

(19)
(12)

(KR)
(A)

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(43)

2002 - 0065784
2002 08 14

(21) 10 - 2001 - 0005966
(22) 2001 02 07

(71) 3 416

(72) 3 1158 - 3

(74)
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(54)

1	가	2	.	1	2	.	가
				1	2		1
,	1			1	2	,	
1	2		,				가
.	,		.			.	

6b

1

Naofumi Kimura 5,610,741 (: Reflection type Liquid Crystal Display Device with bumps on the reflector)

1999 3 4 1999 - 7093 (:)

1
 1 (195) 1 (193) 2 (195)
 1 (193) 1 (193) 2 (195)
 2 (195)
 1 (193)

가

2000 - 66972 (:) 2000 11 11

2
 5 (295) 1 (291) 1 (290) 가 1 (290) 2 (290)
 a) 1 (290a) 2 (290b)
 1 (290) 2 (195)
 1 (290) 2 (195)
 1 (193) 2 (195)
 2 (195)
 1 (193)

3 2

3 (210) 2 (220), 1 (210) 2 (200) 가 1 (210), 1 (210)
 (210) (230) (pixel) (235) (230) 1

1 (210) 1 (240) 1 (240) (TFT)(245)
 (265), (270) (245) (250), (255), (260), (ohmic)
 (275)
 (245)가 1 (240) (resist)
 (280) (280) (245) (275)
 (285)

(285) (280) (235) (235) (285)
 (275) , (245) (235) .

(235) 1 (orientation film)(300) .

1 (210) 1 (220) 2 (305), (310), (315), 2 (3
 20), (325) (330) .

2 (305) 1 (240) (325)
 (330) 2 (305) , (310) 2 (305)
 , (310) (315) 2 (320) 2 (220)
 . 2 (320) 1 (210) 1 (300) (230)

1 (210) 2 (220) (335, 336)가 1 (210) 2 (220) 2 (220)
 , 1 (210) 2 (220) (230)

3 .

4a 4d 3 4a
 4d , 3 .

4a , 1 (240) , (250) ,
 (250) () 1 (240) (255) .

(255) (insitu) n +
 , n +
 (255) (250) (260) (265)
 . 1 (240) ,

(270) (275) , (250), (260), (265),
 (270) (275) (245)가 .

(255) .

, (245)가 1 (240) 1 3μm
 (280) 1 (210) .

4b , (280) (285) 1 (350) ,
 (280) (275) (285)

(280) (285) (280)

5a 5b 4b (280)

5a (285) 5b (285) (280) (285) (280) (280) (280) (285) (full) 1 (350) (275) /

5) 5 (355) 2 (235) (235) 2 (355) 2 (280) (355) (280) (281) (280) (35) (2) (2) (355) 2 (285) (280) 2

가 1 (280) 2 (281) 2 (280) (275) (285) 가 1 (280) 2 (280) 1 2

(280) 가 (280) 가

4c i), (Cr) (235) (230) (Ag) (281) (280) (Al), (N) (235) (pretilting) 1 (rubbing) (300) (235) (235) 1 (280) (281) 가 1 (235) 1 (290) 2 (295) 1 가 2

(235) (280) (281) 1 (290) (295) 2 (295) (295) 1 (295) 2 (295) 1 (290) (290) (295) 2 (295) 1 (290)

4d , 1 (240) 2 (305) (310),
 (310) 2 (320) 2 (220) , 2 (220)
 1 (210) , 1 (210) 2 (220) , 1 (210) 2 (335)
 (220) , 1 (210) 2 (230) , 1 (210) 2
 (200)가 , 2 (320) (330) (325)
 , 2 (305) (310) 가 .
 , 가 ,
 2 , 1 .

5b , (355) , (280) ,
 (Pin) (Pout) 가 . (rubbing)
 , 가
 , 가
 , 1 2 가 가 가
 , 1 2 가 가 .
 , 가 .

