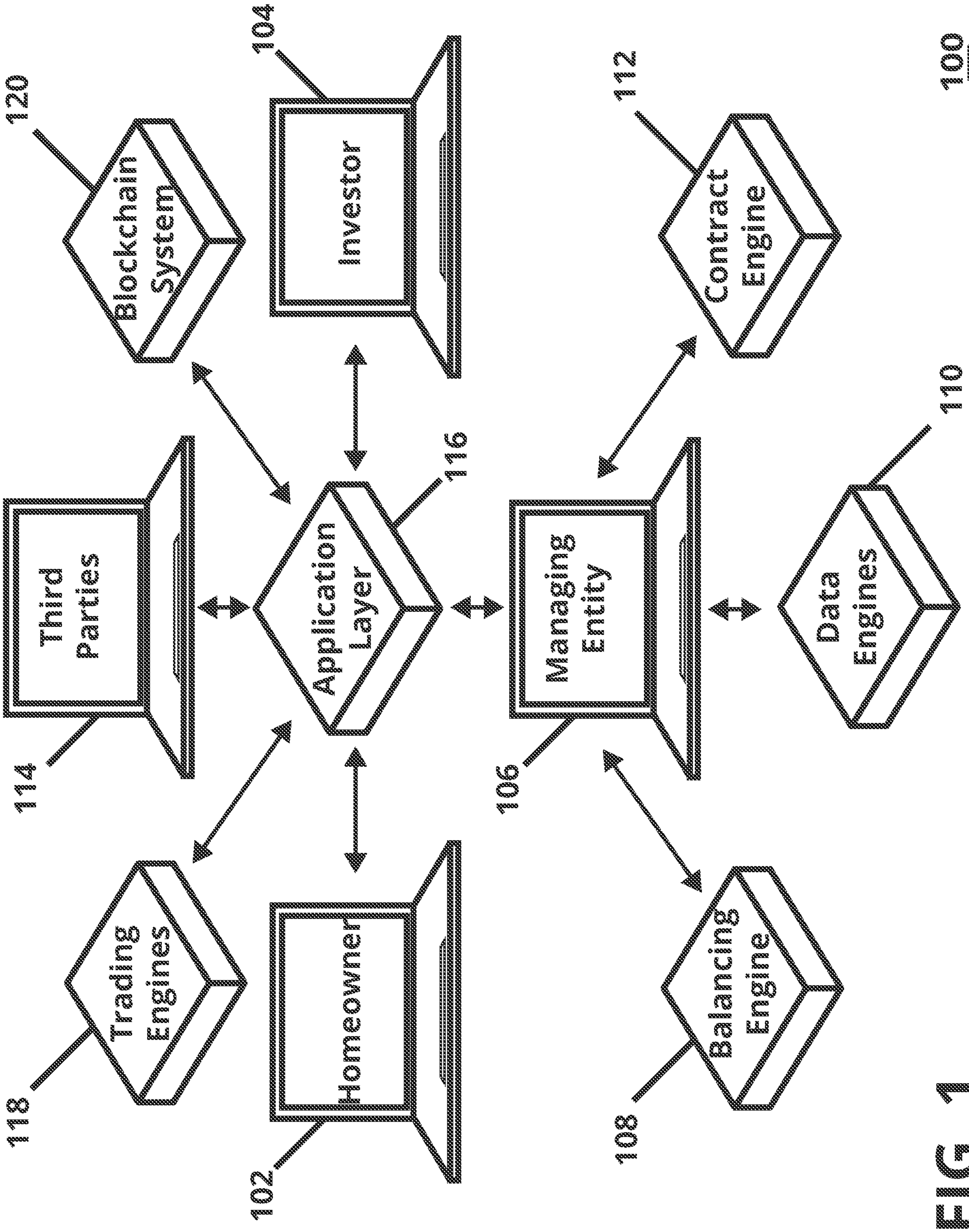

100
110
112
Contract Engine
Data Engines
104
Investor
116
Blockchain System
120
Third Parties
Application Layer
Managing Entity
114
106
Trading Engines
Homeowner
Balancing Engine
118
102
108

