

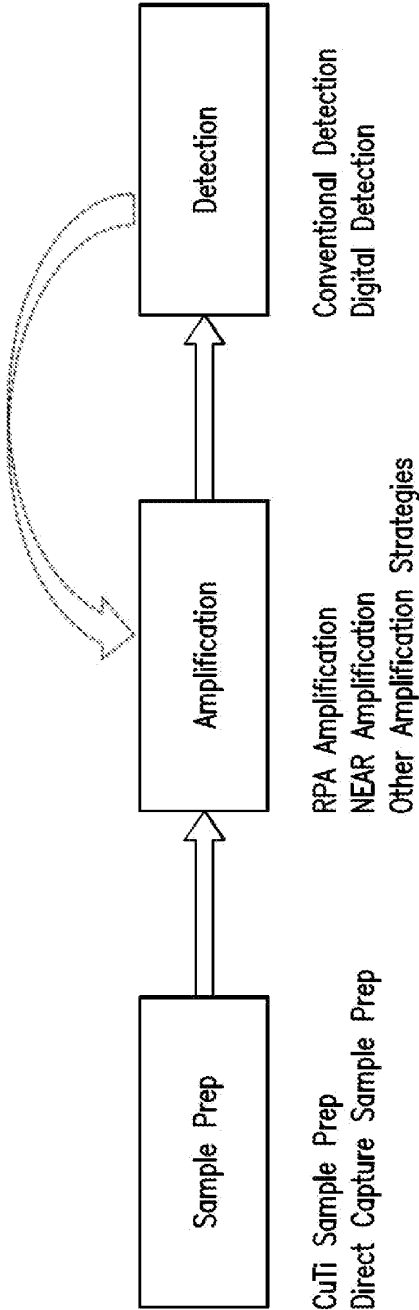


FIG. 1

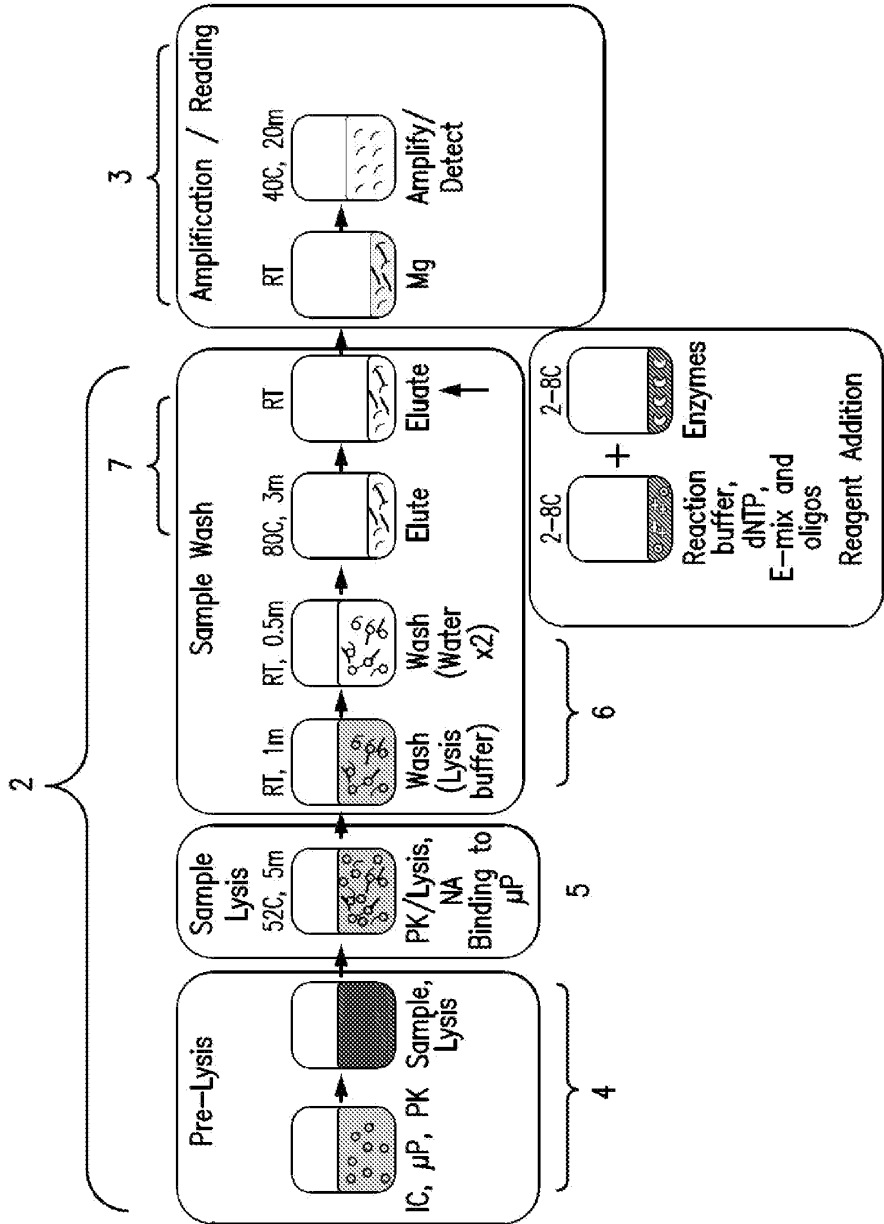


FIG. 2A

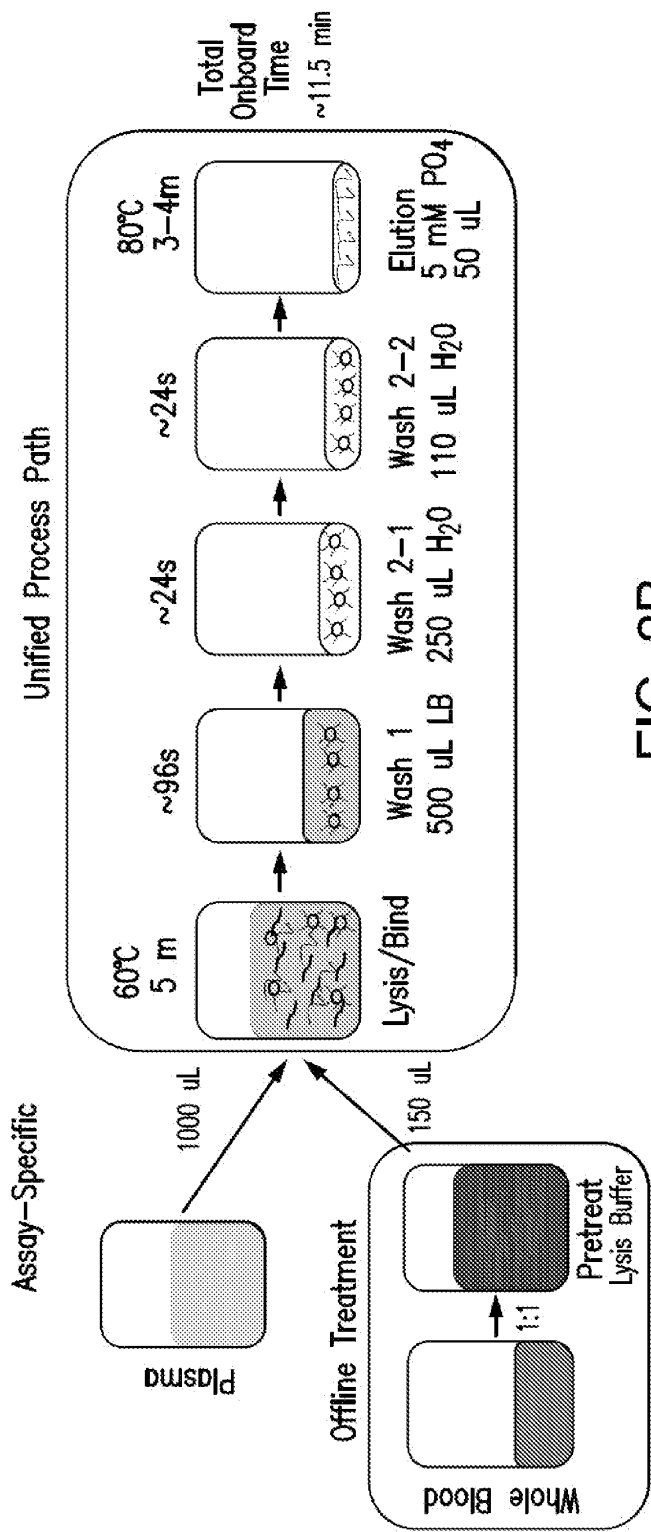


FIG. 2B

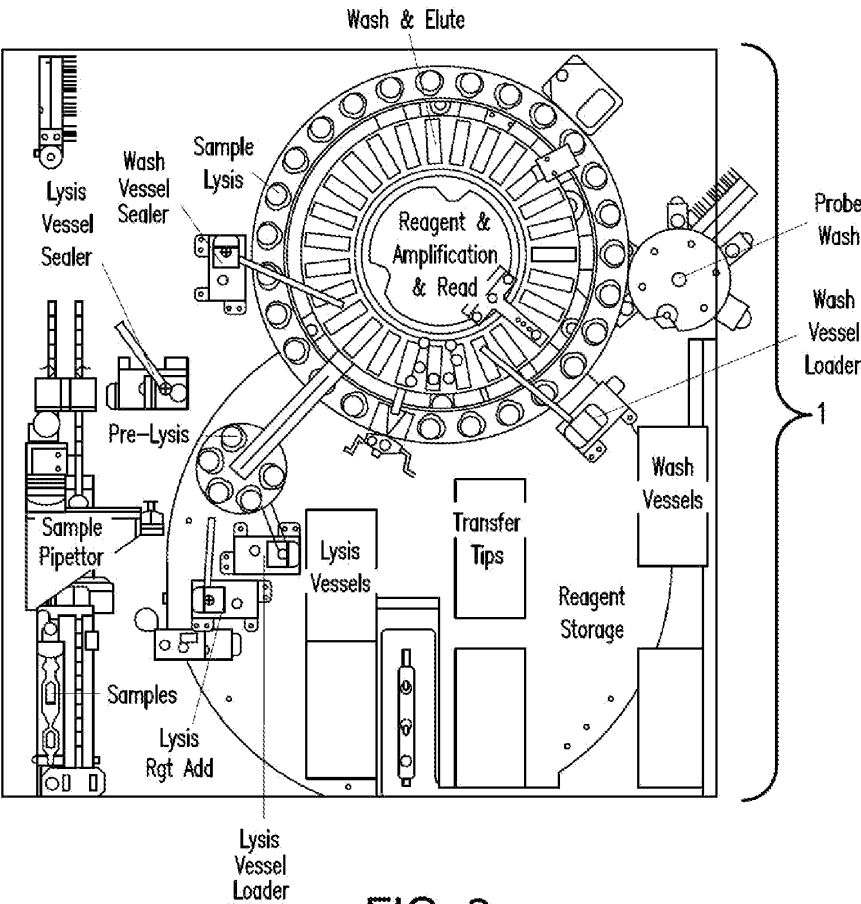


FIG. 3

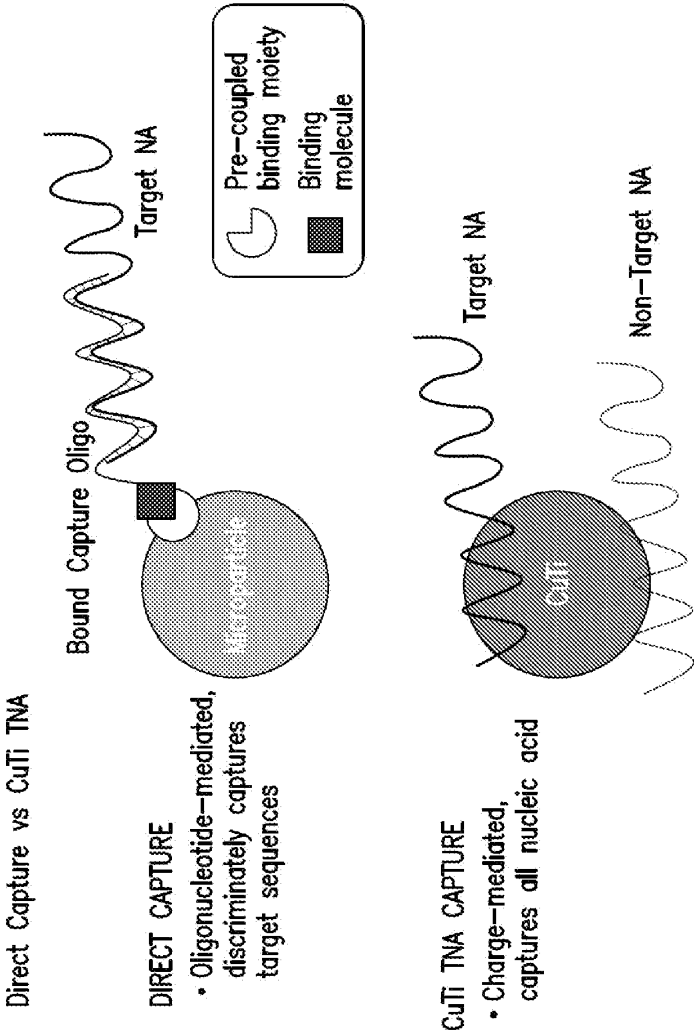


FIG. 4

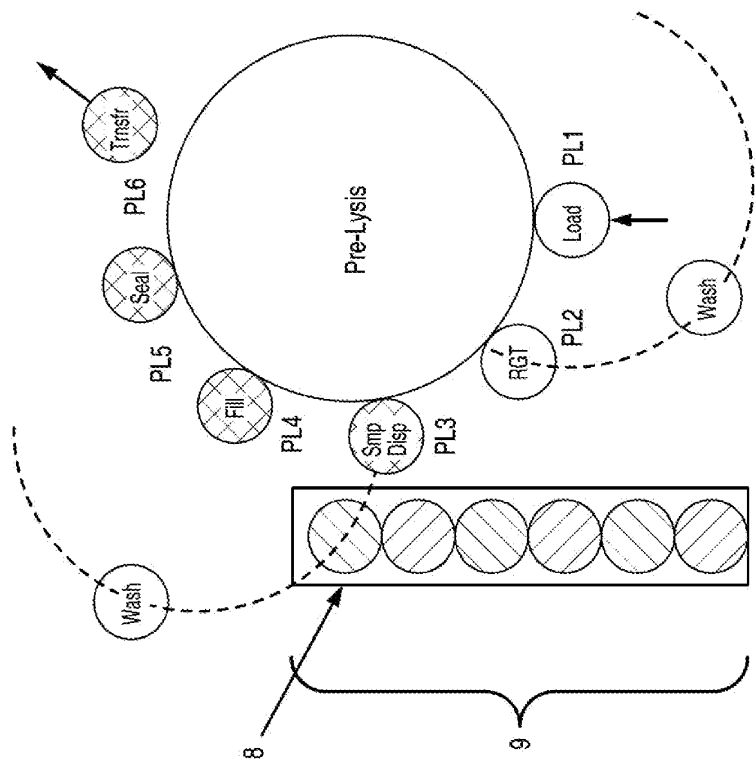


FIG. 5

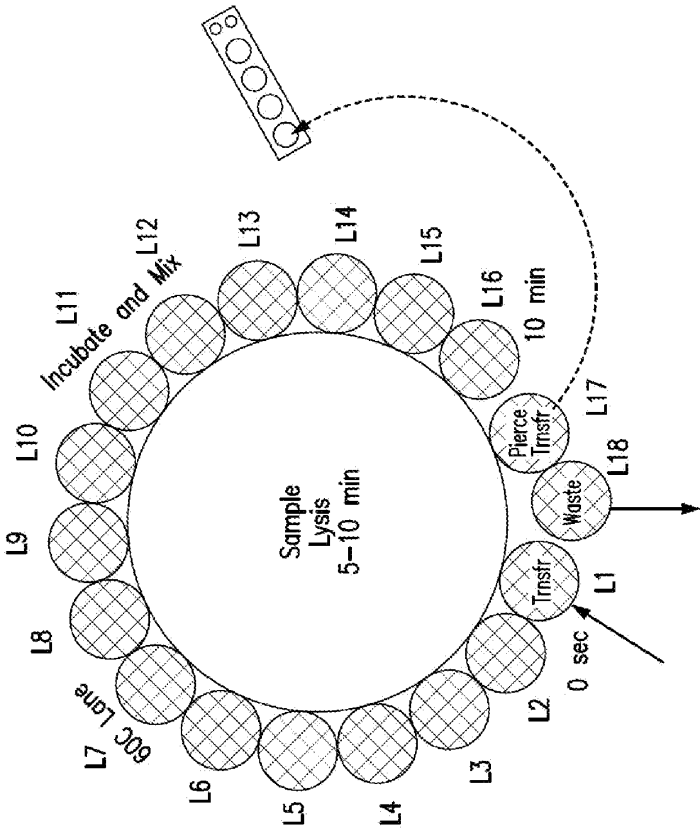


FIG. 6

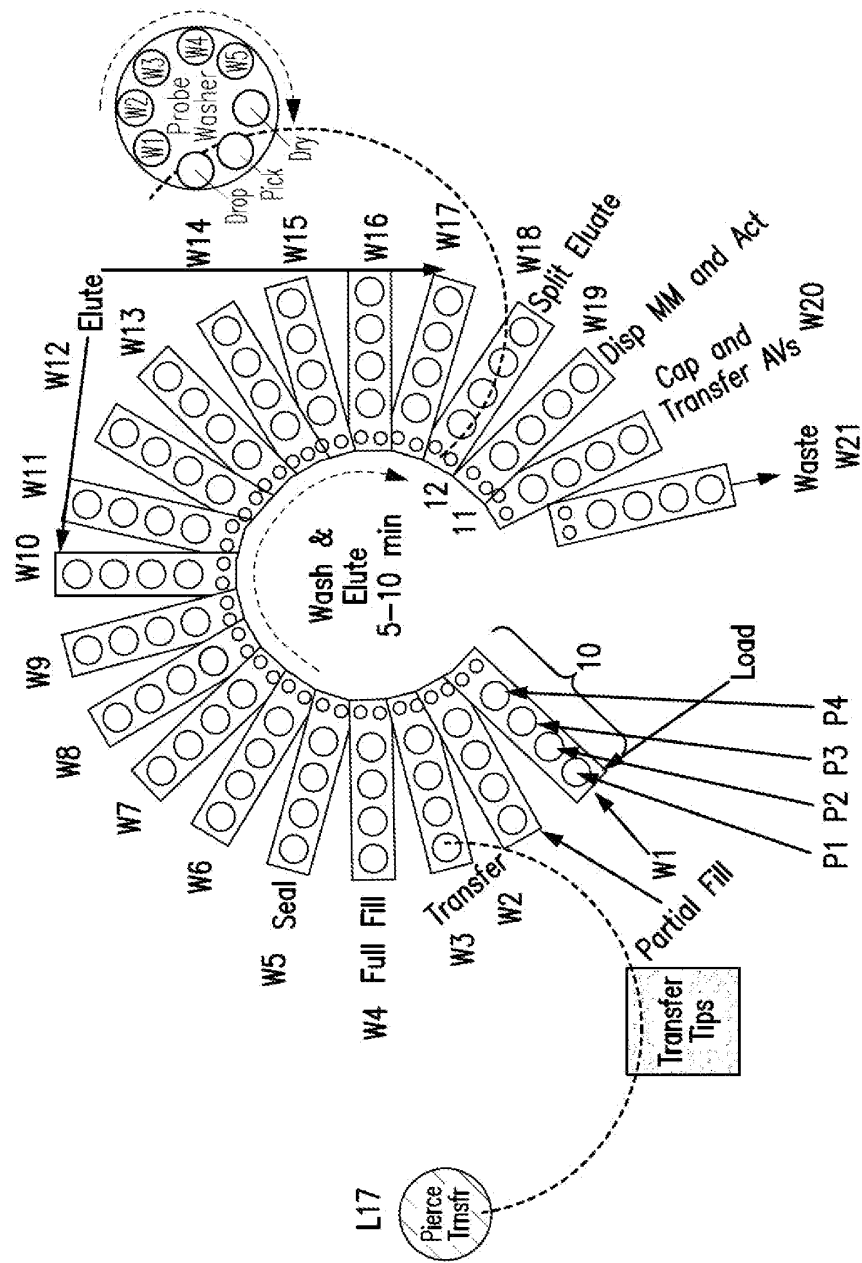


FIG. 7

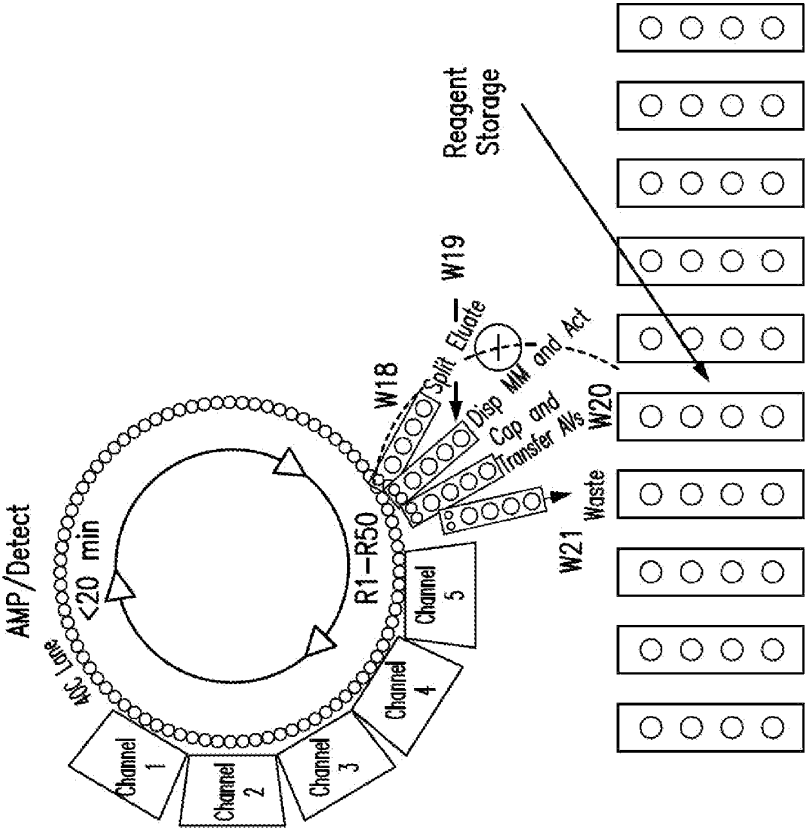


FIG. 8

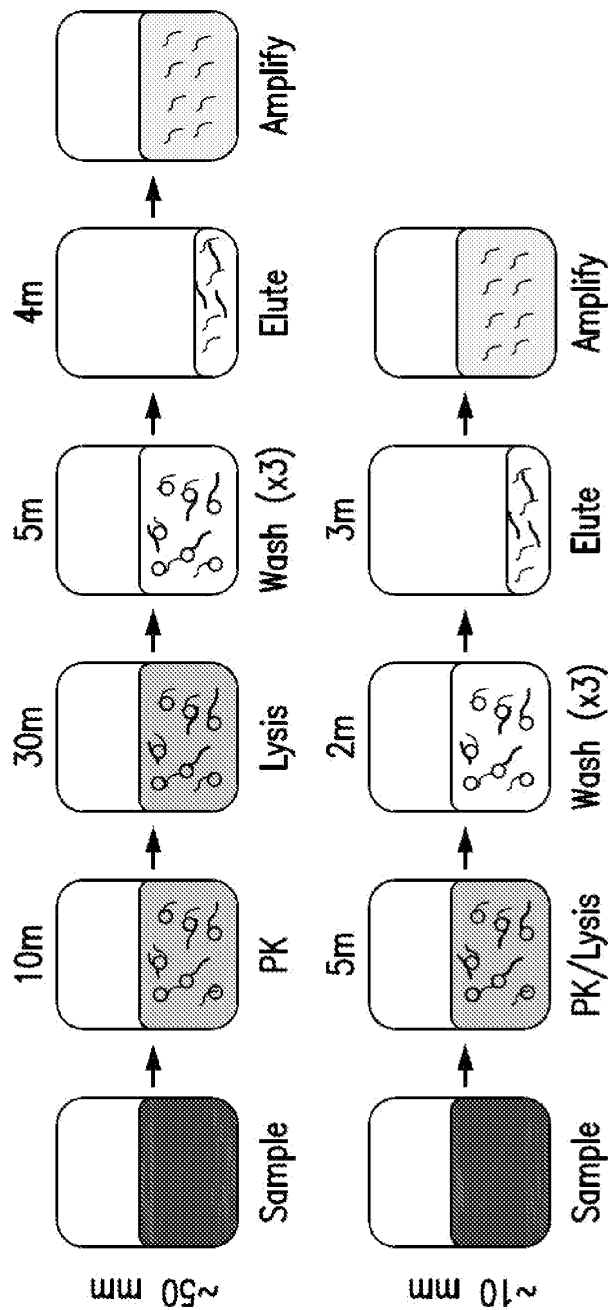


FIG. 9

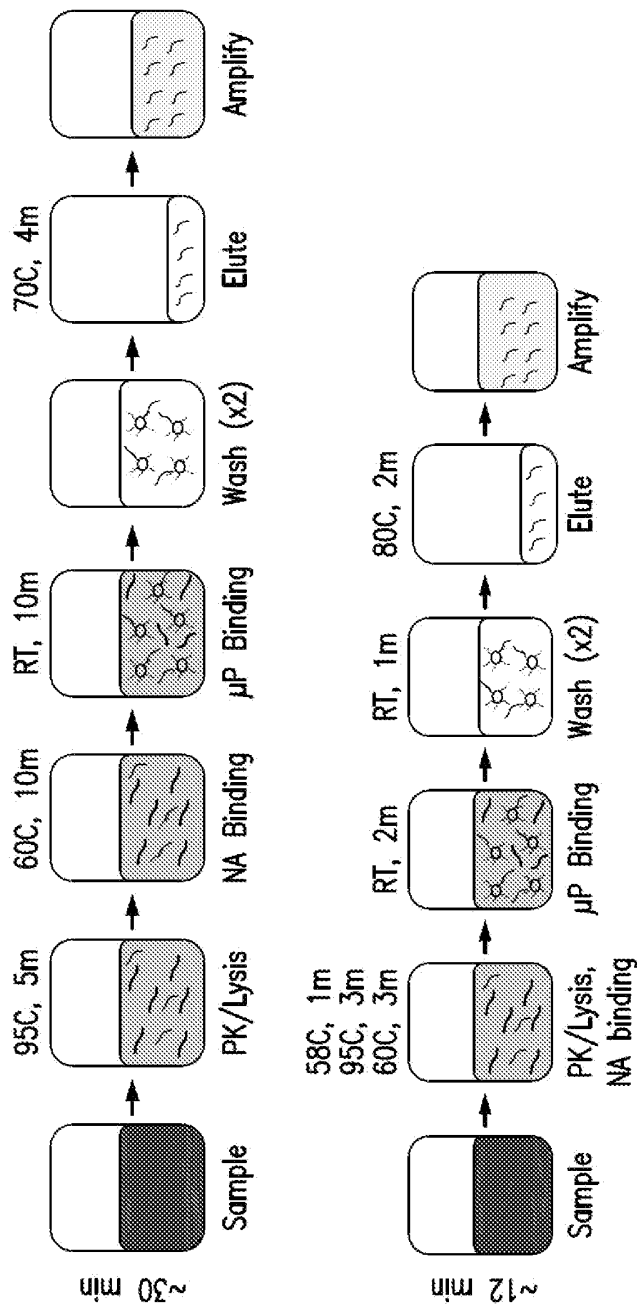


FIG. 10

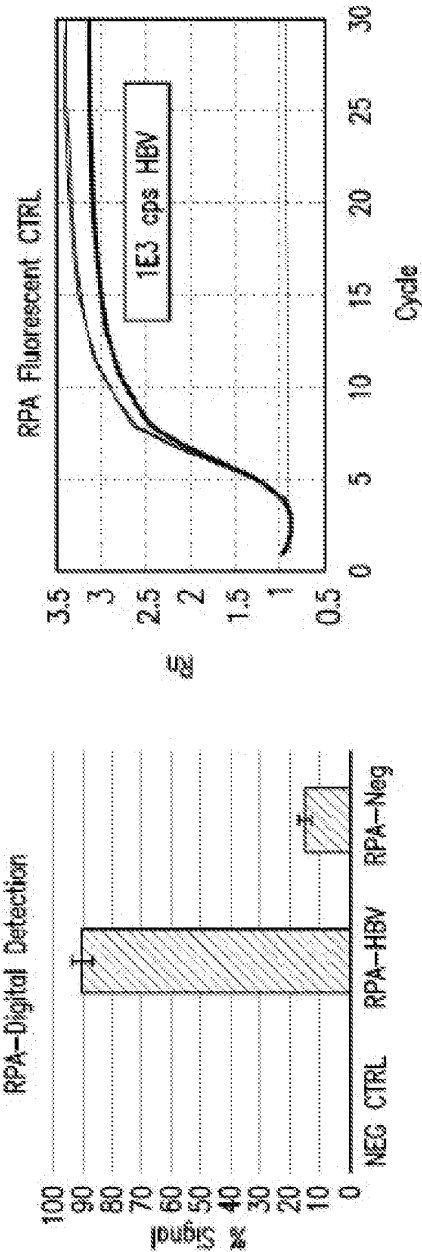


FIG. 11

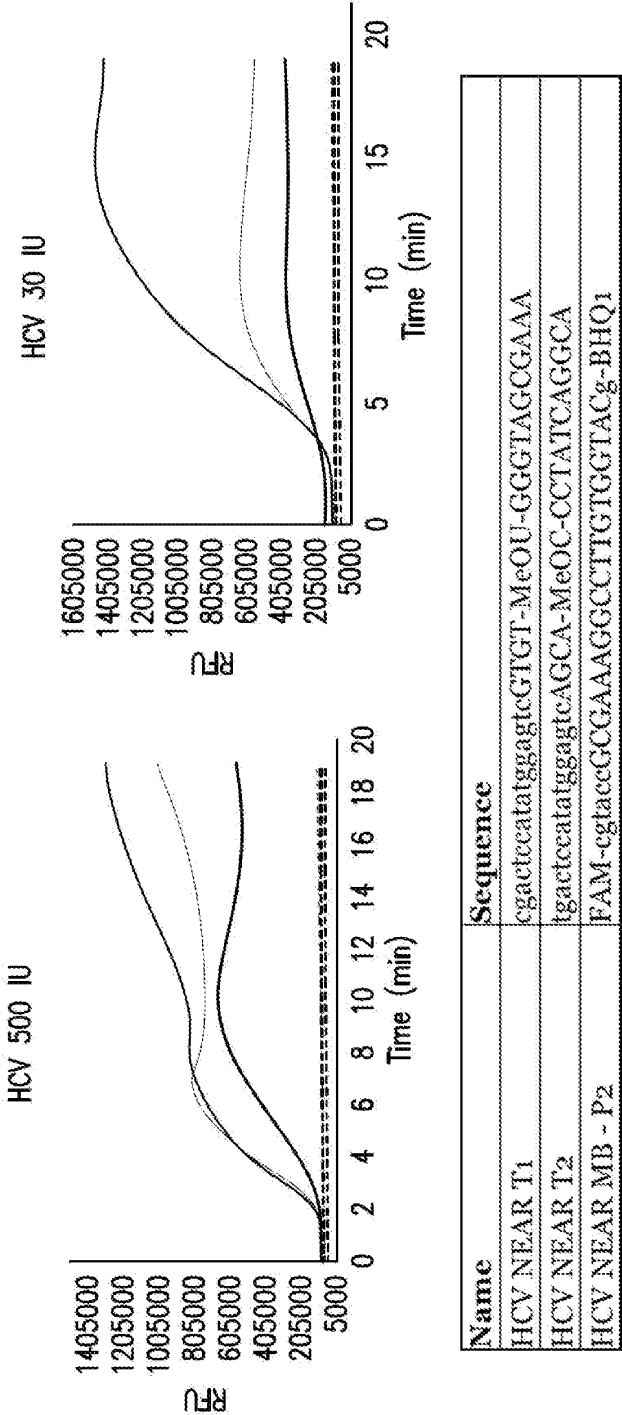


FIG. 12

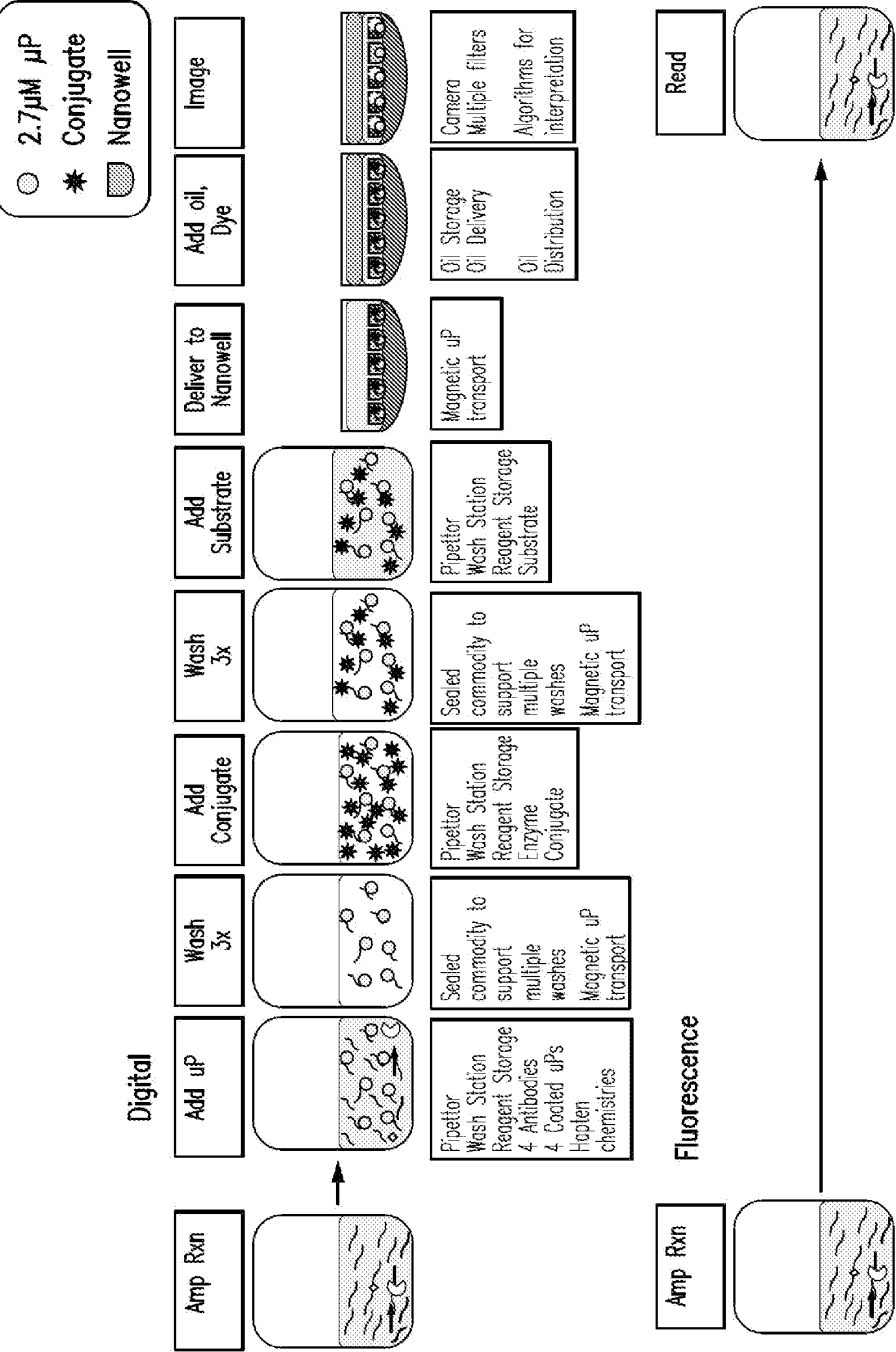


FIG. 13

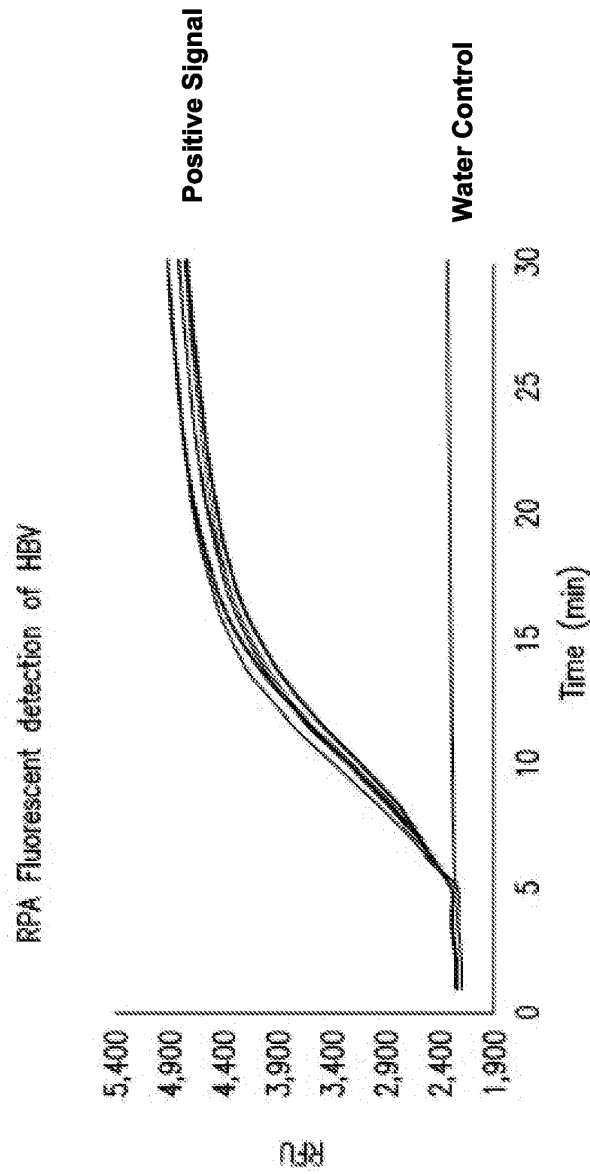


FIG. 14

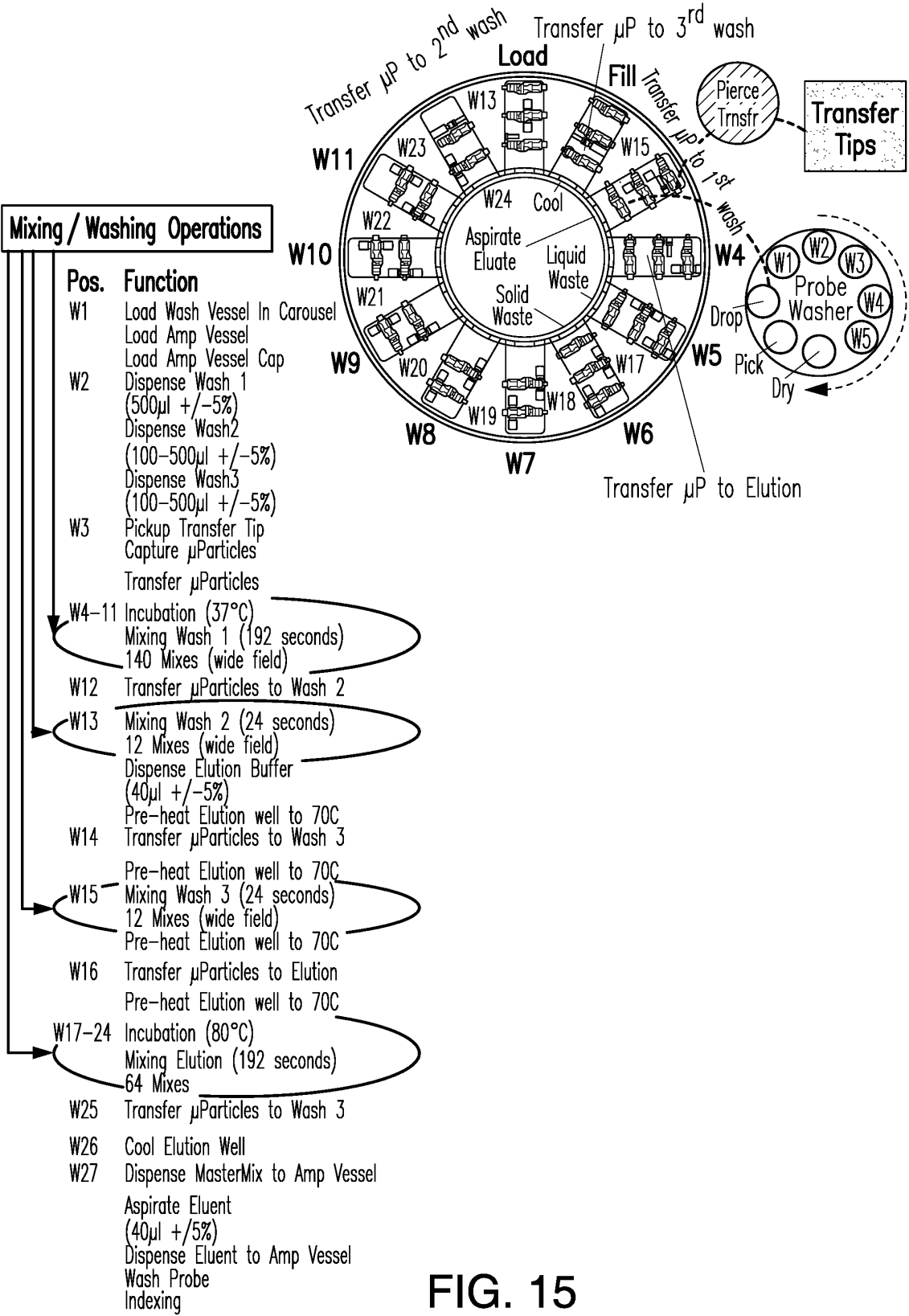


FIG. 15



uParticle Wash (Side Slide)-4 wells
 Wash1 - 500 μ L capacity
 Wash2 - 100 - 500 μ L capacity
 Wash3 - 100 - 500 μ L capacity
 Eluate - 40 μ L capacity

