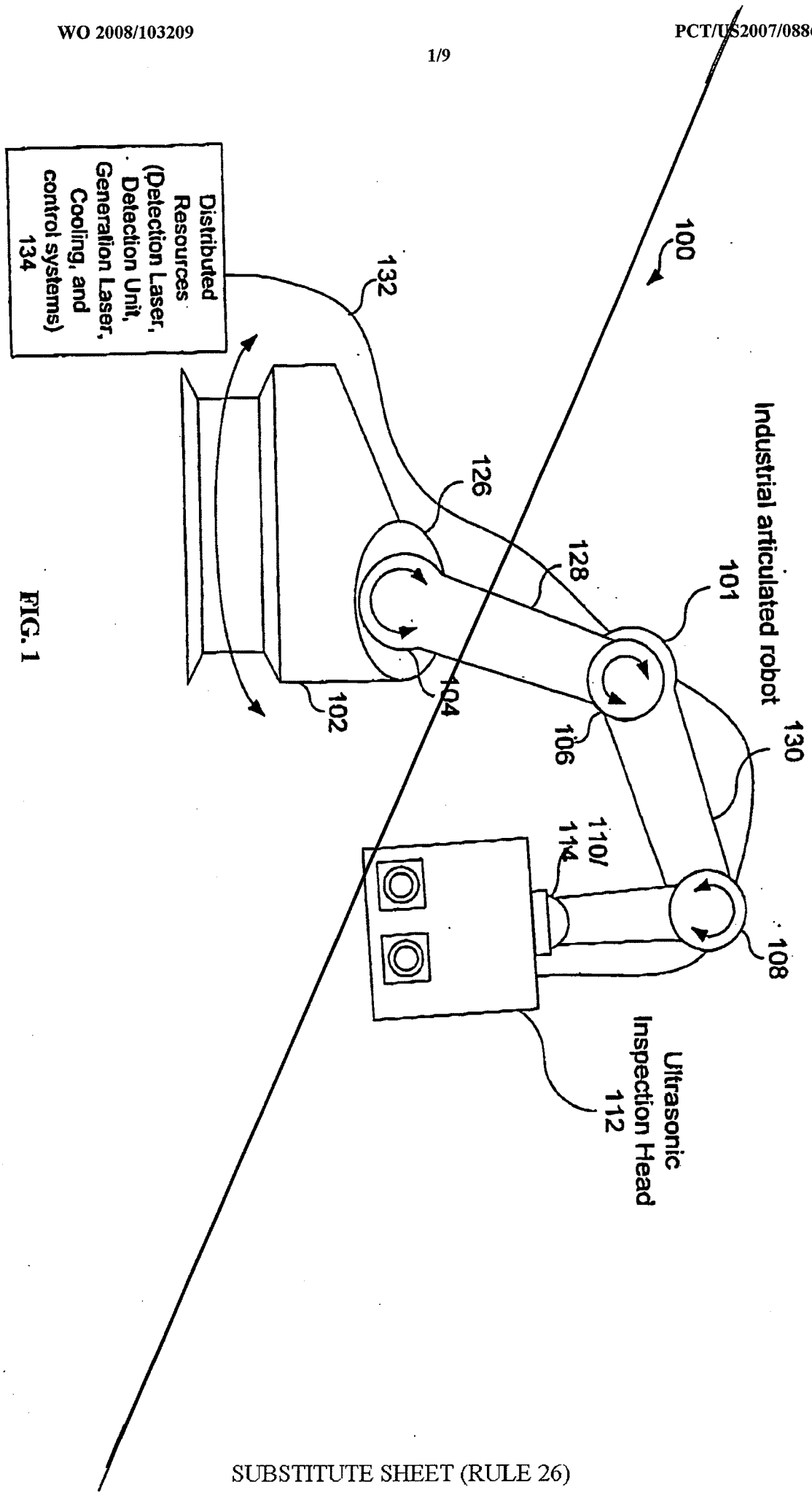

Distributed Resources (Detection Laser, Detection Unit, Generation Laser, Cooling, and control systems) 134
132
100
Industrial articulated robot
126
128
101
104
102
106
130
110/ 114
108
Ultrasonic Inspection Head 112

