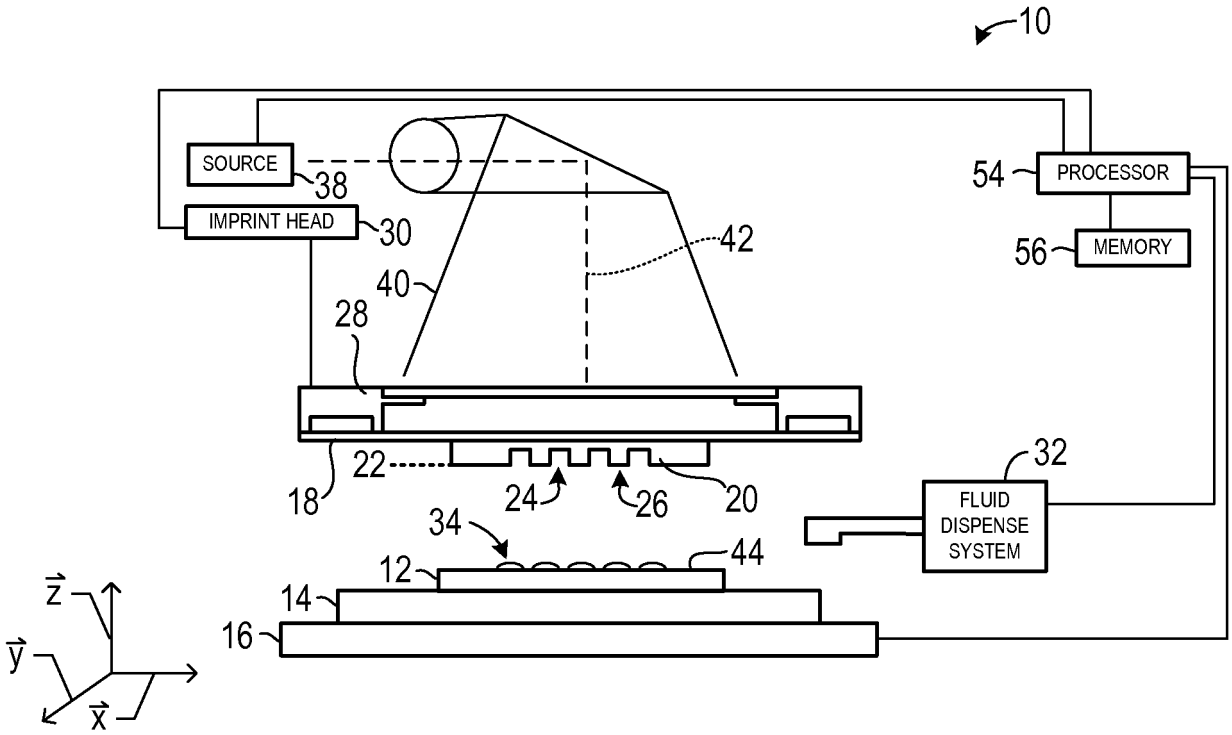
10
SOURCE
38
IMPRINT HEAD
30
54
PROCESSOR
56
MEMORY
42
40
28
22
18
24
26
20
32
FLUID
DISPENSE
SYSTEM
34
44
12
14
16
z
y
x

