

12 **EUROPEAN PATENT APPLICATION**

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54 Architectural arch.

57 An arch construction (11) comprising a series of bricks (12) laid side by side as a horizontal arch course. The bricks (12) have a cut away portion (13) facing forwards. The cut away portions (13) progressively increase in size towards the middle of the course to define a pattern.

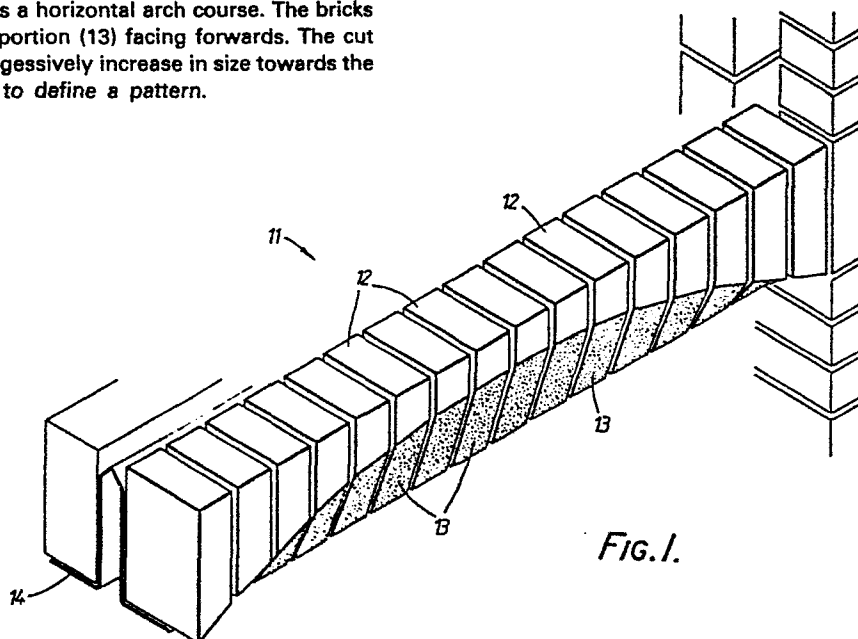


FIG. 1.

1.

ARCHITECTURAL ARCH

5. The present invention relates to arches for use in buildings, in particular, brickwork arches. Such arches may be suitable for location over architectural features as windows, doors panels etc., and may have various shapes from flat to semicircular, gothic and many other decorative forms.

10. In the past, arches have been made by various methods. In perhaps their simplest form, arches have comprised a series of upright or "soldier" bricks arranged side-by-side over the feature and supported either by a lintel beneath or by a rod passing through the bricks from one end of the arch to the other.

15. This would constitute a flat arch. This basic design might be varied by using suitably tapered bricks to arrive at a trapezium-shaped arch having a flat top and bottom.

20. Other forms of arch are curved, for example, semi-circular arches. These use tapered bricks arranged in a semi-circle above the feature. Thus, they cannot use a rod passing down the centre of the bricks for support nor a semi-circular lintel, however, the semi-circular configuration is a good load bearing/distributing structure in itself. Nevertheless, these

25. arches require expensive timber formers for their construction and either infill panels beneath them, or correspondingly curved window sections or even further brickwork.

30. When an arch is required having a form which is

neither flat nor semi-circular, problems may arise from a load-bearing point of view. For example, a shallow curved arch suffers all the drawbacks of a semi-circular arch but in addition, has very poor load-bearing characteristics, and so metal angle supports from above may be required, and these are very cumbersome.

5. It is therefore an object of the present invention to provide a system for an architectural arch which can give a curved appearance while having the constructional advantages and characteristics of a flat arch.

10. According to the invention, there is provided an arch comprising a series of bricks laid side-by-side as a horizontal arch course, at least some of the bricks having a cutaway portion facing forwards to define a pattern along the length of the course.

15. The bricks may be of any suitable material and are generally cuboidal, apart from the cutaway portion. The cutaway portions preferably extend into the under surfaces of the bricks and preferably progressively increase in size towards the middle of the arch, thereby defining a curved or gothic arch shape. The pattern preferably extends along the entire length of the arch course thereby spanning the feature beneath the arch.

