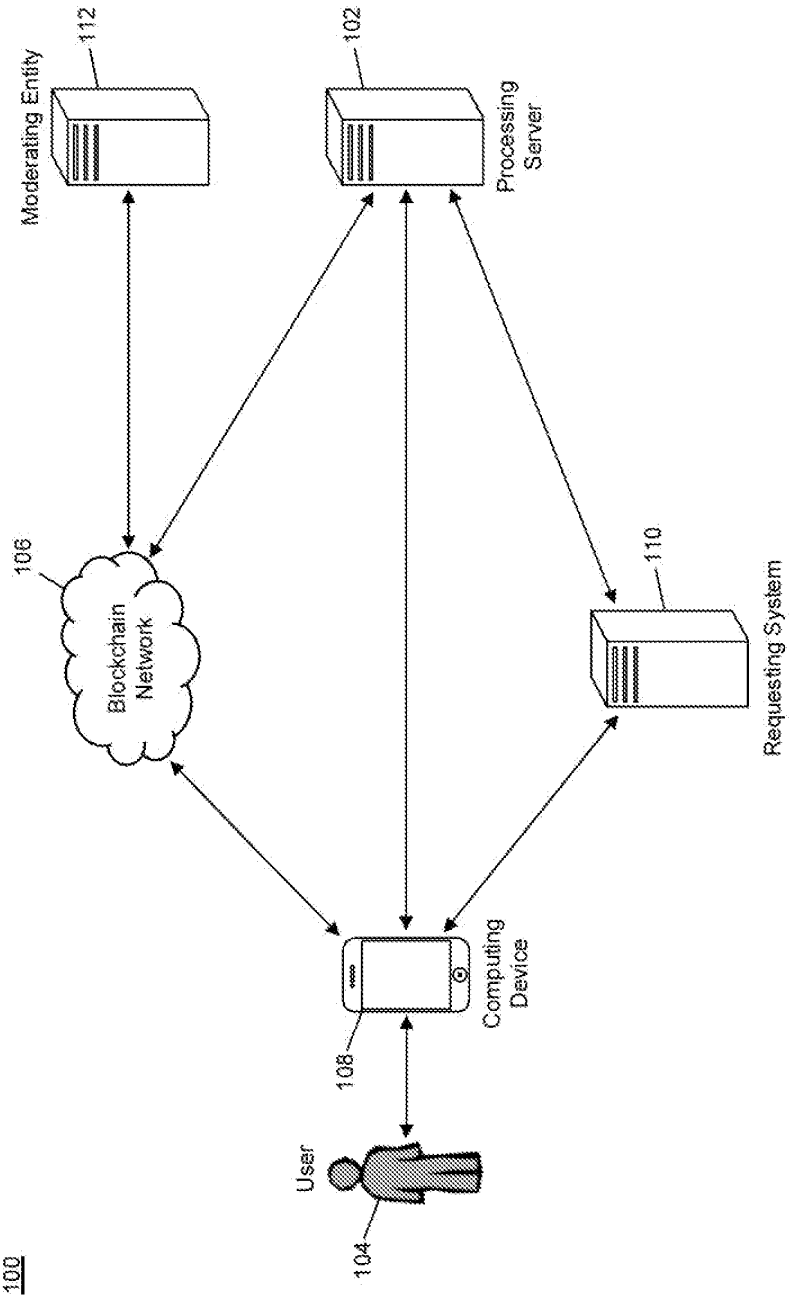

100
Moderating Entity
112
Processing Server
102
Blockchain Network
106
Requesting System
110
Computing Device
108
User
104

