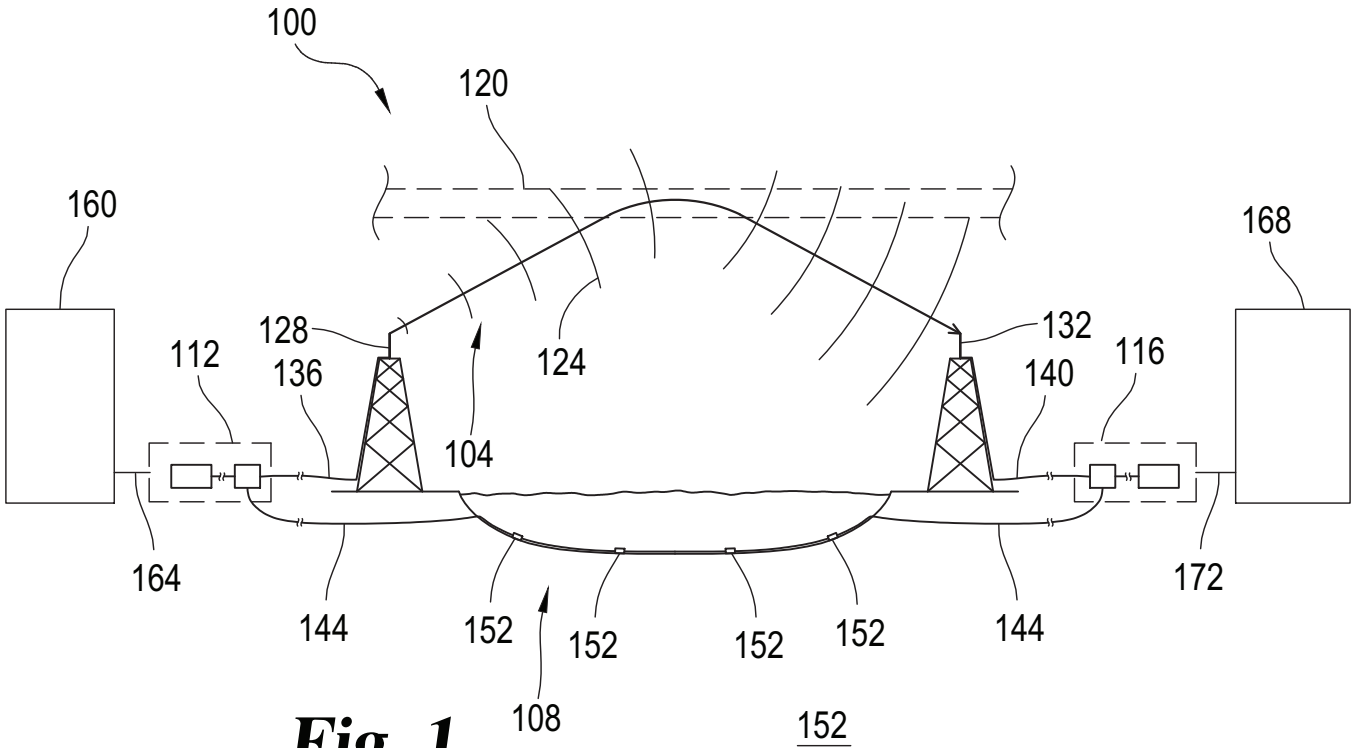

100
120
160
168
128
132
112
136
124
140
116
104
164
172
144
152
152
152
152
144
108
152

