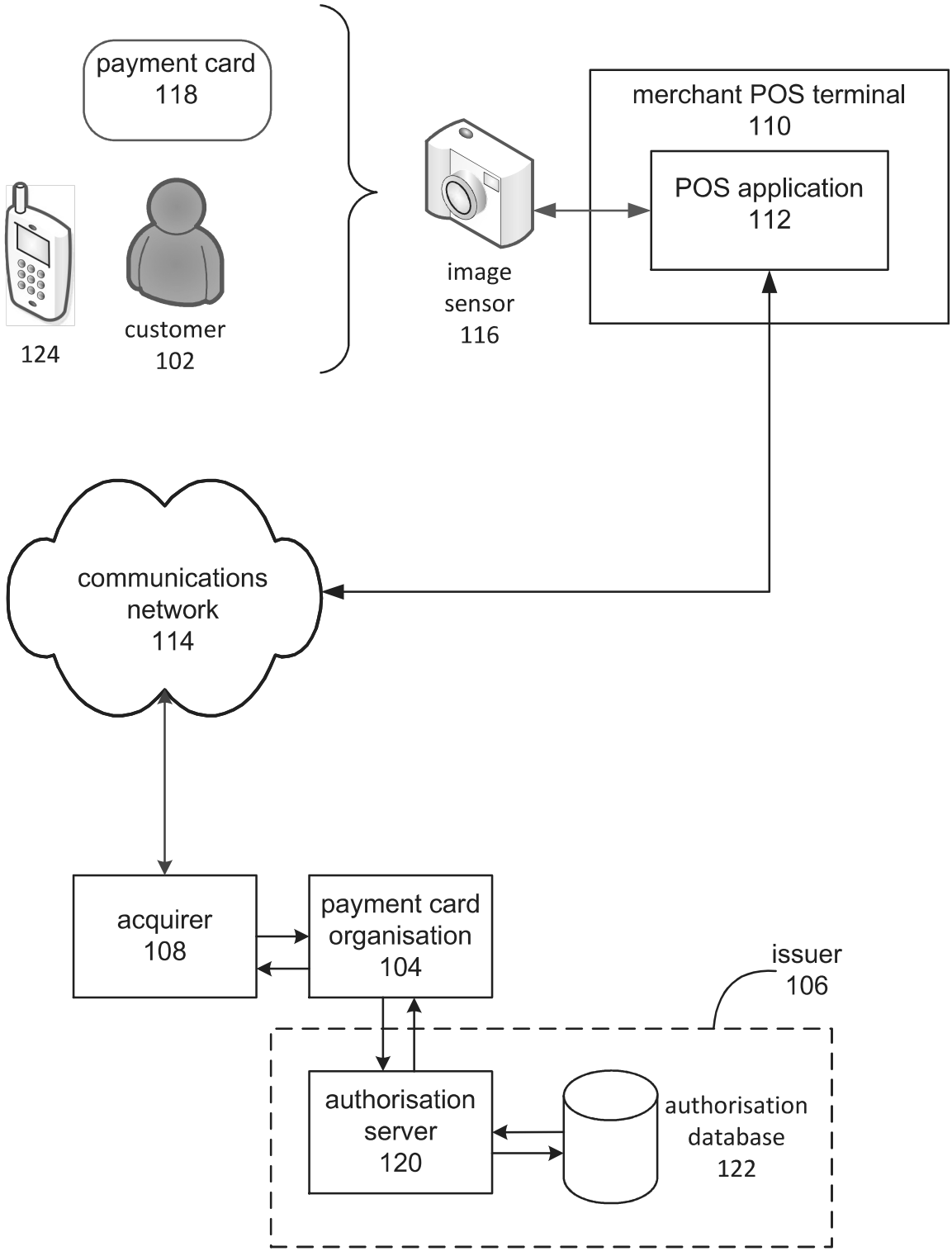

payment card
118
merchant POS terminal
110
POS application
112
image
sensor
116
124
customer
102
communications
network
114
acquirer
108
payment card
organisation
104
issuer
106
authorisation
server
120
authorisation
database
122

