(No Model.)

2 Sheets—Sheet 1.

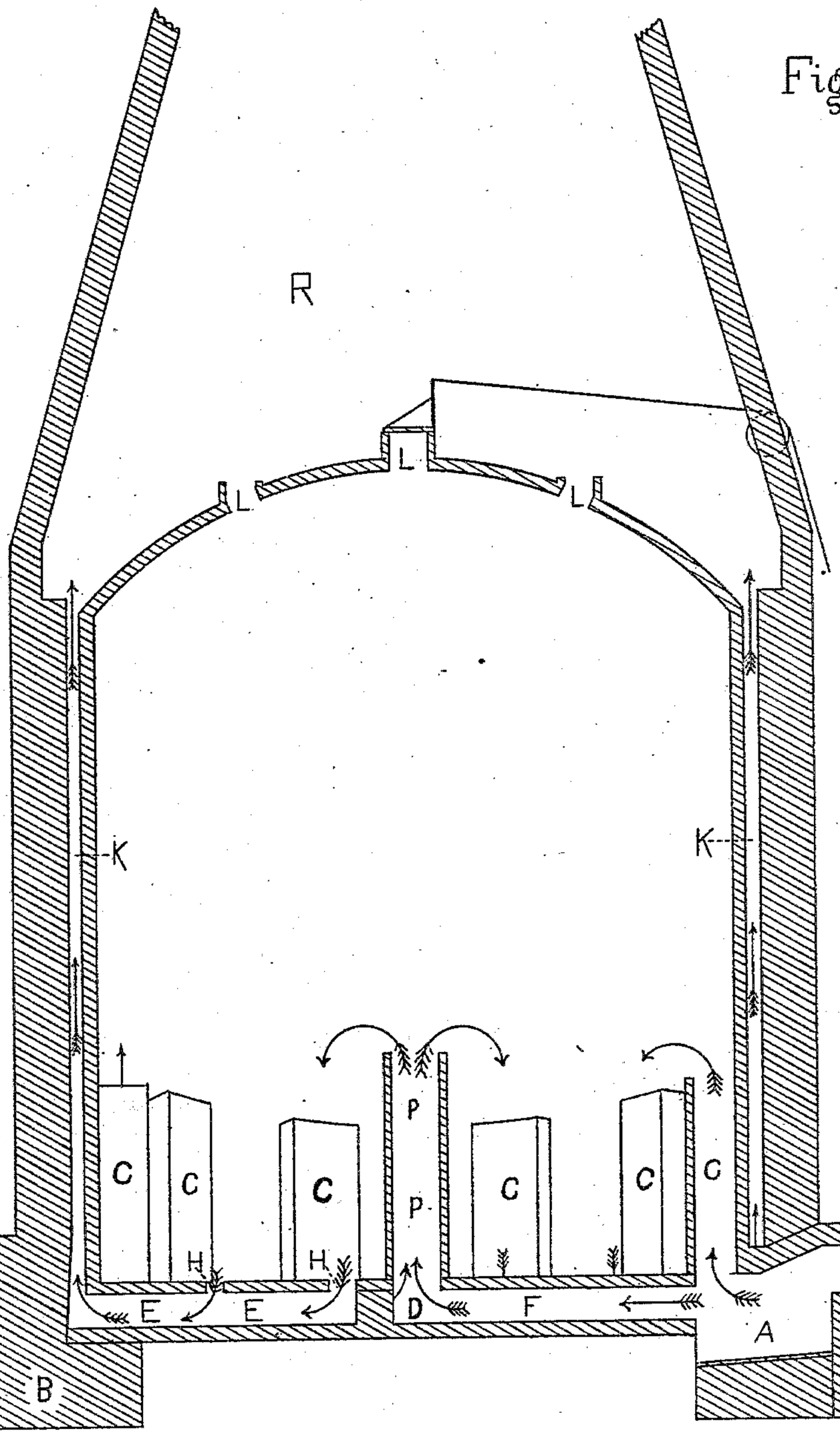
L. LAWTON.

POTTERY KILN.

No. 295,412.

Patented Mar. 18, 1884.

Fig 1



WITNESSES

George T. Cranmer

James Buchanan

INVENTOR

Lewis Lawton

(No Model.) 2 Sheets—Sheet 2.

