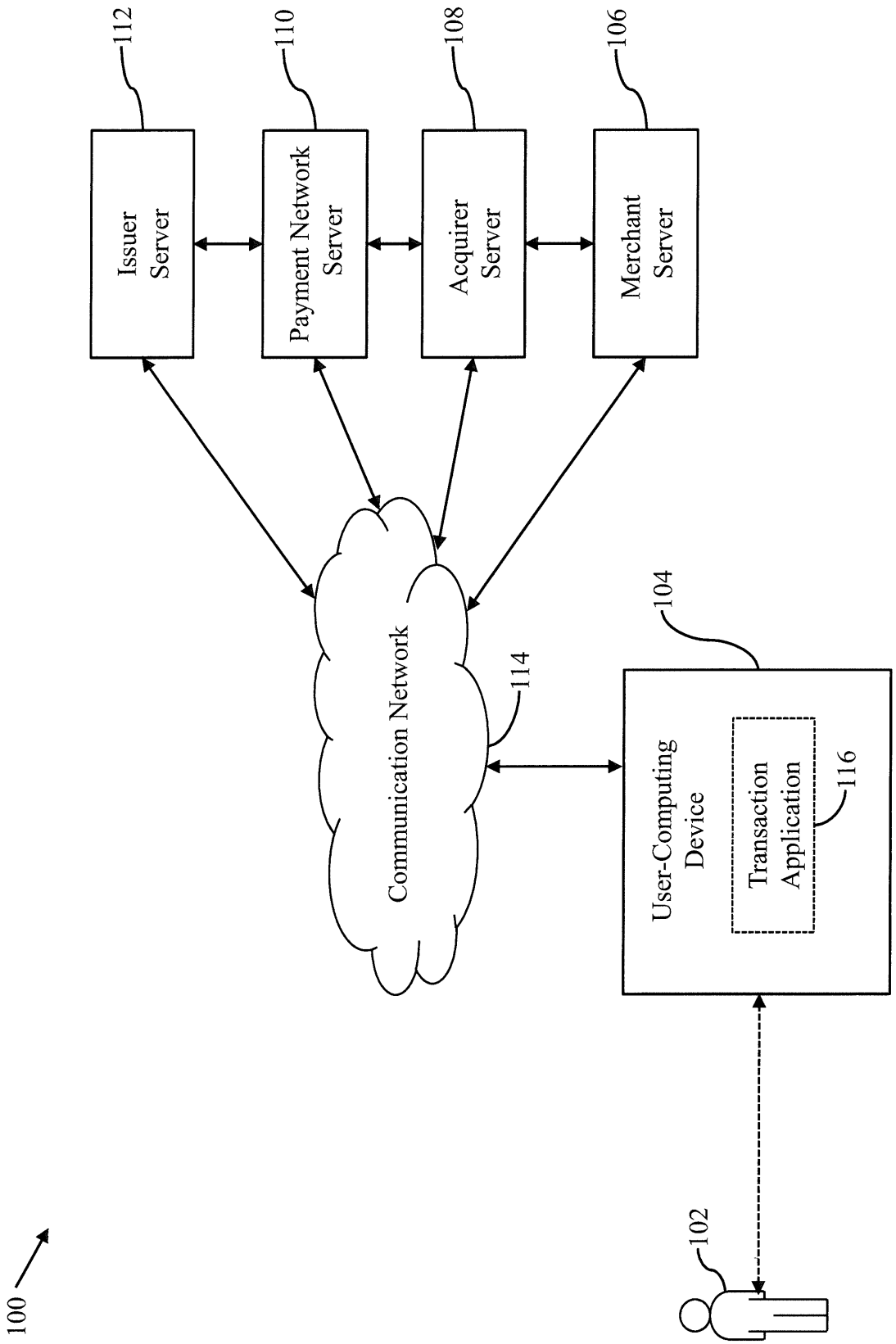

100
102
104
106
108
110
112
114
116
Issuer Server
Payment Network Server
Acquirer Server
Merchant Server
Communication Network
User-Computing Device
Transaction Application

