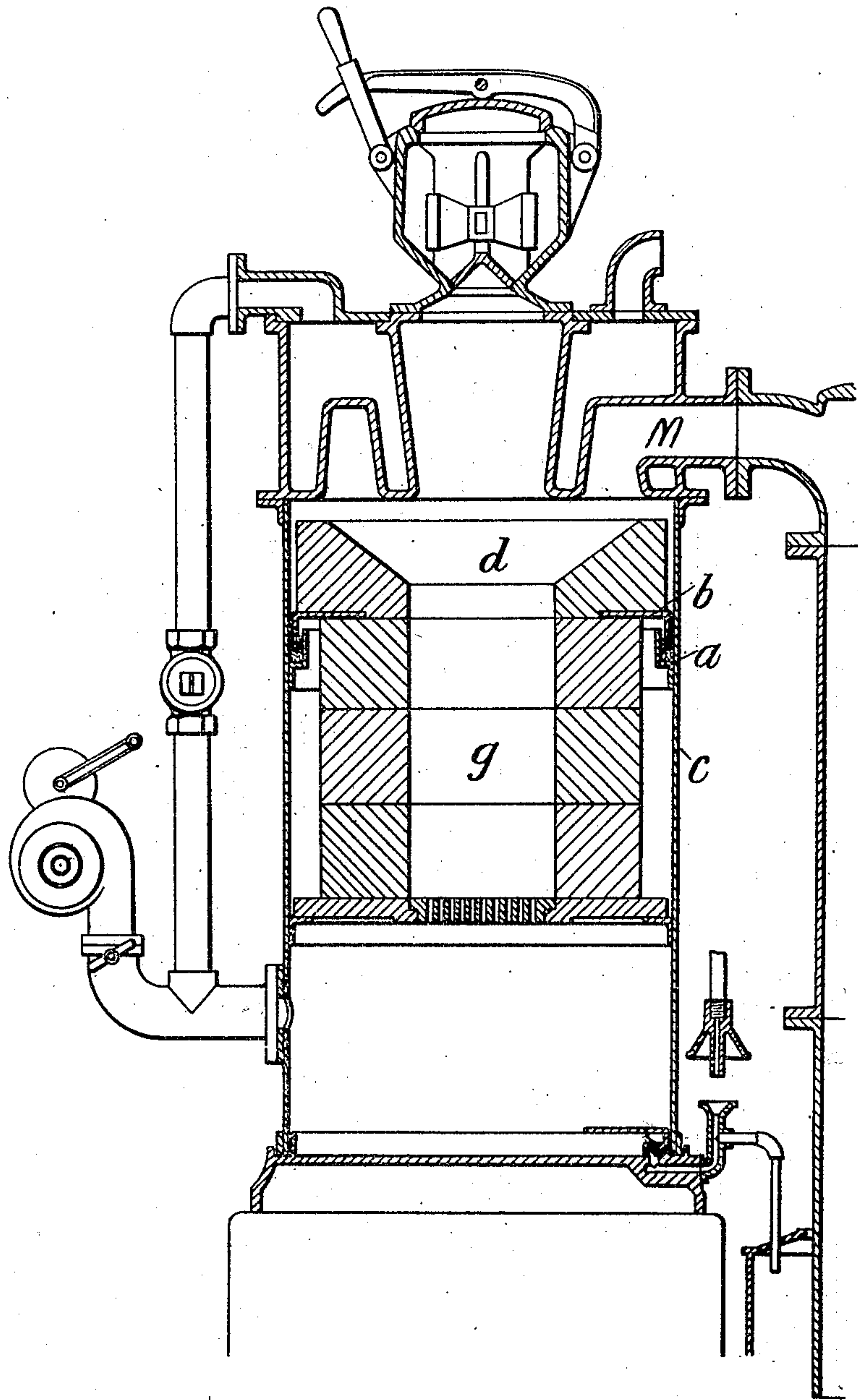


No. 837,755.

PATENTED DEC. 4, 1906.

F. THIELE.
GAS PRODUCER.

APPLICATION FILED JULY 7, 1906.



Attest

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UNITED STATES PATENT OFFICE.

FRIEDRICH THIELE, OF HILDESHEIM, GERMANY.

GAS-PRODUCER.

No. 837,755.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed July 7, 1906. Serial No. 325,101.

To all whom it may concern:

Be it known that I, FRIEDRICH THIELE, a subject of the German Emperor, and a resident of Hildesheim, Germany, have invented a certain new and useful Improvement in Gas-Producers, of which the following is a specification.

This invention relates to improvements in gas-producers, and has for its object to provide means for preventing leakage of air between the brickwork and the casing into the gas-outlet connection.

Gas-producer plants at present in use offer the objection that in case the masonry or brickwork of the shaft is not gas and air tight a part of the air which serves for the combustion or gasification of the coal does not traverse the shaft, but passes through the bricks to the space between the outside casing and the brickwork and thence to the gas-outlet connection, and the gas coming from the shaft is thus in part consumed to form carbon dioxid.

Under my invention this disadvantage is avoided by providing a sand seal located at the normal height of the shaft between the outside casing and the brickwork. As a rule the brickwork cracks only at the lowest layer, while the upper bricks hold firmly together. Any circulation of air between the casing and the bricks is altogether prevented by means of the sand seal. If, however, the second or even the third layer of bricks becomes defective, the sand seal forces the air to return to the shaft and to pass through a secondary shaft located above the sand seal and the height of which can naturally be less than that of the primary shaft. In this way the air gasifies the coal in known manner. The secondary shaft may be short, because the

quantity of air admitted thereto will be relatively small and will contain a larger proportion of carbon dioxid. The effect is thus that the gas produced, even after the apparatus has been long in use and the brickwork becomes defective, is poor in carbonic-acid gas.

The accompanying drawing shows the improved producer in longitudinal vertical section.

In the drawing, *g* is the primary shaft.

b is a plate fitted into a recess or groove in the brickwork, and *a* a plate secured to the outer casing *c*. Between said plates *b* and *a* is a sand seal, which forms an air-tight closure which is maintained despite unequal expansion. The secondary shaft *d* is located above the plate *b* and leads to the gas-outlet *M*.

Having described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

The improved gas-producer comprising, in combination, a primary shaft *g* of brickwork, a secondary shaft *d* also of brickwork, directly above the primary shaft, a casing *c* inclosing both said shafts, a plate *a* secured to the inner wall of said casing opposite the top of said primary shaft, a plate *b* fitted into a recess between said primary and secondary shafts, and a sand seal contained between said plates *a* and *b*, substantially as described.

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

FRIEDRICH THIELE.

Witnesses:

ANNA DIPPEL,
HERMINE GÖDEKE.