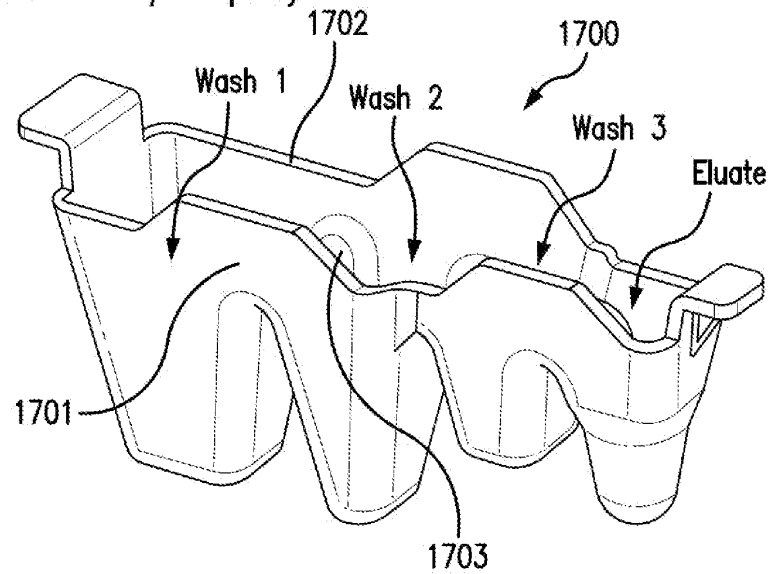


FIG. 17A

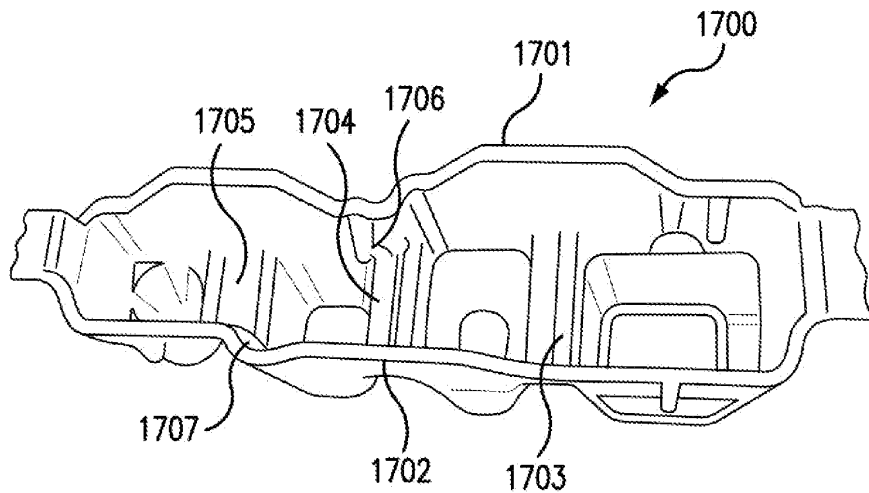


FIG. 17B

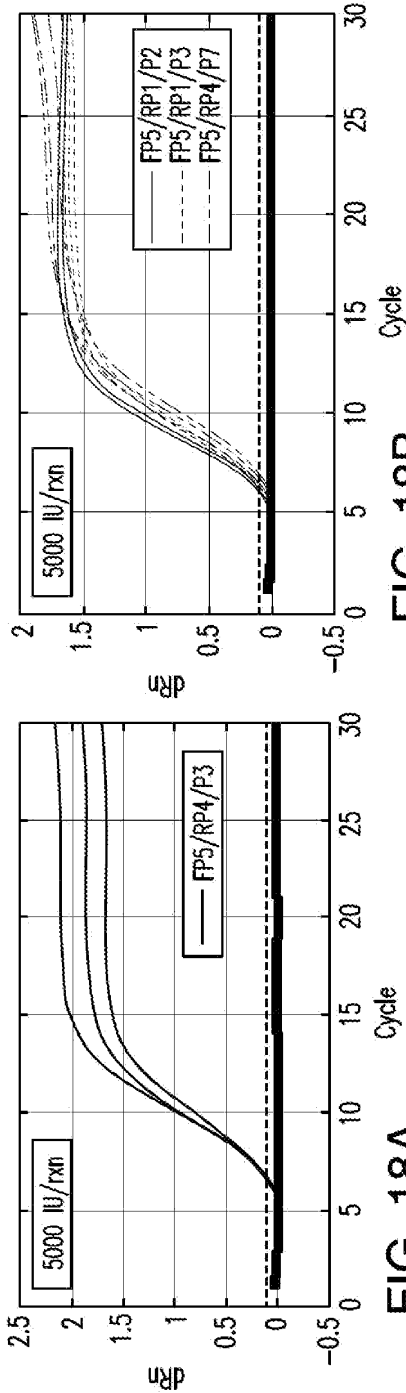


FIG. 18B

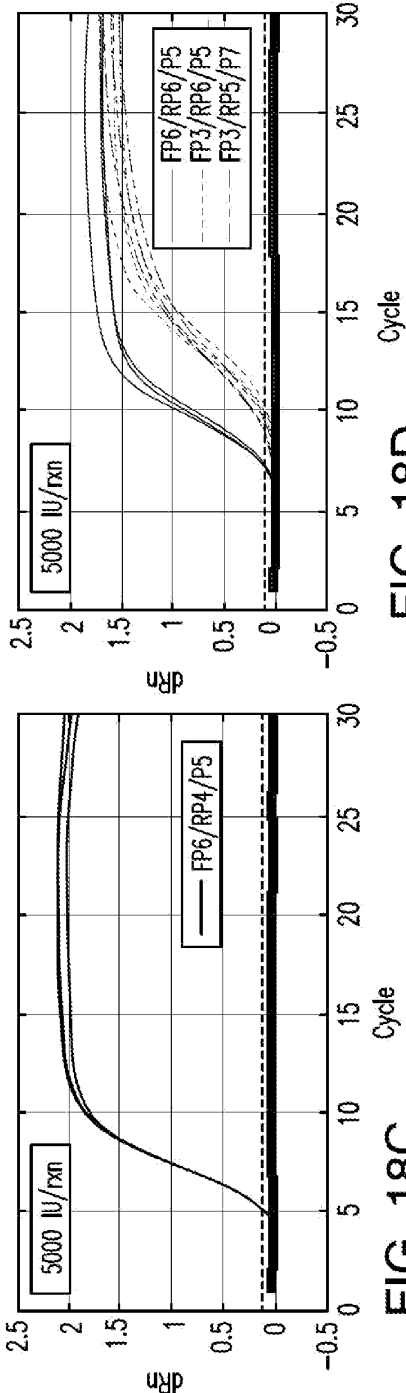
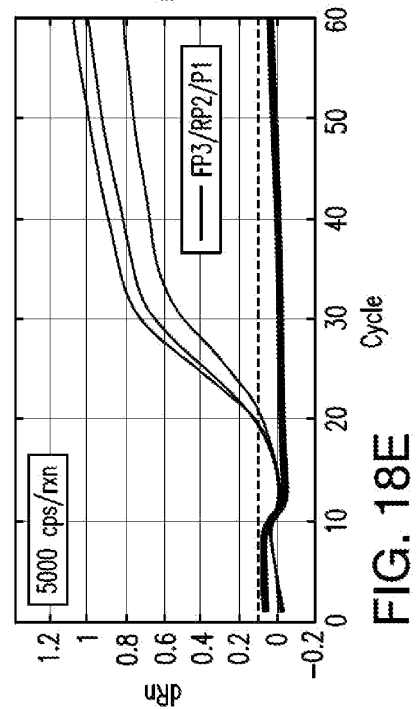
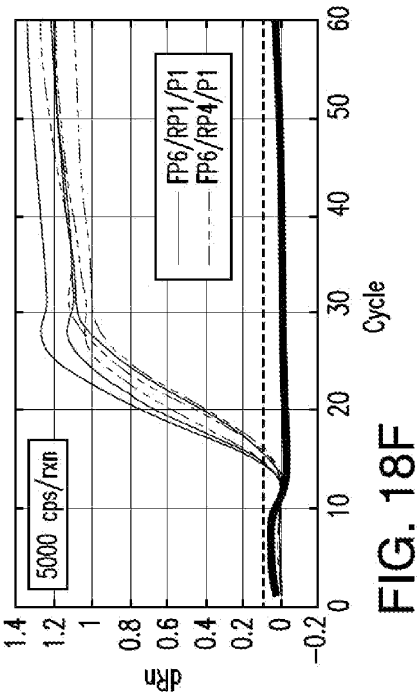
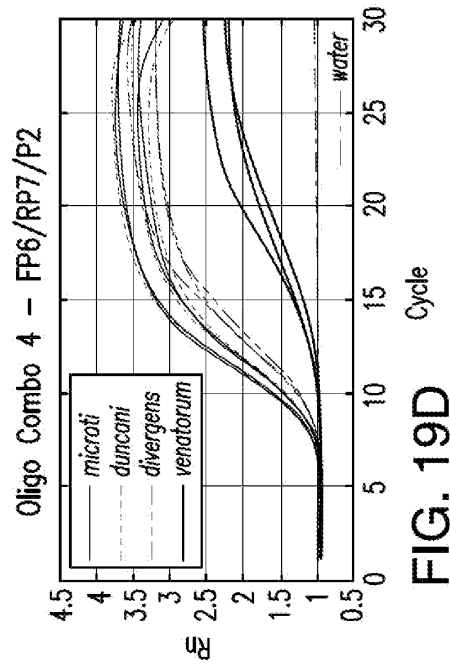
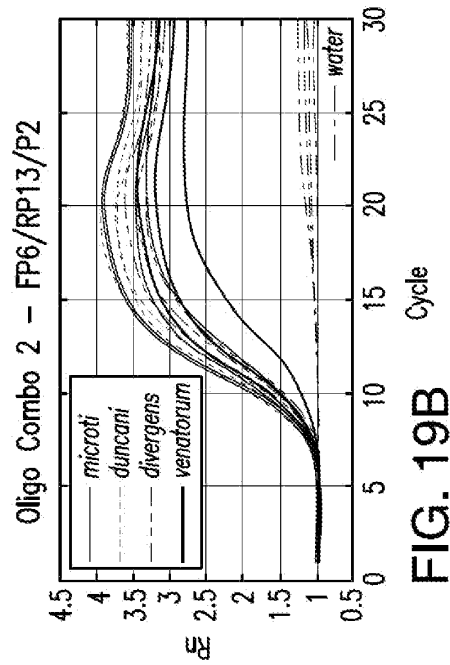
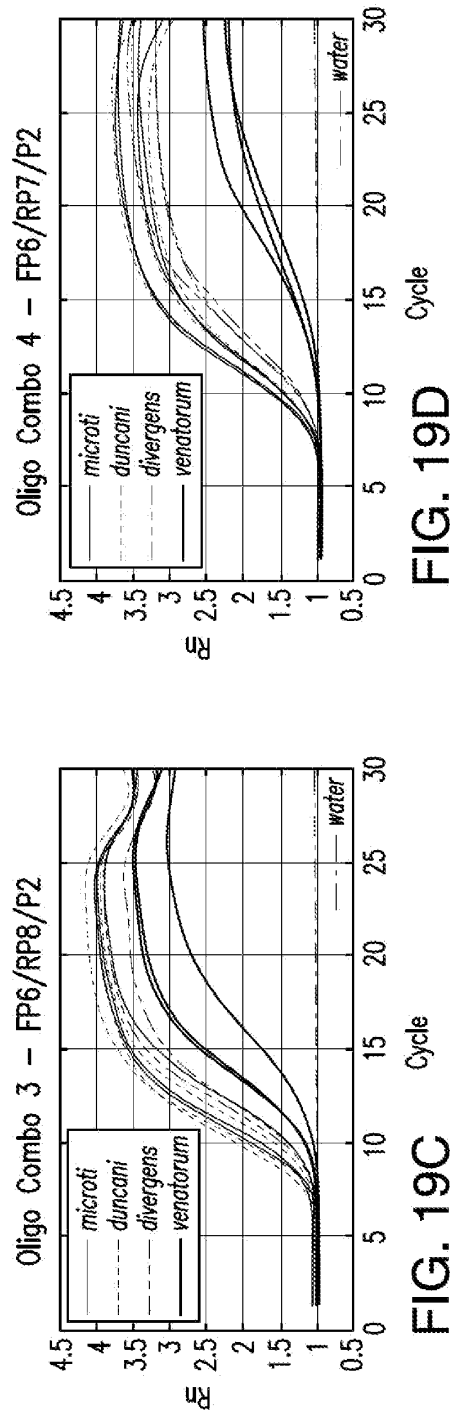
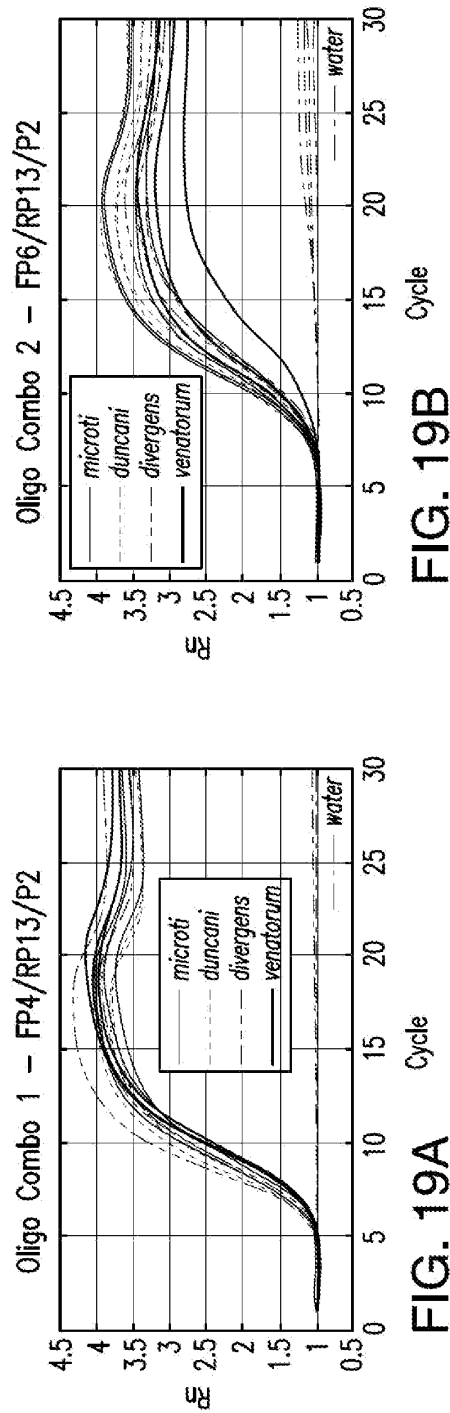


FIG. 18D

FIG. 18C





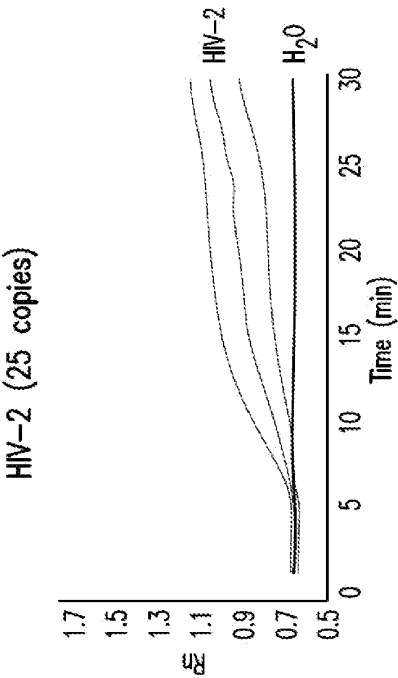


FIG. 20A

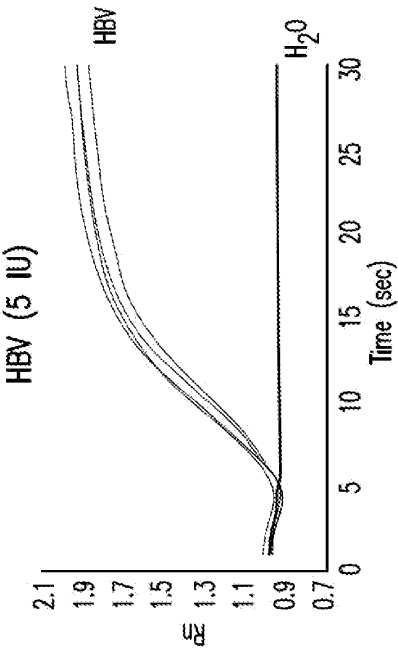


FIG. 20B

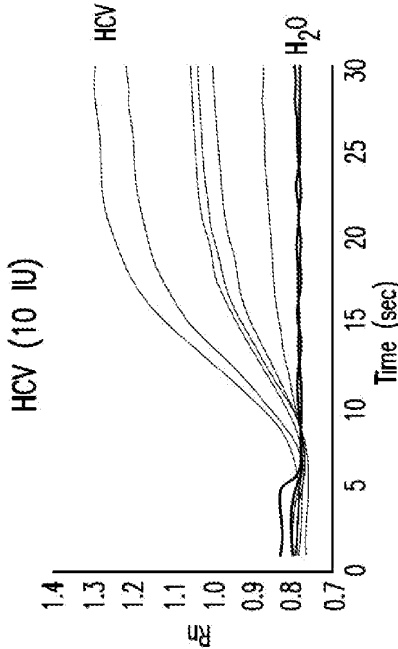


FIG. 20D

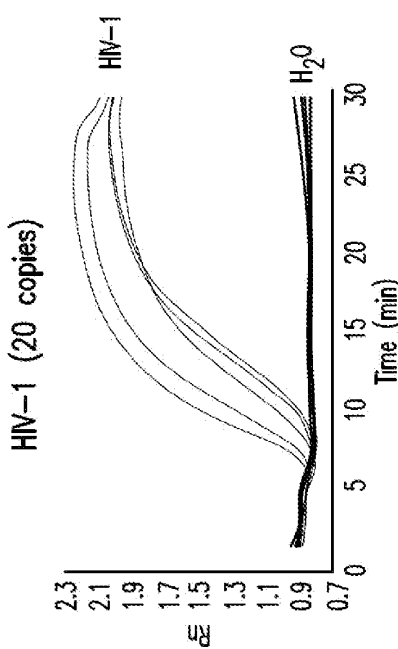


FIG. 20C

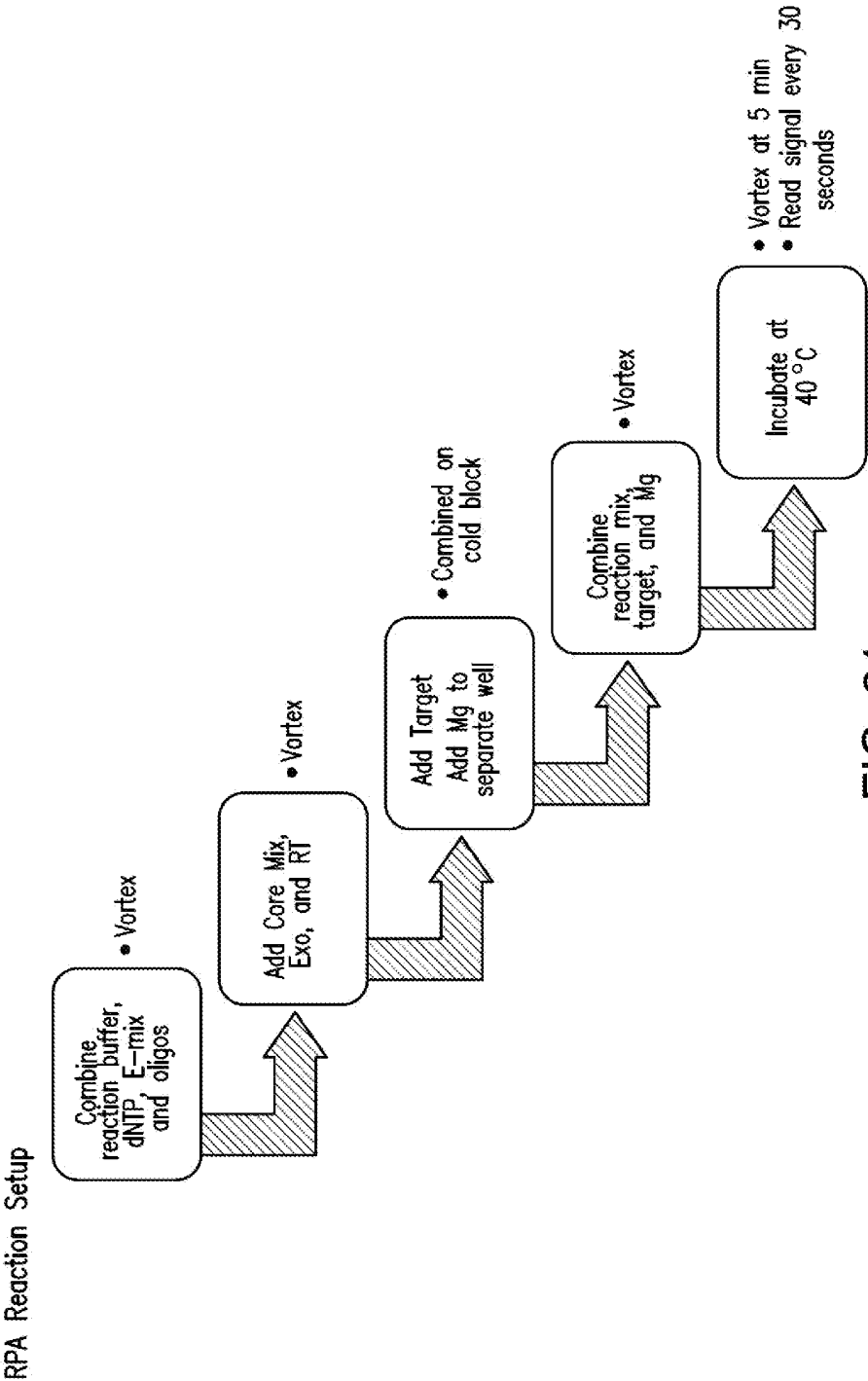


FIG. 21

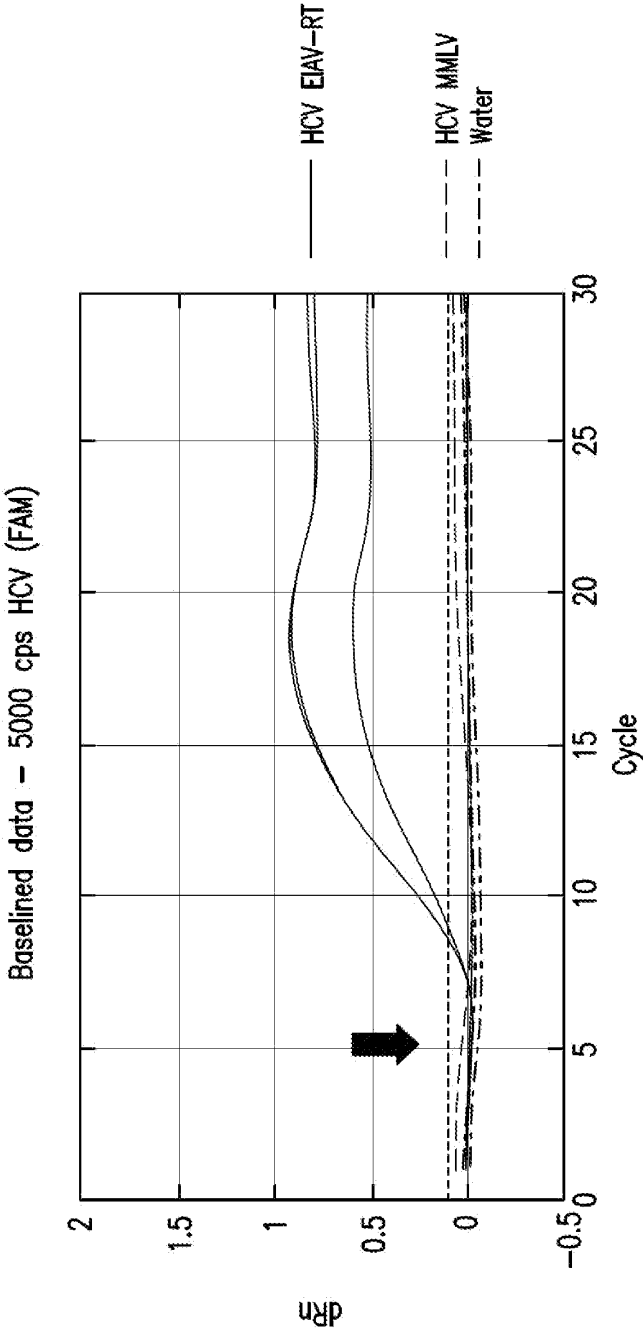


FIG. 22

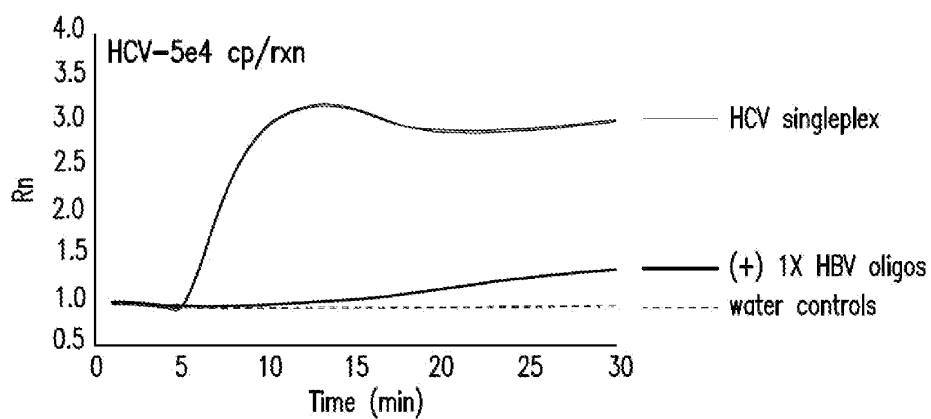
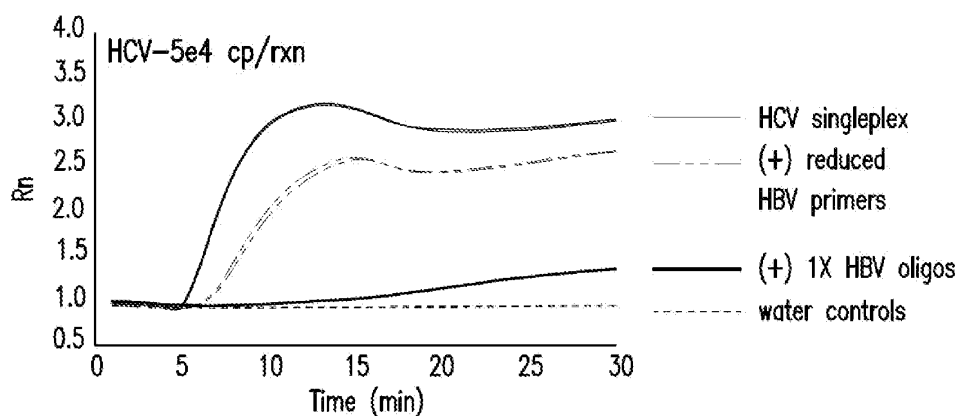
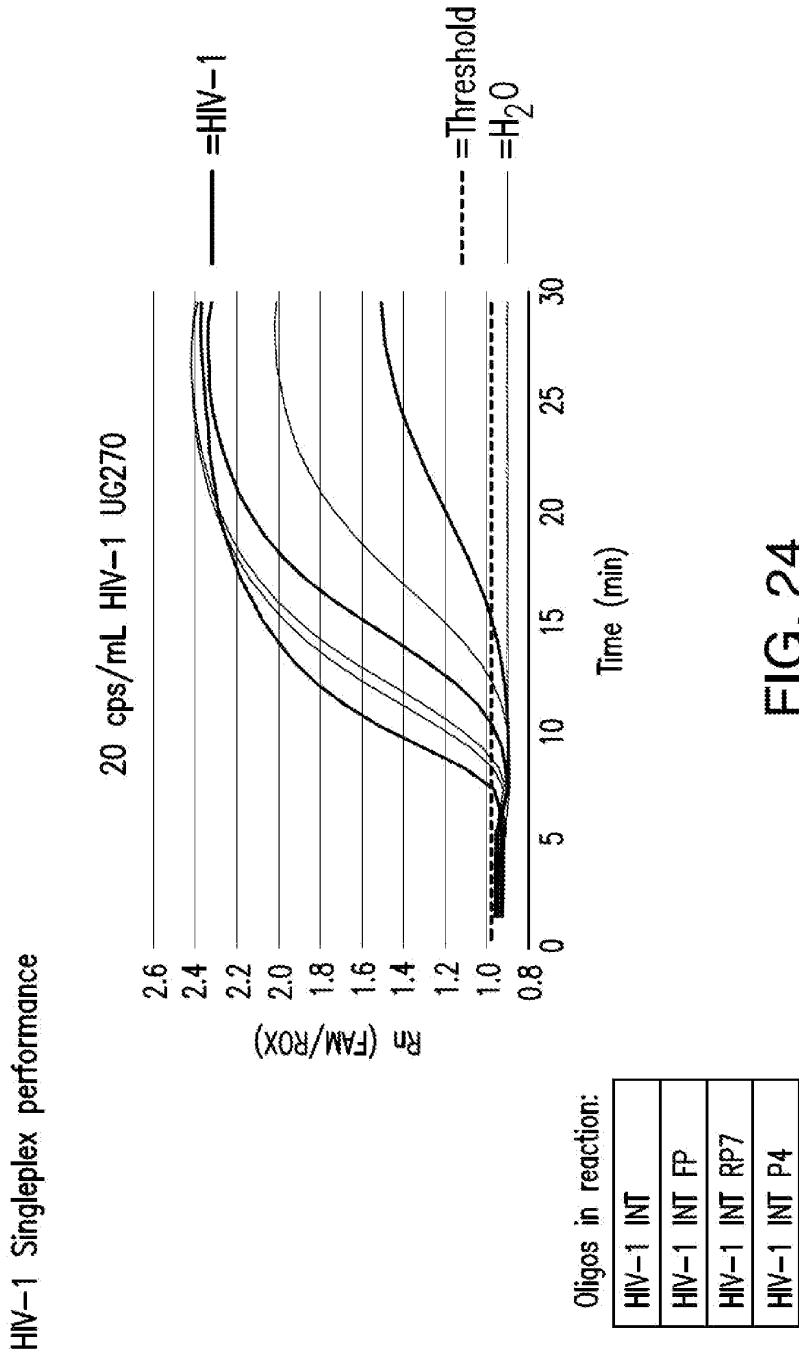


FIG. 23A



- HCV detection improved with reduced HBV oligos
- Reduction in oligos does not impact HBV detection

