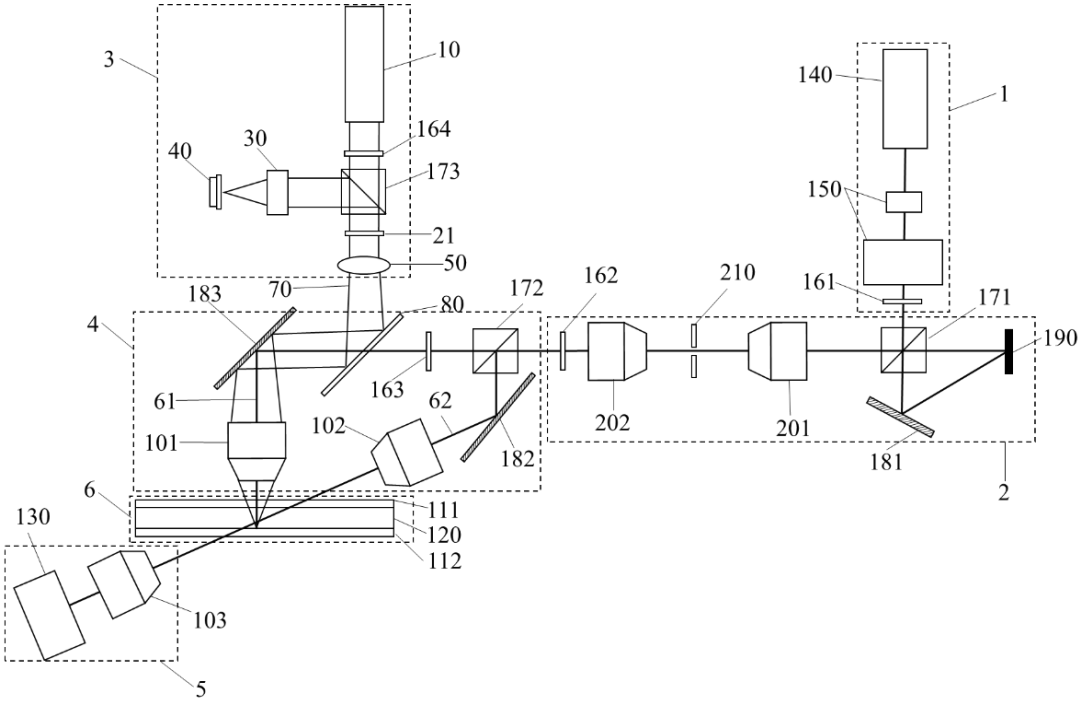

3
10
140
1
40
30
164
173
150
21
50
183
70
80
172
162
210
161
171
190
4
61
163
62
202
201
101
102
182
181
6
111
130
120
112
2
103
5

