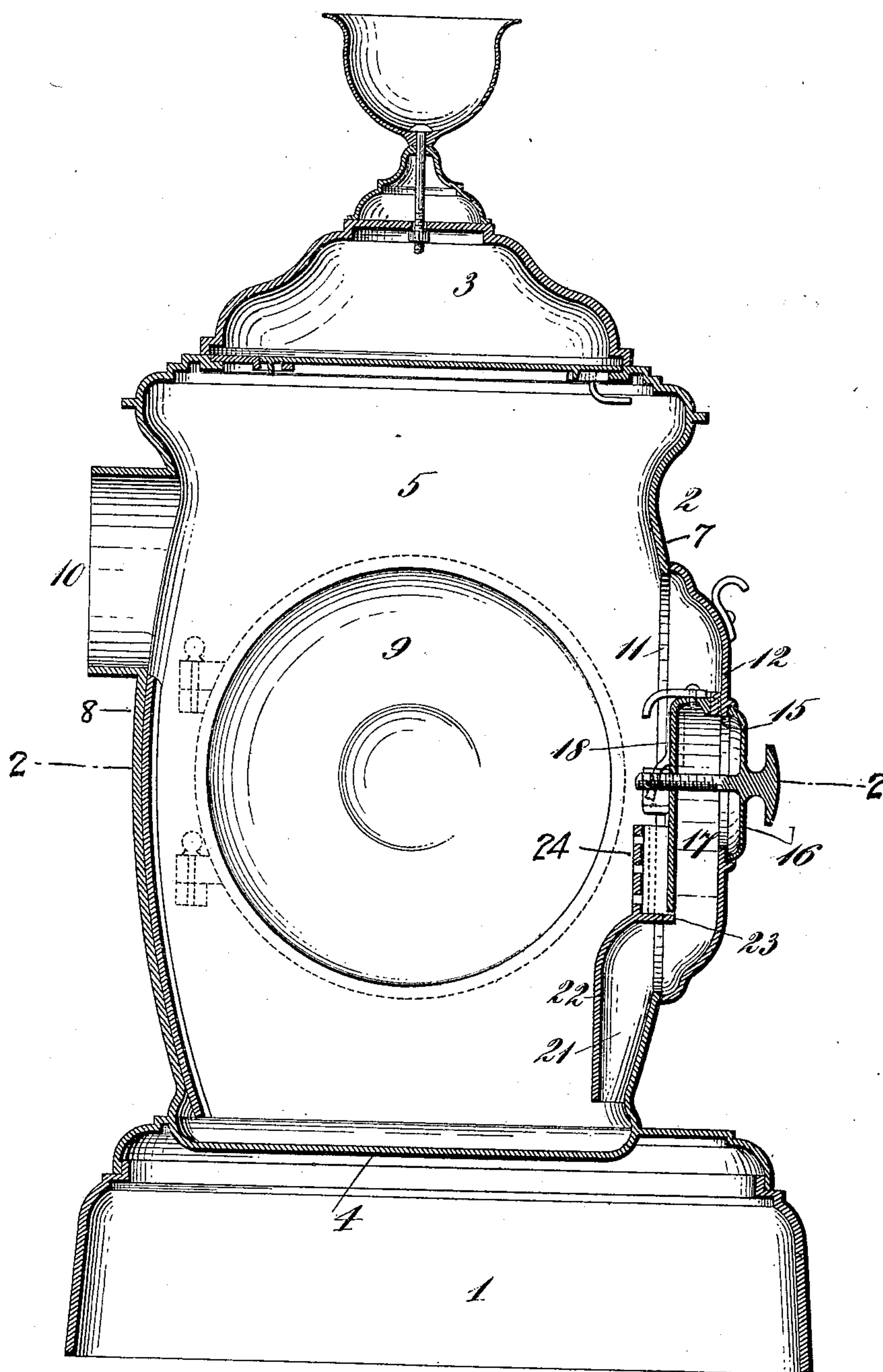


E. W. ANTHONY.
STOVE.

APPLICATION FILED JAN. 25, 1909.

938,543.

Patented Nov. 2, 1909.
2 SHEETS—SHEET 1.



WITNESSES:

W. E. Flaherty.
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FIG. 1.

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STOVE.

Patented Nov. 2, 1909.

2 SHEETS—SHEET 2.

Fig. 2.

