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(12)

(KR)
(A)

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(43)

2001 - 0062339
2001 07 07

(21) 10 - 2000 - 0075431
(22) 2000 12 12

(30) 11 - 356736 1999 12 15 (JP)

(71) 가 가
가 가 398

(72) 가 가 398 가 가
가
가 가 398 가 가

(74)
:

(54)

(1) (101) 가 가 (2) (107) (102)가
(105a, 105b) PWB (1) (107) PWB (2) (110)
PWB (110) (103, 104) (103, 104)

- 1 ,
- 2 ,
- 3 ,
- 4 EL ,
- 5 EL ,
- 6 EL ,
- 7 EL ,
- 8 ,
- 9 .

() 가 ,
 EL(Electro Luminescence) (EL)

EL (EL) (EL)
 . EL , 가
 가 , EL , (輕量),
 가 .

EL , EL EL 가 . EL
 가 , EL 가 EL 가
) , EL (IR
 가 , EL 가

around distance)가 , EL , (draw -

A_1, A_2, \dots, A_N " n" 가 2 EL . 201
 , 202 , 203 TFT(204), (205), TFT(206)
 , EL (207) (201), (202), (203)

(301) 1 (300)
(301) (306) , (330) 가 (305) (305) 가
(305)

3B , 310 2 (311)(

, 312 (313) (314) , (314) (311)
(315)

(311) (313) (311) 2 (310)
(330) 가 가 (312)
312) 가 (312)

(320) , 1 (300) 2 (310)
(331) (330)

1 (300) 2 (310) (307 314) (3
30)

(320) (330) (空隙)
5μm 1mm (10 100μm).
(320) 가

가 (가 , 가 , 가 , 가) 가 (330)
(320) (321)

, PVC(polyvinyl chloride), PVB(polyvinyl butylal),
EVA(ethylenevinyl acetate)가

가 (321) ()

(312) , (305) (312)
) 가 EL

[1]

1 , EL 4A 4B
4A EL 가 (4B 400) , 401
, 402 , 403

, 404 , PWB (405) . 406 1
 (404) , 1 (406) , (4B 407)
 (400) (4B 408) (407) 가

409 PWB (405) (400) (410a
 410c) . FPC(Flexible Printed Circuit)(411)
 PWB (405) , (409)

4A A - A' 가 4B . 4A 4B ,
 00) . (403) EL 4B , (403) (401) (4
 TFT(431) (401) N TFT(433) P TFT(434)가 CMOS .
 (432) (1) EL
 (435) (436a), (436b) ()
 EL (432) (遮光) (1)
 (437)
 (436a 436b) ,
 가 ,
 가 ,
 1 , (437) , (410a 410c)
 (410a 410c) (440a 440c) PWB (405)
 0a 410c) FPC(411) . FPC(411) , (41

1 , 1 (406) (同類) , (spacer)(
) (404) 1 (406) (散布) (407)
 (400), (404), 1 (406)
 가 가 1 ,

, (照射) 가 (407) , 1 (406) (
)가 , 2 (412) 1 (406), (404), FPC(411)
 (塗布) . 2 (412) 1 (406)
 (407) EL , EL 가
 가 , 가 EL

[2]

2 , EL 5A 5B
 5A 5B 5A A - A' .

5B , 501 , 502 , 5A 5B
 2 , (502) (evaporation) .

(503) (502) , (503) (5
 02) (502) , (503)
 (patterning) .

(503) (504)가 (504) (502)
 (504) 가 (taper) .

(505) (506) (505) (505)
 가 (505) (506)
 (505) .

(506) (504) (506) (505) (506) (505)
 .

(505) (506)
 , PEDOT .

, EL 가 (505) (光) (501) 2 ((501)
)

(502) 1 (507) (508a 508b) (510)
 PWB (511) 2 , PWB (511) (510)
 (511a), (511b), (511c) 3 . 1
 (510)

(511b) , 5A , (510) (511a)
 (510) (511a) (502)
 (511c) (506) , (510)
 (511a) FPC(512) .

2 , (501) (510) (513) (513) 가
 (514) EL (515)가 (510)
 , EL .

(513) EL , EL 가 가 , EL
 가 .

가 EL 가 .

[3]

3 1 EL 6
 (400) TFT EL 4A 4B . ,

(437) 1 (601) (601) (437) 50
 500nm (601) , EL 가 , (vapor - phas
 e deposition) 150 .

EL 3 (601) , EL (601)
 , 4A 4B , 가 EL 3 EL 가 (407)
 , 3 , EL 가

(410a , (602a 602b) (603) PWB (604)
 410c) , , (400) 가 . (603)

(601) EL , EL 가 가 ,
 EL 가 .

가 EL 가 .

3 1 .

[4]

4 1 EL 7
 (400) TFT EL 4A 4B .

4 , EL 4A 4B 가 (4) (702)
) () (701) , (4) ()

EL (704) 1 (703) (705) 가 ()
 706)가 . (704) , , , , ,

9) (400) (via hole)가 (707a 707b) (708a 708b) (707a 707b) (707b)
 PWB (710) PWB (710) FPC(711) (707b)
 12 (400) (709) .7
 (712)가 가 가 가 EL
 가 4 , 가

[5]

EL (FED) 가 1 가 4 EC(Electro Chr
 omic) , 가 가 가

[6]

가 가 가 , T
 V , 가 가 20 60 ,
 , TV , 가

, 가 (goggle) (),
 (, (,), 가 (,
 (DVD) , 가 ()
 , EL , 가 8 9 .

8A (2001), (2002), (2003) 가 가
 (2003) . 가

8B (2101), (2102), (2103), (2104), (2105), ()
 2106) (2102) .

