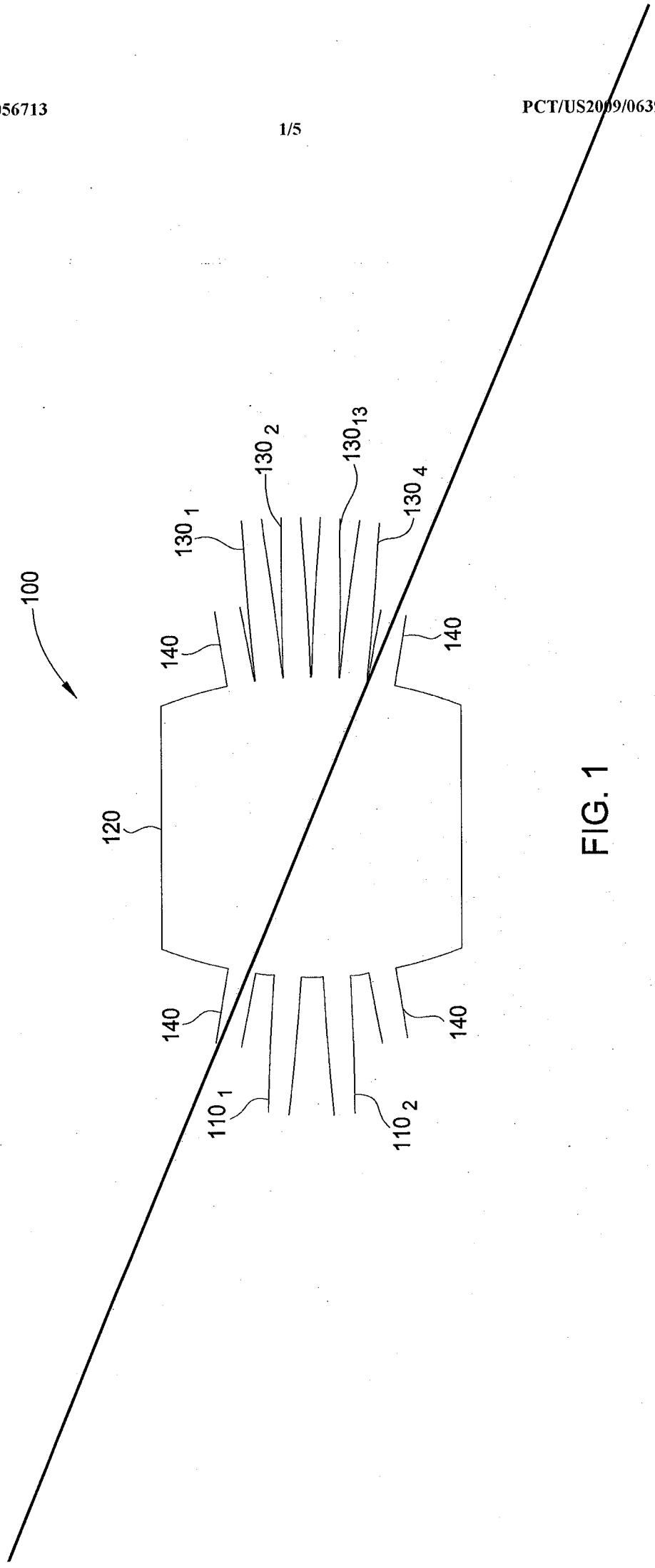


FIG. 1

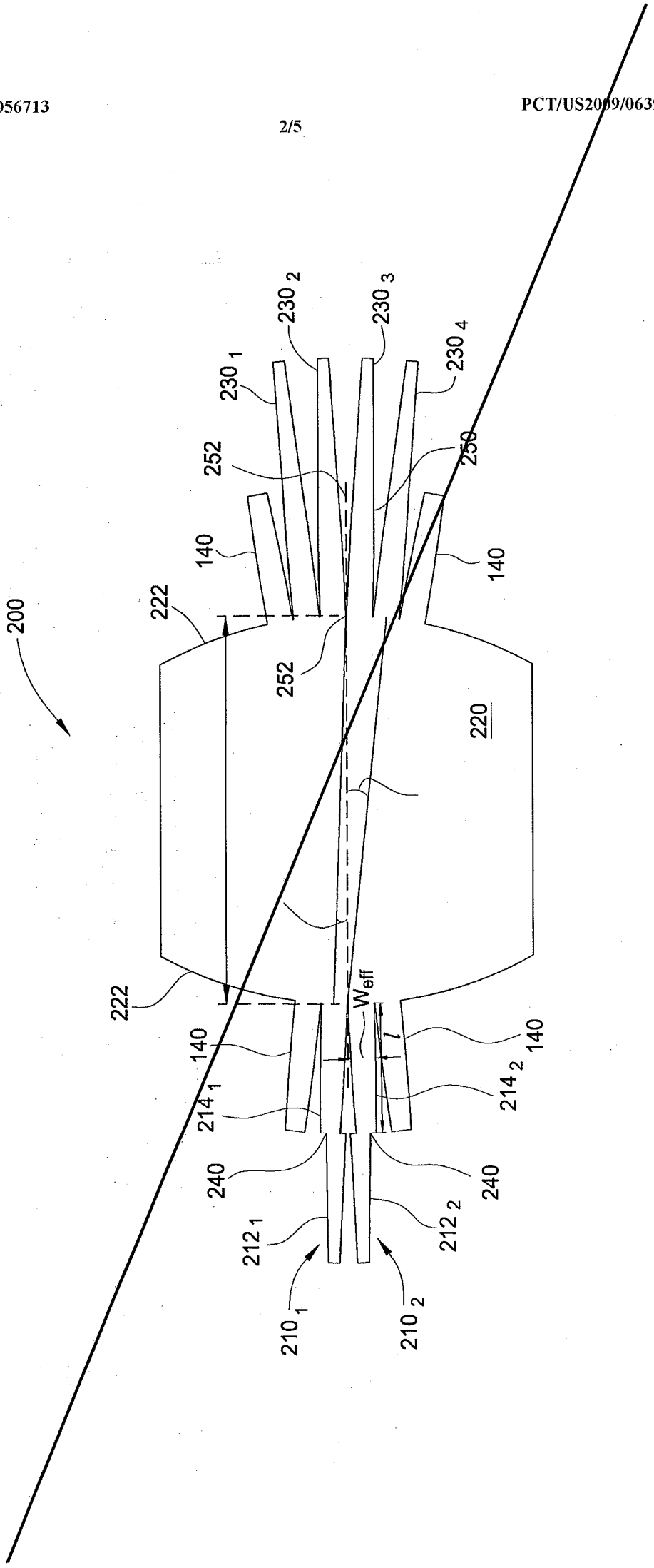

200
222
222
140
140
140
140
252
252
250
230 1
230 2
230 3
230 4
220
W_{eff}
l
214 1
214 2
240
240
212 1
212 2
210 1
210 2

