

July 12, 1938.

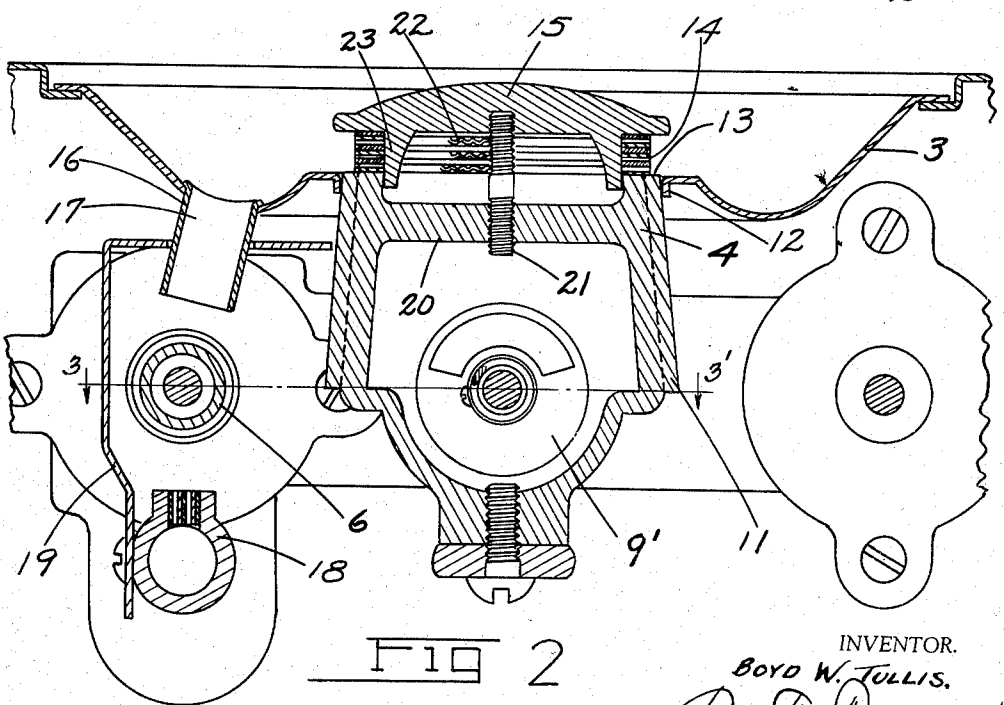
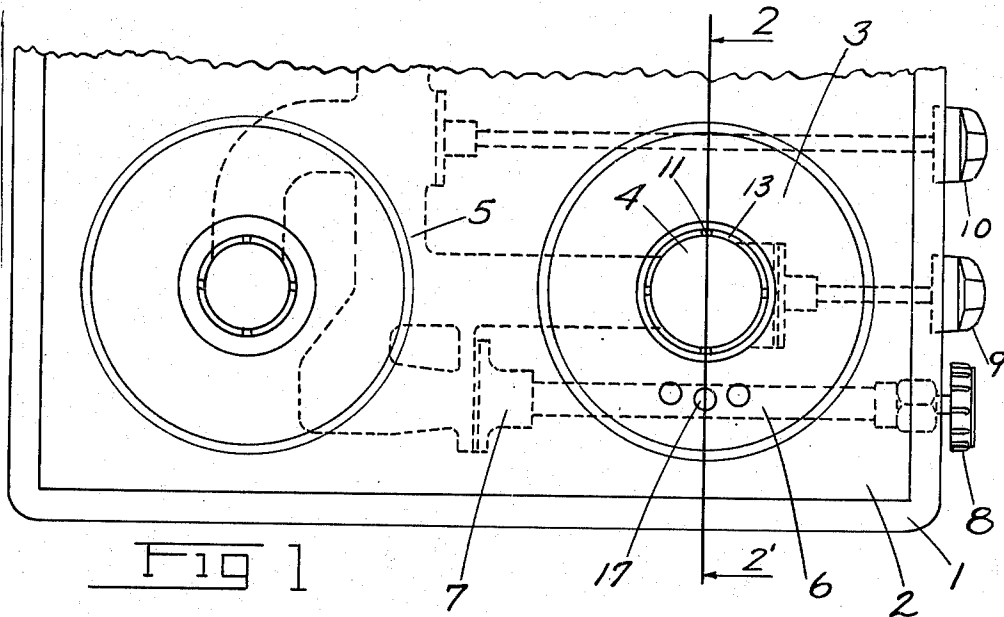
B. W. TULLIS

2,123,293

STOVE

Filed Feb. 15, 1936

2 Sheets-Sheet 1



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July 12, 1938.

