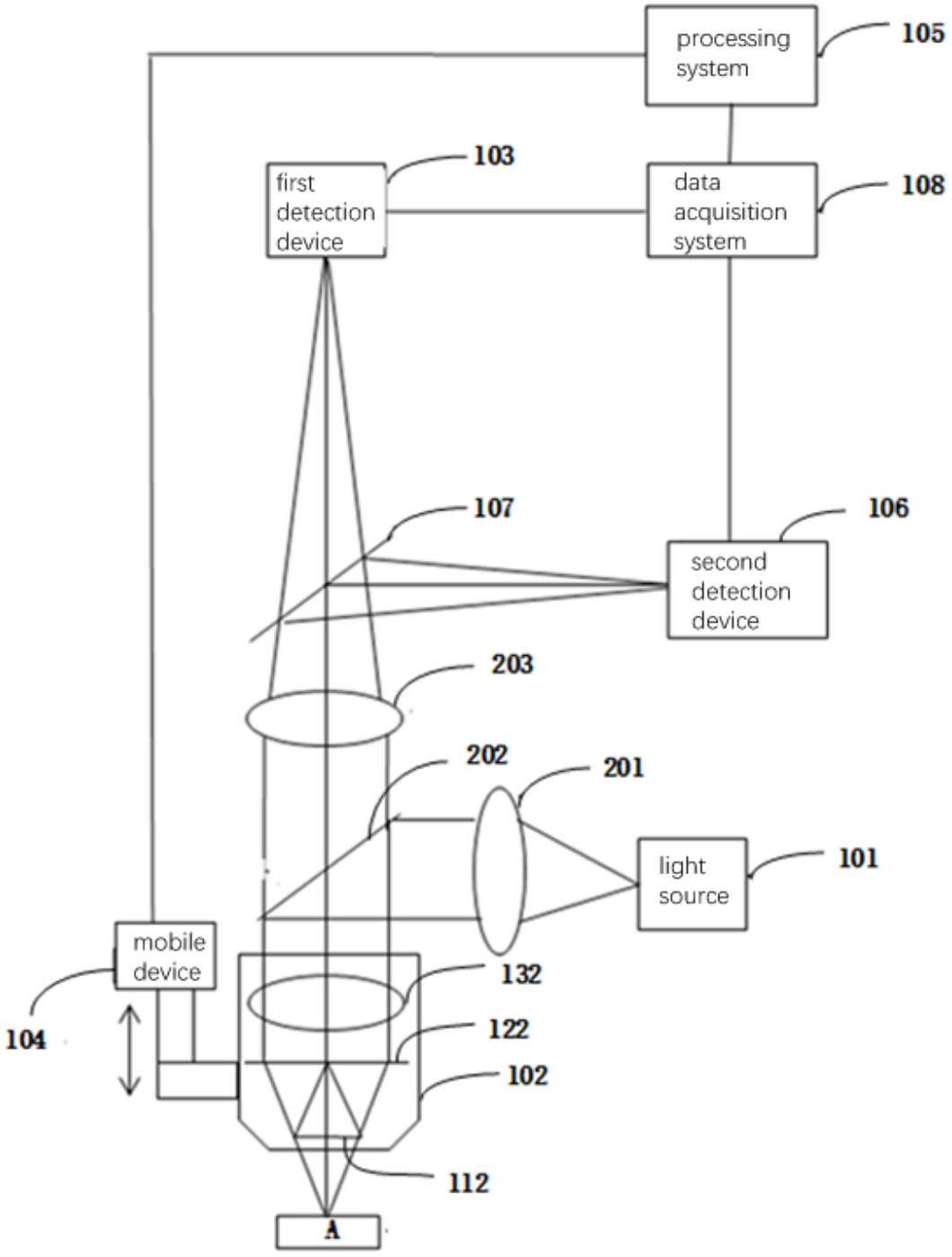

processing system
105
first detection device
103
data acquisition system
108
107
106
second detection device
203
202
201
light source
101
mobile device
104
132
122
102
112
A

