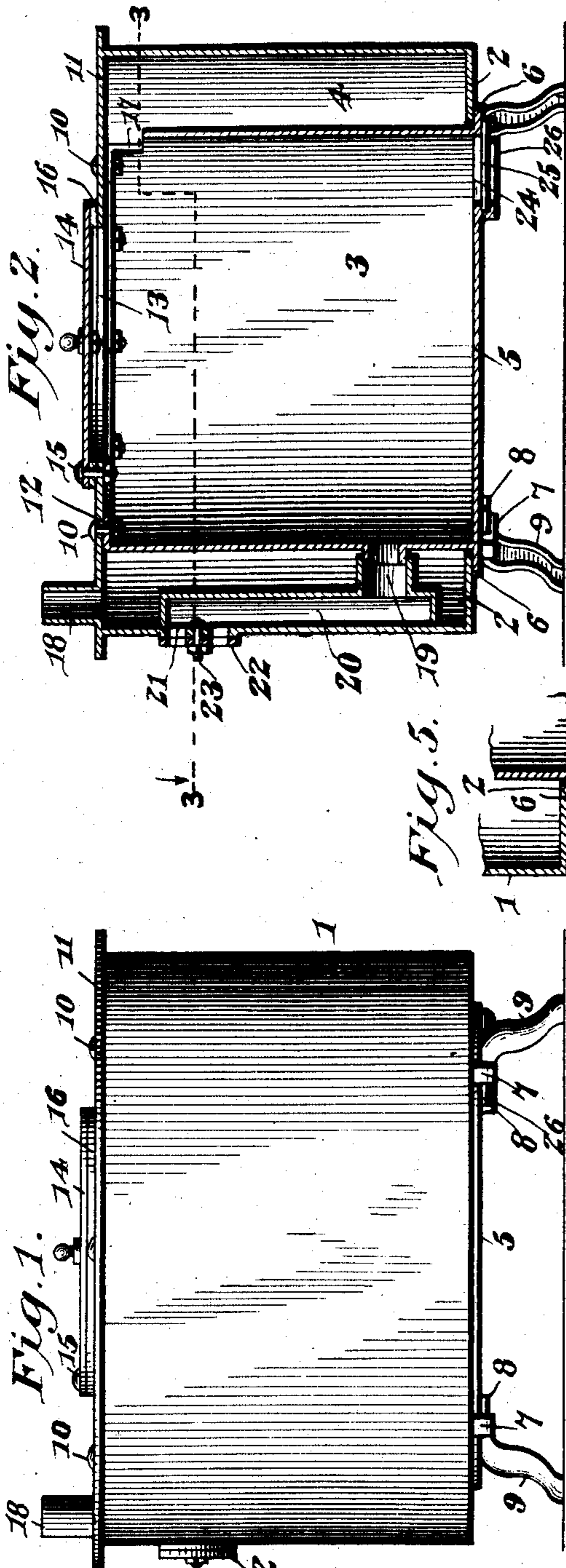


No. 864,371.

PATENTED AUG. 27, 1907.

W. A. HAMMER.
STOVE.

APPLICATION FILED MAY 12, 1904. RENEWED JULY 16, 1907.



