

(No Model.)

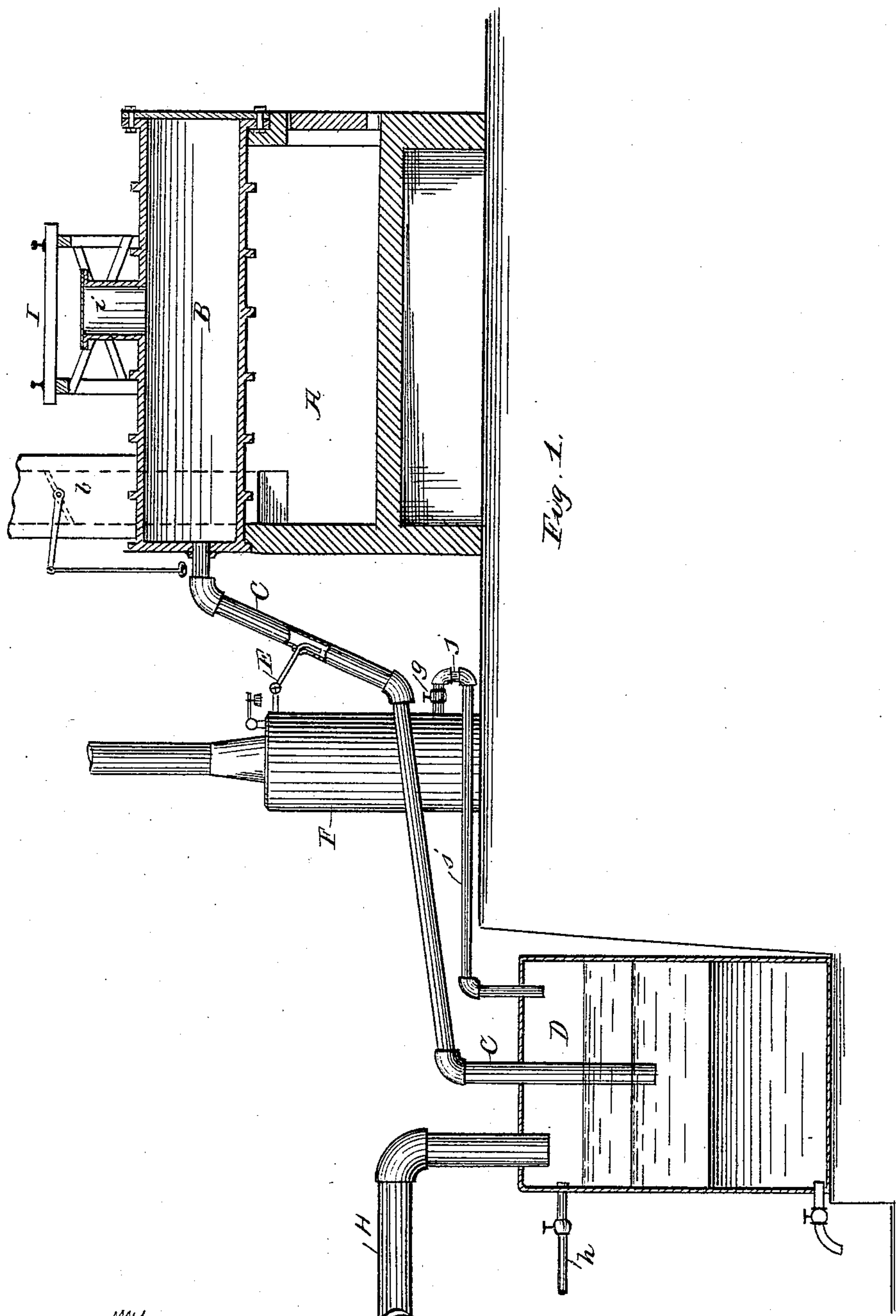
2 Sheets—Sheet 1.

G. POTERIE.

APPARATUS FOR PRODUCING COAL TAR AND COKE.

No. 453,386.

Patented June 2, 1891.