FIG 1

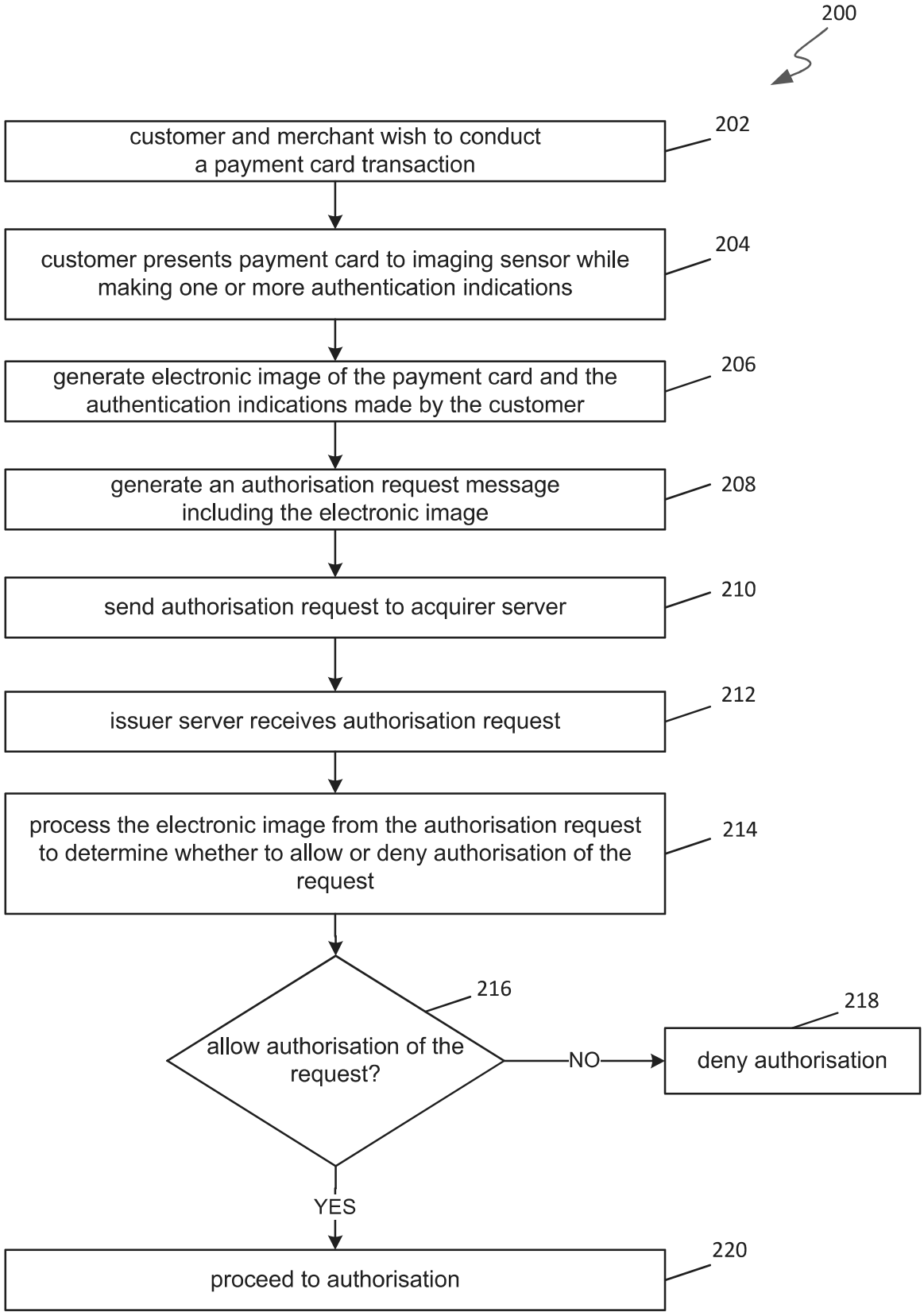

200
customer and merchant wish to conduct a payment card transaction
202
customer presents payment card to imaging sensor while making one or more authentication indications
204
generate electronic image of the payment card and the authentication indications made by the customer
206
generate an authorisation request message including the electronic image
208
send authorisation request to acquirer server
210
issuer server receives authorisation request
212
process the electronic image from the authorisation request to determine whether to allow or deny authorisation of the request
214
allow authorisation of the request?
216
NO
deny authorisation
218
YES
proceed to authorisation
220