FIG. 1

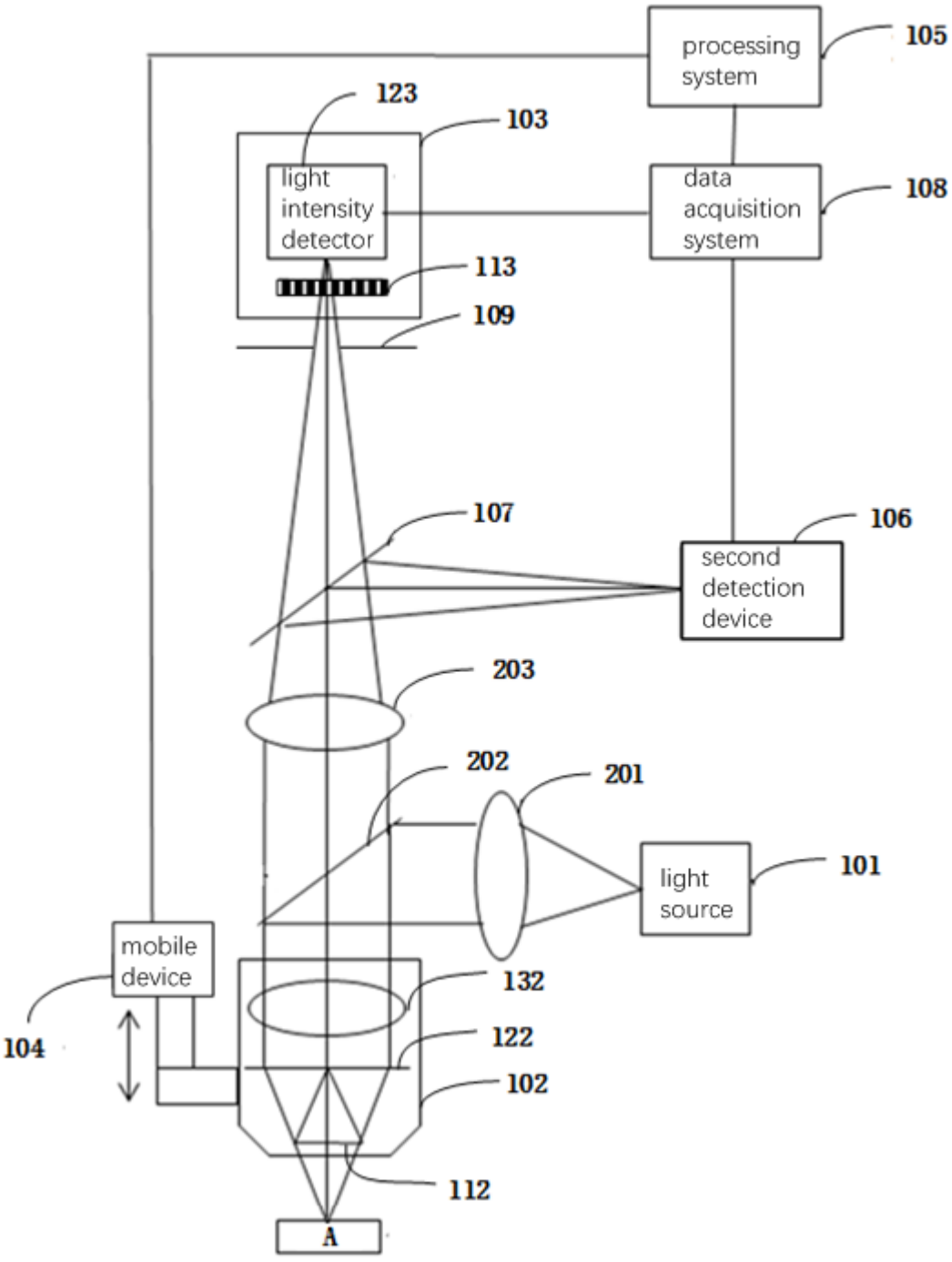

processing system
105
123
103
light intensity detector
data acquisition system
108
113
109
107
106
second detection device
203
202
201
light source
101
mobile device
104
132
122
102
112
A

