

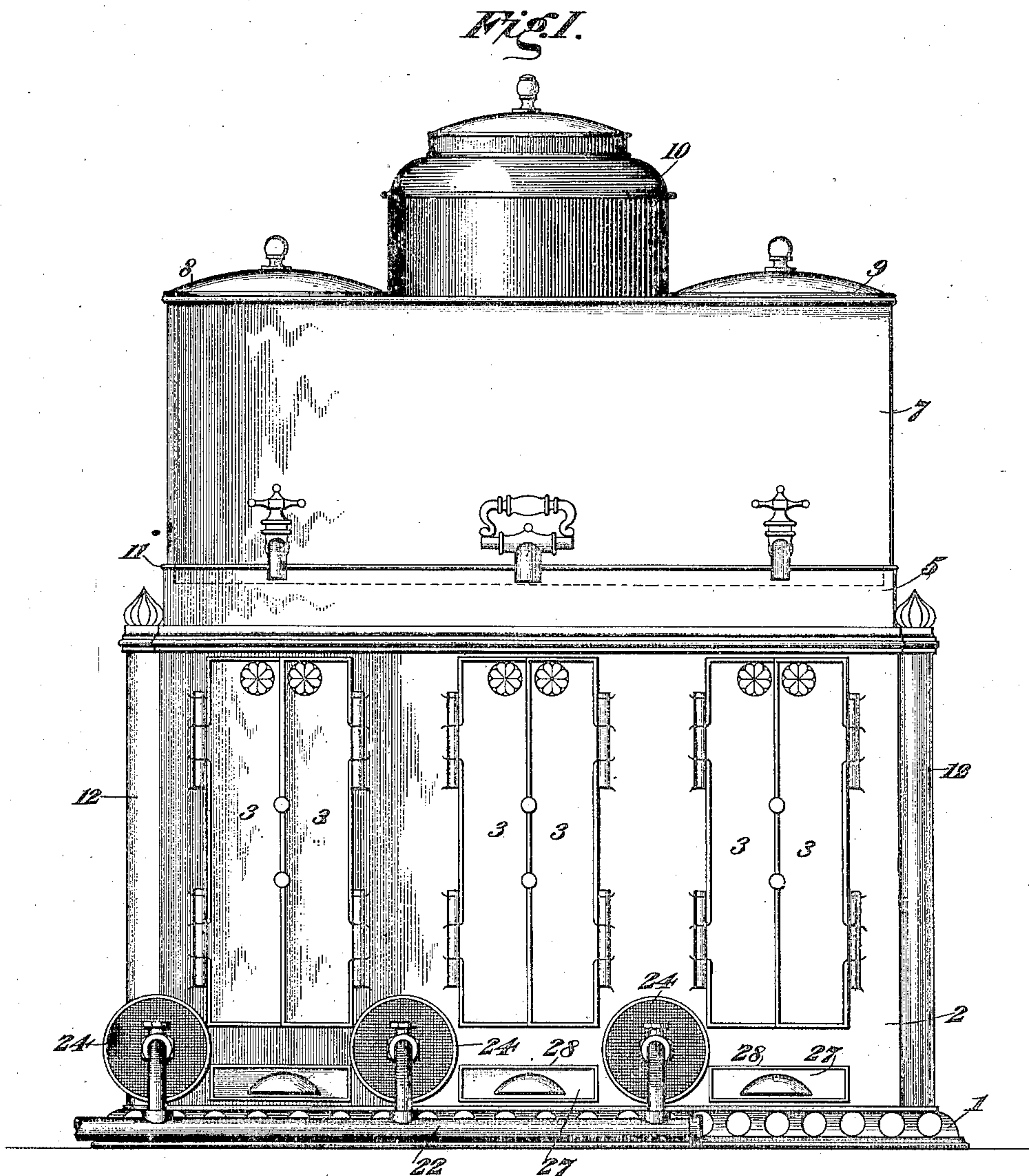
(No Model.)

3 Sheets—Sheet 1.

R. M. DIXON.
HEATING URN FOR BUFFET CARS.

No. 604,736.

Patented May 31, 1898.



Witnesses

M. E. Fowler
Chester A. Baker.

Inventor:

Robert M. Dixon,

By Joseph H. Atkins
Attorney.

