one side, forming a smoke chamber, the top casting, the exit pipe, the box having a passage on one side communicating with the smoke chamber, and the rods, substantially as described.

2. In a sheet metal heating stove, the com-

bination with the base having openings in its bottom, the sheet metal inner casing forming a fire-box and the sheet metal outer casing having openings near its upper end, of the cast iron ring, the inner upper section resting on said ring, having an opening at one side forming a smoke chamber, the top casting, the exit pipe, the box having a passage at one side communicating with the smoke chamber and the slidable damper for opening and closing the ports in said box, substantially as described.

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

MARTIN A. WEBLEN.

Witnesses:

W. D. BUTTERFIELD,
CHAS. S. CHASE.