8C (2201), (2202), (2203), (2204), (2205), (2206)
 EL () . (2206)

8D (2301), (DVD)(2302), (2303), (a)(2304), (b)(2305)
 , 가 (, DVD) . (a) (a)
 (b) . 가 (b) 가 가 (a)

8E (2401), (2402), (2403), (2404), (2405)
 . (2405)

8F (2501), (2502), (2503), (2504)

(輝度)가

가

가 가

9A (2601), (2602), (2603), (2604), (2605), ((2606) (2604)

9B (2701), (2702), (2703 2704) (2702) 6

6

[7]

가 가

가 가

가

가

가

가

가 가

가

가

CMOS

, CMOS

CCD(charge - coupled device)가

가

CCD 가

가

가

CCD CMOS 가

가

가

6

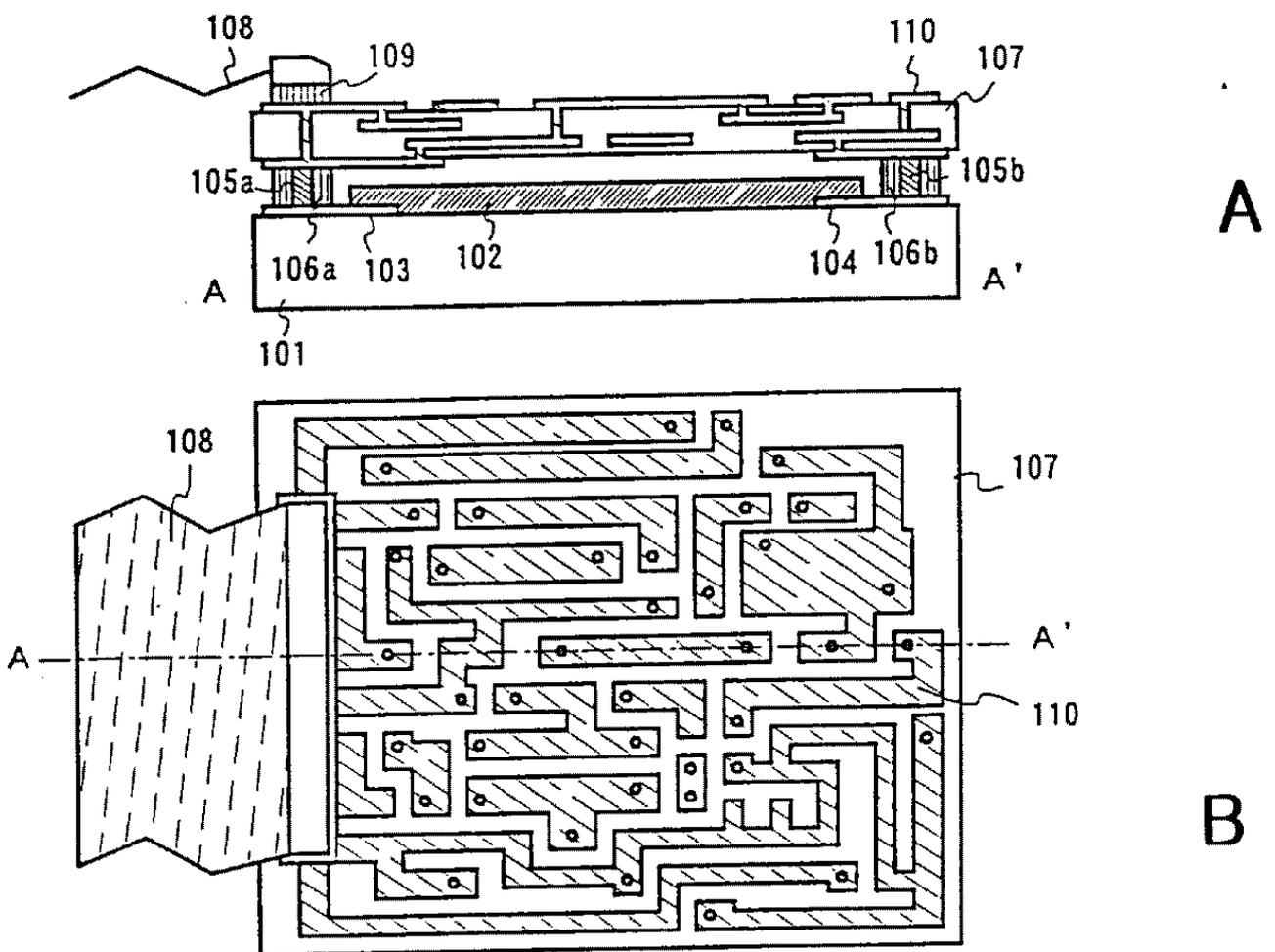
17.

