

FIG. 1

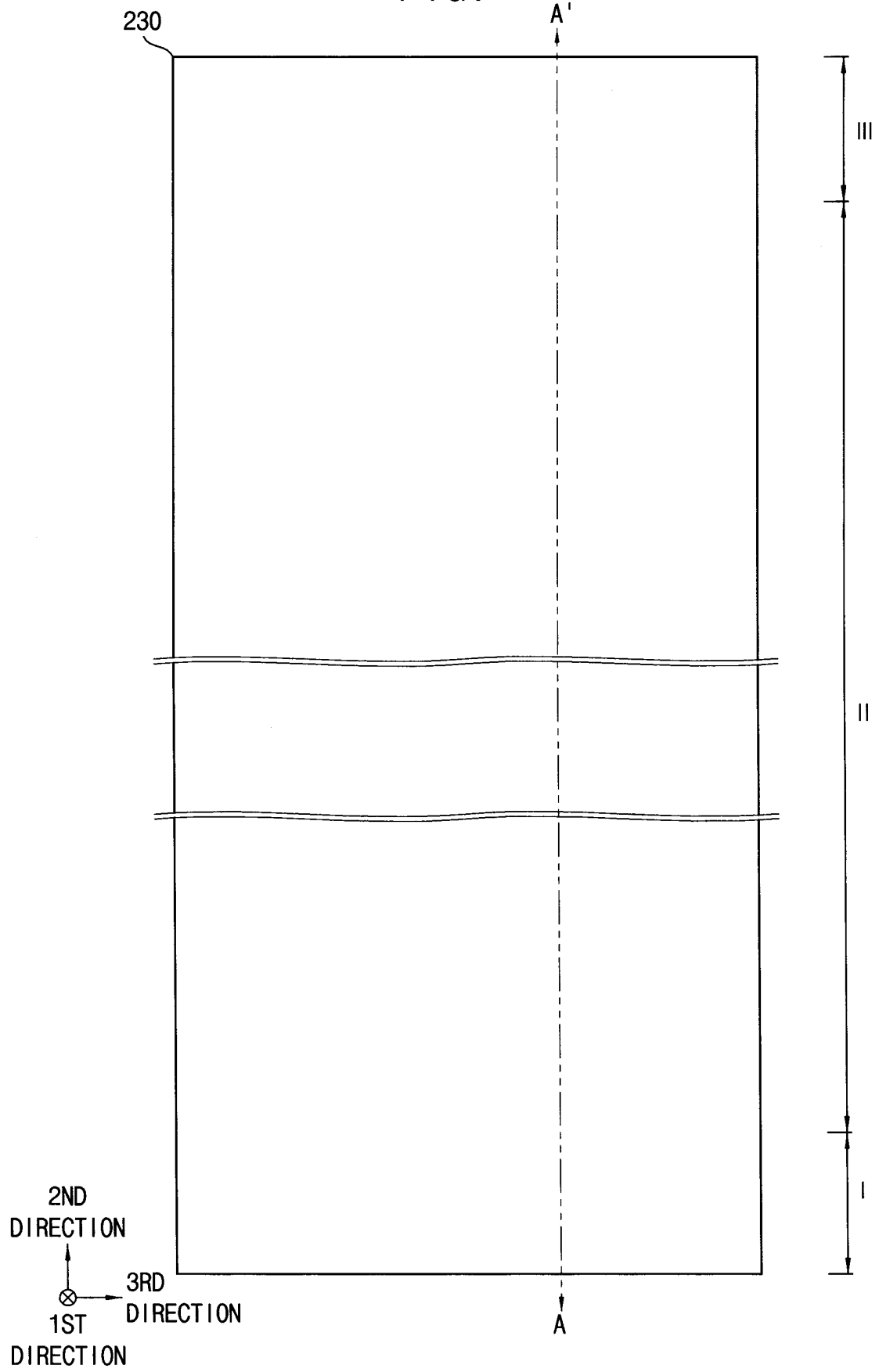


FIG. 2

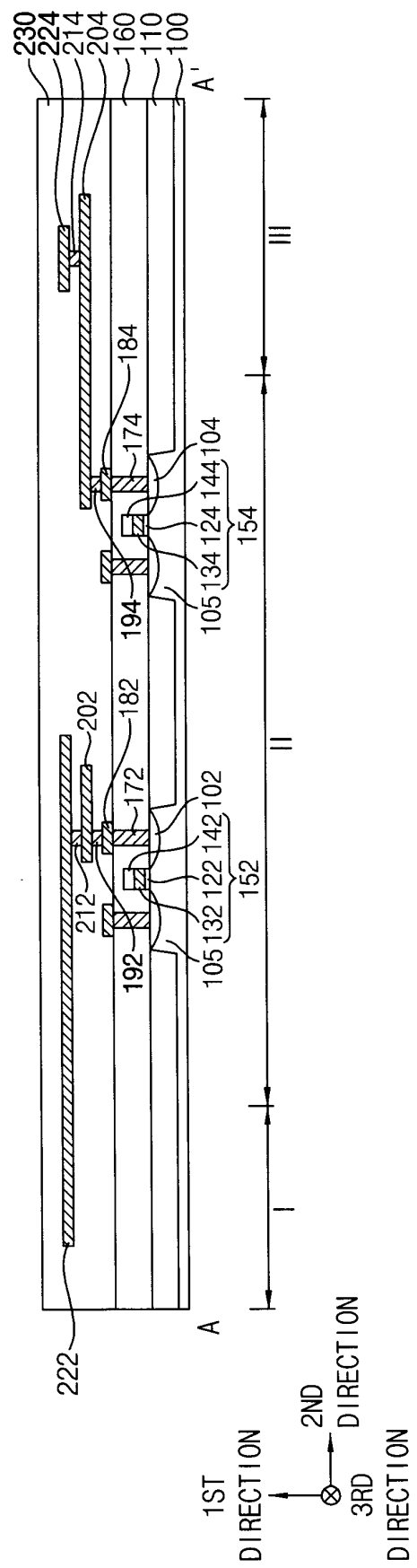


FIG. 3

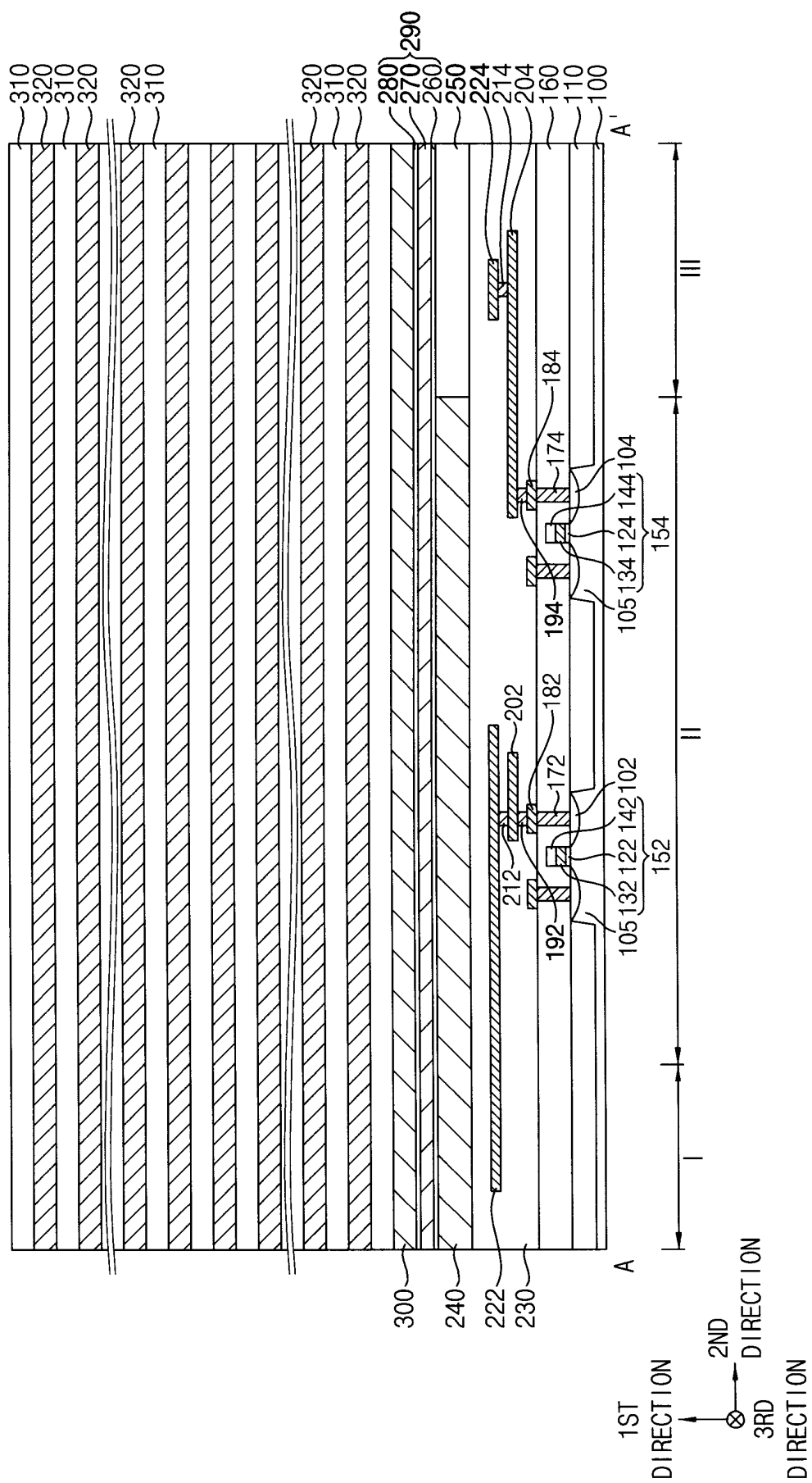


FIG. 4

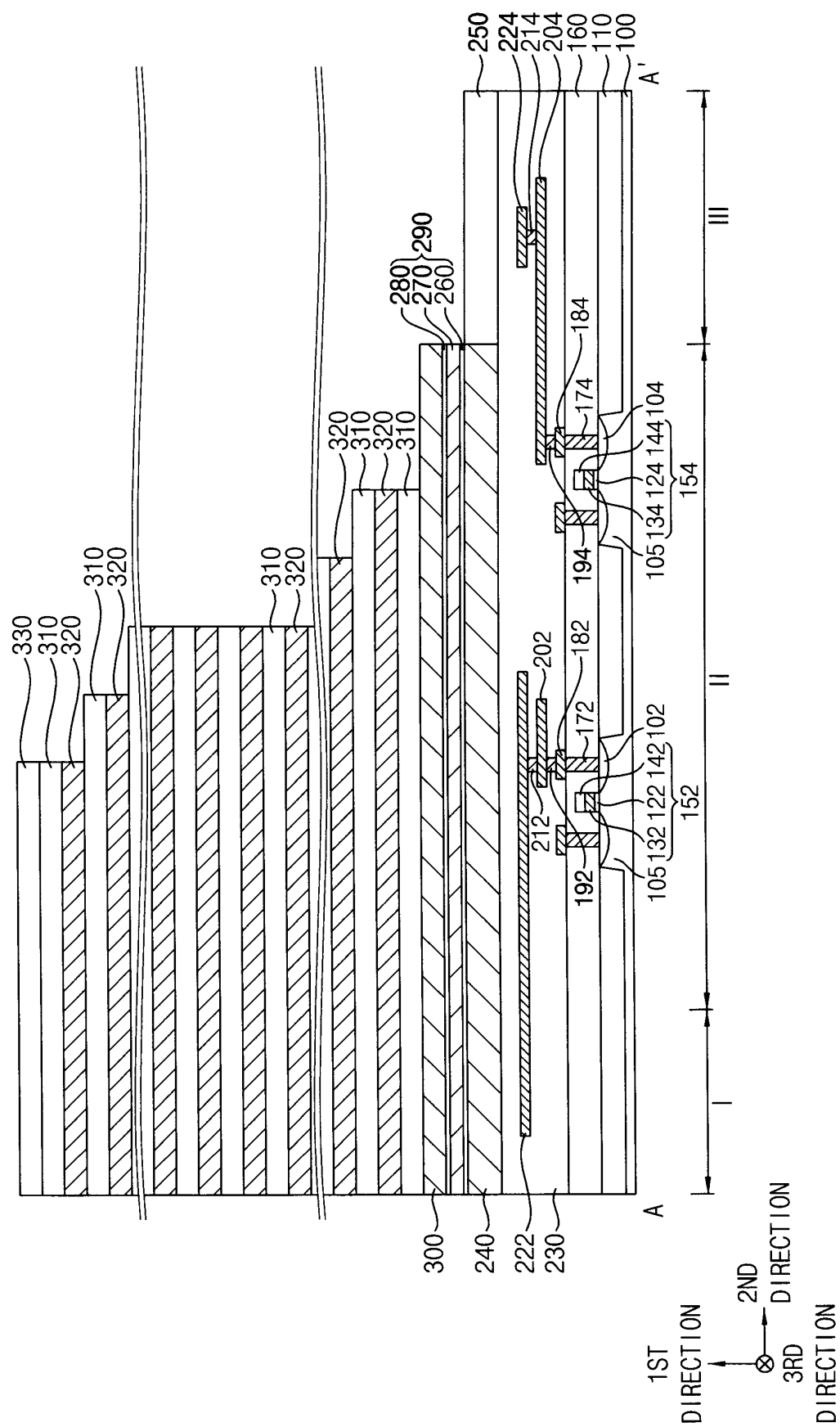


FIG. 5

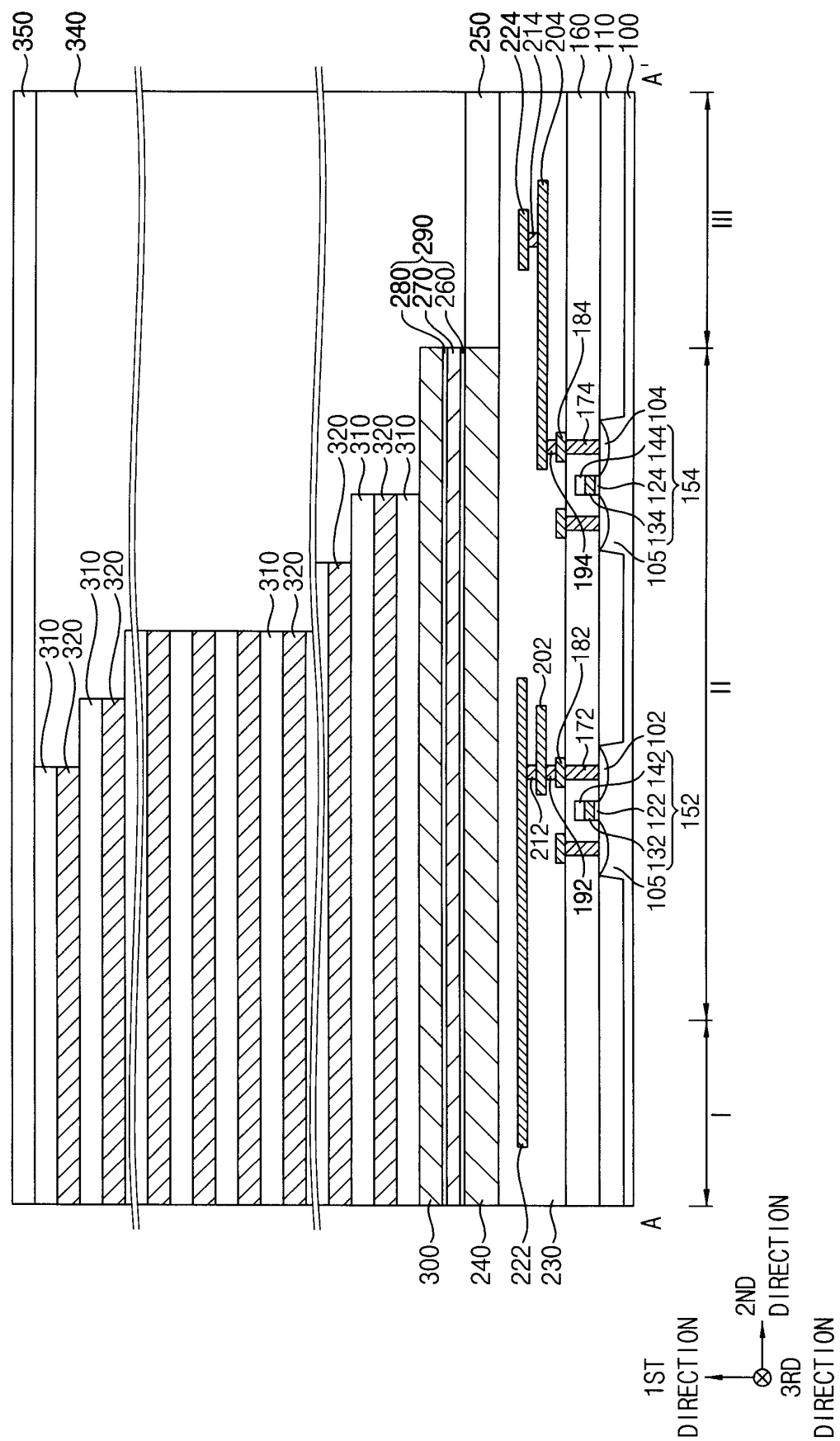


FIG. 1 is a schematic diagram of a multi-layered substrate assembly. The assembly includes a top layer 250, followed by a sequence of layers 300, 320, 320, 320, 320, 320, 320, 320, and 365. A central vertical dashed line A-A' runs through the middle. Circular features, likely vias or holes, are present in the 320 and 365 layers. A wavy line 385 separates the upper and lower portions of the stack. At the base, there are more circular features labeled 360, 410, and 400. Vertical dimensions I, II, and III are shown on the right.

