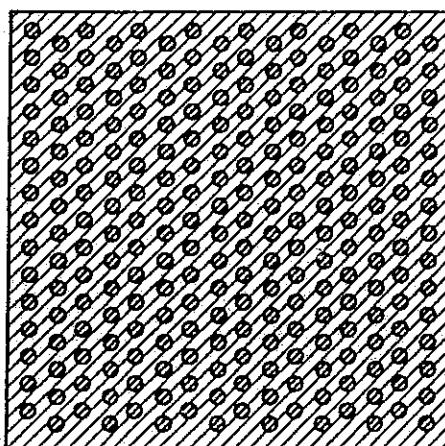


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C4 BUMP PATTERN



I/O SIGNAL, GROUND AND
POWER BUMPS

FIG 1A
(PRIOR ART)

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POWER ROUTING WITH ABM BUMPS

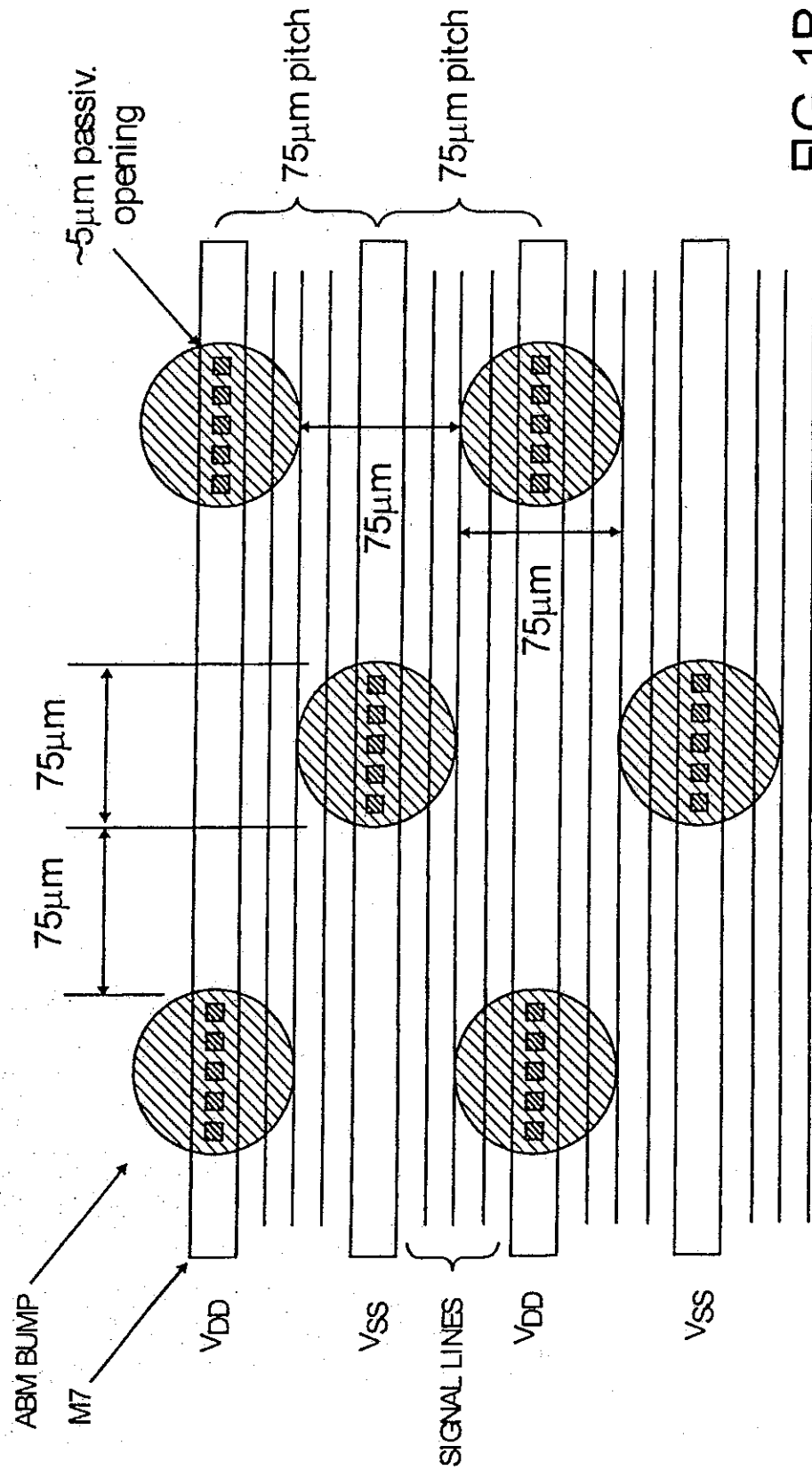


