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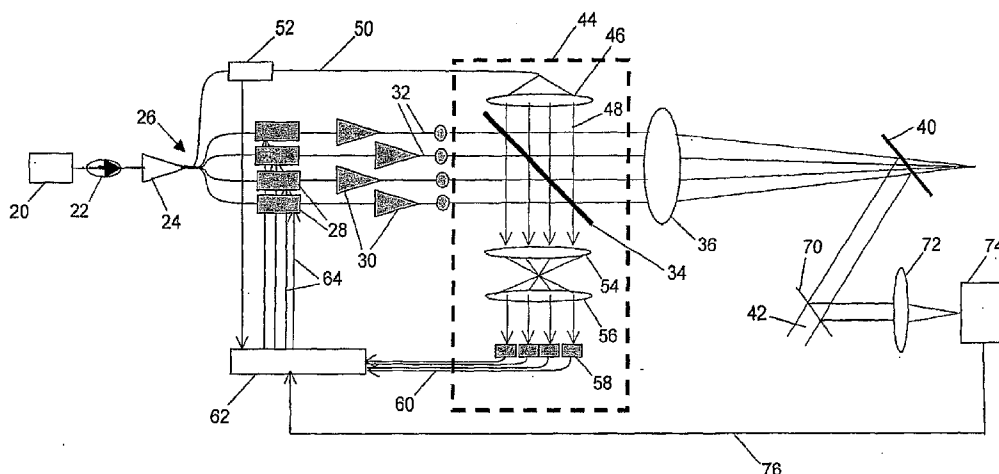
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(54) Title: COHERENT FIBER DIFFRACTIVE OPTICAL ELEMENT BEAM COMBINER



(57) Abstract: An optical beam combiner and a related method for its operation, in which multiple coherent input beams are directed onto a diffractive optical element (DOE) (40) along directions corresponding to diffraction orders of the DOE, such that the DOE generates a single output beam in a direction corresponding to a desired diffraction order, and suppresses outputs in directions corresponding to unwanted diffraction orders. The phases of the input beams are actively controlled to ensure and maintain the condition that only a single diffraction mode is present in the output of the DOE.



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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
H01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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