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Li et al.

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(54) **INDICIA READING TERMINAL HAVING MULTIPLE SETTING IMAGING LENS**

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G06K 7/10 (2006.01)
G06K 15/12 (2006.01)

(52) **U.S. Cl.** **235/462.41**; 235/462.11; 235/462.24

(58) **Field of Classification Search** 235/462.41, 235/462.11, 462.24

See application file for complete search history.

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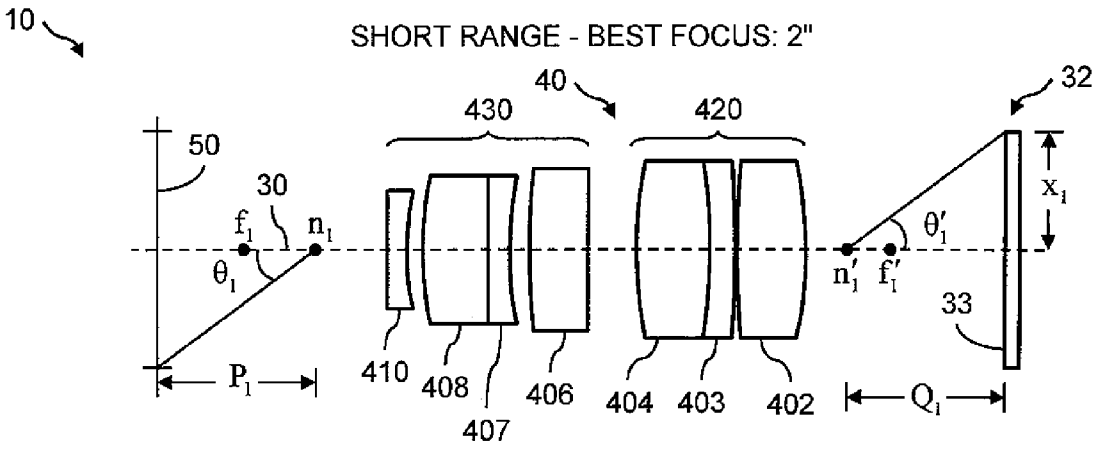
(57) **ABSTRACT**

An indicia reading terminal can include a multiple setting imaging lens assembly and an image sensor having an image sensor array. In one embodiment, an indicia reading terminal in an active reading state can cycle through a set of different lens settings, expose pixels of an image sensor array during an exposure period when each new lens setting is achieved, and attempt to decode decodable indicia represented in frames of image data captured corresponding to each exposure period. In one embodiment, movement of an imaging lens assembly lens element can be provided with use of a hollow stepper motor.

13 Claims, 10 Drawing Sheets



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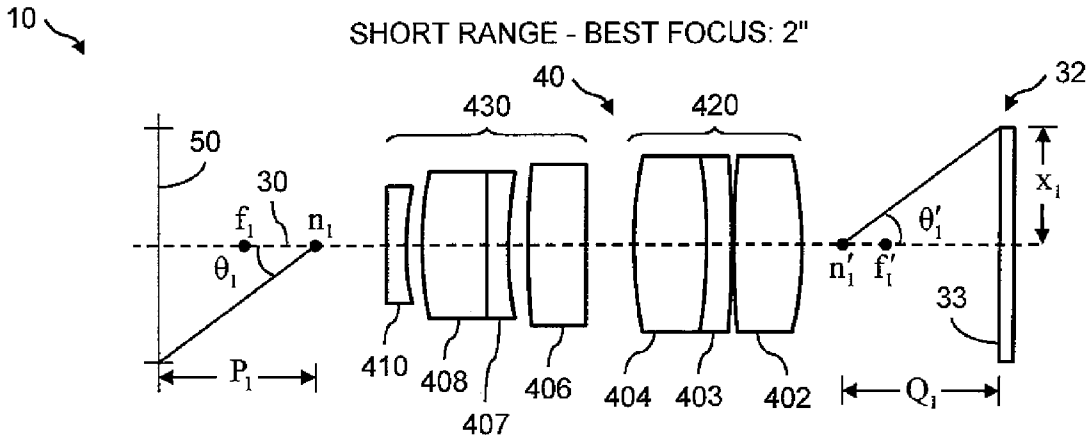

