(No Model.) 3 Sheets—Sheet 1.

S. DEWHIRST.

BRICK KILN.

No. 410,788. Patented Sept. 10, 1889.

Fig. 1.

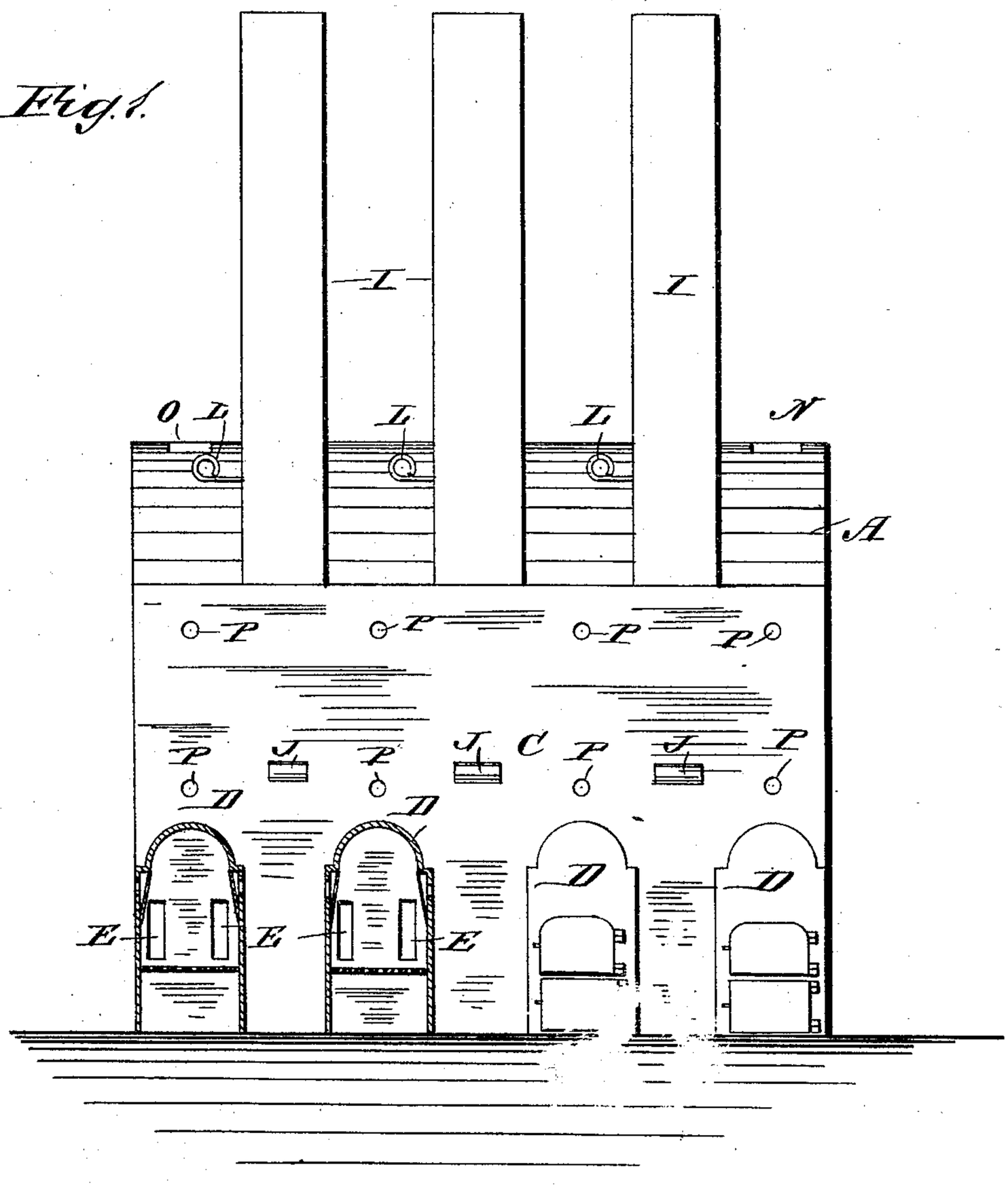

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