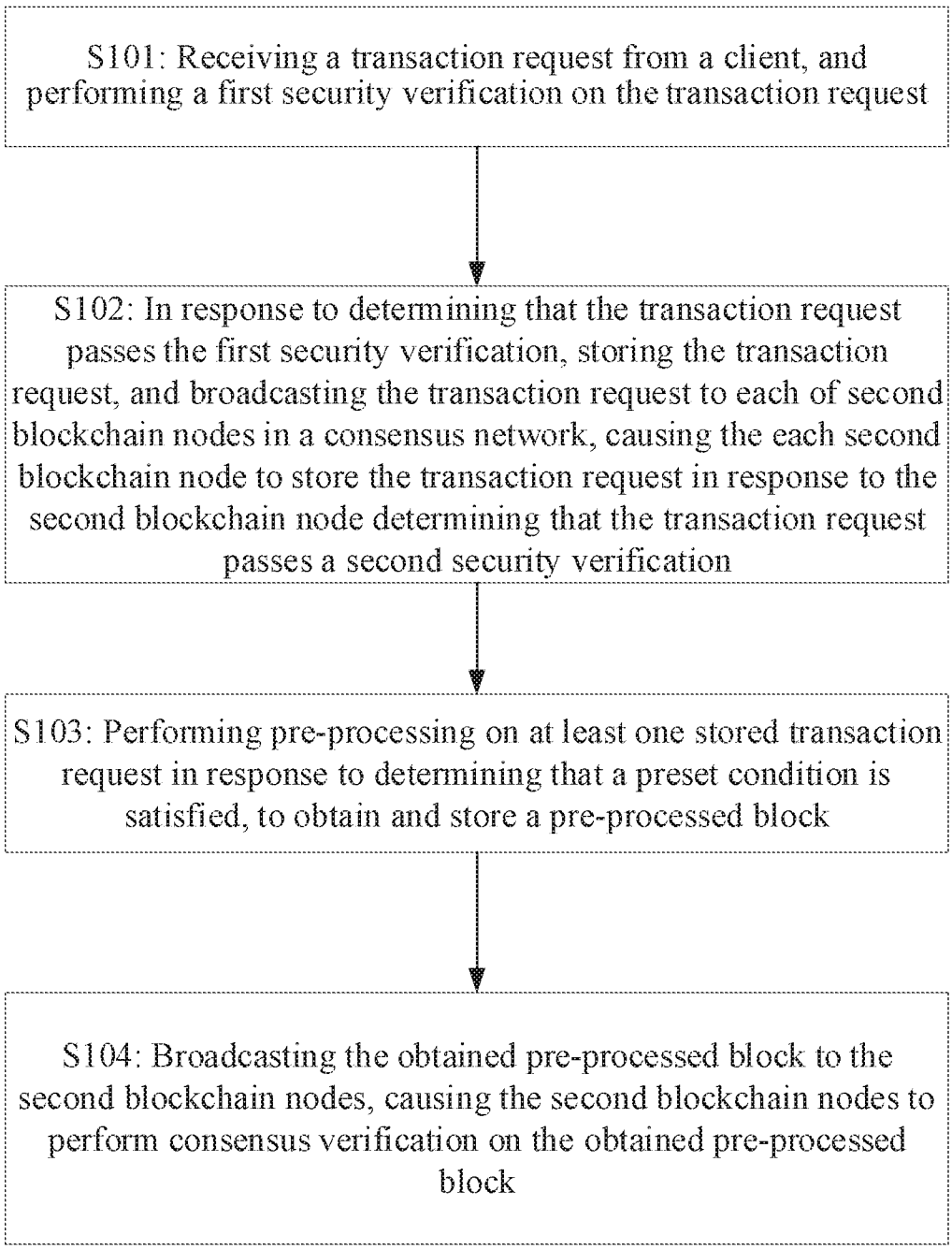

S101: Receiving a transaction request from a client, and performing a first security verification on the transaction request
S102: In response to determining that the transaction request passes the first security verification, storing the transaction request, and broadcasting the transaction request to each of second blockchain nodes in a consensus network, causing the each second blockchain node to store the transaction request in response to the second blockchain node determining that the transaction request passes a second security verification
S103: Performing pre-processing on at least one stored transaction request in response to determining that a preset condition is satisfied, to obtain and store a pre-processed block
S104: Broadcasting the obtained pre-processed block to the second blockchain nodes, causing the second blockchain nodes to perform consensus verification on the obtained pre-processed block