FIG. 1

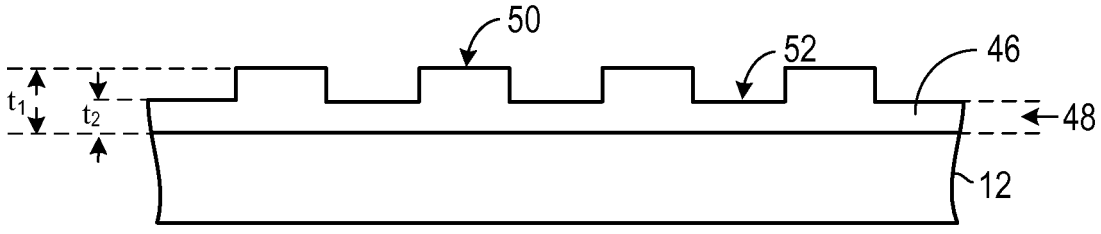
50
52
46
48
12
t1
t2

FIG. 2

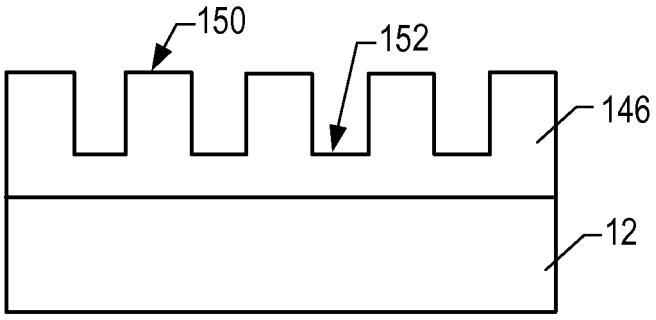

FIG. 3A

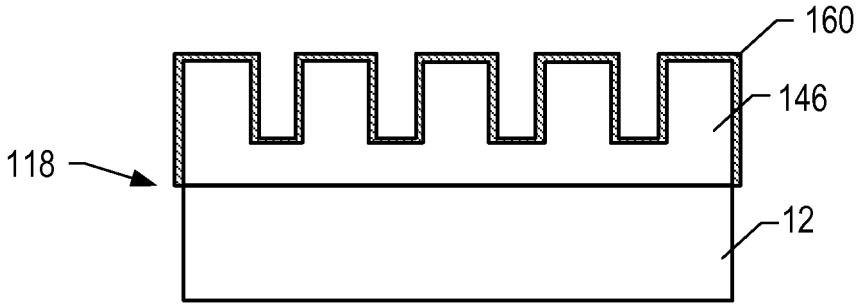

FIG. 3B

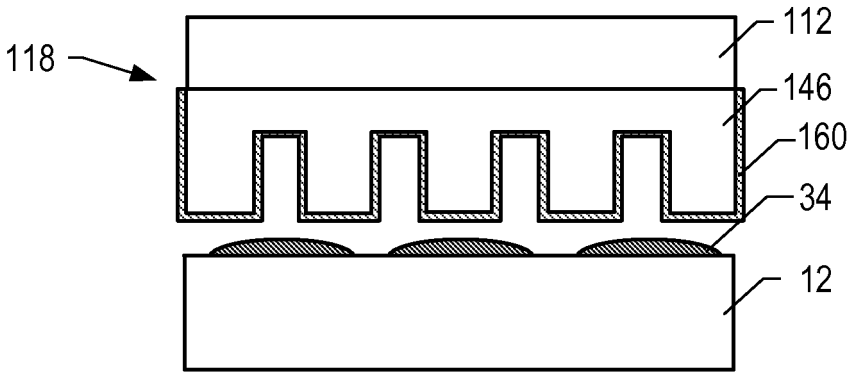

FIG. 4A