FIG. 1

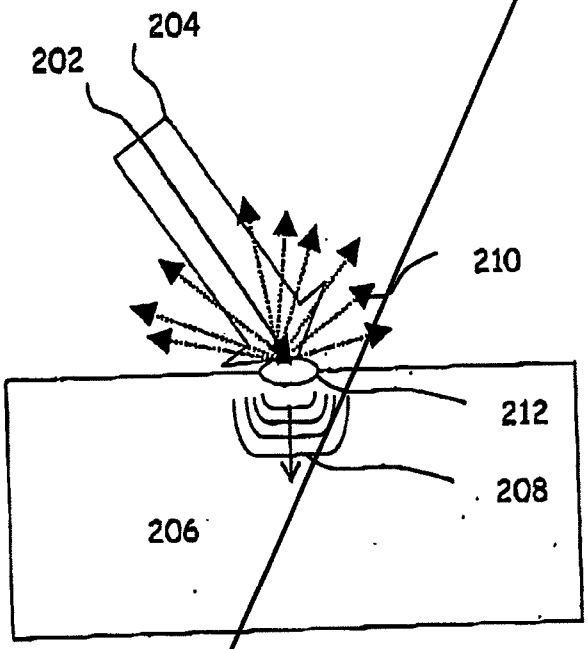

204
202
210
212
208
206

FIG. 2

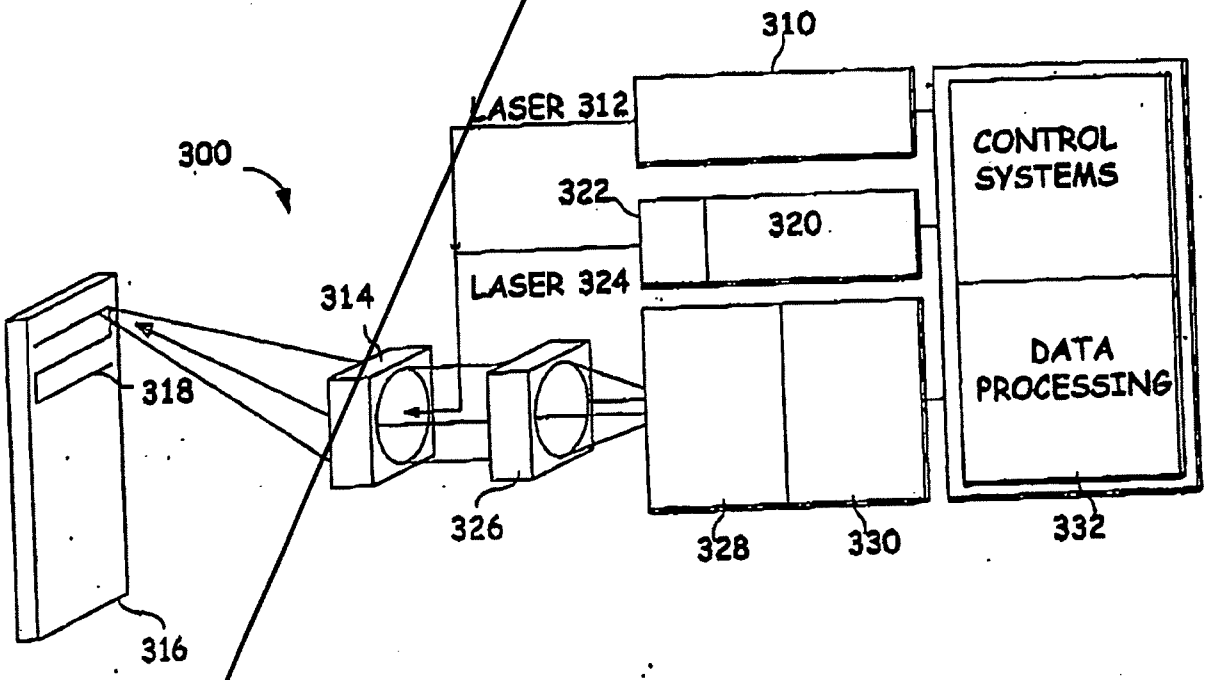

310
LASER 312
300
322
320
CONTROL SYSTEMS
LASER 324
314
DATA PROCESSING
318
326
328
330
332
316

FIG. 3

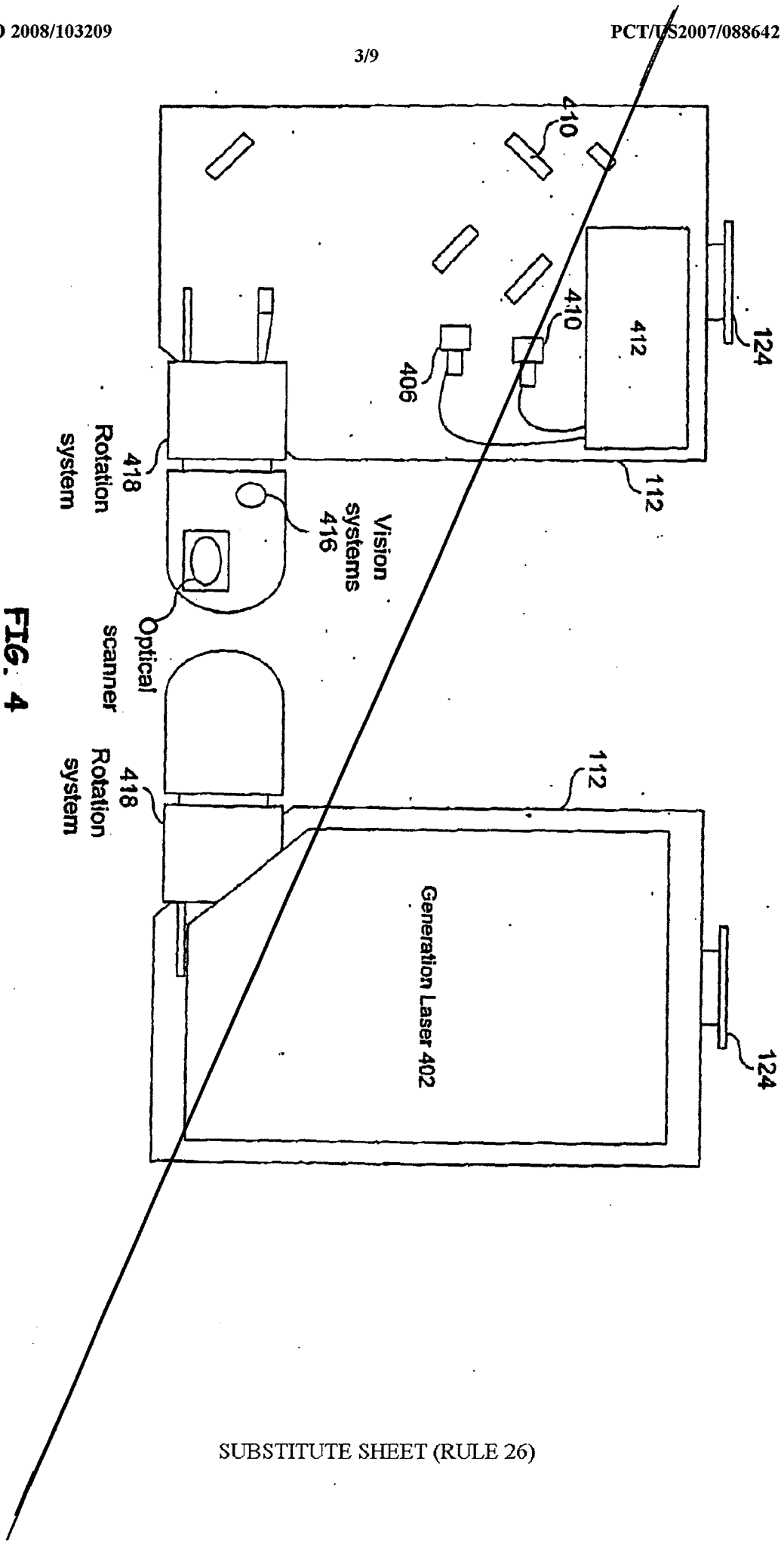

410
410
412
124
406
418
Rotation system
112
Vision systems 416
Optical scanner
418
Rotation system
112
Generation Laser 402
124

FIG. 4

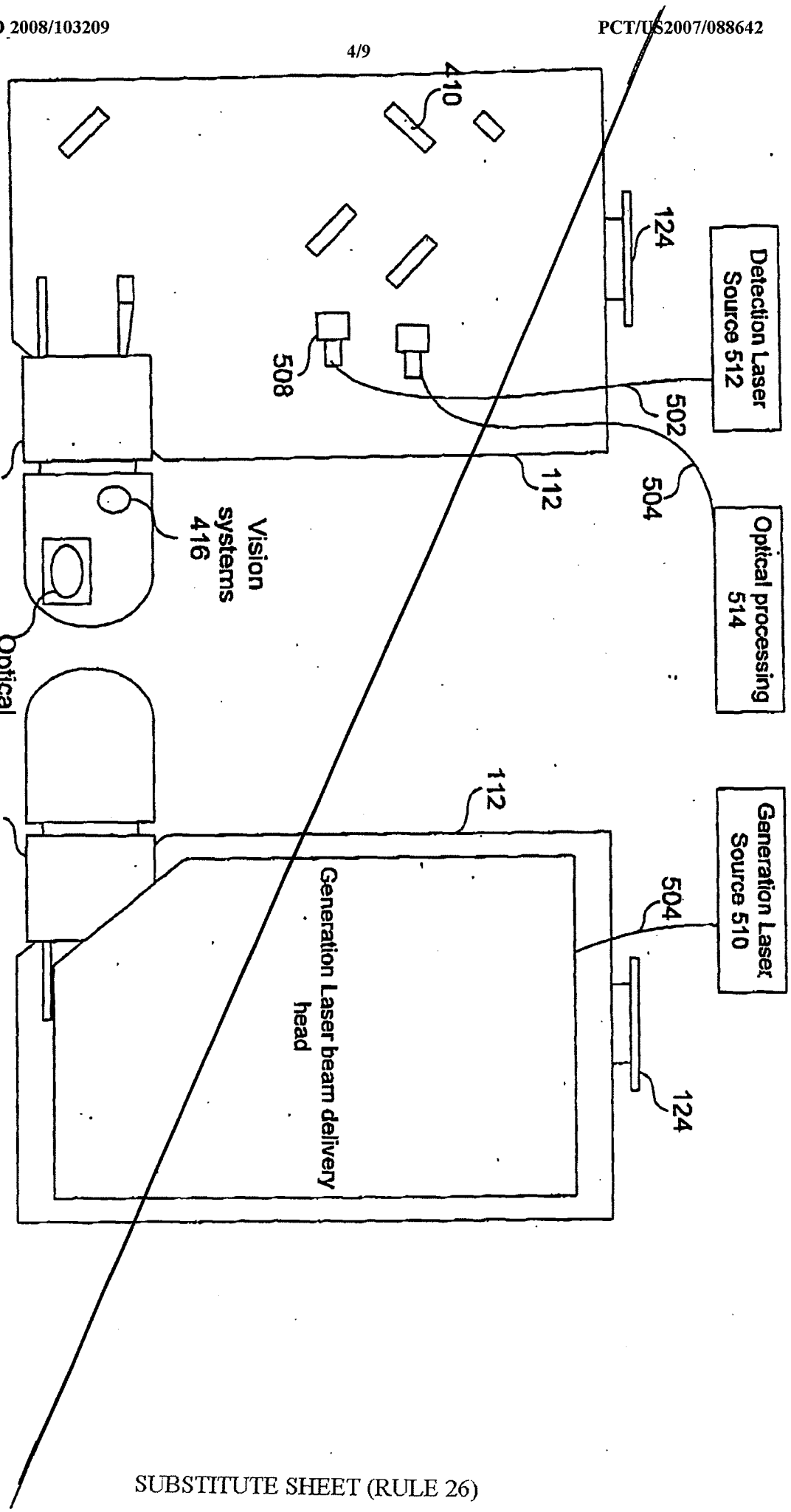

410
124
Detection Laser Source 512
508
502
504
112
Optical processing 514
418
Rotation system
Vision systems 416
Optical scanner
418
Rotation system
112
Generation Laser Source 510
504
Generation Laser beam delivery head
124

