

J. RUSSELL.

Brick Kiln.

No. 12,521.

Patented March 13, 1855

A *Fig. 1.*

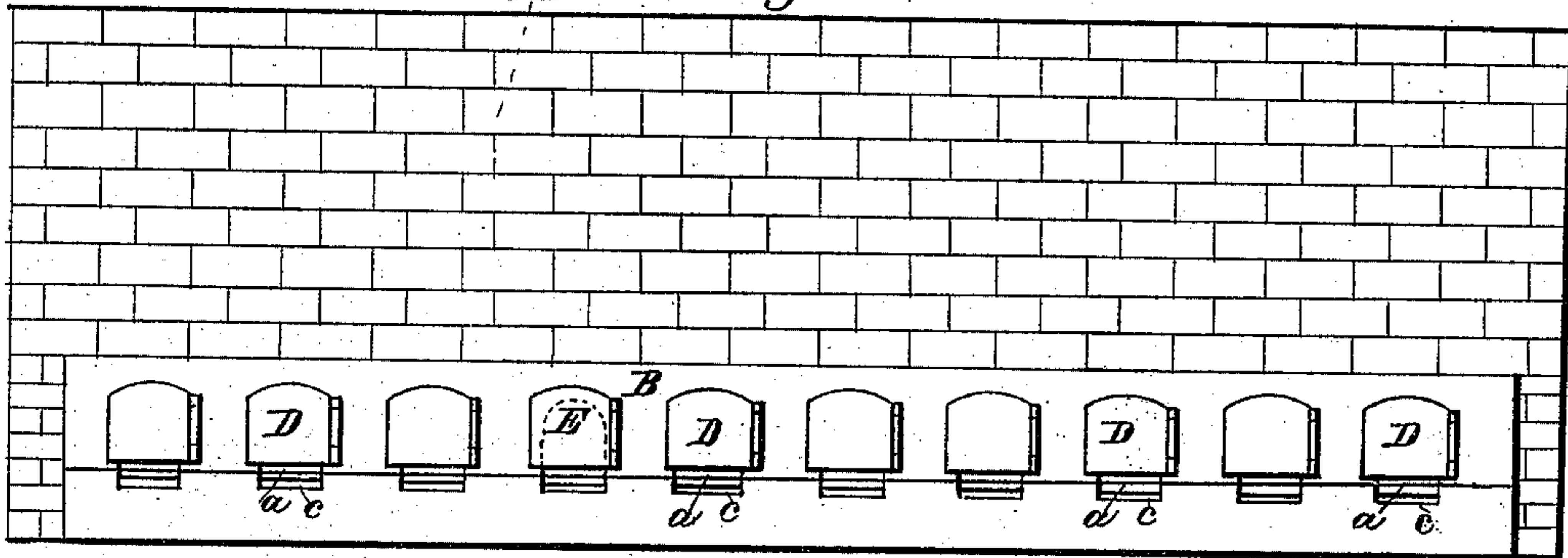


Fig. 2.

