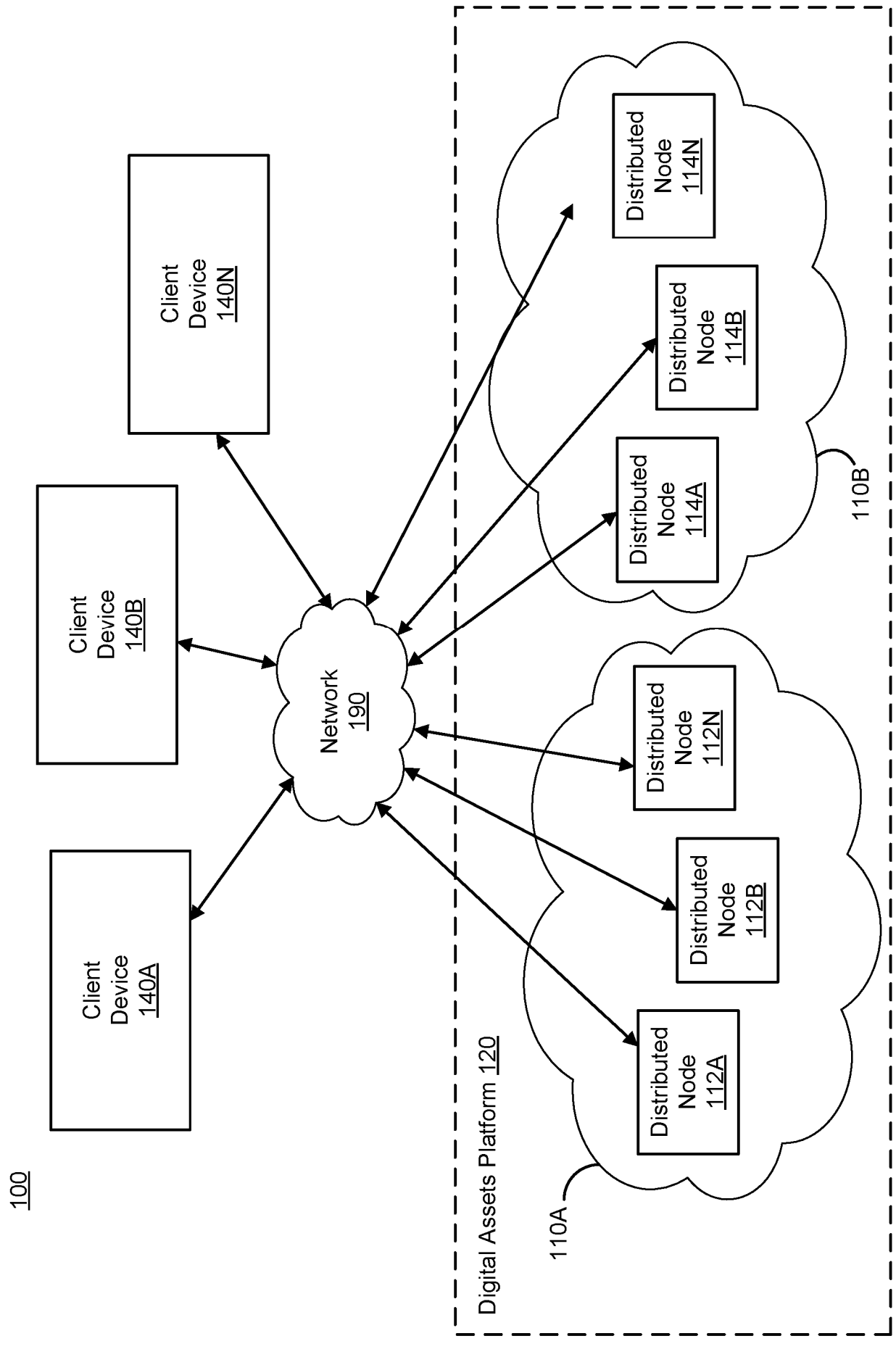
100
Client Device 140A
Client Device 140B
Client Device 140N
Network 190
Digital Assets Platform 120
110A
Distributed Node 112A
Distributed Node 112B
Distributed Node 112N
110B
Distributed Node 114A
Distributed Node 114B
Distributed Node 114N

