H. E. ARMSTRONG.

FUEL SAVER AND AIR CIRCULATOR.

APPLICATION FILED DEC. 22, 1919.

1,382,880. Patented June 28, 1921.

3 SHEETS—SHEET 1.

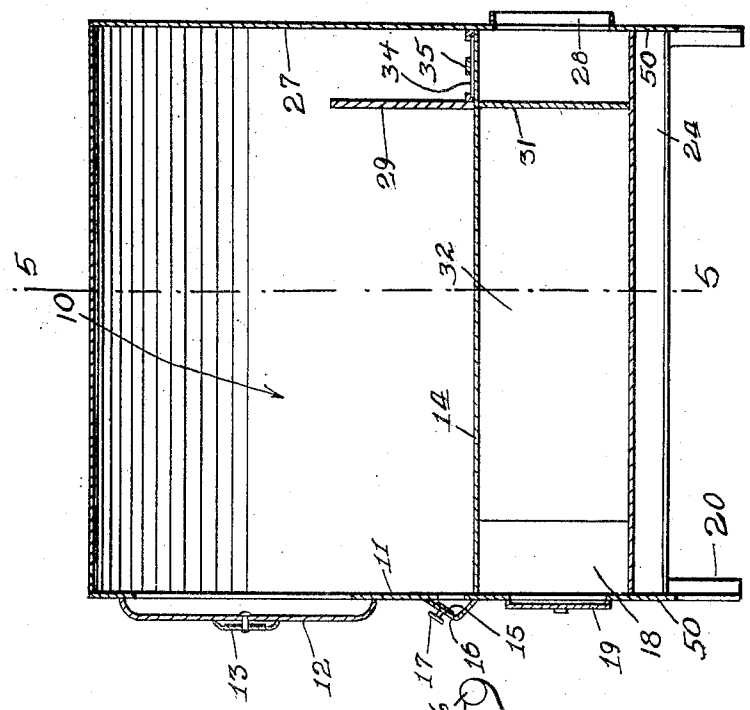


Fig. 2.

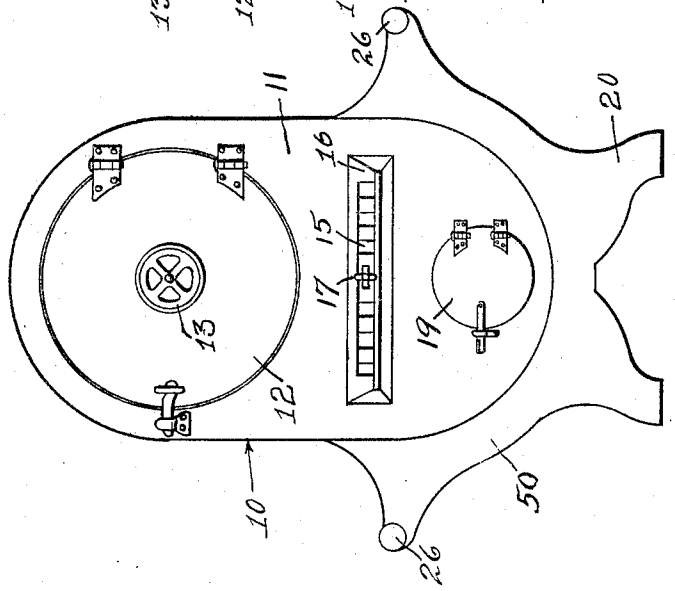


Fig. 1.

Witness

J. C. Fanley

Inventor

H. E. Armstrong

By C. A. Snow & Co.

Attorneys

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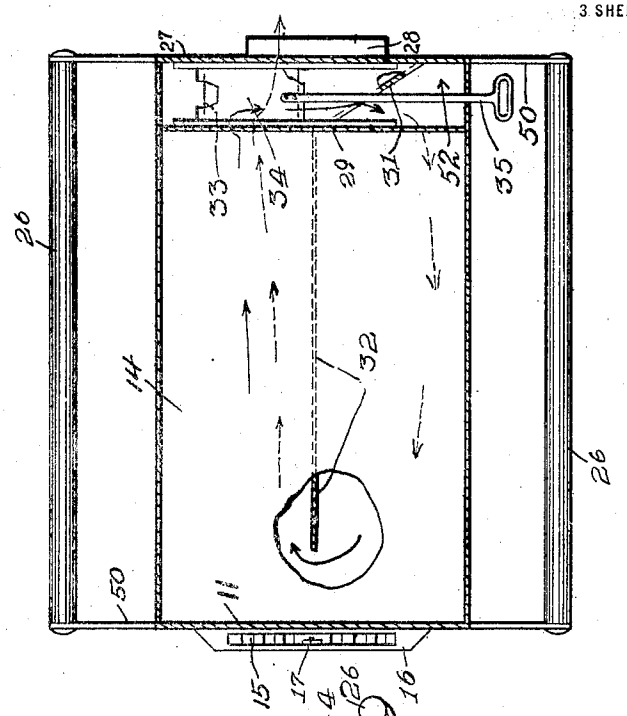


Fig. 4.