2 : 1 2 , 가 1 ; 1
 1 2 ; 1 2 , 1 2
 1 ; 1 2

가 ; 1 2 ,
 2 1 2 1 ;
 ,
 , 가 1 2
 ,
 ,
 ,
 6a 6b 6a
 A - A
 6a 6b , (700) 가 1 (710), 1 (710)
 0) (730) 2 (720), 1 (710) 2 (720) (730) 1 (71)
 1 (710) 1 (740) 1 (740) (TFT)(745)
 1 (740) (745)
 (750a) (750), (755), (760), (ohmic)
 (765), (770) (775) (775) (775)
 1 (740) (750a) (750c)
 (775) (750b)
 (Cr) (750) 1 가 (740) () , 가
 (Al)
 (Si_xN_y) (755) (750) 1 (740)
 760) n⁺ (750) (755)
 (765)
 55) (770) (775) (750) (765) (7
 (Mo), (Ti) (745) (770) (775) (Ta),
 (Cr)
 (780) (745)가 1 (740) (resist)
 (780) (780) (Pin)

1 () 2 () (Pin) 1
 2 (745) (775) (Pout) (785) (780)

(785) (780) (735) (735) (785)
 (775) , (745) (735) .

(735) 1 (orientation film)(800) .

1 (710) 1 (720) 2 (805), (810), (815), 2 (8
 20), (825) (830) .

2 (805) 1 (740) , (825)
 (830) 2 (805) (810) 2 (805)
 , (810) (815) 2 (820) 2 (720)
 . 2 (820) 1 (710) 1 (800) (730)

1 (710) 2 (720) (835, 836)가 1 (710) 2 (720)
 , 1 (710) 2 (720) (700) (730)

7a 7d 6a 6b .
 7a 7d , 6a 6b .

7a , 1 (740) (Ta),
 (Ti), (Mo), (Al), (Cr), (Cu) (W) ,
 (750a) (750a) (750) (750a)
 (750b) (750c) , (750) (750a)
 - (Al - Cu) - (Al - Si - Cu) .
 (750) 1 (740) .
 (755) .

(755) (insitu) n⁺
 (755) (750) n⁺ (760) (765)

, 1 (740) (Ta), (Ti), (Mo), (Al),
 (Cr), (Cu) (W) () , (770) (7

75) (750), (760), (765), (770) ((755)
 775) (745)가 , , ,

(745)가 1 (740) 1 3μm
 (780) 1 (710) (780)
 (PAC; Photo - Active Compound)

7b (780) (785) 1 (850) ,
 (780) (775) (785)

(780) (785) (280)

8a 8b 7b (780)

8a 8b (780) (785)
 (785) / 1 (850) (780) , 1 (full)
 (775) (780)

2 (780) (781)
 (855) (780)

9 2 (855)

9 2 (855) , (691) 2
 4

91) 9 , 1 (693) 2 2 (855) (6)
 2 (695) 1 (695) (693) 1 (693) 1 (693)
 1 (693) 2 (695)
 2 (695)
 1 (693)

2 (855) 9 , 1

1 1 (Pin)
 (Pin) 2 (Pout) 1

2 (855)

2 (855) (785) (780) 2

, 10a / (775) (785)
 (780) (780) (781)

, 8b (Pin) (781)
 (Pout)

7c (781) (780) (Al), (N)
 i), (Cr) (Ag) (rubbing)
 (735) (735) (800)
 (730) (pretilting) 1
 (835) (780)

(835) (780) (781) 1 (790)
 2 (795) , 1 (790)
 1 (790) 2 (795) , 2 (795)
 (735) 2 (795) 1 (790)

, 2 (795) (735) 1 (790) 2 5 μ m 가
 4 20 μ m

7d , 1 (740) 2 (805) (810),
 (810) 2 (820) 2 (720) , 2 (720)
 1 (710) , 1 (710) 2 (720) (735)
 (720) , 1 (710) 2 (710) 2
 (730)

5) (700)가 , 2 (820) (830) (82
 , 2 (805) (810) 가

10a 10e

10a , (791) 2
 2

10a

10a
 1 (790) 2 (795) 2 (795) 1 ()
 2 (가 가) 1

1 (410) 2 (410b) 1 (410) (791)
 . 2 (405) (405a, 405b, 405c) 2 (405)
 2 (410a, 410b) (405a, 405b, 405c) 가 가 1
 5b, 405c) (406)가 . , (405a, 40

(406) (400) . , 가 1 (410a) 2
 (410b) 가
 가 (406)
 (370) . , 1 (410) .