FIG. 5

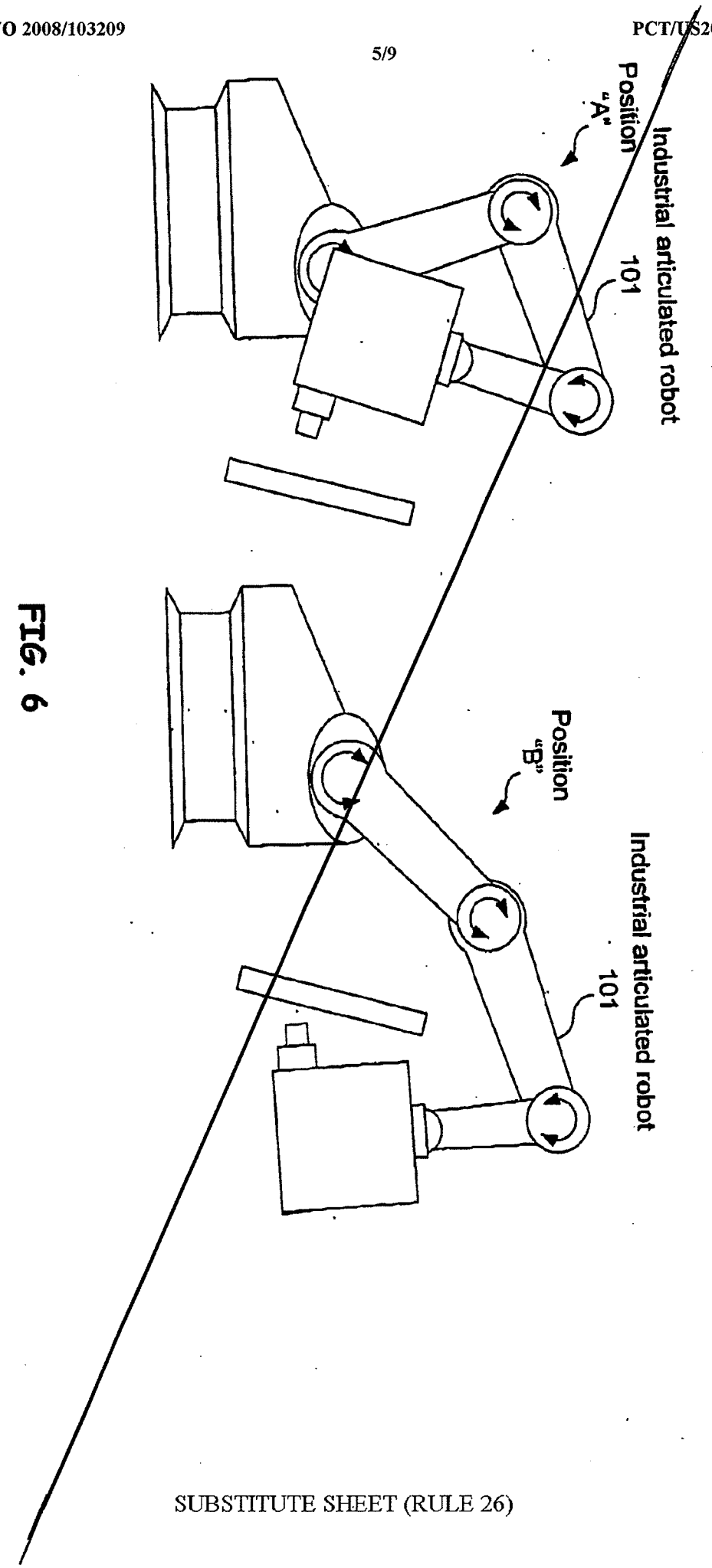

Position "A"
Industrial articulated robot
101
Position "B"
Industrial articulated robot
101

