

(No Model.)

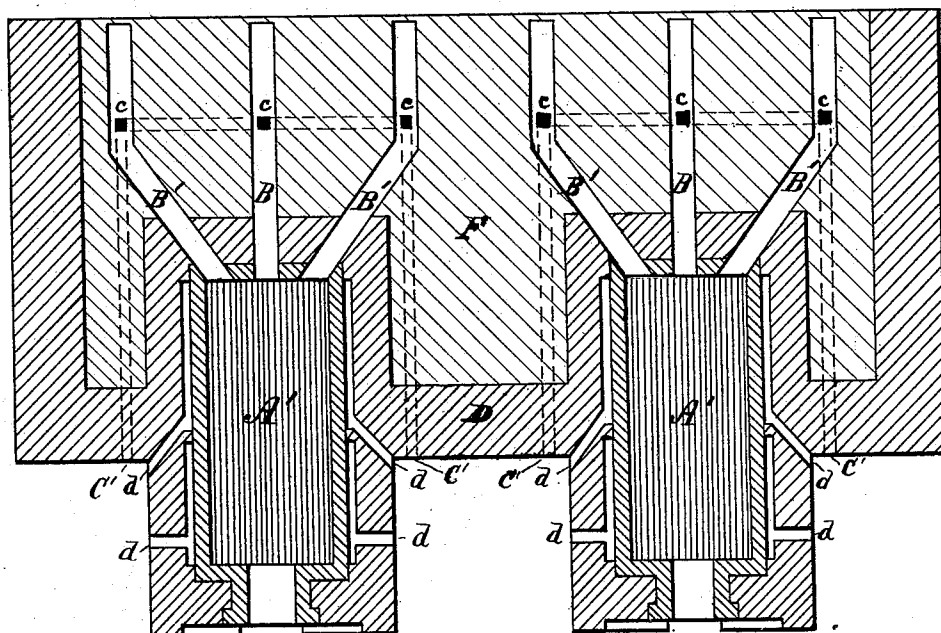
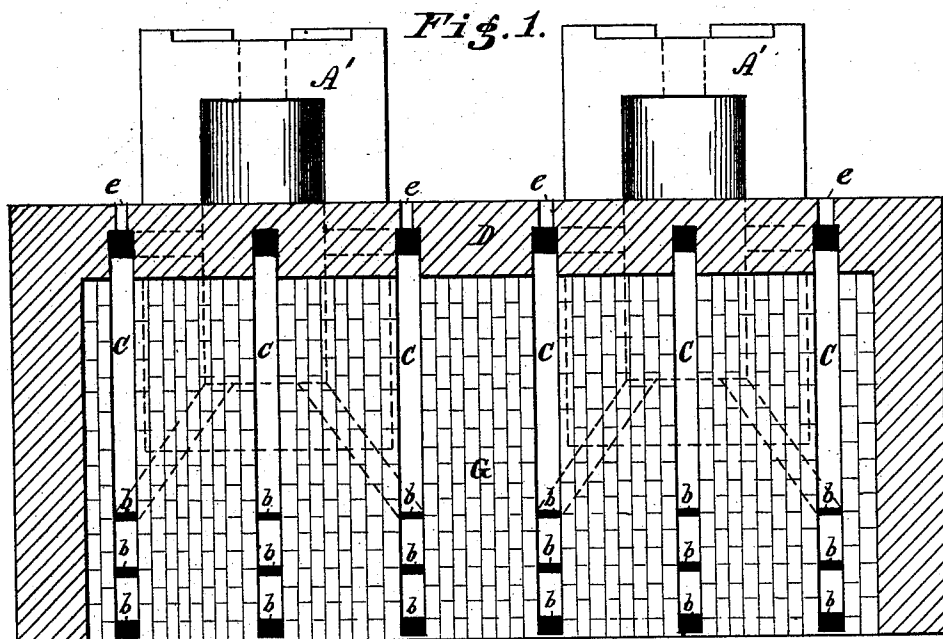
2 Sheets—Sheet 1.

