FIG.1

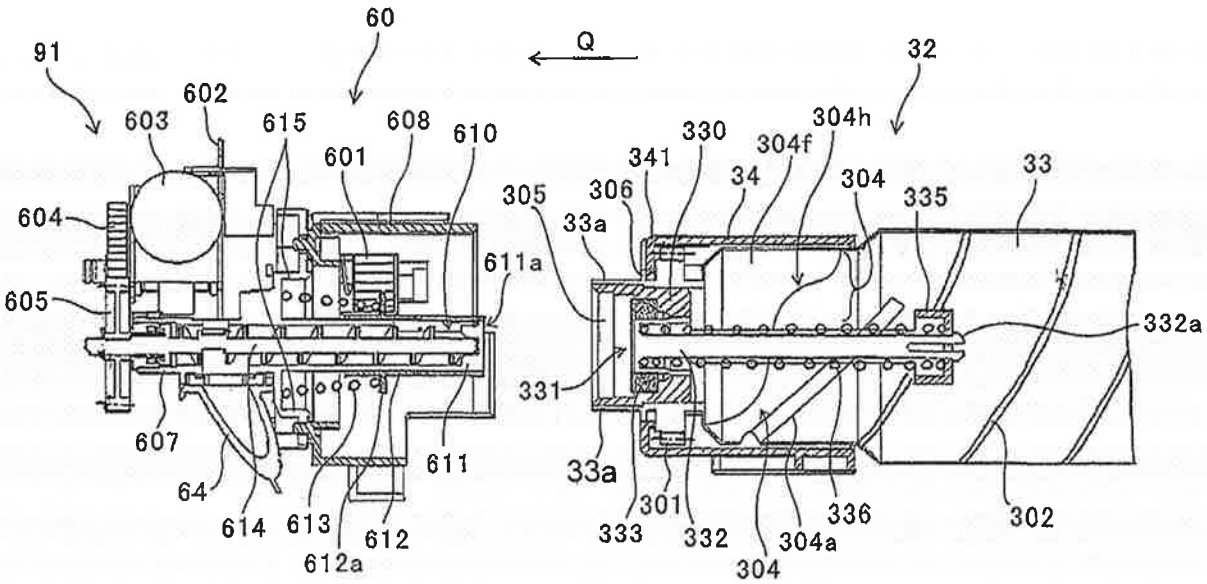

60
91
Q
32
602
603
615
608
610
601
341
330
304h
304f
34
304
335
33
305
306
33a
604
605
611a
332a
331
607
611
64
614
613
612
612a
33a
301
333
332
304
304a
336
302

FIG.2

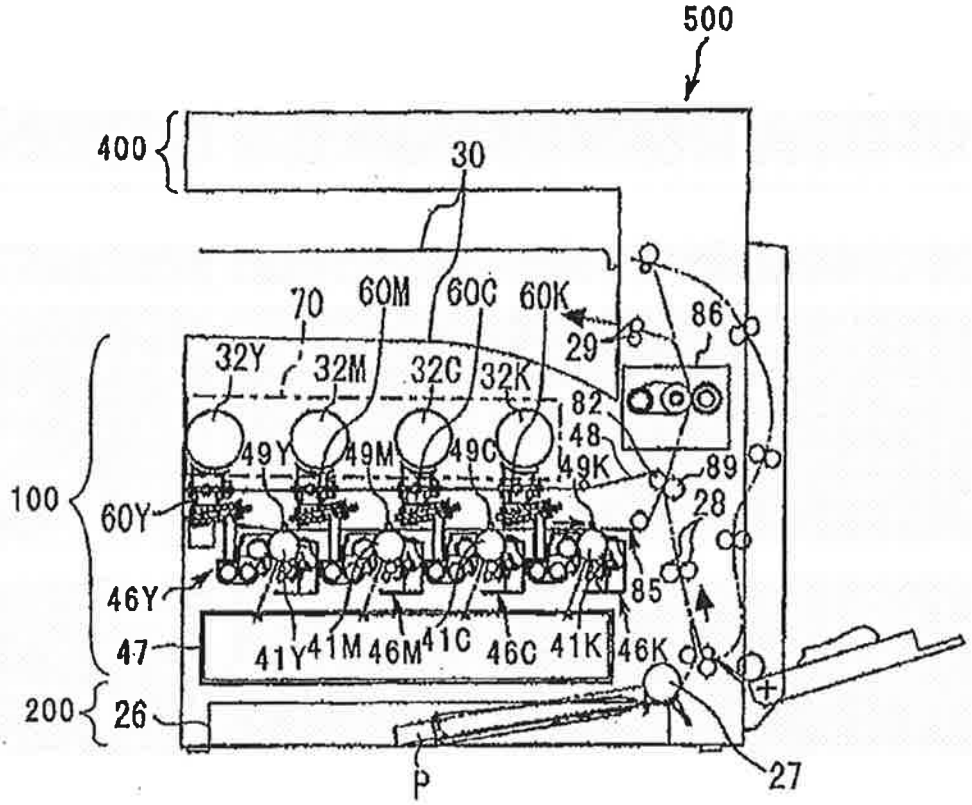

500
400
30
70
60M
60C
60K
29
86
32Y
32M
32C
32K
82
48
49Y
49M
49C
49K
89
28
100
60Y
46Y
85
47
41Y
41M
46M
41C
46C
41K
46K
200
26
P
27

FIG.3

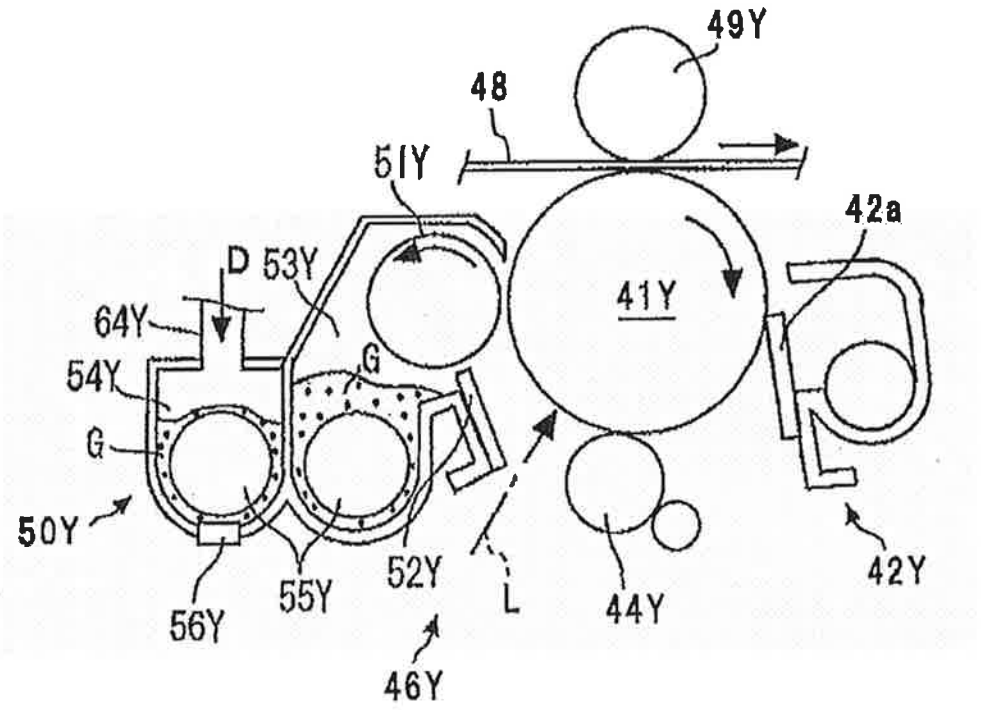


FIG.4

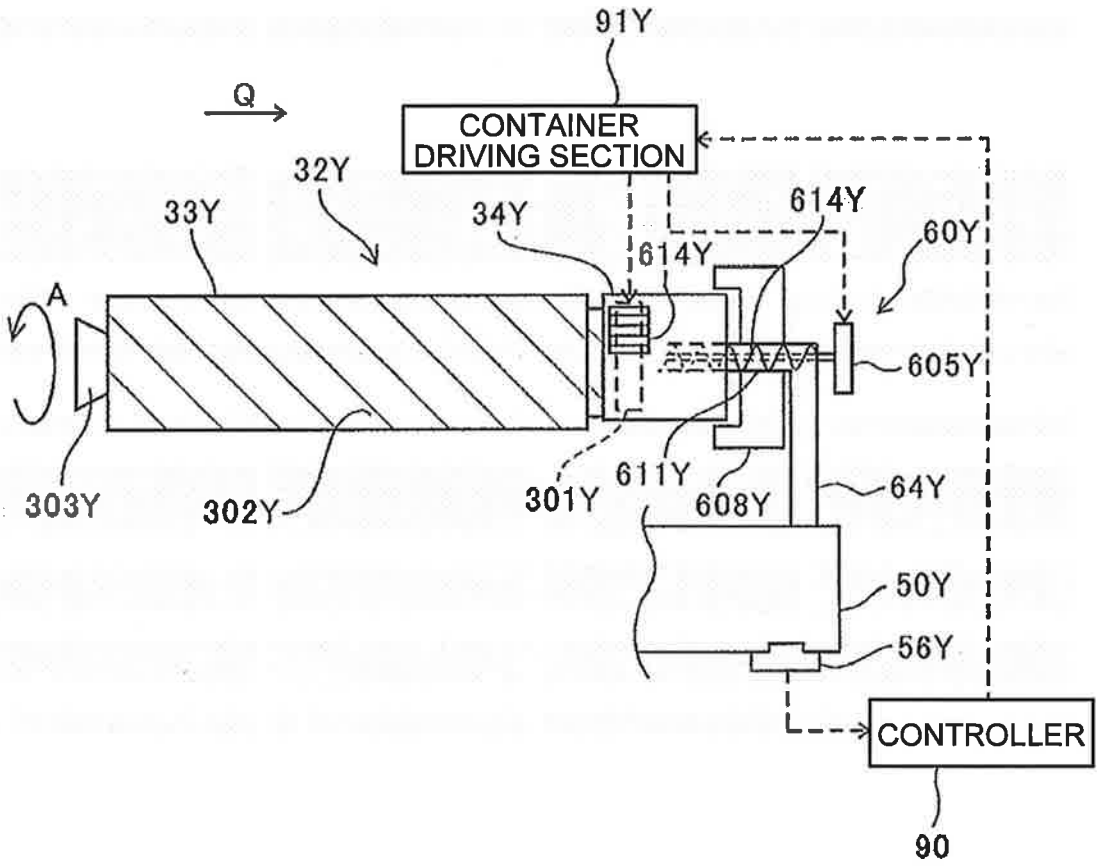

91Y
Q
CONTAINER DRIVING SECTION
32Y
33Y
34Y
614Y
614Y
60Y
A
605Y
303Y
302Y
301Y
611Y
608Y
64Y
50Y
56Y
CONTROLLER
90

FIG.5

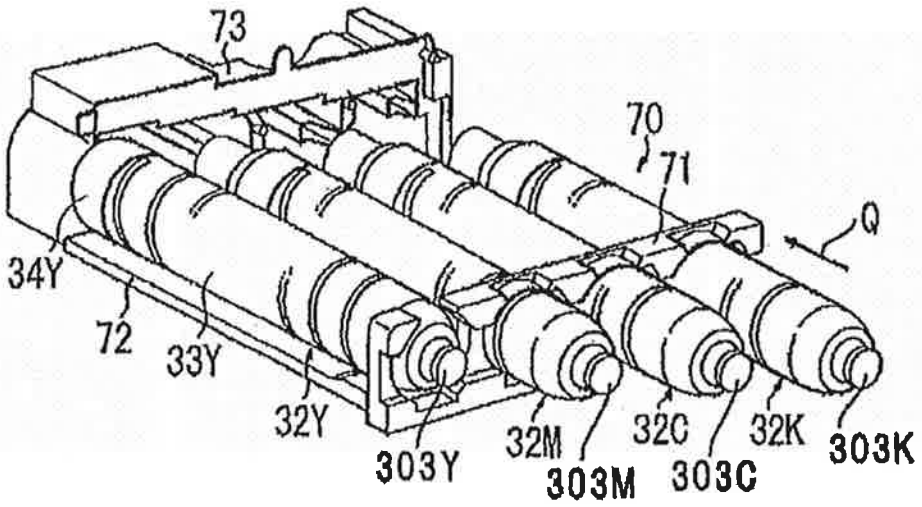


FIG.6

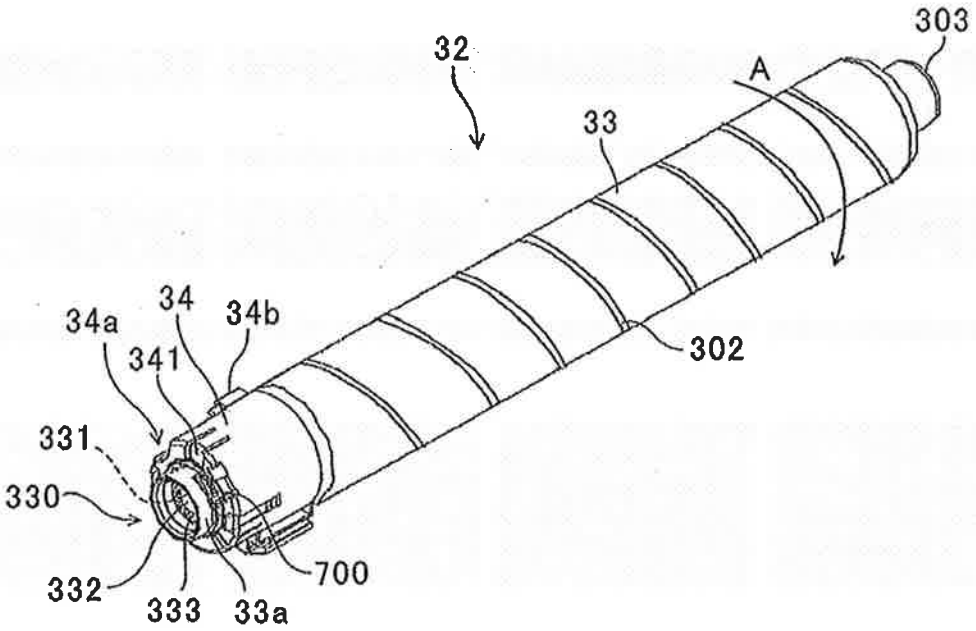


FIG.7

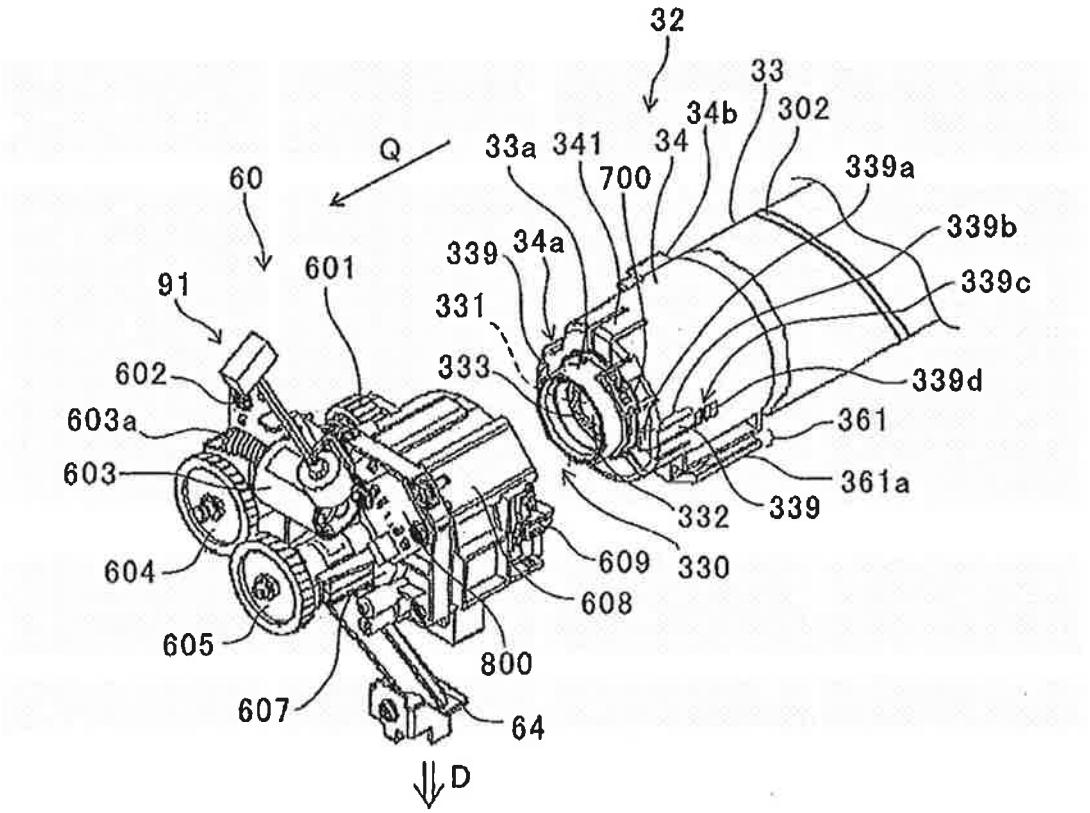

32
33
34b
302
Q
33a
341
34
339a
60
700
339b
339
34a
601
339c
91
331
333
339d
602
603a
361
603
361a
339
332
609
330
604
608
605
800
607
64
D

FIG.8

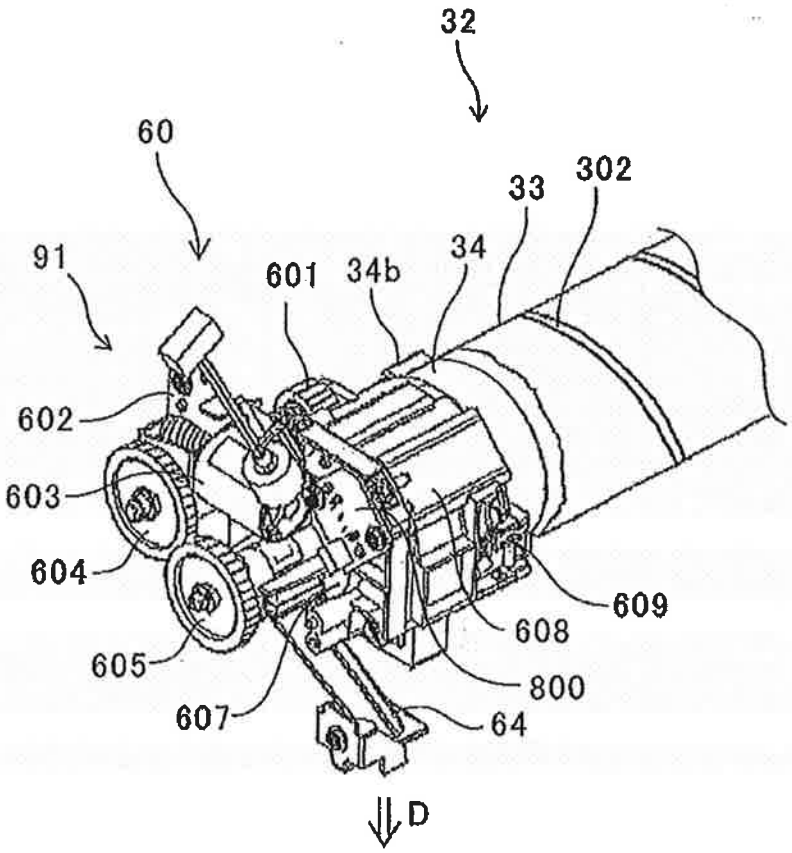


FIG.9

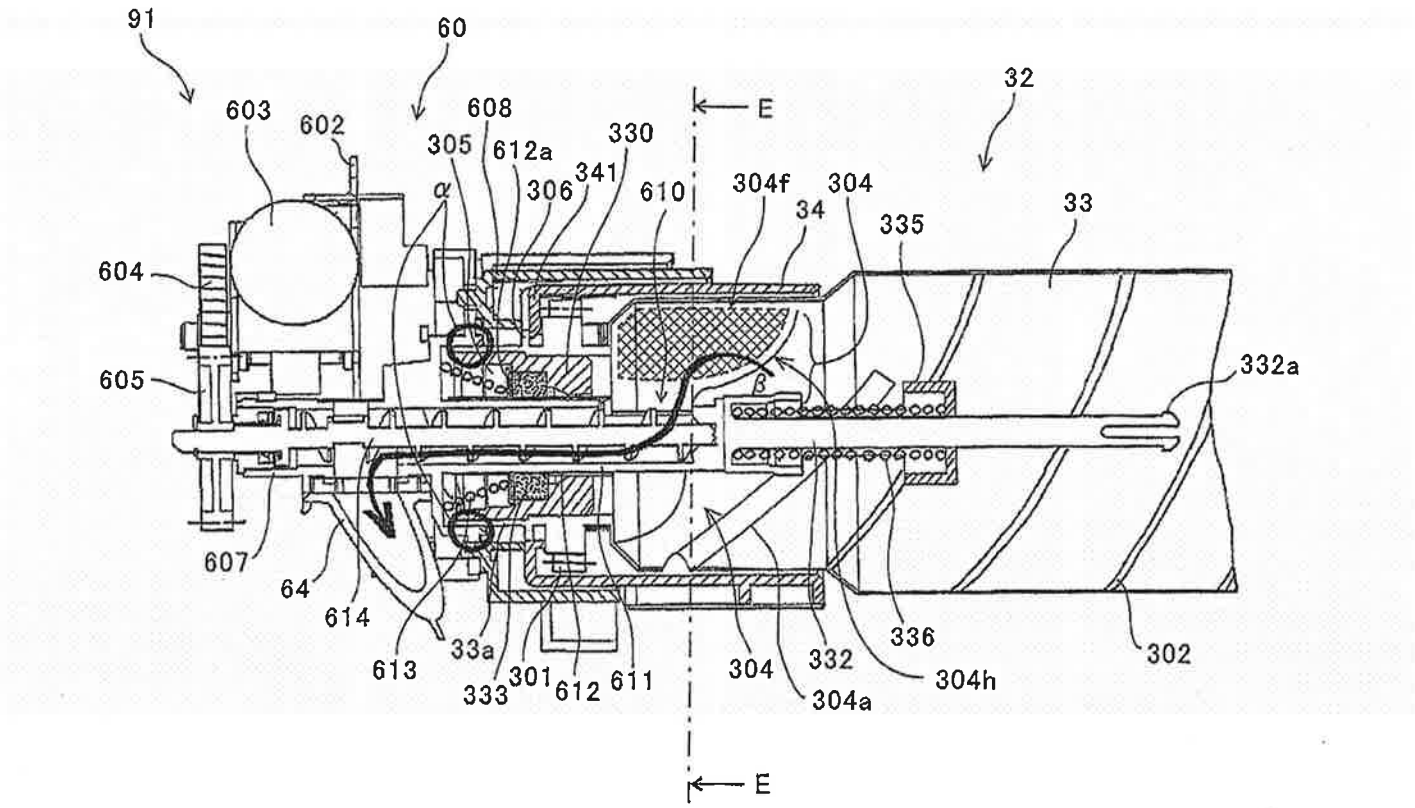

91
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603
602
608
305
612a
330
341
306
610
304f
304
34
335
33
32
E
604
605
α
β
332a
607
64
614
613
33a
333
301
612
611
304
332
304a
336
304h
302
E

