

(No Model.)

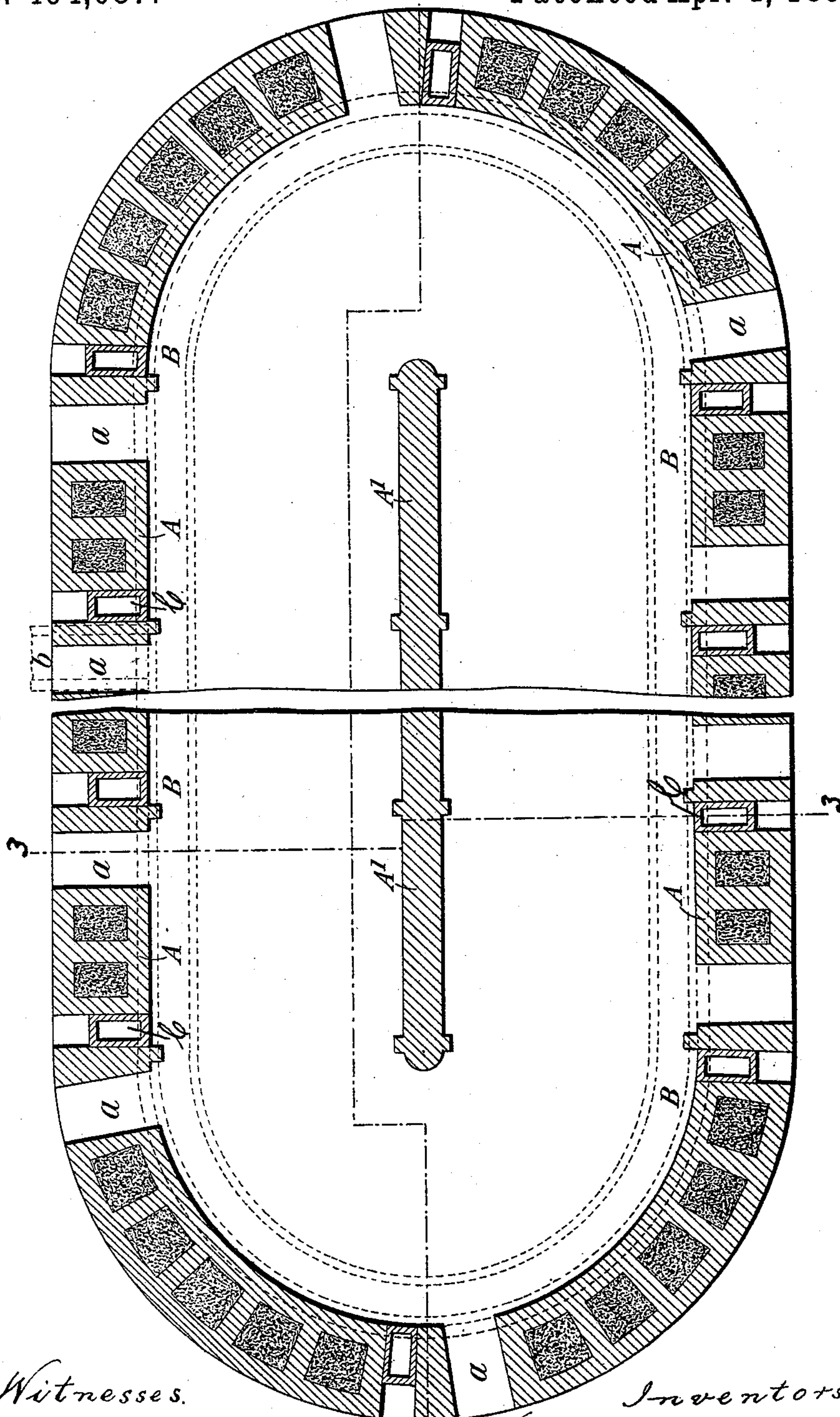
2 Sheets—Sheet 1.

W. & J. OAKES.
CONTINUOUS BRICK KILN.

No. 494,687.

