No. 777,470. PATENTED DEC. 13, 1904.

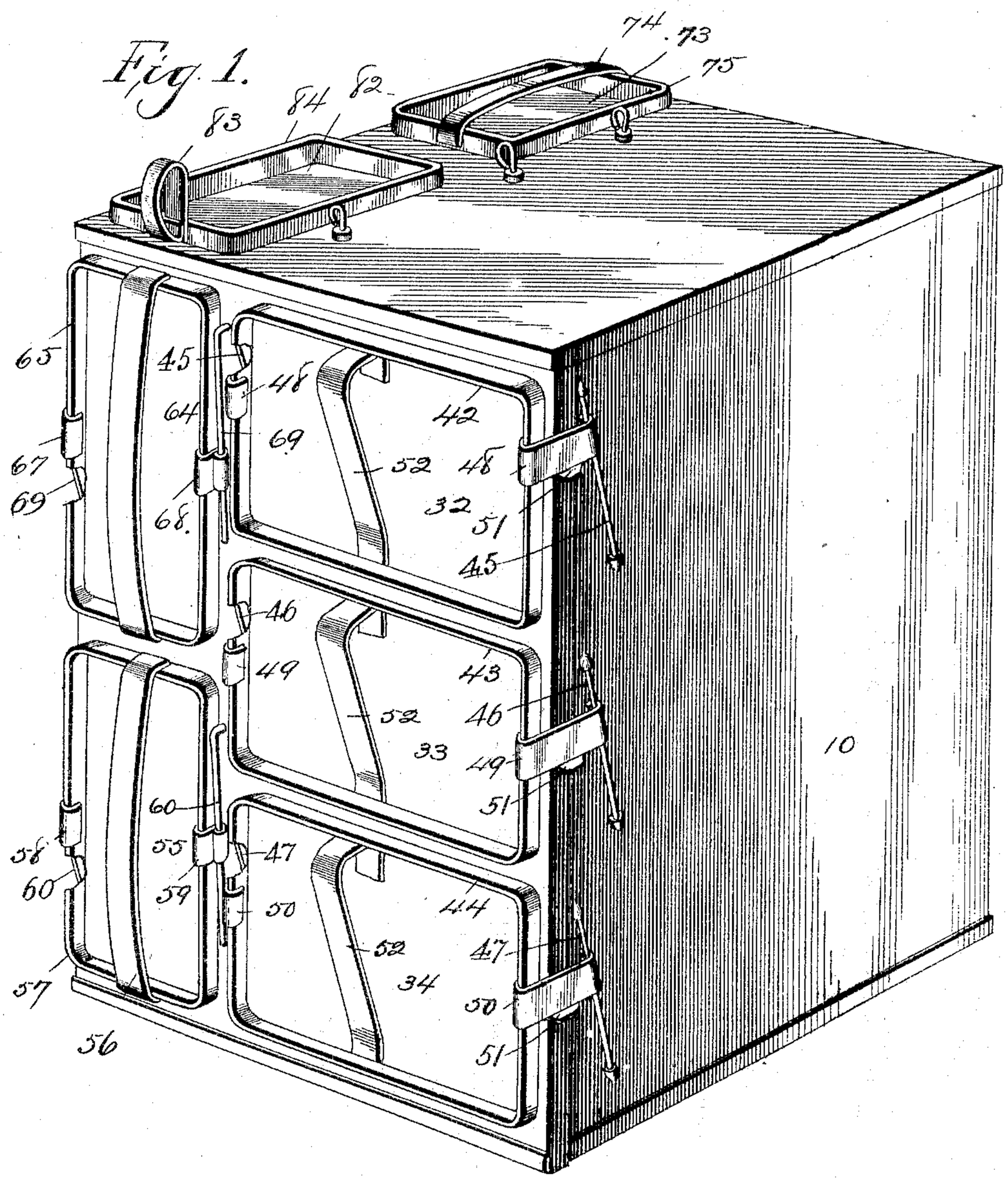
W. ASHERT.

DOMESTIC STEAMER.

APPLICATION FILED DEC. 7, 1903.

NO MODEL. 4 SHEETS—SHEET 1.

Fig. 1.



Attest:
R. B. Owen
W. E. Ellis.

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NO MODEL. 4 SHEETS—SHEET 2.

