

(No Model.)

C. V. ROBERTS.
WOOD BURNING STOVE.

No. 575,617.

Patented Jan. 19, 1897.

FIG. 2.

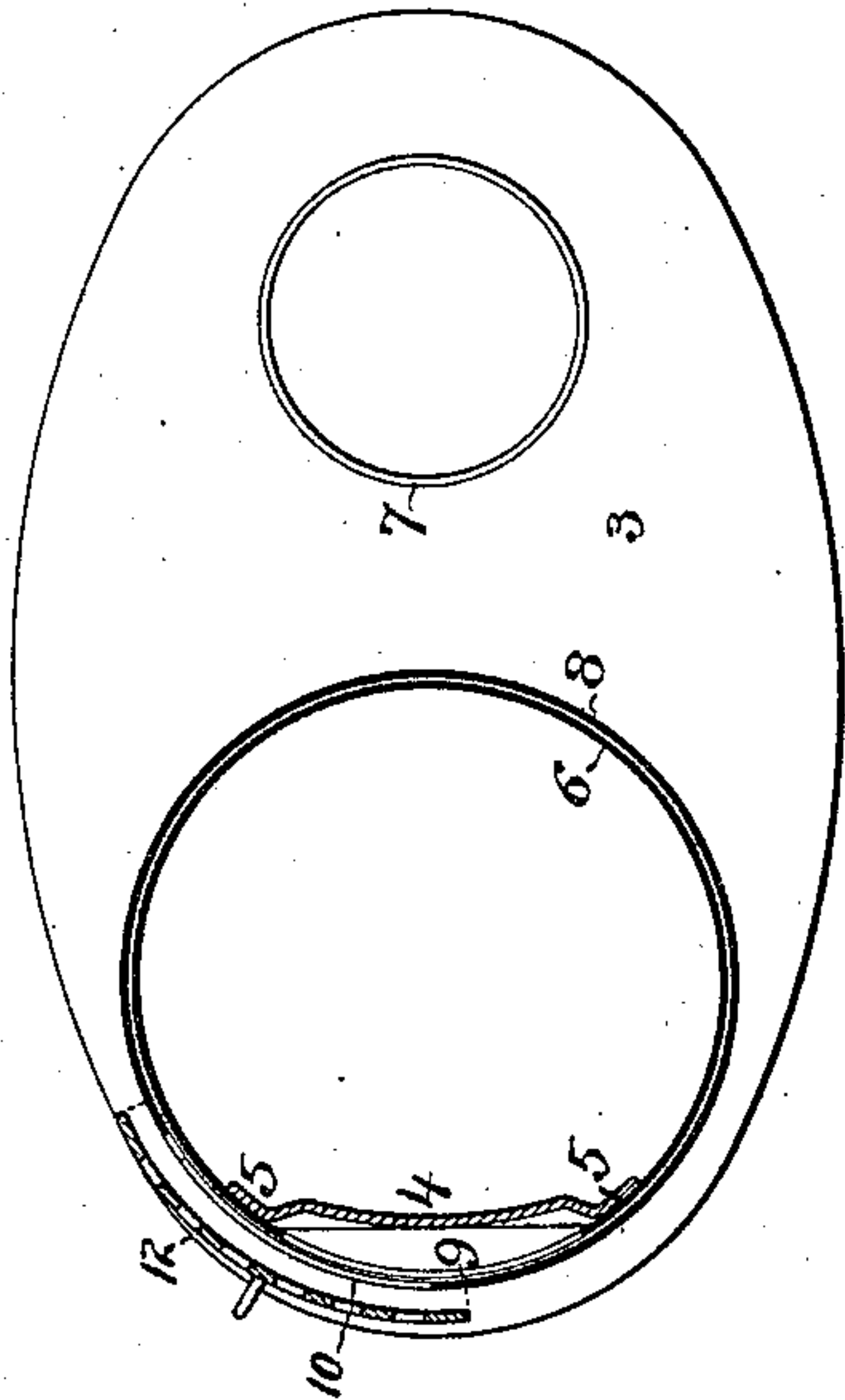


FIG. 3.

