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(54) Method for manufacturing a set of paving blocks and block paving obtained by the method

(57) Block paving is well known and can be used to create a circular paved area. Conventionally, rectangular blocks are used by arranging a first circle of blocks spread out like a fan around a centrepiece and subsequently further rows of blocks are fitted around the first row. Using this method the adjacent blocks are not parallel and there is a tapering gap between blocks which can be unsightly and difficult to fill. A method of manufacturing a set of paving blocks for use in producing a circular paved area is described, the set having at least a first course 11 and a second course 12 having a different radius from the first course, the courses being selected such that the set can be manufactured from a single mould. The method of manufacturing the set is such that the courses of the set can be assembled with a plurality of similar sets in a circular manner with the sides of adjacent blocks parallel, thereby avoiding unsightly gaps that are difficult to fill.

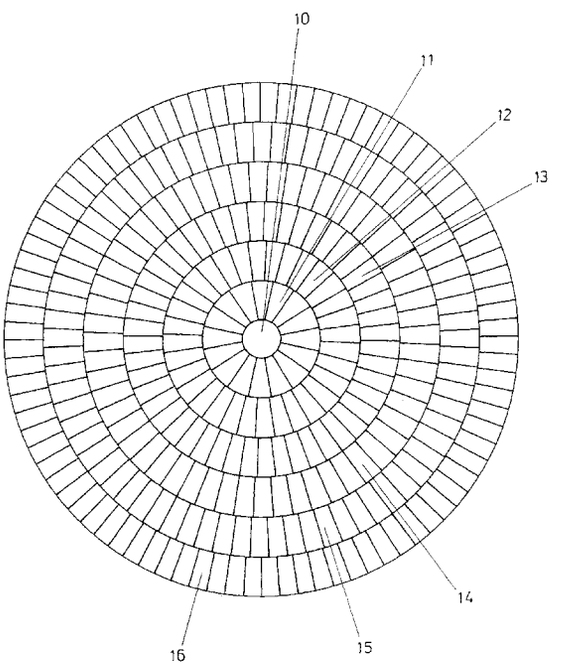

FIG. 1

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Description

[0001] The invention relates to block paving.

[0002] Block paving is well known and may for example comprise a plurality of rectangular blocks which can be laid in various patterns to provide driveways or other paved areas.

[0003] Occasionally it may be desirable to create a circular effect, for example on a patio. Conventionally, rectangular blocks are used to create the circular effect by arranging a first circle of blocks spread out like a fan around a centrepiece. Subsequent rows of blocks are then fitted around the first row to provide further circles of progressively increasing radius.

[0004] One disadvantage of the present method is that as adjacent blocks are not parallel, there is a tapering gap between adjacent blocks which can be unsightly and difficult to fill. The gap becomes greater as the radius decreases towards the centre of the circle.

[0005] Our invention comprises a method of manufacturing a set of paving blocks for use in producing a circular paved area, the set including at least a first course and a second course having a different radius from the first course, the courses being selected such that the set can be manufactured from a single mould and can then be assembled with a plurality of similar sets to produce a circular paved area.

[0006] The set is such that when the courses of the set are assembled in a circular manner, the sides of adjacent blocks are parallel.

[0007] The blocks of the set may for example be assembled into a sector of a circle so that when assembled with similar sets the sectors combine to provide a circular area.

[0008] The blocks for a sector may be moulded in an array in which blocks for inner courses are positioned at the ends of a group of blocks for outer courses to provide an array of sinusoidal shape.

[0009] The blocks of some of the courses may be rotated slightly with respect to the centre of the circle so that the finished pattern does not have any straight radial lines, running through the pattern.

[0010] The staggered effect produced by such rotation also assists in providing a good bond.

[0011] The blocks may be provided with integral ribs to space the blocks apart slightly for grouting purposes. The term grouting is intended to include filling the joint with sand, mortar or any other suitable material.

[0012] Identification means may be provided to identify the blocks of one course from the blocks of another course.

[0013] The identification means may comprise identification lugs.

[0014] The blocks may be moulded from any desired material such as concrete, reconstituted stone, or clay.

[0015] The invention includes a set of paving blocks for use in producing a circular paved area, the set including at least a first course and a second course having a different radius from the first course, the courses being selected such that the set can be manufactured from a single mould and can then be assembled with a plurality of similar sets to produce a circular paved area.

[0016] The blocks of one course may differ in shape and configuration from the blocks of another course.

[0017] Each block may have curved ends and have straight sides which converge.

[0018] By way of example, specific embodiments of the invention will now be described, with reference to the accompanying drawings, in which :-

Figure 1 is a plan view of a circular paved area produced by one embodiment of the invention;

Figure 2 shows a set of blocks used to produce one sector of the paved area shown in Figure 1;

Figure 3 illustrates how the set of blocks of Figure 2 is produced from a single mould;

Figures 4, 5 and 6 are views similar to Figures 1, 2 and 3, but illustrating a second embodiment of the invention;

Figure 7, 8 and 9 are views similar to Figures 1, 2 and 3, but showing a third embodiment of the invention;

Figure 10 is a side view of a block illustrating identification markings;

Figure 11 is a detailed plan view showing one of the blocks which make up the inner course of the blocks of Figure 1;

Figures 12 to 16 are plan views respectively of the blocks which make up the remaining five courses of the paving shown in Figure 1; and

Figure 1 illustrates a circular paved area produced by arranging six courses 11 to 16 of paving blocks arranged around a central circular block 10. The blocks have curved inner and outer ends and converging sides such that the blocks can be closely fitted together with gaps therebetween that are no more than 5 mm wide, sufficient for the insertion of grouting or the like.

[0019] Preferably the gaps therebetween are in the range 2 to 3 mm wide.

[0020] If an attempt is made to create such circular areas using rectangular blocks, gaps are inevitably produced which exceed 5 mm, and this is unsightly and unacceptable.

[0021] While it is relatively easy to design the necessary dimensions of the block shown in Figure 1, the manufacture, storage and assembly of the blocks cre-

ates problems.

[0022] It will be seen from Figure 1 and from Figures 11 to 16 that each course requires a different block. It would be possible to create one mould which produces a plurality of blocks for the first course, another mould which produces a plurality of the blocks for the second course and so on. However, this would create considerable problems in sorting the blocks afterwards. It would be necessary for a mould operative to spend considerable time selecting the requisite number of blocks of each configuration and sorting these into a pack for use in the manufacture of the circular paved area.

[0023] We have appreciated that a much more efficient arrangement is to split the circular area shown in Figure 1 up into a number of identical sectors and then create a mould which produces the blocks for each sector. Thus it is possible to stock and subsequently deliver to a customer a plurality of sets of blocks which can be assembled with similar sets to create the desired effect. Each set contains blocks of different configurations but each set contains the same number of blocks having the different configurations so that manufacture of each set is greatly facilitated. The necessary number of each type of block to create a sector is automatically provided by this novel moulding technique.

