FIG. 1A

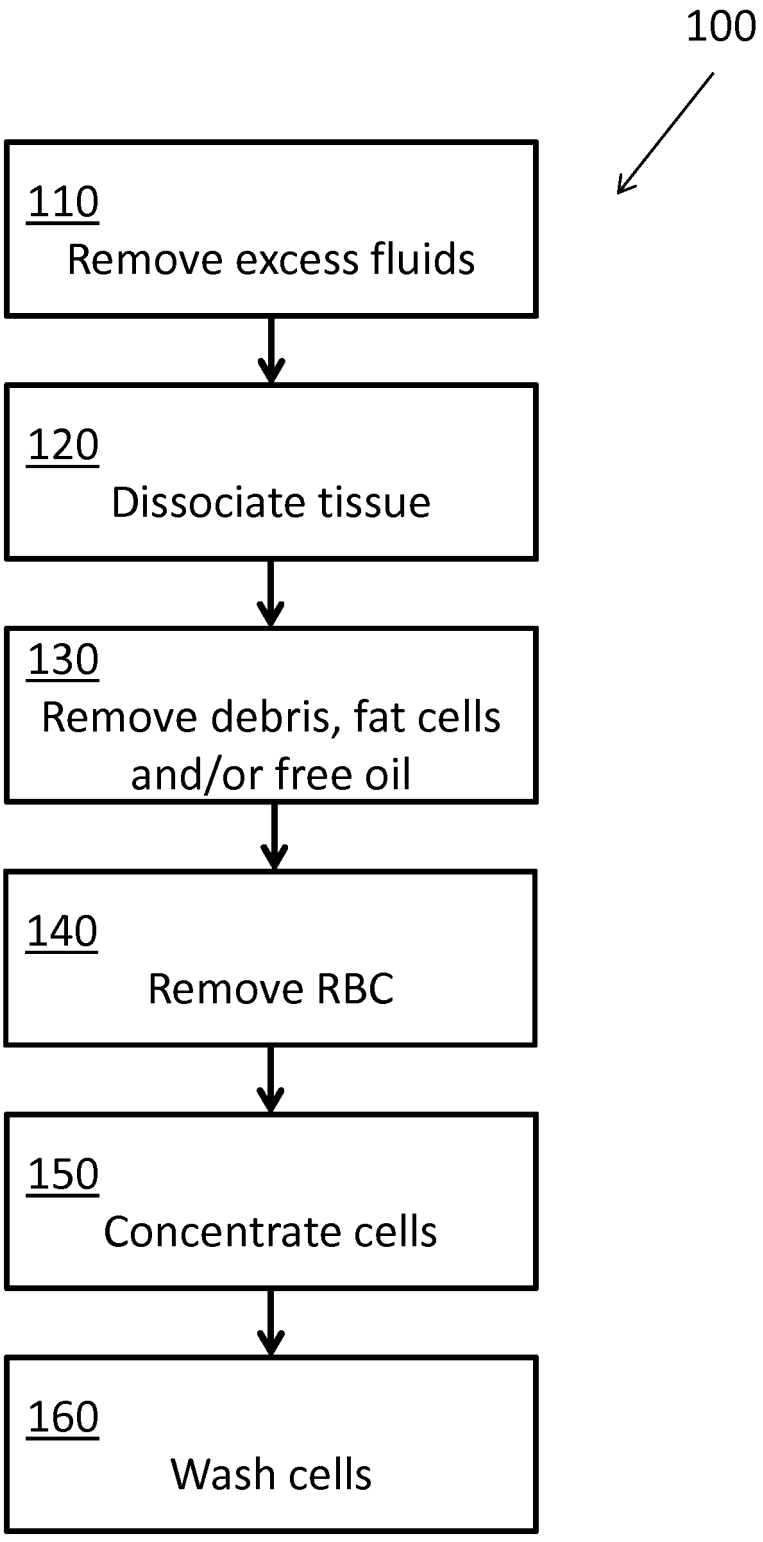

100
110
Remove excess fluids
120
Dissociate tissue
130
Remove debris, fat cells and/or free oil
140
Remove RBC
150
Concentrate cells
160
Wash cells

FIG. 1B

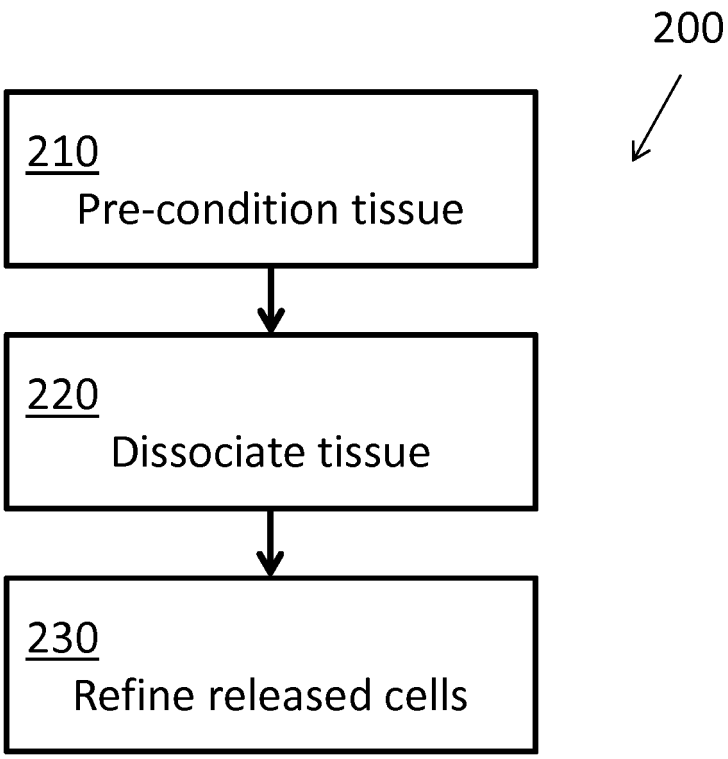

200
210
Pre-condition tissue
220
Dissociate tissue
230
Refine released cells

FIG. 2A

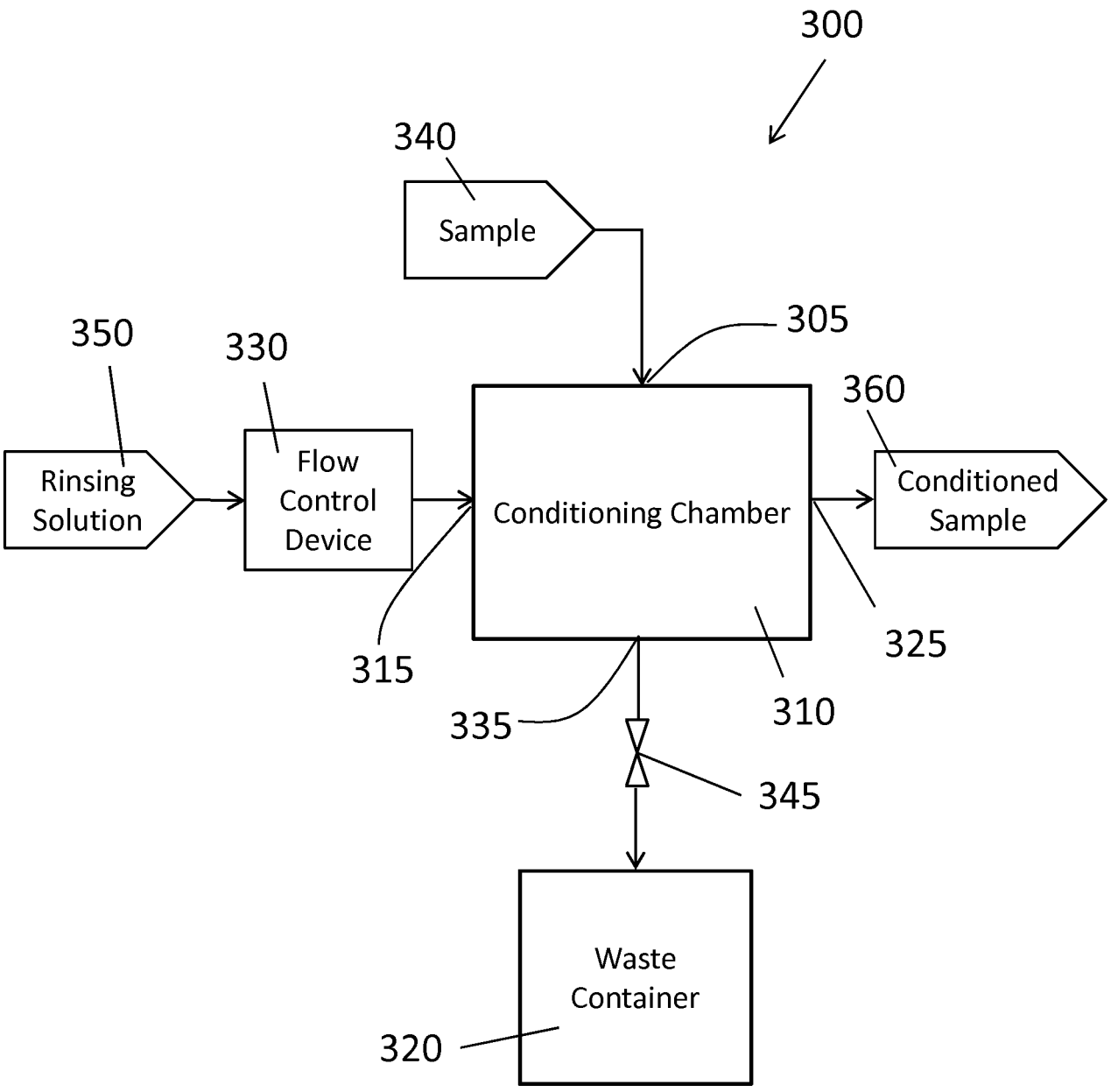

300
340
Sample
305
350
330
360
Rinsing Solution
Flow Control Device
Conditioning Chamber
Conditioned Sample
315
325
335
310
345
Waste Container
320

FIG. 2B

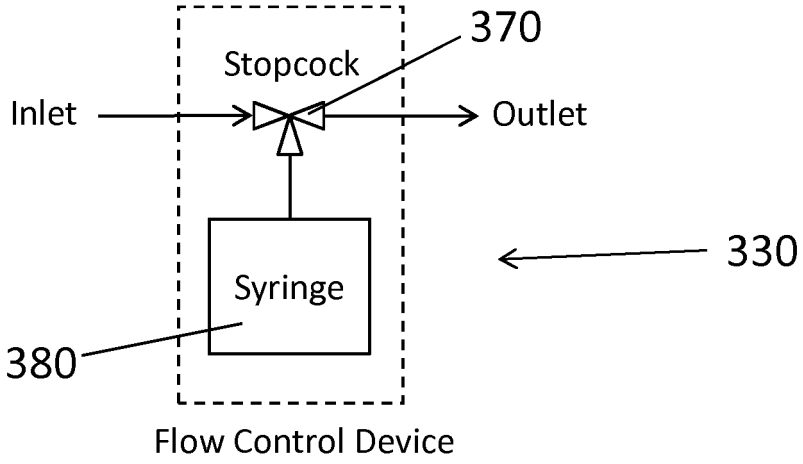

370
Stopcock
Inlet
Outlet
330
Syringe
380
Flow Control Device

FIG. 2C

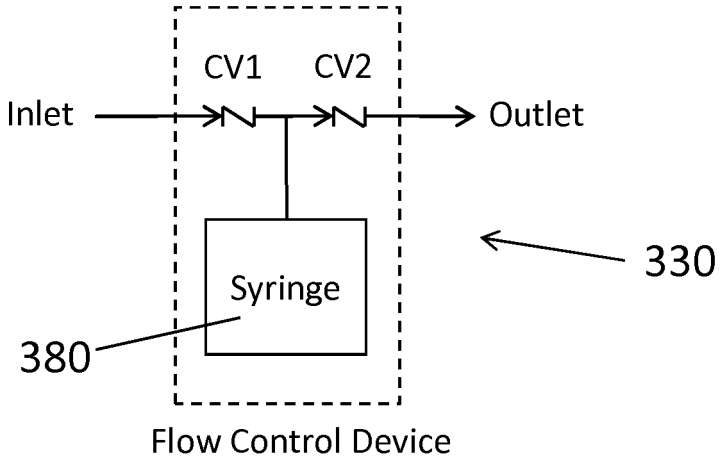

CV1
CV2
Inlet
Outlet
330
Syringe
380
Flow Control Device

FIG. 2D

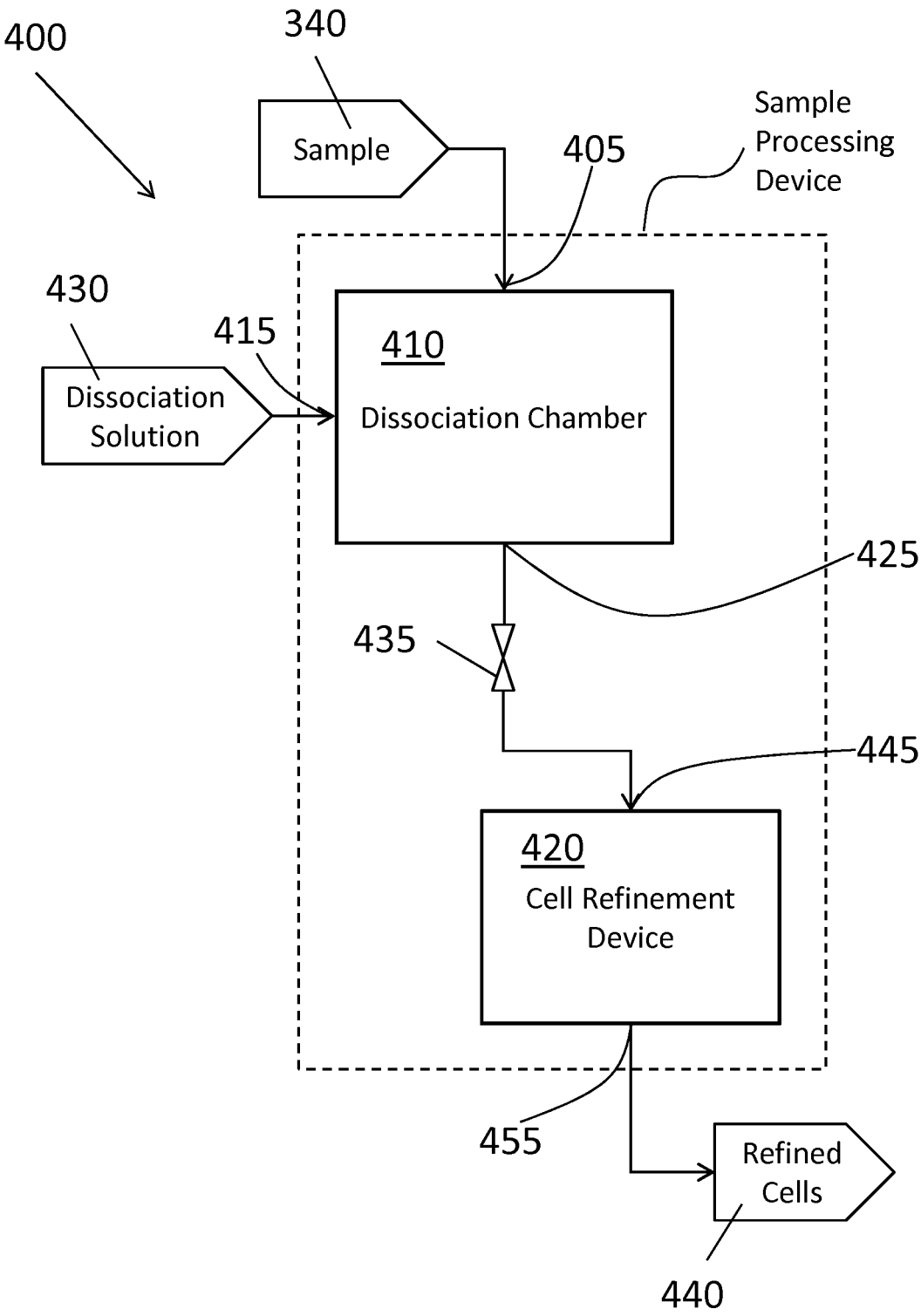

400
340
Sample
405
Sample Processing Device
430
415
410
Dissociation Chamber
Dissociation Solution
425
435
445
420
Cell Refinement Device
455
Refined Cells
440

