

D. BLOCHER.
Brick Kilns.

No. 140,343.

Patented July 1, 1873.

Fig. 1.

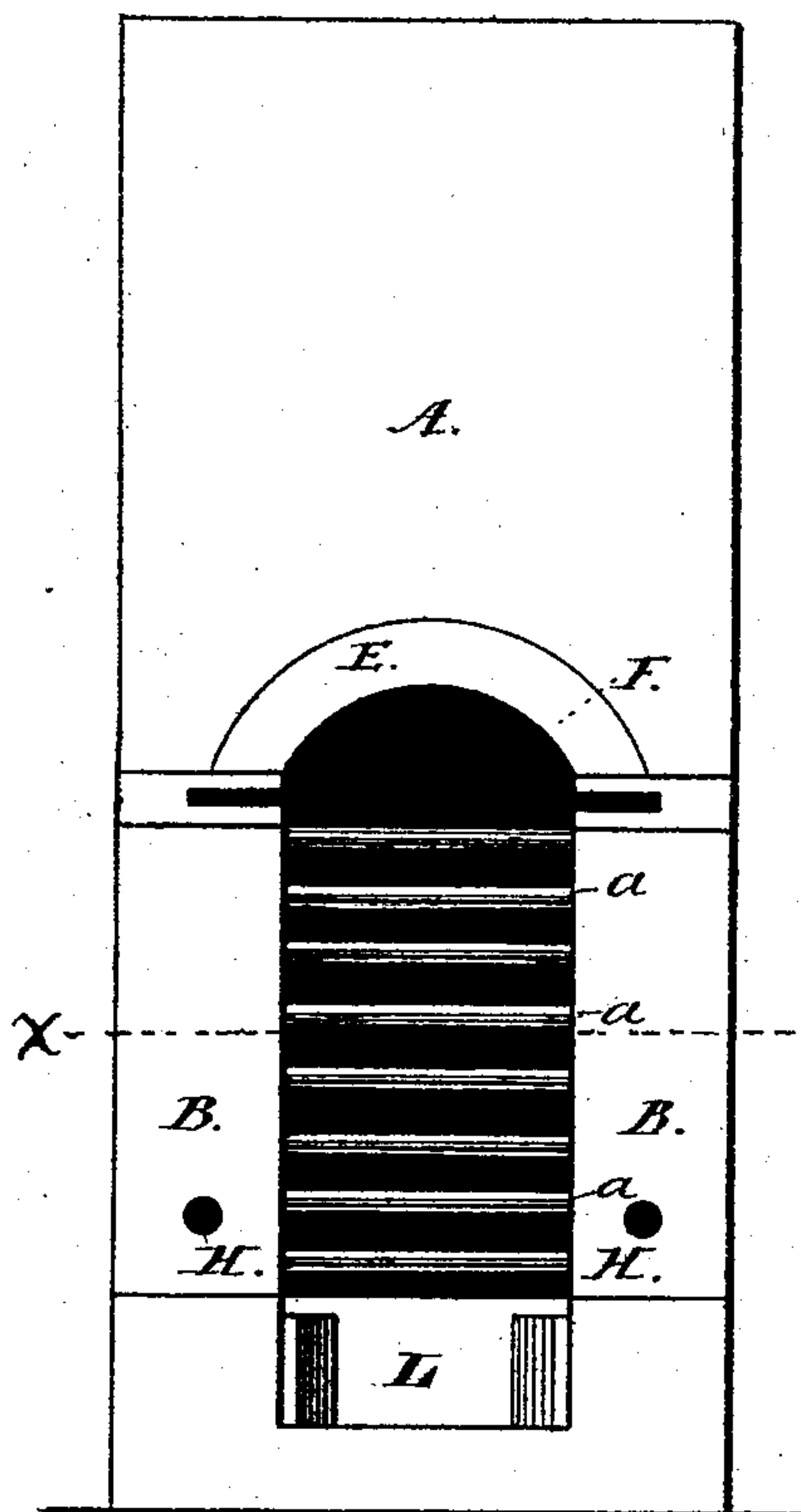