FIG. 23B



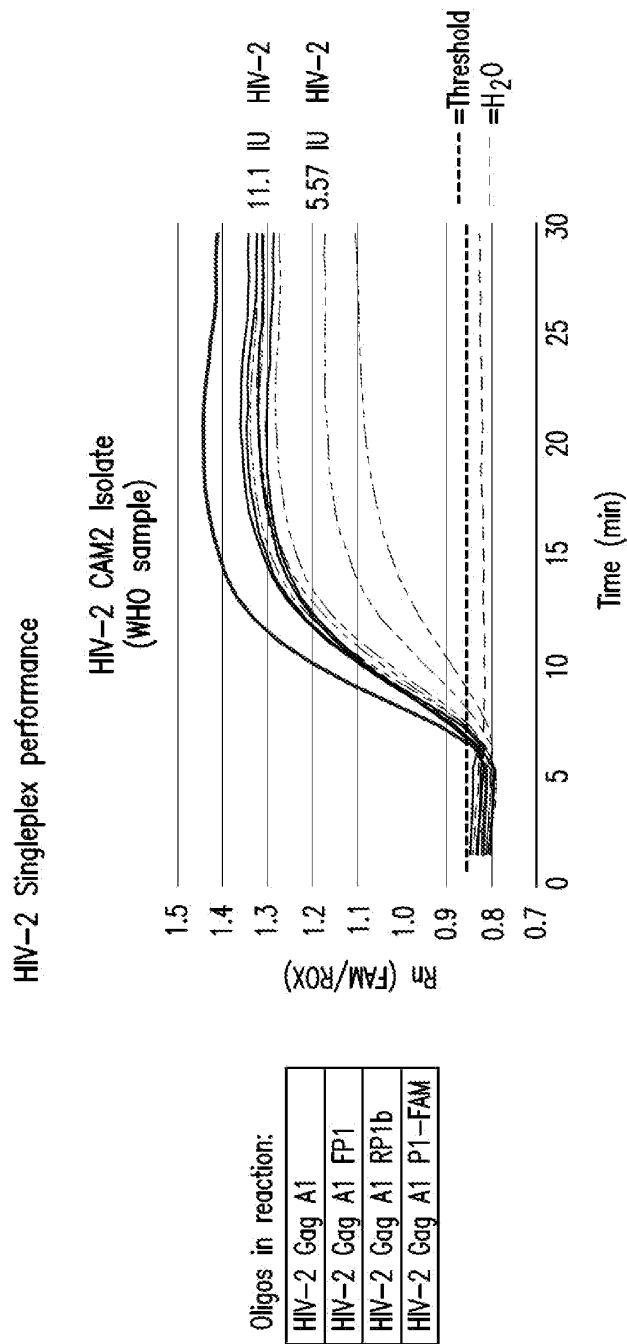


FIG. 25

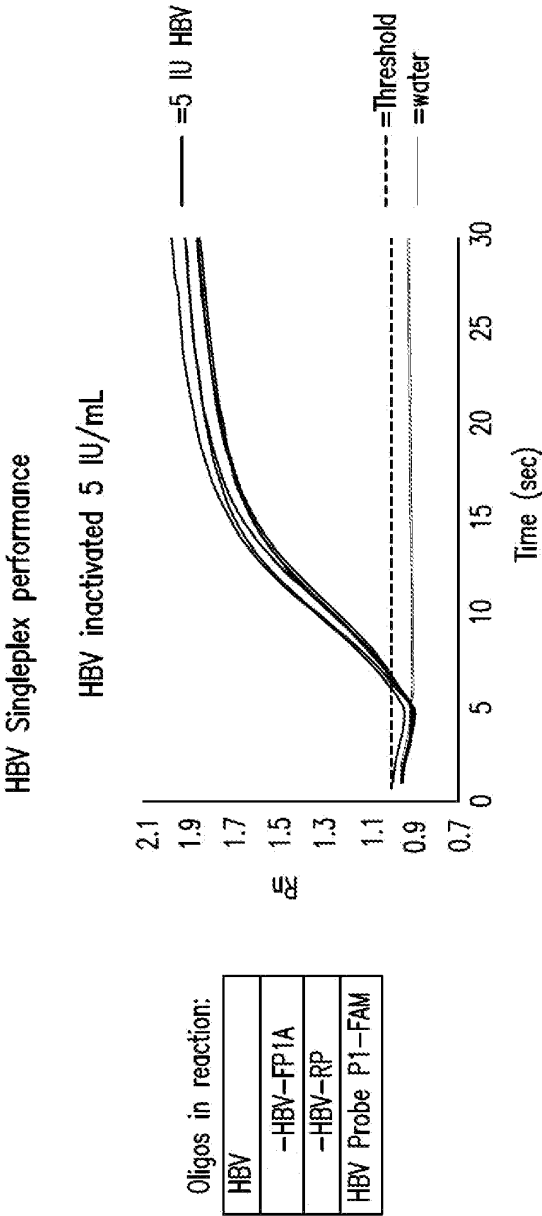


FIG. 26

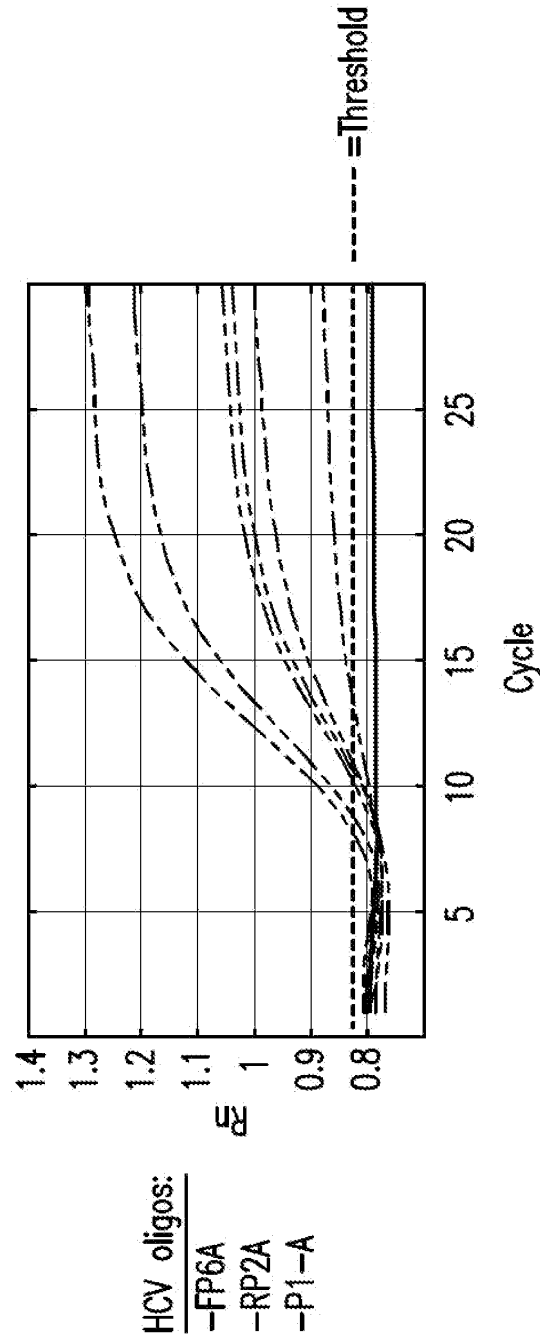
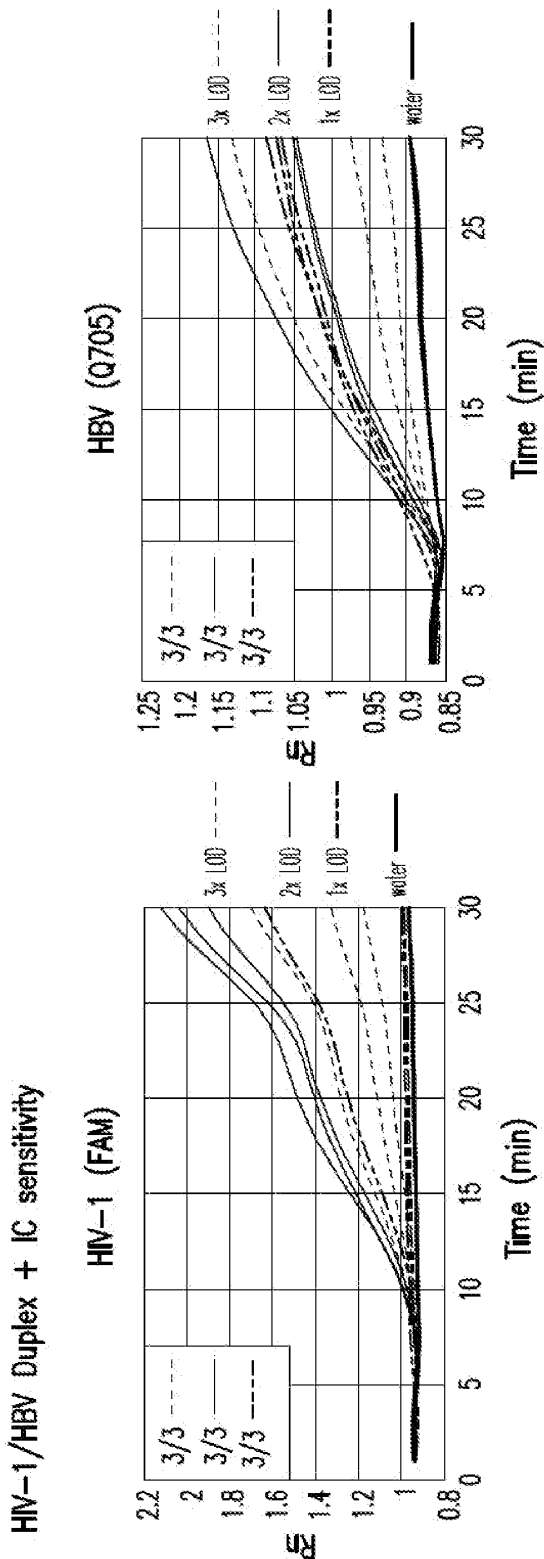


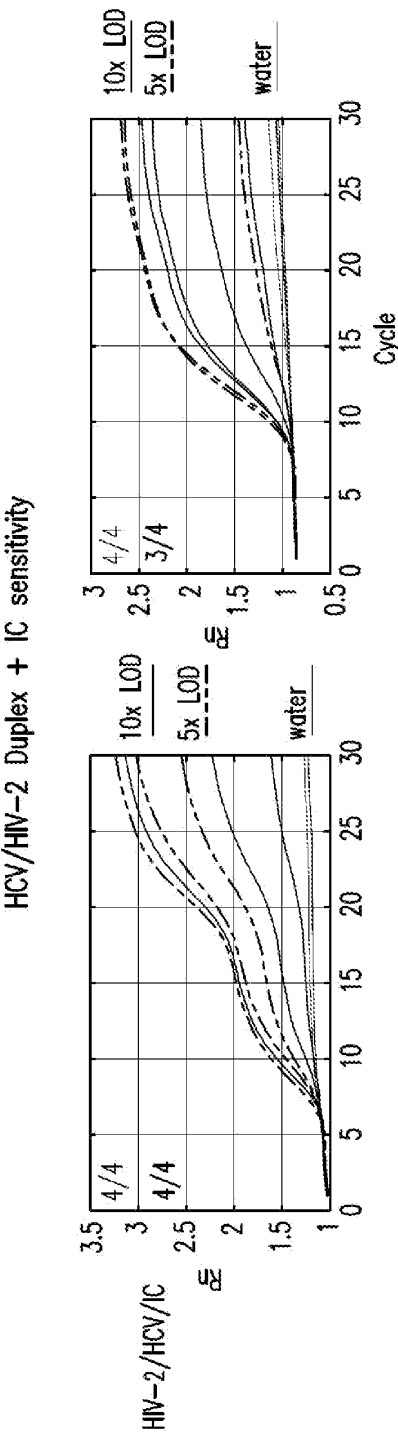
FIG. 27



HIV-1/HEV dual target extracted on Pipetmax and assessed in IC-duplex:

- HIV-1 detected down to 2x LOD (40 copies/mL)
- HBV detected down to 1x LOD (5 IU/mL)

FIG. 28



- HIV-2 and HCV extracted on pipetmax and screened in HIV-2/HCV/IC reaction
- HIV-2 detected at 5x LOD (100 IU/mL)
- HCV detected between 5x-10x LOD (50-100 IU/mL)

FIG. 29

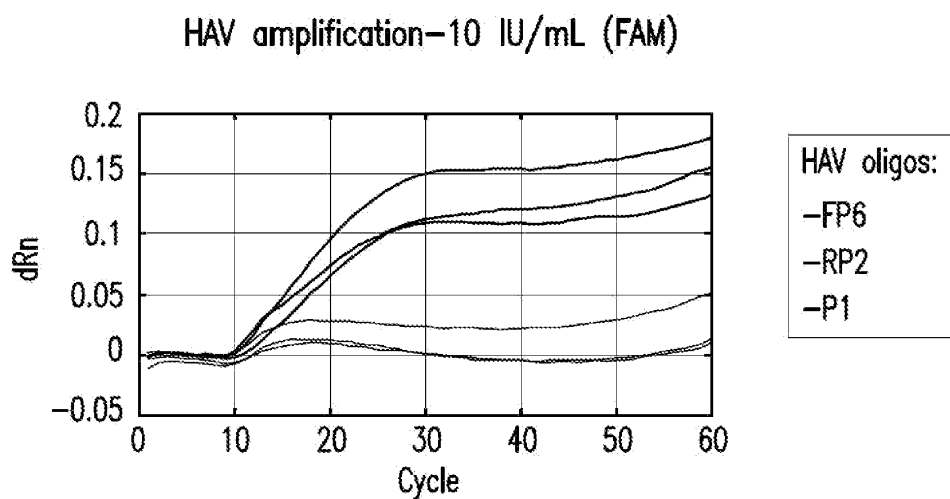


FIG. 30A

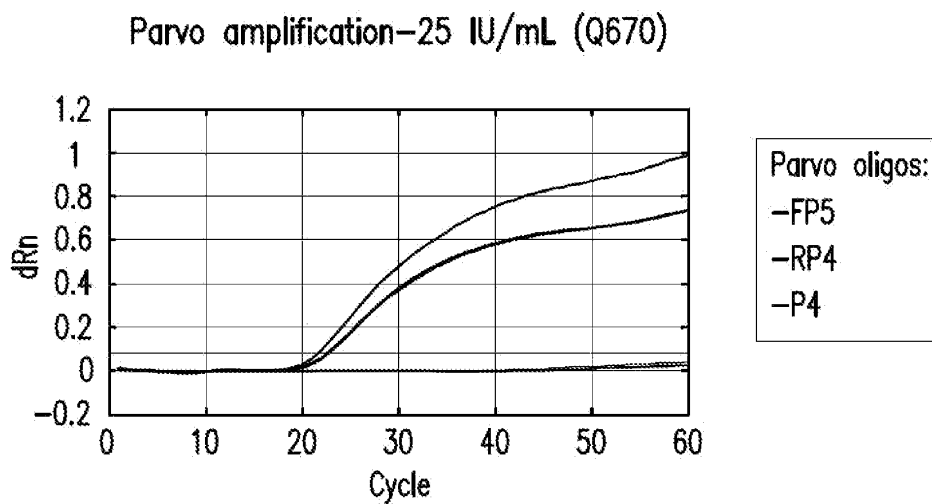


FIG. 30B

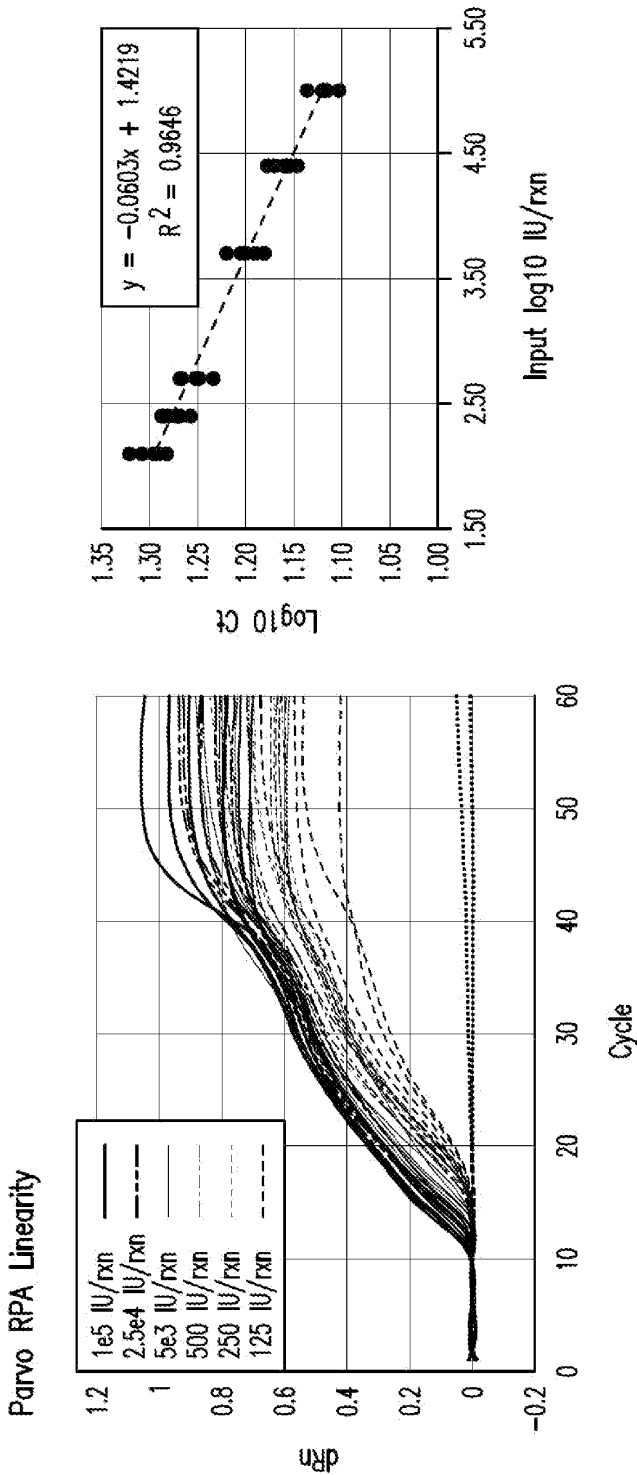
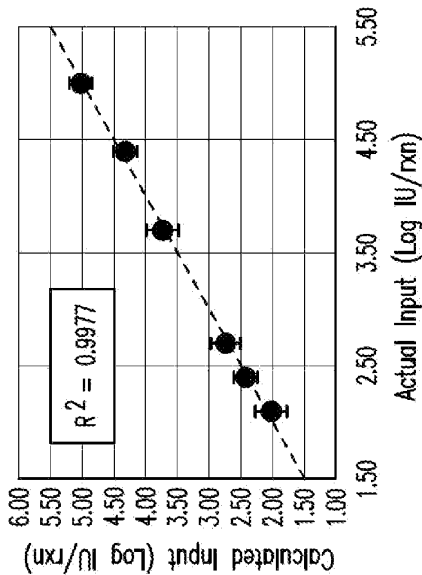


FIG. 31B

FIG. 31A

FIG. 31C



Log Input (IU/mL)	Observed log Input (IU/mL)	Observed-actual	%Accuracy	SD	%CV
2.40	2.40	0.00	100.1	0.11	4.61
2.70	2.66	-0.04	98.5	0.13	5.07
3.00	3.05	0.05	101.7	0.05	1.61
4.00	4.00	0.00	99.9	0.26	6.59
5.00	4.94	-0.06	98.8	0.09	1.80
6.00	6.09	0.09	101.5	0.02	0.31
7.00	6.96	-0.04	99.5	0.10	1.42

FIG. 31D

FIG. 32A

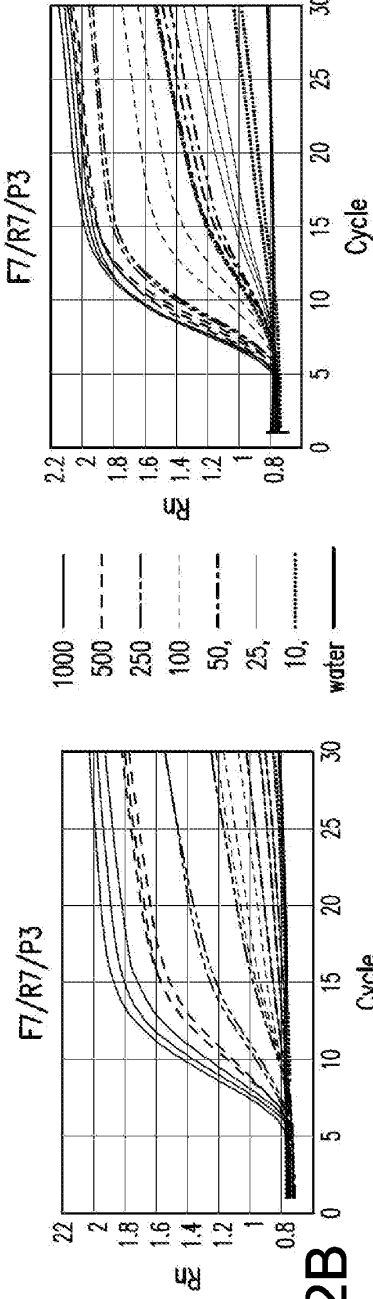
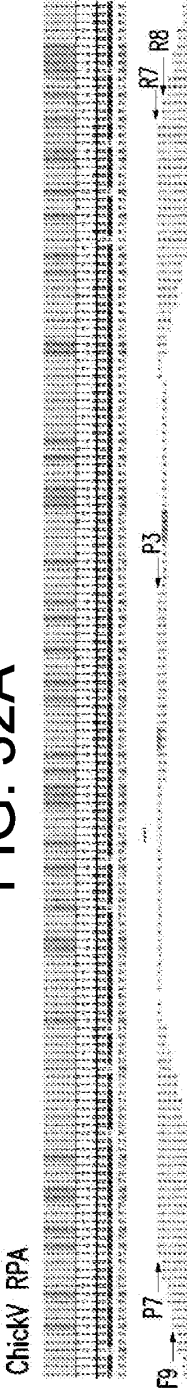


FIG. 32B

FIG. 32C

Obligo name	Sequence
CHIKV_E1_F7	AGCTGTAAGTCTTCACCCGGCTCTACCCATT
CHIKV_E1_R7	GATGAGCCCTGTATGCTGATGCAAAATTCGT
CHIKV_E1_R8	GGCGTATGAGCCCTGTATGCTGATGCAAAATTC
CHIKV_E1_P3	CACCGAAATACGCAATTGACCGAAGCACAT(T(FAM))[T(BHQ1)][T(THF)][T(BHQ1)]GGAGAGTCCGAATCAT

FIG. 32D

Dengue RPA Assay Design

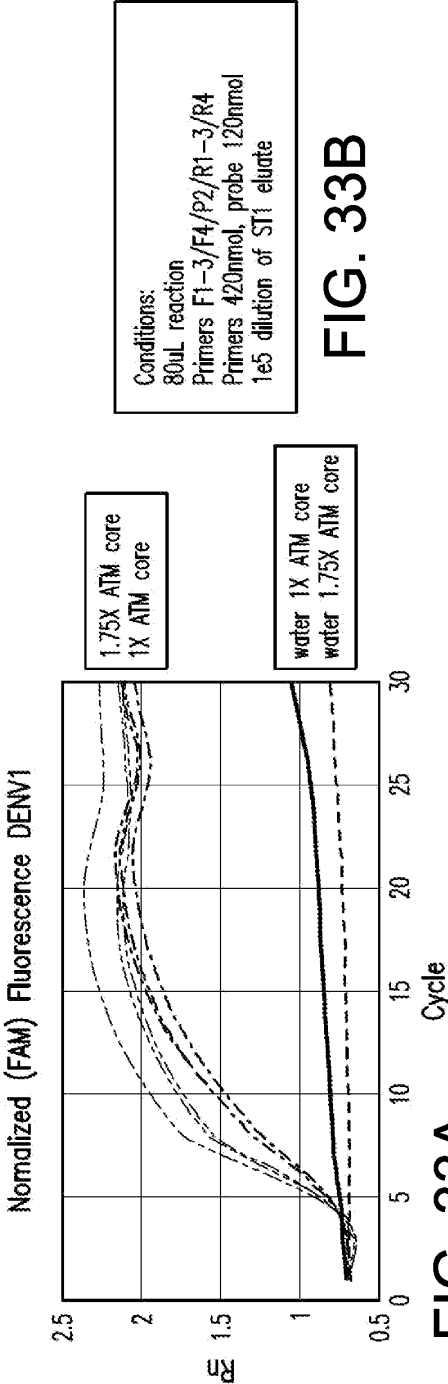


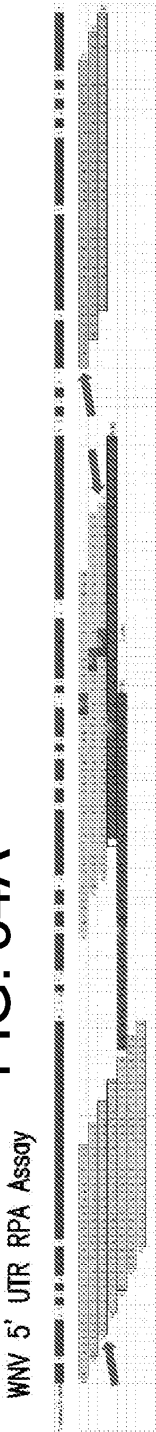
FIG. 33B

FIG. 33A

Name	Sequence
DENV 4 FP	CACAAAAACAGCATATTGACGCTGGGAAG
DENV 1-3 FP	AACAGCATATTGACGCTGGGAGAGACCAGAGATC
DenMPExoP9FAM	CCATTTTCTGCGGTTCTGTGCGCTGGAATGATG[T(FAM)]TG[dSpacer][T(BHQ1)]GAGACAGCAGGAT
DEV 1-3 RP	CACAGAACGCCAGAAAATGGAATGGTGGCTGTTGAAT
DEV 4 RP	TCAATCCAGGCACAGAGCCGCCGAAGATG

FIG. 33C

FIG. 34A



Normalized Data-F3/R1/P3-FAM
Lin1

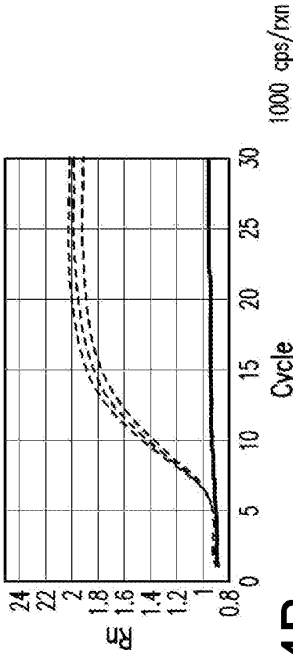


FIG. 34B

Normalized Data-F3/R1/P3-FAM
Lin2

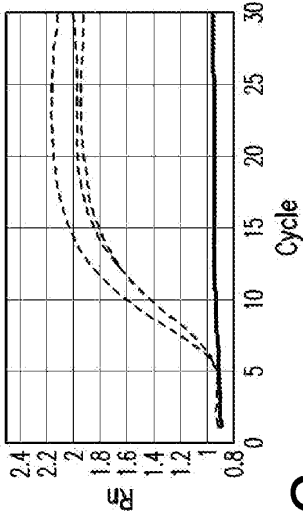


FIG. 34C

WNV_5UTR_F3: TGGCCTGTGAGCTGACAACTTAGTAGTGT
WNV_5UTR_R1: GGCATTCCGCGTTTATGATATTGACAGCCCG
WNV_5UTR_P3: GAGCTGTTTCTTAGCAGCAAGATCTCGATG-T(FAM)-
dSpacer-T(BHQ-1)-AAGAAACCCAGGAGG

FIG. 34D

Normalized WNV_Lin1_5'UTR FAM
F3/R1/P3

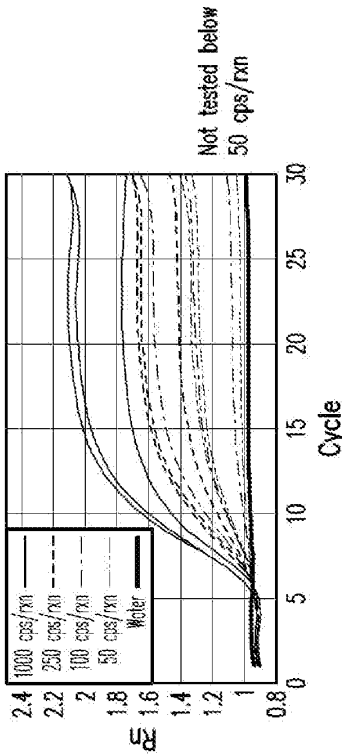


FIG. 34E

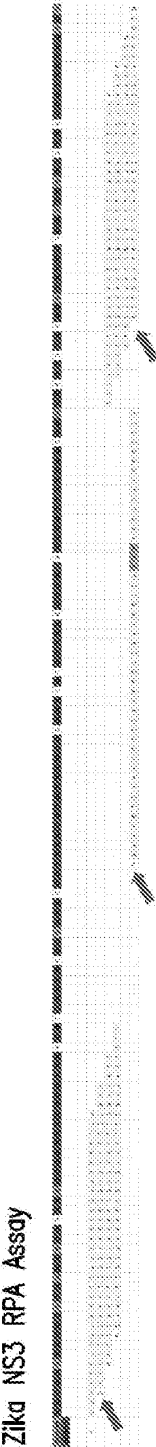


FIG. 35A

F2/P3/R4: Ct 6.92, MR 0.570

Zika_NS3_F2 : GTCATACAGCTCAGCAGACAAGACTTTTGAGAC

Zika_NS3_R4: AGGCATCTCCTGGAATCTATGACACGGTCAGC

Zika_NS3_P3:
AAGAGTGGGACTTTGTCGTGACAACGACAT[(FAM)][(THF)][T(B
HQ1)]CAGAGATGGCGGCC

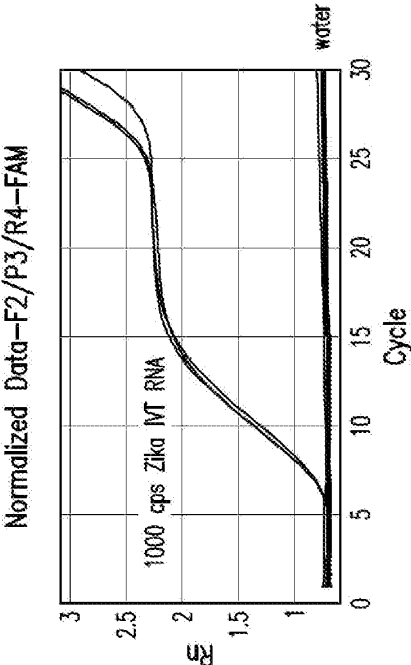
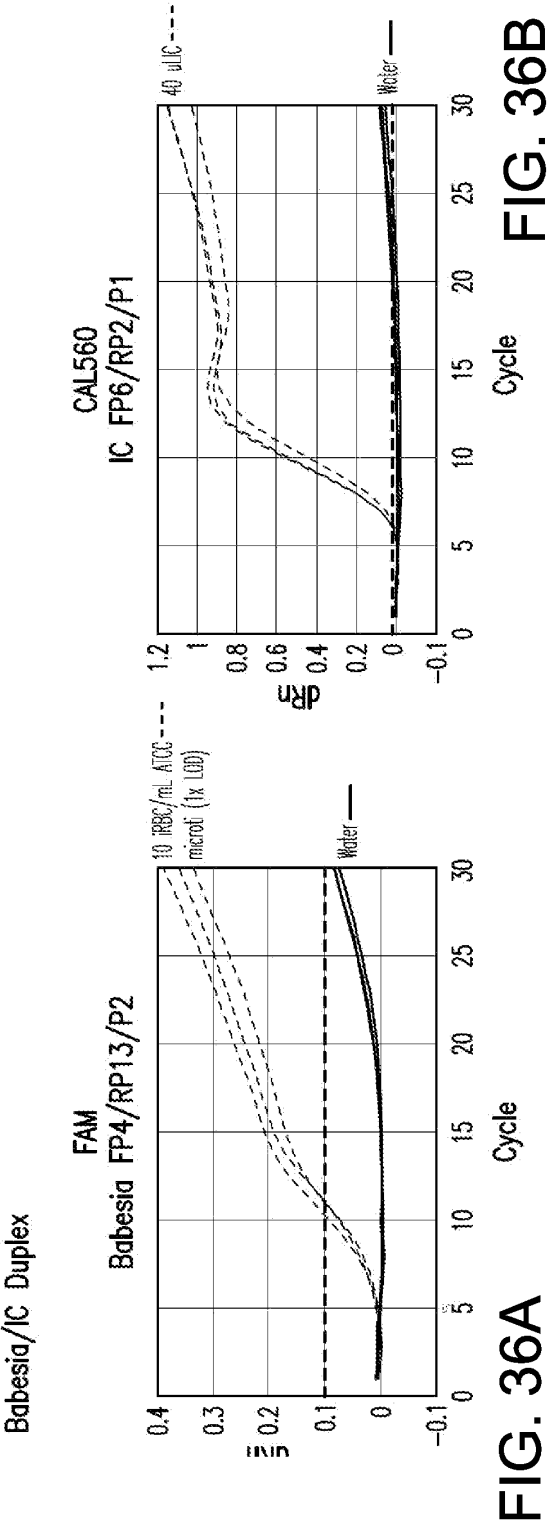


FIG. 35B

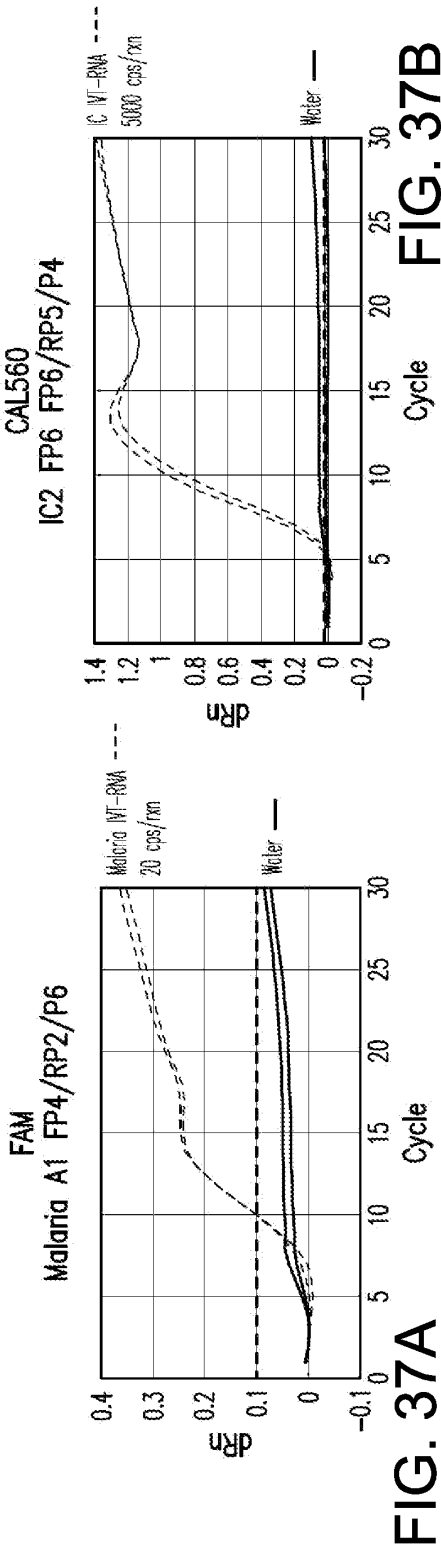
FIG. 35C



Oligo Name	Sequence (5' - 3')
Babesia A2 FP4	CAGCATGGAATAATGAAGTAGGACTTTGGTTC
Babesia A2 RP13	TCCTTGGCAAATGCTTTCGCAGTAGTTCGTC
Babesia A2 P2	GCATTGCTATTTAACGTGCAGAGGTGAAA[T(FAM)][dSpacer]C[T(BHQ-1)]TAGATTGTTAAA

FIG. 36C

Malaria/IC Duplex



Oligo Name	Sequence (5'-3')
Malaria A1 FP4	CGAGTTTCTGACCTATCAGCTTTTTCATGTTAG
Malaria A1 RP2	TATTTCTTGTCACTACCTCTCTCTTTTAGAAT
Malaria A1 P6	AATTAGACTTCGATTCCGGACAGGAGCC[T(FAM)][dSpacer]A[BHQ-1]AAATAGCTACCAC

FIG. 37C

SARS-CoV-2 RPA

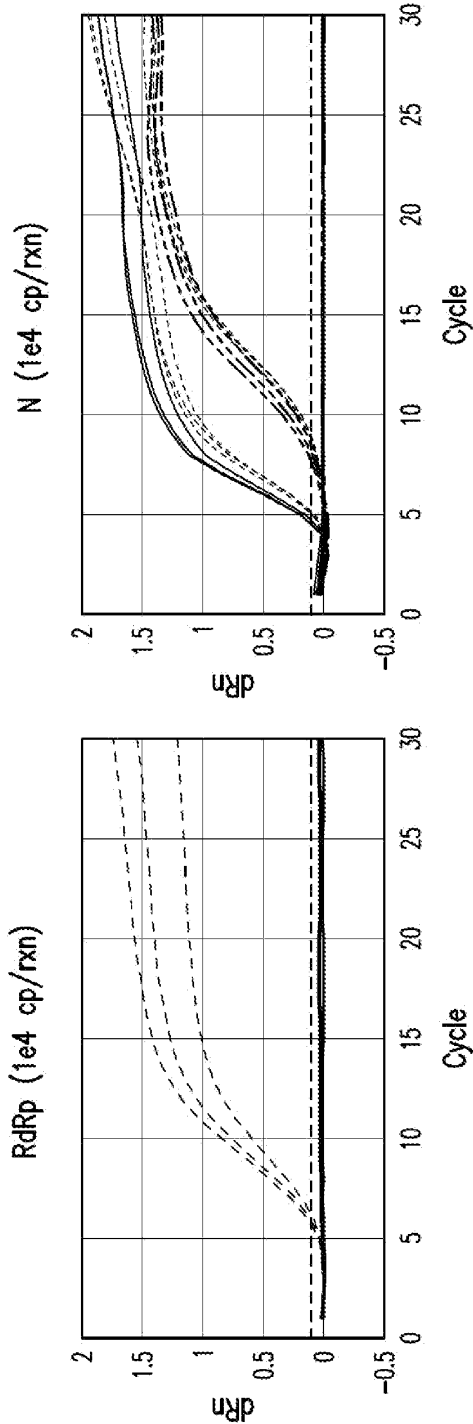


FIG. 38A

FIG. 38B

Time to Result—Sample to detection

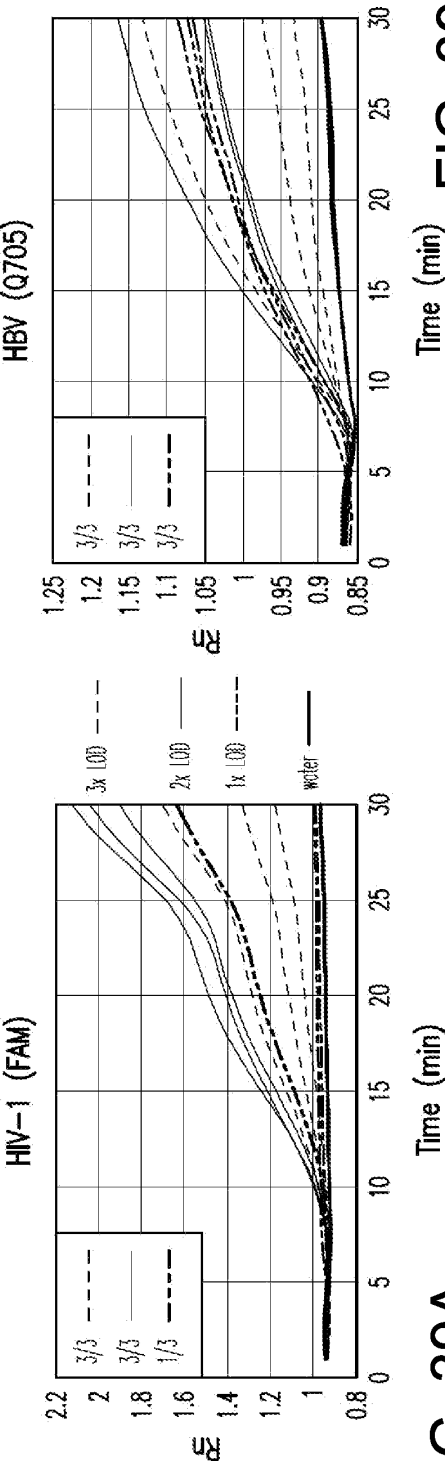
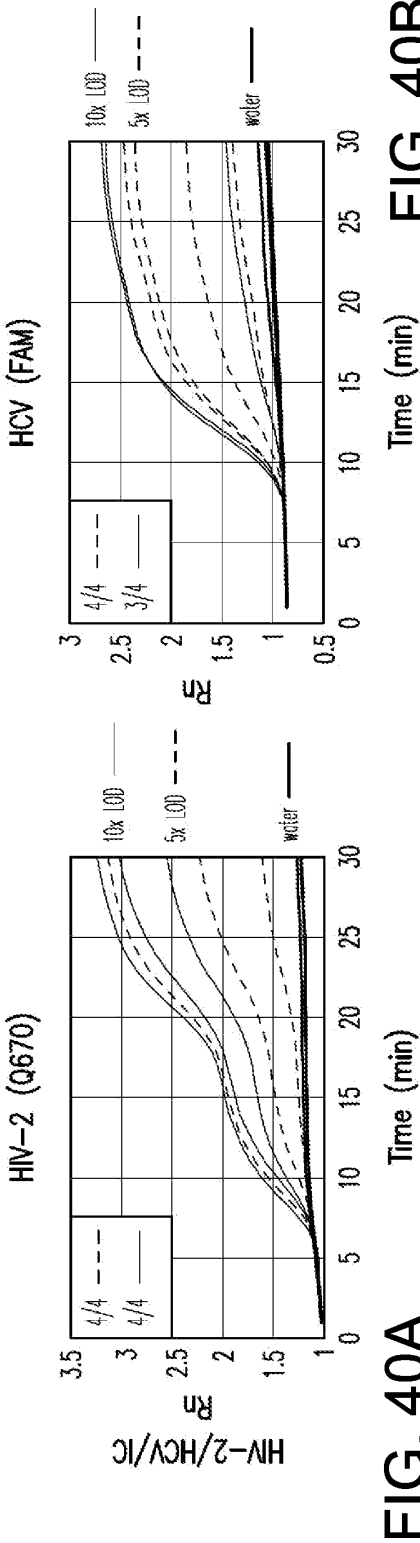