FIG. 2E

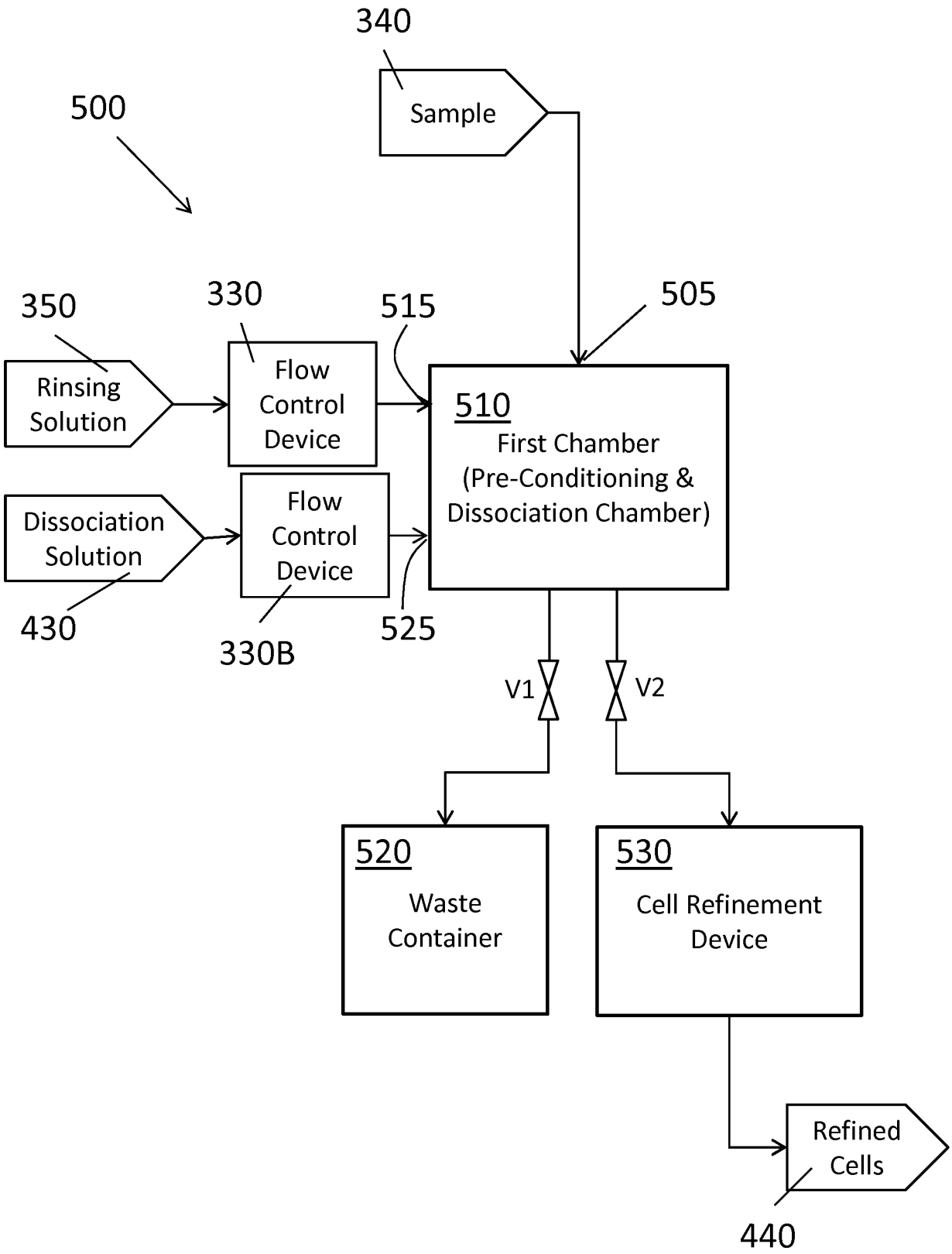

340
Sample
500
505
350
330
515
Rinsing Solution
Flow Control Device
510
First Chamber (Pre-Conditioning & Dissociation Chamber)
Dissociation Solution
Flow Control Device
430
330B
525
V1
V2
520
Waste Container
530
Cell Refinement Device
Refined Cells
440

FIG. 2F

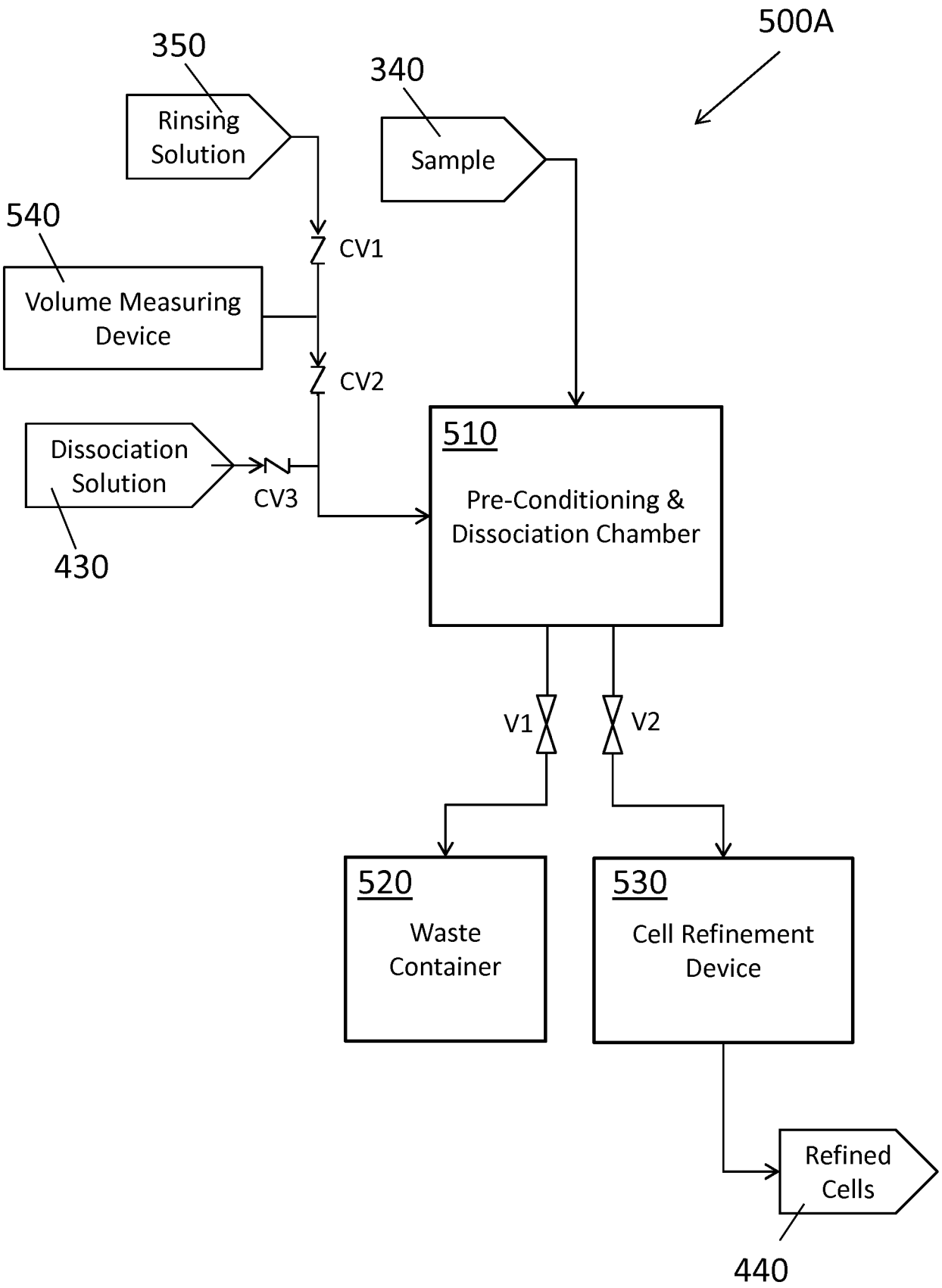

500A
350
Rinsing Solution
340
Sample
540
Volume Measuring Device
CV1
CV2
Dissociation Solution
CV3
430
510
Pre-Conditioning & Dissociation Chamber
V1
V2
520
Waste Container
530
Cell Refinement Device
Refined Cells
440

FIG. 2G

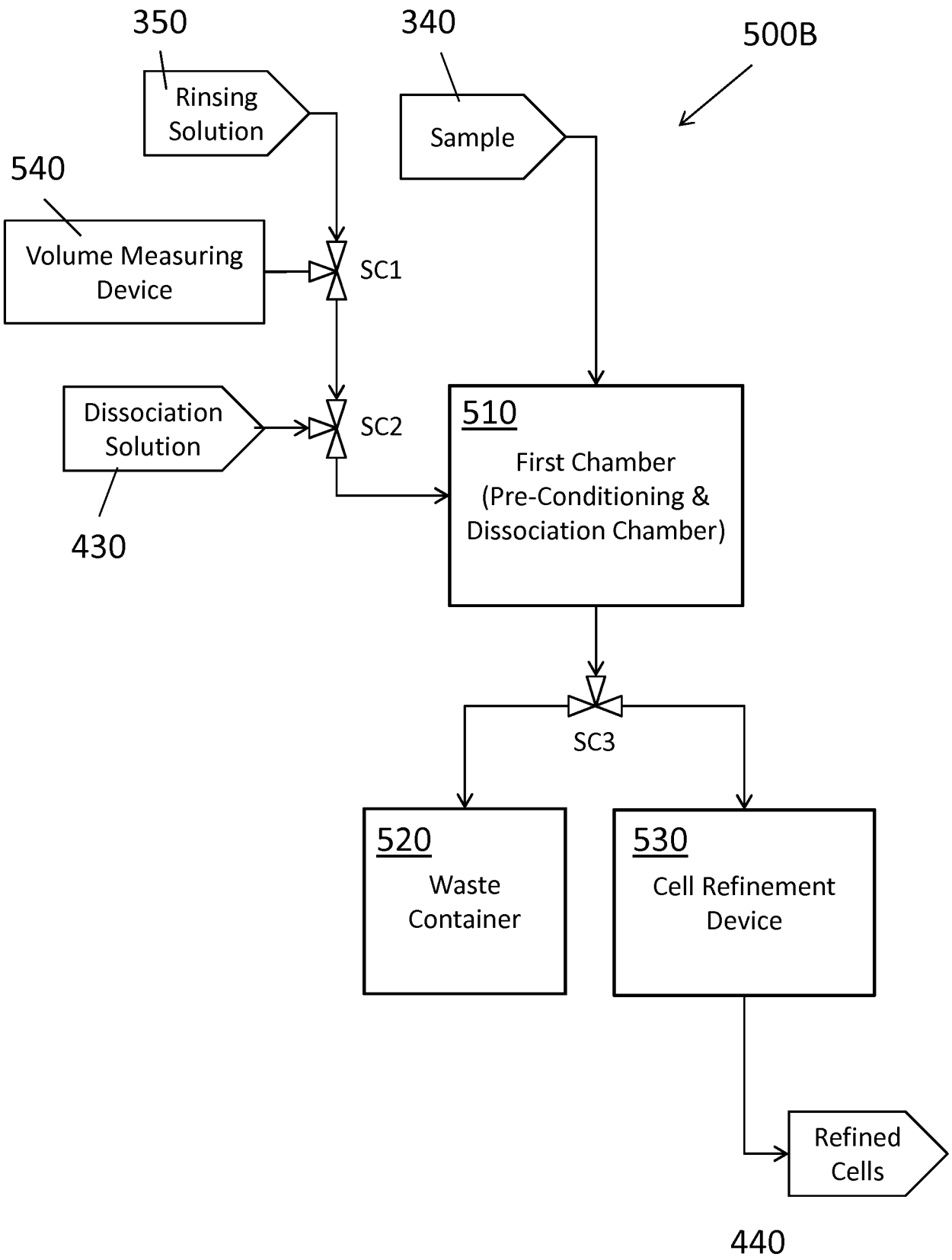

350
Rinsing Solution
340
Sample
500B
540
Volume Measuring Device
SC1
Dissociation Solution
SC2
430
510
First Chamber (Pre-Conditioning & Dissociation Chamber)
SC3
520
Waste Container
530
Cell Refinement Device
Refined Cells
440

FIG. 3A

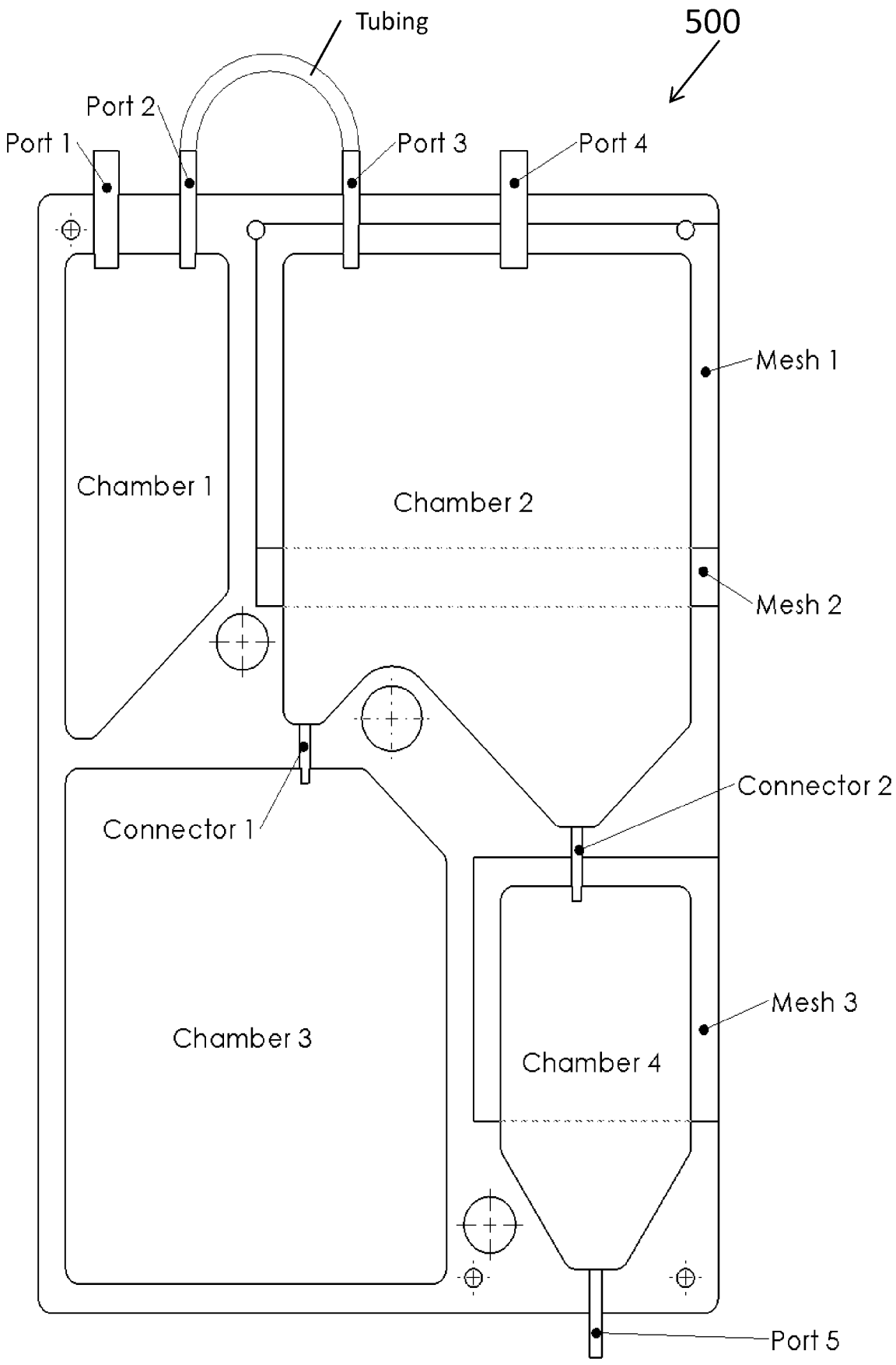

Tubing
500
Port 2
Port 1
Port 3
Port 4
Mesh 1
Chamber 1
Chamber 2
Mesh 2
Connector 2
Connector 1
Chamber 3
Chamber 4
Mesh 3
Port 5