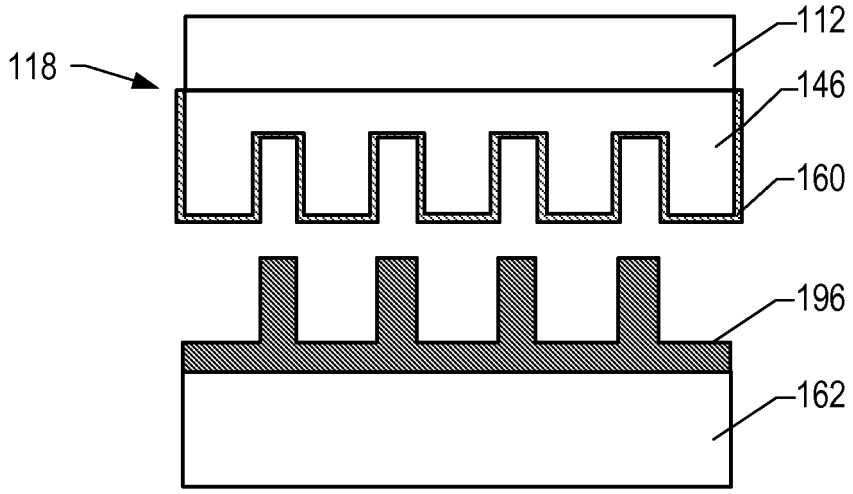

FIG. 4B

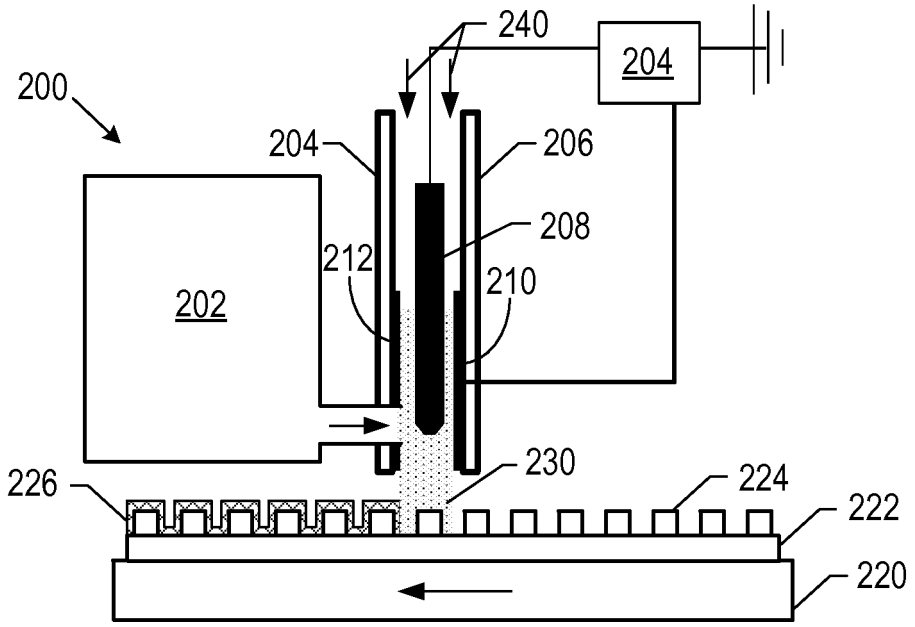
240
204
200
204
206
208
212
210
202
230
224
226
222
220

FIG. 5A

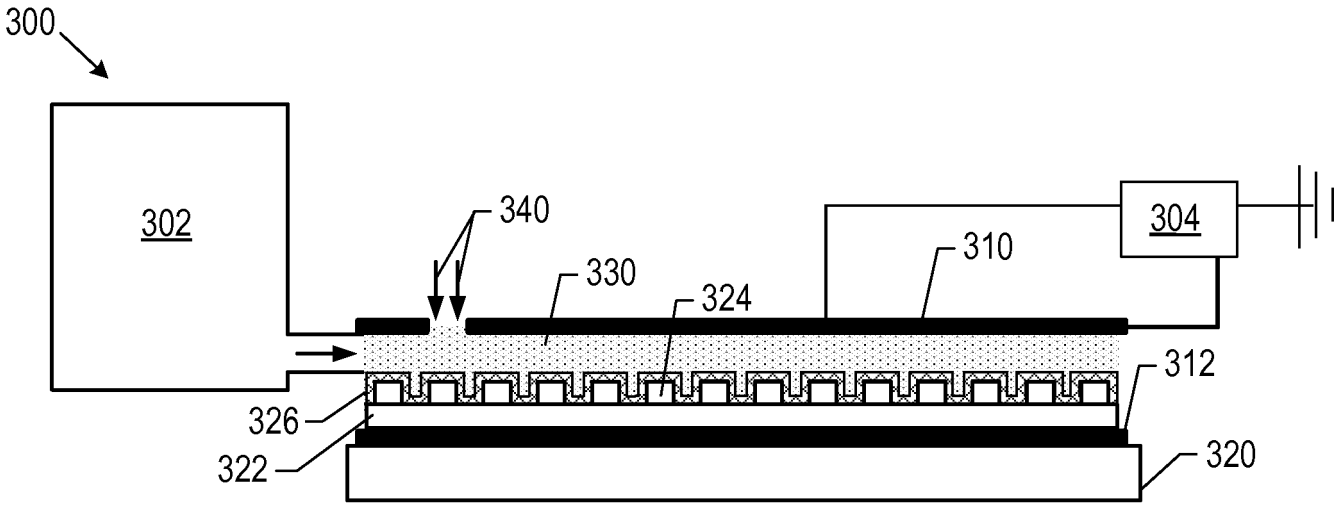
300
302
340
304
330
310
324
312
326
322
320

