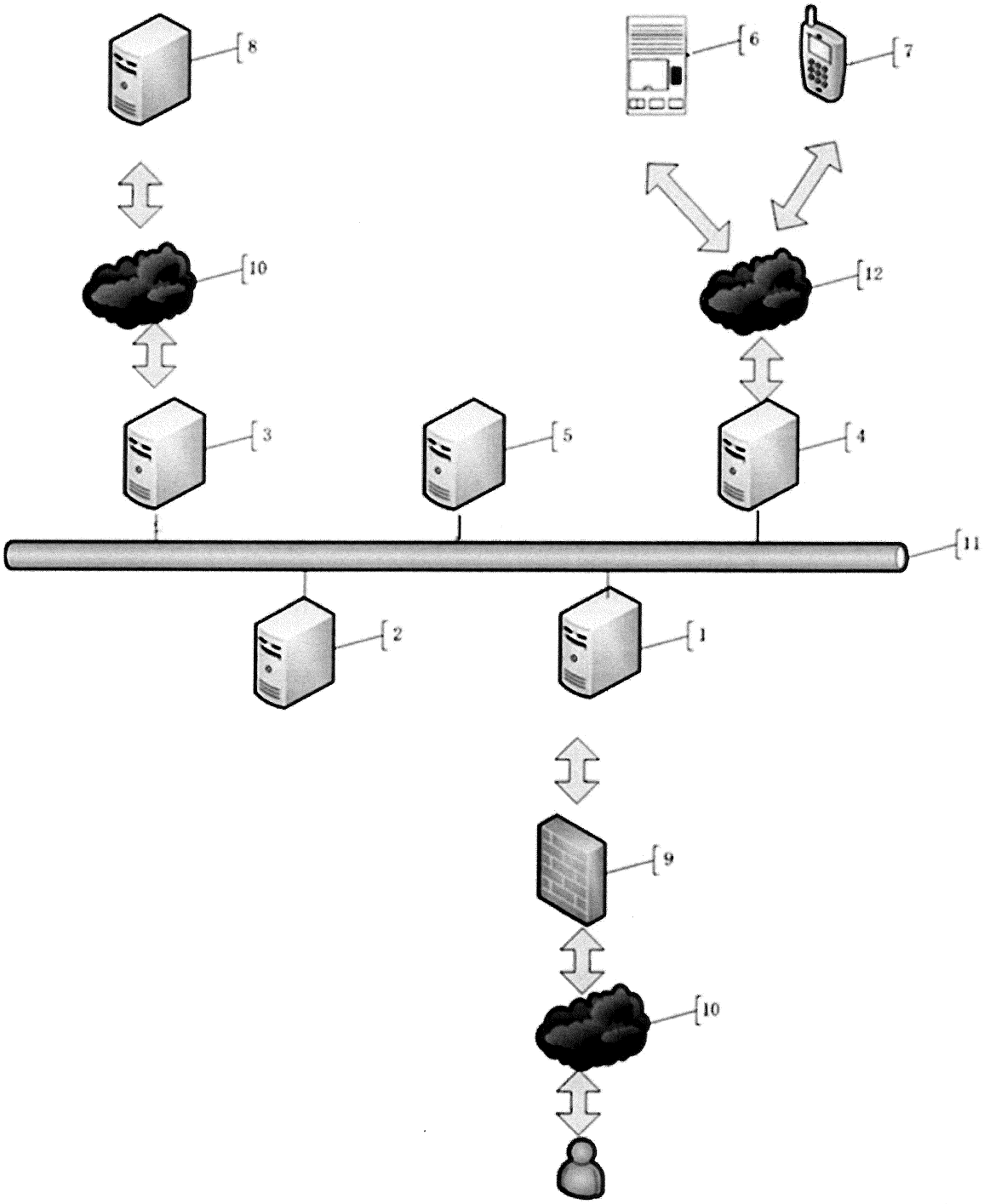


FIG. 1

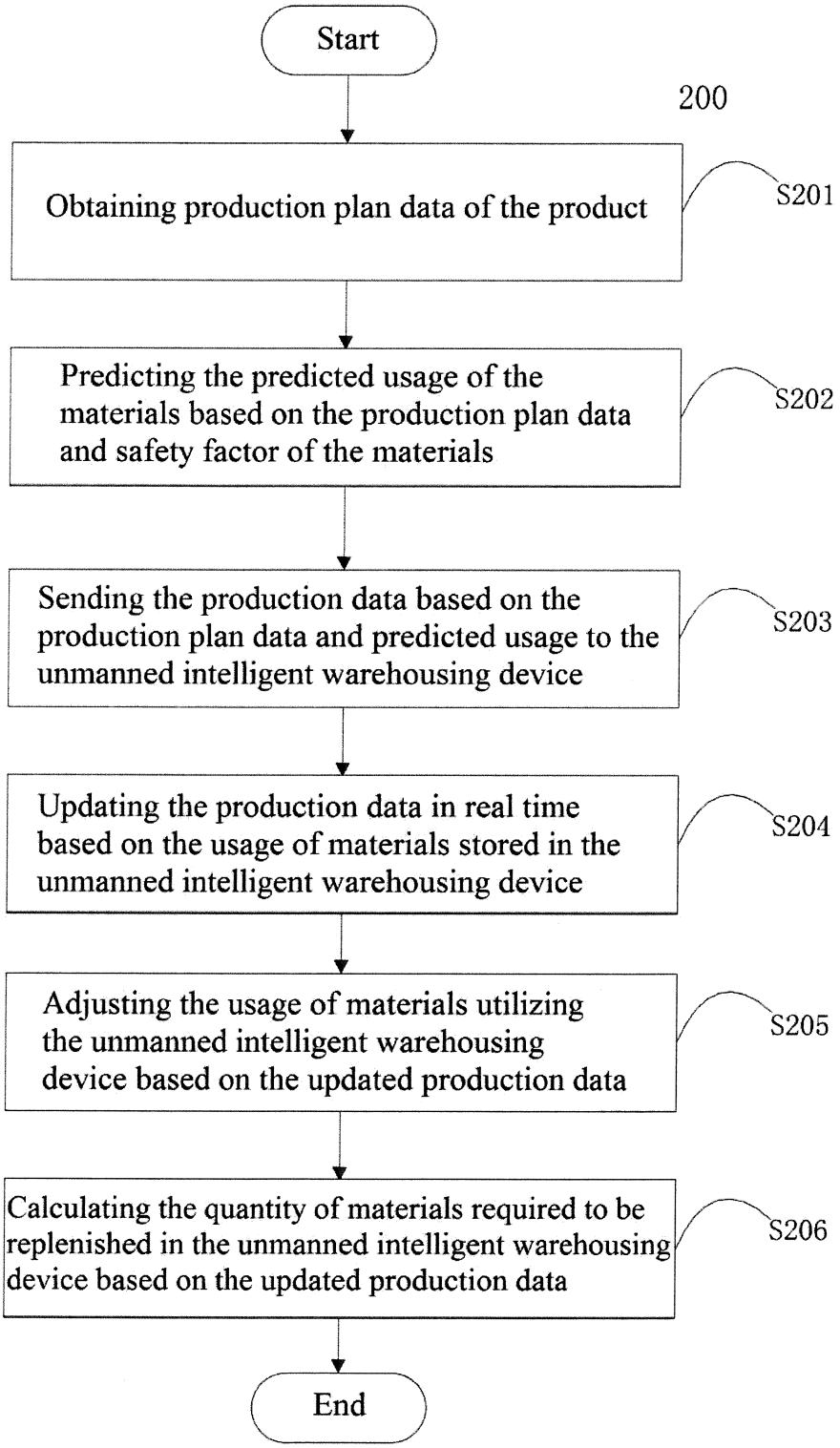

Start
200
Obtaining production plan data of the product
S201
Predicting the predicted usage of the materials based on the production plan data and safety factor of the materials
S202
Sending the production data based on the production plan data and predicted usage to the unmanned intelligent warehousing device
S203
Updating the production data in real time based on the usage of materials stored in the unmanned intelligent warehousing device
S204
Adjusting the usage of materials utilizing the unmanned intelligent warehousing device based on the updated production data
S205
Calculating the quantity of materials required to be replenished in the unmanned intelligent warehousing device based on the updated production data
S206
End