FIG. 1

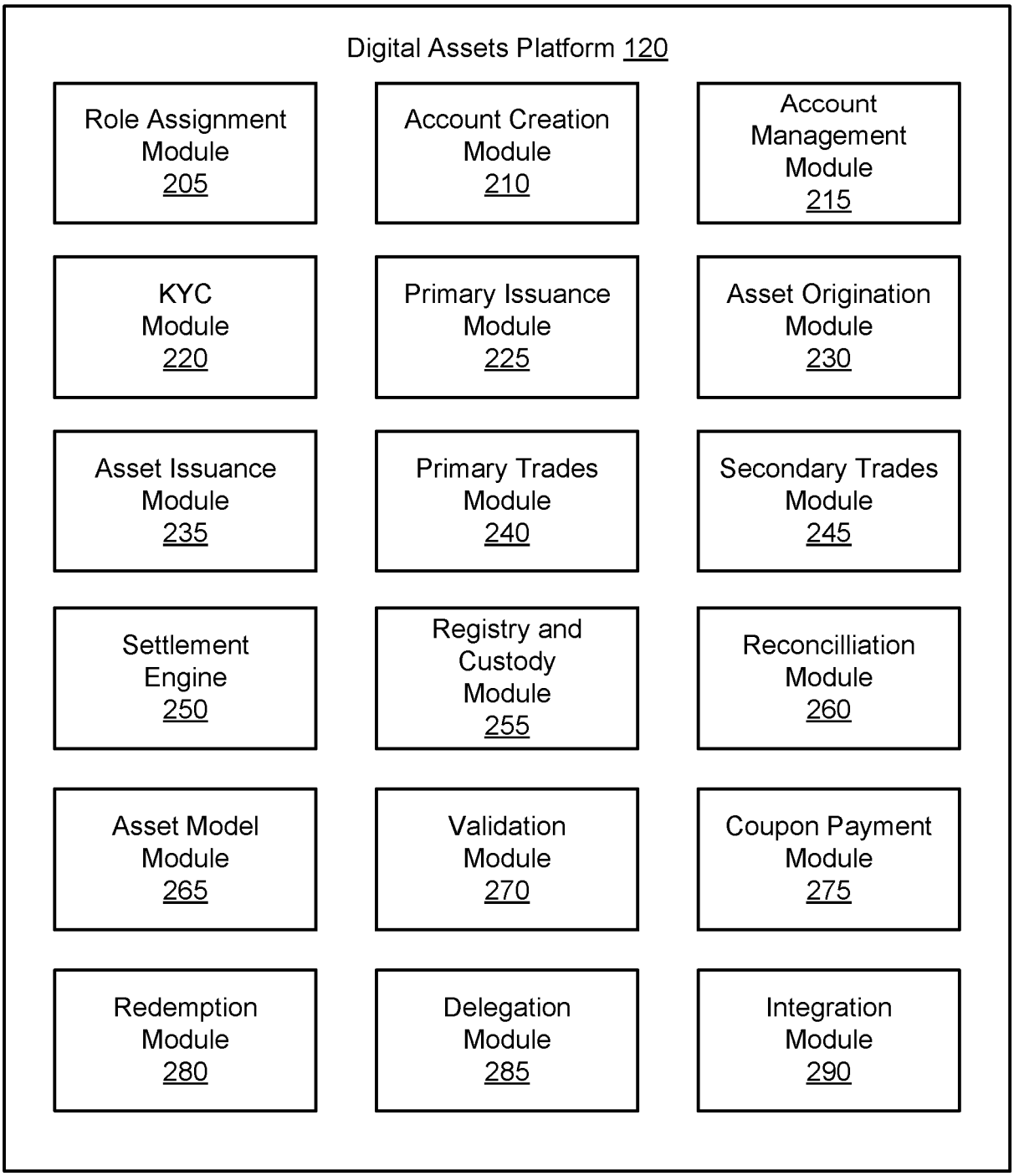
Digital Assets Platform 120
Role Assignment Module 205
Account Creation Module 210
Account Management Module 215
KYC Module 220
Primary Issuance Module 225
Asset Origination Module 230
Asset Issuance Module 235
Primary Trades Module 240
Secondary Trades Module 245
Settlement Engine 250
Registry and Custody Module 255
Reconcilliation Module 260
Asset Model Module 265
Validation Module 270
Coupon Payment Module 275
Redemption Module 280
Delegation Module 285
Integration Module 290

FIG. 2

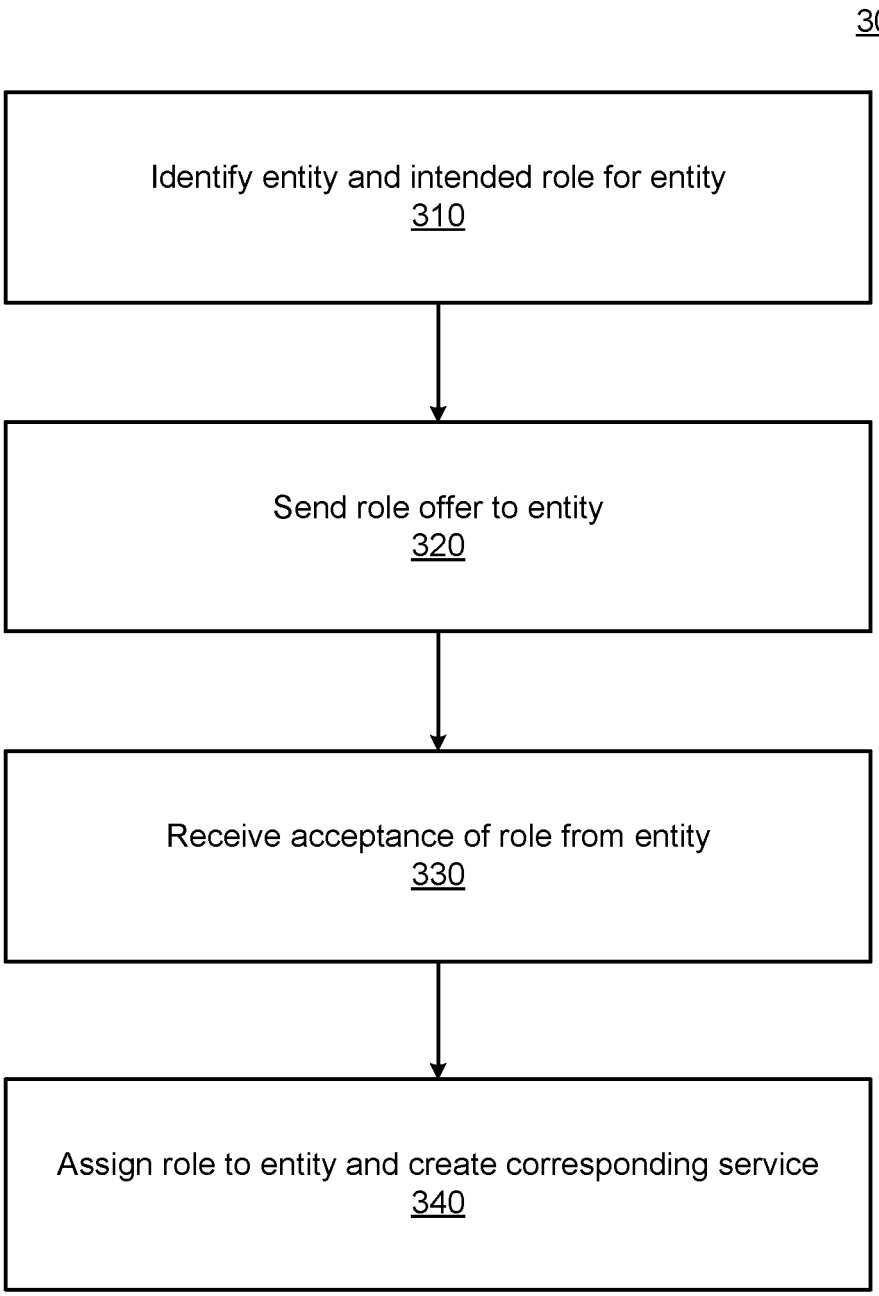
300
Identify entity and intended role for entity
310
Send role offer to entity
320
Receive acceptance of role from entity
330
Assign role to entity and create corresponding service
340

