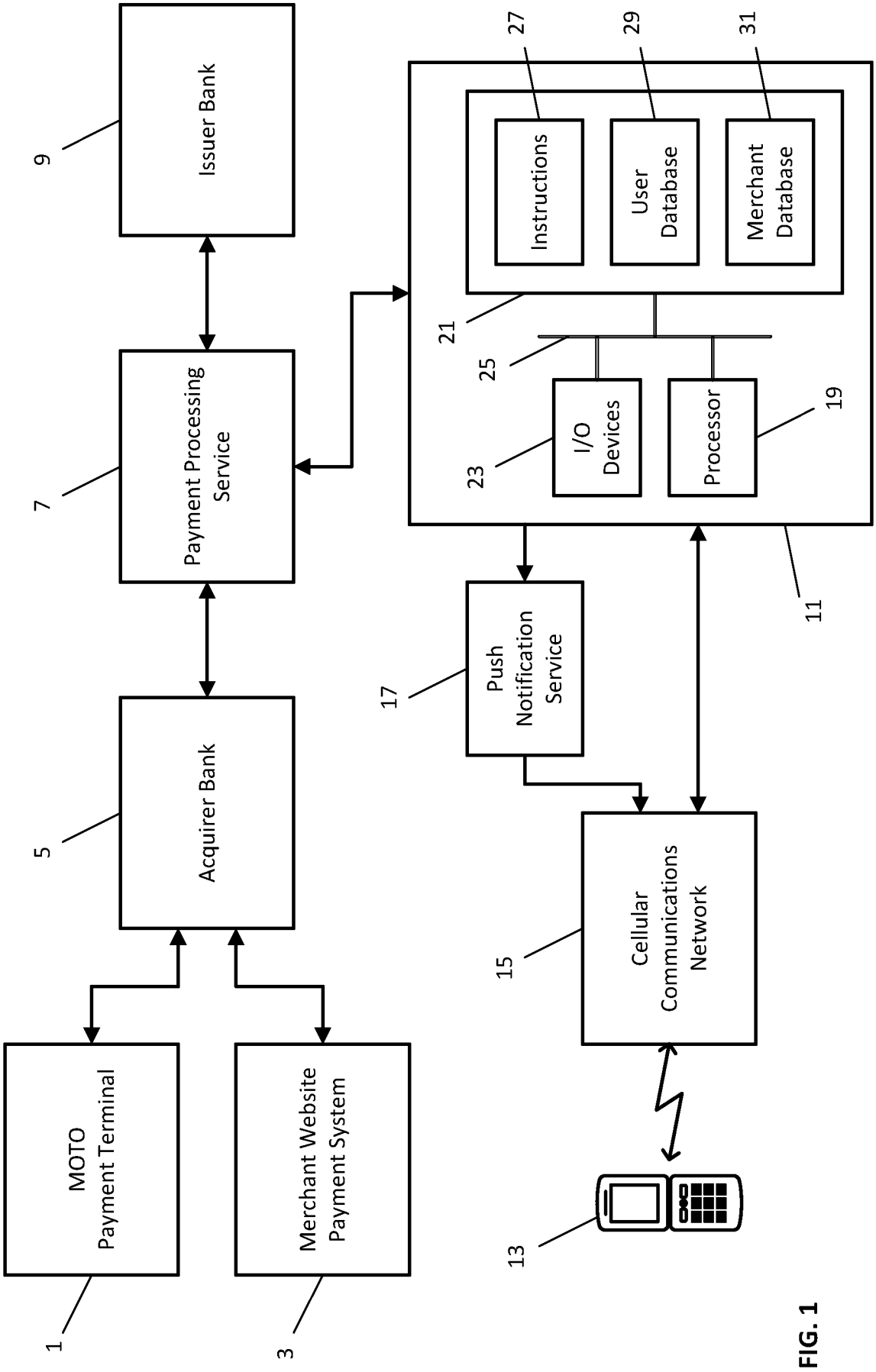
MOTO Payment Terminal
1
Merchant Website Payment System
3
Acquirer Bank
5
Payment Processing Service
7
Issuer Bank
9
Instructions
27
User Database
29
Merchant Database
31
21
25
I/O Devices
23
Processor
19
11
Push Notification Service
17
Cellular Communications Network
15
13

