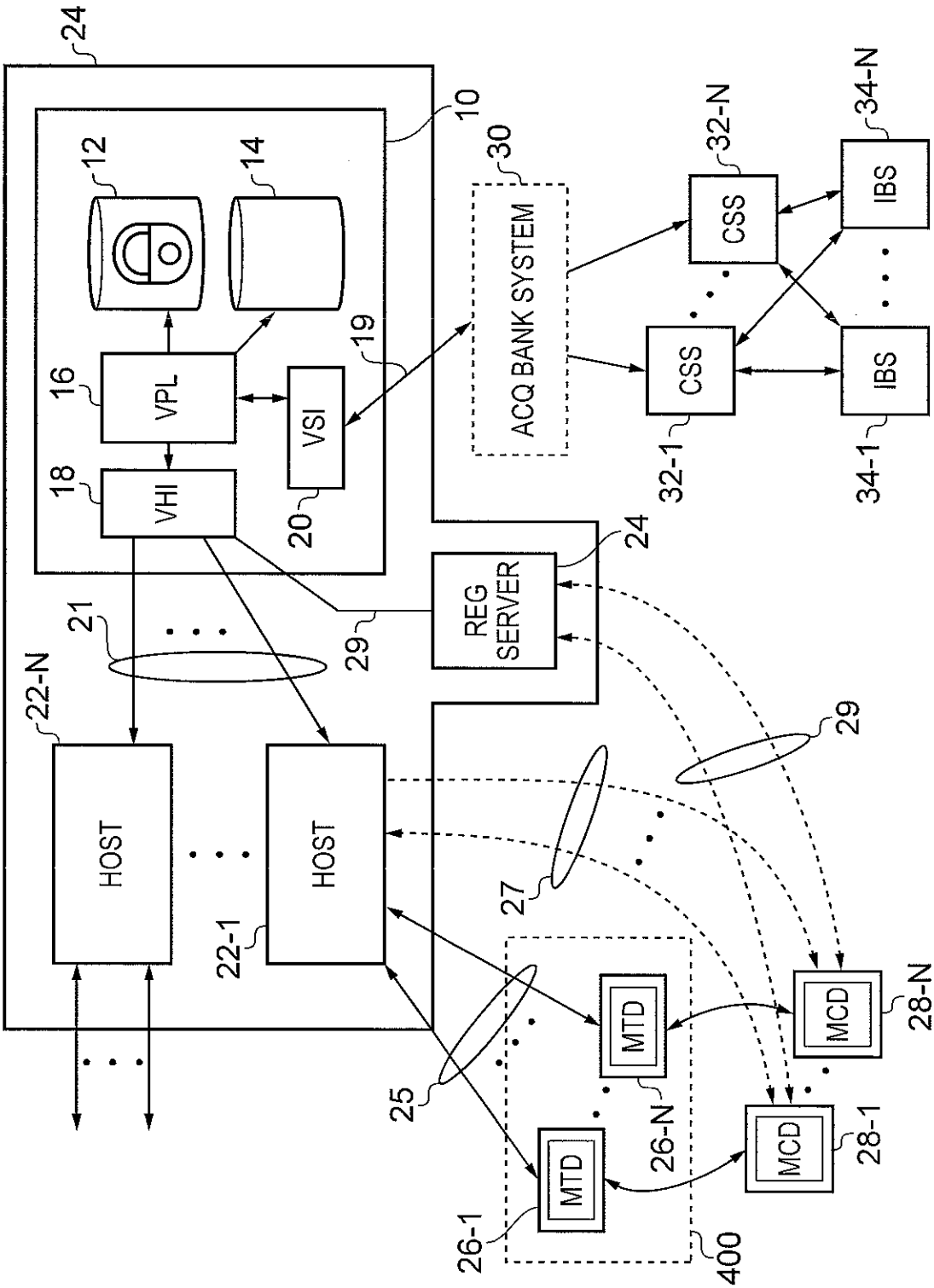
24
10
12
14
16
VPL
VSI
19
18
VHI
20
30
ACQ BANK SYSTEM
32-N
34-N
CSS
IBS
32-1
34-1
REG SERVER
24
21
29
22-N
HOST
22-1
HOST
27
29
25
MTD
26-N
MCD
28-N
MTD
26-1
MCD
28-1
400

