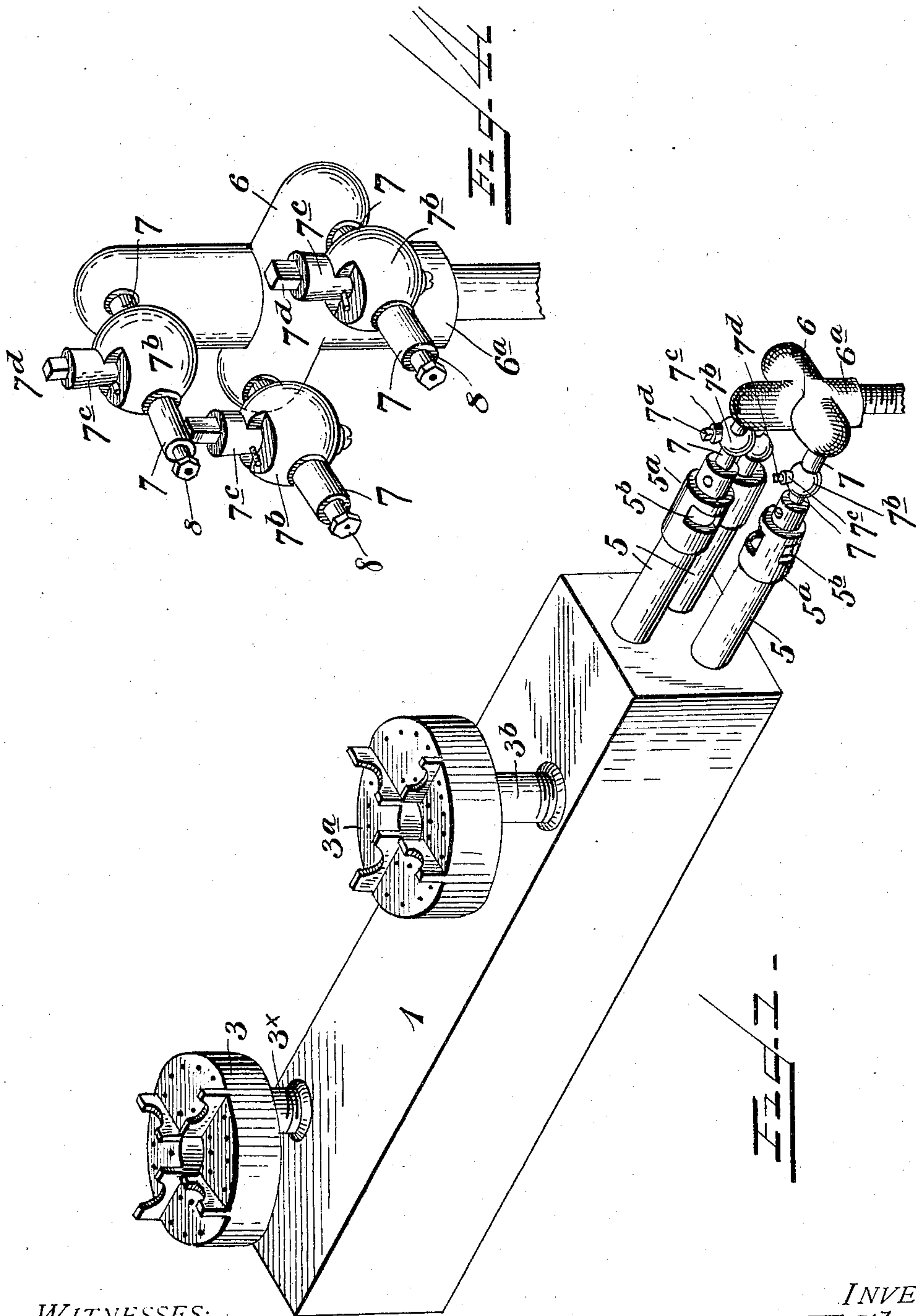


No. 783,391.

PATENTED FEB. 21, 1905.

