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2001 09 18

(21) 10 - 1998 - 0036117
(22) 1998 09 02

(65) 1999 - 0044809
(43) 1999 06 25

(30) 311853 1997 11 13 (JP)

(73) 가 가 , 2 2 3

(72) 2 2-3 가 가
2 2-3 가 가

(74)
:

(54)

가 ,
가 ,
1 가 , 가 ,

1

2

1

3 2

4 1

5 1

6 2

7 2

8 2

9 2

10 6 7

11 7

12

13 12

14

15

16 14 11

17 15

*

*

1a : 1b :

2 : 14 :

13 , 12 , 13 , 13
 , 가 , , . 13

13 , 가 (high) (+), (+) ,
 가 (-), (-) .

14 15 , 14a n (n 0)
 , 14b n+1 , 15
 a n+2 , 15b n+3

14 15 , 1a , , 1b
 , 2 , 4 , (1a), (1b) (2)
 , 1
 1a , (1a) , 11b , (1b)
 , 12 , (2)
 + - , 가 , , (+) (-)
 , 「R」 (11a) (11b) (11b) , 「G」
 가 (11a) (11a) (11b) , 「B」가

(1a) , (1b) , (2) ,
 (1a), (1b) (2)
 (11b) (4) (11a), (11b) (11a), (12)
 (11b) (12) , (11a) (11b) (12)
 11b) (12) TFT()

16 17 , 10 11
 . 16 17 , .

16a , , 1 2 가 .
 , n , n+1 , a n , b n+1
 , c n+2 , d n+3 .

16b , , n 1 2 가 . 16(c) ,
 , n+1 1 2 가 17a , , n+2 1
 1 2 가 . 17b , , n+3 1
 (, 2 가 . a₁, b₁, c₁ d₁ 1 1
) . a₂, b₂, c₂ d₂ 1 2
 . a₃, b₃, c₃ d₃ 1 3
 . a₄, b₄, c₄ d₄ 1 4 . a₅, b₅, c₅ d₅ 1 5

1

가 , 가 . 가 , 가

가 1 , 2 , n 2 1 1

가 , (flip - flop) NOT (gate)

[]

(1)

1 , 가 , 가 , 가 , 가 , 가

1 , 5 , 14 2 , 1 (5) , 1

1 (11b) , (11a) 가 , (11a) 가 , (11b) 가

2 , 1

, 2 , 14 , 2a n

, 2b n+1

3 , 2 3 ,

16 3a , 1

2 가 3b , n 1 2 가

가 3c , n+1 1 2 가

n , 1 2

(3b) , (12)

가 () , 1

2 3 4 (2a) ,

1 1 , 2p+1 2p+2 가 , p

0

n+1 1

2 (3c) , (12)

, 2 가 ()

1 3 4 , 2 p+2 5 (2b) , n

가 가

가 가

(5) 4 1 2

R 5a VD (21) S₁ 5a , 23a NOT 5a 5f

5c S₂가 S₂ S₁ 24a O

OR 24a 1 S₃ , 1 S₅(5e)가 , NOT 23a 2

S₆(5f)가

(2)

2

2

1

6 7 , 2
 7 , 6 7 , 6
 14 15 . 6a n , 7a n+2
 , 6b n+1 , 7b n+3 .

8 8 , 22b 22c , 23b NOT , 9a 9g 4
 , 8 . 8
 , 2 ,
 (21) S₁ 9a , S₁ (21) 9a VD
 1 S₂가 . S₂ (22a) 9c
 S₃가 , 1 S₄가
 22b 1 S₆(9e)가 , S₅가 22c
 2 S₇(9g)가 .

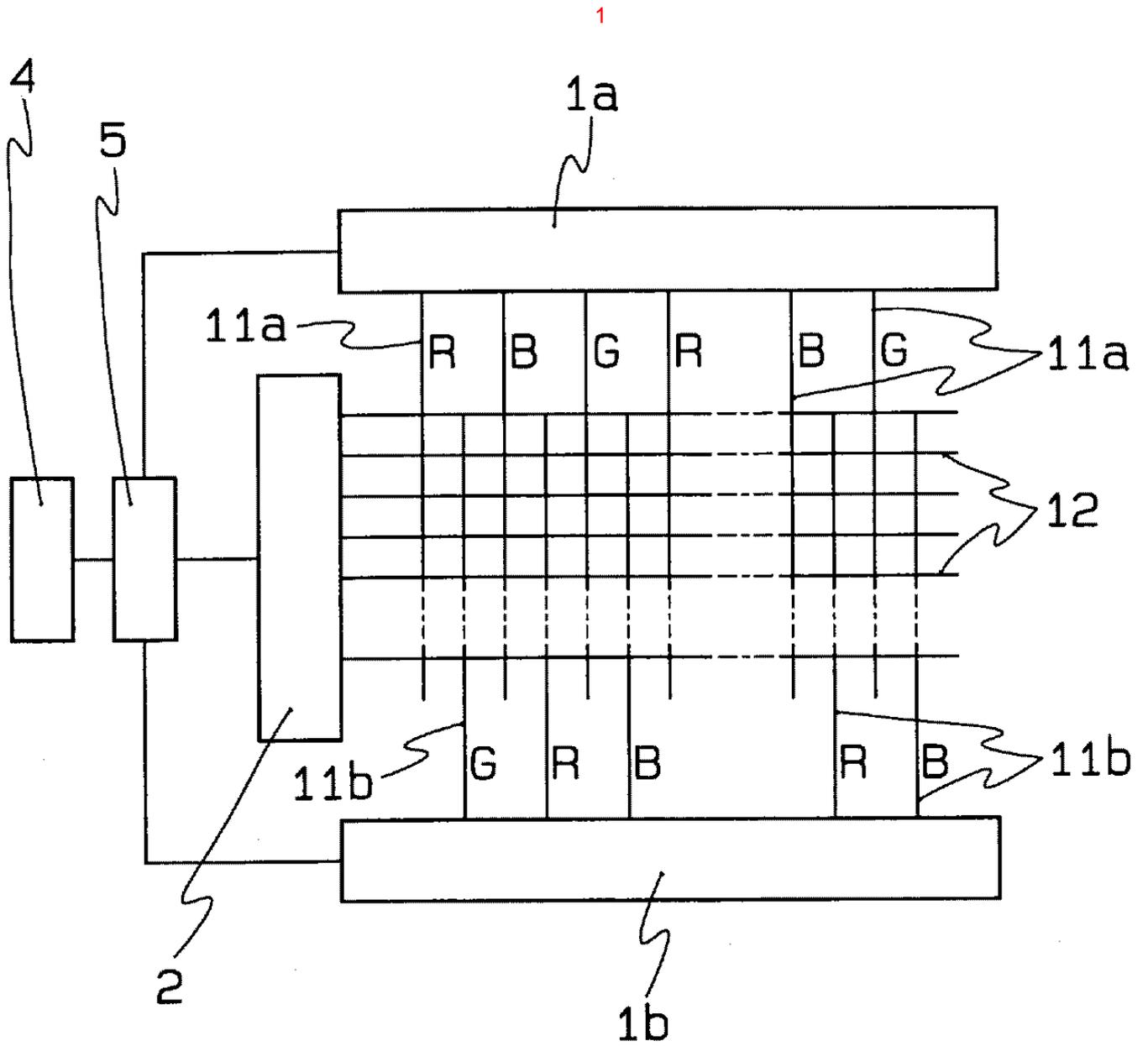
10 11 , 6 7
 . 10 11 , 12 13 .

10a , , 1 2 가 . 1
 0b , n 1 2 가 . 10c , , n+1
 1 2 가 . 11a , , n+2
 2 가 . 11b , , n+3 1

