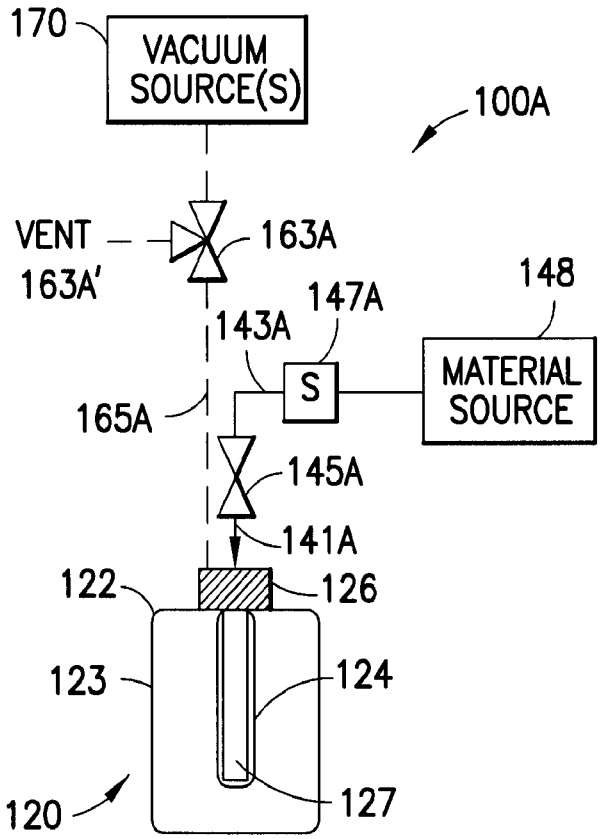


FIG.1A

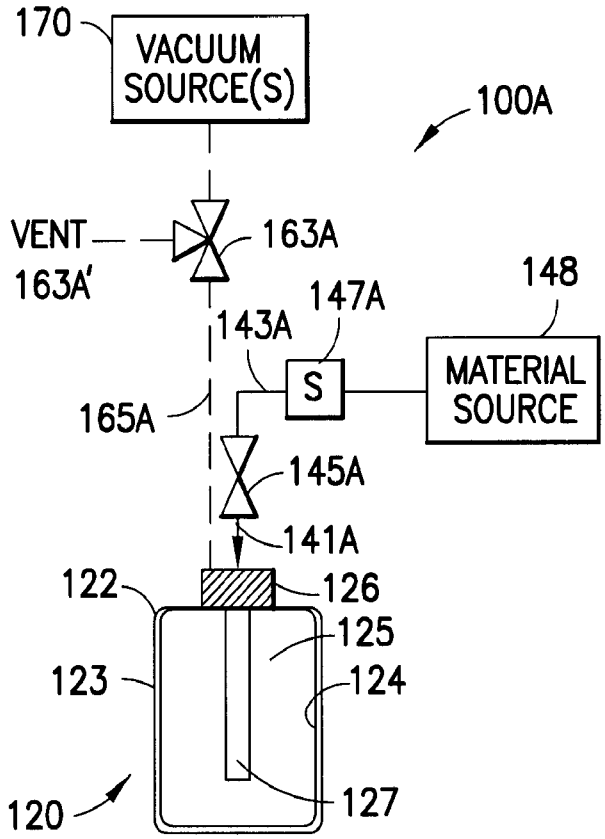


FIG.1B

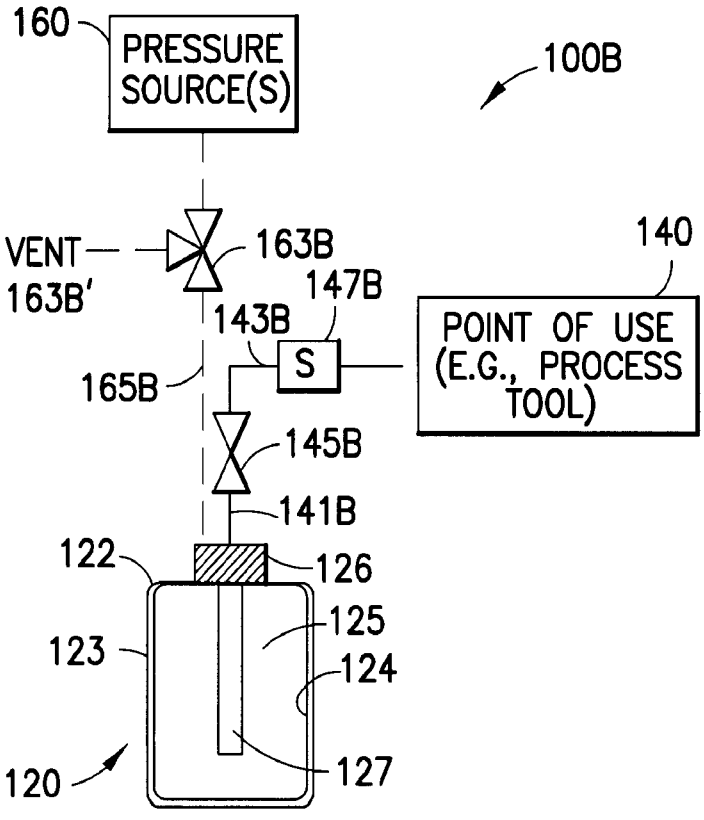


FIG.1C

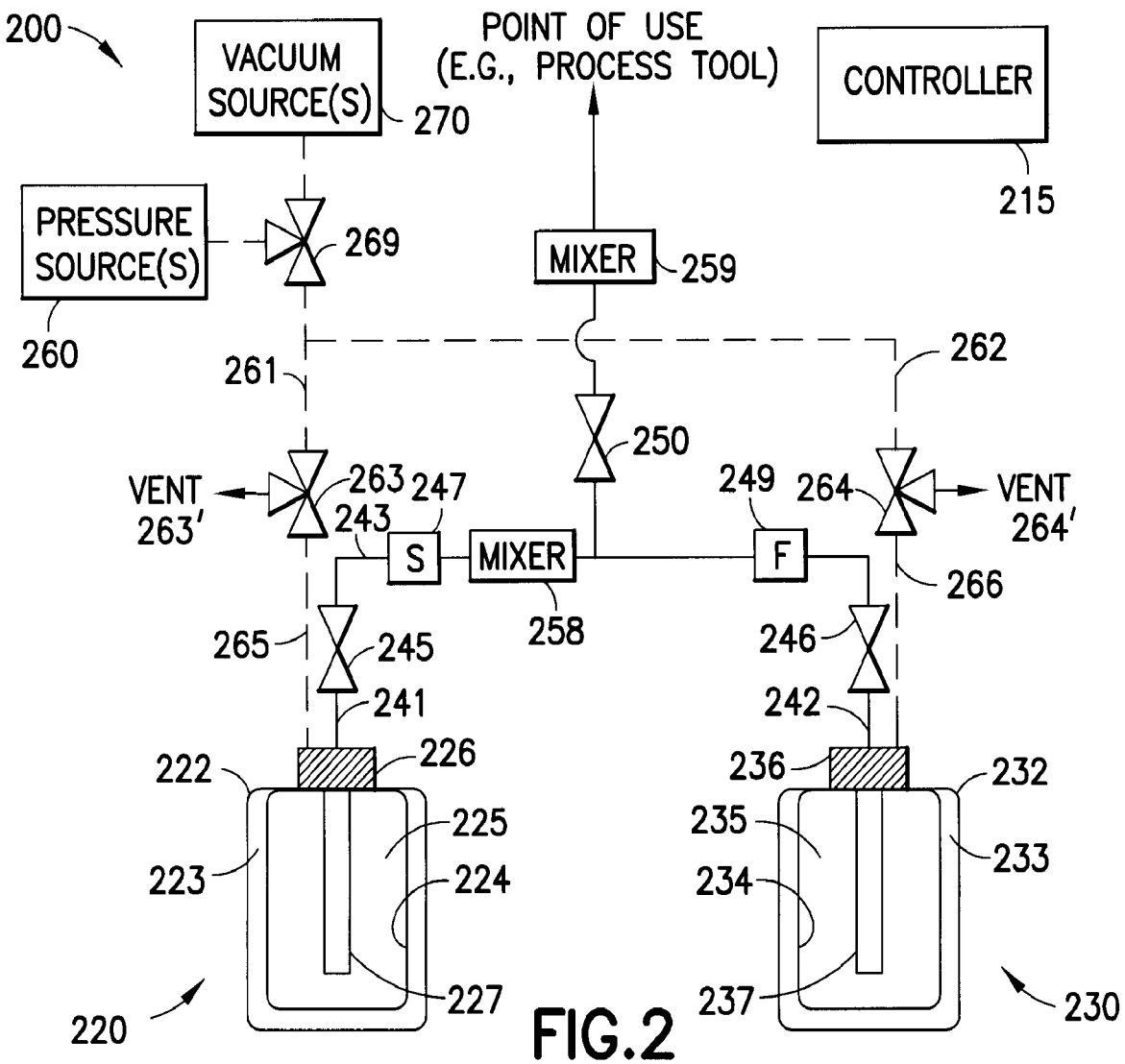

200
VACUUM SOURCE(S)
