W. H. MITCHELL.

STOVE.

APPLICATION FILED DEC. 1, 1917.

1,298,245.

Patented Mar. 25, 1919.

3 SHEETS—SHEET 1.

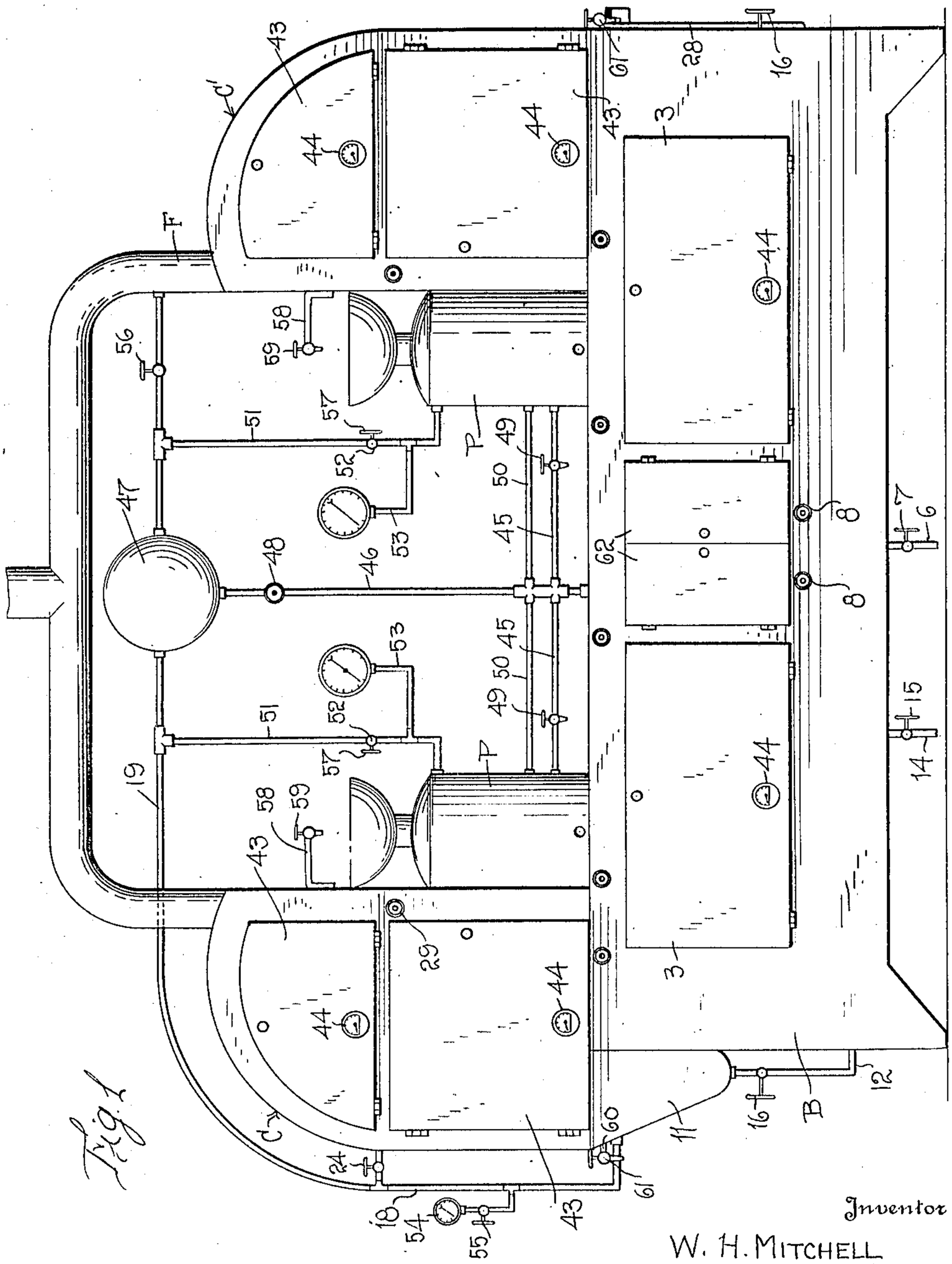

