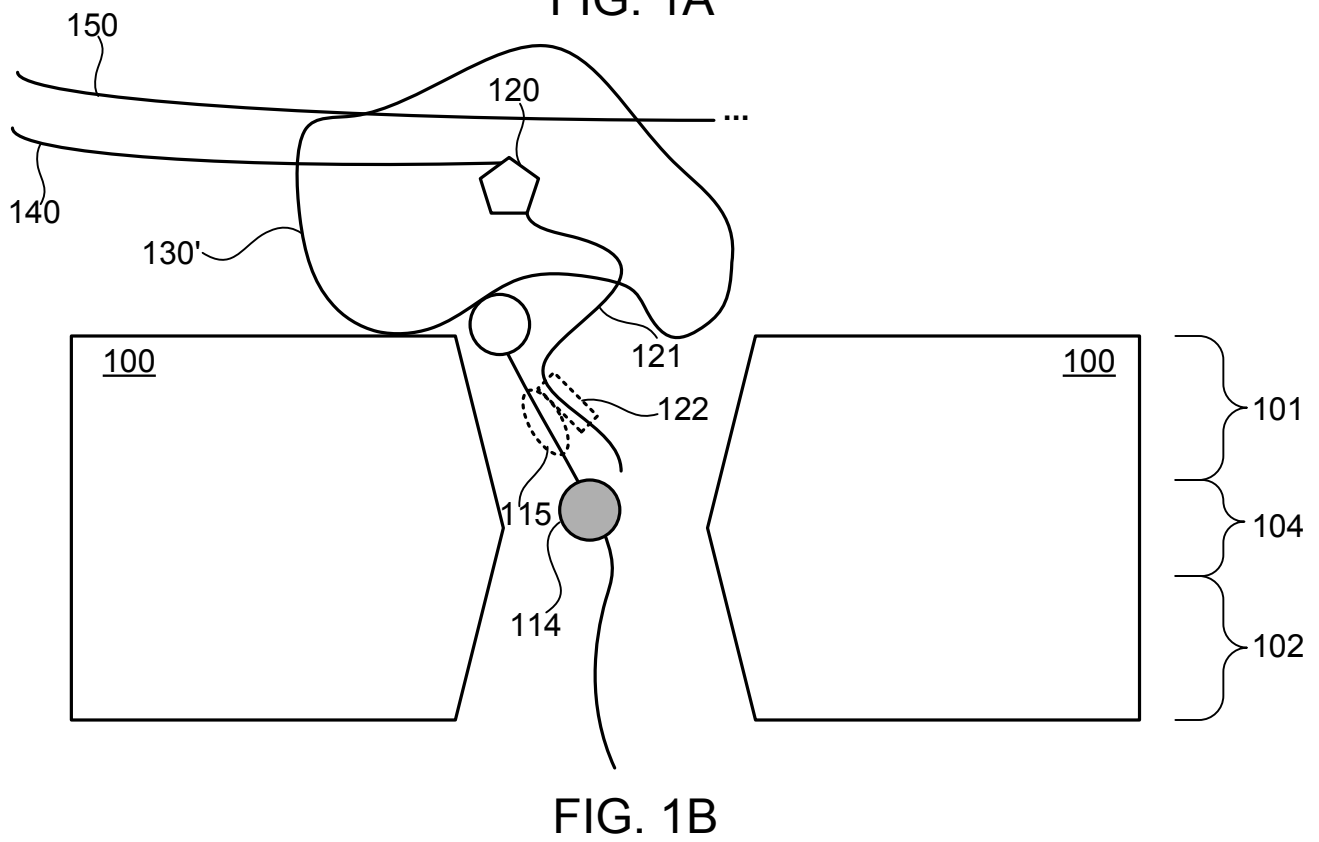
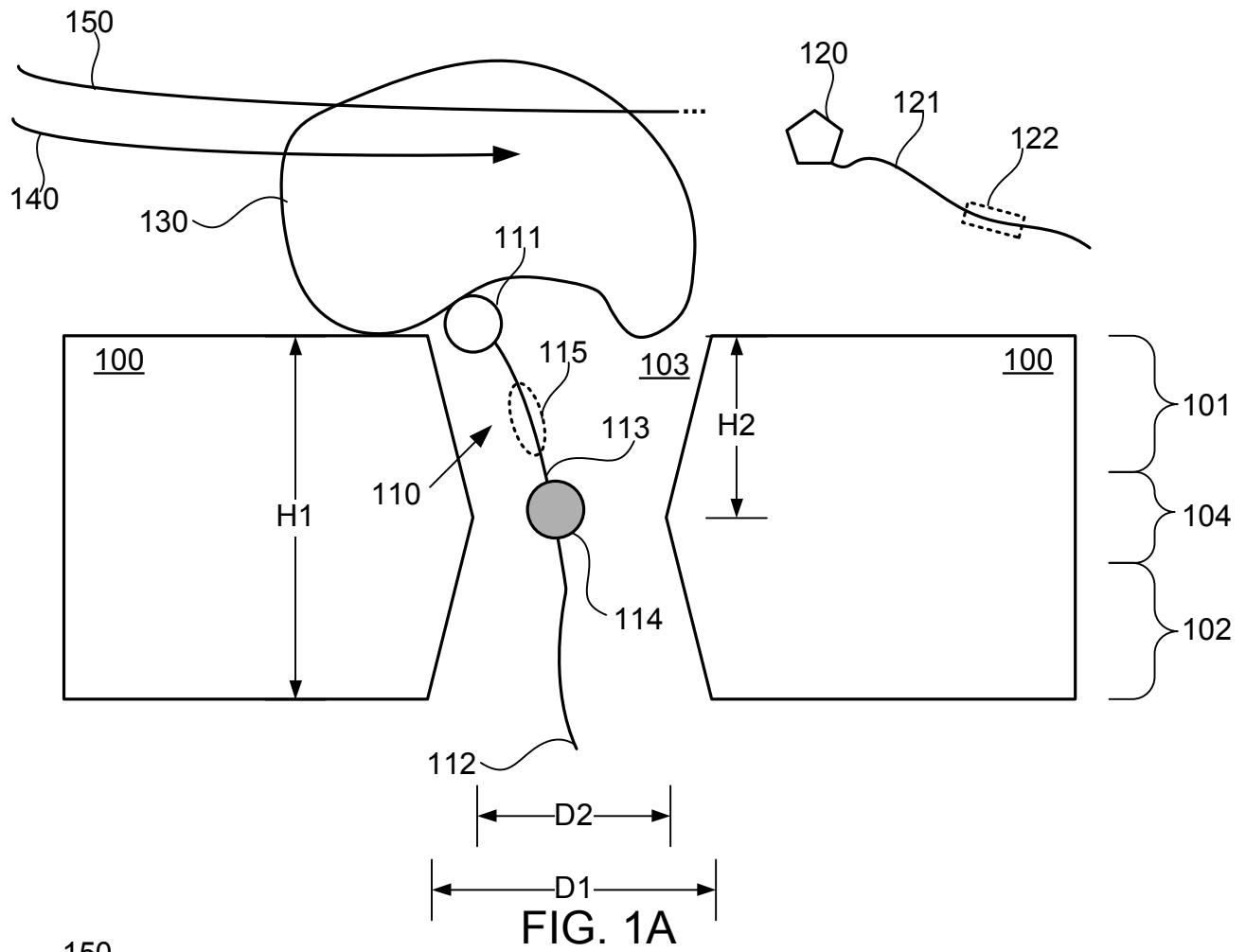




