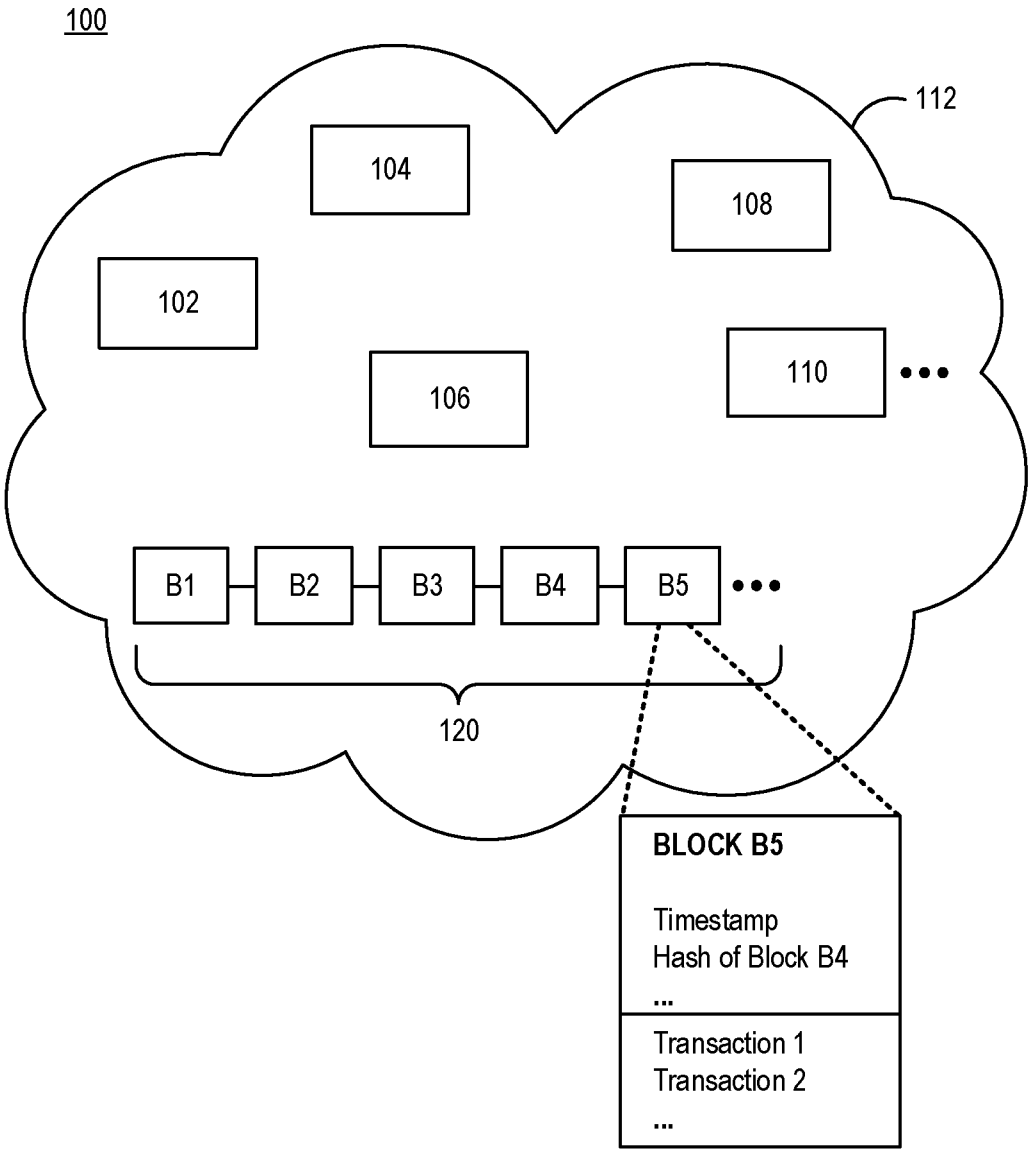

100
112
104
108
102
106
110
B1
B2
B3
B4
B5
120
BLOCK B5
Timestamp
Hash of Block B4
...
Transaction 1
Transaction 2
...

