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(54) **Curtain for venetian blind**

(57) The present invention is to provide a curtain adapted to fasten on a Venetian blind, wherein said Venetian blind has a plurality of slats and tow sets of ladder cords bilaterally connected to said slats to hold said slats at different elevations. The curtain comprises a fabric curtain body, and a plurality of coupling devices fixedly arranged in parallel at one surface of said curtain

body at different elevations corresponding to the slats of said Venetian blind for securing said curtain body to said Venetian blind. The coupling devices each has two main coupling members bilaterally protruded from the surface of said curtain body and fastened to said slats between two distal ends of each of said slats and said two sets of ladder cords, thereby enabling said ladder cords to function.

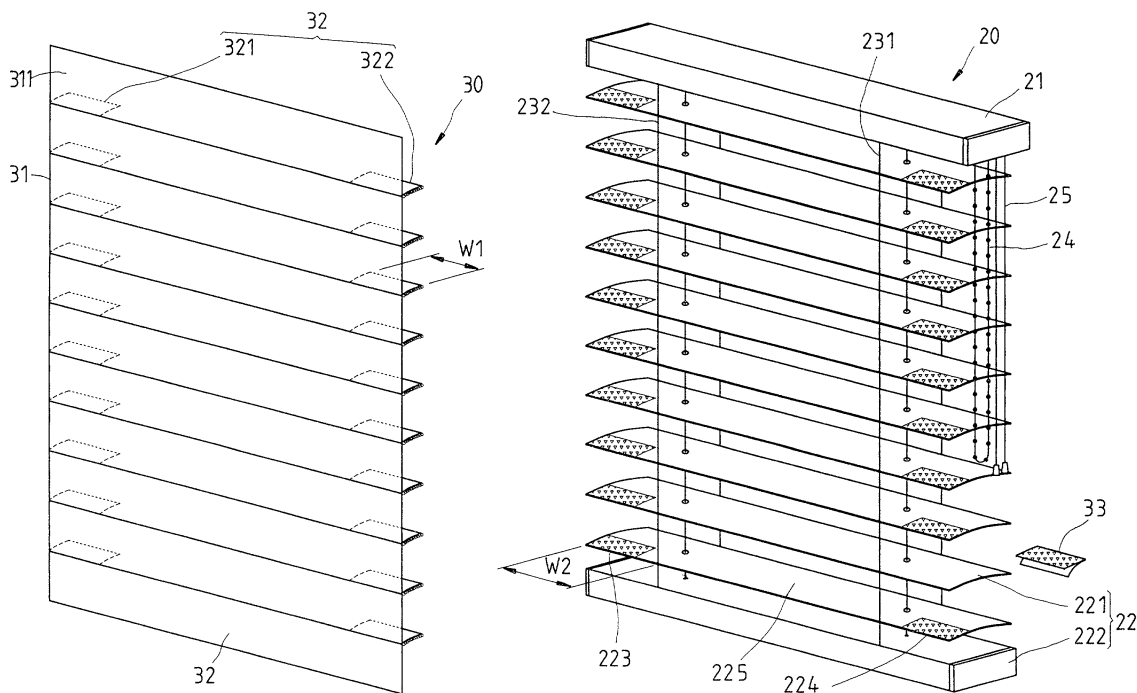


FIG. 4

Description**FIELD OF THE INVENTION**

[0001] The present invention relates generally to a Venetian blind, and more particularly to a curtain adapted to fasten on the Venetian blind.

BACKGROUND OF THE INVENTION

[0002] There are known Venetian blinds equipped with a detachable curtain for decoration and light blocking. FIGS. 1 and 2 show a curtain and Venetian blind arrangement according to the prior art. According to this design, each slat 1 of the Venetian blind has a guide side 2, a lead member 3 integral with the guide side 2 and defining a coupling hole 4. The curtain 5 has a first side 6, a second side 7, and axial elements 8 arranged in parallel between the first side 6 and the second side 7 and adapted for coupling to the coupling holes 4 of the lead members 3 of the slats 1. This arrangement is complicated and expensive to manufacture. Due to high cost, this design of curtain and Venetian blind arrangement cannot attract consumers to buy. Further, due to complicated structure, it is difficult to detach the curtain from the Venetian blind for cleaning.

[0003] FIG. 3 shows another design of curtain and Venetian blind arrangement 1a according to the prior art. According to this design, the curtain 2a comprises a plurality of mounting flaps 3a arranged at the backside at different elevations for coupling to the slats 5a of the Venetian blind 4a. The mounting flaps 3a have slots 3b for the passing of the ladder cords 6a and pull cord 6b of the Venetian blind 4a. Further, each slat 5a has side notches 5b symmetrically disposed at two sides for the passing of the ladder cords 6a. Because the slats 5a must have side notches 5b for the passing of the ladder cords 6a, the manufacturing of the slats 5a is complicated, resulting in high cost, and the curtain 2a cannot fit regular Venetian blinds. Further, it is difficult to remove the curtain 2a from the Venetian blind 4a for cleaning.

SUMMARY OF THE INVENTION

[0004] The primary object of the present invention is to provide a curtain for a Venetian blind, which enables the curtain to be conveniently detachably installed in the Venetian blind.

[0005] It is another object of the present invention to provide a curtain for a Venetian blind, which fits any of a variety of Venetian blinds.

