

C. B. MARTHENS.

FRONTS FOR STEAMBOAT FURNACES.

No. 174,143.

Patented Feb. 29, 1876.

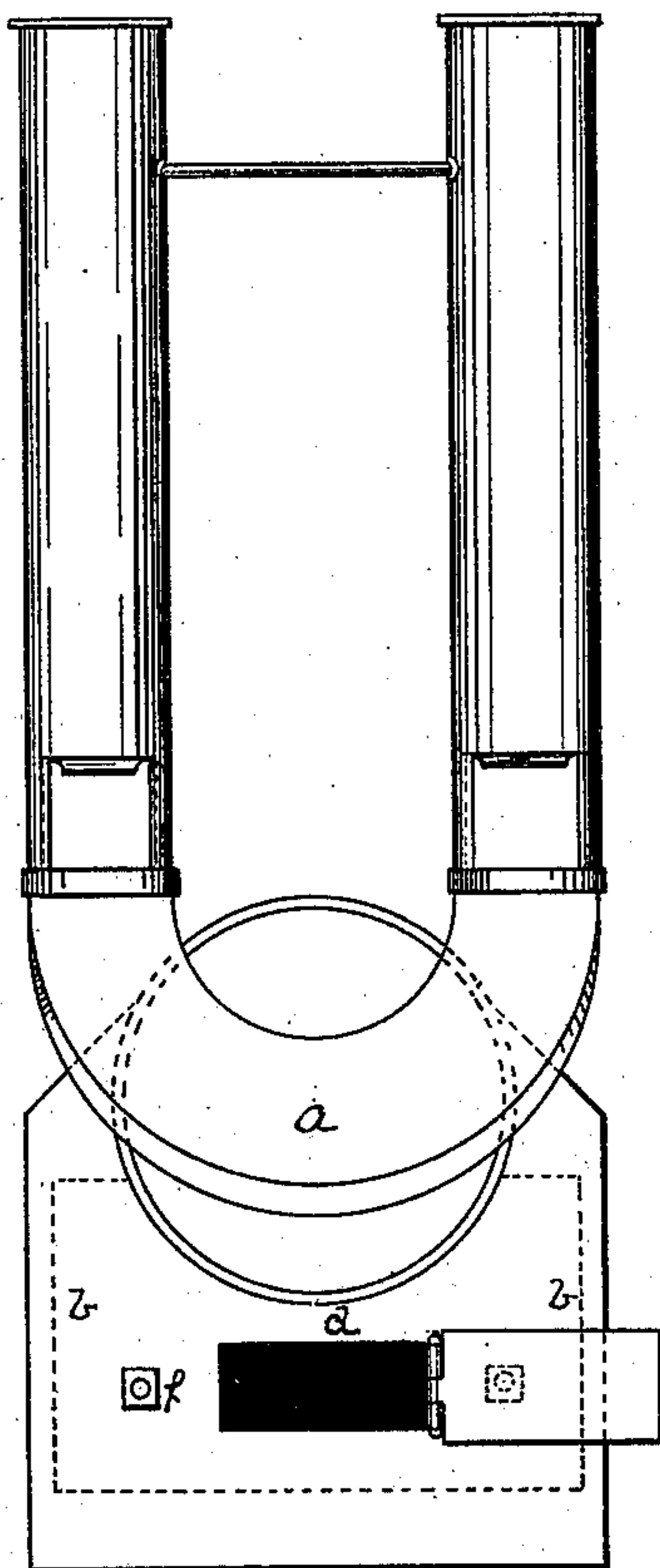


FIG. 1.