FIG. 6

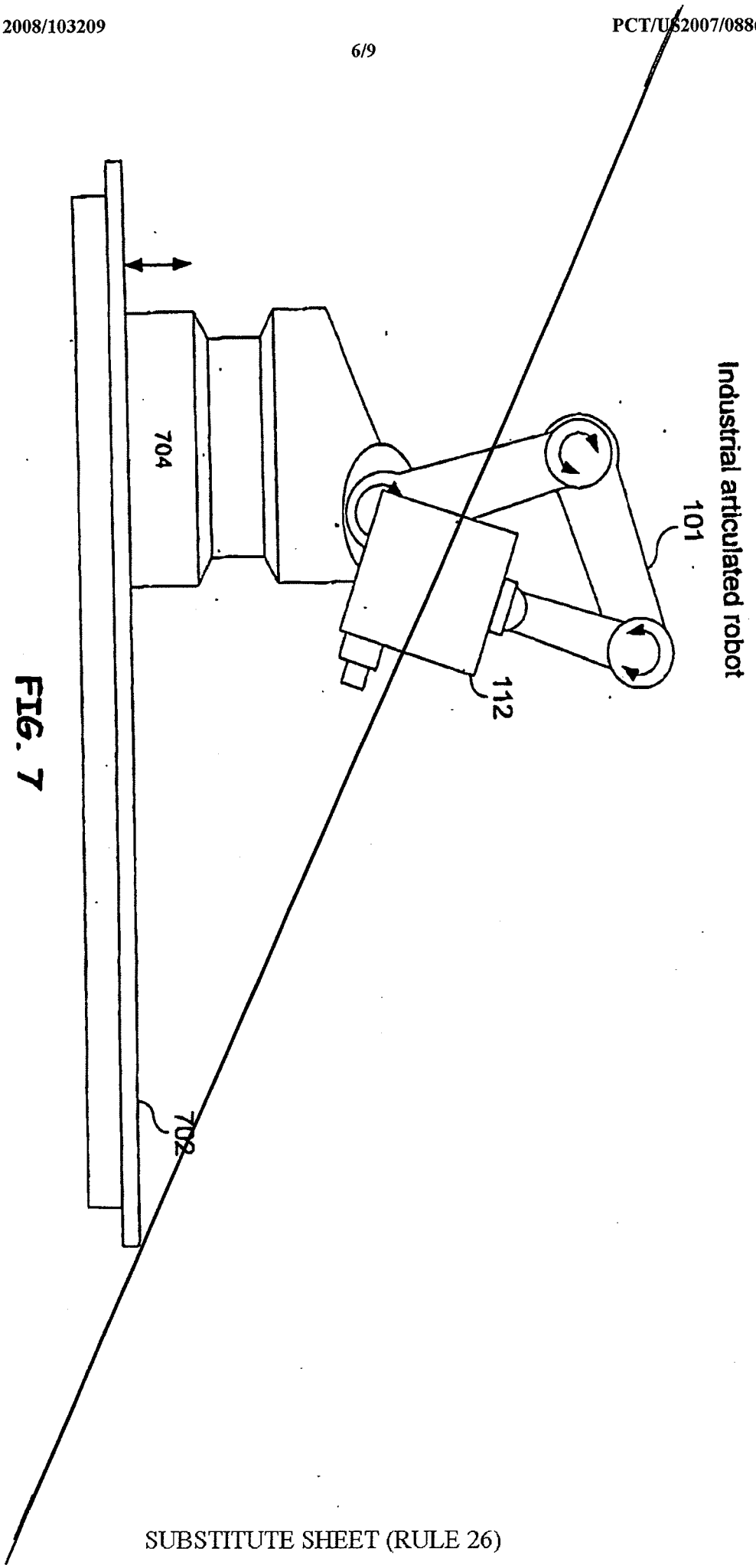


FIG. 7

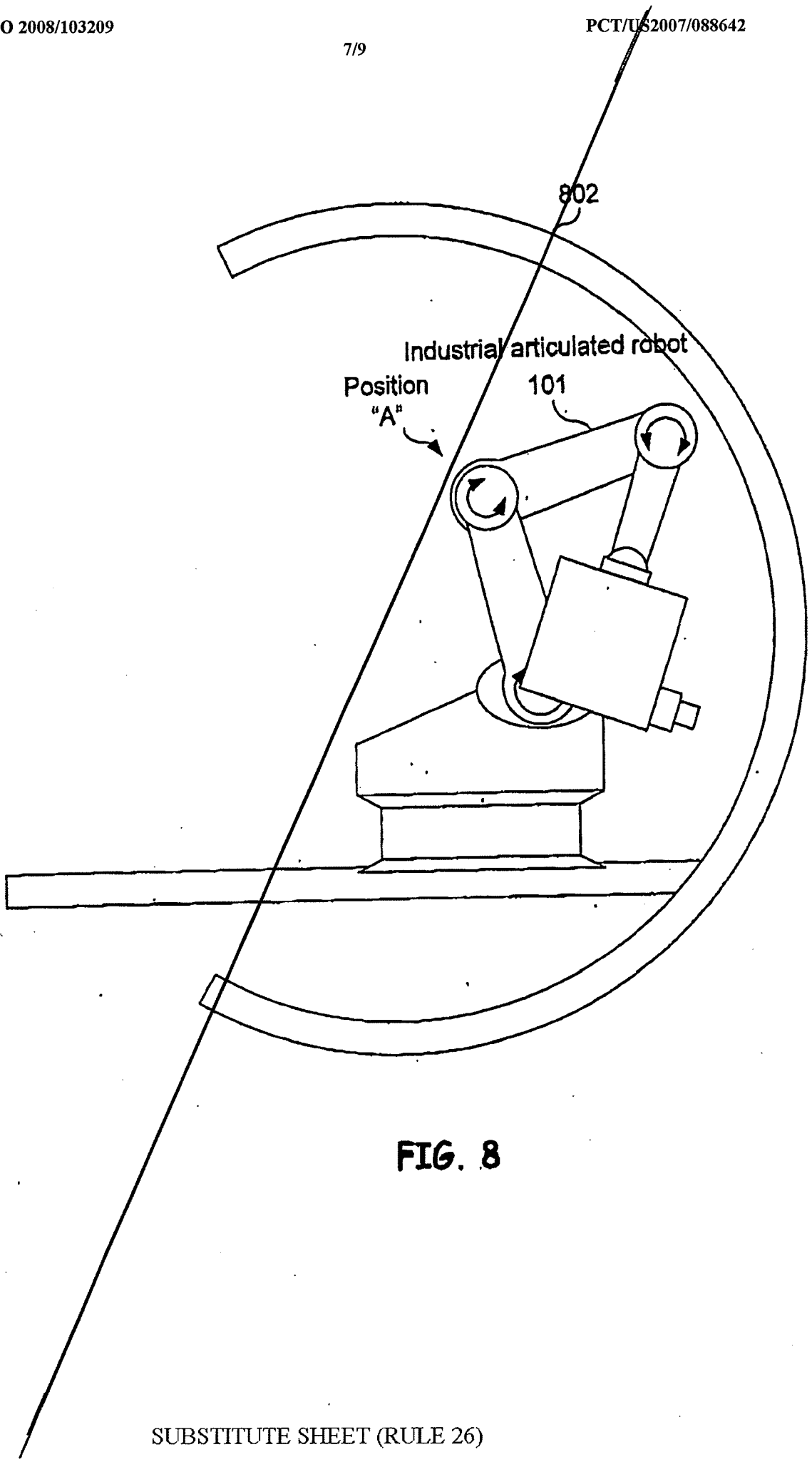


FIG. 8

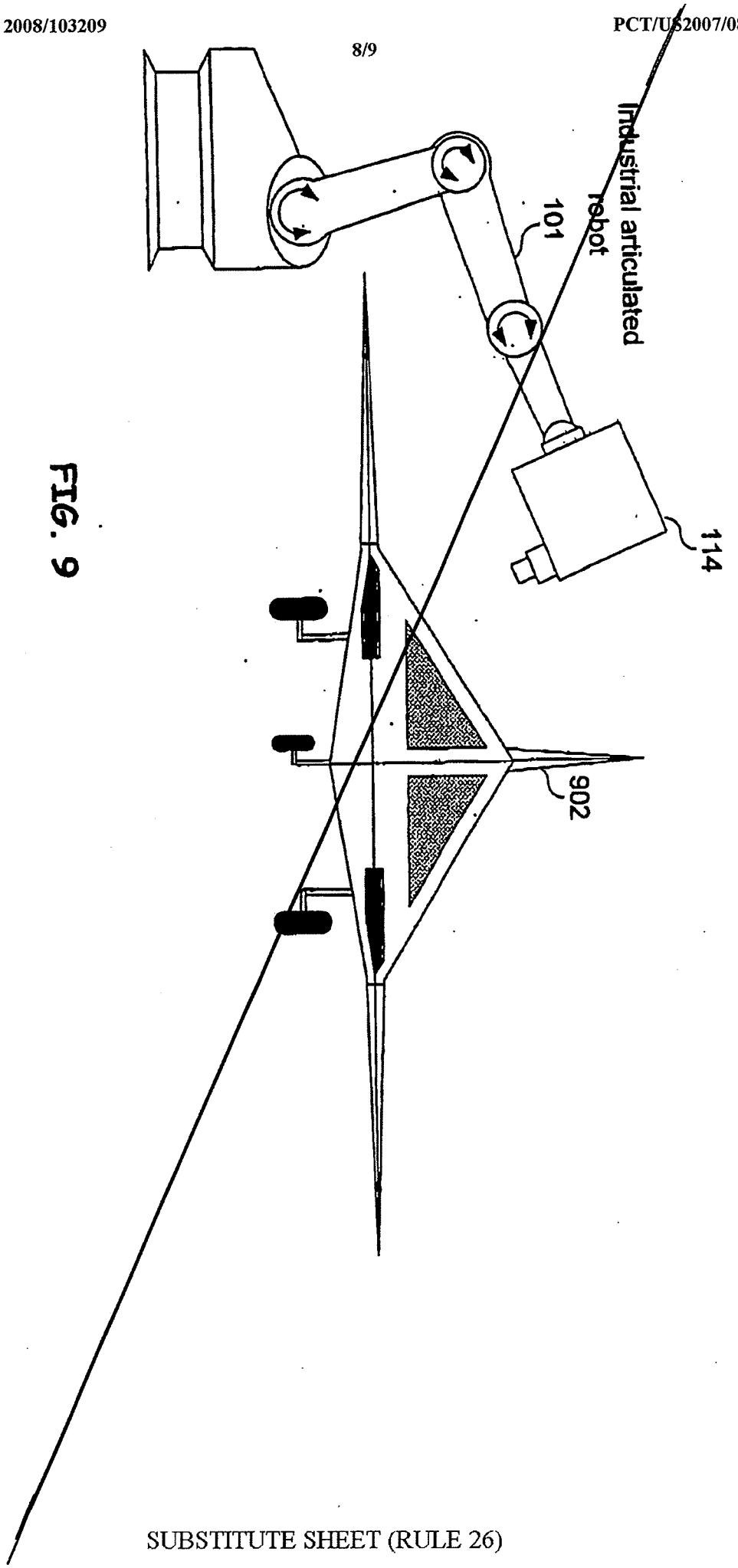


FIG. 9

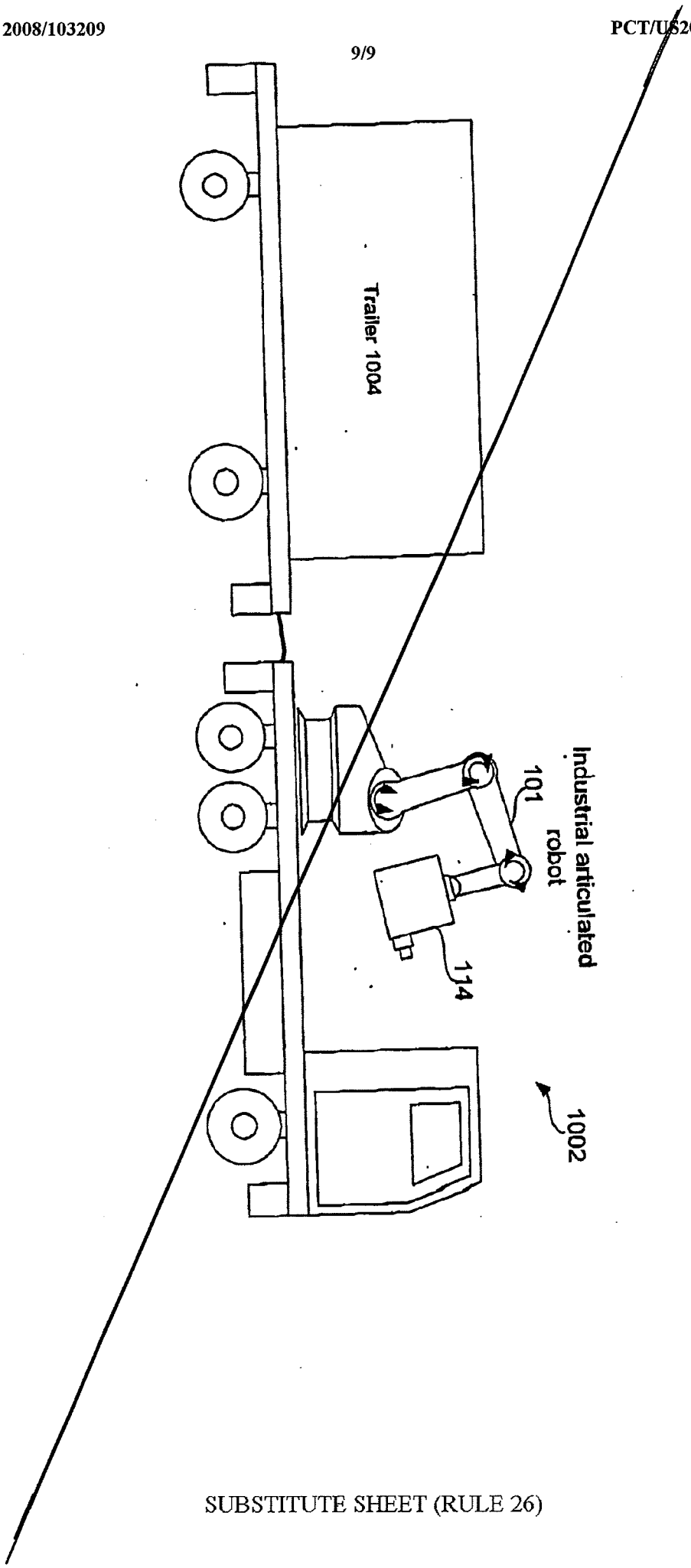


FIG. 10

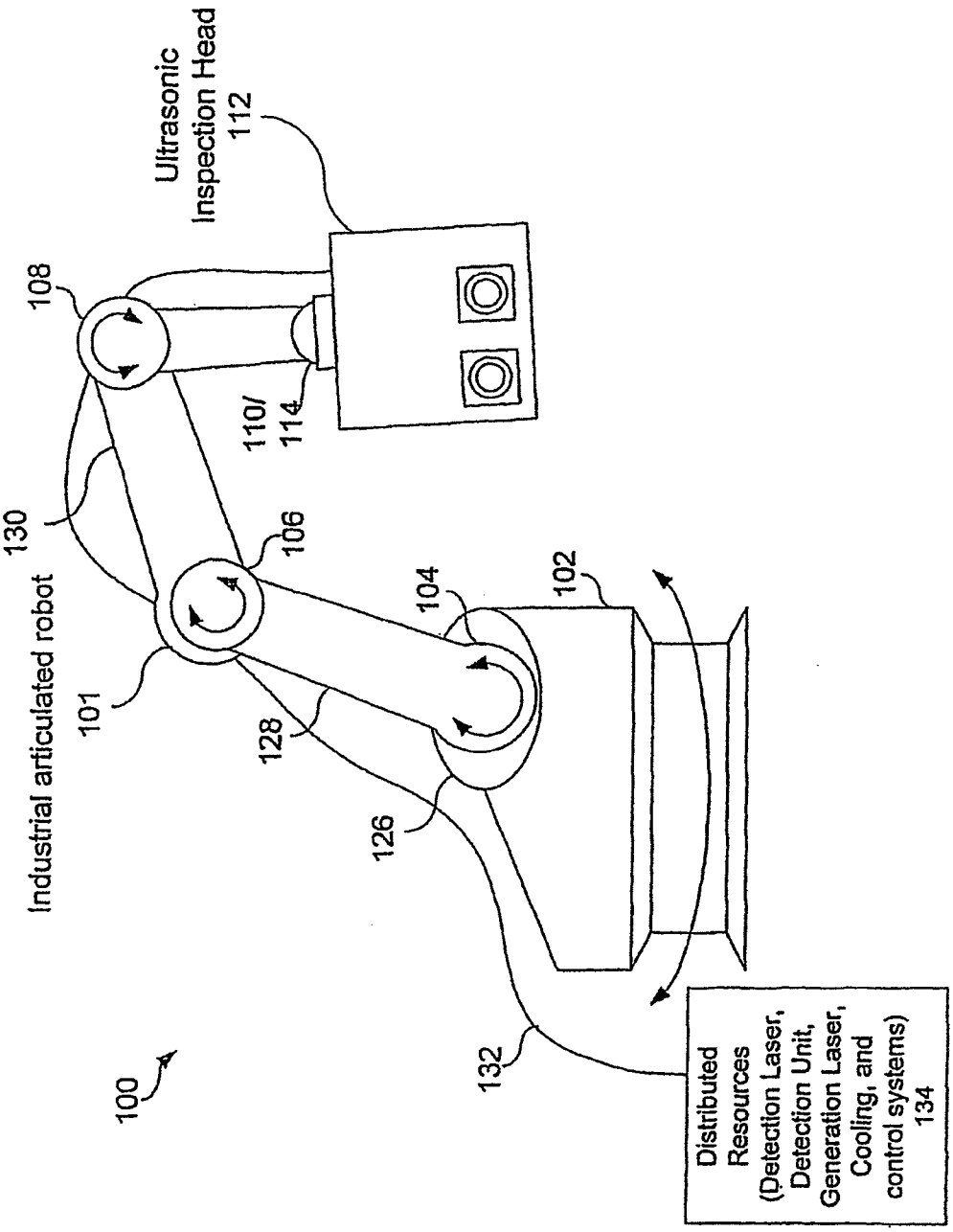

Ultrasonic
Inspection Head
112
108
110/
114
130
106
Industrial articulated robot
101
104
102
128
126
100
132
Distributed