Fig. 2

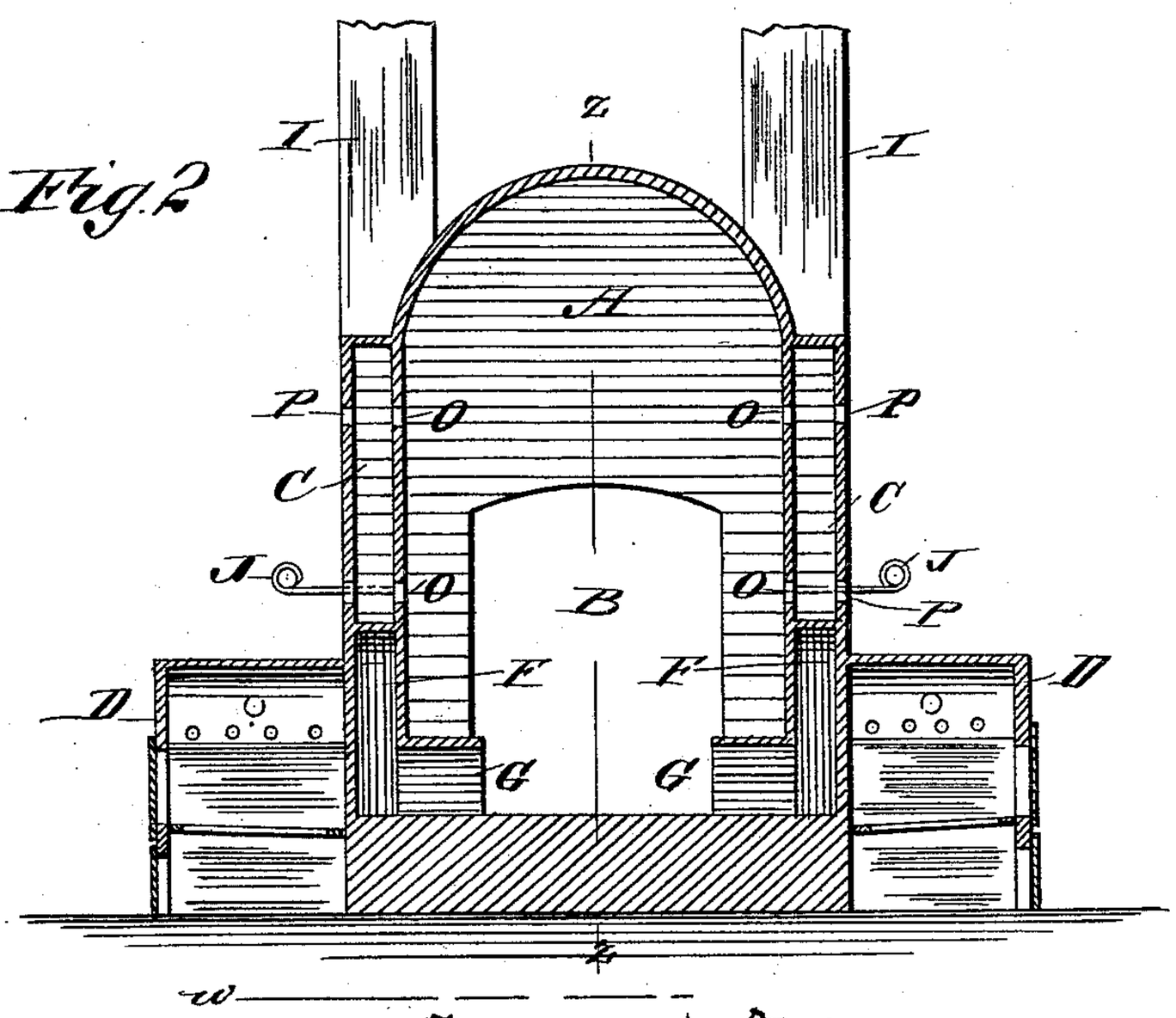

Fig. 3

