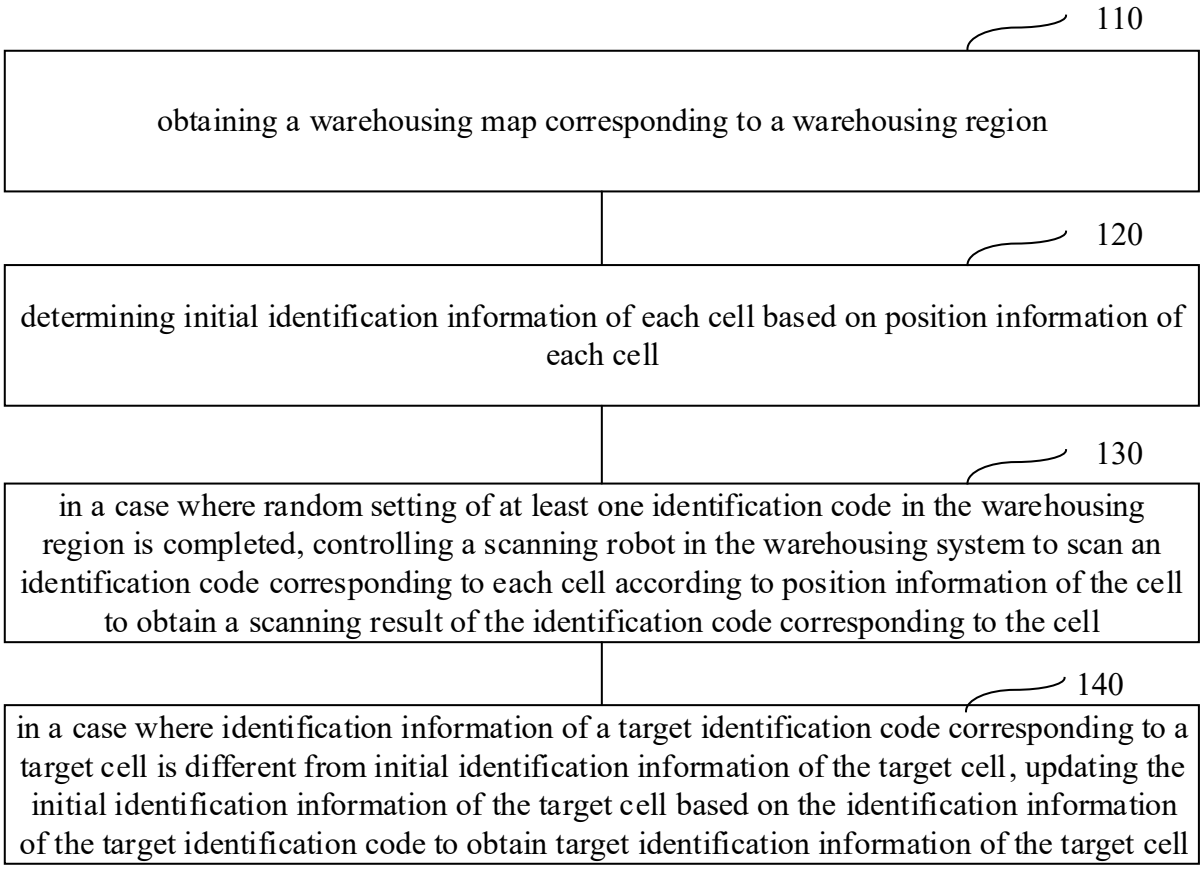

110
obtaining a warehousing map corresponding to a warehousing region
120
determining initial identification information of each cell based on position information of each cell
130
in a case where random setting of at least one identification code in the warehousing region is completed, controlling a scanning robot in the warehousing system to scan an identification code corresponding to each cell according to position information of the cell to obtain a scanning result of the identification code corresponding to the cell
140
in a case where identification information of a target identification code corresponding to a target cell is different from initial identification information of the target cell, updating the initial identification information of the target cell based on the identification information of the target identification code to obtain target identification information of the target cell

