

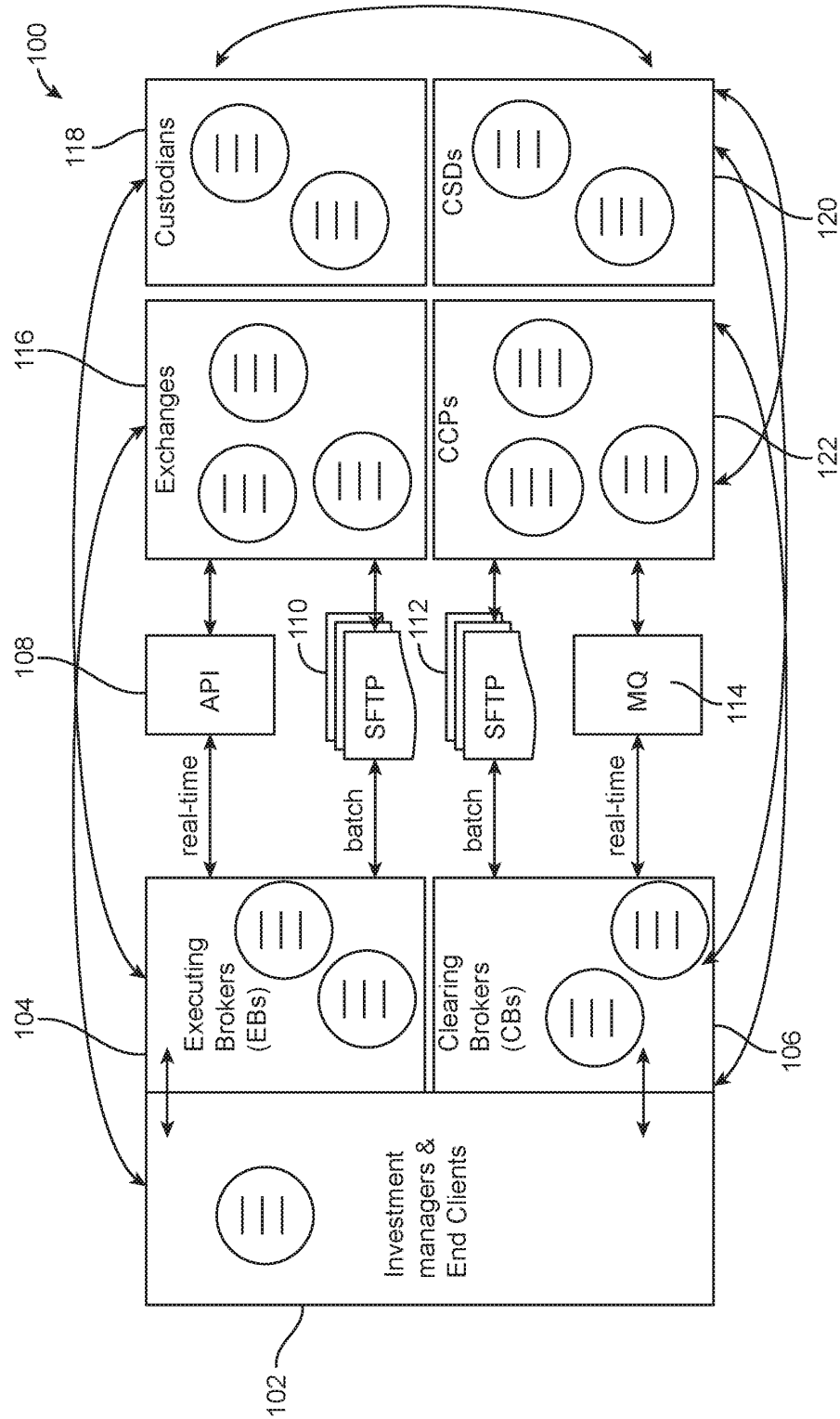


FIG. 1A
(PRIOR ART)

