

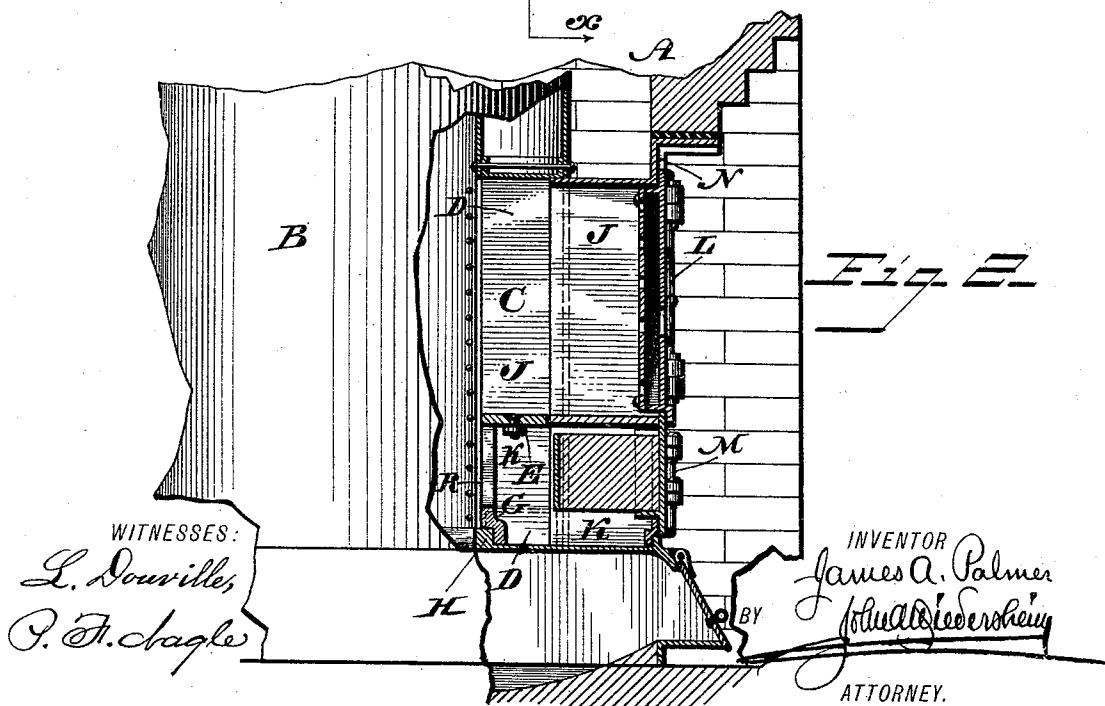
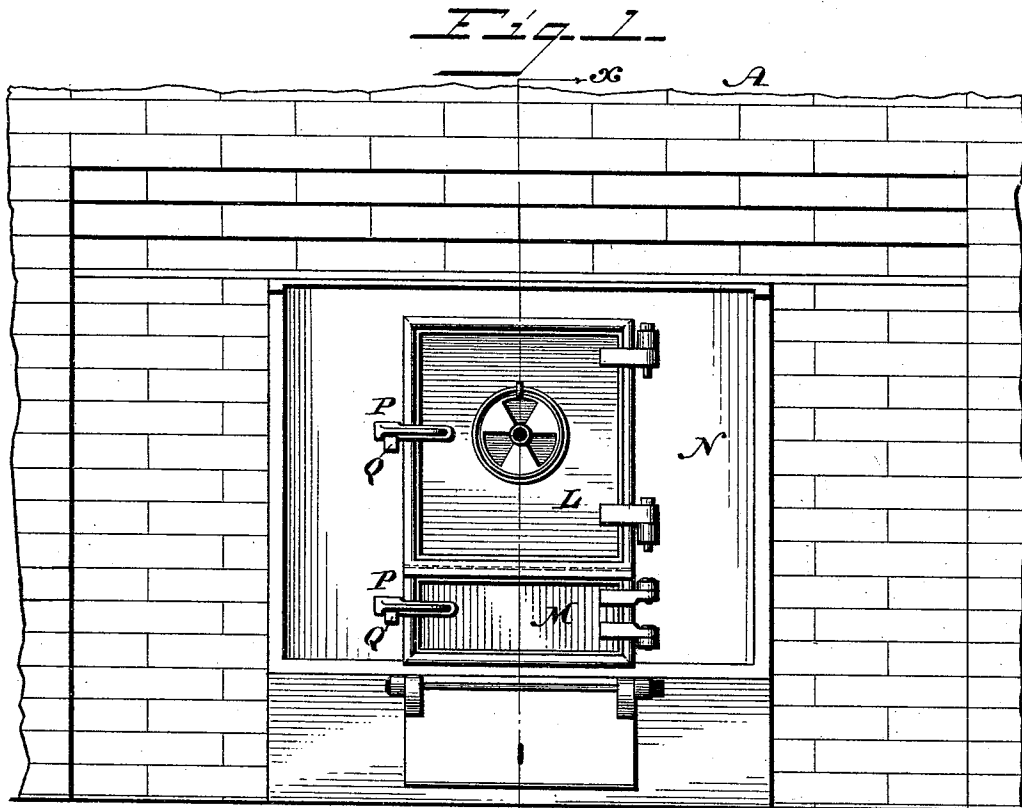
(No Model.)

