

B. E. CHOLLAR.

Removing Carbon from Gas Retorts.

No. 70,166.

Patented Oct 29. 1867.

Fig. 2.

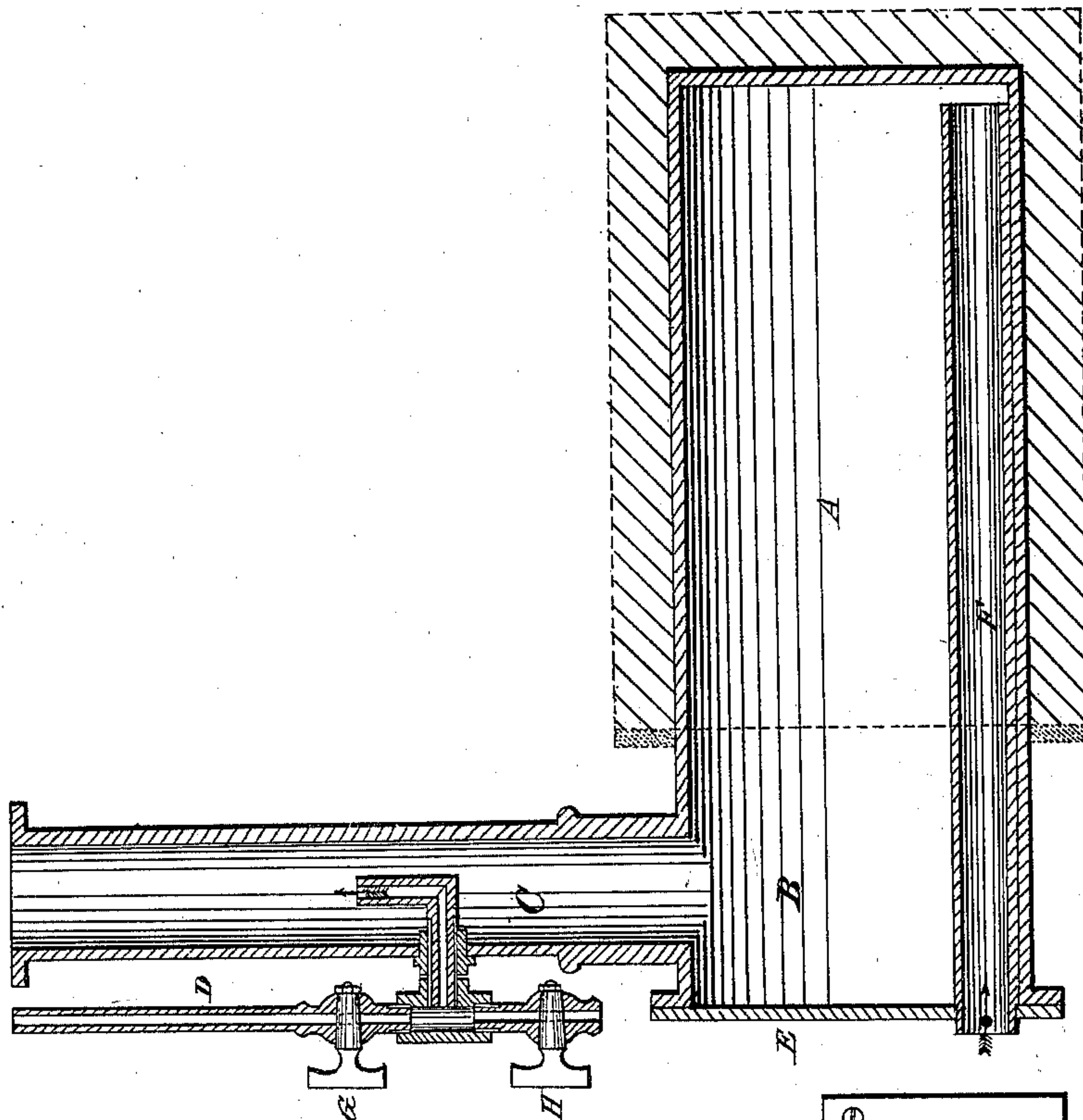
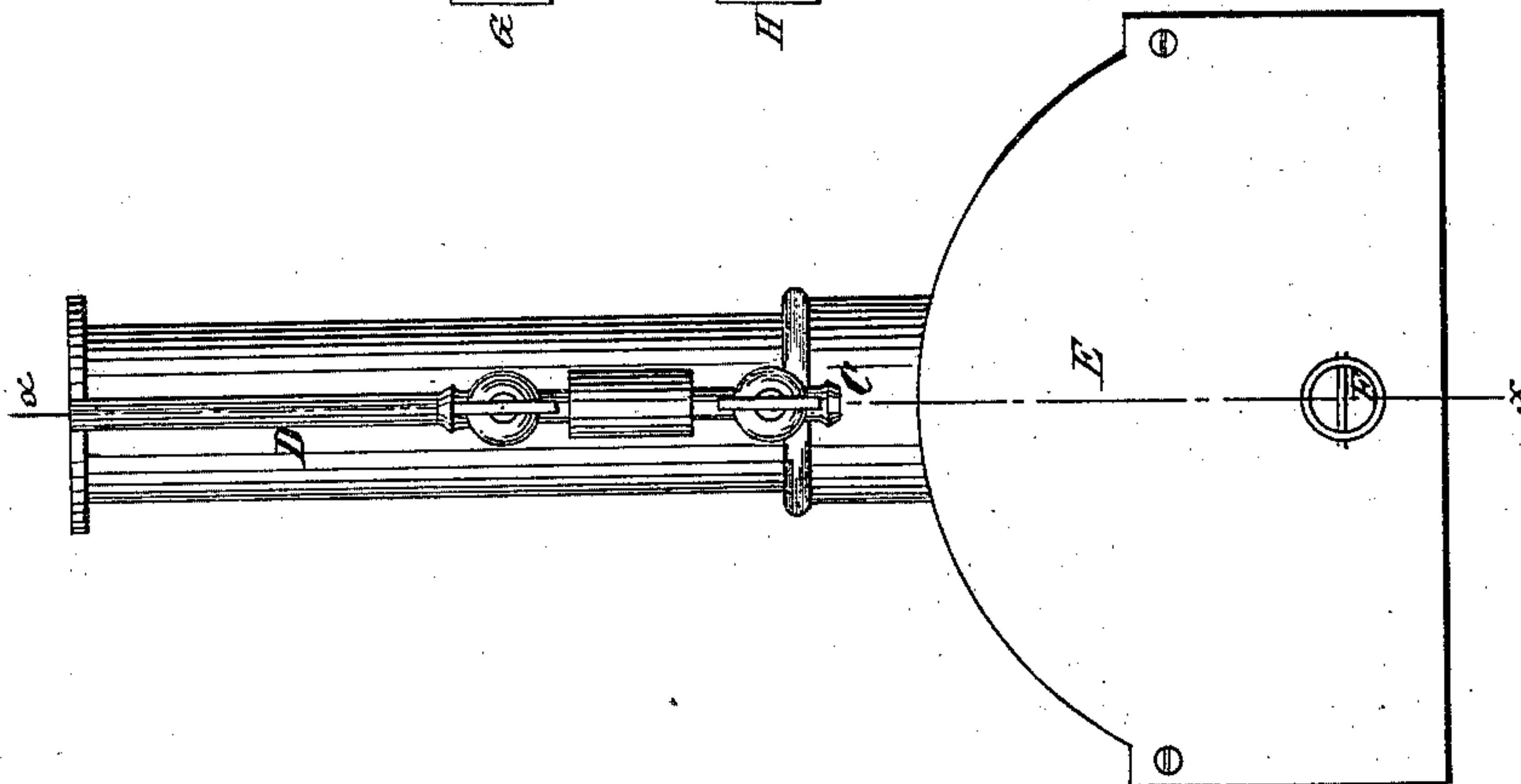