FIG. 3B

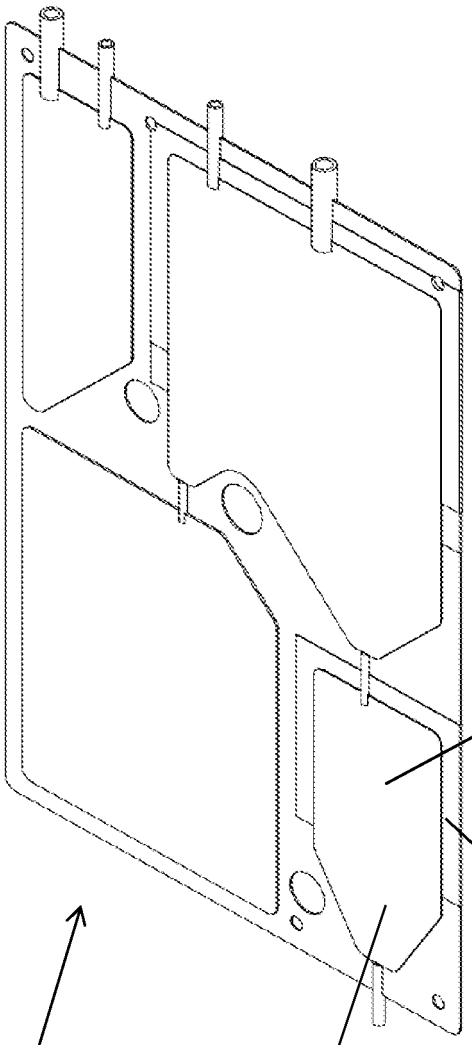

500
Chamber 4

FIG.3C

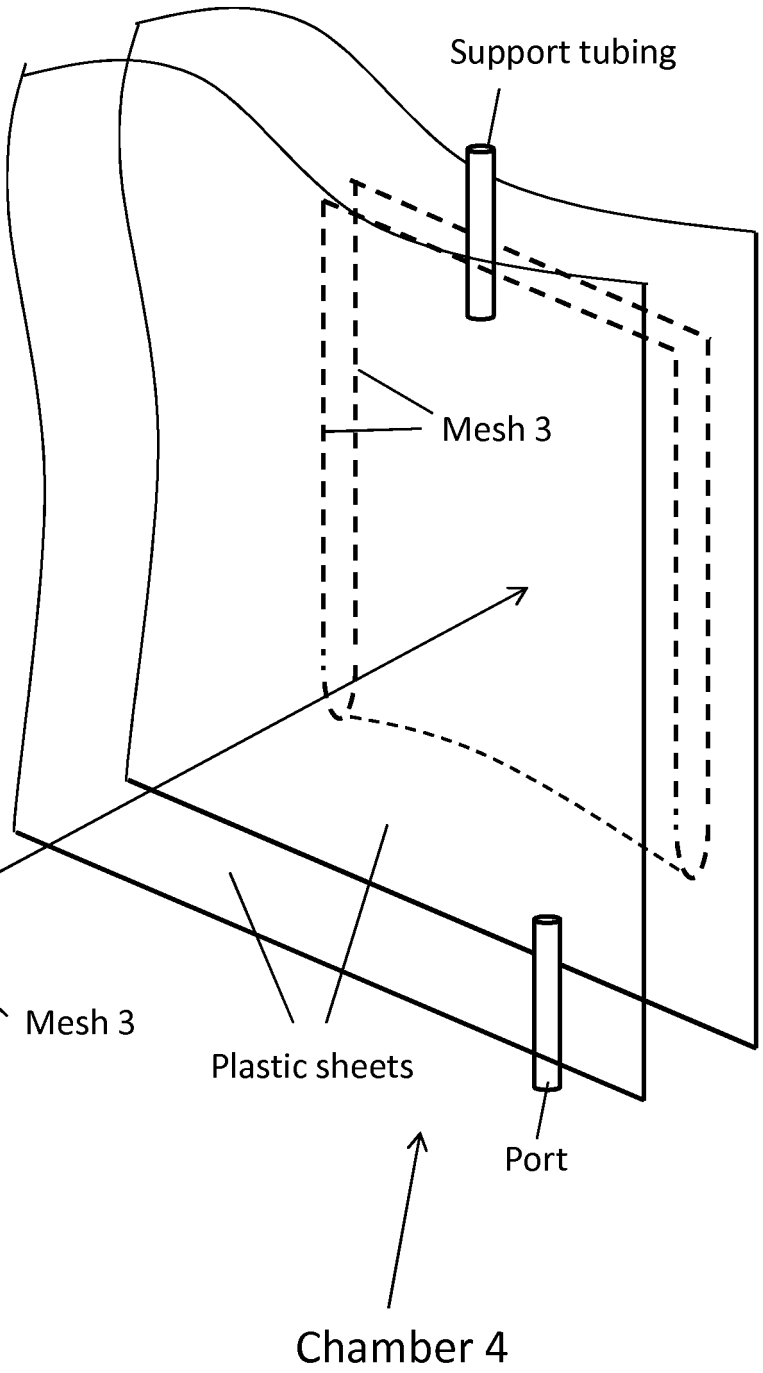

Support tubing
Mesh 3
Mesh 3
Plastic sheets
Port
Chamber 4

FIG. 3D

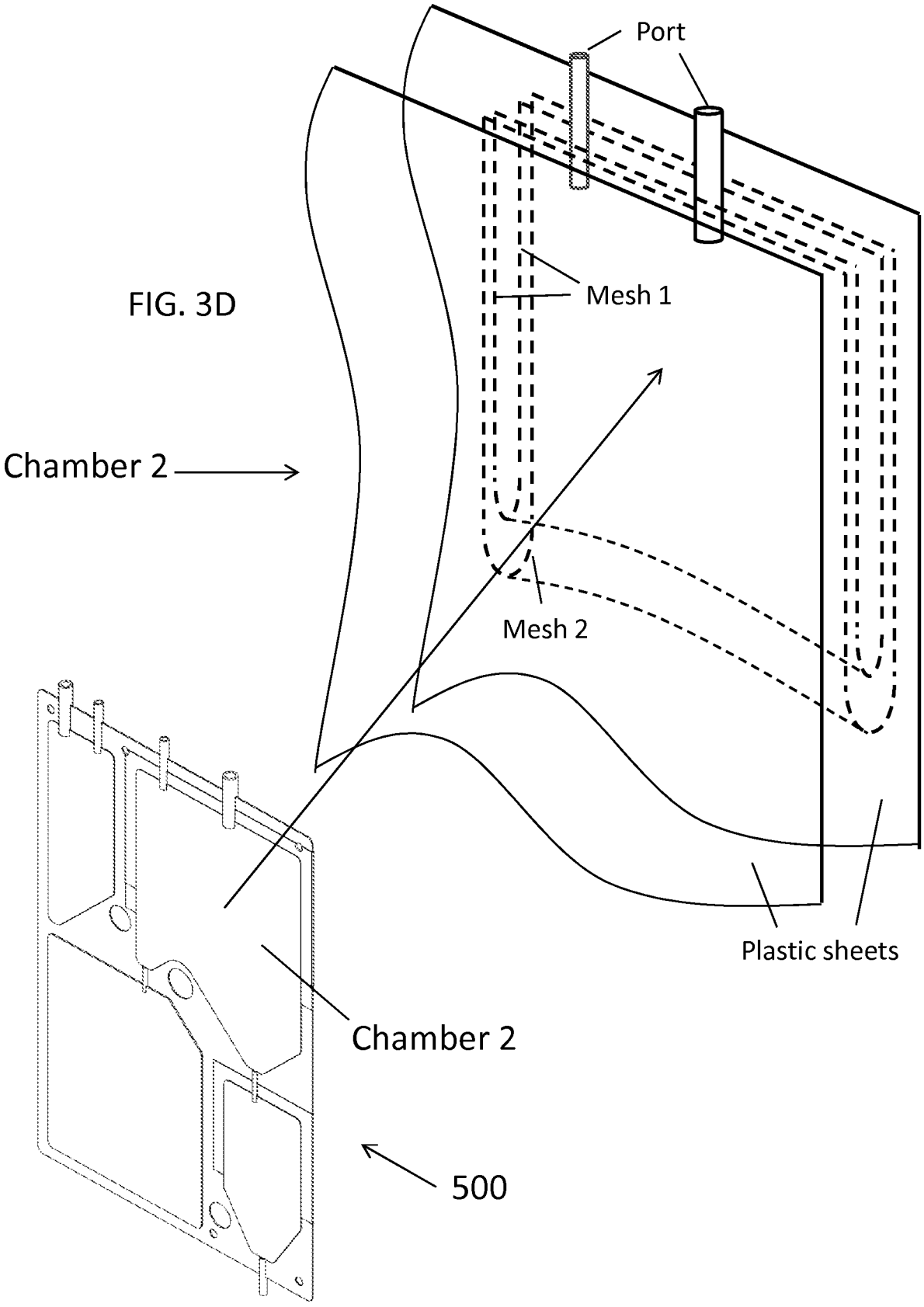


FIG. 3E

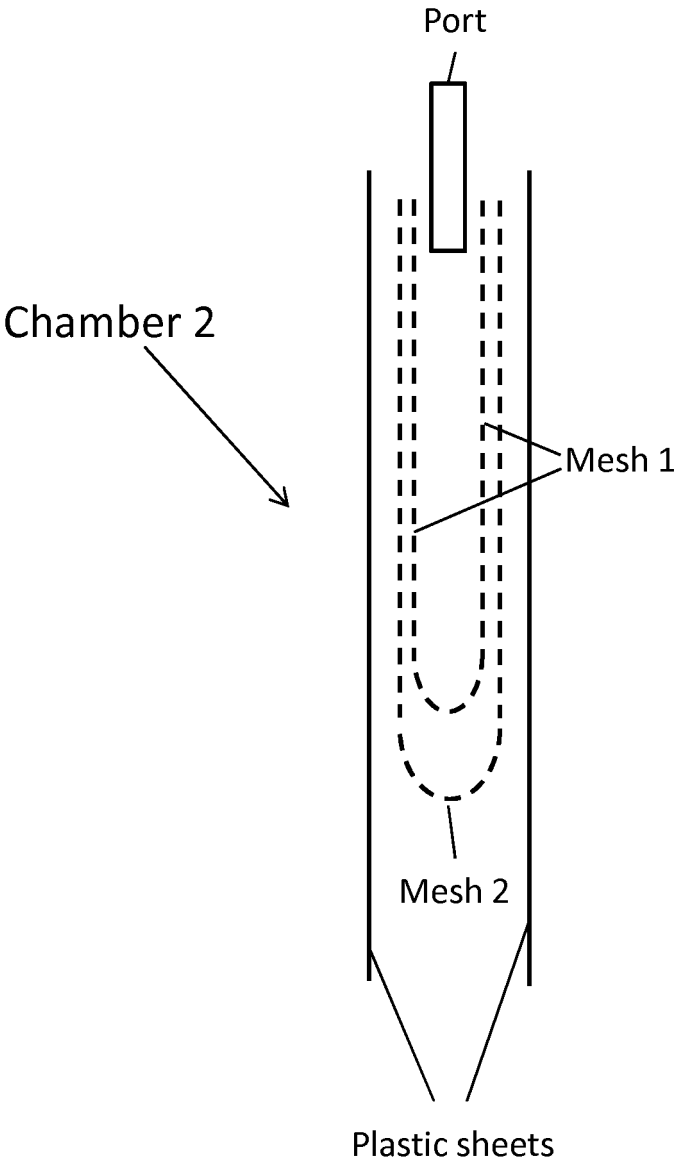


FIG. 3F

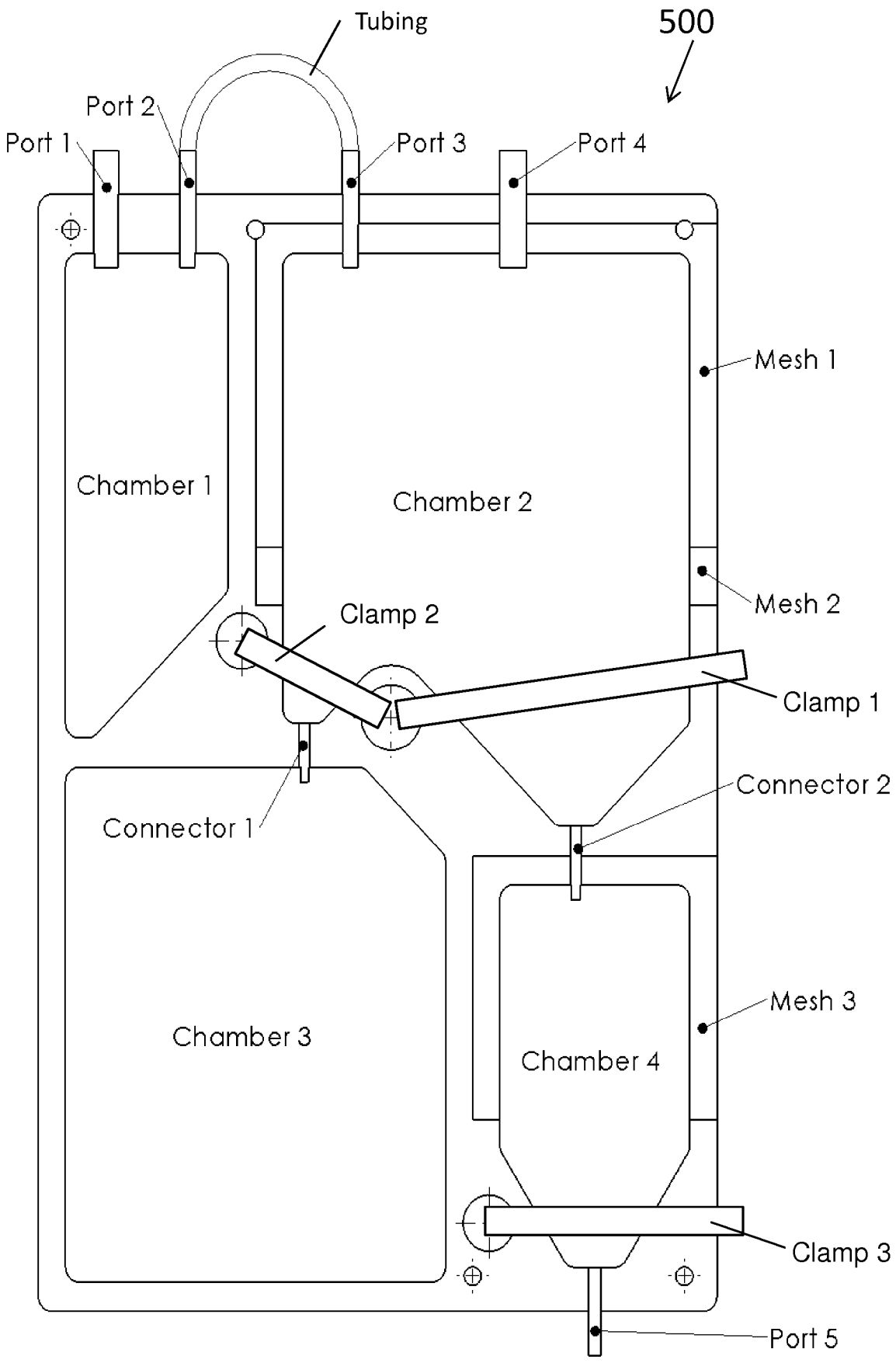

Tubing
500
Port 2
Port 1
Port 3
Port 4
Mesh 1
Chamber 1
Chamber 2
Mesh 2
Clamp 2
Clamp 1
Connector 2
Connector 1
Mesh 3
Chamber 3
Chamber 4
Clamp 3
Port 5

