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2004 07 07

(21) 10-2002-0088462
(22) 2002 12 31

(71) . 20

(72) 1 310-1

2 719-22

(74)

:

(54)

, 가 가

,

9

1

2 1 I-I'

3

4 3 ,

5 4 II-II'

6 4 III-III'

7 4

8a 8d

9

10 9 IV-IV'

11 9 V-V'

12 9

200: 201:

210A 210F: 1 6 220A 220F: 1 6

230:

(in plane switching : IPS)

(personal digital assistants : PDA)
 , 가 가 (flat panel display) , 가 (plasma display panel : PDP), (liquid crystal display : LC D), (electro luminence display : ELD) (field emission display : FED), 가

가 가 (twisted nematic : TN) 가 가 가 (refractive anisotropy) 가

(wide viewing angle characteristic)

가 , 가

1

1 , (1) (4) , (3) (3) (4)

(3) (3) (4) 가 가 (11) , (10)가 (11) (10) 가

가 가 가 (13) (12) , (12) 가 (4)
 (14)
 (4) (5) (5) (7)
 (16) (7) (18) (16) (3) (16)
 (16) (18) (storage capacitance)
 (5) (7)
 (1) (10)가 가 (7) 가 가 , (5) (7)
 2 1 I-I'
 2 , 1 (20) (11) , (11) 1 (20)
 (22)
 14) (22) 1 (20) (12) , (12) (13) (
 (passivation layer, 24)
 , 1 (20) (5) (5) (22) (7)
 (4) (5) (7) 가
 , 2 (30) (32) (34) (32) 가
 (,) (34) (Red), (Green), (Blue)
 1 (20) 2 (30)
 (40)
 (3) (5) (1) 가
 ,) 가 (40) (1) (, 1 (20) 2 (30)
 (40) 가
 (1) 2 (30) (, 1 (20)) 가
 (1)
 2 (30) 2 (30) ITO(Indium Tin Oxide) 2 (56)
 (56) (ground) 2 (30) 가
 (56) 2 (30) (overturning) , 2 (30) 2 (30)
 (34)
 , 2 (30) (56) 2 (30)

2 (30) (32) (34)

(34)

3 (robot arm, 101) (56) 2 (30)
(100)가

4 (100) , 5 4 II-II'
, 6 4 III-III'

4 6 (100) (100) 2 (30) (1
00) (110A 110F) ; (100) 2 (30)
(110G,110H) ; (100) (110A 110F)
00) 2 (30) 가 (120A 120F) (110D 110F) (1

3 (100) 1 4 (100A 100D) (100) 1,
(100A,100C) (110A,110D) 1, 3 (100A,100C) (V2)
(100) (V1)

(100) 2, 4 (100B,100D) (110B,110C,110E,110F)
(110B,110E) (100) (V1) (100) 1, 3 (10
0A,100C) (110A,110D) (110C,110F)
(100) 2 (30)

(100) 2 (30) (110G,110H)
(100) (S1)

7 (100) 2 (30)

A 120F) (100) (110A 110F) (120
2 (30) 가

2 (30) 1 4 (30A 30D) , 2 (30) 1 4
(30A 30D)

0) (100) 2 (30)

, 8a 8d , 2 (30) 가 2 (30)

2 (30) 가 0.7t(0.7mm) (100) (110A,110D) (
120A,120D) 2 (30) 21mm , 0.63t(0.63mm) 25mm, 0.
6t(0.6mm) 31mm, 0.5t(0.5mm) 40mm 2 (30) 가 0.5t(0.
5mm) (100)

(100) 2 (30) 가 0.5t(0.5mm) 2 (30) (100) 가
(110A,110D) (120A,120D)

(120A,120D) (120A,120D) 2 (30)
OD) (120A,120D) 가 가 2 (30) 1 4 (30A 3
1 4 (30A 30D)

) (34) (120A,120D) (34) 2 (30) (32)

, 2 (30) 2 (30) 1 4
 (30A 30D) 1 4 (30A 30D) 1 4
 (30A 30D)

