

()

,
.

(microfiltration), (ultra -
0.1
filtration), (nano - filtration))
(effective pore size) 가 ,
(water plants)

(20 50 (rack) 1000)
가 가 (4)
가

가 4 6

가 (particle counters)

,
.
.

가

가 (separate)

가

가

가

가

1 , ,

16

2 1

3 1 가 , 2 가

4 가

5

6

7

8 가

9

10 11

12

13 가 , 가

(100) 가 1 (control electronics station)(300) 16
가

가 가
(,)

(1) 2 (101) 1 (1) (101)
(1) (, 90°) (201)

(102) (100) (202) (2)
가

(LED)
(avalanche photodiode) (photomultiplier tube), (photodiode),

(100) 가 3 4 가 (150) (101) 가 (150) ,
(160)

(200) 가 (250) , (201) (250)
(260) 가 (101,201)가 (150,250)
(1) 가 가 가 16

1 4

5
 (20,21,22,23)
 (20A) 가 (20B)
 (120) , (220)
 (120) (120A) , (220) (220A)
 (275) (220A) (270) (270)
 (120A) (220A)
 가
 (side - by
 - side manner)

6 (130)() (230)가 , (270)
 (275) , (130A)가 , (230A)가
 가

7 (140) (145) , (101,1
 02) (145) (가) (104) (104)
 가

8 (201,202) (200)

9 (1 8) 가, (13
 5)

10 (101) (100) 가 (150)
 (201)
 (200) (150)
 가 ,

11 (100) (200)가
 (125) (101,102)
 (201,202)

(200)

12 (32B) (30) (32A) (30) (32C) (light trap section)(32) (31)가 (((laser fiber opt (beam splitter)(BS) 90% 10% (L1) (S1), (D) (30) (32C) (32) .

(BS) (P1, P2) (M) (S1)가 (S2)가 (neutral density filter)(ND)(1000 (D) (L2) (3 (S2) 가 가 가 가 (S1, 가 가 가 가

5,912,737

13 가 (100) (200)가 (201,202,203,204) 가

가 .

(57)

1.

2.

1

3.

2 , .

4.

2 , .

5.

4 ,

가

6.

5 , .

7.

5 , .

8.

5 , .

9.

5 , .

10.

5 , .

11.

3 ,

가

2

가

1

12.

11 , 1

,

1

가

13.

11 , 2

가

,

가

2

14.

2 , , , , .

15.

11 , 가 가 .

16.

11 , 가 , .

17.

2 , 가 , ,

(a) 1 2 ,

(b) 2 ,

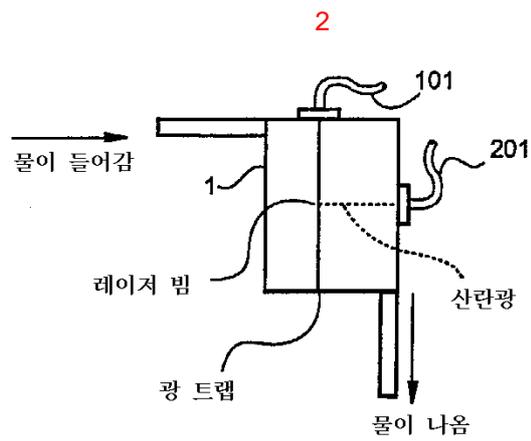
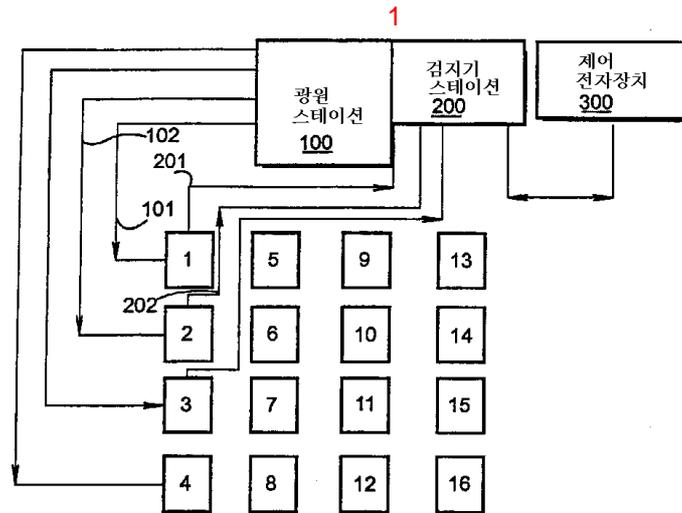
(c) 2 , .