FIG. 2

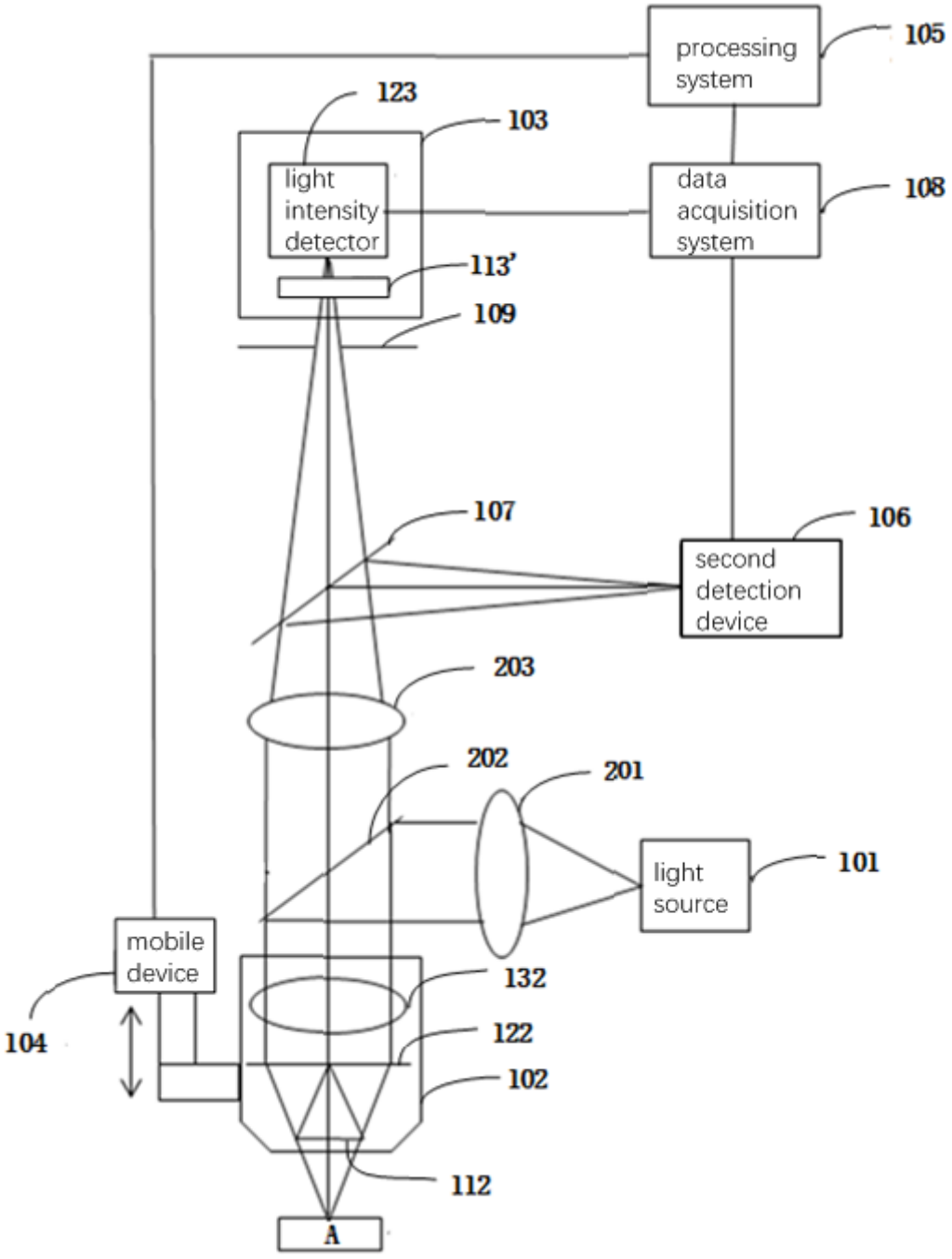

processing system
105
123
103
light intensity detector
data acquisition system
108
113'
109
107
106
second detection device
203
202
201
light source
101
mobile device
104
132
122
102
112
A

