

(19)
(12)

(KR)
(A)

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H01L 21/304

(11)
(43)

2002 - 0075582
2002 10 05

(21) 10 - 2001 - 0015655
(22) 2001 03 26

(71) 3 416

(72) 2 29 1 112 506
1 153 - 182 A - 402

(74)
:

(54)

가 .

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3 2

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7 6

8 6

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* *

40 : 400 :

410 : 420 :

430 : 440, 450 :

460 : 500 :

510 : 520 :

530 :

(polishing pad)

(slurry)

가

1980

(CMP)가

5,709,593 (issued to Guthrie et al.)

6,051,499 (issued to

Tolles et al.)

1

(10)

1 (10) (10) (oscillation) 가
 (12) (12) (platen) (13) 가 (1
 4) (14) (16) (10) (14)
 (16) (16)

가

2 (20)
 2 (20) (arm) (22) (30) (21, 22, 2
 3, 24, 25) (22) (32) (40)가
 (40) (20) (34) (20)

(40) 5,928,062 (issued to Miller et al.)

5 - 343375 (drop) 가

(20) (21, 22, 23, 24, 25) (30)
 (22) 가 (20)
 (22) (22) (30)가 가
 (30) (20)
 2) (30) (2)

3 (20) (22) (30)

3 (22) (30) (22) (reboundin
 g) (30a) (30)가 (21) (30)가 (30)가
 (30a) (22) (30a) 가 (30a)
 (20) (30a)
 (stack) (30a) 가
 (22) (scratch) (22)

1 ,

2 ,

1

2

가

4 (40)

4 , (40) (430) (430) (410)가
(400)

5 4 (410) (450)

5 (410) (410) (450) ,
(430) (410)가 (410)
(460) (450)

(40) (430) (420) (420) (430)
(430) , (410) , (430) (410) ,
(420) , (oscillation) , (420)

(420) (440) (420) (440)

(40) (pad conditioning) ()
 (410) (dressing) (410)가 (430)
 (410) (430)
 (410)

(40) (430) (410) (500)

6 7 4 (500)

6 7 (500) (410) (515) (510)
 (500) 6 (510) 10 (510)
 (410) (515) (510) 2mm
 (500) (410) (515) (510a)
 (410) (515) (500) (5
 20) 가 (400) (500) 가 (5
 15) (500) (410) 20mm (5

(500) (510) (410) (515)
 (515) 가 (410) (41
 0) (515)가 가 (410) (500)가
 (500)가 (410) (515)가

(40) (410) (538) (530)
 (530) (500) (535) (500)

8 8 가 가 가
 가 가 가

(40) (430)

(430) (420) (410)
 (420) (410) (430) (430)
 (410) (538)가 (430) (410) (538)

(538)

(500) (510) (515)가 (410)

8 4 (500) (515)

8 (515) (410) (falling) (410)
 (515) (410) (510)
 (515) (510)

(500) (510) (515) (410)
 (515) (515)

가

가 80%

1 2 1 2 20cm

[1]

(μm)				
	1	2	1	2
0.1	283,377	327,019	50,163	58,240
0.2	139,920	225,494	17,080	25,637
0.3	10,112	53,411	7,129	9,162
0.5	2,902	22,530	2,017	2,450
0.7	1,708	14,174	1,257	1,336
1.0	685	6,564	664	660

1 84% 1 1 가

[2]

(μm)	1	2	1	2
0.1	377,199	354,827	88,358	93,578
0.2	252,043	217,593	25,308	18,207
0.3	55,610	46,617	10,784	7,894
0.5	26,560	20,016	3,352	1,855
0.7	17,606	12,856	2,002	1,302
1.0	8250	6,132	1,038	759

1 82% , 1 , 1 가

1 5 가 , 가 가 652.6 가 173.5 479

30 , , 가 , 1 가

(57)

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2.

1

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1

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3.

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4.

1

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5.

1

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20mm

40mm

6.

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가

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7.

