

(No Model.)

J. LYNCH.
TERRA COTTA CONSTRUCTION.

No. 441,013.

Patented Nov. 18, 1890.

FIG. 1.

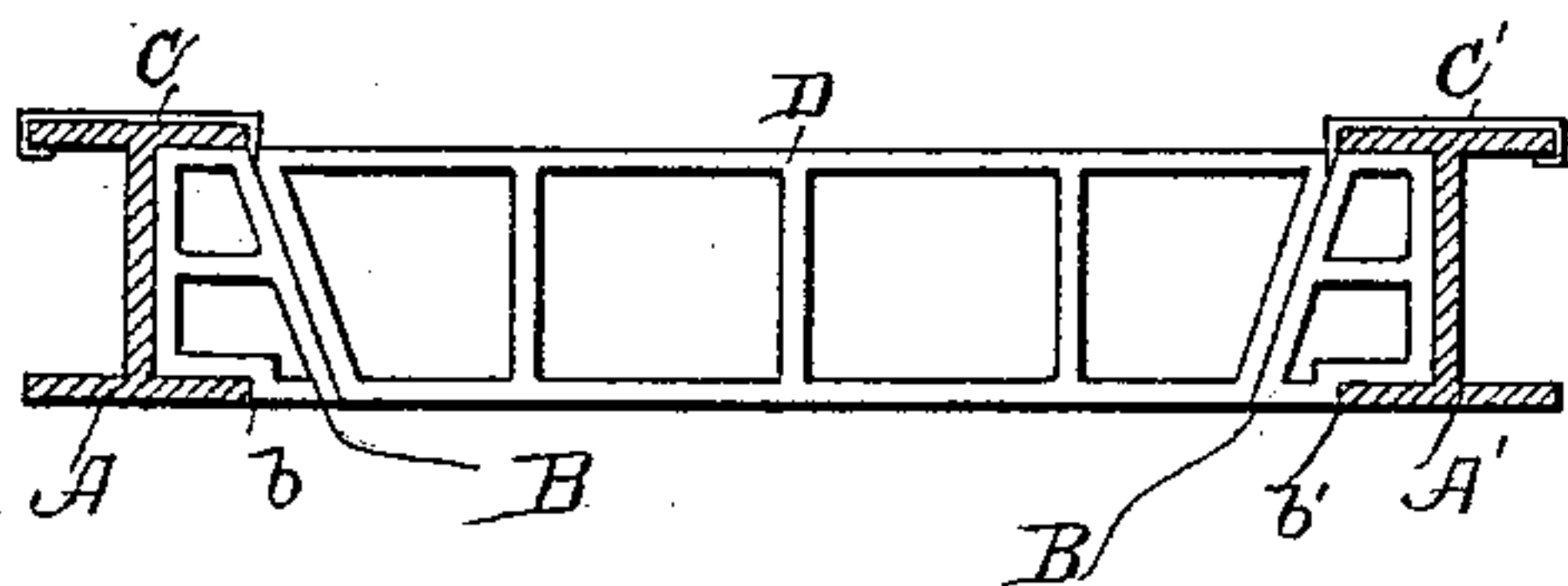


FIG. 2.

