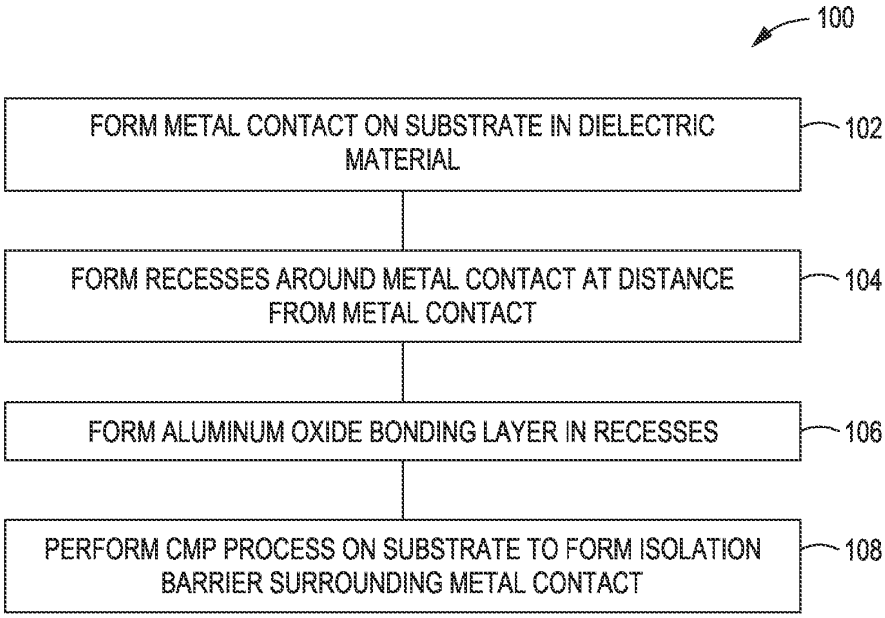

100
FORM METAL CONTACT ON SUBSTRATE IN DIELECTRIC MATERIAL
102
FORM RECESSES AROUND METAL CONTACT AT DISTANCE FROM METAL CONTACT
104
FORM ALUMINUM OXIDE BONDING LAYER IN RECESSES
106
PERFORM CMP PROCESS ON SUBSTRATE TO FORM ISOLATION BARRIER SURROUNDING METAL CONTACT
108

