MOSFET WITH ELECTROSTATIC DISCHARGE PROTECTION STRUCTURE AND METHOD OF FABRICATION

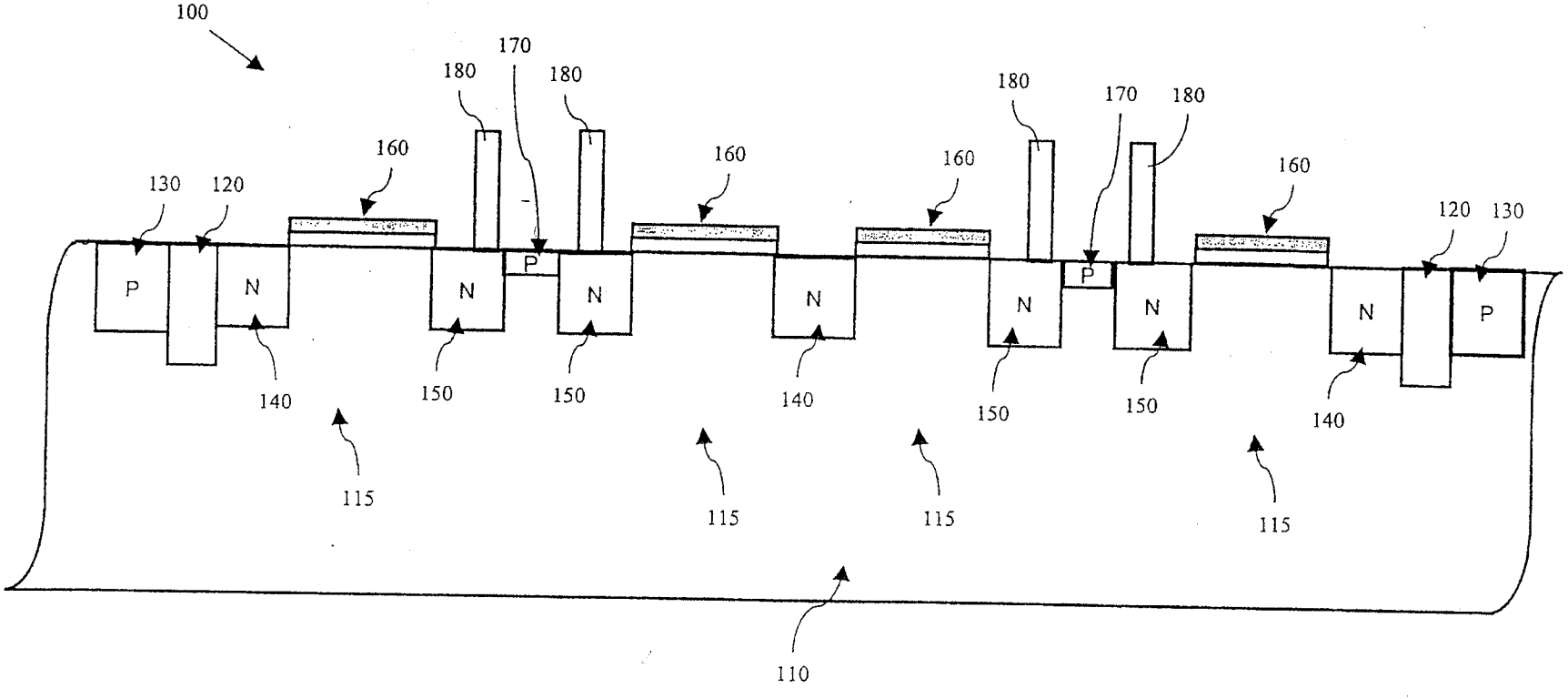


Fig. 1a

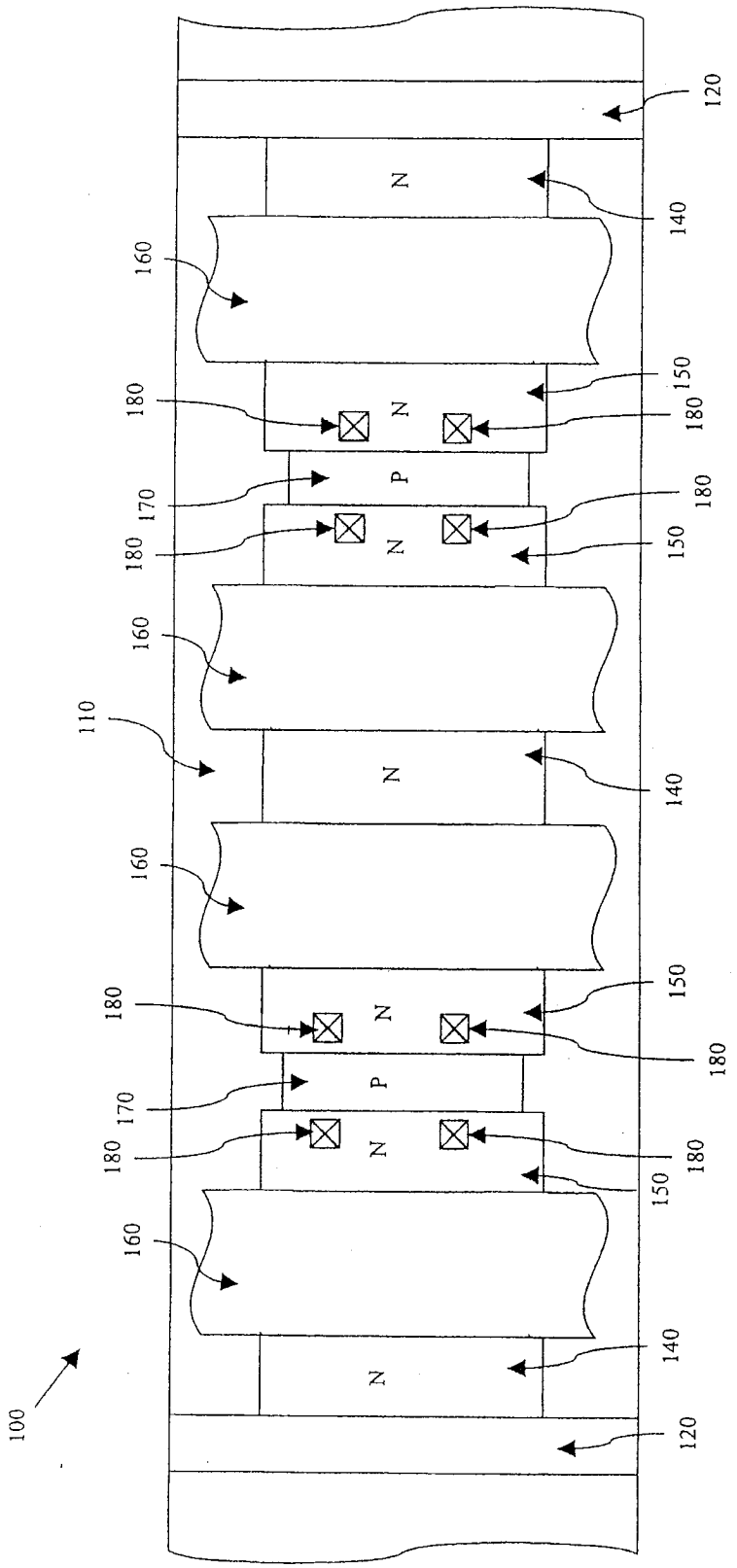

100
110
120
120
140
140
140
150
