

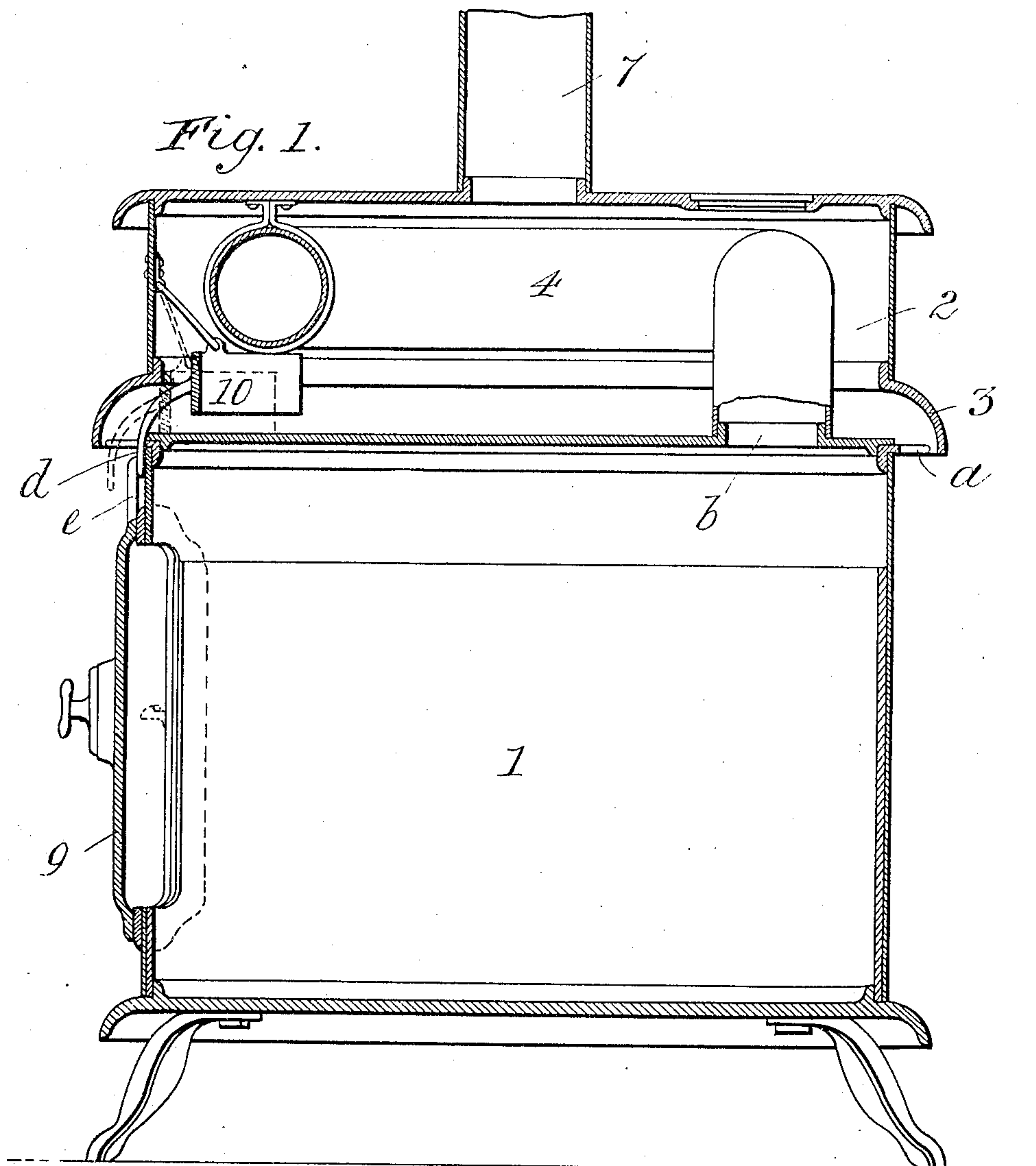
No. 892,759.

PATENTED JULY 7, 1908.

G. D. NEAVITT.  
HEATING STOVE.

APPLICATION FILED MAR. 8, 1907.