FIG. 1

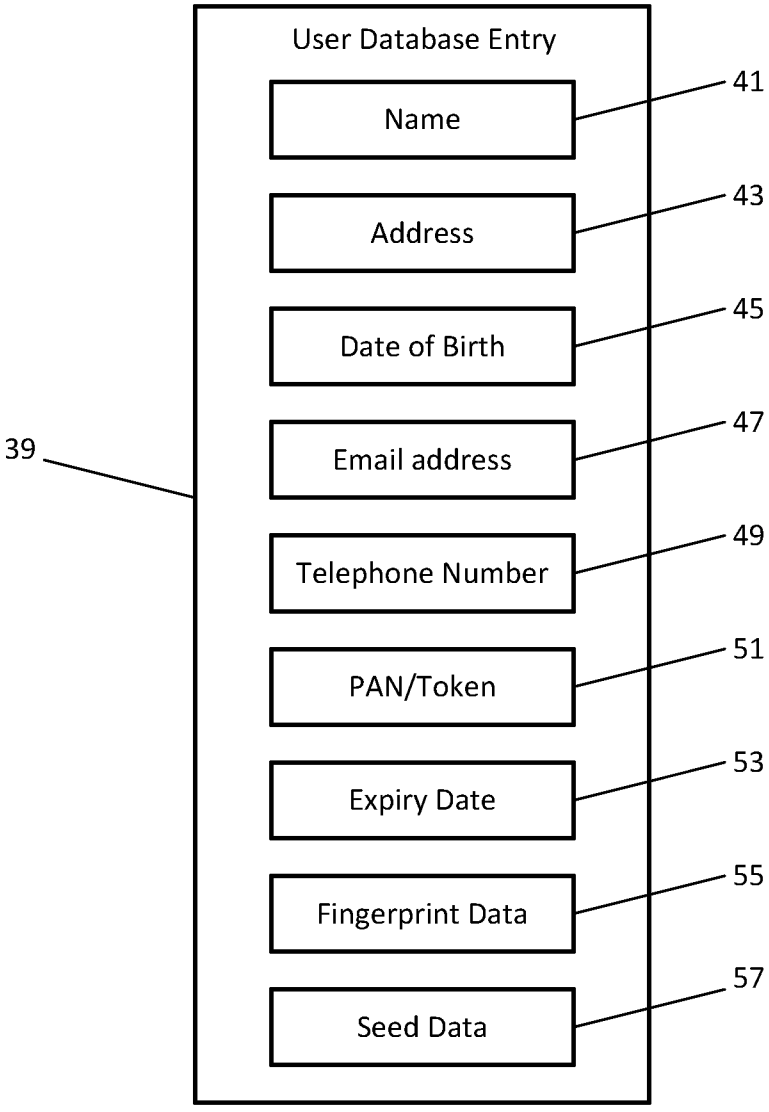
User Database Entry
Name
Address
Date of Birth
Email address
Telephone Number
PAN/Token
Expiry Date
Fingerprint Data
Seed Data
39
41
43
45
47
49
51
53
55
57