13 , 2 2 , ,

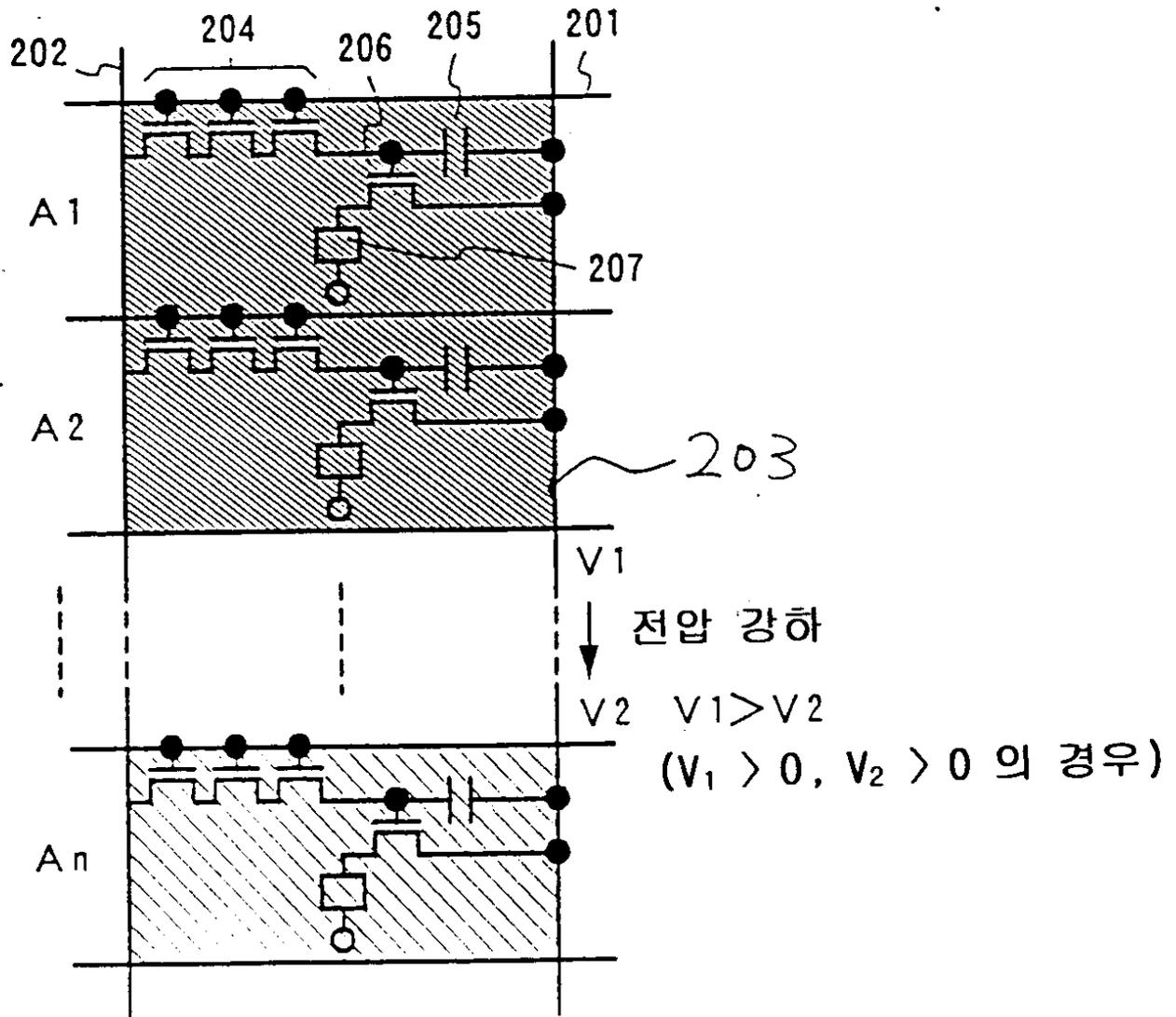
18.

13 , 2 가 2

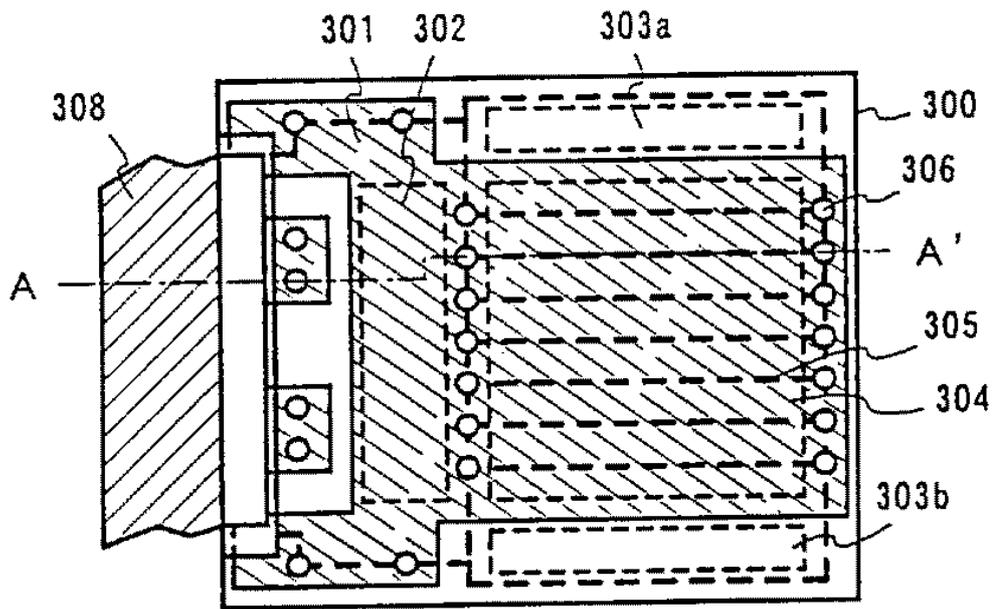
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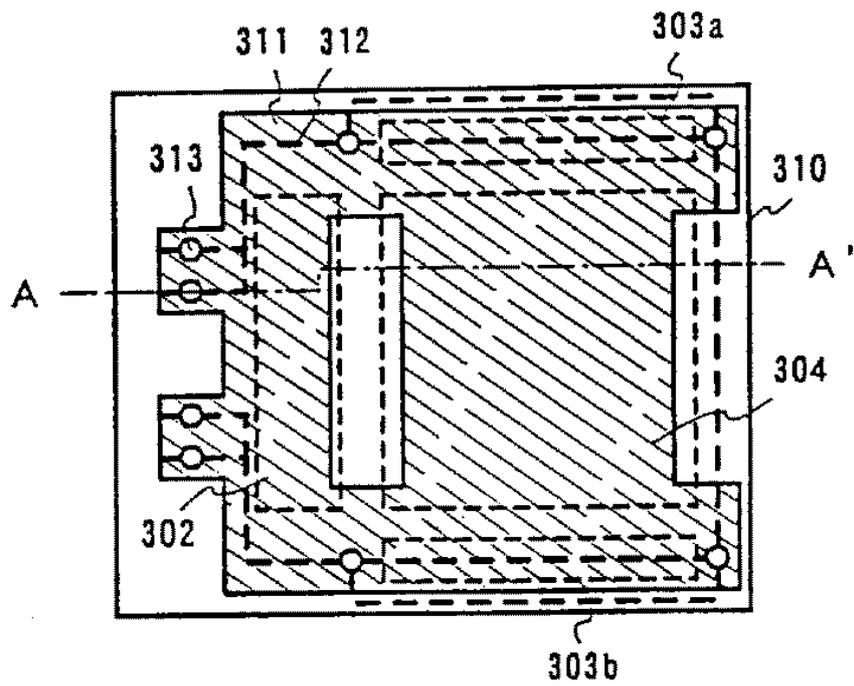
2