FIG. 7

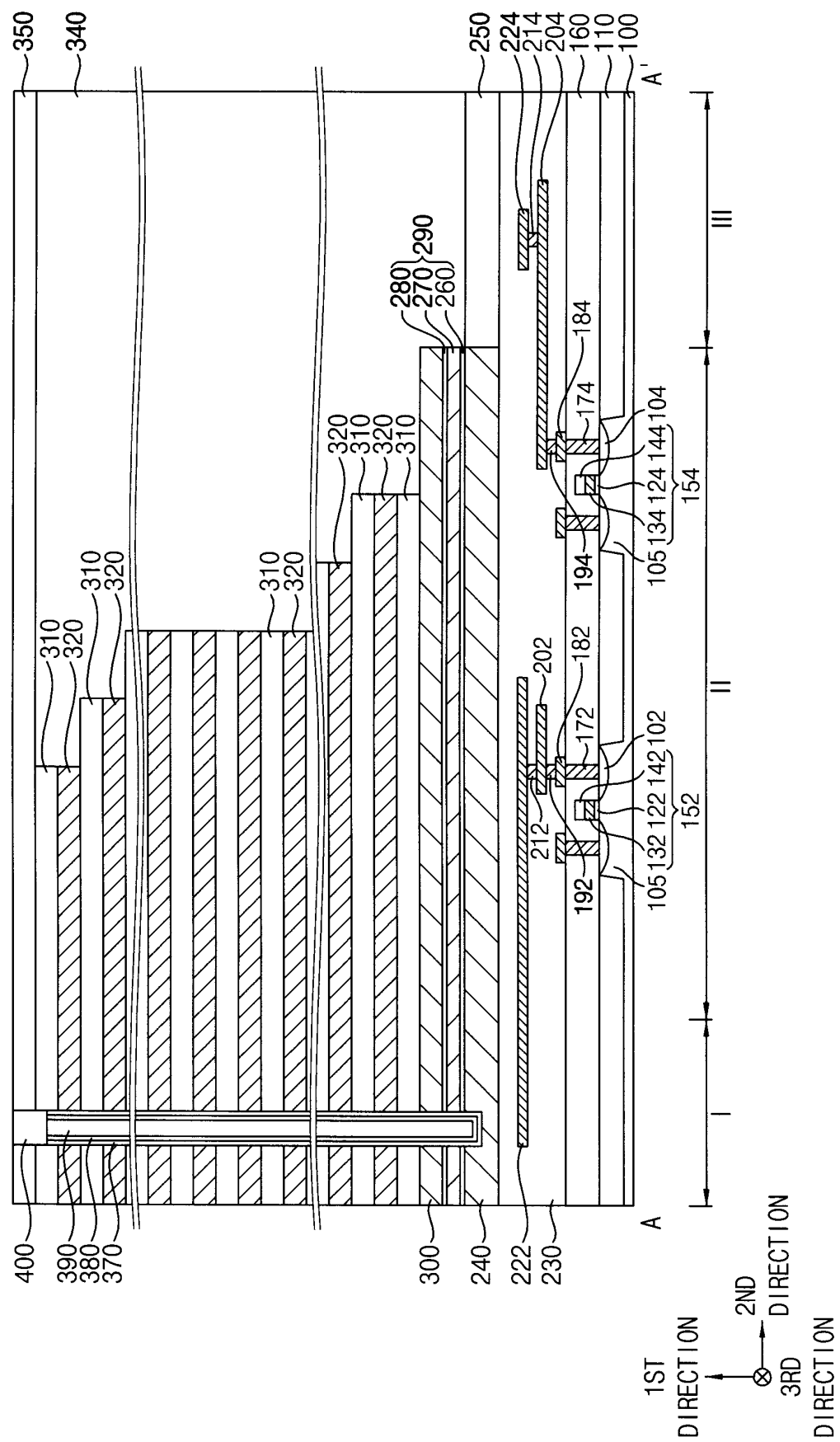


FIG. 8

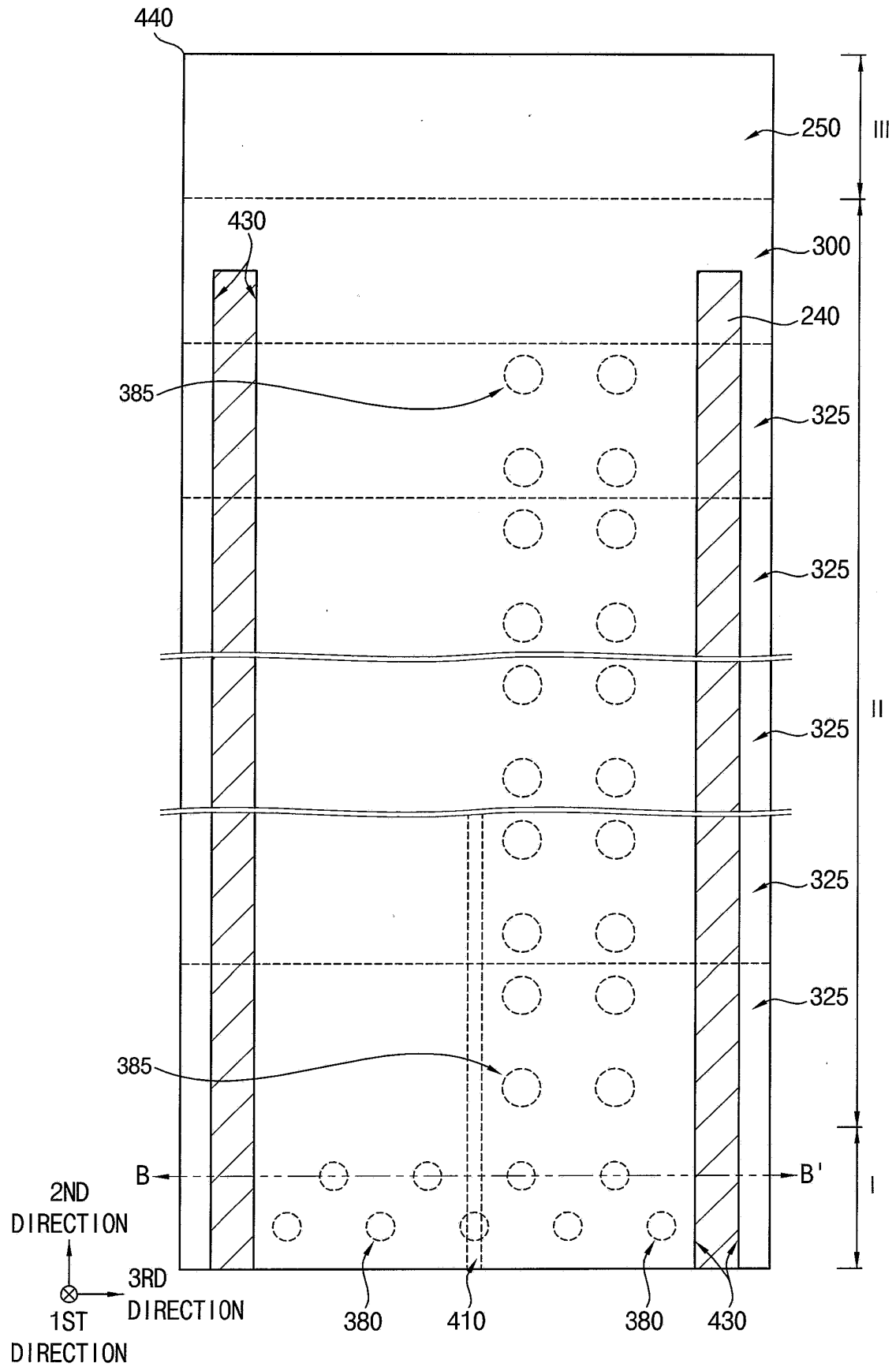
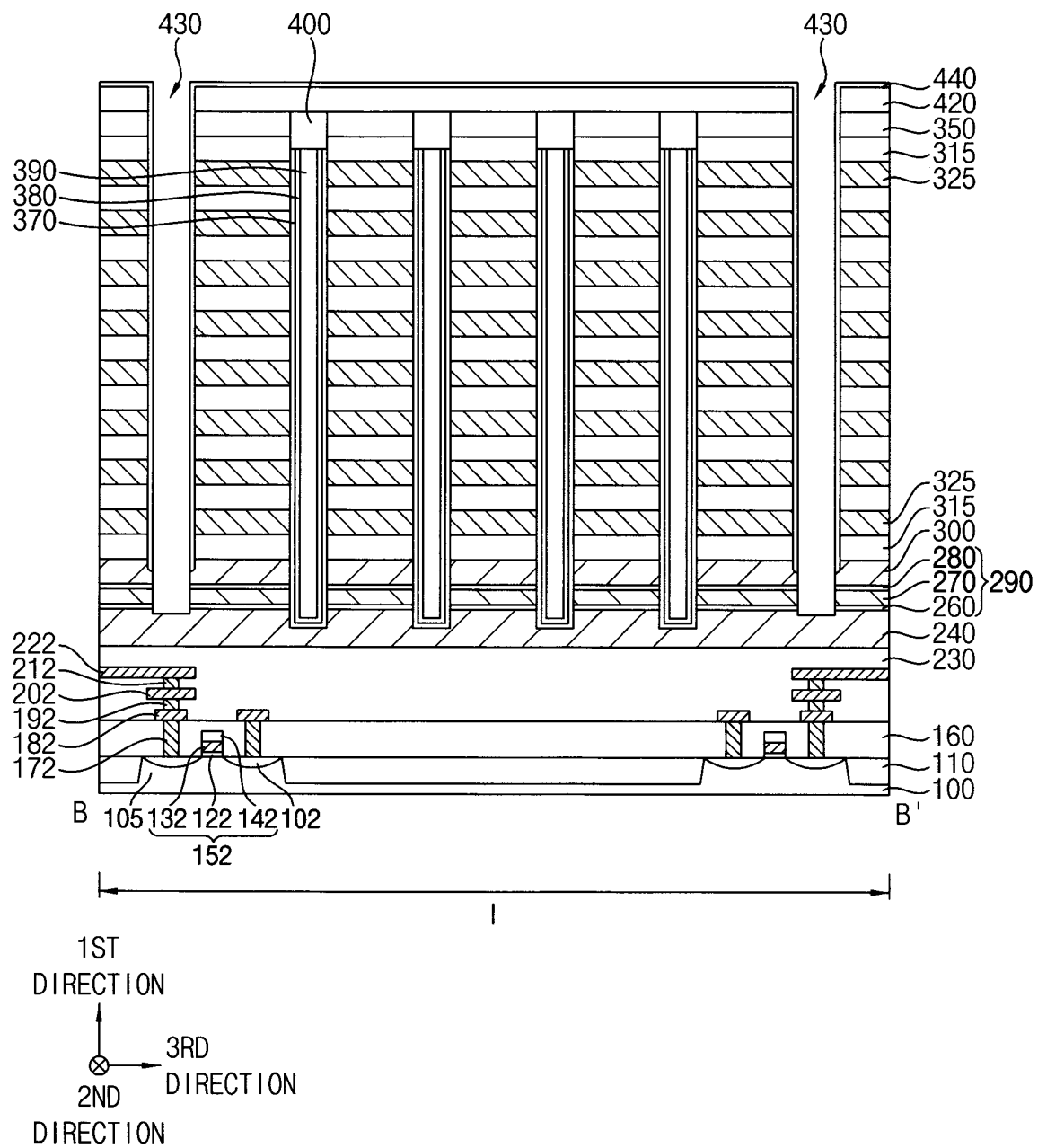


FIG. 9



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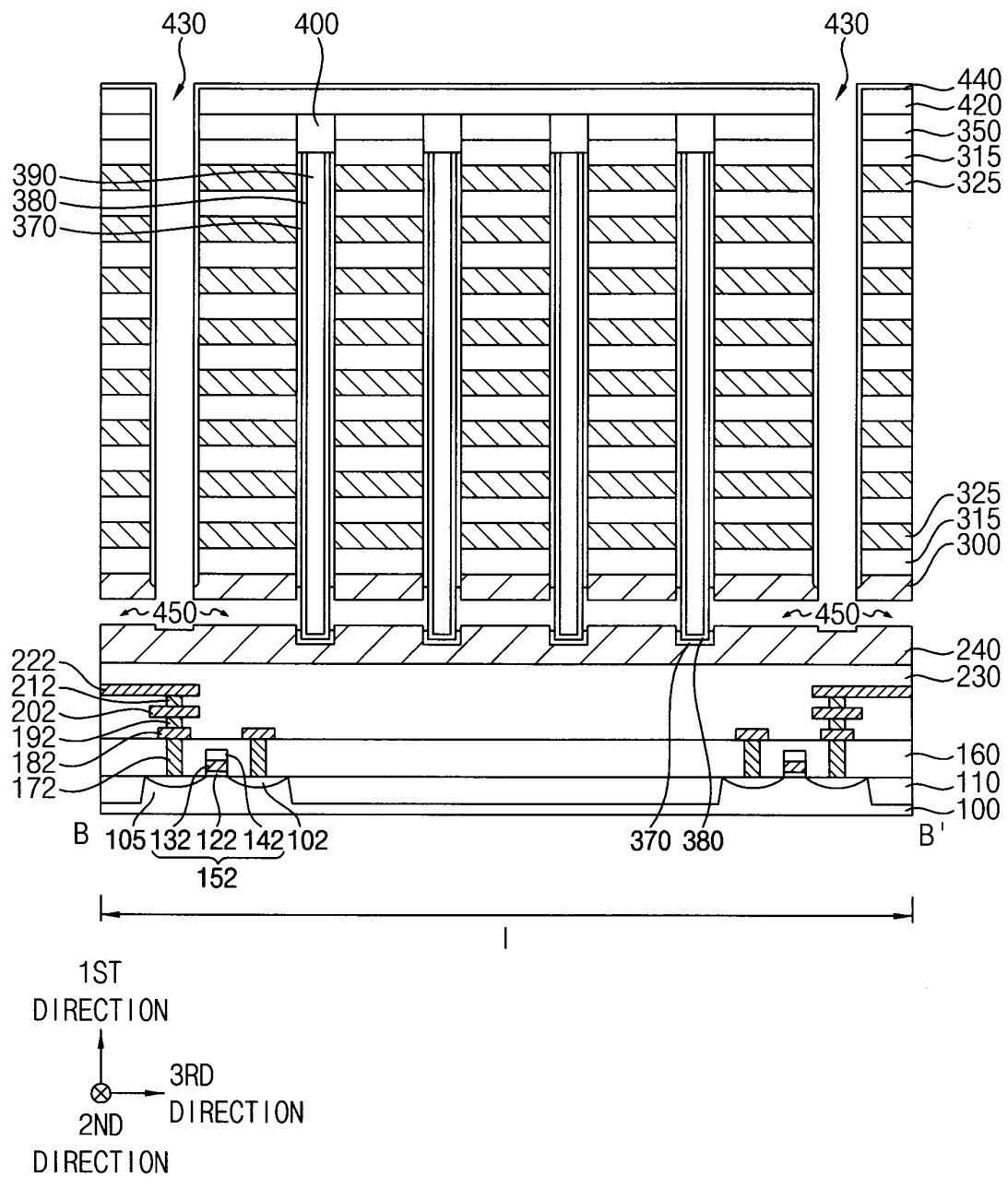