FIG. 1

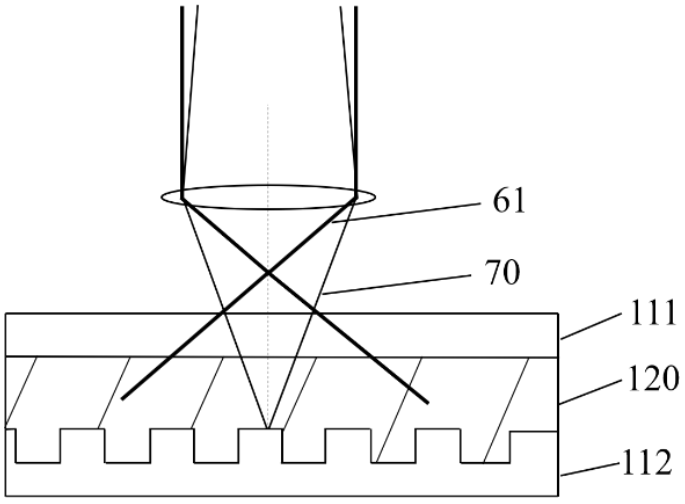

61
70
111
120
112

FIG. 2

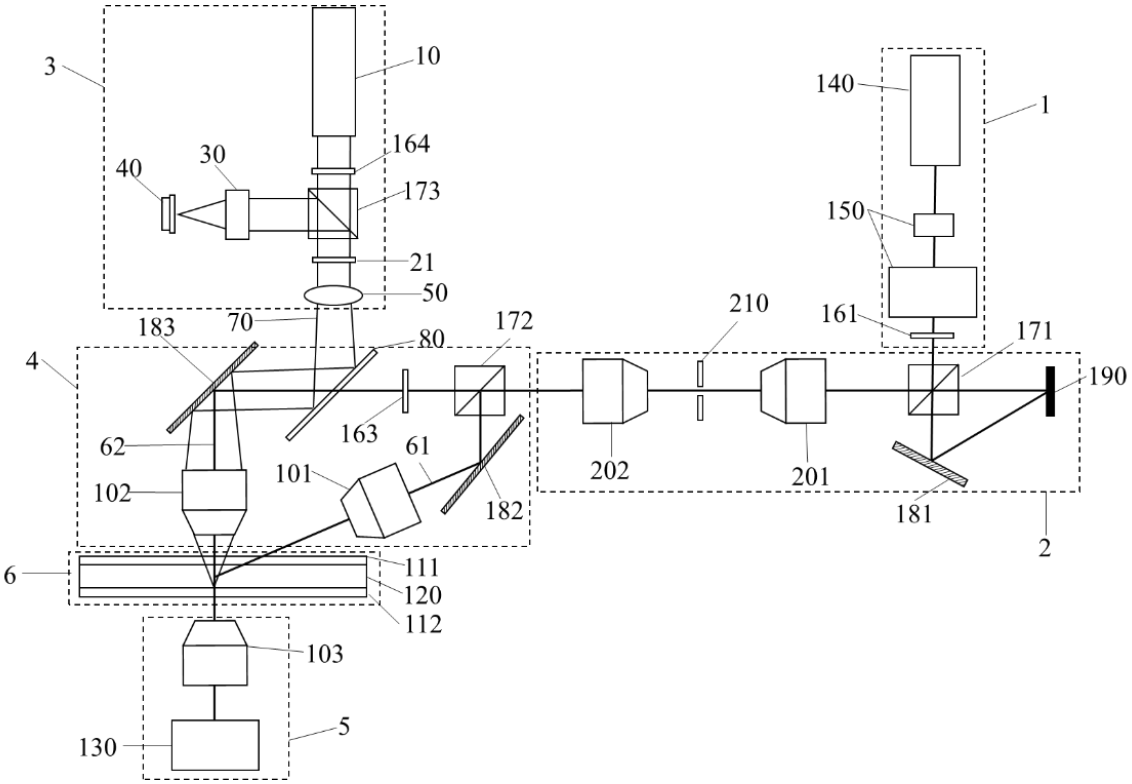

3
10
140
1
40
30
164
173
150
21
50
183
70
80
172
210
161
171
190
4
62
163
61
202
201
102
101
182
181
2
6
111
120
112
103
130
5