6

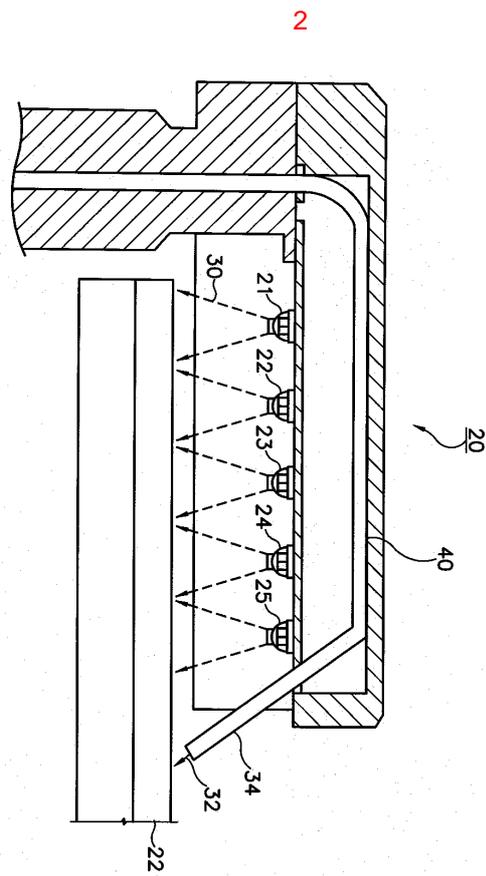
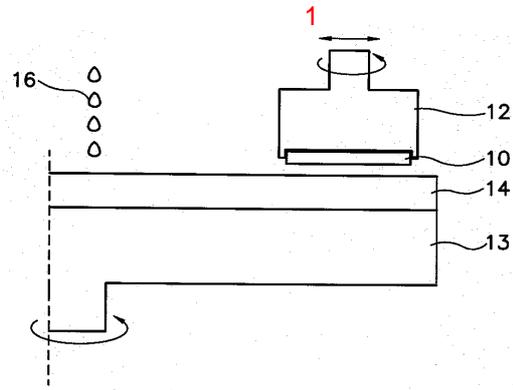
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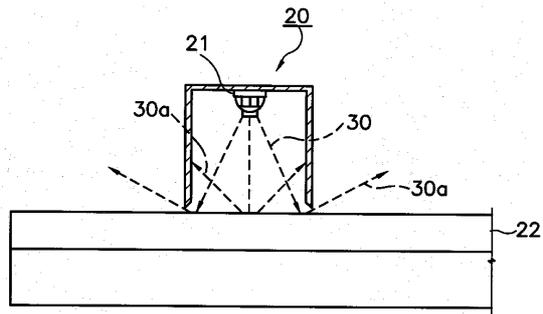
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8.

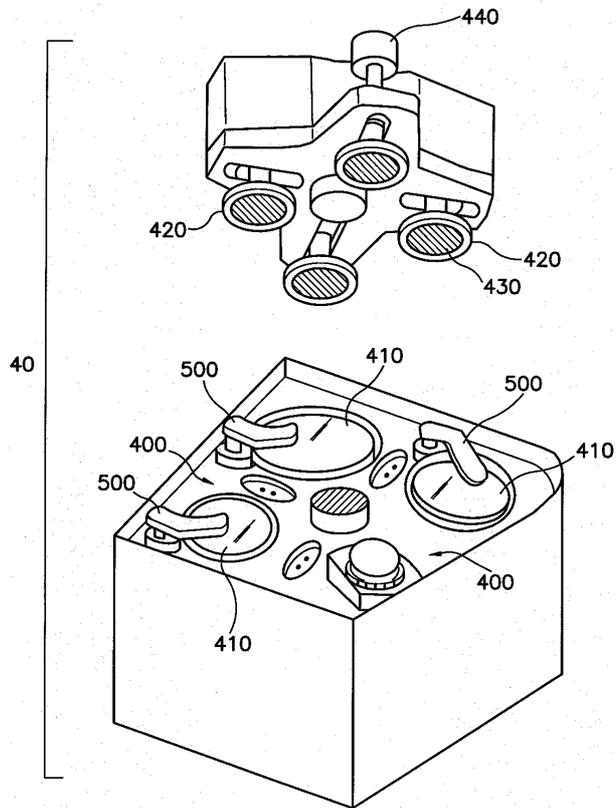
6



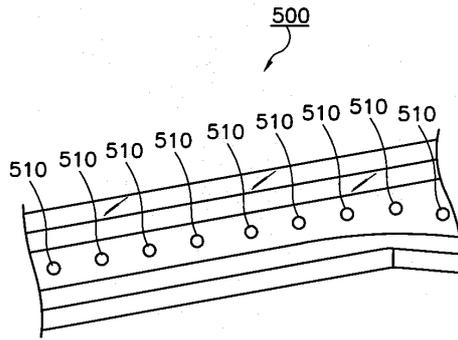
3



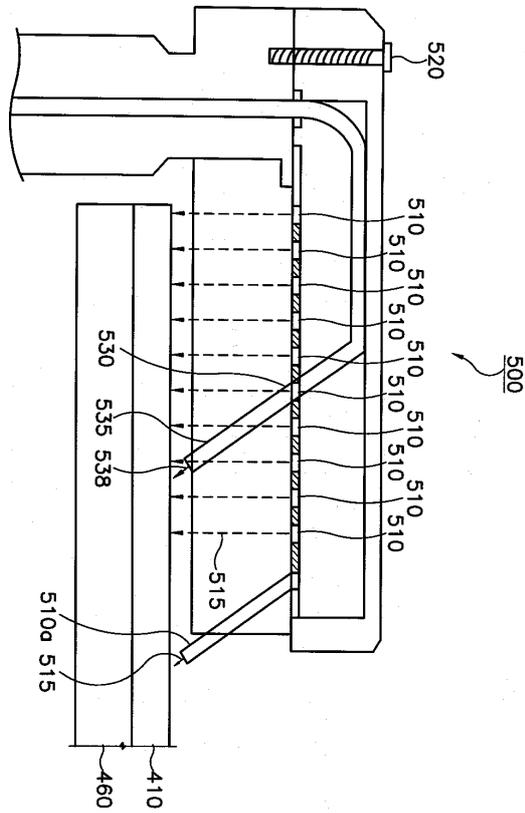
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