[0006] To achieve the objects of the present invention, the present invention is to provide a curtain adapted to fasten on a Venetian blind, wherein said Venetian blind has a plurality of slats and two sets of ladder cords bilaterally connected to said slats to hold said slats at different elevations. The curtain comprises a fabric curtain body, and a plurality of coupling devices fixedly ar-

ranged in parallel at one surface of said curtain body at different elevations corresponding to the slats of said Venetian blind for securing said curtain body to said Venetian blind. The coupling devices each has two main coupling members bilaterally protruded from the surface of said curtain body and fastened to said slats between two distal ends of each of said slats and said two sets of ladder cords, thereby enabling said ladder cords to function.

BRIEF DESCRIPTION OF THE DRAWINGS**[0007]**

FIG. 1 is an exploded view of a part of a curtain and Venetian blind arrangement constructed according to the prior art.

FIG. 2 is a side view of the prior art design of FIG. 1.

FIG. 3 is an exploded view of structure of curtain and Venetian blind arrangement constructed according to another prior art.

FIG. 4 is a perspective view of the curtain of a first preferred embodiment of the present invention and a Venetian blind.

FIG. 5 is a perspective of the first preferred embodiment of the present invention showing that the curtain is fastened on the Venetian blind.

FIG. 6 is a perspective view of the curtain of a second preferred embodiment of the present invention and a Venetian blind.

FIG. 7 is a perspective view of the curtain of a third preferred embodiment of the present invention.

FIG. 8 illustrates the curtain of the third embodiment of the present invention fastened to the Venetian blind.

FIG. 9 is a perspective view of the curtain of a fourth preferred embodiment of the present invention.

FIG. 10 is a perspective view of the curtain of a fifth preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0008] Referring to FIGS. 4 and 5, the curtain 30 of a first preferred embodiment of the present is shown. In addition, the FIGS. 4-5 also disclose a Venetian blind 20 to be fastened by the curtain 30.

[0009] The Venetian blind 20 comprises a head rail 21 fixedly fastened to the top side of the window, a blind set 22 of width approximately equal to the head rail 21,

the blind set 22 comprising a number of slats 221 and a bottom rail 222, two sets of ladder cords 231 and 232 bilaterally connected between the head rail 21 and the bottom rail 22 and respectively coupled to the slats 221 at two sides to hold the slats 221 between the head rail 21 and the bottom rail 22 at different elevations, a tilt cord 24 coupled to the ladder cords 231 and 232 and suspended from the head rail 21 at one side of the blind 22 for operation by hand to tilt the slats 221, and a lift cord 25 inserted through the head rail 21 and the slats 221 for operation by hand to lift the blind 22 to the desired elevation. The ladder cords 231 and 232 define a slat 221 a left section 223, a right section 224, and a middle section 225 between the left section 223 and the right section 224. Because the aforesaid Venetian blind 20 is of the known art, no further detailed description is necessary.

[0010] The curtain 30 comprises a fabric curtain body 31 made of natural or synthetic yarns or the like. The area of the curtain 30 is not less than the total area of the blind 22 of the Venetian blind 20 when extended out. The fabric curtain body 31 comprises a plurality of coupling devices 32 arranged in parallel at one surface, namely, the back side thereof at different elevations corresponding to the slats 221. Each coupling device 32 comprises two coupling members 321 and 322 adapted for fastening to one slat 221 at the areas between the two distal ends of the respective slat 221 and the ladder cords 231 and 232. The connection of the coupling members 321 and 322 of the coupling device 32 to the slats 221 of the blind set 22 does not interfere with the functioning of the blind set 22. According to this embodiment, the coupling members 321 and 322 are pieces of cloth bilaterally fixedly fastened to the backside of the curtain body 31. The width (pitch) between the coupling members 321 and 322 is not less than the width (pitch) between the two sets of ladder cords 231 and 232, i.e., the width W1 of the coupling members 321 and 322 to one lateral side edge of the curtain body 31 is not greater than the width W2 between one end of each slat 221 and one ladder cord 231 or 232, or the width W1 is not greater than the length of the left section 223 or right section 224. The coupling members 321 and 322 are respectively fastened to the left section 223 or right section 224 of the slats 221 by a respective fastener 33, for enabling the curtain body 31 to be detachably secured to the Venetian blind 20 without interfering with the functioning of the Venetian blind 20.

[0011] The aforesaid fastener 33 may be variously embodied. According to this embodiment, the fastener 33 comprises a tape of hook or loop material respectively adhered to the coupling member 321 or 322 of one coupling device 32 and the left section 223 or right section 224 of one slat 221 for enabling the coupling member 321 or 322 of the respective coupling device 32 to be detachably fastened to the left section 223 or right section 224 of the respective slat 221. Alternatively, the fastener 33 can be a double-sided adhesive tape.

[0012] Further, the top end 311 and bottom end 312 of the curtain body 31 are respectively fastened to the front side of the head rail 21 and the front side of the bottom rail 222, as shown in FIG. 5.

[0013] FIG. 6 shows the curtain 60 according to a second preferred embodiment of the present invention. Similarly, FIG. 6 also discloses a Venetian blind 50. According to this preferred embodiment, each coupling device 62 of the curtain 60 further comprises a supplementary coupling member 623 aligned between the coupling members 621 and 622 for connection to the middle section 525 of the corresponding slat 521 to reinforce the structural strength of the whole assembly and, to keep the curtain 60 closely attached to the front side of the Venetian blind 50 in a smooth manner. According to this embodiment, each supplementary coupling member 623 is a piece of cloth protruded from the backside of the curtain body 61. The supplementary coupling member 623 has two lateral sides equally spaced from the coupling members 621 and 622 at a distance. The width of the supplementary coupling member 623 is shorter than the width between the ladder cords 531 and 532. After connection of the coupling members 621 and 622 to the slats 521 by a respective fastener 63, the supplementary coupling members 623 of the coupling devices 62 are respectively fastened to the middle section 525 of each slat 521 by a respective fastener 63. After installation, the ladder cords 531 and 532 are respectively suspended between the coupling members 621 and 622 and the two opposite lateral sides of the supplementary coupling member 623 of each coupling device 62 for free operation. The installation of the supplementary coupling members 623 enhances the connection tightness between the curtain 60 and the Venetian blind 50, and keeps the curtain body 61 suspended from the front side of the Venetian blind 50 in a smooth manner. Therefore, the curtain 60 does not drop from the Venetian blind 50 easily when received a wind or an external force.