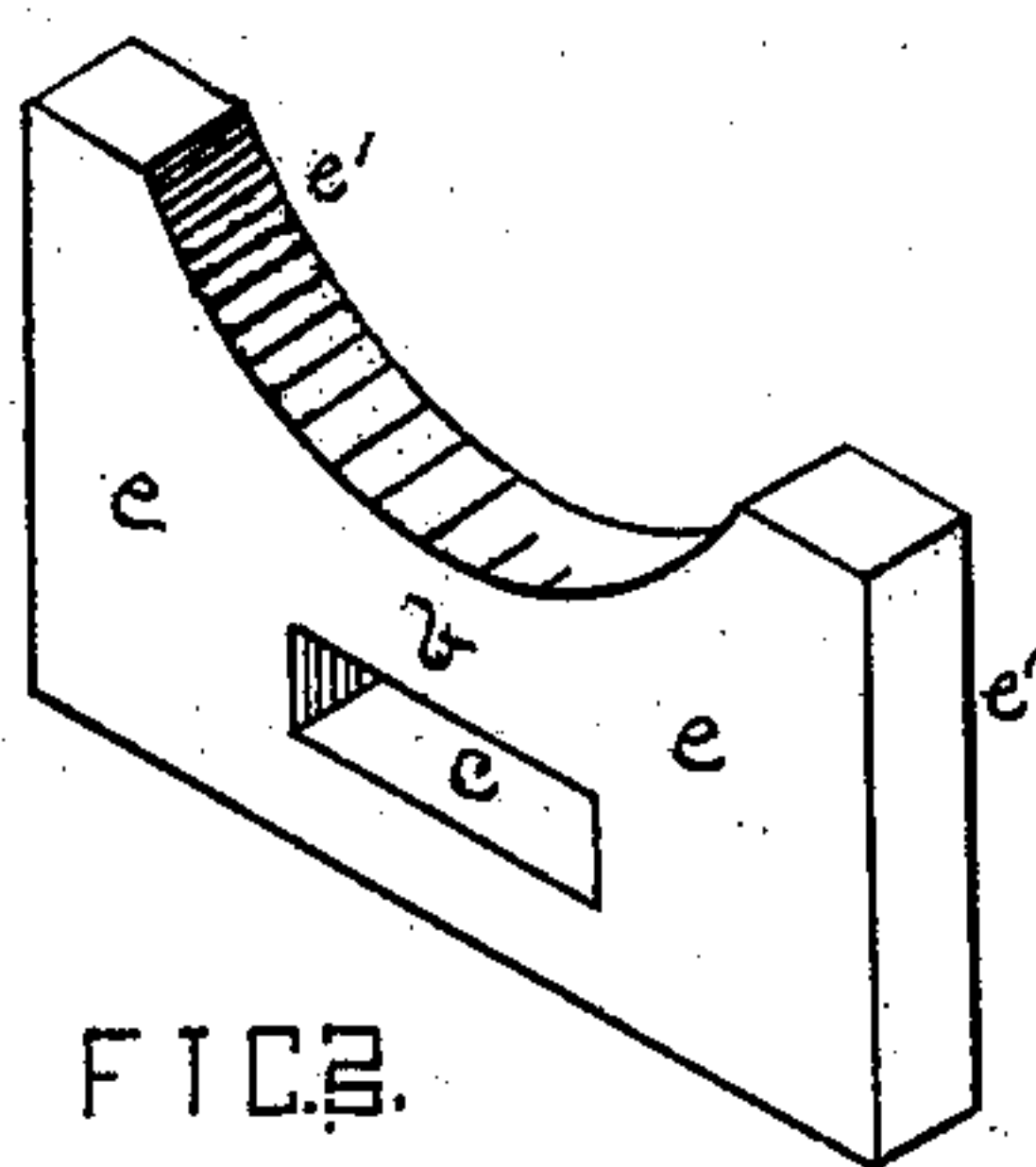


FIG. 2.