Fig. 1

Inventor

W. H. MITCHELL

By Watson E. Coleman

Attorney

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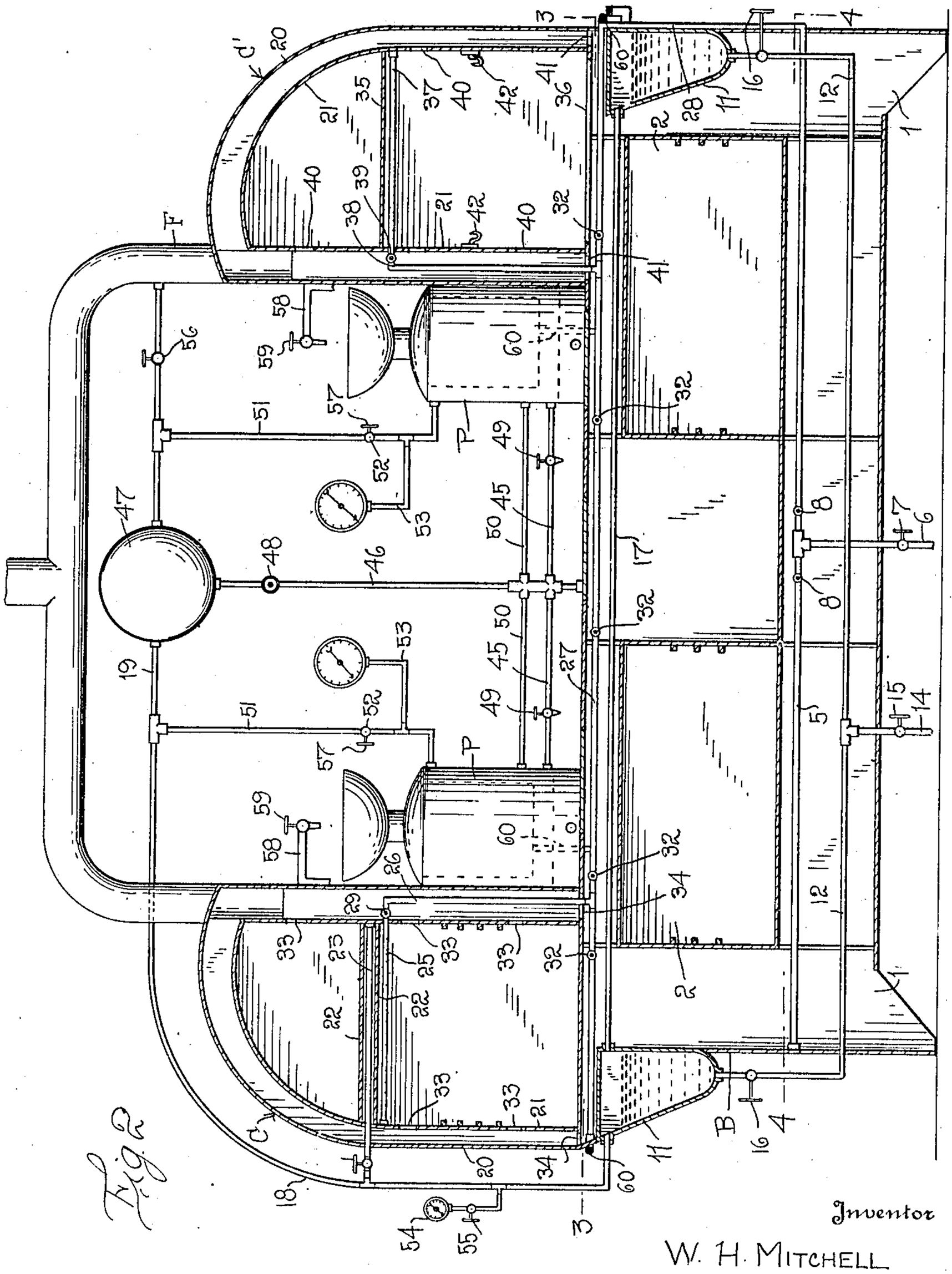

