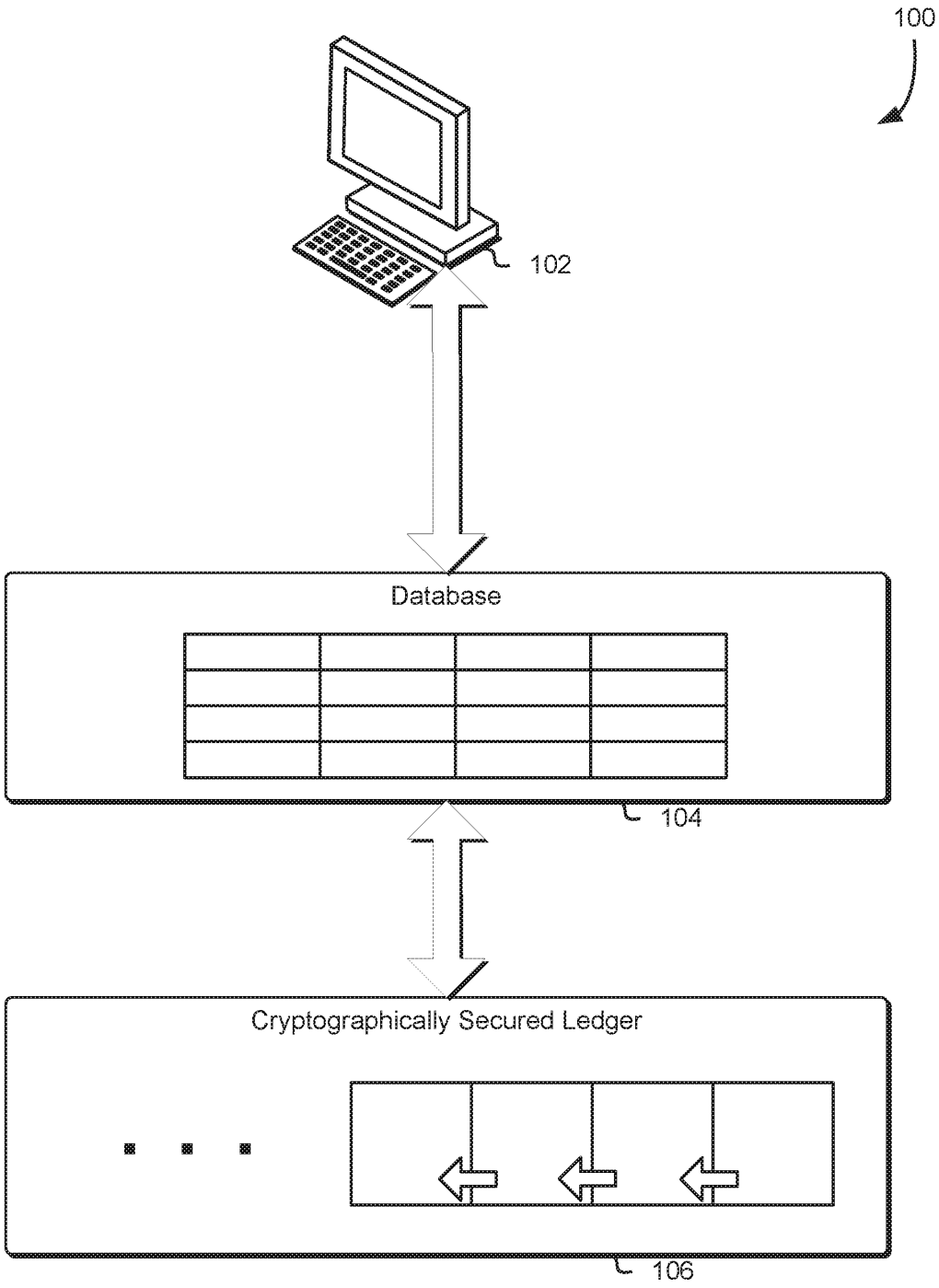

100
102
Database
104
Cryptographically Secured Ledger
106

FIG. 1

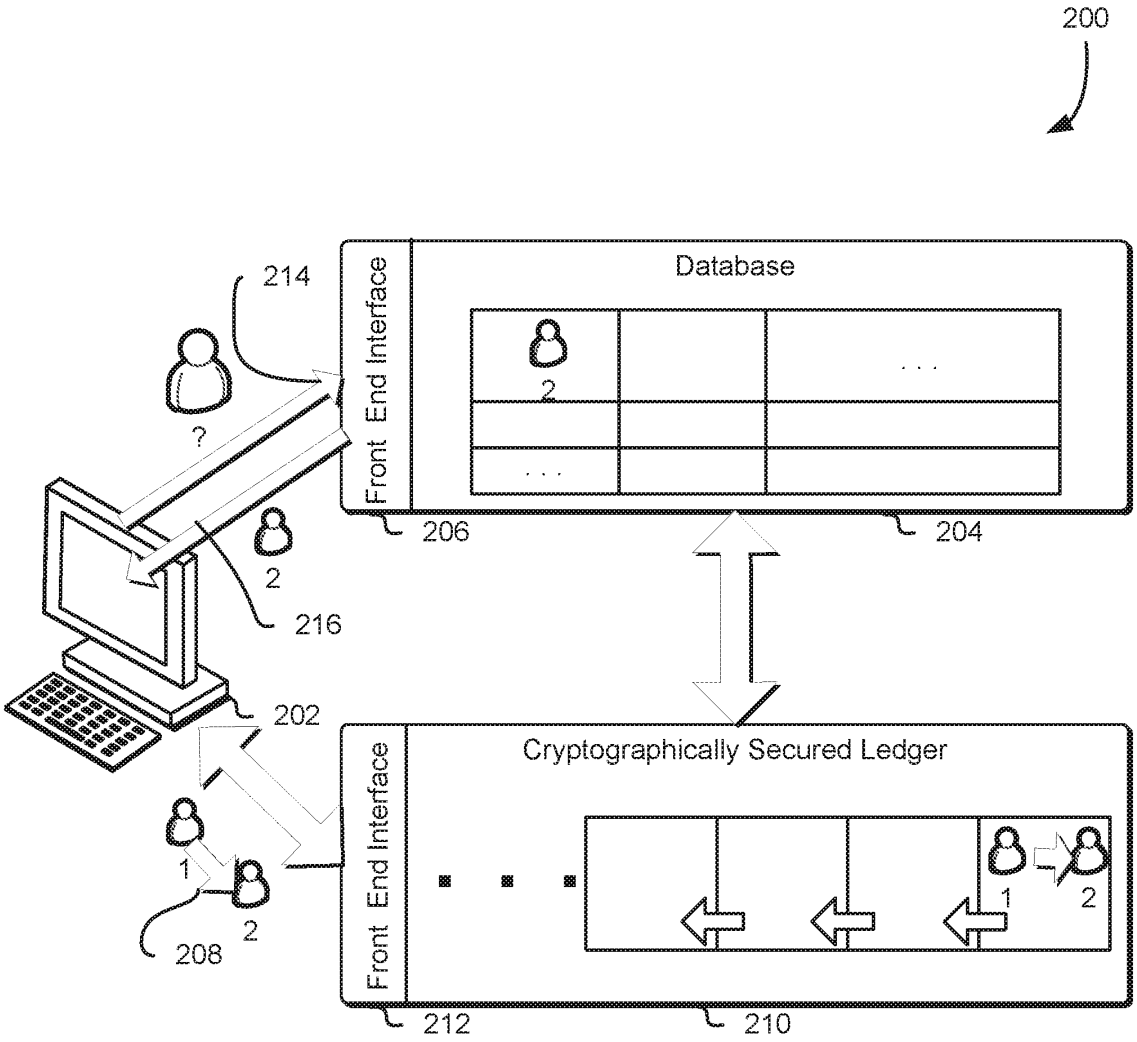

200
214
?
Front End Interface
Database
2
. . .
. . .
206
204
2
216
202
Cryptographically Secured Ledger
1
2
208
Front End Interface
1
2
212
210