Fig. 3.

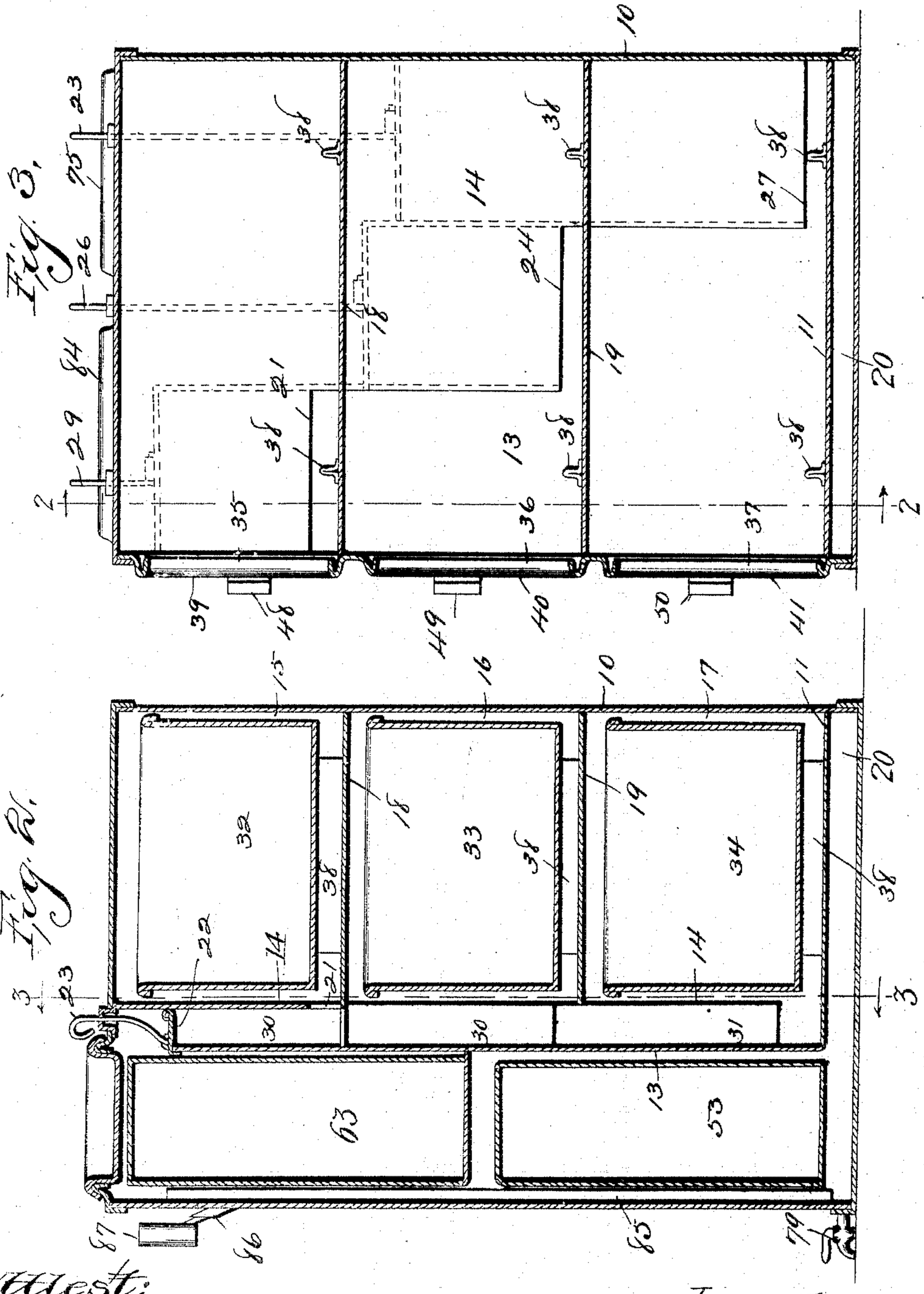

Fig. 2.

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NO MODEL. 4 SHEETS—SHEET 3.

Fig. 3.

