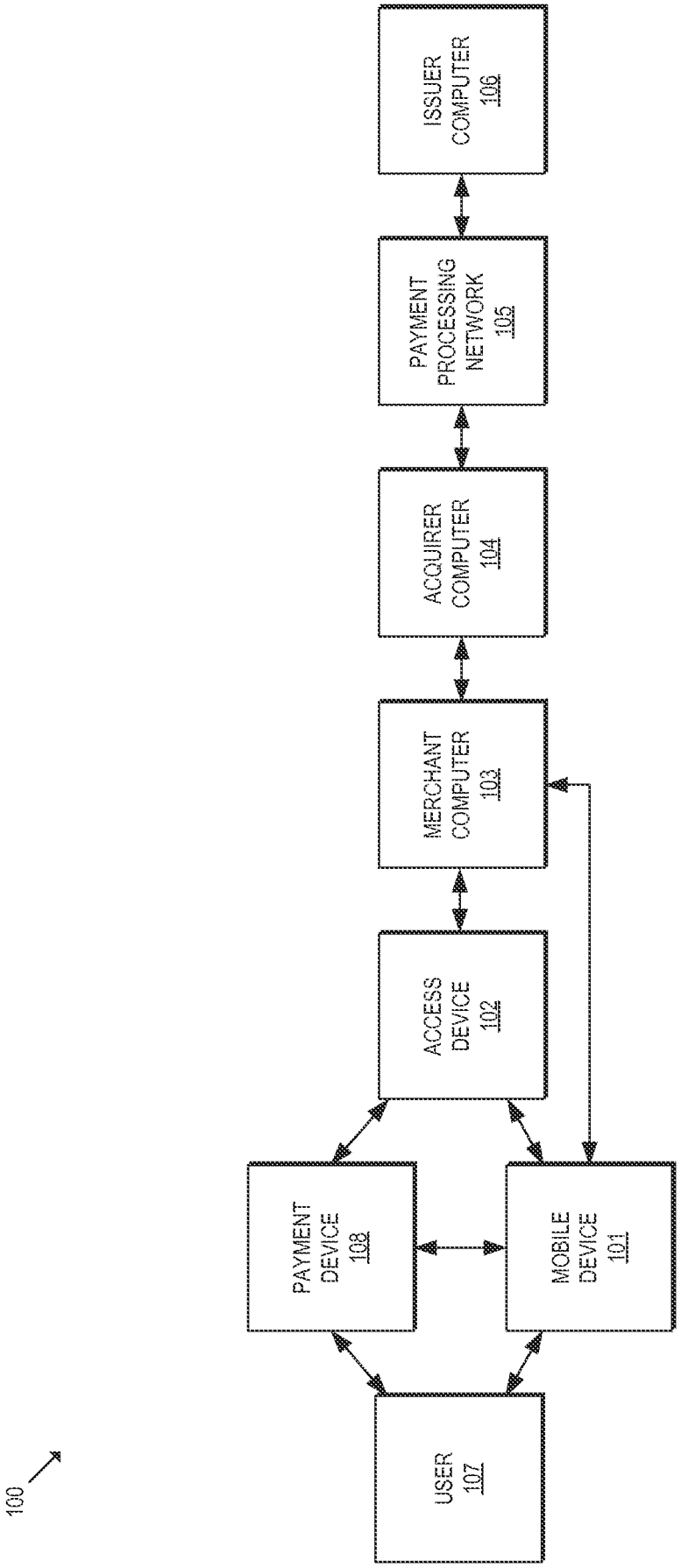

ISSUER COMPUTER 106
PAYMENT PROCESSING NETWORK 105
ACQUIRER COMPUTER 104
MERCHANT COMPUTER 103
ACCESS DEVICE 102
PAYMENT DEVICE 108
MOBILE DEVICE 101
USER 107
100