FIG. 1

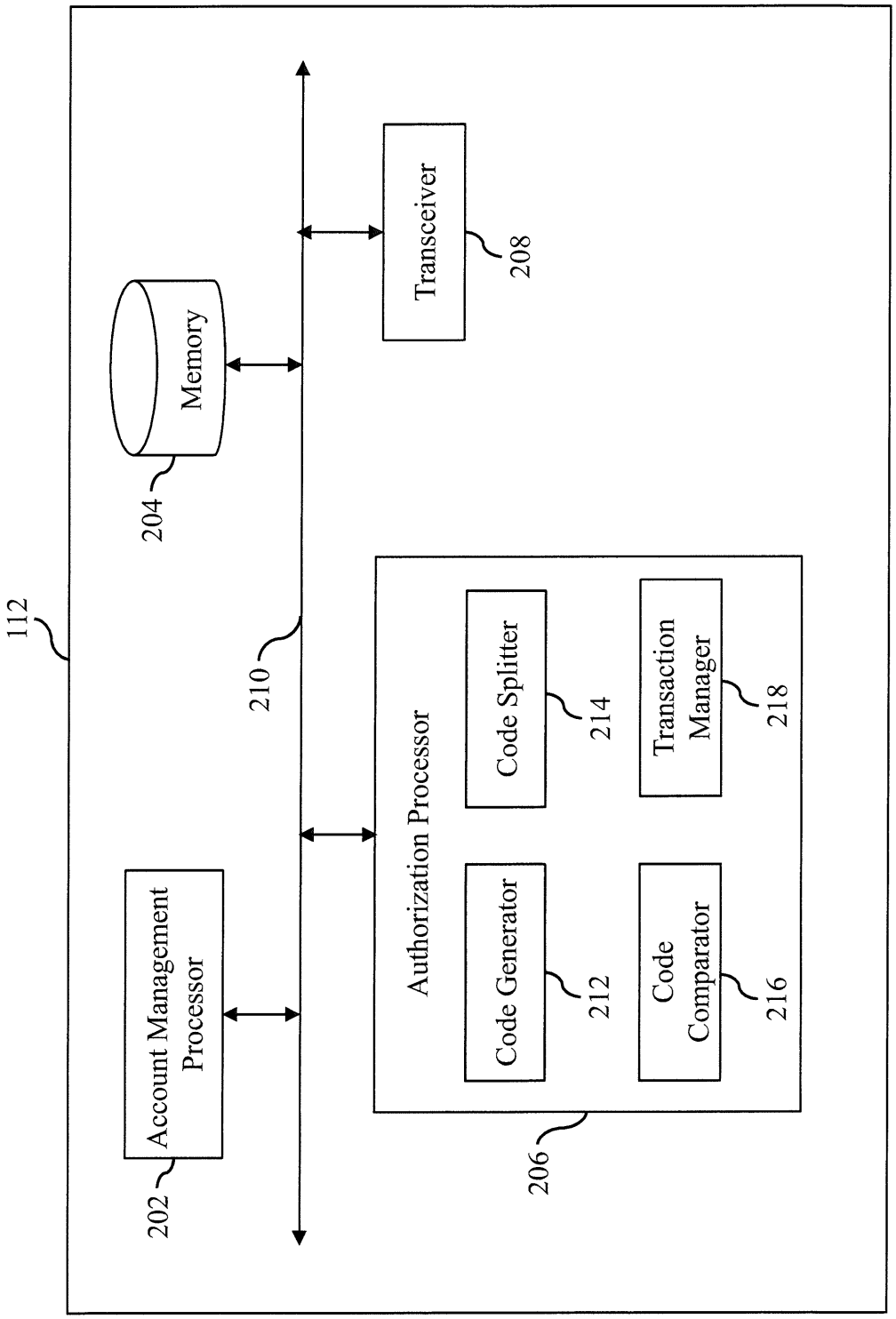

112
Account Management Processor
202
Memory
204
Transceiver
208
210
Authorization Processor
206
Code Generator
212
Code Splitter
214
Code Comparator
216
Transaction Manager
218

