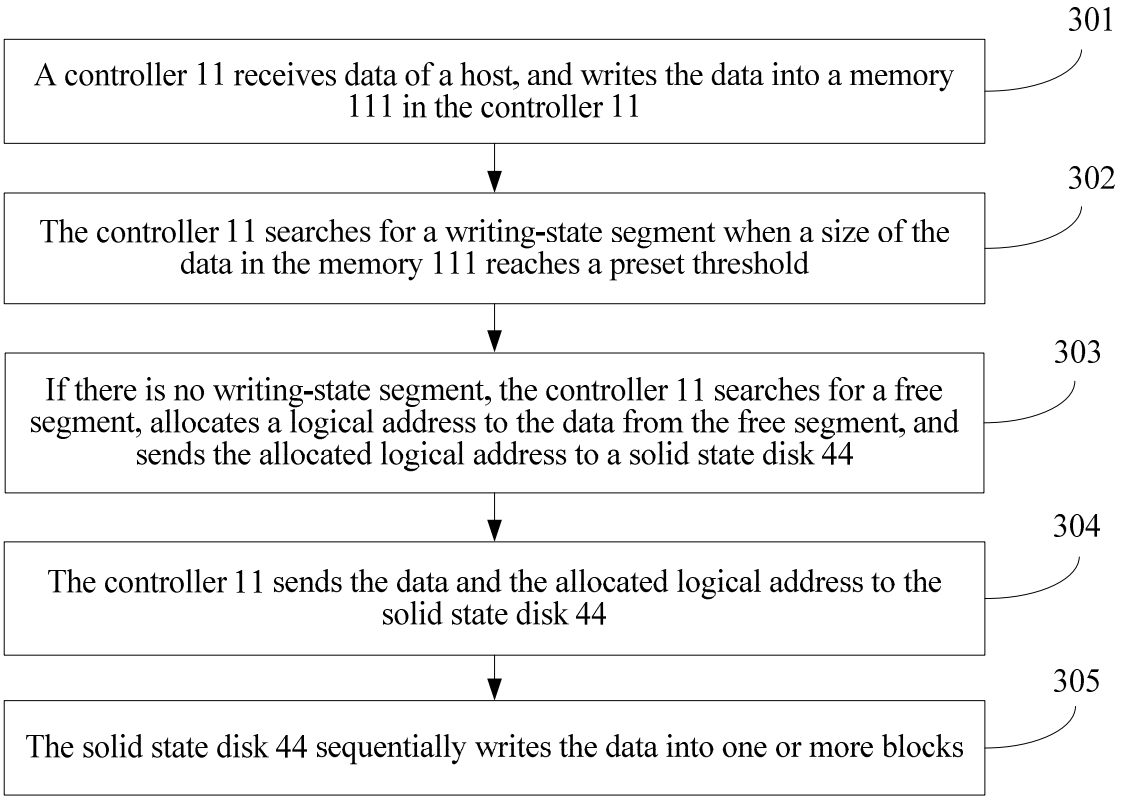

301
A controller 11 receives data of a host, and writes the data into a memory 111 in the controller 11
302
The controller 11 searches for a writing-state segment when a size of the data in the memory 111 reaches a preset threshold
303
If there is no writing-state segment, the controller 11 searches for a free segment, allocates a logical address to the data from the free segment, and sends the allocated logical address to a solid state disk 44
304
The controller 11 sends the data and the allocated logical address to the solid state disk 44
305
The solid state disk 44 sequentially writes the data into one or more blocks

FIG. 3

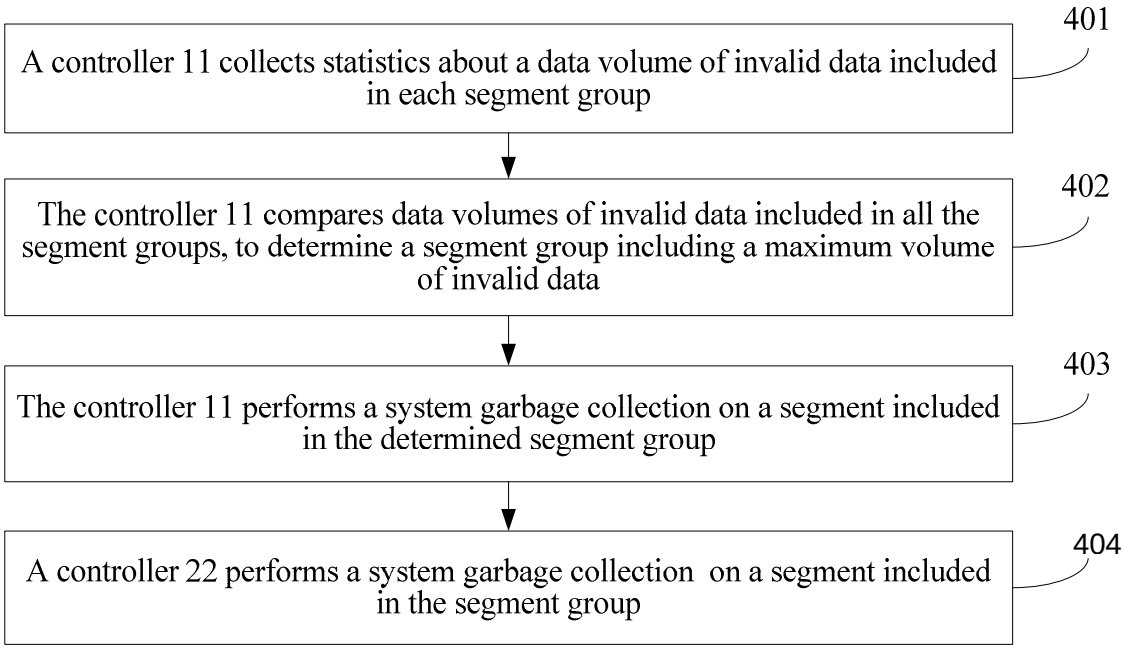

401
A controller 11 collects statistics about a data volume of invalid data included in each segment group
402
The controller 11 compares data volumes of invalid data included in all the segment groups, to determine a segment group including a maximum volume of invalid data
403
The controller 11 performs a system garbage collection on a segment included in the determined segment group
404
A controller 22 performs a system garbage collection on a segment included in the segment group

FIG. 4