FIG. 1B

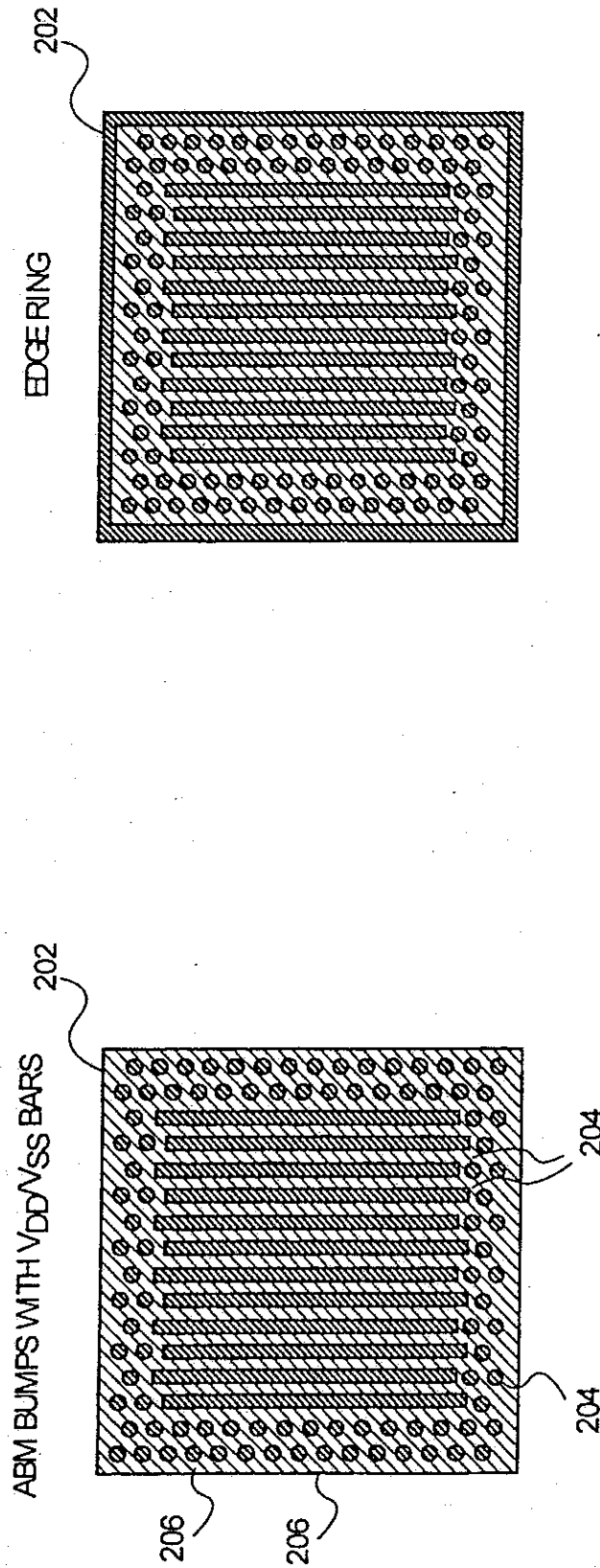


FIG. 2B

FIG. 2A

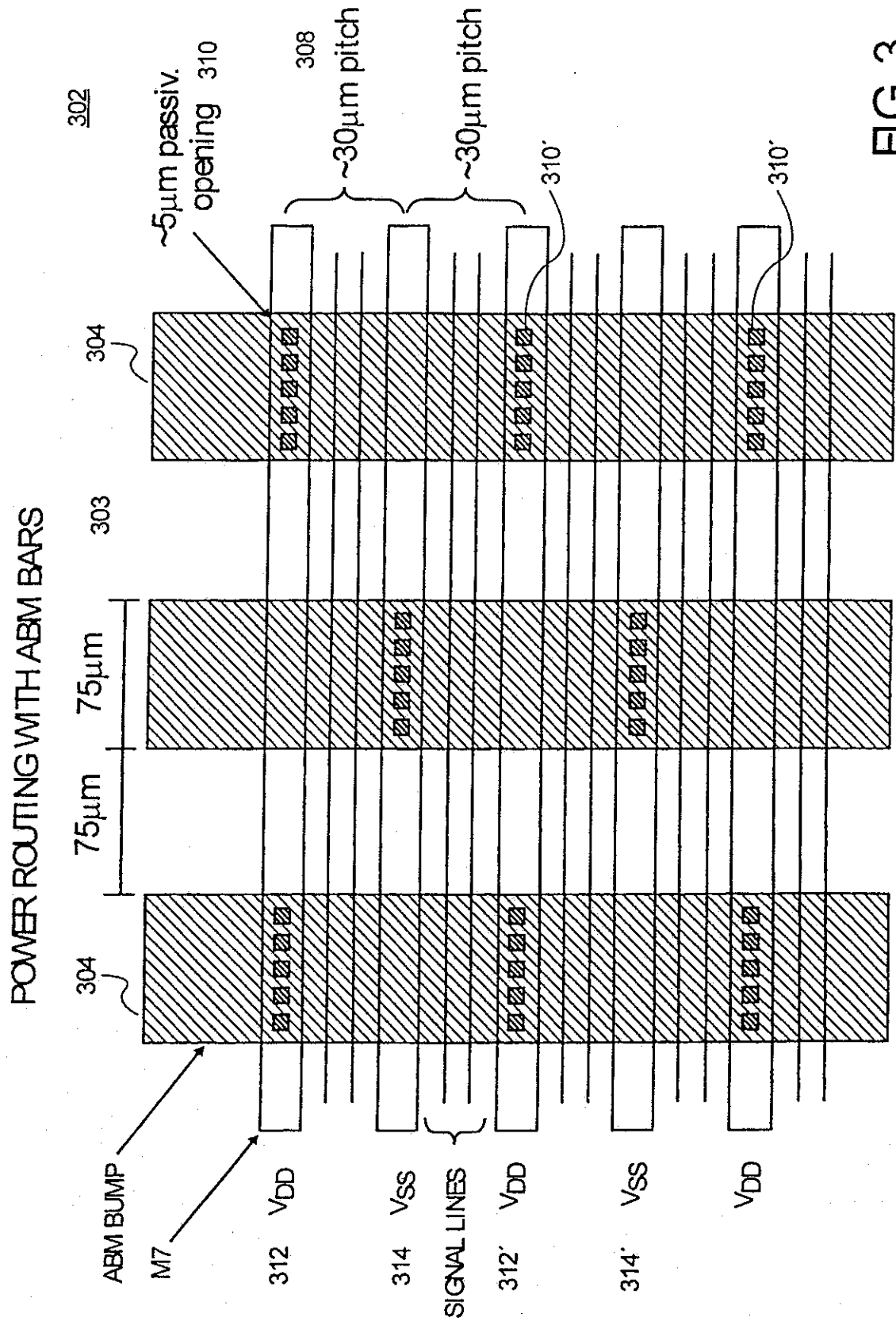


FIG. 3

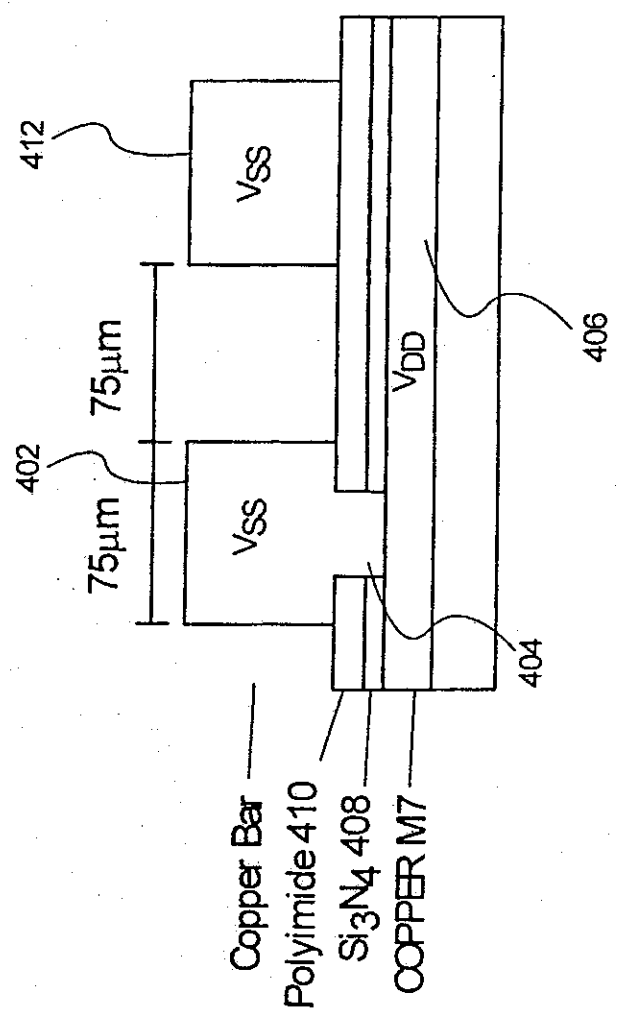


