N. SICKELS.

Brick-Kilns.

No. 146,406. Patented Jan. 13, 1874.

Fig. 1

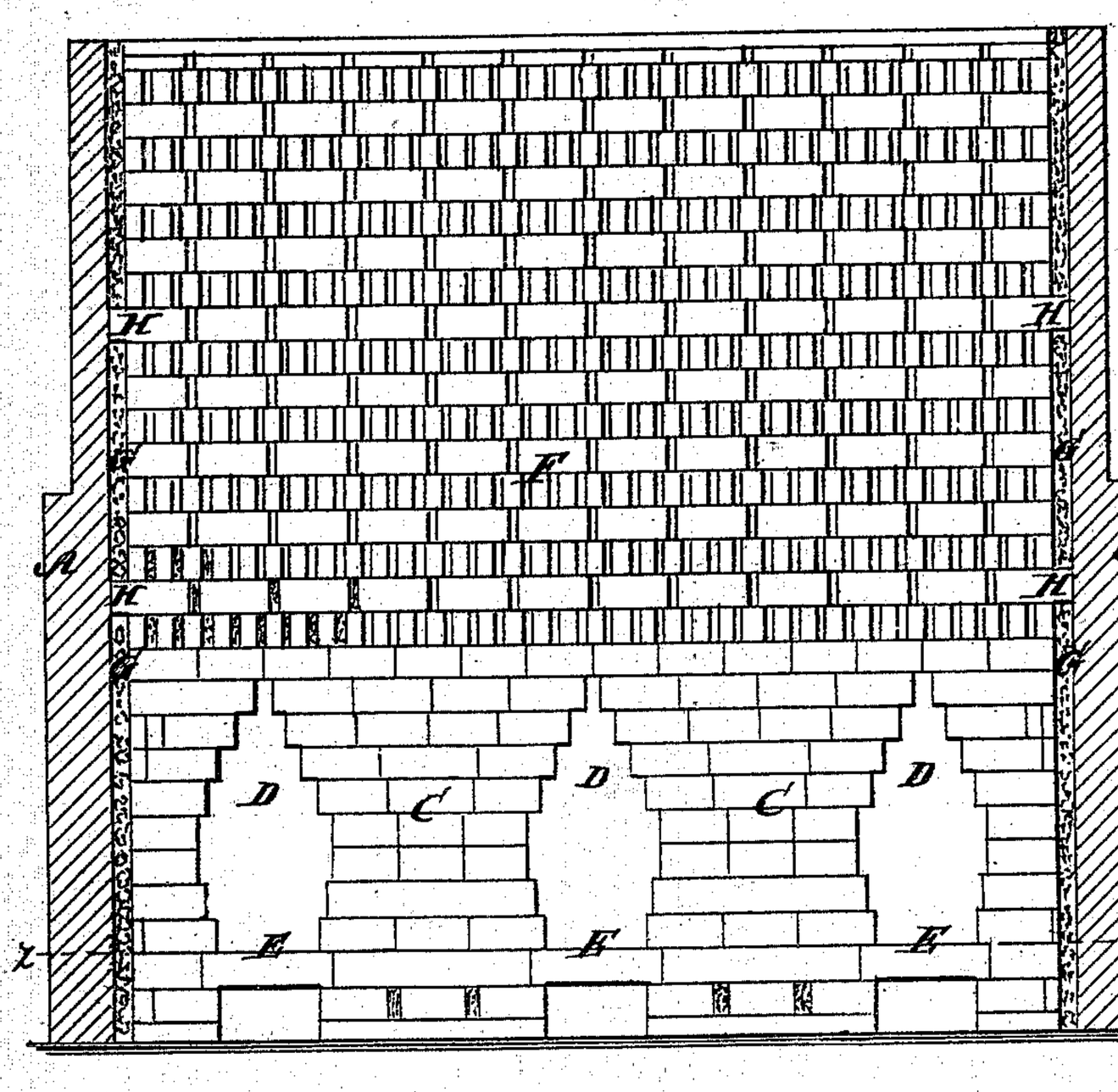


Fig. 2.

