C. D. CARTER & G. F. BIBB.

COMBINED COAL AND GAS STOVE.

APPLICATION FILED MAY 6, 1916.

1,204,130.

Patented Nov. 7, 1916.

3 SHEETS—SHEET 1.

Fig. 1.

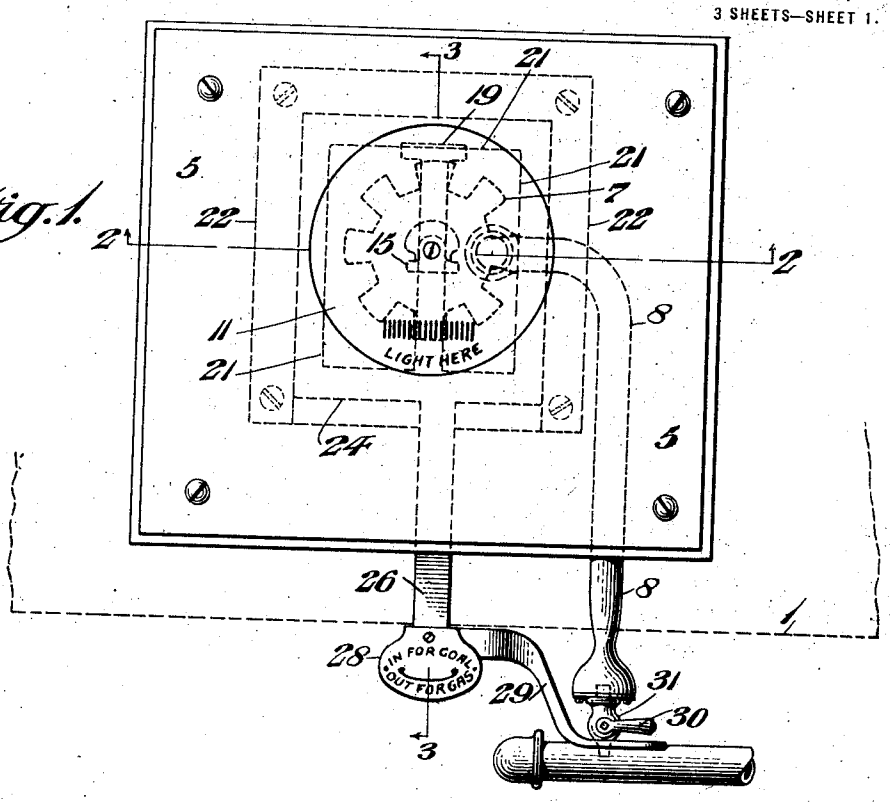
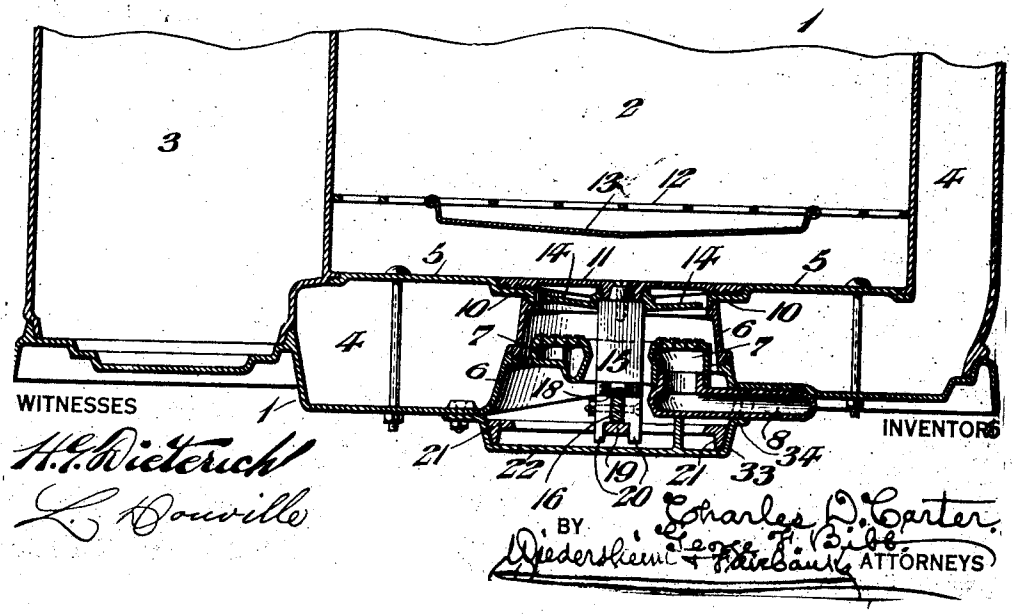


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 3.

