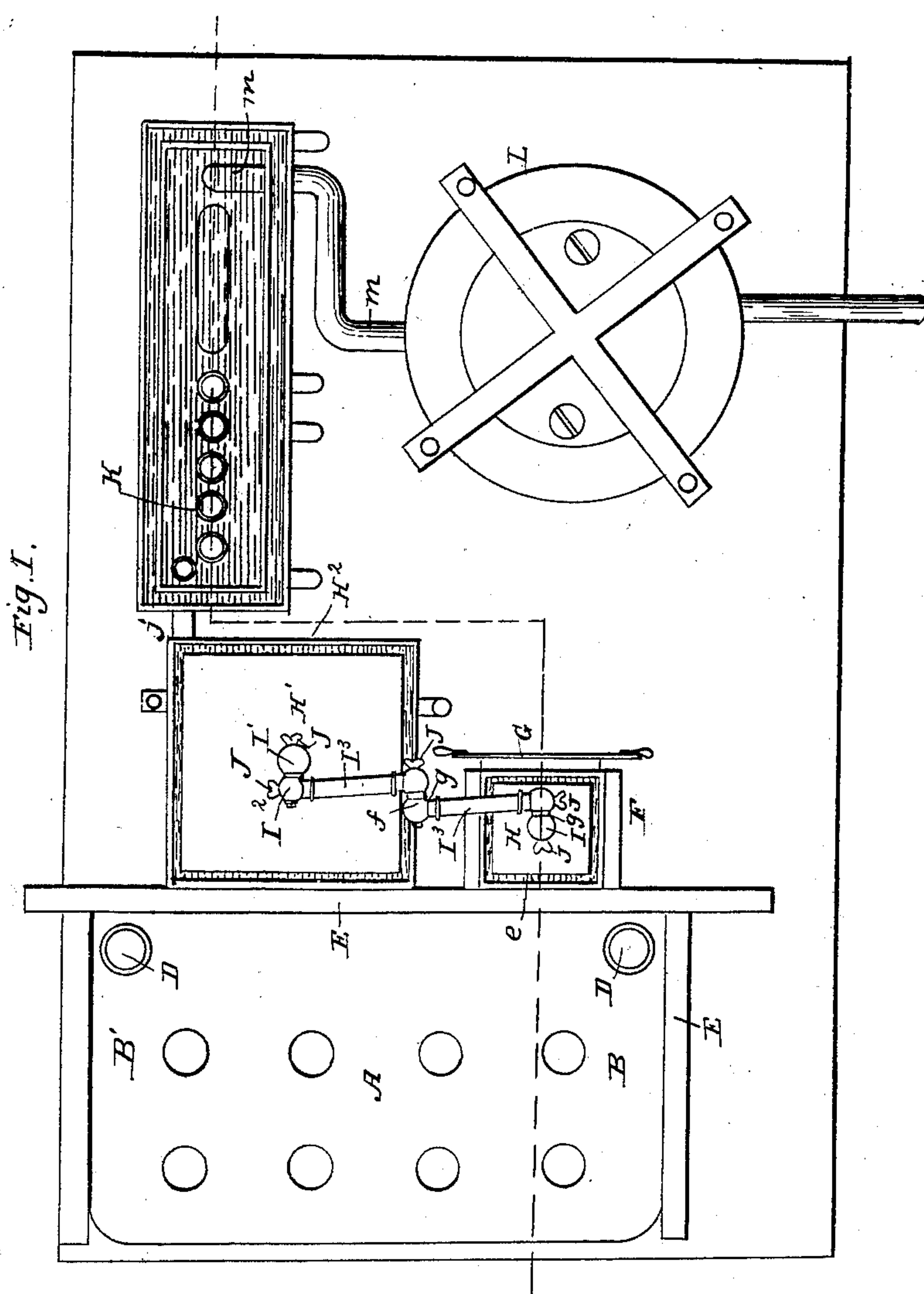


A. HENDRICKS.
Coal Gas Generator.

No. 20,064.

Patented April 27, 1858.



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Fig. 3.