Fig. 1

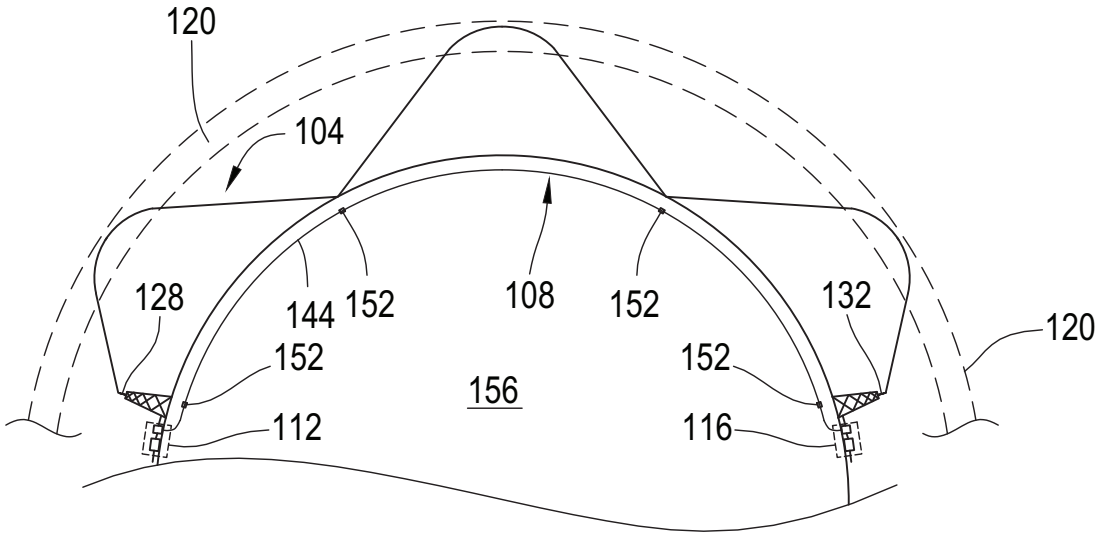

120
104
128
144
152
108
152
132
120
152
152
156
112
116

Fig. 2

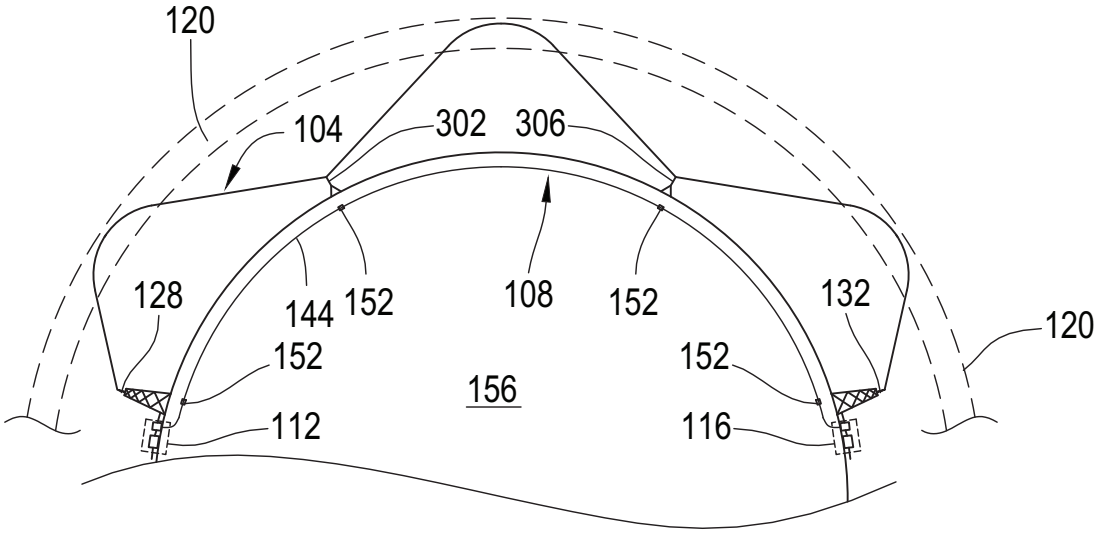

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104
302
306
128
144
152
108
152
132
120
152
152
156
112
116

