

No. 659,971.

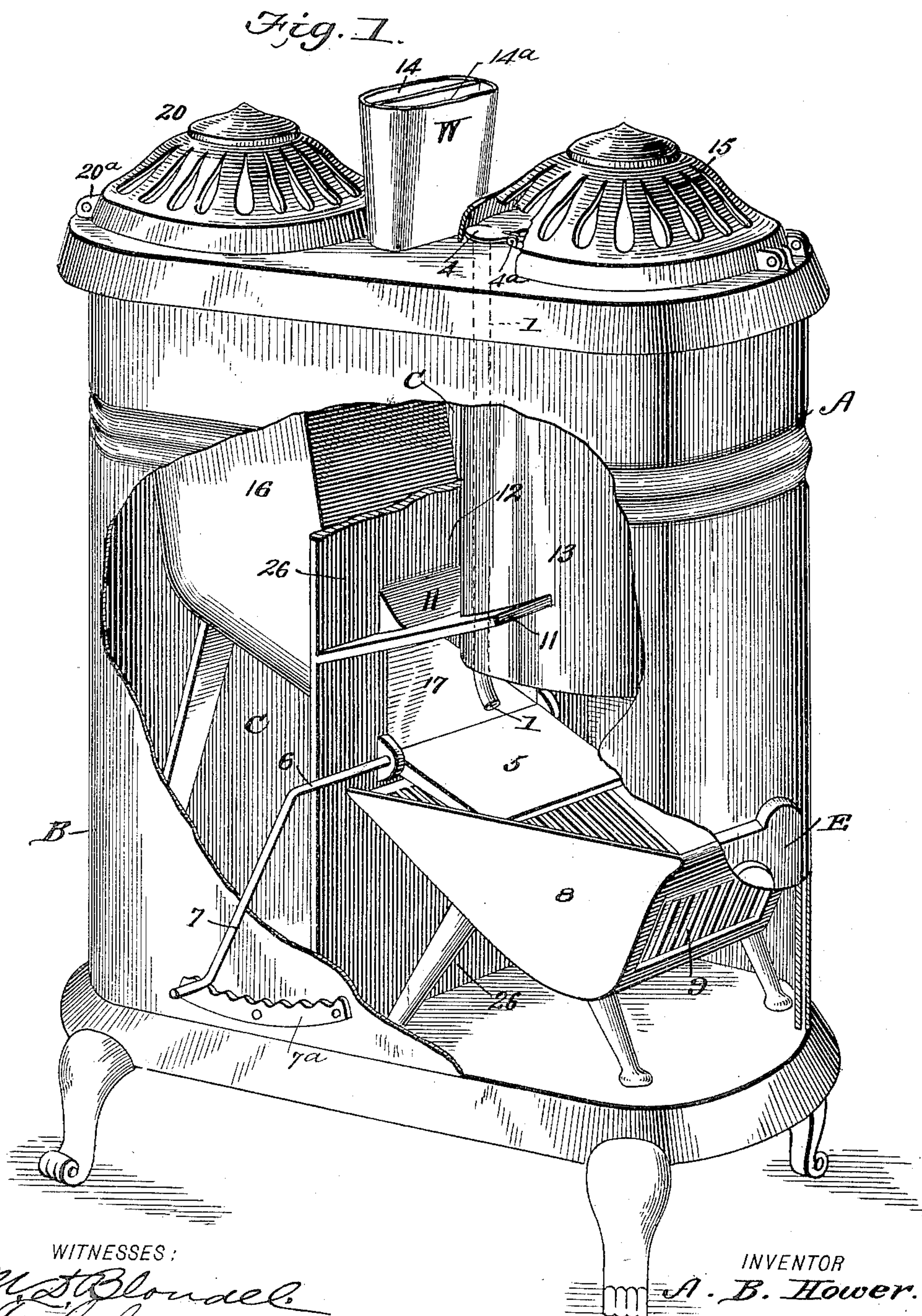
Patented Oct. 16, 1900.