FIG. 2

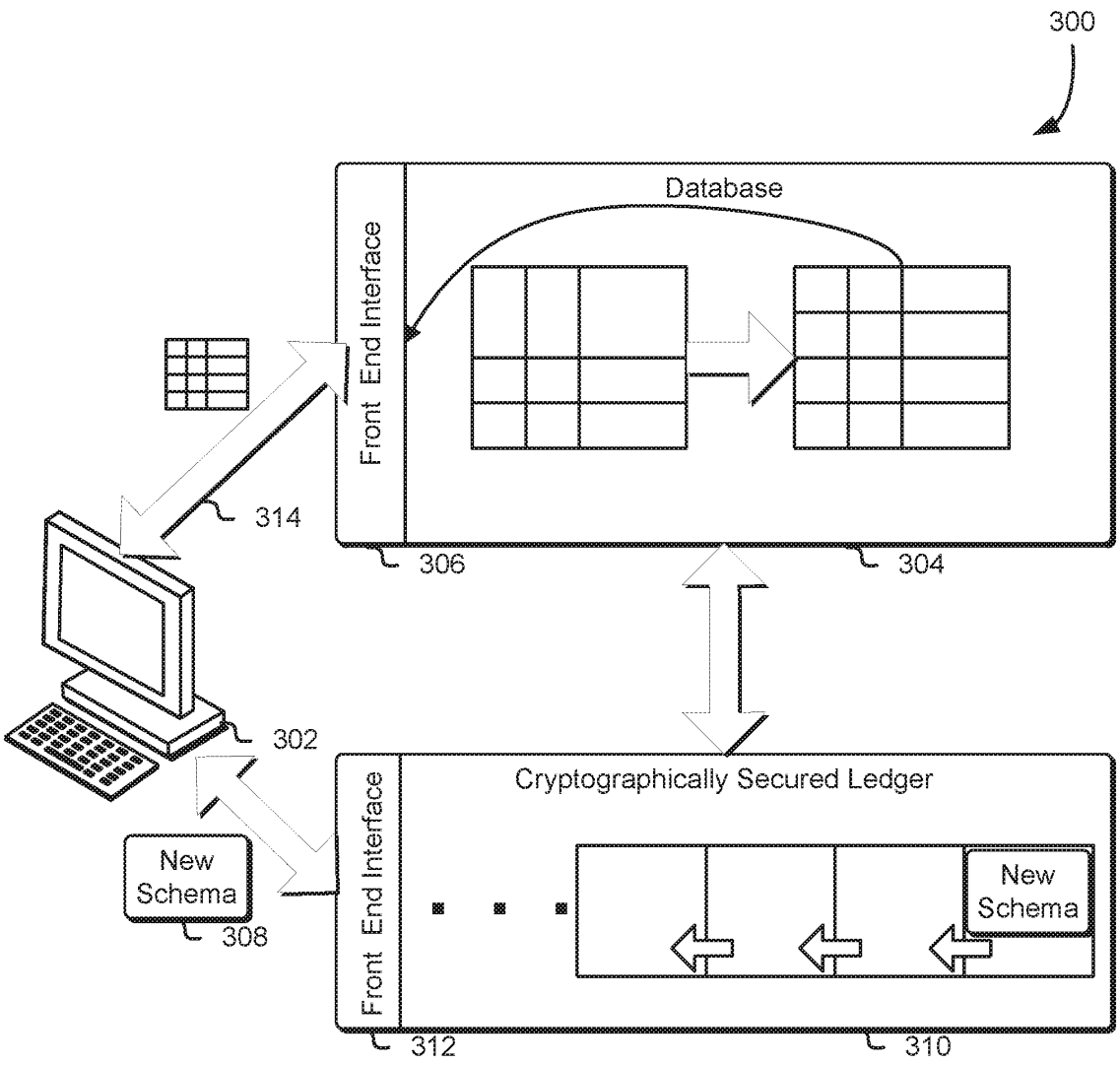

300
Database
Front End Interface
314
306
304
302
New Schema
308
Cryptographically Secured Ledger
New Schema
Front End Interface
312
310