FIG. 2

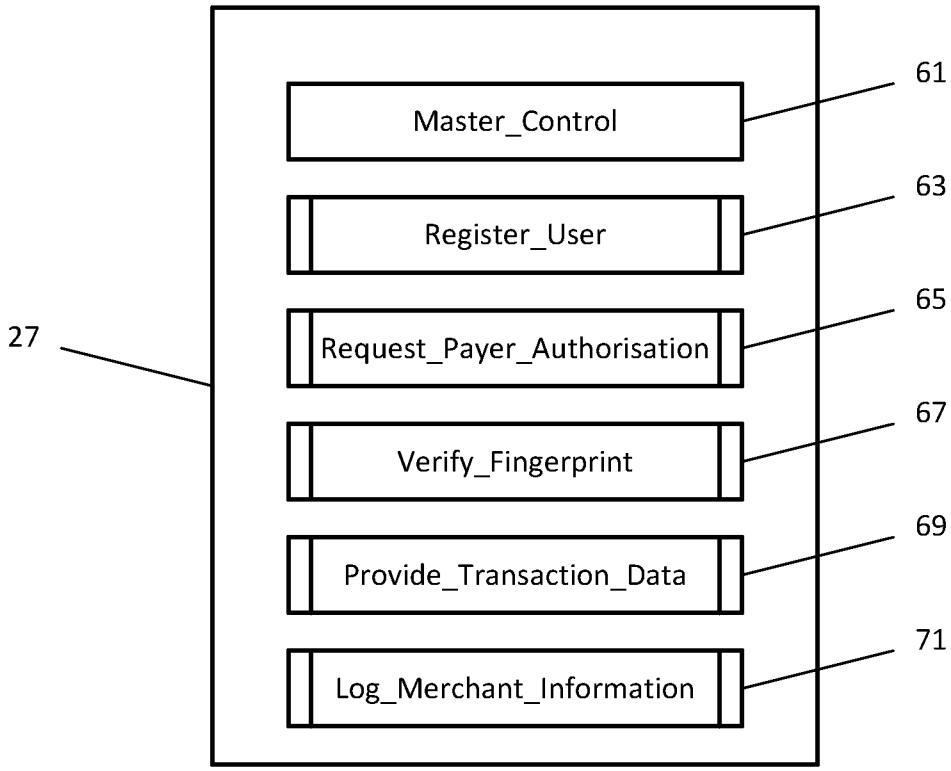
27
Master_Control
61
Register_User
63
Request_Payer_Authorisation
65
Verify_Fingerprint
67
Provide_Transaction_Data
69
Log_Merchant_Information
71

