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(71) 416

(72) 1167 5 520 403

923-2 107 1604

458-3 607

가 1515 103 1003

873 A1 106-1903

(74) :

(54) , ,

가 , , 1 , 1
1 2 . 2 2 , 2 2

1		1								.
2	1	100								.
3	1	200		1			1			.
4	1	200								.
5	1	300		2			2			.
6	1	200		1			3			.
7	1	200		2			4			.
8							1			.
9	8	600	1 ,	1 ,	2 ,	2				.
10	8	700		1		1				.
11	8	800	1		1					.
12	11	1	1		1					.
13	8	800	1		1					.
14	13	1	1		2					.
15	8	1000			1		2			.
16							2			.
17		2		2		2		2		.
18		2		2			3		3	.
19	18	3				3				.
20		2		2			4		4	.
21	20	4				4				.
22	8	1000				1		2		.
23		2		1	,	3		2	4	.
24		2		1	,	3		2	4	.
25		1								.
26	25	1								.

27 1 1 2
 28 2
 29 28 1 4
 30 28 1 4
 31 1
 32 31
 33
 34
 35 1
 36 35
 37 2
 38 37
 39 2

(wide viewing angle)

(Liquid Crystal Display device) (Liquid Crystal)
 (color filter)

(Cathode Ray Tube type display device) (viewing angle) CRT

가 가 가
 가
 S IPS (In-Plan switching mode) 가 IP
 (pixel electrode) (common electrode)
 (fringe electric field)가

IPS 가

(Vertical alignment mode) 가 .

가 PVA (Patterned Vertical Alignment type LCD) ,
가 MVA (Massive Vertical Alignment type LCD) .

가, PVA, MVA

, TN (Twist Nematic LCD)

2

3

4

1 2 2 1 2 1 2 1

[illegible][illegible]

4. 가

가

1

1 1

1 , (atomic beam) (alignment film) (multi-domain)
, (100).

2 1 100

2 , (100) (110) , (110)
(Diamond-Like-Carbon, DLC), , (poly crystalline silicon),
(amorphous silicon), (polyimide)

, (110)

1 (200). 1 1 , 1 1
가

3 1 200 1 1

2 3 , (110) 1 (120)가 1 (120) (110) 1
(A1) 1 (A1) , 1 (A1) (A2) 가 . , 1 (

120) 1 (A1) 1 (125)가 .

, 1 (120) (110) . 1 (120)

(110) (120) (Al₂O₃) , 1 (120) 1000 . 1

1 (120) (110) 1 (A1) , 1 (120) 1 (130)

) 1 (120) Y 0° 90° (130) 1 (125) (130)

1 (A1) (110) , (130) (110) 1 (A1)

1 (115)

4 1 200

3 4 가 , (130) 가 (source gas) (ion)
가 (210). 가 가
가 (argon gas)가 가

2 가

가 , , 가 가
2500K , 가 2500K
가 (argon ion)

가 , , 가
가 . 가 가
가 (220). 가 , 가 가 . 가 , 가
가 가 , 가 가 (ion bea
m)
4 , 가 가 가
가 (230). 가 가
1 (A1) 1 1 (120) (110)
1 (300). 2 1 1 , 1 2 2
5 1 300 2 2
5 , 2 (A3) 2 (117) 가 , 2 (110) 2 (A3) 1 (A
1) (110) , (110) 2 (140)가 , 2 (140)
O₃) (110) , 2 (140) 1000 2 (140) (Al₂
2 (140) (110) 2 (A3) 0°, 90° (140) 2 (130)
2 (A3) 2 (140) , (130) 1 (145)
2 (110) (117) , (130) (110) 2 (A3)
2
가
2
6 1 200 1 4 3 . 7 1
200 2
1 100 (100) (110) , 6 (110) 1 (A
1) 110 1 (A1) (110) 3 (150)가 3 (150) 가 , (150)
(110) / (110)
, (110) 3 (150) , 가
6 , (110) 1 (A1) (110) (130) (110)
1 0° 90° (110) 1 Y

[illegible]

13 8 800 1 1 . 14
13 1 1 2 .

13 14 , 1 (170) 1 (175) 1 (A1) 2 (A3) 1 (180) 2 (A6) 1 (180) 가 . 가
, 2 (A6) 가 (130) 2 . 2 (A6) 가
(130) 2 (184) .

, 2 (A3) 1 (175) 1 가 . 1 (175) 1 (A1) 2
(A3) 2 1 (A1) 2 (A3) .

8 , 1 2 (1000). 1 2
1 2 .

15 8 1000 1 2 .

15 , 1 (170) 2 (190) 1 (170) 2 (190)
) (198)가 . (198) 1 (170) 2 (190)
(199) 1 (170) 2 (190) (196) .

, 1 1 1 1
2 2 1 2 , 1

2

16 2
1 1 2 8 600 900 .

16 , 8 1000 2 2 (650).

17 2 2 2 2 .

17 , 2 (190) 2 (195) . 2 (195)

2 (200) 2 (195) . 2 (200) (Diamond - Like - Carbon, DLC), , (poly crystalline silicon),
(amorphous silicon), (polyimide)
2 .

16 , 2 2 650 , 2 1
3 3 (750).

18 2 2 3 3 3
. 19 18 3 3 .

18 19 , 2 (200) 1 (170) 1 (A5) 3
(A7) 3 , 3 (A7) 3
3 (205) .

16 , 2 3 750 , 2 2
4 4 (850).

20 2 2 4 4 4
. 21 20 4 4 .

20 21 , 2 (200) 1 (170) 1 (180) 2 (A3)
 4 (A8) . 2 (200) 4 (A8) , 2 (A8)
 200) , 2 (190) 가 4 (A8) 4 가 (130) 4 .
 , 2 (190) 4 (A8) 4 (207) .

2 , 8 1000 1 (170) 2 (190) , 1 (170)
 2 (190) .

22 8 1000 1 2 .

22 , 1 (170) 2 (190) 1 (170) 2 (190)
) (198)가 (198) 1 (170) 2 (190) .
 (198) 1 (170) 2 (190) (196) .

1 (170) 1 (182) 2 (190) 3 (205), 1 (170)
 2 (184) 2 (190) 4 (207) 1 (170) 2 (190)
 가 .