270
POINT OF USE (E.G., PROCESS TOOL)
CONTROLLER
215
PRESSURE SOURCE(S)
260
269
MIXER
259
261
262
250
VENT 263'
263
247
243
249
264
VENT 264'
S
MIXER
F
258
266
265
245
246
241
242
222
226
236
232
225
235
223
224
234
233
227
237
220
230

FIG.2

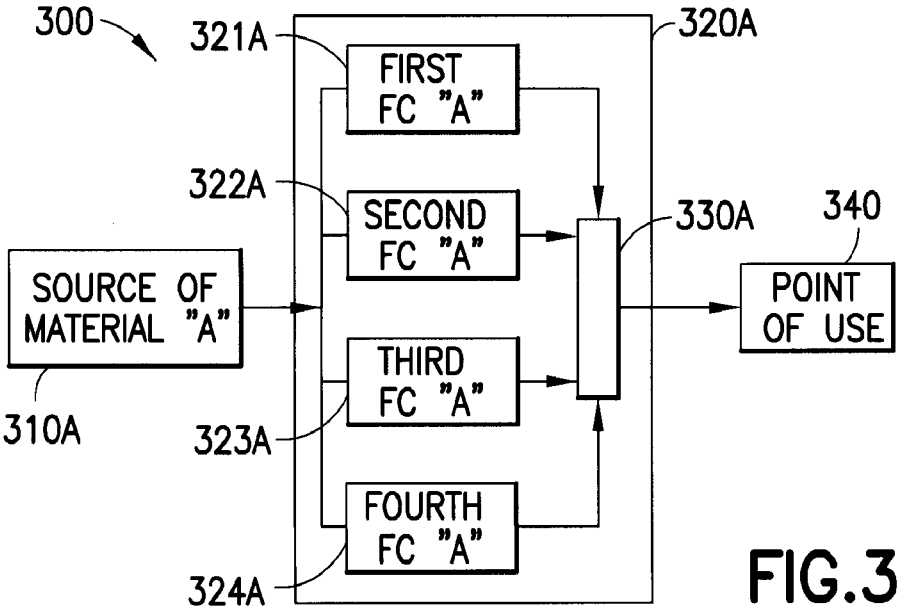

300
321A
320A
FIRST FC "A"
322A
SECOND FC "A"
330A
340
SOURCE OF MATERIAL "A"
POINT OF USE
THIRD FC "A"
310A
323A
FOURTH FC "A"
324A