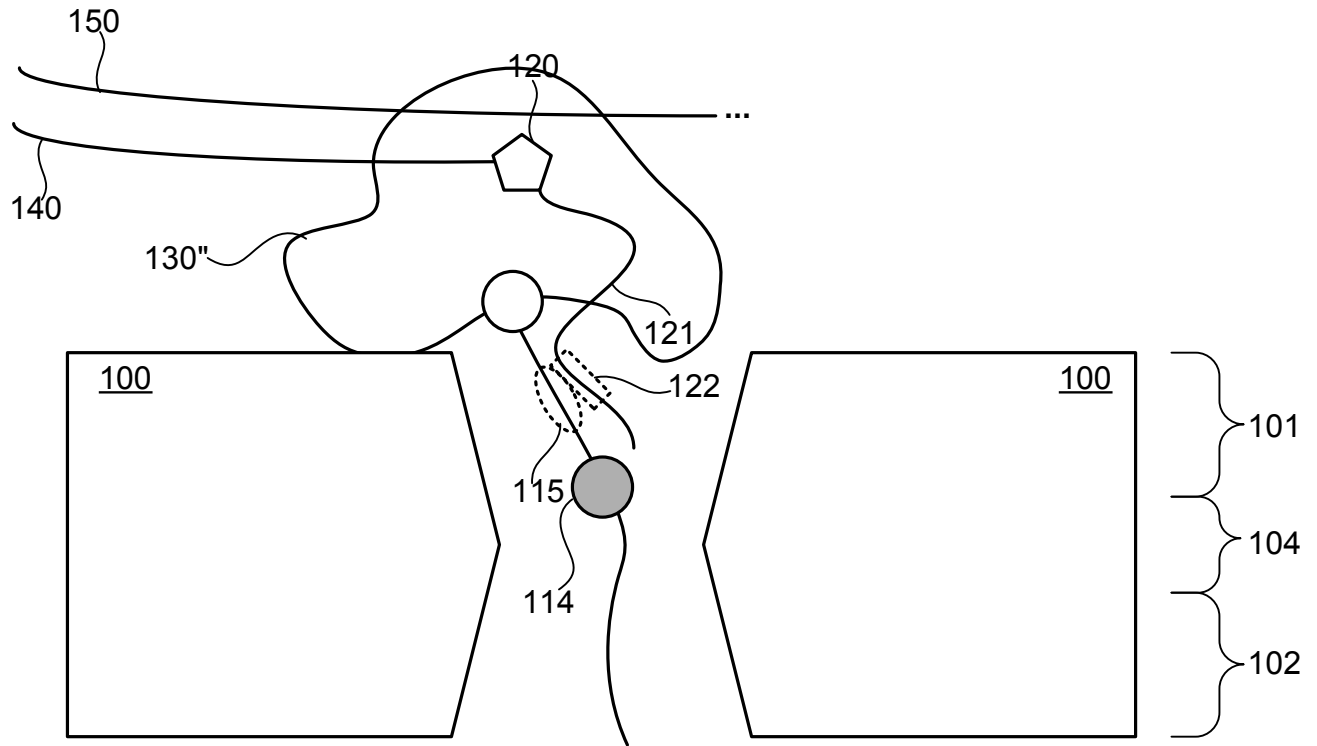


FIG. 1C

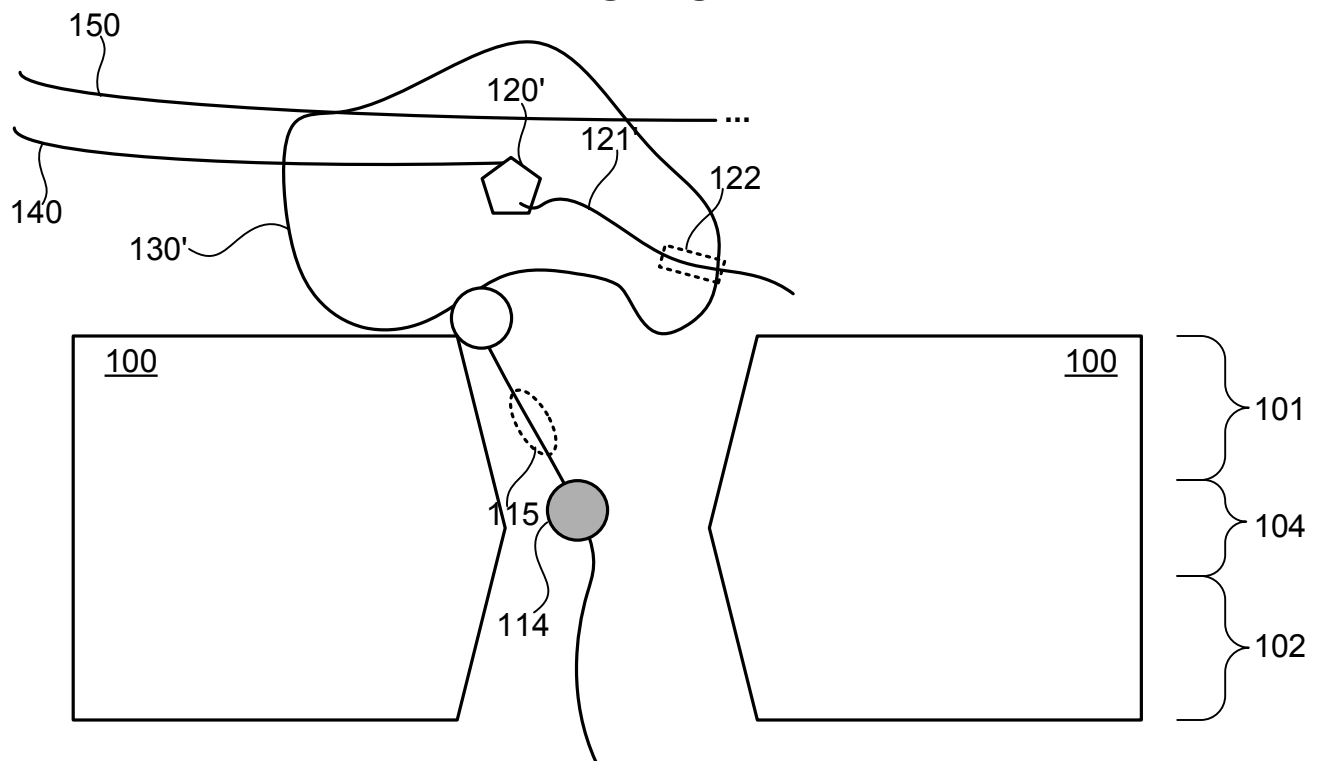