23 2 1 , 3 2 4 .

22 23 , 1 (A5) 1 (182) 3 (A7) 3 (205)
 , 2 (A6) 2 (184) 4 (A8)
 4 (207) .

1 (182) 3 (205) , 2 (184) 4 (207)
 가 , 1 (170) 2 (190) (Vertical Alignment mode
 LC, VA LC) .

24 2 1 , 3 2 4 .

22 24 , 1 (A5) 1 (182) 3 (A7) 3 (205)
 , 2 (A6) , 1 (182) 3 (205) 90 ° 270 °
 07) . , 2 (184) 4 (A8) 4 (207) 90 ° 270 °
 , 2 (184) 4 (207) .

1 (182) 3 (205) , 2 (184) 4 (207)
 , 1 (170) 2 (190) .

1

25 1 26 25 1
 . 27 1 1 2

25 27 , (230) 1 (170) 2 (190), 1 (175)
 2 (195), 1 (180), 2 (200) (196) .

1 (170) 1 (175) 1 (180) , 2 (190) 2 (195) 2
 (200) , 1 (170) 1 (175) 2 (195)

[illegible]

29 3 , 1 (A1) 1 (182a) 3 (A7)
 (205a) 4 (A8) 2 (A3) 2
 (184a) 1 (180) 2 (200) (207a)

30 28 1 4 .

30 3 , 1 (A1) 1 (182a) 3 (A7)
 3 (205a) 90 ° 270 ° , 1 (182a)
 3 (205a)

, 2 (A3) 2 (184a) 4 (A8) 4
 (207a) 90 ° 270 ° , 2 (184a) 4
 (207a) 1 (180)

2 (200)

1

31 1 .

31 , (300) (310), (320) (330)
 (310) (320) (320)가 , (310)
 (320) (330)

(310) (110) (100)

(320) (322), 가 (324) (326)

(322) 가 , , 가 가

가 (322) 2500K 가 ,
 가 가

가 가 (322)

가 가 가

가 (324) 가 가 가 (324a) 가 가 가 (324a)
 324a) 가 (324a)

가 (324a) 가 가 (326)가
 (326) 가 (324a) (electron)
 가 (324a) , 가 (326)가 (326) 가 (324a) 가 가

32 31

32 , (320) (130) (110)
 (328)

(328) (110) (130)
(328) (320) θ

31 , (330) (320) (130) (110)

33

31 33 , (330) (335) (336)

(336) (336) 가 (335) (110) (130)
(336) 가 (130)
(336)

(130) (336)
(336) (336) (110)

(336) (130) (110)

34

33 34 , (330) (336) (335) (338)
가 (338)
()

35 1

35 , (336a) (336) (336a)가 1
(336a) (335) (336)

36 35

36 , (336a) 1 (336) (336) 1
2 (110) (336) (336a) (110)
0)

37 2 38 37

37 38 , (336b) (335) (quartz bar)
(support wire) (336b) (335) W
(336) (110) (336)

(336b) (336) (336b) (335)
(336b) (336b)

39 2 1 . .

39 , (300) (410), (420), (430),
 (430) (440) .

(410) (440) (440) (442) (445)
 (442) (410) , (445) (442)

(445) (430)가 (430)
 , (110) 가 .

(430) (110) (420)가 (460)가 , (460)
 (420) (460)

(430) (430) (420)

1 .

2 , .

(57)

1.

;

1 1 1 1

1 1 ;

2 2 2 2

2.

1 , , , , ,

3.

1 , 1 1 1 가 1

4.

3 , 1

5.

1 , 2 2 2 가 2 .

6.

5 , 2 .

7.

1 , ;
가 ;
가 가 .

8.

1 , 1 ,
1 3 가 3 .

9.

1 , 2 ,
2 4 가 4 .

10.

1 , 1 1 , 1 2
1 1 ;
1 1 ;
1 1 1 1 1
; 1 2 1 2 2
; 1 2 .

11.

10 , 1 2 1 1 .

12.

11 , 1 2 1 .

13.

10 , 1 1 , 2 2 1 .

14.

10 , 2 1 .

15.
10 , 1 1
16.
10 , 1 1 , 2 1 1
17.
10 , 1 2 2 1
2 ;
2 1 3 3 3
; 2 2 4 4 4
18.
17 , 1 3 2 4
19.
17 , 1 2 1 2
20.
17 , 3 1 90 ° 270 ° , 4
2 90 ° 270 °
21.
20 , 1 2 1 2
22.
1 2 ;
1 2 1 2 ;
1 , 1 1 1 2 1 2 1 2
1 2 1 ;
2 2 ;
1 2
23.
22 , 1 2 1 1 가
24.
22 , 1 2 1
- 25.

22 , 1 1 , 2 1 2

26.

22 , 1 1 , 2 1 1

27.

22 , 2 2 1 2 3 4 3 4 3 4

28.

27 , 1 3 , 2 4

29.

28 ,

30.

27 , 3 1 90 ° 270 ° 90 ° 270 ° ,

4 2 90 ° 270 °

31.

30 ,

32.

;

가 ;

가

33.

32 , ;

가 ;

가

34.

33 ,

35.

32 ,

36.

35 , 1

37.

35 , (quartz bar)

38.

35

39.