[0024] Figure 2 shows a set of blocks arranged to form one sector of the overall circular effect shown in Figure 1. Eight of these sectors are needed to make up the effect shown in Figure 1.

[0025] The blocks needed for the set shown in Figure 2 can be moulded in a generally rectangular area shown in Figure 3 by arranging inner blocks A adjacent one end of outer blocks C and arranging the other inner blocks B adjacent the other end of the blocks C.

[0026] Thus, for any given circular effect such as that shown in Figure 1, it is only necessary to manufacture and store a plurality of the sets of blocks shown in Figure 3. It is then only necessary to supply a customer with a pack containing eight of the identical sets to enable the desired circular paved area to be created.

[0027] It will be seen that although the sector shown in Figure 2 has straight radial lines at the edges, these straight lines need not necessarily be introduced into the circular effect shown in Figure 1. If it is desired to have staggered lines, then it is only necessary to rotate each alternate course of blocks when laying the blocks.

[0028] The courses in Figures 1 to 3 produce a header effect.

[0029] Figures 4 to 6 illustrate an alternative embodiment in which the blocks are shaped to provide a stretcher effect.

[0030] Figures 7 to 9 illustrate a third embodiment in which there is a combined stretcher and header effect.

[0031] Turning now to Figures 11 to 16, there is shown in detail a plan view of each block needed to make up the six courses shown in Figure 1. Since the blocks basically vary only in dimensions, only the block shown in Figure 11 will be described in detail. This block is for use in course 11 of Figure 1. The blocks for courses 12 to 16 are shown respectively in Figures 12 to 16.

[0032] The block has an inner curved end 17 and an outer curved end 18. The sides 19 and 20 are straight, but converging. The periphery of the upper part of the block has a chamfer 20a.

[0033] The curved inner end 17 has a pair of vertical lugs 21 to provide a gap of predetermined dimensions between adjacent courses, for example for grouting purposes.

[0034] Side 19 has a vertical lug 22, and side 20 has a vertical lug 23. Lug 22 is provided quite close to the inner end 17 and lug 23 is provided quite close to the outer end 18 so that the lug 22 on the block shown and the lug 23 on an adjacent block will cooperate to space apart adjacent blocks of the same course, by a distance determined by the thickness of the lug.

[0035] Although the blocks of each course differ, they are superficially similar and if a pack accidentally became spilled, quite some time could be taken to reassemble the blocks.

[0036] To assist in identification purposes therefore, the blocks of each course are provided with a unique identification. This could for example be a predetermined number of smaller identification lugs 24, as shown on the block of Figure 10. A vertical spacing lug 23 is shown together with a smaller identification lug 24. For example, the blocks of one course may have one identification lug, the blocks of the next course two identification lugs, and so on. Possible positions for additional identification lugs are shown in dotted lines in Figure 16.

[0037] Although eight sectors are required to make up a circle in the embodiments shown, other embodiments may utilise an arrangement in which the number of blocks in each moulded sector is such that only 4, or 6, or any other desired number of sectors is needed to make up a circle.

[0038] The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

[0039] All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

[0040] Each feature disclosed in this specification (including any accompanying claims, abstract and drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

[0041] The invention is not restricted to the details of

the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

Claims

1. A method of manufacturing a set of paving blocks for use in producing a circular paved area, the set including at least a first course and a second course having a different radius from the first course, the courses being selected such that the set can be manufactured from a single mould and can then be assembled with a plurality of similar sets to produce a circular paved area.

2. A method according to Claim 1, wherein the set of blocks is such that when the courses of the set are assembled in a circular manner, the sides of the adjacent blocks are parallel.

3. A method according to Claims 1 or 2, wherein the blocks of the set are assembled into a sector of a circle so that when assembled with similar sets, the sectors combine to provide a circular area.

4. A method according to Claim 3, wherein the blocks for a sector are moulded in an array in which blocks for inner courses are positioned at the ends of a group of blocks for outer courses to provide an array of sinusoidal shape.

5. A method according to any preceding claim, wherein the blocks of some of the courses are rotated slightly with respect to the centre of the circle so that the finished pattern does not have any straight radial line running through the pattern.

6. A method according to Claim 5, wherein the rotation of the blocks produces a staggered effect which assists in providing a good bond.

7. A method according to any preceding claim, wherein the blocks are provided with integral ribs to space the blocks apart slightly for grouting purposes.

8. A method according to Claim 7, wherein the grouting comprises filling a joint with sand, mortar, or any other suitable material.

9. A method according to any preceding claim, wherein identification means are provided to identify the blocks of one course from the blocks of another course.

10. A method according to Claim 9, wherein the identification means comprise identification lugs.

11. A method according to any preceding claim, wherein the blocks are moulded from concrete, reconstituted stone, or clay.

12. A method of manufacturing a set of paving blocks substantially as described herein with reference to the accompanying drawings.

13. A set of paving blocks for use in producing a circular paved area, the set including at least a first course and a second course having a different radius from the first course, the courses being selected such that the set can be manufactured from a single mould and can then be assembled with a plurality of similar sets to produce a circular paved area.

14. A set of paving blocks according to Claim 13, in which the blocks of one course differ in shape and configuration to the blocks of another course.

15. A set of paving blocks according to Claims 13 or 14, in which each block has curved ends and has straight sides which converge.