Fig. 1.



Witnesses:

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UNITED STATES PATENT OFFICE.

B. E. CHOLLAR, OF LEAVENWORTH, KANSAS.

IMPROVED METHOD OF REMOVING CARBON FROM GAS-RETORTS.

Specification forming part of Letters Patent No. 70,166, dated October 29, 1867.

To all whom it may concern:

Be it known that I, B. E. CHOLLAR, of Leavenworth, in the county of Leavenworth and State of Kansas, have invented a new and Improved Method of Removing Carbon from Gas-Retorts; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved method of removing the carbon which is deposited in retorts used for generating gas for illuminating purposes; and it consists in providing for a supply of air within the retort, whereby a more perfect combustion is produced, which supply of air is produced by a steam-jet in the stand-pipe of the retort, as will be hereinafter described.

Figure 1 represents an end elevation or front view of the retort and stand-pipe, with the steam-pipe attached. Fig. 2 is a vertical longitudinal section of the retort and stand-pipe, steam-pipe, and air-tube, the section being taken through the line *x x* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the retort. B is the mouth-piece of the retort. C is the stand-pipe, which is connected with the mouth-piece of the retort. D is a steam-pipe, which is connected with a steam-boiler. E is the cover or front plate of the retort. F is the air-tube, which rests on the bottom of the retort, which tube is open at both ends. The front end passes through the cover E of the retort, and the other end terminates within the retort, near its back end, as seen in the drawing. The steam-pipe D is passed through the stand-pipe, with an elbow within, turning up so as to discharge steam upward, as indicated by the arrow. G is a cock, by which the flow of steam into the stand-pipe is regulated. H is a cock, by which the water of condensation is drawn off.

During the process of generating gas the stand-pipe is closed by a stopper on its top, and the outer end of the air-tube F is also closed.

When the coke is removed from the retort a coating or deposit of carbon adheres to the inside of the retort and mouth-piece, which, unless removed, interferes with the generating process when the retort is again filled. The removal of this deposit, by consuming it, is the object of this arrangement, and the operation is performed by supplying the retort (or the carbon within the retort) with oxygen when the temperature of the retort is at its working heat. When the retort is in this condition the stoppers are removed from the stand-pipe and air-tube, and a jet of steam is discharged into the stand-pipe, which creates a partial vacuum in that pipe above the steam-jet, causing thereby a draft of air through the air-tube into the retort, and consequently a supply of oxygen for the contained carbon. The carbon and oxygen instantly combine, the effect of such combination being the rapid combustion of the carbon in the retort. The resulting gases pass off through the stand-pipe.

The steam-jet may be discharged in any part of the stand-pipe, and, if found more convenient, the steam-pipe may pass through the cover E, and be passed upward from the mouth-piece B. But I have found that a sufficient draft of air can be produced by the arrangement shown in the drawing.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The use of a jet of steam in the stand-pipes of gas-retorts, to cause a draft of air through the retort, for the purpose of burning or consuming the deposit of carbon, substantially as described.

B. E. CHOLLAR.

Witnesses:

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