FIG. 1

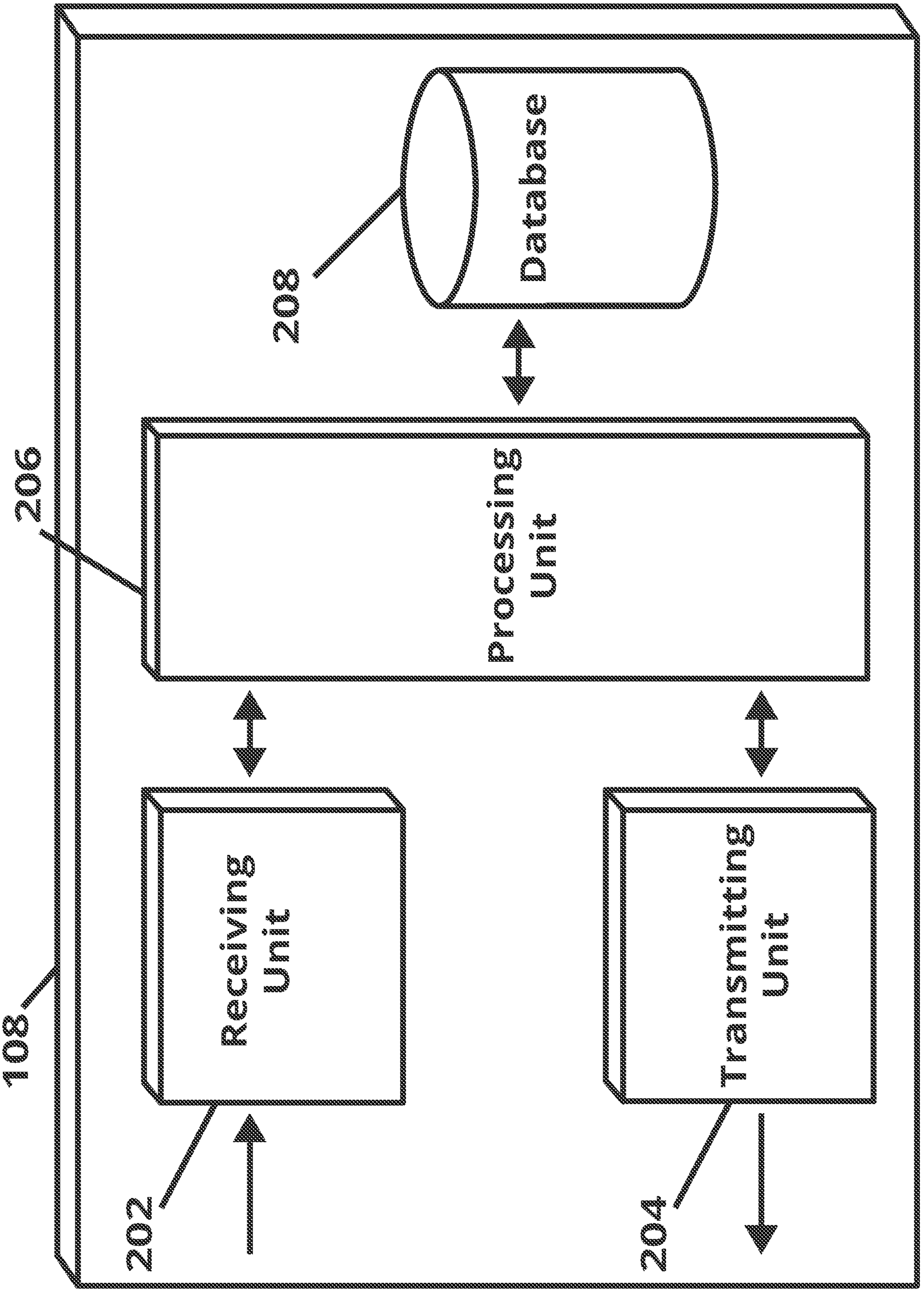

Database
208
206
Processing Unit
Receiving Unit
Transmitting Unit
108
202
204

FIG. 2

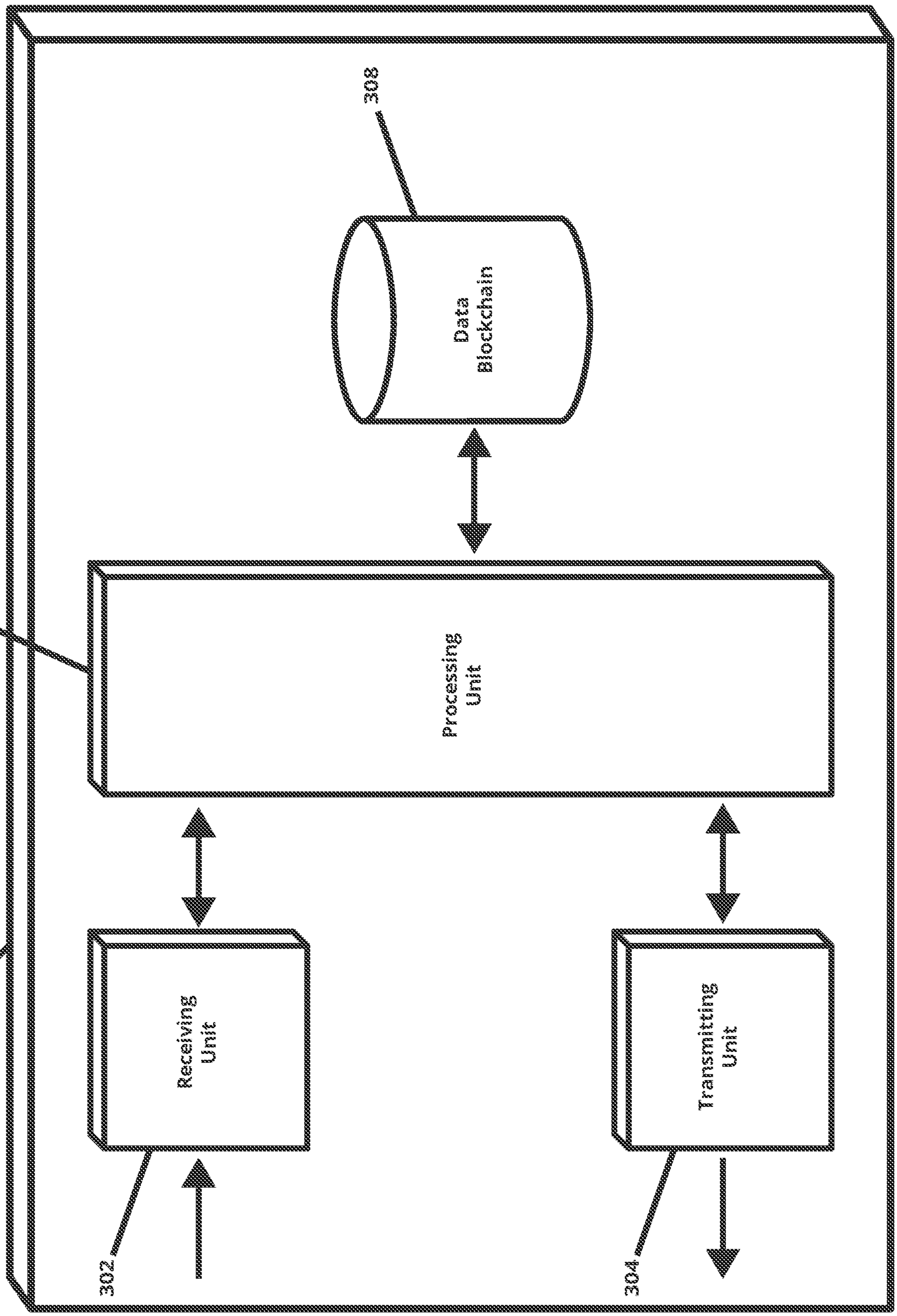

308
Data Blockchain
305
Processing Unit
120
Receiving Unit
Transmitting Unit
302
304

FIG. 3

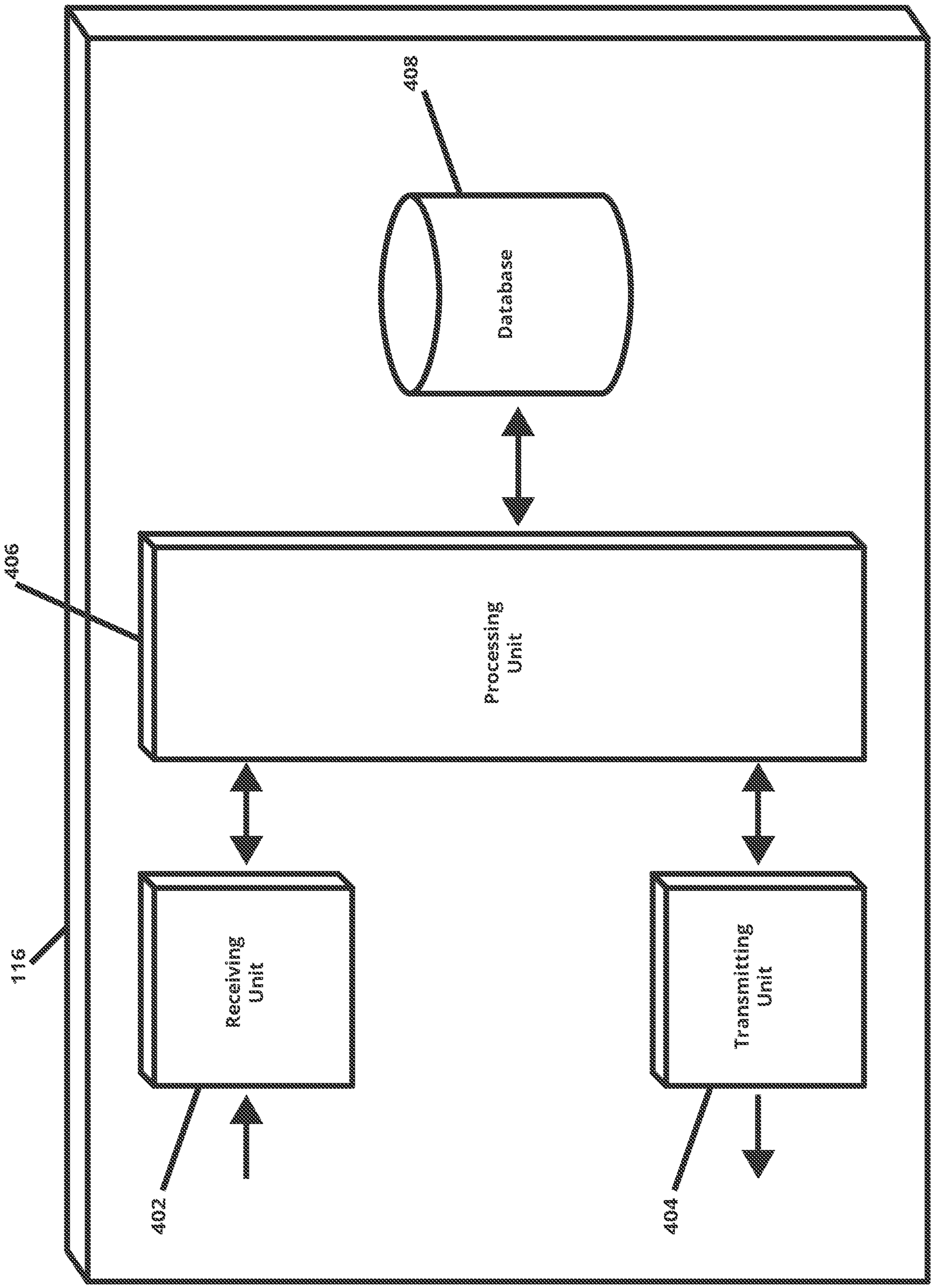

408
Database
406
Processing Unit
116
Receiving Unit
Transmitting Unit
402
404

FIG. 4

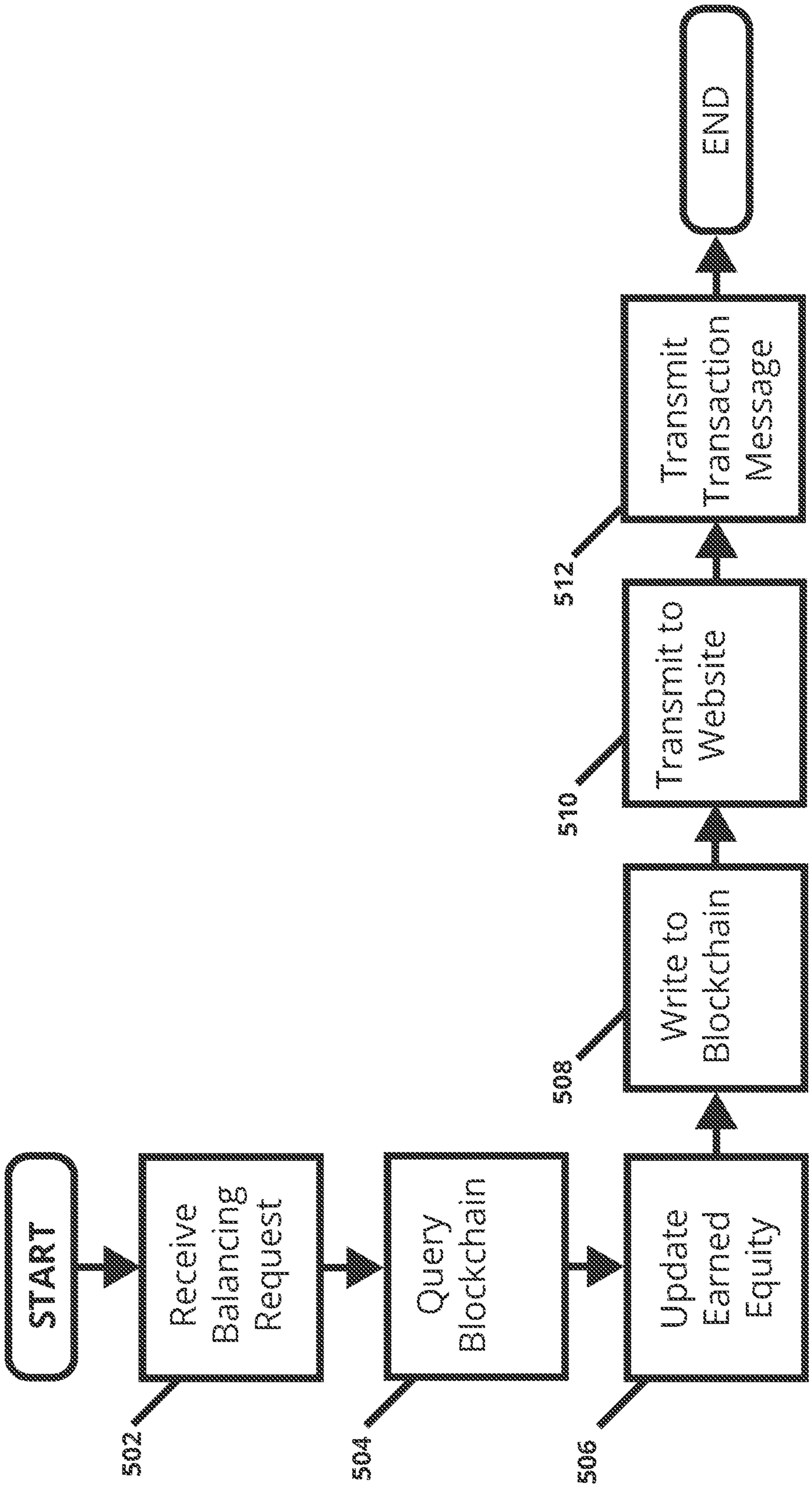

START
Receive Balancing Request
Query Blockchain
Update Earned Equity
Write to Blockchain
Transmit to Website
Transmit Transaction Message
END
502
504
506
508
510
512

