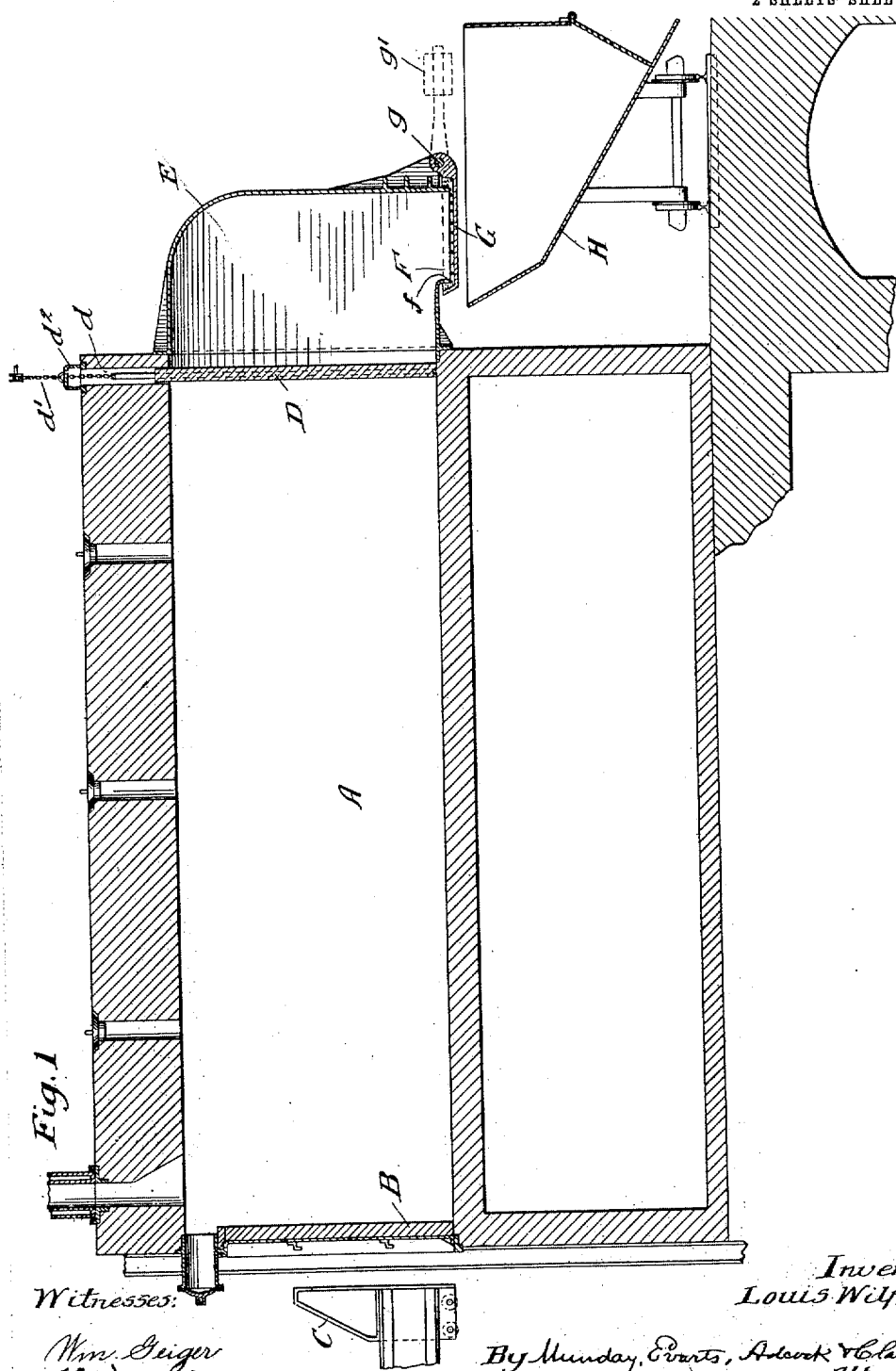


981,344.