FIG. 5B

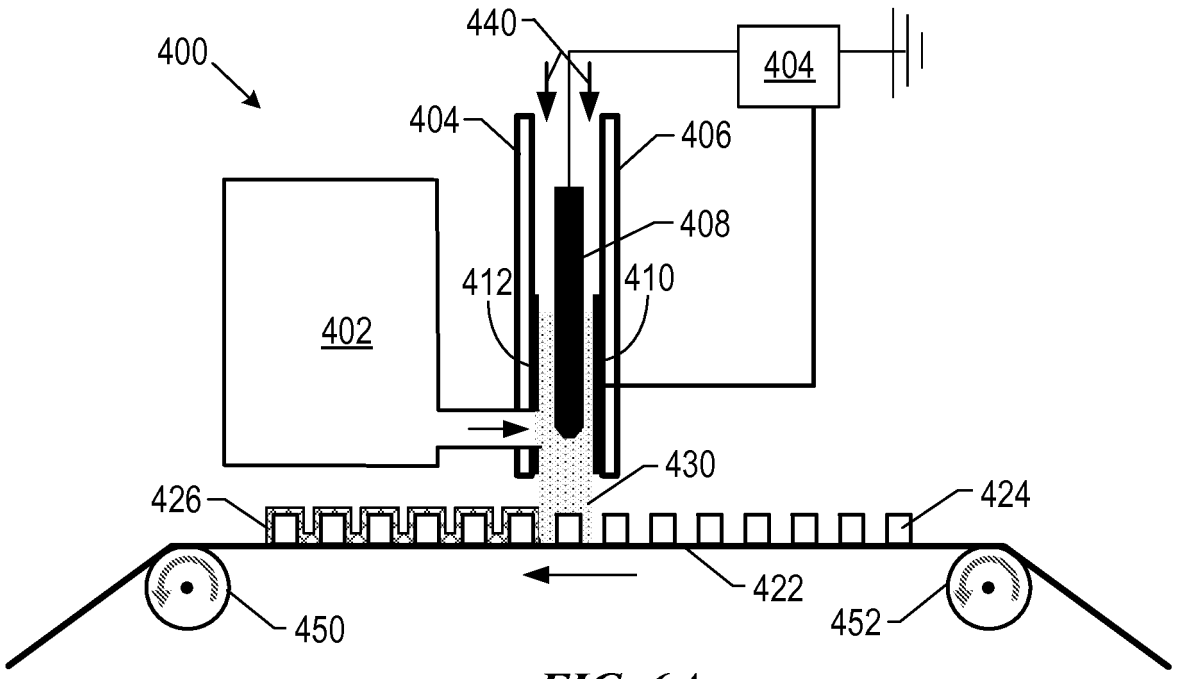
400
440
404
404
406
408
412
410
402
430
426
424
422
450
452