16. A set of paving blocks substantially as escribed herein with reference to the accompanying drawings.

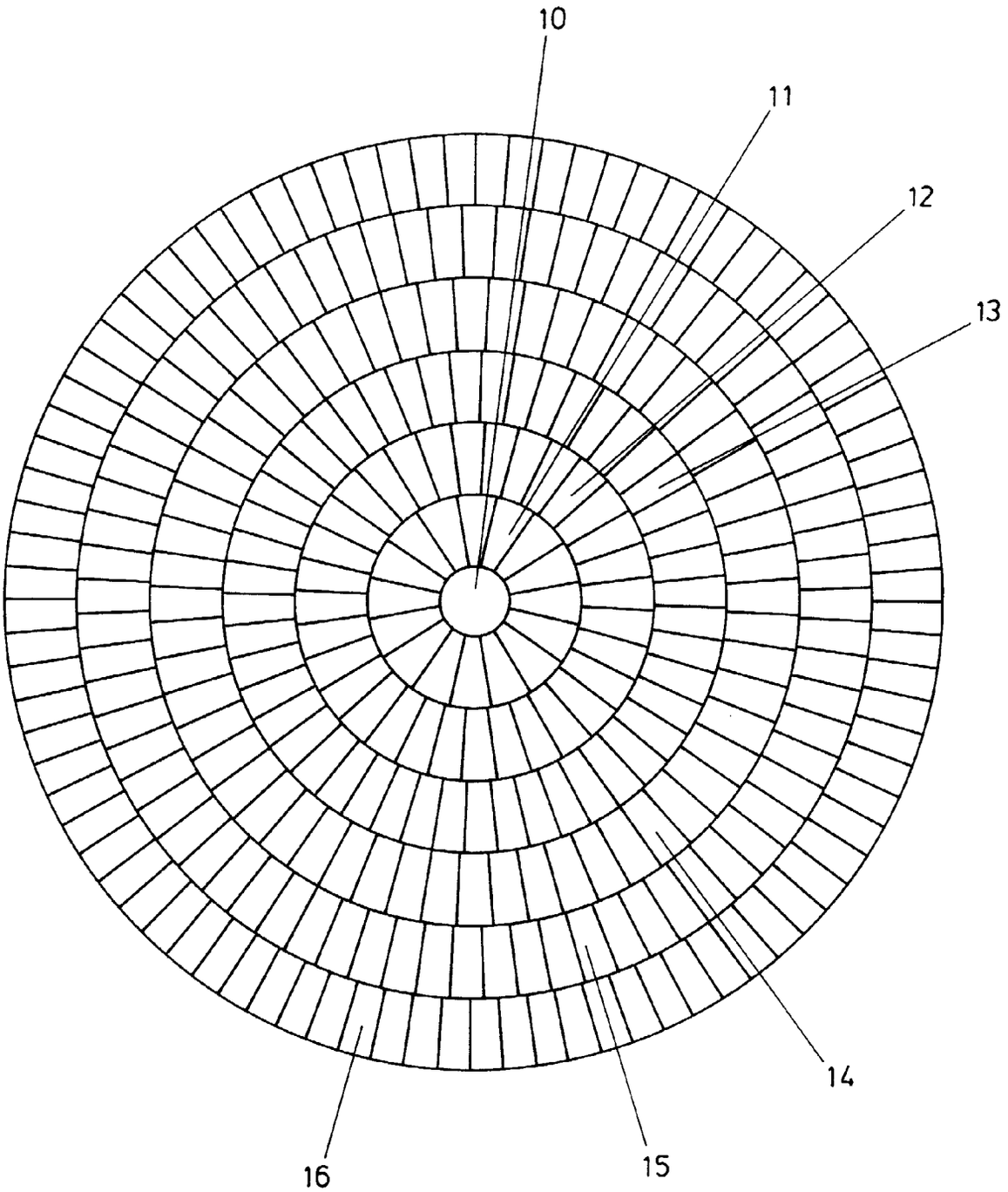