FIG.10

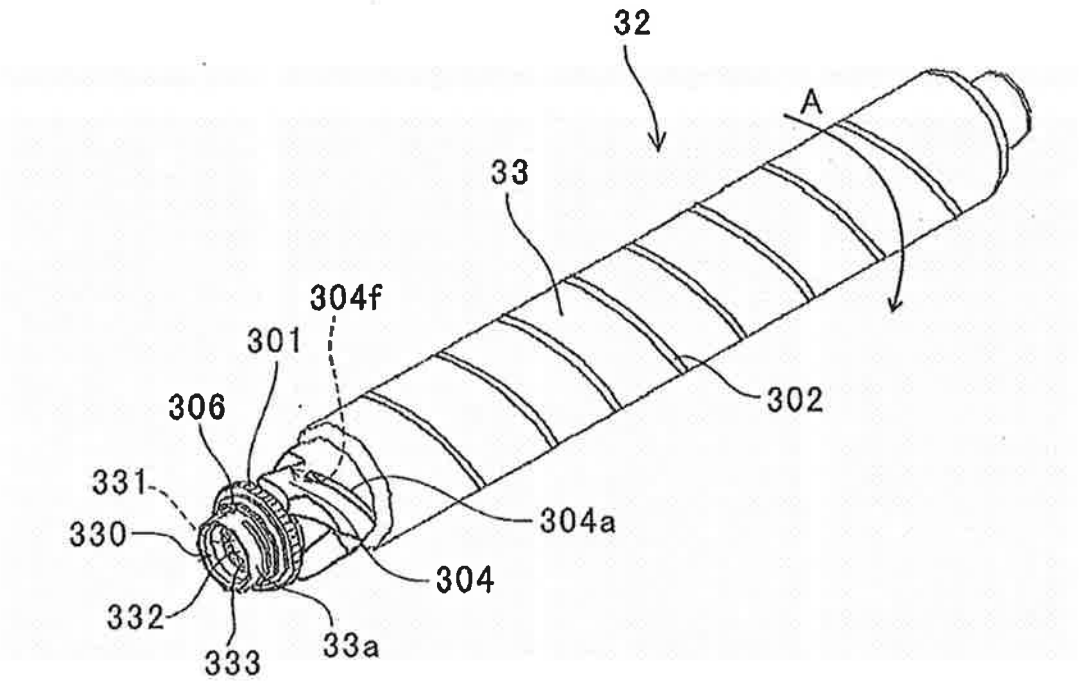


FIG.11

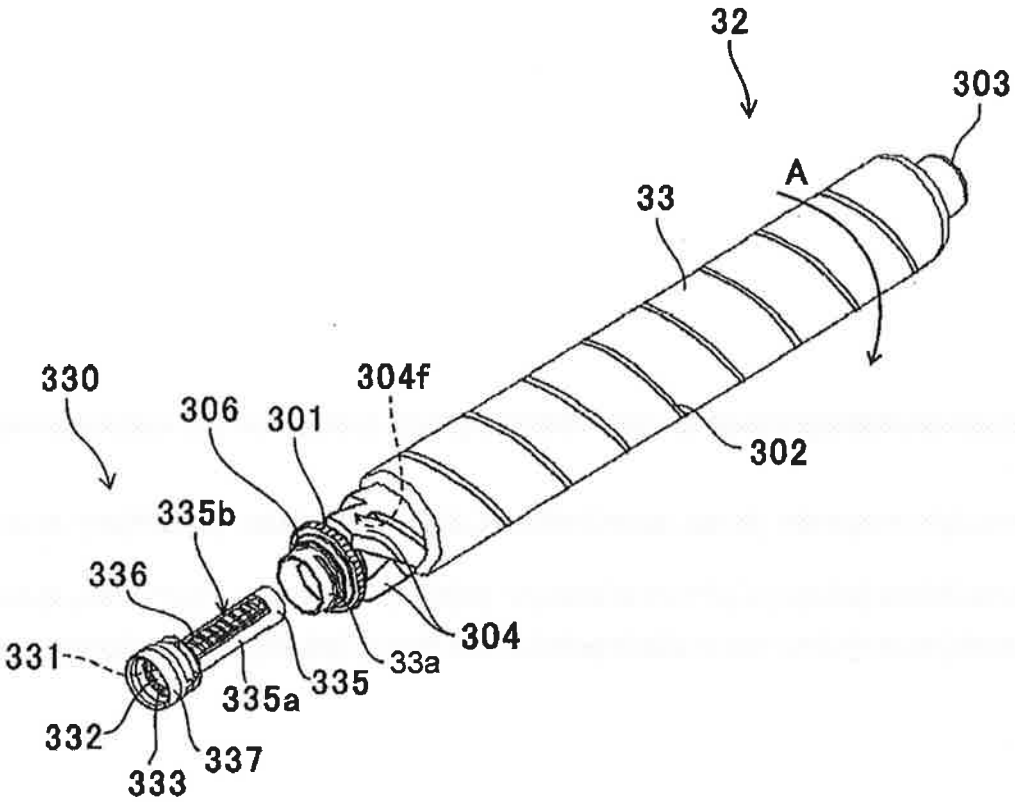

32
303
A
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330
304f
306
301
302
335b
336
304
331
33a
335
335a
332
337
333

FIG.12

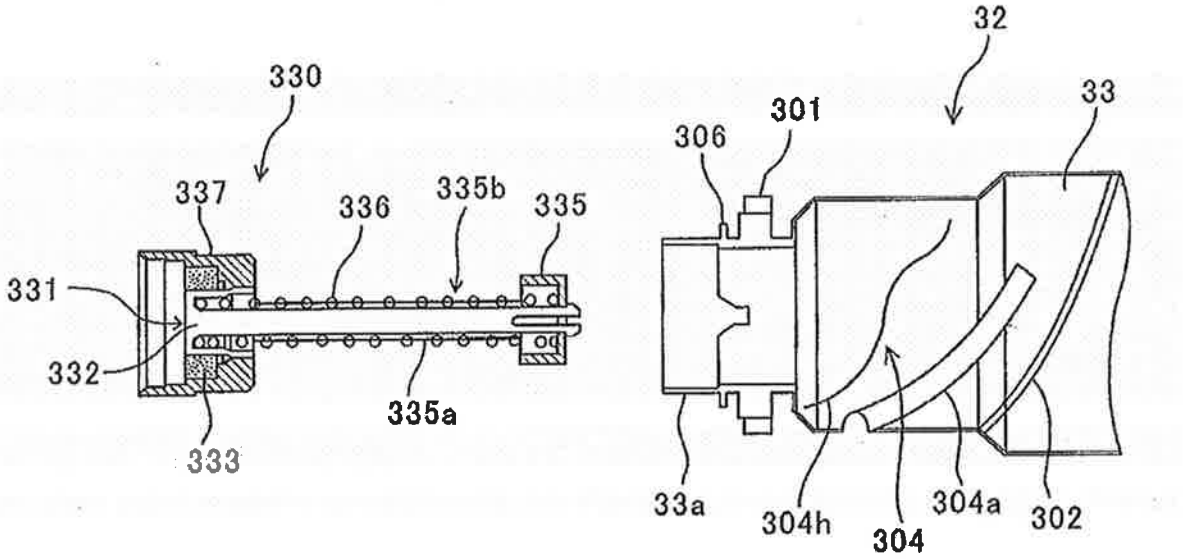

330
337
336
335b
335
331
332
335a
333
32
301
306
33
33a
304h
304
304a
302

FIG.13

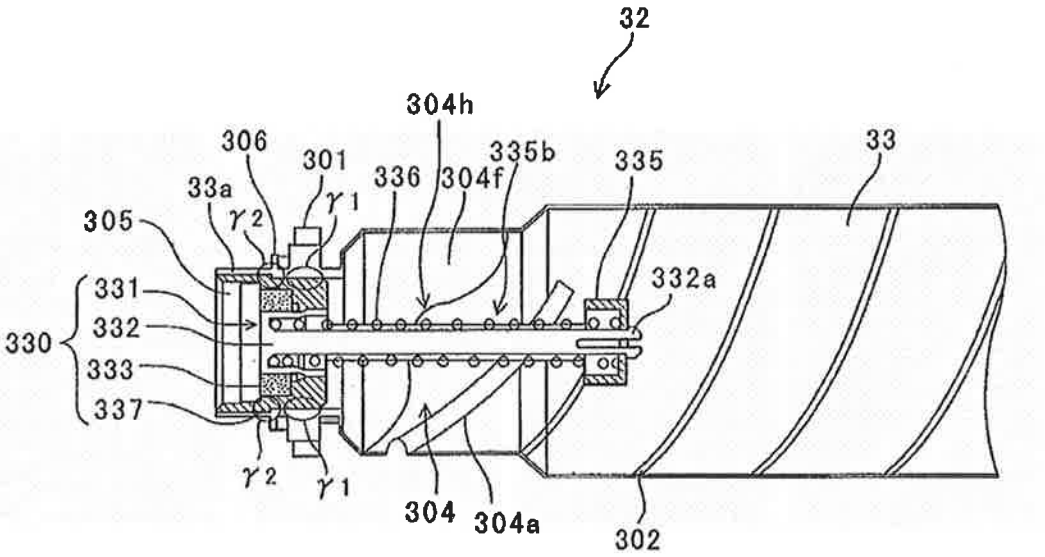

32
304h
306
301
335b
335
33
33a
336
304f
γ1
γ2
305
331
332
330
333
337
332a
γ2
γ1
304
304a
302

FIG.14

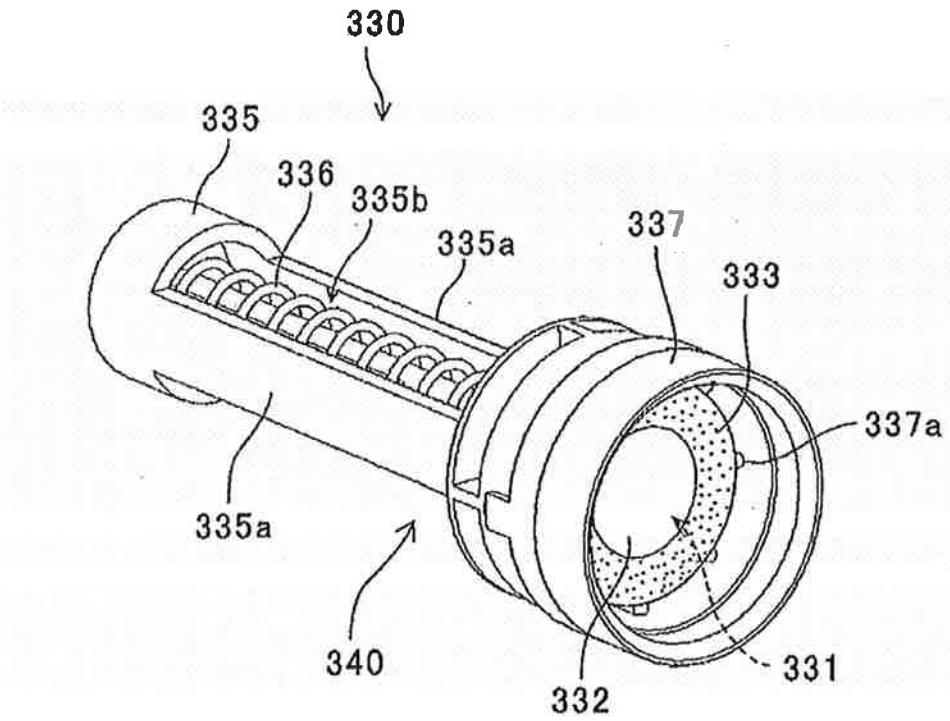


FIG.15

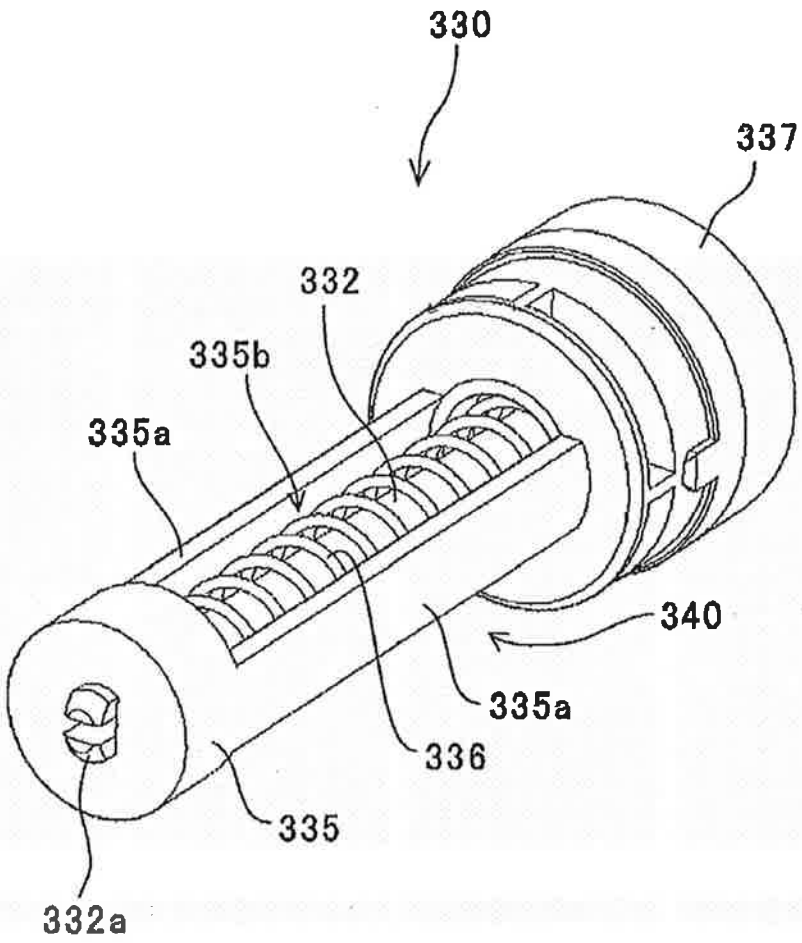


FIG.16

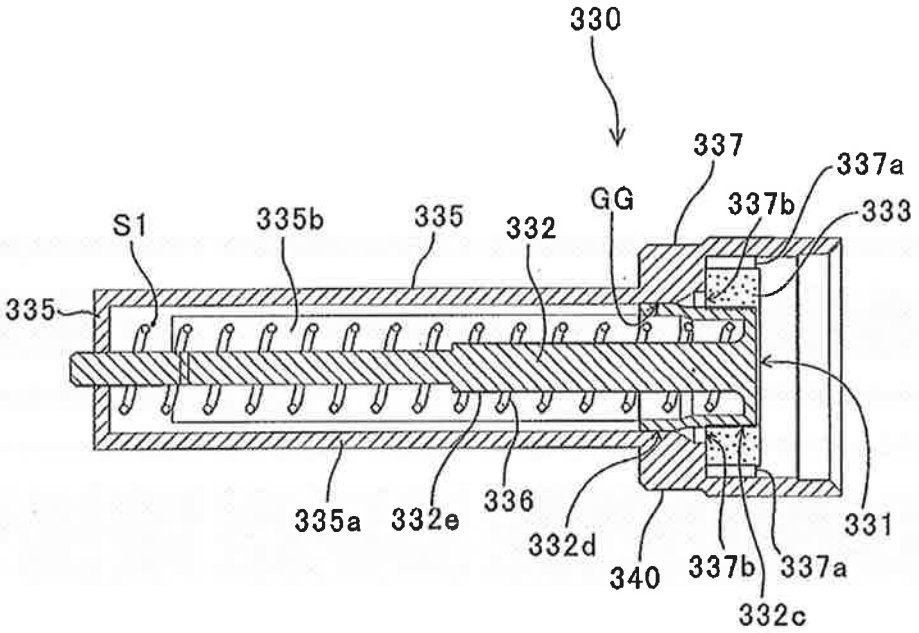

330
337
337a
GG
337b
333
S1
335b
335
332
335
335a
332e
336
332d
340
337b
337a
331
332c

FIG.17

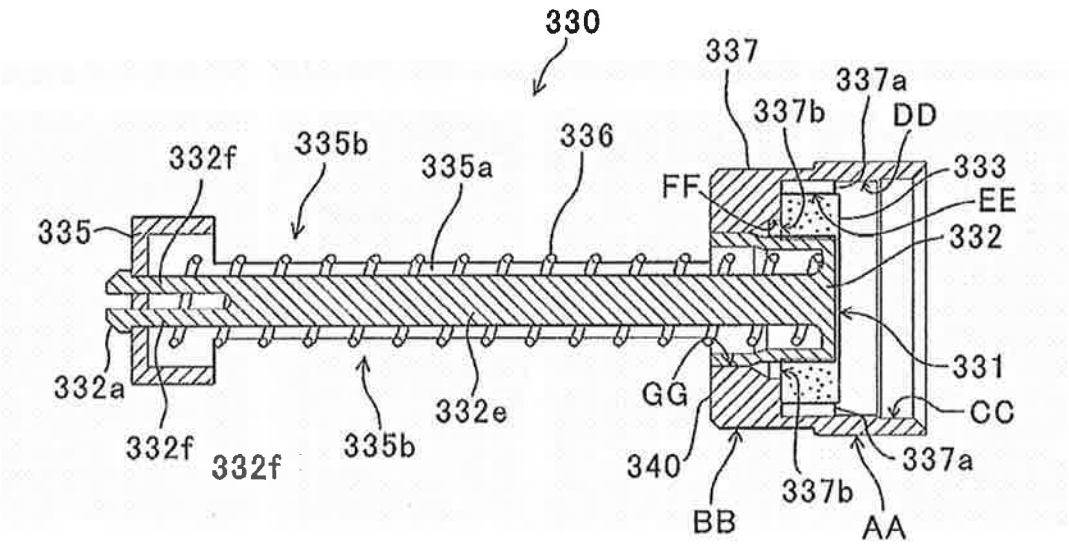

330
337
337a
337b
DD
333
EE
332
331
CC
337a
337b
AA
BB
340
GG
332e
335b
332f
332f
332a
335
332f
335b
335a
336
FF

