

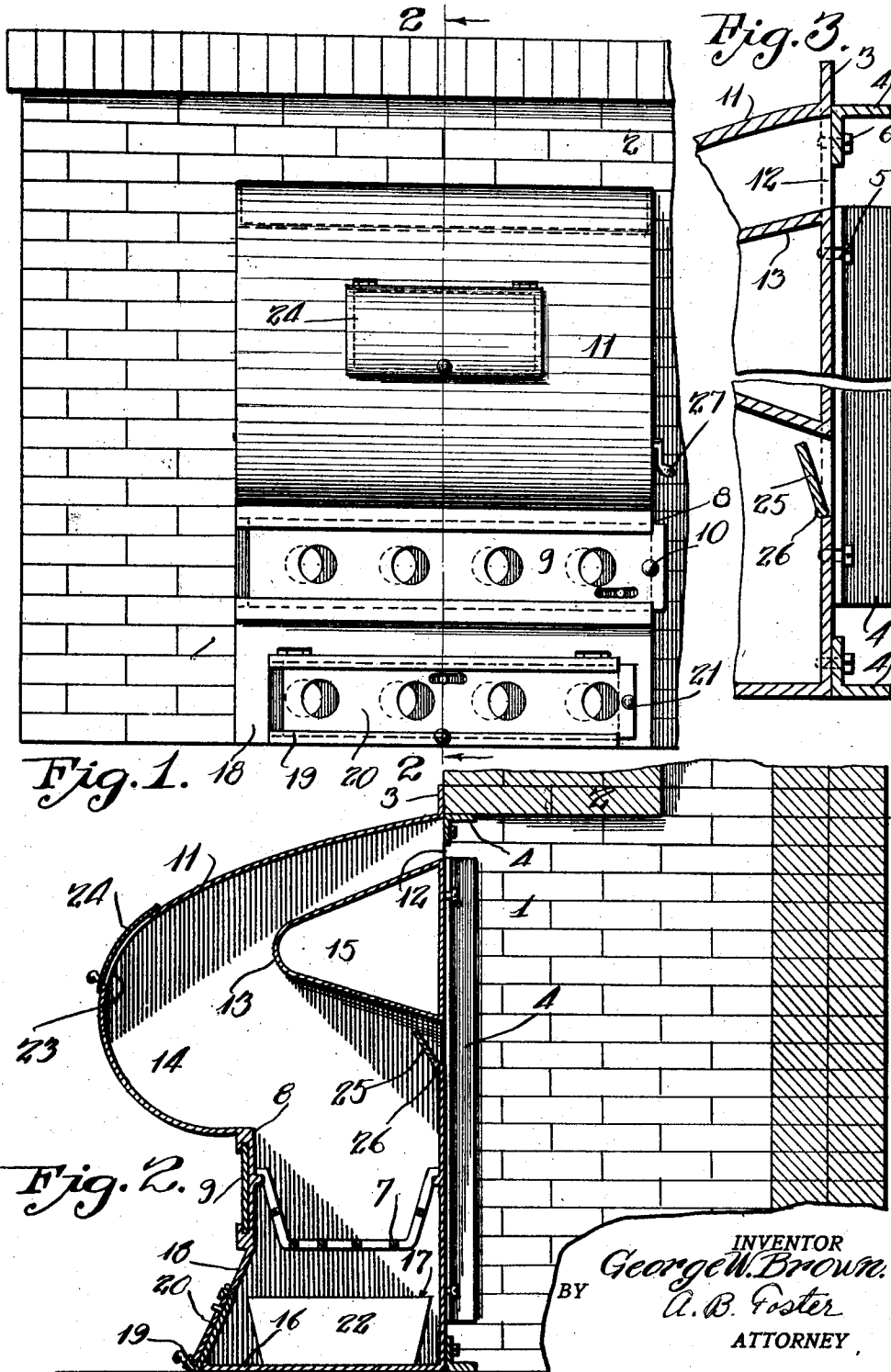
Jan. 25, 1927.

G. W. BROWN

FIREPLACE STOVE

Filed Feb. 19, 1926

1,615,741.



INVENTOR
Georg W. Brown.
 BY *A. B. Foster*
 ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE W. BROWN, OF SELMA, ALABAMA.

FIREPLACE STOVE.

Application filed February 19, 1926. Serial No. 89,387.

The present invention relates to a fireplace heating stove and has reference particularly to a form of stove designed to be placed before the ordinary fireplace and to replace the usual grate arrangement.

The dust and inconveniences resulting from the use of ordinary fireplace fires are well known. Besides the dust and inconveniences resulting from the fire and the products of combustion there is the soot and inconveniences resulting from the exposed open chimney. Furthermore, fireplace fires are very inefficient due to the presence of very few radiating surfaces and to the interception of the heat rays from the fire itself. Stoves utilizing pipes have overcome a few of these defects of fireplaces but they are also inconvenient, troublesome and produce soot and dirt to a great extent in the room in which they are used. The pipes for carrying away the products of combustion of stoves are a source of annoyance and inconvenience from the leaks of smoke and soot occurring therein and are further source of expense due to the rapid deterioration or rusting of the pipes. A further disadvantage to ordinary stoves is that they must be so placed in the room to be heated that a considerable part of the floor space of the room is monopolized or rendered useless. By my invention herein described the above named defects, insufficiencies and annoyances of fireplaces and stoves are completely and efficiently overcome.

The drawings accompanying this written description show an embodiment of my invention and like characters of reference in the several views denote corresponding parts.

Fig. 1 shows a front view of the fireplace stove placed in position before the fireplace opening.

Fig. 2 shows a sectional view of the stove taken along the line 2—2 of Fig. 1.