FIG. 5

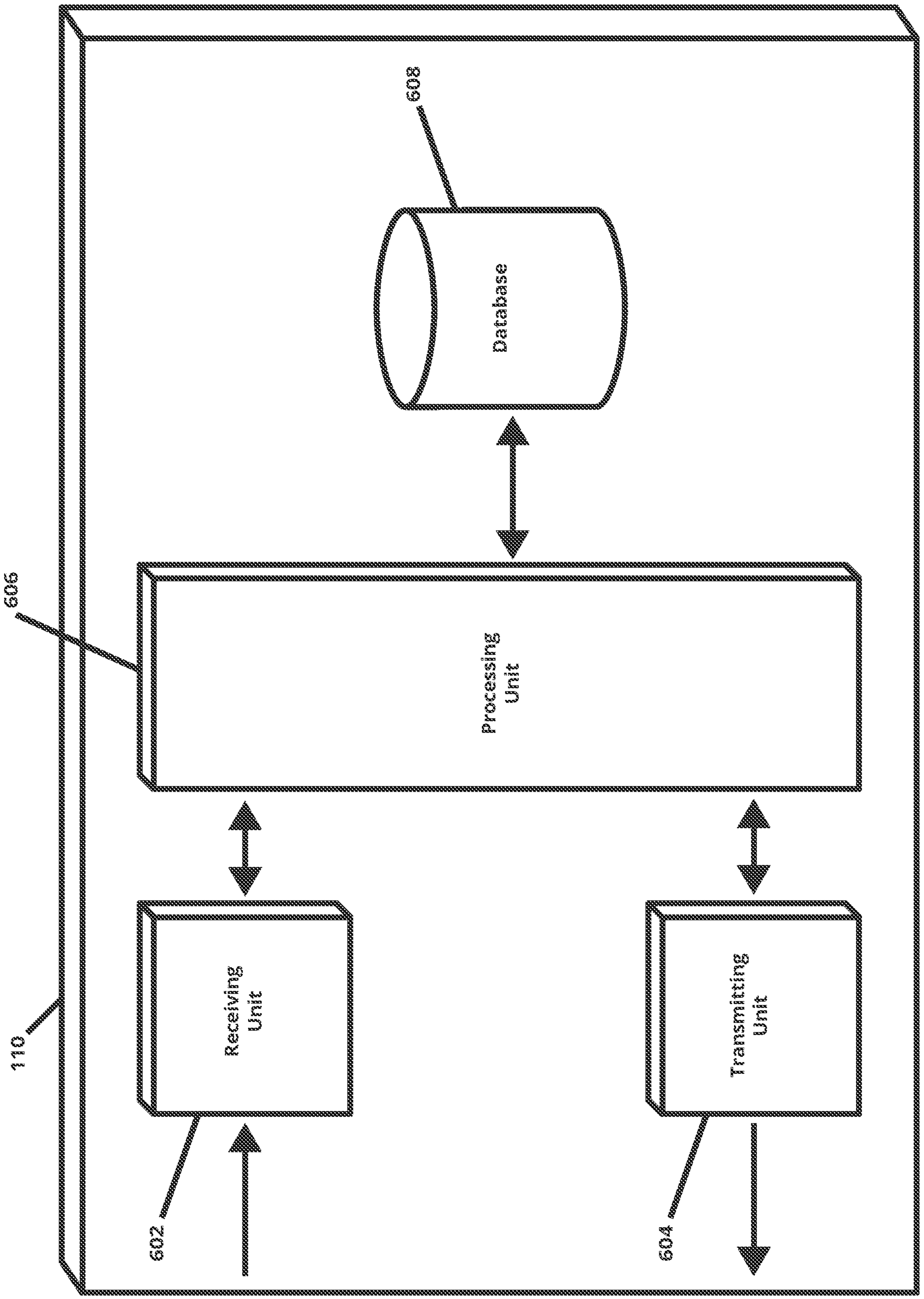

608
Database
606
Processing Unit
110
Receiving Unit
Transmitting Unit
602
604

FIG. 6

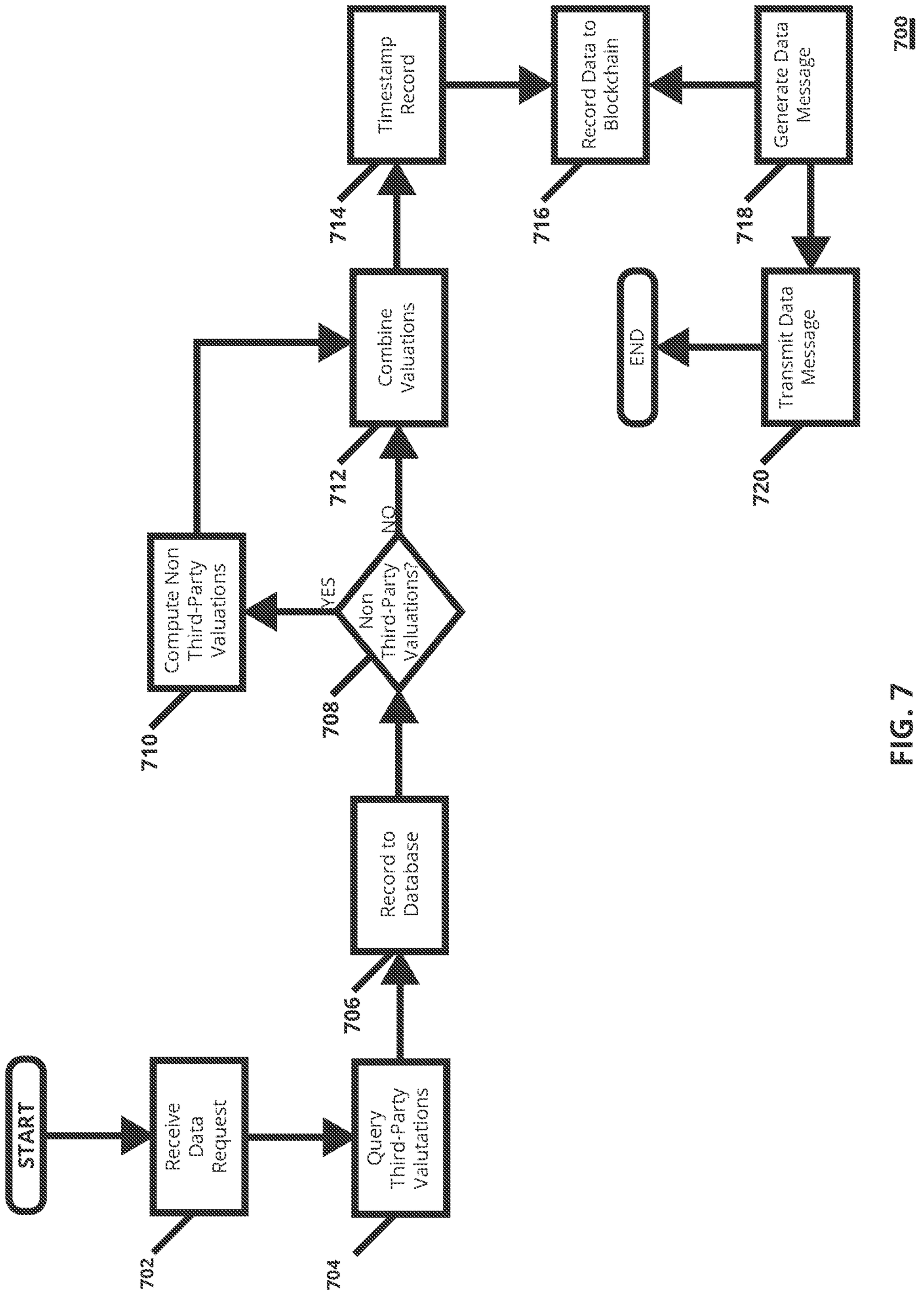

START
Receive Data Request
Query Third-Party Valuations
Record to Database
Non Third-Party Valuations?
YES
NO
Compute Non Third-Party Valuations
Combine Valuations
Timestamp Record
Record Data to Blockchain
Generate Data Message
Transmit Data Message
END
700
702
704
706
708
710
712
714
716
718
720

FIG. 7

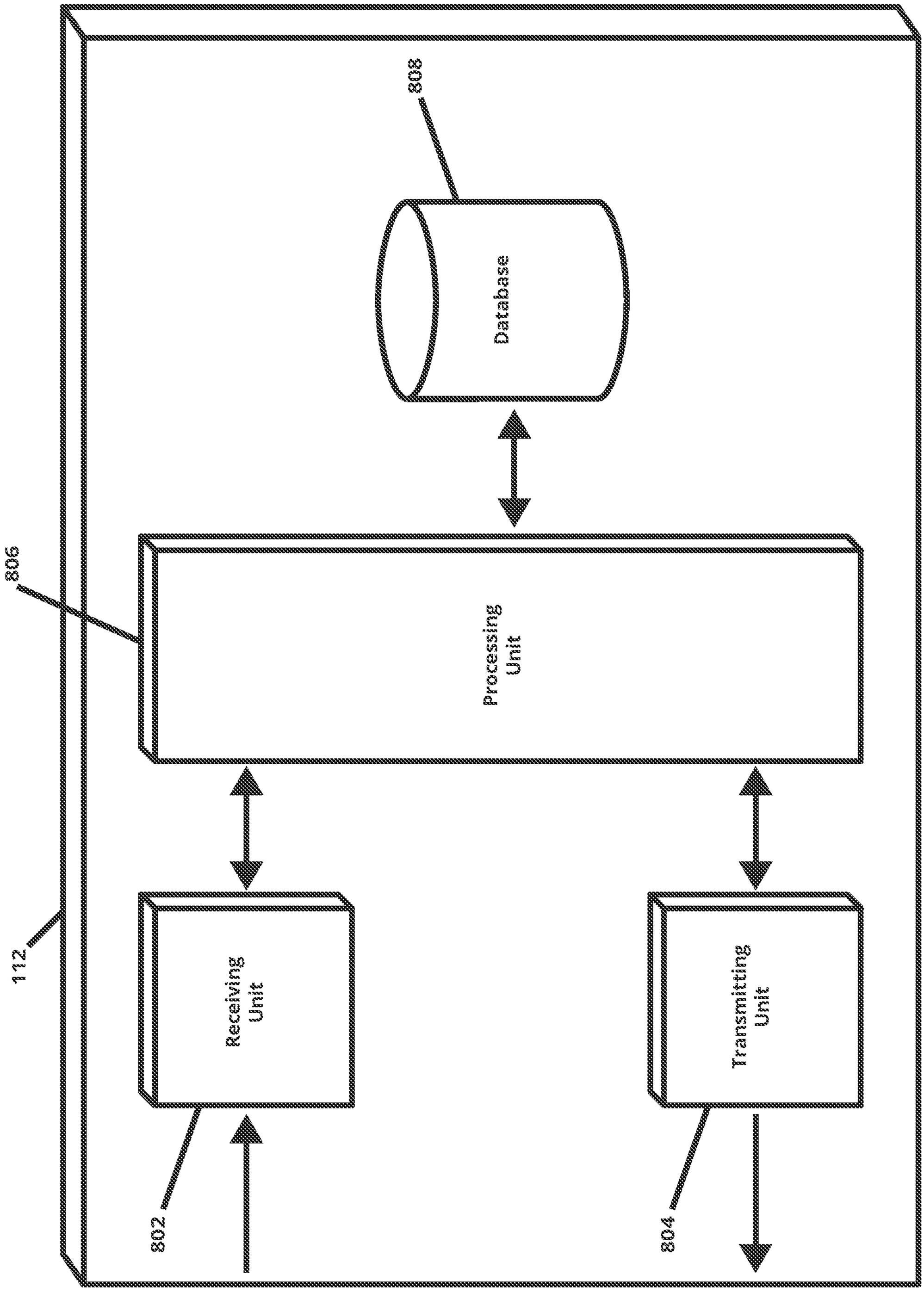

808
Database
806
Processing Unit
112
Receiving Unit
Transmitting Unit
802
804

FIG. 8

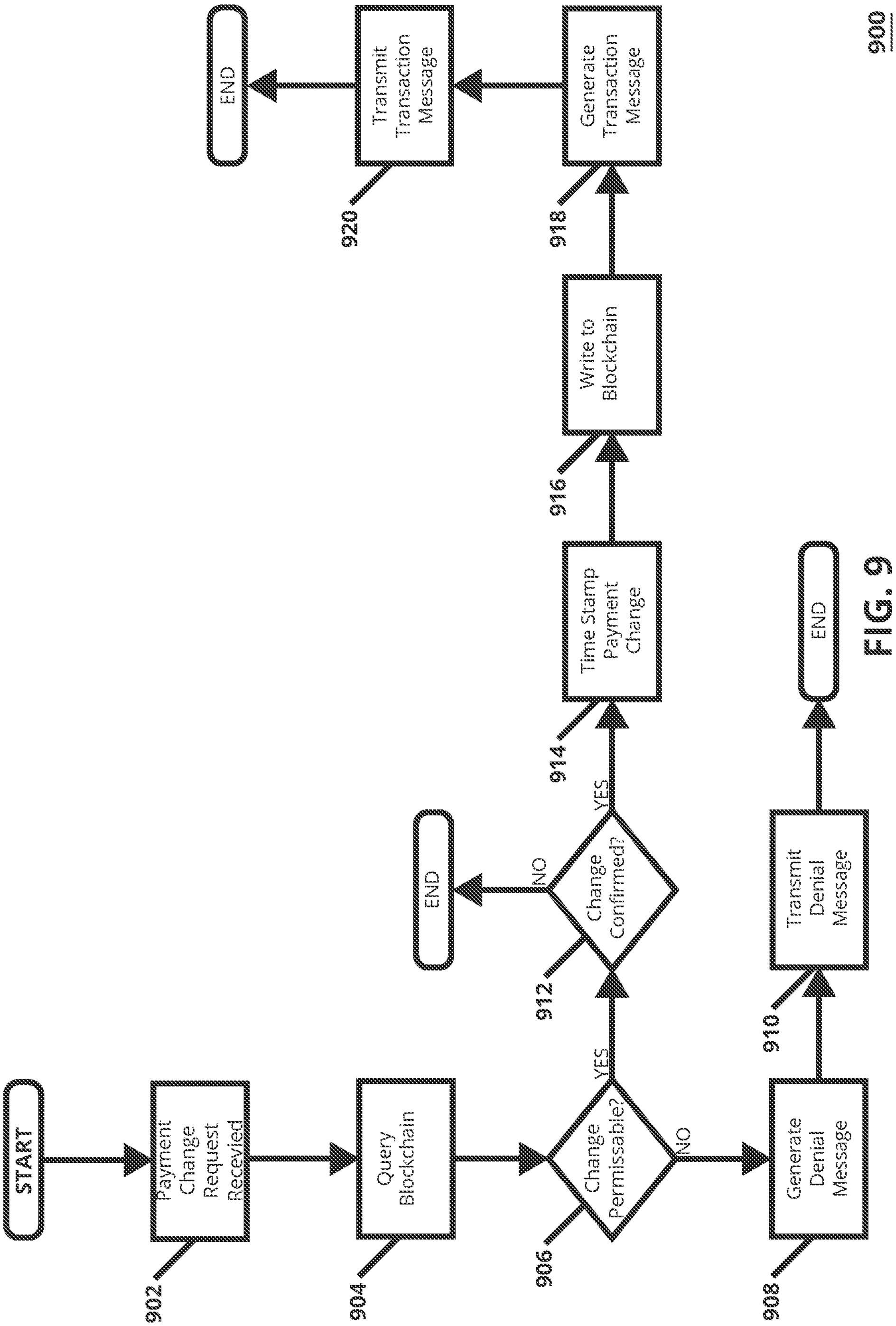

900
START
Payment Change Request Recevied
902
Query Blockchain
904
Change Permissable?
906
YES
NO
Generate Denial Message
908
Transmit Denial Message
910
END
Change Confirmed?
912
YES
NO
END
Time Stamp Payment Change
914
Write to Blockchain
916
Generate Transaction Message
918
Transmit Transaction Message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

