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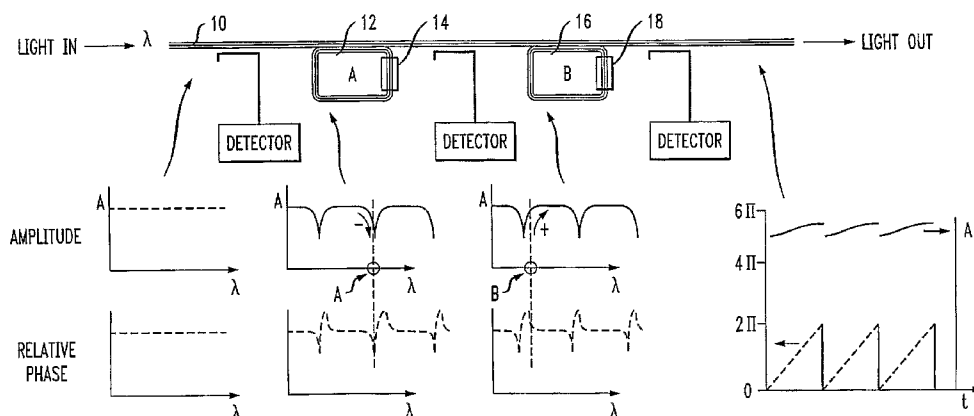
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(54) Title: **SILICON-BASED ELECTRO-OPTIC PHASE MODULATOR WITH REDUCED RESIDUAL AMPLITUDE MODULATION**



(57) Abstract: An arrangement for removing unwanted amplitude modulation from the output of an electro-optic phase modulator (formed within a silicon-on-insulator (SOI) system) includes resonant filters that are biased on the positive and negative slopes of the response signal. Therefore, as the amplitude response of one filter decreases, the amplitude response of the other filter increases, resulting in balancing the output and essentially eliminating amplitude modulation from the phase-modulated output signal. In one embodiment, ring resonators (formed in the SOI layer) are used to provide the filtering, where as the number of resonators is increased, the performance of the filtering arrangement is improved accordingly.