FIG. 39A

HIV-1 is 10 minutes Sample Prep + 15 minutes RPA = 25 minutes total
HBV is 10 minutes Sample Prep + 10 minutes RPA = 20 minutes total

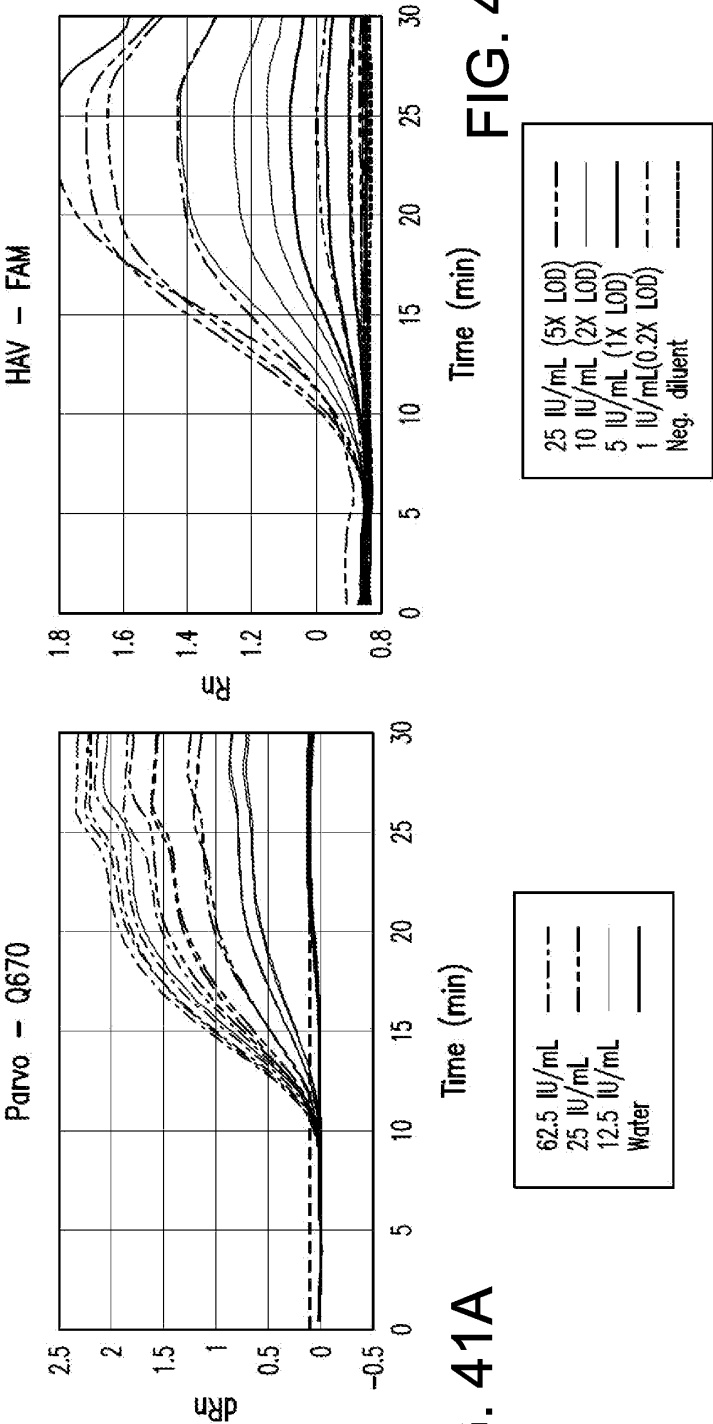
FIG. 39B

Time to Result—Sample to detection



IV-2 is 10 minutes Sample Prep + 15 minutes RPA = 25 minutes total
CV is 10 minutes Sample Prep + 15 minutes RPA = 25 minutes total

Time to Result—Sample to detection



- Parvo B19 is 10 minutes Sample Prep + 15 minutes RPA = 25 minutes total
- HAV is 10 minutes Sample Prep + 15 minutes RPA = 25 minutes total

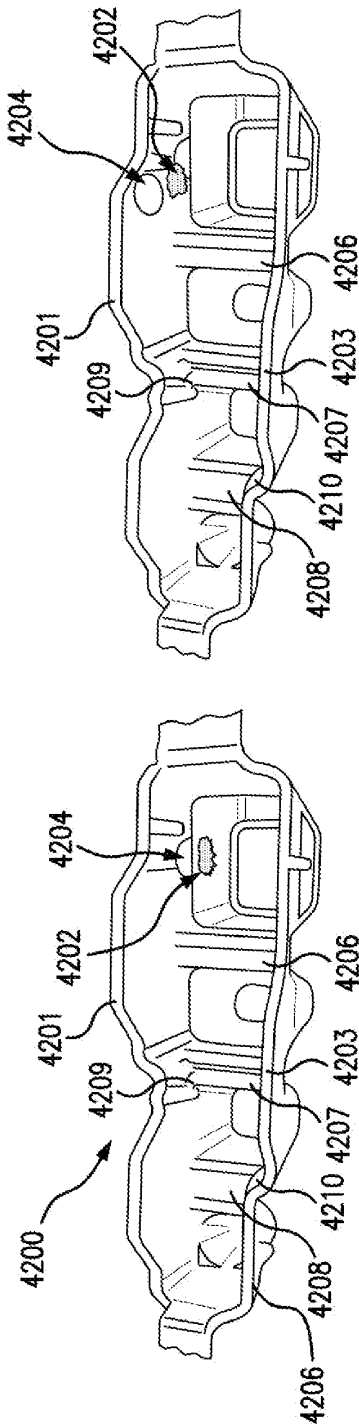


FIG. 42B

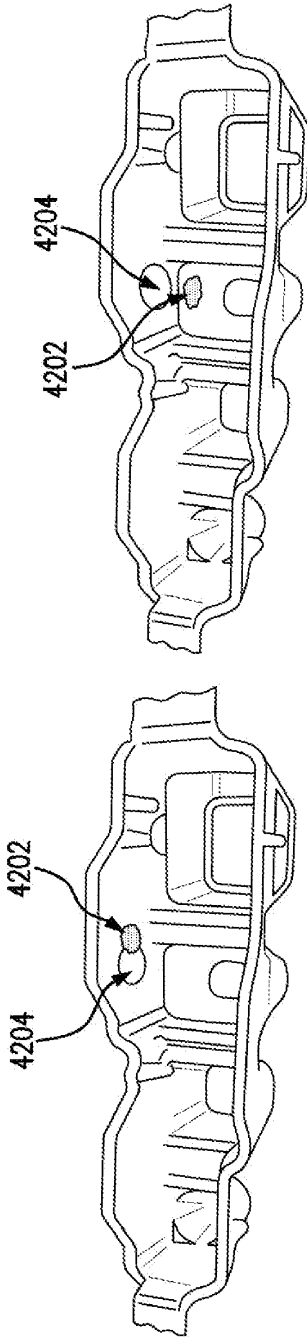


FIG. 42D

FIG. 42C

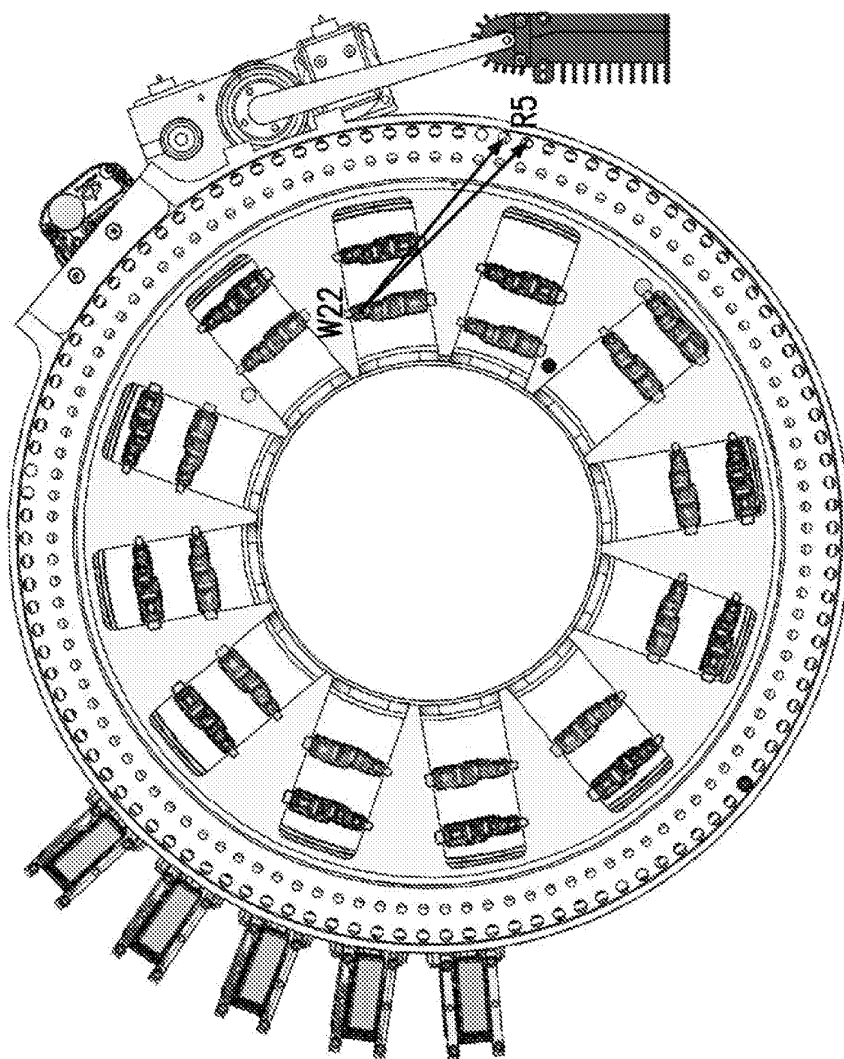


FIG. 43

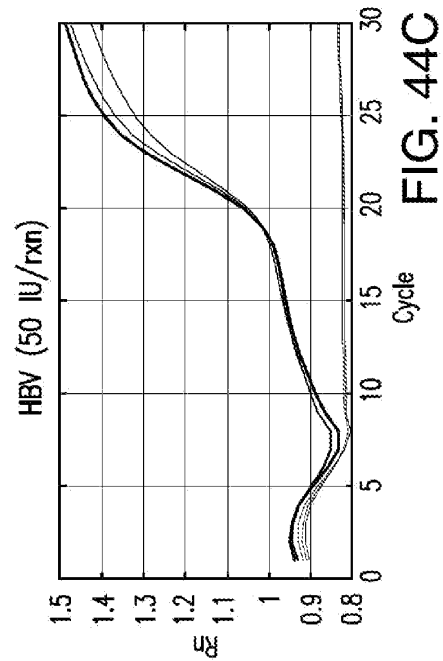
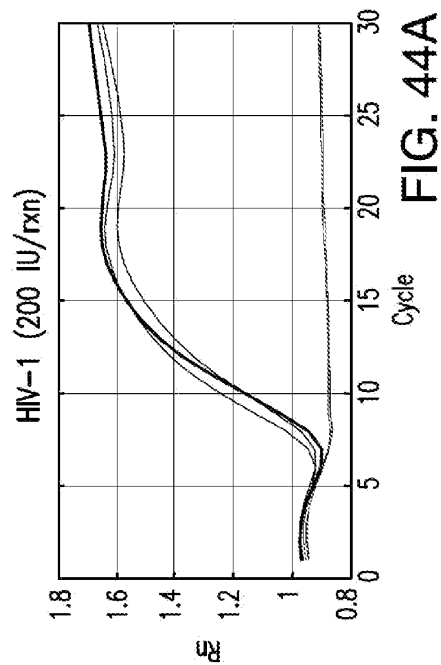
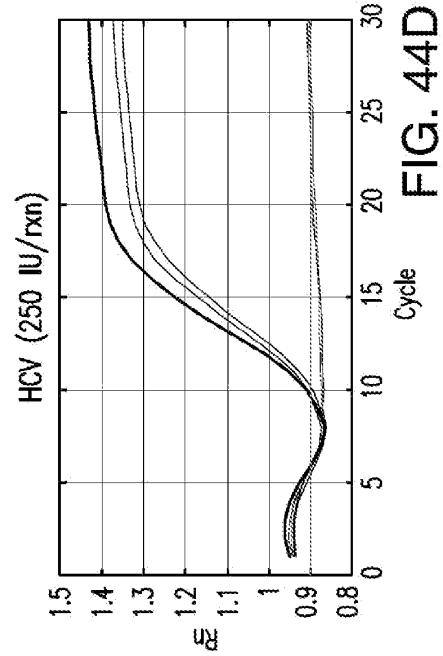
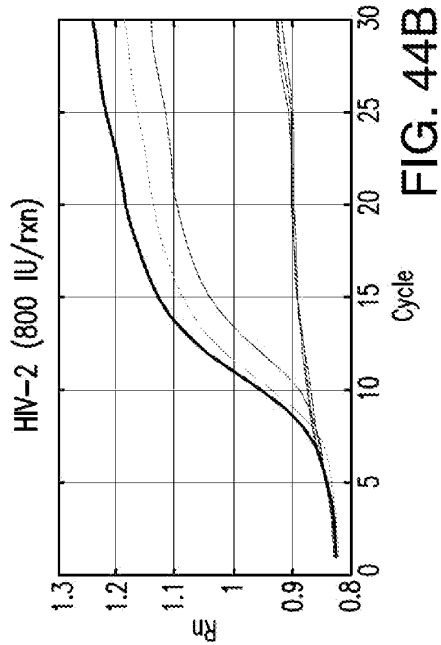
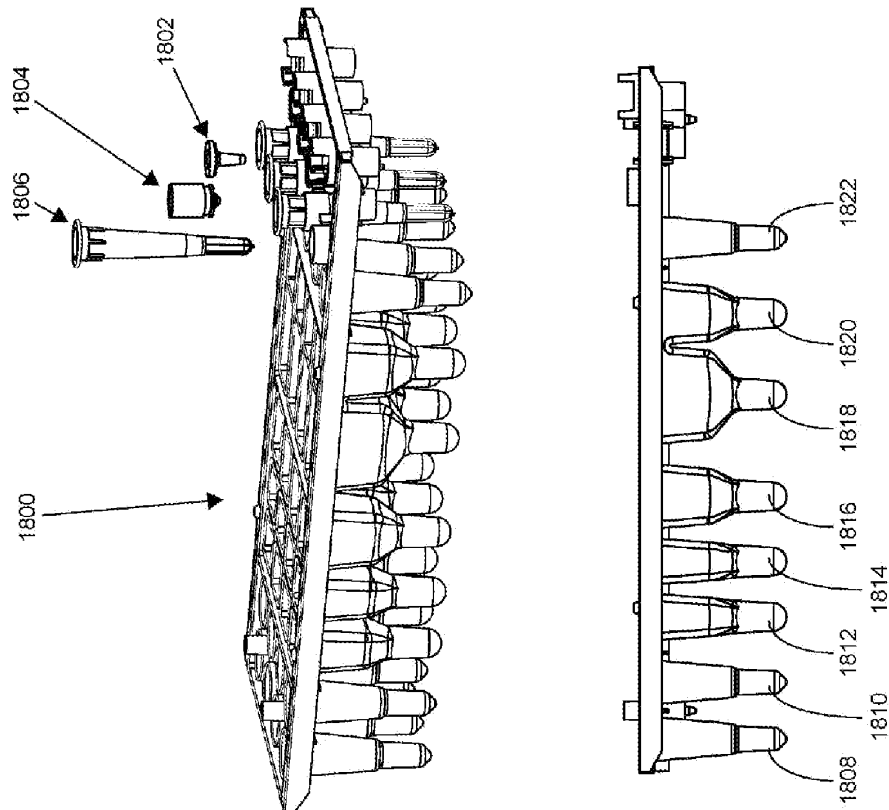


FIG. 45



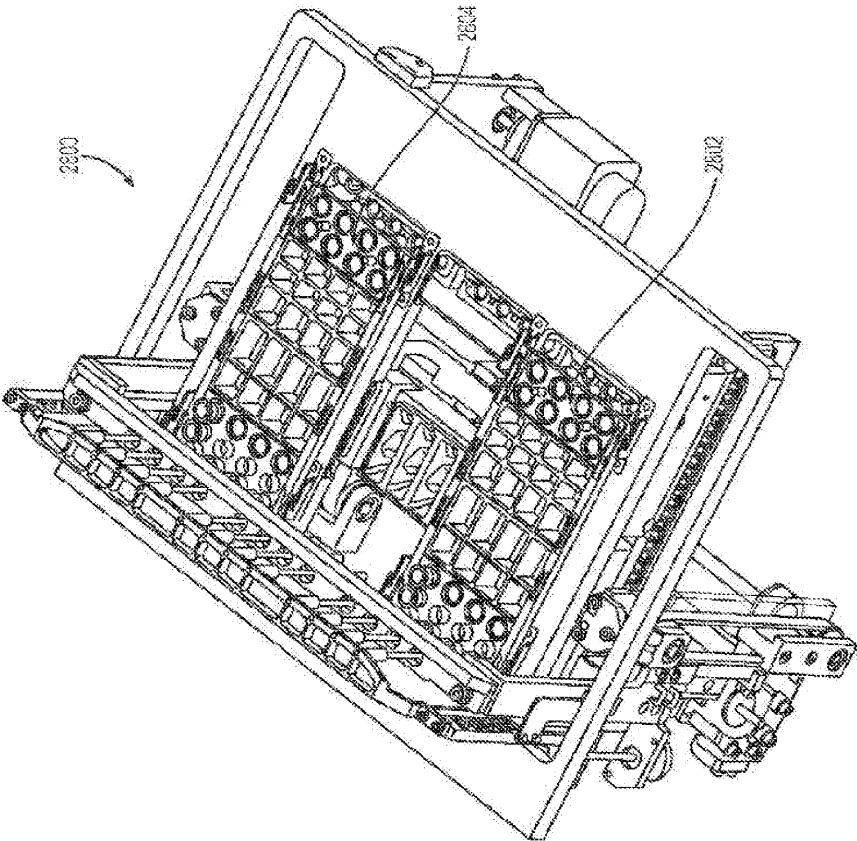


FIG. 46A

FIG. 46B

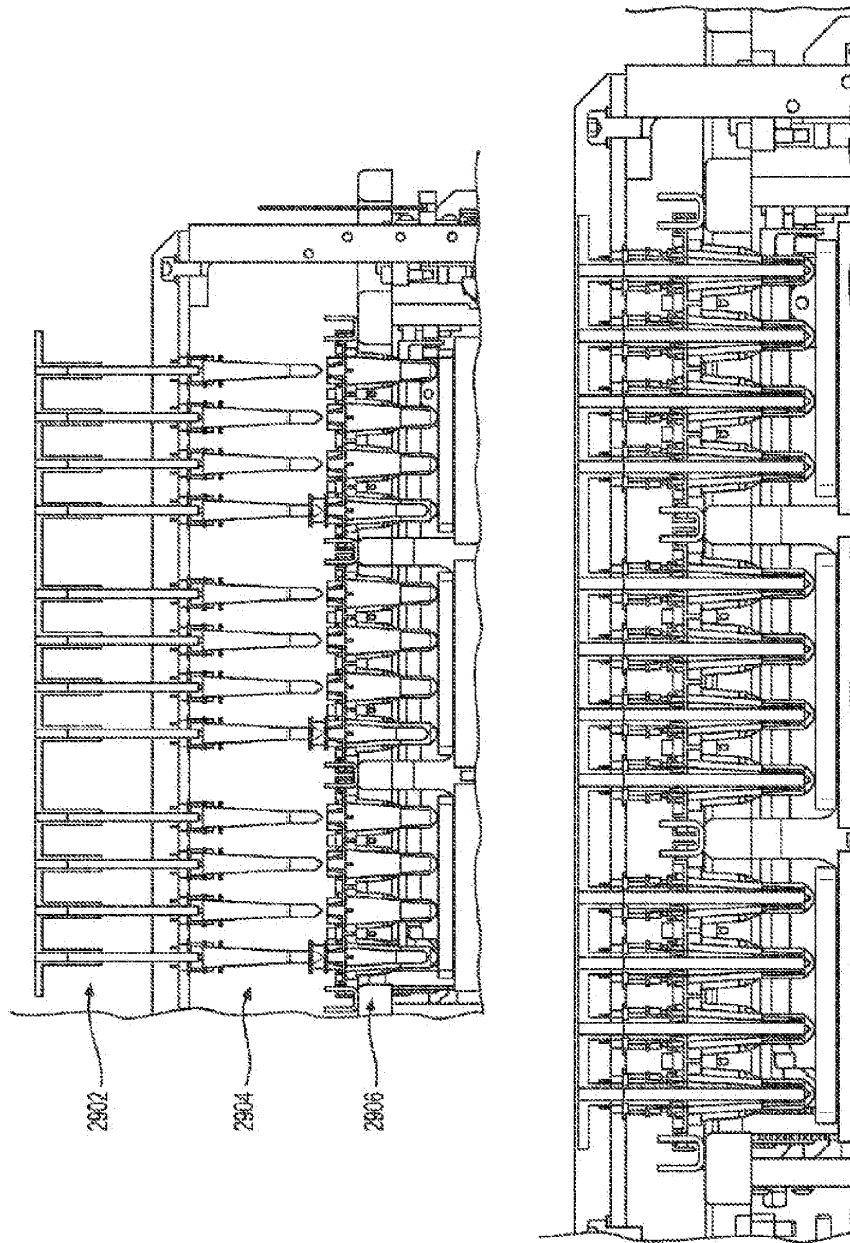


FIG. 46C

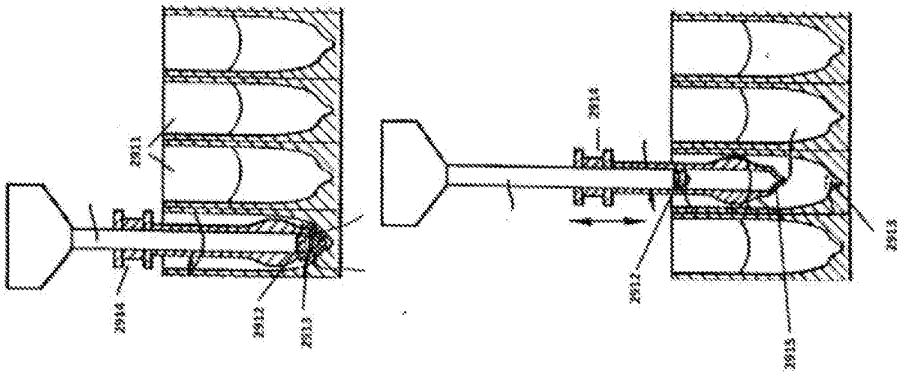


FIG. 47A-47B

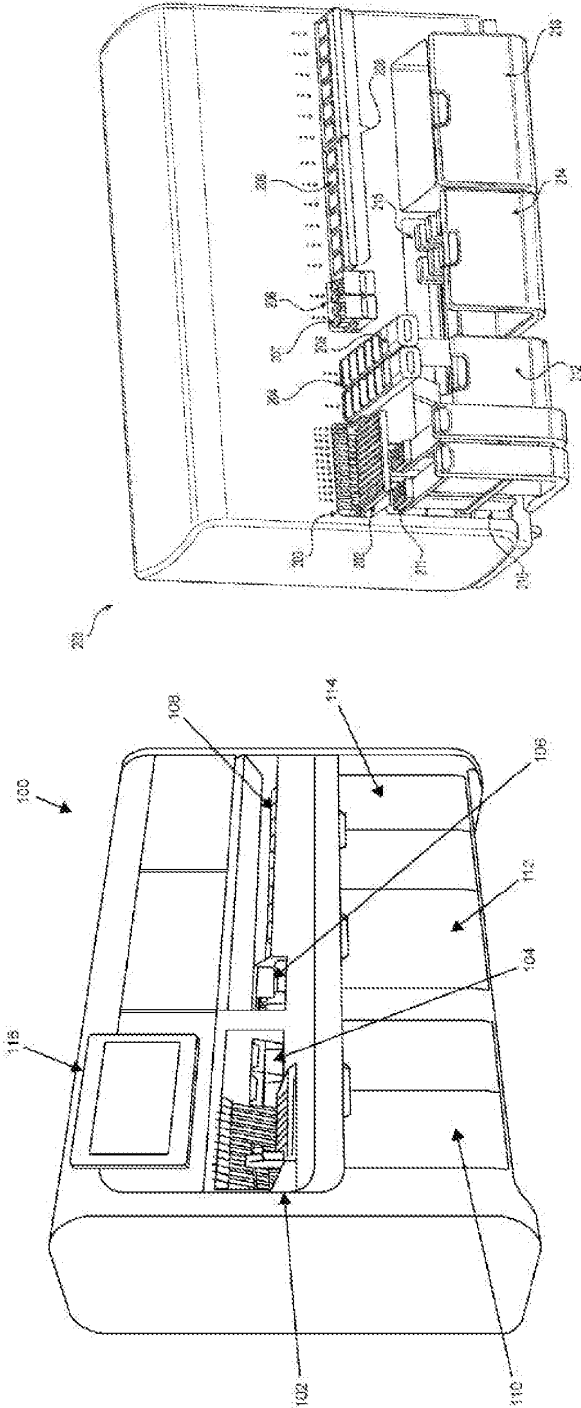


FIG. 48

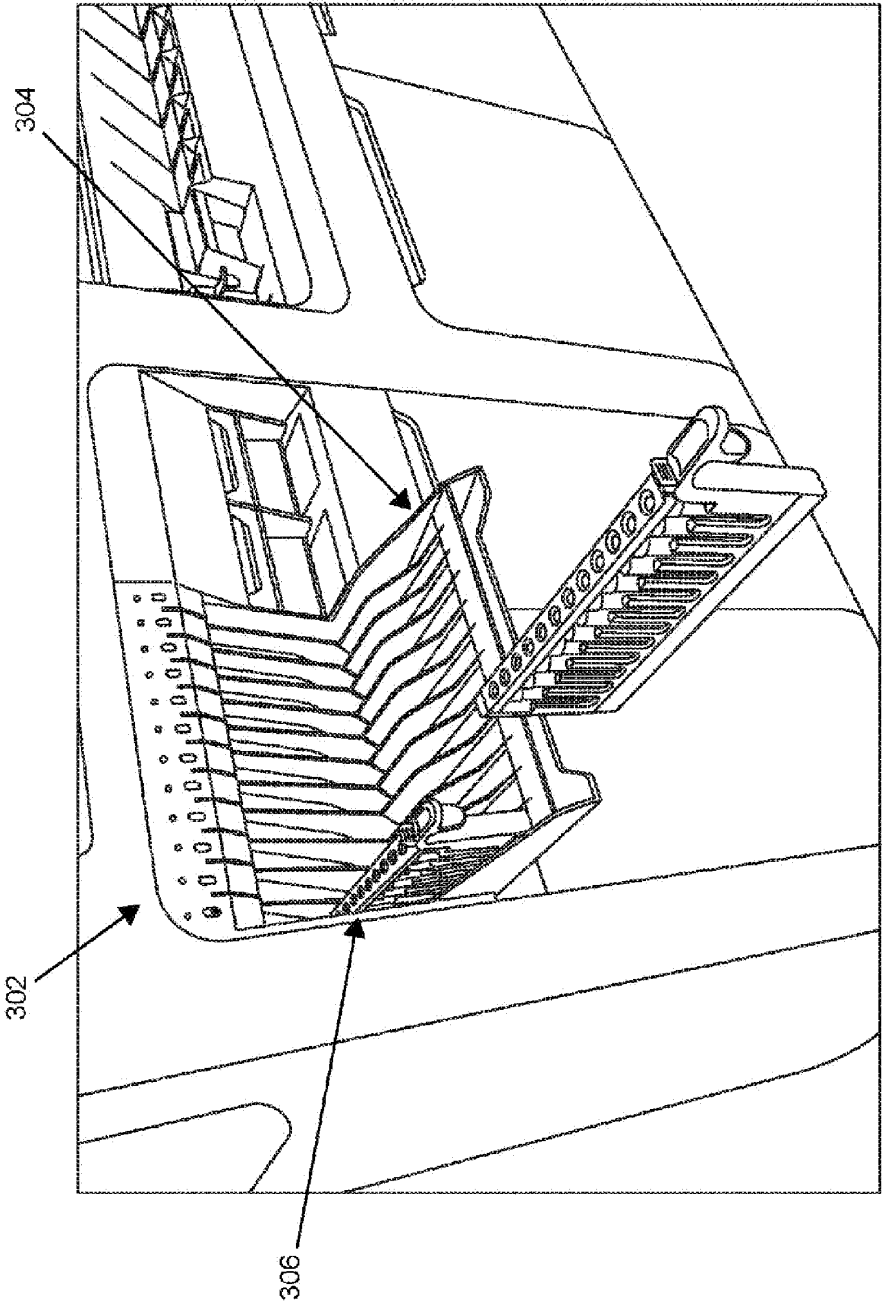


FIG. 49

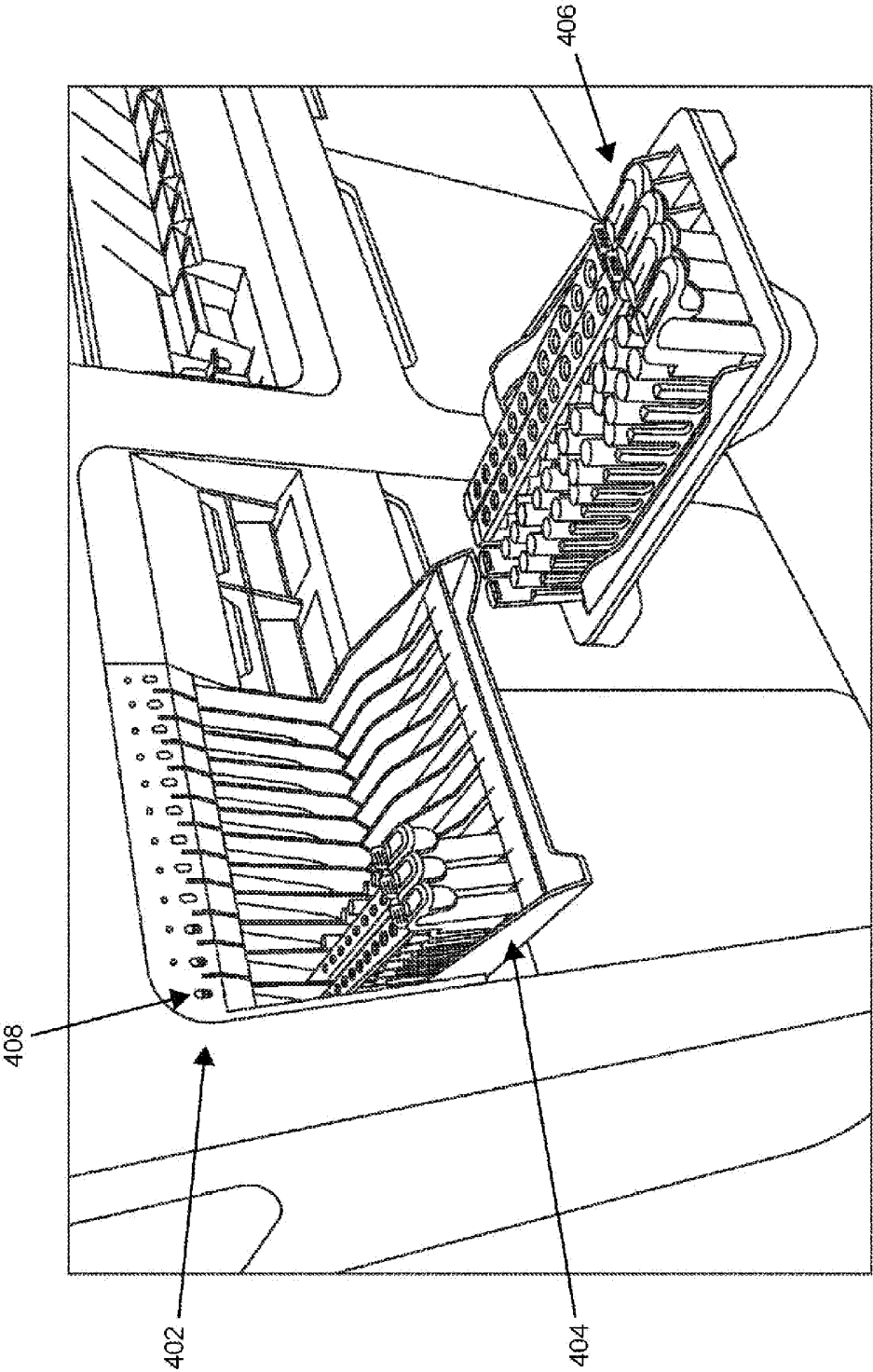
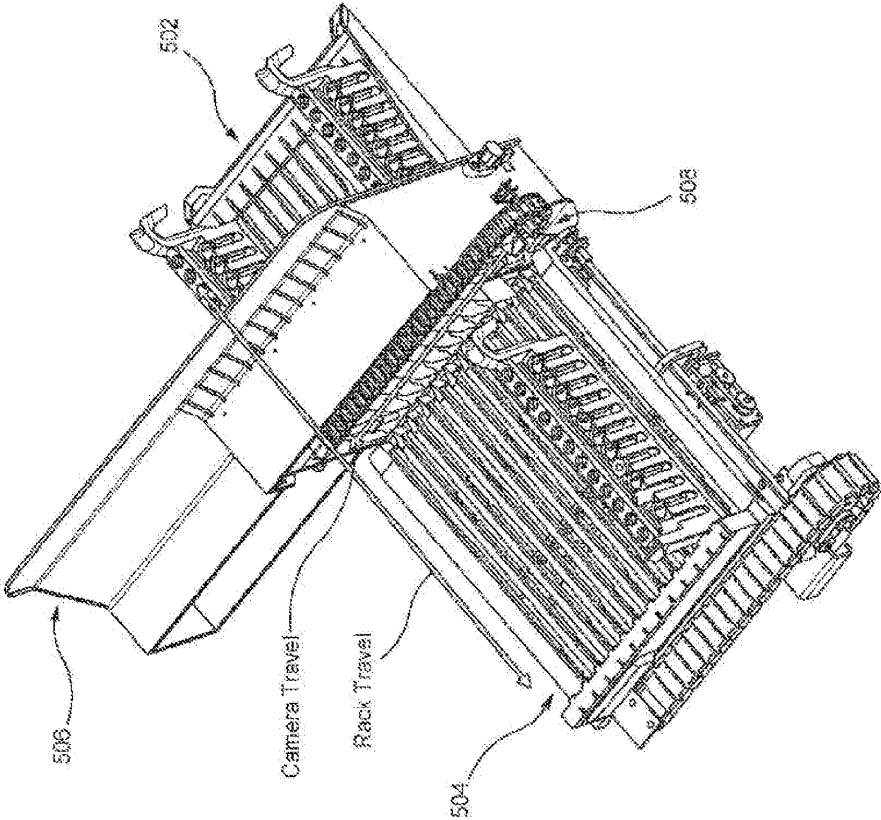