[0014] FIGS. 7 and 8 show a third preferred embodiment of the present invention. According to this embodiment, the coupling members 721 and 722 and the supplementary coupling members 723 of the curtain 70 are made of resilient metal or flexible plastic material that can be deformed and set into a curved shape for hooking on the slats 742 of the Venetian blind 74. The coupling members 721 and 722 and supplementary coupling members 723 of the curtain 70 each have one end fixedly connected to the backside of the curtain body 71. When attached to the slats 742 of the Venetian blind 74, the free ends of the coupling members 721 and 722 and supplementary coupling members 723 of the curtain 70 are curved and hooked on the slats 742 respectively, as shown in FIG. 8.

[0015] FIG. 9 shows a fourth preferred embodiment of the present invention. According to this embodiment, the coupling members 821 and 822 of the curtain 80 are elastic bands adapted for fastening to the left section or right section of each slat of the Venetian blind (not

shown).

[0016] FIG. 10 shows a fifth preferred embodiment of the present invention. According to this embodiment, the coupling members 821 and 822 of the curtain 80 are respectively installed in slat loops that can be hung on the left section and right section of each slat of the Venetian blind (not shown) respectively, to secure the curtain 80 to the front side of the Venetian blind.

[0017] In light of the above, the present invention achieves the following advantages:

1. Low manufacturing cost:

[0018] Because the coupling members of the coupling devices of the curtain are to be respectively fastened to the two distal ends (the left section and the right section) of each slat and the middle section of each slat between the ladder cords without touching the ladder cords or interfering with the functioning of the ladder cords, it is not necessary to change the original design of the slats and the ladder cords or to make wire holes in the curtain for the passing of the ladder cords or the pull cord. Therefore, the invention saves much installation cost.

2. High convenience in mounting and dismounting:

[0019] Because the coupling members of the coupling devices of the curtain are adapted to be detachably fastened to the slats without touching the ladder cords, it is easy to fasten the curtain to the Venetian blind, or to unfasten the curtain from the Venetian blind.

3. High compatibility:

[0020] Because the installation of the curtain needs not to change the structural design of the Venetian blind, the consumer can purchase the curtain only for installation in an existing Venetian blind, i.e., the curtain of the present invention fits any of a variety of conventional Venetian blind.

Claims

1. A curtain adapted to fasten on a Venetian blind, said Venetian blind having a plurality of slats and two sets of ladder cords bilaterally connected to said slats to hold said slats at different elevations, said curtain comprising:

a fabric curtain body, and

a plurality of coupling devices fixedly arranged in parallel at one surface of said curtain body at different elevations corresponding to the slats of said Venetian blind for securing said curtain body to said Venetian blind, said coupling devices each comprising two main cou-

pling members bilaterally protruded from the surface of said curtain body and fastened to said slats between two distal ends of each of said slats and said two sets of ladder cords, thereby enabling said ladder cords to function.

2. The curtain as defined in claim 1, wherein the number of said coupling devices of said curtain is equal to the number of said slats of said Venetian blind.

3. The curtain as defined in claim 1, wherein the main coupling member of said coupling device is a piece of cloth protruded from the surface of said curtain body, said piece of cloth having a width between two distal ends thereof not greater than the distance between the distal end of said slat and said set of ladder cords.

4. The curtain as defined in claim 3 further comprising a plurality of fasteners adapted to fasten the pieces of cloth to said slats of said Venetian blind, thereby enabling said curtain to be fastened on said Venetian blind.

5. The curtain as defined in claim 4, wherein said fasteners are tapes of hook and loop materials, said tapes of hook and loop materials each having a back glue for fastening on said slat.

6. The curtain as defined in claim 4, wherein said fasteners are double-sided adhesive tapes.

7. The curtain as defined in claim 1, wherein said main coupling members of said coupling devices of said curtain are resilient and flexible materials that can be bent into different shapes, each main coupling member having a fixed end fixedly connected to said curtain body and a free end for fastening to said slats of said Venetian blind.

8. The curtain as defined in claim 1, wherein said main coupling members of said coupling devices of said curtain are elastic bands fastened to the ends of said slats of said Venetian blind.

9. The curtain as defined in claim 8 further comprising a plurality of loops sleeved on two ends of the slats of the Venetian blind respectively, said elastic bands being installed in said loops respectively for fastening said loops to said slats.

10. The curtain as defined in claim 1, wherein said curtain body has top and bottom sides respectively fastened to a head rail and a bottom rail of said Venetian blind.

