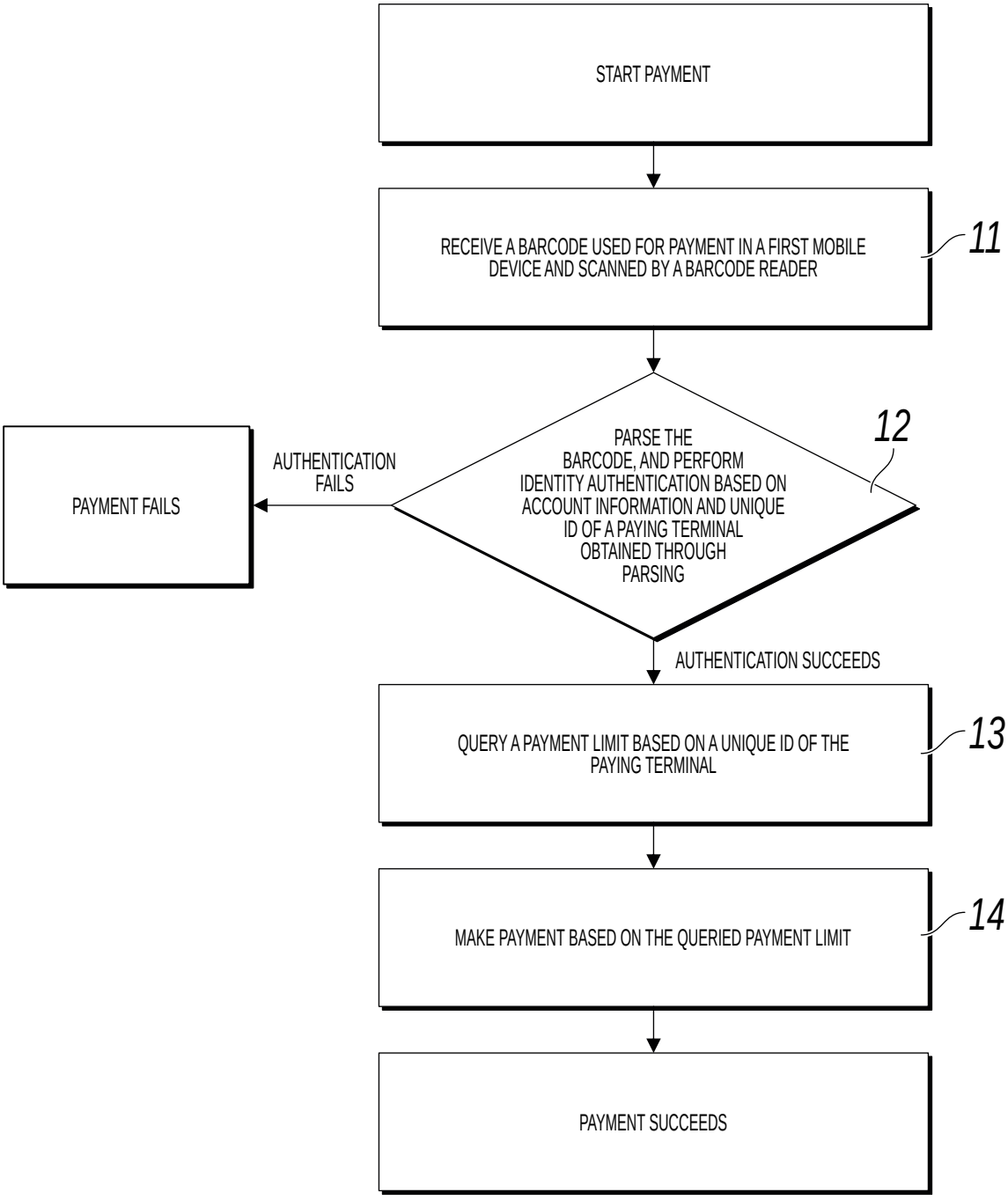

START PAYMENT
RECEIVE A BARCODE USED FOR PAYMENT IN A FIRST MOBILE DEVICE AND SCANNED BY A BARCODE READER
11
PARSE THE BARCODE, AND PERFORM IDENTITY AUTHENTICATION BASED ON ACCOUNT INFORMATION AND UNIQUE ID OF A PAYING TERMINAL OBTAINED THROUGH PARSING
12
AUTHENTICATION FAILS
PAYMENT FAILS
AUTHENTICATION SUCCEEDS
QUERY A PAYMENT LIMIT BASED ON A UNIQUE ID OF THE PAYING TERMINAL
13
MAKE PAYMENT BASED ON THE QUERIED PAYMENT LIMIT
14
PAYMENT SUCCEEDS

