No. 725,747. PATENTED APR. 21, 1903.

E. A. MOORE.

WATER COOLED COKE OVEN DOOR FRAME.

APPLICATION FILED JULY 9, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

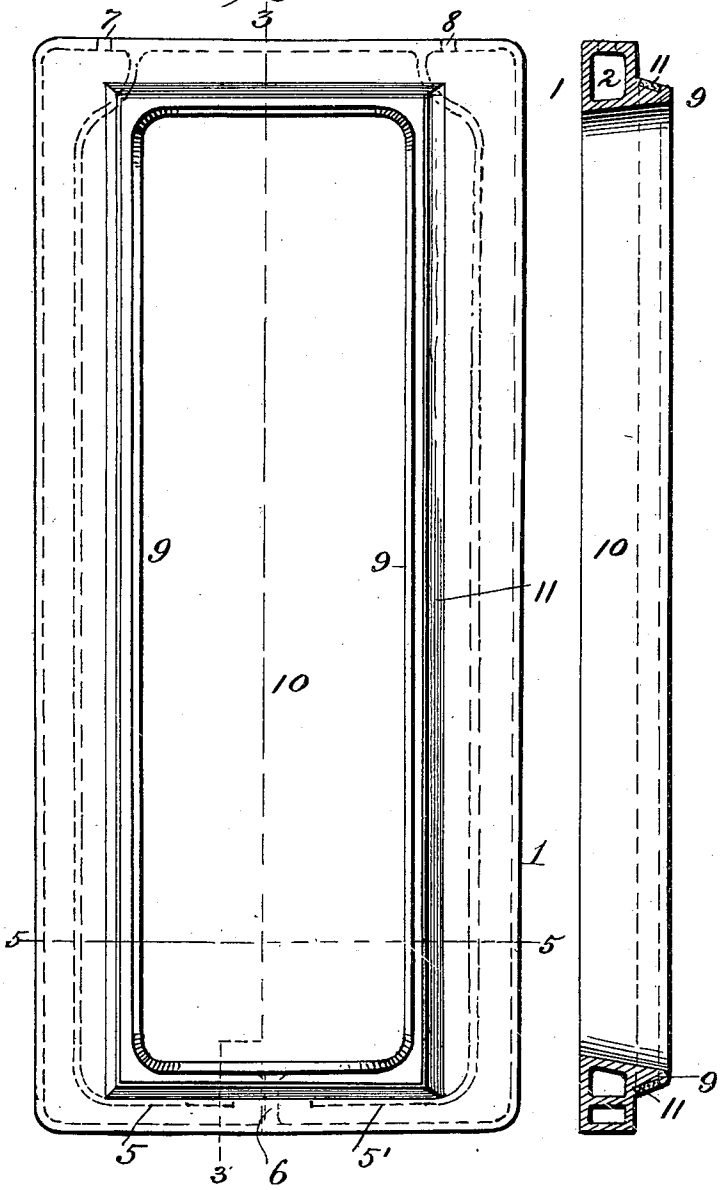
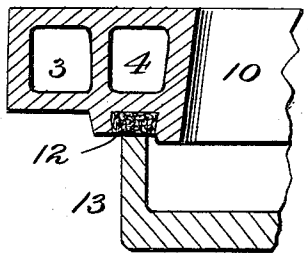


Fig. 3.

Fig. 6



Witnesses
Franck L. Orrand.
M. Parker Reinohl

Inventor
Edwin A. Moore.
by D. L. Reinohl.
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 725,747. PATENTED APR. 21, 1903.

E. A. MOORE.

WATER COOLED COKE OVEN DOOR FRAME.

APPLICATION FILED JULY 9, 1902.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