Witnesses
Geo. E. McCathran
J. J. Riley

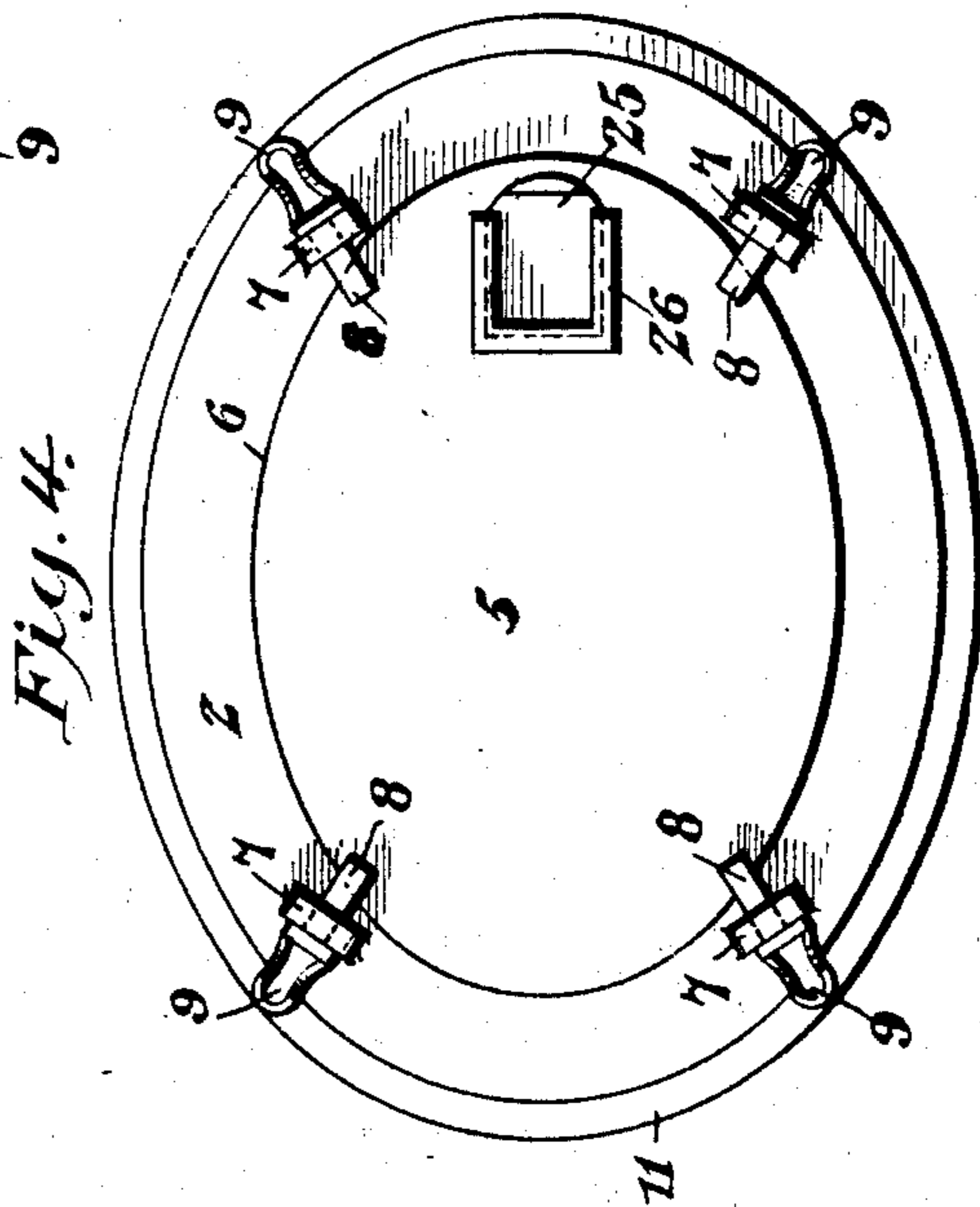


Fig. 4.

