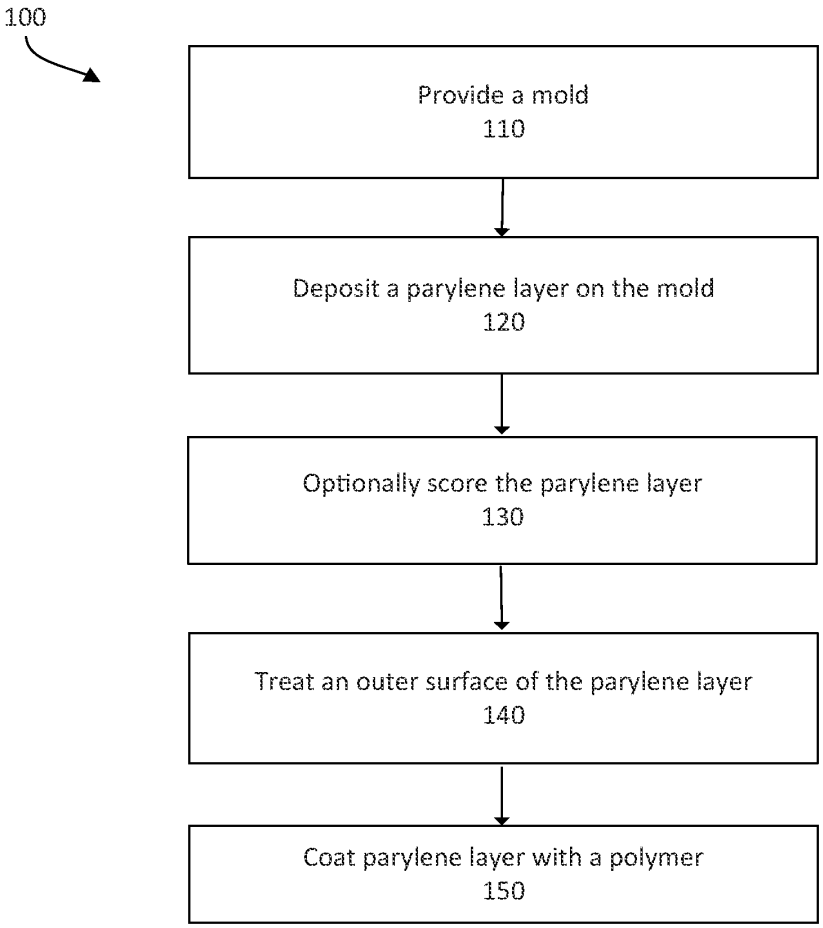

100
Provide a mold
110
Deposit a parylene layer on the mold
120
Optionally score the parylene layer
130
Treat an outer surface of the parylene layer
140
Coat parylene layer with a polymer
150

