

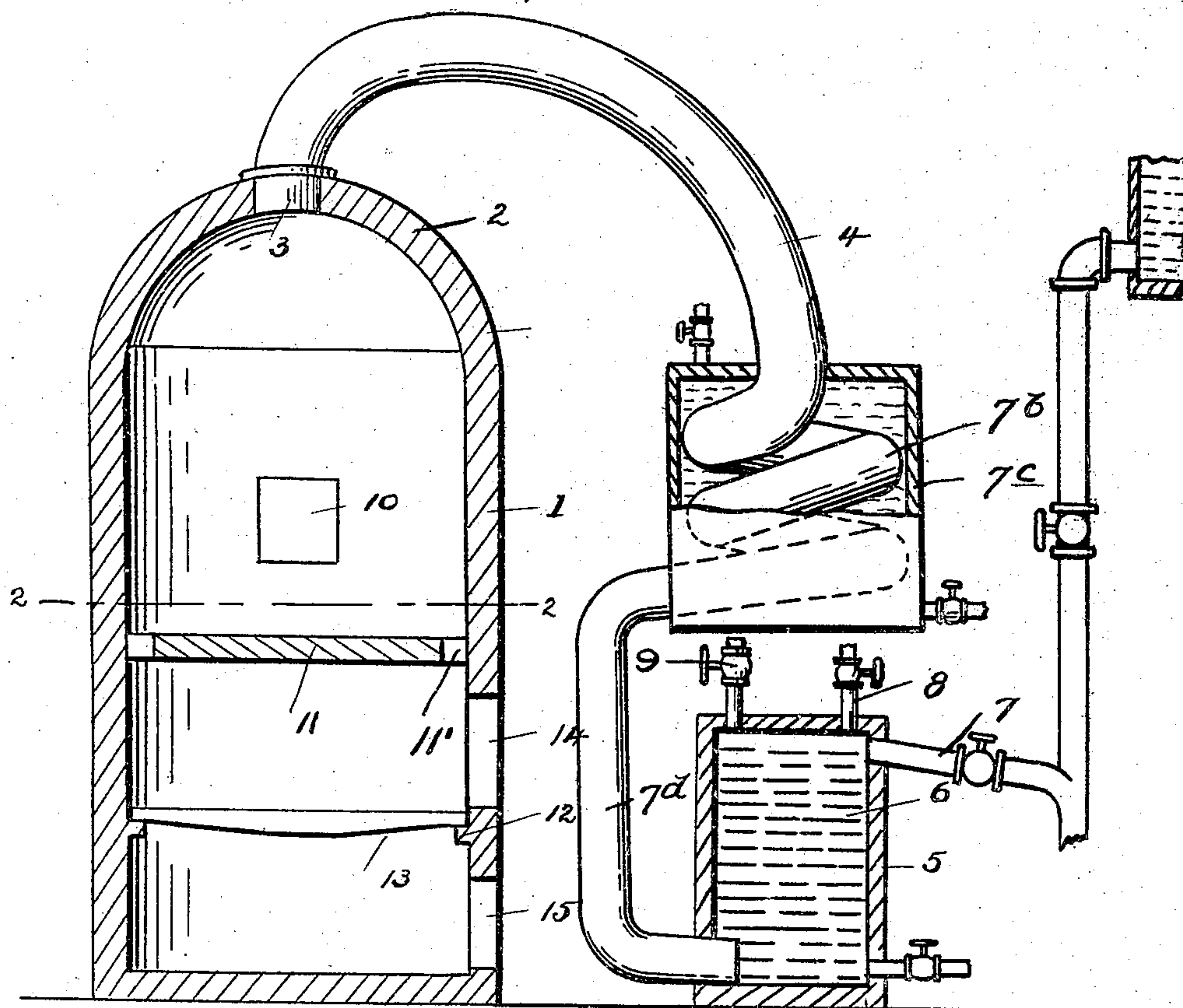
No. 767,180.

PATENTED AUG. 9, 1904.

