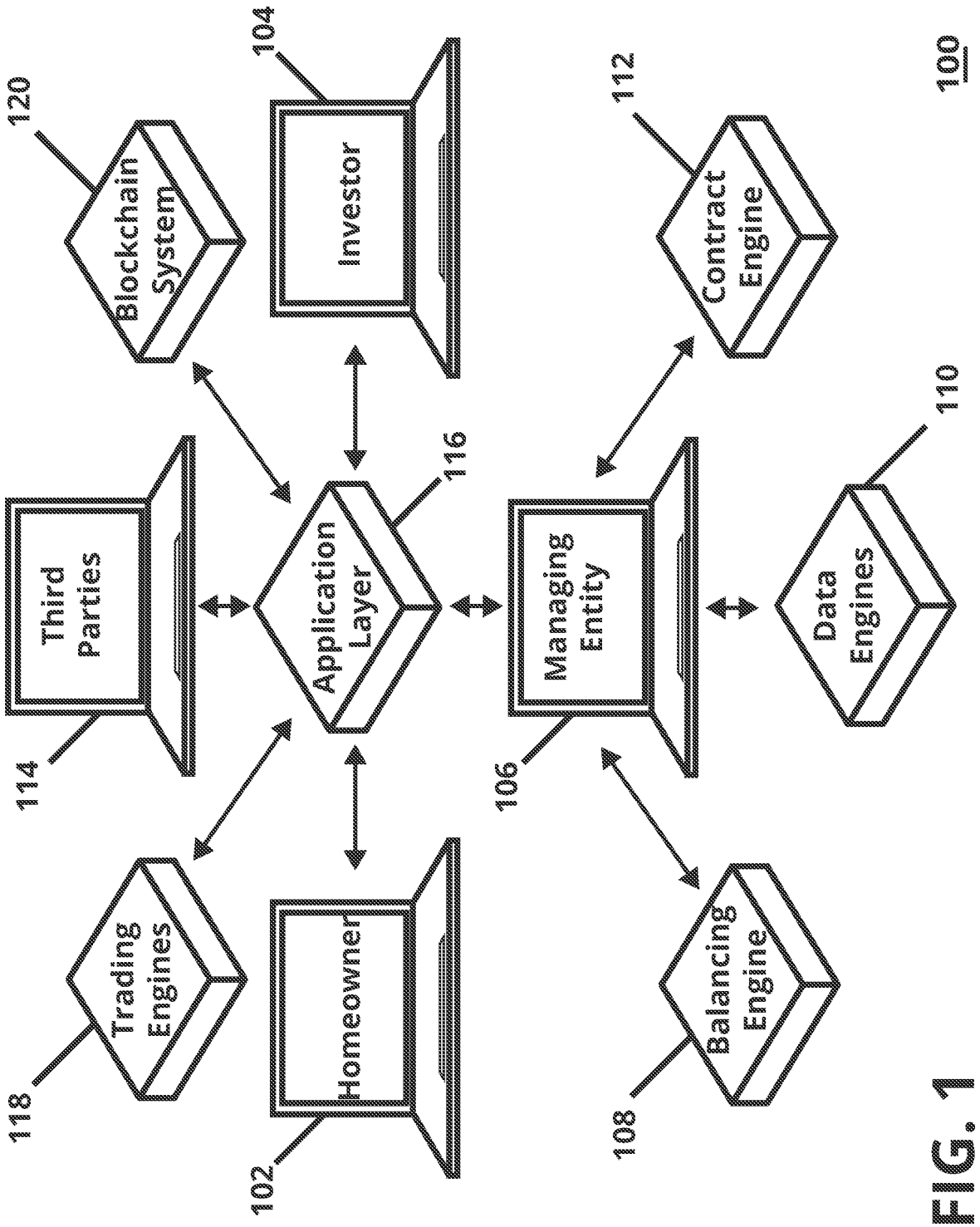

100
Blockchain System
120
Investor
104
Contract Engine
112
Third Parties
114
Application Layer
116
Managing Entity
106
Data Engines
110
Trading Engines
118
Homeowner
102
Balancing Engine
108