FIG. 3

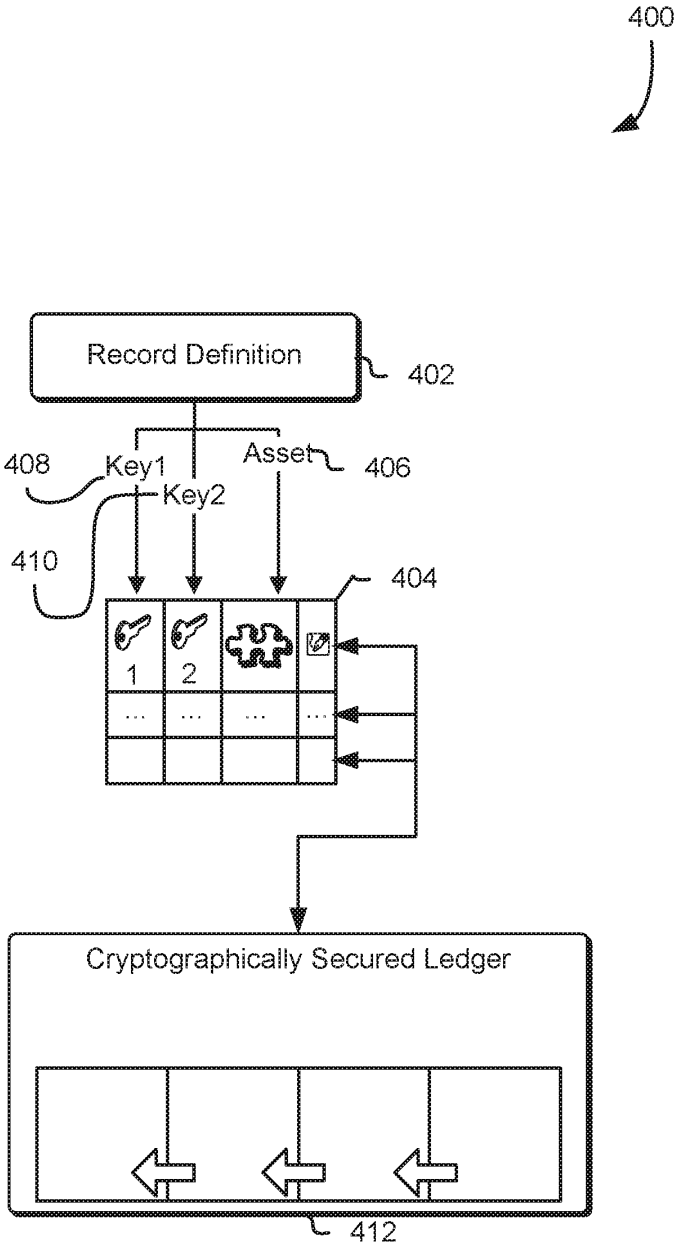

400
Record Definition
402
408
Key1
Key2
Asset
406
410
404
1
2
Cryptographically Secured Ledger
412

FIG. 4

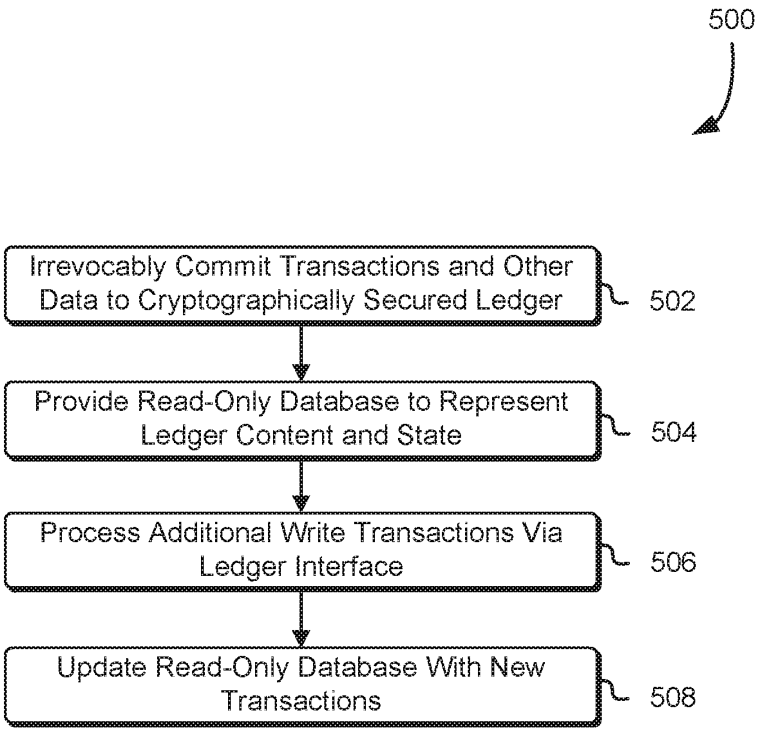

500
Irrevocably Commit Transactions and Other Data to Cryptographically Secured Ledger
502
Provide Read-Only Database to Represent Ledger Content and State
504
Process Additional Write Transactions Via Ledger Interface
506
Update Read-Only Database With New Transactions
508

