(19) INDIA

(51) International

Filing Date (87) International Publication

Application Number

Filing Date

Filing Date

Number

(61) Patent of Addition to

(62) Divisional to Application :NA

(86) International Application

classification

(22) Date of filing of Application: 18/07/2023 (43) Publication Date: 11/08/2023

:A61B 030000, A61B 030800, A61F 090000, A61F 090070, A61H 050000

:NA

: NA

:NA

:NA

(54) Title of the invention: DEVICE AND METHOD FOR DETECTING AN QUANTIFYING STRABISMUS IN AN EYE

(71)Name of Applicant:

1)Chitkara University

Address of Applicant: Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura -------

2)Chitkara Innovation Incubator Foundation

Name of Applicant: NA Address of Applicant: NA (72)Name of Inventor: 1)Dr. Debarshi Ghosh

Address of Applicant :Chitkara University Research and Innovation Network (CURIN), Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura ------

2)Dr. Nitin Kumar Saluja

Address of Applicant :CURIN, Chitkara University, ChandigarhPatiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura ------

3)Mr. Mukul Goyal

Address of Applicant: CUIET, Chitkara University, ChandigarhPatiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura ------

4)Dr. Nayan Gupta

Address of Applicant: Department of Optometry, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura ------------

5)Mr. Kunaal Kiran Kumar

Address of Applicant: CUIET, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura ------

6)Mr. Rishabh Tandon

Address of Applicant :CUIET, Chitkara University, ChandigarhPatiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura ------

7)Dr. Gurjinder Singh

Address of Applicant :CUIET, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura -----

(57) Abstract:

ABSTRACT DEVICE AND METHOD FOR DETECTING AN QUANTIFYING STRABISMUS IN AN EYE The disclosure provides a device and method for detecting and quantifying strabismus in an eye. The device comprises: a wearable faceguard comprising: a structural member configured for protecting at least one part of a human face; at least one aperture configured for human vision through the wearable faceguard; at least one eye sensor capable to sense eye information selected from the group of: distance between pupil and sclera of the eye, eyeball movement, pupil size, eyelid movement; a wireless communication configured to communicate with a predetermined wireless network and in communication with the wearable faceguard to receive eye information; and a processor having a machine learning classifier configured for: identifying a pattern in response to an eye information from wearable faceguard; and comparing the pattern to a target pattern set so as to detect and quantify strabismus in an eye. [Figure 2]

No. of Pages: 17 No. of Claims: 6