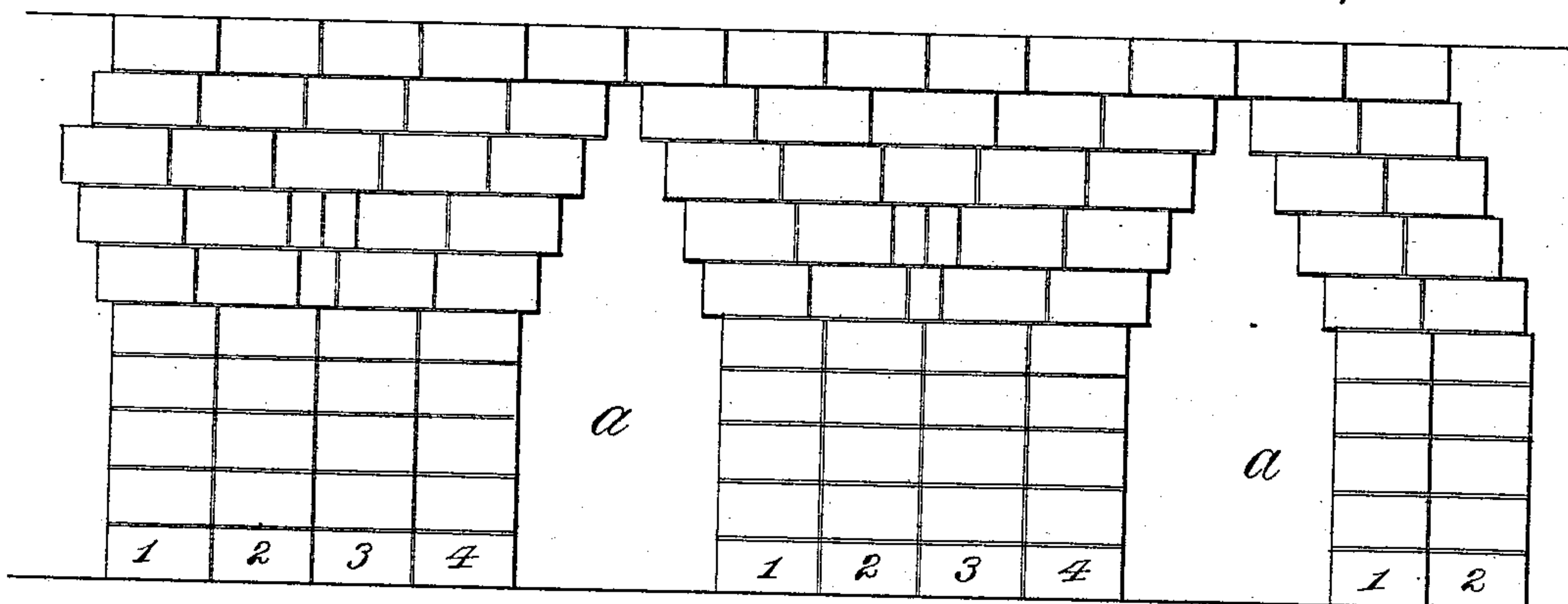


(No Model.)