FIG. 6A

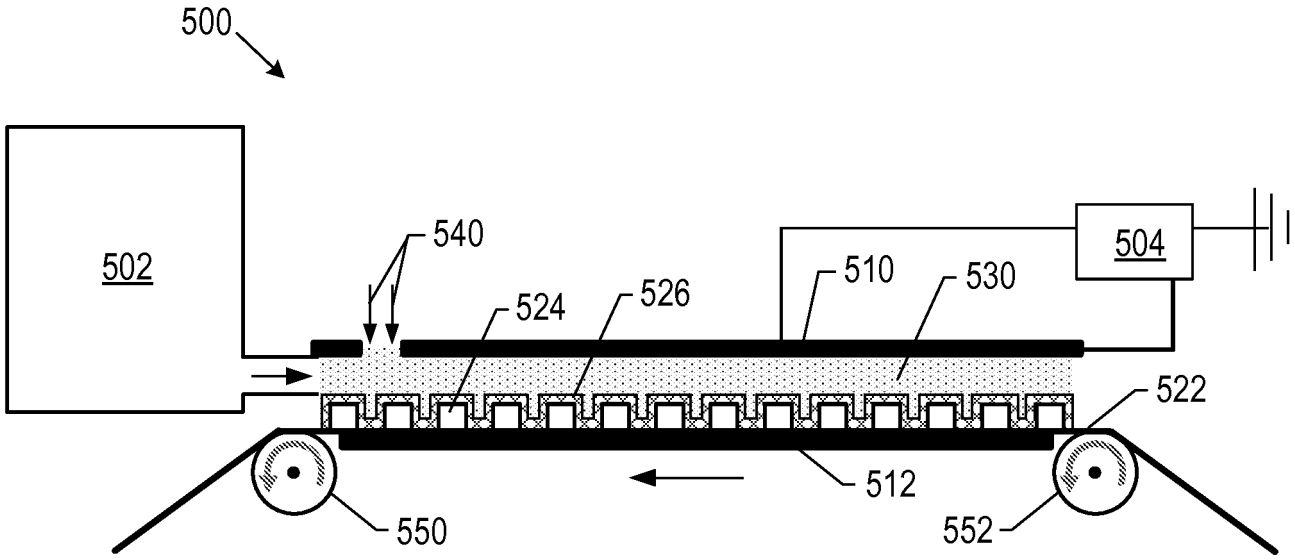
500
502
540
504
510
530
524
526
522
512
550
552

FIG. 6B

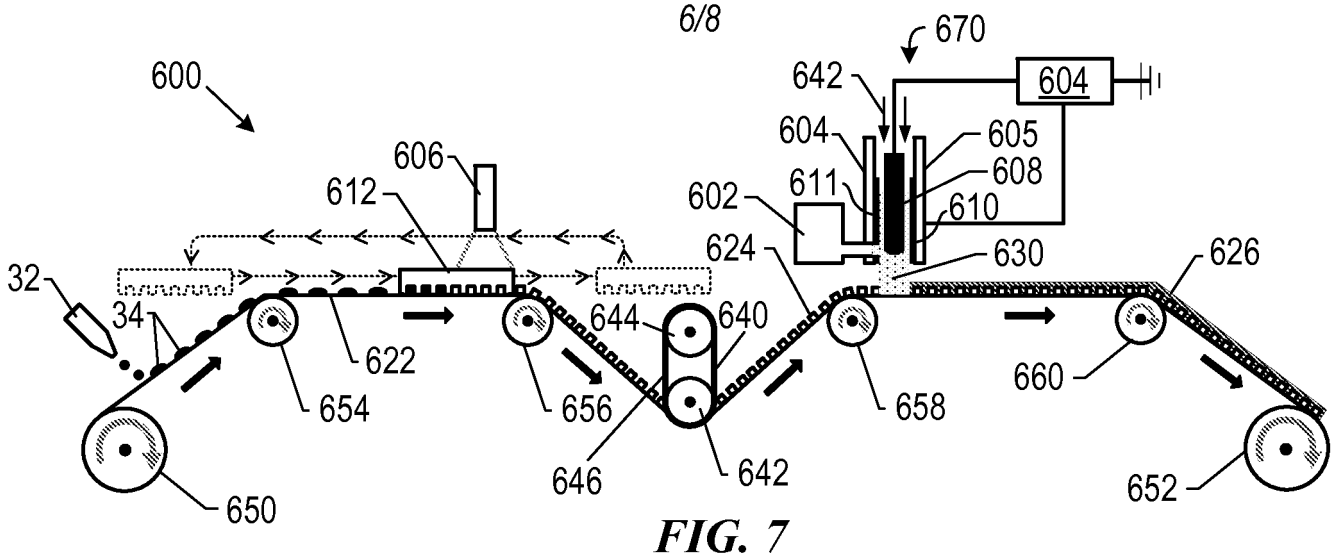
600
606
612
32
34
622
654
650
656
644
640
646
642
670
642
604
604
605
608
611
610
602
624
630
626
660
658
652

