

No. 697,428.

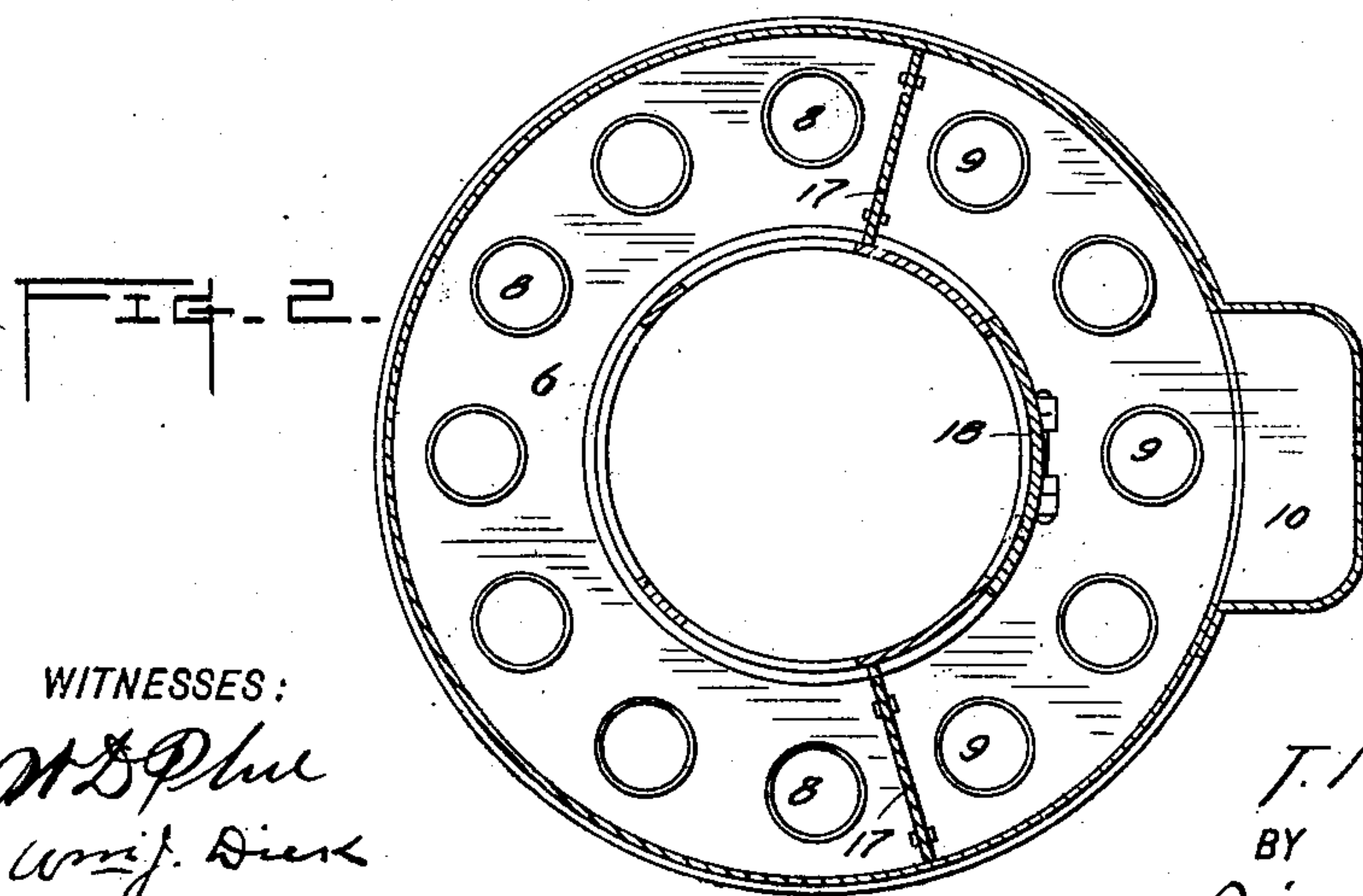