FIG. 3

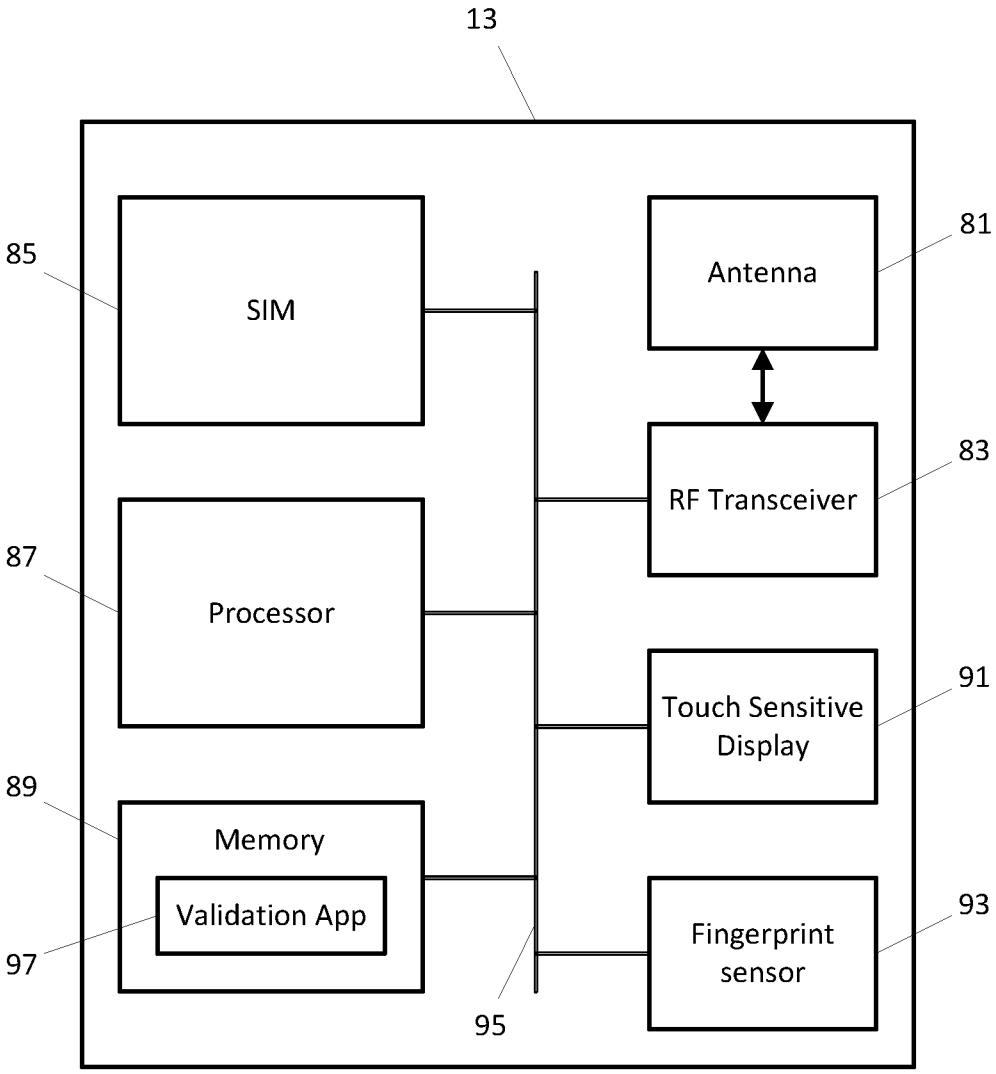
13
85
SIM
81
Antenna
83
RF Transceiver
87
Processor
91
Touch Sensitive Display
89
Memory
Validation App
97
95
93
Fingerprint sensor