FIG. 9

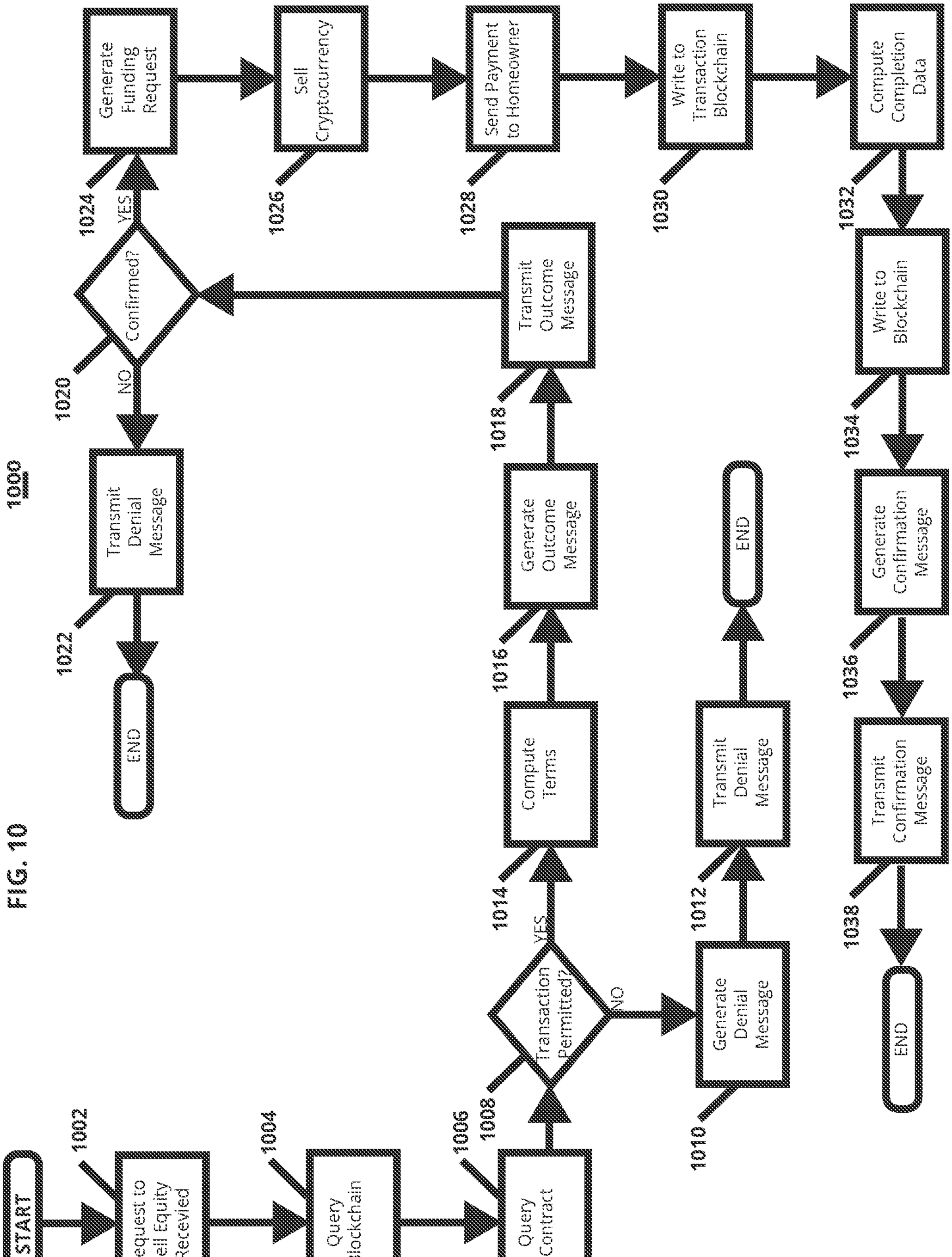

1000
START
1002
Request to Sell Equity Recevied
1004
Query Blockchain
1006
Query Contract
1008
Transaction Permitted?
YES
NO
1010
Generate Denial Message
1012
Transmit Denial Message
1014
Compute Terms
1016
Generate Outcome Message
1018
Transmit Outcome Message
1020
Confirmed?
YES
NO
1022
Transmit Denial Message
1024
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
END
END

FIG. 10

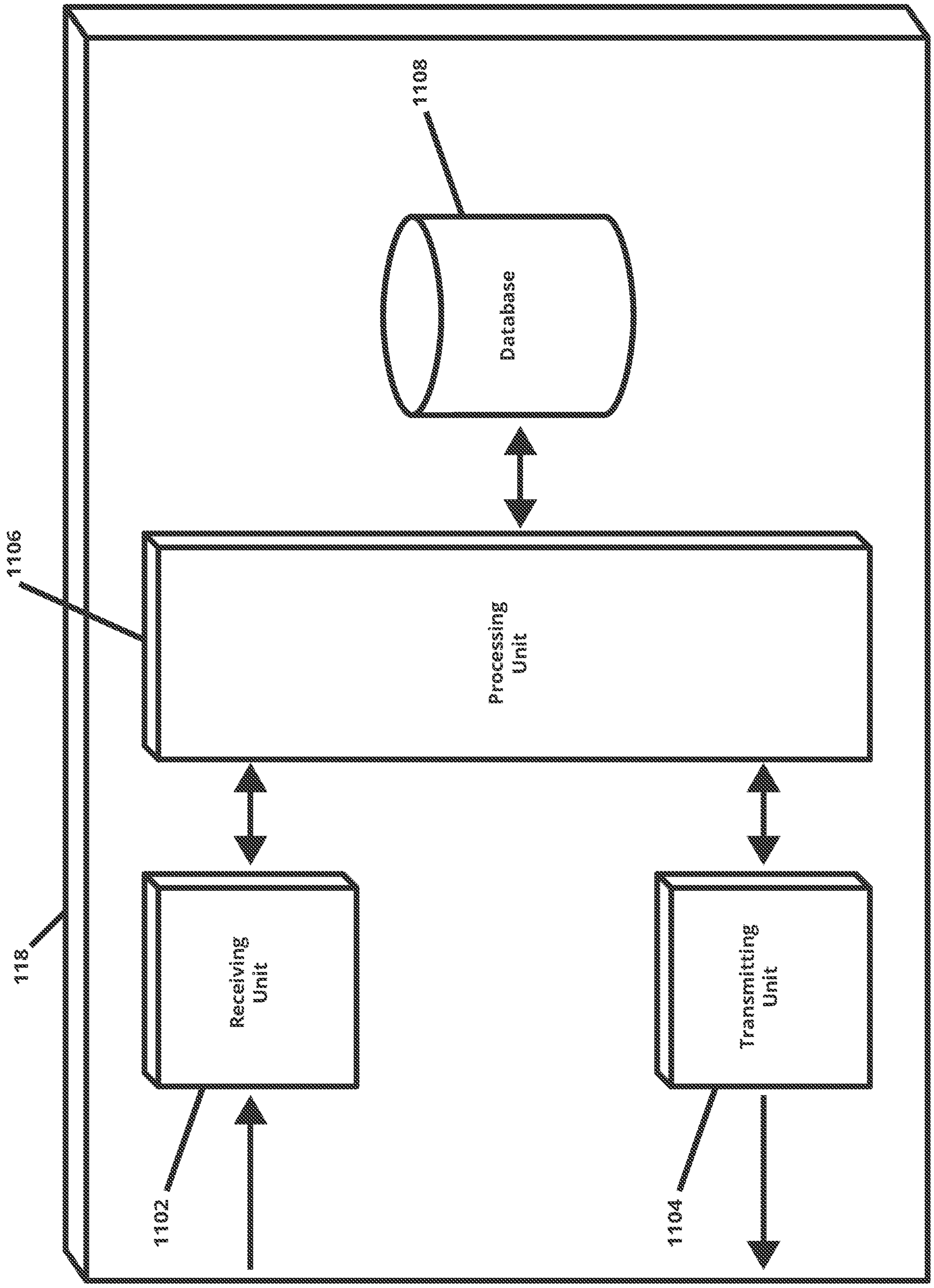

1108
Database
1106
Processing Unit
118
Receiving Unit
Transmitting Unit
1102
1104

FIG. 11

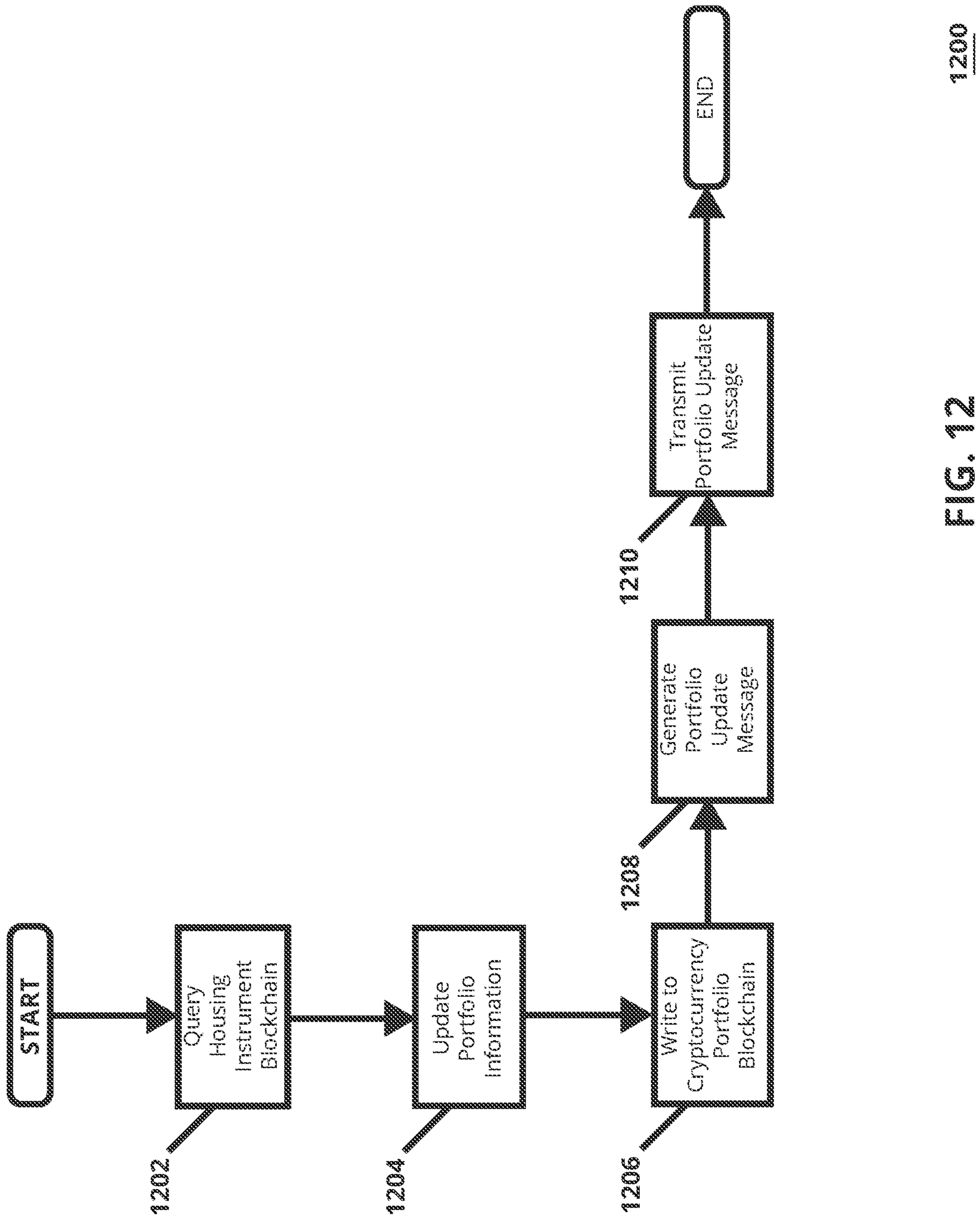

1200
START
Query Housing Instrument Blockchain
1202
Update Portfolio Information
1204
Write to Cryptocurrency Portfolio Blockchain
1206
1208
Generate Portfolio Update Message
1210
Transmit Portfolio Update Message
END