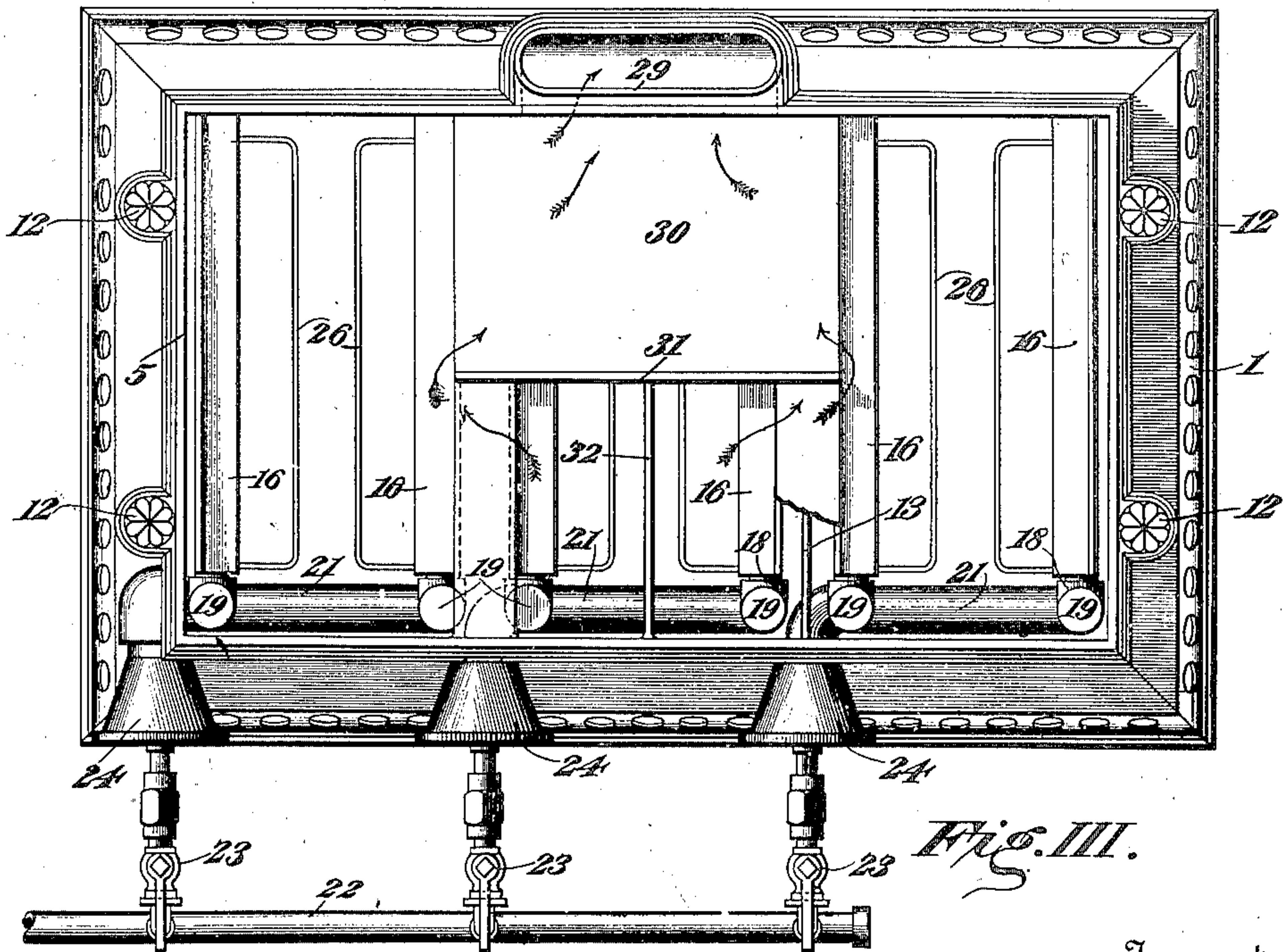