FIG. 4A

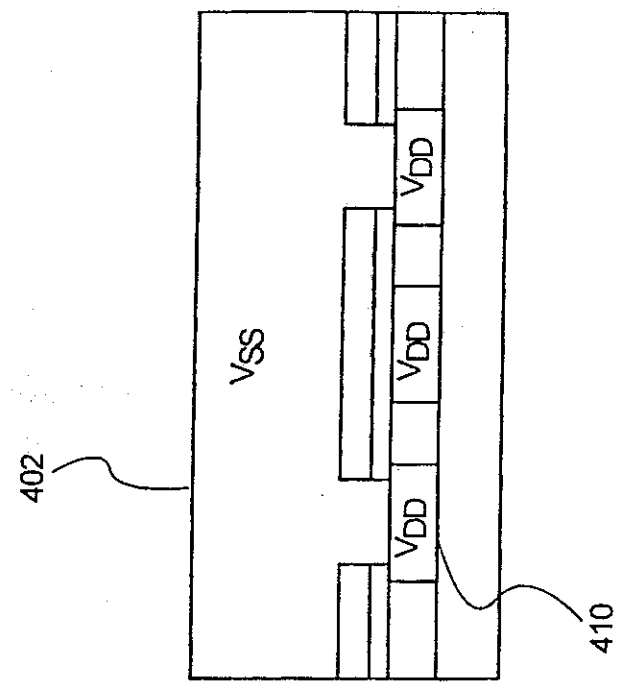


FIG. 4B

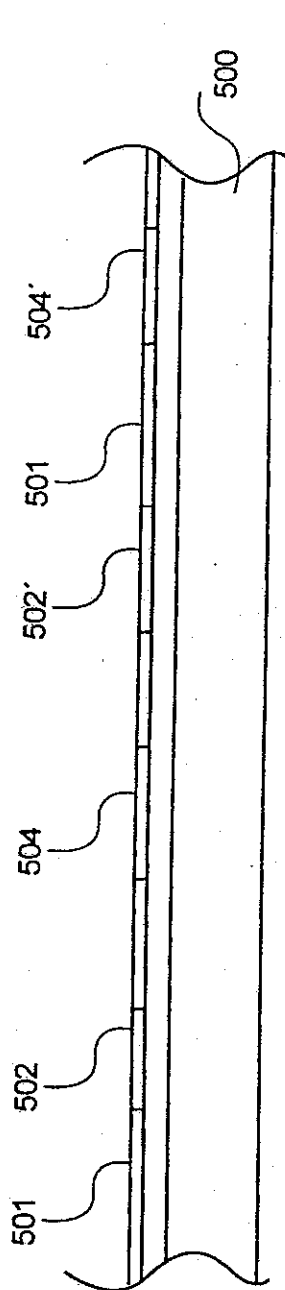


FIG. 5A

