

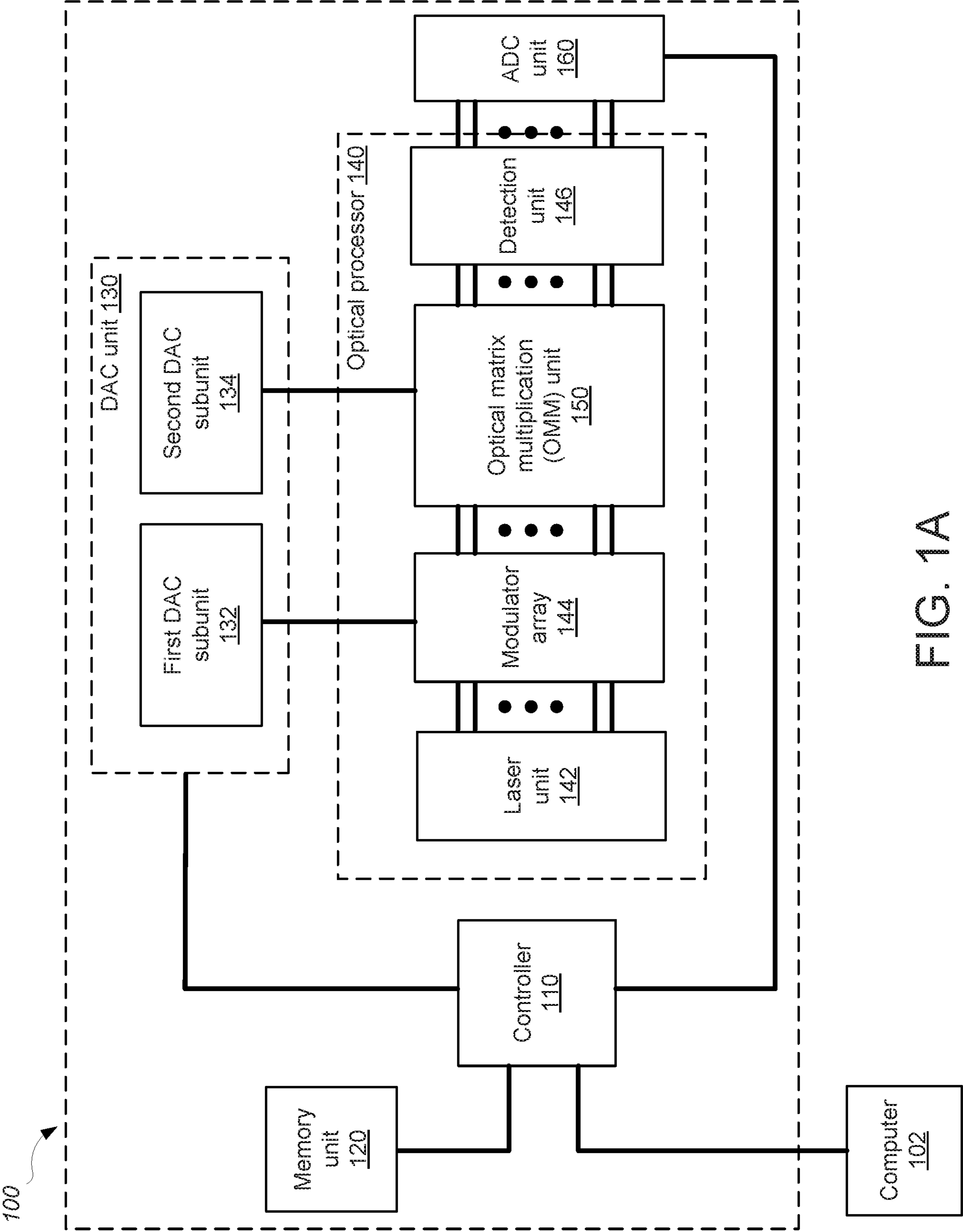


FIG. 1A

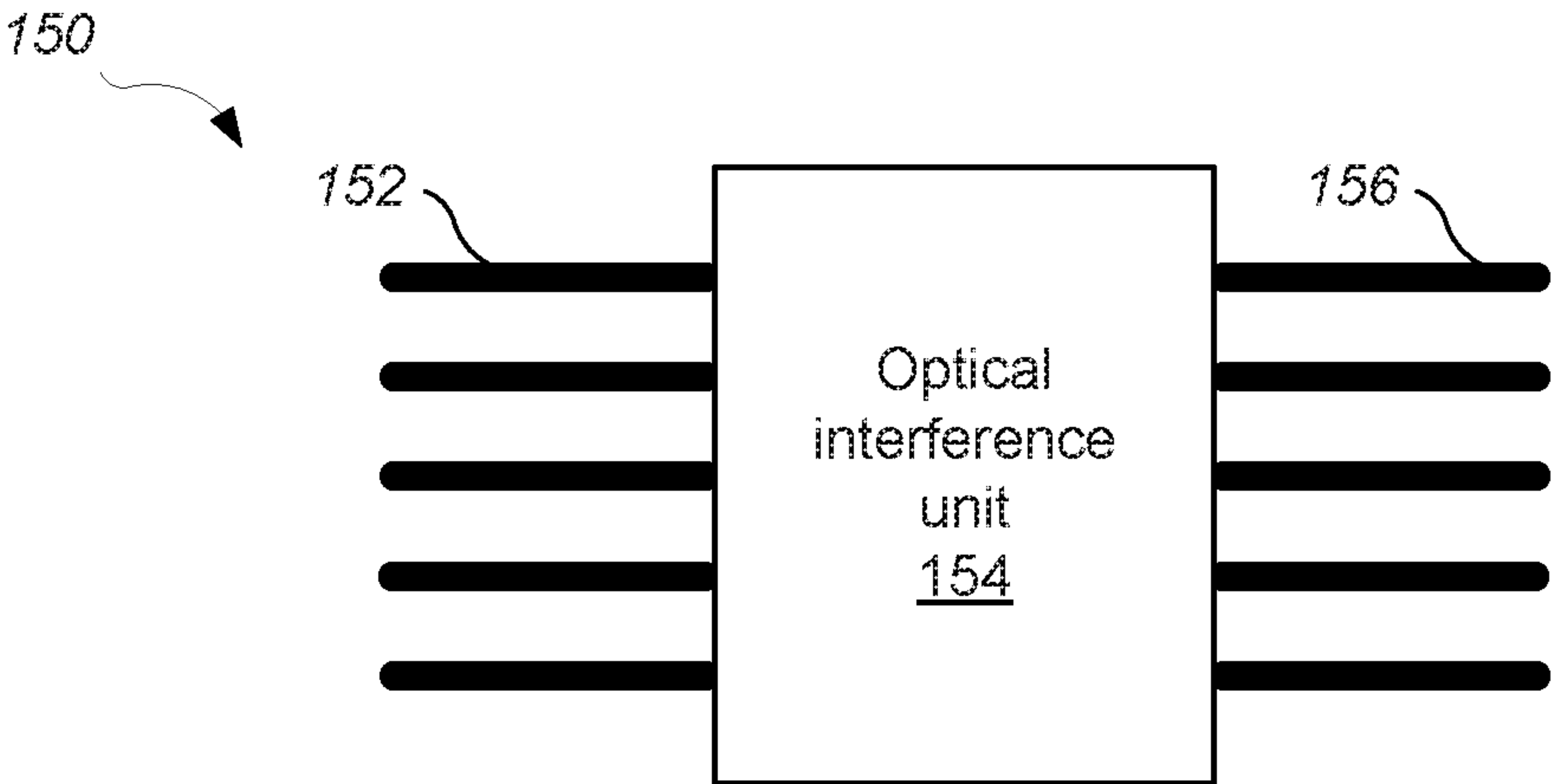


FIG. 1B

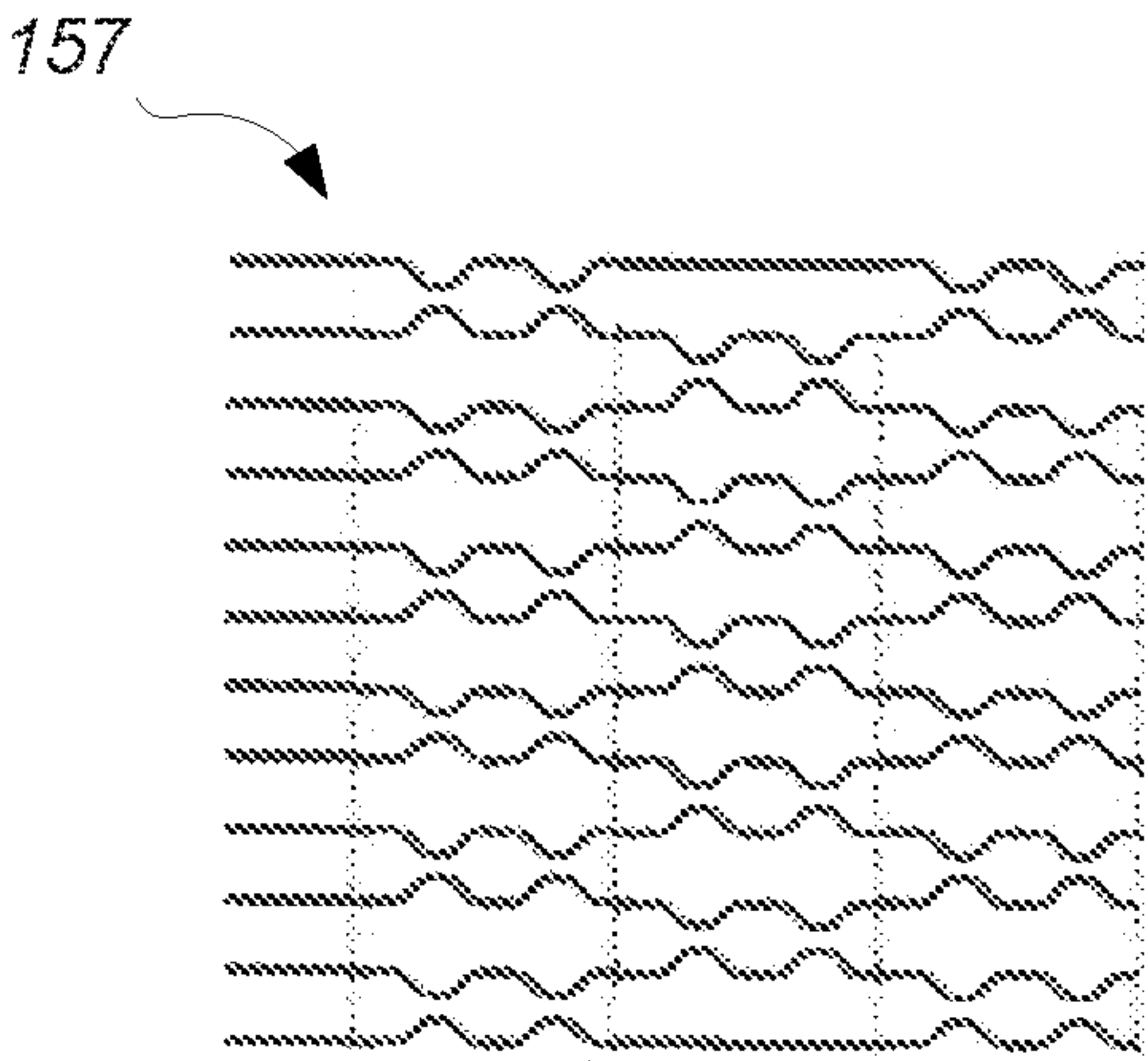


FIG. 1C

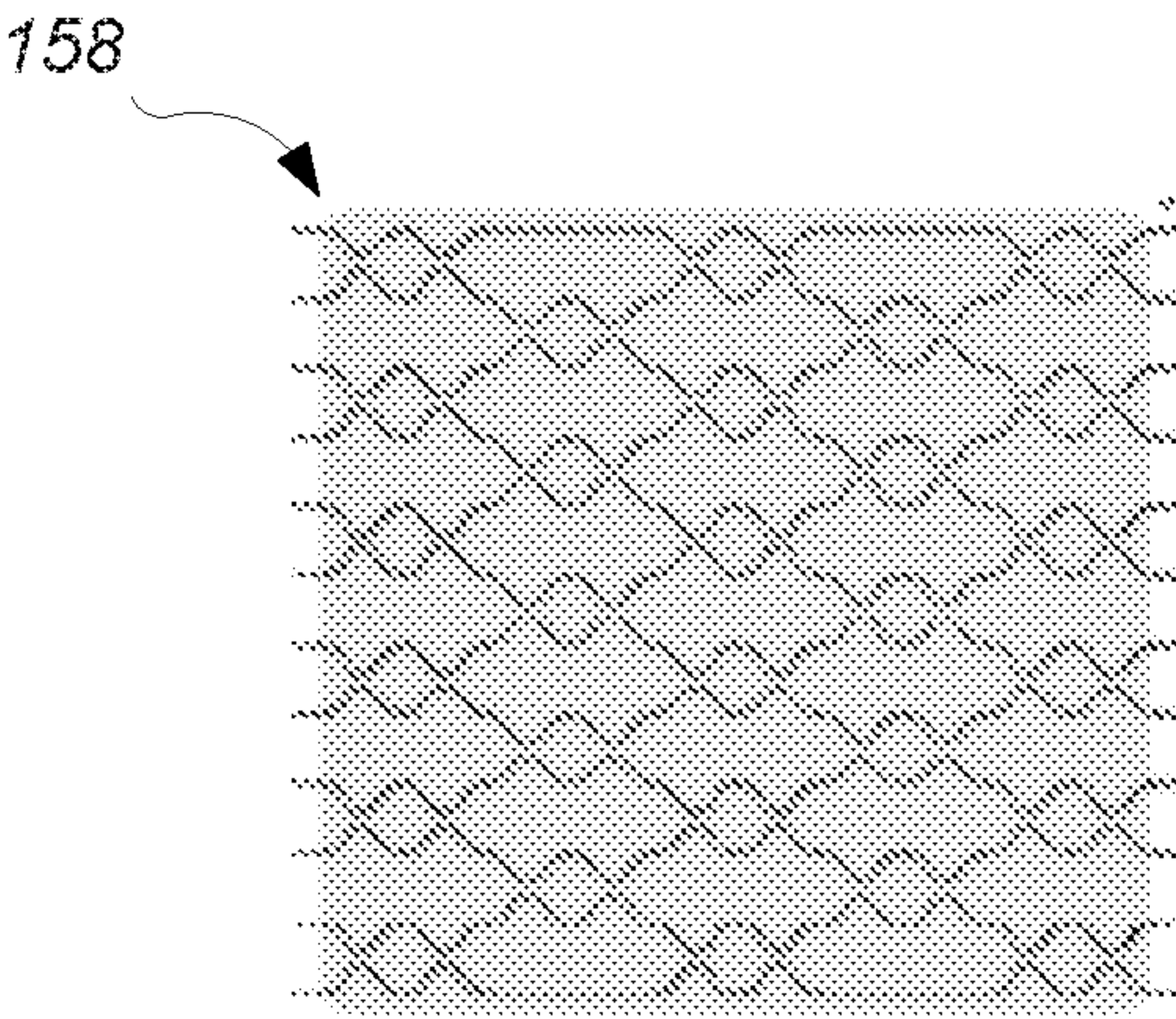


FIG. 1D

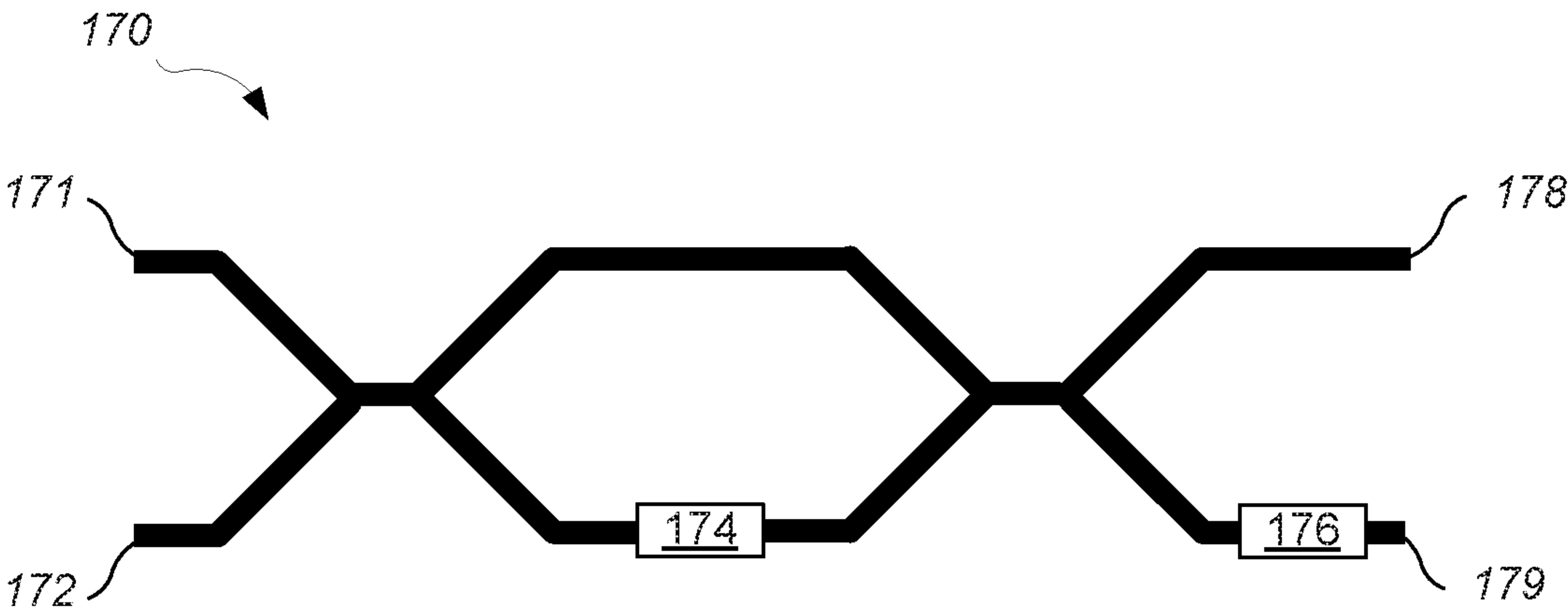
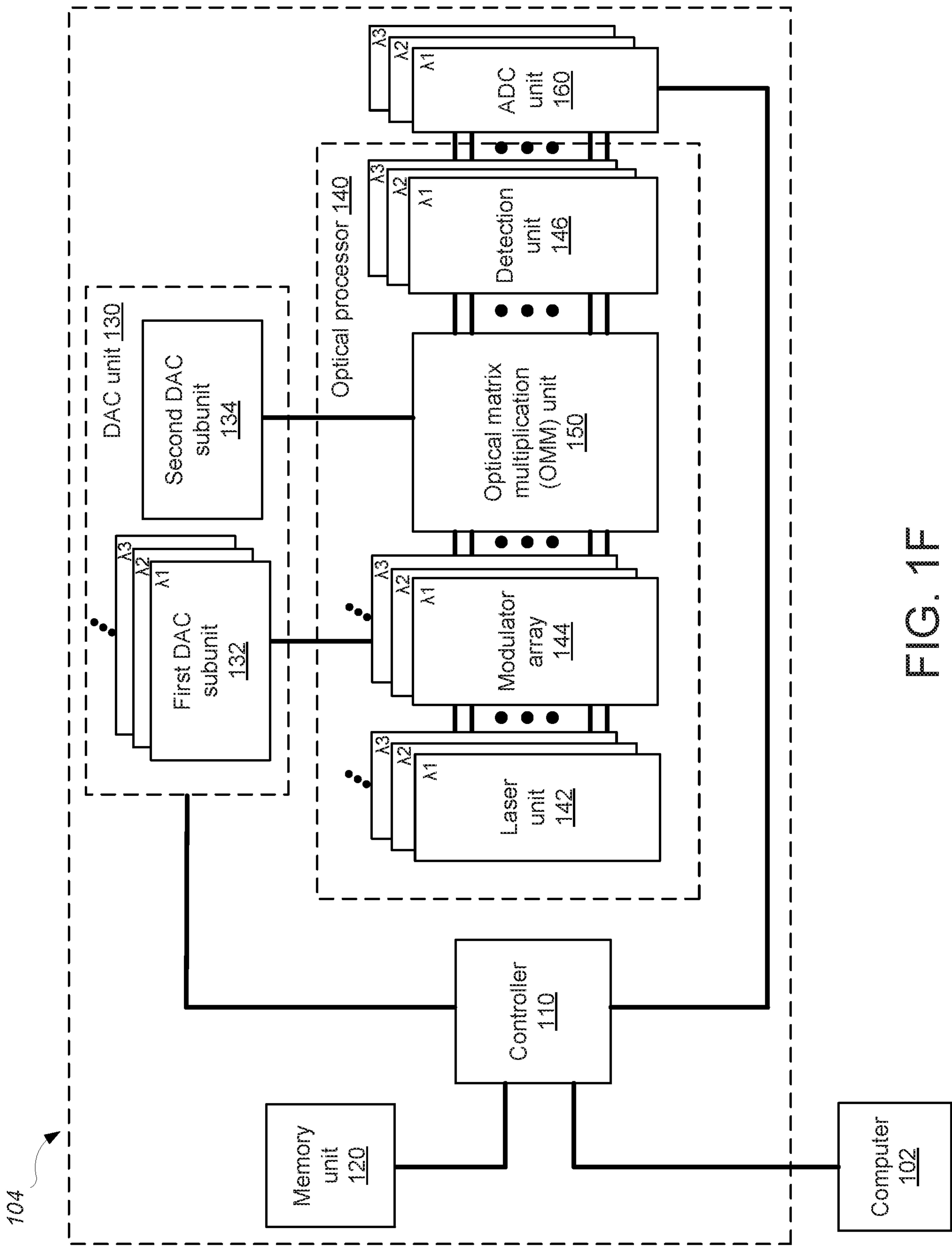


FIG. 1E



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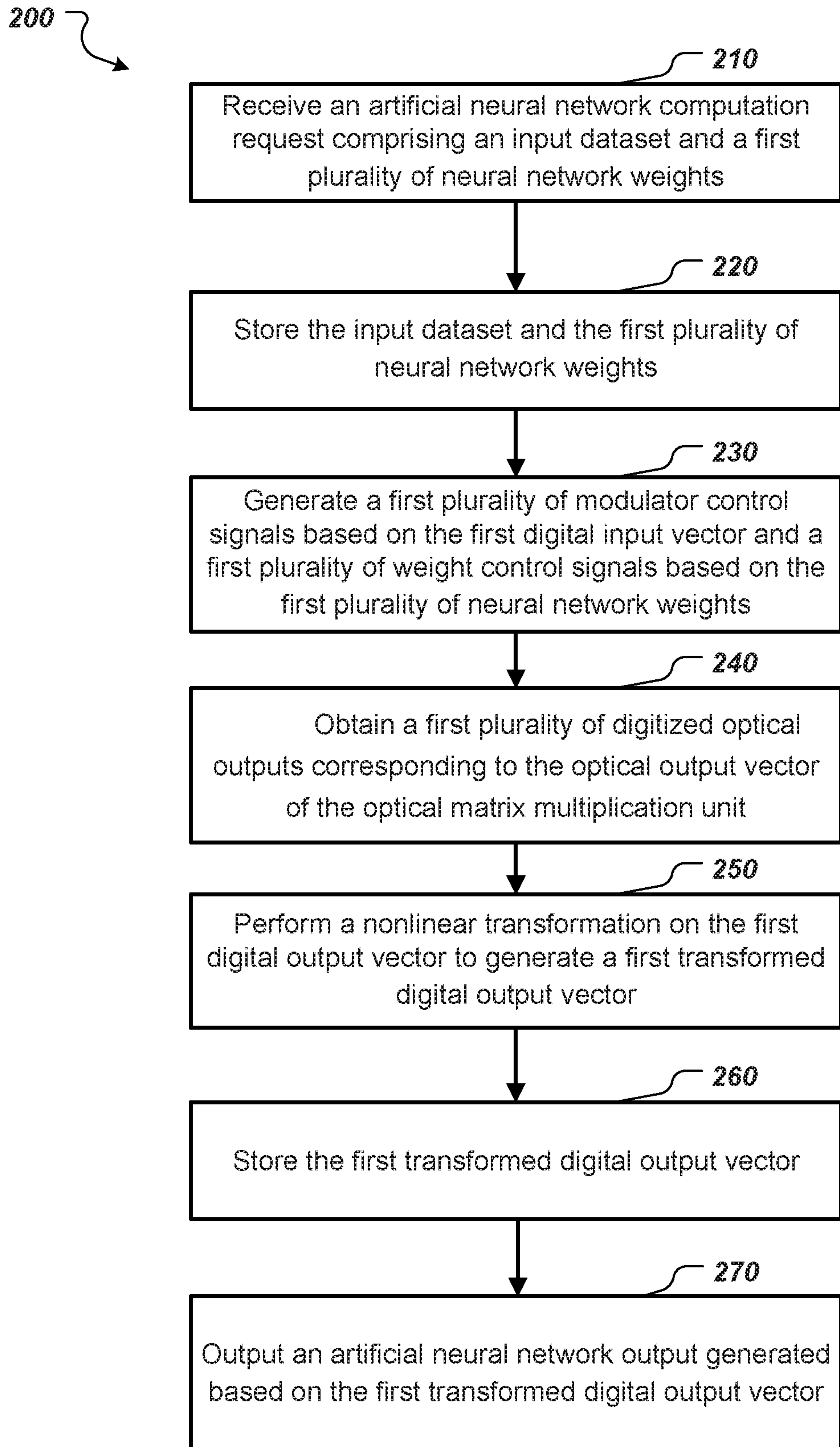