FIG. 1

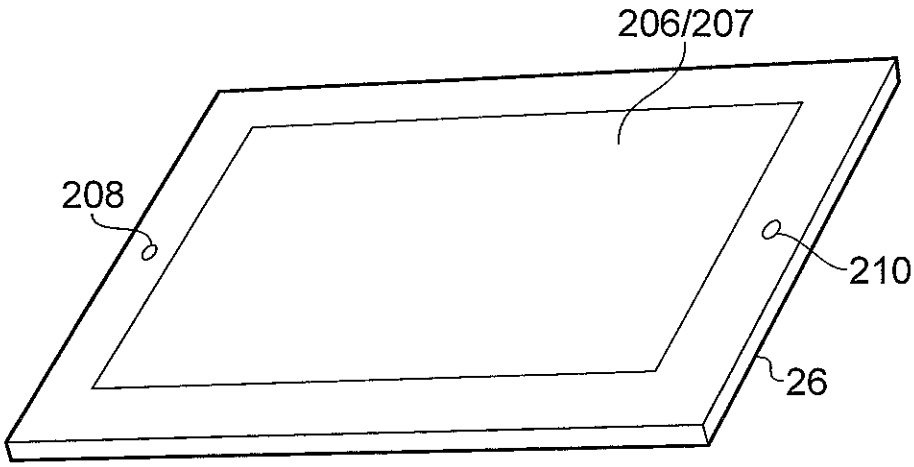
206/207
208
210
26

FIG. 2A

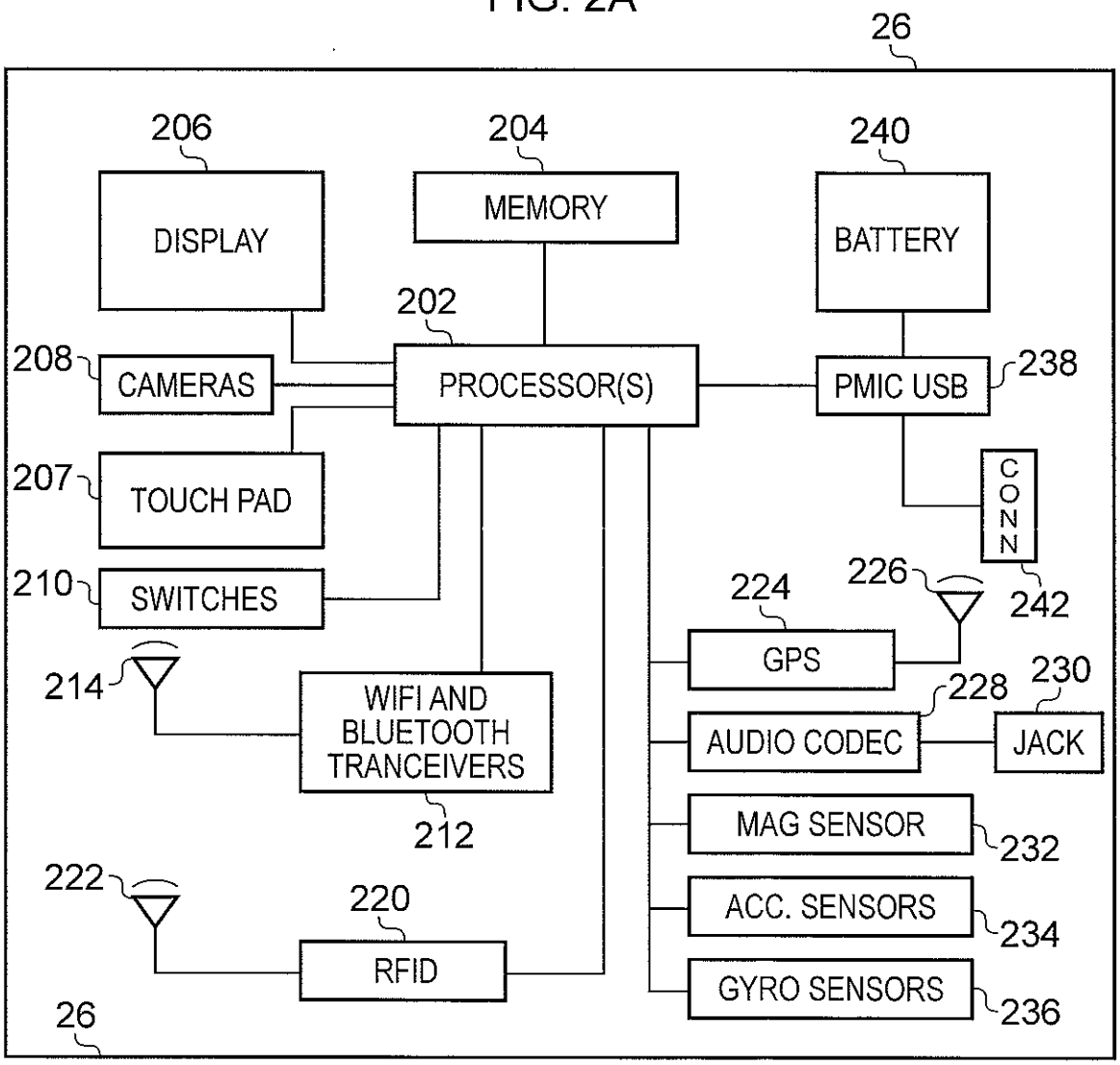
26
206
DISPLAY
204
MEMORY
240
BATTERY
202
208
CAMERAS
PROCESSOR(S)
PMIC USB
238
207
TOUCH PAD
CONN
210
SWITCHES
224
226
242
GPS
214
WIFI AND BLUETOOTH TRANCEIVERS
228
230
AUDIO CODEC
JACK
212
MAG SENSOR
232
222
220
ACC. SENSORS
234
RFID
GYRO SENSORS
236
26