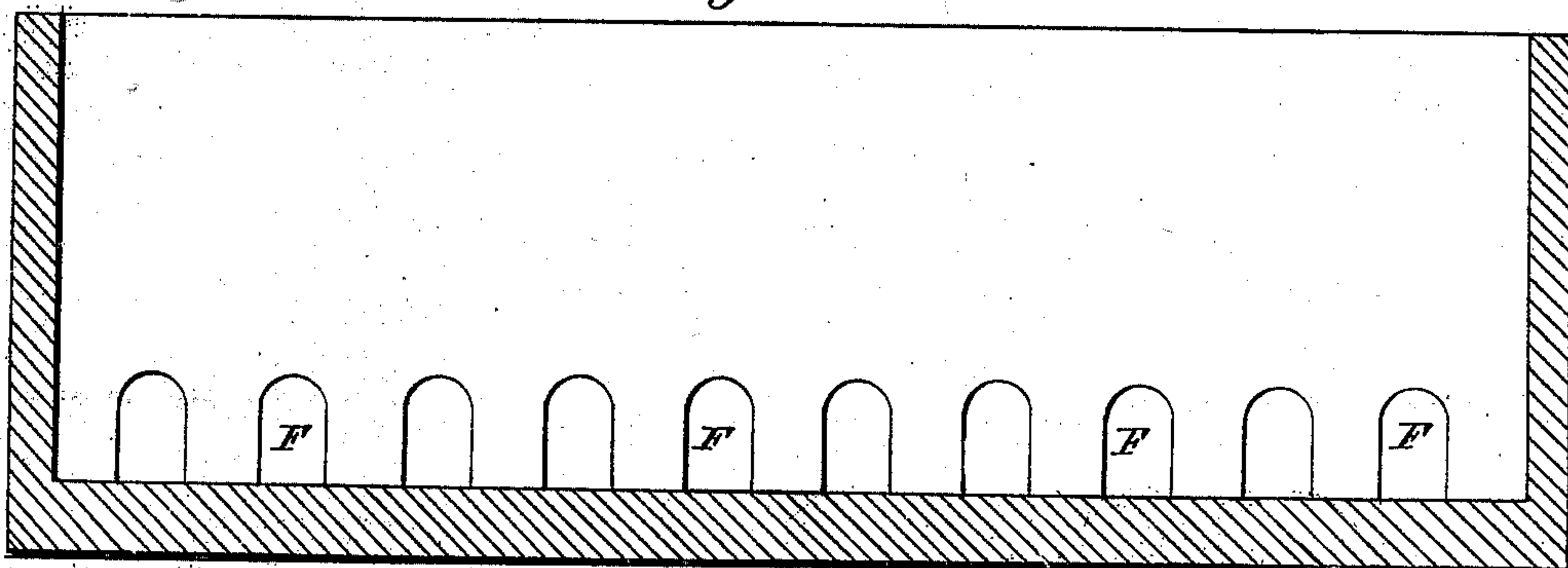


Fig. 3.