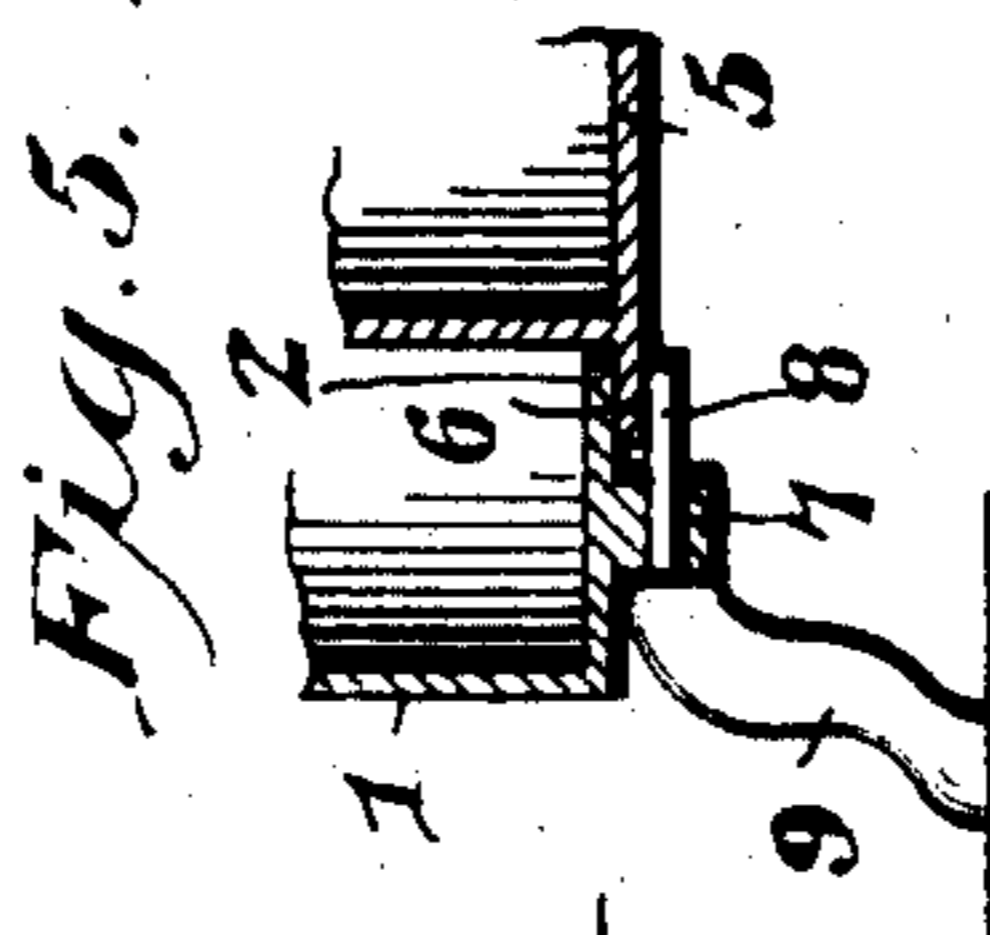


Fig. 5.

