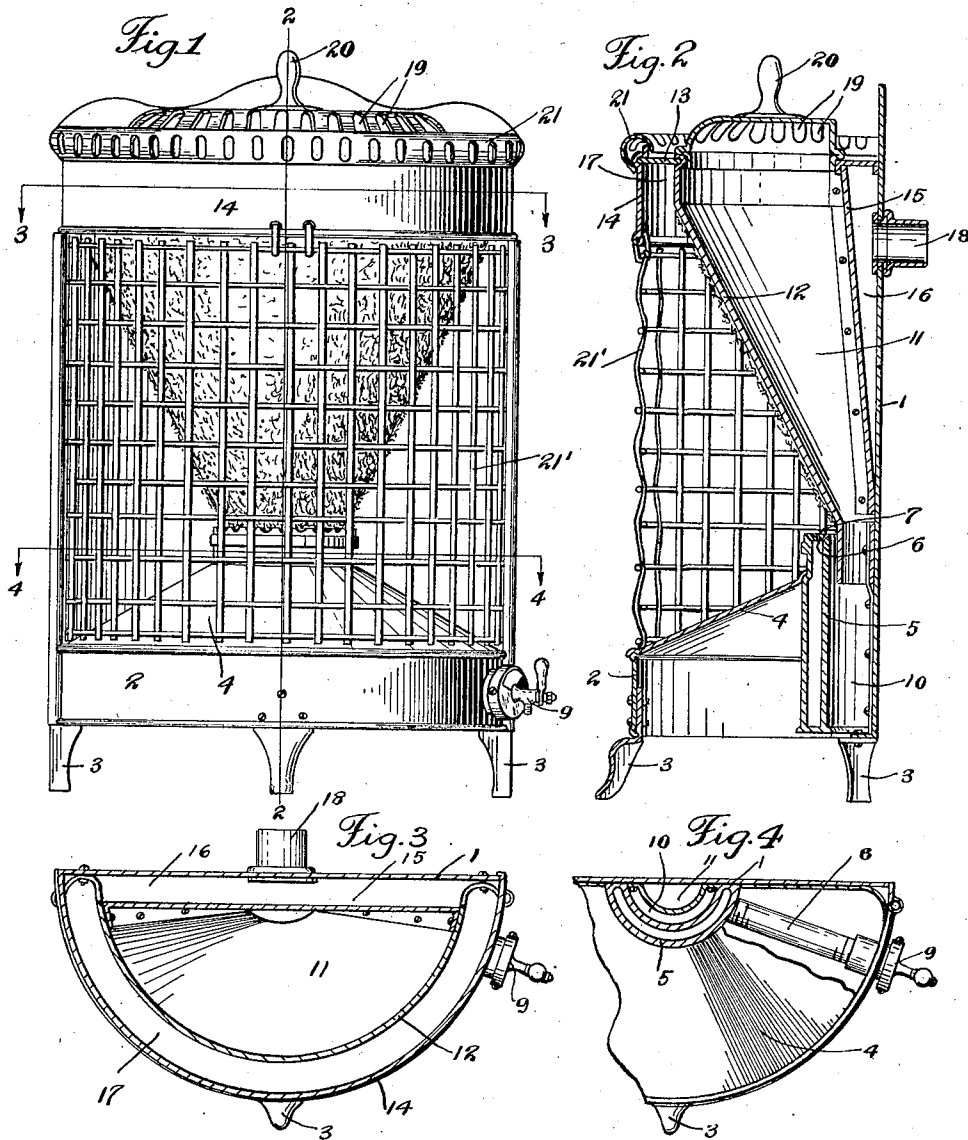


J. W. ASHBAUGH.
GAS HEATER.
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1,330,228.

Patented Feb. 10, 1920.



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JAMES W. ASHBAUGH, OF BREMEN, OHIO.

GAS-HEATER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES W. ASHBAUGH, a citizen of the United States, residing at Bremen, in the county of Fairfield and State of Ohio, have invented certain new and useful Improvements in Gas-Heaters, of which the following is a specification.

This invention relates to gas stoves or heaters, and has for its object to provide a stove of this character embodying improved features of construction which will enable the same to radiate or give off a maximum degree or quantity of heat in proportion to the amount of fuel consumed.

Another object of the invention resides in a gas stove wherein is provided means for effecting a continuous circulation of air therethrough, and which air, during its natural circulation through the stove, will be brought into contact with heated surfaces so that it will be in a heated condition when ejected or radiated from said stove.

A further object is to provide a gas stove with novel features of construction for allowing the gas fumes of its burner to pass off from the stove without entering the immediate atmosphere, said construction being located adjacent to the upper end of the stove and formed to surround the means for permitting of a circulation of air through the latter.

Other objects will be in part obvious and in part pointed out hereinafter.

For a further disclosure of the invention, reference is to be had to the following description and to the accompanying drawing, forming a part of this specification, and in which similar characters of reference denote corresponding parts throughout the several views thereof.

In the drawing:

Figure 1 is a front elevation of the gas stove comprising the present invention.

Fig. 2 is a vertical sectional view thereof, taken along the line 2—2 of Fig. 1.

Fig. 3 is a horizontal sectional view taken along the line 3—3 of Fig. 1, and disclosing more particularly the fume exhaust passageway.