FIG. 2A

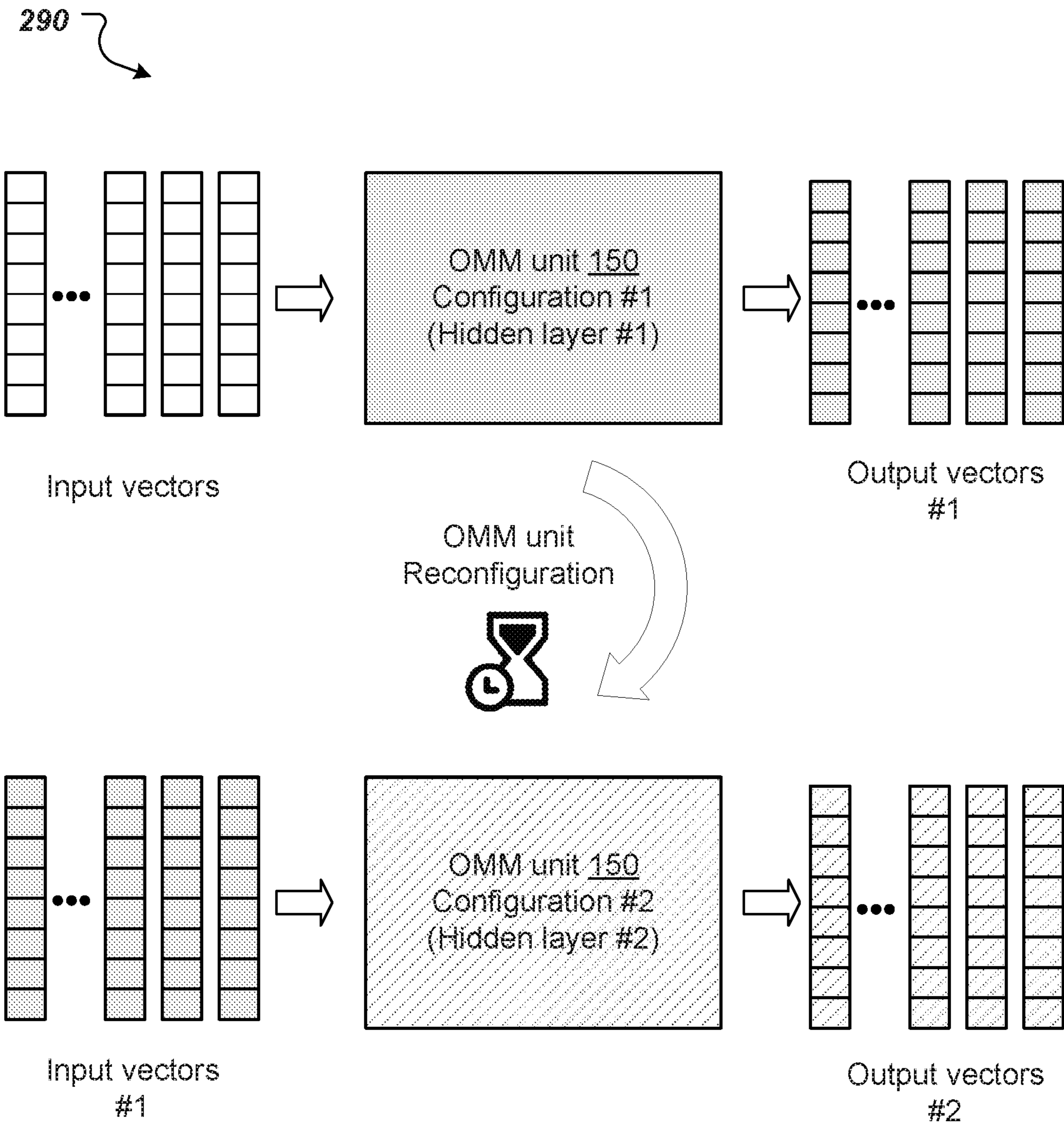
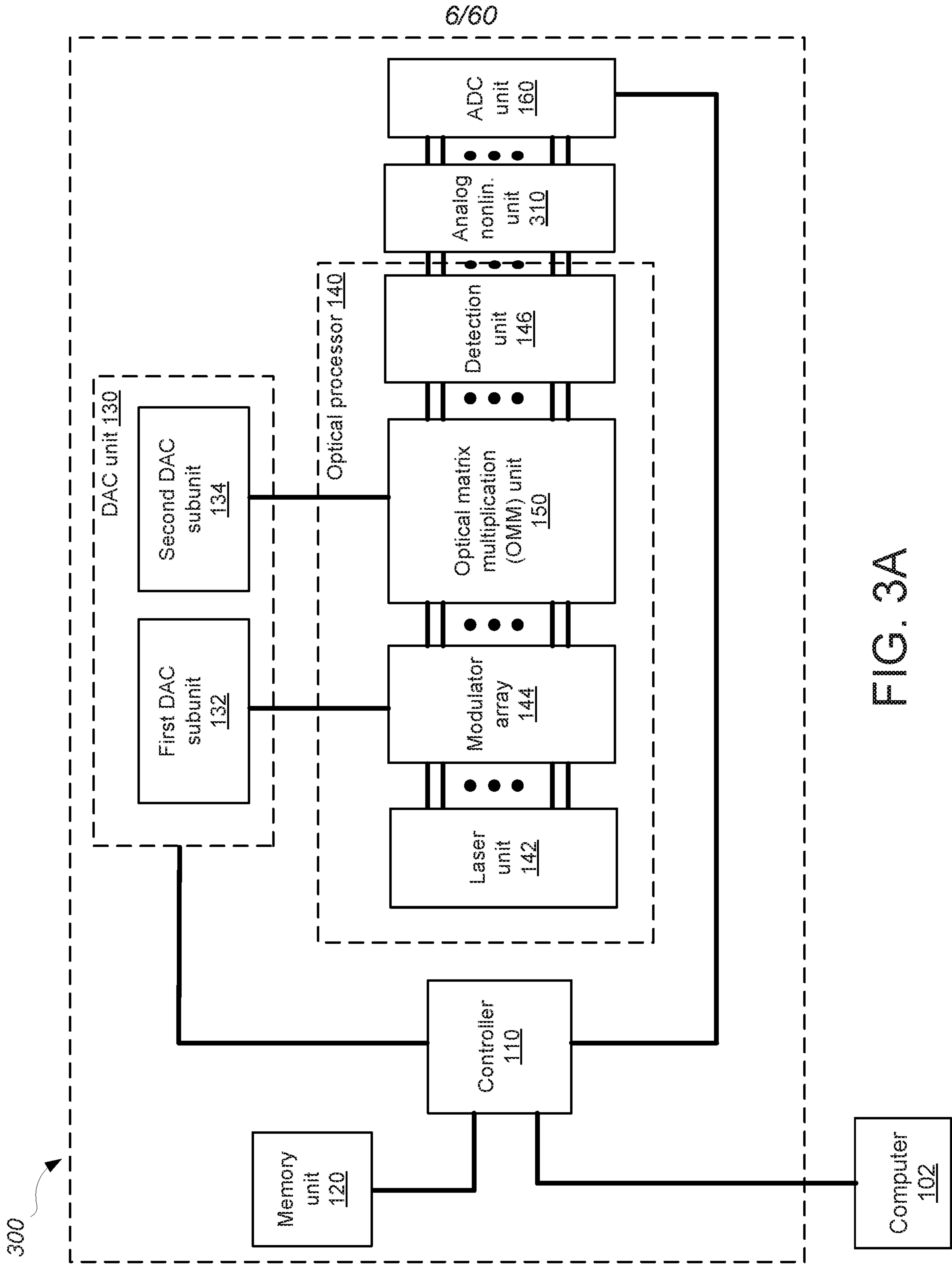
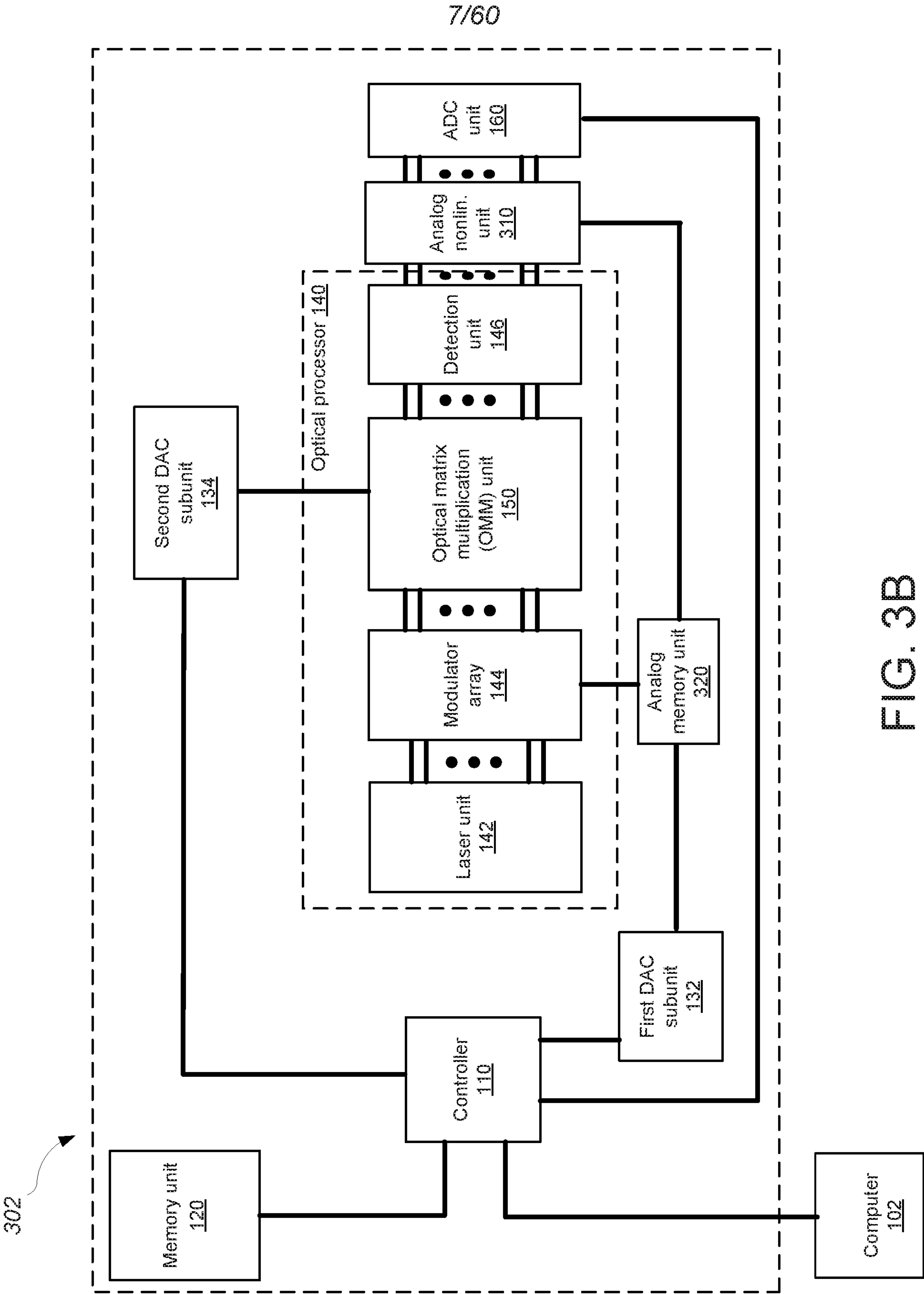


FIG. 2B





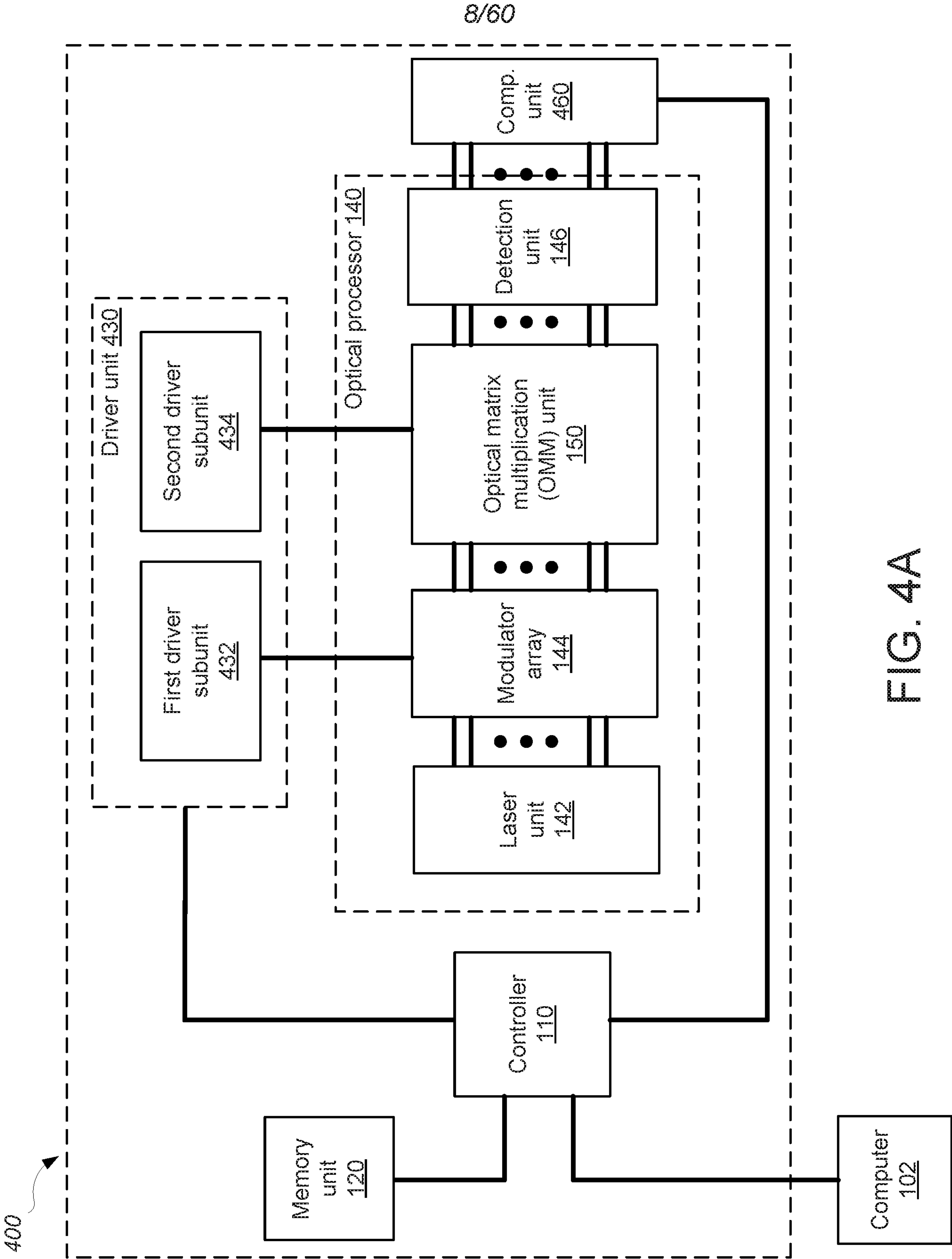


FIG. 4A

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$$\vec{V} = \begin{bmatrix} V_0 \\ V_1 \\ V_2 \\ V_3 \end{bmatrix} \quad U = \begin{bmatrix} U_{00} & U_{01} & U_{02} & U_{03} \\ U_{10} & U_{11} & U_{12} & U_{13} \\ U_{20} & U_{21} & U_{22} & U_{23} \\ U_{30} & U_{31} & U_{32} & U_{33} \end{bmatrix}$$

$$\vec{V} = 2^0 \begin{bmatrix} V_{0,\text{bit}0} \\ V_{1,\text{bit}0} \\ V_{2,\text{bit}0} \\ V_{3,\text{bit}0} \end{bmatrix} + 2^1 \begin{bmatrix} V_{0,\text{bit}1} \\ V_{1,\text{bit}1} \\ V_{2,\text{bit}1} \\ V_{3,\text{bit}1} \end{bmatrix} + 2^2 \begin{bmatrix} V_{0,\text{bit}2} \\ V_{1,\text{bit}2} \\ V_{2,\text{bit}2} \\ V_{3,\text{bit}2} \end{bmatrix} + 2^3 \begin{bmatrix} V_{0,\text{bit}3} \\ V_{1,\text{bit}3} \\ V_{2,\text{bit}3} \\ V_{3,\text{bit}3} \end{bmatrix}$$

$$U \cdot \vec{V} = 2^0 U \cdot \vec{V}_{\text{bit}0} + 2^1 U \cdot \vec{V}_{\text{bit}1} + 2^2 U \cdot \vec{V}_{\text{bit}2} + 2^3 U \cdot \vec{V}_{\text{bit}3}$$

FIG. 4B

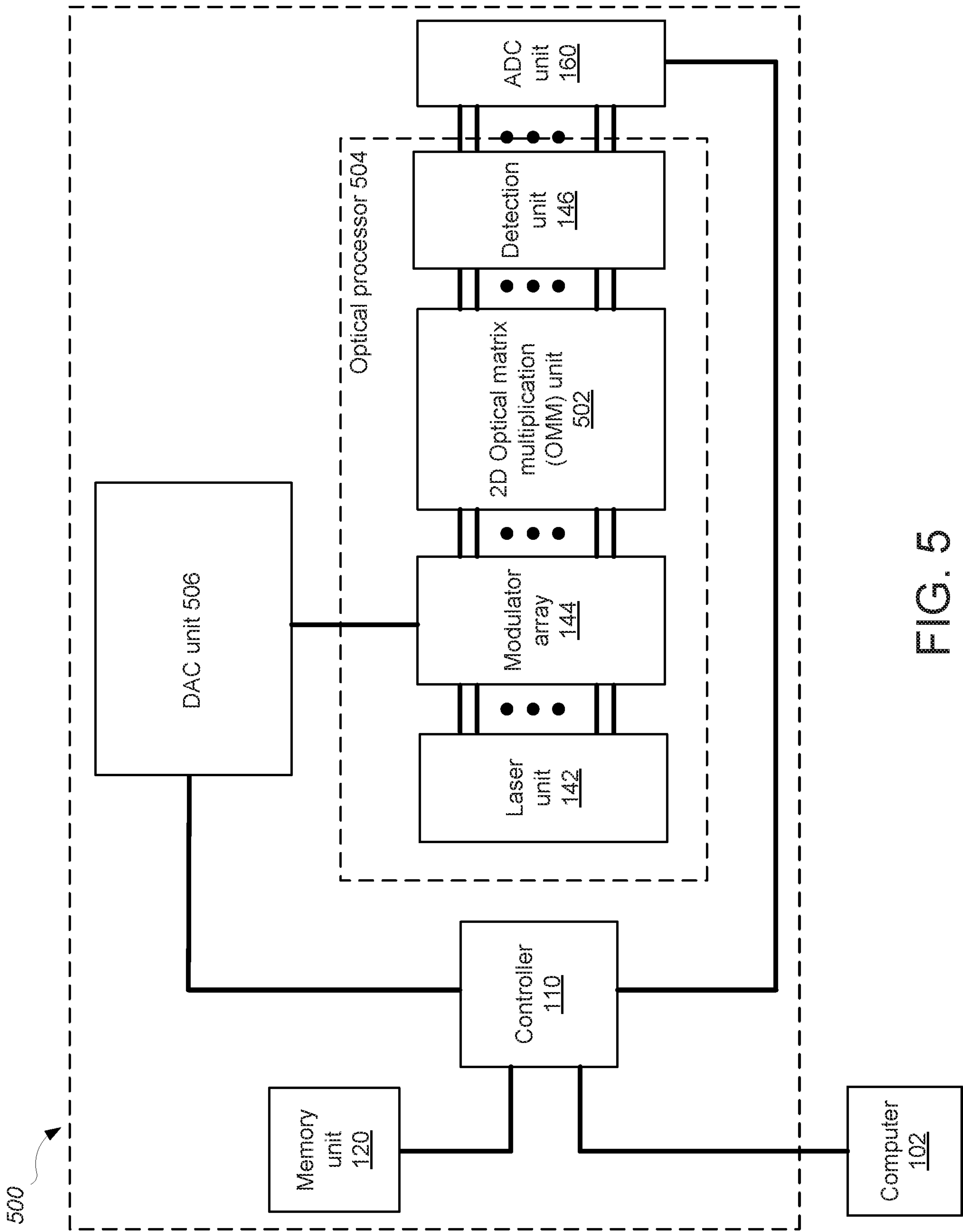


FIG. 5

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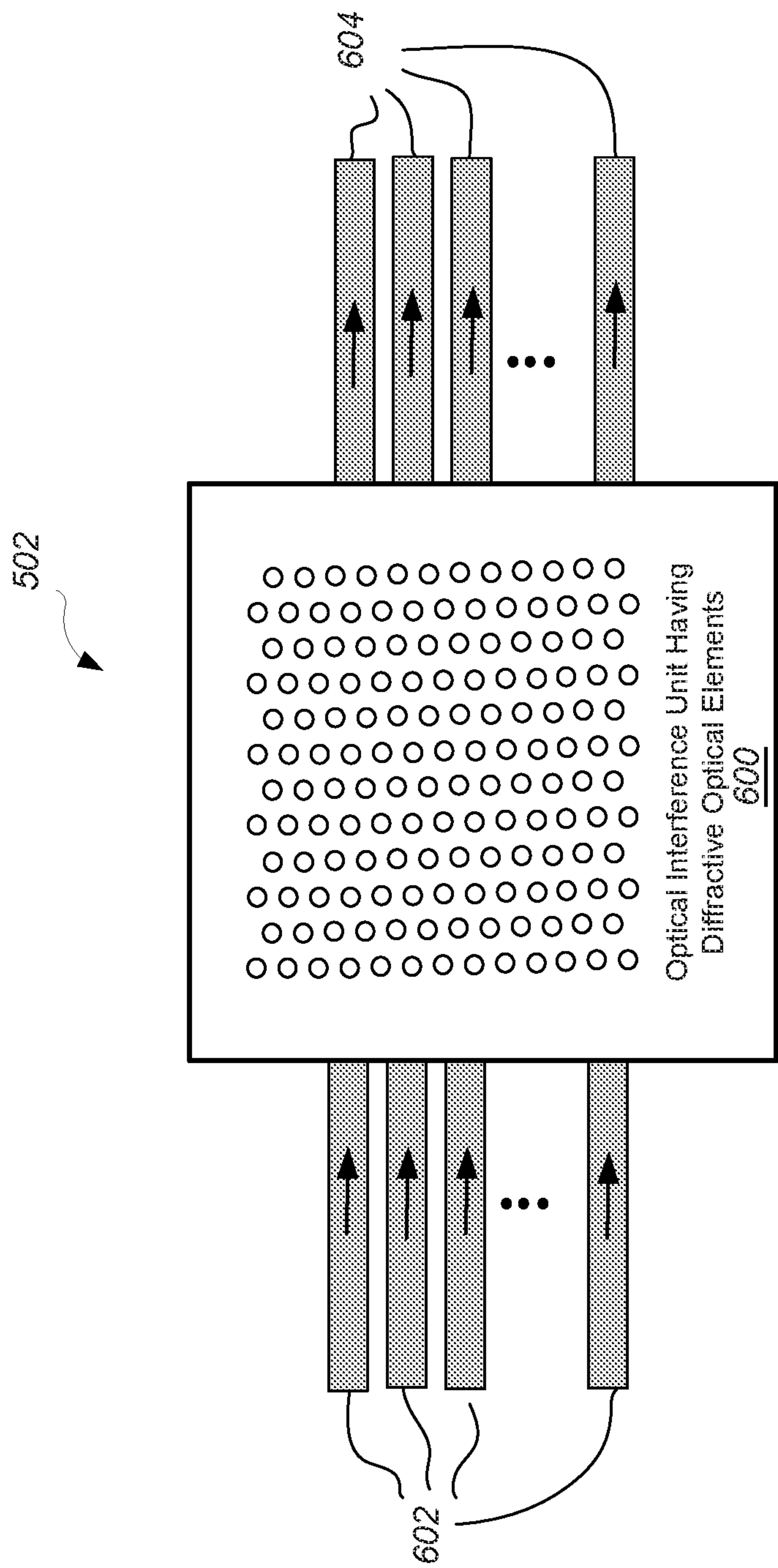
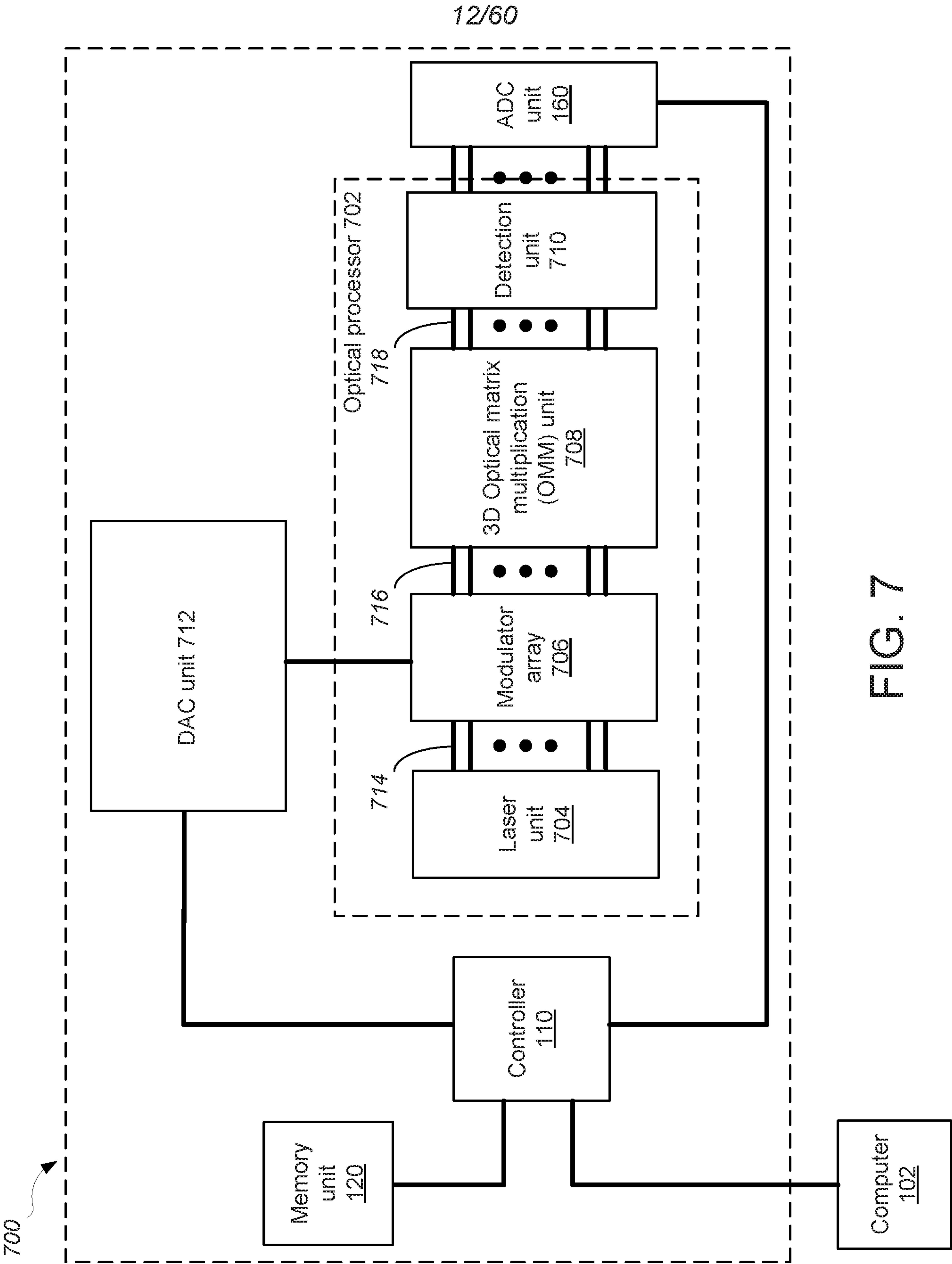


FIG. 6



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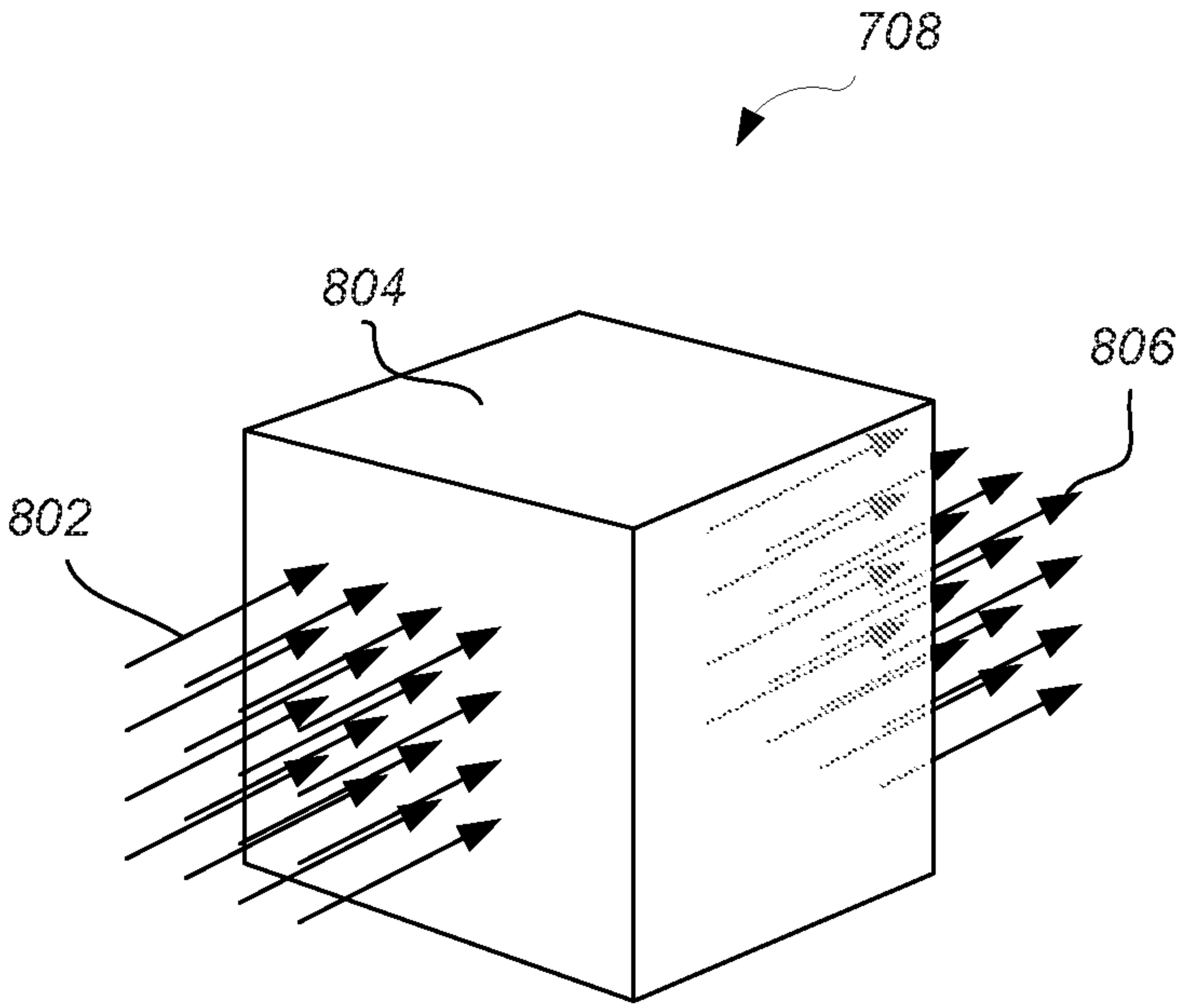