FIG. 3

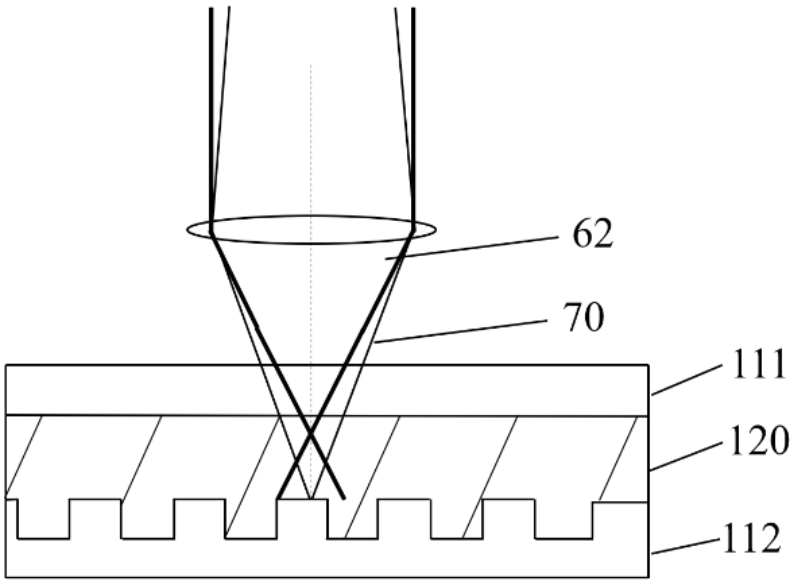

62
70
111
120
112

FIG. 4

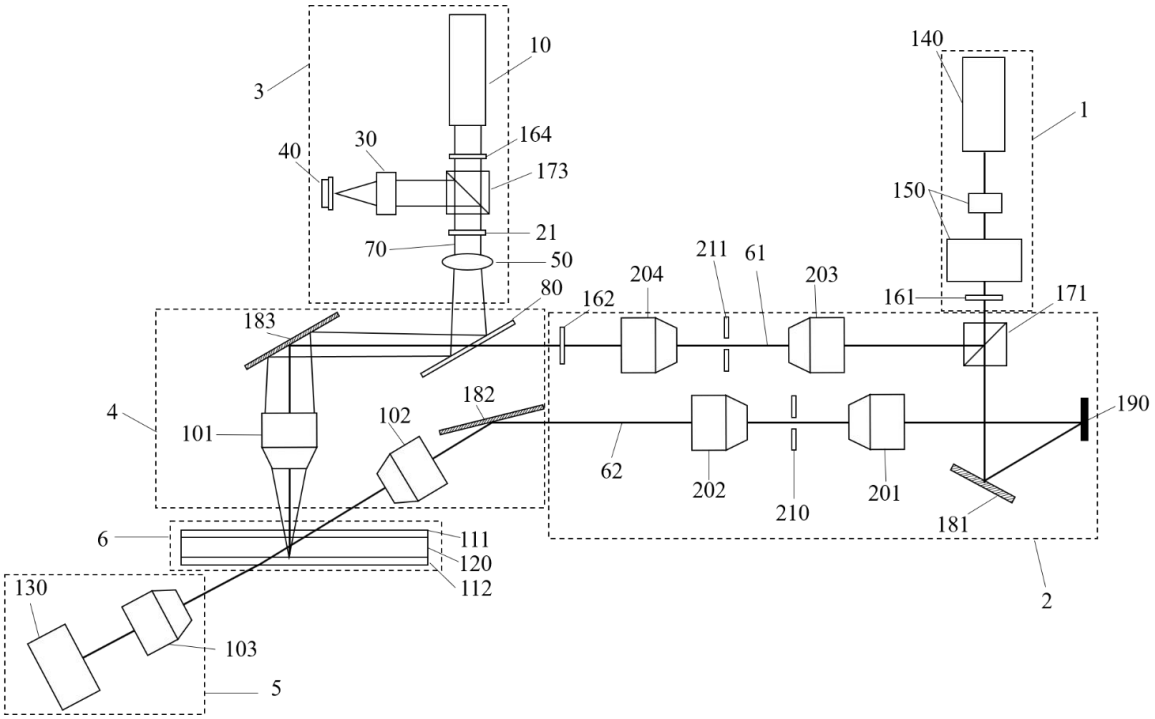

10
3
140
1
40
30
164
173
150
21
70
50
211
61
204
203
80
162
161
171
183
182
190
4
101
102
62
202
210
201
181
6
111
120
112
2
130
103
5