FIG. 50



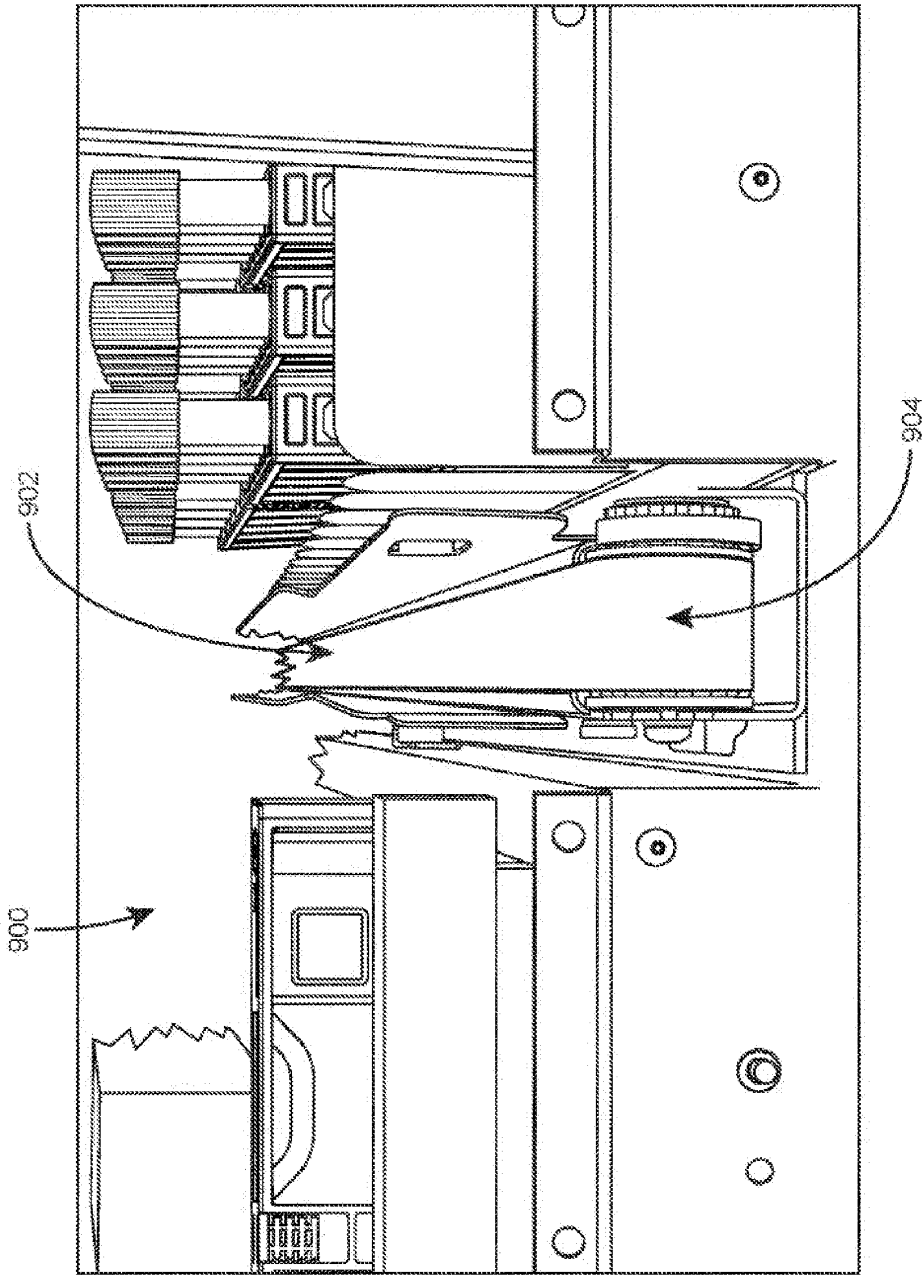


FIG. 51

FIG. 52A

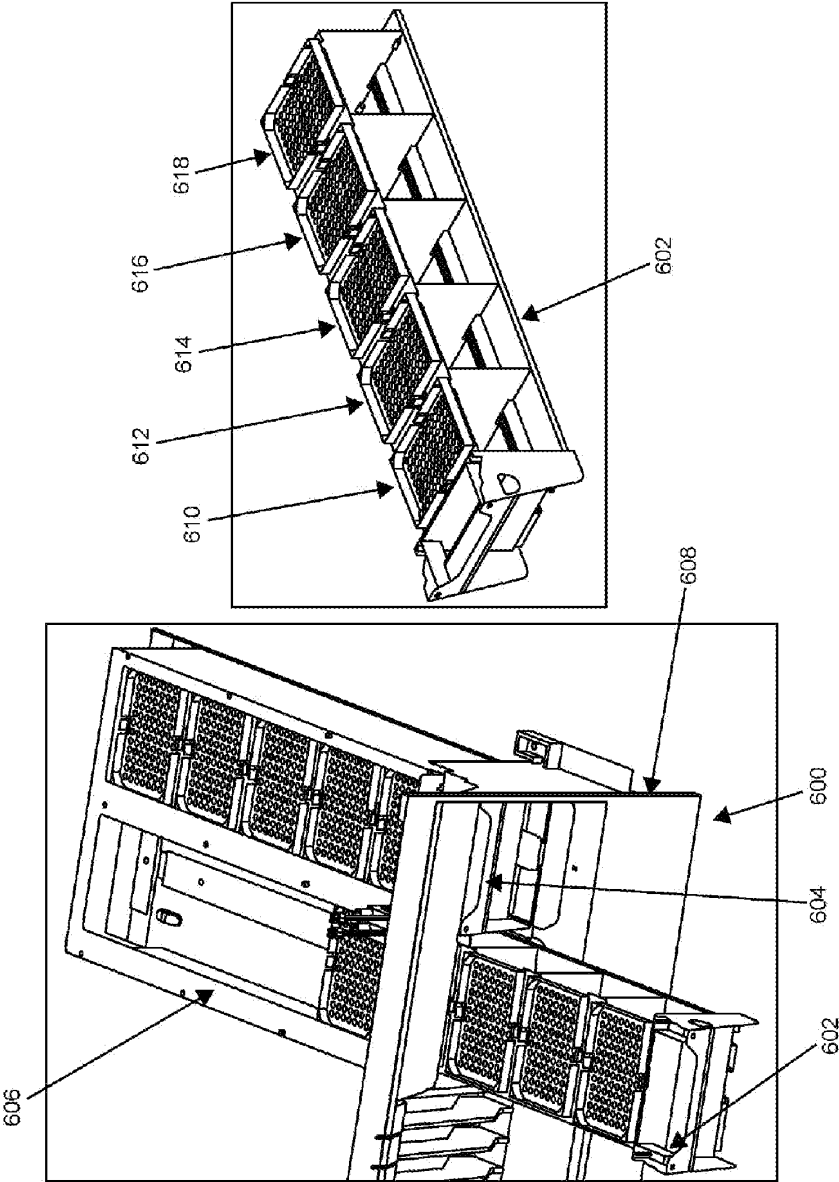


FIG. 52B

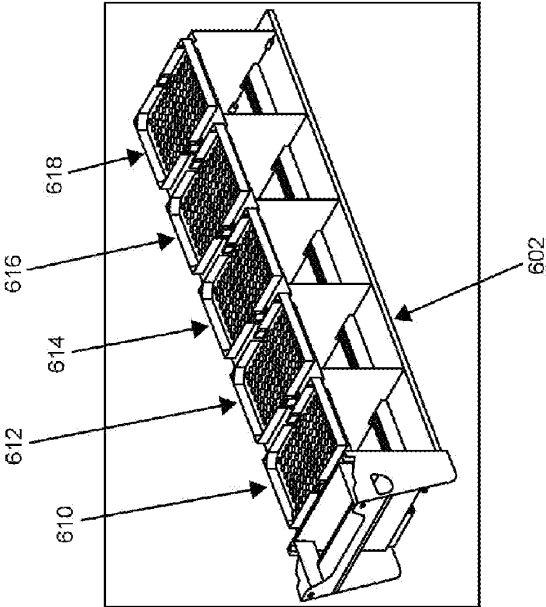


FIG. 53

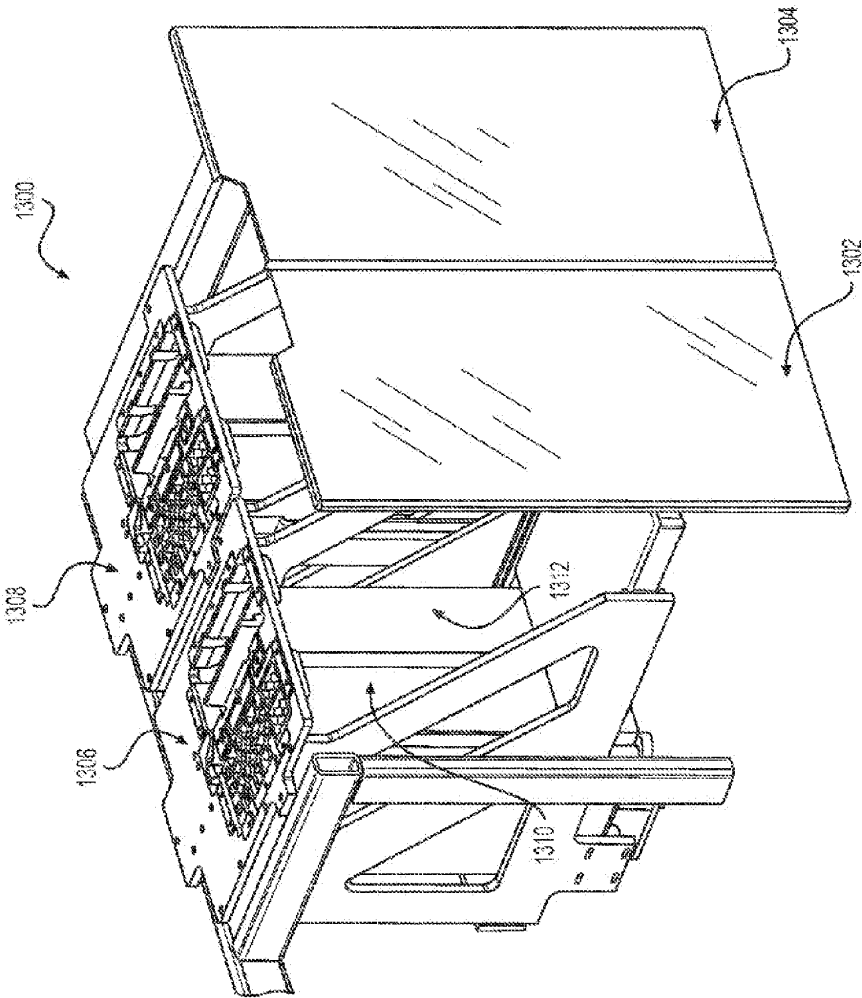
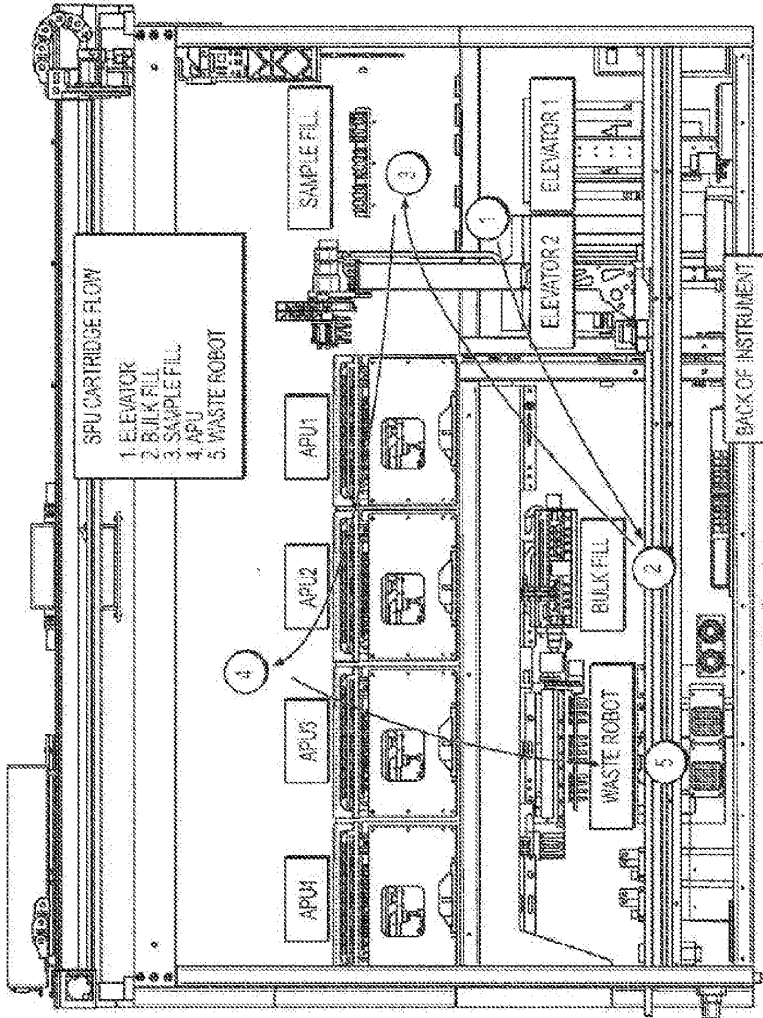


FIG. 54A



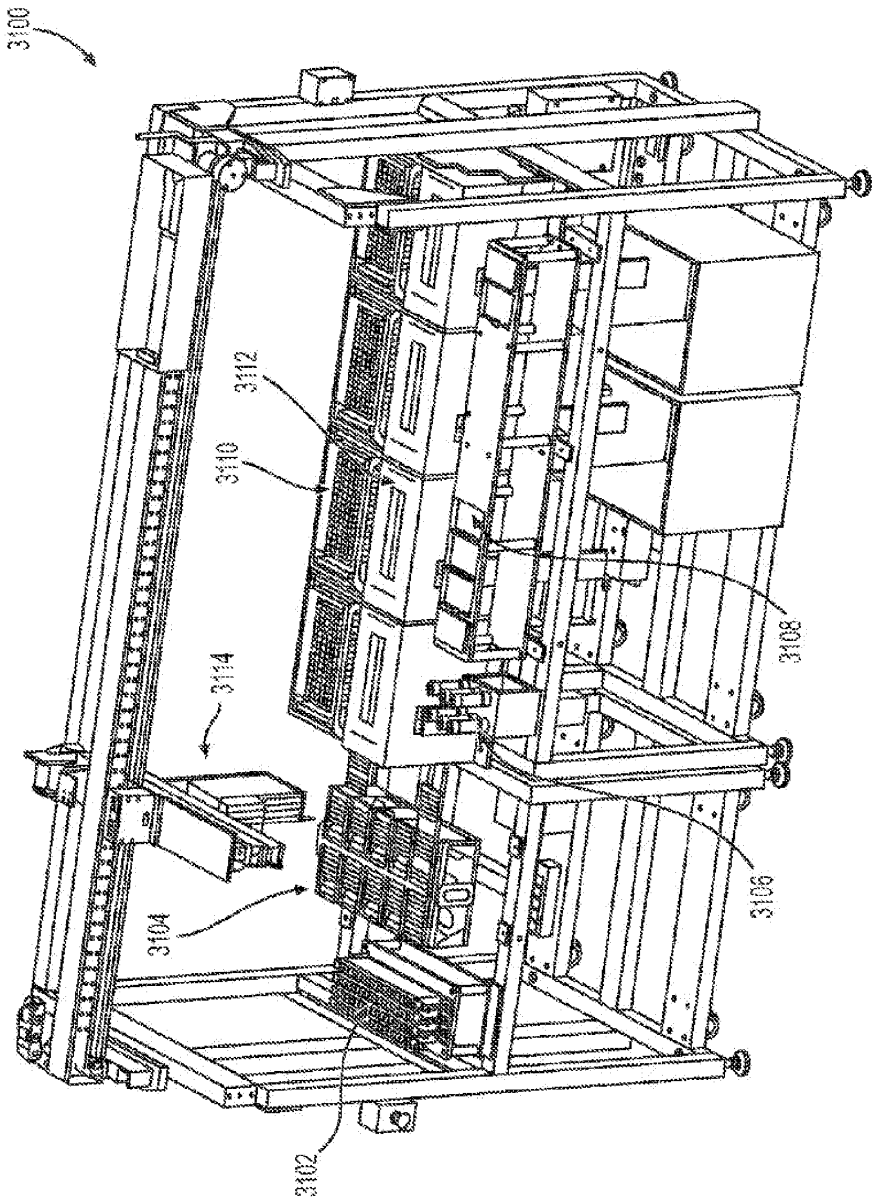


FIG. 54B

FIG. 54C

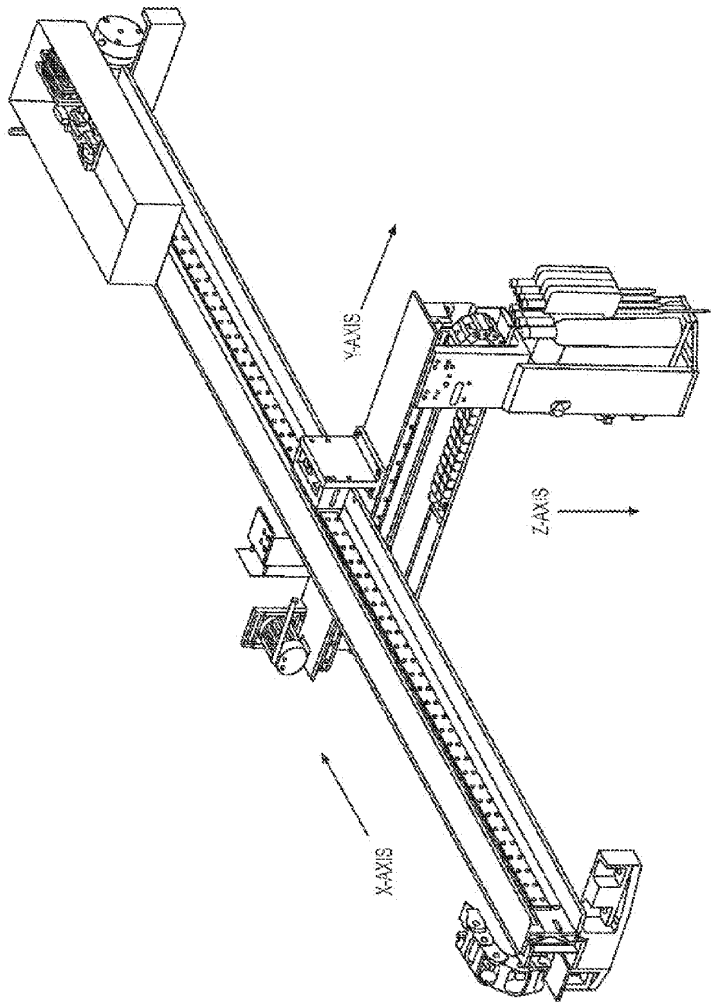
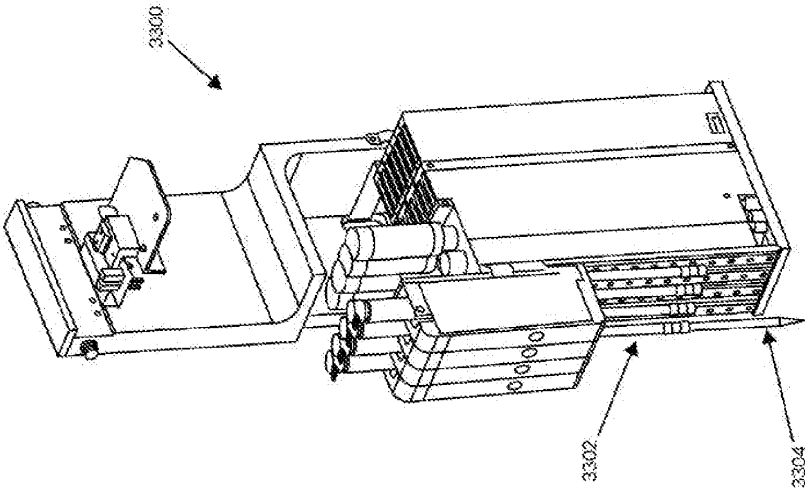


FIG. 54D



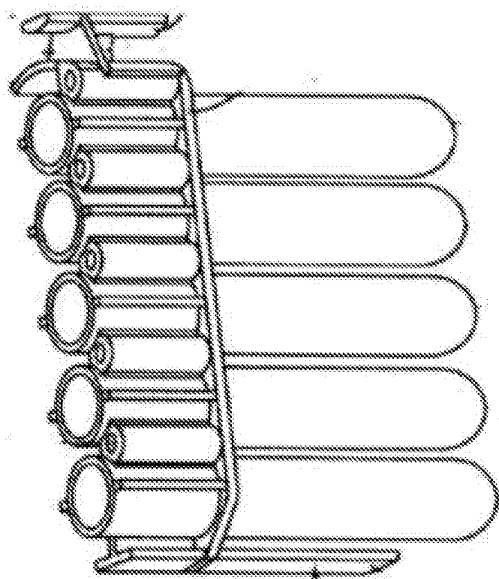


FIG. 54E

FIG. 55A

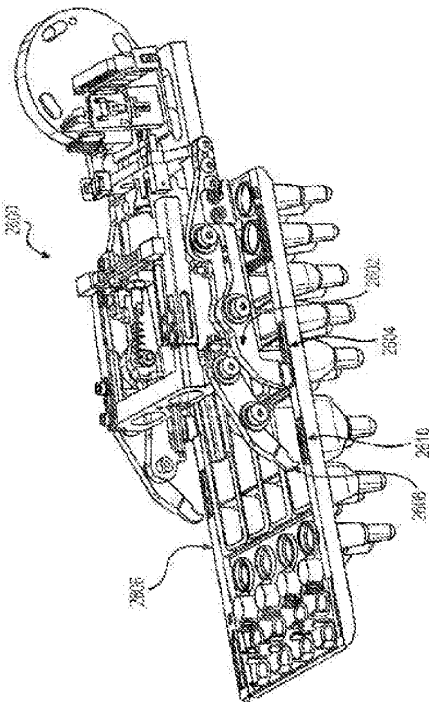
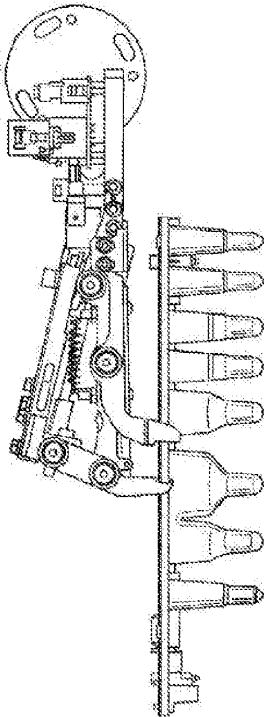


FIG. 55B



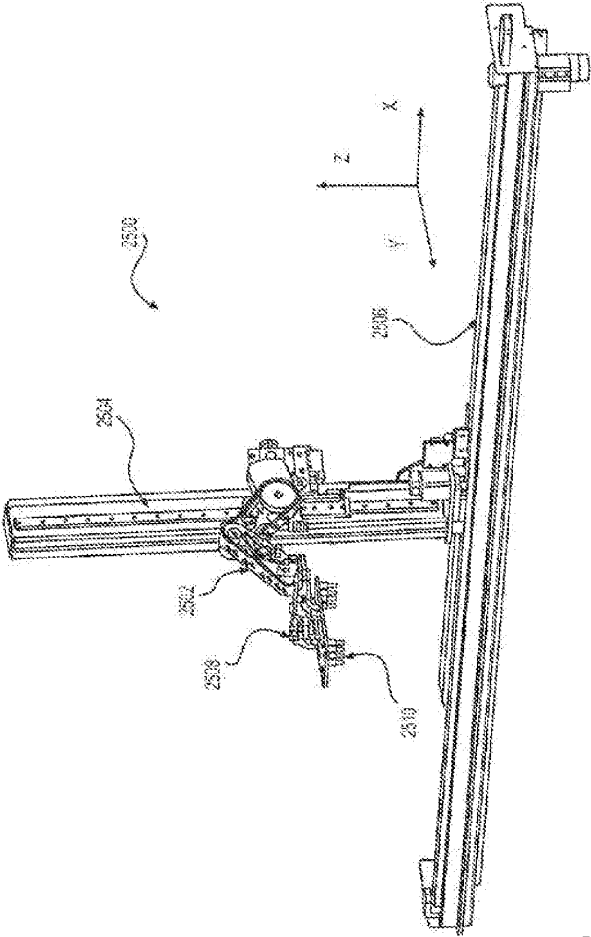
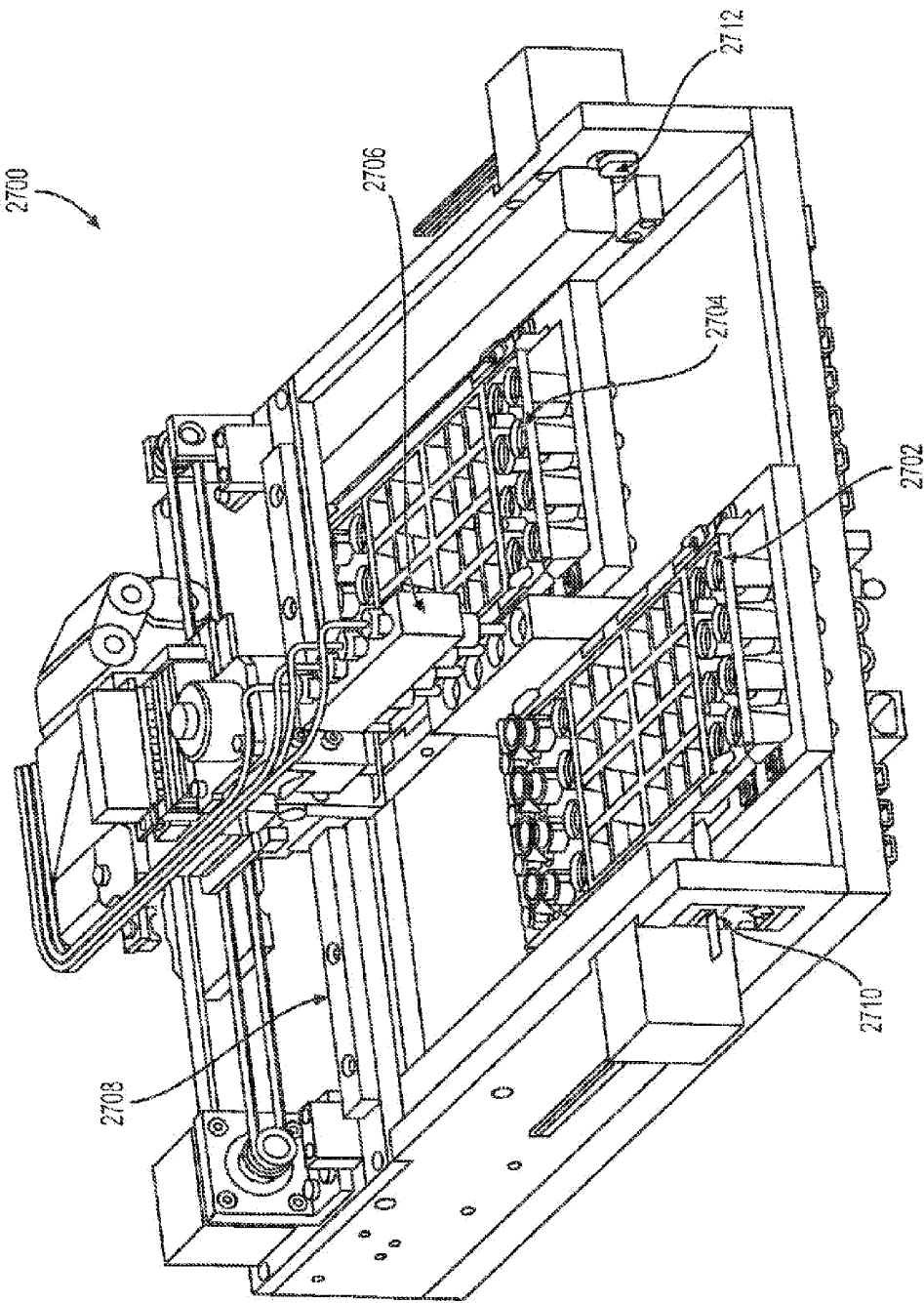


FIG. 55C

FIG. 56



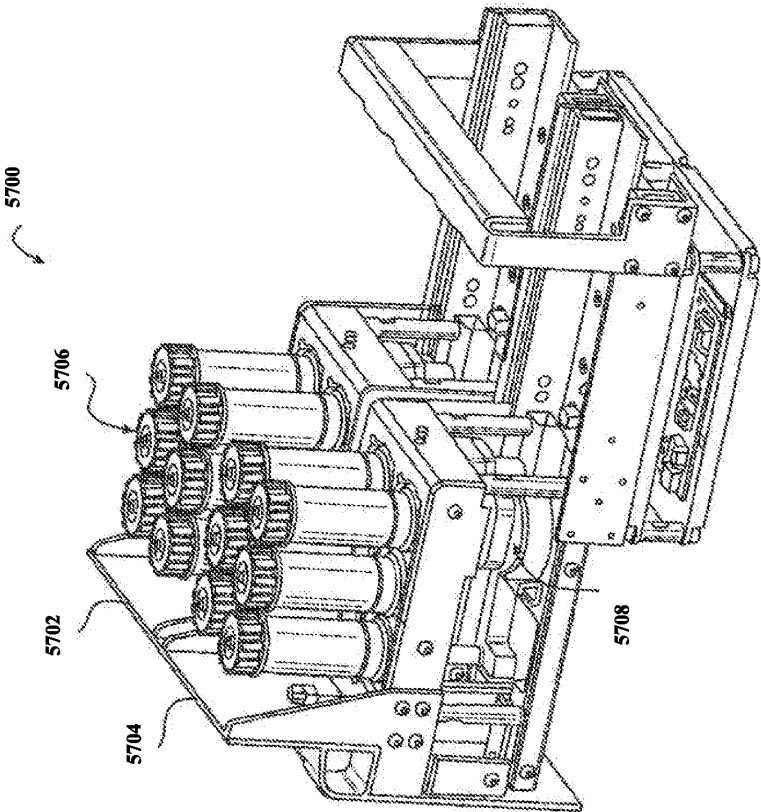
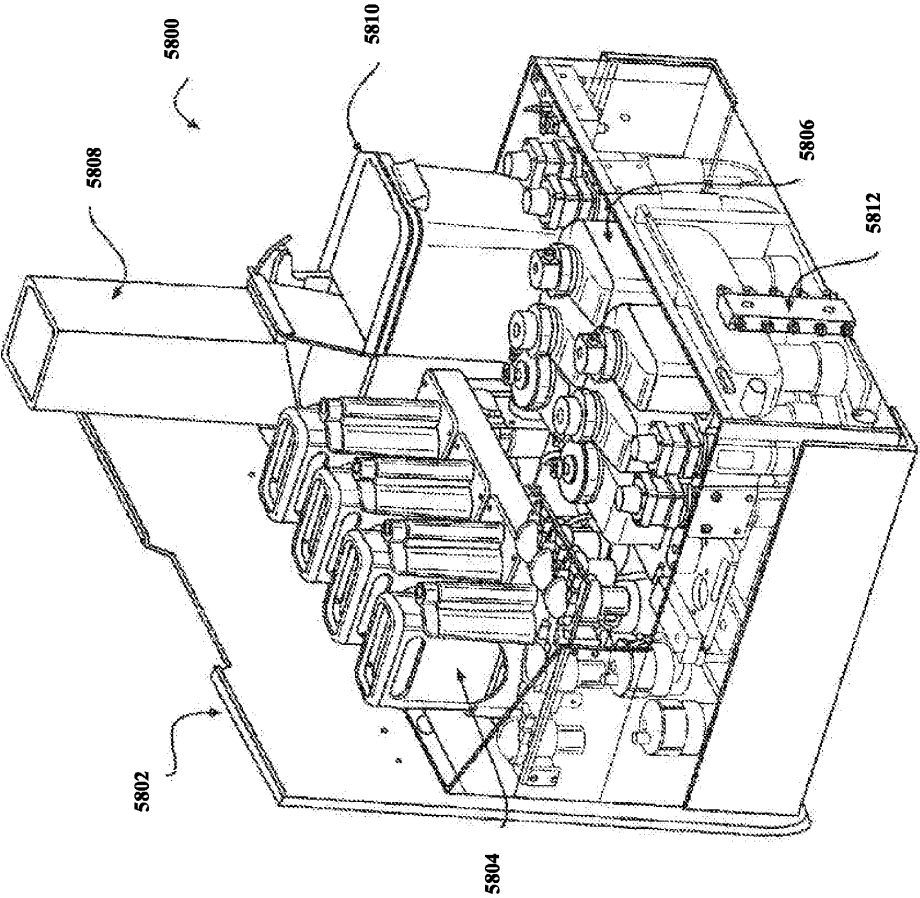


FIG. 57

FIG. 58



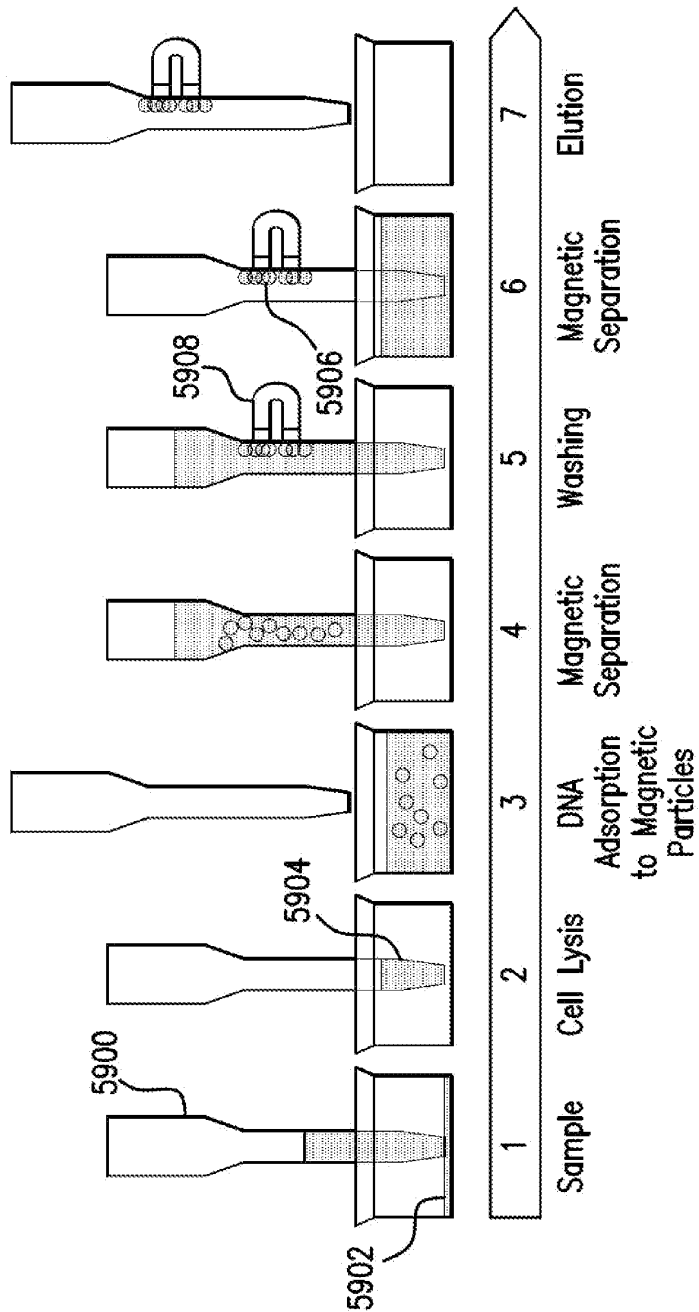


FIG. 59

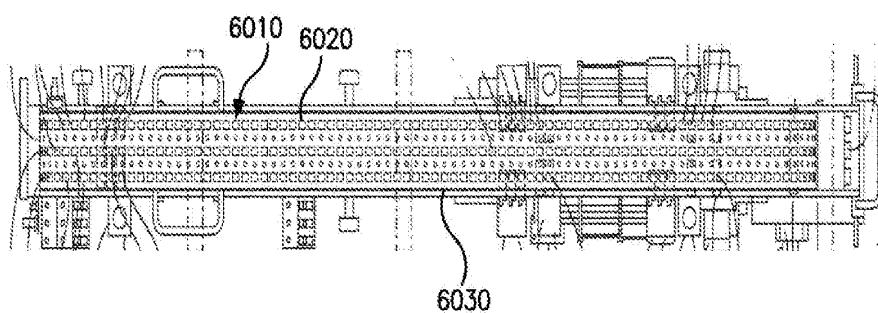


FIG. 60A

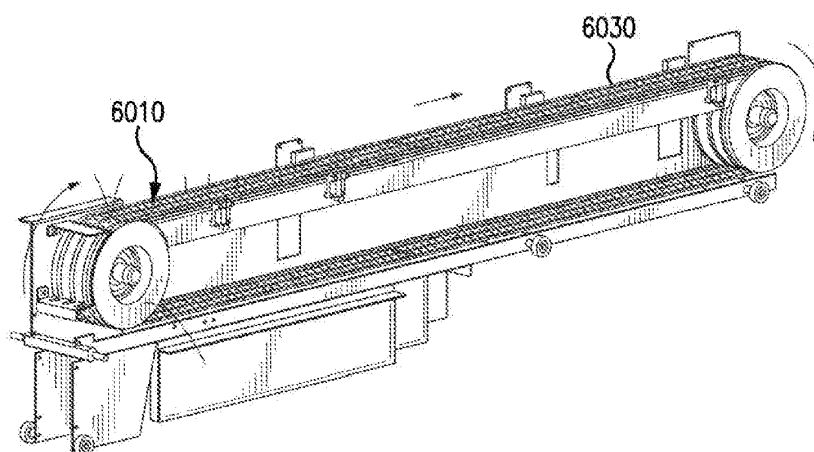


FIG. 60B

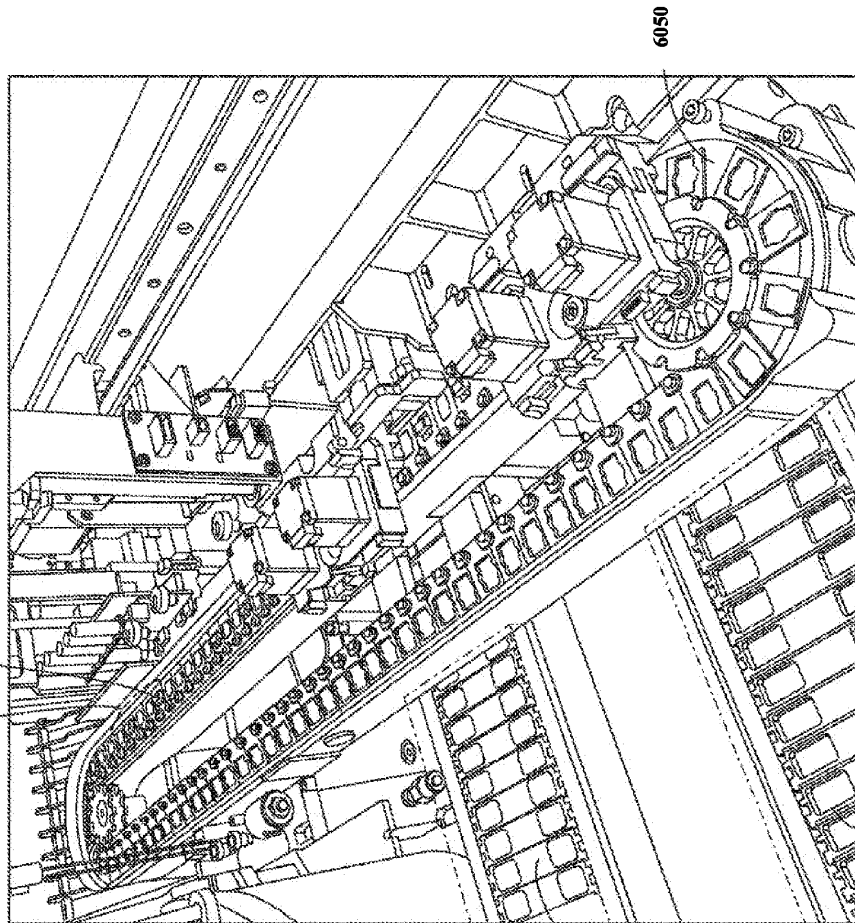
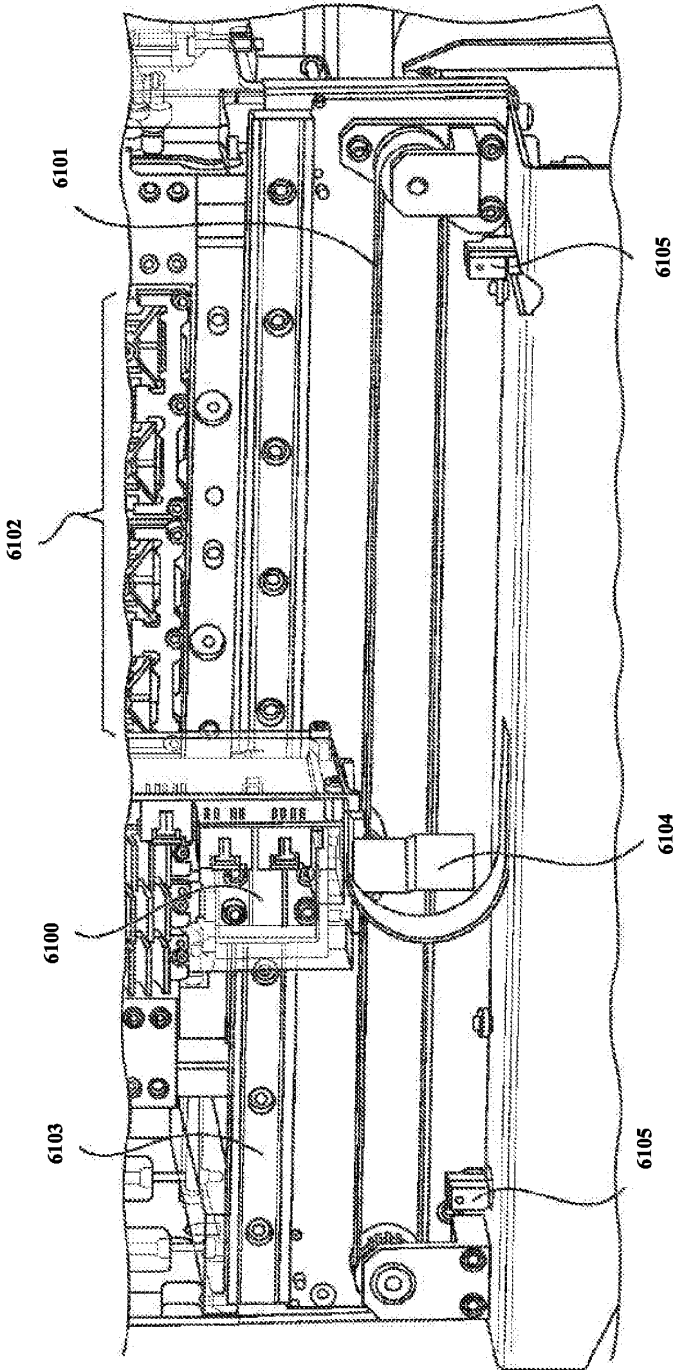