Fig. 3

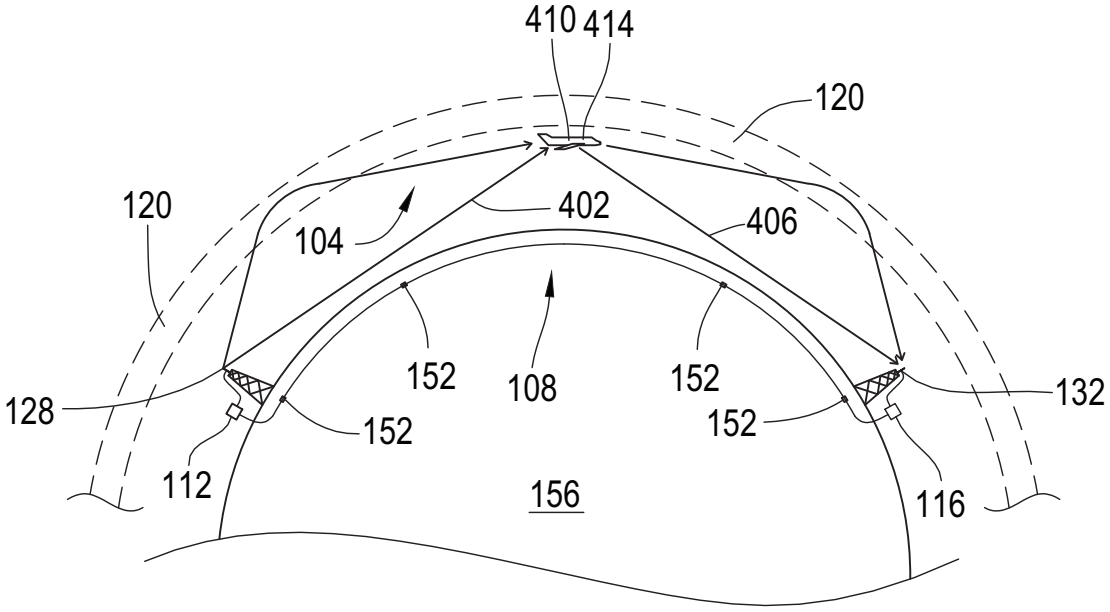

410
414
120
120
104
402
406
152
108
152
128
132
152
152
112
156
116

Fig. 4

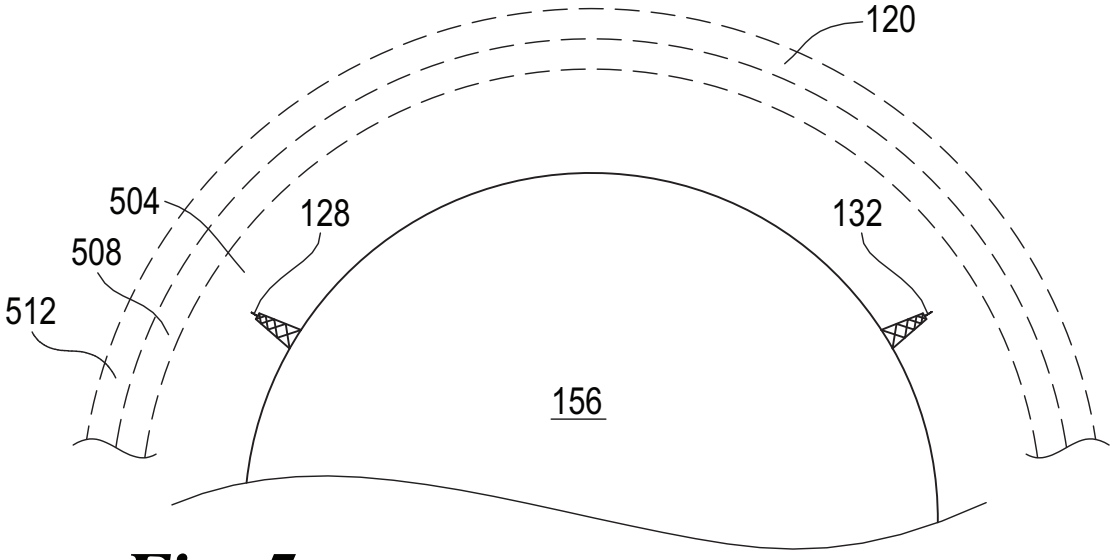

120
504
128
132
508
512
156

Fig. 5

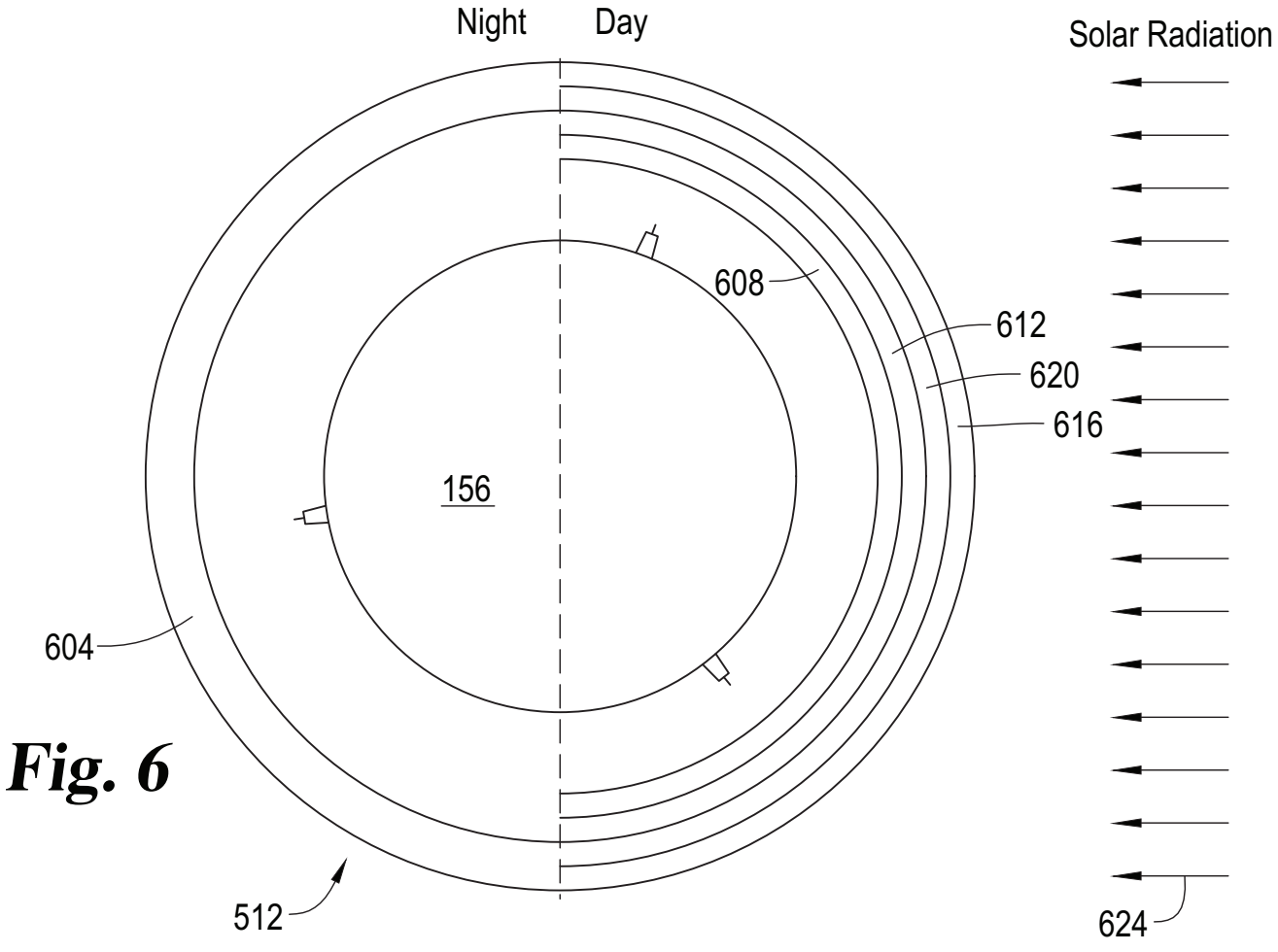

Night
Day
Solar Radiation
608
612
620
616
156
604
512
624

Fig. 6