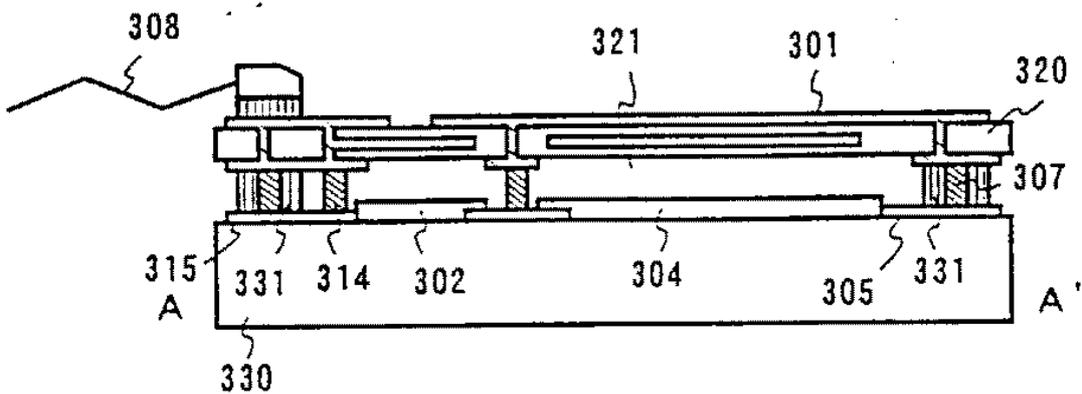
3



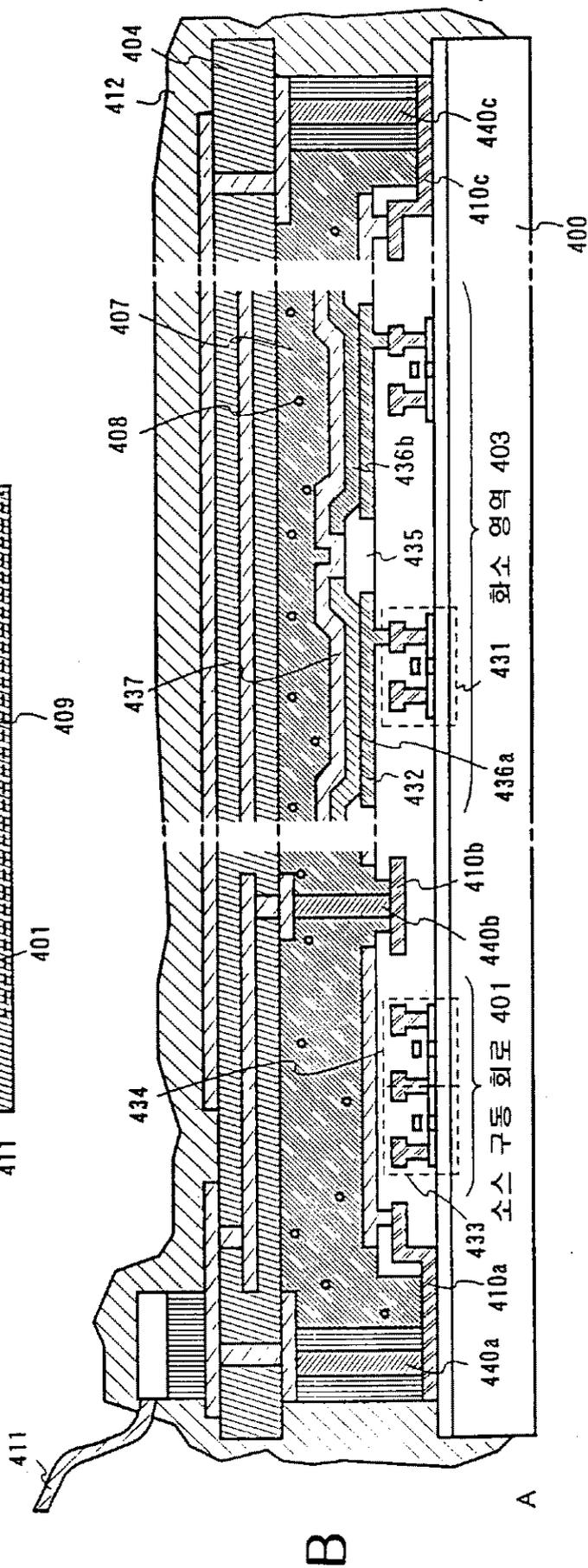
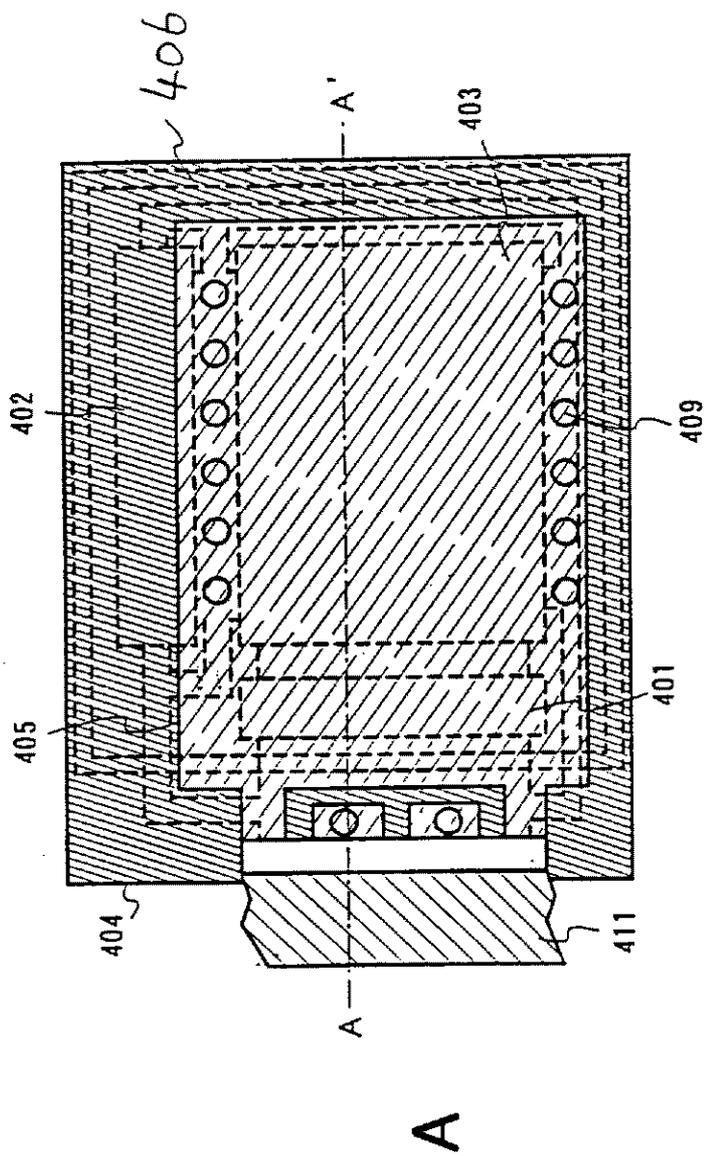
A



