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54 **Paving and tiling.**

57 The object of the invention is to provide blocks or tiles (1, 5, 9) that enable a designer to generate a considerable number of different patterns over a surface area from a relatively small number of block or tile shapes, which invention is met by a block or tile (1, 5, 9) comprising a three-sided figure, each side of which is curved and of the same radius of curvature, two sides diverging symmetrically from a point of intersection with each other to respective points of intersection with the third side, the said two sides being similarly curved, and the said third side being oppositely curved. The two sides (7) may be convex with the third side (8) concave or the two sides (2, 11) may be concave with the third side (4, 12) convex. The upper, or operative face of the block or tile may be plain or patterned e.g. to create a small cobblestone effect.

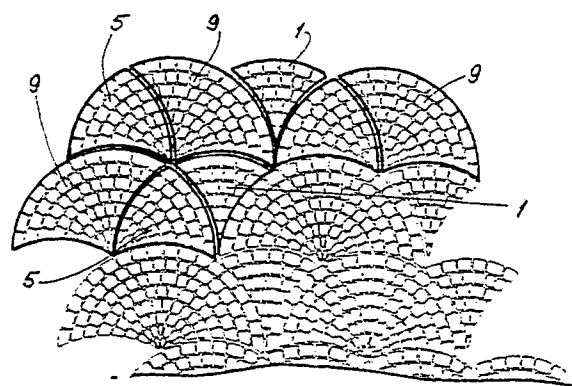


Fig. 4

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PAVING AND TILING

This invention relates to paving and tiling.

Paving as a means of providing an acceptable surface for use by pedestrians and traffic has long been known, in the form of paving tiles or slabs traditionally used for pedestrian areas, pavements and the like, and in the form of so-called cobblestones, traditionally used for both pedestrian areas and road surfaces.

The increasing provision of traffic-free pedestrian areas has caused increased attention to the visual effect of a paved or cobblestoned area, and with conventional square or rectangular paving slabs or cobblestones, whilst some variation of pattern and hence surface effect is possible, the number of variations that are possible is very small.

This has led in some instances to first the designing of a desired pattern for a paved or cobblestoned area, and then the production of paving slabs or cobblestones of particular shapes to enable them to be laid to create the required pattern and hence visual effect. This is obviously inconvenient and expensive.

In other instances, it has led to consideration being given to the creation of shapes of, particularly, paving slabs, and where paving slabs of one or a small number of different shapes can be laid side-by-side with a larger number of variations of pattern and hence visual effect, than is permitted by conventional square or rectangular shapes, and it is the object of the present invention to provide such shapes.

Equally well-known is the tiling of walls to provide a hard wearing surface of pleasing aesthetic effect. Predominantly, such tiles are square or rectangular, relying on a surface pattern on the tiles to create the desired visual appearance.

According to the present invention, a block or tile comprises a three-sided figure, each side of which is curved and of the same radius of curvature, two sides diverging symmetrically from a point of intersection with each other to respective points of intersection with the third side, the said two sides being similarly curved, and the said third side being oppositely curved.

Thus, in one form of construction, the said two sides are each convexly curved to the same radius of curvature, and extend divergently and to the same degree from a point of intersection with each other to a respective point of intersection with a concavely curved third side of the same radius of curvature. In a second form of construction, the said two sides are each concavely curved to the same radius of curvature, and extend divergently to the same degree from a point of intersection with each other to a respective point of intersection with

a convexly curved third side of the same radius of curvature.

With the first and second forms of the invention, each side of the figure can be of the same arcuate length, and with the second form of the invention, the said two sides can be of the same arcuate length and third side a multiple of the length of each of said two sides.

It will be understood that particularly with the form of construction where the said two sides are concave, dependent on material and manufacturing technique, it may be necessary for the shape to be somewhat truncated, but without departing from the spirit of the invention, in that the two concave sides would diverge symmetrically from a projected apex, and without detriment to the use of the shape.

Thus, each of the forms of construction of the invention can of themselves be laid side-by-side in a variety of ways, enabling the designer to create a number of different patterns and hence visual effects. However, when the two forms of construction (the said two sides convex and the said two sides concave) are used in combination, a considerable number of different patterns can be created.

Paving blocks or tiles of the invention can be formed from any of the materials used in the production of conventional paving slabs or cobblestones. Dependent on their size and a designer's requirements, each paving block may have its operative surface plain as with a conventional paving slab or raised as has a conventional cobblestone. It is, however, equally possible to provide on each paving block a required pattern. Thus, for example, each block may have its operative surface so formed as to simulate a number of small cobblestones. Equally, wall tiles of the invention can be formed from any of the materials used in the production of conventional wall tiles.