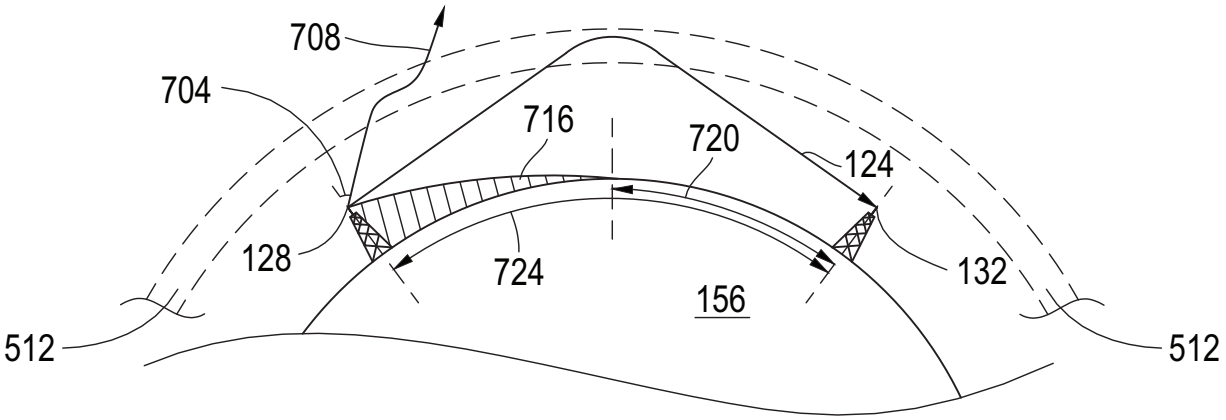

708
704
716
720
124
128
724
132
156
512
512

Fig. 7

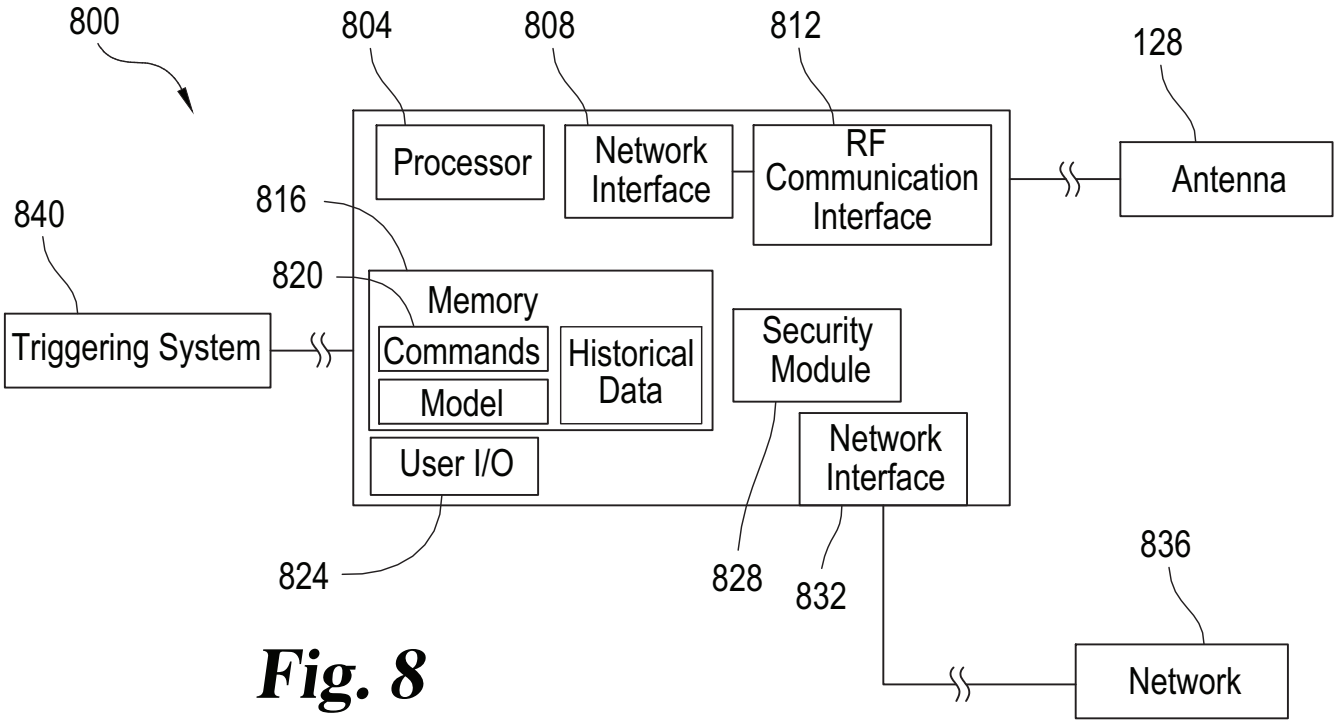

800
804
808
812
128
Processor
Network Interface
RF Communication Interface
Antenna
816
840
820
Memory
Commands
Historical Data
Model
Triggering System
Security Module
User I/O
Network Interface
824
828
832
836
Network