FIG. 2B

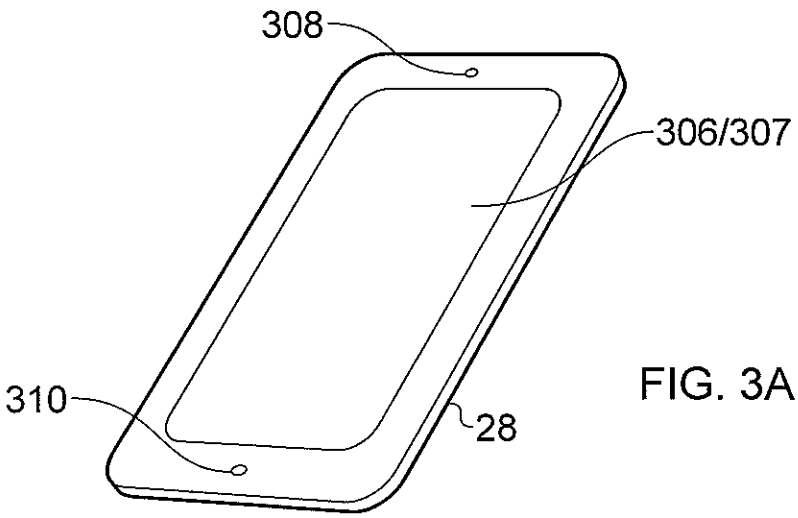
308
306/307
310
28

FIG. 3A

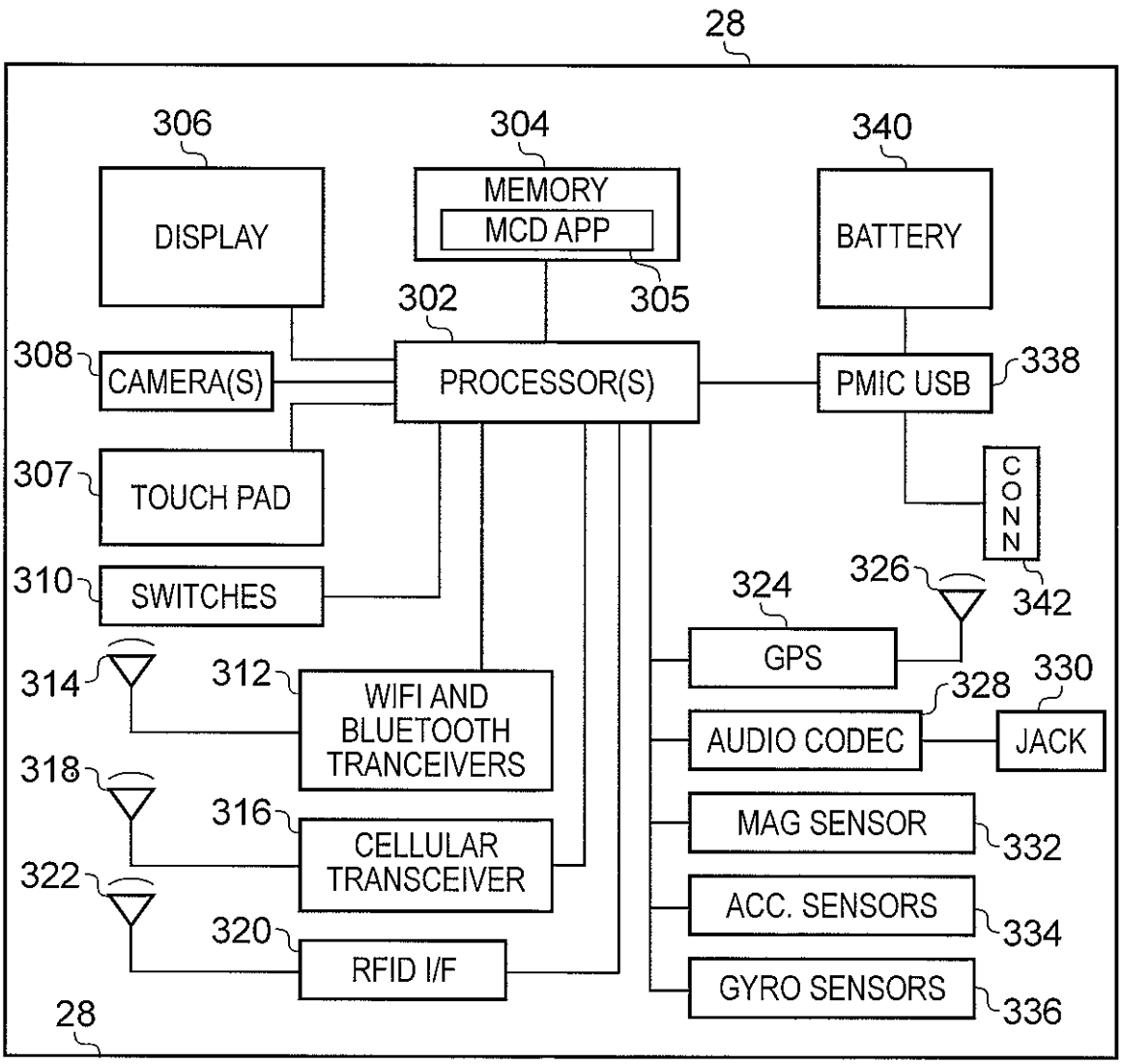
28
306
DISPLAY
304
MEMORY
MCD APP
305
340
BATTERY
302
308
CAMERA(S)
PROCESSOR(S)
PMIC USB
338
307
TOUCH PAD
CONN
310
SWITCHES
326
342
324
GPS
314
312
WIFI AND
BLUETOOTH
TRANCEIVERS
328
330
AUDIO CODEC
JACK
318
316
MAG SENSOR
332
CELLULAR
TRANSCEIVER
322
ACC. SENSORS
334
320
RFID I/F
GYRO SENSORS
336
28

