

L. W. GOSNELL.

Fire Place.

No. 7,239.

Patented April 2, 1850.

Fig. 1

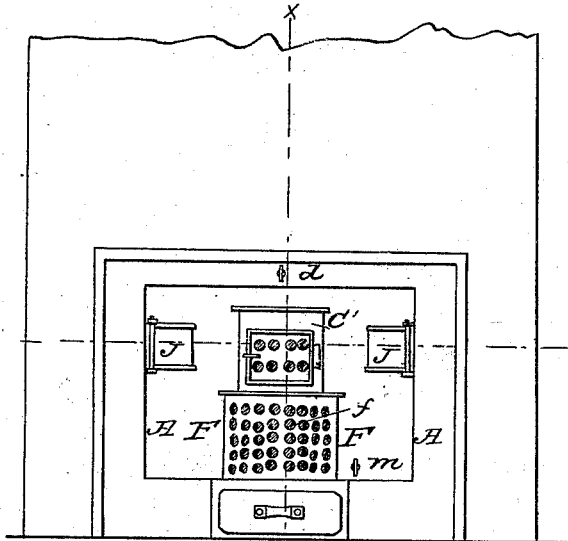


Fig. 2

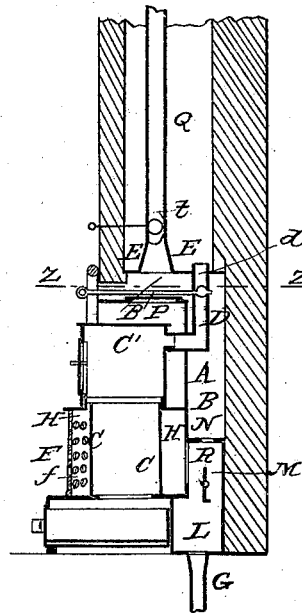


Fig. 3

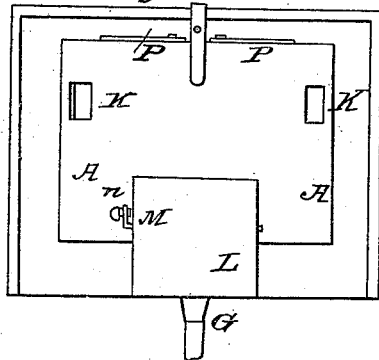


Fig. 5

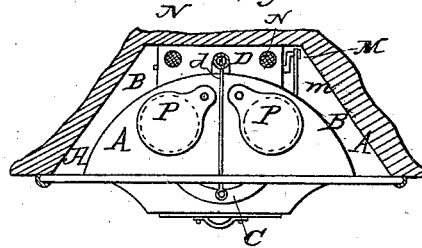


Fig. 4

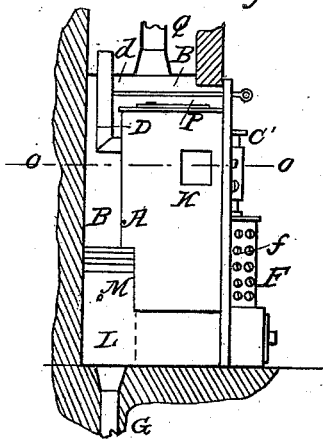
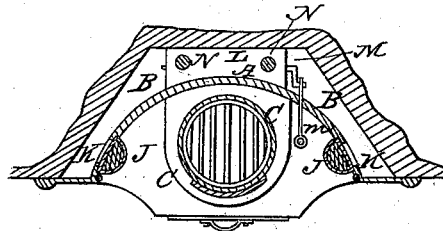


Fig. 6



UNITED STATES PATENT OFFICE.

LEMUEL W. GOSNELL, OF BALTIMORE, MARYLAND.

PARLOR AIR-HEATING STOVE.

Specification of Letters Patent No. 7,239, dated April 2, 1850.

To all whom it may concern:

Be it known that I, LEMUEL W. GOSNELL, of the city of Baltimore and State of Maryland, have invented a new and useful Combined Recessed Portable Fire-Board and Air-Heater for Parlors, which is described as follows, reference being had to the accompanying drawings of the same, making part of this specification.

Figure 1, is a front elevation. Fig. 2, is a vertical transverse section on the line *x x* of Fig. 1. Fig. 3, is a rear elevation. Fig. 4, is a side elevation. Fig. 5, is a horizontal section on the line *Z, Z*, of Fig. 2, or top view of the fire board. Fig. 6, is a horizontal section on the line *O, O*, of Fig. 4.

Similar letters in the several figures refer to corresponding parts.

My recessed fire board A, and air heater is made of Russian polished sheet iron, or cast iron, ornamented and somewhat wider than the widest part of the fire place for which it is designed, recessed in the center in the form of a fire place; or it may be made of a semi circular or other form, said angular, or curved, fire board, being of a smaller size than the fire place, so that when it is arranged in the fire place for which it is designed, a space B or reservoir for heated air will be left between the back and top of said recessed fire board and the ordinary casing of the fire place. Combined with this fire board I use a single cylinder furnace; or heater C, of the usual form and construction, placed in the recess of the fire board, having its smoke or gas pipe D, passing outward from the back of the drum C (or upper part of the cylinder) and through the back of the fire board and upward through a horizontal plate E, placed in the flue of the chimney. The cylindrical fire chamber C is surrounded by an ornamental, reticulated, or perforated, cast, or sheet iron, or other, cylinder, E, of greater diameter than the fire chamber, forming an annular space H, between the two for heated air; into which space, pure, atmospheric air is conducted from a chamber L through an opening R—the air being conveyed into said chamber by a tube G, leading from outside the building, or from the cellar, or other convenient place. The external cylinder F, may be perforated, reticulated, or foliated, in its front to exhibit the redness of the fire cylinder in the most effectual manner and to let the heated air into the room. The use of the