10c 10e . 10c
 1 (790) 2 10d 1
 (790) 2 10a (790b) 1 1
 1 1 1 2 13a 13d
 1 1 (790a) 0.5 (790b) 13a

, , 가
 . , , 가
 1 2 . , , 가
 , 2 1 2 가 1
 , , ,

, , 가
 . , , 가
 1 2 . , , 가
 , 2 1 2 가 1
 , , ,

가

(57)

1.

가 1 ;

1 2 :

1 2 ;

, 1 2 , 1 2 1 2 1 2 ;

1

2.

1 , 1 2 , 2

3.

1 , 1 가 , 2

4.

1 , 1 1 1

5.

4 , 1 2

6.

4 , 1 1 , 2 2

7.

6 , 2

8.

6 , 2 2 2 2

9.

6 , 1 2

10.

9 , 2

11.

2 , 2

12.

1 2 , 1 2 ,

13.

가 ;

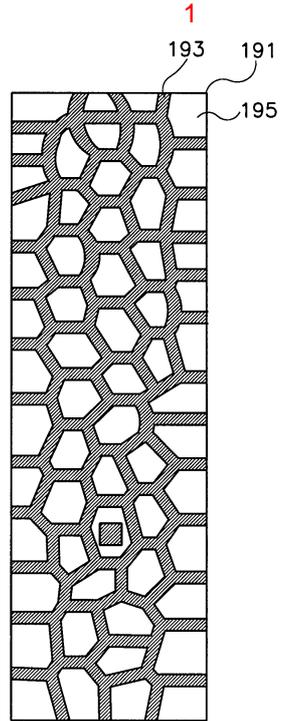
2 , 2 1 2 2 1 ;

14.

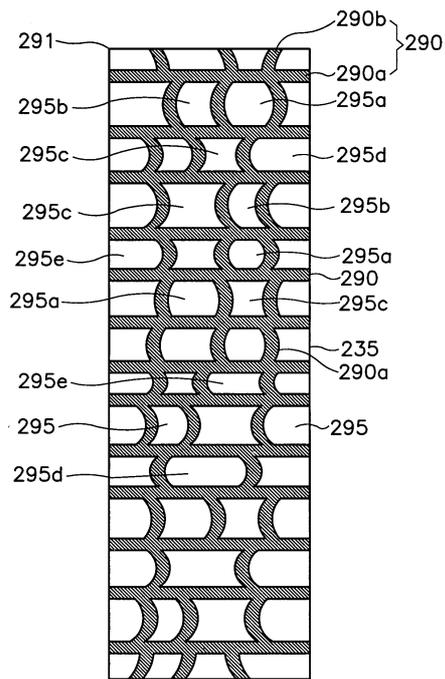
13 , 1 , 2 , 2 , 1 2

15.