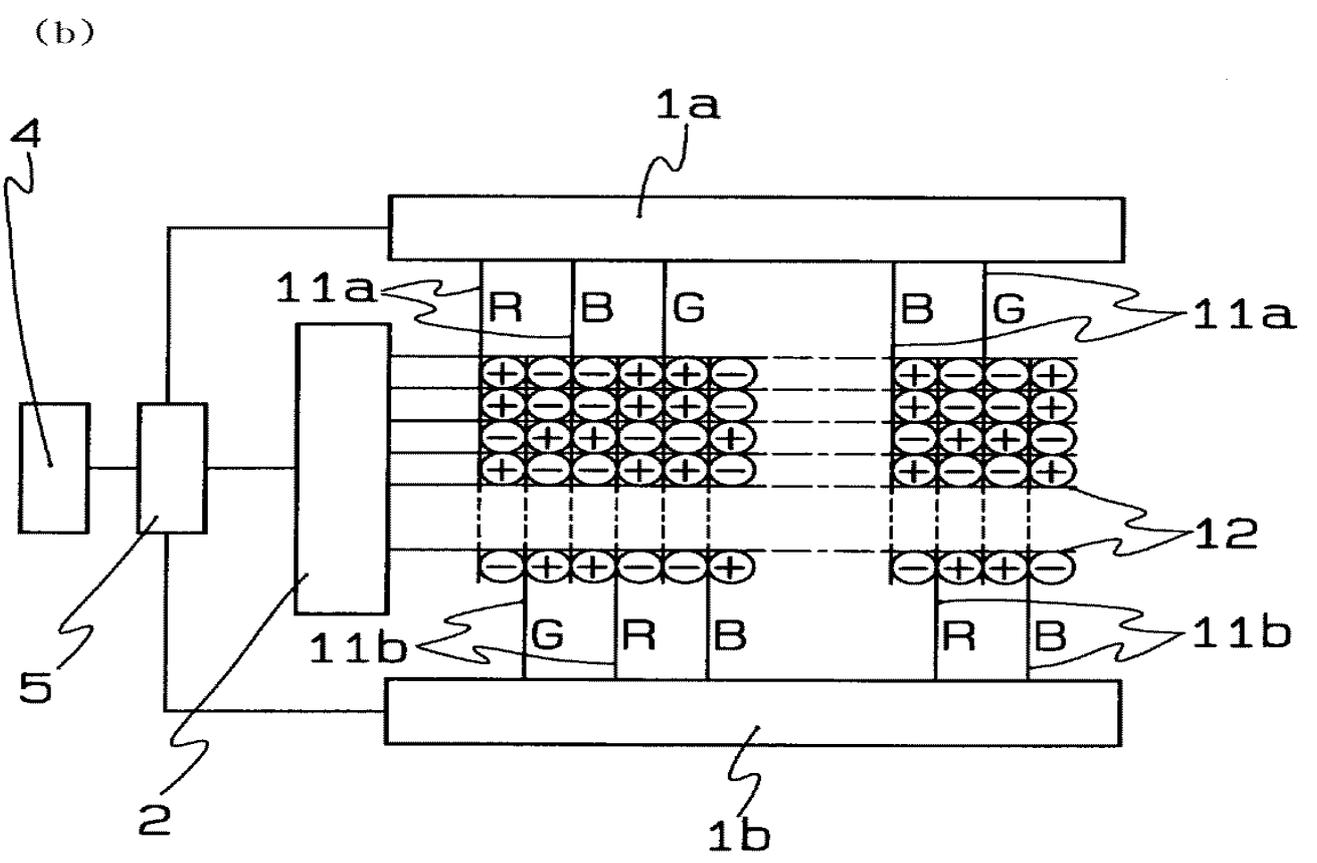
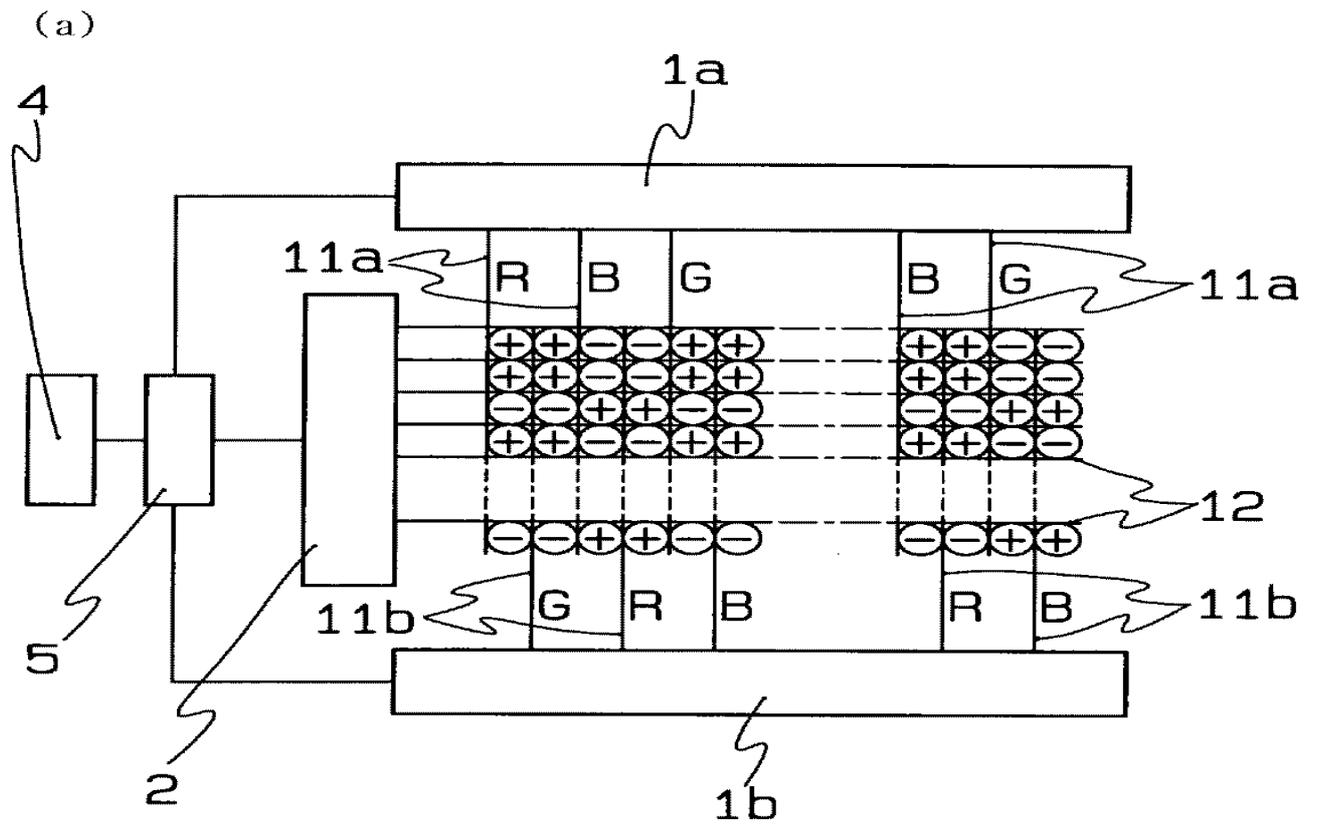
n , 1 , 2
 (10b) . , (12)
 , 3 가 () , 1
 2 , 4 (6a) . , 2p+1 2p+2

, n+1 , 1 n
 (12) , 2 가 (10c) . ,
) , 2 3 4 가 () ,
 2p+2 2p+3 n 5 (6b) . ,

n+2 , n 가 2p+1 2p+2 가
 가 (7a) . , n 가 (+)(-) , n+
 2 가 (-)(+)가 .

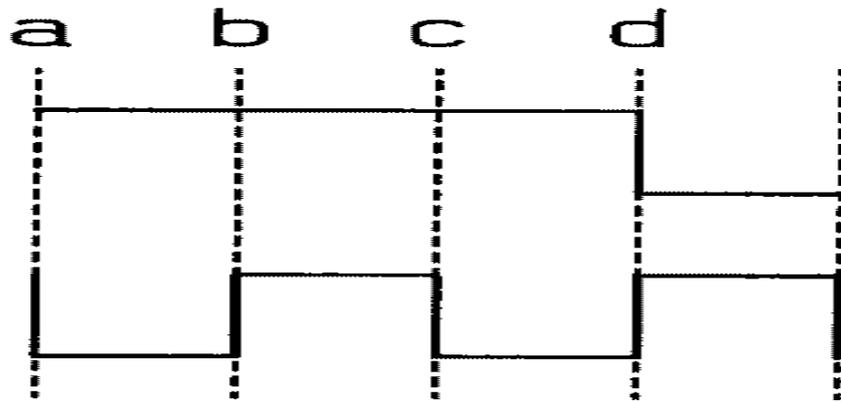


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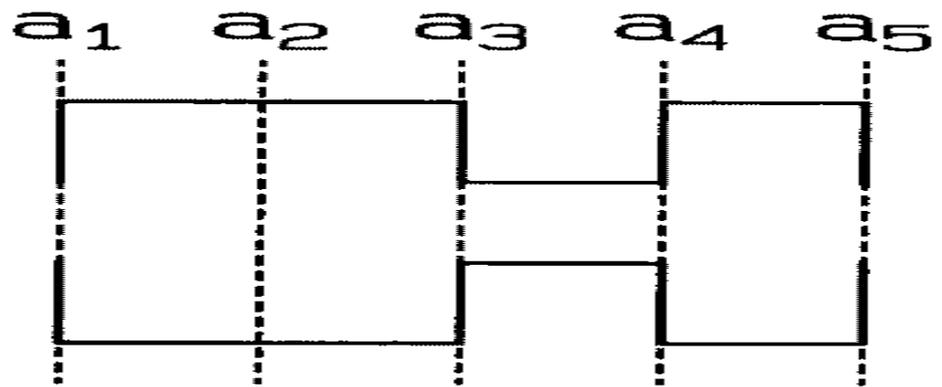


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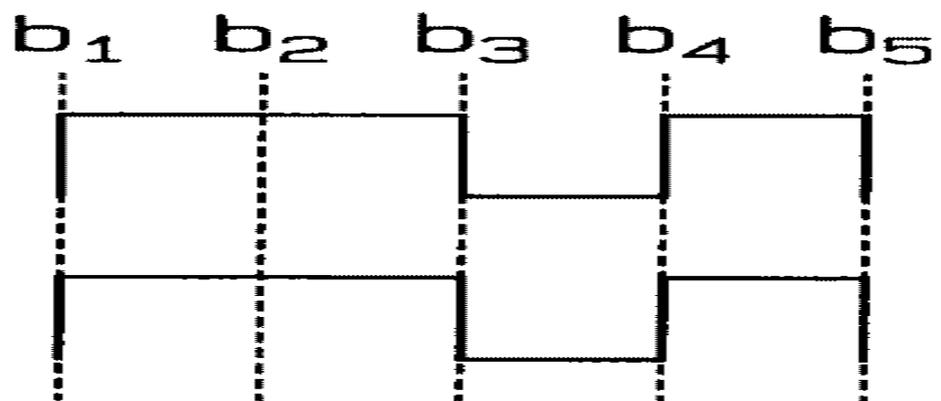
(a)