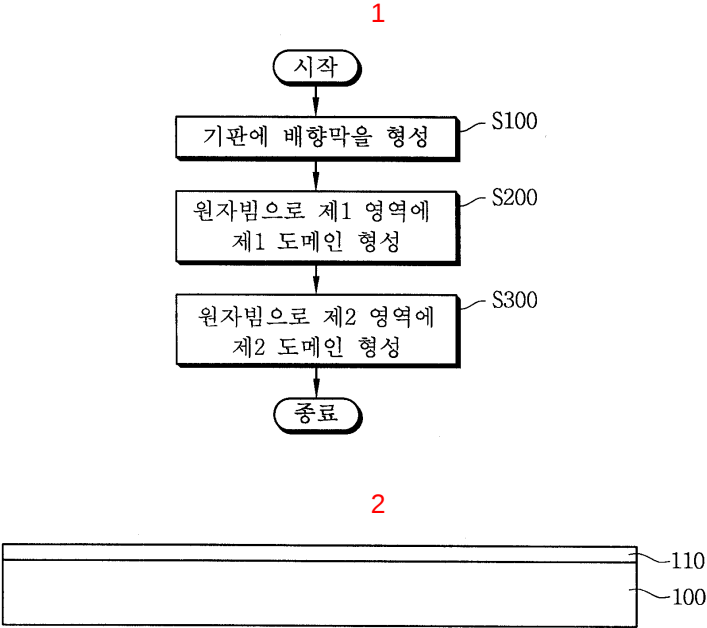
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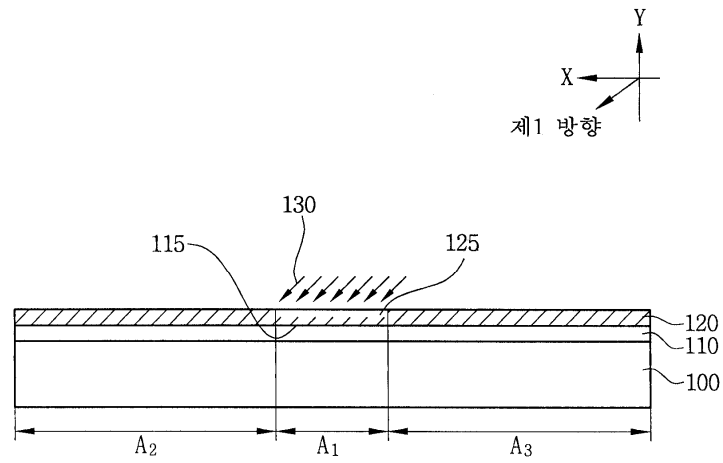
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40