FIG. 2A

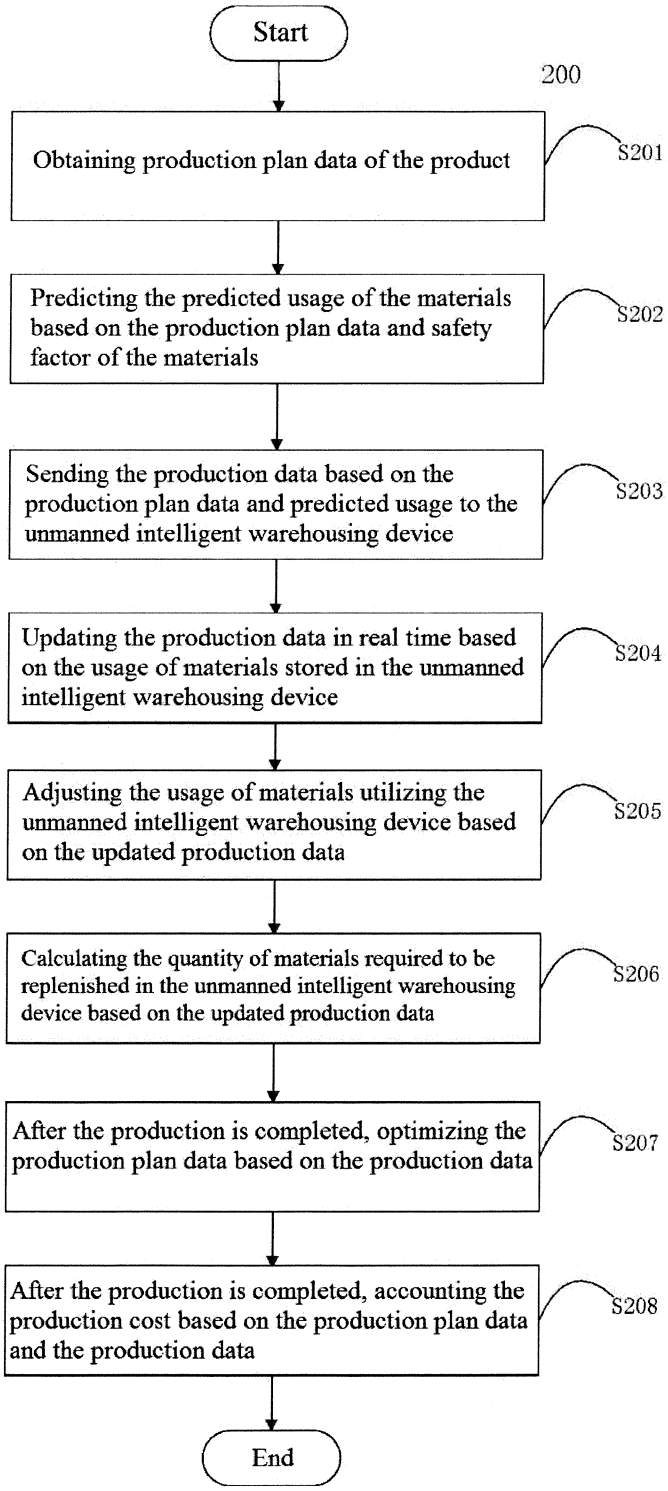

Start
200
Obtaining production plan data of the product
S201
Predicting the predicted usage of the materials based on the production plan data and safety factor of the materials
S202
Sending the production data based on the production plan data and predicted usage to the unmanned intelligent warehousing device
S203
Updating the production data in real time based on the usage of materials stored in the unmanned intelligent warehousing device
S204
Adjusting the usage of materials utilizing the unmanned intelligent warehousing device based on the updated production data
S205
Calculating the quantity of materials required to be replenished in the unmanned intelligent warehousing device based on the updated production data
S206
After the production is completed, optimizing the production plan data based on the production data
S207
After the production is completed, accounting the production cost based on the production plan data and the production data
S208
End

FIG. 2B

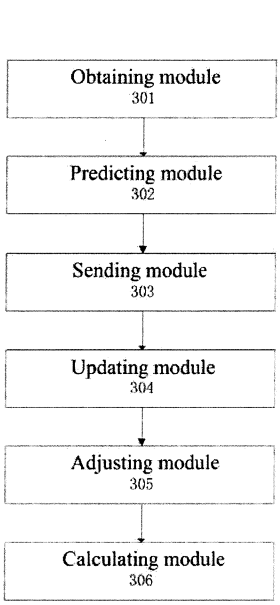

300
Obtaining module
301
Predicting module
302
Sending module
303
Updating module
304
Adjusting module
305
Calculating module
306

FIG. 3A

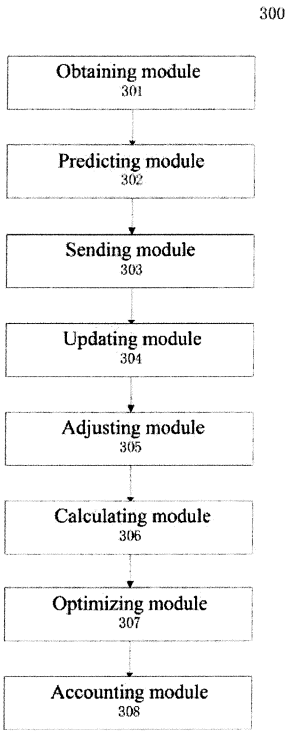

300
Obtaining module
301
Predicting module
302
Sending module
303
Updating module
304
Adjusting module
305
Calculating module
306
Optimizing module
307
Accounting module
308