The invention will now be described, by way of example only, with reference to the accompanying drawings, in which:-

Figures 1 to 3 are schematic plan views of three forms of construction of paving blocks in accordance with the invention; and

Figures 4 to 6 are plan views of three examples of patterns able to be produced from the paving blocks of Figures 1 to 3, and where the surfaces of the paving blocks are each patterned to simulate cobblestones.

In each of Figures 1 to 3 there is shown a basic shape of block in accordance with the invention. Thus, in Figure 1 a block 1 has two sides 2 of concave form and of equal radius of curvature

diverging from a point of intersection 3 to a third side 4 of opposite convex form of the same radius of curvature. In Figure 2, a block 5 has two sides 6 of convex form and of equal radius of curvature diverging from a point of intersection 7 to a third side 8 of opposite concave form and of the same radius of curvature. In Figure 3, a block 9 is shown similar to that of Figure 1, with two sides 10 of concave form and the same radius of curvature diverging from a point of intersection 11 to a third side 12 of opposite convex form and of the same radius of curvature, but with a peripheral length twice that of Figure 1.

As is suggested by Figures 1 to 3, the blocks can have a plain operative surface, and when blocks laid side-by-side create a pattern by virtue of their abutting edges. However, as is indicated in Figures 4 to 6, discussed below, the operative surface of each block can itself be patterned for enhanced visual effect such as by forming said surface to simulate a number of small cobblestones in side-by-side relationship.

Each of Figures 4 to 6 are merely representative examples of a considerable number of different patterns that can be generated by using the blocks of Figures 1 to 3 separately or collectively. In Figures 4 to 6, the shapes of some of the blocks have been highlighted to identify the blocks employed with others left unidentified to allow Figures 4 to 6 to exemplify the patterns that are created.

Thus, in Figure 4, blocks 1, 5, and 9, are employed in side-by-side relationship to generate a fan effect shown by the lower right-hand section.

In Figure 5, blocks 9 are employed in side-by-side relationship to provide a circular fan effect, surrounding a centre circular configuration formed from blocks 5.

In Figure 6 blocks 5 and 9 are employed in side-by-side relationship to create an overlapping circle effect.

Given that Figures 4 to 6 are merely representative of the patterns that can be created, it will readily be understood that the blocks of the invention constitute a significant advance of the state of the art, by permitting a designer substantial freedom in creating different patterned areas from the blocks of the invention, and particularly when it is a cobblestone effect that is required, with the elimination of the need for the laying of what would otherwise be an exceedingly large number of individual cobblestones.

vature, two sides (2, 6, 10) diverging symmetrically from a point of intersection (3, 7, 11) with each other to respective points of intersection with a third side (4, 8, 12) the said two sides being similarly curved, and the said third side being oppositely curved.

2. A block or tile as in Claim 1, characterised in that the said two sides (7) are convexly curved to the same radius of curvature, and extend divergently and to the same degree from a point of intersection (6) with each other to respective points of intersection with a concavely curved third side (8) of the same radius of curvature.

3. A block or tile as in Claim 1, characterised in that the said two sides (2, 11) are each concavely curved to the same radius of curvature, and extend divergently to the same degree from a point of intersection (3, 10) with each other to respective points of intersection with a convexly curved third side (4, 12) of the same radius of curvature.

4. A block or tile as in any of Claims 1 to 3, characterised in that each side of said block (1, 5) is of the same arcuate length.

5. A block or tile as in any of Claims 1 to 3, characterised in that the arcuate length of said third side (12) of said block (9) is a multiple of the arcuate length of said two sides (11).

6. A block or tile as in any of Claims 1 to 5, characterised in that the upper, or operative, surface of said block or tile is plain.

7. A block or tile as in any of Claims 1 to 5, wherein the upper, or operative surface of said block is patterned.

8. A block or tile as in Claim 7, characterised in that said pattern is a simulation of a number of small cobblestones in side-by-side relationship.

9. A paved or tiled area characterised in that a number of blocks or tiles (1, 5, 9) in accordance with any of Claims 1 to 8, are laid individually or in combination in side-by-side relationship to provide a required pattern.

Claims

1. A block or tile characterised in that the block or tile (1, 5, 9) is a three-sided figure, each side of which is curved and of the same radius of cur-

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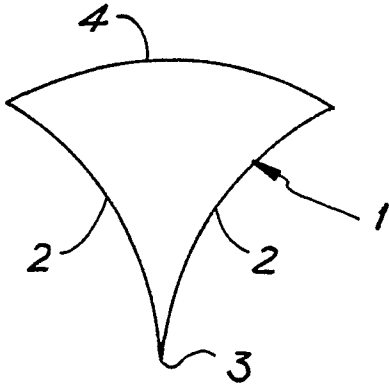