FIG. 3B

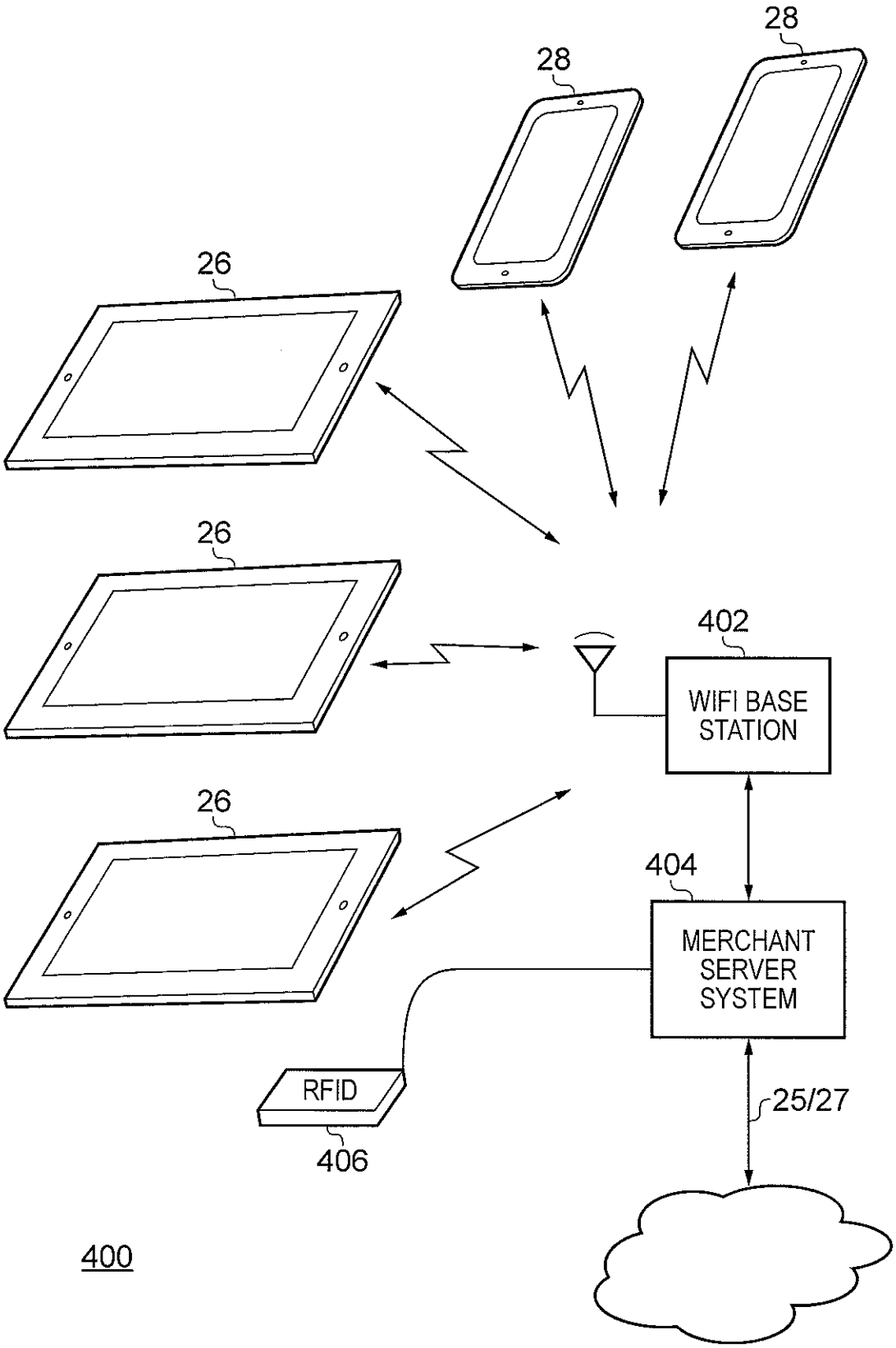
28
28
26
26
26
402
WIFI BASE STATION
404
MERCHANT SERVER SYSTEM
RFID
406
25/27
400

