

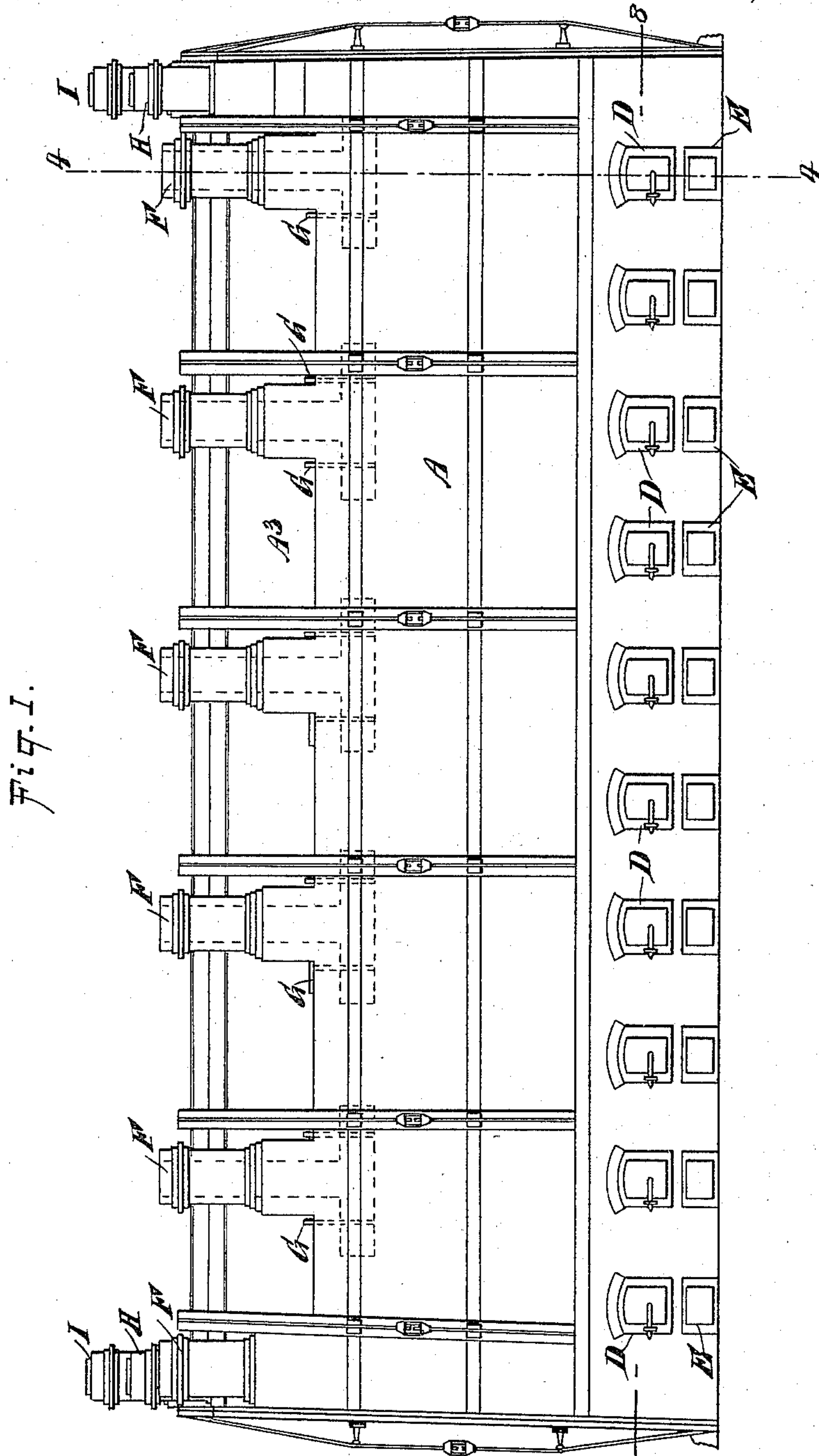
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A. THAI SON.  
KILN.

No. 572,841.

Patented Dec. 8, 1896.



WITNESSES:

*Henry A. C. Kelly.*  
*Geo. G. Foster.*

INVENTOR

*A. Thaison.*

BY

*Mumford*

ATTORNEYS

(No Model.)

