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(71) Applicant: **BRUNSWICK BOWLING & BILLIARDS CORPORATION**
Muskegon, MI 49443-0329 (US)

(72) Inventor: **Morrissey III, William Thomas**
Grand Rapids, Michigan 49506 (US)

(74) Representative:
Miller, James Lionel Woolverton (GB) et al
Kilburn & Strode
20 Red Lion Street
London WC1N 4PJ (GB)

(54) Bowling lane, bowling lane cover layer and perspective pattern

(57) A bowling lane surface comprising a top cover layer having a pattern of a plurality of elongated simulated boards side-by-side across the width of the lane, the simulated boards across the lane being of alternate light and dark shades, having a symmetrical V pattern of spaced range finders (22) on selected ones of the simulated boards, positioned uniformly across the lane, on the first longitudinal portion of the lane, selected simulated boards, preferably those having the range finders (22) thereon, being outlined by dark lines simulating joints, a plurality of dark elongated markings (30,32) arranged on selected simulated boards in the second longitudinal portion of the lane.

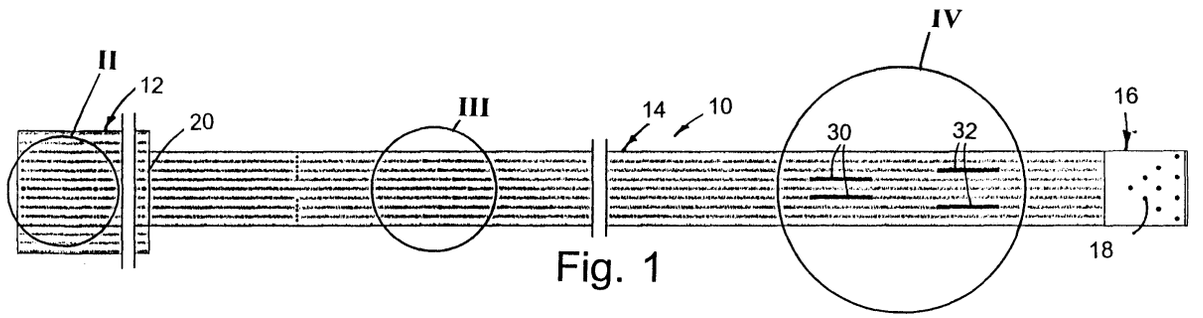

Fig. 1

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Description

[0001] This invention relates to bowling lanes, and particularly to a bowling lane having a cover layer and to a bowling lane cover layer simulating wood boards with a surface pattern thereon.

[0002] Normally, a bowling lane is 18.29 meters long from the foul line to the pin deck and, if made of wood, has 39 boards from side to side in the lane. At least portions of the lane are typically formed of maple wood.

[0003] An object of the invention is to provide a bowling lane cover layer with technically improved aiming means/devices and/or analysis means/devices and/or indicator means/devices (which may take the form of markings on the cover layer) thereon for technically improving the bowler's aim and bowling skill and his/her perspective of the lane.

[0004] Various aspects of the invention are set out in the independent claims. A number of preferred features are set out in the dependent claims. Further aspects of the invention may comprise any combination of the features of the aspects and preferred features which is not specifically recited herein. The invention may consist of and extends to anyone or more of the aspects thereof and such combinations thereof and/or of preferred features thereof.

[0005] The top cover layer may, in preferred aspects, comprise a layer of maple wood, e.g. maple planks, tiles, board's veneer or such like. The top cover layer may be supported on a support means, such as a building material, e.g. concrete, foundation or other support structure.

[0006] Another aspect of this invention provides a novel bowling lane cover layer having a particular pattern which gives an excellent unique visual effect of individual boards while providing the bowler with a perspective of image and depth. In this aspect, the novel pattern enables most effective use of range finders and cherries typically found on the first longitudinal half of the bowling lanes, with dark lines simulating junctions between selected ones of the simulated boards, preferably those having the range finders thereon, and down lane markings of a nature to help achieve image and depth perspective. The range finders are in a typical V pattern on selected ones of the simulated boards. The simulated boards are of alternate light and dark shades across the width of the lane. A plurality of dark elongated markings are symmetrically arranged in a special manner down lane on certain ones of the selected simulated boards and most preferably on those having the range finders thereon.