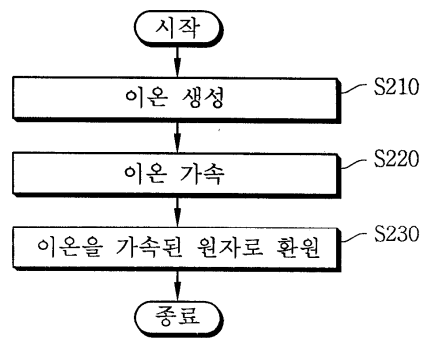
가



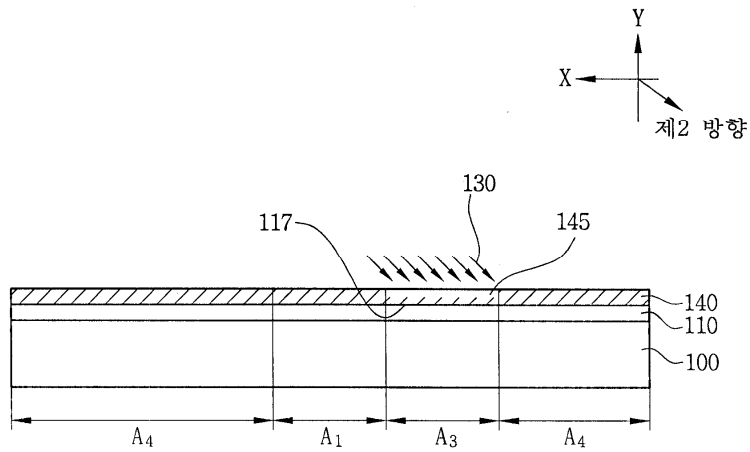
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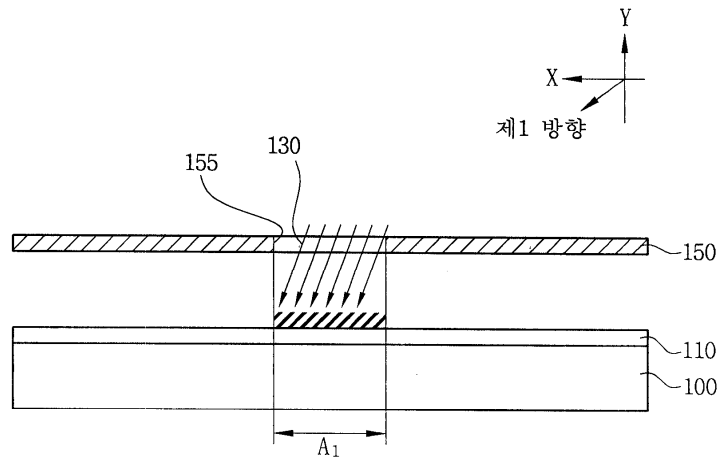
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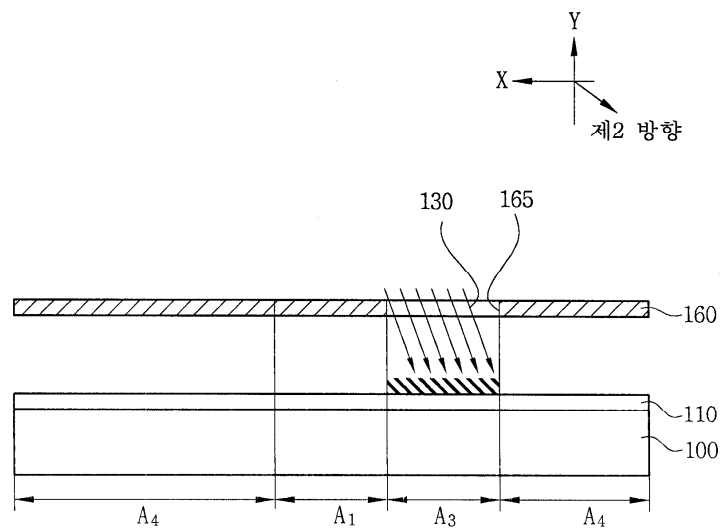
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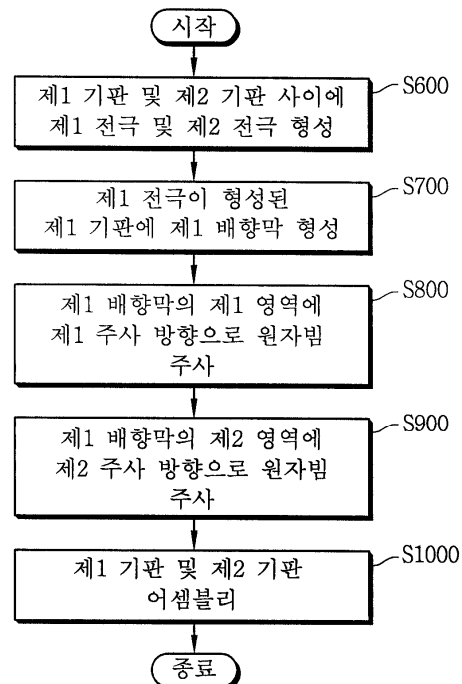
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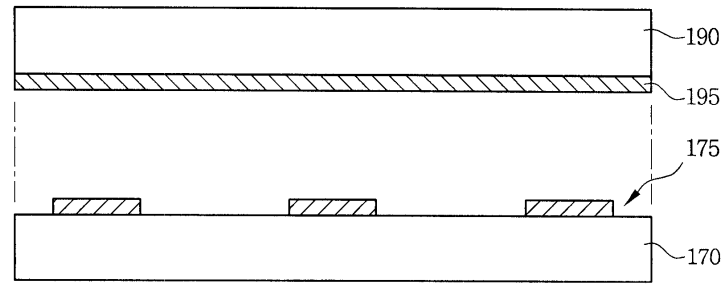
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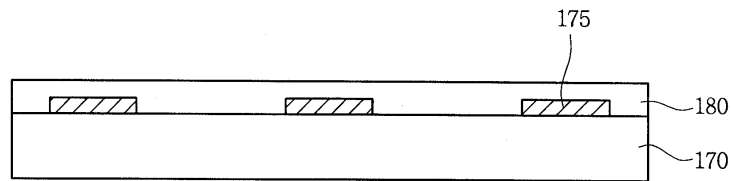
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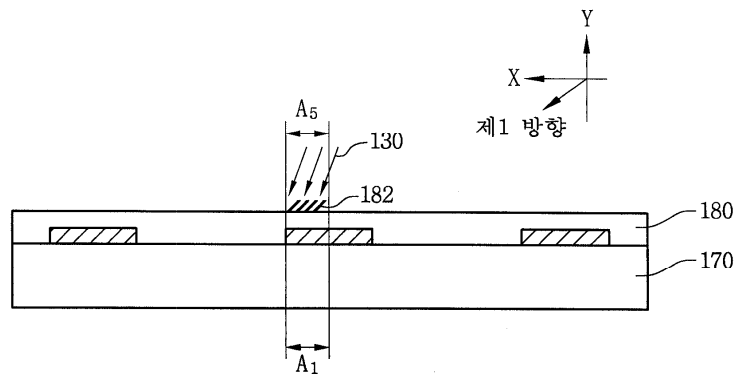
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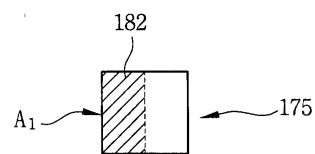
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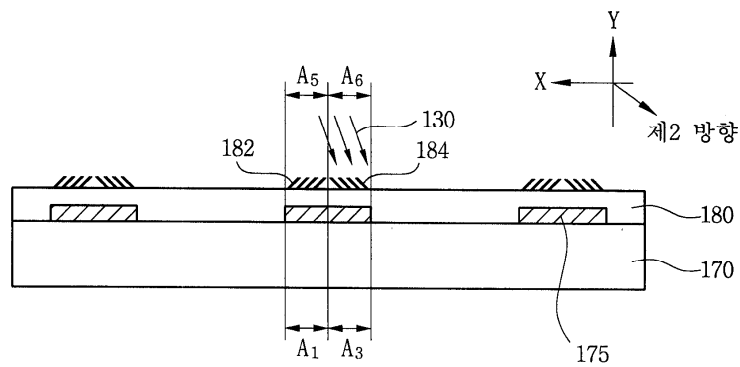
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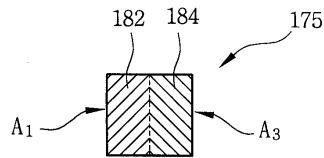
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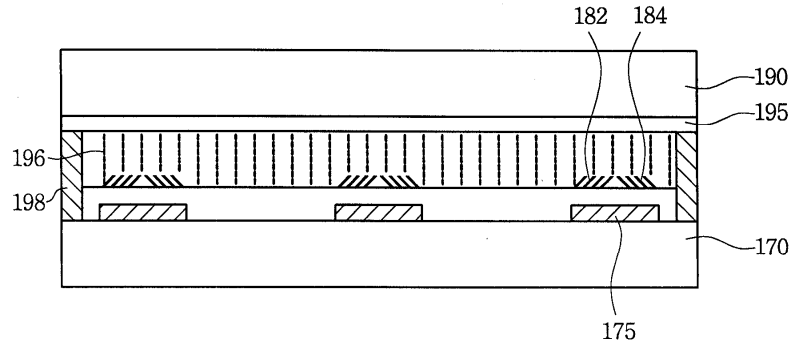