13 1 , 1 , 1 1 , 2 , 2 2

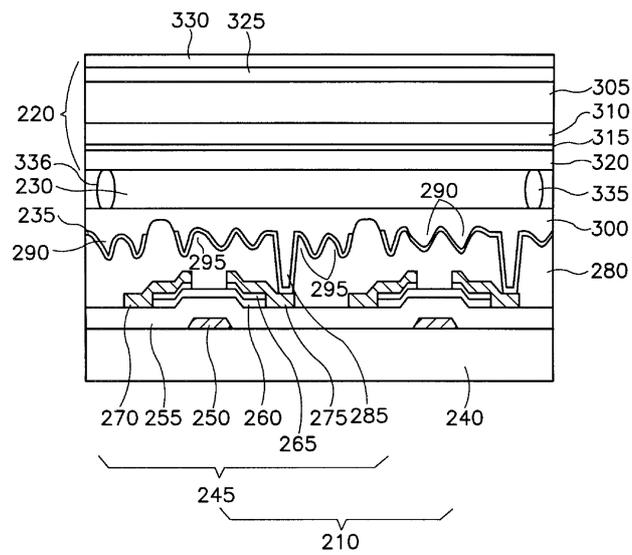


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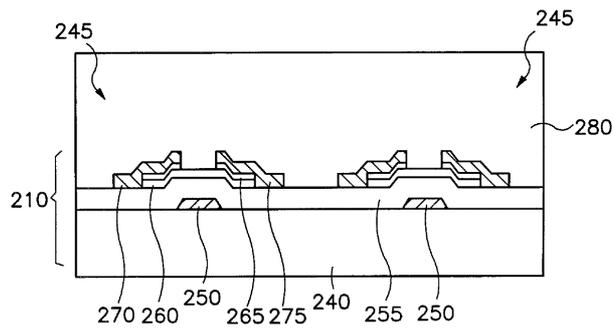


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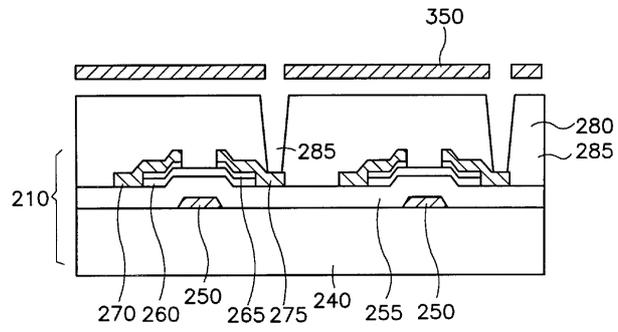
200