FIG. 7

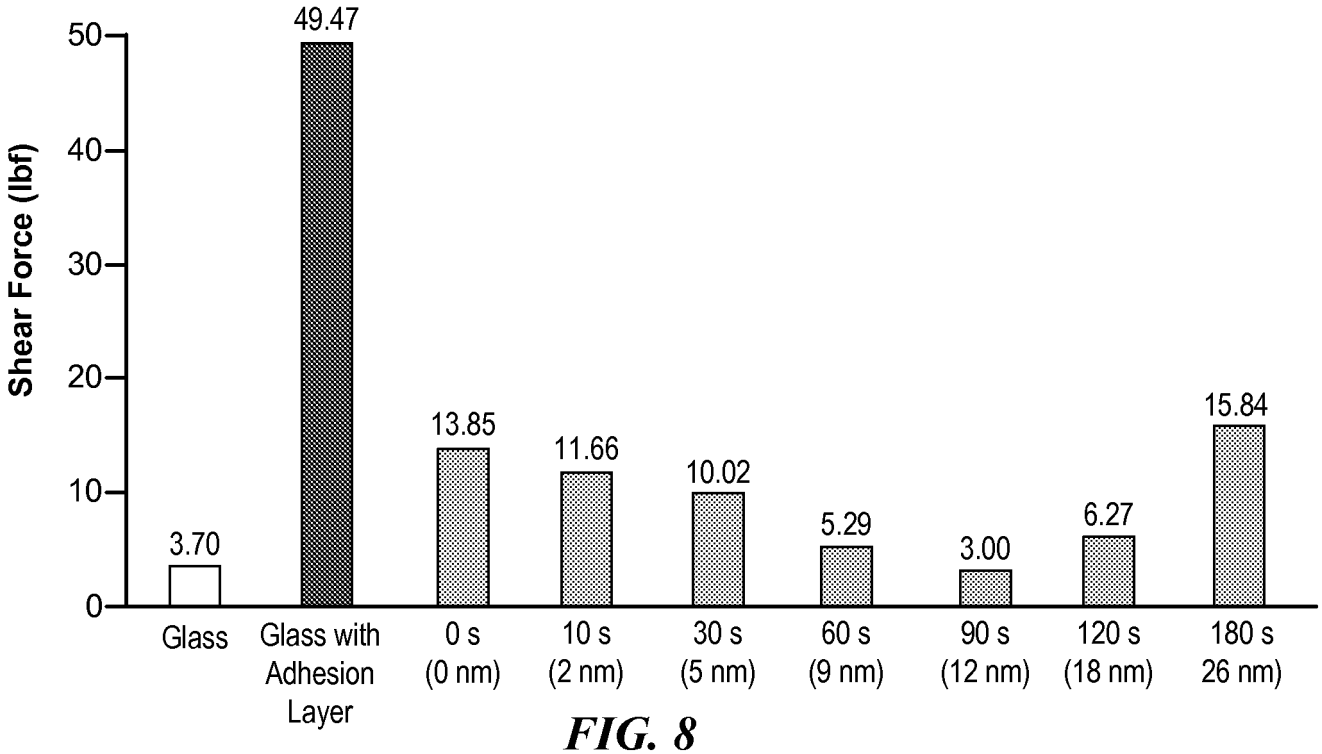
Shear Force (lbf)
50
40
30
20
10
0
3.70
49.47
13.85
11.66
10.02
5.29
3.00
6.27
15.84
Glass
Glass with Adhesion Layer
0 s (0 nm)
10 s (2 nm)
30 s (5 nm)
60 s (9 nm)
90 s (12 nm)
120 s (18 nm)
180 s 26 nm)