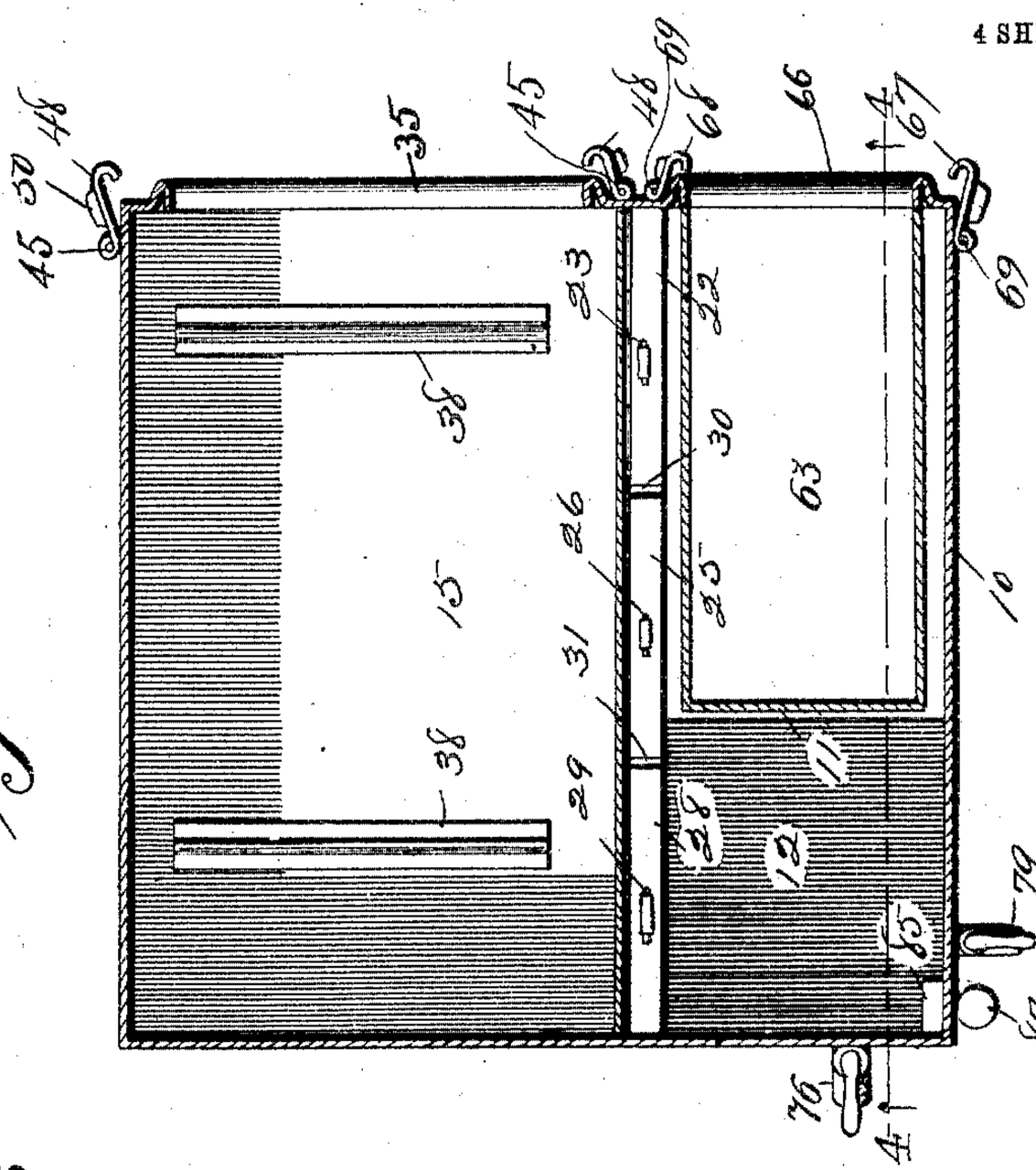

Fig. 4.