FIG 2

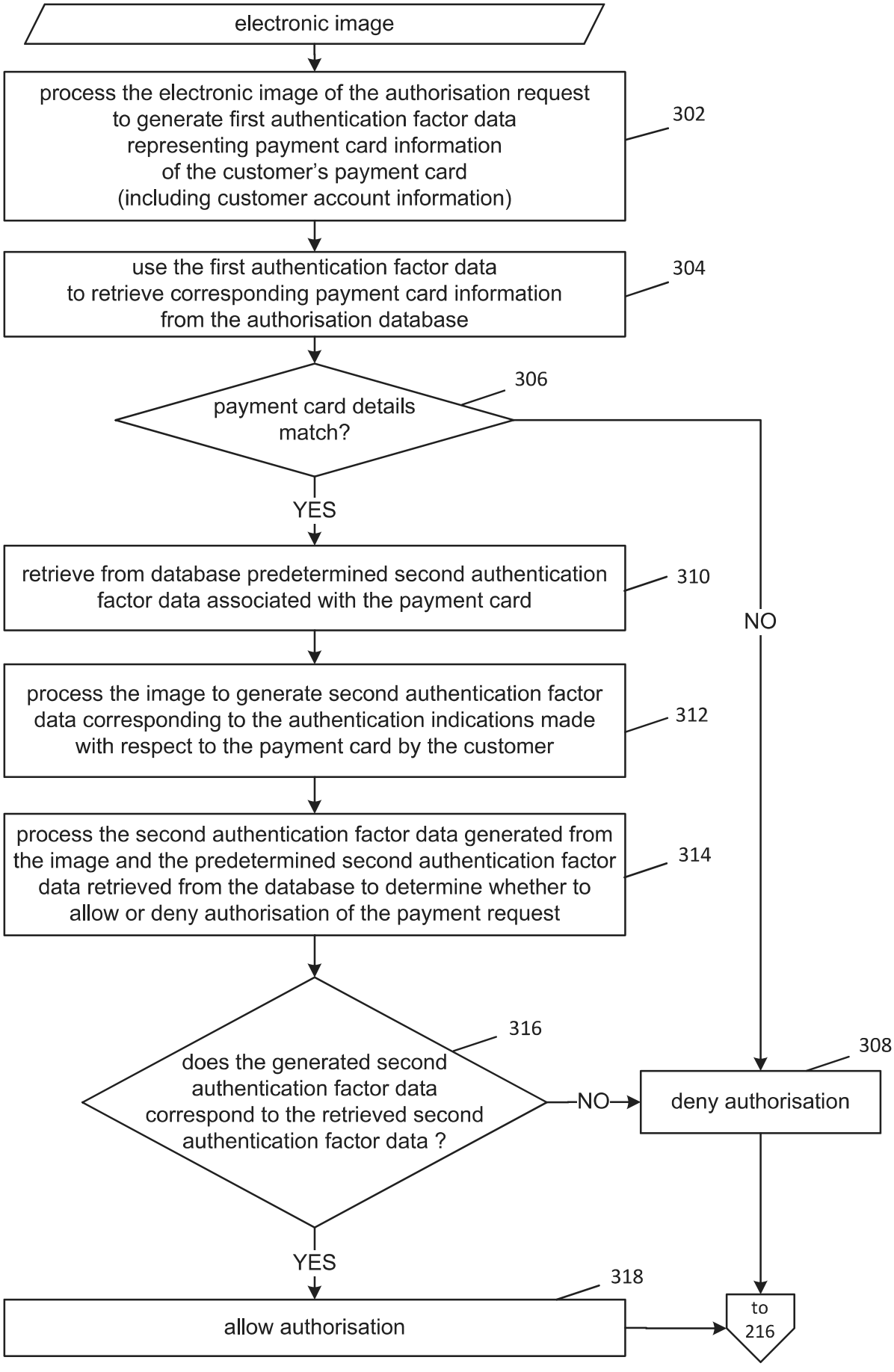

electronic image
process the electronic image of the authorisation request to generate first authentication factor data representing payment card information of the customer's payment card (including customer account information)
302
use the first authentication factor data to retrieve corresponding payment card information from the authorisation database
304
payment card details match?
306
YES
NO
retrieve from database predetermined second authentication factor data associated with the payment card
310
process the image to generate second authentication factor data corresponding to the authentication indications made with respect to the payment card by the customer
312
process the second authentication factor data generated from the image and the predetermined second authentication factor data retrieved from the database to determine whether to allow or deny authorisation of the payment request
314
does the generated second authentication factor data correspond to the retrieved second authentication factor data ?
316
NO
deny authorisation
308
YES
allow authorisation
318
to 216