1 4 (30A 30D)

1, 2 ; 3, 4 ;

5, 6

9 , 11 9 V-V' , 10 9 IV-IV'

9 11 (200) (230) (230)
 (230) (201) ; (201)
 1, 2 (210A,210B) ; (201) 3, 4
 (210C,210D) ; (201) 5, 6 (210E,210F)
 ; 1, 2 (210A,210B) (230) 1
 , 2 (220A,220B) ; 3, 4 (210C,210D) (230)
 3, 4 (220C,220D) ; 5, 6 (210E,210F)
 (230) (230) ()
 5, 6 (220E,220F)

12 (200) (230)

(200) (201) 1, 2 (210A,210B)
 1, 2 (220A,220C) (230) , (201) 3 6
 (210C 210F) 3 6 (220C 220F) (230) 가

(230)

가 가 가 , 가 (,)

Oxide) , ITO(Indium Tin Oxide) IZO(Indium Zinc 가

(overturning)

12 (230) ()

(200)

4 (230) 1 4 (230A 230D) (230) 1

(230A 230D)

F) (201) 5, 6 (210E,210F) 5, 6 (220E,220 (

230) 1, 2 (230A,230B) 3, 4 (230C,230D)

(230) (201) 5, 6

(210E,210F) 5, 6 (220E,220F)

0.5mm) 8a 8d 가 0.5t(

40mm

(100) 7 0.5t(0.5mm) 2 (30) (100) 가

(110A,110D) (120A,120D)

(120A,120D) 2 (30) (120A,120D)

가 가 2 (30) 1 4 (30A 30D)

1 4 (30A 30D)

34) (120A,120D) 2 (30) (32) (

(34)

1 4 2 (30) 2 (30)

1 4 (30A 30D) 1 4 (30A 30D)

1 4 (30A 30D)

(210A,210B) 12 (201) 1, 2

(230) 1, 2 (220A,220B) (230)

3, 4 (220C,220D) 가 3, 4 (210C,210D)

(230) 3, 4 (220C,220D) (230) 1, 3 (230A,230C)

(230) (230) 3, 4 (220C,220D) (230) (230)

(230) 1, 3 (230A,230C)

6 , (201) (220E,220F) 가 5, 6 (210E,210F) 3, 4 (220C,220D) 가 5,
 , 5, 6 (220E,220F) (230) 1, 2 (230A,230B) 3, 4
 (230C,230D) (230) , 5, 6 (220E,220F)
 1, 2 (230) (230A,230B) 3, 4 (230) (230C,230D)
 , 1 4 (230A 230D)
 , (201) 3 6 (210C 210F) 3 6 (220C 220F)
 (230) (200) ()
 가
 , 880×680mm (230) (200) 690mm , (230) (200
) 210F) 3 6 500mm 가 , (201) 3 6 (210C
 (220C 220F) 80 90mm 가 .

가 가

가

가 ,

가 .

(57)

1.

, ;
 3, 4 ; 1, 2 ;
 ; 5, 6 ,

2.

1 , 1 6

3.

1 , 3 6 80 90mm

4.

1 , 5, 6

5.

1 ,

1 6.

6 7.

6 8. ITO(indium tin oxide) IZO(indium zinc oxide)

1 9. 1 6

9 10.

1 11.