J. F. SKOOG.
GAS BURNER FOR COOKING STOVES.
APPLICATION FILED MAY 23, 1904.

2 SHEETS—SHEET 1.



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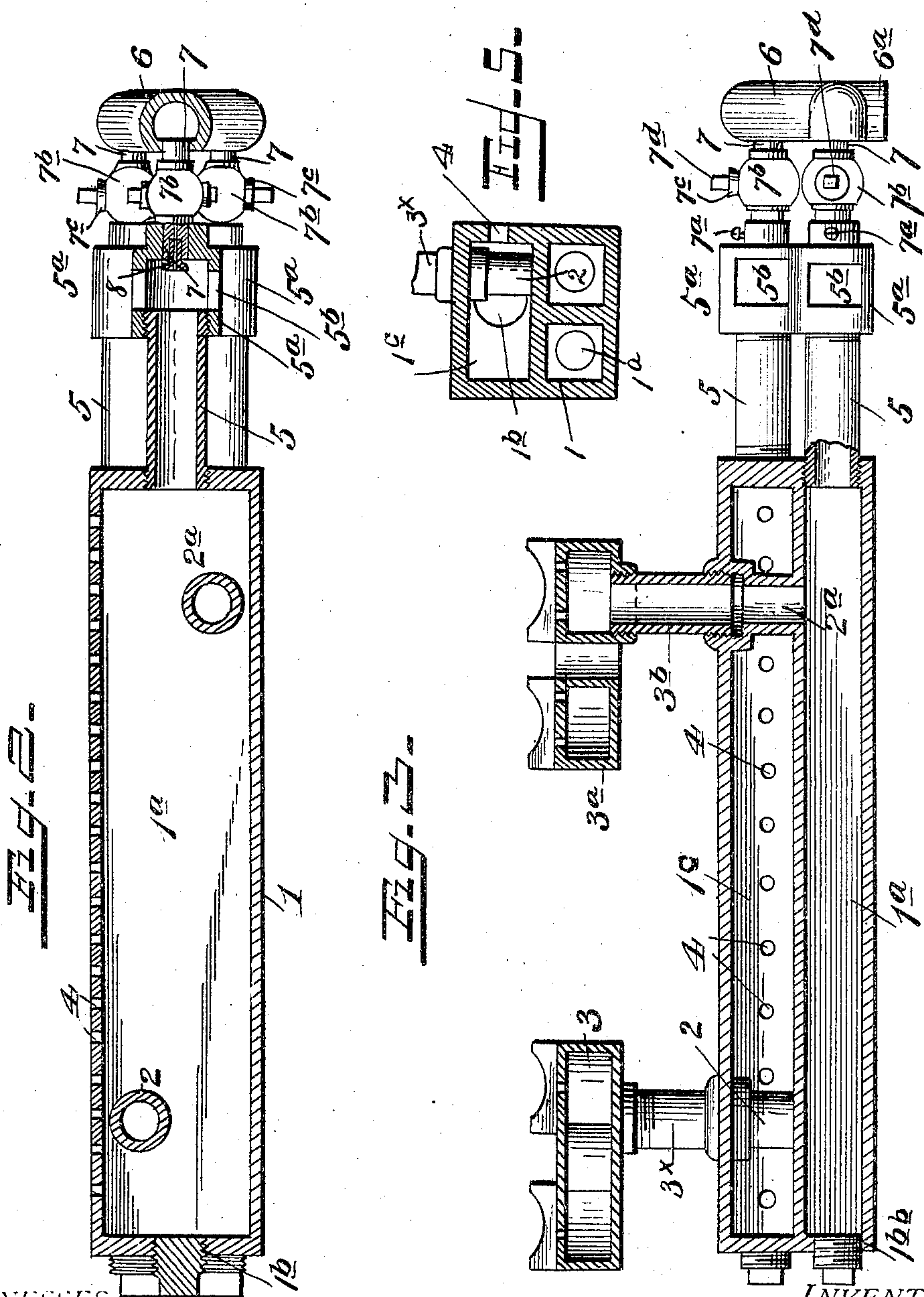
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JOHN F. SKOOG, OF ERIE, PENNSYLVANIA, ASSIGNOR TO ERIEZ STOVE AND MANUFACTURING COMPANY, OF ERIE, PENNSYLVANIA.

GAS-BURNER FOR COOKING-STOVES.

SPECIFICATION forming part of Letters Patent No. 783,391, dated February 21, 1905.

Application filed May 23, 1904. Serial No. 209,210.

To all whom it may concern:

Be it known that I, JOHN F. SKOOG, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in Gas-Burners for Cooking-Stoves, of which the following is a specification.

My invention relates to improvements in means more especially for burning natural gas, and is adapted as an auxiliary to a stove, particularly of the cooking type, while said invention is equally eligible in itself for use independently of such stove.

