(No Model.)

E. M. PIKE, J. CASTLE & J. B. SCHOPP.

FRAME FOR BRICK KILNS.

No. 384,469. Patented June 12, 1888.

Fig. 1.

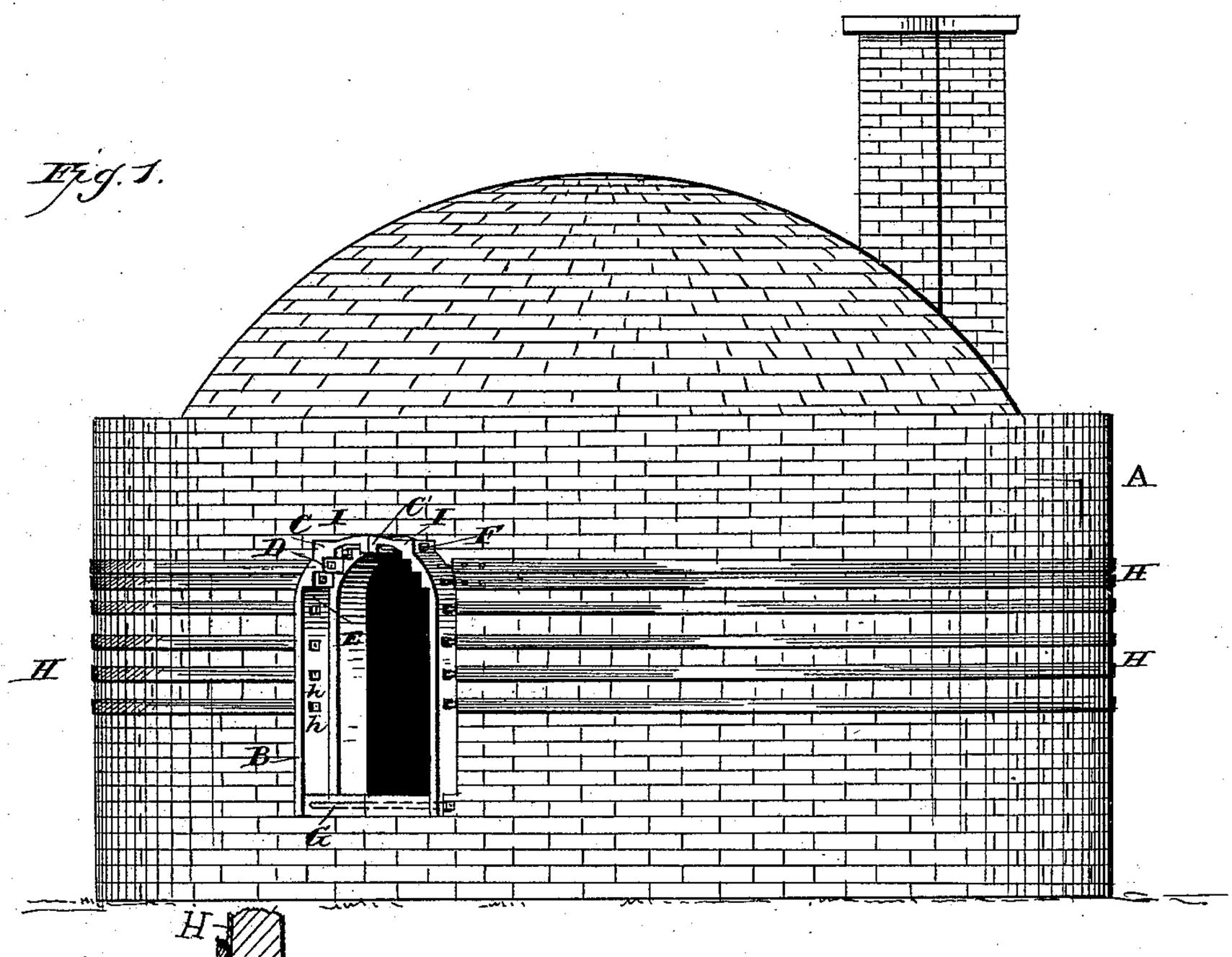


Fig. 3.