20. Thus, the arch construction in accordance with the invention enables an appearance to be given, of a curved arch since the cutaway portions will be in shadow and will be set back from the facing surface of the arch, while still having the constructional advantages of a flat arch. Furthermore, the inside surfaces exposed in the cutaway portions may be

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naturally darker if "flash" bricks are used.

5. Preferably, the arch course is laid on a standard lintel support spanning the feature over which the arch extends. In such a case, the cutaway portion may extend back as far or almost as far as the lintel at the greatest extent of the cutaway.

Alternatively, the bricks forming the arch may be supported by a rod passing through them along the length of the course.

10. Clearly, the pattern defined by the cutaway portions can be increased in size by using larger bricks.

15. The entire arch may be highlighted in the building by setting the arch course forward of the plane of the wall.

The invention also extends to a set of bricks for forming such an arch, i.e. a set of bricks having cutaway portions which together progressively define a desired pattern such as a curved arch shape.

20. The invention may be particularly effective when hand thrown bricks are used.

25. The invention may be carried into practice in various ways and some embodiments will now be described by way of example with reference to the accompanying drawings in which:-

Figure 1 is a perspective view of an arch in accordance with the invention;

Figure 2 is a front view of the arch of Figure 1 in place above a window;

30. Figures 3, 4 and 5 are vertical sections to a

4.

larger scale through selected bricks shown in Figure 2;  
and

Figures 6, 7, 8 and 9 show various designs of  
arch which are possible in accordance with the invention.

5. As shown in Figures 1 and 2 an arch 11 comprises  
a series of bricks 12 (sixteen in the present embodiment)  
laid on a lintel 14 spanning a window 15. Each brick  
12 has a cutaway 13 in the front face extending back  
to the under surface. Without the cutaways, the bricks  
10. are 215mm high, 140mm deep and 65mm wide, though, of  
course, other sizes could be used. The cutaways 13  
all extend back 48mm but their vertical extents are  
graduated from zero at the extreme outer edge of the  
outermost bricks 12 to 112mm at the inner edges of the  
15. centre bricks 12. The gradation of the cutaways 13  
is such that they form a smooth shallow curved arch  
shape.

- In order to illustrate the form and gradation of the  
cutaways 13 more clearly, three bricks 12 indicated by  
20. the letters A, B and C in Figure 2 are shown in section  
in Figures 3, 4 and 5 respectively. In brick A, an  
outermost brick, the maximum height of the cutaway 13  
is 25mm (at the right hand side); in brick B, an  
intermediate brick, the maximum height of the cutaway is  
25. 80mm, and in brick C, a centre brick, the maximum  
height of the cutaway is 112mm. It will be clear that  
the height of the cutaway 13 in each brick 12 increases  
across the brick.

- Figures 6, 7, 8 and 9 show various arch  
30. configurations which are possible in accordance with

5.

the invention. Figure 6 show a deeper curve formed by the cutaways; Figure 7 corresponds to the shape of Figures 1 and 2; Figure 8 shows a shallower curve, and Figure 9 shows a gothic arch design. Naturally, many other designs would be eminently possible. However, in all cases, the significant point is that the bricks are arranged horizontally with the result that a simple lintel or rod can be used for support. This results in an inexpensive and simple system which requires no special skills, in assembly, no special support members, no special formers, and no infill panels or non-standard window shapes.

CLAIMS

1. An arch comprising a series of bricks laid side by side as a horizontal arch course, characterised in that at least some of the bricks have a cut away portion facing forwards to define a pattern along the length of the course.
- 5.
2. An arch as claimed in claim 1 characterised in that the bricks are generally cuboidal apart from the cut away portion.
- 10.
3. An arch as claimed in Claim 1 or Claim 2 characterised in that the cut away portions extends into the under surfaces of the bricks and progressively increase in size towards the middle of the arch.
- 15.
4. An arch as claimed in any preceding claim characterised in that the pattern extends along the entire length of the arch course thereby spanning the feature beneath the arch.
- 20.
5. An arch as claimed in any preceding claim characterised in that the cut away portions are different in colour to the remainder of the bricks.
- 25.
6. An arch as claimed in any preceding claim characterised in that the arch course is laid on a standard lintel support spanning the feature over which the arch extends.

