Oct. 5, 1937. O. W. RENKERT 2,095,012

PAVING BRICK

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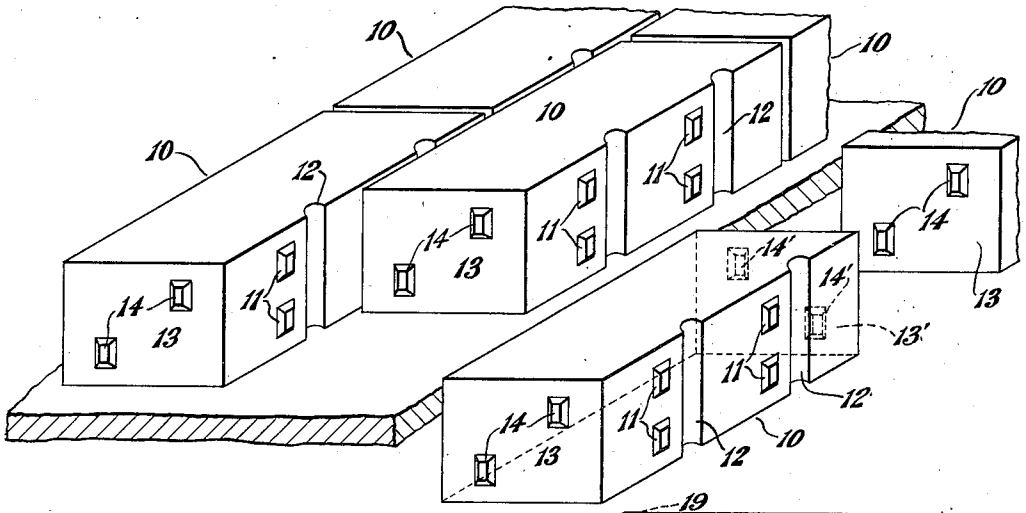


Fig. 1

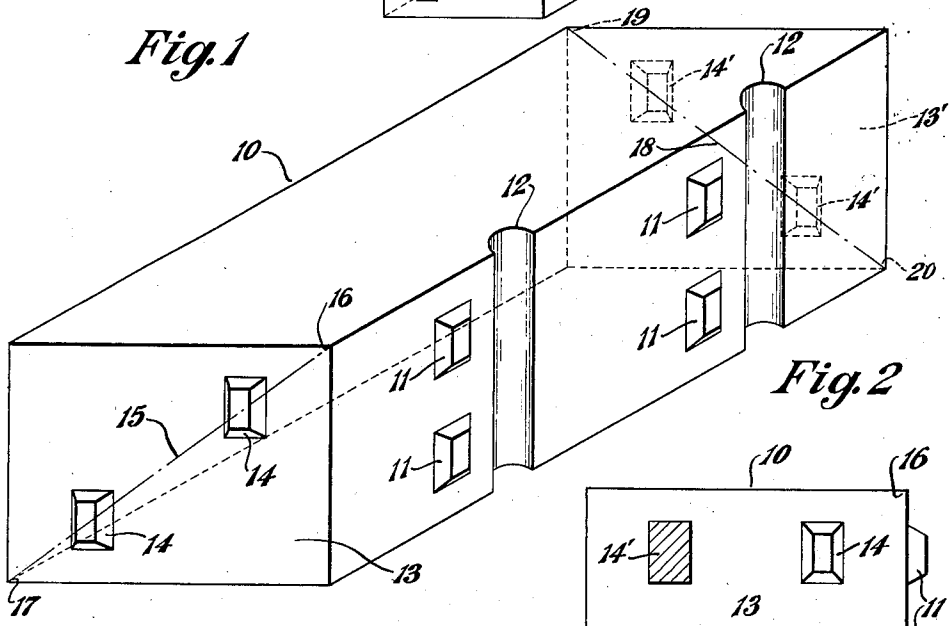


Fig. 2

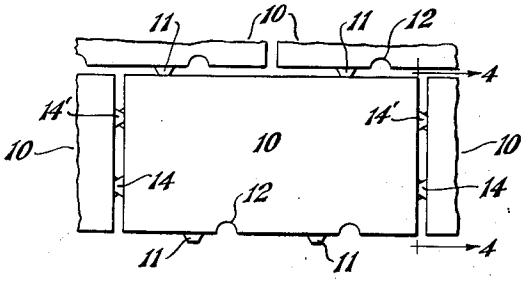


Fig. 3

Fig. 4

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PAVING BRICK

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5 Claims. (Cl. 94—14)

The invention relates to paving bricks for roadways, and more particularly to paving bricks having lugs thereon for providing joint spaces for binder or filler material between adjoining bricks.