FIG. 5

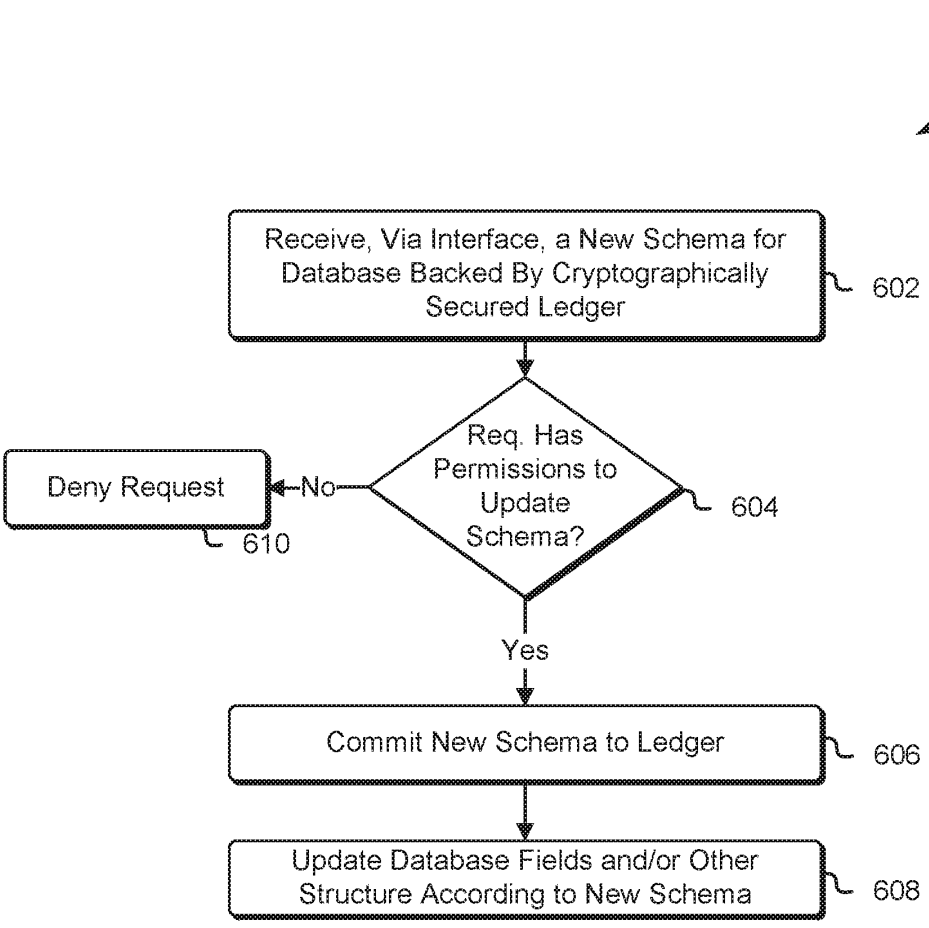

600
Receive, Via Interface, a New Schema for Database Backed By Cryptographically Secured Ledger
602
Req. Has Permissions to Update Schema?
604
No
Deny Request
610
Yes
Commit New Schema to Ledger
606
Update Database Fields and/or Other Structure According to New Schema
608

FIG. 6