FIG. 5

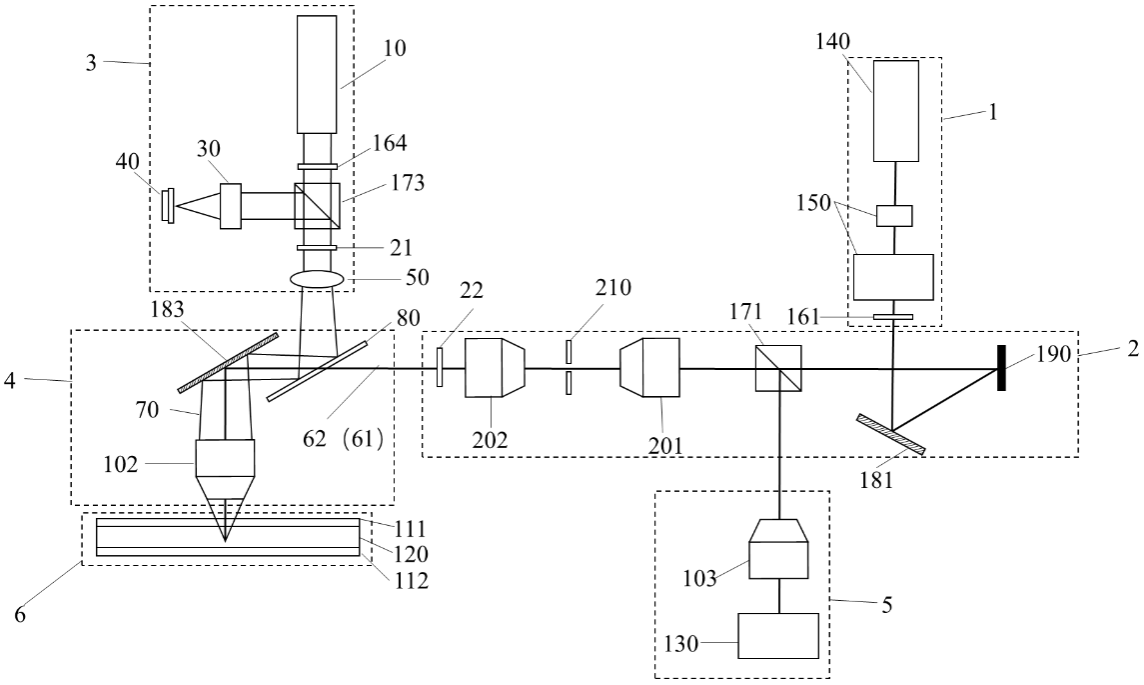

10
3
140
1
40
30
164
173
150
21
50
22
210
183
80
171
161
190
2
4
70
62 (61)
202
201
102
181
111
120
112
6
103
5
130