FIG. 1

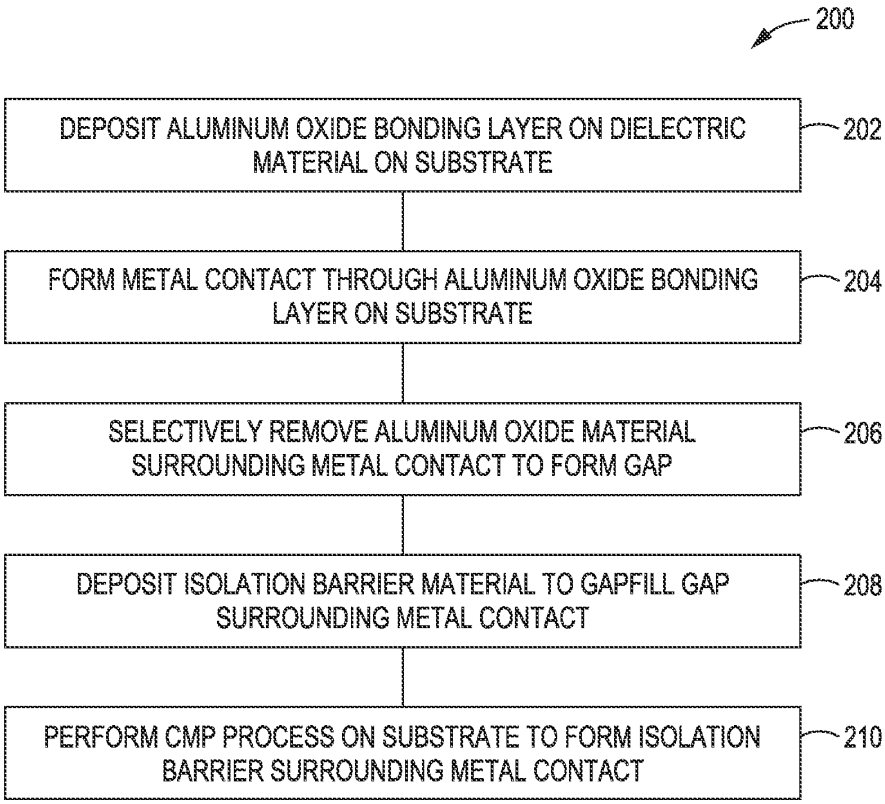

200
DEPOSIT ALUMINUM OXIDE BONDING LAYER ON DIELECTRIC MATERIAL ON SUBSTRATE
202
FORM METAL CONTACT THROUGH ALUMINUM OXIDE BONDING LAYER ON SUBSTRATE
204
SELECTIVELY REMOVE ALUMINUM OXIDE MATERIAL SURROUNDING METAL CONTACT TO FORM GAP
206
DEPOSIT ISOLATION BARRIER MATERIAL TO GAPFILL GAP SURROUNDING METAL CONTACT
208
PERFORM CMP PROCESS ON SUBSTRATE TO FORM ISOLATION BARRIER SURROUNDING METAL CONTACT
210

FIG. 2

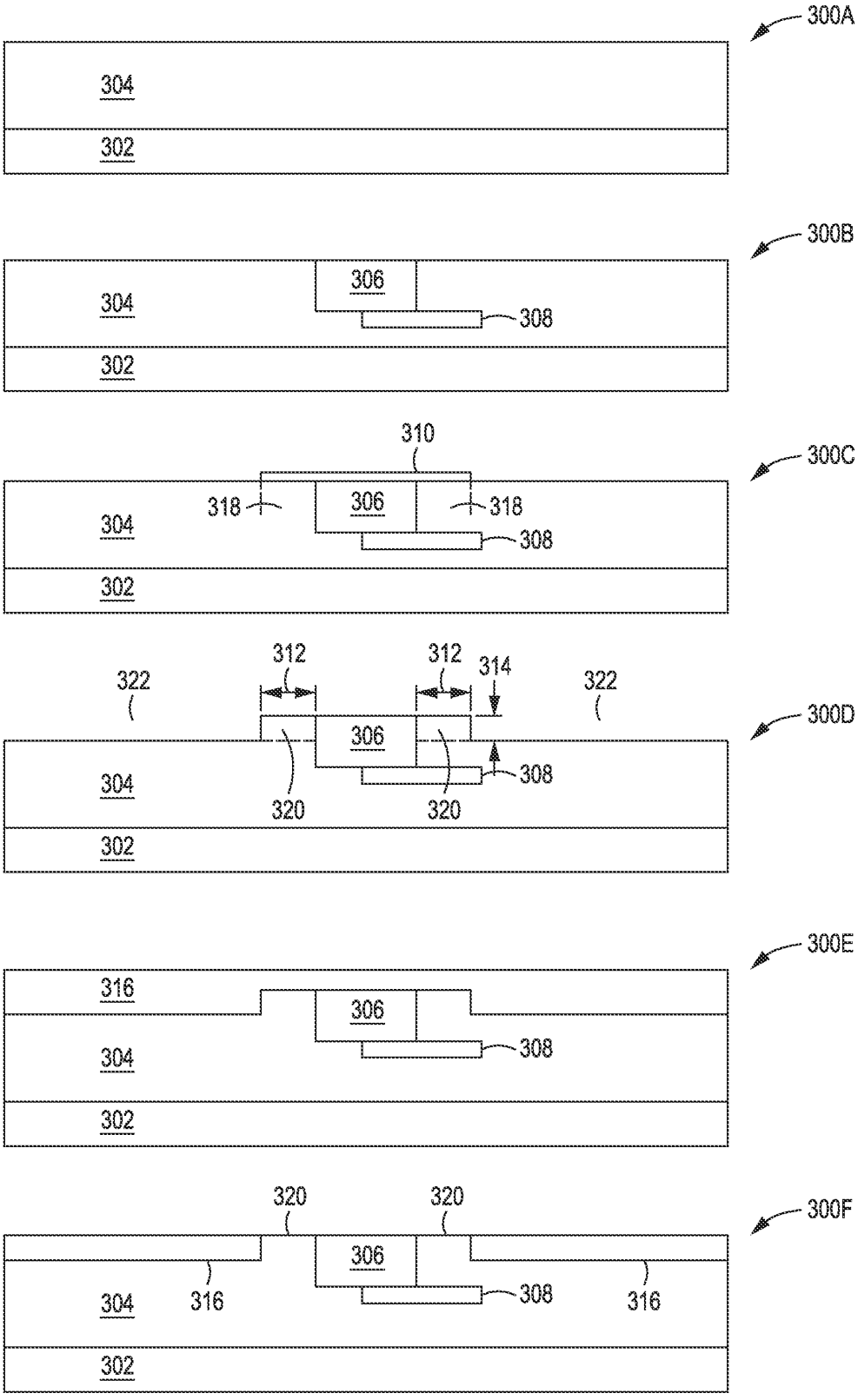

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300D
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300F
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302