FIG. 8

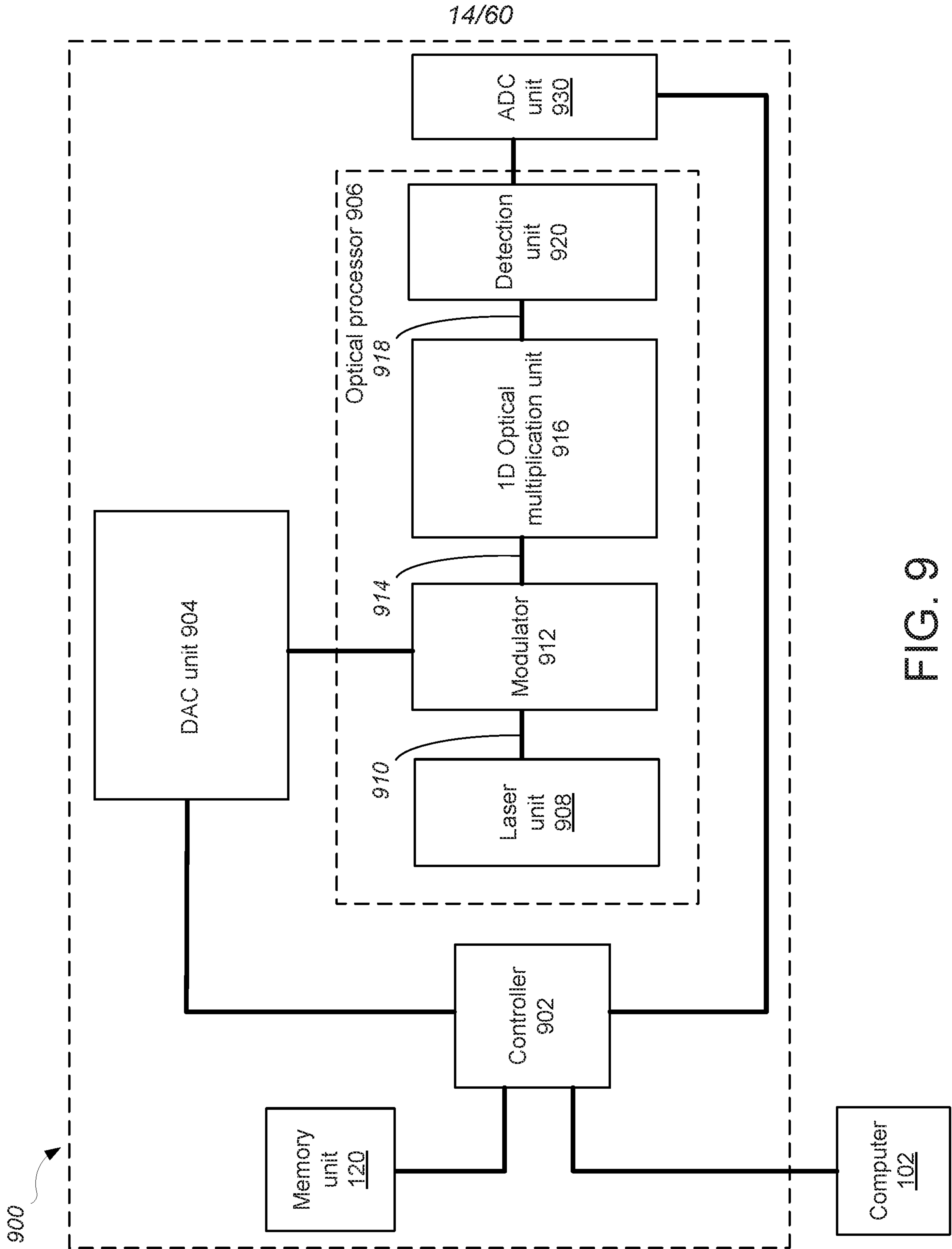


FIG. 9

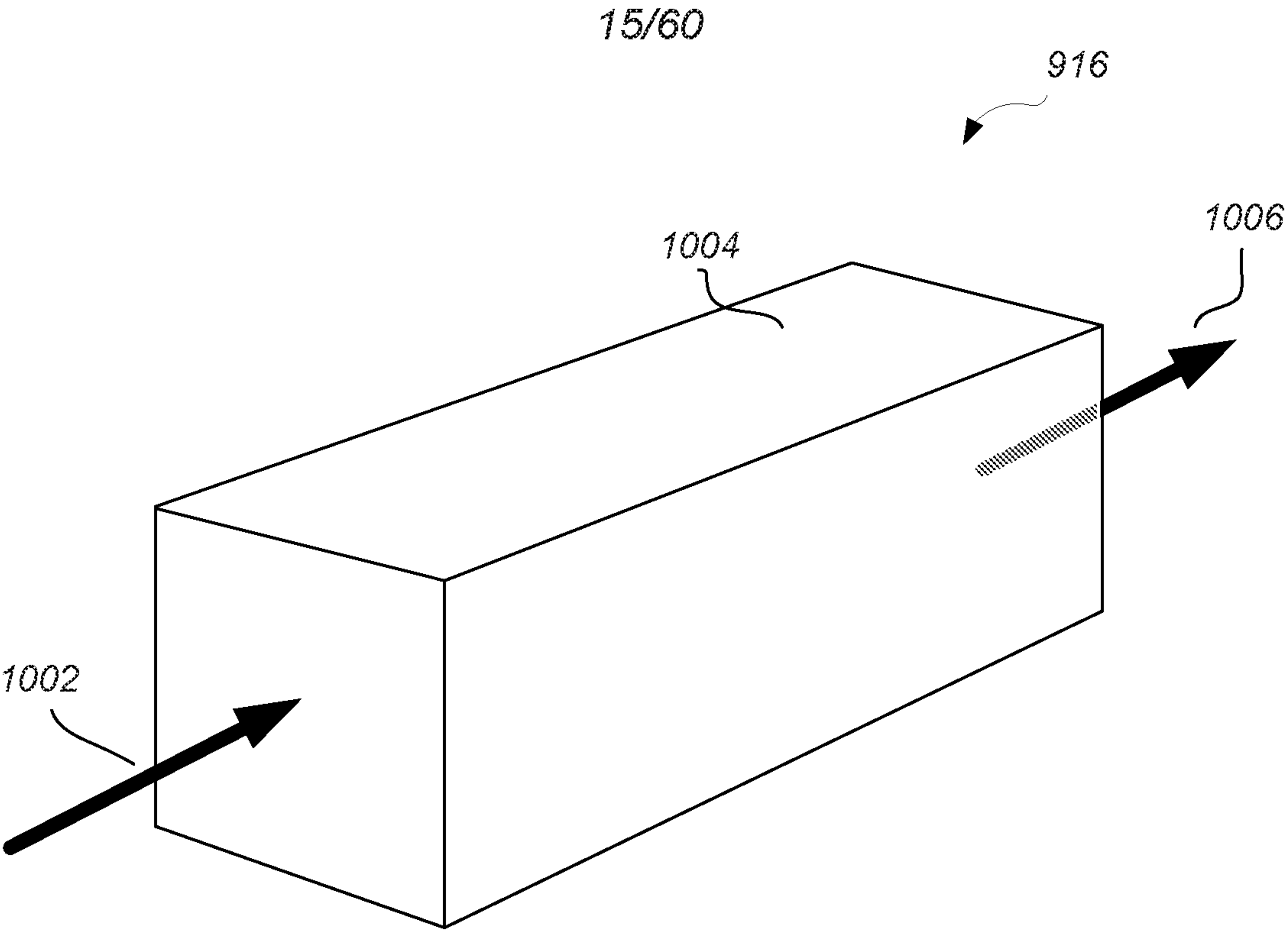


FIG. 10

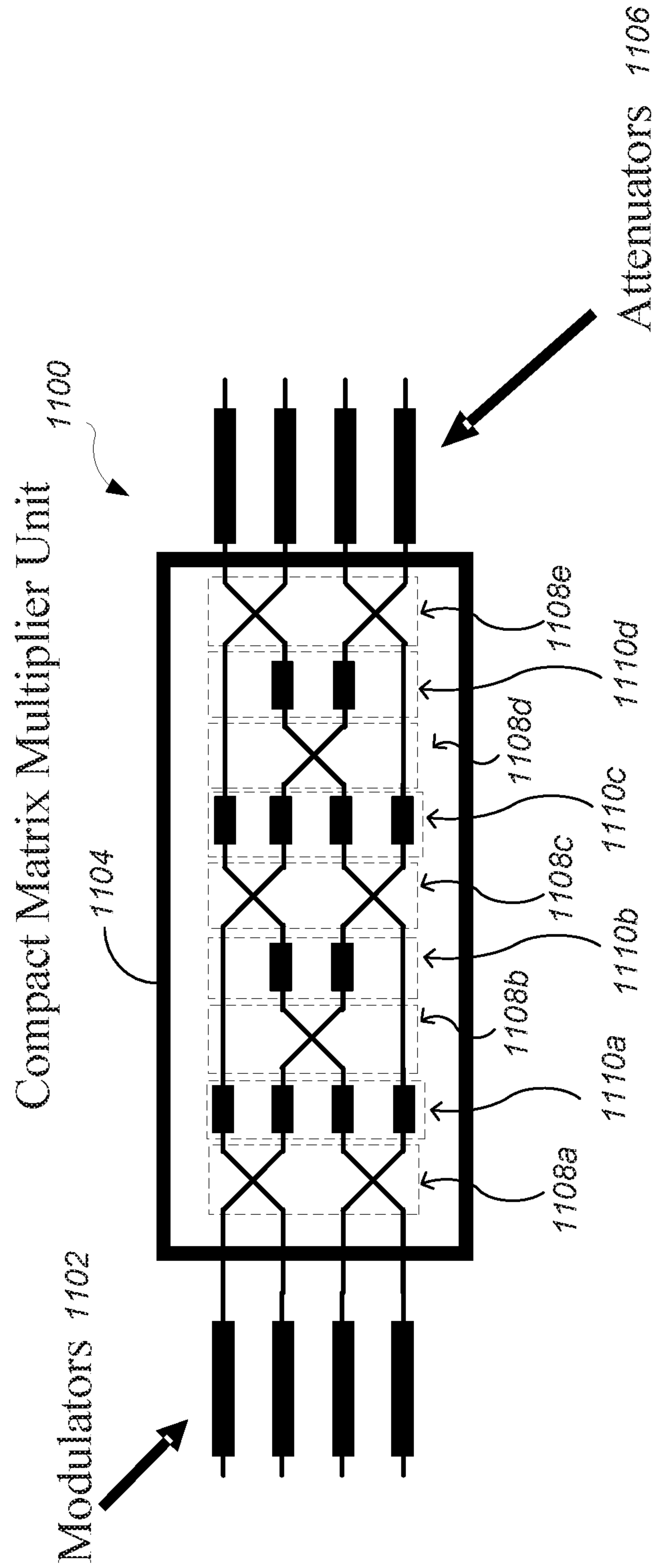


FIG. 11

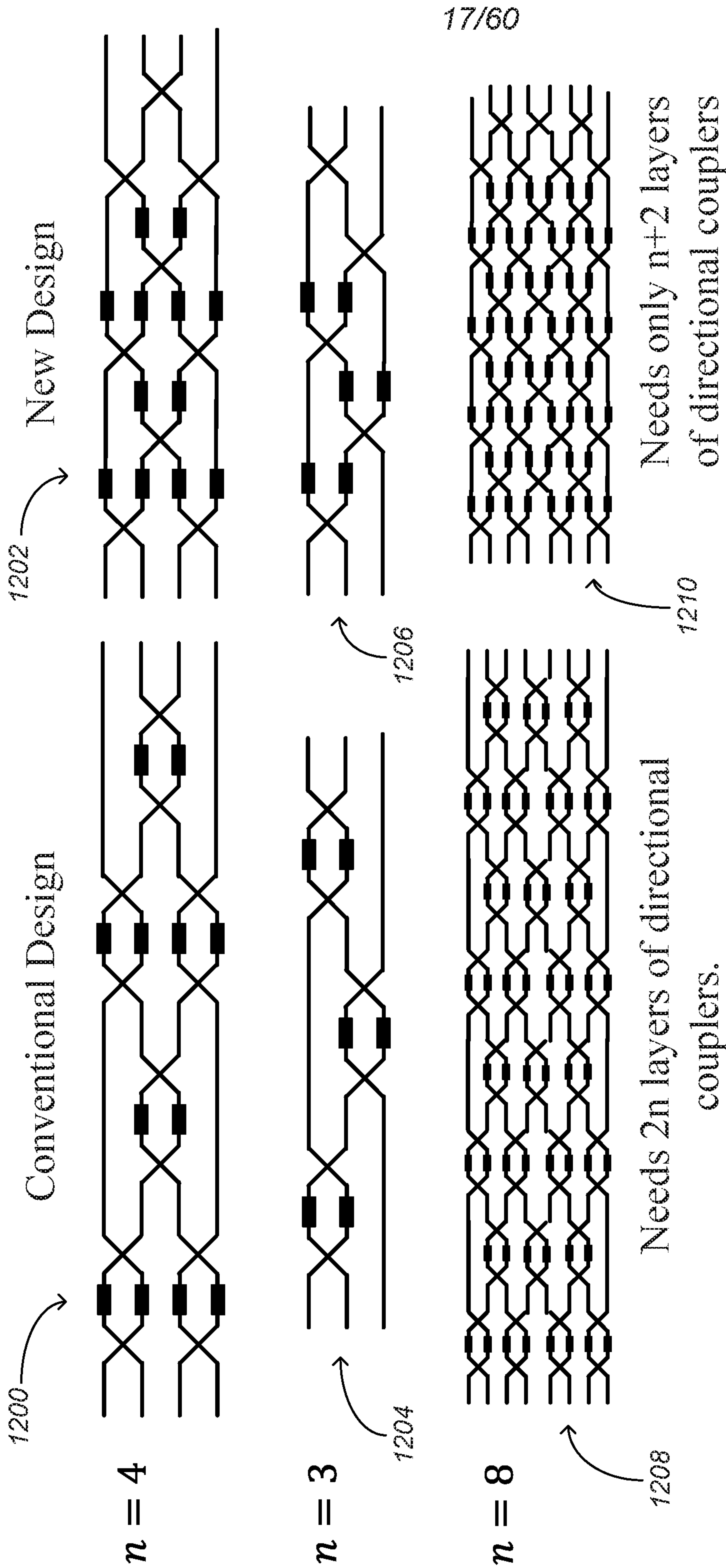
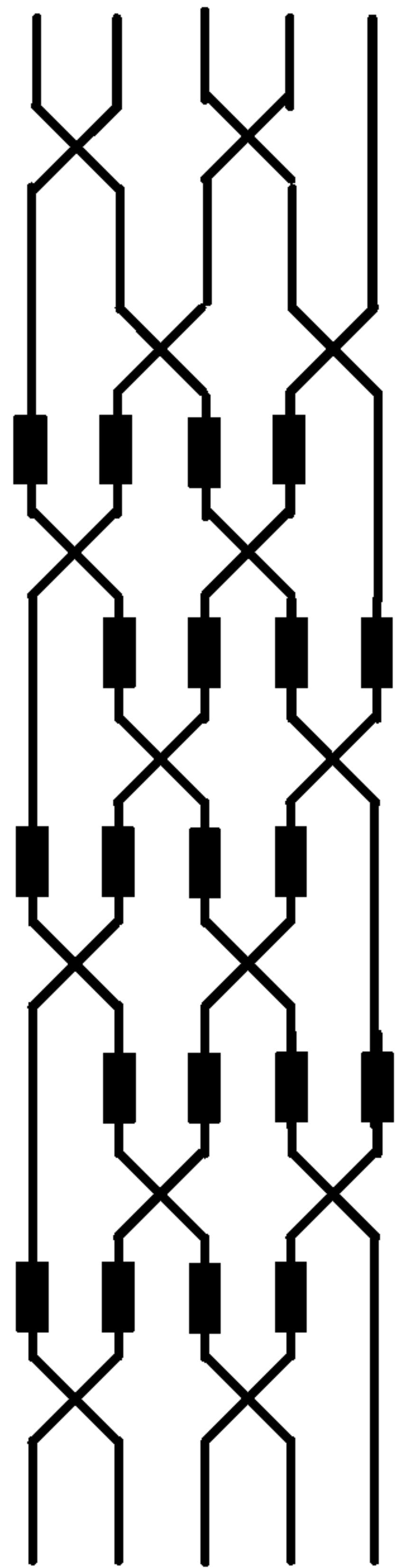


FIG. 12A



$n = 5$
1212

FIG. 12B

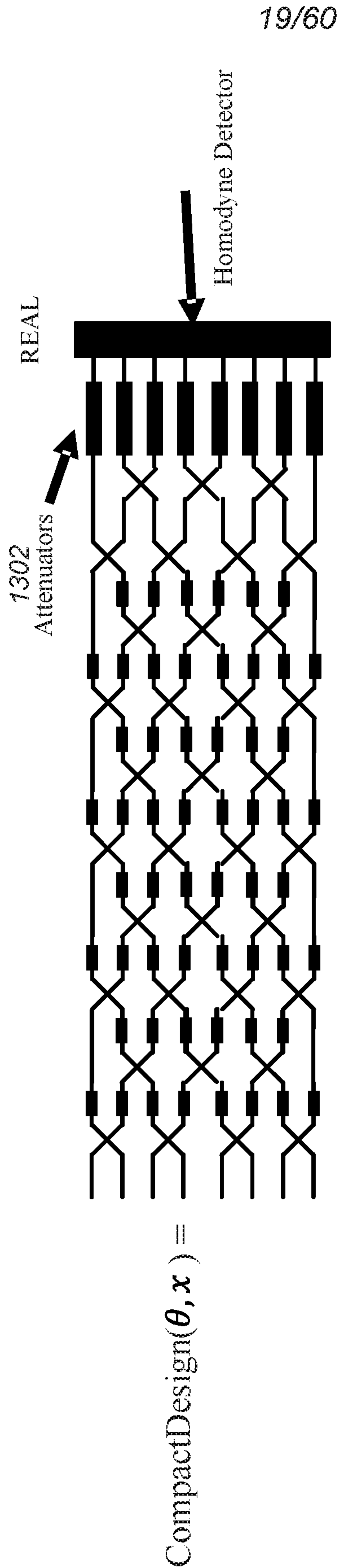
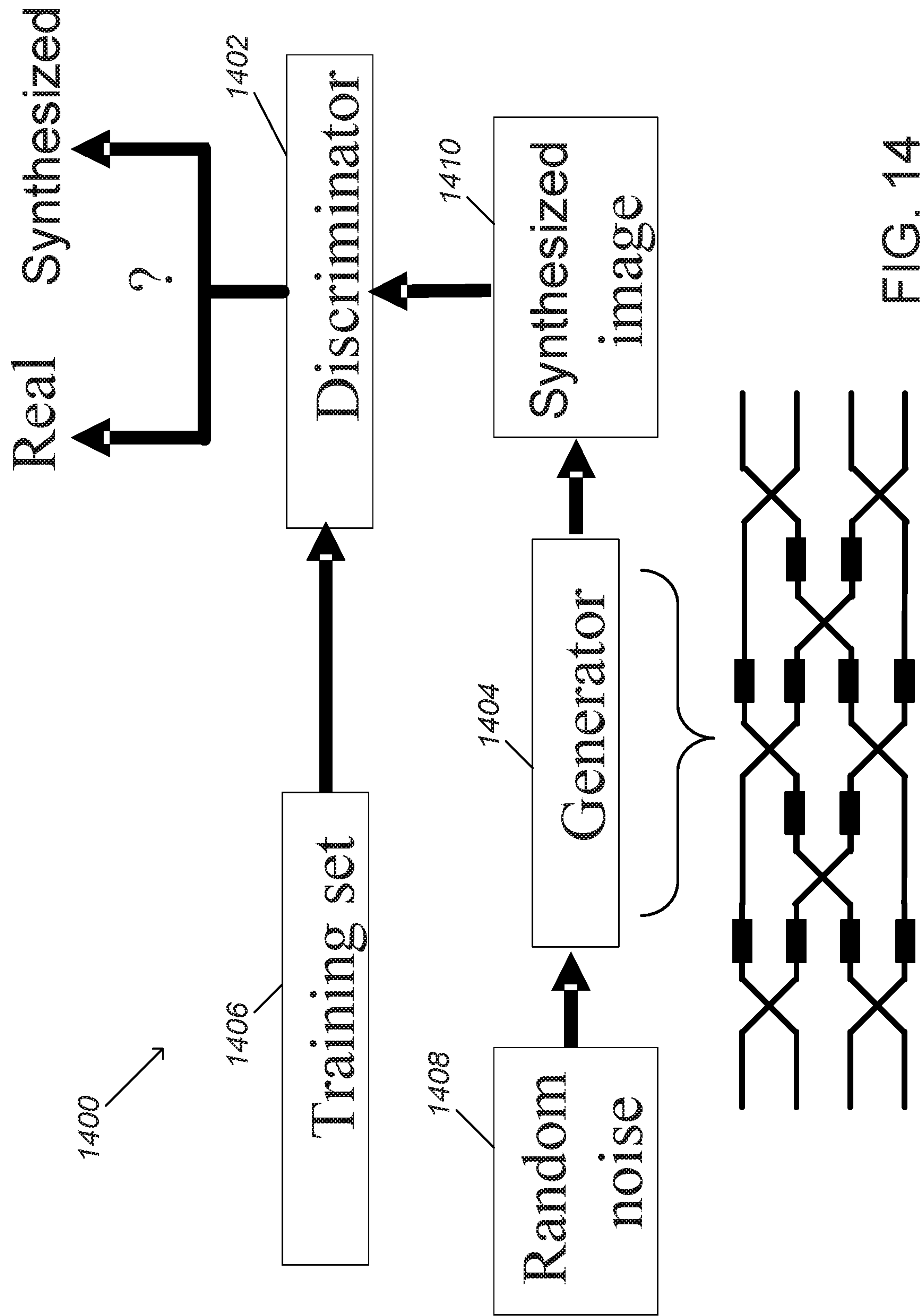


FIG. 13



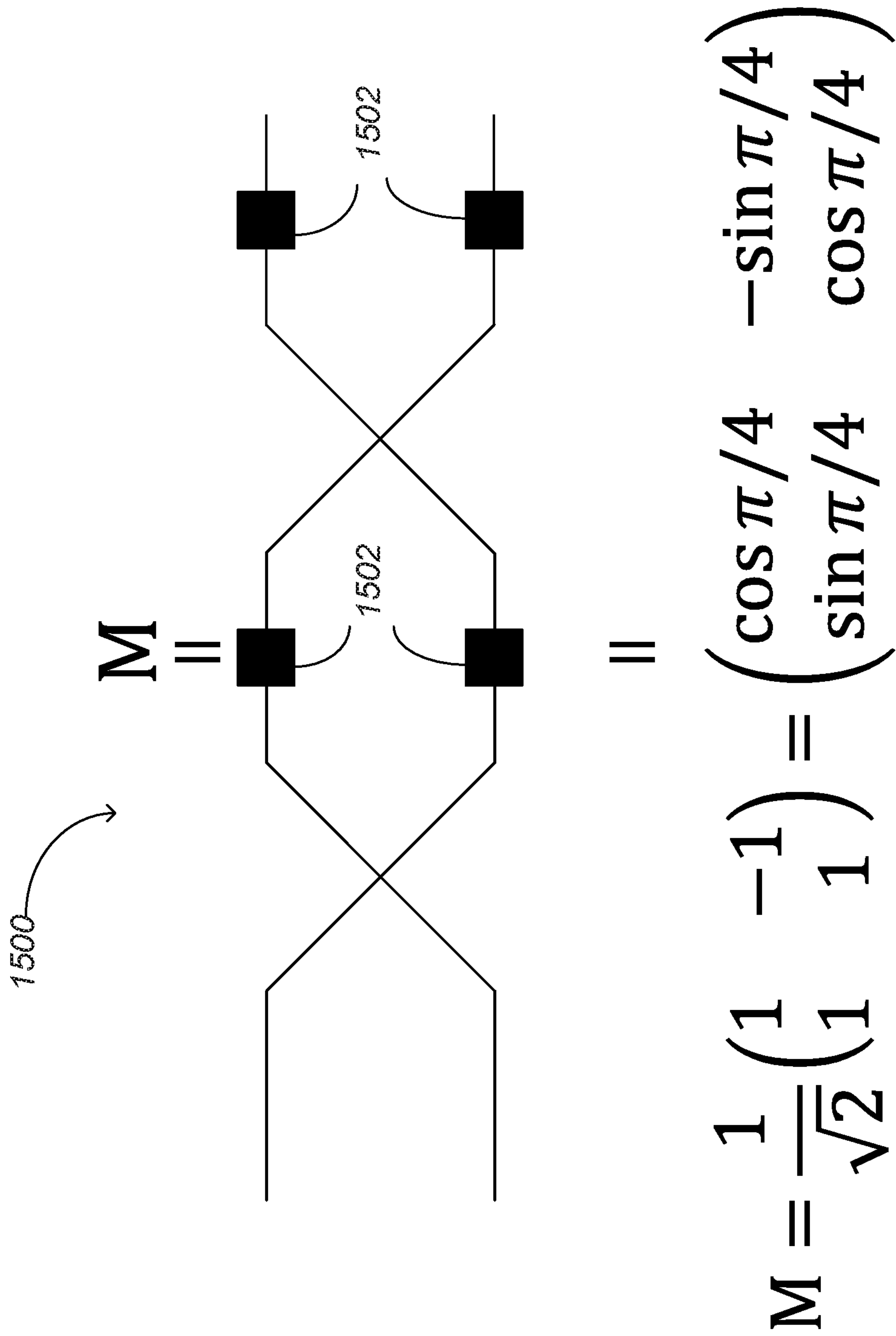
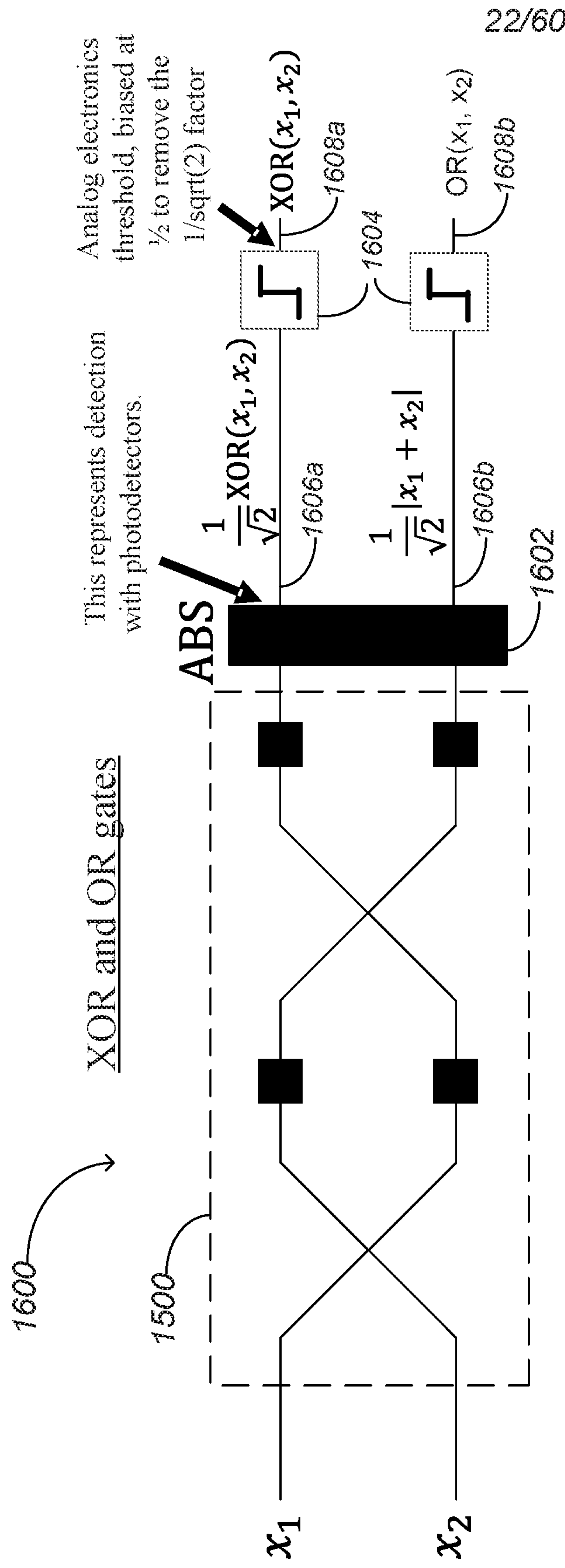