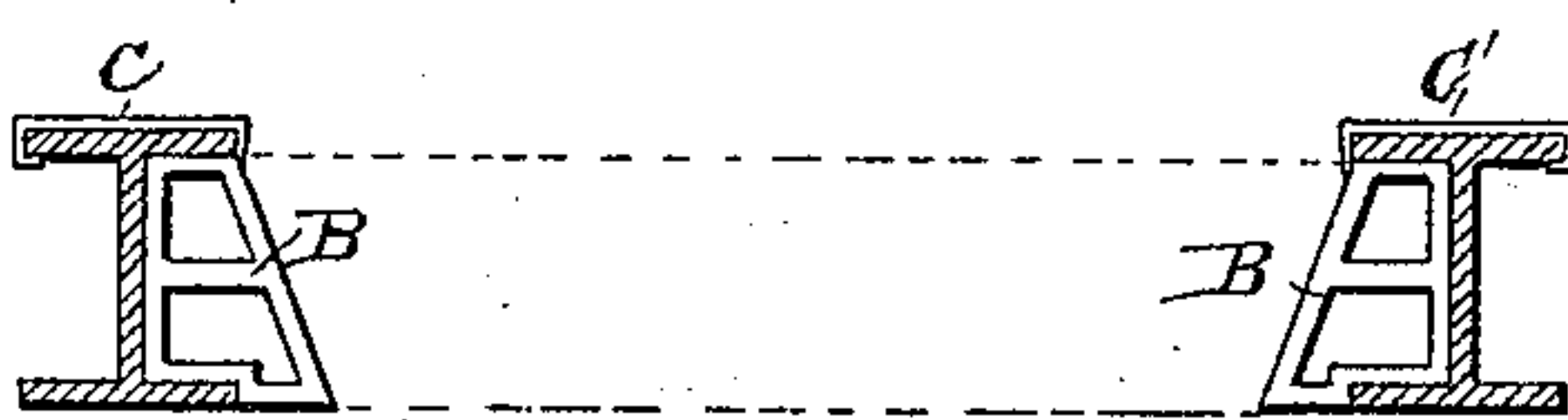


FIG. 3.

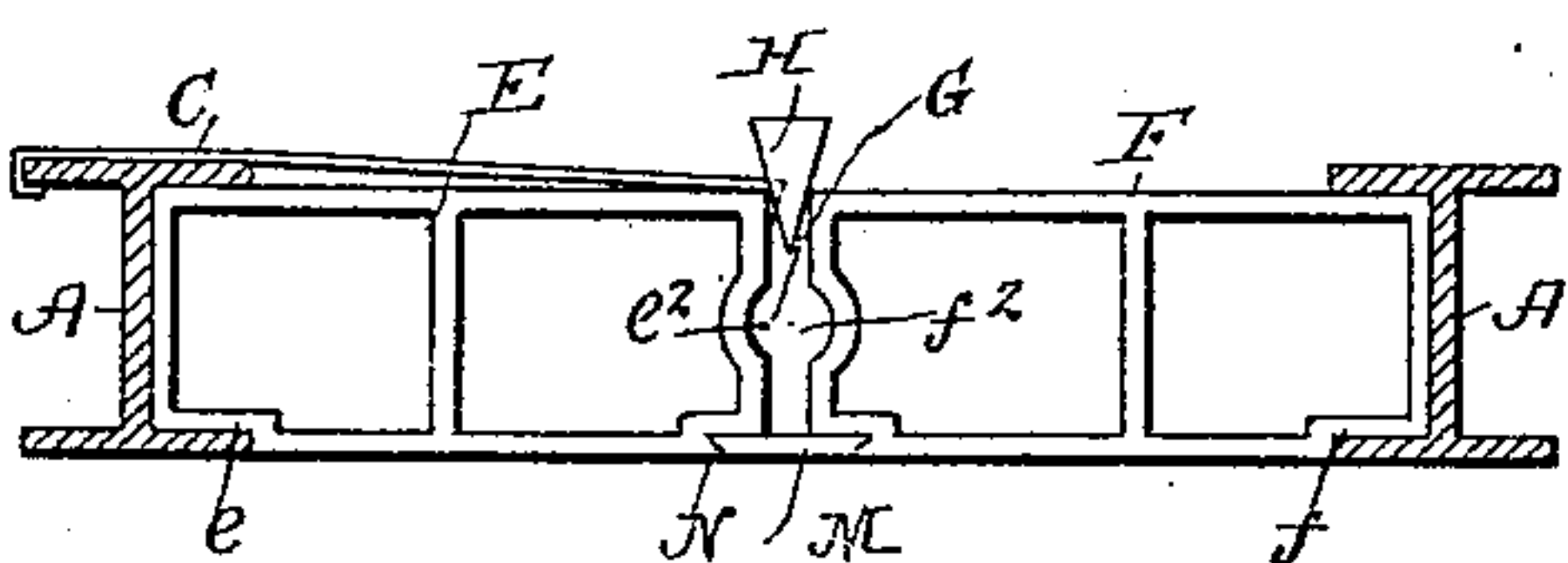


FIG. 4.