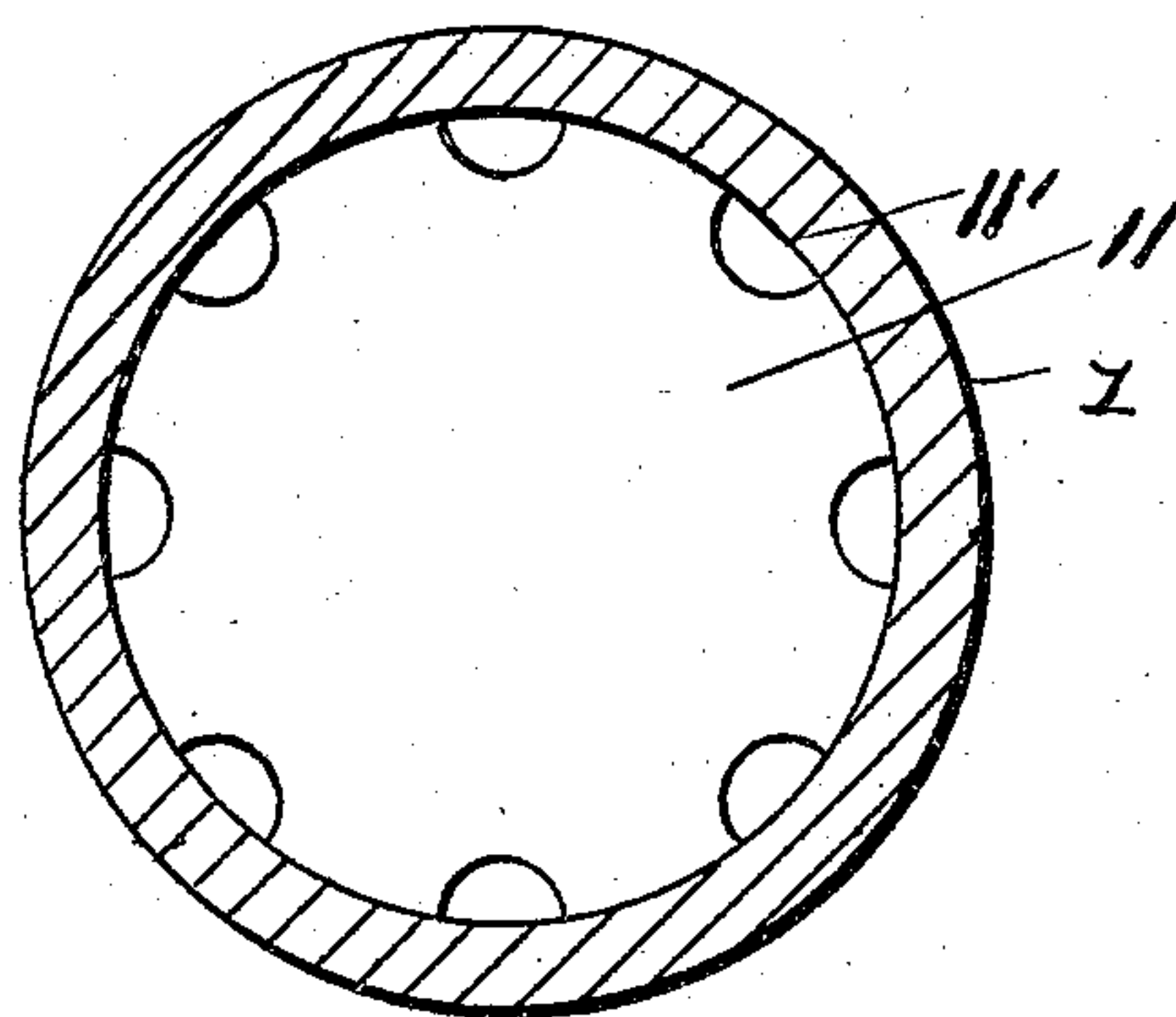
C. W. STANTON.  
FURNACE FOR BURNING MATERIALS.  
APPLICATION FILED OCT. 10, 1902.

NO MODEL.

*Fig. 1.*



*Fig. 2.*



*Witnesses:*  
*Edw. Kessler*  
*Fennie Sundry.*

*Inventor*  
*Charles W. Stanton*  
*By*  
*James L. Norrie*  
*Att'y.*

# UNITED STATES PATENT OFFICE.

CHARLES WALDREN STANTON, OF MOBILE, ALABAMA.