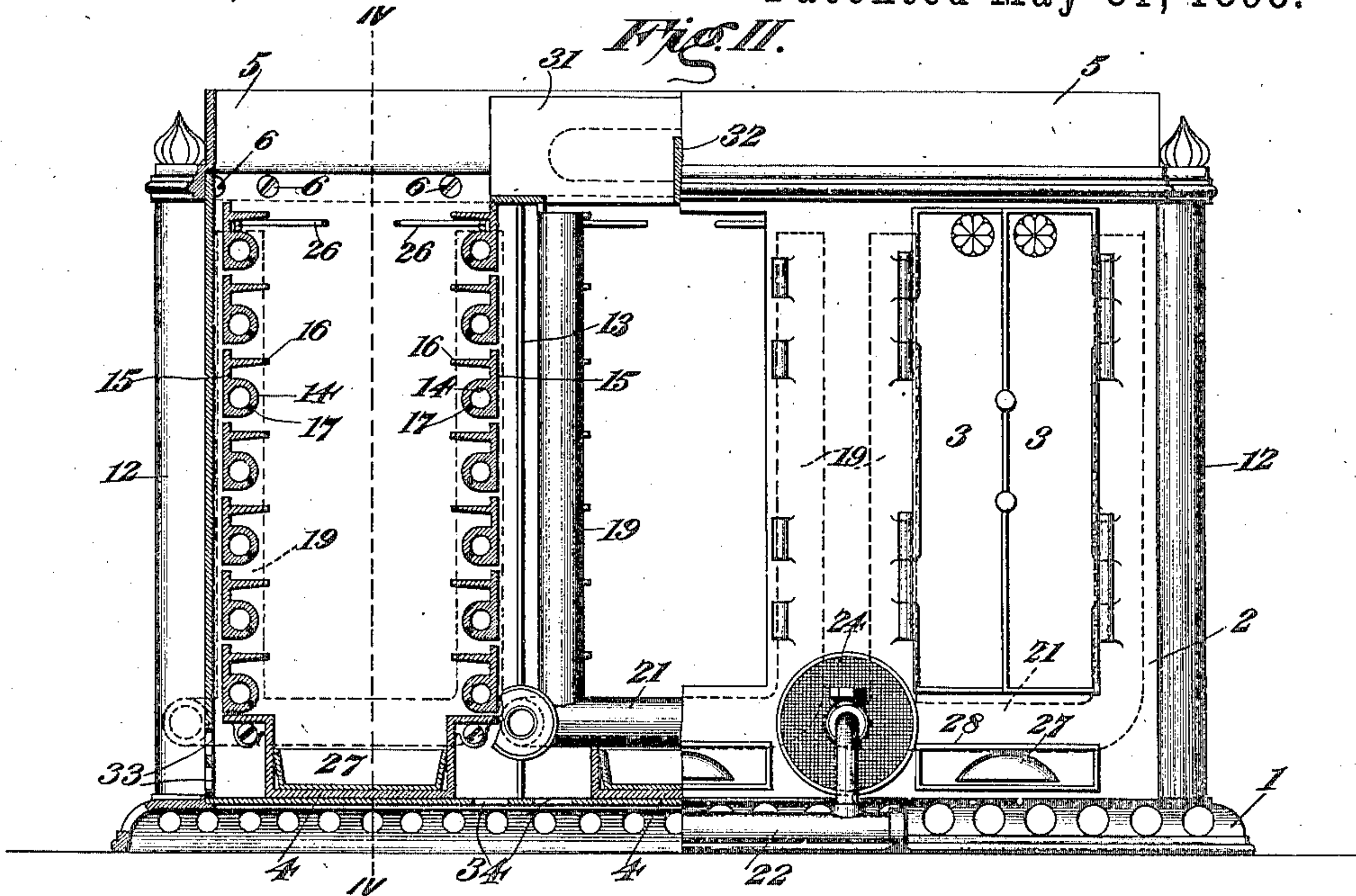
(No Model.)