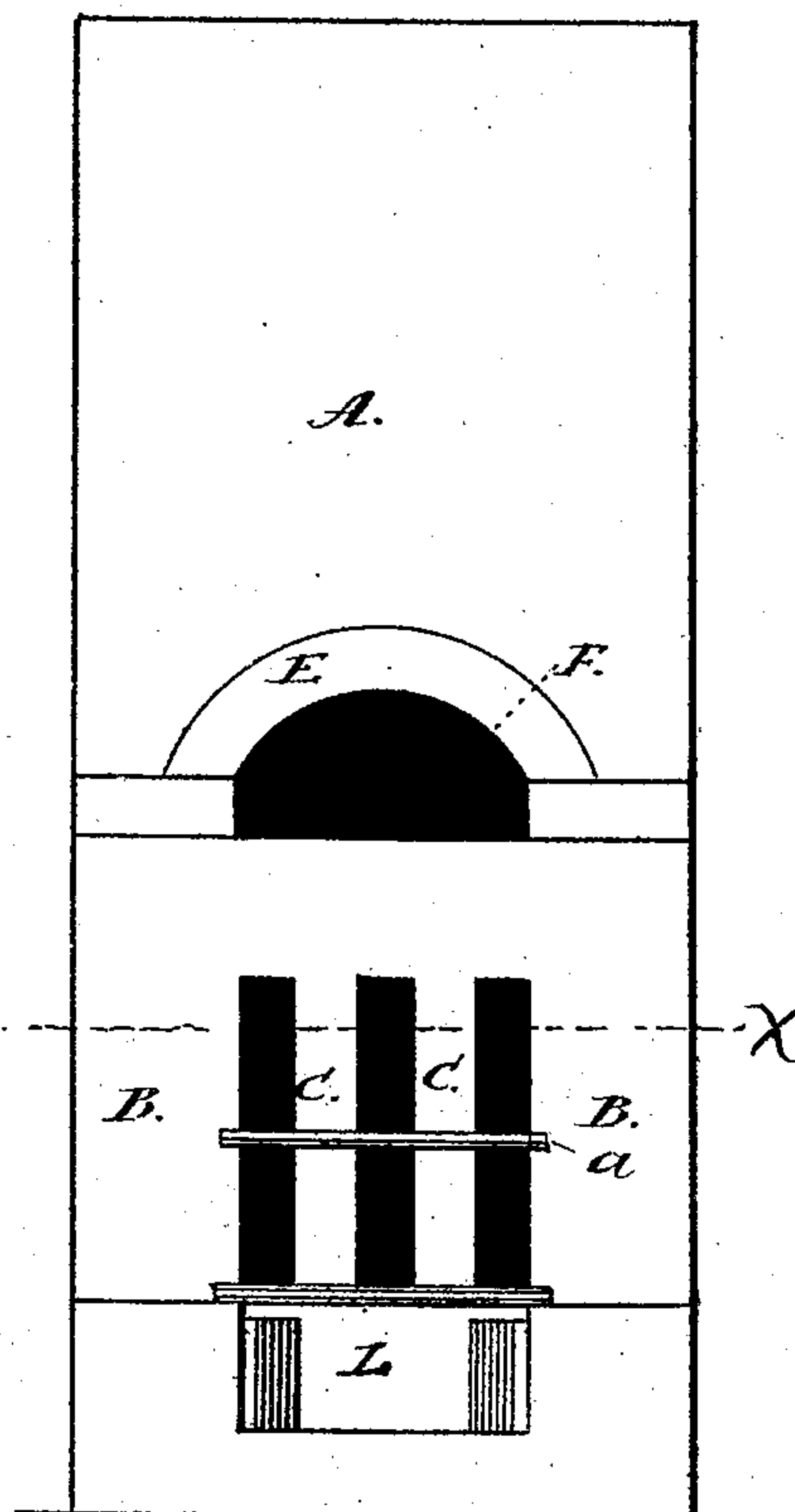


Fig. 2.



Witnesses;
P. Weepert
A. Schuster.