FIG. 1

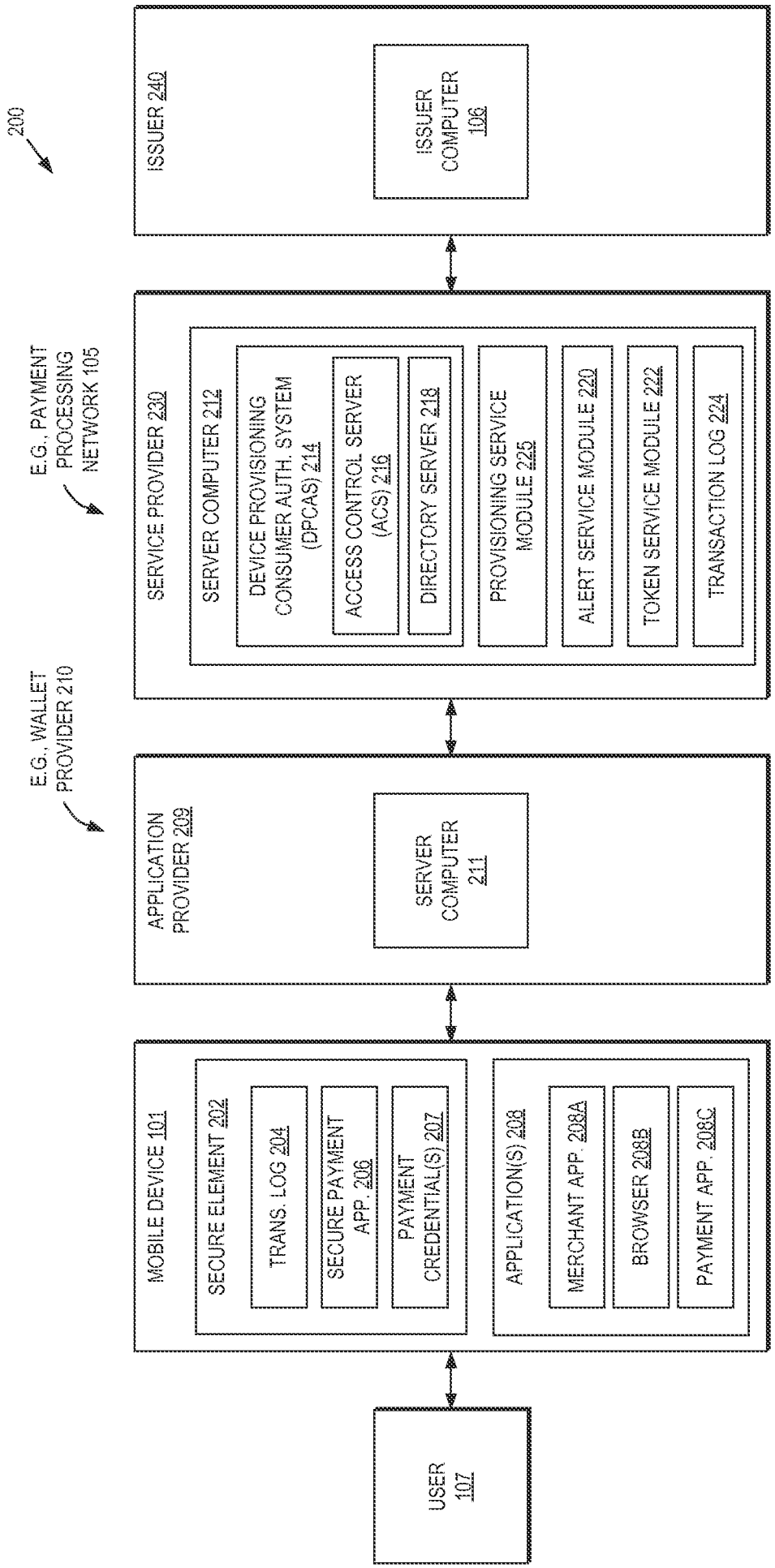

200
ISSUER 240
ISSUER COMPUTER 106
E.G., PAYMENT PROCESSING NETWORK 105
SERVICE PROVIDER 230
SERVER COMPUTER 212
DEVICE PROVISIONING CONSUMER AUTH. SYSTEM (DPCAS) 214
ACCESS CONTROL SERVER (ACS) 216
DIRECTORY SERVER 218
PROVISIONING SERVICE MODULE 225
ALERT SERVICE MODULE 220
TOKEN SERVICE MODULE 222
TRANSACTION LOG 224
E.G., WALLET PROVIDER 210
APPLICATION PROVIDER 209
SERVER COMPUTER 211
MOBILE DEVICE 101
SECURE ELEMENT 202
TRANS. LOG 204
SECURE PAYMENT APP. 206
PAYMENT CREDENTIAL(S) 207
APPLICATION(S) 208
MERCHANT APP. 208A
BROWSER 208B
PAYMENT APP. 208C
USER 107

