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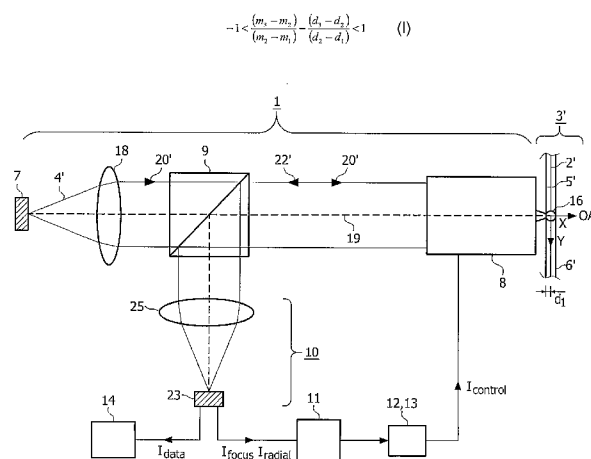
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(54) Title: OPTICAL RECORD CARRIER SCANNING DEVICE



(57) **Abstract:** An optical scanning device for scanning optical record carriers having information layers at different information layer depths within the carrier, the optical record carriers including a first optical record carrier (3') having an information layer (2') at a first information layer depth d_1 , a second optical record carrier (3'') having an information layer (2'') at a second information layer depth d_2 and a third optical record carrier (3''') having an information layer (2''') at a third information layer depth d_3 , wherein $d_3 < d_2 < d_1$. The scanning device includes a radiation source system (7) for producing first, second and third radiation beams (4', 4'', 4'''), for scanning said first, second and third record carriers (3'; 3''; 3'''), respectively, the device including a diffraction structure (48) introducing first, second and third, different, wavefront modifications into at least part of the first, second and third, radiation beams, respectively. The diffraction structure (48) is arranged to operate at selected diffraction orders m_1, m_2, m_3 , for the first, second and third radiation beams, respectively, and is characterised in that the diffraction structure (48) is arranged such that the following relation holds: Formula (I).

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