FIG. 3

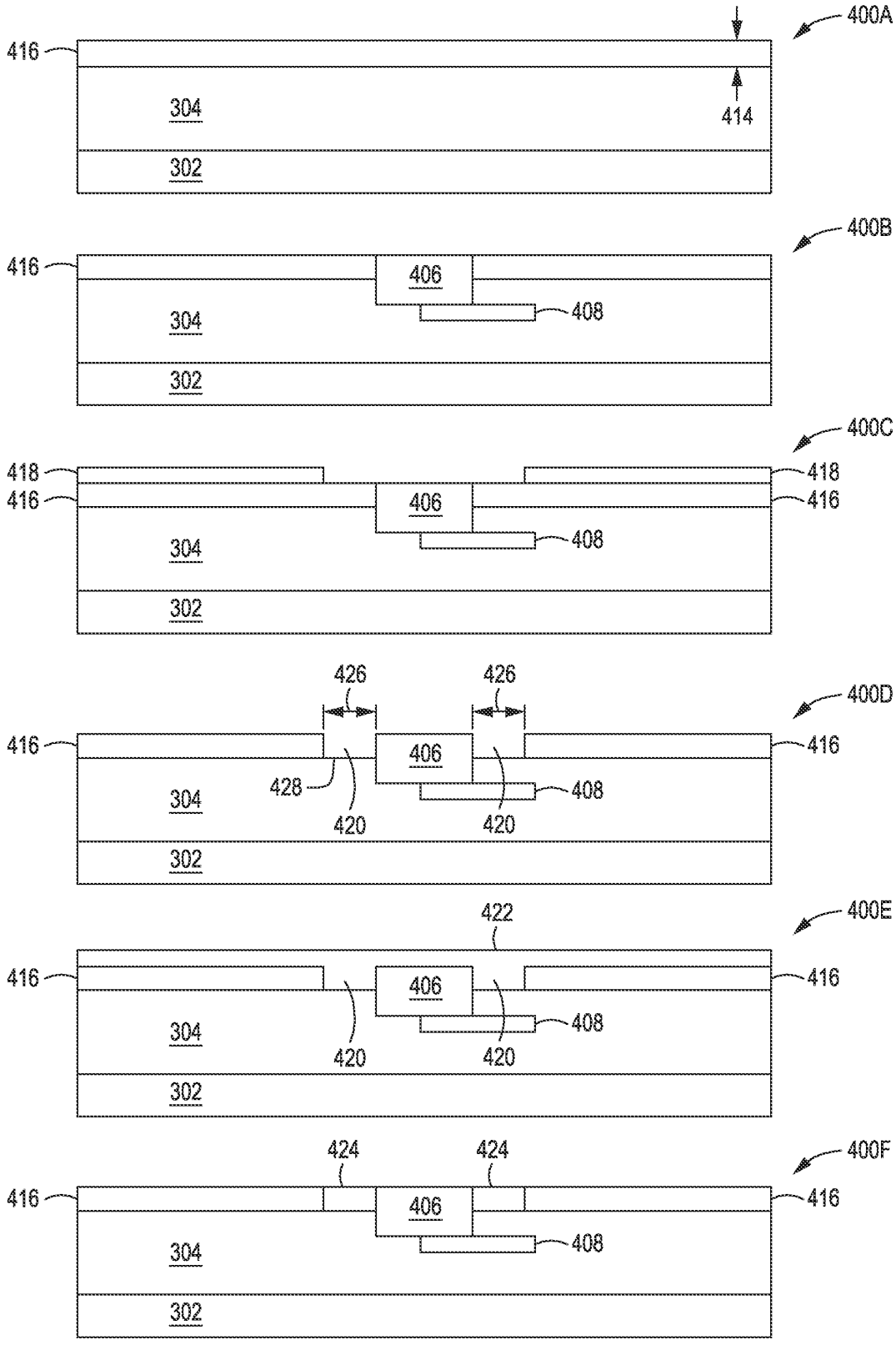

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304
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FIG. 4