7. An arch as claimed in any of claims 1 to 5 characterised in that the bricks forming the arch are supported by a rod passing through the bricks along the length of the course.

8. A set of bricks for forming an arch characterised in that the bricks have cut away portions which together progressively define a desired pattern such as a curved arch shape.

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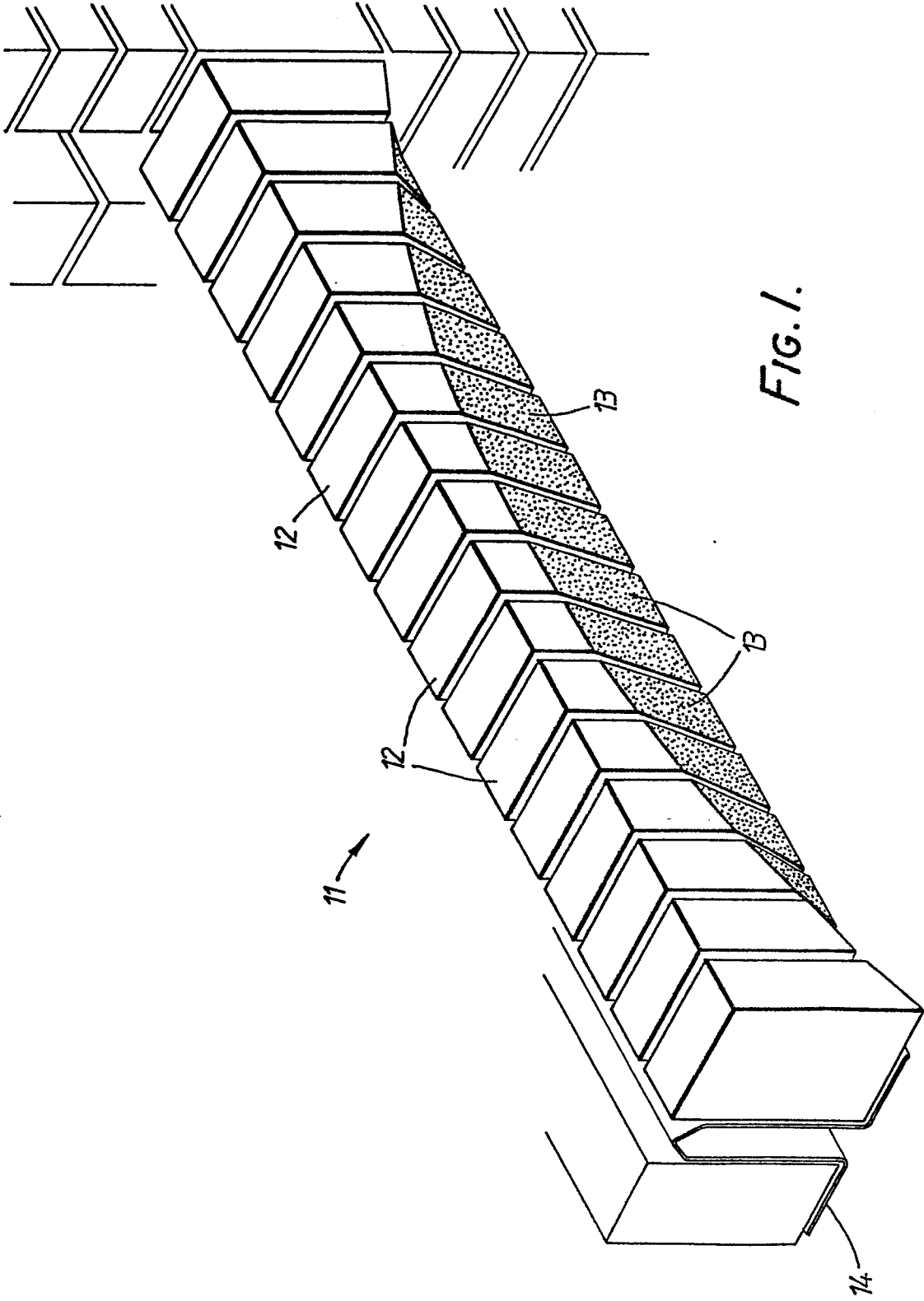


FIG. 1.