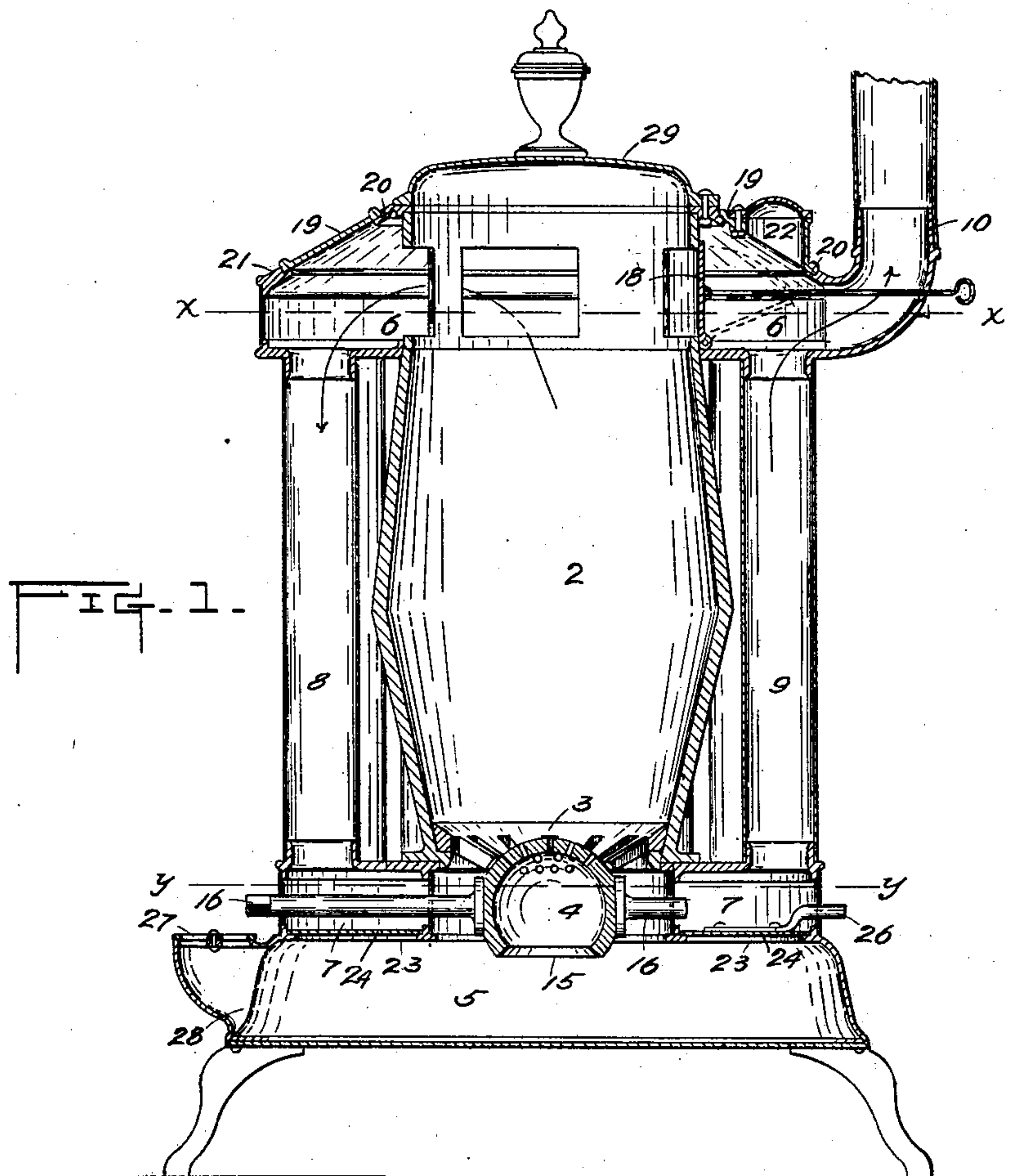
Patented Apr. 15, 1902.