FIG. 1

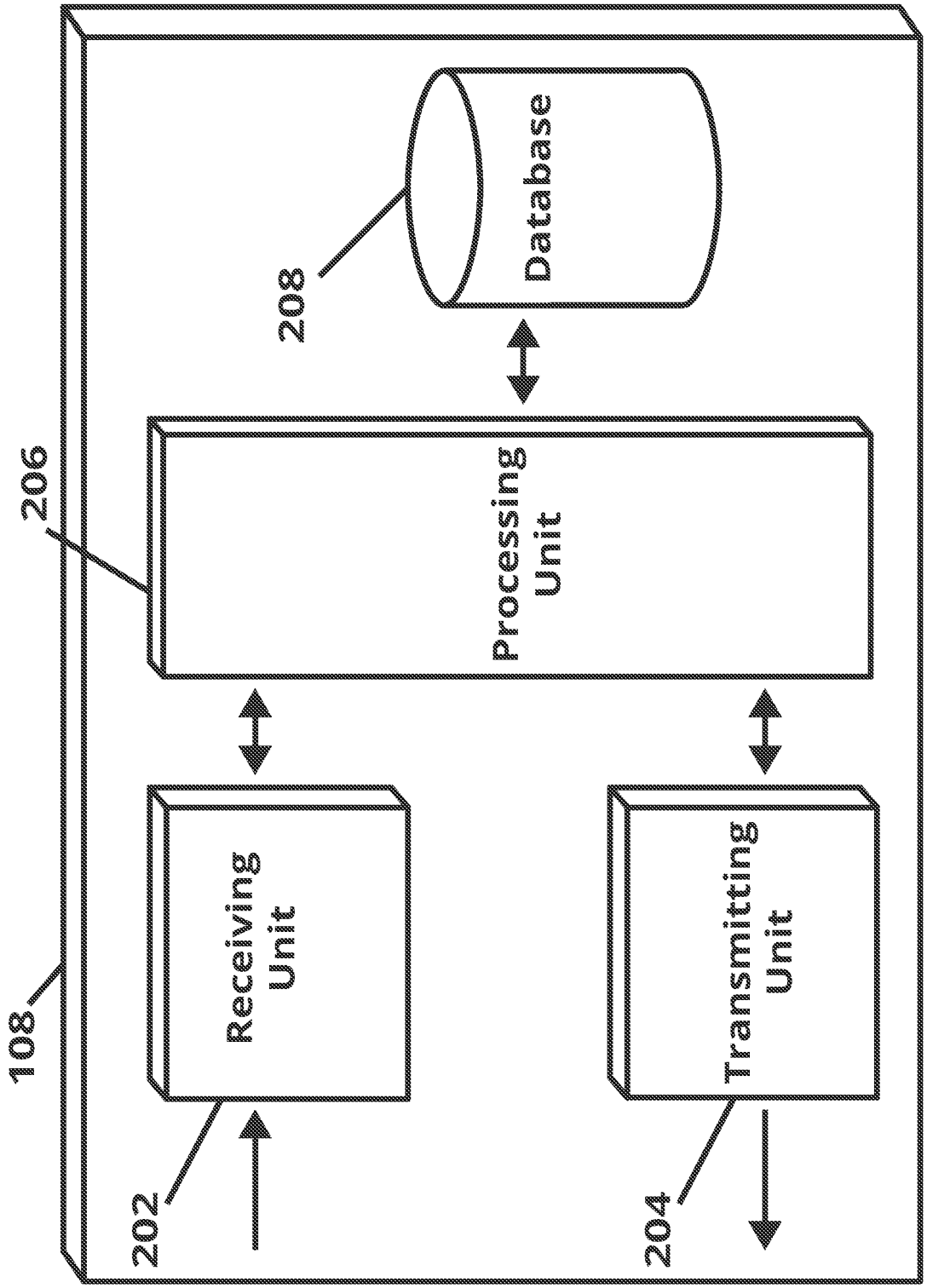

Database
208
Processing Unit
206
Receiving Unit
Transmitting Unit
108
202
204

FIG. 2

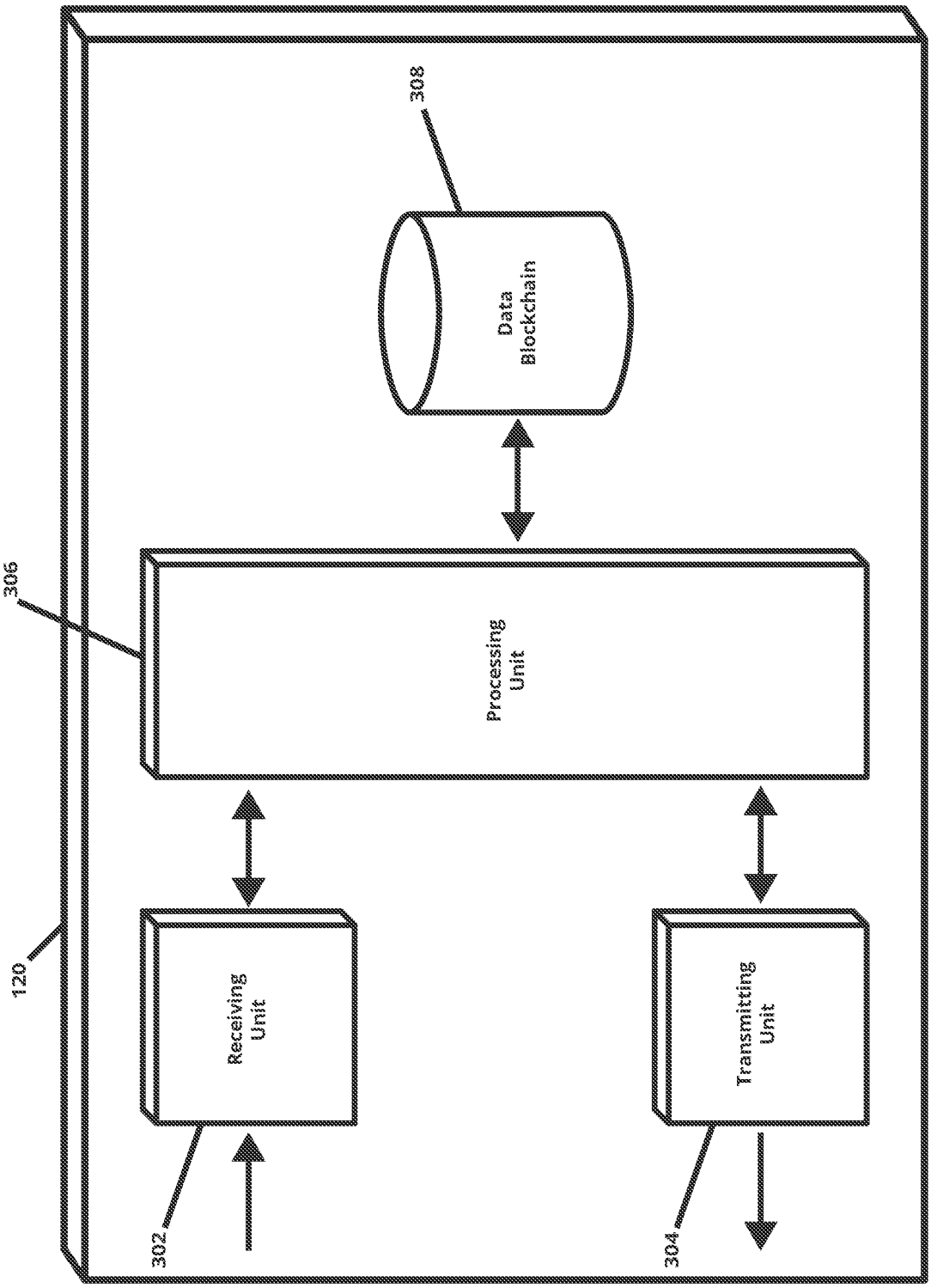

308
Data Blockchain
306
Processing Unit
120
Receiving Unit
Transmitting Unit
302
304

FIG. 3

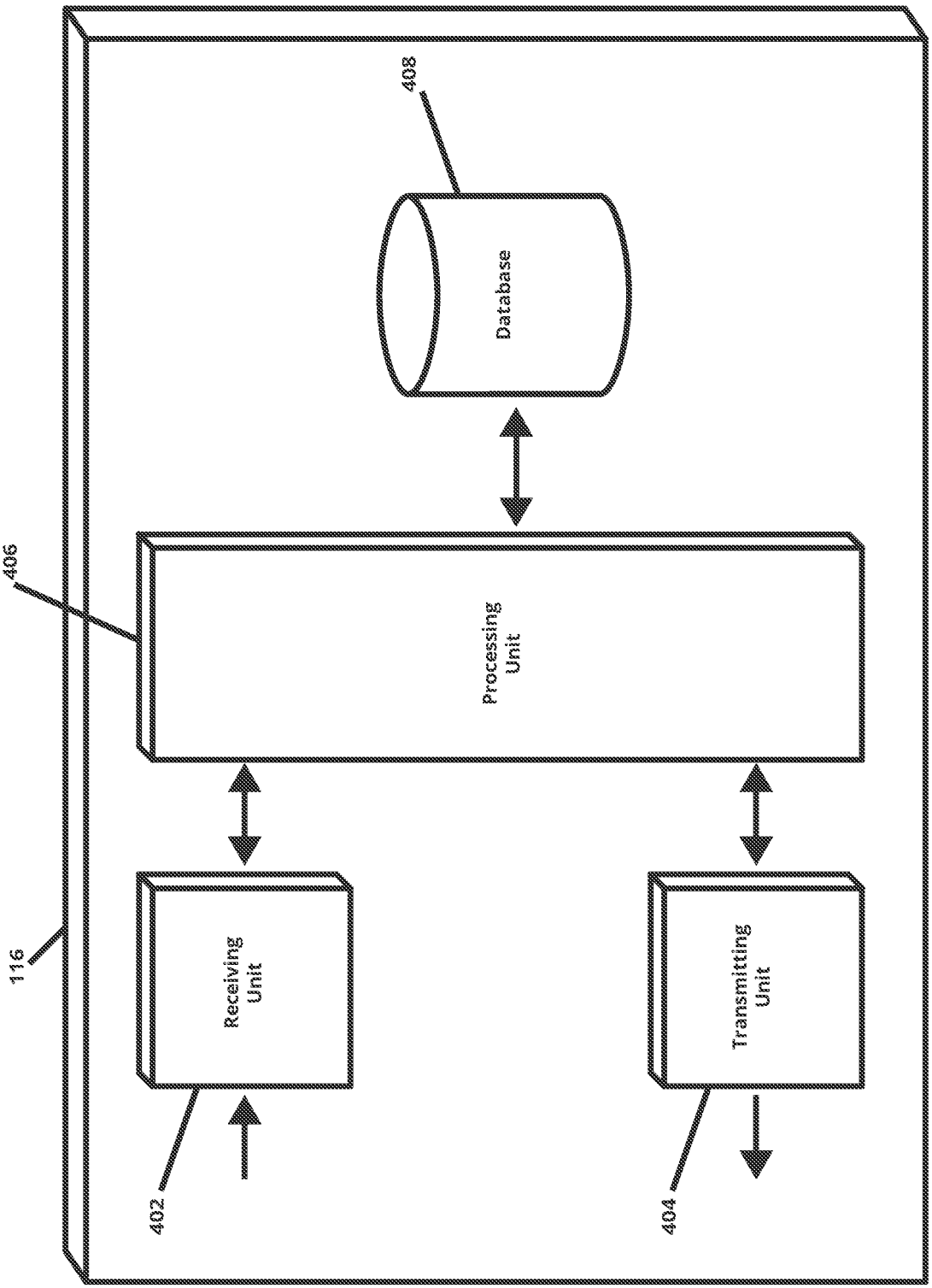

408
Database
406
Processing Unit
116
Receiving Unit
Transmitting Unit
402
404

FIG. 4

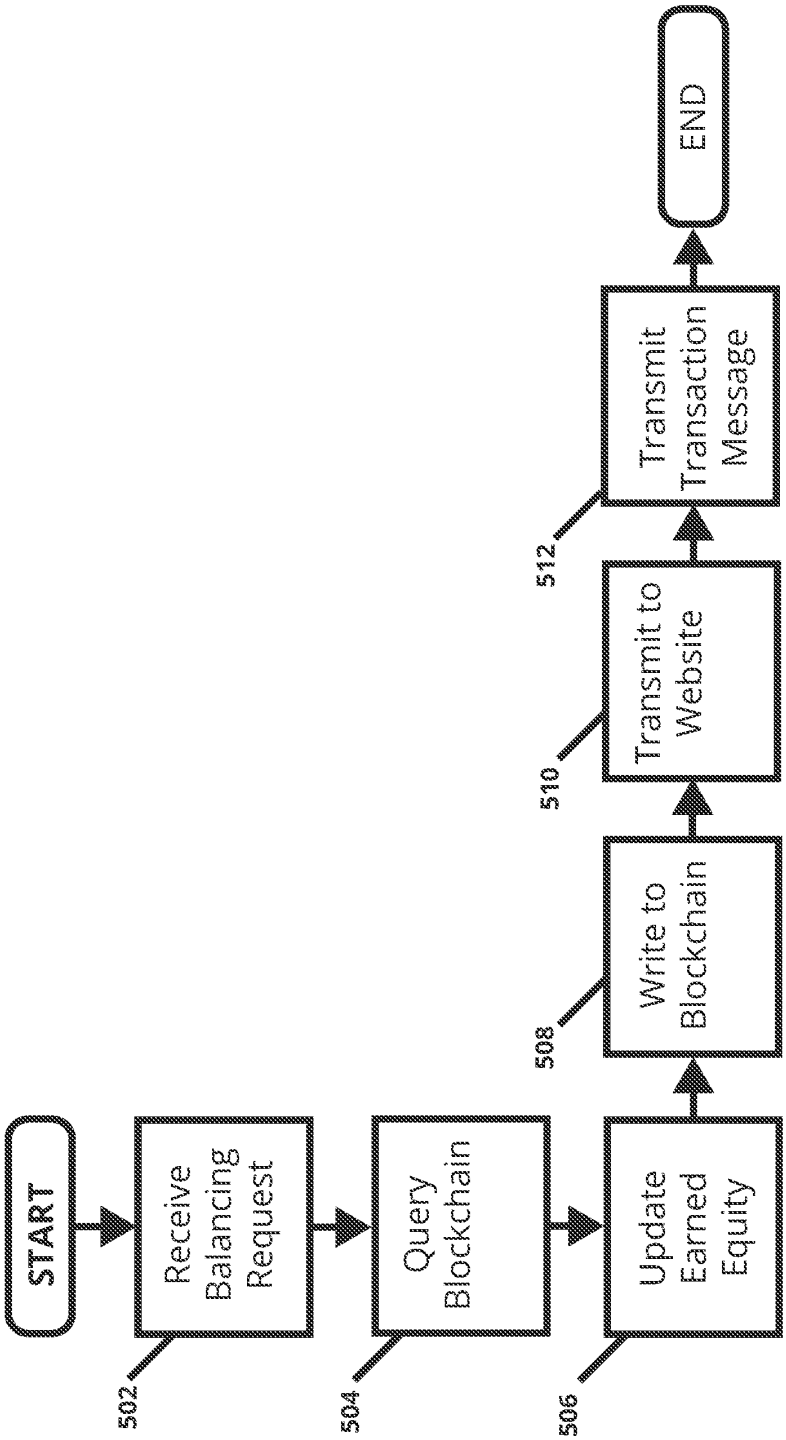

START
Receive Balancing Request
502
Query Blockchain
504
Update Earned Equity
506
Write to Blockchain
508
Transmit to Website
510
Transmit Transaction Message
512
END