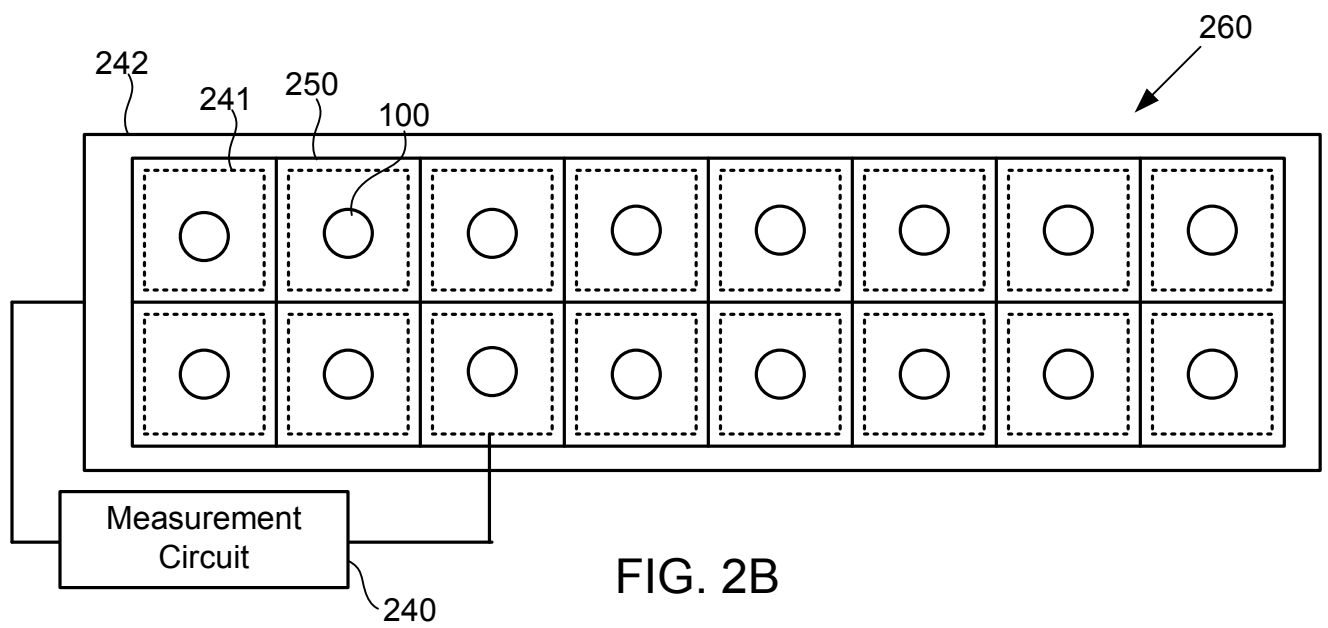
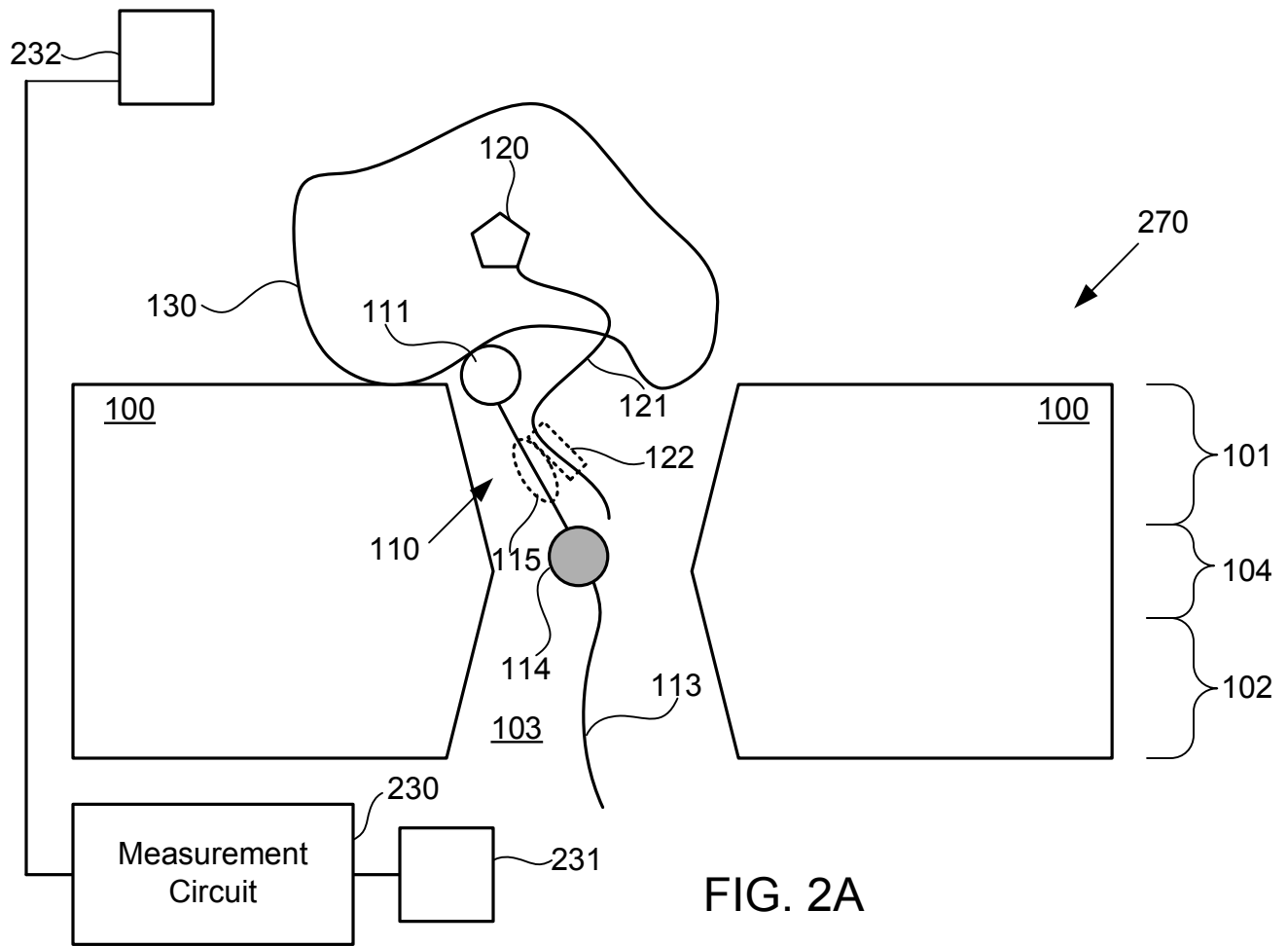