FIG. 12

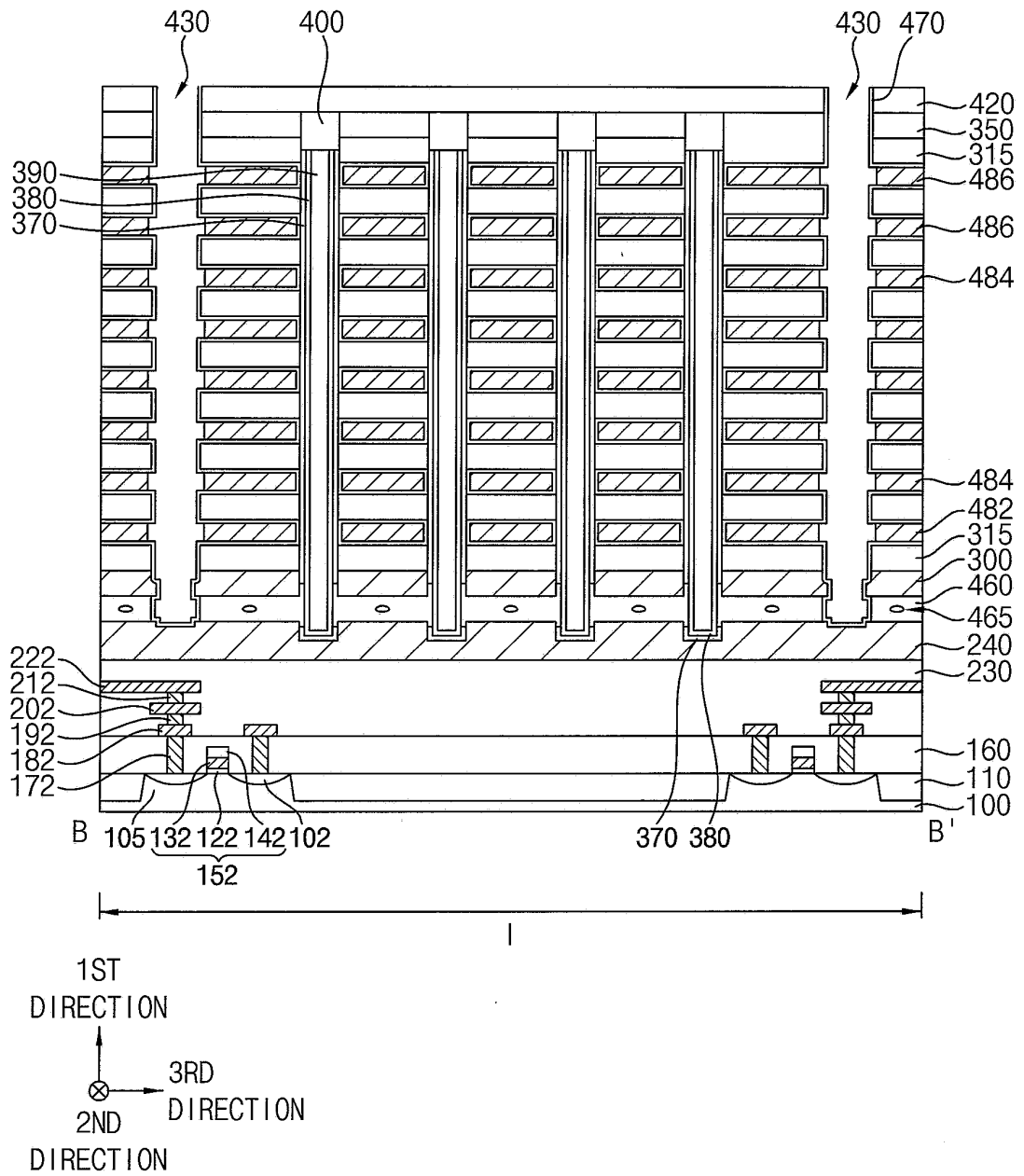


FIG. 13

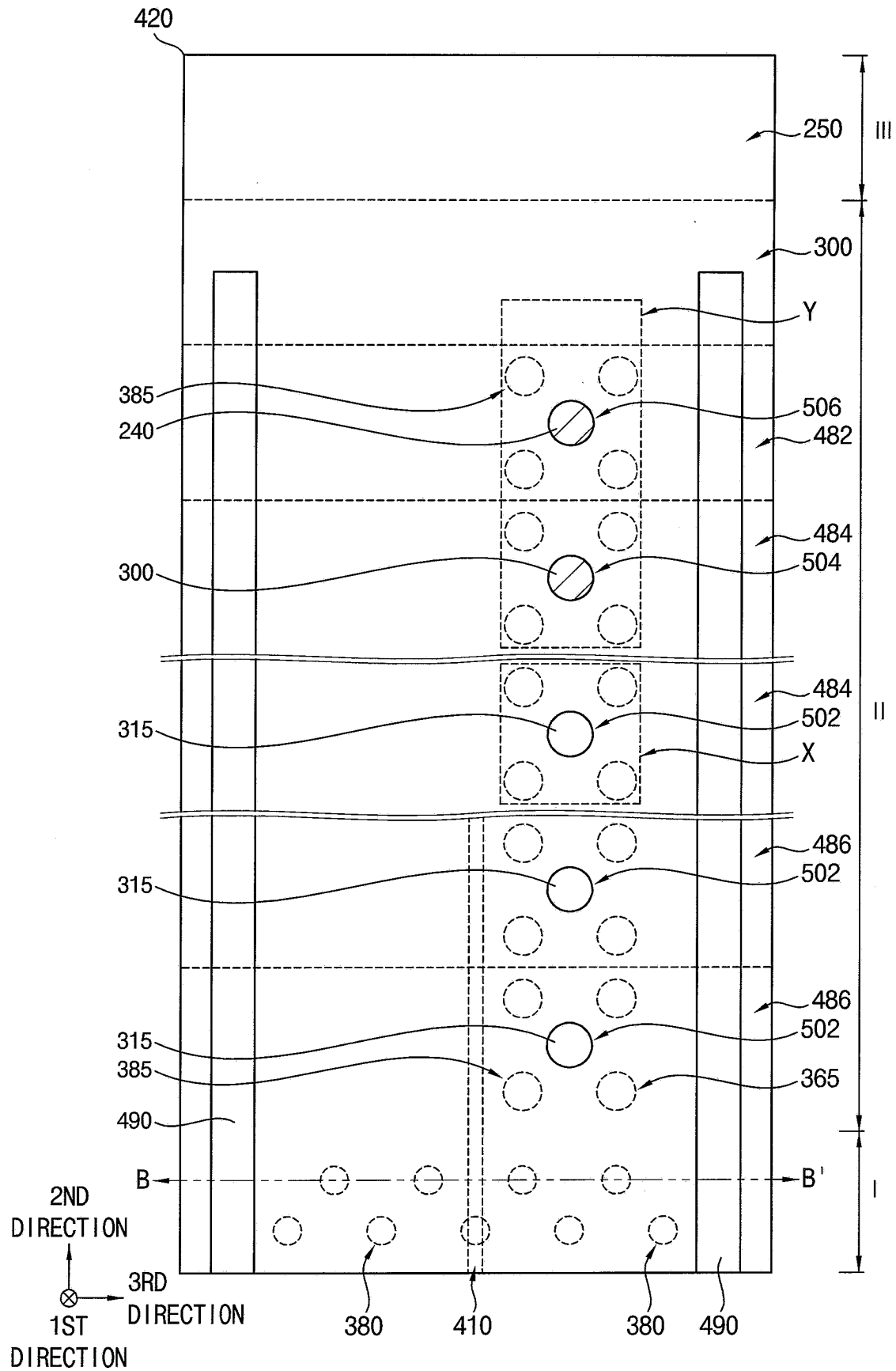


FIG. 14

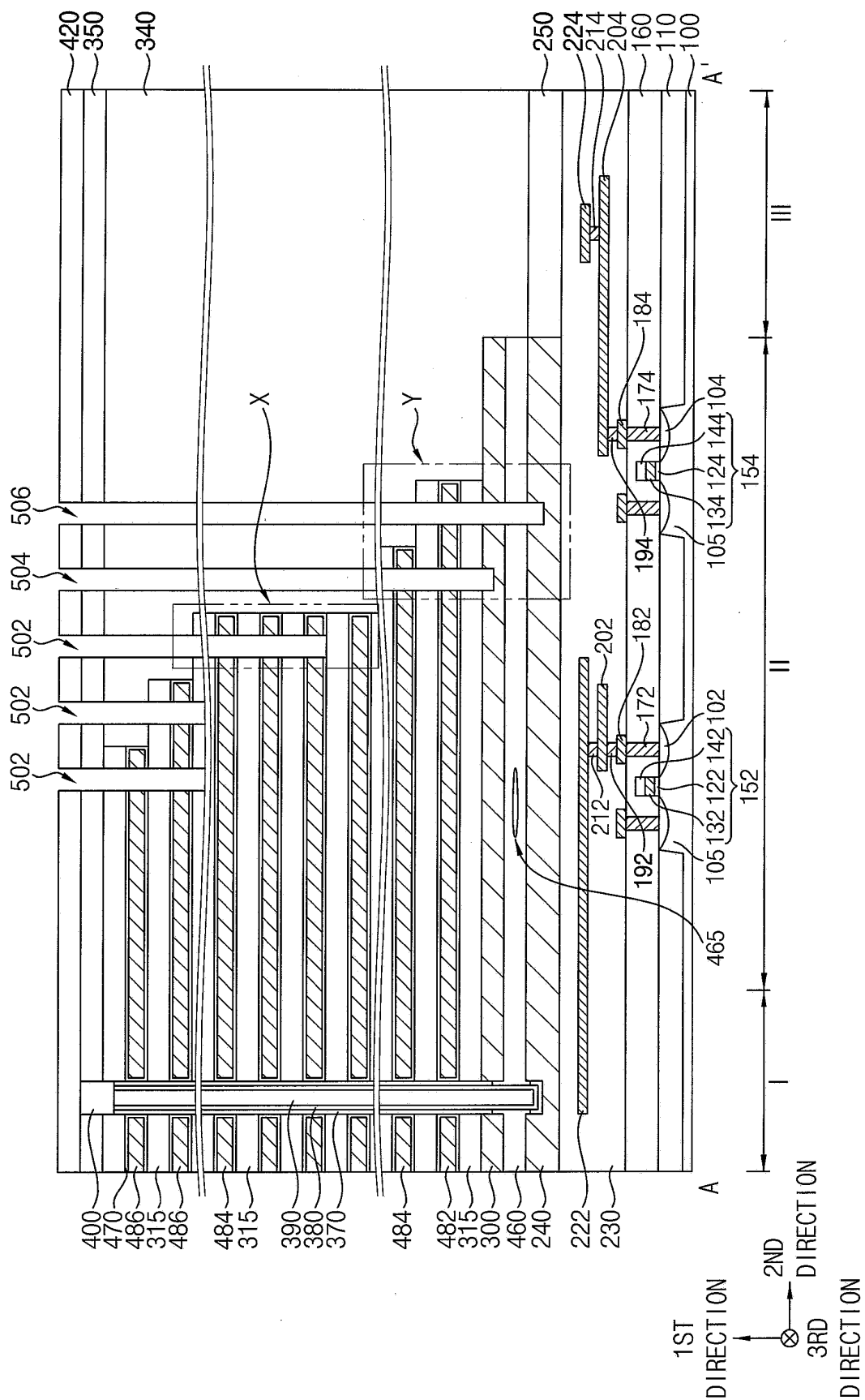


FIG. 15

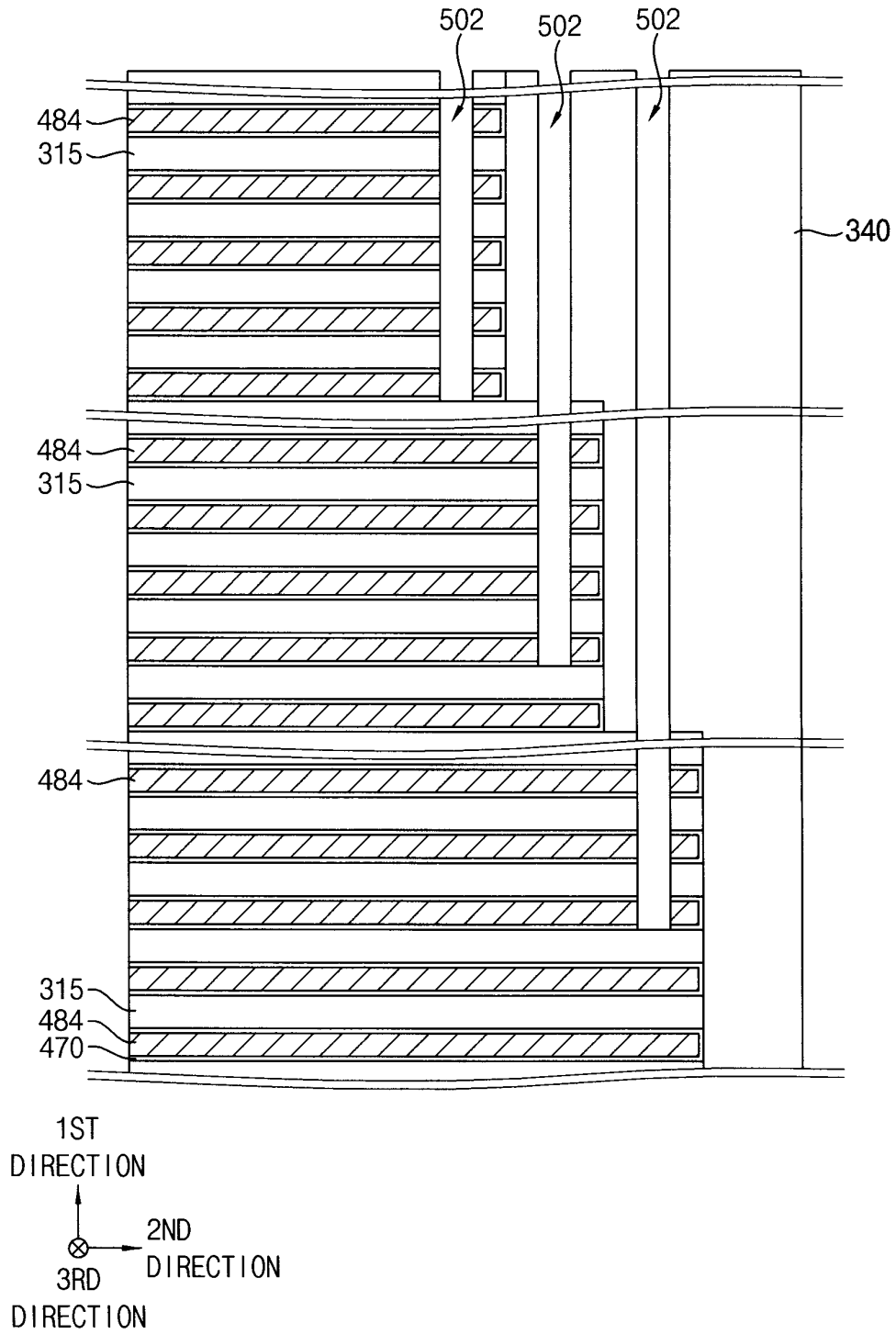


FIG. 16

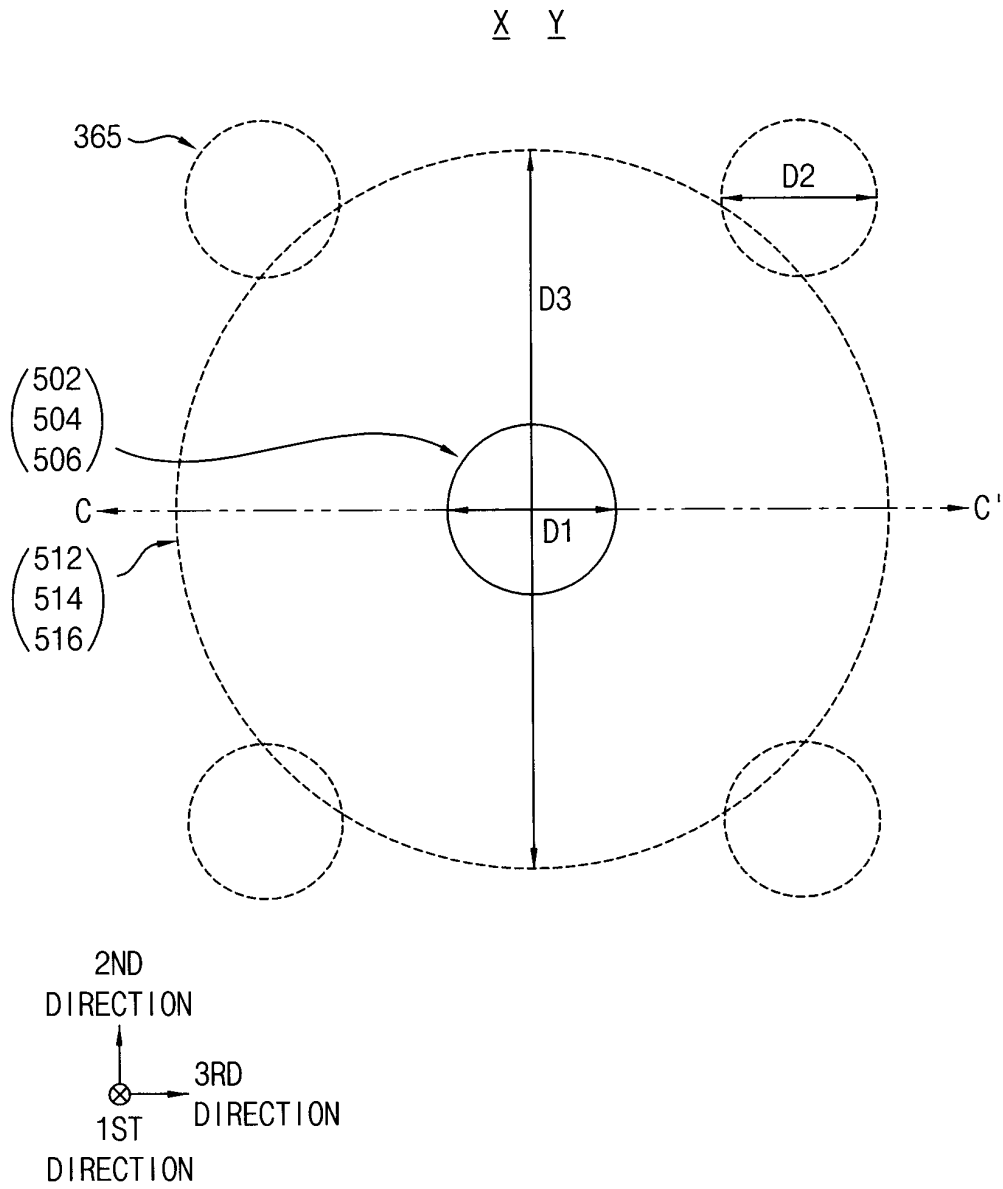
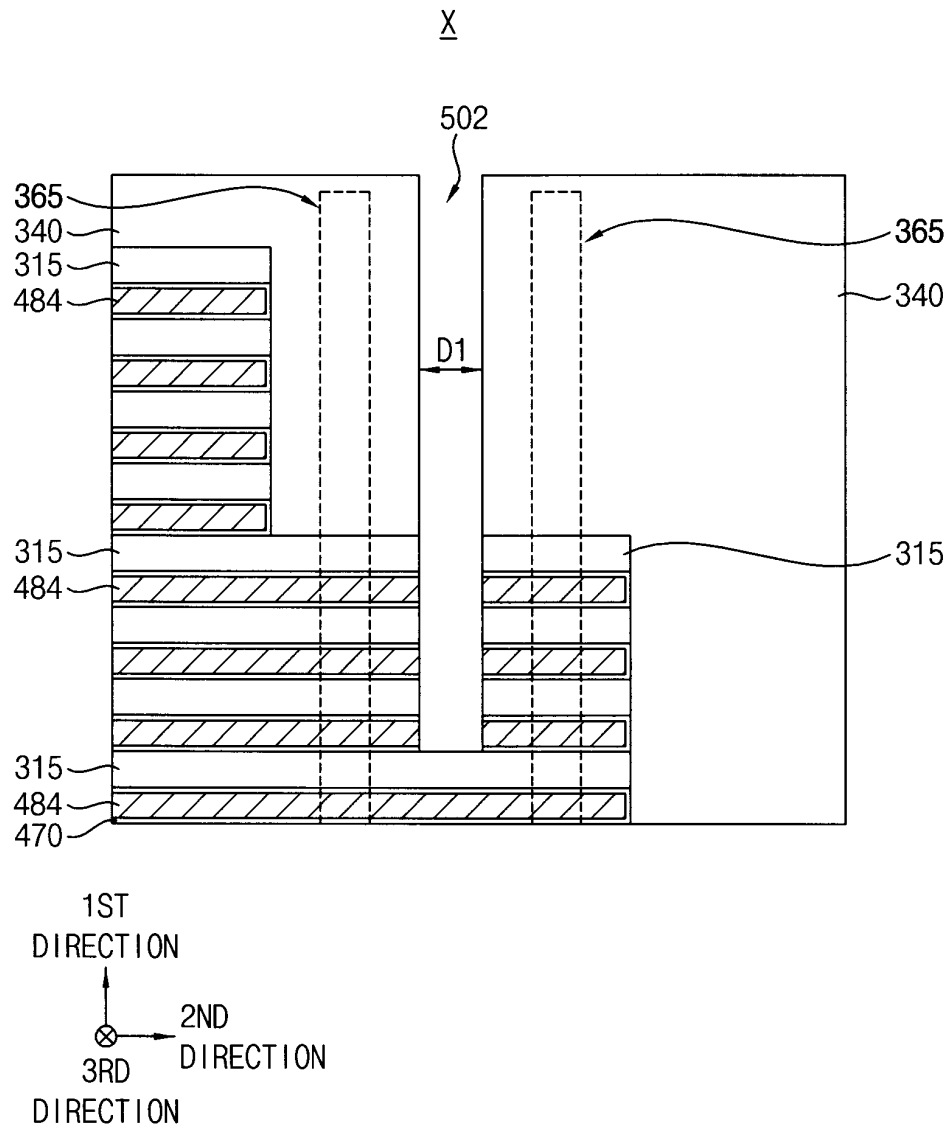


FIG. 17



# FIG. 18

Y

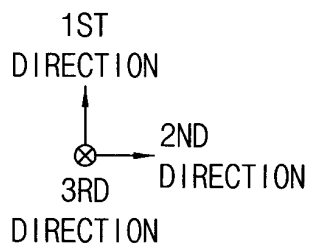
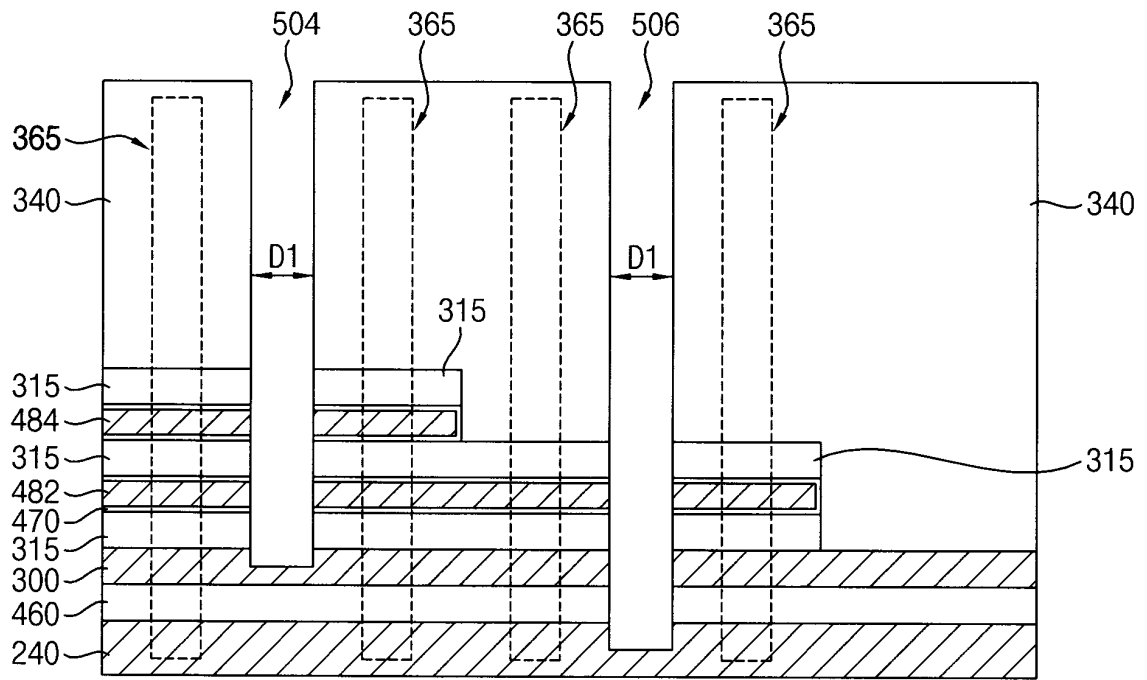
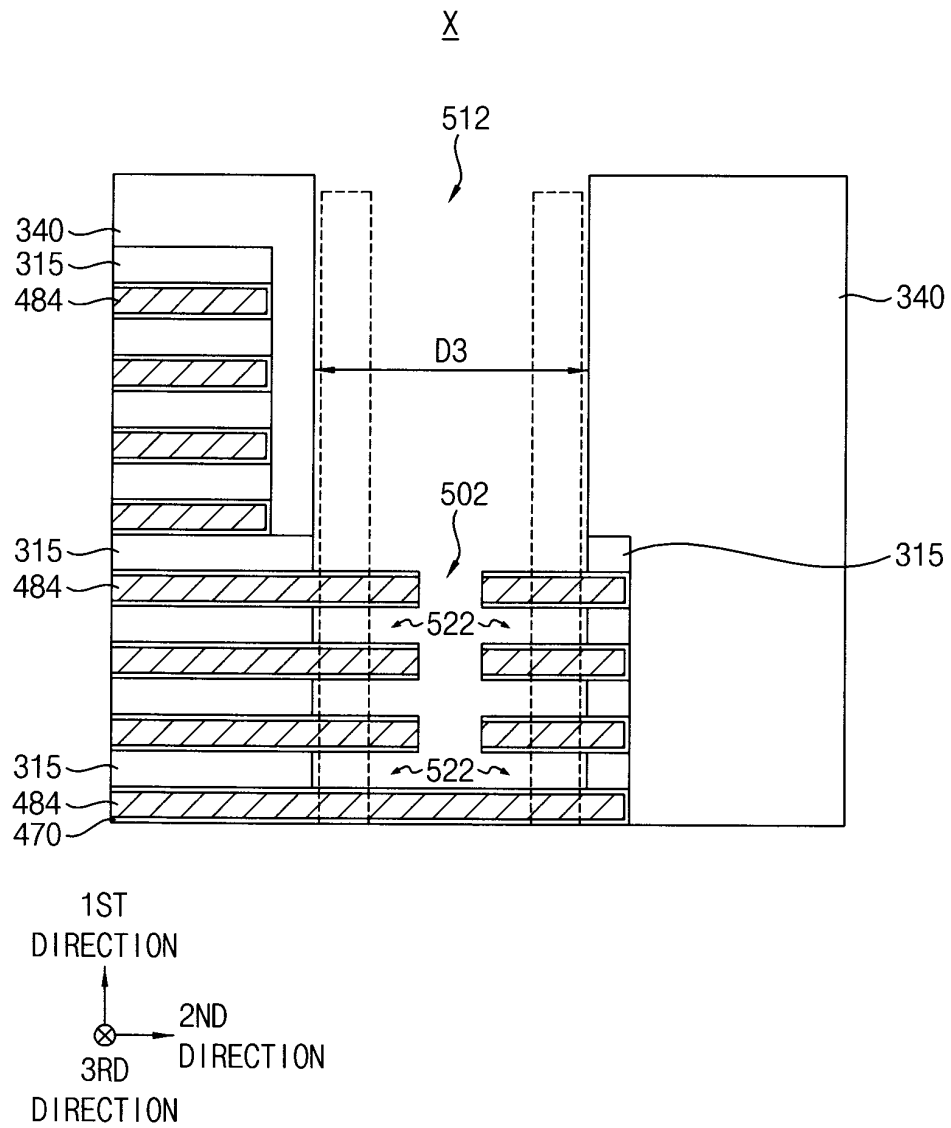


FIG. 19



# FIG. 20

Y

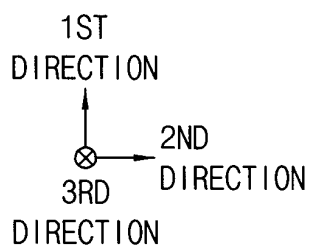
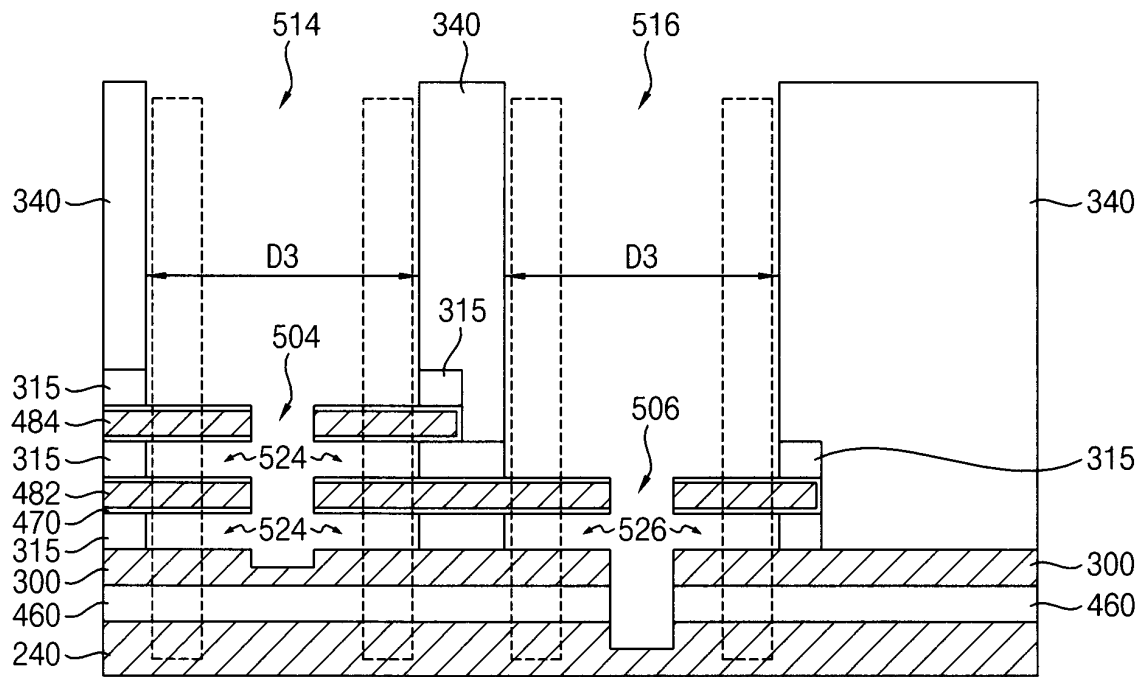