FIG. 1

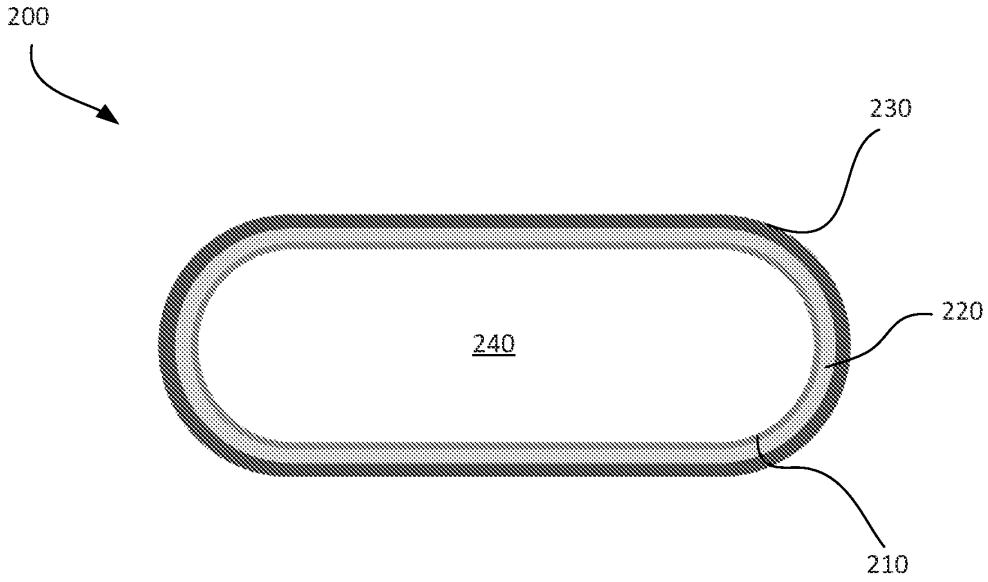


FIG. 2A

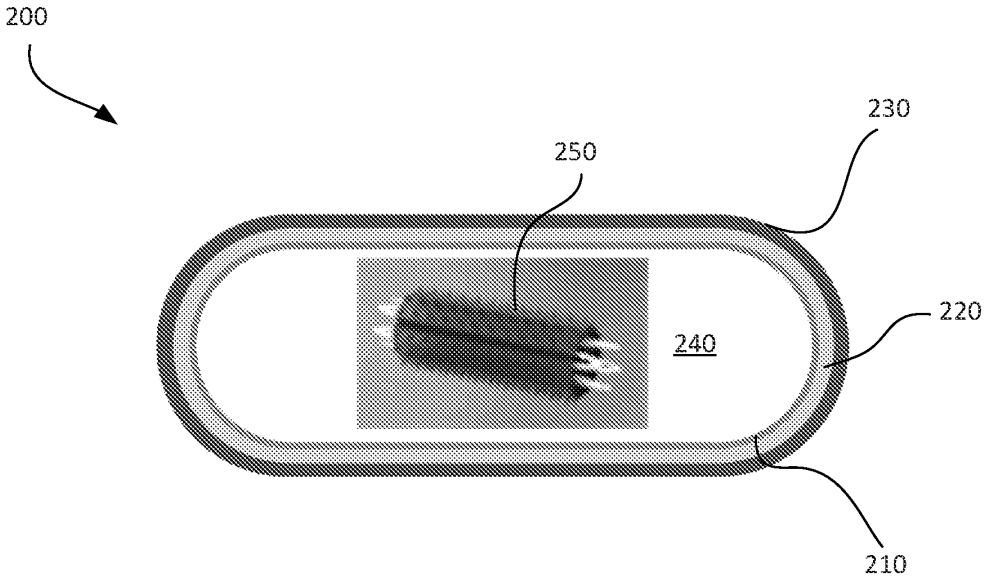


FIG. 2B

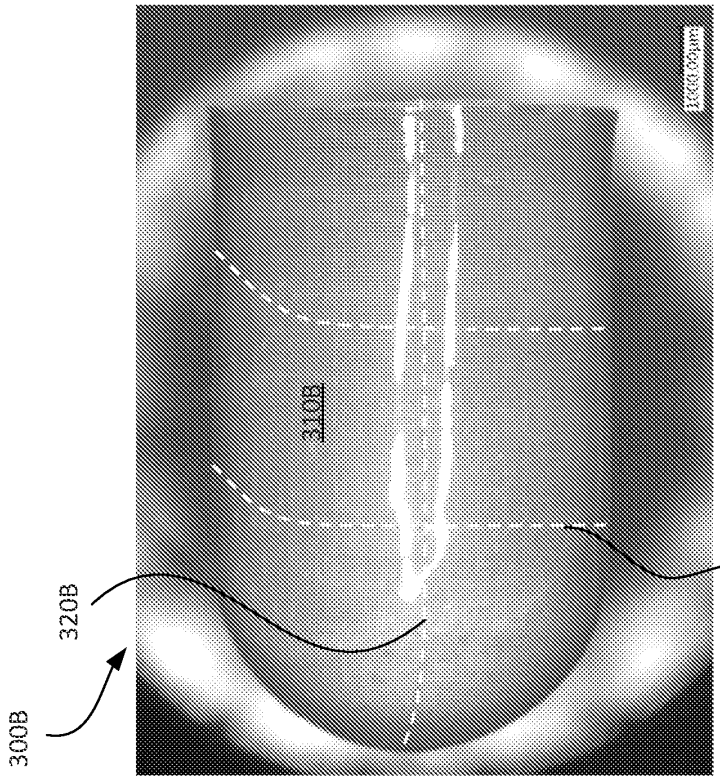


FIG. 3B

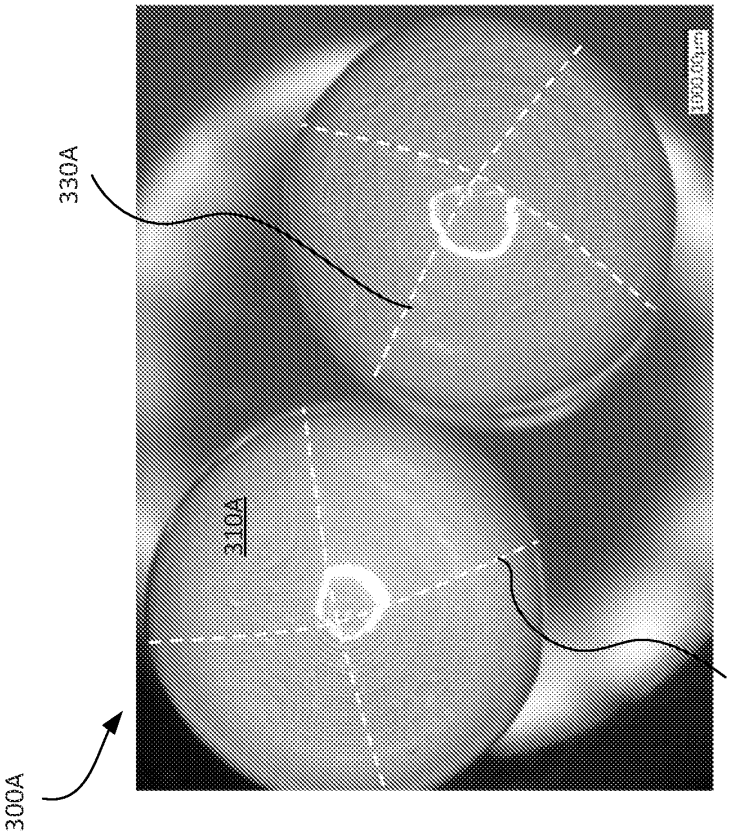


FIG. 3A

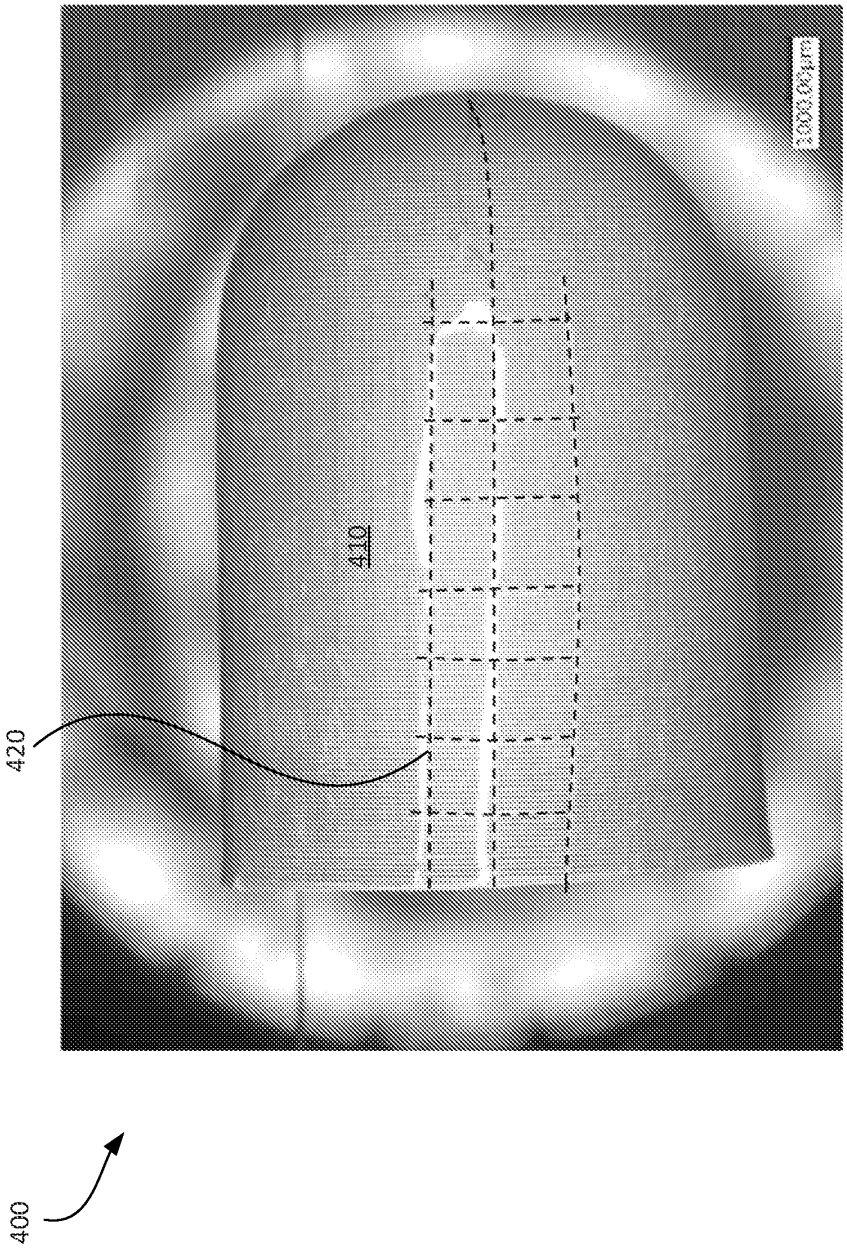