FIG. 1

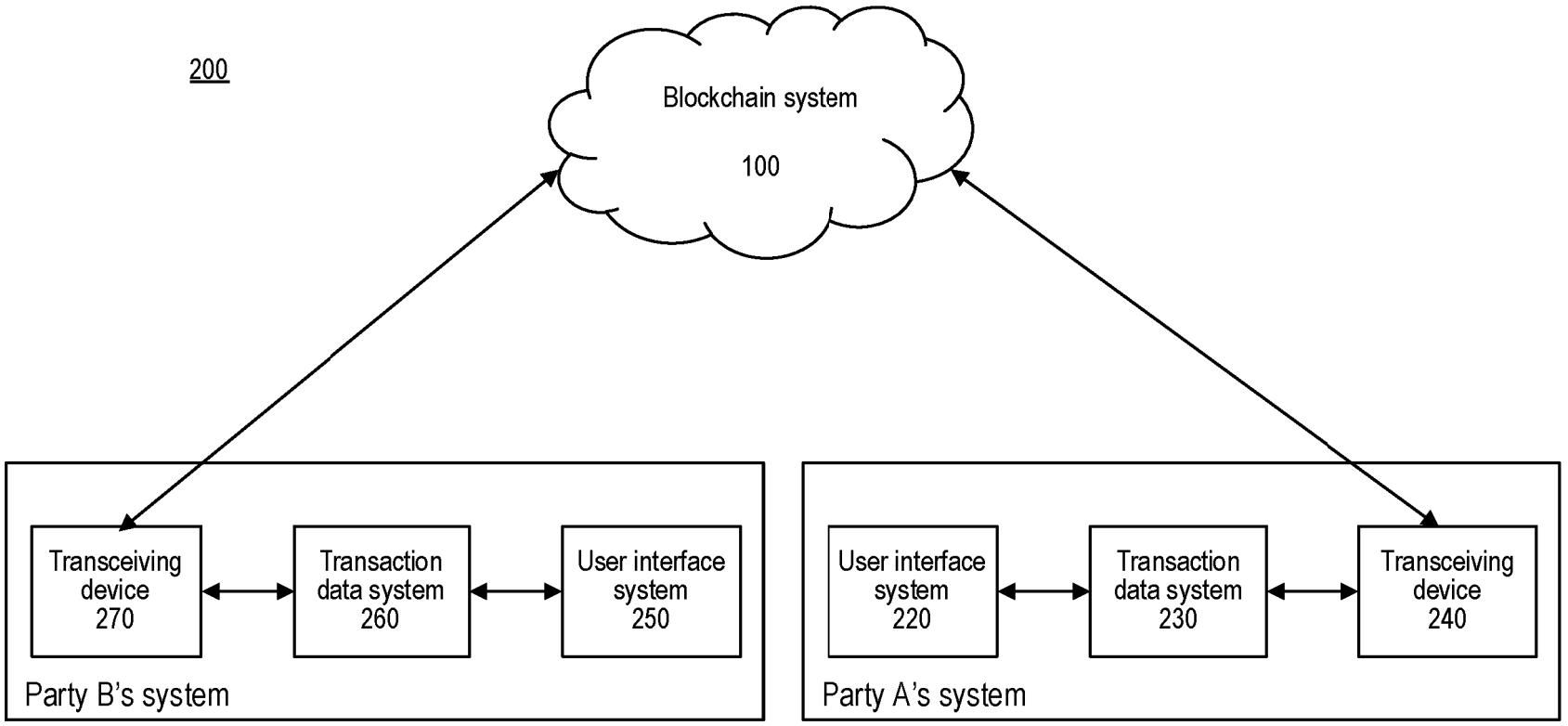

200
Blockchain system
100
Transceiving device 270
Transaction data system 260
User interface system 250
Party B's system
User interface system 220
Transaction data system 230
Transceiving device 240
Party A's system