150
150
160
160
160
160
170
170
180
180
180
180
180
180
180
N
N
N
N
N
P
P

Fig. 1b

MOSFET WITH ELECTROSTATIC DISCHARGE PROTECTION STRUCTURE AND METHOD OF FABRICATION

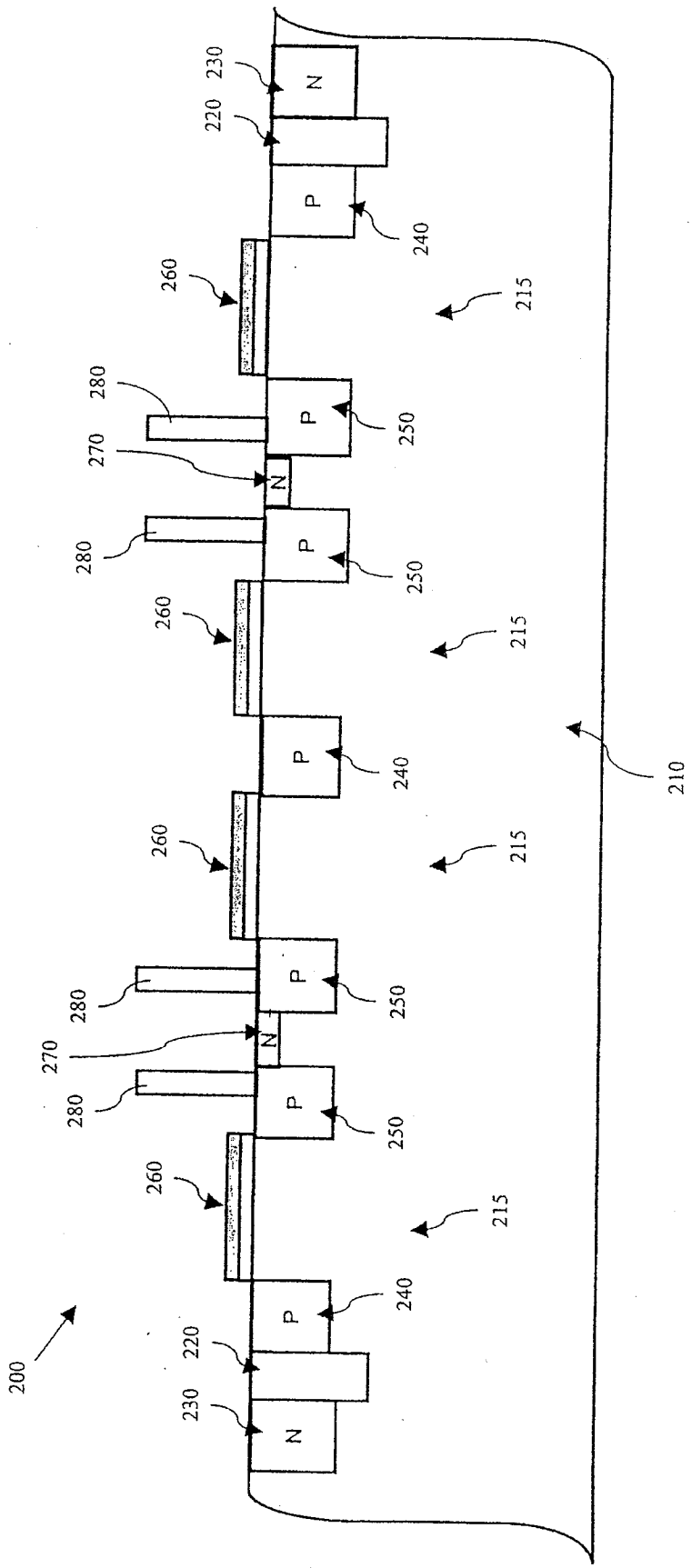