FIG. 2

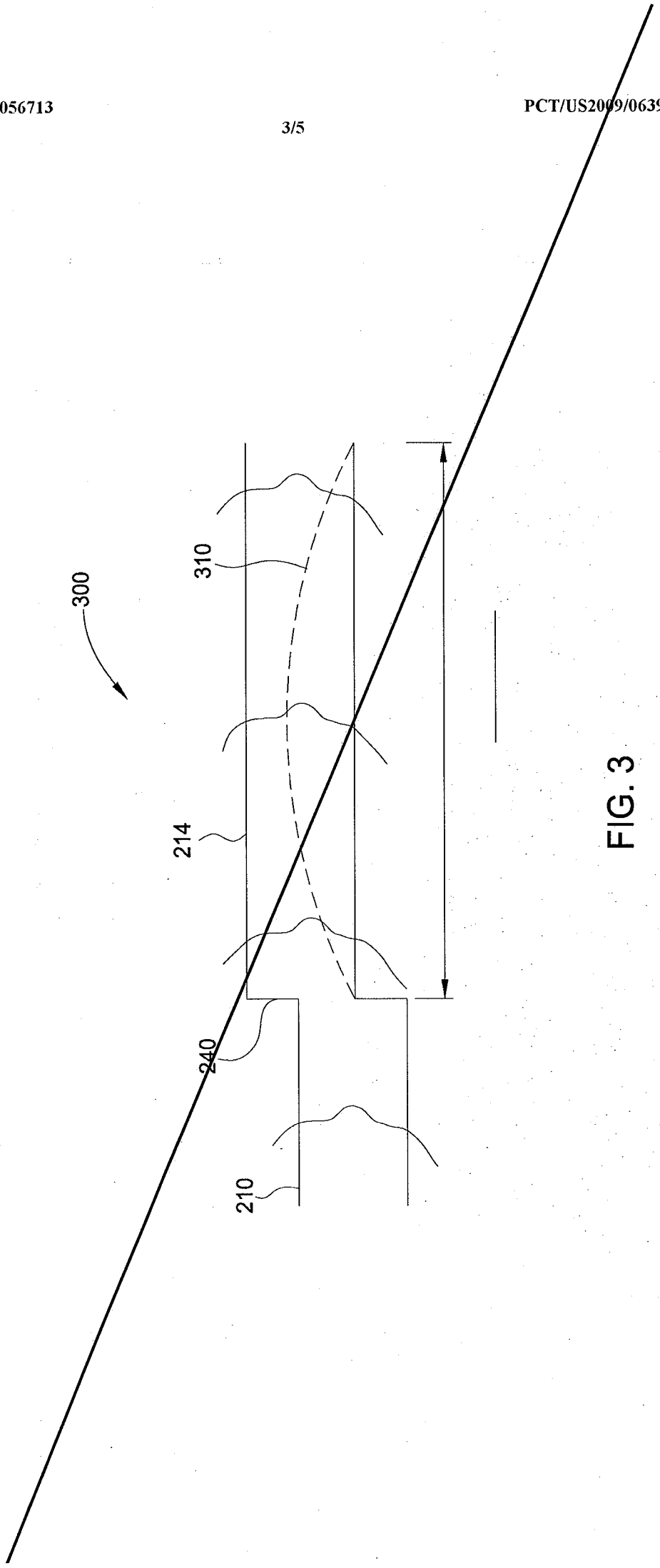


FIG. 3

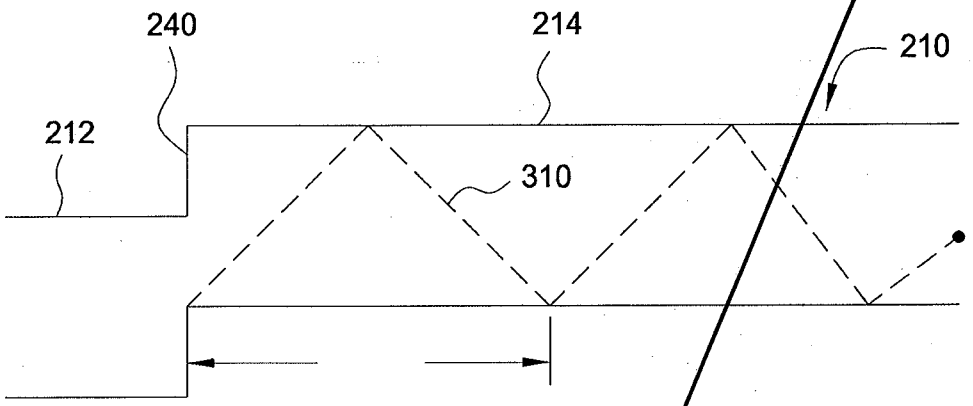


FIG. 3A