FIG. 2

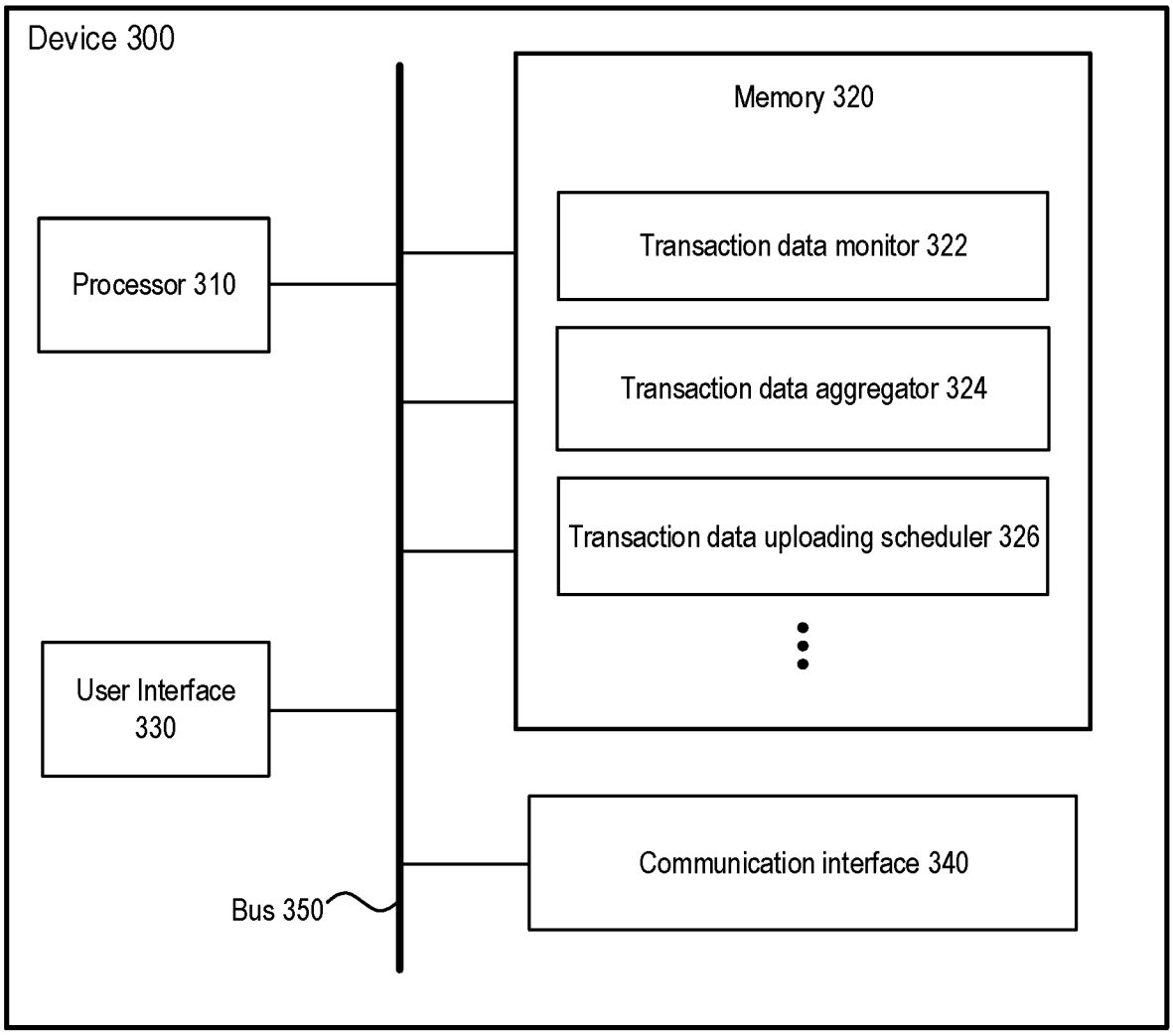

Device 300
Memory 320
Transaction data monitor 322
Processor 310
Transaction data aggregator 324
Transaction data uploading scheduler 326
User Interface 330
Communication interface 340
Bus 350