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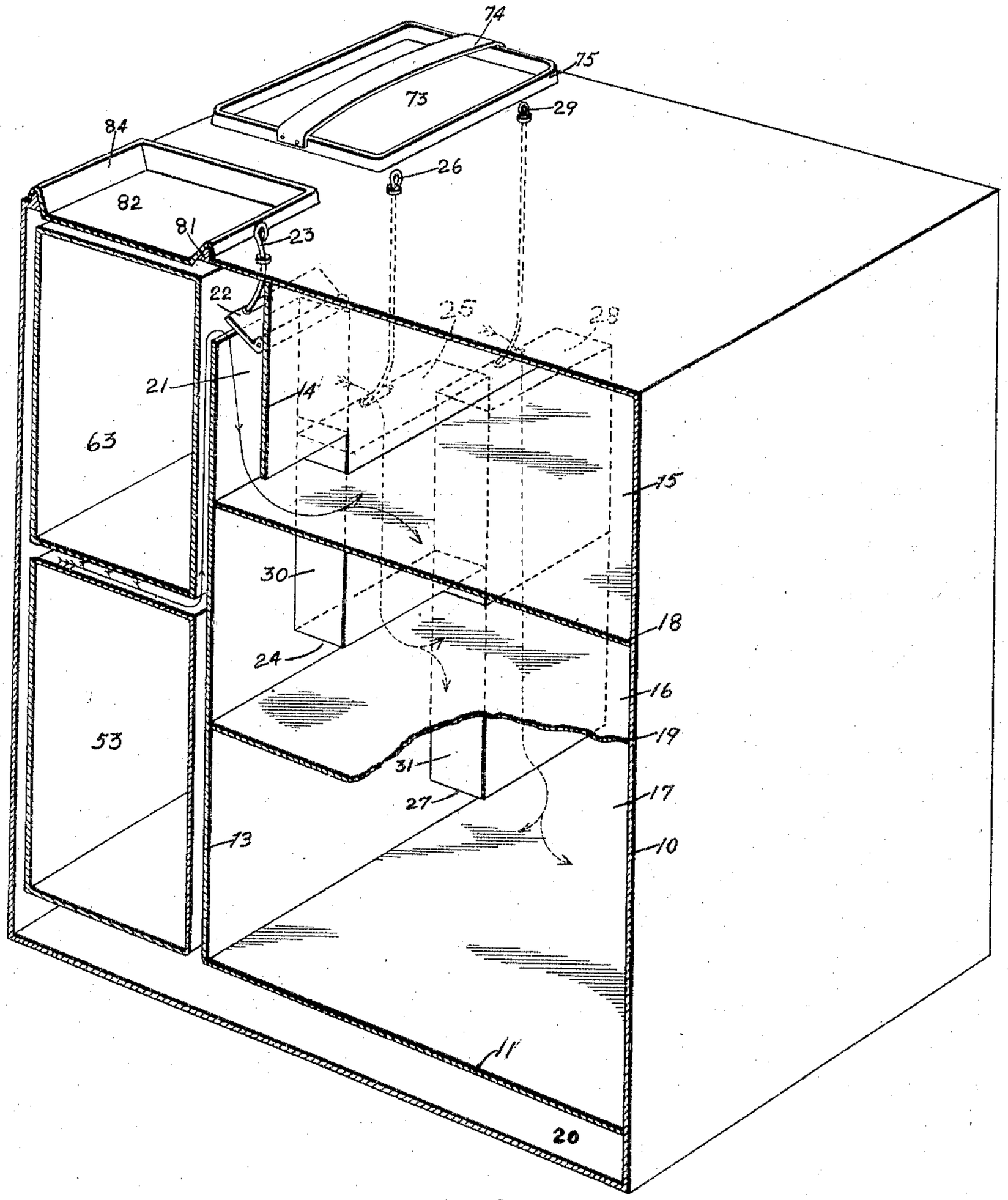
APPLICATION FILED DEC. 7, 1903.

NO MODEL. 4 SHEETS—SHEET 4.

Fig. 6.



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No. 777,470. Patented December 13, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM ASHERT, OF DES MOINES, IOWA.

DOMESTIC STEAMER.

SPECIFICATION forming part of Letters Patent No. 777,470, dated December 13, 1904.

Application filed December 7, 1903. Serial No. 184,239. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ASHERT, a citizen of the United States of America, and a resident of Des Moines, Polk county, Iowa, have invented a new and useful Domestic Steamer, of which the following is a specification.

The object of this invention is to provide improved means for cooking food solely by the use of steam.

A further object of this invention is to provide improved means for cooking quantities of different kinds of food simultaneously in the same apparatus and while doing so prevent the dissemination of the odors and flavors of one food to either of the others.