[0007] The present invention may be carried out in various ways and one example of a bowling lane, bowling lane cover layer and bowling lane perspective pattern will now be described, by way of example only, with reference to the accompanying drawings, in which:

Fig. 1 constitutes a computer simulated plan view of a lane according to a preferred embodiment of this invention;

Fig. 2 is a somewhat enlarged plan view of a portion of Fig. 1 at an approach thereof;

Fig. 3 is a somewhat enlarged plan view of another portion of the lane at range finders thereof;

Fig. 4 is a somewhat enlarged view of a third portion of the lane having down lane markings;

Fig. 5 is a plan view of the approach and an adjacent segment of the lane, showing the correct number of lane boards and the location of a first set of cherries;

Fig. 6 is a plan view of a segment of the lane showing the range finders; and

Fig. 7 is a plan view of a segment of the lane showing the down lane, dark elongated markings.

[0008] Figs. 1-4 constitute a computer simulated showing of the cover layer and pattern, with the approach being on the left-hand side and the pin deck being on the right-hand side, while Figs. 5, 6 and 7 depict the correct number of simulated boards across the width of the lane without depicting the dark and light alternating board shades which exist, since it is believed the concept could be most clearly illustrated in this manner.

[0009] A bowling lane arrangement 10 in typical fashion includes an approach 12, an elongated lane 14, and a pin deck 16 on which the pins 18 are placed at the end of the lane. A foul line 20 is at the junction of lane 14 and approach 12. In usual fashion, a pair of gutters (not shown) straddle lane 14, a ball return track (not shown) extends the length of the lane, typically out of sight, and a pit (not shown) is located beyond the pin deck to receive the ball and struck pins. These conventional components are not shown in order to avoid confusion. The bowling lane is preferably 18.29 meters long from the foul line to the pin deck.

[0010] As depicted in Figs. 5, 6 and 7, there are 39 simulated boards across the width of lane 14. In accordance with this invention, the simulated boards across the width of the lane cover layer have a sequence of successive alternating dark and light shades, typically of brown (dark shade) and yellowish tan (light shade), creating a distinct contrast between all of the simulated boards across the lane. The dark simulated boards preferably start at the outer edges, i.e., numbers 1 and 39. Figs. 1-4 depict these contrasting boards. Figs. 5-7 could be shaded to do this, but are left unshaded to assure understanding of the number of boards in the concept herein. The simulated wood is preferably that of maple.

[0011] In combination with this dark and light shading, the typical V pattern of range finders 22, seven in number, are located on boards, 5, 10, 15, 20, 25, 30 and 35 across the lane. The simulated boards containing the range finders 22 also contain what are commonly known in the trade as cherries 26, i.e., a pattern of dots (seven in number) across the width of the lane on the approach panel adjacent the foul line 20.

[0012] Only selected ones, but not all, of the simulated boards are outlined by dark board lines. These preferably are selected simulated boards on which the range finders are located, and most preferably only these simulated boards, are outlined by dark board lines, typically black, which simulate joints between these simulated boards and the adjacent simulated boards. These dark lines are shown at 28 in Figs. 2-4, but are not depicted in Figs. 5-7 to avoid confusion. The range finders are located in the first portion of the lane length from the foul line 20. In the second portion of the lane length from foul line 20, i.e., more than 6.1 meters from the foul line, are dark, elongated markings 30 and 32. These markings are preferably four in number, comprised of two pairs, preferably being substantially symmetrically arranged on certain ones of the selected simulated boards, most preferably those that contain the range finders. The first pair of dark elongated markings 30 depicted are on boards 15 and 25, while the second pair 32 are on boards 10 and 30. As depicted in Fig. 4, the first spaced pair preferably begins at about 10.36 meters from the foul line and preferably extends about 0.9 meters to about 11.28 meters from the foul line, while the second more widely spaced pair preferably begins at about 12.19 meters from the foul line and preferably extends about 0.9 meters to about 13.1 meters from the foul line.

[0013] It has been found that the special features noted, and especially the combination of features set forth, provide a unique perspective to the bowler to improve the game.

[0014] Additionally, such features/markings improve the bowler's aim and bowling skill and his/her perspective of the lane. Additionally, such markings improve the reference points in the peripheral vision forwards of a bowler, such as one who looks generally down or down and forwards (e.g. to observe the foul line) while walking/running up to deliver/while delivering a ball, and improve the view/vision/perspective of the lane of persons with imperfect vision, such as short-sighted persons or persons without good stereo vision and/or who find distances difficult to judge, such as persons with limited or no vision in at least one eye.