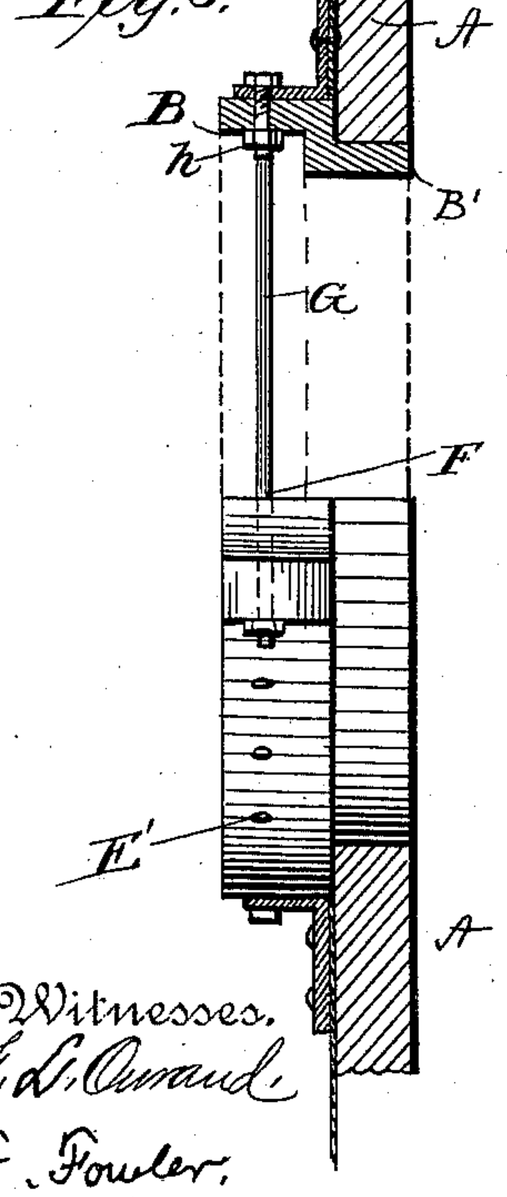
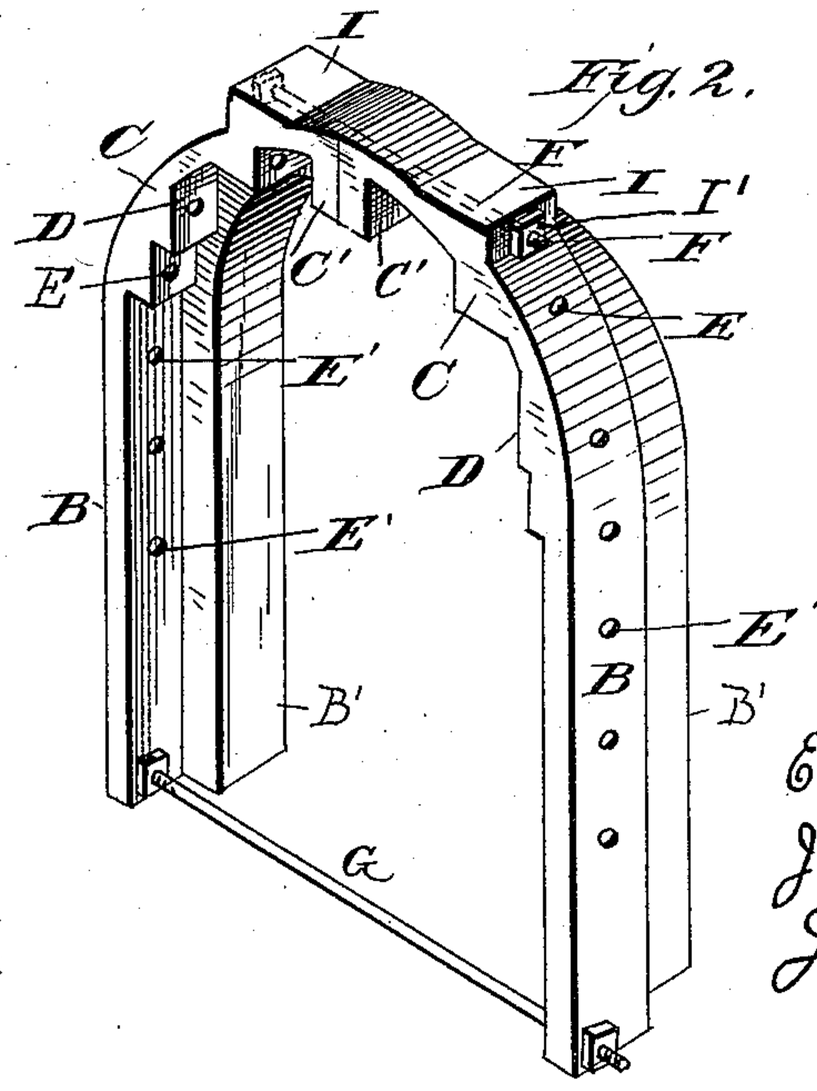


Fig. 2.



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UNITED STATES PATENT OFFICE.

EDWARD M. PIKE, JUSTUS CASTLE, AND JOSEPH B. SCHOPP, OF CHENOA, ILLINOIS.

FRAME FOR BRICK-KILNS.

SPECIFICATION forming part of Letters Patent No. 384,469, dated June 12, 1888.