FIG. 5

500

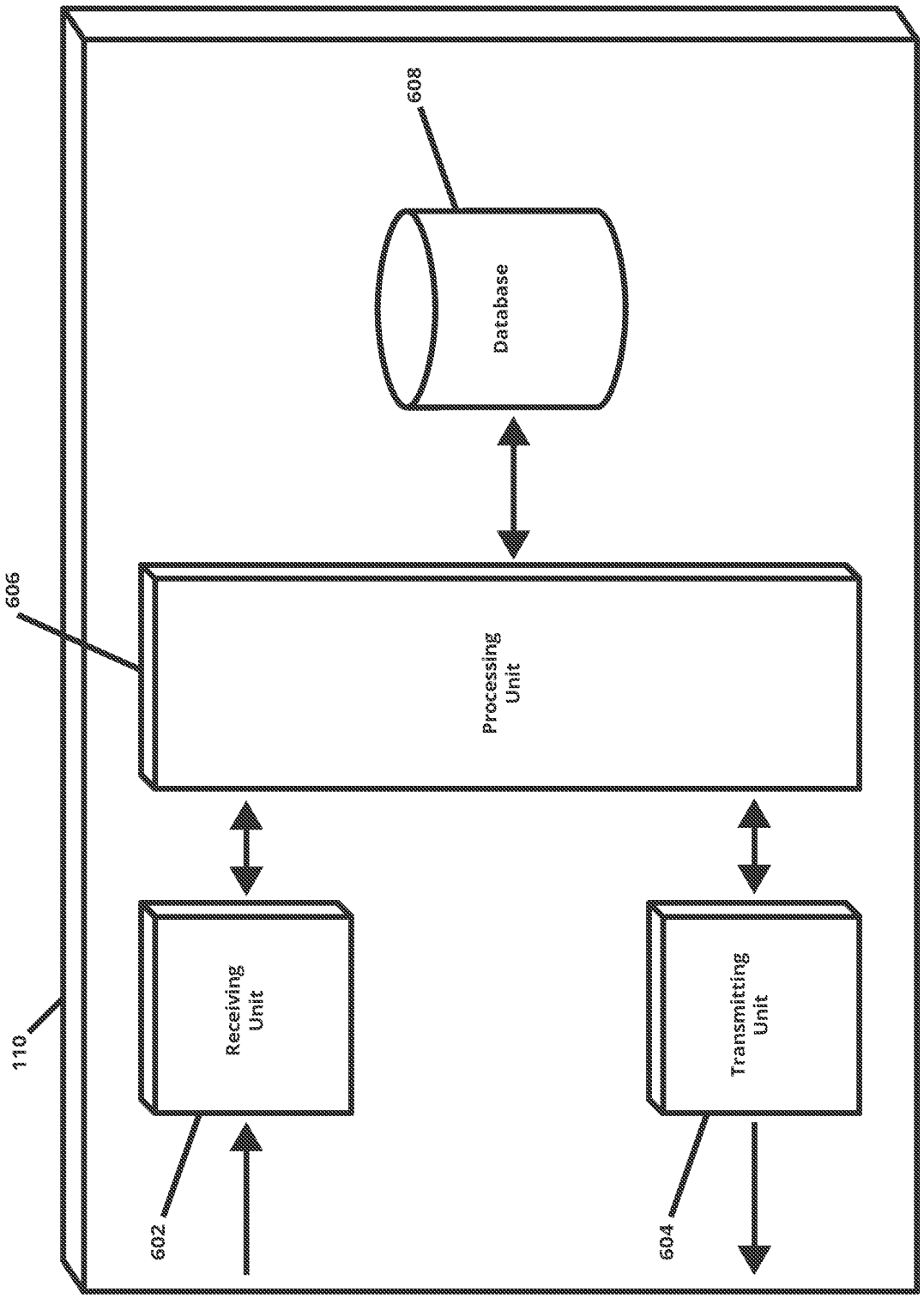

608
Database
606
Processing Unit
110
Receiving Unit
Transmitting Unit
602
604

FIG. 6

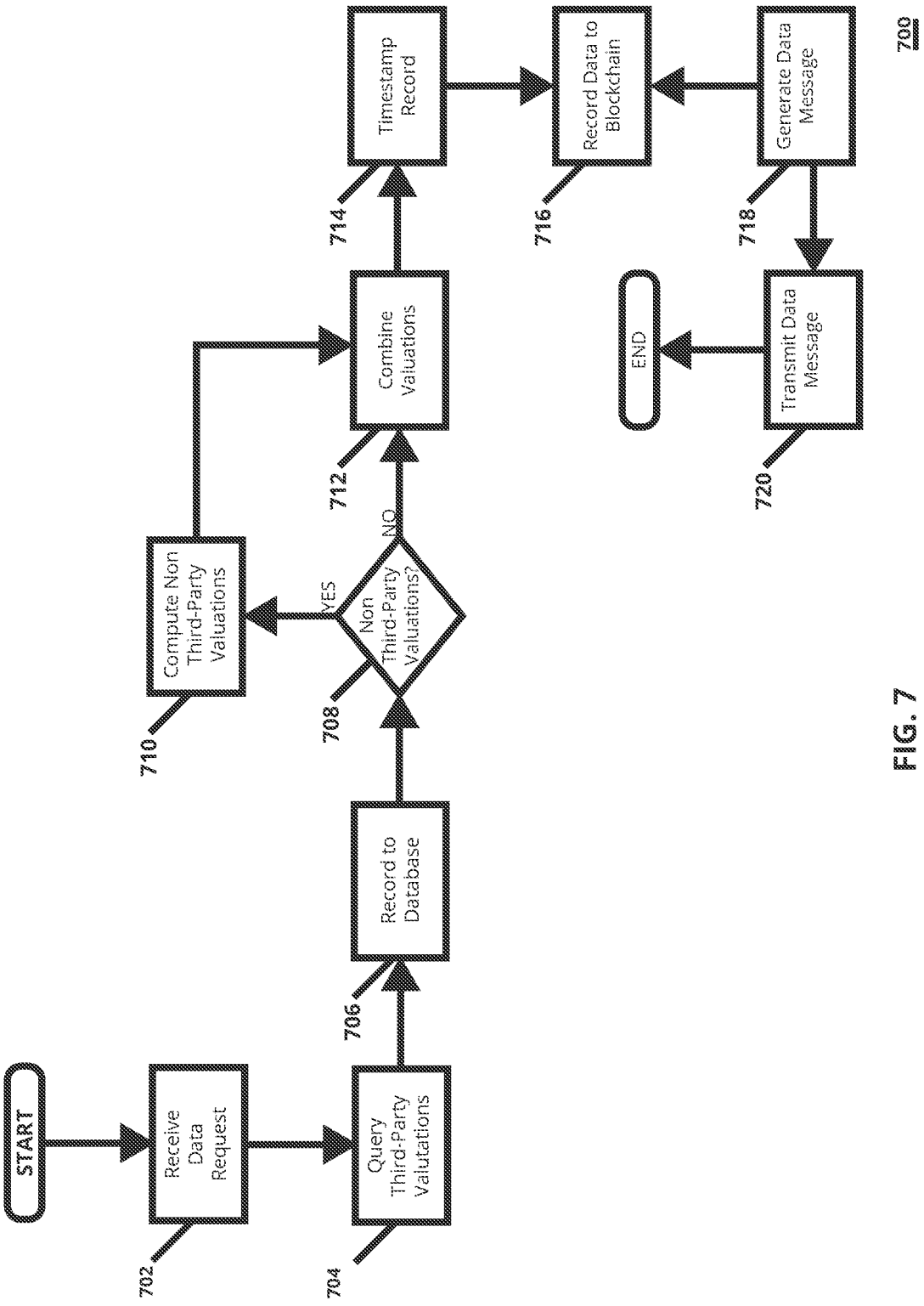

START
Receive Data Request
Query Third-Party Valutations
Record to Database
Non Third-Party Valuations?
YES
NO
Compute Non Third-Party Valuations
Combine Valuations
Timestamp Record
Record Data to Blockchain
Generate Data Message
Transmit Data Message
END
702
704
706
708
710
712
714
716
718
720
700

FIG. 7

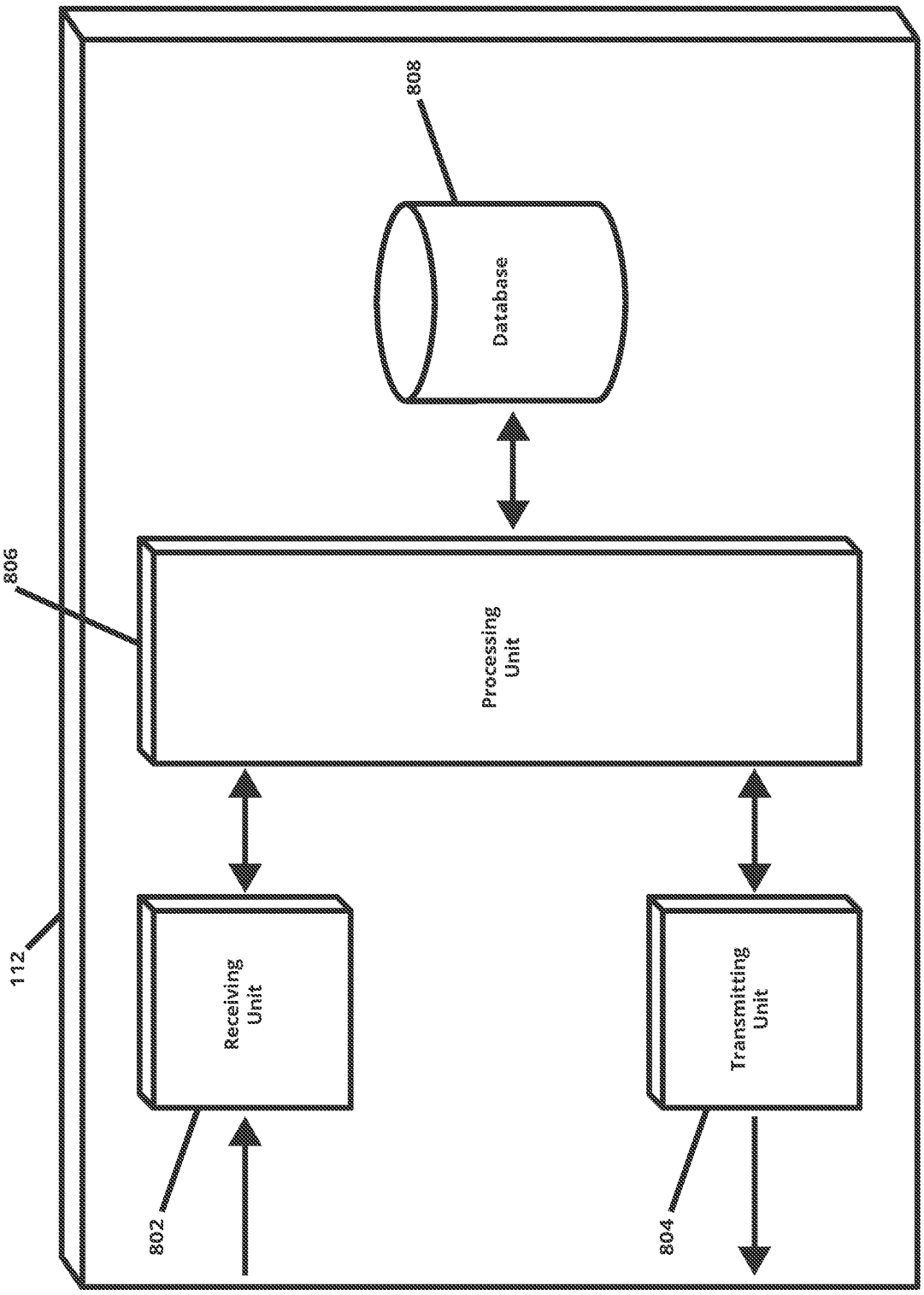

808
Database
806
Processing Unit
112
Receiving Unit
Transmitting Unit
802
804

FIG. 8

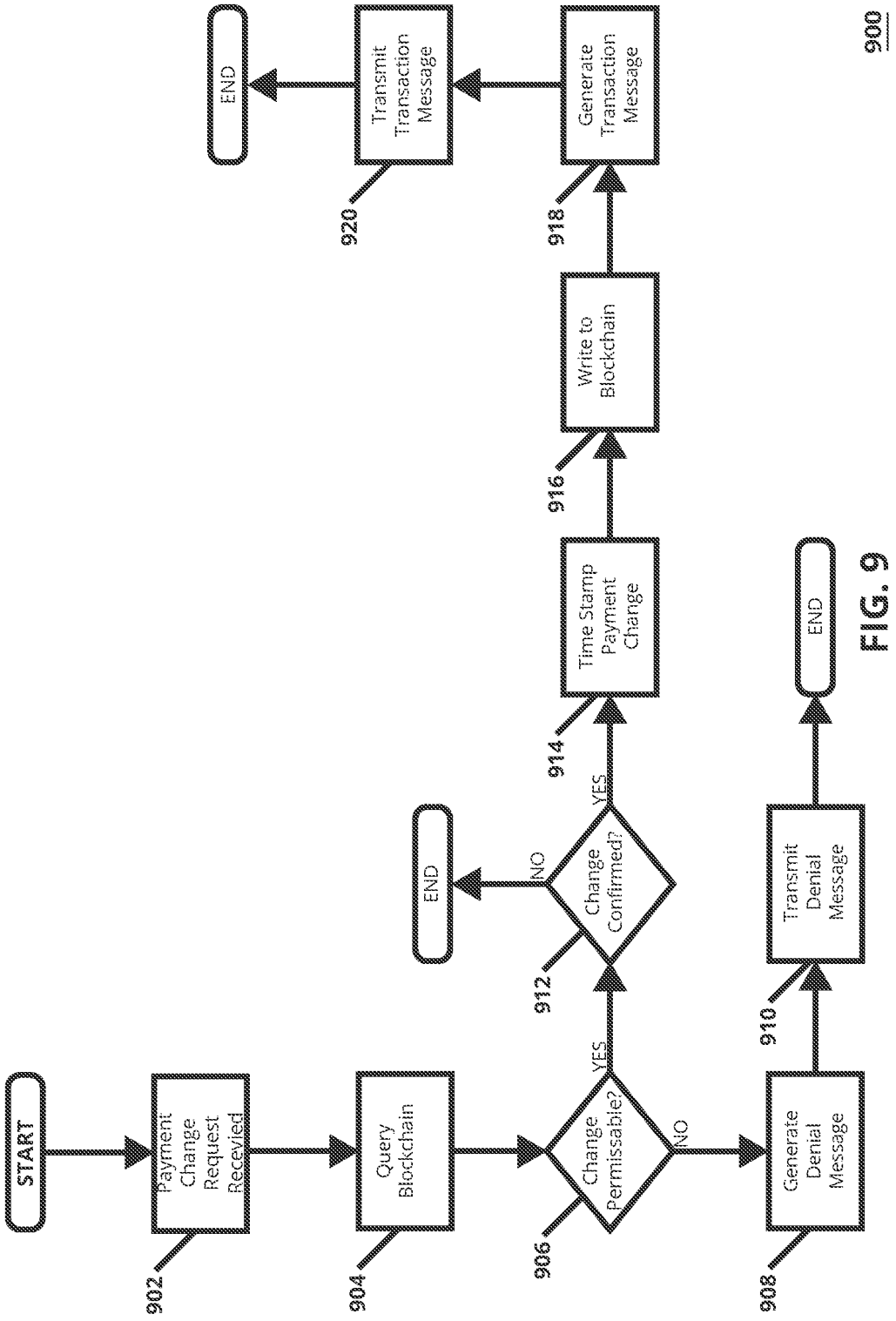

900
START
Payment Change Request Received
902
Query Blockchain
904
Change Permissable?
906
YES
NO
Generate Denial Message
908
Transmit Denial Message
910
END
Change Confirmed?
912
NO
YES
END
Time Stamp Payment Change
914
Write to Blockchain
916
Generate Transaction Message
918
Transmit Transaction Message
920
END