FIG. 4

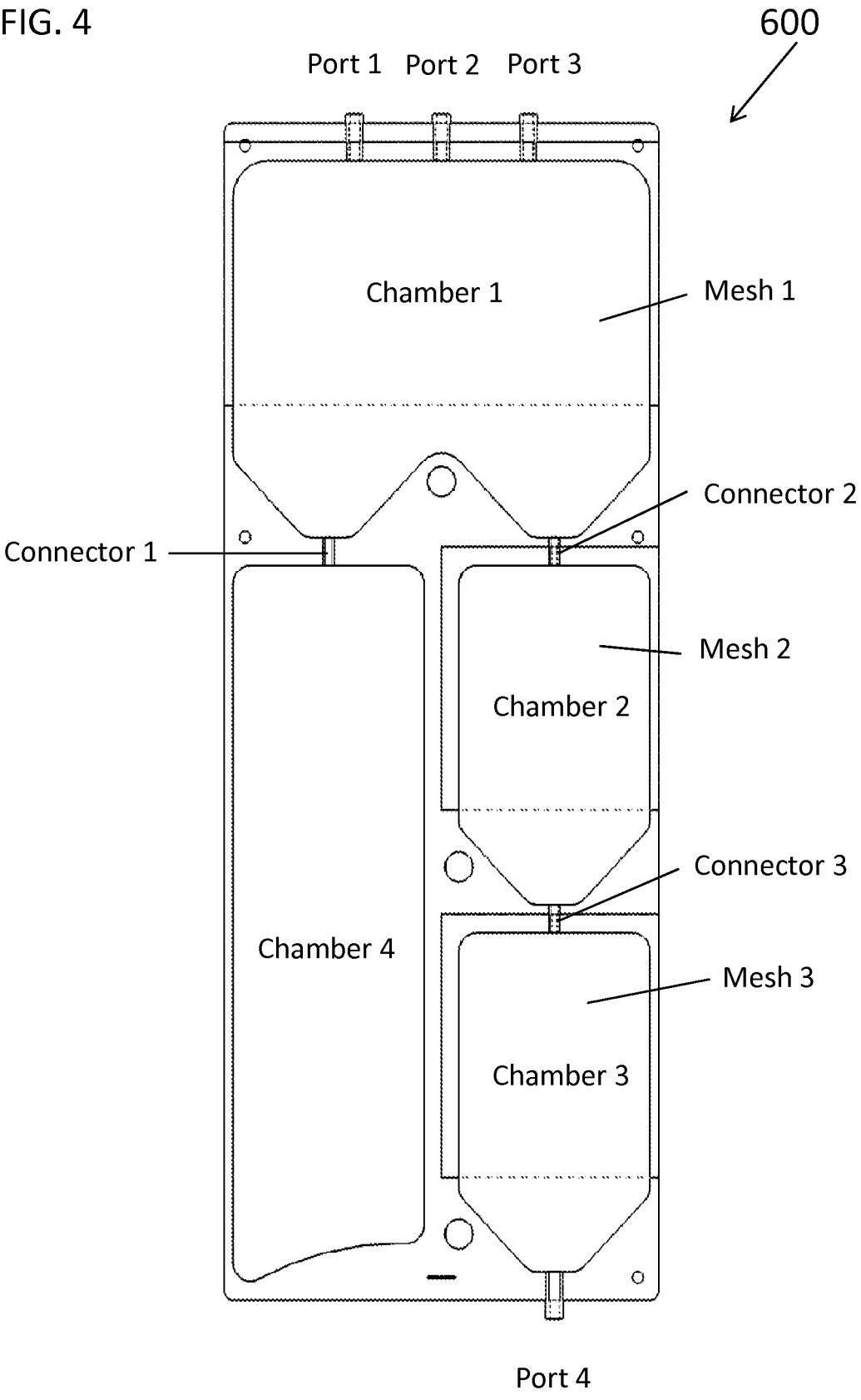

600
Port 1
Port 2
Port 3
Chamber 1
Mesh 1
Connector 2
Connector 1
Mesh 2
Chamber 2
Connector 3
Chamber 4
Mesh 3
Chamber 3
Port 4

FIG. 5A

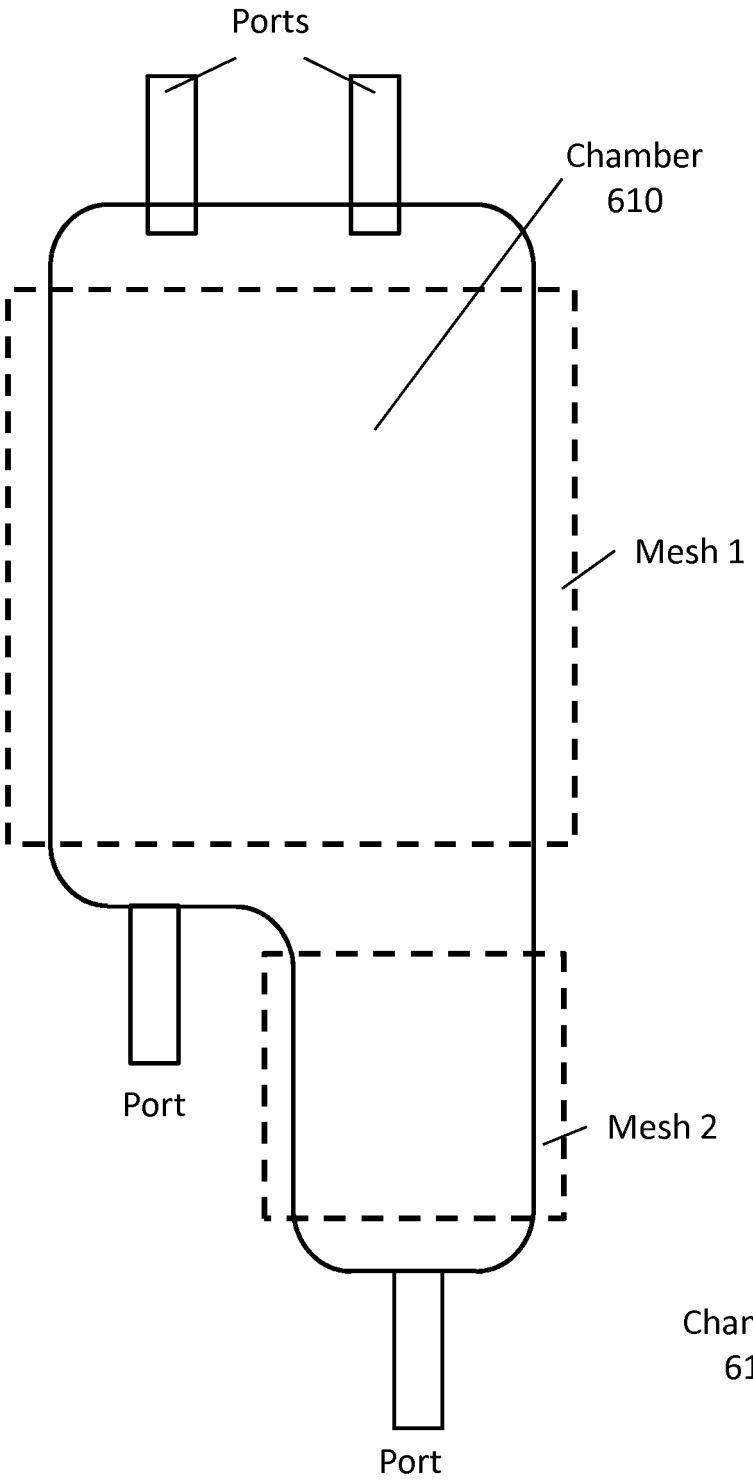

Ports
Chamber
610
Mesh 1
Port
Mesh 2
Port

FIG. 5B

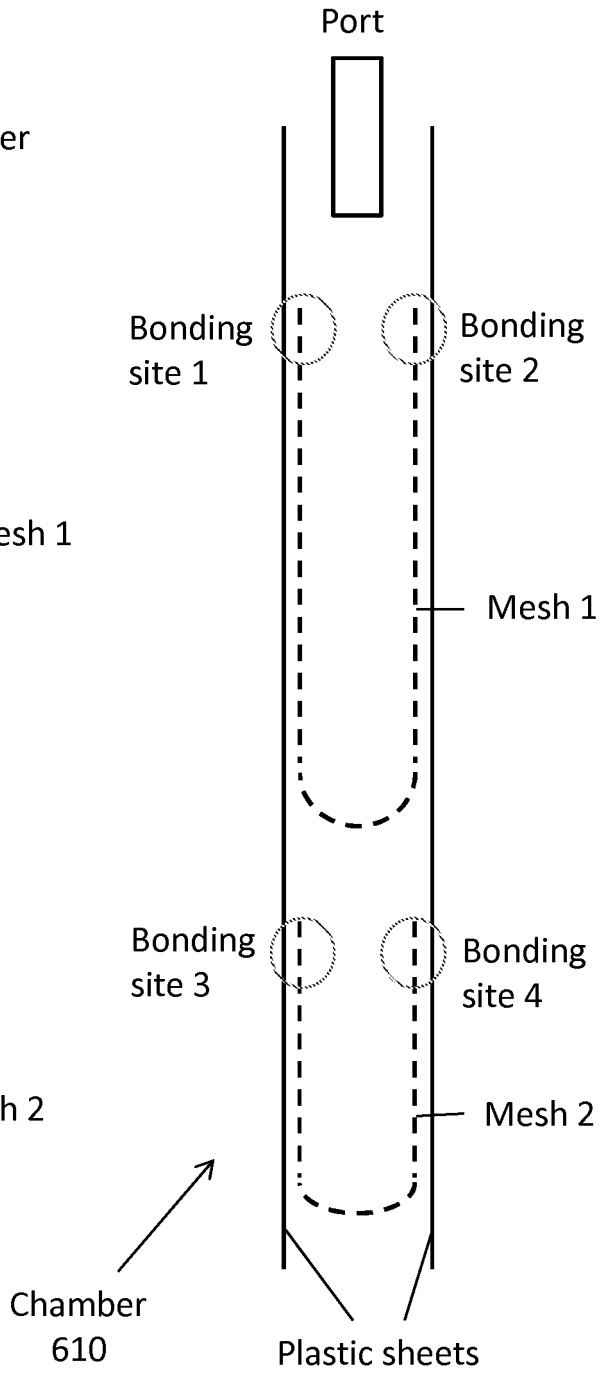

Port
Bonding
site 1
Bonding
site 2
Mesh 1
Bonding
site 3
Bonding
site 4
Mesh 2
Chamber
610
Plastic sheets