FIG. 4

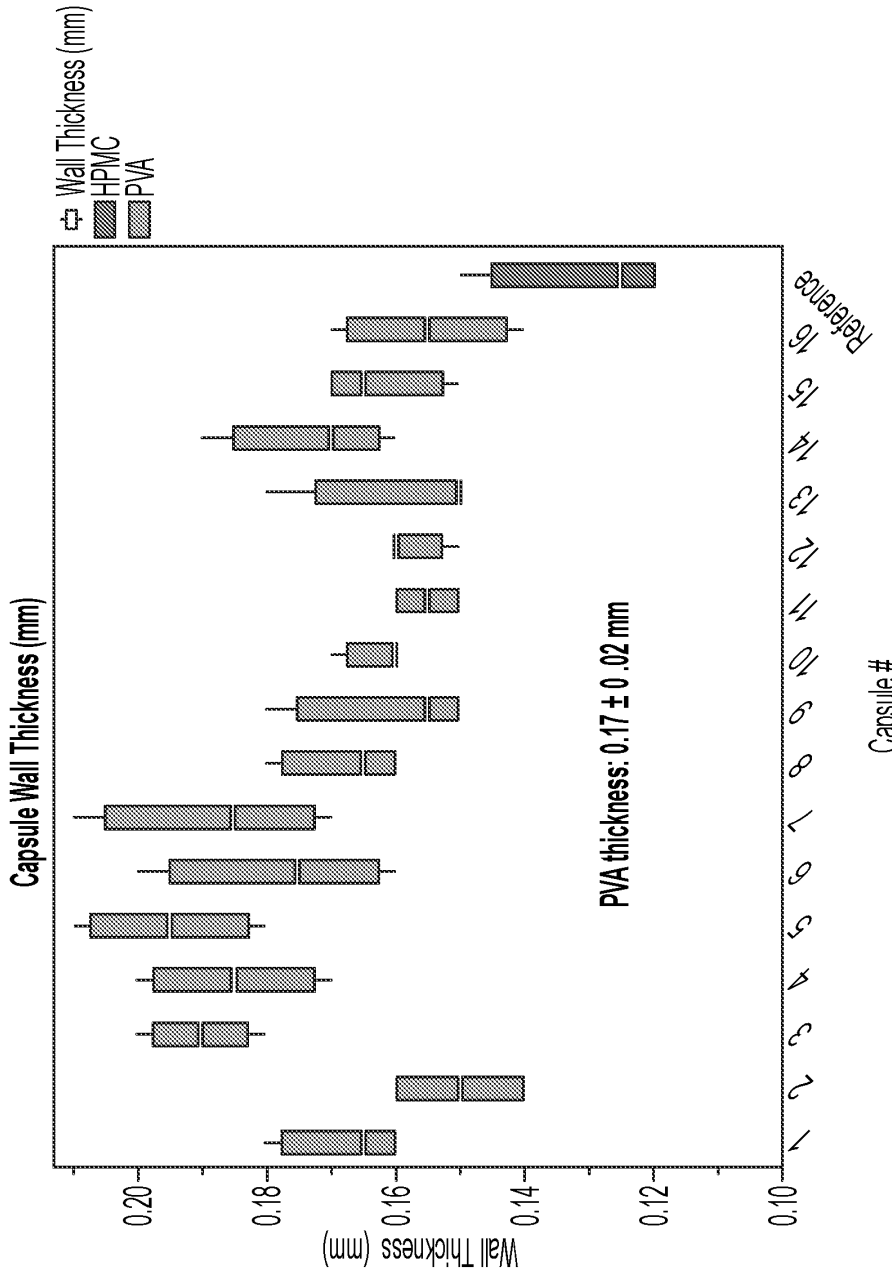

Wall Thickness (mm)
HPMC
PVA
Capsule Wall Thickness (mm)
PVA thickness: 0.17 ± 0 .02 mm
Wall Thickness (mm)
0.20
0.18
0.16
0.14
0.12
0.10
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
Reference
Capsule #