FIG. 9

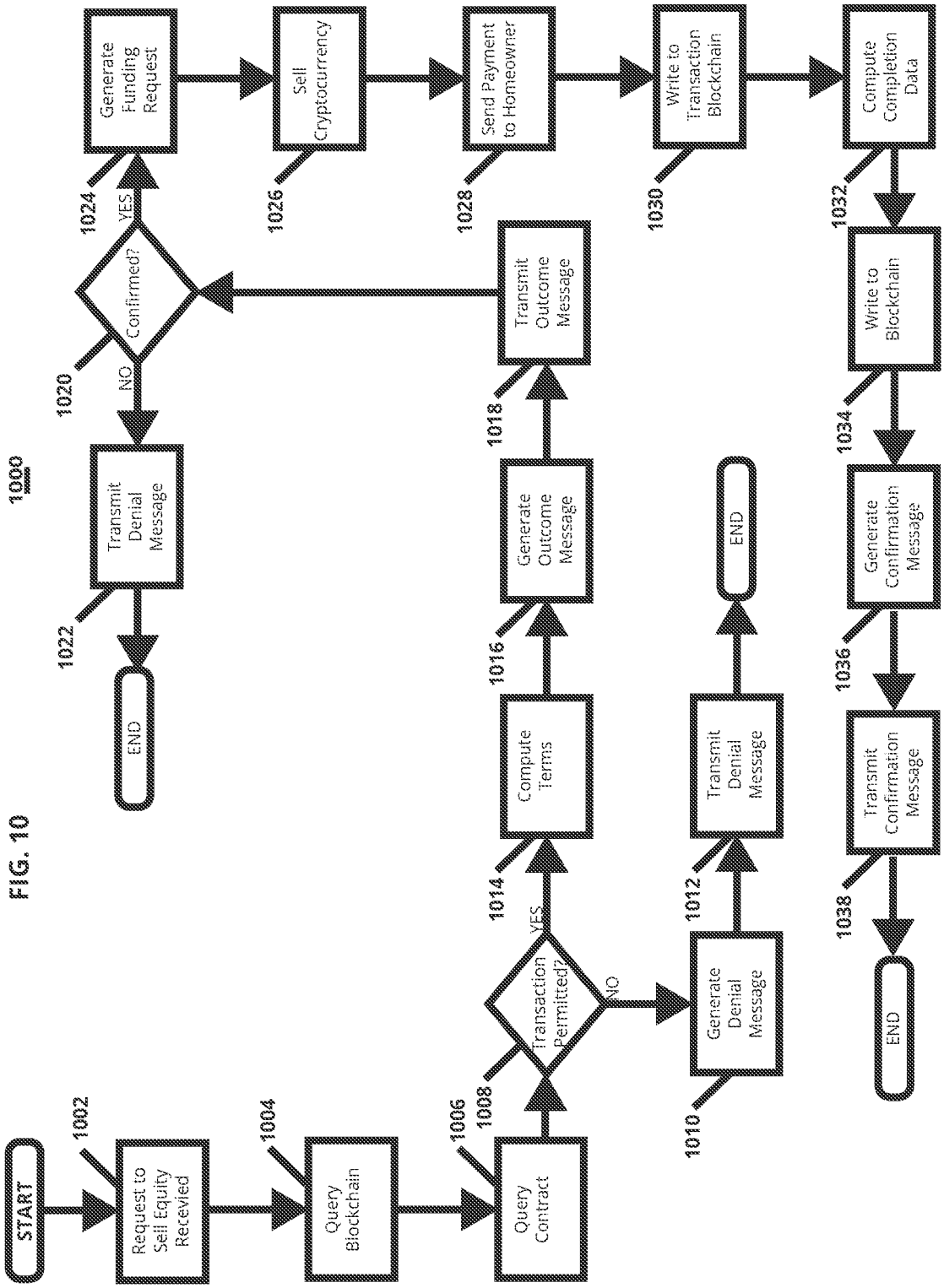

1000
START
1002
Request to Sell Equity Recevied
1004
Query Blockchain
1006
Query Contract
1008
Transaction Permitted?
YES
NO
1010
Generate Denial Message
1012
Transmit Denial Message
END
1014
Compute Terms
1016
Generate Outcome Message
1018
Transmit Outcome Message
1020
Confirmed?
YES
NO
1022
Transmit Denial Message
END
1024
Generate Funding Request
1026
Sell Cryptocurrency
1028
Send Payment to Homeowner
1030
Write to Transaction Blockchain
1032
Compute Completion Data
1034
Write to Blockchain
1036
Generate Confirmation Message
1038
Transmit Confirmation Message
END

FIG. 10

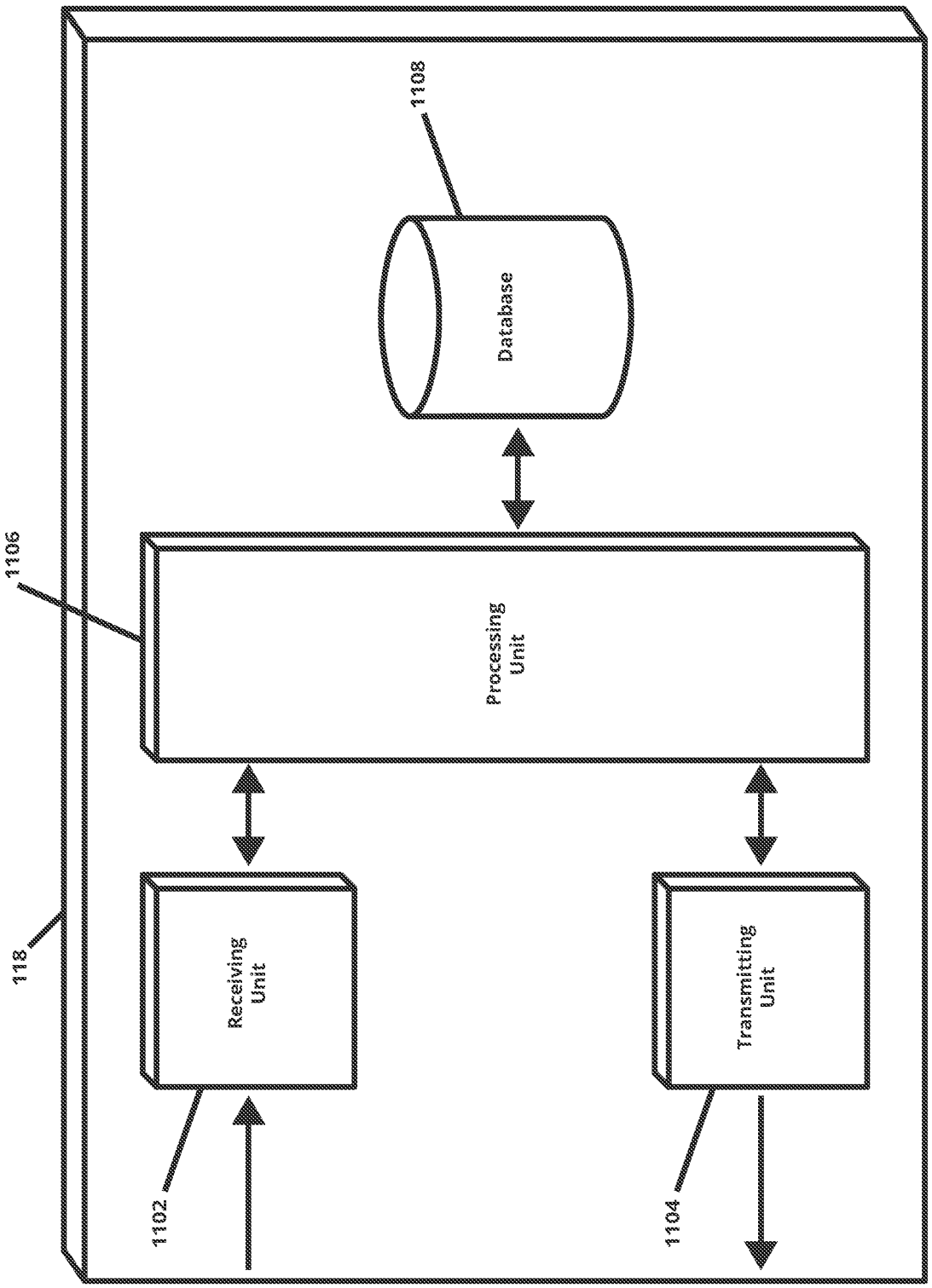

1108
Database
1106
Processing Unit
118
Receiving Unit
Transmitting Unit
1102
1104

FIG. 11

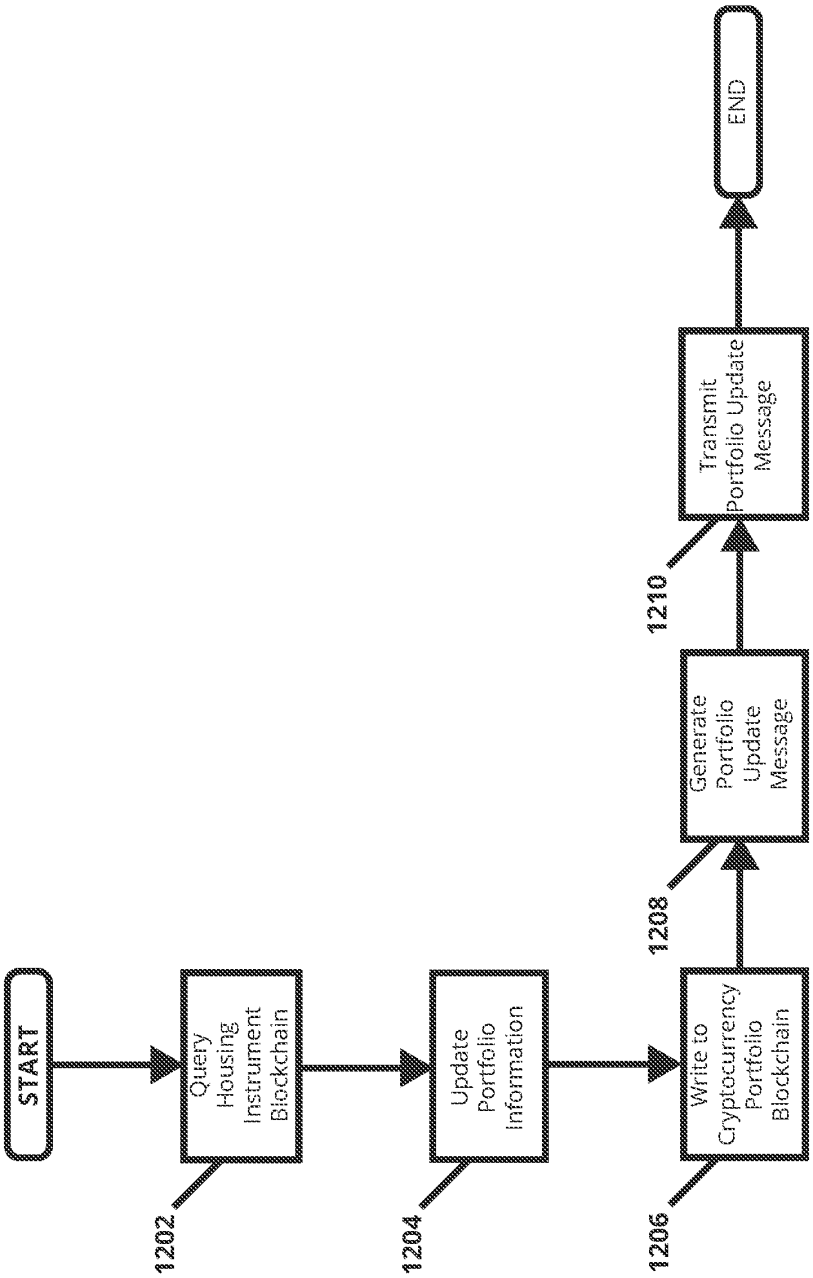

START
Query Housing Instrument Blockchain
Update Portfolio Information
Write to Cryptocurrency Portfolio Blockchain
Generate Portfolio Update Message
Transmit Portfolio Update Message
END
1202
1204
1206
1208
1210
1200