FIG. 1

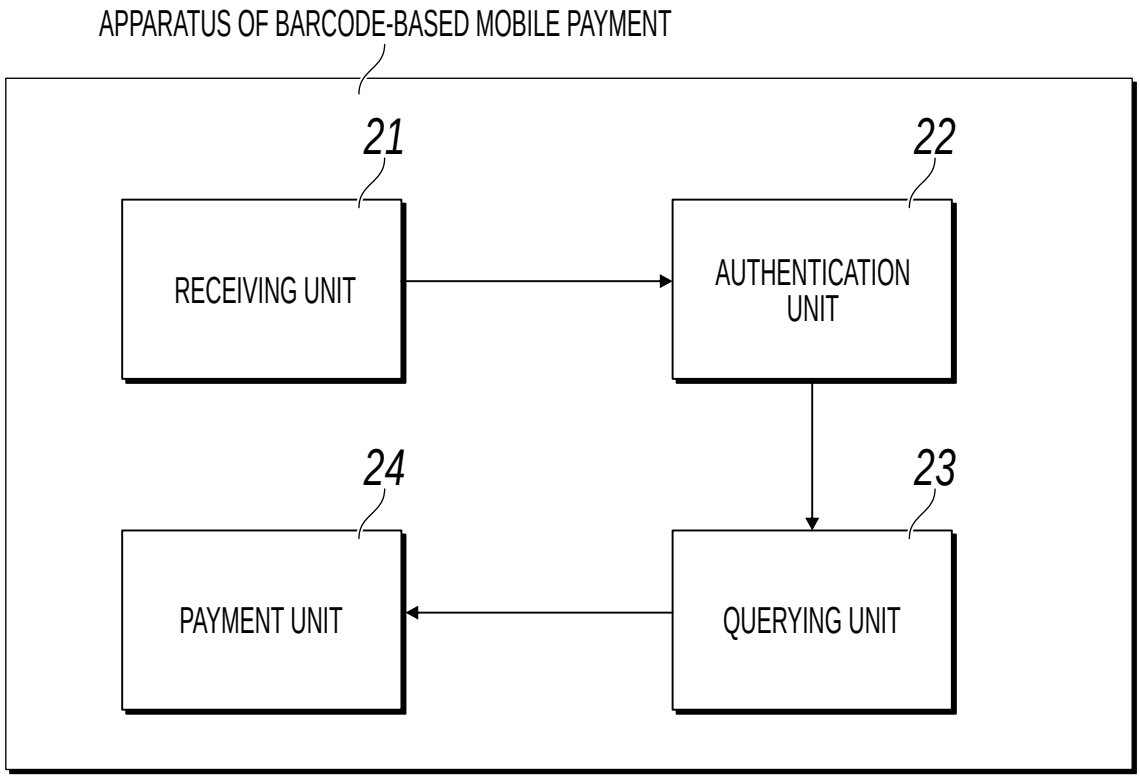

APPARATUS OF BARCODE-BASED MOBILE PAYMENT
21
22
RECEIVING UNIT
AUTHENTICATION UNIT
24
23
PAYMENT UNIT
QUERYING UNIT

FIG. 2

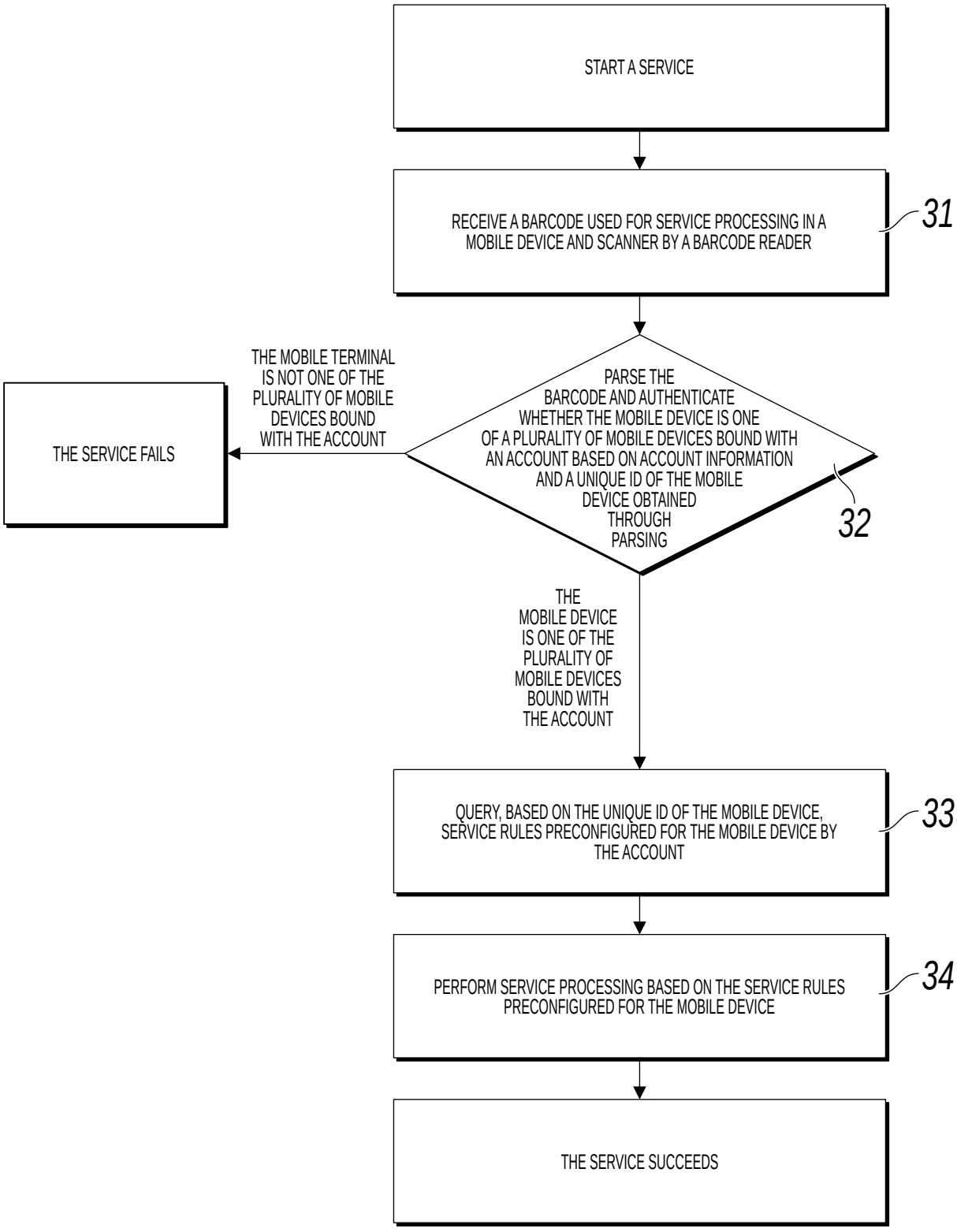

START A SERVICE
RECEIVE A BARCODE USED FOR SERVICE PROCESSING IN A MOBILE DEVICE AND SCANNER BY A BARCODE READER
31
PARSE THE BARCODE AND AUTHENTICATE WHETHER THE MOBILE DEVICE IS ONE OF A PLURALITY OF MOBILE DEVICES BOUND WITH AN ACCOUNT BASED ON ACCOUNT INFORMATION AND A UNIQUE ID OF THE MOBILE DEVICE OBTAINED THROUGH PARSING
32
THE MOBILE TERMINAL IS NOT ONE OF THE PLURALITY OF MOBILE DEVICES BOUND WITH THE ACCOUNT
THE SERVICE FAILS
THE MOBILE DEVICE IS ONE OF THE PLURALITY OF MOBILE DEVICES BOUND WITH THE ACCOUNT
QUERY, BASED ON THE UNIQUE ID OF THE MOBILE DEVICE, SERVICE RULES PRECONFIGURED FOR THE MOBILE DEVICE BY THE ACCOUNT
33
PERFORM SERVICE PROCESSING BASED ON THE SERVICE RULES PRECONFIGURED FOR THE MOBILE DEVICE
34
THE SERVICE SUCCEEDS