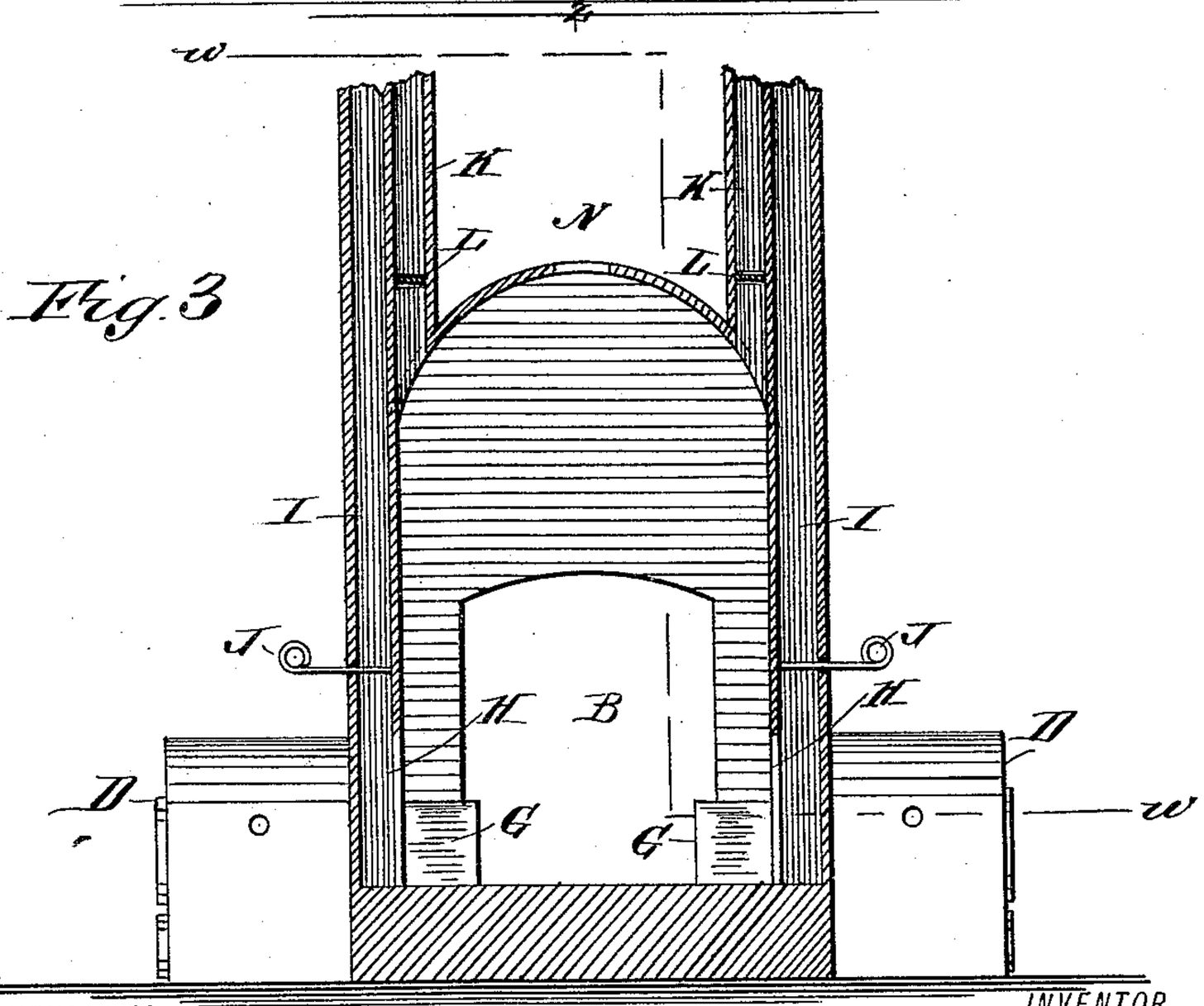

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Fig. 4