FIG. 12

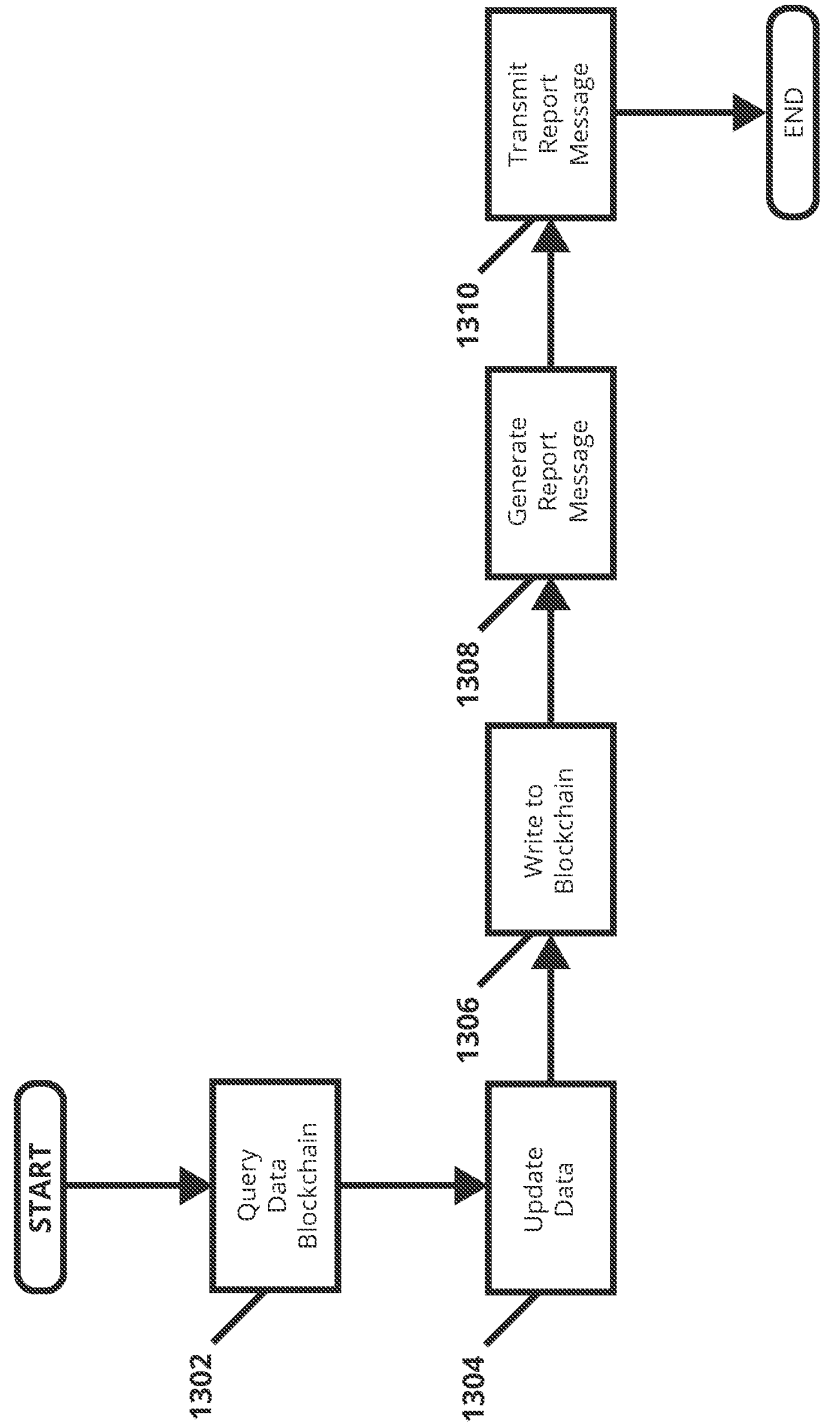

START
Query Data Blockchain
Update Data
Write to Blockchain
Generate Report Message
Transmit Report Message
END
1302
1304
1306
1308
1310
1300

FIG. 13

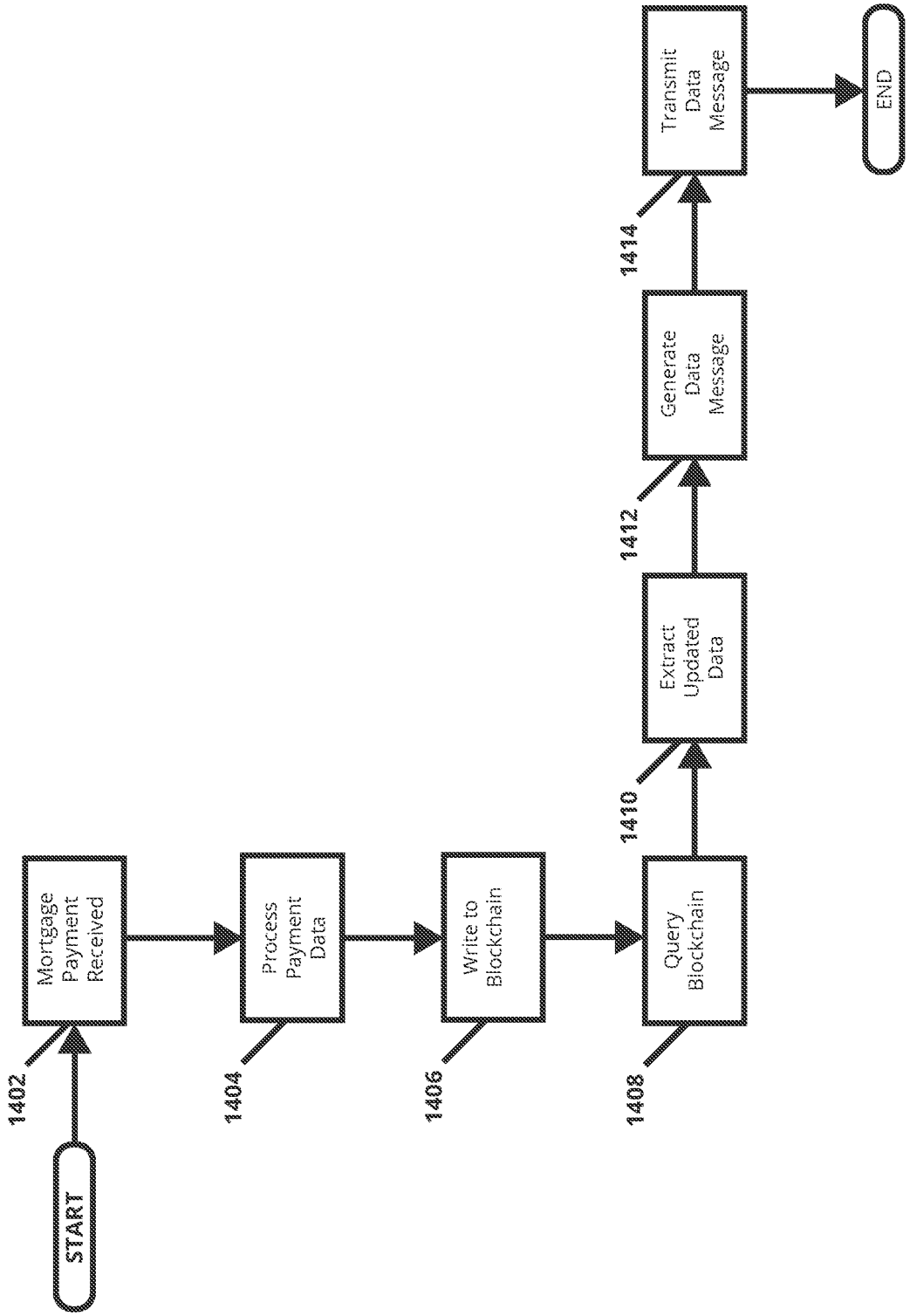

START
Mortgage Payment Received
Process Payment Data
Write to Blockchain
Query Blockchain
Extract Updated Data
Generate Data Message
Transmit Data Message
END
1402
1404
1406
1408
1410
1412
1414
1400

FIG. 14

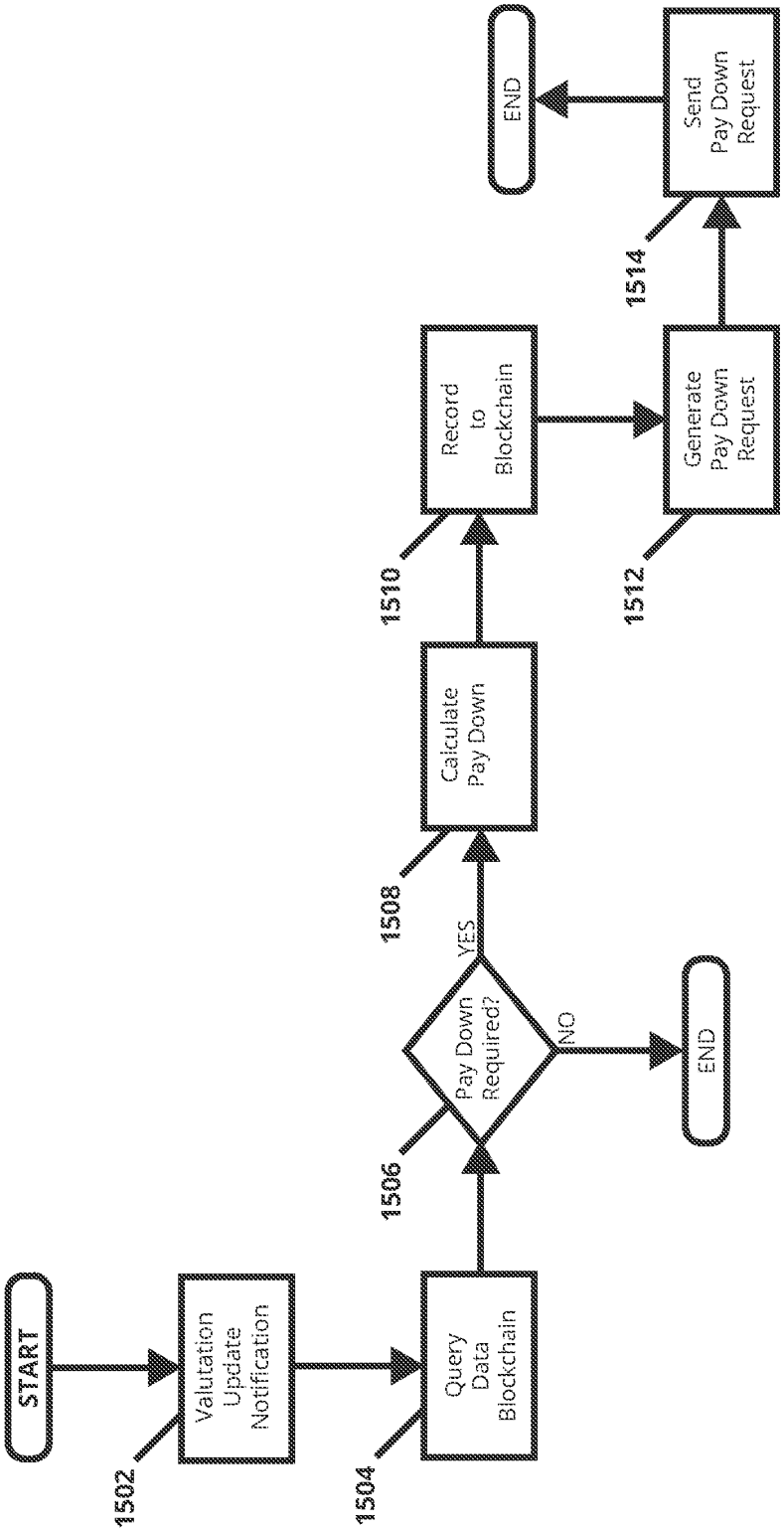

START
Valutation Update Notification
Query Data Blockchain
Pay Down Required?
YES
NO
END
Calculate Pay Down
Record to Blockchain
Generate Pay Down Request
Send Pay Down Request
END
1500
1502
1504
1506
1508
1510
1512
1514

