

No. 782,607.

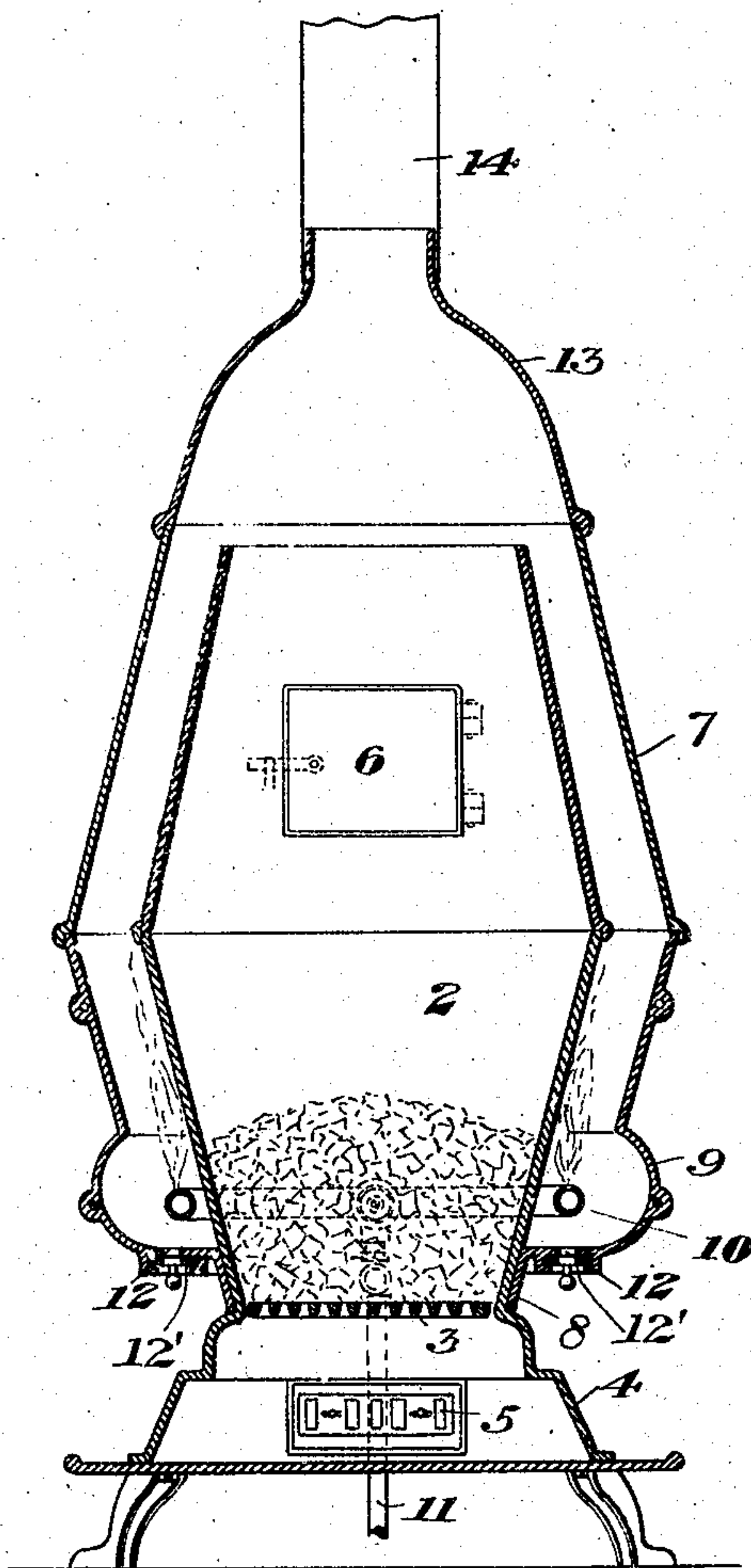
PATENTED FEB. 14, 1905.

B. MASSETH & D. W. BLACK.

J. N. HYLE & O. WALKER, EXECUTORS OF B. MASSETH, DEC'D.

COAL AND GAS STOVE.