FIG. 60C

FIG. 61



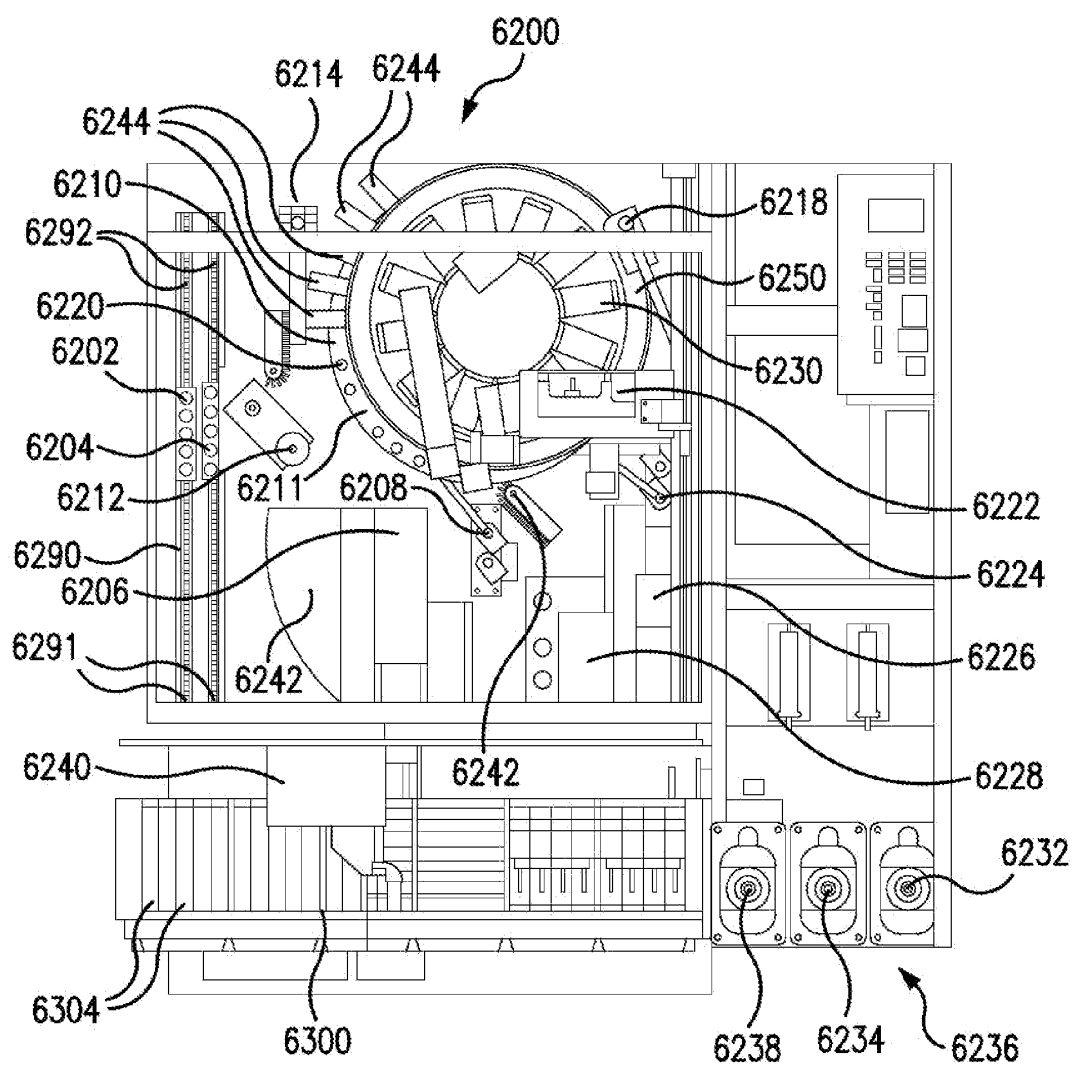


FIG. 62

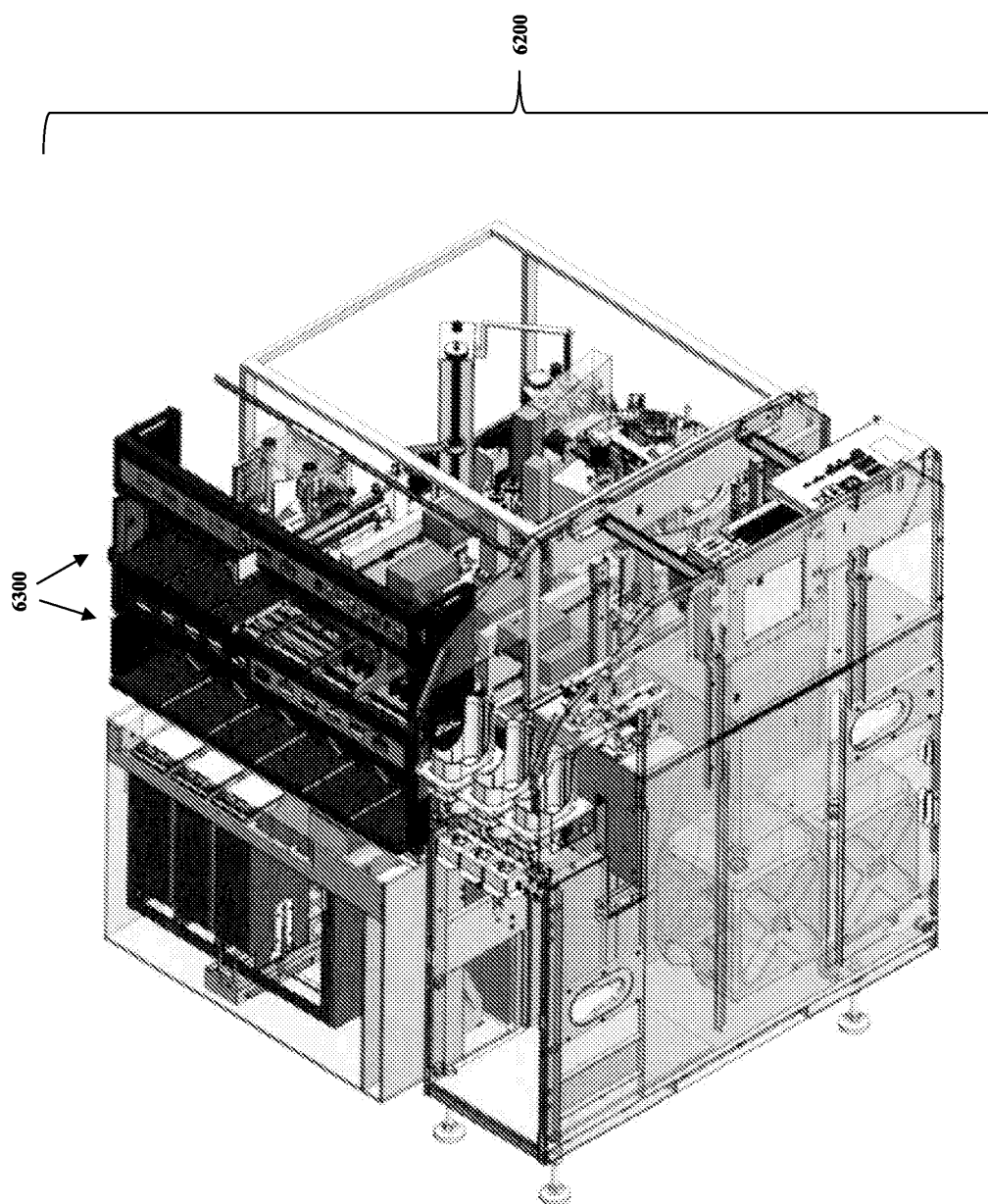


FIG. 63

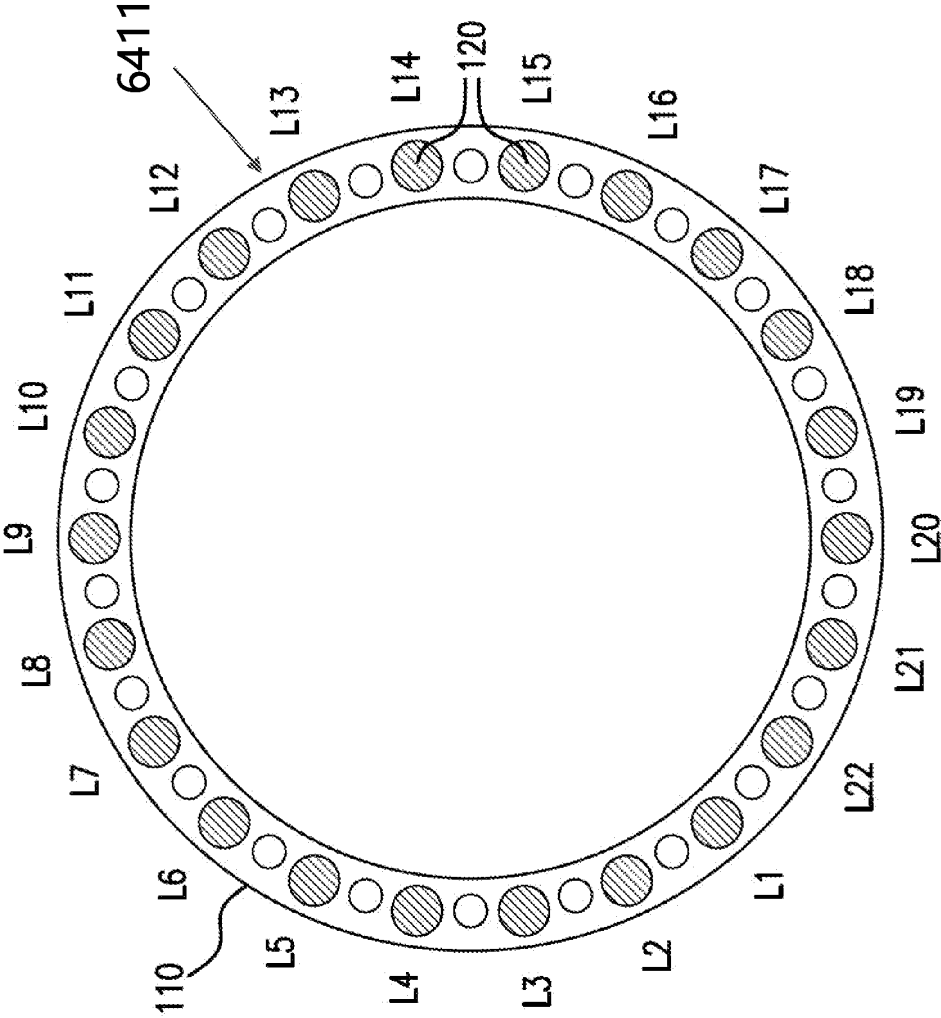


FIG. 64

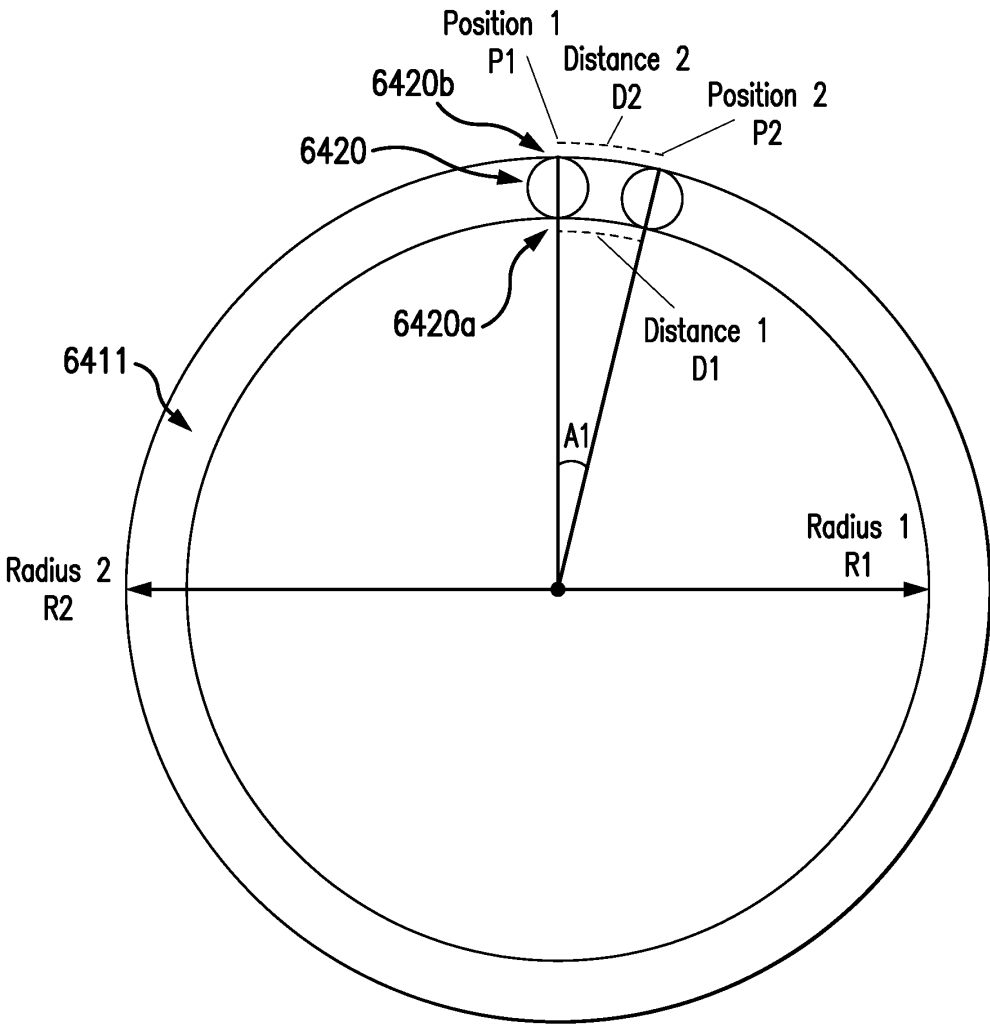


FIG. 64A

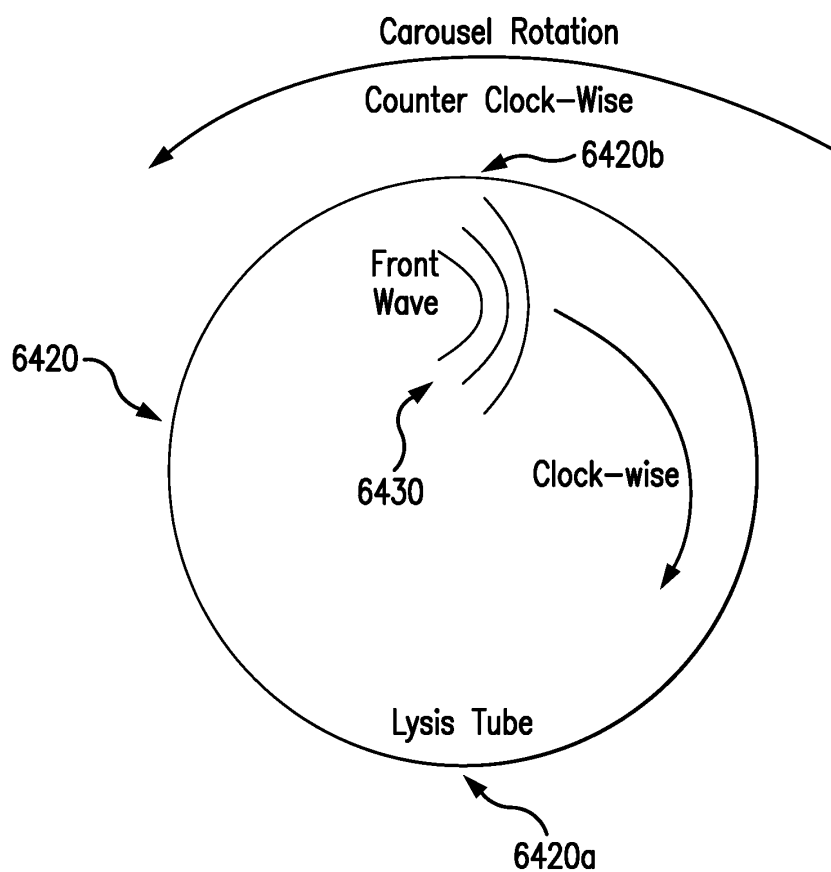


FIG. 64B

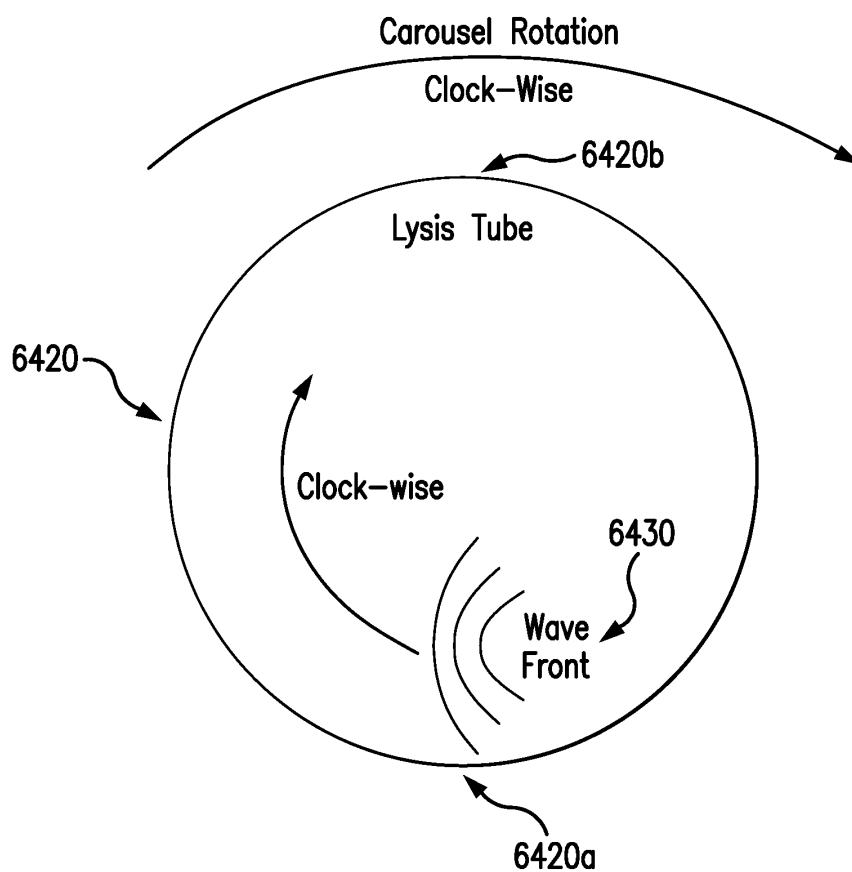


FIG. 64C



FIG. 65

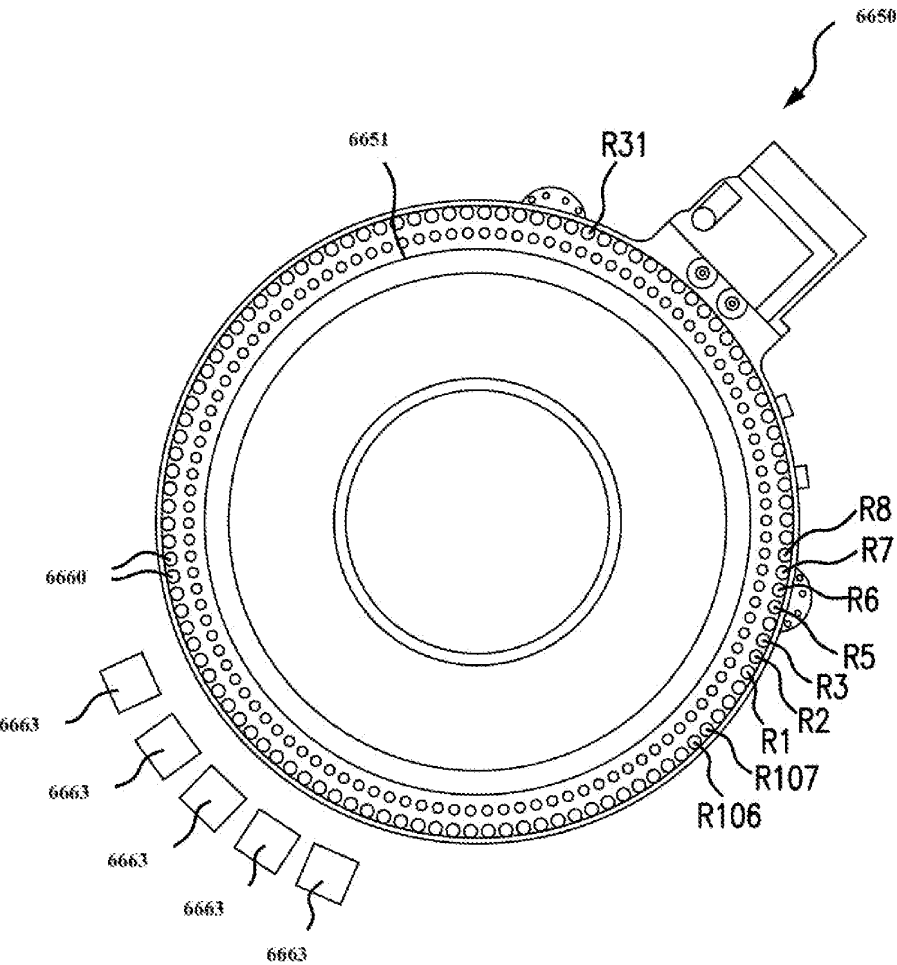


FIG. 66

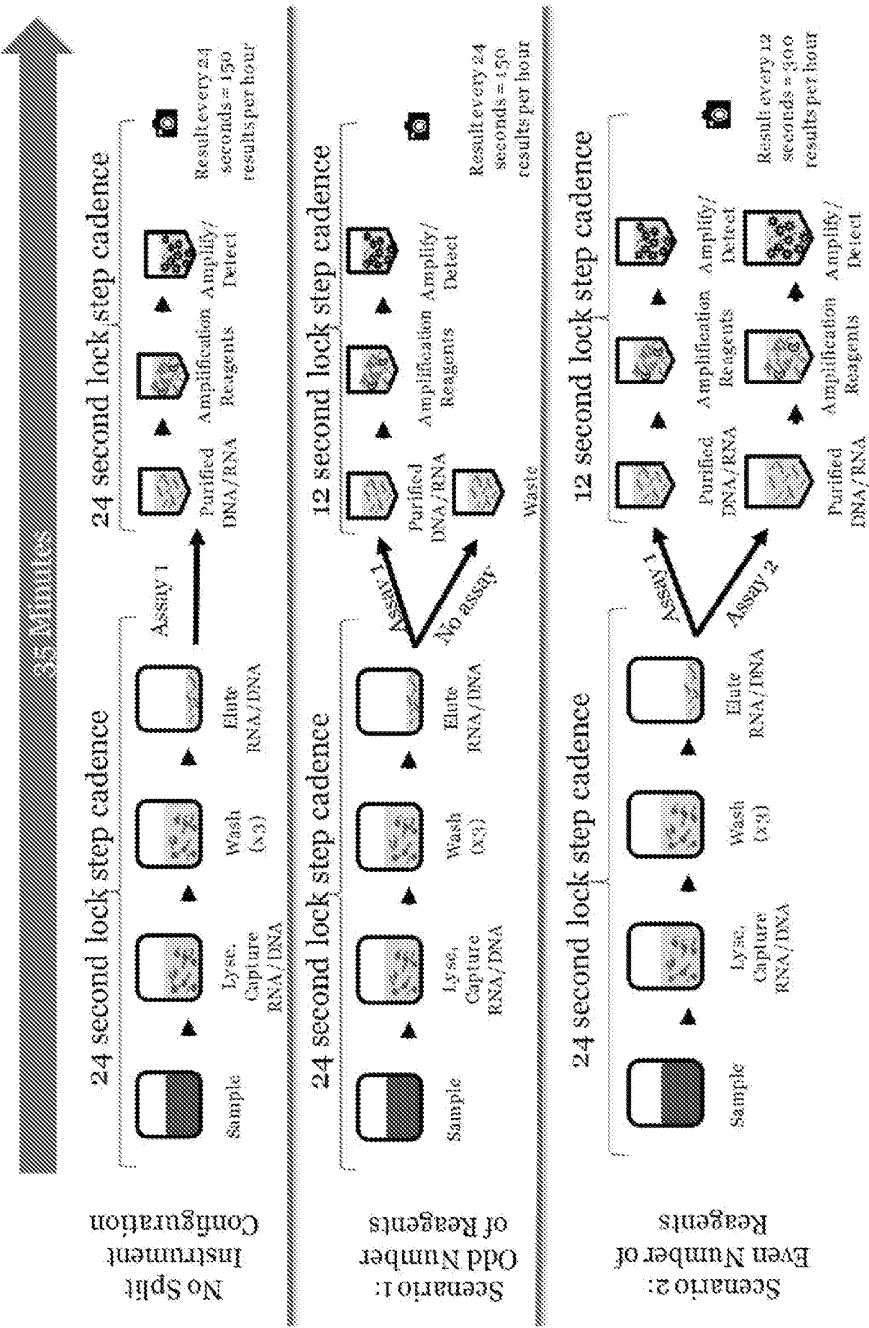


FIG. 67A

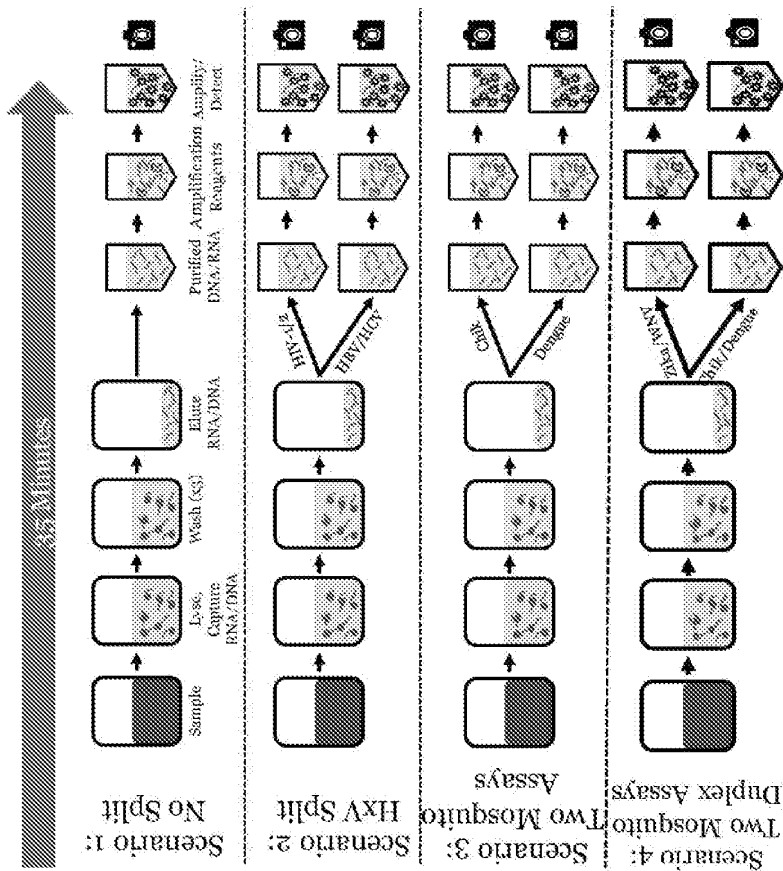
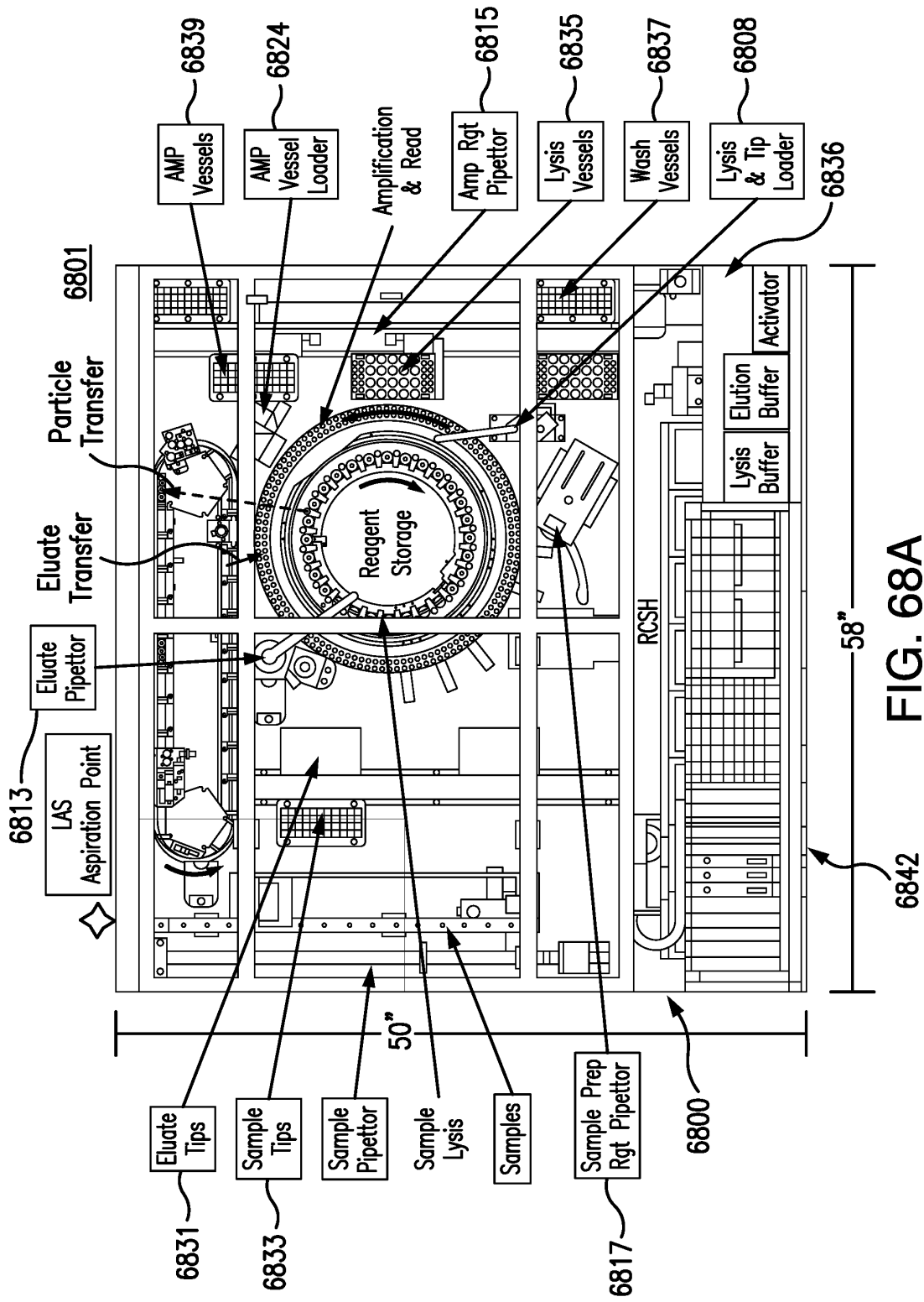


FIG. 67B

Assay Configurations	
Non Split Eluate	Split Eluate
HAV/ Parvo	HIV/ HBV/ HCV
WNV/ Chikv/ Dengue/ Zika	
Malaria	
Babesia	



