
Party B
Party A
Sample label
Sample feature F_B
Sample feature F_A
. . .

FIG. 1

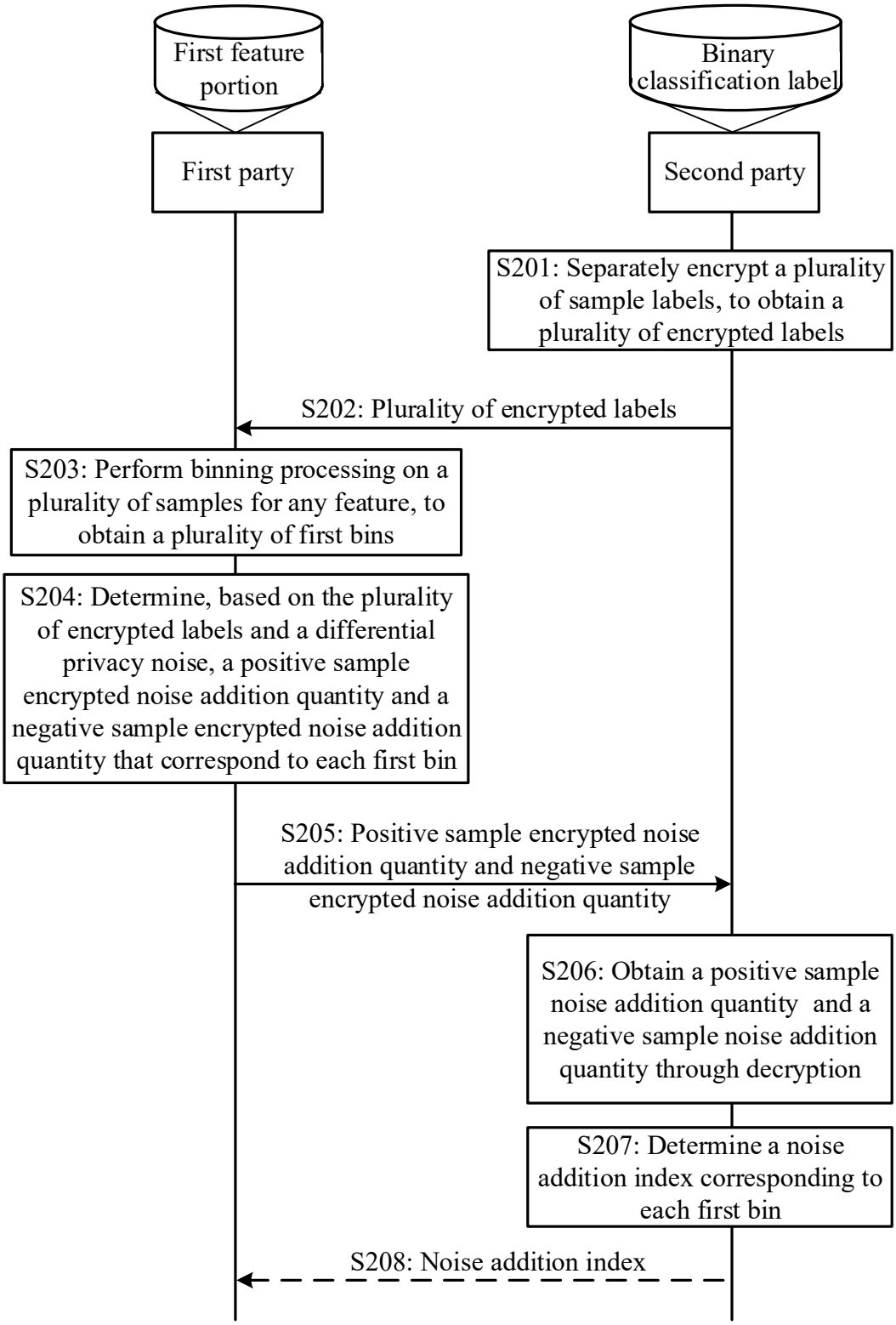

First feature portion
Binary classification label
First party
Second party
S201: Separately encrypt a plurality of sample labels, to obtain a plurality of encrypted labels
S202: Plurality of encrypted labels
S203: Perform binning processing on a plurality of samples for any feature, to obtain a plurality of first bins
S204: Determine, based on the plurality of encrypted labels and a differential privacy noise, a positive sample encrypted noise addition quantity and a negative sample encrypted noise addition quantity that correspond to each first bin
S205: Positive sample encrypted noise addition quantity and negative sample encrypted noise addition quantity
S206: Obtain a positive sample noise addition quantity and a negative sample noise addition quantity through decryption