Fig. 3 is an enlarged vertical sectional view of the back plate closing the fireplace opening and showing in detail the adjustable flanges.

The numeral 1 represents the opening for the usual fireplace in the chimney 2. Before the opening 1 is placed the back plate 3, which forms the back of the stove and which is of sufficient size to cover completely the fireplace opening. This back plate 3 carries four adjustable flanges 4 which fit within

the chimney opening as shown. These flanges 4 are provided with slots 5 the edges of which are engaged by screws 6 carried by the plate 3 whereby adjustment of the flanges 4 to various size openings in chimneys is permitted. The fire chamber is provided with grate 7 for supporting the charge of combustible material. The grate is supported at its rear on the plate 3, while the front part of the grate is attached to the plate 8 forming with slidable plate 9 a draft regulator operable by means of the knob 10. Attached near the upper part of plate 8 is the arcuate plate 11 extending to the plate 3 and attached to the latter above the opening 12 for the escape of the products of combustion. Below the opening 12 another arcuate or V-shaped plate 13 is attached to the back plate 3. This plate 13 extends from its upper point of support to a point above the rear of the grate 7 and about midway between the opening 12 and the grate, and is attached to the back plate 3 at such point. The plates 11 and 13 will be observed in the drawing form a bulging radiator through which the hot products of combustion pass. This radiator effectively recovers and transmits into the room the heat contained in the hot gases arising from the fire chamber. The ends of the radiator formed by plates 11 and 13 are closed by end plates 14 of the stove provided with openings 15. Through the openings 15, of which there are two, air is capable of circulating, and thereby radiation is able to take place from all sides of the radiator, since the back as well as the front and sides can give up heat.

The sides 14 of the stove extend completely to the floor before the fireplace and a bottom 16 is provided to form the ash pit 17. The ash pit 17 is provided with a front wall 18 in which there is mounted a door 19 provided with a sliding draft regulator operable by means of the knob 21. Within the ash pit is positioned the ash pan or drawer 22.

In the front plate 11 of the radiator or drum an opening 23 is provided for the introduction of fuel. This opening is closed by means of a hinged door 24. In the back plate 3 a damper 25 is positioned for assuring that no smoke passes through the opening 23 when the fire is being started. The damper 25 also enables the products of combustion to be led into the chimney without

passing through the drum or radiator defined by plates 11, 13, and 14. In this manner the heat radiated can be controlled without interfering with the natural draft, and hence the danger from gas poisoning is completely eliminated by providing a free escape of gas when part of the stove has been rendered ineffectual as a heater. The damper 25 is connected to the rod 26 which carries the lever 27 for moving the damper from one position to another.

From the foregoing detailed description taken in connection with the drawing it will be obvious how the fireplace stove of the present invention operates and accomplishes the objects stated.

Having described my invention what I desire to secure by Letters Patent is:

1. A stove comprising in combination a back plate of sufficient size to cover the opening in a fireplace, an opening in said back plate for the escape of products of combustion for direct communication with the flue of a chimney, a fire chamber positioned before said back plate, a radiator body connected at one end above said fire chamber for receiving and conducting away products of combustion therefrom and connected at another end to said opening in said back plate, said radiator body extending outward between its connected ends away from said back plate leaving a space between itself and the said back plate for the passage of air.

2. A stove comprising in combination a back plate of sufficient size to cover the opening in a fireplace, an opening in said back plate for the escape of products of combustion for direct communication with the flue of a chimney, a fire chamber positioned before said plate, a damper in said back plate within said fire chamber but below said opening, a radiator body connected at one end above said fire chamber for receiving and conducting away products of combustion therefrom and connected at another end to said opening in said back plate, said radiator body extending outward between its connected ends away from said back plate leaving a space between itself and the said back plate for the circulation of air.

3. A stove comprising in combination a back plate of sufficient size to cover the opening in a fireplace, an opening in said back plate for the escape of products of combustion for direct communication with the flue of a chimney, a fire chamber positioned before said back plate, a radiator body con-

nected at one end above said fire chamber for receiving and conducting away products of combustion therefrom and connected at another end to said opening in said back plate, said radiator body extending outward between its connected ends away from said back plate leaving a space between itself and said back plate for the passage of air, and inlet means in said radiator body permitting the introduction of fuel to said fire chamber.

4. A stove comprising in combination a back plate of sufficient size to cover the opening in a fireplace, adjustable flanges on said back plate for fitting within said fireplace, an opening in said back plate for the escape of products of combustion for direct communication with the flue of a chimney, a grate positioned before said plate enclosed by walls, a damper positioned in said back plate above said grate, an ash pit below said grate, a draft opening in a wall of said ash pit, a draft means before said grate, a radiator body connected at one end above said grate extending as a neck over said grate and spaced intermediate its ends away from said back plate, said radiator being connected at its other end to said opening in said back plate, and inlet means in said radiator body for introducing fuel to said grate.

5. A stove comprising in combination a back plate of sufficient size to cover the opening in a fireplace, an opening in said back plate for the escape of products of combustion for direct communication with the flue of a chimney, a grate positioned before said plate and enclosed by walls, a damper positioned in said back plate above said grate, a closed ash pit positioned below said grate, a draft in a wall of said ash pit, a draft regulator in the wall before said grate, a radiator drum connected at one end above said grate and extending as a neck over said grate and spaced away from said back plate, said radiator being connected at its other end to said opening in said back plate, and inlet means in said radiator drum for introducing fuel to said grate.

6. A stove comprising in combination a back plate of sufficient size to cover the opening in a fireplace, an adjustable member on said back plate for fitting within a fireplace opening and securely attaching said back plate before a fireplace opening, and a fire chamber before said back plate.

In testimony whereof I affix my signature.
GEORGE W. BROWN.