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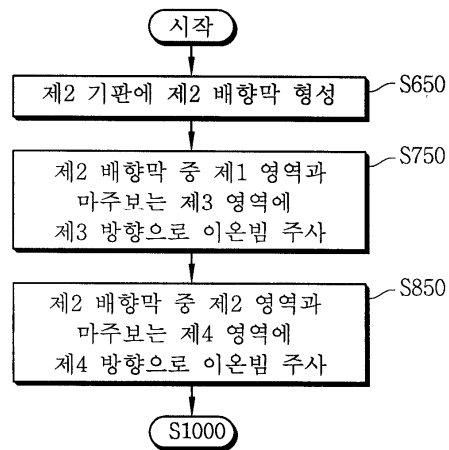
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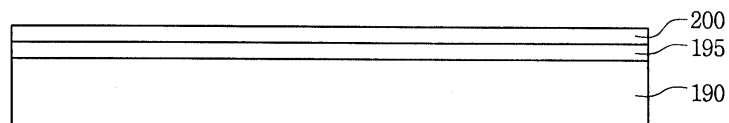
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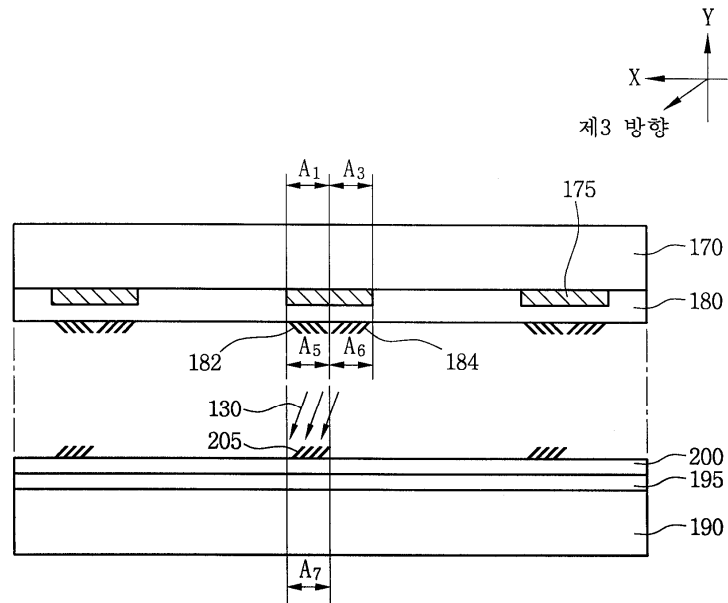
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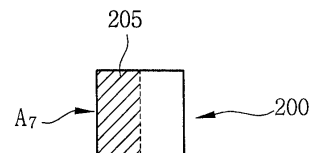
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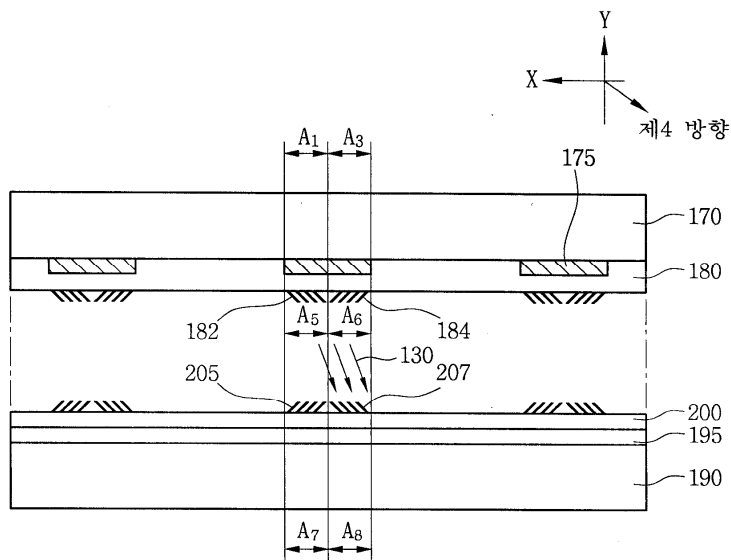
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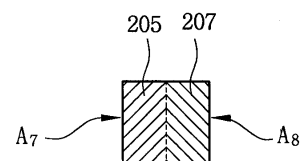
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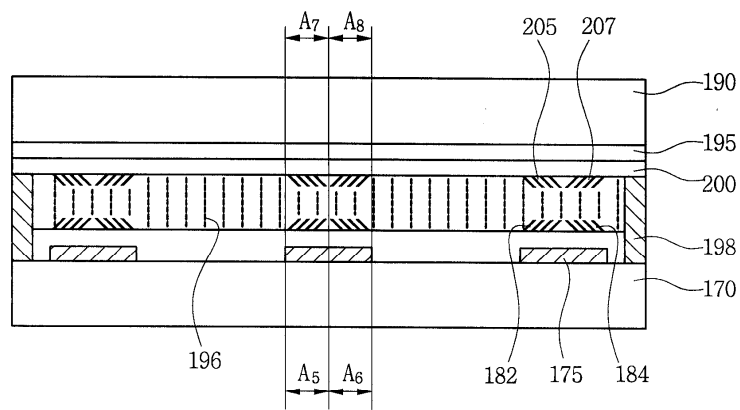
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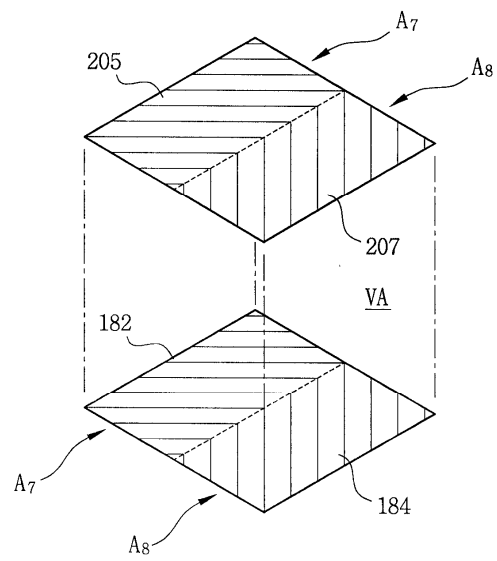
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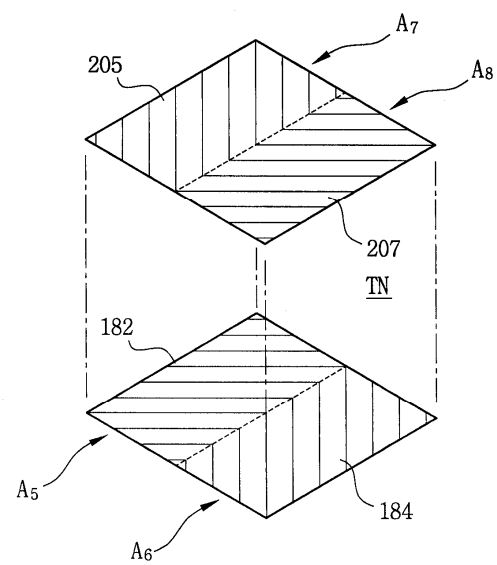
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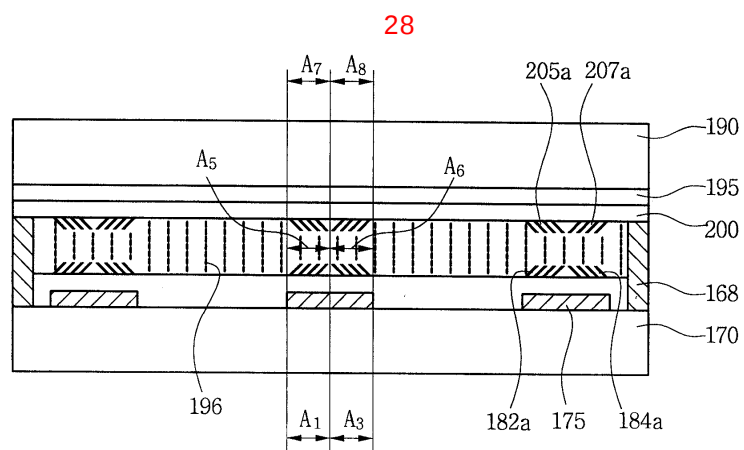
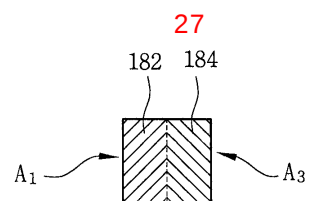
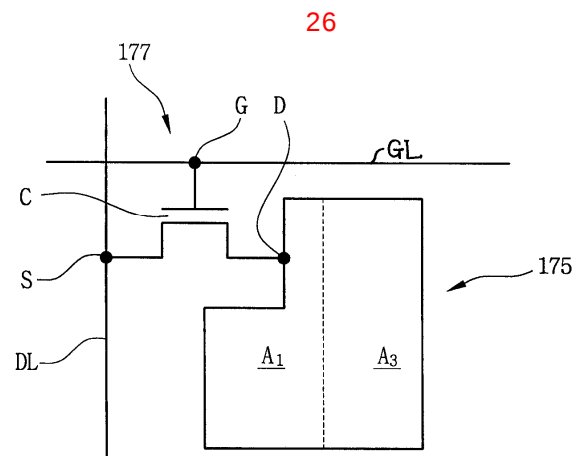
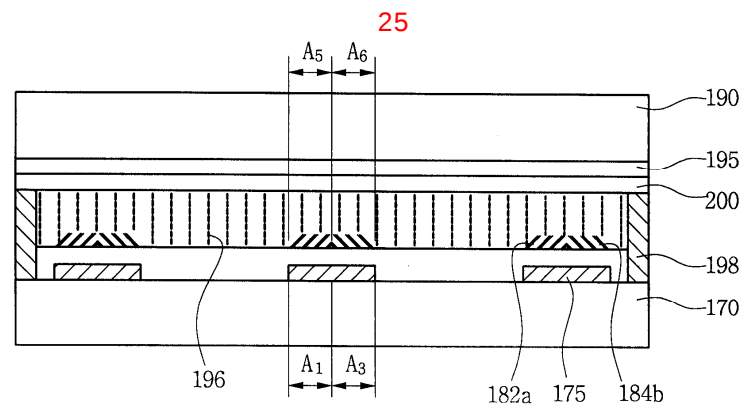