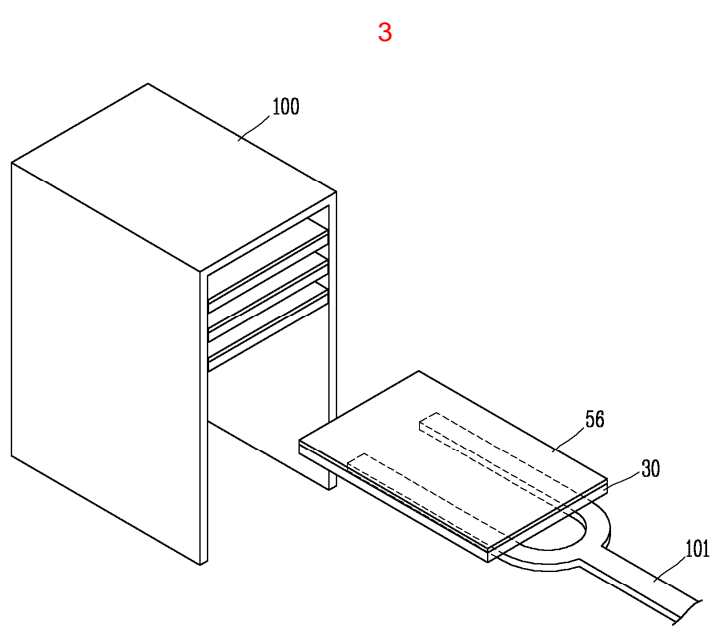
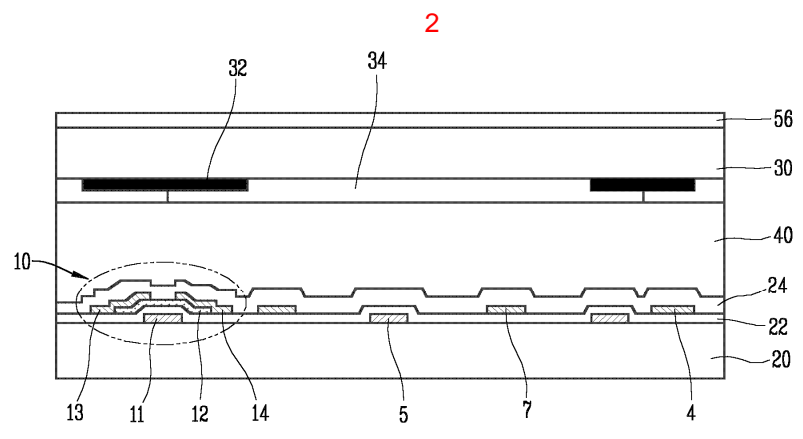
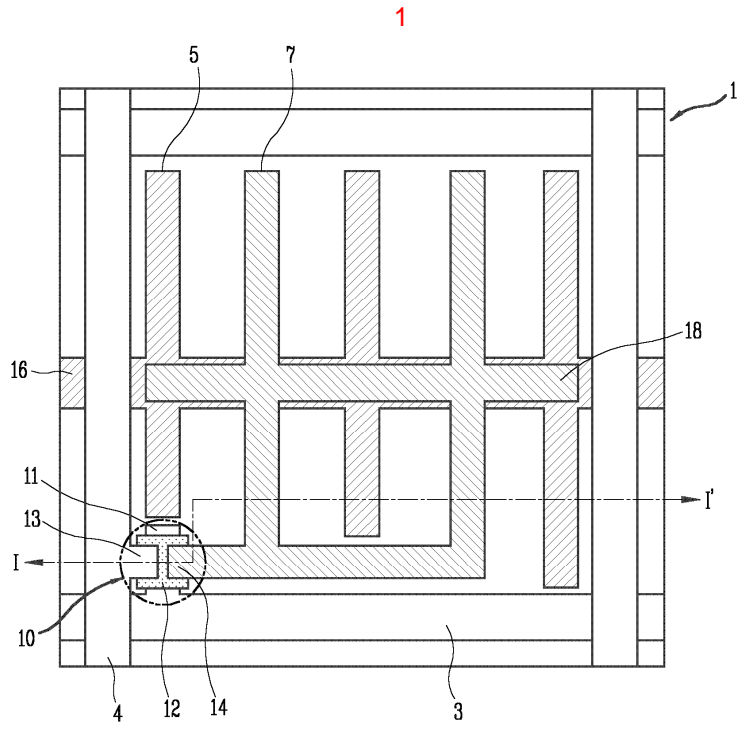
12.