FIGURE 1

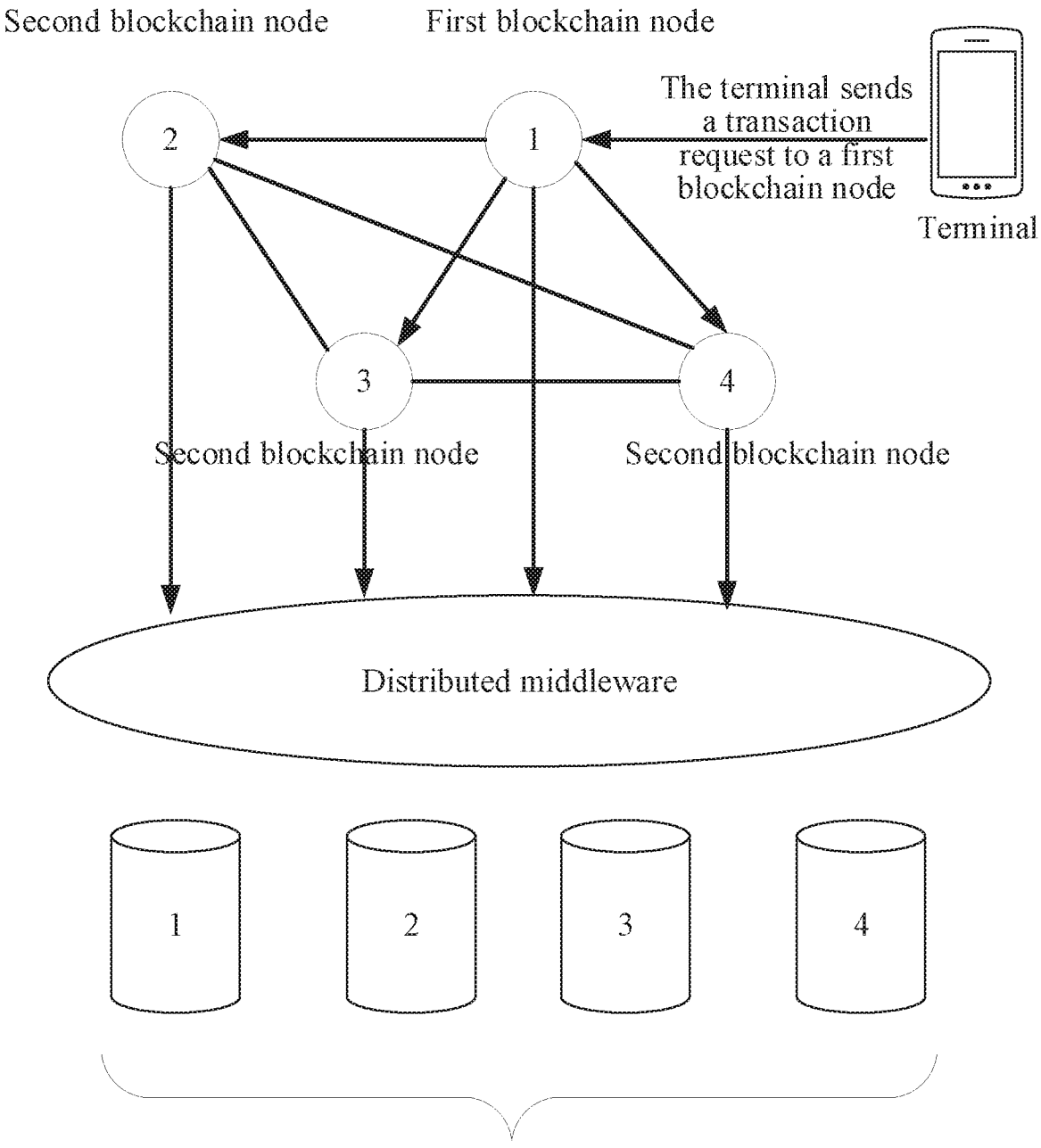
