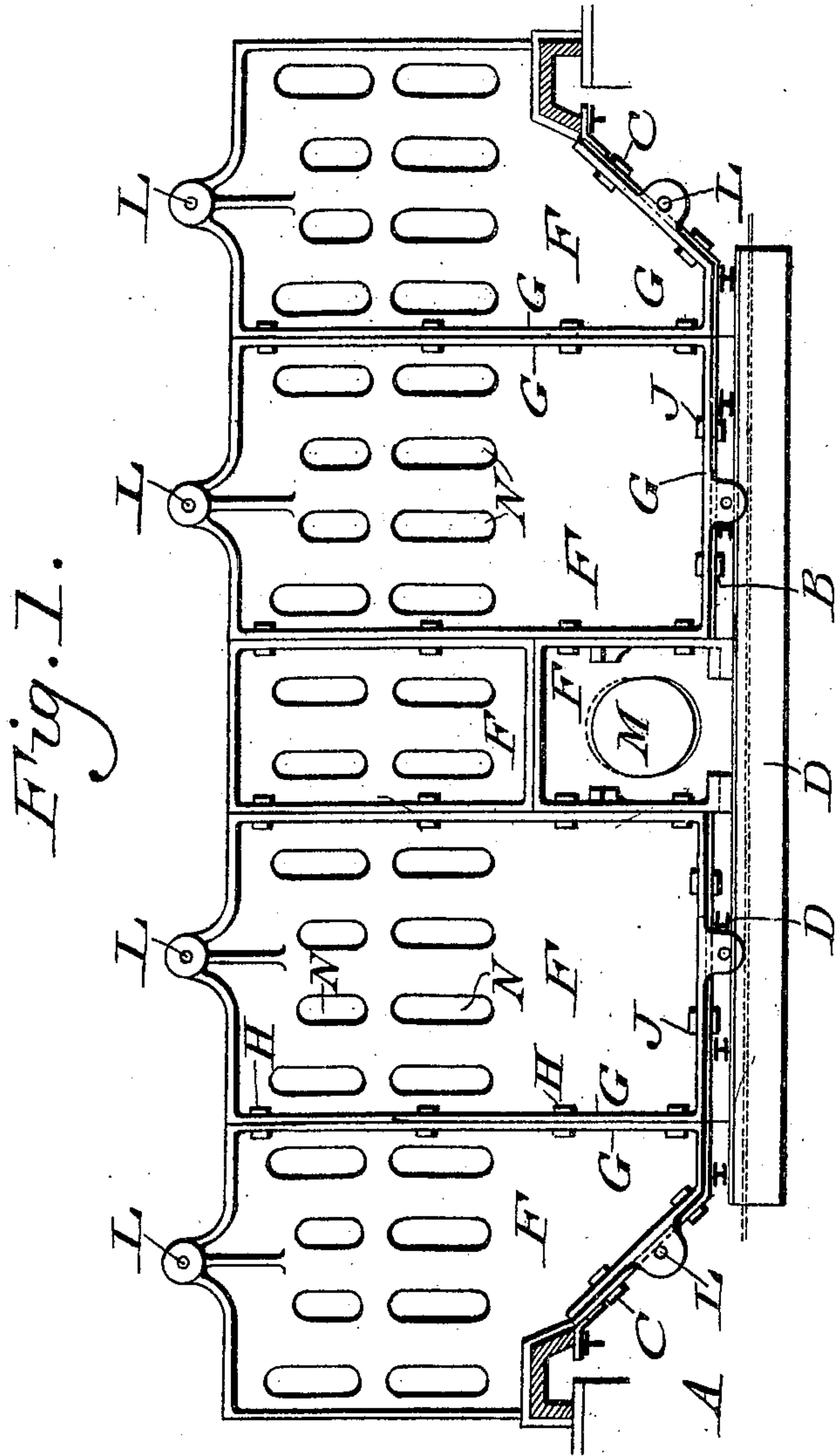


No. 797,883.