Resources
(Detection Laser,
Detection Unit,
Generation Laser,
Cooling, and
control systems)
134

FIG. 1

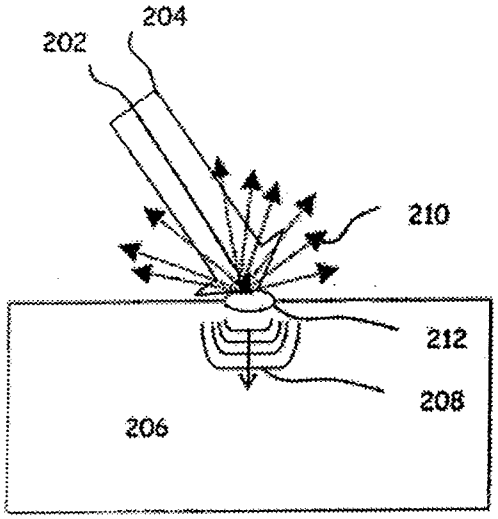

202
204
210
212
208
206

FIG. 2

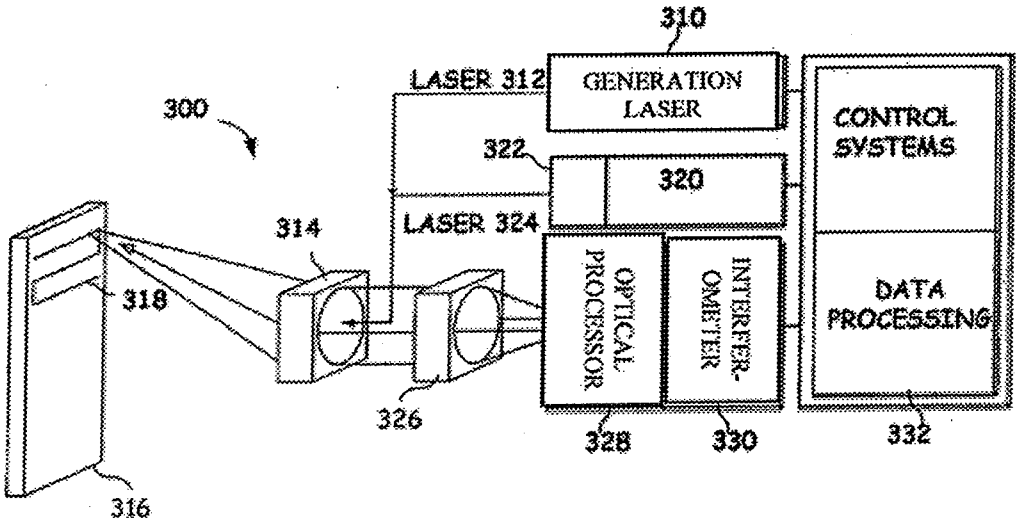

310
LASER 312
GENERATION LASER
CONTROL SYSTEMS
300
322
320
LASER 324
314
318
OPTICAL PROCESSOR
INTERFER-OMETER
DATA PROCESSING
326
328
330
332
316