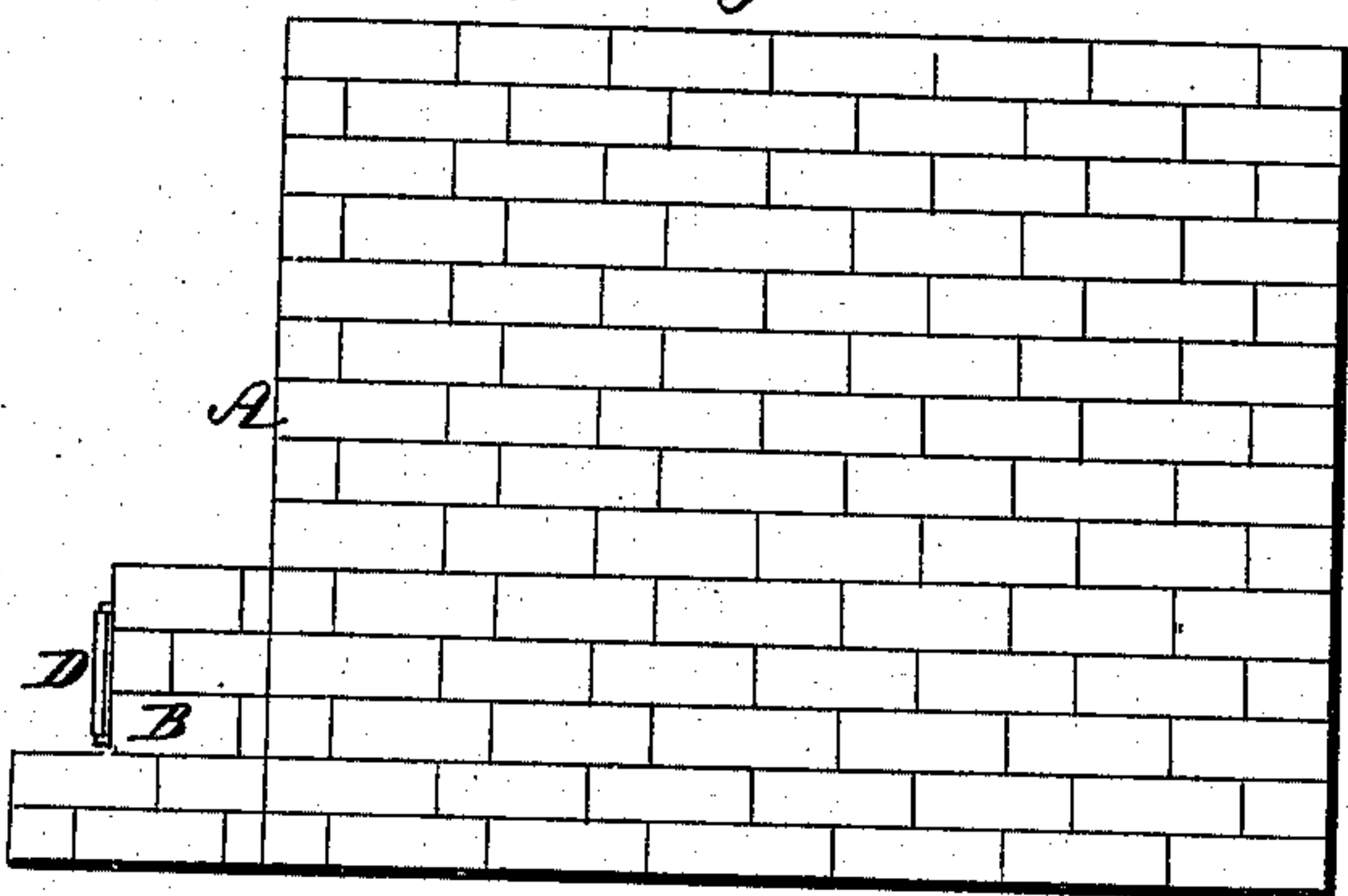
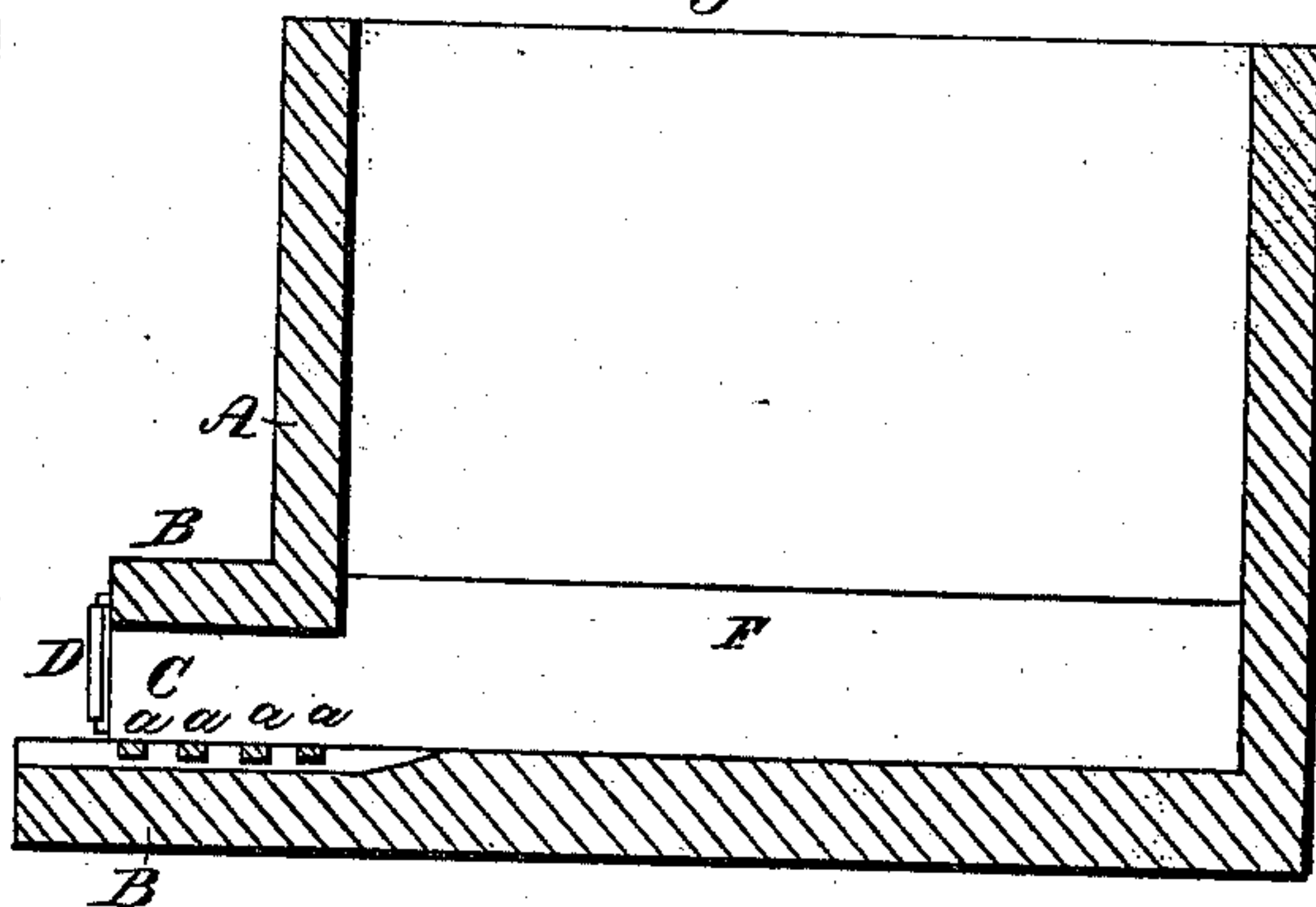


