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**Klin et al.**

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(54) **SYSTEMS AND METHODS FOR DETECTING BLINK INHIBITION AS A MARKER OF ENGAGEMENT AND PERCEIVED STIMULUS SALIENCE**

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**A61B 3/00** (2006.01)  
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CPC ..... **A61B 3/113** (2013.01); **A61B 3/0025** (2013.01); **A61B 3/0041** (2013.01); **A61B 3/112** (2013.01);  
(Continued)

(58) **Field of Classification Search**  
USPC ..... 351/200–246  
See application file for complete search history.

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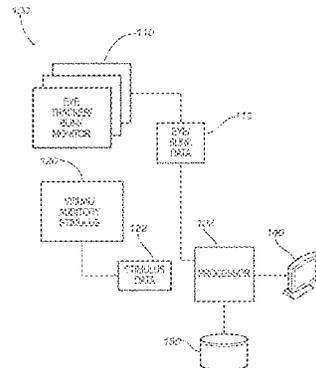
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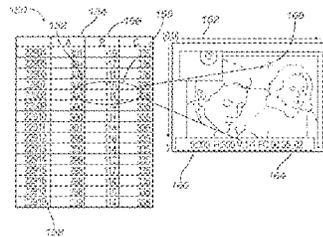
(57) **ABSTRACT**

The present systems and methods provide a mechanism to assess viewer behavior, features of stimuli, and the interaction between viewer behavior and stimuli. The systems and methods described herein for quantifying blink response and blink inhibition provide moment-by-moments measurements of viewer engagement by measuring what is or is not engaging enough to warrant viewers' inhibition of blinking. The present disclosure describes measures of visual scanning, eye movements, blink data, and blink timing data to derive a measure of how engaged a person is with what he or she is looking at. Blink-related data as a measure of viewer engagement provides a mechanism for determining the most engaging spatial and temporal aspects of a stimulus.

**44 Claims, 21 Drawing Sheets**



EXEMPLARY BLINK AND/OR EYE MOVEMENT SYSTEM



EXEMPLARY DATA INDICATIVE OF OCULAR RESPONSE (EYE MOVEMENT)