11. The curtain as defined in claim 1, wherein said cou-

pling devices of said curtain each further comprise a supplementary coupling member protruded from the middle section of the surface of said curtain body between the main coupling members of the respective coupling devices, said supplementary coupling member fastening to said slats between said sets of ladder cords. 5

12. The curtain as defined in claim 11, wherein said supplementary coupling member is a piece of cloth fastening to the middle section of one slat of said Venetian blind by a respective fastener. 10

13. The curtain as defined in claim 11, wherein said supplementary coupling member is made of a resilient and flexible material that can be bent into different shapes. 15

14. The combination of a Venetian blind and a curtain adapted to detachably fasten on the Venetian blind, said Venetian blind comprising: 20

a head rail fixedly fastened to the top side of a window; 25

a blind set provided with a plurality of slats and a bottom rail;

two sets of ladder cords bilaterally connected between said head rail and said bottom rail and respectively coupled to said slats at two sides to hold said slats between said head rail and said bottom rail at different elevations; 30

a lift cord inserted through said head rail and said slats for operation by hand to lift said blind set; 35

said curtain comprising: 40

a fabric curtain body, and

a plurality of coupling devices fixedly arranged in parallel at one surface of said curtain body at different elevations corresponding to the slats of said Venetian blind for securing said curtain body to said Venetian blind, said coupling devices each comprising two main coupling members bilaterally protruded from the surface of said curtain body and fastened to said slats between two distal ends of each of said slats and said two sets of ladder cords, thereby enabling said ladder cords to function. 45 50 55