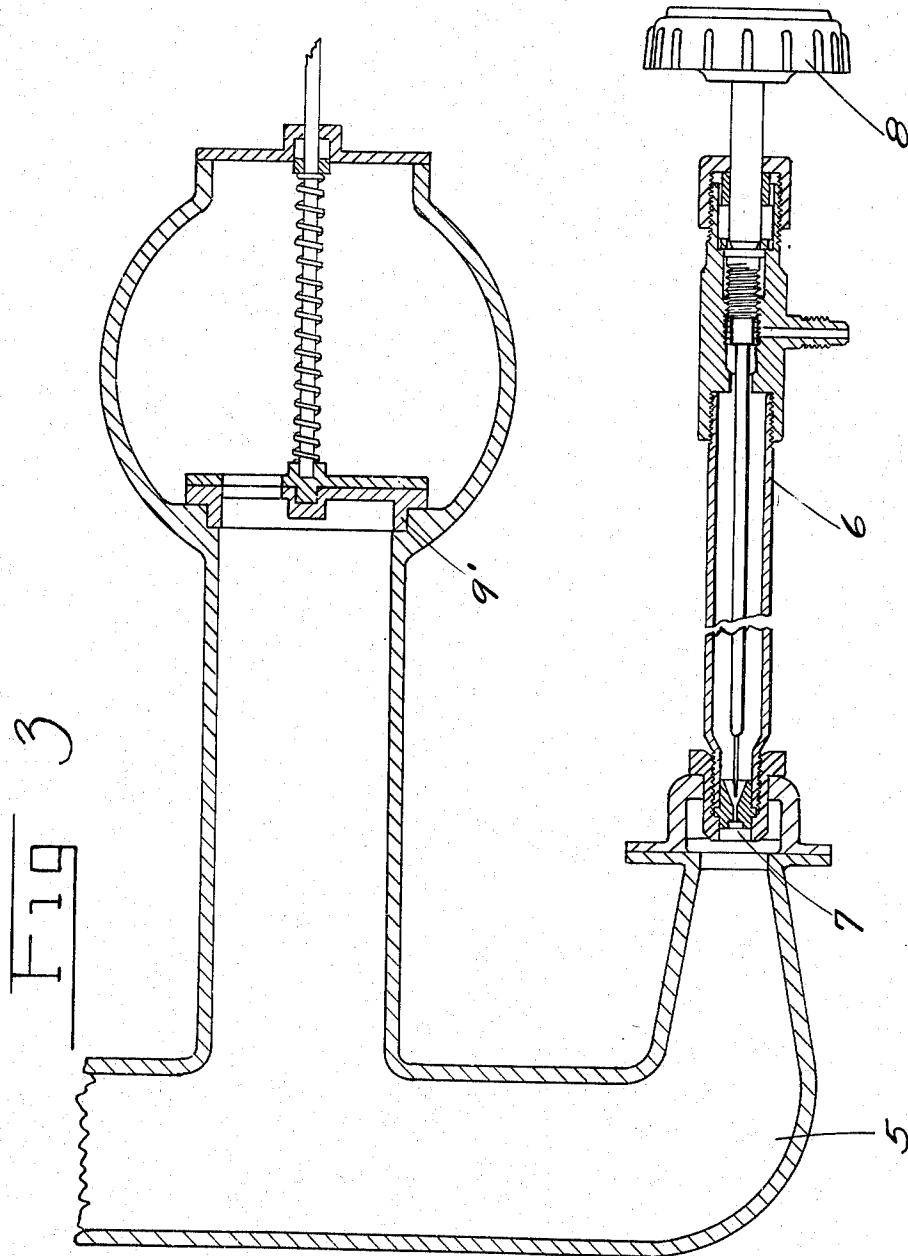
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2 Sheets-Sheet 2



INVENTOR.

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STOVE

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Application February 15, 1936, Serial No. 64,135

5 Claims. (Cl. 126-44)

This invention relates to liquid fuel burning stoves and particularly to ranges and the like. The primary object of the invention is to have a stove with an unbroken top plate so that a continuous obstruction is provided over the top of the stove to prevent objects dropping down between the burners and to present a symmetrical, uniform top which enhances the appearance of the stove. I am aware that prior to my invention stoves with top plates have been provided but I am not aware that before my invention it was old to provide an unbroken top with a concave reflector as a continuous part of the top, the reflector having its inner edge spaced from the burner so as to provide secondary air at the burner outlet. In order to understand the invention reference should be had to the following description in connection with the accompanying drawings in which

Figure 1 is a fragmentary plan view of a stove frame and top constructed in accordance with my invention,

Figure 2 is a cross sectional view on line 2-2 of Figure 1, and

Figure 3 is a horizontal section through the vaporizer on the line 3-3 of Figure 2.