FIG. 3

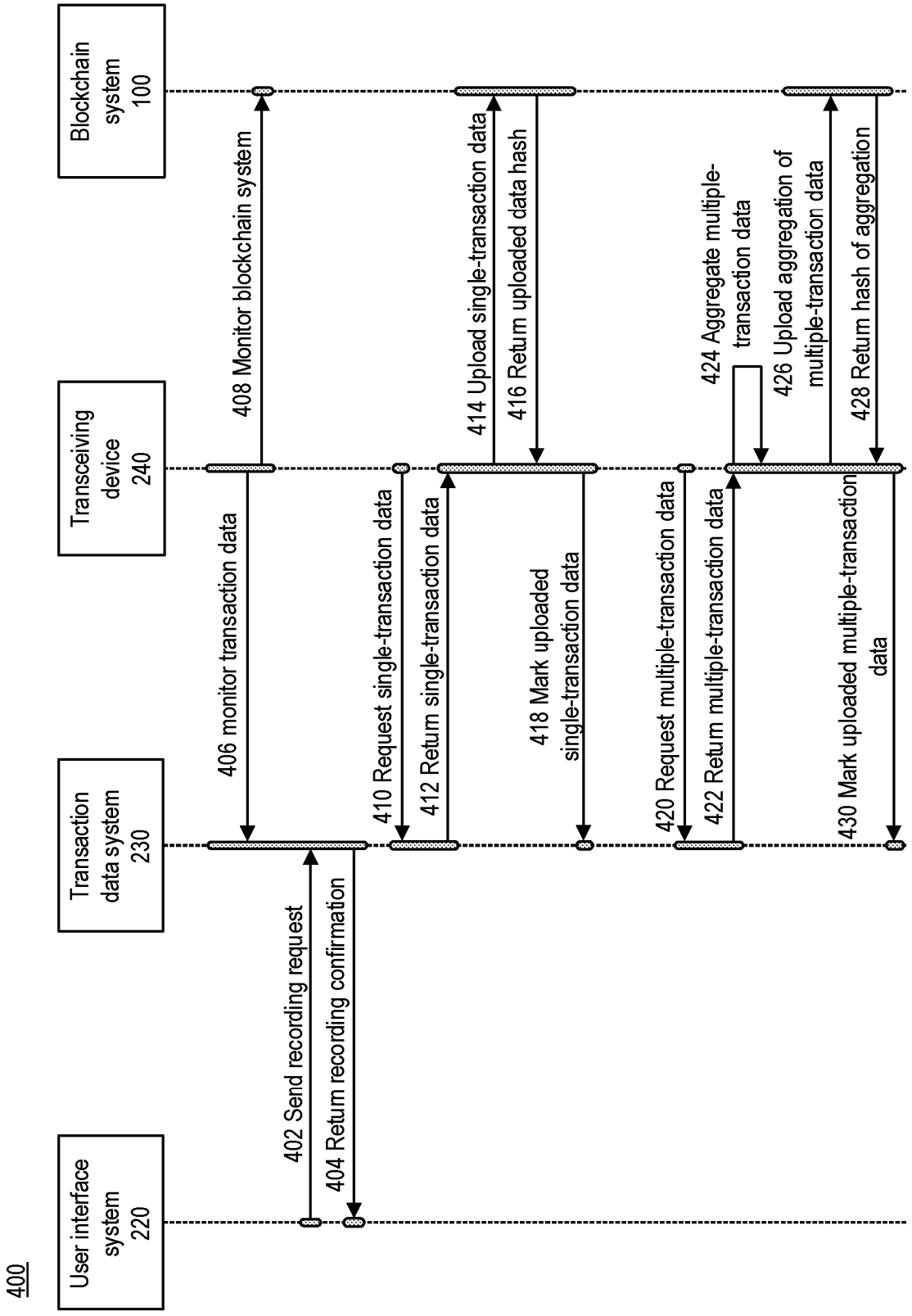

400
User interface system 220
Transaction data system 230
Transceiving device 240
Blockchain system 100
402 Send recording request
404 Return recording confirmation
406 monitor transaction data
408 Monitor blockchain system
410 Request single-transaction data
412 Return single-transaction data
414 Upload single-transaction data
416 Return uploaded data hash
418 Mark uploaded single-transaction data
420 Request multiple-transaction data
422 Return multiple-transaction data
424 Aggregate multiple-transaction data
426 Upload aggregation of multiple-transaction data
428 Return hash of aggregation
430 Mark uploaded multiple-transaction data

