

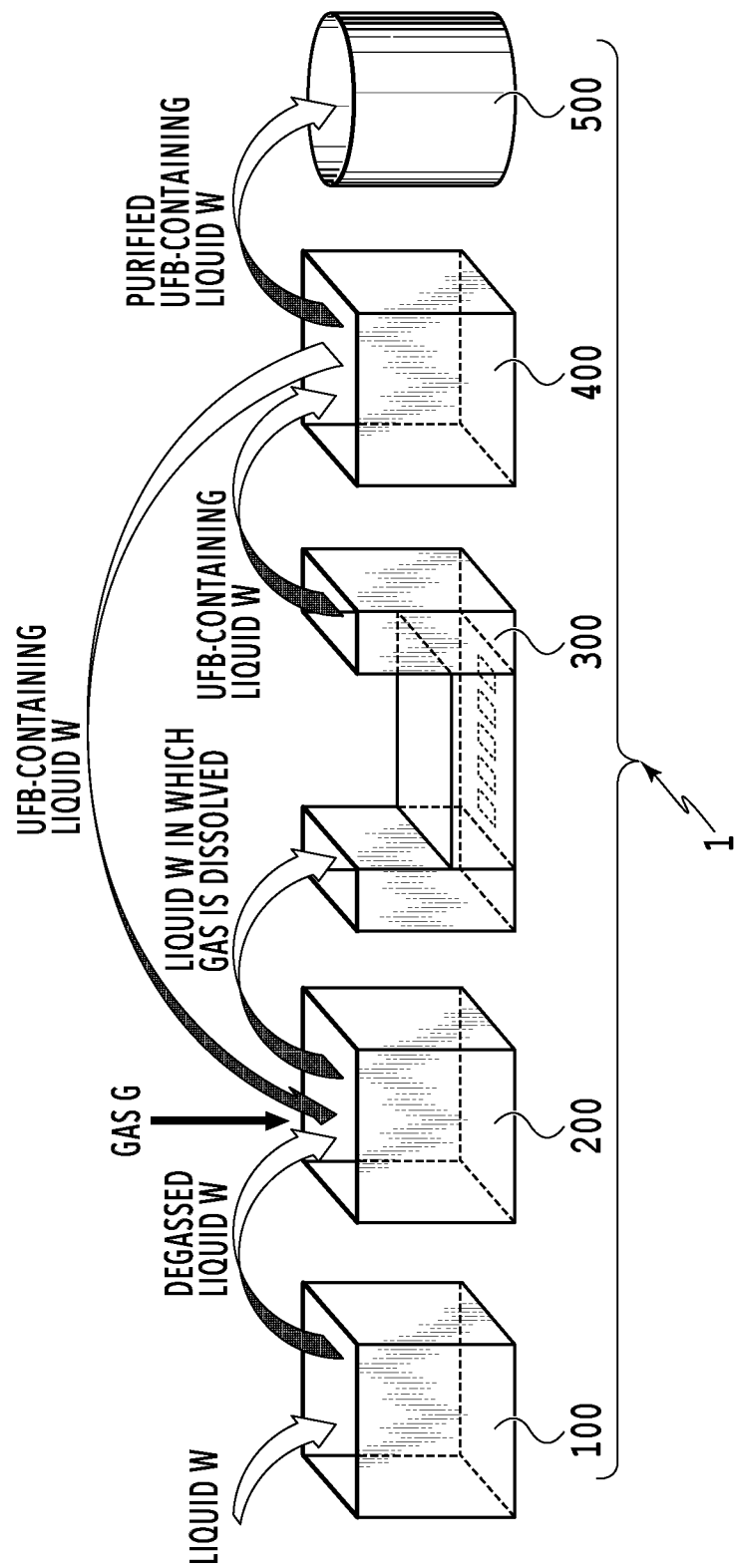
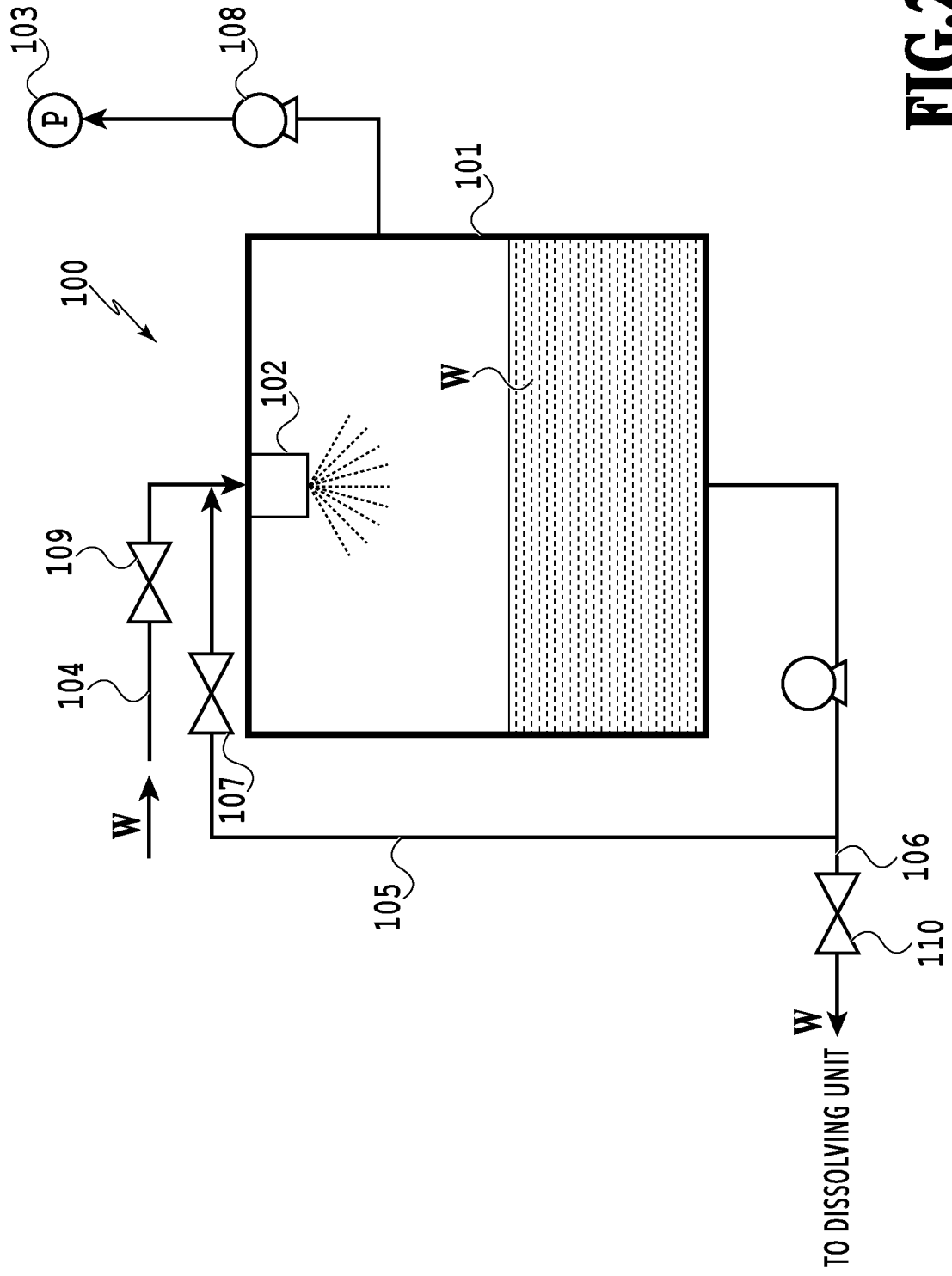
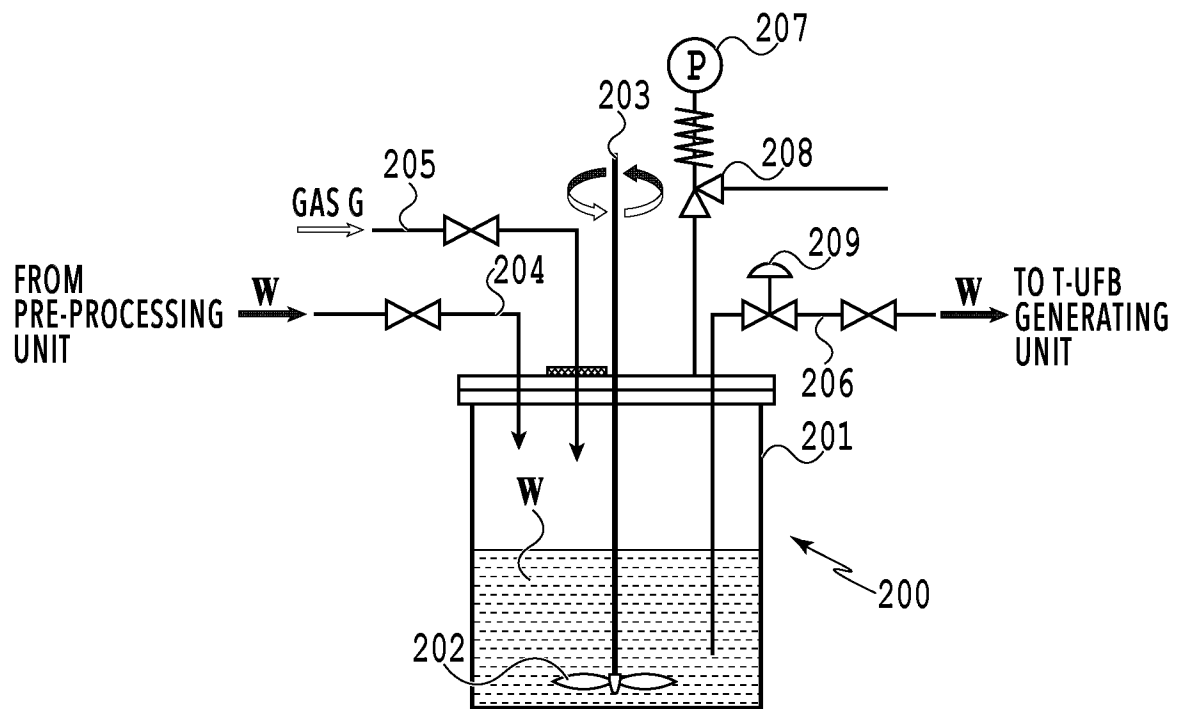
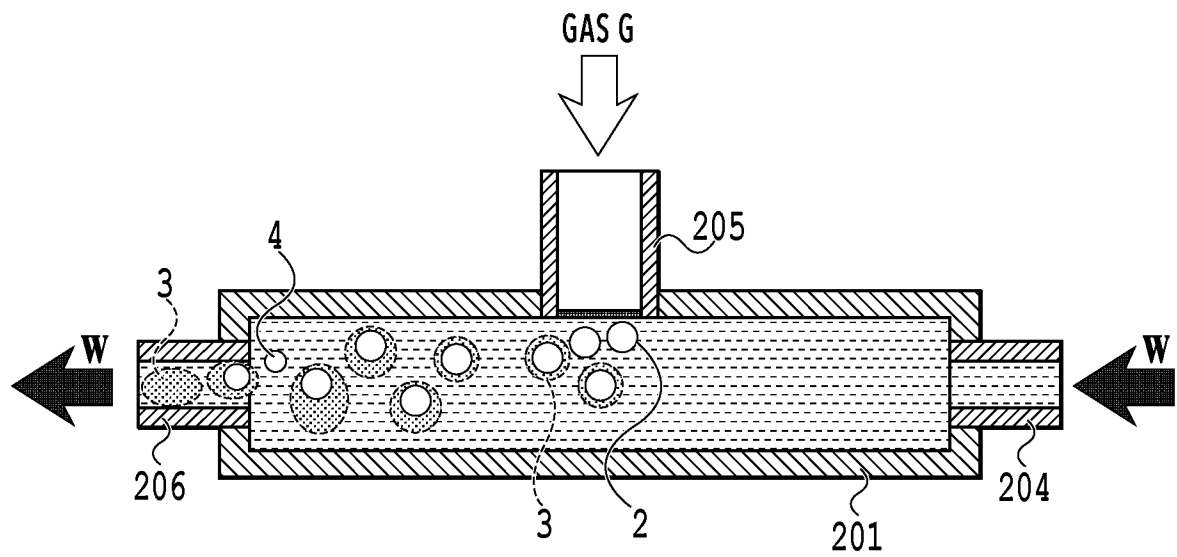