T. M. ANDERSON.
HEATING STOVE.

(Application filed June 10, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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Wm. J. Dier

INVENTOR

T. M. Anderson.

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HEATING STOVE.

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2 Sheets—Sheet 2.

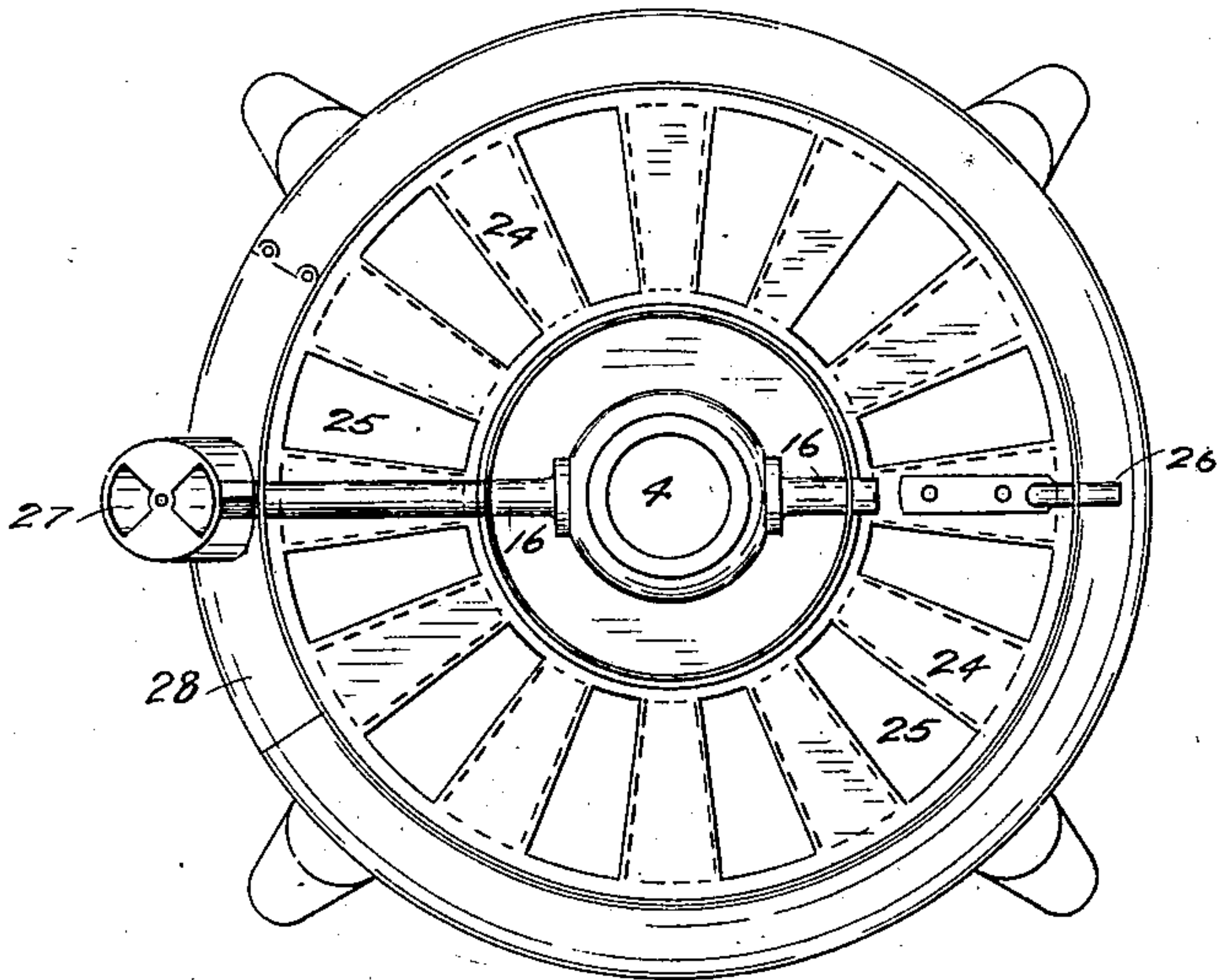


FIG. 3.