FIG. 4

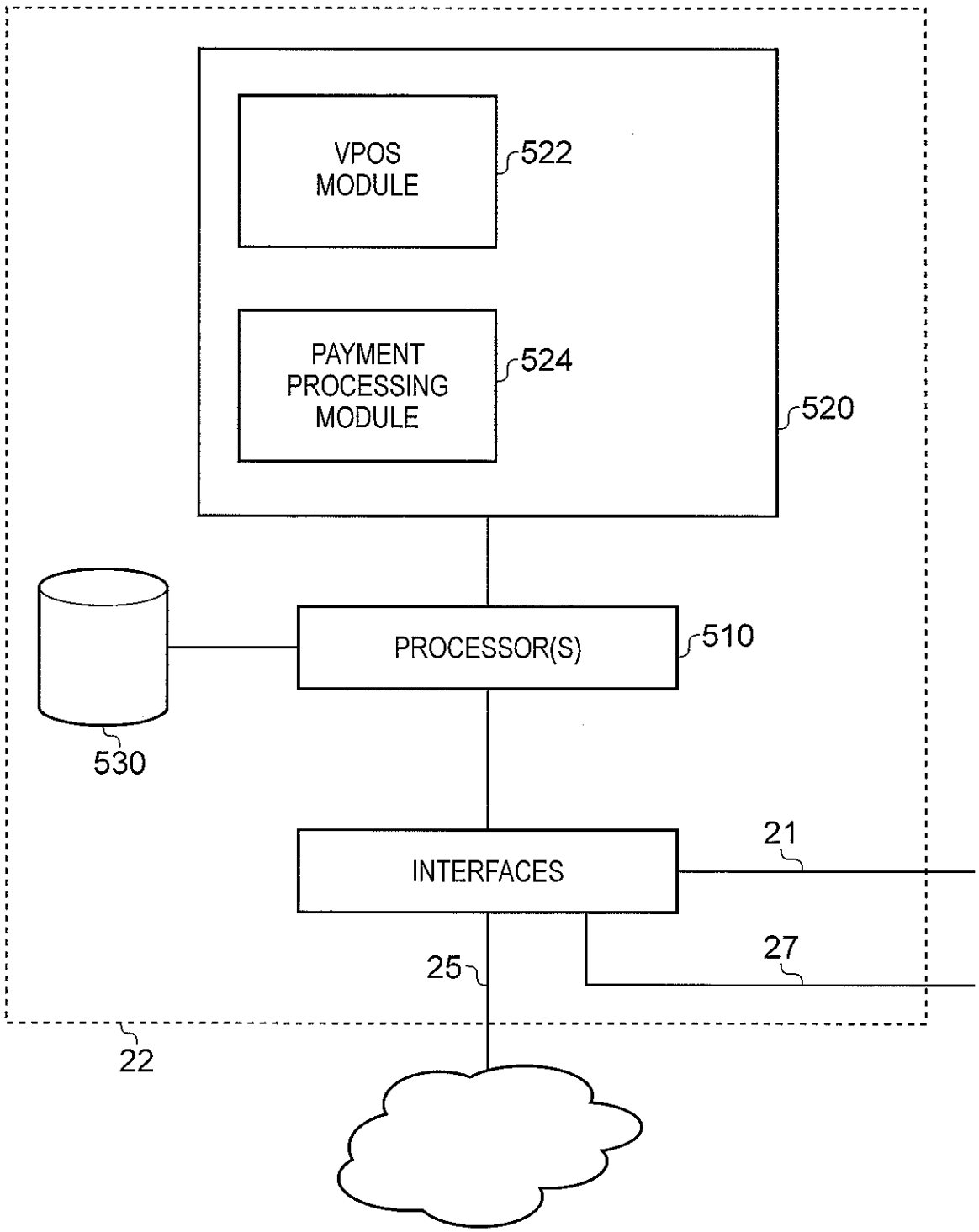
VPOS
MODULE
522
PAYMENT
PROCESSING
MODULE
524
520
PROCESSOR(S)
510
530
INTERFACES
21
27
25
22

FIG. 5

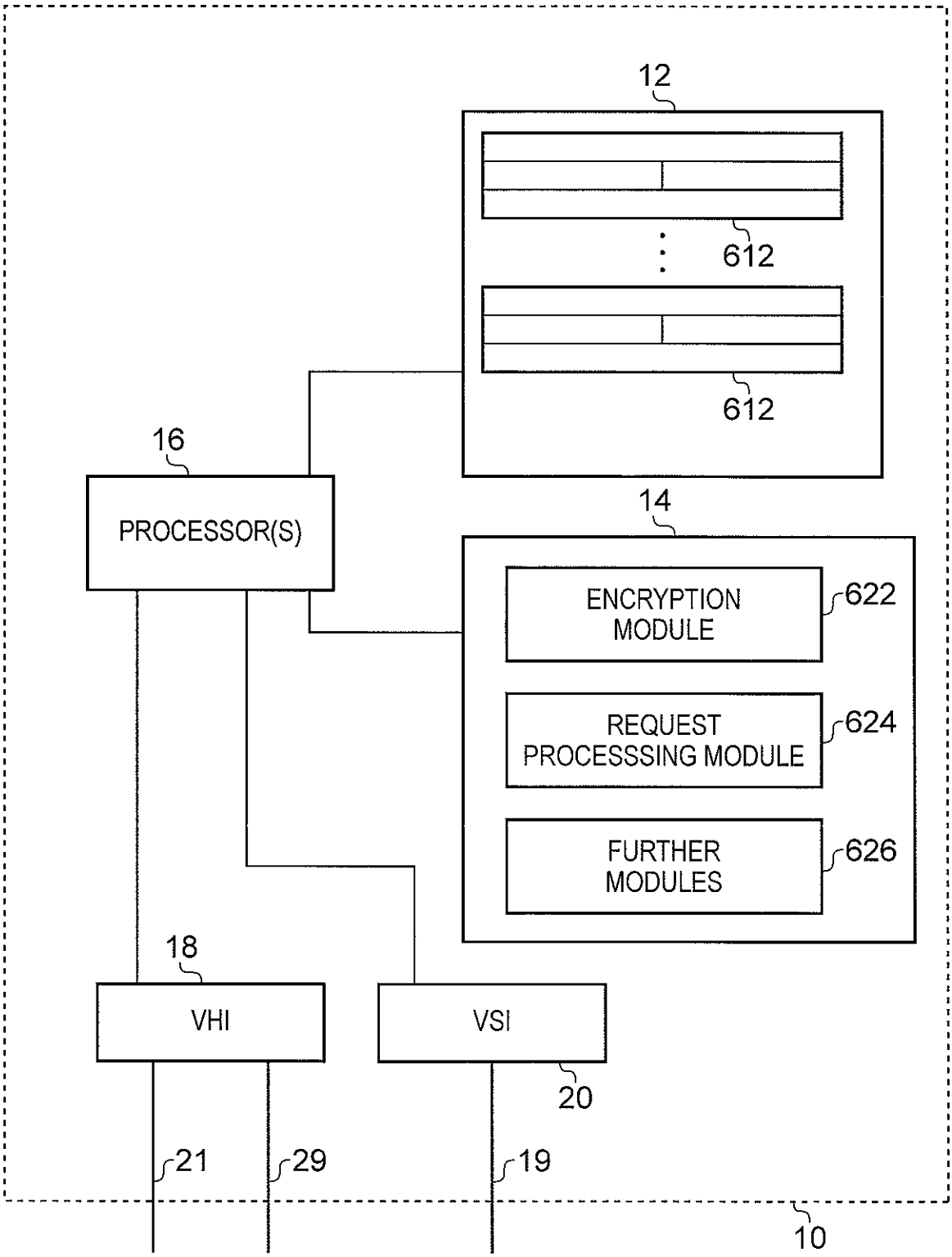
12
612
612
16
PROCESSOR(S)
14
ENCRYPTION MODULE
622
REQUEST PROCESSSING MODULE
624
FURTHER MODULES
626
18
VHI
VSI
20
21
29
19
10