FIG. 21

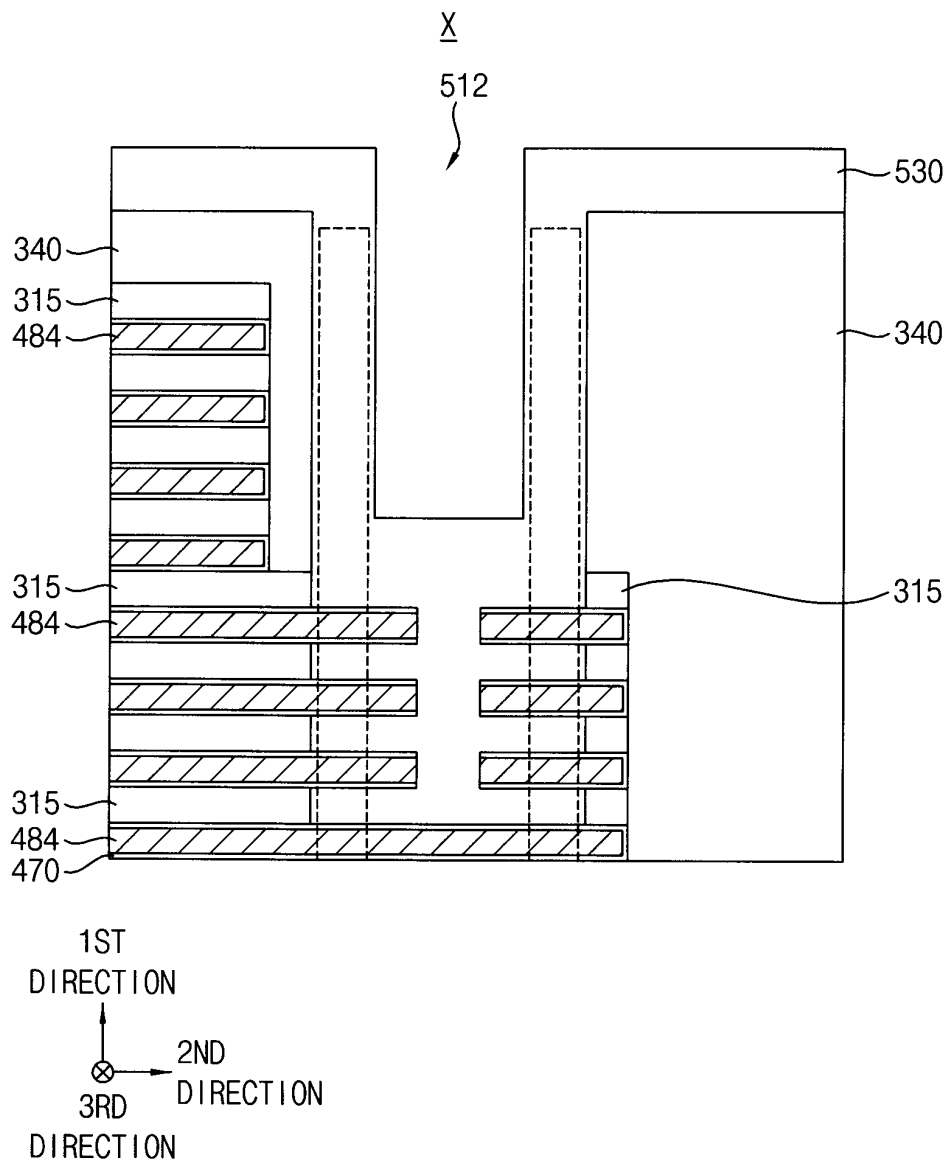
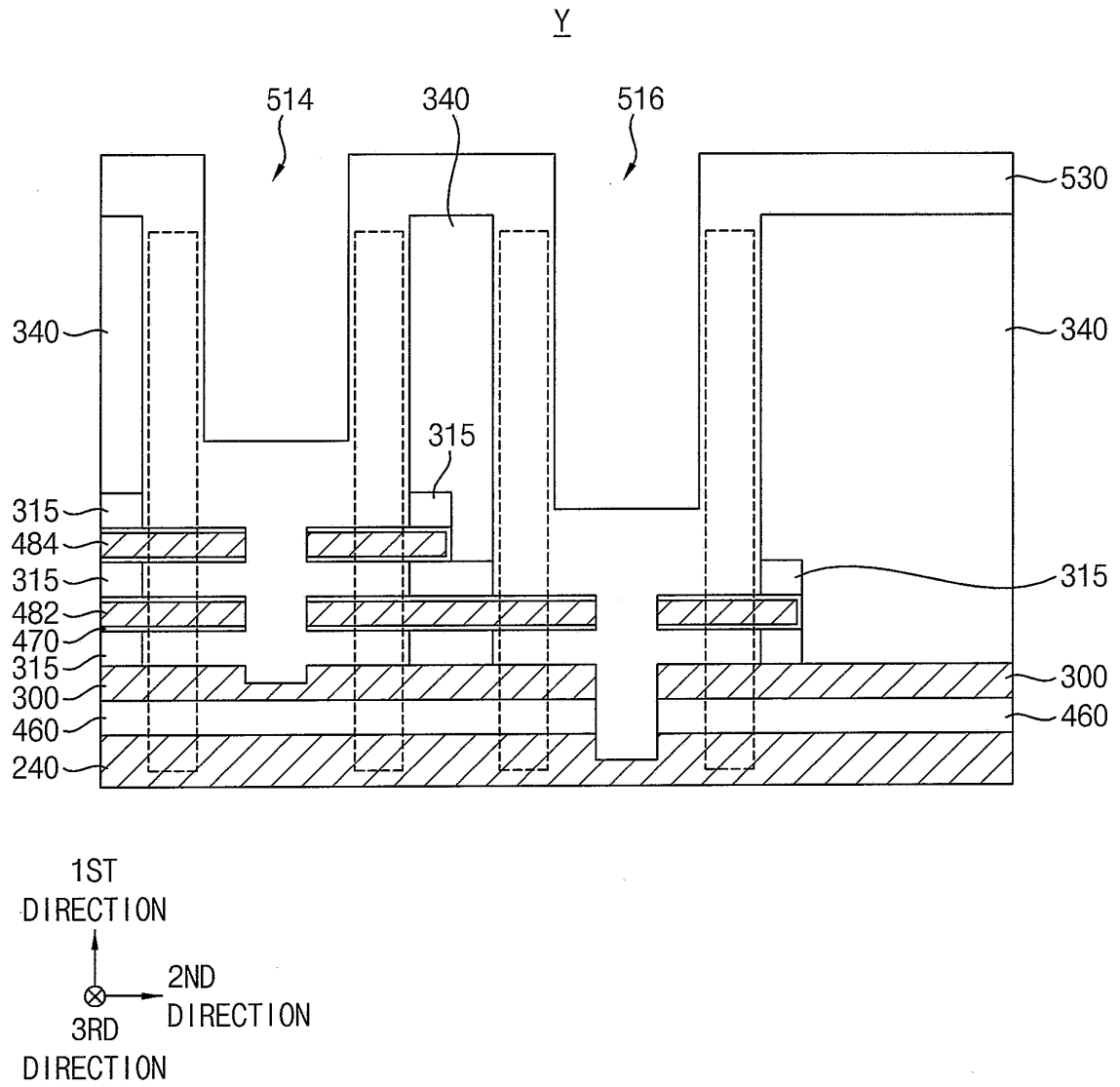
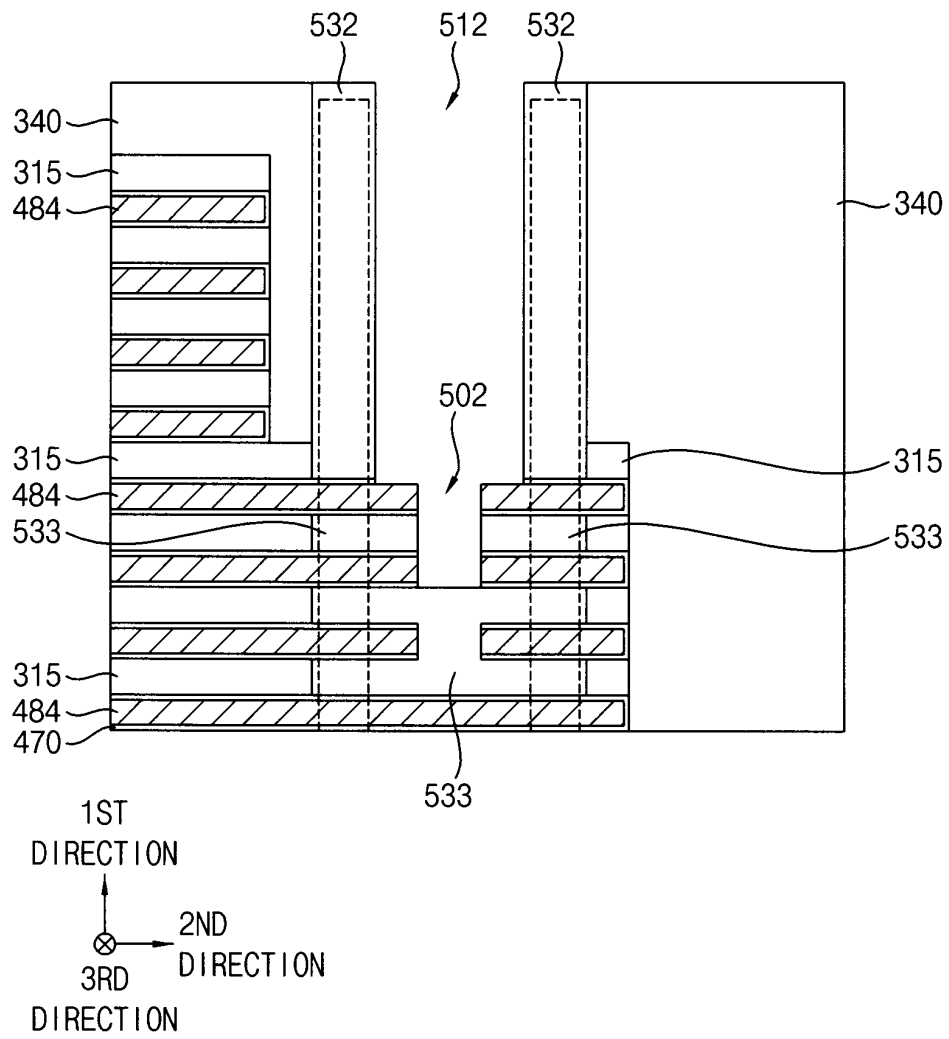