FIG. 8

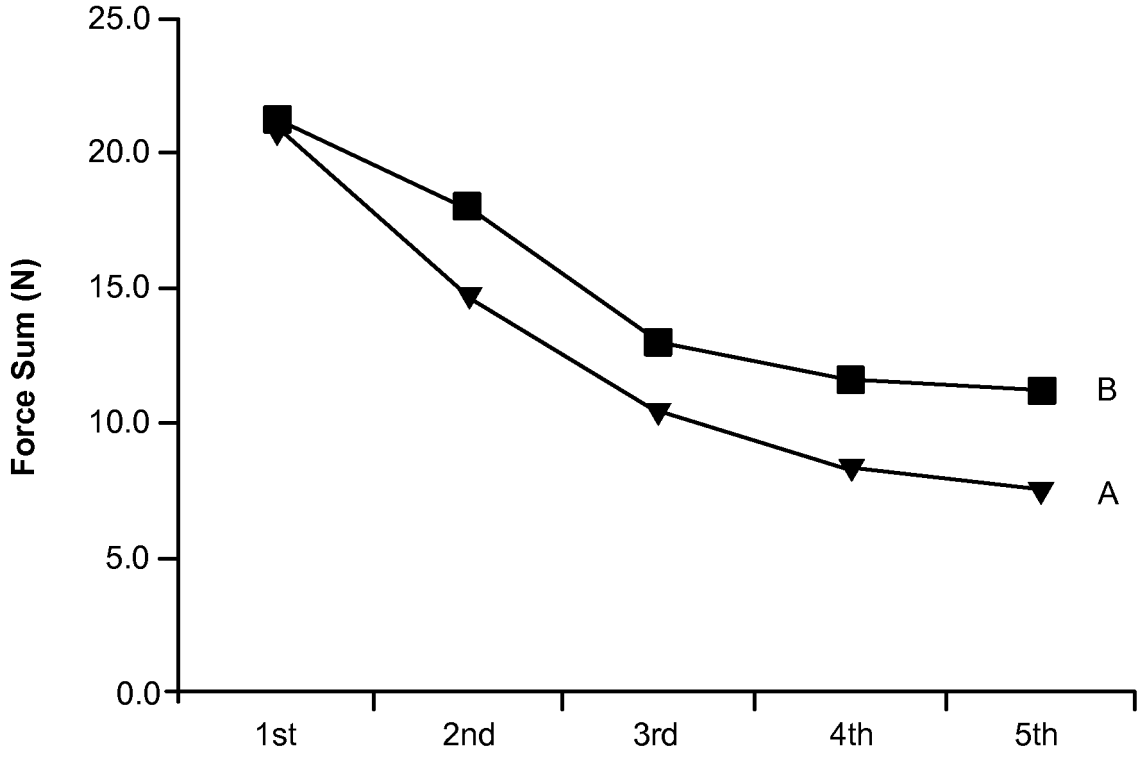