FIG. 6

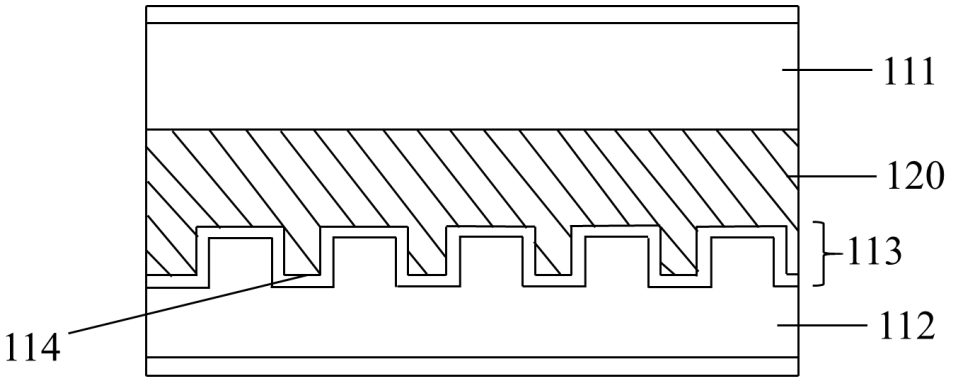

111
120
113
112
114

FIG. 7

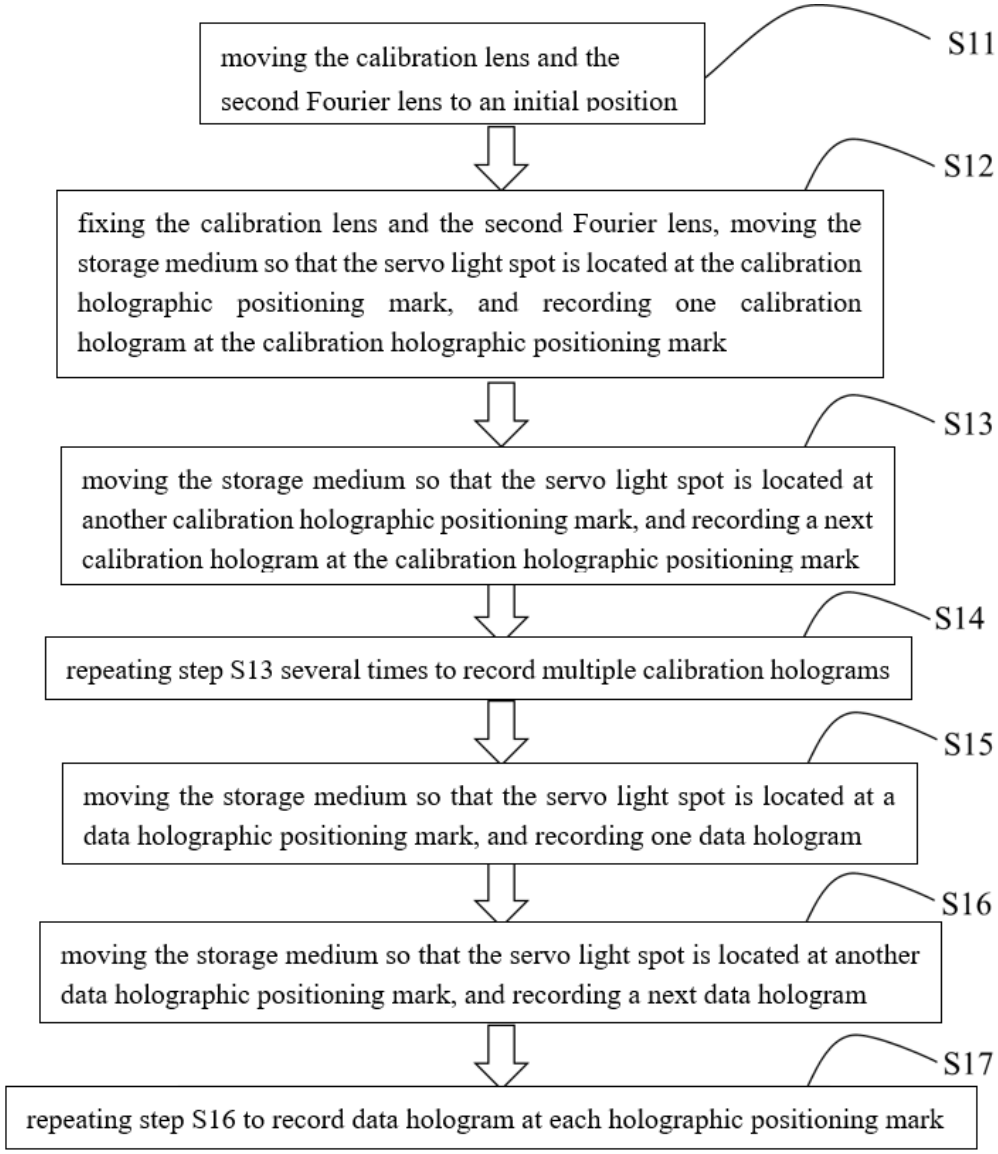

moving the calibration lens and the second Fourier lens to an initial position
S11
fixing the calibration lens and the second Fourier lens, moving the storage medium so that the servo light spot is located at the calibration holographic positioning mark, and recording one calibration hologram at the calibration holographic positioning mark
S12
moving the storage medium so that the servo light spot is located at another calibration holographic positioning mark, and recording a next calibration hologram at the calibration holographic positioning mark
S13
repeating step S13 several times to record multiple calibration holograms
S14
moving the storage medium so that the servo light spot is located at a data holographic positioning mark, and recording one data hologram
S15
moving the storage medium so that the servo light spot is located at another data holographic positioning mark, and recording a next data hologram
S16
repeating step S16 to record data hologram at each holographic positioning mark
S17