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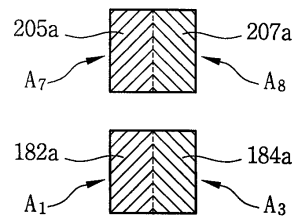


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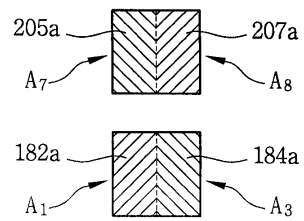




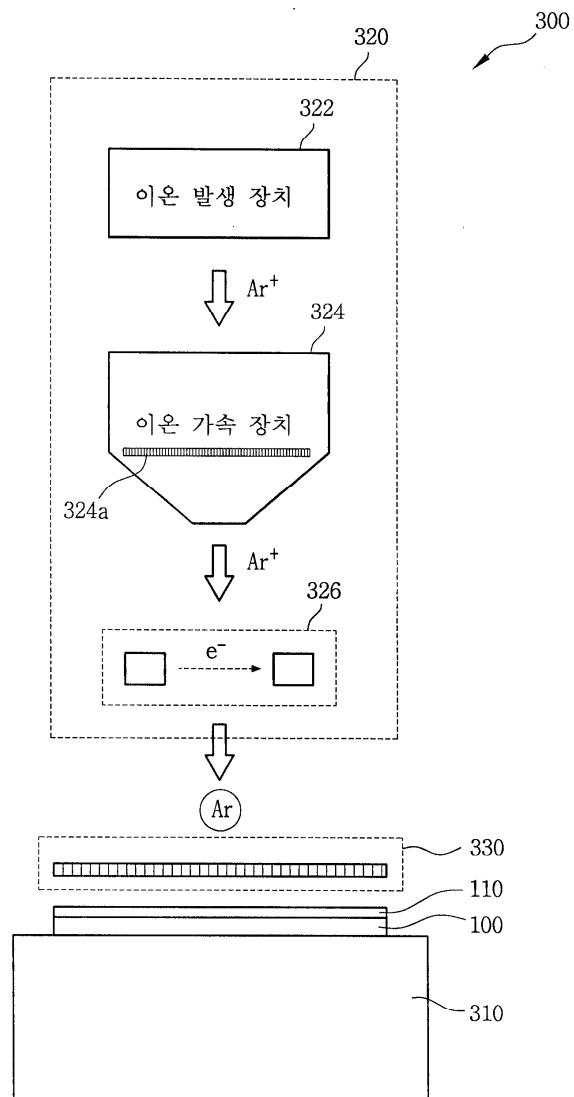
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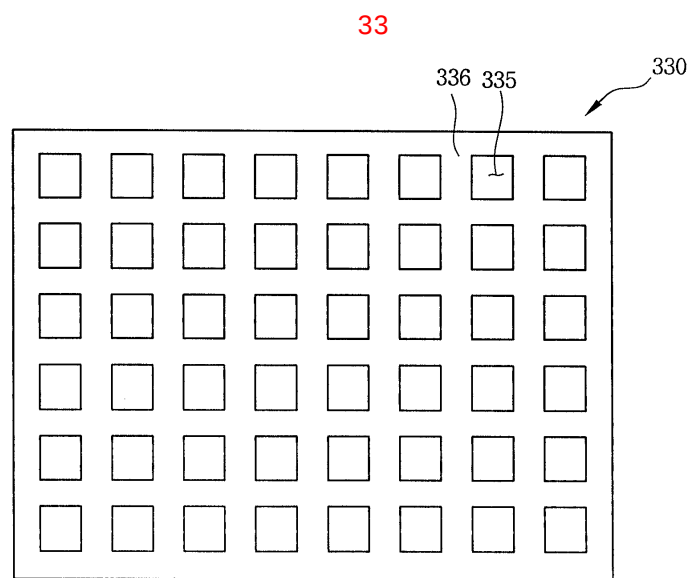
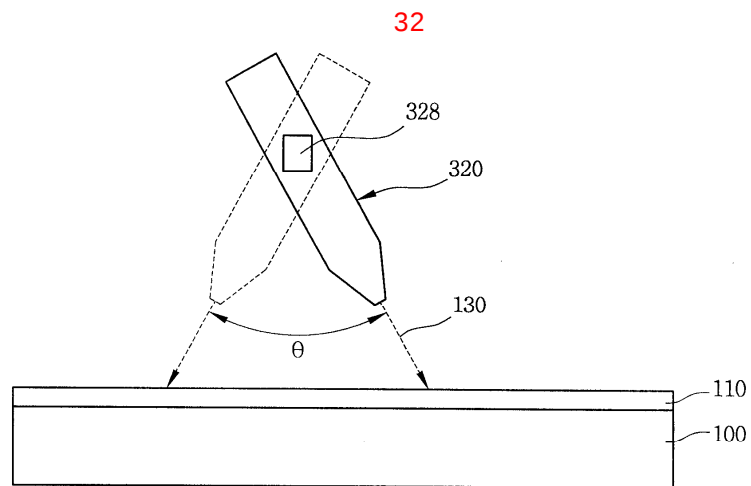


