C. M. MOGNI.

GAS HEATER.

APPLICATION FILED JULY 8, 1919.

1,344,555. **Patented June 22, 1920.**

Fig: 1.

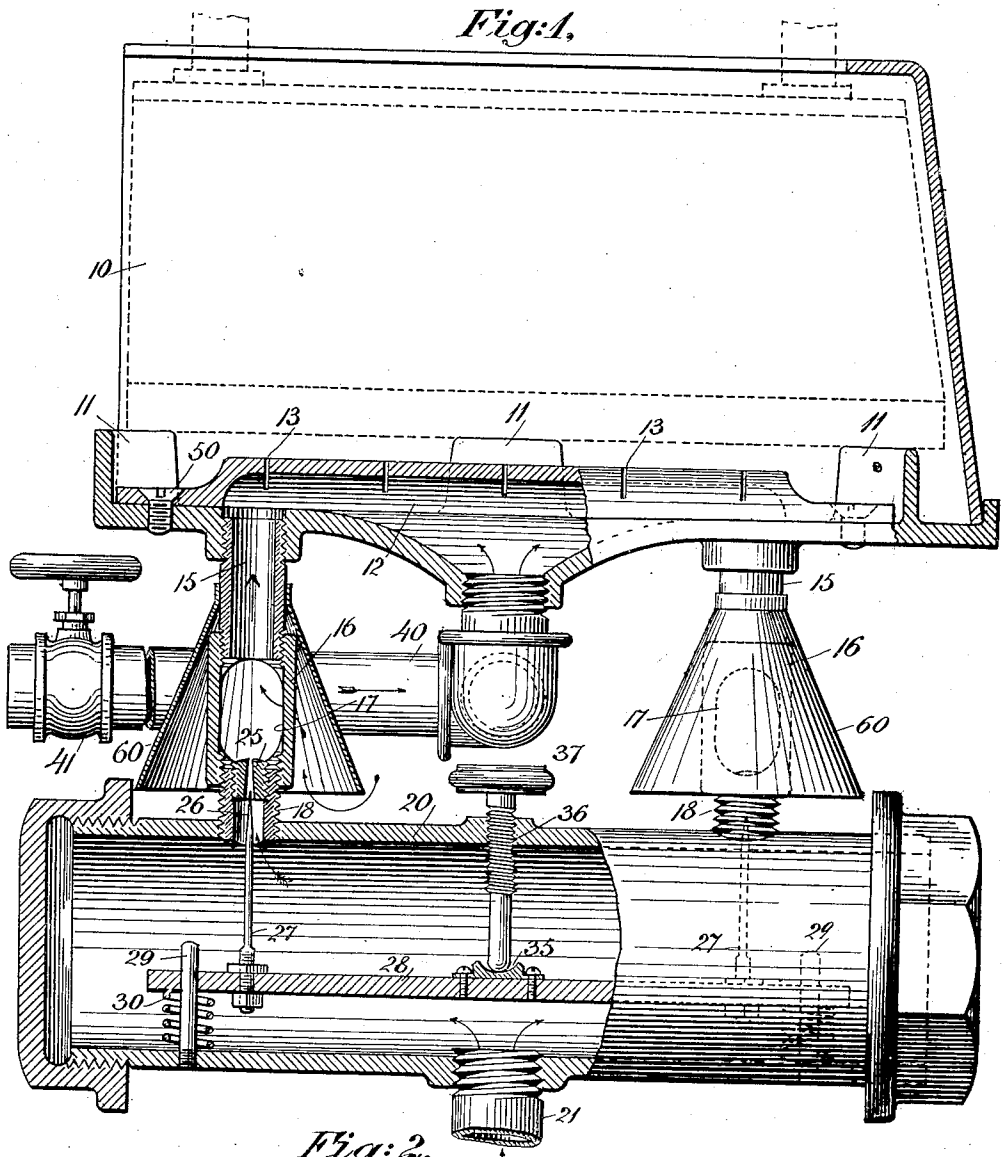
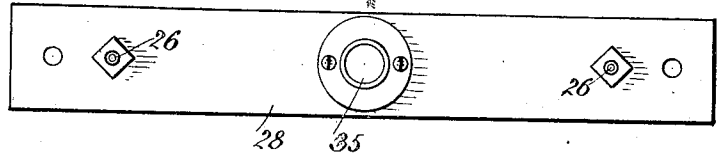


Fig: 2.



WITNESSES

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GAS-HEATER.

1,344,555. Specification of Letters Patent. Patented June 22, 1920.

Application filed July 8, 1919. Serial No. 309,277.

To all whom it may concern:

Be it known that I, CHARLES M. MOGNI, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Gas-Heater, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved gas heater more especially designed for use in laundries and other establishments for heating sadirons and like devices, and arranged to produce an exceedingly intense flame to insure a quick effective heating of the sadiron. Another object is to reduce the consumption of the gas to a minimum. Another object is to permit of cheaply manufacturing the gas heater and installing the same wherever required.

With these and other objects in view, the invention consists of certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a sectional side elevation of the improved gas heater with parts shown in elevation; and

Fig. 2 is a plan view of the needle valves and their adjustable support.