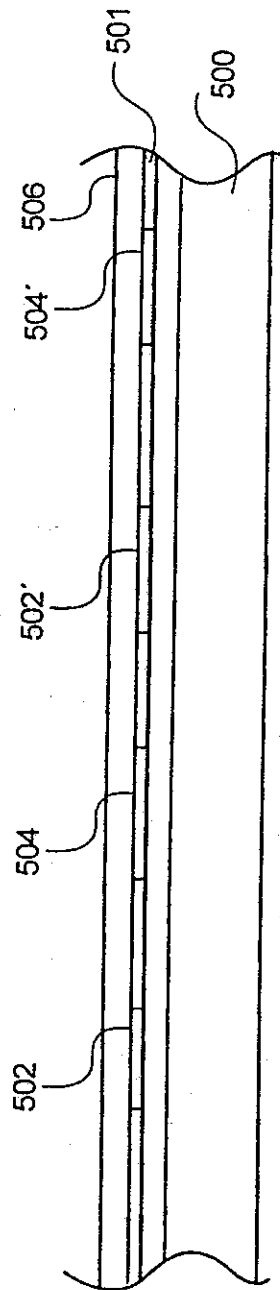


FIG. 5B

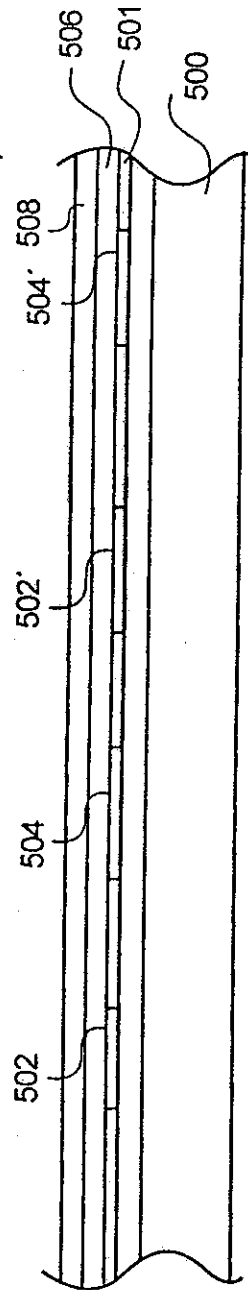


FIG. 5C

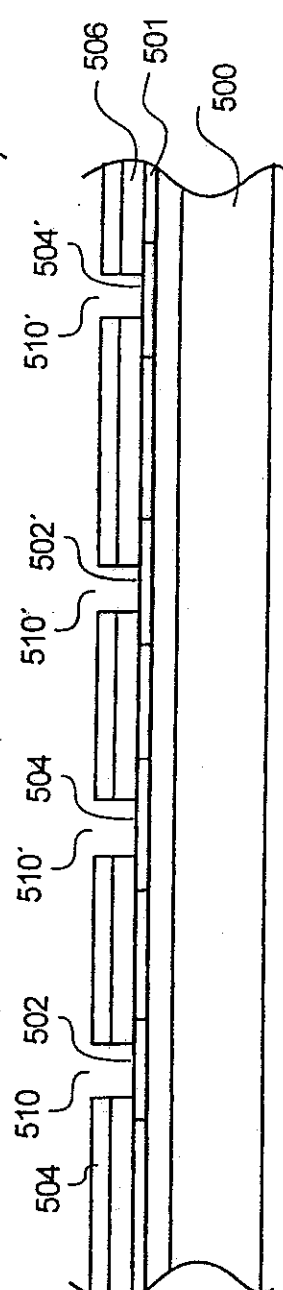


FIG. 5D