FIG. 2



FIG. 3A

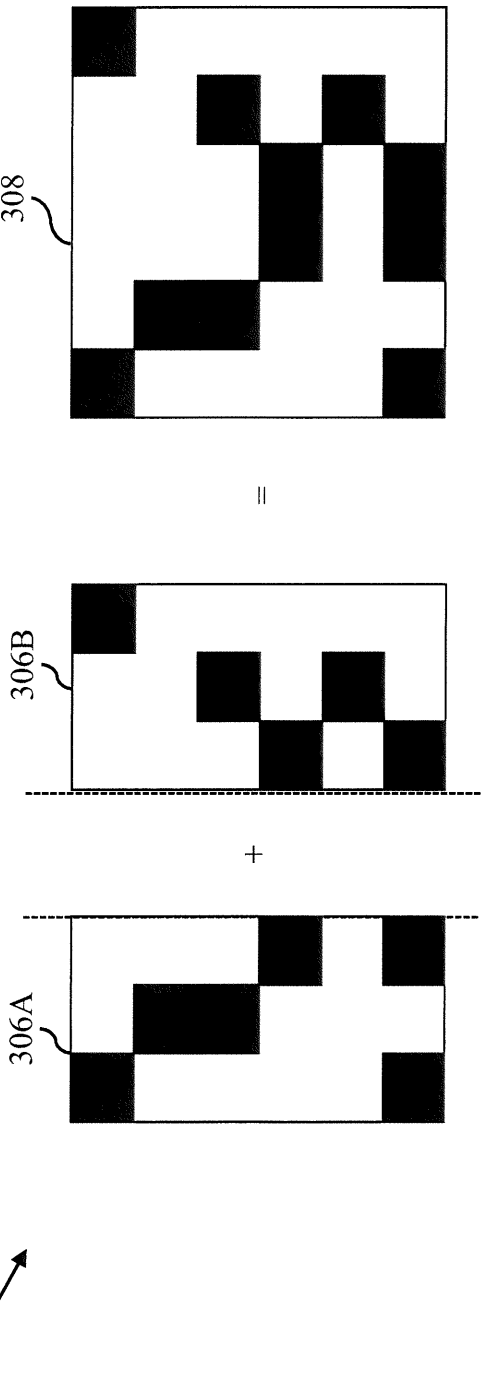


FIG. 3B

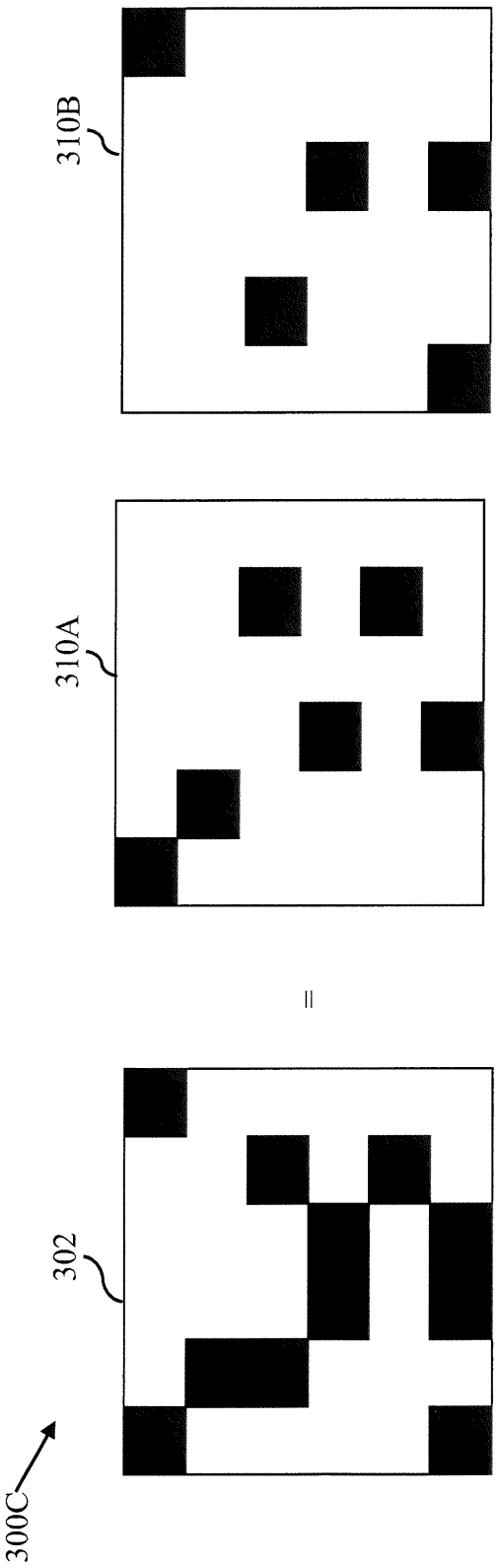


FIG. 3C

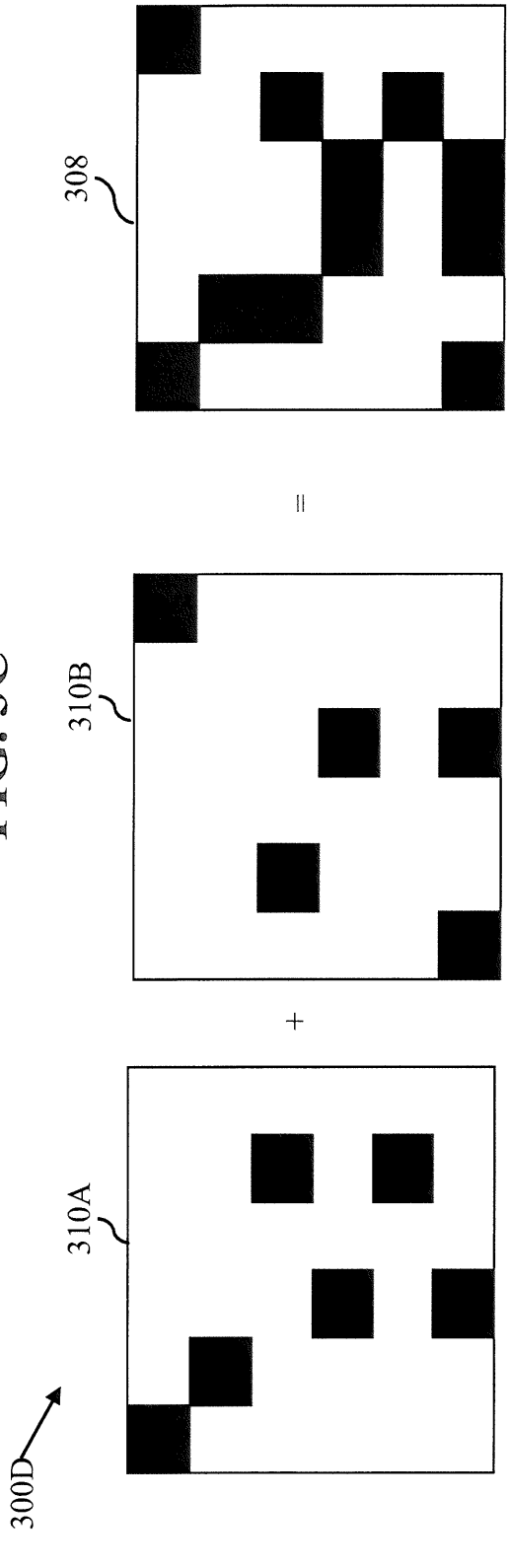


FIG. 3D

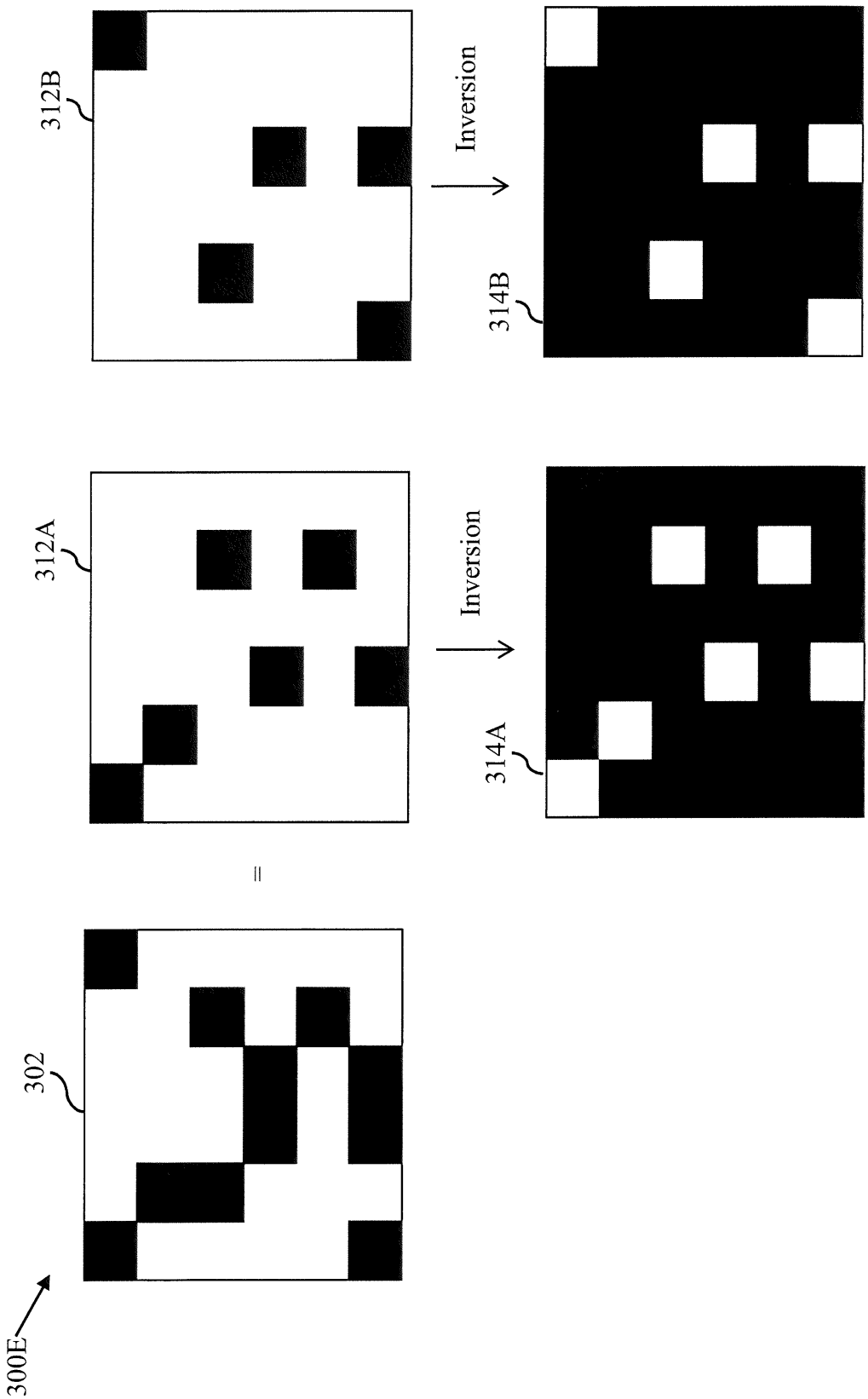


FIG. 3E

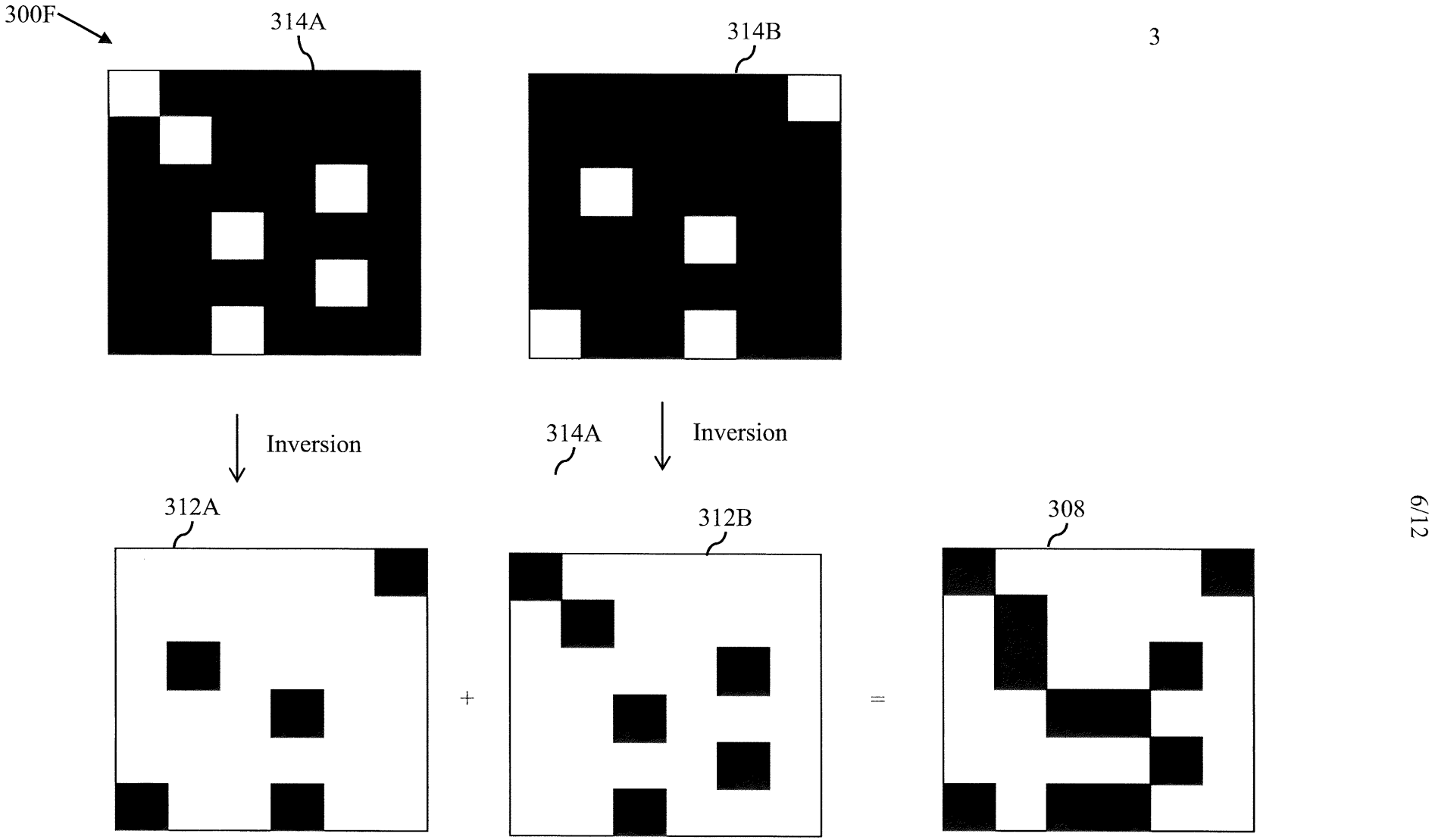


FIG. 3F