FIG. 4

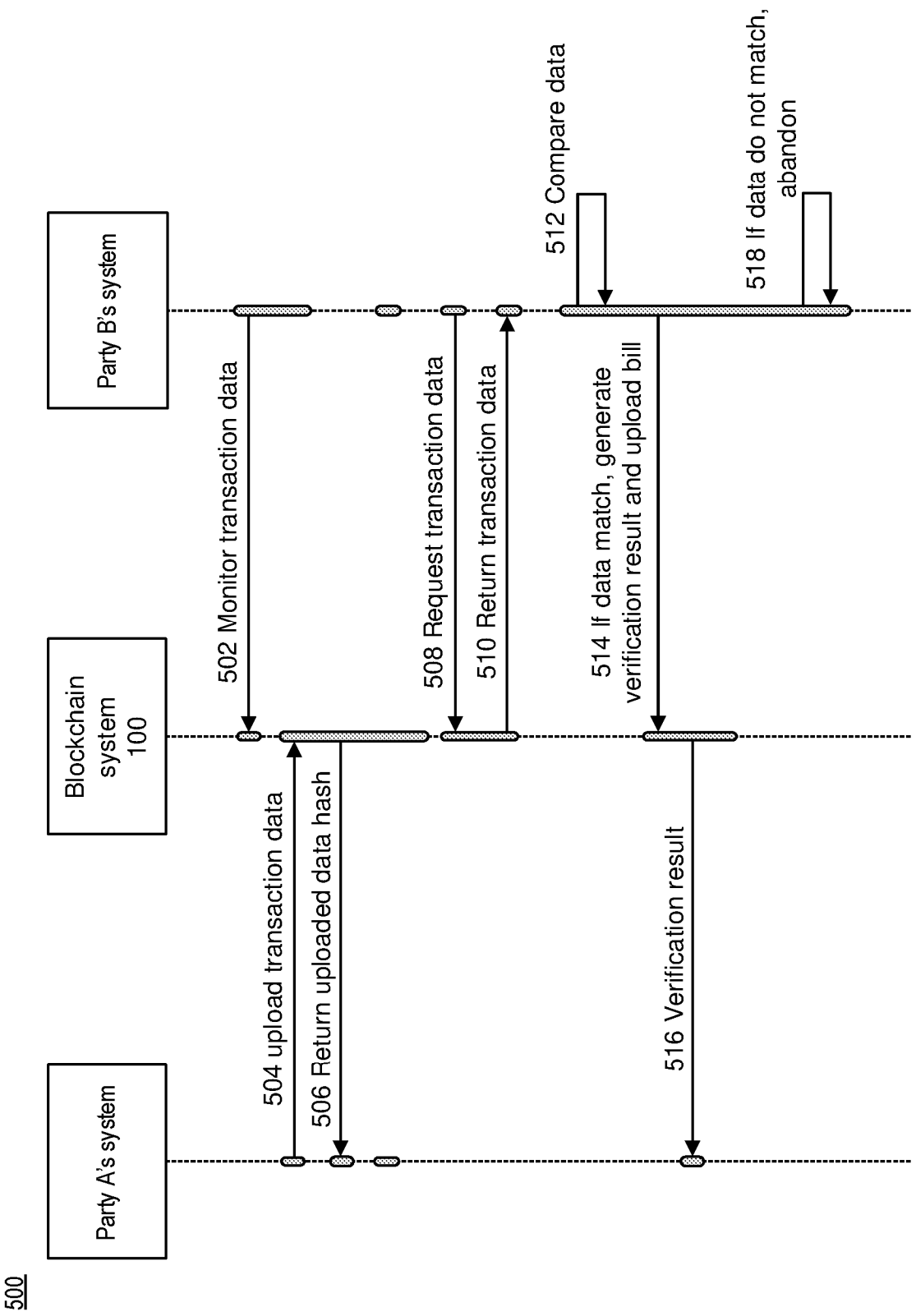

500
Party A's system
Blockchain system 100
Party B's system
504 upload transaction data
506 Return uploaded data hash
502 Monitor transaction data
508 Request transaction data
510 Return transaction data
512 Compare data
514 If data match, generate verification result and upload bill
516 Verification result
518 If data do not match, abandon