FIG. 3

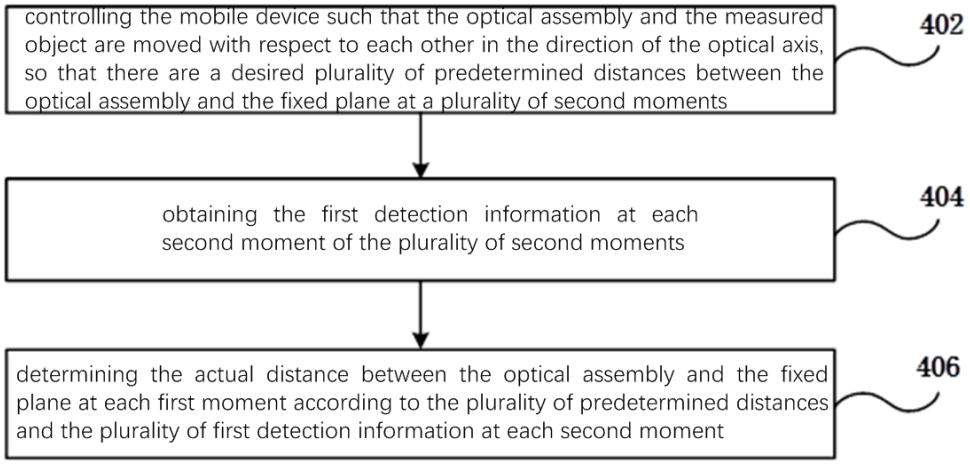

controlling the mobile device such that the optical assembly and the measured object are moved with respect to each other in the direction of the optical axis, so that there are a desired plurality of predetermined distances between the optical assembly and the fixed plane at a plurality of second moments
402
obtaining the first detection information at each second moment of the plurality of second moments
404
determining the actual distance between the optical assembly and the fixed plane at each first moment according to the plurality of predetermined distances and the plurality of first detection information at each second moment
406

FIG. 4

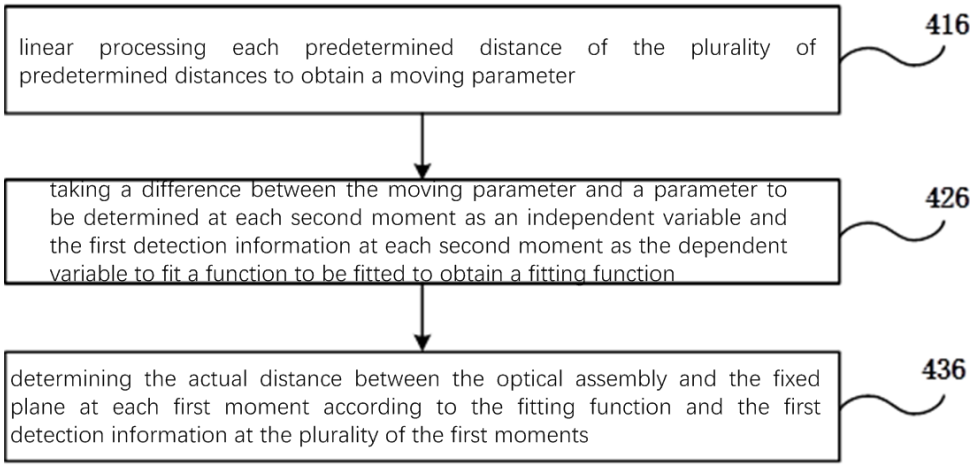

linear processing each predetermined distance of the plurality of predetermined distances to obtain a moving parameter
416
taking a difference between the moving parameter and a parameter to be determined at each second moment as an independent variable and the first detection information at each second moment as the dependent variable to fit a function to be fitted to obtain a fitting function
426
determining the actual distance between the optical assembly and the fixed plane at each first moment according to the fitting function and the first detection information at the plurality of the first moments
436