Fig 2

Inventor

W. H. MITCHELL

By Watson E. Coleman

Attorney

W. H. MITCHELL.

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3 SHEETS—SHEET 3.

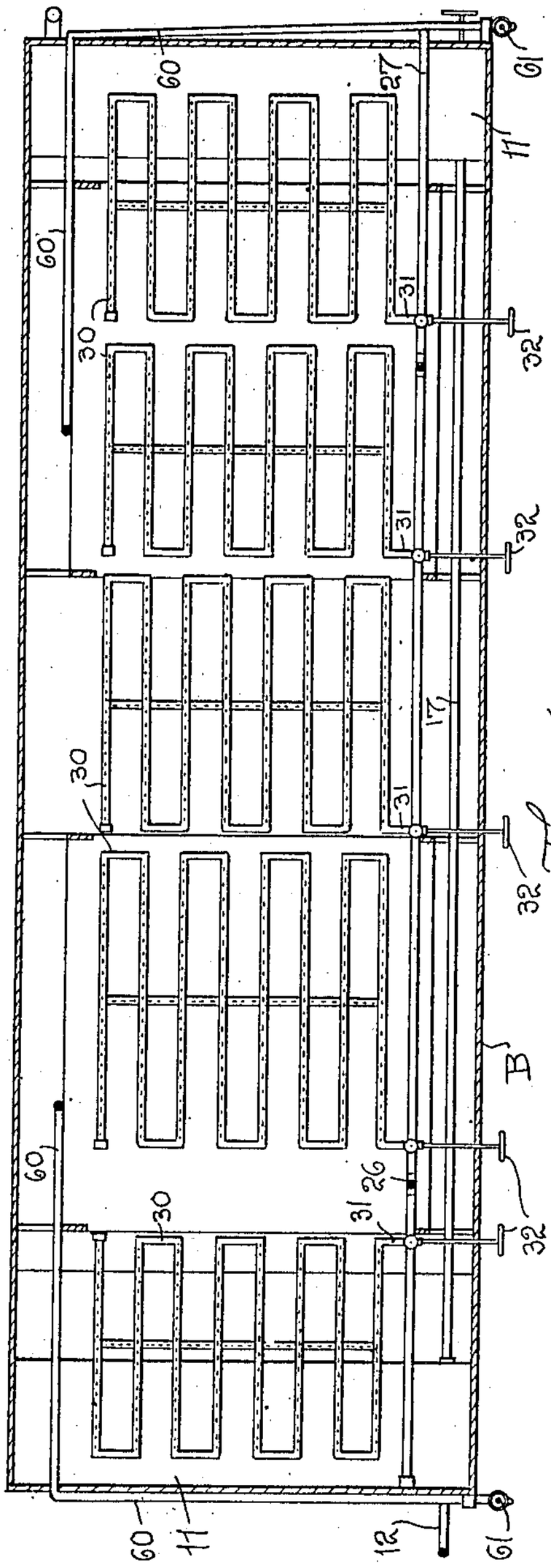

Fig. 3.