FIG. 3B

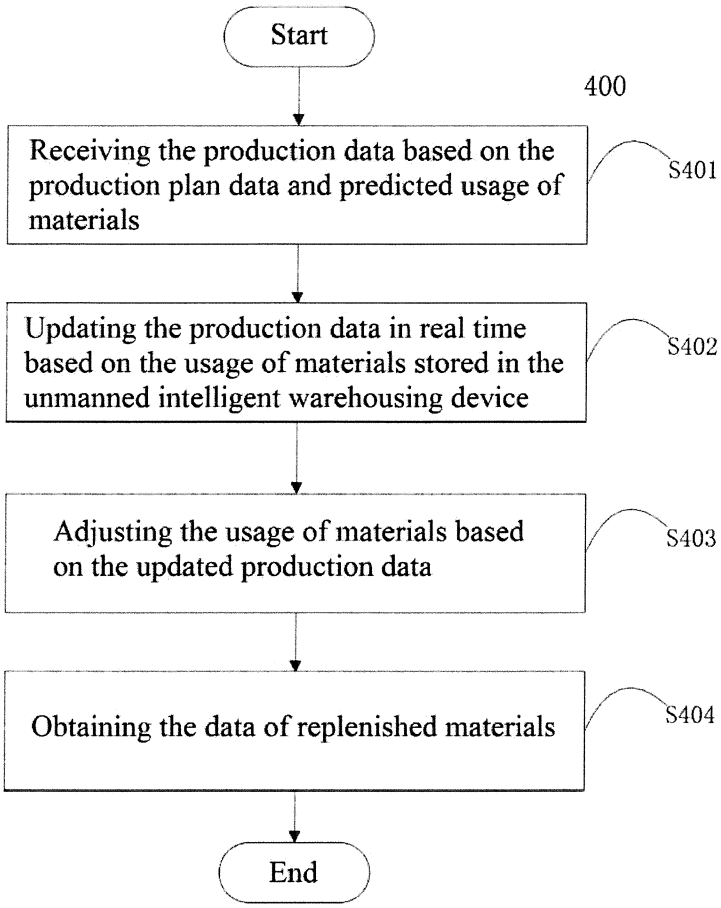

Start
400
Receiving the production data based on the production plan data and predicted usage of materials
S401
Updating the production data in real time based on the usage of materials stored in the unmanned intelligent warehousing device
S402
Adjusting the usage of materials based on the updated production data
S403
Obtaining the data of replenished materials
S404
End