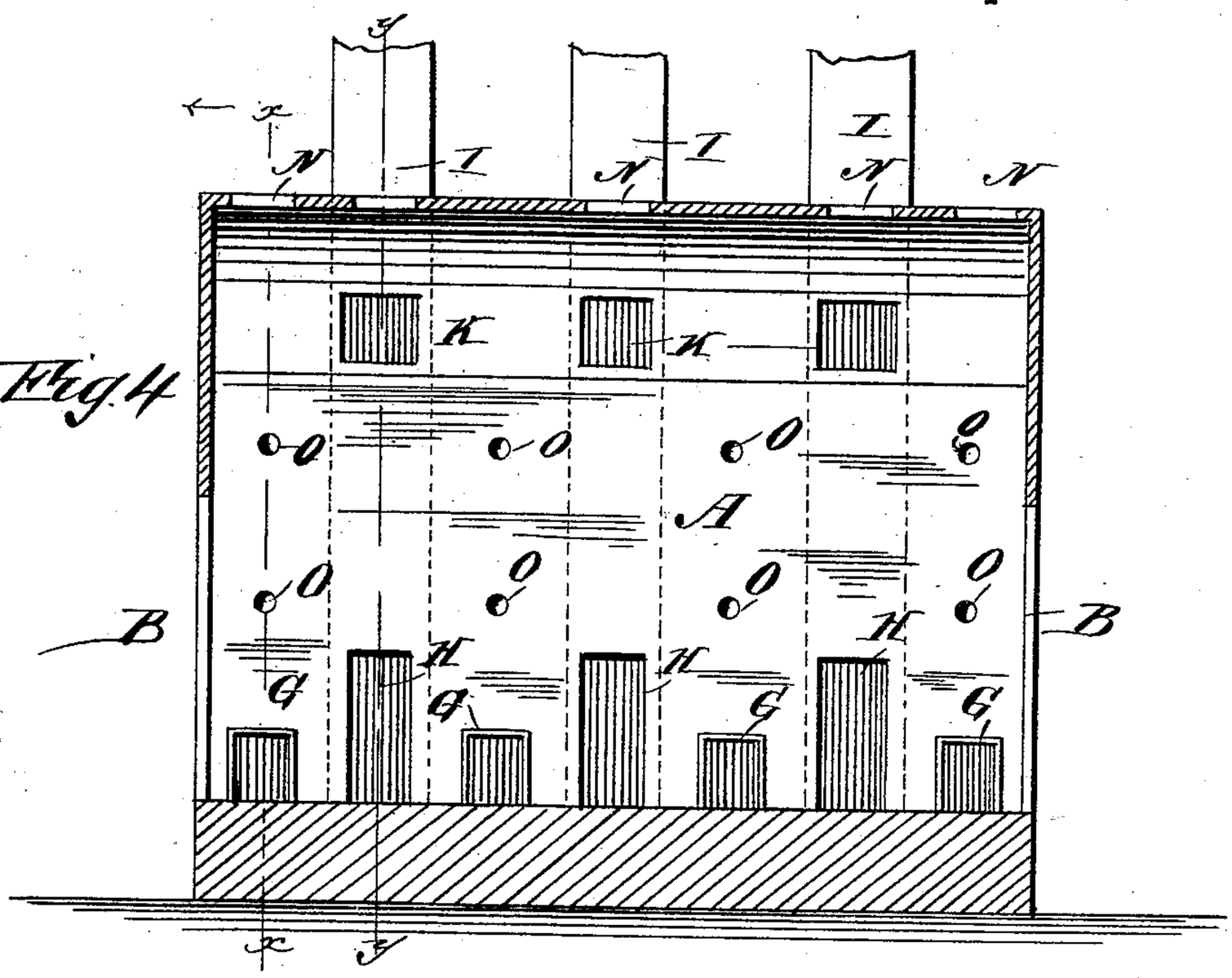
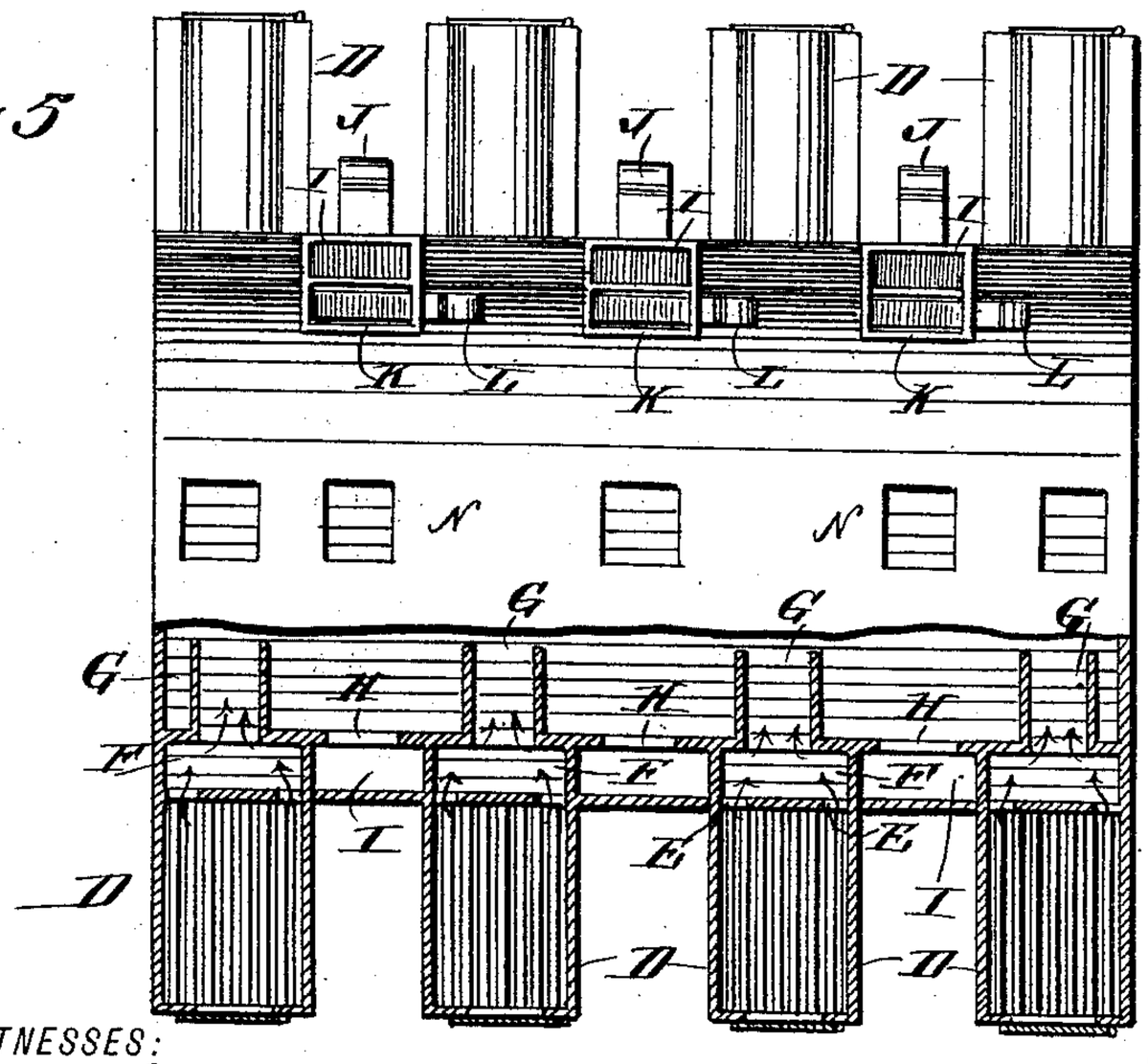