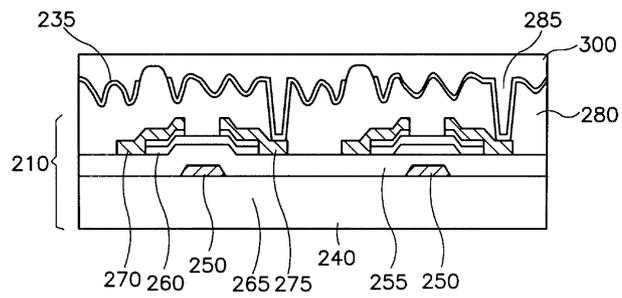
4a



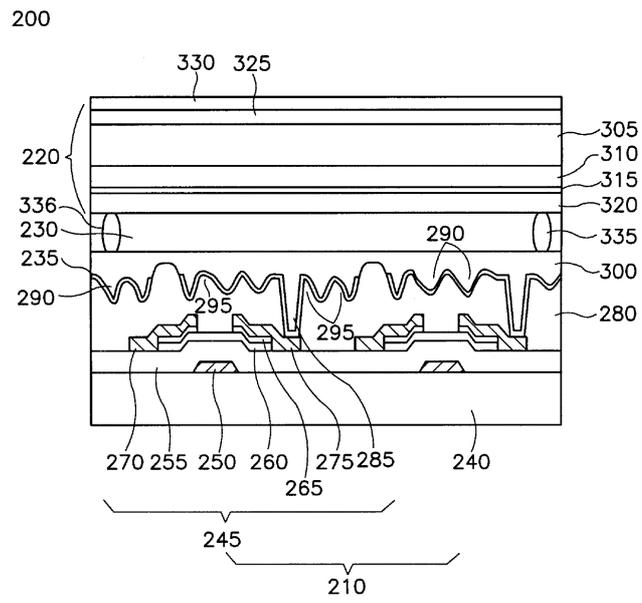
4b



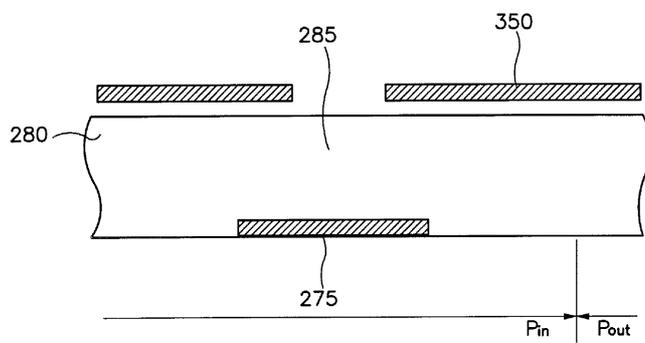
4c



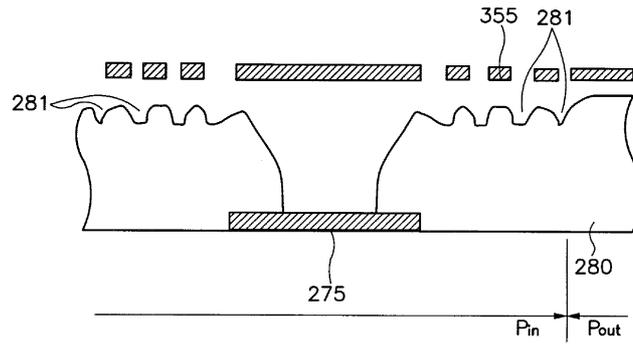
4d



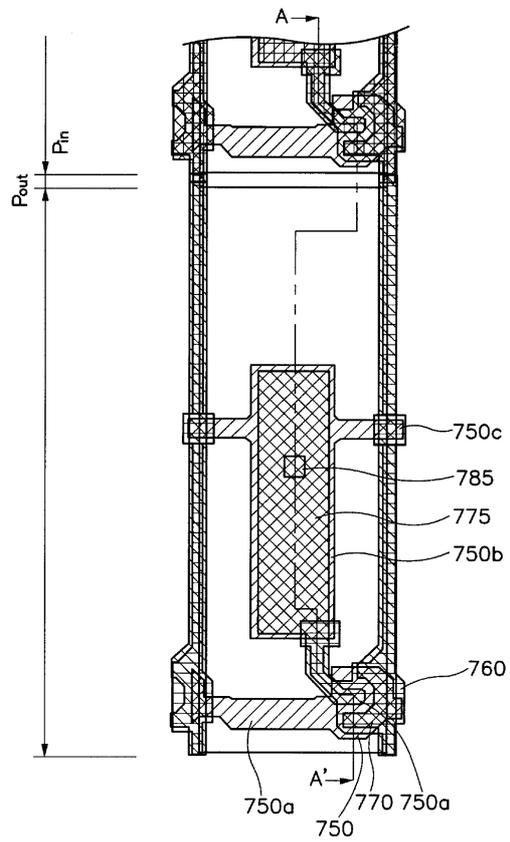
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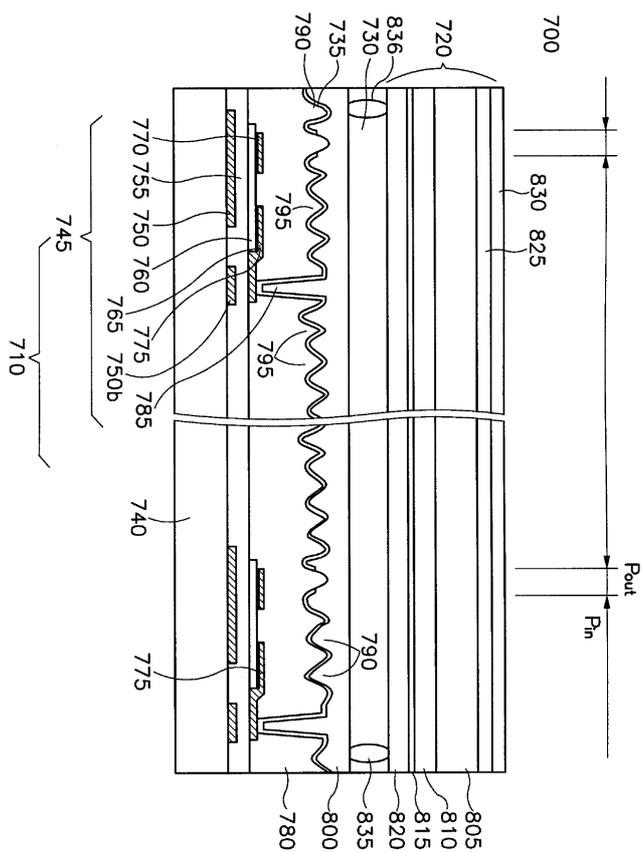
5b