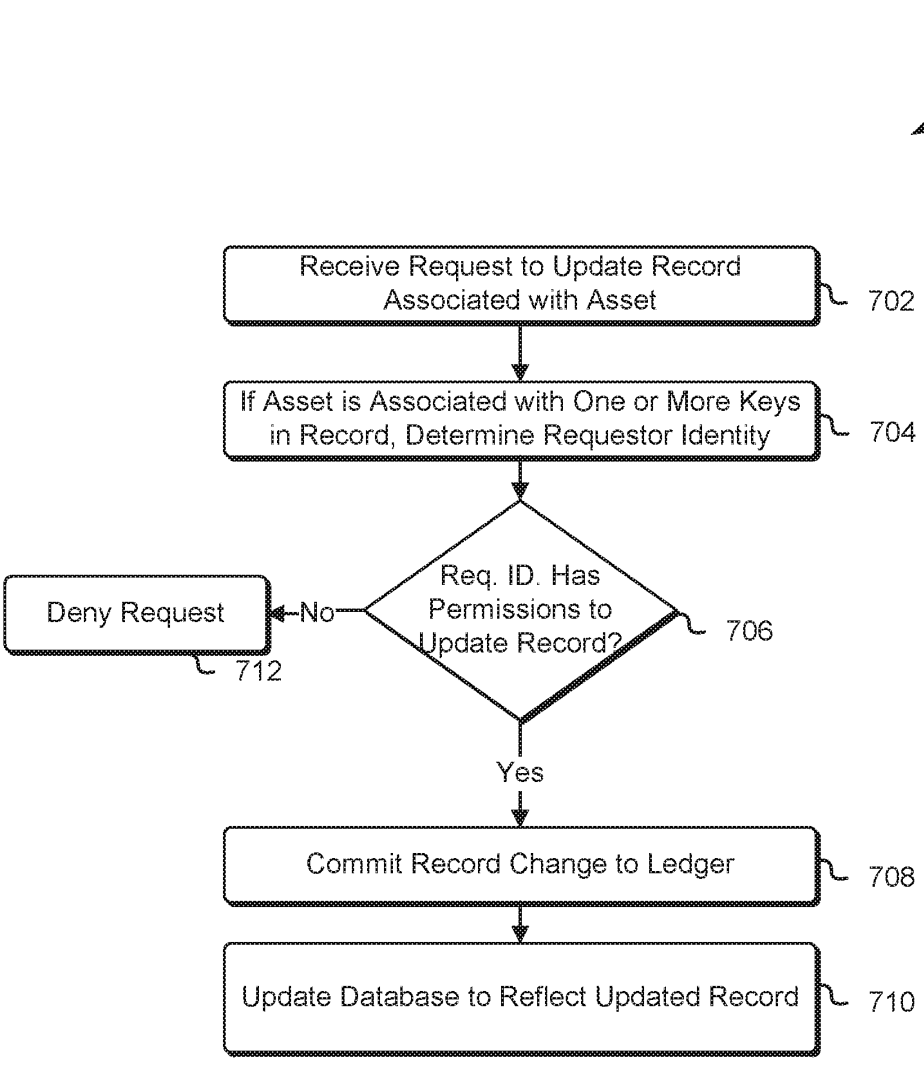

700
Receive Request to Update Record Associated with Asset
702
If Asset is Associated with One or More Keys in Record, Determine Requestor Identity
704
Req. ID. Has Permissions to Update Record?
706
No
Deny Request
712
Yes
Commit Record Change to Ledger
708
Update Database to Reflect Updated Record
710