FIG.18

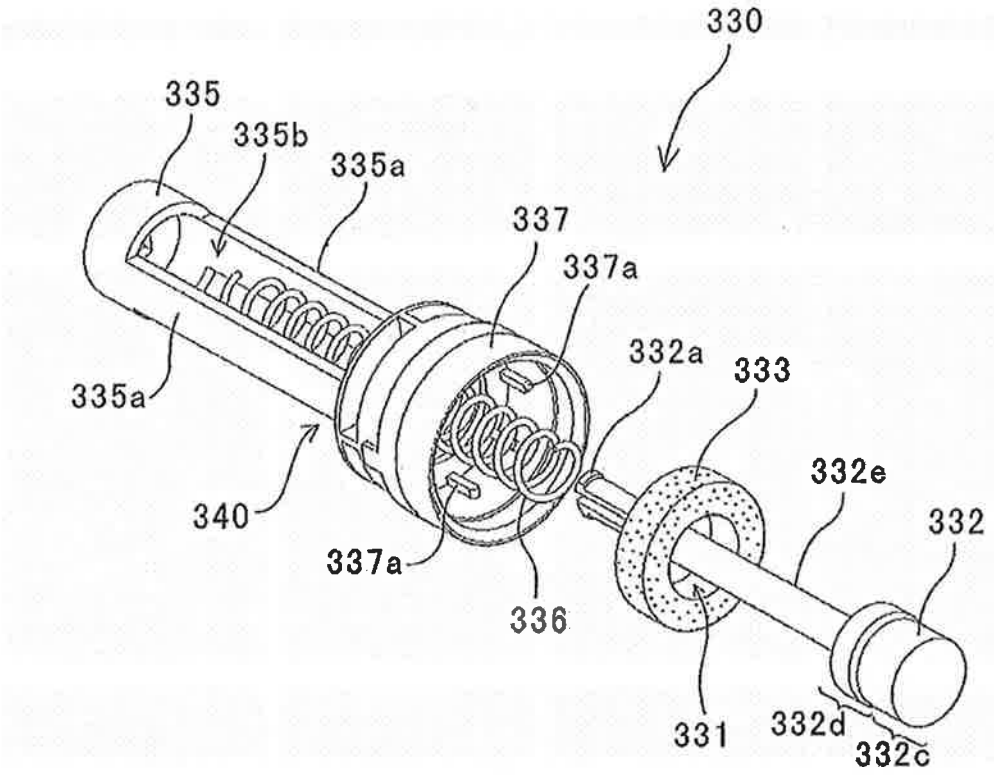

330
335
335b
335a
337
337a
332a
333
335a
340
332e
332
337a
336
331
332d
332c

FIG.19

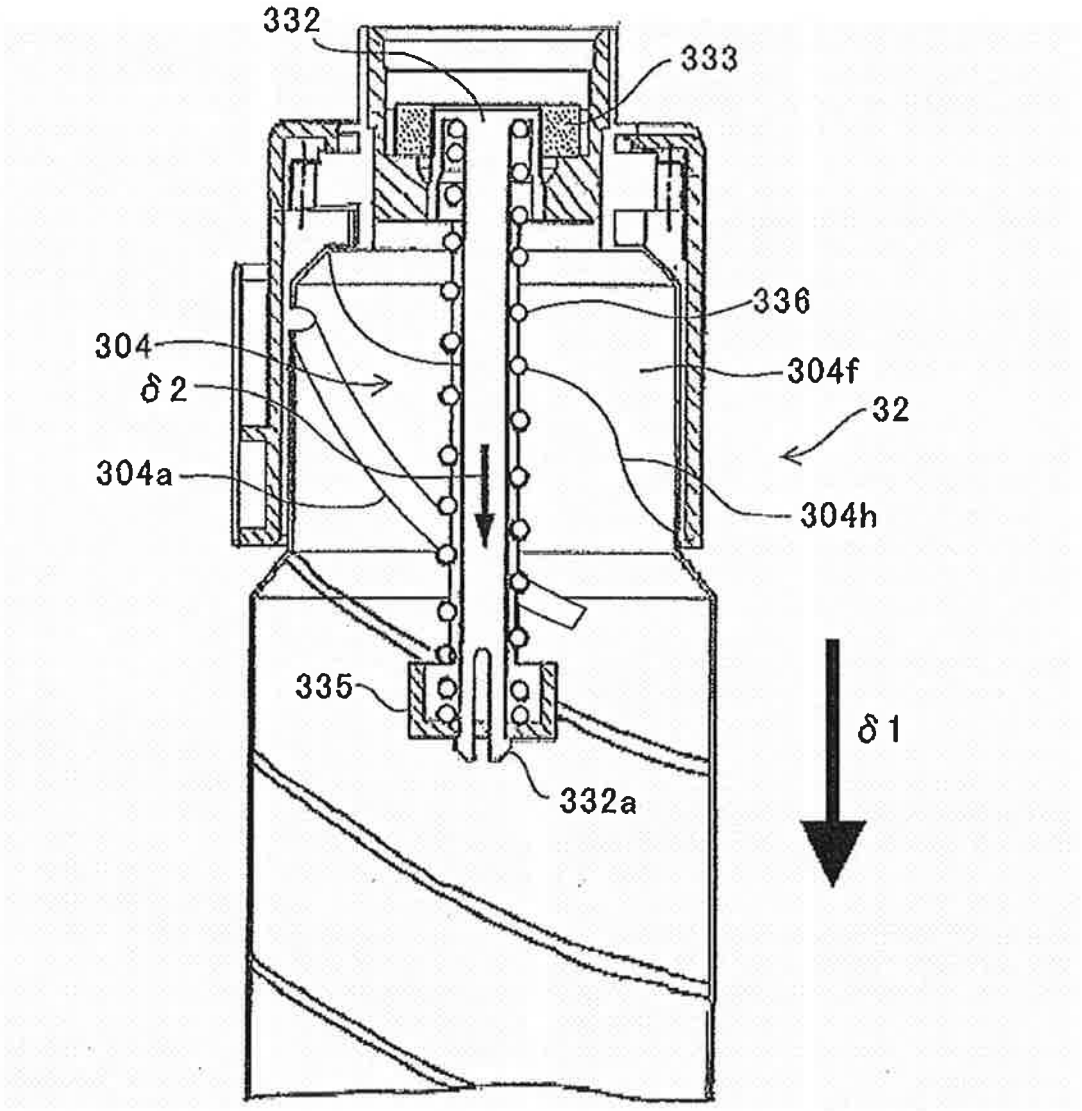


FIG.20

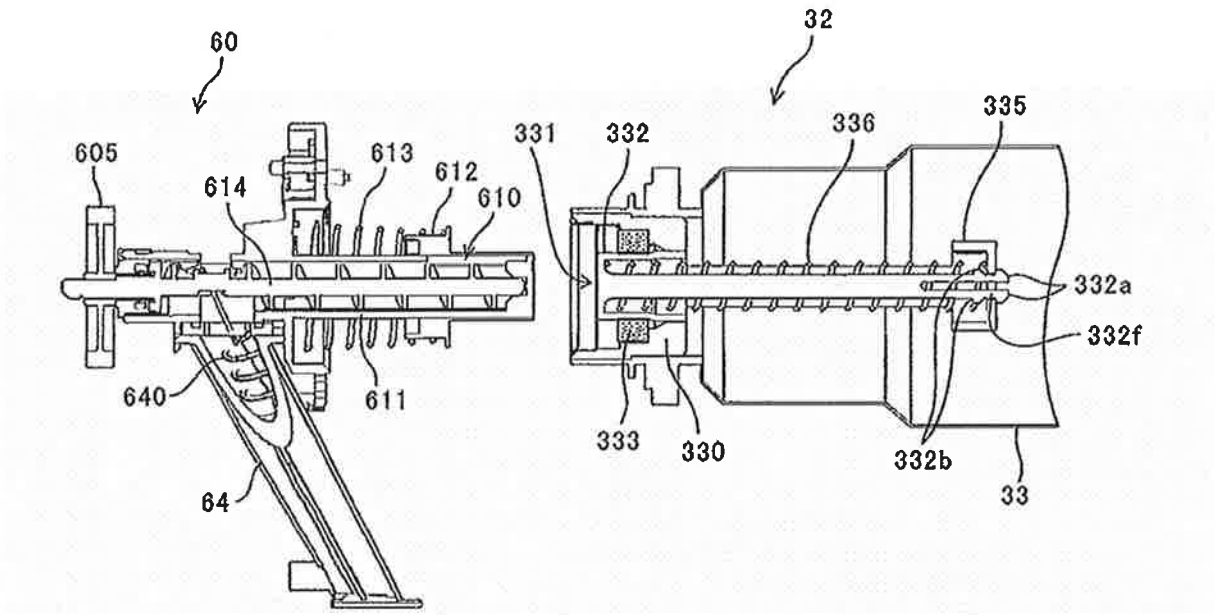

60
32
605
614
613
612
610
331
332
336
335
332a
332f
640
611
333
330
332b
33
64

FIG.21

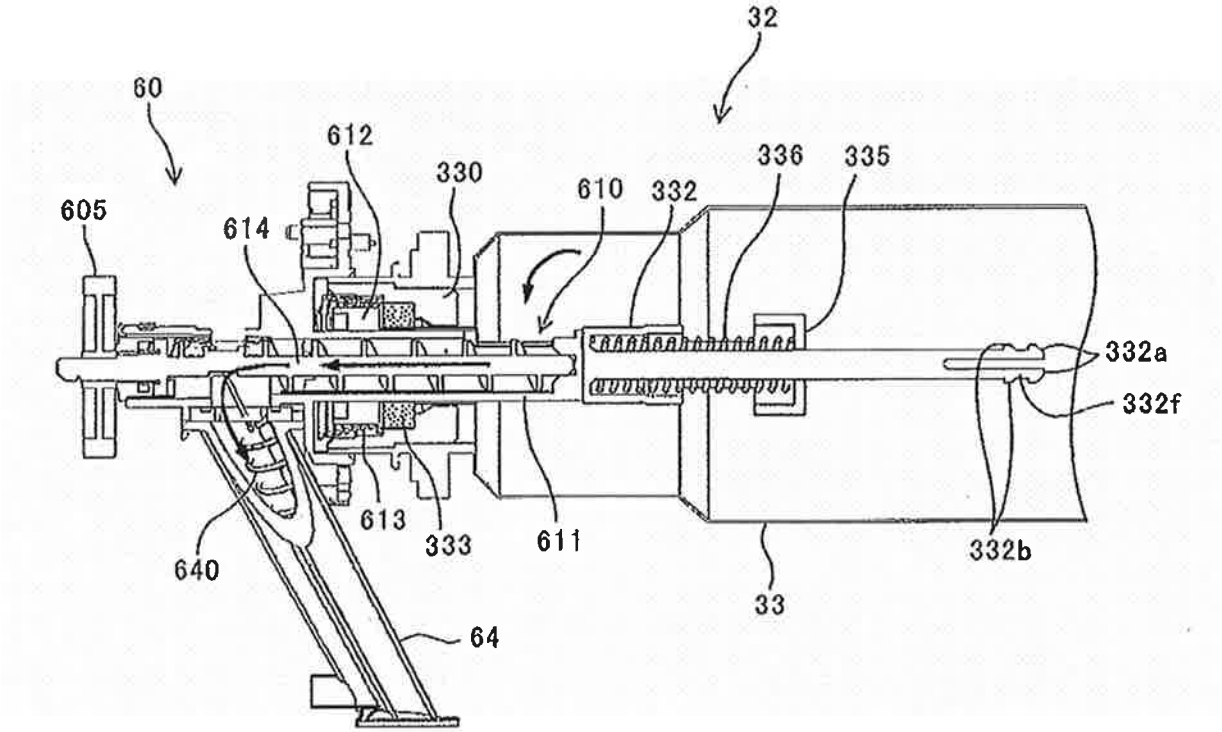

32
60
612
330
610
332
336
335
605
614
332a
332f
613
333
611
640
332b
33
64

FIG.22

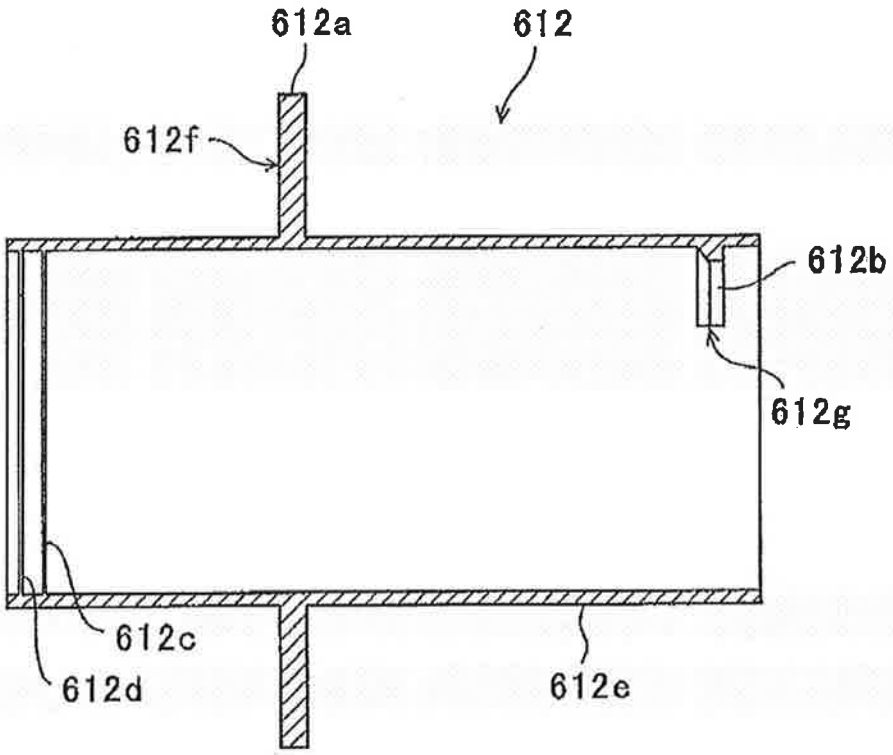


FIG.23

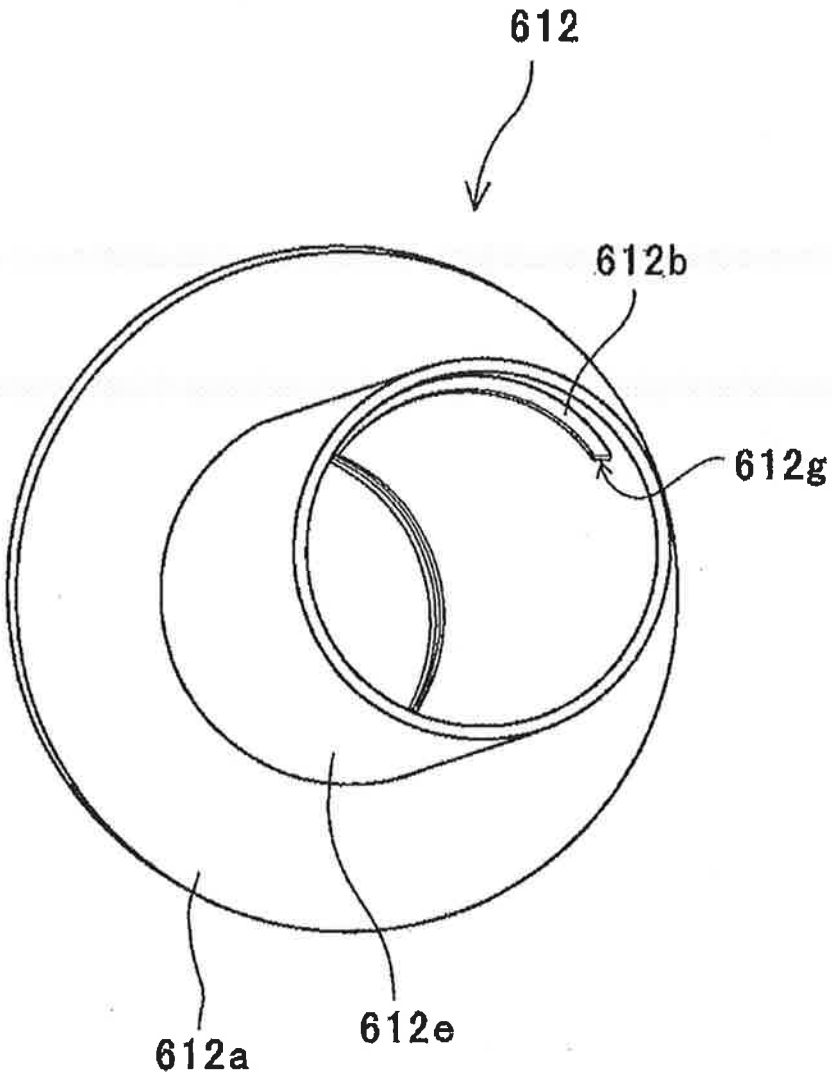


FIG.24

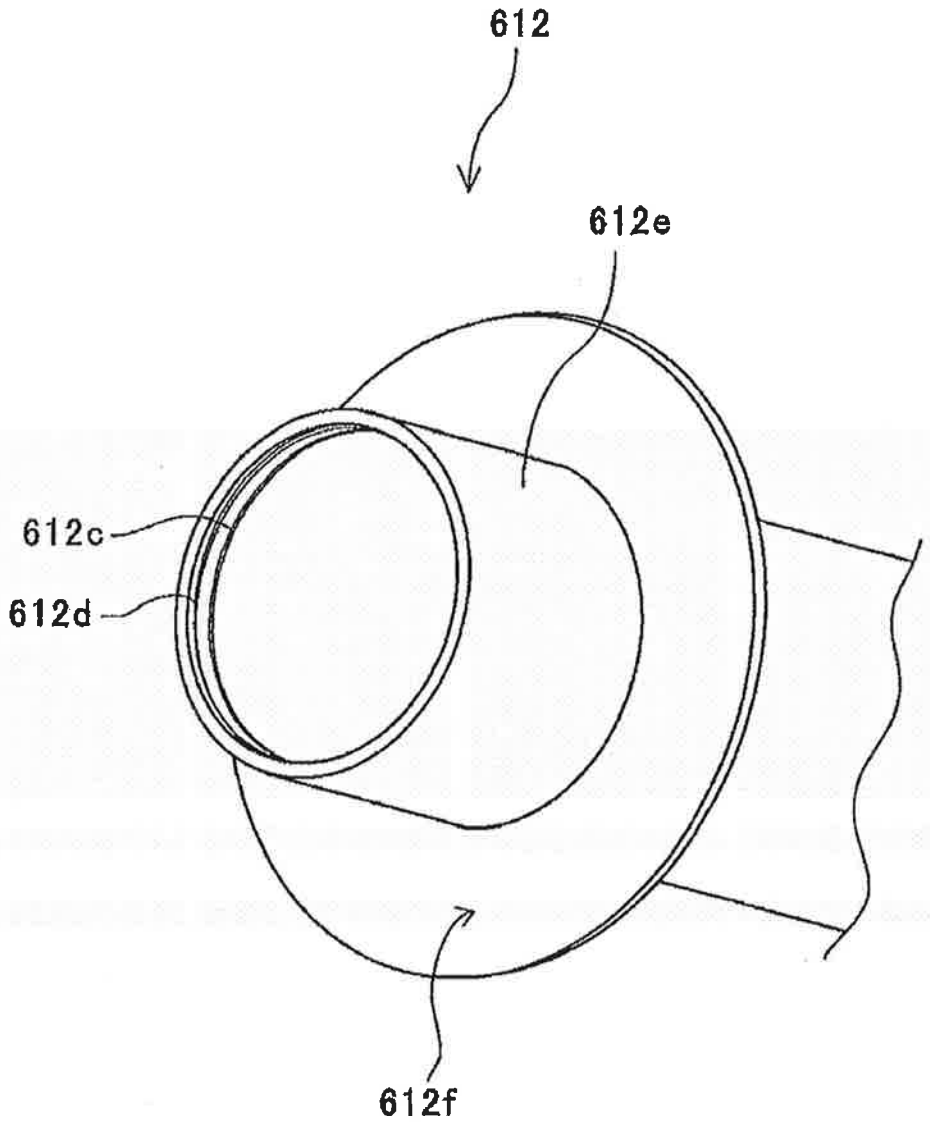


FIG.25

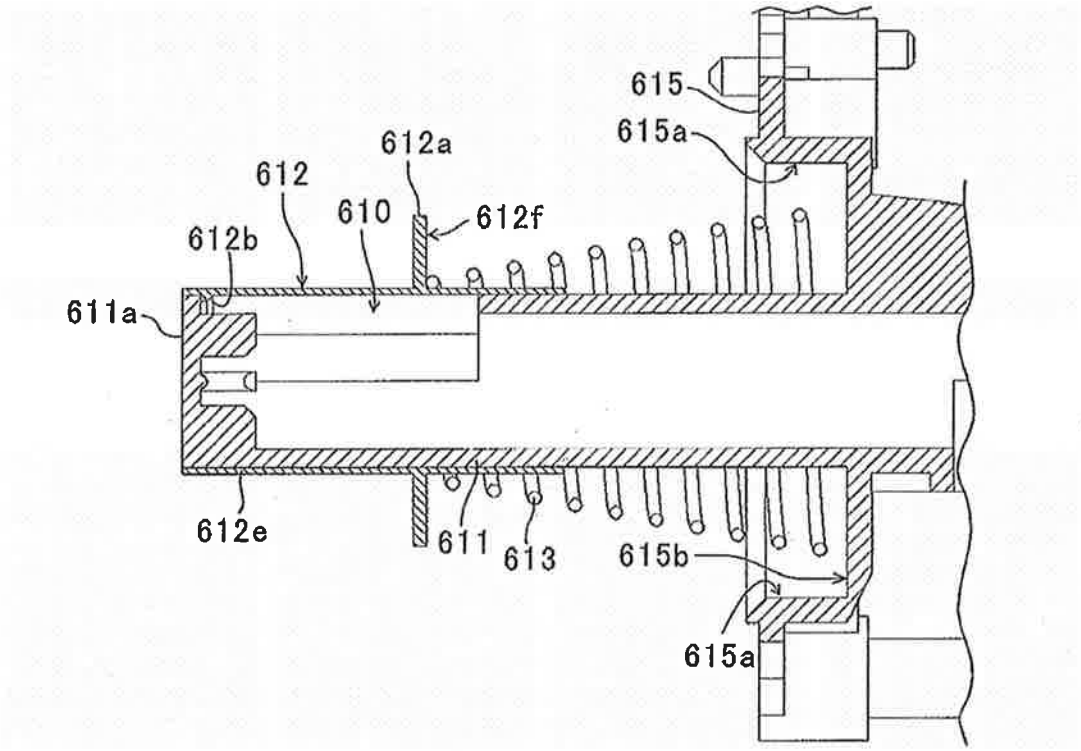


FIG.26