FIG. 5

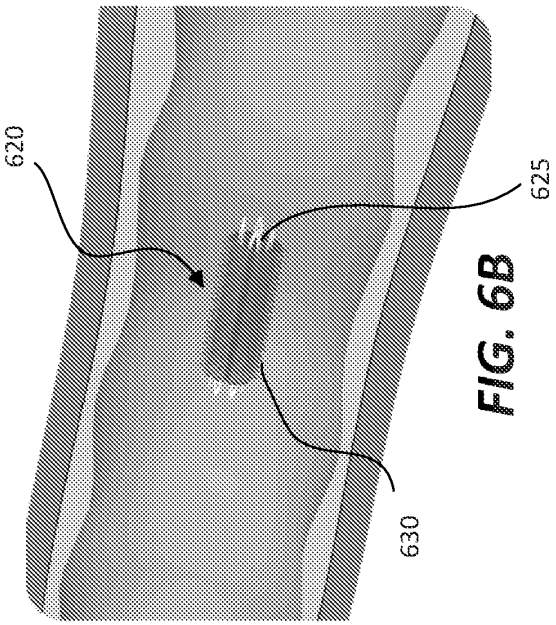


FIG. 6B

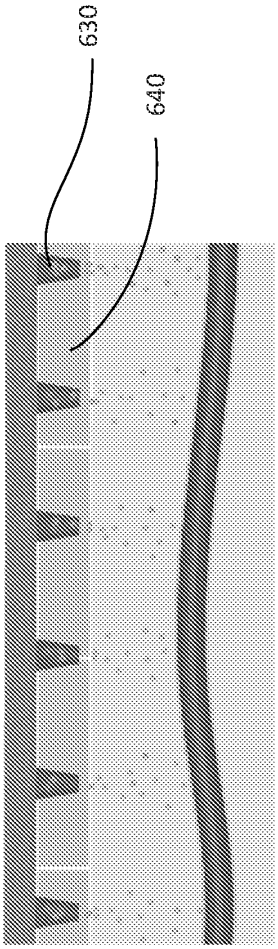


FIG. 6C

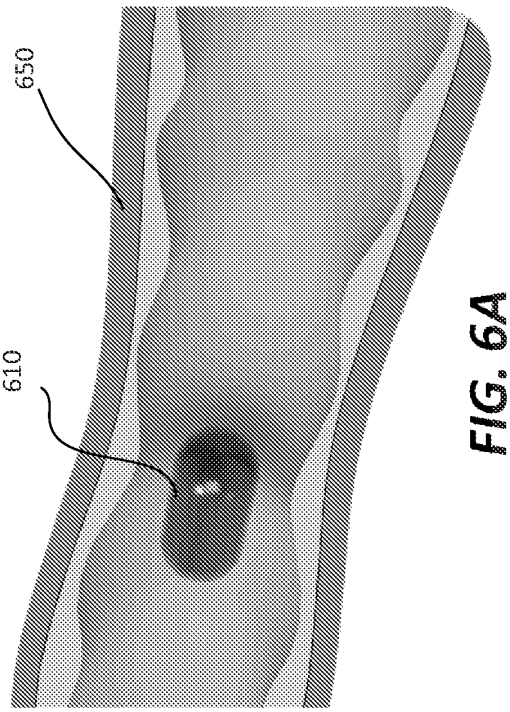


FIG. 6A

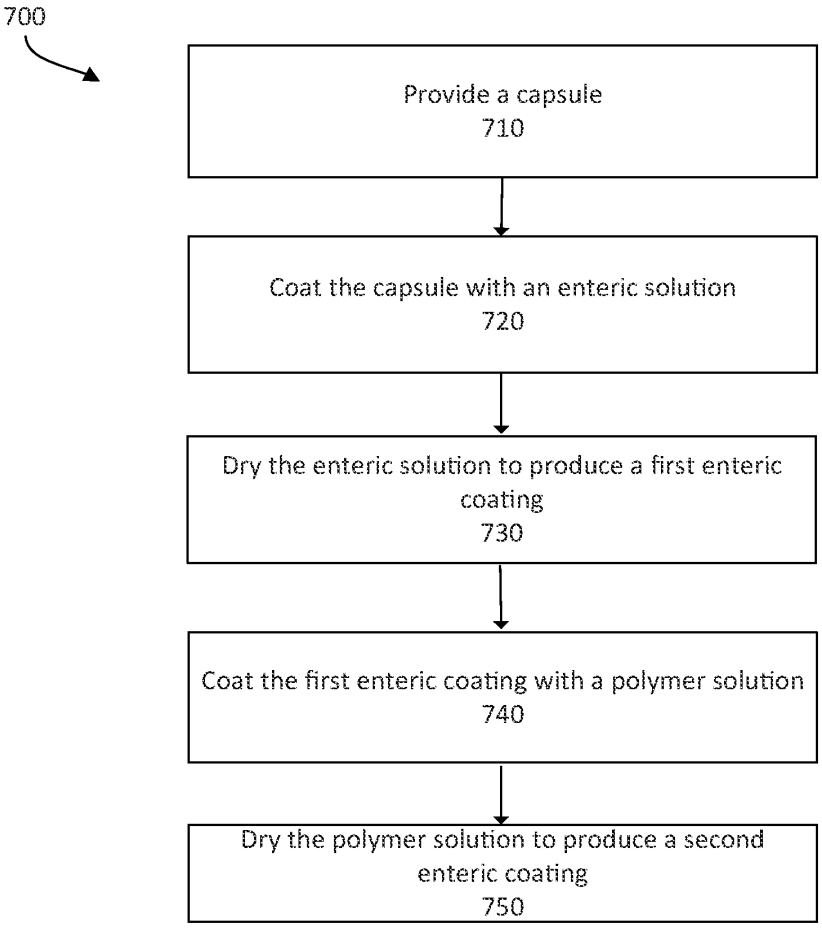

700
Provide a capsule
710
Coat the capsule with an enteric solution
720
Dry the enteric solution to produce a first enteric coating
730
Coat the first enteric coating with a polymer solution
740
Dry the polymer solution to produce a second enteric coating
750