FIG. 3

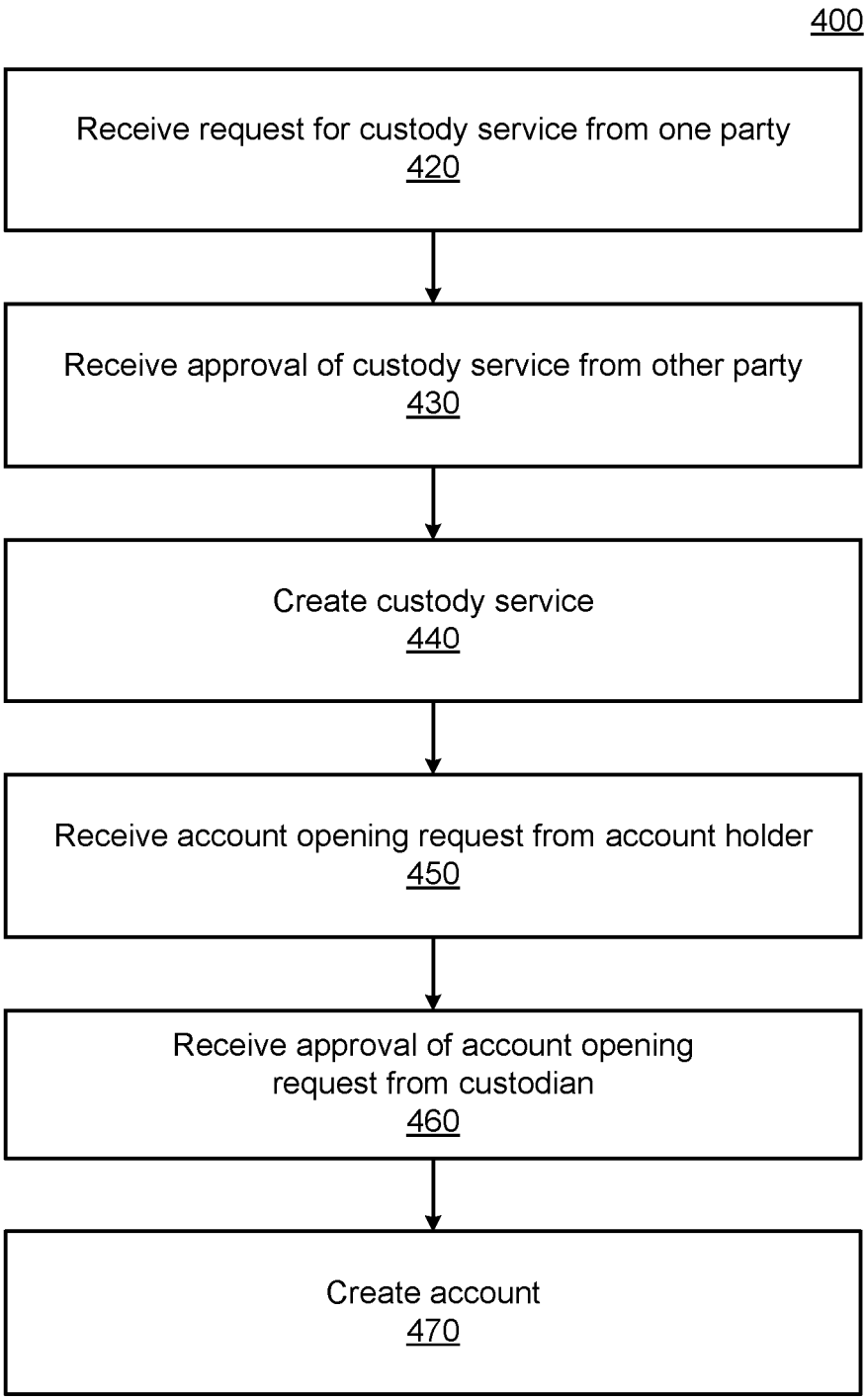
400
Receive request for custody service from one party
420
Receive approval of custody service from other party
430
Create custody service
440
Receive account opening request from account holder
450
Receive approval of account opening request from custodian
460
Create account
470

FIG. 4

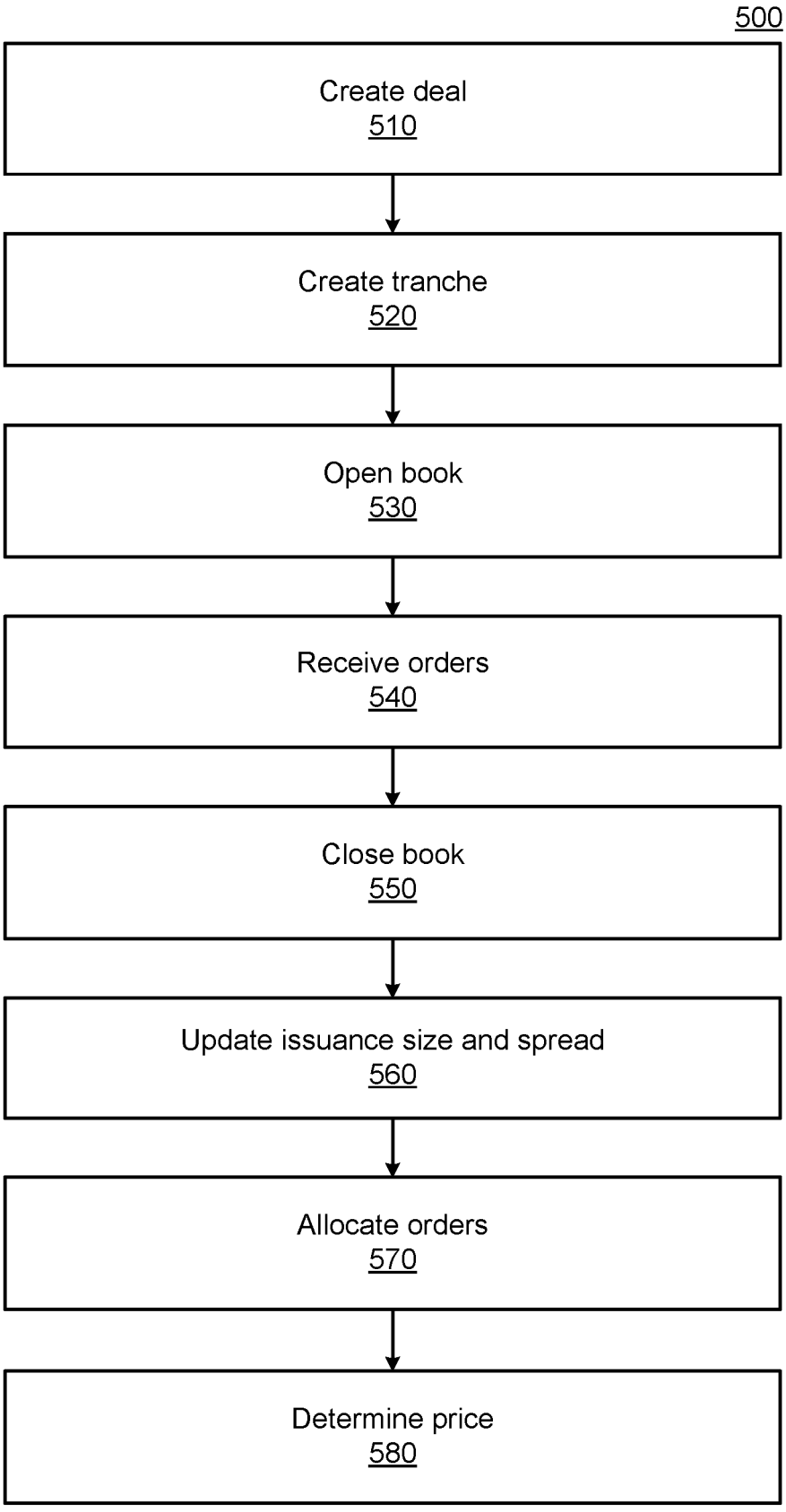
500
Create deal
510
Create tranche
520
Open book
530
Receive orders
540
Close book
550
Update issuance size and spread
560
Allocate orders
570
Determine price
580

