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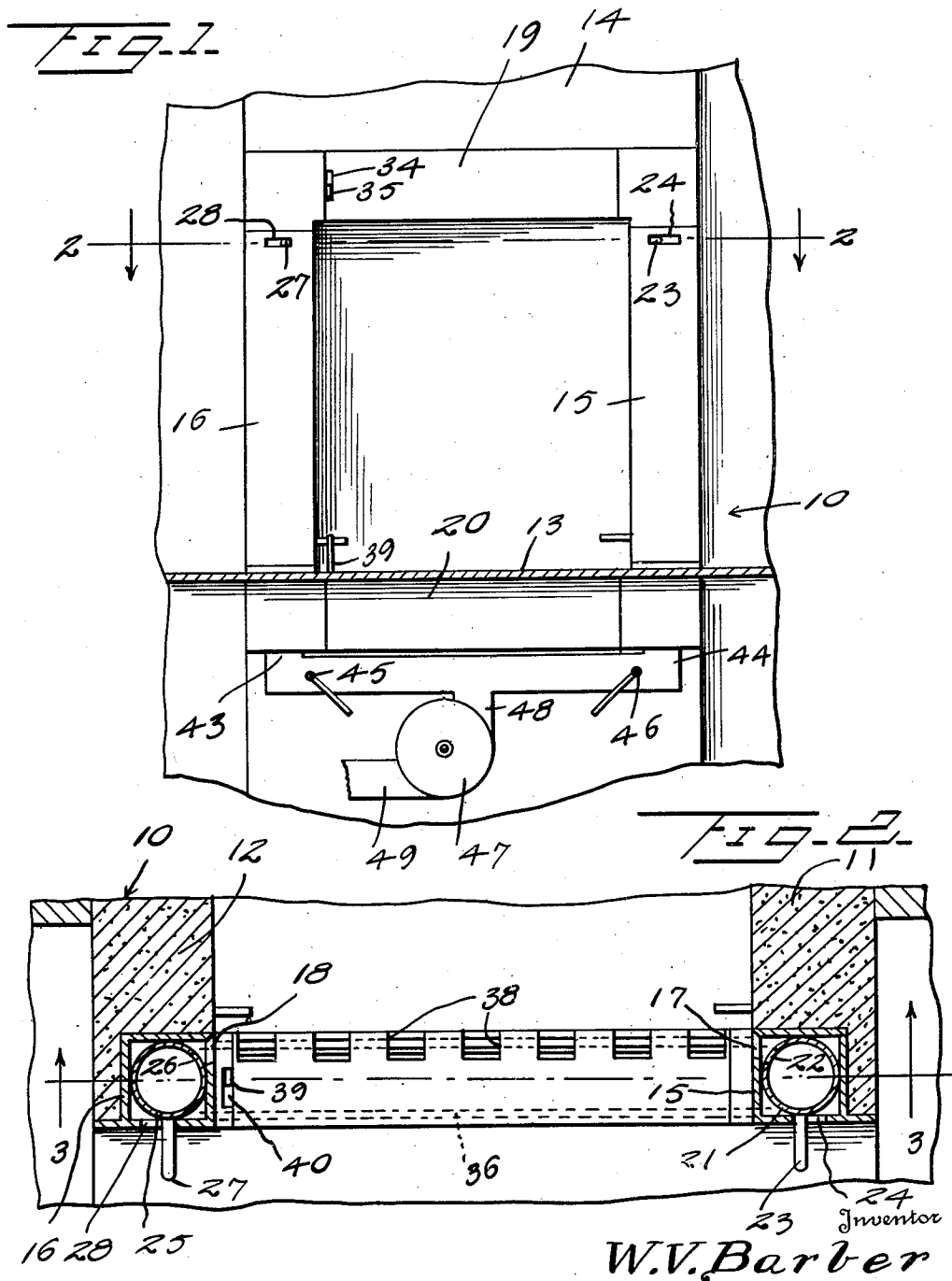
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2,497,486

FIREPLACE WITH SUPPLEMENTAL DRAFT MEANS

Filed Nov. 5, 1945

2 Sheets-Sheet 1



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### FIREPLACE WITH SUPPLEMENTAL DRAFT MEANS

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## UNITED STATES PATENT OFFICE

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FIREPLACE WITH SUPPLEMENTAL  
DRAFT MEANS

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1 Claim. (Cl. 126—120)

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This invention relates to fireplaces, and more particularly to a means for ventilating the fireplace.

An object of this invention is to provide in a fireplace air ducts which are positioned about the front of the fireplace so as to supply air to the burning fuel in order that the windows and doors of the dwelling may be closed without causing smoke from the fireplace to enter the room.

It is well known that a fireplace draws oxygen from the air in the room as the fire is being burned, and where a dwelling is provided with tight windows and doors the air in the room does not contain the usual amount of oxygen, and as a result the fire will not burn properly, and frequently the fuel will smoke and this smoke will enter the room rather than rise upwardly through the throat of the fireplace into the chimney.

It is, therefore, an object of this invention to provide a ventilating means for admitting air under either forced draft from a blower, or air from the outside of the dwelling or cellar, into the fireplace so that the fire will burn evenly and the fuel will not smoke or smoulder as is the case where there is not sufficient oxygen in the room to effect a proper burning of the fuel.