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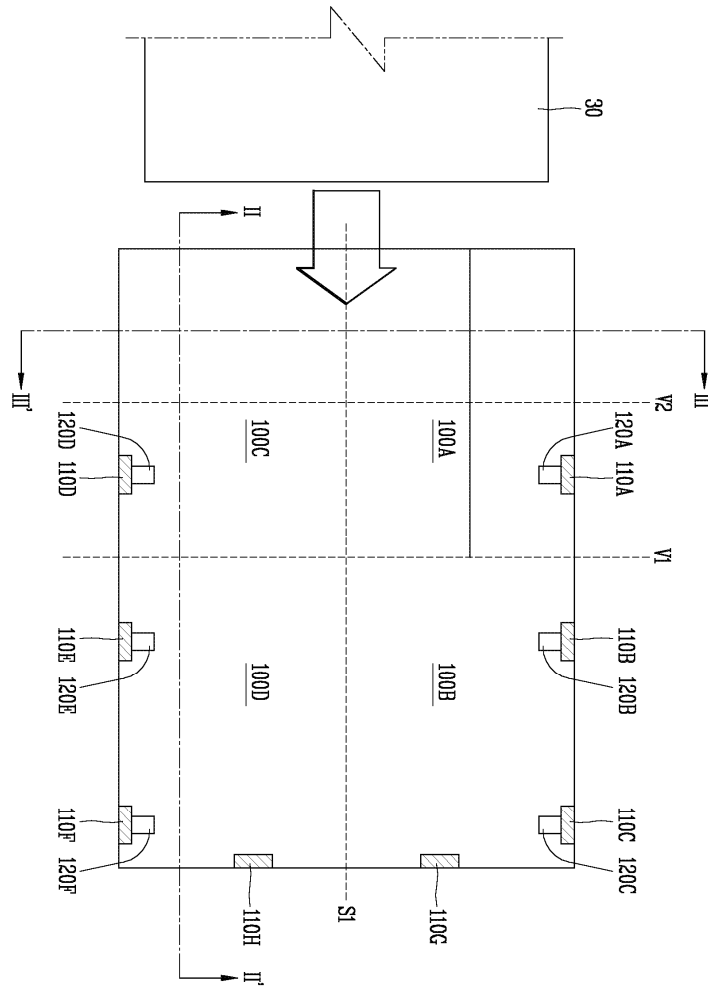
3, 4 ; 1, 2 ;