FIG. 3

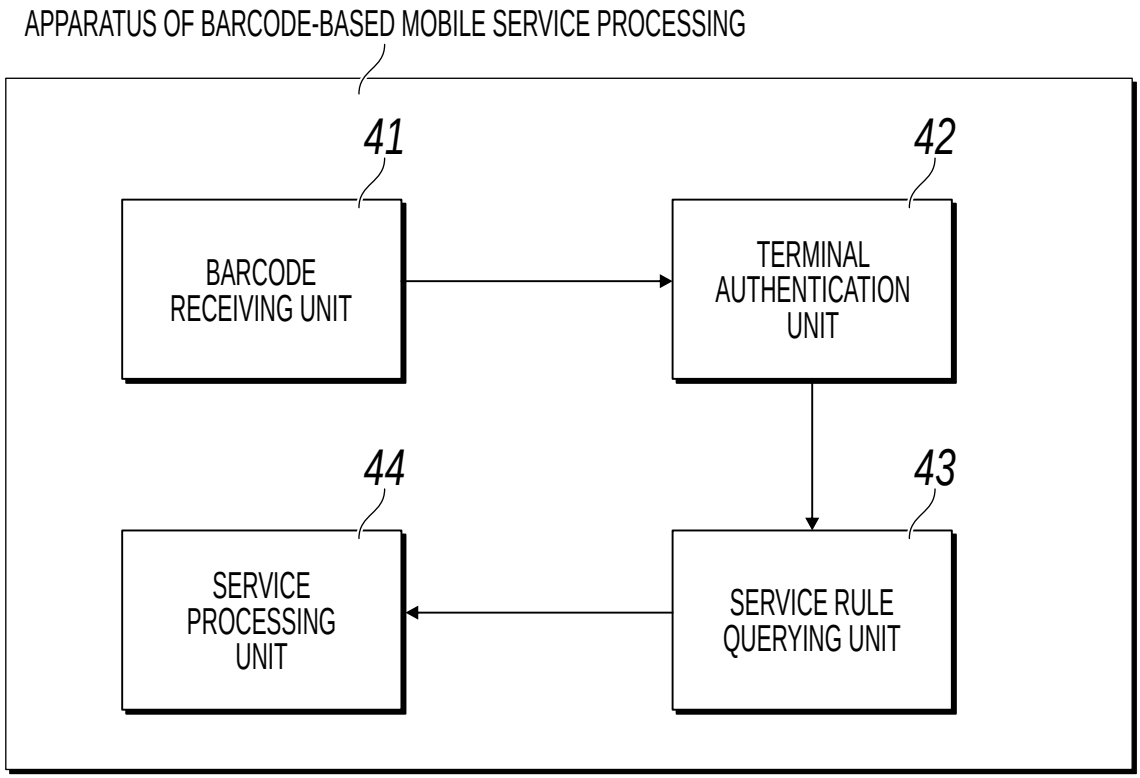

APPARATUS OF BARCODE-BASED MOBILE SERVICE PROCESSING
41
BARCODE RECEIVING UNIT
42
TERMINAL AUTHENTICATION UNIT
44
SERVICE PROCESSING UNIT
43
SERVICE RULE QUERYING UNIT

