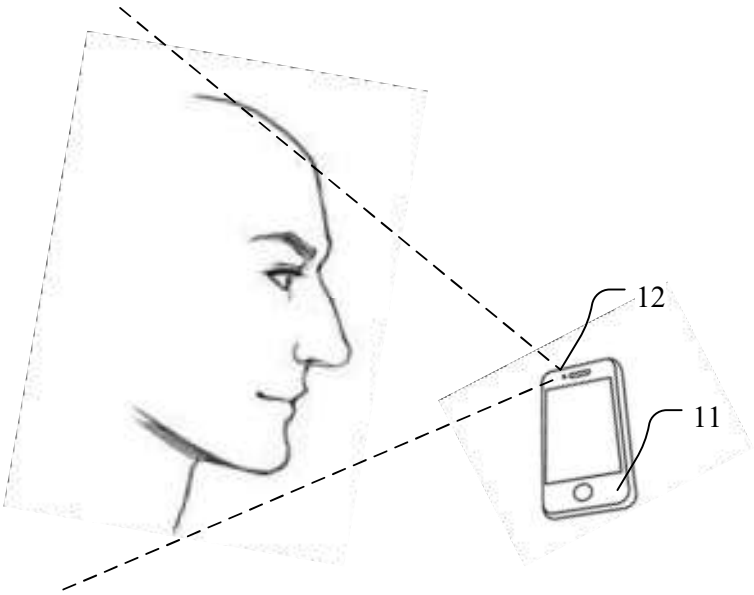

FIG. 1

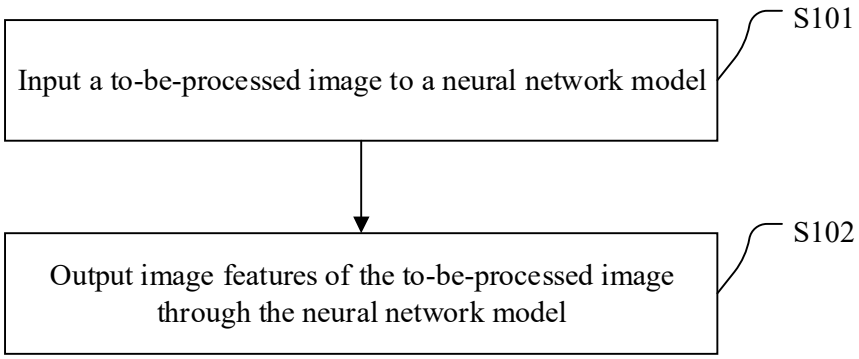
S101
Input a to-be-processed image to a neural network model
S102
Output image features of the to-be-processed image through the neural network model

FIG. 2

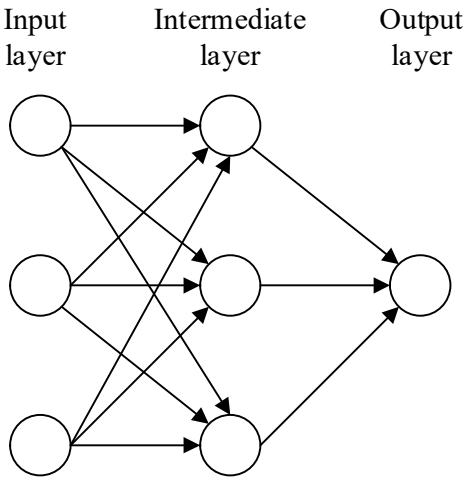

FIG. 3

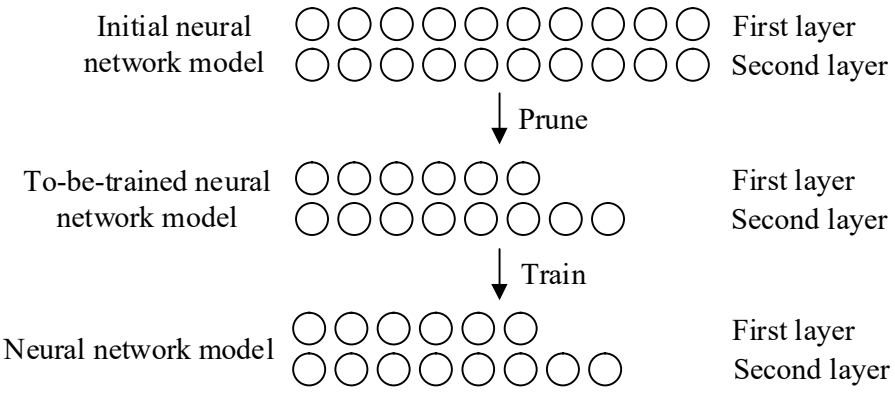
Initial neural network model
First layer
Second layer
Prune
To-be-trained neural network model
First layer
Second layer
Train
Neural network model
First layer
Second layer