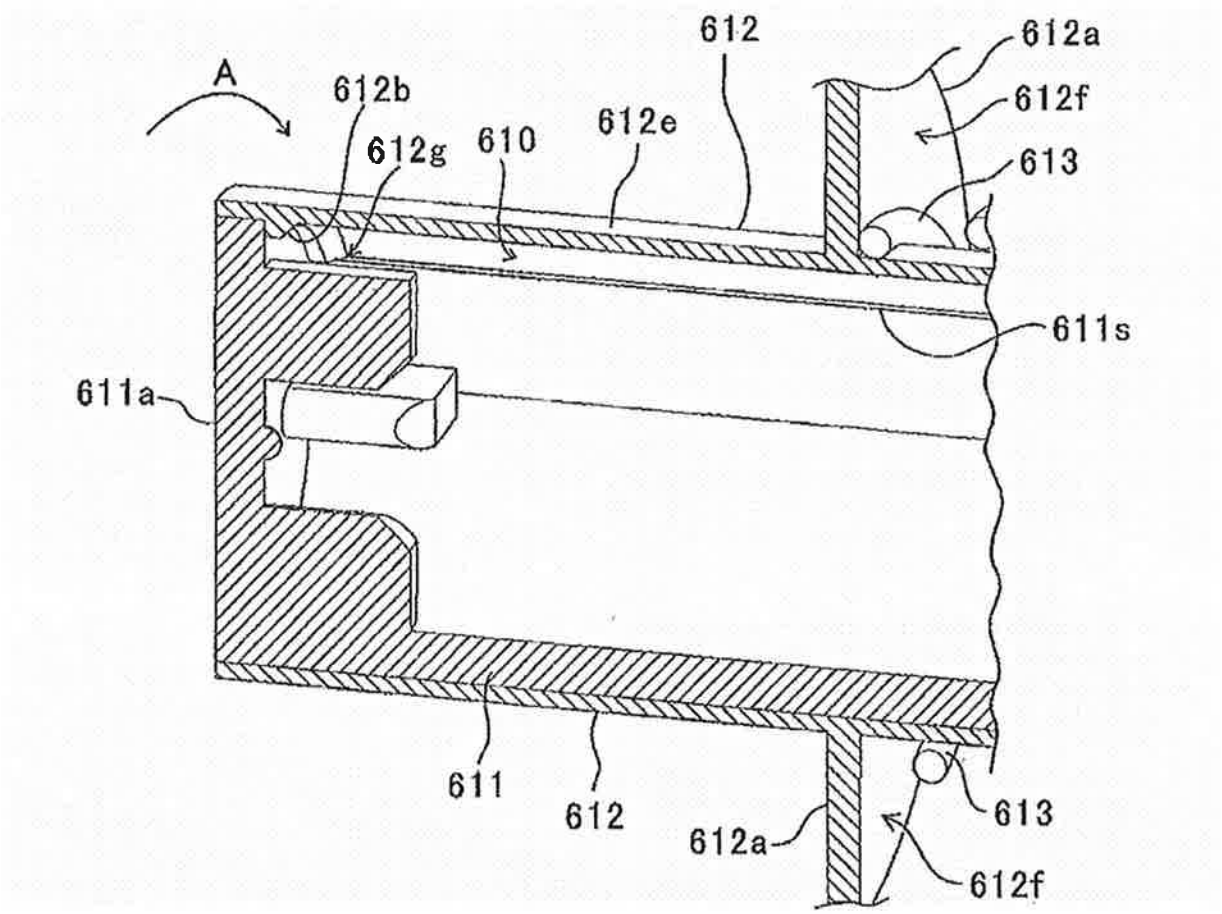

A
612b
612g
610
612e
612
612a
612f
613
611s
611a
611
612
612a
613
612f

FIG.27

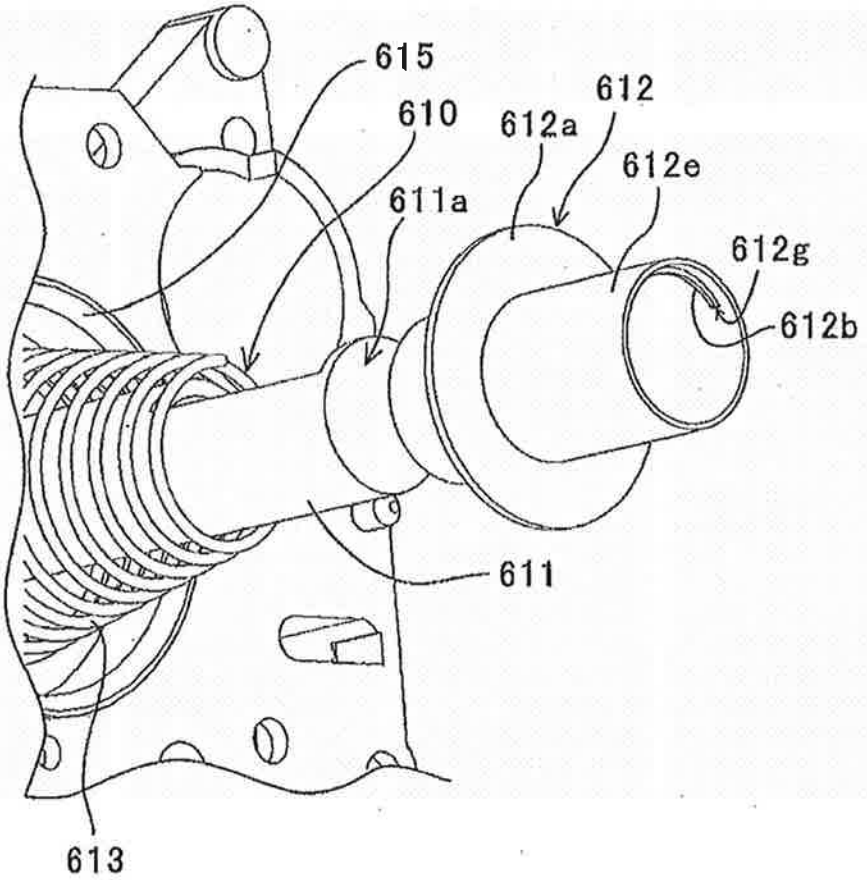


FIG.28

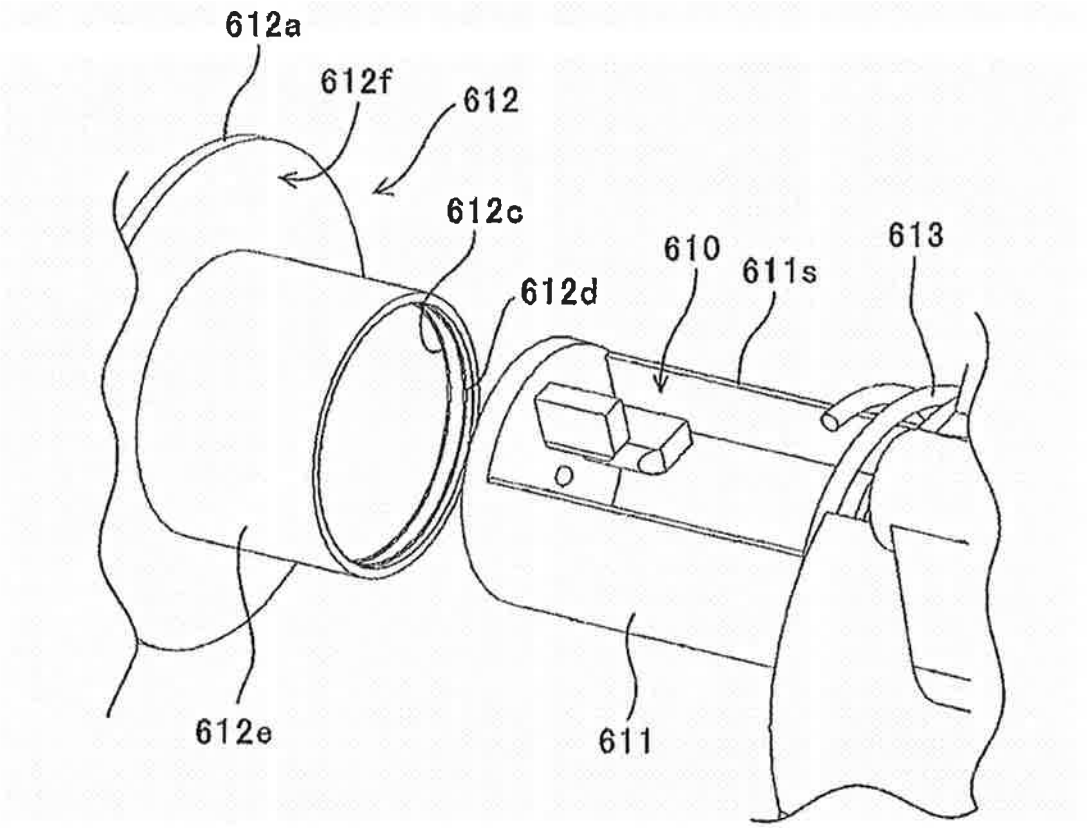


FIG.29

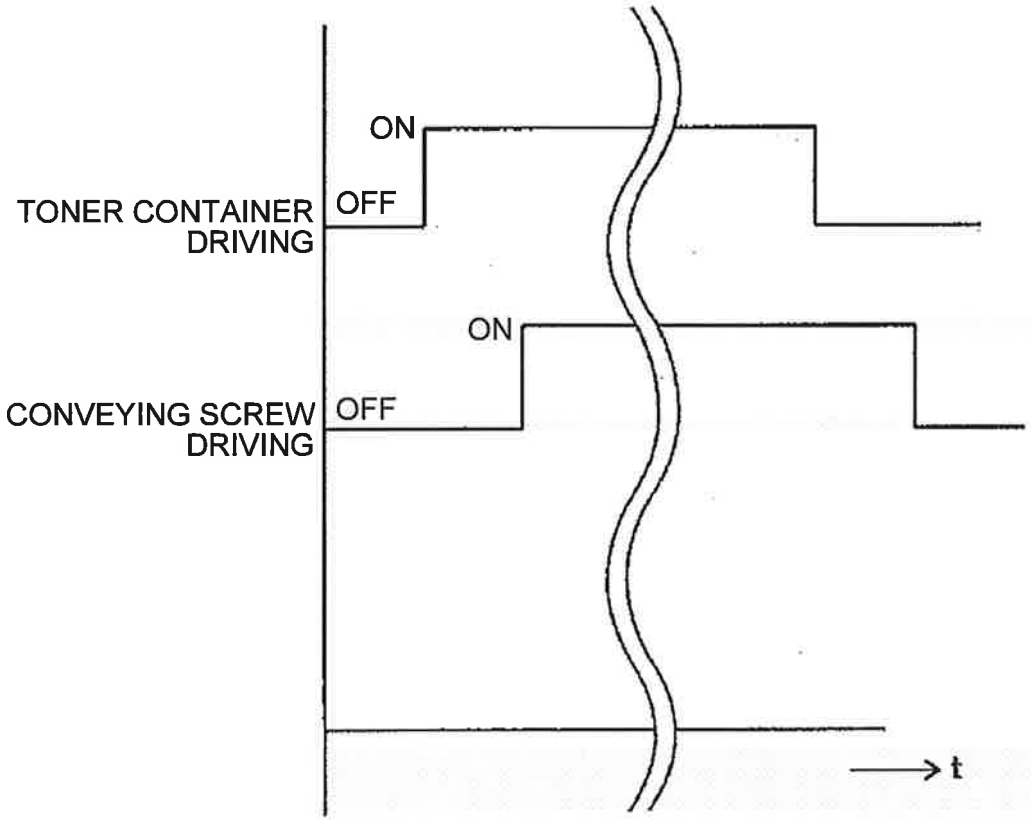

ON
OFF
TONER CONTAINER DRIVING
ON
OFF
CONVEYING SCREW DRIVING
t

FIG.30A

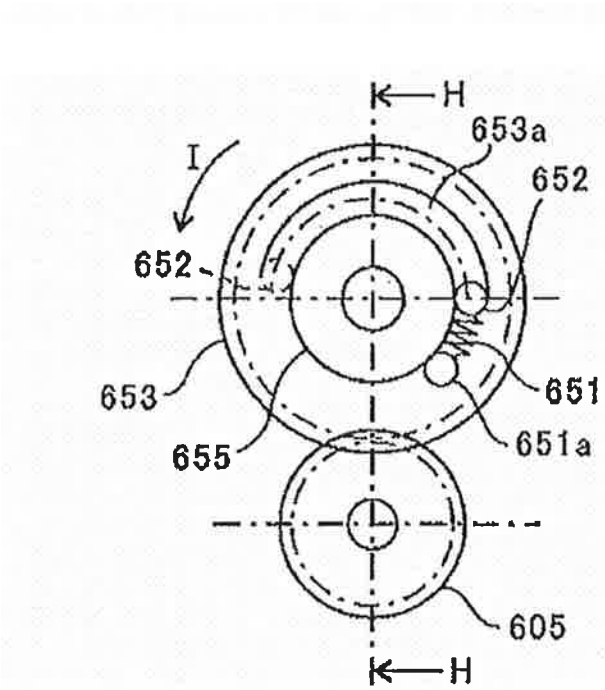


FIG.30B

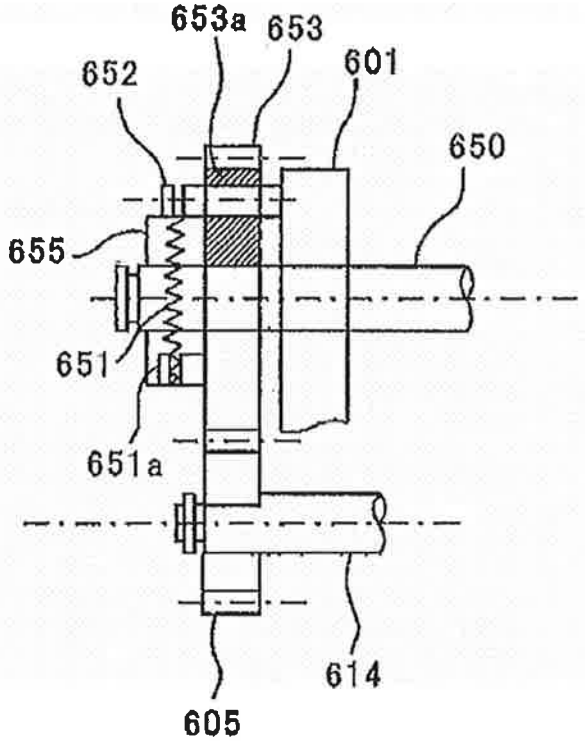


FIG.31

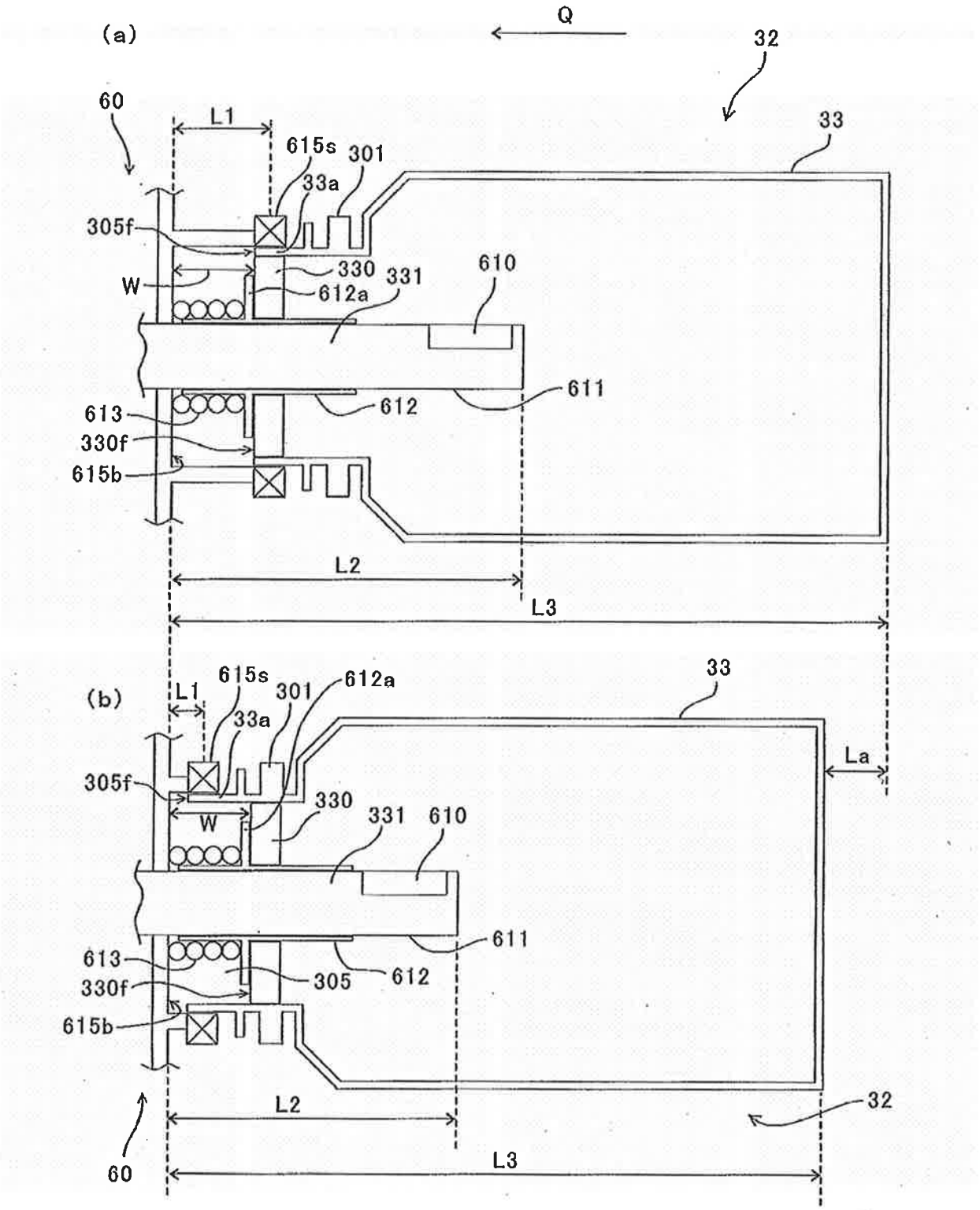

(a)
Q
32
60
L1
615s
301
33a
33
305f
330
331
610
W
612a
611
613
612
330f
615b
L2
L3
(b)
615s
612a
33
L1
301
33a
La
305f
330
331
610
W
611
613
305
612
330f
615b
L2
32
60
L3