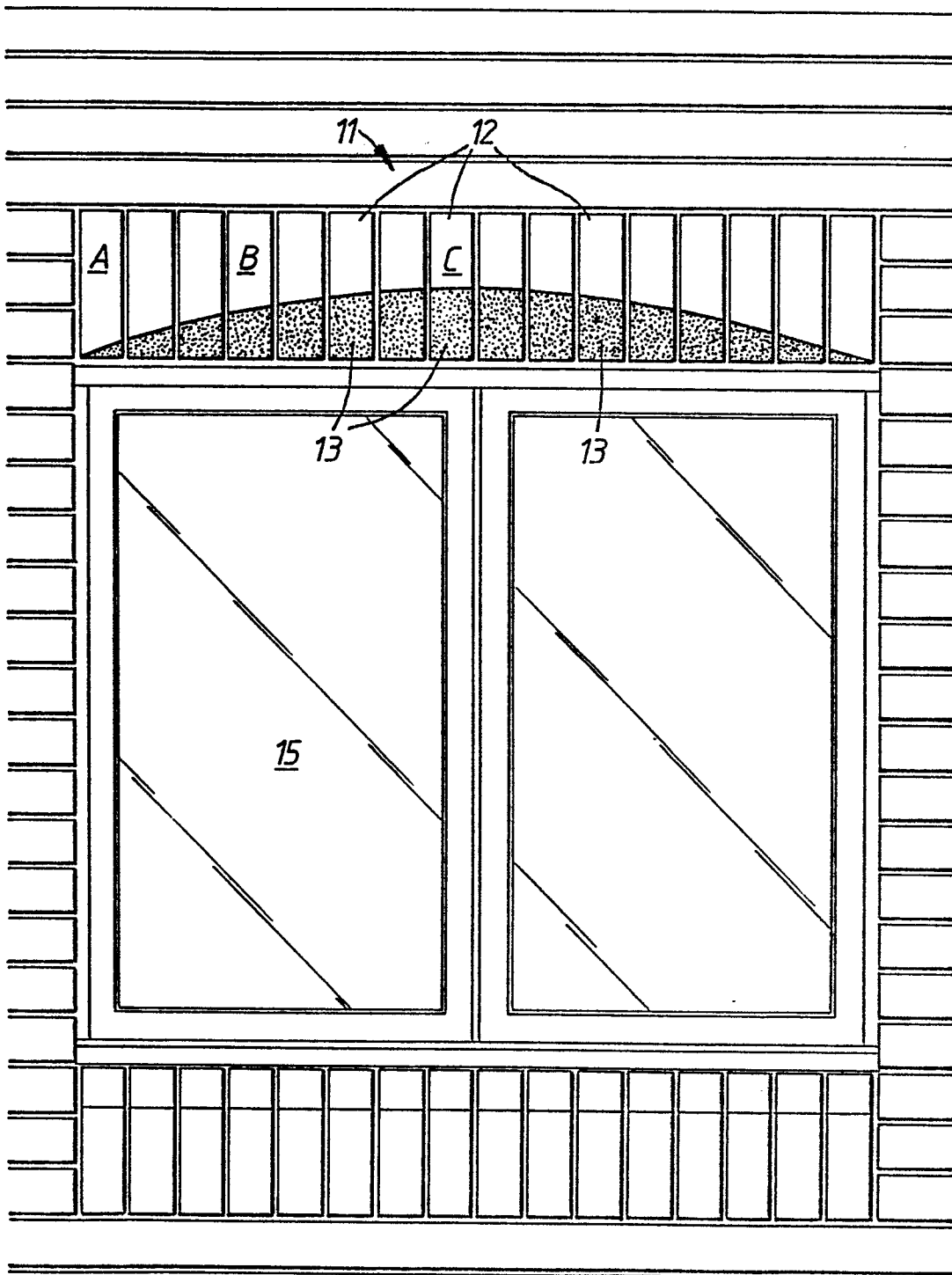


FIG. 2.