FIG. 1

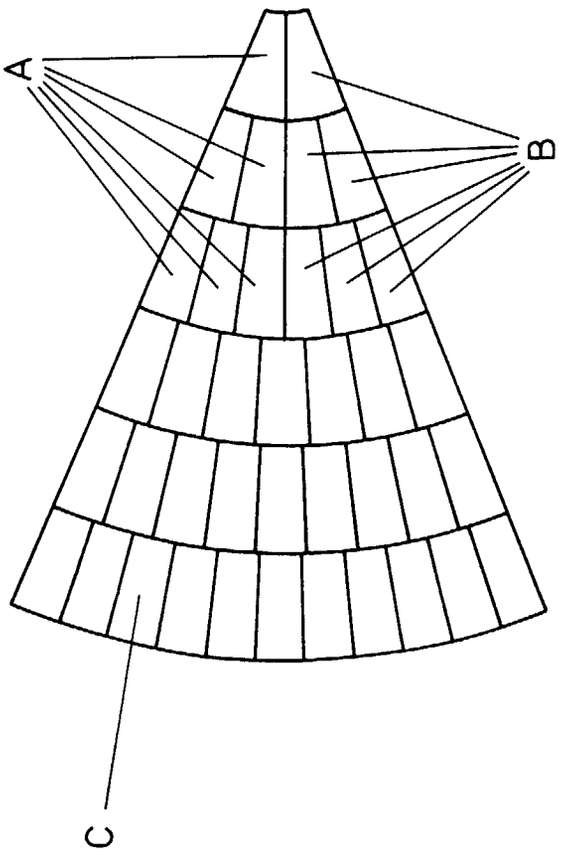

FIG. 2

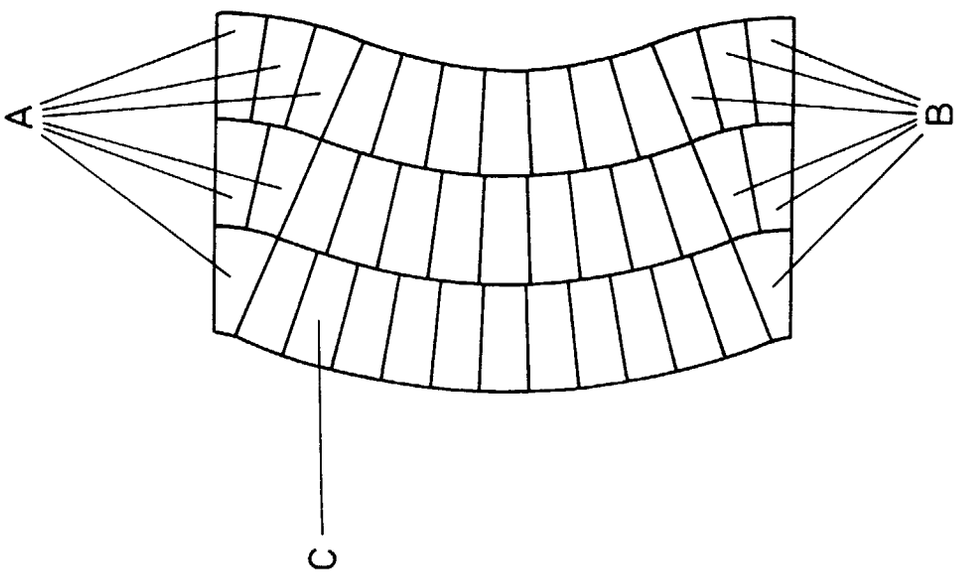

FIG. 3

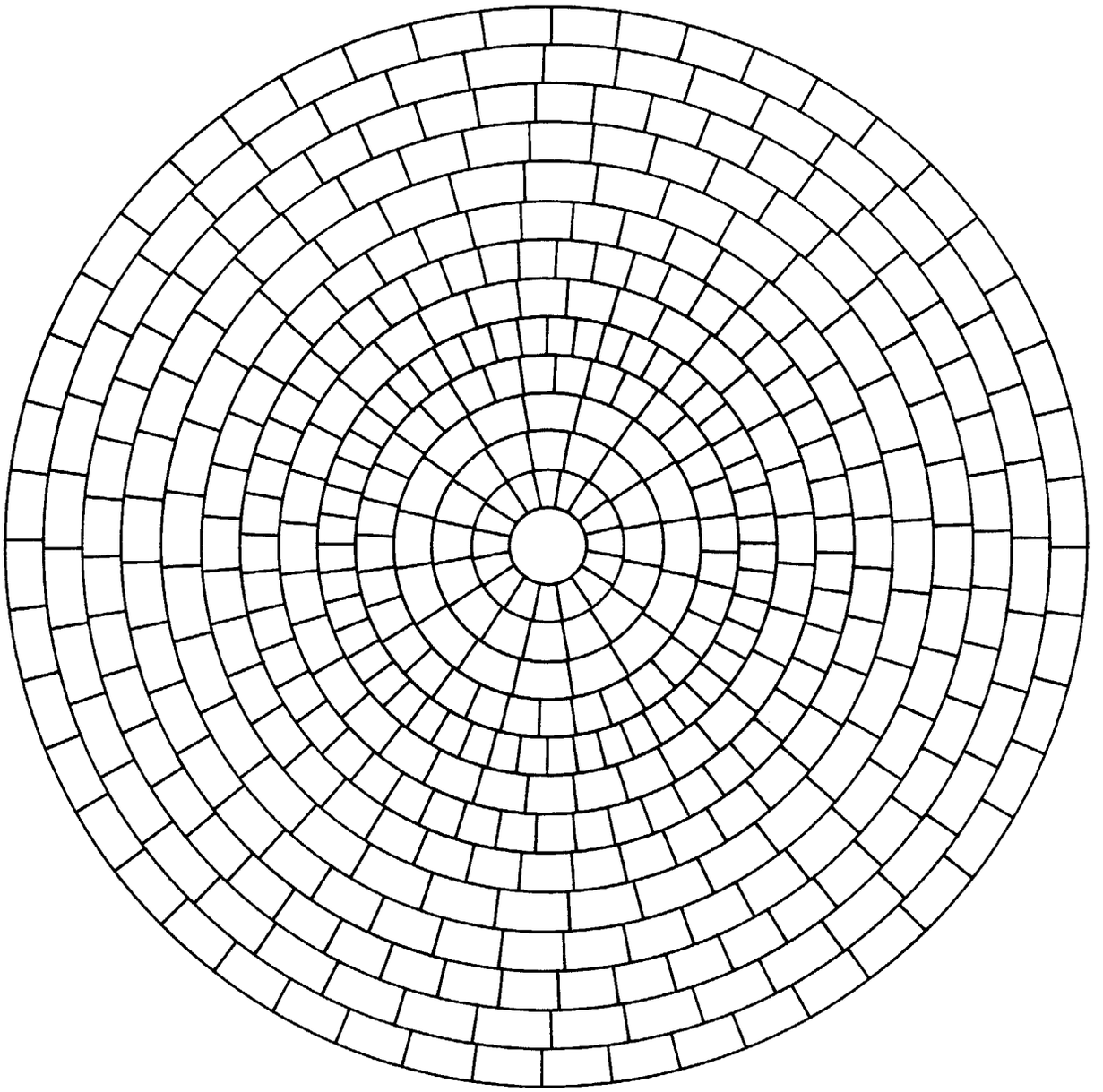