FIG. 6A

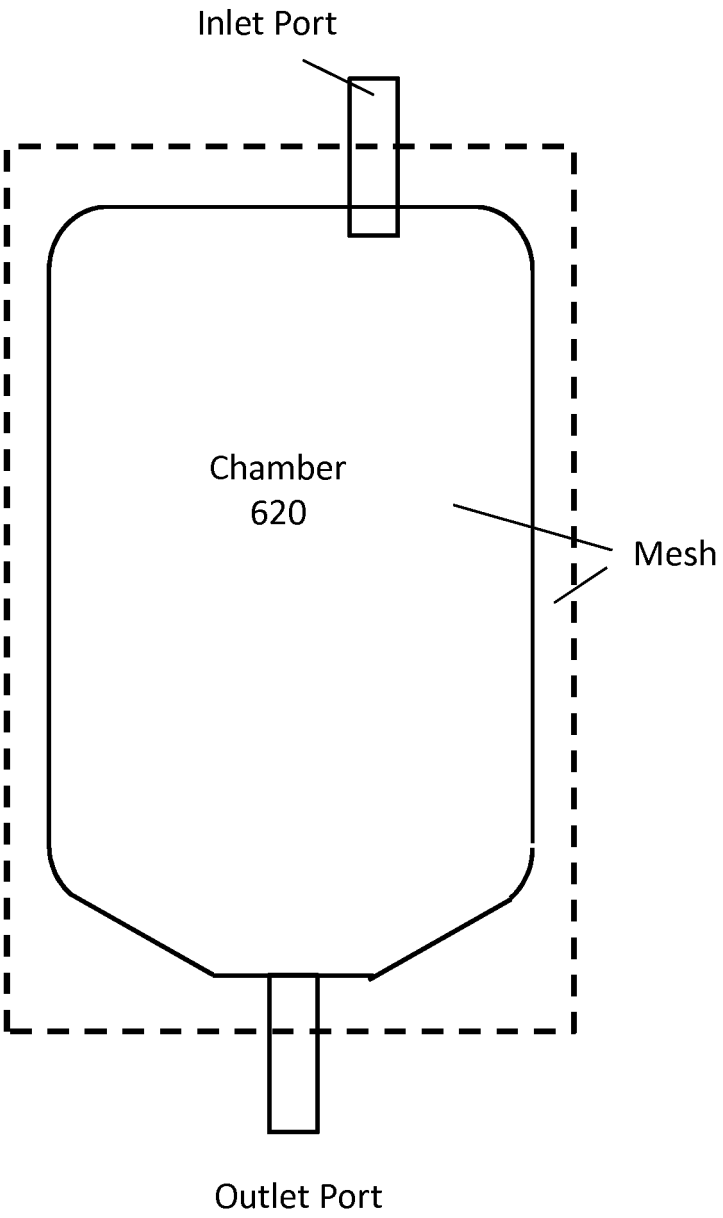

Inlet Port
Chamber
620
Mesh
Outlet Port

FIG. 6B

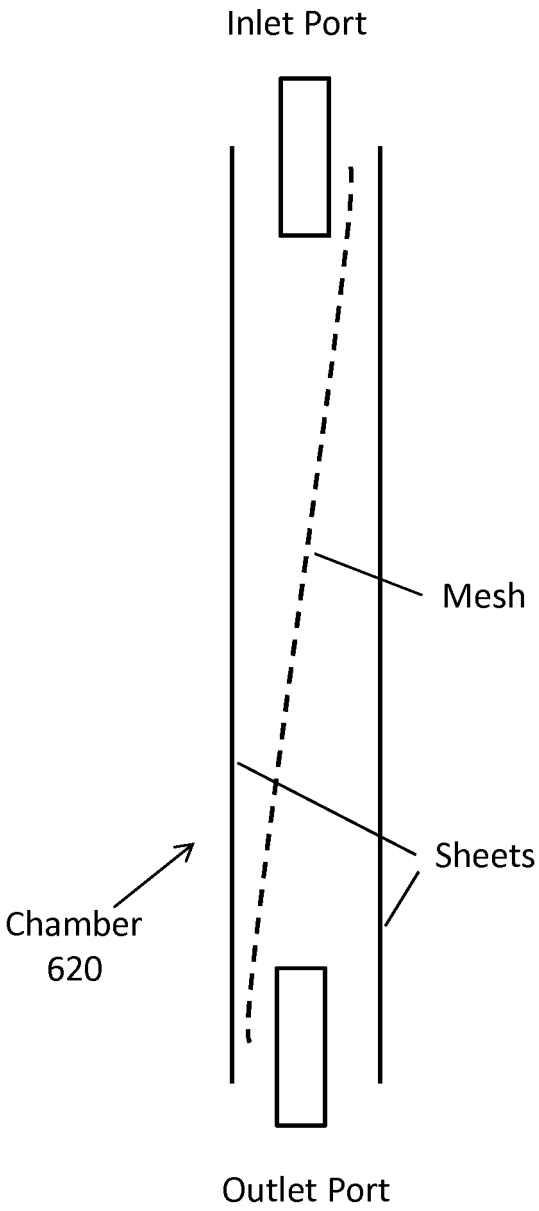

Inlet Port
Mesh
Sheets
Chamber
620
Outlet Port

FIG. 7

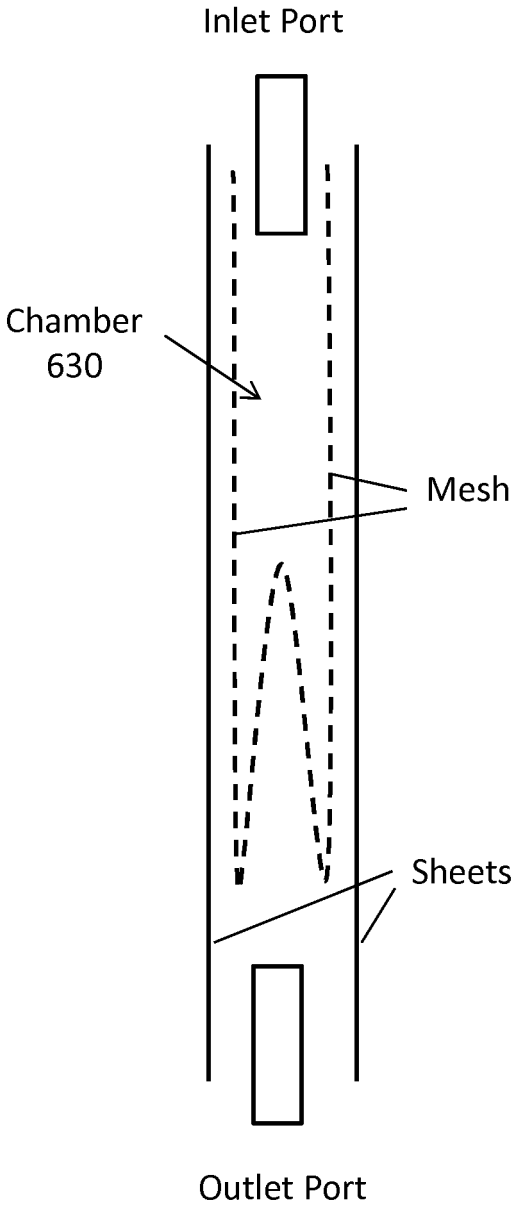


FIG. 8A

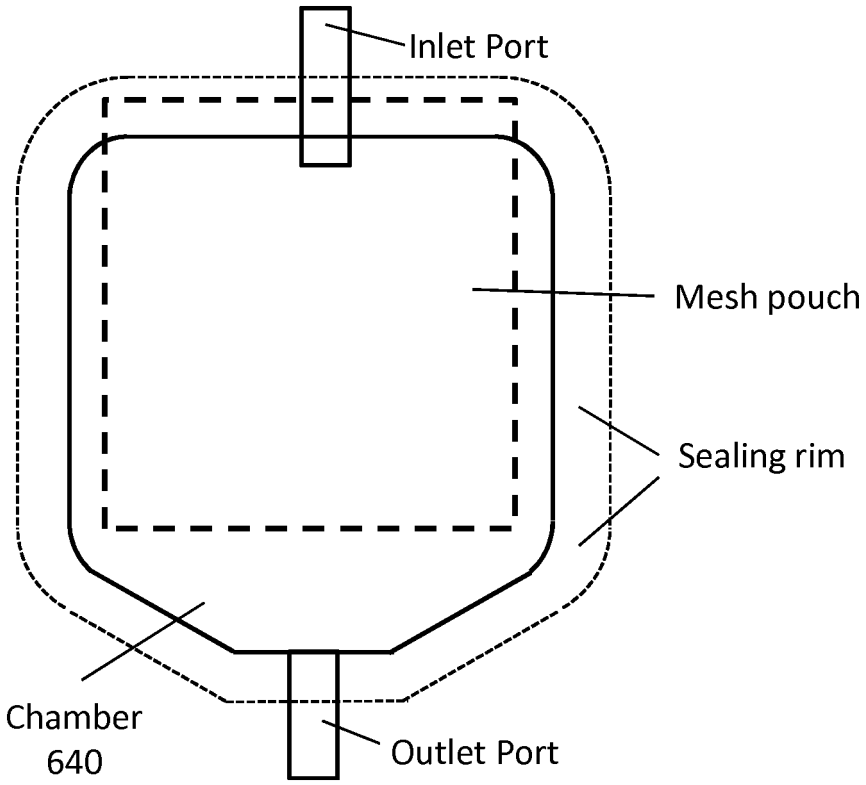


FIG. 8B

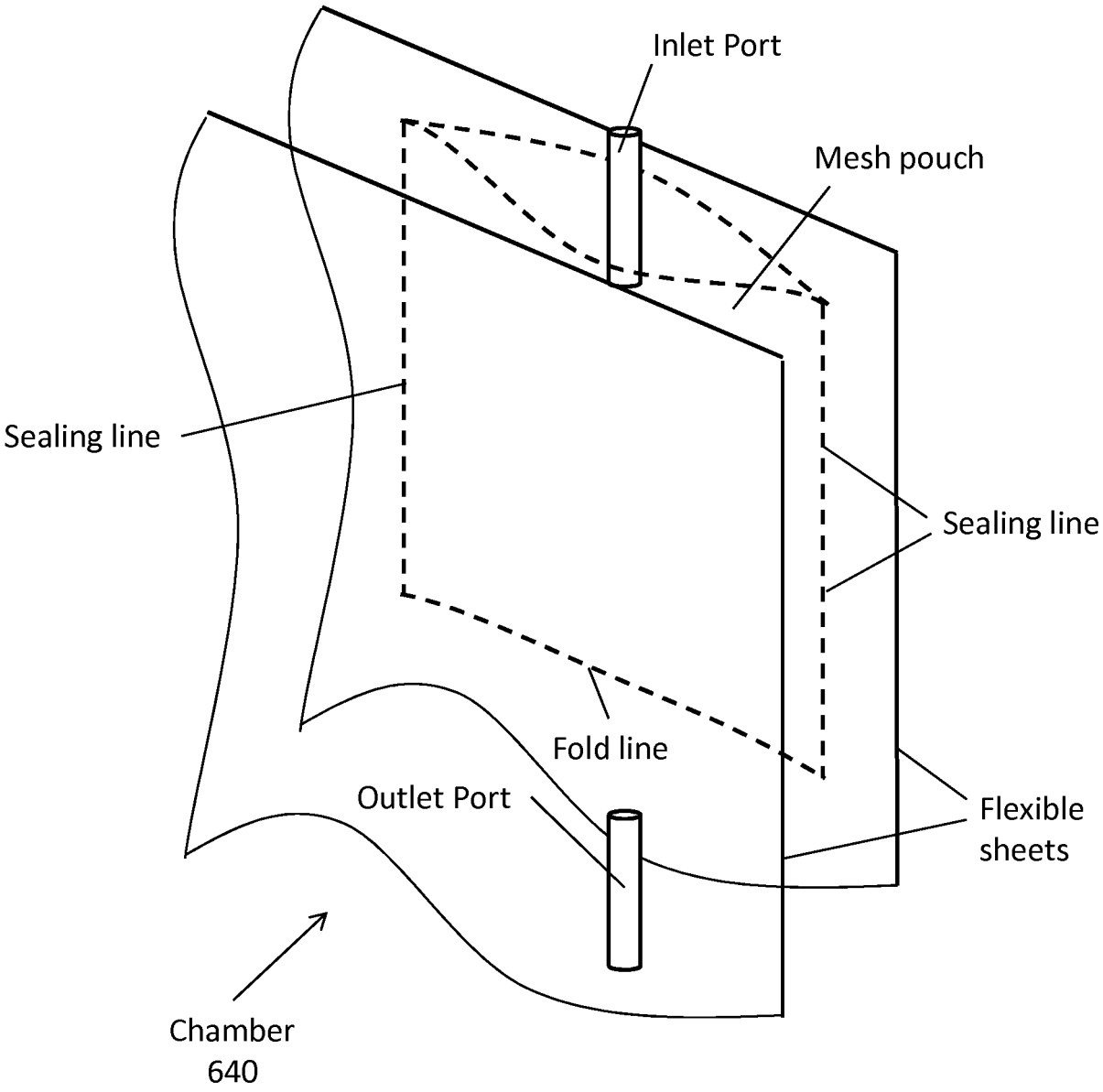

Inlet Port
Mesh pouch
Sealing line
Sealing line
Fold line
Outlet Port
Flexible sheets
Chamber 640

FIG. 9A

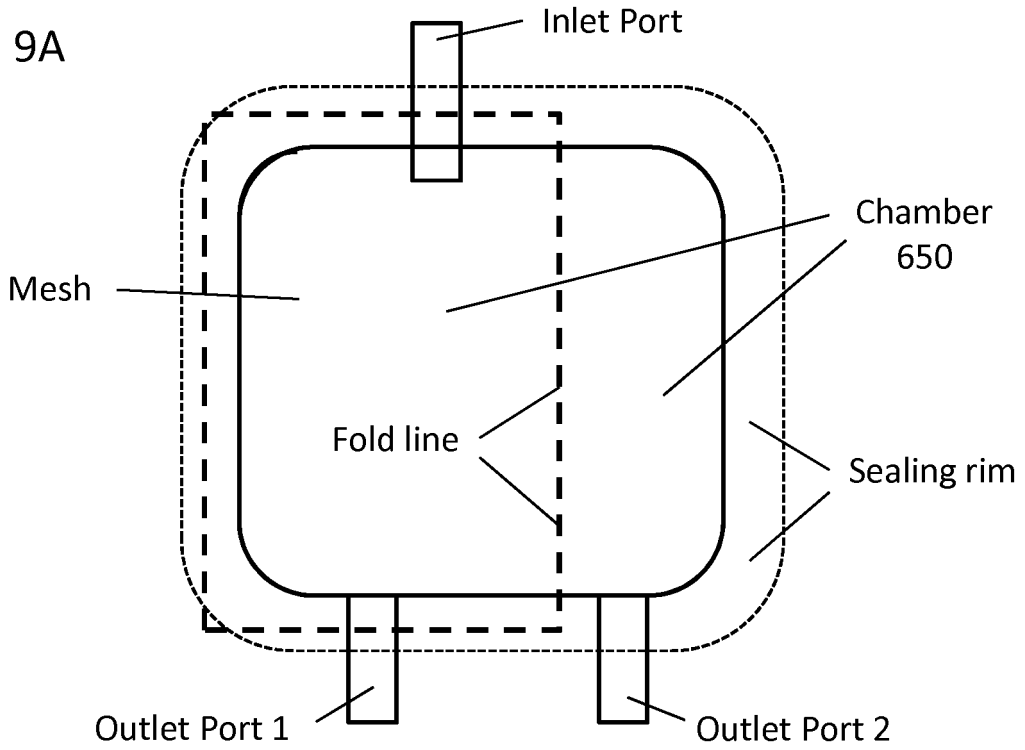

Inlet Port
Chamber
650
Mesh
Fold line
Sealing rim
Outlet Port 1
Outlet Port 2

FIG.9B

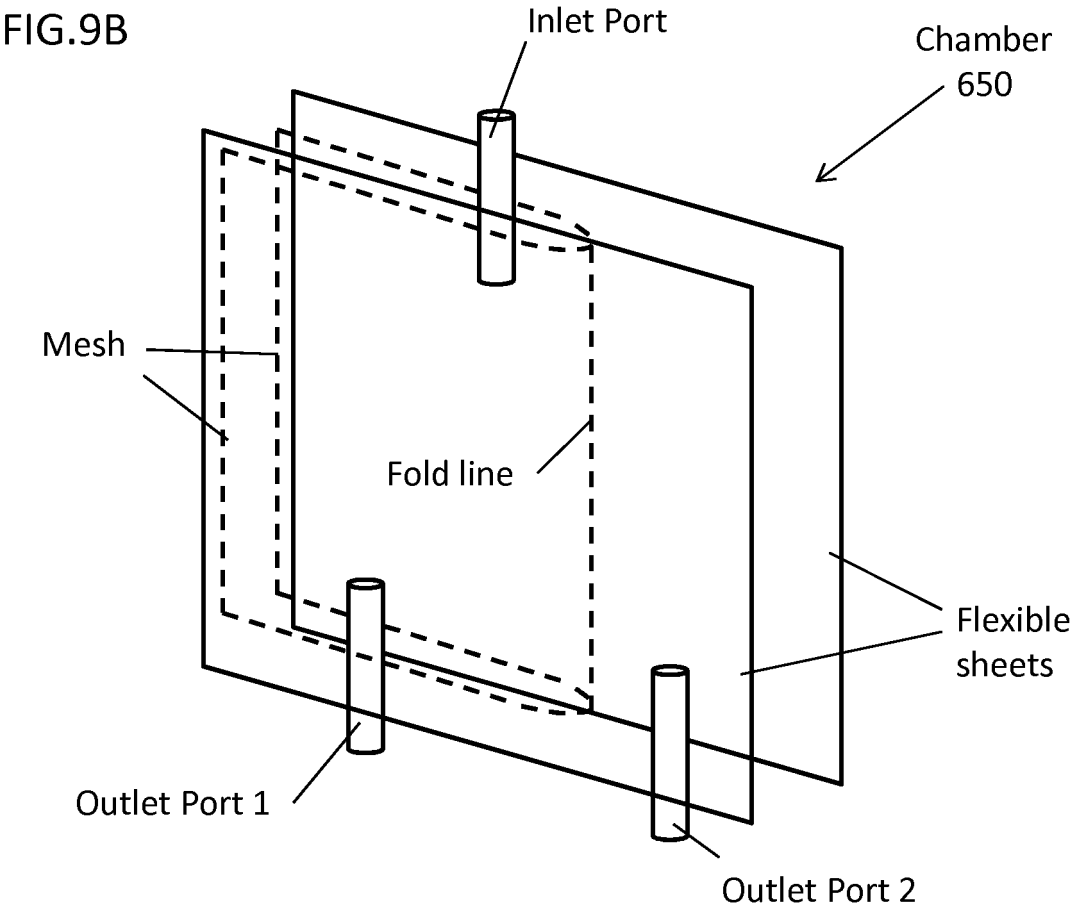

Inlet Port
Chamber
650
Mesh
Fold line
Flexible
sheets
Outlet Port 1
Outlet Port 2