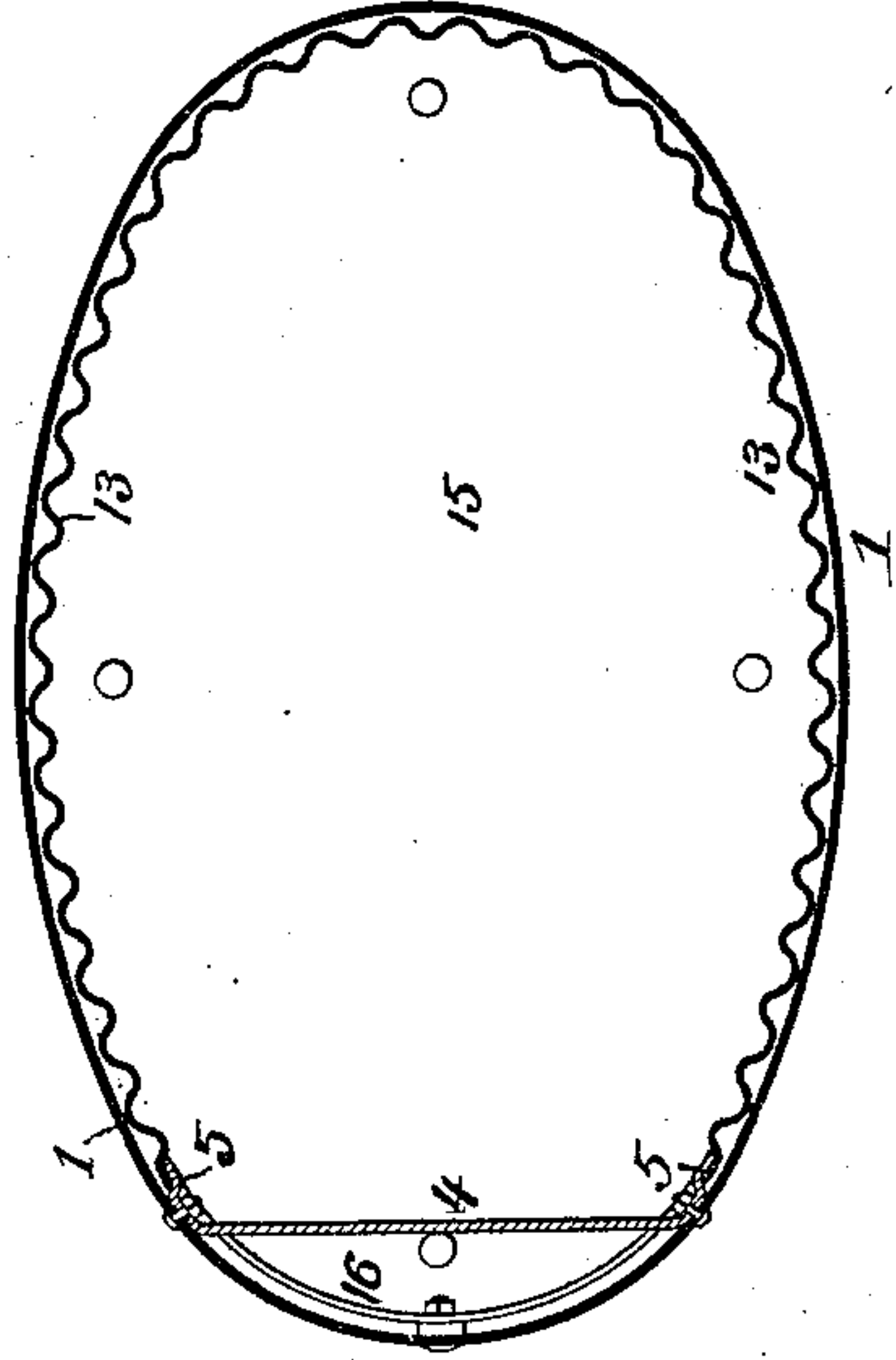
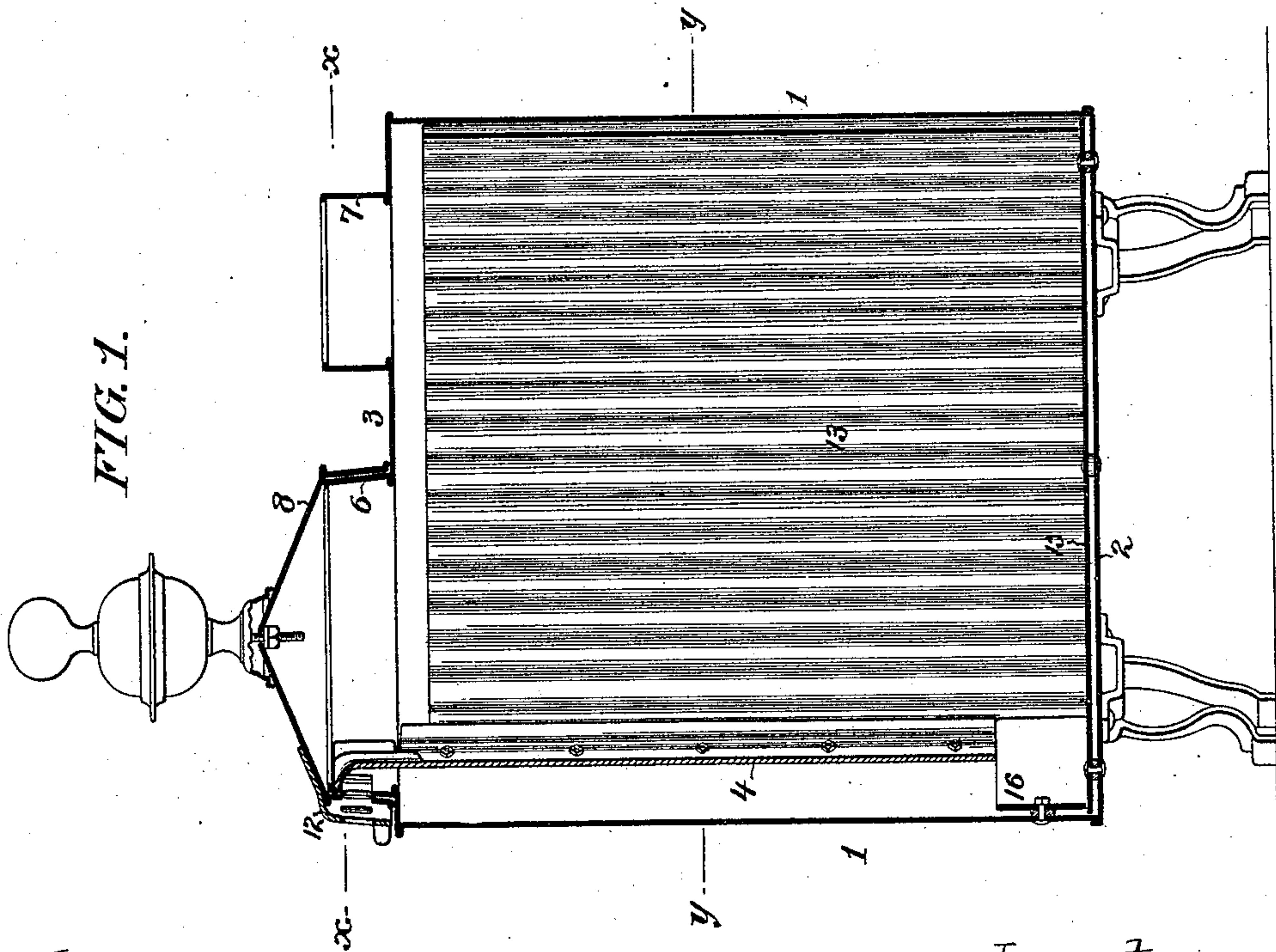