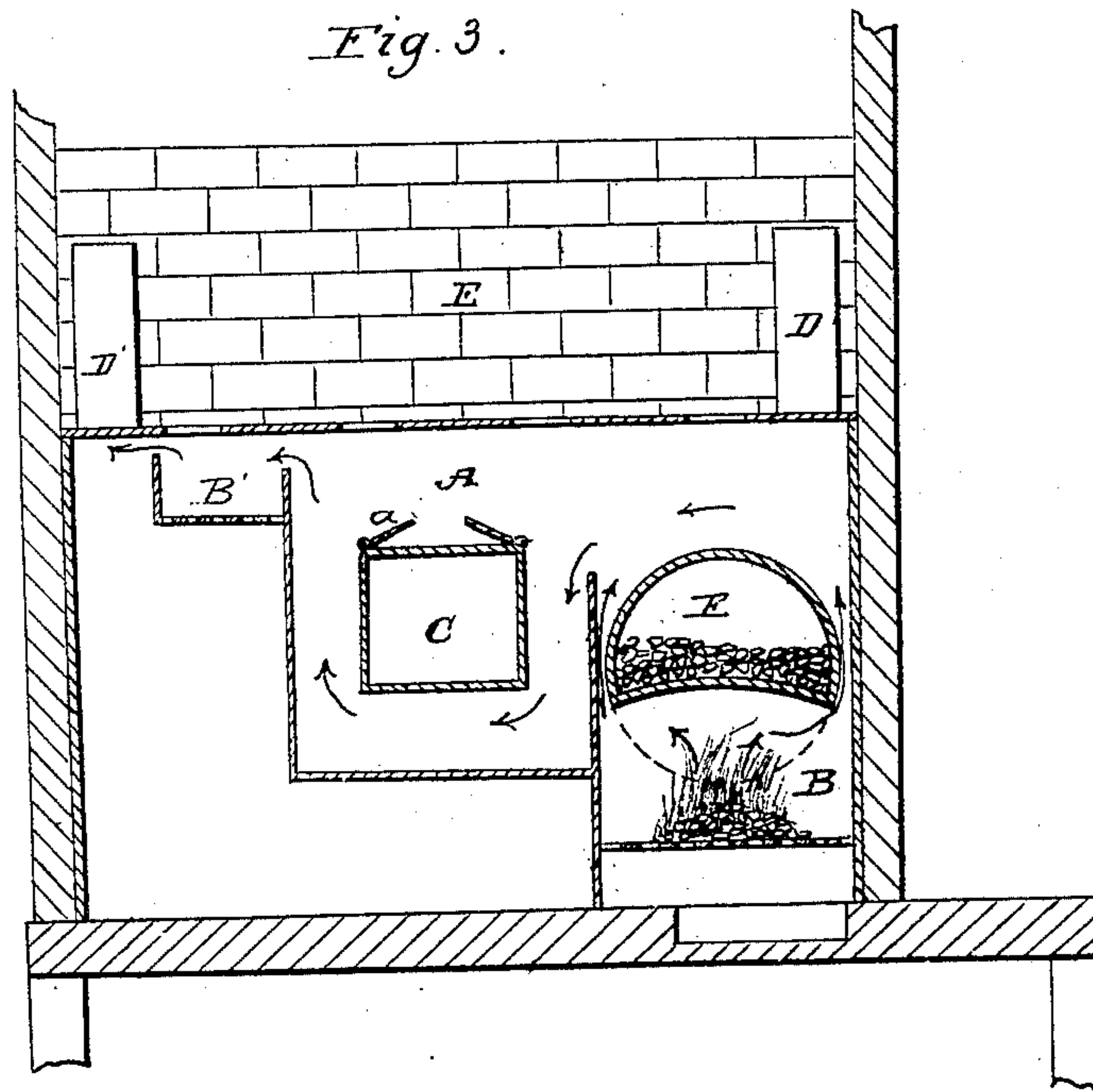