FIG.1

**FIG. 2**

**FIG.3A****FIG.3B**

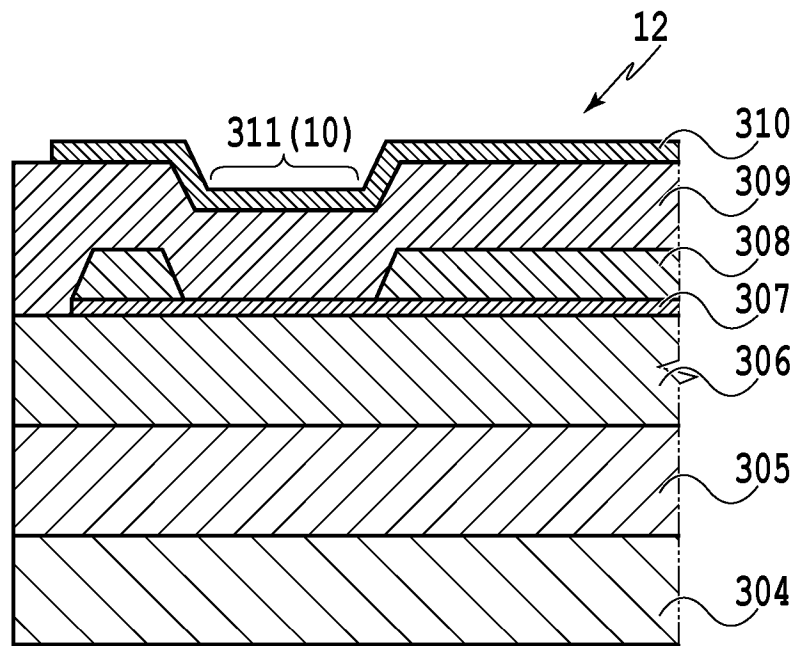


FIG.5A

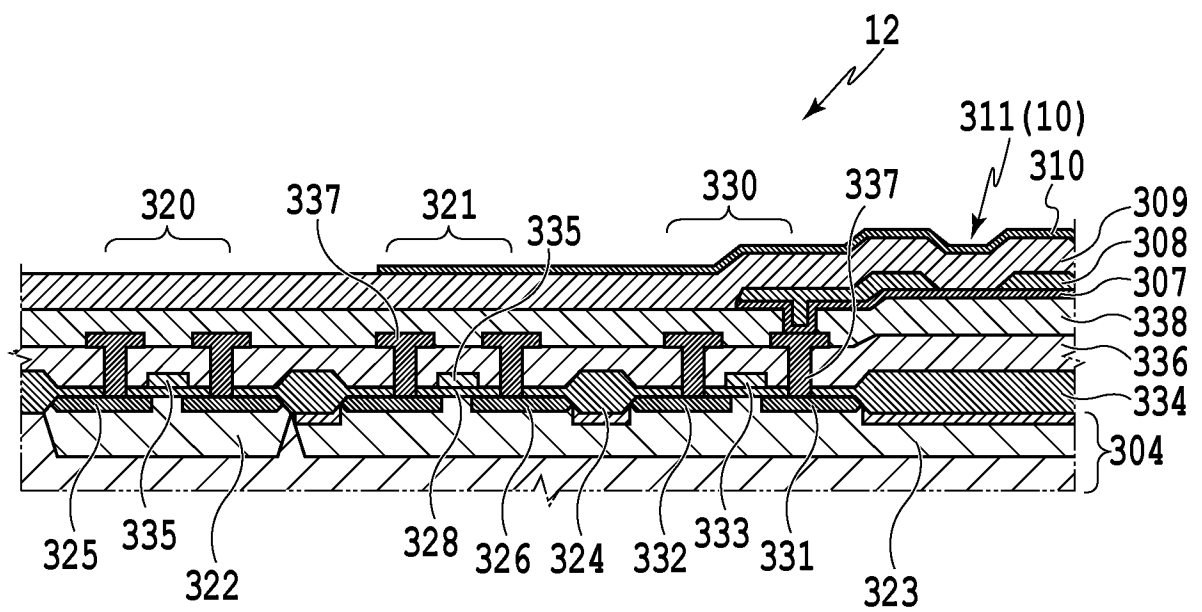
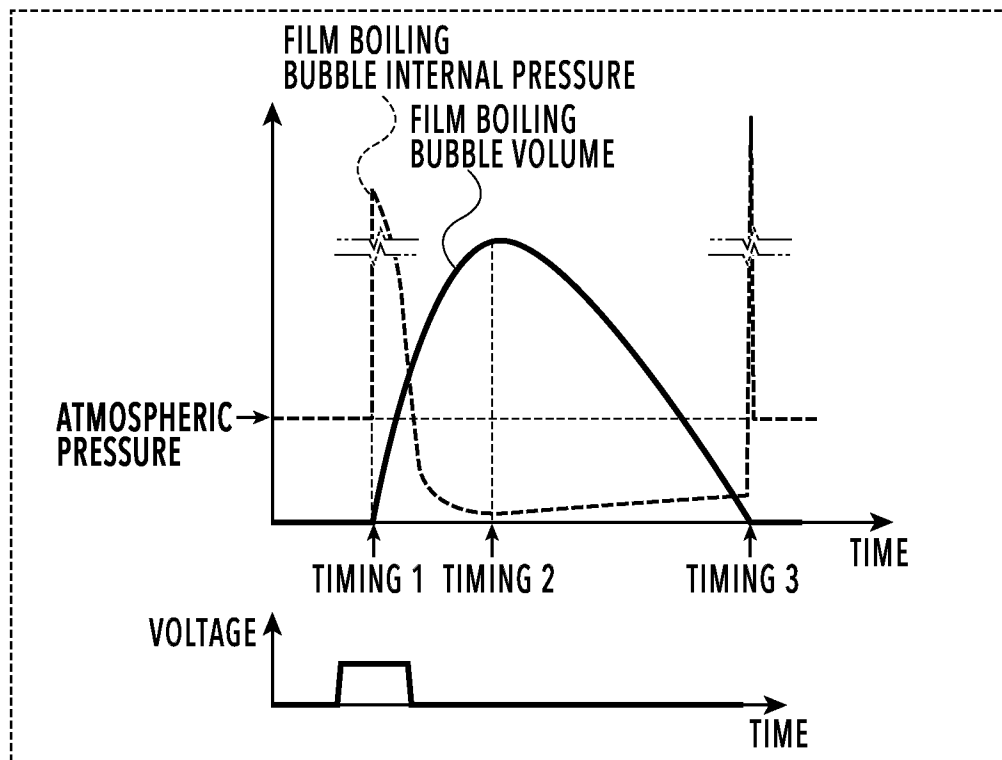
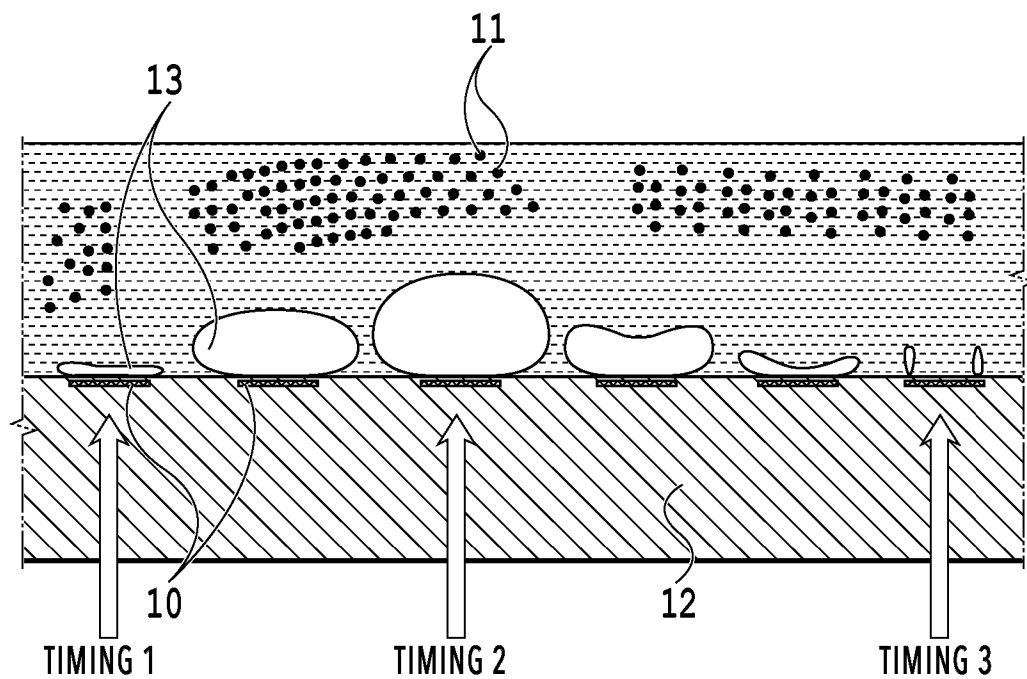