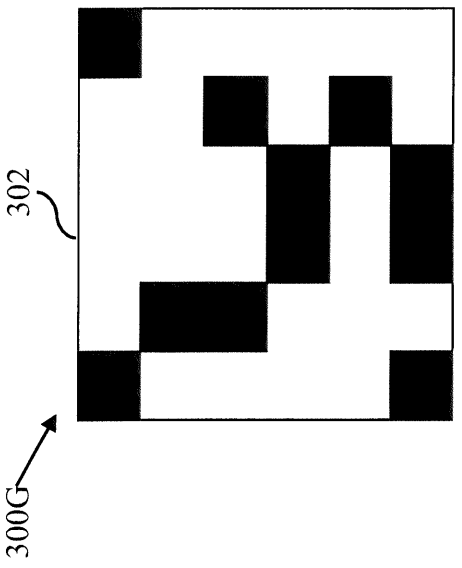


FIG. 3G

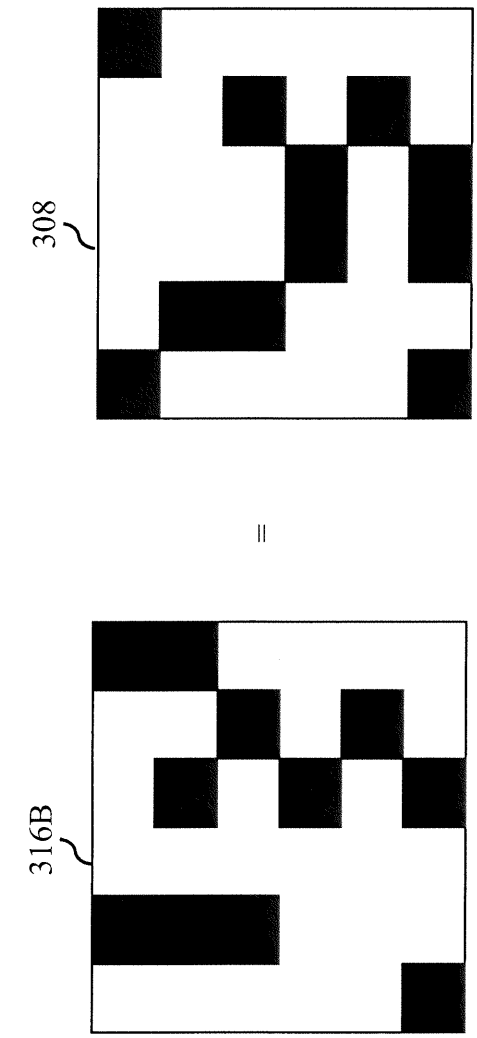


FIG. 3H

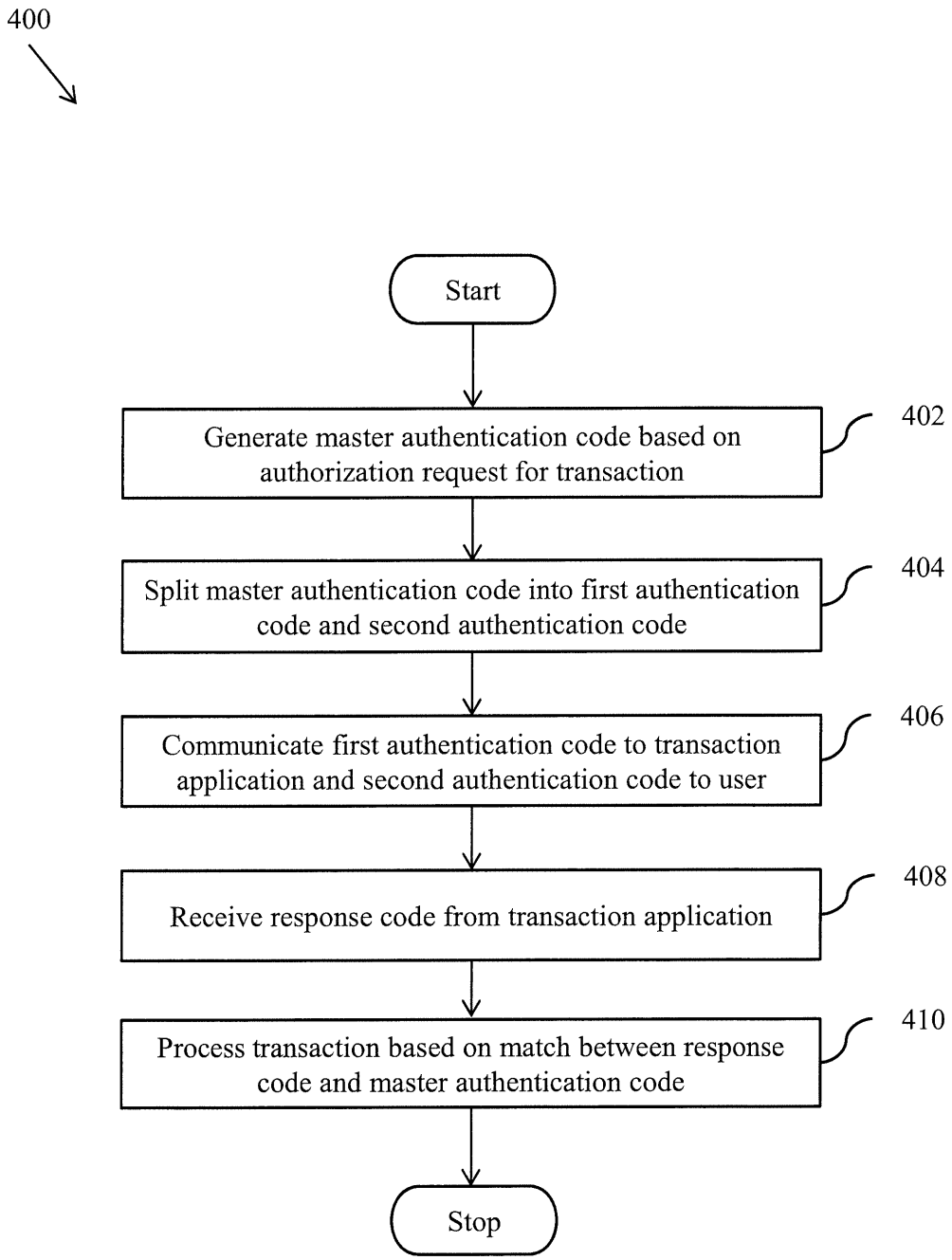

400
Start
Generate master authentication code based on authorization request for transaction
402
Split master authentication code into first authentication code and second authentication code
404
Communicate first authentication code to transaction application and second authentication code to user
406
Receive response code from transaction application
408
Process transaction based on match between response code and master authentication code
410
Stop