FIG. 4

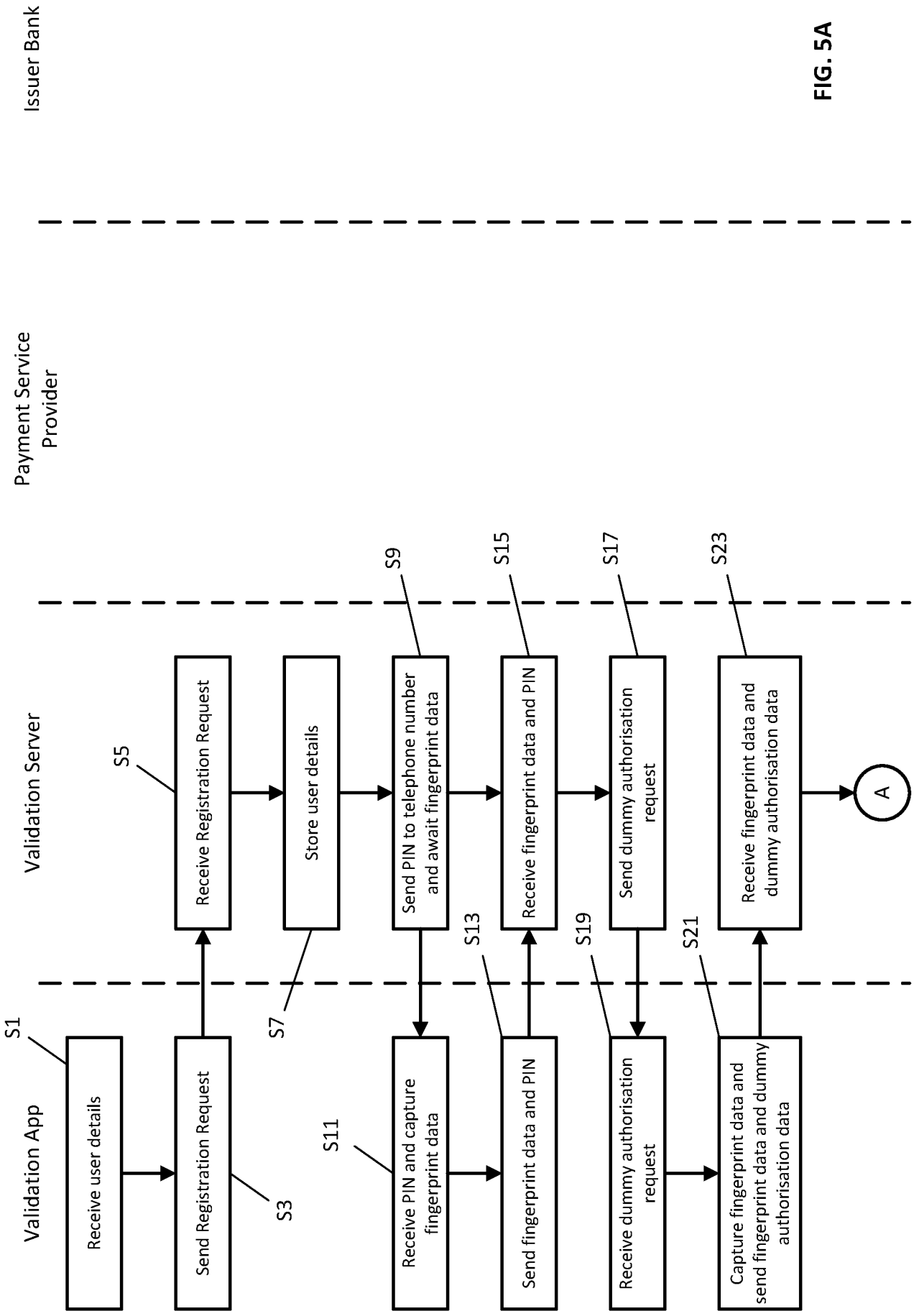
Validation App
Validation Server
Payment Service Provider
Issuer Bank
Receive user details
Send Registration Request
Receive Registration Request
Store user details
Send PIN to telephone number and await fingerprint data
Receive PIN and capture fingerprint data
Send fingerprint data and PIN
Receive fingerprint data and PIN
Send dummy authorisation request
Receive dummy authorisation request
Receive fingerprint data and dummy authorisation data
Capture fingerprint data and send fingerprint data and dummy authorisation data
A
S1
S3
S5
S7
S9
S11
S13
S15
S17
S19
S21
S23