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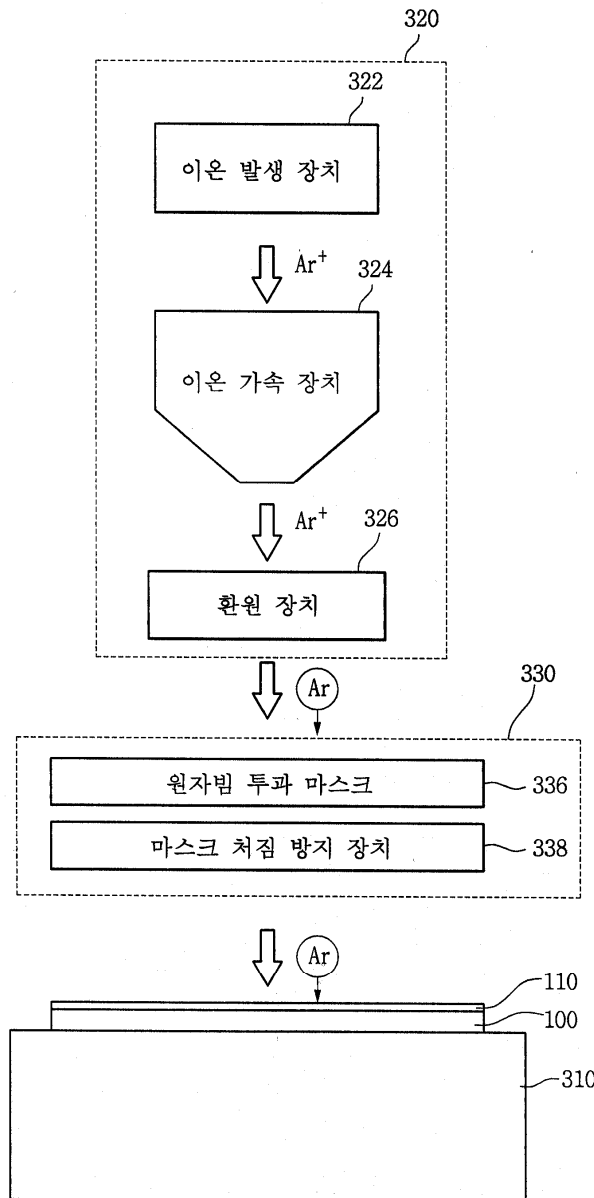


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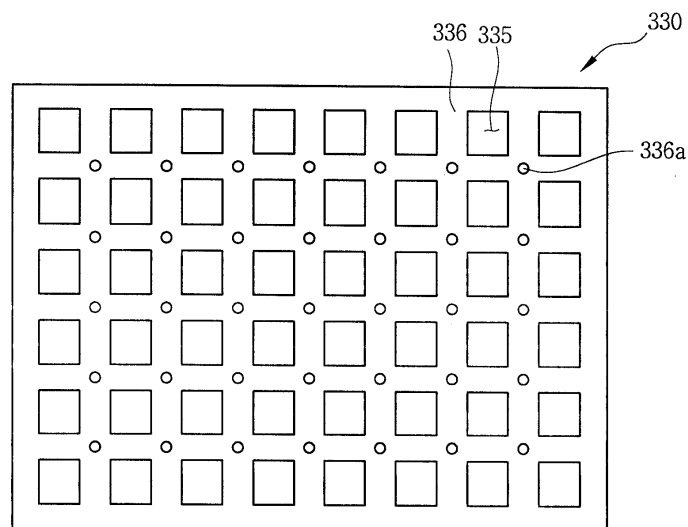