Prior constructions have included bricks having lugs on one side only for abutting the side faces of adjoining bricks and lugs on both ends for abutting end lugs on adjoining bricks.

One difficulty with these prior constructions is that when the bricks are laid end to end in a pavement and then rolled to level the same, the abutting end lugs provide pivot or hinge points about which the bricks may swing or pivot, with the result that the bricks in each course tend to get out of alignment.

Another difficulty is that during the laying or subsequent rolling of the bricks to level the same, the abutting lugs of adjoining bricks tend to move or slide laterally relative to each other and wedge or interlock, causing further misalignment.

Of course, the end lugs of these prior constructions could be provided on one end only so as to abut the end face of adjoining bricks and thus eliminate the interlocking of the lugs, but the bricks could not be turned end for end, and this is a very necessary expedient in road paving. The numerous surface defects which are bound to be present in the surfaces of the bricks are usually present in the top or bottom surface but not both, and by turning the bricks a large proportion are used which would otherwise be discarded.

It is therefore an object of the present invention to provide an improved paving brick having end lugs which will abut adjoining bricks in such a way as to prevent misalignment of the bricks due to hinging or pivoting thereof during the rolling operation.

Another object is to provide an improved paving brick having end lugs which will abut adjoining bricks in such a way as to prevent misalignment due to interlocking of the lugs during the laying or subsequent rolling of the bricks.

Another object is to provide an improved paving brick which can be turned end for end without changing the relative positions of the end lugs of adjoining bricks.

A further object is to provide a paving brick which will provide proper end to end joint spaces between adjoining bricks regardless of variations in the alignment of the side edges of the bricks.

A still further object is to provide a simple and inexpensively made paving brick which will accomplish all of the foregoing objects, and which is easy to handle and lay in a roadway.

These and other objects are accomplished by the improvements comprising the present invention, which may be briefly described as including a paving brick having lugs on one side only and lugs on both ends, the lugs on one end being located on a diagonal between opposite corners of said end, and the lugs on the other end being located on the oppositely inclined diagonal between corners of said other end.

Referring to the drawing forming part hereof,

Figure 1 is a fragmentary perspective view of a section of roadway made up of the improved bricks, two of the bricks being shown apart from the others and spaced endwise from each other;

Fig. 2 is an enlarged perspective view of one of the improved bricks;

Fig. 3 is a fragmentary plan view of a section of roadway made up of the improved bricks; and

Fig. 4 is an enlarged sectional view taken on the end face of one brick, as on line 4—4, Fig. 3.

Similar numerals refer to similar parts throughout the several views of the drawing.

The improved paving brick indicated generally at 10 is provided on one side face only with spacing lugs 11 for abutting the side face of an adjoining brick or bricks so as to provide uniform joint spaces between the courses of bricks when laid in a pavement. Adjacent each pair of lugs 11 is provided a vertical groove 12 of sufficient depth and width to receive the lugs of an adjacent brick, so as to protect the spacing lugs 11 when the bricks are stacked for drying or burning. Thus, when the bricks are stacked for drying or burning, the lug side faces of adjacent bricks are turned toward each other.

Practically all paving bricks in present day use have spacing lugs and adjacent grooves on one side only, and when they are laid in a pavement, the bricks of each course are always laid with the side lugs facing in one direction, and the bricks of the next course with the side lugs facing in the same direction, so that the side lugs of one course abut the side faces of the adjoining course to provide a uniform joint space between courses.

The top or bottom surfaces of paving bricks always have a certain number of surface defects, which result from the manufacture or handling thereof, but usually these surface defects do not occur in both the top and bottom surfaces of a brick. It is therefore common practice to inspect the uppermost surfaces of the bricks when they are laid in a pavement and where surface de-

fects are present, to turn the brick end for end and place the bottom surface of the brick uppermost. In this way, large numbers of bricks are retained which would otherwise necessarily be discarded.

In order to obtain uniform joint spaces between the ends of adjoining bricks in a course, it is necessary to provide projecting lugs on the ends of the bricks. In order to provide for turning the bricks end for end, these lugs must be placed on both ends of a brick, and in such a way that if the brick is turned, the end lugs will be in the same relative position to the end lugs of adjoining bricks.

Where the end lugs of a brick are vertically spaced one above the other, they provide pivot or hinge points about which adjoining bricks in a course may hinge or pivot, particularly when the pavement is rolled, causing misalignment of the bricks in a course. Where the end lugs abut end lugs of adjoining bricks, they not only tend to cause pivoting or hinging, but also are very apt to slide laterally of each other during the laying or rolling of the bricks, and wedge or interlock with each other to cause serious misalignment of the courses.