FIG. 5A

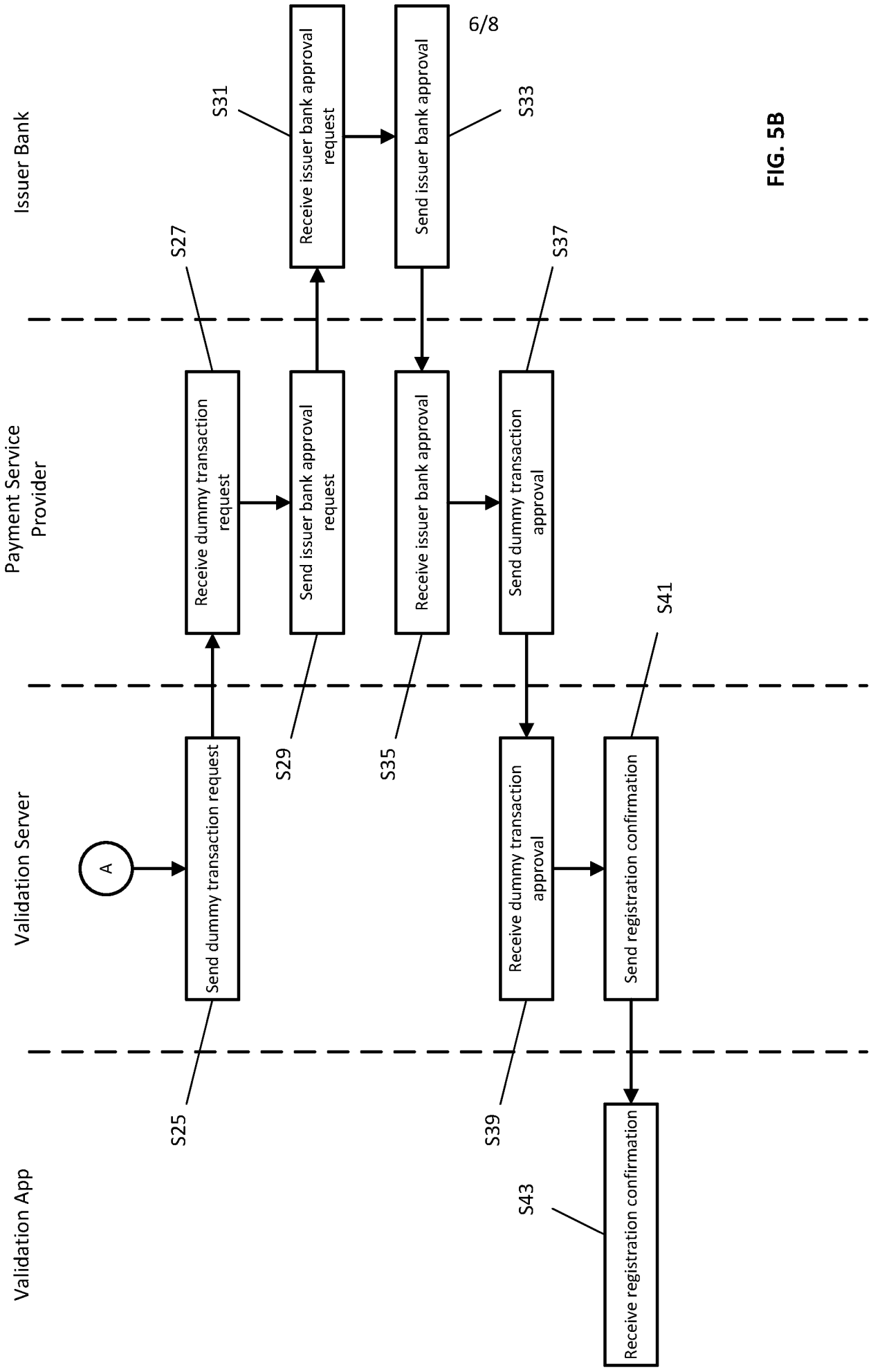
Issuer Bank
Payment Service Provider
Validation Server
Validation App
A
Send dummy transaction request
Receive dummy transaction request
Send issuer bank approval request
Receive issuer bank approval request
Receive issuer bank approval
Send issuer bank approval
Receive dummy transaction approval
Send dummy transaction approval
Send registration confirmation
Receive registration confirmation
S25
S27
S29
S31
S33
S35
S37
S39
S41
S43