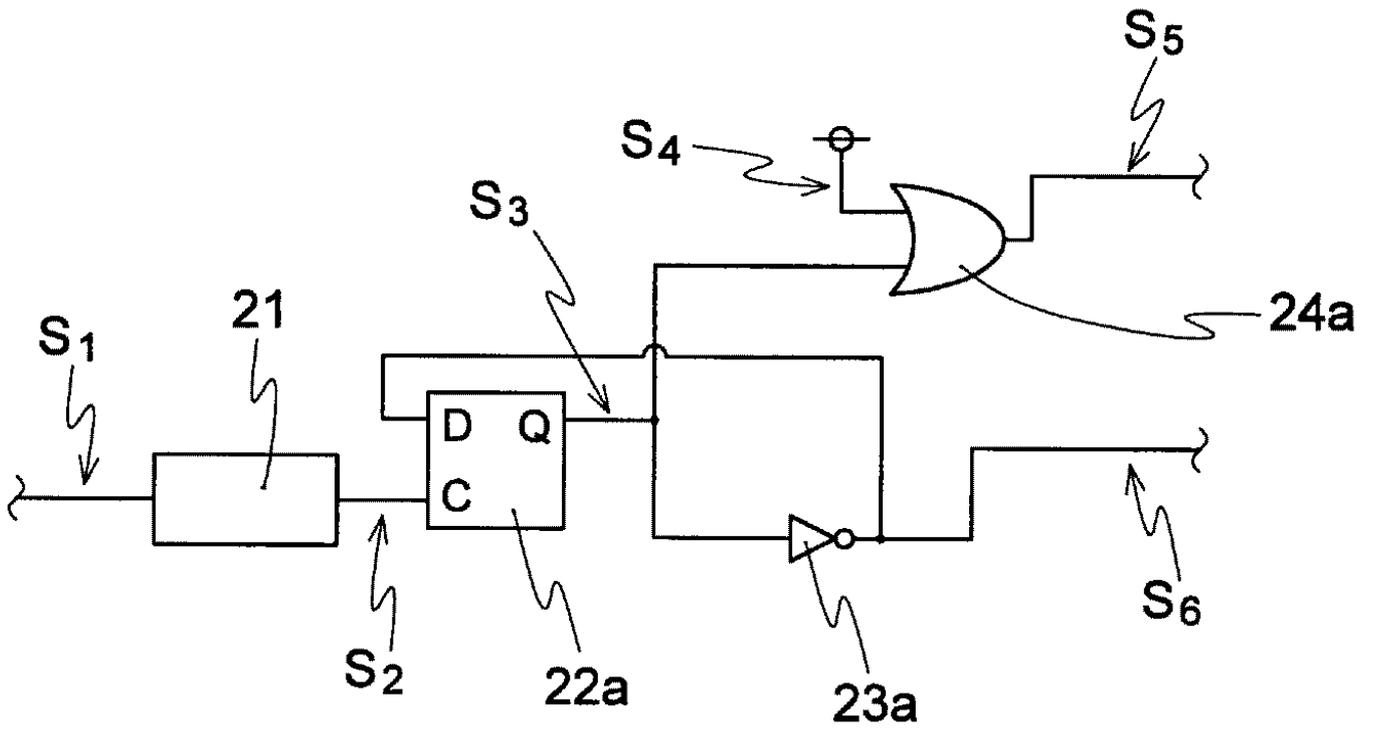


(b)



(c)





5

VD



(a) **S₁**



(b) **S₂**



(c) **S₃**



(d) **S₄**



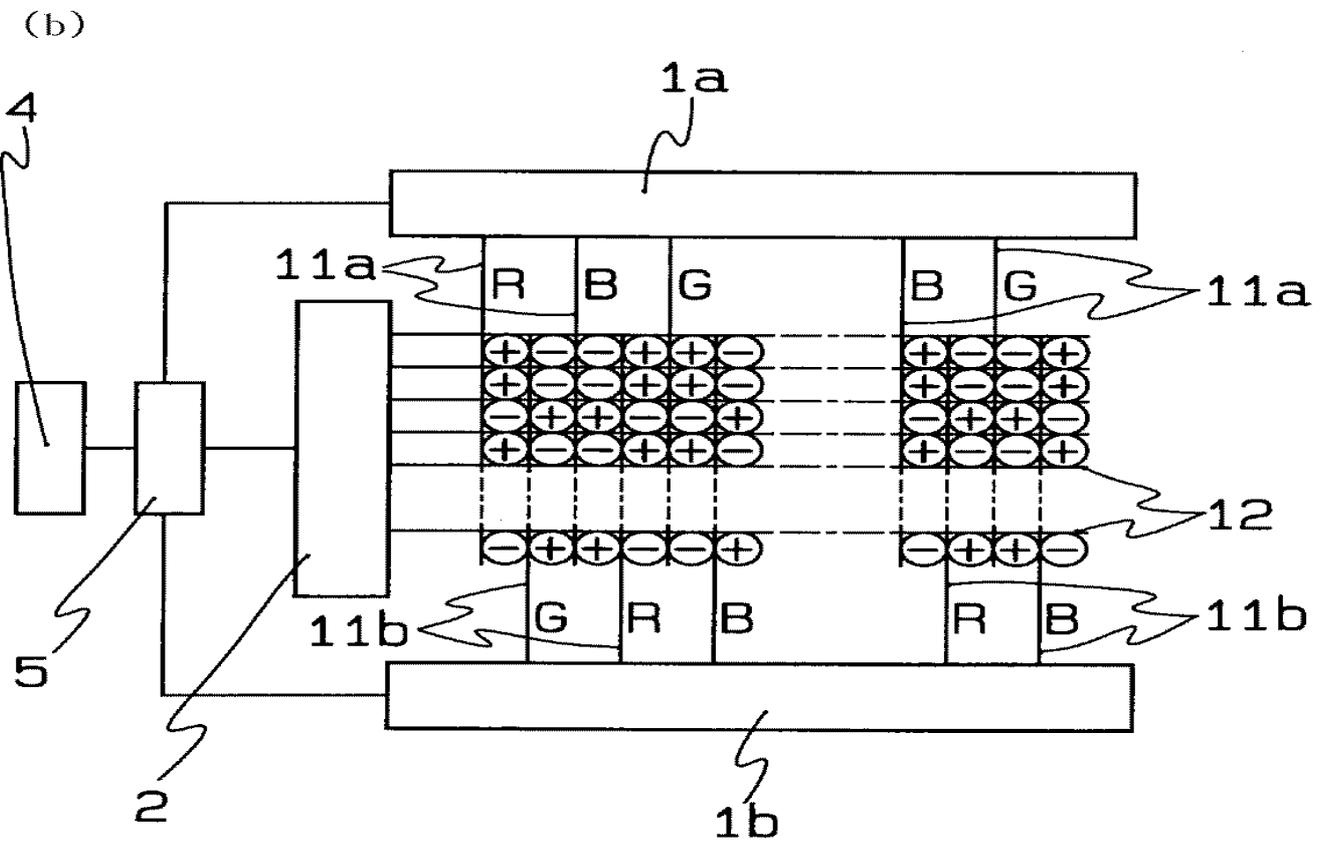
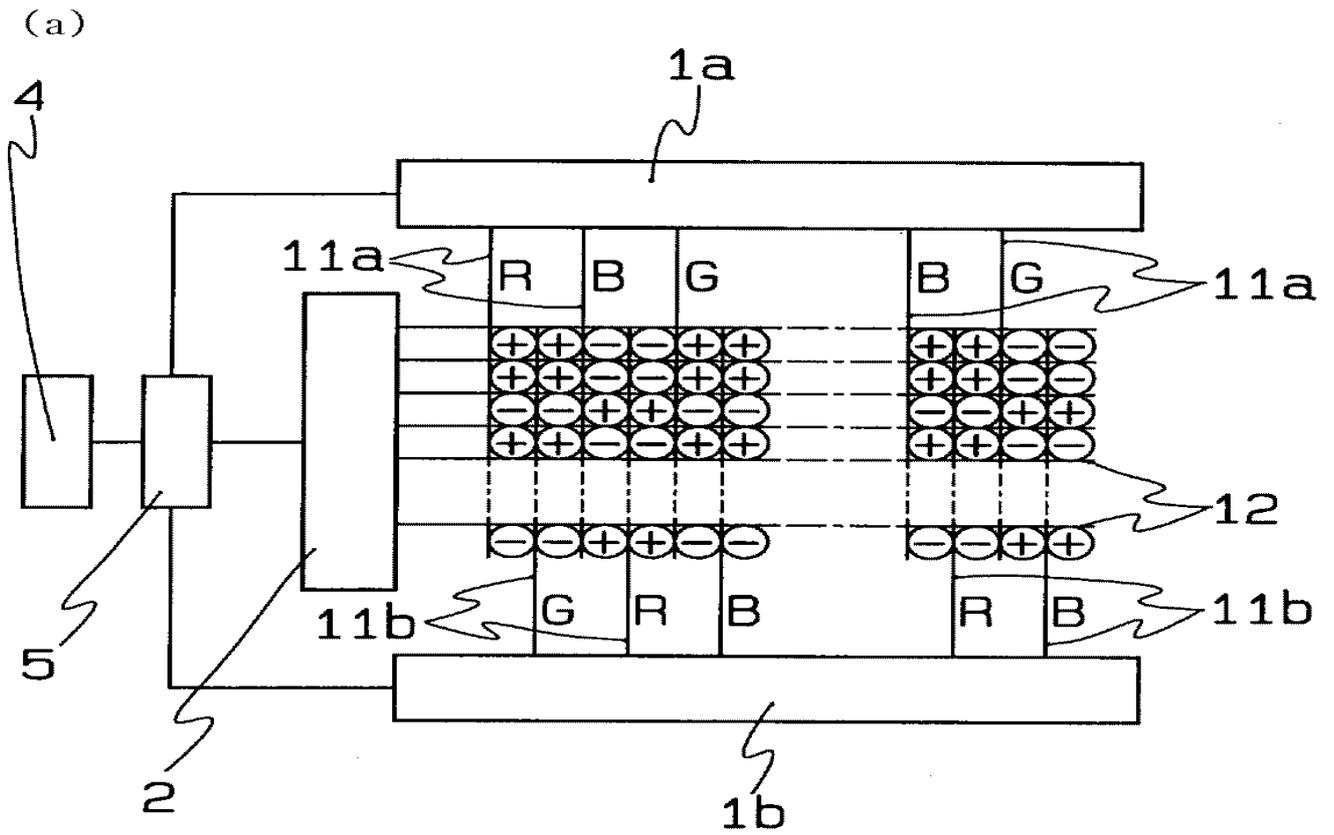
(e) **S₅**