Fig. 2

MOSFET WITH ELECTROSTATIC DISCHARGE PROTECTION STRUCTURE AND METHOD OF FABRICATION

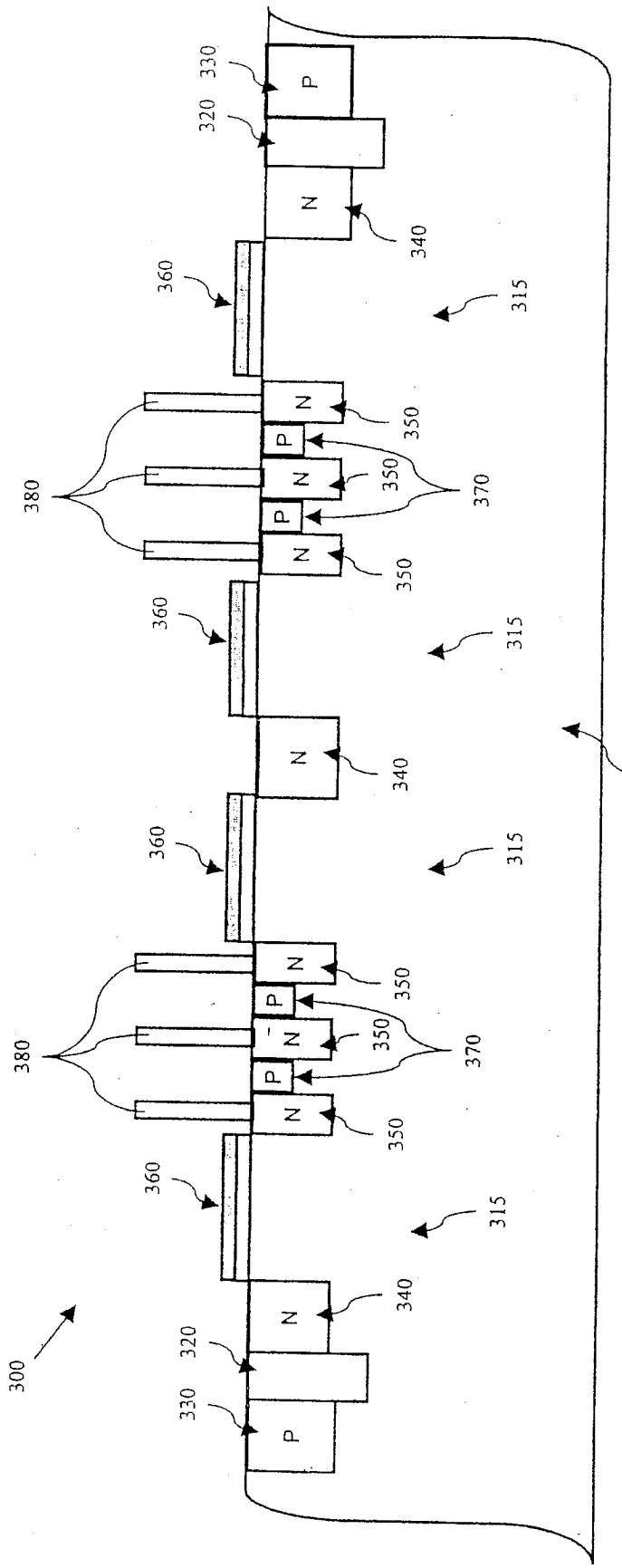


Fig. 3

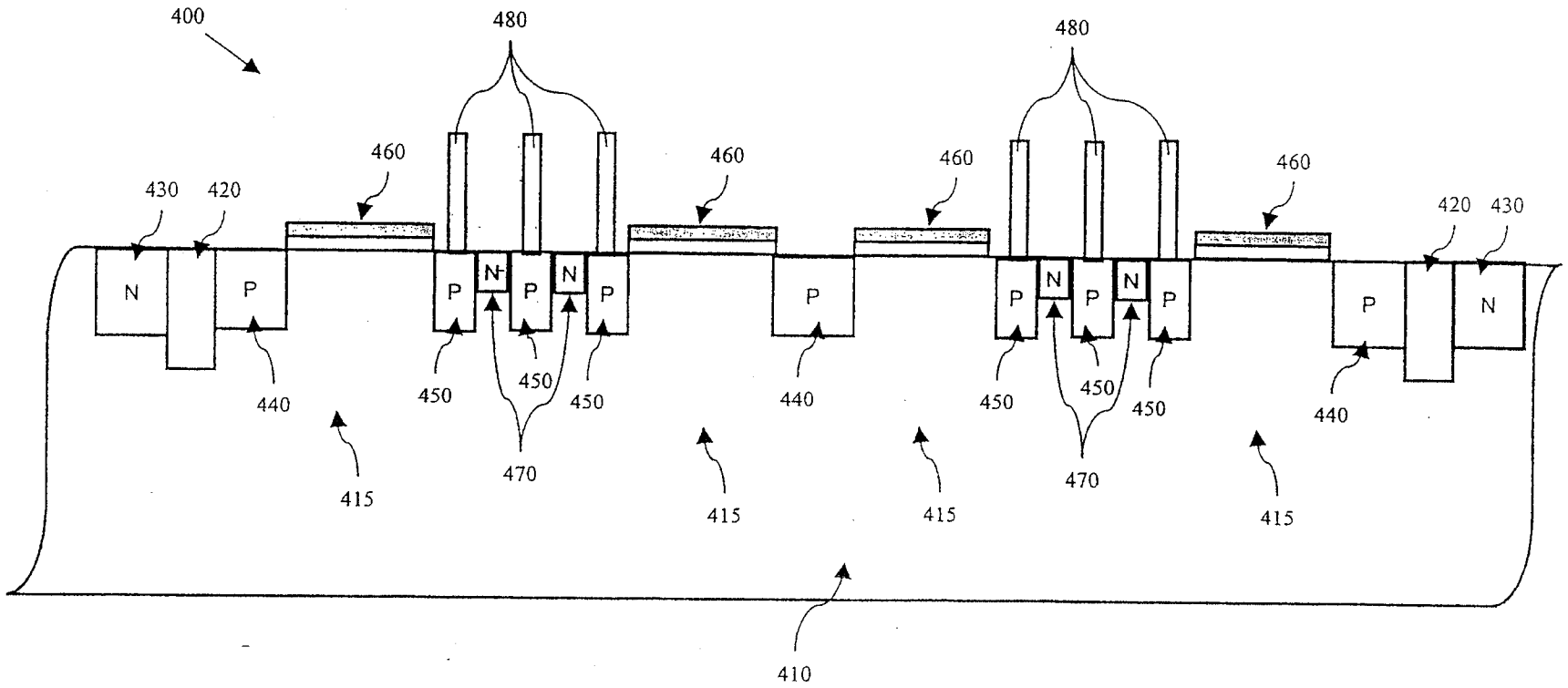

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480
460
460
460
460
430
420
420
430
N
P
P
N
P
N
P
P
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P
N
P
P
P
N
440
450
450
450
450
450
440
440
470
470
415
415
415
415
410

