L. C. FLACCUS.

COKE OVEN DOOR.

APPLICATION FILED OCT. 29, 1910.

992,492. Patented May 16, 1911.

Fig. 1.

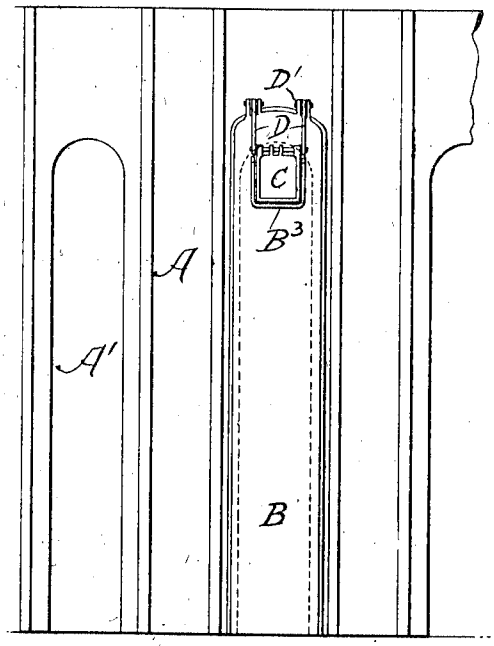


Fig. 2.

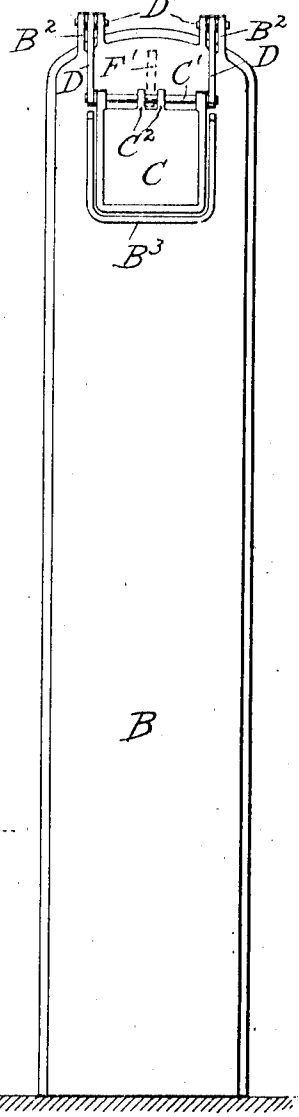
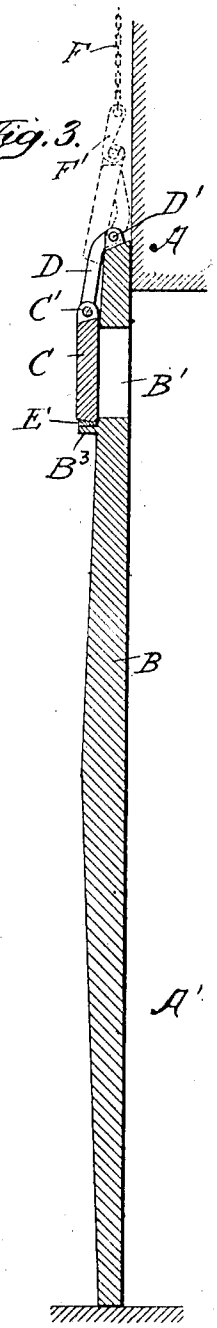


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

LUDWIG CARL FLACCUS, OF NEW YORK, N. Y., ASSIGNOR TO STETTINER CHAMOTTE-FABRIK ACTIEN-GESELLSCHAFT VORM. DIDIER, OF STETTIN, GERMANY, A CORPORATION OF GERMANY.

COKE-OVEN DOOR.

992,492. Specification of Letters Patent. Patented May 16, 1911.

Application filed October 29, 1910. Serial No. 589,694.

To all whom it may concern:

Be it known that I, LUDWIG CARL FLACCUS, a subject of the German Emperor, and formerly a resident of Stettin, Germany, but now of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Coke-Oven Doors, of which the following is a specification.

My invention relates to doors for coke ovens and the like, in which provision is made for the introduction of a fuel-leveling device after the door has been closed.

The present invention has for its object to simplify, cheapen and render more convenient and reliable in operation, the construction of doors of the above-indicated character. For this purpose, I have devised a novel arrangement of parts, as will be fully described hereinafter, and particularly pointed out in the appended claims.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a partial front view of a longitudinal coke oven provided with my improved door; Fig. 2 is a separate face view of the door, upon an enlarged scale, and Fig. 3 is substantially a vertical cross section through the center of Fig. 2.