FIG. 5B

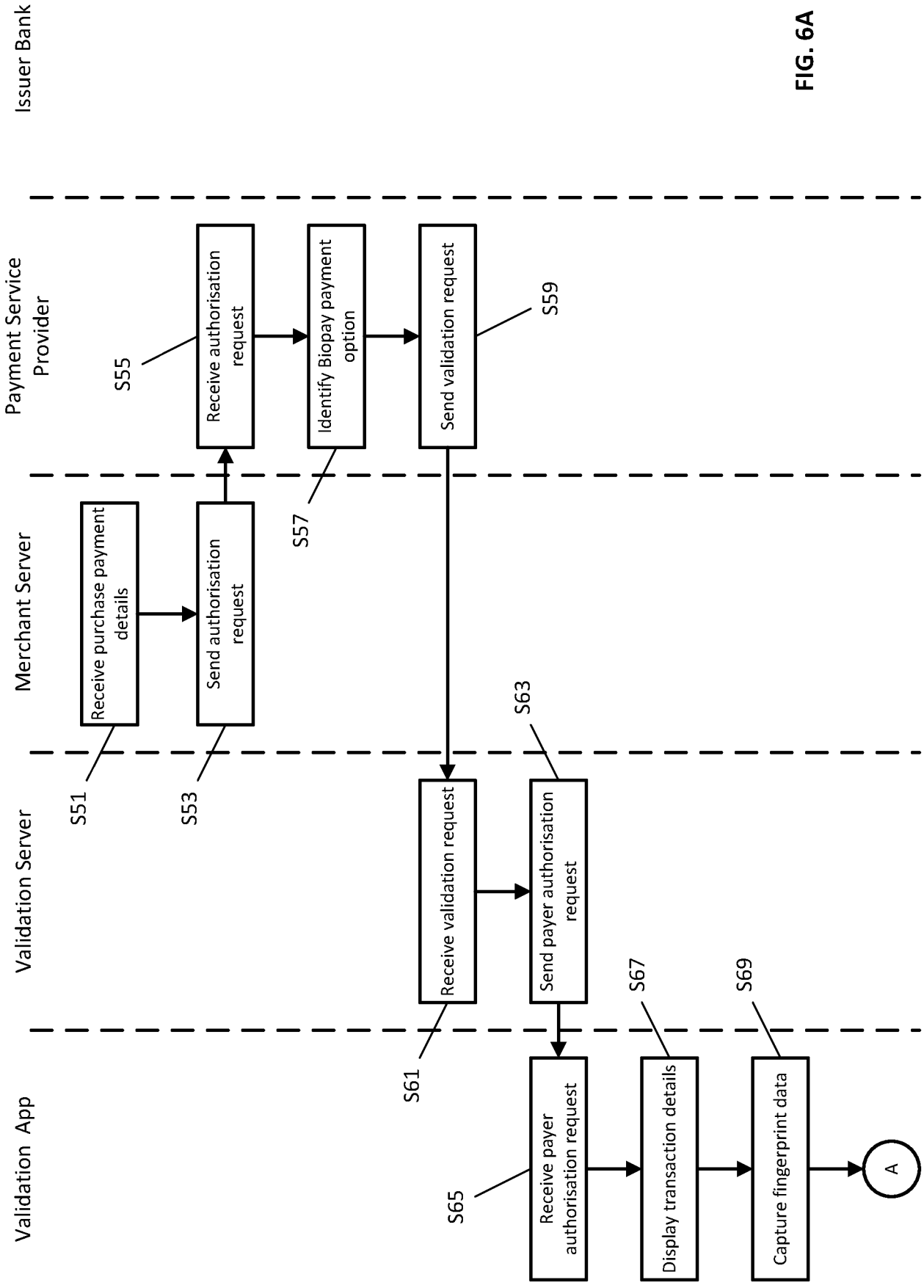
Issuer Bank
Payment Service Provider
Merchant Server
Validation Server
Validation App
Receive purchase payment details
Send authorisation request
Receive authorisation request
Identify Biopay payment option
Send validation request
Receive validation request
Send payer authorisation request
Receive payer authorisation request
Display transaction details
Capture fingerprint data
A
S51
S53
S55
S57
S59
S61
S63
S65
S67
S69