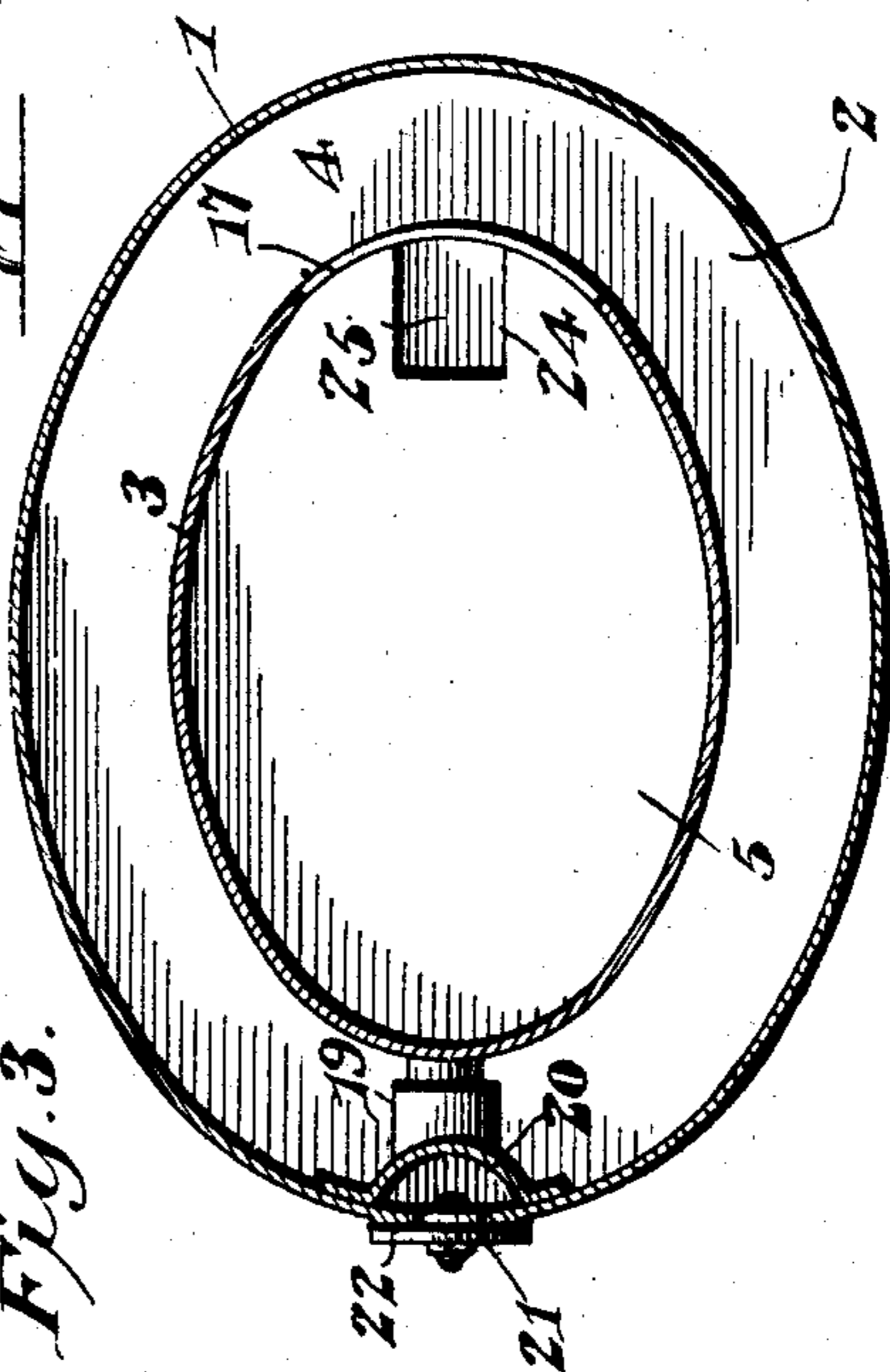


Fig. 3.

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By

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UNITED STATES PATENT OFFICE.

WILLIE A. HAMMER, OF ALAMO, TENNESSEE, ASSIGNOR OF ONE-HALF TO WILL R. SMITH, JOHN C. SMOCK, HANSON L. MARSHALL, AND EDWARD G. BAILEY, OF EUFAULA, INDIAN TERRITORY.

STOVE.

No. 864,371.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed May 12, 1904, Serial No. 207,618. Renewed July 16, 1907. Serial No. 384,111.

To all whom it may concern:

Be it known that WILLIE A. HAMMER, a citizen of the United States, residing at Alamo, in the county of Crockett and State of Tennessee, has invented a new and useful Stove, of which the following is a specification.

The invention relates to improvements in stoves.

The object of the present invention is to improve the construction of stoves, and to provide a structure wherein the products of combustion are retarded and passed over comparatively large radiating surfaces, so that the heat contained in the said products of combustion will be given up, and its loss prevented, the arrangement also serving to economize in the amount of fuel consumed.

The invention also has for its object to provide a structure composed of simple, easily constructed parts that may be readily assembled and disassociated, should any require repair or renewal.

With these and other objects in view, the invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a side elevation of a stove, constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a horizontal sectional view, taken substantially on the line 3—3 of Fig. 2. Fig. 4 is a reverse plan view of the stove. Fig. 5 is an enlarged detail sectional view, illustrating the manner of detachably connecting the inner and outer shells.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates an outer shell substantially elliptical in horizontal section, as clearly illustrated in Fig. 3 of the drawing, and provided at its bottom 2, with a substantially elliptical opening, through which extends an inner fire box shell 3. The inner fire box shell 3, which is of substantially the same shape as the outer shell, is of less diameter than the same, and is spaced from the walls thereof, whereby a smoke chamber 4 is formed between the said shells.

The inner fire box shell is provided with a horizontal bottom 5, and it has an outwardly extending substantially annular flange 6, which fits against the bottom of the outer shell, as clearly shown in Figs. 2 and 5 of the drawing. The outer shell is provided at its bottom with depending lugs 7, having eyes or openings, for the reception of horizontal stems 8, of legs 9, which

support the stove above the floor, as shown. The reduced portions or stems 8 of the legs extend inwardly from the upper ends of the same and pass through the eyes or openings of the lugs, and extend beneath the substantially annular flange 6 of the inner shell, whereby the latter is detachably secured to the outer shell, and is readily removable therefrom, should it burn out and require repair or renewal. Bolts 10 can be used at the top of the fire box shell, as hereinafter explained, to hold it in position, but they are not necessary. The shanks or stems 8 of the legs are flattened, as shown to provide flat upper faces for supporting the inner shell, and the depending eyes or openings for the reception of the stems may be formed in any desired manner, as will be readily understood. By removing the legs from the depending eyes, the inner fire box shell may be readily detached.

The outer shell is provided with a horizontal top 11, and the upper edge of the inner shell is provided with an inwardly-extending horizontal flange 12, which fits against the lower face of the top 11 of the outer shell, and which may be secured to the same by the said bolts 10, but the latter may be omitted, as before explained. When the bolts are employed, it will be necessary to remove the nuts when it is desired to detach the inner fire box shell.