Fig. 8

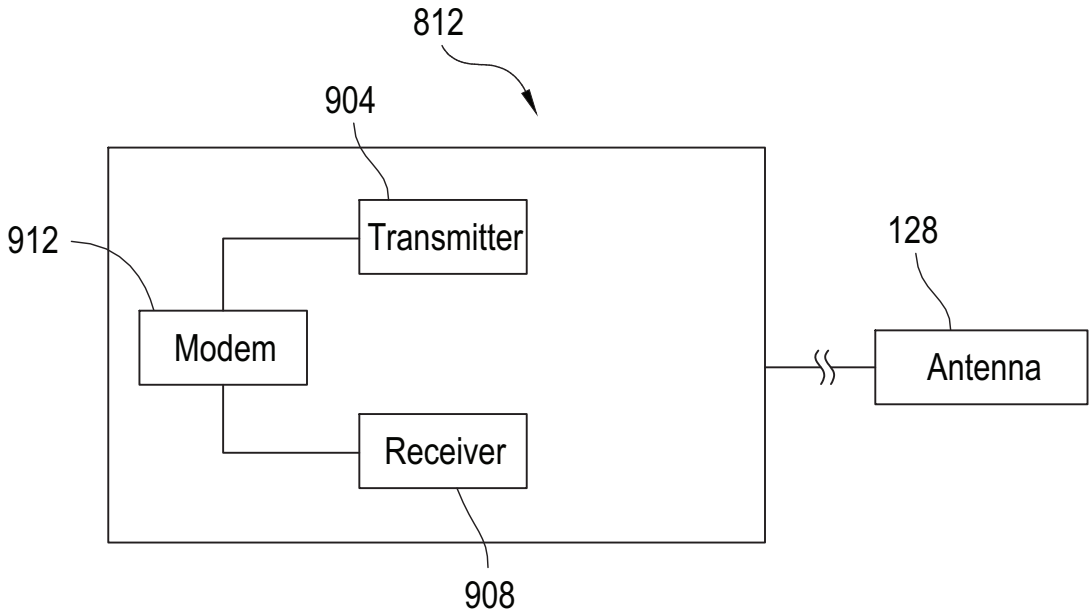


Fig. 9

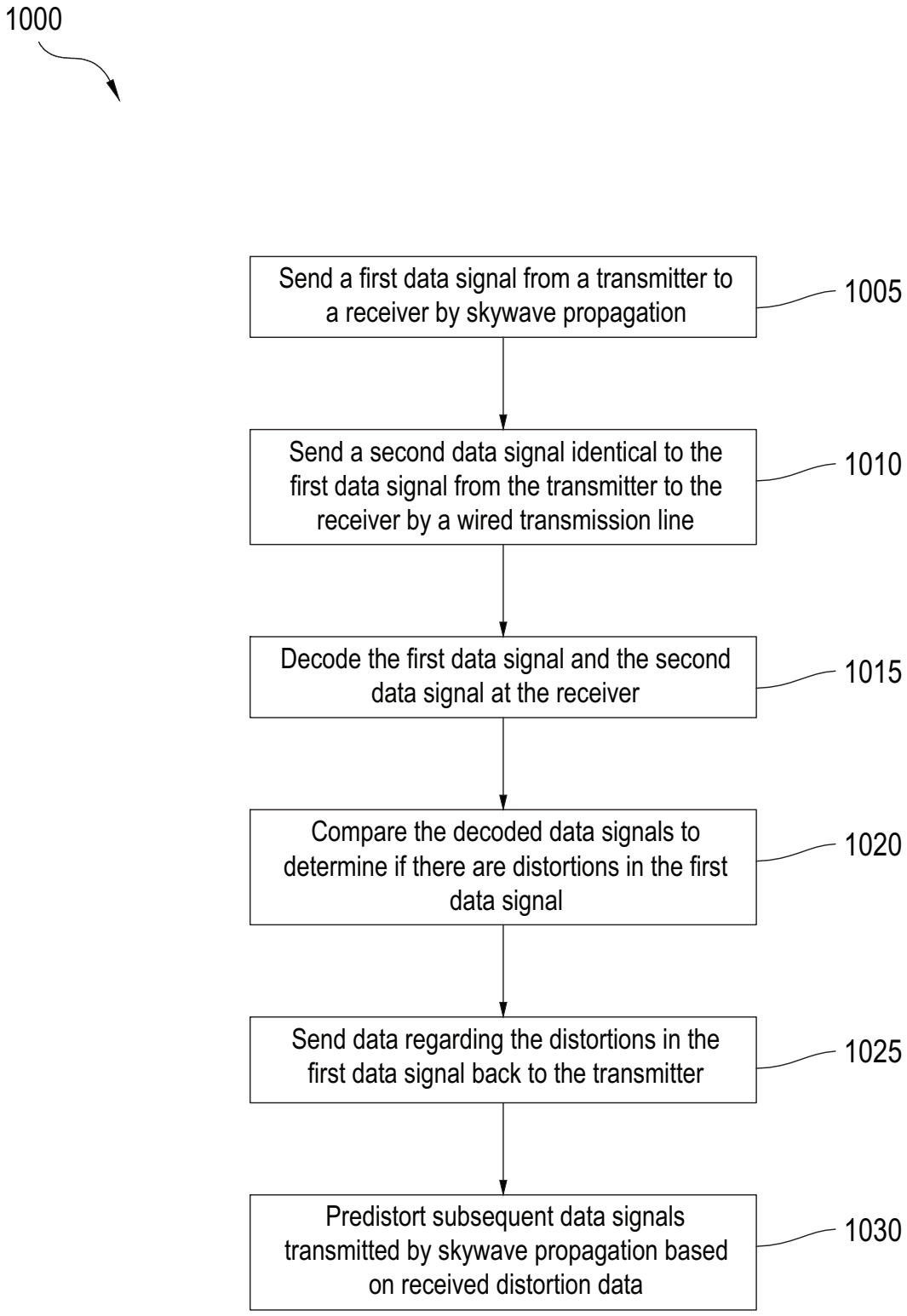

1000
Send a first data signal from a transmitter to a receiver by skywave propagation
1005
Send a second data signal identical to the first data signal from the transmitter to the receiver by a wired transmission line
1010
Decode the first data signal and the second data signal at the receiver
1015
Compare the decoded data signals to determine if there are distortions in the first data signal
1020
Send data regarding the distortions in the first data signal back to the transmitter
1025
Predistort subsequent data signals transmitted by skywave propagation based on received distortion data
1030