FIG. 7

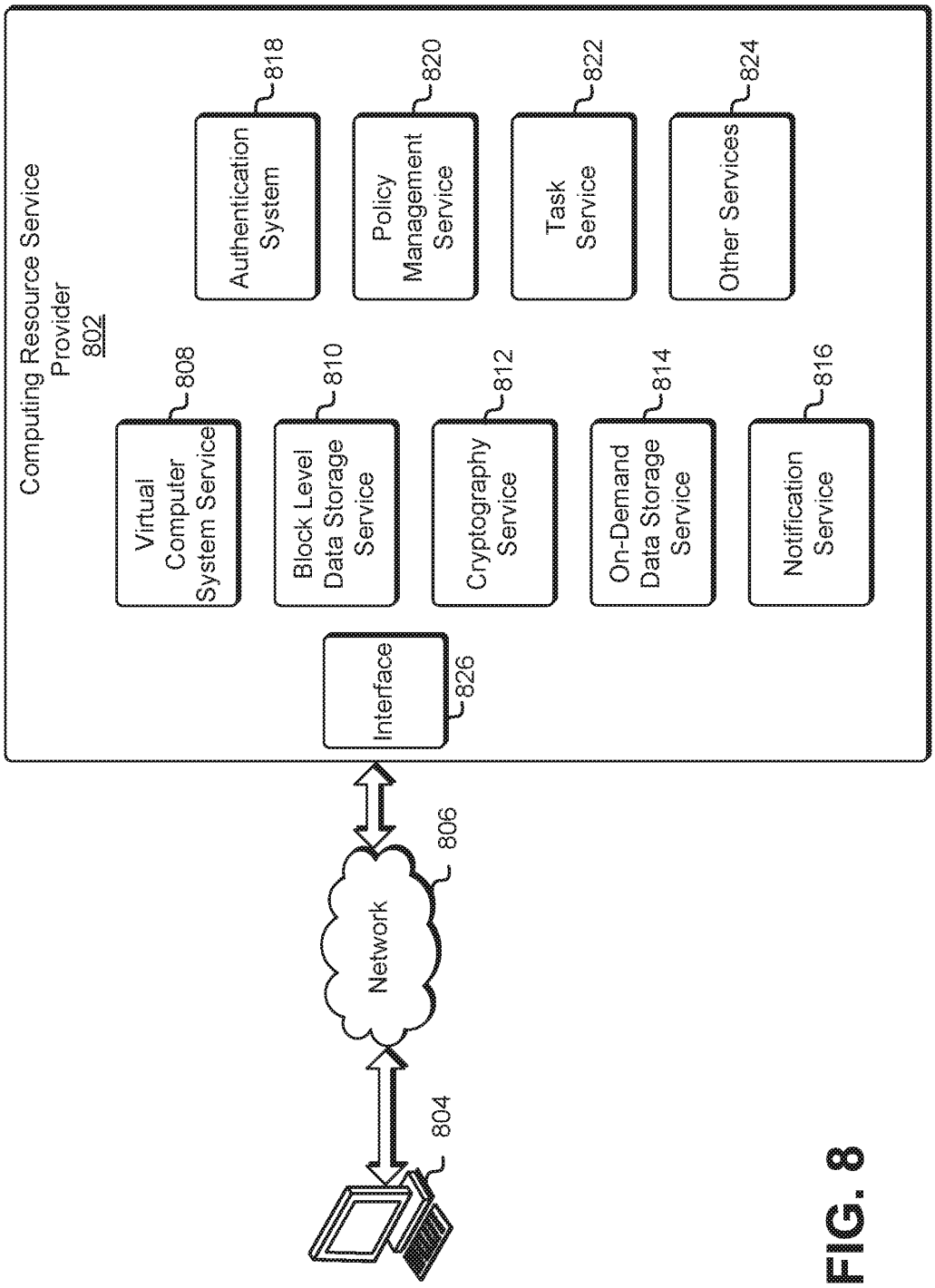

Computing Resource Service Provider
802
Virtual Computer System Service
808
Block Level Data Storage Service
810
Cryptography Service
812
On-Demand Data Storage Service
814
Notification Service
816
Authentication System
818
Policy Management Service
820
Task Service
822
Other Services
824
Interface
826
Network
806
804

