

(No Model.)

W. & J. W. McREYNOLDS.
PAVING BLOCK.

No. 401,361.

Patented Apr. 16, 1889.

Fig 1 -

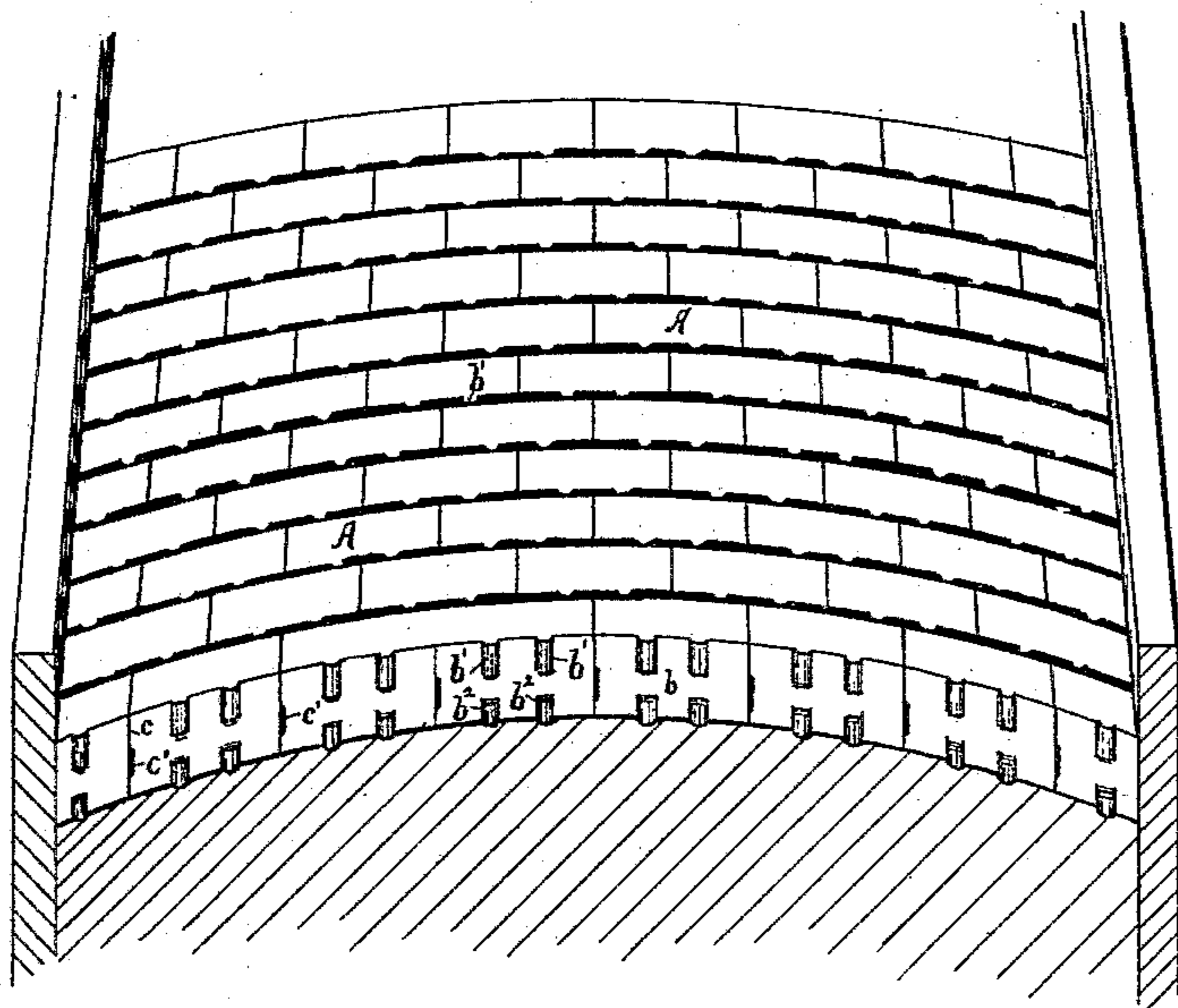


Fig 3 -

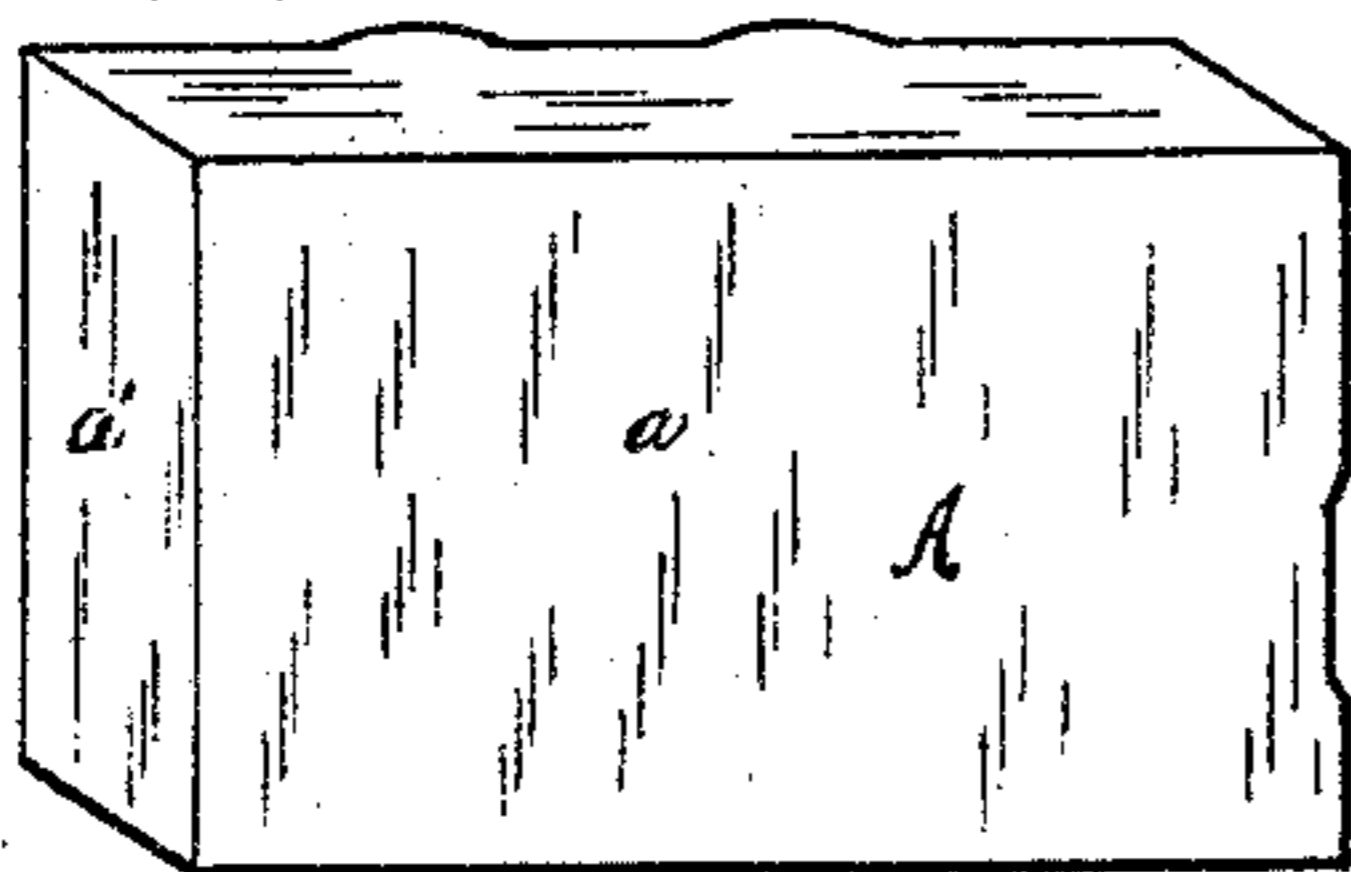
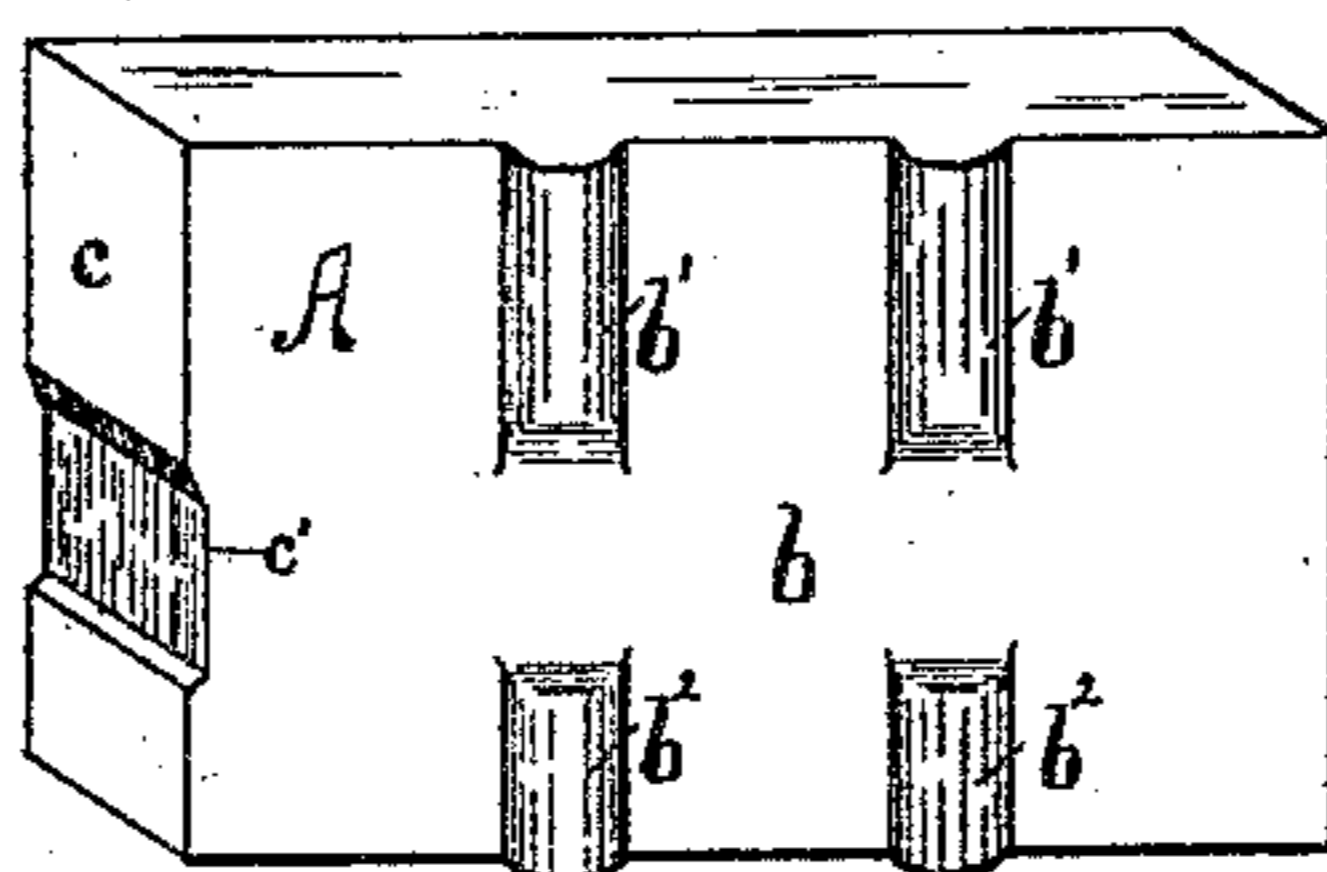


Fig 2 -



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UNITED STATES PATENT OFFICE.