S207: Determine a noise addition index corresponding to each first bin
S208: Noise addition index

FIG. 2

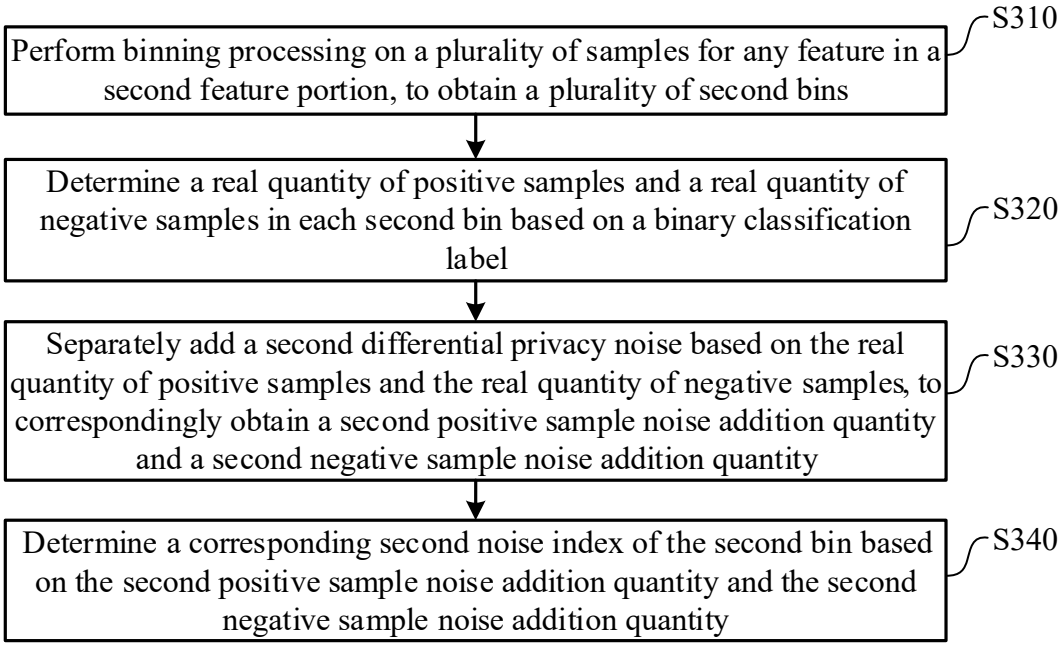

Perform binning processing on a plurality of samples for any feature in a second feature portion, to obtain a plurality of second bins
S310
Determine a real quantity of positive samples and a real quantity of negative samples in each second bin based on a binary classification label
S320
Separately add a second differential privacy noise based on the real quantity of positive samples and the real quantity of negative samples, to correspondingly obtain a second positive sample noise addition quantity and a second negative sample noise addition quantity
S330
Determine a corresponding second noise index of the second bin based on the second positive sample noise addition quantity and the second negative sample noise addition quantity
S340