5 Sheets—Sheet 2.

A. THAISON.  
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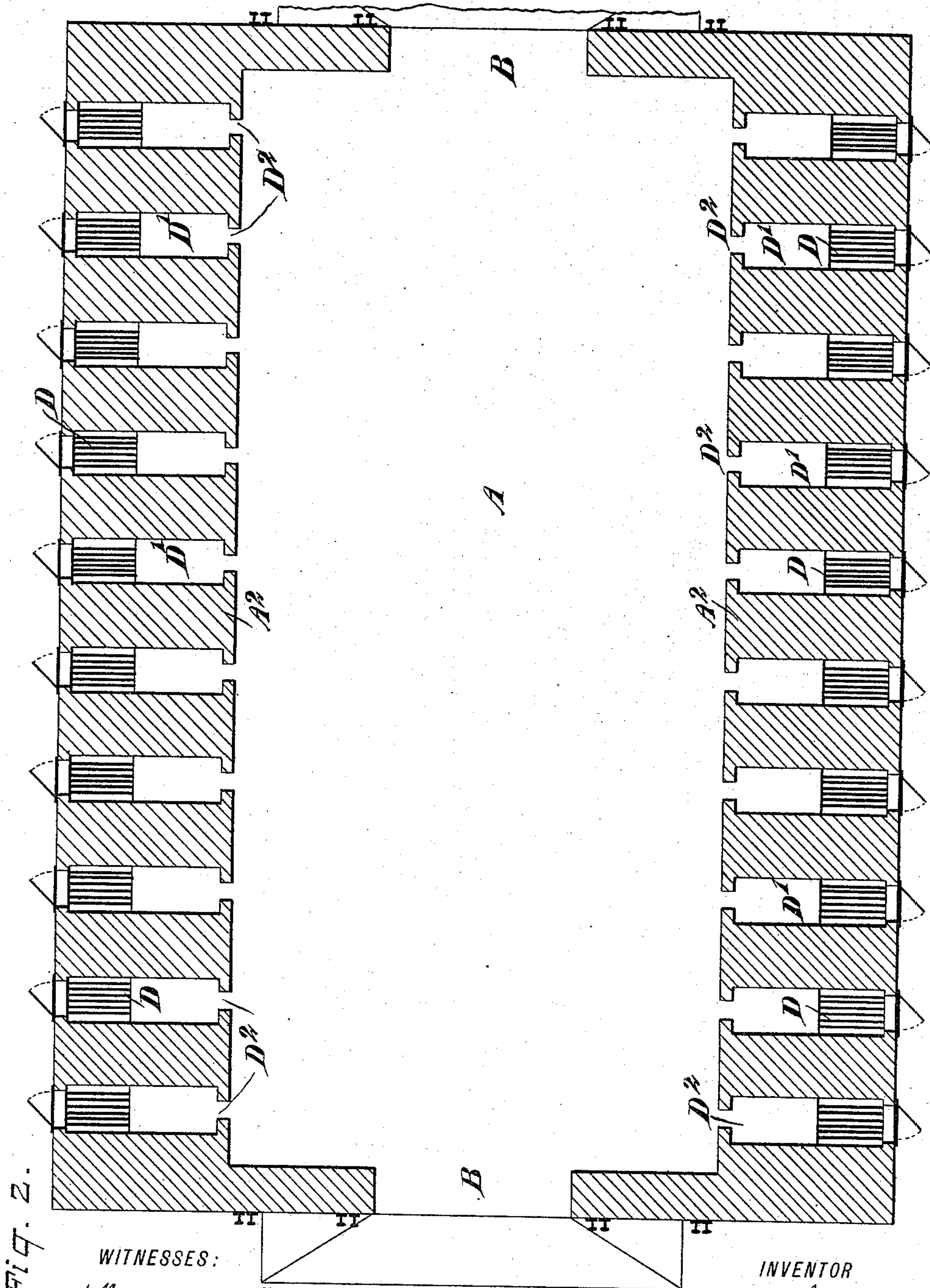


Fig. 2.