FIG. 1

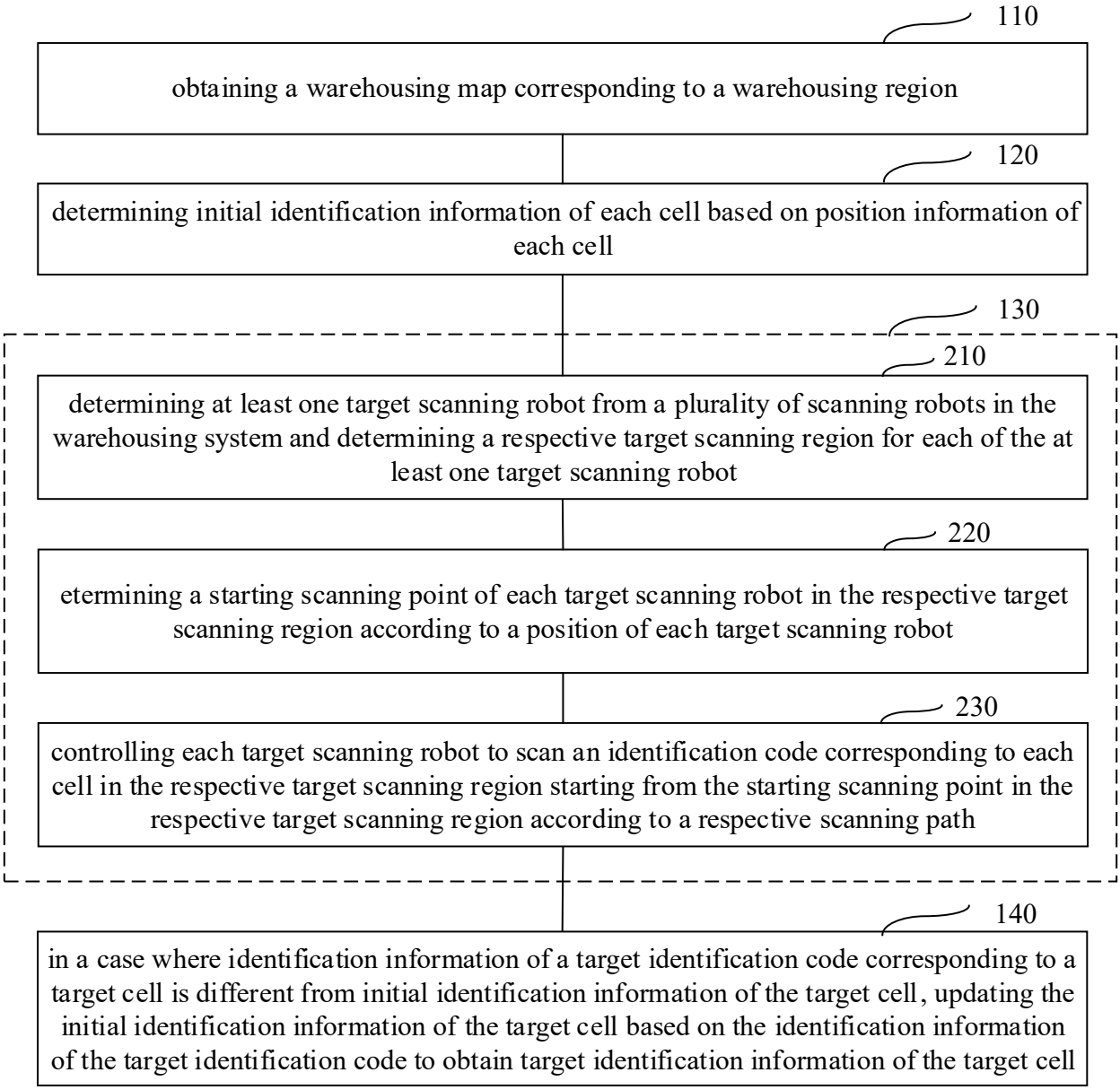

110
obtaining a warehousing map corresponding to a warehousing region
120
determining initial identification information of each cell based on position information of each cell
130
210
determining at least one target scanning robot from a plurality of scanning robots in the warehousing system and determining a respective target scanning region for each of the at least one target scanning robot
220
etermining a starting scanning point of each target scanning robot in the respective target scanning region according to a position of each target scanning robot
230
controlling each target scanning robot to scan an identification code corresponding to each cell in the respective target scanning region starting from the starting scanning point in the respective target scanning region according to a respective scanning path
140
in a case where identification information of a target identification code corresponding to a target cell is different from initial identification information of the target cell, updating the initial identification information of the target cell based on the identification information of the target identification code to obtain target identification information of the target cell