FIG.5B

**FIG.6A****FIG.6B**

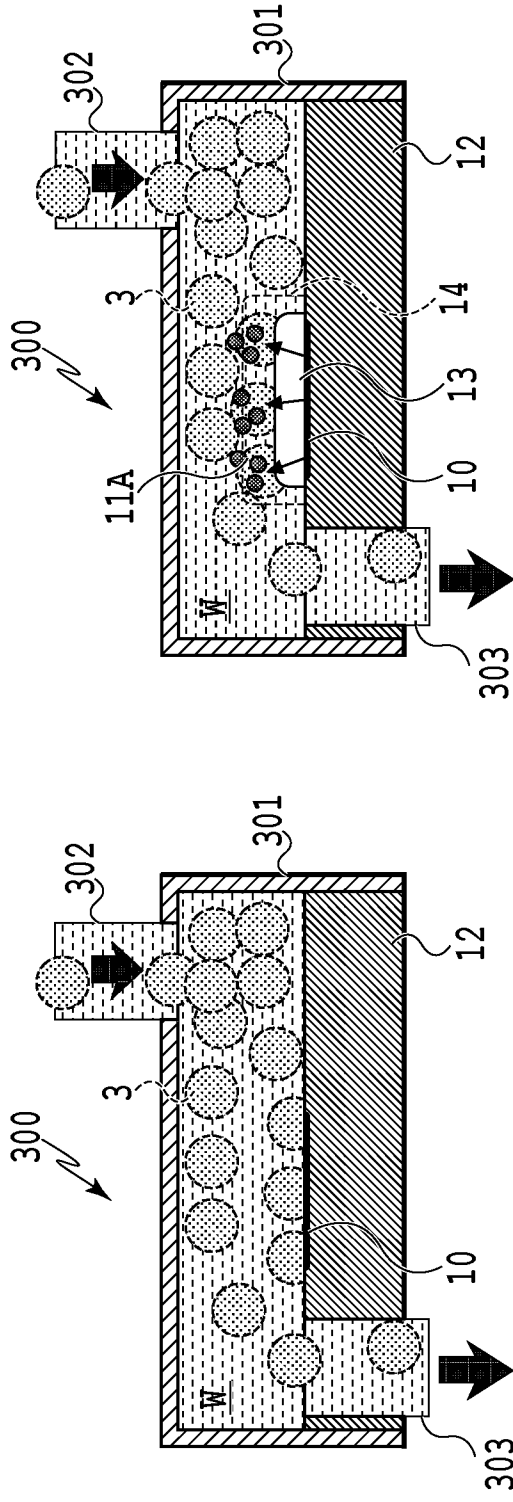


FIG. 7A

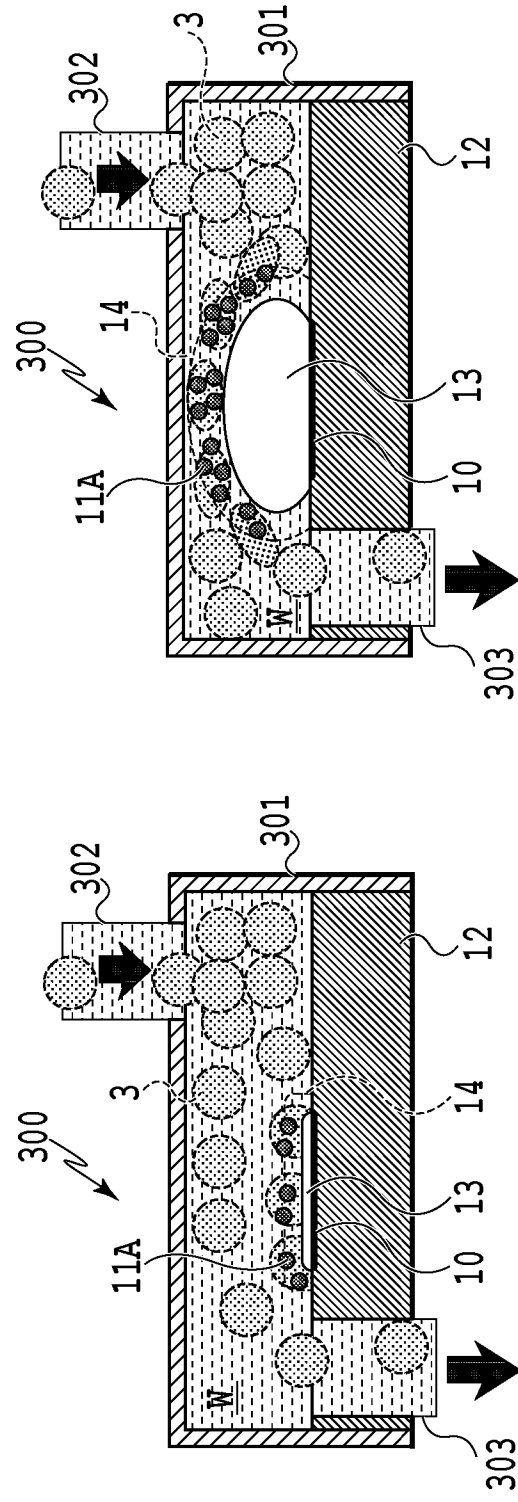


FIG. 7B

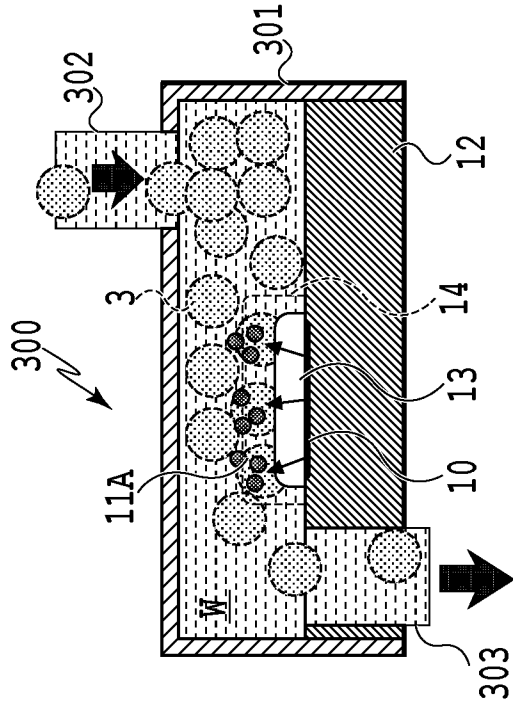


FIG. 7C

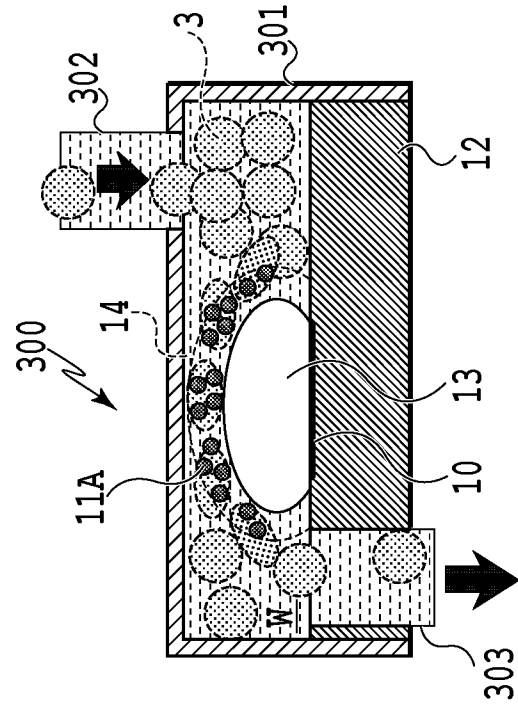


FIG. 7D

FIG.8A

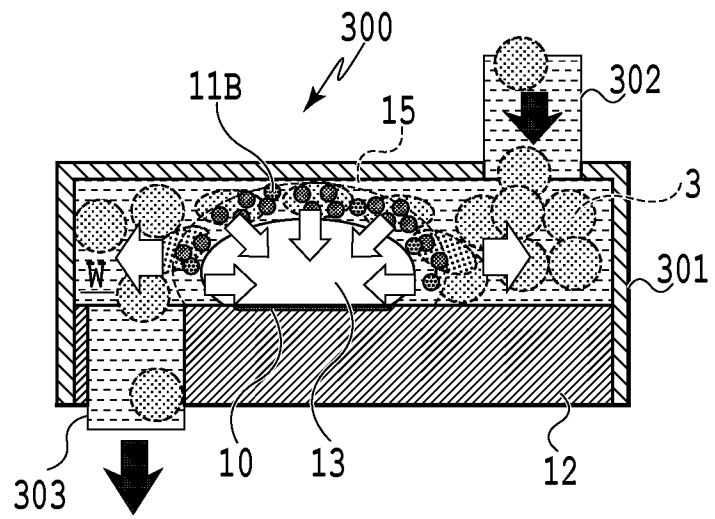


FIG.8B

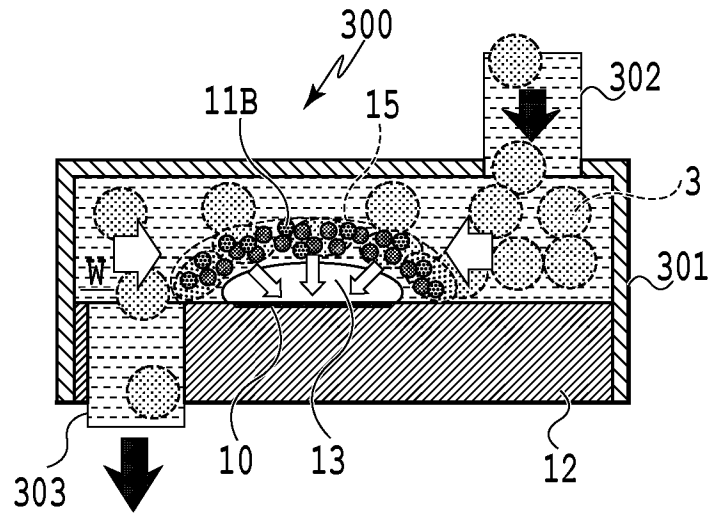


FIG.8C

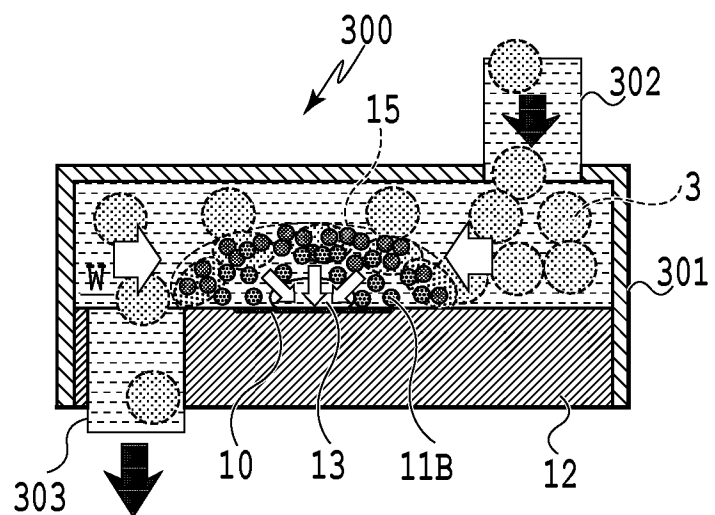


FIG.9A

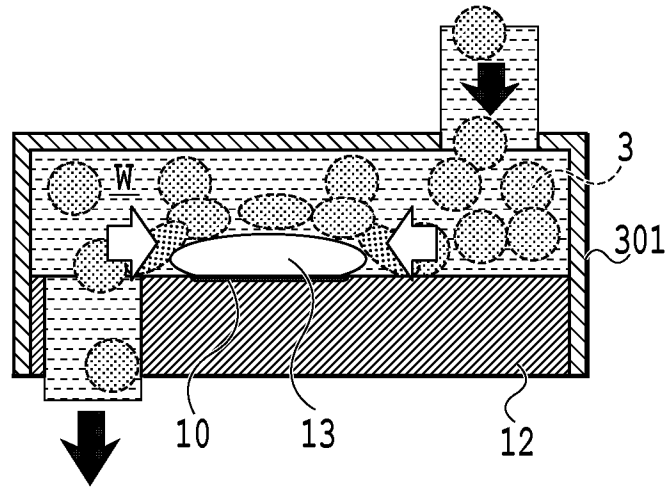


FIG.9B

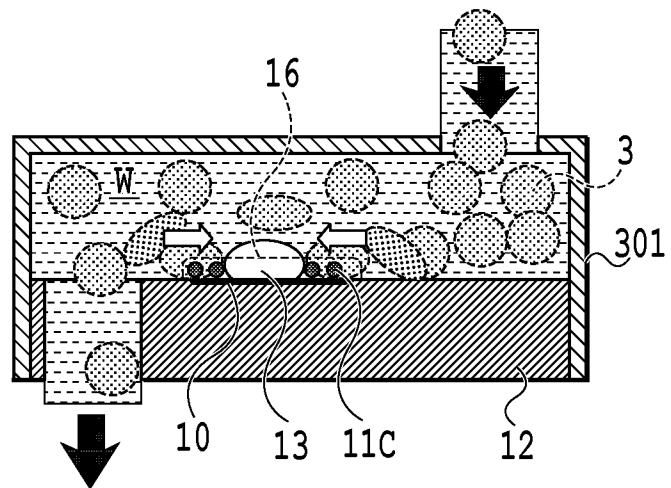


FIG.9C

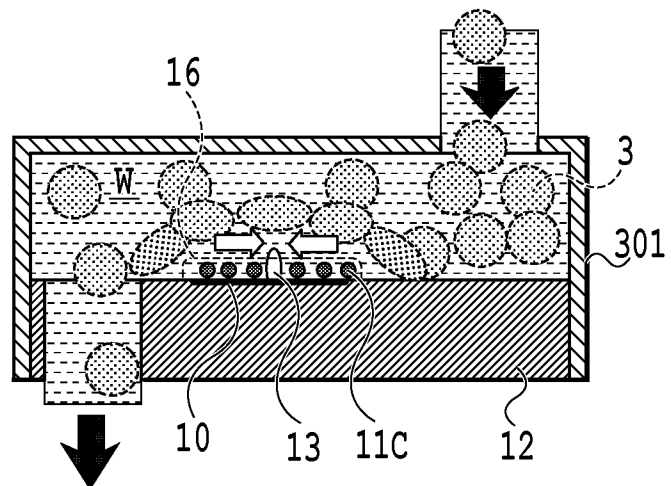


FIG.10A

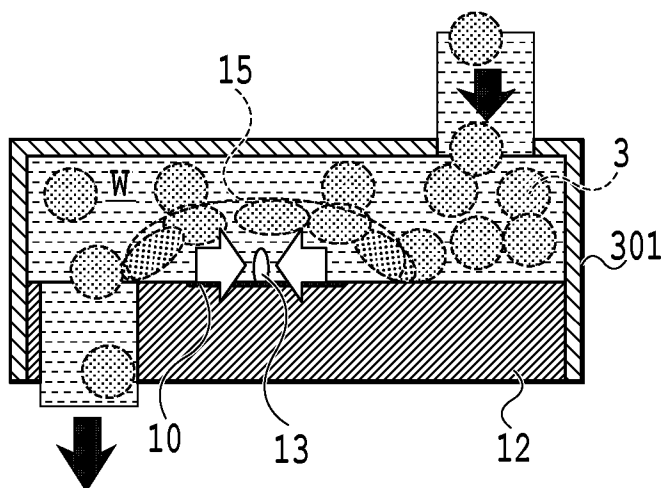
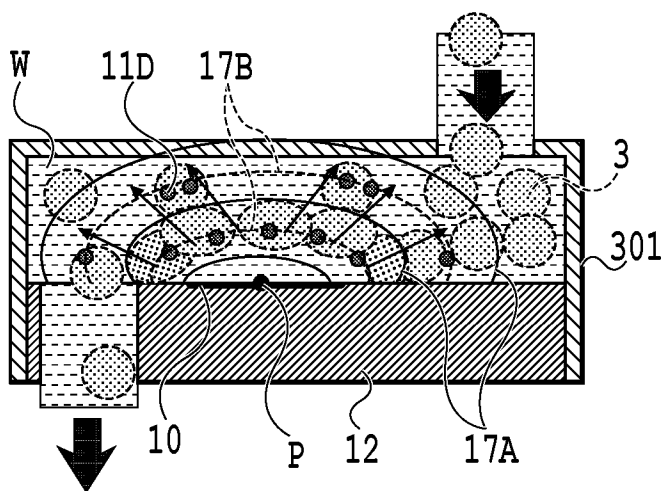