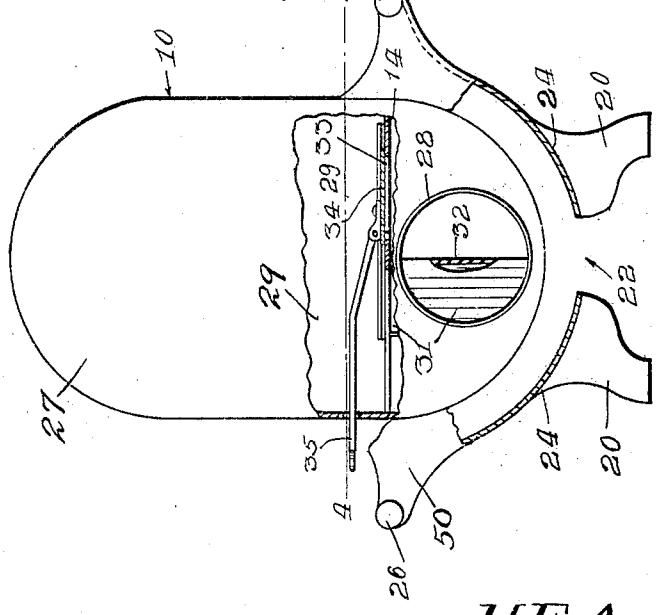


Fig. 3

Witness

J. R. Jones

Inventor

H. E. Armstrong.

By C. A. Snow & Co.

Attorneys

H. E. ARMSTRONG.

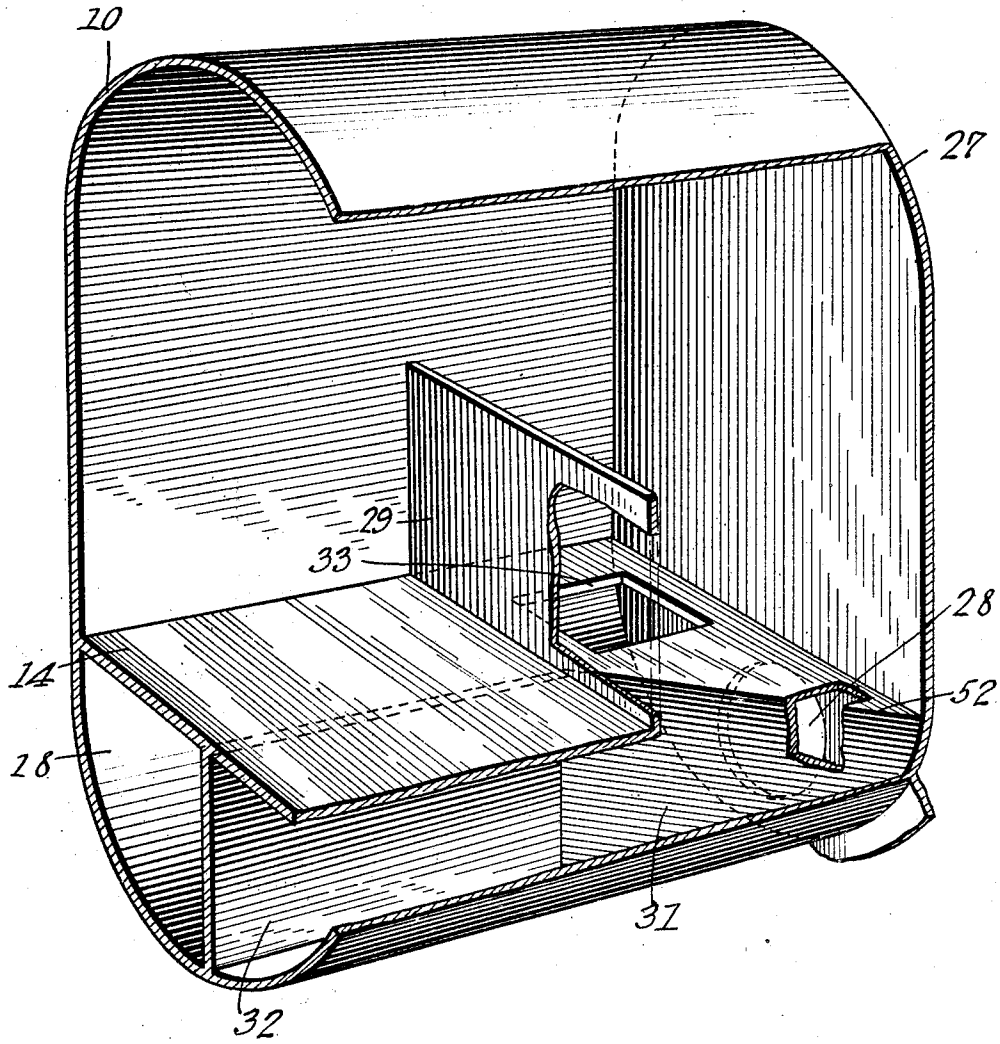
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3 SHEETS—SHEET 3.