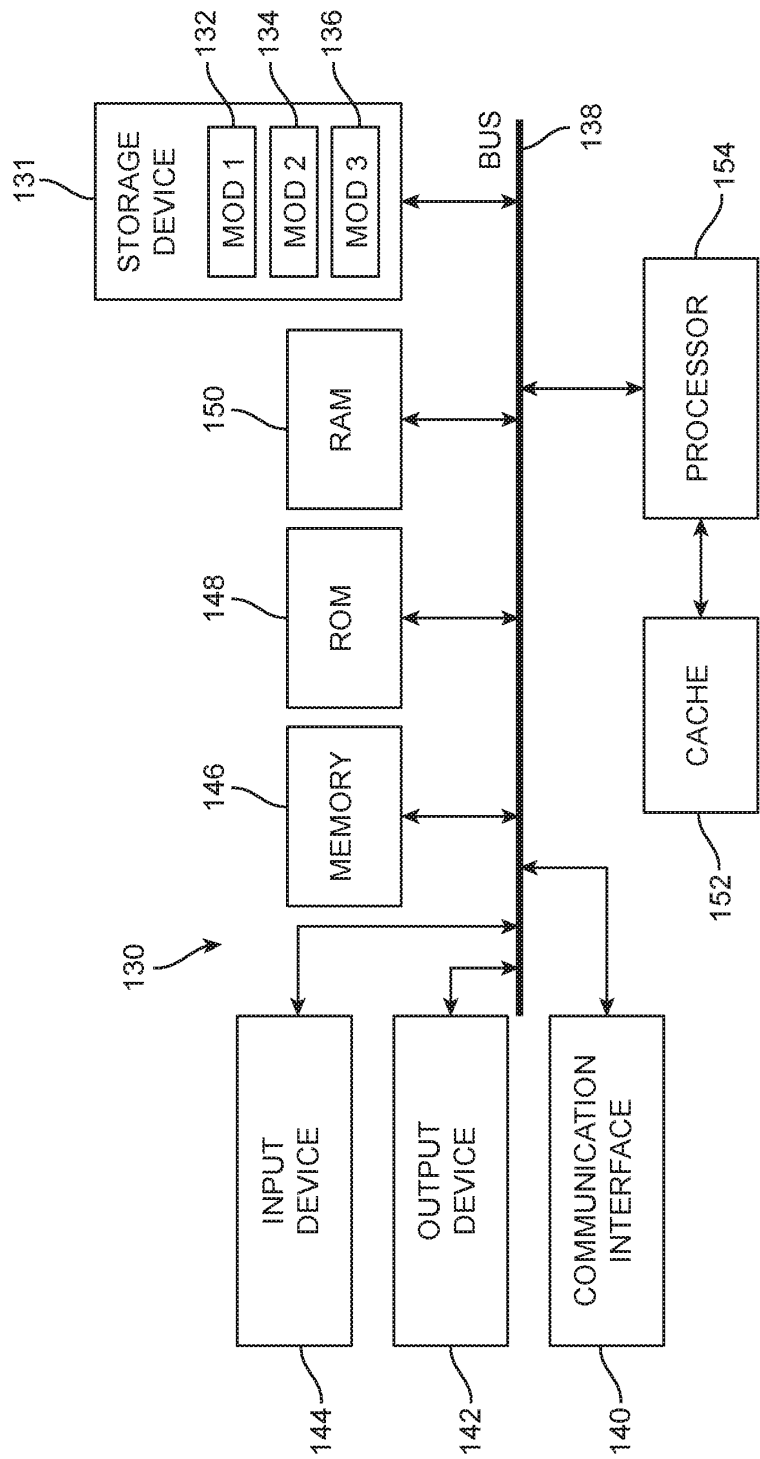


FIG. 1B

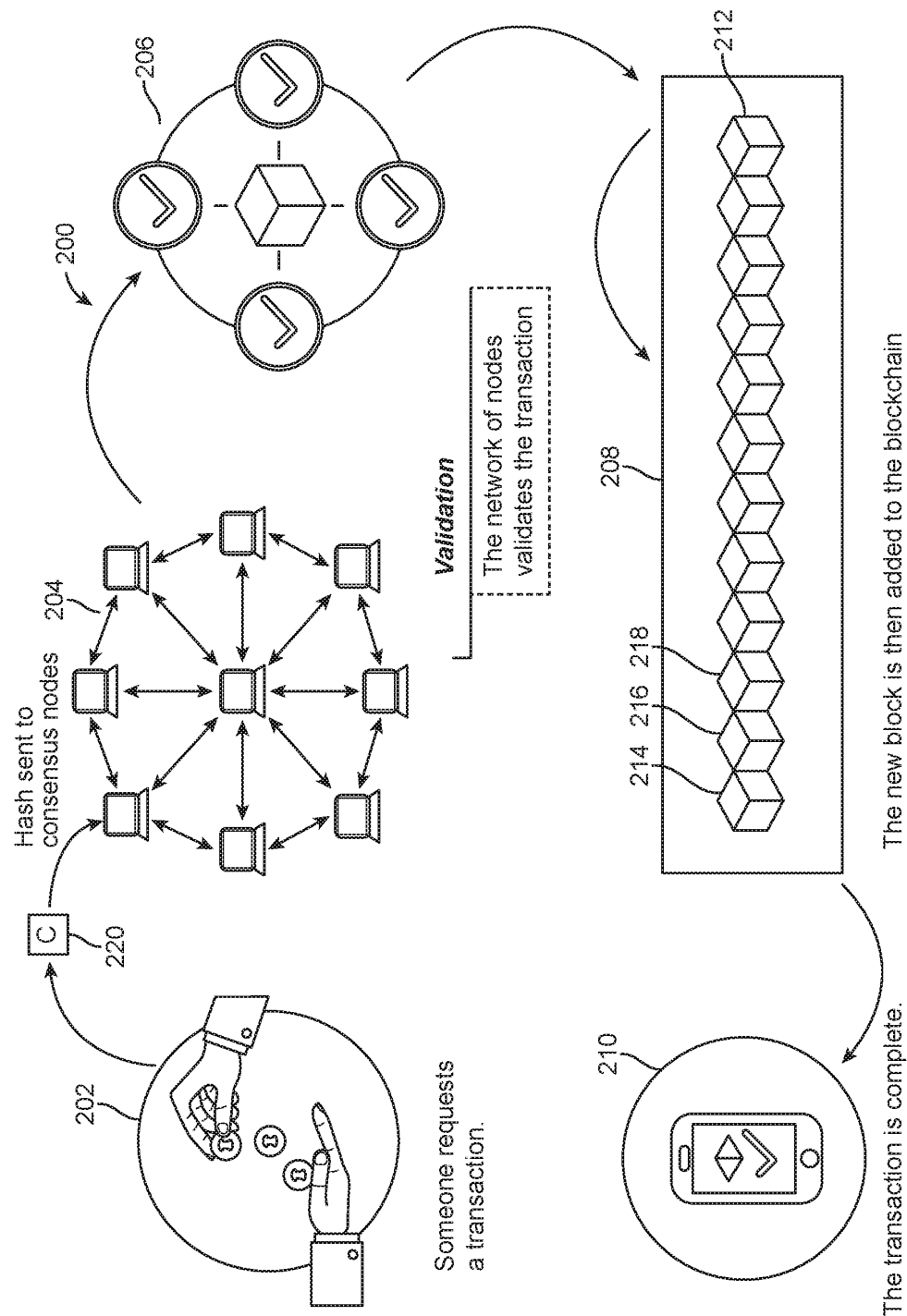


FIG. 2

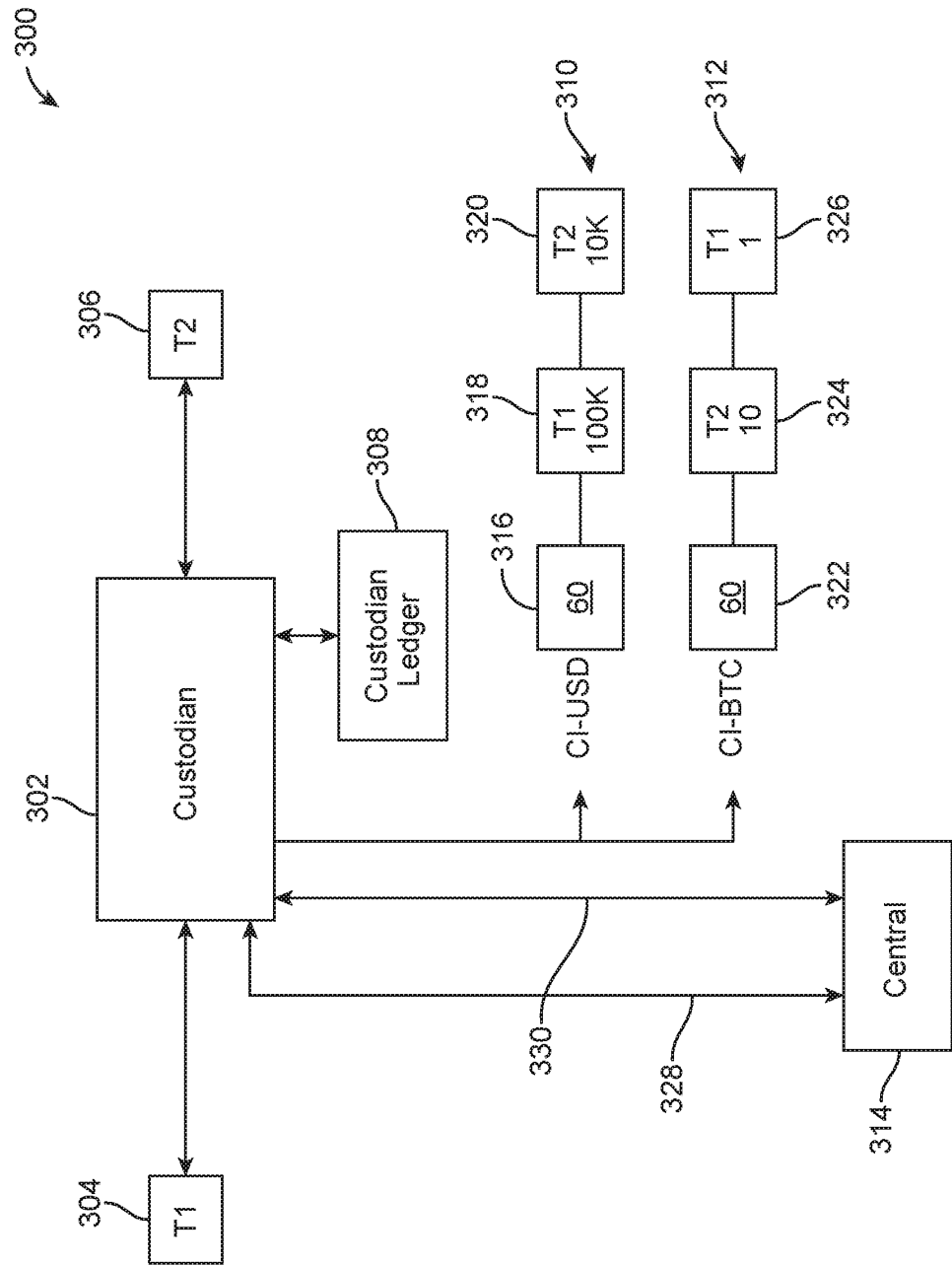


FIG. 3A

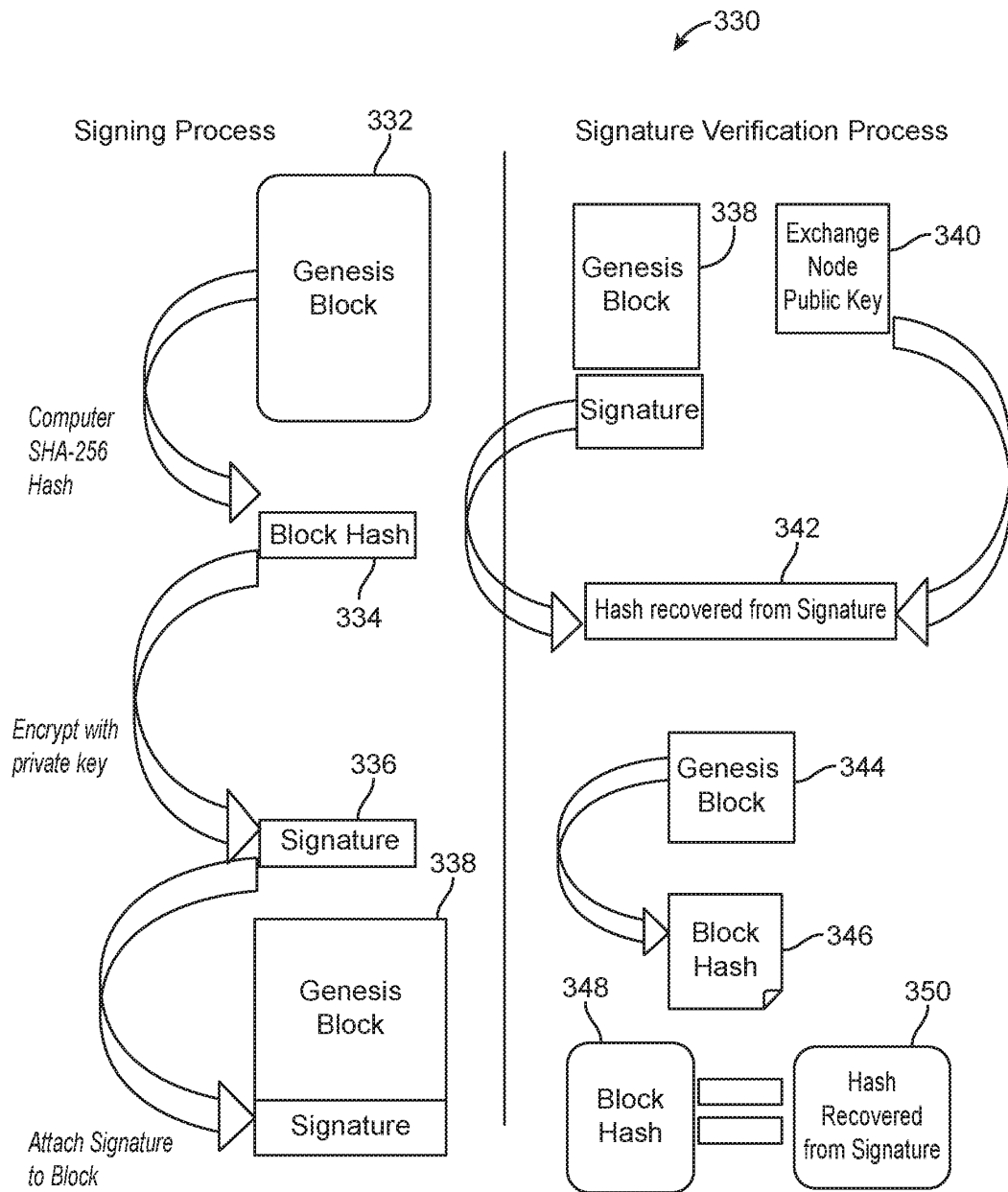


FIG. 3B

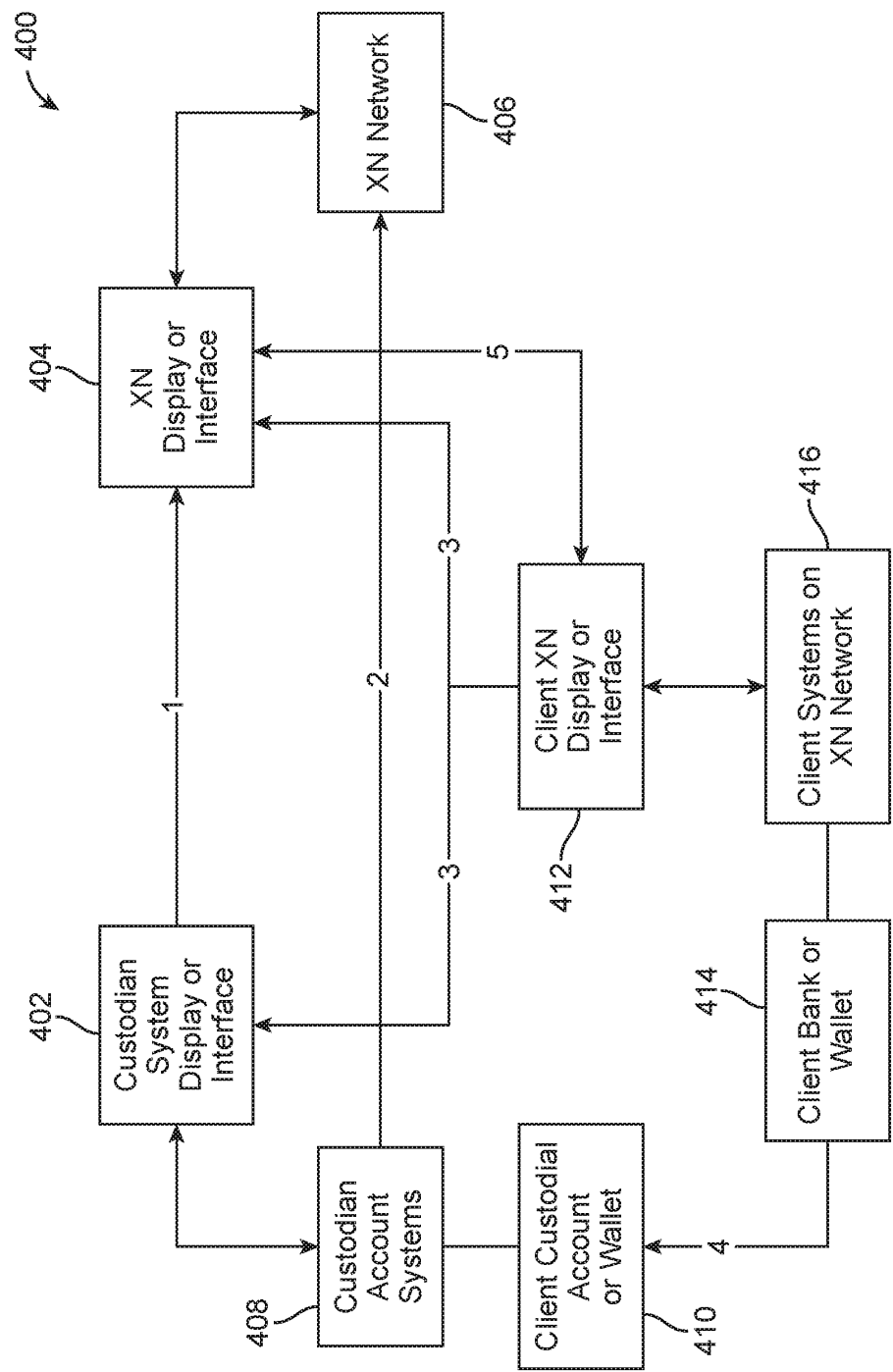


FIG. 4

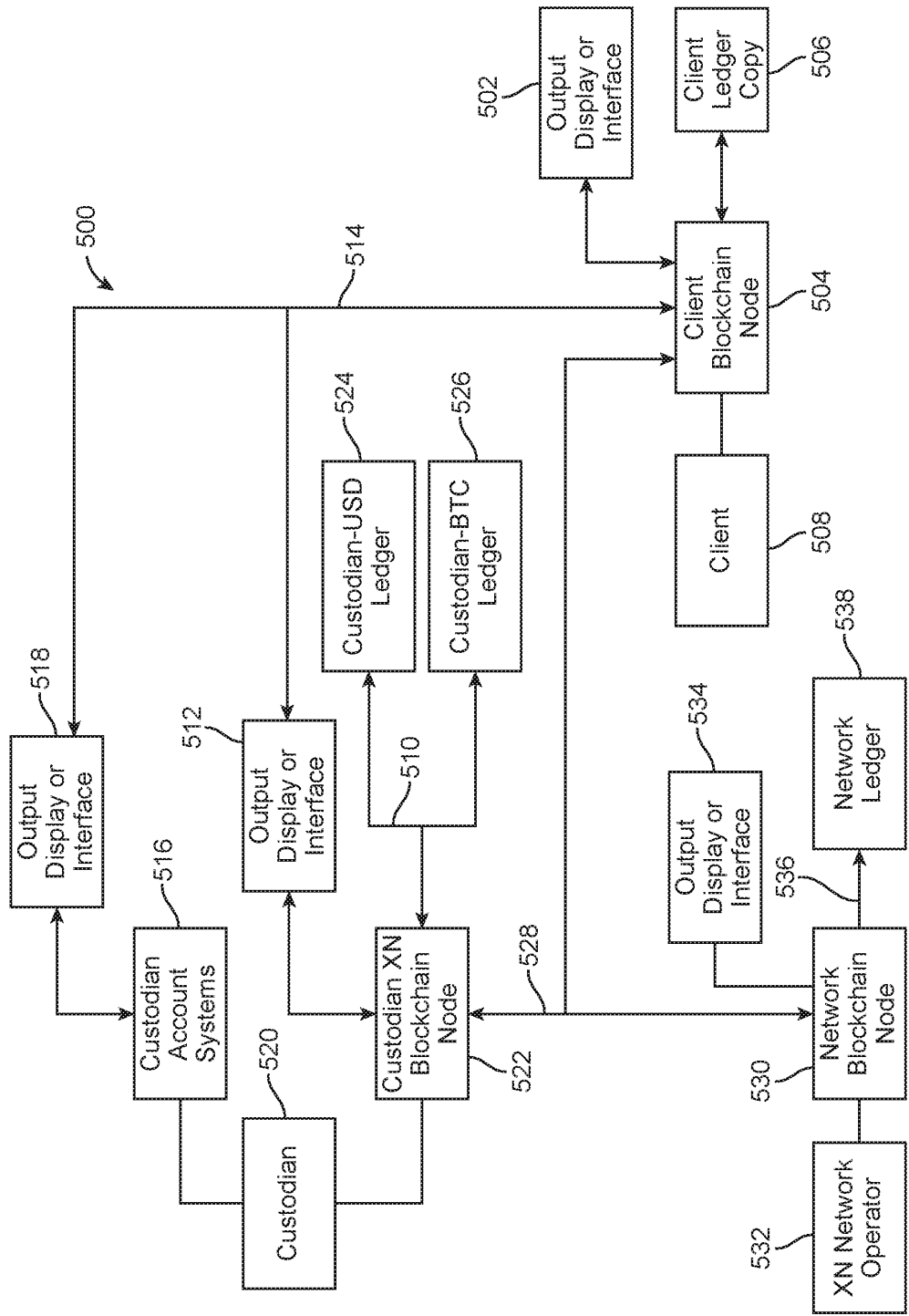