FIG. 6

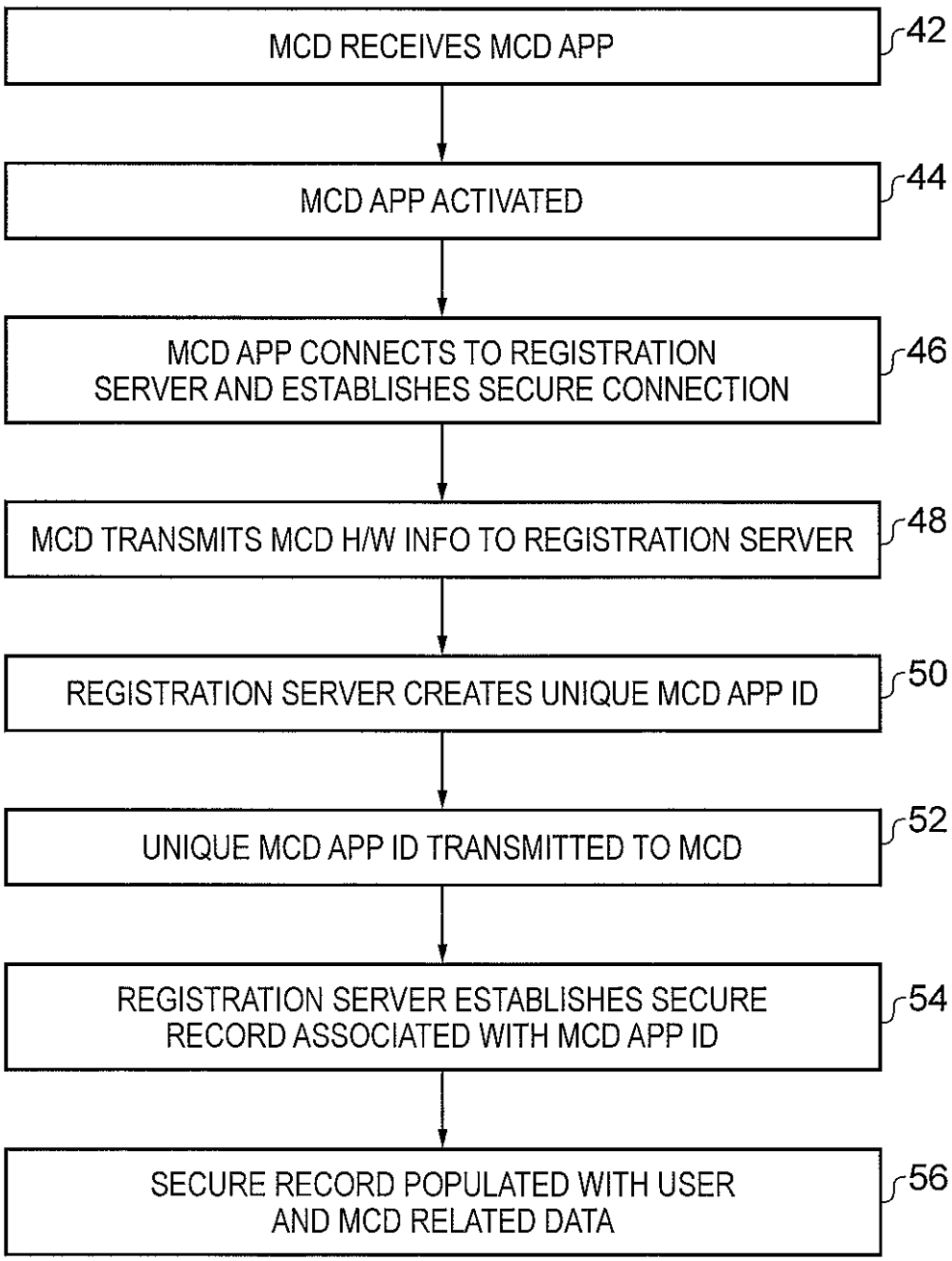
MCD RECEIVES MCD APP
42
MCD APP ACTIVATED
44
MCD APP CONNECTS TO REGISTRATION SERVER AND ESTABLISHES SECURE CONNECTION
46
MCD TRANSMITS MCD H/W INFO TO REGISTRATION SERVER
48
REGISTRATION SERVER CREATES UNIQUE MCD APP ID
50
UNIQUE MCD APP ID TRANSMITTED TO MCD
52
REGISTRATION SERVER ESTABLISHES SECURE RECORD ASSOCIATED WITH MCD APP ID
54
SECURE RECORD POPULATED WITH USER AND MCD RELATED DATA
56
70