WITNESSES:

*Henry A. C. Kelley.*

*Rev. G. Foster,*

INVENTOR

*A. Thaison.*

BY

*Henry*

ATTORNEYS



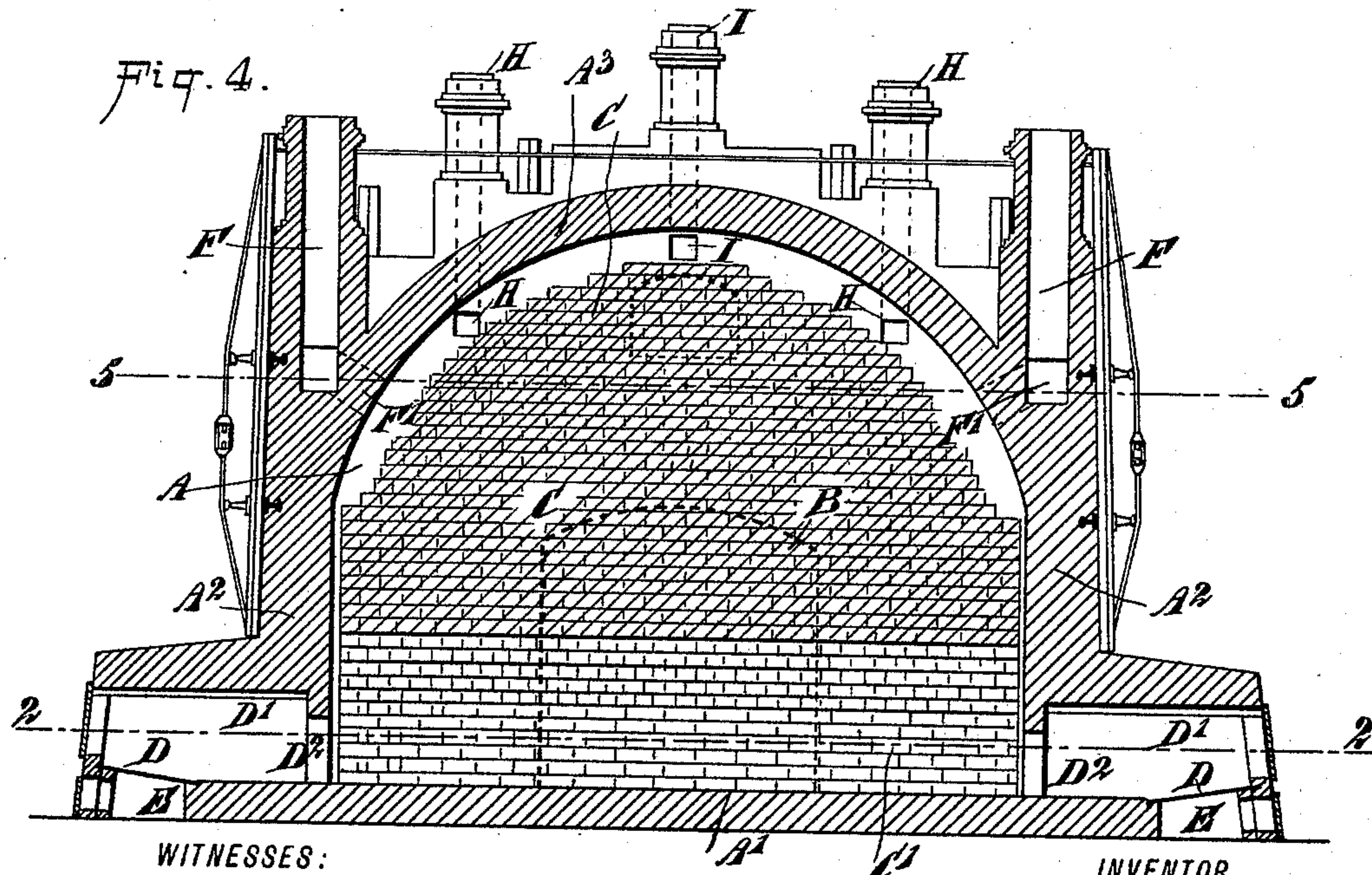