PATENTED AUG. 22, 1905.

F. BALDT, Sr.
OPEN HEARTH FURNACE.
APPLICATION FILED MAR. 8, 1902.

3 SHEETS—SHEET 1

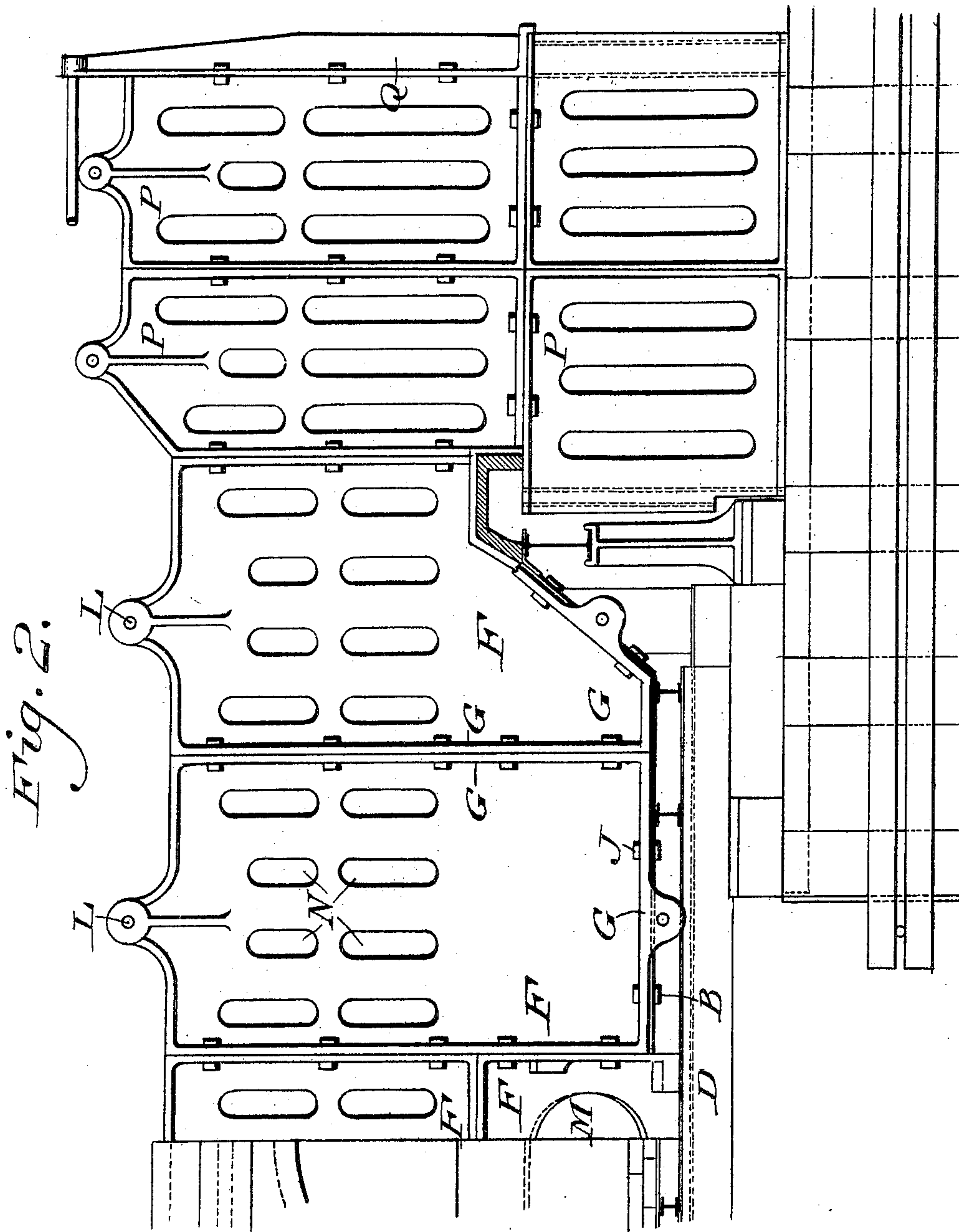


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