

Fig. 1A



Fig. 1B

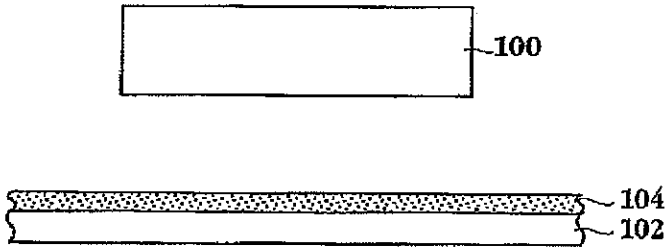


Fig. 2A

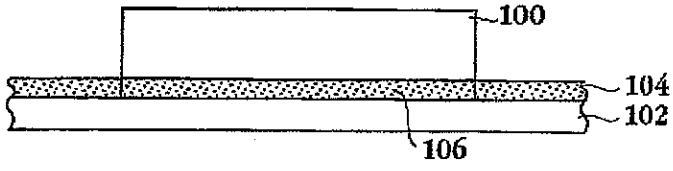


Fig. 2B

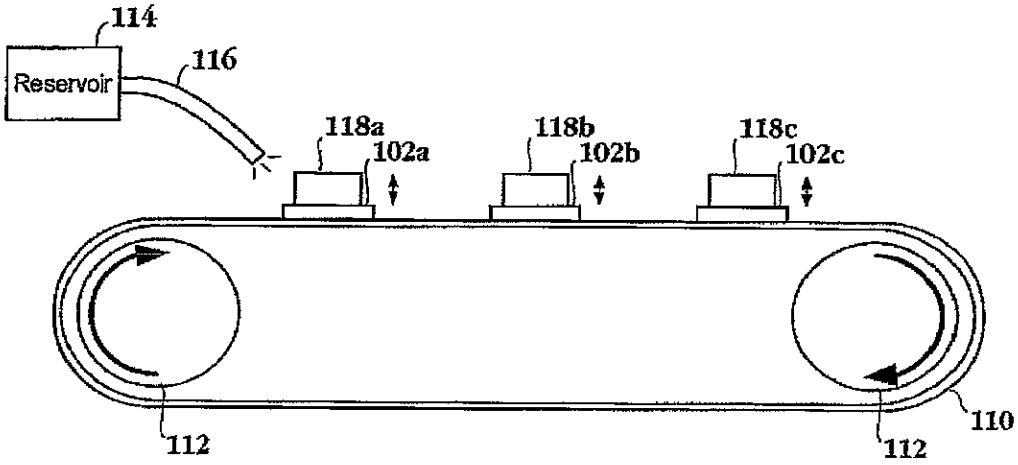

114
Reservoir
116
118a
102a
118b
102b
118c
102c
110
112
112

Fig. 3A

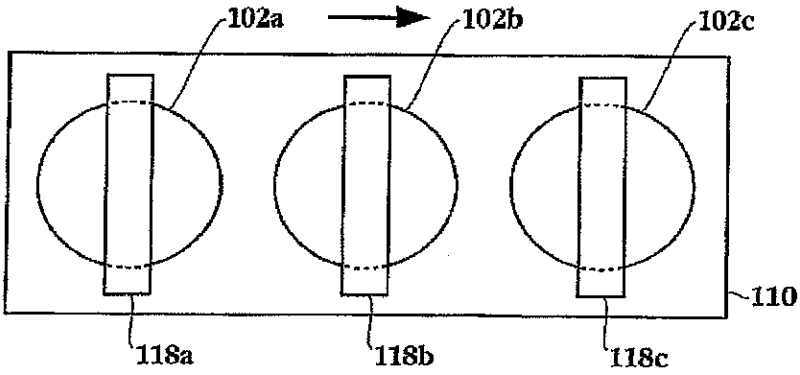

102a
102b
102c
110
118a
118b
118c

Fig. 3B

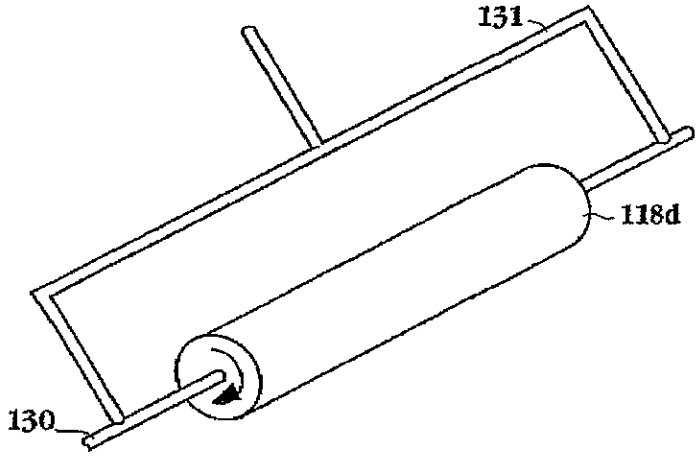


Fig. 4

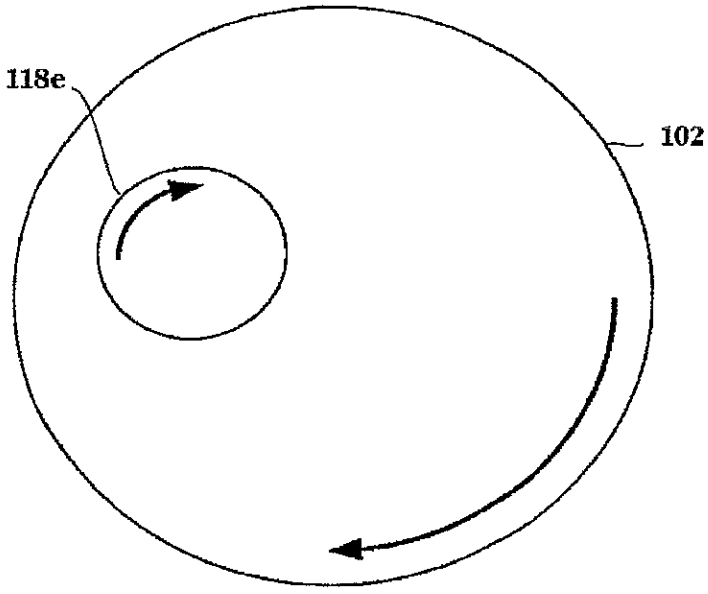


Fig. 5A

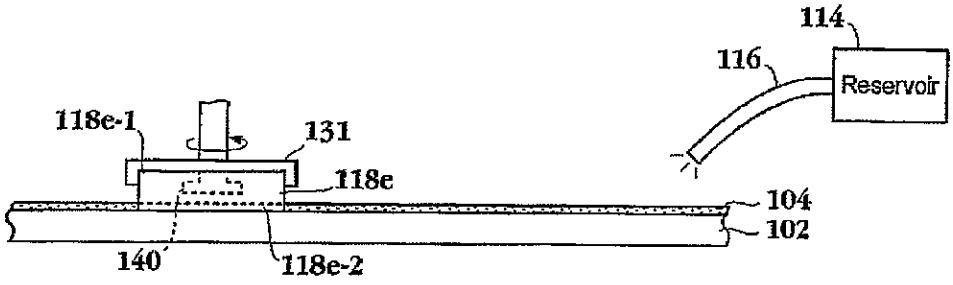


Fig. 5B