WILLIAM McREYNOLDS AND JOHN W. McREYNOLDS, OF CLEVELAND, OHIO.

PAVING-BLOCK.

SPECIFICATION forming part of Letters Patent No. 401,361, dated April 16, 1889.

Application filed February 9, 1889. Serial No. 299,322. (No specimens.)

To all whom it may concern:

Be it known that we, WILLIAM McREYNOLDS and JOHN W. McREYNOLDS, citizens of the United States, and residents of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Paving-Blocks, of which the following is a specification, the principle of the invention being herein explained and the best mode in which we have contemplated applying the principle, so as to distinguish it from other inventions.

Heretofore fire-brick paving-blocks have usually been formed as parallelopipeds having plane smooth faces. The disadvantage of this form is obvious. When the blocks or bricks are laid in a pavement, the face of one brick is laid closely against the contiguous block, and the bricks are so regular in form and fit so closely together that no room is afforded for introducing the necessary filling of tar or other similar or suitable material between the bricks. Unless some such filling is introduced between the bricks, in order to bind them together into one compact mass and render the pavement water-tight, two serious defects are noticeable in the pavement. First, water soaks between the rows of brick and softens up the bed or foundation on which the bricks are laid, practically destroying the supporting-power of the same and leaving the bricks without a suitable foundation on which to rest; second, the weight of loaded wagons causes the bricks sustaining the greatest pressure to become depressed below the level of the adjacent bricks, as they are in no wise bound together.

In our improved form of paving-blocks we provide the bricks on one of their side faces with two or more projections or lugs, that serve to separate the face so provided from the proximate faces of the adjoining bricks. On one of the end faces of the bricks we form a recess, extending entirely across the end, which serves to provide an opening between a portion of the adjoining ends of the bricks, said opening being below the upper edge of the brick. Thus an interstice being formed, being the longitudinal edges of the bricks, permits the usual heated tar to pass between the adjoining longitudinal sides and thence into the end recesses, binding the bricks to-

gether in substantially one water-tight, solid, compact mass. It has been found by experience that the tar filling thus inserted between stone blocks chips off, and is worn away near the upper surface of the block, and the oil contained in said tar filling has a tendency to evaporate, which causes the tar to lose its adhesiveness, and consequently the upper part of such pavement is no longer water-tight. The necessity for extending this filling below the point where there is a possibility of such evaporation occurring is thus apparent, and therefore it is that we locate the greater portion of the body of the end recess below the transverse center of said end. Again, it will be noted that the outer edge of the transverse ribs are in such close contact with the proximate face of the adjoining brick that no tar or other similar filling can be inserted between said outer edge and proximate face; but water, being of so much less density, will readily find its way between said points, and it is to obviate this disadvantage, and also to give a greater adhesive surface below the line of evaporation between the adjoining bricks, that we form the upper and lower lugs independent of each other with a smooth bearing-face between. It will be further noticed that the lugs are of segmental form in cross-section, so as to reduce the point of contact between the lugs and adjoining bricks to a minimum, and thus reduce the surface that cannot be reached by the tar to a minimum. The greater the surface that is covered by the tar and the lower such surface can be located on the vertical faces of the brick the greater the resulting adhesiveness, and hence it is that we make the lower lugs of less length than the upper. The lower and upper lugs have the same distance of projection from the face of the brick in order that consecutive bricks may be located in parallel planes. Another feature of improvement in our form of brick is the fact that no continuous longitudinal rib is formed on the lower portion of the longitudinal face; but instead we use the short transverse lugs that permit a ready escape of the air into the earth beneath as the tar filling is poured on, and thus likelihood of air or blow holes (that might permit water to soak through) being formed in the tar filling as it is poured into

the interstices is done away with. It will be noticed that the upper lug, b' , on one end of the block, and the lower lug, b^2 , on the other end of the block are located in different vertical planes when the pavement is laid, and that each of said lugs are of less vertical length than the vertical height of the face on which they are located.