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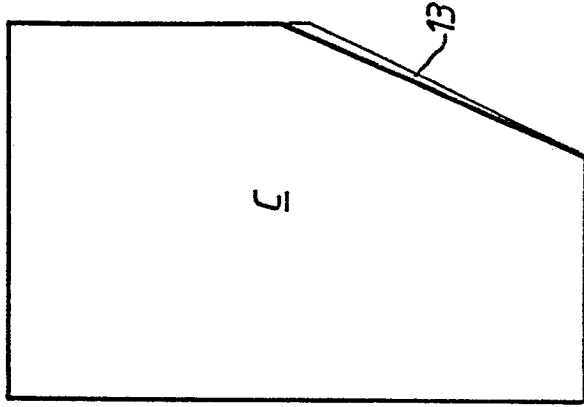


FIG. 5.

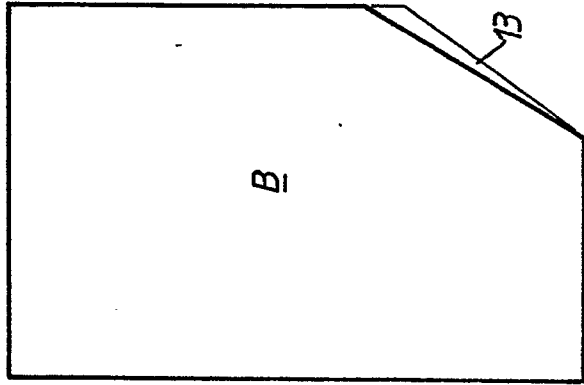


FIG. 4.

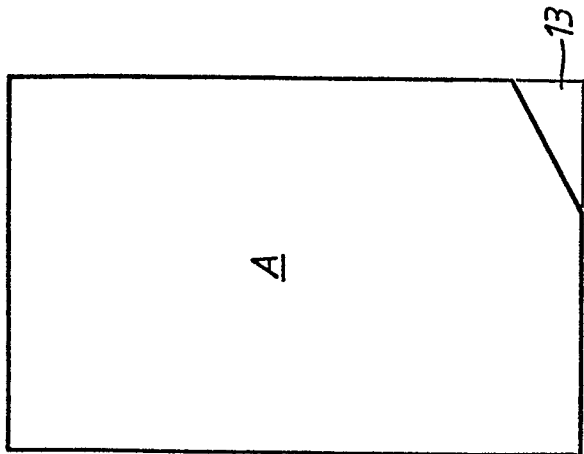


FIG. 3.

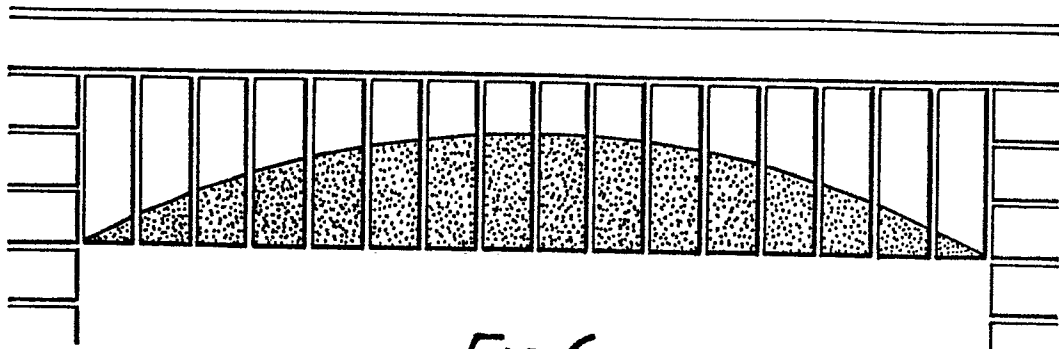


FIG. 6.