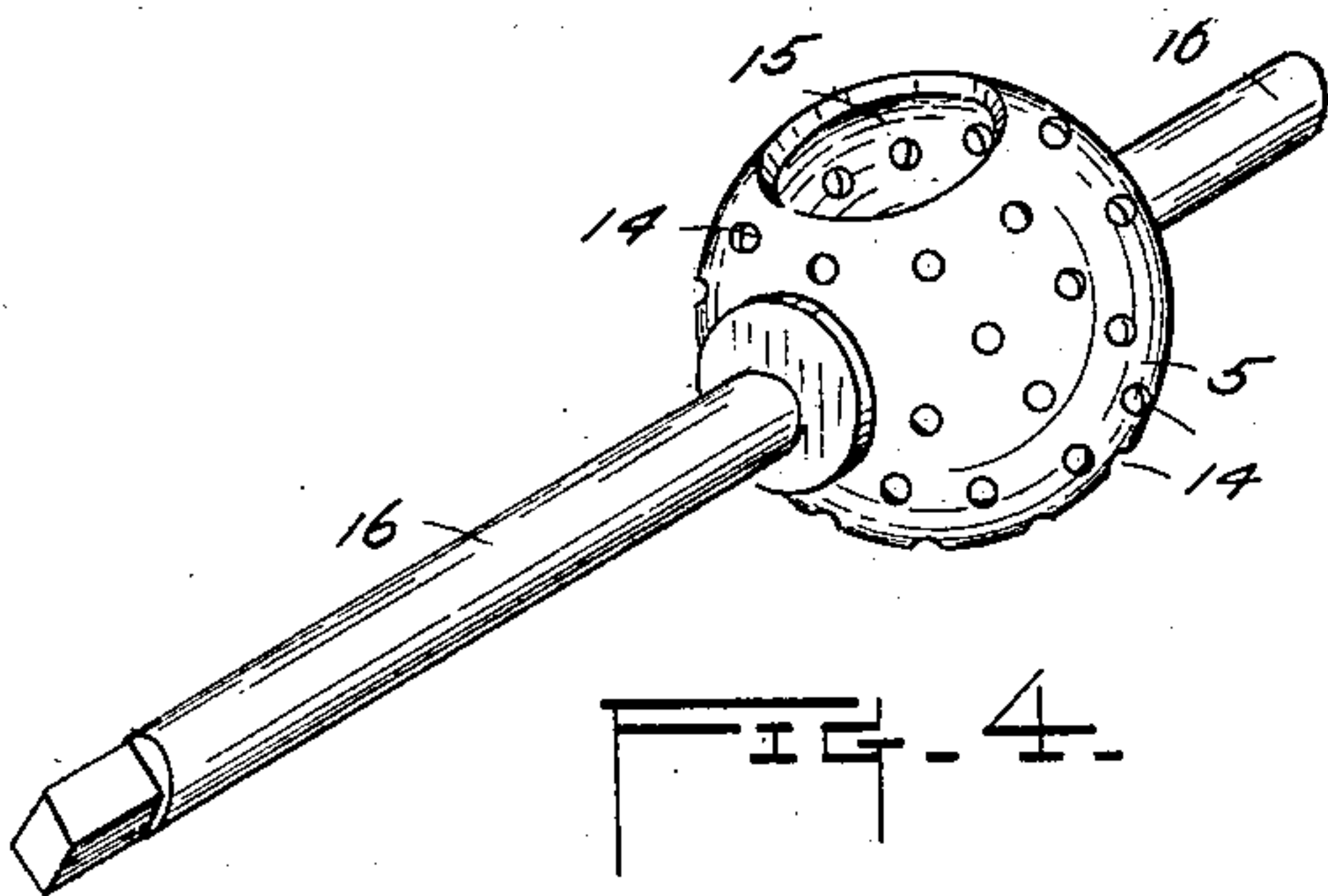


FIG. 4.