FIG 3

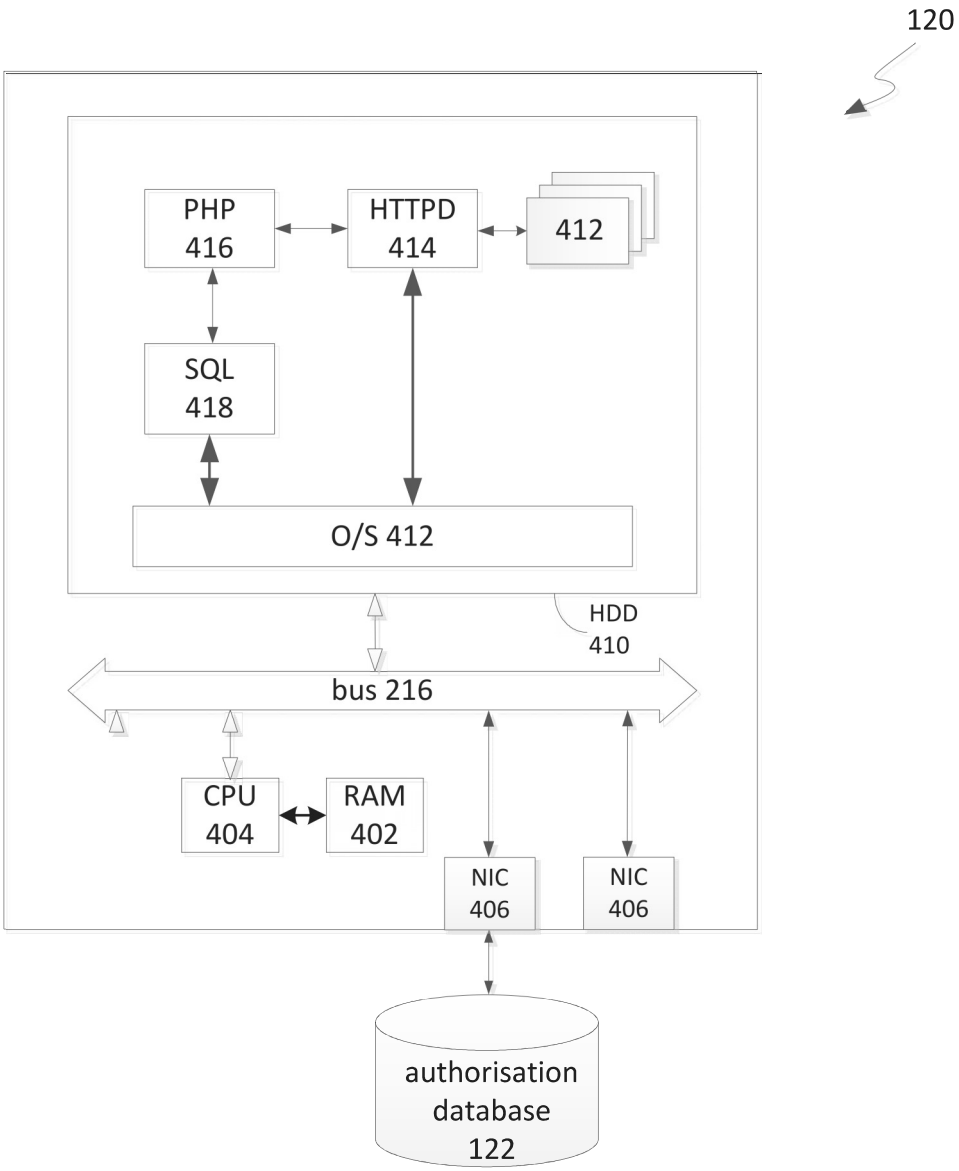

120
PHP
416
HTTPD
414
412
SQL
418
O/S 412
HDD
410
bus 216
CPU
404
RAM
402
NIC
406
NIC
406
authorisation
database
122

FIG 4

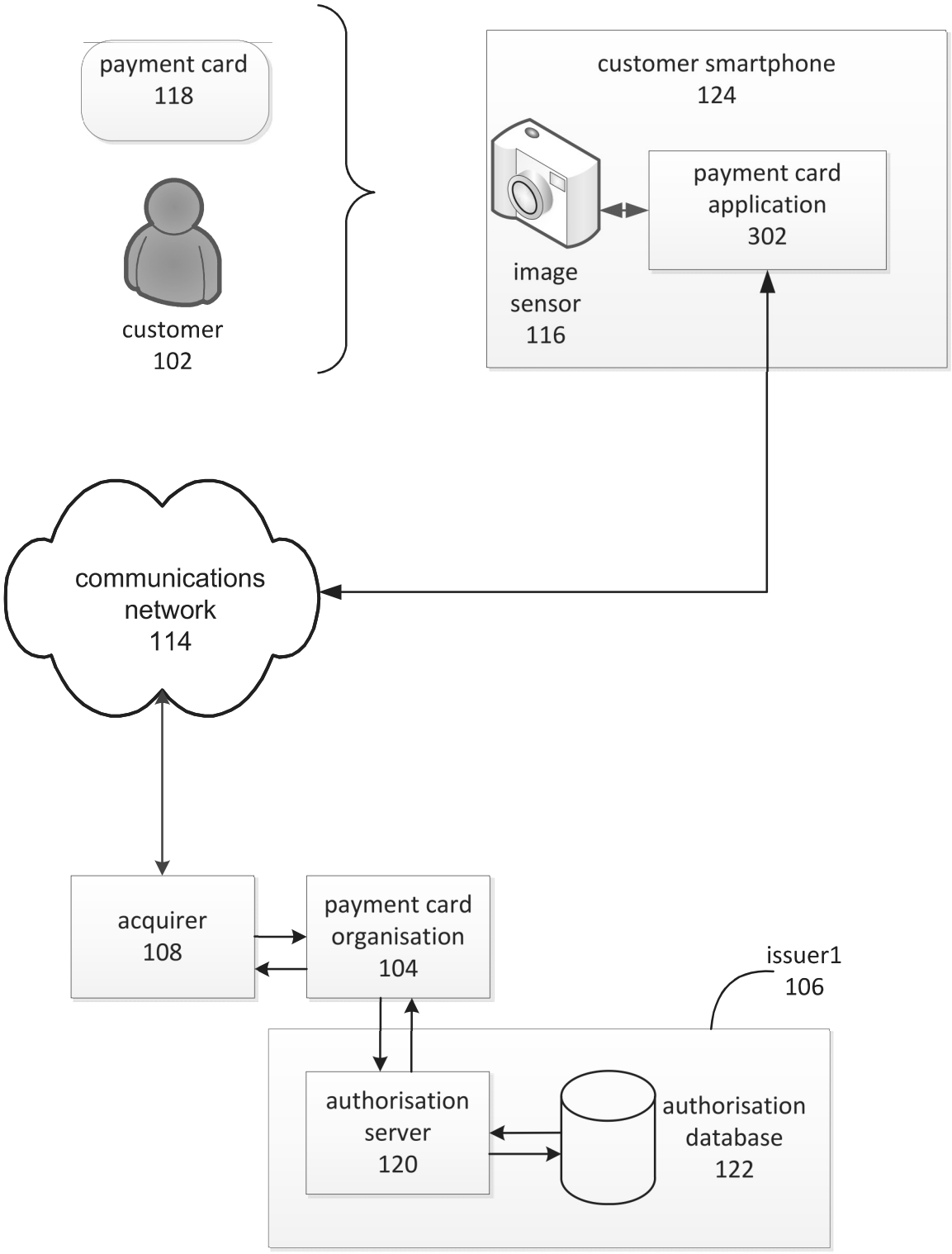

payment card
118
customer
102
customer smartphone
124
payment card
application
302
image
sensor
116
communications
network
114
acquirer
108
payment card
organisation
104
issuer1
106
authorisation
server
120
authorisation
database
122