FIG.32

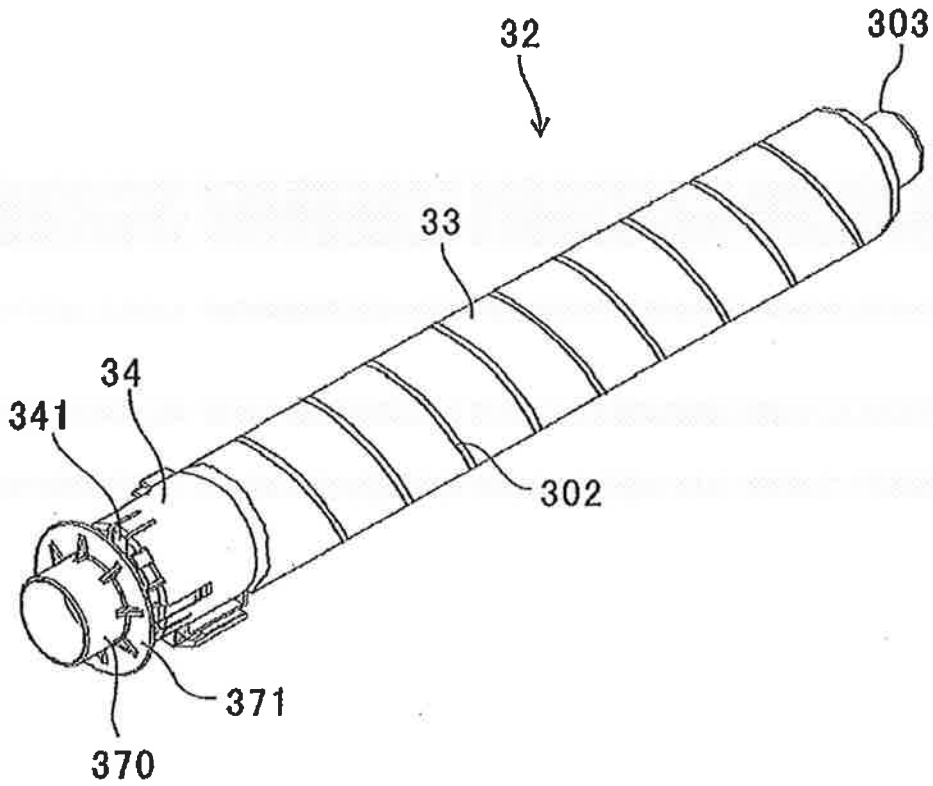


FIG.33

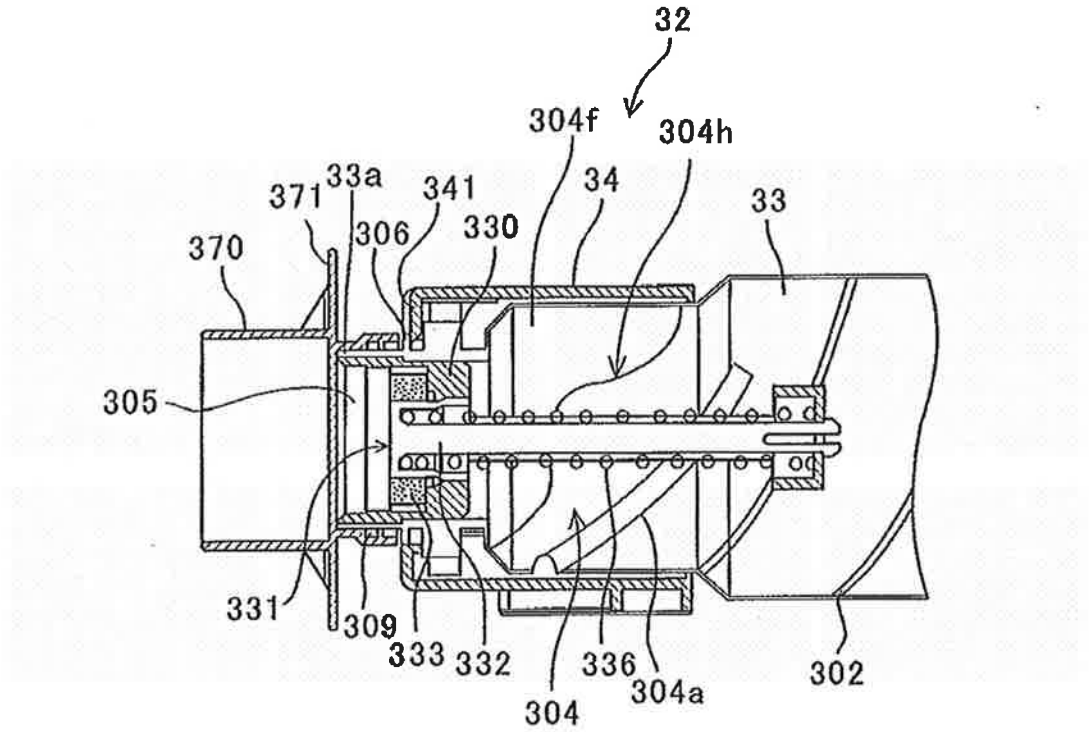

32
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333
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336
304a
304
302

FIG.34

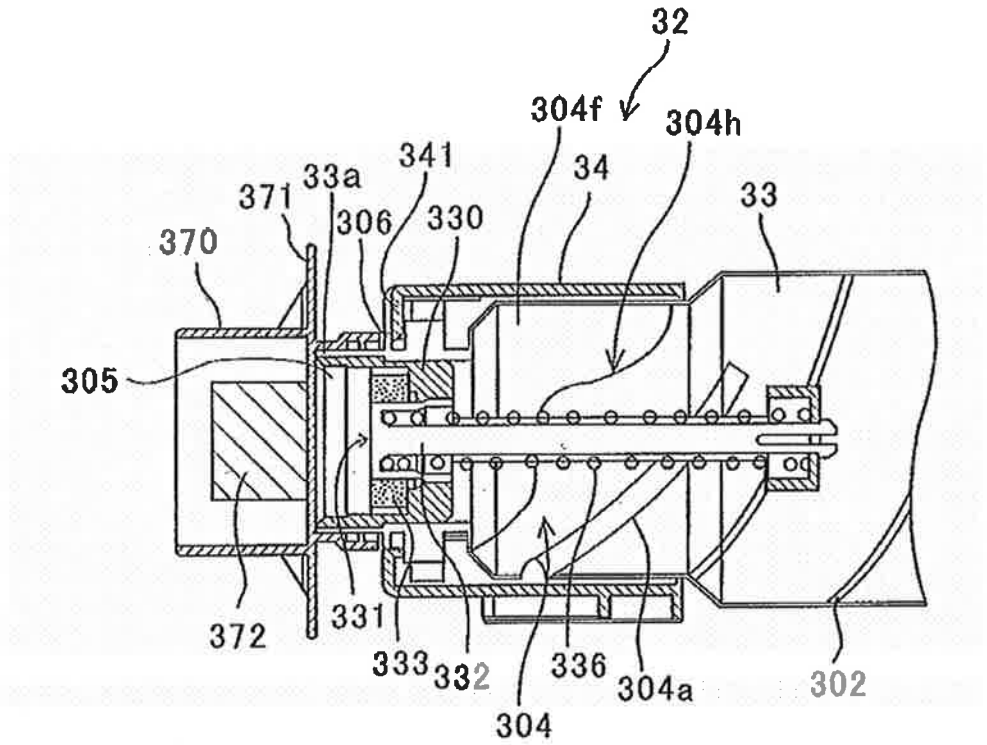

32
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370
305
372
331
333
332
336
304a
302
304

FIG.35

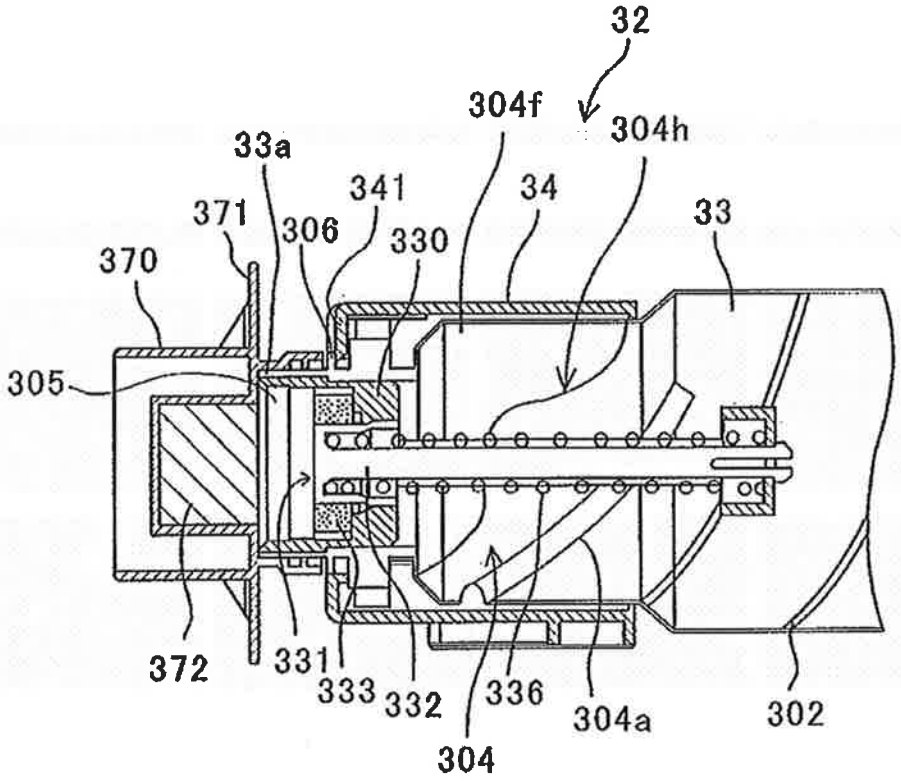

32
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FIG.36

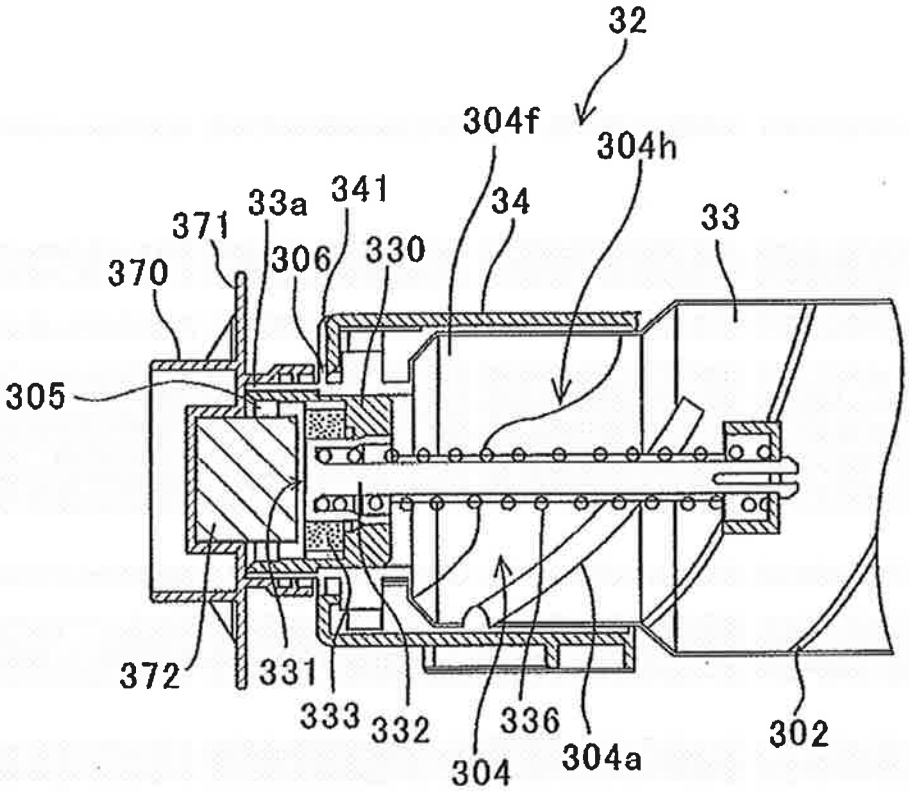

32
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304a
302

FIG.37

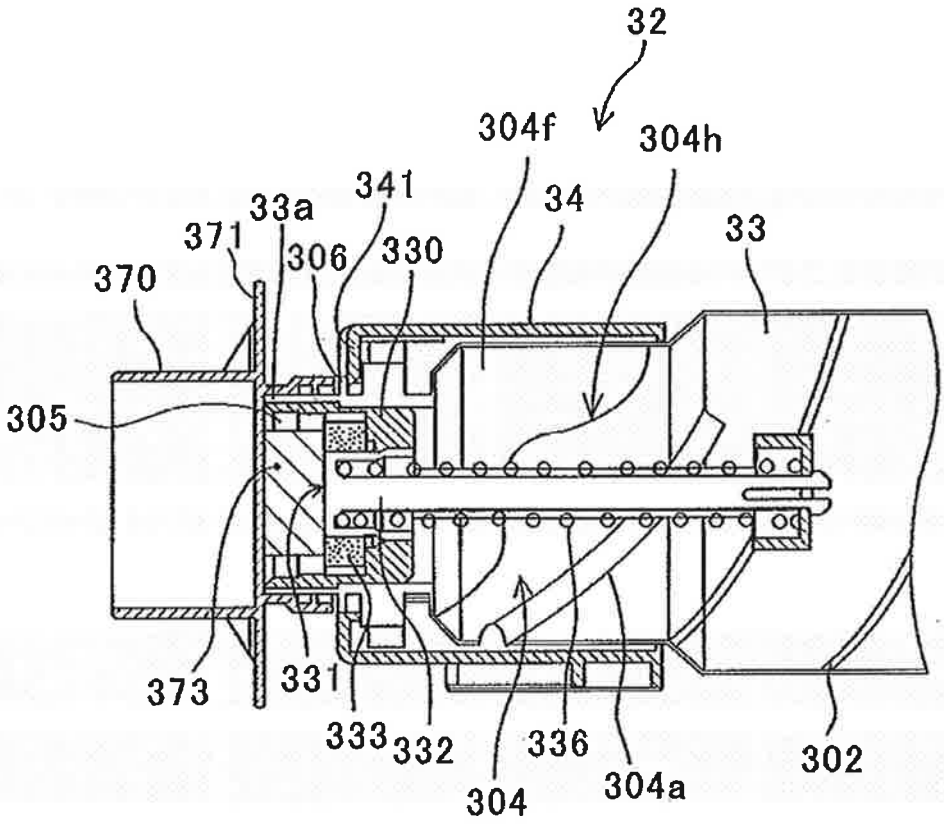

32
304f
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33a
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304a
302

FIG.38

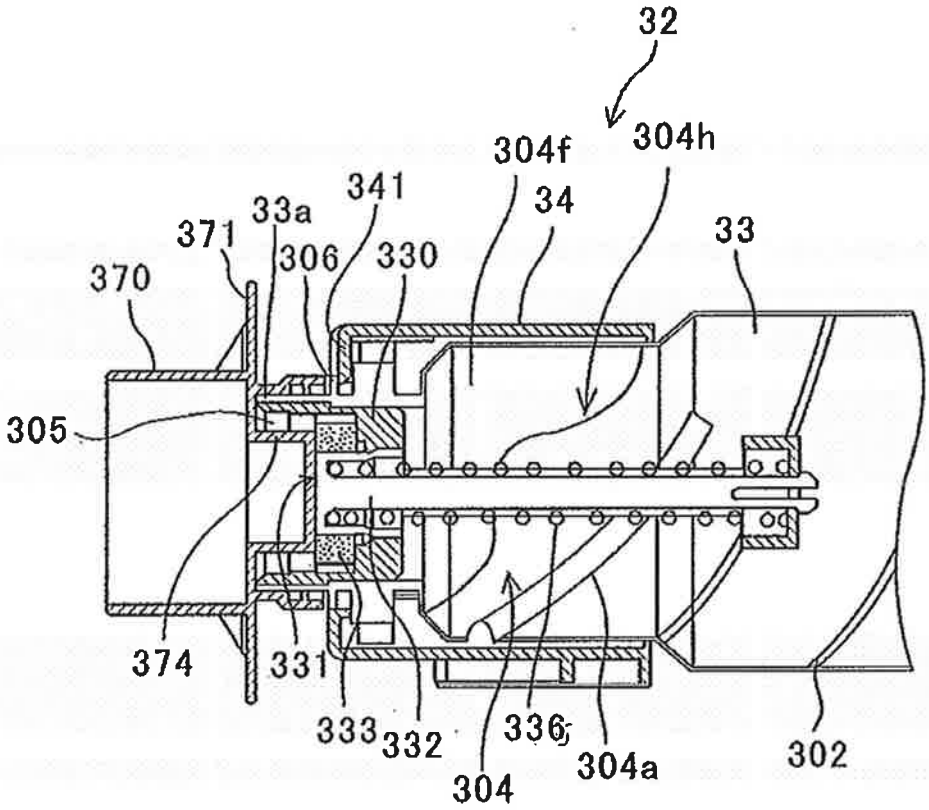

32
304f
304h
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33a
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371
306
330
33
370
305
374
331
333
332
336
304
304a
302

FIG.39

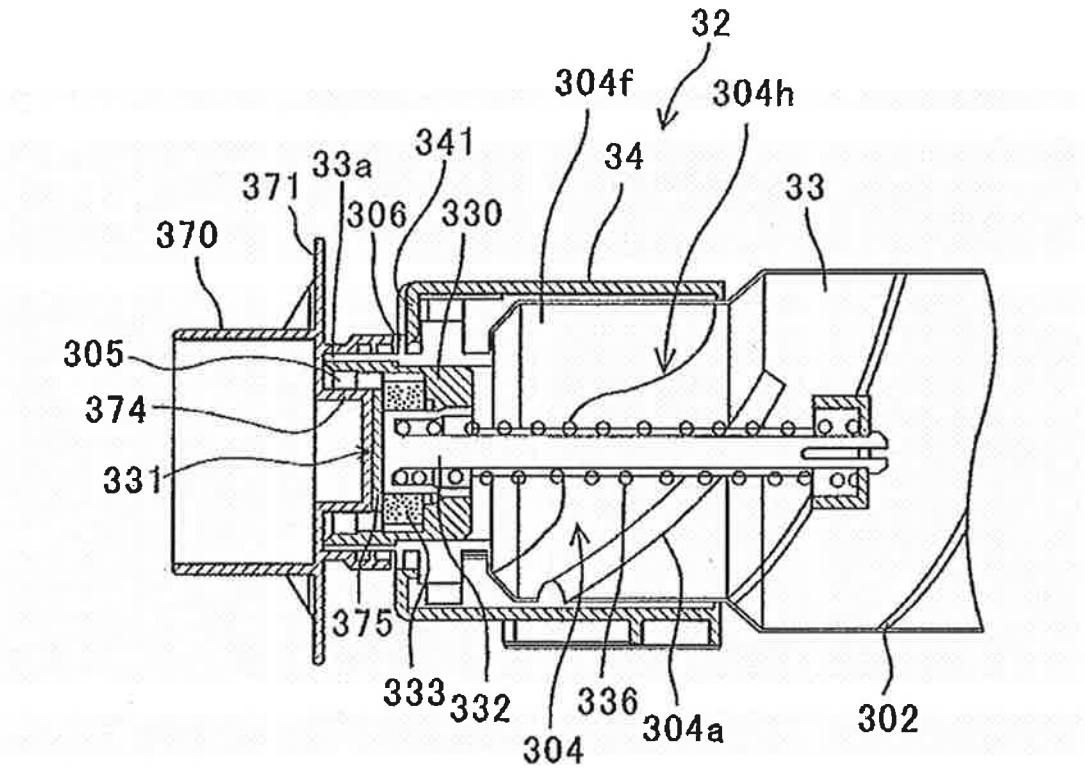

32
304f
304h
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33a
34
371
306
330
33
370
305
374
331
375
333
332
336
304a
304
302

FIG.40

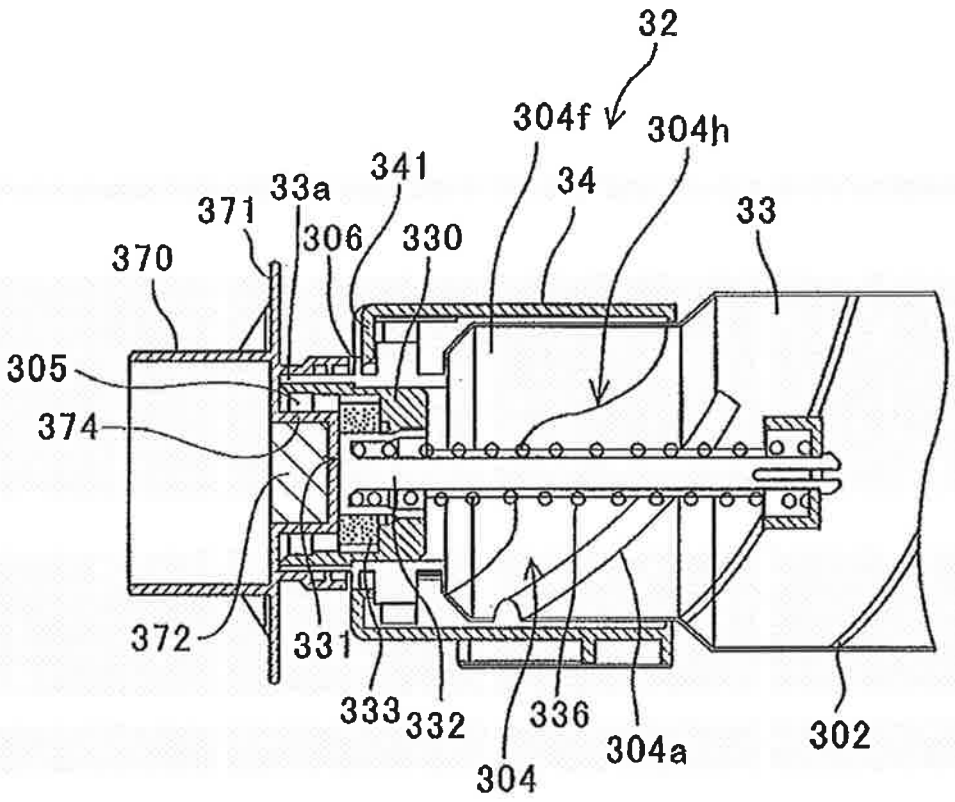

32
304f
304h
341
33a
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371
306
330
33
370
305
374
372
331
333
332
336
304a
302
304