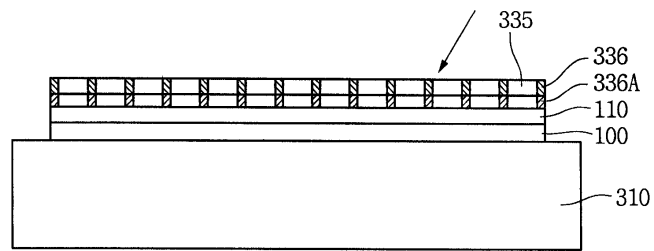
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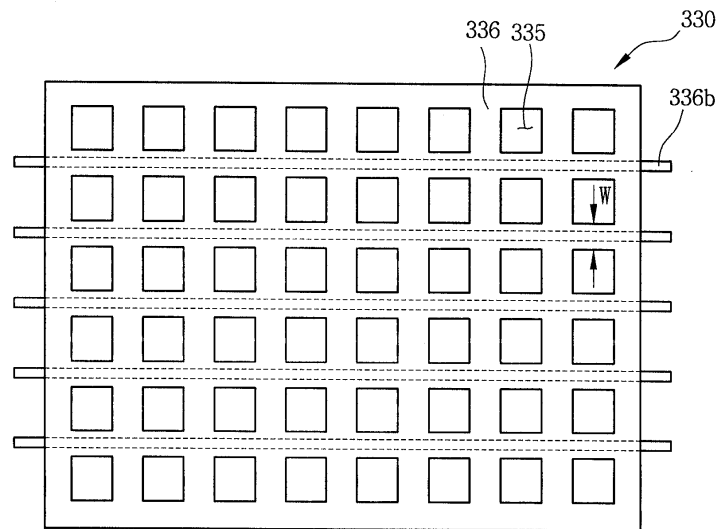
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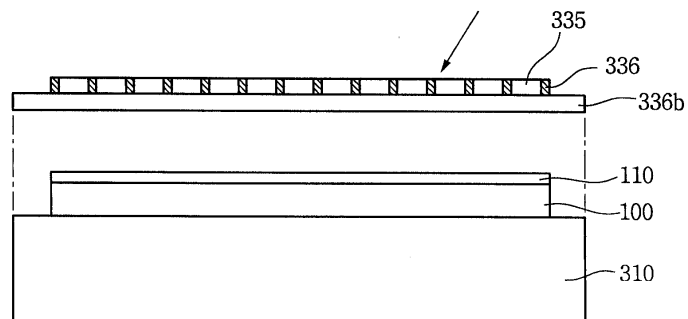
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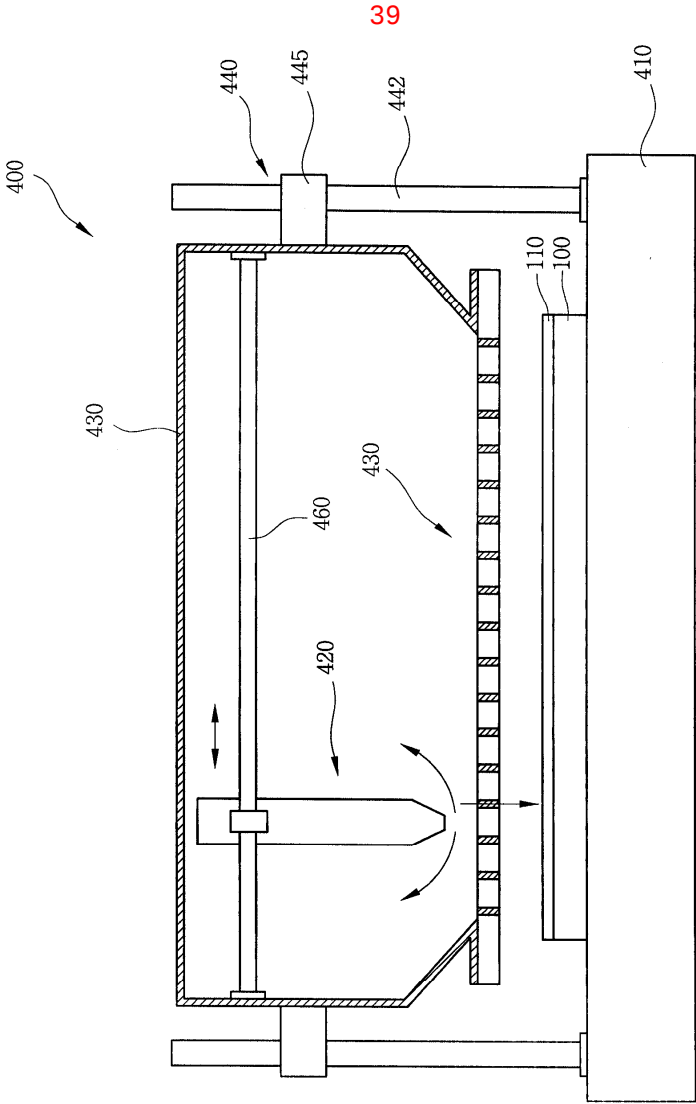


37



38





专利名称(译)	使用原子束在取向膜中形成多畴的方法，使用该方法制造宽视角液晶显示装置的方法，		
公开(公告)号	KR1020040088935A	公开(公告)日	2004-10-20
申请号	KR1020030023382	申请日	2003-04-14
[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	三星电子有限公司		
当前申请(专利权)人(译)	三星电子有限公司		
[标]发明人	CHOO DAEHO 추대호 KIM HAKJIN 김학진 KIM HONGGYUN 김홍균 JEONG HWANKYEONG 정환경 LEE BONGWOO 이봉우		
发明人	추대호 김학진 김홍균 정환경 이봉우		
IPC分类号	G02F1/1335 G02F1/13 G02F1/1337		
CPC分类号	G02F1/133753 G02F1/13378		
代理人(译)	PARK, YOUNG WOO		
外部链接	Espacenet		

摘要(译)

公开了在原子束中形成多个畴的取向层的方法，具有宽视角的宽视角液晶显示器%液晶显示装置的制造方法，以及宽视角液晶显示器%具有宽视角的液晶显示装置和使用该液晶显示装置对准液晶的装置。在基板上形成取向层，以使液晶取向。从对准层的上部面向对准层的第一区域的原子束以第一方向围绕对准层扫描，并且第一区域形成在第一区域上。从取向层的上部面向第二部分的原子束以第二方向围绕取向层扫描，第二畴形成在第二部分上。因此，可以在取向层上更多地形成多个域，进入简单的工艺和快速的工艺速度。液晶显示器和广视角。