FIG. 7

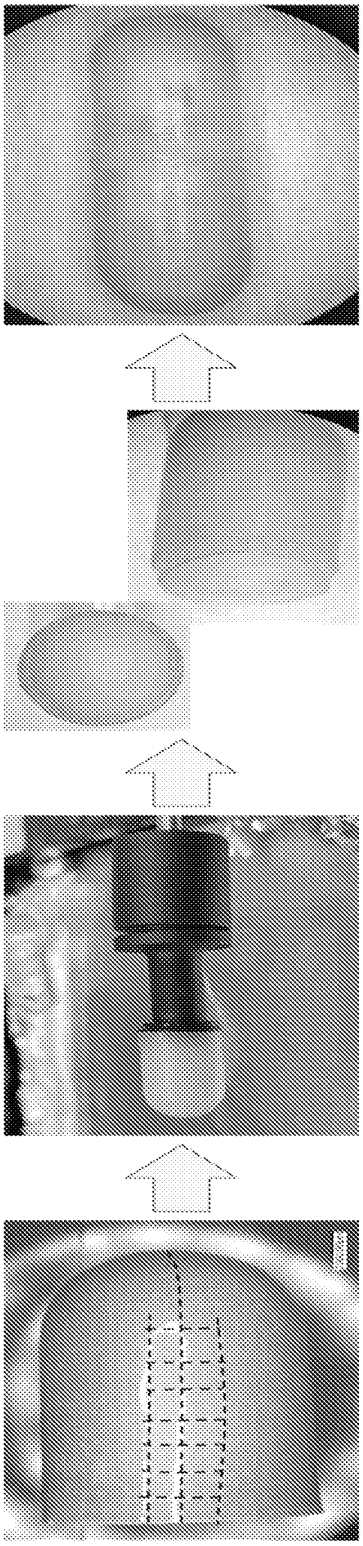


FIG. 8D

FIG. 8C

FIG. 8B

FIG. 8A

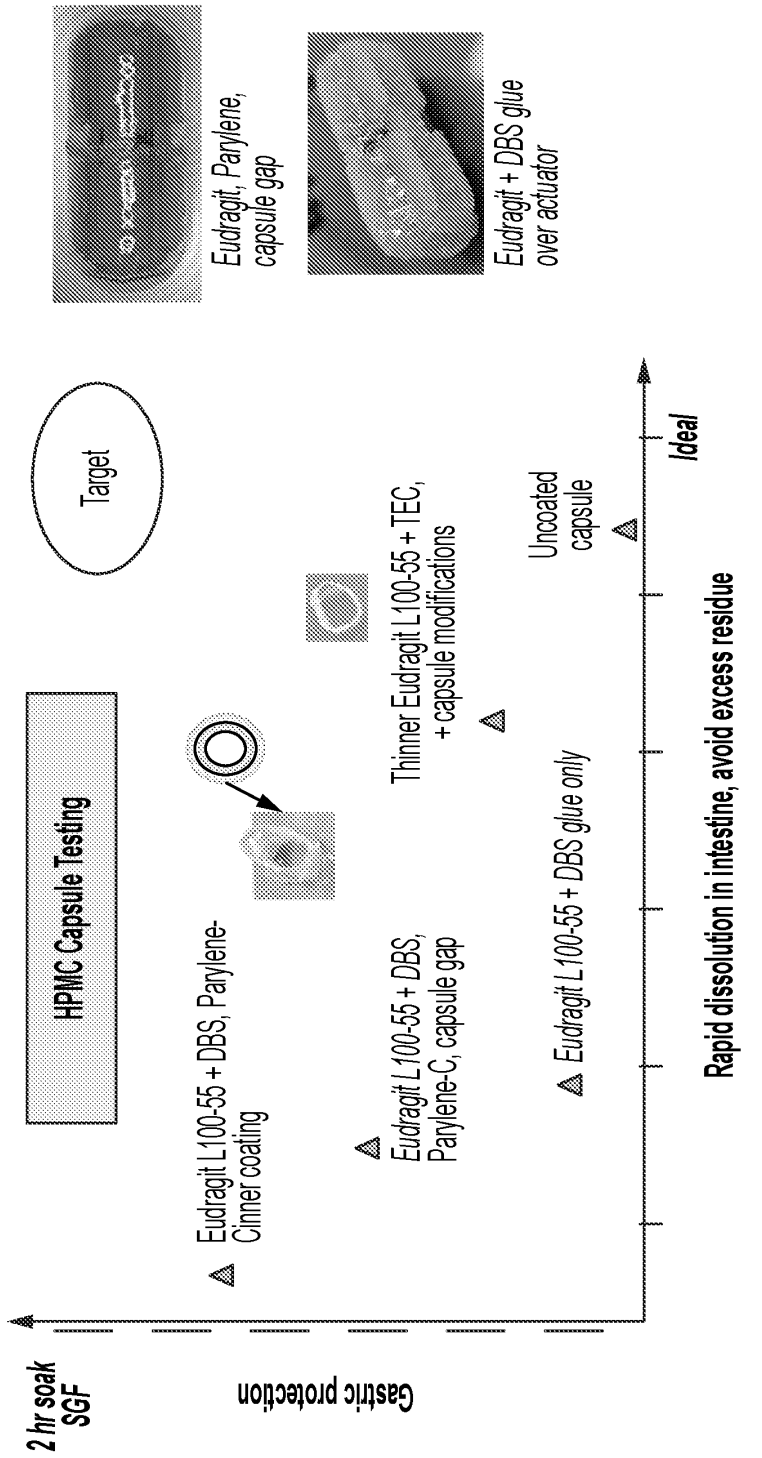

Eudragit, Parylene, capsule gap
Eudragit + DBS glue over actuator
Target
HPMC Capsule Testing
Eudragit L100-55 + DBS, Parylene-C inner coating
Eudragit L100-55 + DBS, Parylene-C, capsule gap
Thinner Eudragit L100-55 + TEC, + capsule modifications
Uncoated capsule
Eudragit L100-55 + DBS glue only
Ideal
Rapid dissolution in intestine, avoid excess residue
Gastric protection
2 hr soak SGF