FIG. 3

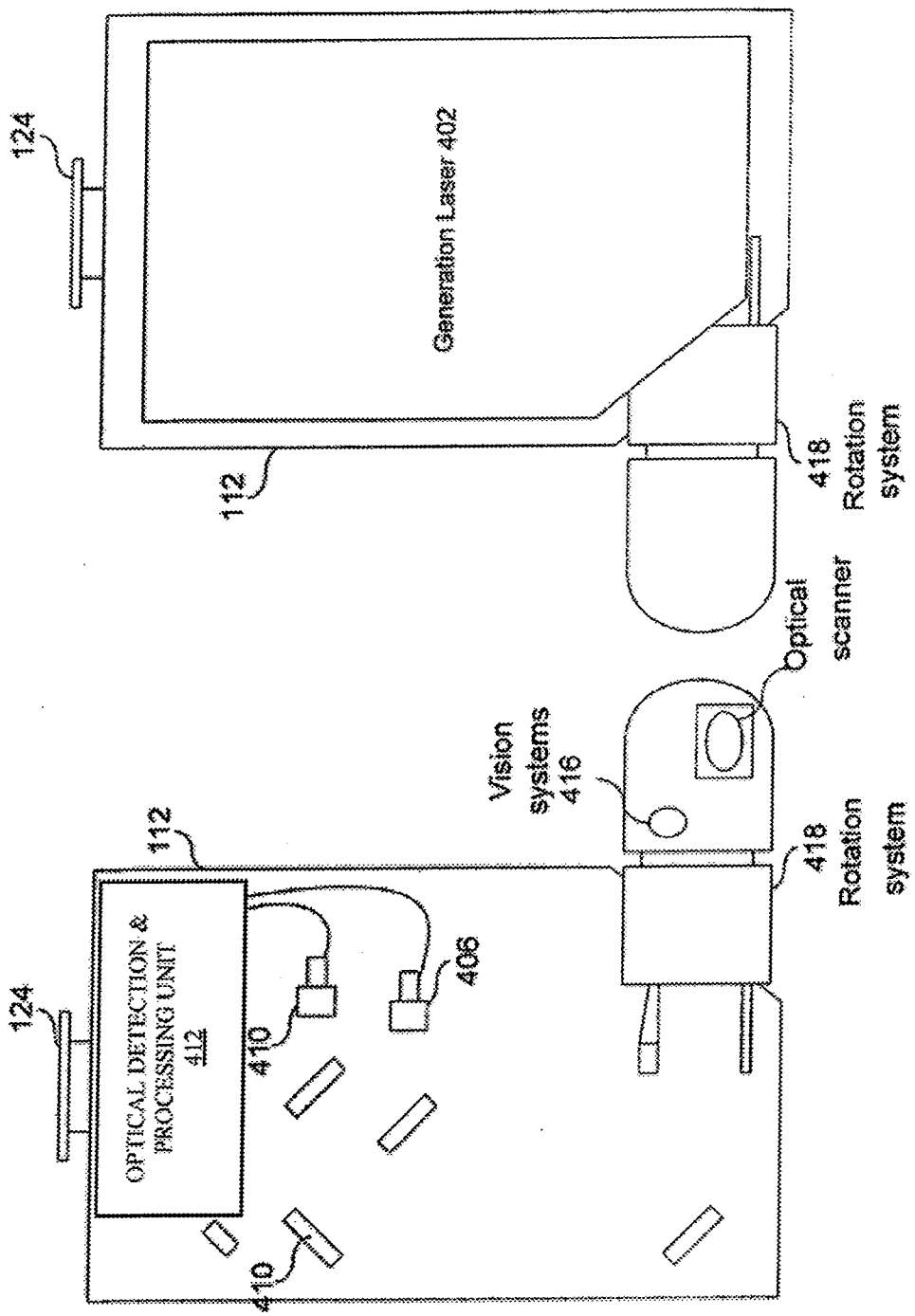

124
Generation Laser 402
112
418
Rotation
system
Optical
scanner
Vision
systems
416
112
418
Rotation
system
124
OPTICAL DETECTION &
PROCESSING UNIT
412
410
406
410

FIG. 4

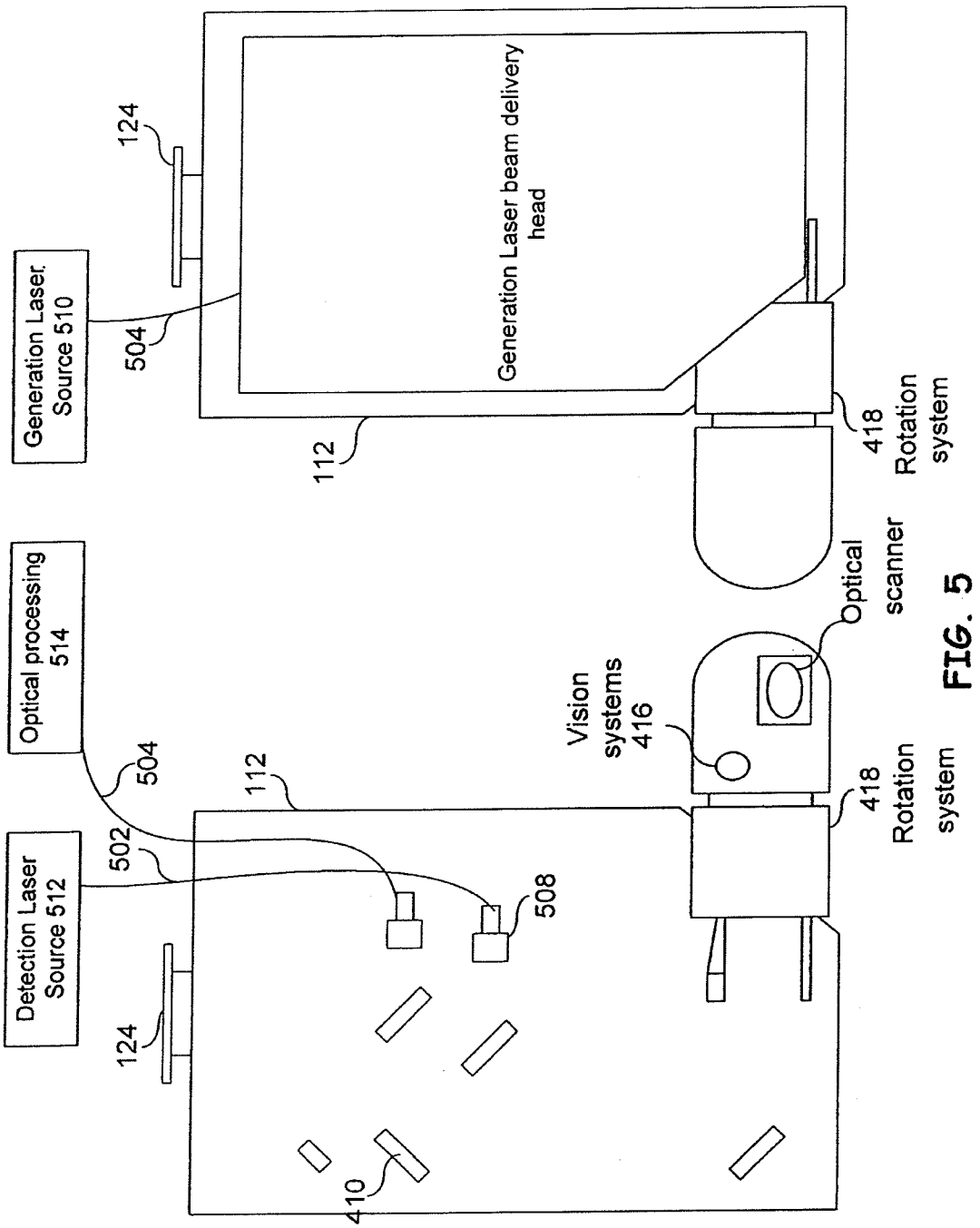

Generation Laser Source 510
Generation Laser beam delivery head
124
504
112
418 Rotation system
Optical processing 514
Optical scanner
Vision systems 416
Detection Laser Source 512
502
508
410