FIG. 1

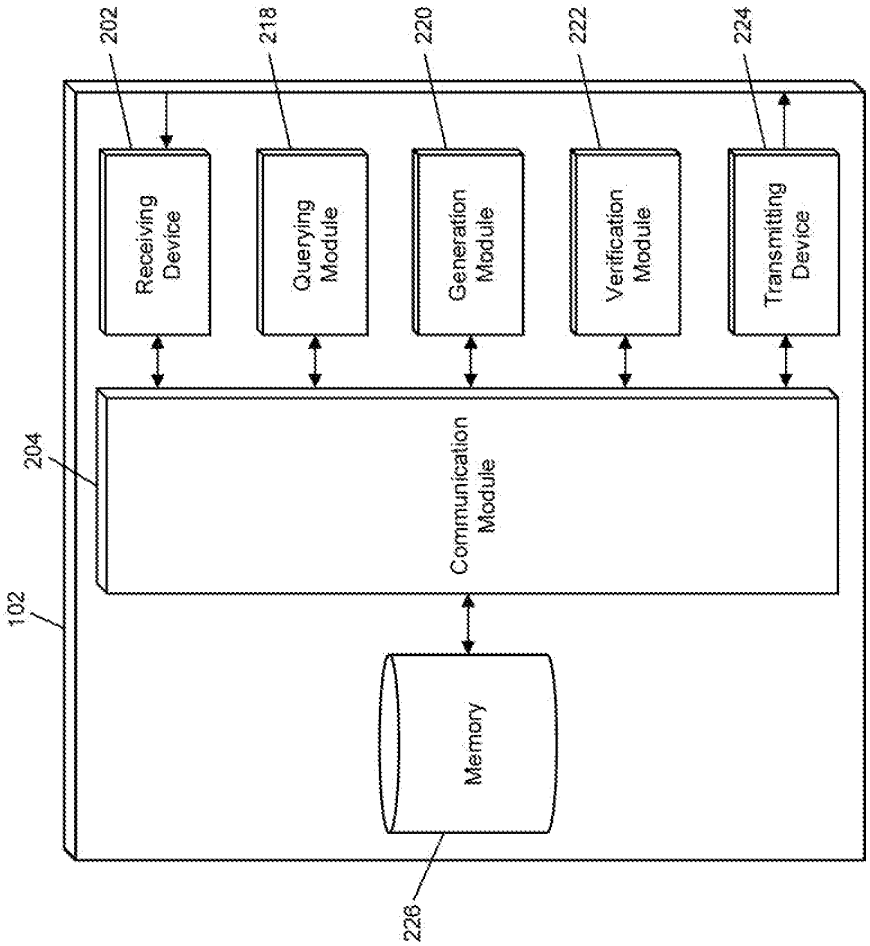

202
218
220
222
224
Receiving Device
Querying Module
Generation Module
Verification Module
Transmitting Device
204
Communication Module
102
Memory
226