FIG. 4

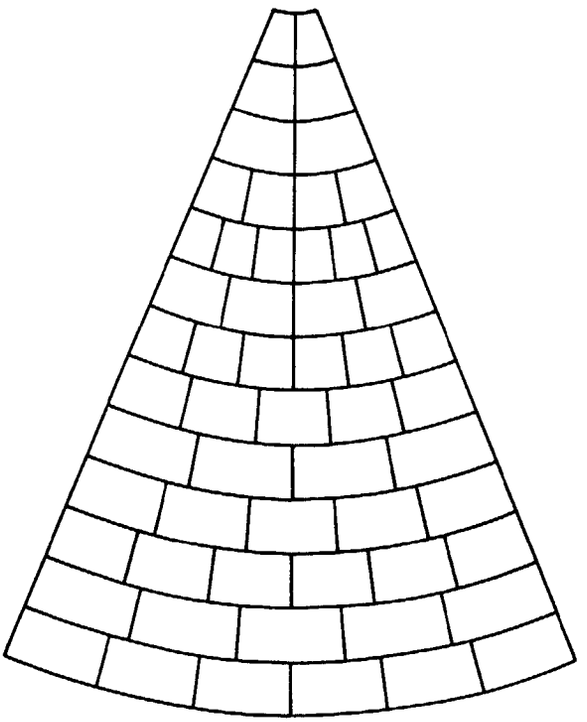

FIG. 5

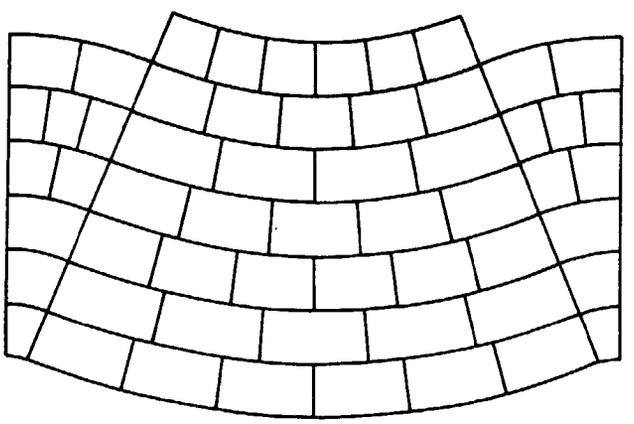

FIG. 6

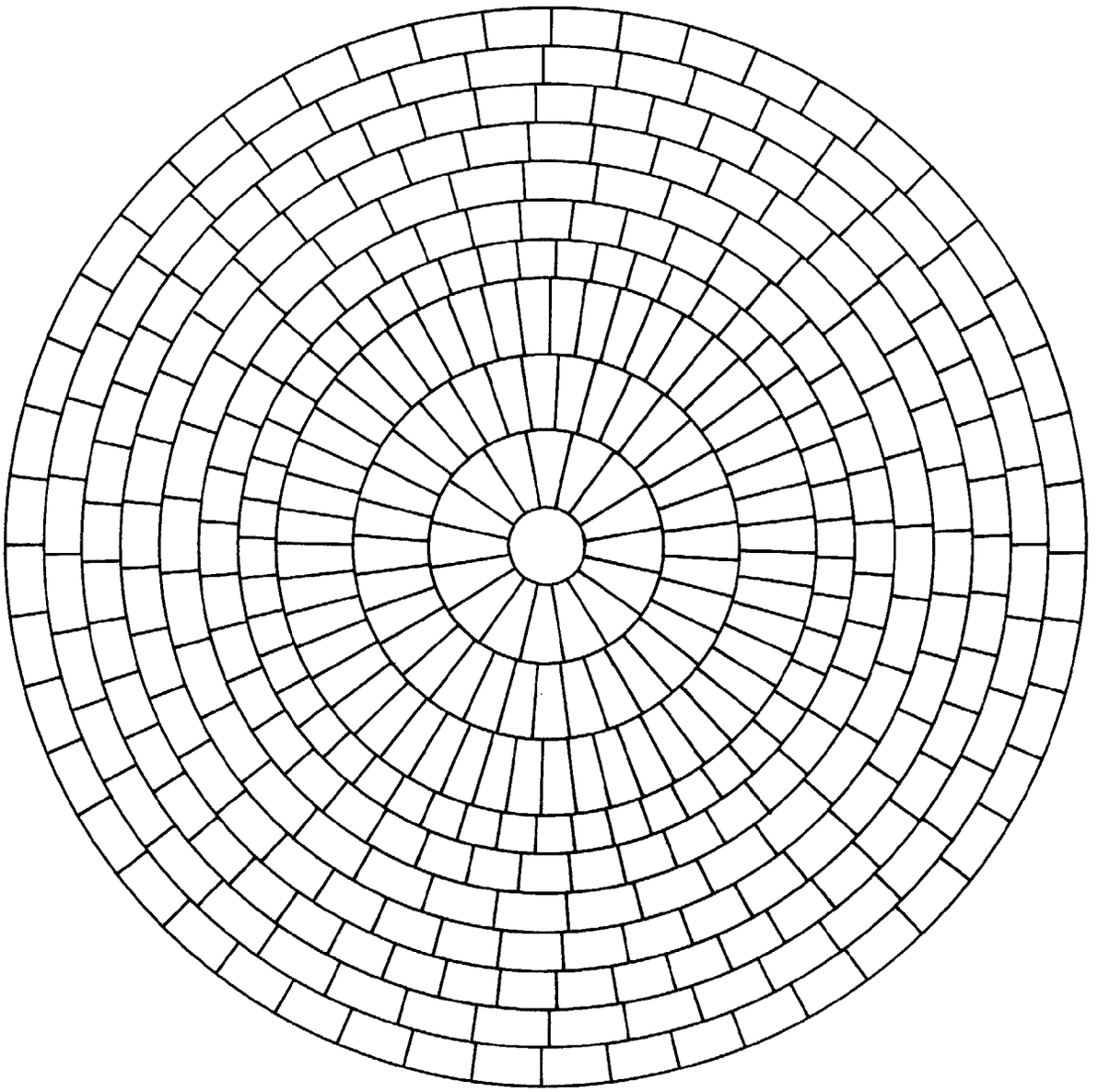