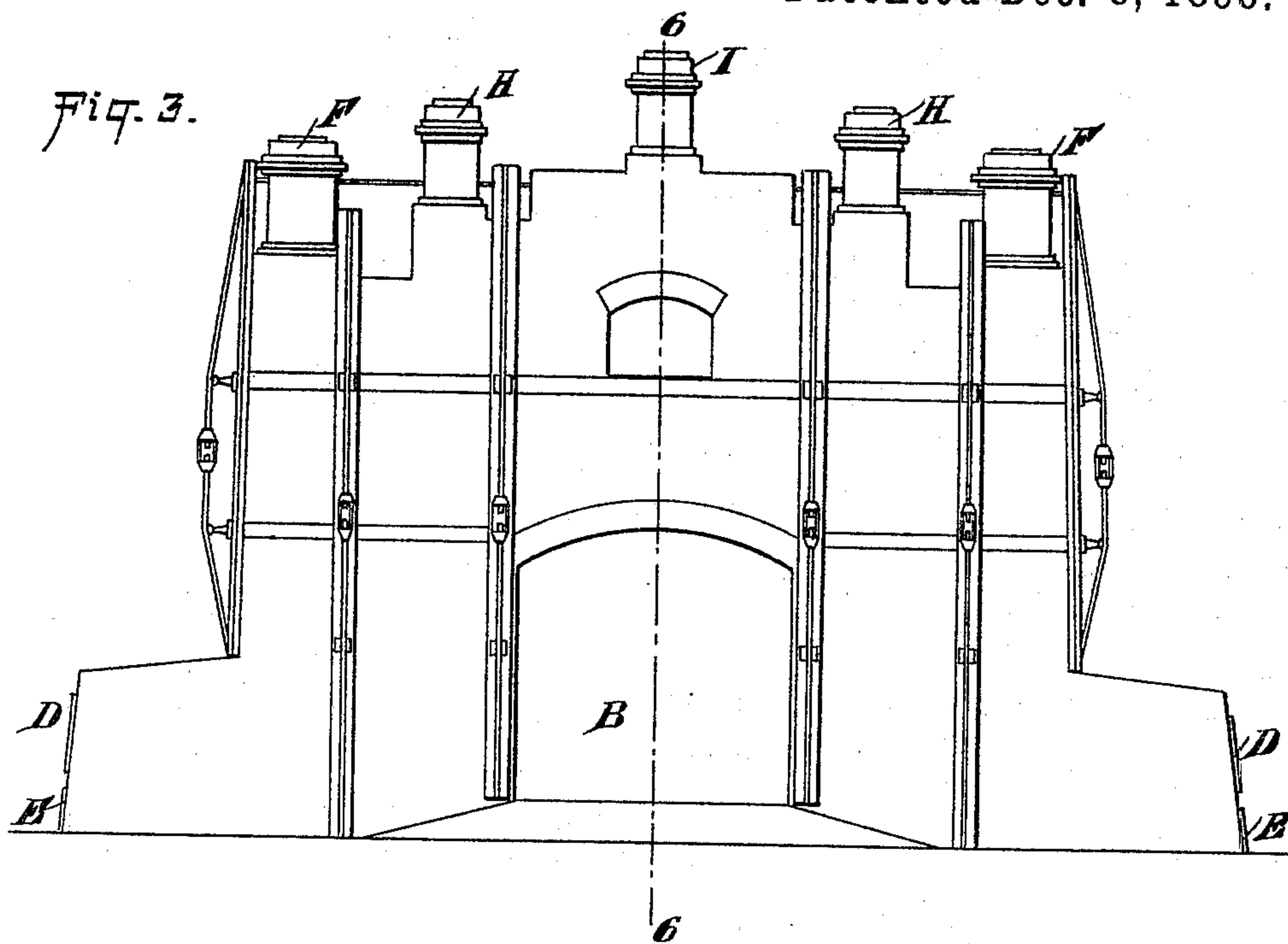
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A. THAISON.  
KILN.