L. WILPUTTE.
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APPLICATION FILED JUNE 24, 1910.

Patented Jan. 10, 1911.

2 SHEETS—SHEET 1.



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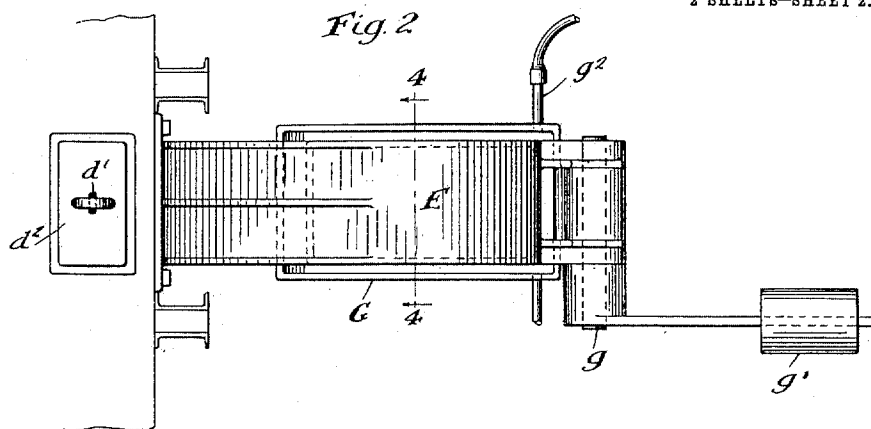
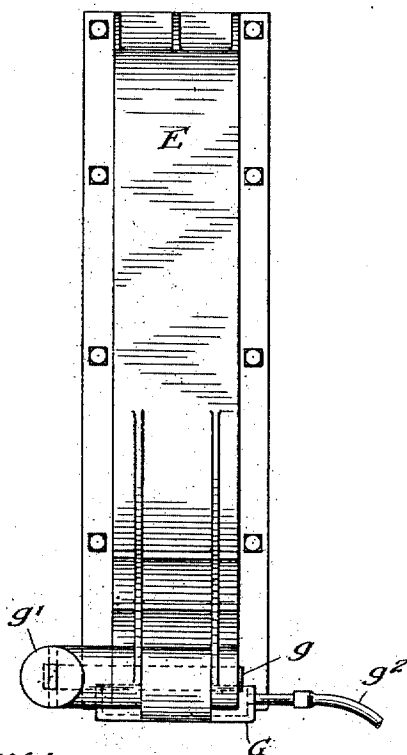


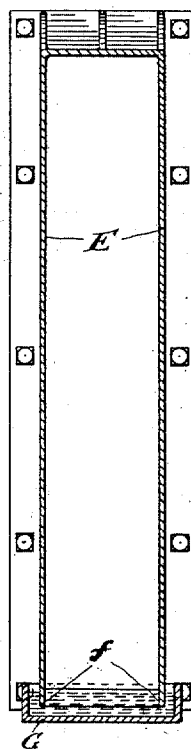
Fig. 3



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Fig. 4



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UNITED STATES PATENT OFFICE.

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COKE AND GAS OVEN.

981,344.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LOUIS WILPUTTE, a subject of the Kingdom of Great Britain, residing in Joliet, in the county of Will and State of Illinois, have invented a new and useful Improvement in Coke and Gas Ovens, of which the following is a specification.

This invention relates to that class of coking and gas ovens, largely in use at the present time, in which the charge of coal is coked in a sealed oven and subsequently discharged therefrom by a through pushing mechanism into the usual quenching cars.

The improvement particularly concerns the means employed for closing the oven for the treatment and opening the oven for the discharge of the treated contents, and the said improvement, generally stated, consists in providing the oven with an upright door against which the charge of coal and coke may rest while being treated, and an exterior air tight hood or chamber with a sealed discharge opening in its lower part for delivering the treated coke to the quenching cars, as will be better understood from the subjoined description and claims and the accompanying drawings forming part of this specification.