FIG. 4

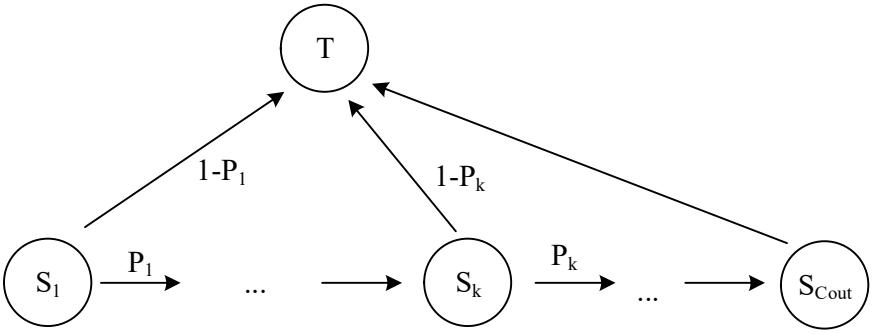

FIG. 5

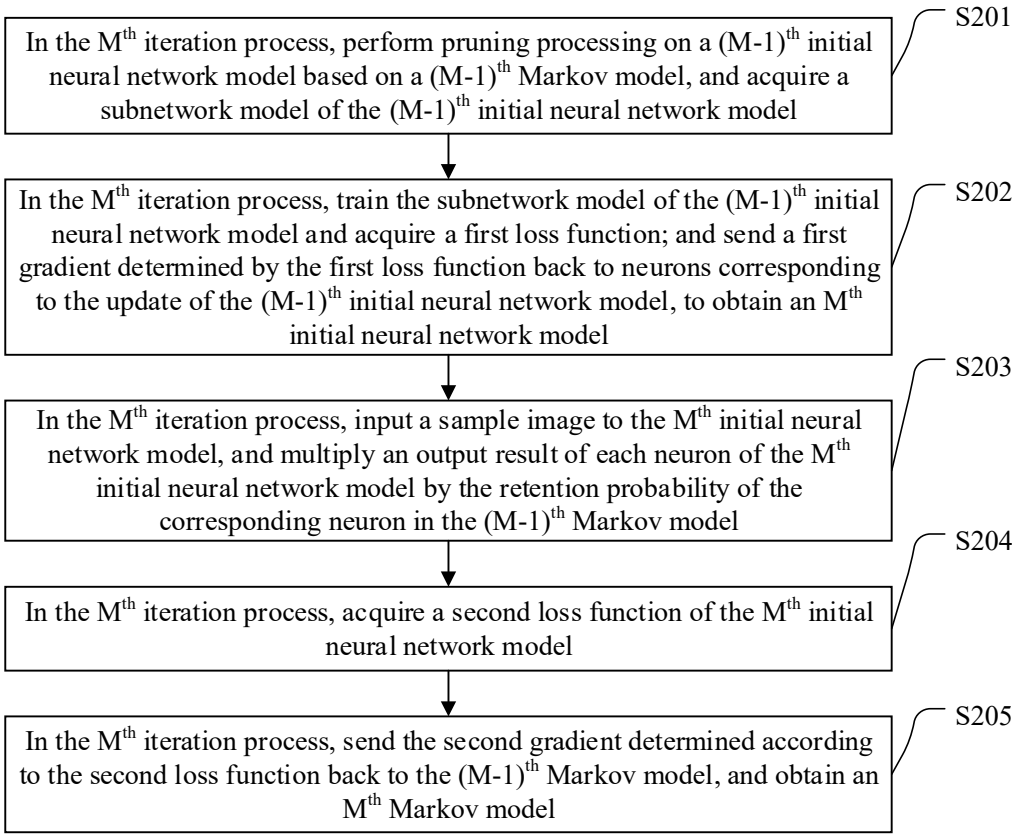
In the M^{th} iteration process, perform pruning processing on a $(M-1)^{th}$ initial neural network model based on a $(M-1)^{th}$ Markov model, and acquire a subnetwork model of the $(M-1)^{th}$ initial neural network model
S201
In the M^{th} iteration process, train the subnetwork model of the $(M-1)^{th}$ initial neural network model and acquire a first loss function; and send a first gradient determined by the first loss function back to neurons corresponding to the update of the $(M-1)^{th}$ initial neural network model, to obtain an M^{th} initial neural network model
S202
In the M^{th} iteration process, input a sample image to the M^{th} initial neural network model, and multiply an output result of each neuron of the M^{th} initial neural network model by the retention probability of the corresponding neuron in the $(M-1)^{th}$ Markov model
S203
In the M^{th} iteration process, acquire a second loss function of the M^{th} initial neural network model
S204
In the M^{th} iteration process, send the second gradient determined according to the second loss function back to the $(M-1)^{th}$ Markov model, and obtain an M^{th} Markov model
S205