J. R. KEMP.

BRICK KILN.

No. 352,194.

Patented Nov. 9, 1886.



Witnesses

Collin Ford

Alexis Copie

Inventor

J. R. Kemp

(No Model.)

2 Sheets—Sheet 2.

J. R. KEMP.
BRICK KILN.

No. 352,194.

Patented Nov. 9, 1886.

Fig. 2.

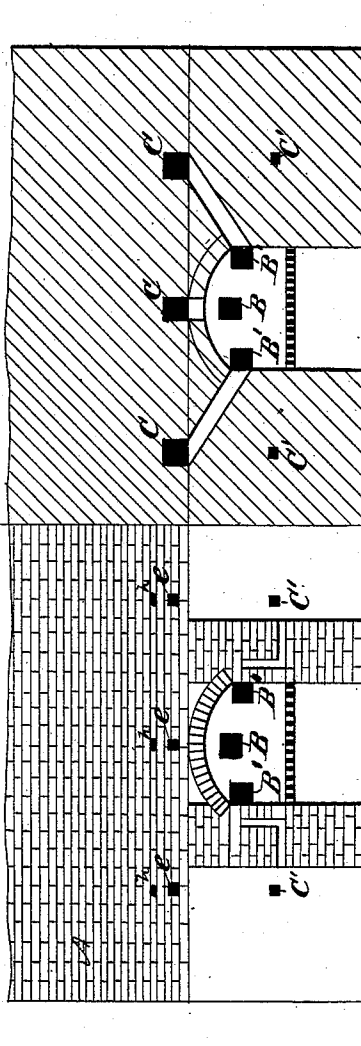
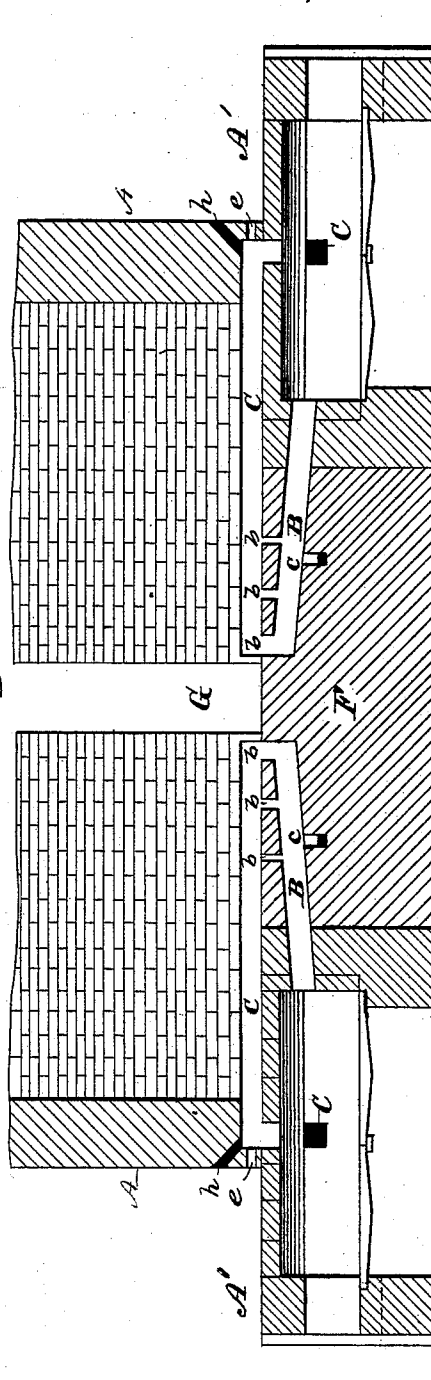


Fig. 3.



Witnesses

Collin Ford
Alexiscope

Inventor
J. R. Kemp

UNITED STATES PATENT OFFICE.

J. RITNER KEMP, OF YOUNGSTOWN, OHIO.

BRICK-KILN.

SPECIFICATION forming part of Letters Patent No. 352,194, dated November 9, 1886.