FIG. 4

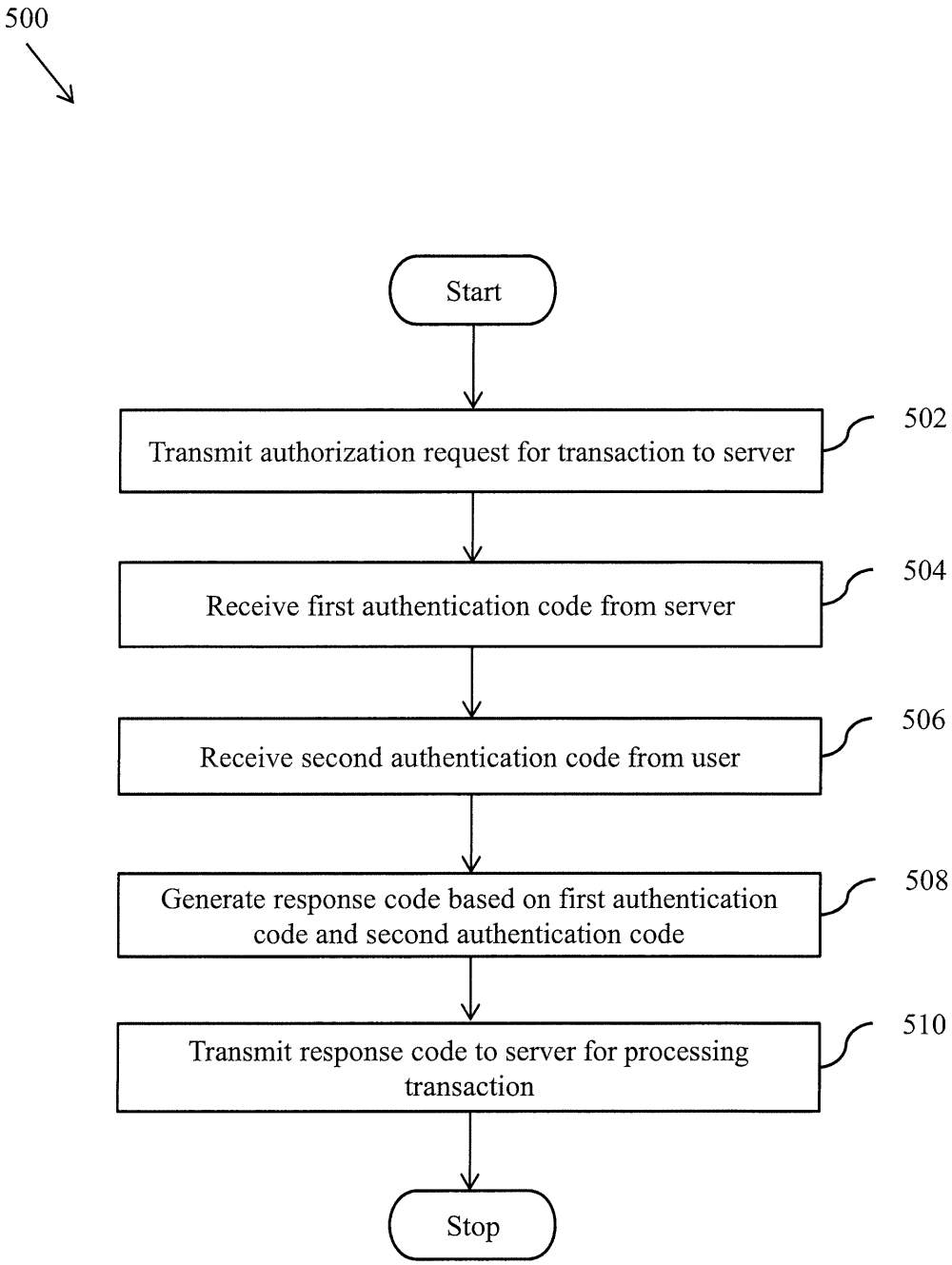

500
Start
Transmit authorization request for transaction to server
502
Receive first authentication code from server
504
Receive second authentication code from user
506
Generate response code based on first authentication code and second authentication code
508
Transmit response code to server for processing transaction
510
Stop