FIG. 10A

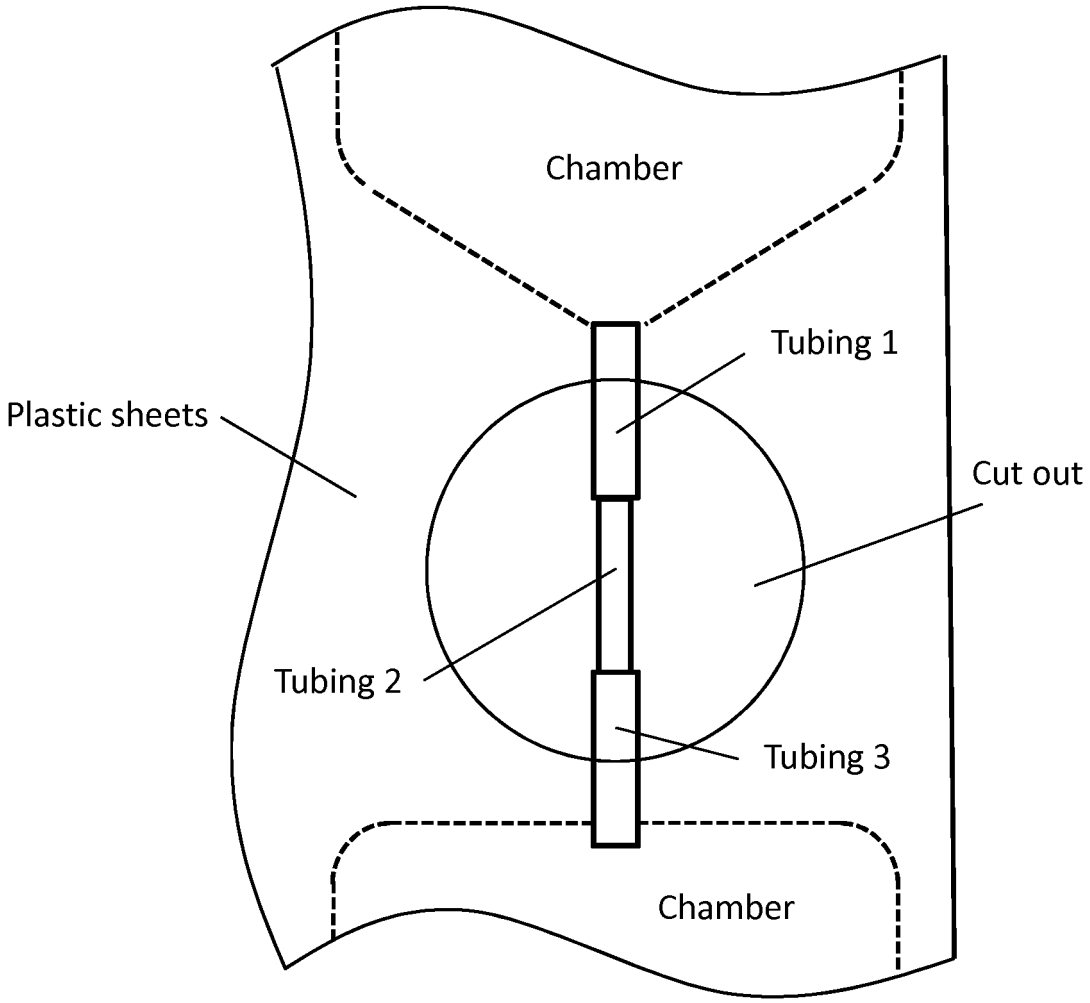

Chamber
Tubing 1
Plastic sheets
Cut out
Tubing 2
Tubing 3
Chamber

FIG. 10B

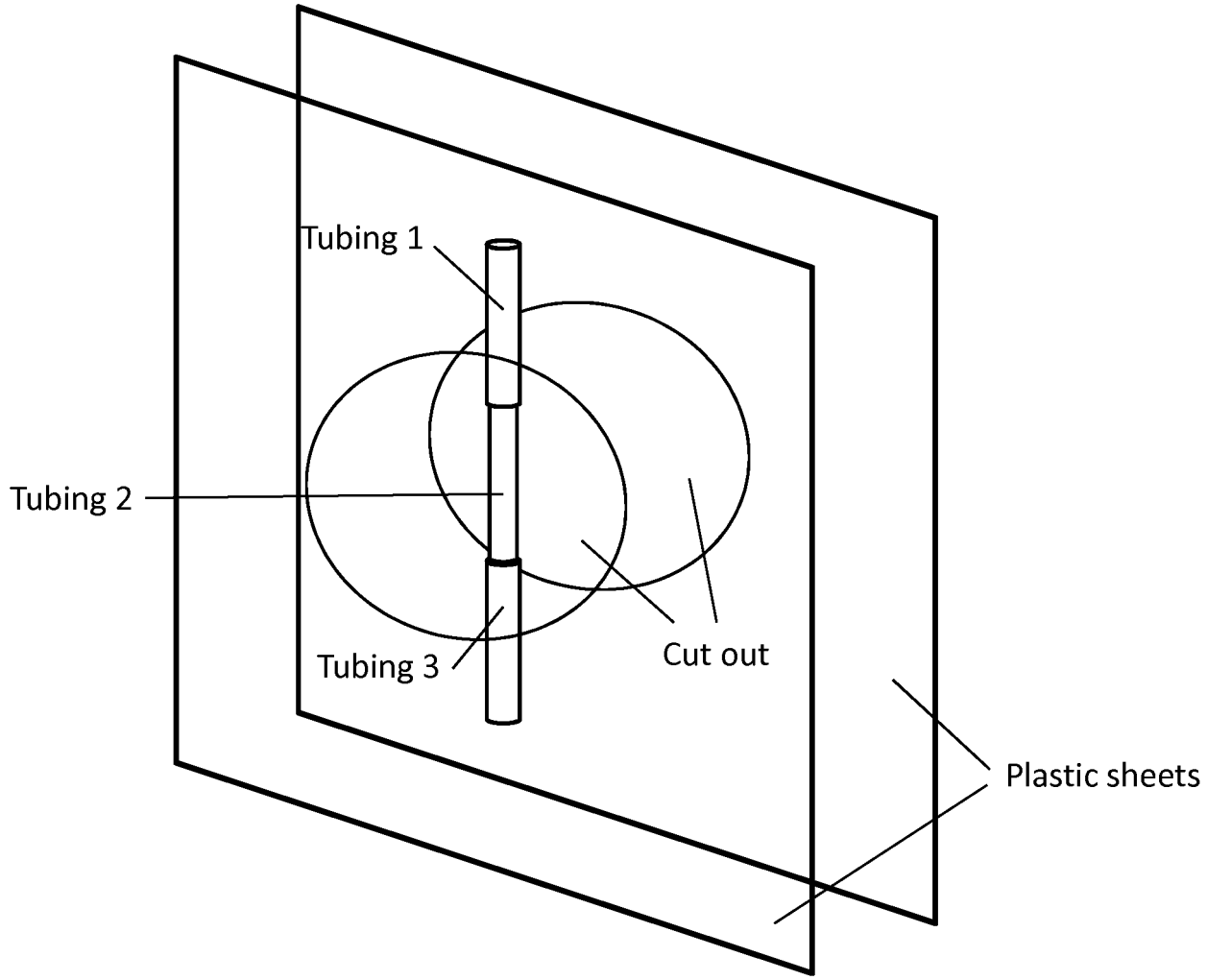


FIG. 11

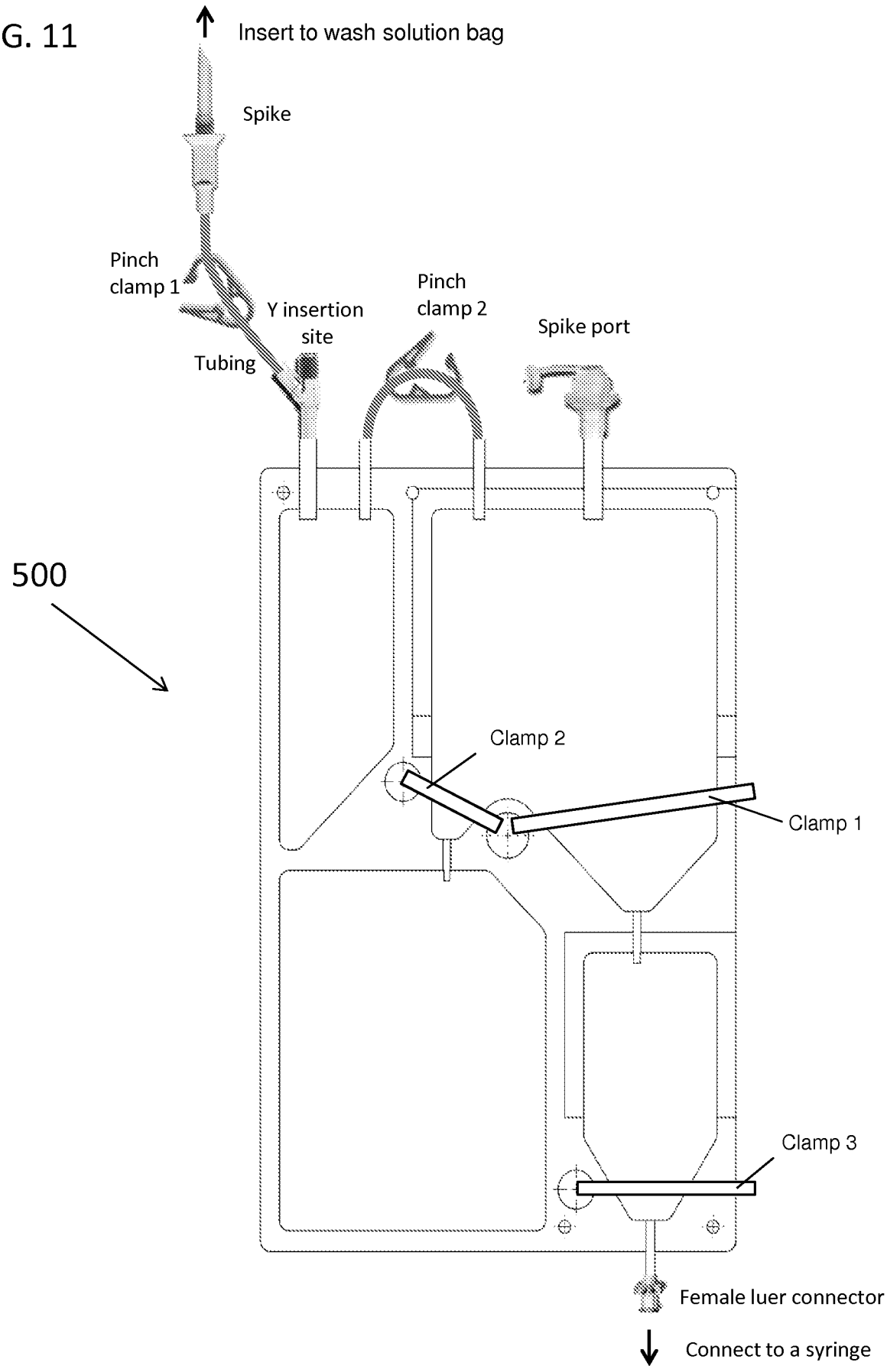

Insert to wash solution bag
Spike
Pinch clamp 1
Y insertion site
Tubing
Pinch clamp 2
Spike port
500
Clamp 2
Clamp 1
Clamp 3
Female luer connector
Connect to a syringe

FIG. 12

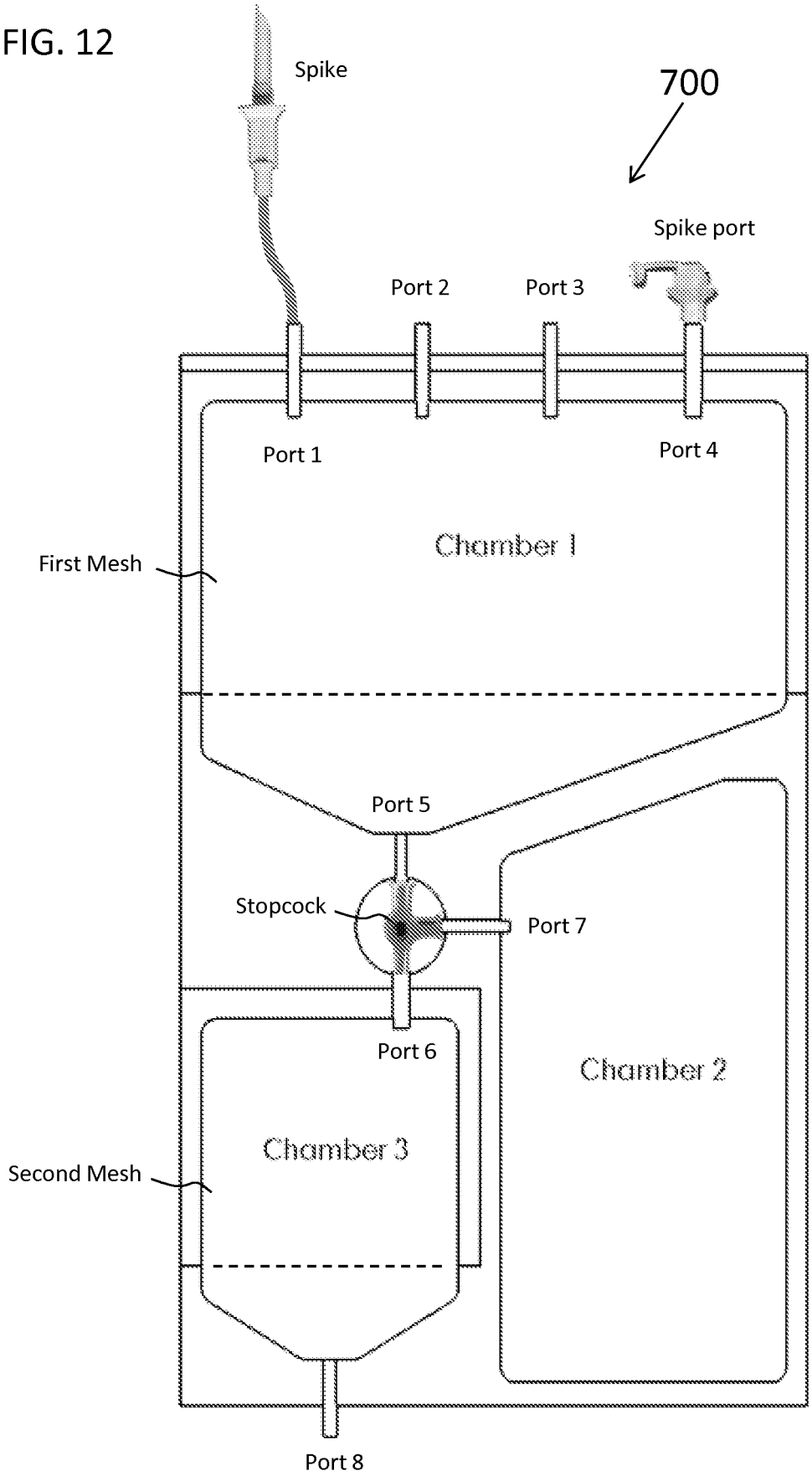

Spike
700
Spike port
Port 2
Port 3
Port 1
Port 4
Chamber 1
First Mesh
Port 5
Stopcock
Port 7
Port 6
Chamber 2
Chamber 3
Second Mesh
Port 8

