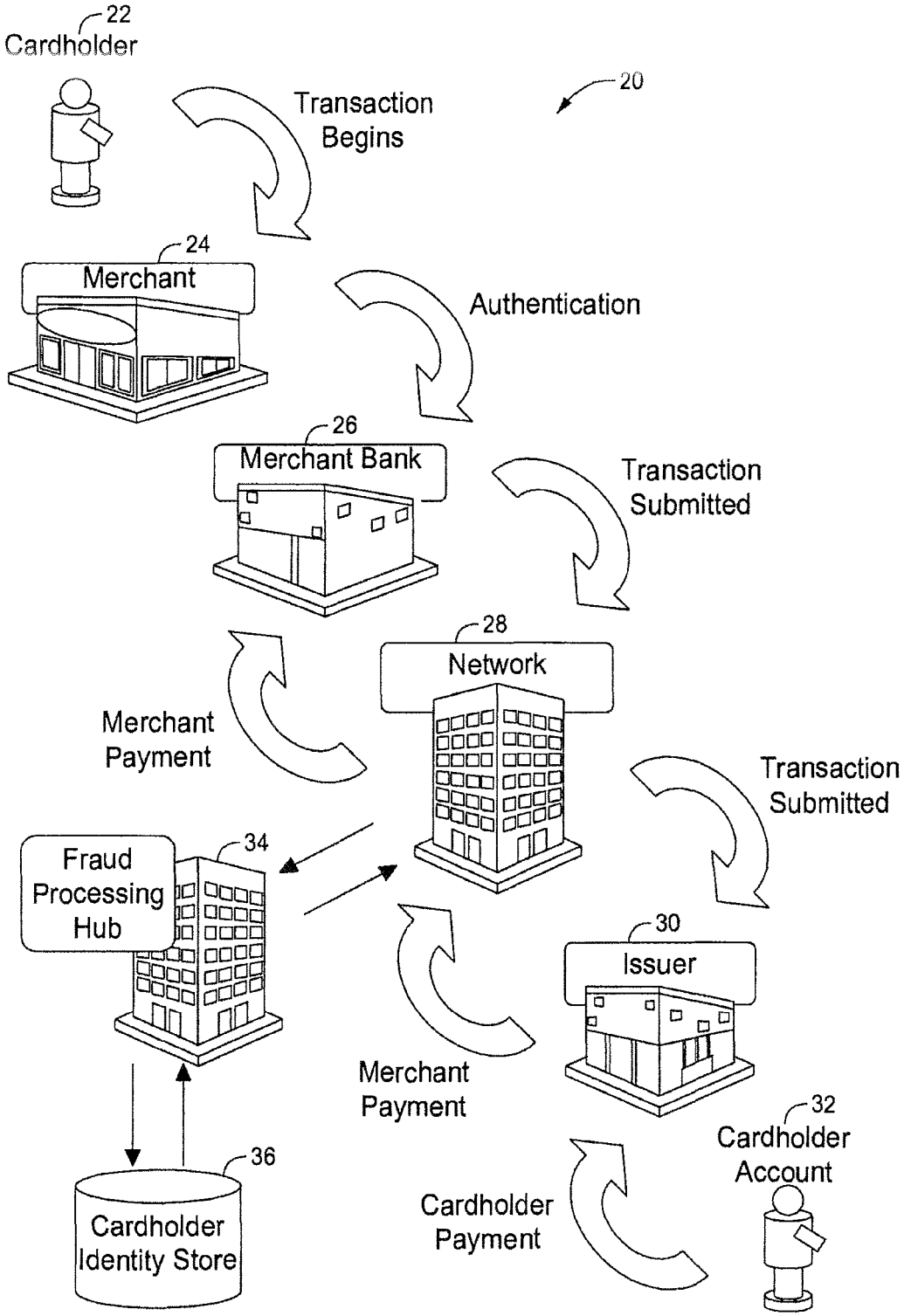

22
Cardholder
20
Transaction Begins
24
Merchant
Authentication
26
Merchant Bank
Transaction Submitted
28
Network
Merchant Payment
Transaction Submitted
34
Fraud Processing Hub
30
Issuer
Merchant Payment
32
Cardholder Account
36
Cardholder Identity Store
Cardholder Payment