2 SHEETS—SHEET 1



WITNESSES:

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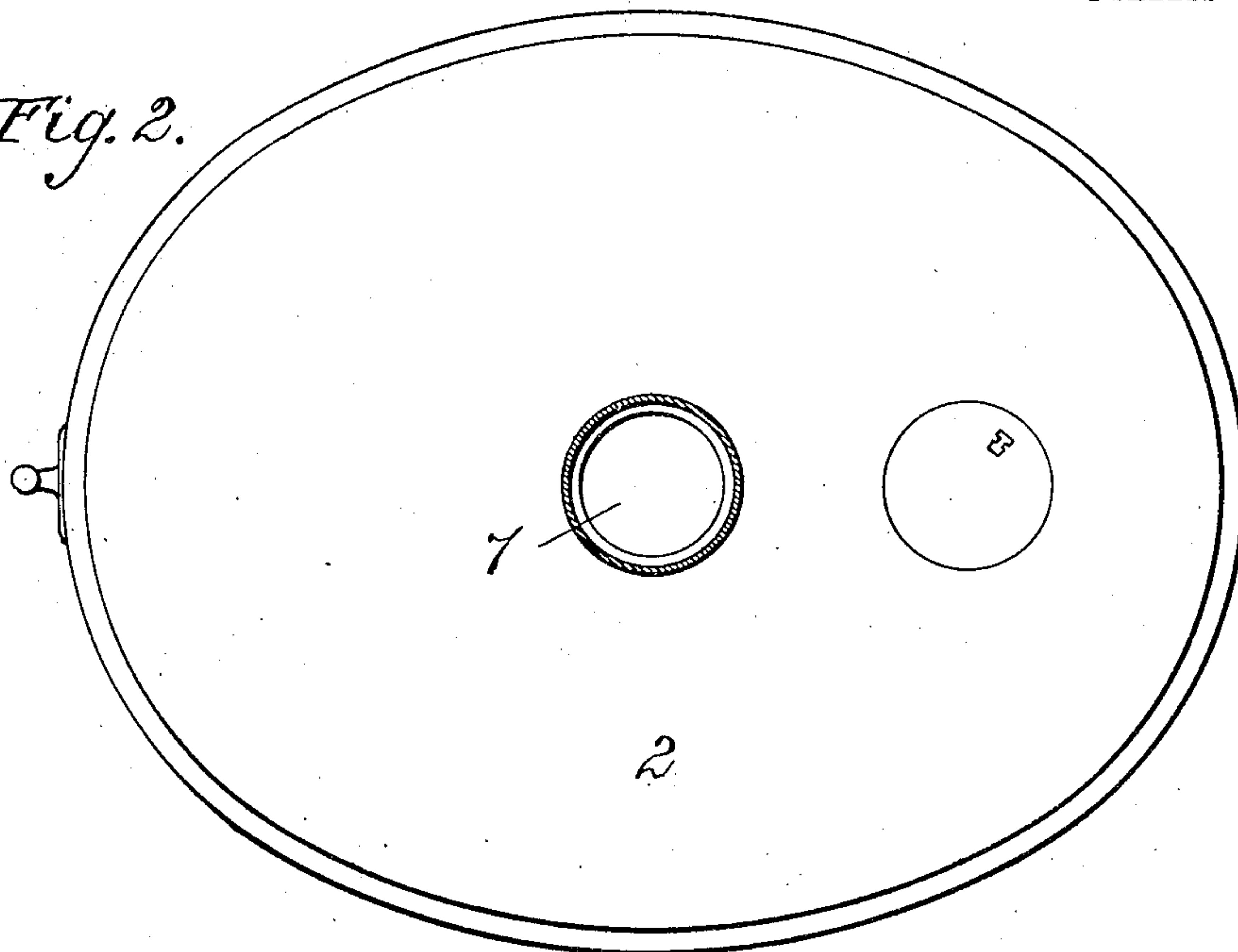