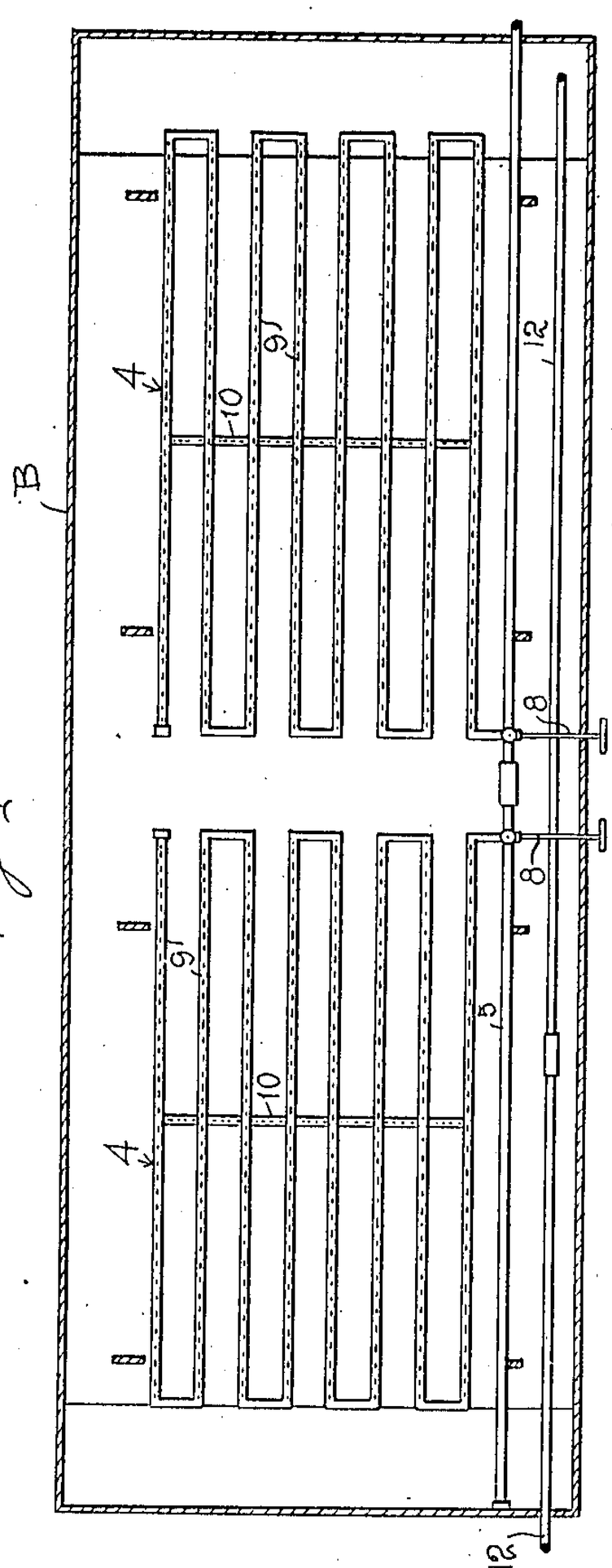

Fig. 4.

Inventor

W. H. MITCHELL

By Watson E. Coleman

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM H. MITCHELL, OF CHICAGO, ILLINOIS.

STOVE.

1,298,245. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed December 1, 1917. Serial No. 204,882.

To all whom it may concern:

Be it known that I, WILLIAM H. MITCHELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Stoves, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in stoves and has relation more particularly to a device of this general character especially designed and adapted for use for cooking purposes and it is an object of the invention to provide a device of this general character comprising a plurality of compartments adapted to be heated direct from a flame or by steam or the like.

The invention also has for an object to provide a device of this general character having novel and improved means whereby a plurality of cooking operations may be effected at one time with a minimum of labor and attention.

A further object of the invention is to provide a novel and improved device of this general character including a combustion chamber together with means for generating steam by the heat created within the combustion chamber and wherein a plurality of heating compartments are employed and which compartments are adapted to be heated by the steam generated.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved stove wherein certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood I will now proceed to describe the same with reference to the accompanying drawings wherein:

Figure 1 is a view in front elevation of a stove constructed in accordance with an embodiment of my invention;

Fig. 2 is a vertical sectional view taken through the device as herein disclosed;

Fig. 3 is a sectional view taken substantially on the line 3—3 of Fig. 2; and

Fig. 4 is a sectional view taken substantially on the line 4—4 of Fig. 2.