FIG. 1D



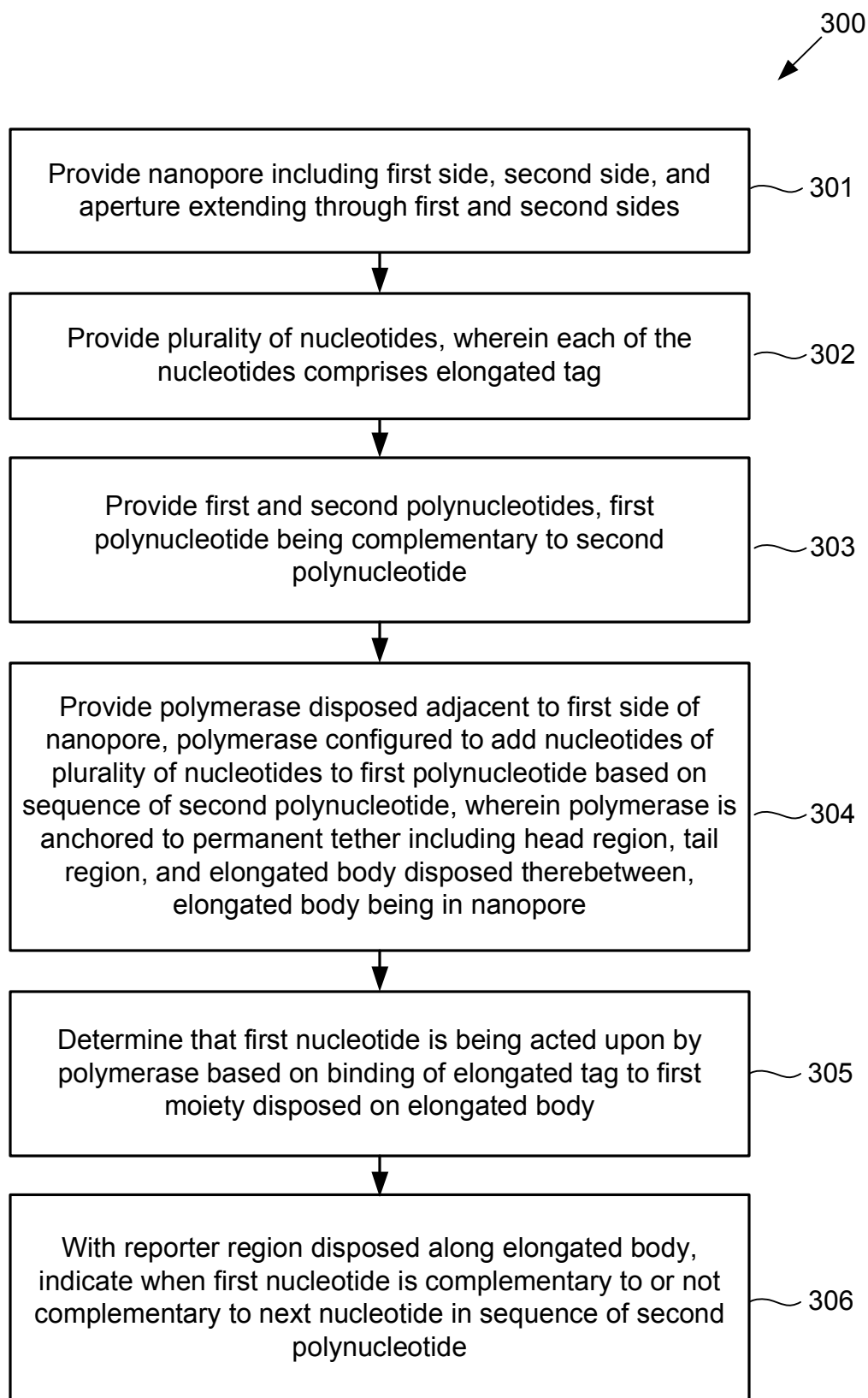


FIG. 3

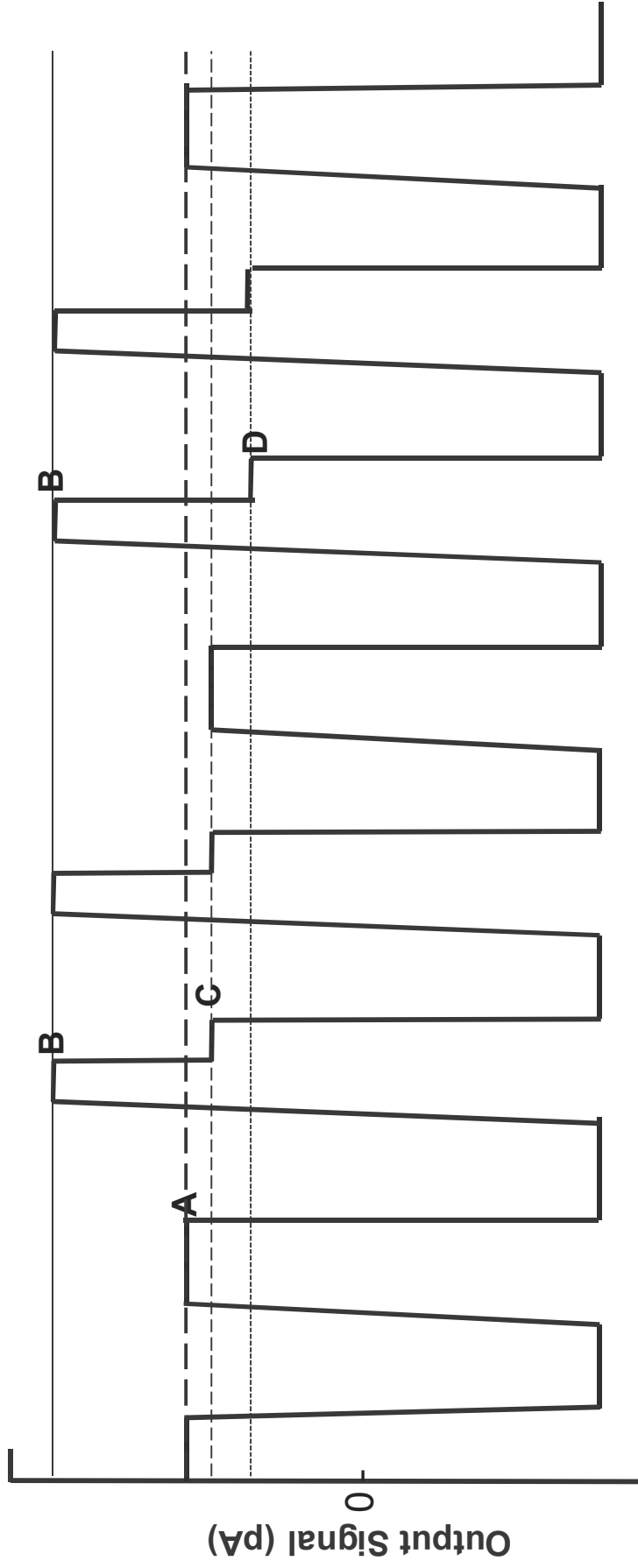


FIG. 6