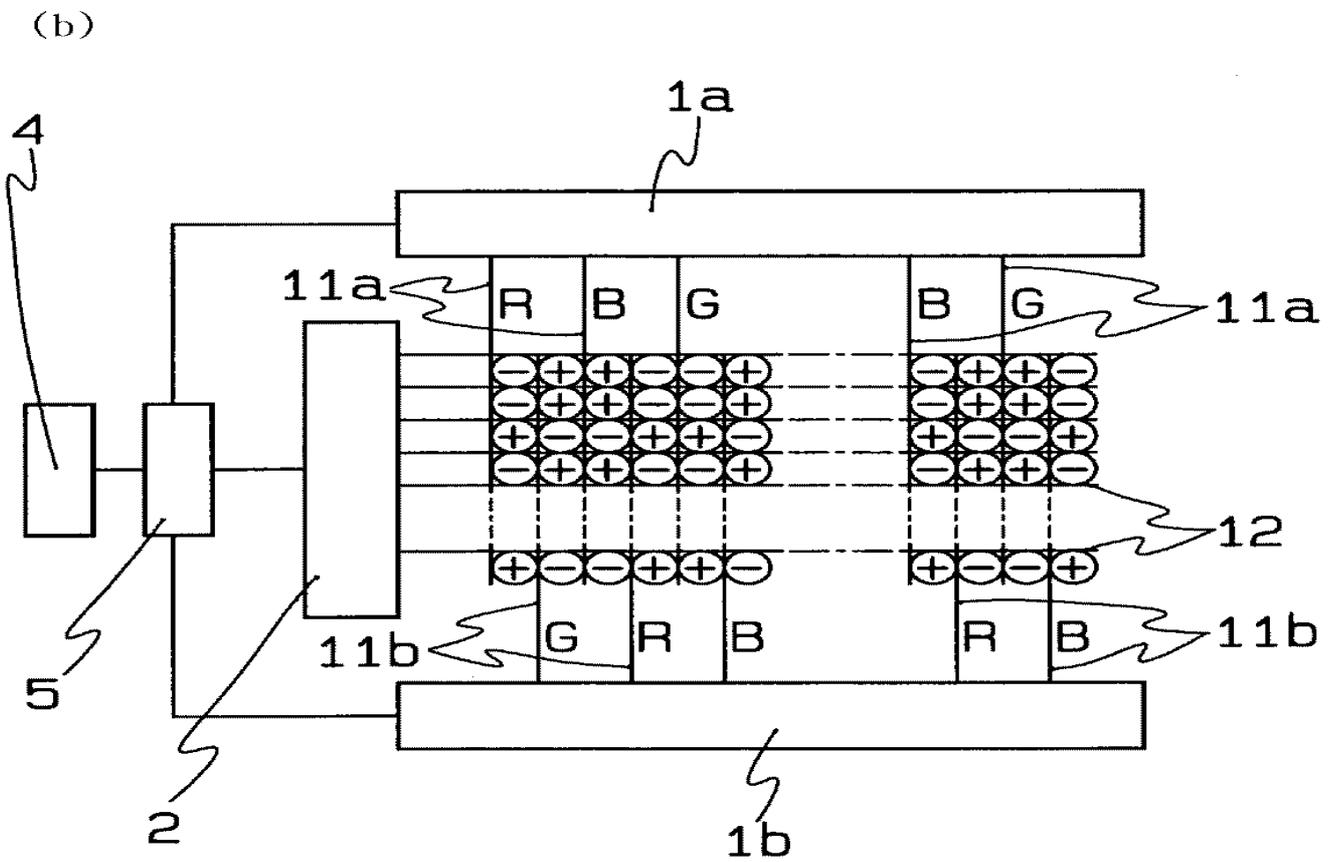
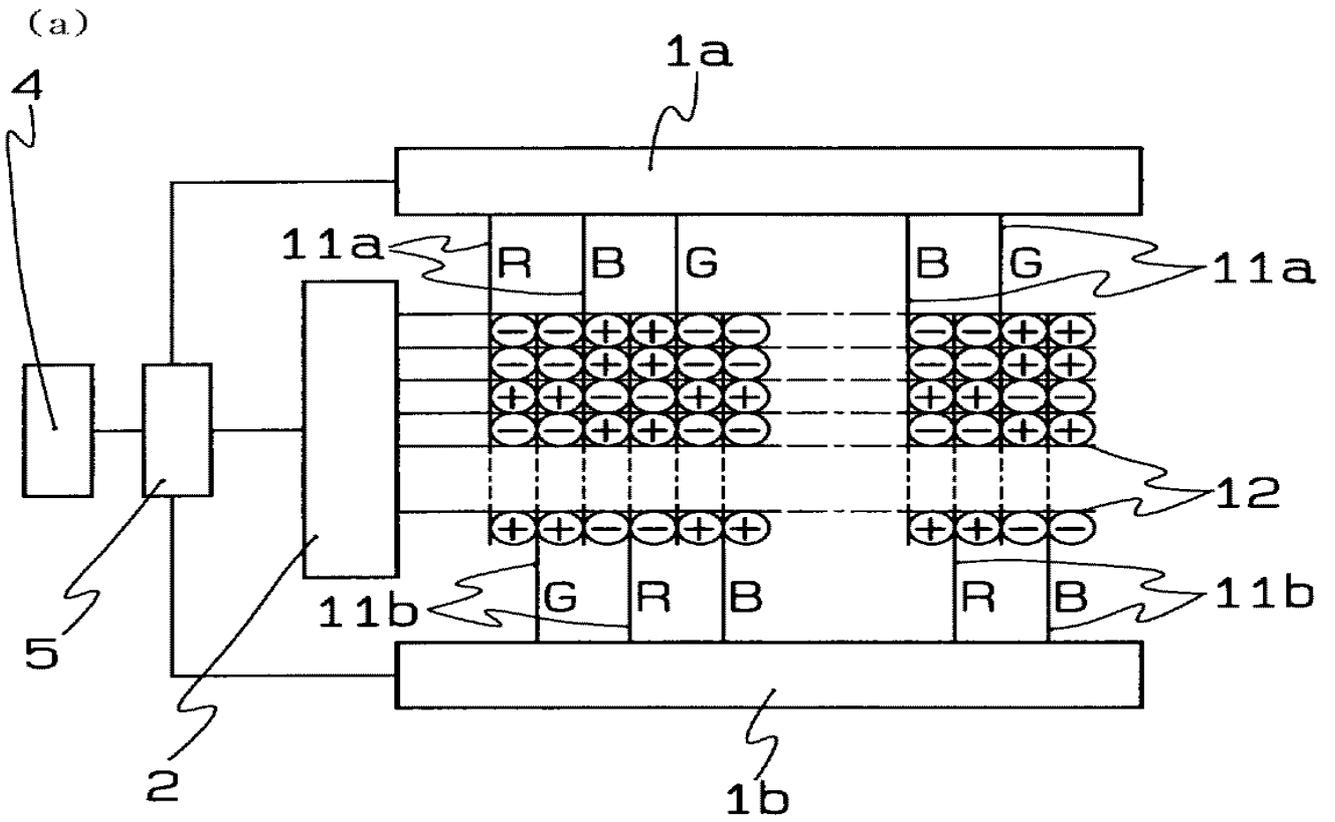
(f) **S₆**