FIG. 5

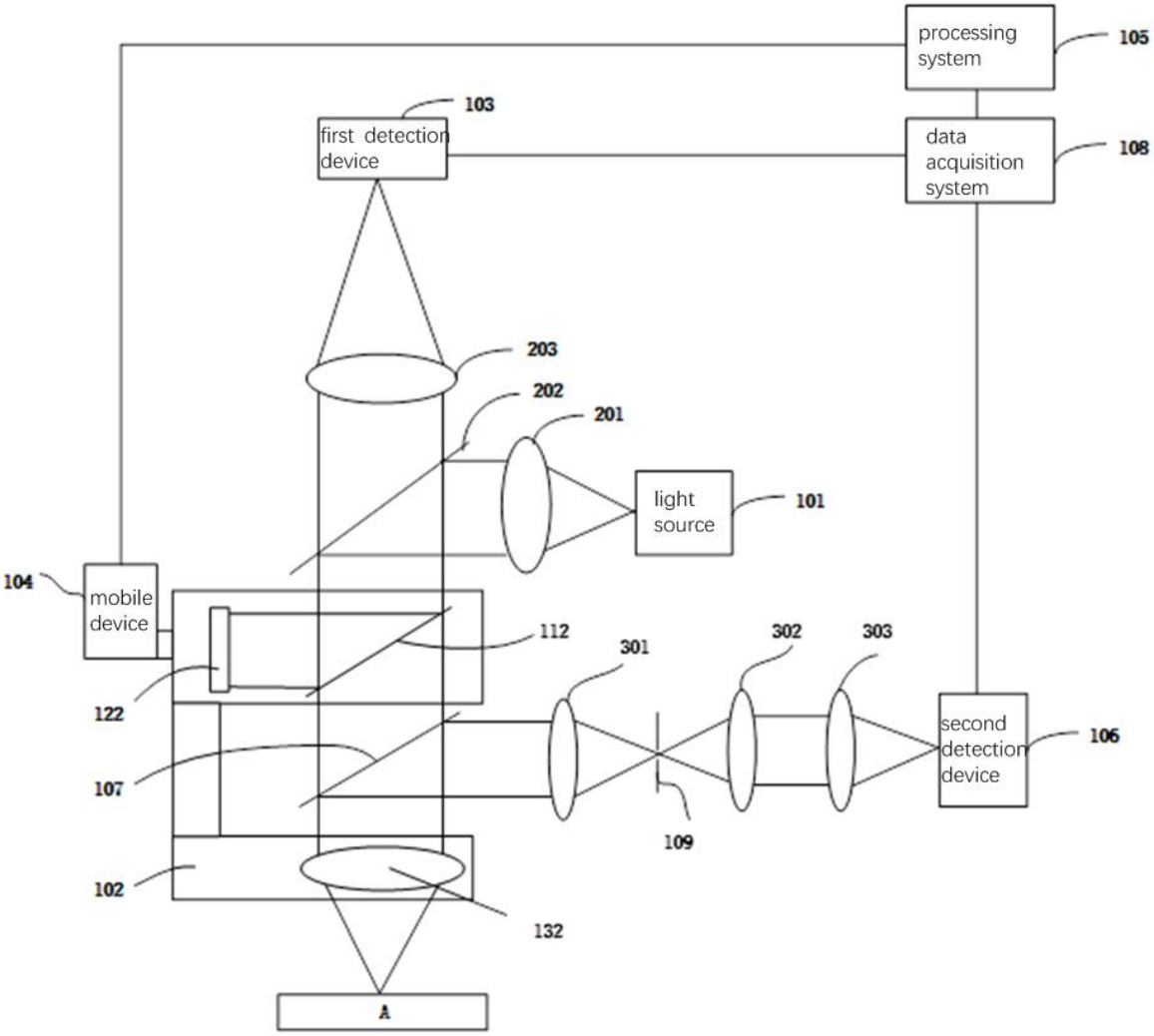

processing system
105
103
first detection device
data acquisition system
108
203
202
201
light source
101
104
mobile device
112
301
302
303
122
second detection device
106
107
109
102
132
A