FIG. 5

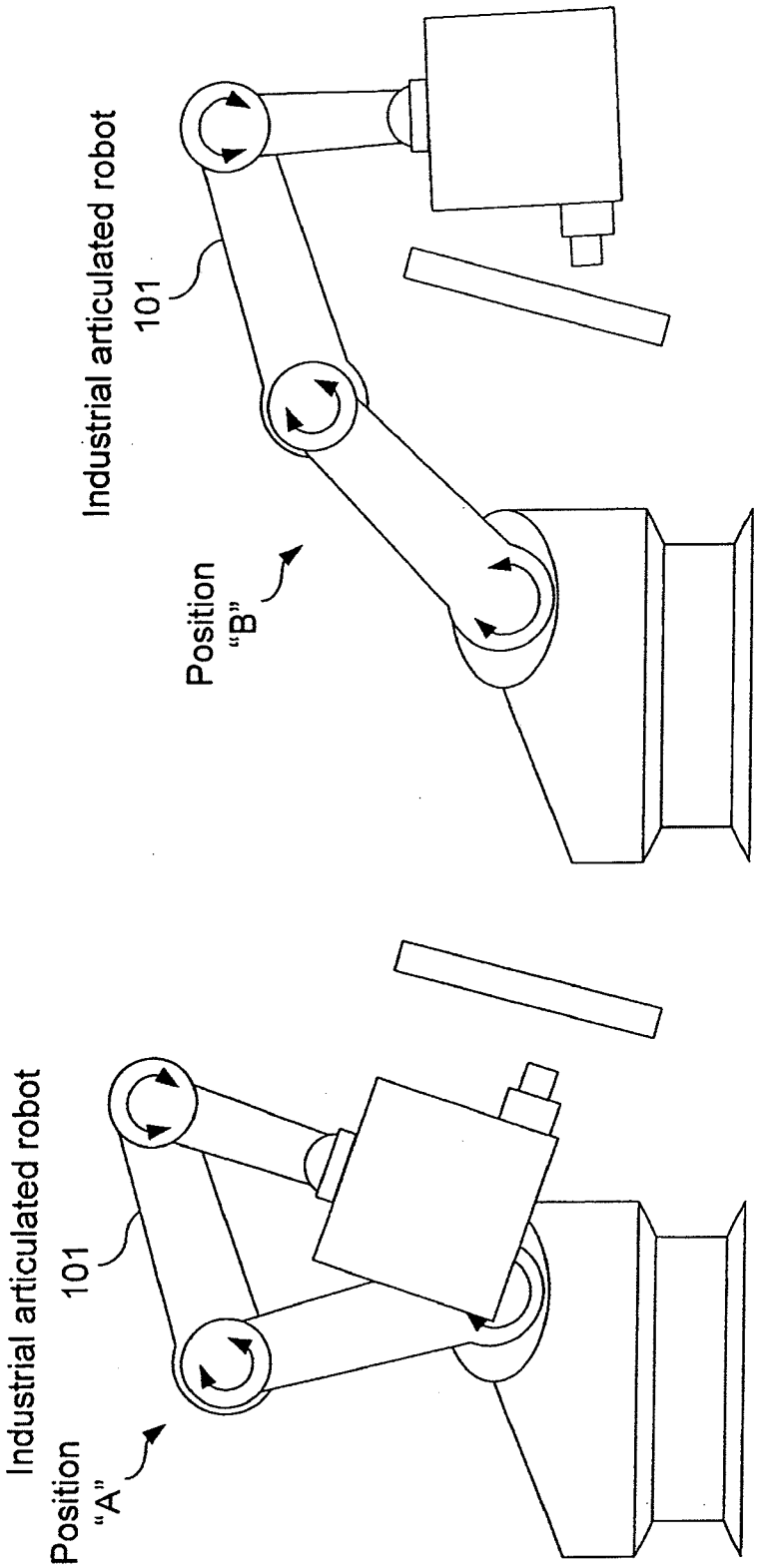

Industrial articulated robot
101
Position
"B"
Industrial articulated robot
101
Position
"A"