FIG. 2

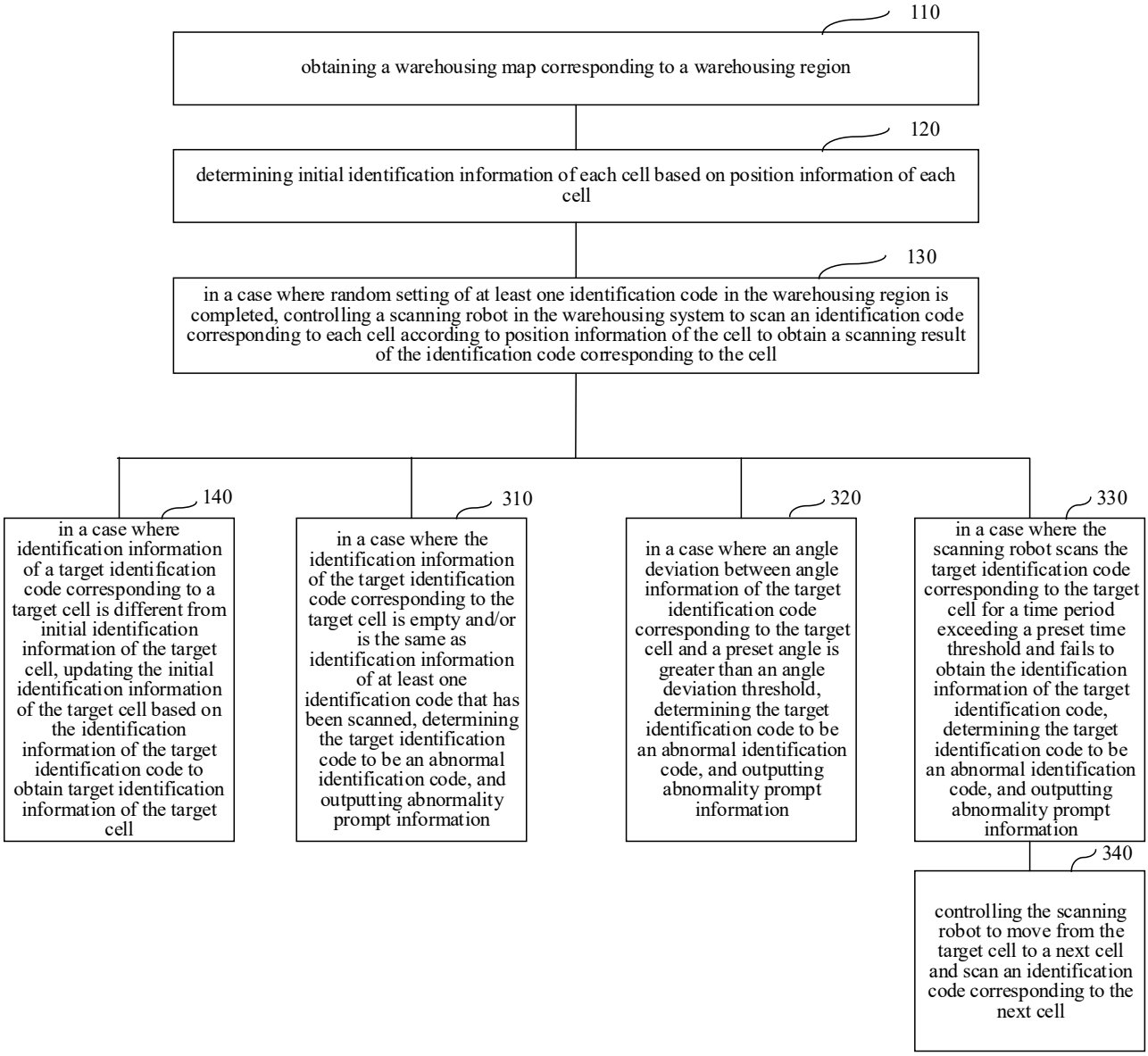

110
obtaining a warehousing map corresponding to a warehousing region
120
determining initial identification information of each cell based on position information of each cell
130
in a case where random setting of at least one identification code in the warehousing region is completed, controlling a scanning robot in the warehousing system to scan an identification code corresponding to each cell according to position information of the cell to obtain a scanning result of the identification code corresponding to the cell
140
in a case where identification information of a target identification code corresponding to a target cell is different from initial identification information of the target cell, updating the initial identification information of the target cell based on the identification information of the target identification code to obtain target identification information of the target cell
310
in a case where the identification information of the target identification code corresponding to the target cell is empty and/or is the same as identification information of at least one identification code that has been scanned, determining the target identification code to be an abnormal identification code, and outputting abnormality prompt information
320
in a case where an angle deviation between angle information of the target identification code corresponding to the target cell and a preset angle is greater than an angle deviation threshold, determining the target identification code to be an abnormal identification code, and outputting abnormality prompt information
330
in a case where the scanning robot scans the target identification code corresponding to the target cell for a time period exceeding a preset time threshold and fails to obtain the identification information of the target identification code, determining the target identification code to be an abnormal identification code, and outputting abnormality prompt information
340
controlling the scanning robot to move from the target cell to a next cell and scan an identification code corresponding to the next cell