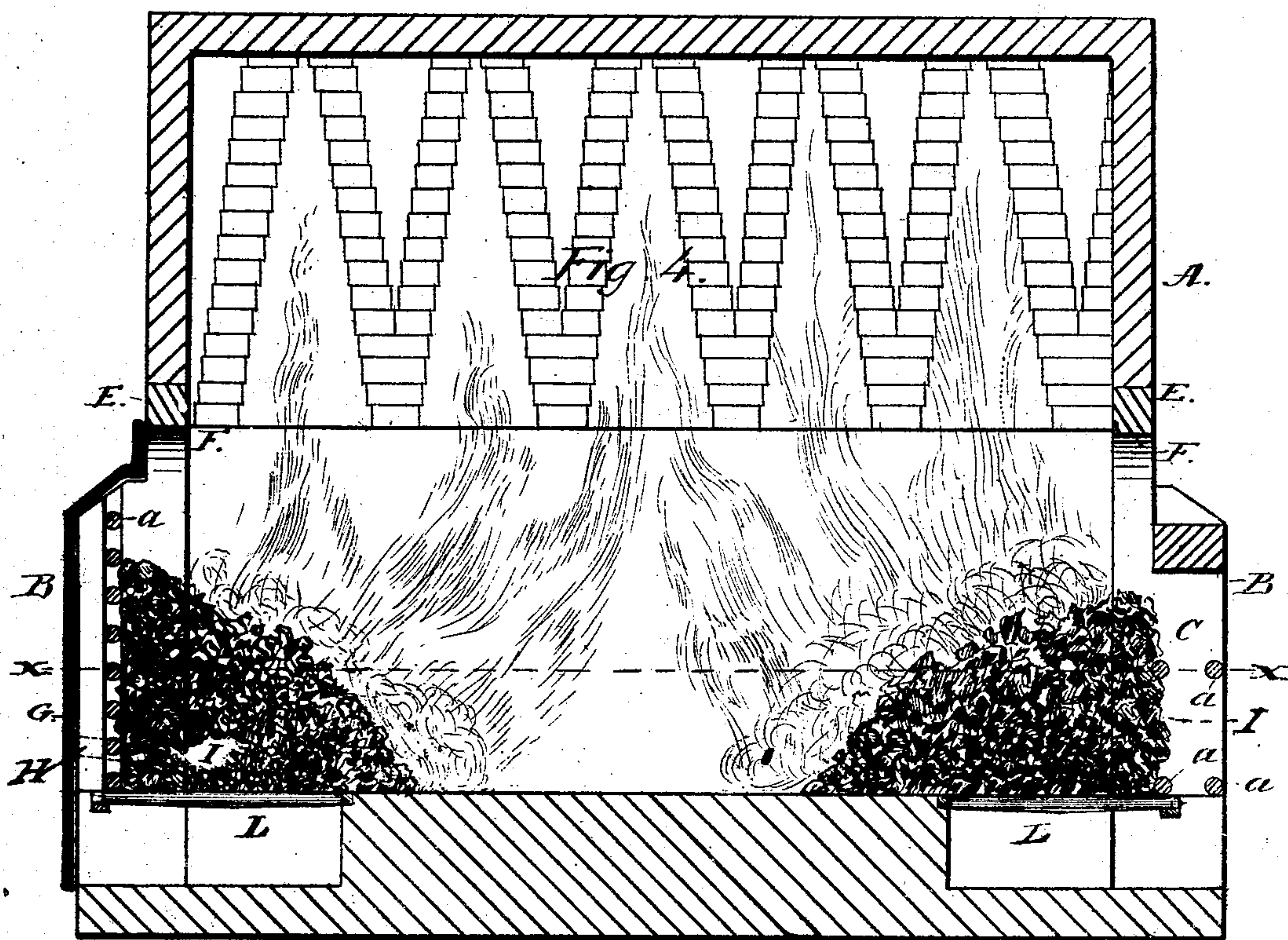