FIG. 13A

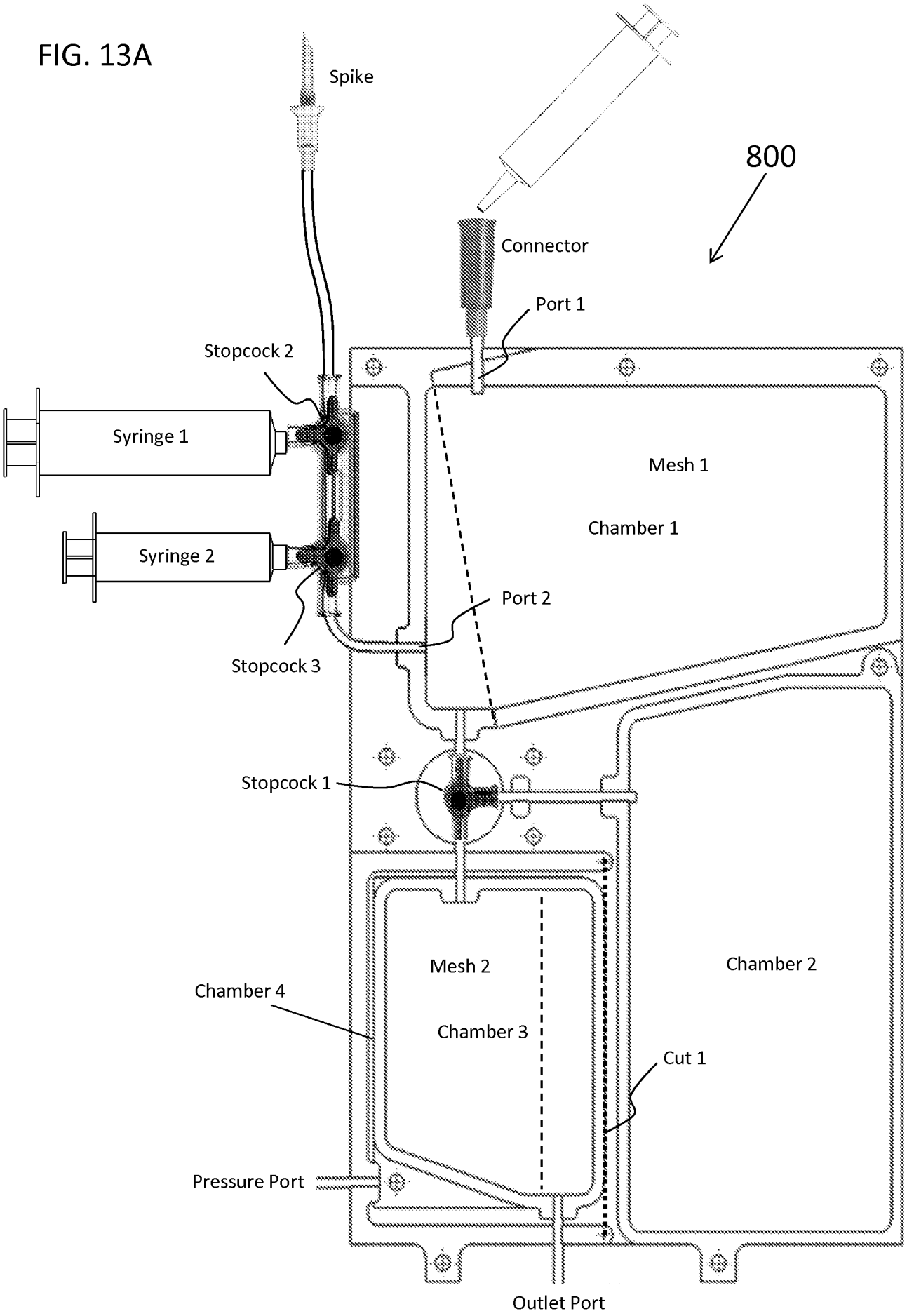

Spike
800
Connector
Port 1
Stopcock 2
Syringe 1
Mesh 1
Chamber 1
Syringe 2
Port 2
Stopcock 3
Stopcock 1
Mesh 2
Chamber 2
Chamber 4
Chamber 3
Cut 1
Pressure Port
Outlet Port