FIG. 7

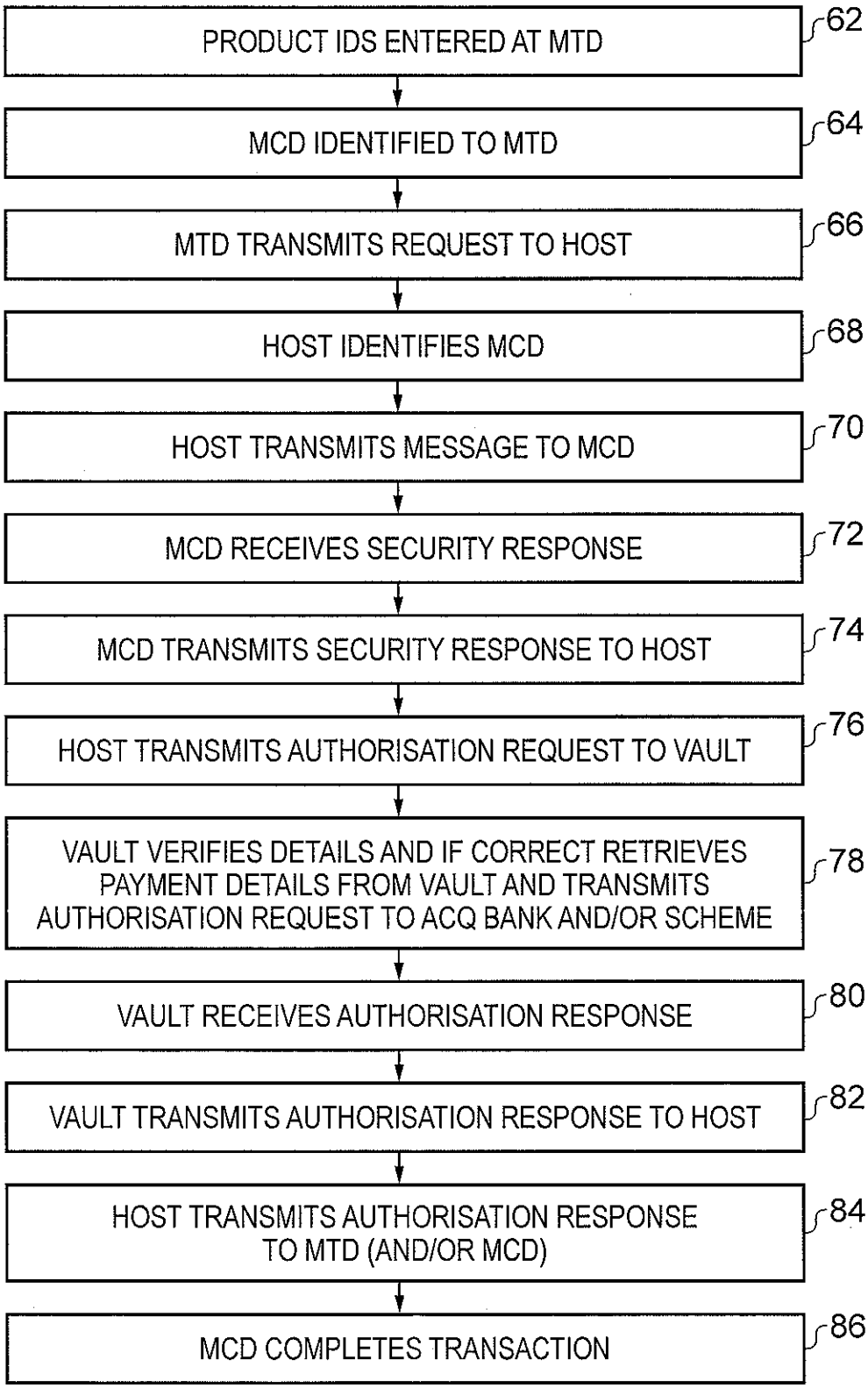
PRODUCT IDS ENTERED AT MTD
62
MCD IDENTIFIED TO MTD
64
MTD TRANSMITS REQUEST TO HOST
66
HOST IDENTIFIES MCD
68
HOST TRANSMITS MESSAGE TO MCD
70
MCD RECEIVES SECURITY RESPONSE
72
MCD TRANSMITS SECURITY RESPONSE TO HOST
74
HOST TRANSMITS AUTHORISATION REQUEST TO VAULT
76
VAULT VERIFIES DETAILS AND IF CORRECT RETRIEVES PAYMENT DETAILS FROM VAULT AND TRANSMITS AUTHORISATION REQUEST TO ACQ BANK AND/OR SCHEME
78
VAULT RECEIVES AUTHORISATION RESPONSE
80
VAULT TRANSMITS AUTHORISATION RESPONSE TO HOST
82
HOST TRANSMITS AUTHORISATION RESPONSE TO MTD (AND/OR MCD)
84
MCD COMPLETES TRANSACTION
86
40