FIG. 2

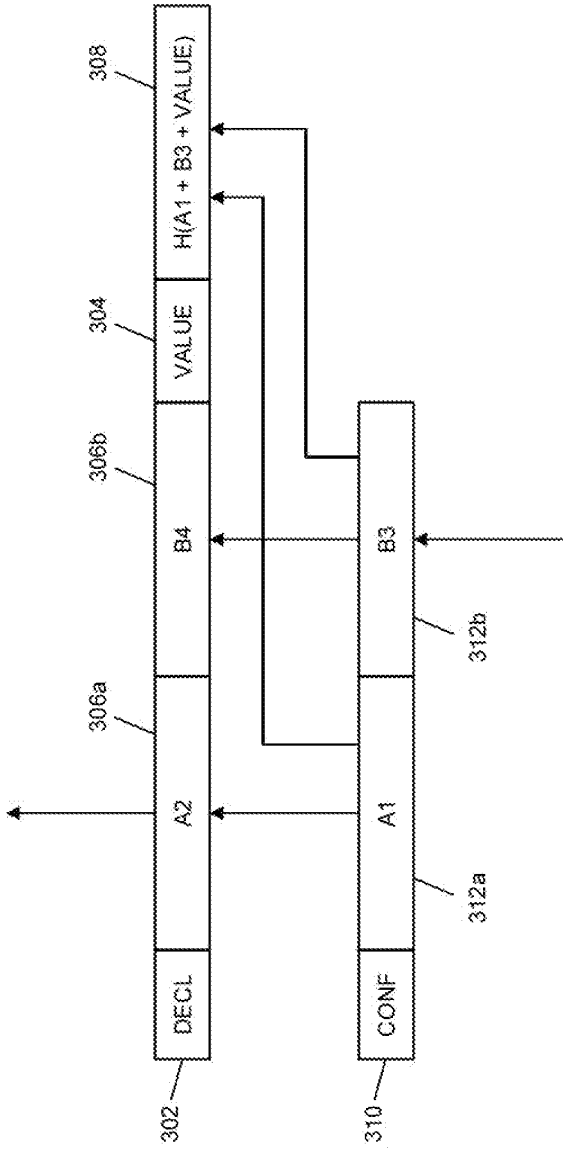

308
H(A1 + B3 + VALUE)
304
VALUE
306b
B4
B3
312b
306a
A2
A1
312a
DECL
CONF
302
310

FIG. 3

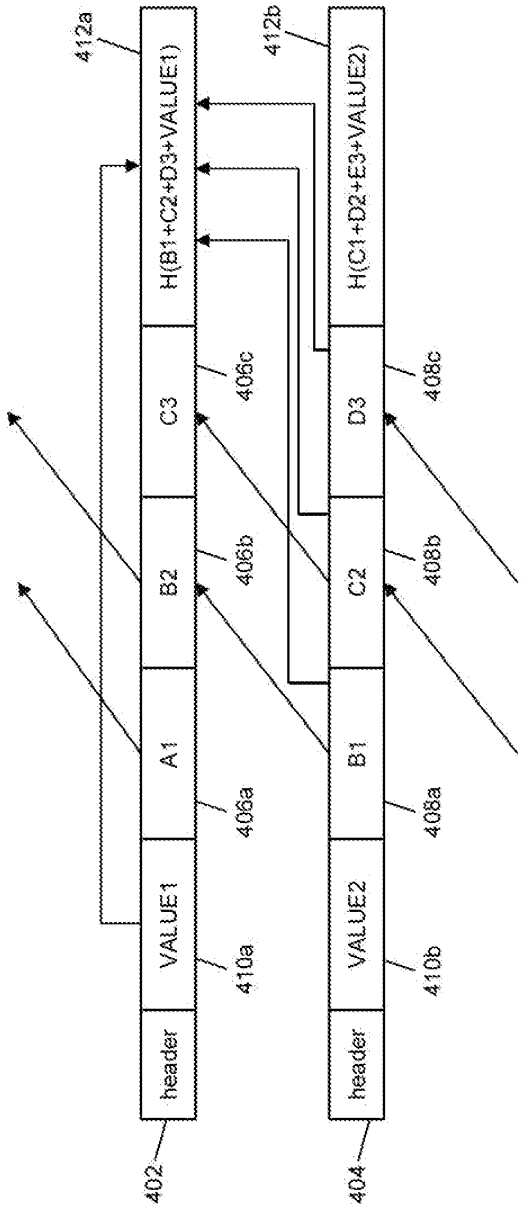

412a
412b
H(B1+C2+D3+VALUE1)
H(C1+D2+E3+VALUE2)
C3
D3
406c
408c
B2
C2
406b
408b
A1
B1
406a
408a
VALUE1
VALUE2
410a
410b
header
header
402
404