FIG. 7

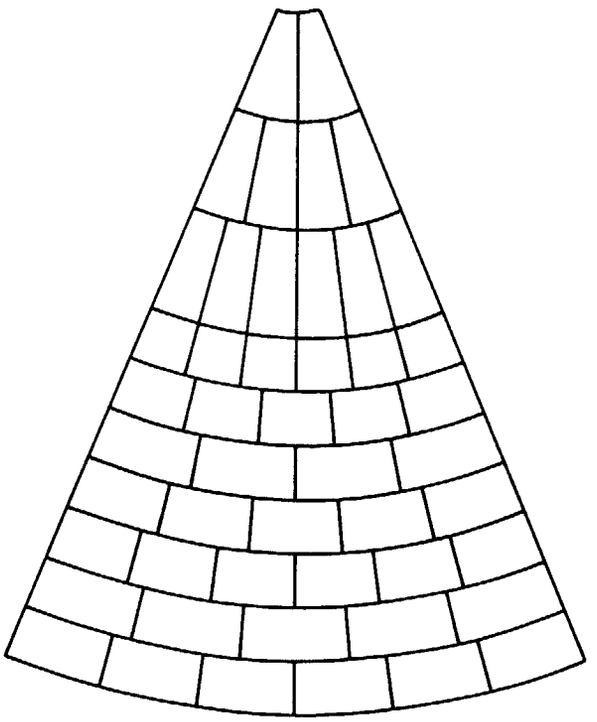

FIG. 8

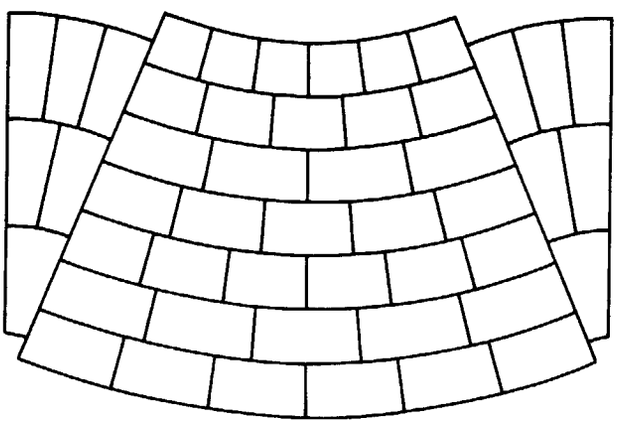

FIG. 9

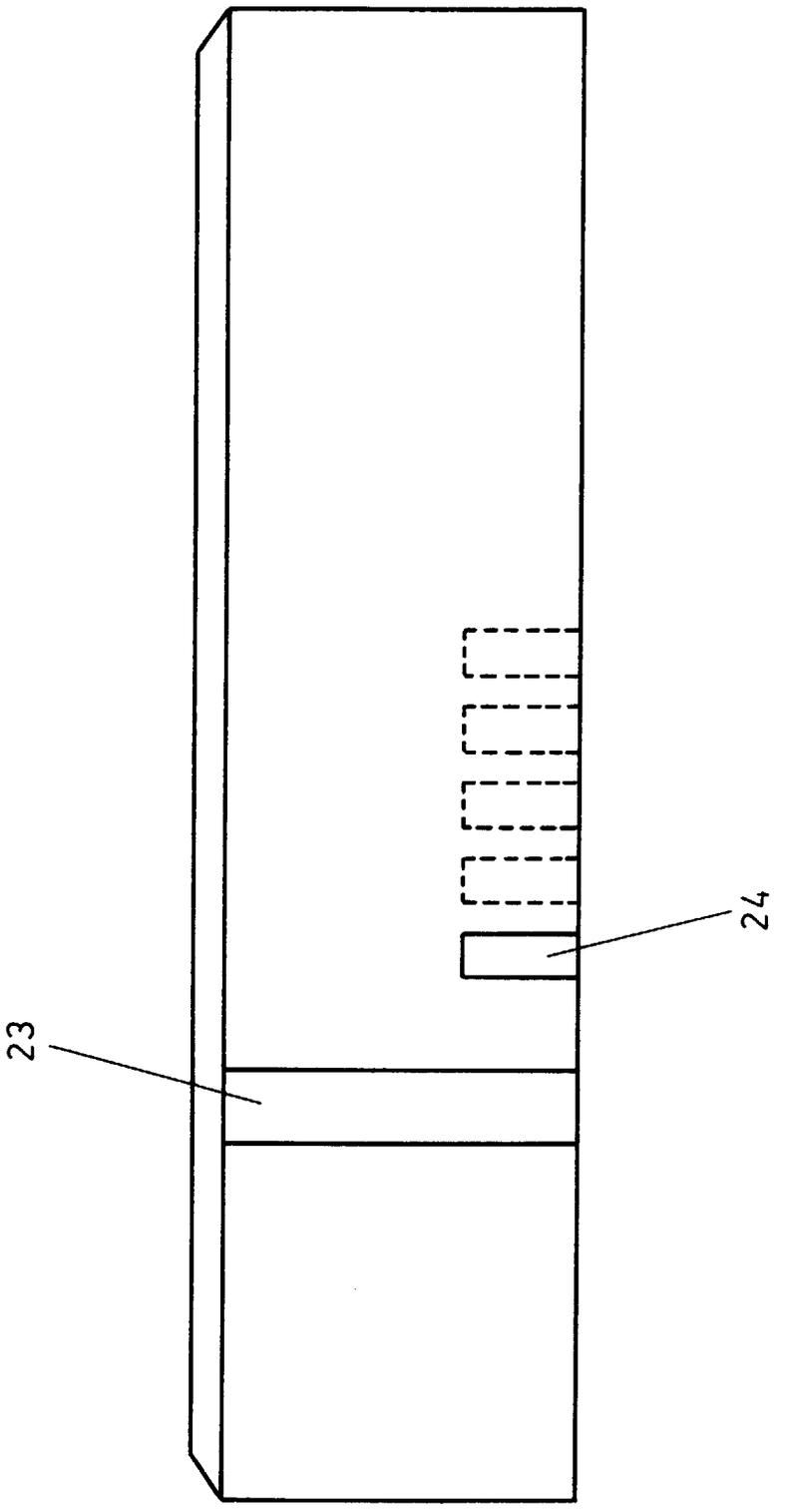