FIG. 1A

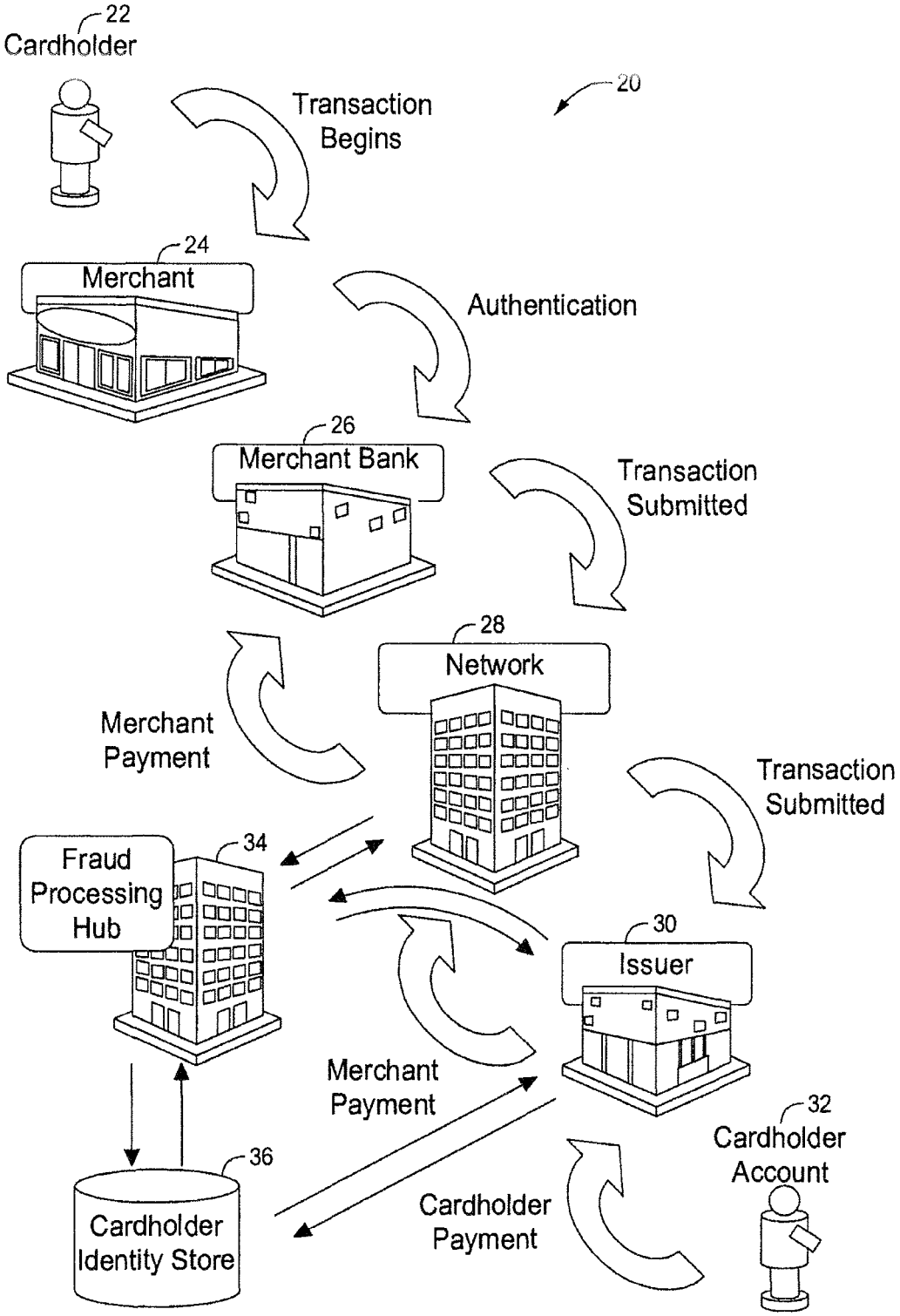

22
Cardholder
Transaction Begins
20
24
Merchant
Authentication
26
Merchant Bank
Transaction Submitted
28
Network
Merchant Payment
Transaction Submitted
34
Fraud Processing Hub
30
Issuer
Merchant Payment
32
Cardholder Account
36
Cardholder Identity Store
Cardholder Payment