2 Sheets—Sheet 1.

J. A. PALMER.
BOILER FURNACE.

No. 495,264.

Patented Apr. 11, 1893.



WITNESSES:
L. Douville,
P. H. Chagler

INVENTOR
James A. Palmer
BY *John A. Sederberg*
ATTORNEY.

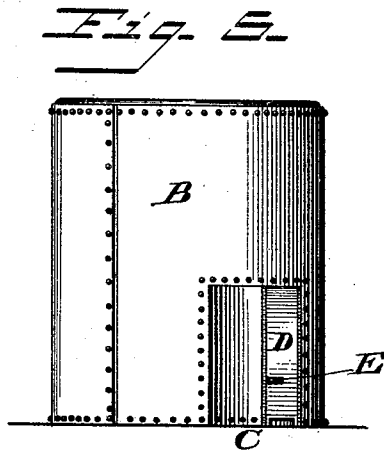
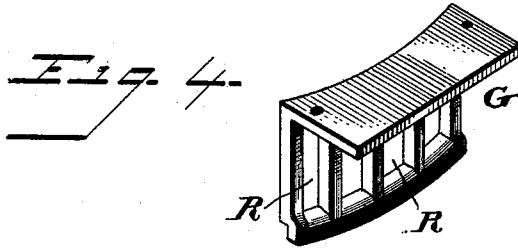
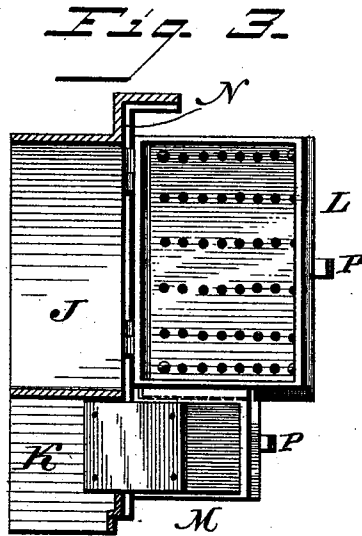
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UNITED STATES PATENT OFFICE.

JAMES A. PALMER, OF PHILADELPHIA, PENNSYLVANIA.

BOILER-FURNACE.

SPECIFICATION forming part of Letters Patent No. 495,264, dated April 11, 1893.

Application filed January 23, 1892. Renewed October 13, 1892. Serial No. 448,746. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. PALMER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Boiler-Furnaces, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in boiler furnaces, and has for its object a furnace having an opening therein provided with doors and walls so constructed that easy access is permitted to the fire-place thereof for a poker or other tool for stirring up or removing clinkers therefrom, and for this purpose it consists of the combination of parts hereinafter set forth, the same being an improvement in the furnace shown in Letters Patent No. 393,579, granted to me November 27, 1888. Figure 1 represents a front view of a portion of a boiler embodying my invention. Fig. 2 represents a section on line *x, x*, Fig. 1. Fig. 3 represents a vertical section of a portion of the boiler showing rear view of the doors when opened. Fig. 4 represents a perspective view of a detail portion of the device. Fig. 5 represents a perspective view of the boiler, showing the opening with one of the flanges for securing the detached portion shown in Fig. 4 thereto.

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

Referring to the drawings: A designates a boiler furnace formed of suitable masonry, having the boiler B therein. The said boiler, which is of annular form, is provided with an opening C in one side of the lower end, leading into the interior thereof, where the fire pot and grate of the furnace are located, the latter being at or near the lower end of said interior opening. On the side wall D of the opening C, are lugs or flanges E, having openings therein, whereby a cross piece G, the base of which rests on a ring H at the lower end of the opening C, is secured in place, dividing the said opening into the feed throat

J and the anti-clinker passage K, both of which extend outward through the masonry to the front plate N. The doors L and M, hinged to the said plate N, close respectively said feed throat and anti-clinker passage, the door L having a flanged portion extending over the upper edge of the door M. The cross piece G has a narrow horizontal upper part, and has its vertical portion provided with the openings R, so as to permit a stirring device such as a bar or poker to have easy access to any portion of the fire pot within the boiler, so that a clinker can be readily reached and removed from the said fire pot. The doors have latches P, as is usual, adapted to engage catches Q, or keepers on the front plate N. By having the flanged lower portion of the upper door overhang the upper portion of the lower door, the latter is more securely held, thereby preventing burning coals from falling through the anti-clinker passage to outside of the furnace. The cross piece G is preferably formed of a single piece or casting.

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

1. A boiler furnace with a recessed portion having a lug on one of its side walls, a ring at the lower end of said recess, and a cross piece having a horizontal flange, said parts being combined substantially as described.

2. A boiler furnace having a recessed portion, a ring at the lower end of said recess, a cross piece having a narrow horizontal part, and openings in its vertical part, said parts being combined substantially as described.

3. A furnace having a boiler, a feed throat and anti-clinker passage separated by a detachable cross piece G resting on a cross bar at the lower end of the said anti-clinker passage, and secured to lugs on the walls of the boiler, substantially as described.

JAMES A. PALMER.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. JENNINGS.