FIG. 9

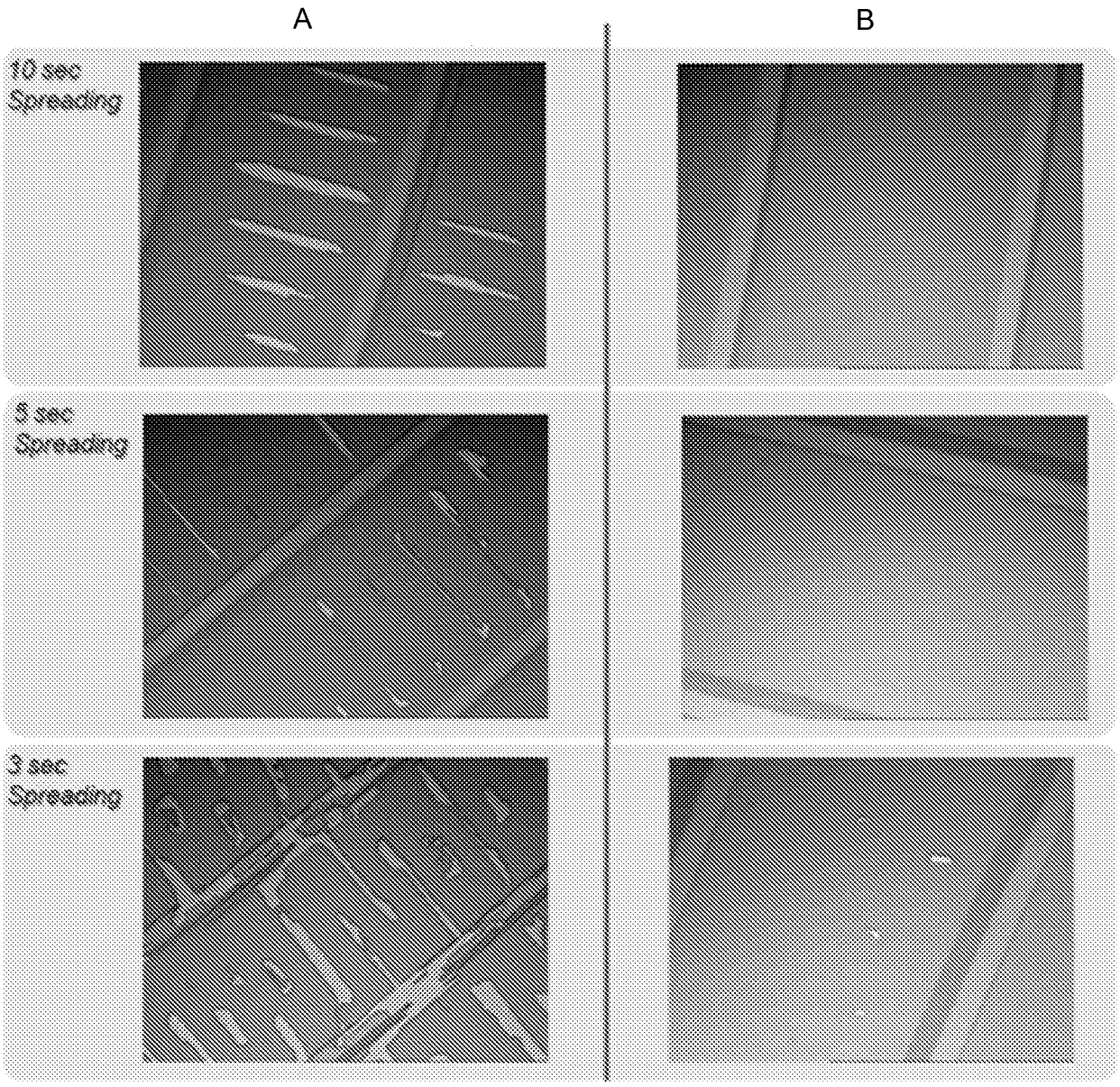

FIG. 10