FIG. 12

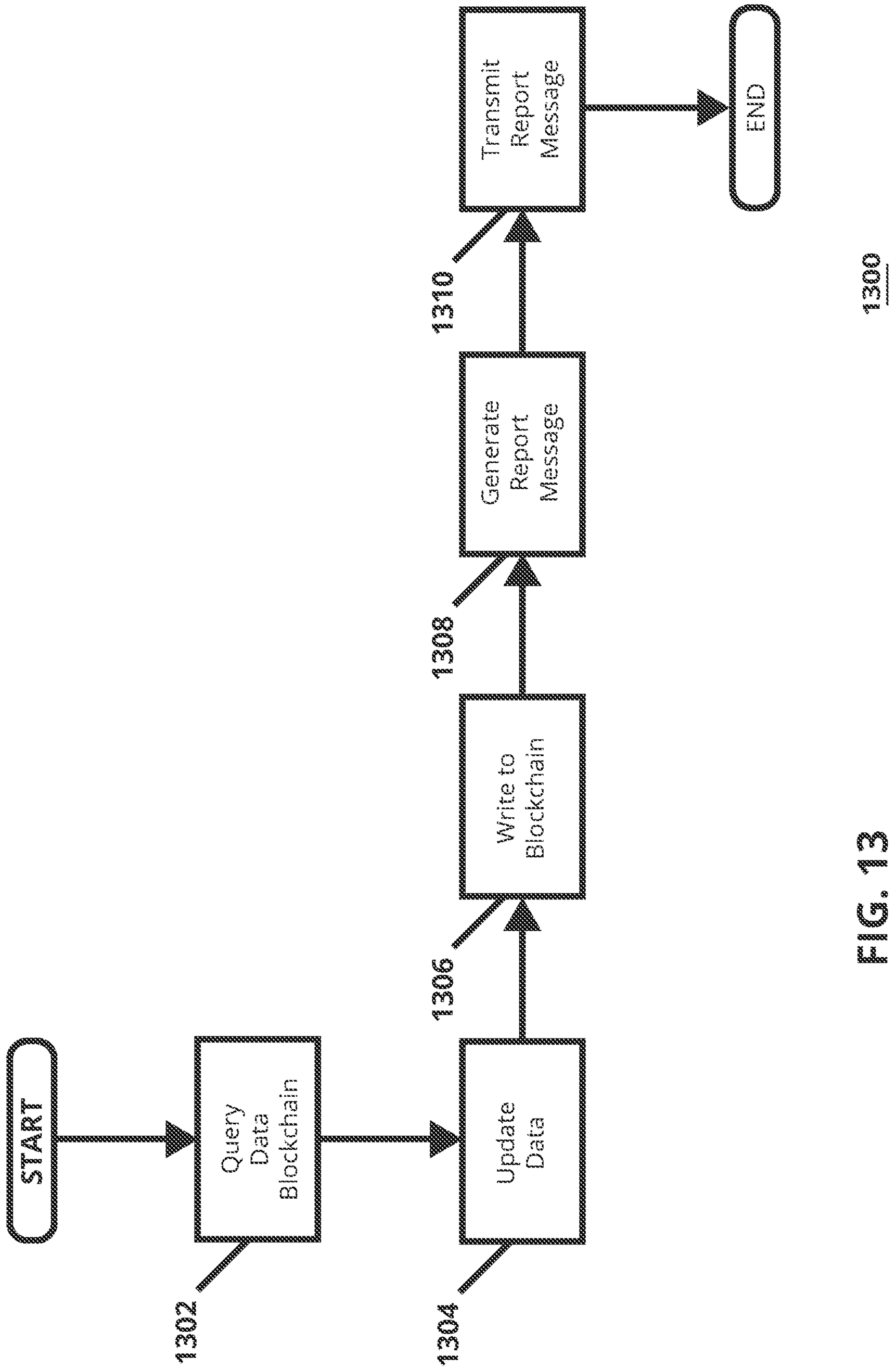

START
Query Data Blockchain
Update Data
Write to Blockchain
Generate Report Message
Transmit Report Message
END
1302
1304
1306
1308
1310
1300

FIG. 13

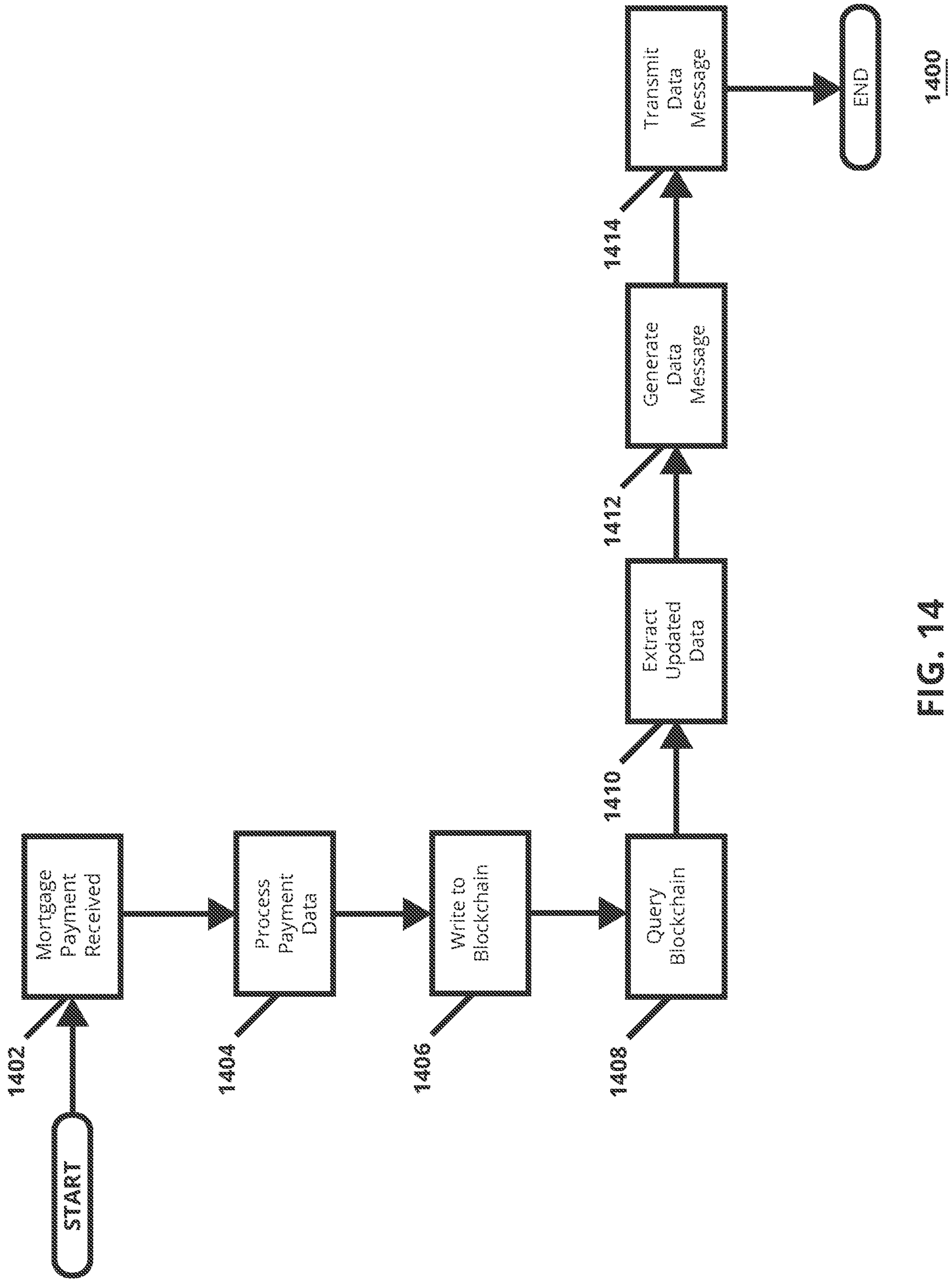

START
1402
Mortgage Payment Received
1404
Process Payment Data
1406
Write to Blockchain
1408
Query Blockchain
1410
Extract Updated Data
1412
Generate Data Message
1414
Transmit Data Message
END
1400

FIG. 14

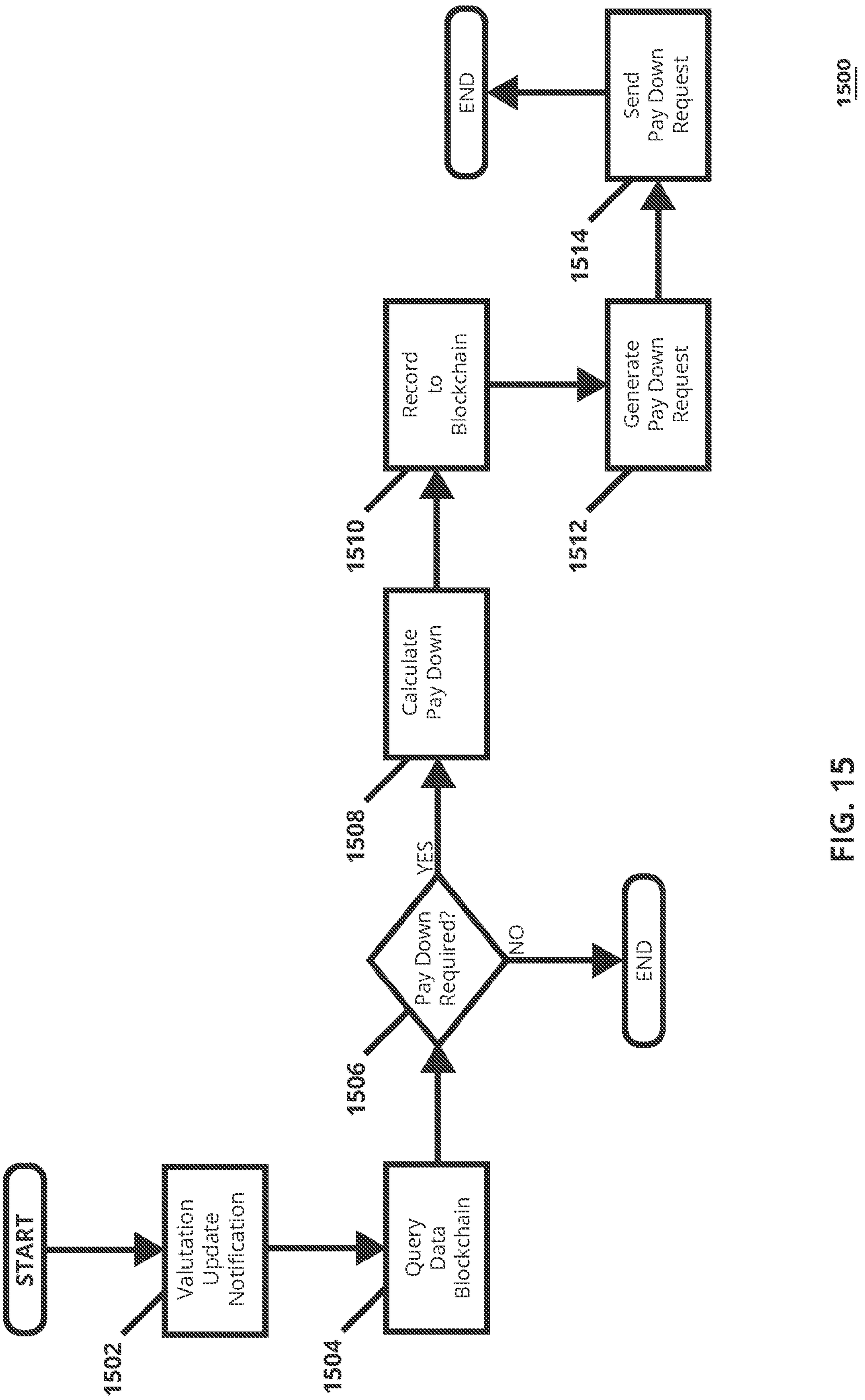

START
Valutation Update Notification
1502
Query Data Blockchain
1504
Pay Down Required?
1506
YES
1508
NO
END
Calculate Pay Down
Record to Blockchain
1510
Generate Pay Down Request
1512
Send Pay Down Request
1514
END
1500

FIG. 15

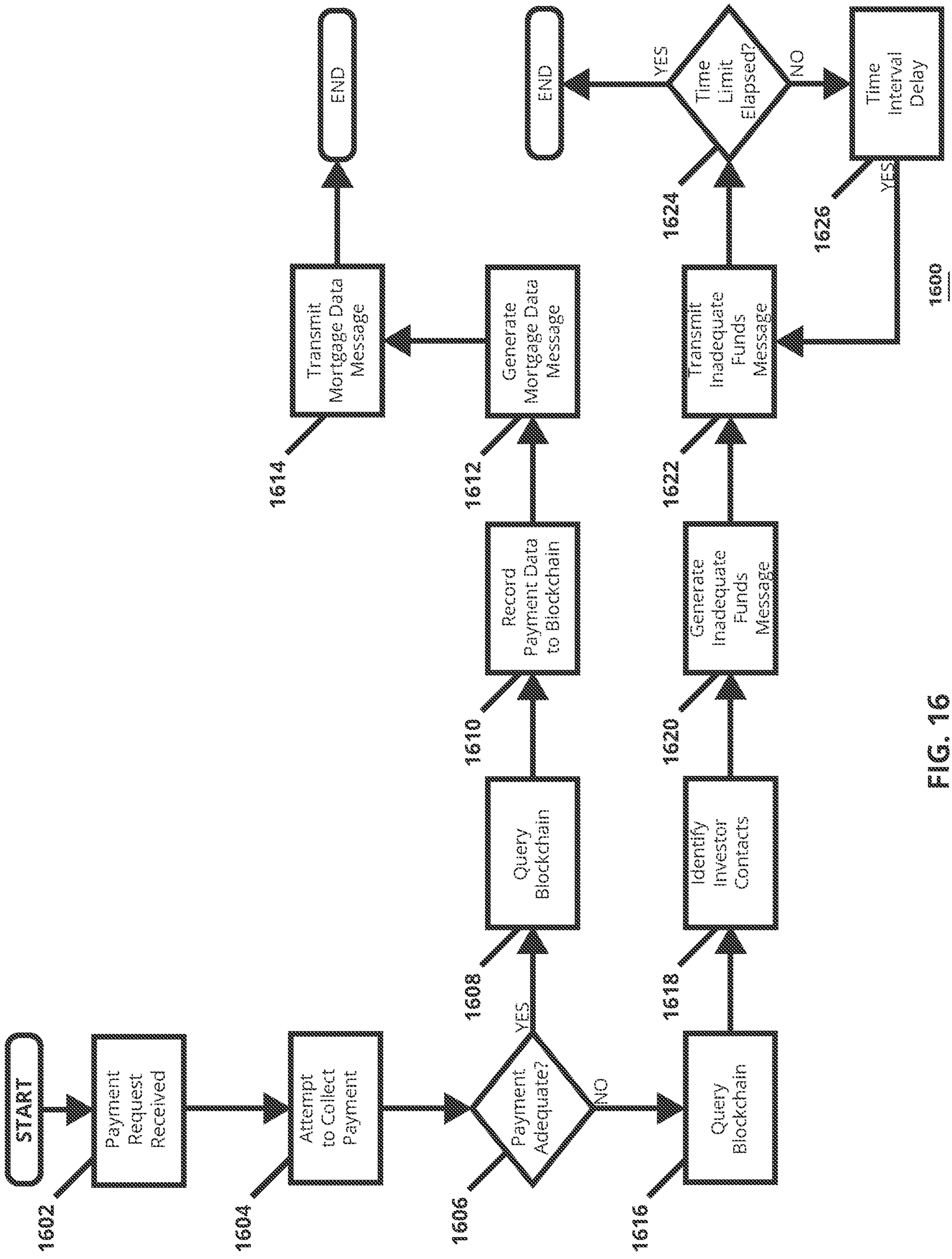

START
Payment Request Received
Attempt to Collect Payment
Payment Adequate?
YES
NO
Query Blockchain
Identify Investor Contacts
Generate Inadequate Funds Message
Transmit Inadequate Funds Message
Time Limit Elapsed?
YES
NO
Time Interval Delay
Query Blockchain
Record Payment Data to Blockchain
Generate Mortgage Data Message
Transmit Mortgage Data Message
END
END
1602
1604
1606
1608
1610
1612
1614
1616
1618
1620
1622
1624
1626
1628
1600

