

(No Model.)

J. GRANT.  
CONCRETE PAVEMENT.

No. 330,110.

Patented Nov. 10, 1885.

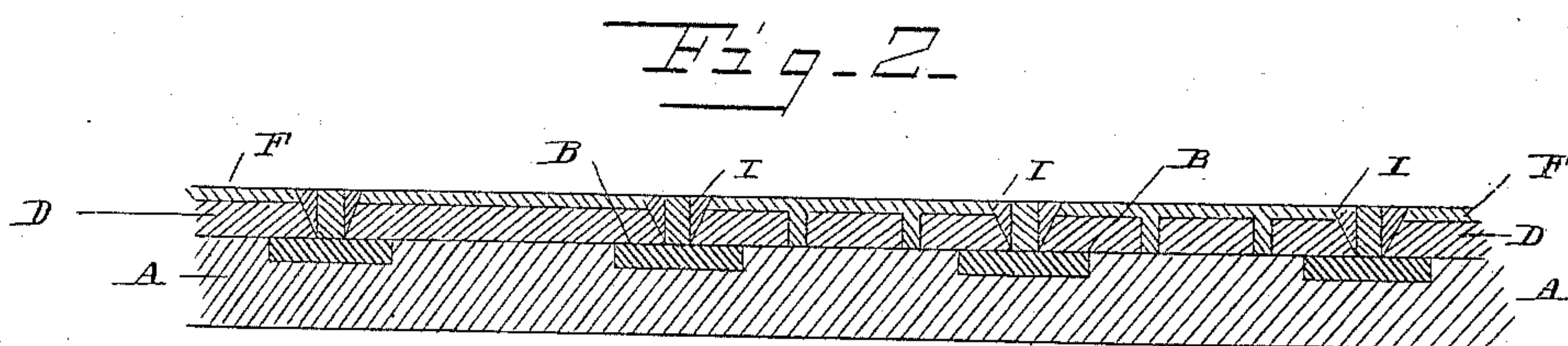
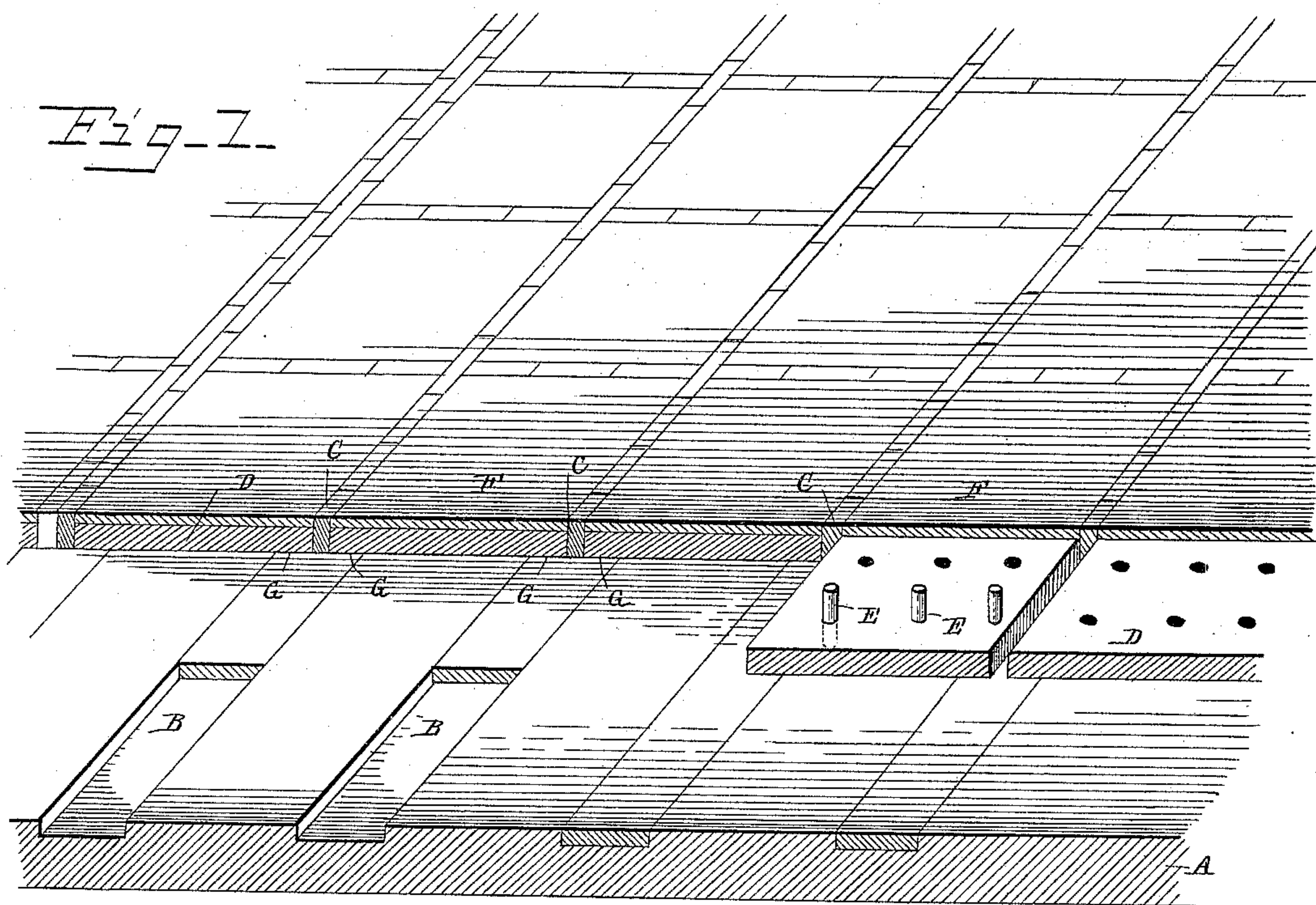
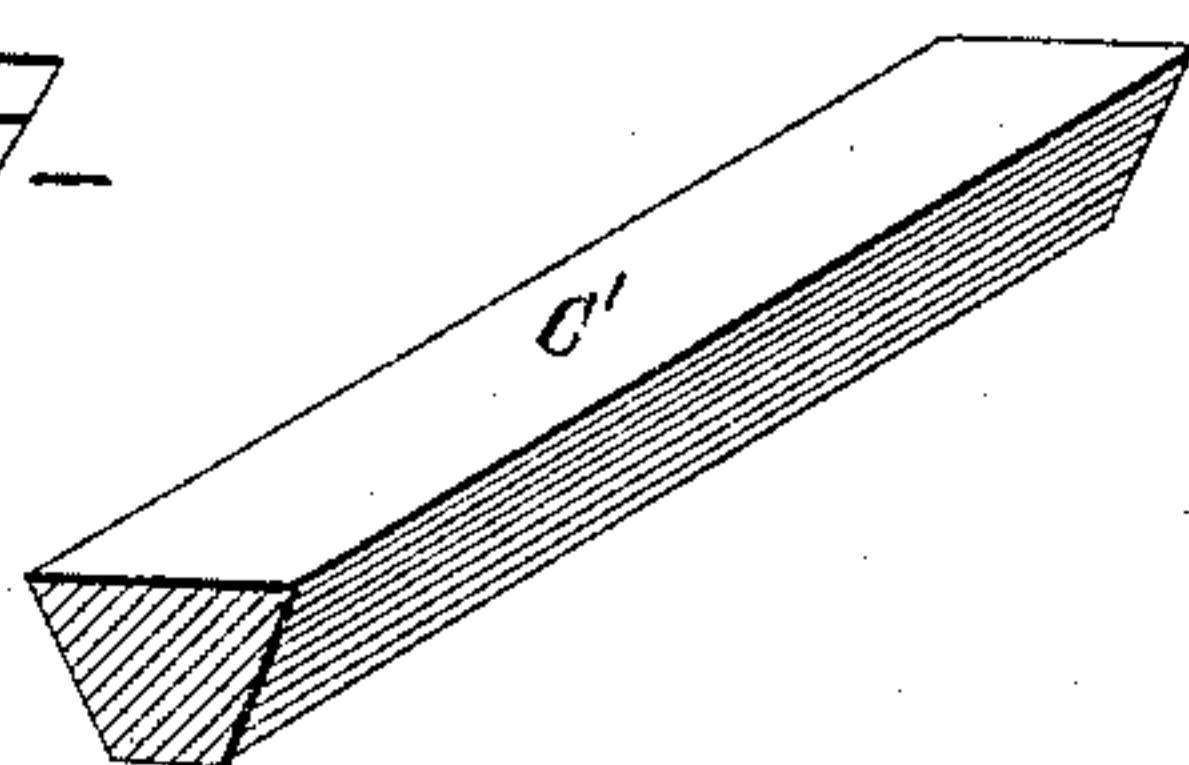