FIG. 5

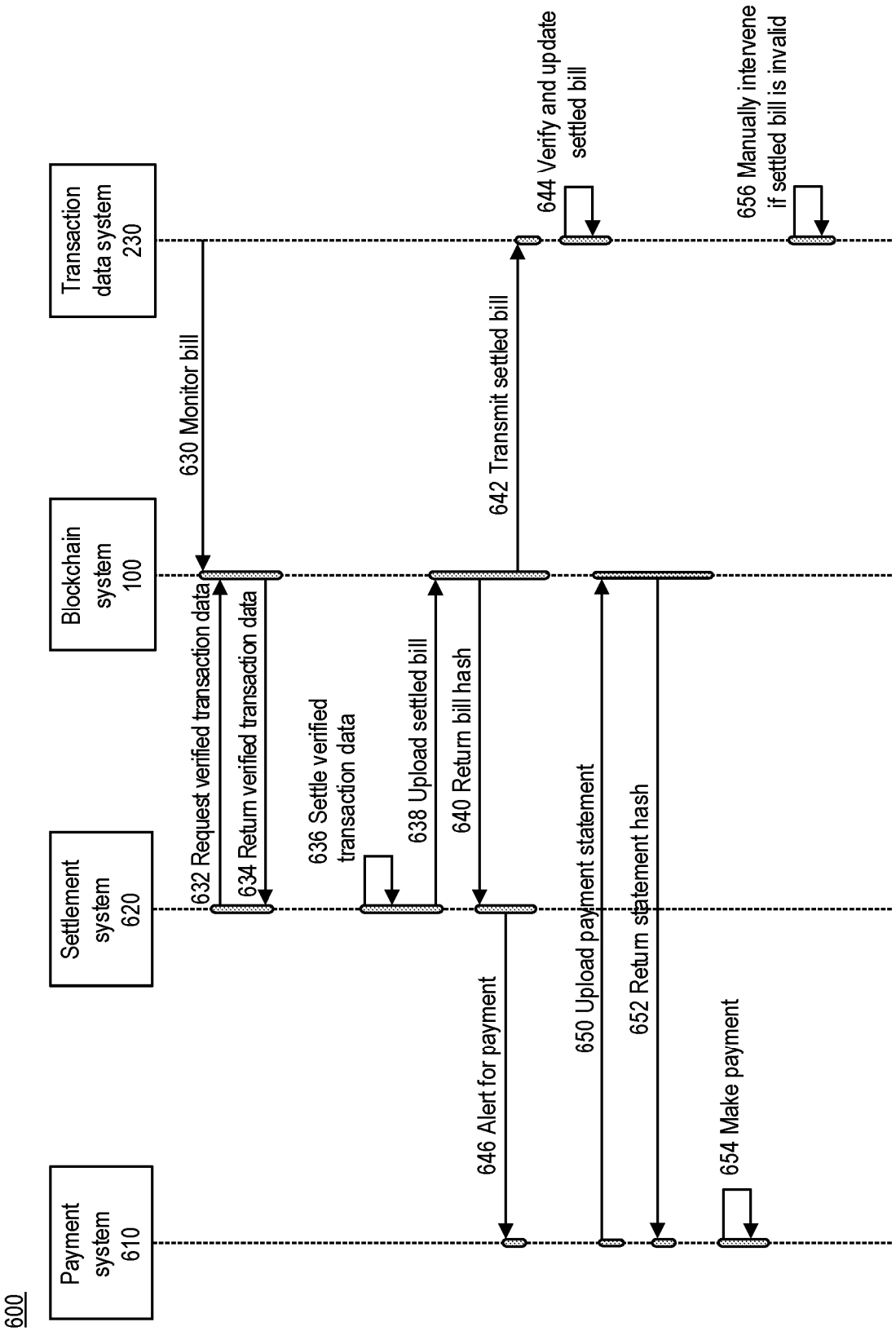

600
Payment system 610
Settlement system 620
Blockchain system 100
Transaction data system 230
630 Monitor bill
632 Request verified transaction data
634 Return verified transaction data
636 Settle verified transaction data
638 Upload settled bill
640 Return bill hash
642 Transmit settled bill
644 Verify and update settled bill
646 Alert for payment
650 Upload payment statement
652 Return statement hash
654 Make payment
656 Manually intervene if settled bill is invalid