Patented Apr. 4, 1893.

Fig. 1.



Witnesses.
James Miller
Albert Edward Allen

Inventors.
William and James Oakes
by George Henry Rayner
his attorney.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

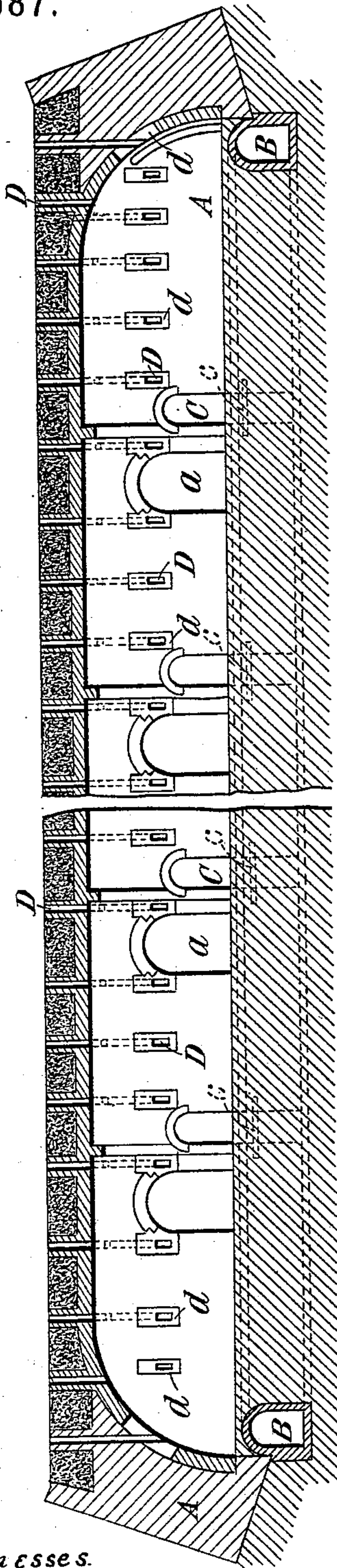
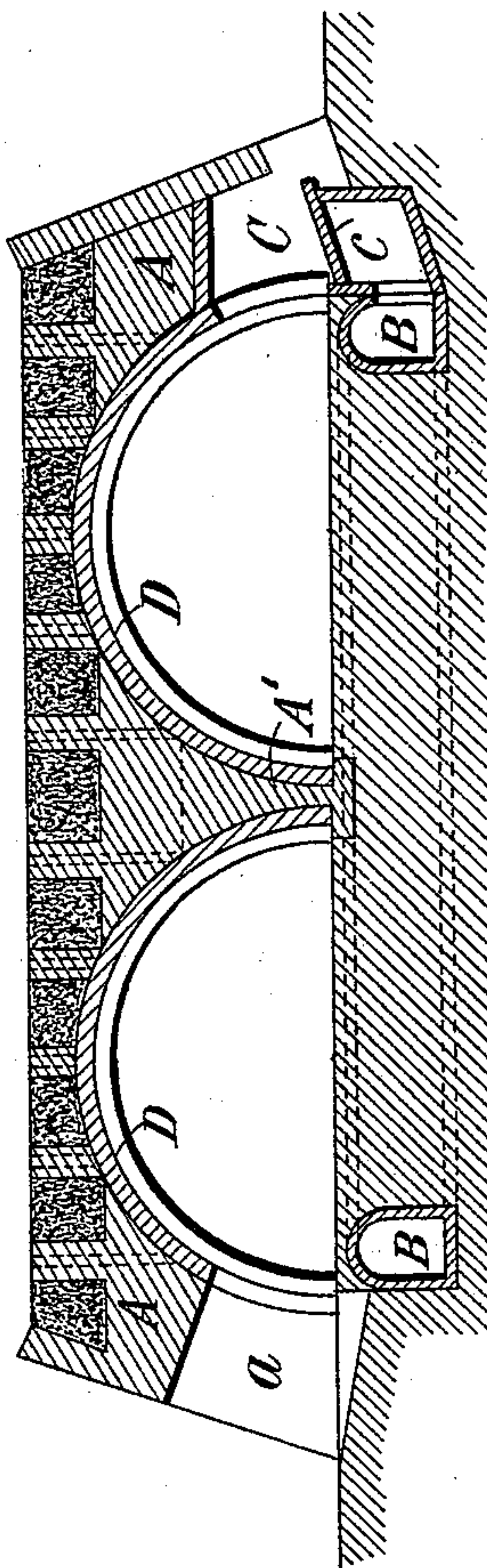


Fig. 3.