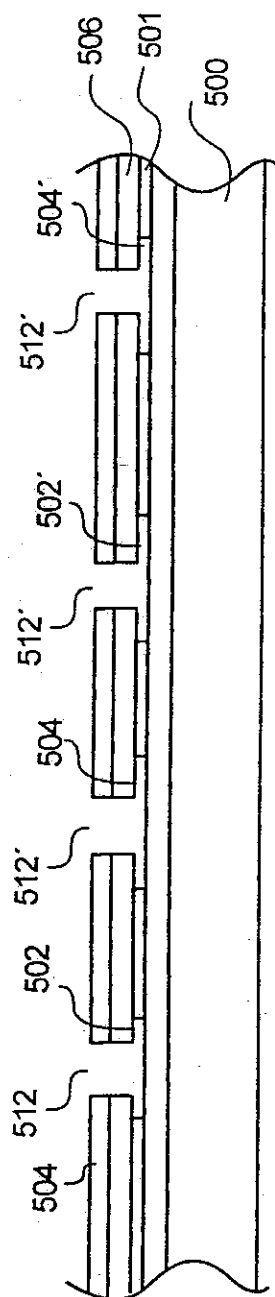


FIG 5E

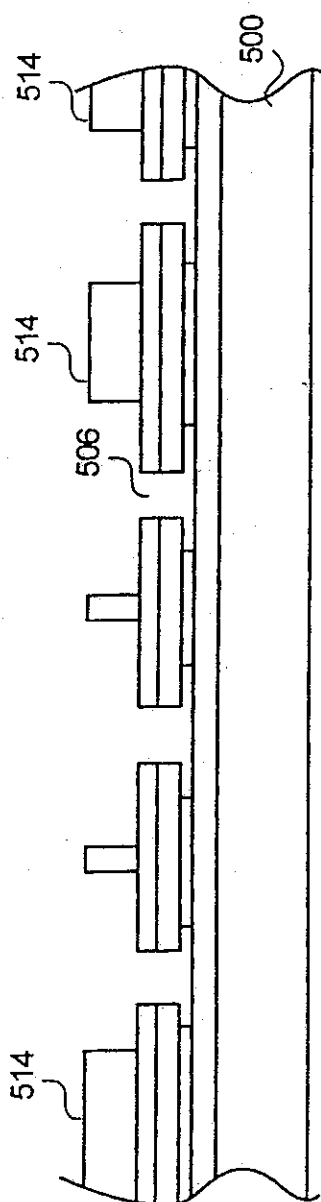


FIG 5F

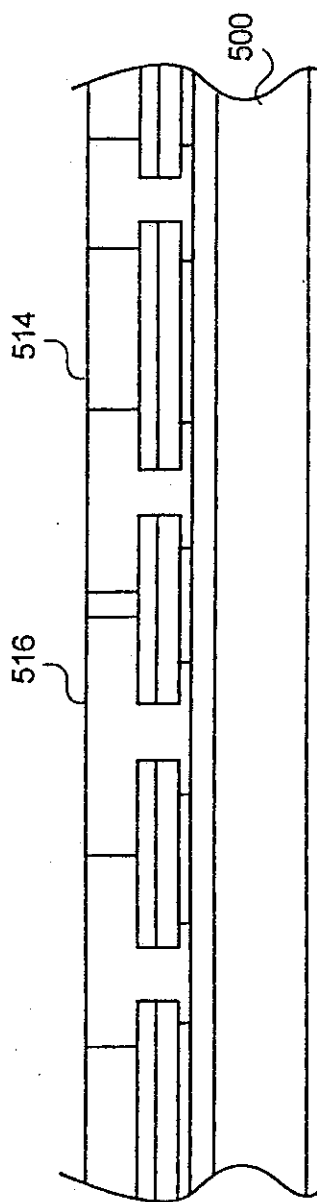


FIG 5G