FIG. 5

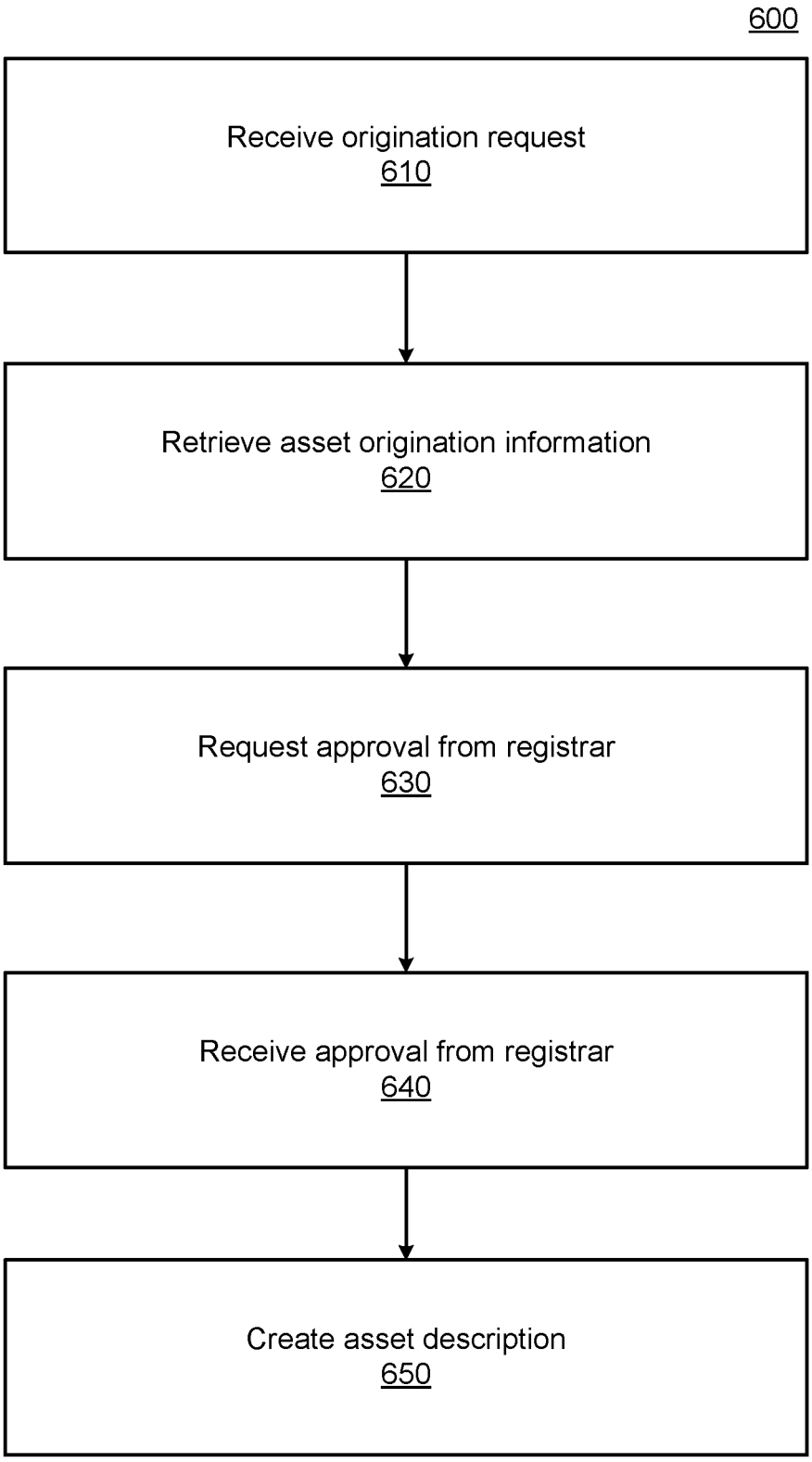
600
Receive origination request
610
Retrieve asset origination information
620
Request approval from registrar
630
Receive approval from registrar
640
Create asset description
650