FIG. 15

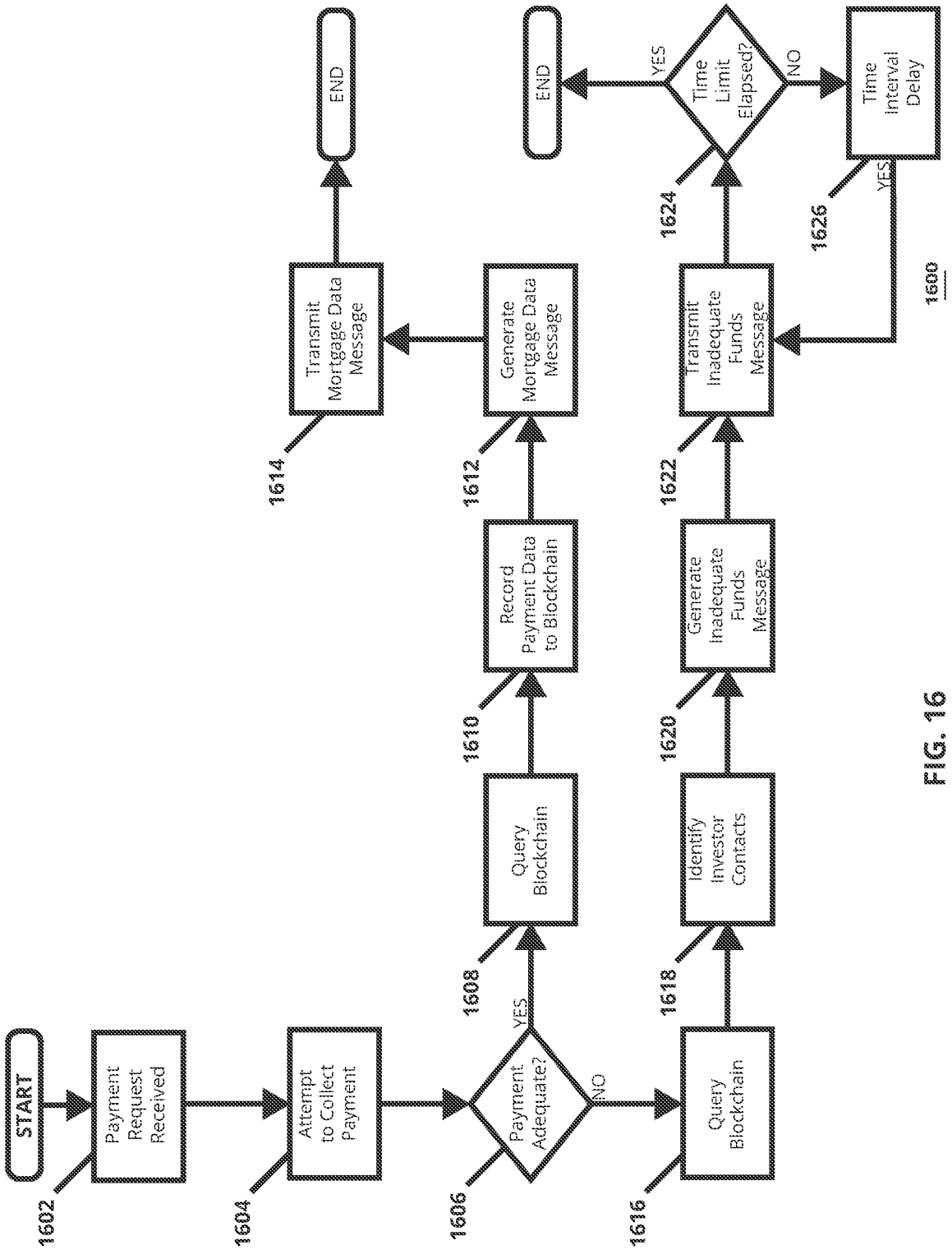

START
Payment Request Received
Attempt to Collect Payment
Payment Adequate?
YES
NO
Query Blockchain
Record Payment Data to Blockchain
Generate Mortgage Data Message
Transmit Mortgage Data Message
END
Query Blockchain
Identify Investor Contacts
Generate Inadequate Funds Message
Transmit Inadequate Funds Message
Time Limit Elapsed?
YES
NO
END
Time Interval Delay
1600
1602
1604
1606
1608
1610
1612
1614
1616
1618
1620
1622
1624
1626

FIG. 16

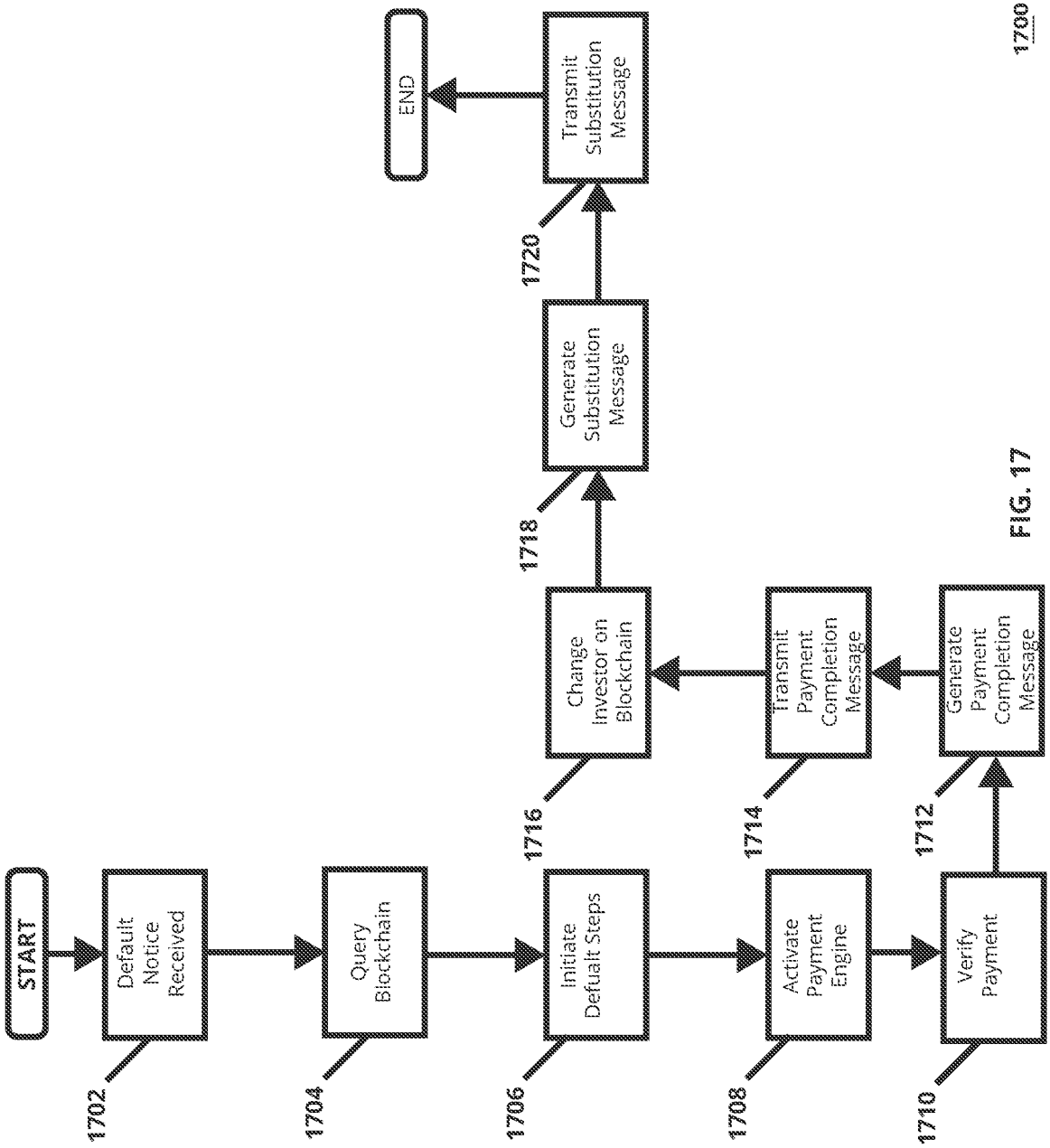

START
Default Notice Received
Query Blockchain
Initiate Default Steps
Activate Payment Engine
Verify Payment
Generate Payment Completion Message
Transmit Payment Completion Message
Change Investor on Blockchain
Generate Substitution Message
Transmit Substitution Message
END
1702
1704
1706
1708
1710
1712
1714
1716
1718
1720
1700

FIG. 17

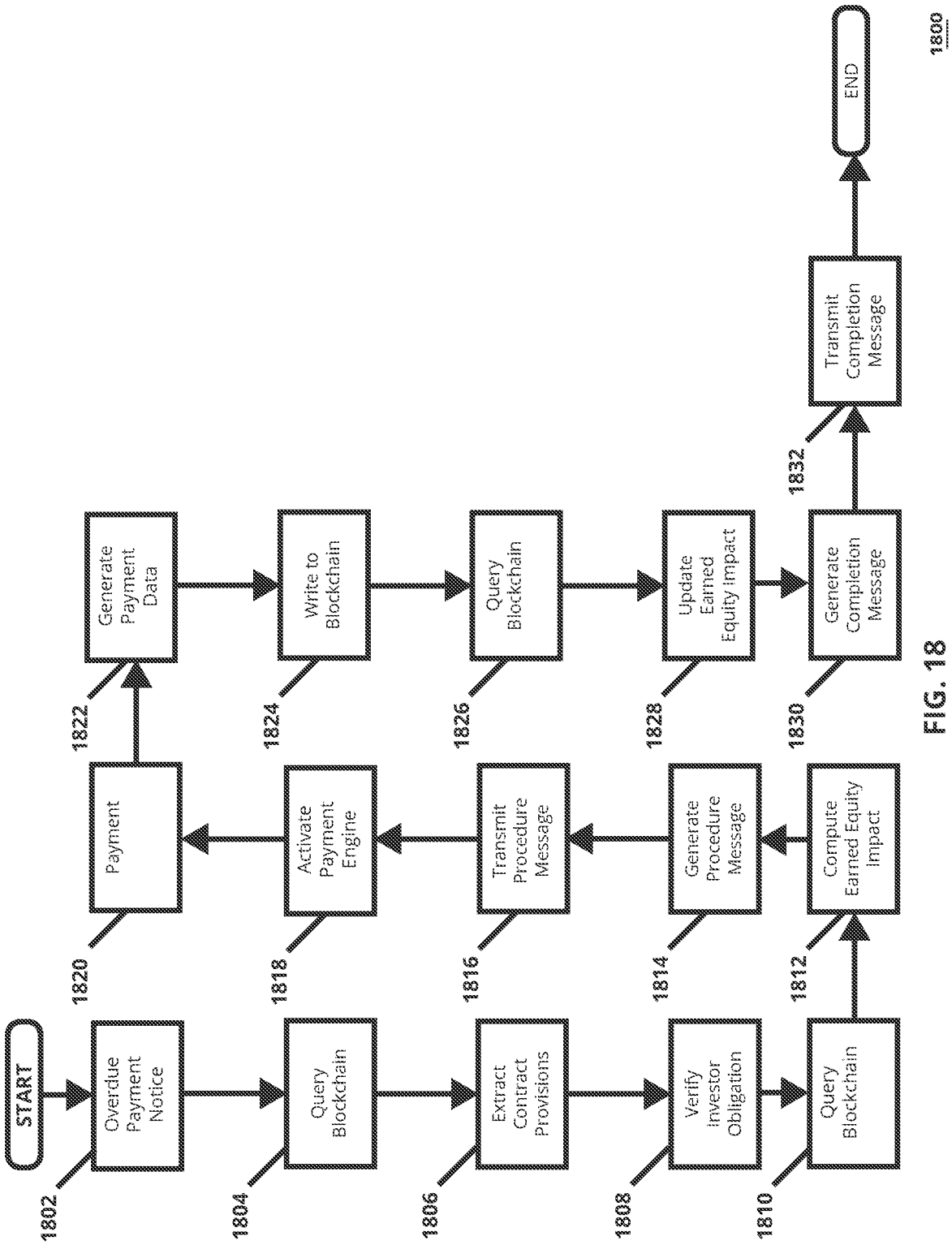

START
Overdue Payment Notice
Query Blockchain
Extract Contract Provisions
Verify Investor Obligation
Query Blockchain
Compute Earned Equity Impact
Generate Procedure Message
Transmit Procedure Message
Activate Payment Engine
Payment
Generate Payment Data
Write to Blockchain
Query Blockchain
Update Earned Equity Impact
Generate Completion Message
Transmit Completion Message
END
1802
1804
1806
1808
1810
1812
1814
1816
1818
1820
1822
1824
1826
1828
1830
1832
1800