FIG.41

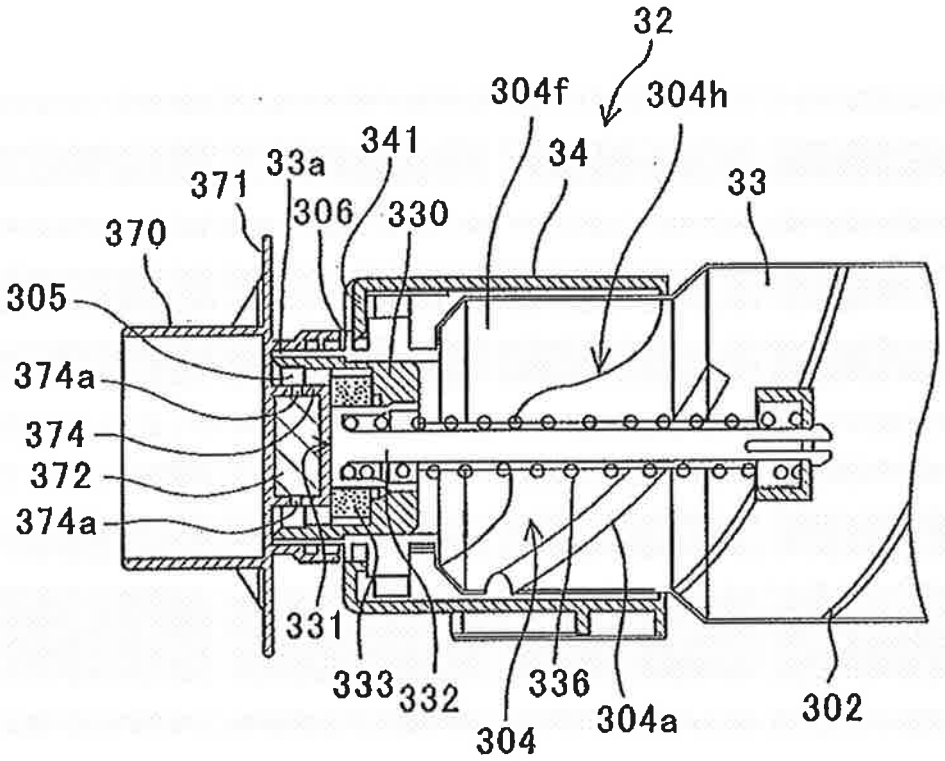

32
304f
304h
341
33a
34
371
306
330
33
370
305
374a
374
372
374a
331
333
332
336
304
304a
302