FIG. 2

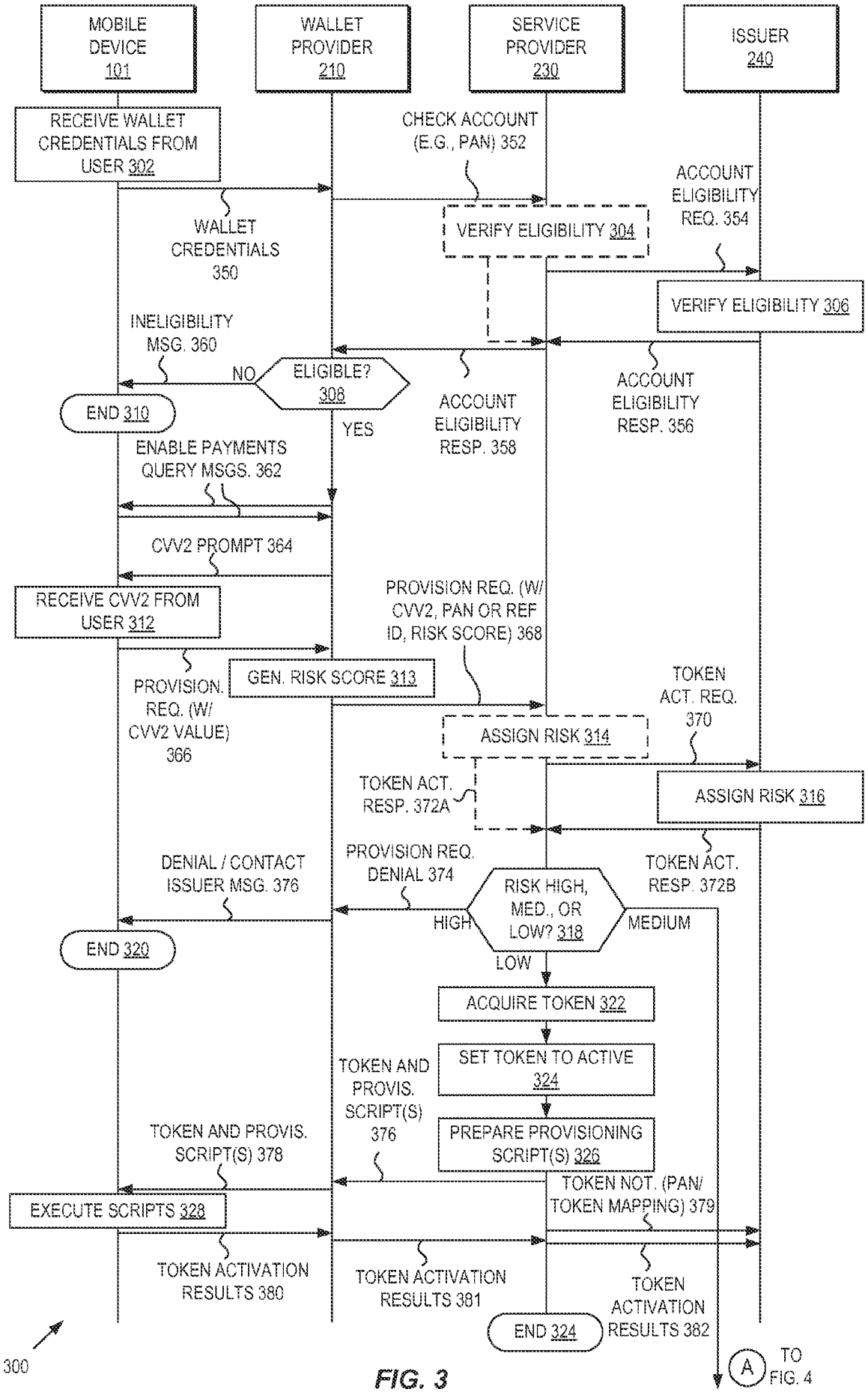

MOBILE DEVICE 101
WALLET PROVIDER 210
SERVICE PROVIDER 230
ISSUER 240
RECEIVE WALLET CREDENTIALS FROM USER 302
CHECK ACCOUNT (E.G., PAN) 352
ACCOUNT ELIGIBILITY REQ. 354
WALLET CREDENTIALS 350
VERIFY ELIGIBILITY 304
VERIFY ELIGIBILITY 306
INELIGIBILITY MSG. 360
NO
ELIGIBLE? 308
YES
END 310
ACCOUNT ELIGIBILITY RESP. 358
ACCOUNT ELIGIBILITY RESP. 356
ENABLE PAYMENTS QUERY MSGS. 362
CVV2 PROMPT 364
RECEIVE CVV2 FROM USER 312
PROVISION REQ. (W/ CVV2, PAN OR REF ID, RISK SCORE) 368
PROVISION. REQ. (W/ CVV2 VALUE) 366
GEN. RISK SCORE 313
TOKEN ACT. REQ. 370
ASSIGN RISK 314
ASSIGN RISK 316
TOKEN ACT. RESP. 372A
TOKEN ACT. RESP. 372B
DENIAL / CONTACT ISSUER MSG. 376
PROVISION REQ. DENIAL 374
RISK HIGH, MED., OR LOW? 318
HIGH
MEDIUM
LOW
END 320
ACQUIRE TOKEN 322
SET TOKEN TO ACTIVE 324
TOKEN AND PROVIS. SCRIPT(S) 376
PREPARE PROVISIONING SCRIPT(S) 326
TOKEN AND PROVIS. SCRIPT(S) 378
TOKEN NOT. (PAN/ TOKEN MAPPING) 379
EXECUTE SCRIPTS 328
TOKEN ACTIVATION RESULTS 380
TOKEN ACTIVATION RESULTS 381
TOKEN ACTIVATION RESULTS 382
END 324
300
A
TO FIG. 4