Fig. 1

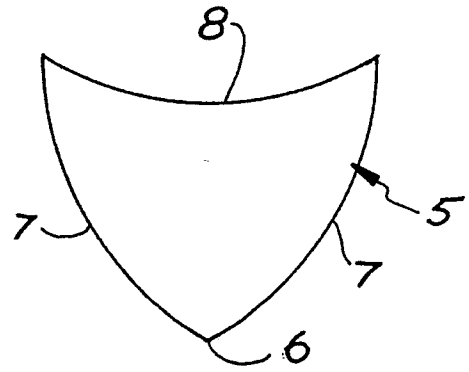


Fig. 2

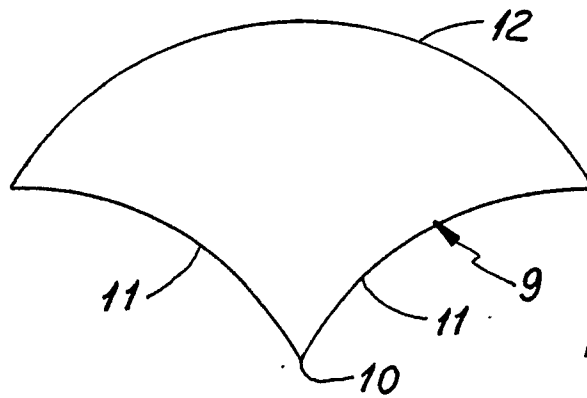


Fig. 3

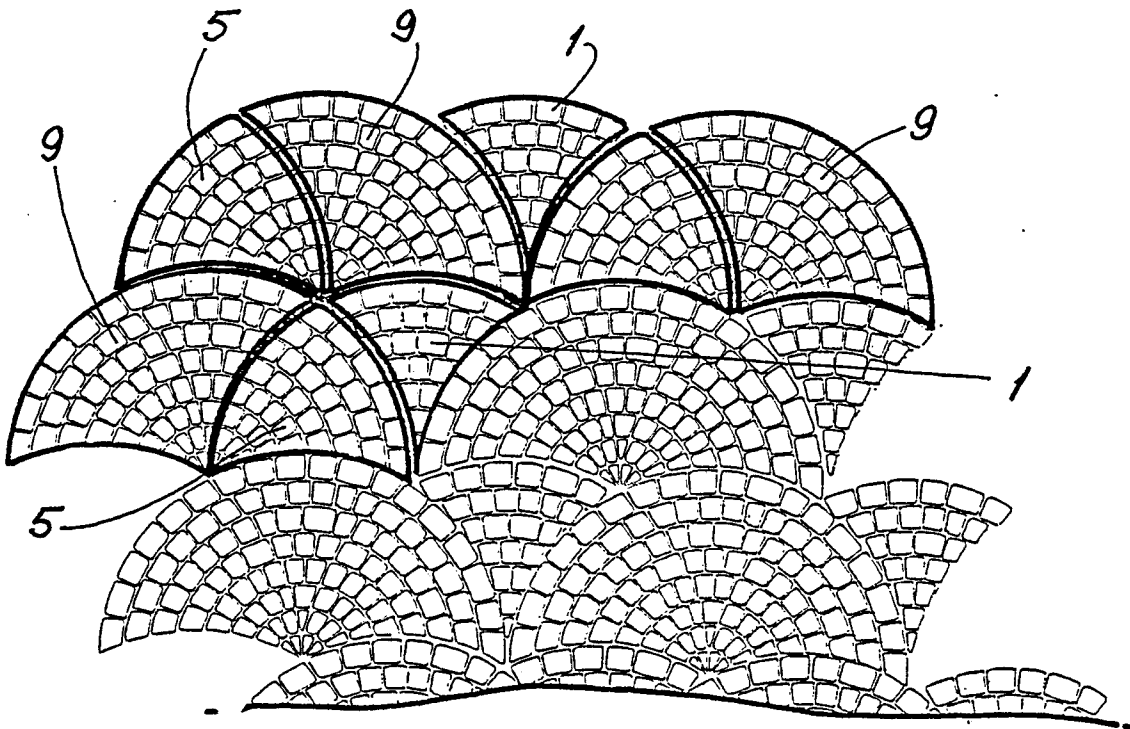


Fig. 4

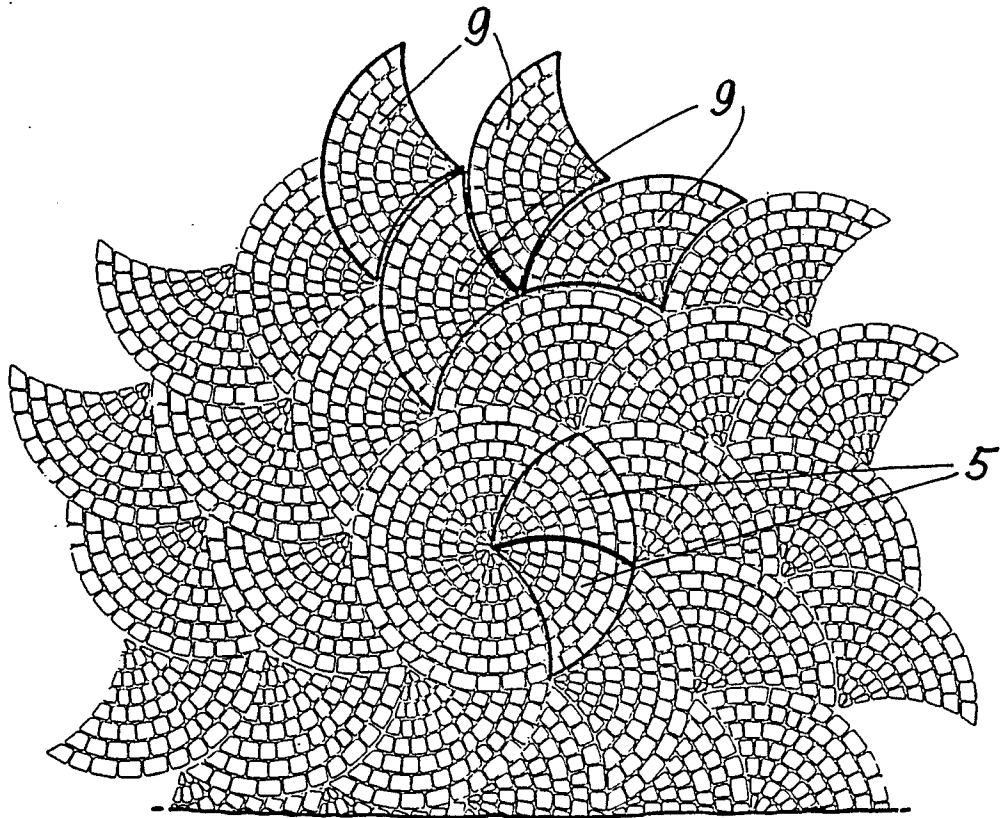


Fig. 5

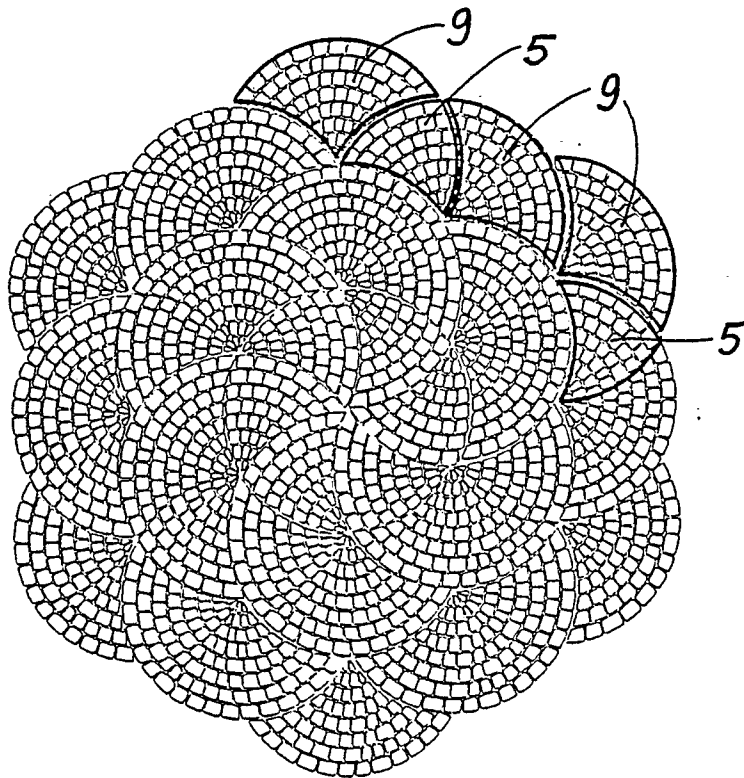


Fig. 6



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	DE-A-3 311 354 (GERHARDT) * Whole document *	1,3,5,7 -9	E 01 C 5/00 E 04 F 13/08
Y	---	4,6	
Y	GB-A- 268 214 (CO. CERAMIQUE) * Figures 6,13 *	4	
A	---	1	
Y	DE-A-3 101 148 (DURACH) * Abstract; figures *	6	
A	---	1,2,4	
A	DE-A-2 604 336 (THIELMANN) ---		
A	GB-A-2 012 332 (IBSTOCK BUILDING) -----		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			E 01 C E 04 F
Place of search		Date of completion of the search	Examiner
THE HAGUE		17-08-1989	DIJKSTRA G.
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T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			