

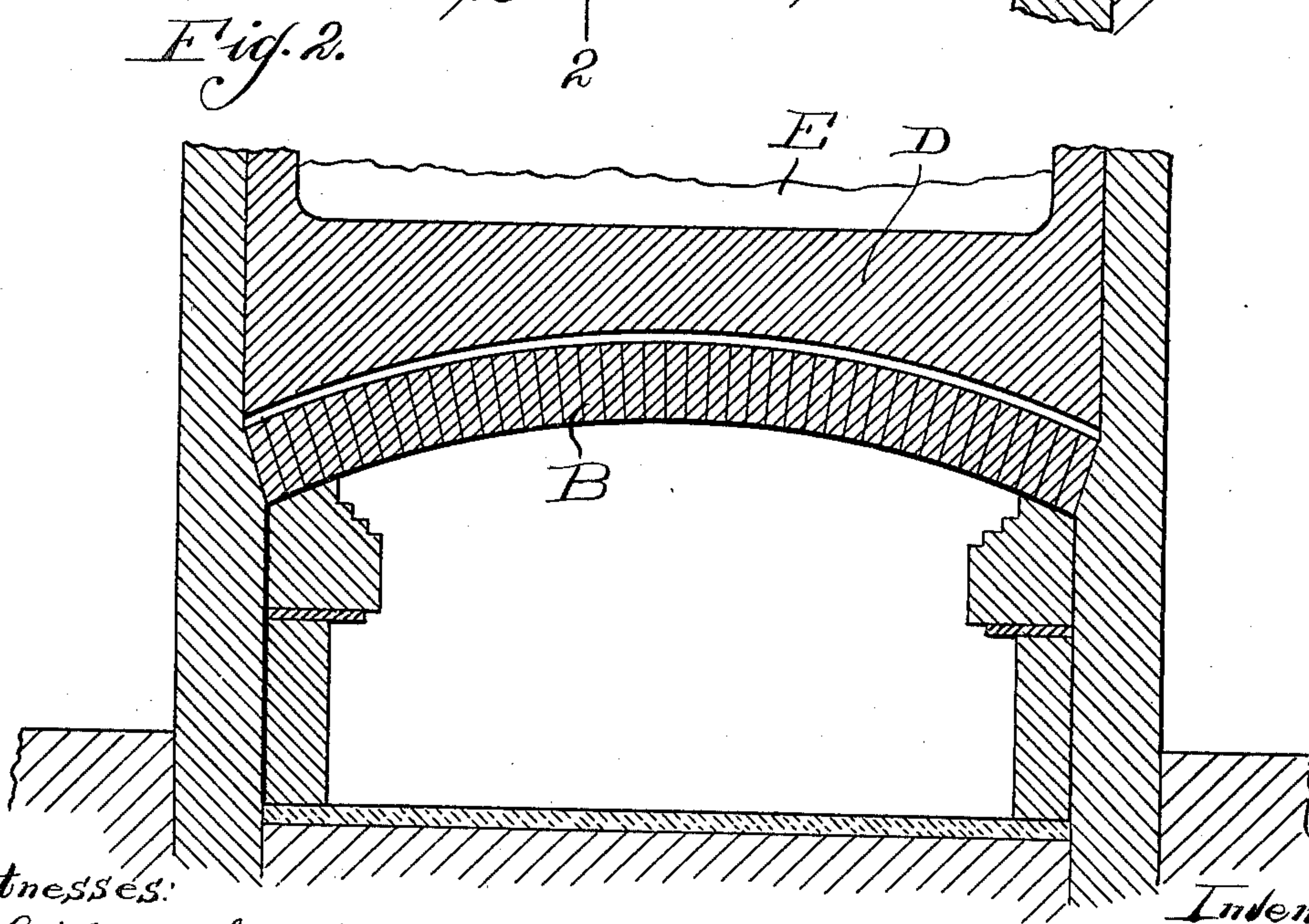
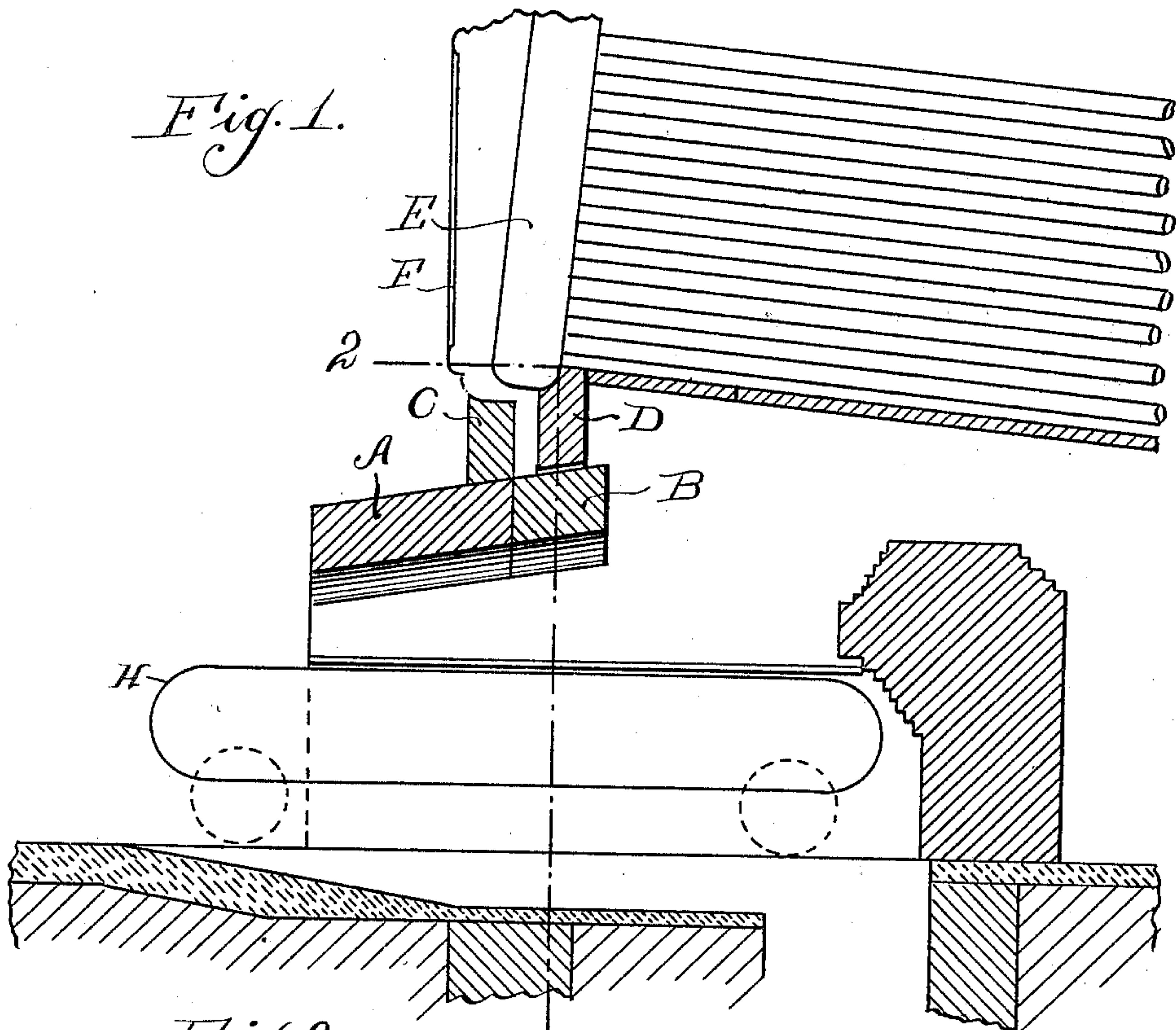
No. 697,737.