FIG. 3

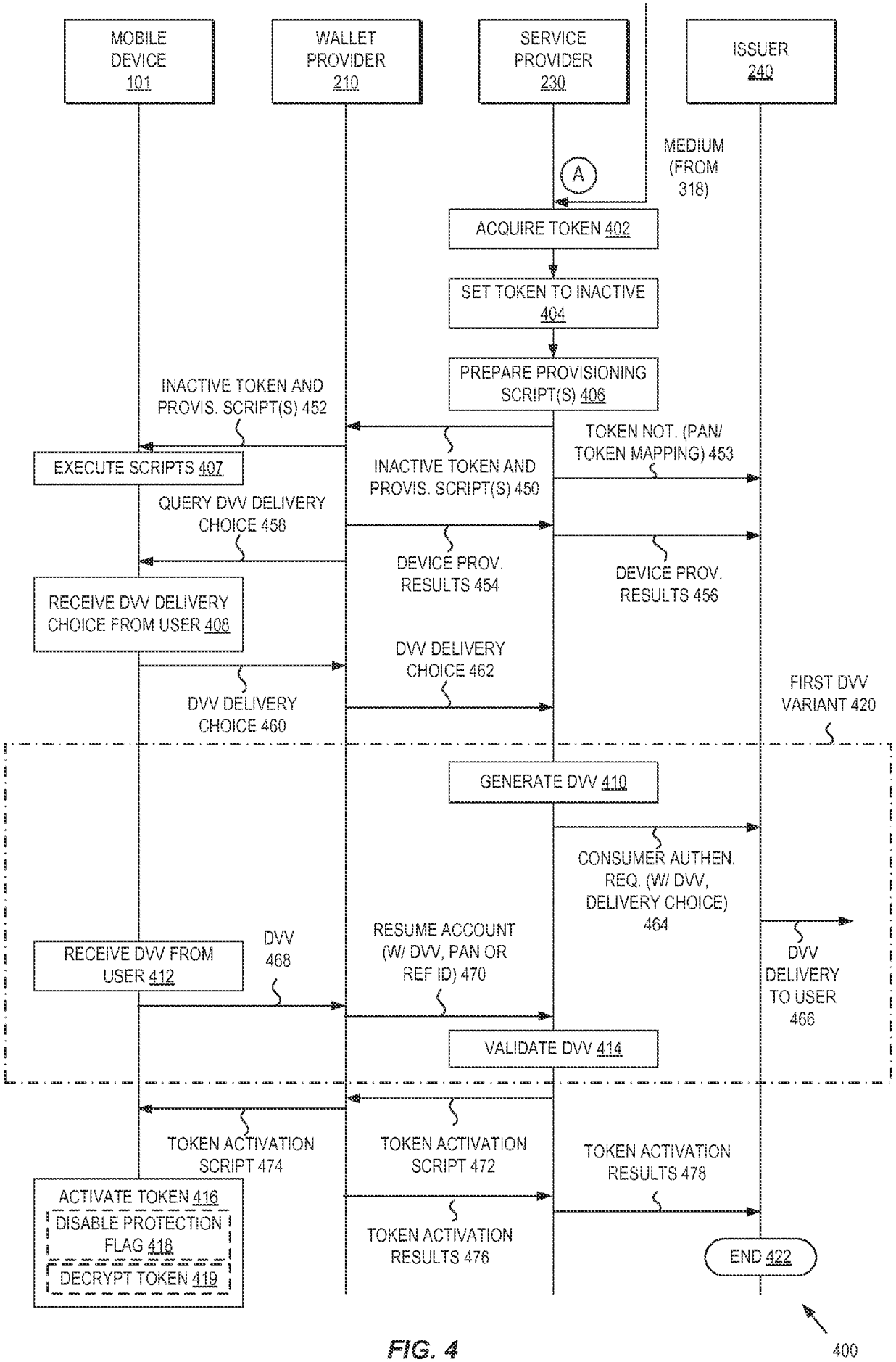

MOBILE DEVICE 101
WALLET PROVIDER 210
SERVICE PROVIDER 230
ISSUER 240
MEDIUM (FROM 318)
A
ACQUIRE TOKEN 402
SET TOKEN TO INACTIVE 404
PREPARE PROVISIONING SCRIPT(S) 406
INACTIVE TOKEN AND PROVIS. SCRIPT(S) 452
EXECUTE SCRIPTS 407
INACTIVE TOKEN AND PROVIS. SCRIPT(S) 450
TOKEN NOT. (PAN/ TOKEN MAPPING) 453
QUERY DVV DELIVERY CHOICE 458
DEVICE PROV. RESULTS 454
DEVICE PROV. RESULTS 456
RECEIVE DVV DELIVERY CHOICE FROM USER 408
DVV DELIVERY CHOICE 462
DVV DELIVERY CHOICE 460
FIRST DVV VARIANT 420
GENERATE DVV 410
CONSUMER AUTHEN. REQ. (W/ DVV, DELIVERY CHOICE) 464
RECEIVE DVV FROM USER 412
DVV 468
RESUME ACCOUNT (W/ DVV, PAN OR REF ID) 470
DVV DELIVERY TO USER 466
VALIDATE DVV 414
TOKEN ACTIVATION SCRIPT 474
TOKEN ACTIVATION SCRIPT 472
TOKEN ACTIVATION RESULTS 478
ACTIVATE TOKEN 416
DISABLE PROTECTION FLAG 418
DECRYPT TOKEN 419
TOKEN ACTIVATION RESULTS 476
END 422
400