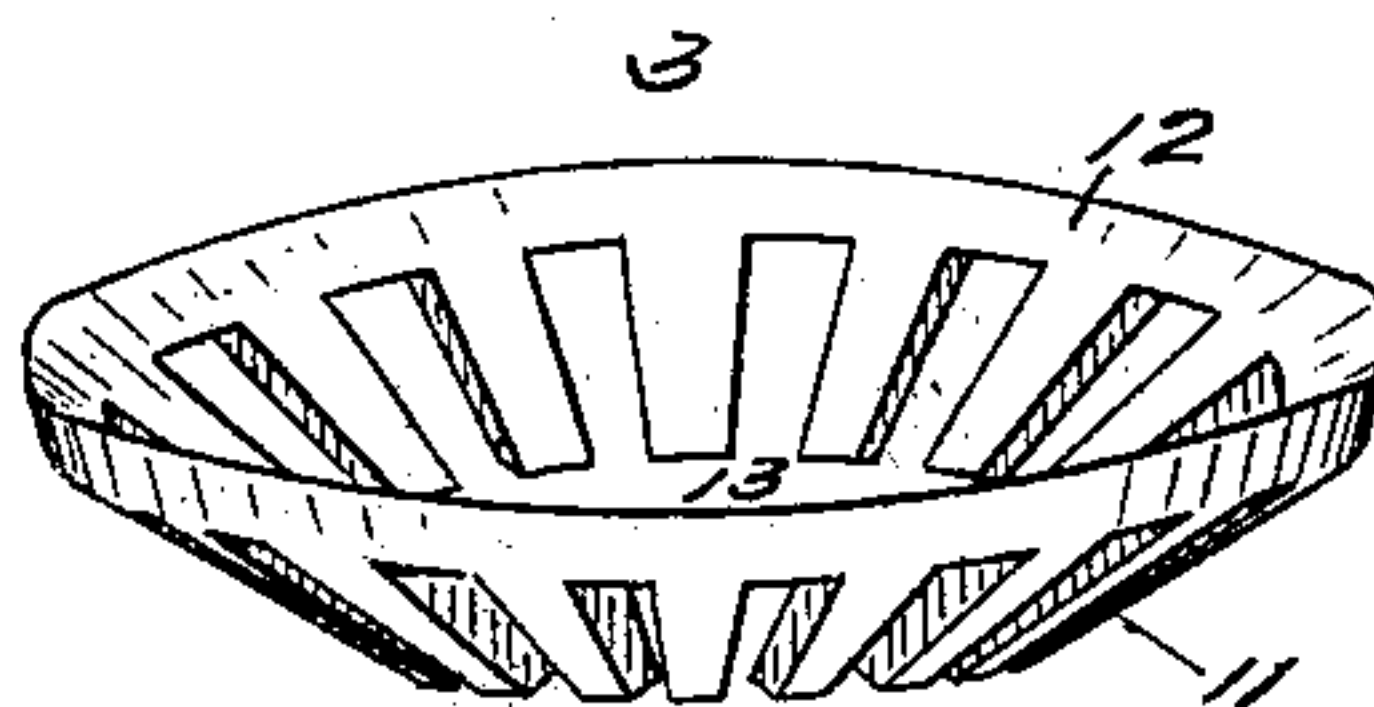


FIG. 5.

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UNITED STATES PATENT OFFICE.

THEODORE M. ANDERSON, OF NEW WHATCOM, WASHINGTON.

HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 697,428, dated April 15, 1902.

Application filed June 10, 1901. Serial No. 63,845. (No model.)

To all whom it may concern:

Be it known that I, THEODORE M. ANDERSON, a citizen of the United States, residing at New Whatcom, in the county of Whatcom and State of Washington, have invented certain new and useful Improvements in Heating-Stoves, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to improvements in heating-stoves; and its object is to provide a stove of this class wherein greater heating-surfaces are obtained by arranging the channels so that the gases of combustion will pursue an extended course in passage from the fire-box to the chimney, together with certain detail of construction and combination of parts whereby better results are obtained and accessibly to all of the several members
20 comprising the stove.

In the accompanying drawings, where similar numerals indicate corresponding parts in the several views, Figure 1 is a central vertical section of a stove embodying my invention. Fig. 2 is a horizontal section taken on line *xx* in Fig. 1. Fig. 3 is a horizontal section on line *yy* of Fig. 1. Figs. 4 and 5, respectively, are perspective views of the stove-grate parts.

30 The improved stove comprises a fire-box 2, grate parts 3 and 4, and ash-pit 5, upper and lower chambers 6 and 7, respectively, connected by vertical downflow-tubes 8 and upflow-tubes 9, a smoke-outlet or chimney 10 from the upper chamber, and various doors, dampers, and lids, where required, to properly regulate the draft, to control the combustion, and for the supply of fuel or the removal of ashes or soot from the stove.