FIG. 4

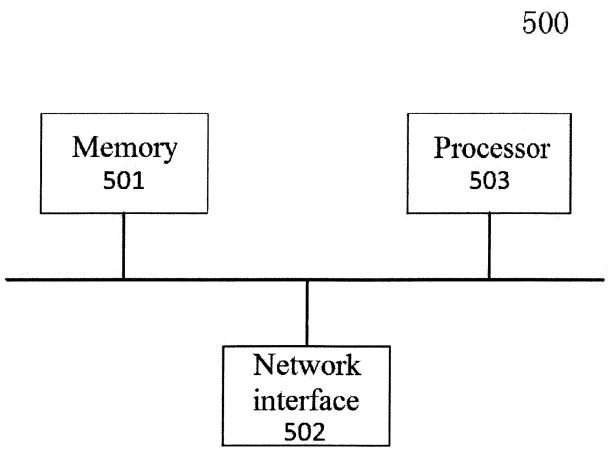

500
Memory
501
Processor
503
Network interface
502

FIG. 5

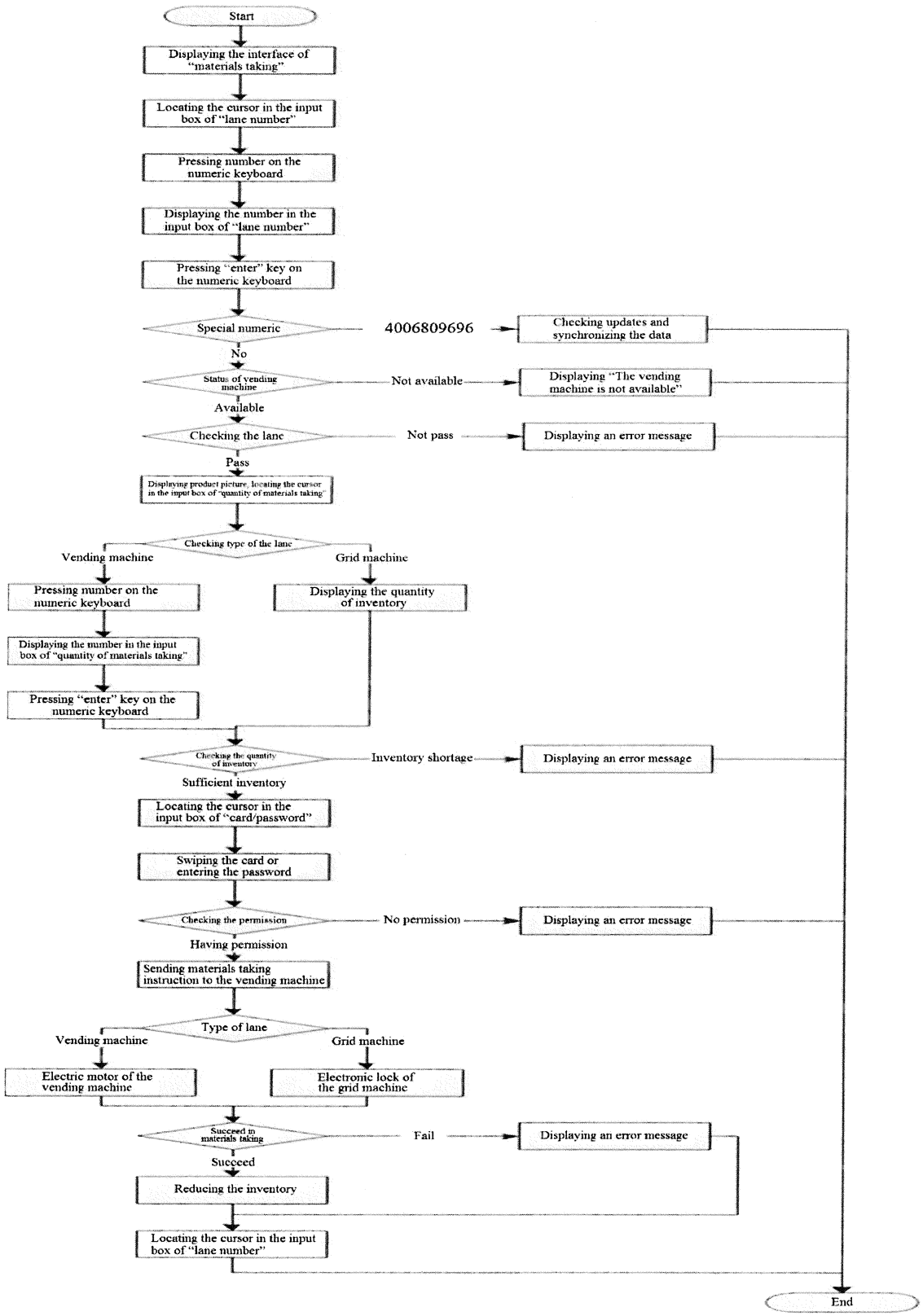

Start
Displaying the interface of "materials taking"
Locating the cursor in the input box of "lane number"
Pressing number on the numeric keyboard
Displaying the number in the input box of "lane number"
Pressing "enter" key on the numeric keyboard
Special numeric
4006809696
Checking updates and synchronizing the data
No
Status of vending machine
Not available
Displaying "The vending machine is not available"
Available
Checking the lane
Not pass
Displaying an error message
Pass
Displaying product picture, locating the cursor in the input box of "quantity of materials taking"
Checking type of the lane
Vending machine
Grid machine
Pressing number on the numeric keyboard
Displaying the quantity of inventory
Displaying the number in the input box of "quantity of materials taking"
Pressing "enter" key on the numeric keyboard
Checking the quantity of inventory
Inventory shortage
Displaying an error message
Sufficient inventory
Locating the cursor in the input box of "card/password"
Swiping the card or entering the password
Checking the permission
No permission
Displaying an error message
Having permission
Sending materials taking instruction to the vending machine
Type of lane
Vending machine
Grid machine
Electric motor of the vending machine
Electronic lock of the grid machine
Succeed in materials taking
Fail
Displaying an error message
Succeed
Reducing the inventory
Locating the cursor in the input box of "lane number"
End