Fig. 5.



H. E. Armstrong
Inventor

By C. A. Snow & Co
Attorneys

UNITED STATES PATENT OFFICE.

HORACE E. ARMSTRONG, OF SALEM, OREGON.

FUEL-SAVER AND AIR-CIRCULATOR.

1,382,880. Specification of Letters Patent. Patented June 28, 1921.

Application filed December 22, 1919. Serial No. 346,449.

To all whom it may concern:

Be it known that I, HORACE E. ARMSTRONG, a citizen of the United States, residing at Salem, in the county of Marion and State of Oregon, have invented a new and useful Fuel-Saver and Air-Circulator, of which the following is a specification.

It is the object of this invention to provide novel means for producing and governing the passage of the products of combustion through a stove, to the end that the efficiency of the stove may be enhanced.

In the drawings:—Figure 1 is an elevation showing one end of my improved stove; Fig. 2 is a vertical longitudinal sectional view of the stove; Fig. 3 is an elevation showing the opposite end of the stove from that depicted in Fig. 1, parts being broken away and shown in section; Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 3; Fig. 5 is a sectional perspective, taken on the line 5—5 of Fig. 2, looking toward the rear end of the device, parts being broken away.

The stove comprises a body 10, the side portions of which are parallel, and the top and bottom portions of which are rounded. The body 10 is provided with a front wall 11 having a fire door 12 carrying a mica window 13. Arranged horizontally in the body 10 is a fuel platform 14 defining a combustion chamber. The supply of air to the combustion chamber may be regulated through the medium of a sliding draft door 15, mounted in a casing 16, and having a handle 17.

Below the platform 14, there is provided a compartment 18 having a door 19 through which access to the compartment may be had, for cleaning purposes. The body 10 is supported upon plates 50 having legs 20, the plates 50 being united by curved side plates 24 having their lower edges spaced apart as at 22, so that air may enter between the plates and the body 10, the air being heated and being discharged at the upper edges of the plates 24. The upper edges of the plates 24 carry foot rails 26.

The rear end wall of the body 10 is indicated at 27 and has an outlet 28 for the products of combustion, the outlet communicating with the compartment 18. A vertical partition 29 projects upwardly from the platform 14 and is spaced from the end wall 27. A baffle 32 is disposed between the platform 14 and the bottom of the body 10 and terminates short of the front wall 11, the baffle being provided with a laterally inclined wing 31 which extends rearwardly to the end wall 27. The platform 14 extends to the rear of the body, but is cut away at one end, adjacent to the wing 31 to form an opening 52. There is a draft opening 33 in the rear portion of the platform 14, the opening being controlled by a sliding damper 34 having an operating handle 35 extended horizontally through one side of the body 10.

A fire is built on the platform 14, the fuel being inserted through the opening controlled by the door 12, and air being supplied by adjusting the damper 15. If a direct draft is desired, the damper 34 is moved to open position with respect to the opening 33. Then the products of combustion pass upwardly over the partition 29, downwardly at the rear of the partition, through the opening 33 into the rear end of the compartment 18 at one side of the wing 31, and out of the outlet 28, without moving forwardly toward the front of the stove. If a direct draft is desired, the damper 34 is moved to closed position with respect to the opening 33. Then the products of combustion pass upwardly over the partition 29, downwardly at the rear of the partition 29, through the opening 52, forwardly along the other side of the wing 31, forwardly along one side of the baffle 32, transversely across the forward end of the baffle 32, rearwardly along the baffle 32 and its wing 31, and out of the outlet 28. When the sides of the body 10 are heated, the air will rise between the sides of the body and the plates 24, as hereinbefore alluded to. The plates 24 serve as guards preventing a lateral discharge of heated air into the faces of persons sitting beside the stove.

I claim:—

1. A stove comprising a body having a front wall and a rear wall; a platform in the body and defining an upper combustion chamber and a lower compartment, the front wall having an air inlet disposed adjacent to the platform; a baffle extended between the platform and the bottom of the body, the forward end of the baffle being spaced from the front wall of the body, the baffle including a wing extended rearwardly to the rear wall of the body; a transverse partition upstanding from the platform adjacent to the rear wall of the body, the plat-

form having openings located between the partition and the rear wall of the body and disposed on opposite sides of the wing, the rear wall having an outlet communicating, at one side of the wing, with the compartment; and a damper controlling that one of the openings which is located on the same side of the wing as the outlet.

2. A device of the class described, constructed as set forth in claim 1, and further characterized by the provision of end plates whereon the body is supported, the end plates being connected by side plates spaced from the body to define air passages, the lower edges of the side plates being spaced apart to define an inlet for the said passages.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HORACE E. ARMSTRONG.

Witnesses:
P. J. KUNTZ,
MANDA M. KUNTZ.