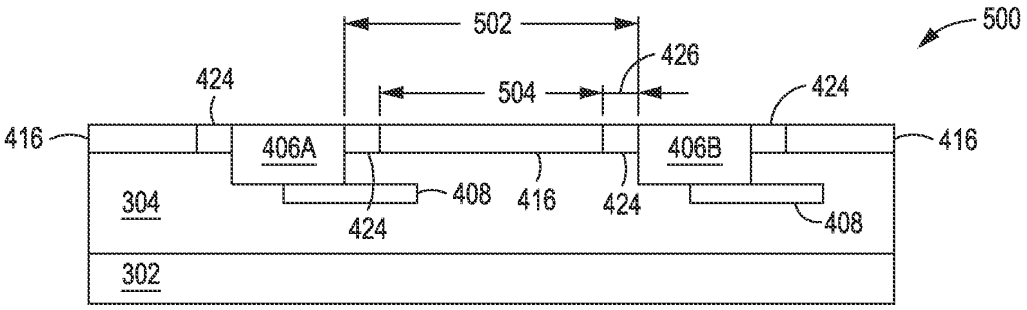


FIG. 5

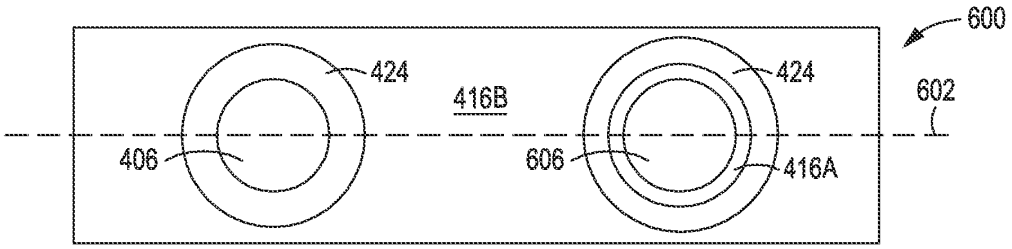


FIG. 6

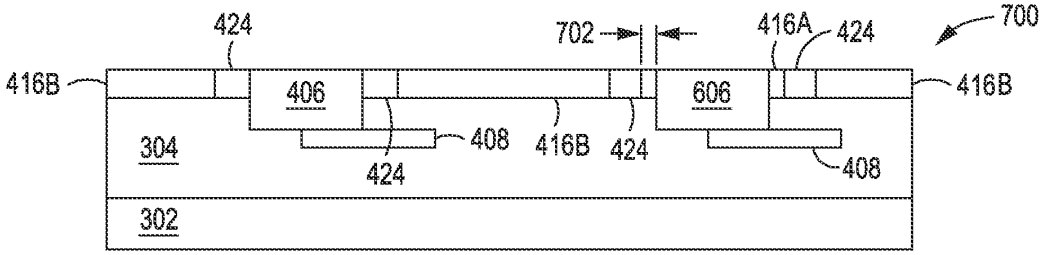


FIG. 7

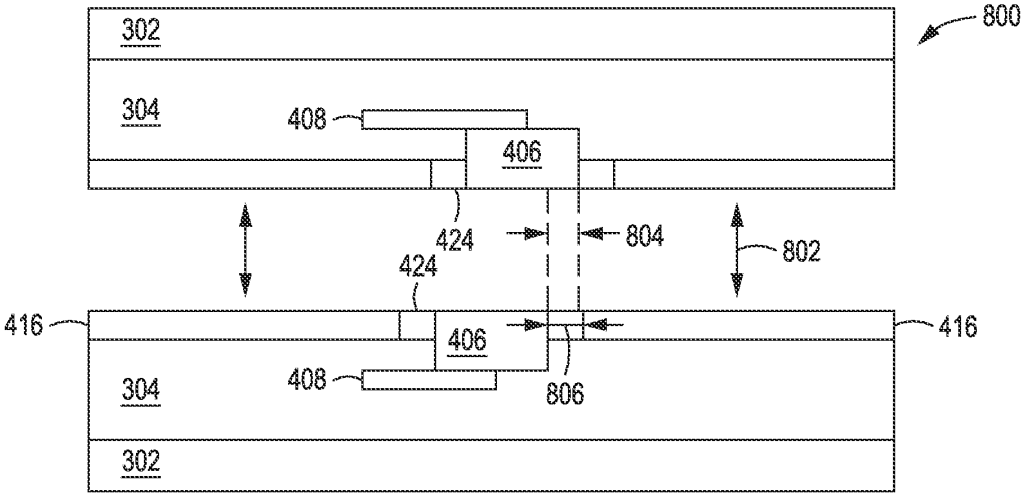