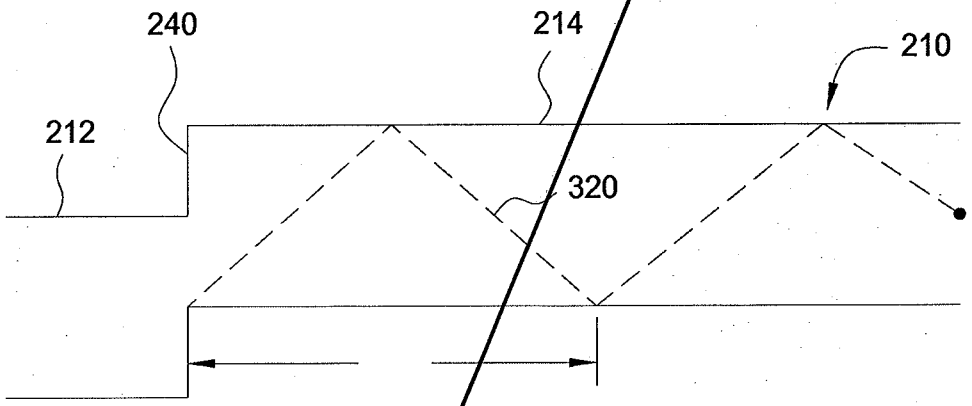


FIG. 3B

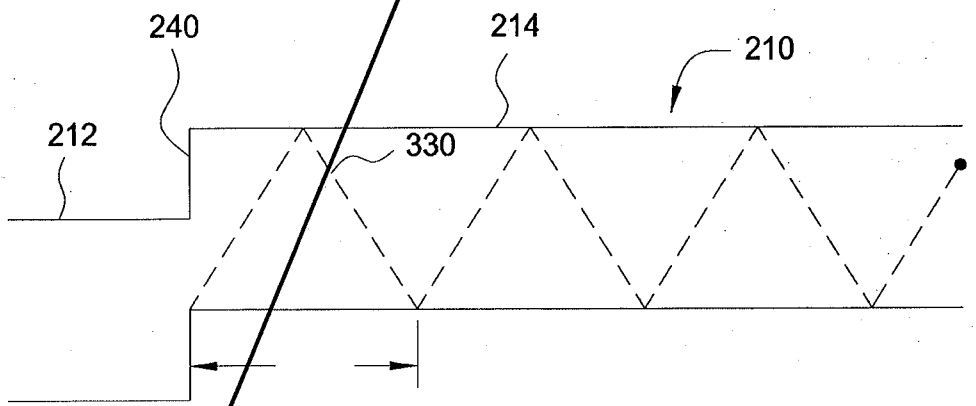


FIG. 3B

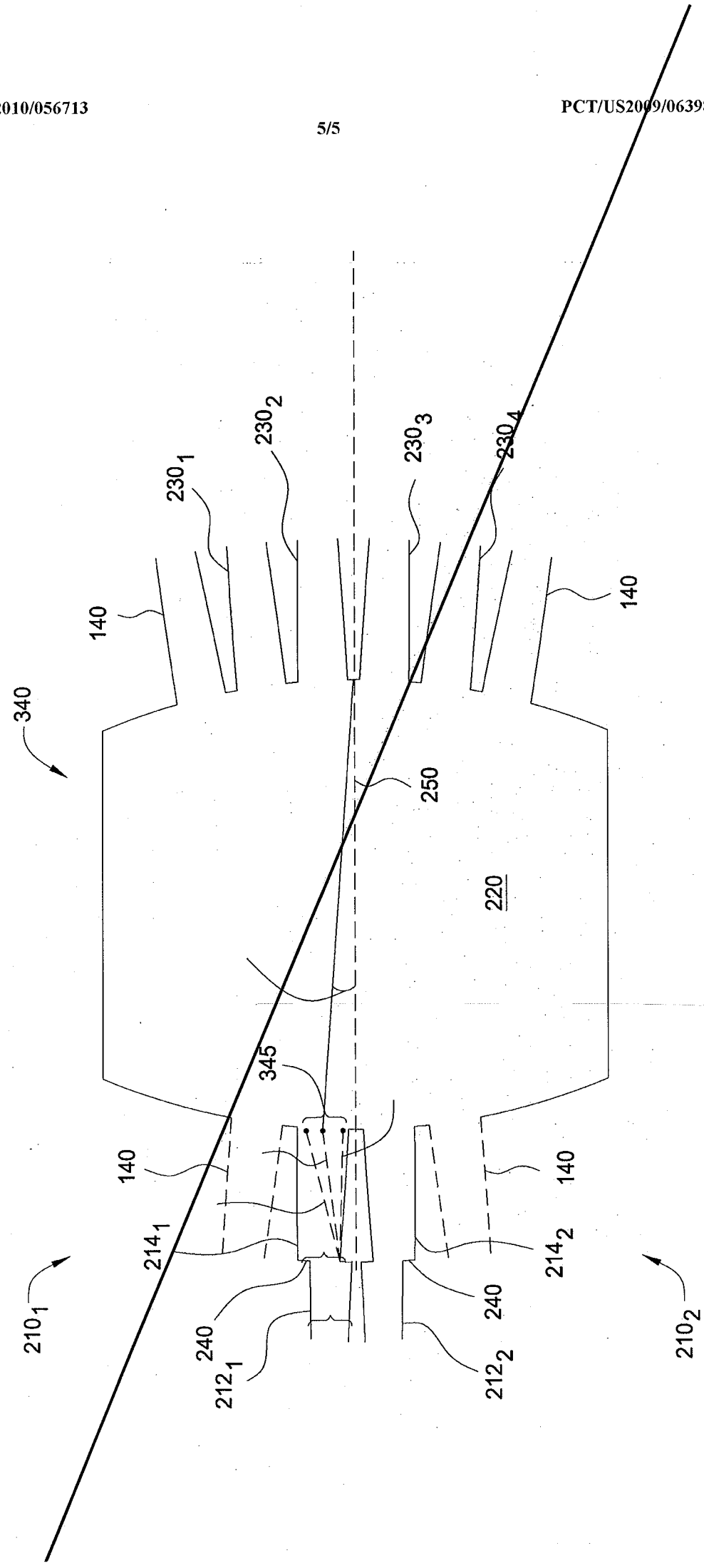

230_1
230_2
230_3
230_4
140
140
340
250
220
345
140
140
214_1
214_2
210_1
210_2
240
240
212_1
212_2