No. 572,841.

Patented Dec. 8, 1896.



WITNESSES:

*Henry M. C. Kelley.*  
*Thos. G. Brown.*

INVENTOR

*A. Thaison*  
BY *Wm. J. [Signature]*  
ATTORNEYS

(No Model.)

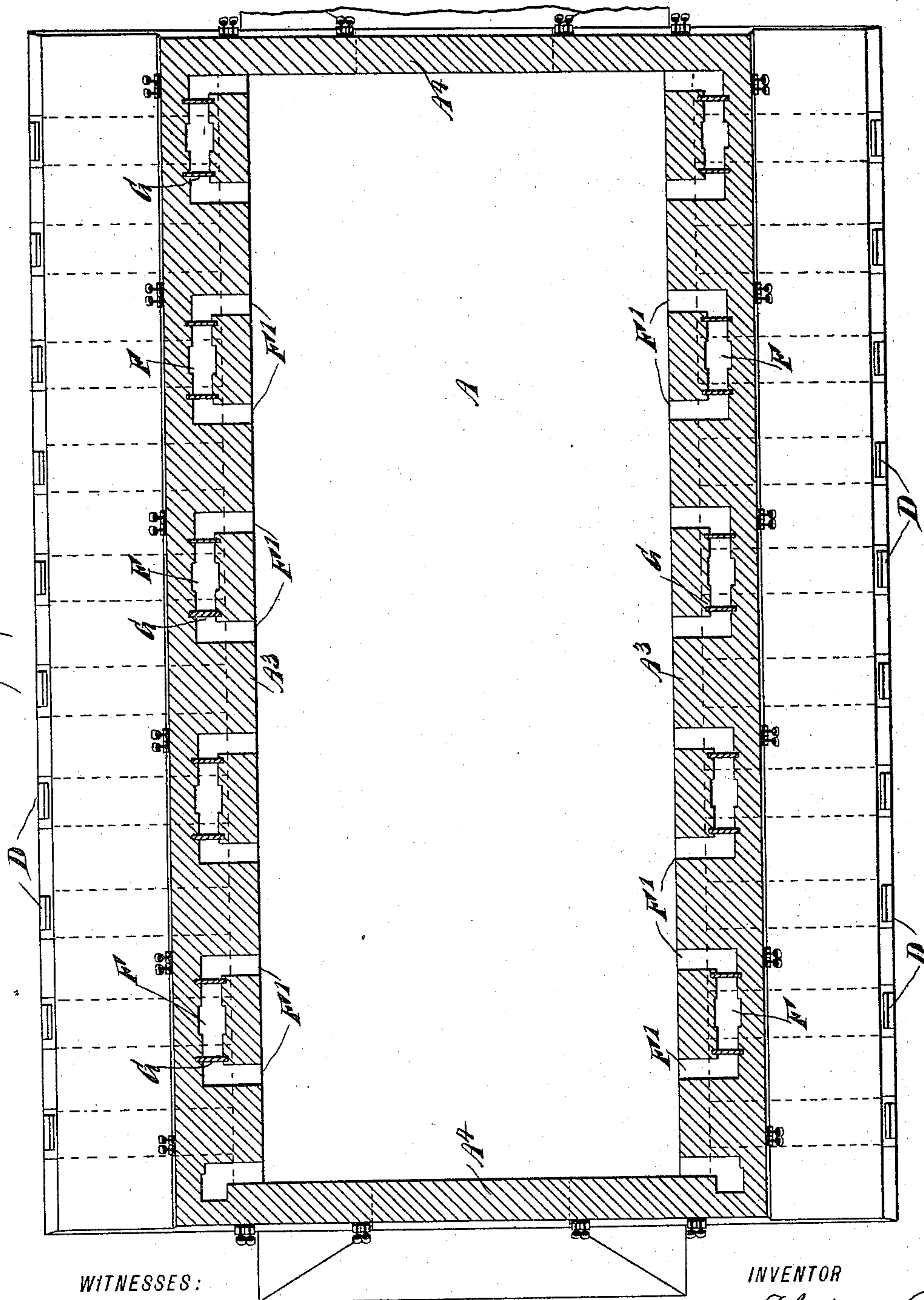
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A. THAISON.  
KILN.

No. 572,841.

Patented Dec. 8, 1896.

Fig. 5.



WITNESSES:

*Henry A. C. Kelly.*  
*Rev. J. H. Foster.*

INVENTOR

*A. Thaison*  
BY *Munn*

ATTORNEYS



(No Model.)