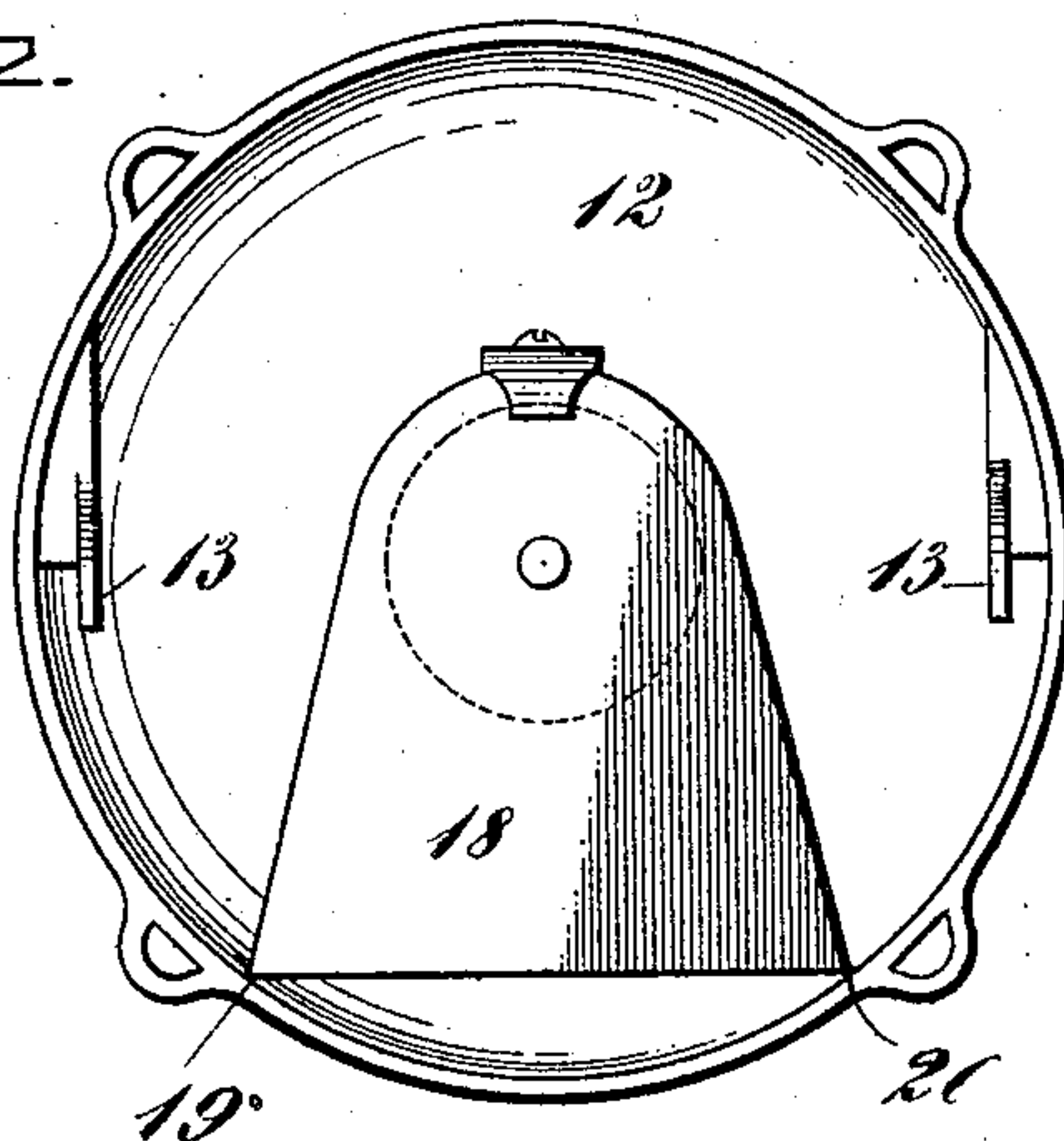


Fig. 3.

