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(54) **AUTOMATIC DETECTION OF RED LESIONS IN DIGITAL COLOR FUNDUS PHOTOGRAPHS**

(75) Inventors: **Michael D. Abràmoff**, University Heights, IA (US); **Bram van Ginneken**, Utrecht (NL); **Meindert Niemeijer**, Utrecht (NL)

(73) Assignee: **University of Iowa Research Foundation**, Iowa City, IA (US)

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G06K 9/34	(2006.01)
A61B 5/00	(2006.01)
A61B 13/00	(2006.01)
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(58) **Field of Classification Search** 382/100, 382/115, 117, 128, 173–180, 190–195, 224–227; 600/300, 318, 356, 357, 400, 558, 162, 236; 351/200, 206, 211

See application file for complete search history.

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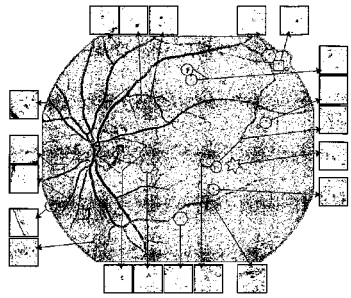
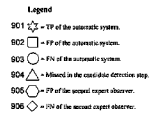
Primary Examiner—Bhavesh M Mehta
Assistant Examiner—Manav Seth
(74) *Attorney, Agent, or Firm*—Ballard Spahr Andrews & Ingersoll, LLP

(57) **ABSTRACT**

Disclosed is an automated method which can detect images containing red lesions. First, each image is preprocessed; next, candidate objects that may represent red-lesions are extracted; and in the final stage the probability for each candidate to represent a red-lesion is estimated using a classifier and a large set of specifically designed features.

30 Claims, 12 Drawing Sheets