FIG. 1.



Witnesses:
Hamilton D. Turner
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Inventor:
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by his Attorneys,
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UNITED STATES PATENT OFFICE.

CLARENCE V. ROBERTS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
THE THOMAS, ROBERTS, STEVENSON COMPANY, OF SAME PLACE.

WOOD-BURNING STOVE.

SPECIFICATION forming part of Letters Patent No. 575,617, dated January 19, 1897.

Application filed November 30, 1896. Serial No. 614,014. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE V. ROBERTS, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Wood-Burning Stoves, of which the following is a specification.

My invention consists of certain improvements in that class of wood-burning stoves which have bodies designed to be practically air-tight at the joints, but provided with damper-controlled air-inlet openings whereby air to support combustion is admitted to the lower portion of the combustion-chamber, the object of my invention being to so construct a stove of this class as to lessen the number of parts composing the same, and thereby reduce the number of joints, and to provide for convenient and effective control of the air-supply, the structure also possessing the merits of strength and lightness.

In the accompanying drawings, Figure 1 is a longitudinal vertical section of a wood-burning stove constructed in accordance with my invention. Fig. 2 is a sectional plan view of the same on the line *xx*, Fig. 1; and Fig. 3 is a sectional plan view on the line *yy*, Fig. 1.

The casing of the stove consists of the drum or body 1, preferably cylindrical or oval in shape, the bottom 2, and the top plate 3, all of these parts being of sheet metal and being secured together so as to form practically air-tight joints.

Extending transversely across the interior of the stove near one end of the same is a partition-plate 4, preferably of cast metal, this partition-plate having edge flanges 5, whereby it is secured to the sheet-iron drum or body of the stove. Projecting upwardly from the top plate 3 of the stove are annular flanges 6 and 7, the flange 6 surrounding the feed-opening and the flange 7 constituting the stove-pipe-neck, through which the products of combustion escape.

