No. 784,507. PATENTED MAR. 7, 1905.

T. VANTINE.

OIL OR GAS BURNER.

APPLICATION FILED NOV. 1, 1904.

Fig. 1.

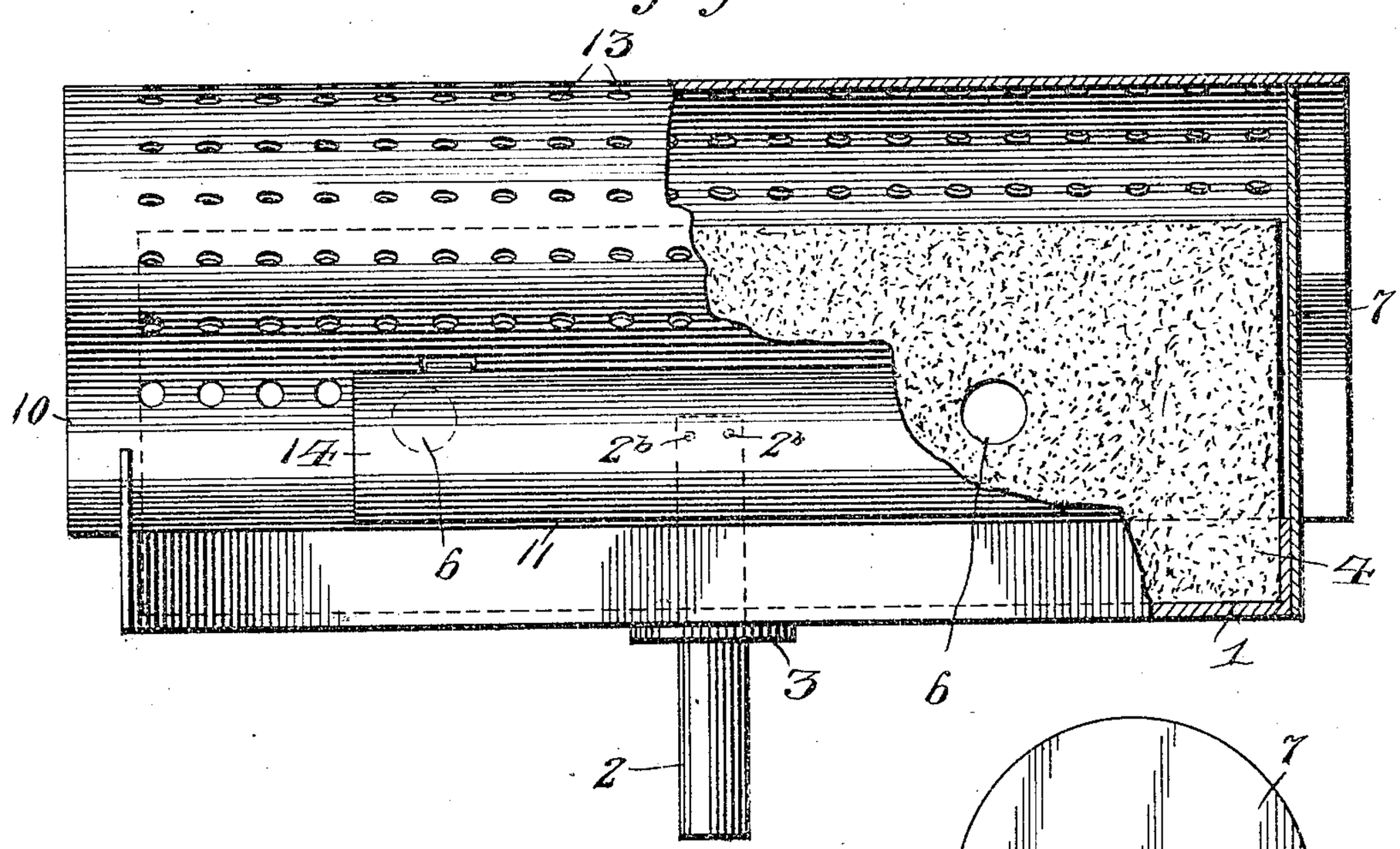


Fig. 2.