Fig. 4 is a fragmentary horizontal sectional view taken substantially along the line 4—4 of Fig. 1.

Referring more particularly to the drawing, the stove in its preferred form consists of a sheet metal structure and includes a rectangular backwall or plate 1, to the lower

end of which is suitably connected a semi-circular base band 2, these members 1 and 2 being preferably equipped with a suitable number of supporting legs 3, whereby the stove body may be positioned in spaced relation from a floor or supporting base. To the upper edge of the band 2, there is secured the lower semi-circular edge of a heat deflecting plate 4, which latter extends conically upward and terminates adjacent to the upper extremity of a semi-circular hollow gas burner 5. The burner extends substantially from the base of the wall 1 to a plane above the reduced upper end of the plate 4, and has its upper horizontal surface 6 provided with gas outlet openings 7, and in which position gas passing through the burner may be ignited. Fuel is introduced into the lower extremity of the burner through the medium of a pipe 8, the latter extending in a horizontal direction and terminating in an outwardly protruding valved extremity 9, by use of which the flow of fuel through the burner may be conveniently governed.

The body of the burner 5, as hereinbefore stated, is substantially semi-circular in cross section and has the upper and lower ends thereof left open so as to define an air passageway 10, the latter being in communication with an inverted, semi-circular, conic passageway 11 which is in this instance provided by the flex or bend in an upper semi-circular heat deflecting plate 12 and the backwall 1. This upper plate has its lower reduced end disposed adjacent to the upper horizontal surface of the burner 5, and is exteriorly provided with a fibrous covering of abestos or the like, and serves to radiate the heat of the stove in the even and constant manner common to gas stoves of this character. It will be understood, however, that it is not necessary to construct and locate the plates 4 and 12 in the manner specifically set forth above, and that such plates merely provide a substantially semi-spool shaped heat radiating structure, in which the burner 5 is centrally positioned.

The open and upper relatively widened extremity of the plate 12 is connected in any suitable manner with a curved top wall 13 secured to the upper extremity of the wall 1, and the wall 13 is provided with a vertical downwardly disposed flange 14, the latter surrounding the upper end of the plate 12. Forming the backwall of the passage-

way 11 is an inclined plate 15, which is spaced from the wall 1 to define an exhaust chamber 16, the latter being in communication with the fume entrapping channel 17 5 formed between the flange 14 and the upper extremity of the plate 12. By virtue of this construction, it will be manifest that the gas fumes arising from the burner 5, will collect within the channel 17, which being in communication with said exhaust chamber, will 10 permit the fumes or exhaust gases to flow into said chamber, whence the same pass off from the stove by way of outlet means 18. This construction effectively prevents the 15 obnoxious gases or fumes from intermingling with the atmosphere of the room in which the stove is situated.

At this juncture, attention is directed to the air passageways 10 and 11, which are 20 designed to increase the heating efficiency of the stove. It will be observed that air passing through said passageways will be subjected to the heat radiated inwardly from the plates 4 and 12 and will thus be in a 25 heated condition when the same is passed off into the atmosphere by way of the openings 19, formed in a removable lid member 20. Thus a positive circulation of air through said passageway will be maintained 30 by the effect of the arising heated air in the upper passageway 11, and which air is finally utilized in heating the atmosphere surrounding the stove. If desired, a semicircular guard member 21 may be carried by 35 the upper curved extremity of the stove, in order to enhance the ornamental appearance of the latter and to prevent one from unduly contacting with the heated surfaces adjacent thereto. Also to prevent further injurious contact with the heat imparting surfaces 4, 5 and 12, use is made of a wire mesh screen or the like 21', which is adapted to inclose the entire open front of the stove, thus rendering it impossible for one to come 40 accidentally into engagement with said surfaces. The screen 21 may be hingedly mounted, if desired, to the flange 14 so that the burner 5 may be readily accessible by simply elevating said screen.

50 From the foregoing it will be seen that the stove is so constructed that an im-

proved method has been devised for permitting obnoxious gas fumes to escape from the stove where they may be remotely discharged without contaminating 55 the atmosphere of the room in which the stove is situated. And in connection with the above there is provided the means for circulating air through the stove and heating the same, so that the maximum 60 amount of heat may be derived from the stove in proportion to the quantity of fuel consumed and in conclusion the stove is equipped with improved means for preventing unwary persons from being burned by 65 the heating surfaces of the stove, and to otherwise generally safeguard the latter.

Having described the invention, what is claimed is:

A gas stove comprising a base, a rear vertically extending wall forming a part of 70 said base, a semicircular vertically situated burner member coöperative with said wall to form a vertically disposed air passageway extending substantially throughout the 75 height of said base, said burner member being provided at its top with a row of fuel discharging orifices and at its lower end with a valved fuel supplying connection, a lower semiconical heat reflecting plate carried by said base and having its apex situated immediately beneath the orificed portion of said burner member, said plate being situated to substantially surround said burner member, an upper inverted semiconical heat reflecting plate coöperatively 80 carried by said wall and spaced from said latter to define an air circulating passageway, the lower reduced end of said upper plate terminating in communication with 90 said air passageway to the rear of said burner member, whereby a continuous air circulating space is provided through said stove by the formation of said burner member and said upper plate.

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

J. W. ASHBAUGH.

Witnesses:

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