[0015] The surface of the lane (14) may be formed of a layer maple wood, e.g. as planks, tiles, boards, veneer or the like of maple wood, and each simulated board may be defined by markings or lines on the surface thereof. However, the surface need not necessarily be formed of maple wood, and could be formed of a layer of other suitable material.

Claims

1. A bowling lane surface having a width, first and second longitudinal portions, and two side edges, for a bowling lane having a foul line, comprising: a top cover layer having a pattern of a plurality of elongated simulated boards side-by-side across the width of the lane cover layer, said cover layer having a symmetrical V pattern of spaced range finders on selected ones of said simulated boards, positioned uniformly across said lane cover layer on the first longitudinal portion of said lane cover layer; said simulated boards across said lane cover layer being of alternate light and dark shades; said selected simulated boards having said range finders thereon being outlined by dark lines simulating joints between said simulated boards and the adjacent simulated boards; and a plurality of dark elongated markings arranged on certain ones of said selected simulated boards having said range finders thereon, said plurality of dark elongated markings being on the second longitudinal portion of said lane cover layer.

2. A bowling surface as claimed in claim 1 wherein said lane surface has 39 simulated boards across said lane surface, said selected simulated boards having said range finders thereon being simulated boards 5, 10, 15, 20, 25, 30 and 35, and said dark elongated markings being on simulated boards 10, 15, 25 and 30; and preferably wherein said dark elongated markings are at least about one-third the length of said lane surface from the foul line.

3. A bowling surface as claimed in claim 2 wherein said lane surface is 18.29 meters in length from the foul line, and said dark elongated markings are at least about 10.36 meters from the foul line; preferably wherein there are a first two of said dark elongated markings beginning at about 10.36 meters from the foul line, and a second two dark elongated markings beginning at about 12.19 meters from the foul line; preferably wherein said first two dark elongated markings are on simulated boards 15 and 25, and said second two dark elongated markings are on simulated boards 10 and 30; preferably wherein said first pair of dark elongated markings extend about 0.9 meters, and said second pair of dark elongated markings extend about 0.9 meters; and preferably wherein said lane cover has 39 simulated boards across said lane cover, said selected simulated boards having said range finders thereon being simulated boards 5, 10, 15, 20, 25, 30 and 35, and said dark elongated markings being on simulated boards 10, 15, 25 and 30.

4. A bowling lane surface as claimed in any preceding claim wherein said dark lines simulating joints between simulated boards outline only said selected simulated boards having said range finders thereon.

5. A bowling lane surface having a width, first and second longitudinal portions, and two side edges, for a bowling lane having a foul line, comprising: a top

cover layer having a pattern of a plurality of elongated simulated boards side-by-side across the width of the lane cover layer, said cover layer having a pattern of spaced range finders on selected ones of said simulated boards, positioned uniformly across said lane surface on the first longitudinal portion of said lane cover layer; said simulated boards across said lane cover layer being of alternate light and dark shades.

6. A bowling lane surface as claimed in claim 5 including 39 simulated boards.

7. A bowling lane surface as claimed in claim 6 or claim 7 wherein said dark simulated boards are at both said side edges.

8. A bowling lane surface as claimed in claim 5 or claim 6 or claim 7 wherein a plurality of dark elongated markings are substantially symmetrically arranged on certain ones of said selected simulated boards having said range finders thereon, said plurality of dark elongated markings being in the second longitudinal portion of said lane cover layer; and preferably wherein said lane surface has 39 simulated boards across said lane surface, said selected simulated boards having said range finders thereon being simulated boards 5, 10, 15, 20, 25, 30 and 35, and said dark elongated markings being on simulated boards 10, 15, 25 and 30.

9. A bowling lane surface as claimed in any one of claims 5 to 8 wherein said selected simulated boards having said range finders thereon are outlined by dark lines simulating joints between said simulated boards and the adjacent simulated boards.

10. A bowling lane surface having a width, first and second longitudinal portions, a foul line, and two side edges, comprising: a top cover layer having a pattern of a plurality of elongated simulated boards side-by-side across the width of said lane surface, said layer having a pattern of spaced range finders on selected ones of said simulated boards, positioned uniformly across said lane surface on the first longitudinal portion of said lane surface; and only selected ones, but not all of said selected simulated boards being outlined by dark lines simulating joints between said simulated boards and the adjacent simulated boards.