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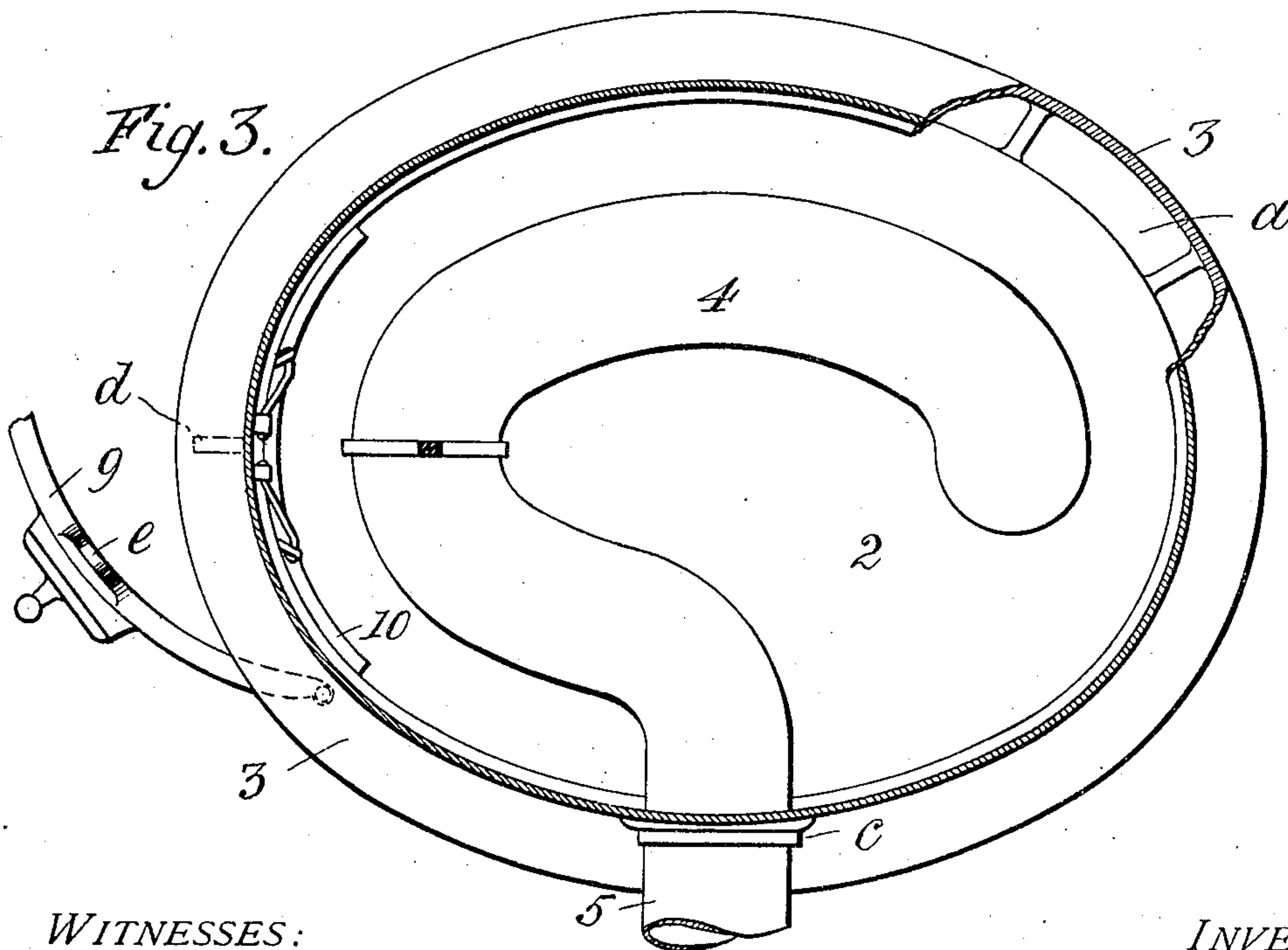
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2 SHEETS—SHEET 2.