FIG. 4

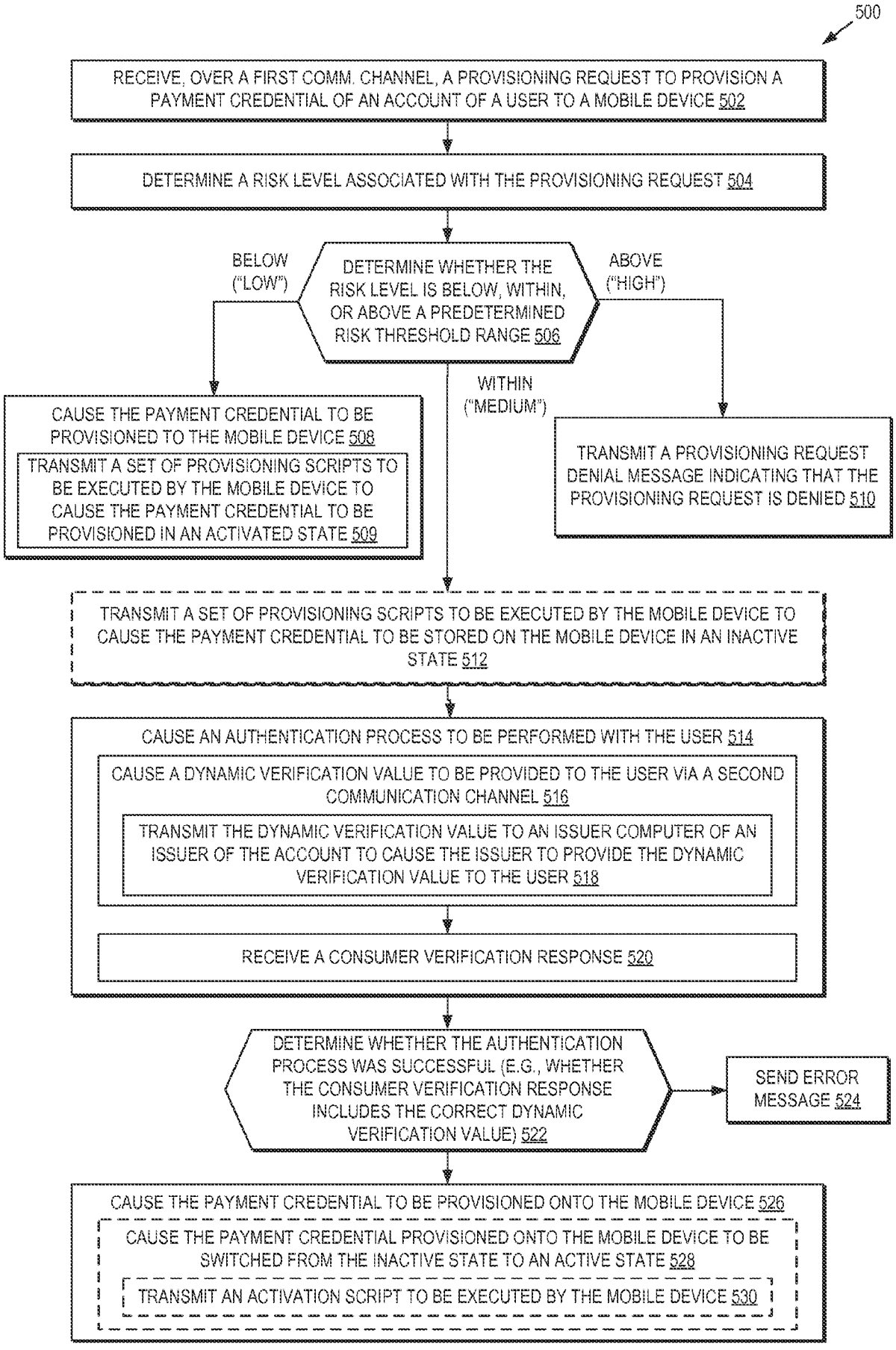

500
RECEIVE, OVER A FIRST COMM. CHANNEL, A PROVISIONING REQUEST TO PROVISION A PAYMENT CREDENTIAL OF AN ACCOUNT OF A USER TO A MOBILE DEVICE 502
DETERMINE A RISK LEVEL ASSOCIATED WITH THE PROVISIONING REQUEST 504
DETERMINE WHETHER THE RISK LEVEL IS BELOW, WITHIN, OR ABOVE A PREDETERMINED RISK THRESHOLD RANGE 506
BELOW ("LOW")
WITHIN ("MEDIUM")
ABOVE ("HIGH")
CAUSE THE PAYMENT CREDENTIAL TO BE PROVISIONED TO THE MOBILE DEVICE 508
TRANSMIT A SET OF PROVISIONING SCRIPTS TO BE EXECUTED BY THE MOBILE DEVICE TO CAUSE THE PAYMENT CREDENTIAL TO BE PROVISIONED IN AN ACTIVATED STATE 509
TRANSMIT A PROVISIONING REQUEST DENIAL MESSAGE INDICATING THAT THE PROVISIONING REQUEST IS DENIED 510
TRANSMIT A SET OF PROVISIONING SCRIPTS TO BE EXECUTED BY THE MOBILE DEVICE TO CAUSE THE PAYMENT CREDENTIAL TO BE STORED ON THE MOBILE DEVICE IN AN INACTIVE STATE 512
CAUSE AN AUTHENTICATION PROCESS TO BE PERFORMED WITH THE USER 514
CAUSE A DYNAMIC VERIFICATION VALUE TO BE PROVIDED TO THE USER VIA A SECOND COMMUNICATION CHANNEL 516
TRANSMIT THE DYNAMIC VERIFICATION VALUE TO AN ISSUER COMPUTER OF AN ISSUER OF THE ACCOUNT TO CAUSE THE ISSUER TO PROVIDE THE DYNAMIC VERIFICATION VALUE TO THE USER 518
RECEIVE A CONSUMER VERIFICATION RESPONSE 520
DETERMINE WHETHER THE AUTHENTICATION PROCESS WAS SUCCESSFUL (E.G., WHETHER THE CONSUMER VERIFICATION RESPONSE INCLUDES THE CORRECT DYNAMIC VERIFICATION VALUE) 522
SEND ERROR MESSAGE 524
CAUSE THE PAYMENT CREDENTIAL TO BE PROVISIONED ONTO THE MOBILE DEVICE 526
CAUSE THE PAYMENT CREDENTIAL PROVISIONED ONTO THE MOBILE DEVICE TO BE SWITCHED FROM THE INACTIVE STATE TO AN ACTIVE STATE 528
TRANSMIT AN ACTIVATION SCRIPT TO BE EXECUTED BY THE MOBILE DEVICE 530

