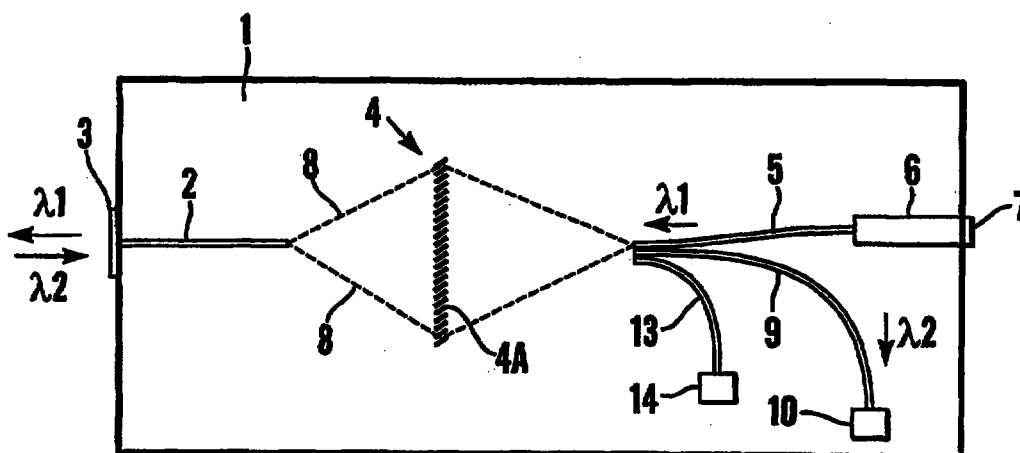




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(54) Title: OPTICAL DEVICE FOR MONITORING MULTI-WAVELENGTH SIGNALS



(57) Abstract

The optical device comprises a diffraction grating (16) for dividing a multi-wavelength signal received on an input waveguide (17) into a plurality of signals each of a single wavelength or narrow wavelength band. A first set of waveguides (18) receives signals from a main (m^{th}) diffraction order from the grating (16) to provide an output from the device. A second set of waveguides (19) receives signals from a lower or higher ($m + p^{\text{th}}$) diffraction order from the grating and transmits these signals to light detectors (20). Properties of the output signals on the first set of waveguides (18) can thus be monitored from the properties of the signals received by the light detectors (20) as the properties of the lower or higher ($m + p^{\text{th}}$) diffraction order are closely related to those of the main (m^{th}) diffraction order.