Another feature of the end recess is that while it permits the tar filling to flow therein and bind the ends compactly together and forms a water-tight joint it permits the upper edge of the ends to be in close contact with each other, and there is less danger consequently of the said ends being chipped or broken or worn rough by the tires of the wheels, as would otherwise occur, owing to the bricks being laid with their length across the street and the traffic being transverse to said length rather than parallel therewith.

We do not limit ourselves to a fire-brick paving-block, for the form embodying our principle may be made from artificial stone or any suitable substance.

Referring to the drawings, Figure 1 is a perspective view of a section of pavement laid with our bricks. Figs. 2 and 3 are respectively perspective views of our paving-blocks, the former showing the side and end provided with lugs and recess, the latter showing the plane face and end.

A is a paving block or brick composed of fire-clay, artificial stone, or any other suitable material provided with plane longitudinal face a and the plane end face, a' . The opposite longitudinal face, b , is provided with the two sets of transverse lugs b' and b^2 , the lugs of the two sets respectively located opposite each other and extending from opposite longitudinal edges inward and of segmental form in cross-section, each lug projecting equally with the others from the face of the brick, and each formed independent of every other lug, with a portion of the plane face intermediate of them. End c is provided with the transverse rabbet or recess c' , extending across said end, the greater portion of the body of said recess being formed below the transverse center of said end.

The foregoing description and accompanying drawings set forth in detail mechanism which is an embodiment of our invention. Change may be made therein provided the principles of construction respectively recited in the following claims are employed.

We therefore particularly point out and distinctly claim as our invention—

1. In a pavement, the combination of two paving-blocks laid on their longitudinal edges, each of said blocks having one plane longitudinal face and provided on its opposite longitudinal face with two projections located in different vertical planes, said projections of less vertical length than the vertical height

of the face on which they are located, the longitudinal plane face of one block and the longitudinal face that is provided with projections of the adjacent block located in proximity to each other, whereby an interstice is formed between adjacent faces of the two blocks, a portion of said interstice being located in the same vertical plane with each of said projections, substantially as set forth.

2. In a pavement, the combination of two paving-blocks laid on their longitudinal edges, each of said blocks having one plane face and provided on its opposite longitudinal face with two lugs located transversely to the length of the face from which they project, said lugs located in different vertical planes, said projections of less vertical length than the vertical height of the face on which they are located, the longitudinal plane face of one block and the longitudinal face that is provided with projections of the adjacent block located in proximity to each other, whereby an interstice is formed between adjacent faces of the two blocks, a portion of said interstice being located in the same vertical plane with each of said projections, substantially as set forth.

3. In a pavement, the combination of two paving-blocks laid on their longitudinal edges, each of said blocks having one plane face and provided on its opposite longitudinal face with two lugs located in different vertical planes, said projections of less vertical height than the vertical height of the face on which they are located, said block further provided on one of its end faces with a transverse recess extending across said end, the longitudinal plane face of one block and the longitudinal face that is provided with projections of the adjacent block located in proximity to each other, whereby an interstice is formed between adjacent faces of the two blocks, a portion of said interstice being located in the same vertical plane with each of said projections, substantially as set forth.

4. A paving-block provided on its longitudinal face with transverse lugs located near the opposite edges of said face and having a smooth face portion formed intermediate of them, said lugs of segmental form in cross-section, said block further provided on one of its end faces with a transverse recess extending across said end, the greater part of the body of said recess located below the transverse center of said block, substantially as set forth.

In testimony that we claim the foregoing to be our invention we have hereunto set our hands this 6th day of February, A. D. 1889.

WM. McREYNOLDS.
J. W. McREYNOLDS.

Witnesses:

J. B. FAY,
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