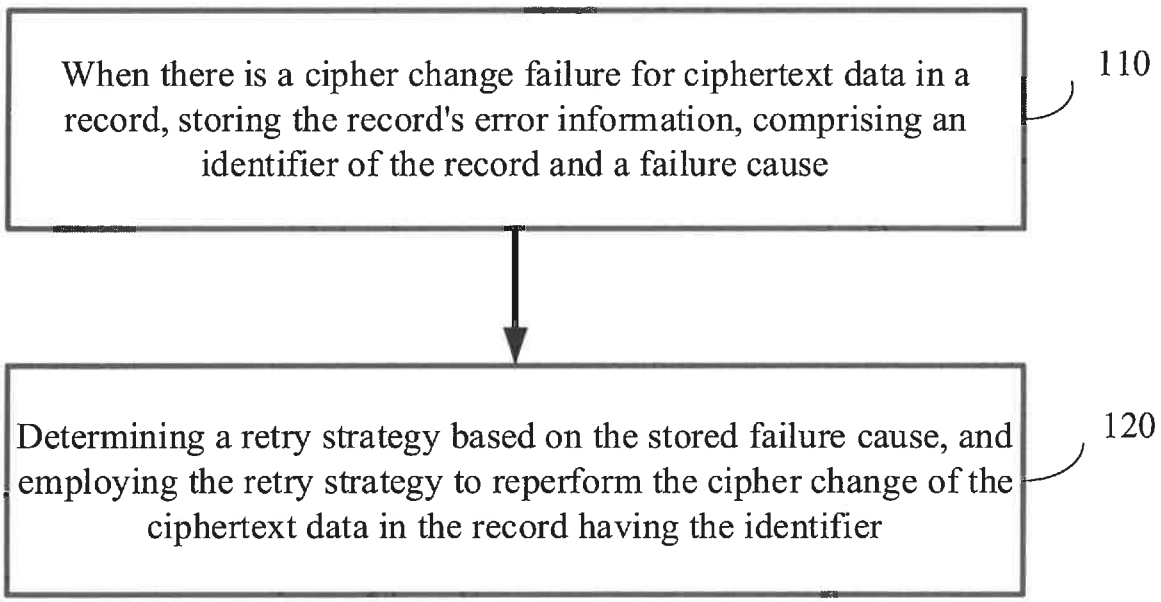

When there is a cipher change failure for ciphertext data in a record, storing the record's error information, comprising an identifier of the record and a failure cause
110
Determining a retry strategy based on the stored failure cause, and employing the retry strategy to reperform the cipher change of the ciphertext data in the record having the identifier
120

