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H. L. HINTON.

TILE COVERING FOR GIRDERS.

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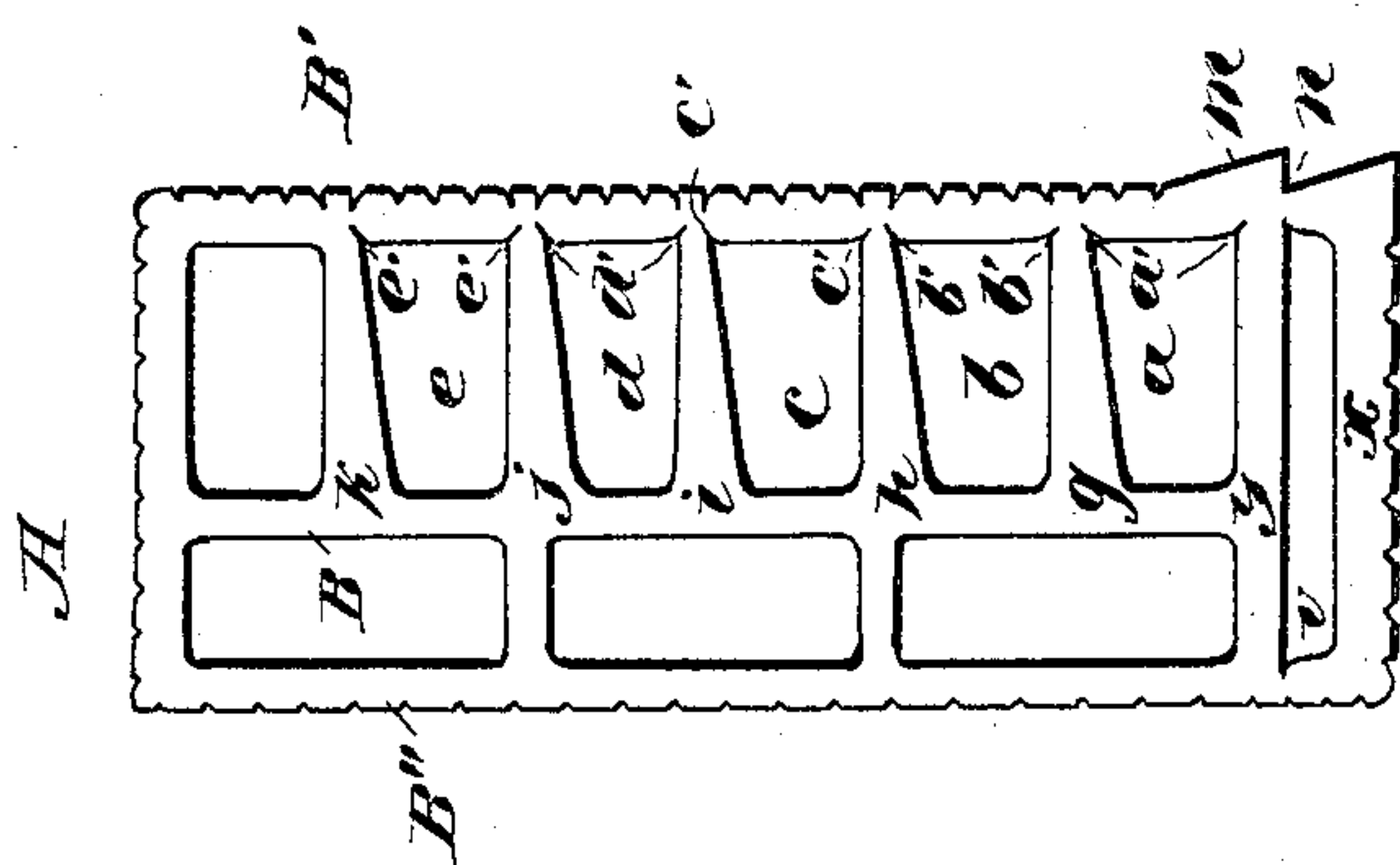


Fig. 3.