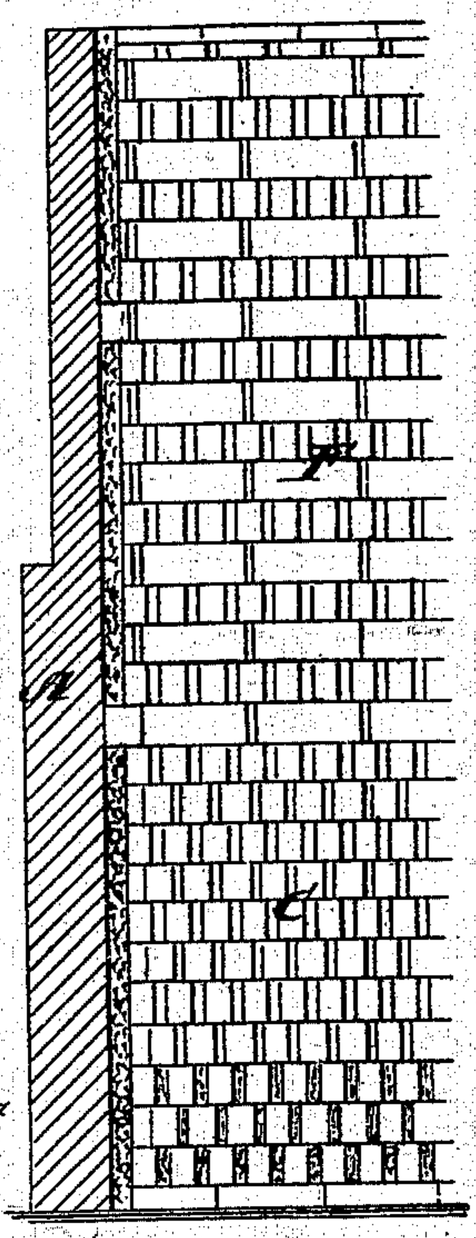
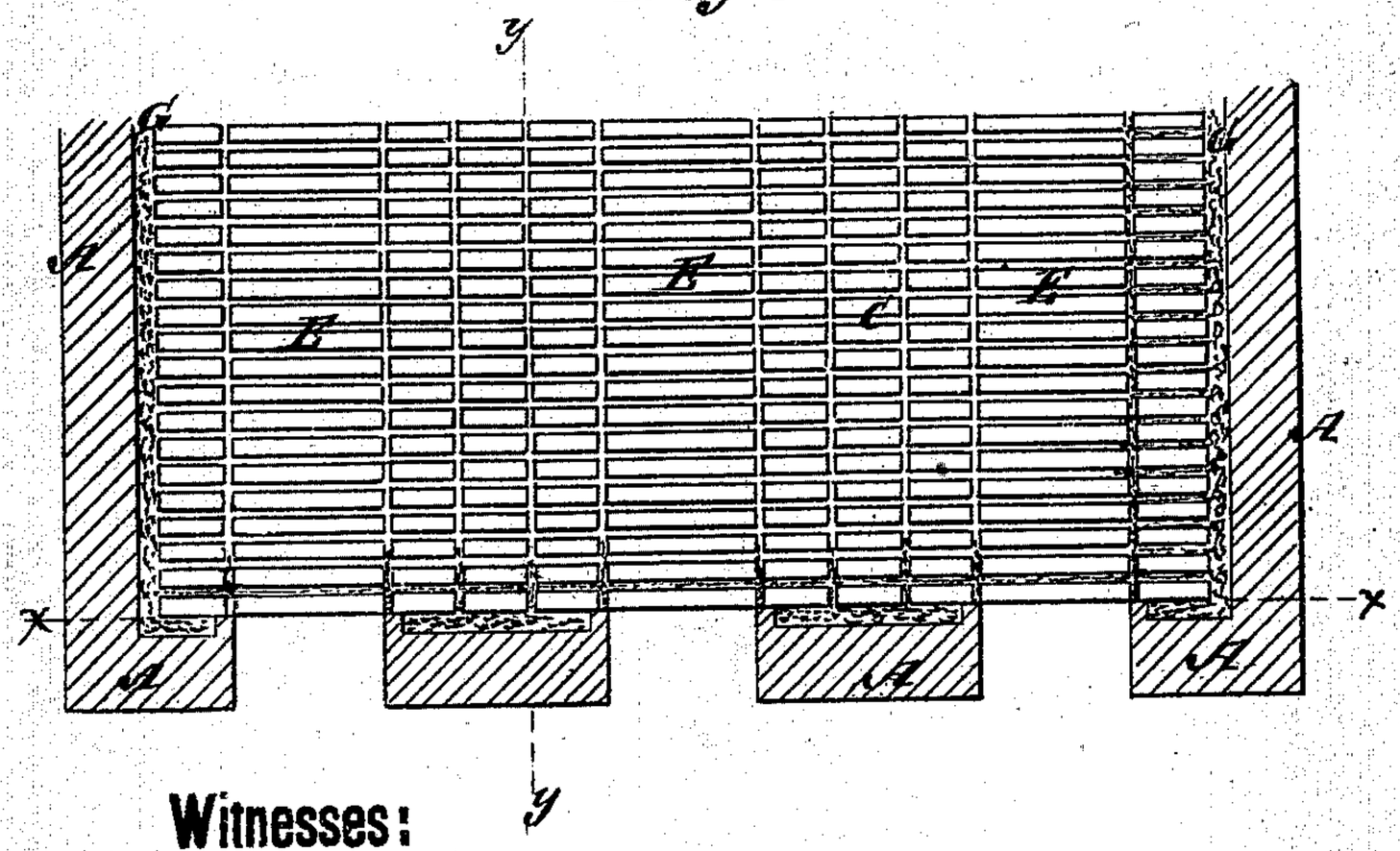