FIG. 8

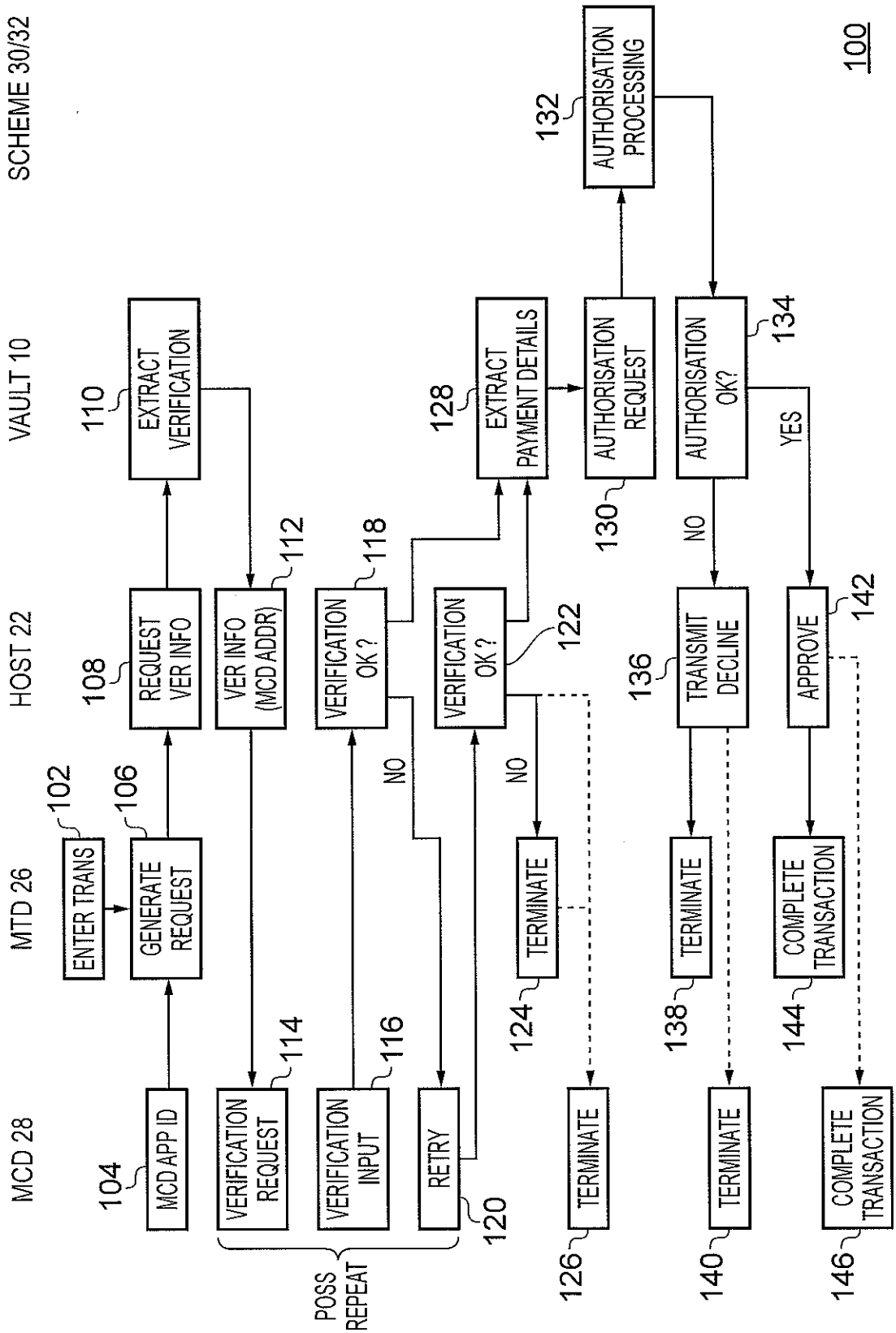
MCD 28
MTD 26
HOST 22
VAULT 10
SCHEME 30/32
100
ENTER TRANS
GENERATE REQUEST
REQUEST VER INFO
EXTRACT VERIFICATION
AUTHORISATION PROCESSING
MCD APP ID
VERIFICATION REQUEST
VER INFO (MCD ADDR)
VERIFICATION INPUT
VERIFICATION OK ?
RETRY
VERIFICATION OK ?
EXTRACT PAYMENT DETAILS
AUTHORISATION REQUEST
AUTHORISATION OK?
TERMINATE
TERMINATE
TERMINATE
TRANSMIT DECLINE
APPROVE
COMPLETE TRANSACTION
COMPLETE TRANSACTION
NO
NO
NO
YES
POSS REPEAT
102
104
106
108
110
112
114
116
118
120
122
124
126
128
130
132
134
136
138
140
142
144
146

FIG. 9