FIG. 6

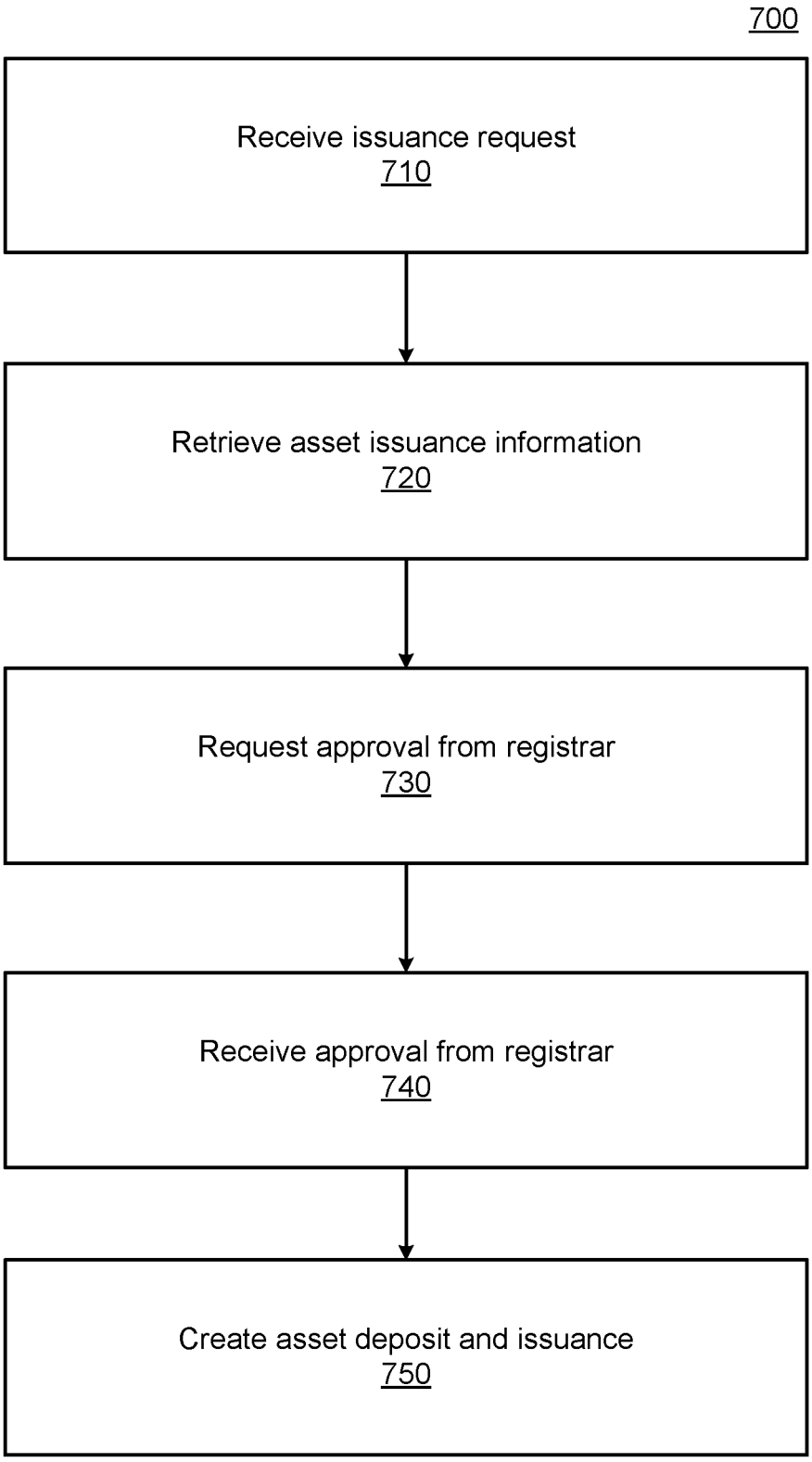
700
Receive issuance request
710
Retrieve asset issuance information
720
Request approval from registrar
730
Receive approval from registrar
740
Create asset deposit and issuance
750

FIG. 7

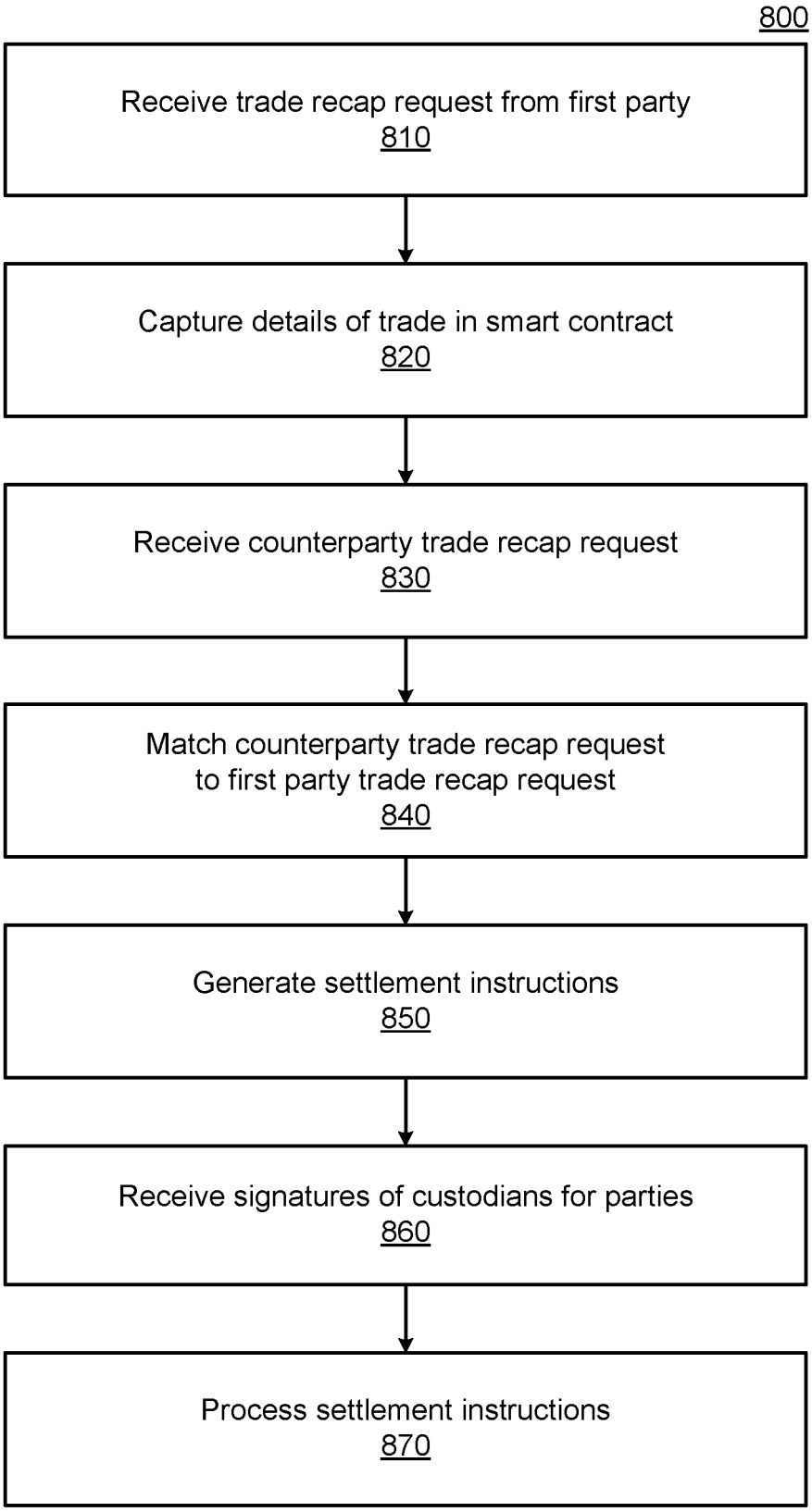
800
Receive trade recap request from first party
810
Capture details of trade in smart contract
820
Receive counterparty trade recap request
830
Match counterparty trade recap request
to first party trade recap request
840
Generate settlement instructions
850
Receive signatures of custodians for parties
860
Process settlement instructions
870