FIG. 1B

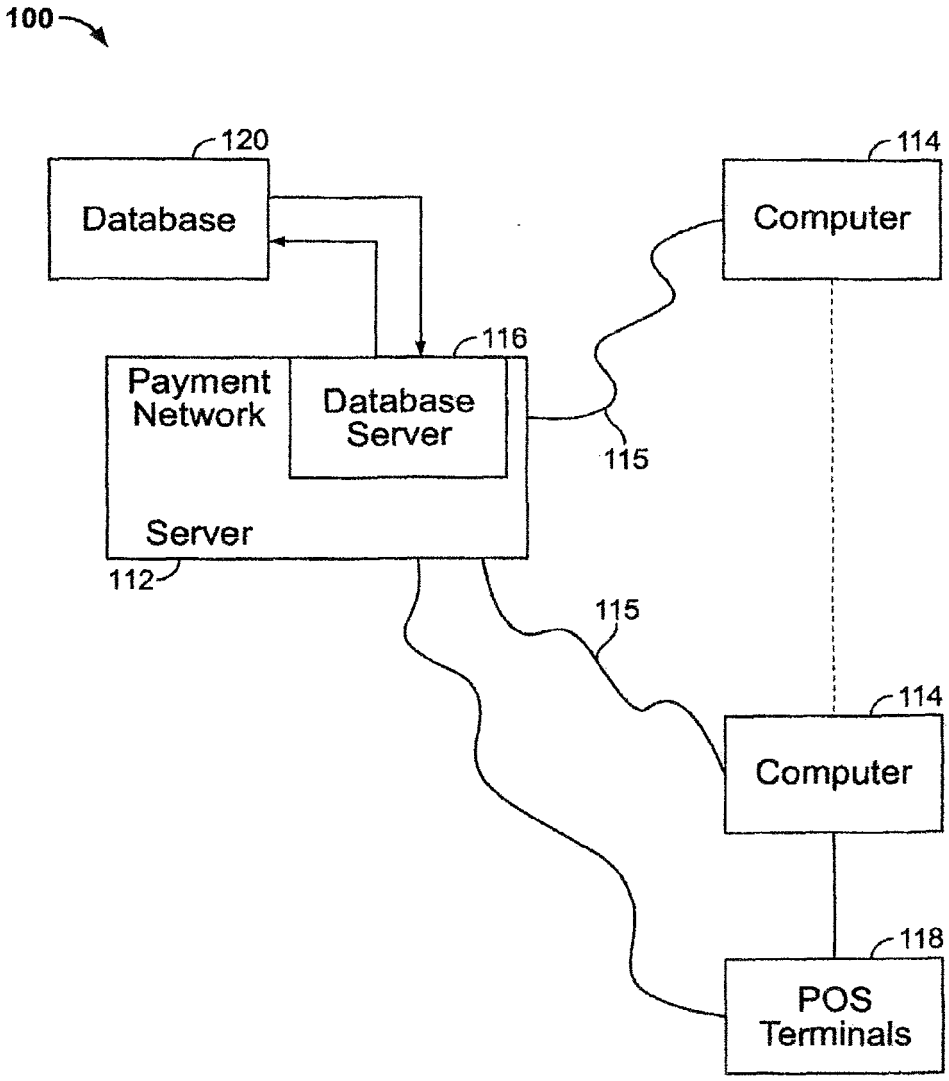

100
120
Database
114
Computer
116
Payment Network
Database Server
115
Server
112
115
114
Computer
118
POS Terminals