FIG. 5

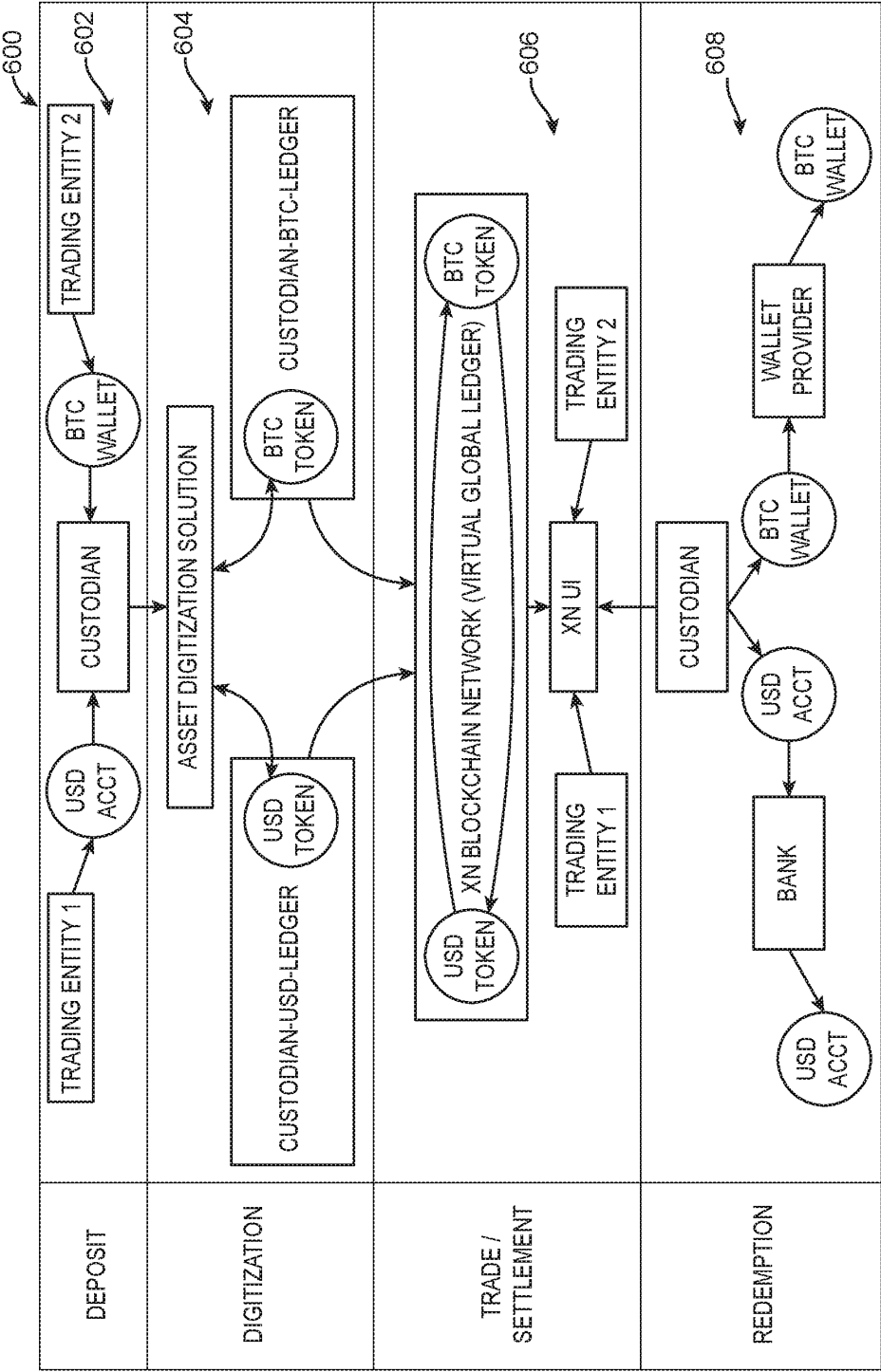


FIG. 6

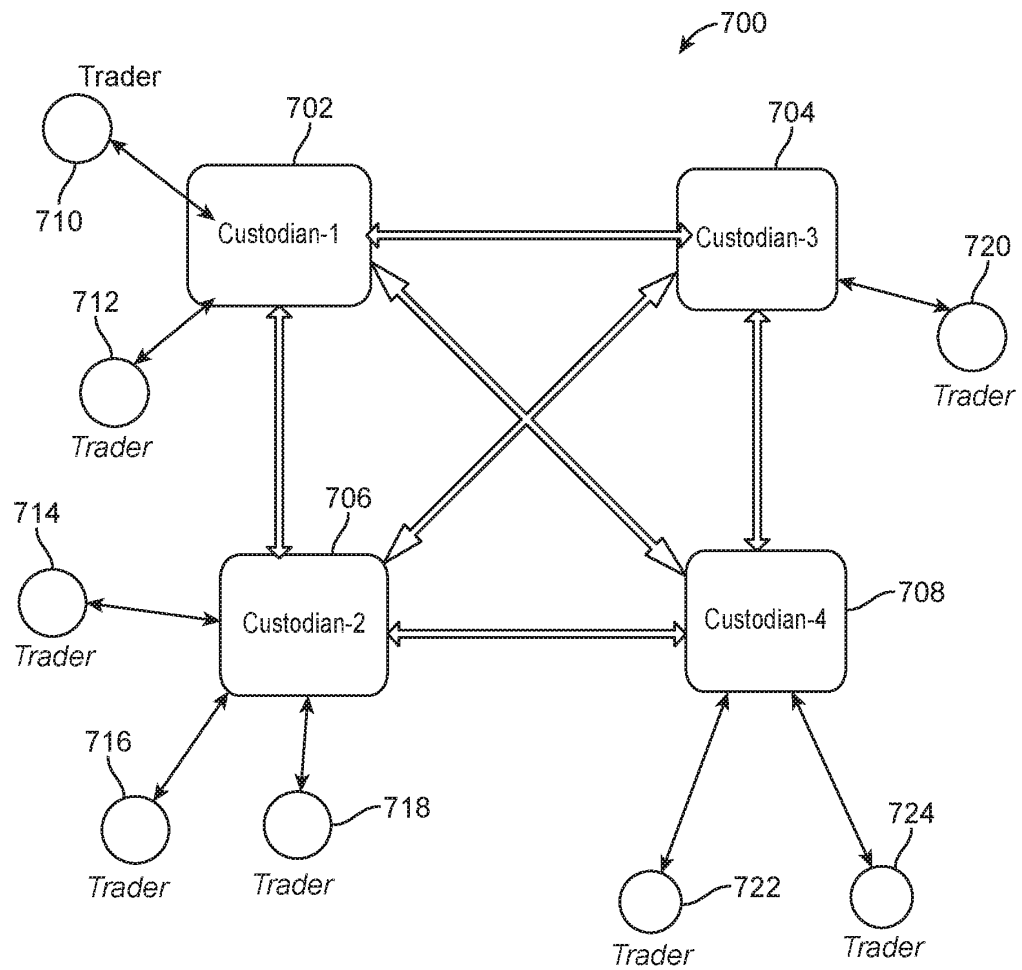


FIG. 7

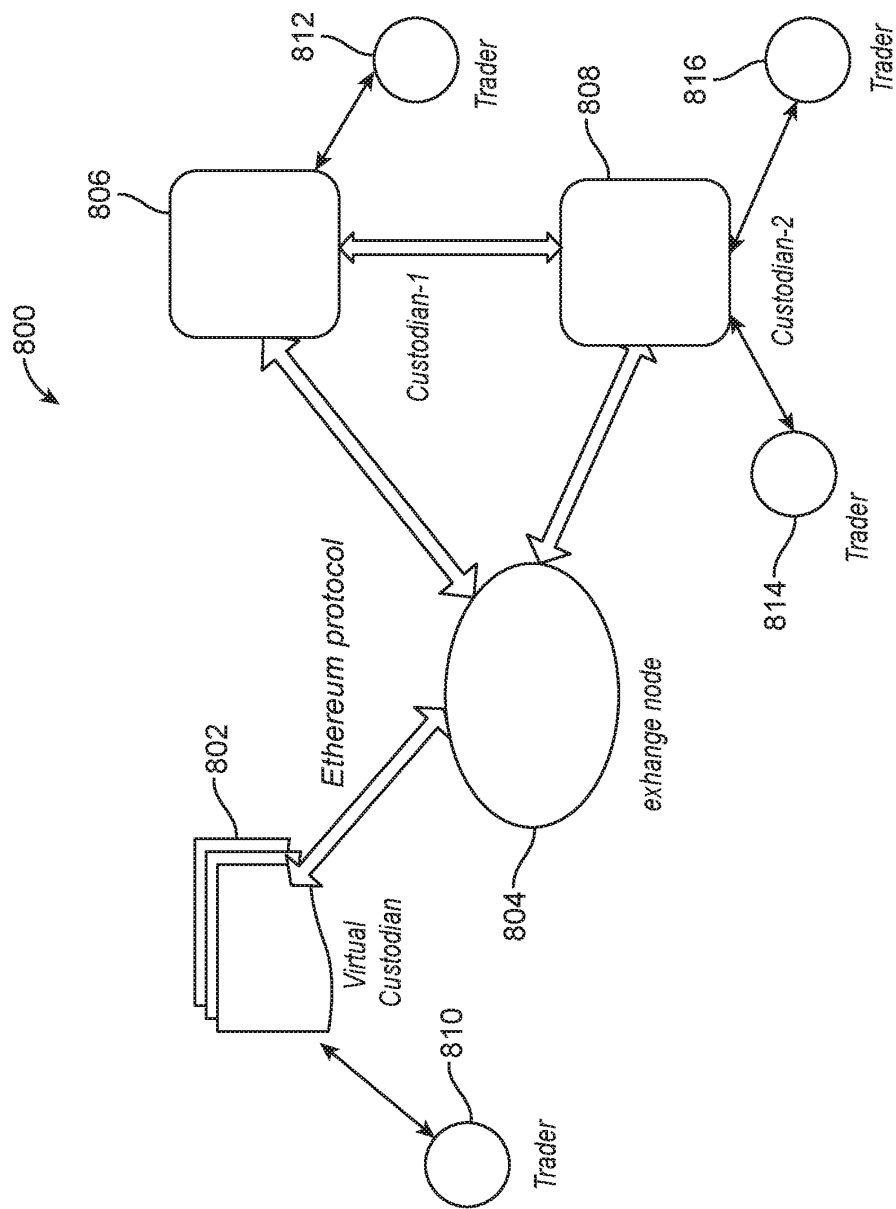


FIG. 8

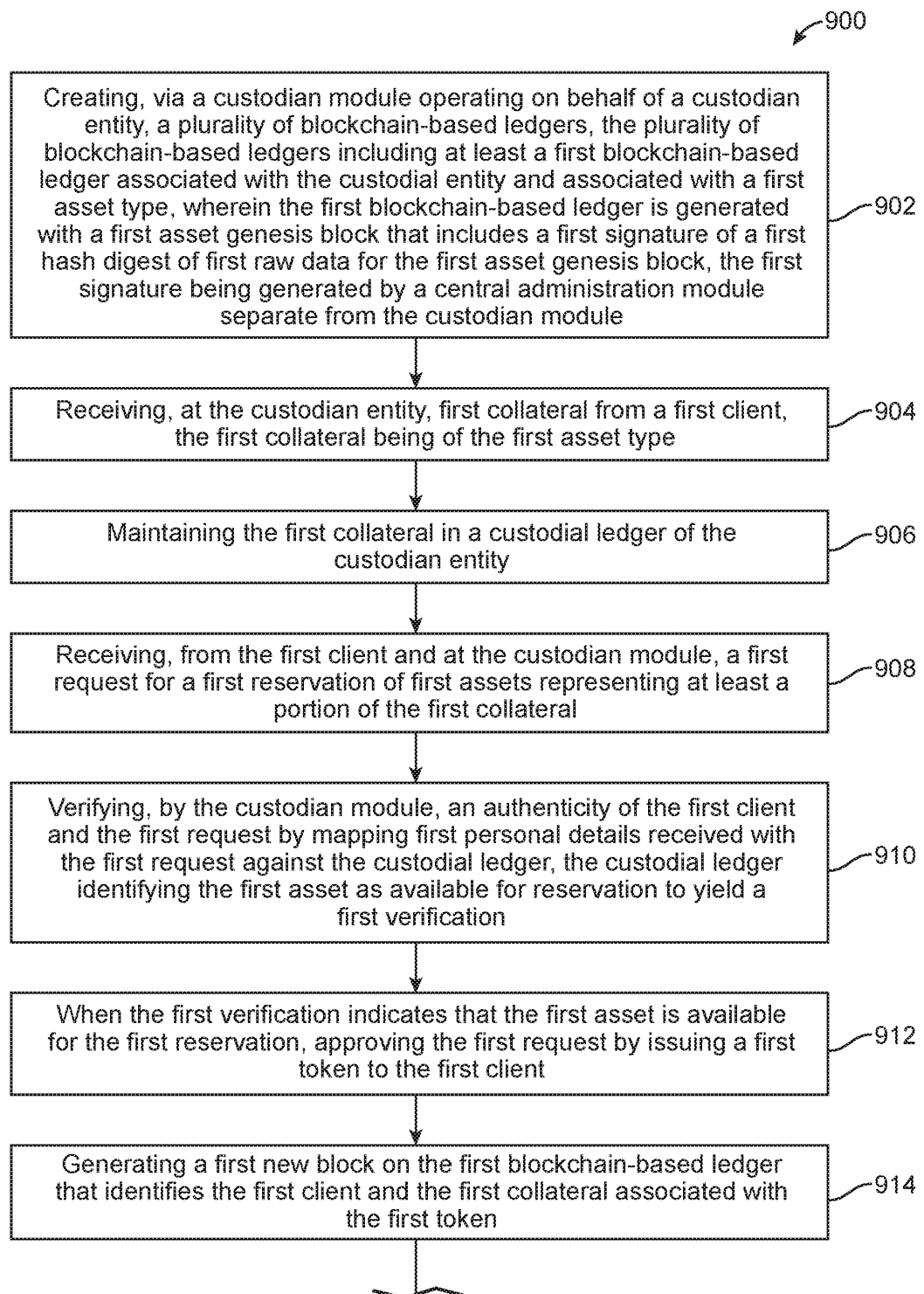


FIG. 9

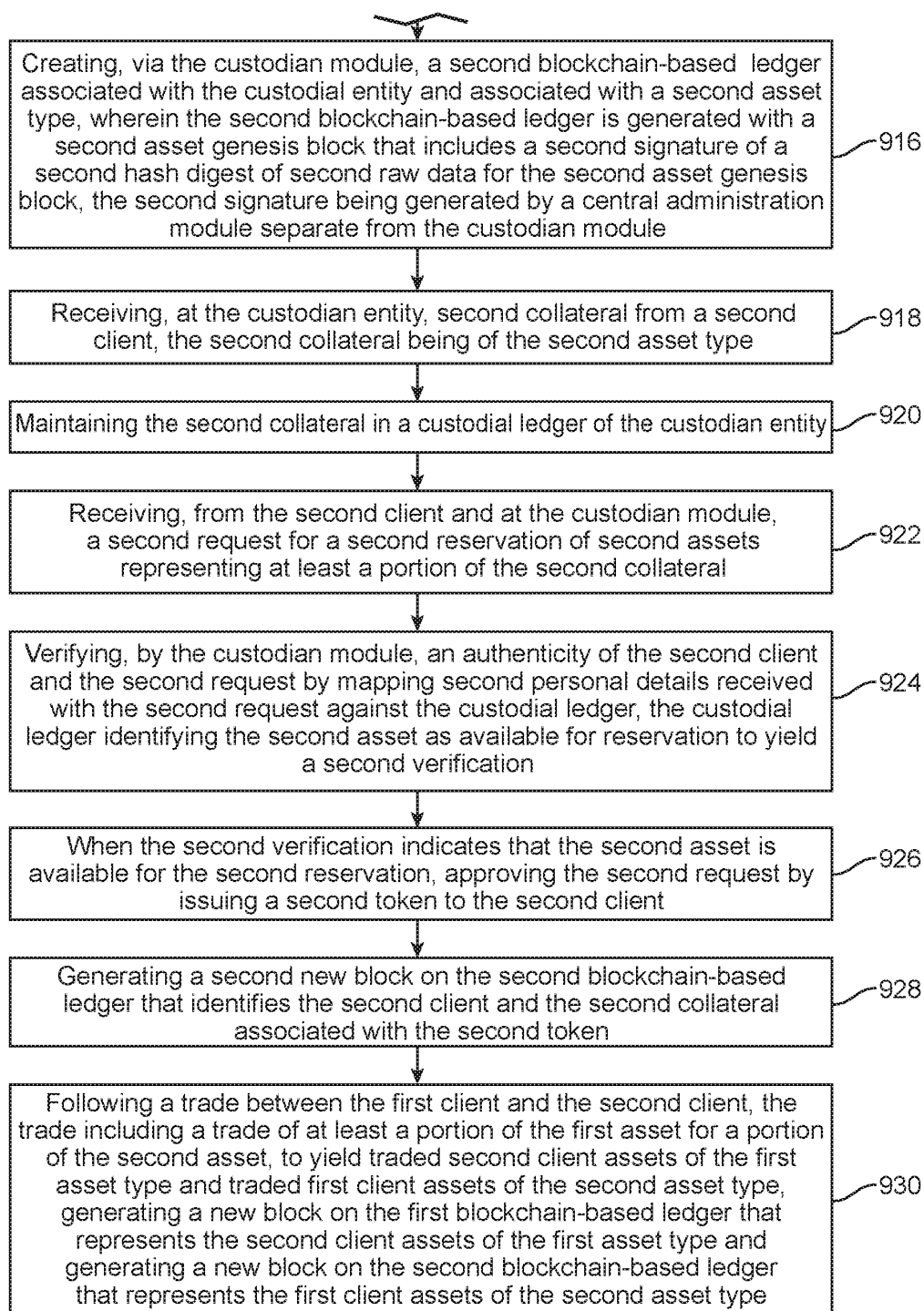


FIG. 9 (Continued)