Witnesses:  
M. E. Hanson.  
A. Patterson

Inventor.  
George Poterie  
By his  
Attorney John H. Conley

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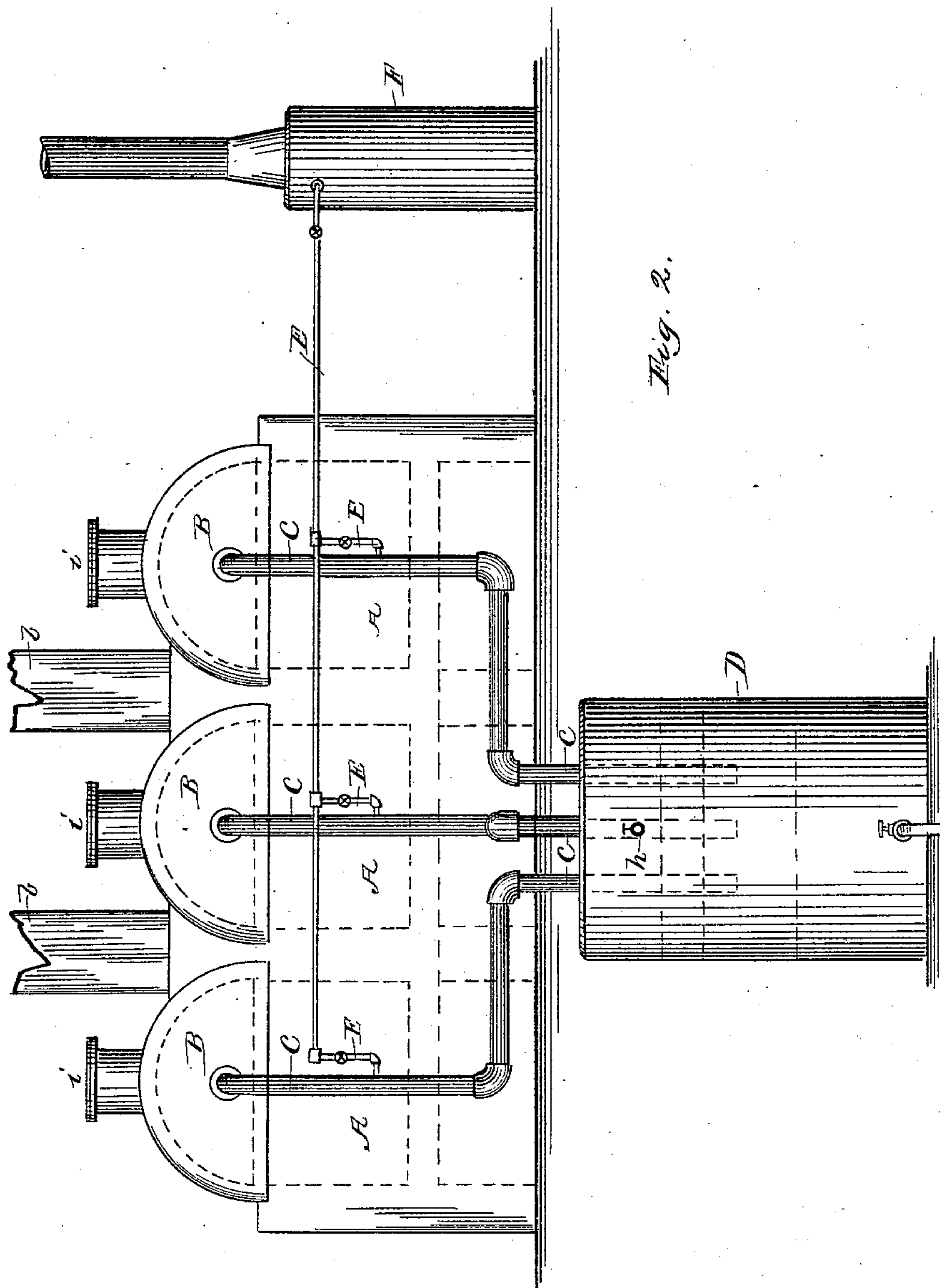


Fig. 2.

WITNESSES:

W. E. Harrison.  
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Inventor.  
George Poterie  
By his  
Attorney John H. Roney



# UNITED STATES PATENT OFFICE.

GEORGE POTERIE, OF ALLEGHENY, PENNSYLVANIA.

## APPARATUS FOR PRODUCING COAL-TAR AND COKE.

SPECIFICATION forming part of Letters Patent No. 453,386, dated June 2, 1891.

Application filed October 2, 1890. Serial No. 366,895. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE POTERIE, a citizen of the United States, residing at Allegheny city, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Producing Coal-Tar and Coke; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 shows a sectional side elevation of my improved plant for the production of coal-tar and coke. Fig. 2 indicates a front elevation of same.

The object of my invention is to produce a plant adapted to produce coal-tar and coke, and this I accomplish by the novel arrangement of the oven and retort, the oven producing coke and at the same time generating sufficient heat to distill the coal-tar in said retort.

In the practice of my invention I charge the retort with crushed coal, then charge the oven beneath with the required quantity of crushed coal or slack, ignite the same, and when fully ignited close up all the openings in said oven and permit said coal or slack to gradually coke, as in the ordinary oven. Meanwhile the heat thus generated distills the tar in said retort and produces therewith gas and lighter oils, which are utilized by the apparatus hereinafter described, reference being had to the accompanying drawings, forming part hereof, in which—

A is a coke-oven of any suitable size and shape. B is a retort suitably secured upon the top of said oven. Said oven is provided with a suitable chimney *b*. C is a pipe leading from said retort to a receiving-vessel D, which is partly filled with water, as shown in Fig. 1. At a short distance from said retort

and entering into said pipe C is the pipe E, which communicates with the boiler F for the purpose of discharging steam into said pipe C to assist the discharge of vapor-tar from said retort through said pipe into a receiving-vessel D, which is partially filled with water, in which said tar, &c., is precipitated by reason of their respective specific gravities, the tar dropping to the bottom of said vessel and the lighter gases arising to the top thereof. H is a pipe through which the gas is permitted to escape into a large receiver. (Not shown.) I is a railway leading from a crusher (not shown) to the man-hole of said retort, whereby the crushed coal may be readily dumped therein. *j* is a pipe leading from said receiving-vessel, and is provided with a valve *g* for the purpose of admitting gas. Beneath the boiler *h* is a pipe to draw off the lighter oils contained in said receiving-vessel.

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

In a plant for producing coal-tar and coke, the combination of a series of ovens, the retorts arranged above said ovens and adapted to be heated thereby, a receiving-vessel adapted to be partly filled with water and arranged below the ovens and connected individually with the retorts, the pipe in the top of said vessel, and a boiler intermediate of said ovens and the receiving-vessel, a pipe in the boiler adapted to discharge steam in the pipes leading from the retorts, and a pipe leading from the receiving-vessel to the furnace of the boiler to convey gas thereto, substantially as described.

In testimony that I claim the foregoing I hereunto affix my signature this 1st day of October, A. D. 1890.

GEORGE POTERIE. [L. S.]

In presence of—

C. C. LEE,  
WALTER REESE.