## FURNACE FOR BURNING MATERIALS.

SPECIFICATION forming part of Letters Patent No. 767,180, dated August 9, 1904.

Application filed October 10, 1902. Serial No. 126,777. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES WALDREN STANTON, a citizen of the United States, residing at Mobile, in the county of Mobile and State of Alabama, have invented new and useful Improvements in Furnaces for Burning Material, of which the following is a specification.

This invention relates to certain new and useful improvements in furnaces for burning materials, such as brick, tile, or other earthy substances; and it consists of the novel combination and arrangement of parts hereinafter more specifically described, and illustrated in the accompanying drawings.

Referring to the invention in detail, reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout both views, in which—

Figure 1 is a vertical sectional elevation of my improved furnace, and Fig. 2 is a transverse sectional view of the furnace on line 2 2 of Fig. 1.

Referring to the drawings by reference-numerals, 1 denotes the furnace, which is substantially cylindrical in contour and provided in its top with a dome 2, the latter having a discharge-opening 3, in which is hermetically connected the lower end of the gas-take-off pipe 4. The other end of the gas-take-off pipe 4 terminates in a worm 7<sup>b</sup>, arranged in the receptacle 7<sup>c</sup>, forming a condensing-chamber, in which is placed a suitable cooling medium. The end of the worm 7<sup>b</sup> projects from the receptacle 7<sup>c</sup> and terminates in a pipe 7<sup>d</sup> for the discharge of the products of condensation or the uncondensed products into a suitable receptacle 5, forming a reservoir. The receptacle is provided with a liquid seal 6, which prevents any back pressure of air to the worm and further prevents the escape to the atmosphere of any of the uncondensed products.

The reference-numeral 7 denotes a draw-off cock for the products of condensation, and the reference-numeral 8 denotes a draw-off cock for the uncondensed products, which may

be discharged into the atmosphere or carried to any suitable point and used for any suitable purposes. The receptacles 5 and 7<sup>c</sup> are provided with suitable inlet and outlet cocks. To the draw-off cock 8 is connected a suitable suction device 8<sup>a</sup>.

The furnace-wall 1 is constructed with a door 10 to permit of entrance to the interior of the furnace, and this door 10 when closed is adapted to be hermetically sealed. The interior of the furnace 1 is also provided with an annular plate 11, provided with openings 11' for supporting the material to be burned or dried. The interior of the furnace is also provided near its lower end with a series of projections 12 to support the grate-bars 13. The reference-numeral 14 denotes a fire-door, and the reference-numeral 15 denotes the entrance to the ash-pit.

The device is operated in the following manner: The material is placed in the furnace and the door 10 hermetically sealed, and when the material is being burned the gases are passed off through the pipe 4 into the condensing apparatus and the products of condensation or uncondensed products discharged into the receptacle 5 through the pipe 7<sup>d</sup> and be discharged from the receptacle 5 through the cocks 7 and 8.

The reference character 9 denotes a filling-pipe provided with a cut-off and which is connected to the top of the receptacle 5.

The invention aims to hermetically seal the chamber in which the material is placed, so that it will be thoroughly burned, the draft being taken from the entrance to the ash-pit 15.

It is thought the many advantages of such a construction can be readily understood from the foregoing description, taken in connection with the accompanying drawings, and it is thought that minor changes may be made in the details of construction without departing from the general spirit of my invention.

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

In combination, a furnace provided with an apertured plate forming thereby a chamber



above the fire-box, said chamber being closed  
and provided with an entrance-opening, a her-  
metically-sealable door for said opening, a  
take-off pipe connected to the top of said fur-  
5 nace and communicating with the interior  
thereof, a condensing apparatus communicat-  
ing with the outer end of said take-off pipe, a  
reservoir adapted to contain a liquid seal, and  
a pipe communicating with the bottom of said

condensing apparatus and extending in said 10  
reservoir near the bottom thereof.

In testimony whereof I have hereunto set  
my hand in presence of two subscribing wit-  
nesses.

CHARLES WALDREN STANTON.

Witnesses:

GEO. W. REA,

PHILIP N. TILDEN.