FIG. 5

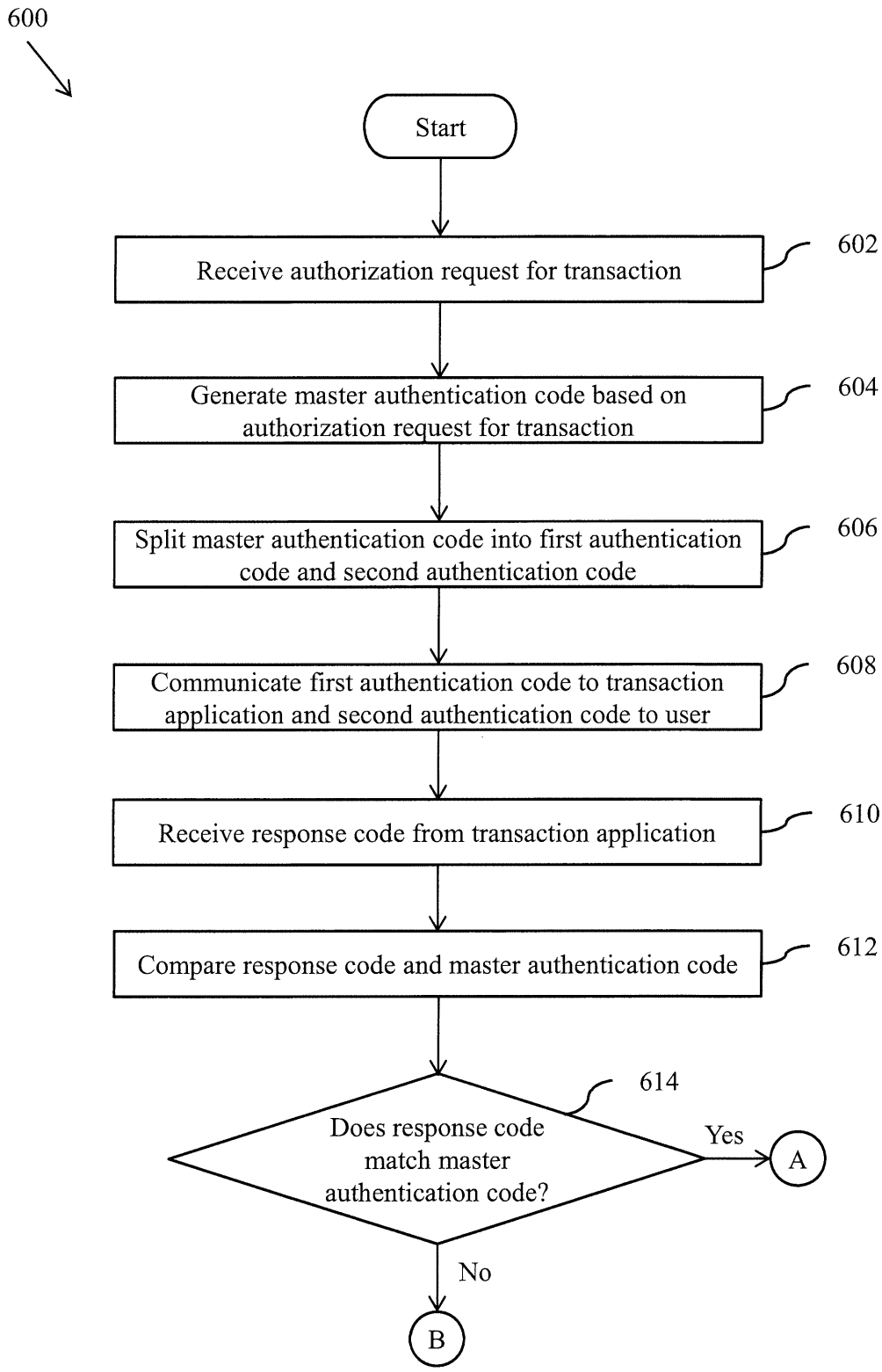

600
Start
Receive authorization request for transaction
602
Generate master authentication code based on authorization request for transaction
604
Split master authentication code into first authentication code and second authentication code
606
Communicate first authentication code to transaction application and second authentication code to user
608
Receive response code from transaction application
610
Compare response code and master authentication code
612
614
Does response code match master authentication code?
Yes
A
No
B