18.

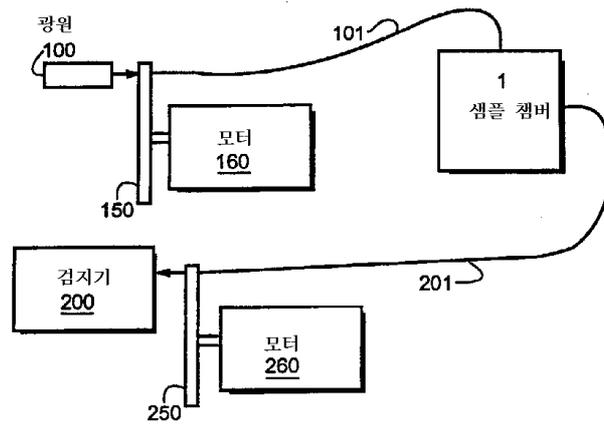
(d) ,

(e) ,

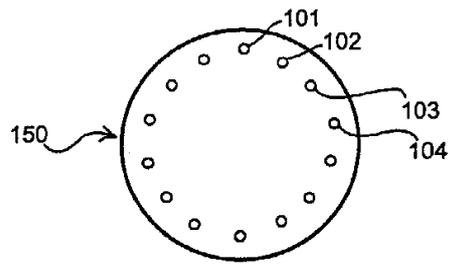
(f) , .



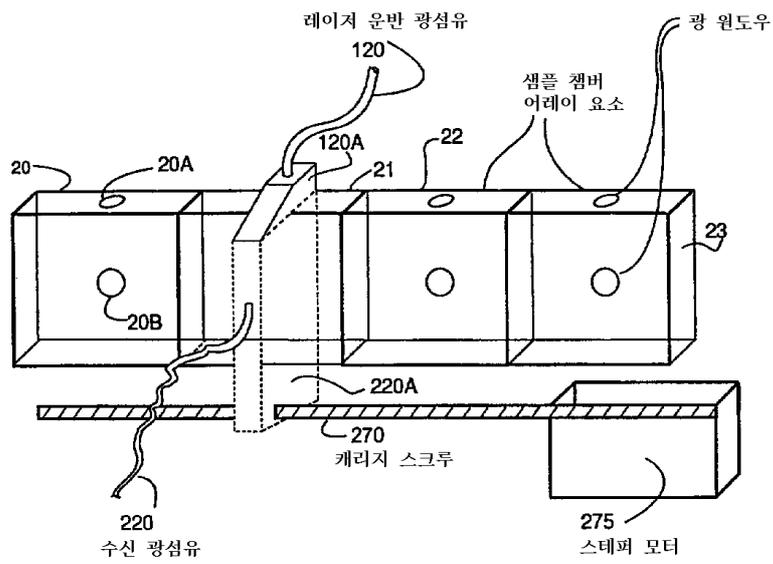
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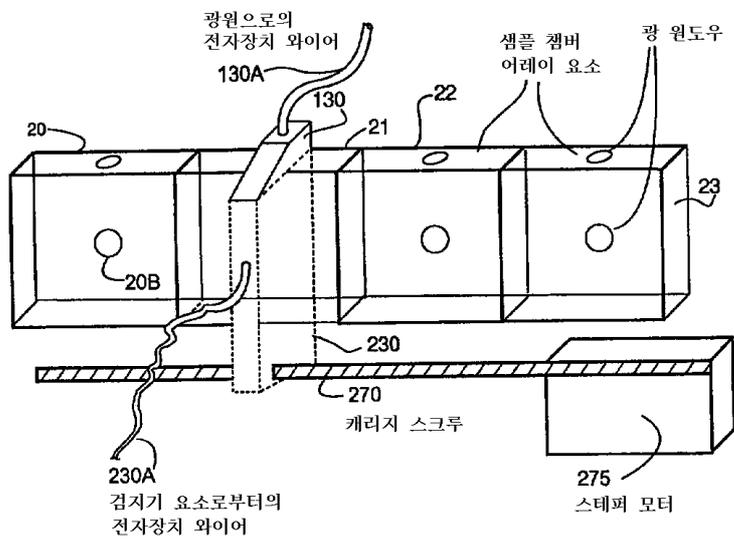
4