11. A bowling lane surface as claimed in claim 10 including dark markings symmetrically arranged on certain ones of said selected simulated boards, said dark elongated markings being in the second longitudinal portion of said lane surface; preferably wherein said bowling lane surface has 39 simulated boards across said lane surface, said selected simulated boards having said range finders thereon being simulated boards 5, 10, 15, 20, 25, 30 and 35, and said dark elongated markings being on simulated boards 10,15, 25 and 30.

12. A bowling lane surface cover having a width, first and second longitudinal portions, and side edges, for a bowling lane having a foul line, comprising: a cover layer having a pattern of a plurality of elongated simulated boards side-by-side across the width of the lane cover, said layer having a pattern of spaced range finders on selected ones of said simulated boards, positioned uniformly across said lane cover on the first longitudinal portion of said lane cover beyond the foul line toward said second longitudinal portion; and dark markings arranged on said simulated boards in the second longitudinal portion of said lane cover beyond said range finders.

13. A bowling lane surface cover as claimed in claim 12 wherein said dark markings are at least 6.1 meters from the foul line; and preferably wherein said dark elongated markings are substantially symmetrically arranged at least about 10.36 meters from the foul line.

14. A bowling lane surface cover as claimed in claim 12 or claim 13 wherein said lane cover has 39 simulated boards across said lane cover, and said dark markings are elongated on a plurality of said simulated boards.

15. A bowling lane surface cover having a width, and first and second longitudinal halves, for a bowling lane having a foul line, comprising: a cover layer having a pattern of a plurality of elongated simulated boards side-by-side across the width of the lane cover, said layer having a symmetrical V pattern of spaced range finders on selected ones of said simulated boards, positioned uniformly across said lane cover on the first longitudinal half of said lane cover; said simulated boards across said lane cover being of alternate light and dark shades; said selected simulated boards having said range finders thereon being outlined by dark lines simulating joints between said simulated boards and the adjacent simulated boards; and a plurality of dark elongated markings symmetrically arranged on certain ones of said selected simulated boards having said range finders thereon, said plurality of dark elongated markings being on the second longitudinal half of said lane cover.

16. A bowling lane surface cover as claimed in any one of claims 5 to 9 wherein said lane cover is 18.29 meters long from the foul line, and said dark elon-

gated markings are at least about 10.36 meters from the foul line; preferably wherein there are a first two of said dark elongated markings beginning at about 10.36 meters from the foul line, and a second two dark elongated markings beginning at about 12.19 meters from the foul line; preferably wherein said first two dark elongated markings are on simulated boards 15 and 25, and said second two dark elongated markings are on simulated boards 10 and 30; and preferably wherein said first pair of dark elongated markings extend about 0.9 meters, and said second pair of dark elongated markings extend about 0.9 meters.

17. A bowling lane surface cover as claimed in claim 15 wherein said dark lines simulating joints between simulated boards outline only said selected simulated boards having said range finders thereon.

18. A bowling lane surface cover as claimed in any one of claims 12 to 14 wherein said cover extends 18.29 meters from the foul line, said first and second longitudinal portions comprise first and second longitudinal halves of said cover, and said dark markings are elongated markings on said second longitudinal half of said cover; and preferably wherein said dark elongated markings comprise a plurality of markings including an outer symmetric pair of markings extending further away from said first longitudinal half of said lane cover.

19. A bowling lane arrangement (10) including a bowling lane surface as claimed in any preceding claim.

20. A bowling lane arrangement (10) as claimed in claim 19 which includes an approach (12) and/or a pin deck (16).

21. A bowling lane arrangement (10) as claimed in claim 19 or claim 20 which includes at least one gutter on at least one side of the bowling lane surface and/or a ball return track.

22. A bowling lane arrangement (10) as claimed in any one of claims 19 to 21 including support means on which the bowling lane surface is located.

