(No Model.)

W. BIGNELL.

PAVEMENT.

No. 382,683. Patented May 15, 1888.

Fig 1.

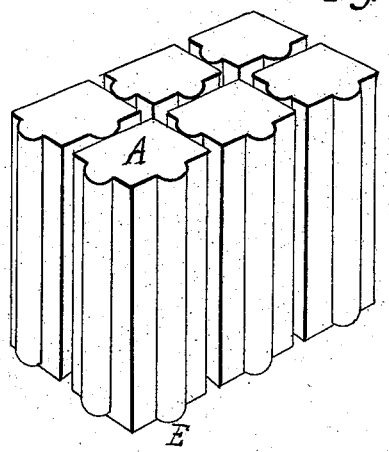


Fig 2.

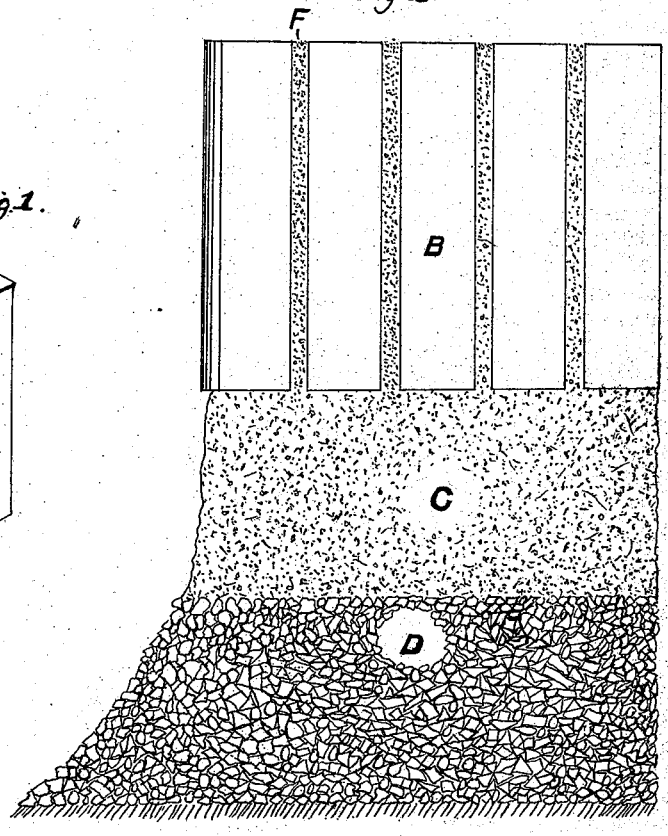
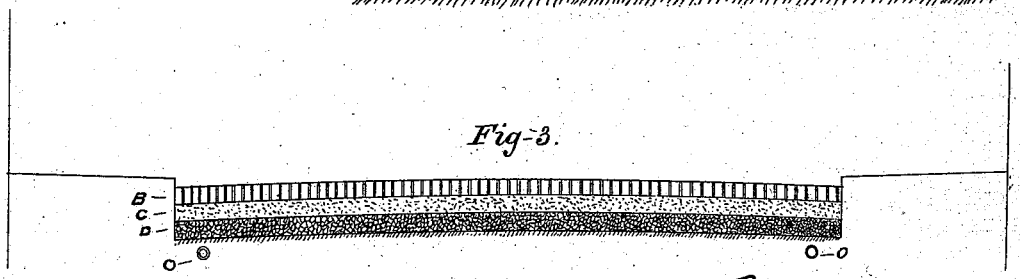


Fig-3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM BIGNELL, OF NEBRASKA CITY, NEBRASKA.

PAVEMENT.

SPECIFICATION forming part of Letters Patent No. 382,683, dated May 15, 1888.

Application filed May 24, 1887. Serial No. 239,254. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BIGNELL, a citizen of the United States, residing at Nebraska City, in the county of Otoe and State of Nebraska, have invented a new and useful Improvement in Pavements, of which the following is a specification.

My invention relates to pavements made of bricks or blocks of fire-hardened clay, which may be made in any usual manner of producing hard and durable bricks, such as those adopted for the lining of furnaces.