5, 6 ; 1, 2 ; 3, 4 ; 1, 2

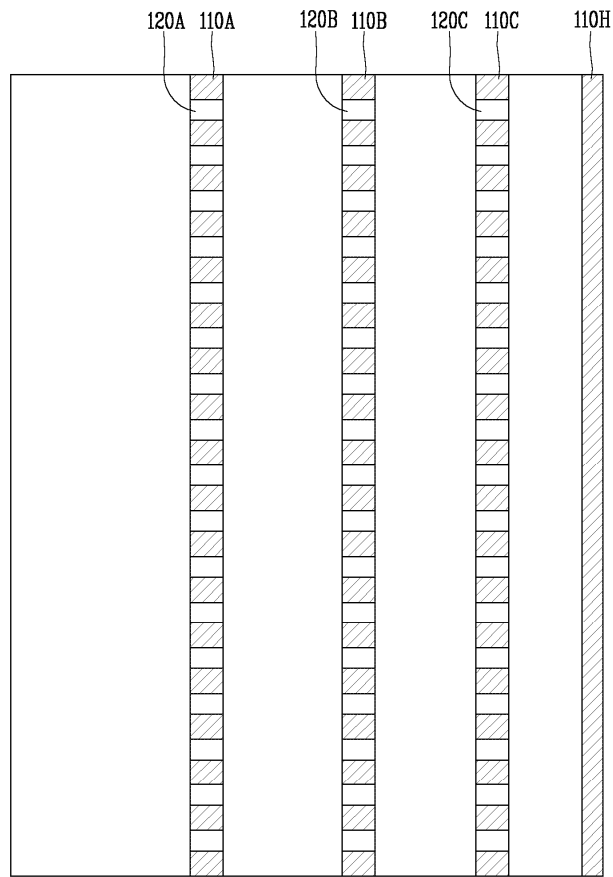
5, 6 ; 3, 4 ; 5, 6 ; 3, 4 ; 1, 2



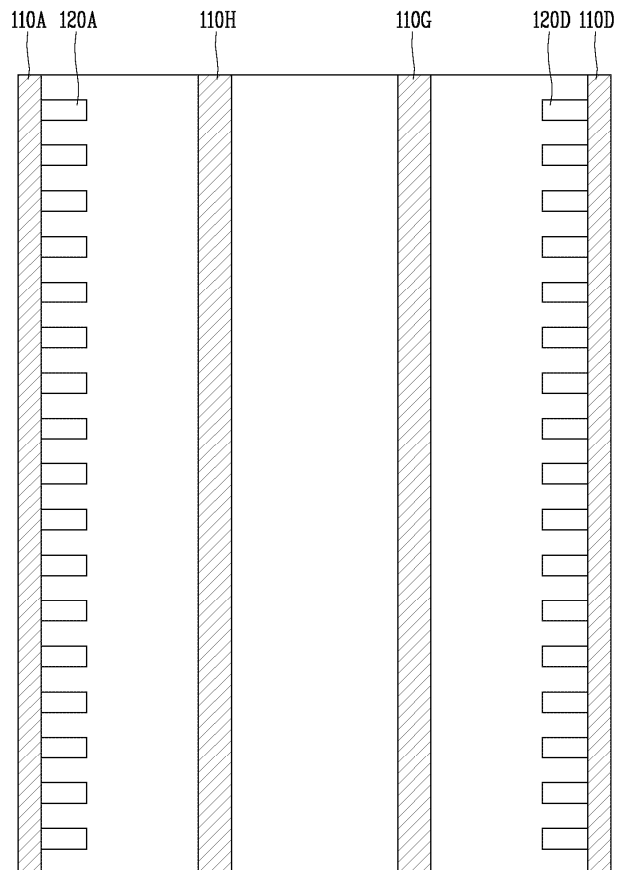
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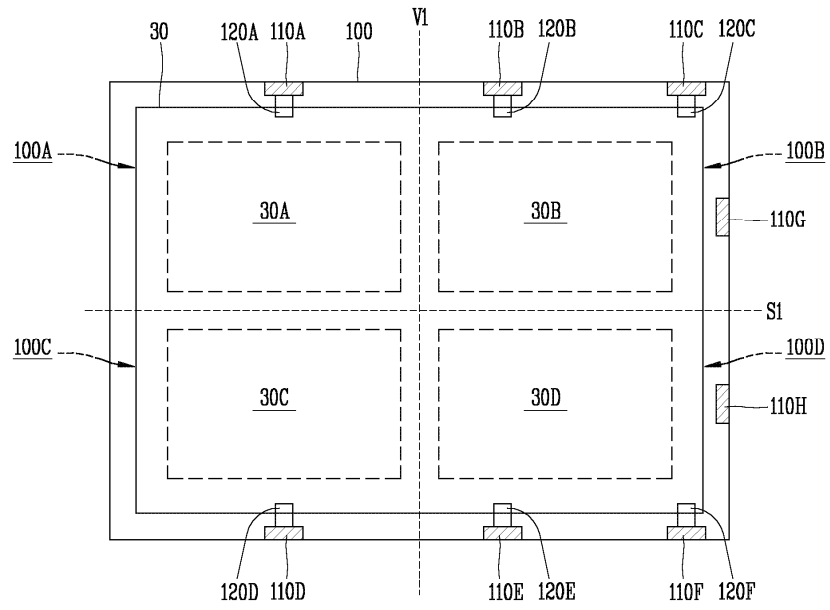
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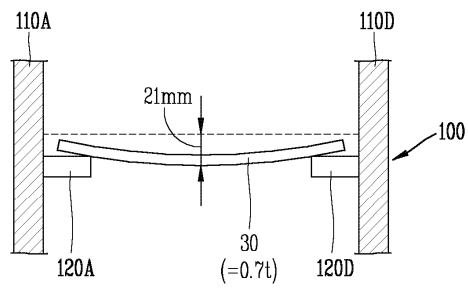
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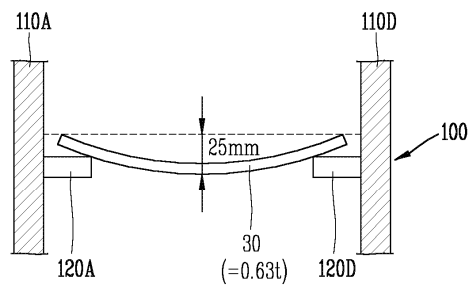
7