Witnesses.
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by George Henry Rayner
his Attorney

UNITED STATES PATENT OFFICE.

WILLIAM OAKES AND JAMES OAKES, OF LEEDS, ENGLAND.

CONTINUOUS BRICK-KILN.

SPECIFICATION forming part of Letters Patent No. 494,687, dated April 4, 1893.

Application filed December 6, 1892. Serial No. 454,272. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM OAKES and JAMES OAKES, subjects of the Queen of Great Britain and Ireland, residing at Anchor Street, Hunslet, Leeds, in the county of Yorkshire, England, have invented certain new and useful Improvements in Kilns for Bricks, Lime, and the Like, of which the following is a specification.

10 This invention relates to improvements in continuous firing kilns for various purposes, and has for its object to provide a kiln with flues and dampers so arranged that the consumption of fuel is reduced to a minimum, while the heat is more evenly distributed than in the ordinary kilns.

A common arrangement of flues for kilns of the description hereinafter referred to, is to have them surrounding the central partition leading to a chimney at the center or the ends of a kiln, a smoke chamber being formed at the center. The heat is in these cases very unequally distributed, one part of the kiln being heated to a much higher temperature than another.

According to our invention the flue is arranged round the sides of the kiln, just inside and below the outer wall, the partition in the center commonly used as a flue being simply a solid wall. A number of passages with dampers are employed around the sides at suitable distances apart, leading into the flue, the smoke and hot air thus passing all round the kiln to a chimney at one side. This arrangement causes the heat to be more uniformly diffused and consequently less escapes into the flues, the smoke chamber being rendered unnecessary. To feed the fuel in a number of apertures provided with a plug to close them are formed in the roof, through which the fuel can be dropped when required. A special brick may be employed for each aperture, which is built into the roof, having the hole formed in it.

45 In order that the invention may be more clearly understood, reference is had to the accompanying sheet of illustrative drawings, in which

Figure 1. is a sectional plan; Fig. 2. a longitudinal section and Fig. 3. a cross section taken on the lines 2—2 and 3—3 of Fig. 1. respectively, of a kiln constructed according to our invention.

A is the wall of the kiln, constructed in any well known manner with dividing wall A' at the center. A number of wickets or openings *a* are employed to supply the brick or other material to be burned at the commencement of the operation, being closed during the firing.

The B flue extends as shown around the whole of the wall A at the inside, the inner edge of the wall resting on it having the chimney *b* at one side. The flue is shown close against the outer wall but it may of course be placed a short distance inside. The smaller flues or passages C. leading from the chamber to the main flue, are provided at the required intervals close to the openings *a*, and are provided with the dampers *c*. to regulate the draft. The dampers are adjusted by hand in the usual manner.

The holes D in the roof are furnished for the purpose of feeding the fuel and are arranged in rows of five for each division, being plugged when not in use. The special bricks *d* in which these openings are formed are shown in Fig. 2. for those apertures placed at the sides and ends, but is of course equally applicable to the other openings.

What we claim for our invention, and desire to secure by Letters Patent, is—

In a kiln of the kind described a flue B extending around the outer wall, within and below it, having a number of inlets C. with dampers *c* in the outer wall substantially as described and shown.

In witness whereof we have set our hands, in the presence of two witnesses, at Leeds, this 25th day of November, 1892.

WILLIAM OAKES.
JAMES OAKES.

In presence of—
WILLIAM SIMPKISS,
G. B. NEWTON.