It has for its object a solid pavement, with practically smooth surface that is not slippery and that will endure constant and heavy traffic; and it consists in the particular matters hereinafter described and pointed out.

In the accompanying drawings, which form part of the specification, Figure 1 represents a perspective view of several pavement-bricks in juxtaposition. Fig. 2 is a side view representing bricks supported on a bed of concrete and broken stone, the spaces between the bricks being filled with concrete; and Fig. 3, a transverse section of a paved street.

In the several figures, in which like parts are indicated by similar letters, A indicates the end, and B the side, of a single paving-brick. It is usual to make these of fire-clay, which, after it is molded into proper form, is "burned" to produce hard brick or blocks. These bricks I provide with a longitudinal rib or projection, E, preferably on two adjacent sides of the same, to keep the bricks separate or out of contact with each other when laid in the pavement. These ribs may be made of any convenient form in cross-section. As illustrated, they are semi-cylindrical; but they could be made in angular, ovoid, or other form without departure from the invention. A suitable size for these bricks is ten inches in length by four and one-half inches in width and two and a half in thickness, with a rib raised one-half inch above the face of the brick. These dimensions, however, may be varied, either singly or all together, as desired.

In constructing the pavement the bricks are placed, preferably, on a bed of concrete, which rests on broken stone, suitable means for drainage being provided.

In Fig. 3, C indicates concrete and D broken stone, and drains are indicated at O. Six inches of concrete upon six inches of broken stone constitute a suitable bed for the pavement, though it may be constructed in any approved way and of any suitable material. The spaces between the bricks, the sizes of which are determined by the thickness of the spacing-ribs E, are filled with concrete or similar material, as indicated at F.

The bricks made of the size above given present each but a small area or surface, and this is never exactly continuous with that of the filling between them. The danger of the slipping of the foot upon such pavement is heretofore largely obviated, the joints between the brick and the filling tending to arrest any slipping movement on the upper surface of the same.

The pavement constructed as above set forth presents an approximately smooth surface, excelling that made of stone blocks in this respect, and it is far more durable and clean than pavement of wood.

The broken stone and concrete should be laid so as to produce a nearly smoooth level surface, and may be compacted and prepared in any approved manner. That portion of concrete that is inserted between the brick should be made of suitable consistency for the purpose of convenient introduction. It operates when hardened to cement the brick together, and the construction is such that surface-water does not percolate or soak through. Any excess of moisture that may find its way laterally into the broken stone is drained away, and all danger of upheaval by frost or ice formed in the same is obviated.

Heretofore it has been proposed to provide paving-blocks with several ribs or projections on their sides, whereby vertical grooves were formed between said ribs, the bricks being adapted and intended to be laid in contact at their corners; but said construction is liable to the objection that it is difficult to properly fill these grooves with cement. To fill them with concrete is practically impossible, so that the surface of pavements made of blocks of this construction expose openings into which horseshoe-calks are liable to enter and be held; and, further, such imperfectly-filled grooves admit surface-water to penetrate beneath the paving-bricks to an injurious extent under certain conditions. By my improvement a

nearly continuous space between the bricks is provided, and such space always surrounds the corners. This greatly facilitates the introduction of cement. The provision of ribs on two adjacent sides is ample to separate the blocks and accurately determine their relative position, and the location of these ribs at or near the center of the blocks leaves a space which is continuous around each corner, the confluence of the several spaces leaving at the corners an opening for the introduction of concrete, which could not otherwise be effected.

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

1. A brick for paving provided on each of two adjacent sides with a rib for separating the blocks in use, said ribs being located at a distance from the corners, substantially as specified, whereby, when several bricks are placed together in a pavement, a continuous space will be provided around the corners.

2. A pavement consisting of bricks provided on each of two adjacent sides with a rib to separate the bricks, said ribs being located at a distance from the corners, whereby, when several bricks are placed together in a pavement, a continuous space will be provided around the corners, and a filling of concrete in the spaces between the bricks, all placed on a suitable road-bed, substantially as specified.

May 21, 1887.

WILLIAM BIGNELL.

Attest:

WM. MCLENNEN,

S. J. STEVENSON.