FIG. 2

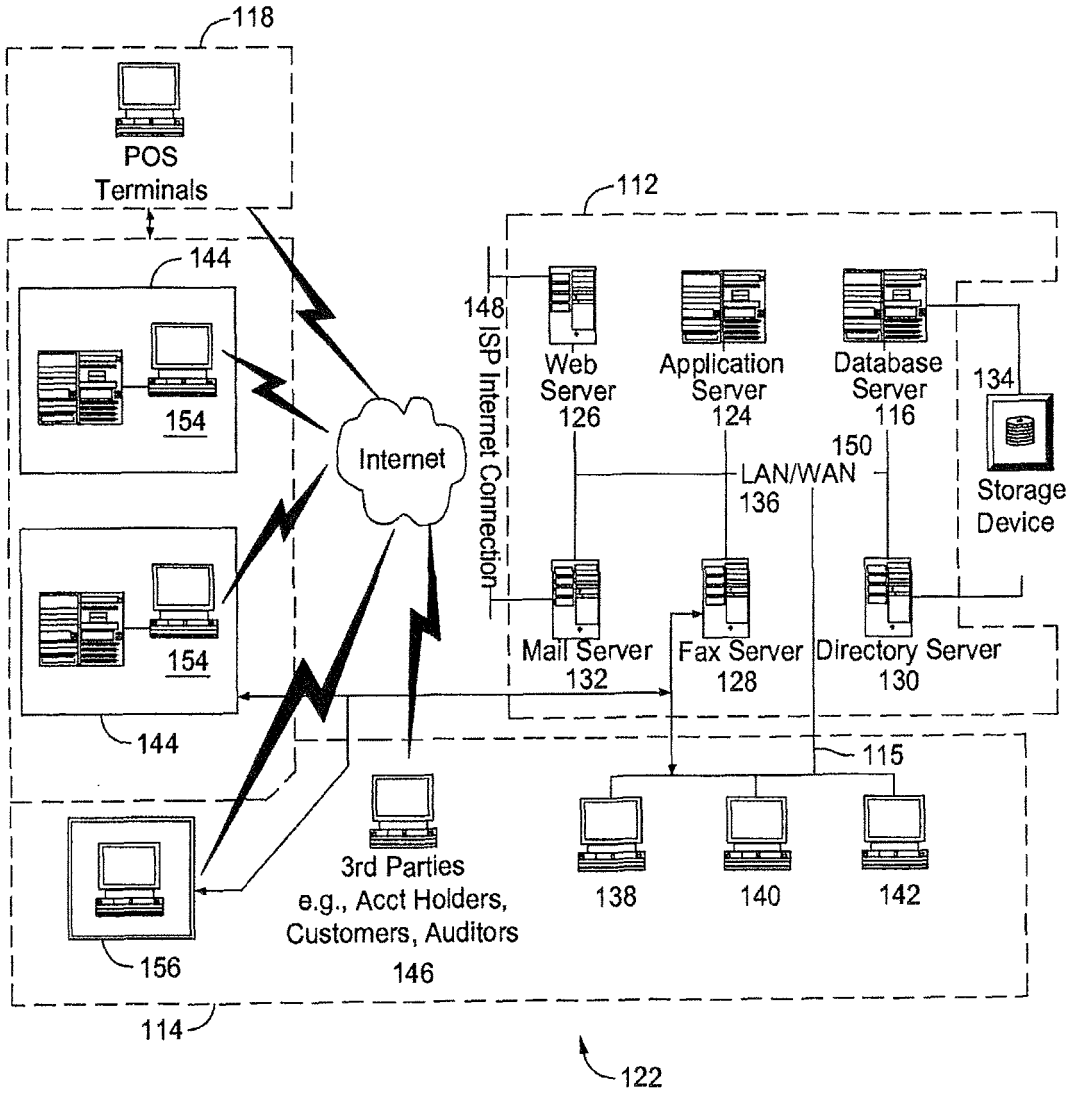

118
POS
Terminals
144
154
154
144
Internet
112
148
ISP Internet Connection
Web
Server
126
Application
Server
124
Database
Server
116
134
Storage
Device
150
LAN/WAN
136
Mail Server
132
Fax Server
128
Directory Server
130
115
3rd Parties
e.g., Acct Holders,
Customers, Auditors
146
138
140
142
156
114
122