FIG. 5

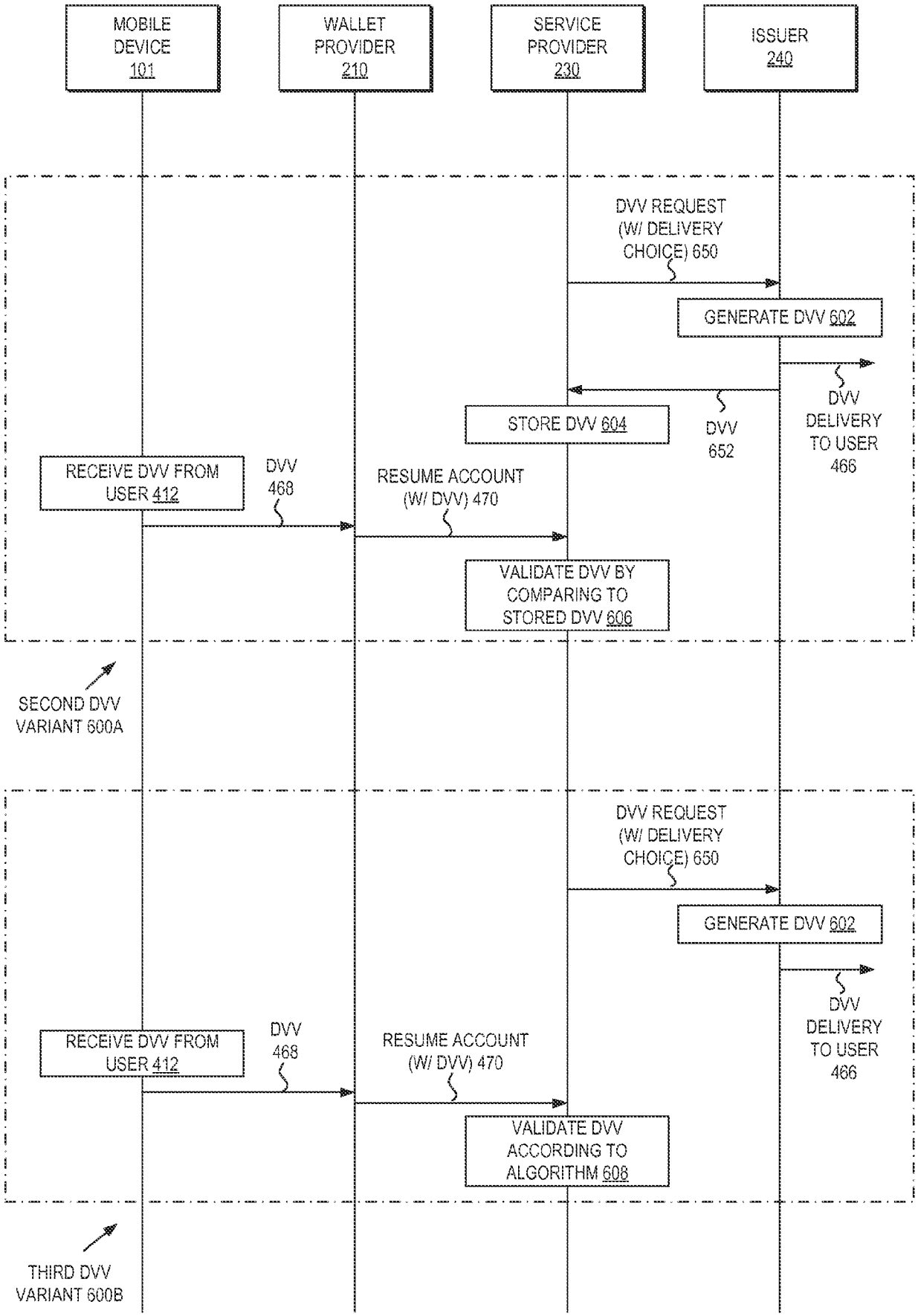

MOBILE DEVICE 101
WALLET PROVIDER 210
SERVICE PROVIDER 230
ISSUER 240
DVV REQUEST (W/ DELIVERY CHOICE) 650
GENERATE DVV 602
DVV DELIVERY TO USER 466
DVV 652
STORE DVV 604
RECEIVE DVV FROM USER 412
DVV 468
RESUME ACCOUNT (W/ DVV) 470
VALIDATE DVV BY COMPARING TO STORED DVV 606
SECOND DVV VARIANT 600A
DVV REQUEST (W/ DELIVERY CHOICE) 650
GENERATE DVV 602
DVV DELIVERY TO USER 466
RECEIVE DVV FROM USER 412
DVV 468
RESUME ACCOUNT (W/ DVV) 470
VALIDATE DVV ACCORDING TO ALGORITHM 608
THIRD DVV VARIANT 600B