FIG. 10

FIG. 11

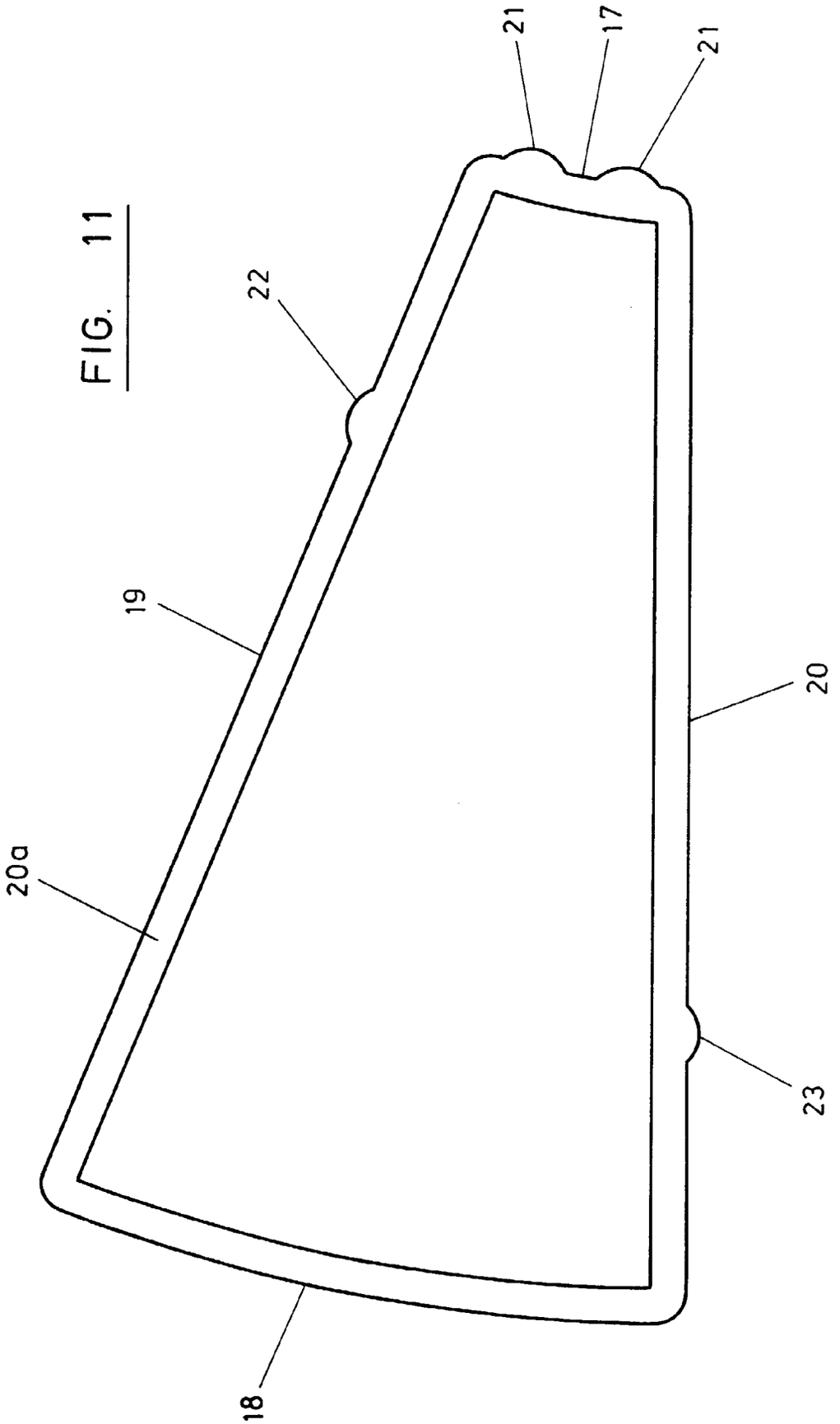

FIG. 12

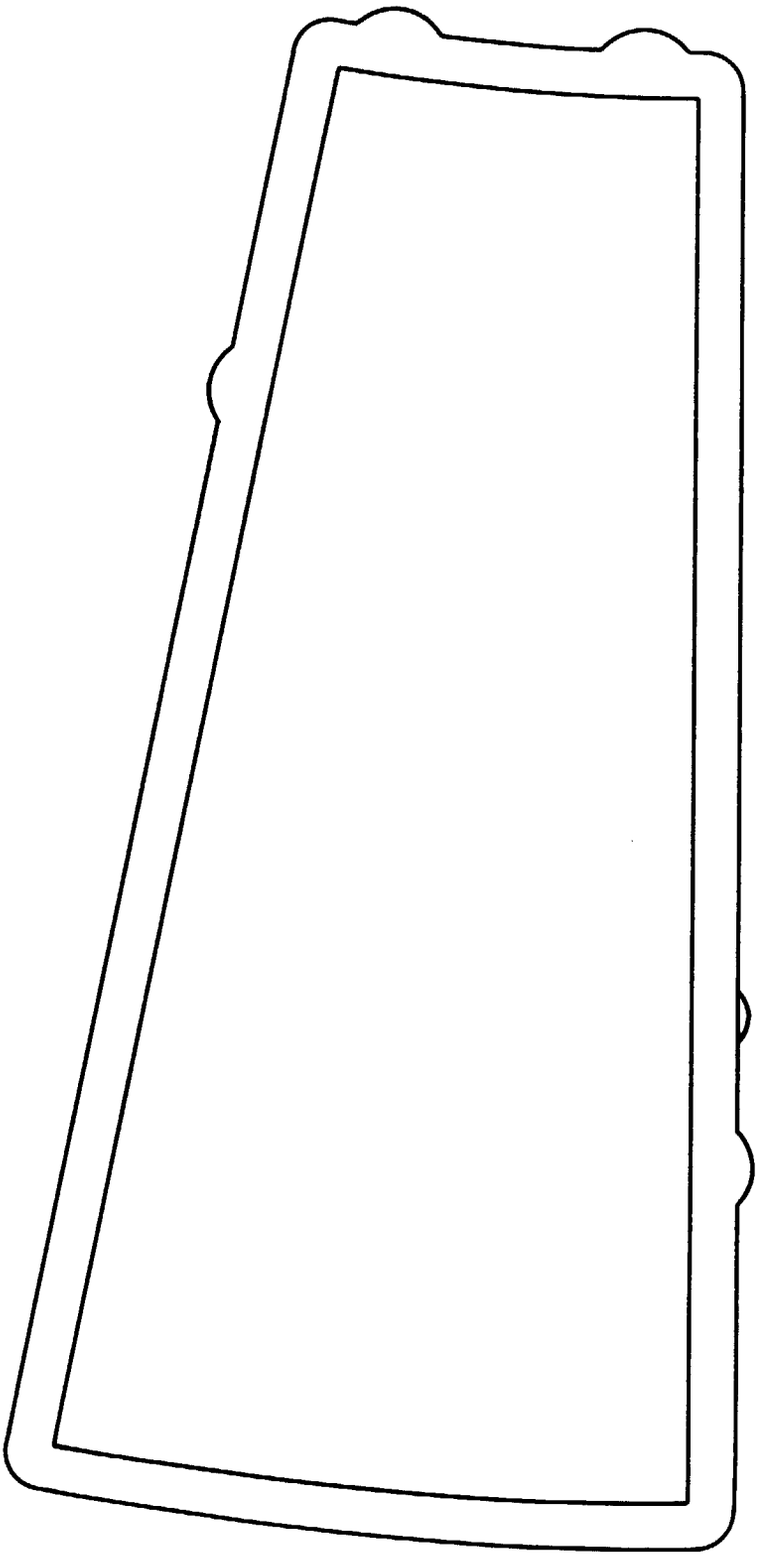

FIG. 13