FIG. 3

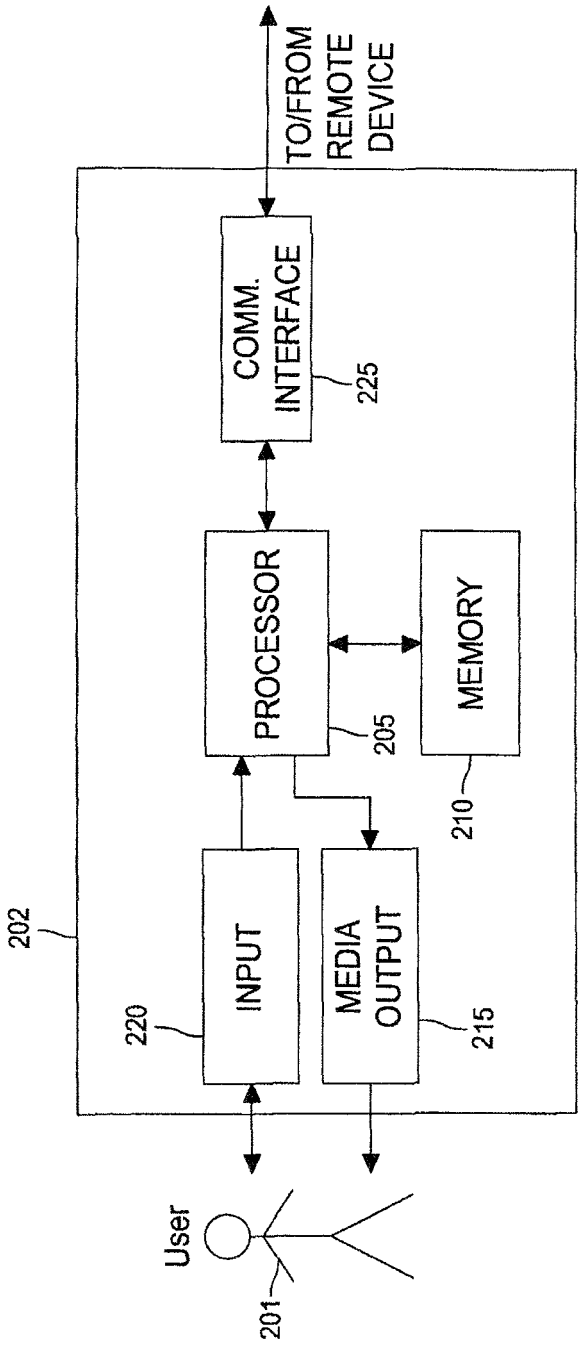

TO/FROM REMOTE DEVICE
COMM. INTERFACE
225
PROCESSOR
205
MEMORY
210
INPUT
220
MEDIA OUTPUT
215
202
User
201

FIG. 4

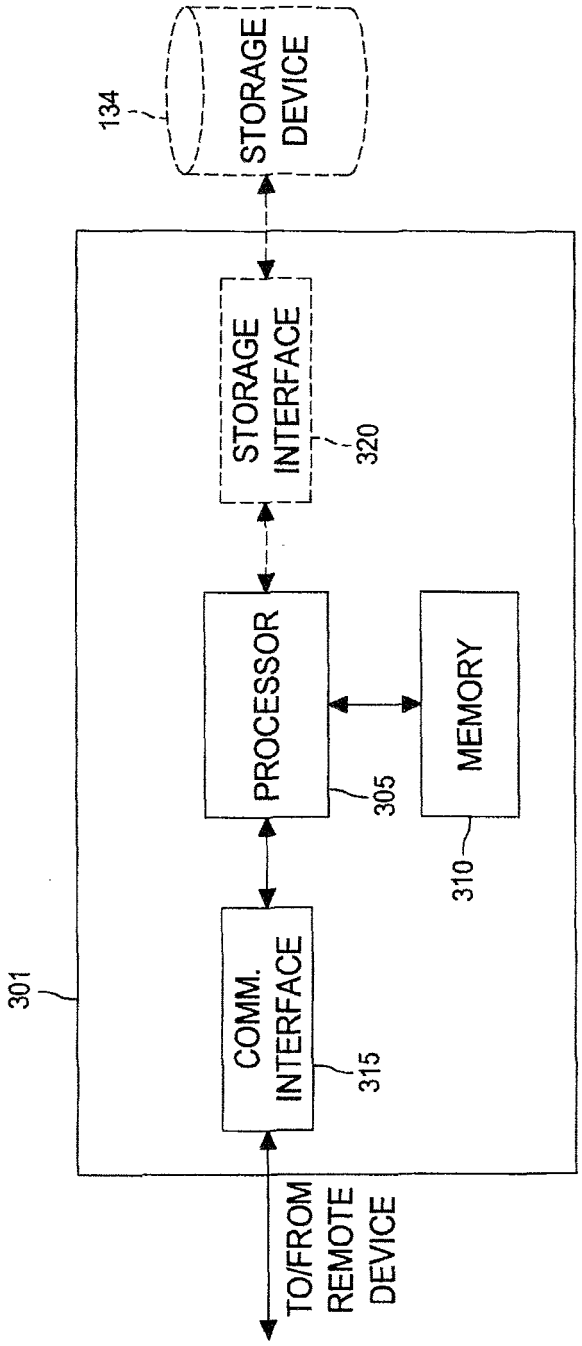

134
STORAGE DEVICE
STORAGE INTERFACE
320
PROCESSOR
305
MEMORY
310
COMM. INTERFACE
315
301
TO/FROM REMOTE DEVICE

FIG. 5

600

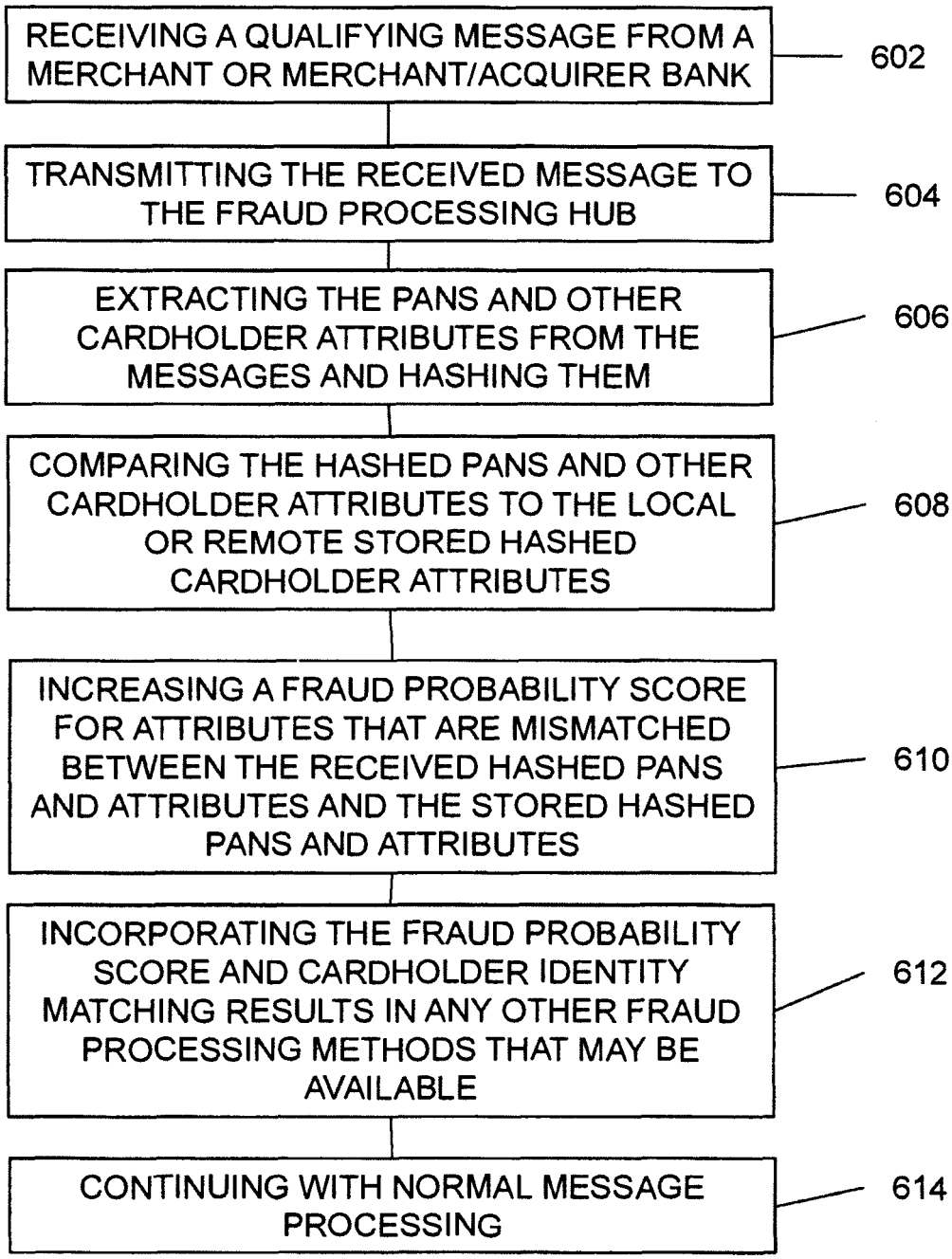

RECEIVING A QUALIFYING MESSAGE FROM A MERCHANT OR MERCHANT/ACQUIRER BANK
602
TRANSMITTING THE RECEIVED MESSAGE TO THE FRAUD PROCESSING HUB
604
EXTRACTING THE PANS AND OTHER CARDHOLDER ATTRIBUTES FROM THE MESSAGES AND HASHING THEM
606
COMPARING THE HASHED PANS AND OTHER CARDHOLDER ATTRIBUTES TO THE LOCAL OR REMOTE STORED HASHED CARDHOLDER ATTRIBUTES
608
INCREASING A FRAUD PROBABILITY SCORE FOR ATTRIBUTES THAT ARE MISMATCHED BETWEEN THE RECEIVED HASHED PANS AND ATTRIBUTES AND THE STORED HASHED PANS AND ATTRIBUTES
610
INCORPORATING THE FRAUD PROBABILITY SCORE AND CARDHOLDER IDENTITY MATCHING RESULTS IN ANY OTHER FRAUD PROCESSING METHODS THAT MAY BE AVAILABLE
612
CONTINUING WITH NORMAL MESSAGE PROCESSING
614

FIGURE 6