

No. 674,097.

Patented May 14, 1901.

O. C. PIXLEY.
HOLLOW TILE OR BRICK.

(Application filed Feb. 23, 1901.)

(No Model.)

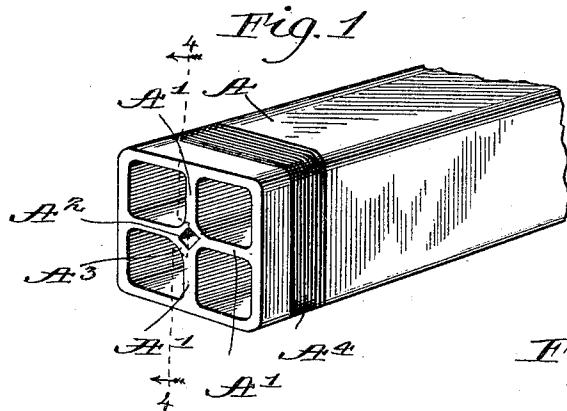


Fig. 2

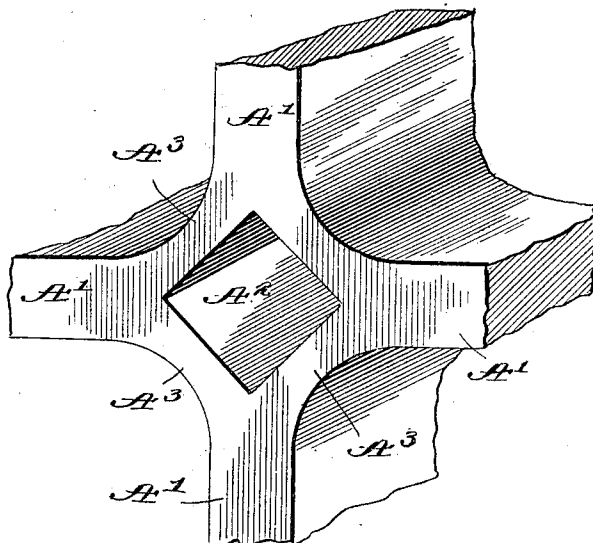


Fig. 3

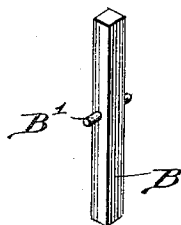
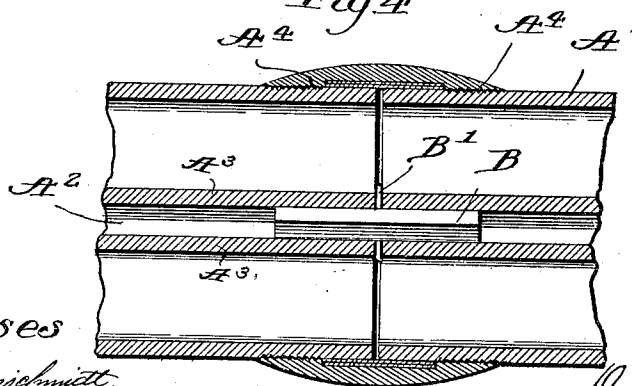


Fig. 4



Witnesses

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HOLLOW TILE AND BRICK.

SPECIFICATION forming part of Letters Patent No. 674,097, dated May 14, 1901.

Application filed February 23, 1901. Serial No. 48,537. (No model.)

To all whom it may concern:

Be it known that I, ORLA C. PIXLEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hollow Tile and Brick, of which the following is a specification.

The hollow tile referred to are those used for electrical purposes and are known as "underground electrical conduits," and the hollow brick are such as are used for constructing walls, foundations, fire-proofing, &c., and known as "hollow building-blocks" or "hollow tile." As heretofore manufactured, these tile have been provided with small round openings extending longitudinally of said tile. These openings are provided for the reception of small cylindrical dowel-pins for the purpose of centering and holding a longitudinal section of said tile in alinement. Metallic dowel-pins have heretofore been employed exclusively for causing the ends of adjacent tile to register properly each with the other, and the openings for the reception of these dowel-pins have always been quite small and circular. As a consequence the body of material at the center of the tile, where the partition-walls meet, is considerably greater than that in the partition-walls themselves or in the outer walls, and the shrinkage of the center core or web in drying is sufficient to pull the outer walls inward, causing the same to sag in longitudinal grooves where the partitions meet these outer walls, or, if the outer walls be sufficiently strong to withstand the strain in drying, the partitions themselves are cracked, allowing the core or center web to contract away from the outer walls. These cracks weaken the tile and render them unfit for conduit construction, as their tendency is continually to increase, allowing moisture to enter the ducts and causing rough edges, over which the lead-covered cables are subject to injury while being drawn in. The cracks also destroy the insulation which these partitions are intended to provide between the cables installed in adjacent ducts.

The object of this invention is the production of a hollow tile or brick wherein the defects hereinbefore mentioned are obviated,

also having other advantages which will be mentioned hereinafter.