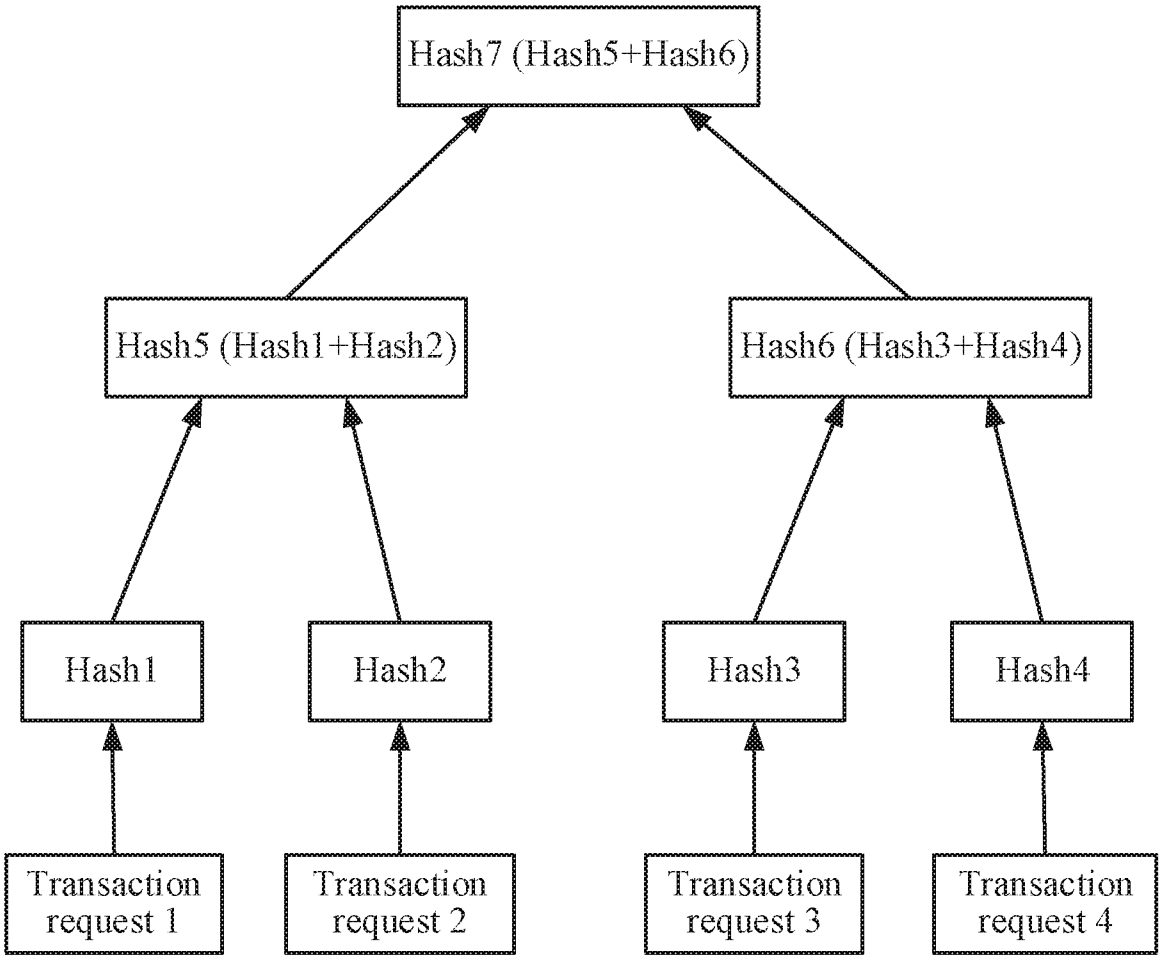