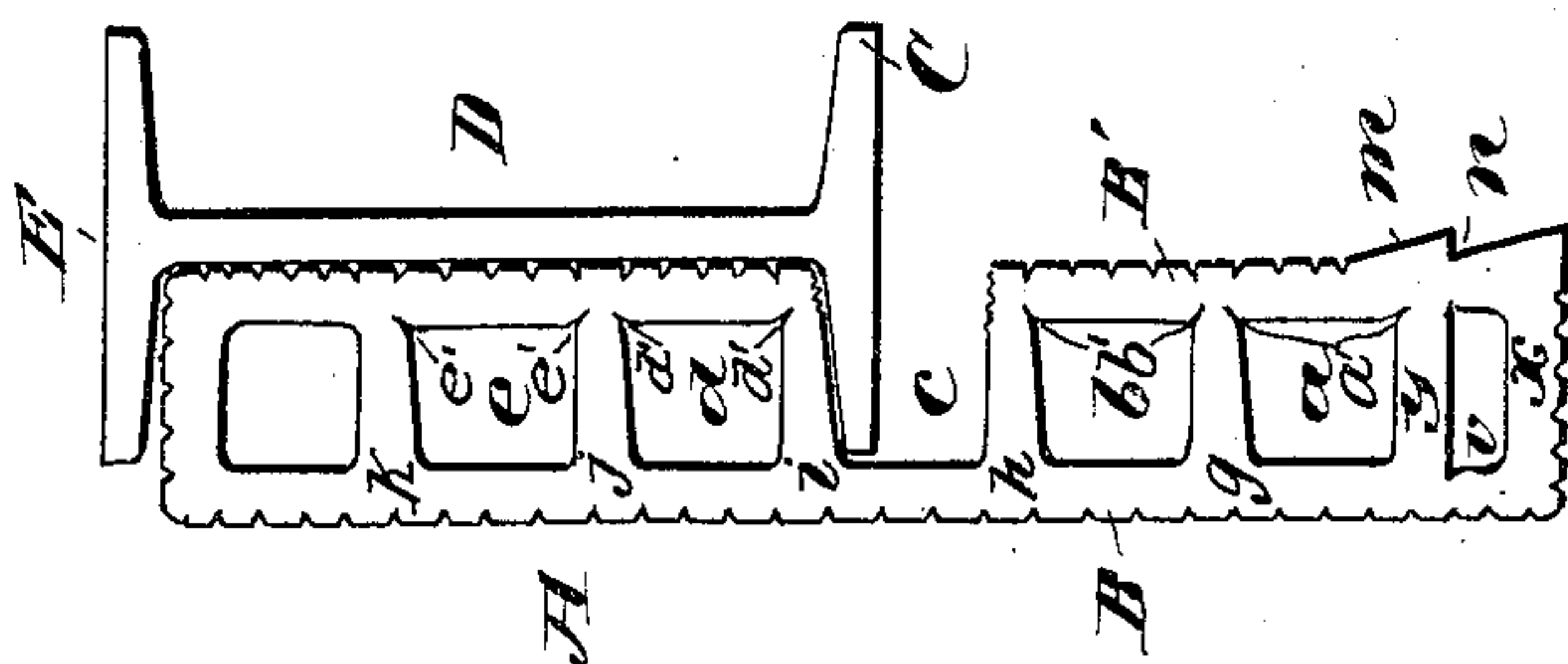


Fig. 2.