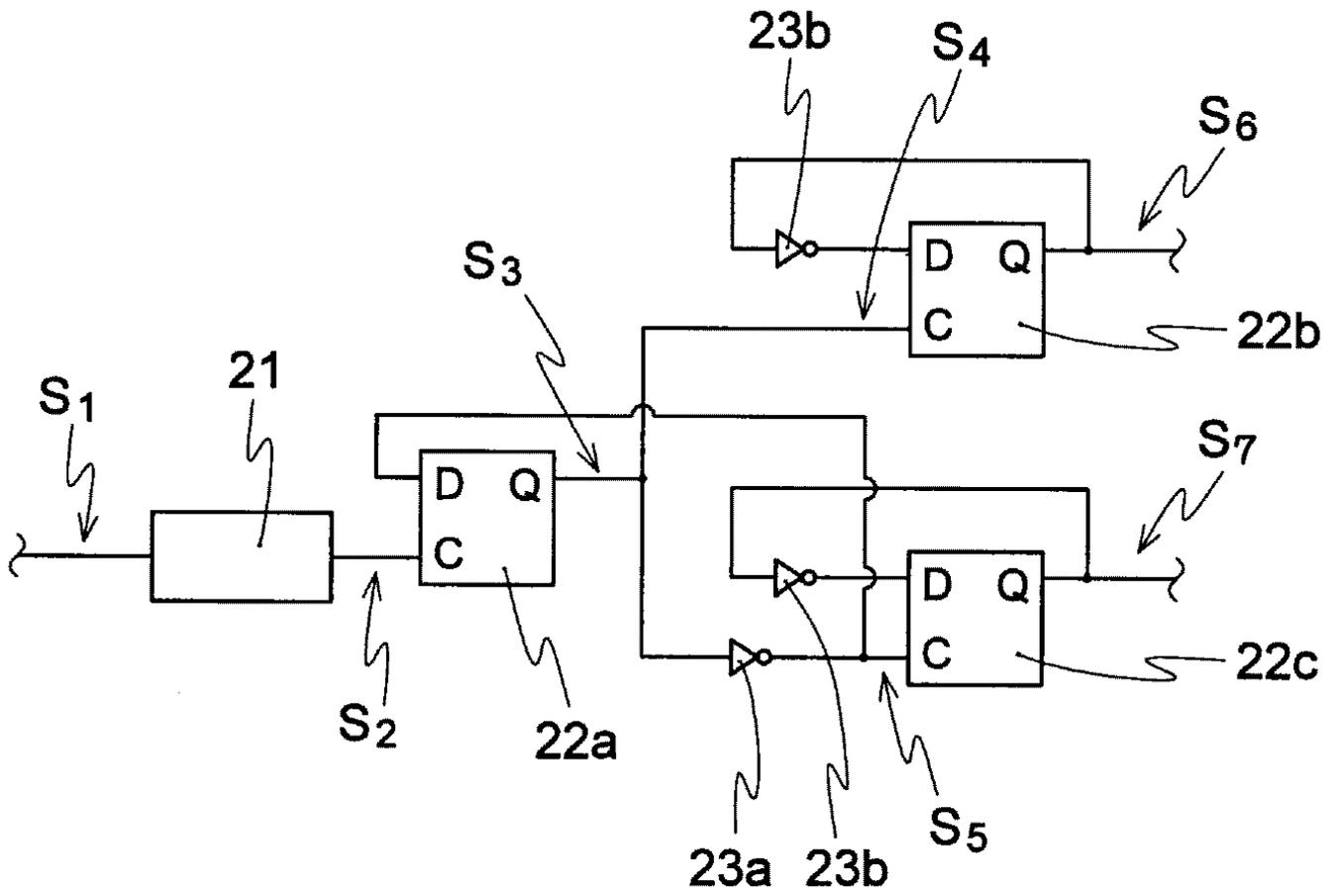


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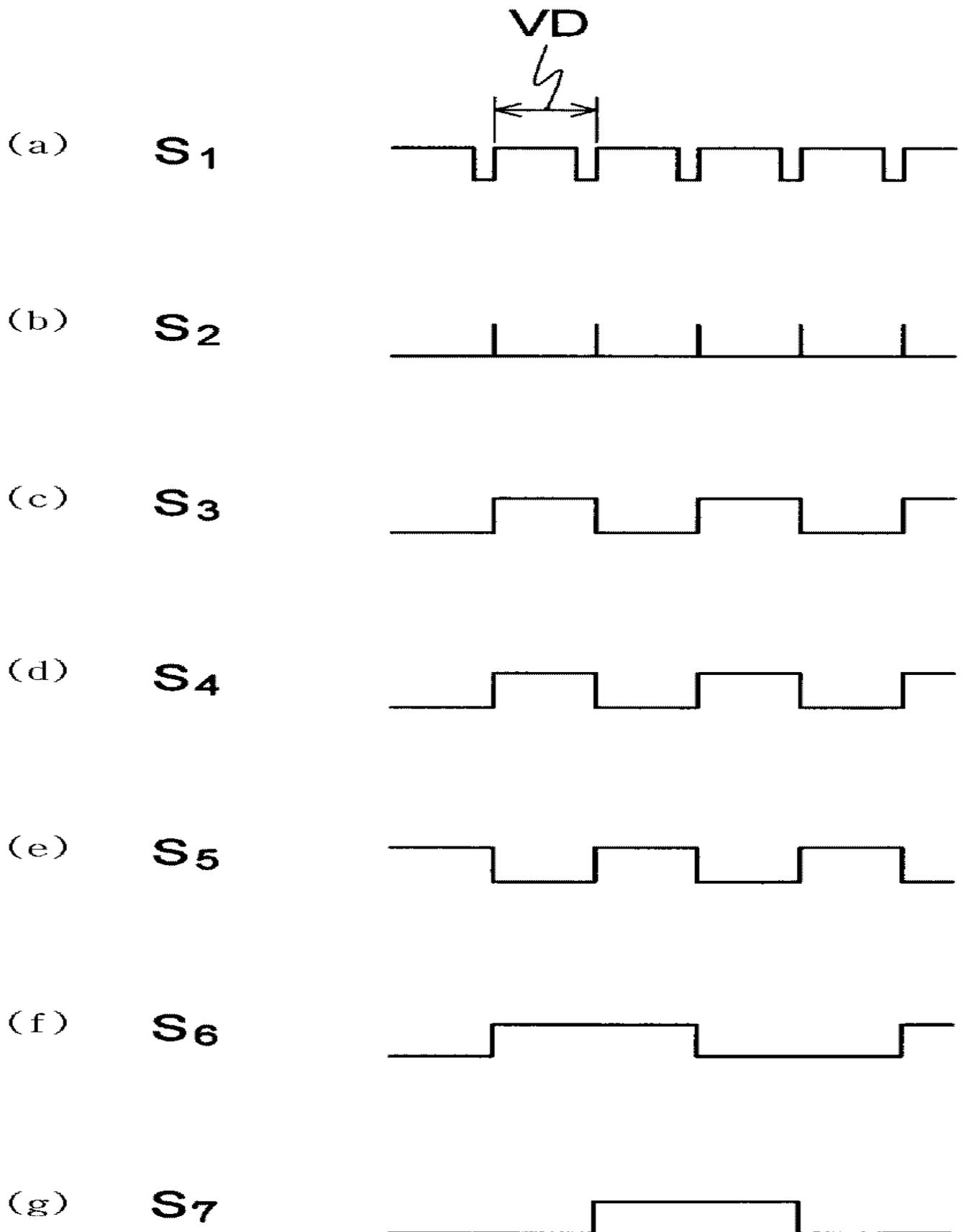


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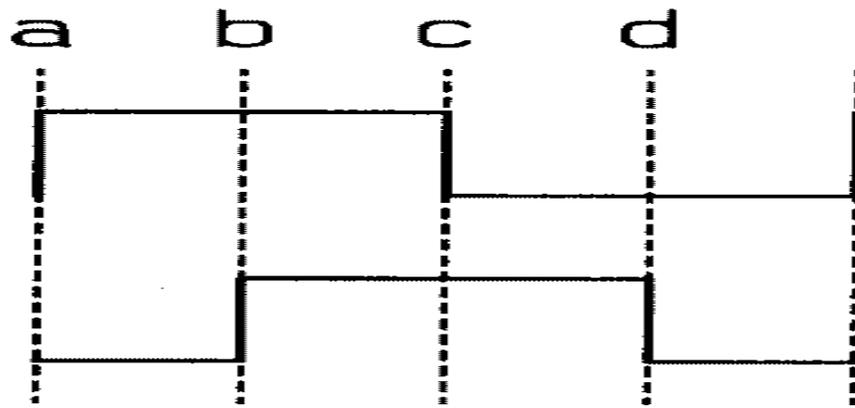


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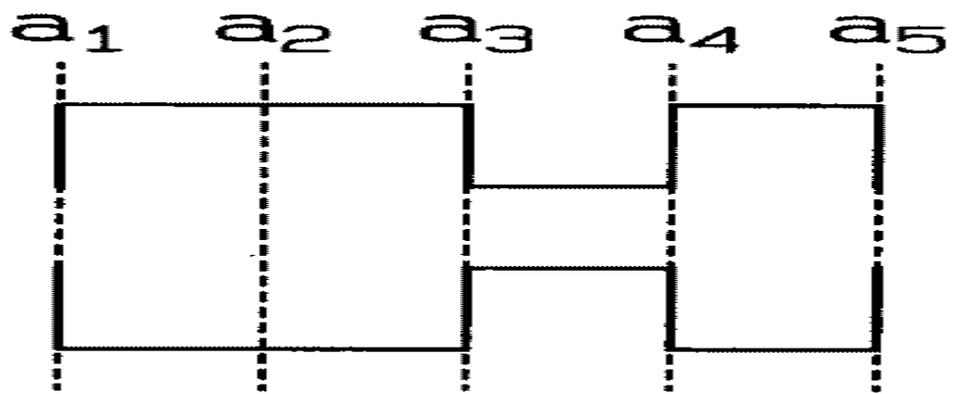


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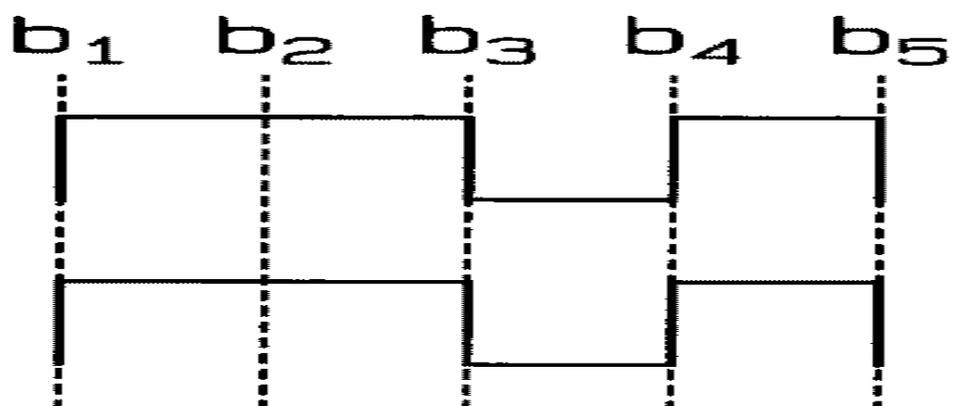
(a)



(b)

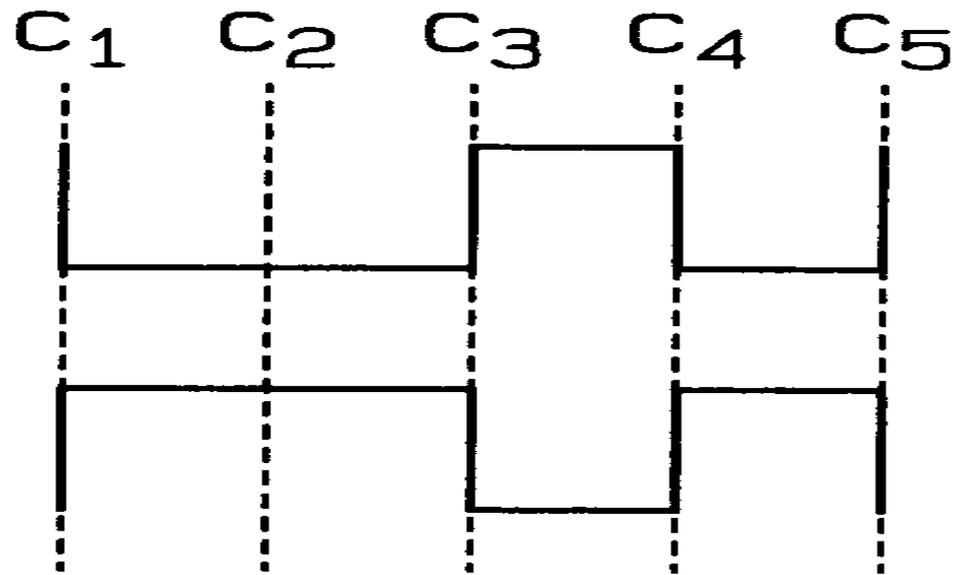


(c)