A designates the masonry or setting of the bench of coke ovens, the individual ovens A′ being open at the ends, horizontal or longitudinal ovens being indicated in the drawings. Adjacent to the open end of each oven is adapted to move vertically a door B, held in the closed position by any well known or approved device (not shown). When closed, this door rests upon the ground or foundation. At its upper portion, the door has an opening B′ through which the well known fuel-leveler may be introduced. During the normal operation of the oven, the opening B′ is closed by an auxiliary door C pivotally suspended at C′ from a cross bar carried by depending links D which are pivoted at D′ to brackets B^2 at the upper part of the main door B. As will be seen clearly in Fig. 3, the pivots D′ are to the rear of the front surface or seat against which the auxiliary door C rests when closed, so that the weight of said door and of the links D will tend to hold the door C against its seat. The opening B′ is preferably partly surrounded by a U-shaped rib B^3 thus forming a space or depression for the reception of suitable material to lute the edge of the auxiliary door, as indicated at E. This material is of course removed when it is desired to open the door C.

The auxiliary door is shown as provided with ears C^2 at its central portion, to form a guide for the hook F′ or other connecting member of the door-hoisting or door-opening device, such as the chain F. The hook F′ having been engaged with the cross bar C′ and the luting E removed, an upward pull on the chain F will cause the auxiliary door C and the links D to swing into the upper position indicated by dotted lines in Fig. 3, so as to uncover the opening B′. A further pull on the chain F will then raise the main door B with the auxiliary door C. Similarly, when the main door is lowered, the opening B′ will remain open until the said door reaches its lower position (dotted lines in Fig. 3); the paying out of the chain F is then stopped to leave the opening B′ uncovered for the introduction and removal of the fuel-leveler; finally, when this operation is completed, the chain F is paid out farther to allow the auxiliary door to close, and this door is luted if desired. It will be seen that the same device serves for moving the auxiliary door relatively to the main door and for operating both doors together.

Various modifications may be made without departing from the nature of my invention as set forth in the appended claims.

I claim:

1. The combination with a structure having an opening, of a movable main door adapted to close said opening, said door being itself provided with an opening, and an auxiliary door movably secured to the main door and adapted to close the opening thereof, said auxiliary door being adapted for connection with suitable mechanism to first move the auxiliary door away from the opening in the main door and then move both doors in unison.

2. The combination with a structure having an opening, of a movable main door adapted to close said opening, said door being itself provided with an opening, an auxiliary door adapted to close the opening of the main door, and vertical links fulcrumed on the main door and pivotally connected with the auxiliary door adjacent to its upper edge, the pivot connections at both ends of the links being horizontal.

3. The combination with a structure having an opening, of a movable main door adapted to close said opening, said door being itself provided with an opening, an auxiliary door adapted to close the opening of the main door, and links fulcrumed on the main door to the rear of the seat of the auxiliary door, and pivotally connected with said auxiliary door.

4. The combination with a structure having an opening, of a movable main door adapted to close said opening, said door being itself provided with an opening, an auxiliary door adapted to close the opening of the main door, links fulcrumed on the main door above the opening thereof, and a horizontal cross-bar connecting the outer ends of said links, the said auxiliary door being hung on said cross bar.

5. The combination with a structure having an opening, of a movable main door adapted to close said opening, said door being itself provided with an opening, an auxiliary door adapted to close the opening of the main door, links fulcrumed on the main door, and a cross bar connecting the outer ends of said links, the central portion of said auxiliary door being provided with ears pivotally engaged with said cross bar and adapted to confine and guide the attaching member of a lifting device.

6. The combination with a structure having an opening, of a movable main door adapted to close said opening, said door being itself provided with an opening, and with a depression adjacent thereto, and an auxiliary door movably secured to the main door and adapted to fit within said depression and to close the opening of the main door, said auxiliary door being adapted for connection with suitable operating mechanism for first opening the auxiliary door and then the main door.

7. The combination with a structure having an opening, of a movable main door adapted to close said opening, said door being itself provided with an opening, an auxiliary door adapted to close the opening of the main door, and a link fulcrumed upon the main door at a point above the opening thereof to swing about a horizontal axis, the normally lower portion of said link having a horizontal pivot connection with said auxiliary door.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

LUDWIG CARL FLACCUS.

Witnesses:
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