FIG.10B



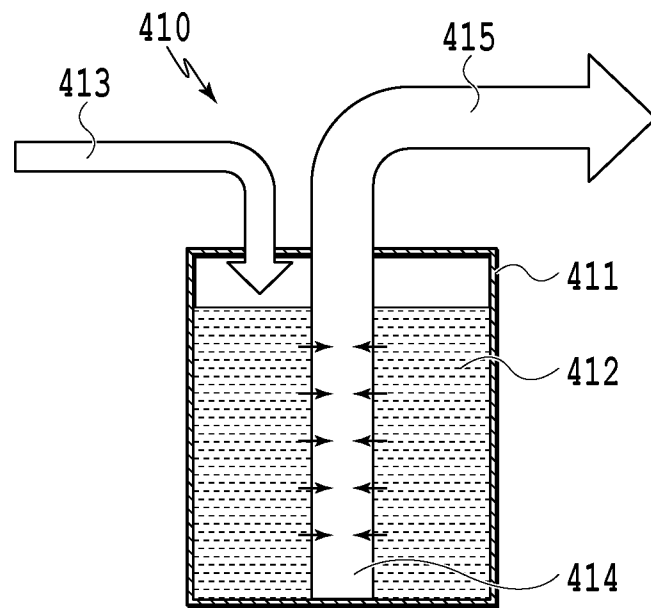


FIG. 11A

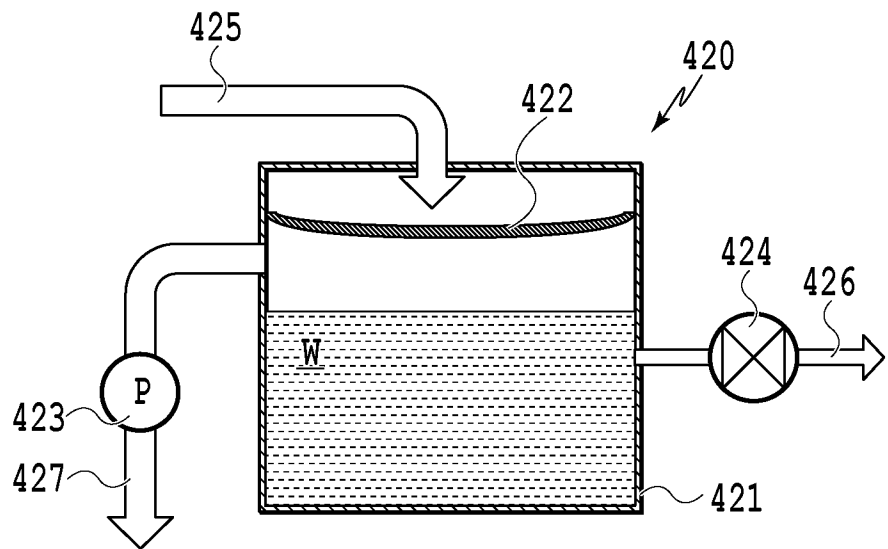


FIG. 11B

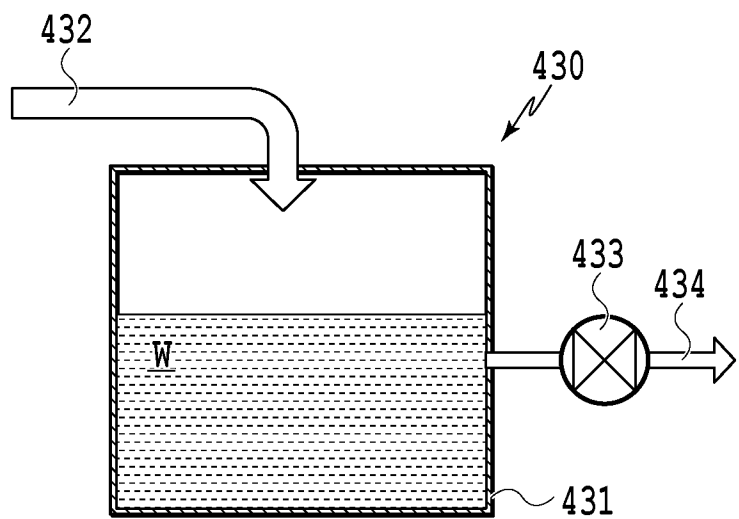


FIG. 11C

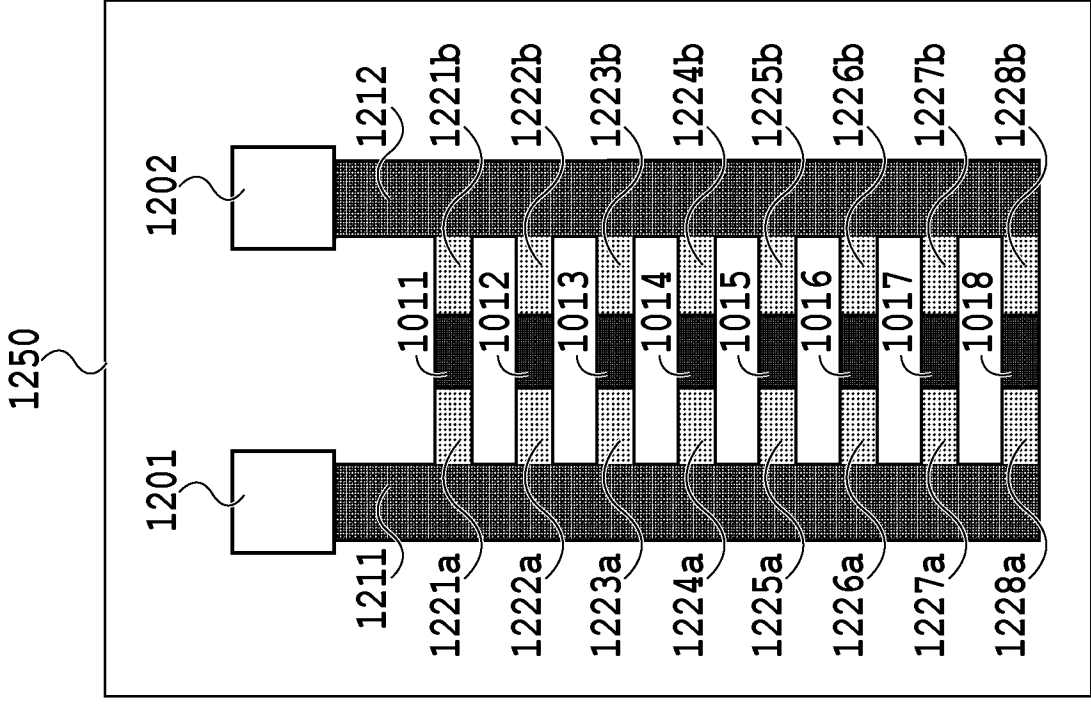


FIG.12A

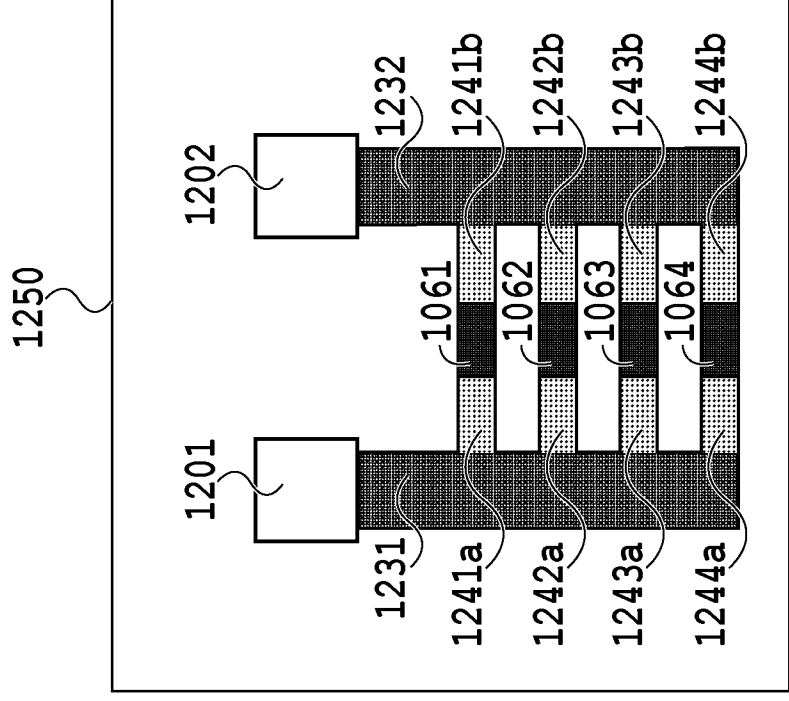
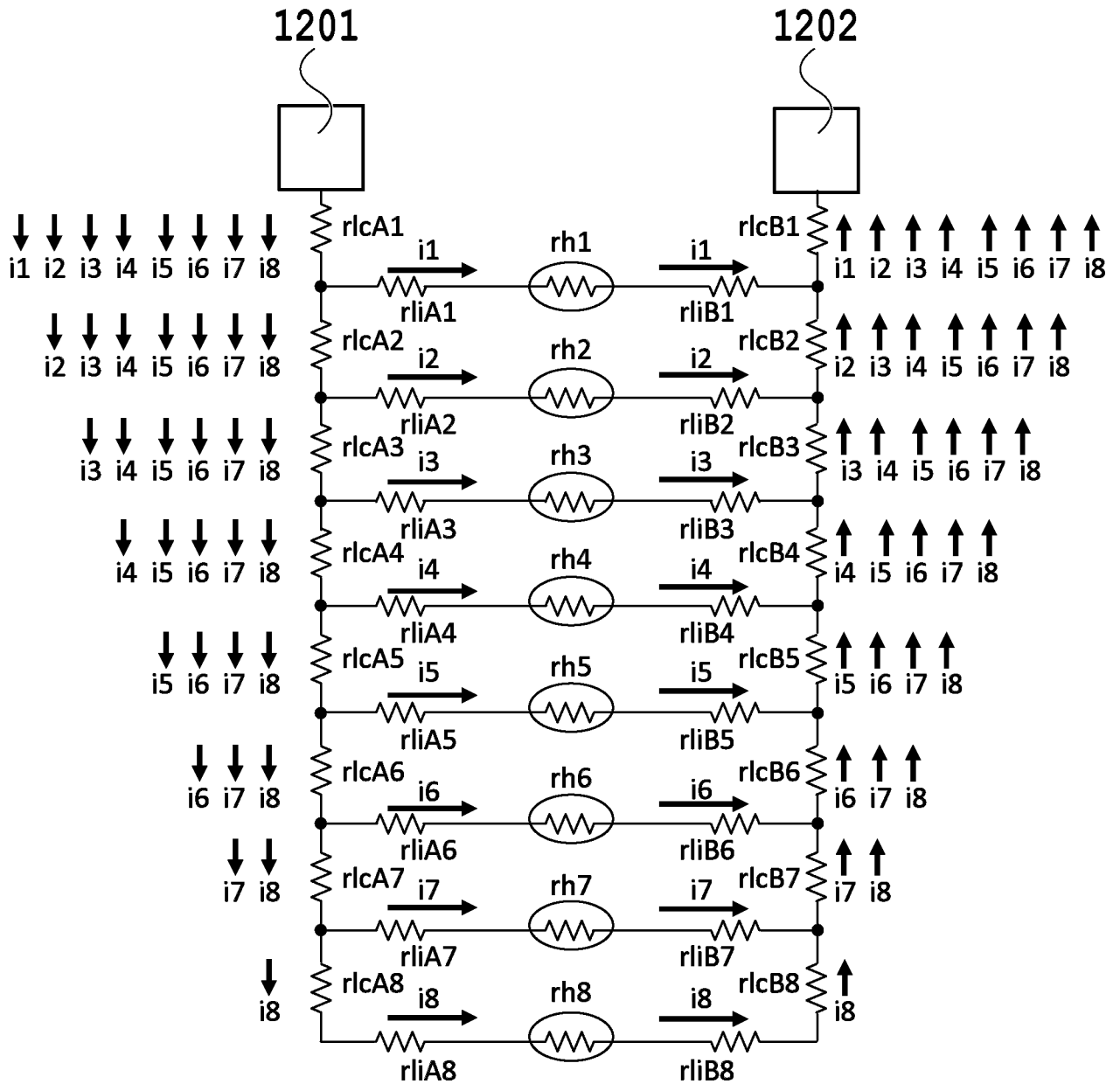
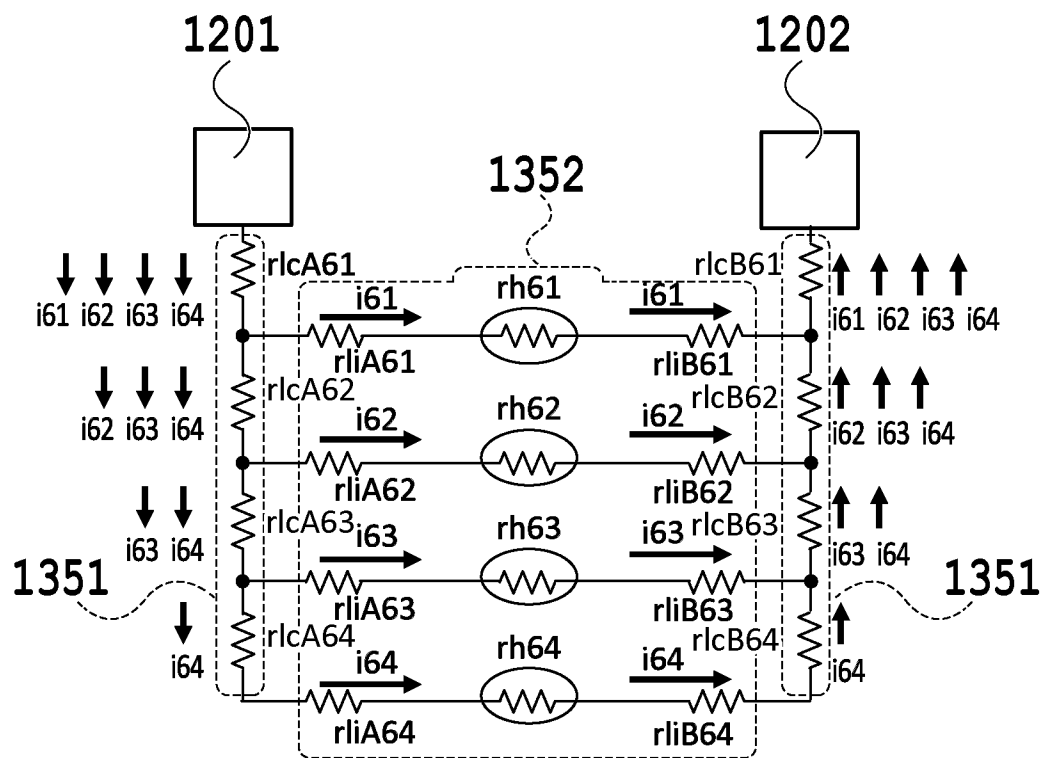