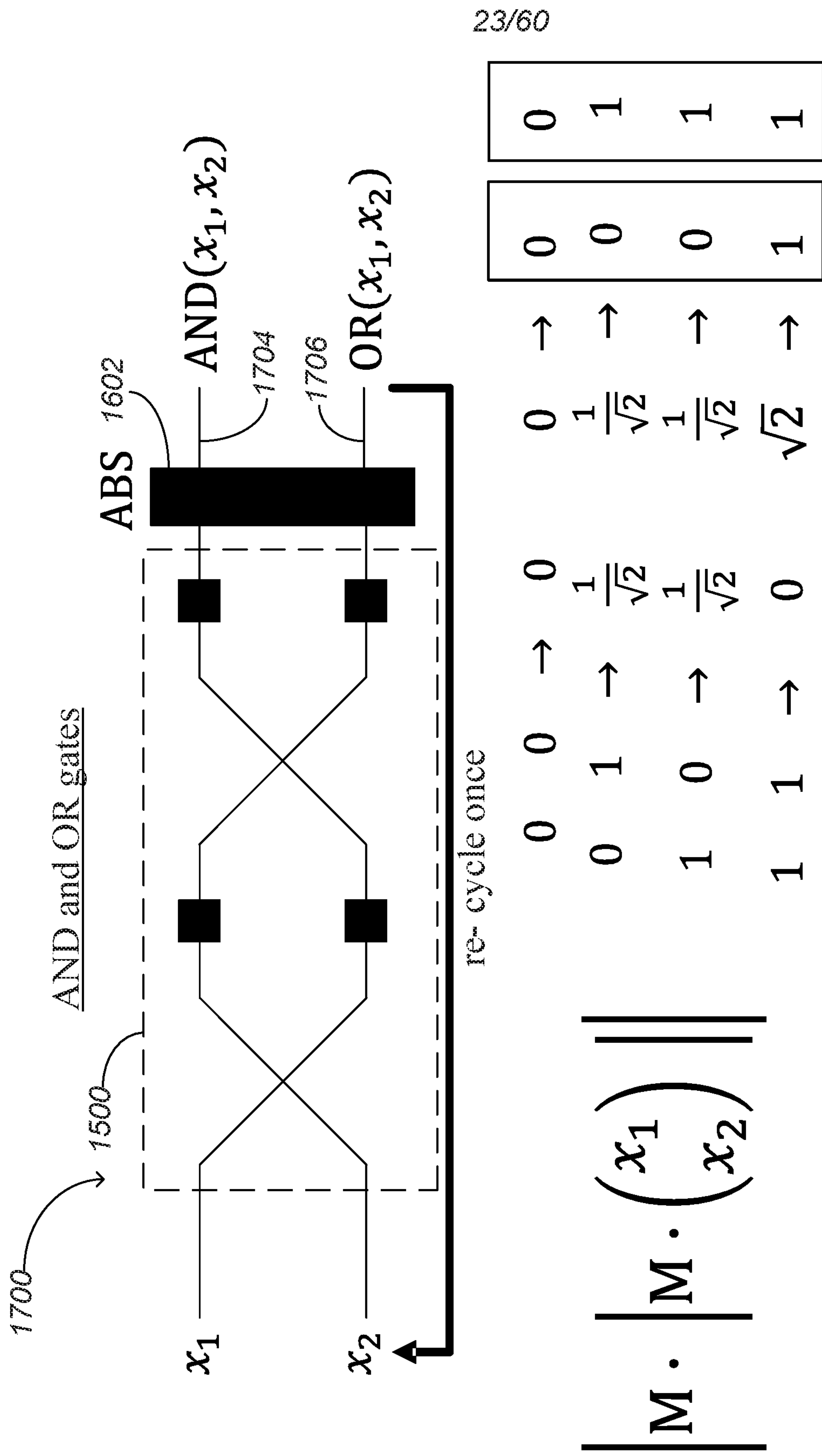
FIG. 15



$$\left| M \cdot \begin{pmatrix} x_1 \\ x_2 \end{pmatrix} \right| = \begin{pmatrix} \frac{1}{\sqrt{2}} |x_1 - x_2| \\ \frac{1}{\sqrt{2}} |x_1 + x_2| \end{pmatrix}$$

0, 0	- >	0,	0	- >	0, 0
0, 1	- >	$1/\sqrt{2}$,	$1/\sqrt{2}$	- >	1, 1
1, 0	- >	$1/\sqrt{2}$,	$1/\sqrt{2}$	- >	1, 1
1, 1	- >	0,	$\sqrt{2}$	- >	0, 1

FIG. 16



7A
7
G
L

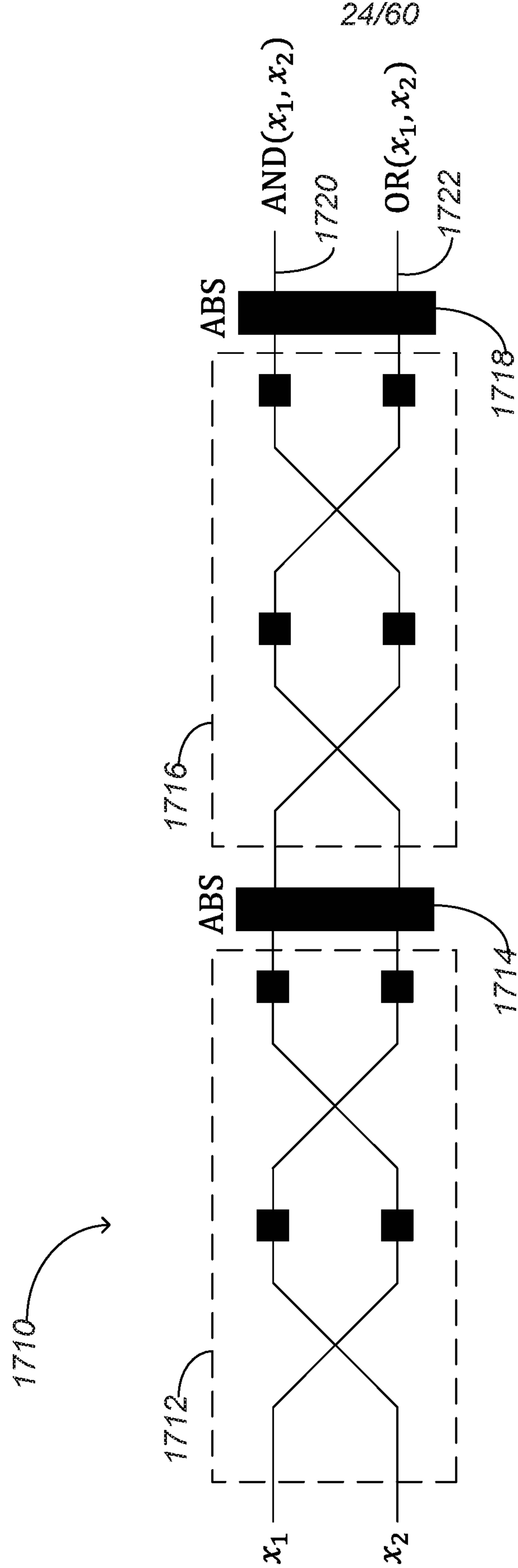


FIG. 17B

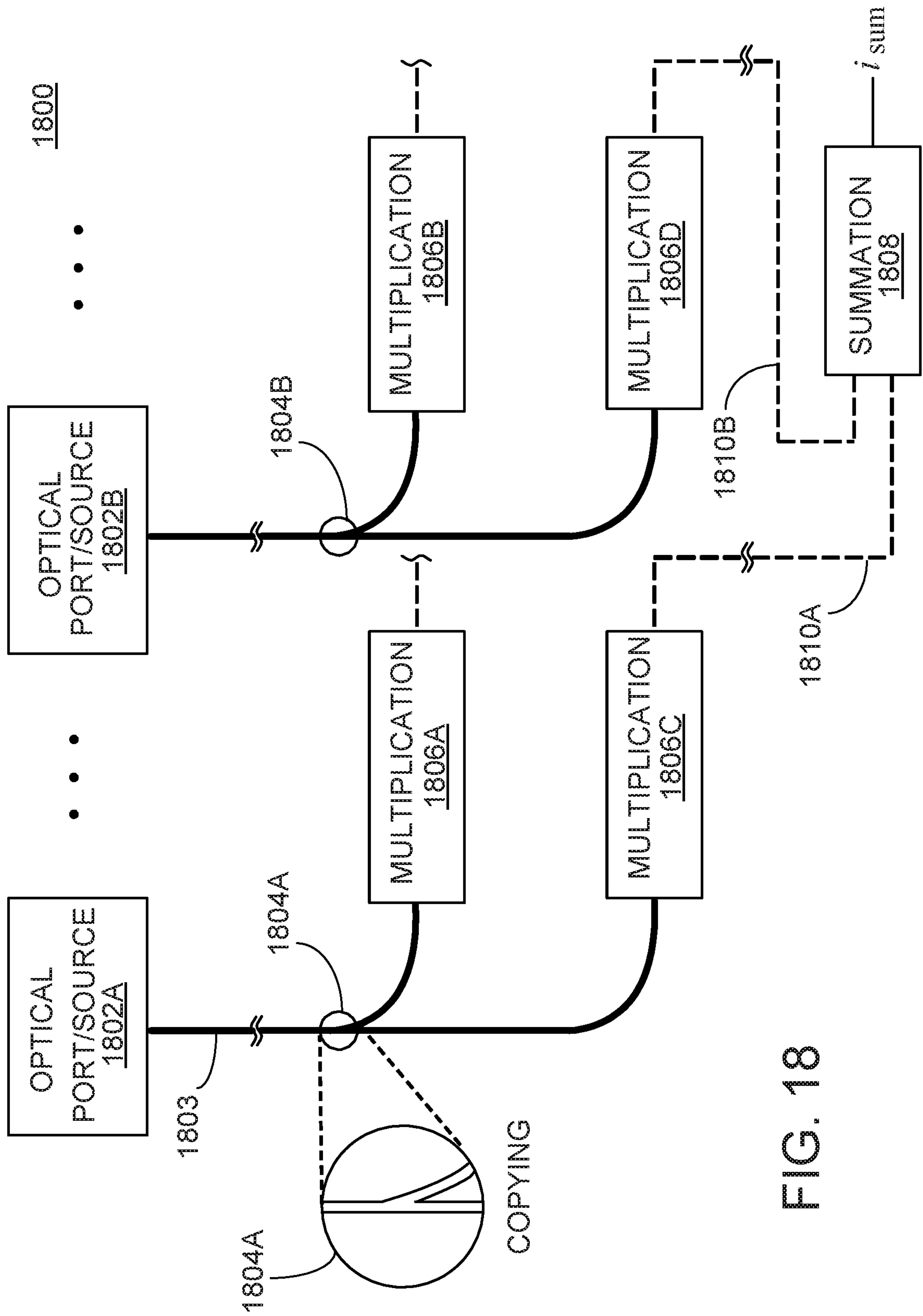


FIG. 18

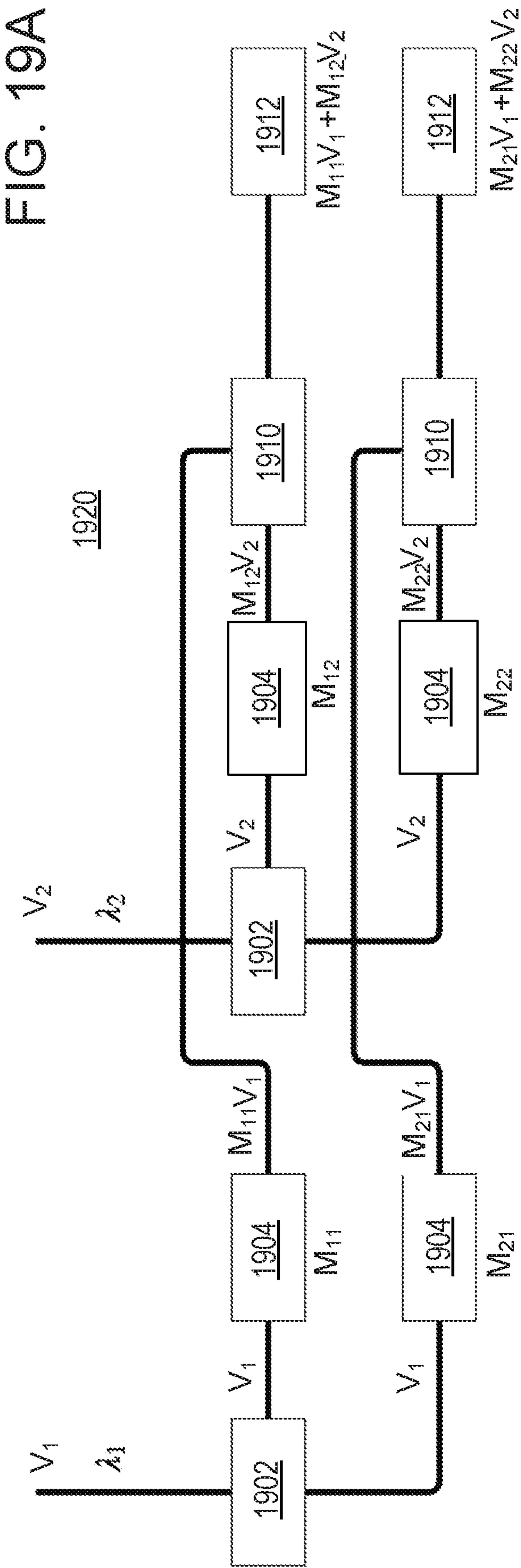
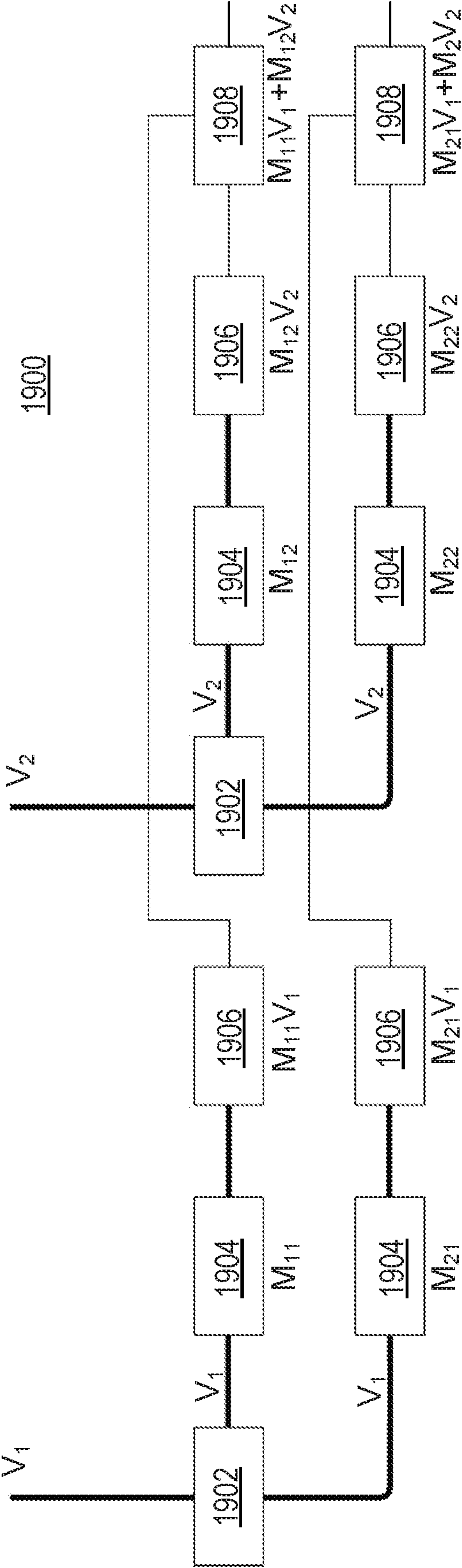


FIG. 19A

FIG. 19B

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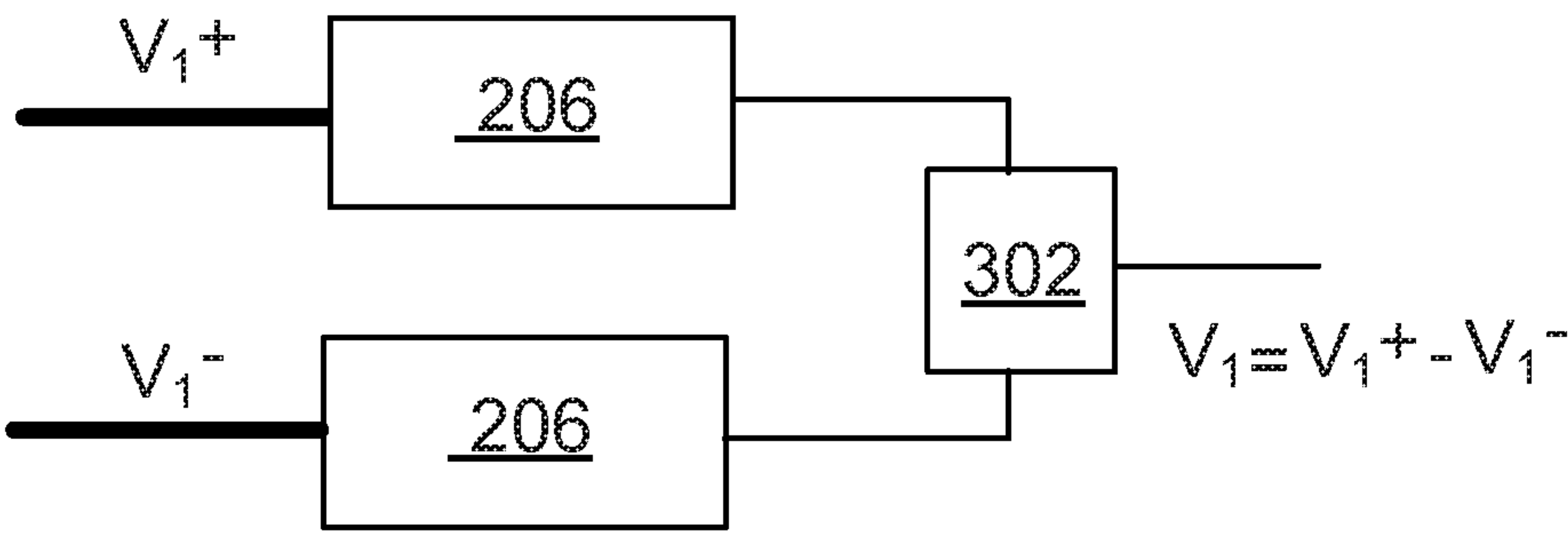