FIG. 3

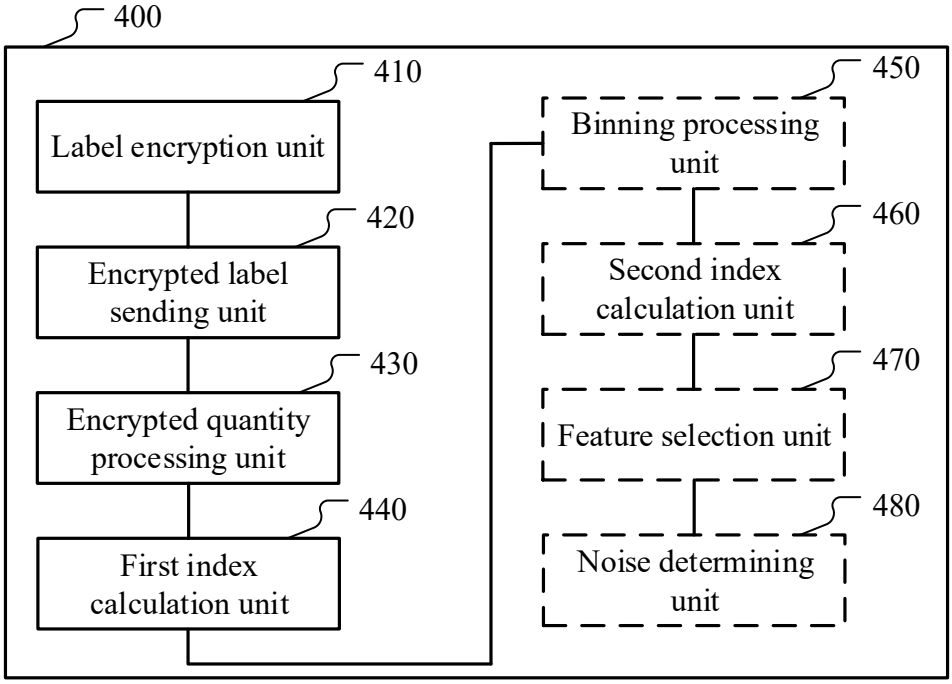

400
410
Label encryption unit
420
Encrypted label sending unit
430
Encrypted quantity processing unit
440
First index calculation unit
450
Binning processing unit
460
Second index calculation unit
470
Feature selection unit
480
Noise determining unit

FIG. 4

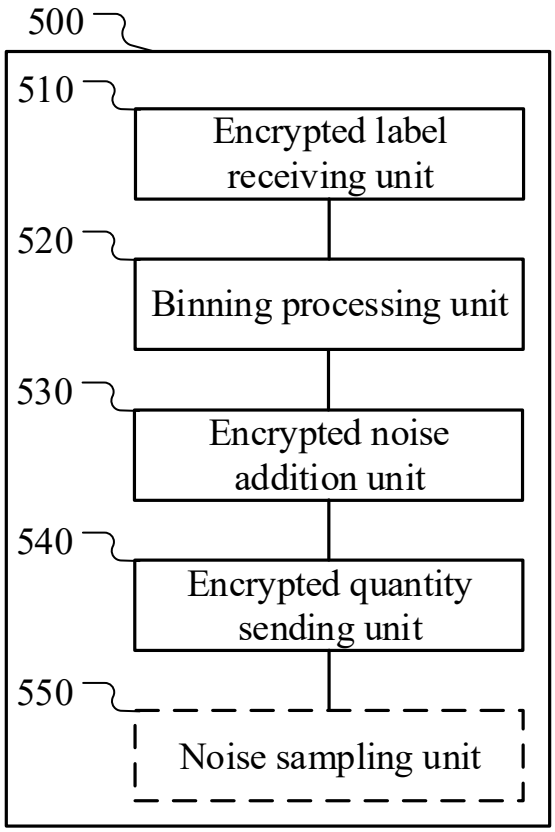

500
510
Encrypted label receiving unit
520
Binning processing unit
530
Encrypted noise addition unit
540
Encrypted quantity sending unit
550
Noise sampling unit

FIG. 5