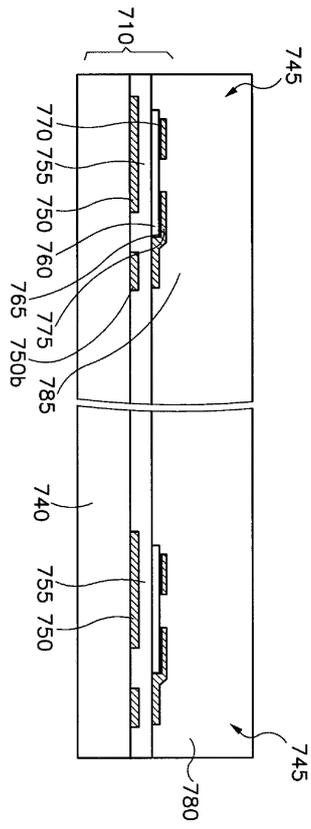
6a



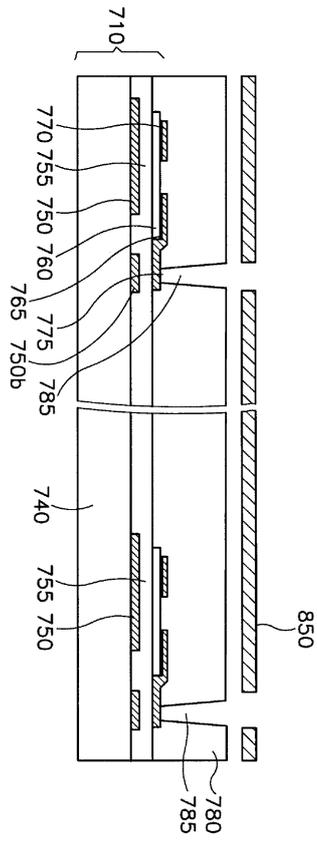
6b



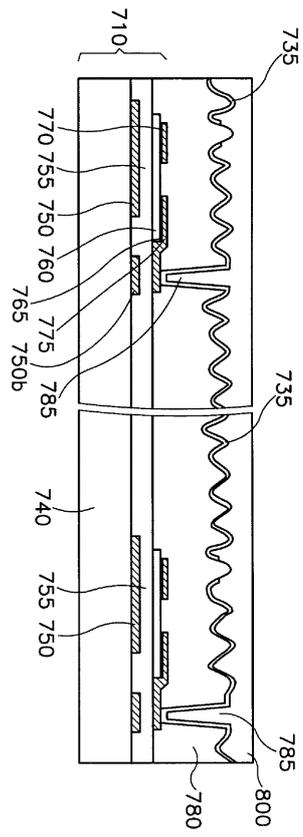
7a



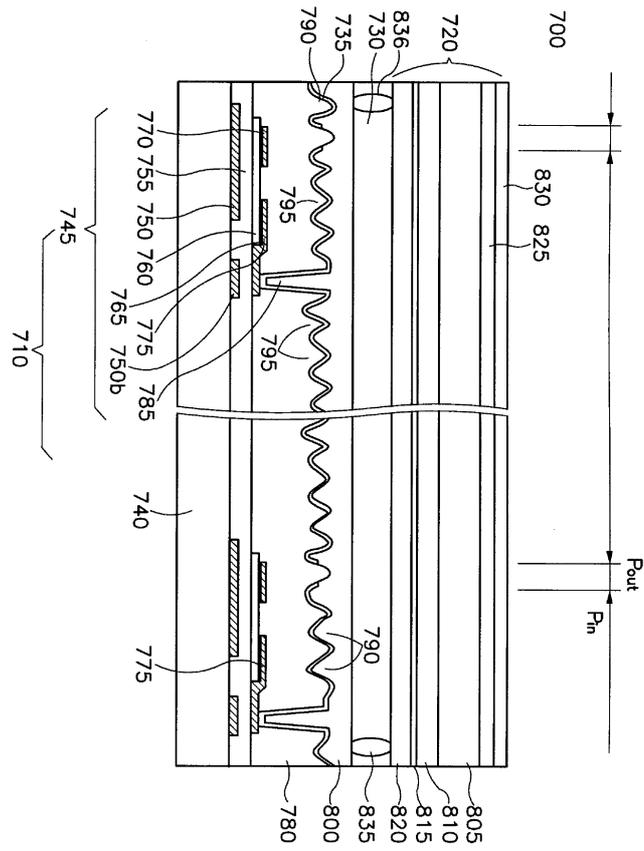
7b



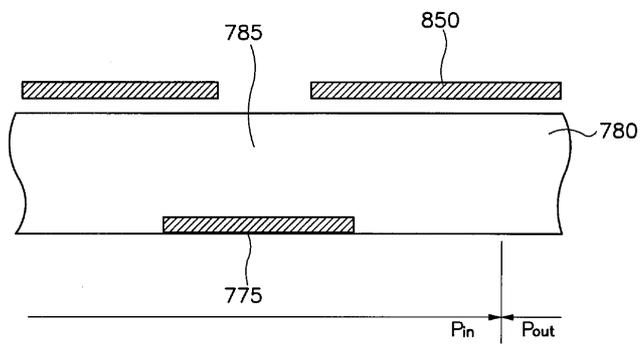