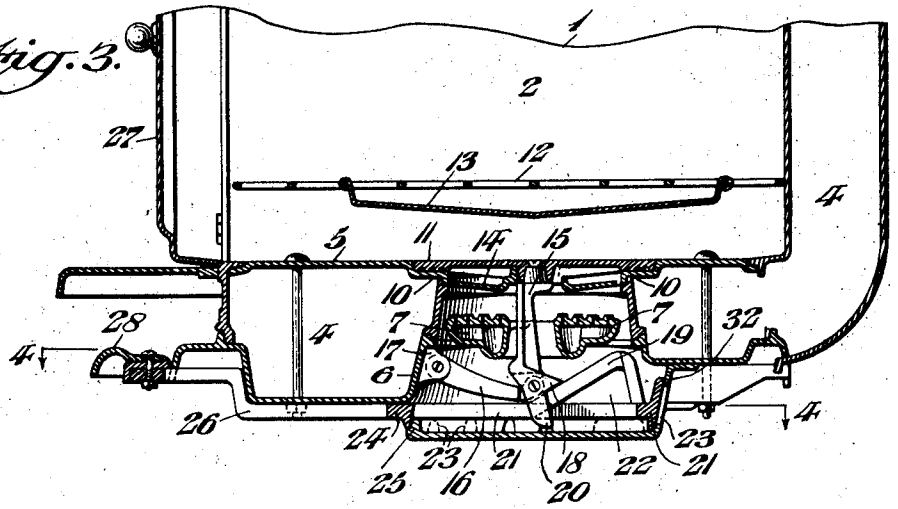


Fig. 4.

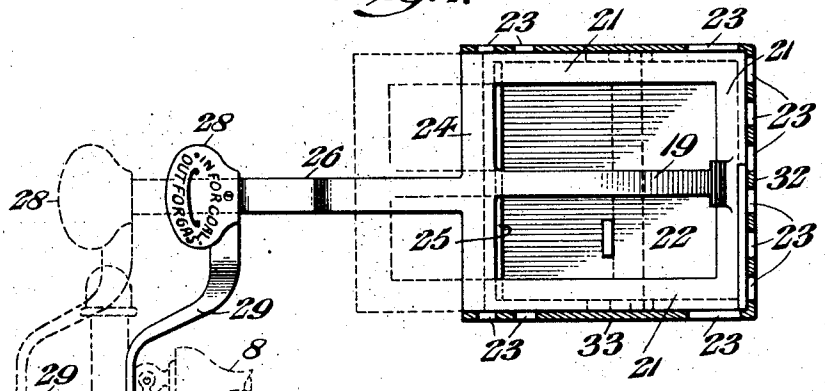


Fig. 7.

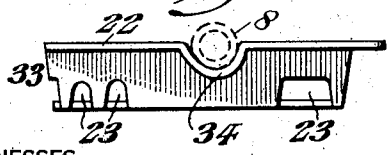
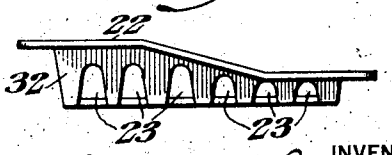


Fig. 8.



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3 SHEETS—SHEET 3.

Fig. 5.