Said invention has for its object to provide for the ready delivery of the gas via a coupling or union between the service-pipe and a multiple of mixing tubes or chambers into any one of a number of subchambers or compartments of a common chamber previous or preliminary to combustion and to effect the ready control or regulation of the passage of the gas *en route* through the burner as aforesaid.

Said invention consists of certain structural features substantially as hereinafter more fully disclosed, and particularly pointed out by the claim.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a perspective view of the same. Fig. 2 is a horizontal section produced through the chamber having a multiple or plurality of subchambers or compartments. Fig. 3 is a longitudinal section taken along the line of one of the burners, including the compartments or subchambers, one of which delivers the gas through the burner-openings as used for heating the stove water-back. Fig. 4 is an enlarged detached view showing more particularly the coupling or union between the service-pipe and the air-mixing tubes or chambers with valved branch tubes or members. Fig. 5 is a cross-section of the burner, showing more especially the several compartments or subchambers thereof.

In the carrying out of my invention I employ a chamber 1, which may be rectangular or of other general outline and having a plurality of compartments or subchambers 1^a 1^b

1^c, preferably two lower ones and an upper one being thus arranged for compactness and to provide for intensifying the heating action thereof, it being apparent that the contiguity of heated bodies will produce a mutually-heating action. Tube castings or members 2 2^a, having their lower ends integral with the top portions of and communicating with the lower compartments or subchambers 1^a 1^b, respectively, extend through but do not communicate with the upper compartment or subchamber 1^c and open out through and are also integral with the top portion of said upper compartment or subchamber, the purpose of which will be apparent presently. Into enlarged upper screw-threaded ends of said tube members or passages are screwed or fitted the lower ends of the screw-threaded tube members 3^x 3^b of burners 3 and 3^a, respectively, adapted to permit the placing and supporting thereon of a utensil whose contents it may be desired to heat or prepare for use. The upper compartment or subchamber 1^c has produced through its outer lateral wall a plurality of or numerous small burner-openings 4 for the passage or jetting of gas therethrough for combustion outside thereof, by the action of which the stove water-back may be suitably heated.

Tube members or chambers 5, interchangeable for either end of the chamber 1, provided with suitable openings 1^{bb} for that purpose, are adapted to deliver into the compartments or subchambers 1^a 1^b 1^c, respectively, for suitably supplying the same with gas. Said tube members have suitably fitted or screwed thereon at their outer ends stub-tubes 5^a of somewhat greater diameter and having lateral air inlets or openings 5^b to admit air to the gas passing therethrough into the tube members or chambers 5, consequently permitting the commingling of said air with said gas as required for aiding the combustion of the same, said parts 5 5^a thus constituting air-mixers.

A union or coupling 6, preferably of the construction shown, being of approximately cross shape, has a slightly-downward continuation of its vertical portion or stem adapted, as at 6^a, to make connection with the service gas-pipe, said vertical portion and the arm

of the cross or coupling having lateral screw-threaded apertures therein near their outer ends which provide for equipping said coupling or union with branch tubes or pipes 7, whose forward ends are adapted to be inserted into opposite ends of the air-mixers 5 5^a, wherein they are suitably held by means of binding-screws 7^a. Said branch tubes or pipes 7 have globular enlargements 7^b, fitted with valves or plugs 7^c for controlling the flow of the gas therethrough or wholly cutting it off, said valves or plugs having their stems provided with angular terminals 7^d for the suitable application of the same of a key for their actuation, as in turning the valves or plugs. Into the forward or delivery ends of the branch pipes or tubes 7 are inserted or screwed gas-nozzles 8, therefore readily removable for cleaning when necessary, the opening or passage of the nozzle delivering into that compartment of the chamber for feeding the water-back heater being enlarged to impart thereto a delivering capacity equal to the demands thereon for the purpose stated.

Latitude is allowed as to details herein, as they may be changed without departing from

the spirit of my invention and the latter still be protected.

I claim—

A device of the character described, having a plurality of longitudinal compartment-chambers, valved gas-jet tubes connecting with the service-pipe and delivering into air-mixing tubes connecting with said compartment-chambers, respectively, burner-tubes connecting with two of said compartment-chambers, and the other of said compartment-chambers being of greatly-increased cross-sectional area and having a lateral series of burner-openings to deliver an increased volume of gas and adapted for use especially in connection with a cook-stove or range having a water-back, said lateral series of burner-openings being effective as a heater for said water-back.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN F. SKOOG.

Witnesses:

JOS. E. NASON,
H. E. FISH.