

No. 764,981.

PATENTED JULY 12, 1904.

I. H. BLACK.
HEATING STOVE.

APPLICATION FILED NOV. 7, 1903.

NO MODEL.

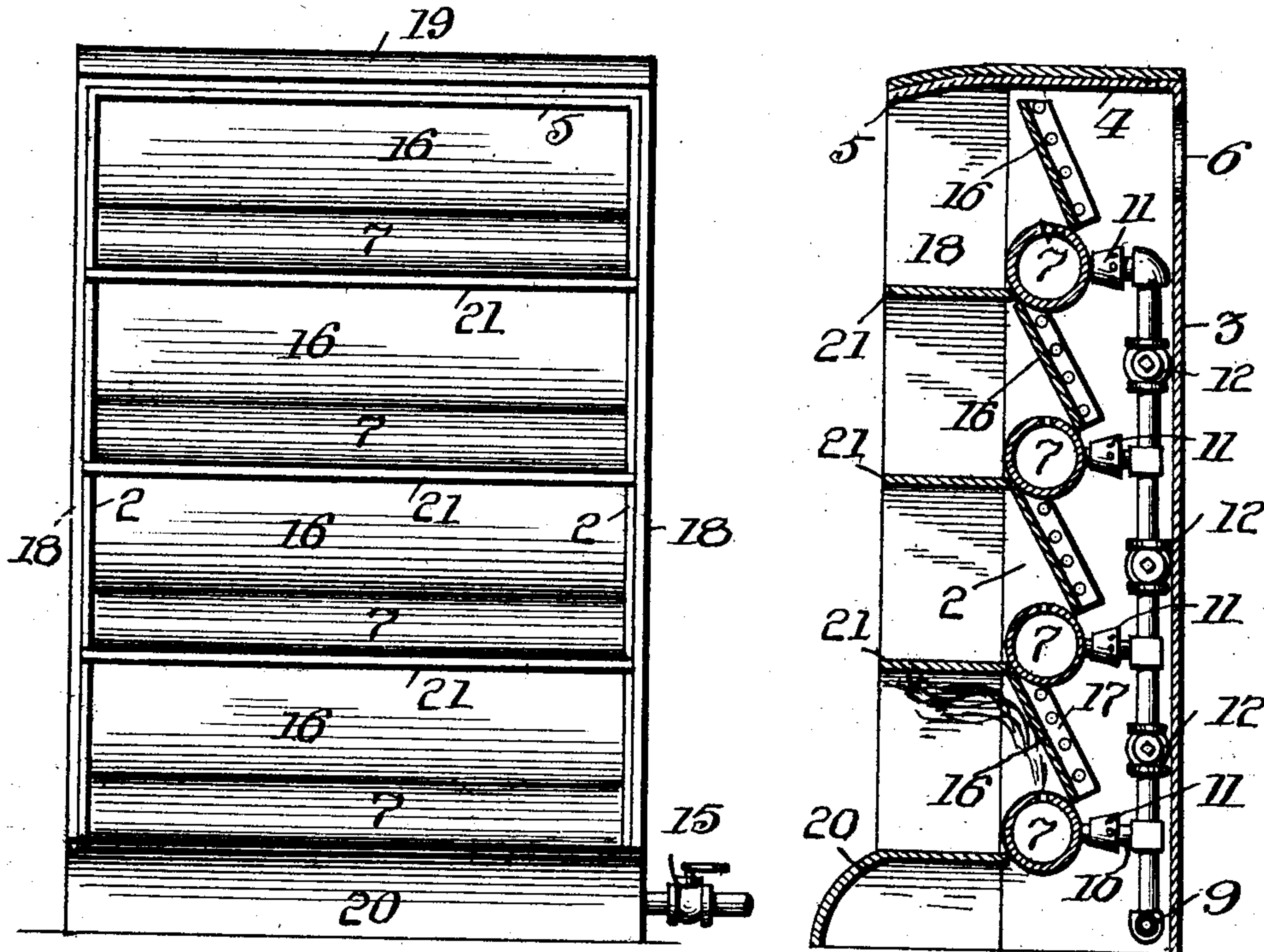


Fig. 1.

Fig. 2.