FIG. 6

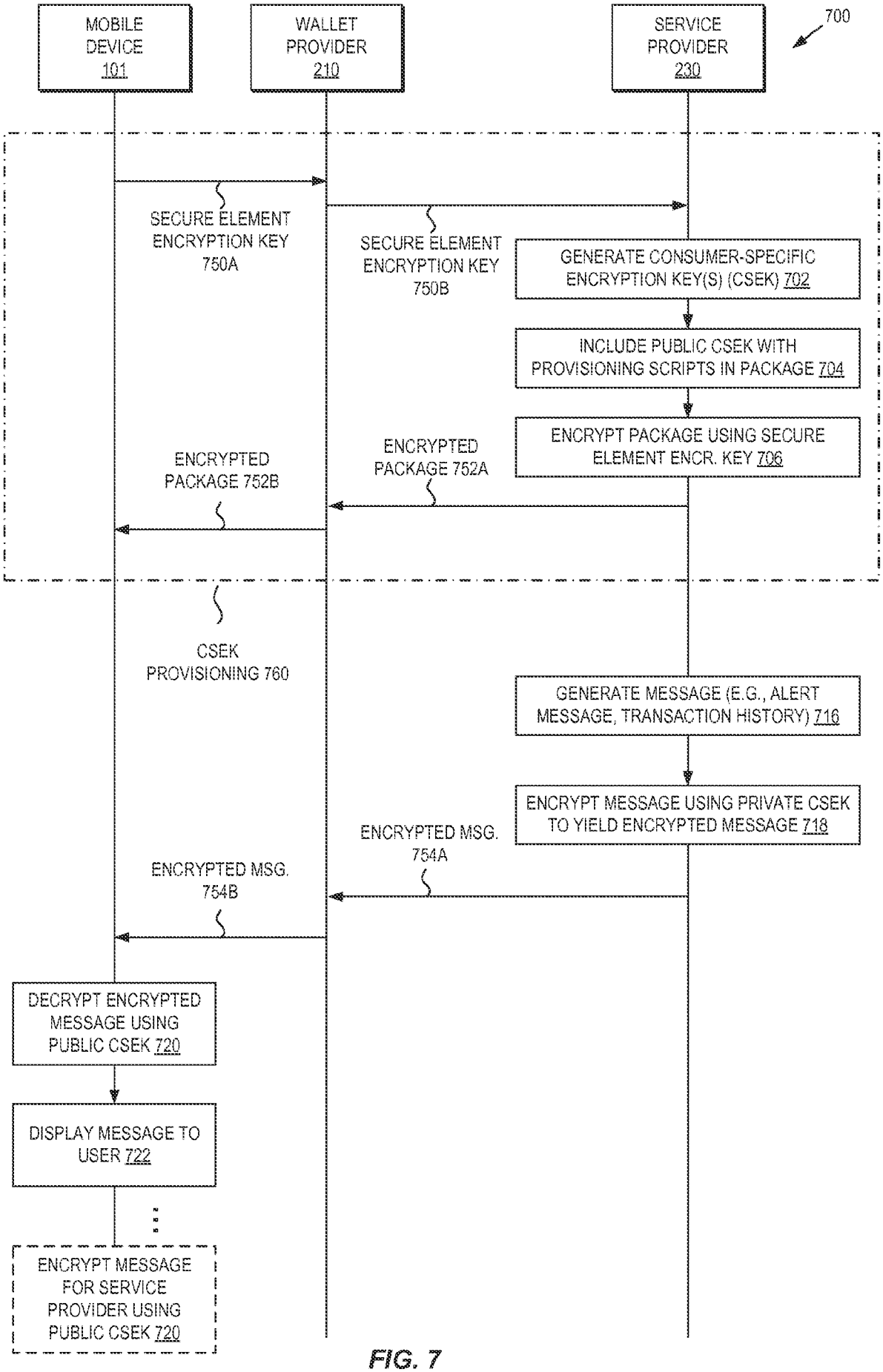

MOBILE DEVICE 101
WALLET PROVIDER 210
SERVICE PROVIDER 230
700
SECURE ELEMENT ENCRYPTION KEY 750A
SECURE ELEMENT ENCRYPTION KEY 750B
GENERATE CONSUMER-SPECIFIC ENCRYPTION KEY(S) (CSEK) 702
INCLUDE PUBLIC CSEK WITH PROVISIONING SCRIPTS IN PACKAGE 704
ENCRYPT PACKAGE USING SECURE ELEMENT ENCR. KEY 706
ENCRYPTED PACKAGE 752A
ENCRYPTED PACKAGE 752B
CSEK PROVISIONING 760
GENERATE MESSAGE (E.G., ALERT MESSAGE, TRANSACTION HISTORY) 716
ENCRYPT MESSAGE USING PRIVATE CSEK TO YIELD ENCRYPTED MESSAGE 718
ENCRYPTED MSG. 754A
ENCRYPTED MSG. 754B
DECRYPT ENCRYPTED MESSAGE USING PUBLIC CSEK 720
DISPLAY MESSAGE TO USER 722
ENCRYPT MESSAGE FOR SERVICE PROVIDER USING PUBLIC CSEK 720