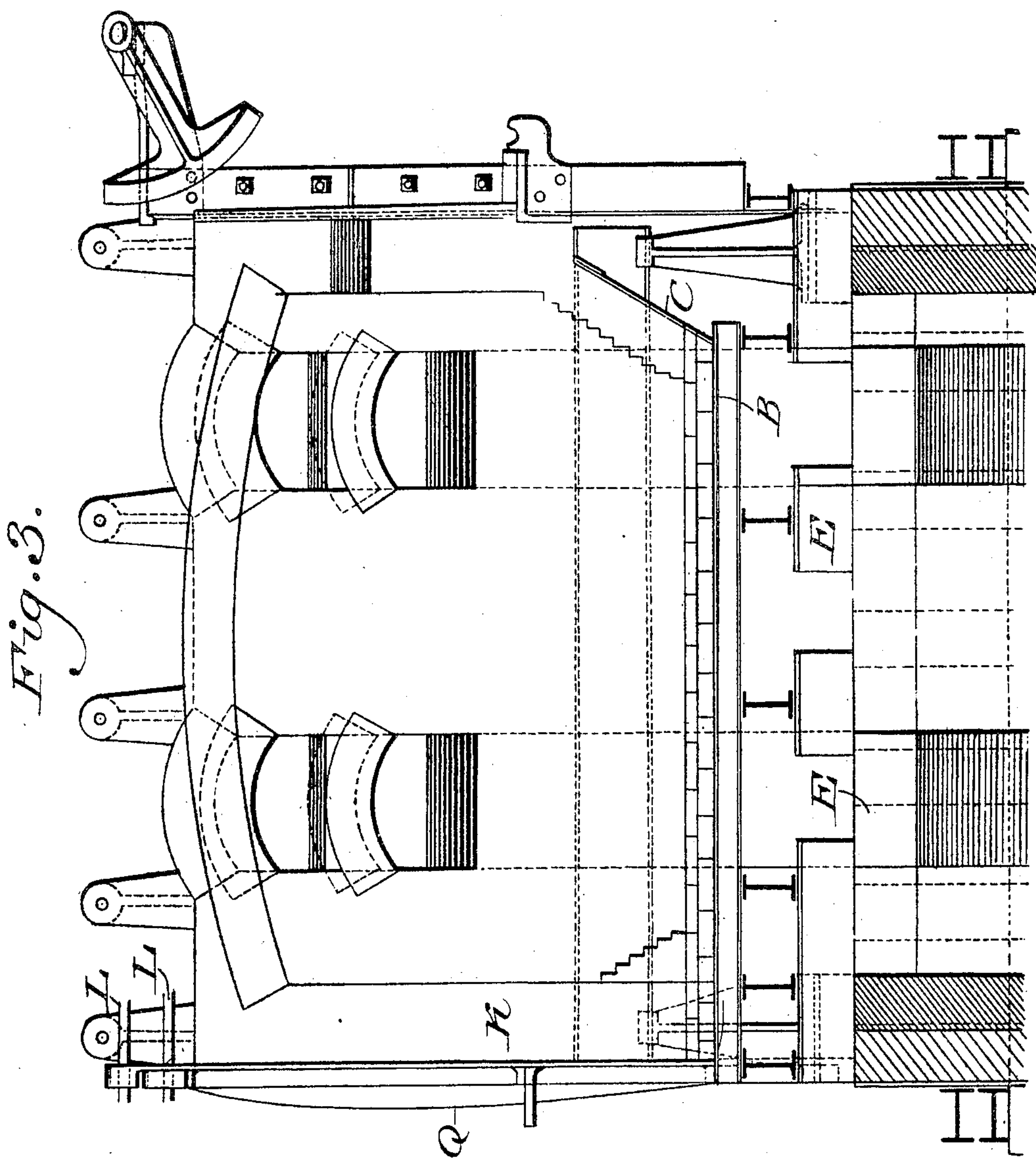
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3 SHEETS—SHEET 3,



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UNITED STATES PATENT OFFICE.