Fig-3



WITNESSES

Edwin L. Yewell  
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# UNITED STATES PATENT OFFICE.

JOHN GRANT, OF OMAHA, NEBRASKA.

## CONCRETE PAVEMENT.

SPECIFICATION forming part of Letters Patent No. 330,110, dated November 10, 1885.

Application filed July 3, 1885. Serial No. 170,605. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN GRANT, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Concrete Pavements; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in artificial pavements, and it has for its objects means to provide a pavement the removal of the stones or sections whereof is facilitated, while obviating the danger of breaking the same, and be ornamental, cheap, and substantial. These objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view of my improved pavement in section. Fig. 2 represents a cross-section of a modification thereof, and Fig. 3 represents a perspective view of one of the rods used in constructing my pavement.

In carrying out my invention I first grade my walk from six to twelve inches in depth; according to the character of the soil, which if it should be sand or gravel the depth would only be dug four inches; but if the soil should be wet and clayey the depth should be eight, ten, or twelve inches, and a sand, gravel, or cinder foundation, A, (rolled solid,) laid to about four inches from the surface. This foundation is then channeled or guttered, as indicated by the letter B, the channels or gutters being about twelve inches wide and three inches deep, and filled with a mixture of cement and sand, forming solid bases for the bricks or tile C, which are set upon the center of the concrete after it has become sufficiently hard and set. The rods or strips which form the spaces for the bricks are planed smooth, and are of a suitable width, and are preferably placed at intervals of four, six, or eight feet apart upon the concrete bases before mentioned. Between the rods or strips, and nearly to the top thereof, is filled a compound, D,

composed of clean furnace-slag crushed or broken to about the size of a walnut, and not to exceed two inches in diameter, and gravel or stone of a size that will pass through a screen of one mesh to the inch, both slag and gravel or stone being thoroughly mixed with a thick mortar composed of American or Portland cement and sand. I then take iron pins, (indicated by the letters E) not less than two and a half inches in diameter and pointed, and drive them into the course or layer just laid, at suitable intervals apart and then fill in the remaining space between the rods or strips and to the top thereof with the compound F, composed of a mixture of slag, limestone, or marble chips crushed fine and screened to remove the dust and mixed with cement and made into a thick mortar.

The iron pins are removed as the surface is gradually filled in, leaving spaces extending into the lower course, which are filled by the surface compound, forming ties uniting and securing the surface and the lower course together.

After sufficient time to allow the pavement to set, the rods are removed, leaving spaces between each stone, in which is dusted sand enough to even the bricks or tile (that are dropped into the spaces) with the surface of the pavement, the brick being either set upon their ends, sides, or faces, and may be of any style, shape, or manufacture.

The bricks being placed, the surface of the pavement is dusted with dry Portland cement, which fills the cracks between the bricks and the stones, making the pavement perfectly water-tight.

As is plainly seen, pavements and floors presenting beautiful effects may be made by the use of enamel bricks of different colors, and should any one of the bricks or stones crack or otherwise become injured it can be easily removed and replaced by another.

To remove a stone, it is evident by removing a border of bricks space sufficient will remain to manipulate the raising of the stone without cracking the edges of the adjacent stones, and the two courses or layers of the stones being united and secured together by the means before mentioned, the danger of separation is obviated.

The rods used in constructing my pavement



are about four by two inches in cross-section, and they being removed and bricks or tile of the same size being placed in their spaces it will be seen that the bases upon which the bricks rest extend beyond each side of the same, (as indicated by the letter G,) preventing moisture and frost from reaching the under side of the pavement.

To better facilitate the removal of the stones, I use the rods C', (shown in the drawings,) which in cross-section are wider at their tops than at their bases they being more easily removed, and when they are and bricks dropped into their places the spaces I at each side are filled with the surface compound and troweled even with the surface; or said spaces may be filled with colored material.

I do not confine myself to a single line of bricks or tile between the sections, but for convenience and ornamentation two or more lines may be used between the sections, and also may be arranged to form some design.

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

1. An artificial pavement laid in sections, having a line or lines of bricks or tile between said sections, substantially as and for the purposes herein set forth.
2. An artificial pavement laid in sections, having a base of coarse material, an intermediate course of fine material, and an upper or wearing surface, the intermediate and wearing surface or course being divided vertically by a line or lines of brick or tile, substantially as described.

3. An artificial pavement the foundation of which is channeled or guttered, said channels or gutters being filled with a suitable concrete, said concrete being arranged centrally below the division-lines of a series of artificial stones and bricks, substantially as described.

4. An artificial pavement having a foundation channeled or guttered of coarse material, an intermediate course of finer material, and an upper or wearing surface, an intermediate and upper course being divided vertically by a line or lines of brick or tile, and also secured together by ties of one course extending into the other, as and for the purposes herein described.

5. An artificial pavement laid in sections, having a line or lines of beveled bricks or tile between each section, said bricks or tile being laid in beveled spaces, substantially as described.

6. An artificial pavement laid in sections, having a line or lines of brick or tile between each section, the bricks or tile being rectangular in cross-section and laid in beveled spaces, the remaining spaces between the sides of the brick or tile and the beveled sides of the spaces being filled with suitable material, substantially as described.

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

JOHN GRANT.

Witnesses:

WILLIAM W. KEYSOR,  
NILES CALLANAN.