*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

GEORGE DAVIS NEAVITT, OF CENTERVILLE, MARYLAND.

## HEATING-STOVE.

No. 892,759.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed March 8, 1907. Serial No. 361,328.

*To all whom it may concern:*

Be it known that I, GEORGE DAVIS NEAVITT, of Centerville, in the county of Queen Anne and State of Maryland, have invented certain Improvements in Heating-Stoves, of which the following is a specification.

This invention relates to certain improvements in a stove provided with a drum and a pipe leading therefrom, whereby hot air is conducted to a chamber situated above the room containing the stove, as will hereinafter fully appear.

In the description of the said invention which follows, reference is made to the accompanying drawings forming a part hereof, and in which,—

Figure 1 is a sectional side view of the improved stove, and Fig. 2 an exterior top view of the same. Fig. 3 is a top view of the stove with the top of the hot air drum removed.

Referring now to the drawing, 1 is the fuel chamber of the stove, and 2 the hot-air drum connected to the fuel chamber by means of the overhanging hollow ring 3 which is open practically the whole way round the stove, thus placing the interior of the hot-air drum in communication with the outer air, as is best shown in Fig. 3 where the ring 3 is shown partly in section.

4 is a radiator situated in the drum 2, consisting of a pipe which leads from a hole *b* in the top of the fuel chamber 1, and after rising vertically for a proper distance, is horizontally curved concentric with the wall of the drum, and united to the collar *c* to which the stove pipe 5 is attached.

7 is a pipe leading from the drum 2 to the apartment to which the hot air is to be carried.

When the stove is in use, the radiator 4 becomes highly heated by the products of combustion in the fuel chamber and a large proportion of its heat is transmitted to the air in the drum, and the superheated air rises and forms a draft or current through the drum, towards and through the pipe 7 to the room above; and in view of the open ring 3 extending beyond the wall of the fuel chamber, a portion of the heated air immediate to the exterior of the fuel chamber enters the open ring and commingles with that directly heated by the radiator, thus further increasing the efficiency of the drum as a heater for the room above.

By extending the radiator pipe 4 horizon-

tally around the hot air drum and practically concentric with the same, instead of passing it vertically through the drum, or in any other direction whereby it occupies a vertical space in excess of its diameter, the hot air is retained for a longer period within the drum with the same height of stove, and a short stove which heats the air in the apartment near the floor, is more economical than one from which the heat is given off on a higher plane.

I am aware that with the construction of the stove as described, I do not effect an increase in its heating capacity; but, by carrying air at a higher temperature to the room above, the heat is better diffused, and the fuel more economically used.

9 is the door of the fuel chamber. In opening the door the influx of air to the fuel will often be in excess of that required to complete combustion of the fuel, and in consequence, smoke will escape; and should there be a free passage to the drum immediately over the stove door the smoke would enter the drum with the hot air surrounding the fuel chamber. To prevent this, I provide a damper 10, arranged to present no obstruction to the entrance of air to the drum when the stove door is closed, but which automatically closes a portion of the open ring 3 and thereby prevents such entrance when the door is open.

The damper 10 consists of a segmental plate having the same curvature as the inner circumference of the ring 3, which is hinged to the wall of the drum, as shown in Fig. 1. The damper provided with a lever *d* which extends through the hollow open ring 3, against which a finger *e*, extending from the door, presses as the door is closed and causes the damper to be lifted away from the ring. When the door is opened, the damper falls back by gravity and closes the ring for a circumferential distance equal to the length of the damper.

The damper with its lever is represented in both positions in Fig. 1, the full delineation showing it as open by reason of the finger of the door pressing against it.

I claim as my invention:—

In a stove, a fuel chamber provided with a door with a finger extending therefrom, a drum having an outlet for hot air, and a stove pipe, a hollow practically open ring

situated at the junction of the fuel chamber and the drum, whereby air is admitted to the drum, and a radiator pipe situated within the drum, one end of which is in communication with the fuel chamber, and the other end connected with the stove pipe, combined with a hinged damper within the drum and directly over the door of the fuel chamber, having a lever the end of which is in the path of the finger of the stove door when the same is opened and closed, the lever and finger be-

ing so arranged that when the stove door is closed the damper is opened, and when opened, the damper is allowed to fall by gravity and close a portion of the open ring, substantially as, and for the purpose specified. 15

GEORGE DAVIS NEAVITT.

Witnesses:

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