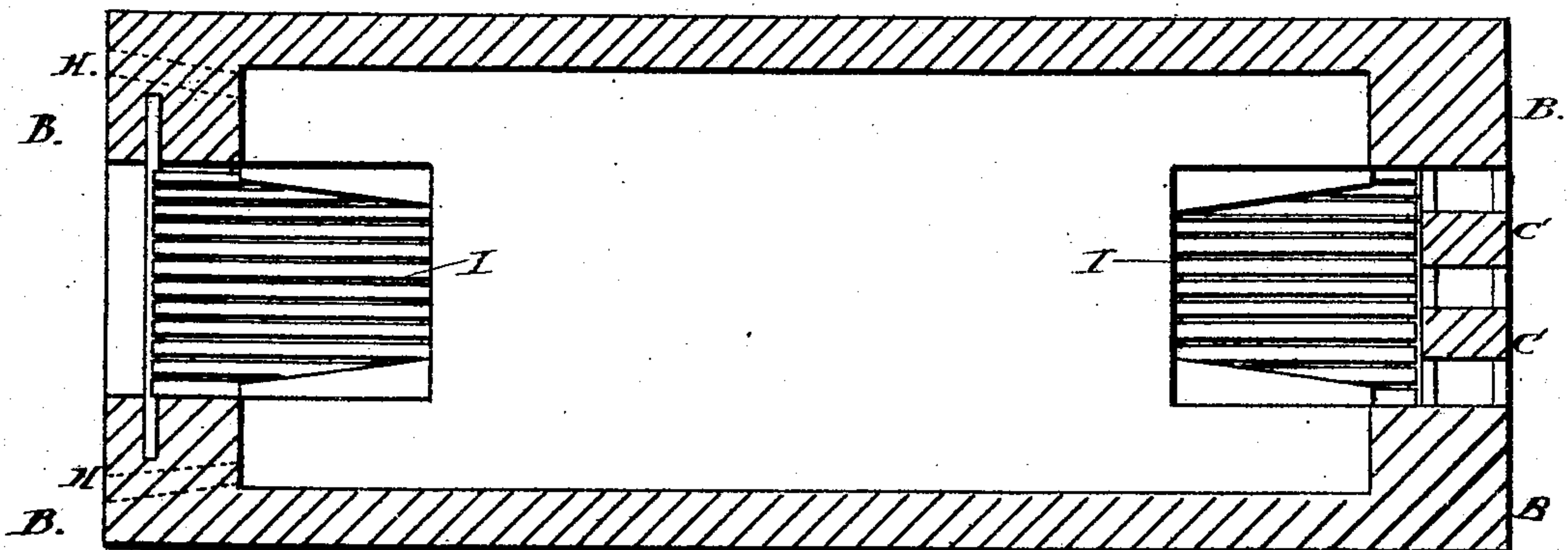
Inventor;
Daniel Blocher.