FIG. 22



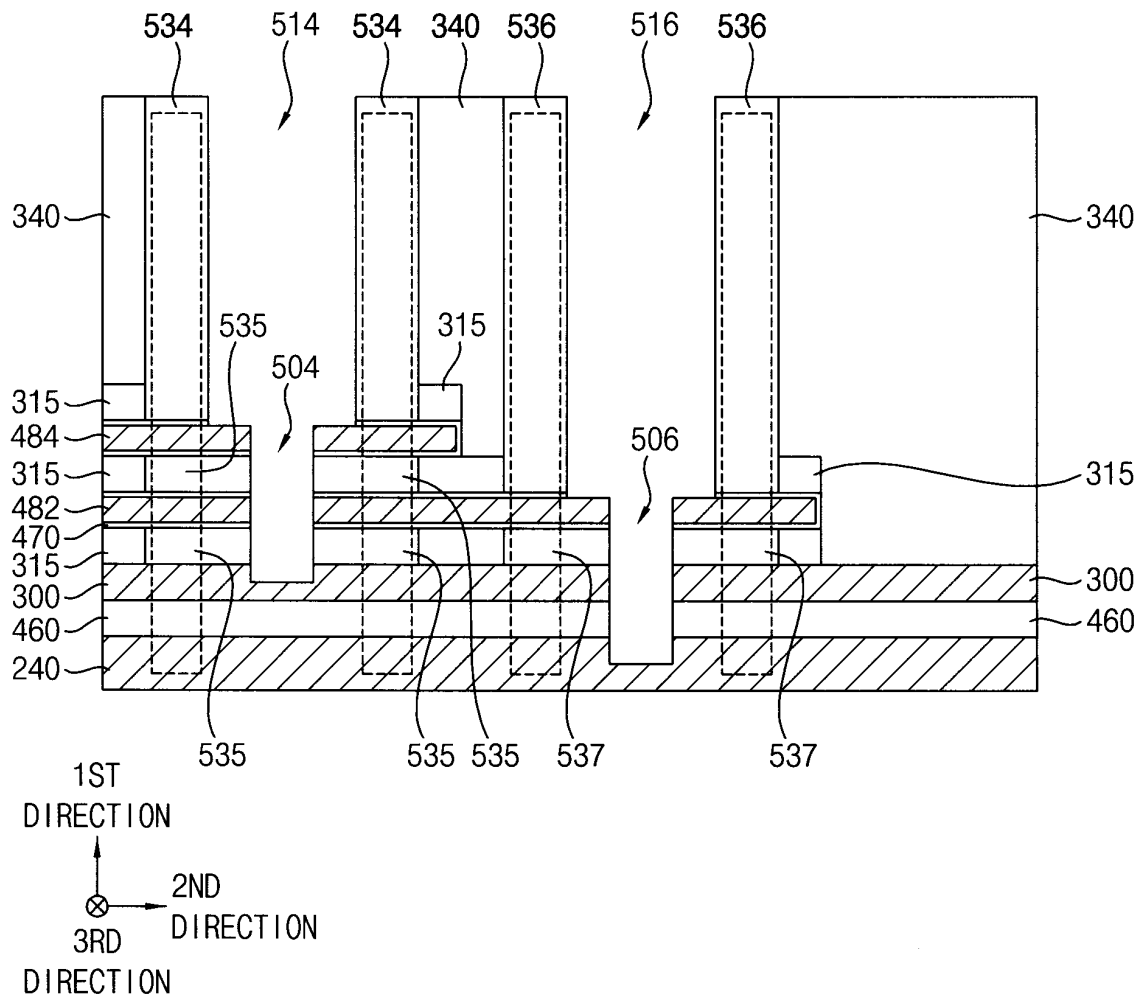
# FIG. 23

X

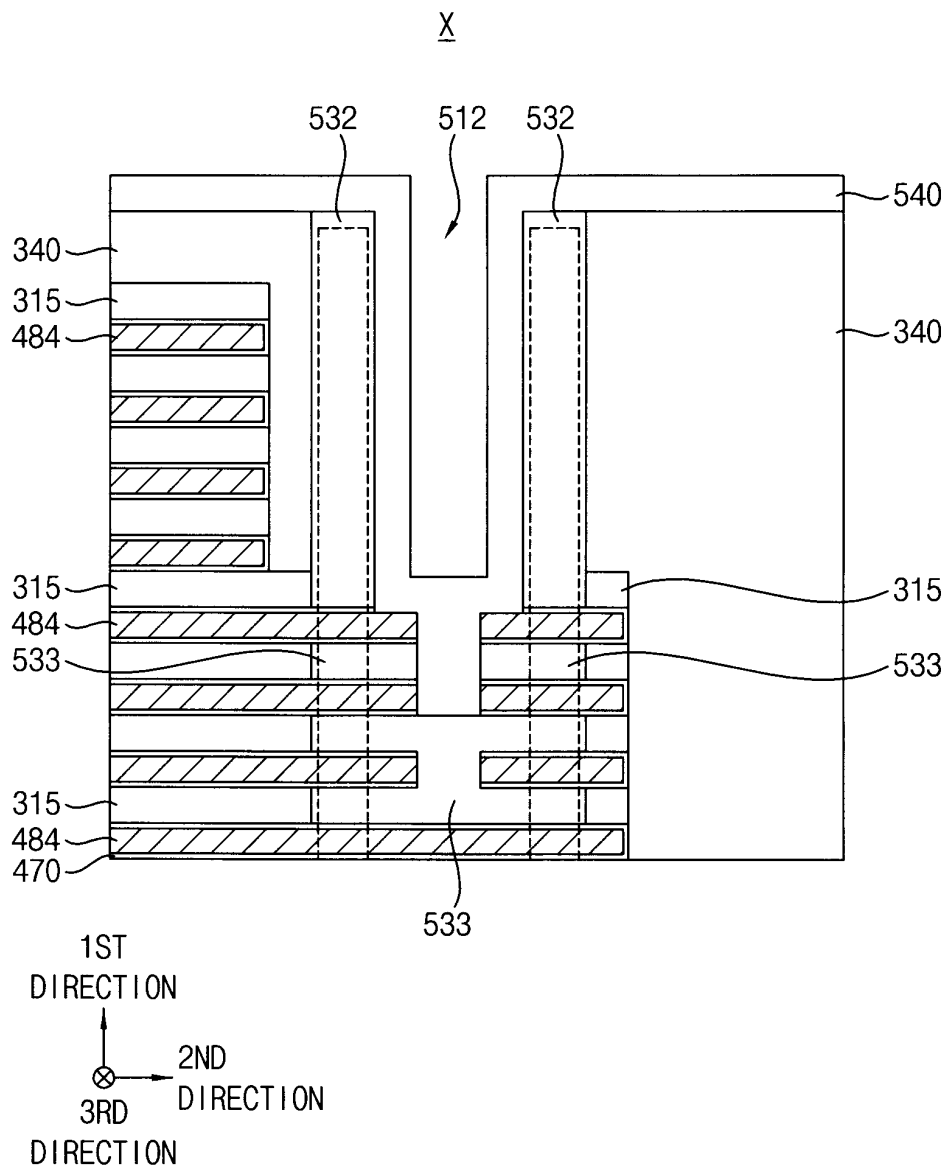


# FIG. 24

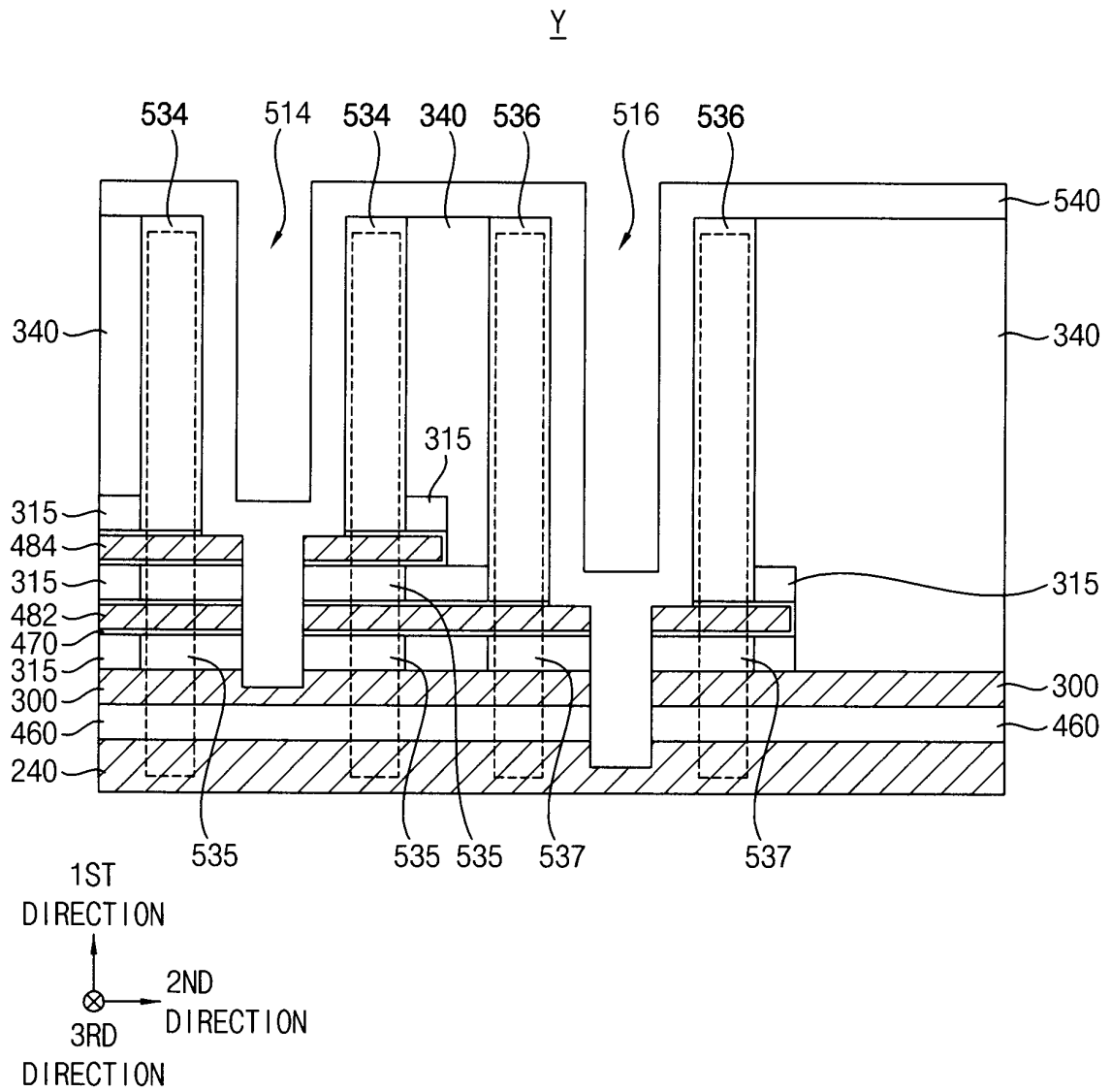
Y



# FIG. 25



# FIG. 26



# FIG. 27

X

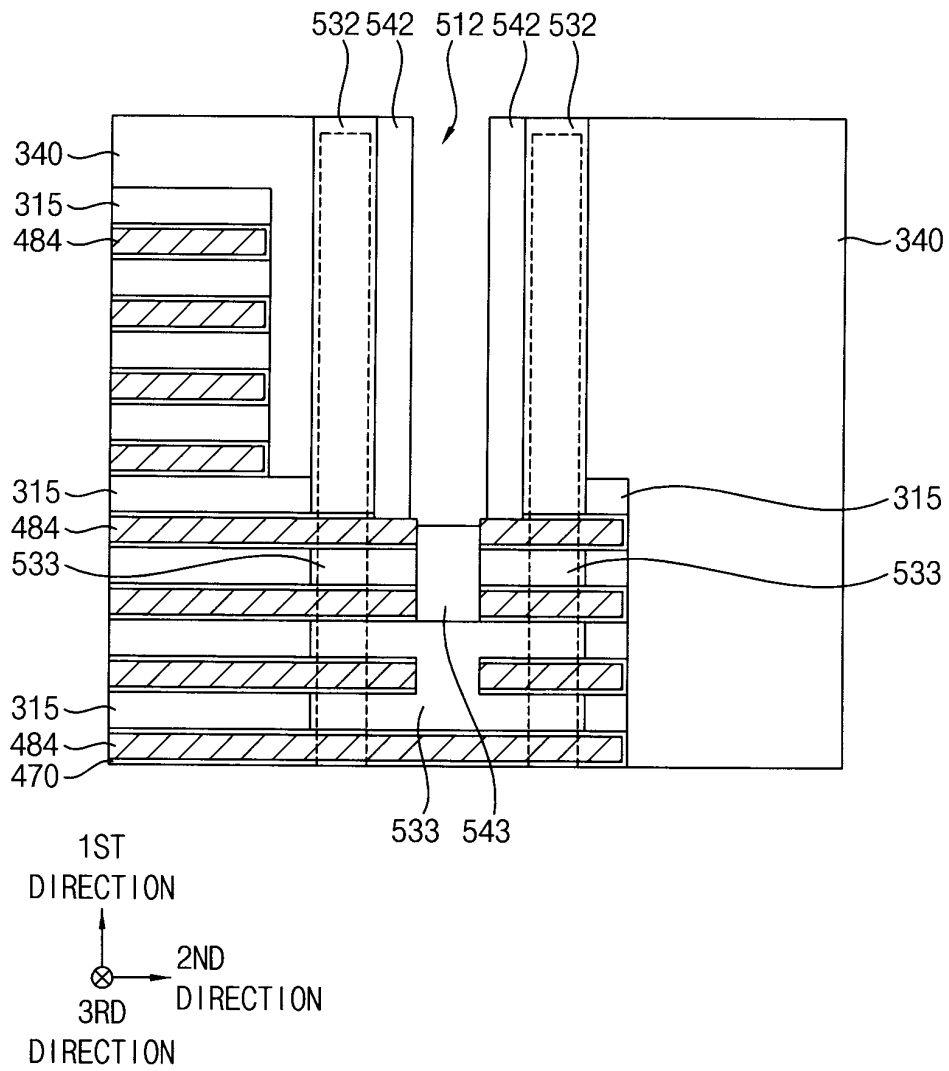
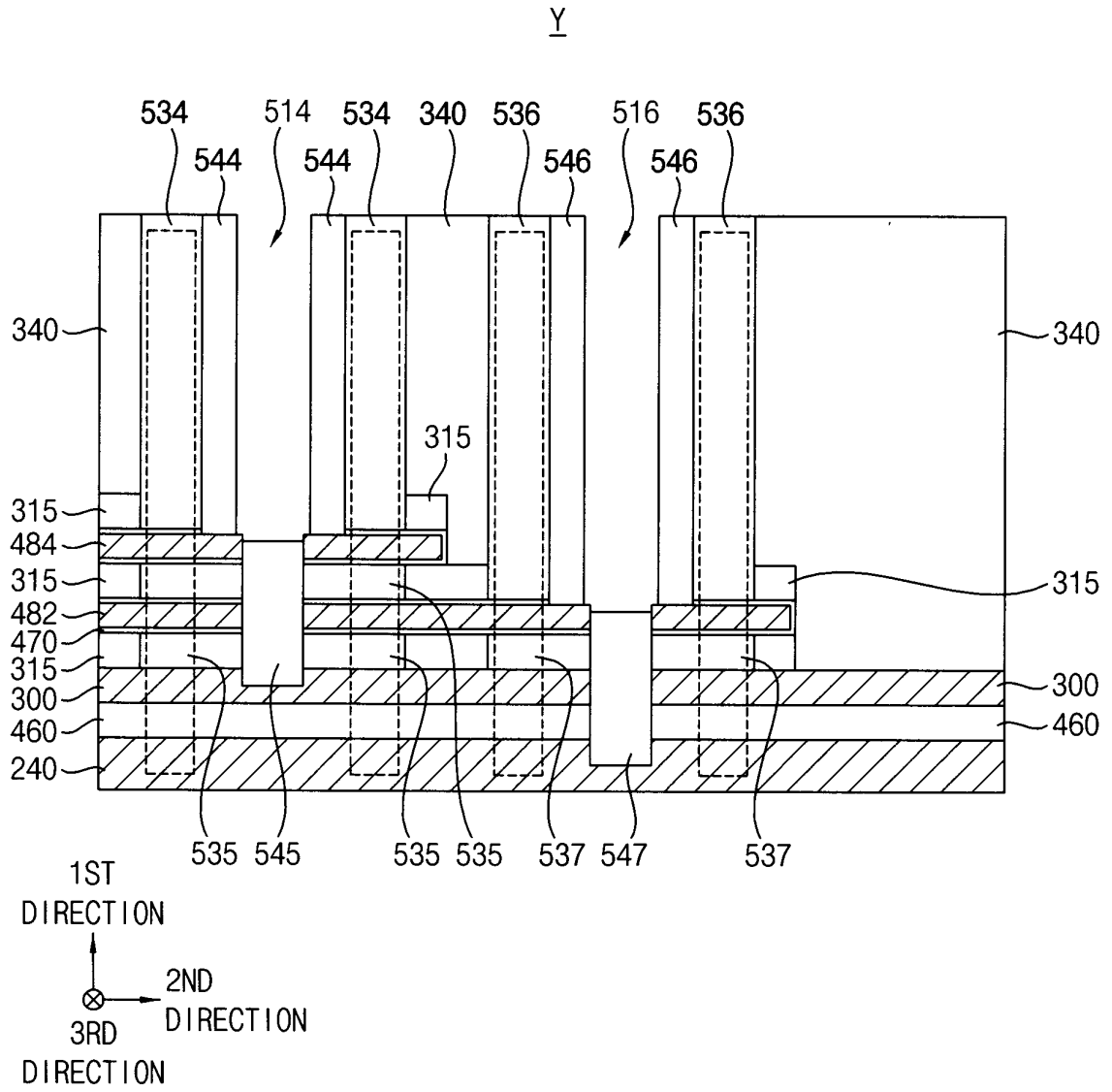
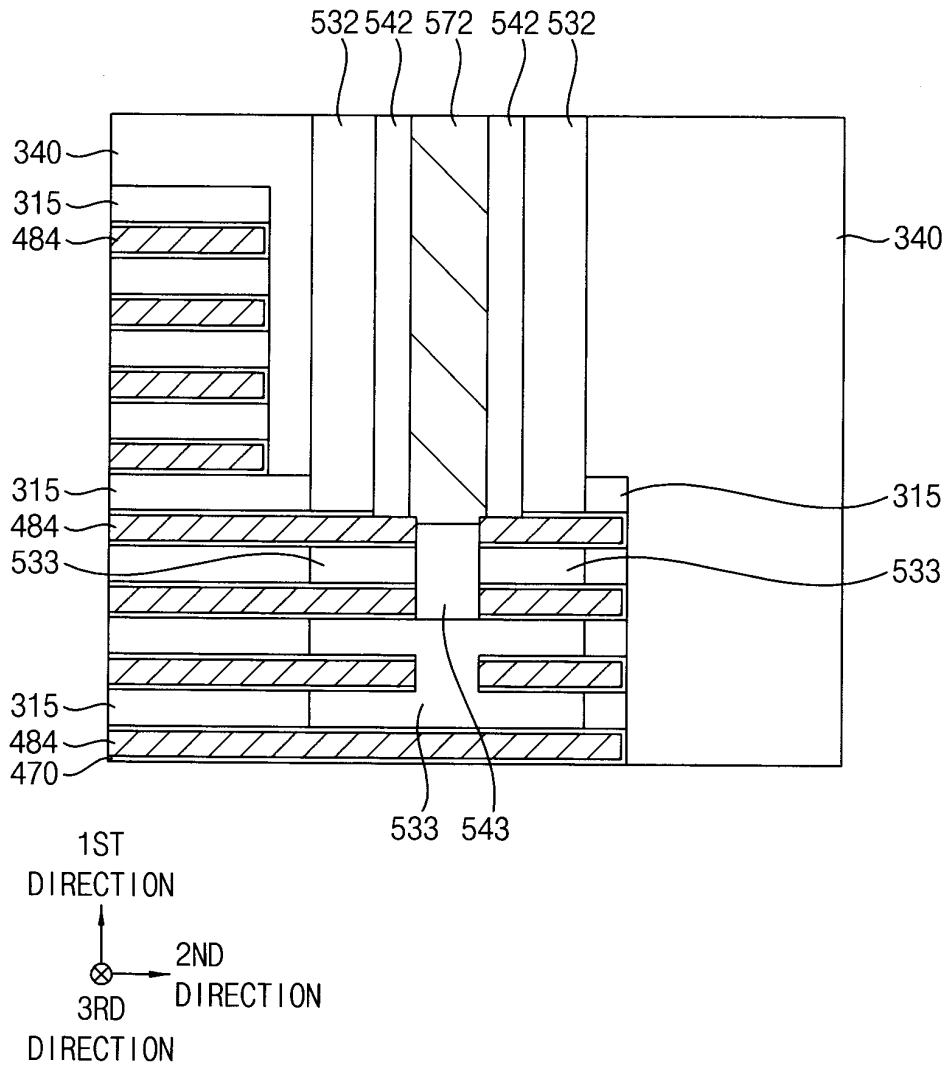