FIG. 6

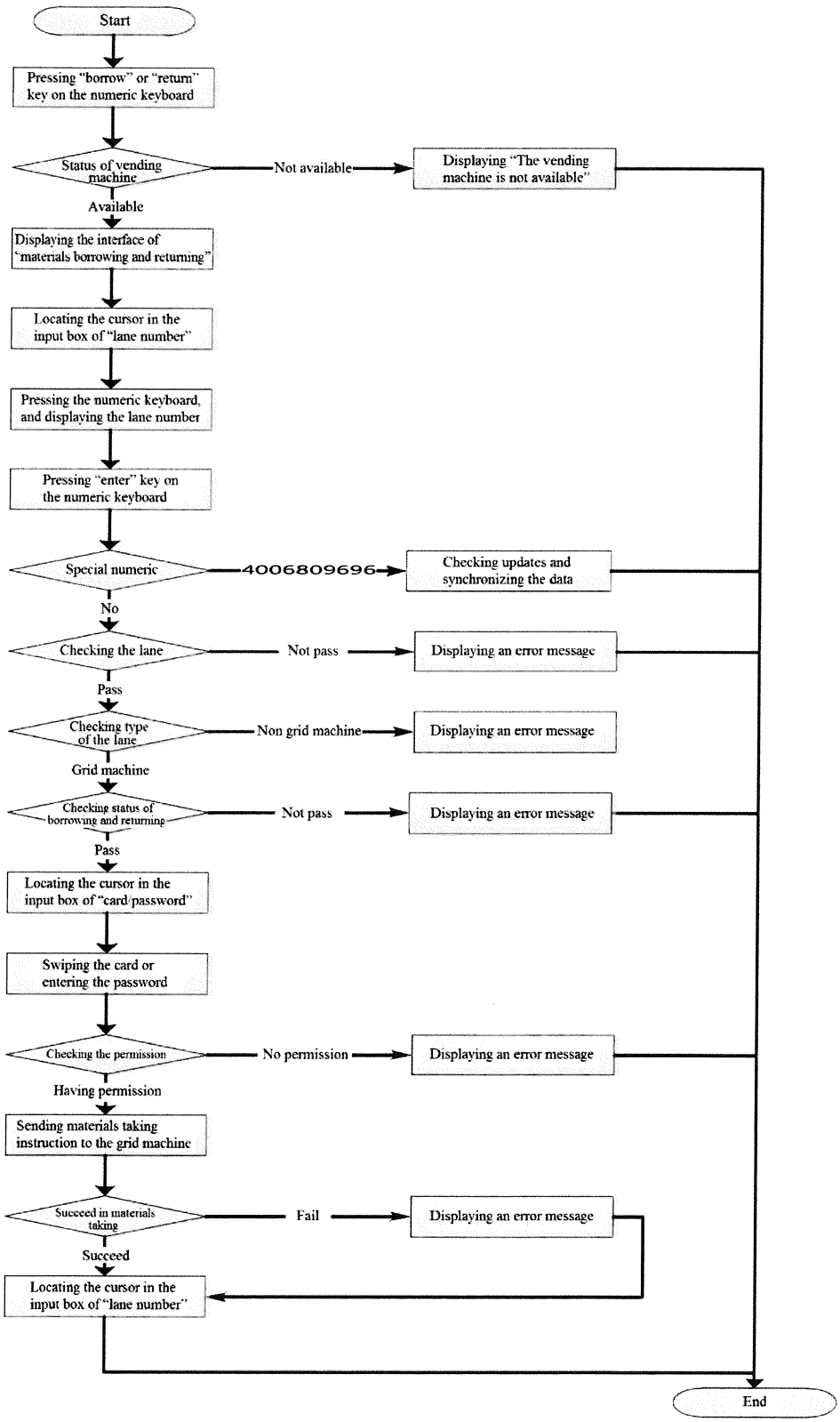

Start
Pressing "borrow" or "return" key on the numeric keyboard
Status of vending machine
Not available
Displaying "The vending machine is not available"
Available
Displaying the interface of "materials borrowing and returning"
Locating the cursor in the input box of "lane number"
Pressing the numeric keyboard, and displaying the lane number
Pressing "enter" key on the numeric keyboard
Special numeric
4006809696
Checking updates and synchronizing the data
No
Checking the lane
Not pass
Displaying an error message
Pass
Checking type of the lane
Non grid machine
Displaying an error message
Grid machine
Checking status of borrowing and returning
Not pass
Displaying an error message
Pass
Locating the cursor in the input box of "card/password"
Swiping the card or entering the password
Checking the permission
No permission
Displaying an error message
Having permission
Sending materials taking instruction to the grid machine
Succeed in materials taking
Fail
Displaying an error message
Succeed
Locating the cursor in the input box of "lane number"
End