FIG.3

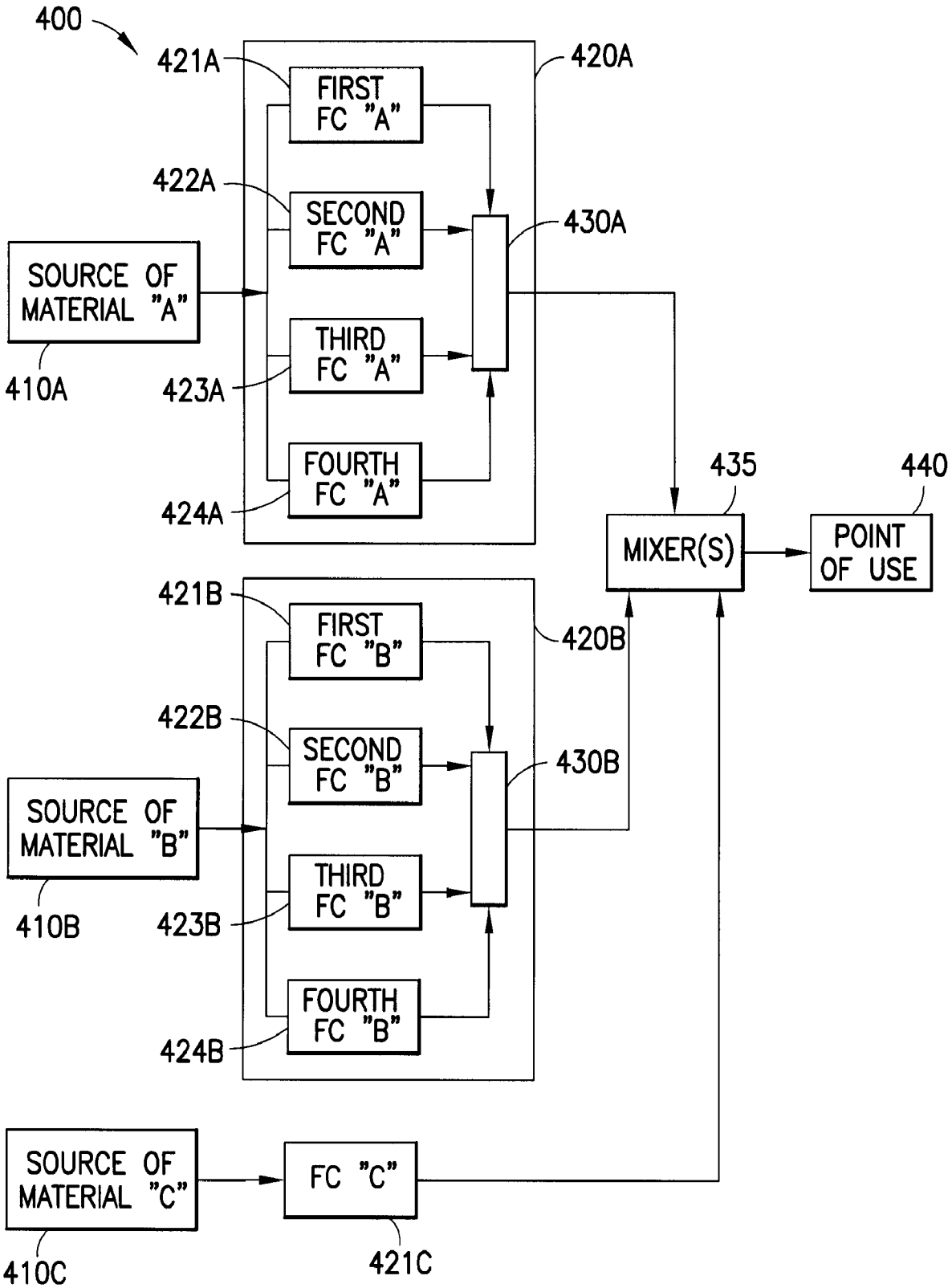

400
421A
FIRST FC "A"
420A
422A
SECOND FC "A"
430A
SOURCE OF MATERIAL "A"
410A
THIRD FC "A"
423A
FOURTH FC "A"
424A
435
440
MIXER(S)
POINT OF USE
421B
FIRST FC "B"
420B
422B
SECOND FC "B"
430B
SOURCE OF MATERIAL "B"
410B
THIRD FC "B"
423B
FOURTH FC "B"
424B
SOURCE OF MATERIAL "C"
FC "C"
410C
421C

FIG.4

COM-PONENT	MFCs		ON OR OFF?	TOTAL FLOW	INDIVIDUAL FLOW RATES	CONCEN-TRATION	PRECISION FOR TOTAL FLOW	
	max flow (ml/min)	std.dev. (ml/min)		(ml/min)	(ml/min)	(wt.%)	std.dev. (ml/min)	% std.dev. (%)
DI water	250	2.5	1	300	240	80	2.60	0.87
DI water	125	1.25	0		0			
Chem A	50	0.5	1		45	15		
Chem B	50	0.5	1		15	5		

0: off
1: on

300
total

FIG.5A

COM-PONENT	MFC's		ON OR OFF?	TOTAL FLOW	INDIVIDUAL FLOW RATES	TARGET CONCEN-TRATION	ACTIAL CONCETRATION CONSIDERING VARIATIONS	DEVIATION FROM TARGET CONCEN-TRATION
	max flow (ml/min)	std.dev. (ml/min)		(ml/min)	(ml/min)	(wt.%)	(wt.%)	(%)
DI water	250	2.5	1	300	242.5	80	80.4	0.54
DI water	125	1.25	0		0			
Chem A	50	0.5	1		44.5	15	14.8	−1.60
Chem B	50	0.5	1		14.5	5	4.8	−3.81