7c



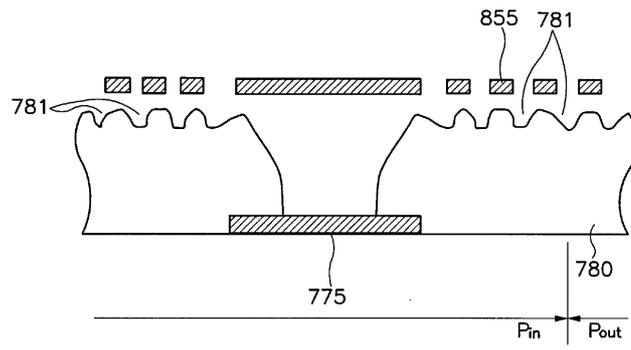
7d



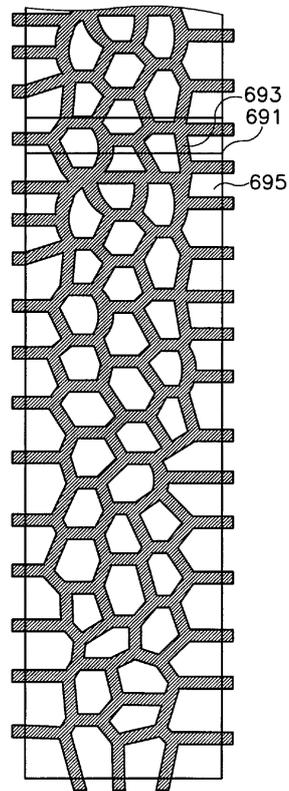
8a



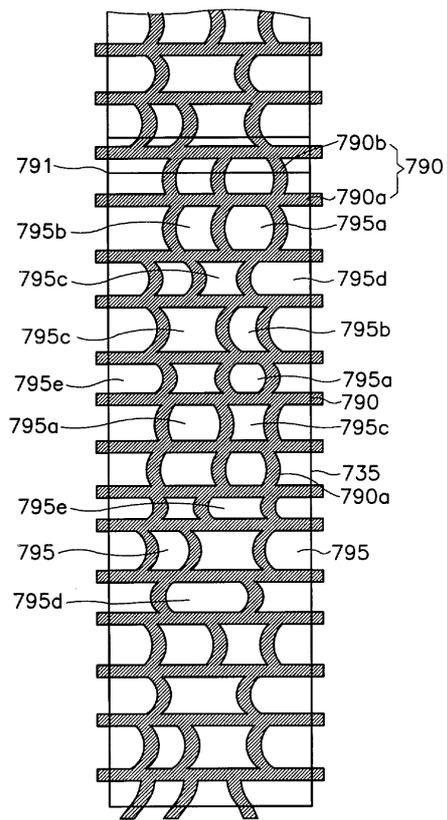
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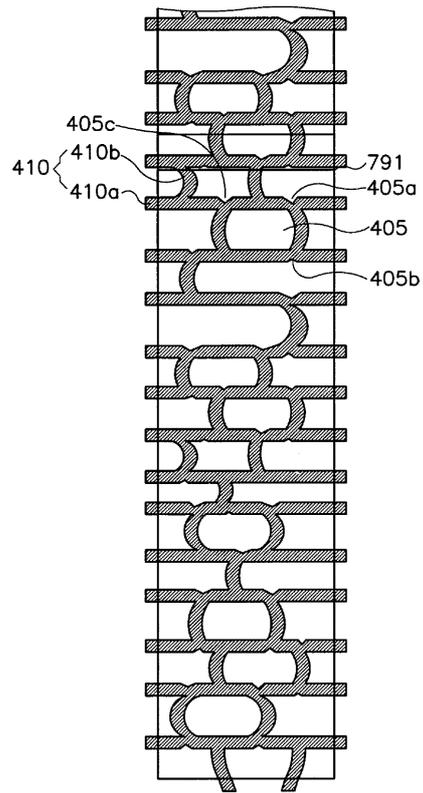