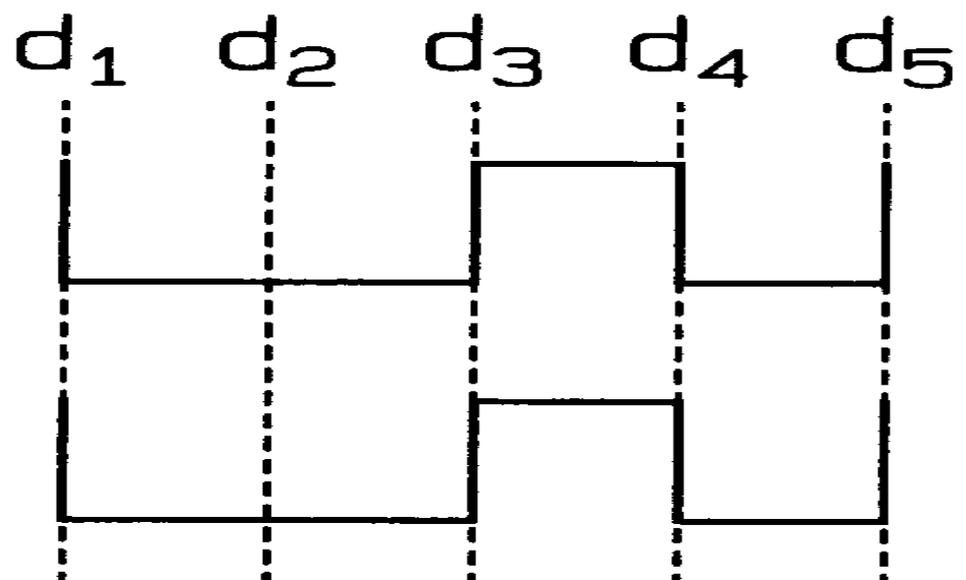


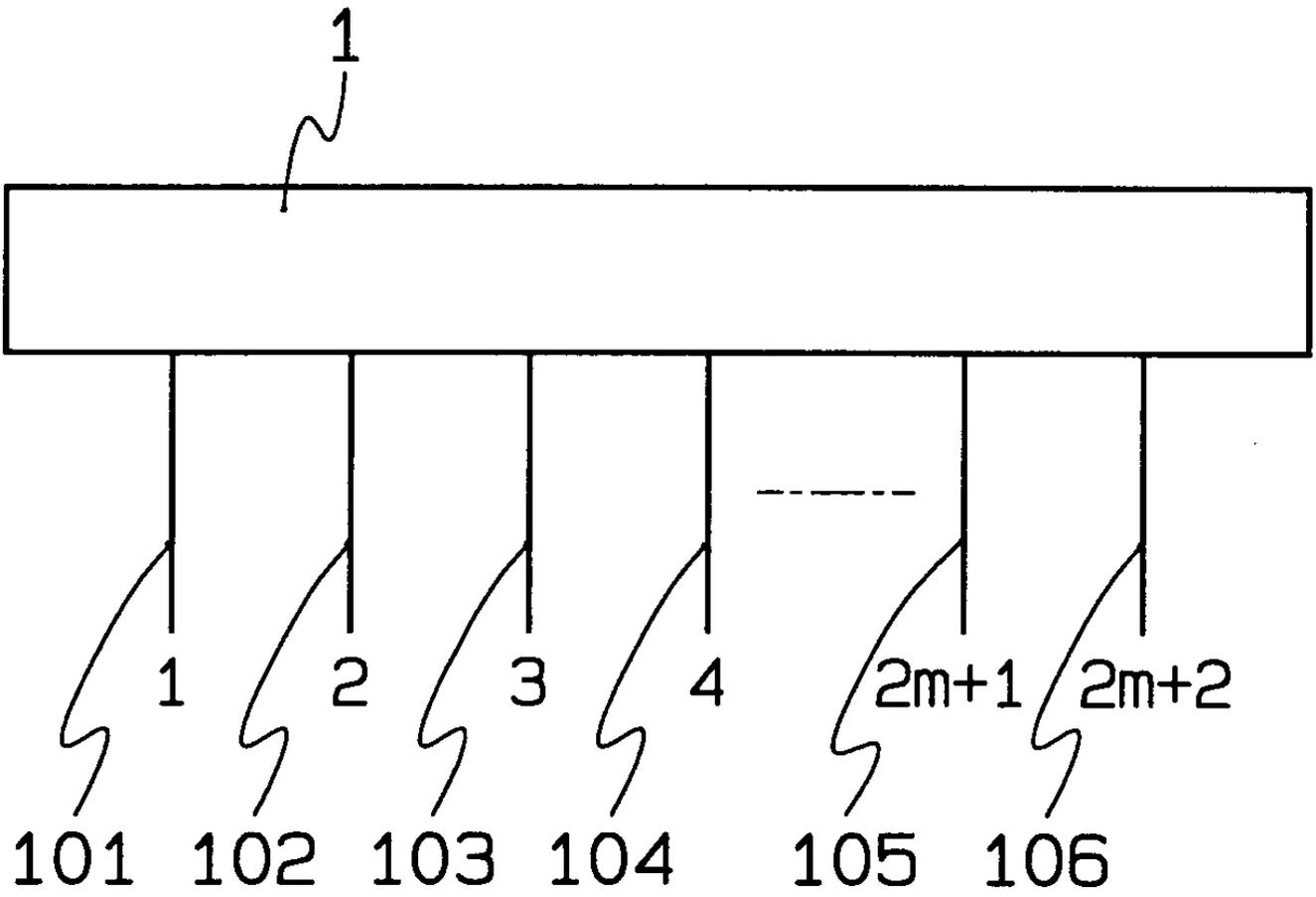
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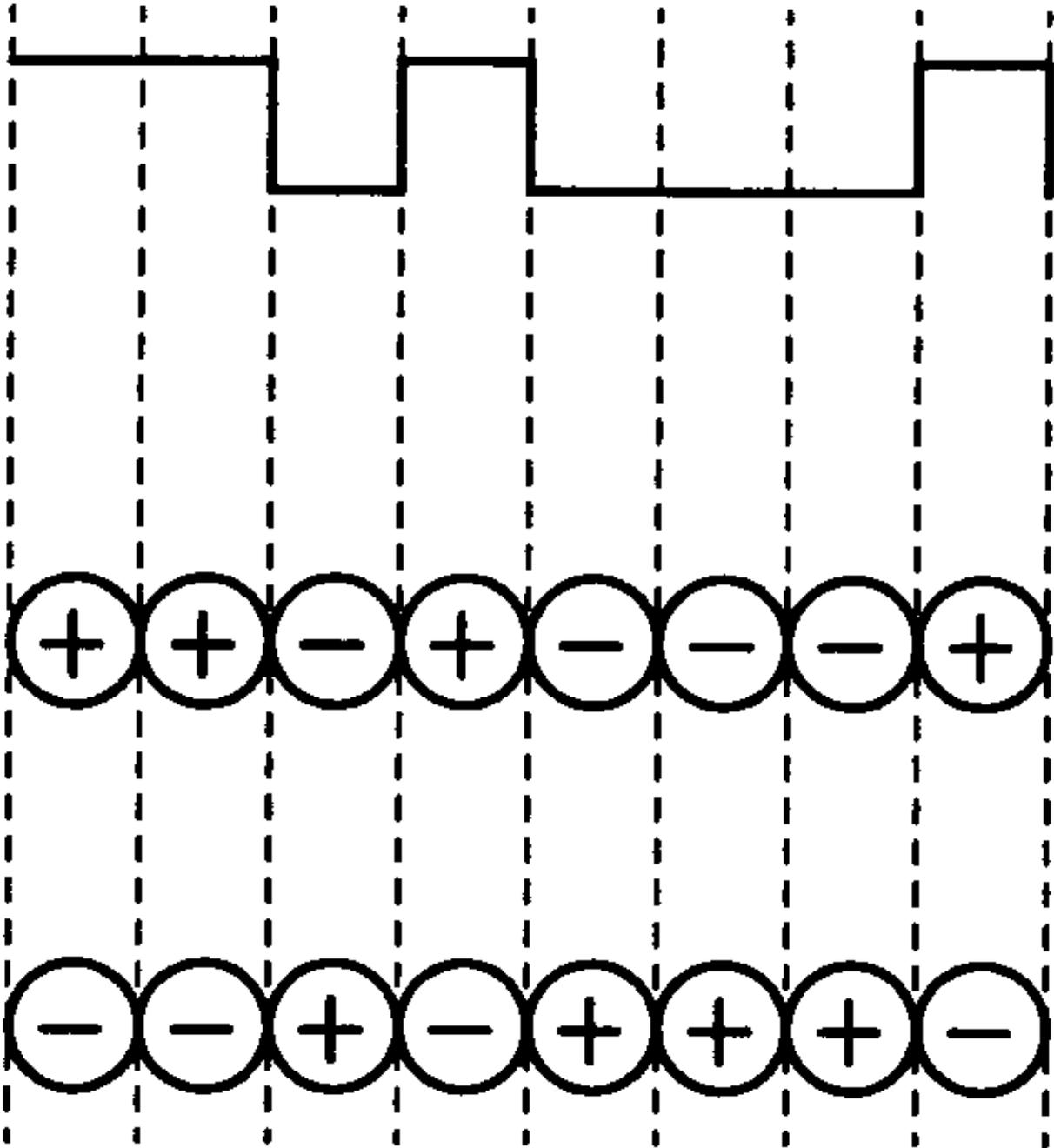
(a)