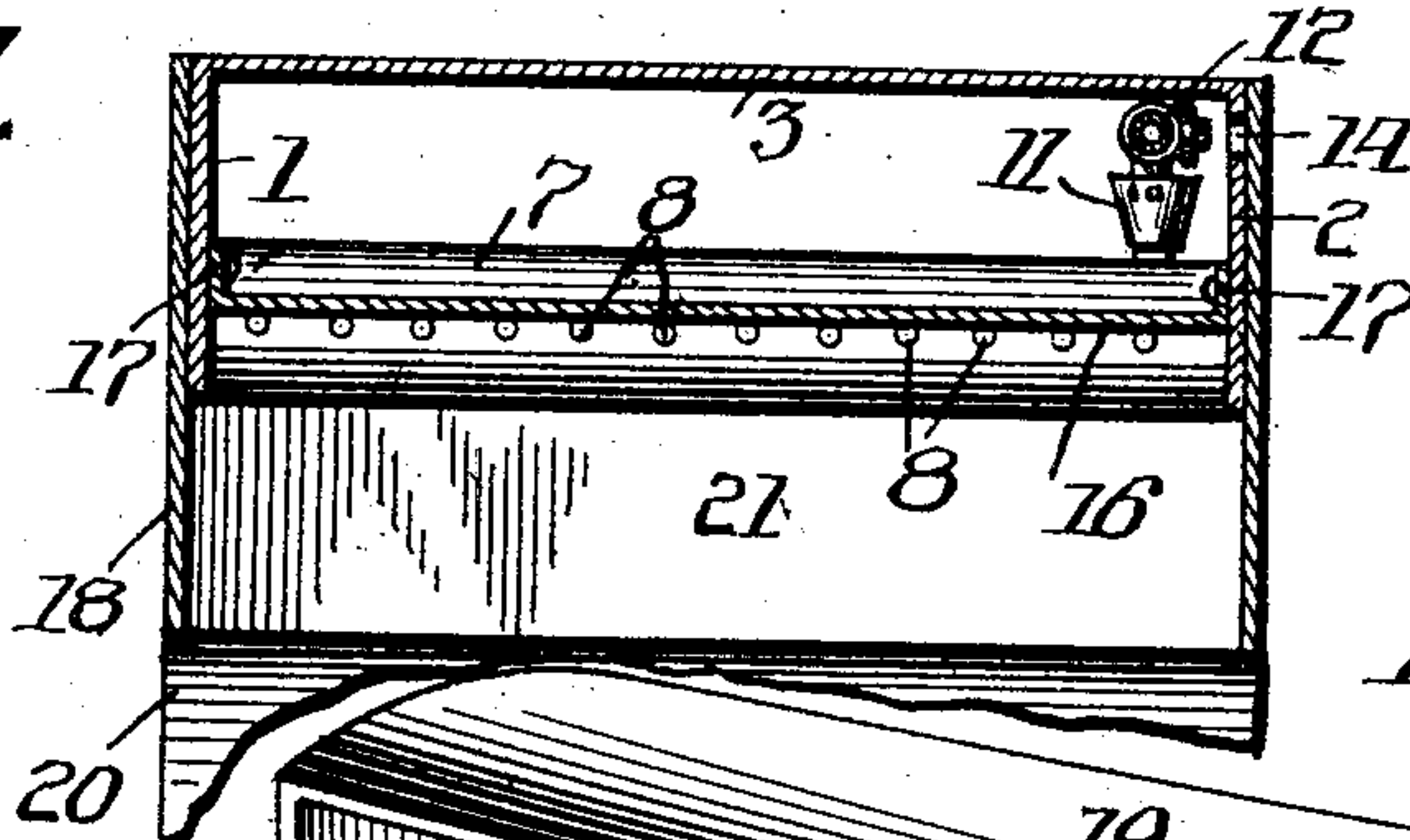
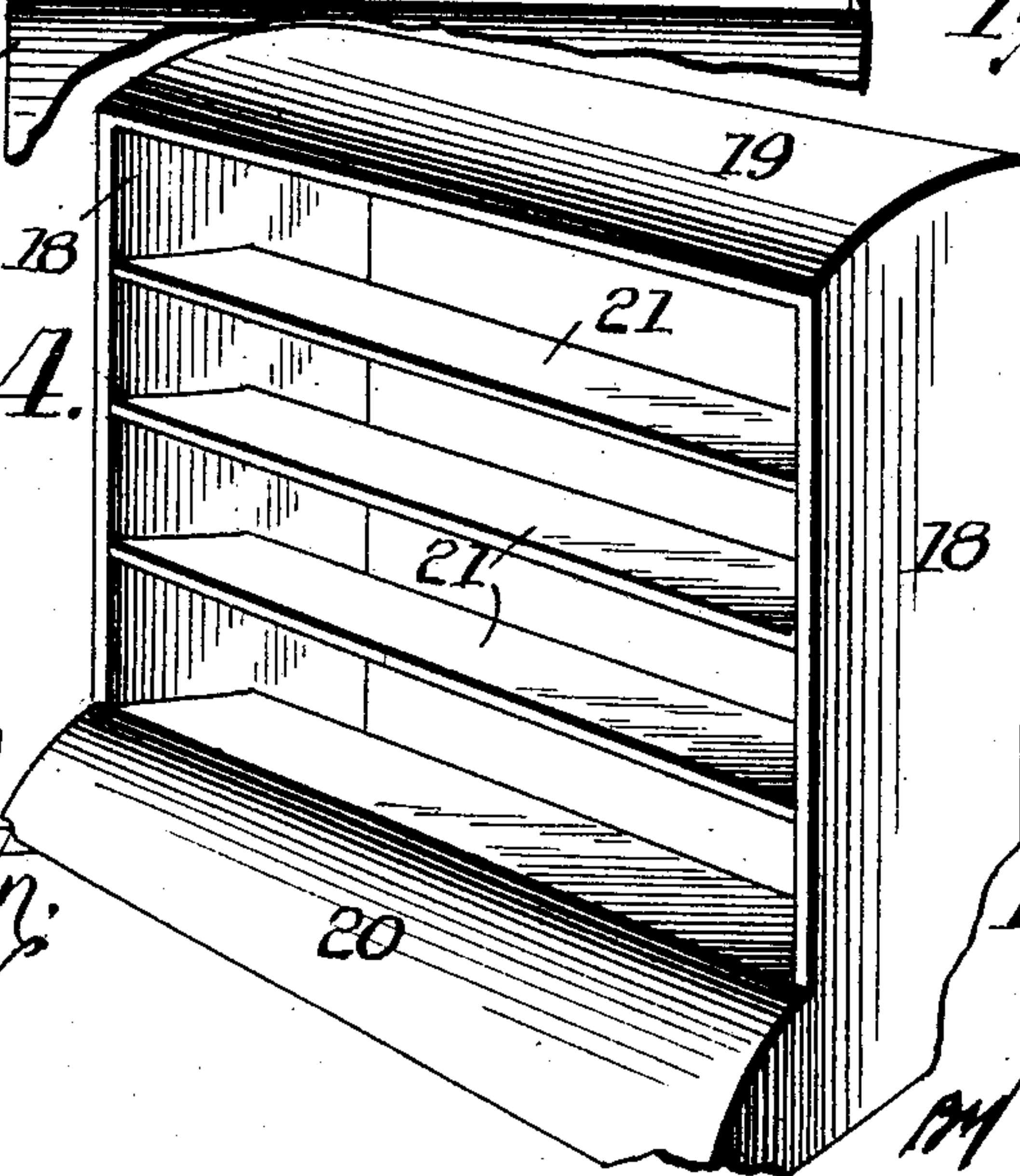