FIG 5

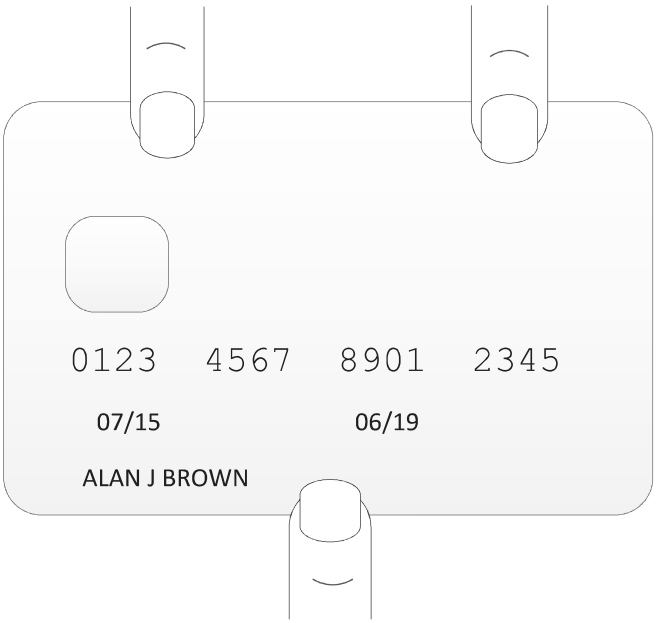

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FIG 6

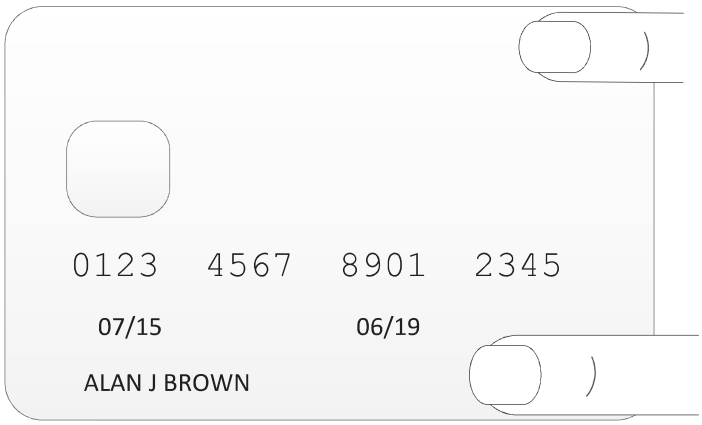

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FIG 7

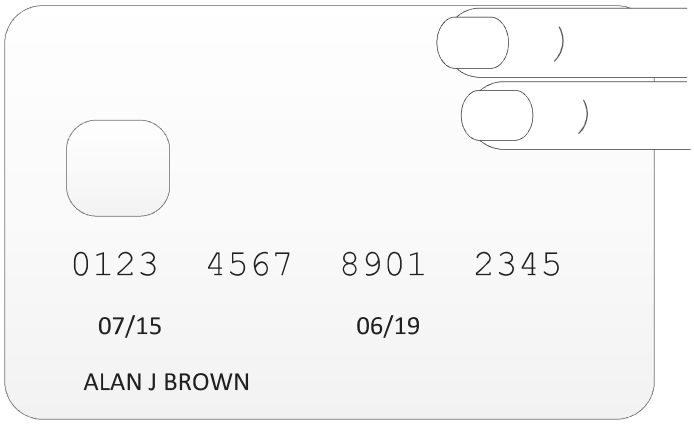

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FIG 8

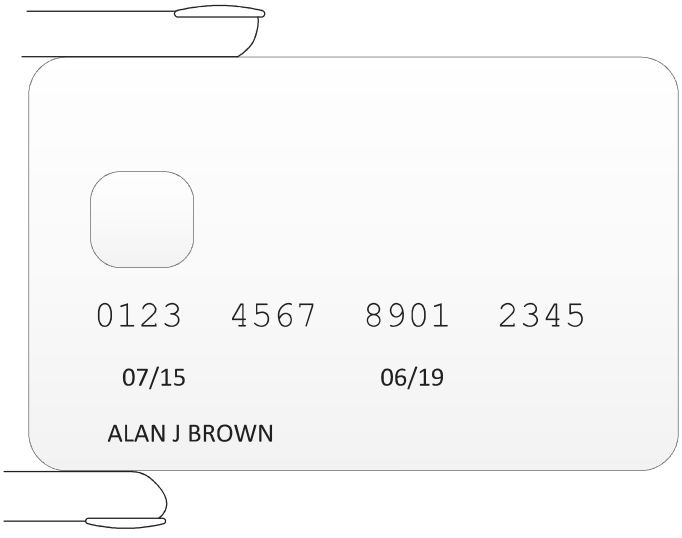