0: off
1: on

301.5
total

FIG.5B

COM-PONENT	MFC's		ON OR OFF?	TOTAL FLOW	INDIVIDUAL FLOW RATES	CONCEN-TRATION	PRECISION FOR TOTAL FLOW	
	max flow (ml/min)	std.dev. (ml/min)		(ml/min)	(ml/min)	(wt.%)	std.dev. (ml/min)	% std.dev. (%)
DI water	250	2.5	1	400	230	82.5	2.88	0.72
DI water	125	1.25	1		100			
Chem C	50	0.5	1		40	10.0		
Chem D	50	0.5	1		30	7.5		

0: off
1: on

400
total

FIG.5C

COM-PONENT	MFC's		ON OR OFF?	TOTAL FLOW	INDIVIDUAL FLOW RATES	TARGET CONCEN-TRATION	ACTIAL CONCETRATION CONSIDERING VARIATIONS	DEVIATION FROM TARGET CONCEN-TRATION
	max flow (ml/min)	std.dev. (ml/min)		(ml/min)	(ml/min)	(wt.%)	(wt.%)	(%)
DI water	250	2.5	1	400	232.5	82.5	82.87	0.45
DI water	125	1.25	1		101.25			
Chem C	50	0.5	1		39.5	10	9.81	-1.92
Chem D	50	0.5	1		29.5	7.5	7.32	-2.34

0: off
1: on

402.75
total

FIG.5D

SUBSTITUTE SHEET (RULE 26)

COMPONENT	MFC's		ON OR OFF?	TOTAL FLOW	INDIVIDUAL FLOW RATES	TARGET CONCEN-TRATION	ACTIAL CONCETRATION CONSIDERING VARIATIONS	DEVIATION FROM TARGET CONCEN-TRATION
	max flow (ml/min)	std.dev. (ml/min)		(ml/min)	(ml/min)	(wt.%)	(wt.%)	(%)
DI water	500	5	1	400	335	82.5	82.92	0.51
DI water	125	1.25	0		0			
Chem C	50	0.5	1		39.5	10	9.78	-2.23
Chem D	50	0.5	1		29.5	7.5	7.30	-2.64

0: off
1: on

404
total

FIG.5E

COMPONENT	MFC's		ON OR OFF?	TOTAL FLOW	INDIVIDUAL FLOW RATES	TARGET CONCEN-TRATION	ACTIAL CONCETRATION CONSIDERING VARIATIONS	DEVIATION FROM TARGET CONCEN-TRATION
	max flow (ml/min)	std.dev. (ml/min)		(ml/min)	(ml/min)	(wt.%)	(wt.%)	(%)
DI water	250	2.5	0	200	0	82.5	83.02	0.63
DI water	125	1.25	1		166.25			
Chem C	50	0.5	1		19.5	10	9.74	-2.62
Chem D	50	0.5	1		14.5	7.5	7.24	-3.45

0: off
1: on

200.25
total

FIG.5F

COMPONENT	MFC's		ON OR OFF?	TOTAL FLOW	INDIVIDUAL FLOW RATES	TARGET CONCEN-TRATION	ACTIAL CONCETRATION CONSIDERING VARIATIONS	DEVIATION FROM TARGET CONCEN-TRATION
	max flow (ml/min)	std.dev. (ml/min)		(ml/min)	(ml/min)	(wt.%)	(wt.%)	(%)
DI water	500	5	1	200	170	82.5	83.33	1.01
DI water	125	1.25	0		0			
Chem C	50	0.5	1		19.5	10	9.56	-4.41
Chem D	50	0.5	1		14.5	7.5	7.11	-5.23