A further object of this invention is to provide improved means for controlling the flow of steam to one or another of various food-receptacles.

My invention consists in the construction, arrangement, and combination of elements for carrying out the above-mentioned objects, as hereinafter set forth, pointed out in my claims, and illustrated by the accompanying drawings, in which—

Figure 1 is a perspective illustrating my improved apparatus in position for practical use. Fig. 2 is a vertical section of the device on the indicated line 2 2 of Fig. 3. Fig. 3 is a vertical section of the device on the indicated line 3 3 of Fig. 2. Fig. 4 is a vertical section of the device on the indicated line 4 4 of Fig. 5. Fig. 5 is a horizontal section on the indicated line 5 5 of Fig. 4 with the water-tank removed. Fig. 6 shows a sectional perspective view of the cooker, taken on a line near the front, the detachable cooking vessels removed, the arrows indicating the paths of the steam in entering the several chambers.

In the construction of the apparatus as shown the numeral 10 designates a casing formed of top and bottom, side walls, a front wall, and a rear wall, preferably made of sheet metal, integrally joined or hermetically sealed or soldered to each other. Within the casing 10 and parallel with the bottom thereof and spaced apart therefrom is a horizontal partition 11. A vertical partition 13 is mounted within the casing 10 and sealed to the front and rear walls and integral with the horizontal partition 11. A second vertical partition 14 is mounted in the casing 10 parallel with and spaced from the vertical partition 13 and is sealed to the front and rear walls and the top of the casing. The upper margin of the partition 13 is formed in a series of steps at different altitudes, and the lower margin of the partition 14 overlaps said upper margin and is formed in a series of steps at different altitudes adjacent to and corresponding with the steps of the other partition. The space between the vertical partition 13 and the right side wall of the casing is divided into sections or compartments, in this instance three in number, (designated by the numerals 15 16 17,) by partitions 18 19, sealed to the side wall, front wall, rear wall, and vertical partitions of the casing The compartments 15, 16, and 17 constitute food-chambers, and the space beneath the lowermost of said compartments and to the left thereof constitutes a water and steam chamber. Communication is provided between the upper portion of the steam-chamber 20 and the compartment 15 through a port 21, formed by the uppermost step of the partition 14 and a port formed by the uppermost step of the partition 13, the latter port closable by a damper 22, hinged to the partition 14 and controlled by a rod 23, pivoted thereto and extending through the top of the casing. Communication is provided between the central portion of the steam-chamber and the compartment 16 through a port 24, formed by the central step of the partition 14 and by the central step of the partition 13 and closable by a damper 25, hinged to the partition 14 and controlled by a rod 26, pivoted thereto and extending through the top of the casing. Communication is provided between the lower portion of the steam-chamber and the compartment 17 through a port 27, formed by the lowermost step of the partition 14 and by the lowermost step of the partition 13 and closable by a damper 28, hinged to the partition 14 and controlled by a rod 29, pivoted thereto and extending through the top of the casing. Vertical partitions 30 31 are mounted between and sealed to the partitions

13 14 and subdivide the space between said partitions to form passages controlled by the dampers, whereby the passage of steam from the steam-chamber to the various food-compartments is determined, guided, and directed, and the steam from one food-compartment cannot enter another food-compartment either directly or by reverse movement through the steam-chamber. It will be observed that the ports 21, 24, and 27 open to the compartments 15, 16, and 17 near the floors of said compartments, thereby introducing steam from the steam-chamber to the lower portions of the food-compartments.

Food-receptacles 32, 33, and 34 are formed of sheet metal, preferably shaped as drawers, with open tops, and are mounted in the food-compartments 15, 16, and 17 by longitudinal movements through openings 35, 36, and 37 in the front wall of the casing.

Angle-plates 38 are arranged in pairs on and are fixed to and extend transversely of the horizontal partitions 11, 18, and 19 and serve as rests or supports for the food-receptacles in the food-compartments.

Beads or ribs 39, 40, and 41, V-shaped in cross-section, are formed in the front wall of the casing 10 and surround the apertures therein, through which the food-receptacles 32, 33, and 34 are inserted. The ribs or beads 39, 40, and 41 project forward from the front wall of the casing 10 and receive and are overlapped by marginal flanges 42, 43, and 44 on and extending laterally from the outer ends of said receptacles, the said marginal flanges also V-shaped in cross-section.