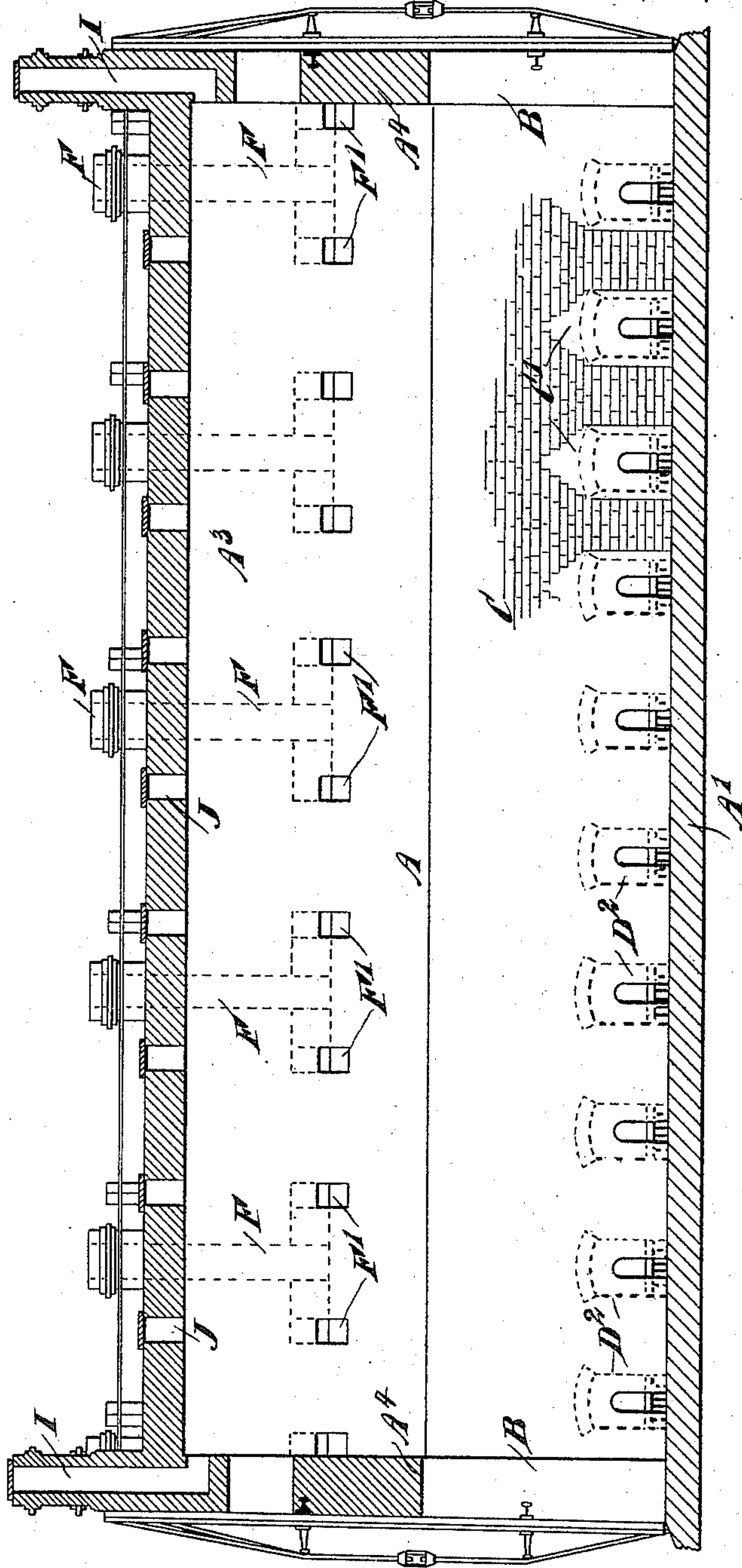
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A. THAISON.  
KILN.

No. 572,841.

Patented Dec. 8, 1896.

Fig. 6.



WITNESSES:

Henry R. C. Kelly.  
Rev. J. B. Foster.

INVENTOR

A. Thaison.

BY

Wm. J. Foster.

ATTORNEYS



# UNITED STATES PATENT OFFICE.

ANDREW THAISON, OF LAREDO, TEXAS.

## KILN.

SPECIFICATION forming part of Letters Patent No. 572,841, dated December 8, 1896.

Application filed February 12, 1896. Serial No. 578,974. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW THAISON, of Laredo, in the county of Webb and State of Texas, have invented a new and Improved Kiln, of which the following is a full, clear, and exact description.

The invention relates to updraft-kilns; and its object is to provide a new and improved kiln for burning brick and other clay ware and arranged to enable the operator to control the heat, so as to insure a uniform and equal heating of the articles set in the kiln, and at the same time requiring a small amount of fuel.