FIG. 3

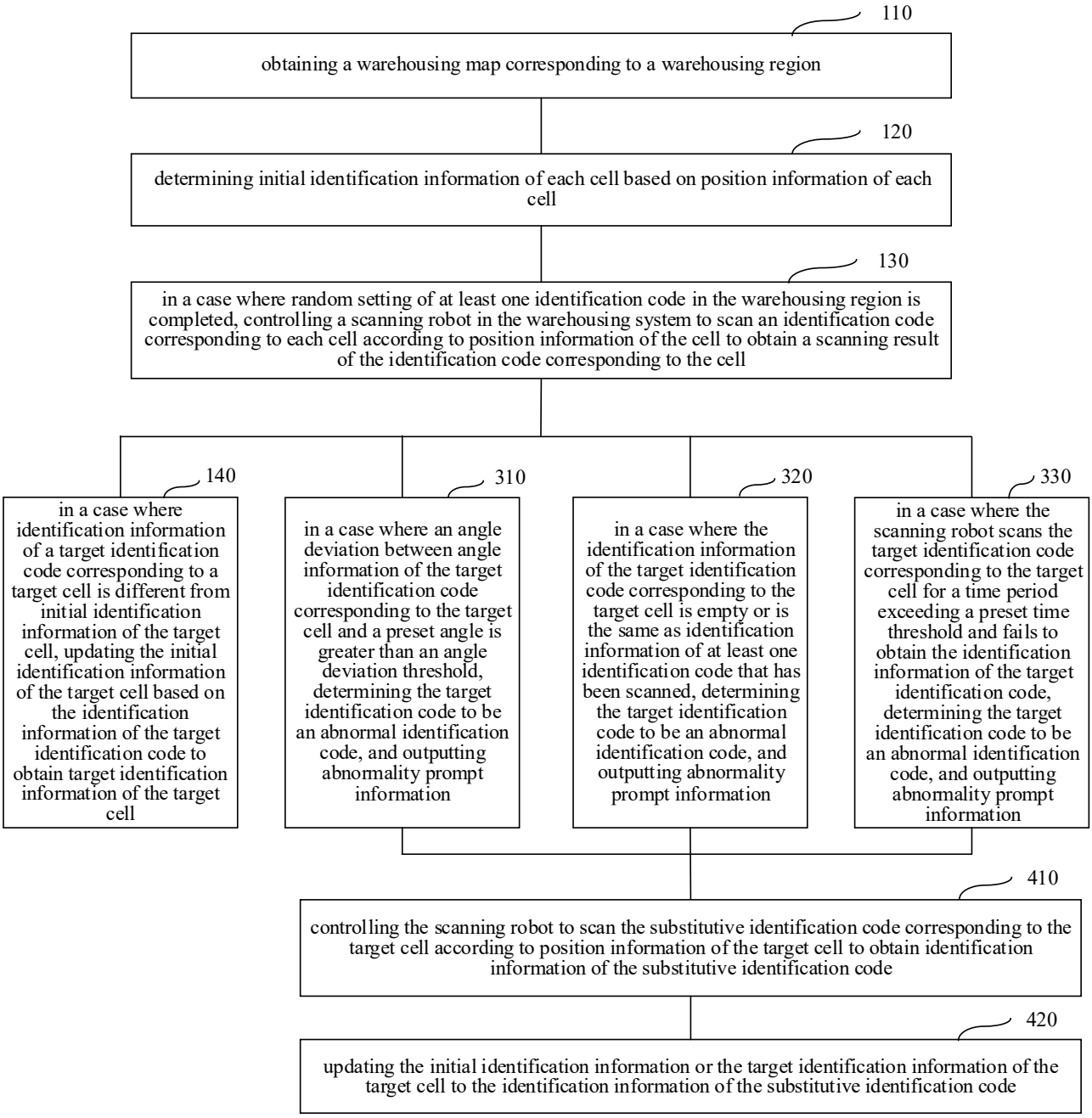

110
obtaining a warehousing map corresponding to a warehousing region
120
determining initial identification information of each cell based on position information of each cell
130
in a case where random setting of at least one identification code in the warehousing region is completed, controlling a scanning robot in the warehousing system to scan an identification code corresponding to each cell according to position information of the cell to obtain a scanning result of the identification code corresponding to the cell
140
in a case where identification information of a target identification code corresponding to a target cell is different from initial identification information of the target cell, updating the initial identification information of the target cell based on the identification information of the target identification code to obtain target identification information of the target cell
310
in a case where an angle deviation between angle information of the target identification code corresponding to the target cell and a preset angle is greater than an angle deviation threshold, determining the target identification code to be an abnormal identification code, and outputting abnormality prompt information
320
in a case where the identification information of the target identification code corresponding to the target cell is empty or is the same as identification information of at least one identification code that has been scanned, determining the target identification code to be an abnormal identification code, and outputting abnormality prompt information
330
in a case where the scanning robot scans the target identification code corresponding to the target cell for a time period exceeding a preset time threshold and fails to obtain the identification information of the target identification code, determining the target identification code to be an abnormal identification code, and outputting abnormality prompt information
410
controlling the scanning robot to scan the substitutive identification code corresponding to the target cell according to position information of the target cell to obtain identification information of the substitutive identification code
420
updating the initial identification information or the target identification information of the target cell to the identification information of the substitutive identification code