FIG.42

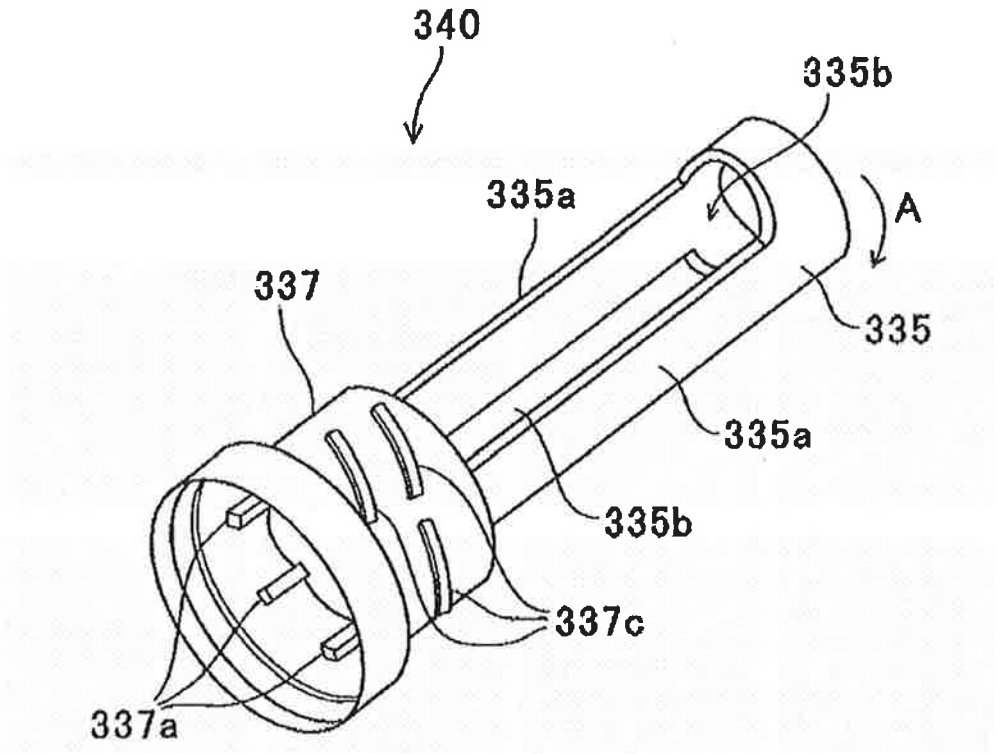


FIG.43

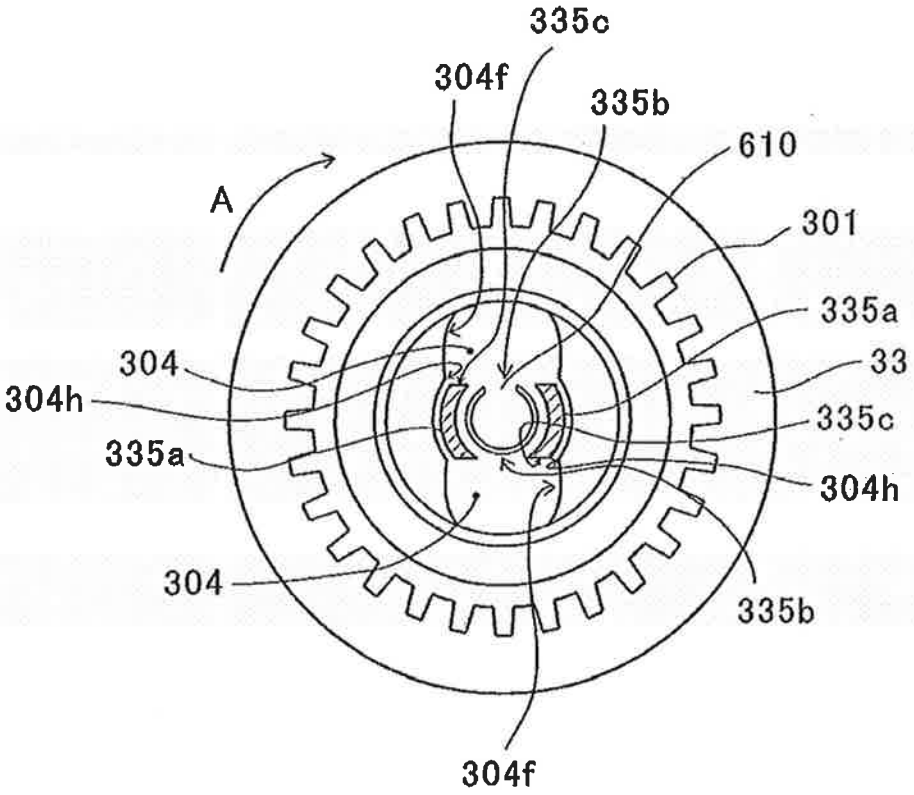

335c
304f
335b
610
A
301
335a
304
33
304h
335c
335a
304h
304
335b
304f

FIG.44

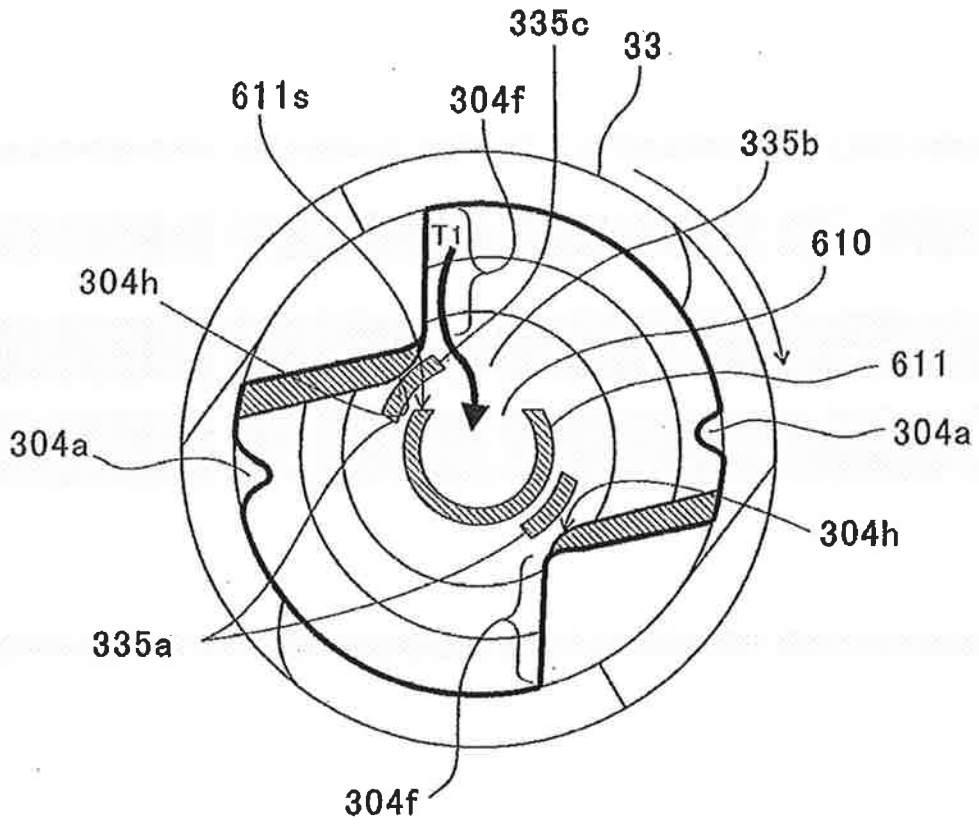

335c
33
611s
304f
335b
T1
610
304h
611
304a
304a
304h
335a
304f

FIG.45A

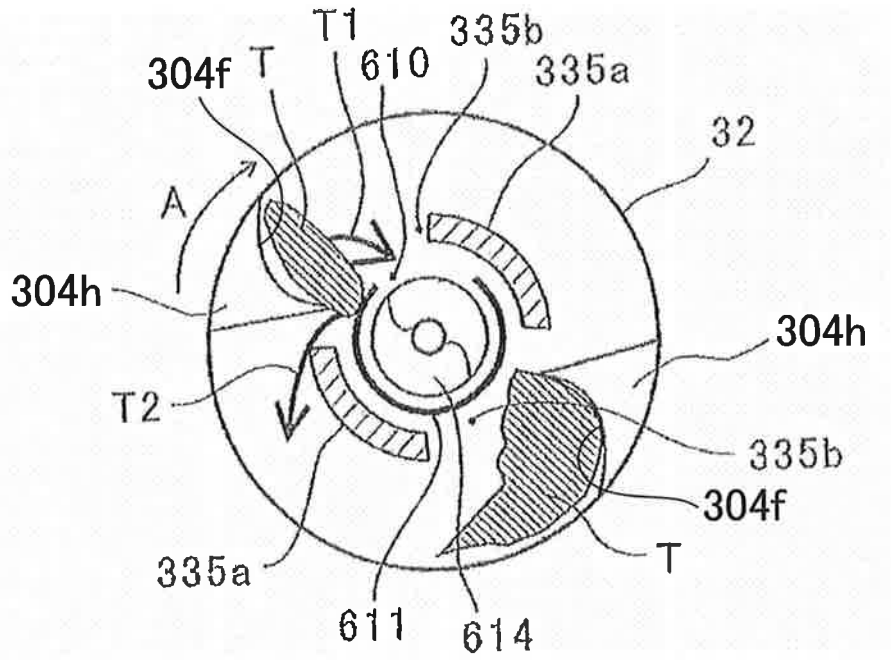


FIG.45B

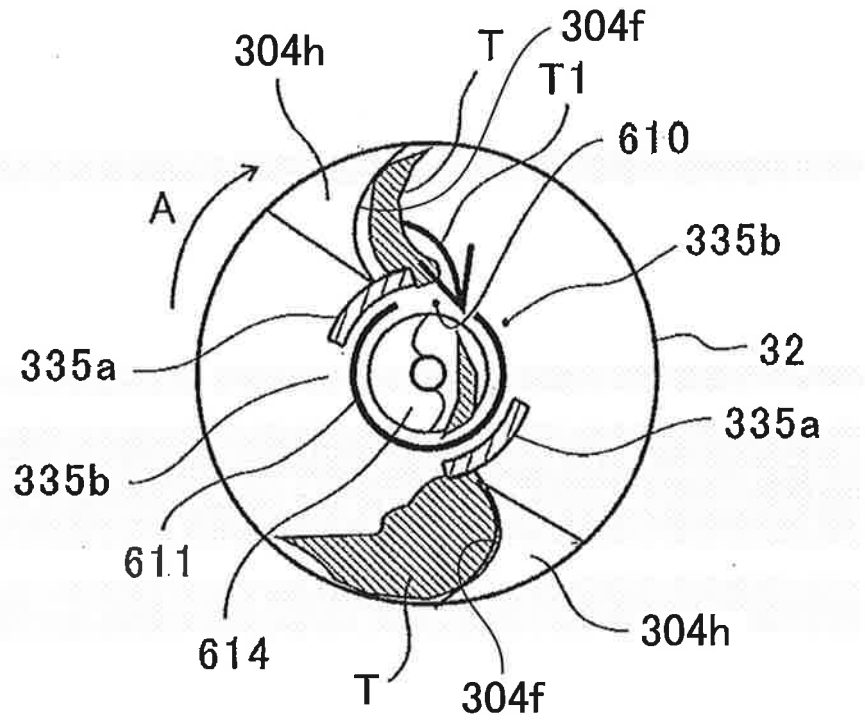


FIG.46

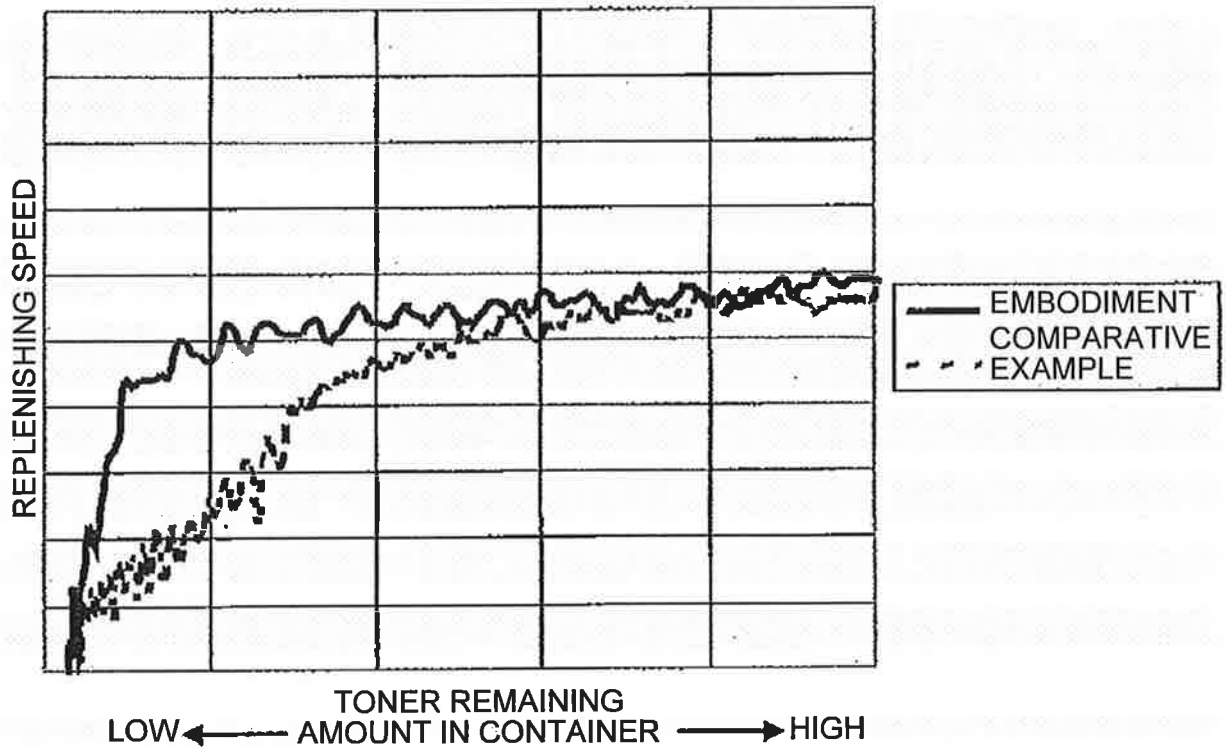

REPLENISHING SPEED
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EMBODIMENT
COMPARATIVE
EXAMPLE

FIG.47A

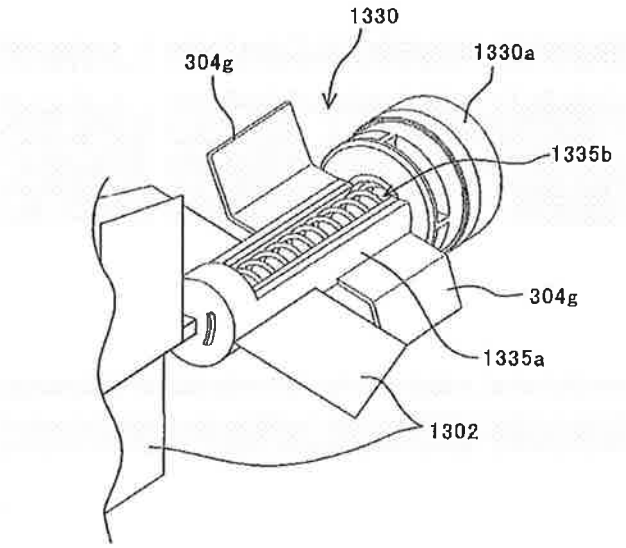


FIG.47B

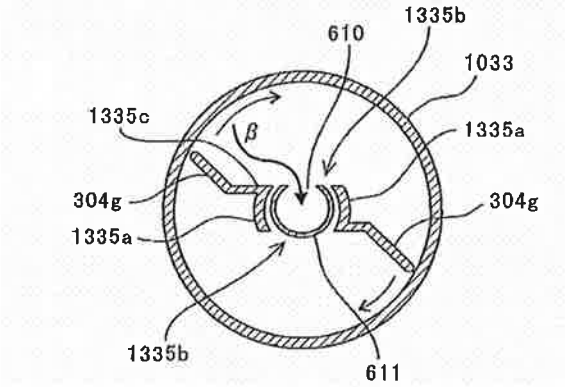


FIG.47C

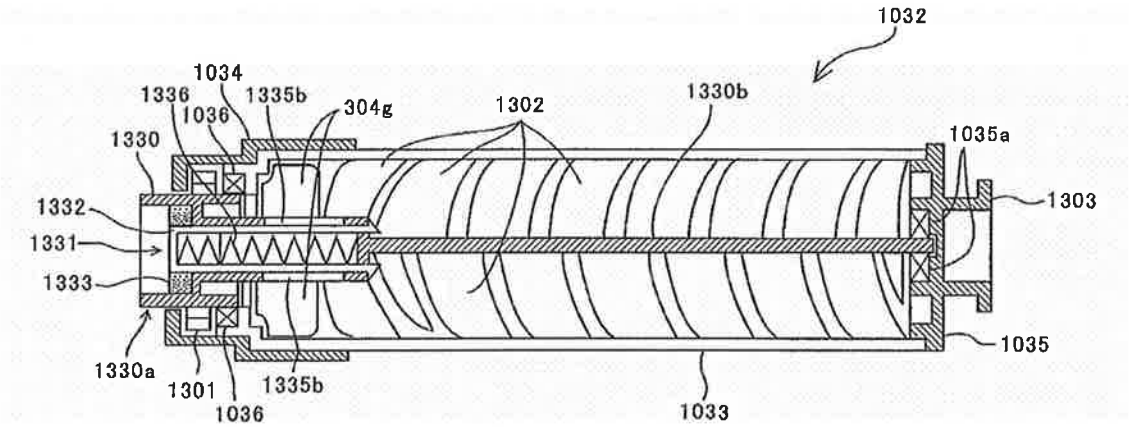


FIG.47D

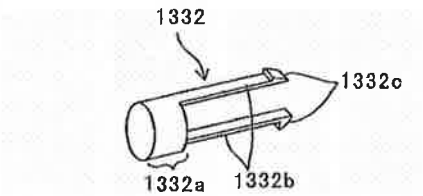


FIG.48A

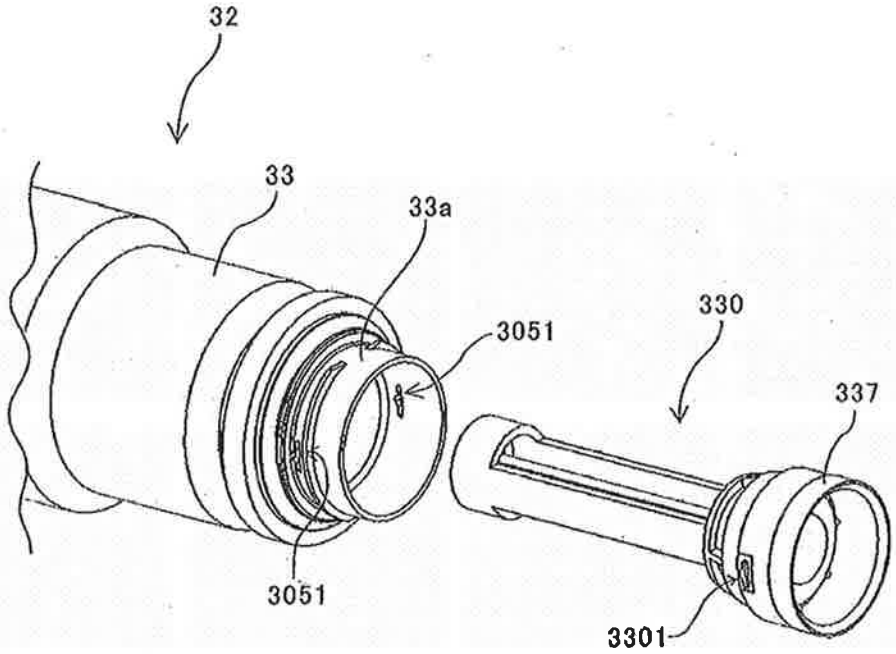


FIG.48B

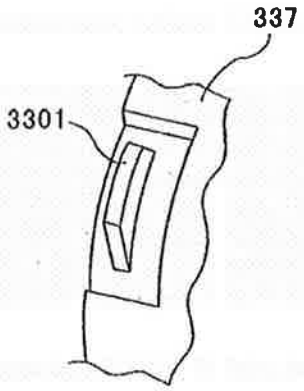


FIG.49

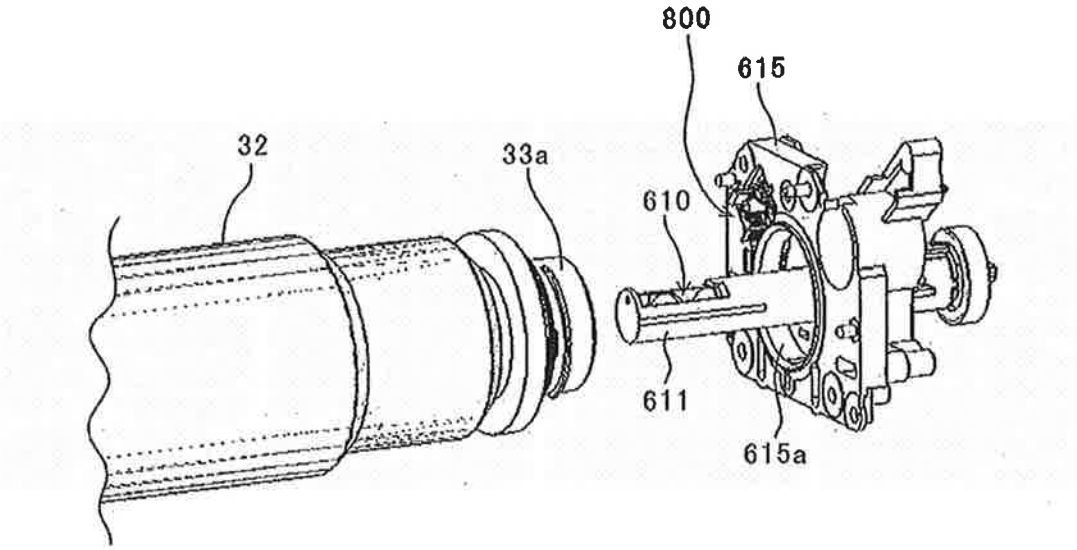


FIG.50A

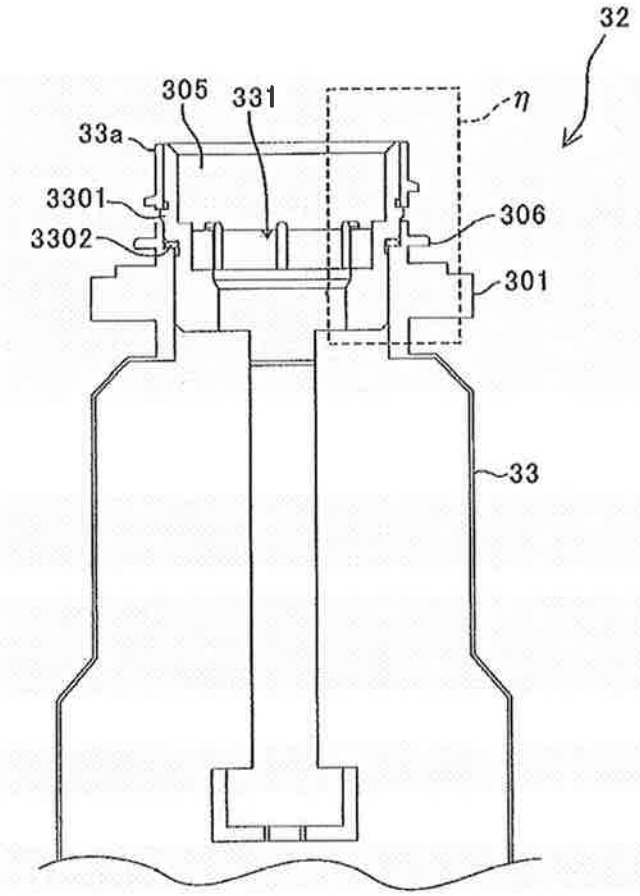


FIG.50B

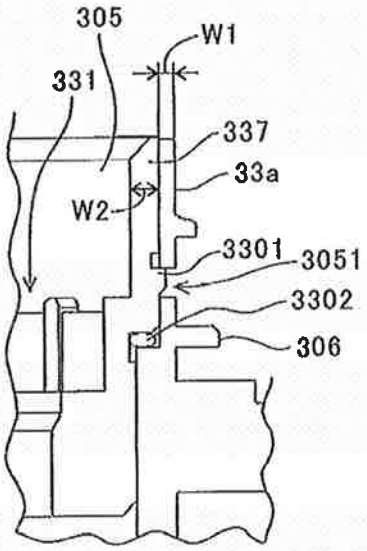


FIG.51A

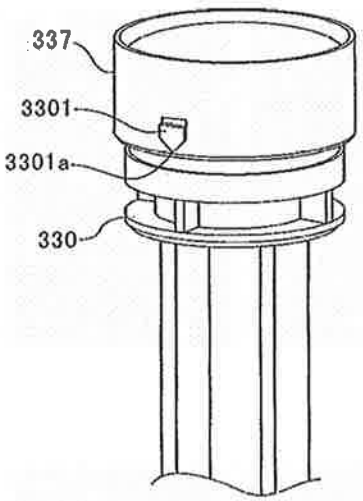


FIG.51B

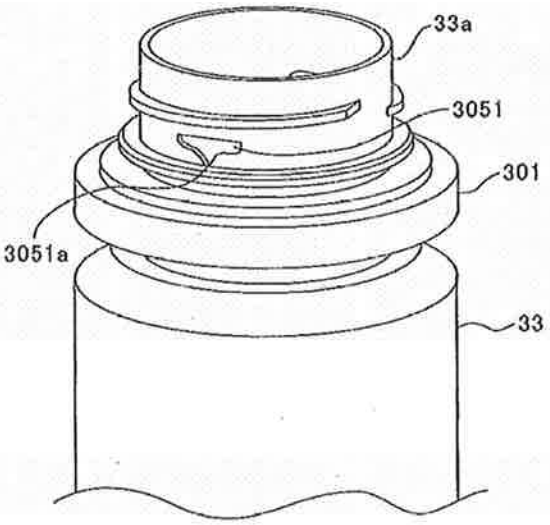


FIG.52A

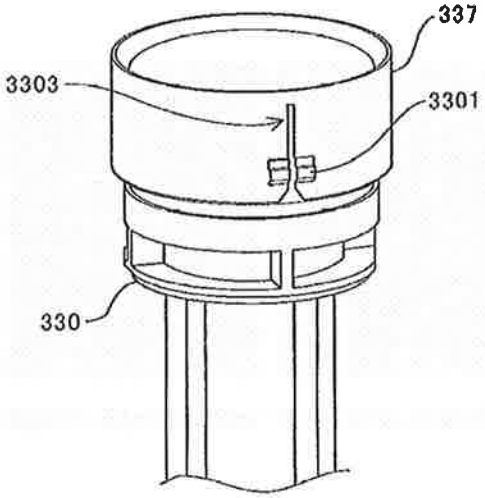


FIG.52B

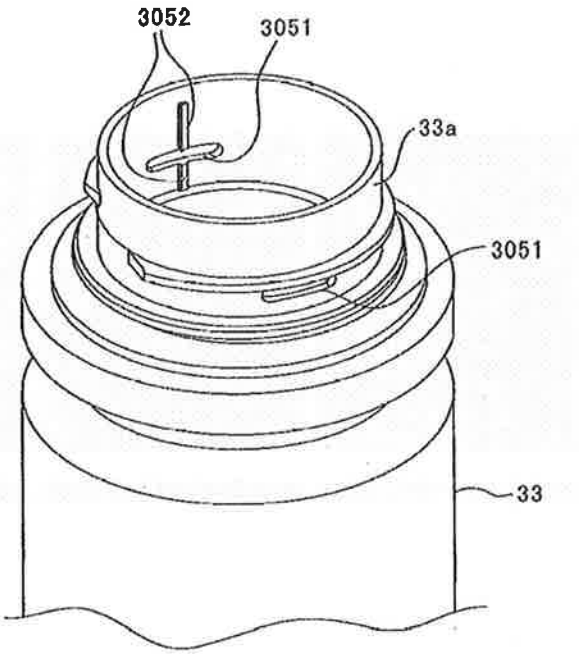


FIG.53A

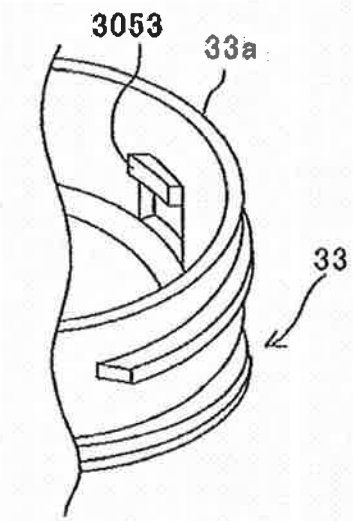


FIG.53B

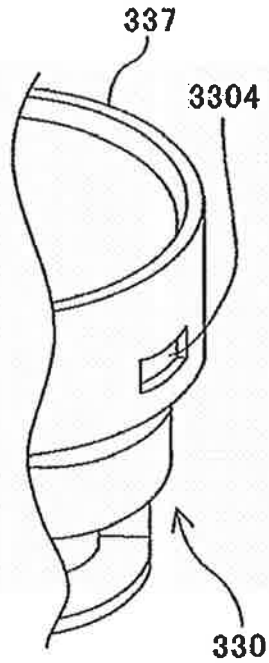


FIG.53C

