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Baude et al.

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[54] **OPTICAL LENS FOR CORRECTING ASTIGMATISM**

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[58] **Field of Search** ..... 351/160 R, 160 H, 161, 351/162, 176; 350/162.17, 162.20, 162.21, 162.22, 162.23, 162.24; 623/6

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[57] **ABSTRACT**

The present invention relates to an optical lens for correcting astigmatism. It includes diffractive components whose outlines are delimited by conic section curves having non-degenerate centers. More precisely, in accordance with the invention, the lens includes adjacent diffractive components having hyperbolic or elliptical outlines with a periodicity in r^2 in two mutually orthogonal directions x and y intersecting on the axis of the lens and coinciding with the main axes of the hyperbolas or of the ellipses, which are determined respectively by the equations: $\Delta r_x^2 = 2\lambda|f_x|$; and $\Delta r_y^2 = 2\lambda|f_y|$; in which: Δr_x^2 represents the periodicity in r^2 along the x direction; Δr_y^2 represents the periodicity in r^2 along the y direction; λ represents the mean utilization wavelength; f_x represents the desired focal length in the X direction; and f_y represents the desired focal length in the Y direction.

7 Claims, 8 Drawing Sheets