40 The grate part 3, which I designate the "hopper," of truncated cone shape, having a number of radial bars 11 extending inwardly from a peripheral ring 12 and terminating in a circular opening 13, is supported at the ring thereof by a shelf or flange formed on the walls of the said fire-box at or near the lower end thereof. The other grate part 4 consists of a hollow spherical main portion 5, with a plurality of holes or perforations 14, extending through the shell thereof and with a relatively large hole 15, of approximately the same size as the central opening 13 in the

grate part 3 aforesaid, to form a pot-like receptacle for the purpose of removing the clinkers from the fire, which is accomplished 55 by mounting the globe on trunnions 16, one of which projects exteriorly of the stove for upsetting the same upon said axis. The said vertical tubes 8 and 9, communicatively connecting the upper and lower chambers, constitute the principal heat-radiating members of the stove and are preferably made of the sheet metal. By partitions 17 in the upper chamber 6 the said vertical tubes are divided into upflow and downflow channels, which 65 may, however, be "cut-out" or temporarily disused, if desired, when starting the fire by opening a damper 18, thus getting a direct passage between the fire-box 2 and the chimney 10. To clean the interiors of said tube I 70 provide a circular plate or ring 19, rotatable in grooves or rabbeted tracks 20 of stove-top 21, and which ring has an opening 22, that may be successively moved over each of the several tubes to clean the same. The deposit 75 so dislodged falls into the chamber 7, and thence is dropped into the ash-pit through a number of holes 23 in the bottom of said chamber.

I provide a circular plate 24, having holes 80 25 therein to register with those in the chamber and which may be moved around by a handle 26 out of register to close the openings.

27 is an air-intake damper, positioned, preferably, in the ash-pit door 28, and 29 is a cover 85 or lid of the fire-box for feeding fuel to the same.

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

90 1. In a heating-stove, the combination with a fire-box and an ash-pit, of an upper compartment having partitions therein and communicatively connected with the said fire-box, a lower compartment having a series of cleaning-holes in the bottom thereof opening in the said ash-pit, means to simultaneously close 95 all of said cleaning-holes, vertical tubes arranged concentric of the stove connecting said upper and lower compartments to form return-current channels for the passage of the combustion-gases therebetween, a revoluble circular plate or ring having an aperture therein and adapted to be rotated so as to move the 100

aperture over and in line with each of the said vertical tubes, substantially as and for the purposes set forth.

2. In a heating-stove, the combination with
5 a fire-box, an ash-pit, an upper compartment having partitions therein and communicatively connected with the said fire-box, a lower compartment having a series of cleaning-holes in the bottom thereof opening in the said ash-
10 pit, vertical tubes arranged concentric of the stove connecting said upper and lower compartments; of means to simultaneously close all of the said cleaning-holes, and a rotatable circular plate or ring having an aperture there-
15 in adapted to be moved directly over and in line with each of the said vertical tubes for cleaning the same, substantially as described.

3. In a heating-stove, the combination with
20 a fire-box, an ash-pit, an upper compartment communicatively connected with the said fire-box, a lower compartment communicatively connected by a plurality of openings with said ash-pit, means to coincidently close said communicative connections between said lower
25 compartment and the ash-pit, and vertical tubes arranged concentrically of the stove

connecting said upper and lower compartments; of a rotatable circular plate having a hole therein adapted to be used to give access for cleaning each of the said vertical tubes, 30 substantially as and for the purposes set forth.

4. In a heating-stove, the combination with a fire-box, an ash-pit, an upper compartment communicatively connected with the said fire-
35 box, a lower compartment communicatively connected by a plurality of openings with said ash-pit, means to coincidently close said communicative connections between said lower compartment and the ash-pit, vertical tubes arranged concentrically of the stove connect- 40 ing said upper and lower compartments, and a grate; of a rotatable circular plate having a cleaning-hole therein adapted to be used to give access for cleaning each of the said vertical tubes, substantially as and for purposes 45 set forth.

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

THEODORE M. ANDERSON.

Witnesses:

G. W. WORD,

D. J. MCARTHUR.