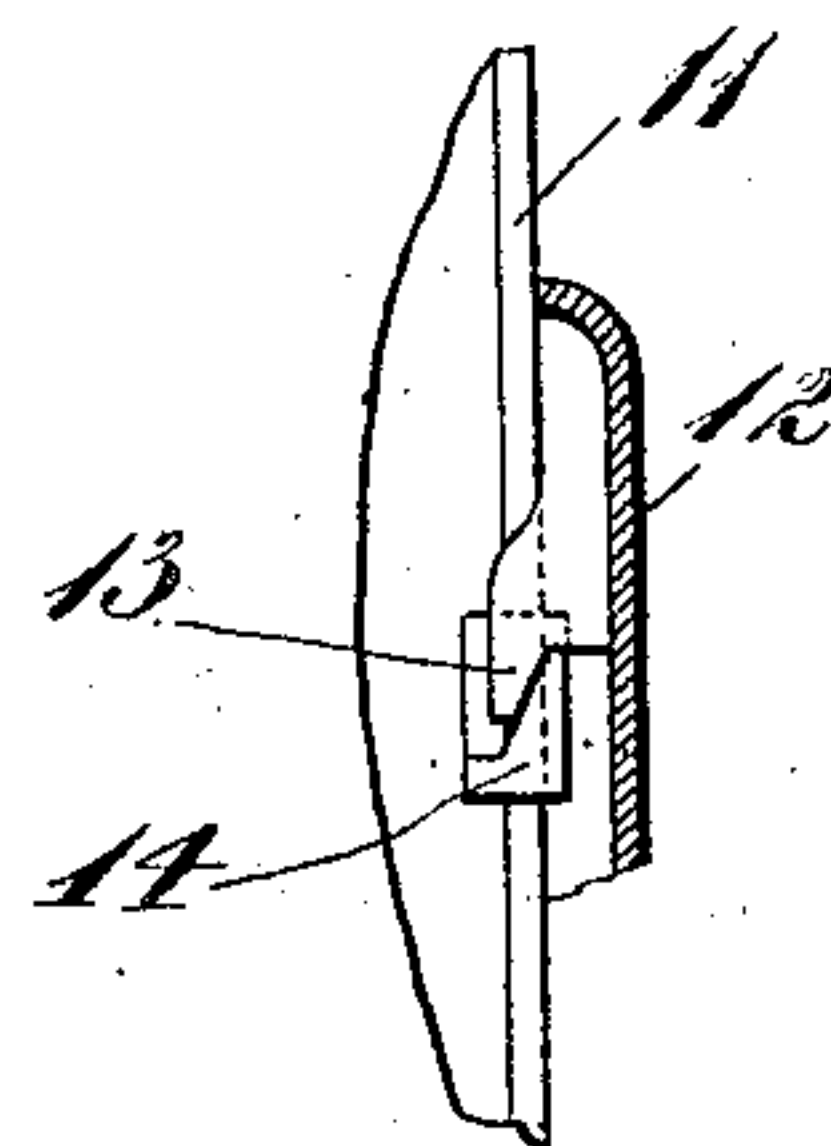


Fig. 4.

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UNITED STATES PATENT OFFICE.

EDGAR W. ANTHONY, OF BROOKLINE, MASSACHUSETTS.

STOVE.

938,543.

Specification of Letters Patent.

Patented Nov. 2, 1909.

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To all whom it may concern:

Be it known that I, EDGAR W. ANTHONY, of Brookline, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

My invention relates to an improvement in stoves especially a wood-burning stove and one constructed in such manner, also, that it may be converted from an open stove into an airtight stove or vice versa.

The essential object of my invention is to provide a simple, practical embodiment of a stove so convertible and especially to provide an improved means for properly directing air into the stove when converted into an airtight stove in order that the air may best produce a proper combustion of fuel within the stove.

My invention can best be seen and understood by reference to the drawings, in which—

Figure 1 shows the stove in cross vertical section. Fig. 2 is a cross section on the line 2—2 of Fig. 1. Fig. 3 shows in rear elevation an essential detail entering into the construction of the stove, to which especial reference will hereinafter be made. Fig. 4 shows in cross section a detail of construction to which further reference will also be made.

Referring to the drawings:—1 represents the base of the stove supporting the body 2 and top portion or head 3. The body of the stove is preferably of a deep, somewhat rectangular-like structure, and comprises the bottom 4, the ends 5 and 6, respectively, and the respective front and rear sides 7 and 8. In the end 5 is formed an opening controlled by a hinged door 9. Through this opening fuel may be placed inside the body of the stove. Extending from an opening in the rear side 8 of the stove is the smoke-pipe 10.

In the front side 7 of the stove is formed a large opening 11. For closing this opening there is applied to the side of the stove a face plate 12 preferably concave and of just sufficient size to cover the entire opening in the side. The face plate is secured to the side by means of hooks 13 extending from the back of the face plate at either side thereof and which as the face plate is applied to the side of the stove are adapted

to engage lugs 14 extending inwardly from the side of the stove at points just adjacent to the opening in it. It will be seen by reference to Fig. 4 that by inclining or beveling the hooks 13 to draw over the edges of the lugs the face plate when applied to the stove will be drawn inwardly toward the side of the stove by the bearing of the inclined hooks against the lugs and will accordingly fit tightly against the side of the stove when in place.