FIG. 20A

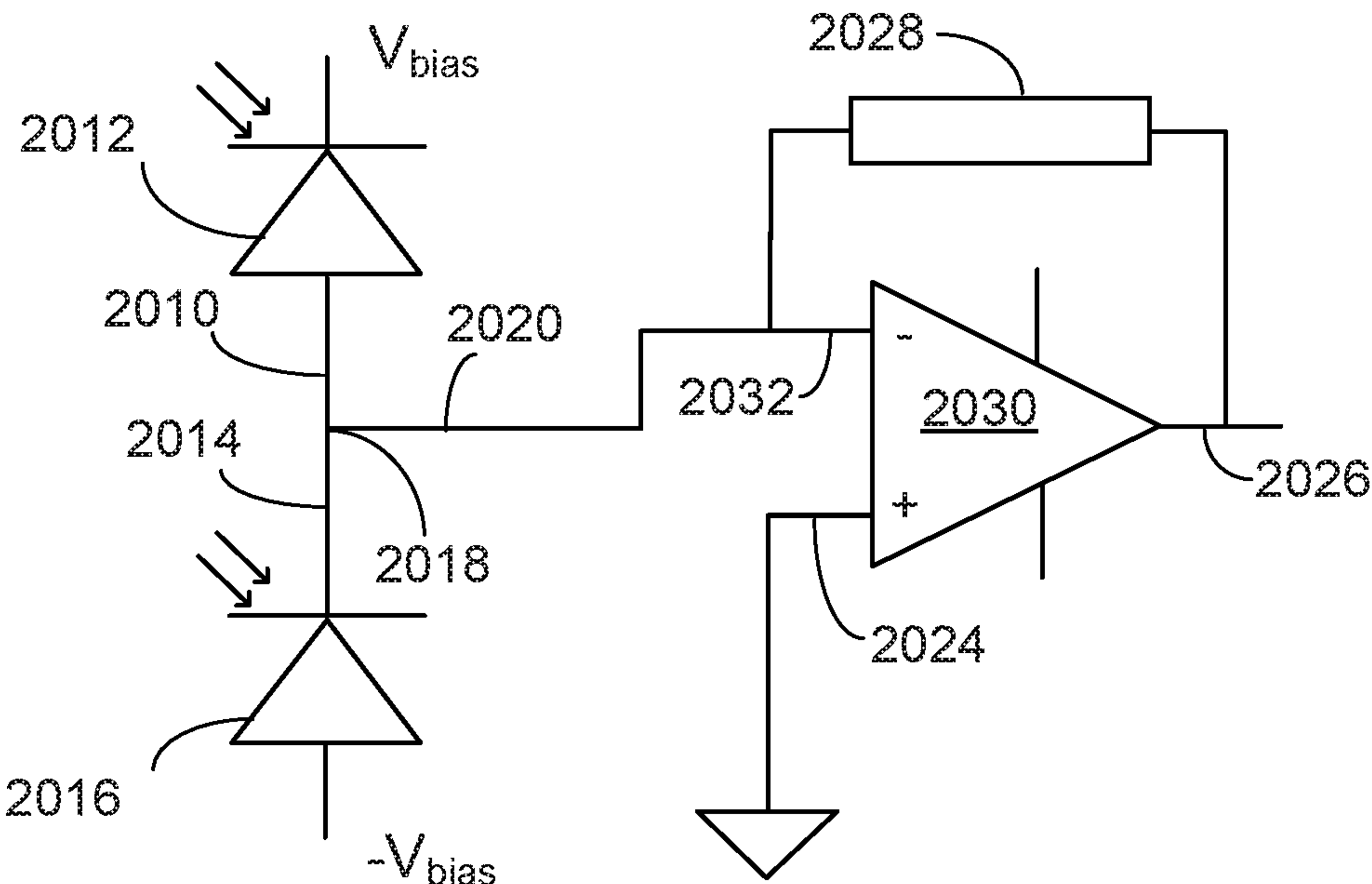


FIG. 20B

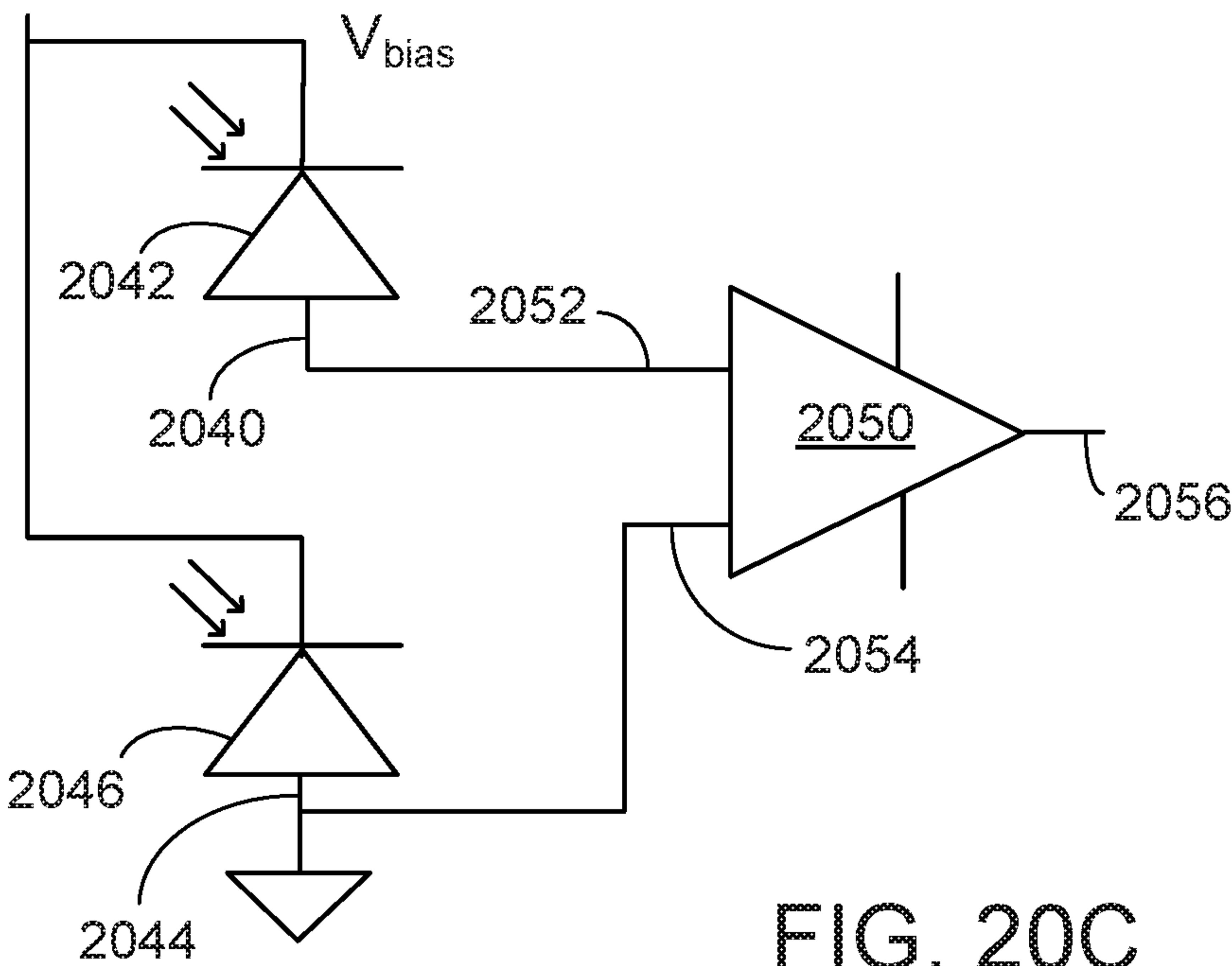


FIG. 20C

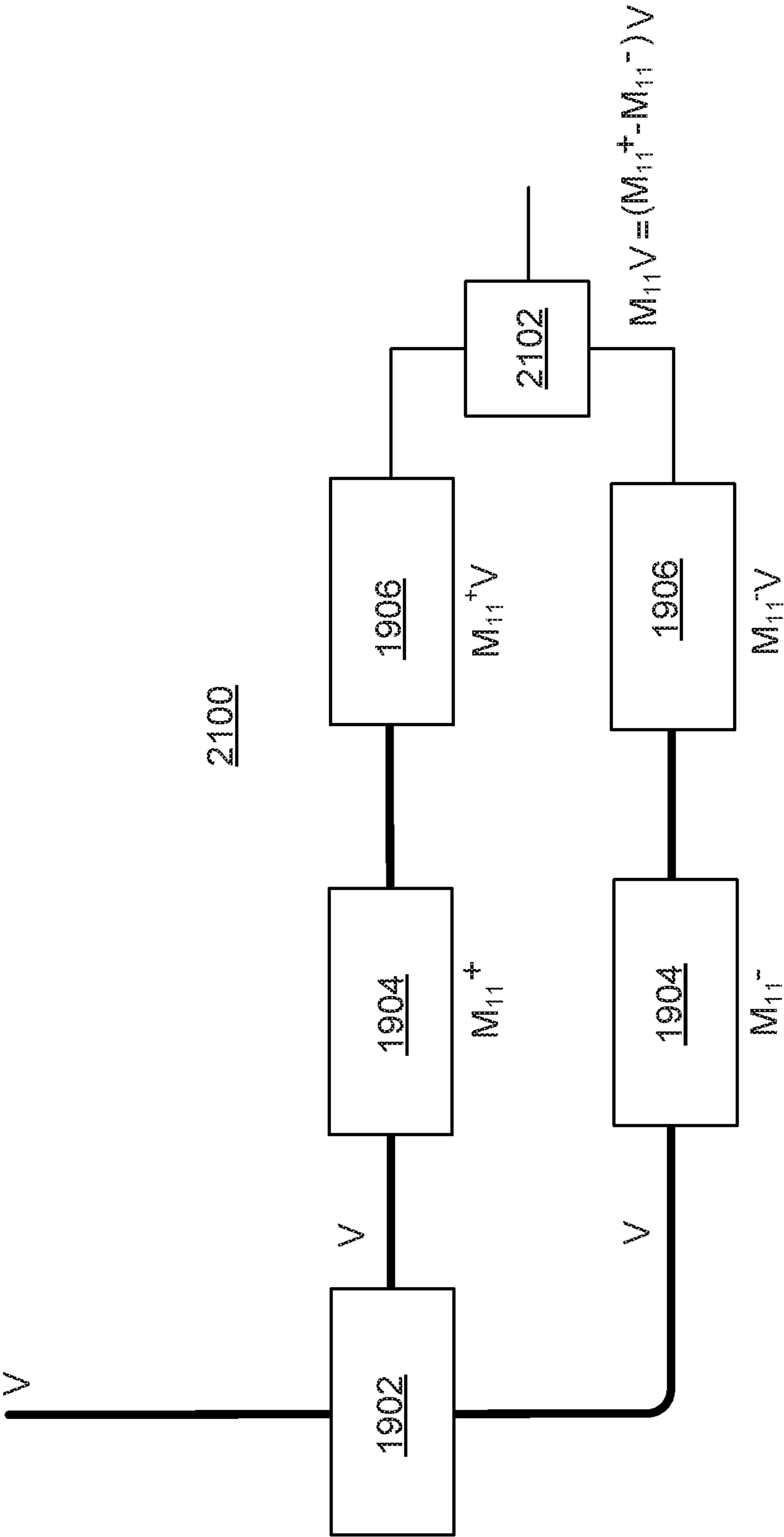
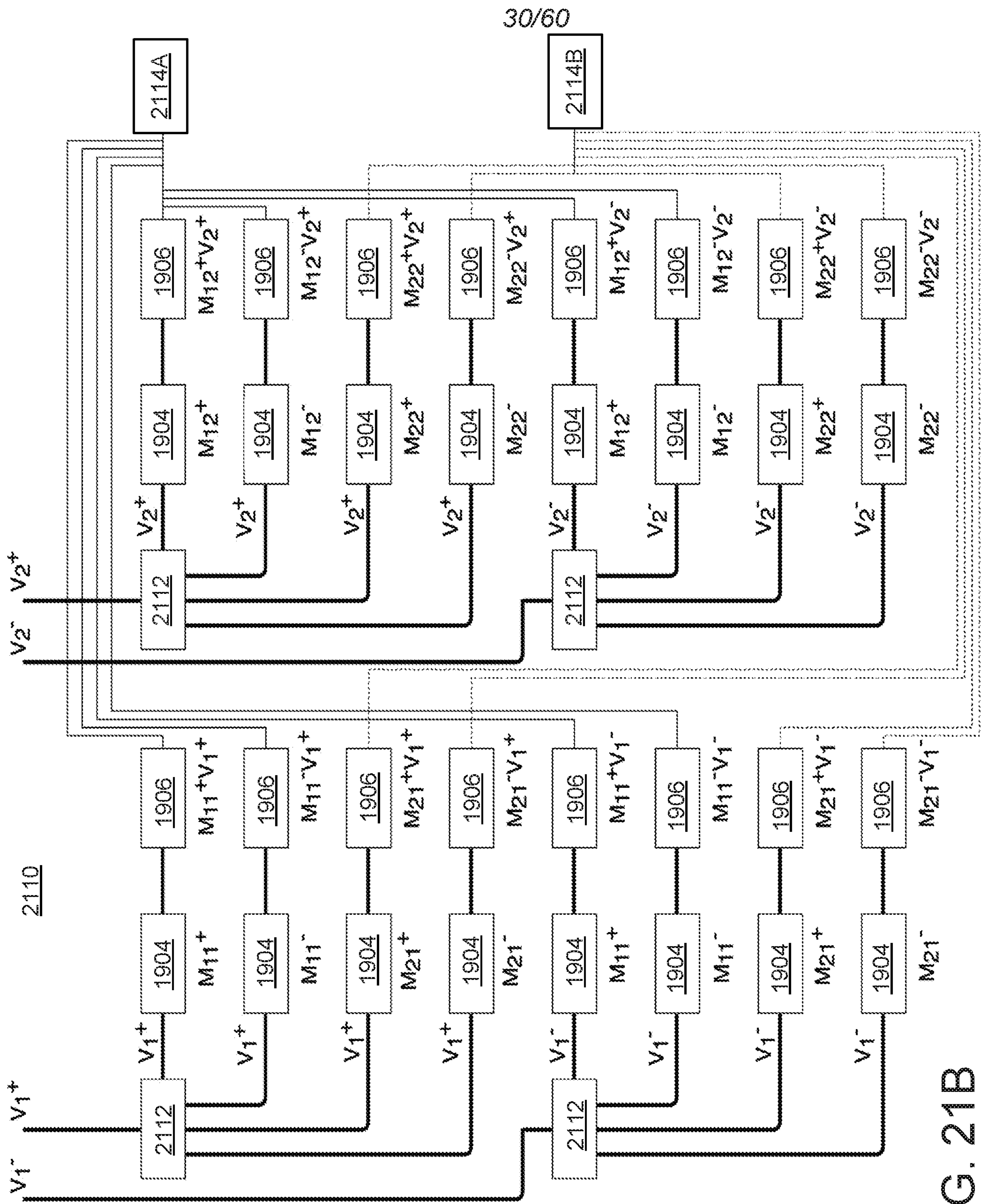


FIG. 21A



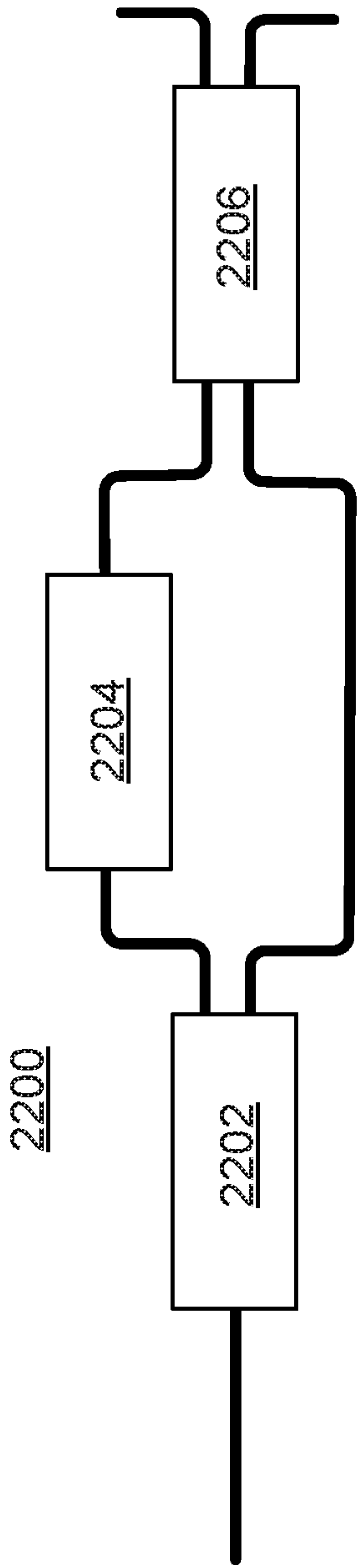


FIG. 22A

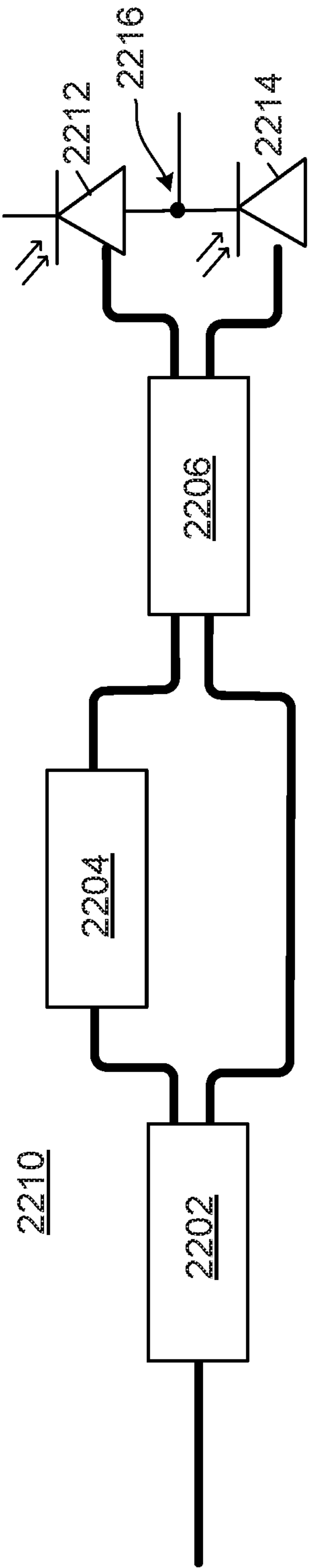
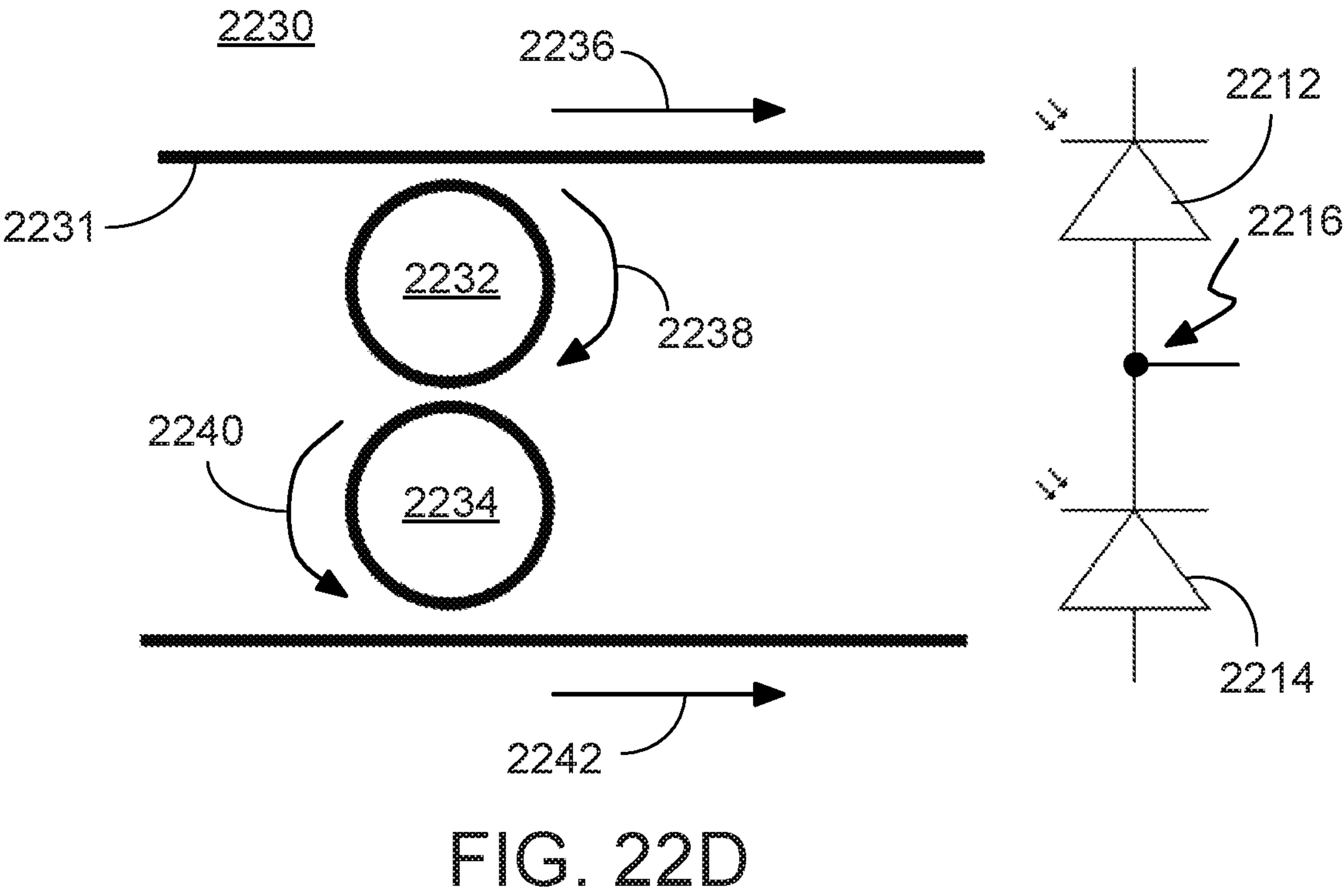
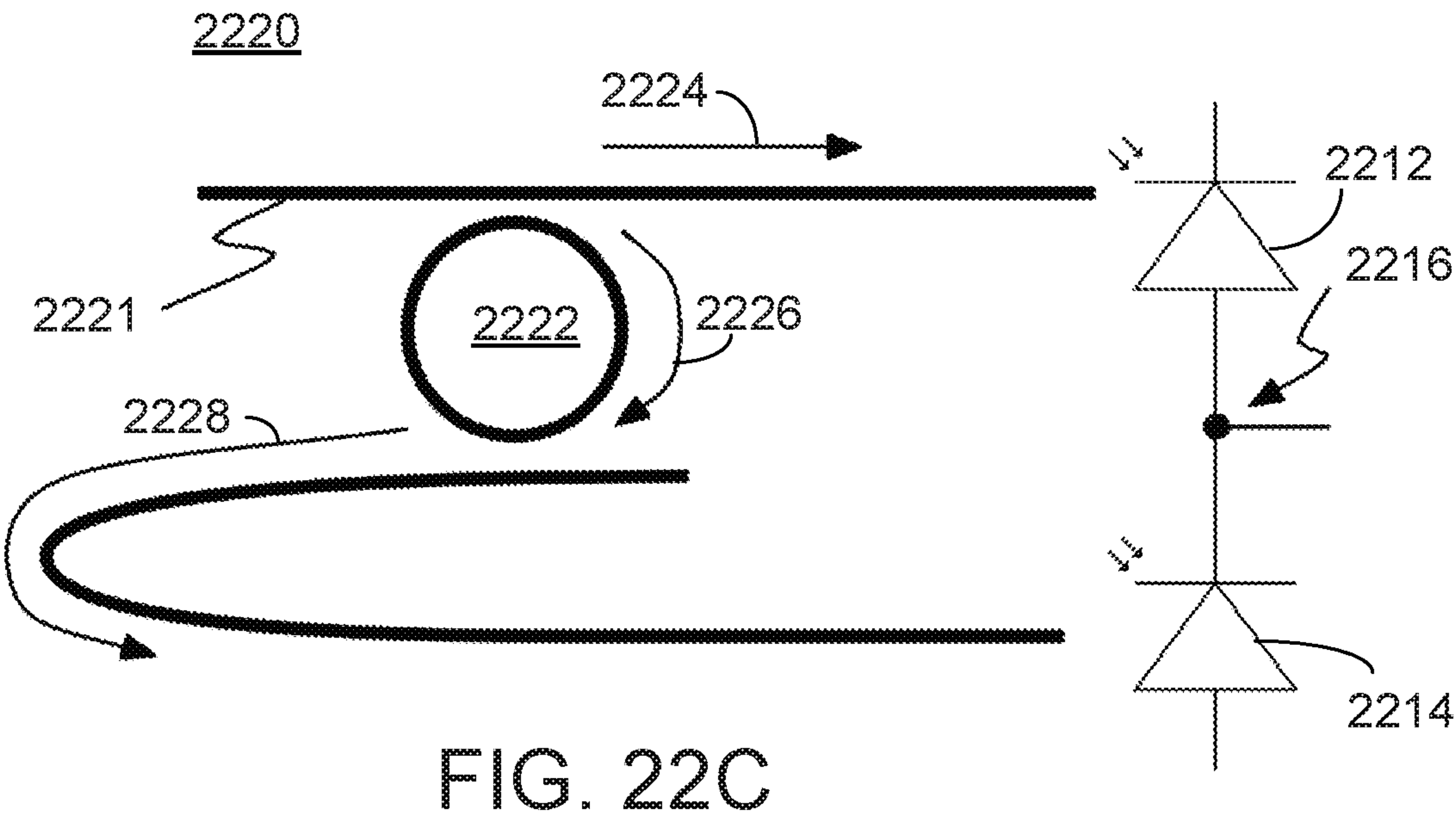