Guide-rods 45 45, 46 46, 47 47 are mounted in pairs on either side of the openings, through which the receptacles 32, 33, and 34 are mounted in the casing, one individual of each pair of said rods fixed at its ends to and inclining from the front wall of the casing and the other individual of each pair of said rods fixed at its ends to and in inclined positions on the right side wall of the casing. Hooks 48 48, 49 49, and 50 50 are provided, each formed of sheet metal and looped at one end around and arranged to slide on one or another of the guide-rods 45 46 47 and terminating at its outer end with an inturned hook arranged to engage and slide on one or another of the beads or ribs 42 43 44. It is the function of the hooks 48 49 50 to engage the flanges 42, 43, or 44 and by being moved downward along the guide-rod by manual force firmly draw and seat said flanges in steam-tight contact with the ribs 39, 40, and 41 of the front wall of the casing 10. Handles or thumb-pieces 51 are formed on the hooks 48, 49, and 50, as well as on other hooks hereinafter described, whereby manual force may be applied to move said hooks slidingly on their supports. Handles 52 are fixed to and project outward from the outer end portions of the food-receptacles 32, 33, and 34, whereby manual force may be applied to remove and replace said food-receptacles relative to the casing.

A stationary receptacle or oven 53, open at one end, is mounted in the lower portion of the steam-chamber and sealed at the margins of its front end to the front wall of the casing 10. An opening is formed in the front wall of the casing communicating with the oven or stationary receptacle 53, and a bead or rib 54, V-shaped in cross-section, is formed in said front wall and surrounds said opening. A lid or cover 55, provided with a handle 56 and a marginal flange 57, V-shaped in cross-section, is mounted in contact with the bead 54 and closes the opening to said oven. Hooks 58 59 are mounted on guide-rods 60 60, one on the left wall of the casing and the other on the front wall thereof and are arranged to engage the marginal flange 57 and bind it into steam-tight contact with the rib 54, thus effectually closing the opening to the oven. The side walls of the oven are spaced from the left wall of the casing and from the partition 13, so that the steam may surround said oven.

Angle-plates or cleats 61 are mounted in and transversely of and are sealed to the bottom of the stationary oven 53. A broiler or grate 62 may be mounted removably and replaceably on the cleats or angle-plates 61[a].

A stationary receptacle or oven 63 is provided and mounted in the upper portion of the steam-chamber above the oven 53 and opens through the front wall of the casing. The open forward end of the oven 63 may be closed by a lid or cover 64, formed with a marginal flange 65, fitting over a bead 66 in the front wall of the casing, said lid or cover engaged by hooks 67 68, slidingly mounted on inclined rods 69 69, one of said rods mounted on the left side of the casing and the other on the front wall thereof.

It will be observed that the ovens or stationary receptacles 53 and 63 are of less length than the interior depth of the casing 10, and an aperture is formed in the top of the casing in a vertical plane at the rear of said ovens and is surrounded by a bead or rib 70, V-shaped in cross-section. A food-receptacle 71 is mounted in and depends through the opening in the top of the casing 10 within the bead 70, and marginal flanges 72 on the upper end of said receptacle, also formed V-shaped in cross-section, overlap and engage said bead or rib and form a steam-tight joint therewith. The receptacle 71 may be of considerable length, as illustrated in Fig. 4, and extend nearly to the bottom of the casing 10, and it is provided with a removable cover 73, formed with a handle 74 and a marginal flange 75, resting on and embracing the marginal flange 72 of said receptacle. The food-receptacle 71 may be employed advantageously in cooking vegetables or fruit in moist condition or it may

be provided with a faucet 76, communicating with its lower end portion and extending through and sealed to the rear wall of the casing. The faucet 76 may be screwed into the lower end portion of the receptacle 71 and may pass through jam-nuts or washers 77 78 on opposite sides of the rear wall of the casing, whereby the joint between said faucet and wall may be sealed.

The casing 10 is provided with a drainage-pipe 79, communicating with its lowermost portion and mounted in and extending through its left wall.