FIG. 8

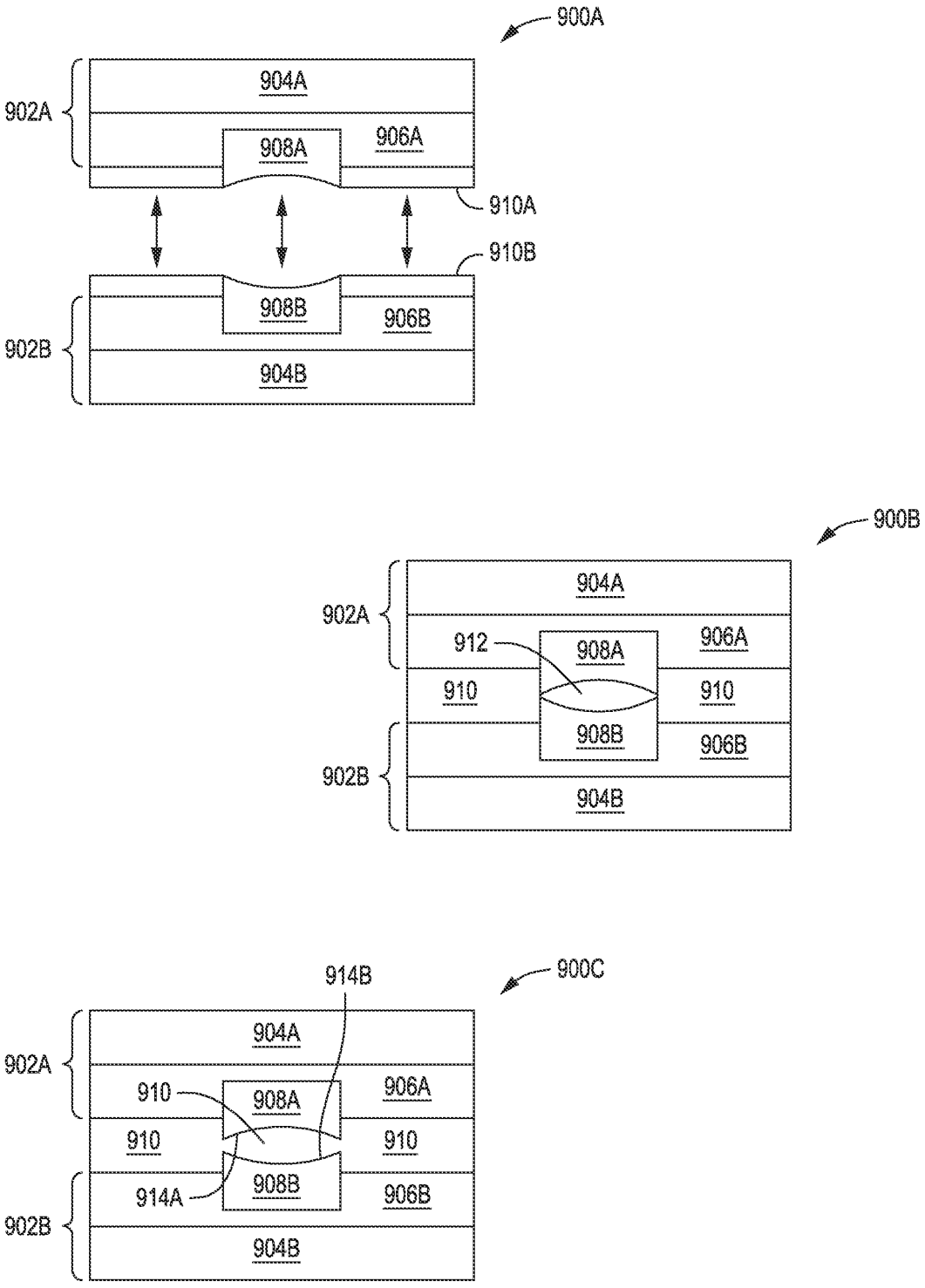

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902B
904B

FIG. 9

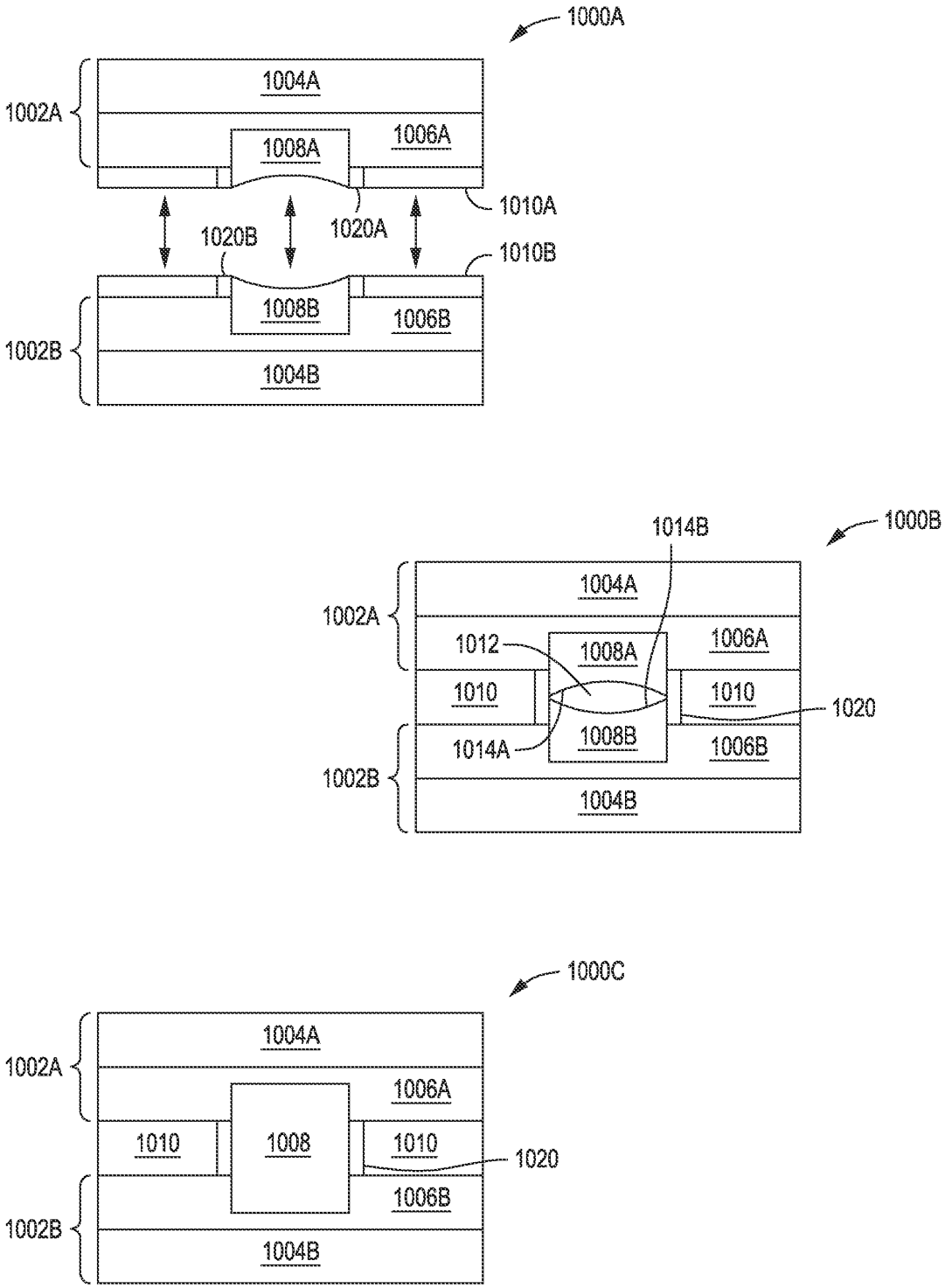

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1014A
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1006A
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1004B

FIG. 10