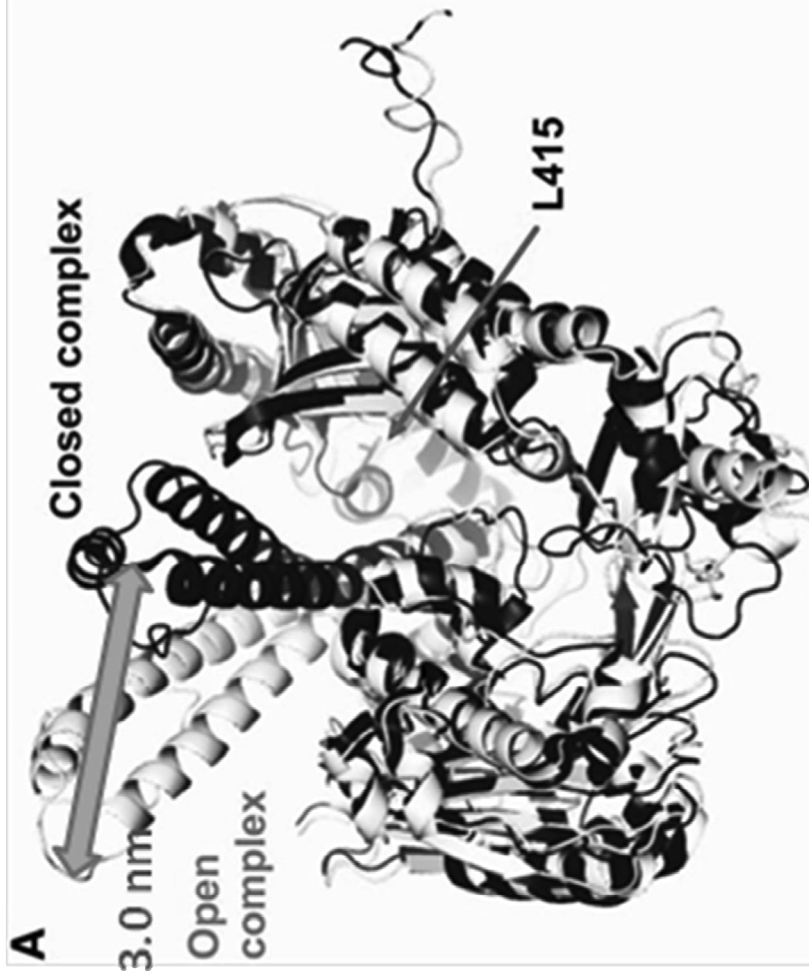


FIG. 7A

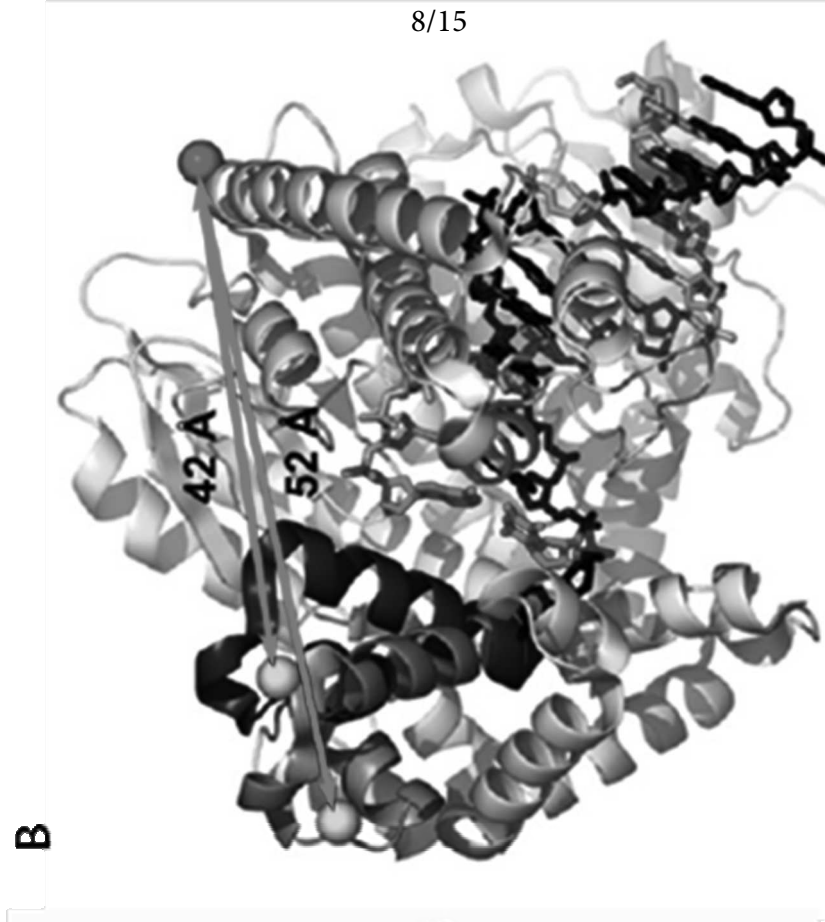
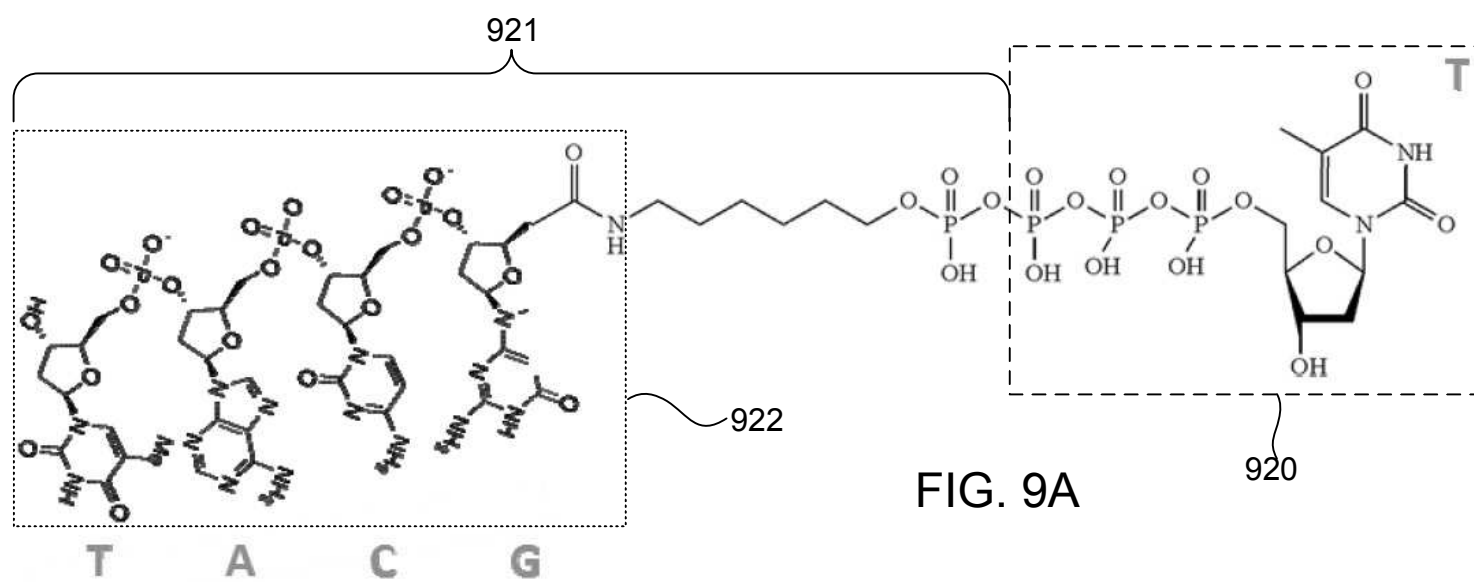