Fig. 3.

Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

IRA H. BLACK, OF CARNEGIE, PENNSYLVANIA.

HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 764,981, dated July 12, 1904.

Application filed November 7, 1903. Serial No. 180,151. (No model.)

To all whom it may concern:

Be it known that I, IRA H. BLACK, a citizen of the United States of America, residing at Carnegie, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Heating-Stoves, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in heating-stoves, and relates more specifically to that class of stoves which employ natural gas as a fuel.

The present invention has for its object to provide means for increasing the amount of heat thrown off by the stove and to provide means for regulating the quantity of fuel fed to the stove.

The invention resides in the novel construction, combination, and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this application, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a front elevation of a gas-stove constructed in accordance with my invention. Fig. 2 is a transverse vertical sectional view thereof. Fig. 3 is a horizontal sectional view showing the fender partly broken away. Fig. 4 is a detached detail perspective view of the outside member or shell of the stove.

In the use of gas-stoves adapted for domestic or like purposes it is the common practice to provide a lining or back wall of asbestos adapted to throw the heat outwardly from the stove or grate. My invention aims to provide means for throwing the heat outwardly to the front of the stove or grate and at the same time increase the amount of heat thrown off by the stove by the provision of deflector-plates made of metal, which not only deflect the heat of the flames, but throw off their own heat as well.