Fig. 4

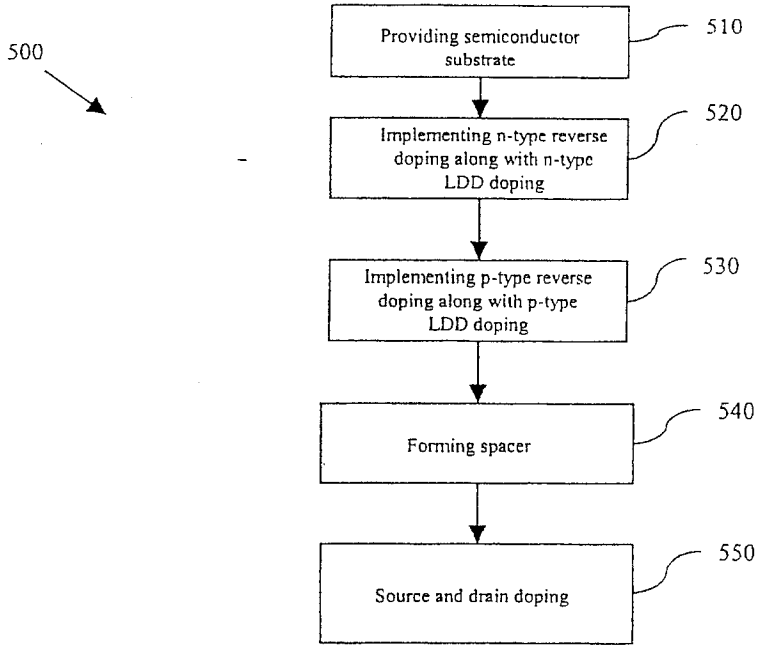

500
Providing semiconductor substrate
510
Implementing n-type reverse doping along with n-type LDD doping
520
Implementing p-type reverse doping along with p-type LDD doping
530
Forming spacer
540
Source and drain doping
550