FIG. 7B

FIG. 7D

	Reaction Parameters	Tag Dwell Time (usec)
Reaction Scheme	$ED_n + dNTP \xrightleftharpoons{K_1} ED_n dNTP \xrightleftharpoons[k_{-2}]{k_2} FD_n dNTP \xrightleftharpoons[k_{-3}]{k_3} FD_{n+1} PP_i \xrightarrow{fast} ED_{n+1} PP_i$	$1/(k_{-2} + k_3)$
Perfect Match Nucleotide	$ED_n + dNTP \xrightleftharpoons{28 \mu M} ED_n dNTP \xrightleftharpoons[1.6 \text{ s}^{-1}]{660 \text{ s}^{-1}} FD_n dNTP \xrightleftharpoons[360 \text{ s}^{-1}]{360 \text{ s}^{-1}} FD_{n+1} PP_i \xrightarrow{fast} ED_{n+1} PP_i$	2760
Mismatch Nucleotide	$ED_n + dNTP \xrightleftharpoons{200 \mu M} ED_n dNTP \xrightleftharpoons[420 \text{ s}^{-1}]{220 \text{ s}^{-1}} GD_n dNTP \xrightleftharpoons[0.3 \text{ s}^{-1}]{0.3 \text{ s}^{-1}} GD_{n+1} PP_i \xrightarrow{fast} ED_{n+1} PP_i$	2380