FIG. 4

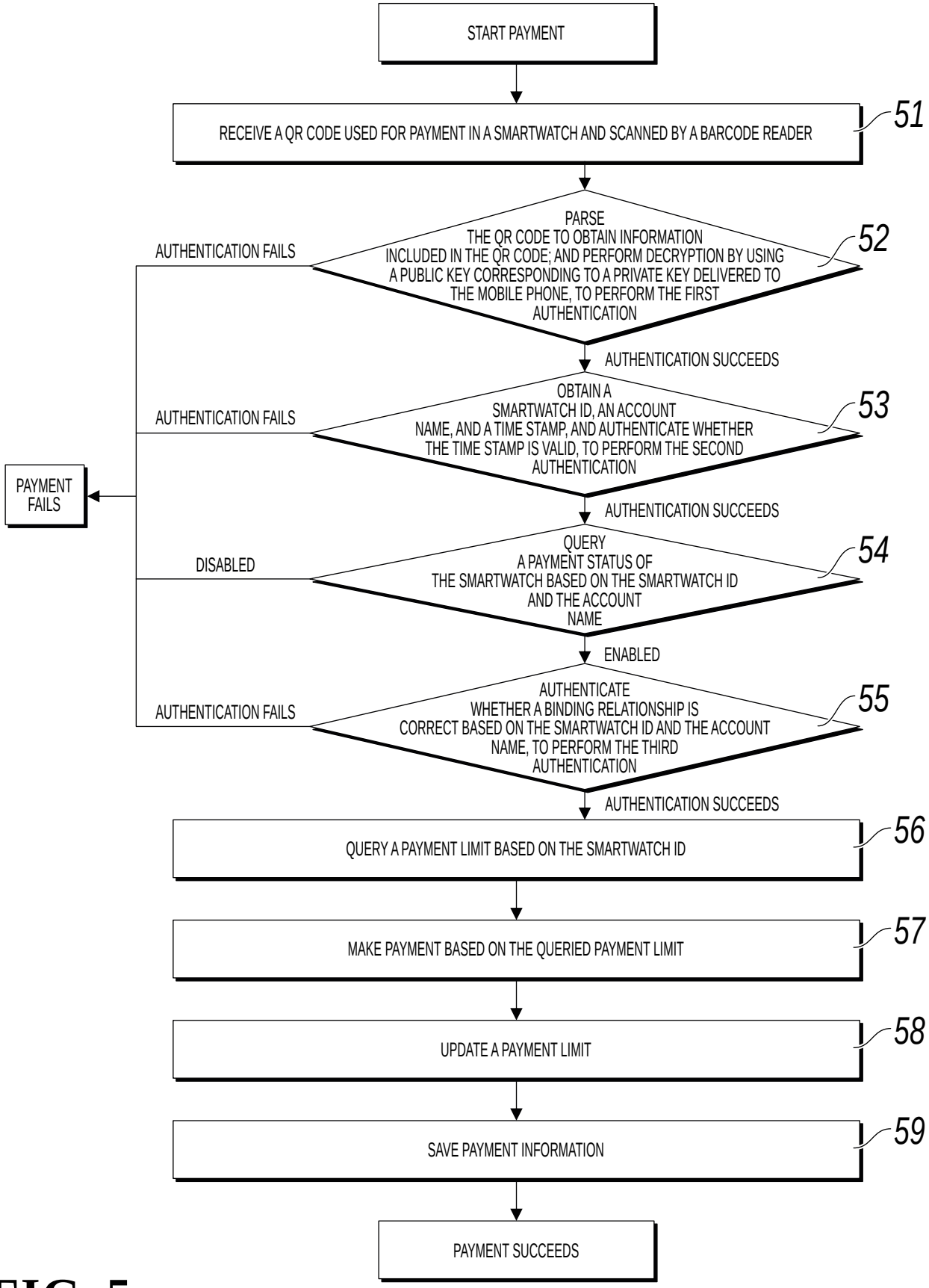

START PAYMENT
RECEIVE A QR CODE USED FOR PAYMENT IN A SMARTWATCH AND SCANNED BY A BARCODE READER
51
PARSE THE QR CODE TO OBTAIN INFORMATION INCLUDED IN THE QR CODE; AND PERFORM DECRYPTION BY USING A PUBLIC KEY CORRESPONDING TO A PRIVATE KEY DELIVERED TO THE MOBILE PHONE, TO PERFORM THE FIRST AUTHENTICATION
52
AUTHENTICATION FAILS
AUTHENTICATION SUCCEEDS
OBTAIN A SMARTWATCH ID, AN ACCOUNT NAME, AND A TIME STAMP, AND AUTHENTICATE WHETHER THE TIME STAMP IS VALID, TO PERFORM THE SECOND AUTHENTICATION
53
AUTHENTICATION FAILS
AUTHENTICATION SUCCEEDS
QUERY A PAYMENT STATUS OF THE SMARTWATCH BASED ON THE SMARTWATCH ID AND THE ACCOUNT NAME
54
DISABLED
ENABLED
AUTHENTICATE WHETHER A BINDING RELATIONSHIP IS CORRECT BASED ON THE SMARTWATCH ID AND THE ACCOUNT NAME, TO PERFORM THE THIRD AUTHENTICATION
55
AUTHENTICATION FAILS
AUTHENTICATION SUCCEEDS
PAYMENT FAILS
QUERY A PAYMENT LIMIT BASED ON THE SMARTWATCH ID
56
MAKE PAYMENT BASED ON THE QUERIED PAYMENT LIMIT
57
UPDATE A PAYMENT LIMIT
58
SAVE PAYMENT INFORMATION
59
PAYMENT SUCCEEDS

FIG. 5