FIG. 4

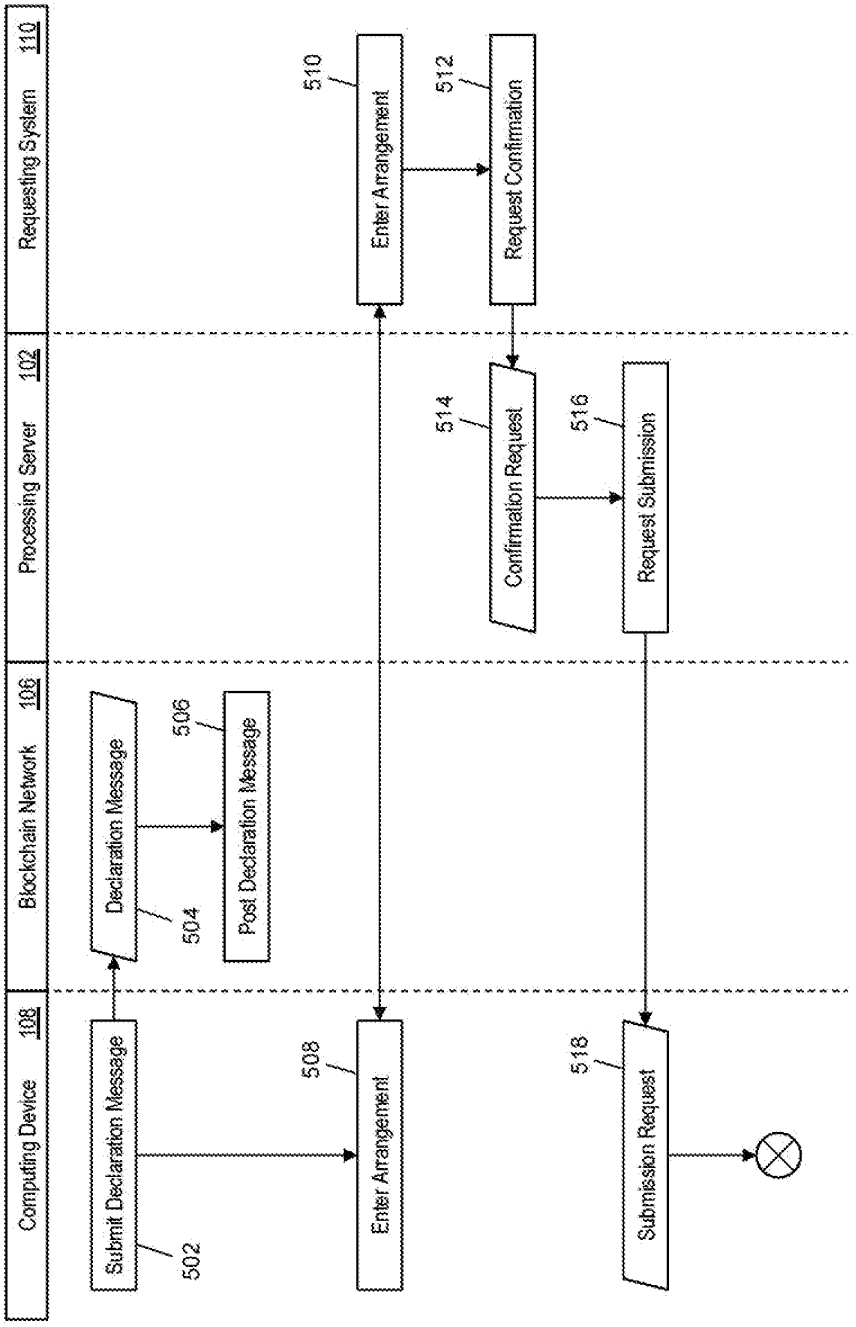

Computing Device 108
Blockchain Network 106
Processing Server 102
Requesting System 110
Submit Declaration Message
502
Declaration Message
504
Post Declaration Message
506
Enter Arrangement
508
Enter Arrangement
510
Request Confirmation
512
Confirmation Request
514
Request Submission
516
Submission Request
518