FIG. 28



# FIG. 29

X



# FIG. 30

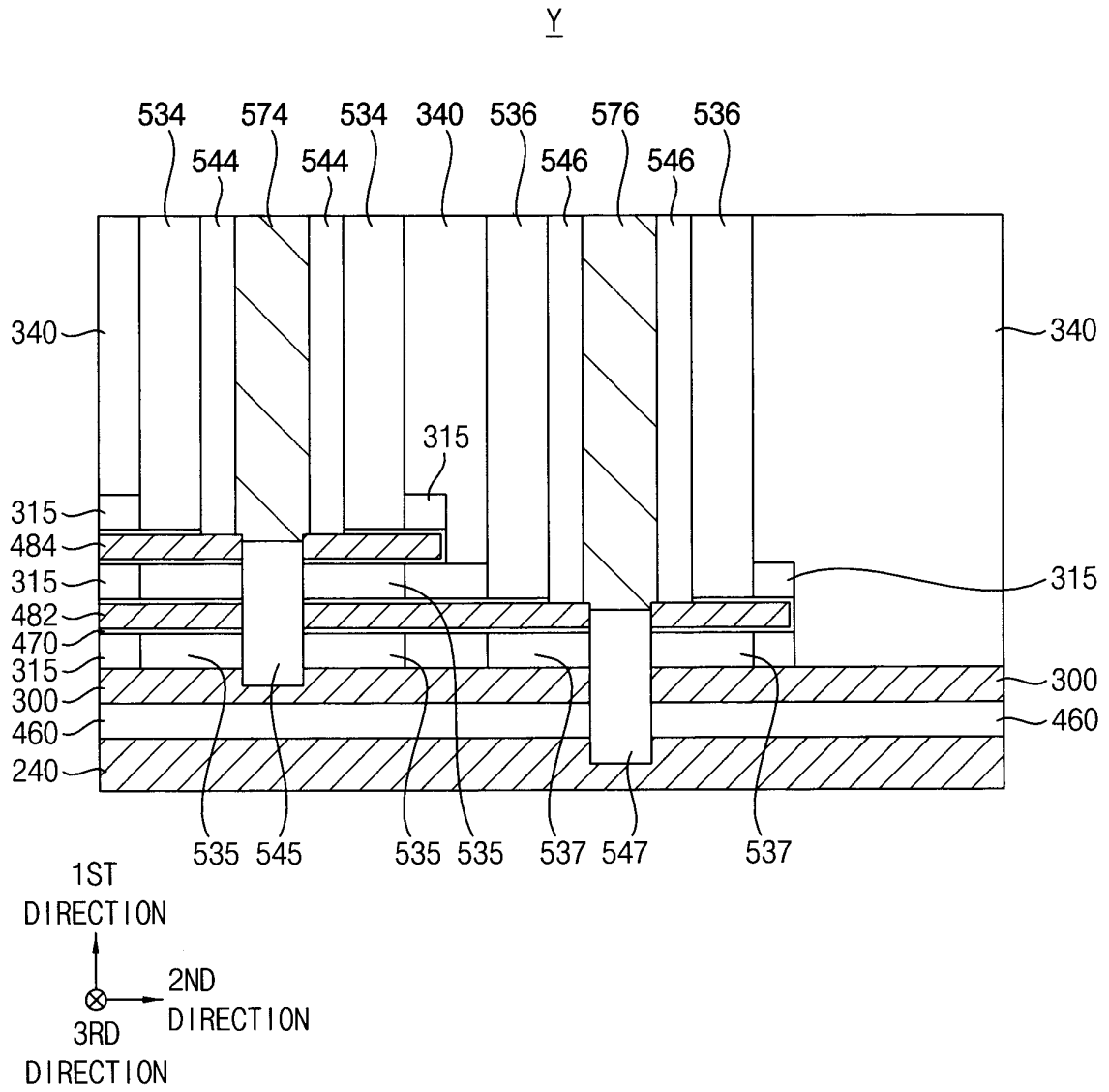


FIG. 31

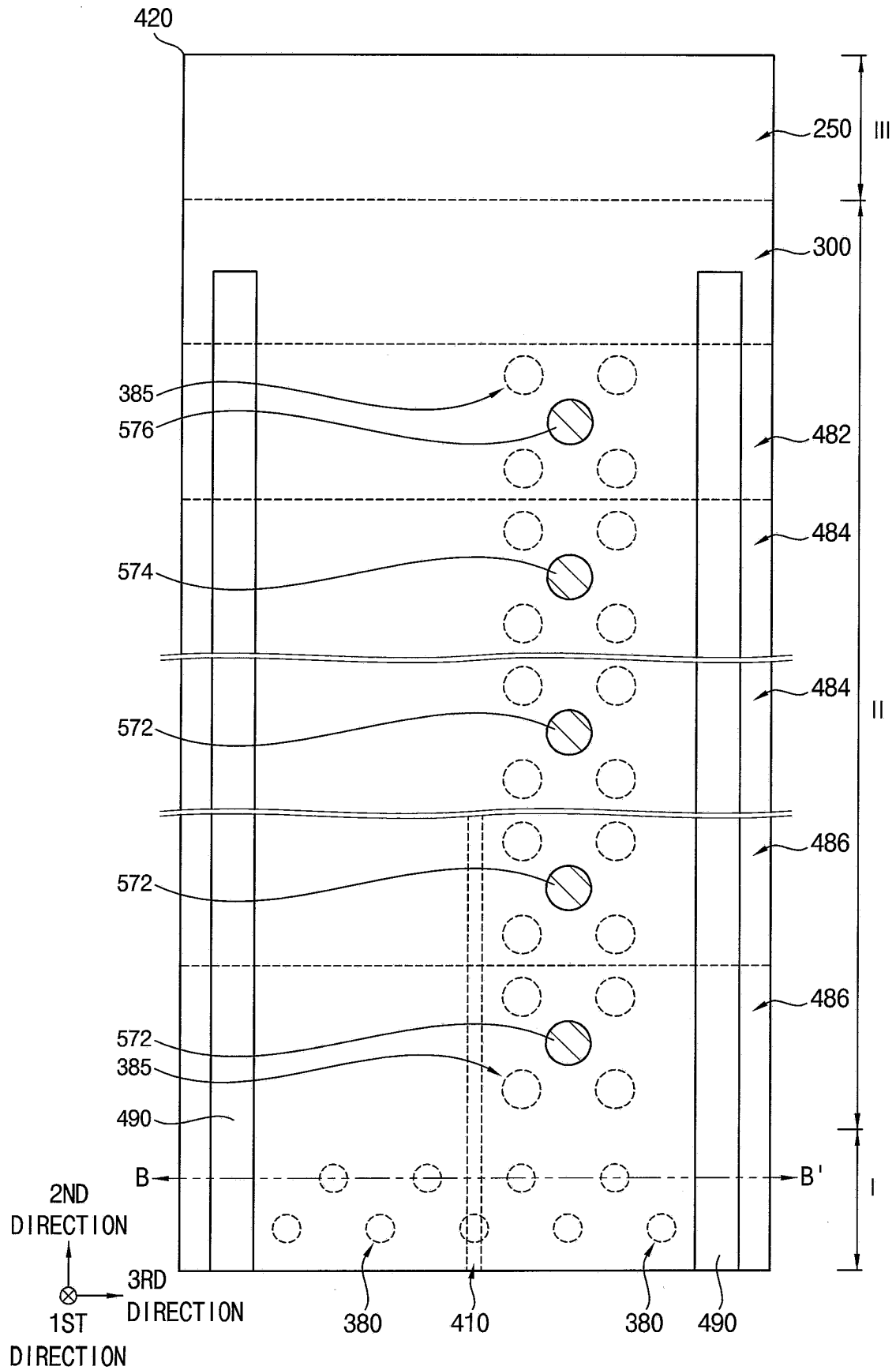


FIG. 32

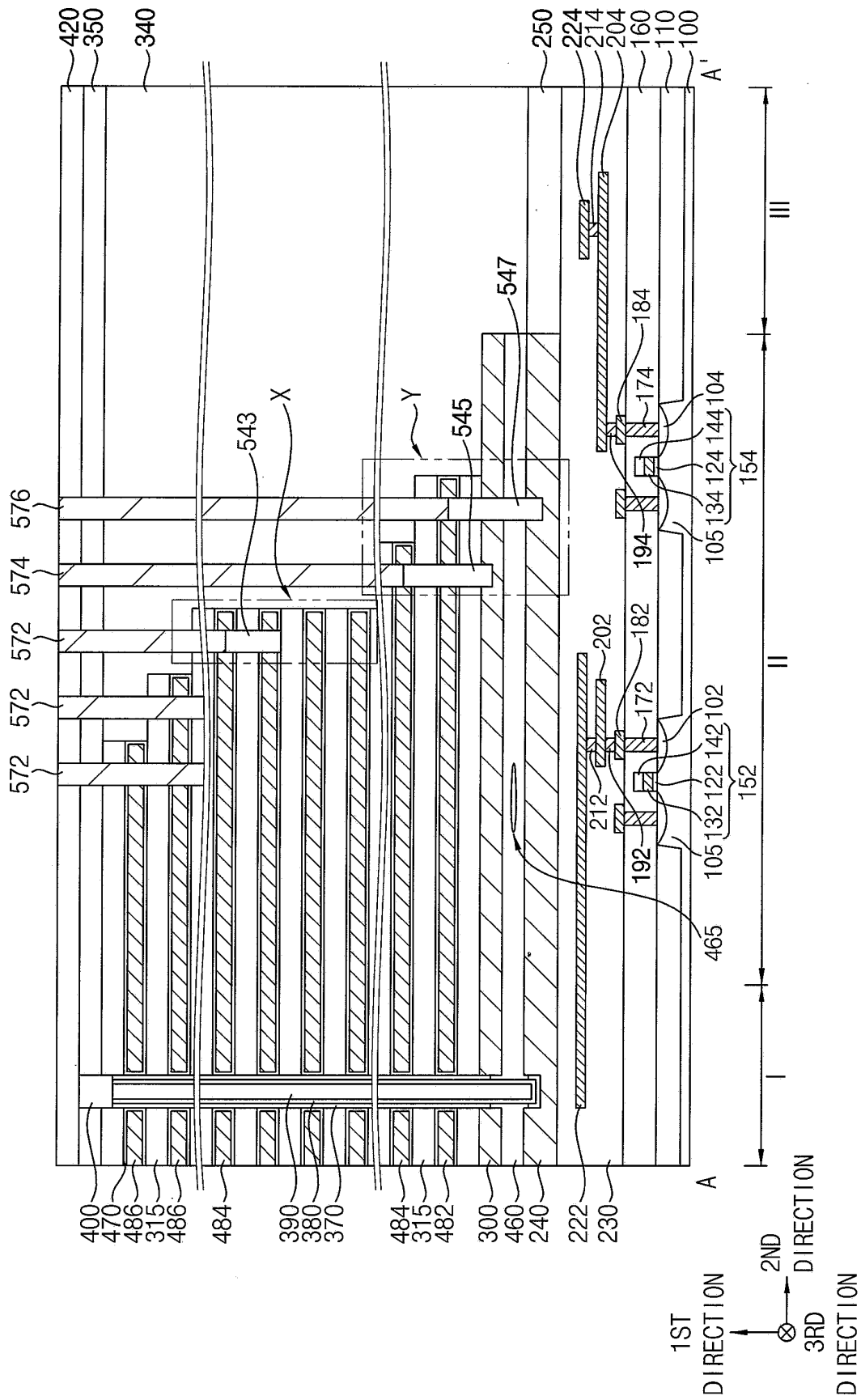


FIG. 33

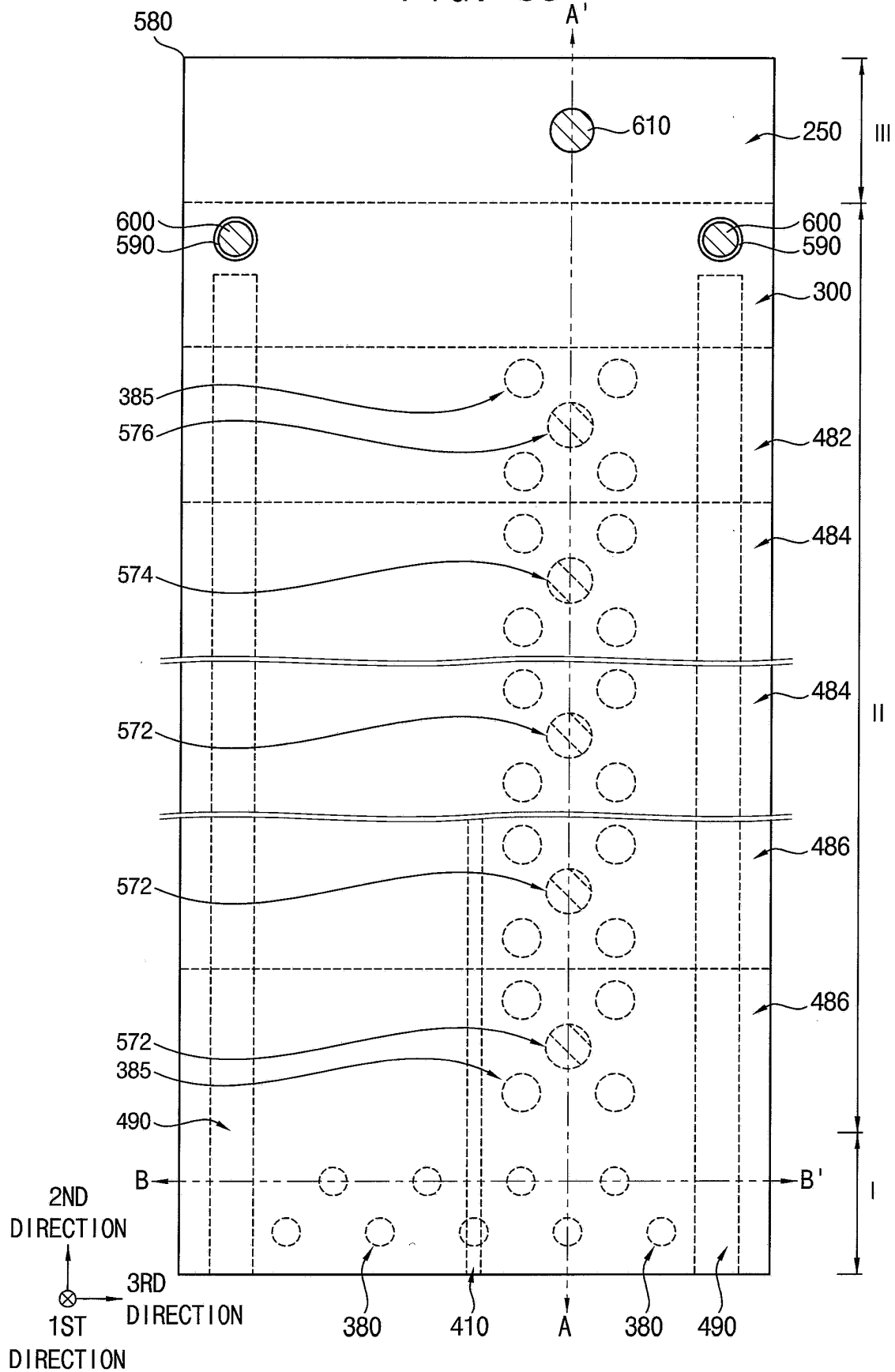


FIG. 34

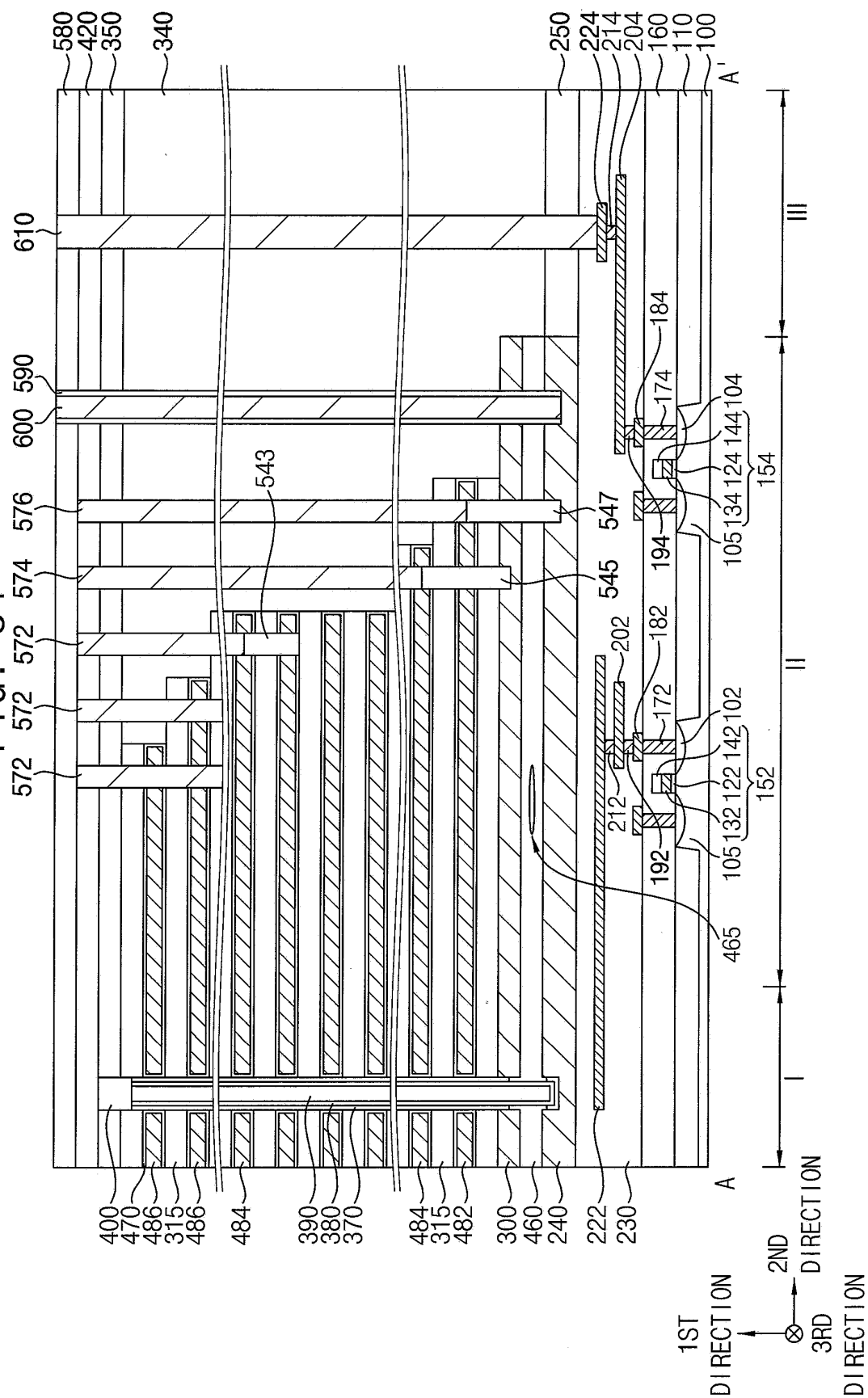


FIG. 35

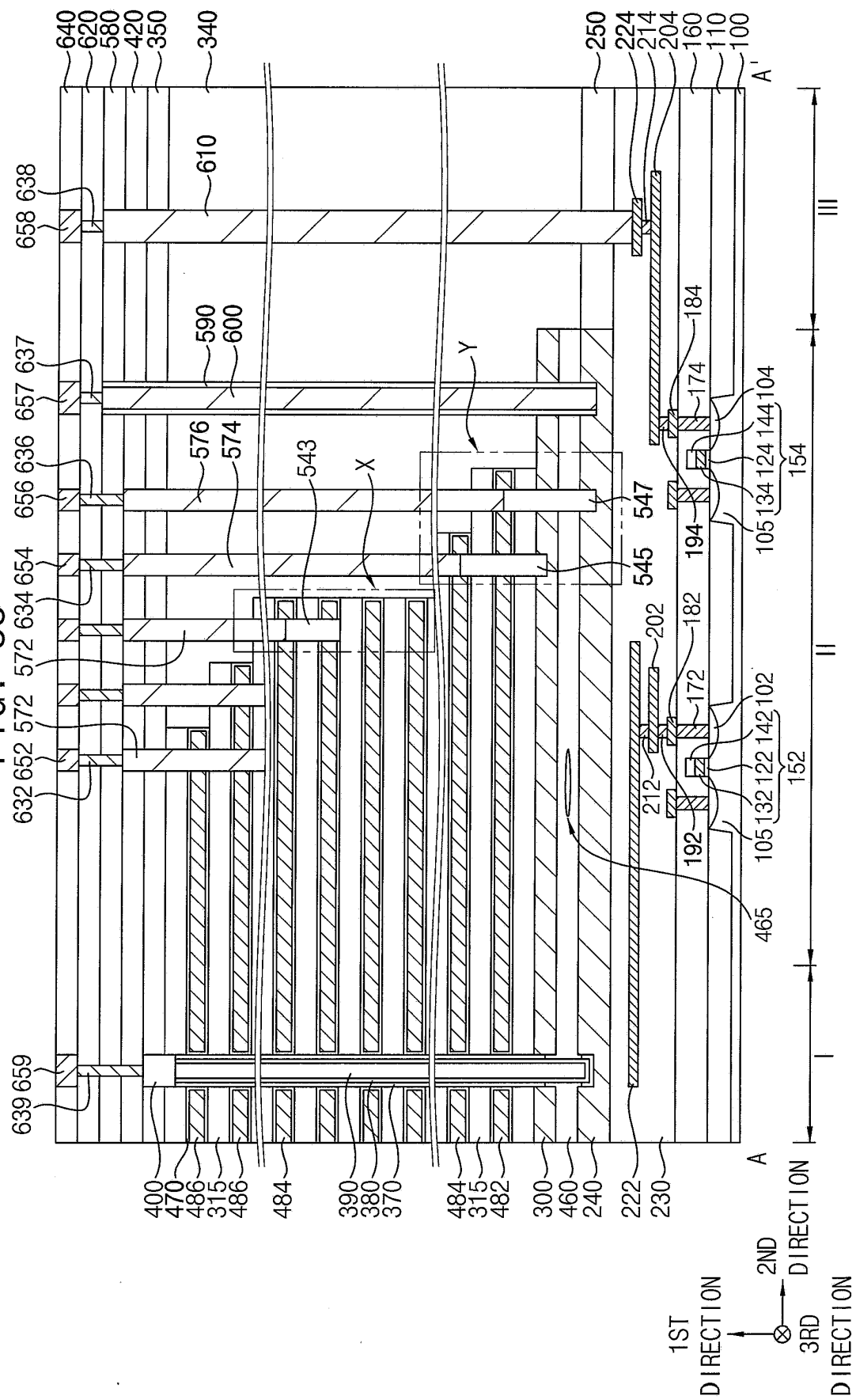


FIG. 36

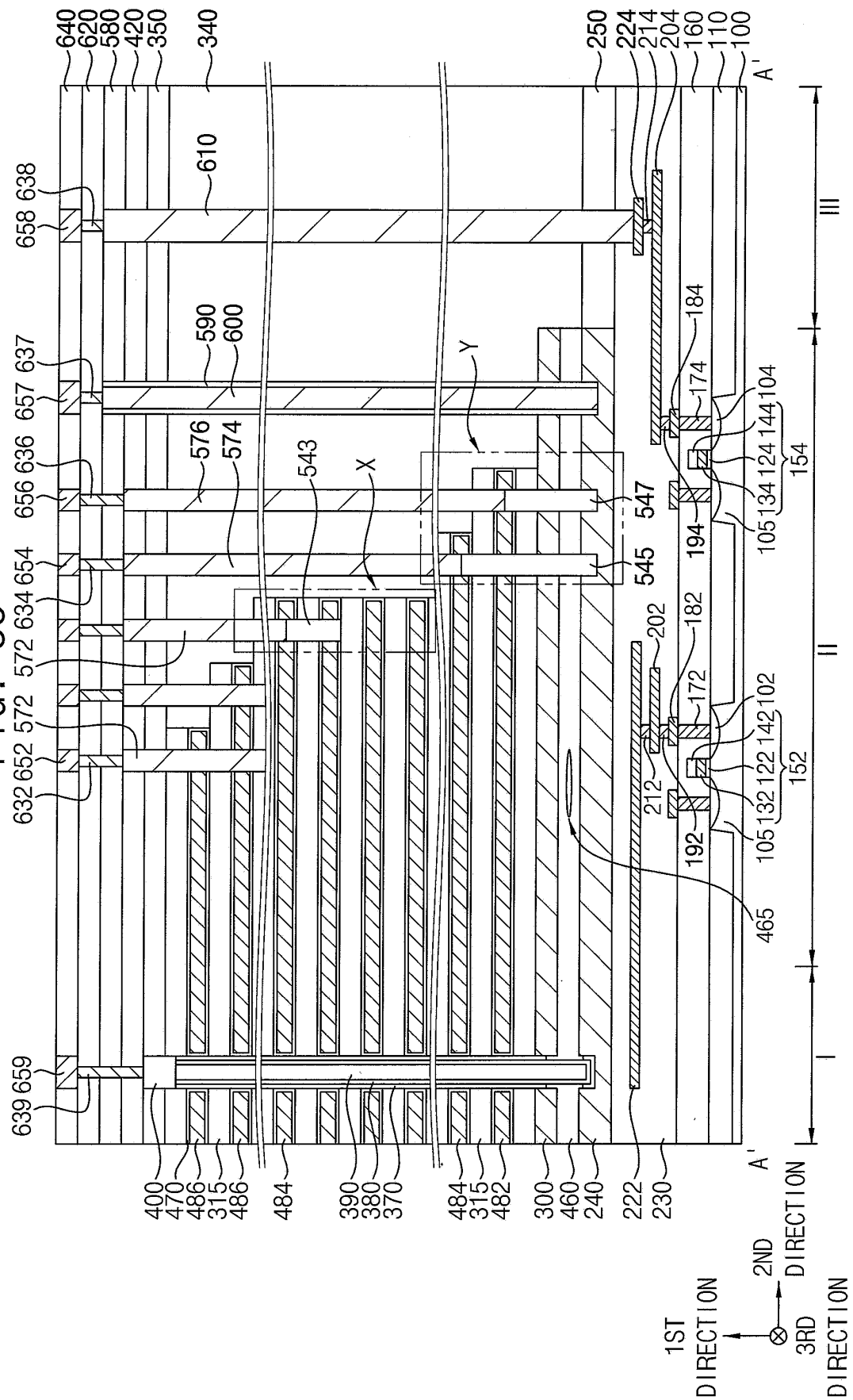