(b)

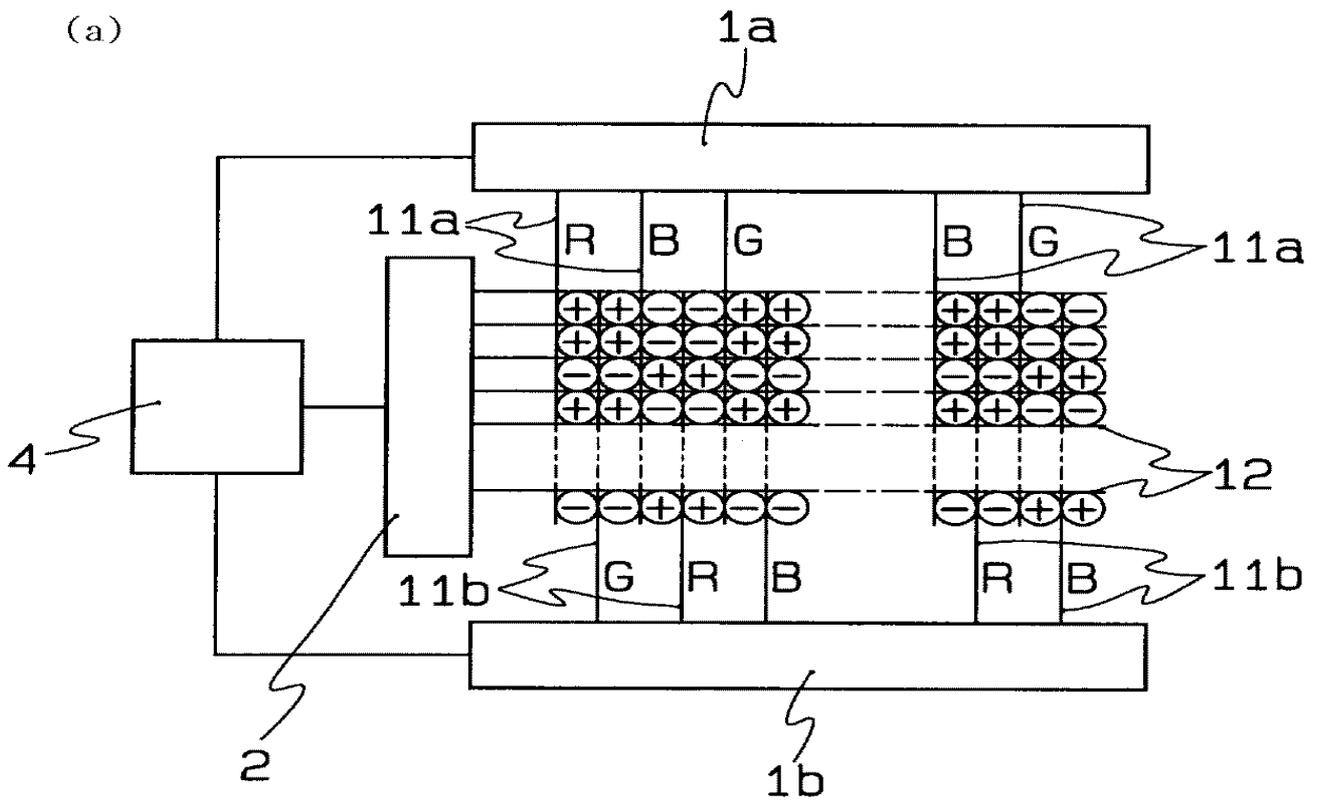




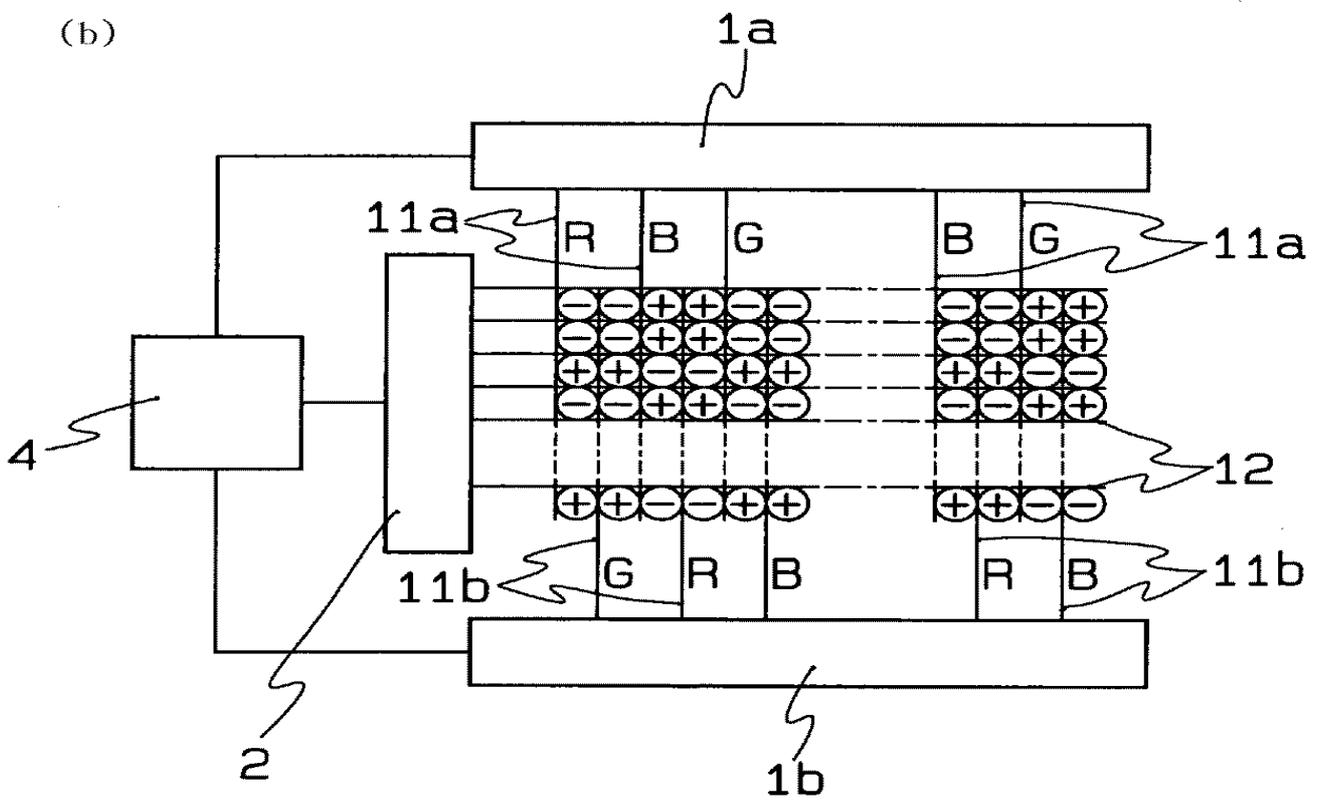


14

(a)