Fig. 4.



UNITED STATES PATENT OFFICE.

JESSE RUSSELL, OF ELKTON, KENTUCKY.

BRICK-KILN.

Specification of Letters Patent No. 12,521, dated March 13, 1855.

To all whom it may concern:

Be it known that I, JESSE RUSSELL, of Elkton, in the county of Todd and State of Kentucky, have made certain new and useful Improvements in the Manner of Constructing Kilns for Burning Brick; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1, represents a side view; Fig. 2, represents a longitudinal vertical section through the center of the kiln; Fig. 3, represents an end view, and Fig. 4 a vertical cross section through one of the flues.

Similar letters in the several figures denote like parts.

The nature of my invention consists in placing the furnaces or fire chambers without the walls of the kiln, and introducing the heated products of combustion to the brick to be burnt through avenues or passages leading from the fire chamber to the opposite side of the kiln, by which means I economize fuel, keep the fires within easy access for the attendant, diminish the number of fires and arches, and burn the brick with more uniformity than by any other means of which I have knowledge.

To enable others skilled in the art to make and use my invention I will proceed to describe the same with reference to the drawings.

The sides and ends of the kiln may be built in any of the well known ways, and of any suitable material. On one of the sides A, of the kiln I build furnace walls B, entirely without or outside of the kiln wall, and within these furnace walls at about the distance of four feet from each other is placed the fire chambers C, C, &c., the number of which will depend upon the length of the kiln. These fire chambers are suitably provided with doors D, D, &c., grate bars *a, a, a, &c.*, and an ash pit *c, c, c* through which draft is supplied to the fire chamber—the fire chamber which I have found best in practice, is one capable of burning wood about two and a half feet in length, and by placing them outside of the kiln are easily

supplied, and the ash pit being within the easy control of the attendant can be cleaned, at all times and thus preserve constant draft.

The red line at E, Fig. 1, represents the height of the arch over the fire chamber, and in the section Fig. 2, the height of the arches over the avenues or passages F, are represented by the black line, showing an increase in the height. These avenues extend entirely across the kiln and it will not be found necessary to fire the kiln from both sides, as is heretofore universally practiced. To do so would cause an additional consumption of fuel, without accomplishing any useful result, as I have succeeded in perfectly burning the kiln, and with a regularity, never, to my knowledge, heretofore attained, with the fire entirely on one side of the kiln.

The bricks to be burnt may be stacked up, in the usual well known forms, within the kiln, the only difference being that, fewer avenues are required, and thicker walls between them, as but about half, of the furnaces heretofore required, will be found necessary with my modification of kiln.

By placing the fire chambers outside of the kiln I entirely prevent the vitrifying of bricks in the arches, or their twisting and choking of the small passages between them—distribute a more uniform degree of heat through the kiln, and thereby burn the kiln of brick with greater regularity.

Having thus fully described the nature of my invention what I claim therein as new and desire to secure by Letters Patent is—

The arranging of the fire chambers outside of the kiln, and introducing the products of combustion to the brick to be burnt, through avenues or passages extending from the fire chambers entirely across the kiln, when said fires are placed and used on one side of the kiln only, substantially as described.

JESSE RUSSELL.

Witnesses:

H. R. SITTELL,
R. COULTER.