A. B. HOWER.
HEATING STOVE.

(Application filed Sept. 1, 1899.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:

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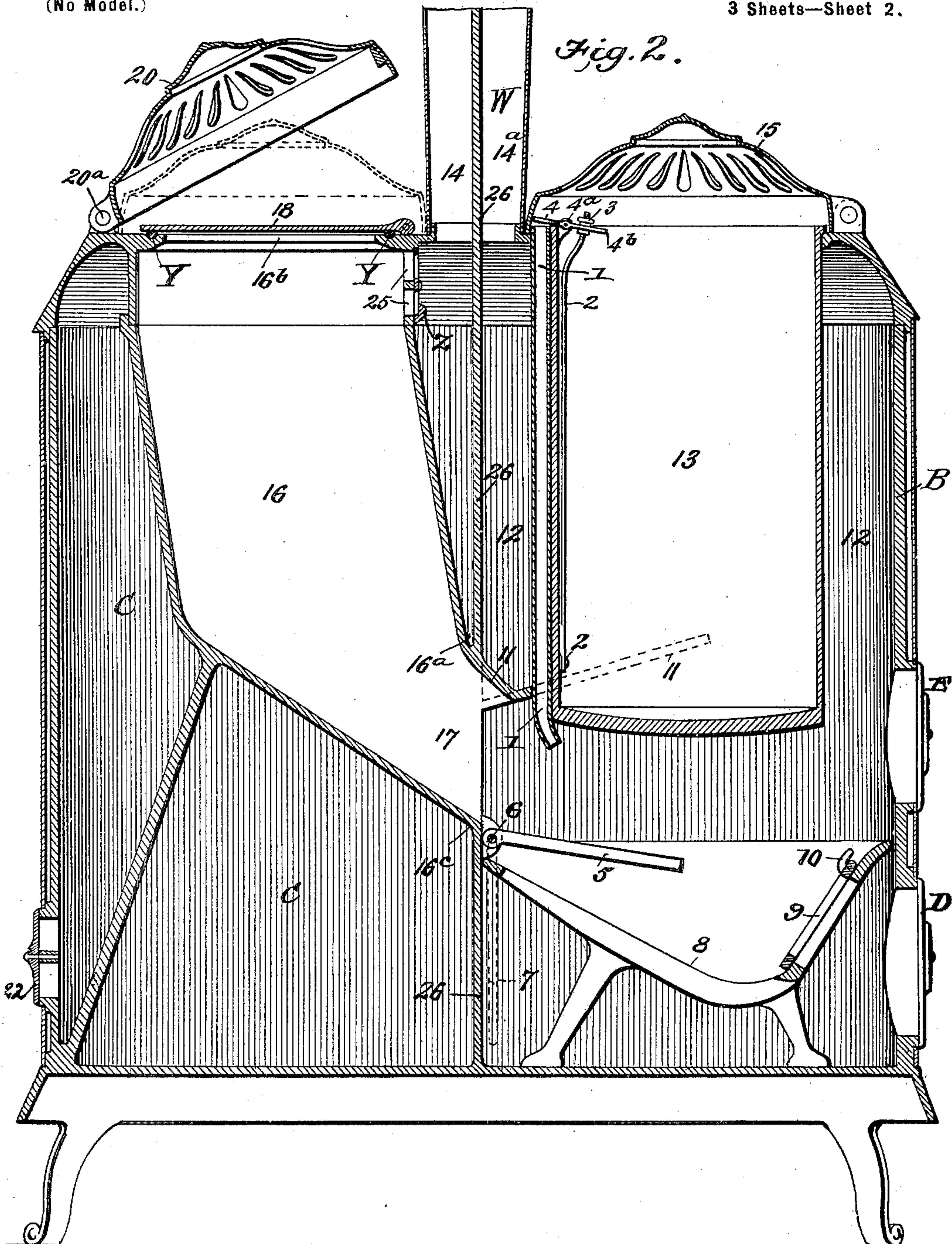
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3 Sheets—Sheet 2.