In the accompanying drawings, Figure 1 is a longitudinal section of an oven embodying my said invention; Fig. 2 is a plan view of the exterior air tight hood and its water seal; Fig. 3 is a front view of said hood and seal; and Fig. 4 a vertical cross section of the same. Figs. 2, 3 and 4, it will be noted are upon a larger scale than Fig. 1.

Like letters of reference denote like parts in the several figures.

In said drawings A represents the coking chamber, of the usual form and construction, and which in the use of the apparatus is to be filled with the coal to be treated in the usual manner. At one end this chamber is closed by the air tight door B, which is, or may be, made air tight by luting the seams in the usual manner with clay before treating the charge. The purpose of this door is to admit the usual through pusher or ram, C, which after the charge is fully treated is made to enter the chamber and traverse the same forcing the hot coke out at the final or discharge end, to be now described. At the said discharge end is the upright door, D, sliding in suitable grooves and opening upward through a slot, *d*, being lifted by a

chain, *d*¹ attached to the cover-plate, *d*², so that when the said door is lowered the slot, *d*, in the roof of the oven is rendered air tight by being filled with the substance of the door and also covered by the plate. It is not necessary that the other seams of this upright door shall be air tight, since the function of the door is only to support the coal and coke in upright mass and prevent the same from falling into the exterior air tight hood to interfere with the sealing and handling of the latter. E, is the said exterior air tight hood, which may be made of cast iron. This hood is fitted closely to the oven in such manner as to be air tight at all points excepting the downward opening, F, which is lipped with the downward extending lip *f*, to meet the water-seal pan, G, swung on the pivot, *g*, and held in position by the counter-poise, *g*¹, said water pan being kept full of water when in position by the supply pipe *g*². Below the opening, F, is seen a quenching car H in position to receive the discharged coke.

In operation the chamber A is filled with a charge of coal in the usual way, the pusher C, being in the withdrawn position, and door, B, being shut and luted or otherwise made air tight, the door, D, being lowered into the closed position, and the opening, F, being sealed with the water-seal. The oven being fired and the charge of coal duly treated the door, B, is opened, the door, D, lifted up, and the seal, G, swung open, and the pusher C, is sent through the chamber, forcing the incandescent coke out into the hood, E, where it falls through the opening, F, into the quenching cars, H, where it is subjected to the deluge of quenching water in the usual manner.

By the employment of the upright lifting door and the air-tight hood at the discharge end of the oven, I dispense with the necessity of the luting of the door at this end which is a difficult job and am able to shorten and cheapen the operation, and at the same time keep the coking coal confined during the treatment of the same in the coking chamber in a uniform condition throughout the whole chamber and the entire treatment, so that the product is uniform throughout.

Having thus described my invention I claim as new:—

1. The combination of the oven chamber,

the upright sliding door at the discharge end, and the external air tight hood with a sealed downward discharge opening in said hood, substantially as and for the purpose specified.

2. The combination of the oven chamber, the upright sliding door at the discharge end and the external air tight hood with a water sealed downward discharge opening, substantially as and for the purpose specified.

3. The combination of the oven chamber, the upright sliding door at the discharge end, and the external air tight hood with a pivoted water sealed downward discharge opening, substantially as and for the purpose specified.

4. The combination of the oven chamber, the upright sliding door at the discharge end, and the external air tight hood with a counterpoised, pivoted, downward discharge opening adapted to act as a deflector, substantially as and for the purpose specified.

5. The combination of the oven chamber, the upright sliding door at the discharge end, rising through a slot covered by a lid, and the external air tight hood with a sealed downward discharge opening adapted to act as a deflector, substantially as and for the purpose specified.

LOUIS WILPUTTE.

Witnesses:

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