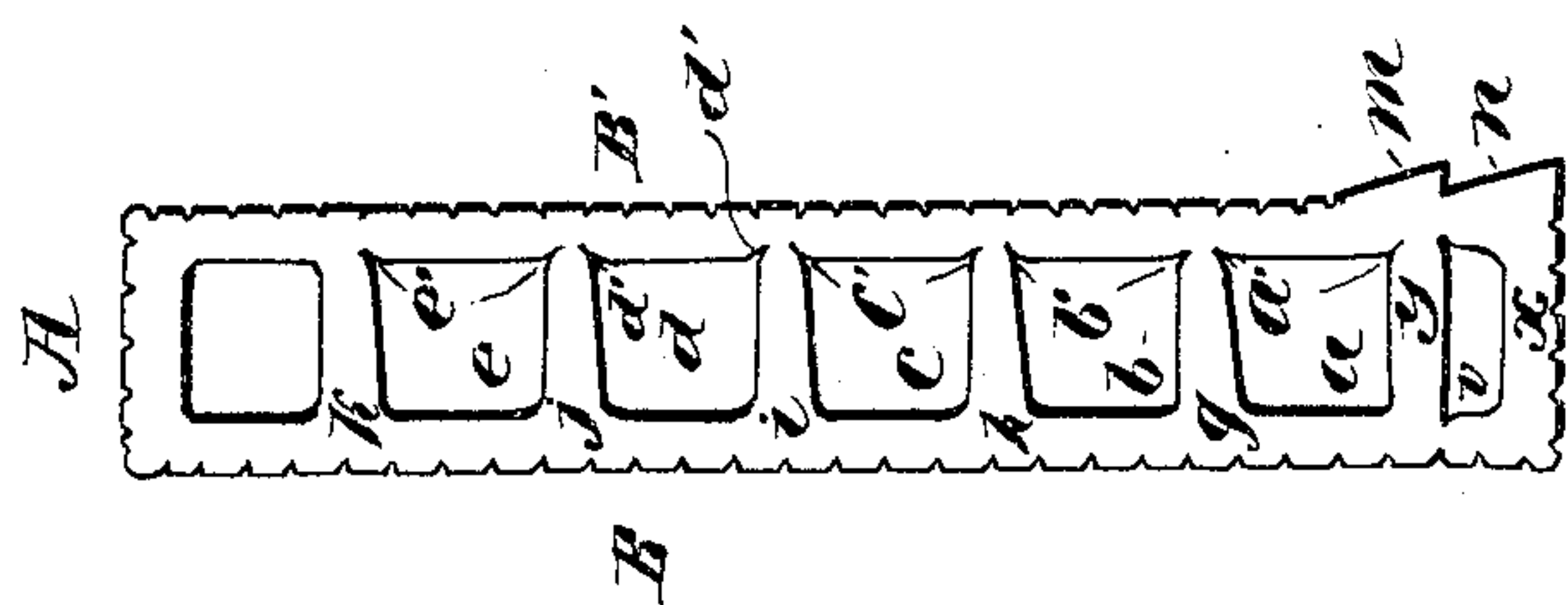


Fig. 1.

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TILE COVERING FOR GIRDERS.

SPECIFICATION forming part of Letters Patent No. 789,731, dated May 16, 1905.

Application filed January 30, 1903. Renewed December 13, 1904. Serial No. 236,757.

To all whom it may concern:

Be it known that I, HENRY L. HINTON, a citizen of the United States, residing in the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Tile Coverings for Girders, of which the following is a specification.

As is well known, in the construction of steel-frame buildings the supporting-girders are required to be covered with hollow tiles, such as are used in constructing the floors of such buildings, both to protect them in case of fire and to form a foundation for the finishing masonry. The tile coverings used for this purpose are provided near their lower extremity with a slot to receive the lower flange of the girder, whereby the tile is supported and extends around under the girder to protect its lower surface. Architectural requirements make it necessary that the thickness of that part of the girder-coverings below the girder shall vary widely to meet different conditions, and for this reason it has been necessary to make the tiles heretofore employed in a great variety of patterns to meet the architect's requirements in this respect.

The object of my improvement is to do away with the necessity for this great variety of patterns and provide a tile for covering girders of such form that a single pattern may be readily applied, so as to meet a variety of conditions in respect to the distance to which the tile covering is required to extend below the girder.

To this end my invention consists in making a girder-covering tile with a series of superposed "voids," (as the hollow spaces within the tiles are called,) the lower surface of each of the partitions between which conforms in shape with the upper surface of the girder-flange, so that when the wall of the tile is broken away at any one of the voids such void will form a slot or socket to receive the flange of the girder, with an upper surface conforming in shape to the girder-flange, so that the tile will fit and rest securely thereon.

The inner wall of the tile—i. e., the wall which lies next to the girder when the tile is in place—is adapted to be broken away at points opposite the voids, and when so broken

the void at the point of breakage forms a slot to receive the girder-flange. I prefer also to make below the voids above mentioned a shallow void not adapted to receive the girder-flange, the walls of which may also be broken away when required. This void is made of about half the depth of the voids which are adapted to act as slots for the girder-flange and provides for the extension of the tile below the girder to a distance less than the depth of one of the first-mentioned voids. By means of this arrangement I am able with even a single pattern of tile to provide for covering the lower surfaces of steel girders to any distance within the range of ordinary requirements. Different patterns may be made to provide for different thicknesses of covering on the sides of the girder or for girders of different depths; but the variety of tile-patterns required is very much reduced.