FIG. 12B

**FIG.13A**

**FIG.13B**

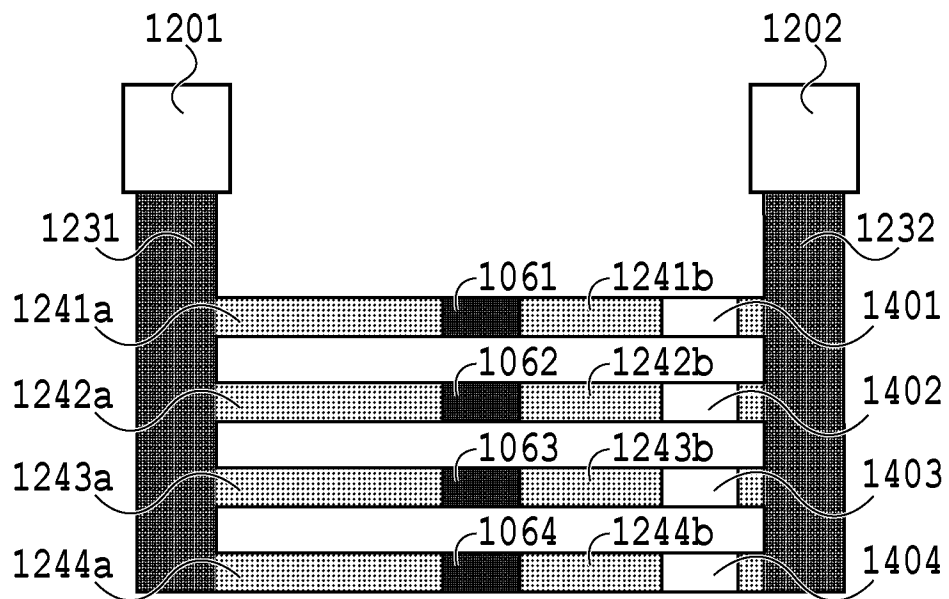


FIG.14A

HEATING ELEMENT DRIVING SW LOGIC WAVEFORM

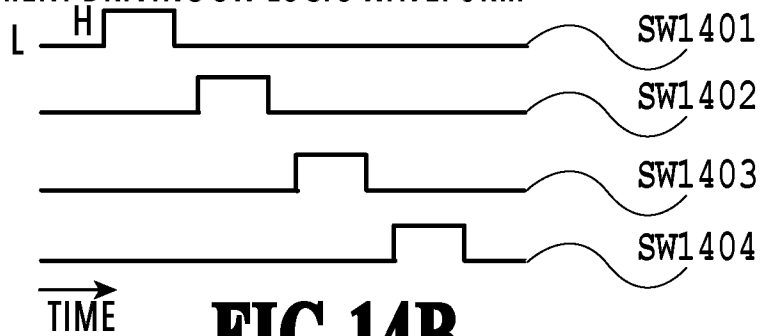


FIG.14B

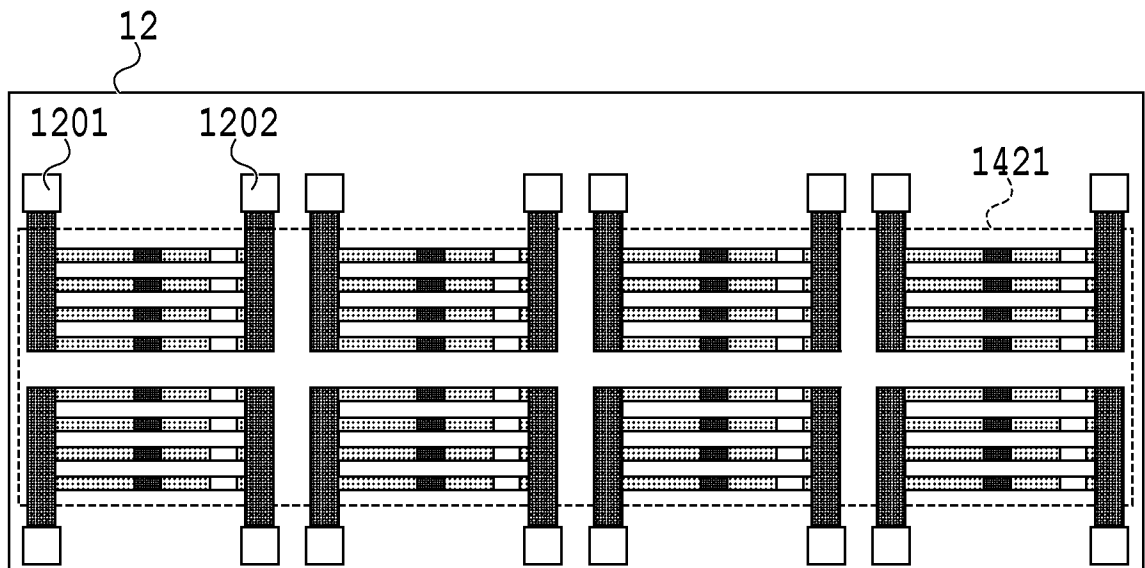


FIG.14C

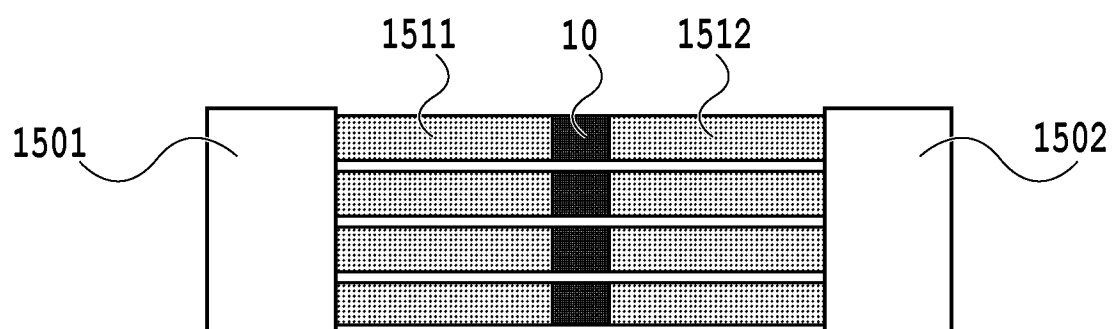


FIG.15A

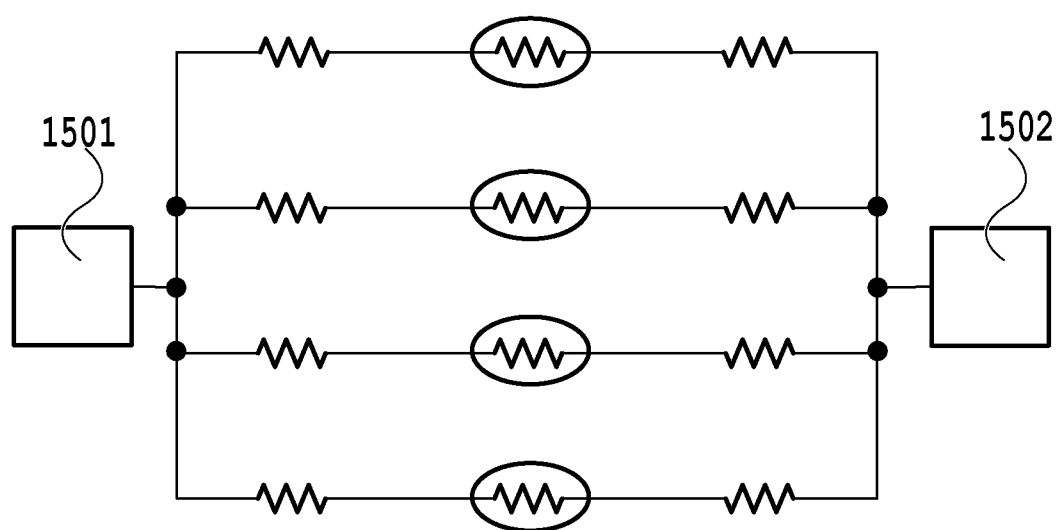


FIG.15B

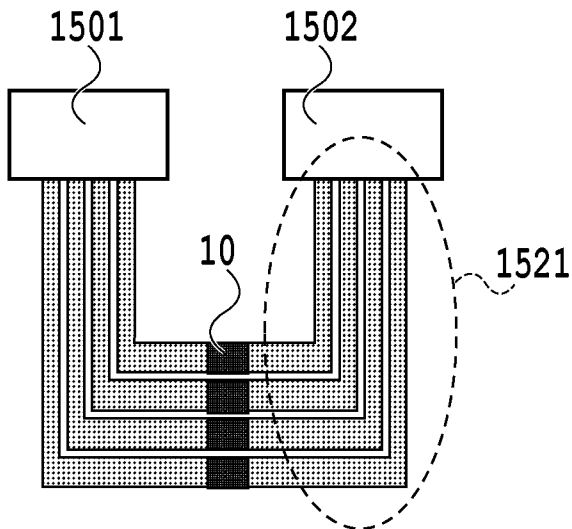


FIG. 15C

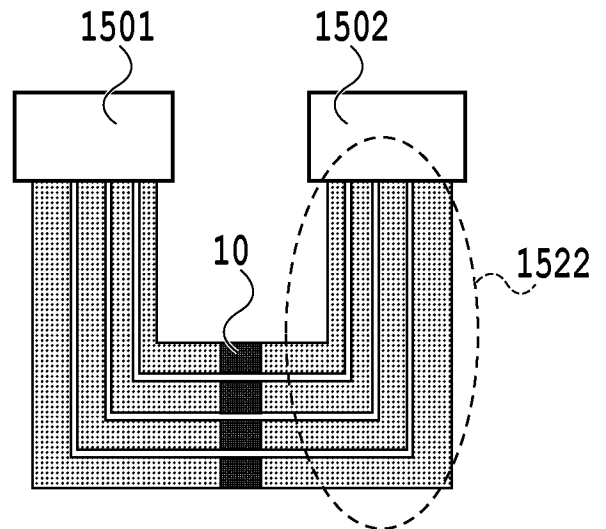


FIG. 15D

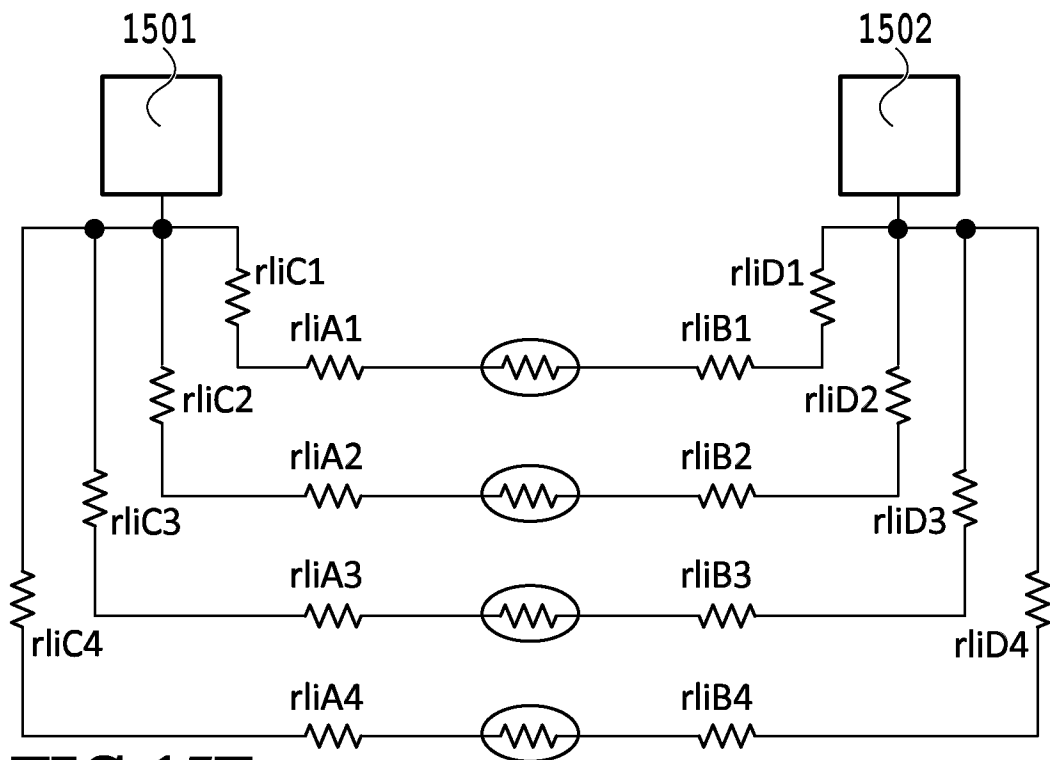


FIG. 15E

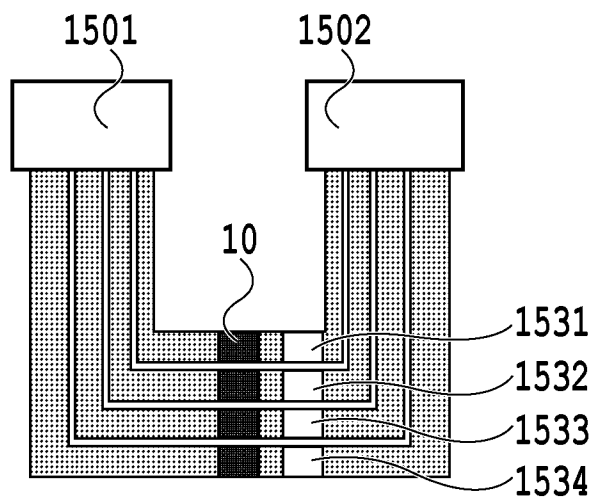


FIG. 15F

○ UFB GENERATION IS POSSIBLE
× UFB GENERATION IS IMPOSSIBLE

IN CASE WHERE SHAPE AND
RESISTANCE OF HEATING ELEMENTS ARE SAME

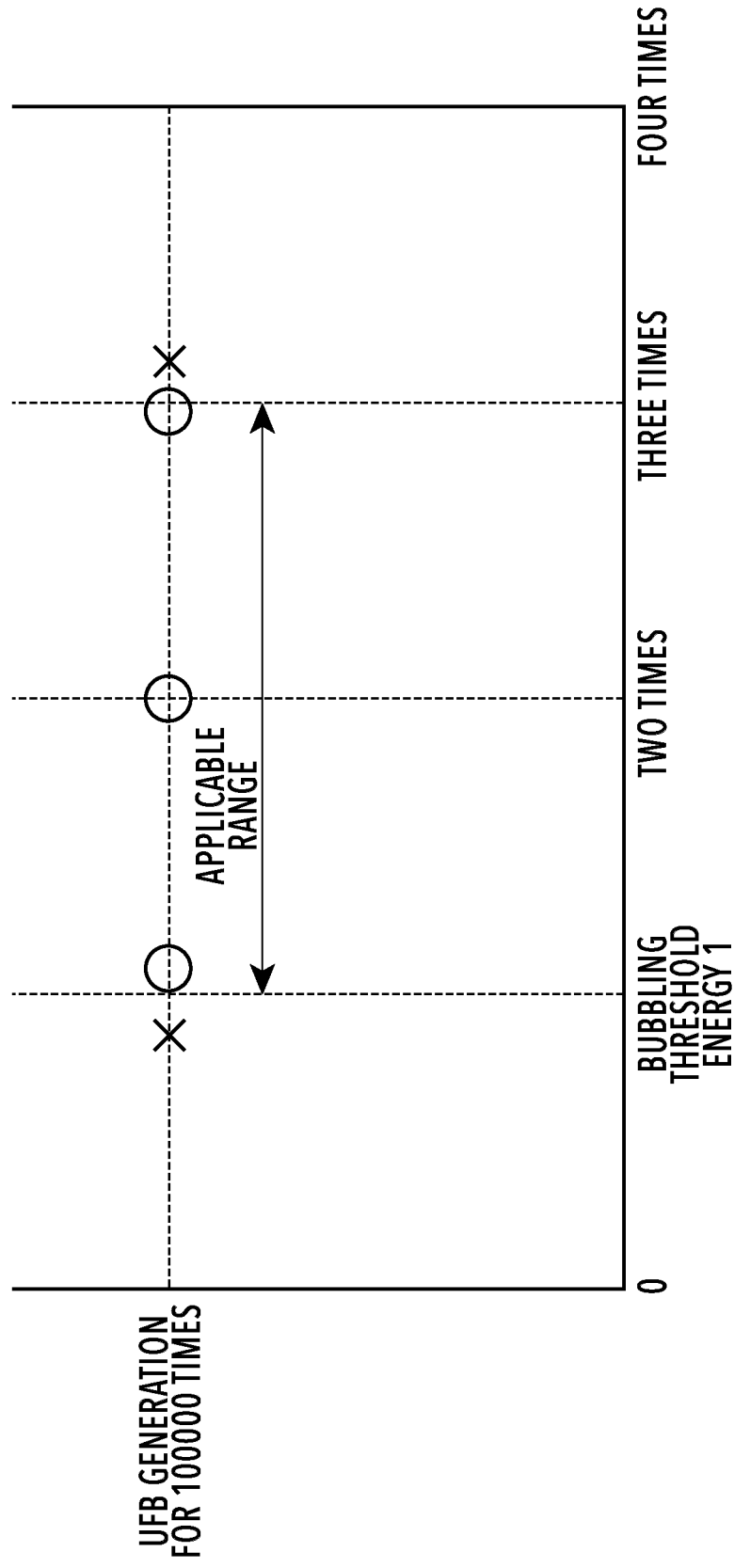


FIG.16A

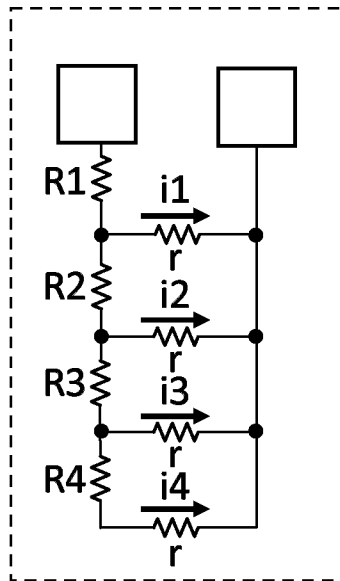


FIG.16B

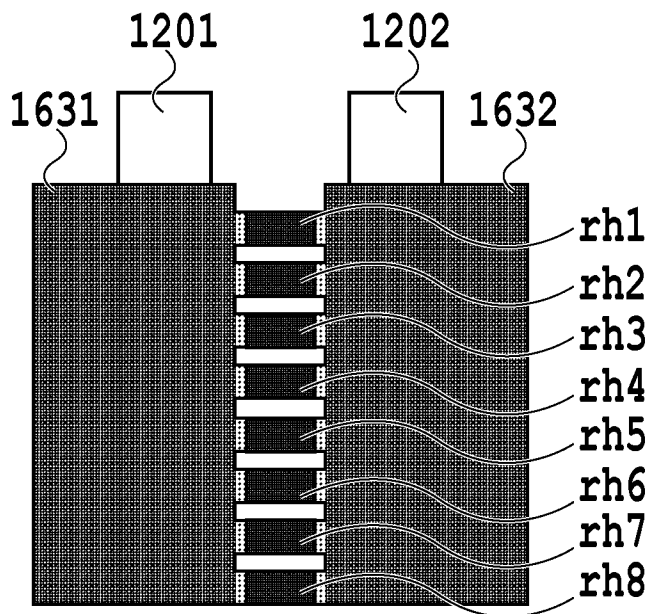