0: off
1: on

204 total

FIG.5G

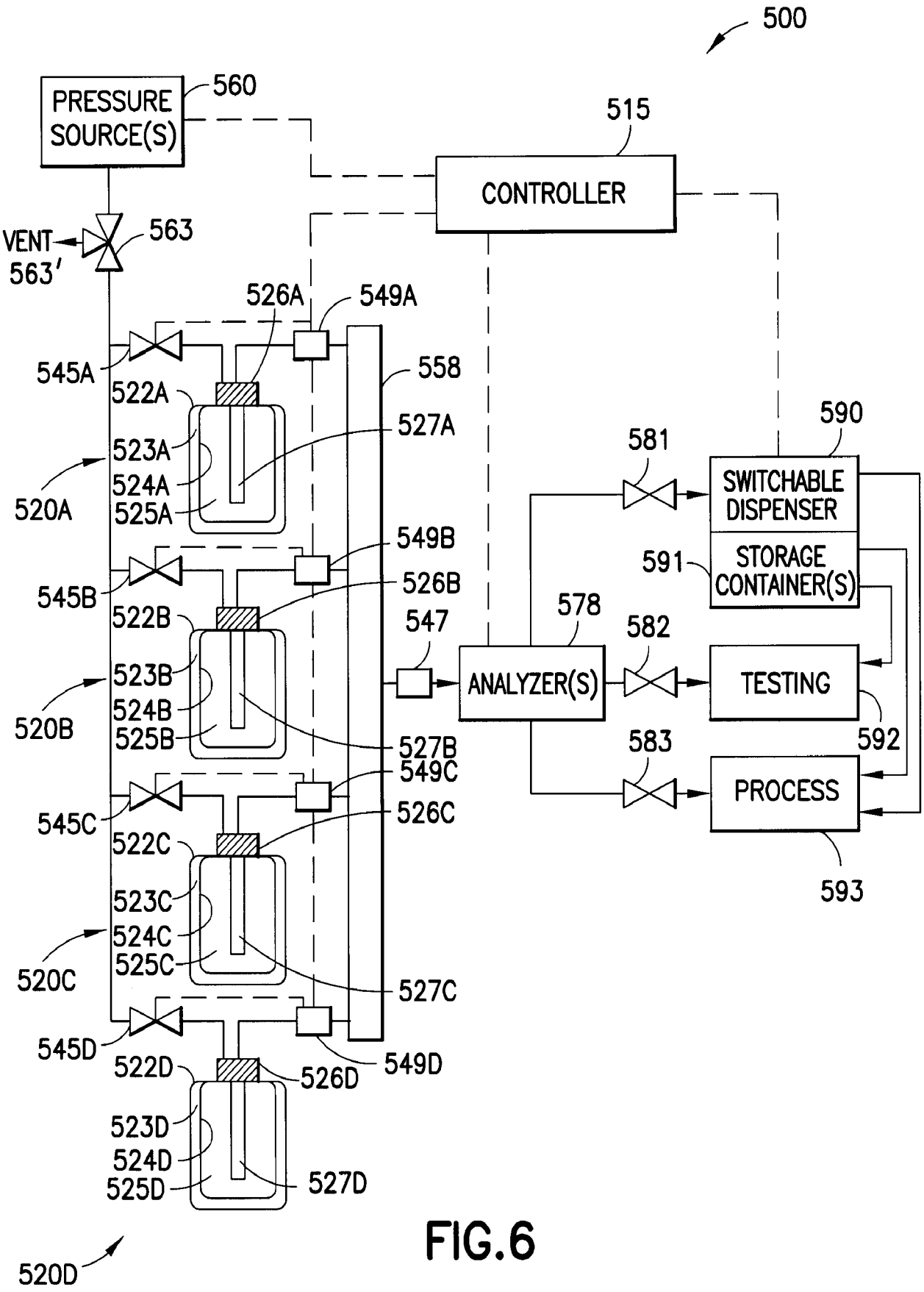

500
PRESSURE SOURCE(S)
560
515
CONTROLLER
VENT 563'
563
526A
549A
545A
558
522A
527A
523A
524A
525A
520A
590
581
SWITCHABLE DISPENSER
591
STORAGE CONTAINER(S)
549B
526B
545B
522B
578
547
582
523B
524B
525B
520B
ANALYZER(S)
TESTING
592
527B
549C
583
526C
545C
522C
PROCESS
523C
524C
525C
520C
593
527C
545D
549D
522D
526D
523D
524D
525D
527D
520D