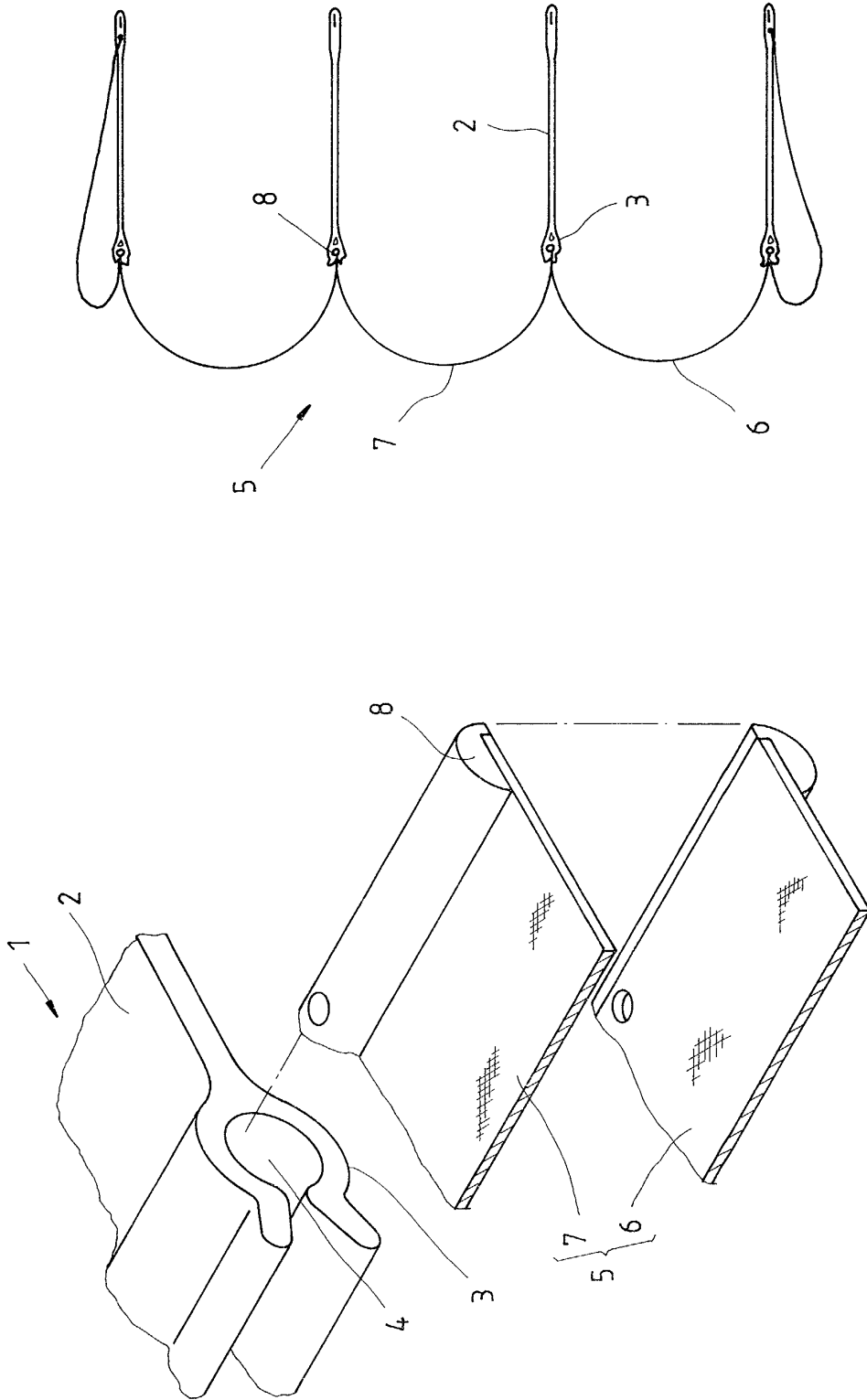


FIG. 2
PRIOR ART

FIG. 1
PRIOR ART

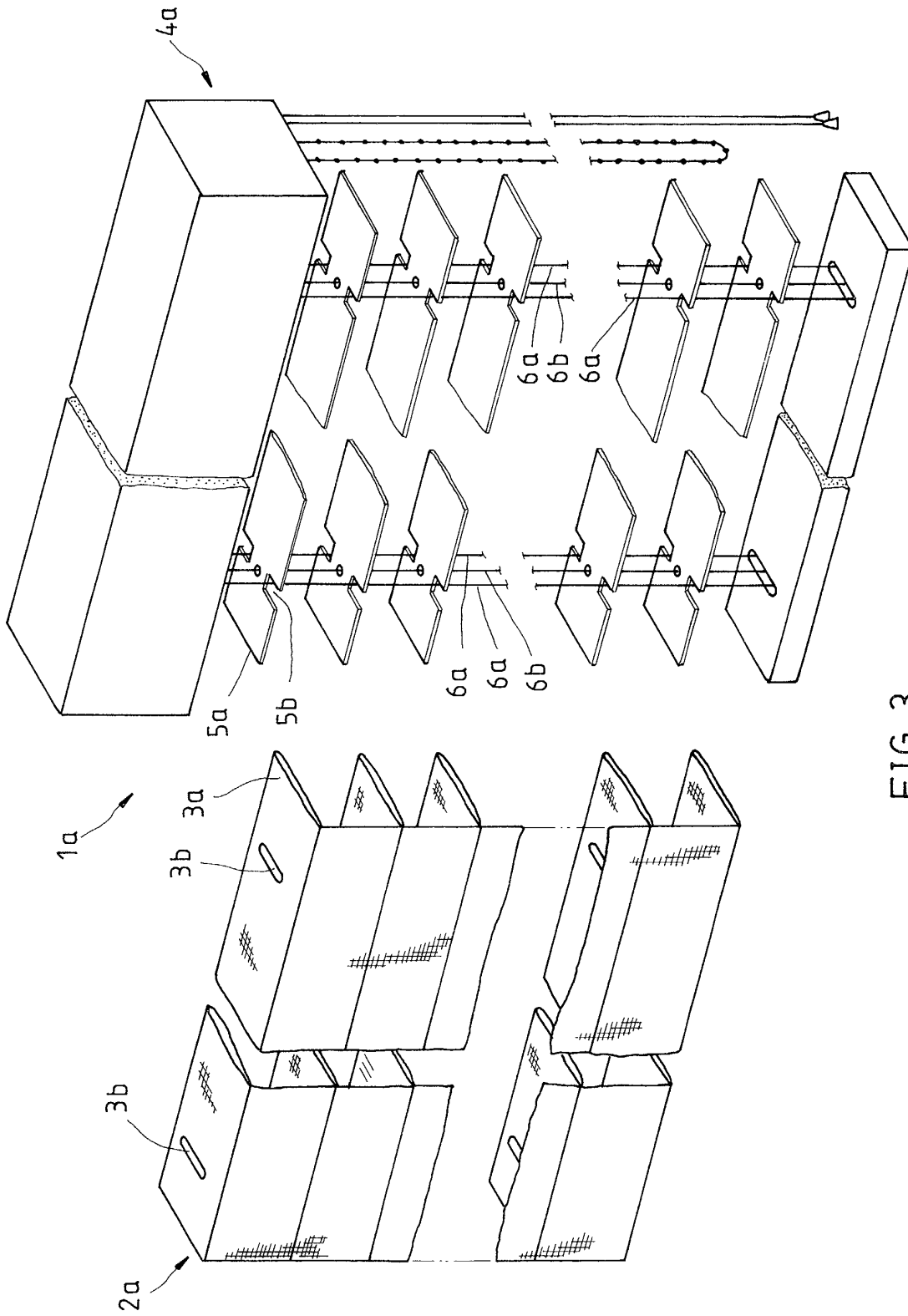


FIG. 3
PRIOR ART

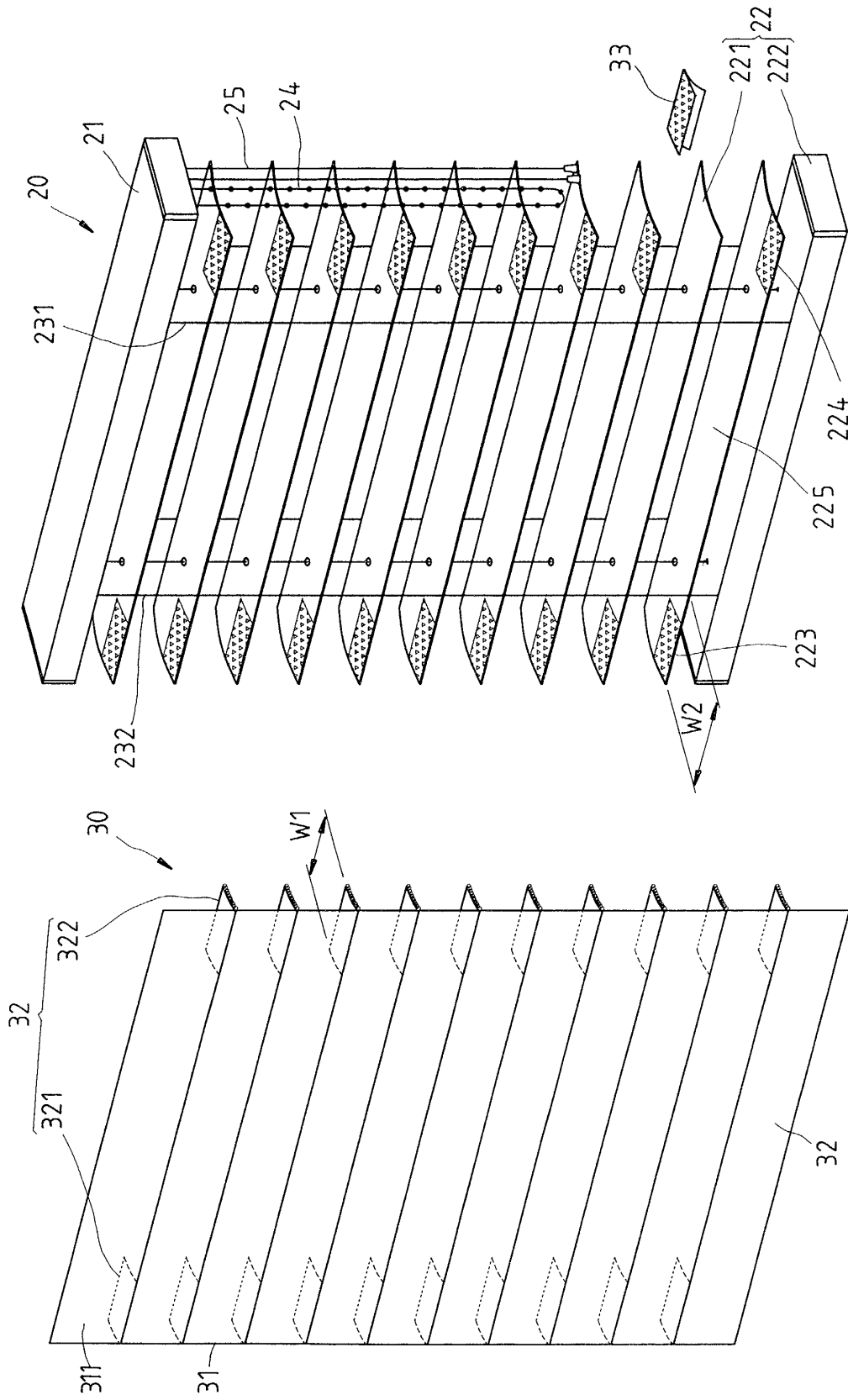


FIG. 4

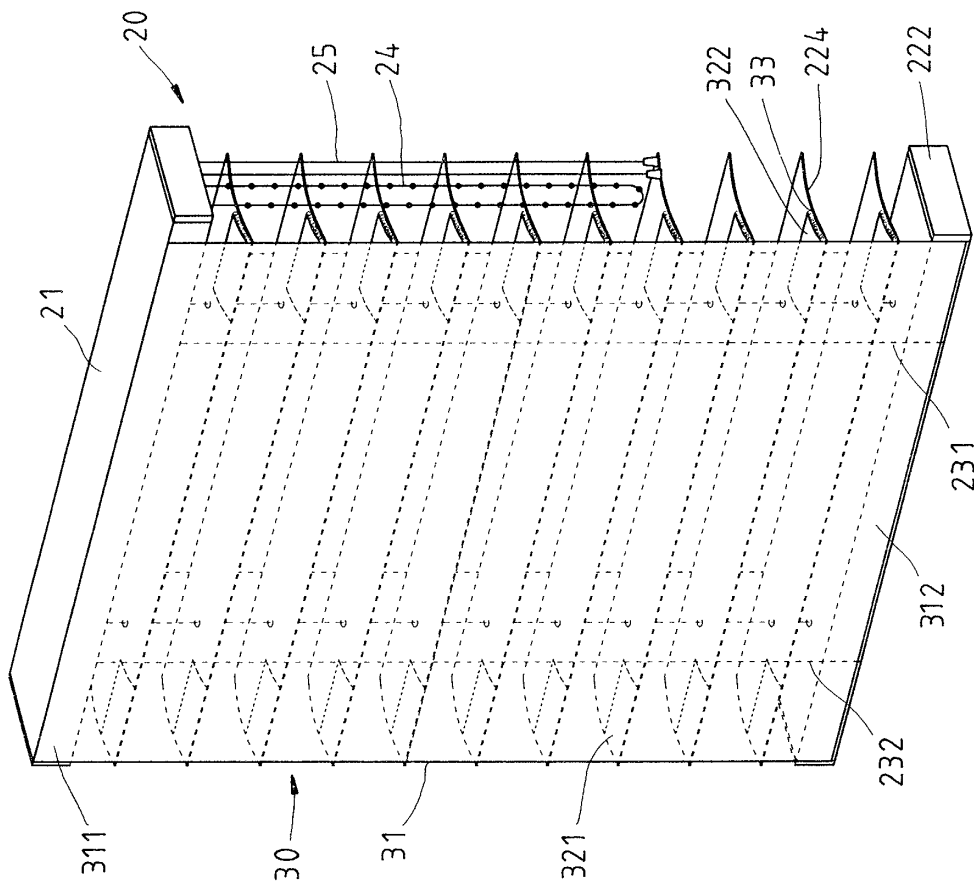


FIG. 5

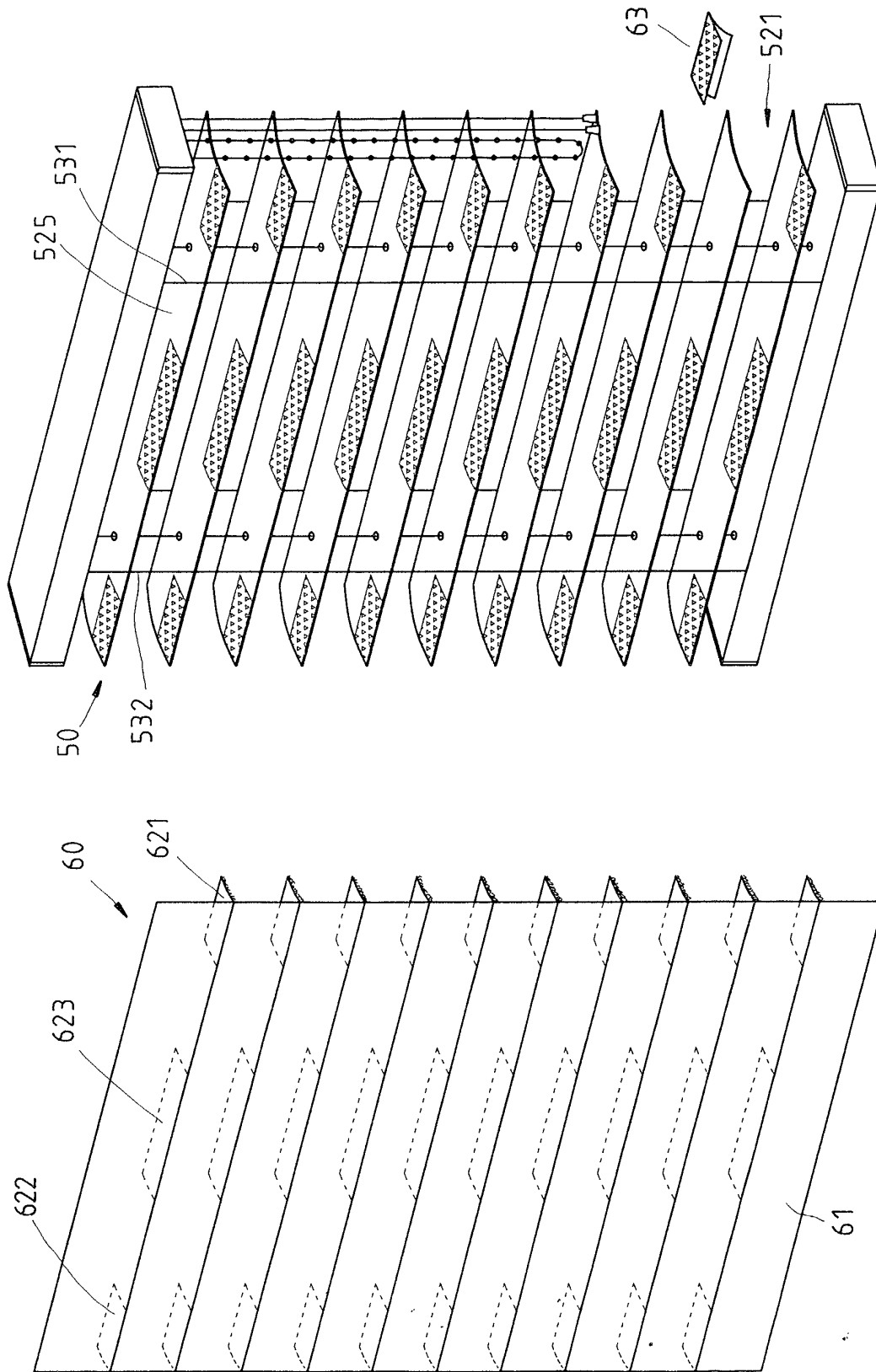


FIG. 6