Referring now to the drawings by numerals of reference 1 designates a stove frame to which is secured a flat plate 2 constituting the top. The top is provided with one or more concave reflectors 3, surrounding the burner or burners 4. Each burner is supplied with fuel in the usual way, preferably through a manifold 5 the manifold receiving its supply from the vaporizing generator 6 which discharges into a mixing chamber or Bunsen 7 at the inlet to the manifold. The generator is provided with a valve control 8 and the burners likewise are provided with valves, for example, 9 and 10. Each burner is provided with vertical spacing ribs 11 against which the inner edges of the reflector 12 bear, to provide an air space 13 adjacent to the outlet 14 beneath the burner cap 15. In Figure 3 it will be observed that the disc 9' is stationary and provided with a segmental opening coinciding with similar openings in a disc on the end of the valve stem 9 or 10 as the case may be so that when the two openings are in alignment, communication can be had from the manifold to the burner and when the openings are out of alignment communication is shut off. This form of valve is well known.

In Figure 2 I have shown the reflector 3 as provided with a depending tube 16 surrounding an opening 17 above the sub-burner 18 which main-

tains the vaporizing generator 6 hot enough to vaporize the fuel. The sub-burner 18 carries a baffle 19, angular in cross section, so that the vaporized fuel from the sub-burner will be confined in the zone adjacent to the tube 16. Therefore, the operator may light the sub-burner by applying a flame to the opening 17. It will be observed that the cap 15 is fastened to the cross bar 20 of the burner head 4 by a screw 21 so as to hold the corrugated laminations 22 on the burner head to provide the outlets 14 and that the cap is provided with depending lugs 23 which receive within the inner edge of the burner head so that the laminations can be readily centered with respect to the burner head, it being understood that the laminated rings fit snugly against the lugs 23.

Another important feature of the invention is that the burner head is made integral with the manifold so that there will be enough heat conductivity from the head to the manifold to maintain the burner at the outlet relatively cool. This will eliminate liability of trapped wet gases in the manifold becoming vaporized by the burner head when the supply of fuel is shut off.

One of the objections to vapor burning stoves is that when the supply of fuel is shut off by the valve 8 there will be some vaporized fuel in the manifold. If this vaporized fuel flows over a hot burner it vaporizes or smokes causing objectionable odors in the room. If the burner head is relatively cool, say below 600° F., this vaporization does not take place and as a result the objectionable odors are not so noticeable. Where the burner head is made as a separate part of the manifold the conductivity of the heat from the head to the manifold is negligible so the manifold is relatively cold while the burner head is relatively hot.

Another important feature is that the head, being made as part of the manifold, properly centers the burner cap which eliminates the necessity for machining the heads. Where they are made separate, they must be machined to seat in the manifold, because if the separate heads are not machined leakage occurs at the joint between the head and the manifold.

It will be apparent that the above information shows manifold advantages over known types of stove constructions.

What I claim is:

1. A stove comprising a burner, a top for the stove including a plate and a concave reflector carried thereby, the inner edge of which is slightly spaced from the outer edge of the burner

- to permit secondary air to flow to the discharge portion of the burner, a vaporizing generator burner and an opening in the concave reflector whereby the vaporizing generator burner may be ignited through the reflector.
2. A stove comprising a burner, a top for the stove including a plate and a concave reflector carried thereby, said reflector having an opening, and a vaporizing generator burner below the first named burner and so positioned with respect to the opening in the reflector that the vaporizing generator burner may be ignited through the opening in the reflector.
3. A stove including a top plate having a burner opening, a burner supported in said opening, a reflector encircling the burner and closing said opening, said reflector having an opening, and a vaporizing generator and burner for supplying vaporized fuel to the burner and supported below said reflector opening whereby said vaporizing generator burner is ignited through the opening in the reflector.
4. A stove including a top plate having a burner opening, a burner supported in said opening, a reflector encircling the burner and closing said opening, said reflector having an opening, a vaporizing generator and burner for supplying vaporized fuel to the burner and supported below said reflector opening whereby said vaporizing generator burner is ignited through the opening in the reflector, and a tube registering with said opening and terminating above the vaporizing generator burner.
5. A stove including a burner top having spaced burner openings, burners supported in said openings, reflectors encircling the burners and closing said openings, a vaporizing generator burner for supplying vaporized fuel to the burners and supported below one of said reflectors, said reflector having an opening through which the generating burner is ignited, and means for selectively controlling flow of vaporized fuel to the respective burners.

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