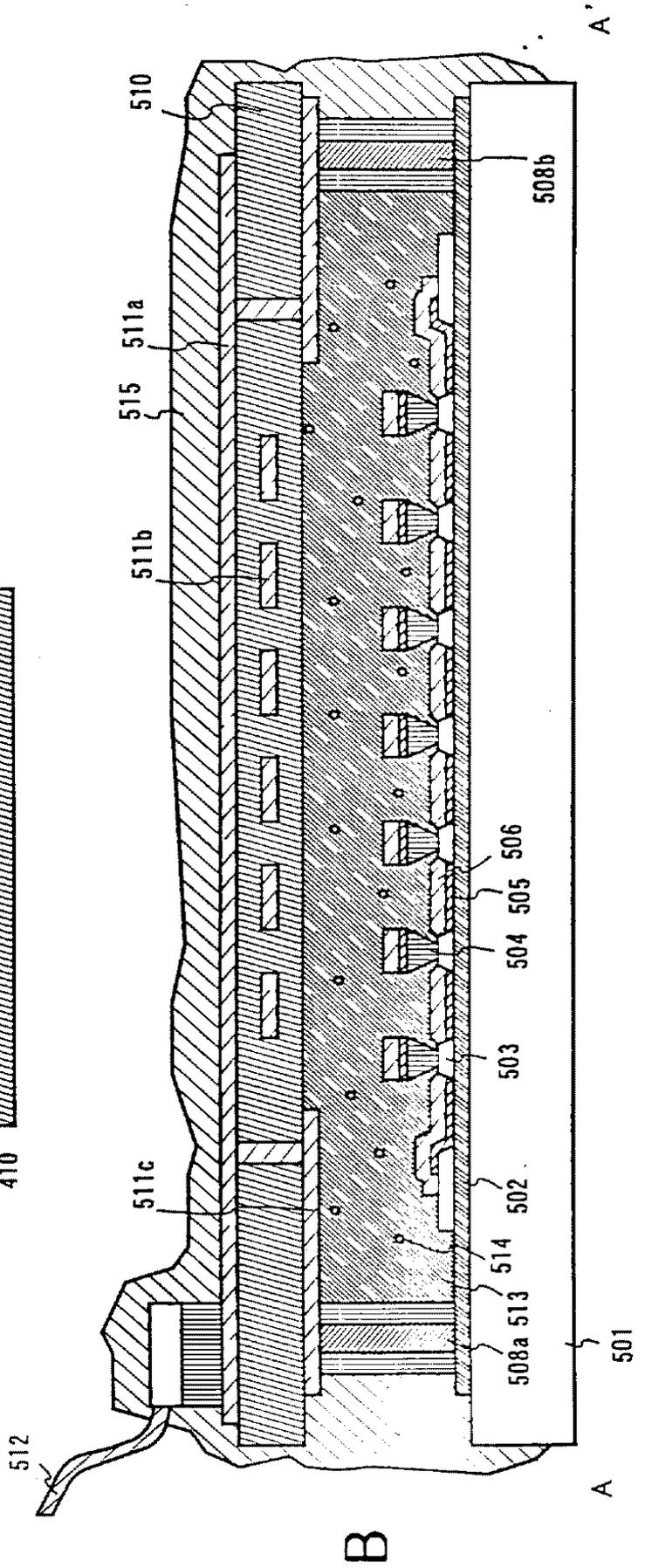
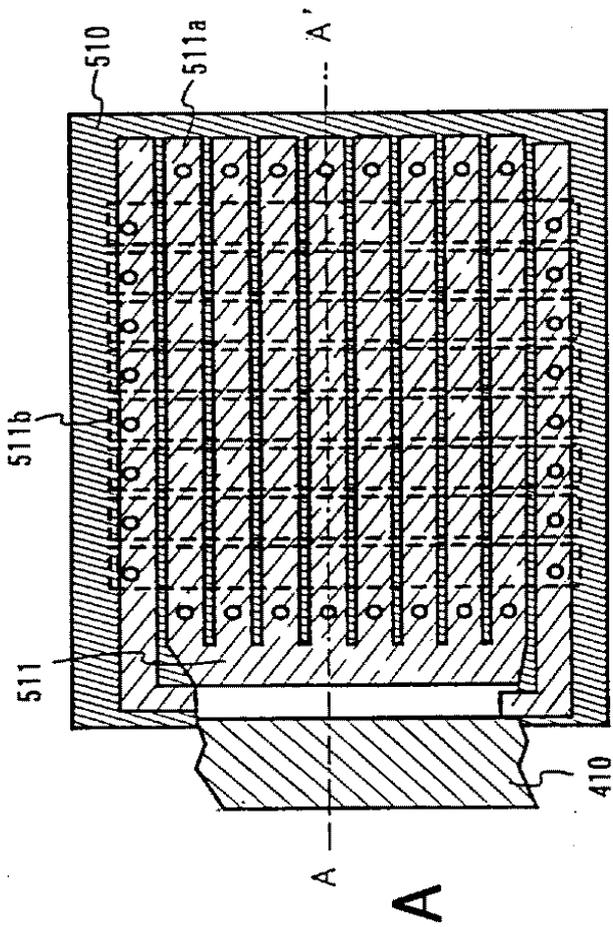