APPLICATION FILED SEPT. 10, 1903.



INVENTORS

WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN N. HYLE AND CLARENCE WALKER, EXECUTORS OF BENJAMIN MASSETH, DECEASED, AND DAVID W. BLACK, OF BUTLER, PENNSYLVANIA.

## COAL AND GAS STOVE.

SPECIFICATION forming part of Letters Patent No. 782,607, dated February 14, 1905.

Application filed September 10, 1903. Serial No. 172,852.

*To all whom it may concern:*

Be it known that BENJAMIN MASSETH and DAVID W. BLACK, of Butler, in the county of Butler and State of Pennsylvania, did invent a new and useful Coal and Gas Stove, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, in which the figure is a central vertical section of a coal and gas stove constructed in accordance with the invention.

The invention relates to the class of heating-stoves, and is designed to provide a stove which is equally well adapted for the use of gas as a fuel and for the use of solid fuel, such as coal or wood.

In regions where natural gas is used as a fuel it frequently occurs that the supply of gas is insufficient or is cut off for some time. In such cases the stoves ordinarily used for gaseous fuel are not adapted for solid fuel and even if solid fuel is at hand it cannot be used.

The invention provides a stove which may be used for either gases or solid fuel or for both at the same time.

In the drawing, in which is shown the invention applied to an ordinary form of coal-stove, 2 represents the body of the coal-stove, 3 the grate, and 4 the hollow base, with a suitable damper 5. The top of the stove-body 2 is open, and a fuel-door 6 is provided in the side of its upper portion. To adapt this stove for the use of gas as a fuel, an outer surrounding casing 7 is provided, which may be of cast or sheet metal and which preferably extends down to and is supported upon the lower portion of the body 2, as shown at 8. The lower part 9 of this outer casing may be swelled outwardly to provide a chamber of suitable size which receives an annular gas-burner 10, extending around the lower part of the inner casing 2. This burner is supplied from a pipe 11, leading to a suitable mixer, which extends through the part 9 of the outer casing. This part 9 is provided with a series of lower holes 12, which form air-inlets lead-

ing into the annular space between the two shells. These holes are preferably controlled by a rotary annular valve or damper 12'.

The outer shell or casing may conform, approximately, to the shape of the inner shell and is contracted in its upper part 13 to fit the stove-pipe 14. The outer shell is provided with a door which registers with the door 6, so that by opening the two doors solid fuel may be charged into the coal-stove proper.

In using the stove the gas-burner may be used alone, flame and gases rising around the inner casing and passing up the outlet-flue. If coal is to be used, the gas-supply is shut off and coal or other solid fuel supplied through the doors to the inner stove and burned in the ordinary manner.

The advantages of the invention result from the combined stove structures, one arranged around the other, so that solid fuel may be used or gaseous fuel, or both, burned simultaneously.

By the words "coal and gas stove" in the claims it is intended to cover the stove adapted for any solid fuel in connection with gas.

Many variations may be made in the form and arrangement of the stove structure, the gas-burner, &c., without departing from the invention, since

What is claimed is—

1. A combined coal and gas heater comprising an inner combustion-chamber arranged to receive solid fuel and having an offtake-flue, an outer casing surrounding said combustion-chamber, and an annular fluid-fuel burner arranged between the solid-fuel combustion-chamber and the surrounding casing; substantially as described.

2. A combined coal and gas stove, comprising an inner stationary stove structure arranged to receive solid fuel and having an offtake-flue, an outer shell surrounding it with an annular chamber between them leading to the same offtake-flue, and having air-inlets in its lower part, and a circular gas-burner arranged in the lower part of the annular chamber; substantially as described.



3. A combined coal and gas stove, comprising an inner stationary stove structure arranged to receive solid fuel and having an off-take-flue, an outer shell surrounding it with  
5 an annular chamber between them leading to the same offtake-flue, and having valve-controlled air-inlets in its lower part, and a circular gas-burner arranged in the lower part of the annular chamber; substantially as described.  
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In testimony whereof we have hereunto set our hands.

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Witnesses:

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