FIG. 7

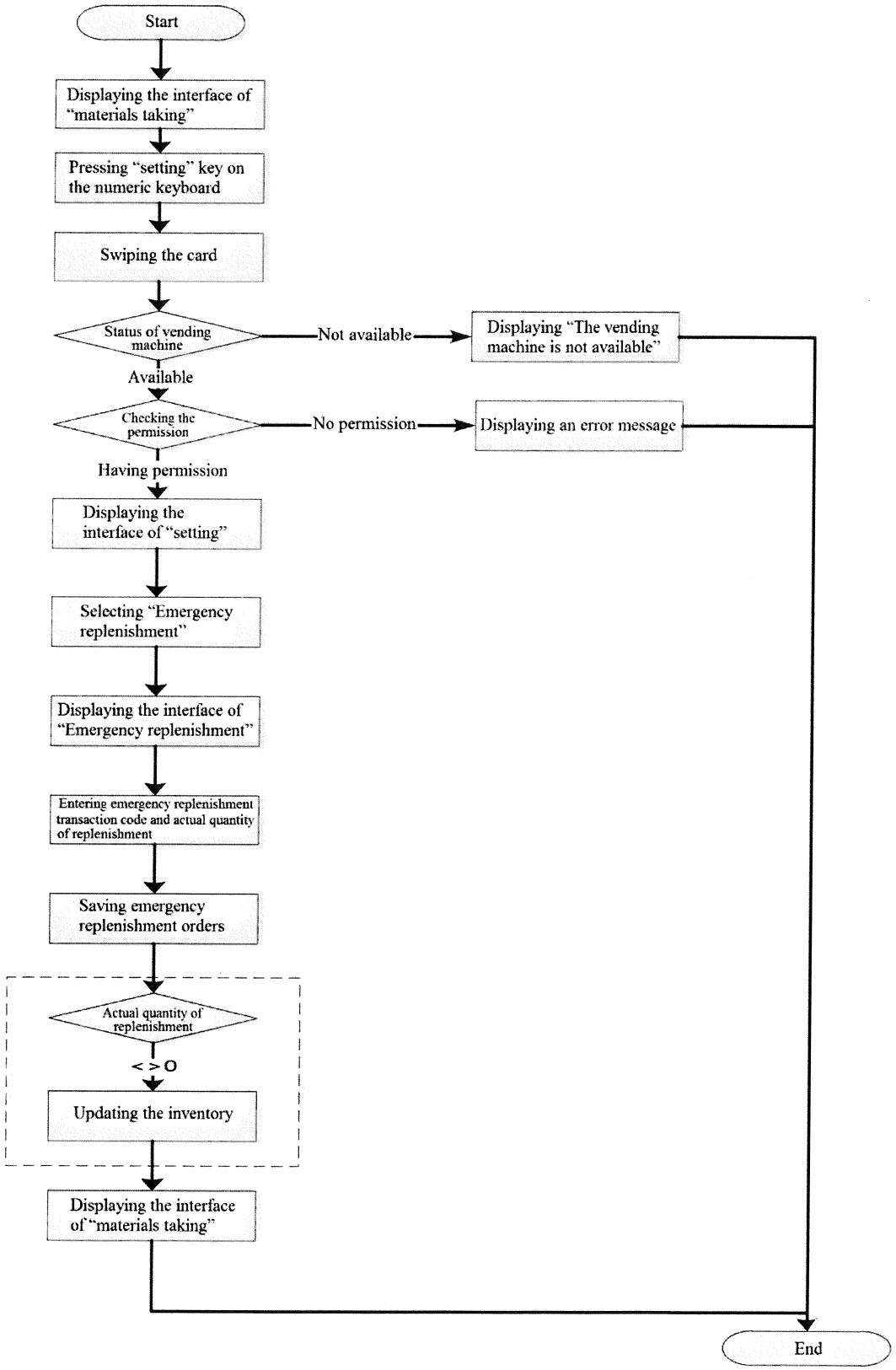

Start
Displaying the interface of "materials taking"
Pressing "setting" key on the numeric keyboard
Swiping the card
Status of vending machine
Not available
Displaying "The vending machine is not available"
Available
Checking the permission
No permission
Displaying an error message
Having permission
Displaying the interface of "setting"
Selecting "Emergency replenishment"
Displaying the interface of "Emergency replenishment"
Entering emergency replenishment transaction code and actual quantity of replenishment
Saving emergency replenishment orders
Actual quantity of replenishment
< > O
Updating the inventory
Displaying the interface of "materials taking"
End