Fig. 5

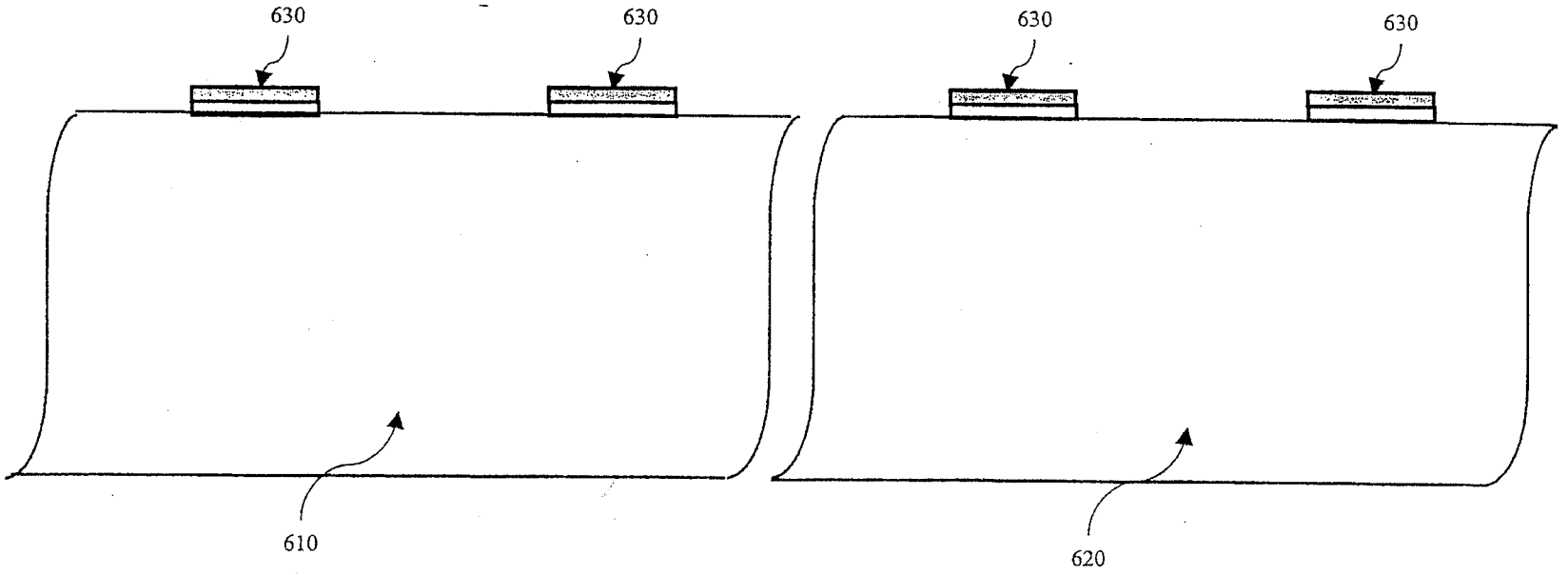


Fig. 6

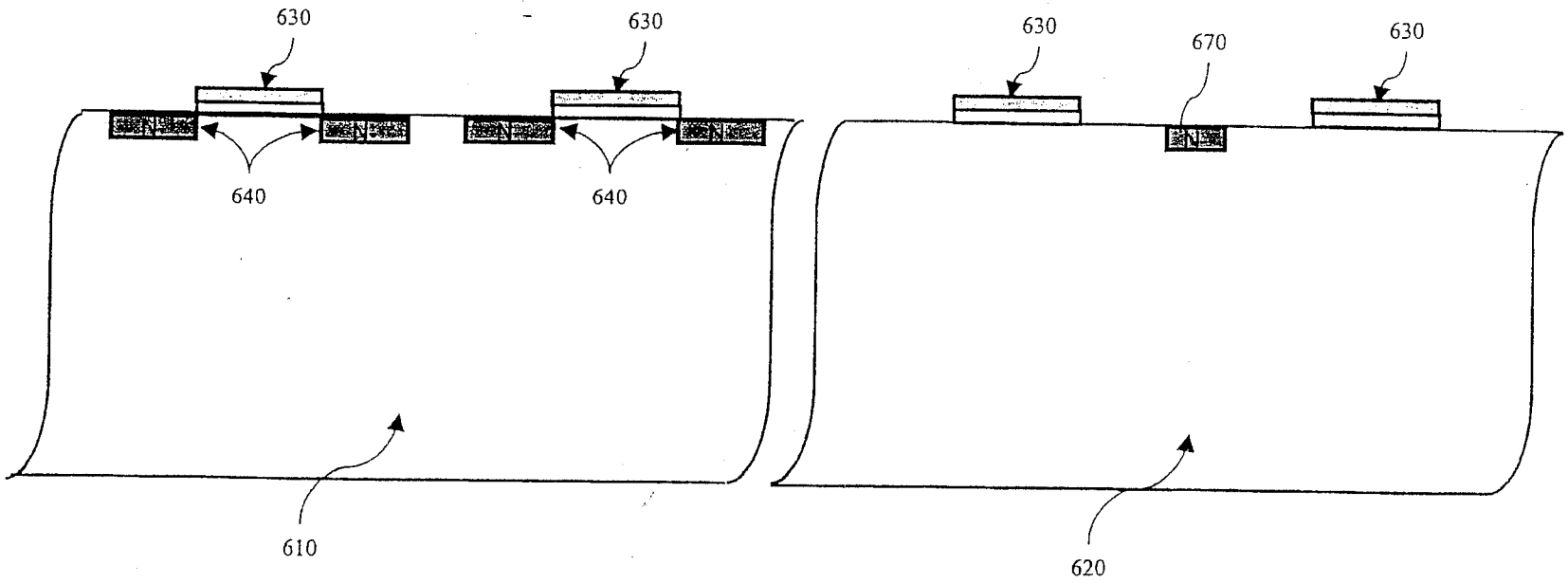


Fig. 7

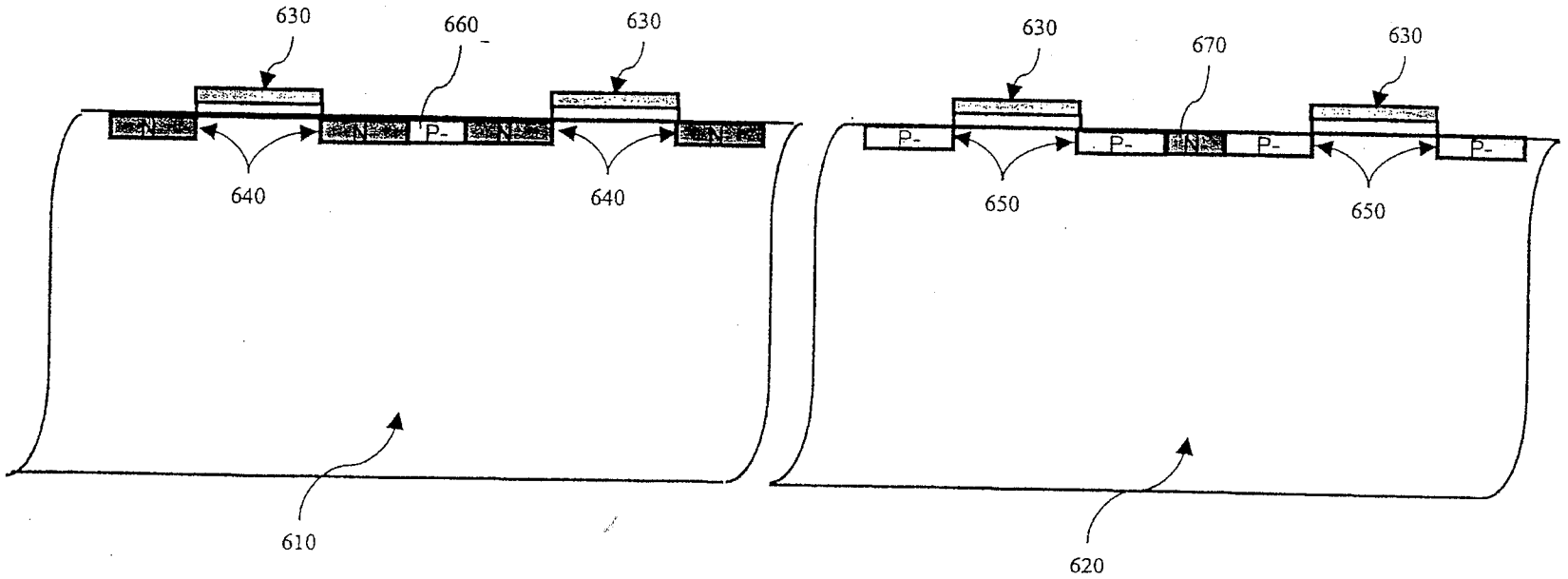


Fig. 8

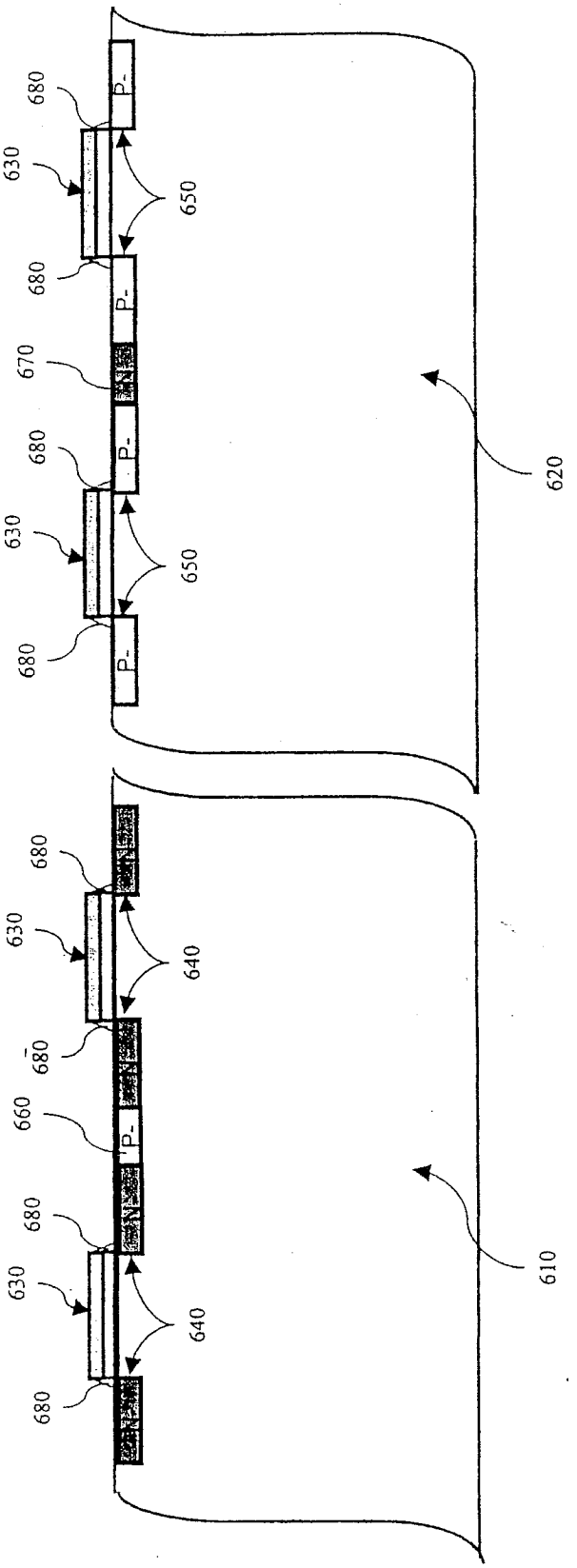

P-
680
630
650
680
P-
670
680
P-
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650
680
P-
620
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630
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660
P-
680
630
640
680
610