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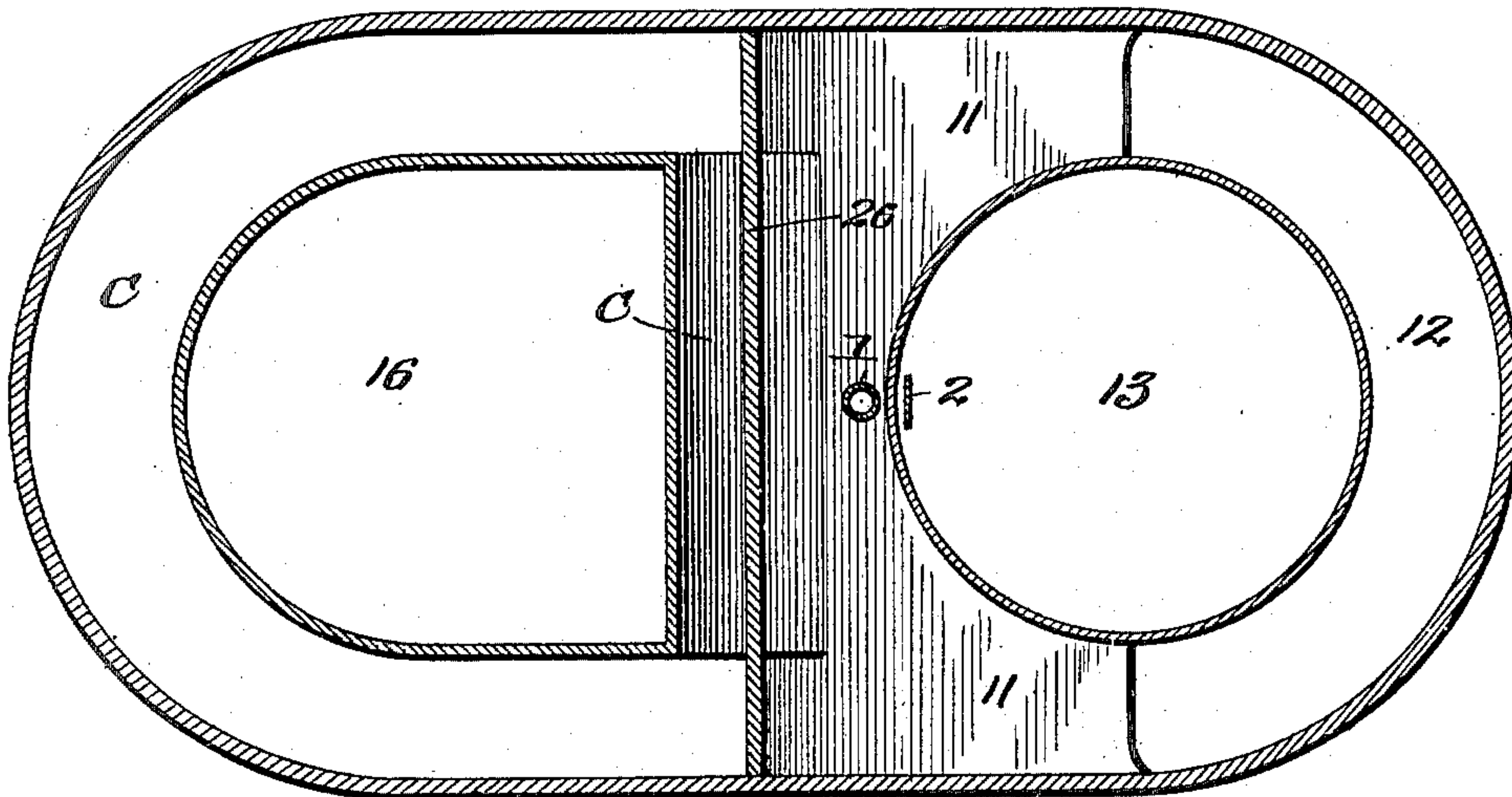
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3 Sheets—Sheet 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

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HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 659,971, dated October 16, 1900.

Application filed September 1, 1899. Serial No. 729,159. (No model.)

To all whom it may concern:

Be it known that I, ATEN BOWMAN HOWER, of Logan, in the county of Cache and State of Utah, have invented a new and useful Improvement in Heating-Stoves, of which the following is a specification.

My invention relates to heating-stoves, and has for its object a stove of this character which will be especially useful for burning soft or bituminous coal.

The invention consists in certain details of construction and arrangements of the parts, which I shall first describe and then point out the novel features in the appended claim.

Reference is to be had to the accompanying drawings, forming part of this specification, in which like characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of my improved stove, the casing thereof being partly broken away to illustrate the relative positions of some of the interior parts. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a horizontal section.

My improved stove A is provided with an oblong or oval casing B, of sheet and cast metal, supported on legs and inclosing the main parts of the stove. This casing is divided practically into two equal parts by a transverse partition 26, as best seen in Fig. 3. On one side of such partition the fuel-magazine 16 is located, being spaced upon all sides from the casing B and extending from the feed-opening 16^b down into the casing and in a direction toward the partition 26. About half-way the height of the stove the side of the magazine adjacent the partition 26 connects with the partition, as at 16^a, and the opposite side of the magazine at such point takes a sharp inward turn and also connects with the partition 26 at 16^c, an opening 17 being made in the partition 26 between the two points 16^a and 16^c, whereby to admit the fuel to the combustion and heating portion of the stove.

