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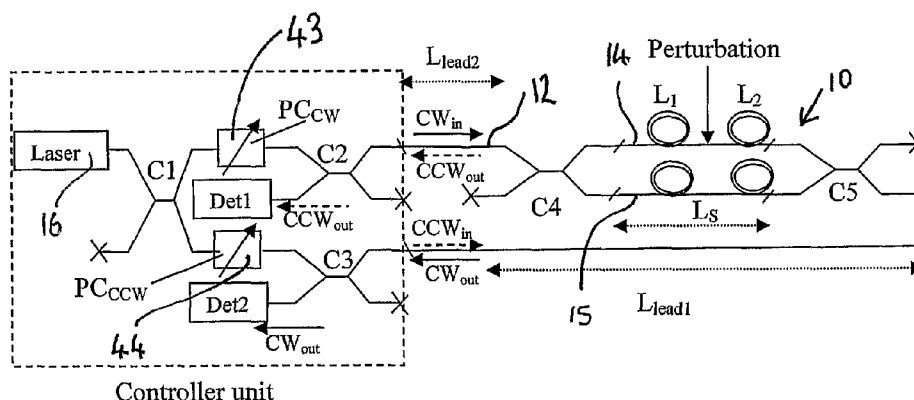
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(54) Title: APPARATUS AND METHOD FOR USING A COUNTER-PROPAGATING SIGNAL METHOD FOR LOCATING EVENTS



(57) Abstract: An apparatus and method for using a counter-propagating signal method for locating events is disclosed. The apparatus and method uses a Mach Zehnder interferometer through which counter-propagating signals can be launched. If the sensing zone of the Mach Zehnder interferometer is disturbed, modified counter-propagating signals are produced and the time difference between receipt of those signals is used to determine the location of the event. Polarisation controllers (43, 44) receive feedback signals so that the polarisation states of the counter-propagating signals can be controlled to match the amplitude and/or phase of the signals. Detectors are provided for detecting the modified signals.