FIG. 18

1900

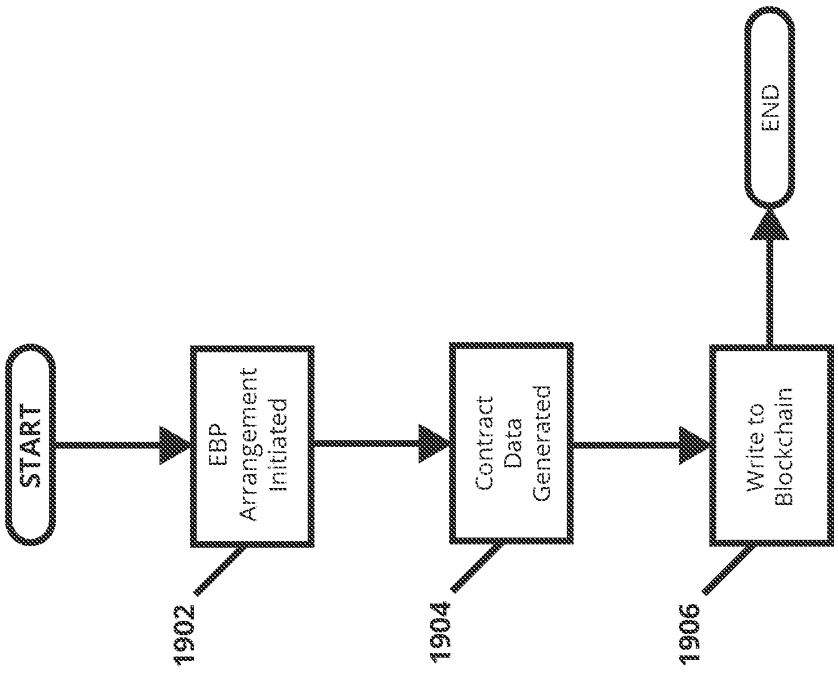

START
EBP Arrangement Initiated
Contract Data Generated
Write to Blockchain
END
1902
1904
1906

FIG. 19

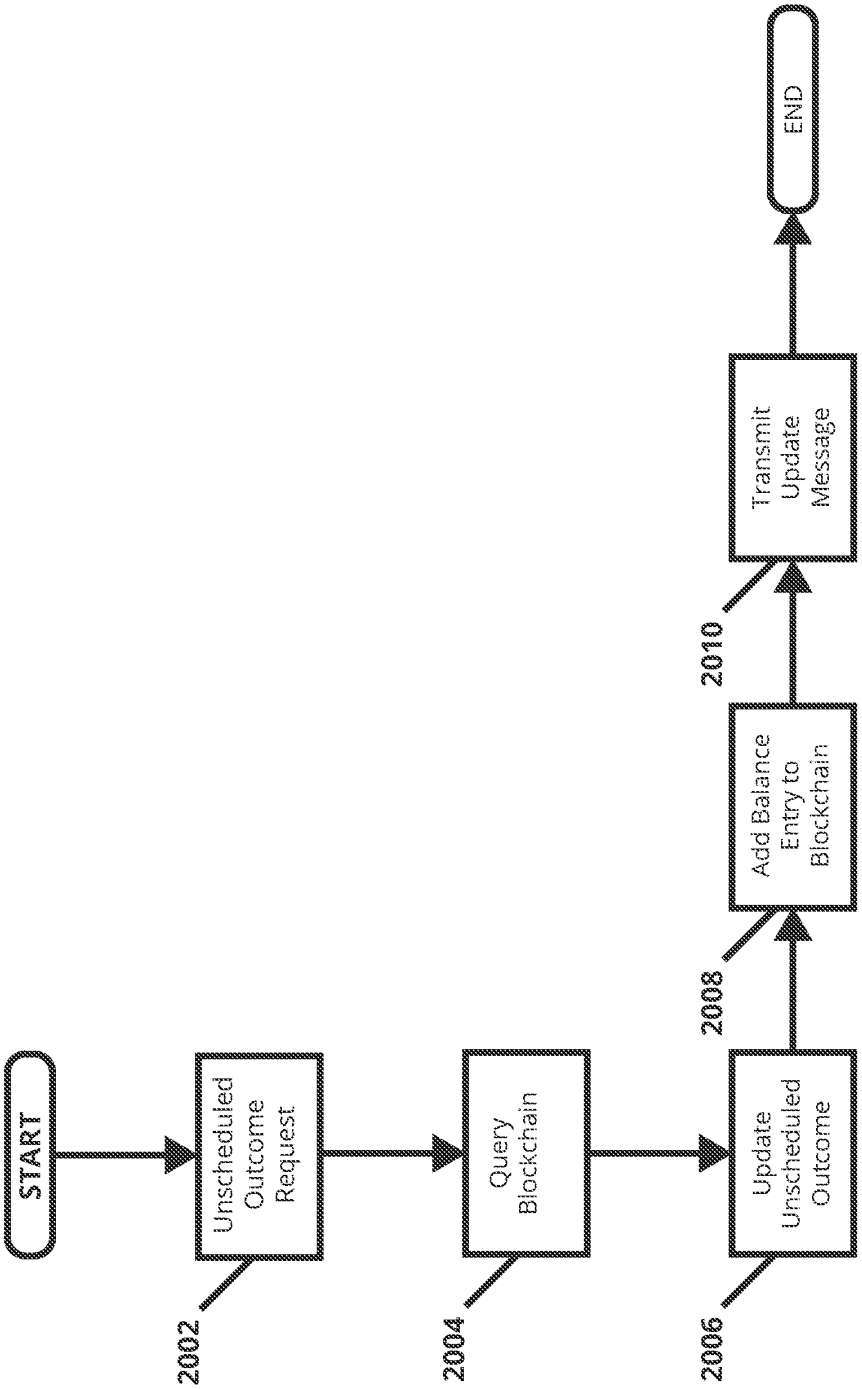

START
Unscheduled Outcome Request
Query Blockchain
Update Unscheduled Outcome
Add Balance Entry to Blockchain
Transmit Update Message
END
2002
2004
2006
2008
2010
2000

FIG. 20

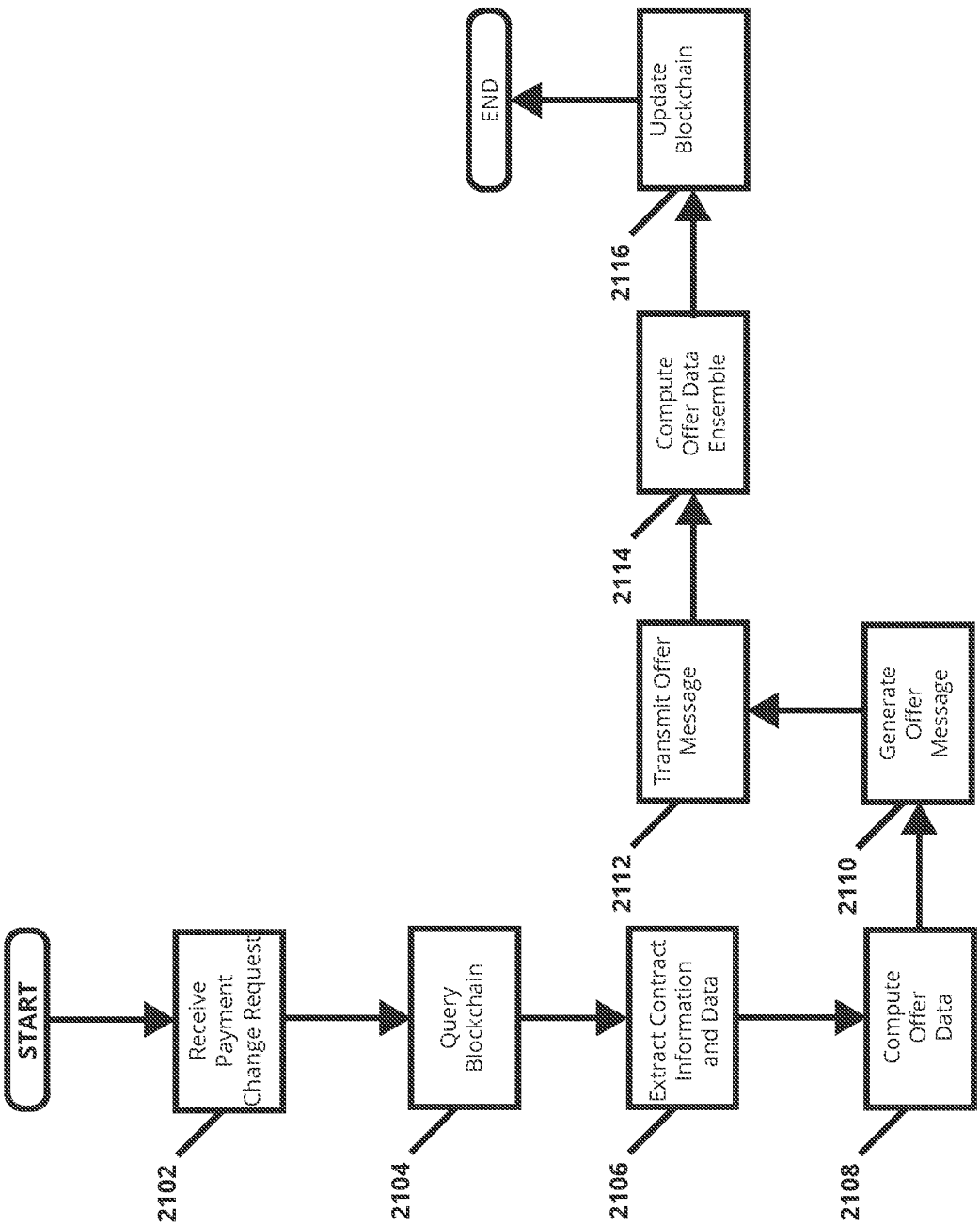

START
Receive Payment Change Request
Query Blockchain
Extract Contract Information and Data
Compute Offer Data
Generate Offer Message
Transmit Offer Message
Compute Offer Data Ensemble
Update Blockchain
END
2102
2104
2106
2108
2110
2112
2114
2116
2100

FIG. 21

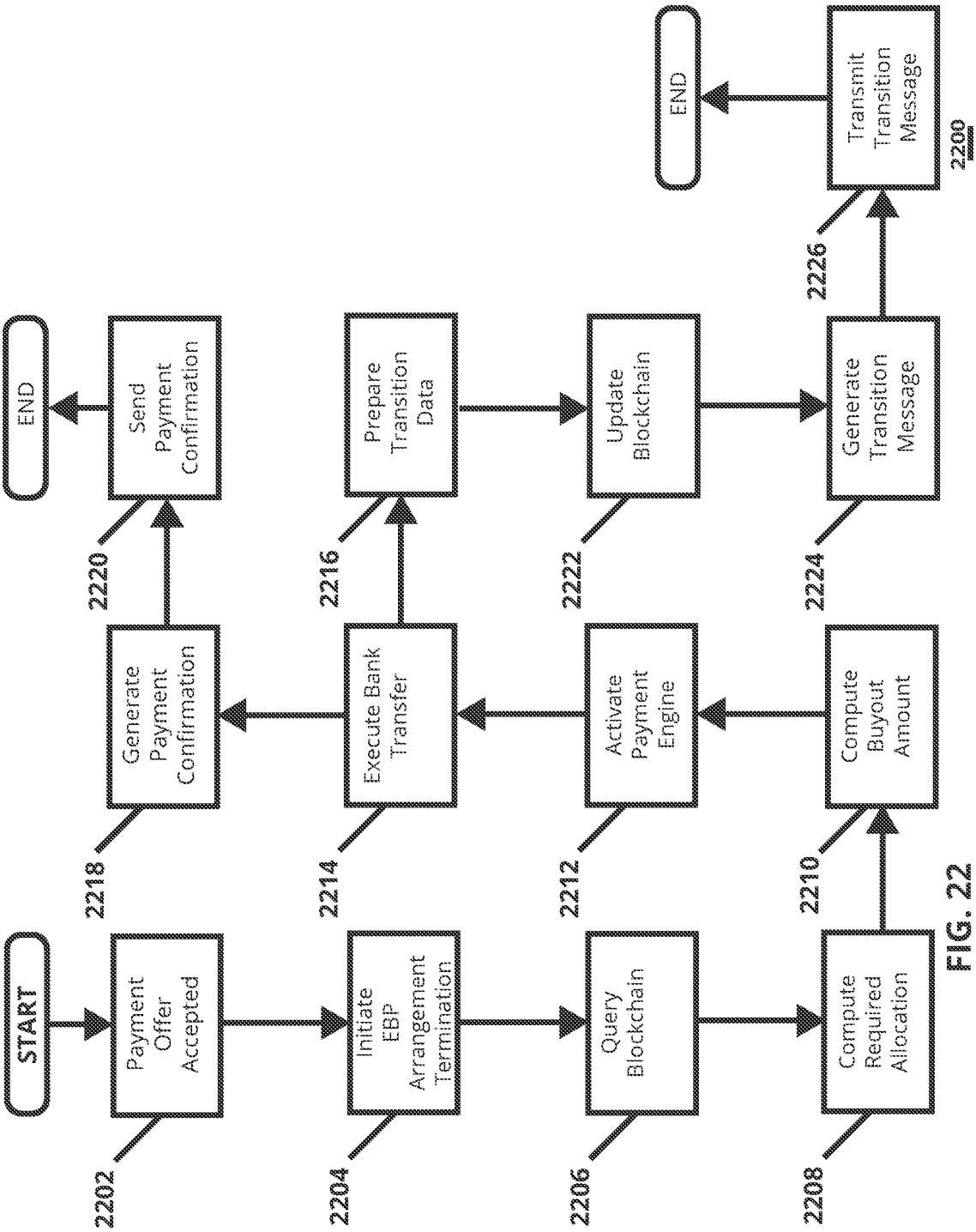

START
Payment Offer Accepted
Initiate EBP Arrangement Termination
Query Blockchain
Compute Required Allocation
Compute Buyout Amount
Activate Payment Engine
Execute Bank Transfer
Generate Payment Confirmation
Send Payment Confirmation
END
Prepare Transition Data
Update Blockchain
Generate Transition Message
Transmit Transition Message
END
2202
2204
2206
2208
2210
2212
2214
2216
2218
2220
2222
2224
2226
2200