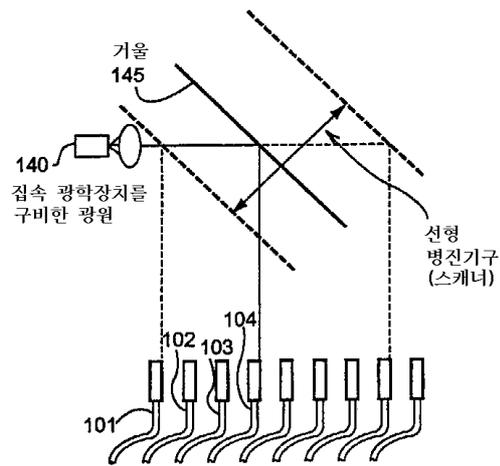
5



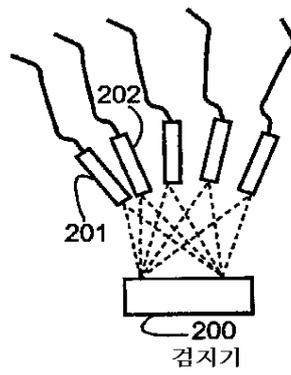
6



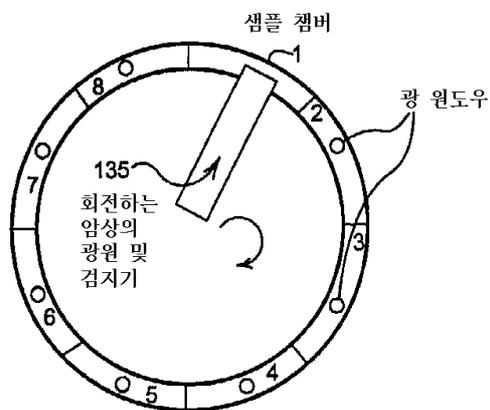
7



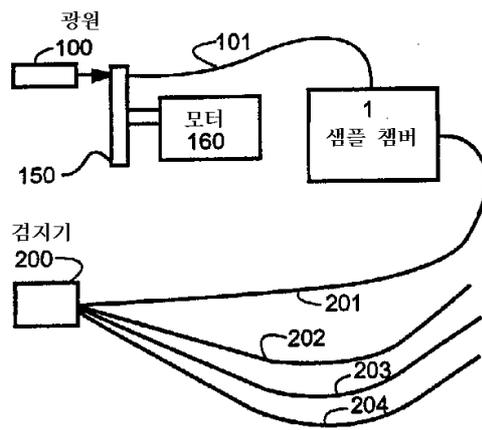
8



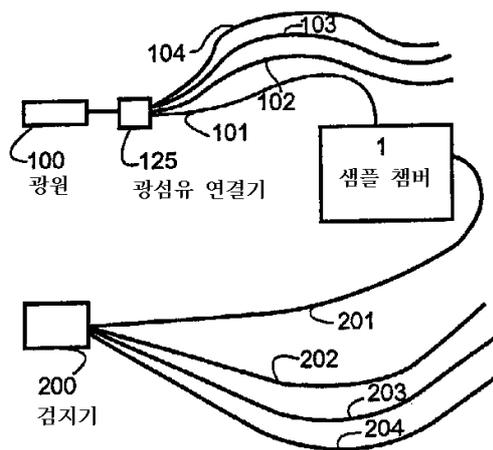
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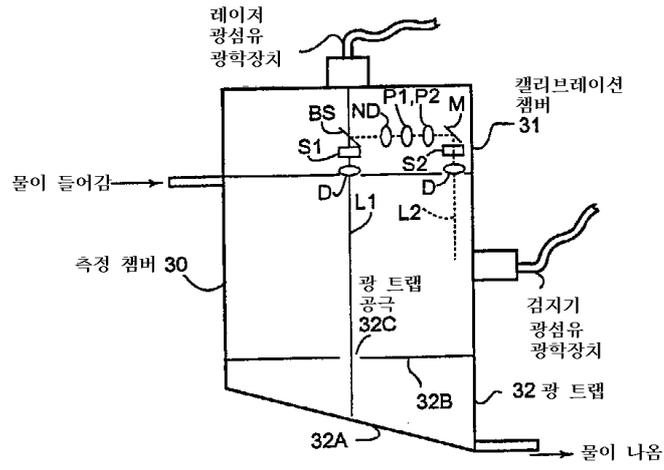
10



11



12



13