FIG. 37

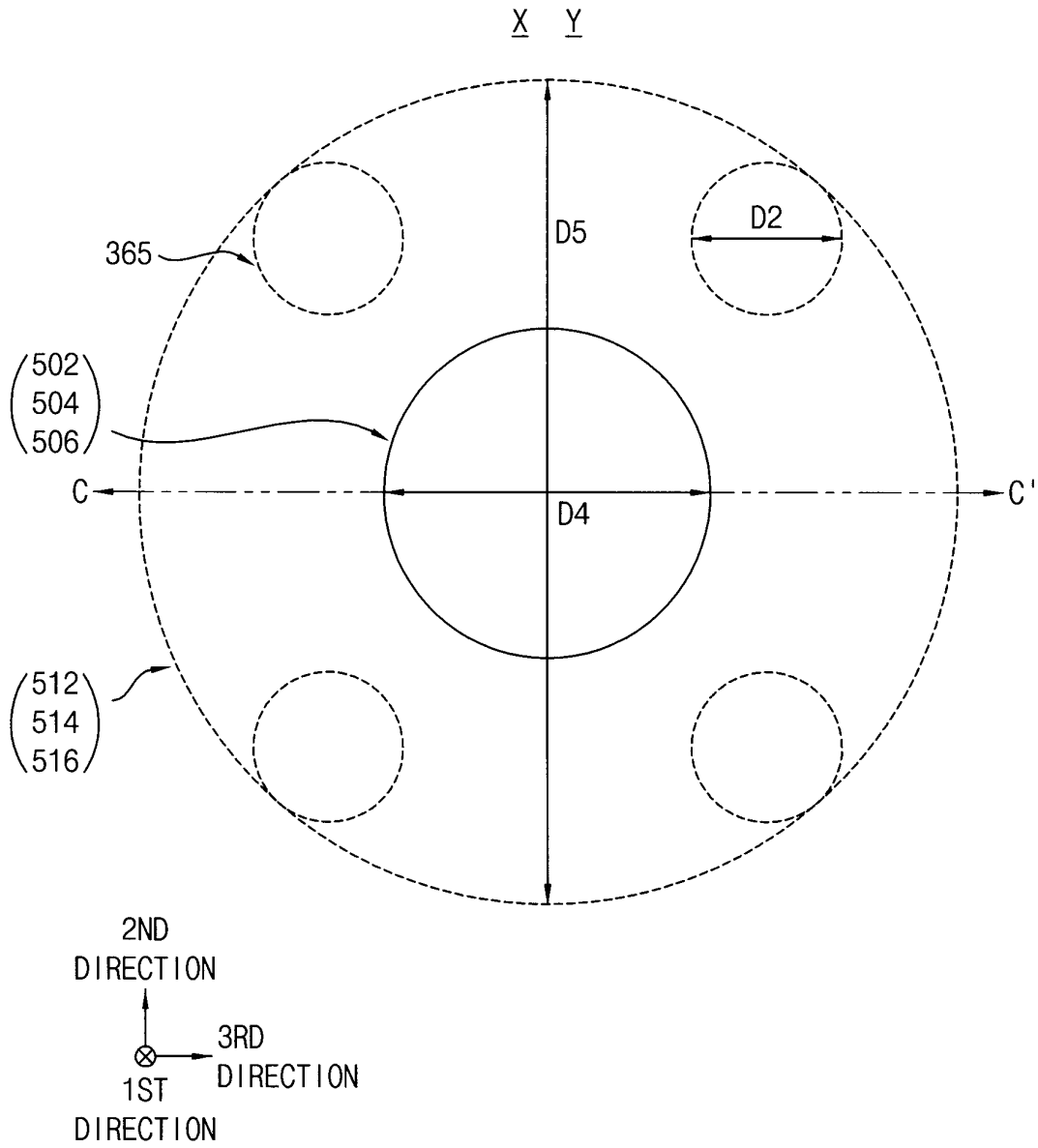


FIG. 38

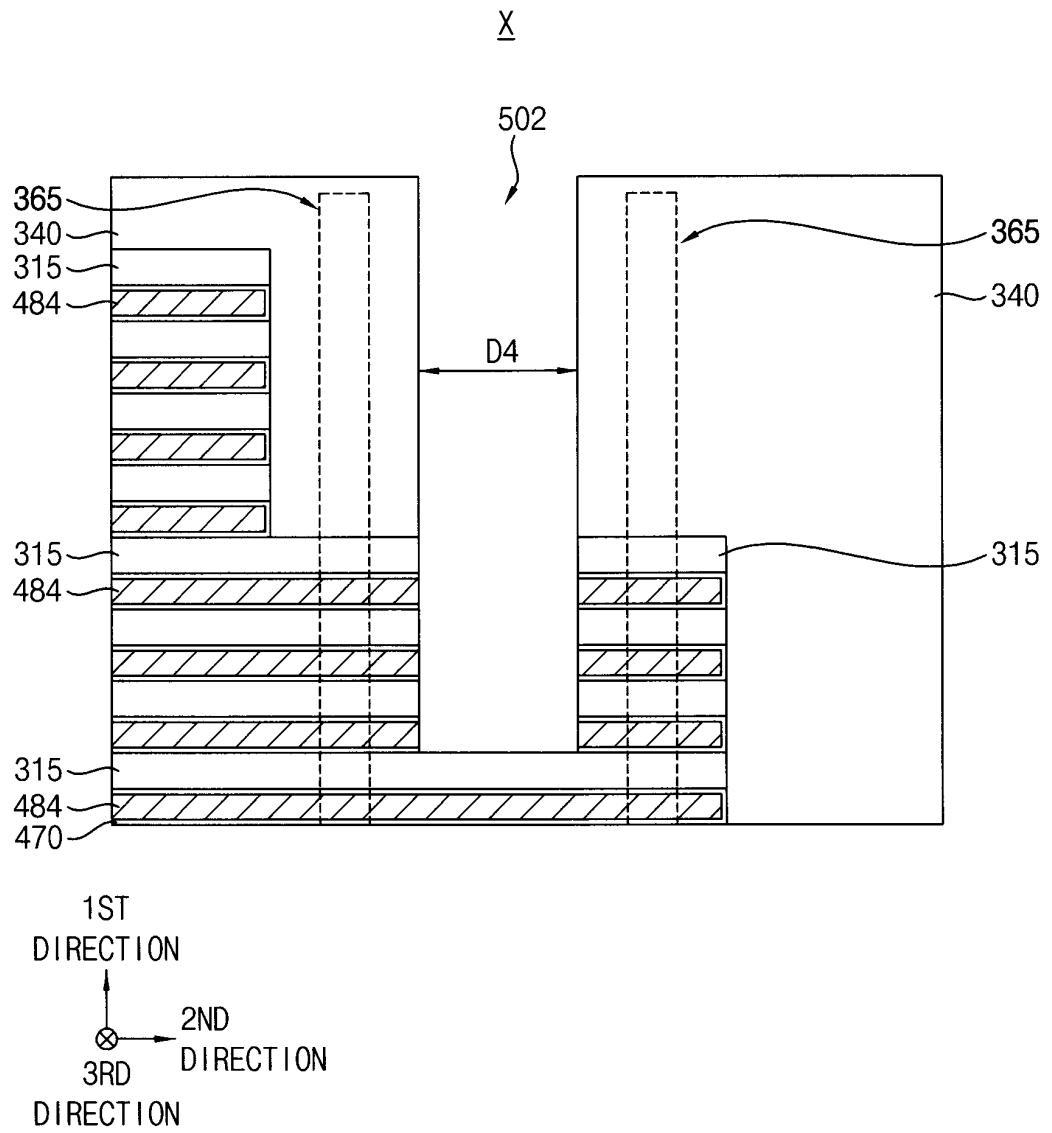


FIG. 39

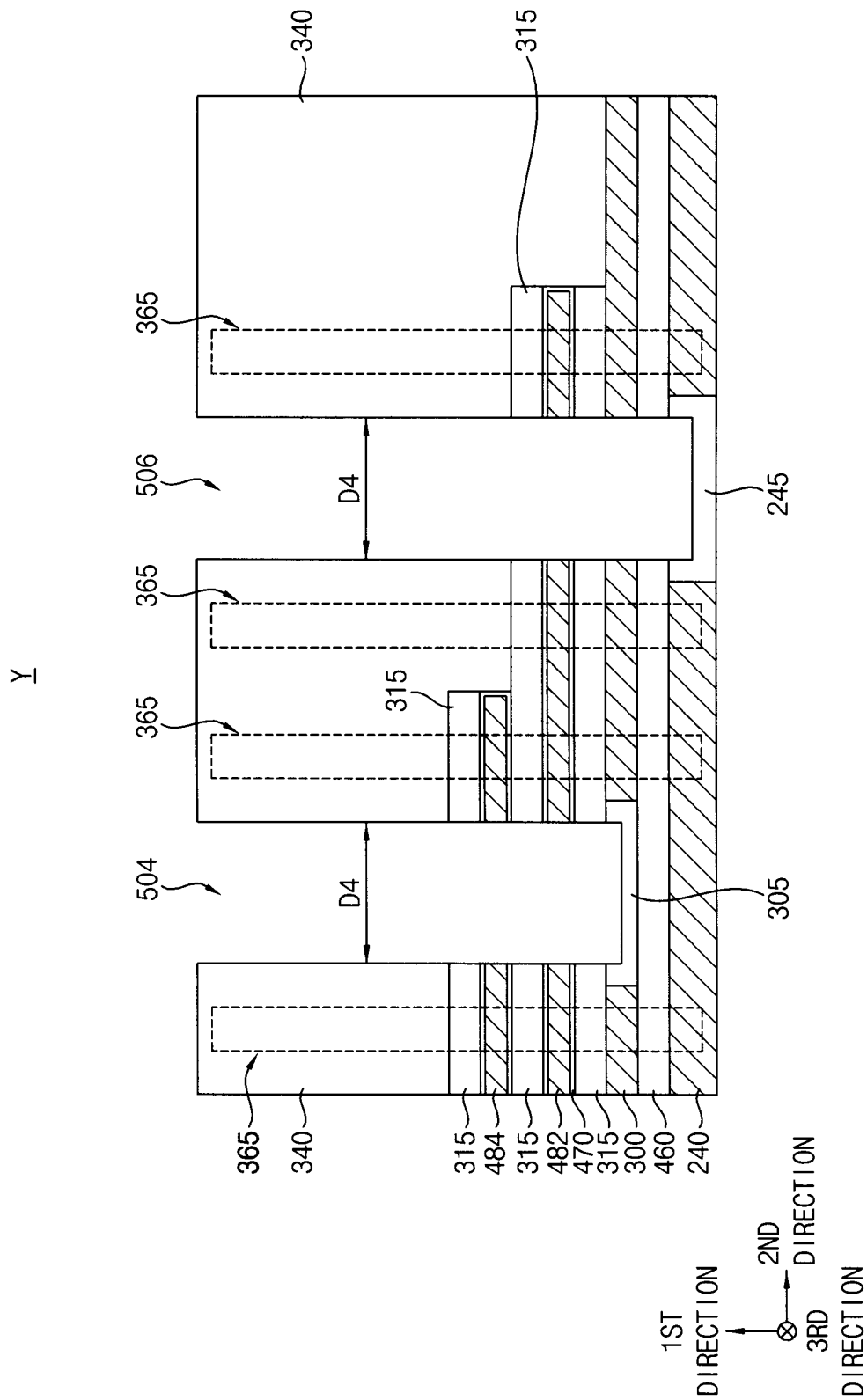


FIG. 40

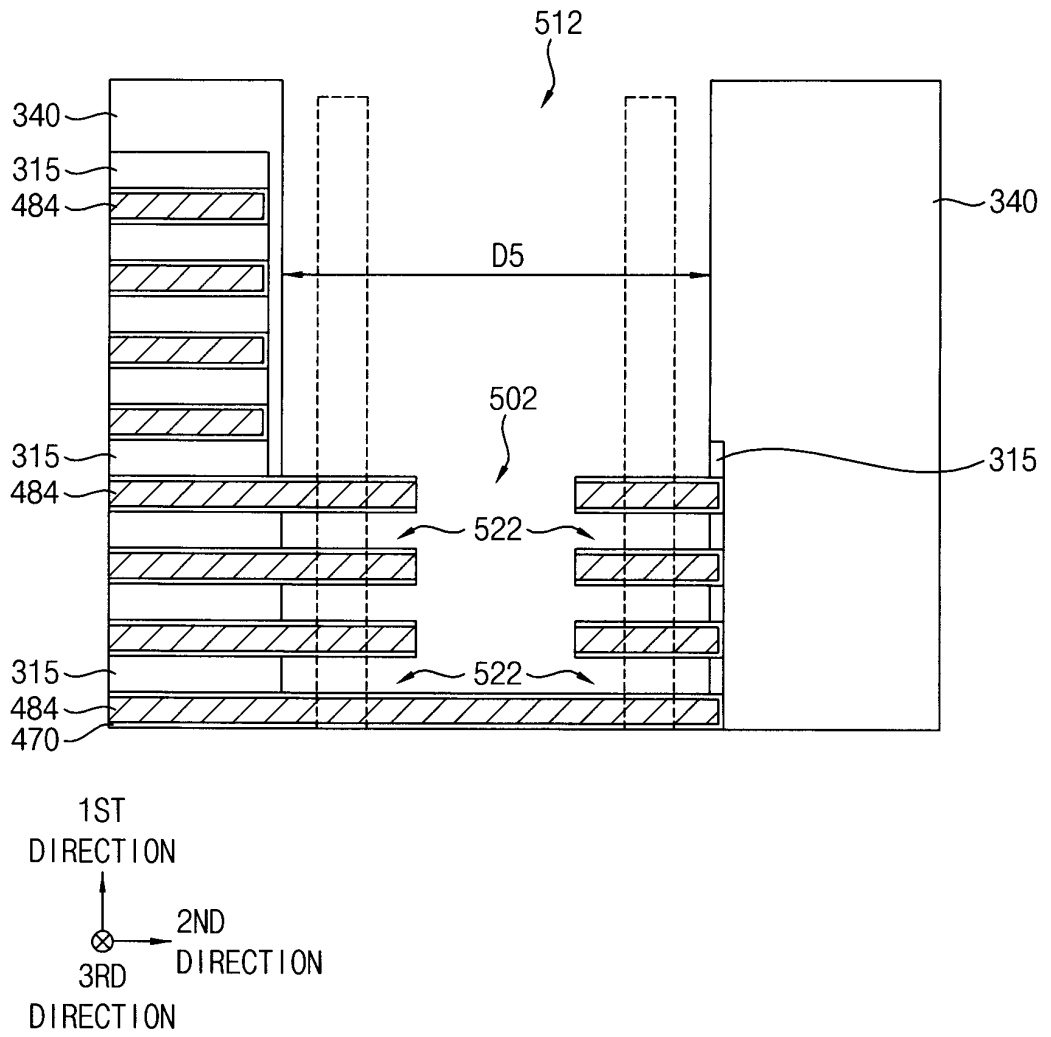
X

FIG. 41

Y

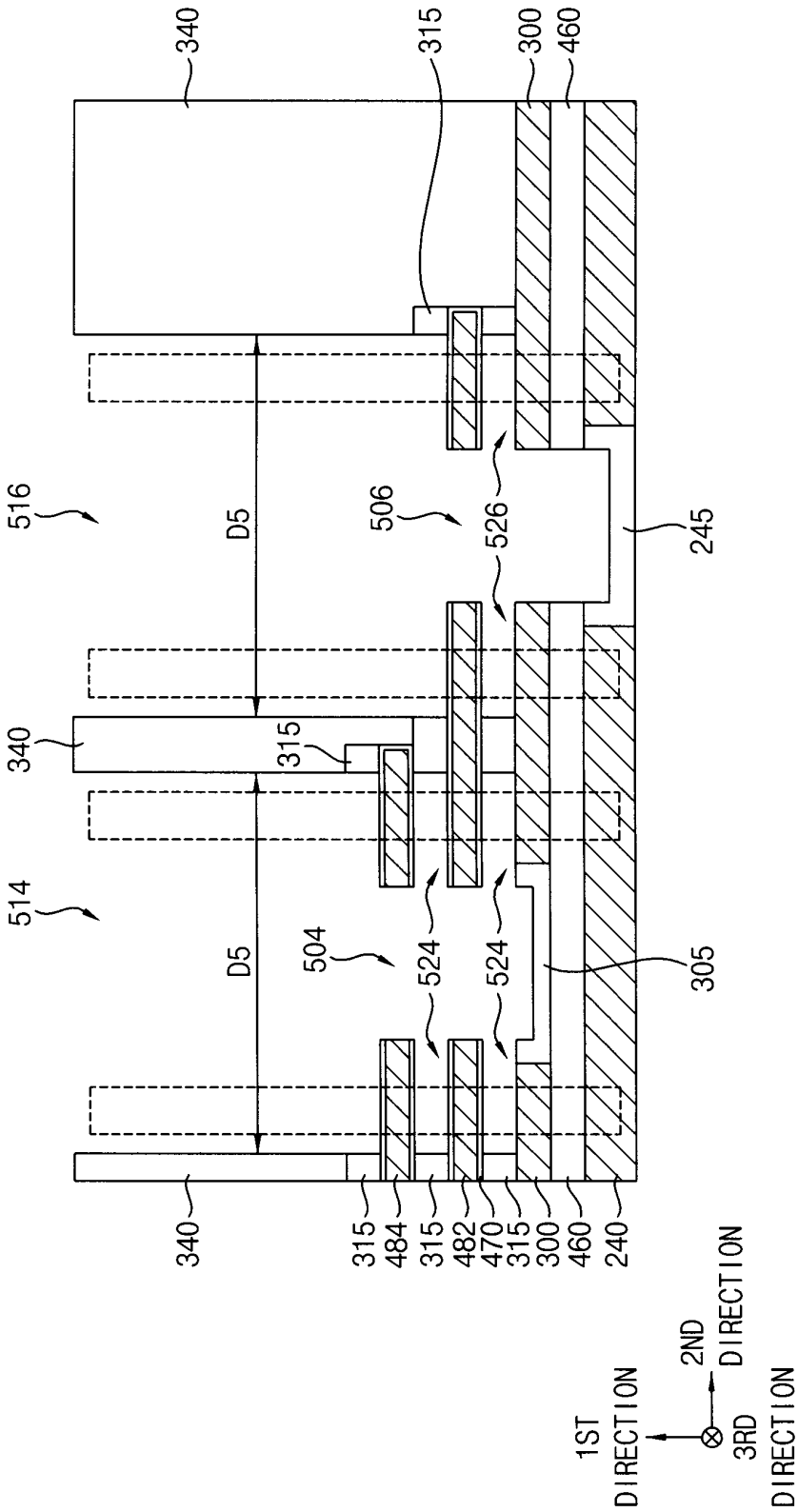


FIG. 42

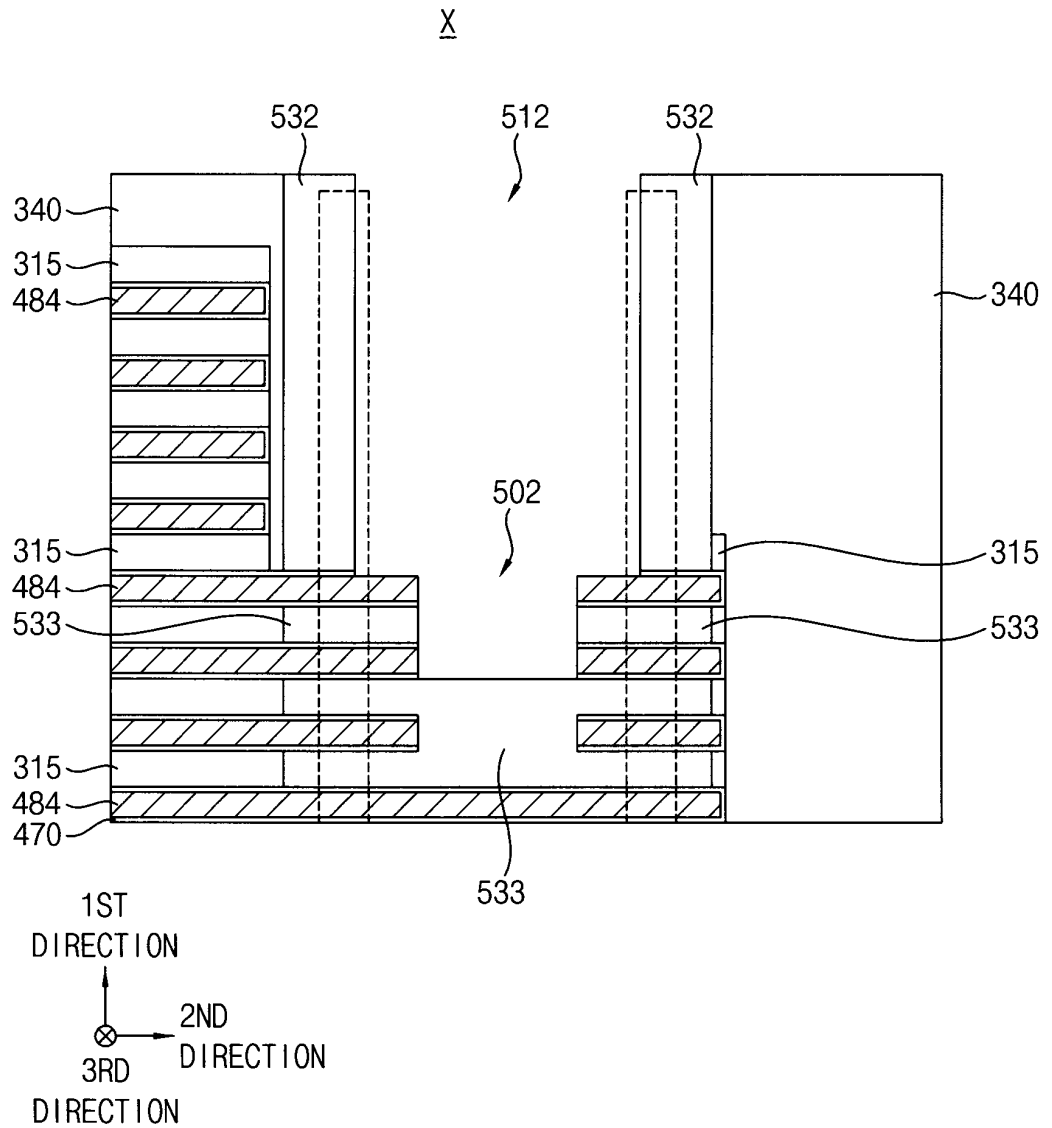
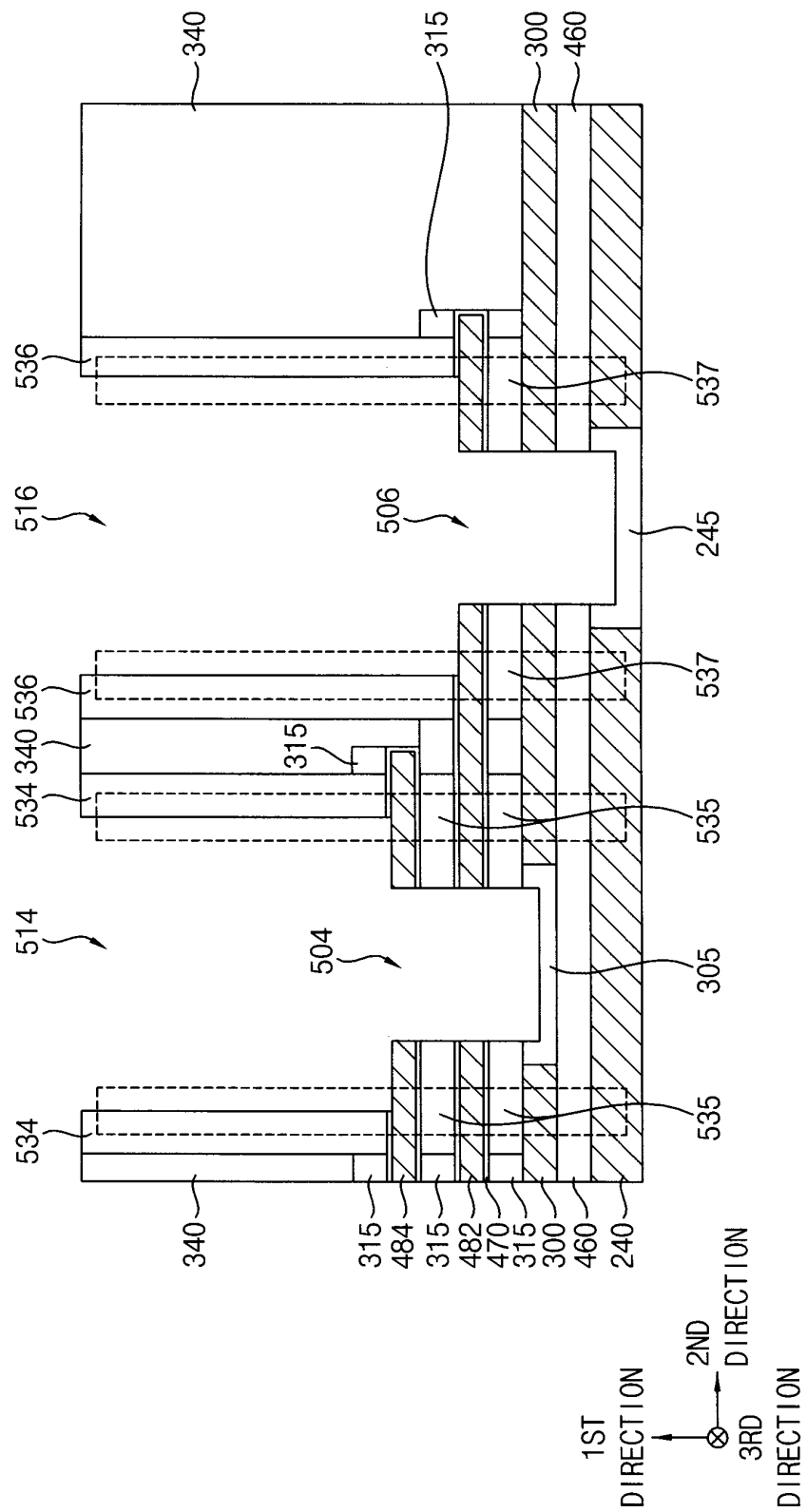
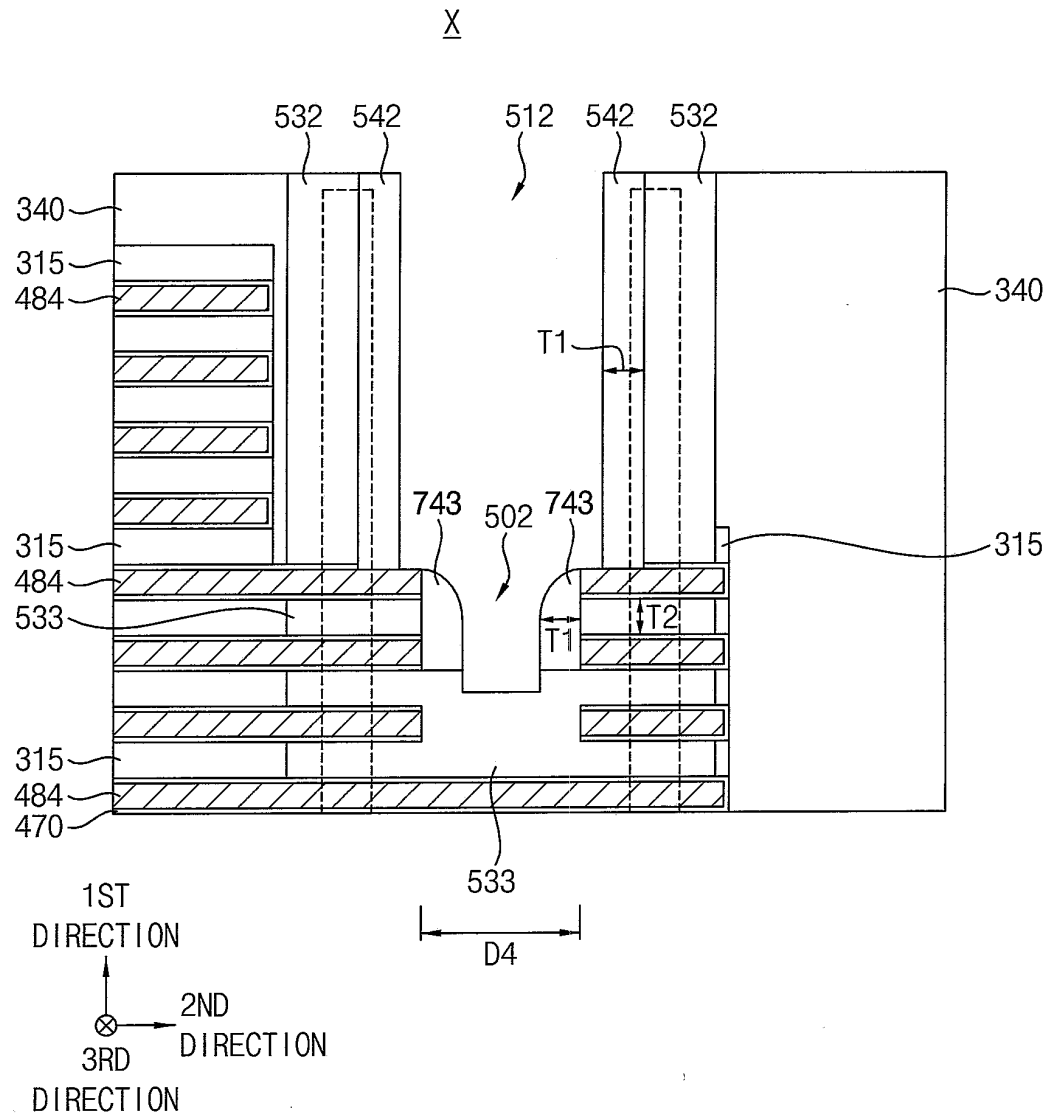