As disclosed in the accompanying drawings B denotes a hollow base of predetermined configuration and dimensions and provided in its bottom adjacent its opposite ends with the openings 1 to permit the ingress of air to support combustion within the base. Suitably supported within the base are the longitudinally spaced ovens 2, the entrance to which is through a side wall of the base through the medium of the doors 3. Arranged within the base B and below the ovens 2 are the gas burners 4 in communication with a feed pipe 5. In communication with the pipe 5 is a pipe 6 leading from a suitable source of supply and interposed in said pipe 6 is a controlling valve 7. Co-acting with each of the burners 4 is a controlling valve 8 extending exteriorly of the base B whereby it will be perceived that the burners 4 may be caused to operate in unison or one be employed independently of the remainder.

Each of the burners 4 preferably comprises a plurality of returned portions 9 arranged substantially in parallelism and co-acting with said returned portions 9 is a transversely disposed pilot pipe 10 to facilitate the lighting of the burners. Any suitable means may be provided to facilitate the lighting of the burners 4.

Supported by the opposite ends of the base B adjacent the top thereof are the reservoirs or boilers 11 having in communication therewith the feed pipes 12 leading from a suitable source of water supply through the medium of the main pipe 14. Interposed in the pipe 14 is a controlling valve 15 and in each of the pipes 12 is interposed a controlling valve 17. The heat generated within the base B serves to convert into steam the water within the boilers 11 and in communication with and connecting the upper portions or steam chambers of the boilers 11 is the pipe 17.

One of the boilers 11 is positioned within the base B while the second boiler 11 is positioned exteriorly thereof. Leading from the upper portion or steam chamber of the exterior boiler 11 is the pipe 18 which extends upwardly a predetermined distance and is then disposed horizontally as indicated at 19 and is in communication with an upstanding flue F in communication with the base B adjacent the end thereof remote from the exterior boiler 11.

Disposed transversely of the top of the base B at the opposite ends thereof and ex-

tending thereabove are the chambers C and C′ each of which is provided with the double walls 20 and 21. The chamber C is divided into two vertically disposed compartments through the medium of the horizontally disposed spaced partitions 22 and arranged between the partitions 22 is the steam pipe 23 leading from the pipe 18 and having interposed therein the controlling valve 24. The upper compartment serves as an oven and is adapted for any preferred use while the lower compartment of the chamber C serves particularly as a roasting oven and for which reason I find it of advantage to have arranged within the lower compartment of the chamber C at the top thereof a burner 25, in communication, through the medium of the pipe 26 with the pipe 27 underlying the top of the base B and disposed longitudinally thereof. The pipe 27 is in communication through the medium of the exterior extension 28 with the pipe 5 hereinbefore referred to. Interposed in the pipe 26 is a controlling valve 29. Also underlying the top of the base B are the burners 30 and each of said burners 30 is also in communication as indicated at 31 with the pipe 27. Co-acting with each of the burners 31 is a controlling valve 32. The walls 21 of the chamber C are provided with the openings 33 affording communication within the compartments above and below the partitions 22 so that the heat generated within the hollow base B may enter within said compartments. As is clearly illustrated in Fig. 2 the spaces between the walls 20 and 21 are in communication with the hollow base B through the medium of the openings 34.