FIG.16C

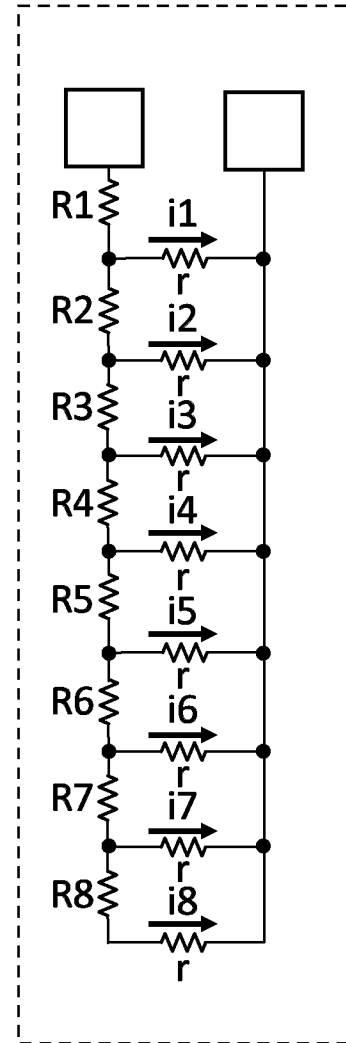


FIG.16D

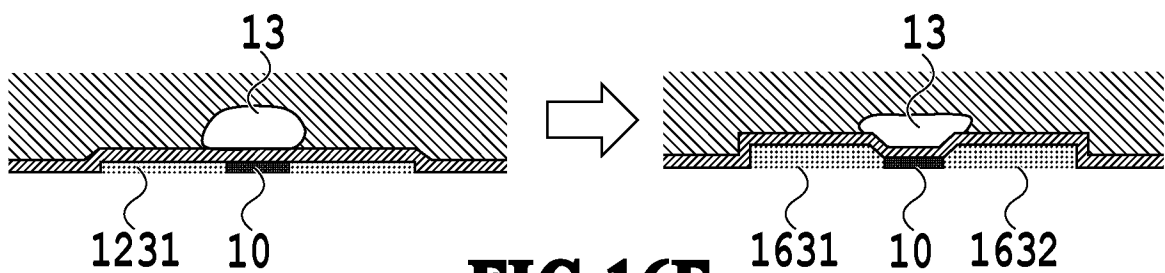


FIG.16E

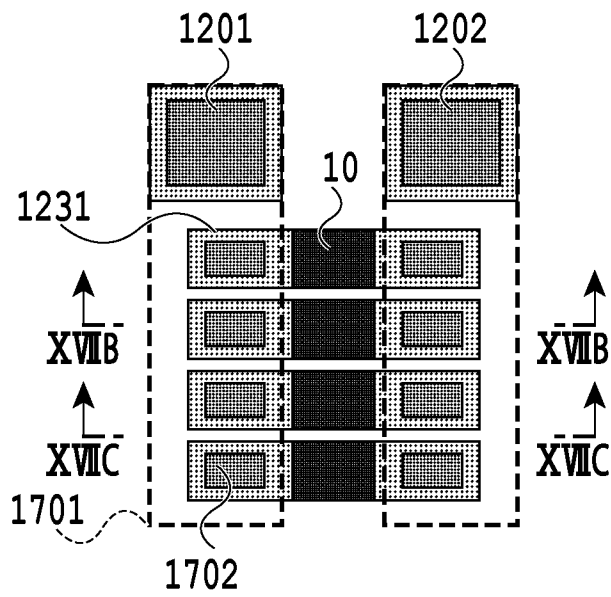


FIG. 17A

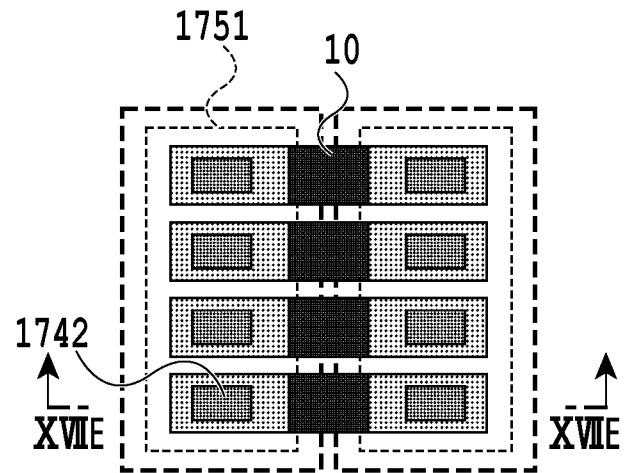


FIG. 17D

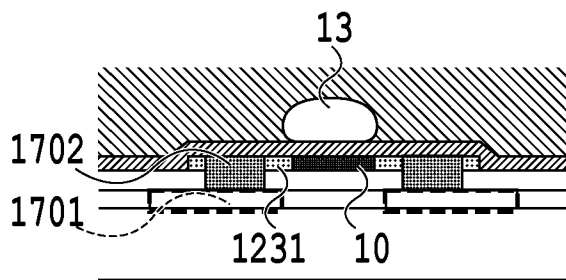


FIG. 17B

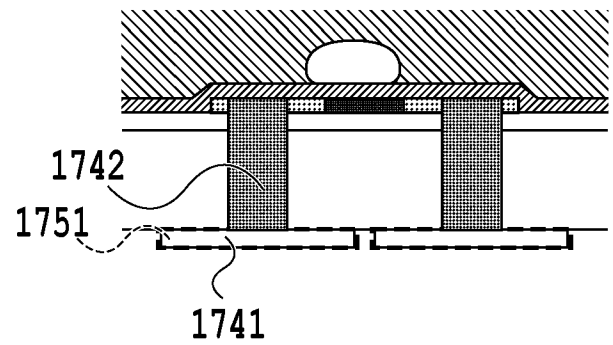


FIG. 17E

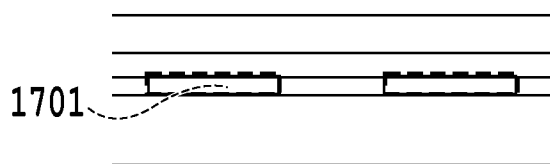
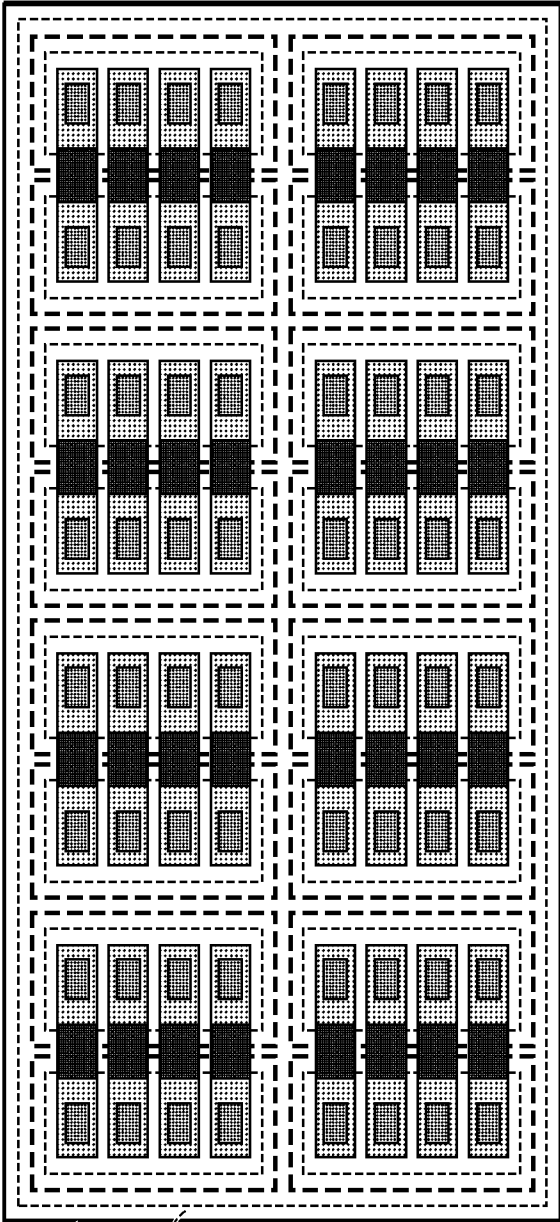


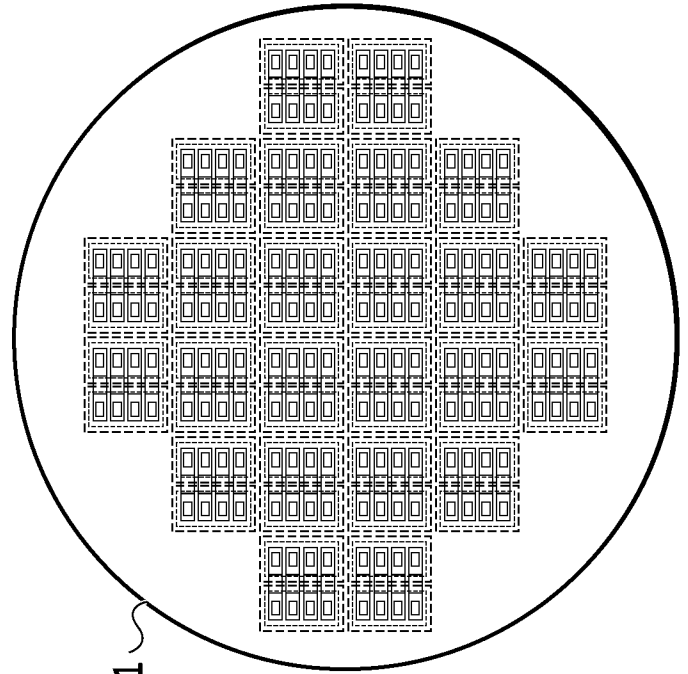
FIG. 17C



12

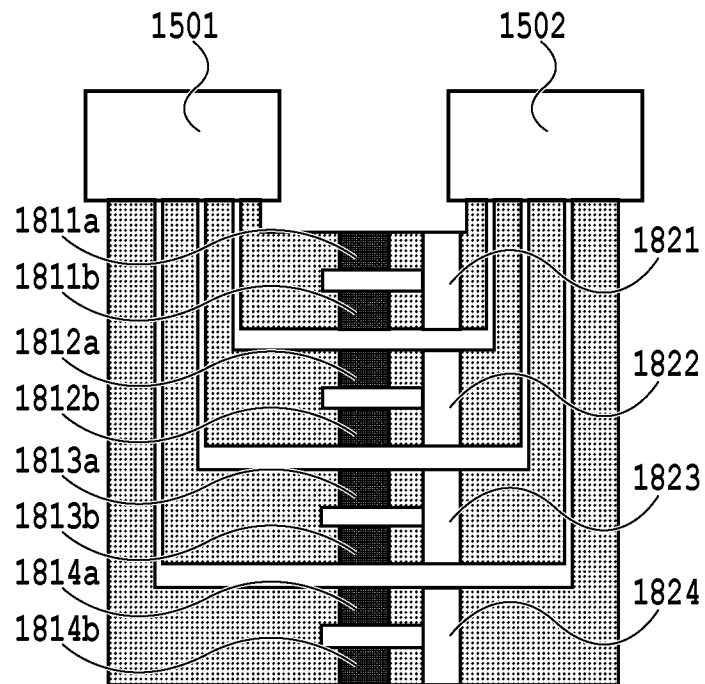
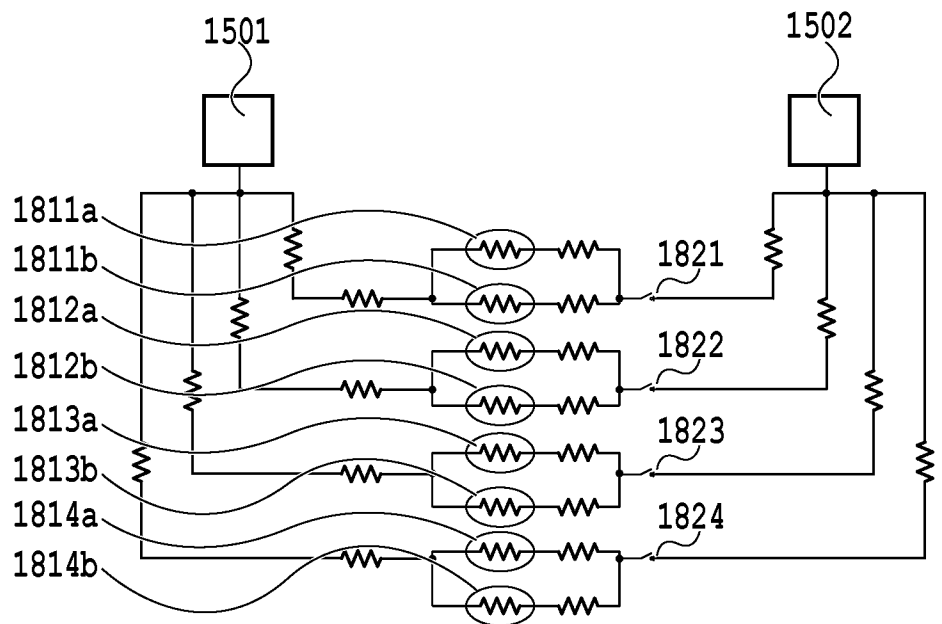
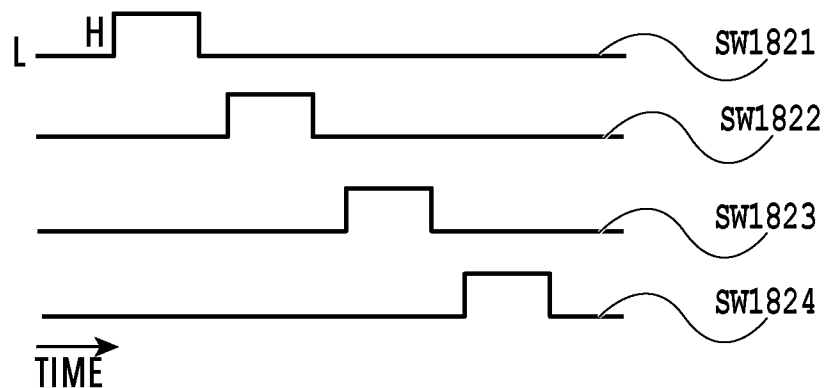
1761

FIG. 17F



1771

FIG. 17G

FIG.18A**FIG.18B****HEATING ELEMENT DRIVING SW LOGIC WAVEFORM****FIG.18C**

23/29

FIG.19A

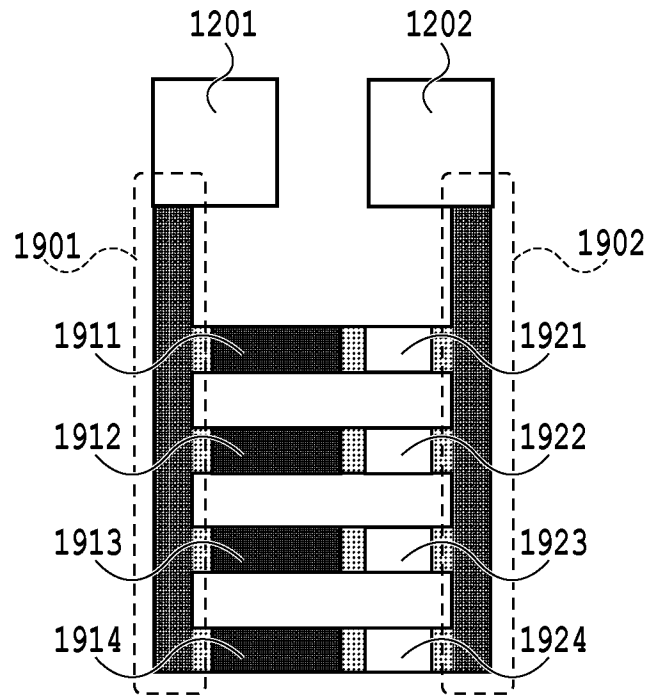
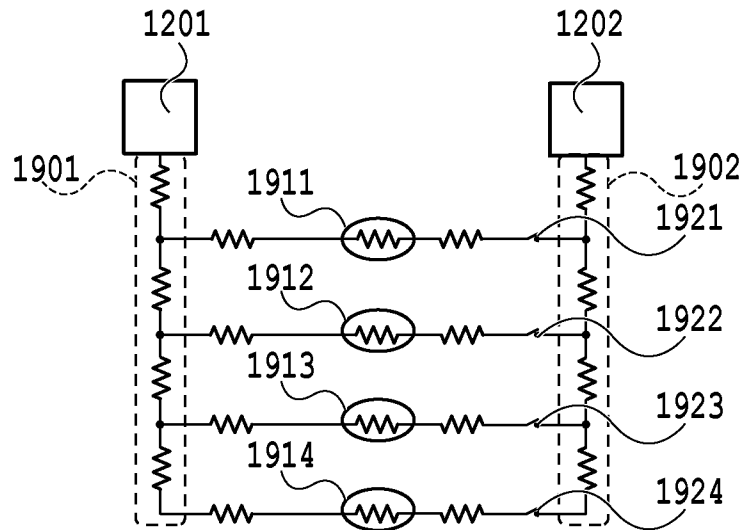