3 Sheets—Sheet 2.

R. M. DIXON.
HEATING URN FOR BUFFET CARS.

No. 604,736.

Patented May 31, 1898.



Witnesses

M. E. Fowler
Chester A. Baker

Inventor:

Robert M. Dixon
By Joseph W. Atkins
Attorney.

(No Model.)

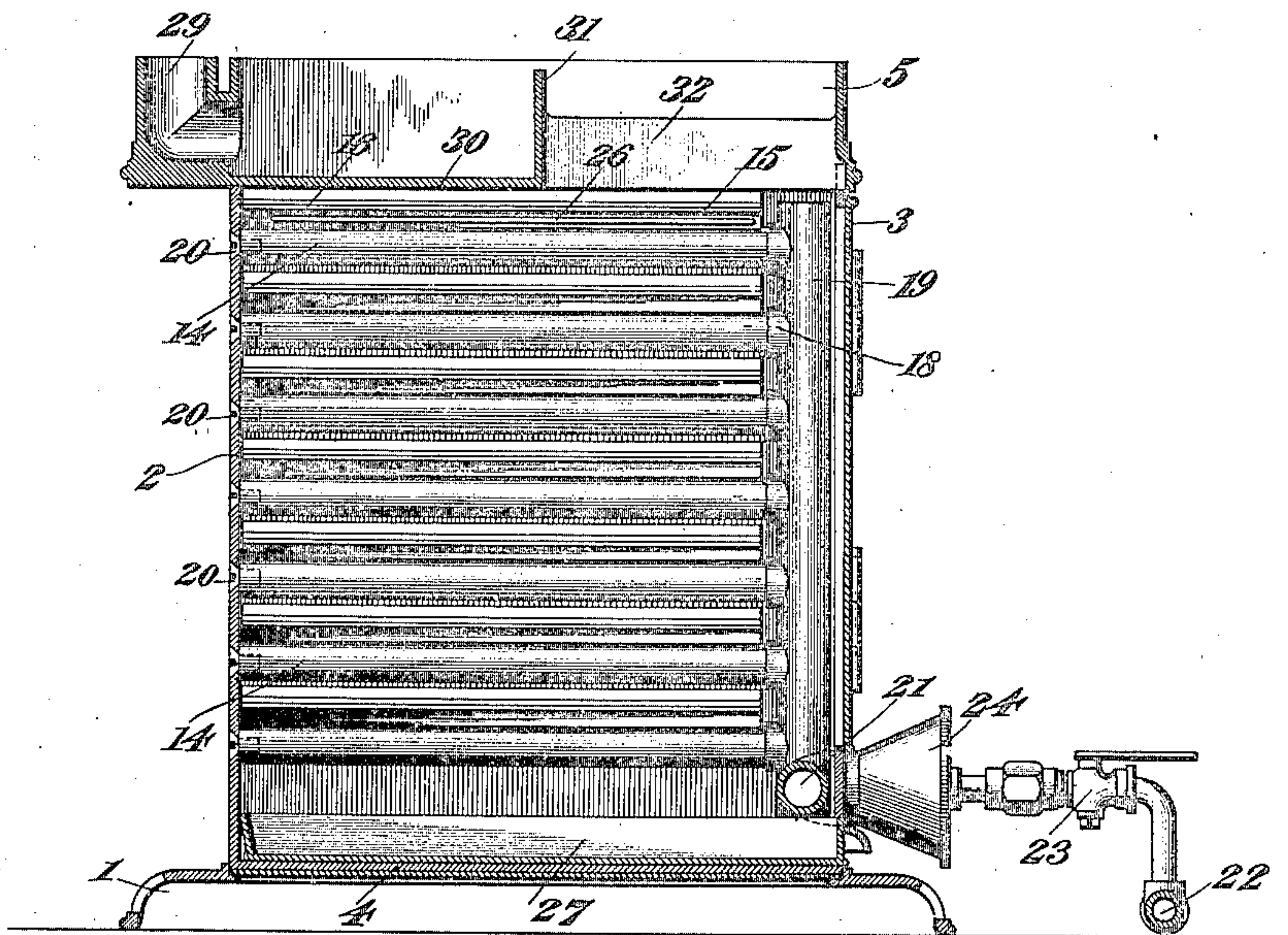
3 Sheets—Sheet 3.

R. M. DIXON.
HEATING URN FOR BUFFET CARS.

No. 604,736.

Patented May 31, 1898.

Fig. IV.



Witnesses

M. C. Fowler
Charles A. Baker.

Inventor:

Robert M. Dixon,

By Joseph H. Atkins,
Attorney,

UNITED STATES PATENT OFFICE.

ROBERT MUNN DIXON, OF EAST ORANGE, NEW JERSEY.

HEATING-URN FOR BUFFET-CARS.

SPECIFICATION forming part of Letters Patent No. 604,736, dated May 31, 1898.

Application filed July 8, 1897. Serial No. 643,865. (No model.)

To all whom it may concern:

Be it known that I, ROBERT MUNN DIXON, of East Orange, in the county of Essex, State of New Jersey, have invented certain new and useful Improvements in Heating-Urns for Buffet-Cars, of which the following is a complete specification, reference being had to the accompanying drawings.

The object of my invention is to produce an improved heating-urn for buffet-cars in which the heat employed for heating the urn is also utilized for broiling purposes. Heretofore in stoves of this character an urn adapted to be filled with water and to receive various receptacles containing food to be cooked has been heated either by an oil-lamp or a gas-flame whose heat is utilized for the one purpose only.

By my invention I propose to incorporate into a stove a series of burners having a wide area of heating-flame, which may be employed first for broiling and afterward for heating the contents of the urn and in such manner that the heat from one of the burners may be utilized for heating the urn as perfectly as if all of the burners were used at one time.

In the accompanying drawings, Figure I is a front elevation of my heating-urn complete. Fig. II is a similar view showing one-half of the frame in section and the urn proper removed. Fig. III is a top plan view of the frame with the urn removed. Fig. IV is a section on the line IV IV of Fig. II.