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

NELSON SICKELS, OF NEWELL, IOWA.

IMPROVEMENT IN BRICK-KILNS.

Specifi ation forming part of Letters Patent No. **146,406,** dated January 13, 1874; application filed March 29, 1873.

To all whom it may concern:

Be it known that I, NELSON SICKELS, of Newell, in the county of Buena Vista and State of Iowa, have invented a new and Improved Brick-Kiln, of which the following is a specification:

The invention will first be fully described and then pointed out in the claim.

Figure 1 is a front elevation of a kiln constructed according to my improvement, with a front wall removed, on the line *x x* of Fig. 3. Fig. 2 is a sectional elevation on the line *y y* of Fig. 1. Fig. 3 is a horizontal section taken on the line *z z* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the walls inclosing the kiln. They are built of burned bricks and mortar, and designed to be permanent. C represents the lower portion of the bricks to be burned, in which the arches D are formed. They are arranged close together in the direction at right angles to the arch; but with spaces between them the other way, as indicated in the horizontal section, Fig. 3, and long bricks E are placed across the arches a short distance above the bottom suitable for burning coal. F represents the brick above the arch-brick to be burned. They are arranged with spaces in both directions to be filled or partly filled with coal. G represents wider spaces between the stack of green brick and the walls A. They are also for containing coal to be burned. They are divided vertically into several compartments by rows H of brick extending against the walls to separate the coal and keep it from falling to the bottom of the spaces as it burns. The arches may have iron doors, if necessary, for closing them to facilitate the burning. The arches extend through the kiln from side to side, and have the coal placed in them throughout their whole length to be burned throughout alike. The fires are started at the mouths of the arches, and kept burning moderately until the bricks get dry; then they are allowed to advance throughout the kiln in all the spaces as fast as necessary.

By careful attention in the preparation of the bricks and the arrangement of the coal in the spaces and properly regulating the draft, I can burn much better and with greater economy than it is possible to burn with wood in the ordinary way.

I propose to use iron grates when I may choose to do so, and, if need be, I will have the inclosing-walls temporarily constructed for removal to facilitate the piling of the green bricks and removal of the burned ones.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The spaces G separated in two or more compartments by bricks H extended to the walls, substantially as specified.

NELSON SICKELS.

Witnesses:

H. E. HARRIS,

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