FIG. 3D

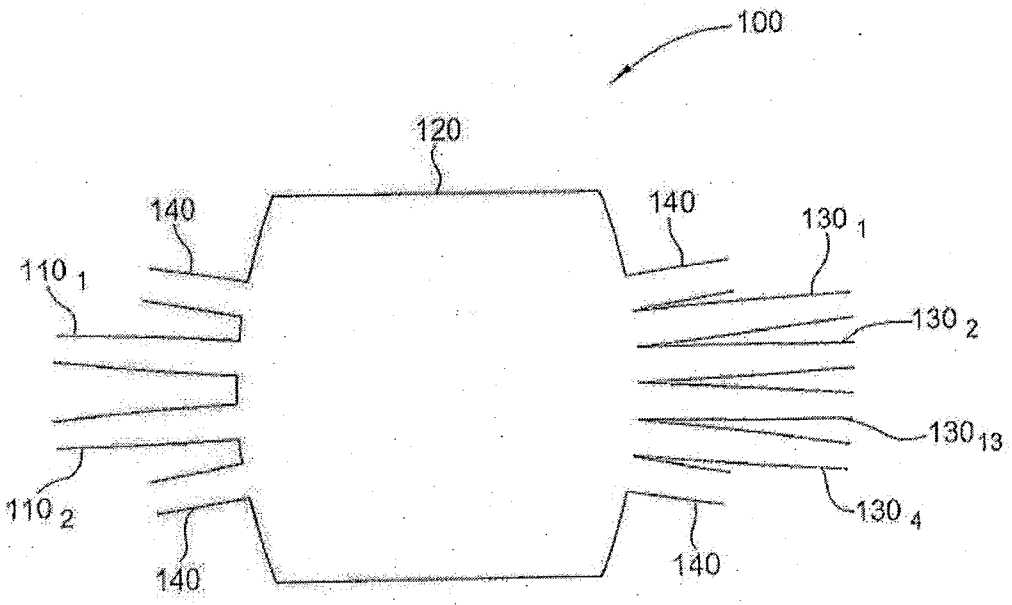


FIG. 1

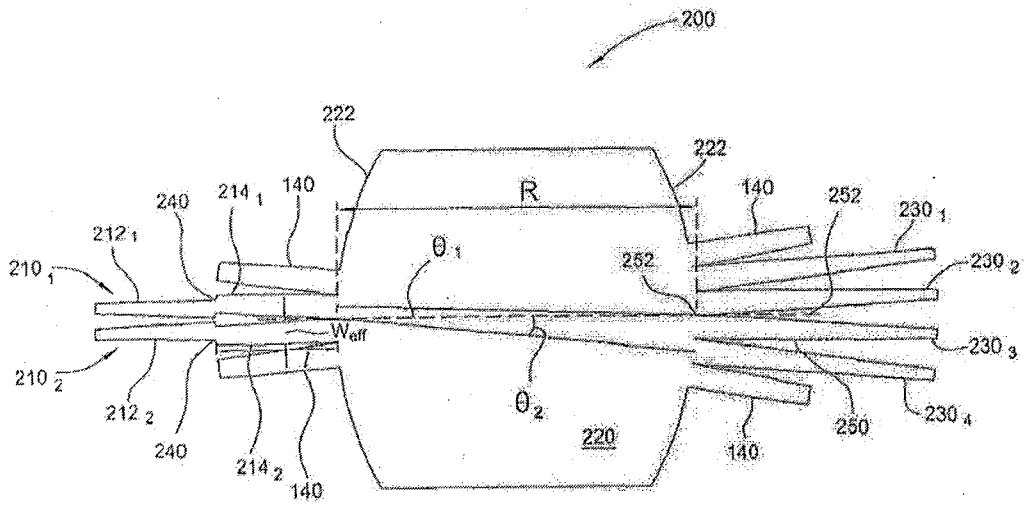

200
222
222
R
140
140
240
214 1
212 1
210 1
θ 1
252
252
230 1
230 2
230 3
230 4
Weff
θ 2
210 2
212 2
240
214 2
140
220
140
250