FIG. 8

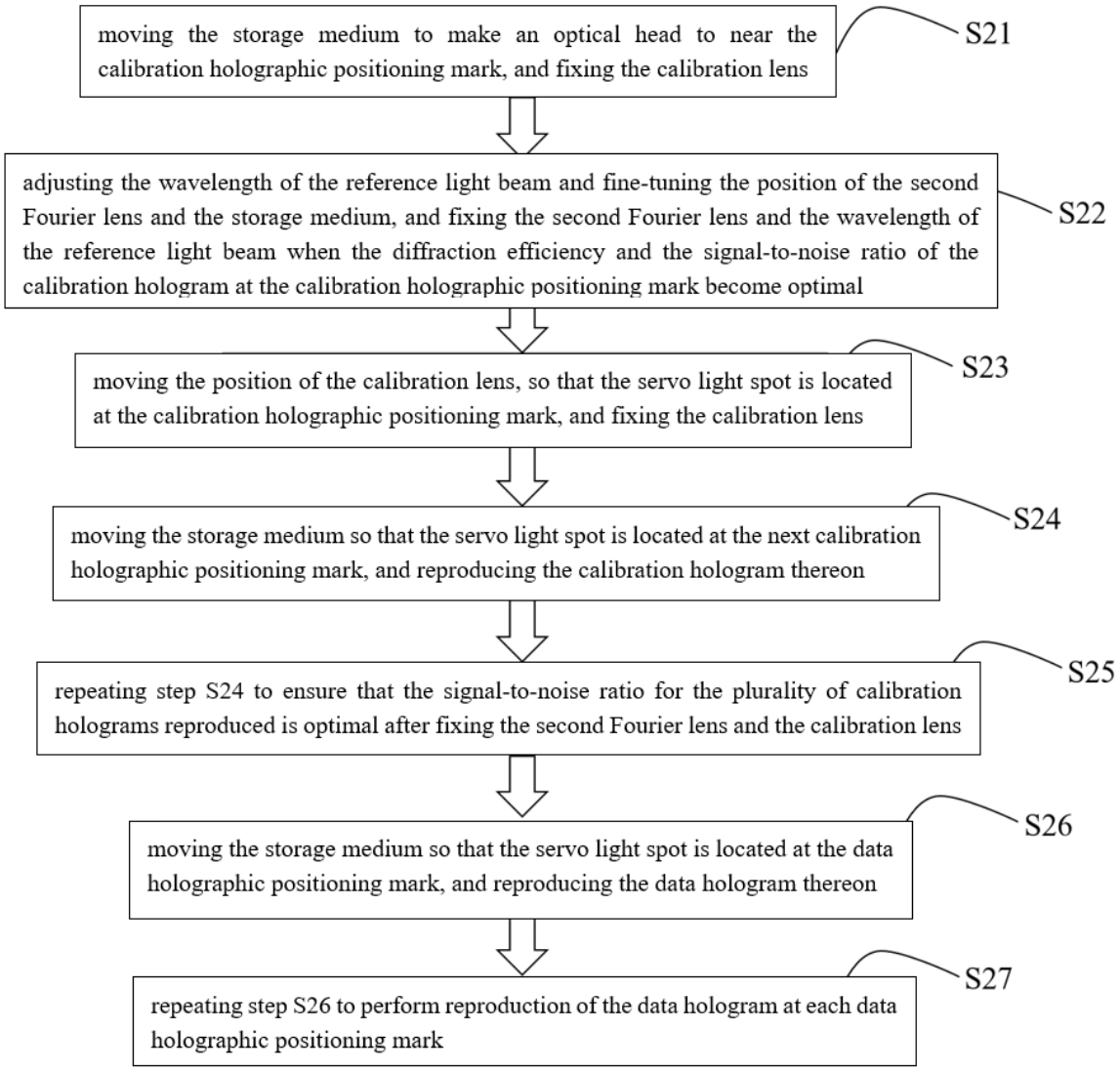

moving the storage medium to make an optical head to near the calibration holographic positioning mark, and fixing the calibration lens
S21
adjusting the wavelength of the reference light beam and fine-tuning the position of the second Fourier lens and the storage medium, and fixing the second Fourier lens and the wavelength of the reference light beam when the diffraction efficiency and the signal-to-noise ratio of the calibration hologram at the calibration holographic positioning mark become optimal
S22
moving the position of the calibration lens, so that the servo light spot is located at the calibration holographic positioning mark, and fixing the calibration lens
S23
moving the storage medium so that the servo light spot is located at the next calibration holographic positioning mark, and reproducing the calibration hologram thereon
S24
repeating step S24 to ensure that the signal-to-noise ratio for the plurality of calibration holograms reproduced is optimal after fixing the second Fourier lens and the calibration lens
S25
moving the storage medium so that the servo light spot is located at the data holographic positioning mark, and reproducing the data hologram thereon
S26
repeating step S26 to perform reproduction of the data hologram at each data holographic positioning mark
S27