FIG. 8

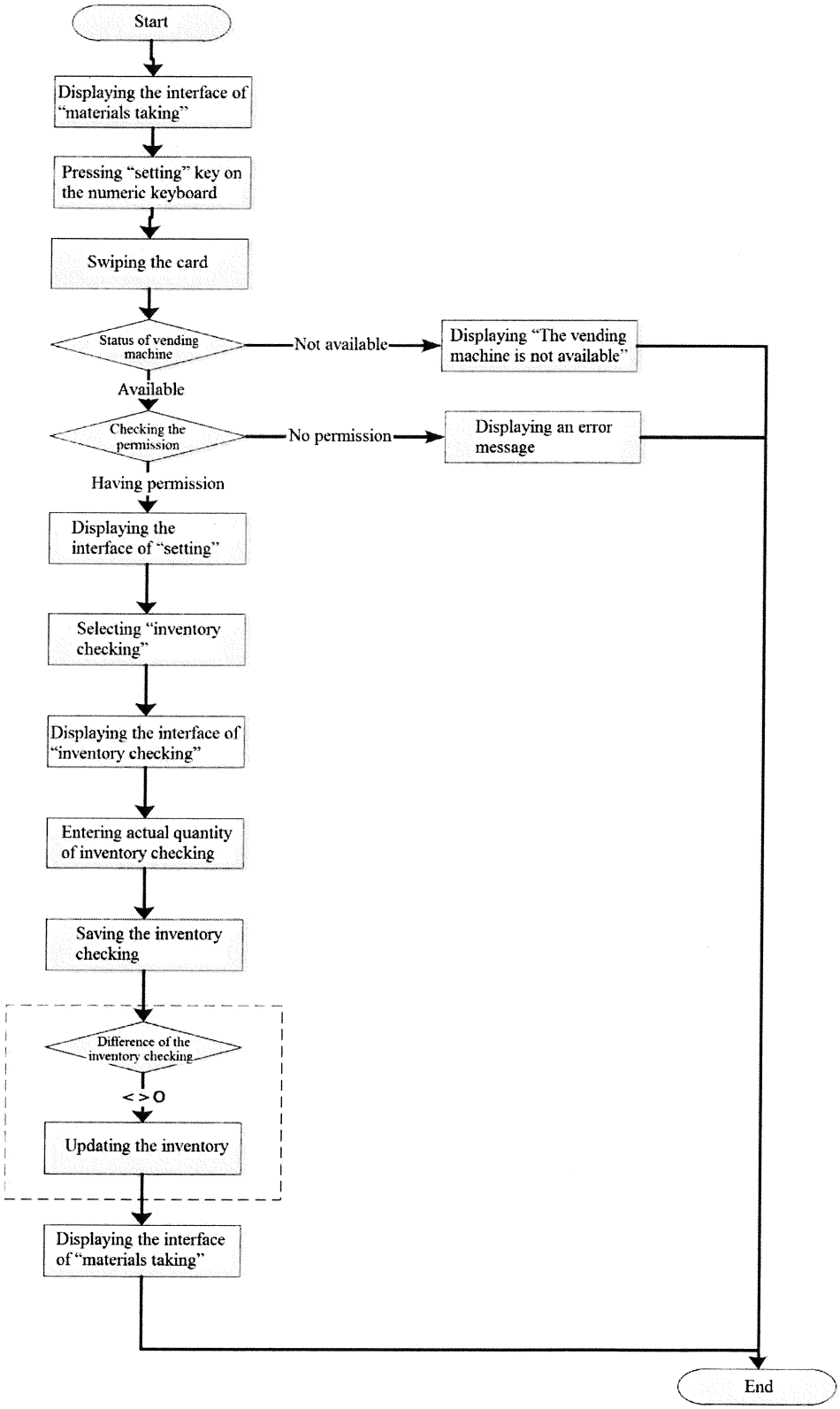

Start
Displaying the interface of "materials taking"
Pressing "setting" key on the numeric keyboard
Swiping the card
Status of vending machine
Not available
Displaying "The vending machine is not available"
Available
Checking the permission
No permission
Displaying an error message
Having permission
Displaying the interface of "setting"
Selecting "inventory checking"
Displaying the interface of "inventory checking"
Entering actual quantity of inventory checking
Saving the inventory checking
Difference of the inventory checking
<>0
Updating the inventory
Displaying the interface of "materials taking"
End

FIG. 9

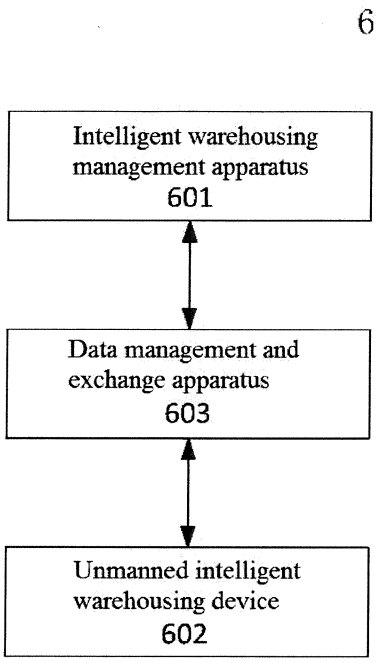

600
Intelligent warehousing management apparatus
601
Data management and exchange apparatus
603
Unmanned intelligent warehousing device
602

FIG. 10