FIG. 2

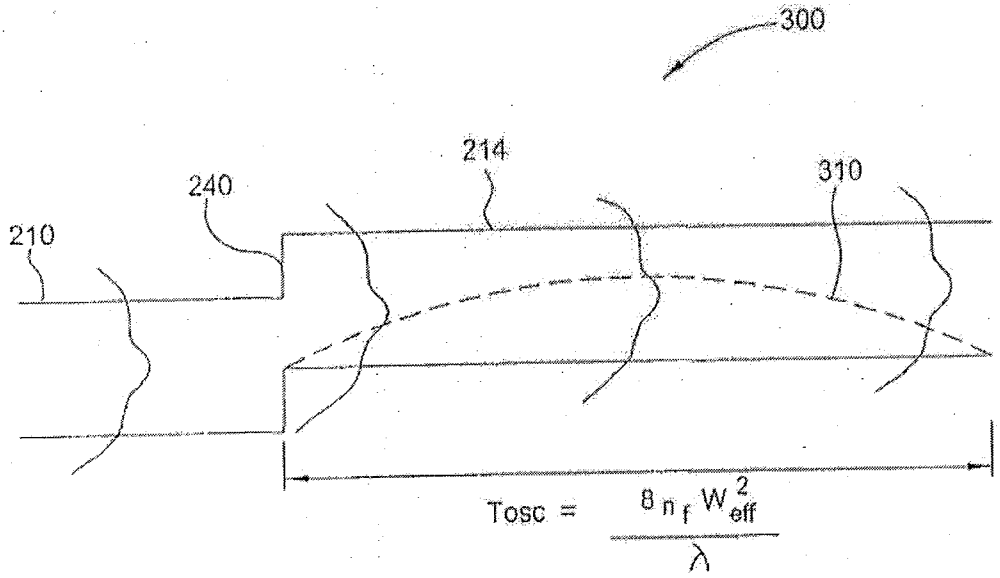

300
214
240
310
210
Tosc = 8 n f W 2 eff / λ

FIG. 3

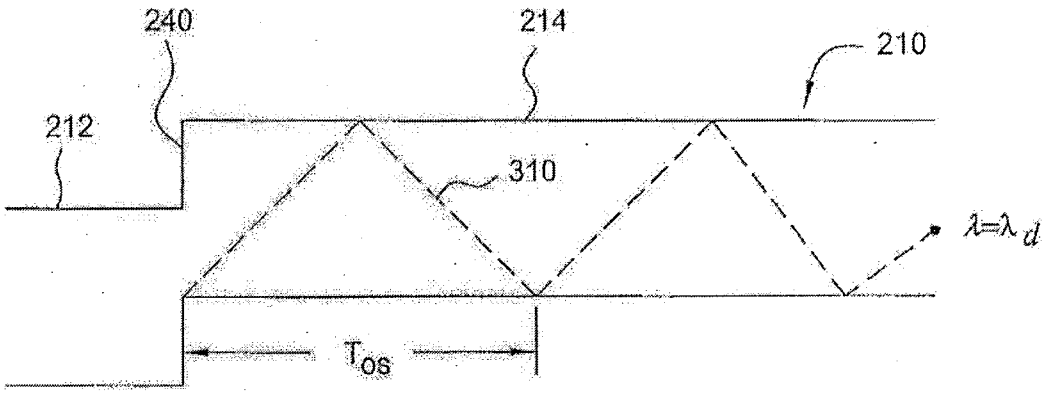


FIG. 3A

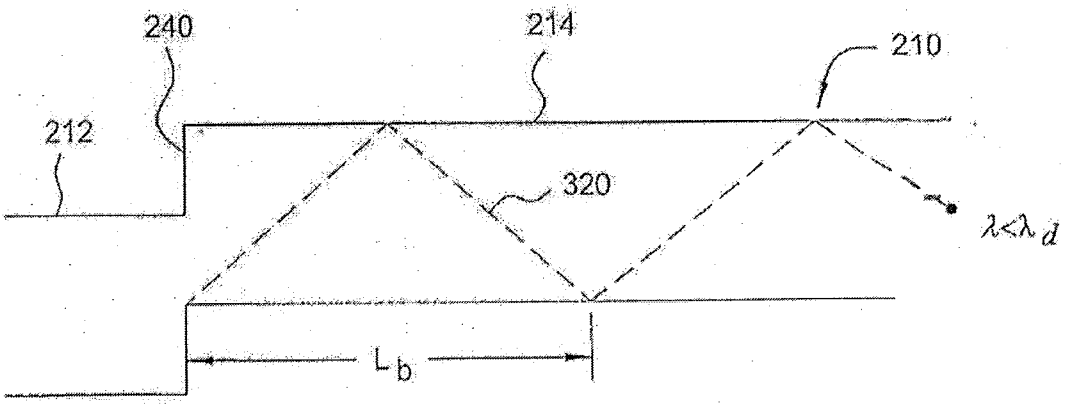


FIG. 3B

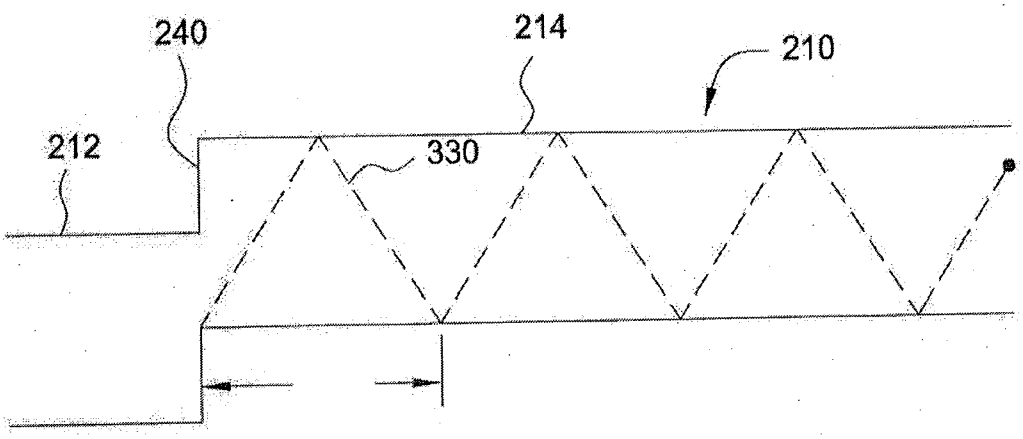