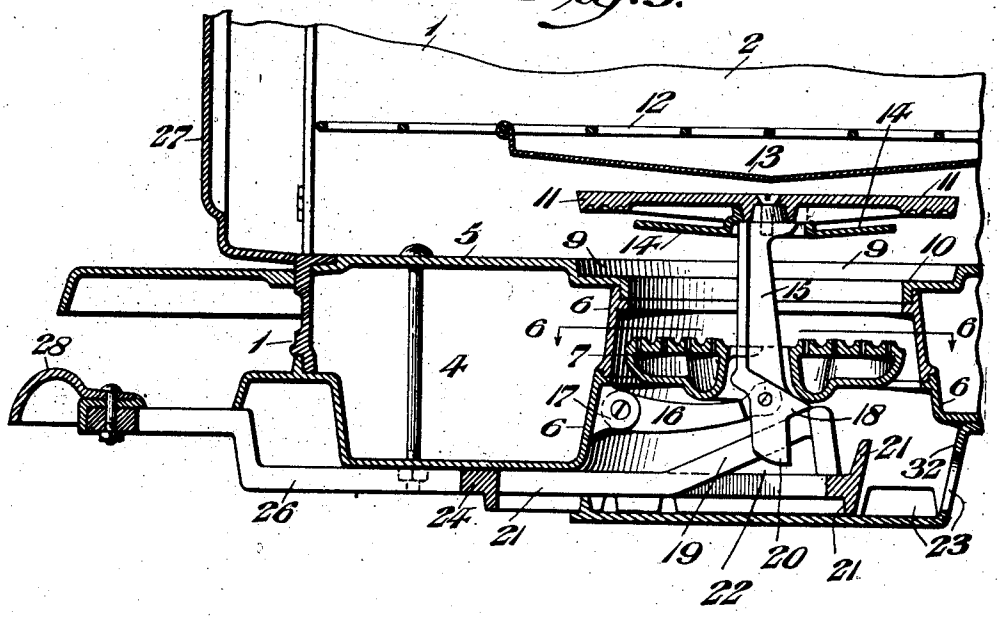
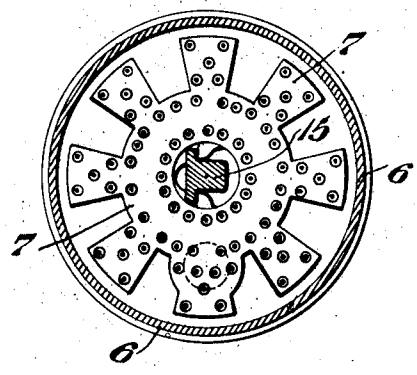


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES D. CARTER, OF NEW YORK, AND GEORGE F. BIBB, OF TROY, NEW YORK, ASSIGNORS TO THE FLOYD-WELLS COMPANY, OF ROYERSFORD, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

COMBINED COAL AND GAS STOVE.

1,204,130. Specification of Letters Patent. Patented Nov. 7, 1916.

Application filed May 6, 1916. Serial No. 95,778.

To all whom it may concern:

Be it known that we, CHARLES D. CARTER, a citizen of the United States, residing in the city, county, and State of New York, and GEORGE F. BIBB, a citizen of the United States, residing at Troy, in the county of Rensselaer, State of New York, have invented a new and useful Combined Coal and Gas Stove, of which the following is a specification.

Our invention consists of the provision of the oven of a stove for coal or other fuel, known as a coal stove, to be heated by what is known as a gas stove. To this end, said oven has connected with it an auxiliary compartment for a gas burner and appurtenances, which apartment is adapted to be placed in communication with said oven, so that the heat of said burner may be admitted into said oven for cooking or other purposes, when the coal stove is not in service, or cut-off therefrom, in which latter case, the oven may receive its heat from the coal stove, the latter then being serviceable as usual, or in other words, the oven of a coal stove is utilized to be heated by a gas stove.

The invention is satisfactorily illustrated in the accompanying drawing, but the important instrumentalities thereof may be varied, as long as they are included in the scope of the claims.

Figure 1 represents a top or plan view of a portion of a gas stove attachment for a coal stove embodying our invention. Fig. 2 represents a vertical section of the gas stove on line 2—2 Fig. 1, and adjacent portions of a coal stove with which the former is connected. Fig. 3 represents a vertical section of the gas stove at a right angle to Fig. 2. Fig. 4 represents a partial plan view, and a partial horizontal section of detached members of the gas stove. Fig. 5 represents a view similar to Fig. 3, on an enlarged scale with certain portions in different position from those shown in the latter. Fig. 6 represents a horizontal section of a portion on line 6—6 Fig. 5. Figs. 7 and 8 represent side elevations of the sides of the air receiving chamber of the gas stove.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates portions of a coal stove embodying the oven 2, the ash pit 3, and the flue 4 for the products of combustion.

In the portion of the flue 4 below the bottom wall 5 is the chamber or compartment 6, which is not in communication with said flue, it containing the gas burner 7 with which is connected the gas-supply pipe 8.