FIG. 43

Y



# FIG. 44



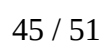
$\geq$ 

FIG. 46

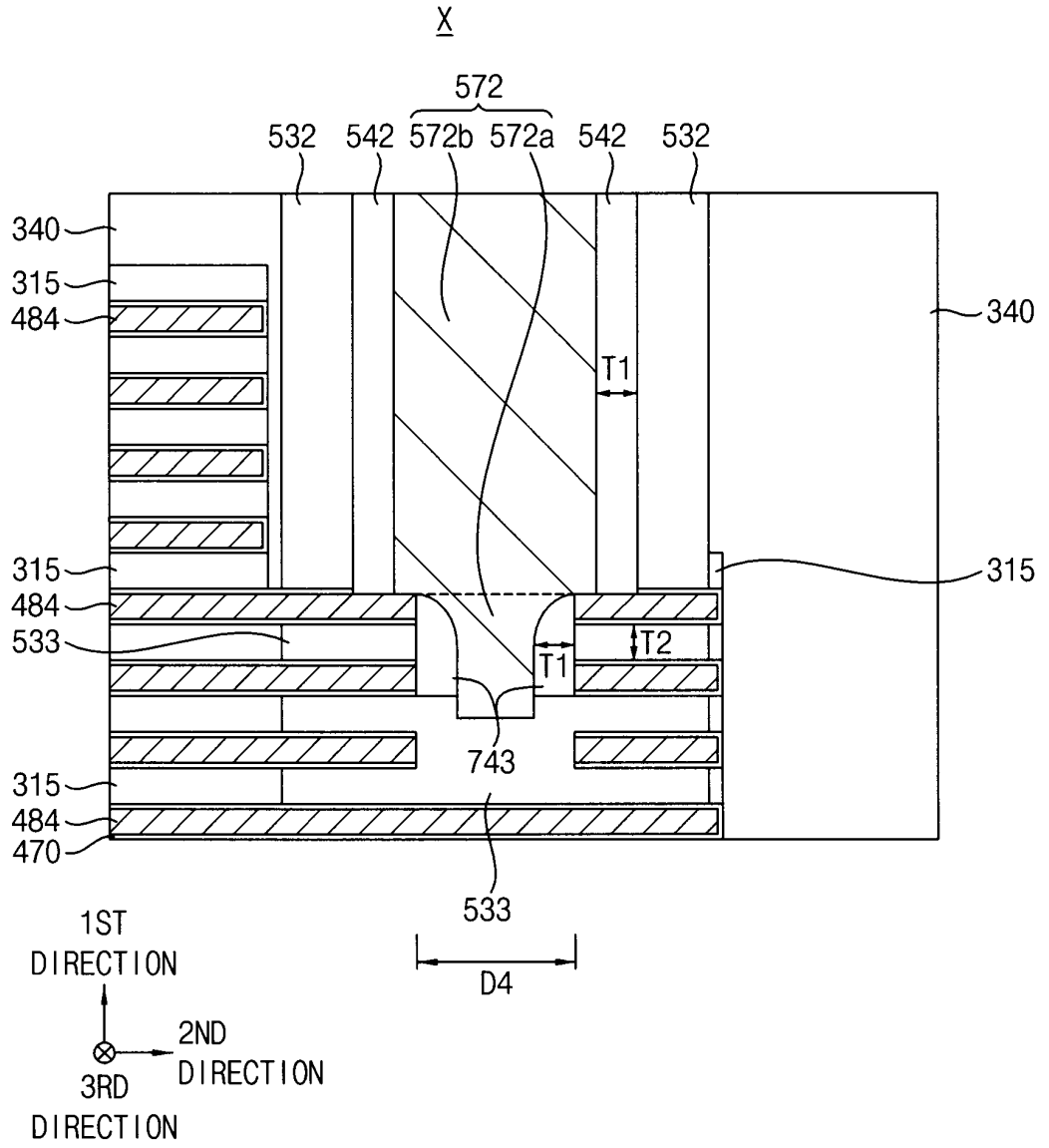


FIG. 47

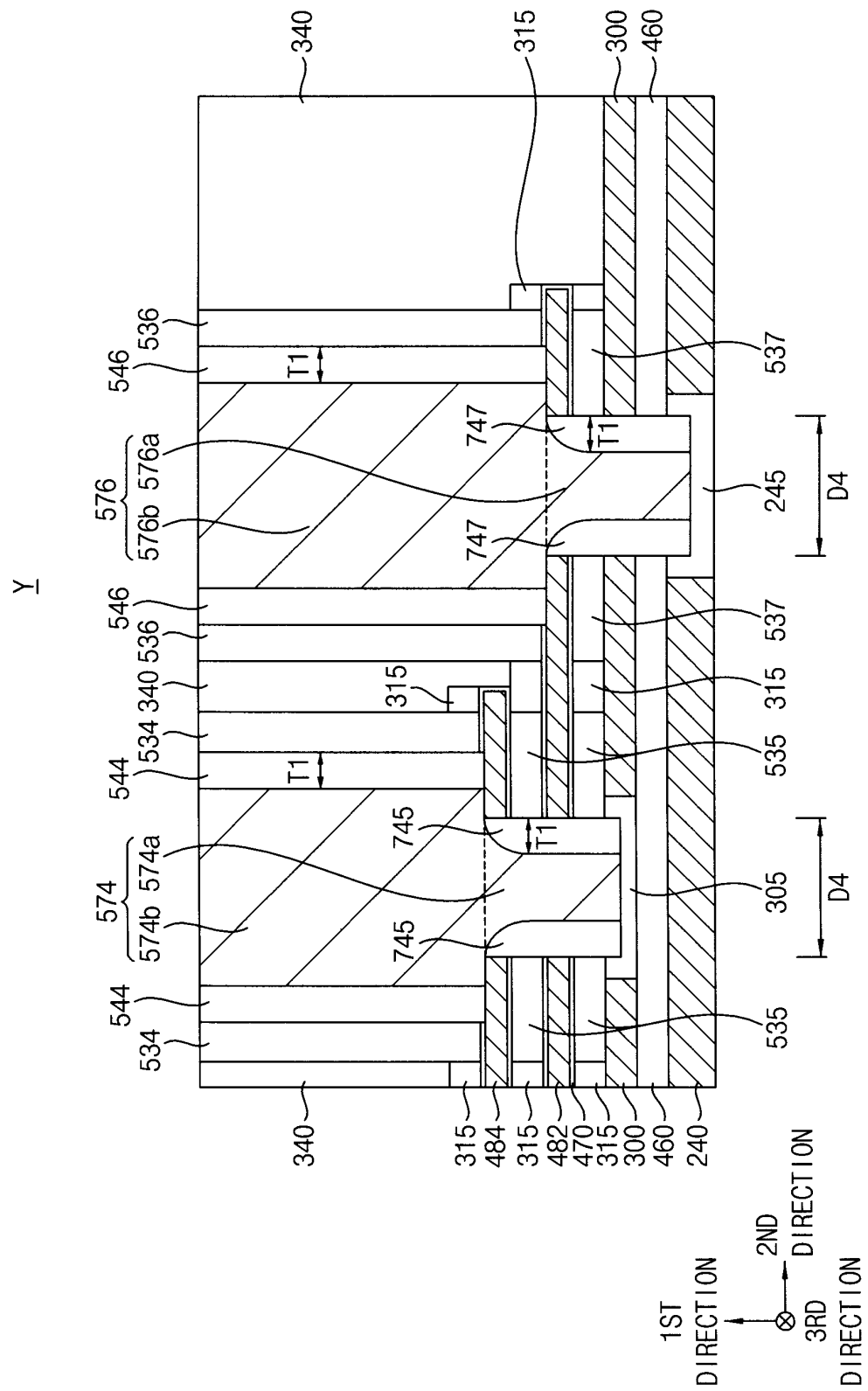


FIG. 48

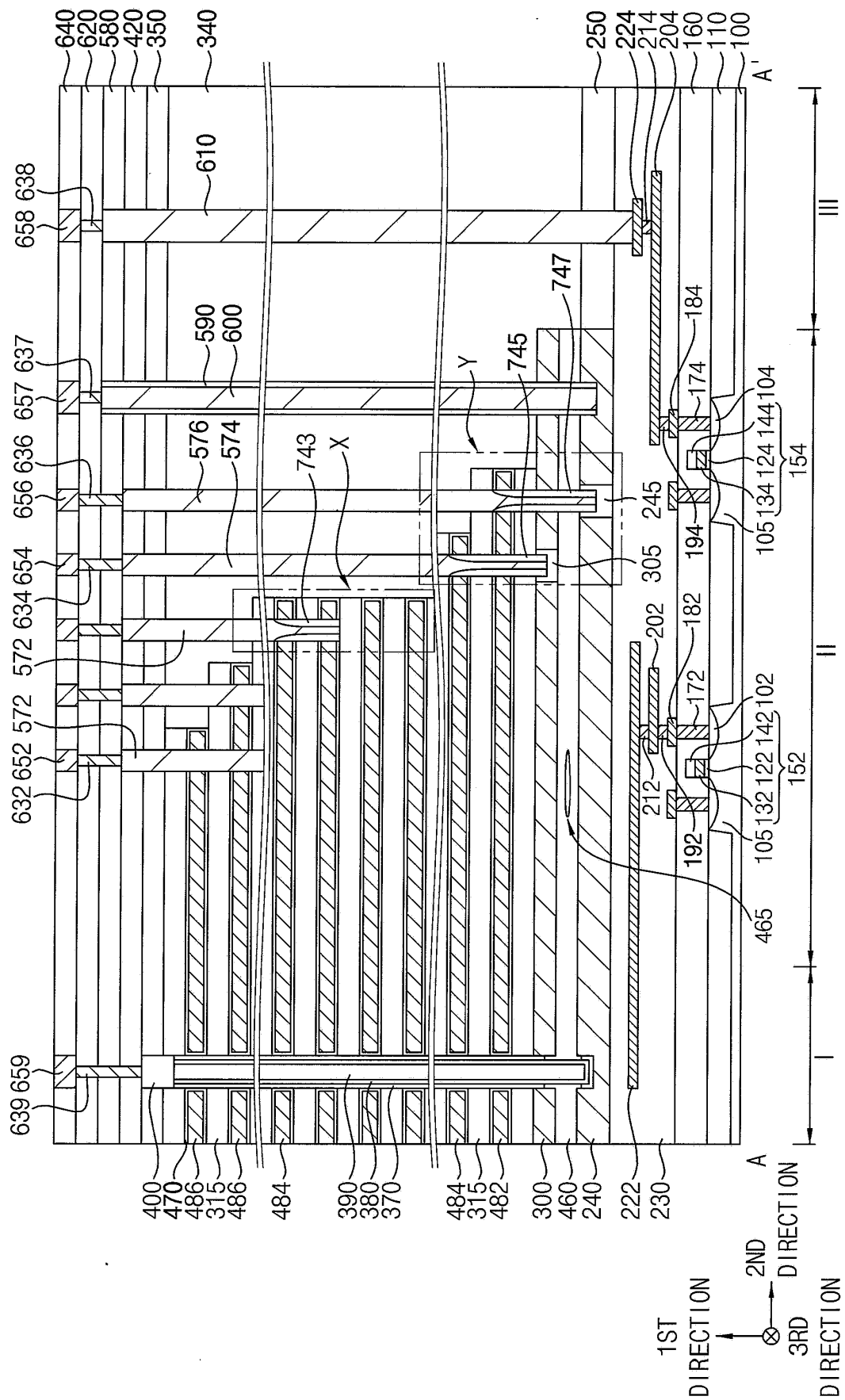


FIG. 49

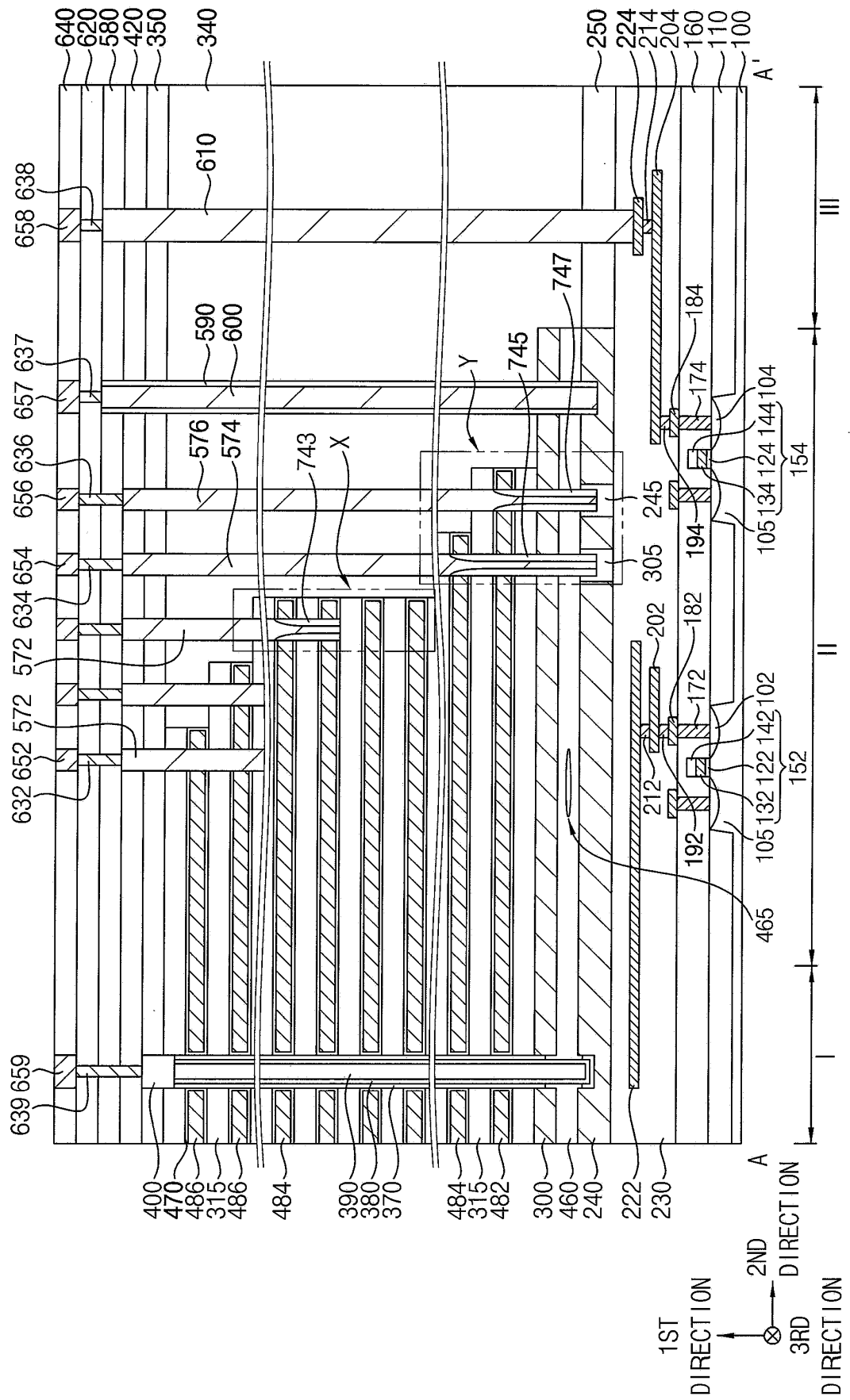


FIG. 50

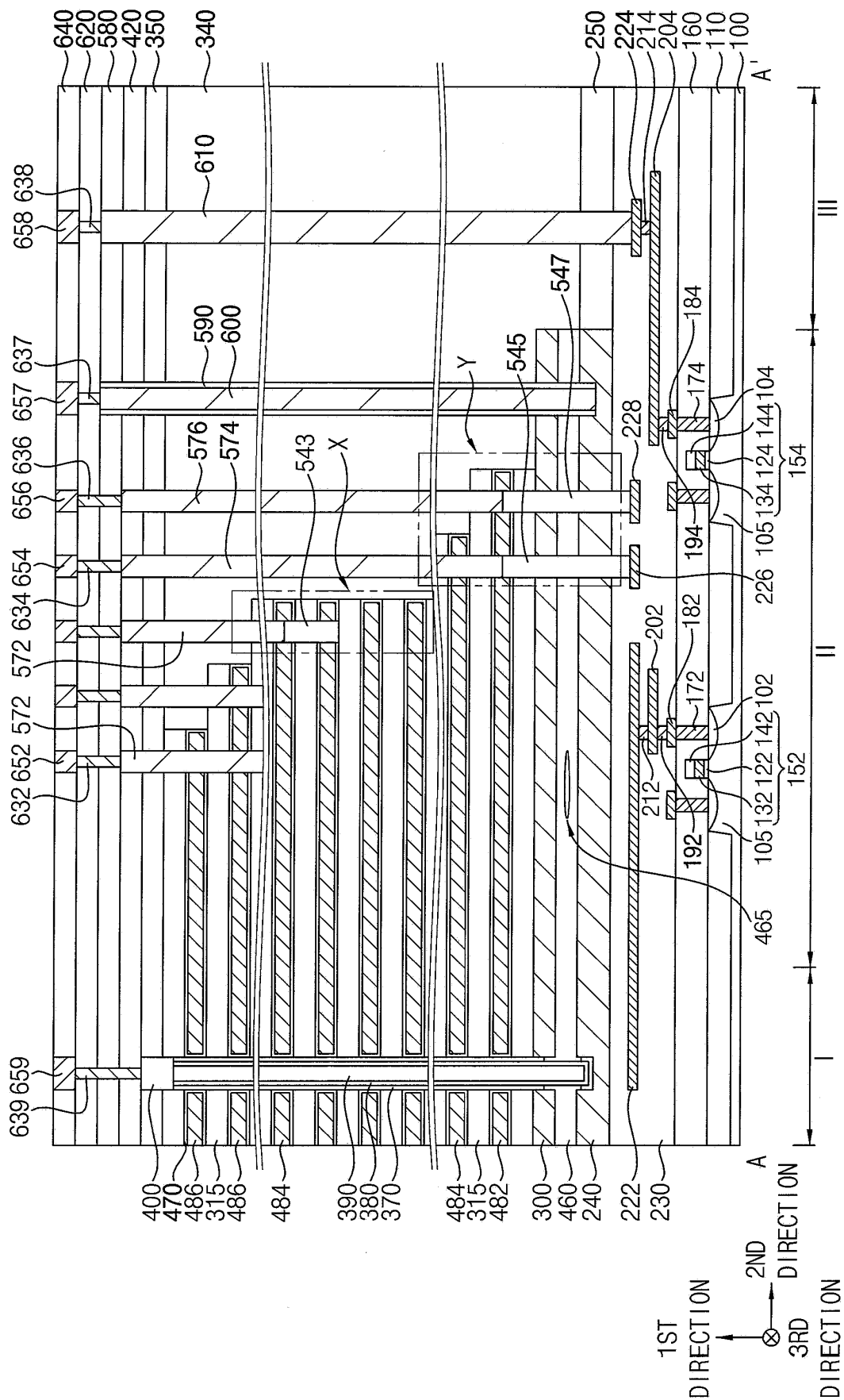


FIG. 51