FIG. 8

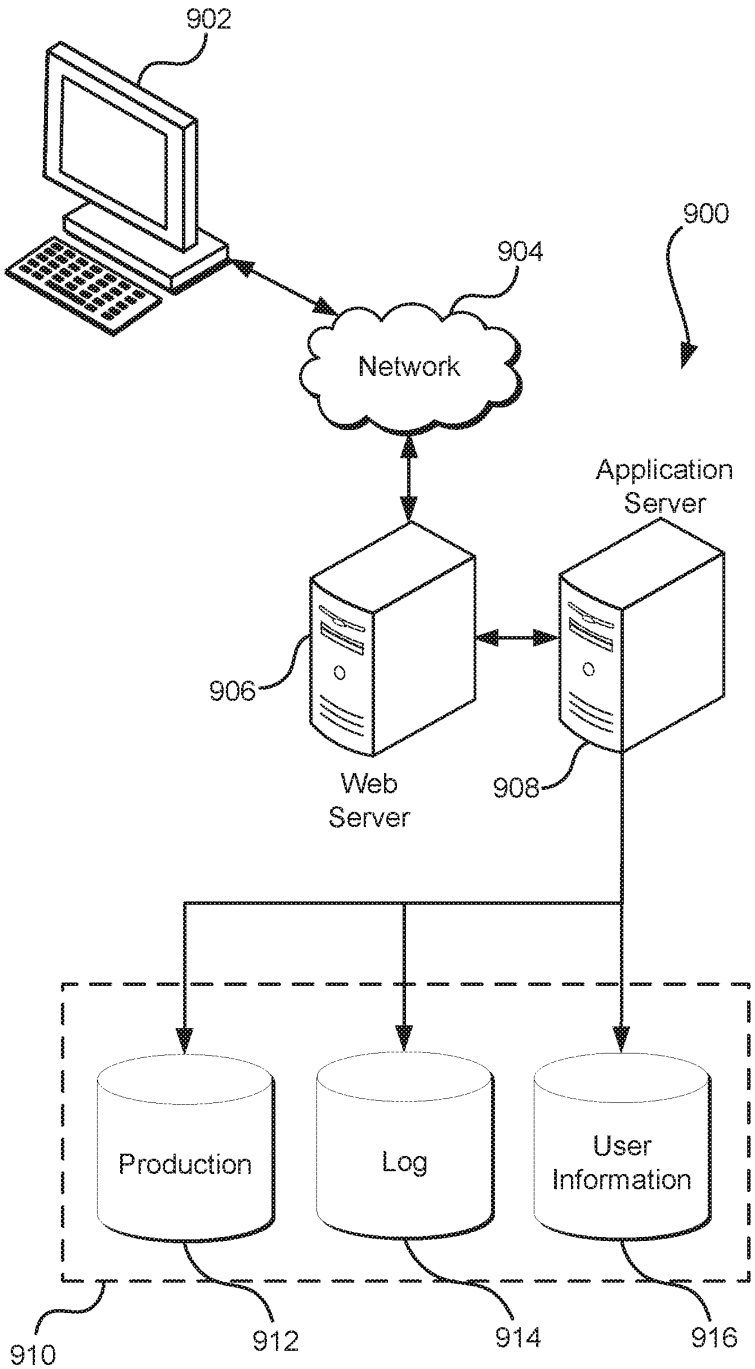

902
900
904
Network
Application
Server
906
Web
Server
908
Production
Log
User
Information
910
912
914
916

FIG. 9