In the upper face of the bottom 5 of the oven is an opening 9, the wall of which is depressed forming the seat 10 for the vertically movable valve 11 which consists of a plate which when raised admits the chamber 6 to be in communication with the oven 2, through said opening 9, and which when lowered closes said opening and so shuts off said communication, it being evident that when the burner 7 is ignited, and the valve is raised or opened, the heat of the former will enter the oven, and so be availed-of, as shown in Fig. 5 to heat the oven, in which case the coal stove as such is not in service. When, however, said stove is required for service, the burner is not lighted, and the valve lowered or closed as in Figs. 2 and 3, the oven receiving its heat from the coal stove as usual.

Within the oven is the tray or shelf 12 for supporting utensils, for cooking, etc., and below said tray is the baffle plate 13 which is secured thereto, the same forming a dishing deflector above the chamber 6, so that the heat or products of combustion for the burner will be properly distributed to the tray 12. This will be assisted by the dishing deflector 14 which is secured to the underside of the valve 11. Depending centrally from said valve 11 and entering the chamber is the hanger 15 which is composed of a bar adapted to raise and lower said valve, it being pivotally connected near its lower end with the swinging link 16 which is pivotally mounted on the ear 17 on the inner side of the wall of the chamber 6, and adapted to guide said hanger, and consequently the valve 11 in its opening and closing motions.

On the side of the hanger is the projec-

tion or lug 18 which is seated on the inclined plane 19 which passes freely through the bifurcation 20 on the lower end of the hanger 15 as a guide for the latter and is connected with the sliding valve 21, which occupies a position in the air chamber 22 at the base of the gas burner chamber 6, the sides of said chamber having therein air inlet ports 23, said valve 21 being composed in the present case of a four sided frame which is adapted to open and close said ports to admit air to the burner, or cut it off therefrom, as required. While said inclined plane rides on said lug the latter, when the hanger is raised, is adapted to abut the burner 7 and so limit the ascent of the valve.

The side 24 of the valve 21 has its seat on the flange 25 on the wall of the air chamber 22, so that when said valve is drawn out, it is removed from said flange, allowing air to enter the burner at said side of the valve, but when said valve is pushed in, it is closed against said valve, the effect of which is evident.

Connected with the exterior of the side 24 of the valve is the bar or rod 26 which passes under the flue 4 and below the door 27 of the oven 2 of the stove, where it is provided with the grip or handle 28, whereby the air supply and regulating valve 21 may be moved in opposite directions, it being evident that when said valve is drawn out, the inclined plane 19 rides on the lug 18 and moves the same, and consequently the hanger 15 upward, whereby the valve 11 is raised and consequently opened, and when said valve is pushed in, the corresponding movement of the inclined plane permits said valve to lower and so close on its seat.

Secured to the grip or handle 28 and extending laterally therefrom is the arm 29, whose free end is adjacent to the handle 30 of the cock 31 of the gas supply pipe 8, so that when the bar or rod 26 is pushed in to close the valve 11 and the gas is shut-off, said free end of the arm is at the side of said handle in the closed condition of said cock 31, thus preventing the handle of the latter from being operated and unnecessarily or improperly turning on the gas, as plainly shown in Fig. 1, but when the bar or rod is drawn out, and the valve 11 is opened, as shown dotted in Fig. 4, the arm 29 is removed, the said handle 30 allowing the latter to be operated to turn on the gas.

The side walls 32 of the air chamber 22 are higher at one end than at the other, as shown in Figs. 2 and 8, owing to the different altitudes of the bottom of the flue 4 to which said walls are bolted, and one of the walls 33 has thereon a depression 34, as a seat for the portion of the gas supply pipe which enters the chamber 6 and is connected with the burner 7 therein.

It is evident that when the valve 11 is in closed position, the gas heating attachment is cut off from the oven, and vice versa, and nothing in the oven can enter the chamber of said attachment, and the coal stove as such has its usual functions.

Having thus described our invention what we claim as new and desire to secure by Letters Patent, is:—

1. A stove of the order of a coal stove having an oven, an auxiliary compartment having communication therewith, a gas burner in said compartment, a vertically movable valve, the bottom of said oven being adapted to form a seat for said valve, an axially-disposed hanger forming a support for said valve, and horizontally-movable means acting on said hanger to give vertical movement to said valve.