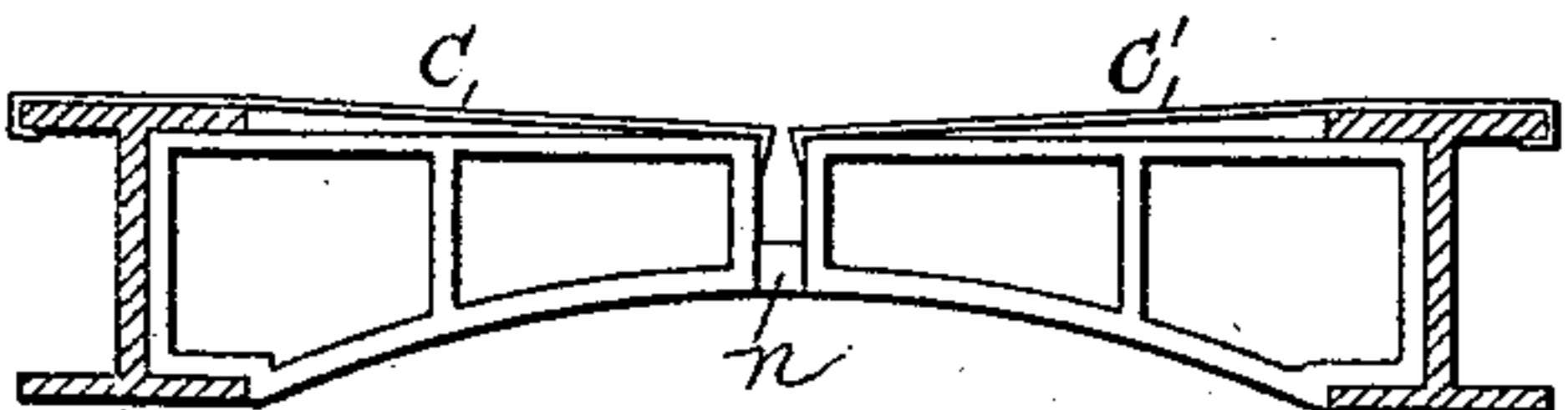


FIG. 6.

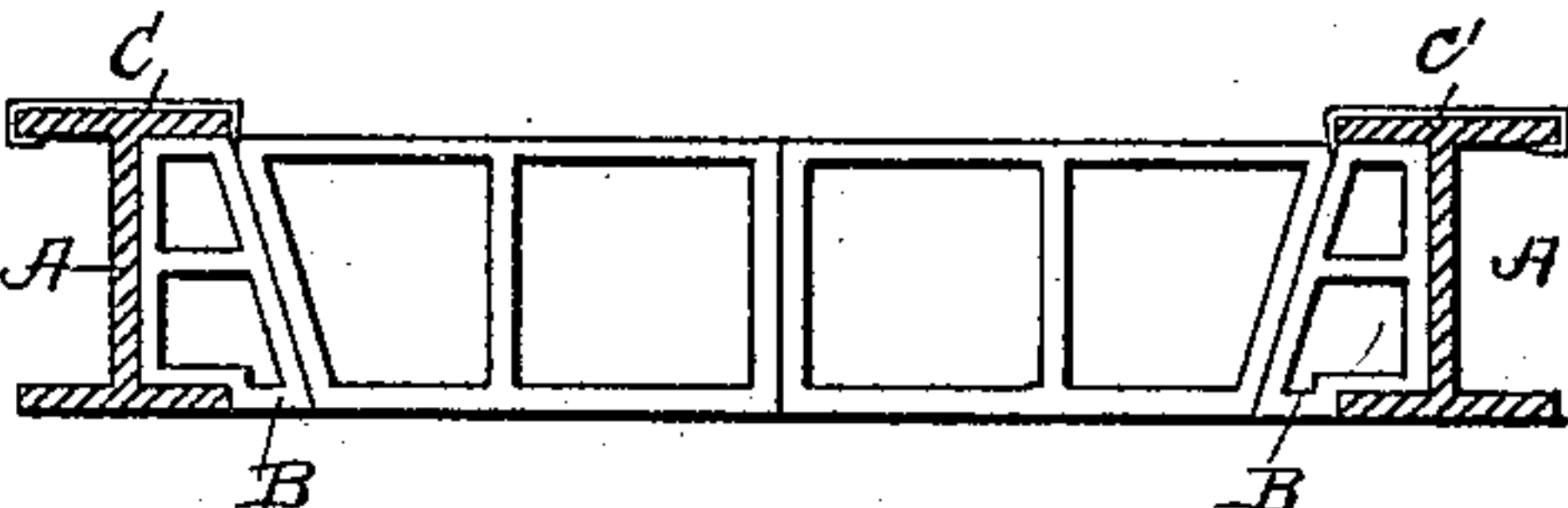
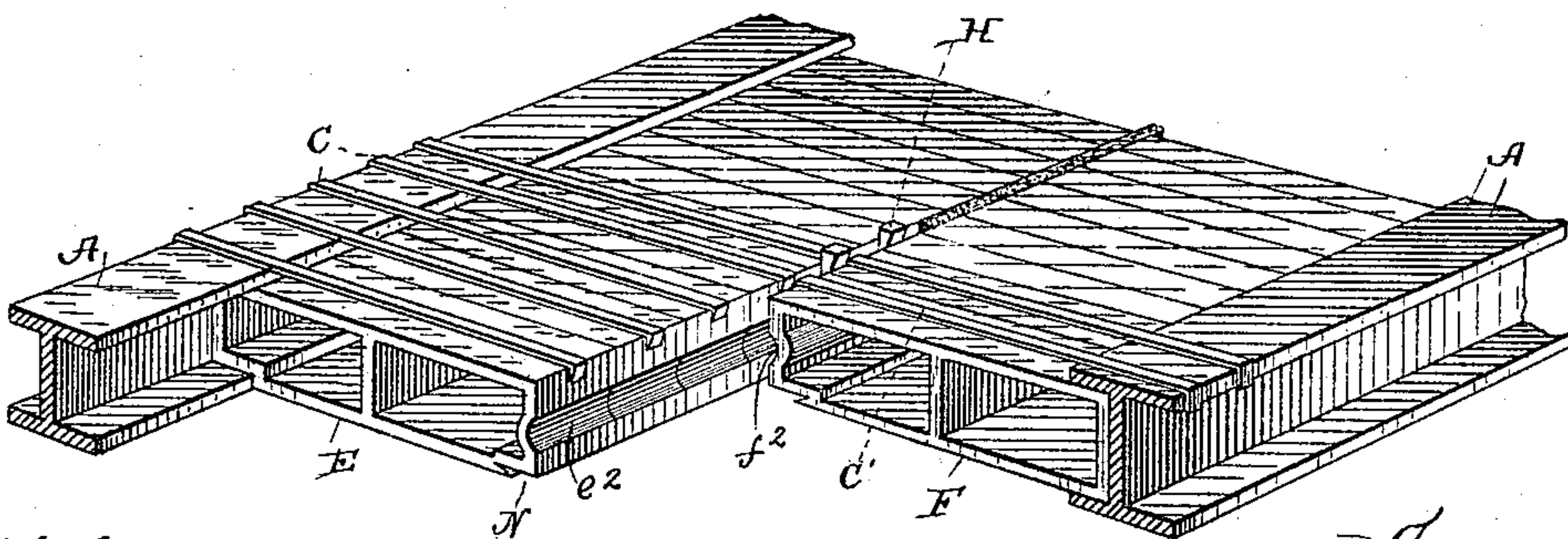