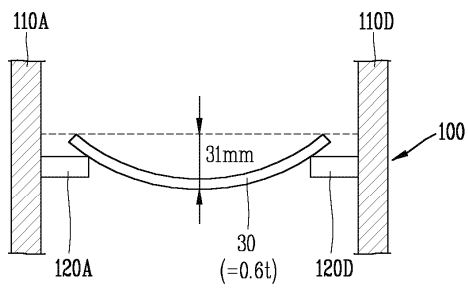
8a



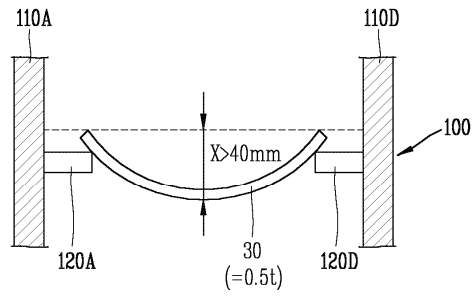
8b



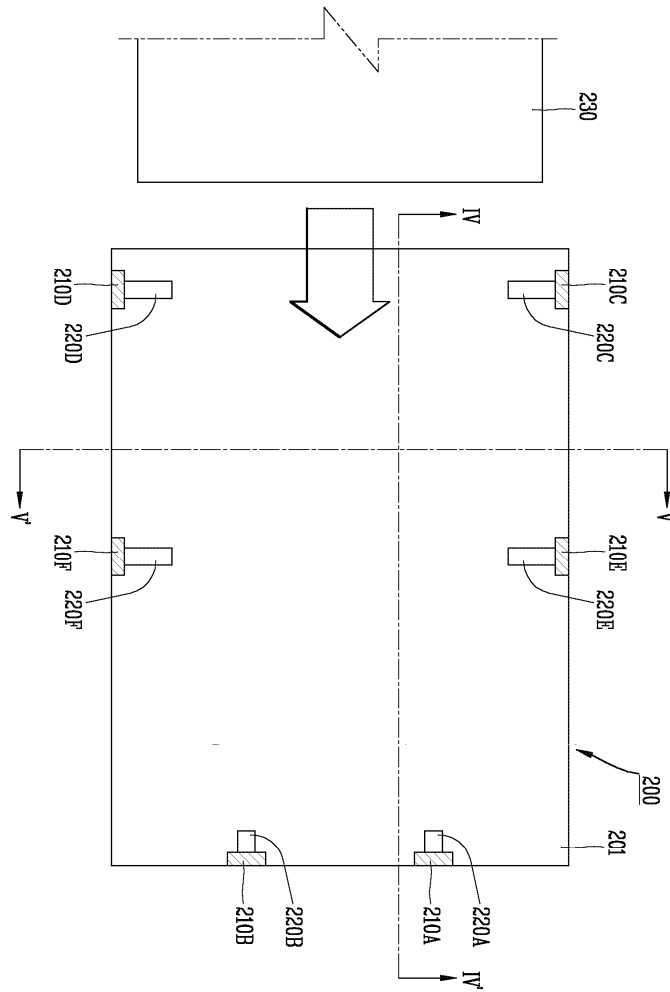
8c