Second blockchain node
First blockchain node
The terminal sends a transaction request to a first blockchain node
Terminal
2
1
3
4
Second blockchain node
Second blockchain node
Distributed middleware
1
2
3
4
Transaction memory corresponding to each blockchain node

FIGURE 2



Order of the transaction requests

Transaction request 1
Transaction request 2
Transaction request 3
Transaction request 4

FIGURE 3

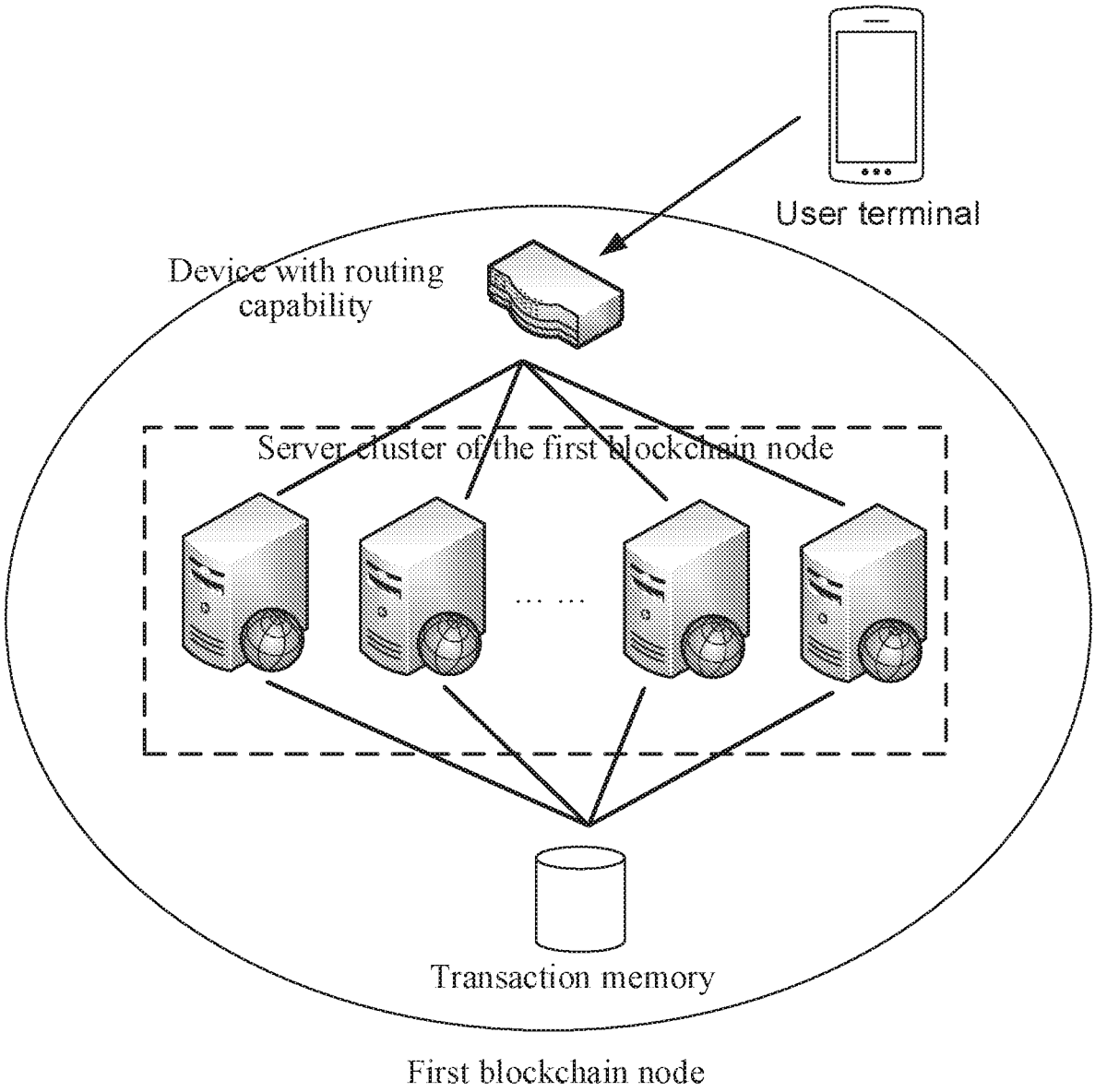

User terminal
Device with routing capability
Server cluster of the first blockchain node
Transaction memory
First blockchain node

