

No. 676,394.

Patented June 11, 1901.

W. GARRETT.  
GAS PRODUCER.

(Application filed Oct. 14, 1899. Renewed Oct. 31, 1900.)

(No Model.)

Fig. 1.

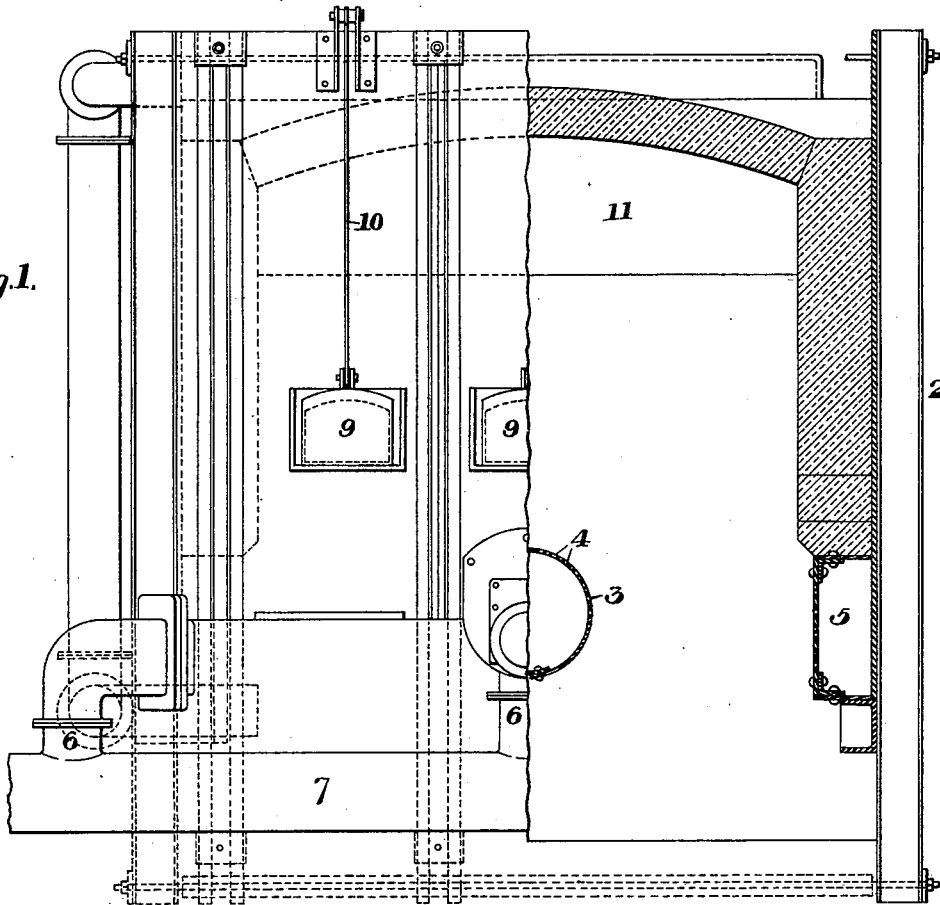
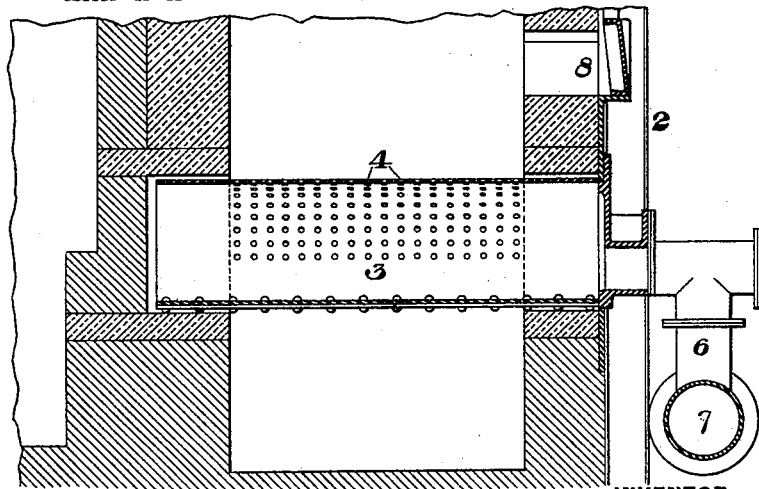


Fig. 2.



WITNESSES

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INVENTOR

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his attys.

# UNITED STATES PATENT OFFICE.

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## GAS-PRODUCER.

SPECIFICATION forming part of Letters Patent No. 676,394, dated June 11, 1901.

Application filed October 14, 1899. Renewed October 31, 1900. Serial No. 35,050. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM GARRETT, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Gas-Producers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation, partly broken away, of my improved producer; and Fig. 2 is a central cross-section of the same, partly broken away.

My invention relates to gas-producers, and is designed to provide a producer which will prevent clogging of the ashes and refuse below the fuel-bed.

In the drawings, 2 represents a producer having supported in its front and rear walls a central transverse air-box 3, which I have shown as of tubular form with perforations 4 in its upper portions, though it may be made of hexagonal or any other desired form. The inner end of this box rests in a recess in the back wall, so as to allow for expansion and contraction without injury to the structure. At each side the producer is provided with a wind-box 5, perforated on its inner surface, each of these wind-boxes being located opposite to the central box 3. Air is supplied to the box 3 and the boxes 5 by branches 6, leading from the air-main 7. 8 represents the charging-openings for introducing the fuel, these being closed by suitable doors 9, which may be operated by cords 10 or any other suitable device. The air may be forced in through these boxes by steam-jets or in any other desirable way.

In the operation of the producer the entering air passing through the openings in the box 3 and side wind-boxes 5 combines with the fuel in the ordinary manner, forming gas, which passes off through the upper side opening 11 to the heating-furnace or other point. As the coal is consumed the ashes and refuse

settle down between the box 3 and the boxes 5, and after passing the center of the box 3 they pass down freely, as the cross-sectional area increases downwardly from this point.

The advantages of my invention result from the use of a central air-box with a free space beneath it, the cross-sectional area of the producer being greater beneath the box than at the level of the boxes, thus allowing the free discharge of the ashes and preventing clogging.

The producer may be used with or without a water seal, as desired, supporting-legs may be used for the intermediate air-box, and many other changes may be made in the shape and arrangement of the parts without departing from my invention.

I claim—

1. A gas-producer having a transverse air-box with a closed bottom, the cross-sectional area of the producer being enlarged beneath the air-box; substantially as described.

2. A gas-producer having a central transverse air-box with upper perforations and side air-boxes opposite thereto, the cross-sectional area of the producer being greater beneath the central air-box than at its level, substantially as described.

3. A gas-producer having an intermediate transverse air-box, supported at its ends with a free open space beneath it, and a side air-box with front perforations opposite to the central air-box, substantially as described.

4. A gas-producer having a transverse air-box with a closed bottom extending across the producer-chamber, the area of the chamber being greater beneath the box than at its level, and a source of compressed air connected to the box; substantially as described.

In testimony whereof I have hereunto set my hand.

WILLIAM GARRETT.

Witnesses:

H. D. SMITH,  
JOHN SHARP.