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FIG 9

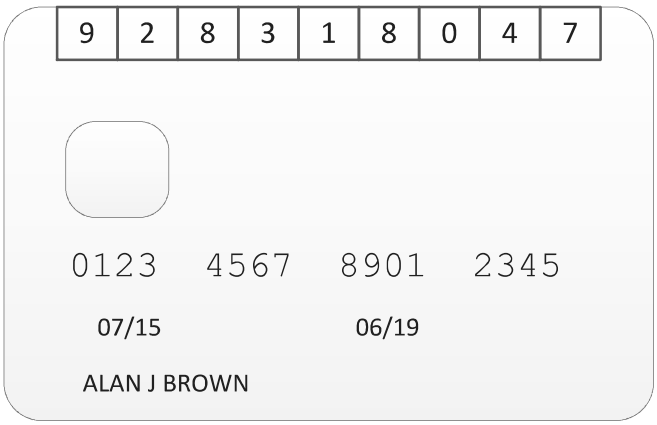

9 2 8 3 1 8 0 4 7
0123 4567 8901 2345
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FIG 10

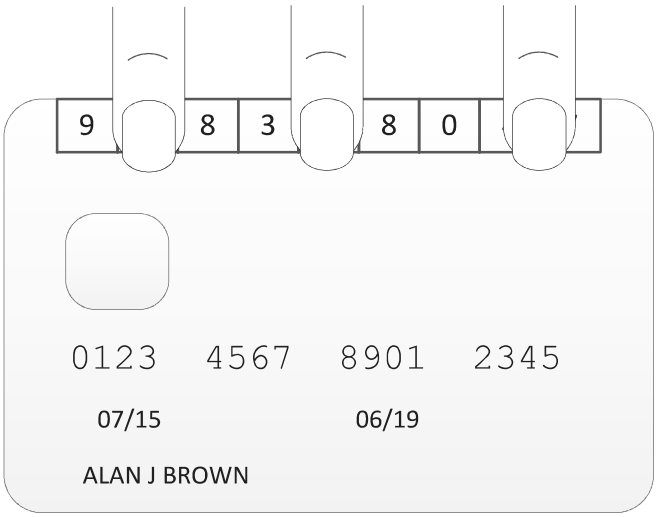

9 8 3 8 0
0123 4567 8901 2345
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FIG 11