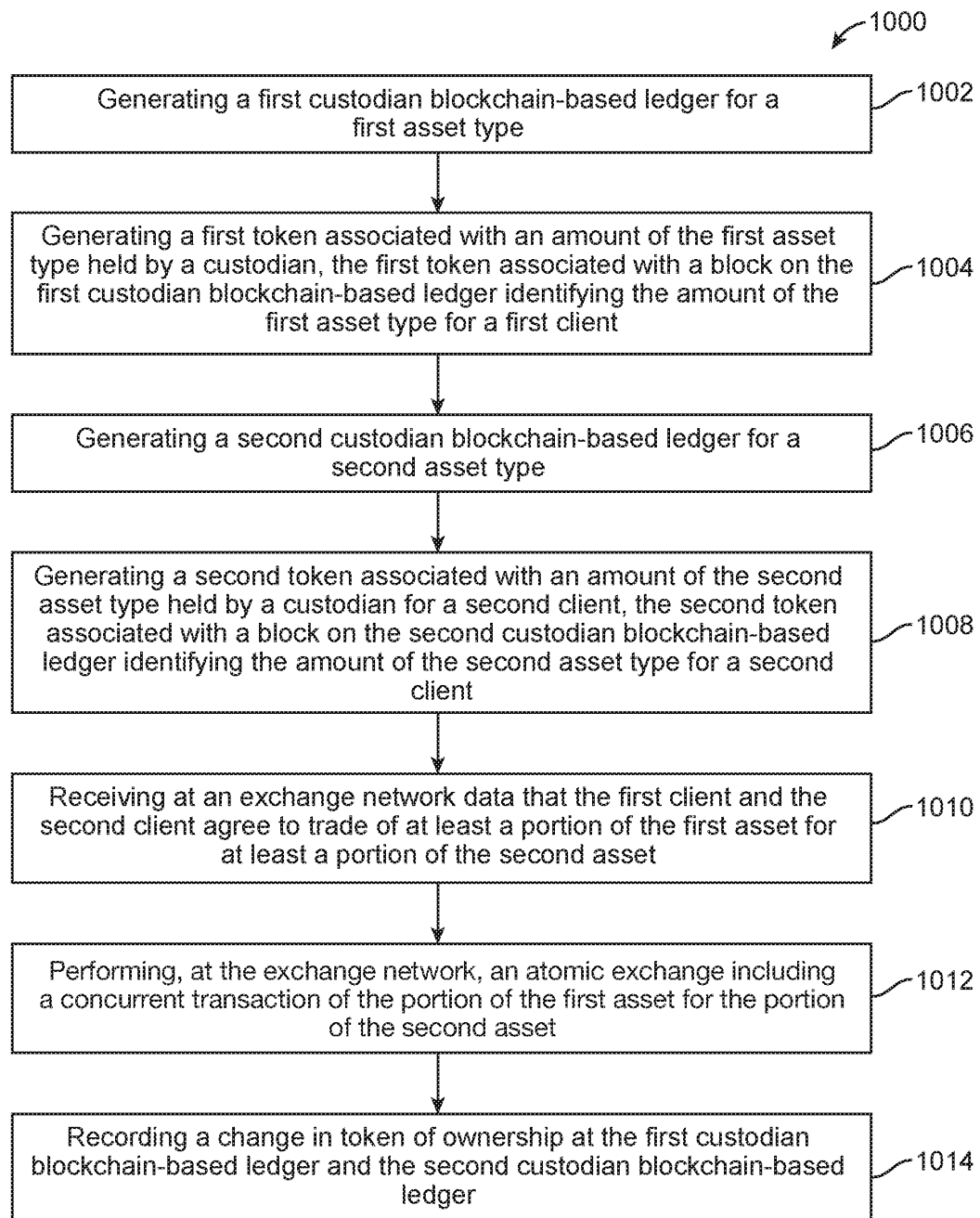


FIG. 10

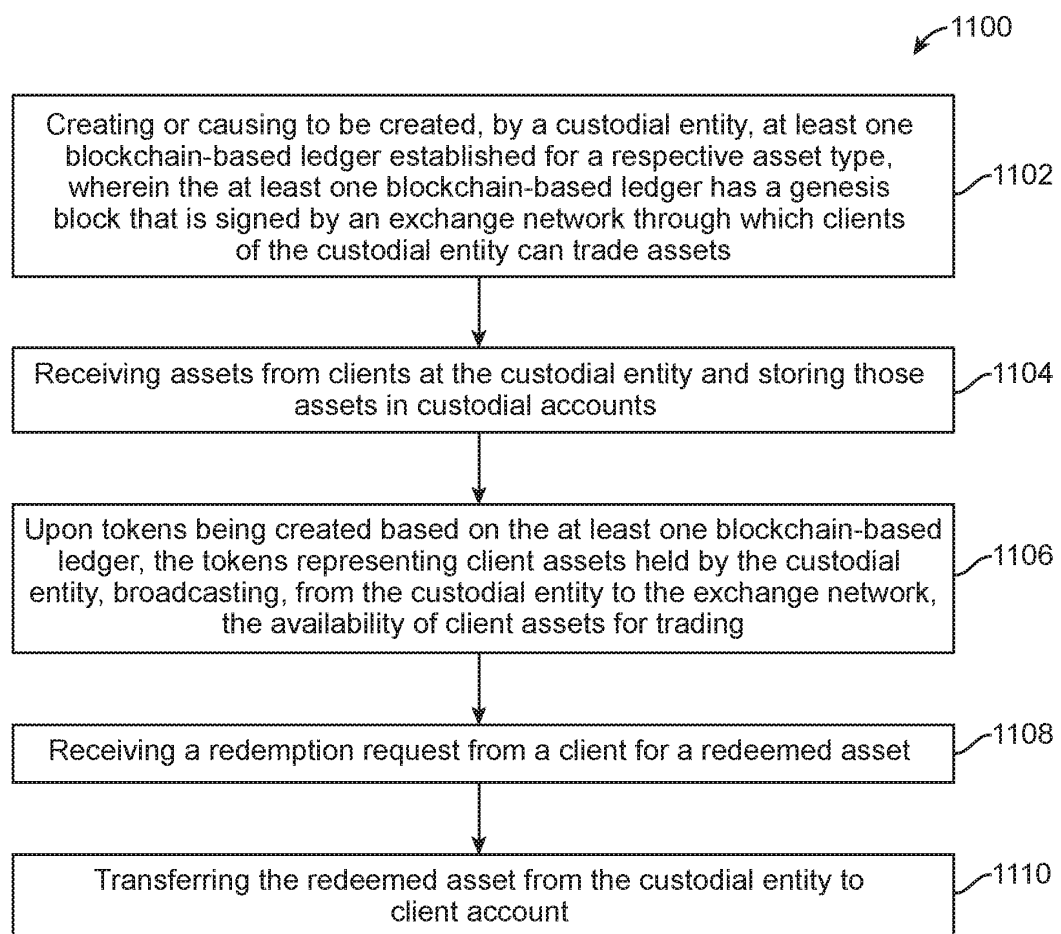


FIG. 11

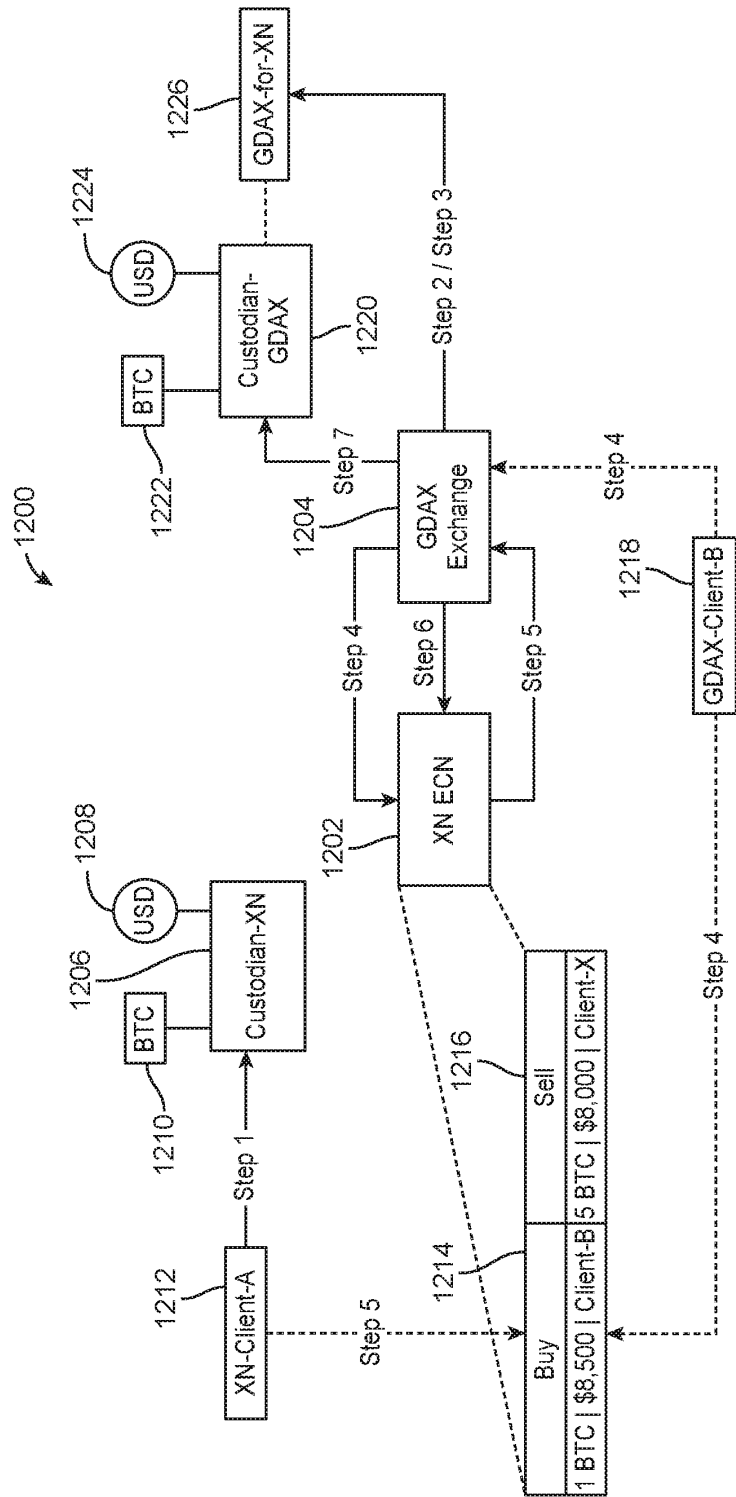


FIG. 12

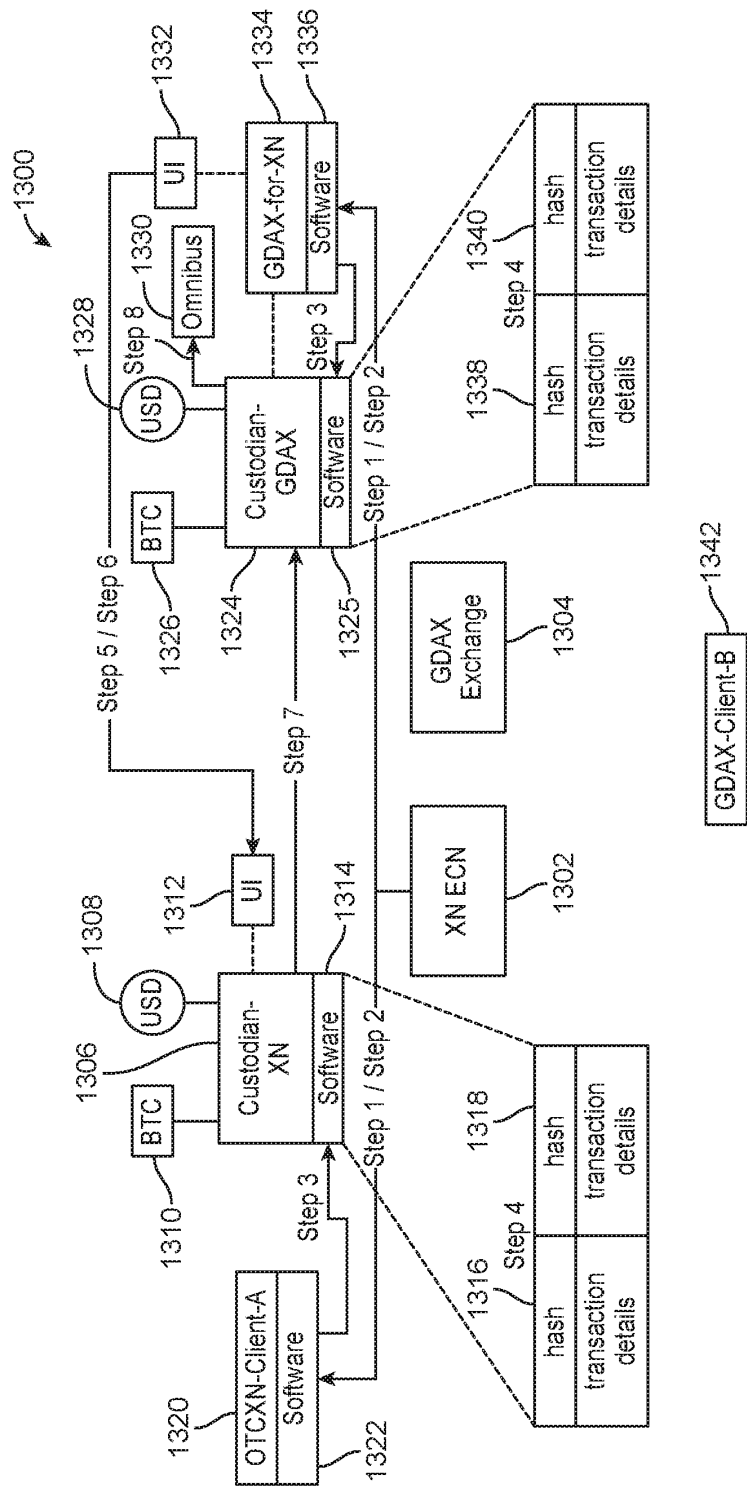


FIG. 13

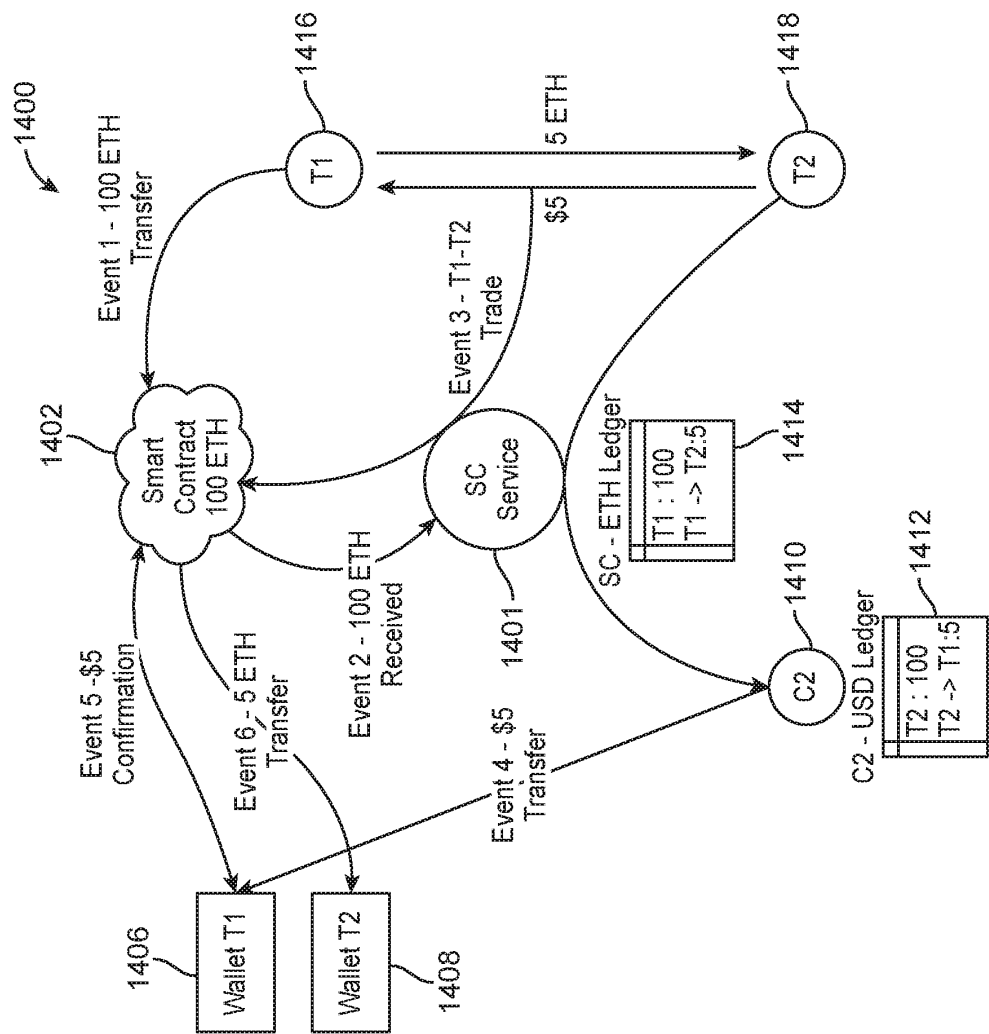


FIG. 14

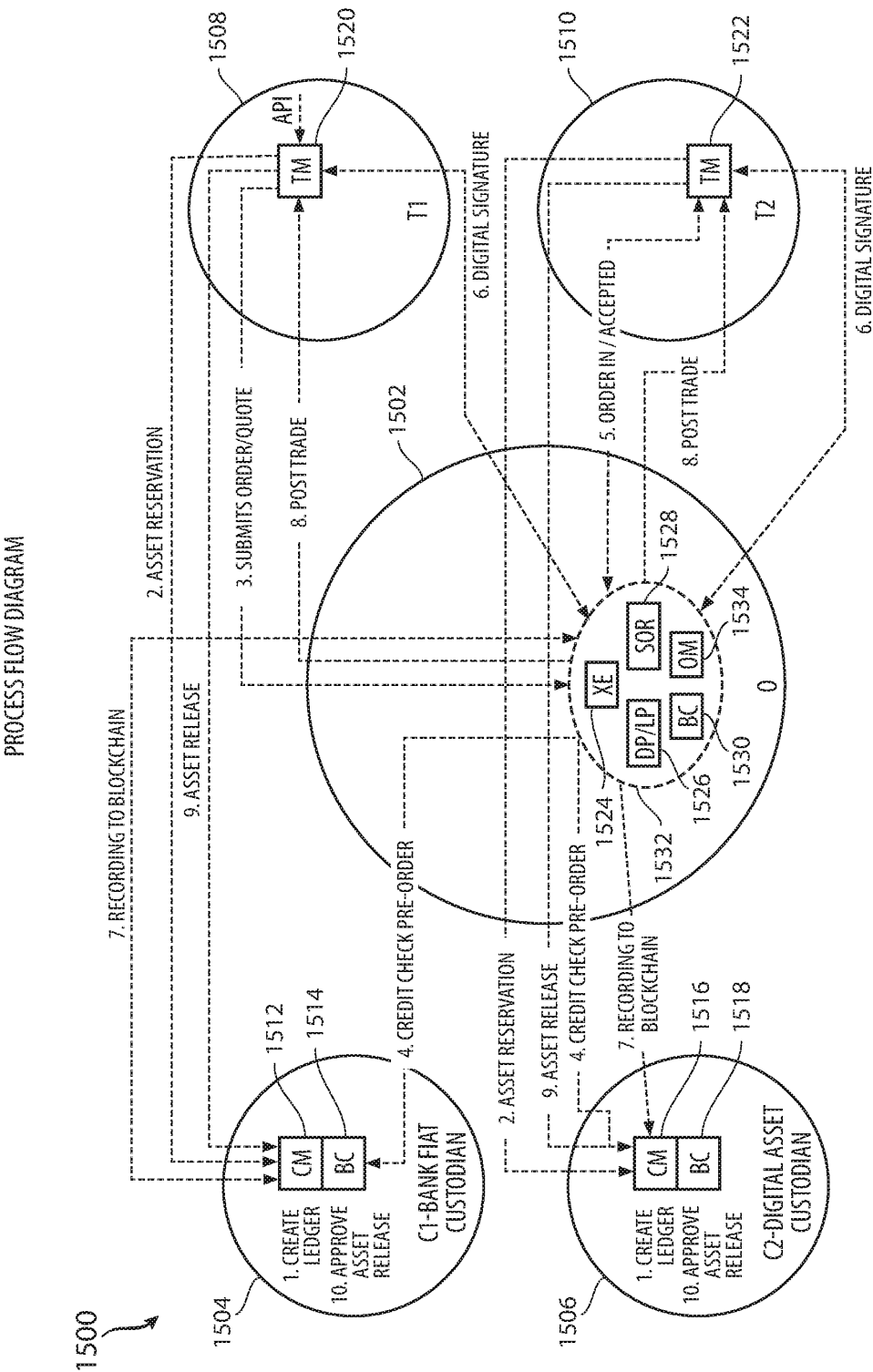


FIG. 15A

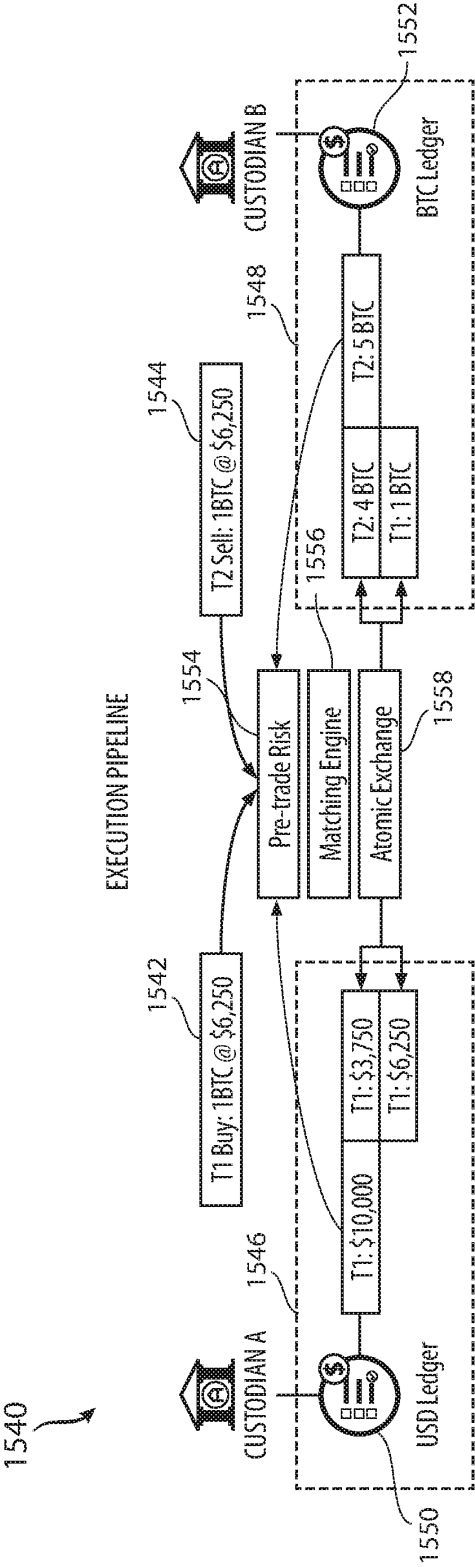


FIG. 15B

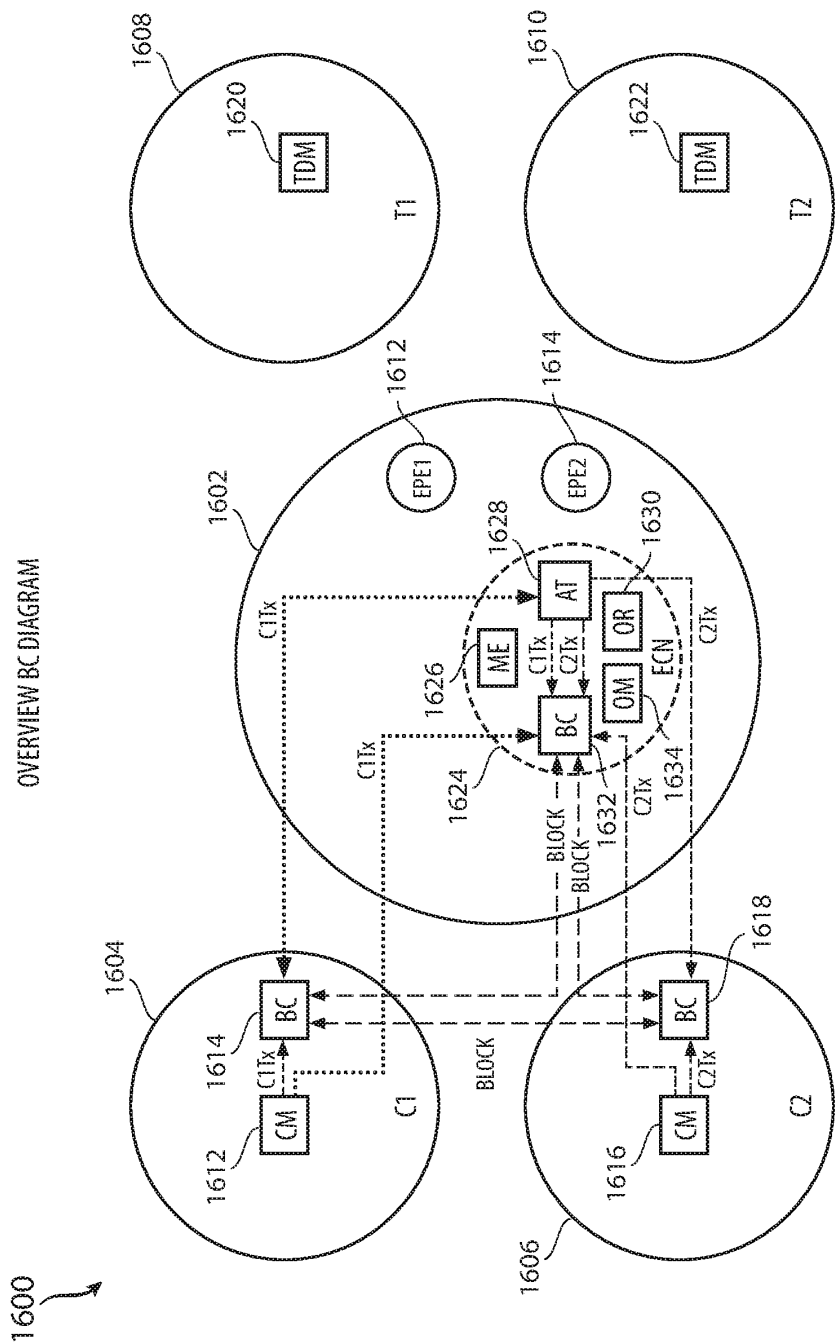


FIG. 16

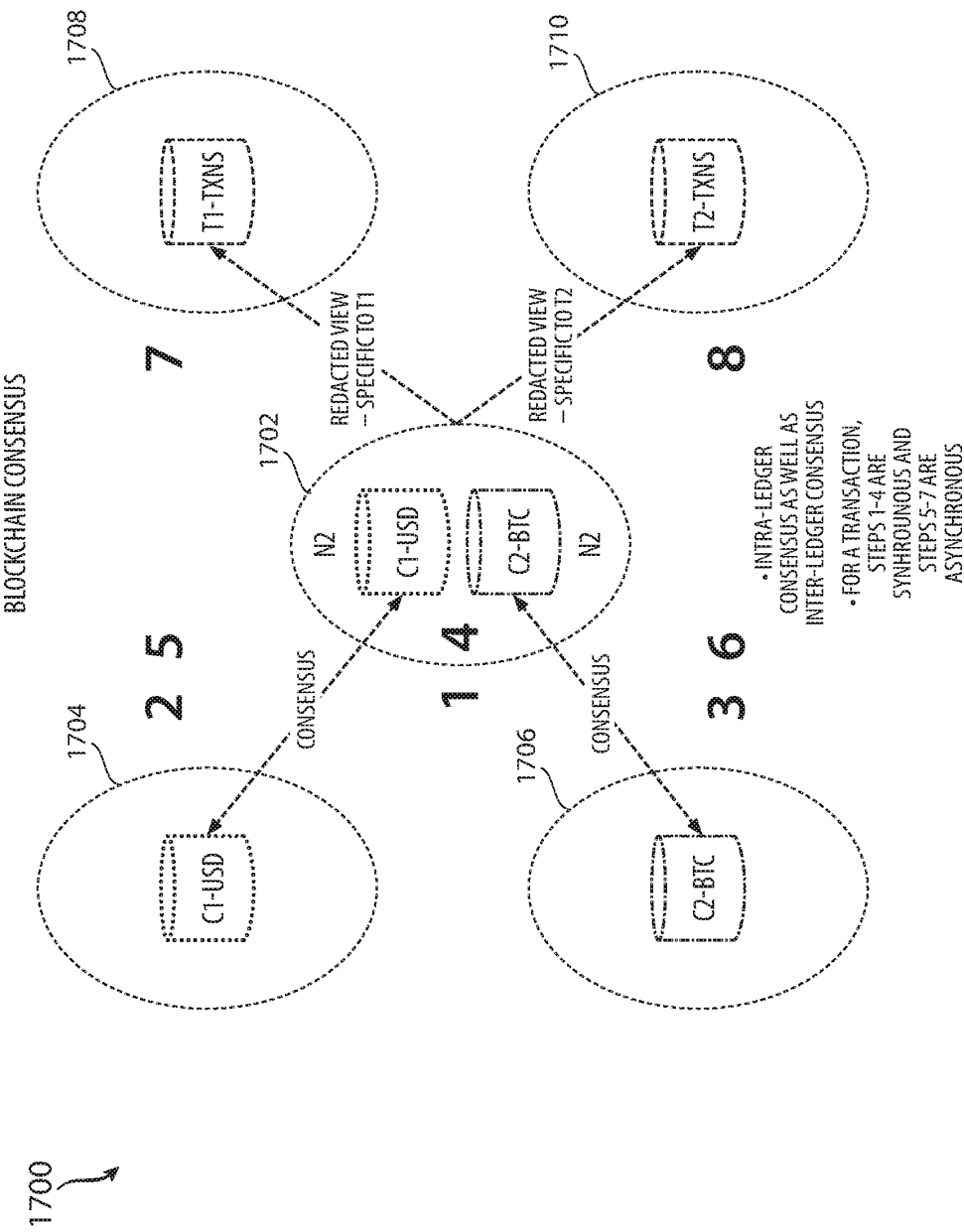


FIG. 17

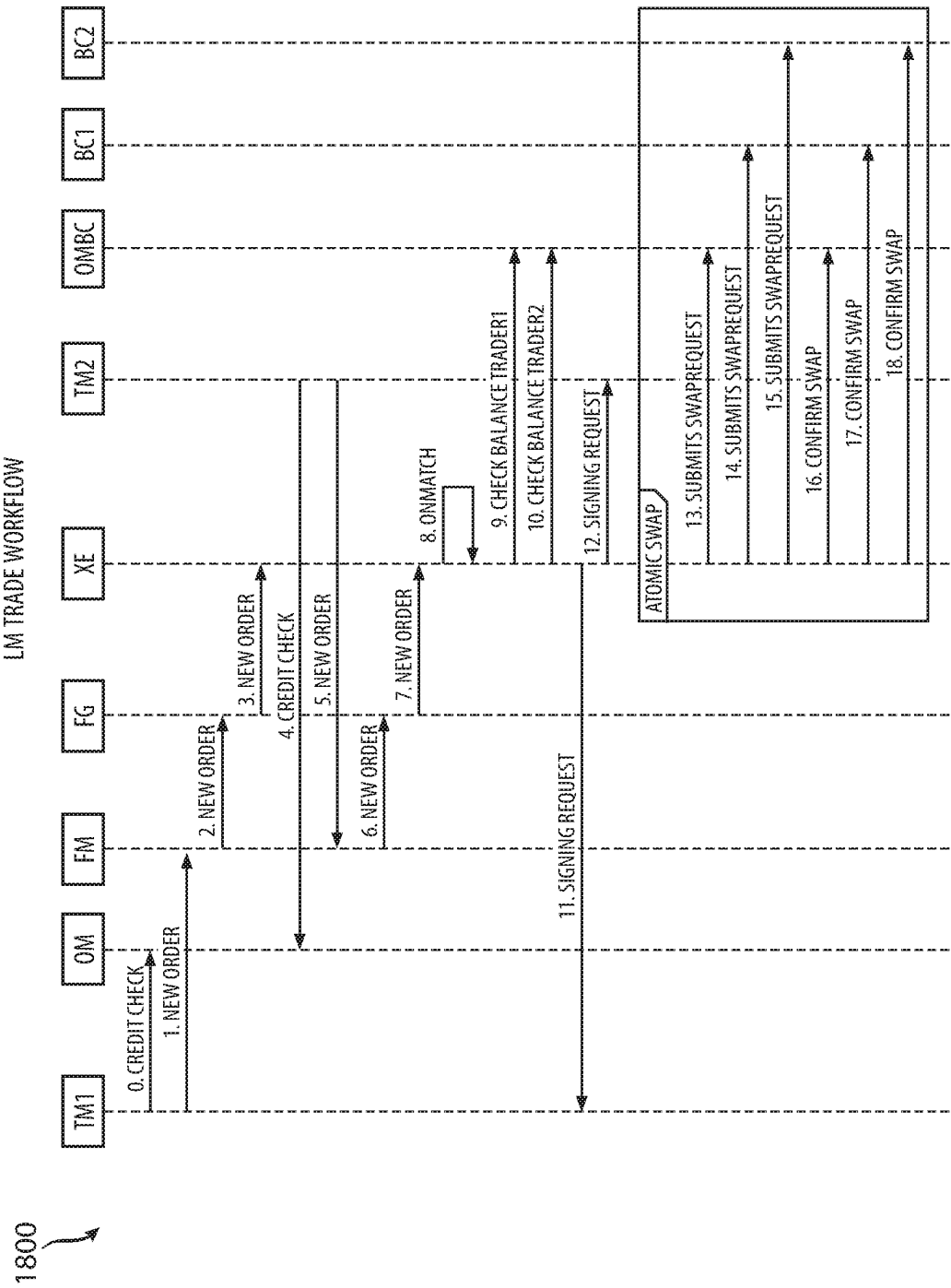


FIG. 18

BLOCKCHAIN NODE CLASSES

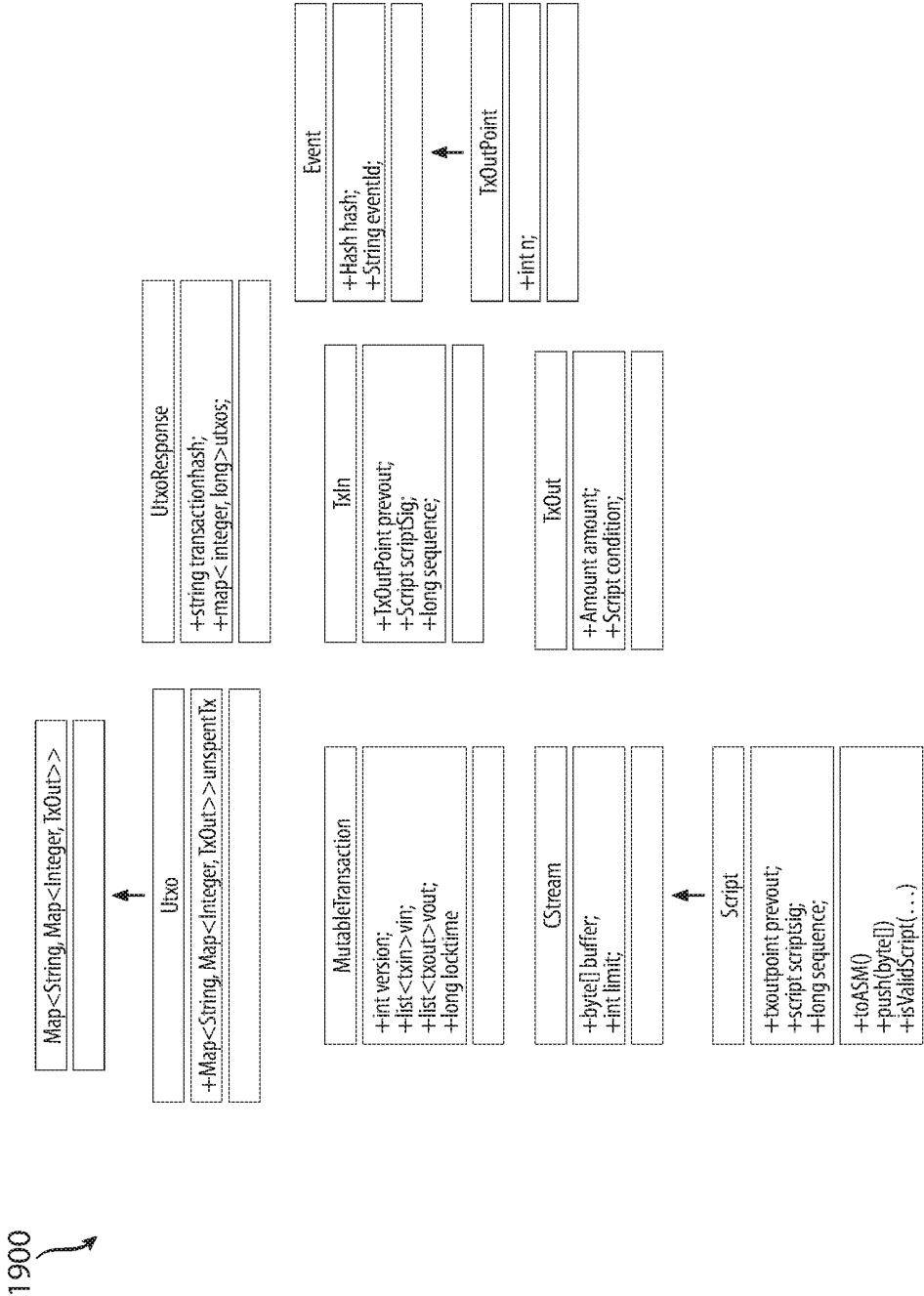


FIG. 19

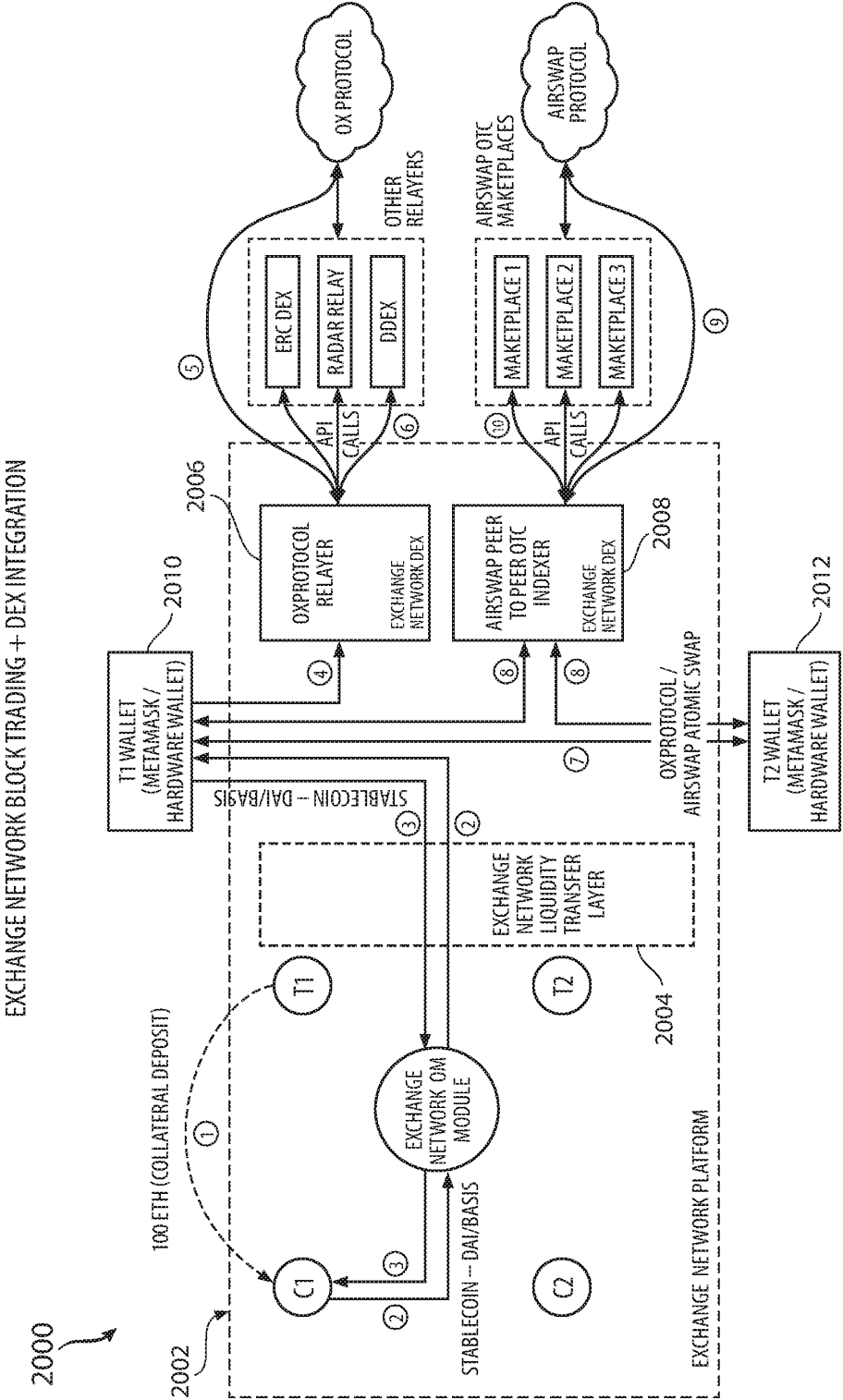


FIG. 20

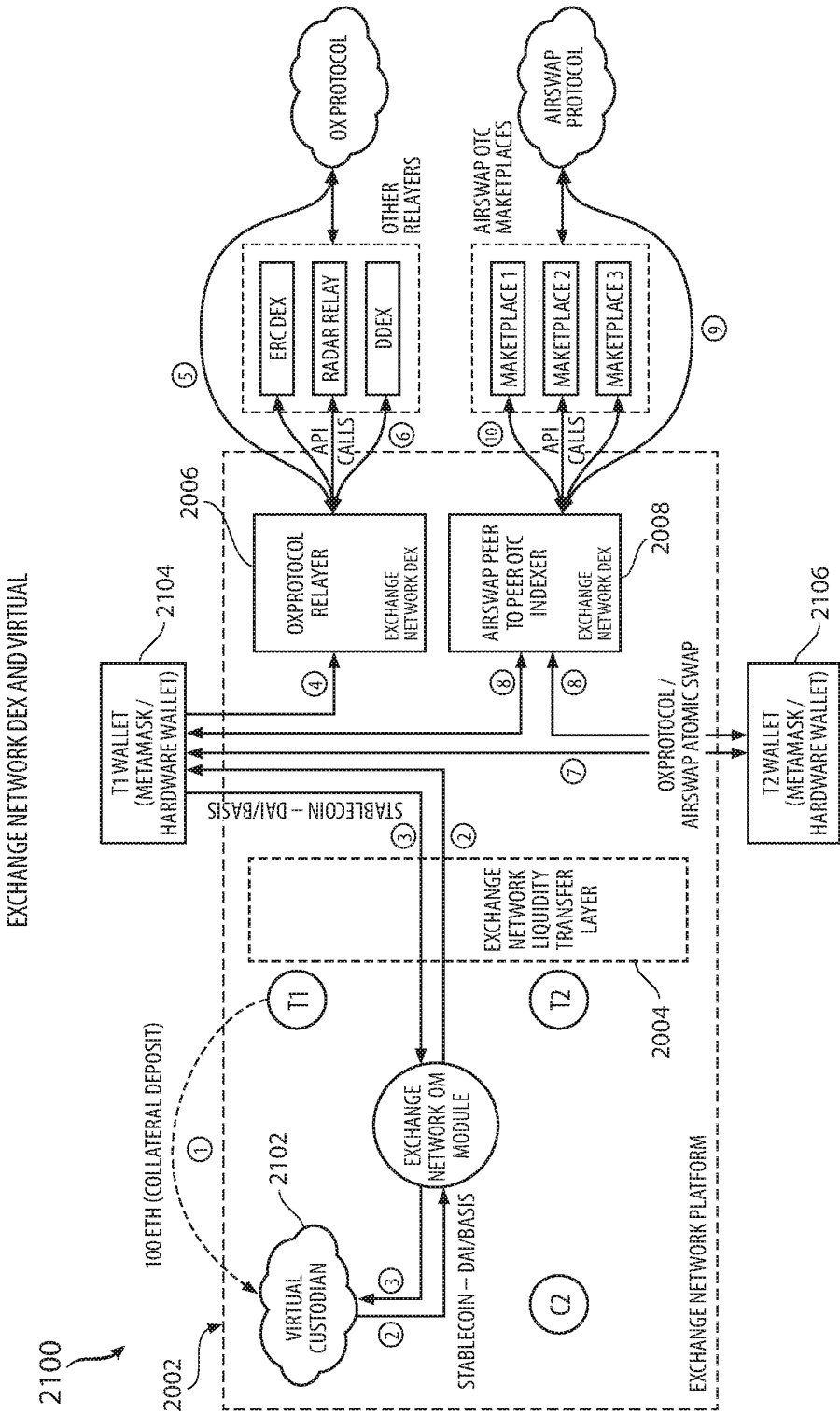


FIG. 21

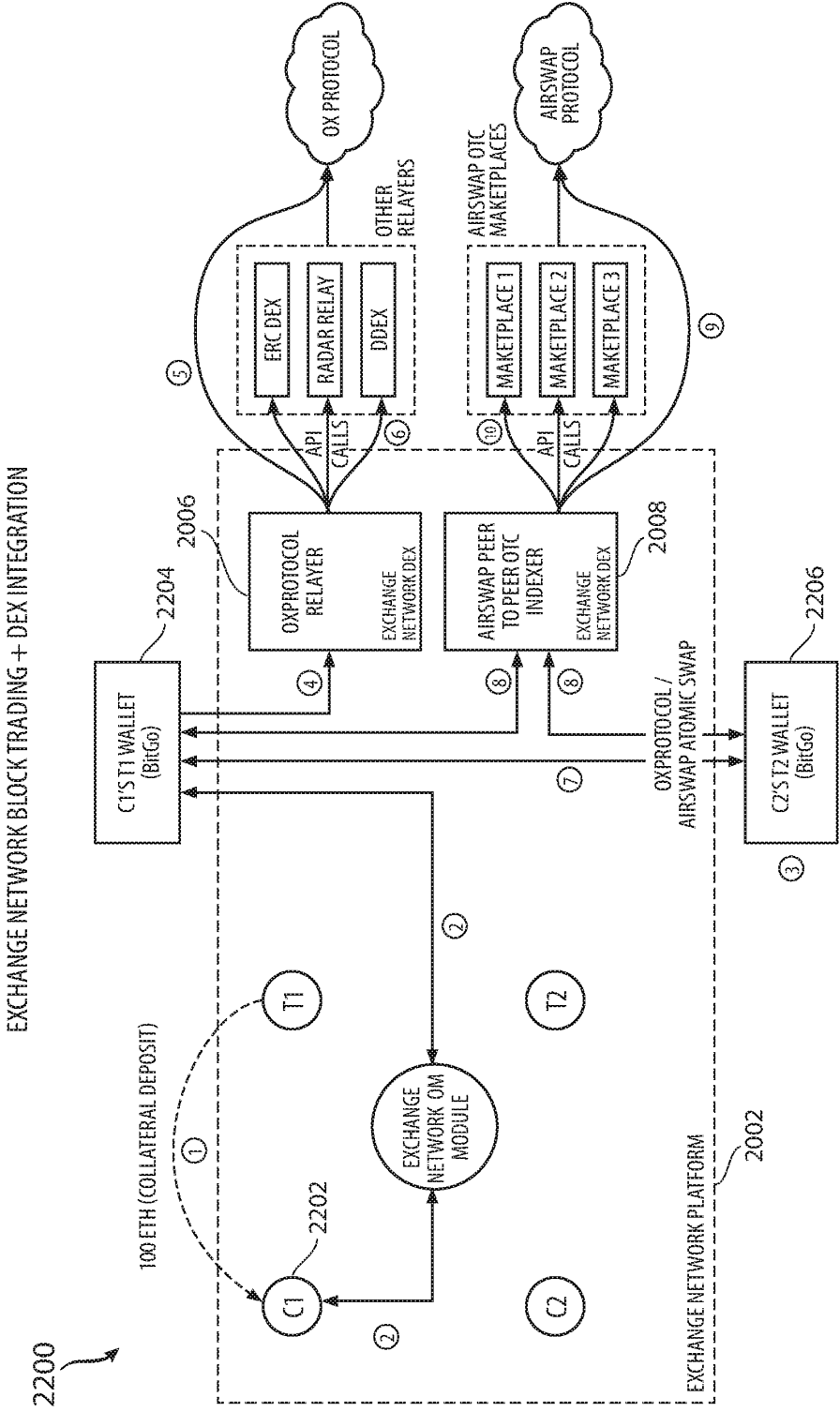


FIG. 22

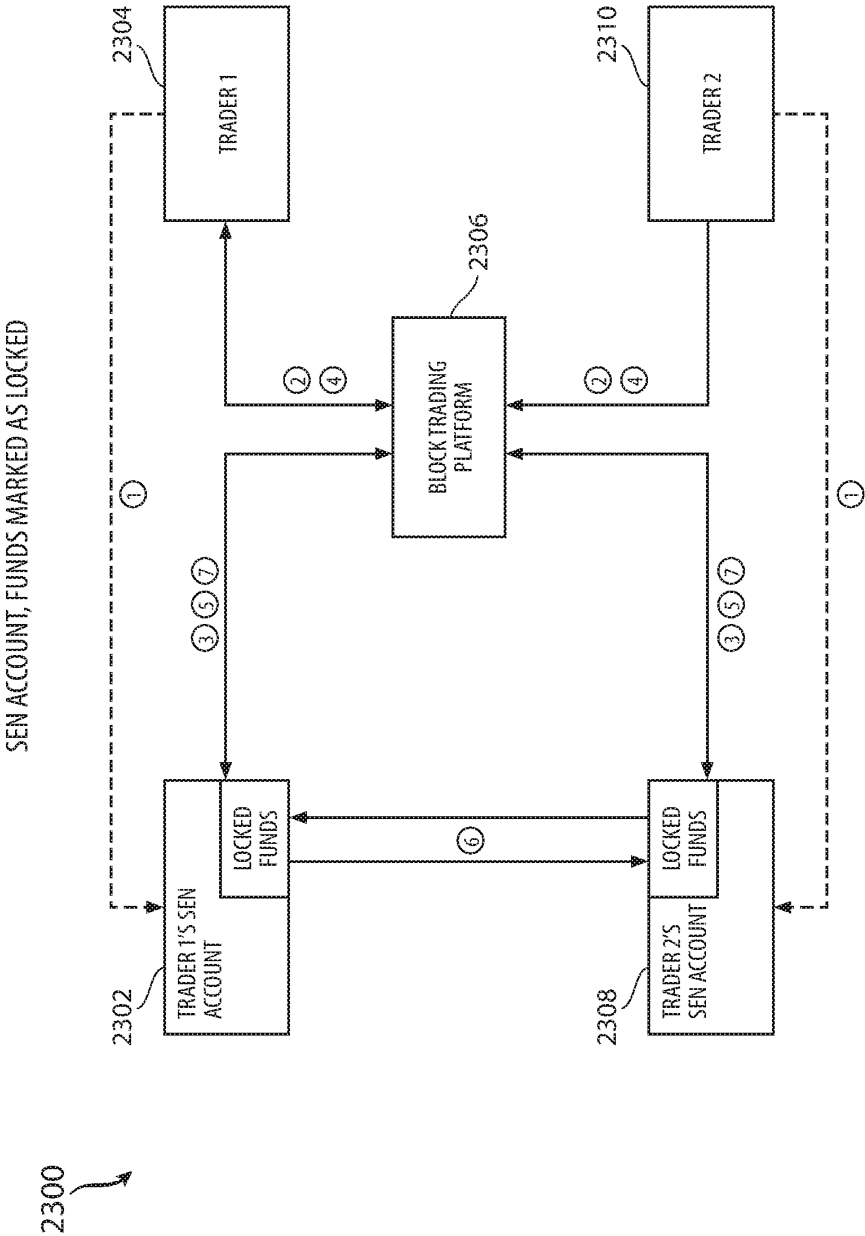


FIG. 23

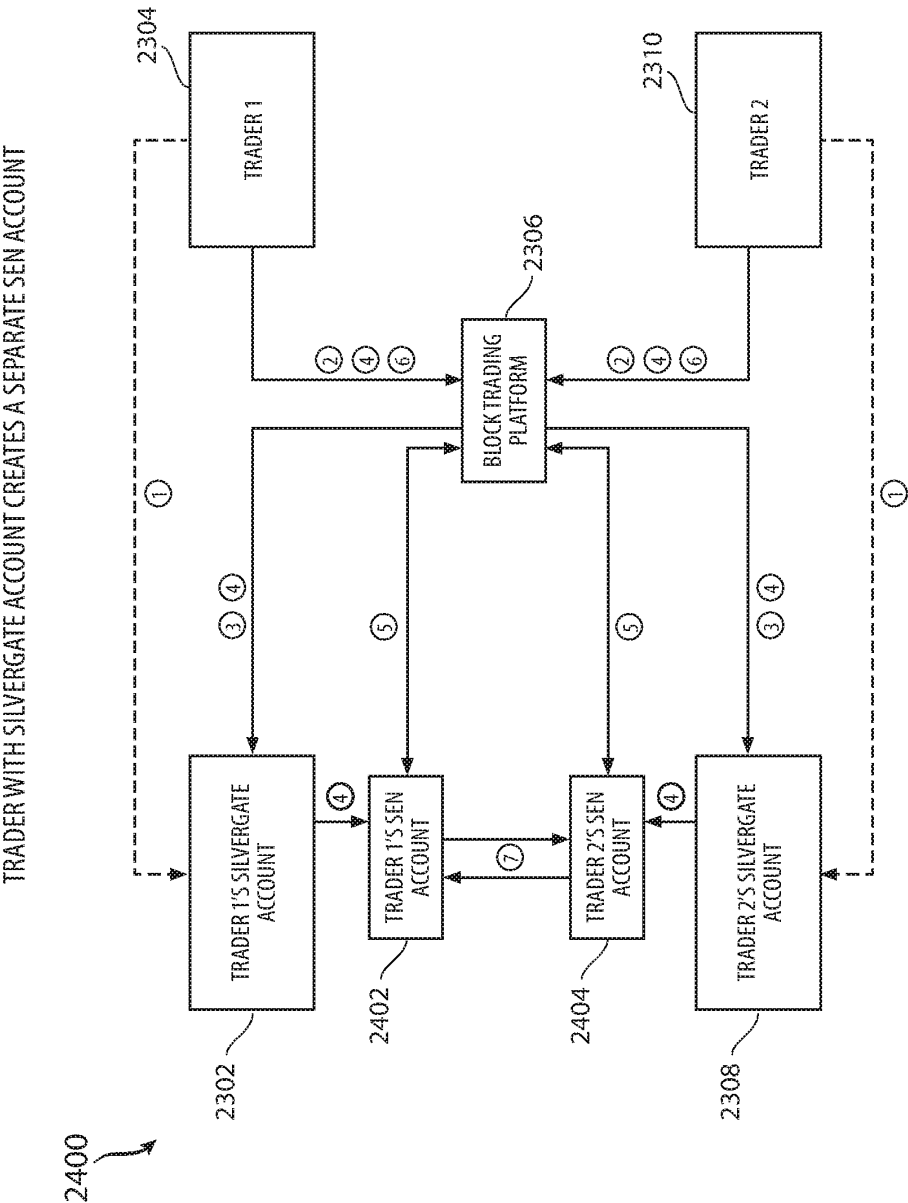


FIG. 24

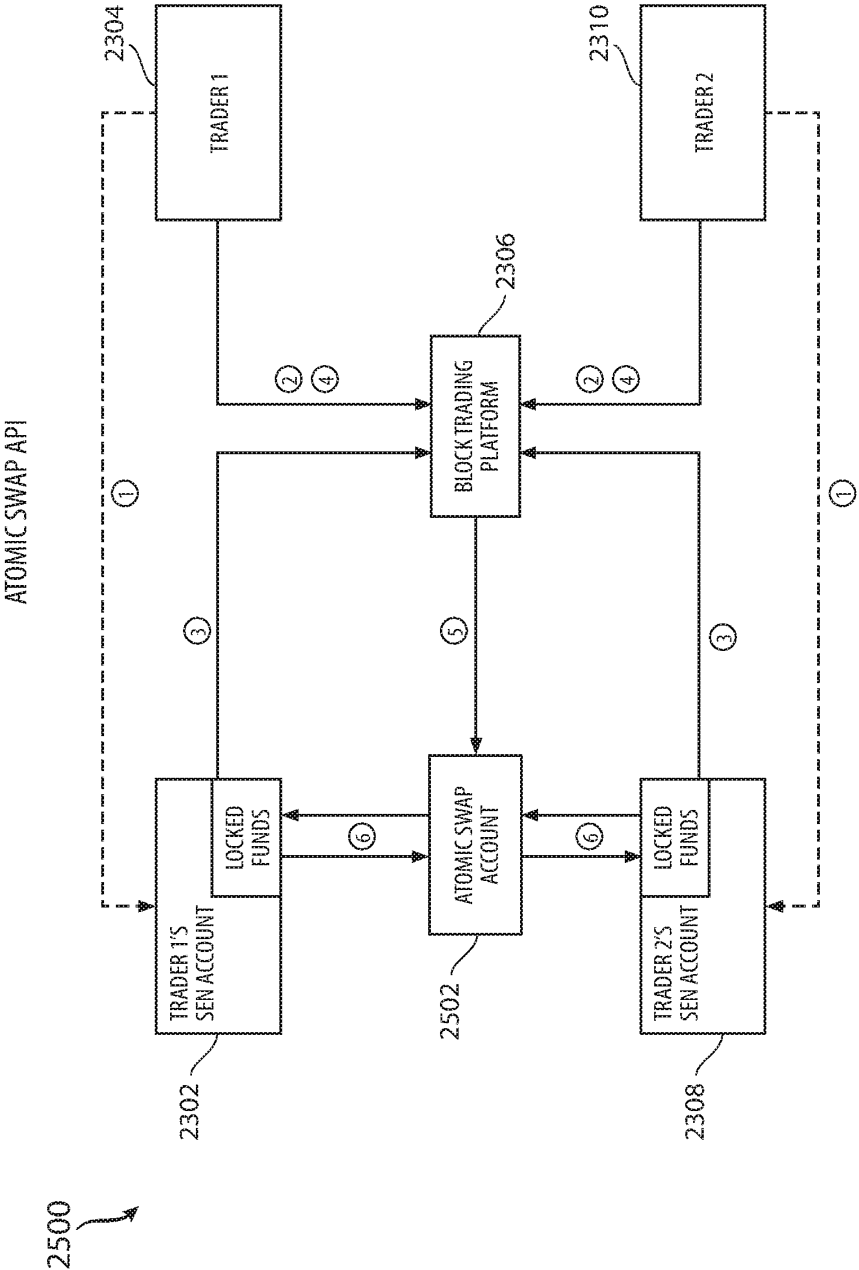


FIG. 25

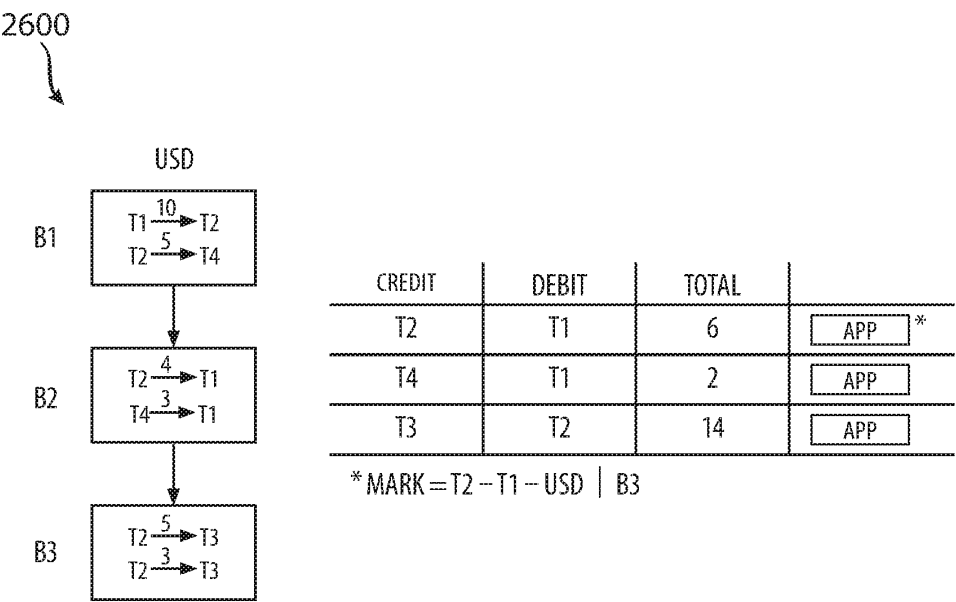


FIG. 26

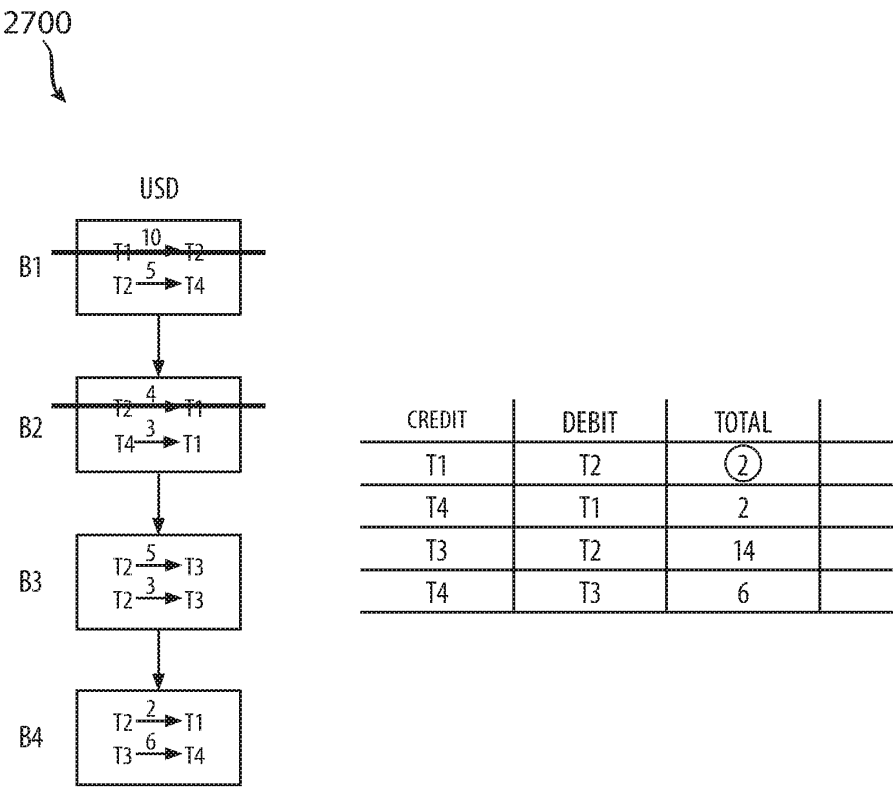


FIG. 27

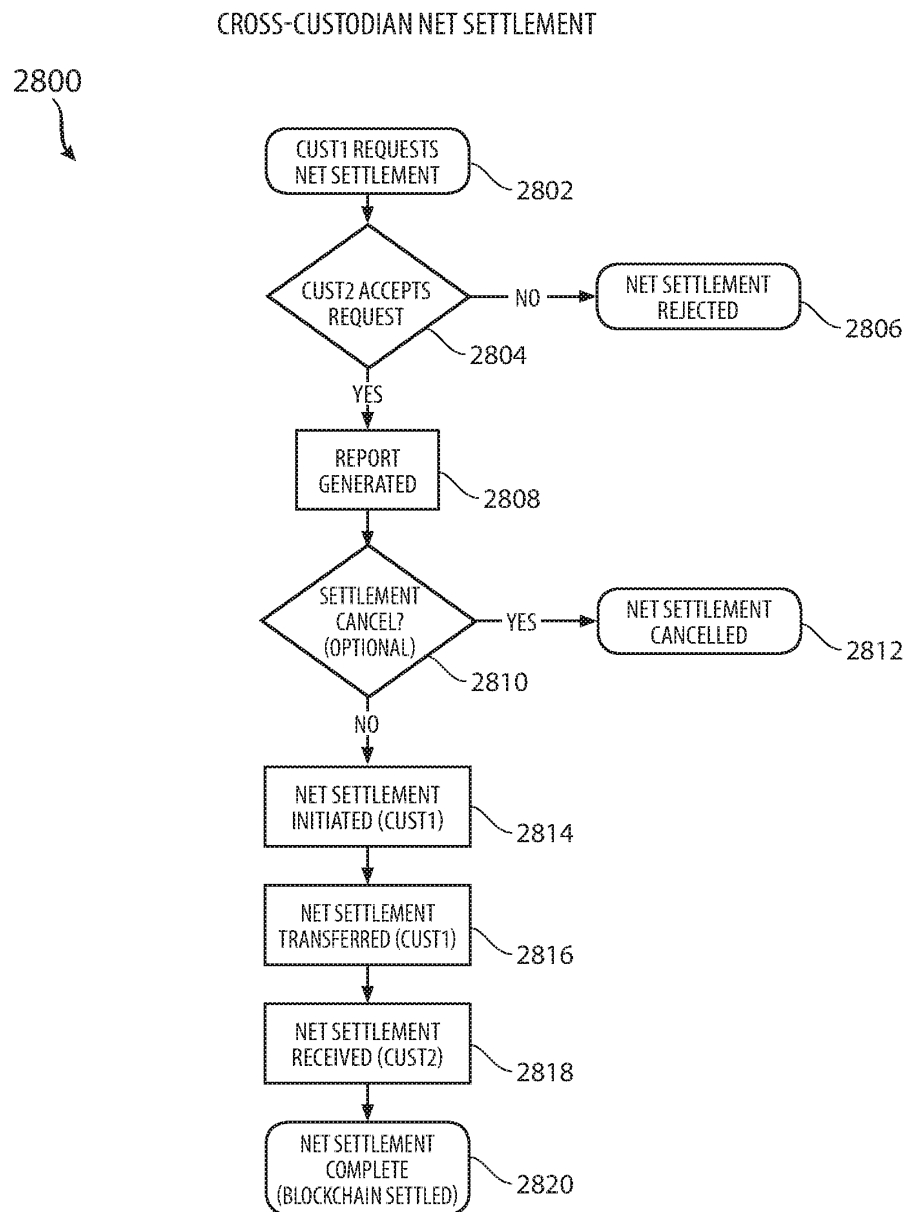