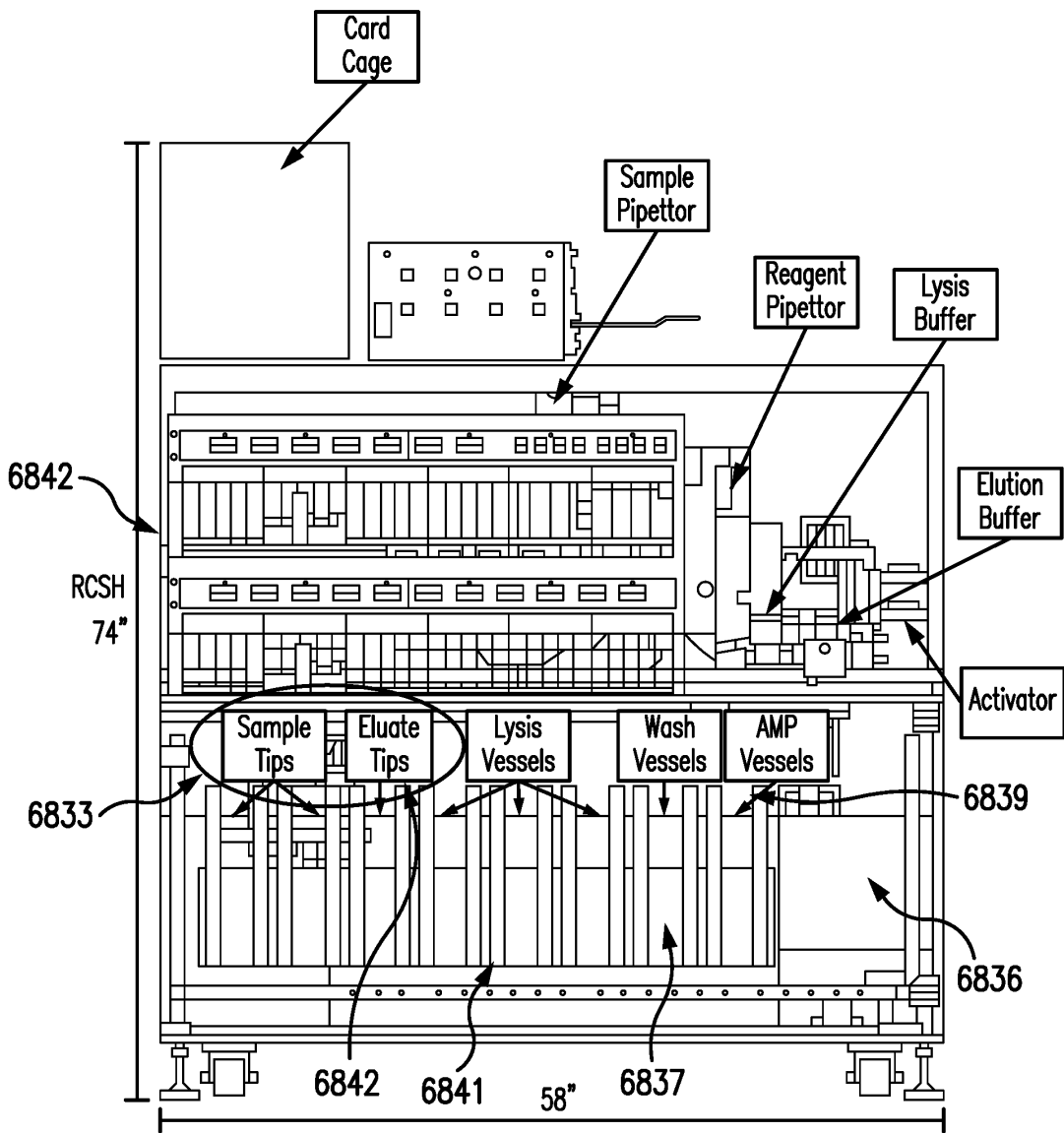


FIG. 68B

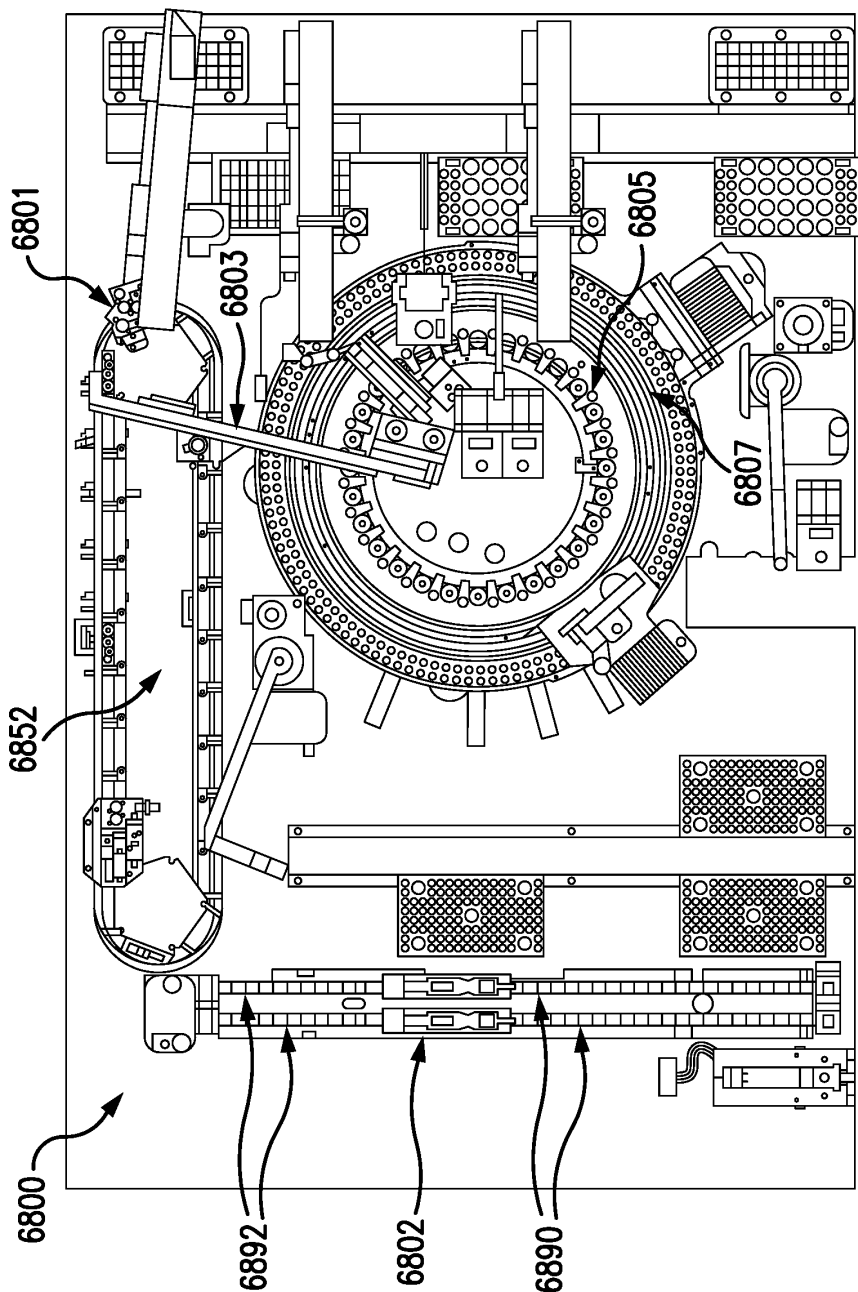


FIG. 68C

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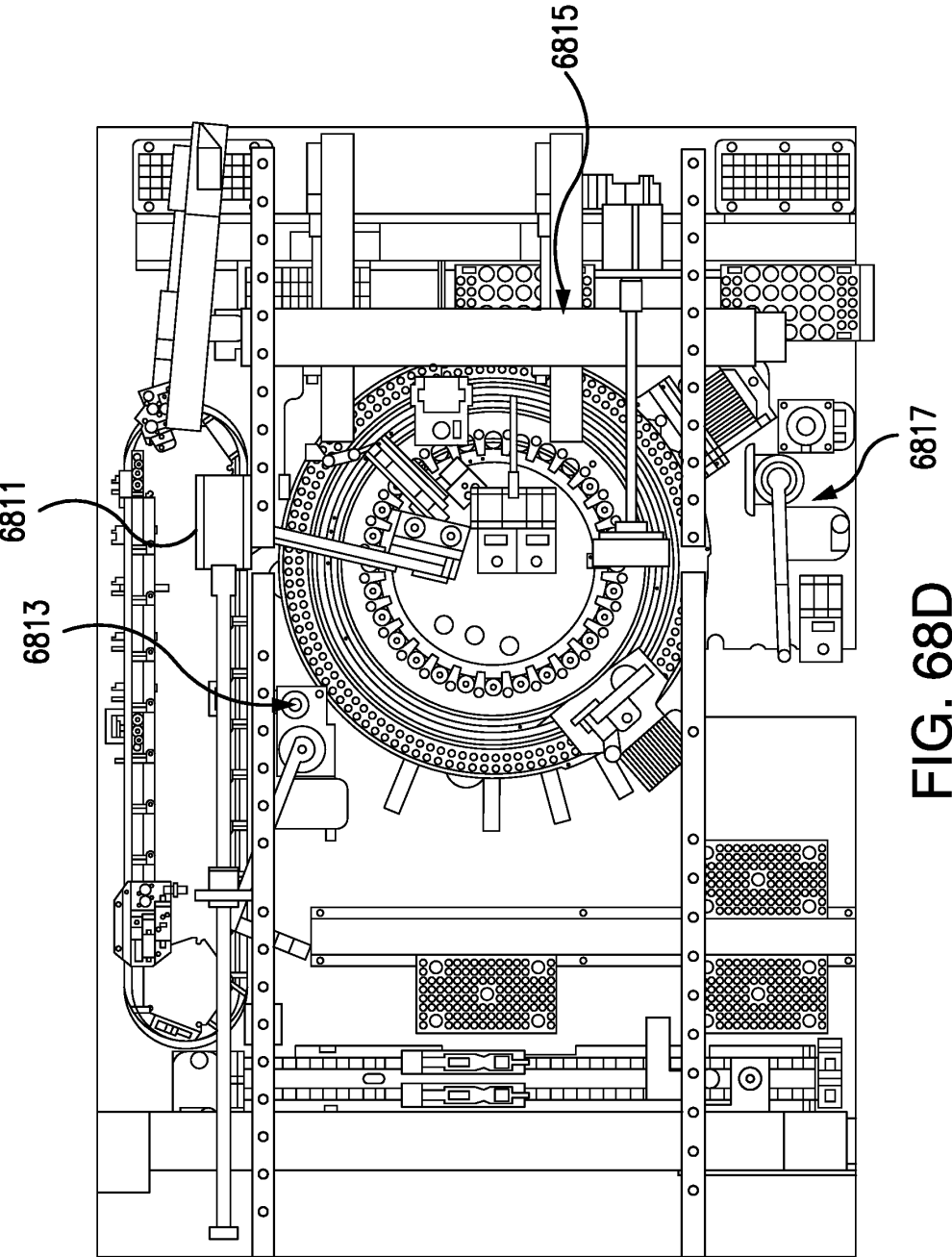
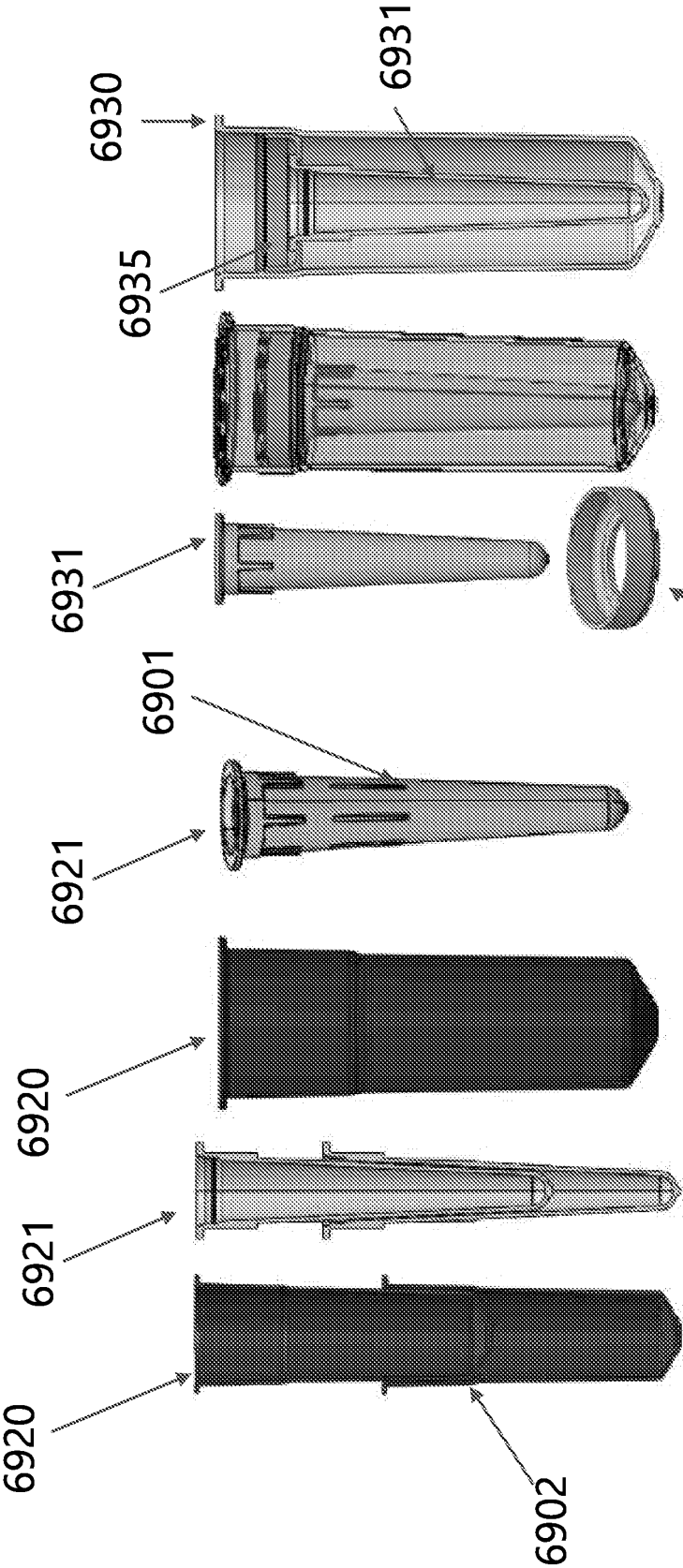