FIG. 16

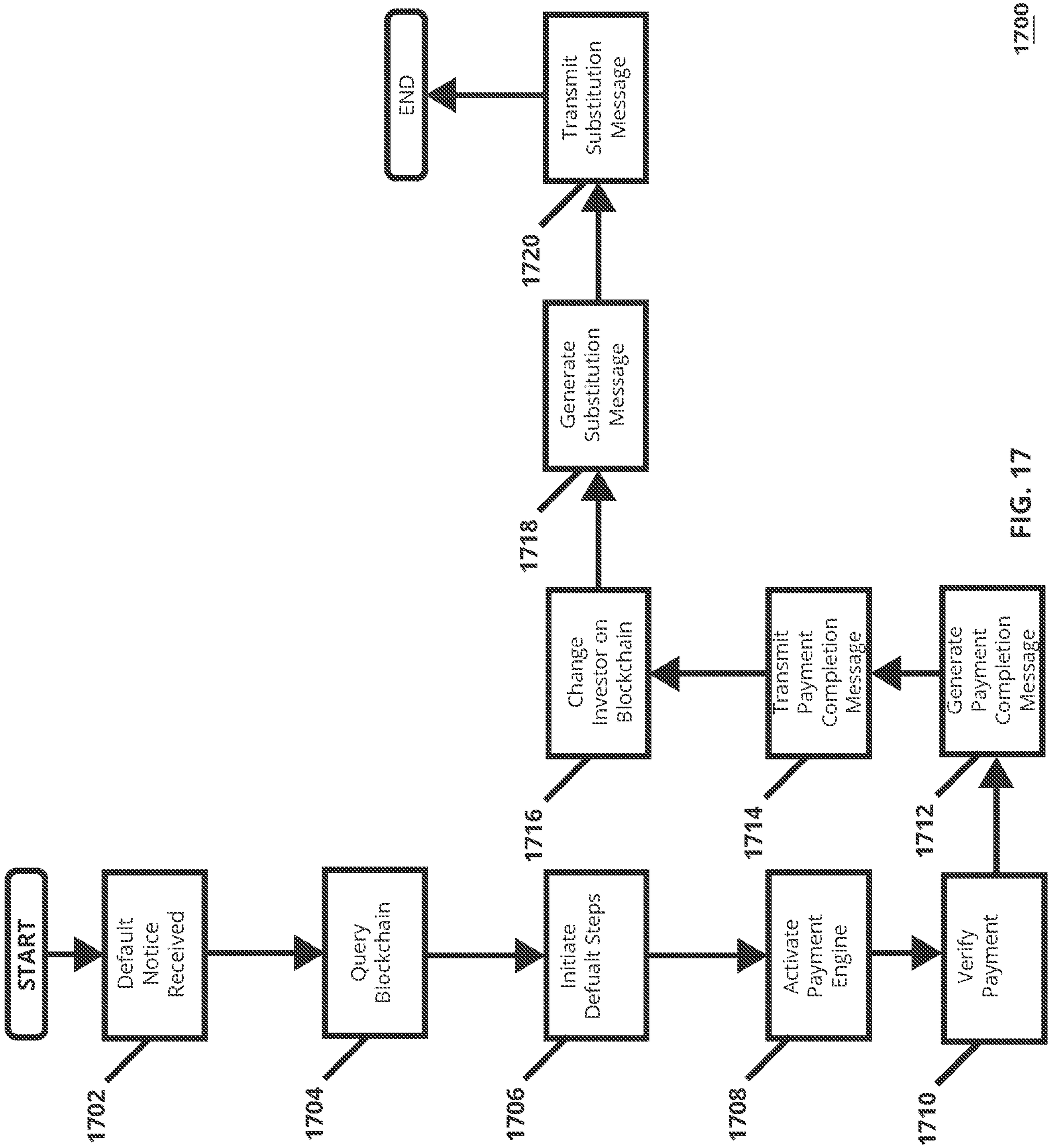

1700
START
Default Notice Received
Query Blockchain
Initiate Defualt Steps
Activate Payment Engine
Verify Payment
Generate Payment Completion Message
Transmit Payment Completion Message
Change Investor on Blockchain
Generate Substitution Message
Transmit Substitution Message
END
1702
1704
1706
1708
1710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

FIG. 17

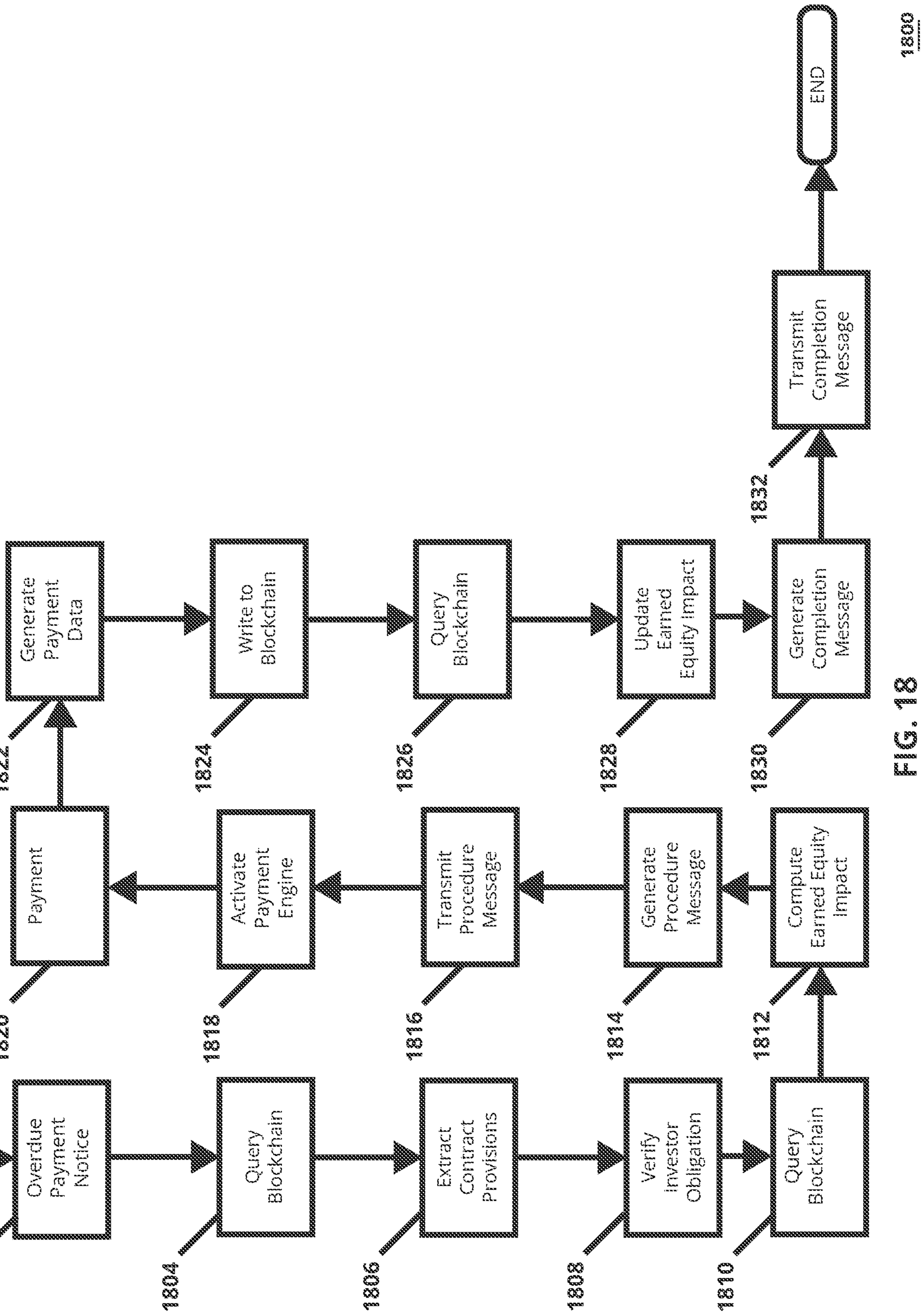

START
Overdue Payment Notice
Query Blockchain
Extract Contract Provisions
Verify Investor Obligation
Query Blockchain
Compute Earned Equity Impact
Generate Procedure Message
Transmit Procedure Message
Activate Payment Engine
Payment
Generate Payment Data
Write to Blockchain
Query Blockchain
Update Earned 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

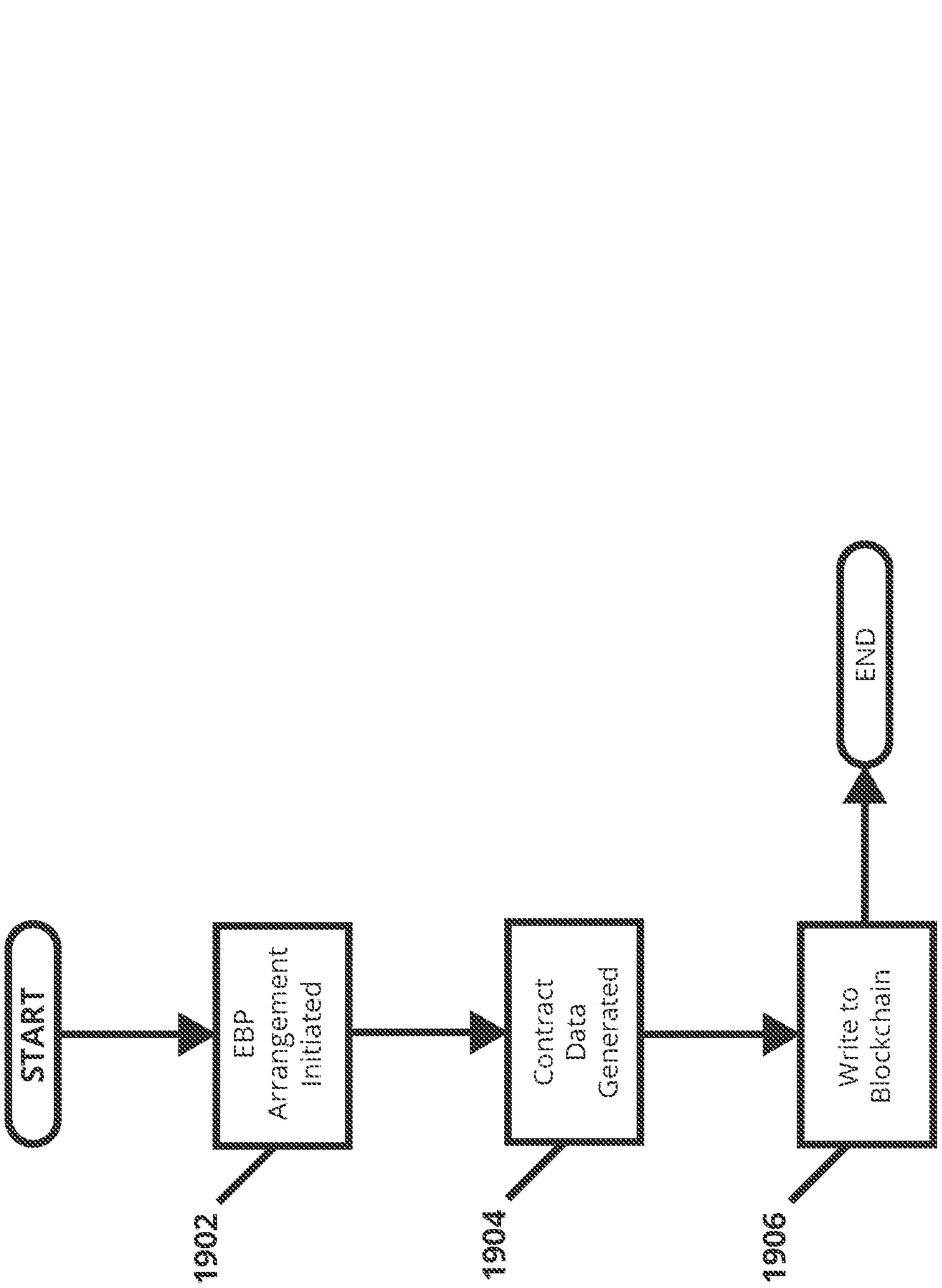

START
EBP Arrangement Initiated
Contract Data Generated
Write to Blockchain
END
1902
1904
1906
1900