FIG. 9

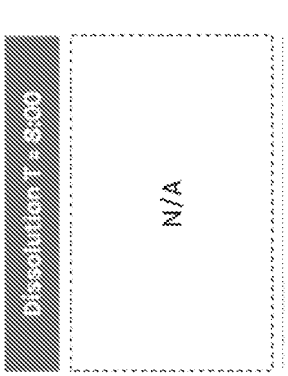


FIG. 10D

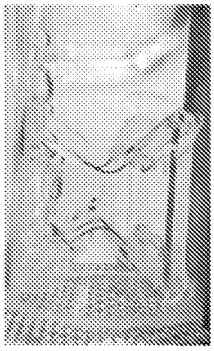


FIG. 10H

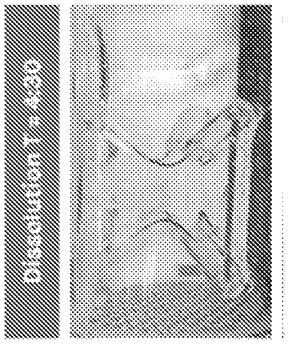


FIG. 10C

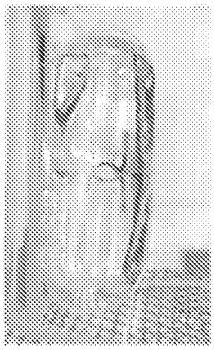


FIG. 10G

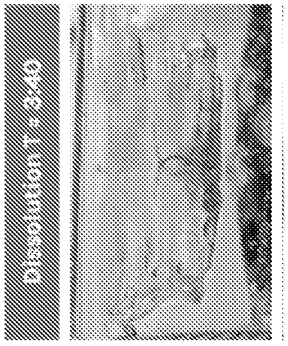


FIG. 10B

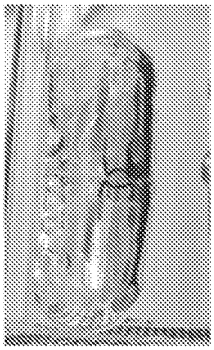


FIG. 10F

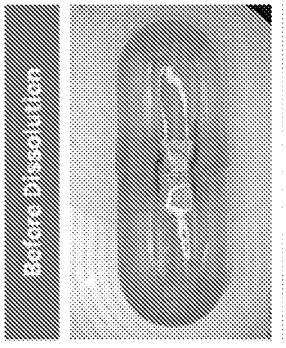


FIG. 10A

PVA
Custom

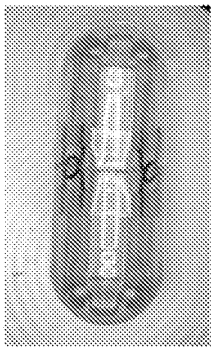


FIG. 10E

HPMC
Commercial

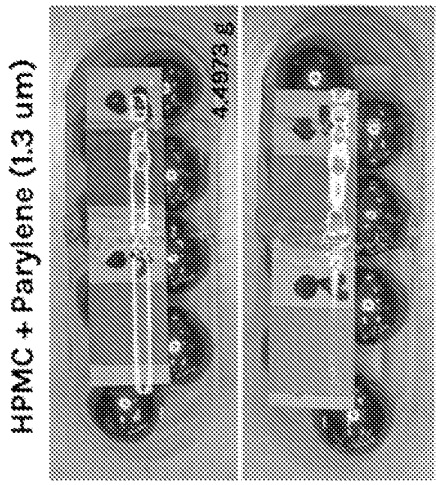


FIG. 11A

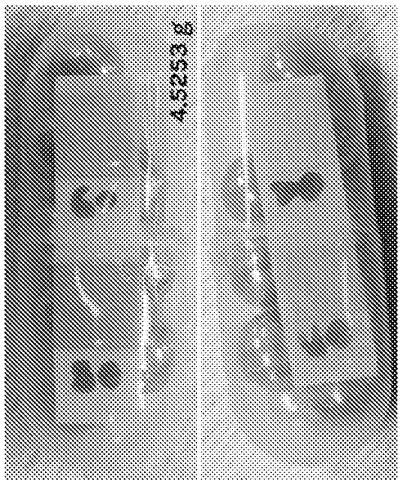