FIG. 4

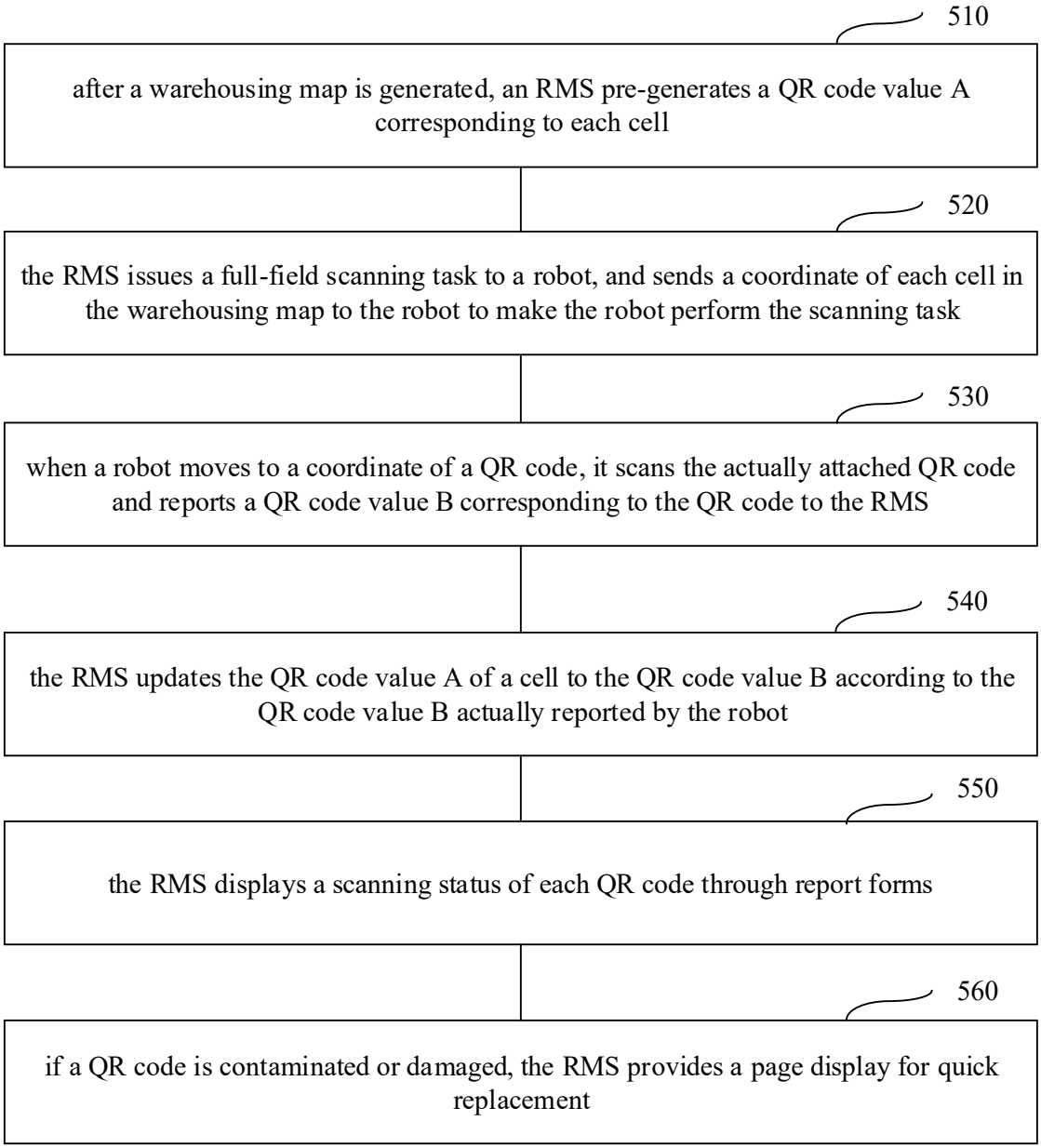

510
after a warehousing map is generated, an RMS pre-generates a QR code value A corresponding to each cell
520
the RMS issues a full-field scanning task to a robot, and sends a coordinate of each cell in the warehousing map to the robot to make the robot perform the scanning task
530
when a robot moves to a coordinate of a QR code, it scans the actually attached QR code and reports a QR code value B corresponding to the QR code to the RMS
540
the RMS updates the QR code value A of a cell to the QR code value B according to the QR code value B actually reported by the robot
550
the RMS displays a scanning status of each QR code through report forms
560
if a QR code is contaminated or damaged, the RMS provides a page display for quick replacement