FIG. 19

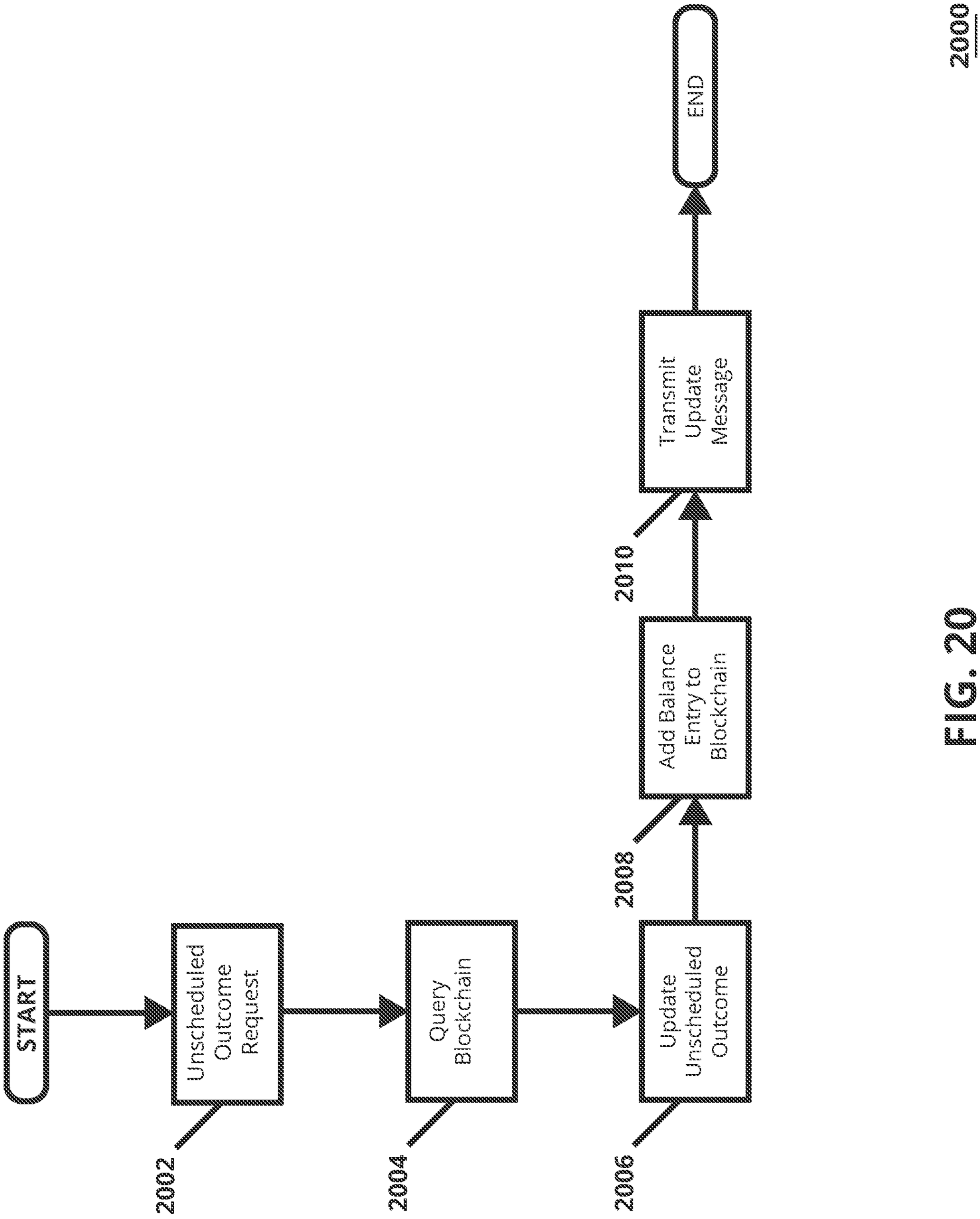

START
Unscheduled Outcome Request
2002
Query Blockchain
2004
Update Unscheduled Outcome
2006
2008
Add Balance Entry to Blockchain
2010
Transmit Update Message
END
2000

FIG. 20

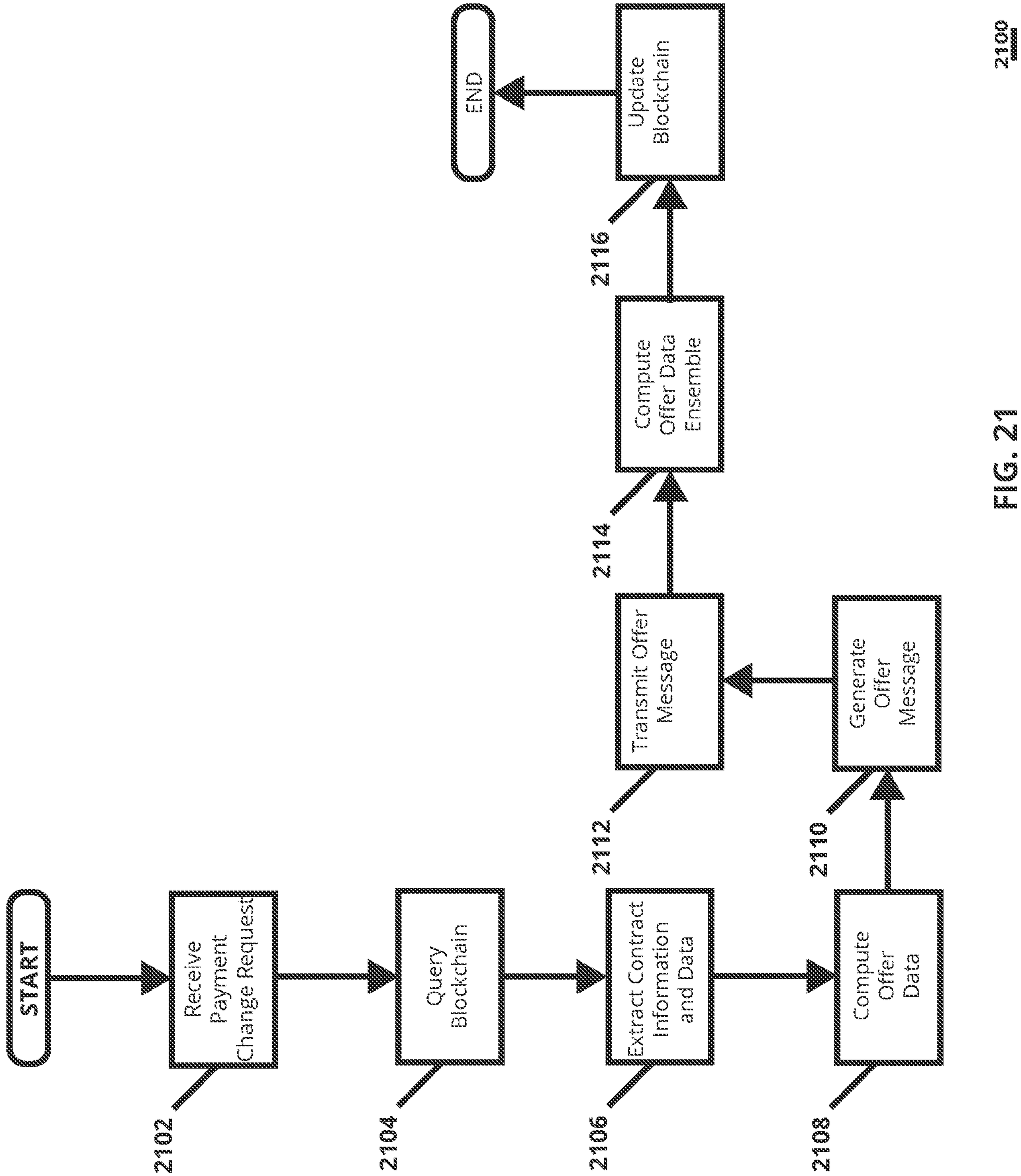

START
Receive Payment Change Request
2102
Query Blockchain
2104
Extract Contract Information and Data
2106
Compute Offer Data
2108
Generate Offer Message
2110
Transmit Offer Message
2112
Compute Offer Data Ensemble
2114
Update Blockchain
2116
END
2100

FIG. 21

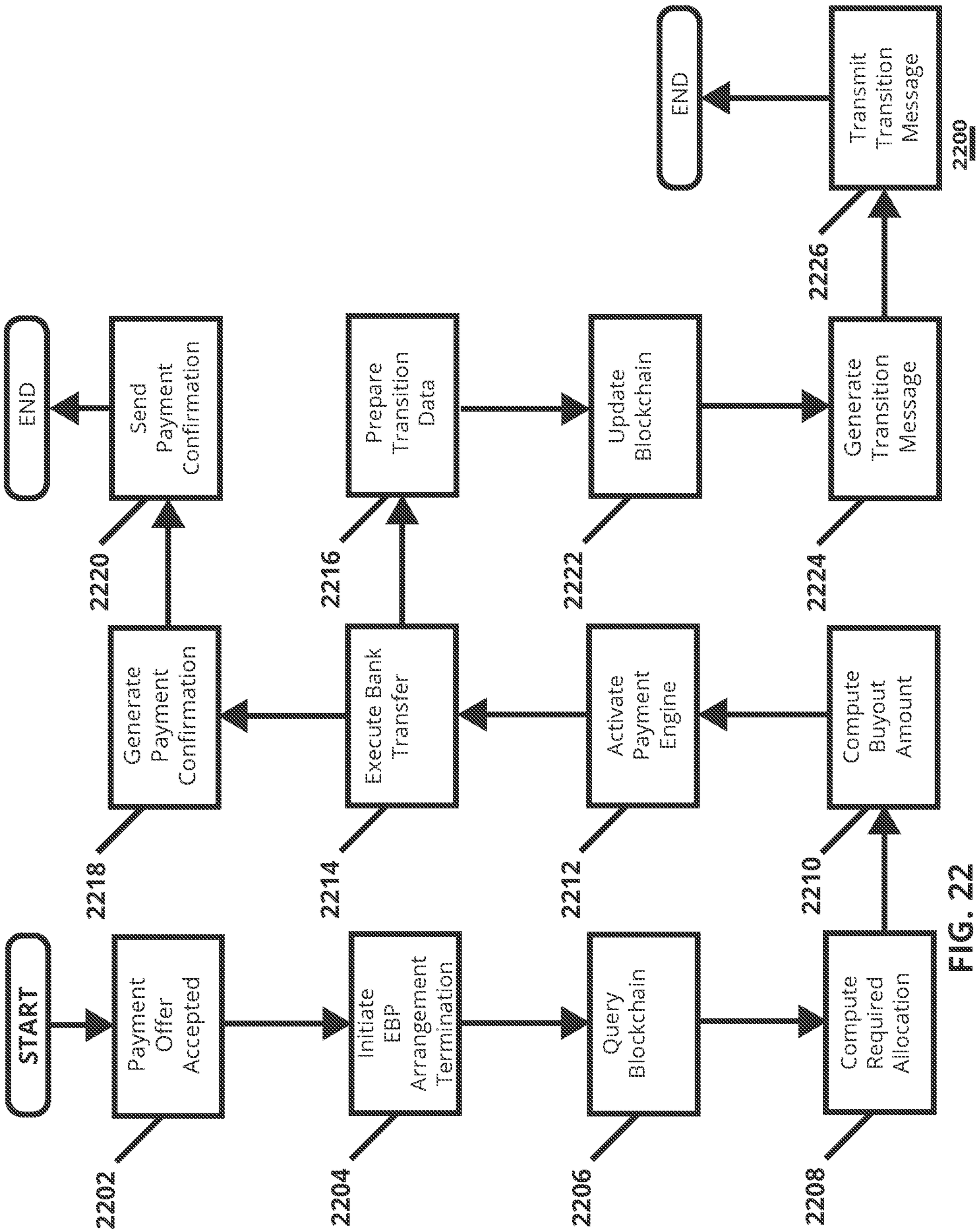

START
Payment Offer Accepted
2202
Initiate EBP Arrangement Termination
2204
Query Blockchain
2206
Compute Required Allocation
2208
Compute Buyout Amount
2210
Activate Payment Engine
2212
Execute Bank Transfer
2214
Generate Payment Confirmation
2218
Send Payment Confirmation
2220
END
Prepare Transition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