D. BLOCHER.
Brick Kilns.

No. 140,343.

Patented July 1, 1873.

Fig. 3.



Witnesses;
J. Walpert
A. J. J. J. J.

Inventor;
Daniel Blocher.

UNITED STATES PATENT OFFICE.

DANIEL BLOCHER, OF BALTIMORE, ASSIGNOR OF ONE-HALF HIS RIGHT
TO JONATHAN H. SEYMOUR, OF HAGERSTOWN, MARYLAND.

IMPROVEMENT IN BRICK-KILNS.

Specification forming part of Letters Patent No. **140,343**, dated July 1, 1873; application filed
December 18, 1871.

To all whom it may concern:

Be it known that I, DANIEL BLOCHER, of Baltimore city, and State of Maryland, have invented certain Improvements in Burning Bricks with bituminous and semi-bituminous coal, or coal and wood combined, of which the following is a specification:

My invention relates to brick-kilns; and it consists in constructing the arches of the kiln with short fire-places having grated fronts at each end of the arch, and with air-passages specially arranged for the purpose of enabling the brick at the center of the kiln to be burned equally with those at or near the ends without building a fire elsewhere than at the ends, as hereinafter more fully described.

Figure 1 is an end view of a portion of a kiln, showing a single arch, and showing one form of the grated front. Fig. 2 is a similar view, showing another form of the grated front. Fig. 3 is a transverse horizontal view on the line *x x* of Figs. 1, 2, and 4, looking from above downward. Fig. 4 is a longitudinal vertical section through the center of one of the arches.

This invention is intended for burning brick with coal—and I generally use bituminous or semi-bituminous coal for that purpose—and may properly be denominated as an improvement upon the device or plan patented to D. and G. M. BLOCHER, June 5, 1855.

In carrying out my present invention, I build the kiln with any desired number of arches, as usual, a single arch only being shown in the drawing, the others being duplicates thereof, the body A of the kiln being laid up with spaces for the passage of the flame and heat, in the usual or in any suitable manner. At each end of these arches I construct a short fire-place, I, which is provided with a grate, as shown in Fig. 3, and with an ash-pit, L, underneath, as shown in Figs. 1, 2, and 4. At the ends of the arches a projection, B, is built up, as shown in Figs. 2 and 4, to the point from which the arch E springs, or about as high as the vertical sides of the arch, and leaving an opening, F, into the top part of the arch above it, as shown in Figs. 1, 2, and 4, this opening F being for the admission of the fuel. Across the front of the arch, in the projections B, I

arrange a series of bars, *a*, as shown in Fig. 1, thus forming a grated front to the fire-place, against which the coal will rest in a pile when thrown in at the opening F above, as represented in Fig. 4. In this case the whole front is represented as provided with the bars *a*, extending from side to side; but I prefer the plan shown in Fig. 2, in which is shown a series of vertical openings between piers *c* or tiers of brick, with one or more bars, *a*, arranged transversely, these plans both being represented in Fig. 4 also, the first at the left-hand and the latter at the right-hand side of the figure.

If preferred, this grated front may be made of iron separately, and set when the arch is built; but the plan shown in Fig. 2 is cheaper, and I find by experience that it works best. I also form small holes or passages H through these fronts B, as shown in Fig. 1, and in dotted lines in Figs. 3 and 4, the object of which is to permit a rod to be inserted at these points for the purpose of stirring and breaking up the mass of coal at the sides and at the inner edges of the pile, when it becomes banked or united at those points, as soft coal is apt to after burning some time.

For the purpose of preventing storms from interfering with the operation of the fires I provide sheet-iron hoods or covers G, which fit over the grated fronts, as shown in Fig. 4, left-hand side. This is also used when the workmen desire to stir the fire through the holes H, and when putting on coal.

The coal, being thrown in at the opening F at the top of the arch, is piled up against the grated front, as represented in Fig. 4, and the air, entering both through the ash-pit and through these grated fronts, and also through the opening above, produces a perfect combustion, and creates a strong draft, by which the flame and heat are drawn toward the center of the kiln, from each end of the arch, to such an extent that I am thus enabled to burn the brick as perfectly at the center as at the ends of the kiln, whereas, it has heretofore been difficult to burn the bricks sufficiently at the center without burning them too much at the ends, thereby destroying many of the brick, which by my improvement I am

now enabled to save. By this method, also, the process of burning the kiln is expedited, less time being required than heretofore.

The bars *a* not only serve to hold the coal in place at the ends of the arch in such a manner as to allow the air to pass freely through the entire mass, but also serve as supports to rest the poker on in stirring the fire.

It is, of course, obvious that the fronts *B* need not project outward beyond the face of the kiln, but I prefer to arrange them in that manner, as it is more convenient, and I think works rather better.

Having thus described my improvements, what I claim is—

1. A brick-kiln having a fire-place, I, con-

structed at the ends of the arches, said fire-places having grated fronts, all being constructed and arranged substantially as and for the purpose set forth.

2. In combination with fire-places in the arch of a brick-kiln, constructed as described, the holes or openings *H*, arranged as and for the purpose set forth.

3. In combination with the fire-places in the arch of a brick-kiln, as herein described, the protecting hoods *G*, arranged to operate as and for the purpose set forth.

DANIEL BLOCHER.

Witnesses:

WM. H. PITCHER,
I. REESE PITCHER.