FIG. 11B

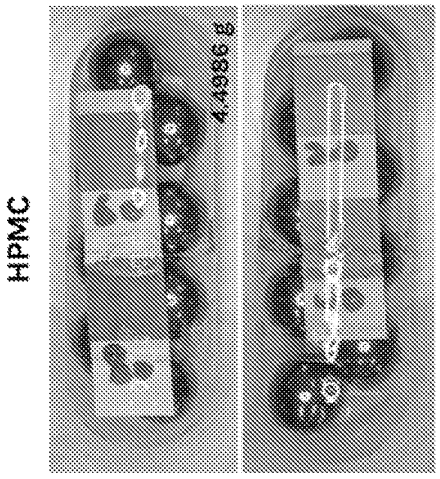


FIG. 11C

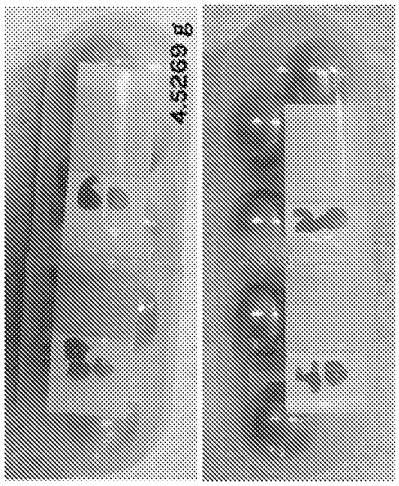


FIG. 11D

FIG. 11E

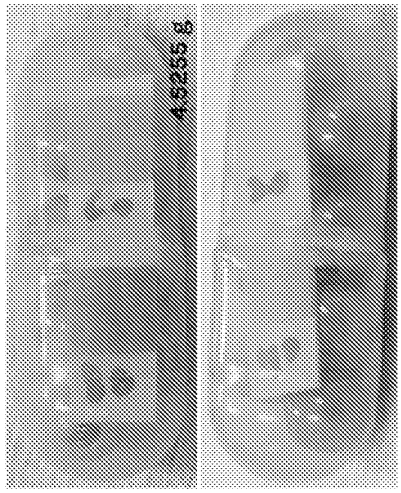


FIG. 11F

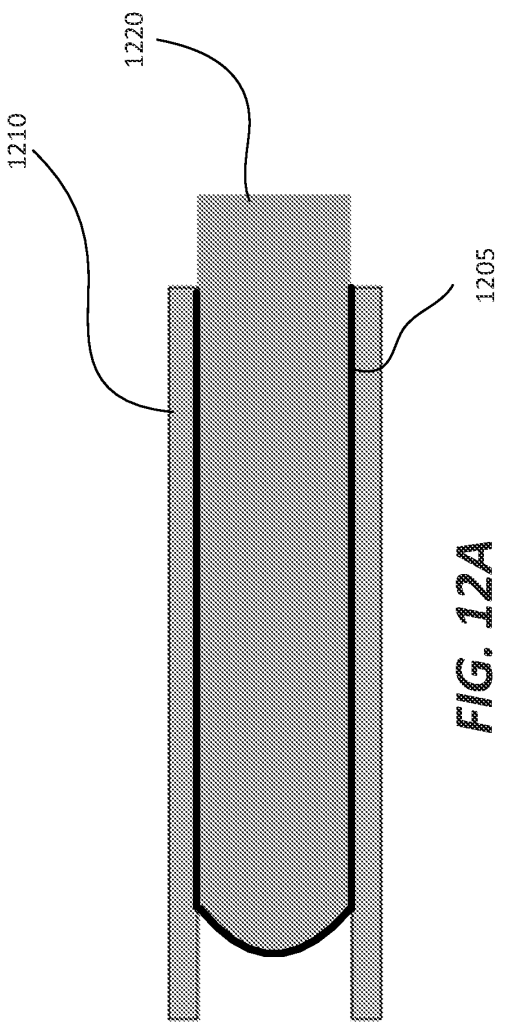


FIG. 12A

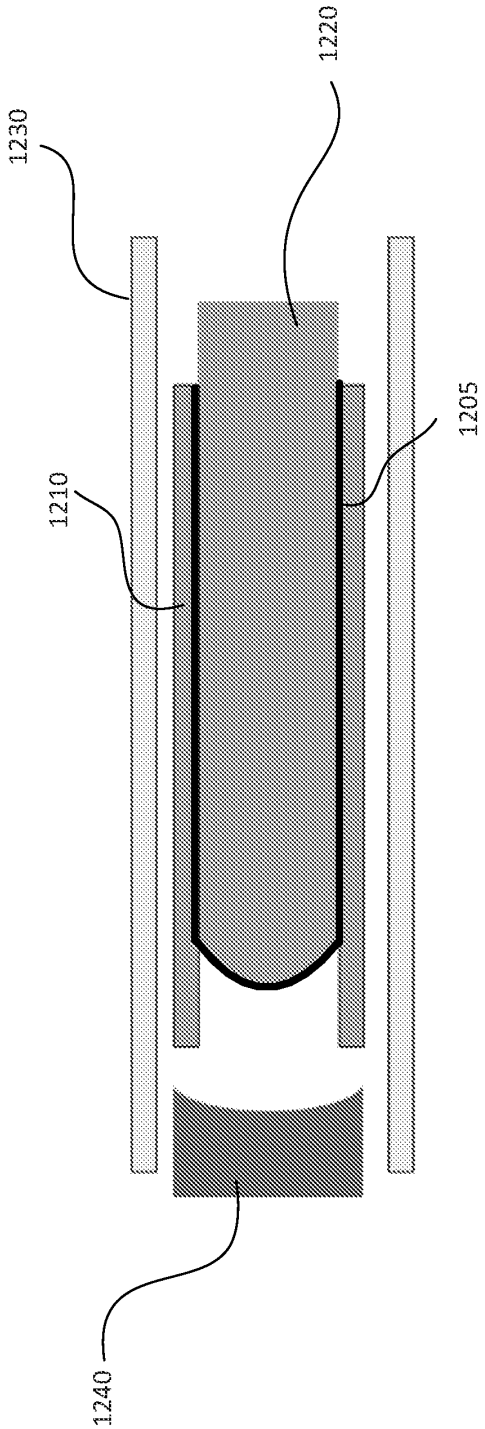


FIG. 12B

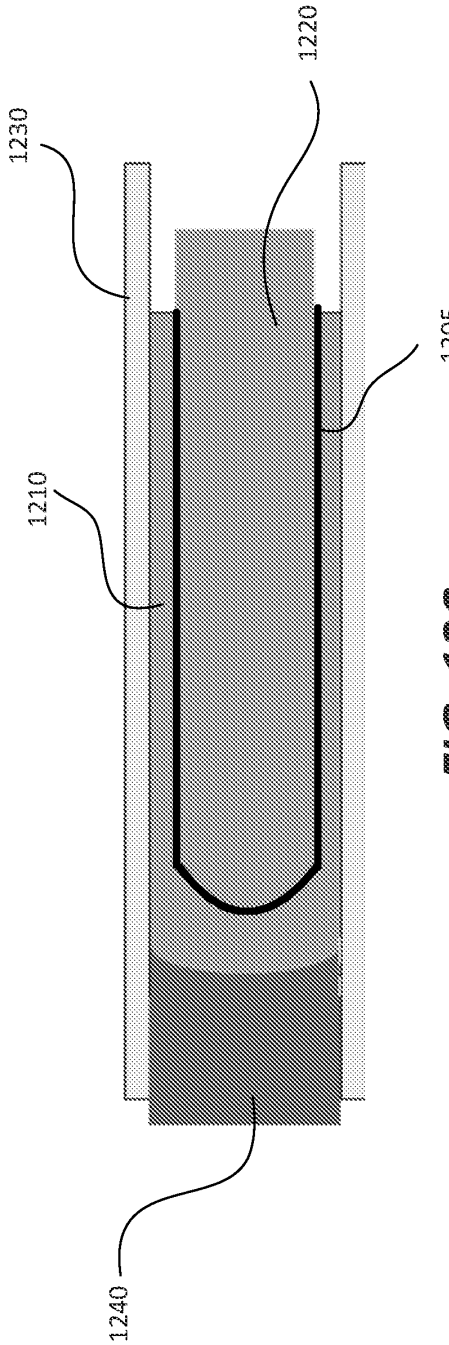


FIG. 12C

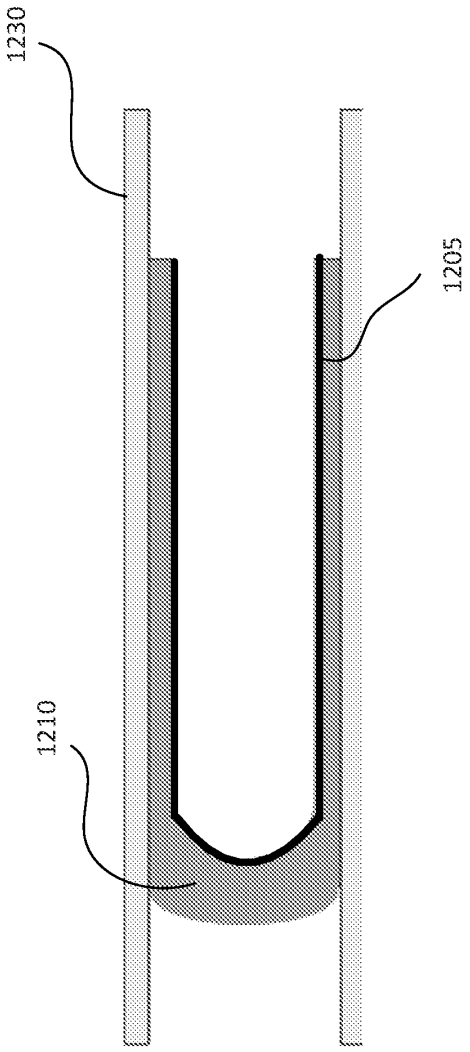


FIG. 12D

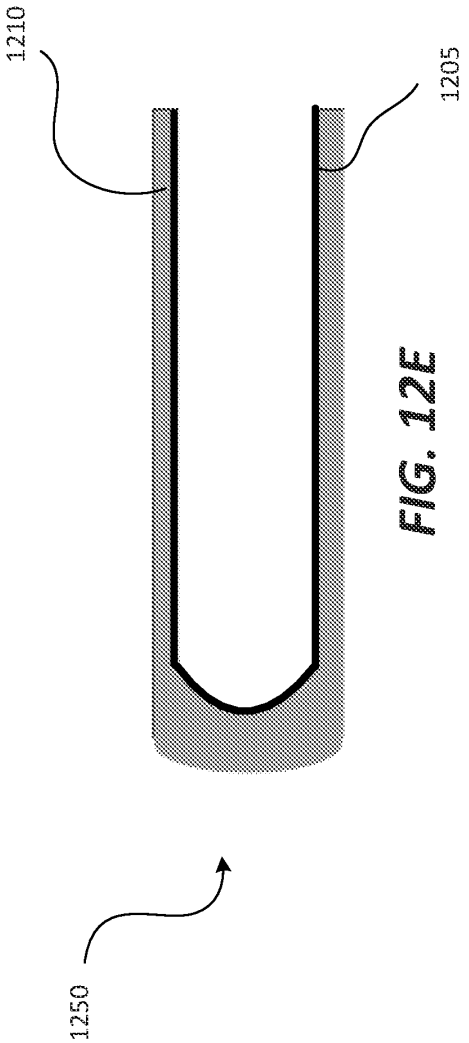


FIG. 12E

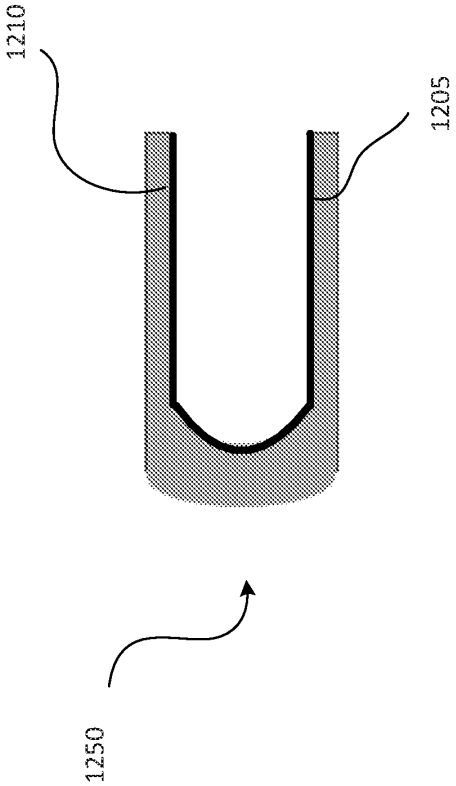


FIG. 12F

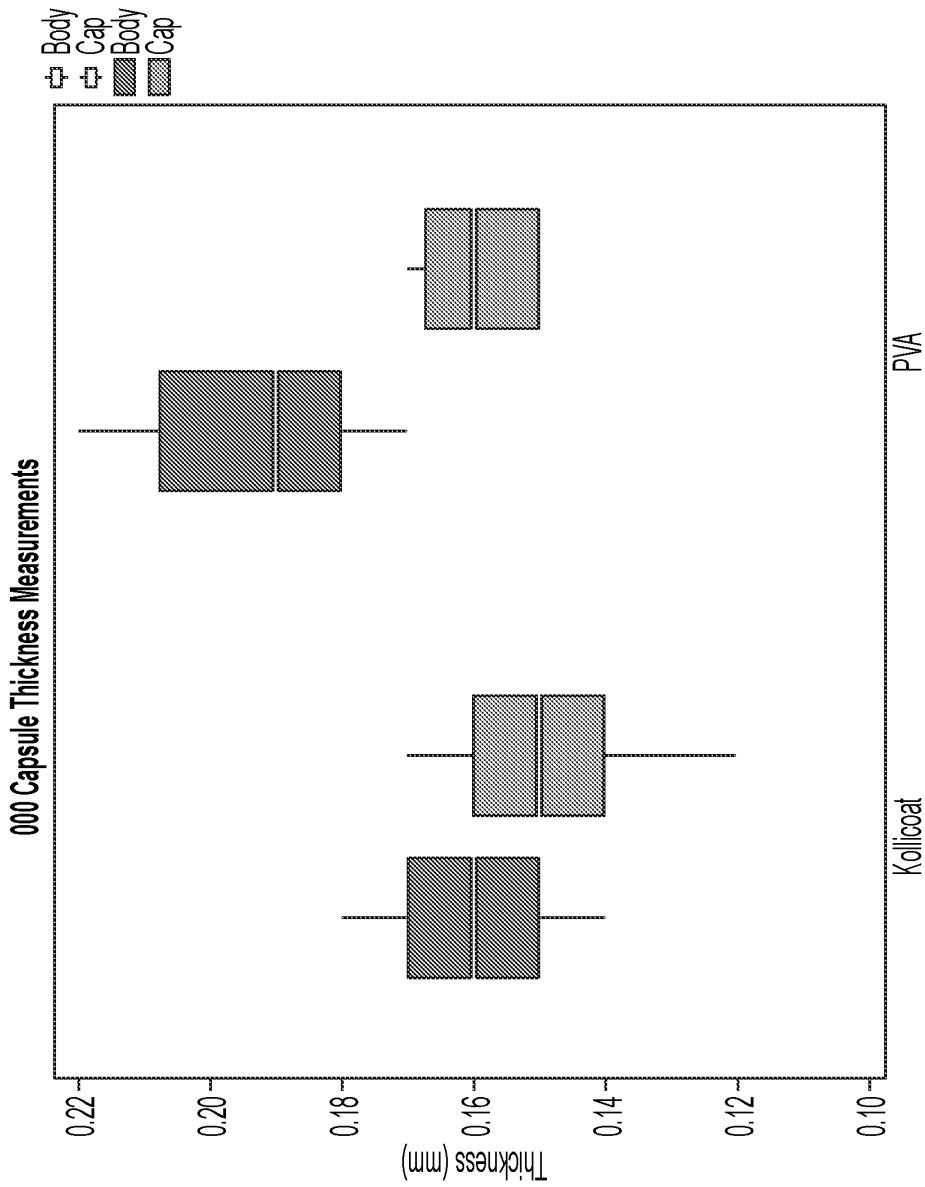