FIG. 6

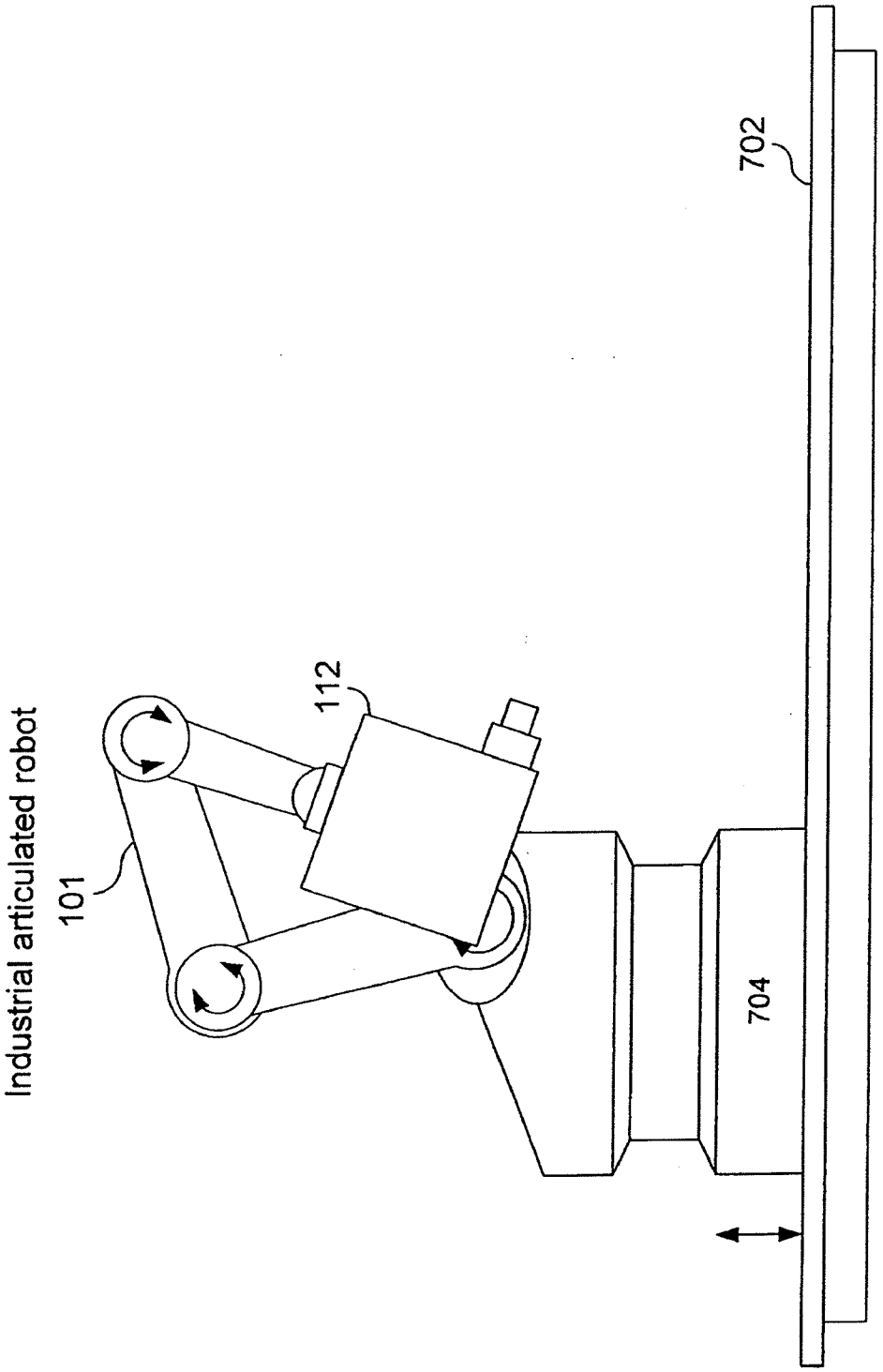


FIG. 7

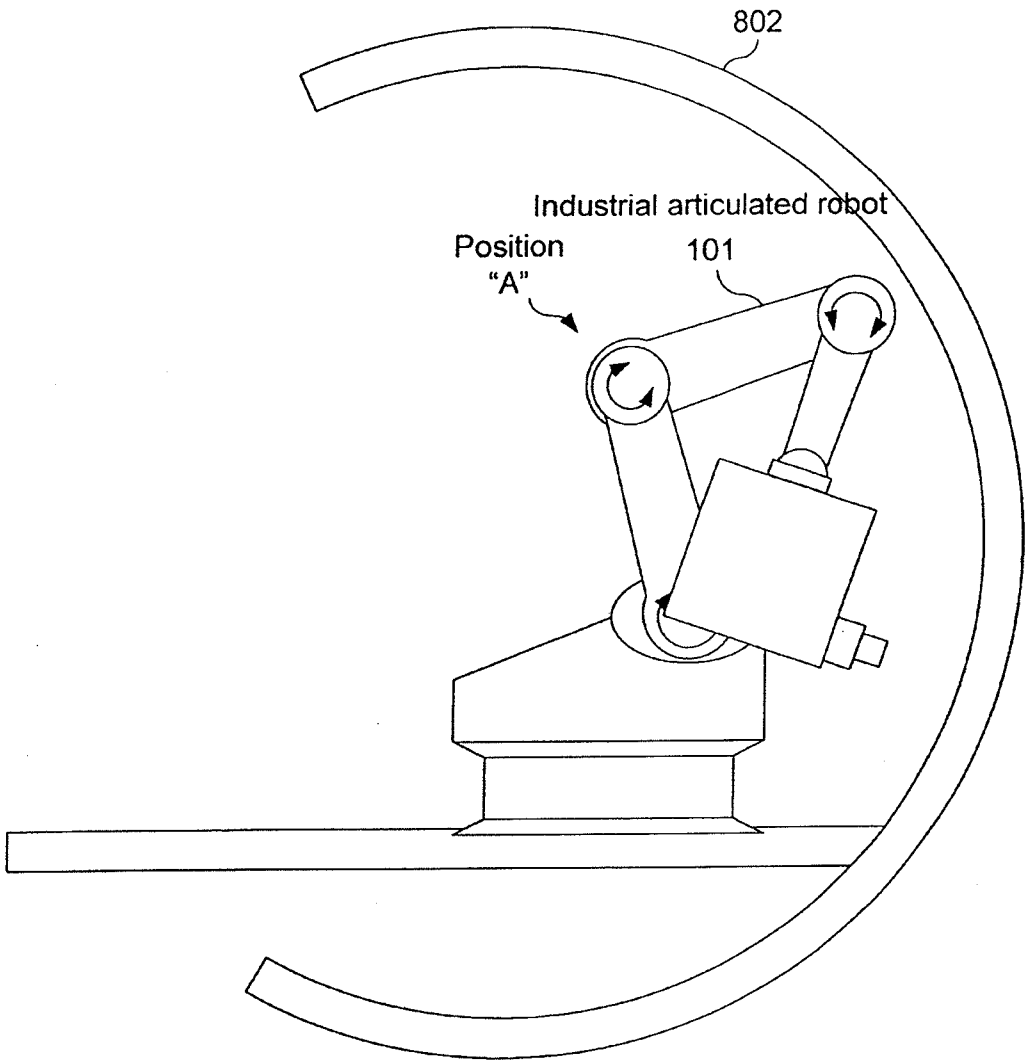


FIG. 8

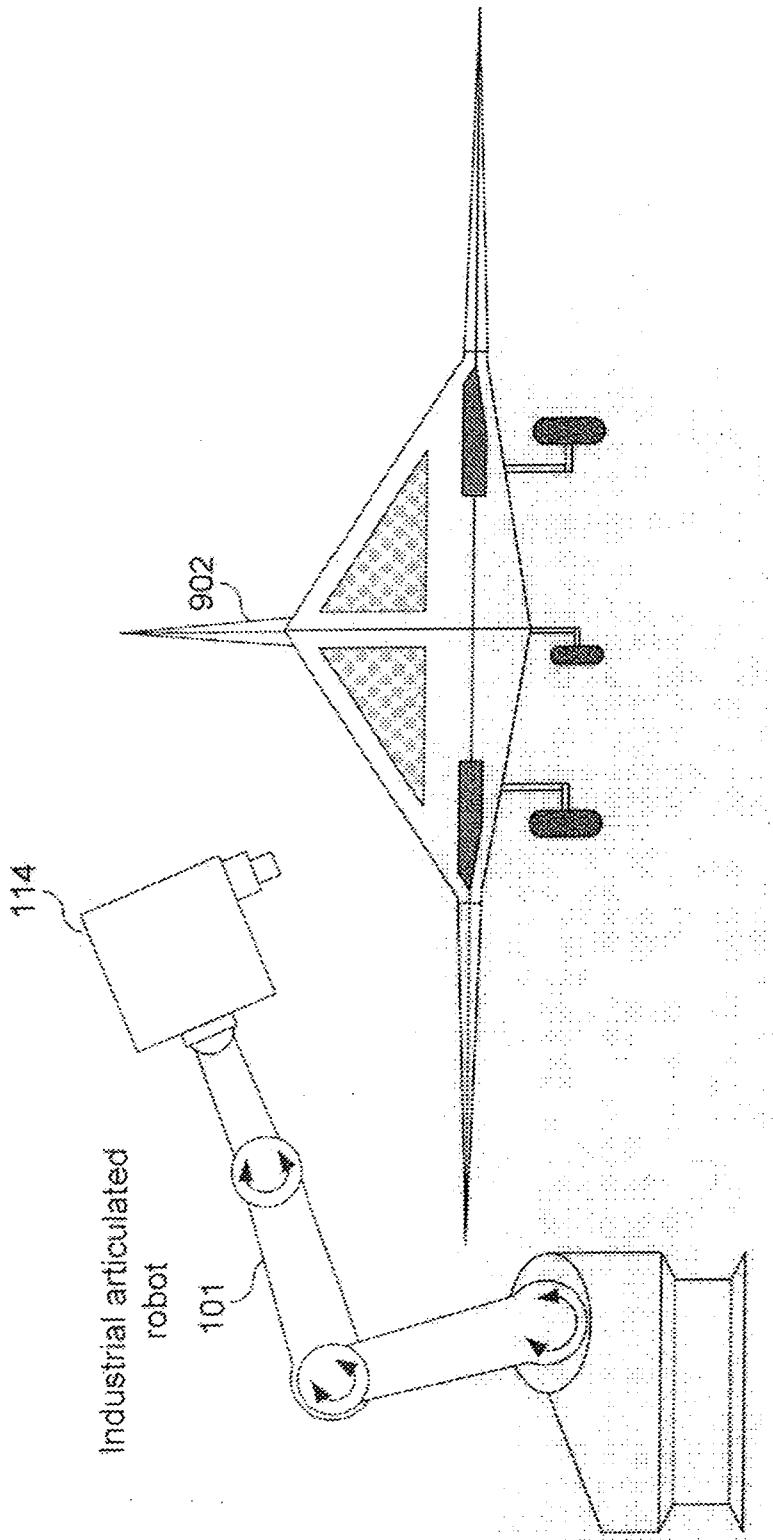


FIG. 9

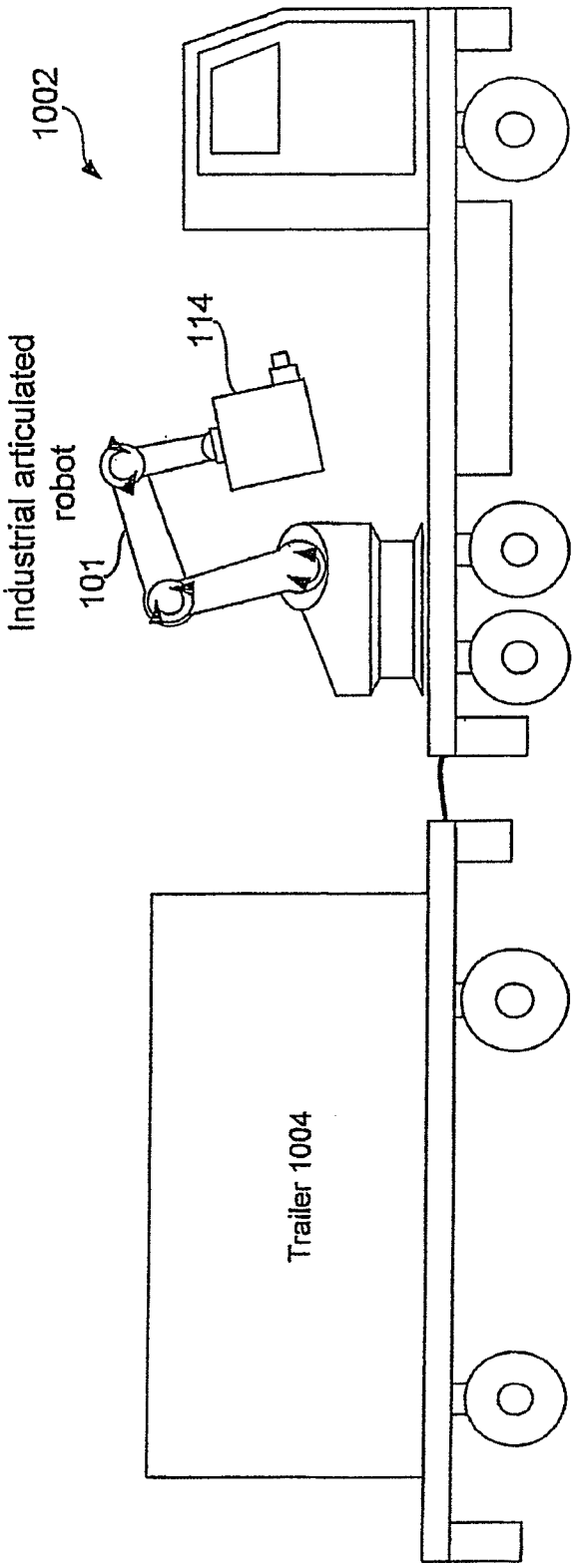


FIG. 10