The invention consists in the particular construction and arrangement of parts, as will be fully described hereinafter and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement. Fig. 2 is a sectional plan view of the same on the lines 2 2 of Figs. 1 and 4. Fig. 3 is an end elevation of the same. Fig. 4 is a cross-section of the same on the line 4 4 of Fig. 1. Fig. 5 is a sectional plan view of the improvement on the line 5 5 of Fig. 4, and Fig. 6 is a longitudinal section of the improvement on the line 6 6 of Fig. 3.

The improved kiln is provided with a burning-chamber A, having a floor A', on which the bricks and other articles to be burned are set, said chamber having its sides A<sup>2</sup> connected with each other by an arched roof A<sup>3</sup>, as plainly shown in Fig. 4, and the ends A<sup>4</sup> of the chamber are provided with openings B for passing the bricks or other articles into the kiln or for removing the same therefrom after they are burned.

The green bricks C are stacked on the floor A' in such a manner as to form the usual transverse smoke-flues C', terminating at their ends at the inner ends of the combustion-chambers D', forming part of the furnaces D, arranged on the sides A<sup>2</sup> of the chamber. Thus two oppositely-arranged furnaces discharge their heat directly into the smoke-flue formed by the green bricks, the heat then rising from the smoke-flue through the stack of green bricks to burn the same.

Each furnace D is provided with the usual grate and ash-pit E, and doors lead to said furnaces and ash-pits for introducing the fuel and removing the ashes in the usual manner.

The green bricks are set in the chamber A to a height within a short distance of the arched roof A<sup>3</sup>, as indicated in Figs. 4 and 6, and draft-flues F open by their branch channels F' into the interior of the chamber at the arched roof A<sup>3</sup> between the inner ends D<sup>2</sup> of the adjacent furnaces. (See Fig. 6.) The draft-flues F extend above the roof A<sup>3</sup> and open into the atmosphere.

Each branch flue F' contains a damper G, adapted to be manipulated from the outside to permit the operator to regulate the escape of the heat, water-smoke, &c., from the arched roof of the chamber, as the burning of the brick may require.

In order to insure a good draft in each corner of the chamber A, I provide a draft-flue H for each corner and leading to the outside, and a similar draft-flue I is arranged at or near the middle of each end A<sup>4</sup>, it being, however, understood that all the draft-flues F', H, and I open into the chamber A above the brick or other ware set in the chamber. By arranging the furnaces and smoke-flues C' alternately with the branch draft-flues F', I insure a complete circulation of the heat through the green bricks, as the heat has to rise upwardly and sidewise in order to finally reach said draft-flues. Closed outlet-openings J are formed in the top of the roof A<sup>3</sup> to permit the heat contained in the roof to escape to the outer air whenever desired.

By the arrangement described I am enabled to dispense with the two courses of bricks usually placed as a covering on the top of the green bricks to be burned, and, furthermore, the water-smoke can readily escape without danger of injuring any of the green brick, as all draft is in an upward direction.

By the arrangement described I am enabled to hold the heat any desired length of time within the chamber A, so as to permit of annealing the bricks, cooling the same gradually, as required, by simply closing the dampers G accordingly. The outside of the kiln is bound in by suitable metallic posts and braces, as indicated in the drawings.

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

5 A kiln, comprising an arched chamber adapted to receive the bricks or other articles to be burned, furnaces arranged in the sides of the chamber and located directly opposite each other, main draft-flues arranged at the sides of the kiln directly above the inner end  
10 of said furnaces and each having branch flues leading from opposite sides thereof and opening into the arched roof of the chamber at an angle to the main flue, the openings of the branch flues being above and alternating  
15 with the inner ends of the said furnaces, whereby the hot products of combustion dis-

charged from the furnaces pass upwardly and sidewise through the material to be burned insuring a complete circulation of the said products of combustion through the 20 material, dampers located in each branch flue, a draft-flue leading from the arched roof of the chamber at each end thereof, and a draft-flue for each corner of the chamber, each of the said flues opening into the upper part of 25 the chamber above the material to be burned, as and for the purpose set forth.

ANDREW THAISON.

Witnesses:

HENRY FISHER,  
A. C. HAMILTON.