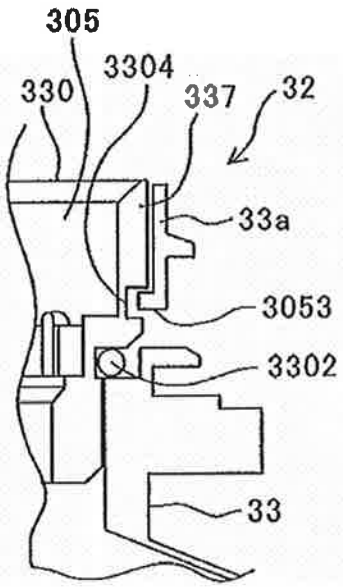


FIG.54A

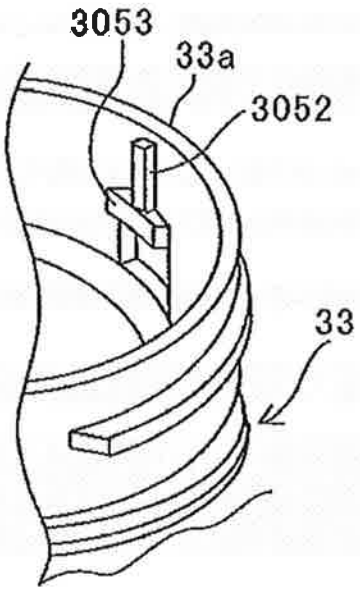


FIG.54B

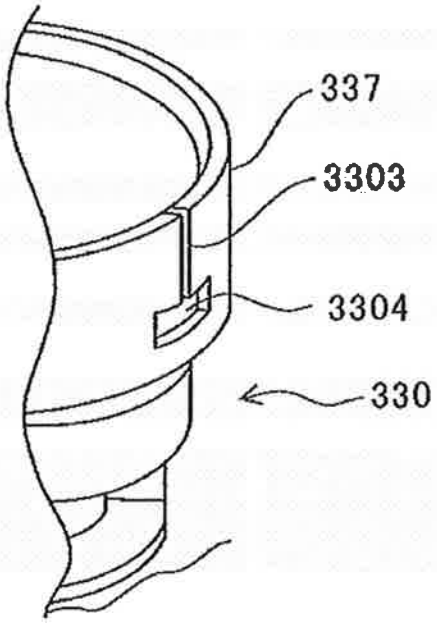


FIG.55

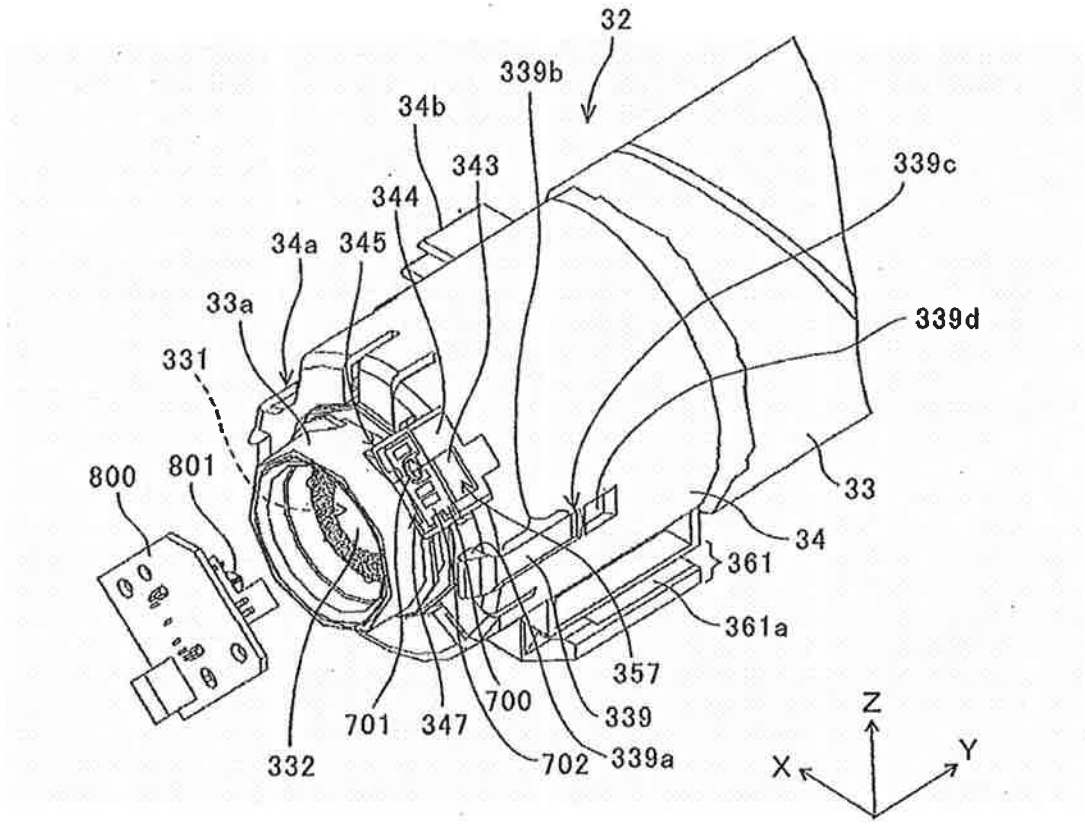

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FIG.56

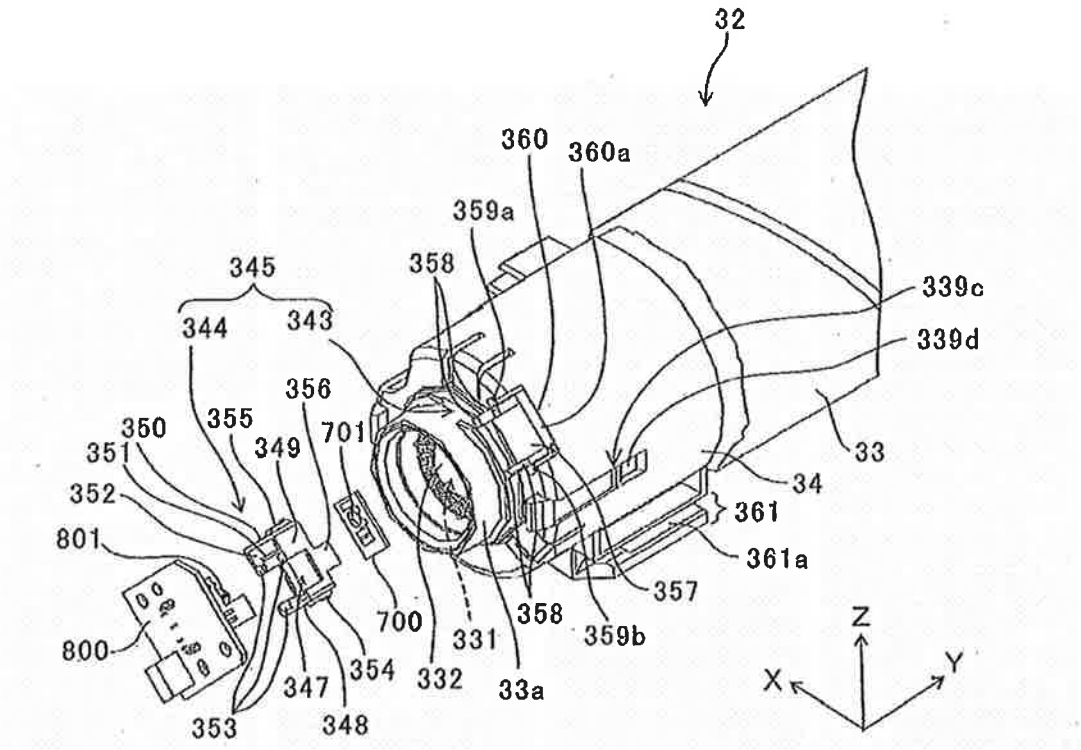

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FIG.57

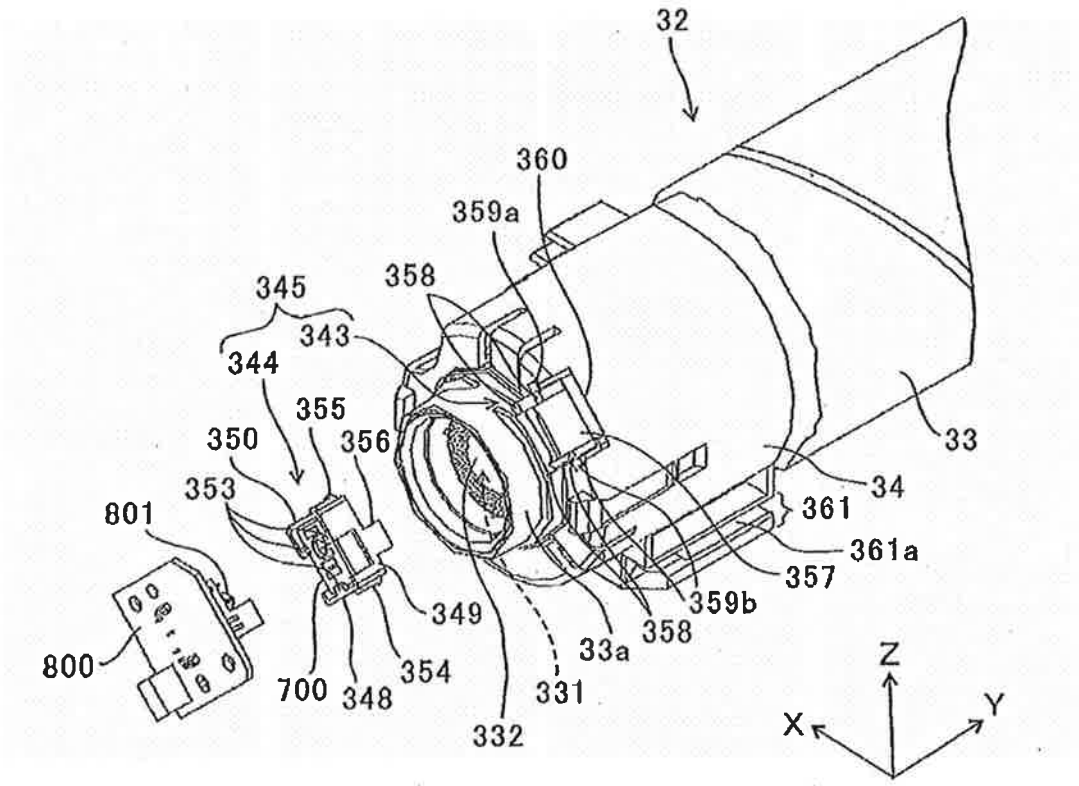

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FIG.58A

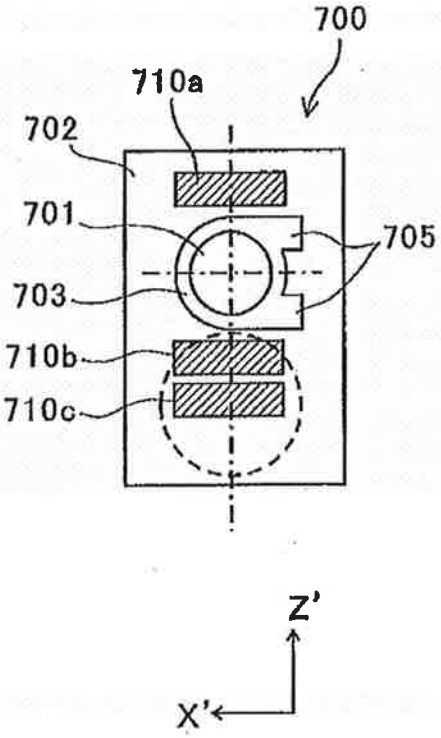


FIG.58B

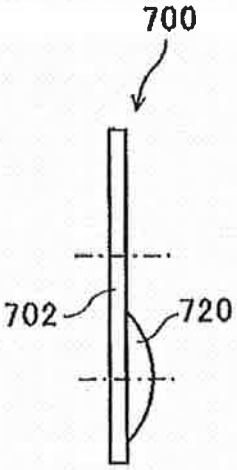


FIG.58C

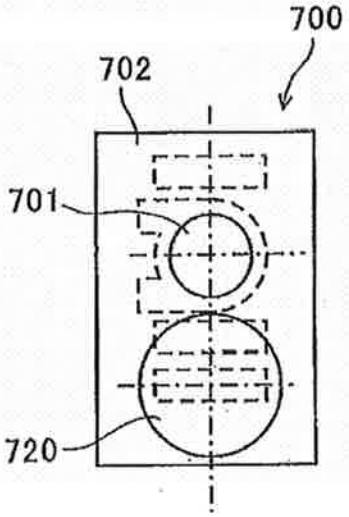


FIG.59

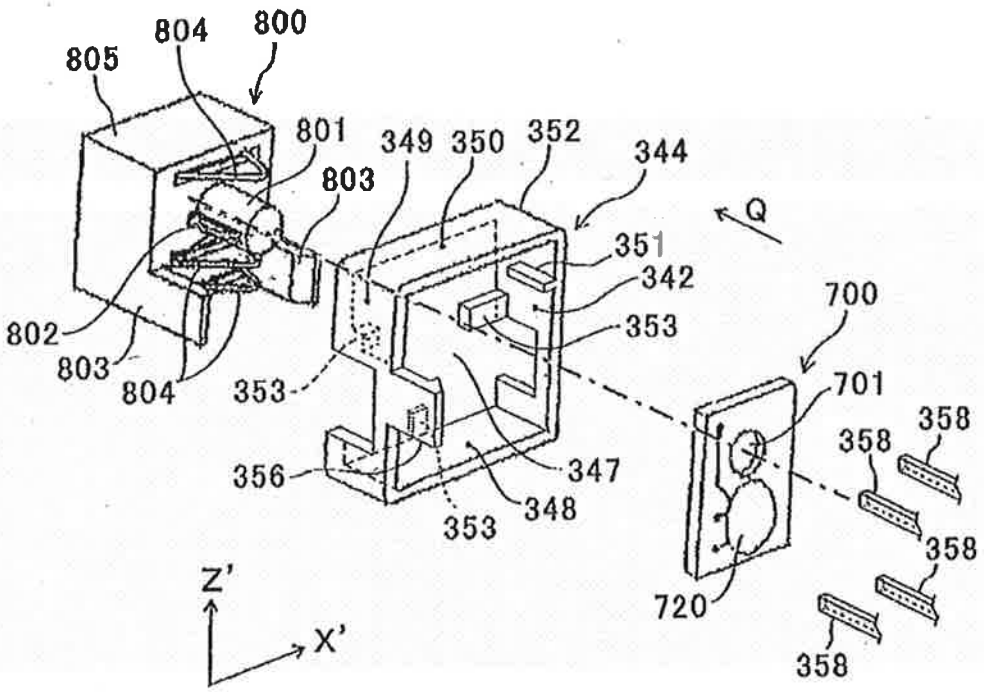

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FIG.60

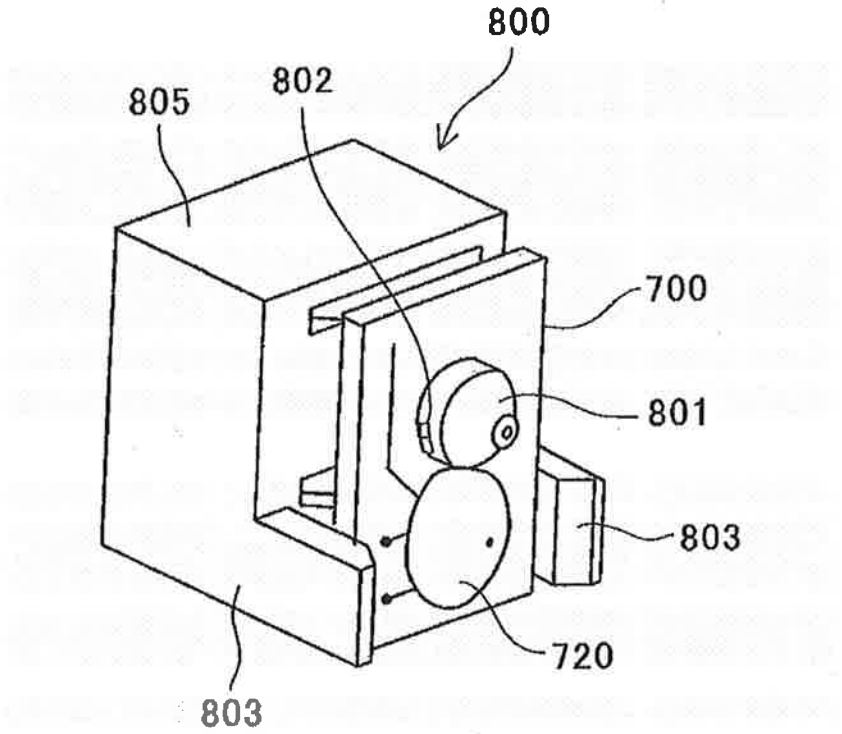


FIG.61A

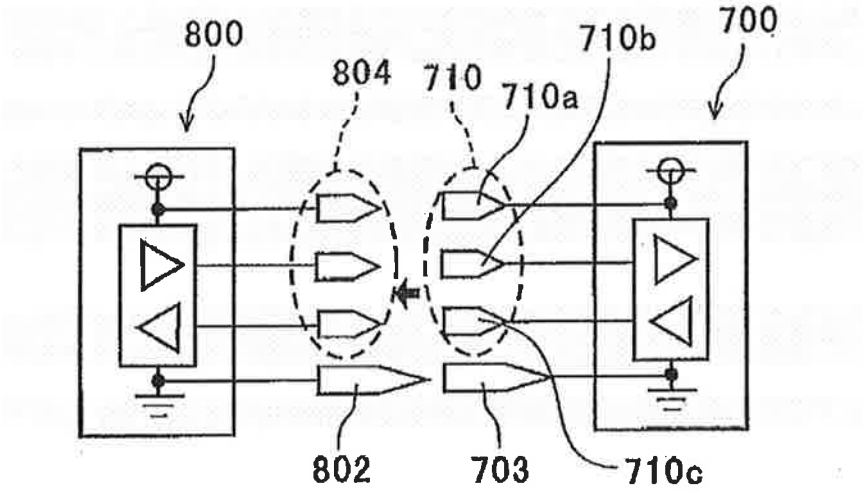


FIG.61B

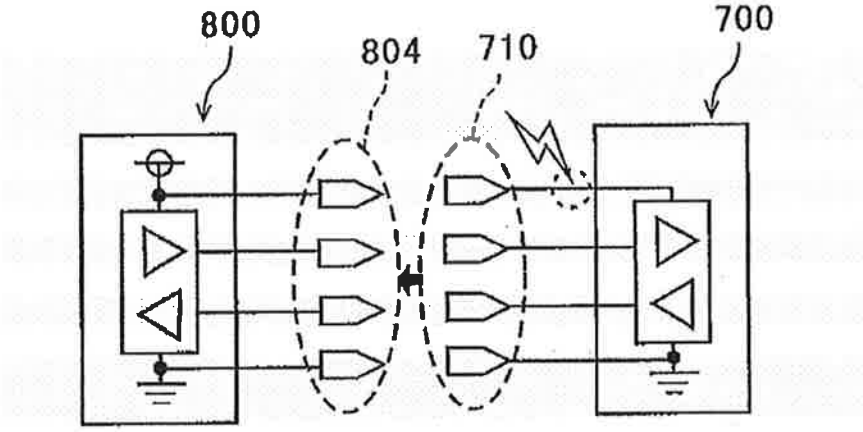


FIG.62A

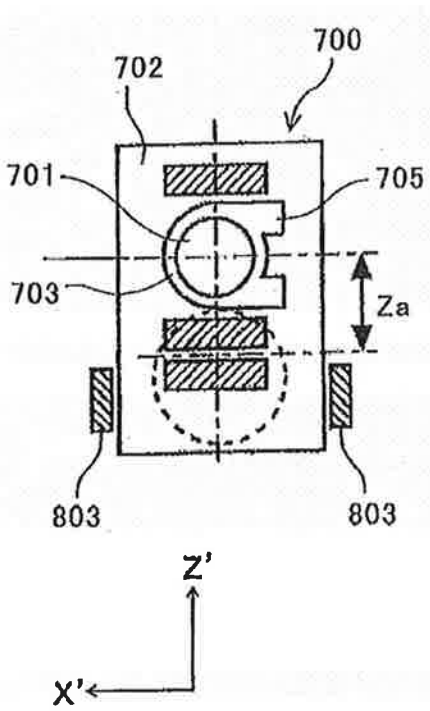


FIG.62B

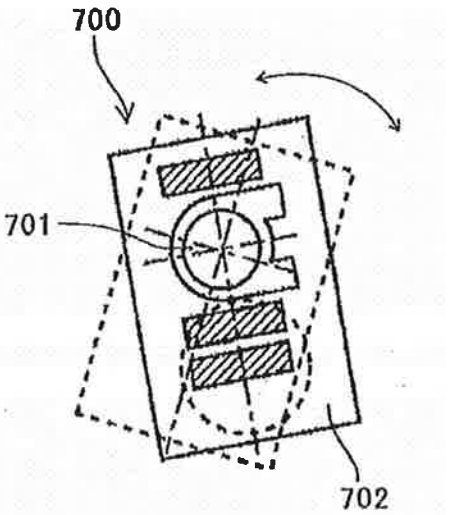


FIG.63

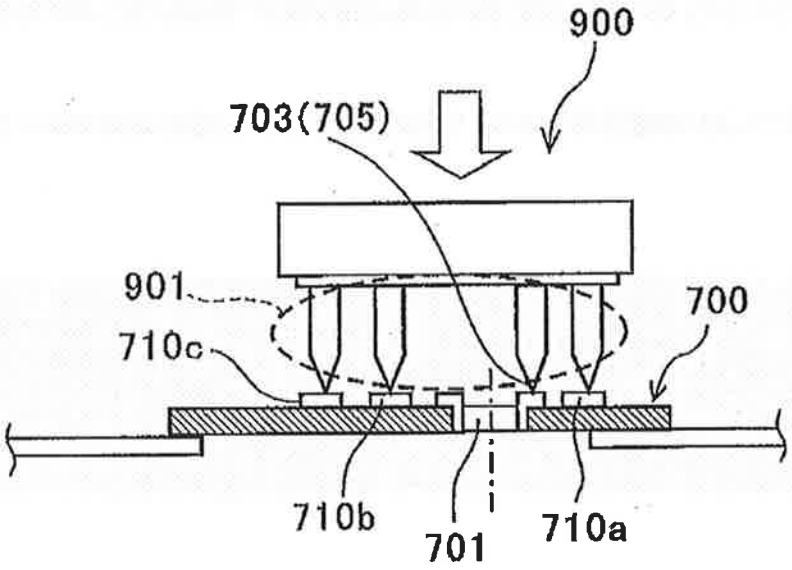


FIG.64A

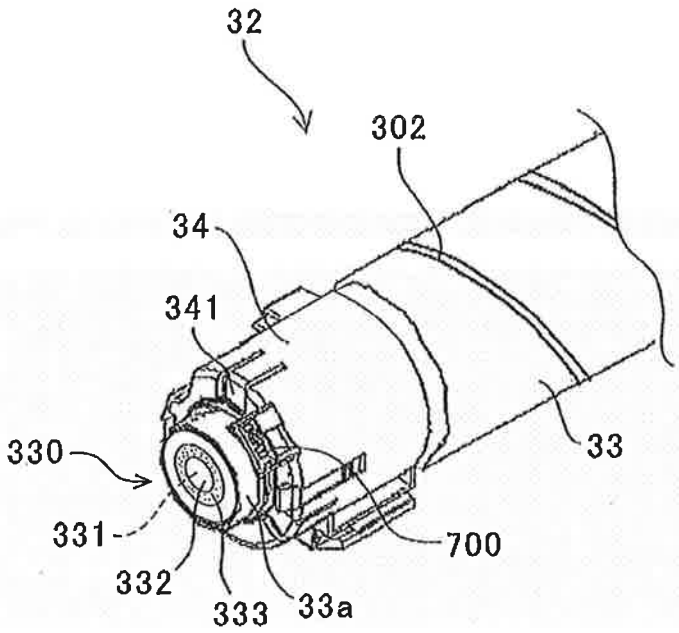


FIG.64B

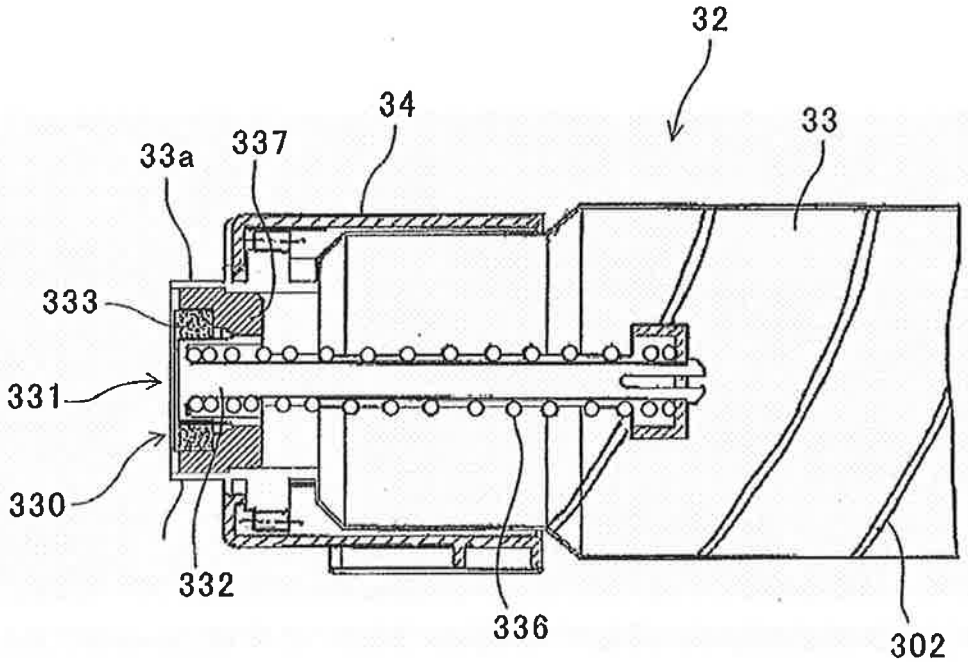


FIG.65A

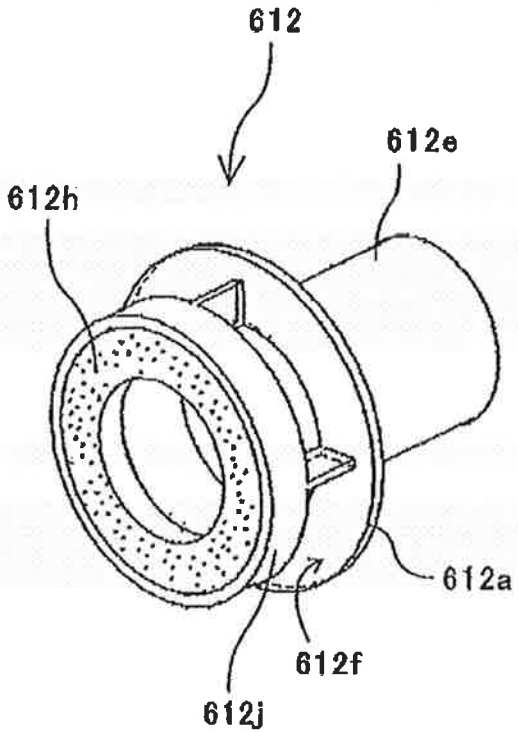


FIG.65B

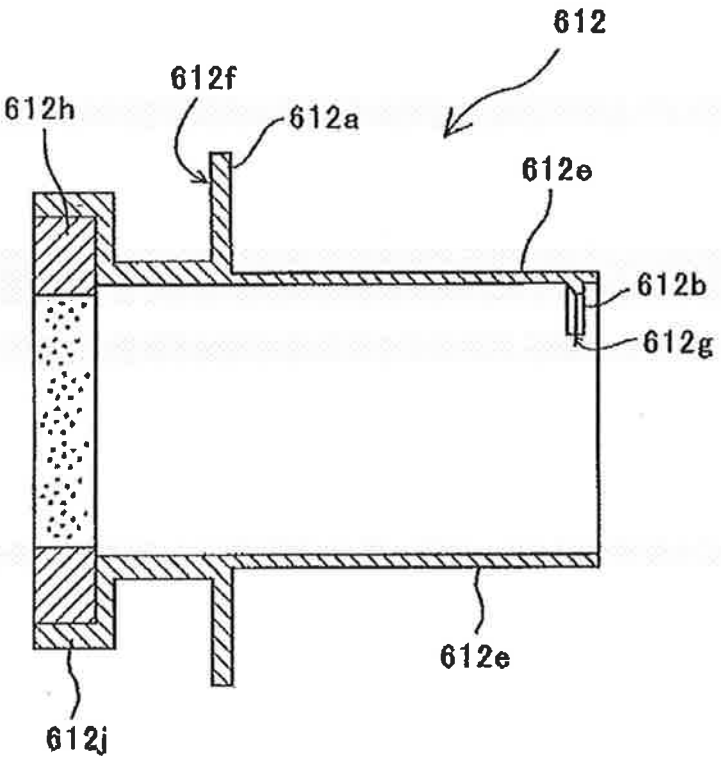
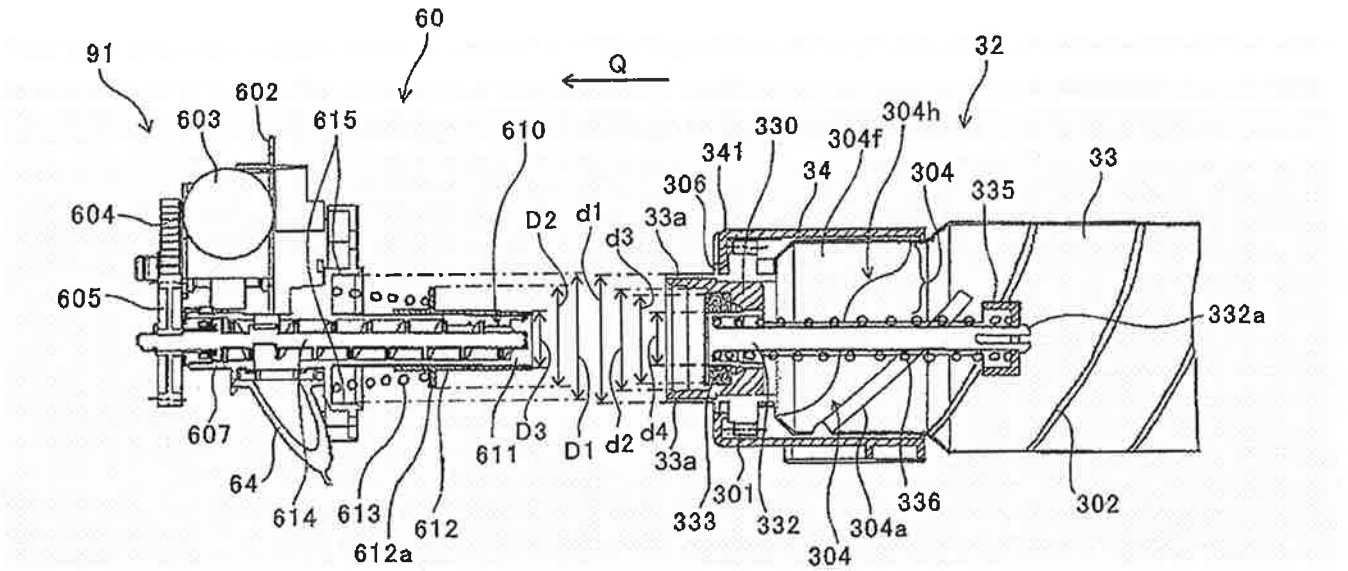


FIG.66


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