FIGURE 4

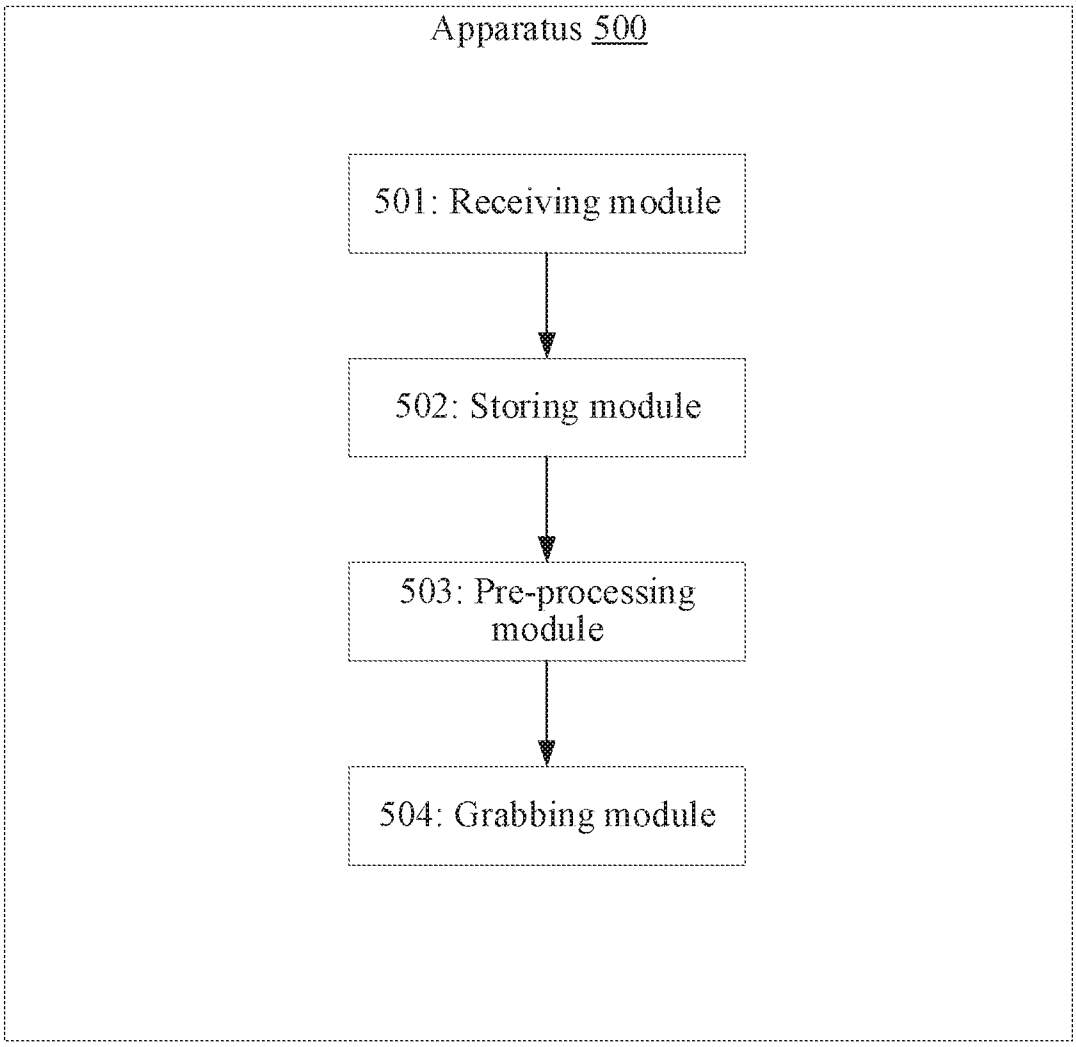

Apparatus 500
501: Receiving module
502: Storing module
503: Pre-processing module
504: Grabbing module