Body
Cap
Body
Cap
000 Capsule Thickness Measurements
0.22
0.20
0.18
0.16
0.14
0.12
0.10
Thickness (mm)
PVA
Kollicoat

FIG. 13

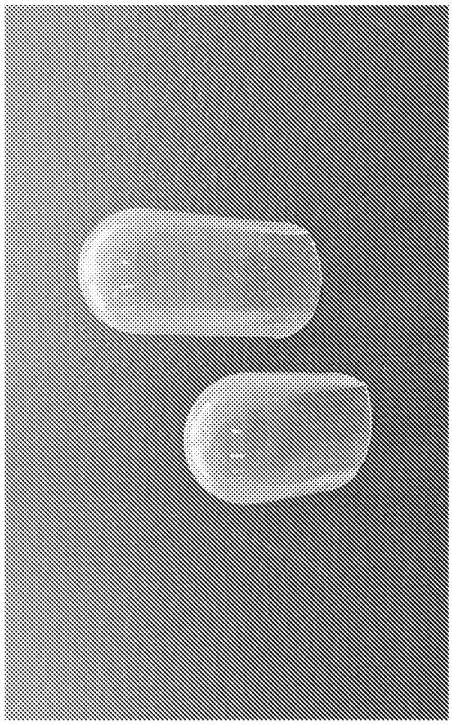


FIG. 14A

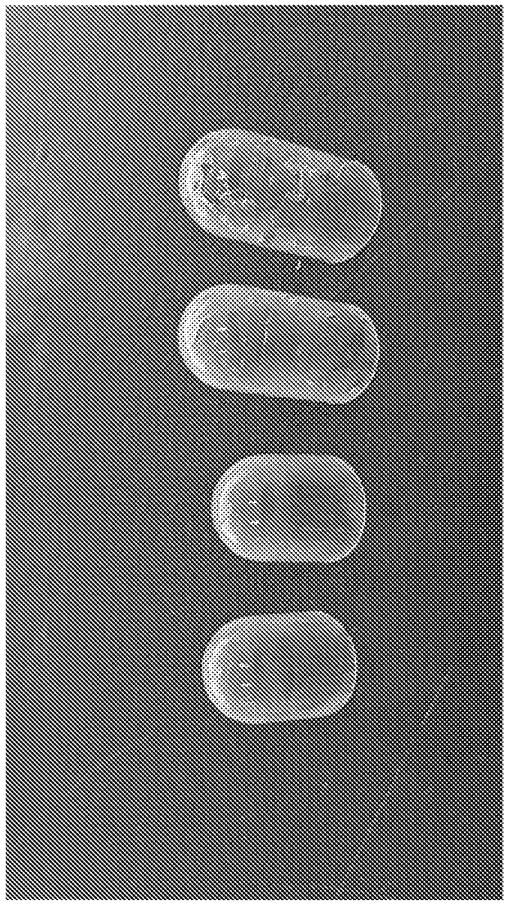


FIG. 14B



FIG. 15B

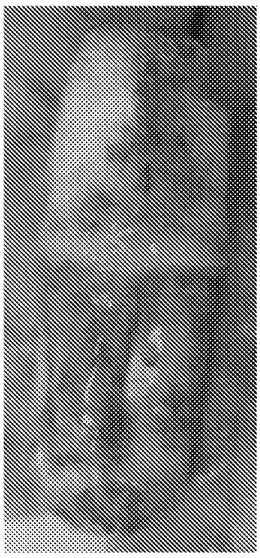


FIG. 15D

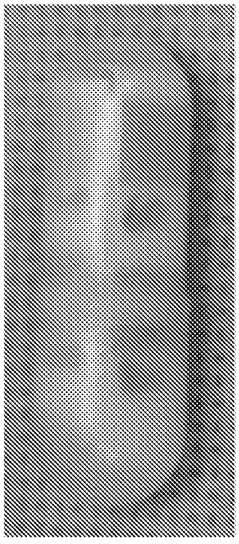


FIG. 15A

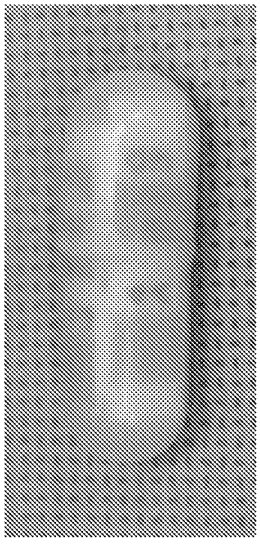


FIG. 15C



FIG. 16B



FIG. 16D

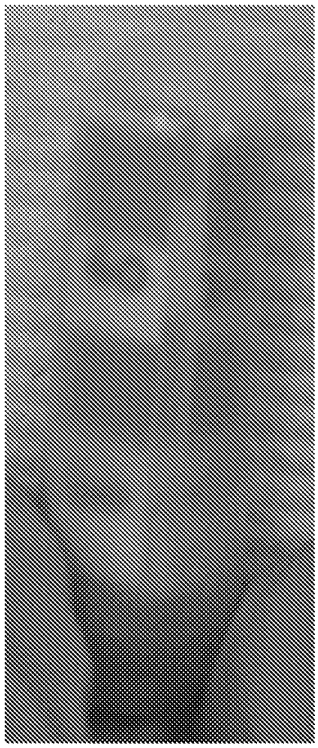


FIG. 16A

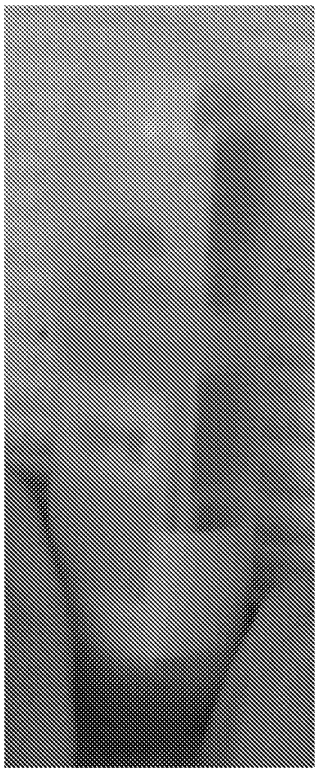


FIG. 16C