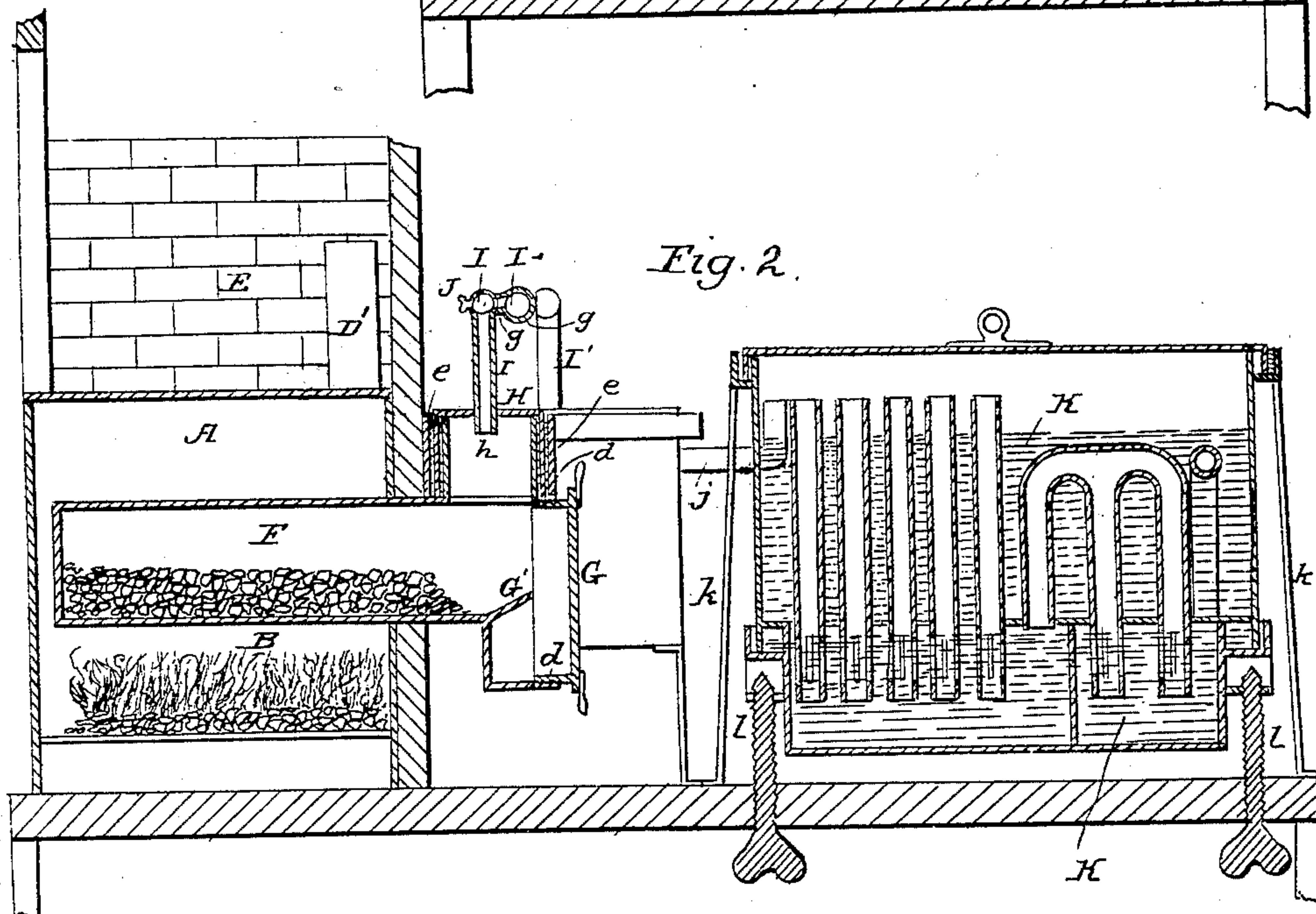