The present improved brick **10** has lugs on both ends, which provide abutment with the end faces of adjoining bricks at laterally and vertically spaced points so as to prevent any pivoting or hinging of the bricks, or any interlocking of the end lugs thereof. Moreover, the improved brick can be turned end for end without changing the relative positions of the end lugs of adjoining bricks.

The brick **10** has at the rectangular end face **13** a pair of projecting lugs **14**, which are diagonally spaced preferably at each side of the center of said end face **13** of the brick, so as to be in laterally opposite portions and diagonally opposite quadrants of said end faces. These lugs **14** are preferably located substantially on a diagonal indicated at **15** extending between opposite corners **16** and **17** of the end face, and each lug **14** is nearer to corner **16** or **17**, respectively, than to the other corners thereof.

The other corresponding end face **13'** has thereon a pair of diagonally spaced lugs **14'**, which are spaced at each side of the center of said end face, so as to be in laterally opposite portions and diagonally opposite quadrants thereof, and preferably located substantially on the diagonal **18**, which extends between the corners **19** and **20** of end face **13'**, and which diagonal is oppositely inclined to the diagonal **15** of the other end face of the brick. Thus, the corners **19** and **20** are opposite diagonally to the corners **16** and **17**, and each lug **14'** is nearer to corner **19** or **20** respectively, than to the other corners of end face **13'**.

It will be seen that if the brick **10** is turned end for end to place the bottom surface uppermost, the end lugs **14'** will occupy a position corresponding to the end lugs **14** in Fig. 2.

When the bricks **10** are laid in a pavement with the side lugs **11** all facing the same direction, as shown in Fig. 1, the end lugs **14** of each brick will abut the end face **13'** of an adjoining brick at diagonally spaced points, and the end lugs **14'** of said end face **13'** will abut the end face **13** of the first brick at oppositely diagonally spaced points.

Thus, as best shown in Fig. 4, the end lugs of adjoining bricks provide four laterally and vertically spaced abutments with the adjacent end faces of said bricks, so that the bricks in each course are maintained in accurate alignment and there is no possibility of any pivoting or hinging of the bricks or of any interlocking of the lugs.

Obviously, the end lugs **14** and **14'** may be located slightly to one side or the other of their respective diagonals without departing from the spirit of the invention, as long as the lugs on one end of a brick are correspondingly spaced to the oppositely diagonally spaced lugs on the other end.

As shown in Fig. 3, when the present improved bricks are laid in a pavement, the side lugs and end lugs abut adjacent side and end faces and provide uniform joint spaces at all sides of each brick. Also, even though the sides of the adjacent bricks should not be accurately aligned when laid, the ends of the bricks will be properly spaced, because the end lugs will always abut end faces of adjoining bricks.

The improved paving brick is relatively simple and inexpensive to make, and can be easily handled and laid in a roadway in the same manner as prior types of paving bricks. Also, when the improved bricks are laid in a roadway and subsequently rolled to level the same, accurate alignment of the courses is maintained and uniform joint spaces on all sides of the bricks are positively insured.

I claim:

1. In a brick pavement, a plurality of bricks laid end to end, each brick having spacing lugs on one side and two diagonally spaced lugs on each end located in laterally opposite portions thereof, all of the bricks having their side spacing lugs facing in the same direction, and the lugs of each end abutting the end face of an adjoining brick regardless of whether the top or bottom faces of either of two adjoining bricks are placed uppermost.

2. A brick having a pair of lugs projecting from each end, the lugs on one end being located on one diagonal and in laterally opposite portions of said end, and the lugs on the other end being located on an oppositely inclined diagonal and in laterally opposite portions of said other end.

3. In a brick pavement, a plurality of bricks laid end to end, each brick having spacing lugs on one side and the spacing lugs of all the bricks facing in the same direction, and each brick having two lugs in diagonally opposite quadrants of one end and two lugs in diagonally opposite non-corresponding quadrants of the other end, whereby the end lugs always abut end faces of adjoining bricks.

4. A brick having rectangular end faces, a pair of lugs projecting from each end face, the lugs on one end face being located in diagonally opposite quadrants thereof and the other two quadrants being plane, and the lugs on the other end face being located in the quadrants corresponding to the plane quadrants of the one end face.

5. A brick having a pair of lugs projecting from each end, the lugs on one end being located in an inclined line and in laterally opposite portions of said end, and the lugs on the other end being located in an oppositely inclined line and in laterally opposite portions of said other end.

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