The sadiron 10 to be heated is adapted to be placed on a support formed on lugs 11 and a combustion chamber 12 is arranged with its top below the top of the lugs 11 and directly opposite the under side of the sadiron 10 to heat the latter by blue flames issuing through the jets 13 in the form of transverse slots formed in the top of the combustion chamber 12. The bottom of the combustion chamber 12 is provided near the ends of the latter with depending nipples 15 on which screw mixing tubes 16 provided with air inlet openings 17, and the lower ends of the mixing tubes 16 are connected by nipples 18 with a gas chamber 20 connected by a pipe 21 with a suitable source of gas supply. The pipe 21 may form a stand for supporting the gas heater but the latter may be otherwise supported without deviating from my invention.

In the nipples 18 are arranged valve seats 25 controlled by needle valves 26 having their stems 27 extending into the gas chamber 20. The lower ends of the stems 27 are secured to a supporting bar 28 arranged within the gas chamber 20 and mounted to slide up and down on guide pins 29 attached to the bottom of the gas chamber 20. Springs 30 are coiled around the pins 29 and are interposed between the supporting bar 28 and the bottom of the gas chamber 20 to support the bar 28 and normally to hold the same in uppermost position, that is, with the needle valves 26 closing the valve seats 25. The top of the bar 28 is provided near its middle with a seat 35 engaged by the lower end of a screw rod 36 screwing in the top of the gas chamber 20. The upper outer end of the screw rod 36 is provided with a suitable handle 37 under the control of the operator to permit the latter to screw the screw rod 36 downward or upward with a view to correspondingly move the bar 28 and with it the needle valves 26 to allow more or less gas to pass from the chamber 20 by way of the needle valve seats 25 into the mixing tubes 16. It is understood that the gas passing into the mixing tubes 16 mix with the air passing into the said tubes by way of the air inlets 17, and the mixture of gas and air passes by way of the nipples 15 into the combustion chamber 12 and through the jets 13 to be burned underneath the bottom of the sadiron 10 resting on the supporting lugs 11 at the time. It will be noticed that by the operator adjusting the screw rod 36 the proper amount of gas is allowed to pass to the mixing tubes 16 to insure the formation of a proper mixture of air and gas prior to such mixture passing into the combustion chamber 12.

In order to insure the formation of a blue flame and a consequent production of intense heat, use is made of an air supply pipe 40 connected with the bottom of the combustion chamber 12 intermediate the nipples 15. This air supply pipe 40 is provided with a suitable valve 41 under the control of the operator to permit of regulating the amount of air passing to the mixture of air and gas contained in the combustion chamber 12. It is understood that this extra supply of air insures the formation of blue flame at the jets 13. By reference to Fig. 1 it will be noticed that the combustion chamber 12 is formed of top and bottom

parts fastened together by screws 50, and the bottom part is provided with lugs 11 for supporting the sadiron.

In order to prevent any portion of the flame reaching the openings 17 in the mixing tubes 16, use is made of conical hoods 60 attached to the nipples 15 and inclosing the mixing tubes 16, as plainly shown in Fig. 1.

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

1. A gas heater, comprising a combustion chamber having in its top burner slots, mixing tubes connected with the ends of the said combustion chamber and provided with air inlets and with needle valves, a gas chamber connected with a gas supply and into which extend the stems of the said needle valves, a valve supporting bar within the said gas chamber and on which the said valve stems are secured, springs supporting the said bar, and a screw rod screwing in the said gas chamber and engaging the said bar.

2. A gas heater, comprising a combustion chamber having in its top burner slots, mixing tubes connected with the ends of the said combustion chamber and provided with air inlets and with needle valves, a gas chamber connected with a gas supply and into which extend the stems of the said needle valves, a valve supporting bar within the said gas chamber and on which the said valve stems are secured, springs supporting the said bar, a screw rod screwing in the said gas chamber and engaging the said bar, and a valved air supply pipe connected with the said combustion chamber intermediate the said mixing tubes.

3. In a gas heater, a combustion chamber having openings in its top, a gas chamber below the combustion chamber, a mixing tube having an air inlet, a nipple connecting the mixing tube with the combustion chamber, a nipple connecting the mixing tubes with the gas chamber, the last named nipple having a valve seat, a spring pressed needle valve mounted in the gas chamber and engaging the said valve seat, and means for controlling the needle valve.

4. In a gas heater, a combustion chamber having openings in its top, a gas chamber below the combustion chamber, mixing tubes having air inlets, nipples connecting each mixing tube with the combustion and gas chambers, the nipples connecting the mixing tubes with the gas chamber having valve seats, a sliding and spring pressed bar mounted in the gas chamber, needle valves mounted on the bar and engaging the valve seats, and a screw rod screwing in the gas chamber and engaging said bar.

5. A gas heater, comprising a combustion chamber having openings in its top, mixing tubes having air inlet openings, nipples connecting the mixing tube with the bottom of the combustion chamber, conical hoods secured to the nipples and inclosing the mixing tubes, a gas chamber, nipples connecting the mixing tubes with the gas chamber and having valve seats, spring pressed needle valves mounted in the gas chamber and engaging the valve seats, means for controlling the needle valves, said means being common to both valves, and an air pipe opening into the bottom of the combustion chamber intermediate of the nipples thereof.

CHARLES M. MOGNI.