Fig. 5



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UNITED STATES PATENT OFFICE.

SIMON DEWHIRST, OF VORIS, MISSOURI.

BRICK-KILN.

SPECIFICATION forming part of Letters Patent No. 410,788, dated September 10, 1889.

Application filed January 22, 1889. Serial No. 297,141. (No model.)

To all whom it may concern:

Be it known that I, SIMON DEWHIRST, of Voris, in the county of Buchanan and State of Missouri, have invented a new and Improved Kiln, of which the following is a full, clear, and exact description.

The invention relates to kilns for burning bricks and similar materials; and its object is to provide an improved kiln which is simple and durable in construction, very effective in operation, and which permits of sending the heat evenly through all the bricks at one time, thus reducing the usual time for burning bricks about one-half.

The invention consists of certain parts and details and combinations of the same, as will be hereinafter fully described, and then pointed out in the claims.

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

Figure 1 is a side elevation of the improvement with parts in section. Fig. 2 is a transverse section of the improvement on the line *x x* of Fig. 4. Fig. 3 is a like view of the same on the line *y y* of Fig. 4. Fig. 4 is a longitudinal sectional elevation of the improvement on the line *z z* of Fig. 2, and Fig. 5 is a plan view of the improvement with parts in section on the line *w w* of Fig. 3.

The improved kiln is provided with a building A of suitable size and having at each end an opening B, through which the green bricks are carried into the building and set up in the same in the usual manner. The openings B can be closed by doors after the bricks are set up.

On each side of the building A is formed a chamber C, which extends throughout the length of the kiln, and from the bottom to the roof of the same and forming an air-space.

On the outside of each chamber C are held a number of furnaces D of any approved construction, and provided with the usual grates, doors, dampers, &c. The inner end of each furnace D is connected by two apertures E with a combustion-chamber F, formed in the chamber C. From each combustion-chamber F leads a channel G into the interior of the building A, extending a suitable distance into the interior, as is plainly shown in Figs. 2 and 3.

From the interior of the building A lead the large openings H into chimneys I, built in the said chamber C. Each chimney I is located between two succeeding furnaces D, as is plainly illustrated in the drawings, and the openings H are consequently each located between two succeeding channels G. Each of the chimneys I is provided with a damper J, for regulating the heat and smoke passing to the respective chimney.

The chimneys I extend a suitable distance above the building A, and at the inside of each chimney I is formed a second chimney K, leading into the top of the building A, as is plainly shown in Fig. 3. In each of the chimneys K is held a damper L, for regulating the heat and gases passing out at the top of the building A through the chimneys K.

In the roof of the building A are arranged a number of apertures N, for permitting the escape of heat and gases after the same has passed through the green bricks.

In the side walls of the building A are arranged several rows of openings O, and directly opposite the same are located openings P, formed in the outer wall of the side chambers C. The openings P and O serve as peep-holes for examining the workings of the kiln.

The operation is as follows: The green bricks are carried through the end openings B into the building A, and are set up in the usual manner with a channel extending between two opposite openings H, leading to a corresponding chimney I. When the openings B are closed and a fire is started in the furnaces D, the heat passes from the furnaces through the openings E into the combustion-chambers F, from which the heat passes through the channels G in among the bricks. As the channels G extend a suitable distance into the building A, the heat is carried nearly to the center of the building from opposite sides, so that the bricks are evenly burned.

The heat can be kept in the interior of the building A among the green bricks by closing the dampers J and L in the chimneys I and K. If the heat is too strong, the dampers can be opened or partly opened only, so as to let some of the heat escape, as desired.

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

1. A brick-kiln provided in its side walls with a series of combustion-chambers having channels leading therefrom into the interior of the kiln above the floor thereof, and with a series of chimneys between the combustion-chambers and communicating with the interior of the kiln at or near the bottom, in combination with a series of furnaces on the outside of the kiln, each furnace communicating with a combustion-chamber, substantially as described.

2. A brick-kiln provided in its side walls with chambers C, combustion-chambers F, having channels G leading therefrom into the interior of the kiln, along the floor of the same, and a series of chimneys I between the combustion-chambers, provided with dampers J and communicating with the interior of the kiln just above the floor, as at H, in combination with the furnace D outside of the kiln, and each communicating with a combustion-chamber, substantially as herein shown and described.

3. In a brick-kiln, the combination of the kiln-building A, provided in its side walls with the chambers C, the combustion-chambers F, having channels G leading into the interior of the kiln, the chimneys I between the combustion-chambers, provided with the dampers J and communicating with the interior of the kiln at H, the furnaces D on the outside of the kiln and communicating with the combustion-chambers, and the auxiliary chimneys K at the side of the chimneys I, communicating with the interior of the kiln through the top and provided with dampers L, substantially as herein shown and described.

SIMON DEWHIRST.

Witnesses:
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SENTERLOW BUTLER.