FIG. 1

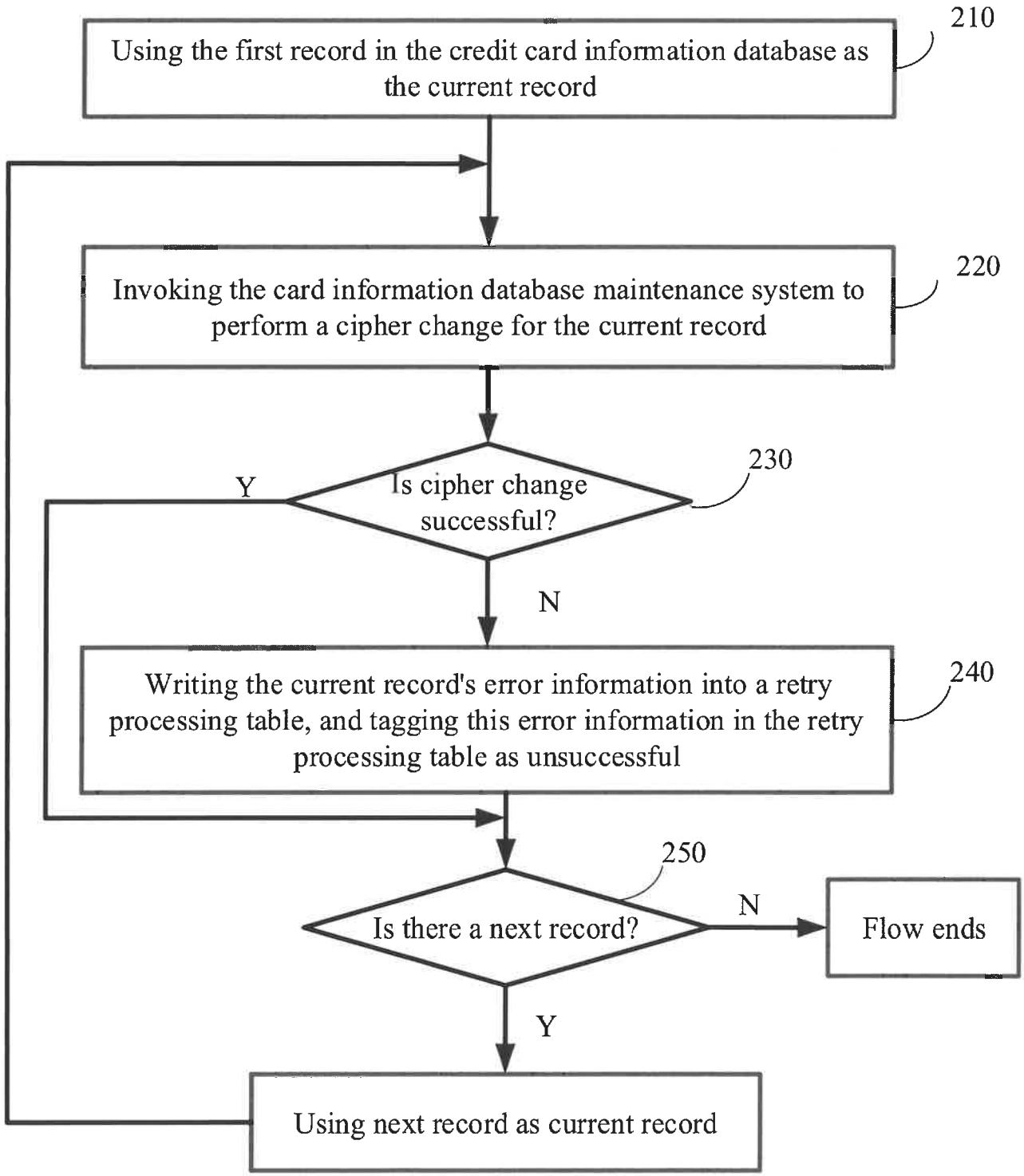

Using the first record in the credit card information database as the current record
210
Invoking the card information database maintenance system to perform a cipher change for the current record
220
Is cipher change successful?
230
Y
N
Writing the current record's error information into a retry processing table, and tagging this error information in the retry processing table as unsuccessful
240
Is there a next record?
250
N
Flow ends
Y
Using next record as current record