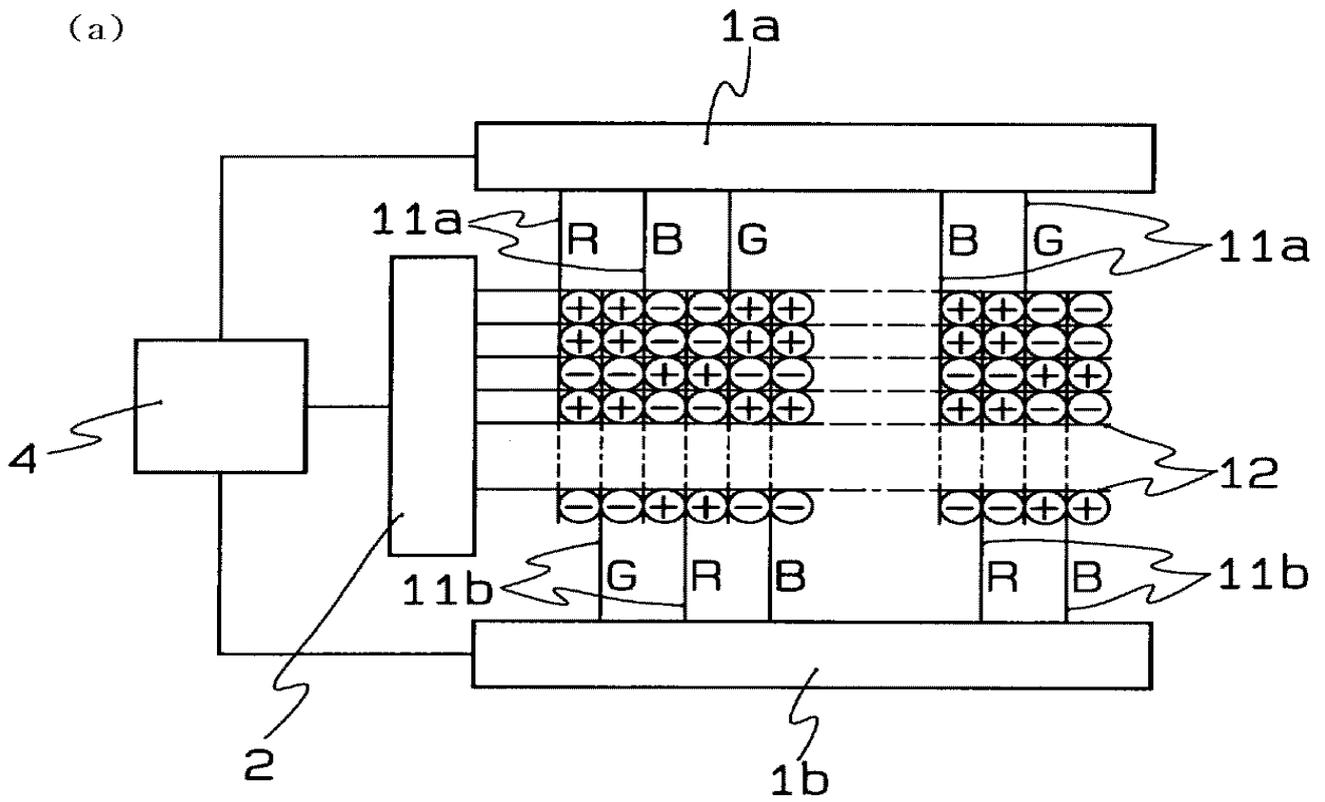


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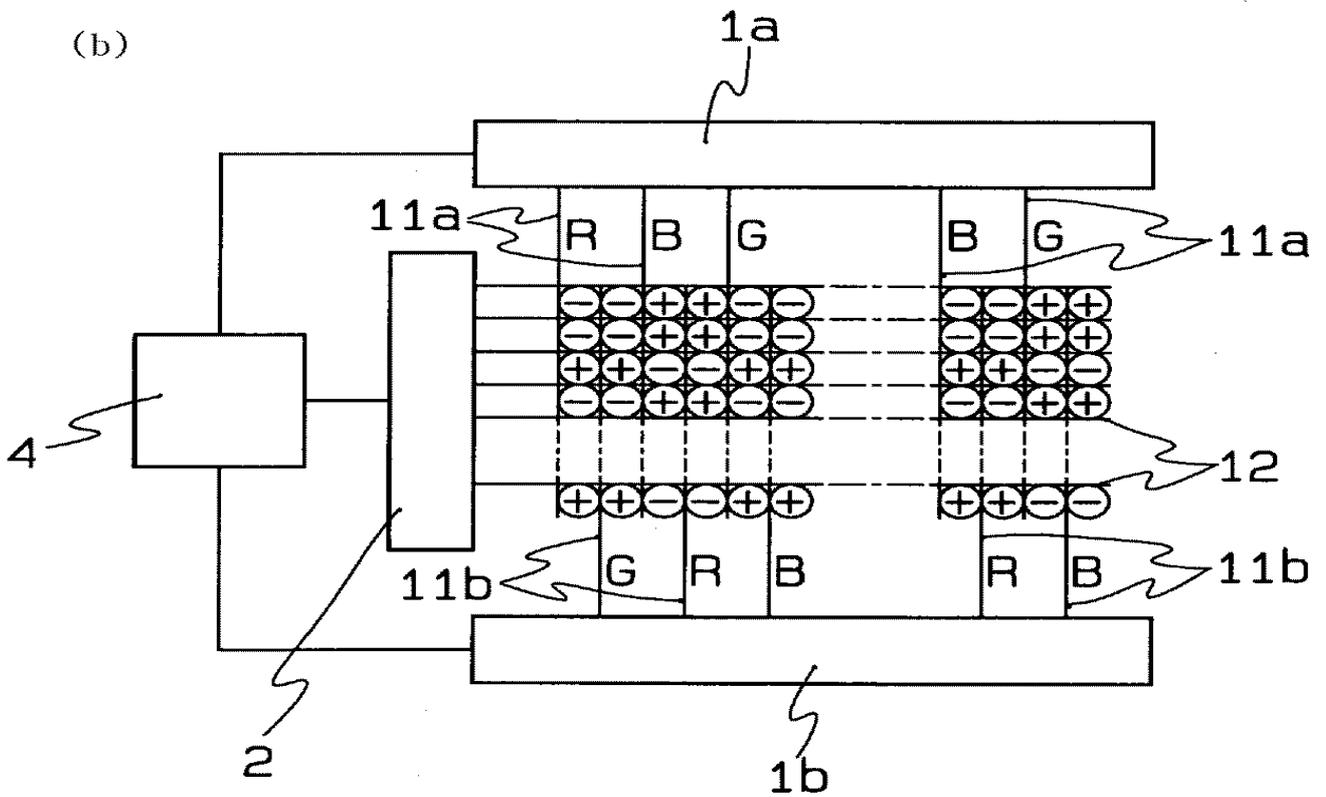


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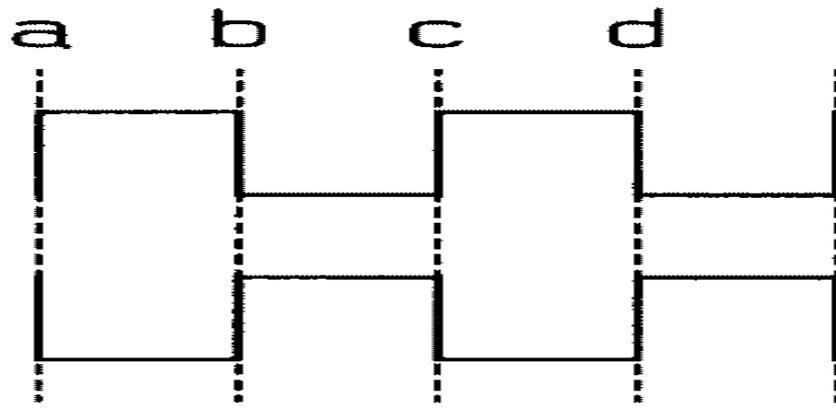
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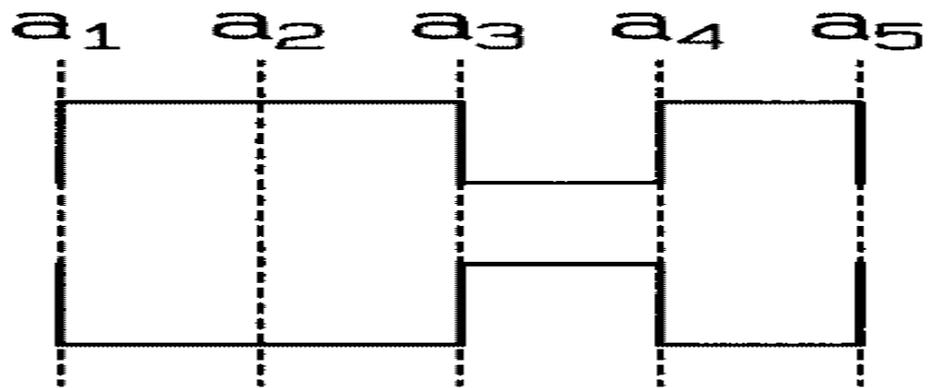
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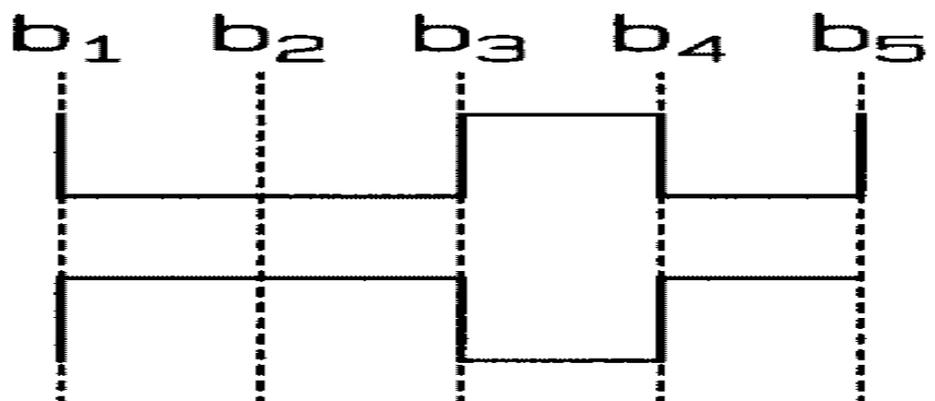
(a)



(b)

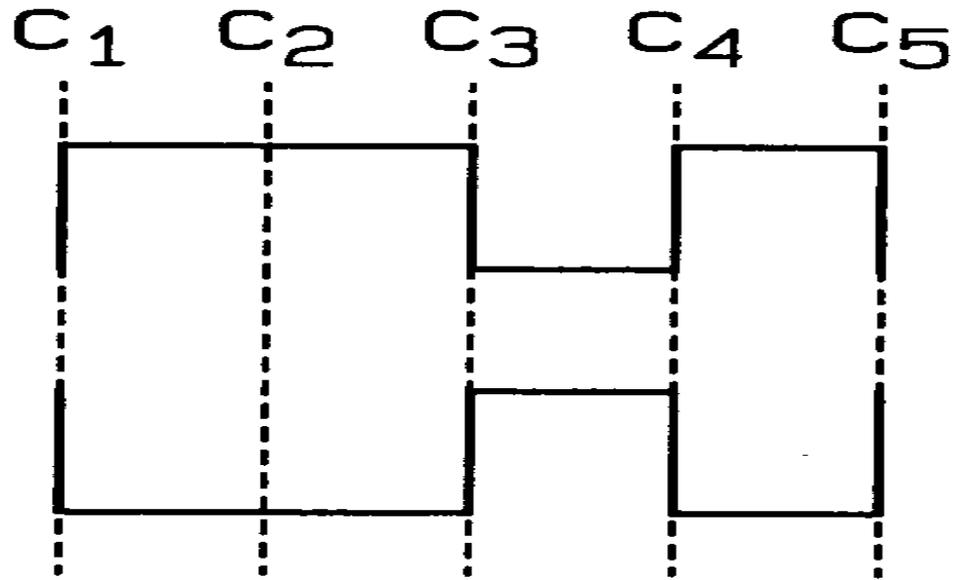


(c)



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(a)



(b)