FIG. 28

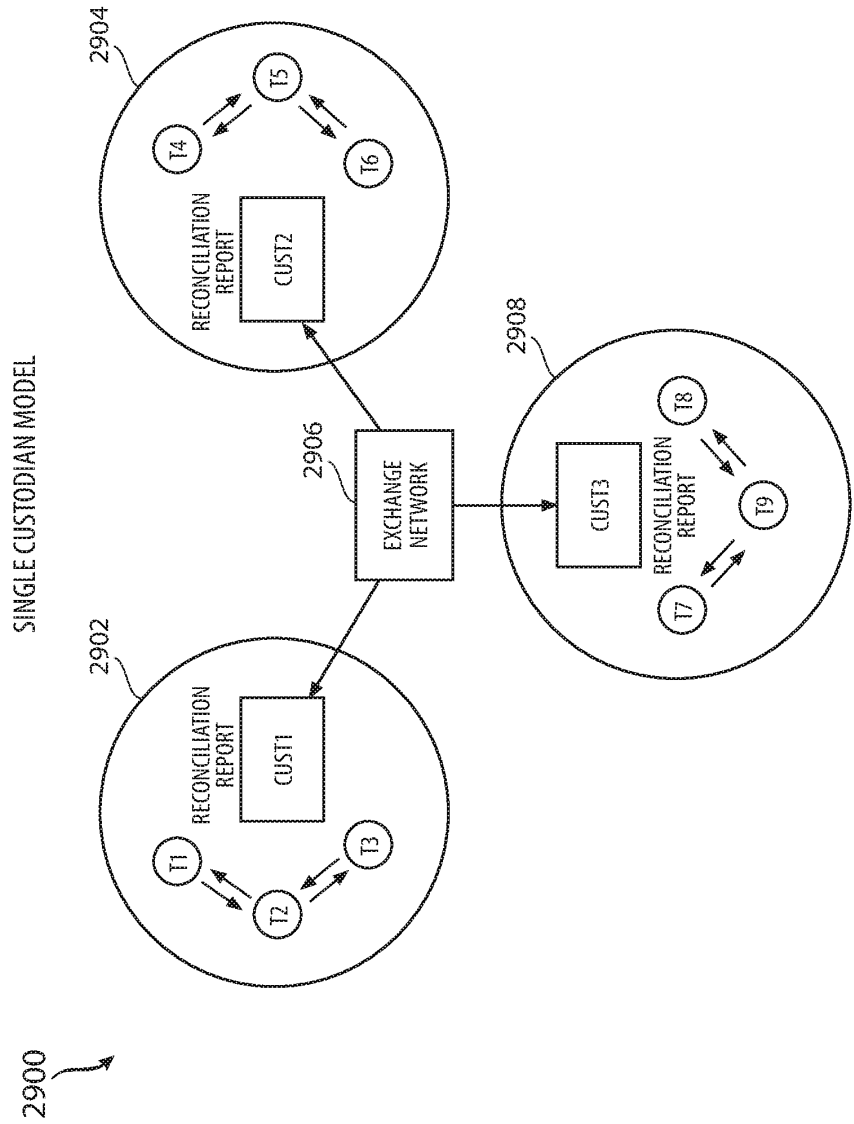


FIG. 29

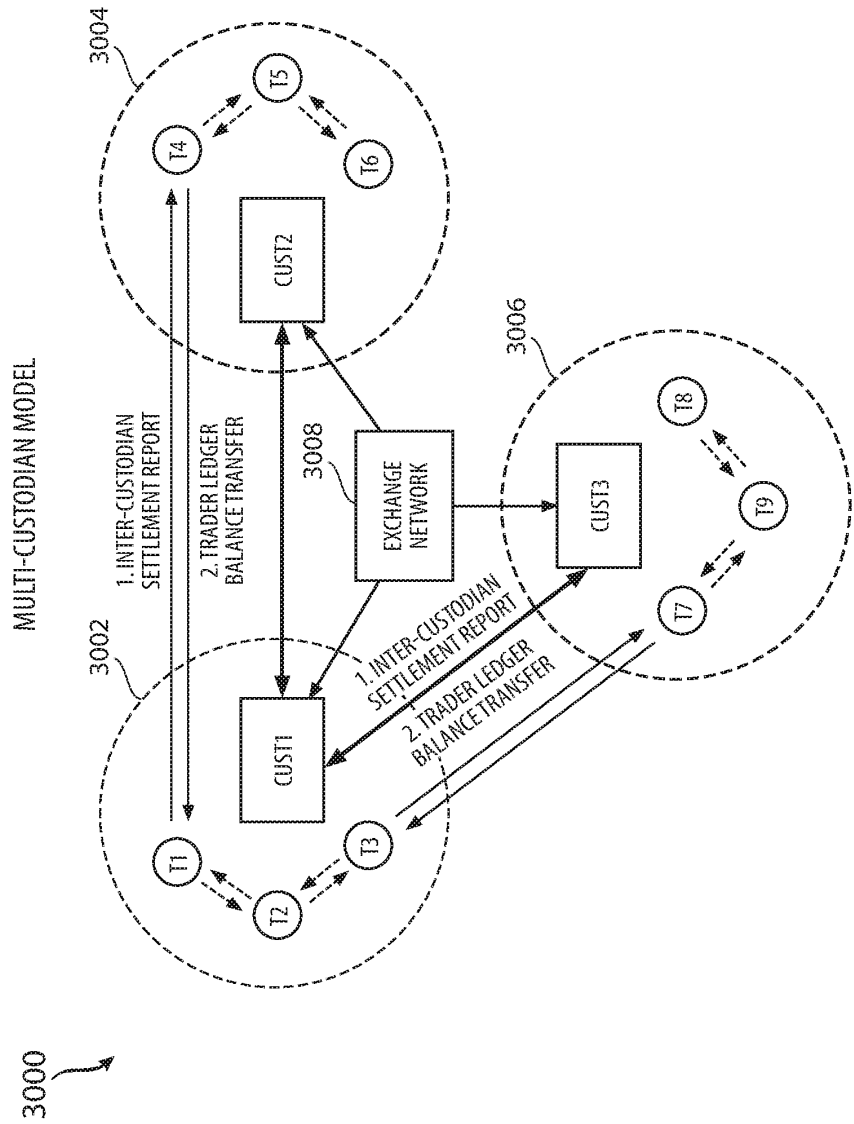


FIG. 30

3100 ↗

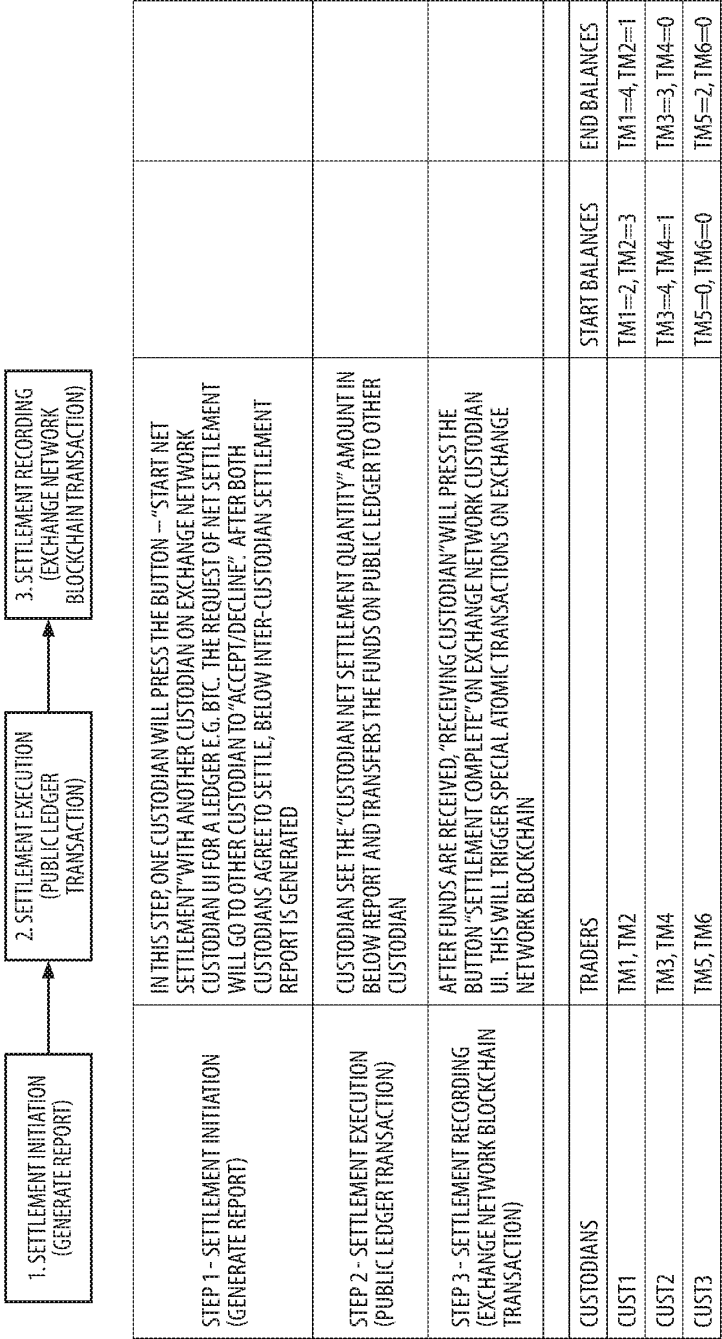


FIG. 31A

3102

CUST1-CUST2 NET SETTLEMENT DUE REPORT

CUSTODIAN	CPTY CUSTODIAN	DEBIT CUSTODIAN	ASSET	CUSTODIAN NET SETTLEMENT QUANTITY	UTXOS	PRICE	QUANTITY	DATE	TIME	TRANSACTION HASH	BLOCK HASH
CUST2	CUST1	CUST2	BTC	2							
	CUSTODIAN LEDGER	TOTAL LEDGER SETTLEMENT QUANTITY									
	CUST1_BTC	3									
	EARMARKED ALLOCATIONS →	TRADER	AMOUNT	PRICE (USD)	UTXOS						
		TM3(CUST2)		4200	1+2						
	TRANSACTIONS →	DEBIT TRADERS	CREDIT TRADERS	ASSET	PRICE	QUANTITY	DATE	TIME	TRANSACTION HASH	BLOCK HASH	
		TM1(CUST1)	TM3(CUST2)	BTC	4000	2	2/19/2019	9:00 AM	F3188E9FB3F73E53B29868	1HQ2ULUD7T5YKALCZ3KM	
		TM3(CUST2)	TM4(CUST2)	BTC	4500	2	2/19/2019	9:10 AM	HADL362087902188F51017	1E182JRUUBAB21PIXDMMXPF	
		TM4(CUST2)	TM5(CUST3)	BTC	5000	2	2/19/2019	9:10 AM	DAR00362087902188F5101	1E182JRUUBAB21PIXDMMXPF	
		TM2(CUST1)	TM3(CUST2)	BTC	4100	2	2/19/2019	9:10 AM	DAR00362087902188F5101	1E182JRUUBAB21PIXDMMXPF	