FIG. 22B



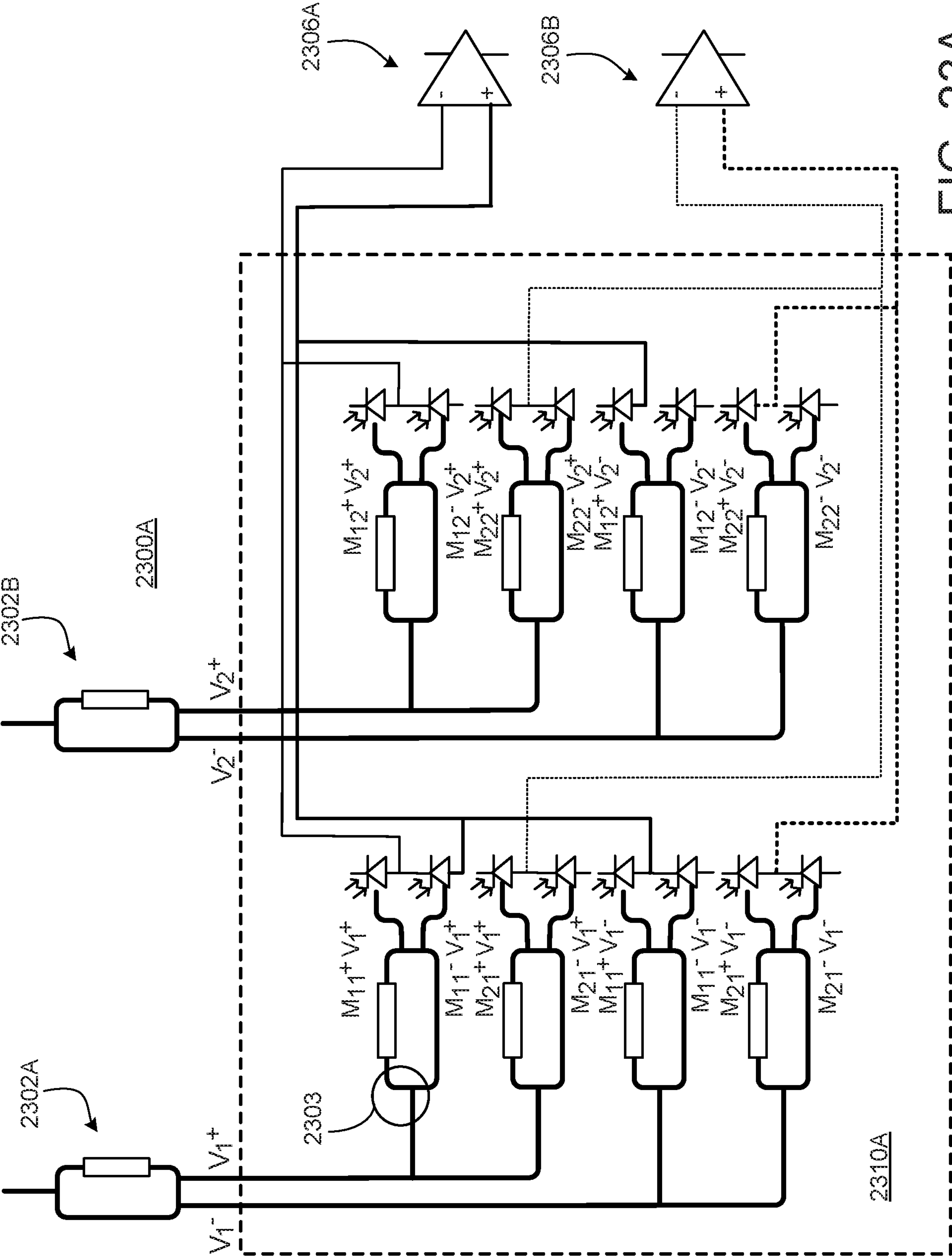


FIG. 23A

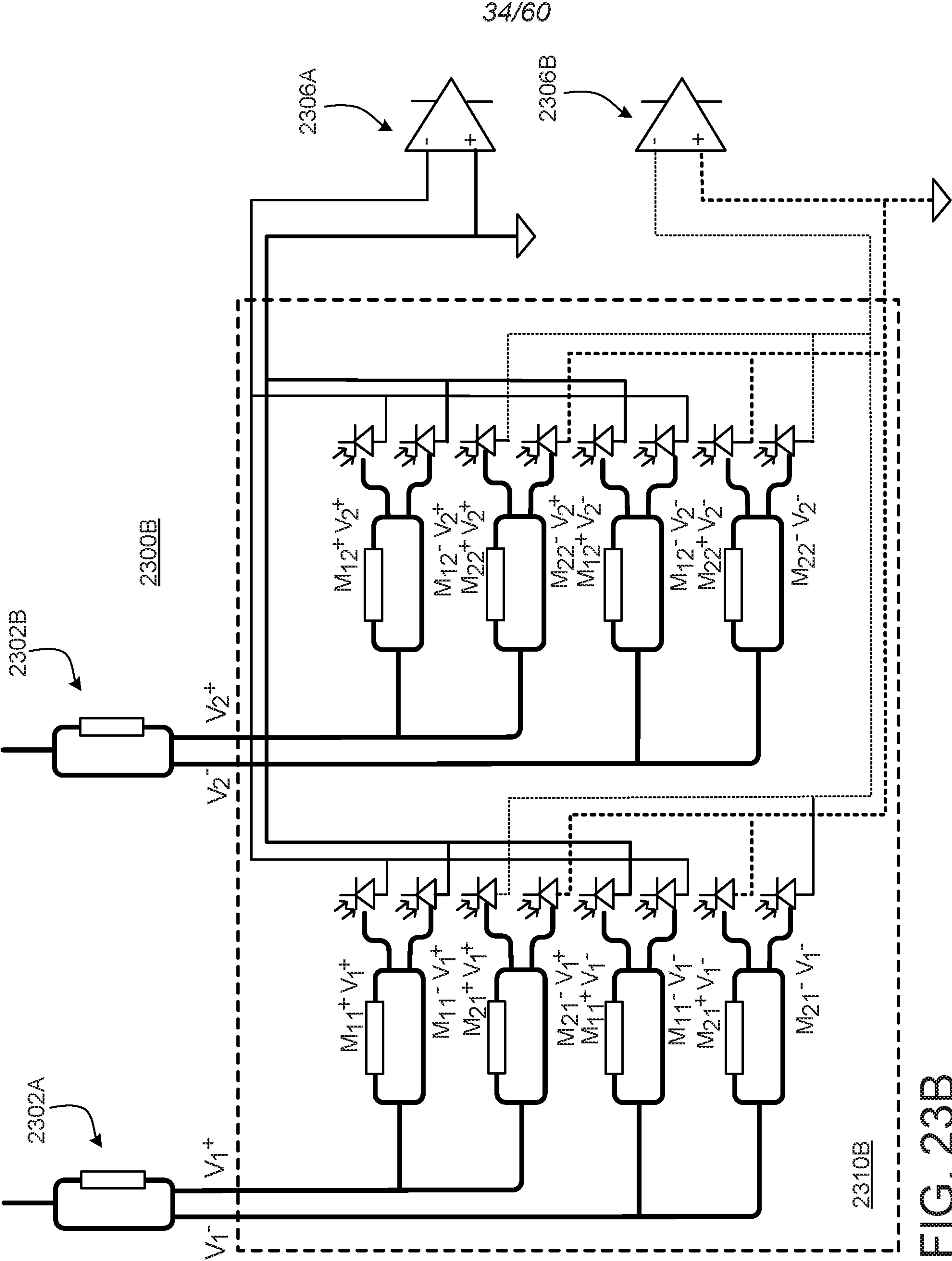


FIG. 23B

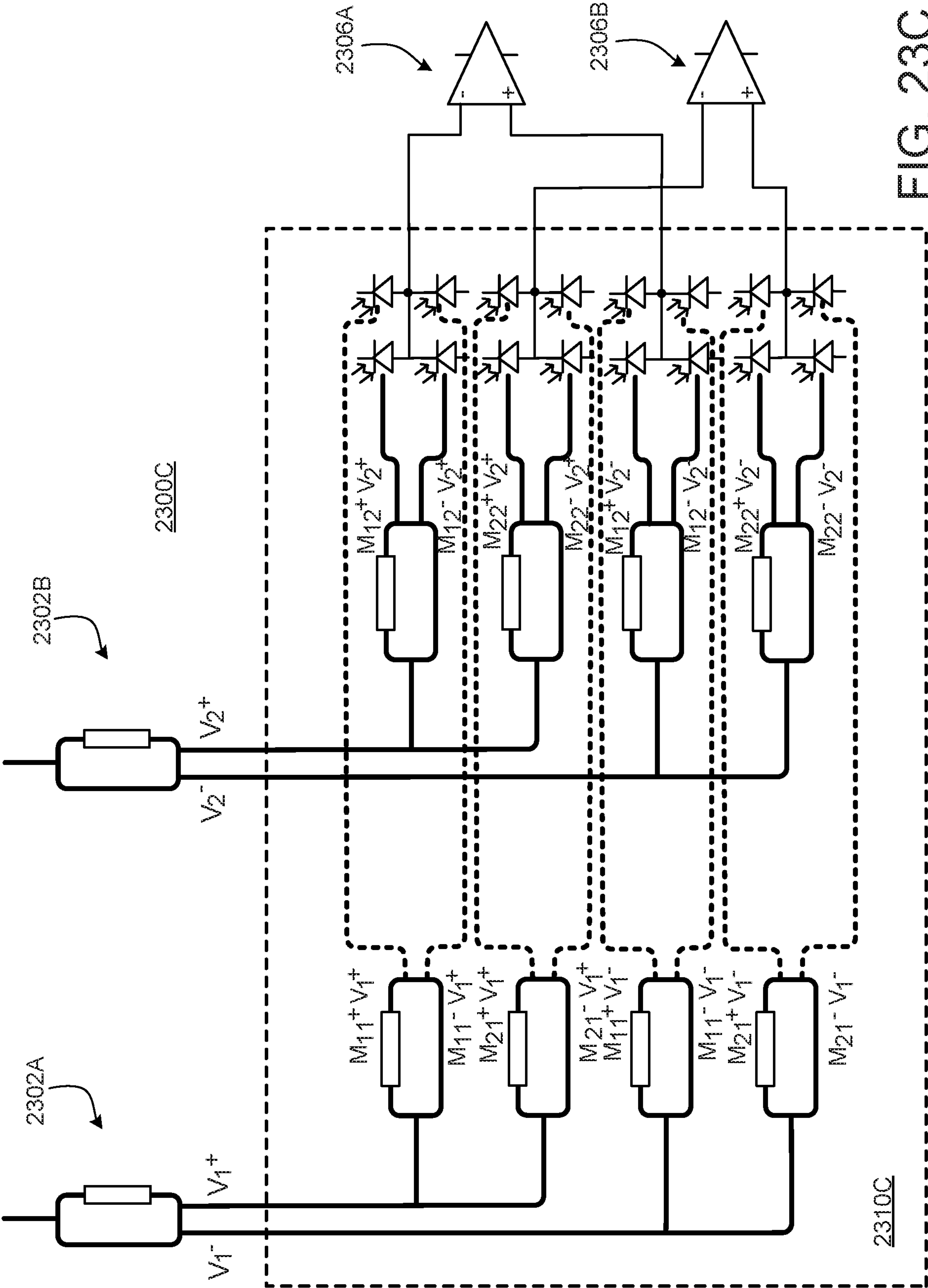


FIG. 23C

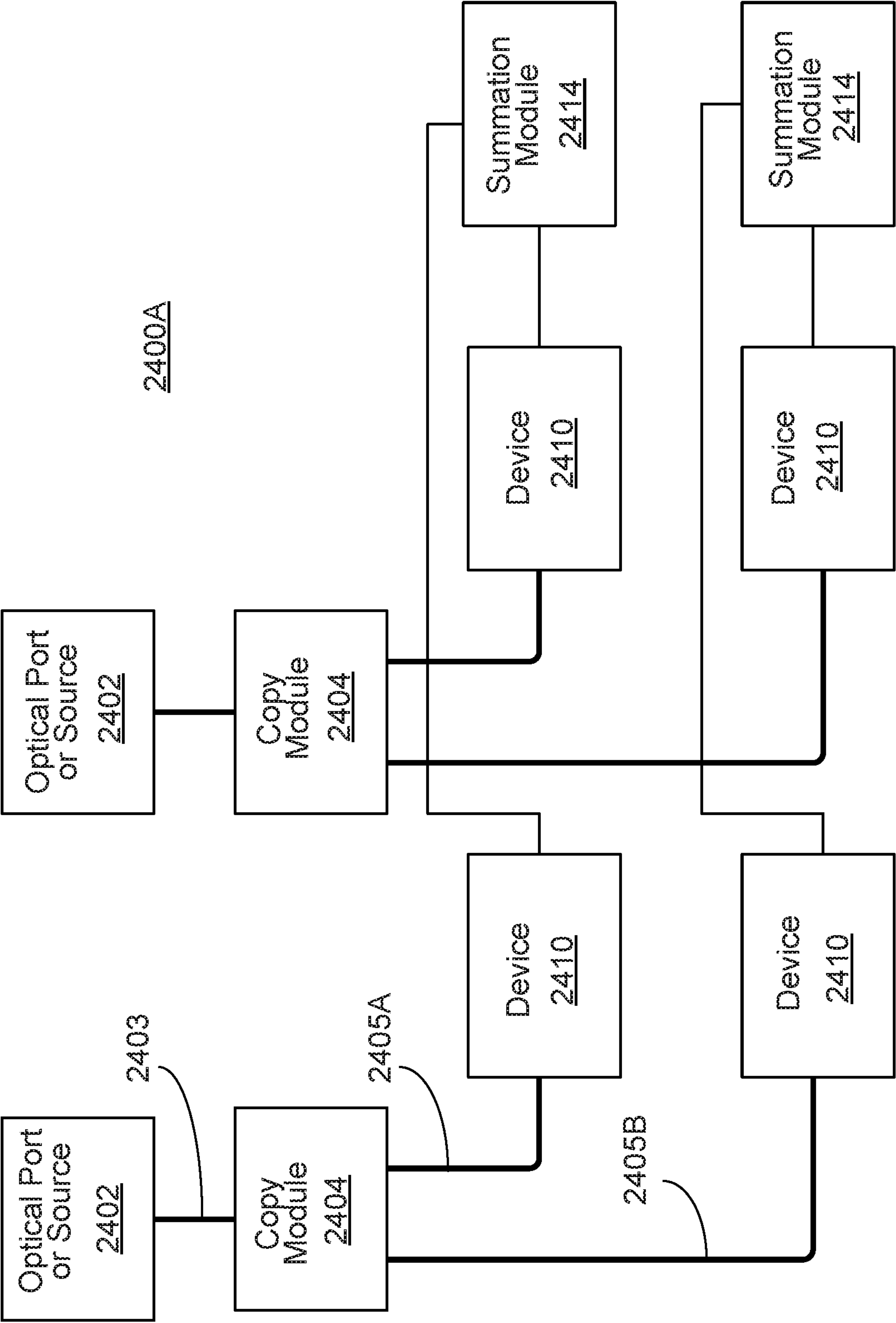


FIG. 24A

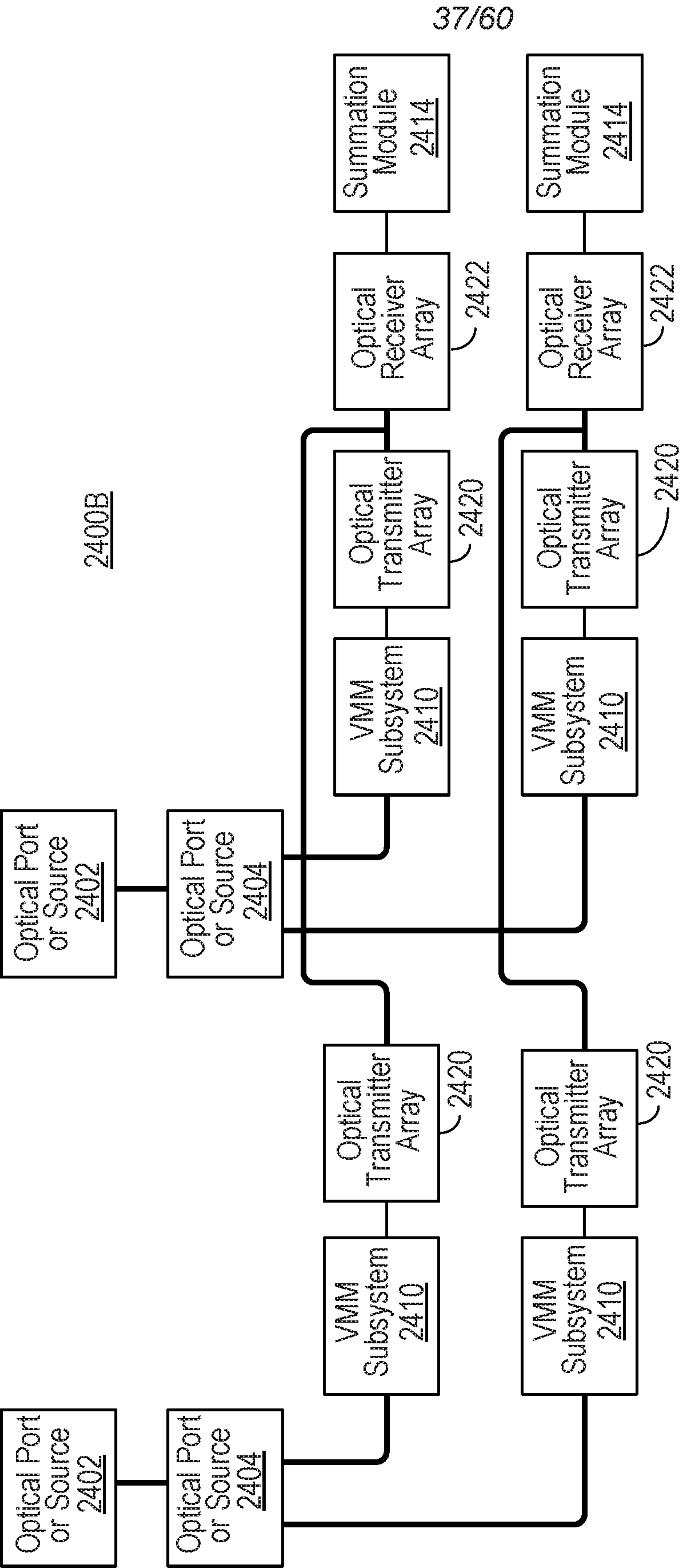


FIG. 24B

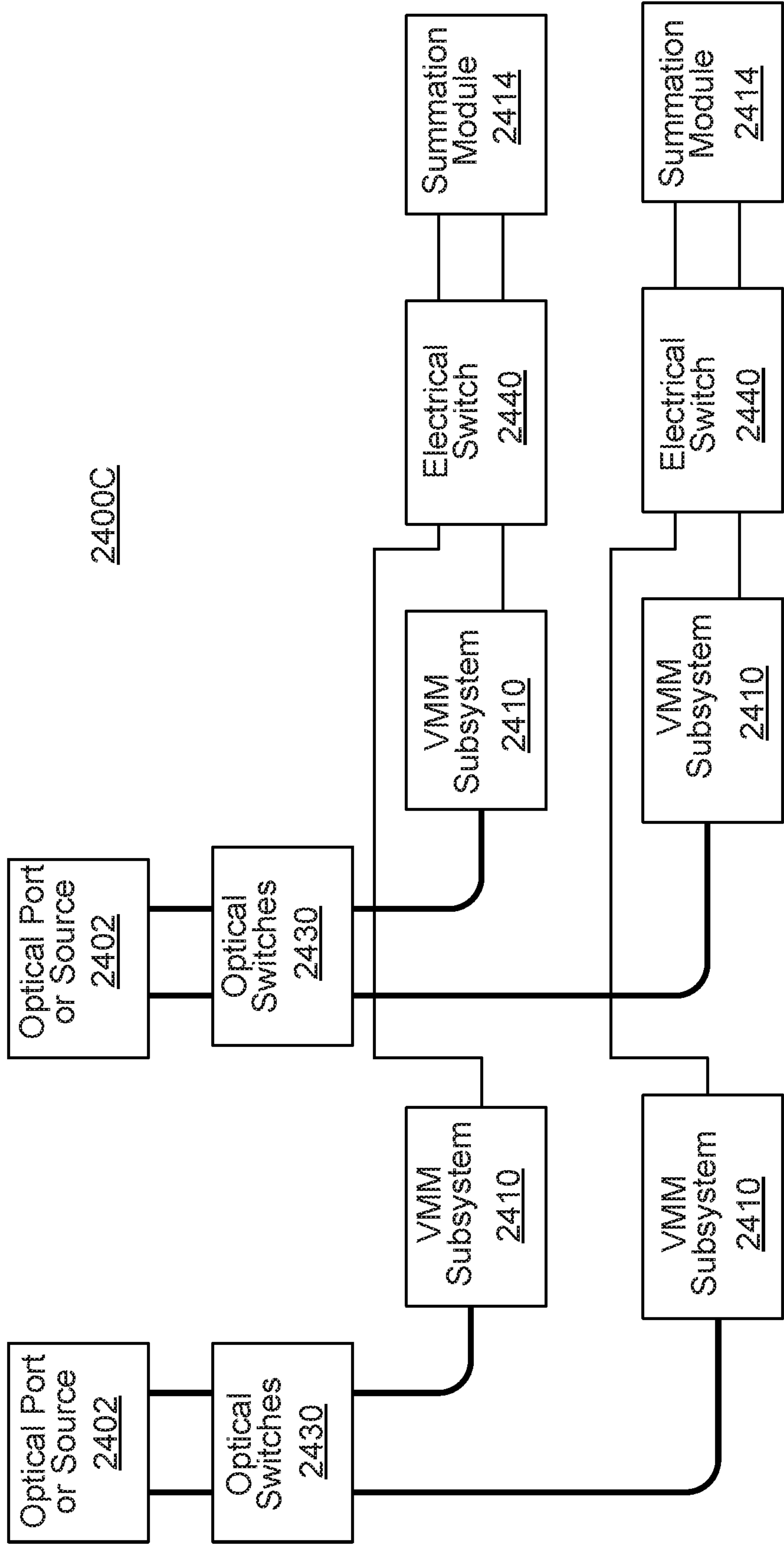


FIG. 24C

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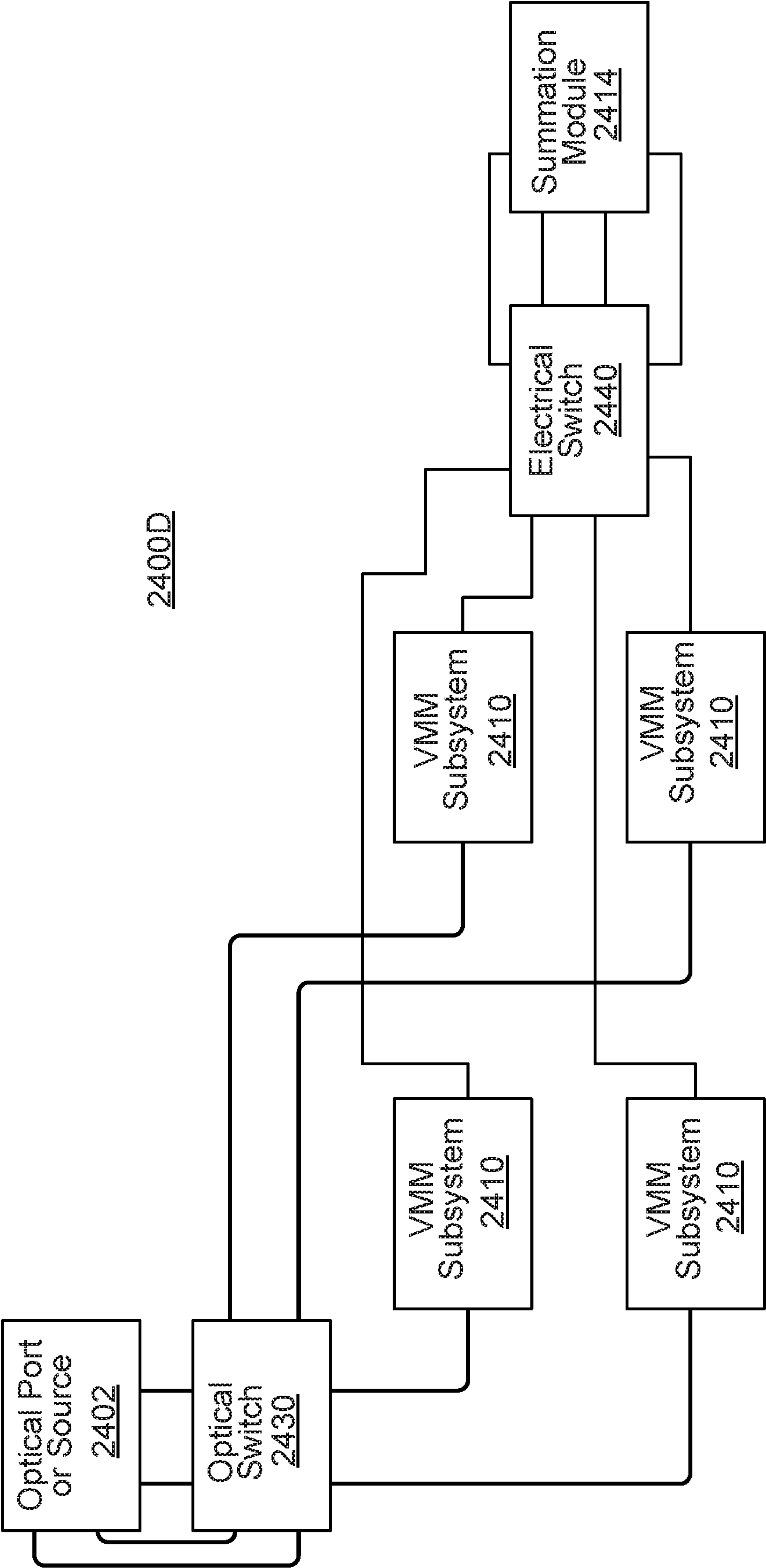


FIG. 24D

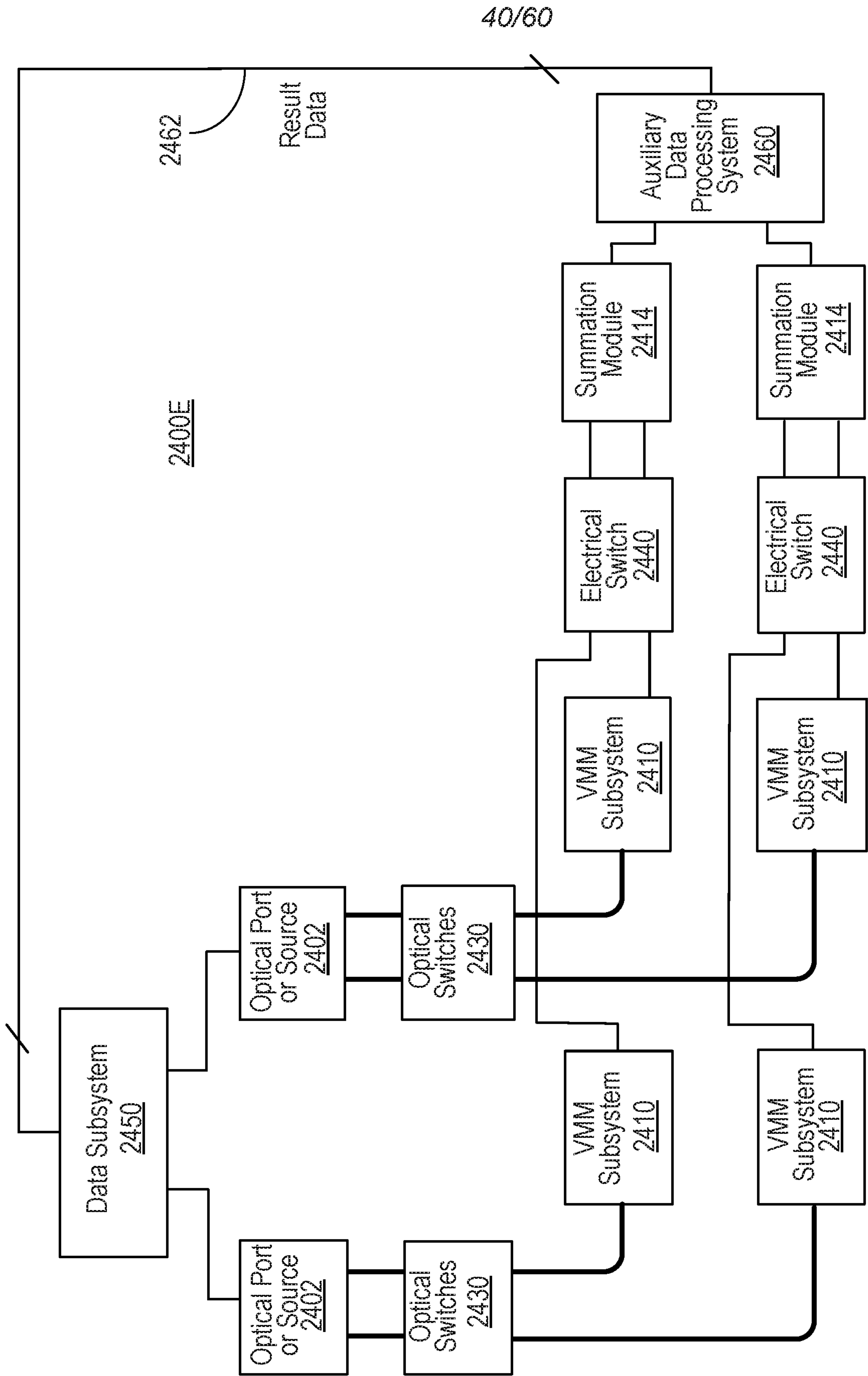


FIG. 24E

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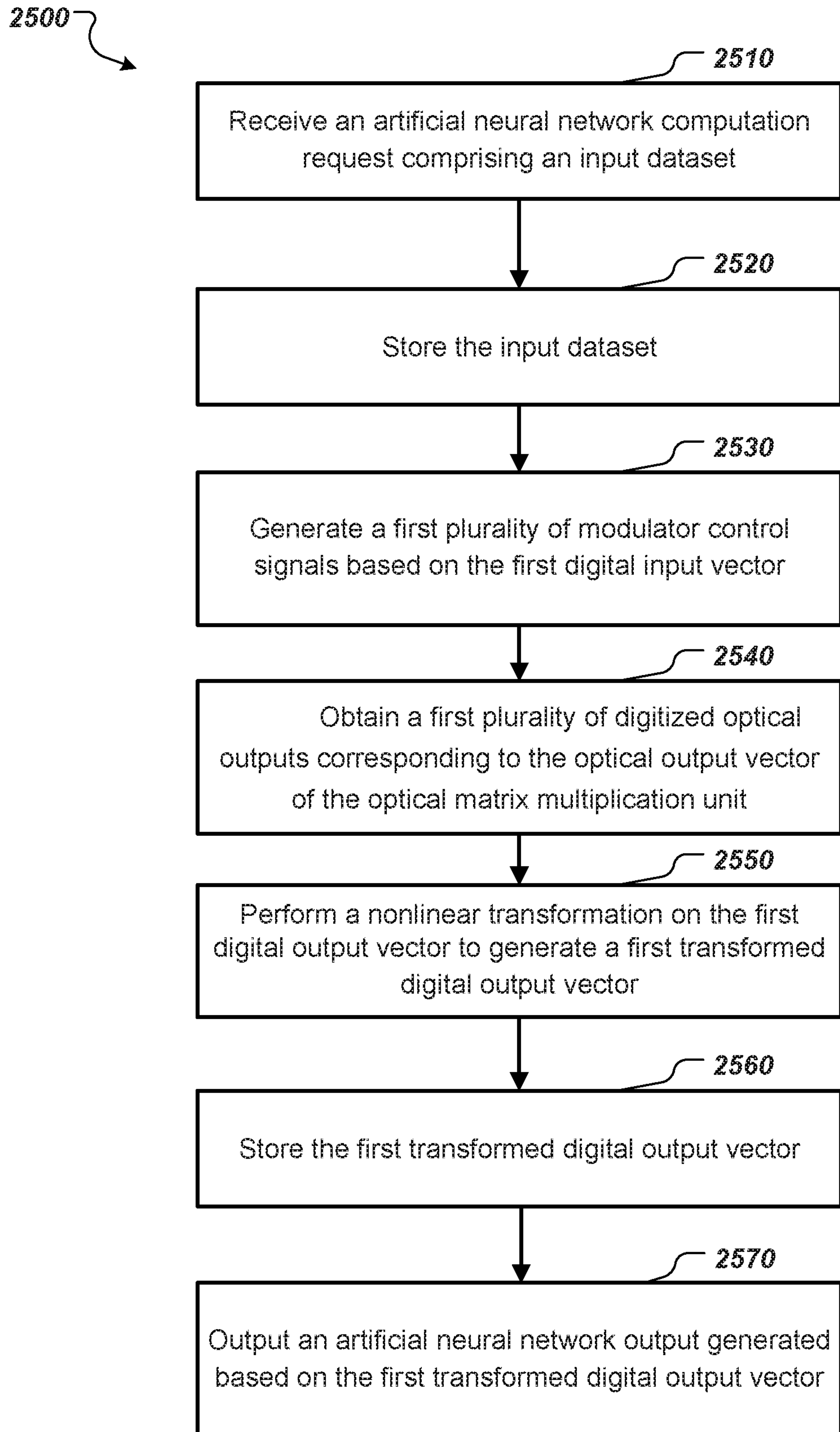


