

ПАТЕНТЫ/PATENTS

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WO2022174380 (A1) — 2022-08-25

EYE EXERCISING INSTRUMENT FOR REPAIRING/RECOVERING/ENHANCING VISUAL ACUITY

Discloses is an eye exercising instrument for repairing/recovering/enhancing visual acuity, belonging to the technical field of eye exercising. Eyes are allowed to follow the movement trajectory of a moving light spot (5) to carry out a coordinated motion of spirally distributed rotation and annular rotation, and/or eyes are allowed to follow the movement trajectory of a moving light spot (5) to carry out a coordinated motion of left-right symmetrical rotation and symmetrical annular rotation, so that muscles connected to the eyes are activated and nerves connected to the eyes are stretched, and the muscles connected to the eyes then become elastic and powerful by means of exercising. Left and right eyes are allowed to follow the movement trajectory of the moving light spot (5) to make a left-right transverse homodromous movement and/or a left-right symmetrical transverse movement and/or a left-right symmetrical oblique movement and/or a left-right homodromous oblique movement and/or a vertical up-down homodromous movement and/or a vertical up-down symmetrical movement for synchronous motion so as to pull eyeballs to extend outwards, adjust the focal length inside the eyeball and allow the eyes to change focus automatically and flexibly. The aim of repairing/recovering/enhancing visual acuity can be achieved by means of regular long-term exercise of the eyes.

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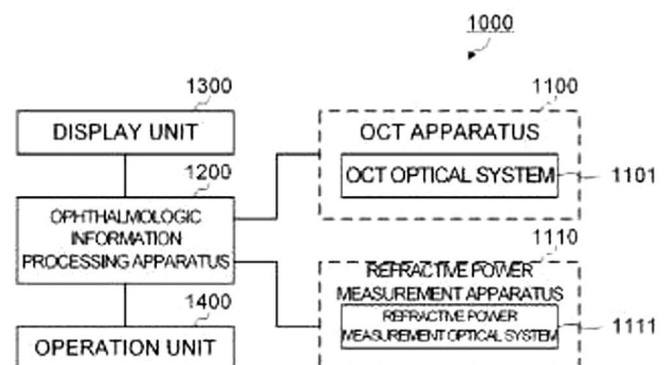
SYSTEM FOR MEASURING BINOCULAR ALIGNMENT WITH ADJUSTABLE DISPLAYS AND EYE TRACKERS

A system to determine a binocular alignment, comprises a first optical unit, including a first display, to display images for a first eye, actuatable along a longitudinal direction according to a simulated distance and an optical power of the first eye, and a first eye tracker assembly, to track a gaze direction of the first eye, adjustable in a horizontal lateral direction to accommodate a pupillary distance of the first eye; and a second optical unit, including a second display, to display images for a second eye, actuatable along the longitudinal direction according to a simulated distance and an optical power of the second eye, and a second eye tracker assembly, to track a gaze direction of the second eye, adjustable in the horizontal lateral direction to accommodate a pupillary distance of the second eye; and a computer, to determine the binocular alignment based on the gaze directions.

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OPHTHALMIC INFORMATION PROCESSING DEVICE, OPHTHALMIC DEVICE, OPHTHALMIC INFORMATION PROCESSING METHOD, AND PROGRAM

This ophthalmic information processing device comprises a generation unit, an extraction unit, and a phase correction unit. The generation unit generates a phase difference profile by performing a depth-direction averaging process on phase differences obtained by performing calculation at respective A-line depth positions between two adjacent B-frames of complex OCT data regarding an eye being examined. The extraction unit extracts a phase drift from the phase difference profile generated by the generation unit. The phase correction unit corrects the phase of first complex OCT data of one of the aforementioned two B-frames on the basis of the phase drift extracted by the extraction unit.