Referring to the figures on the drawings, 1 indicates the inversely-dished base of my stove, which supports the side walls 2 of an oblong rectangular frame. The base is preferably made of open-work designed to admit the free ingress through it of air. The frame may be made of any suitable design. It is preferably provided in front with sets of hinged doors 3 and angular cross-pieces 4, located near its bottom part, and surmounted with a rim 5, secured in place as by screws 6, adapted to support an urn 7 of any suitable shape and dimensions. The urn may be divided, for example, into compartments 8, 9, and 10 and may be sustained in position upon the rim 5, as by a rib 11, near its base. The frame is preferably provided with hollow posts 12, which serve to lend rigidity to the structure.

A series of vertical partitions 13 serves to divide the frame into a series of separate compartments, three of which are illustrated in the drawings. Each of the compartments is provided, preferably upon its opposite sides, with a burner of extensive area adapted to distribute toward the center of the compartment the heat from a flame.

In the drawings I illustrate a burner suitable for the purpose, which consists of a series of transversely-disposed pipes 14, which may be formed in castings 15, that are also provided with horizontal flanges or shelves 16, which project above each one of the pipes and serve to direct the flame emanating from minute apertures 17, arranged in series in each of the pipes toward the medial plane of the compartment. Each of the pipes 14 is provided with a cylindrical screw-threaded end, which enters an internally-screw-threaded nipple 18 in a vertical pipe 19. The ends of the pipes 14 opposite the pipe 19 may be supported as by screws 20, passing through the rear wall of the frame and into the ends of the respective pipes, as is clearly shown in Fig. IV of the drawings. One pipe 19 is provided within the frame for each burner composed of a series of pipes 14. Six pipes are therefore requisite to supply all of the three compartments of the frame.

Each pair of pipes 19 preferably communicates with and is supported by a common interior pipe 21, carried within the frame near the base 1. Each pipe derives its supply from an exterior pipe or source of gas-supply 22 through a cock 23, communicating with its respective pipe 21 through a commingler 24. The cocks 23 may be of any suitable construction and the comminglers may be of any preferred pattern, the object being to supply from the pipe 22 to one or more of the pipes 21 a sufficient quantity of gas commingled in suitable proportions with air to supply to the burners within the respective compartments a clean blue flame.

Within each of the compartments of the frame I prefer to provide racks 26, which may be secured between the uppermost flanges 16 and pipes 14, respectively, of the burner.

Within the angular depression of each of the cross-pieces 4 I provide a gravy-pan 27, which projects through an aperture 28 pro-

vided for it in the front wall of the frame, and which is adapted to receive the drippings from meat suspended from the racks 26.

By the arrangement above specified, as may be perceived, the heat from the vertical burner within the compartments may be utilized first for broiling, and then passing upwardly underneath the urn 7 it may be employed to heat the contents of the urn before it reaches the flue 29, provided in the frame for conducting away the products of combustion in the usual manner. In order, however, that the urn may be properly heated by the vertical burners when in operation, I provide in the upper part of the frame, underneath the urn, a heat-deflecting plate 30, provided in front with an upturned flange 31, a brace-piece 32, extending between the flange 31 and the front wall of the frame, being provided for sustaining the deflecting-plate 30 in position. The space in the rear of the flange 31 above the deflecting-plate 30 communicates directly with the flue 29. The portion of the products of combustion from the middle compartment in front of the flange 31 is retarded by the flange and must pass around it, following the direction of the arrows in Fig. III in order to reach the flue 29. By this means the entire bottom of the urn may be heated by the products of combustion from one of the compartments.

The castings 15, with their pipes 14 and flanges 16, are suitably spaced from each other and from the walls of the frame and the partition-walls 13, respectively, to permit free circulation of fresh air, which is derived as through apertures 33 in the side walls of the frame and apertures 34 in the base thereof.

What I claim is—

1. The combination with a frame and an urn supported above the same, of vertical partitions dividing the interior of the frame into a series of separate compartments, burners within the several compartments, respectively, a flue communicating with an intermediate compartment, and a deflector between the intermediate compartment and the flue, with which the flue would otherwise directly communicate, substantially as and for the purpose specified.

2. The combination with a frame and an urn supported above the same, of vertical partitions dividing the interior of the frame into a series of compartments, burners within the several compartments, respectively, a flue in the frame, a deflecting-plate between the flue and an intermediate compartment with which the flue would otherwise directly communicate, and a flange upon the front of the deflecting-plate, substantially as set forth.

3. The combination with a frame and its flue, of a vertical burner arranged within the frame, said burner consisting of a vertical supply-pipe, a series of perforated horizontal pipes secured thereto, and a series of horizontally-disposed flanges or shelves arranged above each of the perforated pipes, substantially as and for the purpose specified.

In testimony of all which I have hereunto subscribed my name.

ROBERT MUNN DIXON.

Witnesses:

E. W. BULKLEY,
WM. ST. JOHN.