My invention will be best understood by reference to the accompanying drawings, in which—

Figure 1 shows a section of a tile embodying my invention. Fig. 2 shows a section of a tile applied to a girder; and Fig. 3 shows a tile having a second series of voids, so as to give greater thickness of covering on the sides of the girder.

The same letters of reference indicate corresponding parts throughout.

A indicates the tile girder-covering, having an outer wall B and inner wall B', which is next the girder-web when the tile is in position on the girder. Within the tile are the superposed voids *a b c*. The number of these voids, and therefore the length of the tile, may be varied to correspond to girders of different depth.

The lower surface of each of the partitions *g h i j k* dividing the voids is inclined downwardly and outwardly to correspond in shape to the upper surface of the girder-flange C, so that when the tile is in position it will rest securely upon the girder-flange.

Preferably the inner wall B' of the tile is indented at the upper and lower corner of each of the voids, as shown at *a' b'*, &c., to facilitate the breaking away of the wall B' when required.

Below the void *a* at the lower end of the tile I prefer to make in the tile a supplementary void *v*, which is about half the depth of each of the voids *a b c*, &c., and which may
5 also be broken away if required. Thus the void *v* extends the thickness of the tile below the girder by about half the depth of one of the voids *a b c*. The depth of each of the
10 voids *a b c* may conveniently be somewhat more than twice the thickness of the girder-flange.

In applying the tile to the girder the inner wall *B'* of the tile is broken away, as shown in Fig. 2, at such a point that when the void
15 at the point of breakage is used as a slot to receive the girder-flange the tile will extend the required distance below the girder. Thus if the tile is required to extend but a short distance below the girder the wall *B'* is broken
20 away at the points *a' a'* and the void *a* becomes the slot to receive the girder-flange. In this case the extension of the tile below the girder is measured by the void *v* and about half of the void *a* with the thickness of the
25 interposed partition. In case a still shallower covering is required the void *v* is broken away, leaving only the half of the void *a* and the partition *y* below the girder. In case a greater depth of covering below the girder is required
30 one of the upper voids *b c*, &c., is used, as required, the void *v* being broken away or left according to the requirements of depth of covering below the girder. In case a wide covering-plate is required, as when two girders
35 come together, such plate may be set in the notches *n n* in the usual manner or on the projections *m* in case the lower part of the tiles is broken away.

Such girder-covering tiles are usually put
40 in place before the arches are laid and are held firmly in place against the girder by the arch. If desired, the tiles may also be held from springing apart at the bottom by a metal clip applied in the usual way.

The advantages of my invention will be 45 readily apparent to those skilled in the art, since by means of it any usual depth of tile-covering below the girder may be had without the necessity of making a great number of tile-patterns to meet the requirements of 50 each case.

What I claim as new, and desire to secure by Letters Patent, is—

1. A girder-covering tile, comprising a shell inclosing a series of superposed voids, and 55 having one of its walls adapted to be broken away at points opposite each of said voids, partitions between said voids, the lower surface of each of which conforms in shape to the upper surface of the girder-flange, and a 60 supplementary void located below and having a lesser depth than the first-mentioned voids, substantially as and for the purposes set forth.

2. A girder-covering tile comprising a shell 65 inclosing a series of superposed voids, each of which is adapted to serve as a slot for receiving the girder-flange, and having one of its walls adapted to be broken away at points opposite each of said voids, and partitions be- 70 tween said voids the lower surface of each of which partitions conforms in shape to the upper surface of the girder-flange, substantially as and for the purposes set forth.

3. A girder-covering tile, comprising a shell 75 inclosing a series of superposed voids, each of which is adapted to serve as a slot for receiving the girder-flange, and having one of its walls adapted to be broken away at points opposite said voids, substantially as and for 80 the purposes set forth.

In testimony whereof I have hereunto subscribed my name this 27th day of January, A. D. 1903.

HENRY L. HINTON.

Witnesses:

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