external cylinder F will retain the air in contiguity with the furnace until it is sufficiently heated, when it may either pass out through the perforations *f* into the recess of the fire board, and thence in to the apartment; or pass upward through the openings (fitted with the dampers P) in the horizontal segment plate of the fire board into the space B and thence into a pipe Q, or pipes, passing through the chimney flue, or otherwise, to an apartment, or apartments, above, wherein the heated air is discharged—regulated by a valve, or valves, or a register of the usual construction arranged at the outlet, or in any convenient place.

This combined fire board and heater will act by radiation and reflection, as well as by direct contact of the air with the cylinder. The radial heat from the furnace will strike the back, and inclined, or curved sides, of the fire board and be reflected into the room. It will also heat the surrounding air. The air in the reservoir or space B between the sheet metal fire board and the ordinary brick casing of the fire place will be heated by radiation and contact with the fire board and brick casing and will pass into the room through suitable apertures K in the fire board. Should the fire place be too shallow to admit the fire chamber and external cylinder and to form the aforesaid hot air reservoir B the front of the fire board, which may be of cast or sheet metal, may be brought forward beyond the breast of the chimney and the surrounding space between the edges of the fire board and the chimney-breast closed by narrow plates, which may also be ornamented and perforated to let the heated air pass through into the room from the hot air chamber B behind the fire board. I, however, generally remove the back of the casing of the fire place which makes the latter sufficiently deep to receive the heater. Semi circular water vessels or evaporators J J for containing water to moisten the atmosphere, when necessary, are placed in semi-circular holders attached to plates hinged to the concave recessed part of the fire board directly over the openings K K that are designed to admit warm air from the space B or reservoir behind the fire board into the apartment—said combination of holders and plates serving the double purpose of water holders and valves.

The chamber (L) before mentioned for cold air is constructed directly behind the

hot air chamber H, and is provided with a valve (M) to shut off the entrance of cold air when required. *m* is the handle of said valve, by which it is opened and closed.

5 The chamber or reservoir B for hot air is formed in the brick chimney behind and above the recessed metallic fire board and below a horizontal metallic plate E that closes the flue; through which plate E the
10 smoke or gas pipe D and hot air pipe Q pass up into or through the flue. The heated air is let into this chamber B through openings made in the segmental top of the fire board, said openings being provided
15 with valves P, which may be opened or closed at pleasure. A portion of the cold air from the chamber L also passes in the hot air reservoir B through the small openings N designed to force upward the warm
20 air in the reservoir.

The ash box and ventilator are made and arranged in the usual manner; also the damper *d* in the smoke pipe.

The pipe Q for conveying warm air to an
25 upper apartment may be provided with a damper *t* above the plate E, by which to shut off the ascent of the warm air through this pipe when required. At bed time this valve may be opened and the valve (M) in
30 the chamber L closed which will prevent the entrance of cold air—the air to be warmed and conducted upward to the bed chamber being then drawn from the parlor; and should the fire in the chamber of combustion
35 get low, or go out, the temperature of the apartments would not be reduced by the entrance of cold air from the cellar—the afore-said valve M being closed. It will thus be
40 seen that the use of this valve M in the air chamber L is all important and should be kept closed when the fire is low, and also at bed time, for the reasons above stated, and should be duly attended to at other times.

45 Having thus described the construction and use of my combined recessed fire board and air heater and explained the manner of introducing pure atmospheric air through the lower part of the chimney to the chamber L and sending a portion into the annu-

lar space around the furnace to be heated 50 and thence into the parlor, or reservoir B, and a portion directly into the reservoir from said chamber L to force the heated air upward through the chimney to chambers above to be warmed, and the operation of 55 the several valves and vaporizers, I wish it to be distinctly understood that I do not claim to be the original inventor of a combined heater and fire board; nor of a combined radiator and fire place; nor of placing 60 a furnace in the fire place of a common chimney; nor of bring pure atmospheric air through the hearth to be heated; as these inventions are quite ancient, but

What I do claim as my invention and desire to have secured to me by Letters Patent is— 65

1. The combination of the cold air chamber, L and valve M with the hot air annular chamber H and the reservoir or chamber B 70 below the horizontal plate E in the chimney flue and behind the recessed fire board A as described, said chamber L being provided with an opening R to let the cold air into the annular hot air chamber H and small 75 openings N to let a portion of the cold air into the reservoir B and the valve M.

I likewise claim the combination of the hinged water holders J with the recessed fire board, said holders serving the double pur- 80 pose of evaporator, stands and valves, as described, for moistening the air and admitting warm air from the reservoir or space B behind the fire board directly into the parlor. 2. I also claim the arrangement 85 of the valve P in the segmental top of the fire board, as described, for letting the warm air from the recess of the fire board into the reservoir B, to be conveyed thence wherever desired. 90

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

L. W. GOSNELL.

Witnesses:

WM. P. ELLIOT,
LUND WASHINGTON.