FIG. 8



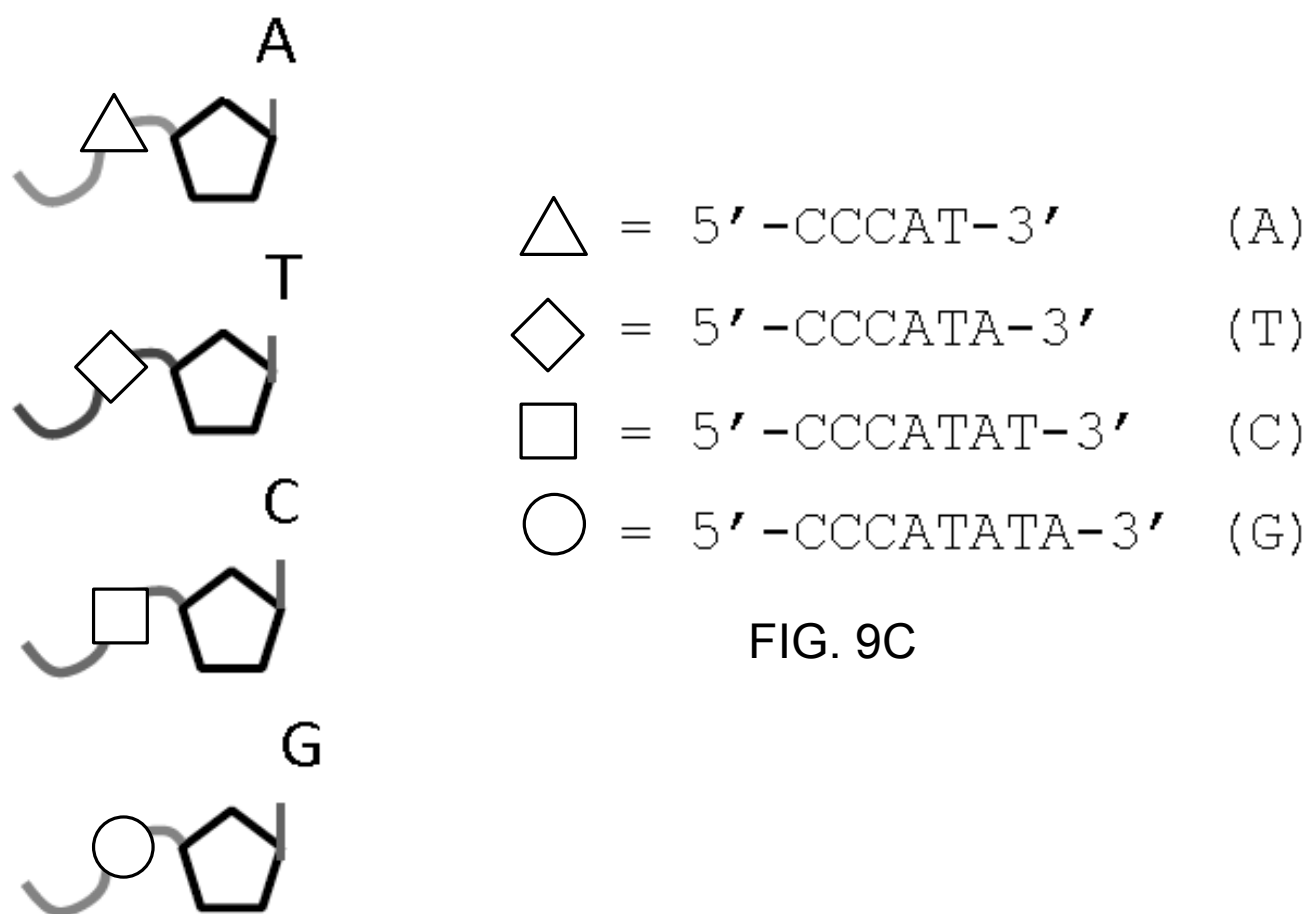


FIG. 9C

FIG. 9B

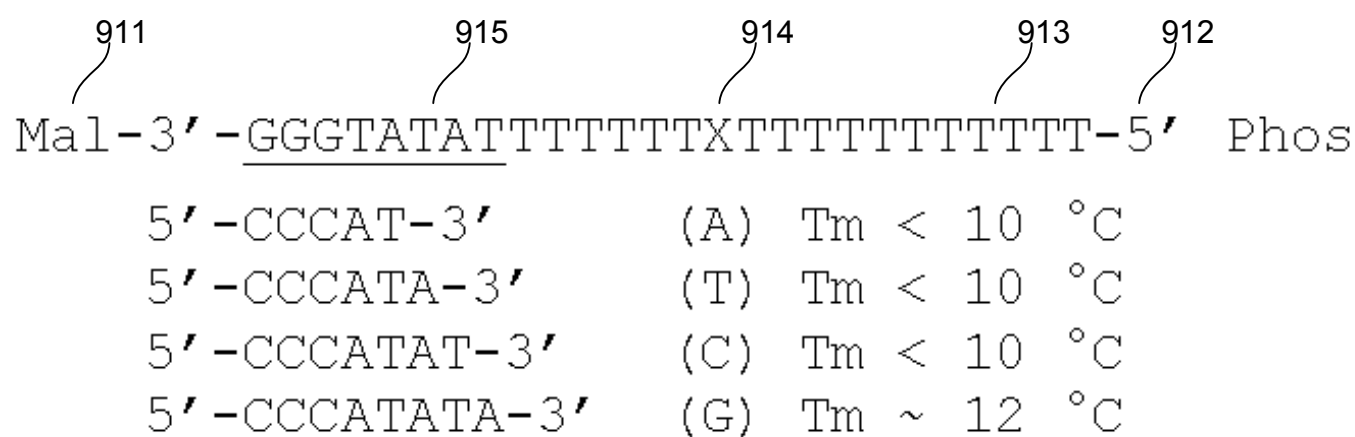
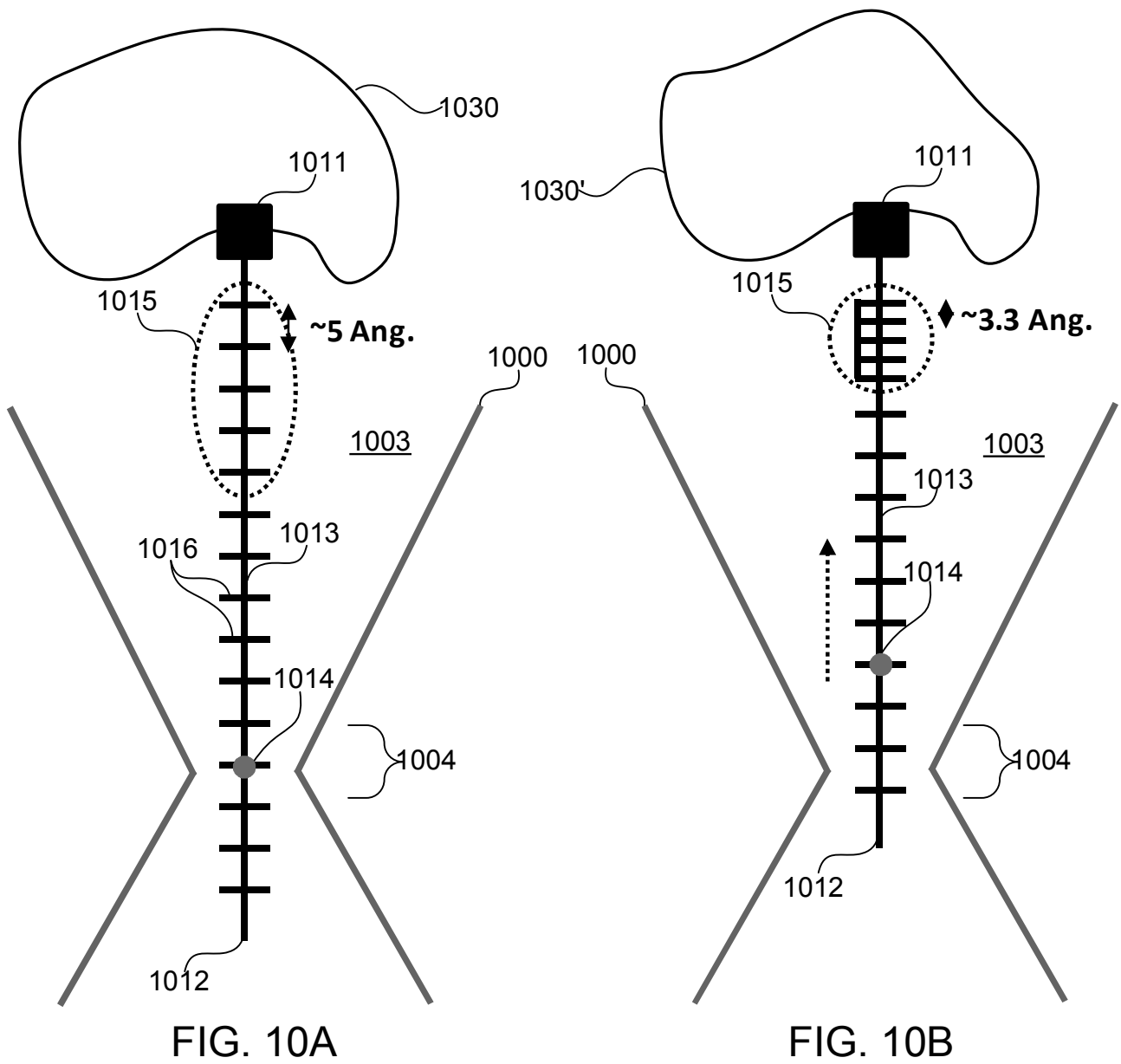