FIG. 6

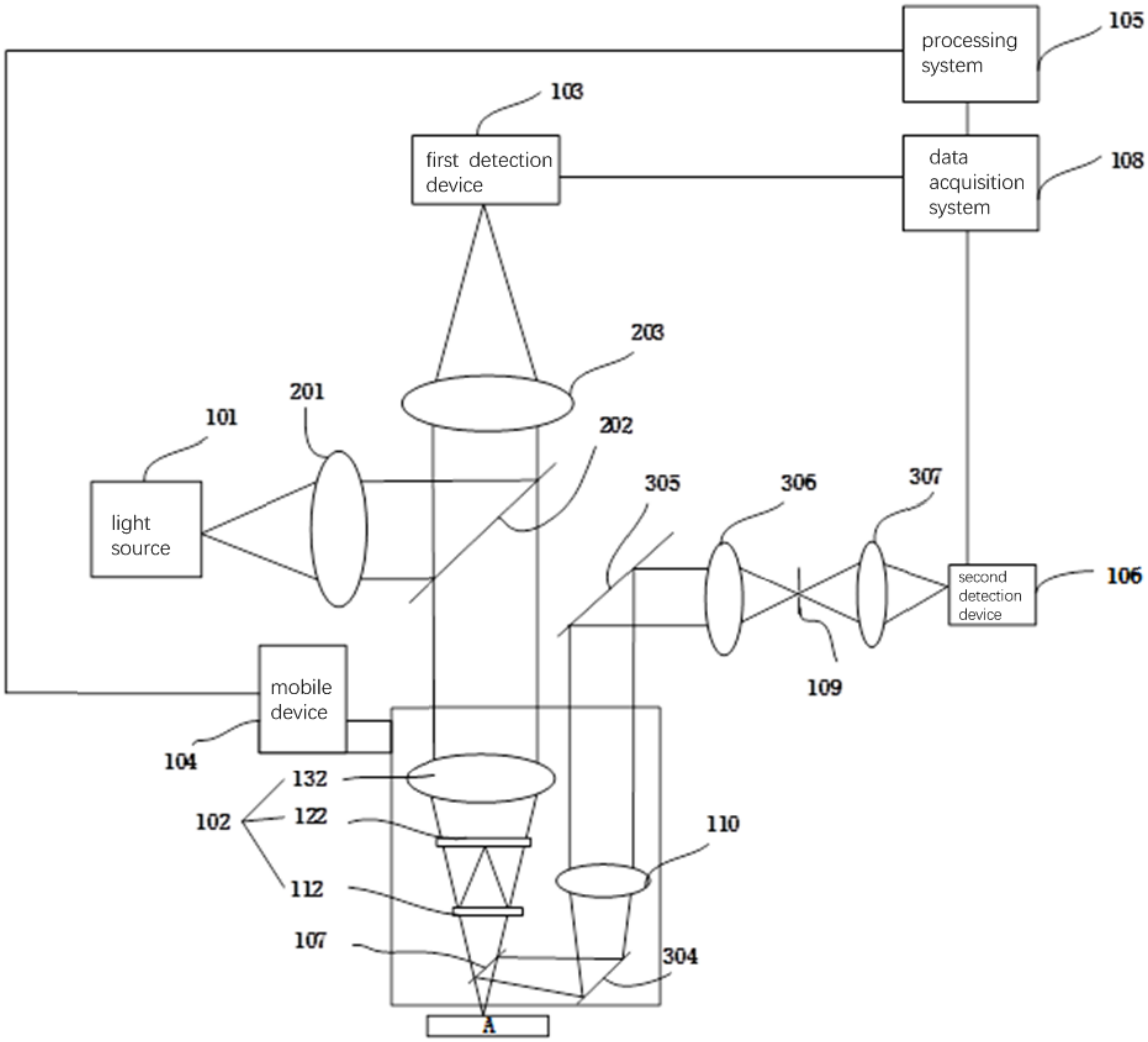

processing system
105
103
first detection device
data acquisition system
108
203
201
101
202
light source
305
306
307
second detection device
106
109
mobile device
104
132
102
122
110
112
107
304
A