FIG. 6A

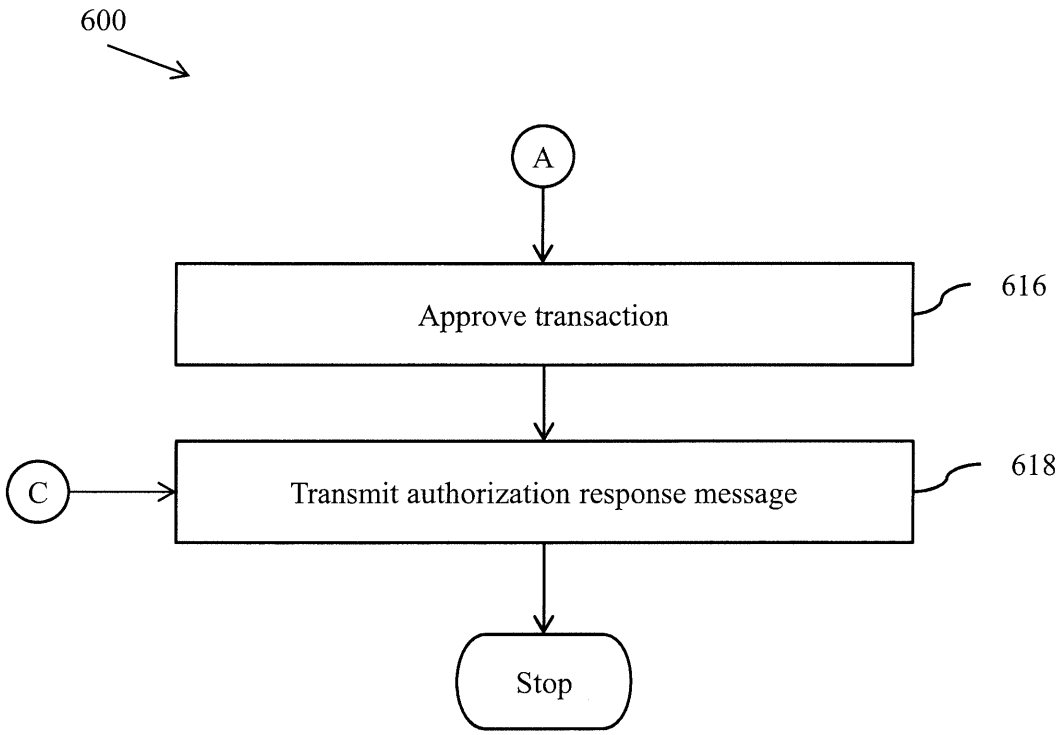

600
A
Approve transaction
616
C
Transmit authorization response message
618
Stop

FIG. 6B

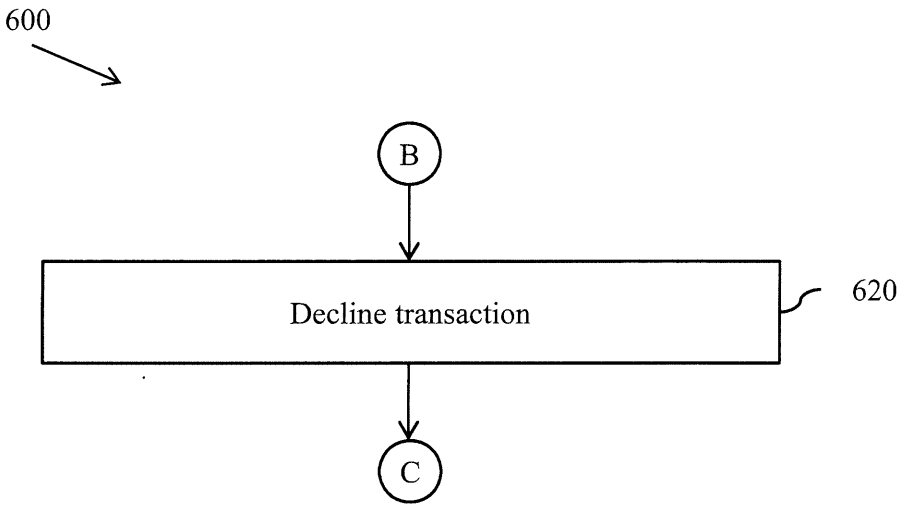

600
B
Decline transaction
620
C

FIG. 6C

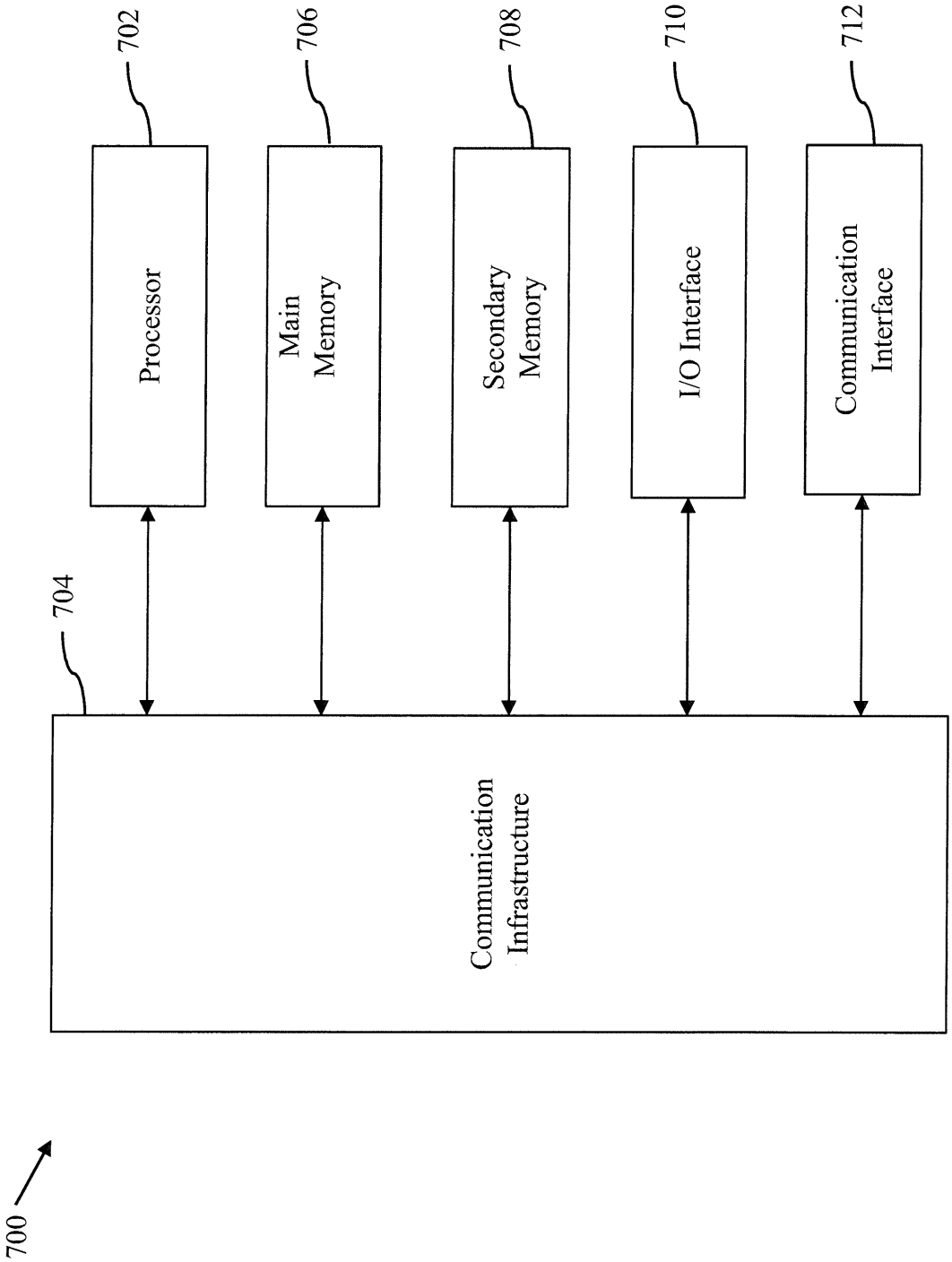

700
704
Communication Infrastructure
Processor
Main Memory
Secondary Memory
I/O Interface
Communication Interface
702
706
708
710
712

FIG. 7