C designates the space between the fuel-magazine and the casing, and such space is adapted to form the cold-air chamber of the stove, which, as will be seen from the drawings, extends entirely around the fuel-magazine. At the upper end of the inner side of

the fuel-magazine 16 an opening is provided for the escape of gas, which is regulated by the damper 25.

18 designates the closure for the mouth of the fuel-magazine, and 20 designates the top ornament above the same and hinged at 20^a.

An asbestos gasket 19, seated in a groove Y, surrounding the feed-opening, prevents the escape of gas through the latter.

22 designates the cold-air damper.

The fuel to be burned falls from the lower contracted end of the fuel-magazine through the opening 17 onto a fire-plate 5, pivoted to the partition 26 at the lower wall of the opening, the fuel being designed to be burned on such plate. I hinge this plate 5 so that the discharge of fuel from the magazine may be regulated as desired and hold it at different angles, preferably by means of a crank-arm 7 on its shaft 6 engaging any one of the notches in the curved plate 7^a.

The fire-pot proper, 8, is removably seated in the casing B below the fire-plate 5 and is formed with hooks 10, in which the swinging grate 9 is held.

D designates the ash-pit door containing an opening for direct draft, and E the door through which kindling-wood or the like may be inserted.

A draft is maintained on the burning fuel on the fire-plate 5 by a vertical pipe 1, extending down into the casing and having its lower end bent slightly in the direction of the free end of the fire-plate, and a deflector-plate 11, inclined upwardly, extends from the partition at the upper wall of the opening 17 and on both sides of the heating-drum 13. The purpose of said deflector-plate is to divert the fire away from the fuel-supply in the magazine and to throw the heat into the hot-air chamber 12, which surrounds the heating-drum 13, as shown in Fig. 2.

To automatically regulate the draft in the pipe 1, I provide the damper 4 in the form of a plate pivoted between ears 4^a and having a rear extension 4^b, adapted to receive the upper end of a copper or like metallic rod 2, whose opposite end is secured to the inside of the heating-drum and near the bottom thereof. After the damper has been adjusted by the screw 3 it will automatically open and

close the pipe 1 by the contraction and expansion of the rod.

The heating-drum 13 is open at the top, being covered only by the pivoted top ornament 15. The partition 26, as best shown in Fig. 2, extends up into the flue W, dividing the latter into two compartments 14 and 14^a, of which the former is the hot-air flue and the latter the cold-air flue.

It will be seen that I have provided a stove of simple construction and efficient operation and one that by its arrangement of flues, its separation of the fuel-magazine from the heating part of the stove, and its adjustable fire-plate will avoid effectively the collection of gas and other disagreeable faults of stoves using bituminous coal as fuel.

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

1. A stove, comprising a casing provided with a central transverse partition extending from top to bottom and dividing it into cold-air and hot-air compartments, said partition being formed with an opening near its lower end, a fuel-magazine in the cold-air compartment, said magazine being spaced from the casing and having a contracted lower end connected to the partition at the opening therein, an adjustable fire-plate hinged to the partition at the lower wall of said opening, a fire-pot below said plate, a heating-drum in the hot-air compartment and spaced from the partition and the walls of the casing, and a deflector-plate extending outwardly and upwardly from the partition at the upper wall

of said opening on both sides of the heating-drum, as set forth.

2. A stove, comprising a casing having a transverse partition dividing it into cold-air and hot-air compartments, said partition being formed with an opening near its lower end, a fuel-magazine in the cold-air compartment, said magazine having its lower end connecting with the partition at the opening therein, a fire-pot in the hot-air compartment below said opening, a heating-drum above said fire-pot, and a deflector-plate extending from the partition at the upper wall of the opening, said plate partially surrounding the heating-drum, as set forth.

3. A stove, comprising a casing having a transverse partition dividing it into cold-air and hot-air compartments, said partition being provided with an opening near its lower end, a fuel-magazine in the cold-air compartment connected with the partition at the said opening, a fire-plate hinged to said partition at the lower wall of said opening, a fire-pot in the hot-air compartment below said plate, a heating-drum above said fire-pot, a deflector-plate extending from the upper wall of said partition and partially surrounding said drum, and a draft-tube extending vertically from the upper end of the casing down through said deflector-plate and terminating above the fire-plate, as set forth.

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Witnesses:

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