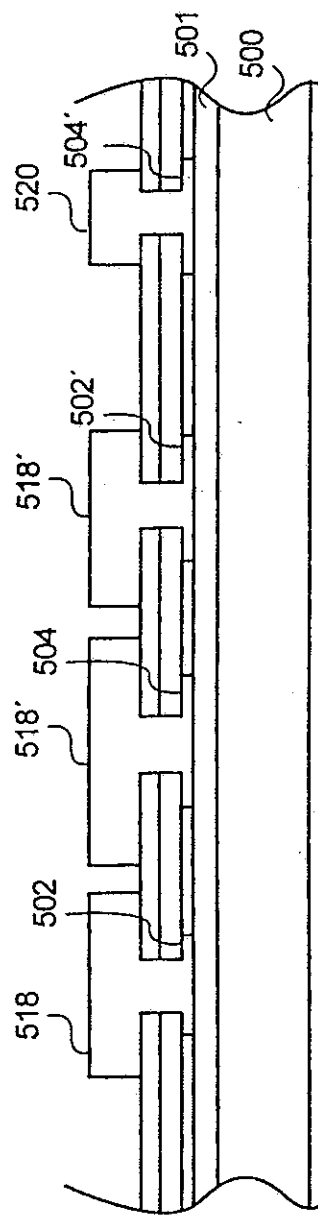


FIG 5H

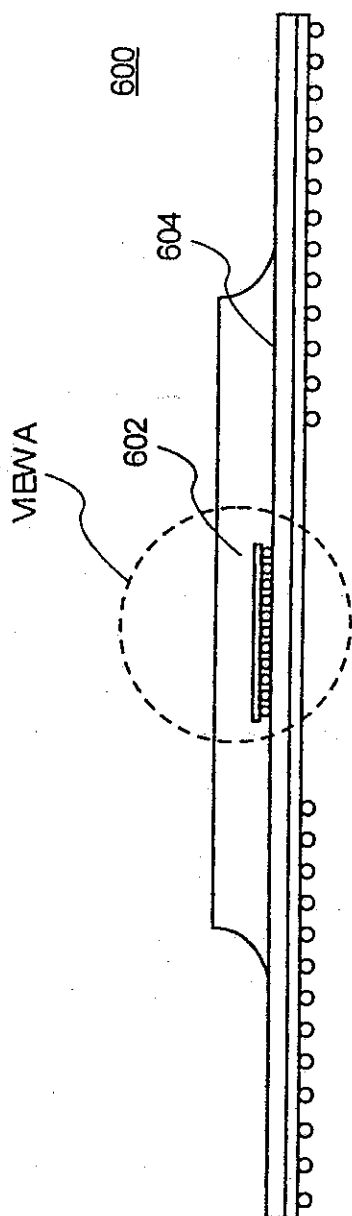


FIG. 6A

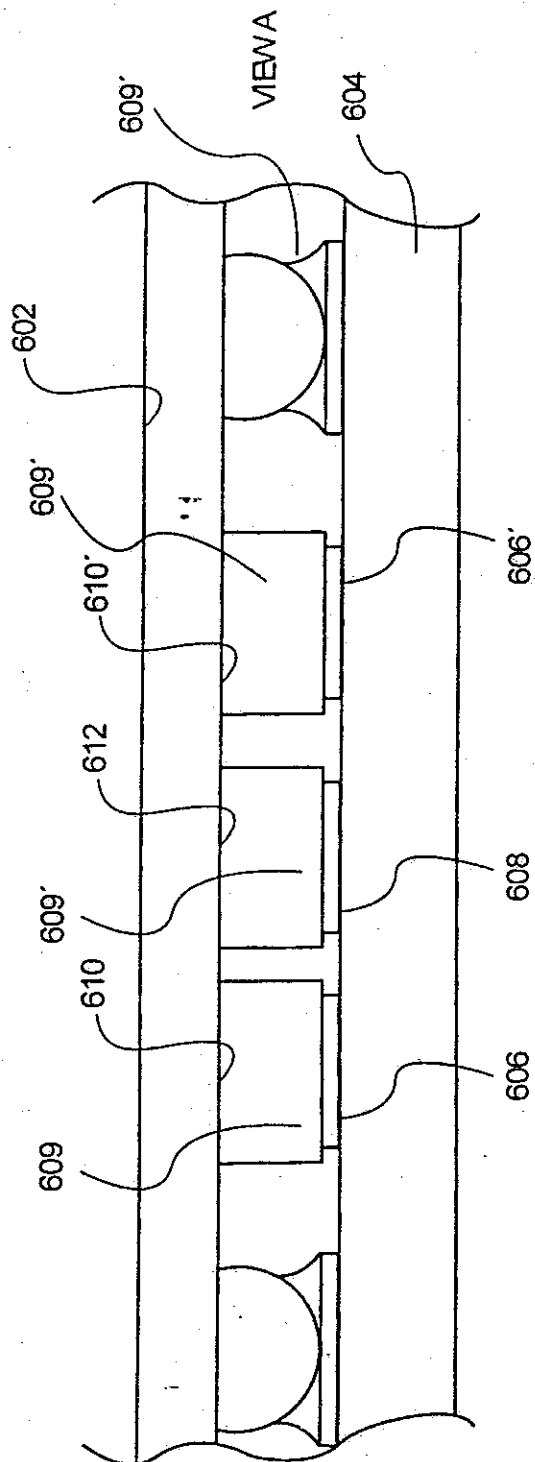


FIG. 6B