FIG. 5.



Attest:

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UNITED STATES PATENT OFFICE.

JOHN LYNCH, OF WASHINGTON, DISTRICT OF COLUMBIA.

TERRA-COTTA CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 441,013, dated November 18, 1890.

Application filed October 22, 1889. Serial No. 327,852. (No model.)

To all whom it may concern:

Be it known that I, JOHN LYNCH, a citizen of the United States, residing at Washington, in the District of Columbia, have invented
5 certain new and useful Improvements in Terra-Cotta Construction; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of the present invention is to
15 provide practical, safe, and cheap means for securing in place terra-cotta floor and roofing blocks between the girders of a floor or roof construction.

The invention consists of an improved con-
20 struction of terra-cotta blocks and improved means for holding the same, whereby they can be rapidly set in place by any mechanic of average intelligence without requiring a specially-constructed hanging platform to
25 support the workmen and their material. Fire-proof terra-cotta arch-blocks for floors, &c., can be so readily set by this means as to permit the work to be done by a common la-
30 borer, and the services of a skilled and high-priced brick or stone mason are not necessary. This invention therefore effects a material saving in the case of a large fire-proof building. The hollow arched floors are built with-
35 out requiring any centers to support them, the workmen standing on a staging or platform resting on the floor below instead of one hanging from centers above. The distance between the iron girders of a floor construc-
40 tion ordinarily employed is too great for the use of a single piece of terra-cotta, as said distance is ordinarily about four feet, and terra-cotta in lengths of more than three feet cannot be burned to good advantage. Hence preferably two or more blocks of terra-cotta
45 should be used to span the space between two girders. On account of the projecting upper and lower flanges of the girders it is not practicable to drop into place a block of terra-
50 cotta long enough to span between the girders after the girders are set, and it is therefore customary to bridge the space by an arch

which requires a center to support it in lay-
ing. It has been proposed to use a single terra-cotta block and to set the blocks in place as the girders are laid and to move up
55 each successive girder against the ends of a line of blocks after the same have been set in place; but this method requires the entire line of blocks for each space to be supported in place from below until the next girder has
60 been moved up against them.