Application filed October 6, 1887. Serial No. 251,620. (No model.)

To all whom it may concern:

Be it known that we, EDWARD M. PIKE, JUSTUS CASTLE, and JOSEPH B. SCHOPP, citizens of the United States, residing at Chenoa, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Door-Frames for Tile and Pottery Kilns; and we do declare the following to be a full, clear, and exact description of the 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, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to door-frames for tile and pottery kilns; and it consists in the parts which will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side view of a kiln provided with our improved door-frame. Fig. 2 is a perspective view of the frame detached, showing the top and bottom tie-bolts; and Fig. 3 represents a top plan view of one of the arched frame-pieces, and a horizontal section of the companion frame-piece, and a section of the brick, showing the position of the frame therein. In this view the top tie bolt or rod is broken away, so as to disclose the bottom tie-rod.

Like letters indicate like parts in the views.

The letter A represents the brick-work of a kiln.

The door-frame is made in two parts. Each part consists of a vertical side piece, B, having a top or arched piece, C, formed therewith. The outer end of each arch is provided with a downwardly-inclined vertical projection, C′. The inner or abutting face of each projection is flat, so as to conform and lie in close contact with the adjoining face or like projection on the companion arch. The inner side of each arch is provided with a series of flat vertical surfaces, D, which are formed by notching the arch. Each of these surfaces or faces D is provided with a transverse horizontal opening, E, which passes through the arch. The vertical frame-pieces B are also provided with a series of transverse openings, E′. The openings E E′ are adapted to receive the threaded ends of the tie-bolts and the threaded ends of the bolts on the ends of the bands which encircle the kiln.

F represents a tie-bolt for uniting the two abutting arches of the frame, and G indicates the tie-bolt for securing and holding the lower part of the frame in a firm fixed position. The bolt or rod G, when the frame is in position, lies immediately under the threshold, as shown in Fig. 1.

The letter H represents a series of bands, which encircle the kiln. These bands lie one above the other. The ends of each band are provided with screw-threaded bolts *h*, and said bolts pass through the openings E E′ in the door-frame, and serve to hold the frame firmly in position. The frame is so fixed in the brick-work of the kiln that the front edge, in which are the openings E E′, are outside the kiln and exposed, so as to receive the tie-rods and threaded bolts on the bands. The rear part of the frame B′ is in the nature of a flange, and it is smaller than the front part of the frame. The outer top part of the inner flange, B′, presents a uniform curved arch. The difference in the sizes of the frame B B′ forms a rear recess. The brick-work is formed around the outer side of the inner piece, B′, or within the rear recess of the frame, while the outer part, B, is exposed.

The letter I represents a lug on the outer side of each arch. The outer face of each lug I is flat, so as to firmly engage the flat face of the nut I′ on the outer end of the tie-bolt F. The faces D on the inner side of the arch are made flat, so as to conform to the flat face of the nuts, which engage the threaded ends of the bolts on the ends of the bands H.

Having thus described our invention, we claim as new and desire to secure by Letters Patent of the United States—

1. A door-frame consisting of two parts, each part consisting of a side piece and an inwardly-turned top piece forming half of an arch, the outer end of each of said arch-pieces being provided with a flat face, each face being provided with a transverse opening and a tie-bolt in engagement with said openings, substantially as described, and for the purposes set forth.

2. A door-frame consisting of two parts,

each part consisting of a side piece and an inwardly-turned top piece provided on its outer inner end with a flat surface adapted to abut the corresponding surface on the adjoining top, the outer side of each top or arch being provided with a flat-faced lug, I, the abutting ends of the two parts of the frame and the lugs aforesaid being provided with openings in alignment for the reception of a bolt, and a bolt provided with nuts for engaging said opening, substantially as specified.

3. A two-part door-frame, each part consisting in a side piece and a top piece turned inward, said top piece forming half of an arch, said side and arched pieces being provided with transverse openings, the inner sides of the arched pieces being provided with flat surfaces D around the bolt-openings, substantially as specified.

4. A two-part door-frame, each part consisting of a side piece and a top piece turned inward, said top piece forming half of an arch, each of the frame-pieces being provided with openings, in combination with the bands H, and means for engaging the ends of said bands in the openings aforesaid, substantially as described.

5. A door-frame consisting of two side pieces, each piece being provided with an inwardly-turned top piece, forming half an arch, said sides and top being provided with openings for the reception of bolts, each of said side pieces and its half-arch being provided in the rear with a flange, the outer face of said flange lying within the outer surface of the main frame-pieces and arch, whereby a recess is formed, substantially as described, and for the purposes set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWARD M. PIKE.
JUSTUS CASTLE.
JOSEPH B. SCHOPP.

Witnesses:
WM. A. HAYNES,
J. W. HATCH.