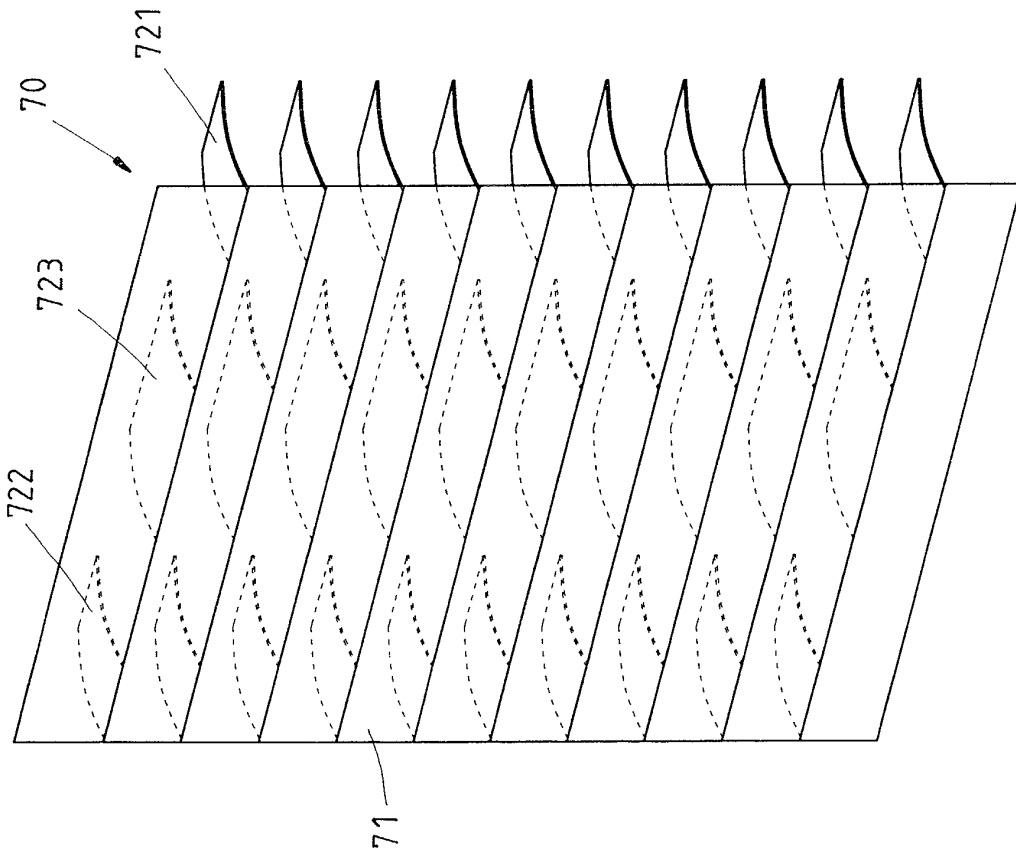


FIG. 7

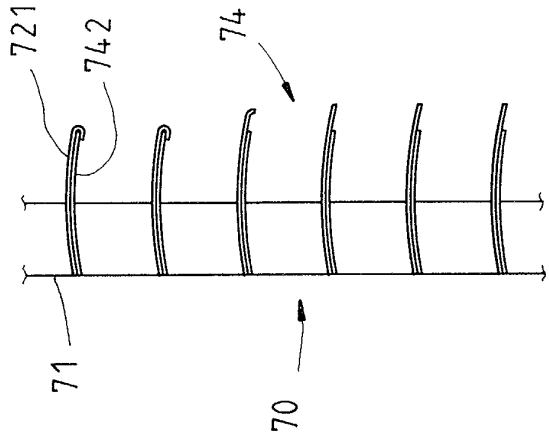


FIG. 8

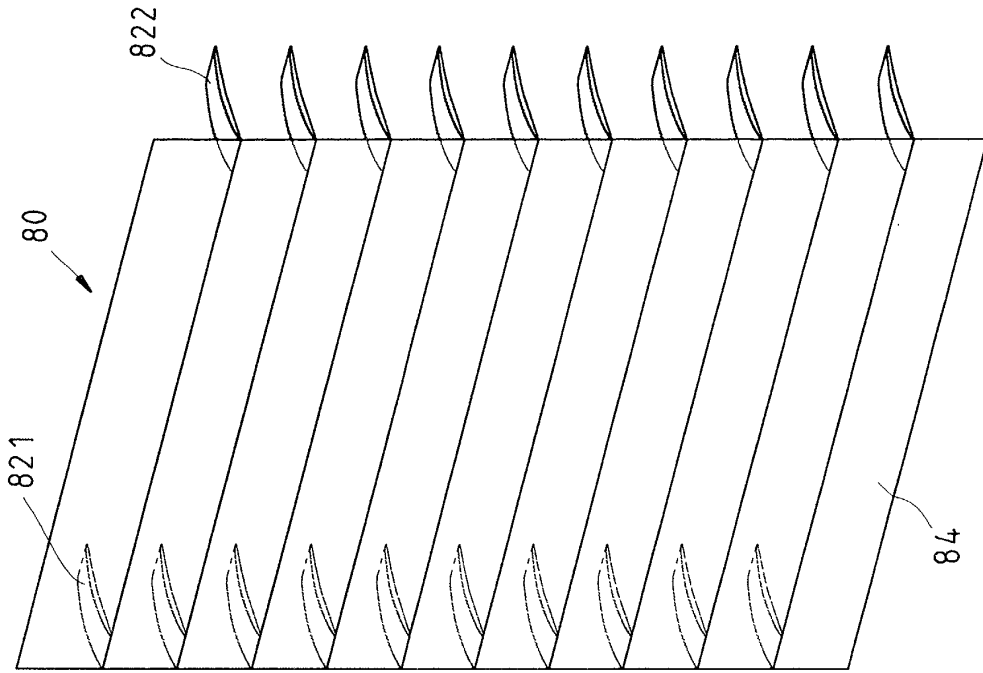


FIG. 9

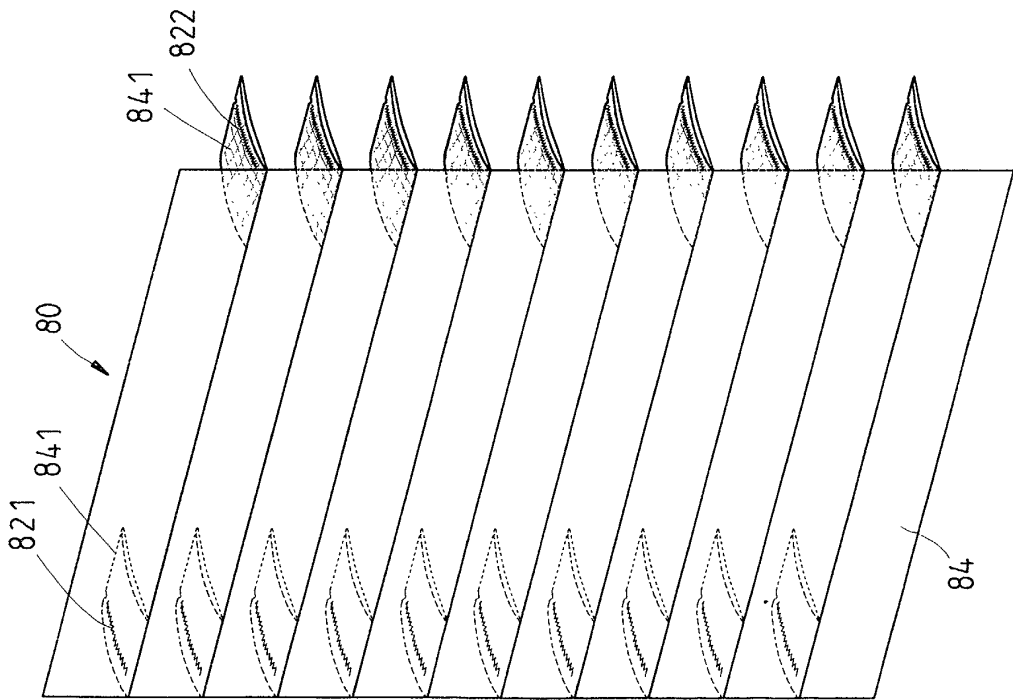


FIG. 10



European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 02 25 0077

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.7)
A	EP 0 654 577 A (HUNTER DOUGLAS INTERNATIONAL) 24 May 1995 (1995-05-24) * column 13, line 38 - column 14, line 5 * * figures 38-50 * -----	1	E06B9/30 E06B9/264
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			E06B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		29 May 2002	Geivaerts, D
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		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	

EPO FORM 1503 03 82 (P04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 02 25 0077

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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