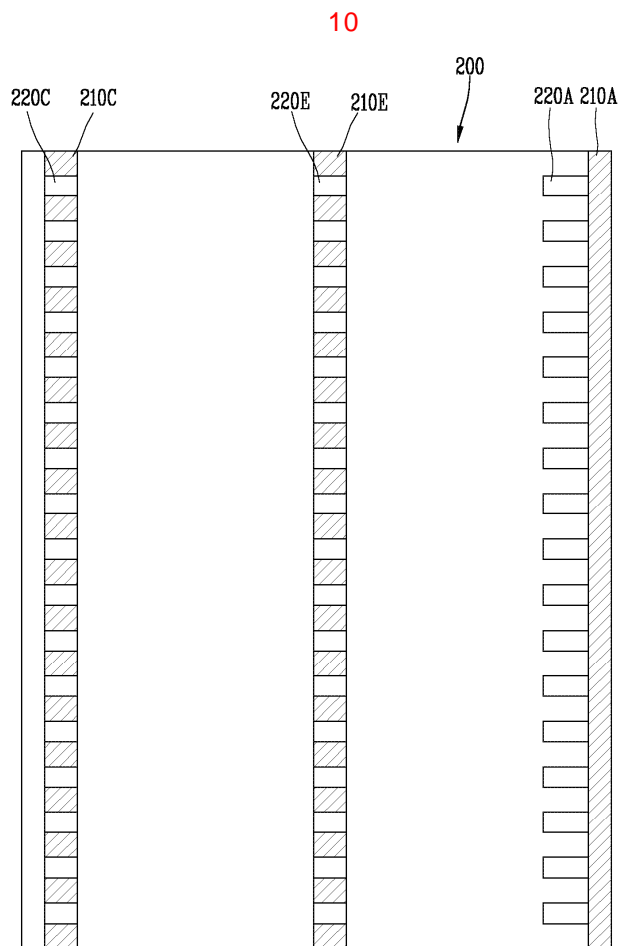


8d

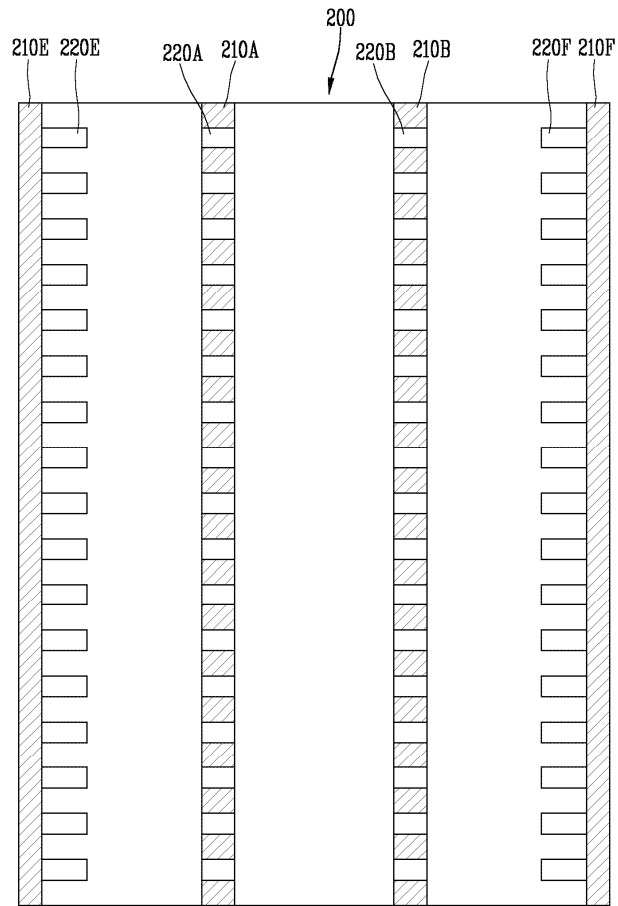


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11



12