FIG. 9D



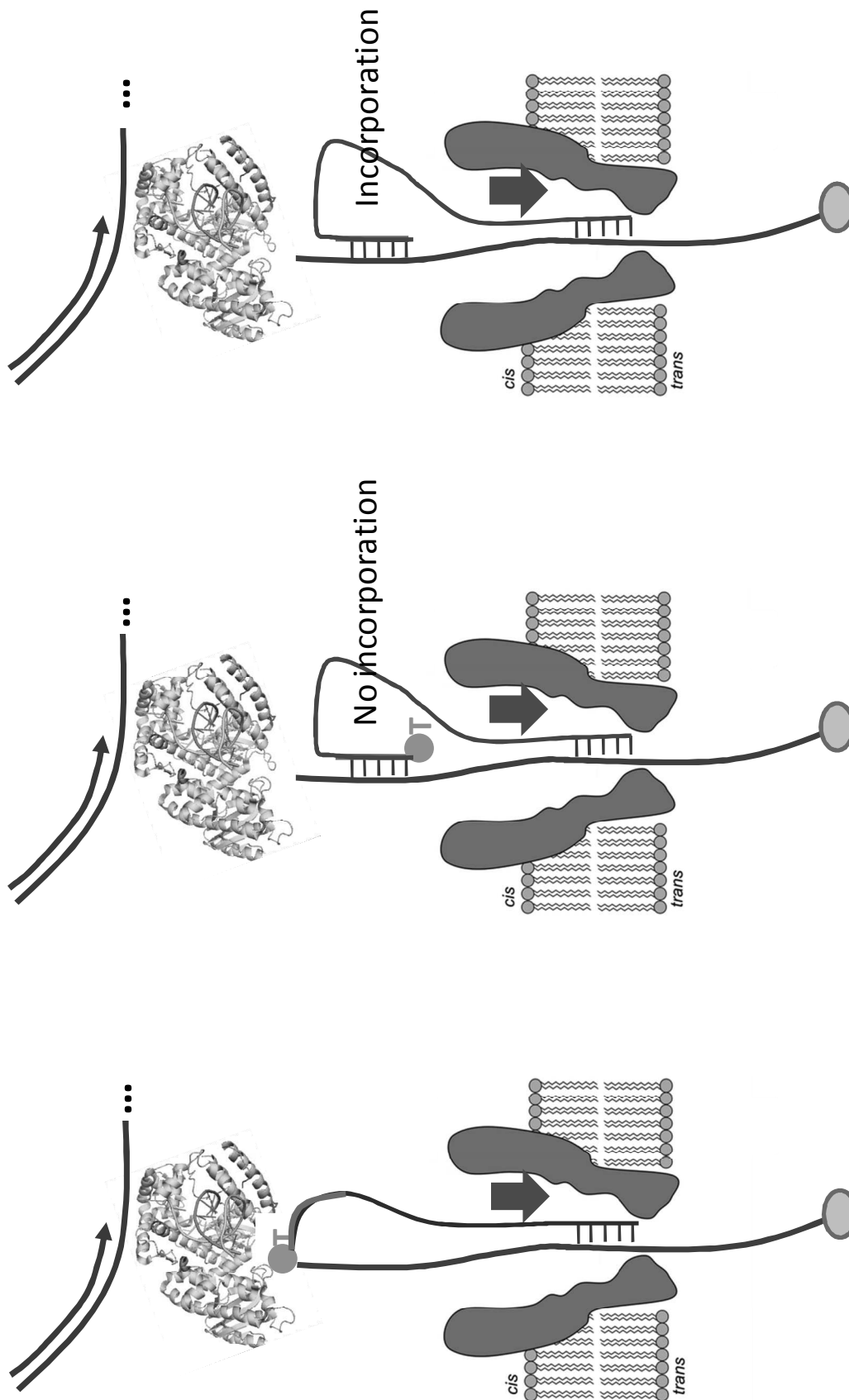


FIG. 11C

FIG. 11B

FIG. 11A

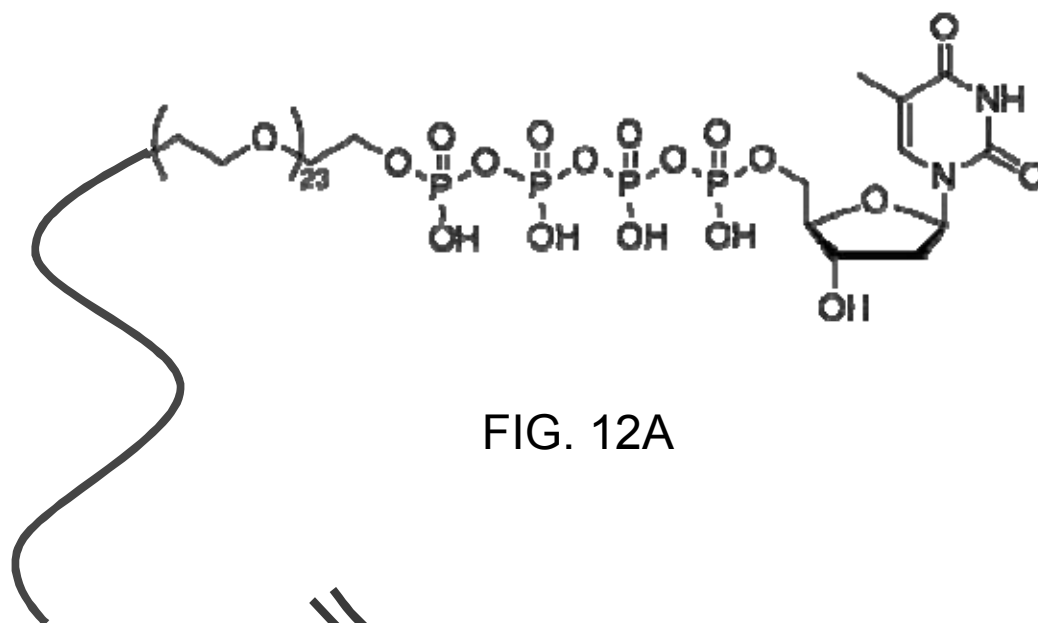


FIG. 12A

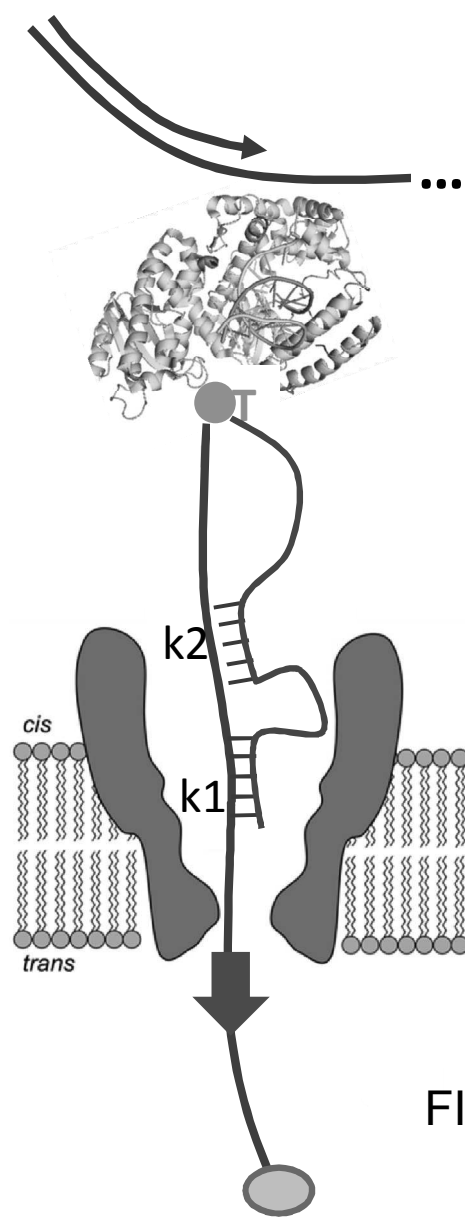


FIG. 12B