FIG. 7

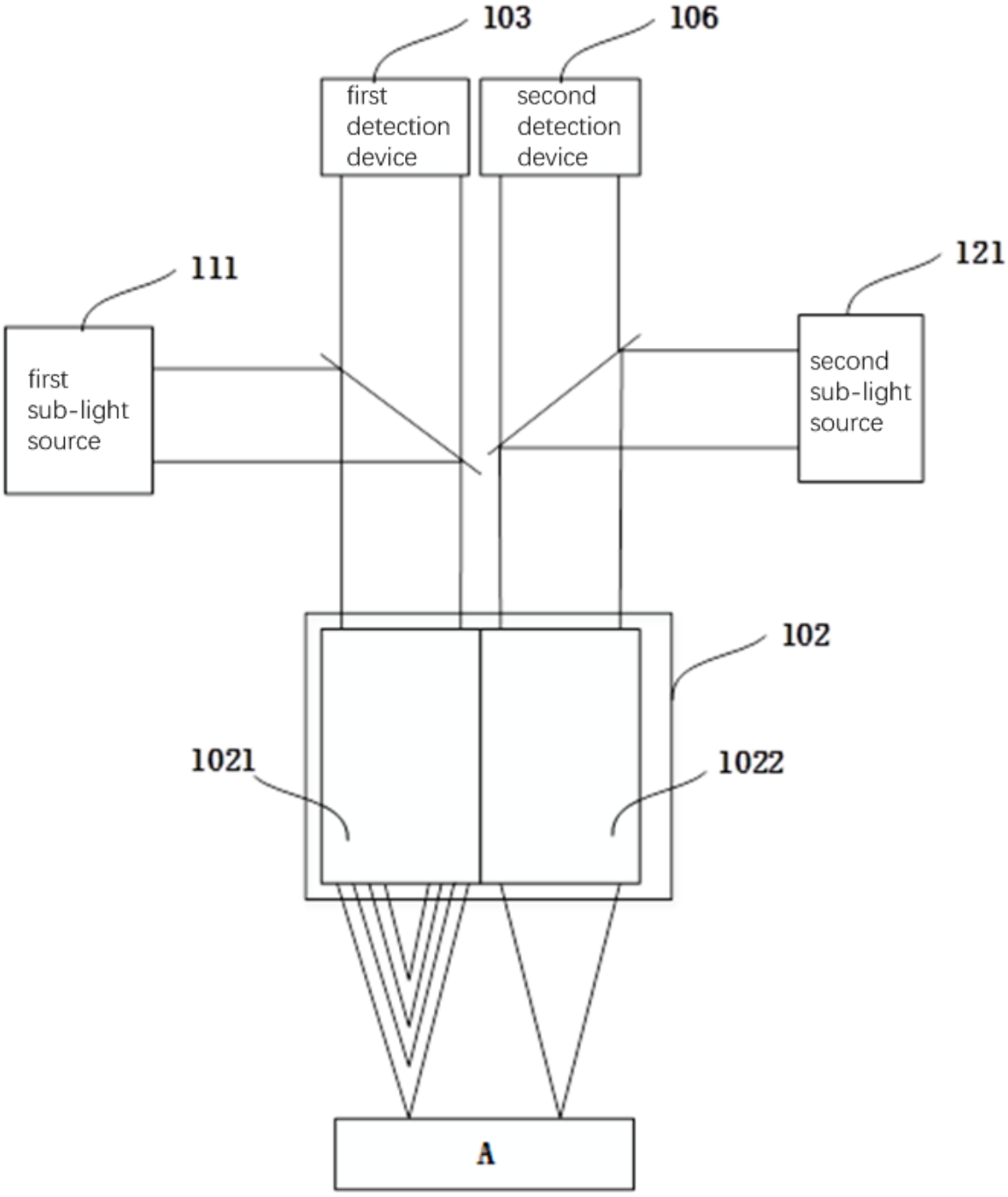

103
106
first detection device
second detection device
111
121
first sub-light source
second sub-light source
102
1021
1022
A