Fig. 2.



UNITED STATES PATENT OFFICE.

A. HENDRICKX, OF MORRISANIA, NEW YORK.

COMBINATION COOKING-RANGE AND COAL-GAS GENERATOR.

Specification of Letters Patent No. 20,064, dated April 27, 1858.

To all whom it may concern:

Be it known that I, A. HENDRICKX, of Morrisania, in the county of Westchester and State of New York, have invented a new and Improved Combination Cooking-Range and Coal-Gas Generator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, is a plan or top view of a combination cooking range and coal gas generator. Fig. 2, is a vertical transverse section of the same. Fig. 3, is a vertical longitudinal section of the same.

Similar letters of reference in each of the several figures indicate corresponding parts.

The nature of my invention consists, 1st, in an arrangement embracing a cooking range which has two fire chambers, two draft flues, suitable dampers when used in connection with a gas retort which opens on the outside of the room in which the range is located. With this arrangement of range the necessity of exposing the retort to the continuous and destructive action of the fire every day is avoided, as the fire chamber which heats the retort can be used at periods say once a week in order to generate gas and at the same time heat the range, and then the other fire chamber can be used daily instead thereof for simply heating the range and without acting upon the retort. And by the peculiar arrangement of retort so as to open on the outside of the room instead of on the inside thereof the inconvenience and injurious effect to the persons in the kitchen from the gas and fumes of sulfur etc. which issue in large volume from the mouth of the retort while withdrawing the coke and feeding fresh coal are avoided.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A, represents a range. It is constructed with two fire chambers B, B', and a central oven C, as shown in Fig. 3. The fire chamber B, is lower than B' so as to admit of the introduction of the retort. The chamber B, is used at periods in order to heat the retort and at the same time heat the range, and the chamber B', is used daily when B, is not used, simply for heating the range. When the retort is heated, it throws off a large amount of heat and assists in heating the

range. The flue around the oven is furnished with dampers *a, a*, so that the direction of the heated current from either fire chamber may be controlled in a manner to have it pass under and around or only over the top of the oven.

D, D', are two draft flues leading into the main flue or chimney E.

F, is the retort forming part of a circle and having its bottom convex. The end which receives the door G, is cylindrical and communicates with another apartment or with the open atmosphere outside of the kitchen as shown. The door G, is fastened by means of a screw thread *d*, instead of by hinges and catches as commonly, and is furnished with handles to work it by.

G', is a guard for preventing the running down of the tar toward the mouth of the retort and the escape of the same when the door is open.

H, is the safety gas escape cover. It fits loosely in a groove *e, e*, of the retort, said groove being filled with water so as to pack the top air tight and also gas tight so long as a proper pressure of gas is maintained.

I, I', I², I³, represents the conducting tubes which connect the retort with the receiver. They are jointed at *f, f, f*, and passed down through the cover of the retort and through the loose water packed safety gas escape cover H', of the receiver H² in a manner to communicate with the interior of the same.

J, J, J, J, J, are screw plugs for stopping the passages in the branches or hollow wrists *g, g, g*, which form the joints of the pipes I, I', I², I³, as shown. The conducting pipes thus jointed and formed will admit of either I, or I', being thrown up without necessity of disjoining to a convenient position for being cleansed, and by having the branches or wrists plugged they can, by simply withdrawing the screws, also be cleansed. When the section I, or I', of the conducting pipe is thrown up the cover of retort or receiver is inverted and the cleansing brush inserted at *h*.

K, K', represent a condenser and purifier combined, being connected to the receiver by a pipe *j*. This condenser and purifier is arranged on fixed standards *k, k*, while the lower part is arranged on set screws *l, l*, so as to be adjusted up and down in order to expose its interior and the lower ends of the condensing tubes, and thus afford facilities

for cleansing. It is also otherwise peculiarly constructed, but as I intend to apply for a separate patent for the same, a description of its construction any further than illustrated by the drawings is deemed unnecessary.

L, is the gasometer, communicating with the purifier by means of a pipe *m*, which passes up through the bottom of the condenser and then takes a turn down and enters the purifying chamber. This gasometer is formed of rubber cloth so as to be air-tight and flexible. In form it is cylindrical and has its top and bottom solid. The top is guided by four rods in its up and down movements as the amount of gas increases

or diminishes, its descent being aided and steadied by a weight which assists in the forcing of the gas out of the gasometer through the tube to the burners.

What I claim as my invention and desire to secure by Letters Patent, is—

The arrangement embracing a cooking range which has two fire chambers B, B', two draft flues D, D', and appropriate dampers, when used in connection with a gas retort opening on the outside of the room substantially as and for the purposes set forth.

A. HENDRICKX.

Witnesses:

G. YORKE AT LEE,
JOHN P. JACOBS.