FIG. 13B

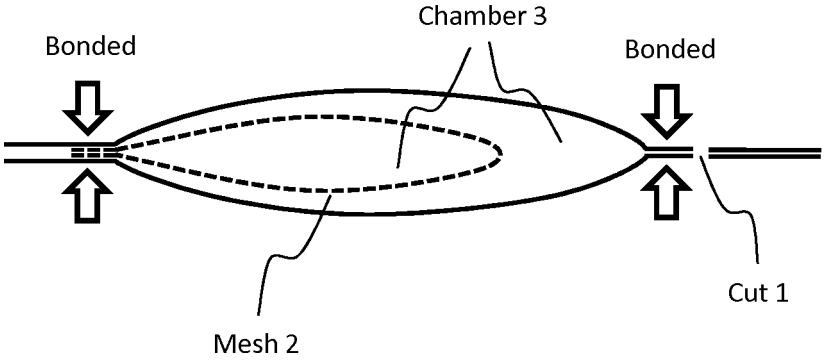


FIG. 13C

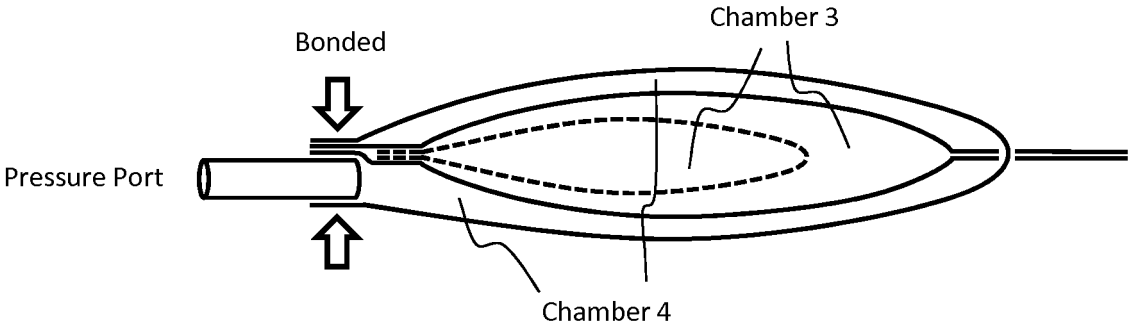


FIG. 14

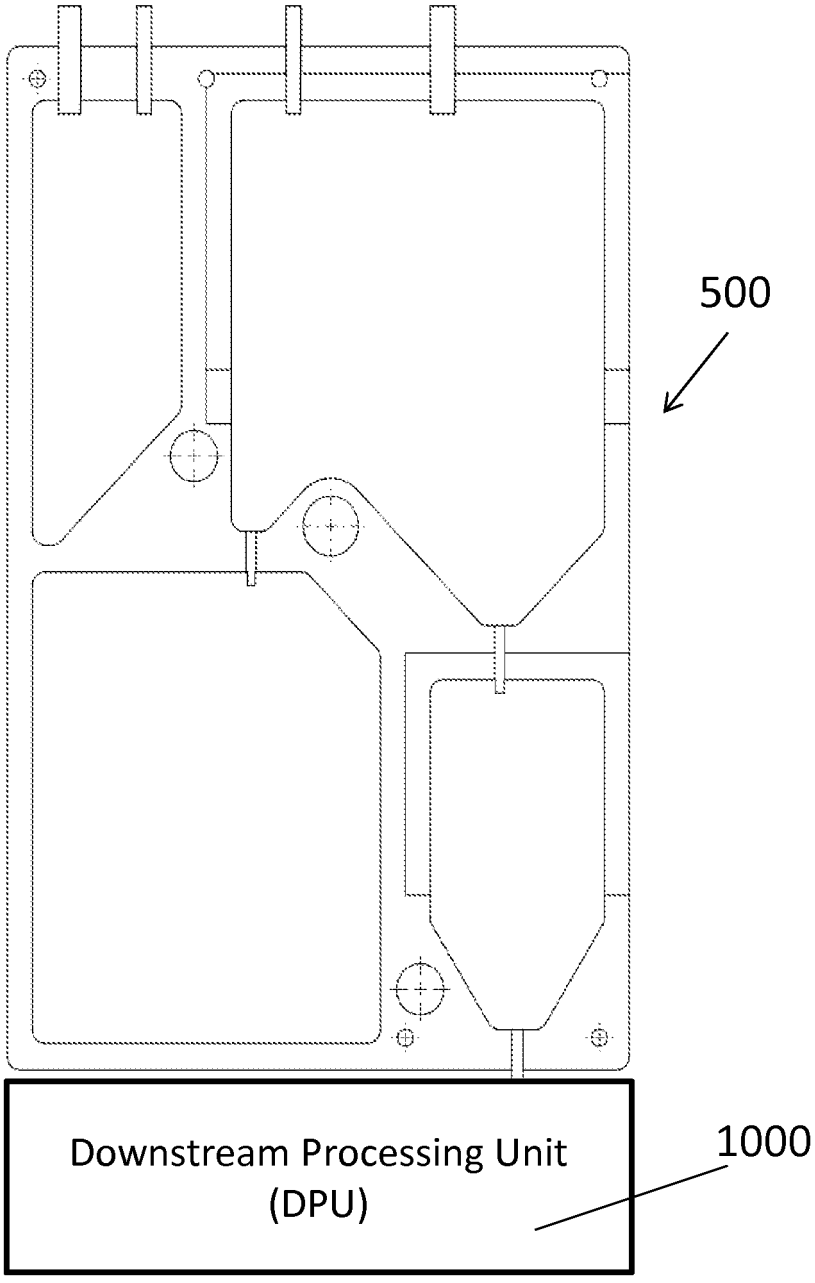


FIG. 15A

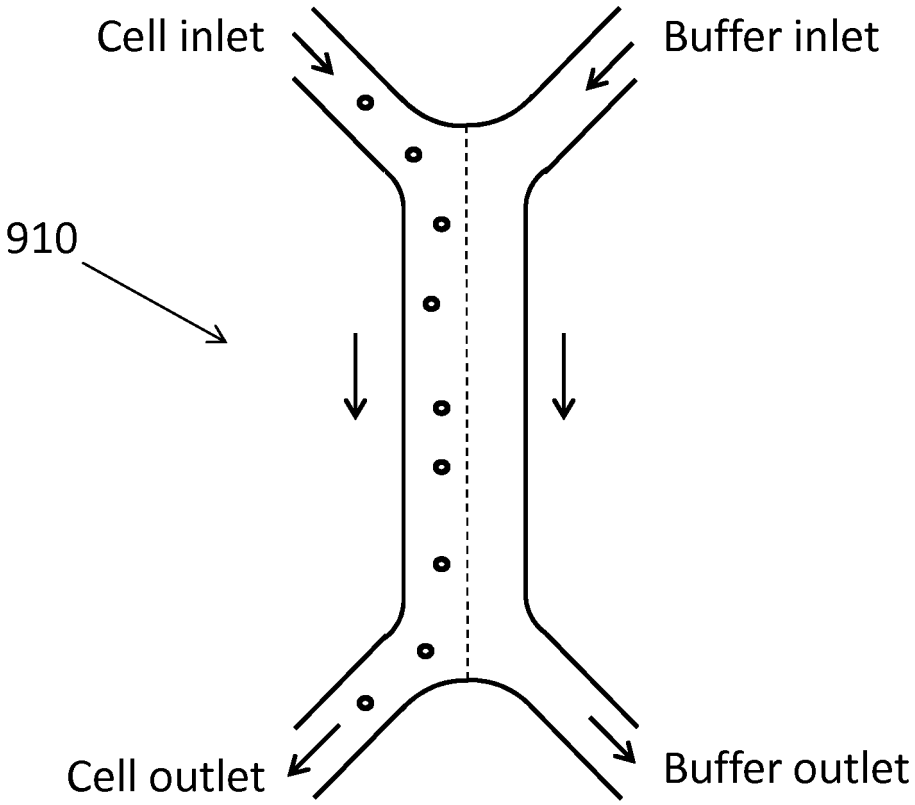


FIG. 15B

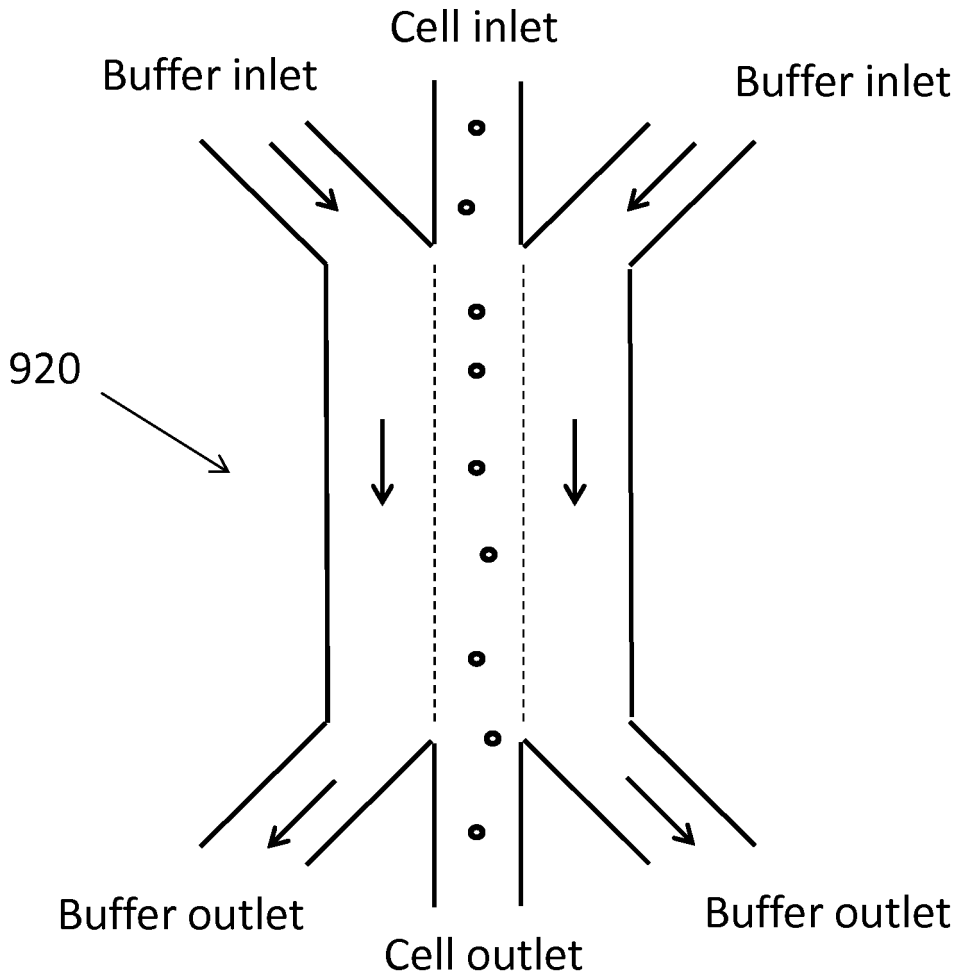

Cell inlet
Buffer inlet
Buffer inlet
920
Buffer outlet
Buffer outlet
Cell outlet

FIG. 15C

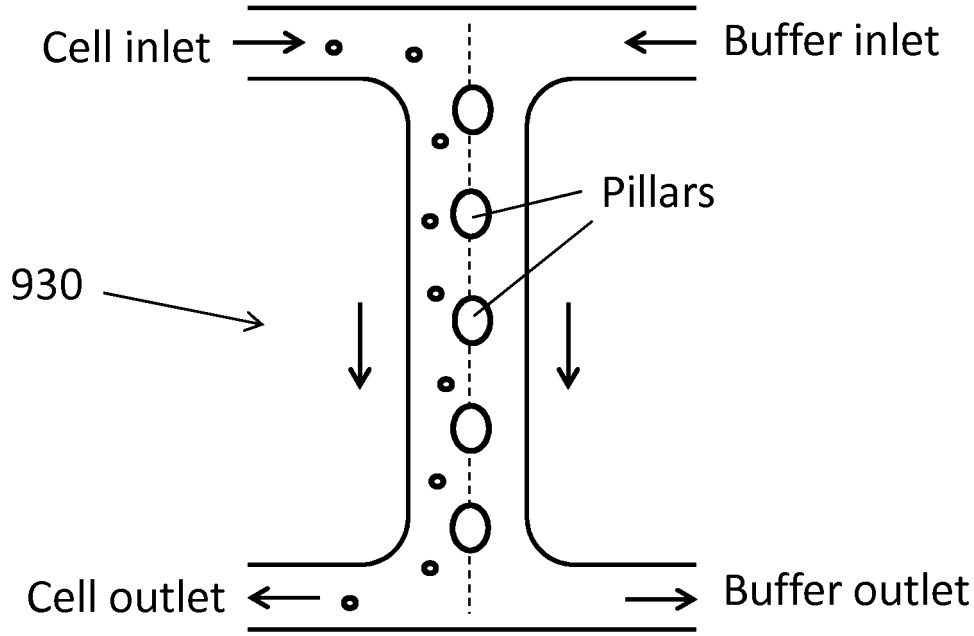

Cell inlet
Buffer inlet
Pillars
930
Cell outlet
Buffer outlet

FIG. 15D

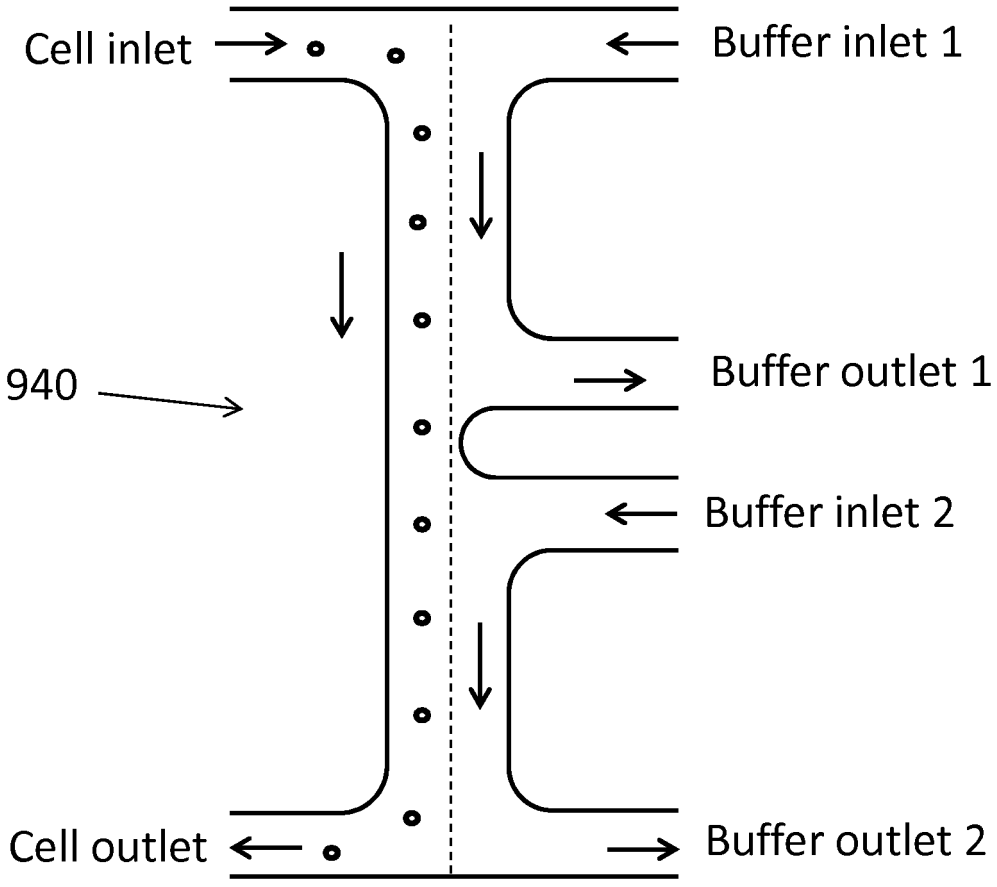

Cell inlet
Buffer inlet 1
940
Buffer outlet 1
Buffer inlet 2
Cell outlet
Buffer outlet 2

FIG. 15E

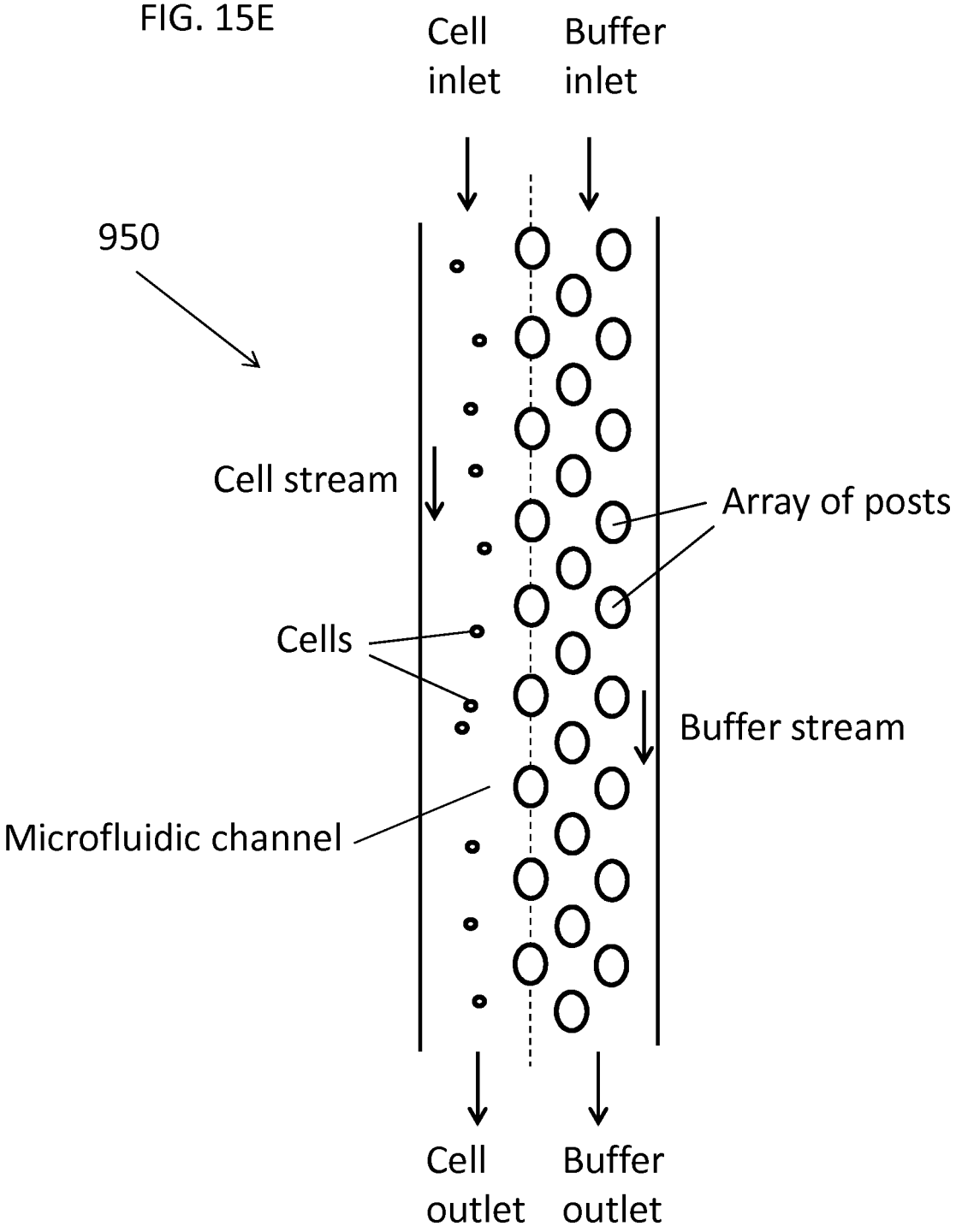

Cell inlet
Buffer inlet
950
Cell stream
Array of posts
Cells
Buffer stream
Microfluidic channel
Cell outlet
Buffer outlet

FIG. 16

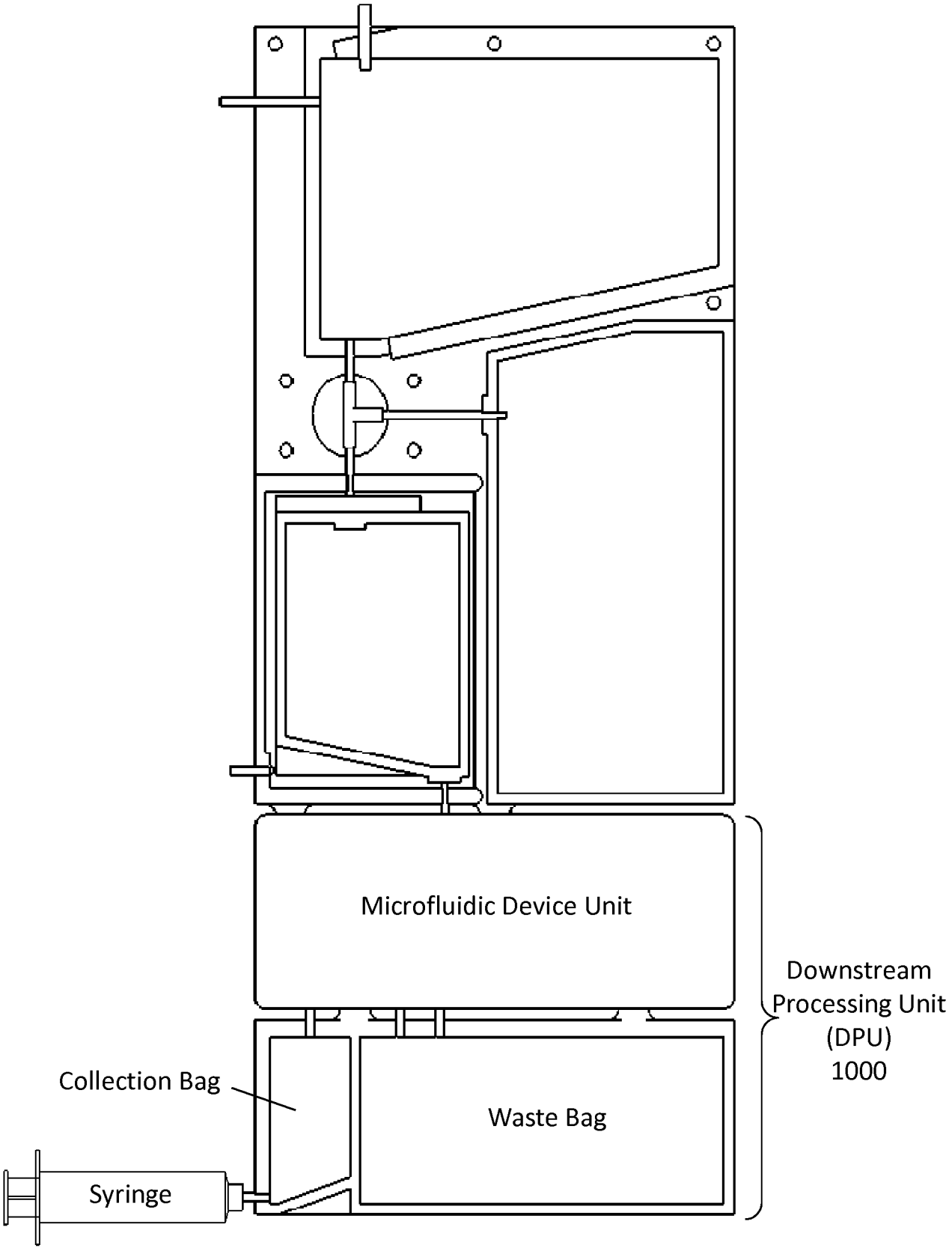

Microfluidic Device Unit
Downstream Processing Unit (DPU) 1000
Collection Bag
Waste Bag
Syringe

FIG. 17

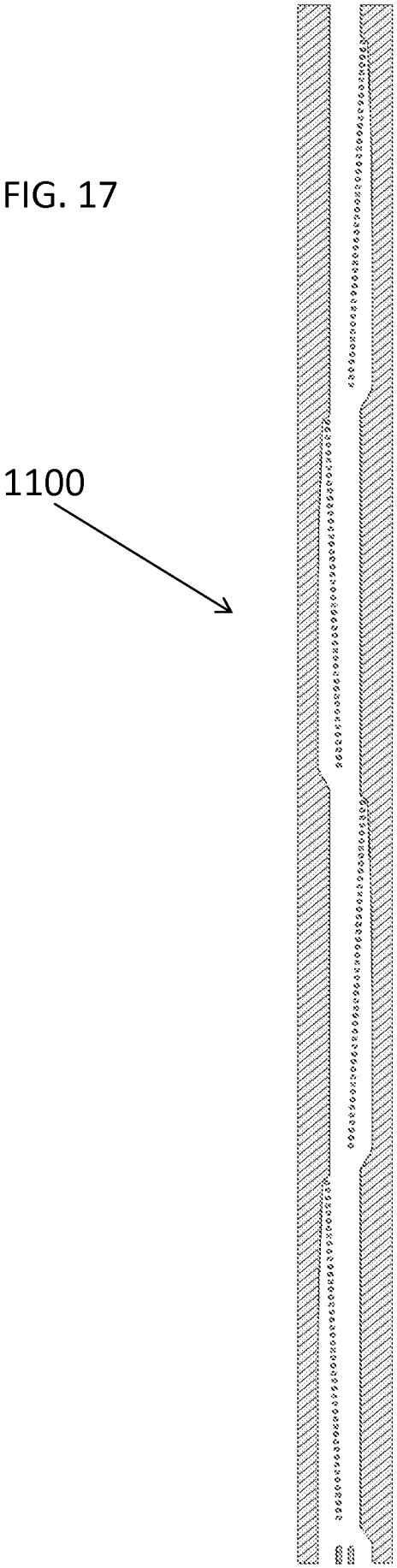


FIG. 18A

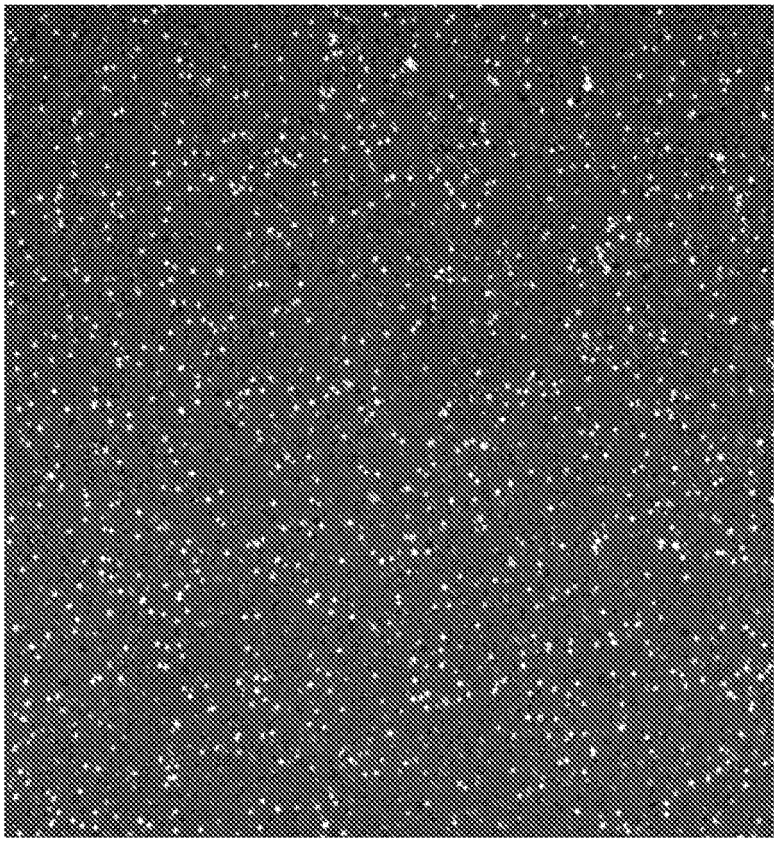


FIG. 18B