With the face plate 12 applied to cover the opening in the side of the stove it becomes an airtight stove. Upon removing the face plate, however, the stove is converted into an open stove and may be used as such. When the face plate is removed and the stove used as an open stove air will enter through the opening 11 in the side of the stove for burning the fuel within it. When, however, the stove is used as an airtight stove air is conducted into the stove for burning the fuel in the following manner: Formed in the face plate 12, preferably at about the center thereof, is an air inlet opening 15 controlled by a screw damper 16. Extending downward from this opening along the back of the face plate, assuming that it is in place on the stove, is a flue 17. This flue is formed by the face plate on the one side and by a flue plate 18 on the other side with the side edges of the flue plate bent or turned inwardly to connect with the inside of the face plate forming the flue.

In connection with the flue plate 18, attention is directed to the fact that this plate does not extend to the extreme bottom end of the face plate (see Fig. 3), but a space is left between the bottom end of the flue plate or flue formed by it and the extreme bottom end of the face plate in order that air passing down through the flue may pass over the bottom end of the face plate uncovered by the flue and thence inwardly through the adjacent portion of the opening 11 in the side of the stove. Moreover it is desirable in order that no air may pass up from the end of the flue into the cavity of the face plate for the flue to extend so far that the bottom squared end of the flue plate 18 will, when the face plate is in place, lie just within the edge around the opening 11 in the side of the stove with the bottom side ends 19 and 20 of the flue plate lying just within and snugly adjacent to the edge

forming said opening in the side of the stove. In further connection with the flue plate 18 attention is directed to the fact that it is with this plate that the threaded shank of the screw damper is adapted to connect, the plate forming a very convenient fixture for obtaining a proper adjustment of the damper.

Extending from or in continuation of the flue formed on the face plate is a flue 21 formed in the body of the stove and through which air entering by the way of the flue 17 is directed downward to enter the stove at or near the bottom thereof. The flue 21 is formed by a flue plate 22, between this plate and the side 7 of the stove with which the edges of the flue plate are turned or bent inwardly to connect.

In order that the flue plate 22 may properly combine with the side of the stove to receive and direct the air as aforesaid, attention is directed to the fact that the plate starts from the edge 23 thereof which extends into or through the opening 11 in the side of the stove to lie snugly adjacent to and cooperate with the bottom end of the flue plate 18. From its edge 23 the flue plate extends inwardly toward the interior of the stove and thence downwardly toward the bottom of the stove with the edges of the plate at either side thereof turned or bent in to connect with the side of the stove down to the very bottom end of the flue in order to leave no opportunity for air to escape other than from the bottom end of the flue. In order that the air may be directed into the bottom of the stove for some little distance along the side thereof the flue 21 is materially widened from the point where the air enters into it through the opening in the side plate from the flue 17. This may be done simply by widening the flue plate 22, the plate being laterally extended at either side, as may be seen by reference to Fig. 2.

The advantage of the construction just described is that when the stove is converted into an airtight stove the air let into the stove through the opening of the damper 16 is directed down to a point at the bottom of the stove where it may most advantageously assist in effecting a combustion of the fuel. Moreover by the adjustment of the damper 16 just the proper amount of air may be let into the stove to effect any desired intensity of combustion.

It will be understood of course that the stove may be converted from an airtight stove into an open stove simply by the removal of the face plate covering the opening in the stove. In this connection attention is directed to the fender 24 which may be

connected with the flue plate 22 to extend upwardly therefrom and prevent the fuel from being placed too near the opening in the side of the stove.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States:—

1. A stove having an opening in the side thereof, a face plate attachable to the stove for closing said opening, said face plate having an opening therein, a flue plate on the back of said face plate forming therewith a flue reaching from the point of opening in the face plate to the point of opening in the stove when the face plate is applied thereto, a flue plate within the body of the stove having connection with the side thereof below the opening therein and forming therewith a flue reaching from said point of opening in the stove to a point near the bottom thereof and which flue plates are adapted and arranged also to the end that they may cooperate with one another at the point of said opening in the stove and the flues formed thereby have a closed communication with one another whereby an unbroken flue passage may extend from the opening in said face plate to a point near the bottom of the stove.

2. A convertible stove, the same having an inlet into the chamber thereof and a door controlling said inlet, said stove having a further opening in the front thereof for forming an open stove, a face plate attachable to said stove for covering said opening and converting said stove into an air-tight stove, said face plate having an opening in it, a damper controlling said opening, a flue plate on the back of said face plate forming therewith a flue reaching from the point of opening in the face plate to the point of opening in the stove when the face plate is applied thereto, a flue plate within the body of the stove having connection with the side thereof below the opening therein and forming therewith a flue reaching from said point of opening in the stove to a point near the bottom thereof and which flue plates are adapted and arranged also to the end that they may cooperate with one another at the point of said opening in the stove and the flues formed thereby have a closed communication with one another whereby an unbroken flue passage may extend from the opening in said face plate to a point near the bottom of the stove.

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