FIG. 5A

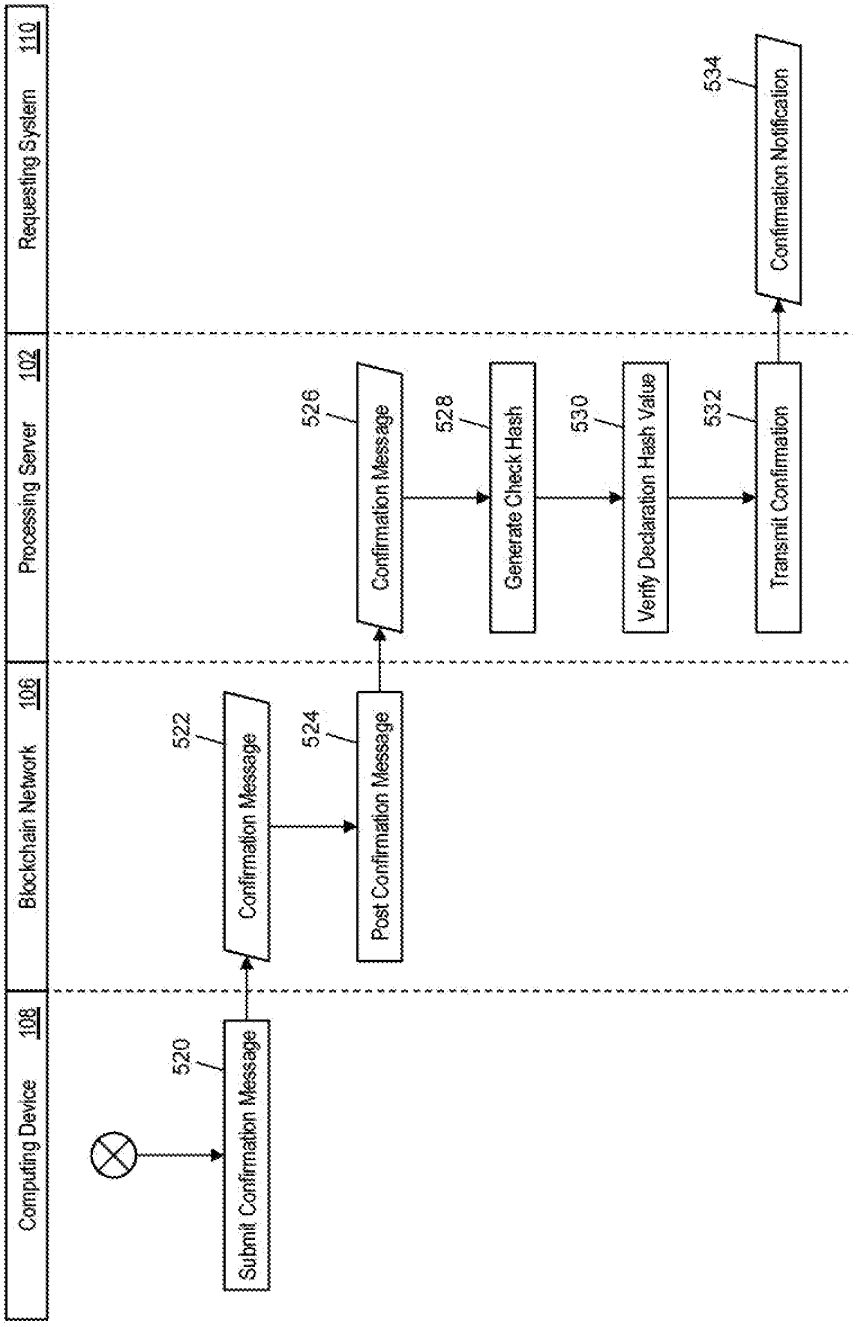

Computing Device 108
Blockchain Network 106
Processing Server 102
Requesting System 110
520
Submit Confirmation Message
522
Confirmation Message
524
Post Confirmation Message
526
Confirmation Message
528
Generate Check Hash
530
Verify Declaration Hash Value
532
Transmit Confirmation
534
Confirmation Notification