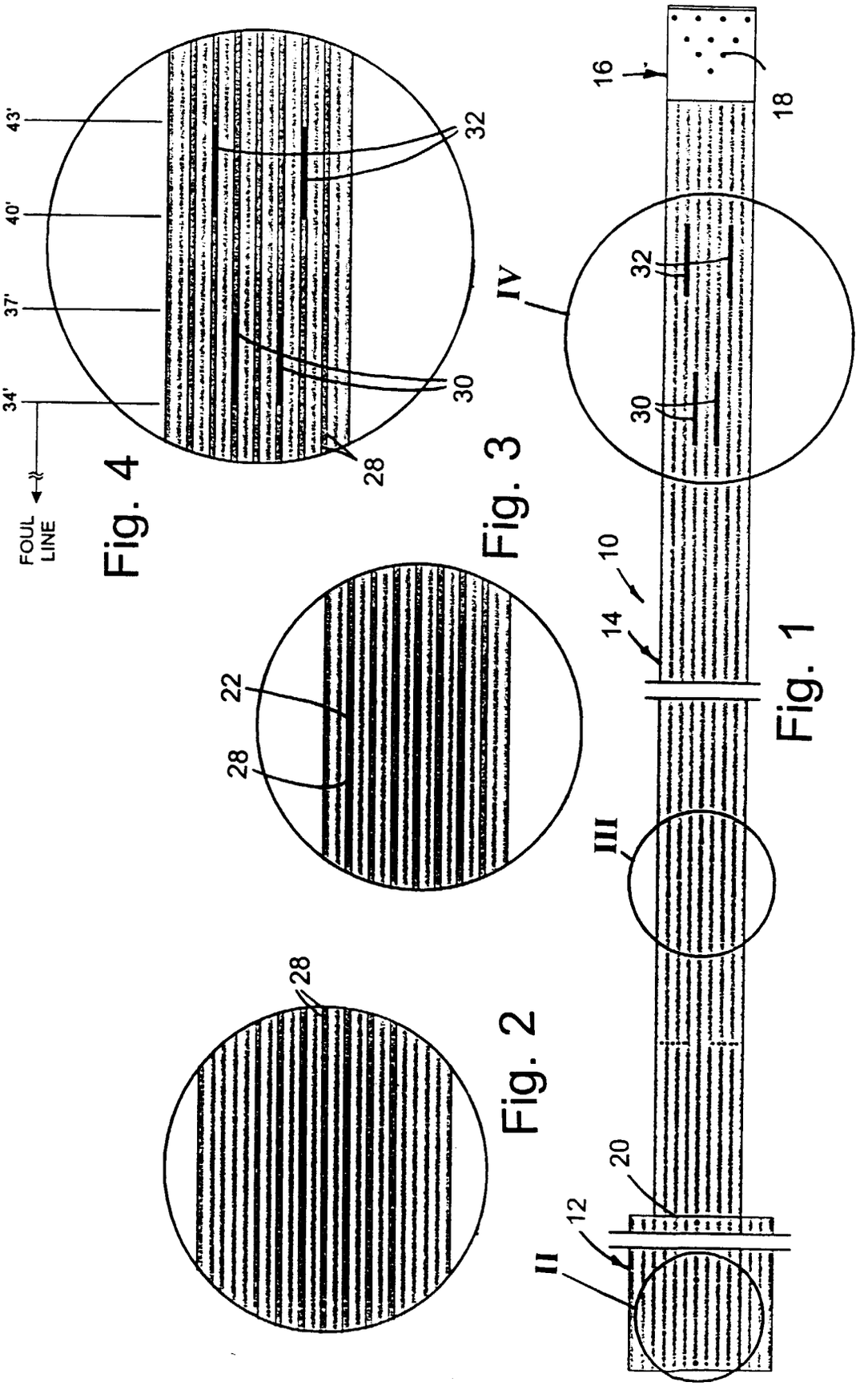

Fig. 1

Fig. 2

Fig. 3

Fig. 4

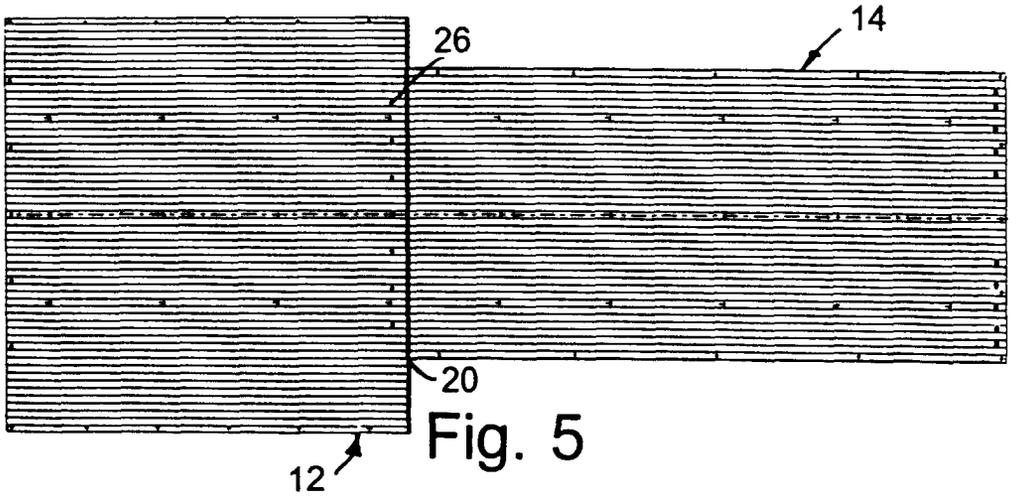

Fig. 5

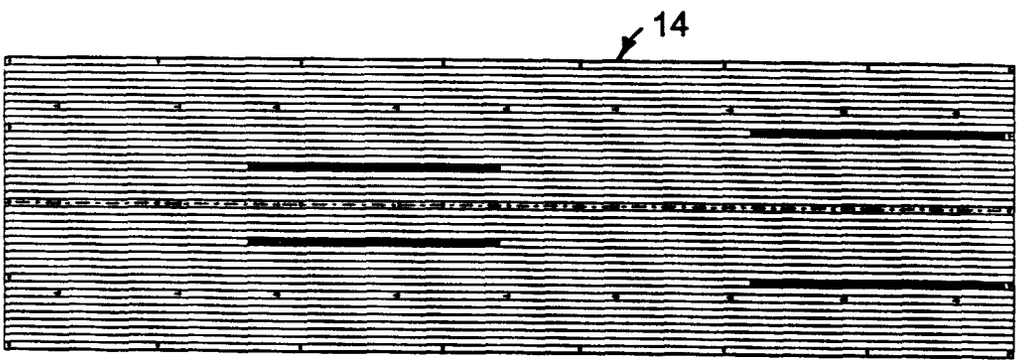

Fig. 7

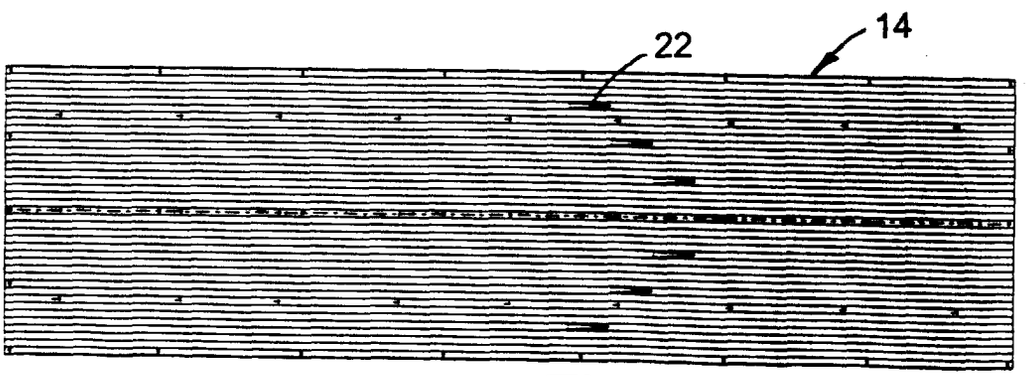

Fig. 6

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EUROPEAN SEARCH REPORT

Application Number
EP 99 30 2671

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION
A	US 5 084 318 A (GAUTRAUD MICHAEL G ET AL) 28 January 1992 (1992-01-28) * abstract; figures 1,4,5 *	1,5,10, 12,15	A63D1/04
A	US 4 406 456 A (BERRY FOSTER W ET AL) 27 September 1983 (1983-09-27) * column 3, line 40 - line 47 * * column 4, line 20 - line 23; figure 1 *	1,5,10, 12,15	
A	US 1 724 841 A (KARR) 13 August 1929 (1929-08-13) * the whole document *	1,5,10, 12,15	
E	US 5 924 931 A (MORRISSEY III WILLIAM T) 20 July 1999 (1999-07-20) * the whole document *	1-22	

TECHNICAL FIELDS SEARCHED

A63D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	18 August 1999	Godot, T

CATEGORY OF CITED DOCUMENTS

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18-08-1999

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US 4406456 A	27-09-1983	NONE	
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