FIG.6

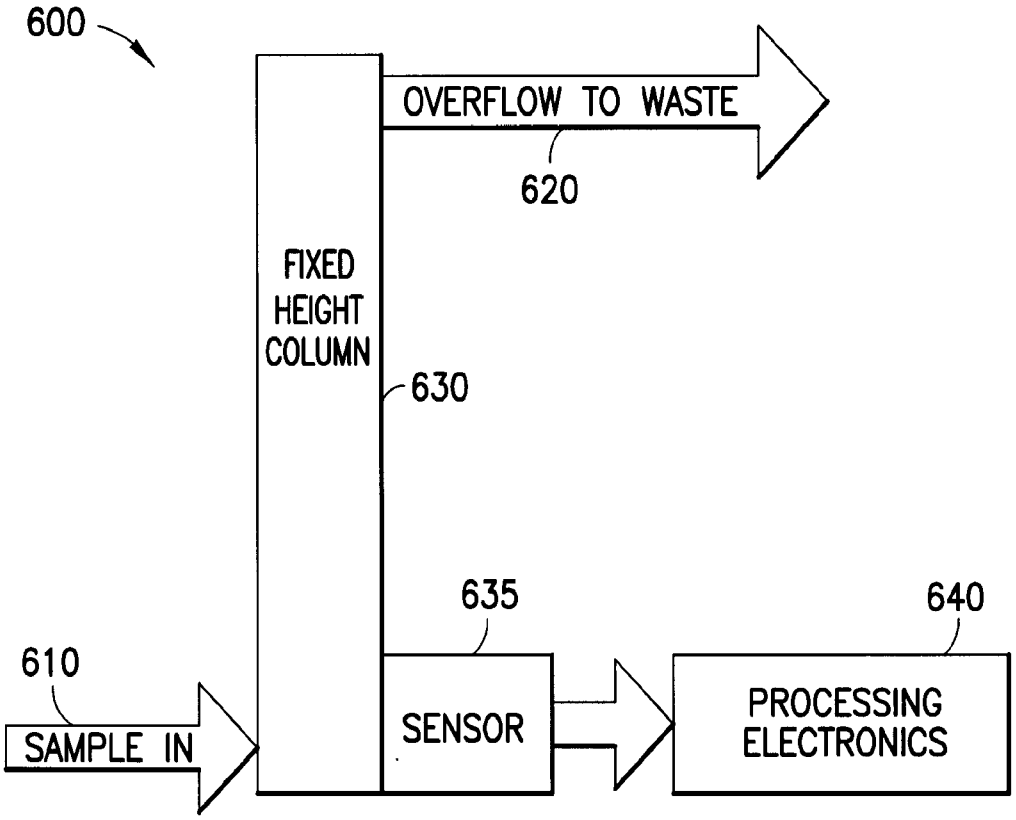

600
OVERFLOW TO WASTE
620
FIXED HEIGHT COLUMN
630
635
640
610
SAMPLE IN
SENSOR
PROCESSING ELECTRONICS

FIG.7A

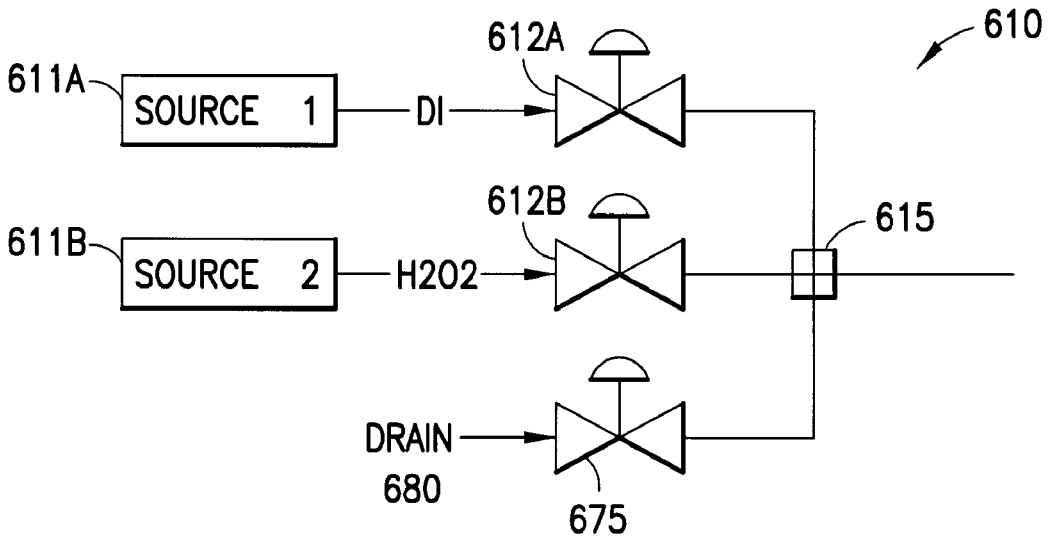

610
612A
611A
SOURCE 1
DI
612B
615
611B
SOURCE 2
H2O2
DRAIN
680
675

FIG.7B