FIGURE 5

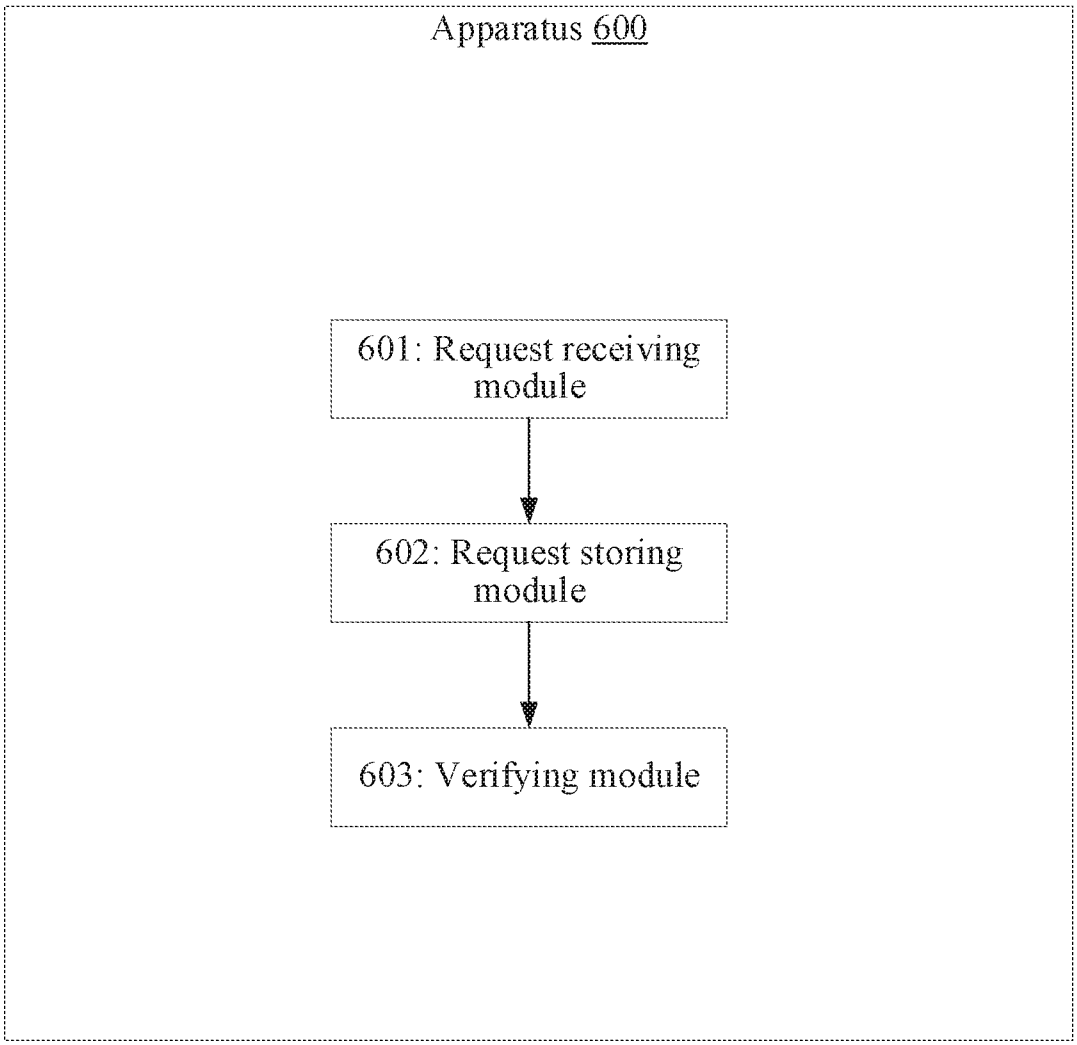

Apparatus 600
601: Request receiving module
602: Request storing module
603: Verifying module

FIGURE 6