Patented Apr. 15, 1902.

J. F. MICHALSKI.
ARCH FOR BOILER FURNACES.

(Application filed Dec. 9, 1901.)

(No Model.)



Witnesses:

C. F. Wilson
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Inventor:

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UNITED STATES PATENT OFFICE.

JOHN F. MICHALSKI, OF CHICAGO, ILLINOIS.

ARCH FOR BOILER-FURNACES.

SPECIFICATION forming part of Letters Patent No. 697,737, dated April 15, 1902.

Application filed December 9, 1901. Serial No. 85,183. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. MICHALSKI, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Arches for Boiler-Furnaces; 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 to a novel construction in an arch for boiler-furnaces, the object being to provide an arch so constructed that the portion thereof which is generally first destroyed by the heat can be readily removed and replaced without removing the entire arch, thereby saving a large part of the cost of such renewal and also saving time; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a fragmentary central vertical section of a boiler-furnace provided with an arch constructed in accordance with my invention. Fig. 2 is a transverse section of same on the line 2 2 of Fig. 1.

In said drawings I have shown a furnace of the automatic-stoker type, which is now most generally used in large plants; but I desire it to be understood that my invention can be applied to any other form of boiler-furnace.

My invention consists in forming the arch over the moving grate H of two parts A and B, the rear portion B being exposed to the greatest heat of the fire and gradually burned away. Heretofore when such portion of the arch was destroyed it was necessary to remove the entire arch and build a new one, such arch generally also comprising the portions

C and D, which form walls to protect the water-box E and front F from the direct heat and to prevent smoke from entering the space between the said water-box and front and escaping through the interstices in said front. Hence the removal of said arch also necessitated the removal of said portions C and D thereof. I make the portions C and D independent arches, so that in repairing said arch only the portion B thereof need be removed. This is obviously easily and quickly done, so that a large part of the expense and also of the time required are saved.

I have shown a space G between the lower face of the arch D and the upper face of the portion or arch B. This is left for the purpose of permitting the portion B of the arch to freely expand and contract, the said portion B being exposed to the greatest heat, and therefore expanding to a greater extent than the portion A of the arch.

I claim as my invention—

In a boiler-furnace, the combination with the grate, the boiler-front and the boiler, of an arch spanning said grate and divided transversely between its ends into two independent parts, one of which may be removed and replaced without removing the other part, a parallel or concentric arch above each part of said first-named arch and independent of the latter, such last-named arches extending to the lower ends of the boiler-front and the forward end of the boiler to protect same from direct heat and prevent smoke and gases from entering the space between said front and the forward end of the boiler.

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

JOHN F. MICHALSKI.

Witnesses:

RUDOLPH WM. LOTZ,
E. F. WILSON.