240
214
210
212
330

FIG. 3C

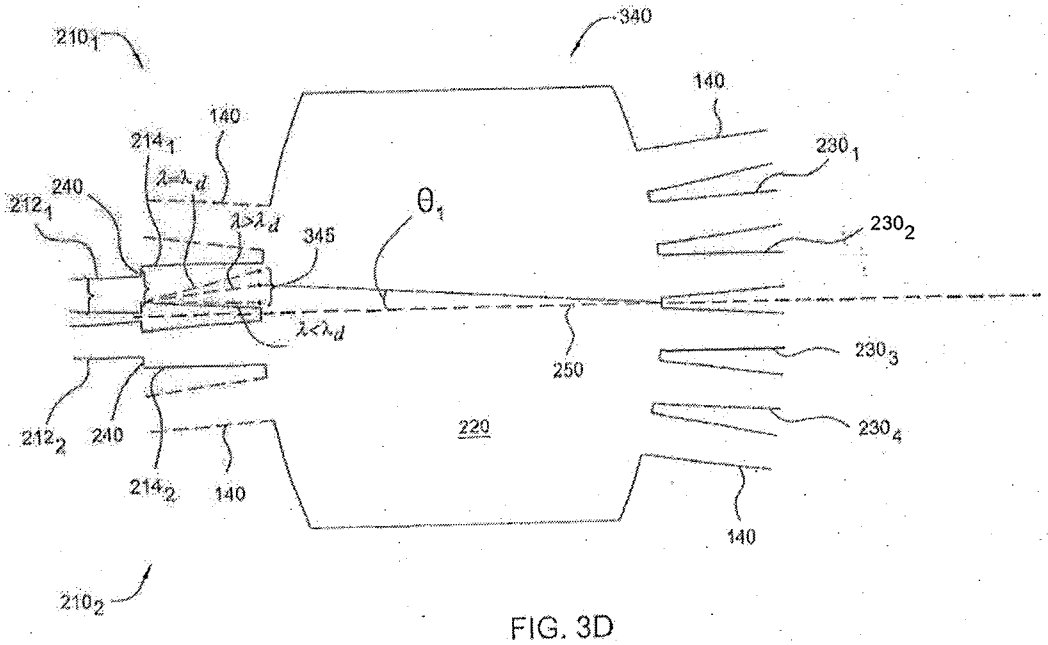

210_1
340
140
140
214_1
230_1
240
212_1
$\lambda=\lambda_d$
$\lambda>\lambda_d$
345
θ_1
230_2
$\lambda<\lambda_d$
250
230_3
212_2
240
220
230_4
214_2
140
140
210_2

FIG. 3D