FIG. 8

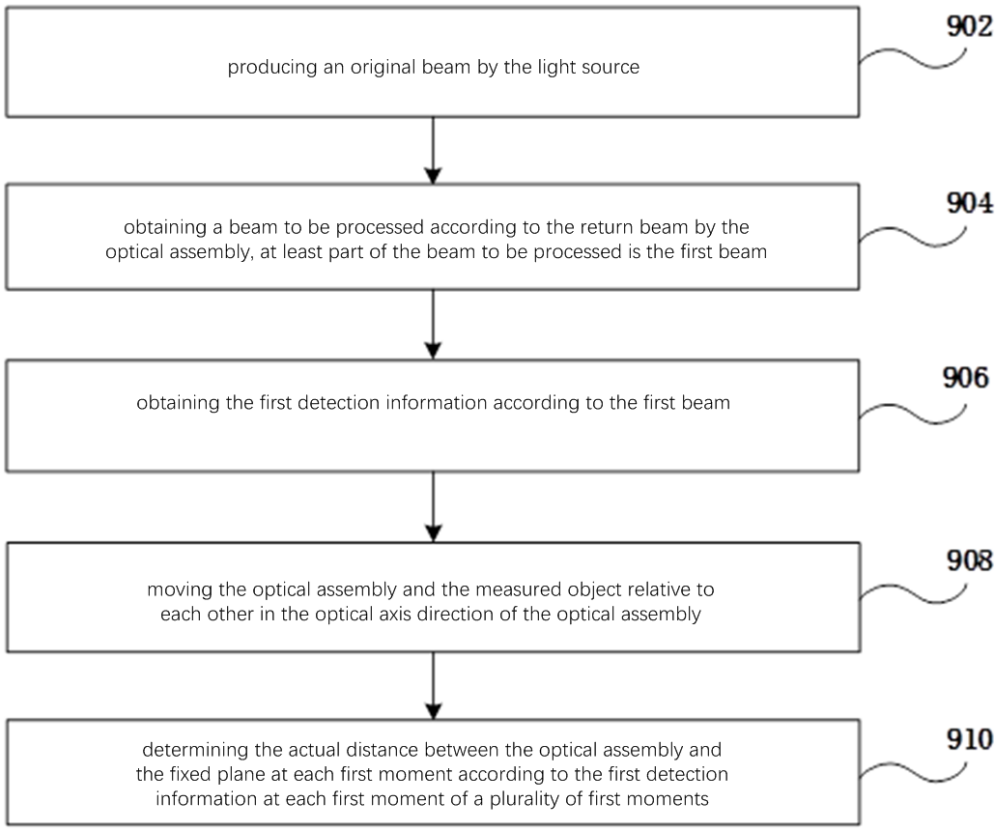

producing an original beam by the light source
902
obtaining a beam to be processed according to the return beam by the optical assembly, at least part of the beam to be processed is the first beam
904
obtaining the first detection information according to the first beam
906
moving the optical assembly and the measured object relative to each other in the optical axis direction of the optical assembly
908
determining the actual distance between the optical assembly and the fixed plane at each first moment according to the first detection information at each first moment of a plurality of first moments
910

FIG. 9

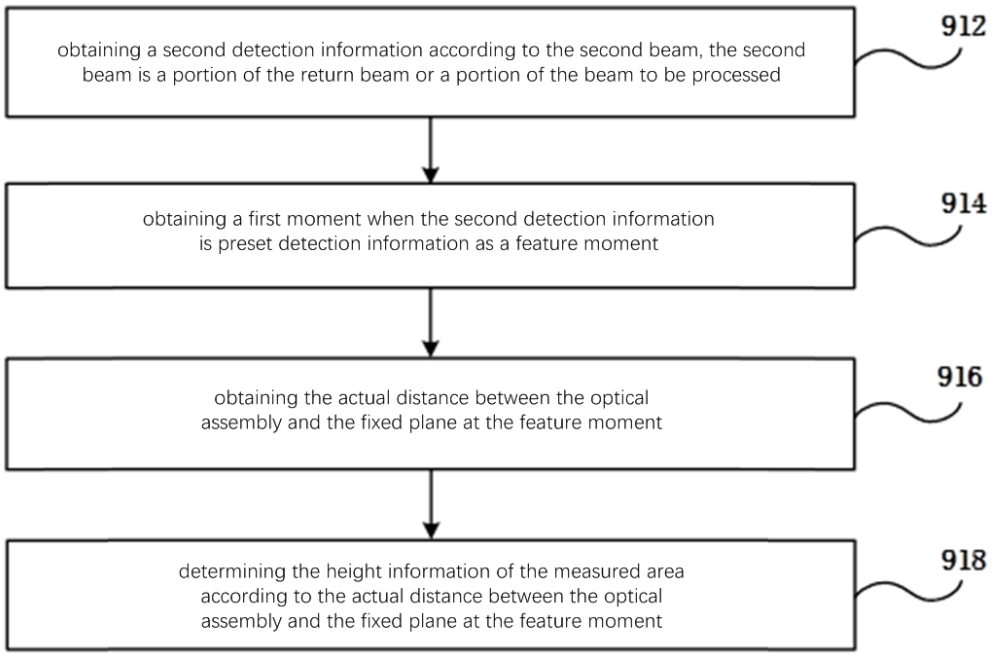

obtaining a second detection information according to the second beam, the second beam is a portion of the return beam or a portion of the beam to be processed
912
obtaining a first moment when the second detection information is preset detection information as a feature moment
914
obtaining the actual distance between the optical assembly and the fixed plane at the feature moment
916
determining the height information of the measured area according to the actual distance between the optical assembly and the fixed plane at the feature moment
918

FIG. 10