A further object of this invention is to provide a ventilating means of this kind which can be easily regulated so as to provide for the admission of air to the front of the fireplace.

A further object of this invention is to provide a ventilating means of this kind which can be easily regulated so as to provide for the admission of air to the front of the fireplace in volume equivalent to the flow of gases up the chimney so that heated air will not be withdrawn from the room causing a seepage of cold air into the room.

With the foregoing objects in view, and others which may hereinafter more fully appear, the invention consists of the novel construction, combination and arrangement of parts as will be more specifically described, and illustrated in the accompanying drawings wherein are shown embodiments of the invention, but it is to be understood that changes, variations, and modifications may be resorted to which fall within the scope of the invention as claimed.

In the drawings:

Figure 1 is a detail front elevation, partly in section, of a fireplace having a ventilating means incorporated therewith constructed according to an embodiment of this invention.

Figure 2 is a fragmentary sectional view taken on the line 2—2 of Figure 1.

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Figure 3 is a sectional view on the line 3—3 of Figure 2.

Figure 4 is a fragmentary sectional view taken on the line 4—4 of Figure 3.

Referring to the drawings the numeral 10 designates generally a fireplace construction embodying side walls 11 and 12, a hearth or bottom wall 13, and a throat 14. The side walls 11 and 12 have mounted in the forward ends thereof vertically disposed housings 15 and 16 respectively, which may be embedded in the bricks or concrete or other material which forms the fireplace, and these housings 15 and 16 preferably have their confronting sides disposed substantially flush with the inner faces of the side walls 11 and 12.

The housing 15 is provided with a series of vertically spaced apart openings 17, and the housing 16 is provided with a plurality of vertically disposed spaced apart openings 18. The openings 17 and 18 are directed inwardly of the interior of the fireplace so that air discharged through such openings will be discharged directly into the center of the fireplace.

The upper housing 19 is disposed between the upright housings 15 and 16, and communicates therewith. The housings 15 and 16 are extended below the hearth and have disposed therebetween a lower housing 20 which communicates with the two housings 15 and 16. The housing 15 has loosely mounted therein a tubular member 21, which is formed with openings 22 adapted for registry with the openings 17. The tubular member 21 has fixed thereto a handle 23 which extends through a slot 24 in the front wall of the housing 15 so that the tubular member 21 may be moved into or out of registry with the discharge openings 17.

The housing 16 has loosely connected therewith a tubular member 25 which is formed with openings 26 adapted to be placed in registry with the openings 18, and a handle 27 extending through a slot 28 in the housing 16 provides a means whereby the openings 26 may be moved into registry or out of registry with respect to the openings 18.

The upper housing 19 has loosely mounted therein a tubular member 29 which is formed with openings 30 adapted to register with discharge openings 31 formed in the lower wall of the housing 19. The ends of the tubular member 29 communicate with the open upper ends of the tubular members 21 and 25, through end air chambers 32 and 33. The housing 19 is formed with a slot 34 through which a handle 35 carried by the

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tubular member 29 projects so that the tubular member 29 may be adjusted to provide for the discharge of the desired amount of air through the openings 31.

The housing 20 has loosely mounted therein a tubular member 36 which is formed with openings 37 adapted for registry with openings 38 formed in the top wall of housing 20. A handle 39, fixed to the tubular member 36 projects through a slot 40 formed in the top wall of the housing 20, so that air from the housing 20 may selectively be discharged from the bottom portion of the fireplace into the fuel.

The tubular member 36 communicates at each end with lower air chambers 41 and 42a which are formed at the junction of the housings 15, 16 and 20.

An air pipe 42 is disposed below the housing 20, and is provided at the opposite ends thereof with upwardly directed branches 43 and 44 discharging air into the chambers 41 and 42a respectively. The pipe 42 has mounted therein, adjacent each end, manually operable dampers 45 and 46 so that air may be directed into the fireplace from either side or from both sides.

A blower 47 has outlet side 48 thereof connected with the pipe 42, and the intake side 49 of the blower is adapted to be connected to a source of atmospheric air, which may be in the cellar of the dwelling, or the air may be drawn from the exterior.

In the use and operation of this fireplace, the air intake pipe which is connected to the blower 47 is extended to the desired point in order that air may freely enter the manifold or pipe 42. The tubular members 21, 25, 29 and 36, which constitute valves, may be adjusted to discharge the desired amount of air into the fireplace and as the openings in the valve housing are directed inwardly toward the center of the fireplace so as

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to provide for the proper burning of the fuel, accumulation of any smoke in the throat of the fireplace is prevented.

I claim:

5 In a fireplace, an air supplying means therefor comprising a pair of vertical housings disposed at each side of the fireplace, upper and lower housings connected to and communicating with the opposite ends of said vertical housings, each of said housings having openings directed inwardly of the fireplace, an elongated tubular valve member in each housing extending along the length thereof, an arm carried by each valve member extending through said housings for rotatably adjusting the latter to regulate the discharge of air into the fireplace, a U-shaped manifold connected to the lower ends of said vertical housings, and a blower connected to said manifold.

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