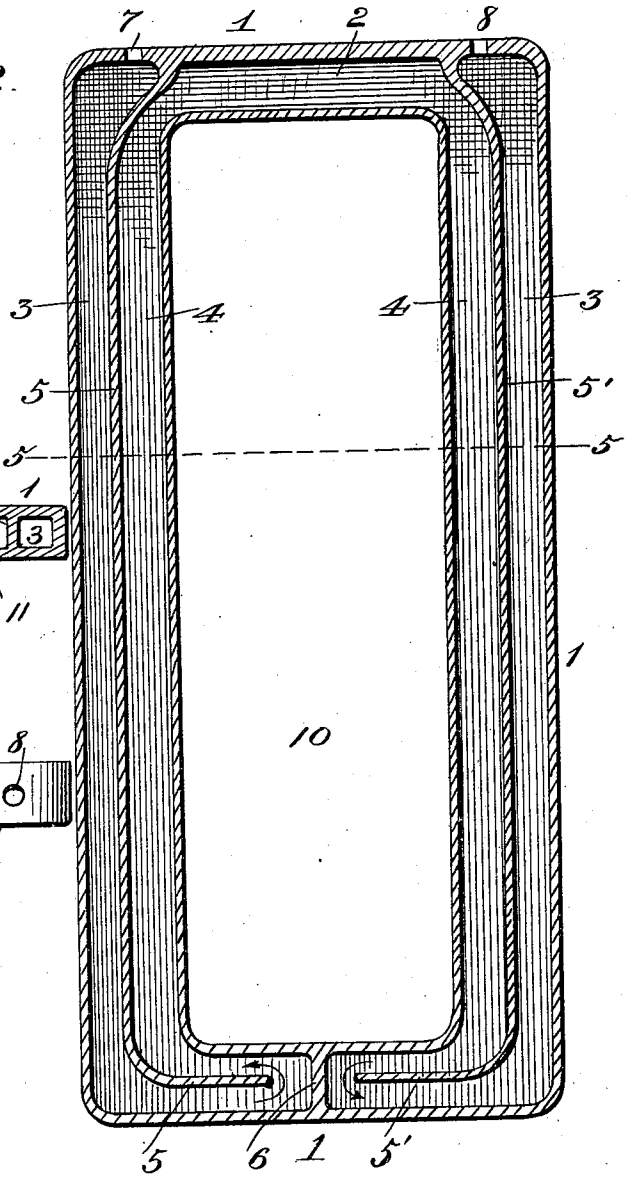
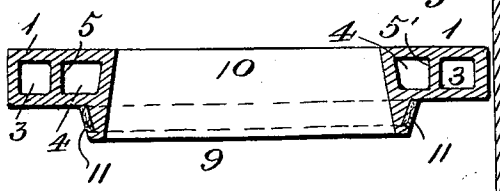


Fig. 5.



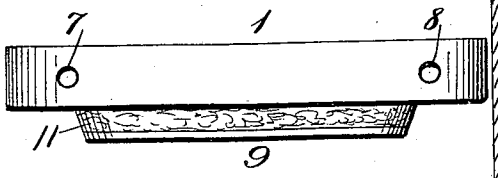


Fig. 4.

Witnesses
Franck L. Durand.
M. Parker Reinhold.

Inventor
Edwin A. Moore
by D. P. Reinhold
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWIN A. MOORE, OF PHILADELPHIA, PENNSYLVANIA.

WATER-COOLED COKE-OVEN-DOOR FRAME.

SPECIFICATION forming part of Letters Patent No. 725,747, dated April 21, 1903.

Application filed July 9, 1902. Serial No. 114,884. (No model.)

To all whom it may concern:

Be it known that I, EDWIN A. MOORE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Water-Cooled Coke-Oven-Door Frames; 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 appertains to make and use the same.

My invention relates, primarily, to coke-ovens, has especial reference to door-frames, has for its object an increase in the durability of the frame, and consists in certain improvements in construction, which will be fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification, Figure 1 represents a front elevation of my improved door-frame; Fig. 2, a vertical transverse section; Fig. 3, a vertical longitudinal section on line 3 3, Fig. 1; Fig. 4, a top plan or end view; Fig. 5, a transverse section on line 5 5, Figs. 1 and 2; and Fig. 6, a horizontal section showing a modification of the seat for a door.

Reference being had to the drawings and the designating characters thereon, 1 indicates the door-frame, which is provided with hollow walls forming water-chambers 2 at the upper end and 3 and 4 in the sides and lower end of the frame, the latter being separated by partitions 5 5′, which extend from the upper end into and part way across the lower end, as shown in Figs. 1 and 2, and the lower end wall is also provided with a partition 6, which separates the chamber therein into two parts, and at the upper end of the frame is an opening 7 for a water-supply pipe and an opening 8 for a water-discharge pipe. Water entering the opening 7 passes down the chamber 3, around the lower end of the partition 5, up the chamber 4, into and across chamber 2, down chamber 4 in the opposite side of the frame, around the lower end of partition 5′, up the chamber 3, and out through the opening 8, thus providing active circulation of the water through the walls of the frame and preventing them warping or burning under the intense heat to which they are exposed from the burning coal being coked in the oven.

9 is a projection on the outer surface of the frame and extends around the opening 10 for the door, (not shown,) and on this projection is formed a non-metallic seat 11, preferably of asbestos, upon which a member of the oven-door rests when the door is in position for sealing the end of the coke-oven.

12 in Fig. 6 is a modification of the non-metallic seat for the member 13 of the door and is formed on the outer face of the door-frame, the projection 9 being omitted. In either construction the seat is kept cool by the circulation of the water in the door-frame.

Having thus fully described my invention, what I claim is—

1. A hollow coke-oven-door frame provided with partitions extending from the upper end of the frame down through the sides and part way across the lower end toward the transverse center thereof, an intermediate partition in the lower end of the frame, a water-supply, and a water-discharge opening at the upper end and on opposite sides of the transverse center of the frame.

2. A hollow coke-oven-door frame provided with partitions extending from the upper end of the frame down through the sides and part way across the lower end toward the transverse center thereof, an intermediate partition in the lower end of the frame, a water-supply, a water-discharge opening at the upper end and on opposite sides of the transverse center of the frame, and a seat for a door on the outer side of the frame.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN A. MOORE.

Witnesses:
D. C. REINOHL,
C. W. METCALFE.