FIG. 5

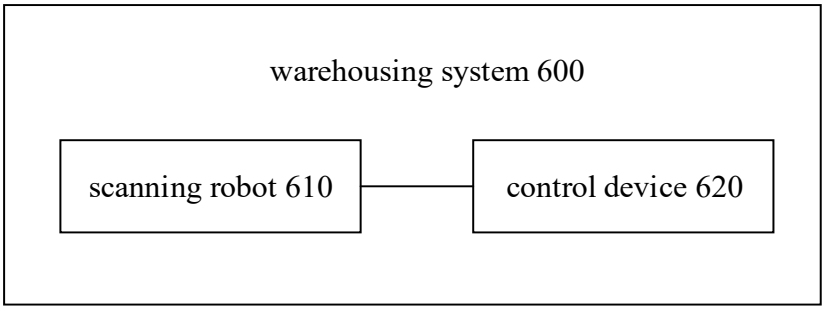

warehousing system 600
scanning robot 610
control device 620

FIG. 6

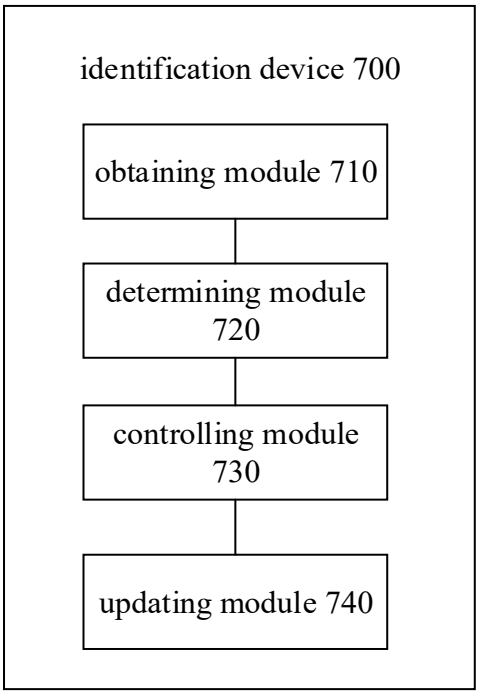

identification device 700
obtaining module 710
determining module 720
controlling module 730
updating module 740

FIG. 7

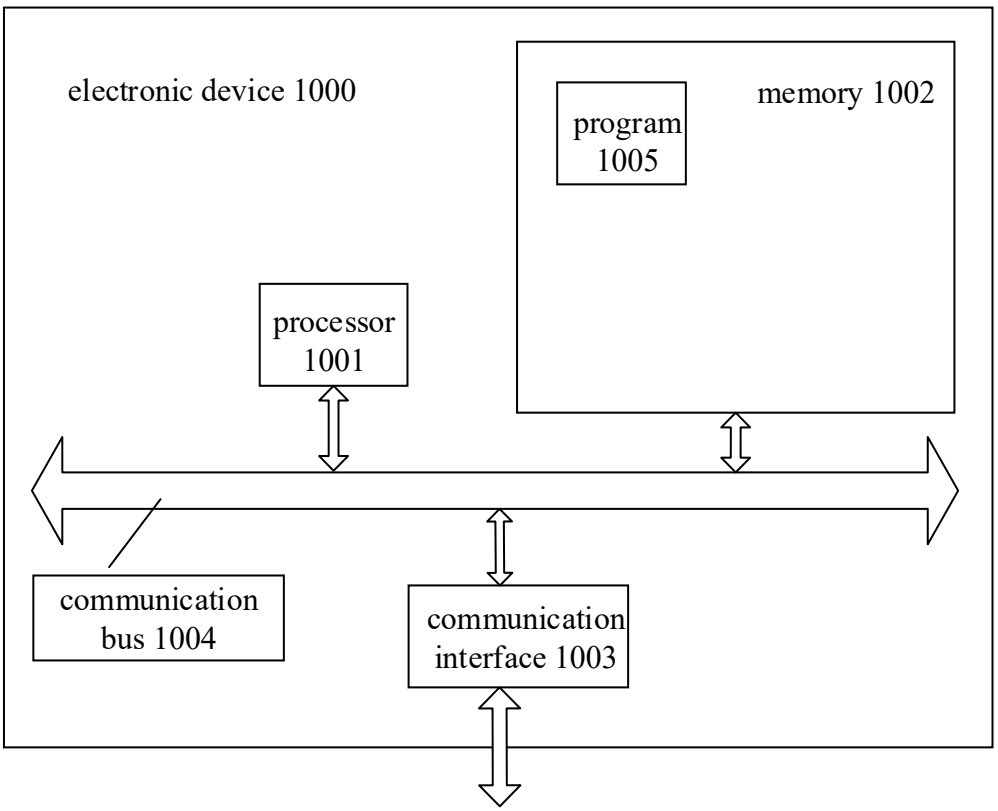

electronic device 1000
memory 1002
program 1005
processor 1001
communication bus 1004
communication interface 1003

FIG. 8