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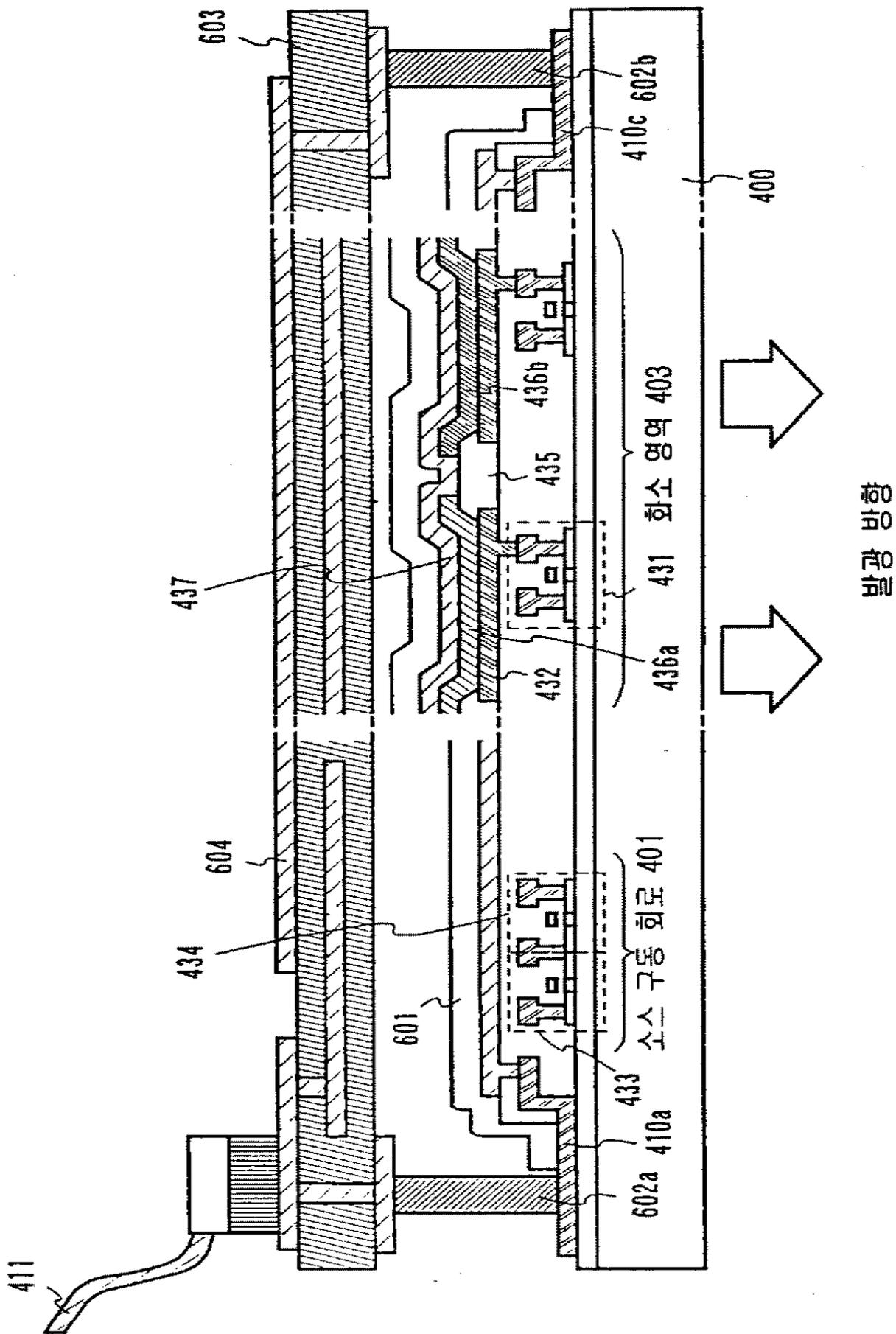