FIG. 25

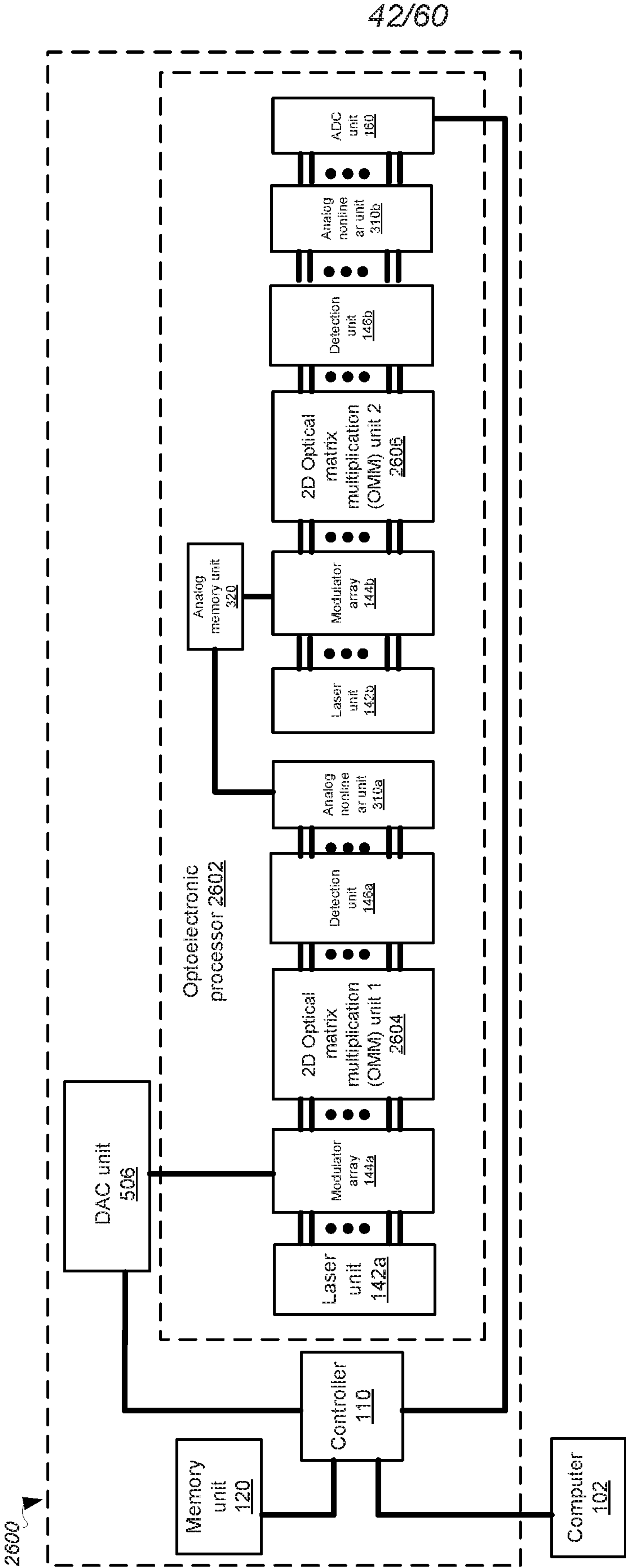


FIG. 26

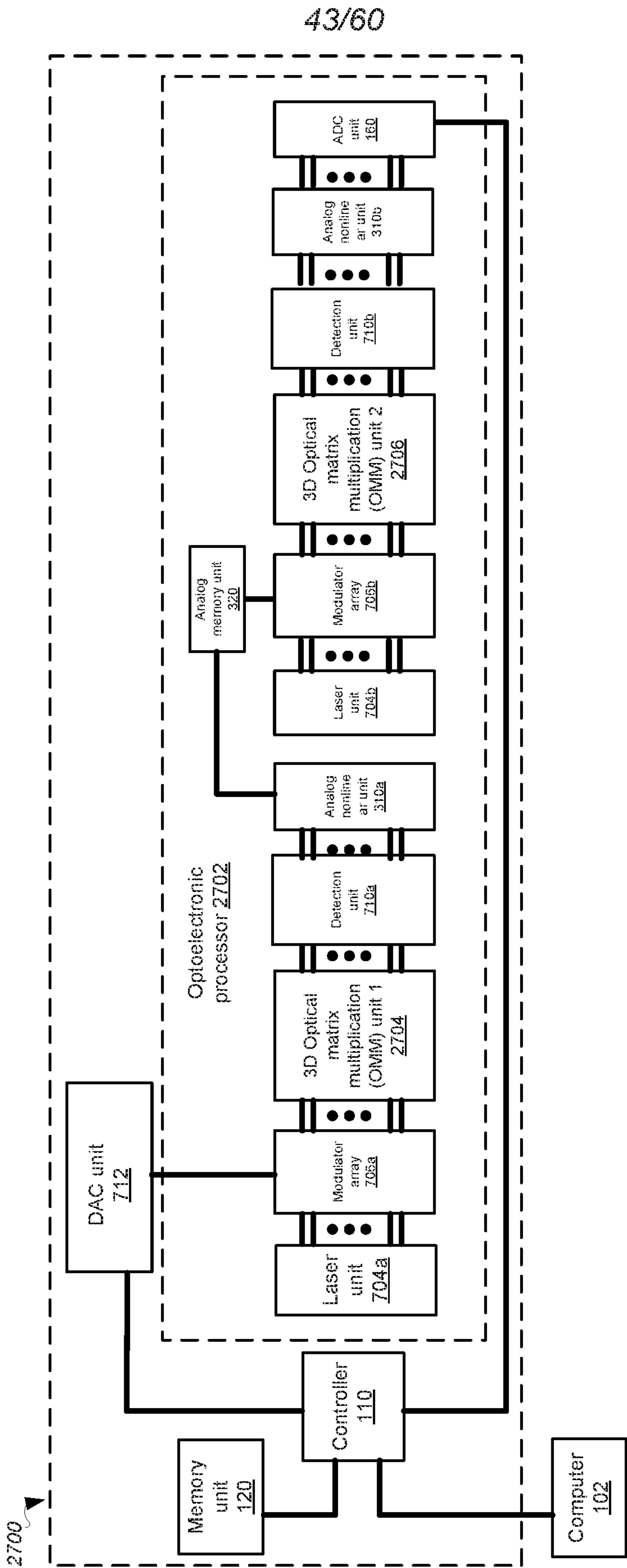
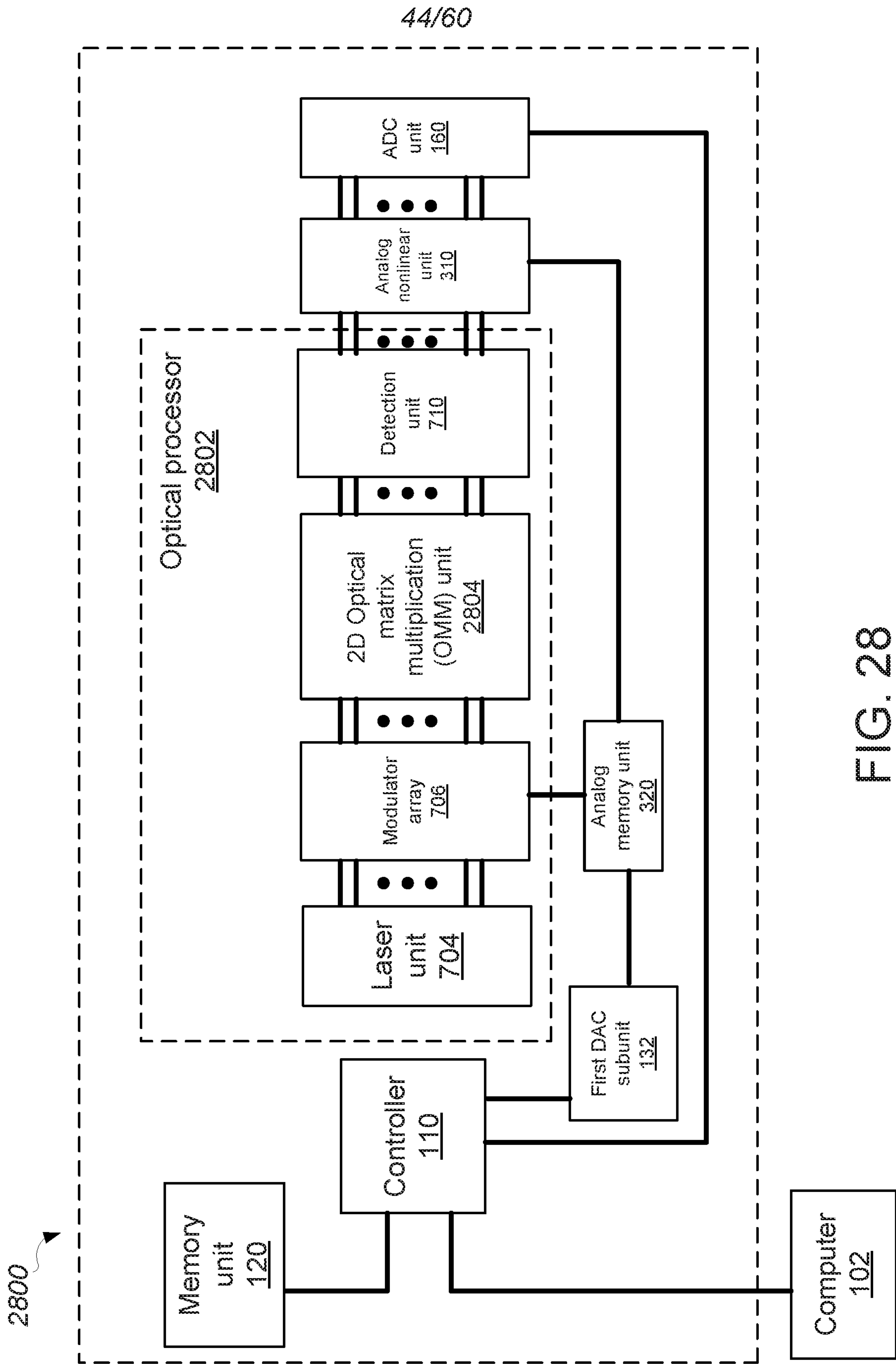


FIG. 27



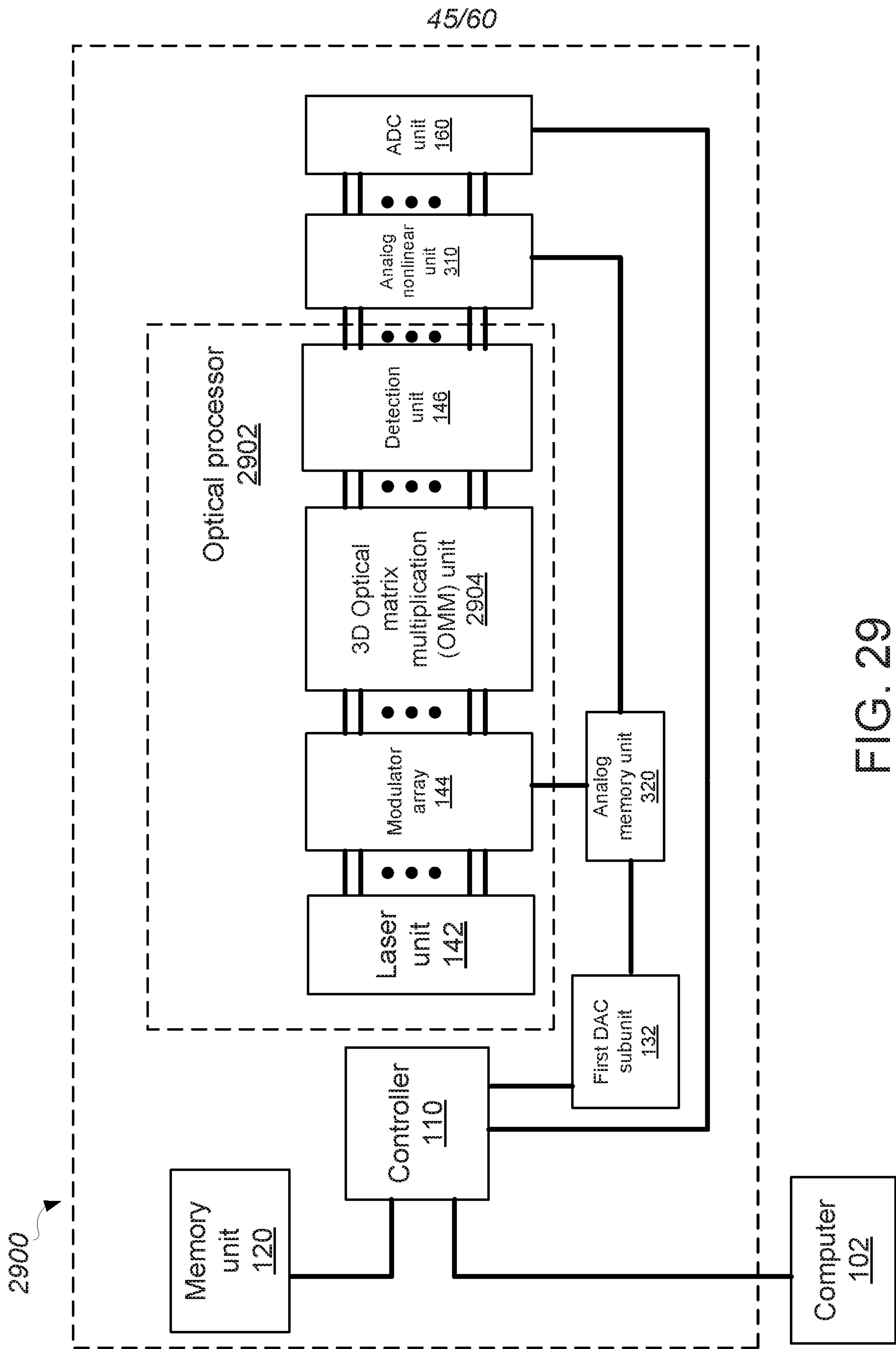


FIG. 29

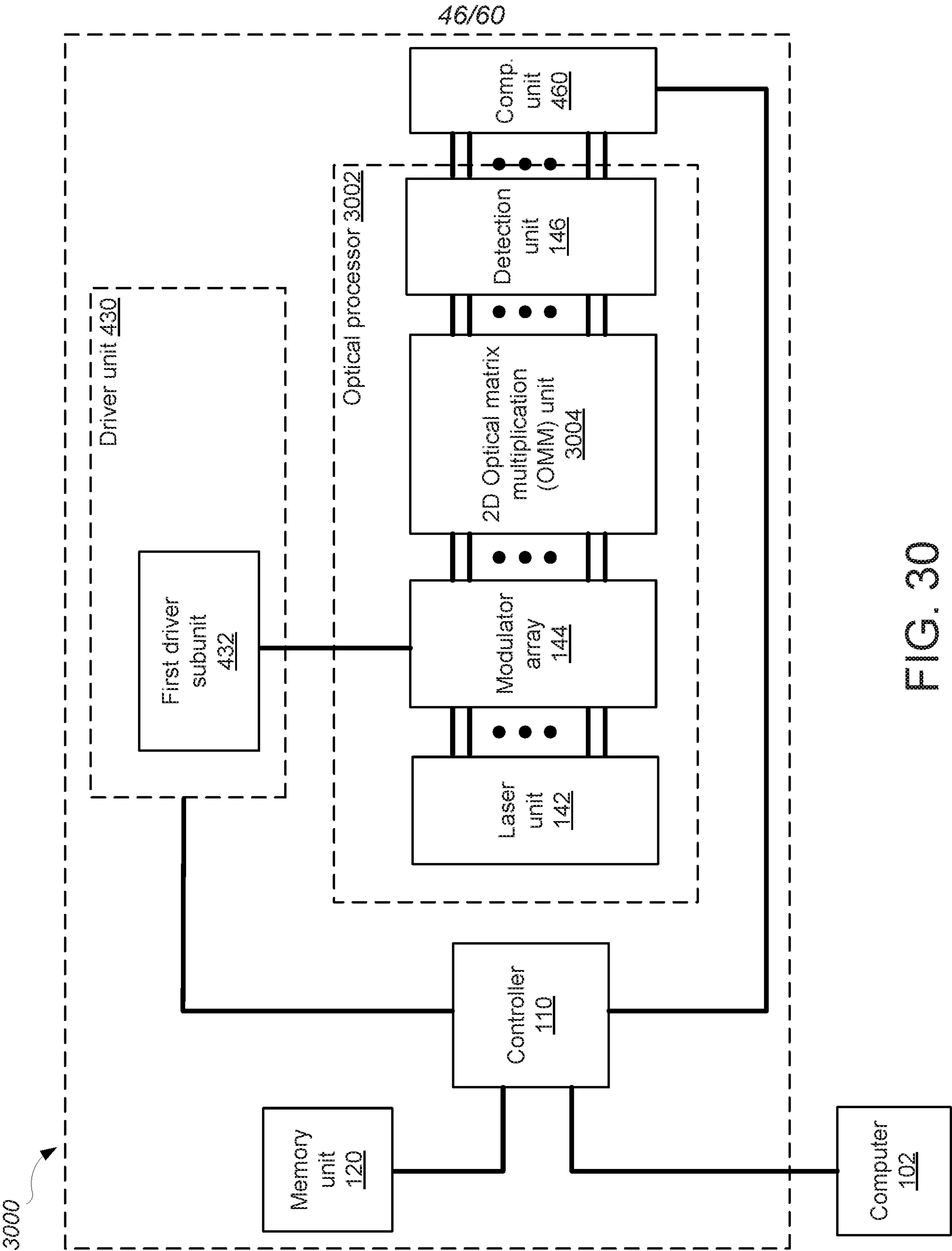


FIG. 30

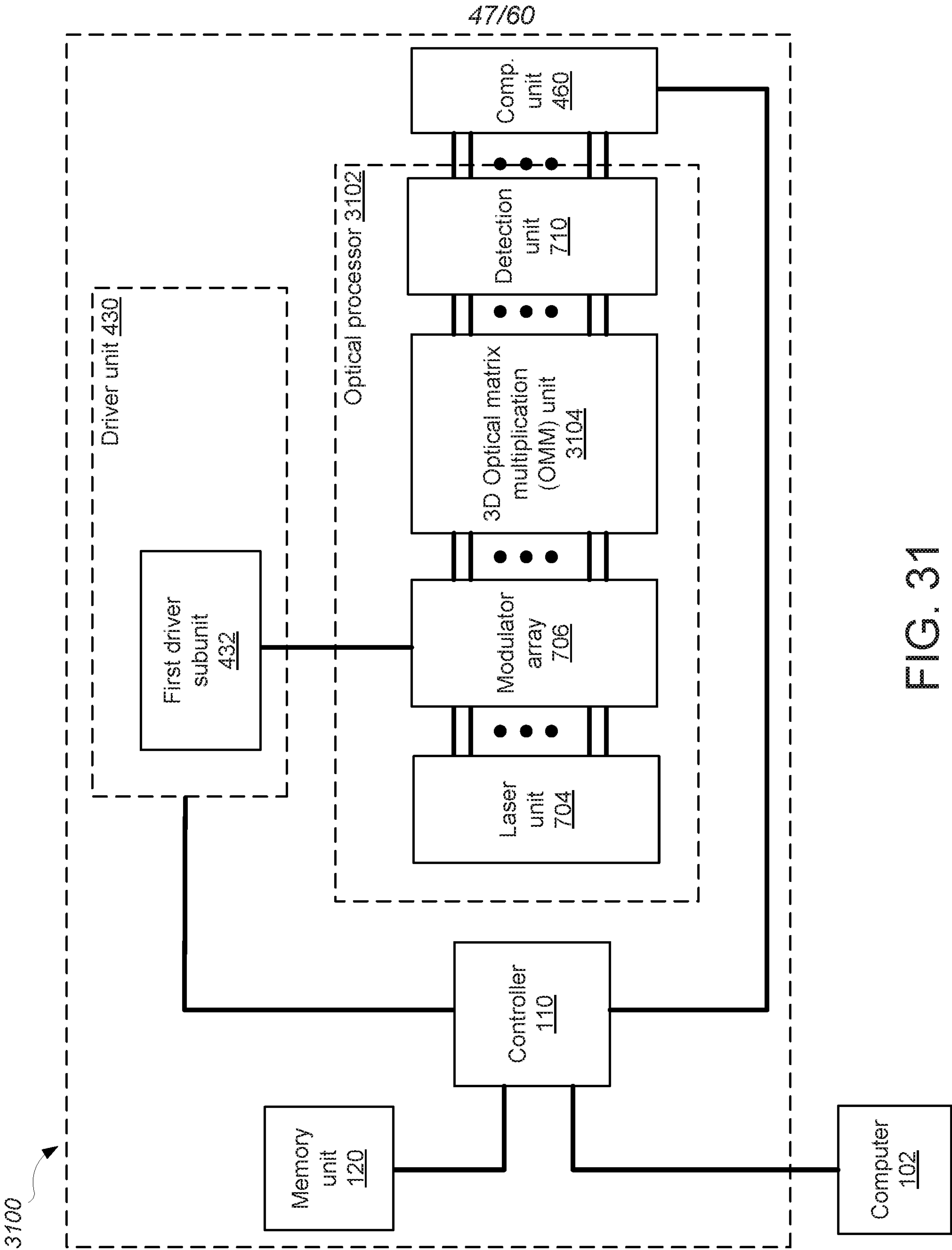


FIG. 31

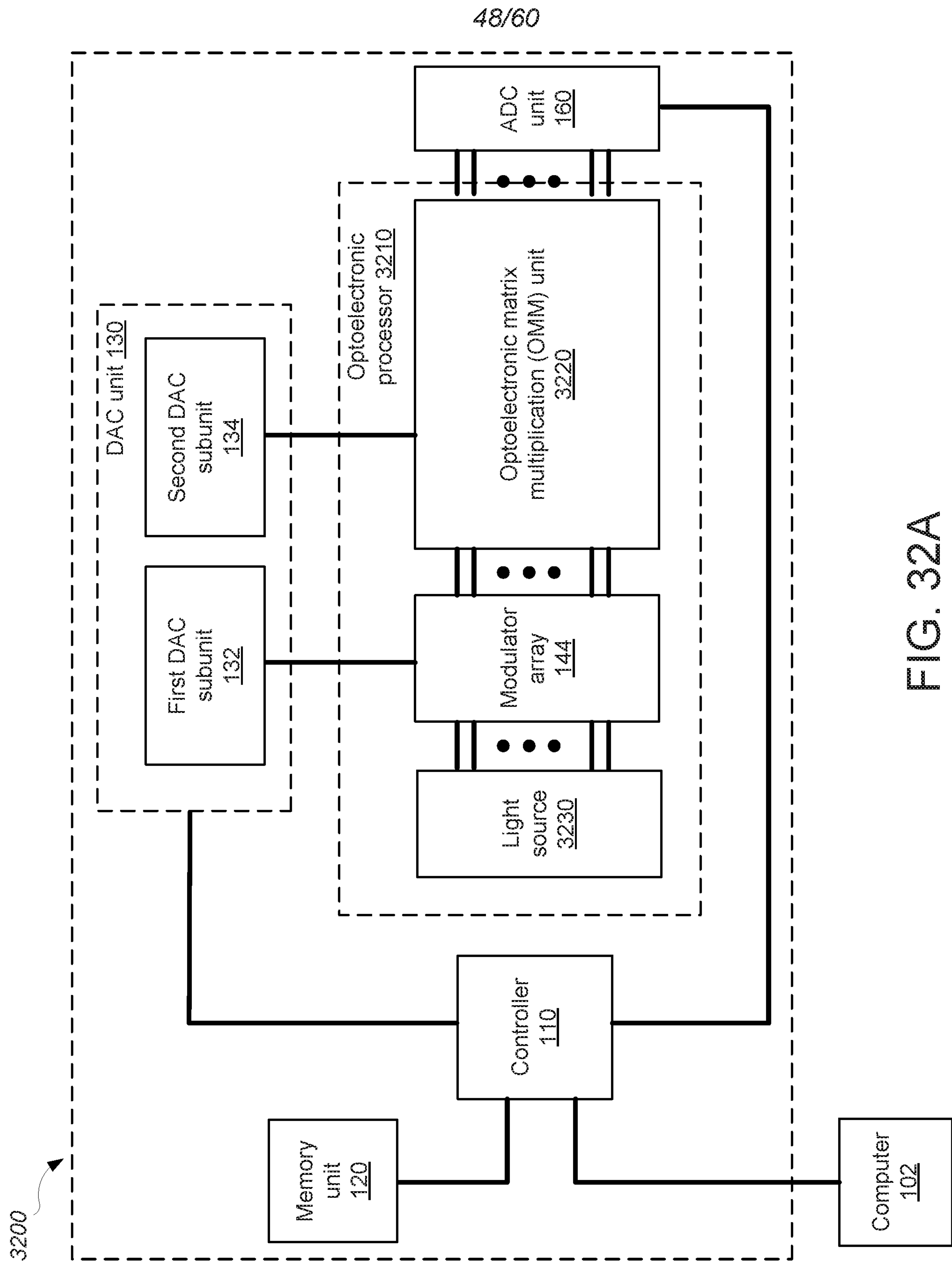


FIG. 32A

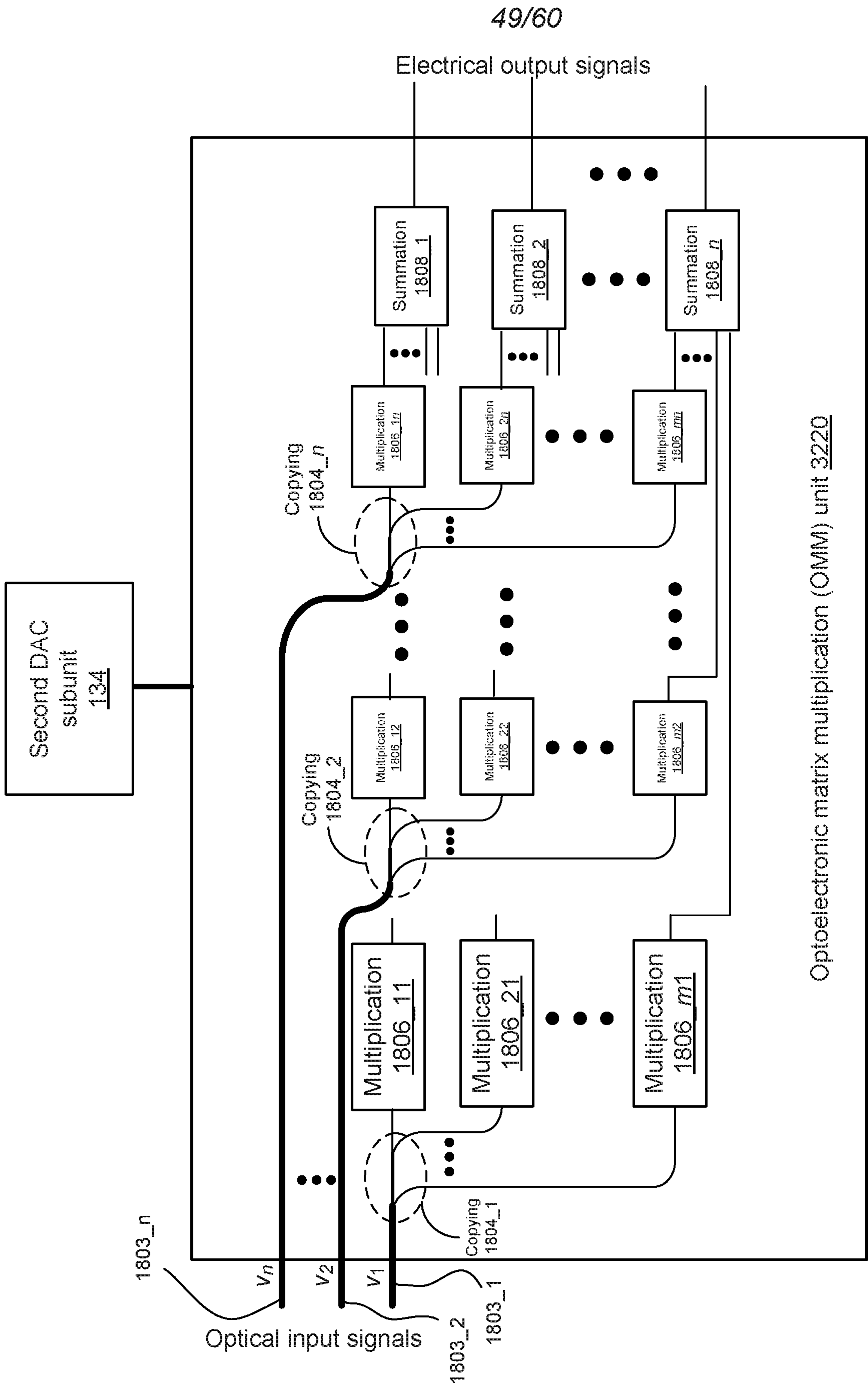


FIG. 32B

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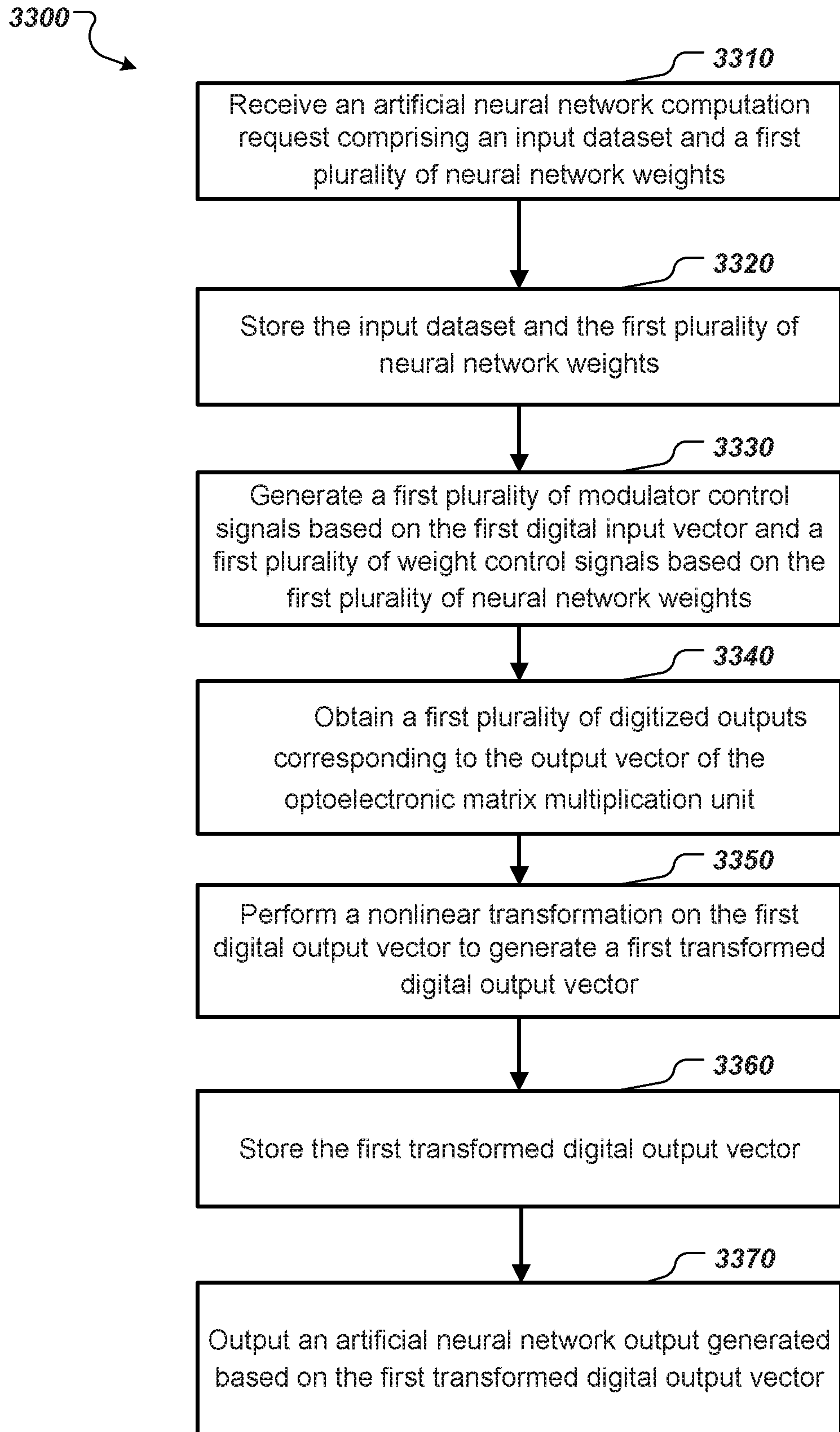