FIG. 5B

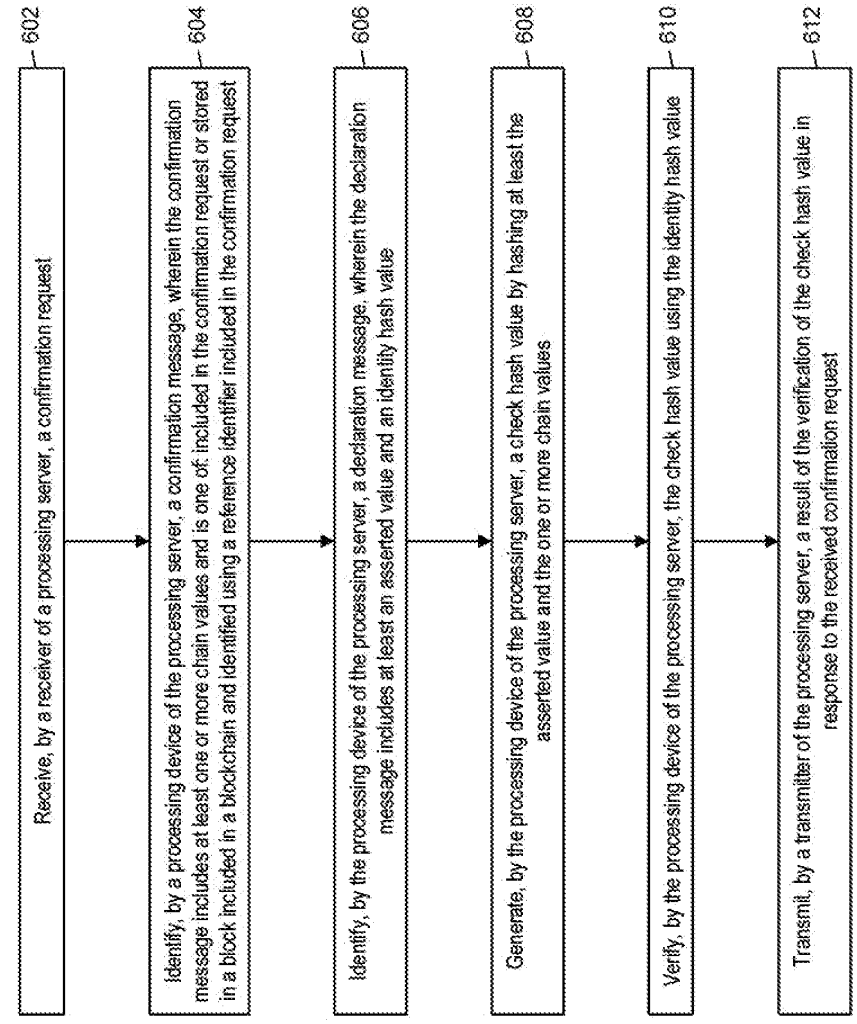

600
602
Receive, by a receiver of a processing server, a confirmation request
604
Identify, by a processing device of the processing server, a confirmation message, wherein the confirmation message includes at least one or more chain values and is one of: included in the confirmation request or stored in a block included in a blockchain and identified using a reference identifier included in the confirmation request
606
Identify, by the processing device of the processing server, a declaration message, wherein the declaration message includes at least an asserted value and an identity hash value
608
Generate, by the processing device of the processing server, a check hash value by hashing at least the asserted value and the one or more chain values
610
Verify, by the processing device of the processing server, the check hash value using the identity hash value
612
Transmit, by a transmitter of the processing server, a result of the verification of the check hash value in response to the received confirmation request