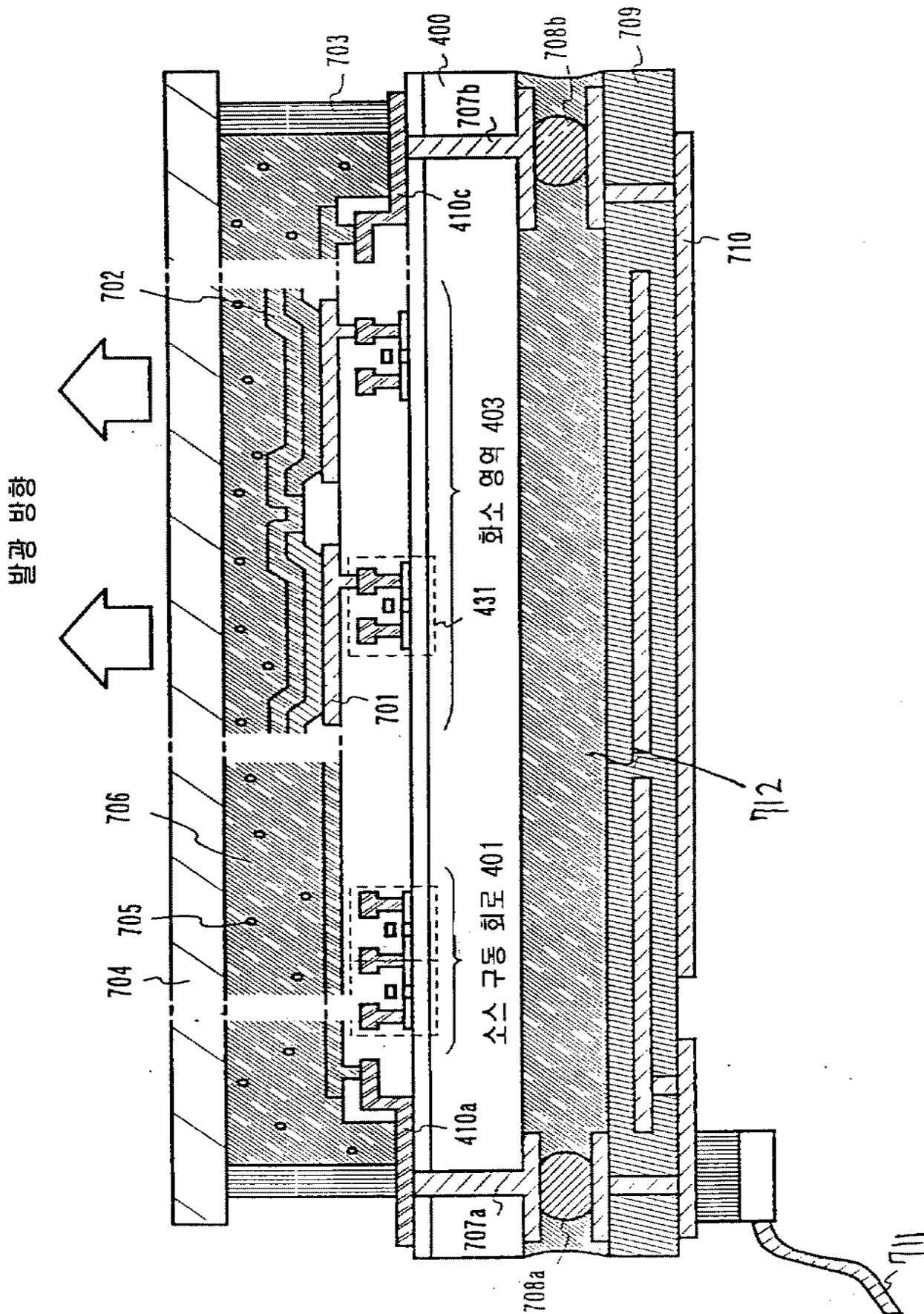
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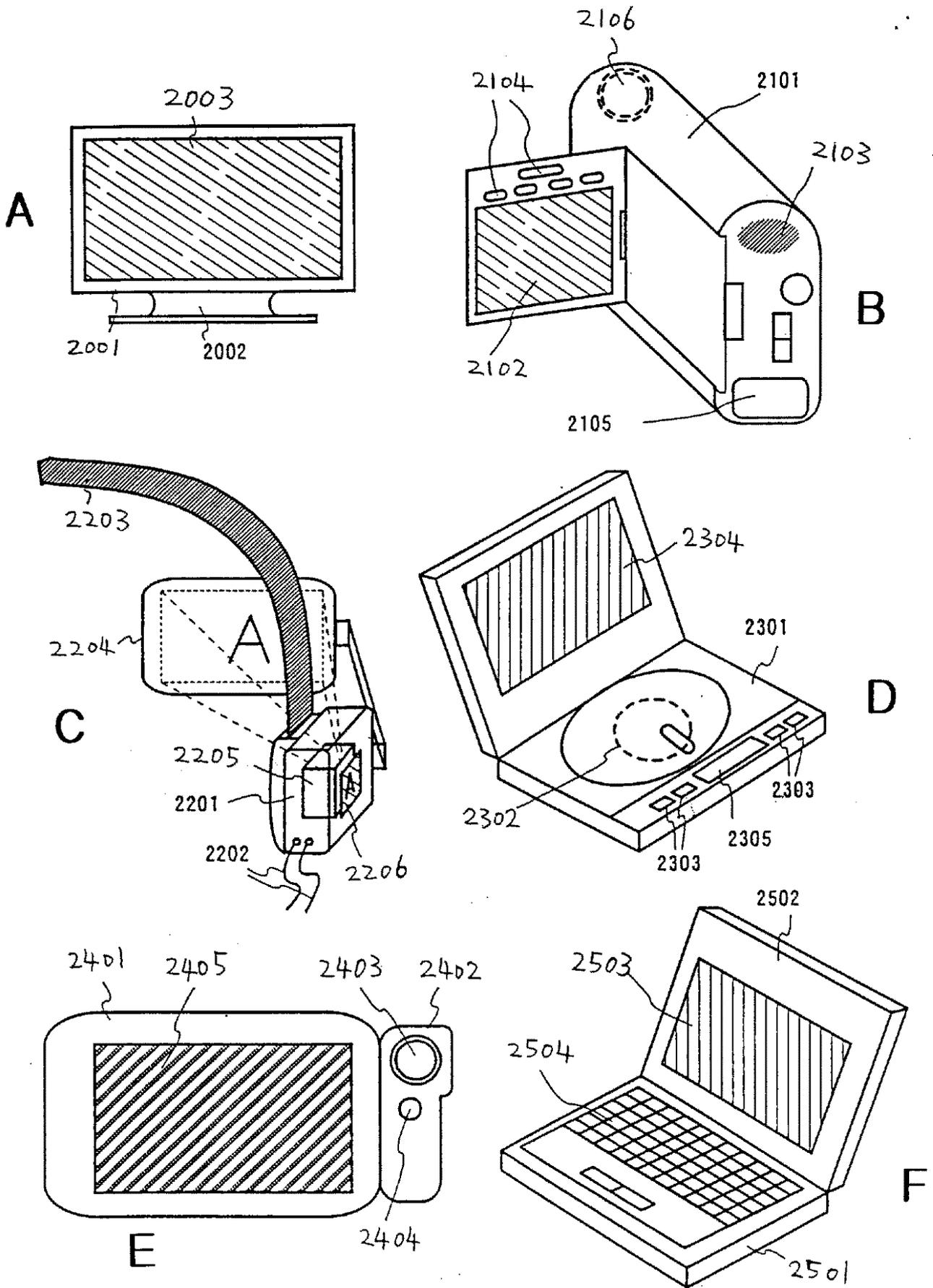