Fig. 10

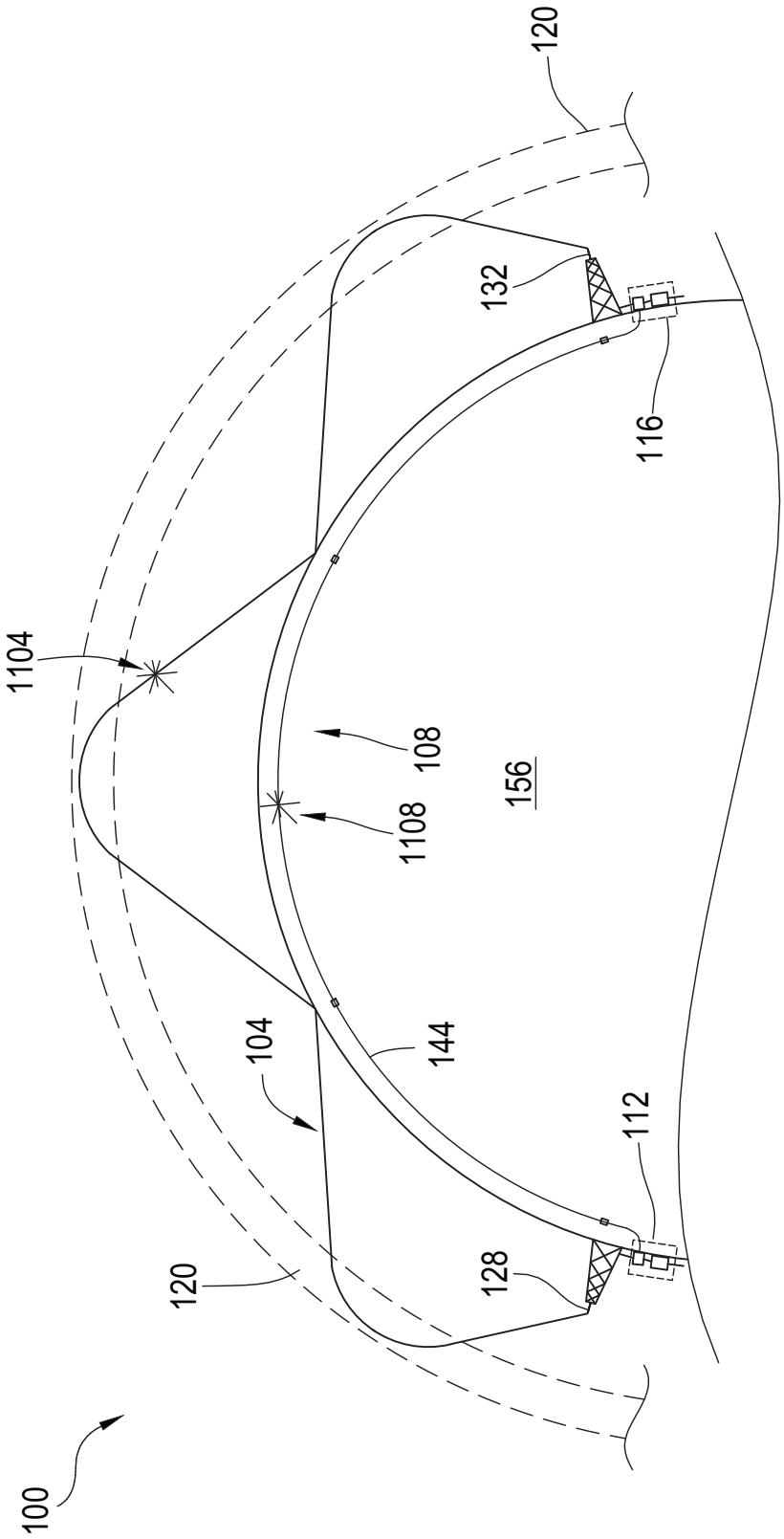


Fig. 11

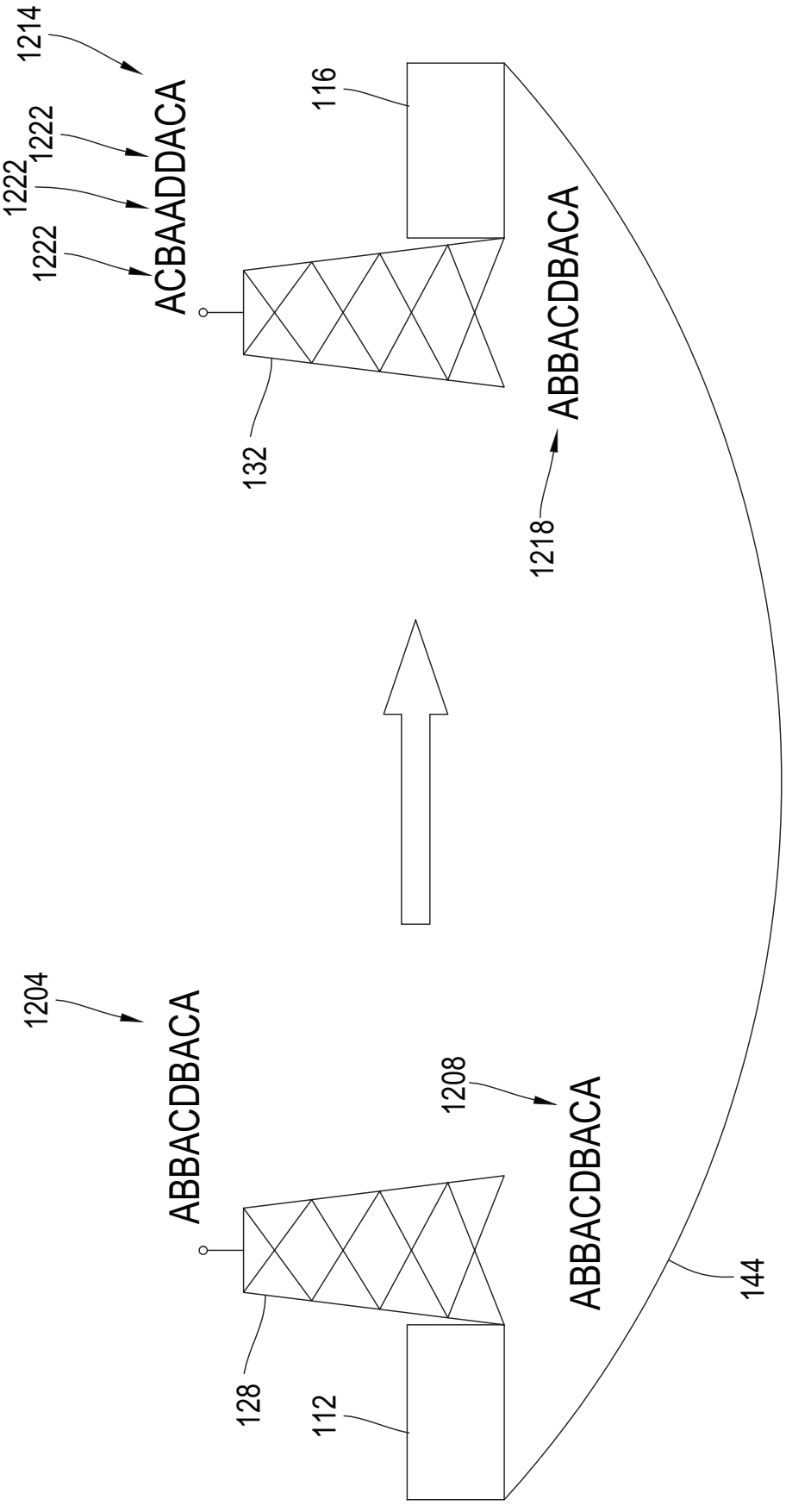

1214
1222
1222
1222
ACBAADDACA
116
ABBACDBACA
1218
132
1204
ABBACDBACA
1208
ABBACDBACA
144
128
112

Fig. 12

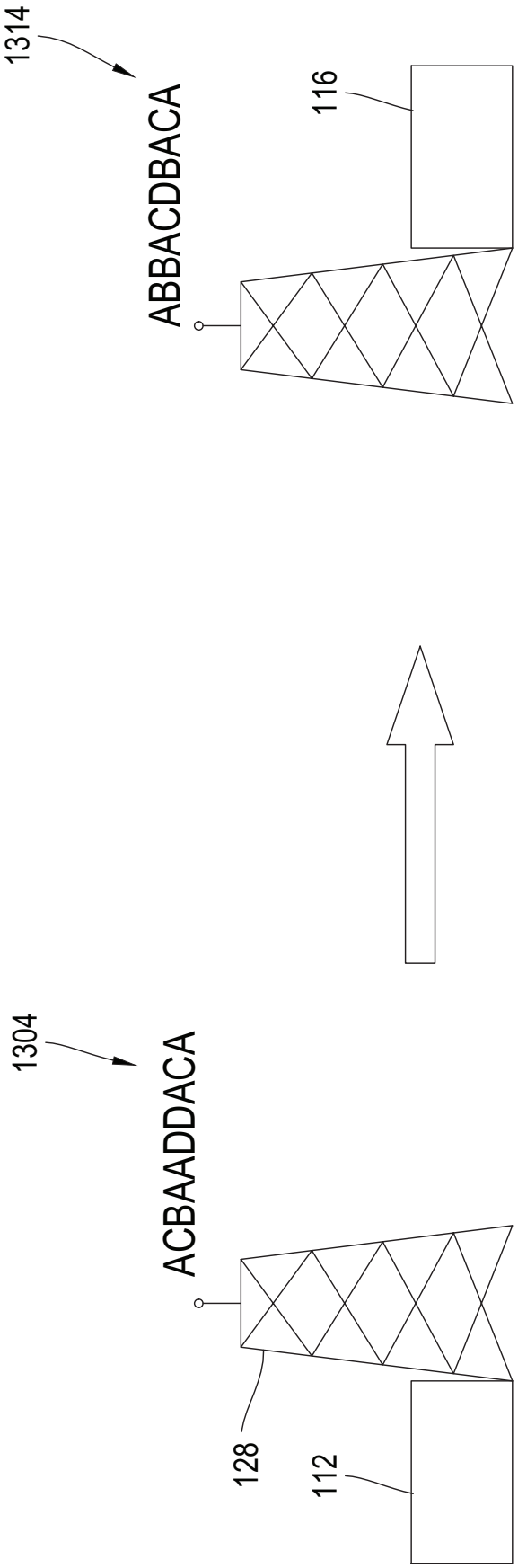


Fig. 13

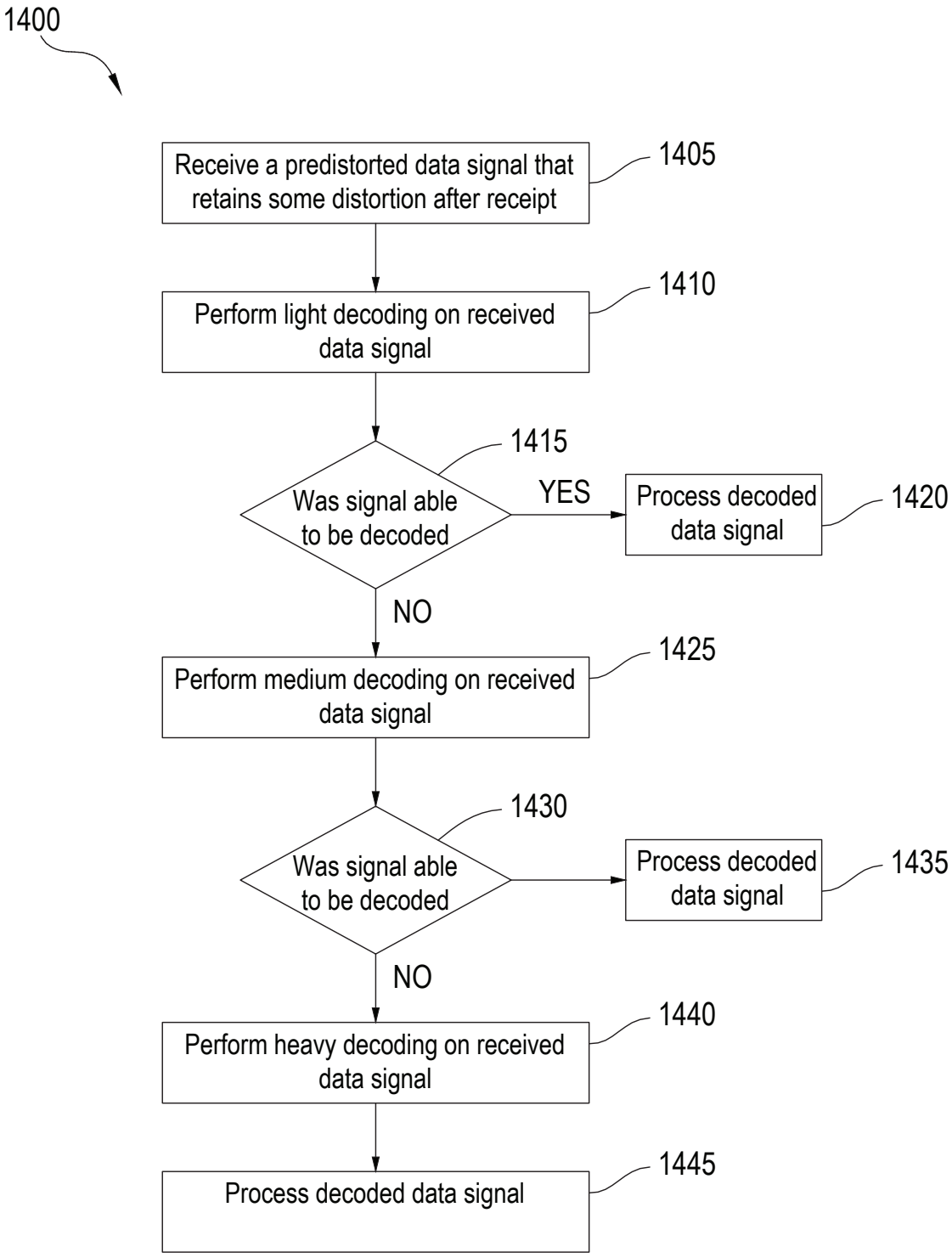

1400
Receive a predistorted data signal that retains some distortion after receipt