In the present case I avoid the objections to former methods of laying such fire-proof floor construction in the manner hereinafter described and claimed. 65

Figure 1 illustrates a floor-section built ac-
cording to my invention. Fig. 2 illustrates the method of laying the same. Figs. 3 and 4 illustrate a modified form thereof, and Fig.
5 illustrates in perspective the method of lay-
70 ing said modification. Fig. 6 is a view of a modification.

A A' are two adjacent girders.

B B' are terra-cotta skewback-blocks which have a bottom notch *b b'*, that sets on the
75 bottom projecting flange of the respective girders.

C C' are hooked straps of hoop-iron, steel, or wire of the form shown, one end of which hooks over the back side of the top of each
80 girder, and it extends over the top of the girder, projecting down in front of the respective blocks B B' and holds them in place until the floor construction is completed. These hooks prevent the blocks from falling
85 forward. They are easily slipped in place and can be readily removed after the floor is laid, if desired, or they can be left without any inconvenience. Having thus set in place the end blocks B B', which project out even
90 with or just beyond the edges of the top projecting flanges of the girders and have front oblique faces, it is an easy matter to drop in from above the block D, which spans the distance between the blocks B B'. The ends of
95 the block D have the proper slope to fit against the inclined faces of the skewback-blocks.

Instead of making the block D a single block spanning the entire space, two blocks
100 may be employed, as illustrated in Fig. 6; or the feature hereinafter described, and illus-

trated by Figs. 3, 4, and 5, may be utilized in connection with these skewback end blocks.

In the form of the invention illustrated by Figs. 3, 4, and 5, instead of employing end blocks which merely fill the space under the projecting flanges of the girders, I make the entire span of two blocks E and F, which respectively have the corner-notches *e* and *f*, which rest on the bottom projecting flanges of the girders, and the combined length of the two blocks is such as to almost span the space between the webs of the two flanges, a small distance for clearance *G* being left between them. These blocks are laid, as before, by setting one block E in place and supporting it by a bent strap-piece C, which at one end hooks over the girder A and at the other end projects down in front of the block E and holds it up against the girder. The other block F is then passed into place. The clearance left between the blocks E and F is sufficient to permit the latter to be passed down into place between the block E and its girder A'. A wooden wedge H is then inserted between the upper corners of the adjacent blocks E and F, which holds the blocks E and F in place and prevents them from tilting forward. In place of the wedge H another strap, like C, can be employed to hold up the block F, or after the wedge H has been inserted the first strap C can be removed, if desired. On the under side of each block E and F there is a dovetail groove N, which grooves, when the blocks are set in place, form a dovetail slide to receive a terra-cotta strip M, which is slipped into place in the dovetail grooves M N from the front and closes the bottom of the space *G* left between the two blocks E and F. The blocks E F are also preferably formed with opposite hemispherical recesses in their adjacent faces *e*² and *f*². After a tier of blocks

are thus set in place each tier has down their center an open trench formed by the spaces *G*. Cement is poured into said trench from above, filling the same. After the same is set the wedges H can be removed, and also the holding-strap C, if the same have been employed, and it is not desired to leave them. The floor construction is then complete and solid.

Fig. 4 shows the blocks made on a slight arch.

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

1. As an improvement in floor construction, the combination, with the girders, of the intermediate terra-cotta blocks having a space between their inner ends and provided with dovetail grooves or recesses and hemispherical recesses in their opposite ends, and the slide fitting said dovetail recesses, substantially as set forth.

2. As an improvement in floor constructions, the combination, with the girders, of the intermediate blocks secured at their ends to said girders and having an intervening space between their inner ends, and the straps C C' for holding said blocks to said girders, substantially as set forth.

3. As an improvement in floor constructions, the combination, with the girders, of the blocks secured to said girders and having an intervening space between their inner ends, the straps C C' for holding said blocks to said girders, and the single block placed between said former blocks, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN LYNCH.

Witnesses:

G. Y. ATLEE,
E. M. WILLIS.