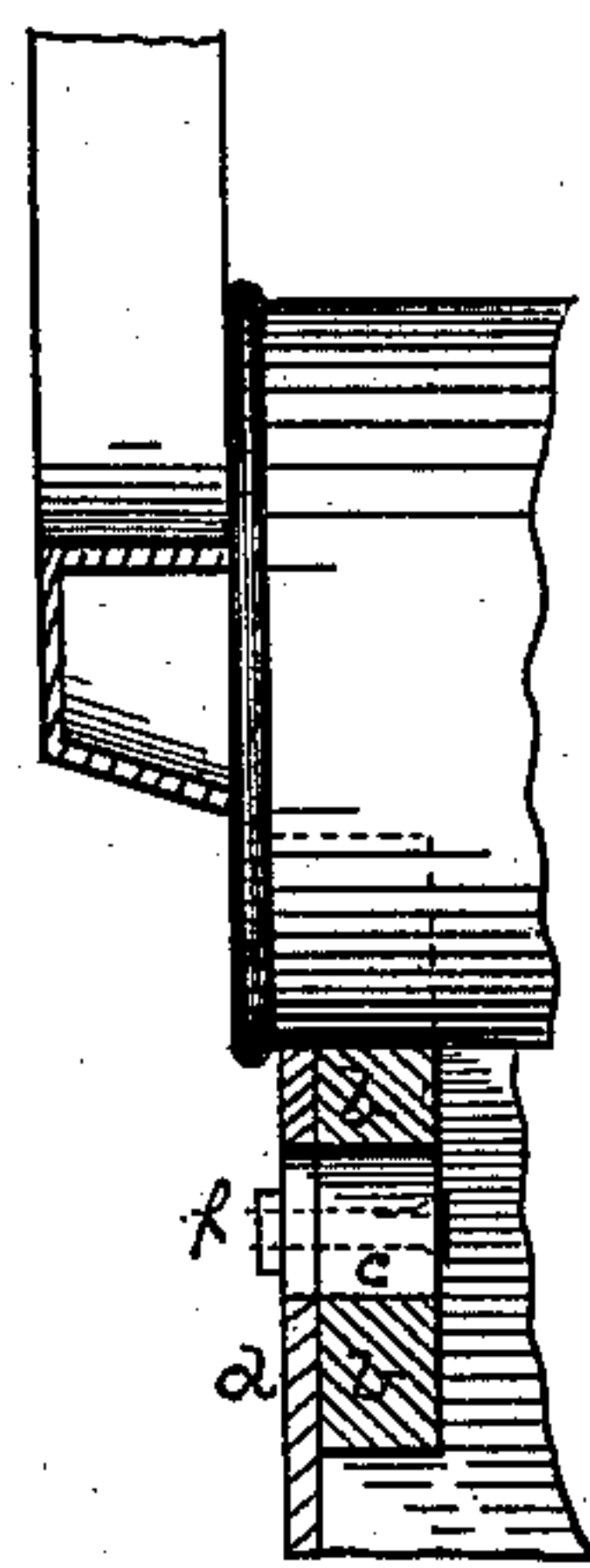


FIG. 2.

WITNESSES.

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CLEMENS B. MARTHENS, OF ALLEGHENY, PENNSYLVANIA.

IMPROVEMENT IN FRONTS FOR STEAMBOAT-FURNACES.

Specification forming part of Letters Patent No. **174,143**, dated February 29, 1876; application filed September 4, 1875.

To all whom it may concern :

Be it known that I, CLEMENS B. MARTHENS, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Fronts for Steamboat-Furnaces; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a front elevation of my improved front for steamboat-boiler furnaces, Fig 2 is a vertical section through the furnace door or opening, and Fig. 3 is a perspective view of the tile.

Like letters of reference indicate like parts in each.

Heretofore steamboat-furnace fronts have been made of an outside metallic front and a fire-brick lining, which at the furnace door or opening was provided with a metallic box or sheeting, which ran back from the metallic front the full thickness of the fire-brick wall. This front is of an extremely temporary nature, as the iron box surrounding the fire-opening burns out in a short time, usually in one season of four months. The lining, being broken and full of seams, often follows, and requires to be entirely renewed.

As these boats have from three to six fire-doors, the frequent renewing of the door-lining is a large item of expense. It is impossible to build these openings of fire-brick in the ordinary form to resist the heat without the use of the metallic box-lining.

My invention consists in a tile for lining the front of steamboat and similar furnaces, said tile formed of a refractory material and molded with an opening through it, which, with the hole in the front, constitutes the fire-opening, and, being without crack or seam, enables me to dispense with the metallic box-lining.

To enable others skilled in the art to make and use my invention, I will describe its construction and use.

The furnace is represented at *a*, the lining at *b*, the fire-door opening at *c*, and the metallic front at *d*. The opening *c* is molded directly through the tile *e*, the form of which is shown in Fig. 3. The tiles are set in place side by side, and secured by bolts *f* to the front *d*. The seamless solid edge *e'* resists the fire a much longer time than the brick-backed metallic lining formerly used, and preserves the opening intact at least twice as long, thereby effecting a large saving in cost as well as in time and material.

What I claim as my invention, and desire to secure by Letters Patent, is—

A tile for lining the front of steamboat and similar furnaces formed from refractory material, and provided with a fire-opening, substantially as specified.

In testimony whereof I, the said CLEMENS B. MARTHENS, have hereunto set my hand.

CLEMENS B. MARTHENS.

Witnesses :

WALTER S. REESE,
T. B. KERR.