FIG. 8

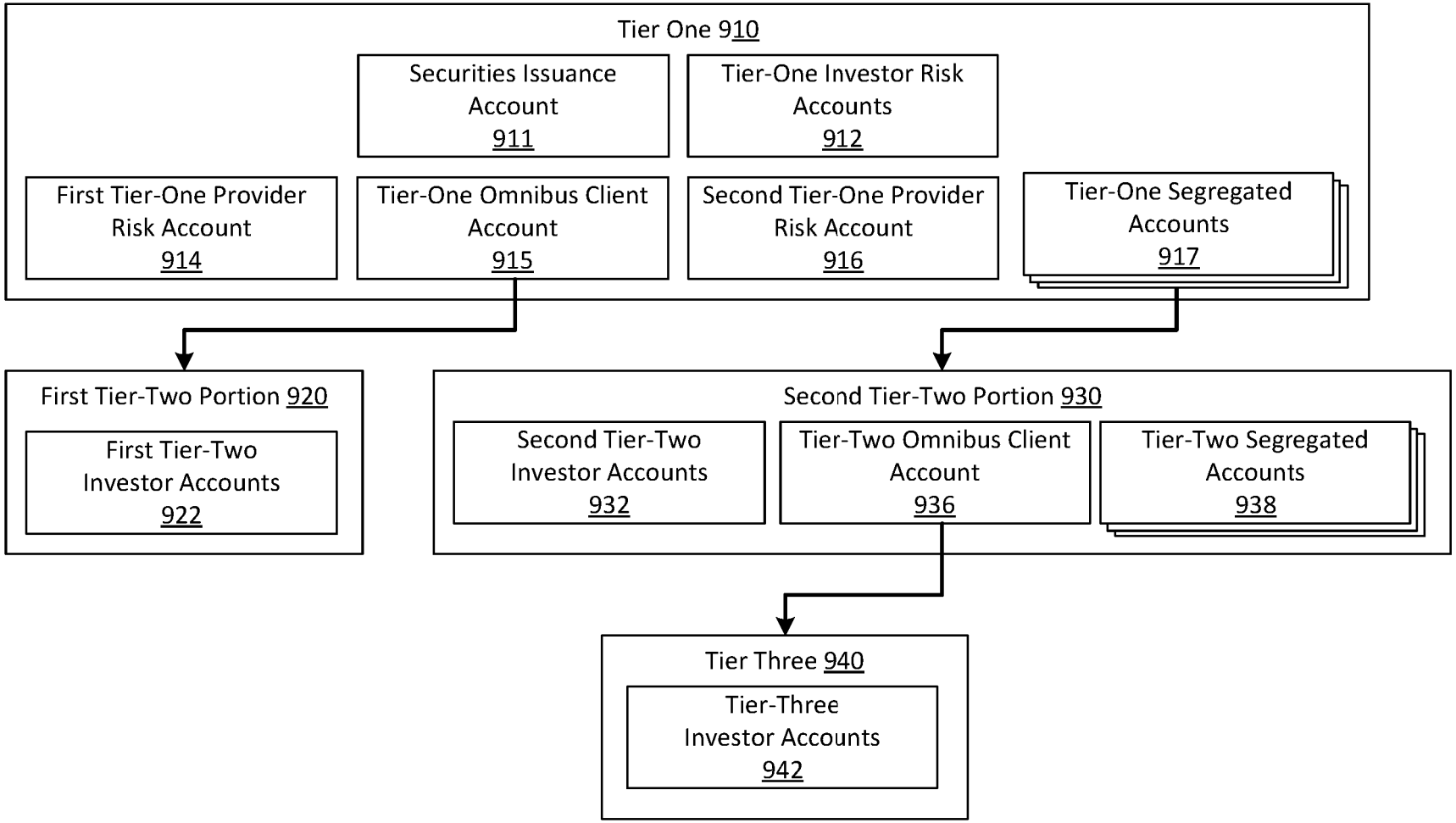
Tier One 910
Securities Issuance Account 911
Tier-One Investor Risk Accounts 912
First Tier-One Provider Risk Account 914
Tier-One Omnibus Client Account 915
Second Tier-One Provider Risk Account 916
Tier-One Segregated Accounts 917
First Tier-Two Portion 920
First Tier-Two Investor Accounts 922
Second Tier-Two Portion 930
Second Tier-Two Investor Accounts 932
Tier-Two Omnibus Client Account 936
Tier-Two Segregated Accounts 938
Tier Three 940
Tier-Three Investor Accounts 942