FIG. 33

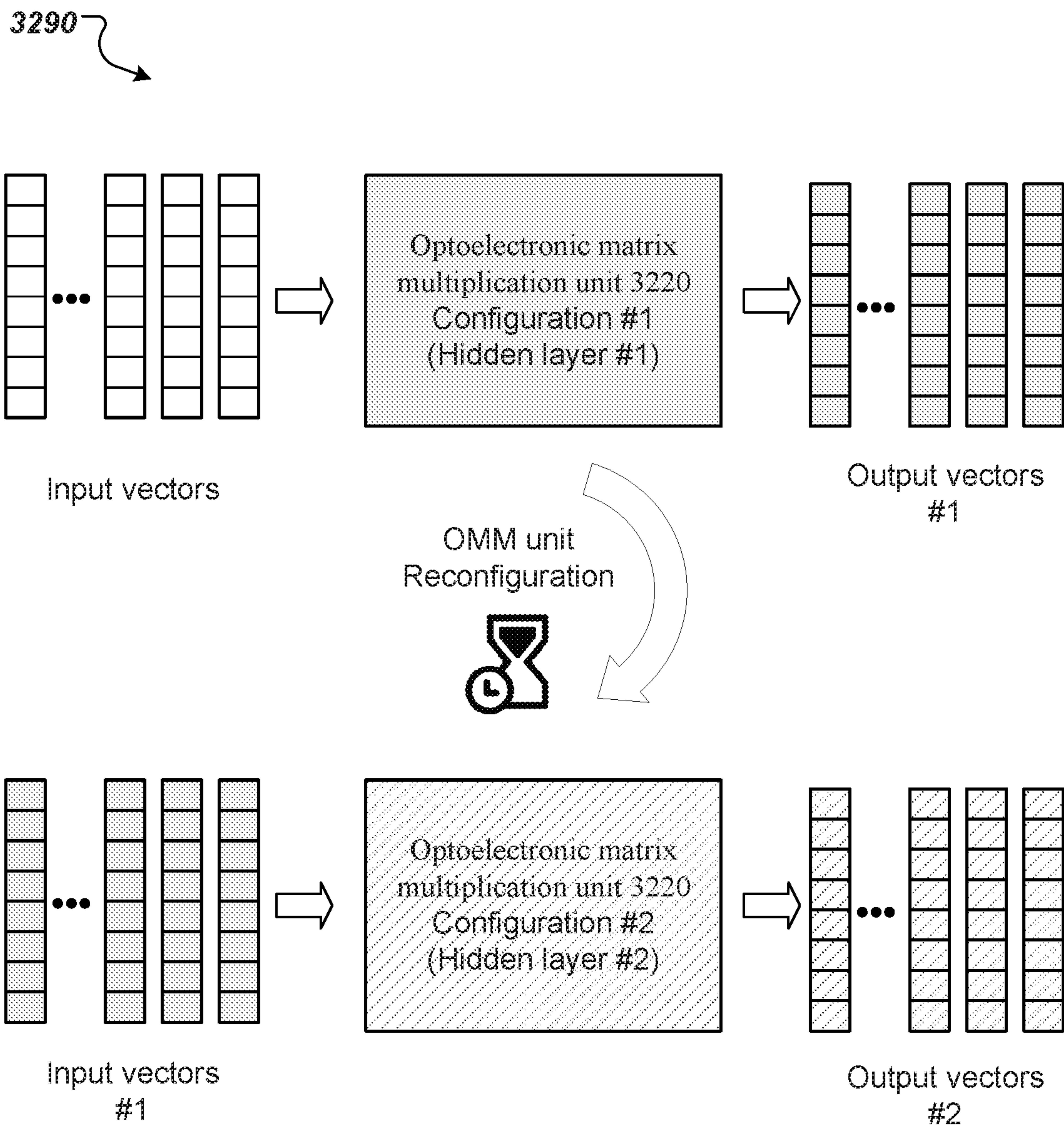
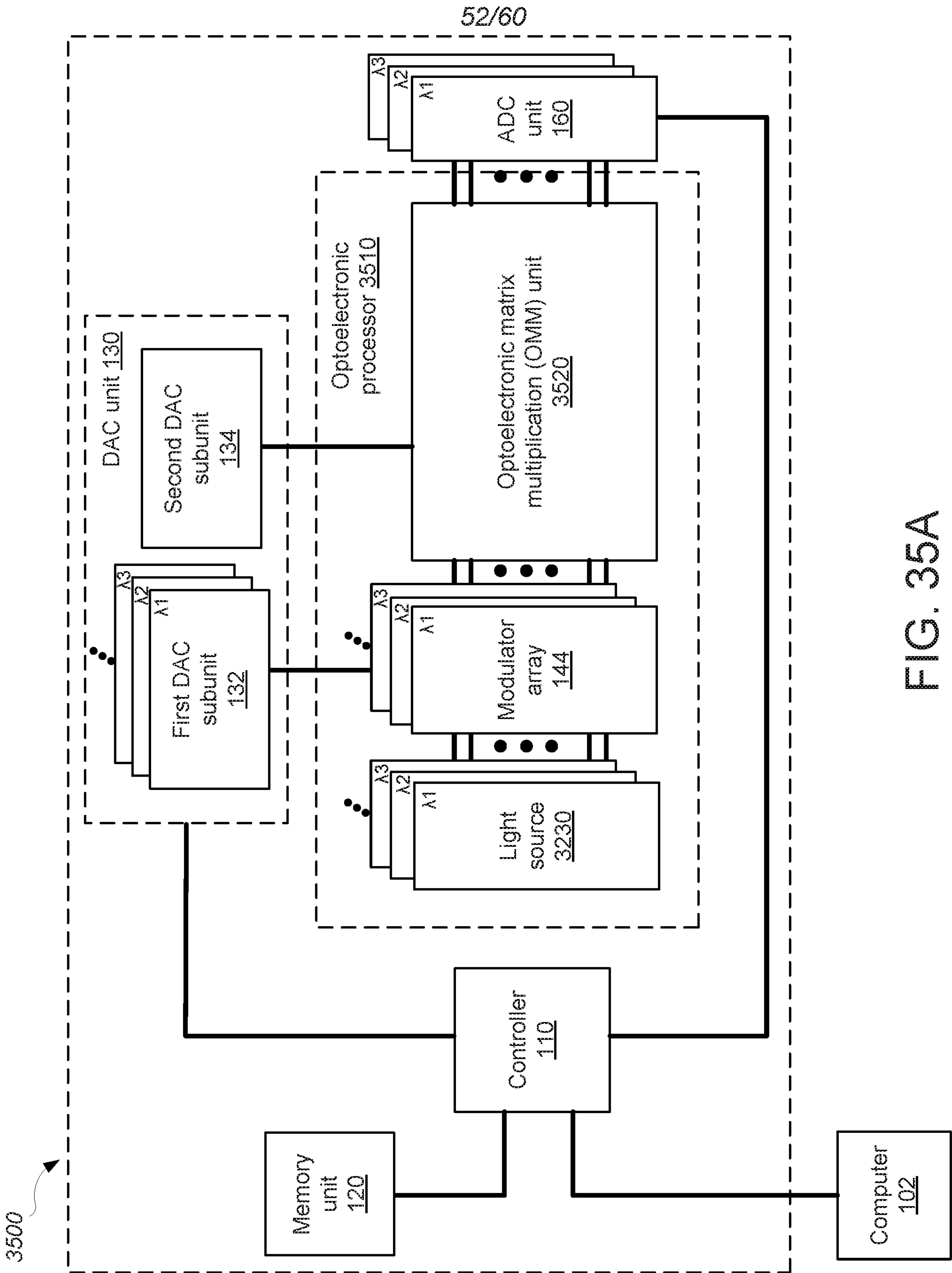


FIG. 34



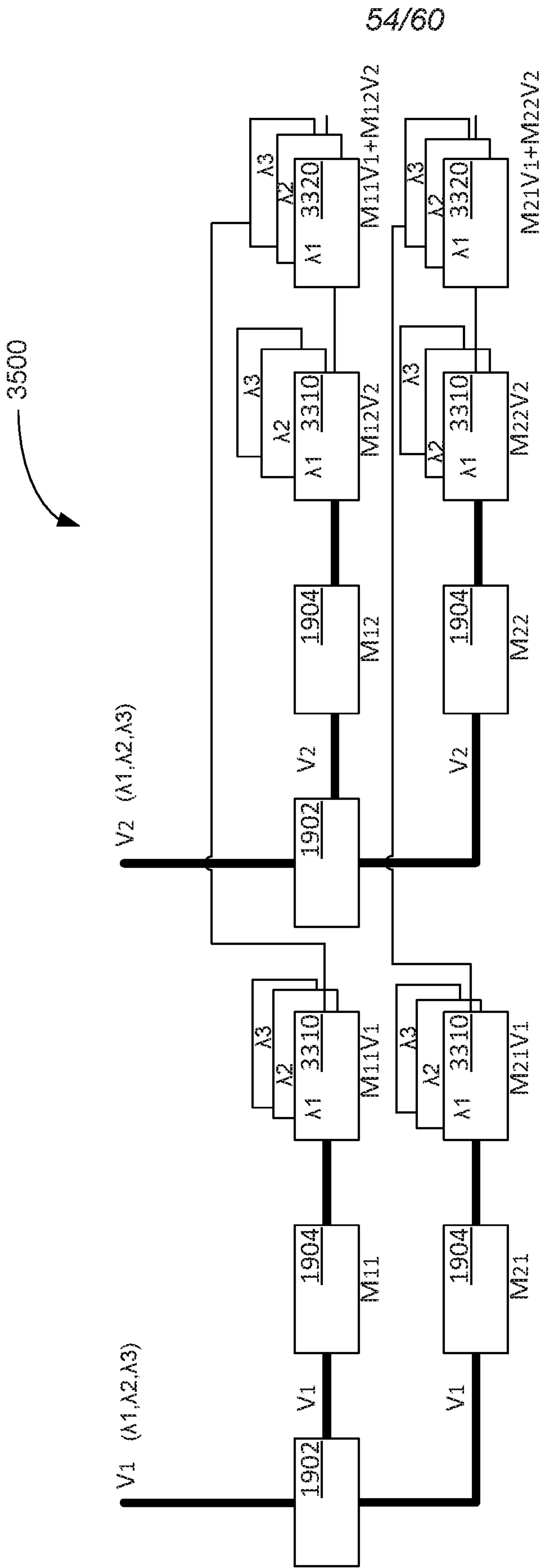
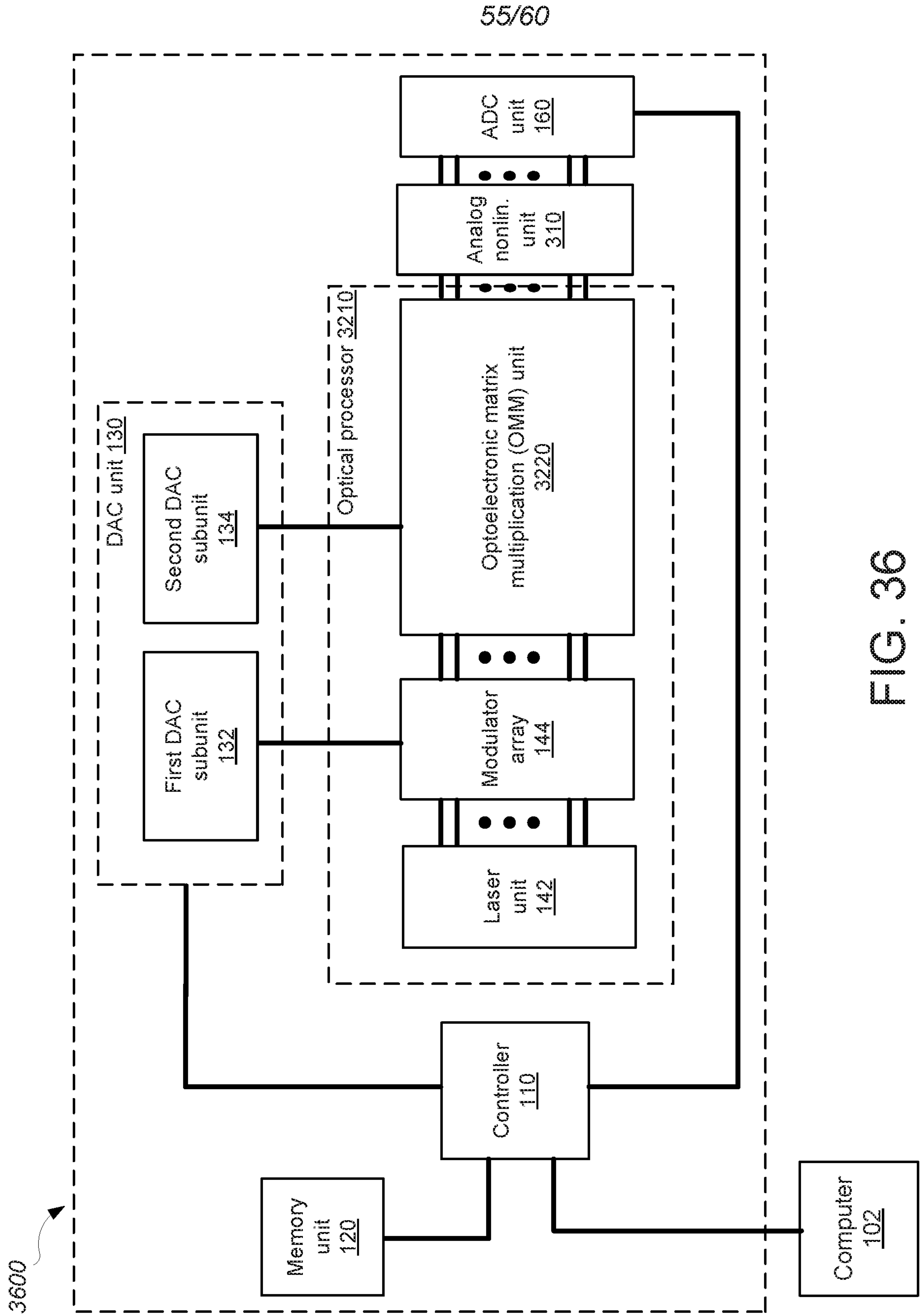
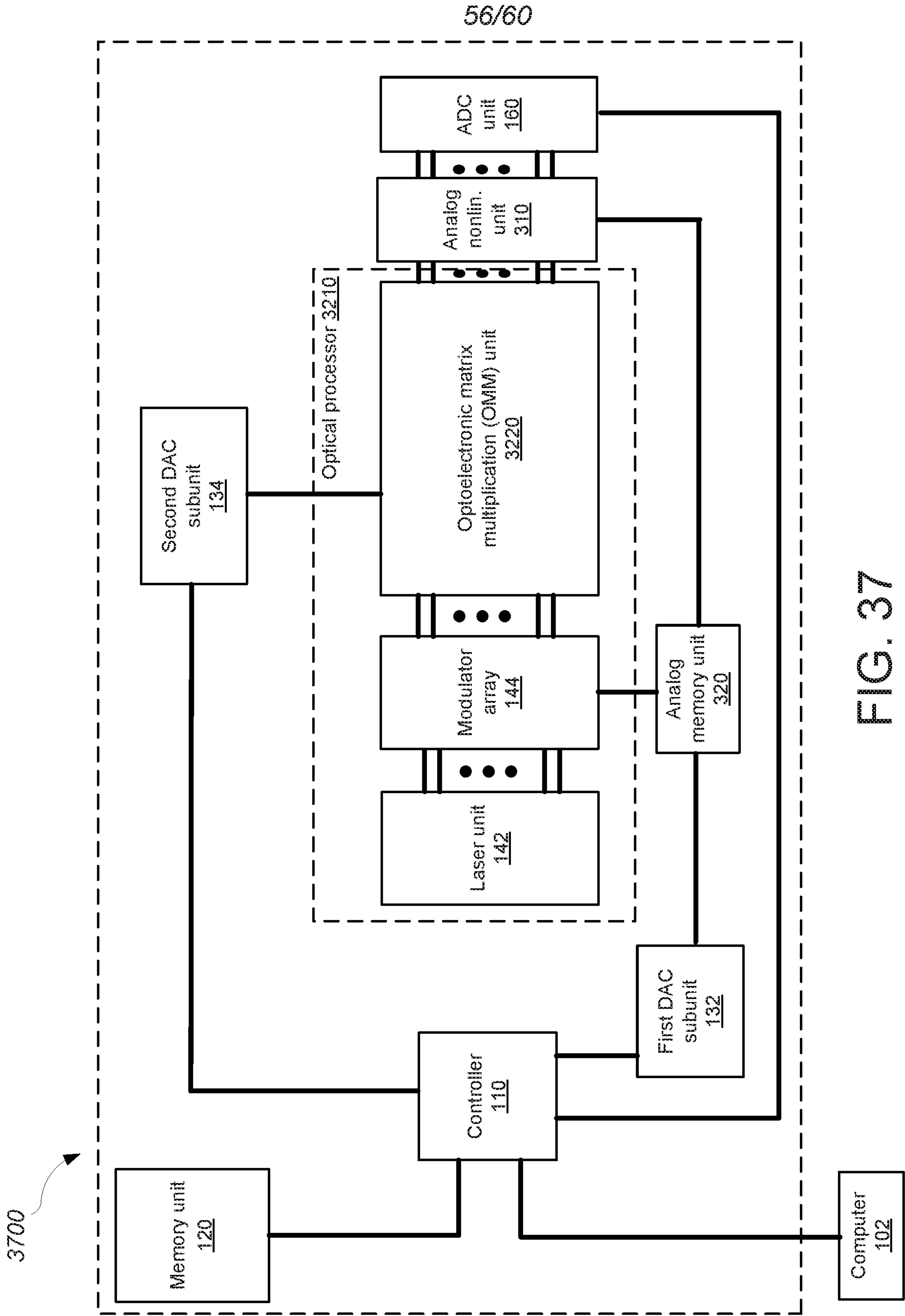
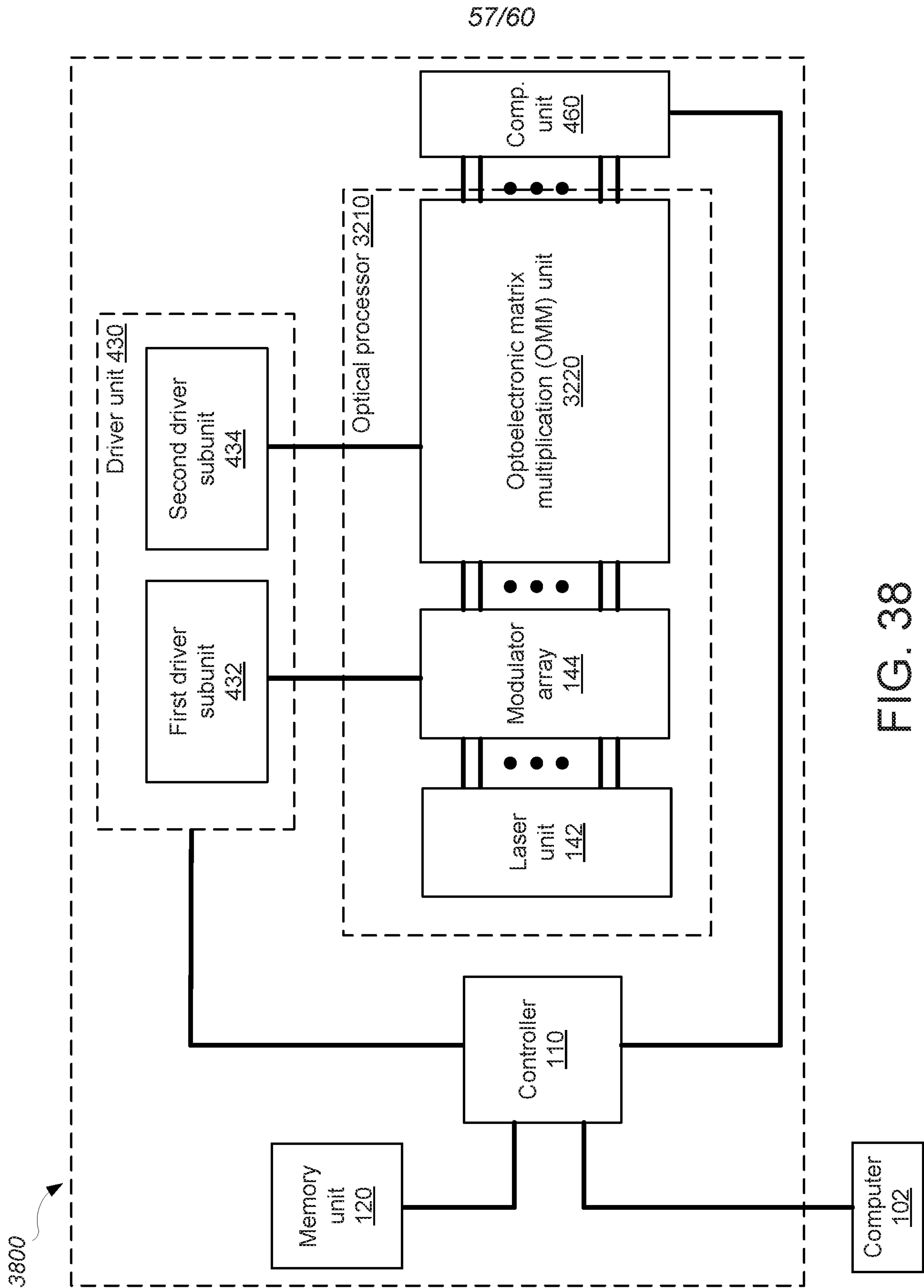


FIG. 35C







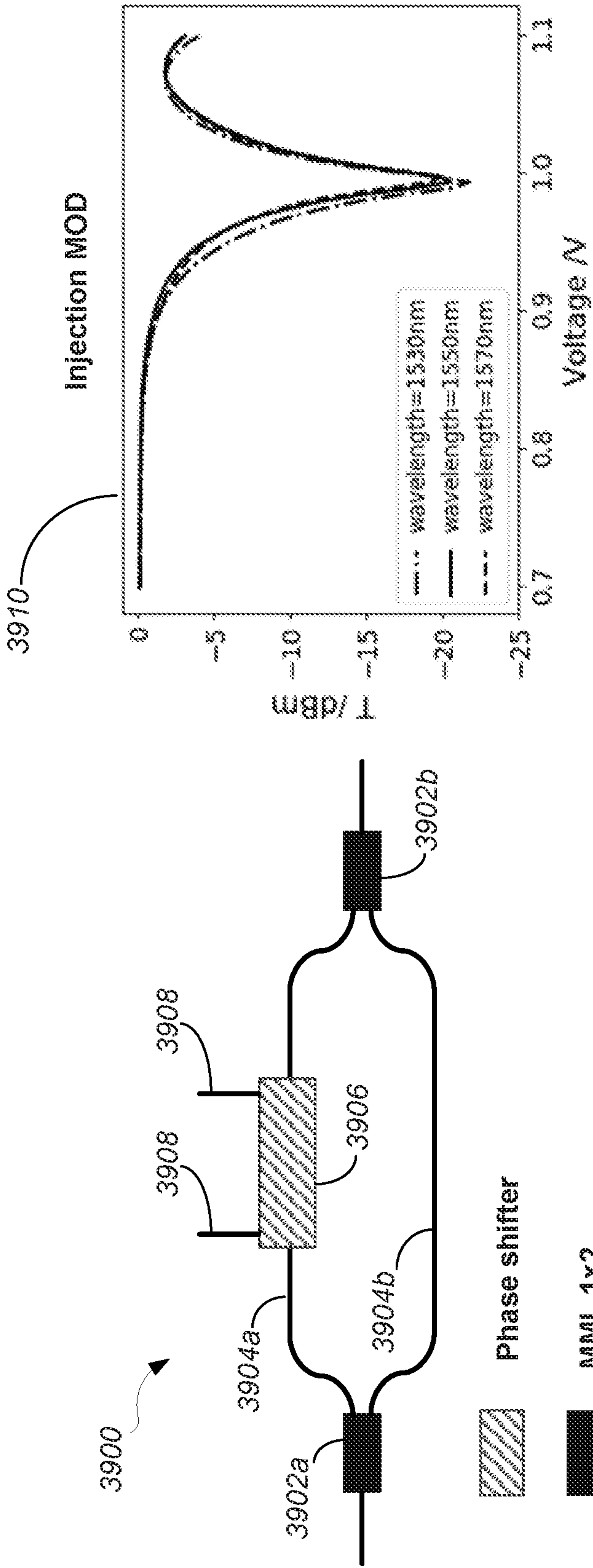


FIG. 39A

FIG. 39B

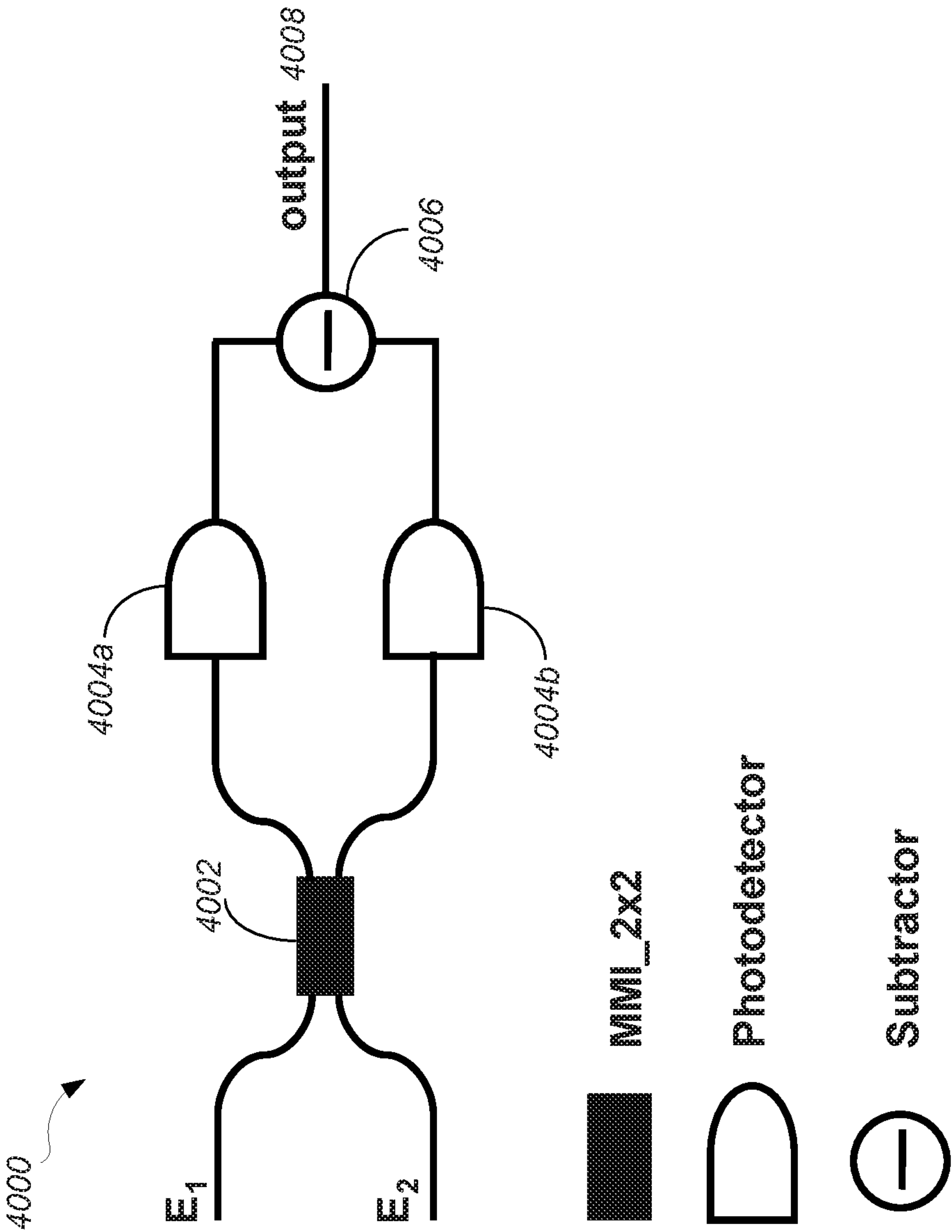


FIG. 40