Fig. 9

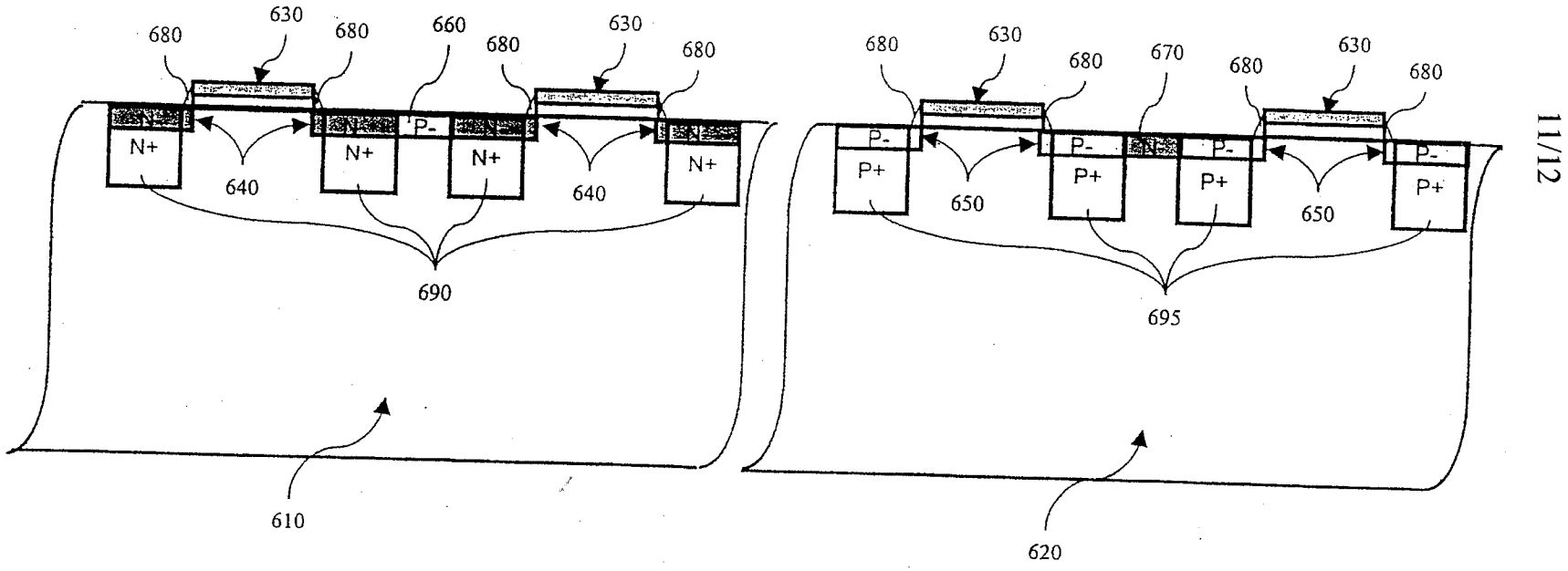

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630
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660
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630
680
N+
N+
P-
N+
N+
640
640
690
610
680
630
680
670
680
630
680
P-
P+
P-
P+
P-
P+
P-
P+
650
650
695
620

Fig. 10

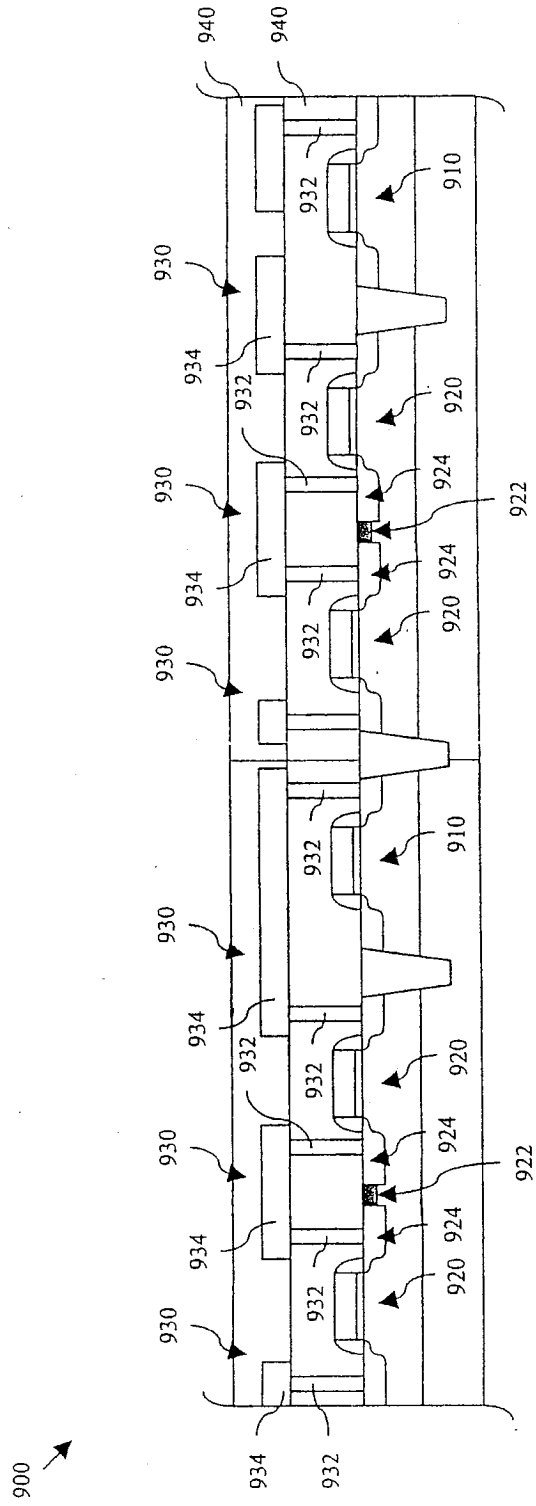


FIG. 11