1405
Perform light decoding on received data signal
1410
1415
Was signal able to be decoded
YES
Process decoded data signal
1420
NO
Perform medium decoding on received data signal
1425
1430
Was signal able to be decoded
Process decoded data signal
1435
NO
Perform heavy decoding on received data signal
1440
Process decoded data signal
1445

Fig. 14

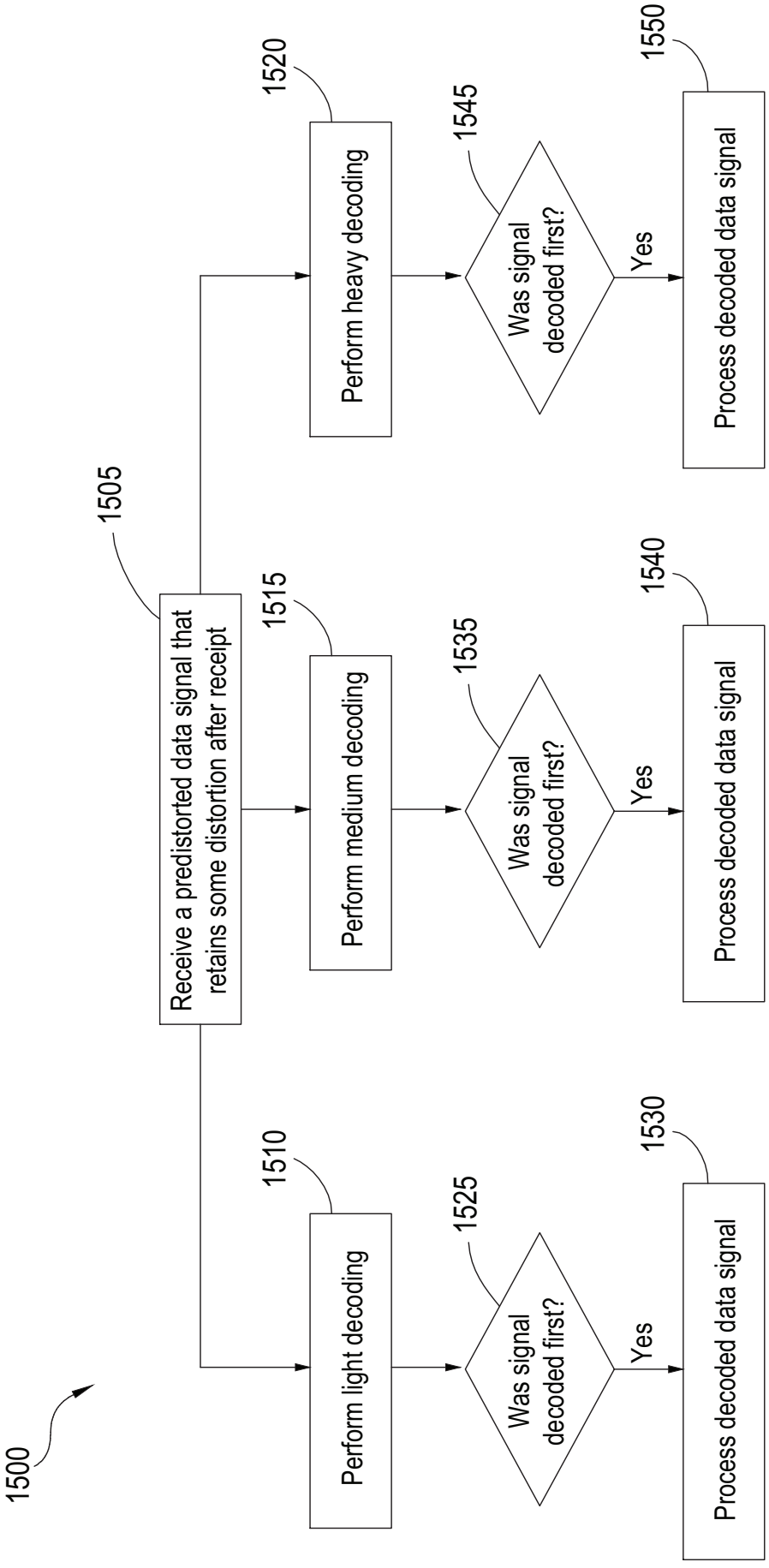

1500
1505
Receive a predistorted data signal that retains some distortion after receipt
1510
Perform light decoding
1515
Perform medium decoding
1520
Perform heavy decoding
1525
Was signal decoded first?
1530
Process decoded data signal
1535
Was signal decoded first?
1540
Process decoded data signal
1545
Was signal decoded first?
1550
Process decoded data signal
Yes
Yes
Yes

Fig. 15