		TM1(CUST1)	TM3(CUST2)	BTC	4400	2	2/19/2019	9:10 AM	DAR00362087902188F5101	1E182JRUUBAB21PIXDMMXPF	
	CUSTODIAN LEDGER	TOTAL LEDGER SETTLEMENT QUANTITY									
	CUST2_BTC										
	EARMARKED ALLOCATIONS →	TRADER	AMOUNT	PRICE	UTXOS						
		TM1(CUST1)		4000	1+1+2						
		TM2(CUST1)		4500	1						
	TRANSACTIONS →	DEBIT TRADERS	CREDIT TRADERS	ASSET	PRICE	QUANTITY	DATE	TIME	TRANSACTION HASH	BLOCK HASH	
		TM4(CUST2)	TM2(CUST1)	BTC	4500	1	2/19/2019	9:15 AM	GHE188E9FB3F73E53B2986	1HQ2ULUD7T5YKALCZ3KM	
		TM3(CUST2)	TM1(CUST1)	BTC	4000	4	2/19/2019	9:10 AM	DAR00362087902188F5101	1E182JRUUBAB21PIXDMMXPF	

STEP 3 - SPECIAL EXCHANGE NETWORK BLOCKCHAIN TRANSACTIONS	
CUST1_BTC	TM3:: 3BTC UTXO → CUST2 SETTLEMENT ADDRESS COINBASE → TM1:: 4BTC UTXO COINBASE → TM2:: 1BTC UTXO
CUST2_BTC	TM1:: 4BTC UTXO → CUST1 SETTLEMENT ADDRESS TM2:: 1BTC UTXO → CUST1 SETTLEMENT ADDRESS COINBASE → TM3:: 3BTC UTXO

FIG. 31B

3104



CUST1-CUST3 NET SETTLEMENT DUE REPORT

CUSTODIAN	CPTY CUSTODIAN	DEBIT CUSTODIAN	ASSET	CUSTODIAN NET SETTLEMENT QUANTITY	EARMARKED TRADERS	QUANTITY	DATE	TIME	TRANSACTION HASH	BLOCK HASH