FIG. 7

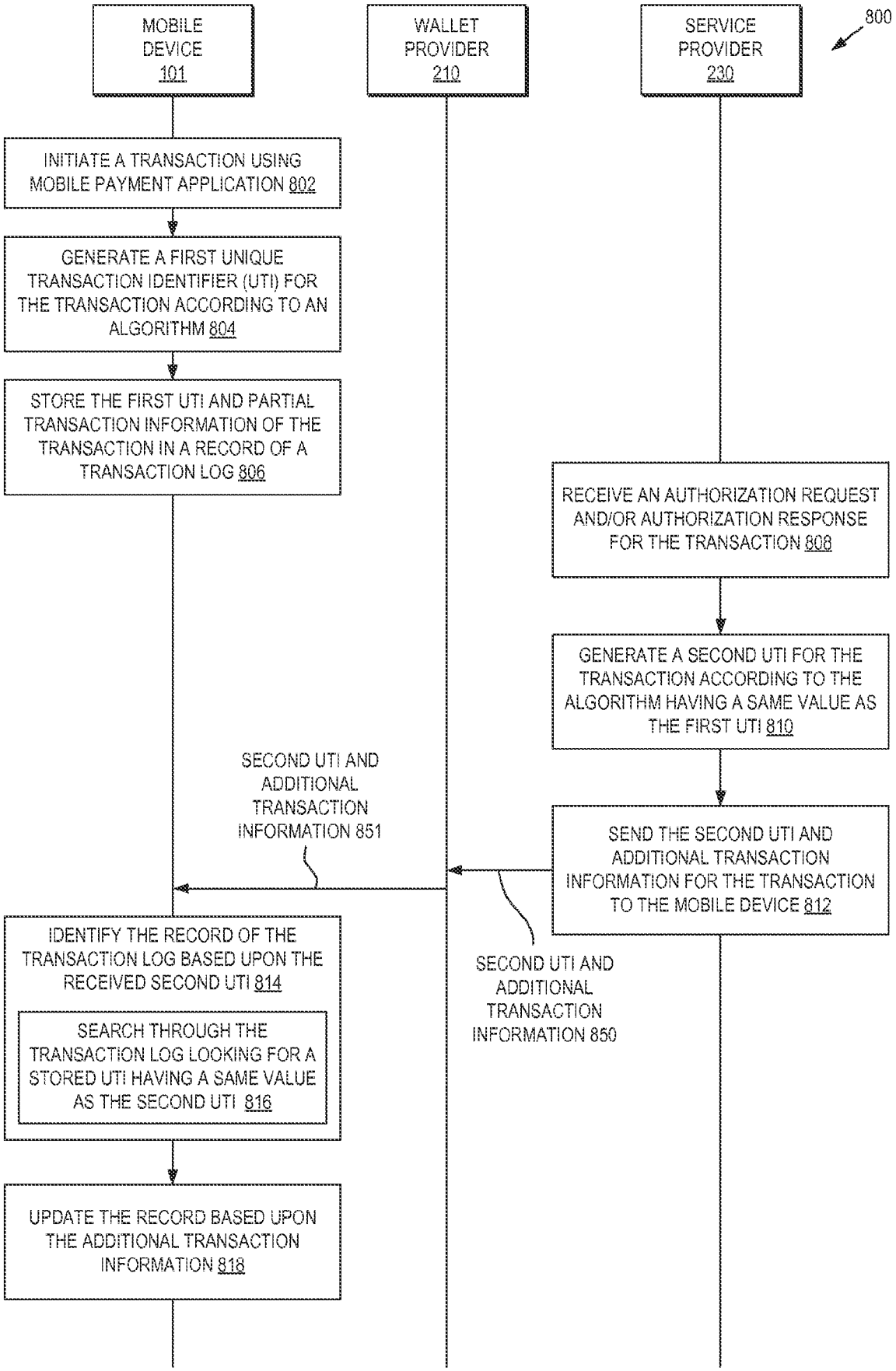

MOBILE DEVICE 101
WALLET PROVIDER 210
SERVICE PROVIDER 230
800
INITIATE A TRANSACTION USING MOBILE PAYMENT APPLICATION 802
GENERATE A FIRST UNIQUE TRANSACTION IDENTIFIER (UTI) FOR THE TRANSACTION ACCORDING TO AN ALGORITHM 804
STORE THE FIRST UTI AND PARTIAL TRANSACTION INFORMATION OF THE TRANSACTION IN A RECORD OF A TRANSACTION LOG 806
RECEIVE AN AUTHORIZATION REQUEST AND/OR AUTHORIZATION RESPONSE FOR THE TRANSACTION 808
GENERATE A SECOND UTI FOR THE TRANSACTION ACCORDING TO THE ALGORITHM HAVING A SAME VALUE AS THE FIRST UTI 810
SECOND UTI AND ADDITIONAL TRANSACTION INFORMATION 851
SEND THE SECOND UTI AND ADDITIONAL TRANSACTION INFORMATION FOR THE TRANSACTION TO THE MOBILE DEVICE 812
SECOND UTI AND ADDITIONAL TRANSACTION INFORMATION 850
IDENTIFY THE RECORD OF THE TRANSACTION LOG BASED UPON THE RECEIVED SECOND UTI 814
SEARCH THROUGH THE TRANSACTION LOG LOOKING FOR A STORED UTI HAVING A SAME VALUE AS THE SECOND UTI 816
UPDATE THE RECORD BASED UPON THE ADDITIONAL TRANSACTION INFORMATION 818

FIG. 8

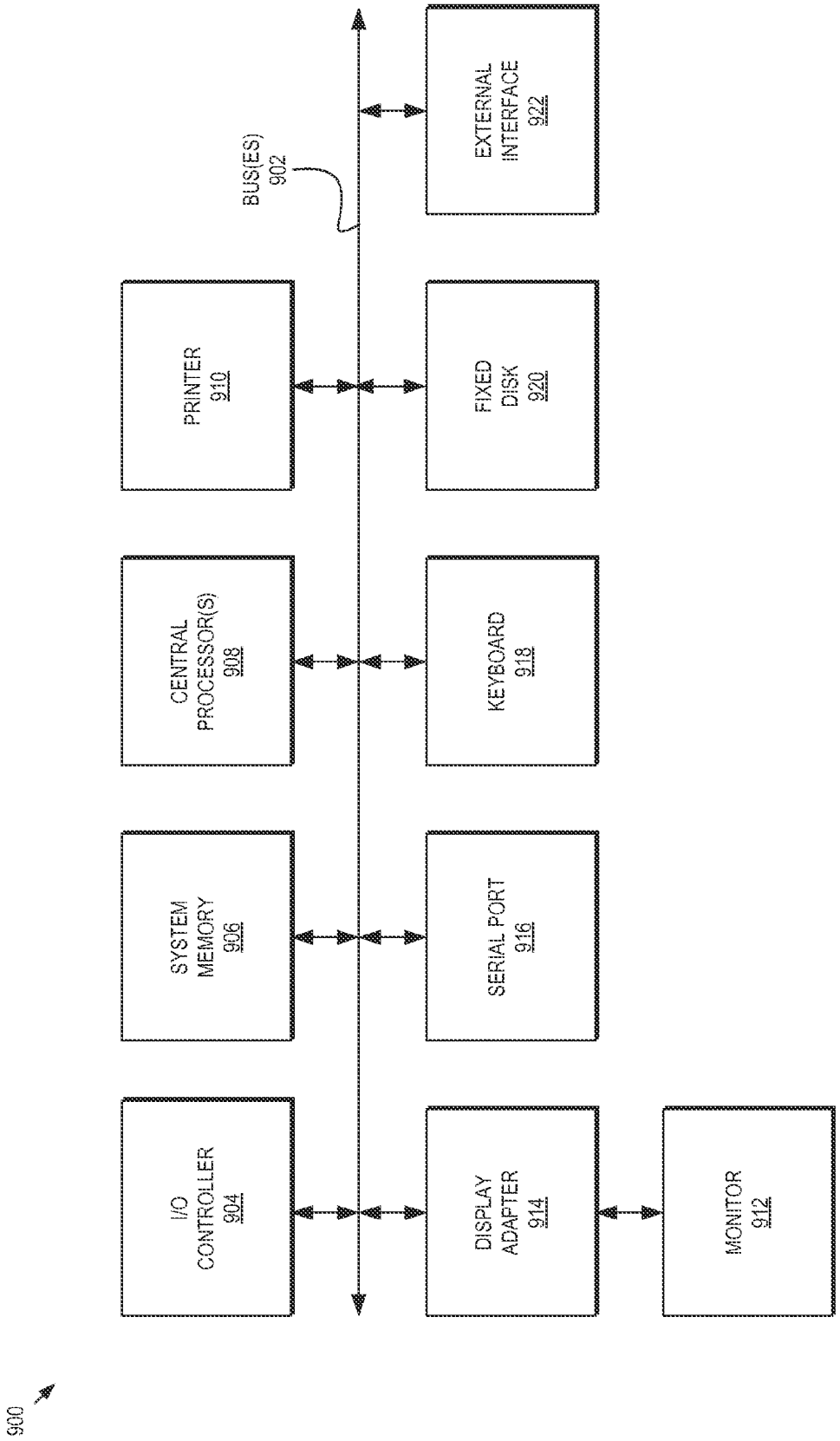

900
I/O CONTROLLER 904
SYSTEM MEMORY 906
CENTRAL PROCESSOR(S) 908
PRINTER 910
DISPLAY ADAPTER 914
SERIAL PORT 916
KEYBOARD 918
FIXED DISK 920
EXTERNAL INTERFACE 922
BUS(ES) 902
MONITOR 912

FIG. 9