FIG.19B



SUPPLY VOLTAGE

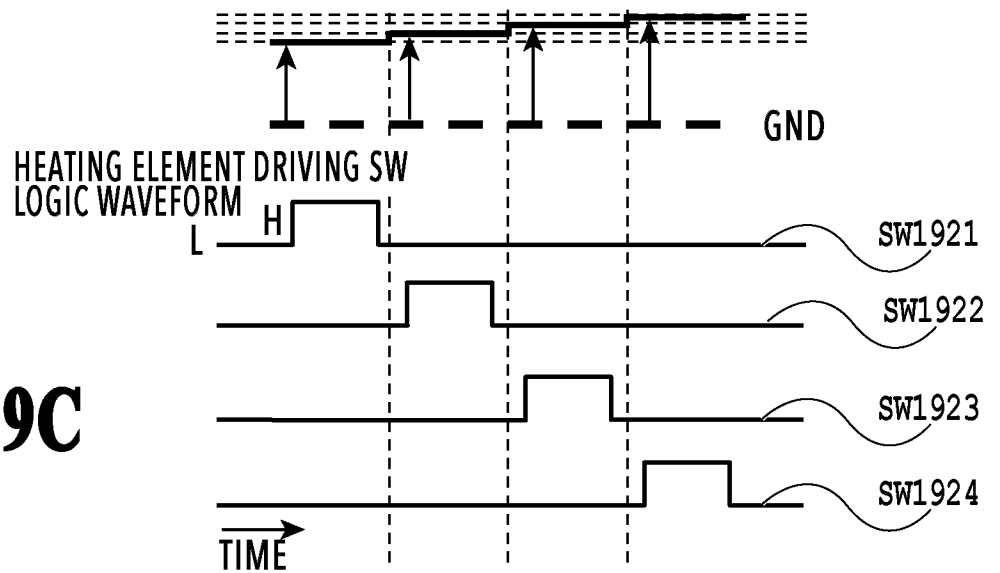


FIG.19C

○ UFB GENERATION IS POSSIBLE
× UFB GENERATION IS IMPOSSIBLE

IN CASE WHERE SHAPE AND
RESISTANCE OF HEATING ELEMENTS ARE SAME

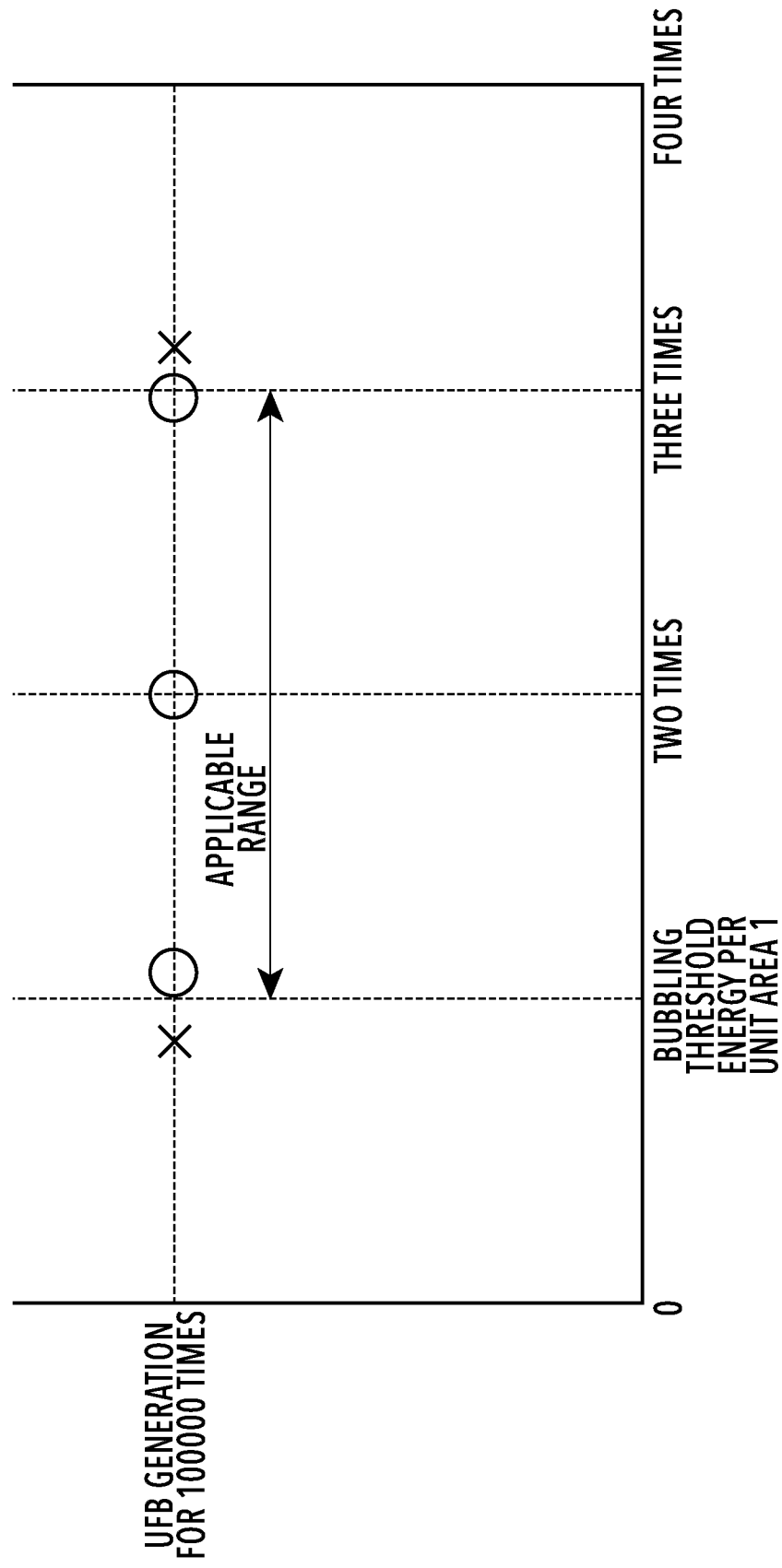


FIG.20A

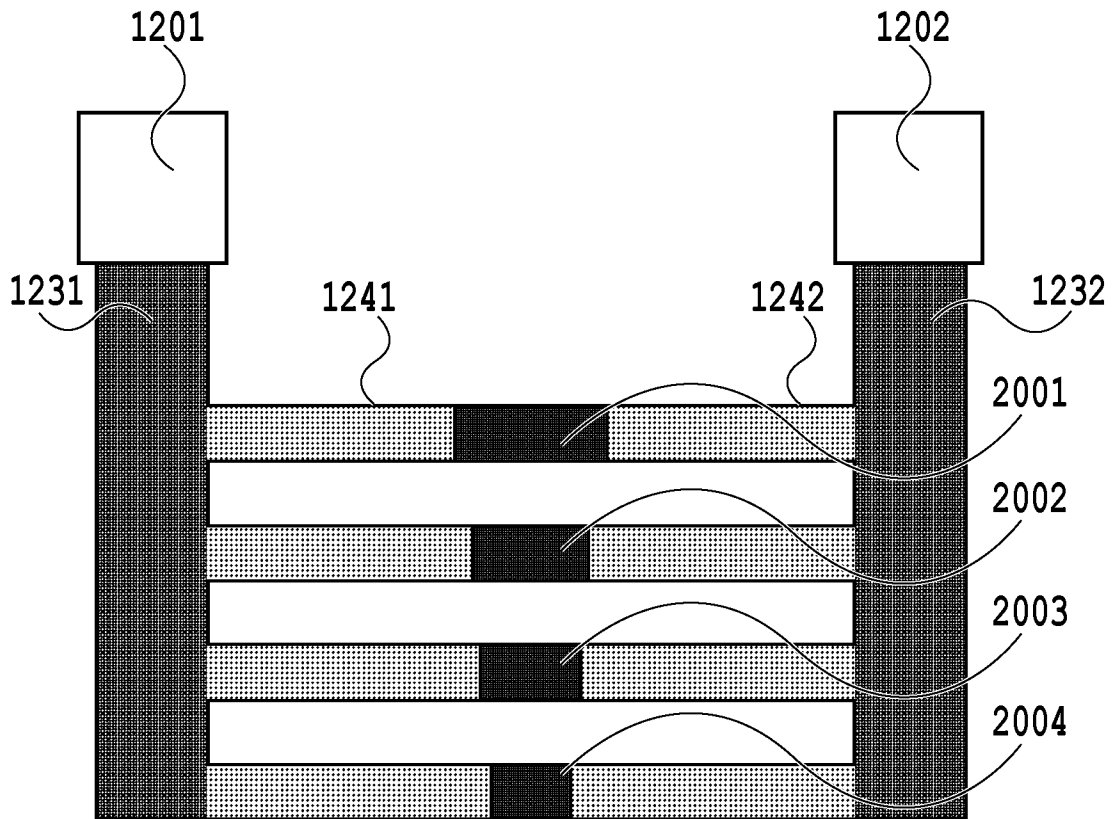


FIG.20B

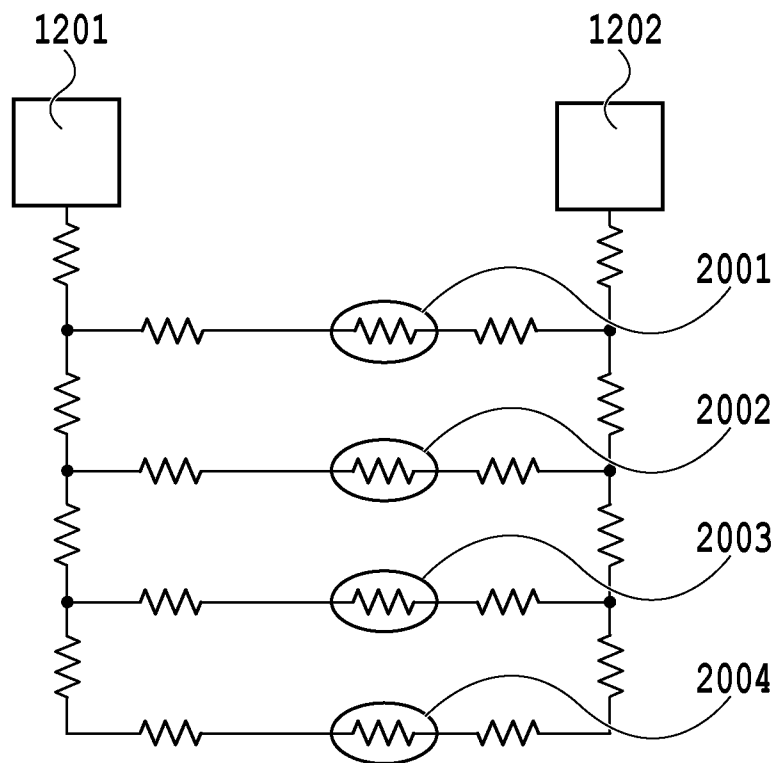


FIG.20C

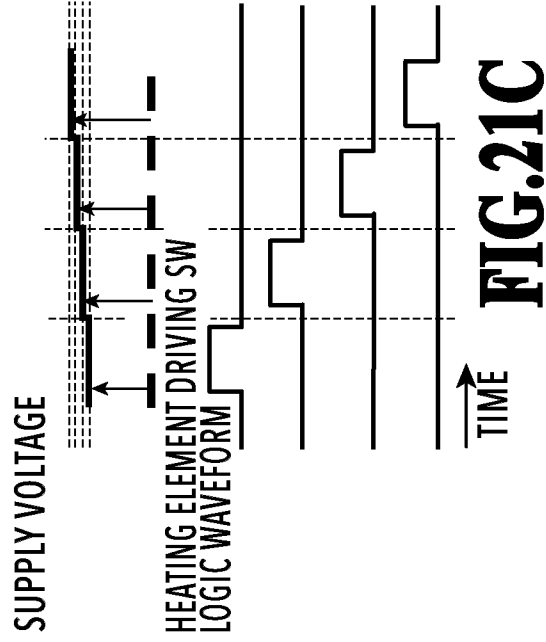
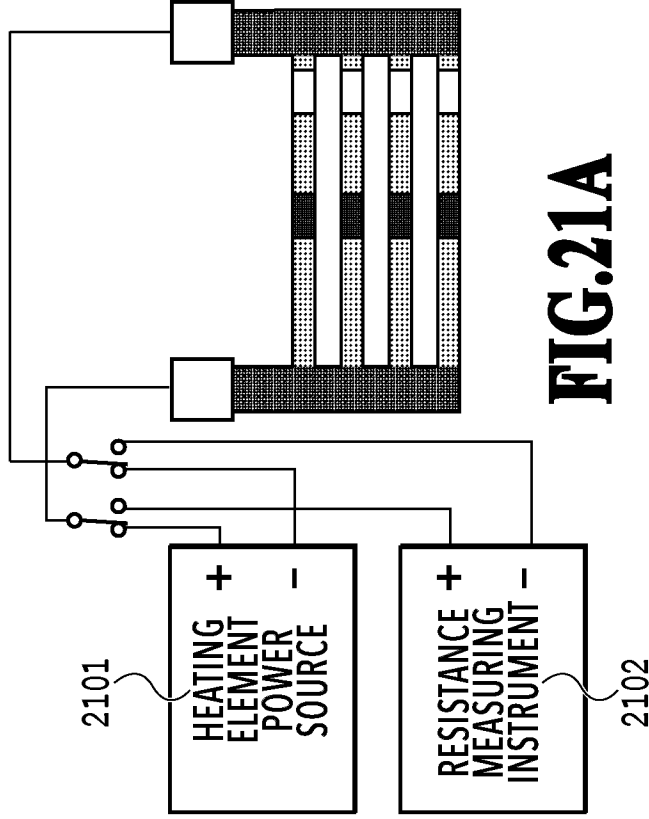


FIG. 21A



HEATING ELEMENT DRIVING SW LOGIC WAVEFORM

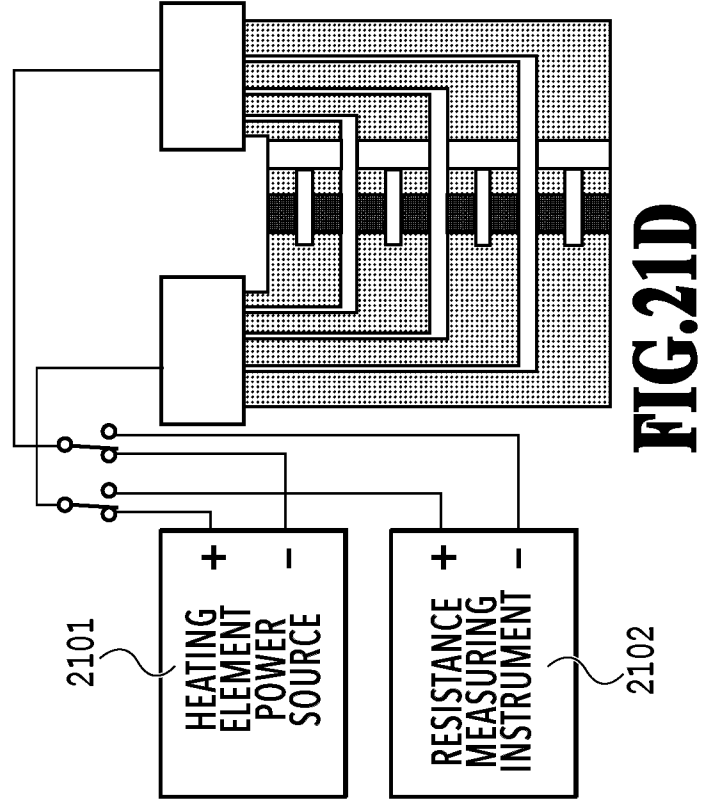
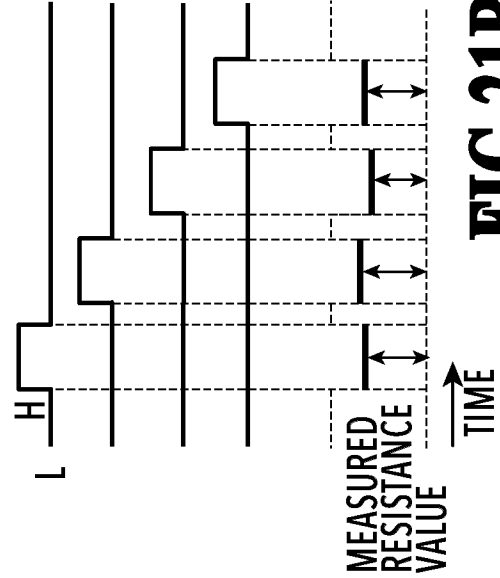