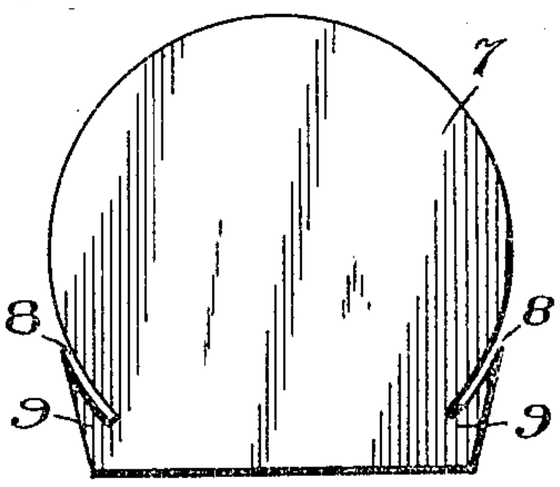
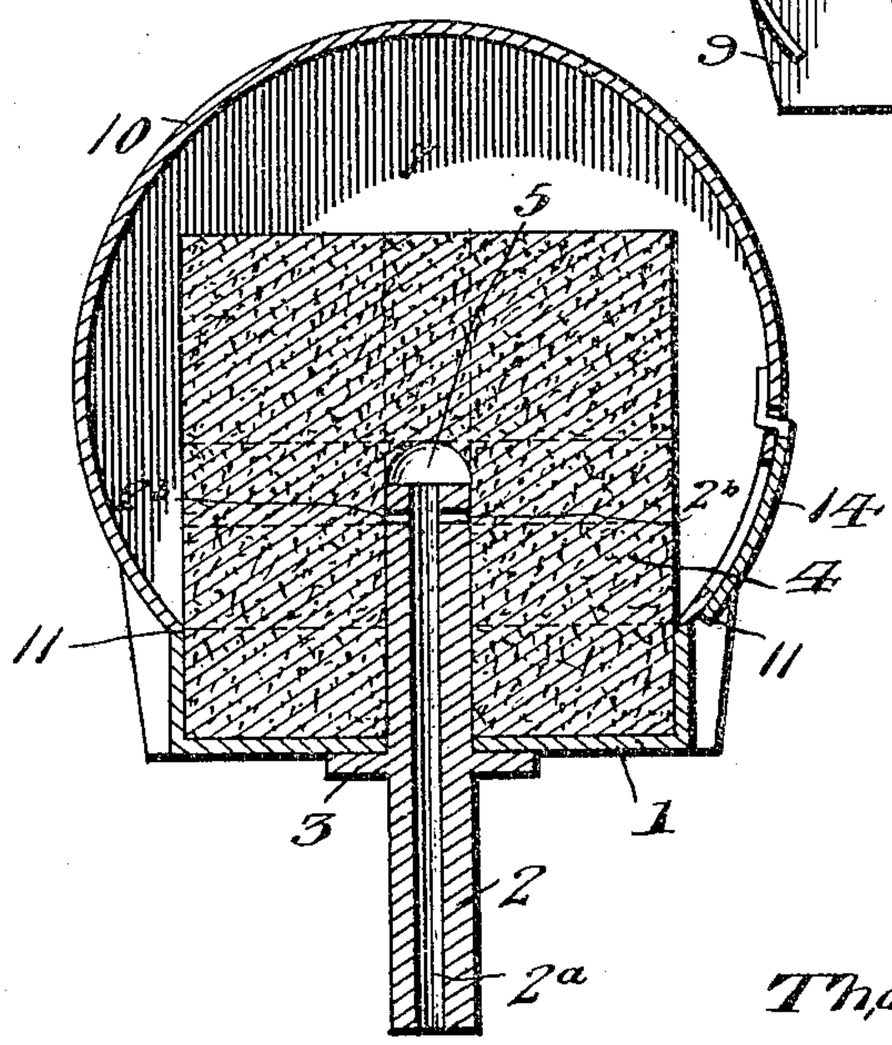


Fig. 3.



Witnesses

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No. 784,507. Patented March 7, 1905.

UNITED STATES PATENT OFFICE.

THOMAS VANTINE, OF NEW CAMBRIA, MISSOURI, ASSIGNOR OF ONE-HALF TO JOHN T. JONES, OF NEW CAMBRIA, MISSOURI.

OIL OR GAS BURNER.