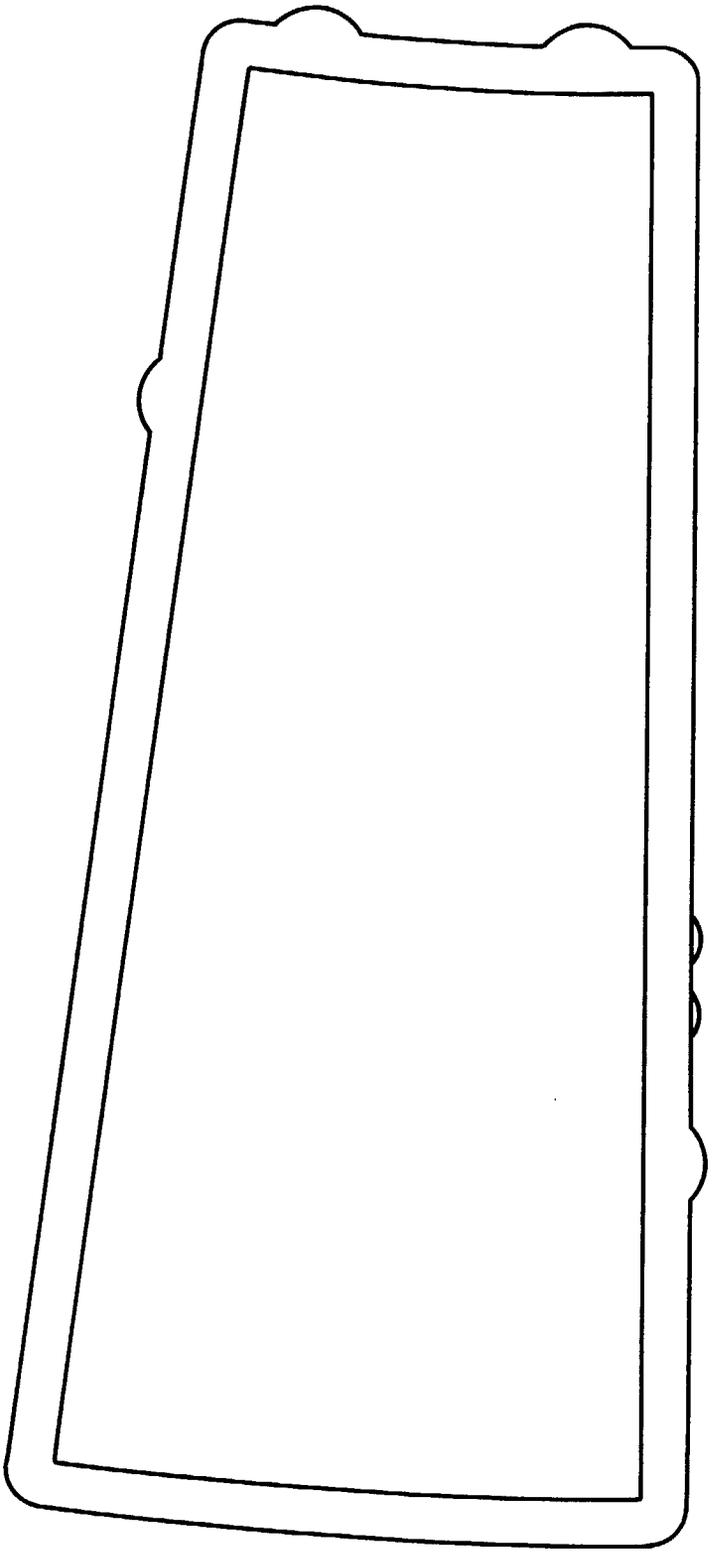

FIG. 14

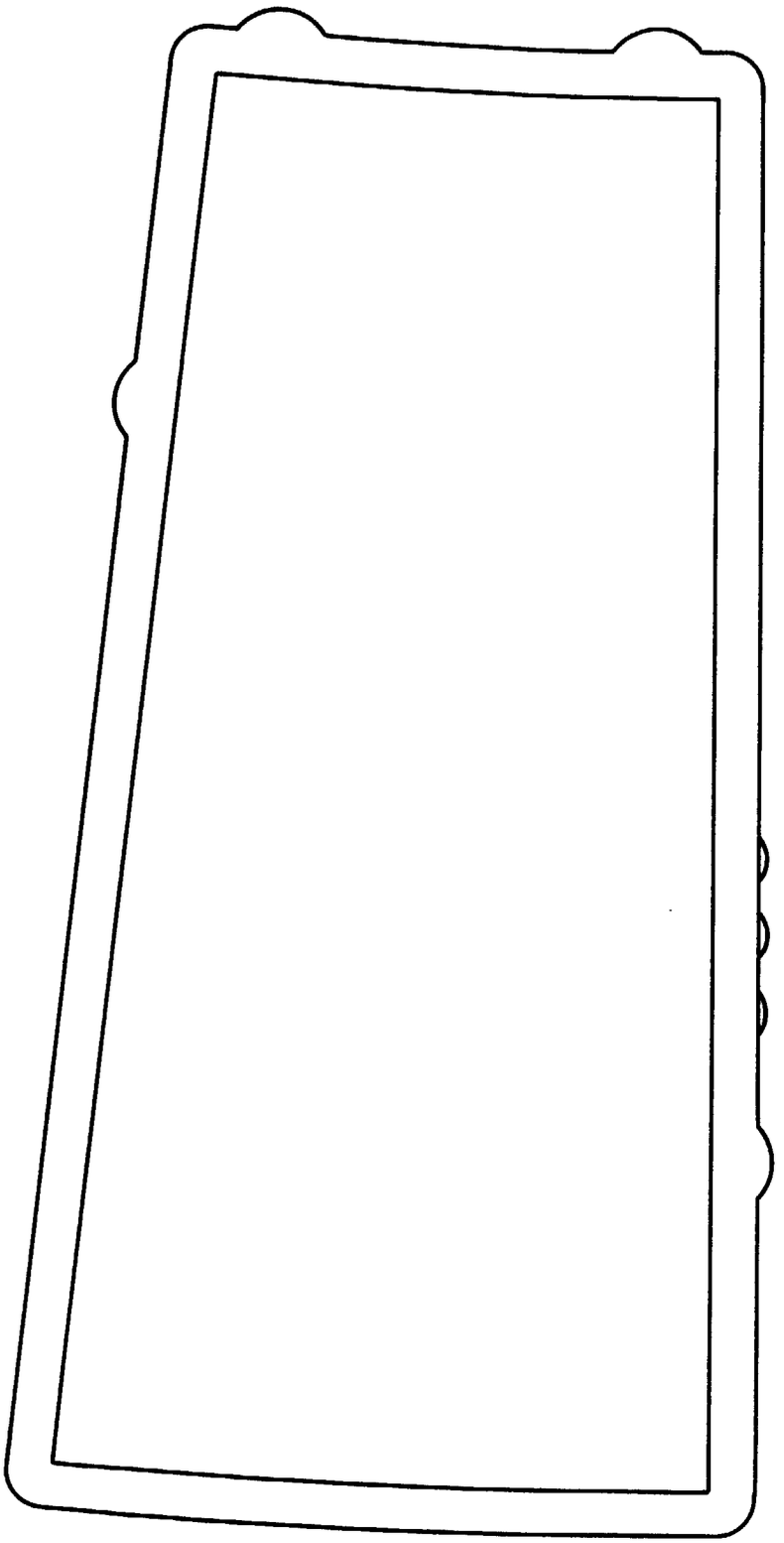

FIG. 15

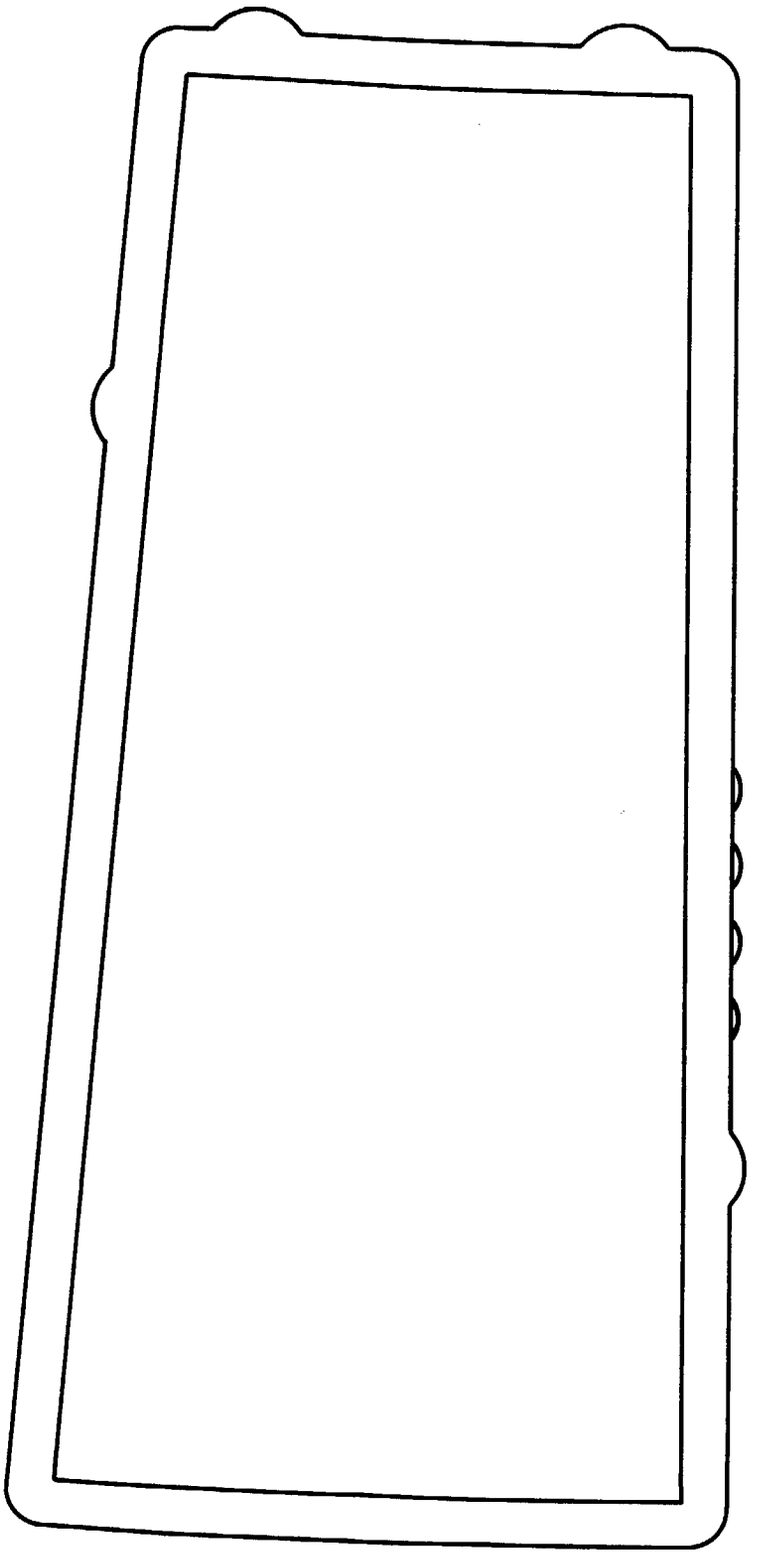

FIG. 16