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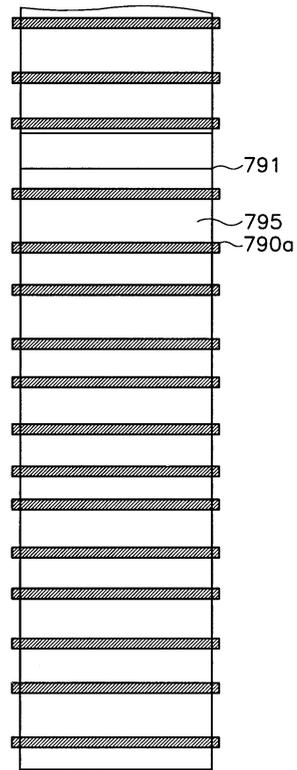
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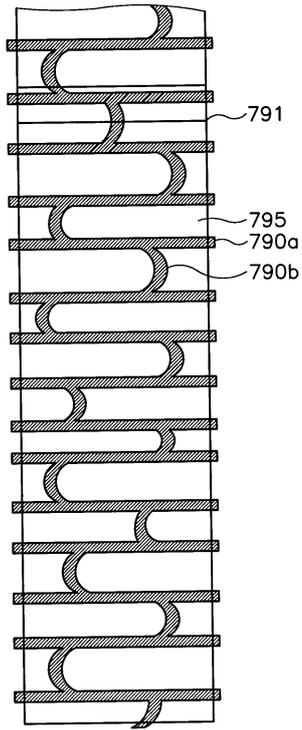
10b



10c



10d



10e