FIG. 22

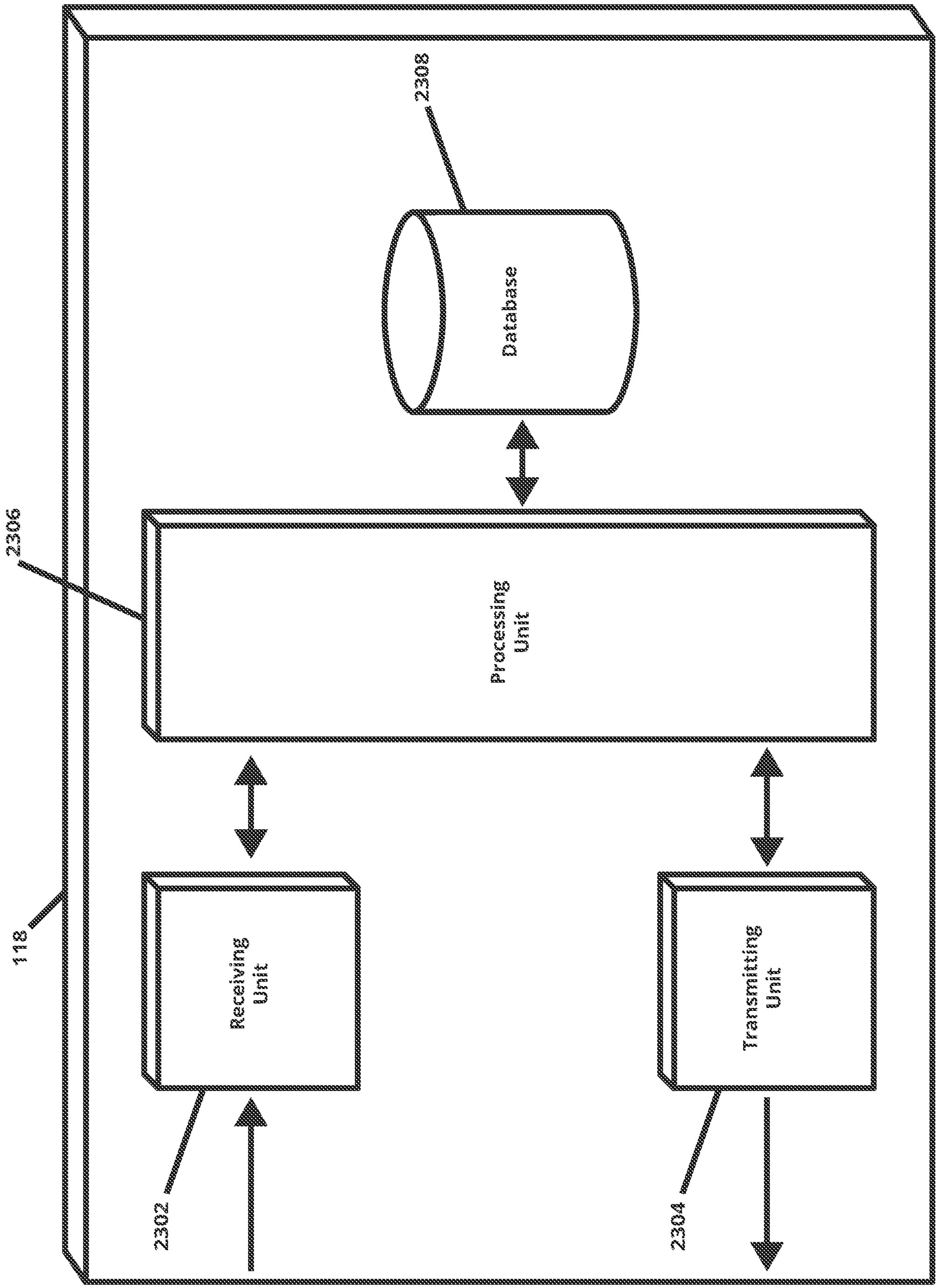

2308
Database
2306
Processing Unit
118
Receiving Unit
Transmitting Unit
2302
2304

FIG. 23

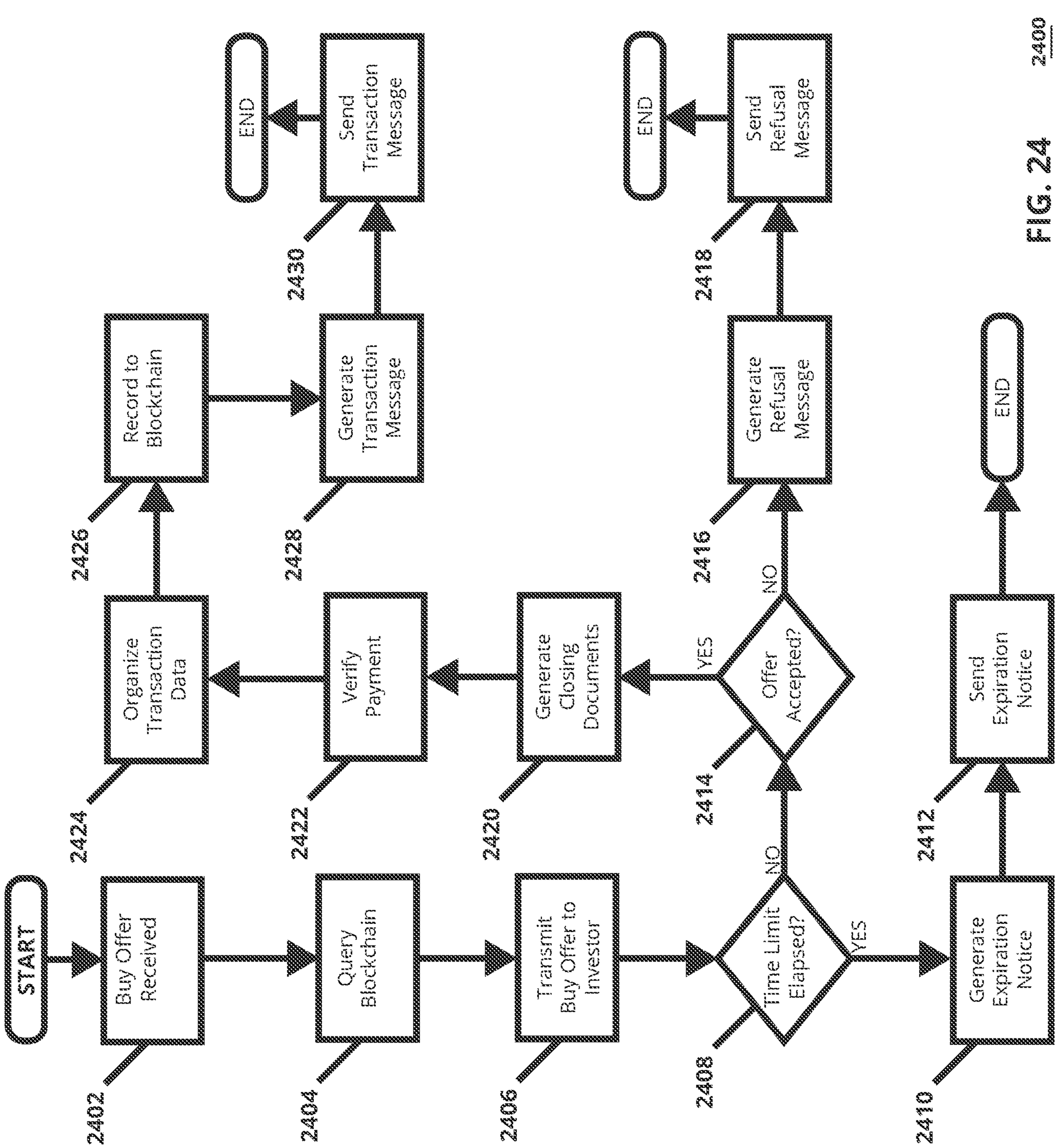

START
Buy Offer Received
2402
Query Blockchain
2404
Transmit Buy Offer to Investor
2406
Time Limit Elapsed?
2408
NO
YES
Generate Expiration Notice
2410
Send Expiration Notice
2412
Offer Accepted?
2414
NO
YES
Generate Refusal Message
2416
Send Refusal Message
2418
END
Generate Closing Documents
2420
Verify Payment
2422
Organize Transaction Data
2424
Record to Blockchain
2426
Generate Transaction Message
2428
Send Transaction Message
2430
END
2400

FIG. 24

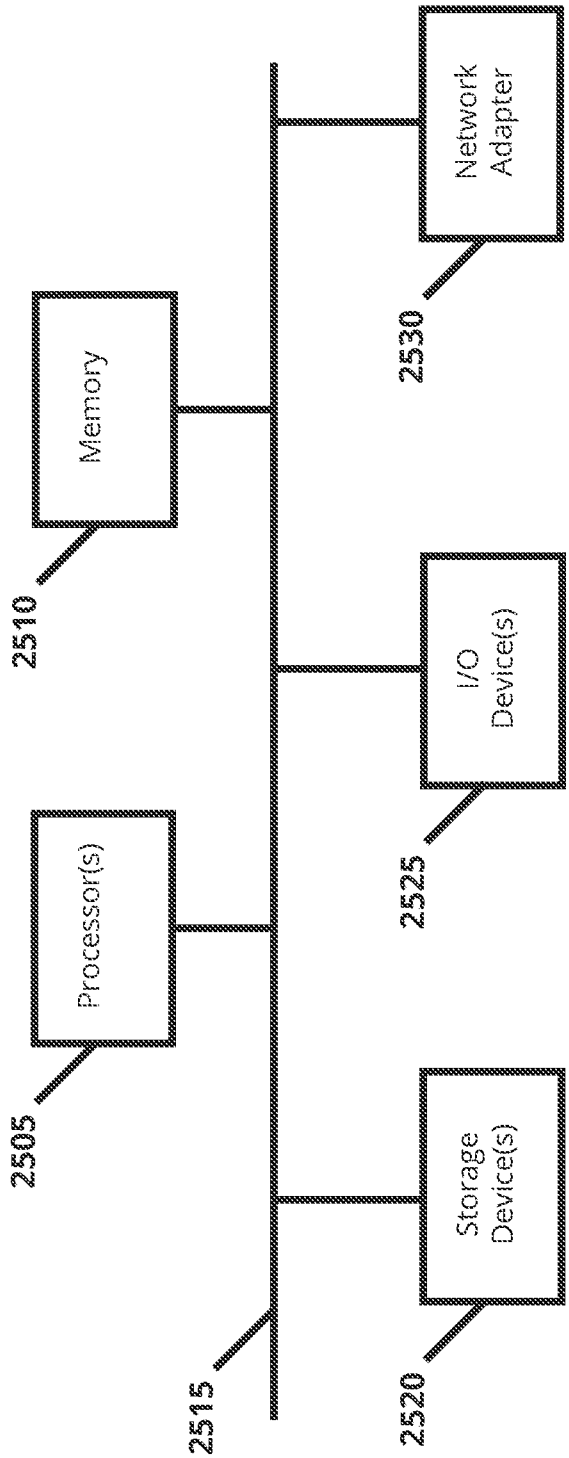

2500
Network Adapter
2530
Memory
2510
I/O Device(s)
2525
Processor(s)
2505
Storage Device(s)
2520
2515

Fig. 25