The top 11 of the stove is provided with an opening 13, which communicates with the inner fire box shell, and which is designed for the introduction of the fuel. The opening is normally closed by a cover or door 14, which completes the top of the stove, and which is pivoted at one side or end by a bolt 15, or other suitable fastening device. The cover preferably rests upon a ledge 16, which surrounds the opening 13 of the top of the stove.

Communication is established between the interior of the fire box shell and the smoke chamber 4 by means of an opening 17, located in the upper portion of the fire box at one end of the stove. The products of combustion escape from the other end of the smoke chamber through an outlet 18, formed in that portion of the top 11 which extends across the smoke chamber 4, as clearly shown in Fig. 2 of the drawing. The necessary draft is obtained through an inlet to the fire box shell by means of a pipe or tube 19, extending across the lower portion of the smoke chamber on the side opposite the opening 17. The tube is preferably provided with two telescope sections, one of which is carried by each of the shells. The tube or flue is provided with an upright portion 20, consisting preferably of a semi-tubular plate or member secured to the inner face of the outer shell and extending to the upper portion thereof, as clearly illustrated in Figs. 2 and 3 of the drawing. The upper portion of the outer shell is provided with air inlet openings 21, and the draft is controlled by a damper 22. The damper is preferably pivoted by a bolt 23,

or other suitable fastening device, but any other desired form of damper may be provided, as will be readily understood.

- The bottom of the inner fire box shell is provided at one end of the stove with an opening 24, for the removal of ashes, and this opening is normally covered by a slide 25, arranged in suitable guides or ways 26, located at opposite sides of the opening 24, and at the inner end of the same.
- The fire is built within the fire box shell, and the products of combustion pass through the opening 17 into the smoke chamber 4, thence passing freely in either direction about the fire box shell, they will be in contact with the outer shell until they enter the smoke outlet 18, to which an ordinary stove pipe is connected. The draft can be readily regulated by means of the damper at the upper end of the inlet tube or flue. Thus, the products of combustion can be retarded, as desired, and as they must necessarily take a tortuous path and come into contact with a comparatively large amount of radiating surface, the heat contained in the said products of combustion will be given up, and its loss through the outlet prevented. As the result, the stove is very economical in the amount of fuel consumed. It will also be evident that the parts are simple and can be readily assembled. Should the fire box be burned out, it may be readily removed by detaching the legs, and the top bolts, if the latter be employed, disengaging the telescoping sections of the draft inlet pipe 19. This will enable the fire box shell to be either repaired or replaced by a new shell.

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

1. In a stove, the combination of an outer shell having an opening in its bottom, an inner fire box shell passed through the opening of the outer shell and spaced from the latter for forming a smoke chamber between the two, a top covering the fire box and the smoke chamber and cutting off all communication between the upper ends of

the same, said fire box shell having outlet communication with the smoke chamber, a draft inlet to the fire box extending through the smoke chamber and through the shells between the top and bottom thereof, a smoke outlet communicating with the smoke chamber above the draft inlet, and means for detachably supporting the fire box shell within the outer shell.

2. In a stove, the combination of an outer shell, an inner shell introduced into the outer shell through an opening of the bottom of the outer shell, and legs mounted on one of the shells and detachably engaging the other, substantially as described.

3. In a stove, the combination of an outer shell having an opening in its bottom, an inner shell passed through the opening of the bottom of the outer shell, and legs mounted on the outer shell and engaging the inner shell and detachably securing the same to the said outer shell, substantially as described.

4. In a stove, the combination of an outer shell having depending eyes and provided in its bottom with an opening, an inner shell passed through the opening of the bottom of the outer shell, and legs having projecting portions extending through the eyes of the outer shell and engaging the inner shell, whereby the latter is detachably secured to the outer shell, substantially as described.

5. In a stove, the combination of an outer shell having an opening in its bottom, an inner shell passed through the opening of the bottom of the outer shell and provided with a projecting flange for engaging the said bottom, and legs mounted on the outer shell and having projecting portions detachably engaging the said flange, whereby the inner shell is removably secured to the outer shell, substantially as described.

6. In a stove, the combination of an outer shell having an opening in its bottom, an inner shell passed through the opening of the outer shell and provided at its top and bottom with projecting flanges, the upper flange being fitted against the top of the outer shell, and the lower flange being detachably secured to the bottom of the same, substantially as described.

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

WILLIE A. HAMMER.

Witnesses:

J. W. EMISON,
JOE. EMISON.