FIG. 68D



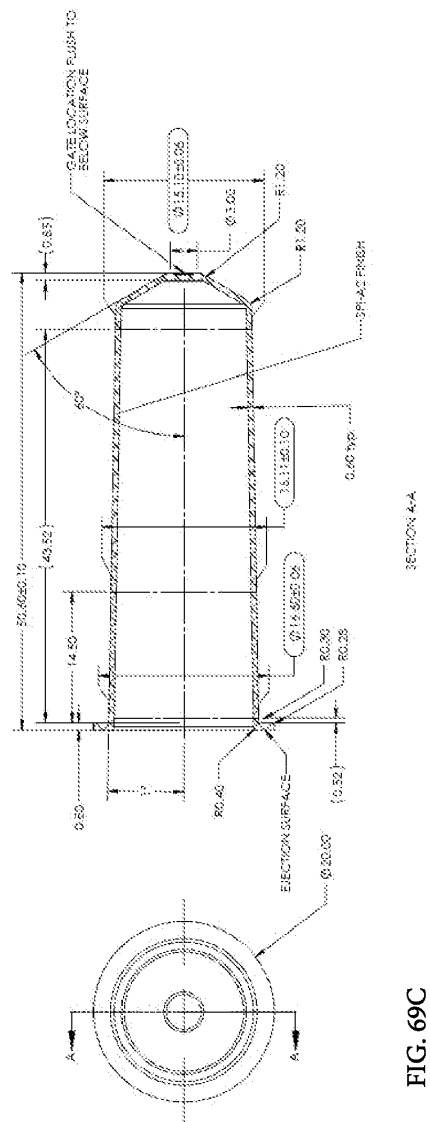


FIG. 69D

FIG. 69C

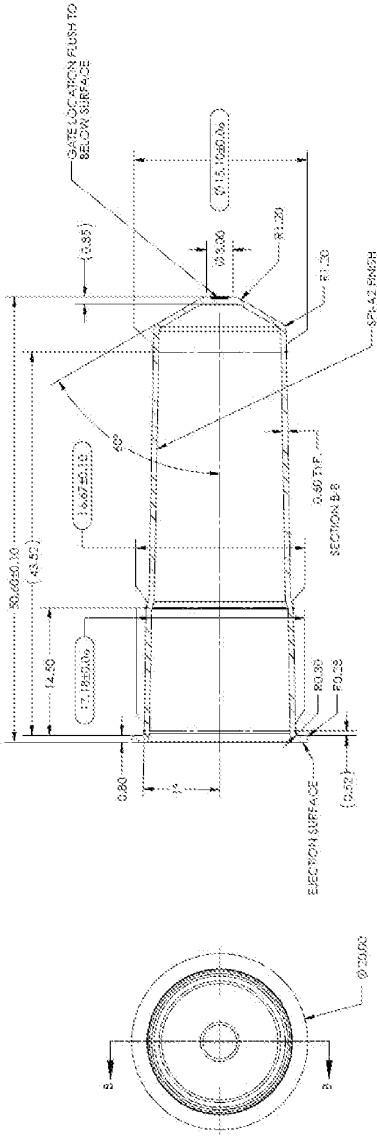


FIG. 69E

FIG. 69F

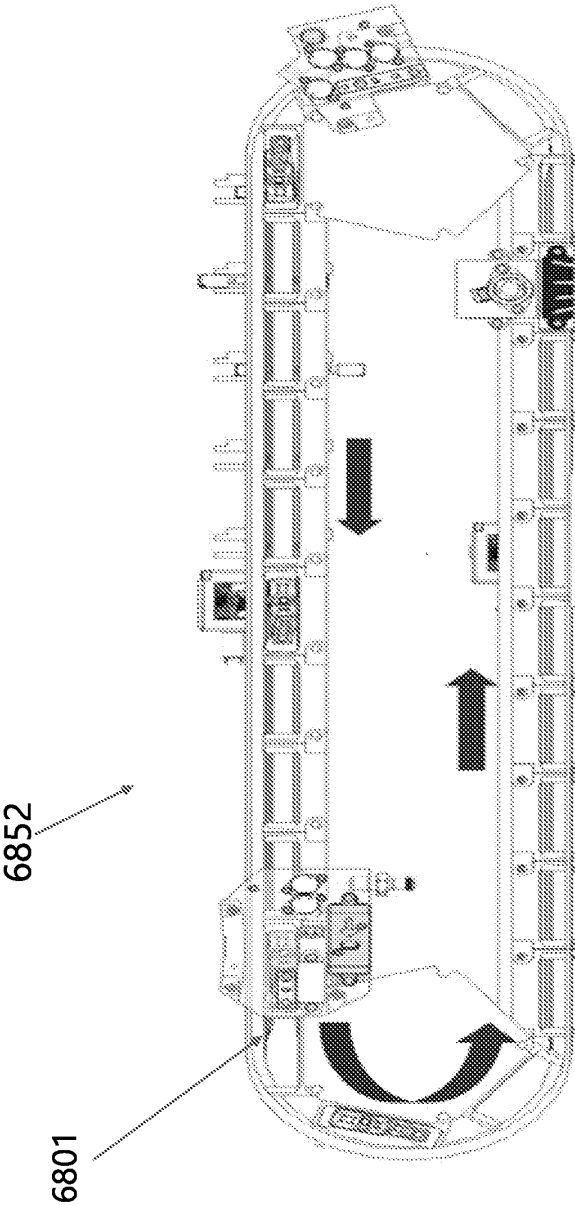


FIG. 70

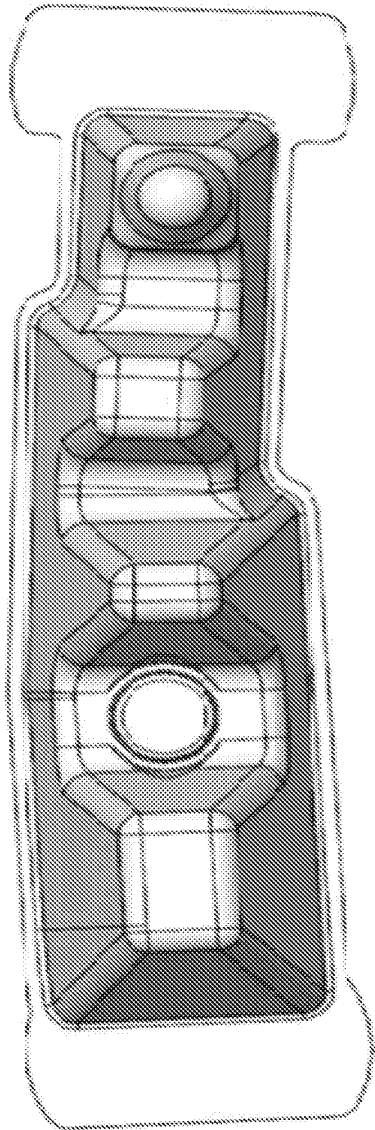


FIG. 71

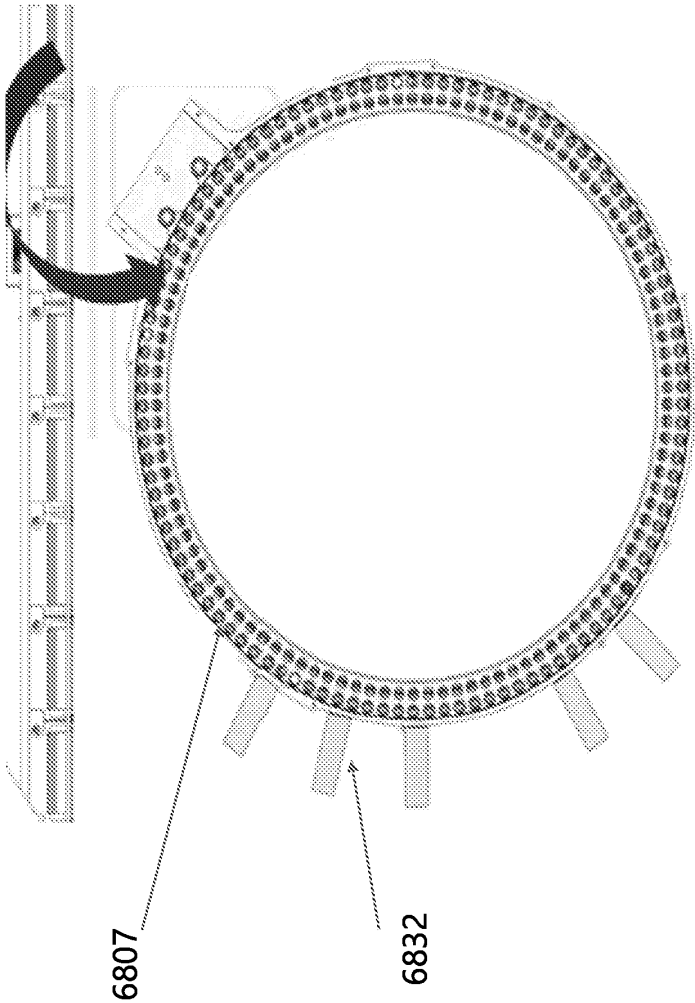


FIG. 72

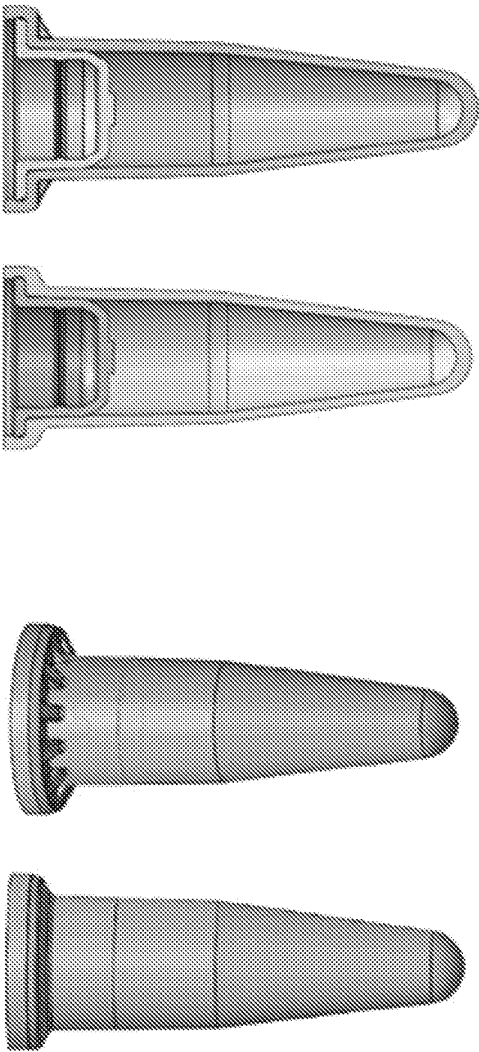


FIG. 73

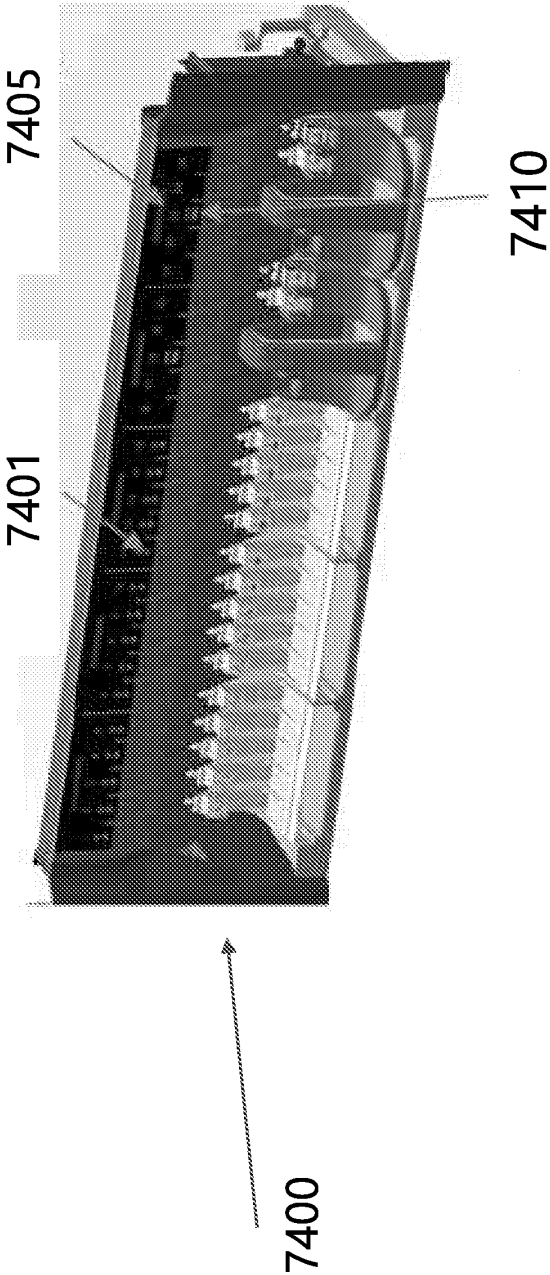


FIG. 74

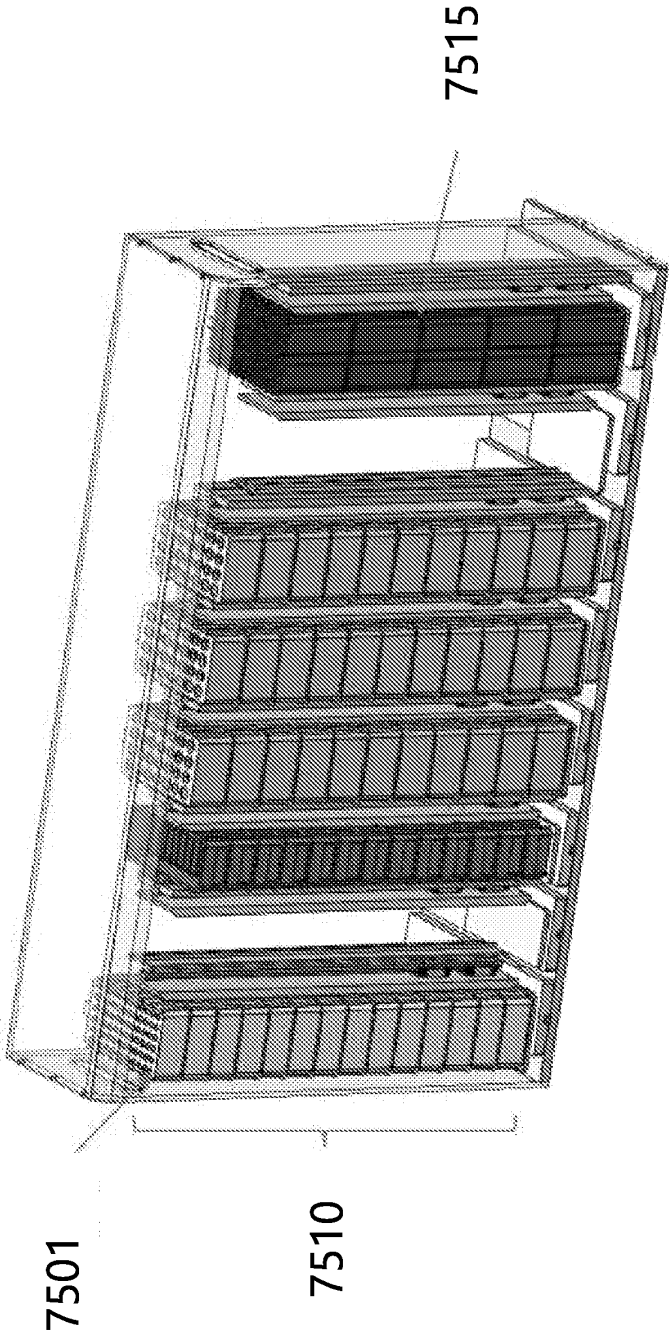


FIG. 75

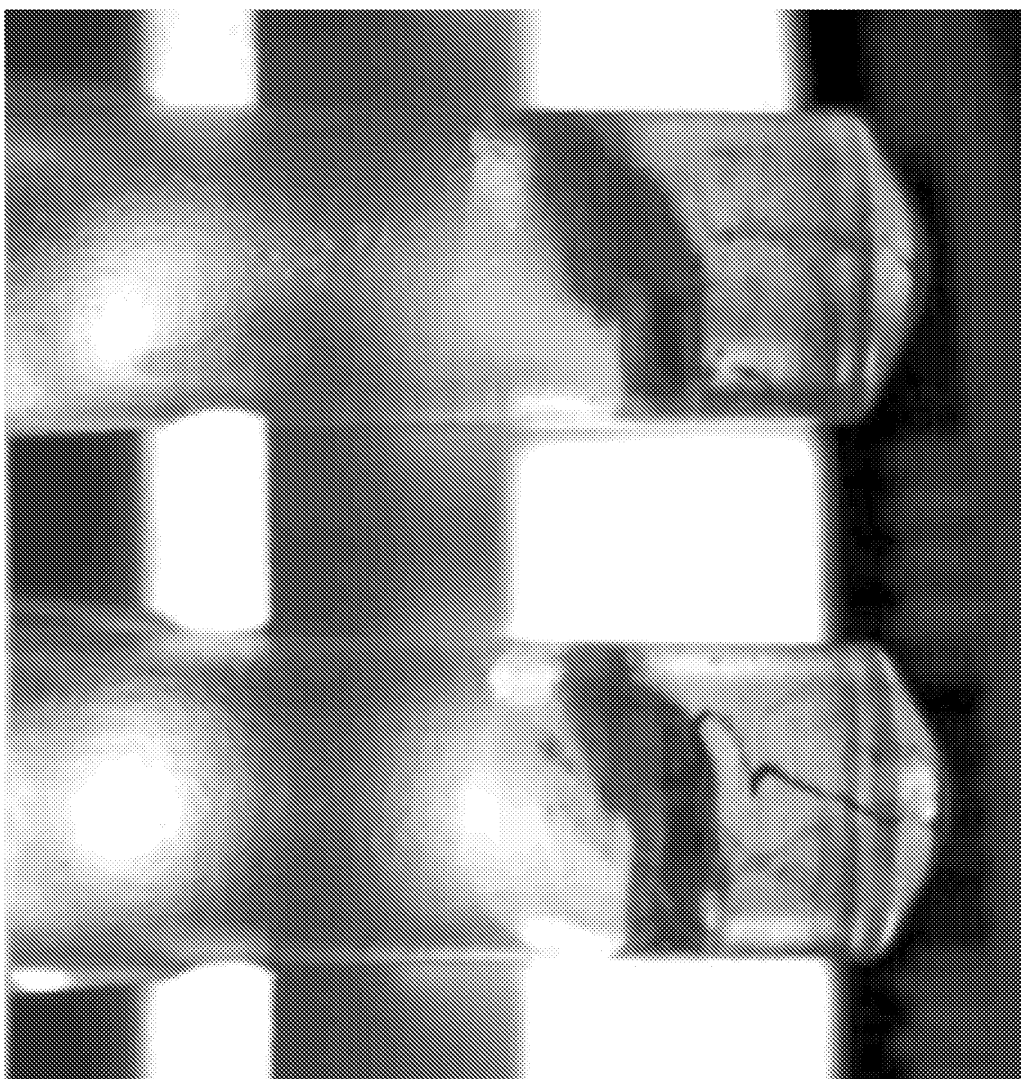


FIG. 76

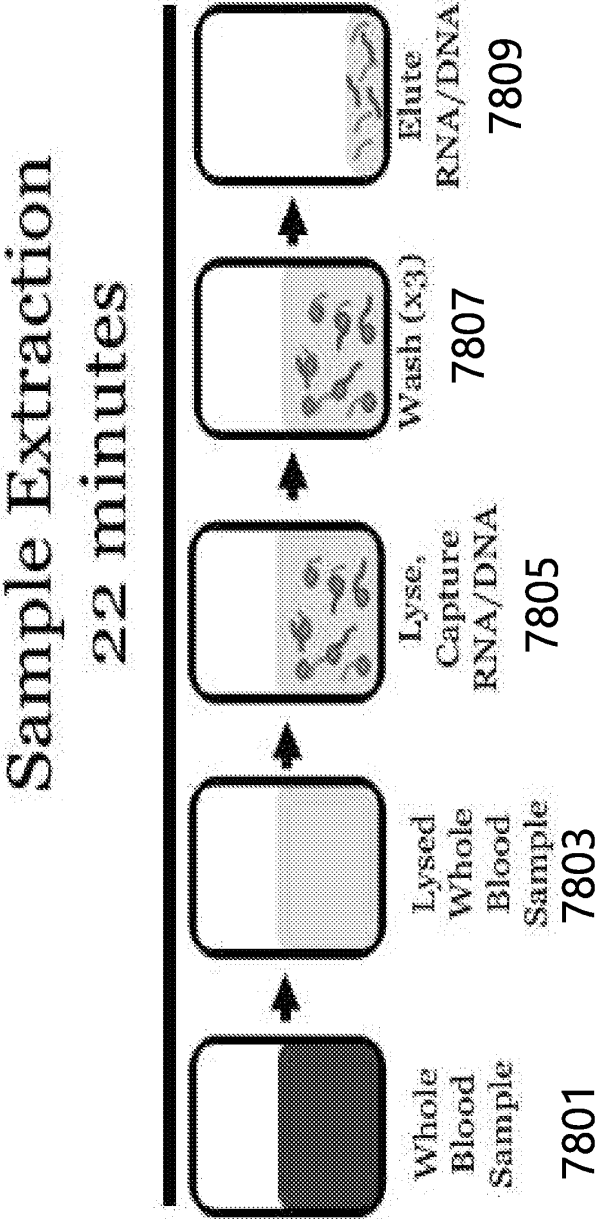


FIG. 77

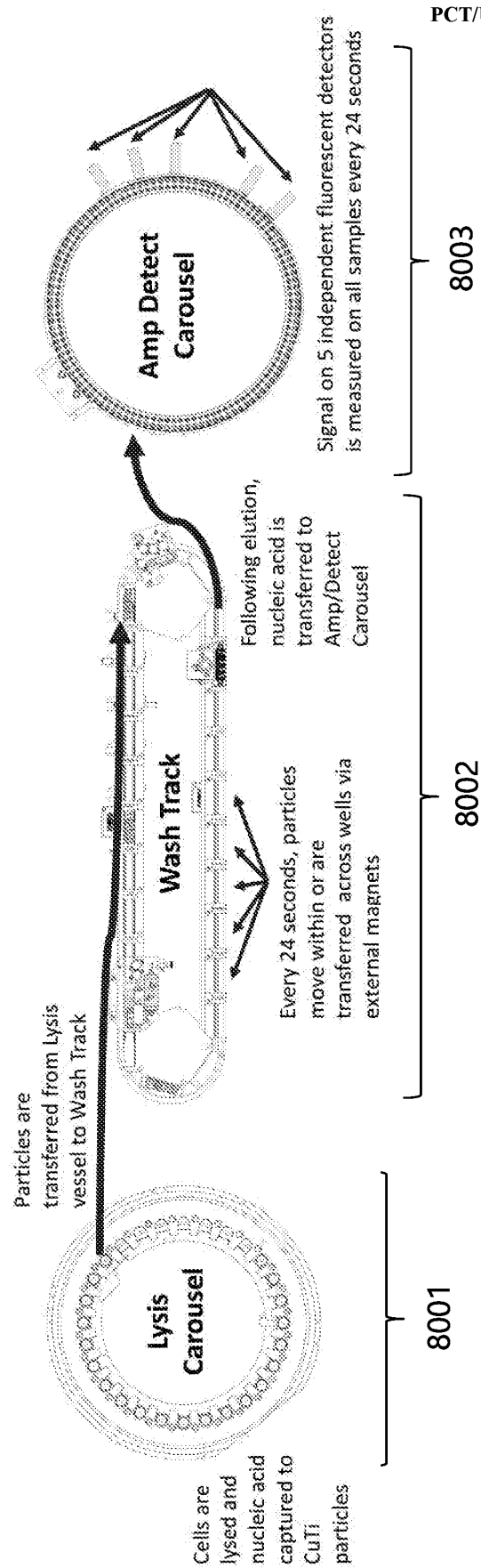


FIG. 78

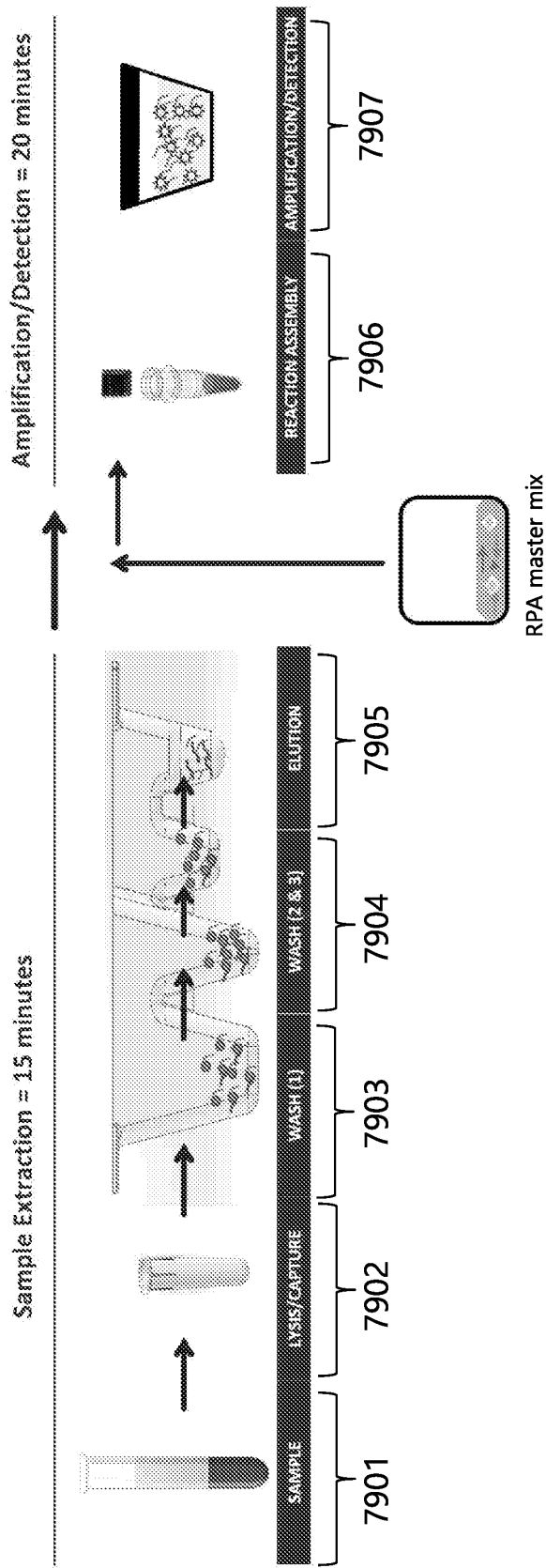


FIG. 79

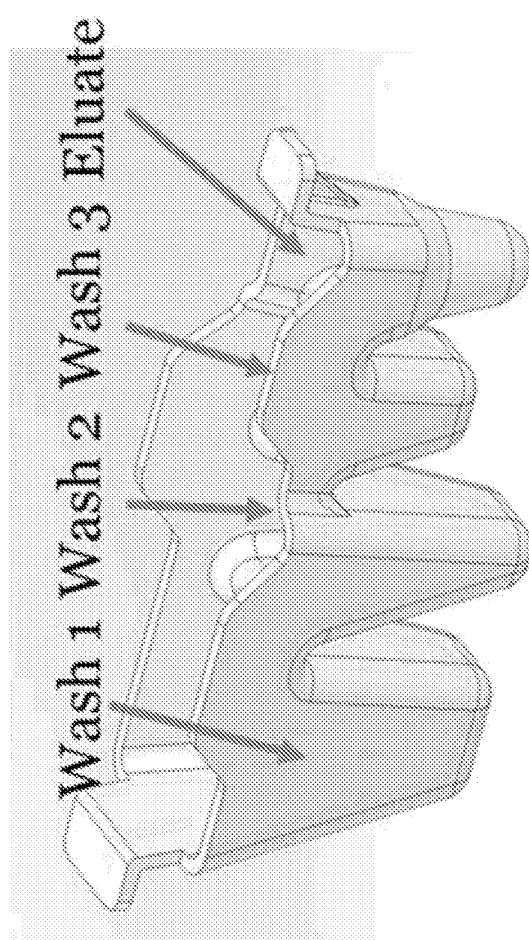


FIG. 80

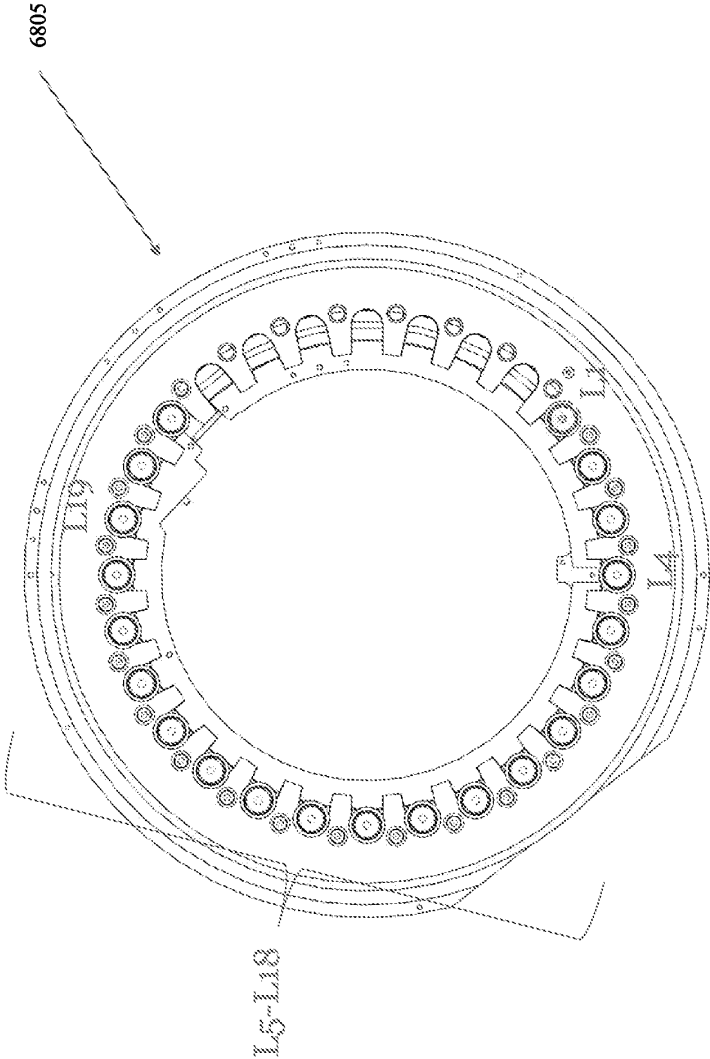


FIG. 81

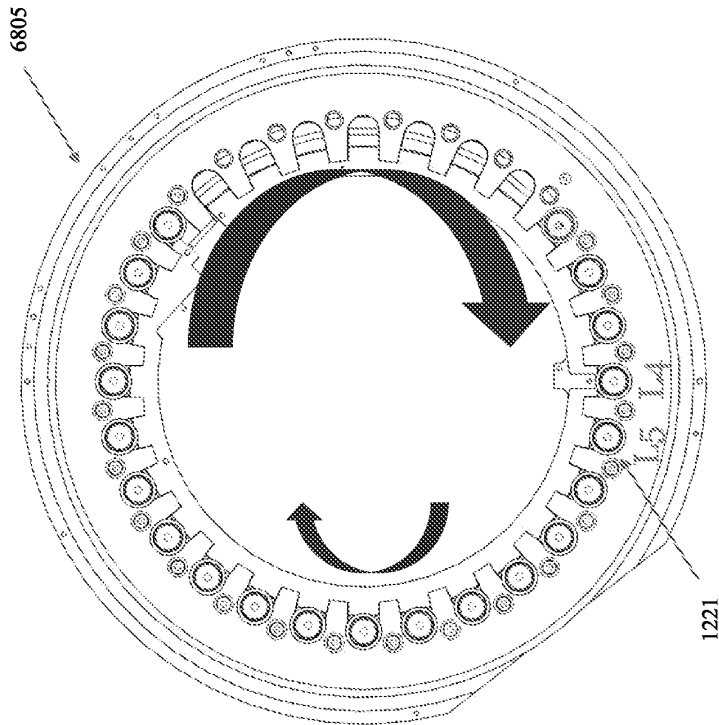


FIG. 82B

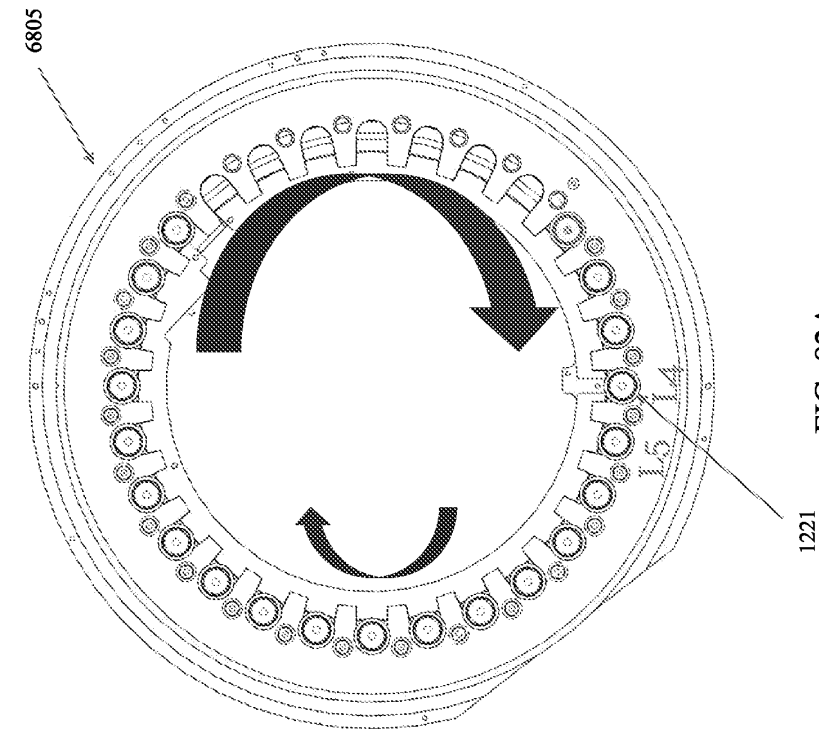


FIG. 82A

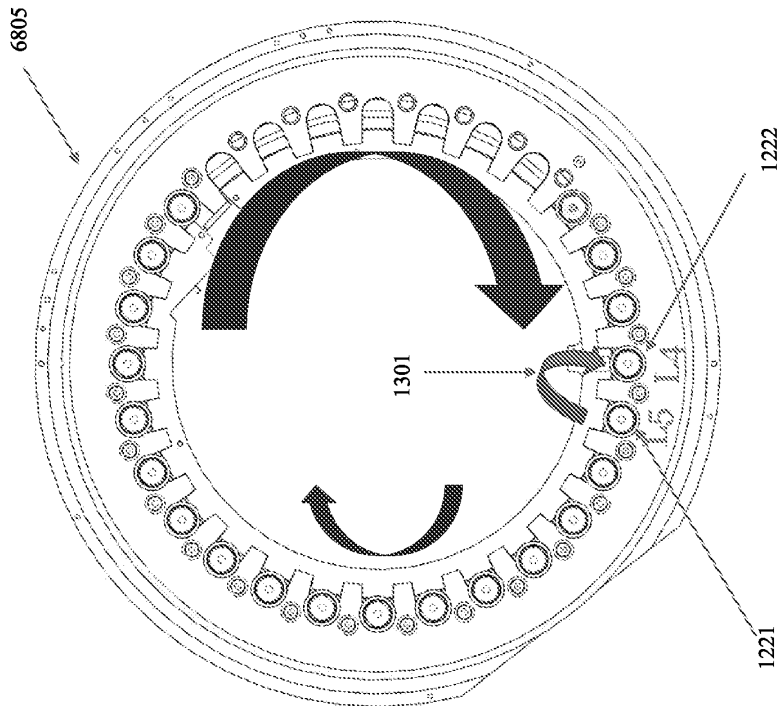


FIG. 83A

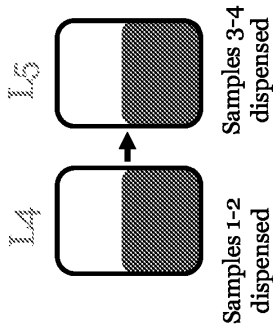


FIG. 83B

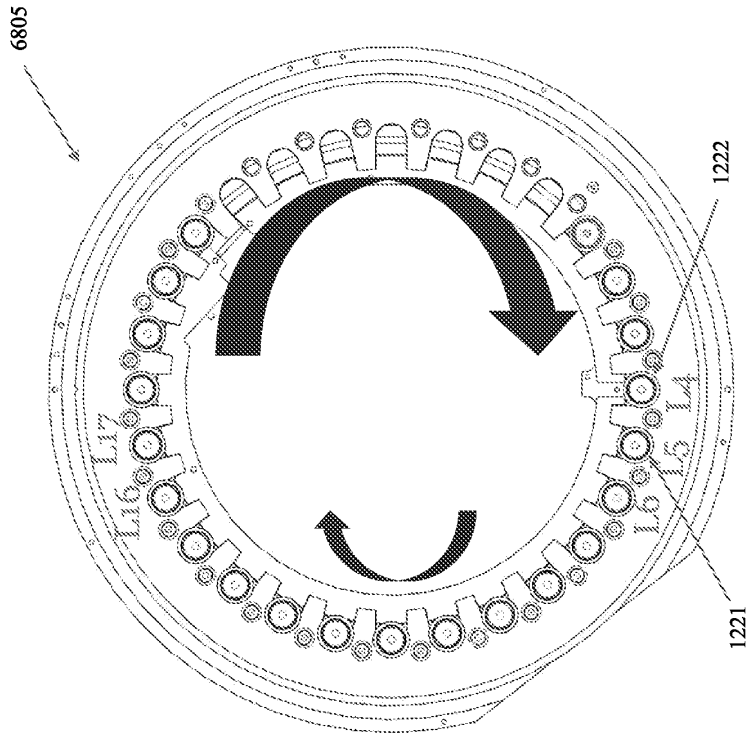


FIG. 84B

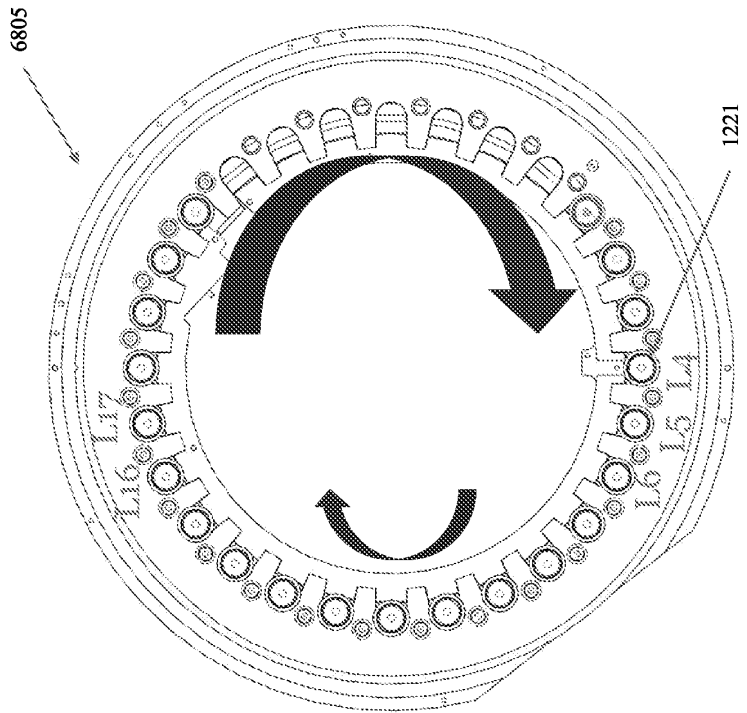


FIG. 84A

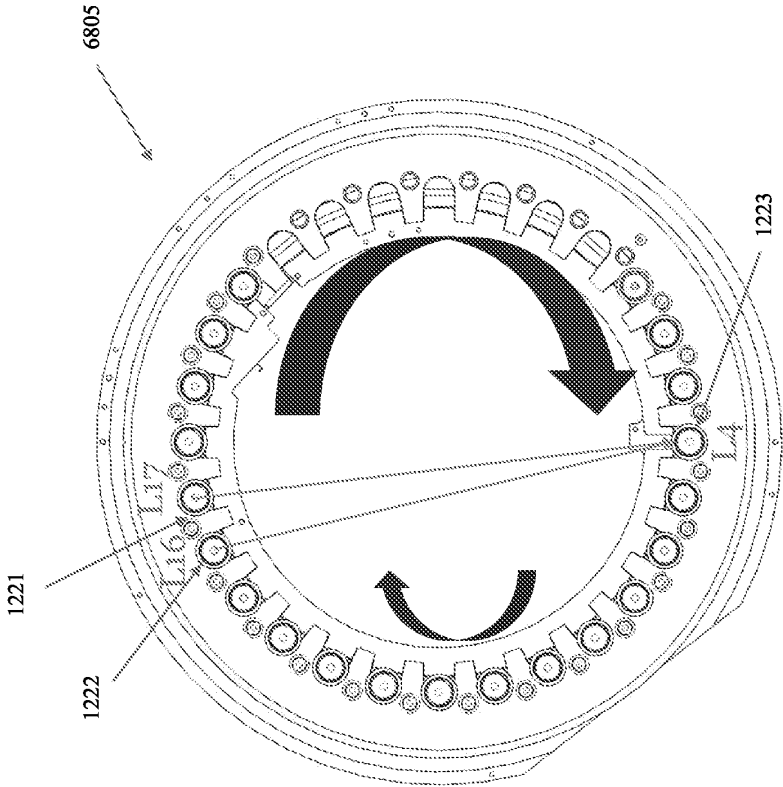


FIG. 84C

THEORETICAL MAX DECONSTRUCTION EFFICIENCY																				
Primary Pool Size		2		4		6		8		12		16		18		24		36		
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	
Deconstruction Round 1	2	IDT	4	IDT	3	PL 2	2	PL 4	3	PL 4	4	PL 4	4	PL 6	3	PL 6	4	PL 12	3	
Deconstruction Round 2					2	IDT	4	IDT	4	IDT	4	IDT	4	PL 6	3	PL 6	3	PL 14	3	
Deconstruction Round 3															2	IDT	2	IDT	4	
Deconstruction Round 4																				
Deconstruction Round 5																				
Deconstruction Max efficiency (Tests):	2	total	4	total	5	total	6	total	7	total	8	total	8	total	8	total	9	total	10	
Max Efficiency Achieved After:	1 Round Deconstruction				2 Round Deconstruction				3 Round Deconstruction				3 Round Deconstruction				3 Round Deconstruction			

FIG. 85A

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THEORETICAL MAX DECONSTRUCTION EFFICIENCY																																
Primary Pool Size		48			64			96			128			192			256			384			480			512						
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size						
Deconstruction Round 1	4	PL 12	4	PL 16	4	PL 24	4	PL 32	4	PL 48	4	PL 64	4	PL 96	4	PL 128	4	PL 160	4	PL 192	4	PL 224	4	PL 256	4	PL 288						
Deconstruction Round 2	3	PL 4	4	PL 4	4	PL 6	4	PL 8	4	PL 12	4	PL 16	4	PL 24	4	PL 32	4	PL 48	4	PL 64	4	PL 96	4	PL 128	4	PL 160						
Deconstruction Round 3	4	IDT	4	IDT	3	PL 2	4	PL 2	4	PL 4	3	PL 4	4	PL 4	4	PL 4	4	PL 6	4	PL 6	4	PL 6	4	PL 8	4	PL 8						
Deconstruction Round 4					2	IDT	2	IDT	2	IDT	4	IDT	4	IDT	4	IDT	4	IDT	3	PL 2	3	PL 2	4	PL 2	4	PL 2						
Deconstruction Round 5																		2	IDT	2	IDT	2	IDT	2	IDT							
Deconstruction Max efficiency (Tests):	11	total	12	total	13	total	14	total	15	total	16	total	17	total	18	total	19	total	20	total	21	total	22	total	23	total						
Max Efficiency Achieved After:	3 Round Deconstruction				4 Round Deconstruction				5 Round Deconstruction				6 Round Deconstruction				7 Round Deconstruction				8 Round Deconstruction				9 Round Deconstruction				10 Round Deconstruction			

FIG. 85A Continued

Max Efficiency 0 Intermediate Pools																		
Primary Pool Size	2		4		6		8		12		16		18		24		36	
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size
Final IDT Step	2	IDT	4	IDT	6	IDT	8	IDT	12	IDT	16	IDT	18	IDT	24	IDT	36	IDT
Deconstruction Max efficiency (Tests):	2	total	4	total	6	total	8	total	12	total	16	total	18	total	24	total	36	total
Max Efficiency Achieved?	Yes		Yes		No		No		No		No		No		No		No	

FIG. 85B

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Max Efficiency 0 Intermediate Pools																		
Primary Pool Size	48		64		96		128		192		256		384		480		512	
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size
Final IDT Step	48	IDT	64	IDT	96	IDT	128	IDT	192	IDT	256	IDT	384	IDT	480	IDT	512	PL 128
Deconstruction Max efficiency (Tests):	48	total	64	total	96	total	128	total	192	total	256	total	384	total	480	total	512	total
Max Efficiency Achieved?	No		No		No		No		No		No		No		No		No	

FIG. 85B Continued

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Max Efficiency 1 Intermediate Pools																		
Primary Pool Size	2		4		6		8		12		16		18		24		36	
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size
Deconstruction Round 1	2	IDT	4	IDT	3	PL 2	2	PL 4	3	PL 4	4	PL 4	3	PL 6	4	PL 6	6	PL 6
Final IDT Step					2	IDT	4	IDT	4	IDT	4	IDT	6	IDT	6	IDT	6	IDT
Deconstruction Max efficiency (Tests):	2	total	4	total	5	total	6	total	7	total	8	total	9	total	10	total	12	total
Max Efficiency Achieved?	Yes		Yes		Yes		Yes		Yes		Yes		No		No		No	

FIG. 85C

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Max Efficiency 1 Intermediate Pools																		
Primary Pool Size	48		64		96		128		192		256		384		480		512	
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size
Deconstruction Round 1	8	PL 6	8	PL 8	16	PL 6	16	PL 8	16	PL 12	16	PL 16	24	PL 16	20	PL 24	32	PL 16
Final IDT Step	6	IDT	8	IDT	6	IDT	8	IDT	12	IDT	16	IDT	16	IDT	24	IDT	16	IDT
Deconstruction Max efficiency (Tests):	14	total	16	total	22	total	24	total	28	total	32	total	40	total	44	total	48	total
Max Efficiency Achieved?	No		No		No		No		No		No		No		No		No	

FIG. 85C Continued

Max Efficiency 2 Intermediate Pools																		
Primary Pool Size	2		4		6		8		12		16		18		24		36	
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size
Deconstruction Round 1	2	IDT	4	IDT	3	PL 2	2	PL 4	3	PL 4	4	PL 4	3	PL 6	4	PL 6	3	PL 12
Deconstruction Round 2					2	IDT	4	IDT	4	IDT	4	IDT	3	PL 2	3	PL 2	3	PL 4
Final IDT Step													2	IDT	2	IDT	4	IDT
Deconstruction Max efficiency (Tests):	2	total	4	total	5	total	6	total	7	total	8	total	8	total	9	total	10	total
Max Efficiency Achieved?	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	

FIG. 85D

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Max Efficiency 2 Intermediate Pools																											
Primary Pool Size	48			64			96			128			192			256			384			480			512		
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size			
Deconstruction Round 1	4	PL 12	4	PL 16	6	PL 16	8	PL 16	6	PL 32	8	PL 32	8	PL 48	10	PL 48	16	PL 32									
Deconstruction Round 2	3	PL 4	4	PL 4	4	PL 4	4	PL 4	8	PL 4	8	PL 4	8	PL 6	8	PL 6	8	PL 4									
Final IDT Step	4	IDT	4	IDT	4	IDT	4	IDT	4	IDT	4	IDT	6	IDT	6	IDT	4	IDT									
Deconstruction Max efficiency (Tests):	11	total	12	total	13	total	14	total	15	total	16	total	17	total	18	total	18	total									
Max Efficiency Achieved?	Yes		Yes		No		No		No		No		No		No		No										

FIG. 85D Continued

Max Efficiency 4 Intermediate Pools																		
Primary Pool Size	2		4		6		8		12		16		18		24		36	
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size
Deconstruction Round 1	2	IDT	4	IDT	3	PL 2	2	PL 4	3	PL 4	4	PL 4	3	PL 6	4	PL 6	3	PL 12
Deconstruction Round 2					2	IDT	4	IDT	4	IDT	4	IDT	3	PL 2	3	PL 2	3	PL 4
Deconstruction Round 3													2	IDT	2	IDT	4	IDT
Deconstruction Round 4																		
Final IDT Step																		
Deconstruction Max efficiency (Tests):	2	total	4	total	5	total	6	total	7	total	8	total	8	total	9	total	10	total
Max Efficiency Achieved?	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	

FIG. 85E

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Max Efficiency 4 Intermediate Pools																													
Primary Pool Size			48			64			96			128			192			256			384			480			512		
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used		
Deconstruction Round 1	4	PL 12	4	PL 16	4	PL 24	4	PL 32	4	PL 48	4	PL 64	4	PL 96	4	PL 128	4	PL 160	4	PL 192	4	PL 224	4	PL 256	4	PL 288	4	PL 320	
Deconstruction Round 2	3	PL 4	4	PL 4	4	PL 6	4	PL 8	8	PL 12	4	PL 16	4	PL 24	4	PL 32	4	PL 48	4	PL 64	4	PL 96	4	PL 128	4	PL 160	4	PL 192	
Deconstruction Round 3	4	IDT	4	IDT	3	PL 2	4	PL 2	3	PL 4	4	PL 4	4	PL 6	4	PL 8	4	PL 12	4	PL 16	4	PL 24	4	PL 32	4	PL 48	4	PL 64	
Deconstruction Round 4					2	IDT	2	IDT	4	IDT	4	IDT	4	IDT	3	PL 2	4	IDT	3	PL 2	3	PL 2	4	PL 2	4	PL 2	4	PL 2	
Final IDT Step															2	IDT	2	IDT	2	IDT	2	IDT	2	IDT	2	IDT	2	IDT	
Deconstruction Max efficiency (Tests):	11	total	12	total	13	total	14	total	15	total	16	total	17	total	18	total	19	total	20	total	21	total	22	total	23	total	24	total	
Max Efficiency Achieved?	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		

FIG. 85E Continued

Primary Pool Size	Max Efficiency 4 Intermediate Pools											
	2	4	6	8	12	16	18	24	36			
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size
Deconstruction Round 1	2	IDT	3	PL 2	2	PL 4	3	PL 6	4	PL 6	3	PL 12
Deconstruction Round 2			2	IDT	4	IDT	3	PL 2	3	PL 2	3	PL 4
Deconstruction Round 3							2	IDT	2	IDT	4	IDT
Deconstruction Round 4												
Final IDT Step												
Deconstruction Max efficiency (Tests):	2	total	4	total	5	total	6	total	7	total	8	total
Max Efficiency Achieved?:	Yes		Yes		Yes		Yes		Yes		Yes	

FIG. 85F

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Max Efficiency 4 Intermediate Pools																												
Primary Pool Size		48			64			96			128			192			256			384			480			512		
	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size	# Tests Used	Int. Pool size		
Deconstruction Round 1	4	PL 12	4	PL 16	4	PL 24	4	PL 32	4	PL 48	4	PL 64	4	PL 96	4	PL 128	5	PL 96	4	PL 128	4	PL 128	4	PL 128	4	PL 128		
Deconstruction Round 2	3	PL 4	4	PL 4	4	PL 6	4	PL 6	4	PL 12	4	PL 16	4	PL 24	4	PL 32	4	PL 24	4	PL 32	4	PL 32	4	PL 32	4	PL 32		
Deconstruction Round 3	4	IDT	4	IDT	3	PL 2	4	PL 2	4	PL 4	4	PL 4	4	PL 6	4	PL 8	4	PL 6	4	PL 8	4	PL 8	4	PL 8	4	PL 8		
Deconstruction Round 4					2	IDT	2	IDT	4	IDT	4	IDT	4	PL 2	3	PL 2	4	PL 2	4	PL 2	4	PL 2	4	PL 2	4	PL 2		
Final IDT Step														2	IDT	2	IDT	2	IDT	2	IDT	2	IDT	2	IDT	2		
Deconstruction Max efficiency (Tests):	11	total	12	total	13	total	14	total	15	total	16	total	17	total	18	total	18	total	18	total	18	total	18	total	18	total		
Max Efficiency Achieved?:	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	Yes		

FIG. 85F Continued

Serum / Plasma / Lysed Whole Blood							
	Individual Samples	Pool of 2	Pool of 4	Pool of 6	Pool of 12	Pool of 18	Pool of 24
Time To Result	35 minutes	35 minutes	35.5 min	36 min	38 min	39 min	40 min
Throughput	150 samples / hour	150 pools / hour	75 pools/hour	50 pools/hour	25 pools/hour	16.7 pools/hour	12.5 pools/hour

Whole Blood with Pre-Treatment Process		
	Individual Samples	Pool of 6
Time To Result	42 minutes	42 minutes
Throughput	75 samples / hour	21 pools/hour

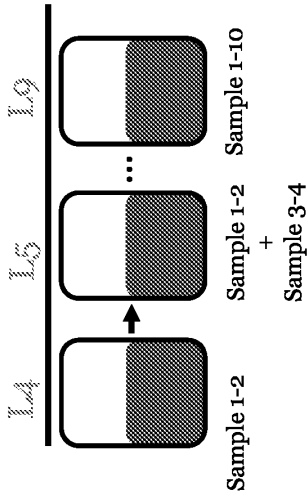
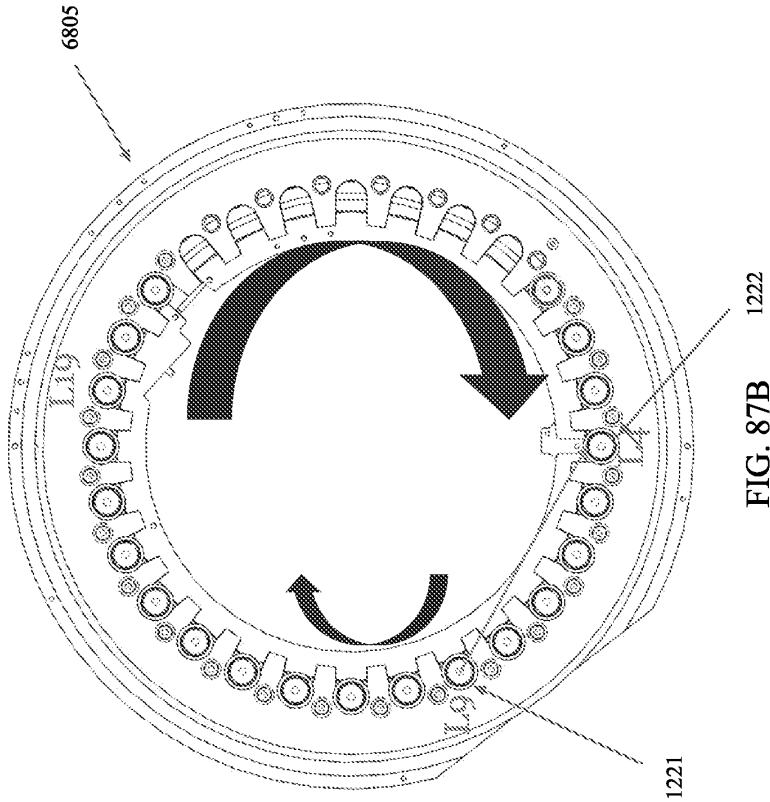


FIG. 87A

FIG. 87B

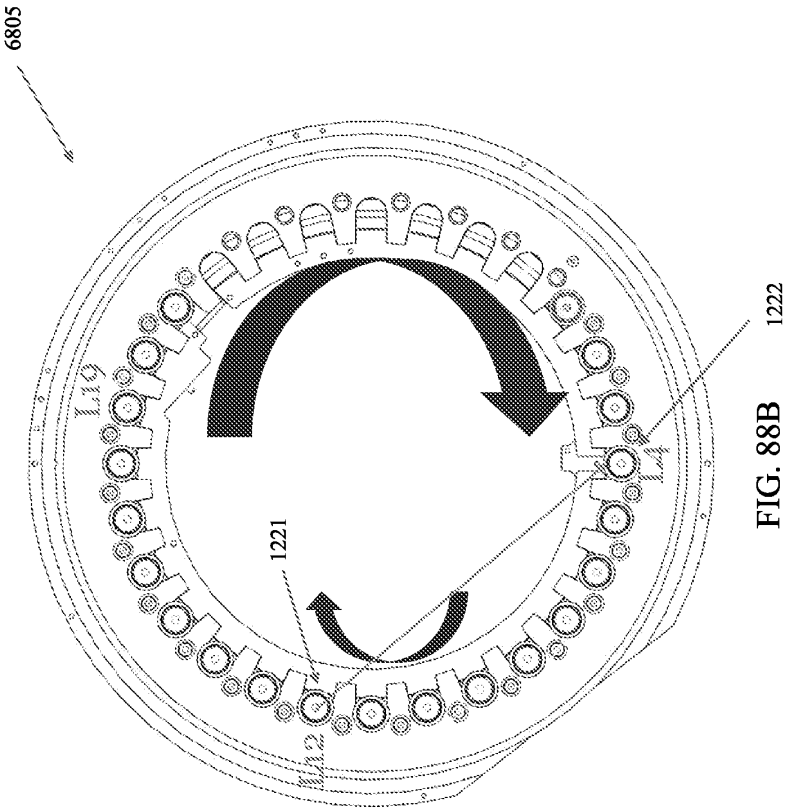


FIG. 88B

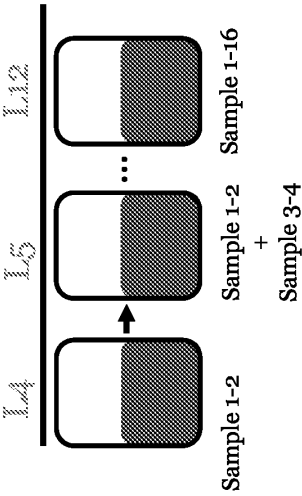


FIG. 88A

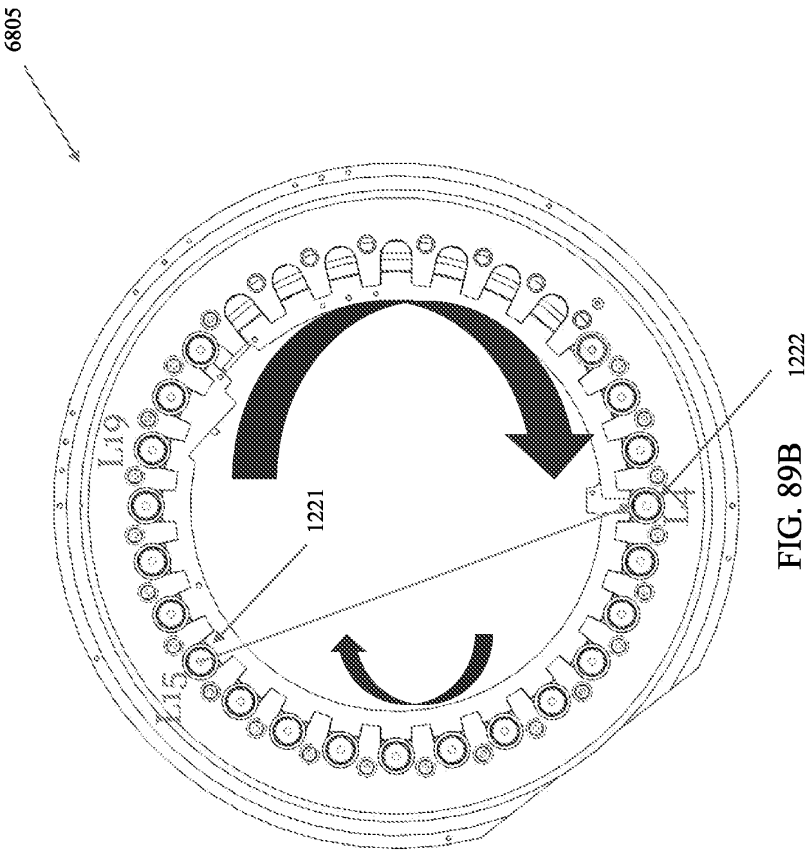


FIG. 89B

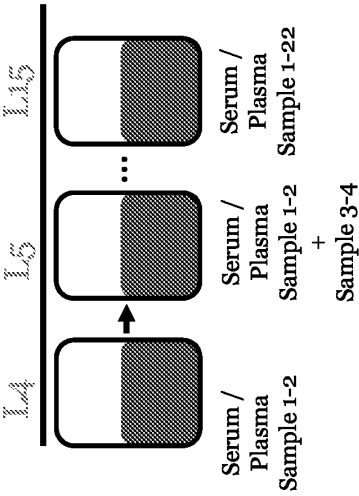


FIG. 89A

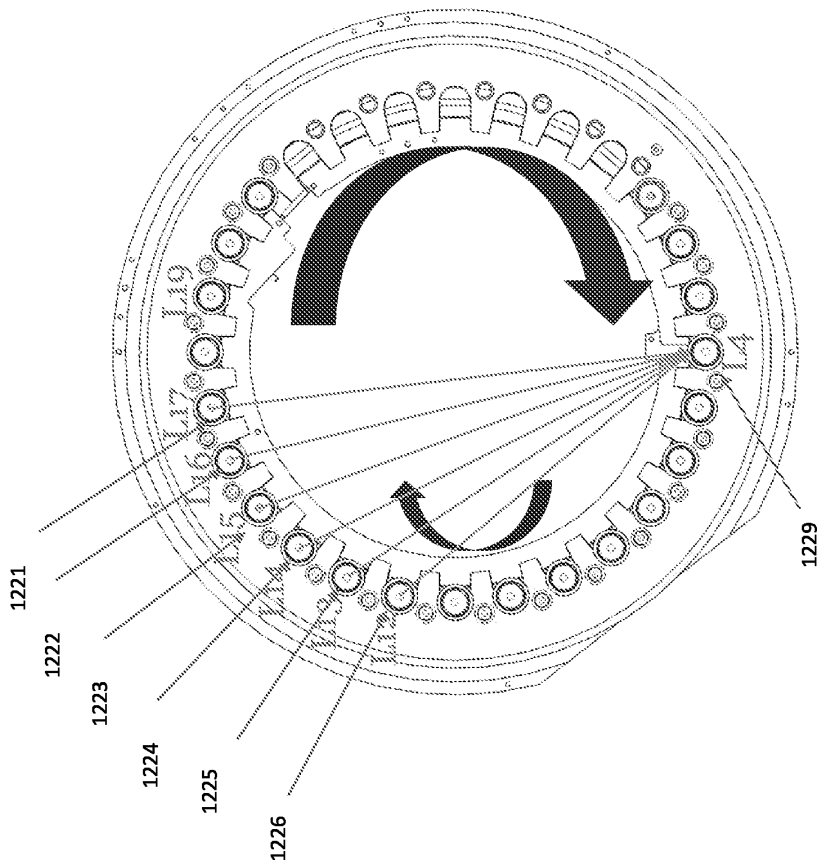


FIG. 90