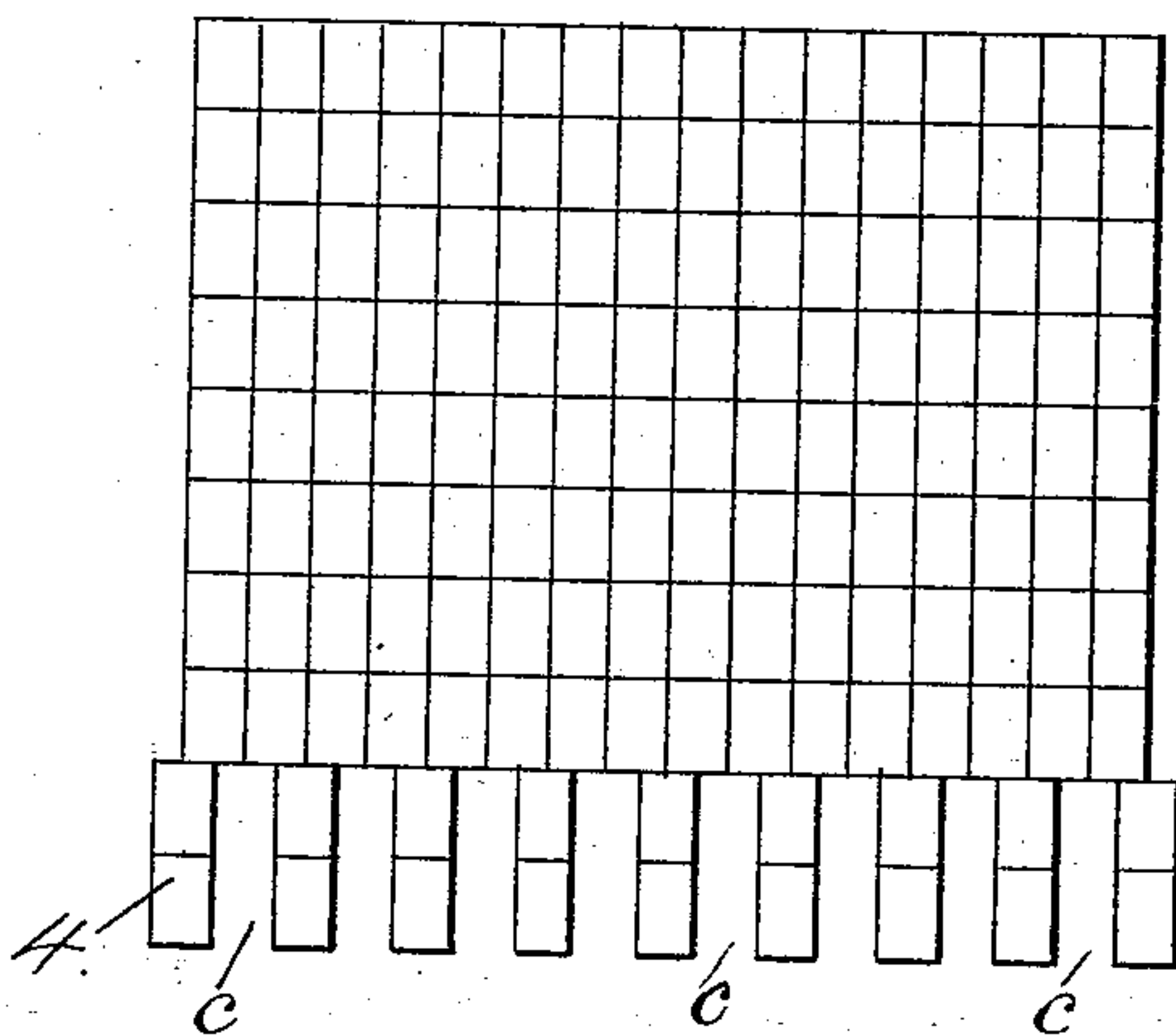
F. ALSIP.  
METHOD OF SETTING BRICK IN KILNS.

No. 484,170.

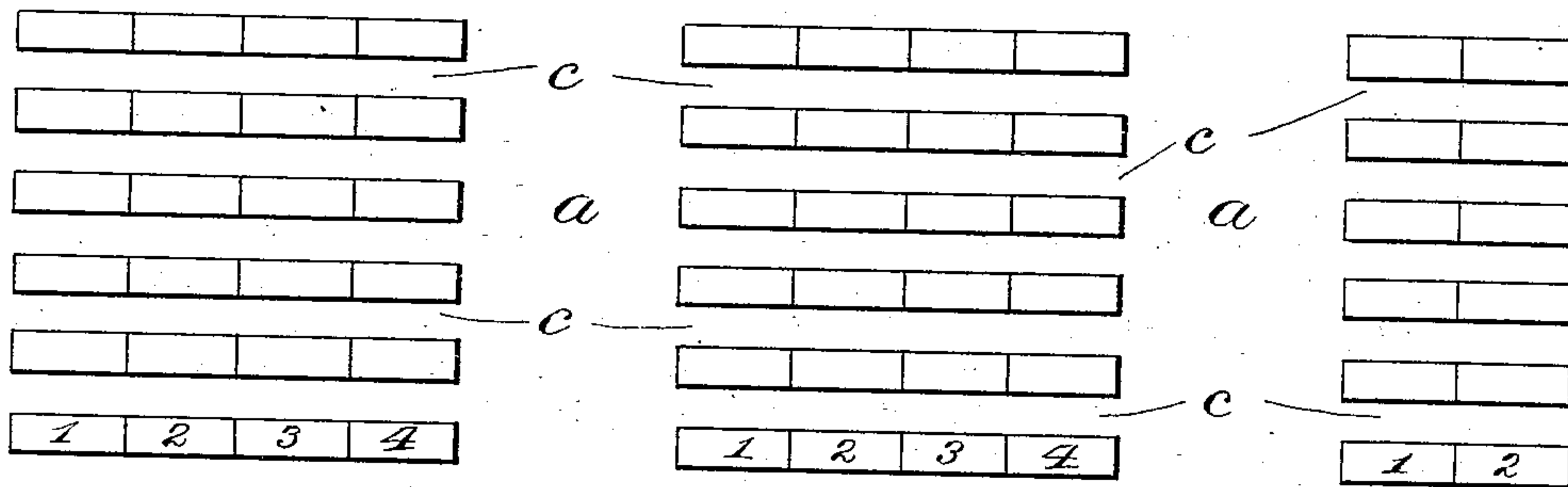
Patented Oct. 11, 1892.