WO2022178539 (A1) — 2022-08-25

STAPHYLOMA SUPPORTING DEVICE AND METHOD FOR MODIFYING THE AXIAL LENGTH AND CURVATURE OF AN EYE

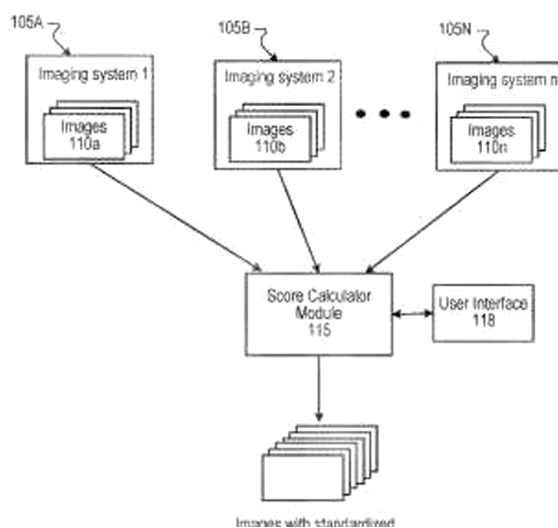
Surgical implants and methods to improve, support, or help to preserve vision by altering the axial length or curvature of an eye are provided. Staphyloma supporting devices or implants can be of unitary construction from a single base material such as titanium alloy and can have a macular indenter plate wider than the implant body and an anchor structure wider than the macular indenter plate. A compound concavity scleral contact surface can approximate the outer surface of the eye with an anterior radius of curvature and can restore macular shape and axial length with a second posterior radius of curvature that can be less than the anterior radius of curvature.

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AU2022211815 (A1) — 2022-08-25

GRADING CORNEAL FLUORESCIN STAINING

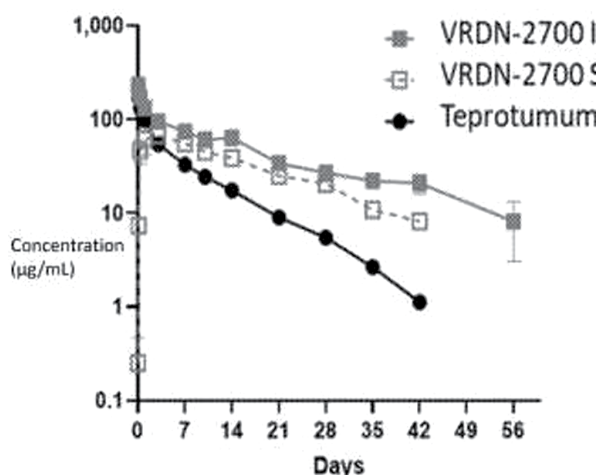
The technology described in this document can be embodied in systems and computer-implemented methods for determining a score representing an amount of staining of the cornea. The methods include obtaining a digital image of the cornea stained with a tracer material, receiving a selection of a portion of the image, and processing, by a processing device, the selection to exclude areas with one or more artifacts to define an evaluation area. For each of a plurality of pixels within the evaluation area, a plurality of Cartesian color components are determined and a hue value in a polar coordinate based color space is calculated from the components. An amount of staining of the cornea is then determined as a function of the hue value. The methods also include assigning a score to the evaluation area based on the amount of staining calculated for the plurality of pixels.



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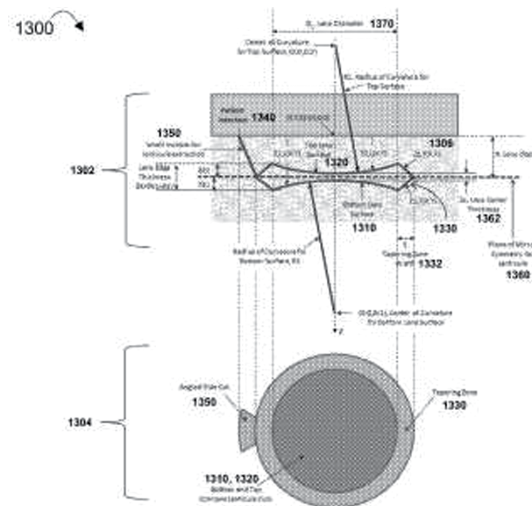
COMPOSITIONS AND METHODS FOR TREATMENT OF THYROID EYE DISEASE

Antibodies and compositions against IGF-1R and uses thereof are provided herein



IMPROVED METHODS FOR LENTICULAR LASER INCISION

Embodiments generally relate to ophthalmic laser procedures and, more particularly, to systems and methods for lenticular laser incision. In an embodiment, an ophthalmic surgical laser system comprises a laser delivery system for delivering a pulsed laser beam to a target in a subject's eye, an XY-scan device to deflect the pulsed laser beam, a Z-scan device to modify a depth of a focus of the pulsed laser beam, and a controller configured to form a top lenticular incision and a bottom lenticular incision of a lens in a corneal stroma.



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DIRECT SELECTIVE LASER TRABECULOPLASTY

A system (20) includes a radiation source (48) and a controller (44), configured to display a live sequence of images of an eye (25) of a patient (22), while displaying the sequence of images, cause the radiation source to irradiate the eye with one or more aiming beams (84), which are 5 visible in the images, subsequently to causing the radiation source to irradiate the eye with the aiming beams, receive a confirmation input from a user, and in response to receiving the confirmation input, treat the eye by causing the radiation source to irradiate respective target regions of the eye with a plurality of treatment beams. Other embodiments are also described.

FIG. 1