An opening 80 is formed in the top of the casing 10 above the oven 63, and a bead or rib 81, V-shaped in cross-section, is formed in said top and surrounds said opening. The opening 80 may be employed for the introduction of water to the casing 10 and may be closed by a lid or cover, such as 73, or by a pan or receptacle 82, provided with a handle 83 and formed with a marginal flange 84, also V-shaped in cross-section, fitting on the bead or rib 81. When the pan 82 is employed, it may be used advantageously for cooking purposes, such as broiling or frying a limited amount of eggs, meat, or vegetables. The pan 82 may be locked to its seat on the rib 81 by hooks, (not shown,) such as are employed to hold other food receptacles and closures, as herein described and illustrated.

The plain portion of the top of the casing 10 to the right of the damper-rods 23, 26, and 29 may be employed advantageously as a support for platters and table-dishes used to receive the food from the cooking utensils, whereby the food therein or the vessels themselves may be kept warm by heat radiated through said top pending their removal to the table.

Either of the receptacles 32, 33, 34, and 71 may be removed and the opening therefor in the casing be closed by a lid or cover, such as 55, 64, or 73. In such event the cooking-compartment from which the receptacle is removed may be employed for some other purpose than that for which it originally was intended.

A broiler or grate, such as that indicated by the numeral 62 in the oven 53, may be employed in either of the food-compartments 15, 16, or 17.

A tube 85 is formed or mounted on the inner face of the casing 10, preferably near the left rear corner thereof, and the open lower end of said tube extends nearly to the bottom of said casing, as illustrated in Fig. 2. Near its upper end the tube 85 opens through the left wall of the casing 10 and communicates with a whistle-stem 86, on which a whistle 87 is removably and replaceably mounted. The normal level of water within the casing 10 is above the horizontal plane of the lower end of the tube 85; but when the level of water is caused to fall below said open end of the tube steam will escape through the tube and whistle, and in so doing give an audible signal or warning to the attendant, who should at such time replenish the supply of water in the casing.

I claim as my invention—

1. A domestic steamer, comprising a casing, a horizontal partition in and near the bottom of said casing, vertical partitions in parallel planes in said casing, the space between said vertical partitions subdivided and separated, and communicating with the space below the horizontal partition, ports of communication through said vertical partitions and subdivisions of the space between them, dampers controlling said ports of communication, the space at one side of said vertical partition within the casing subdivided by horizontal partitions, food-receptacles removably and replaceably mounted in said subdivisions, food-receptacles non-removably mounted in the space on the opposite side of said vertical partitions, means for closing the latter food-receptacles, and a food-receptacle removably and replaceably mounted in the casing at the rear of said stationary receptacles.

2. A domestic steamer, comprising a casing, a horizontal partition in and near the bottom of said casing, vertical partitions in parallel planes in said casing, the space between said vertical partitions subdivided and separated, ports of communication through said vertical partitions and subdivisions of the space between them, dampers controlling said ports of communication, the space at one side of said vertical partition within the casing subdivided by horizontal partitions, food-receptacles removably and replaceably mounted in said subdivisions, food-receptacles non-removably mounted in the space on the opposite side of said vertical partitions, means for closing the latter food-receptacles, a food-receptacle removably and replaceably mounted in the casing at the rear of said stationary receptacles, and a food-receptacle removably and replaceably mounted in the top of said casing above said stationary receptacles.

3. A domestic steamer, comprising a casing, vertical partitions in said casing, ports of communication through said partitions at different altitudes, dampers controlling said ports of communication, separate food-compartments on one side of said partitions and respectively communicated with by said ports, food-receptacles removably and replaceably mounted in said separate food-compartments and means for supplying water to said casing.

4. A domestic steamer, comprising a casing divided vertically and horizontally into two general compartments whereby water may be contained in one compartment beneath and at one side of the other compartment, the lesser of said compartments subdivided horizontally

into food-compartments one above the other, steam-ports at different altitudes in the vertical dividing means and affording communication between the greater of the compartments in the casing and the lesser food-compartments, respectively, manually-operated dampers controlling said steam-ports, food-receptacles removably and replaceably mounted in the food-compartments, stationary ovens in the greater compartment and food-receptacles depending through the top of the casing into the greater compartment, and removable and replaceable relative thereto.

Signed by me at Des Moines, Iowa, this 22d day of May, 1903.

WILLIAM ASHERT.

Witnesses:
S. C. SWEET,
R. G. ORWIG.