Application filed December 21, 1885. Serial No. 186,255. (No model.)

To all whom it may concern:

Be it known that I, J. RITNER KEMP, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Brick-Kilns, known as "The Kemp Minimum Fuel and Equal Cremation-Kiln"; and I do hereby declare the following to be a full, clear, and exact description of my invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in brick-kilns, the object of which is to provide a kiln which will effect a complete combustion of all the gases and disseminate the same through the kiln, so that all the bricks or other wares burned therein will be uniformly burned.

Figure 1 is a sectional plan view of the lower portion of my kiln, one half being taken on a line below the floor and the other half on a line above the floor. Fig. 2 is a front and vertical sectional view of the furnace and eye of the kiln. Fig. 3 is a vertical longitudinal sectional view.

A indicates the walls of the kiln, which may be of any well-known or approved construction having a good solid foundation, which extends below the frost-line.

A' are the furnaces, located partly within and partly without the kiln-walls, said furnaces being provided with the usual grate-bars and doors common to all furnaces of this class. Any desired number of these furnaces may be placed in the kiln; but ordinarily for medium-sized kilns two at each side will be sufficient.

B and B' are flues leading from and through the rear walls of the furnace into the arches of the kiln, and are by preference three in number, the center flue, B, leading straight from the furnace, while the other flues, B', project from the furnaces at an angle for a short distance and then straight, so as to enter the arches of the kiln, as shown in Fig. 1. The rear portions of the flues B and B' are provided with vertical flues b, which serve to distribute the heat and flame which pass through the flues B and B', as will more fully appear.

C C are flues leading from the crown and

sides of the furnace A' to the arches of the kiln, said flues running above and parallel with the flues B and B'. The flues C C are provided with air-ducts, h, at their front ends, which are controlled by suitable dampers, so as to admit the proper amount of external air to effect a complete combustion of the gases within the arches of the kiln from a point near the front walls of the kiln, so that the bricks near the wall will be burned equally well with those in the center of the kiln. The front ends of the flues are also provided with peep-holes e, so that the operator can inspect the kiln, when desired.

C' are air-flues, which extend through the walls of the kiln, and run back some distance into the foundation F of the kiln, and communicate with the flues B B' by means of the flues c'. These air-flues may be controlled by suitable dampers to regulate the amount of air admitted to the flues B B'.

As before intimated, b are short vertical flues, which connect the rear ends of the flues B and B' with the flues C and the arches of the kiln, so that the flame coming through the flues B B' is conducted or forced up by the air-currents coming through the flues C' into the center of the kiln, while the heat and flame coming from the furnace through the flues C are distributed to the brick from the walls of the kiln rearward, and thus all the bricks or articles to be burned are reached by the flame, and a uniform burning of the articles is effected.

The furnace is supplied with suitable air-inlets, d d, by which a suitable amount of air can be admitted to support combustion in all parts of the furnace. The air-inlets d d are also provided with suitable dampers to regulate the supply of air.

What I claim is—

1. In a brick-kiln, the furnaces A', located partly within and partly without the walls of the kiln, the rear ends of said furnaces being connected with the arches of the kiln by the flues B B', said flues being connected at the rear ends with air-supply flues, substantially as described, whereby the gases from the furnaces are burned near the center kiln, as set forth.

2. In a brick-kiln, the flues C, connecting with the combustion-chamber of the furnace

and entering the arches of the kiln near the walls thereof, said flues being provided with air-ducts *e*, as described, whereby the gases entering the flues C are burned in the front portion of the kiln, as set forth.

3. In a kiln for burning brick and other articles, the furnace A', located partly within and partly without the walls of the kiln, the rear end of which is connected to the flues B B', said flues being supplied with air, as described, in combination with the flues C, leading from

the center of the furnace, whereby the products of combustion are equally distributed in the arches from the walls to the center of the kiln, as set forth.

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

J. RITNER KEMP.

Witnesses:

ALEXIS COPE,

CHARLES S. FAY.