FIG. 21D

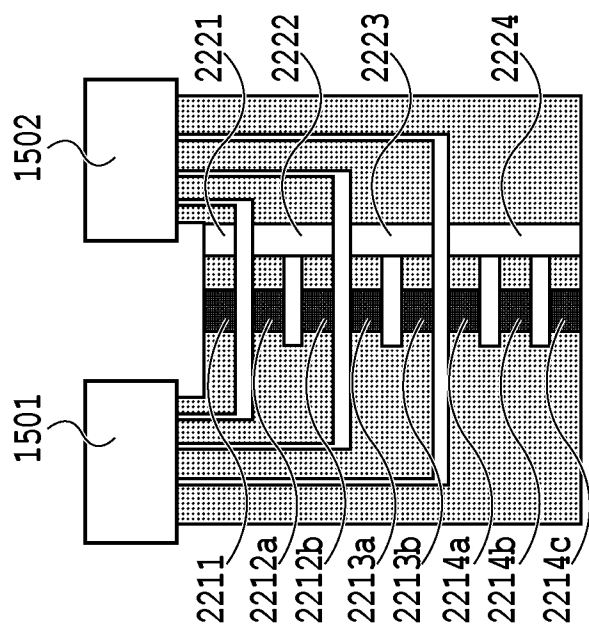


FIG. 22A

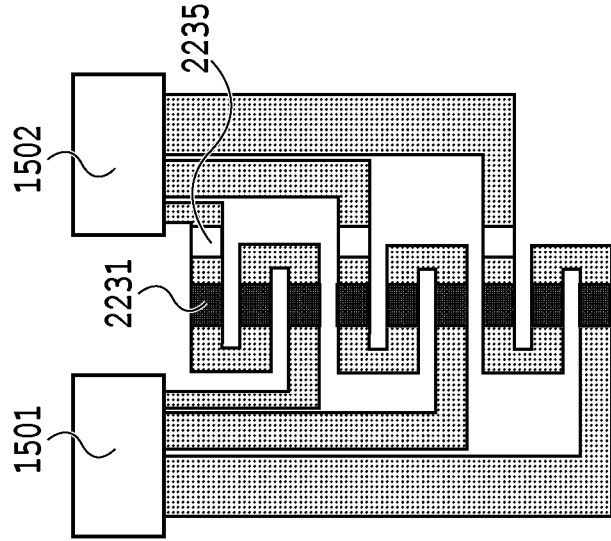


FIG. 22C

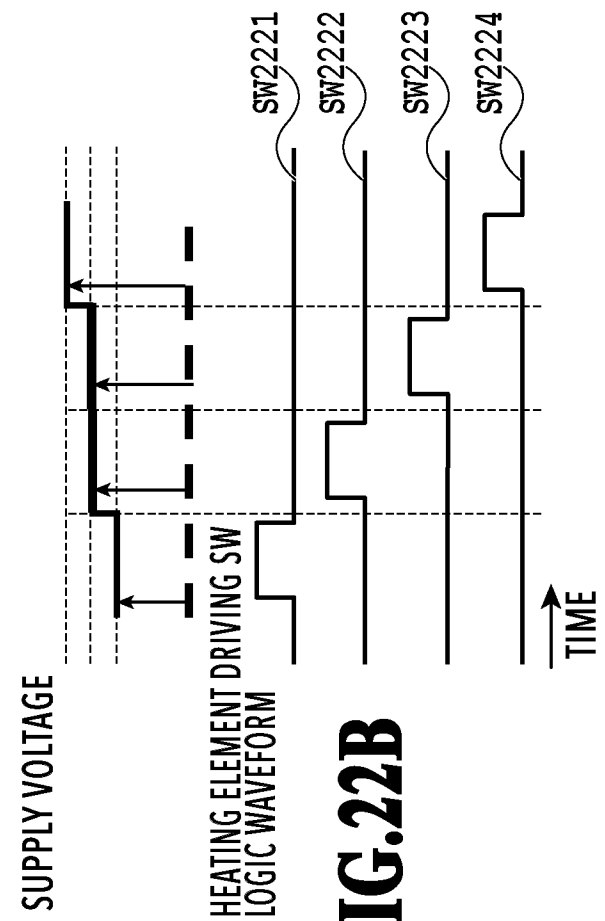


FIG. 22B

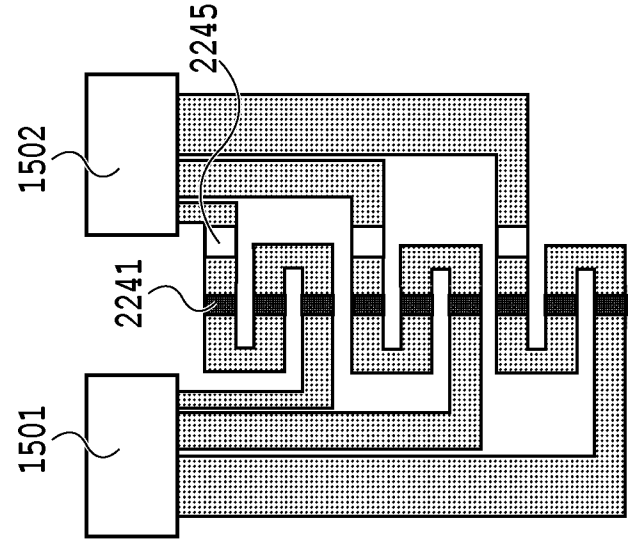


FIG. 22D

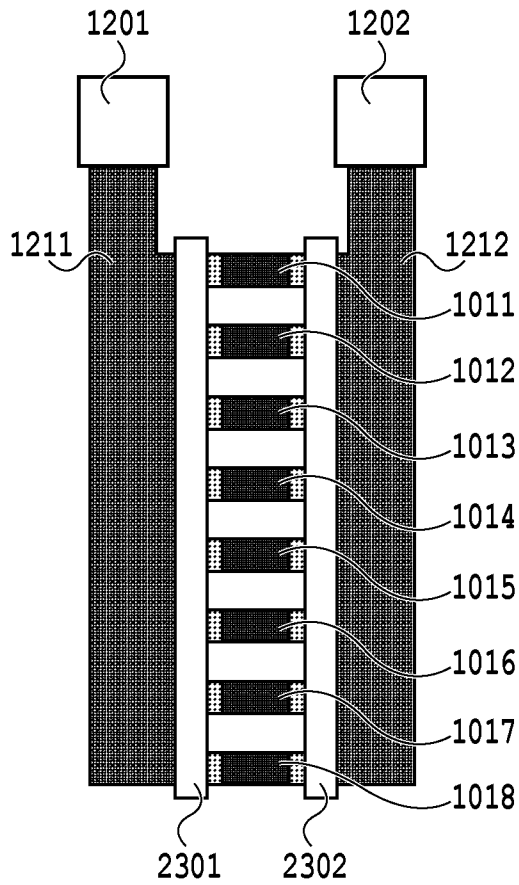


FIG. 23A

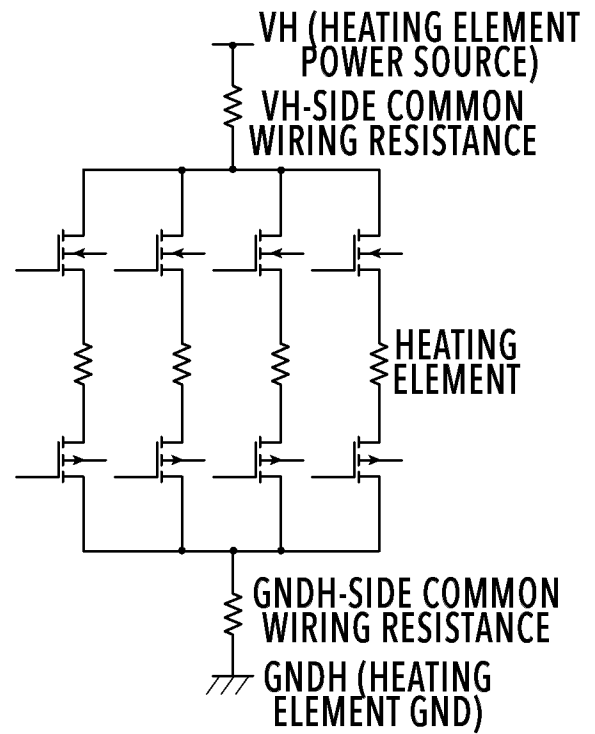


FIG. 23B

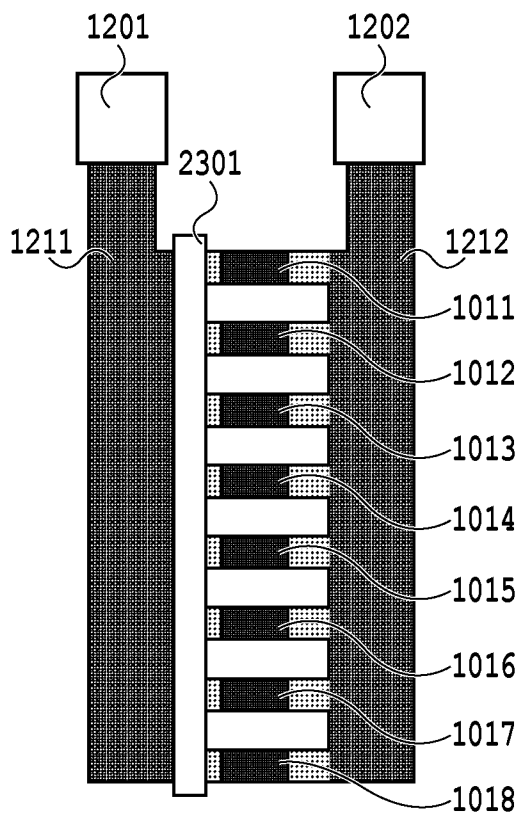


FIG. 23C

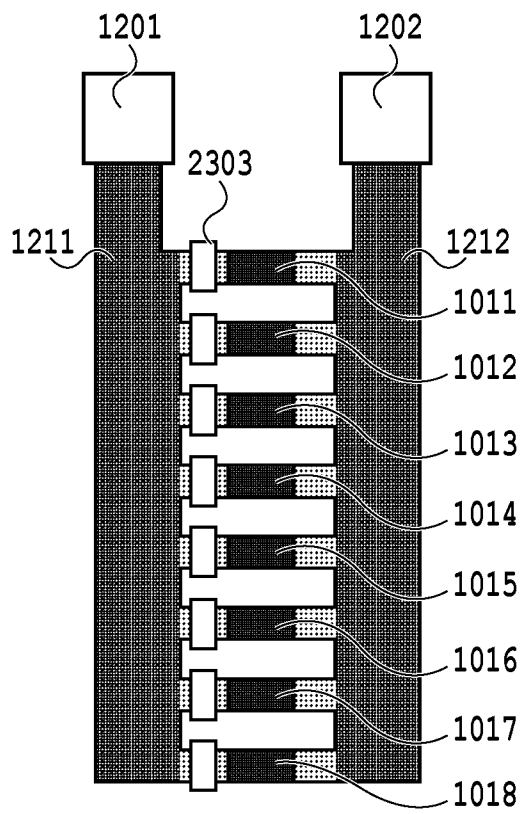


FIG. 23D

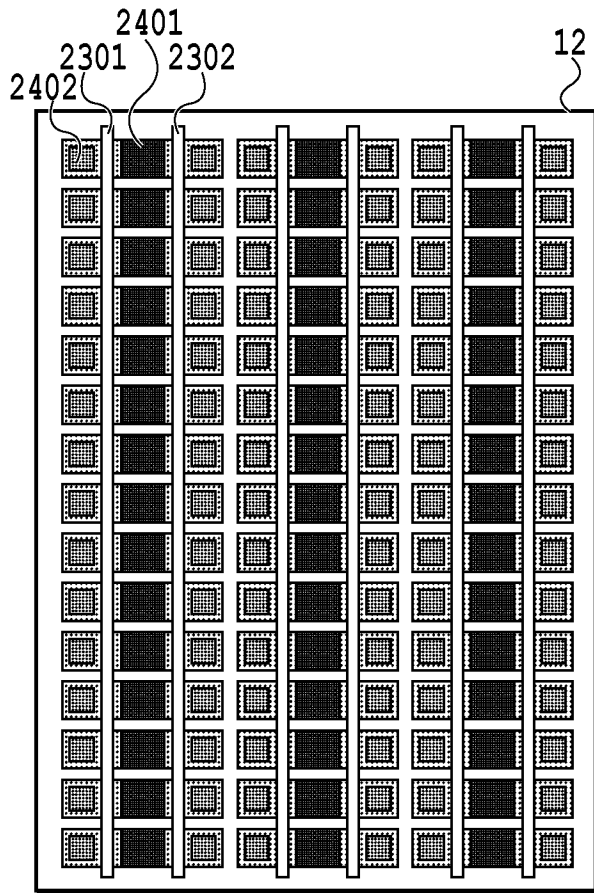


FIG. 24A

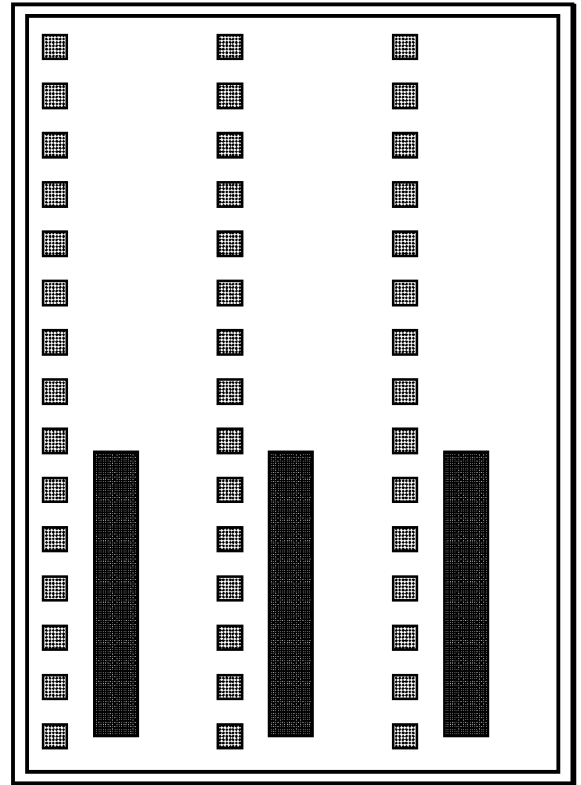


FIG. 24C

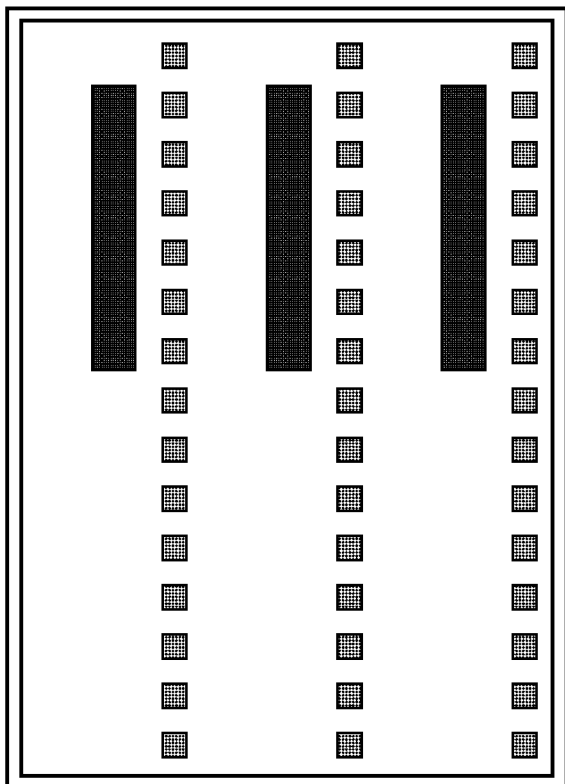


FIG. 24B

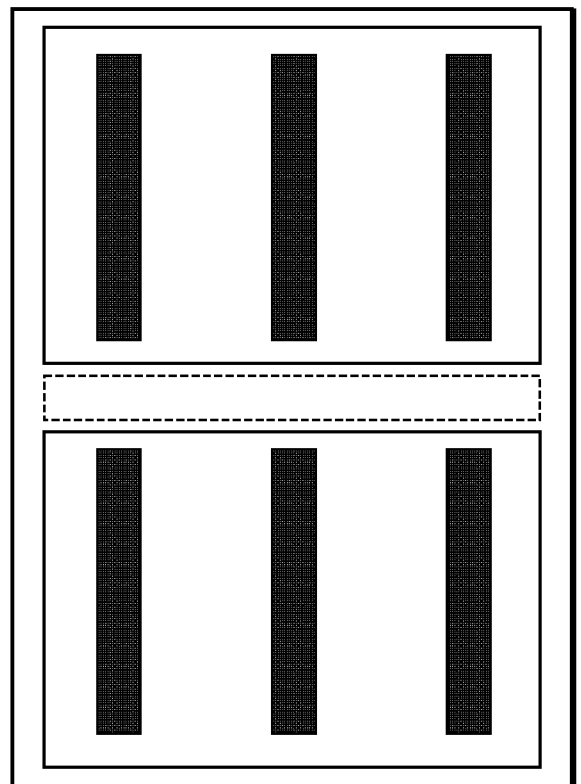


FIG. 24D