SPECIFICATION forming part of Letters Patent No. 784,507, dated March 7, 1905.

Application filed November 1, 1904. Serial No. 230,961.

To all whom it may concern:

Be it known that I, THOMAS VANTINE, a citizen of the United States, residing at New Cambria, in the county of Macon and State of Missouri, have invented new and useful Improvements in Oil or Gas Burners, of which the following is a specification.

This invention relates to oil or gas burners.

The objects of the invention are to improve and simplify the construction of such devices; furthermore, to increase their efficiency in operation and to decrease the consumption of oil or gas.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in a burner comprising a tray, a suitable fire-brick therein, end plates secured to said tray, a perforated casing supported by said end plates, and means for supplying oil or gas to the interior of said fire-brick.

The invention also resides in the particular combination and arrangement of parts and in the precise details of construction hereinafter described and claimed as a practical embodiment thereof.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation, partly in section, of a burner constructed in accordance with the invention. Fig. 2 is a transverse vertical section thereof. Fig. 3 is a detail view of one of the end plates.

Like reference-numerals indicate corresponding parts in the different views.

The reference-numeral 1 indicates the tray of the improved burner, which preferably is of shallow rectangular form. The tray 1 is supported upon a supply-pipe 2, which is provided with a collar 3, on which the tray 1 rests. The supply-pipe 2 is formed with a small bore 2^a and with a plurality of lateral outlet-passages 2^b adjacent to its upper end. Seated in the tray 1 is a fire-brick 4, which may be composed of any suitable material—such, for example, as fire-clay or asbestos. The fire-brick 4 is formed with a suitable vertical passage 5, into which the upwardly-projecting end of the supply-pipe 2 extends. Adjacent to either end the fire-brick 4 is formed with a suitable laterally-extending passage 6.

Attached to each end of the plate 1 is an end plate 7, such as shown in Fig. 3, said end plate having an arched upper end and being formed at its lower end with notches 8 to produce supporting-wings 9. Resting upon the arched upper portion of the end plate 7 is a casing 10, the lower edges 11 of said casing fitting into the notches 8 of the end plates and the end portions 12 of said casing projecting in a longitudinal direction beyond the end plate. Suitable perforations 13 are formed in the casing 10, the lower perforations serving to permit the entrance of air and the upper perforations the exit of products of combustion. The casing 10 is provided on one side with a door 14 to permit the ignition of the burner.

The operation of the improved burner will be apparent from the foregoing description in connection with the drawings. The oil or gas which is fed through the small bore of the supply-pipe 2 passes through the porous material of the fire-brick 4 and serves to heat the casing. The lateral passages 6 through the fire-brick 4 permit the circulation of air therethrough.

The improved burner of this invention is adapted to take the place of coal or other fuel, as it is inexpensive in construction as well as clean and efficient in operation. It can be made of any desired size to fit any heating or cooking stove. Furthermore, it can be used as a stove itself or can be placed in the fire-box of a locomotive or stationary engine.

Changes in the precise embodiment of invention illustrated and described may be made within the scope of the following claims without departing from the spirit of the invention or sacrificing any of its advantages.

It will be understood by those skilled in the art to which this invention relates that suitable air-pressure may be employed in feeding the oil or gas to the burner in order to induce more rapid and complete combustion.

Having thus described the invention, what is claimed is—

1. A burner comprising a tray, a fire-brick therein, end plates on said tray having notches therein to produce wings, and a perforated casing resting upon the end plates and having its lower edges fitting into the notches thereof, the ends of said casing extending longitudinally beyond said end plates.

2. A burner comprising a tray, a fire-brick having passages extending therethrough, a supply-pipe extending through said tray and into one of the passages of said brick, a collar upon said supply-pipe resting against the bottom of said tray, end plates on said tray having notches therein to produce wings, and having arched upper portions, a perforated casing resting on the arched portions of said end plates and having its lower edges fitting into the notches thereof, the ends of said casing extending longitudinally beyond said end plates, and a door for said casing.

3. A burner comprising a tray, a fire-brick therein, end plates on said tray having notches therein to produce wings, and a perforated casing resting upon the end plates and having its lower edges fitting into the notches thereof.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS VANTINE.

Witnesses:
W. B. GREER,
H. E. TRADER.