FIG. 6

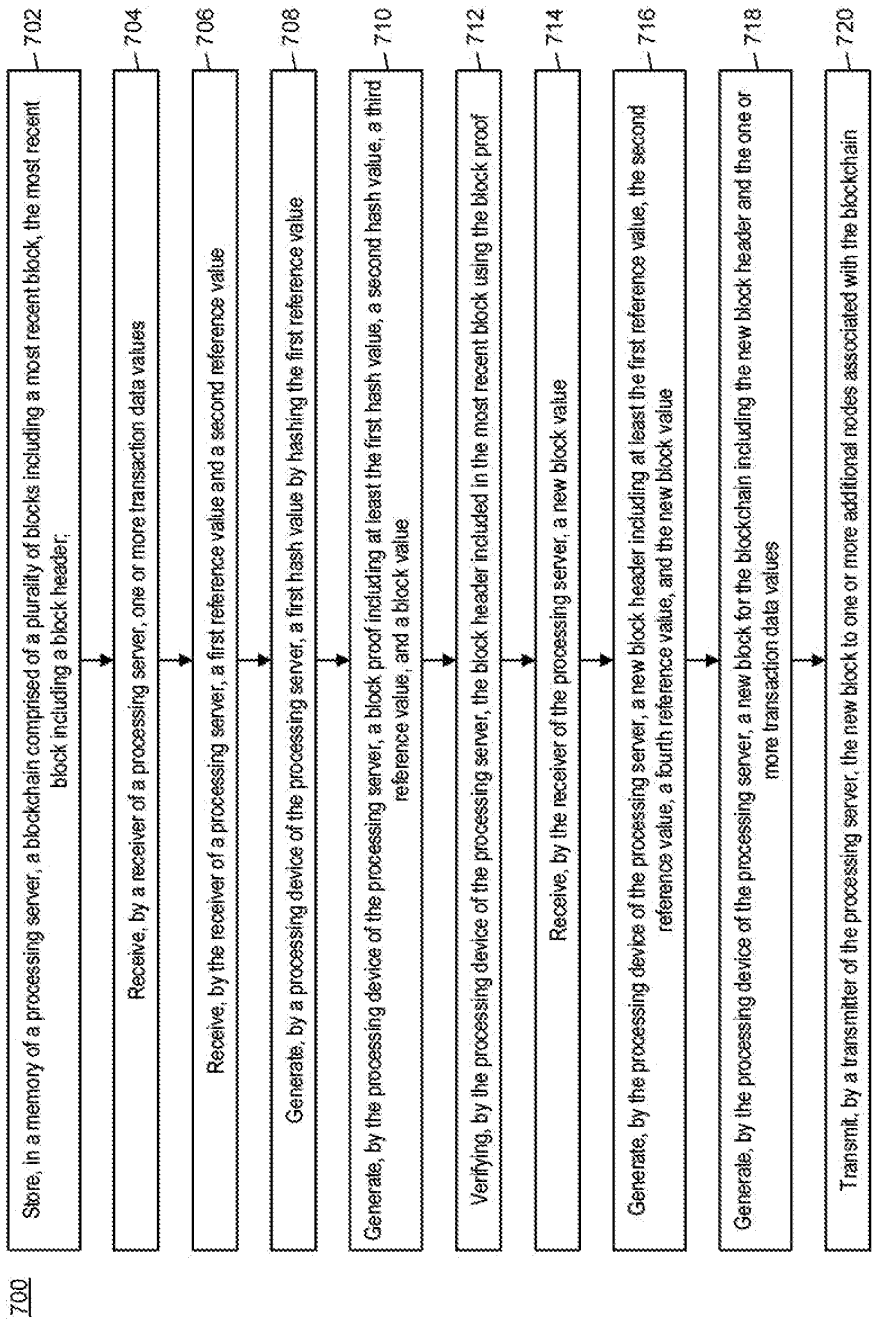

700
Store, in a memory of a processing server, a blockchain comprised of a plurality of blocks including a most recent block, the most recent block including a block header;
702
Receive, by a receiver of a processing server, one or more transaction data values
704
Receive, by the receiver of a processing server, a first reference value and a second reference value
706
Generate, by a processing device of the processing server, a first hash value by hashing the first reference value
708
Generate, by the processing device of the processing server, a block proof including at least the first hash value, a second hash value, a third reference value, and a block value
710
Verifying, by the processing device of the processing server, the block header included in the most recent block using the block proof
712
Receive, by the receiver of the processing server, a new block value
714
Generate, by the processing device of the processing server, a new block header including at least the first reference value, the second reference value, a fourth reference value, and the new block value
716
Generate, by the processing device of the processing server, a new block for the blockchain including the new block header and the one or more transaction data values
718
Transmit, by a transmitter of the processing server, the new block to one or more additional nodes associated with the blockchain
720