2. A stove of the order of a coal stove having an oven, an auxiliary compartment having communication therewith, a gas burner in said compartment, the bottom of said oven being adapted to form a seat for said valve, a vertically movable valve adapted to said seat, an axially-disposed hanger forming a support for said valve, and a horizontally-movable inclined plane acting on said hanger to give vertical movement to said valve.

3. A stove of the order of a coal stove having an oven, an auxiliary compartment having communication therewith, a gas burner in said compartment, the bottom of said oven being adapted to form a valve seat, a vertically movable valve adapted to said seat, an axially-disposed hanger forming a support for said valve, horizontally-movable means acting on said hanger to give vertical movement to said valve, and an air-inlet controlling valve movable with said horizontally-movable means.

4. An oven, an auxiliary compartment, a passage forming a direct communication for said compartment and oven, a gas burner in said compartment, a valve for said passage adapted to open and close the same, a supporting hanger for said valve, an inclined member in said compartment adapted to engage said hanger, a slide valve, said hanger being bifurcated and receiving the said inclined member, and means for operating said member and said valve to open said communication.

5. A compartment, a gas burner therein, means for supplying said burner with gas, a valve and valve controlling mechanism, an air chamber for said burner, the wall of said chamber having therein an air inlet, a horizontally slidable valve in said chamber movable with said valve controlling mechanism and adapted to open and close said inlet, means movable with said horizontally-slidable valve for operating said valve, and

a slidable connection between said valve and the first-named valve controlling mechanism.

6. A compartment, a gas burner therein, a rising and lowering valve in said compartment over said burner, a hanger on said valve, a movable inclined member adapted to engage said hanger to raise said valve, an air chamber for said compartment, a valve in said air chamber for opening and closing the air inlet thereof, and an operating bar connected with said inclined member, the latter being adapted to be connected with the valve of the air chamber whereby the latter named valve and said inclined member may be operated in unison.

7. In a device of the class described, an oven, an auxiliary compartment having communication therewith, a gas burner in said compartment, a valve controlling the communication between said oven and compartment, an air supply regulating valve for said burner, and intermediate connections embodying a hanger for supporting said first-named valve, and an inclined plane movable with the air supply regulating valve and coöperating with said hanger whereby the said valves are operated.

8. An oven, a gas burner chamber having air inlet port, a valve for controlling said port, an inclined member in said chamber and movable with said valve, a valve for said oven intermediate said chamber and oven, means for moving the slidable valve, and means movable with the vertically-movable valve coöperating with said inclined member for raising said vertically movable valve.

9. An oven, a gas burner chamber having air inlet port, a valve for controlling said port, an inclined member in said chamber and movable with said valve, a valve for said oven intermediate said chamber and oven, means for moving the slidable valve, means movable with the vertically-movable valve coöperating with said inclined member for raising said vertically movable valve, and a swinging link coöperable with said last-named means.

10. A gas burner chamber having ports, a slidable valve controlling said ports, an inclined member movable with said valve, a vertically-movable valve, a hanger depending therefrom and having a portion adapted to ride on said inclined member, and a link pivotally connected with the lower end of said hanger.

11. A gas burner chamber having ports, a slidable valve controlling said ports, an inclined member movable with said valve, a vertically-movable valve, a hanger depending therefrom and having a portion adapted to ride on said inclined member, and a link pivotally connected with the lower end of said hanger, said hanger being bifurcated to straddle said inclined member.

12. In a stove of the character described, an oven, a burner, a swinging link, a vertically movable hanger, a valve operated by said hanger, and a horizontally movable inclined member for coöperation with said hanger.

13. In a stove of the character described, an oven, a burner, a swinging link, a vertically movable hanger, a valve operated by said hanger, and a horizontally movable inclined plane engageable with said hanger.

14. In a stove of the character described, an oven, an auxiliary compartment, a gas burner in the latter, a valve intermediate said burner and oven, a swinging link, a vertically movable hanger carrying a valve, said hanger having a lateral lug and a movable inclined plane for coöperation with said lug.

15. An oven, a gas burner chamber in communication with said oven, said chamber having an air inlet port, a valve for controlling the latter, an inclined member in said chamber and movable with said valve, a valve for said oven intermediate of said chamber and oven, means for moving the first-named valve, and means movable with said oven valve and coöperating with said inclined member, whereby the two valves are moved in unison.

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Witnesses as to George F. Bibb:
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GEORGE W. WAGONER.