FIG. 6A

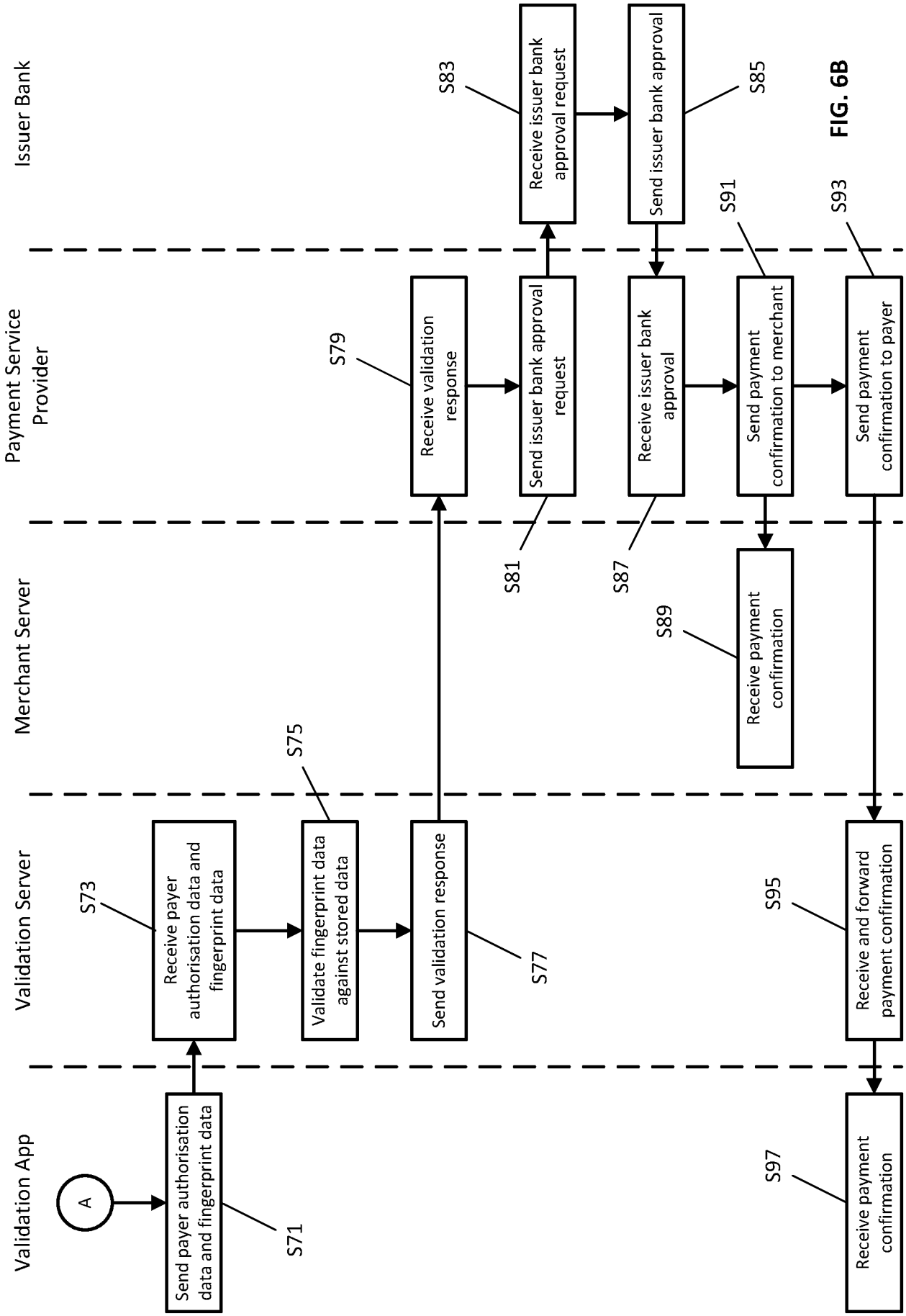
Validation App
Validation Server
Merchant Server
Payment Service Provider
Issuer Bank
A
Send payer authorisation data and fingerprint data
S71
Receive payer authorisation data and fingerprint data
S73
Validate fingerprint data against stored data
S75
Send validation response
S77
Receive validation response
S79
Send issuer bank approval request
S81
Receive issuer bank approval request
S83
Send issuer bank approval
S85
Receive issuer bank approval
S87
Receive payment confirmation
S89
Send payment confirmation to merchant
S91
Send payment confirmation to payer
S93
Receive and forward payment confirmation
S95
Receive payment confirmation
S97

FIG. 6B