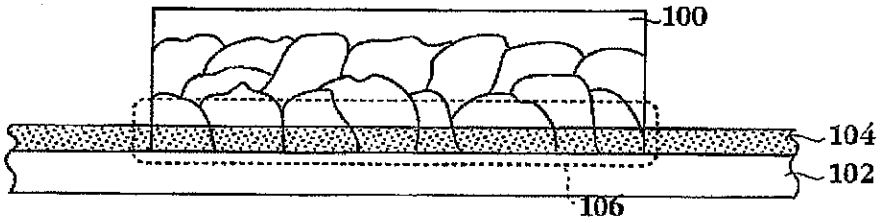


Fig. 6

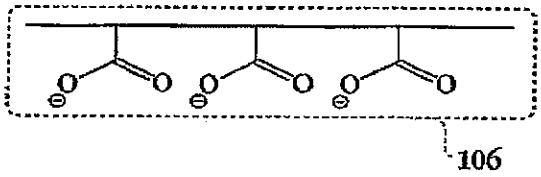


Fig. 7

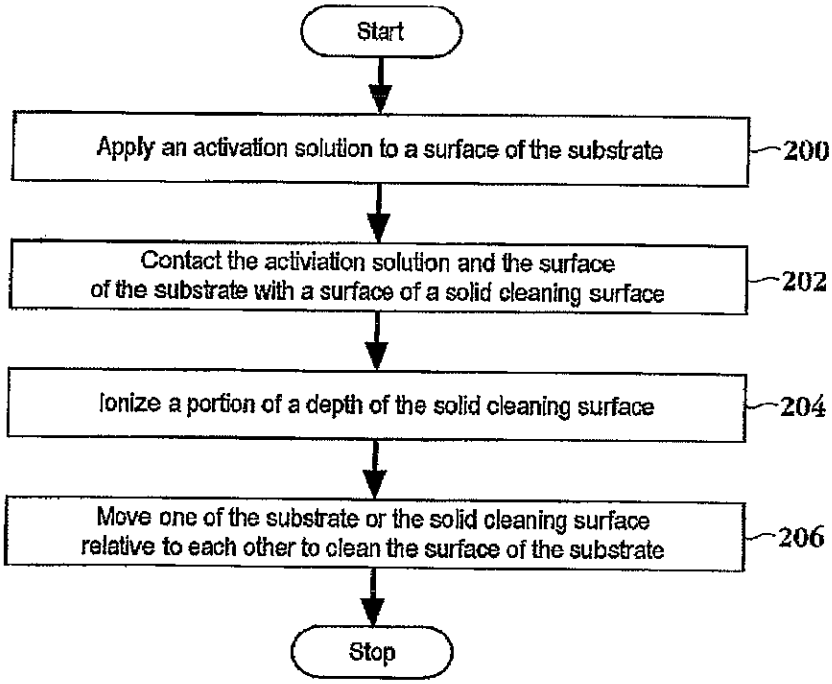

Start
Apply an activation solution to a surface of the substrate
200
Contact the activiation solution and the surface of the substrate with a surface of a solid cleaning surface
202
Ionize a portion of a depth of the solid cleaning surface
204
Move one of the substrate or the solid cleaning surface relative to each other to clean the surface of the substrate
206
Stop

Fig. 8