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OPEN-HEARTH FURNACE.

No. 797,883.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed March 8, 1902. Serial No. 97,296.

To all whom it may concern:

Be it known that I, FREDERICK BALDT, Sr., a citizen of the United States, residing in the city of Chester, Delaware county, State of Pennsylvania, have invented a new and useful Improvement in Open-Hearth Furnaces, of which the following is a specification.

My invention consists of an improvement in open-hearth furnaces wherein I provide a movable front whereby the interior of the furnace is accessible and can be cleared of any deposit, hardened metal, or dirt which could settle therein and which is known by the name of "salamander."

It further consists of the novel details of construction, as will be hereinafter fully set forth and described.

Figure 1 represents a front elevation of a portion of a furnace embodying my invention. Fig. 2 represents a front elevation of a portion of a furnace on an enlarged scale and showing some of the end plates in position. Fig. 3 represents a sectional view thereof.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a portion of an open-hearth furnace, in which B represents the pan or bottom having an inclined side and rear wall C, said pan or bottom being suitably carried on beams D, which are supported by a structure of masonry E, which form no part of the present invention, and hence no further description of the same is deemed necessary at this time.

F designates the plates having flanges G, said plates being secured to each other by bolts or nuts H and to the pan or bottom by bolts and nuts J, it being seen that said plates form the entire front of the furnace and of the pan and are adapted to support the suitable material or fire-brick K with which the interior and bottom of the furnace is adapted to be lined, it being seen that the said plates are bolted or locked to the rear of the furnace by the tie-rods L, which are suitably connected with said plates, and that one of said plates is provided with an opening M, by which the pouring takes place and that suitable means are provided for attaching the spout to the plate at the opening M for evident purposes. It will be further noted that the plates are provided with openings N, which permit ease of cooling off and also lightens the plates without detracting from the efficiency thereof.

It will be seen that from this construction

by manipulating the nuts the bolts H can be removed and the plates loosened from the tie-rods L, so that the whole front of the furnace can be moved, the interior cleaned, and the salamander removed, after which the plates can be placed back in position and locked therein, as above described.

In the drawings I have shown a plurality of plates which are preferably cast; but it will be evident that a single plate can be used, if desired, or any number of plates, and I have shown the form in the drawings as illustrating one manner of constructing the front.

It will be evident from the above that the salamander can be placed on skids and moved out from the pan or bottom until it can be properly handled by cranes, it being evident that this is more easily accomplished and less expensive than any construction now in use where it is necessary in order to remove the salamander to jack up the same, which is very expensive, laborious, and dangerous both to the furnace and the operators.

In Fig. 2 I have shown end plates P, which are removably secured together in the same manner as already described, and in the same instances I may employ buckstays Q to strengthen the furnace, if necessary.

It will be evident that various changes may be made in the construction herein shown and described, and I do not, therefore, desire to be limited in every instance to this exact construction and desire to make such changes as may come within the scope of my invention.

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

1. In an open-hearth furnace, a pan having floor and side walls each extending in a plane to its forward edge and a flanged front wall bolted to said floor and side walls and removable therefrom, whereby said floor and side walls are left without any inwardly-projecting portion.

2. In an open-hearth furnace, a pan having floor and side walls each extending in a plane to its forward edge and a front wall consisting of a plurality of flanged plates bolted to said floor and side walls and removable therefrom, whereby said floor and side walls are left without any inwardly-projecting portion.

FREDERICK BALDT, Sr.

Witnesses:

WM. CANER WIEDERSHEIM,
C. D. McVAY.