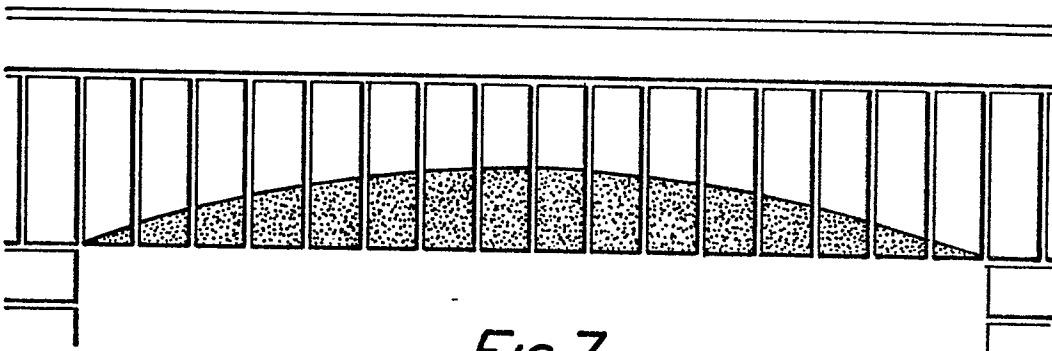


FIG. 7.

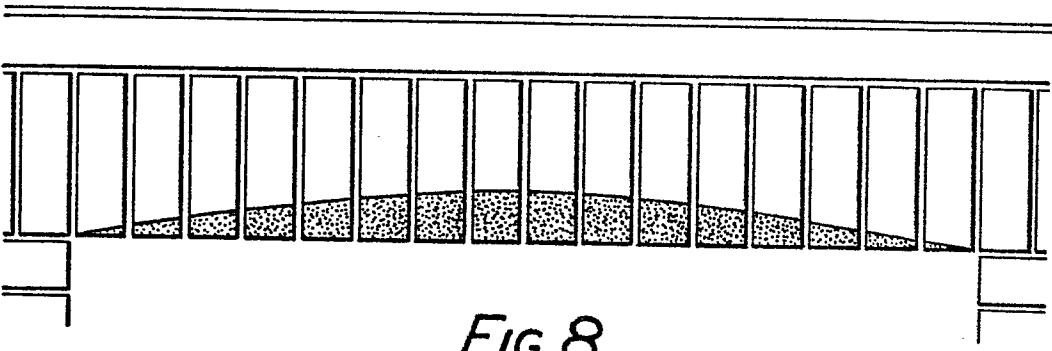


FIG. 8.

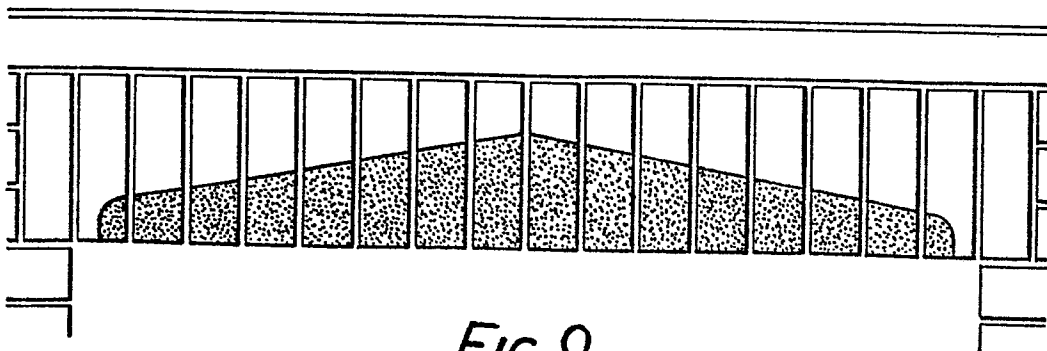


FIG. 9.