The flange 6 is tapered slightly inward from bottom to top, and to this tapered flange is snugly fitted the annular flange of a lid or cover 8, so that when the latter is pushed down upon the flange 6 a practically air-tight joint will be formed between the two. Both the flange 6 and the cover 8 are of sheet metal, and therefore fit snugly one to the other and

maintain the tight joint without impairment, such as frequently results from unequal expansion and contraction when a cast-metal portion of a stove is fitted to a sheet-metal portion of the same.

The upper portion of the partition-plate 4 extends up into the flange 6 on the top plate of the stove, the opposite flanged edges of the partition-plate being suitably secured to said flange 6, as shown in Fig. 3, and the top of the partition-plate being curved forward, so as to meet the flange, as shown in Fig. 1.

That portion of the flange 6 which is thus inclosed by the upper portion of the partition-plate 4 is cut away, as shown at 9 in Fig. 3, and the depending flange of the cover 8 has a like opening 10, as also shown in said Fig. 3, such opening being, by preference, covered and hidden from view by means of a perforated ornamental hood 12.

The partition-plate 4, in connection with the drum or body 1 of the stove and the flange 6 of the top plate 3, forms a flue extending down to the lower portion of the combustion-chamber, and by properly adjusting the lid or cover 8 as much or as little of the opening 9 may be uncovered as the desired amount of draft for the stove may suggest, the draft being entirely cut off when the lid or cover 8 is turned so as to carry its opening 10 away from the opening 9, and full draft being permitted when said lid or cover 8 is turned so as to bring its opening 10 into full register with the opening 9.

As shown in Fig. 3, the lid or cover is adjusted to mid-position, the draft being reduced to one-half of its full volume. By this means the lid or cover 8 serves the double purpose of covering the feed-opening of the stove and of regulating the supply of air to the combustion-chamber, a special dampered flue being rendered unnecessary and the number of joints and possibility of leakage being thereby reduced to a minimum.

To prevent contact of the burning wood, hot ashes, or products of combustion with the casing or drum 1 of the stove, as well as to prevent the same from being injured by contact with the fuel, I employ a lining 13, preferably of heavy corrugated sheet metal, so disposed as to leave a contracted space 14 be-

tween the same and the outer casing of the drum, this corrugated lining extending from top to bottom of the combustion-chamber and completely around the same from the flue-plate at one side of the stove to said plate at the opposite side of the same.

The front edges of the lining-plate 13 are confined in place by the flanges of the flue-plate 4. Hence when the lining-plate is burned out or defective for any other reason it can be removed and a new lining-plate substituted for it, the flue-plate 4 being first released and removed through the feed-opening in the top of the stove and the lining-plate then rolled up, so that it can be likewise removed through said opening, the new lining-plate, while rolled, being passed into the stove through the feed-opening, then spread out and the flue-plate returned and secured in place, so as to confine the edges of said new lining-plate.

The stove has also a false bottom 15, supported a short distance above the bottom plate 2, and around the front of the drum 1 below the flue-plate 4 extends a guard-plate 16, supported a short distance inwardly from the drum and serving to prevent contact of the hot ashes with the latter at that point.

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

1. A stove having around the top feed-opening a projecting flange with draft-opening therein, an internal flue-plate inclosing that portion of said flange in which the opening is formed, and a lid or cover fitting snugly to said flange and having an opening which by rotative adjustment of the cover may be caused to open the upper end of the flue to any desired extent, substantially as specified.

2. The combination in a stove, of a drum

or body of sheet metal, a top plate having a feed-opening with upwardly-projecting flange surrounding the same and having a draft-opening therein, a cast-metal flue-plate bridging the body near one end of the same and extending up into said flange so as to inclose the draft-opening therein, and a lid or cover fitting snugly to the flange and also having an opening therein, substantially as specified.

3. The combination of the stove having a sheet-iron drum or body, a bottom plate, a top plate with stovepipe-collar and feed-opening with upwardly-projecting flange surrounding the same and having an opening therein, a transverse cast-metal flue-plate secured to the sheet-metal drum or body, and projecting up into the flange so as to inclose the opening therein, a detachable lid or cover fitted to said flange and also having an opening and a corrugated lining bounding the combustion-chamber of the stove, substantially as specified.

4. The combination of the sheet-metal drum or body of the stove, the transverse flue-plate removable through the feed-opening in the top of the stove and having edge flanges secured to said drum or body of the stove, and the lining-plate having its front edges confined in place by the flanges of said flue-plate, substantially as specified.

5. The combination of the drum or body of the stove, the flue-plate, the lining, and the guard-plate located beneath said flue-plate, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CLARENCE V. ROBERTS.

Witnesses:

CHAS. H. BANNARD,
F. E. BECHTOLD.