In the accompanying drawings, Figure 1 is a perspective view of one end of a tile embodying the features of my invention. Fig. 2 is a fragmental perspective view showing the center core of the tile and the dowel-pin opening therein. Fig. 3 is a perspective view of said dowel-pin. Fig. 4 is a longitudinal section through the ends of two abutting tile, taken on dotted line 4 4 of Fig. 1, showing the dowel-pin in place to hold said tile in alinement.

Like letters of reference indicate corresponding parts throughout the several views.

The tile and brick of my invention are made in a manner similar to that employed in producing like articles—that is to say, the plastic material is fed into a forming-machine and is cut into suitable lengths as it issues continuously from said machine. The dies of the machine, however, are arranged to produce tile or brick having a square central dowel-pin opening extending longitudinally throughout their length, and the forming of said opening removes a portion of material at the core sufficient to obviate unequal shrinkage at this point. The shape of this dowel-opening is preferably square, and its side walls have a thickness equal to about one-half the thickness of the partition-walls. A further advantage in removing a considerable quantity of material from the center of the tile is in the lessening of its weight without diminishing in any degree the strength of the tile—in fact making the tile stronger by properly distributing the material of which it is composed.

A is my improved tile, having the partition-walls A' and the central longitudinal rectangular opening A² extending throughout the length of said tile. The walls A³, surrounding said central opening, are about one-half the thickness of the partition-walls A'. These dowel-pin openings are made square not only for the purpose hereinbefore mentioned, but so that they may receive a square dowel-pin, which will not permit the tile to turn upon their longitudinal axes, thereby insuring alinement of each of the ducts extending through said tile, as well as

of the tile themselves. This is quite important when the tile are used as conduits for installing electrical cables. The sides of said rectangular dowel-pin openings lie at an angle 5 with the partition walls.

A⁴ is a scarification near the end of each tile. The purpose of the scarification on the tile is to permit a cement joint to be made over the ends of abutting tile. This joint is 10 usually made by first wrapping fabric around the joint and later cementing over the fabric, permitting the cement to lap upon the tile. The scarification is placed at such a distance from the end of the tile as to provide room 15 for the fabric between the scarifications of adjacent tile, leaving said scarifications uncovered to receive the cement.

B is a dowel-pin, square in cross-section, having a transverse stop-pin B' for preventing the dowel-pin from being pushed bodily 20 within the opening in a tile. This dowel-pin is made to fit quite closely in the dowel-pin opening A², and therefore tends to prevent a rotatory displacement of the tile. The dowel-pin opening is sufficiently large to permit the 25 use of wooden dowel-pins, which yield or break when subjected to unusual pressure instead of breaking away the ends of the tile, as iron pins do. Furthermore, iron dowel 30 pins invite the destructive work of electrolysis at the joints, which action is obviated when wooden pins are used.

When my improved tile comes "green" from the forming-machine, it is carefully 35 placed upon a drying-rack of any suitable form, upon which rack it is seasoned preparatory to firing.

I claim as my invention—

1. As a new article of manufacture, a hol- 40 low tile or conduit having an opening extending longitudinally thereof at the juncture of the partition-walls of said tile, the walls surrounding said opening being thinner than said partition-walls.

2. As a new article of manufacture, a hol- 45 low tile or conduit having a rectangular dowel-pin opening extending longitudinally through said tile, the walls surrounding said opening being thinner than the partition-walls of said

tile in order to prevent unequal shrinkage in 50 the tile.

3. As a new article of manufacture, a hollow tile or conduit having a rectangular dowel-pin opening extending longitudinally thereof at the point of juncture of the partition-walls 55 of said tile, the walls surrounding said opening being thinner than said partition-walls.

4. As a new article of manufacture, a hollow tile or conduit having a rectangular opening extending longitudinally thereof at the 60 point of juncture of the partition-walls of said tile, the walls surrounding said opening being thinner than said partition-walls, and the sides of said opening being at an angle with said partition-walls. 65

5. As a new article of manufacture, a hollow tile or conduit having scarifications near one of its ends and at a sufficient distance therefrom to permit said end to be wrapped 70 with fabric in forming a joint, which fabric shall not cover the scarifications.

6. The combination with a series of tile or conduits placed end to end, each of said tile or conduits being provided with a longitudinal opening extending therethrough, which 75 opening is square in cross-section, the walls surrounding said opening being thinner than the partition-walls of said tile, in order to prevent unequal shrinkage in the tile of a 80 dowel-pin conforming to the shape of said longitudinal opening.

7. The combination with a series of tile or conduits placed end to end, each of said tile or conduits being provided with a longitudinal opening extending therethrough, which 85 opening is square in cross-section, also having scarifications at a distance from its end sufficient to permit the wrapping of the joint between said adjacent tile or conduits with fabric so that said fabric shall not cover said 90 scarifications, of a plastic covering for said joint adapted to adhere to said scarifications, and a dowel-pin conforming to said opening in the tile or conduits.

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Witnesses:

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