L. LAWTON.

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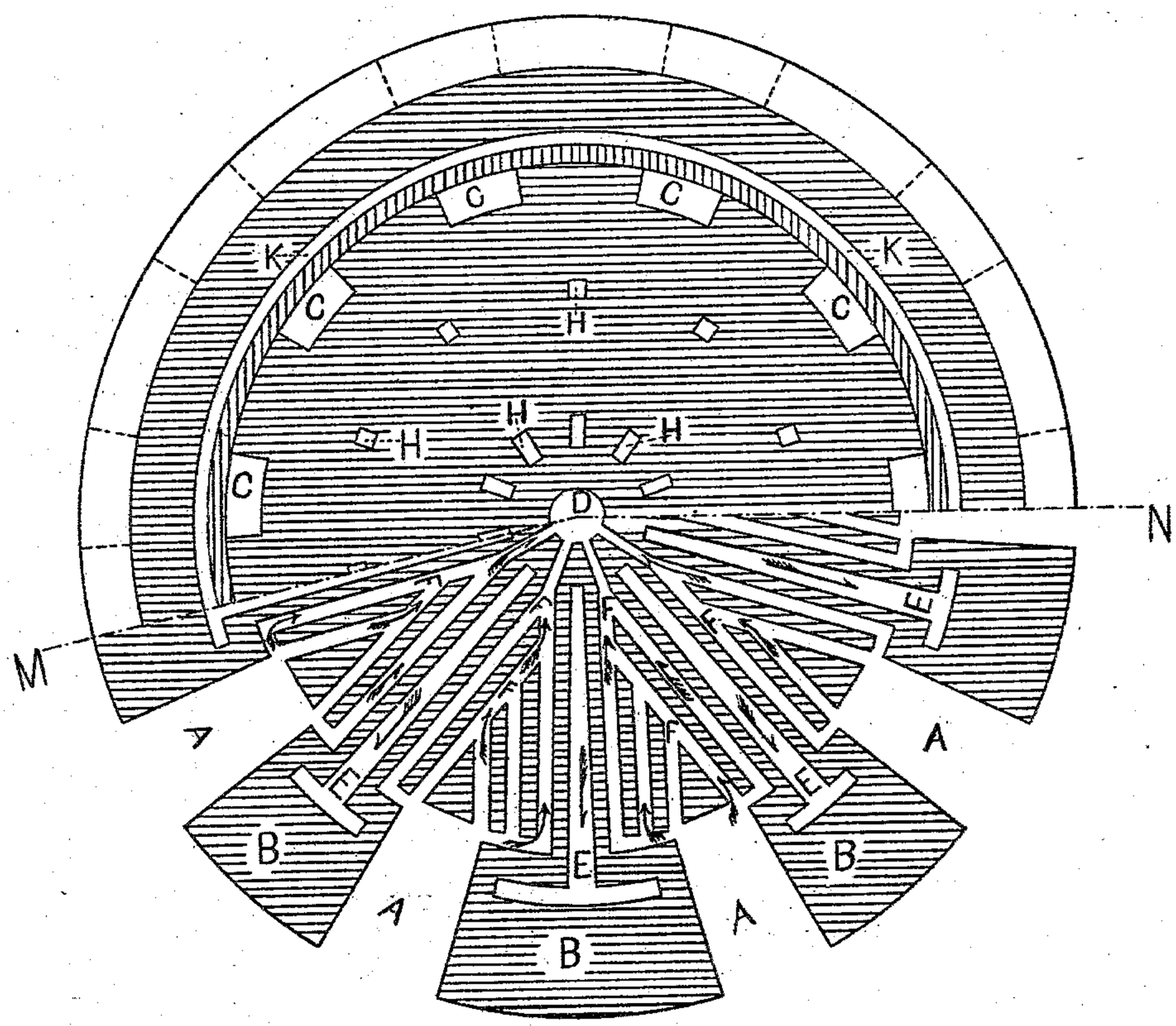

Fig. 2

WITNESSES

Geo. J. T. Cranmer
James Buchanan

INVENTOR

Lewis Lawton

UNITED STATES PATENT OFFICE.

LEWIS LAWTON, OF TRENTON, NEW JERSEY.

POTTERY-KILN.

SPECIFICATION forming part of Letters Patent No. 295,412, dated March 18, 1884.

Application filed January 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, LEWIS LAWTON, a citizen of the United States, residing at Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Pottery-Kilns, of which the following is a specification.

Hitherto such kilns have been so constructed that but a small proportion of the heat generated in firing the kiln is utilized, the current-passages being so arranged as to allow the heated air to pass freely out of the top of the kiln, while yet capable of materially assisting in the baking of the ware in the kiln.

My improvement consists in providing a kiln with an annular flue encircling the inner lining of the kiln, and up which the heated air must pass before it can find egress from the kiln.

My invention is shown more clearly in the accompanying drawings. In these drawings, Figure 1 is a vertical sectional view of my kiln, taken on the line *m n* of Fig. 2, and also showing in perspective sufficient of the inner construction of the kiln to insure clearness. Fig. 2 is a floor view or section of my kiln, with the flooring removed below the line *m n* to show the construction and arrangement of the flues.

In the drawings similar letters of reference indicate similar parts.

A indicates the fire-boxes; B, the foundation-pillars; C, the fire-bags; D, the well-hole; E, the return-flue connecting with the annular flue; F, flues leading from the fire-boxes to the well-hole; H, downdraft-holes leading to flues E; K, annular flue surrounding the inner lining of the kiln, connecting with the flues E and extending to the top of such inner lining; L, crown-holes, opened only when the kiln is burned off, and then to facilitate cooling; P, the pipe-bung above the well-hole D, and O a door for feeding in coal.

The directions of the heat-currents are indicated by arrows, which point with the current.

Upon being fired, the operation of my kiln is this: The heat generated at the fire-boxes A passes a portion of it along the flues F to the well-hole, and thence up into the kiln through the pipe-bung P. Another portion passes up into the kiln through the fire-bags C. The heated air thus entering the kiln by these several means, diffuses itself throughout the kiln, and, finding no means of egress, descends and passes out of the downdraft-holes H in the floor of the kiln. From thence it is conducted by the return-flues E to the continuous annular flue K, up which it passes, entirely encircling the inner lining of the kiln, thereby utilizing all the heat possible and insuring an even burning to the center of the kiln.

This kiln can be used either with or without grate-bars and with either bituminous or anthracite coal.

I disclaim all that is shown in English Patent No. 577, March 1, 1860.

What I claim as my invention is—

1. In a kiln for firing pottery-ware, the return-flues E, in combination with the annular flue K, surrounding the inner lining of the kiln, substantially as shown and described.

2. In a kiln for firing pottery-ware, the return-flues E, provided with the downdraft-holes H, in combination with the annular flue K, surrounding the inner lining of the kiln, substantially as shown and described.

3. Means for firing pottery or other ware, consisting of a kiln provided with the flues F, connecting with the central well-hole, D, and the fire-bags C, and provided with the return-flues E, having downdraft-holes H, connecting with the annular flue K, surrounding the inner lining of the kiln, substantially as shown and described.

LEWIS LAWTON.

Witnesses:
L. B. HARTMAN,
SAML. W. BELDON.