FIG. 7

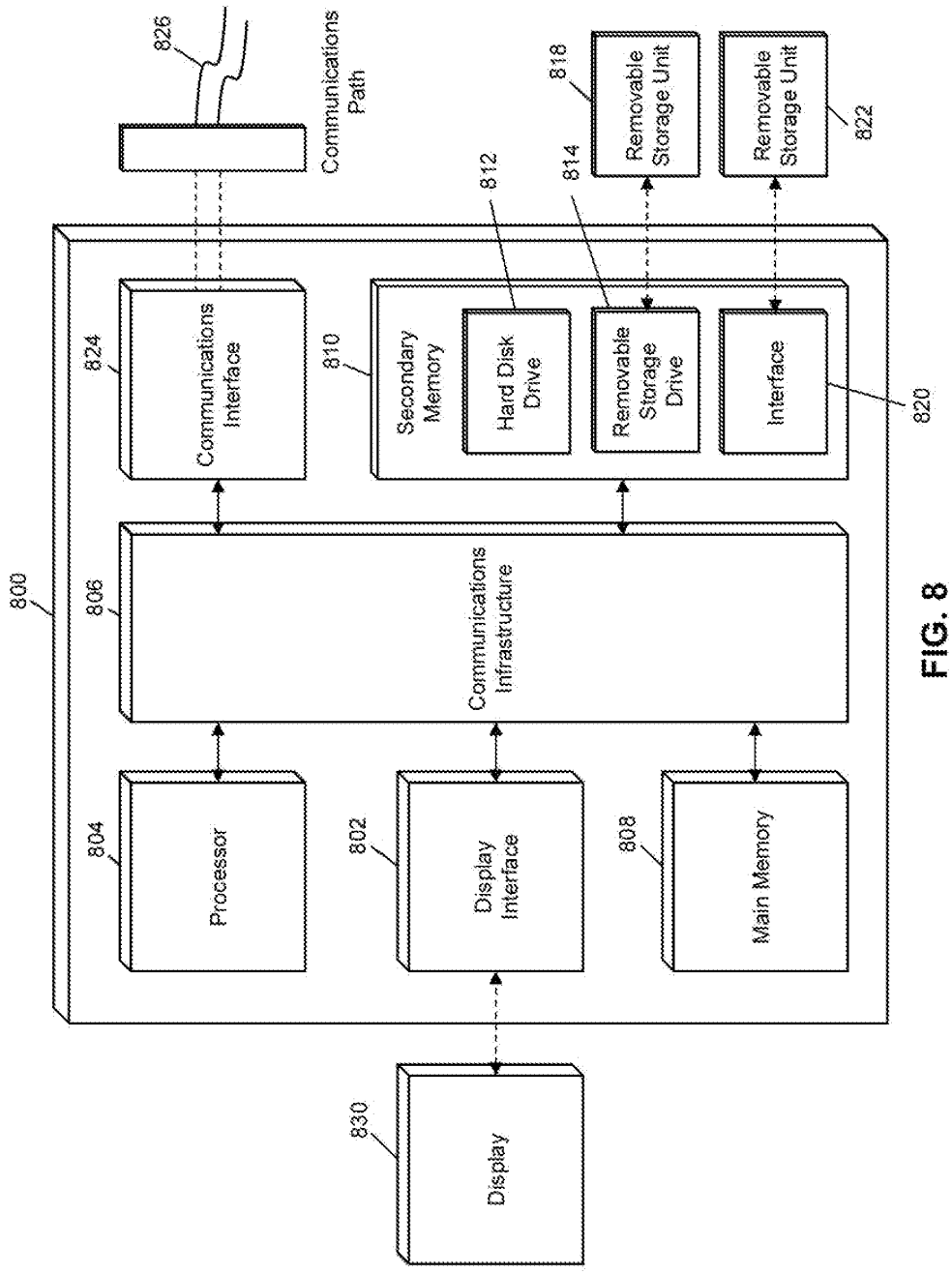

826
Communications Path
818
Removable Storage Unit
822
Removable Storage Unit
812
814
824
Communications Interface
810
Secondary Memory
Hard Disk Drive
Removable Storage Drive
Interface
820
800
806
Communications Infrastructure
804
Processor
802
Display Interface
808
Main Memory
830
Display

FIG. 8