FIG. 9

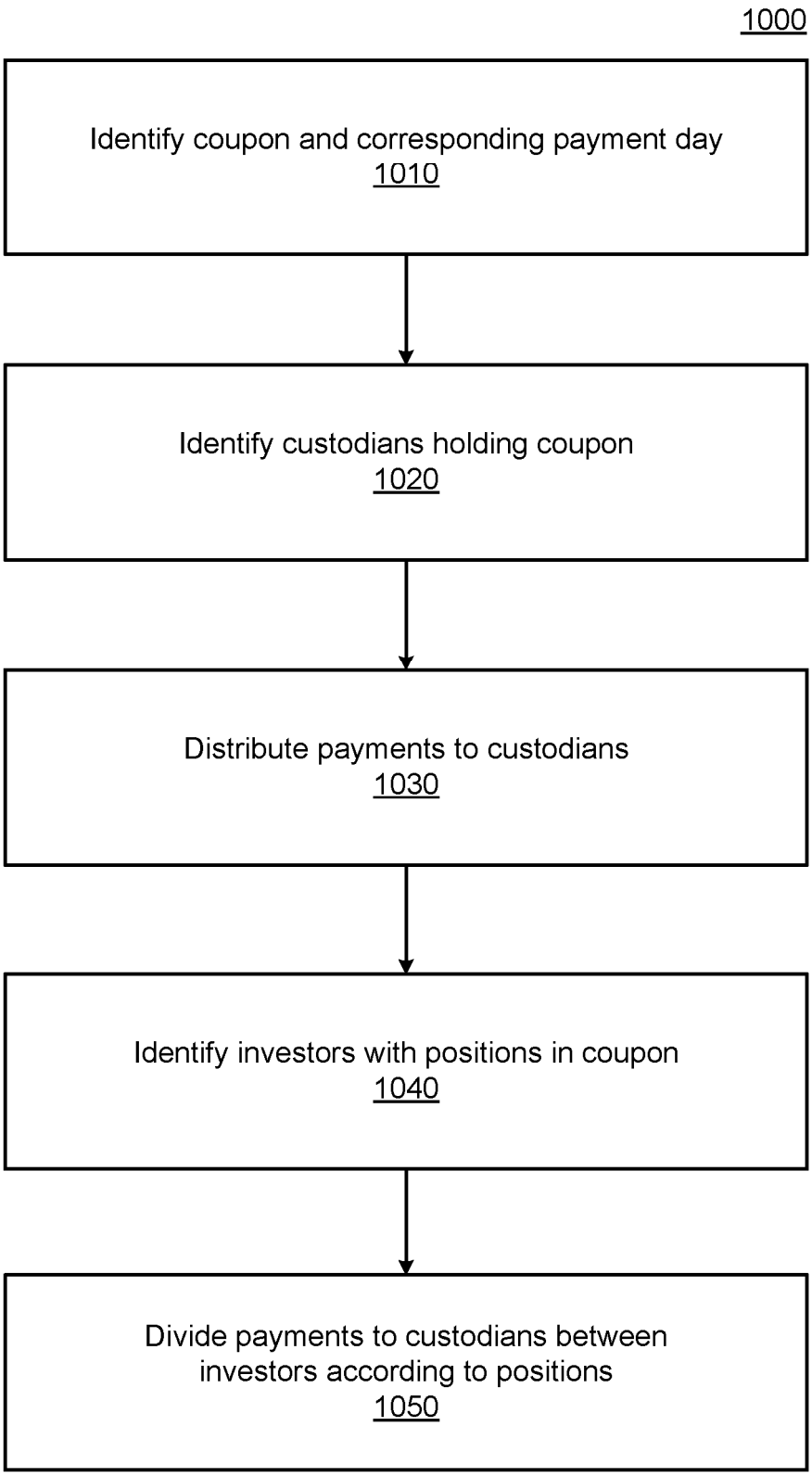
1000
Identify coupon and corresponding payment day
1010
Identify custodians holding coupon
1020
Distribute payments to custodians
1030
Identify investors with positions in coupon
1040
Divide payments to custodians between investors according to positions
1050