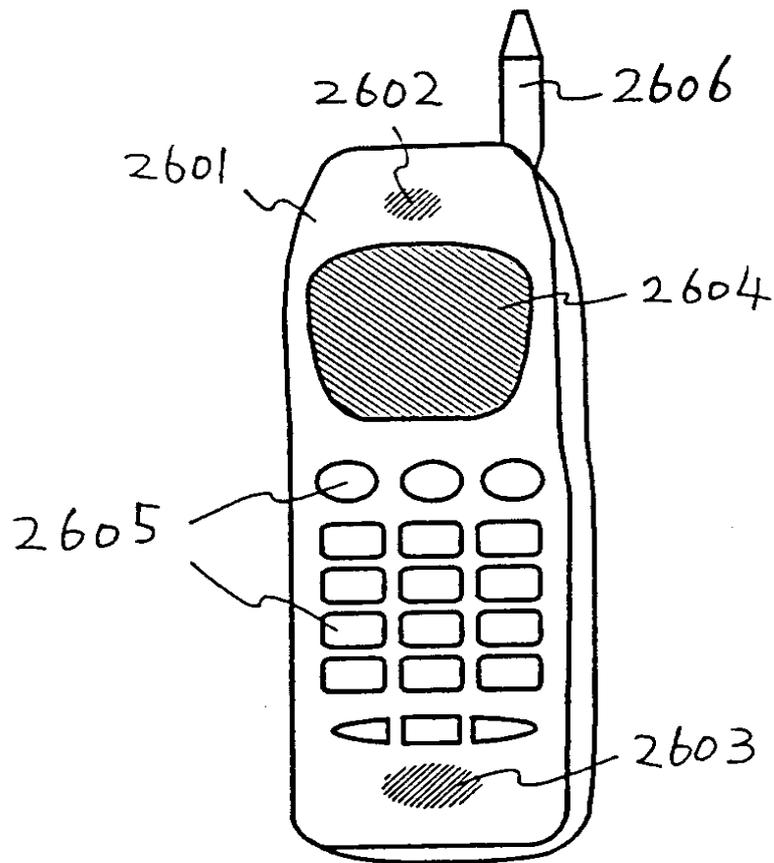
5



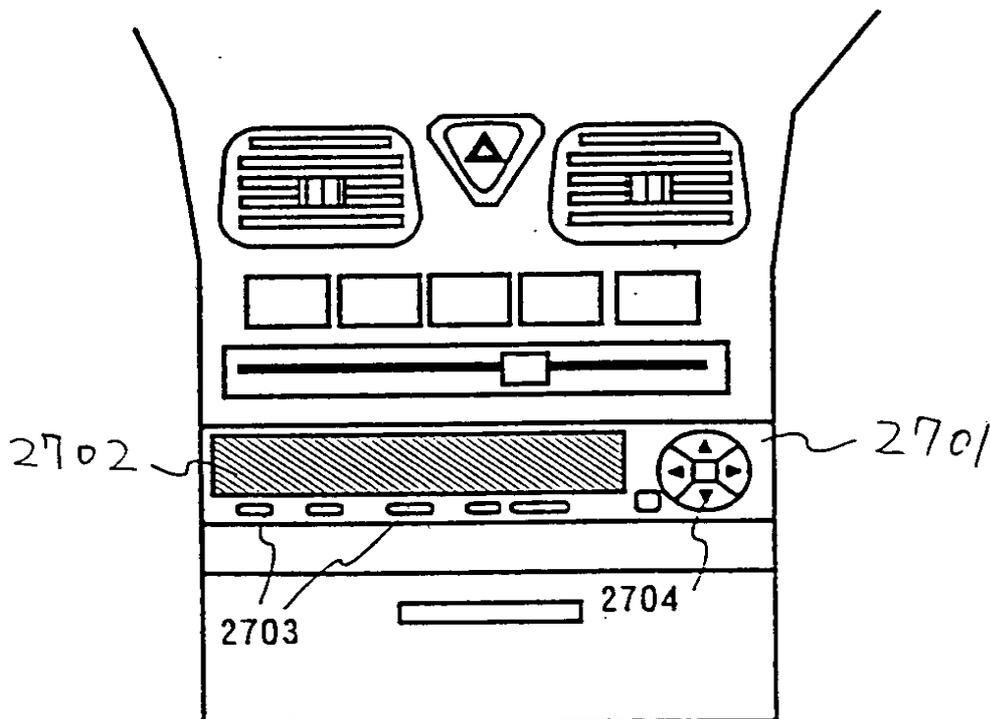








A



B