FIG. 2

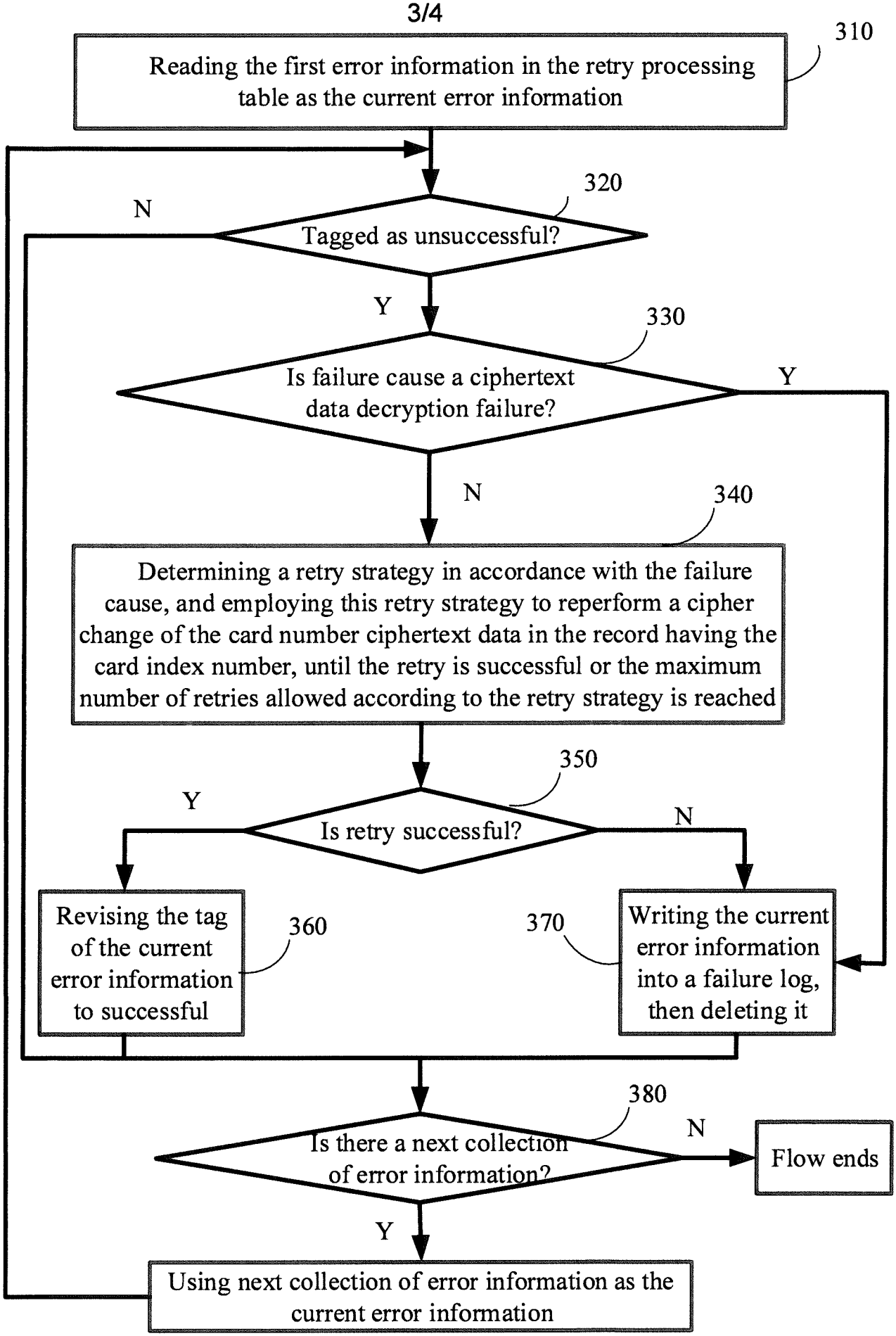

Reading the first error information in the retry processing table as the current error information
310
320
Tagged as unsuccessful?
N
Y
330
Is failure cause a ciphertext data decryption failure?
Y
N
340
Determining a retry strategy in accordance with the failure cause, and employing this retry strategy to reperform a cipher change of the card number ciphertext data in the record having the card index number, until the retry is successful or the maximum number of retries allowed according to the retry strategy is reached
350
Is retry successful?
Y
N
Revising the tag of the current error information to successful
360
370
Writing the current error information into a failure log, then deleting it
380
Is there a next collection of error information?
N
Flow ends
Y
Using next collection of error information as the current error information

FIG. 3

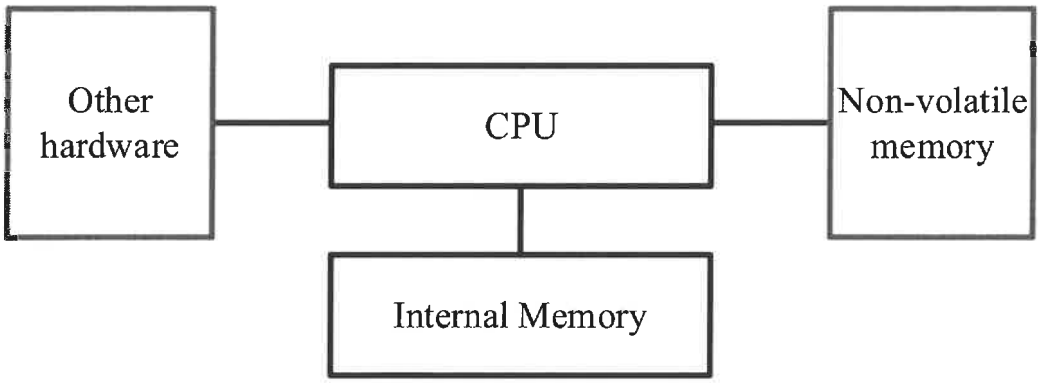

Other hardware
CPU
Non-volatile memory
Internal Memory

FIG. 4

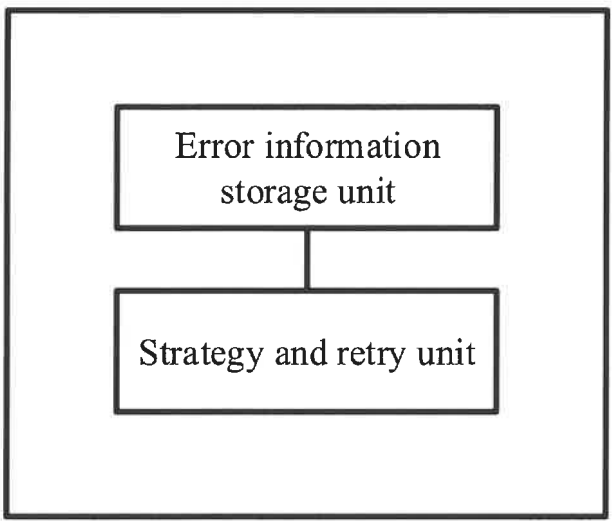

Error information storage unit
Strategy and retry unit

FIG. 5