*Fig. 1*



*Fig. 2*



*Fig. 3*

Witnesses  
John L. Timison  
Martin H. Olsen.

Frank Alsip Inventor  
By his Attorney C. H. Wood.

# UNITED STATES PATENT OFFICE.

FRANK ALSIP, OF CHICAGO, ILLINOIS.

## METHOD OF SETTING BRICK IN KILNS.

SPECIFICATION forming part of Letters Patent No. 484,170, dated October 11, 1892.

Application filed December 23, 1891. Serial No. 416,014. (No model.)

*To all whom it may concern.*

Be it known that I, FRANK ALSIP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have  
5 invented certain new and useful Improvements in Methods of Setting Brick in a Kiln, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 shows an end view of an arch in a brick-kiln. Fig. 2 is a view of the interior of an arch, showing a portion of one-half or one side of the arch and Fig. 3 shows a plan  
15 of the bottom two courses of brick in the piers between the arches.

The object of my invention is to secure the thorough burning of the brick in the piers or lower portion of the kiln.

20 The nature of my invention consists in setting the brick in the arches and piers of a brick-kiln so as to cause a large portion of the heat to pass into the body of the piers between the arches and thence upward through  
25 the mass of brick above the piers.

*a* indicates the arches.

*c* indicates flue-spaces between the lower courses of brick.

1 and 4 indicate the vertical tiers of brick  
30 forming the side walls of the arches.

2 and 3 indicate the vertical tiers of brick in the interior of the pier between the arches.

In my improved method of setting brick the two lower courses are set so as to leave flue-spaces *c* as wide as the thickness of a brick between the brick, as shown in Figs. 2 and 3.  
35 In tiers 1 and 4 the course next above the flues *c* (third course) is set so that the sides of each brick are respectively over the middle of a space and over the middle of a brick  
40 between the spaces, and the courses above that are "packed" as closely as possible up

to the upper part or top of the arch, where the courses should be set rather loosely, so as to allow a sufficient amount of draft. The  
45 brick in tiers 2 and 3 above the bottom two courses are set very openly, so as to secure a draft from the arch through flues *c* and upward through tiers 2 and 3 into the body of the kiln. I prefer to set them "three on  
50 three" or "three across three," the bricks of one layer or course being crosswise to those of the next course up to the height of the top of the arches. The rest of the kiln is set in the usual manner.

55 The size or height of the flue-spaces *c* at the bottom of the arch and the looseness or openness of the setting of the tiers 2 and 3 above the bottom may be varied to suit different conditions and secure the passage of a proper  
60 proportion of the heat from the arch through the flues *c* and upward through the interior of the piers, which is the purpose of my invention.

I claim as my invention—

65 The herein-described method of setting brick in the arches and piers of a brick-kiln so as to form spaces or flues *c* in the bottom courses, the courses forming the side walls of the arches above the courses in which said  
70 flues are provided being set as closely as possible, those courses at the top of the arch being set loosely or openly to provide for a proper amount of draft and those courses in the interior of the piers, as tiers 2 and 3, above  
75 the flues *c* and up to the height of the top of the arch being set very loosely, so as to allow a sufficient proportion of the heat to escape up through the interior of the piers.

FRANK ALSIP.

Witnesses:

CHAS. H. WOOD,  
OSCAR PETERSON.