FIG. 9

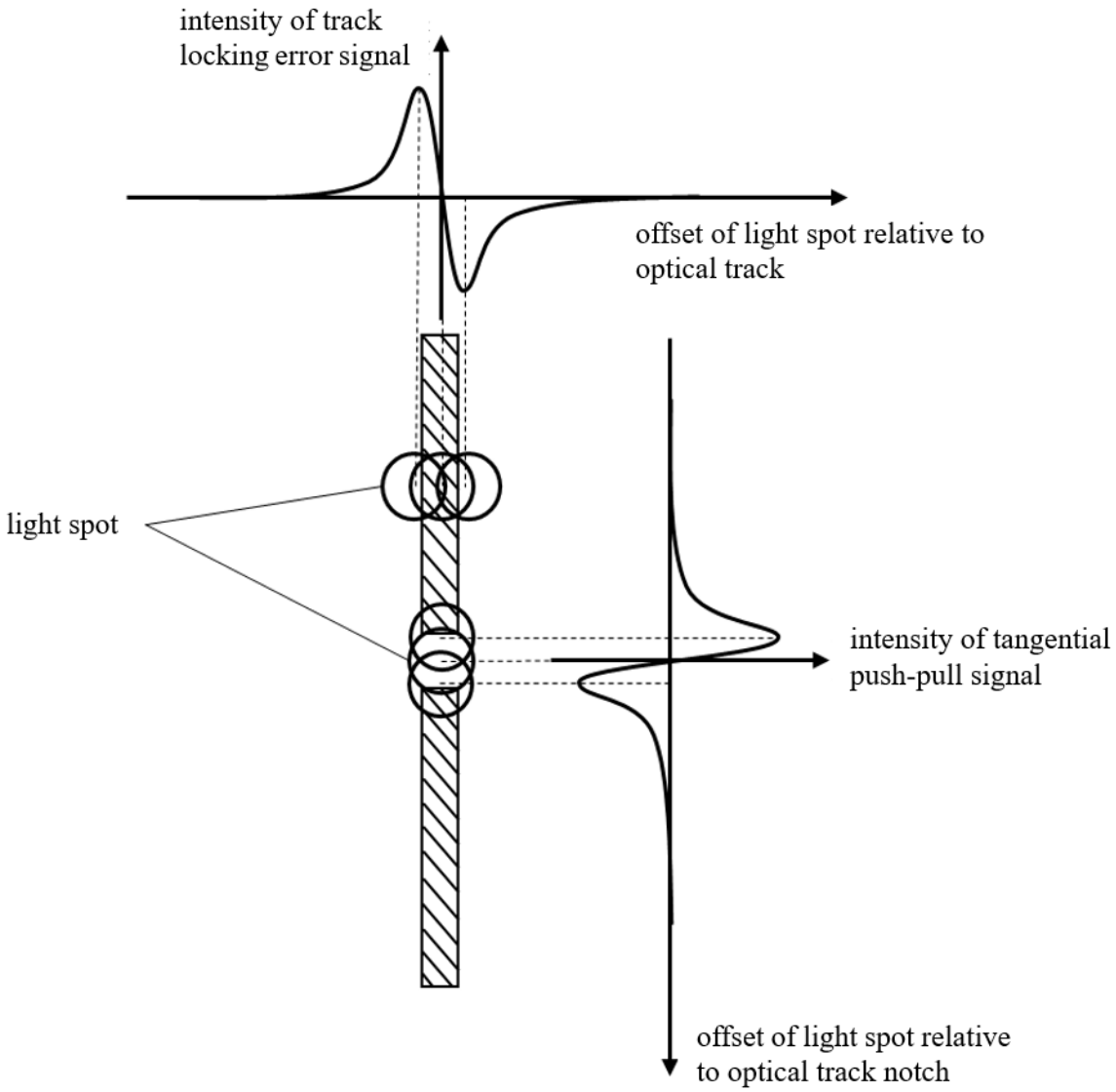

intensity of track
locking error signal
offset of light spot relative to
optical track
light spot
intensity of tangential
push-pull signal
offset of light spot relative
to optical track notch

FIG. 10