FIG. 22

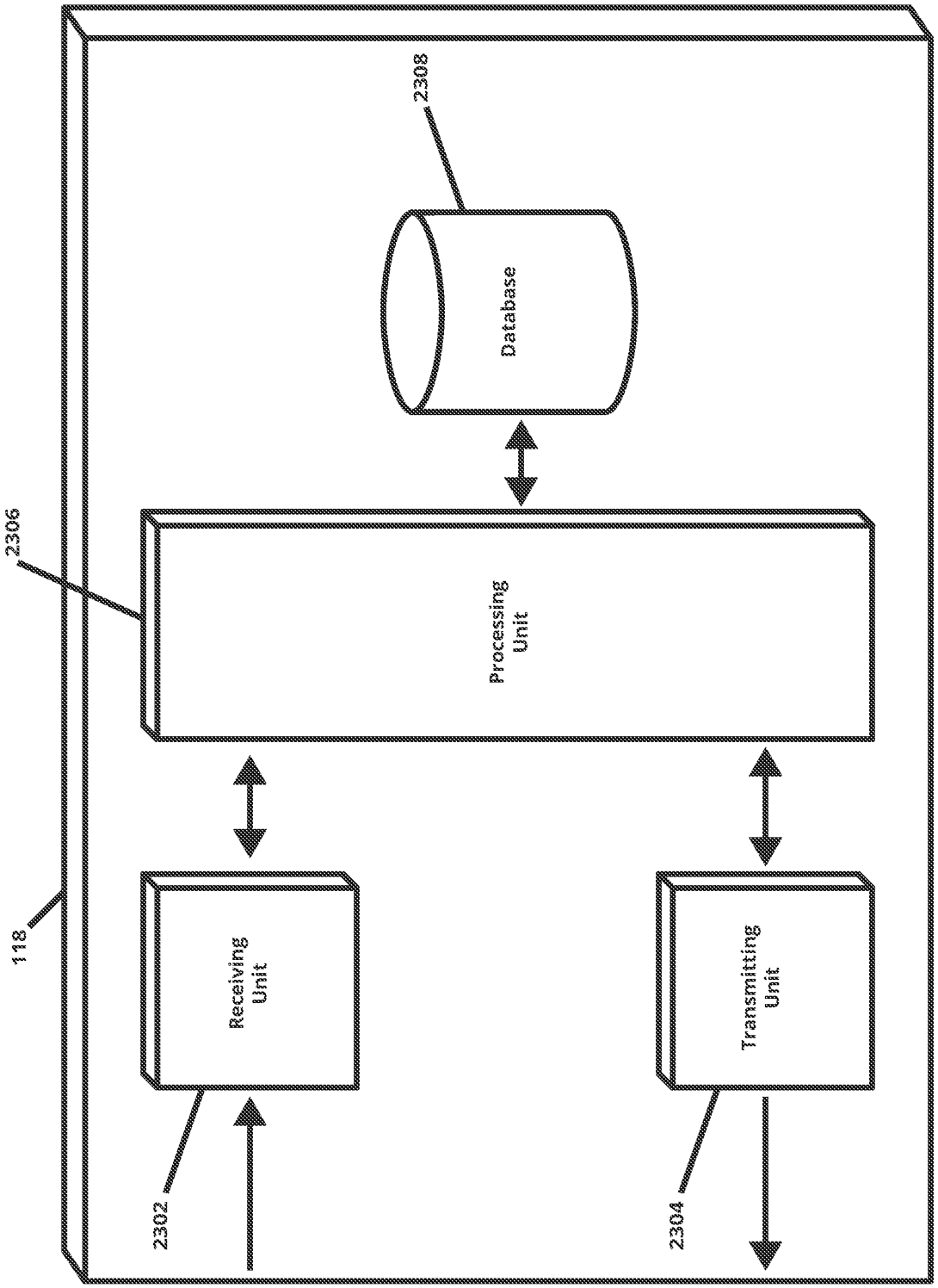

2308
Database
2306
Processing Unit
118
Receiving Unit
Transmitting Unit
2302
2304

FIG. 23

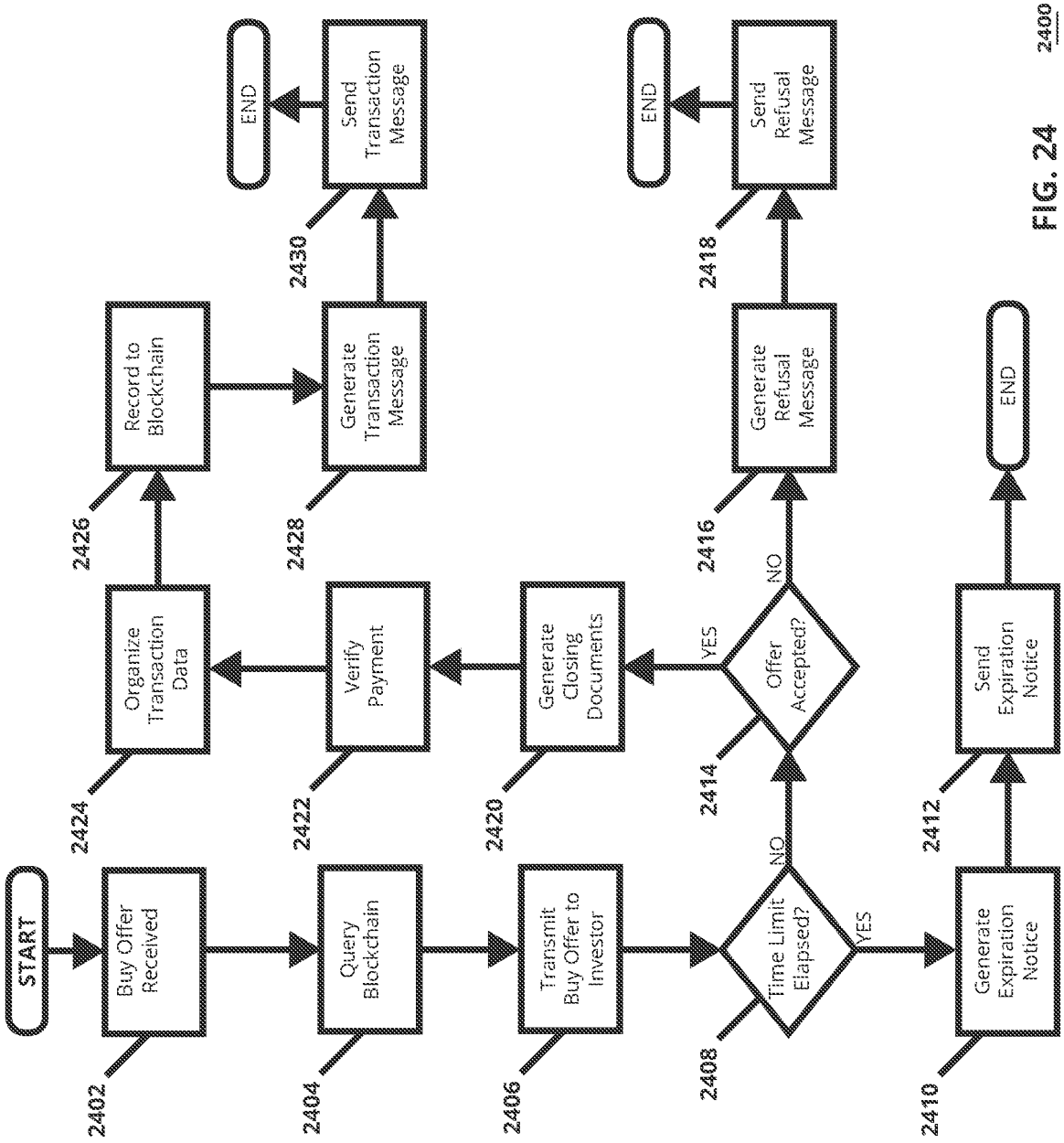

START
Buy Offer Received
2402
Query Blockchain
2404
Transmit Buy Offer to Investor
2406
Time Limit Elapsed?
2408
NO
YES
Generate Expiration Notice
2410
Send Expiration Notice
2412
END
Offer Accepted?
2414
NO
YES
Generate Refusal Message
2416
Send Refusal Message
2418
END
Generate Closing Documents
2420
Verify Payment
2422
Organize Transaction Data
2424
Record to Blockchain
2426
Generate Transaction Message
2428
Send Transaction Message
2430
END

FIG. 24 2400

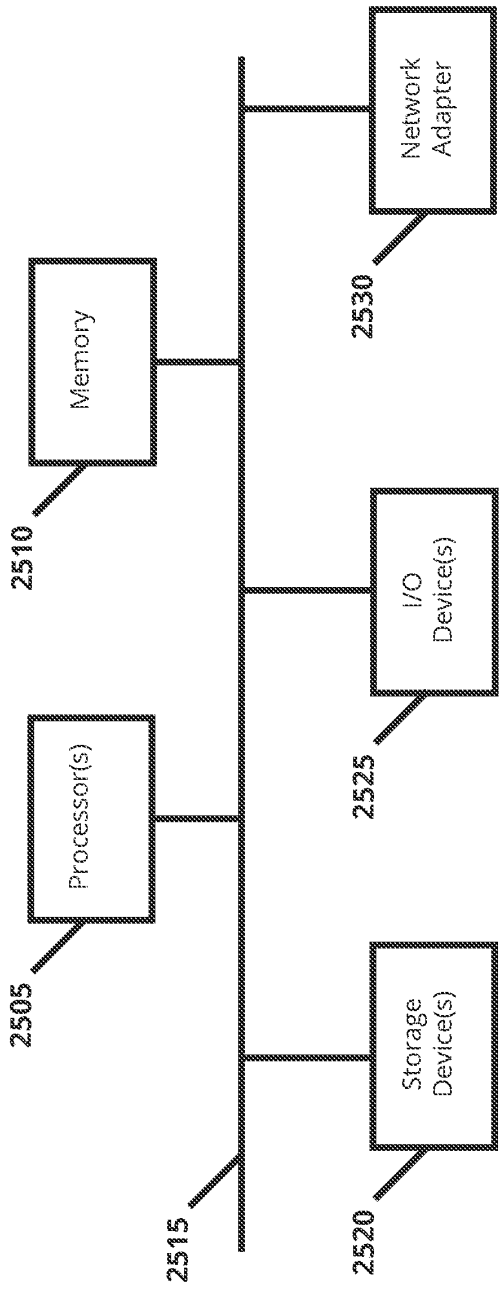

2500
Network Adapter
2530
Memory
2510
I/O Device(s)
2525
Processor(s)
2505
Storage Device(s)
2520
2515

Fig. 25