CUST1	CUST3	CUST1	BTC	0	TMS					
		TOTAL LEDGER SETTLEMENT QUANTITY								
	CUST1_BTC	2								
	EARMARKED ALLOCATIONS	TRADER	AMOUNT	PRICE	UTXOS					
	TRANSACTIONS	TMS(CUST3)		4100	1+1					
		DEBIT TRADERS	CREDIT TRADERS	ASSET	PRICE	QUANTITY	DATE	TIME	TRANSACTION HASH	BLOCK HASH
		TM1(CUST1)	TM3(CUST2)	BTC	4000	2	2/19/2019	9:00 AM	F3188E9FB3F73E538	1H02JLUD75YKAU
		TM4(CUST2)	TM5(CUST3)	BTC	4100	2	2/19/2019	9:15 AM	GHE188E9FB3F73E53	1E82JRUBA621PIX
		TOTAL LEDGER SETTLEMENT QUANTITY								
	CUSTODIAN LEDGER									
	CUST3_BTC	0								
	TRANSACTIONS	DEBIT TRADERS	CREDIT TRADERS	ASSET	QUANTITY	DATE	TIME	TRANSACTION HASH	BLOCK HASH	

STEP 3 – SPECIAL EXCHANGE NETWORK BLOCKCHAIN TRANSACTIONS	
CUST1_BTC	CUST1_BTC TMS: 2 BTC UTXO → CUST3 SETTLEMENT ADDRESS
CUST3_BTC	COINBASE → TMS: 2 BTC UTXO

FIG. 31C

3100 ↗

CUSTODIAN 1 LEDGERS		FUND OWED TO CUSTODIAN 2
CUST1_USD		500
CUST1_BTC		5
CUST1_ETH		2

CUSTODIAN 2 LEDGERS		FUND OWED TO CUSTODIAN 1
CUST2_USD		1000
CUST2_BTC		10

NET SETTLEMENT AMOUNT:

CURRENCY OWED	SETTLEMENT AMOUNT
CUST2 TO CUST1 (USD)	500
CUST2 TO CUST1 (BTC)	5
CUST1 TO CUST2 (ETH)	2

FIG. 31D

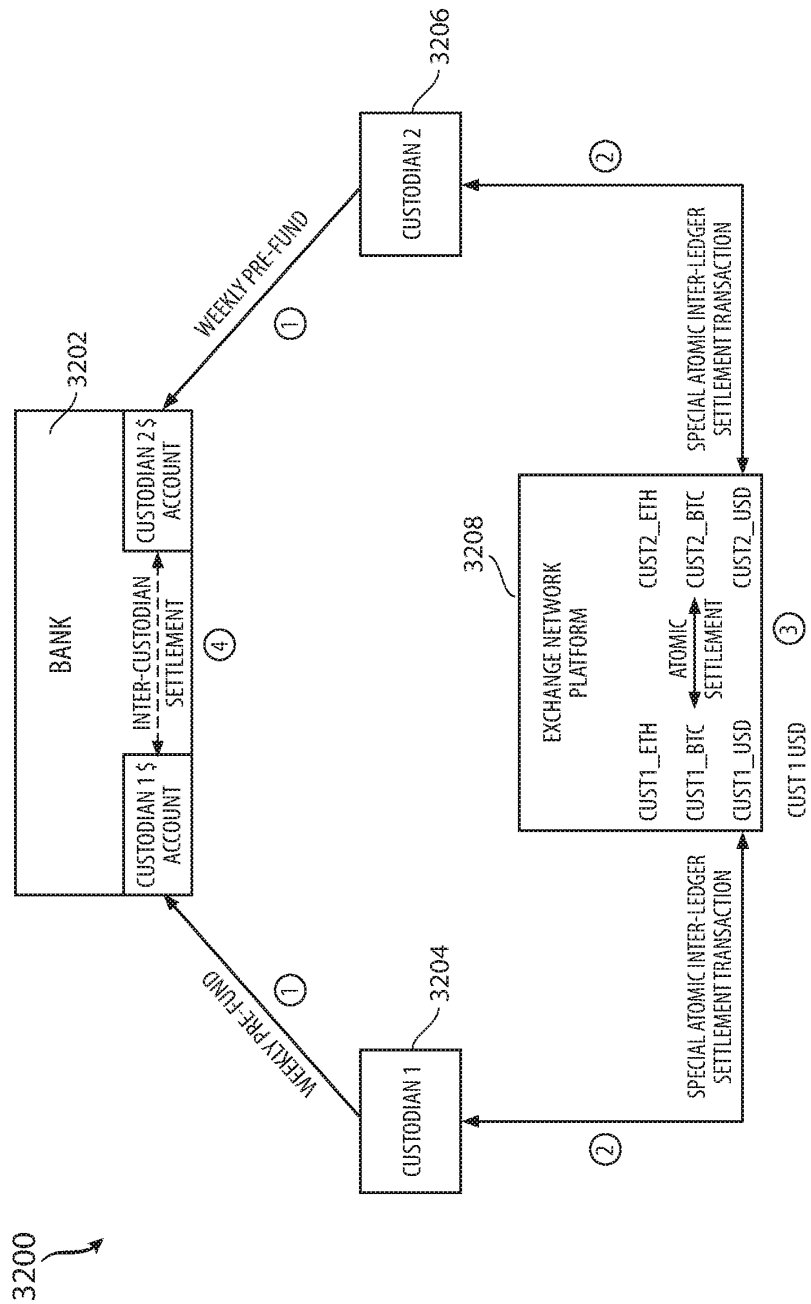


FIG. 32

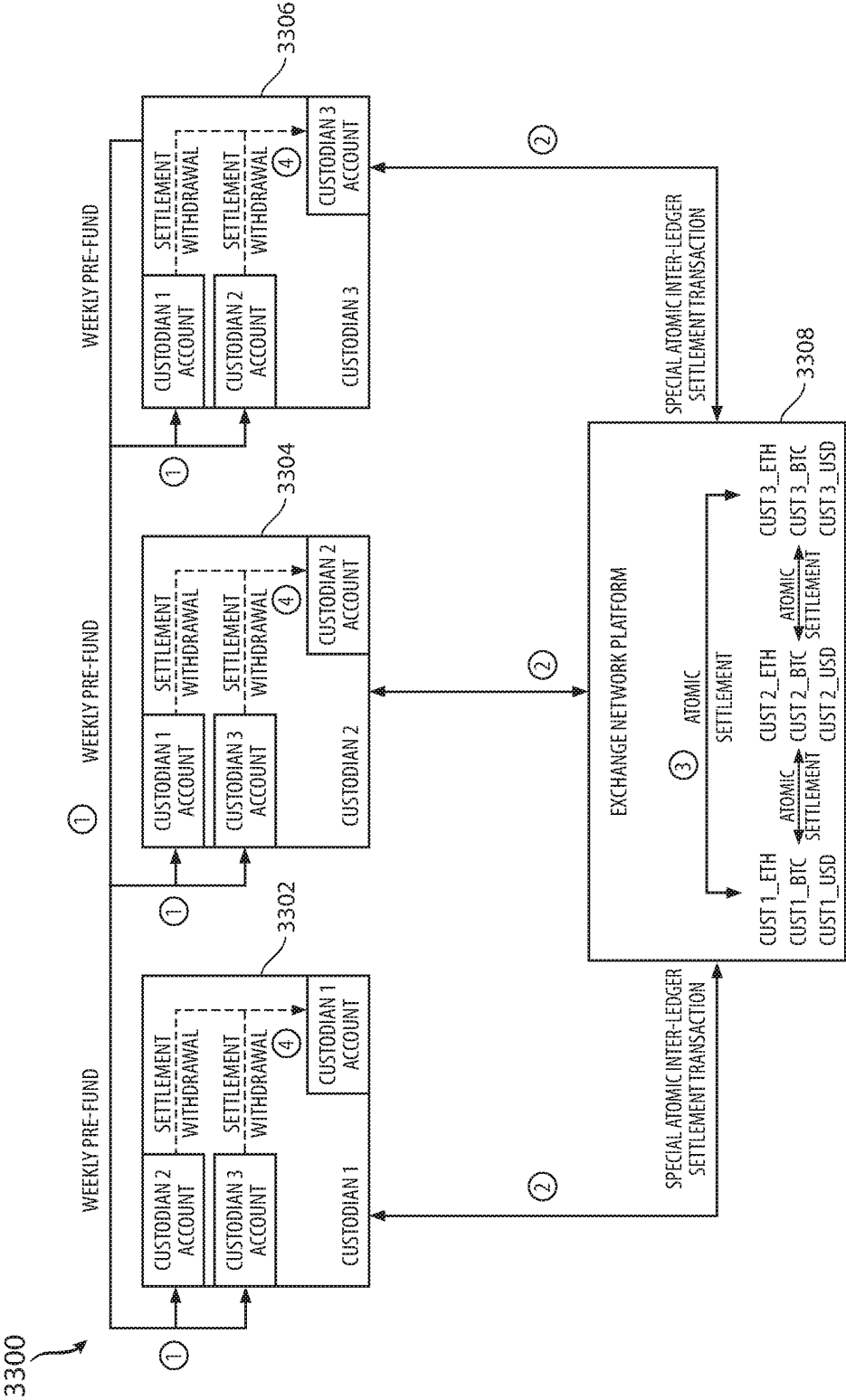


FIG. 33

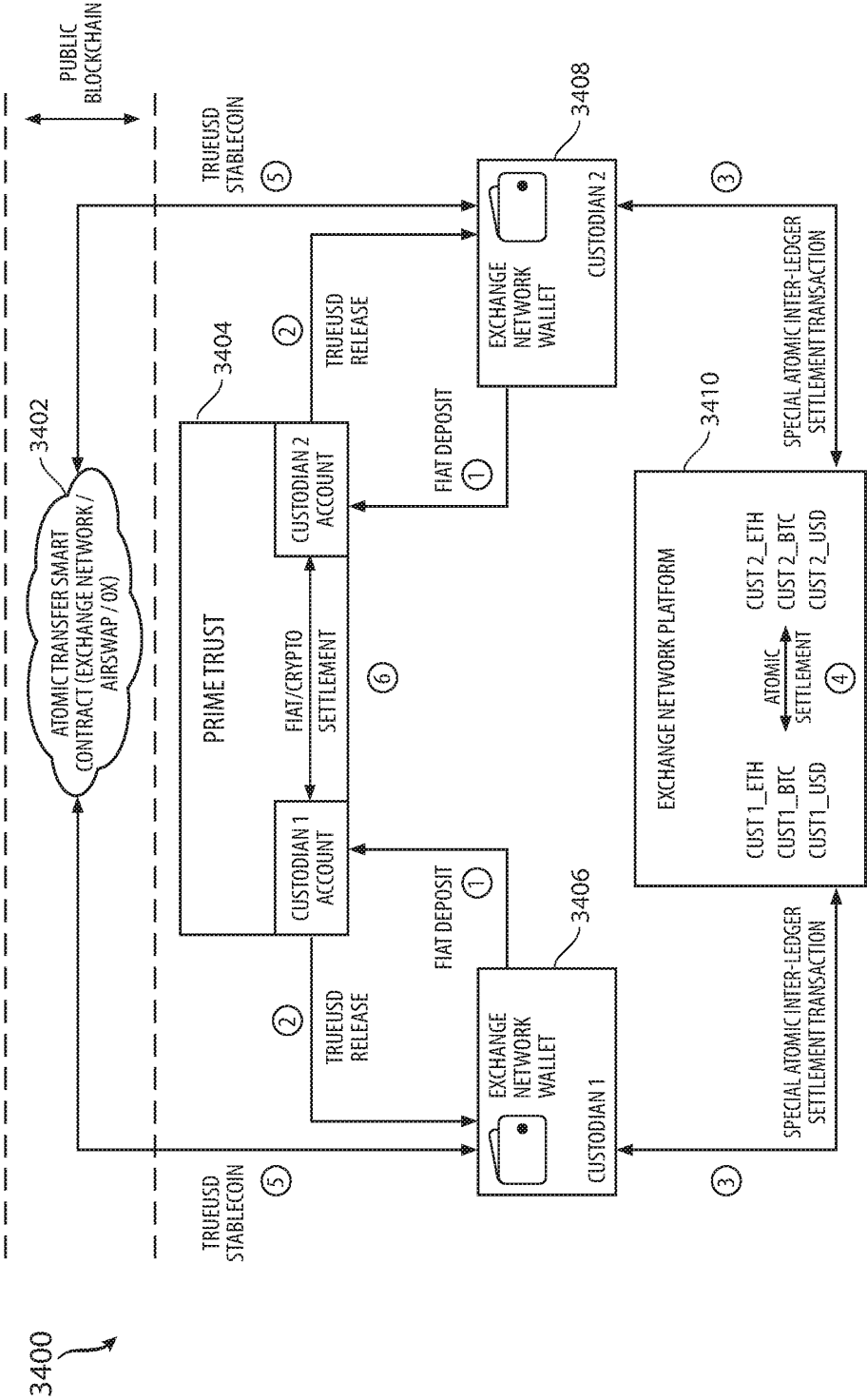


FIG. 34

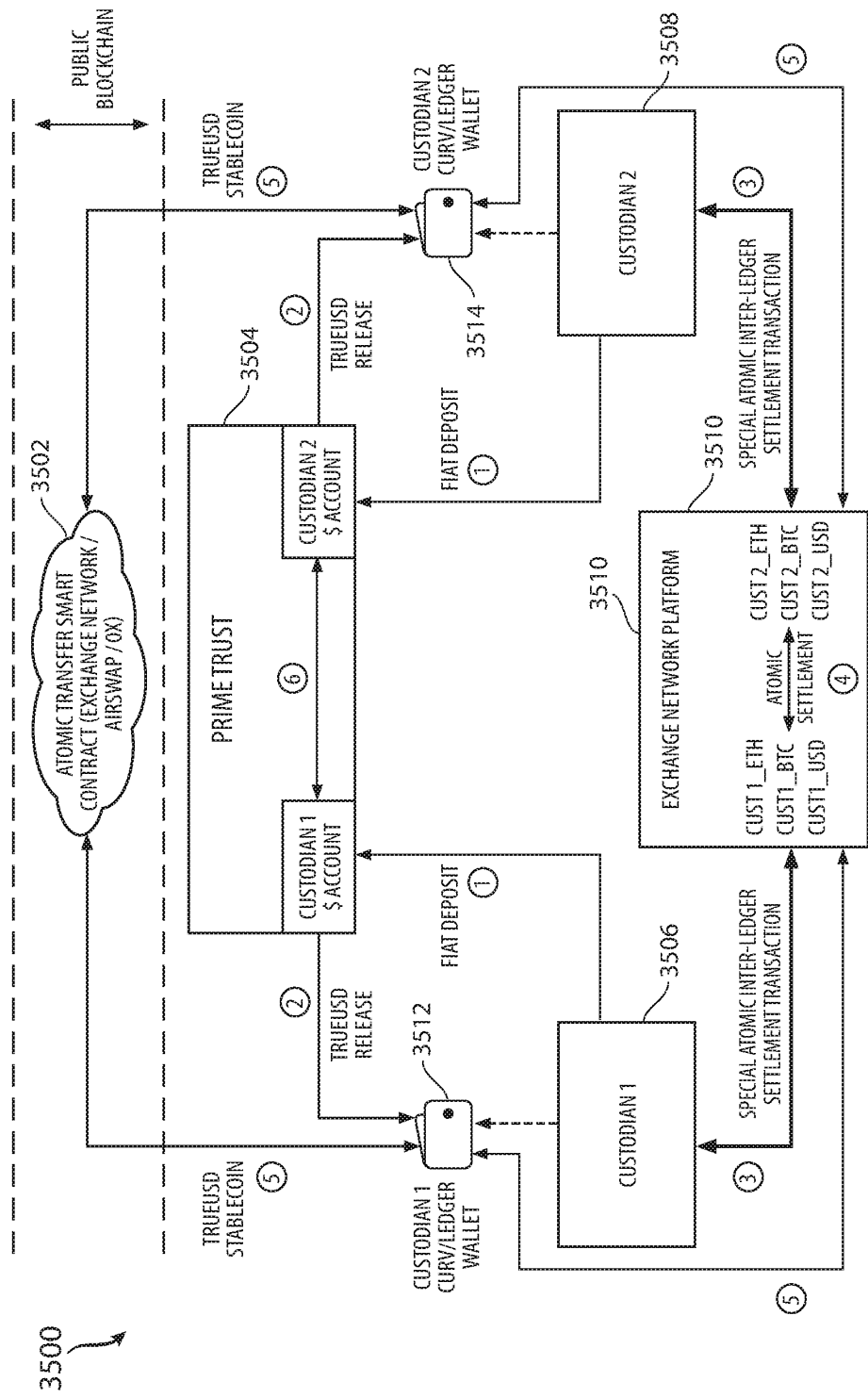
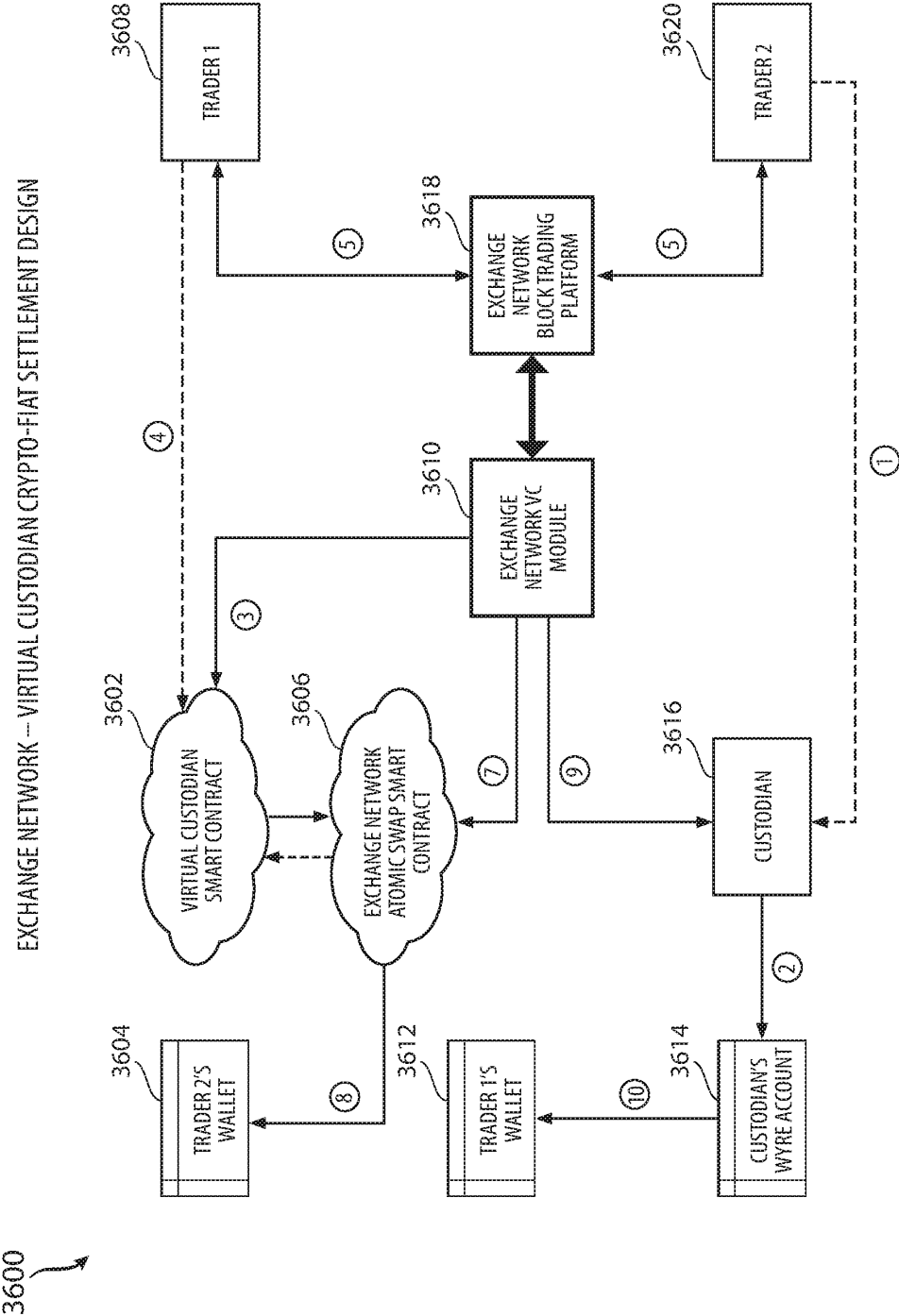


FIG. 35



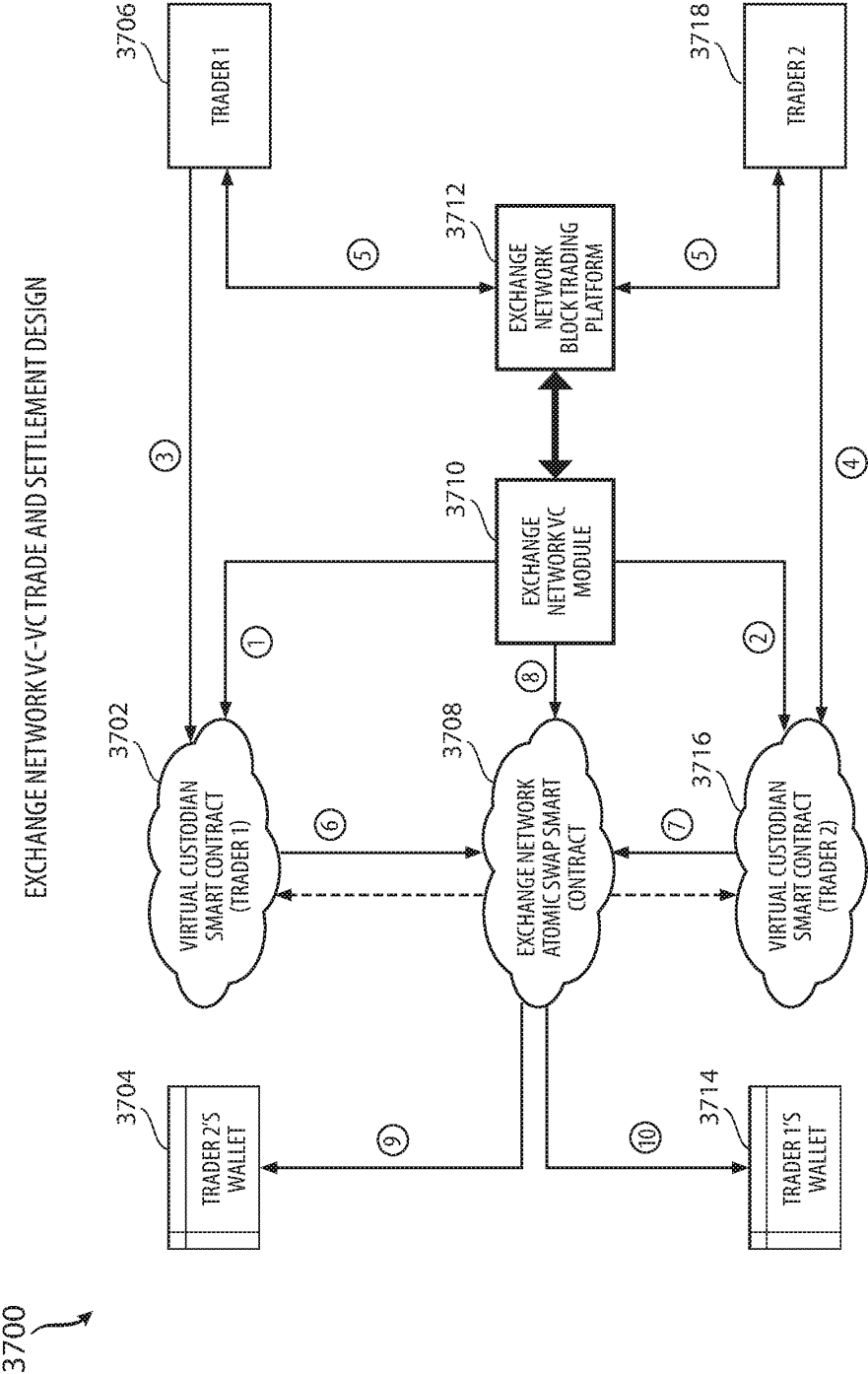


FIG. 37

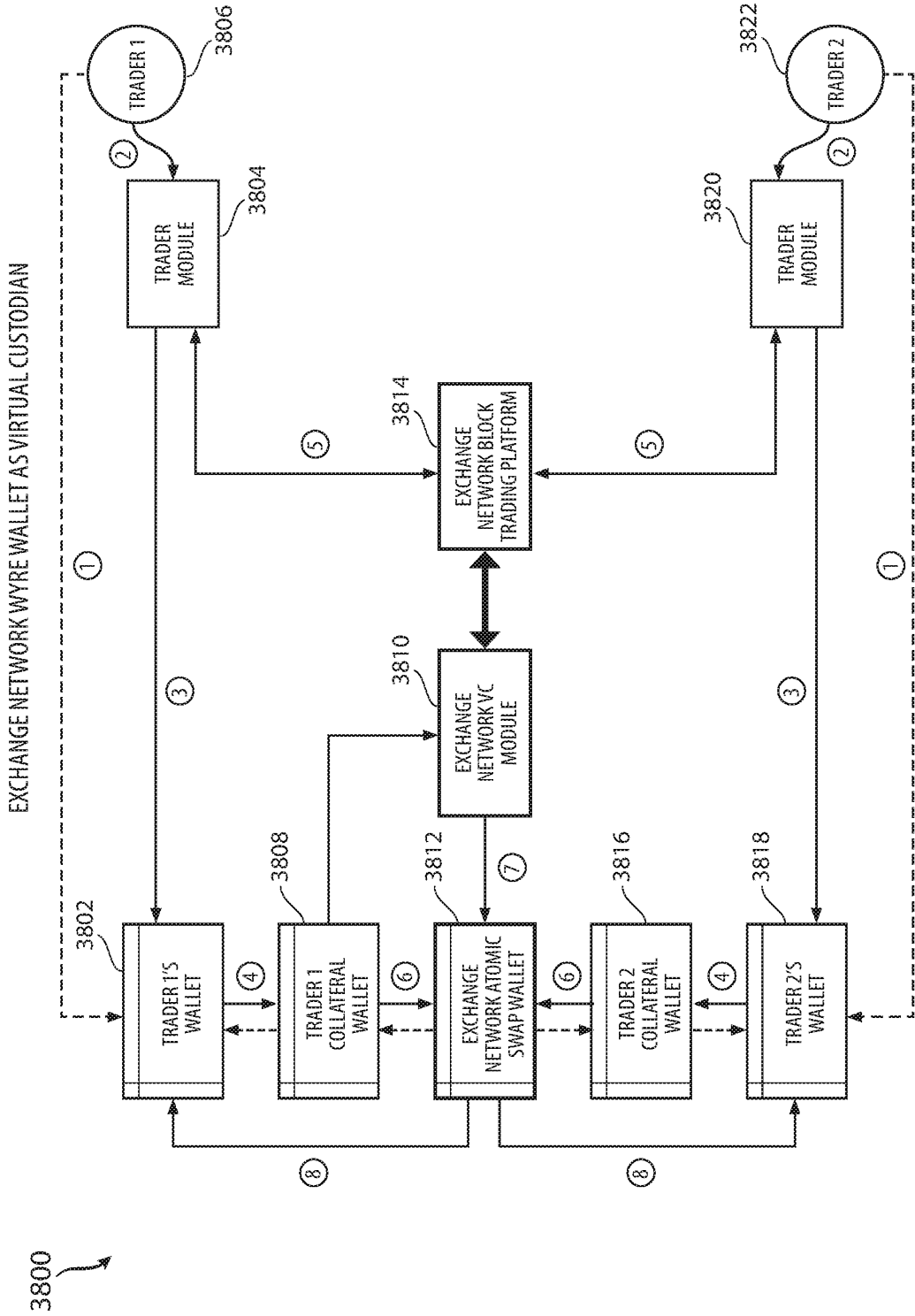


FIG. 38

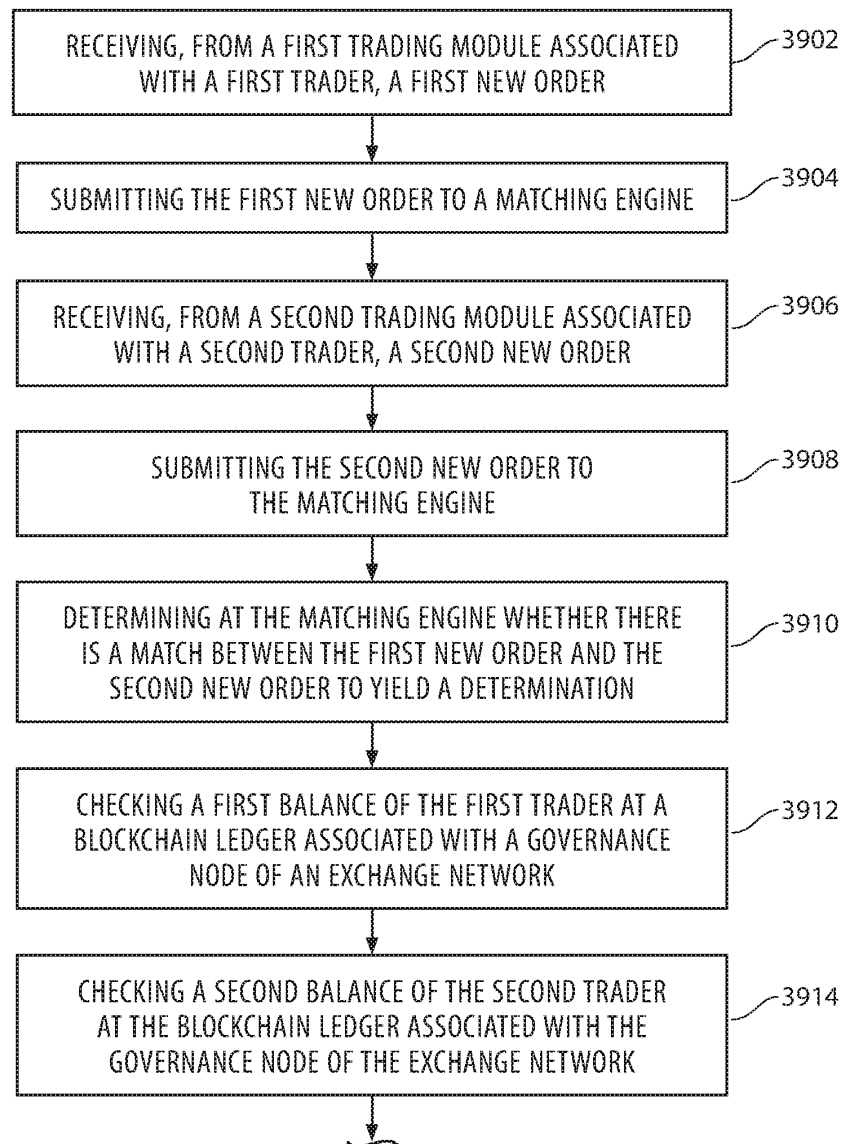
3900
↓

FIG. 39

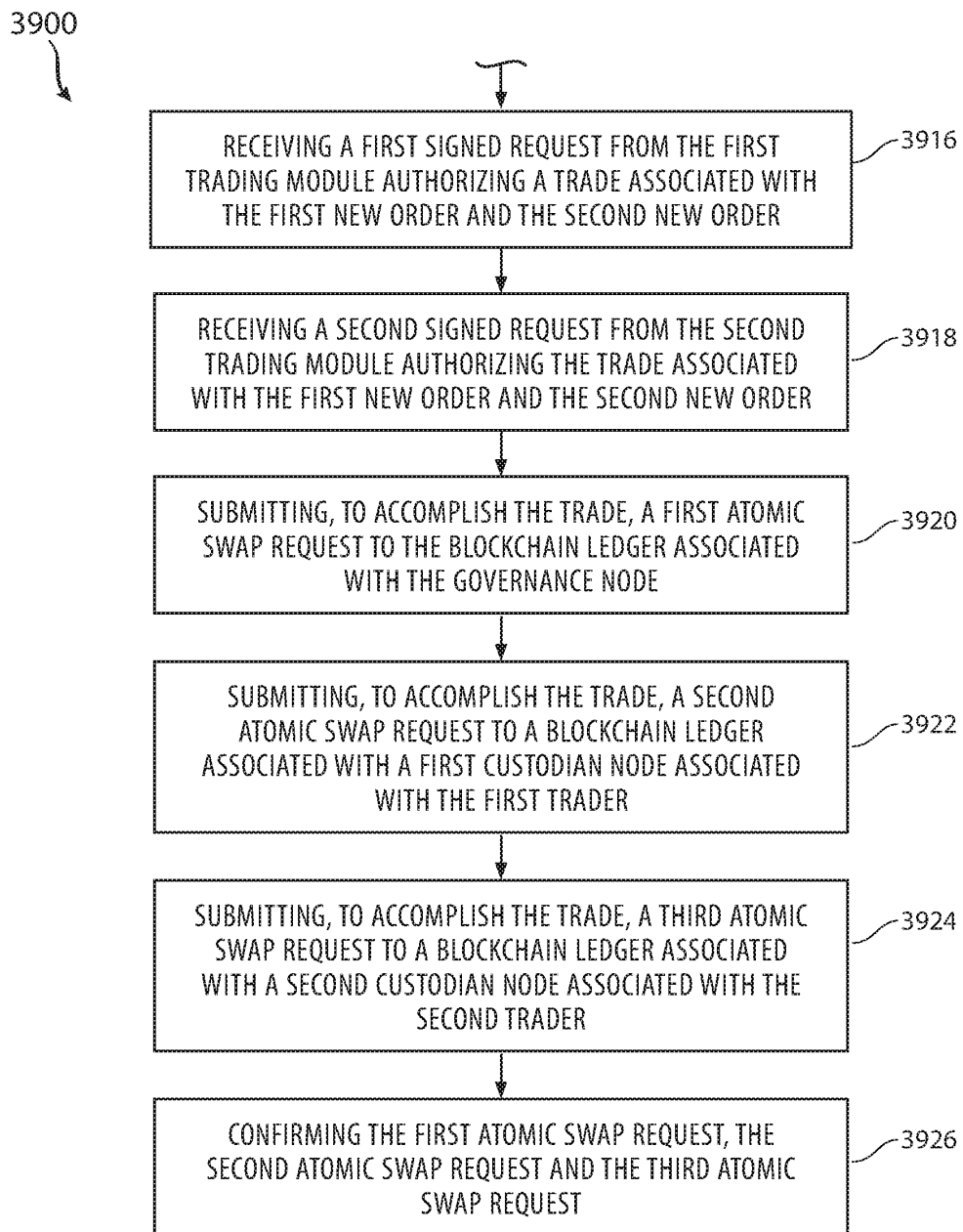


FIG. 39 (Continued)