To put my invention into practice, I provide a casing or body comprising end walls 1 and 2 and a rear wall 3, together with a top wall 4, which latter is preferably curved down-

wardly in the front to form a hood 5. The rear wall 3 may, if desired, be provided with a flue-opening 6, whereby connection may be made with a flue. Instead of employing a single burner arranged at or near the bottom of the stove, as is the ordinary practice, I provide a plurality of burners 7, which are of the ordinary type generally employed, consisting of a cylinder or tube provided in its upper edge with a row of openings 8 to permit the gas to escape from the burner. These burners 7 are disposed one above the other between the end walls of the stove-casing, being connected to said end walls for supporting the burners in any desirable manner. A feed-line 9 is connected by a branch 10 to the lowermost burner 7, and said branch is tapped into the burner from the rear thereof closely adjacent to one end of the burner. The supply-line is also connected to each of the other burners, and in each of the branches I provide the ordinary mixer 11, while in the supply-line between each pair of burners I provide a valve or cock 12, whereby as many of the burners may be used at one time as may be desired. It will be evident that only the lower burner or the lower burner and one or more of the upper burners may be used at one time, or certain of the valves or cocks 12 may be shut off, as may be desired.

Access may be had to the stems of the valves to open or close the same by the insertion of a key (not shown) through openings 14 in the side wall 2. A controlling-valve 15 is placed in the supply-line outside of the stove, whereby to open the inlet to the burners or close the same, as may be desired. Placed between each pair of burners is a deflector-plate 16, which is set at an angle to the vertical, its lower edge resting on one of the burners back of the row of openings 8 and its upper edge contacting with the burner above and engaging said burner below the middle thereof. A convenient manner of securing these plates is by providing same with flanges or angles on their ends and riveting its flanges or angles to the side walls 1 and 2. These plates being set at a forwardly-projecting angle, the flames from the burner strike the same and are projected forwardly, as illustrated in Fig. 2 of

the drawings. In order to prevent the heat from being carried directly upward in front of the several burners, I provide an auxiliary shell or casing, comprising end walls 18, a hood 5 or top wall 19, and a fender 20. The end walls carry a plurality of horizontally-disposed deflector-plates 21, the inner edges of which lie on the upper edges of the inclined plates 16, so that these deflector-plates receive the flame and deflect the same to prevent its passing up directly in front of the burner above, thus throwing out the heat into the room or building. The hood 19 of the auxiliary casing or outer shell is shaped to conform to the hood 5.

It will be evident that the valves 12 may be arranged whereby access may be had to the same through the rear wall 3, if so desired. By reason of the flames from the burners striking directly against the deflector-plates 16 21 these plates become highly heated and throw off the heat, materially increasing the amount of heat thrown off by the stove. Where the stove is adapted to be connected to an uptake or flue, the upper plate 16 may be made of less width, whereby a passage will be afforded between the upper plate and plate 4, giving a draft to the flue.

It will be obvious that various slight changes may be made in the details of construction without departing from the general spirit of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a stove-casing, an auxiliary casing arranged in front thereof and having its top wall overlying the top wall of said first-named casing and a fender carried by said auxiliary casing and projecting outwardly therefrom.

2. In a gas-stove, a casing, a plurality of burners arranged therein and disposed one above the other, a gas-supply line connecting with the several burners, independent means for shutting off the gas-supply to each of the burners; and deflector-plates set at an angle between the burners, substantially as described.

3. In a gas-stove, a casing, a plurality of burners disposed thereon one above the other,

a supply-line common to all of the burners, means for shutting off the supply of gas to one or more of the burners, and deflector-plates arranged in the casing between the burners and engaging said burners with their upper and lower edges, substantially as described.

4. In a gas-stove, a casing, a plurality of burners arranged therein one above the other, a supply-line common to all of said burners, deflector-plates placed at an angle between the burners, and an auxiliary casing fitting over the first-named casing and having horizontal deflector-plates, substantially as described.

5. In a gas-stove, a casing, burners arranged therein, a supply-line connected with said burners, a deflector-plate set at an angle above the burners, and an auxiliary casing fitted over the first-mentioned casing, and having a horizontal deflector-plate with its inner edge engaging the upper edge of the inclined deflector-plate, substantially as described.

6. In a gas-stove, the combination of the casing, a plurality of burners arranged therein, deflector-plates arranged in juxtaposition to said burner, and an auxiliary casing arranged exteriorly of the first-named casing and being provided with deflector-plates cooperating with the deflector-plates thereof.

7. In a gas-stove, in combination with the casing having a curved hood, and the burners arranged in the casing, an auxiliary casing, having its top wall curved and embracing the hood of said first-named wall, and plates arranged in said auxiliary casing, substantially as and for the purpose set forth.

8. In a gas-stove, the combination with the casing and a plurality of burners arranged therein, of deflector-plates arranged between said burners and an auxiliary casing arranged exteriorly of the first-named casing and being provided with deflector-plates having their rear ends arranged adjacent the upper ends of the first-named deflector-plates.

In testimony whereof I affix my signature in the presence of two witnesses.

IRA H. BLACK.

Witnesses:

WM. G. McCRALEY,
L. H. WALTER.