FIG. 6

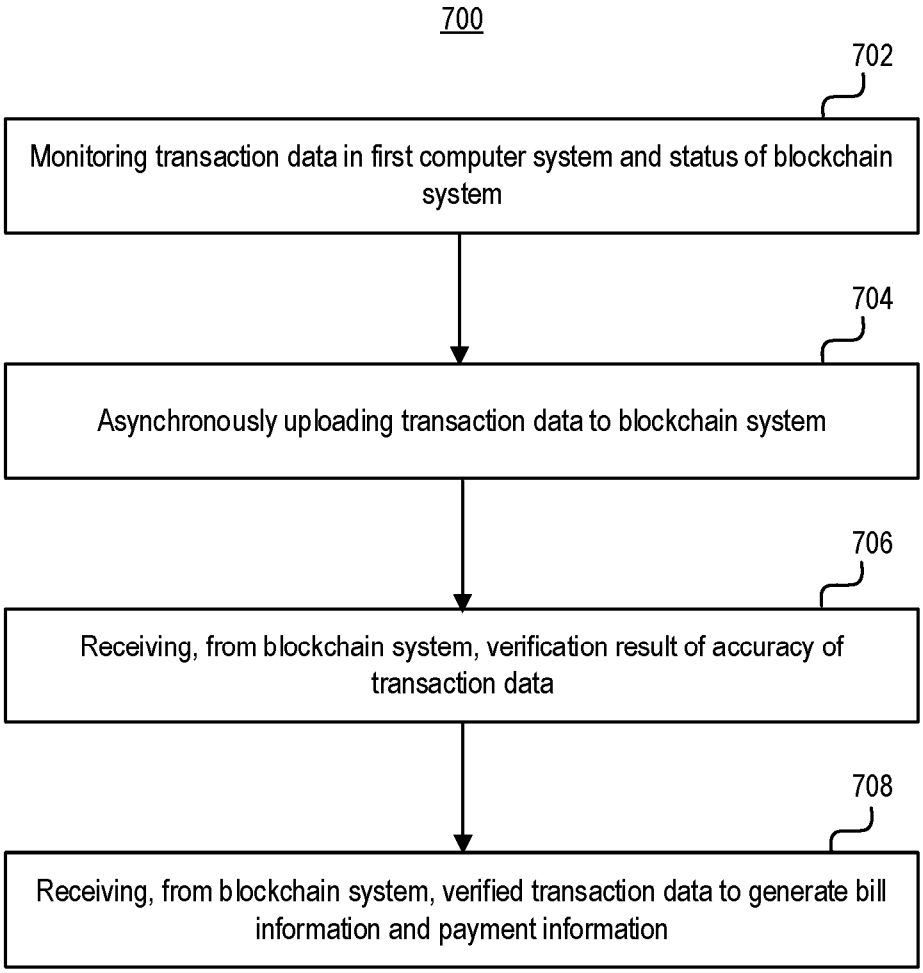

700
702
Monitoring transaction data in first computer system and status of blockchain system
704
Asynchronously uploading transaction data to blockchain system
706
Receiving, from blockchain system, verification result of accuracy of transaction data
708
Receiving, from blockchain system, verified transaction data to generate bill information and payment information

FIG. 7

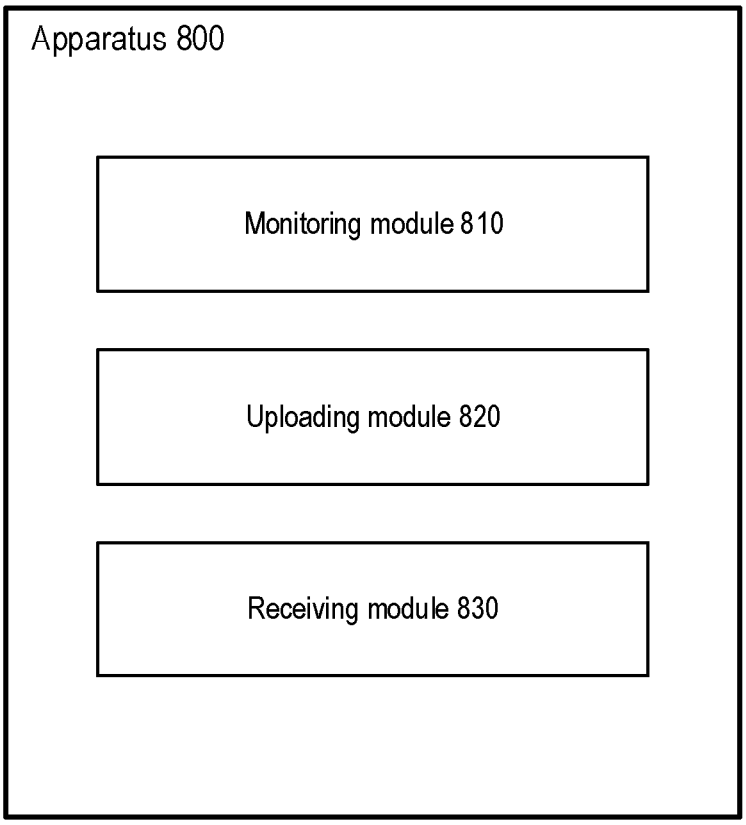

Apparatus 800
Monitoring module 810
Uploading module 820
Receiving module 830

FIG. 8