FIG. 6

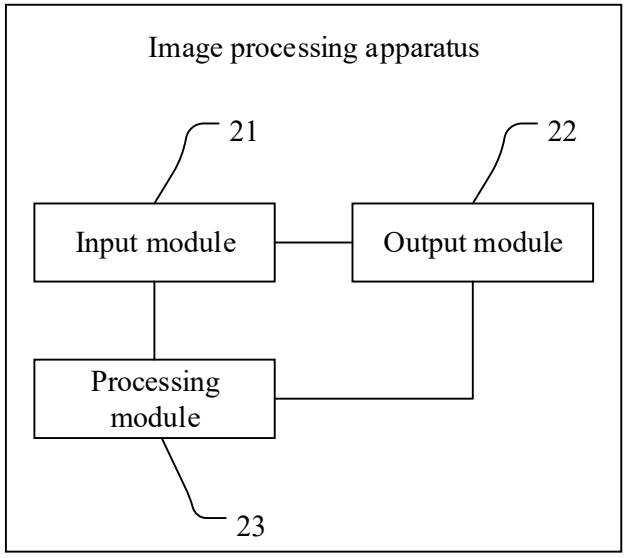
Image processing apparatus
21
22
Input module
Output module
Processing module
23

FIG. 7

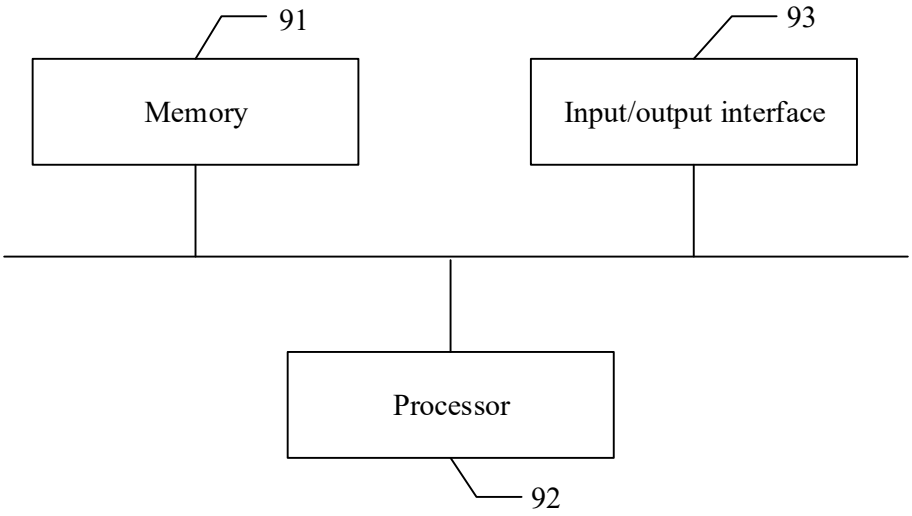

FIG. 8