FIG. 10

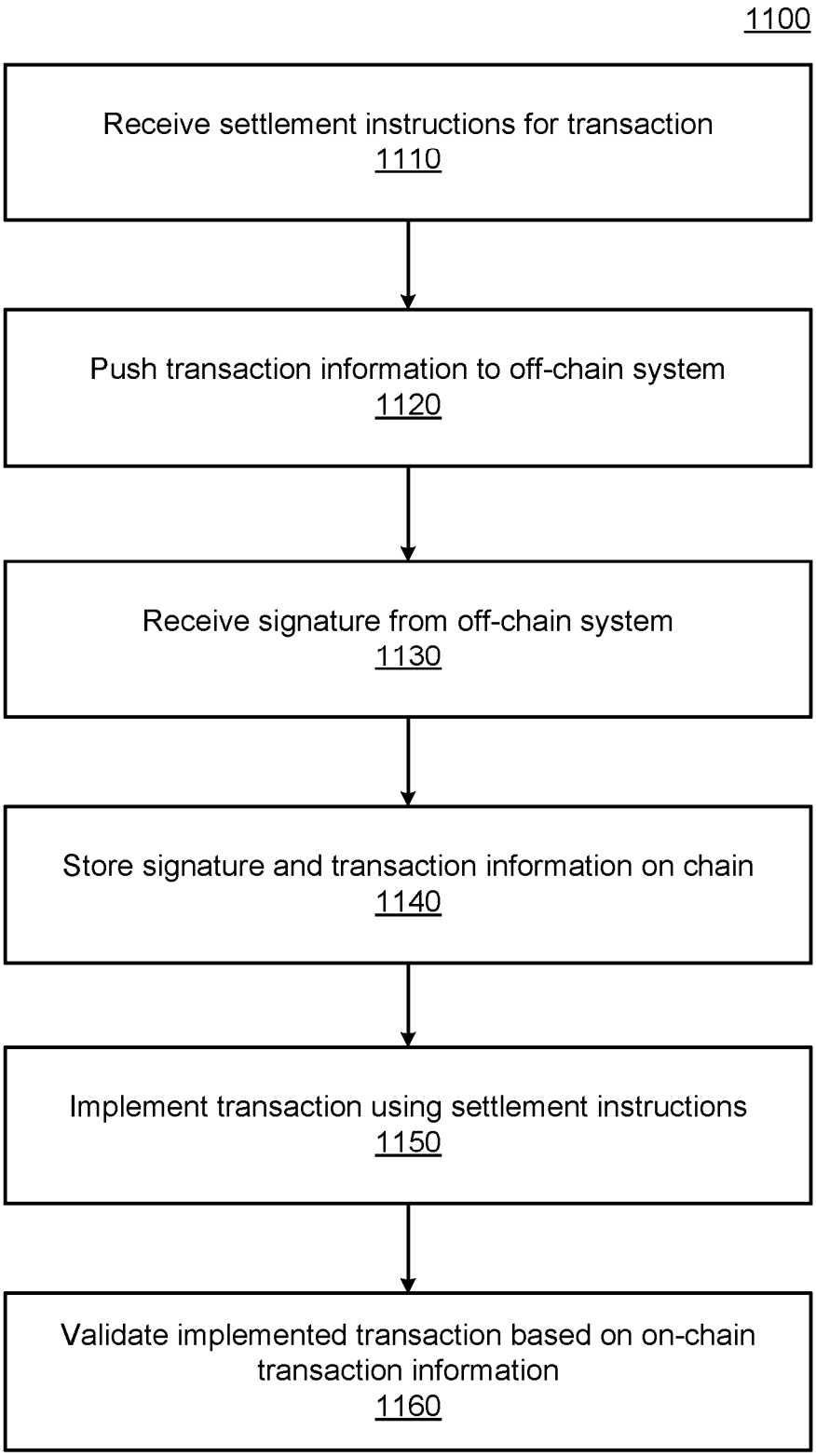
1100
Receive settlement instructions for transaction
1110
Push transaction information to off-chain system
1120
Receive signature from off-chain system
1130
Store signature and transaction information on chain
1140
Implement transaction using settlement instructions
1150
Validate implemented transaction based on on-chain transaction information
1160

FIG. 11

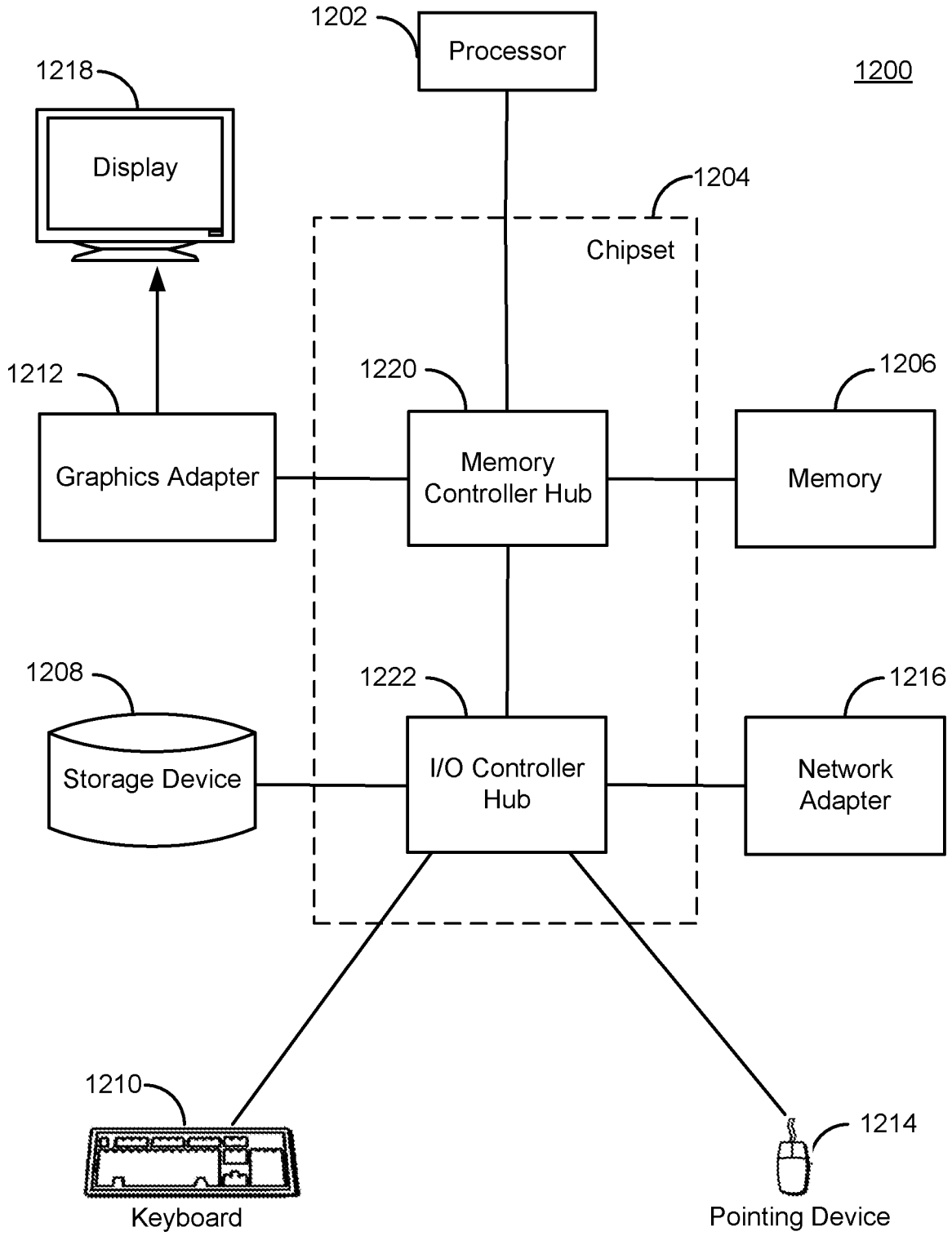
1202
Processor
1200
1218
Display
1204
Chipset
1212
1220
1206
Graphics Adapter
Memory Controller Hub
Memory
1208
1222
1216
Storage Device
I/O Controller Hub
Network Adapter
1210
1214
Keyboard
Pointing Device

FIG. 12