The chamber C′ is divided into two vertically disposed compartments through the medium of the horizontally disposed partition 35 and the lower compartment of the chamber C′ serves as a barbecue oven while the upper compartment of the chamber C′ serves as a warming oven. The bottom of the lower compartment of the chamber C or barbecue oven is substantially open as indicated at 36 so that the heat generated within the hollow base B may enter directly therethrough, and arranged within the lower compartment of the chamber C′ at the top thereof is a burner 37 in communication with the pipe 27 through the medium of the conduit 38. Interposed in the conduit or pipe 38 is a controlling valve 39. The walls 21 of the compartment C′ are in communication with the space between the walls 20 and 21 through the medium of the openings 40 for the admission of heat and the space between the walls 20 and 21 is also in communication with the hollow base B through the openings 41 formed in the top of the base B as particularly illustrated in Fig. 1. The side walls of the lower compartment or barbecue oven of the chamber C′ are provided with inwardly directed supporting hooks 42 whereby baskets or the like containing the meat to be roasted may be readily arranged within the oven or compartment.

Access is had within each of the compartments of the chambers C and C′ through the medium of the door 43 arranged at an end thereof and each of said doors 43 together with the doors 3 hereinbefore referred to is provided with a thermometer 44 of any ordinary or preferred type whereby the temperature within an oven or compartment may be readily and conveniently determined.

Also supported by the top of the base B and inwardly of the chambers C and C′ are the percolators P of a conventional type and in communication with each of the percolators is a pipe 45 in communication with a vertically disposed pipe 46 leading from the hollow glass ball 47 interposed in the horizontal portion 19 of the pipe 18. Interposed in the pipe 46 is a controlling valve 48 and interposed in each of the pipes 45 is a drain cock 49. Also in communication with the lower portion of the pipe 46 and the percolators P are the pipes 50. In communication with the horizontal portion 19 of the pipe 18 and the upper portion of each of the percolators P is a pipe 51 having interposed therein a controlling valve 52. Coacting with each of the pipes 51 is a pressure gage 53. It has also been found of advantage to interpose in the pipe 18 the pressure gage 54, the operation of which is under control of the valve 55. It has also been found of advantage to interpose in the horizontal portion 19 of the pipe 18 intermediate a pipe 51 and the flue F with which the horizontal portion 19 communicates, the controlling valve 56. When the valve 56 is open the steam entering within the flue F will facilitate the draft in order to create a more effective distribution of the heat within the hollow base and also to permit the discharge of excess steam as the occasions of practice may require. Steam entering within the percolators P serves to afford the requisite heat for the liquid or beverage within the percolator and the flow of the steam may be controlled by the valve 48 interposed in the pipe 46, together with the valves 57 interposed in the pipes 51. It has been found in practice that when the transparent member 47 becomes misty or clouded indication is given of the desired operation of the percolators P. Water is adapted to be delivered within each of the percolators through the top thereof by the pipe 58 leading from a suitable source of supply and having interposed therein a controlling valve 59.

In communication with the urn of each of the percolators P and through the bottom thereof is a pipe 60 extending beyond the

adjacent end of the device and terminating in advance of a side wall of the base B. The extended portion of the pipe 60 is provided with the valve controlled discharge cock 61. By this arrangement it will be at once self evident that the contents of each of the percolators may be readily withdrawn with the hand free from the extreme heat radiating from the hollow base B and the chambers C and C'.

Access is had to the space between the ovens 2 through the medium of the doors 62 coacting with a side wall of the base B and as particularly illustrated in Fig. 1. It is also to be stated that the ovens 2 are particularly intended for use for baking bread, pies, or the like.

From the foregoing description, it is thought to be obvious that a stove constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated and it will also be obvious that my invention is susceptible of some change and modification without materially departing from the principle and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:

A stove comprising a hollow base, the bottom of the base adjacent the opposite ends being opened for the admission of air within the base, heat generating means arranged within the base, communicating boilers supported by the base, one of said boilers being positioned therein, a flue in communication with the base, a steam pipe leading from one of the boilers and in communication with the flue, branch pipes in communication with the steam pipe, valves interposed in the branches, and a valve interposed in the steam pipe for controlling the flow therethrough into the flue.

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

WILLIAM H. MITCHELL.

Witnesses:
ALFRED W. BAYS,
MARGARET YOUNG.