FIG. 1

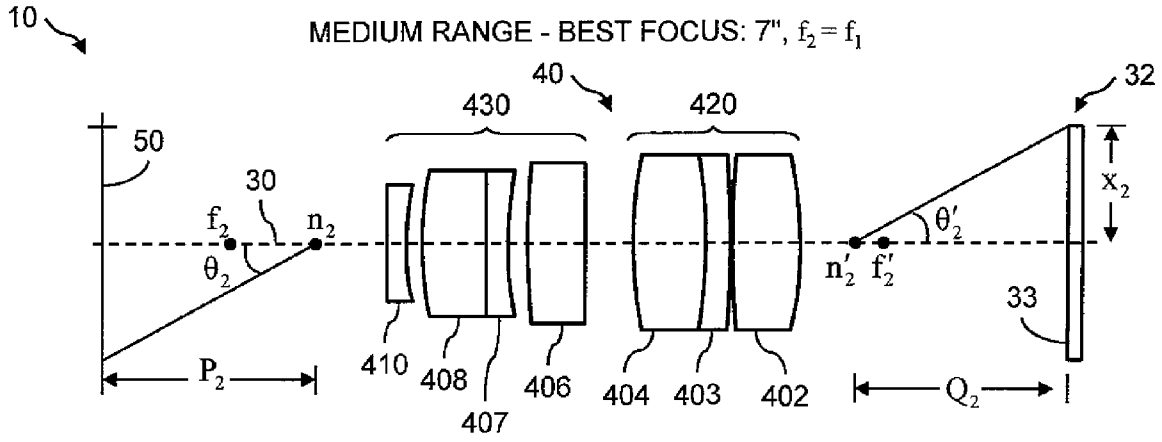

FIG. 2

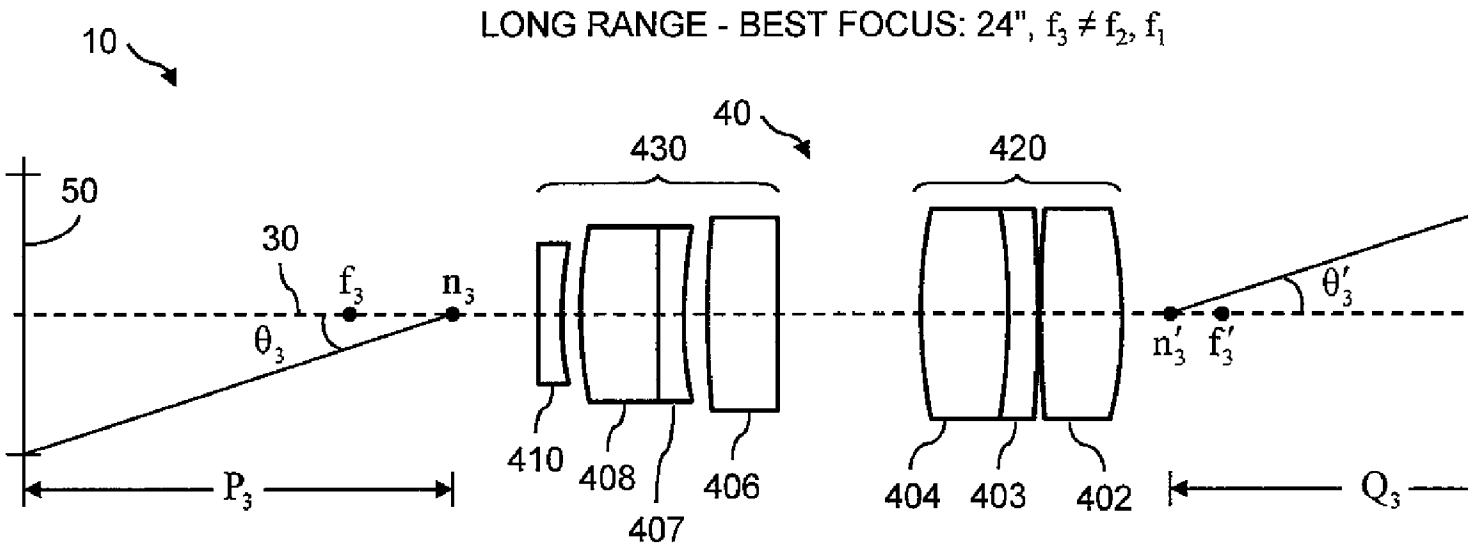

FIG. 3

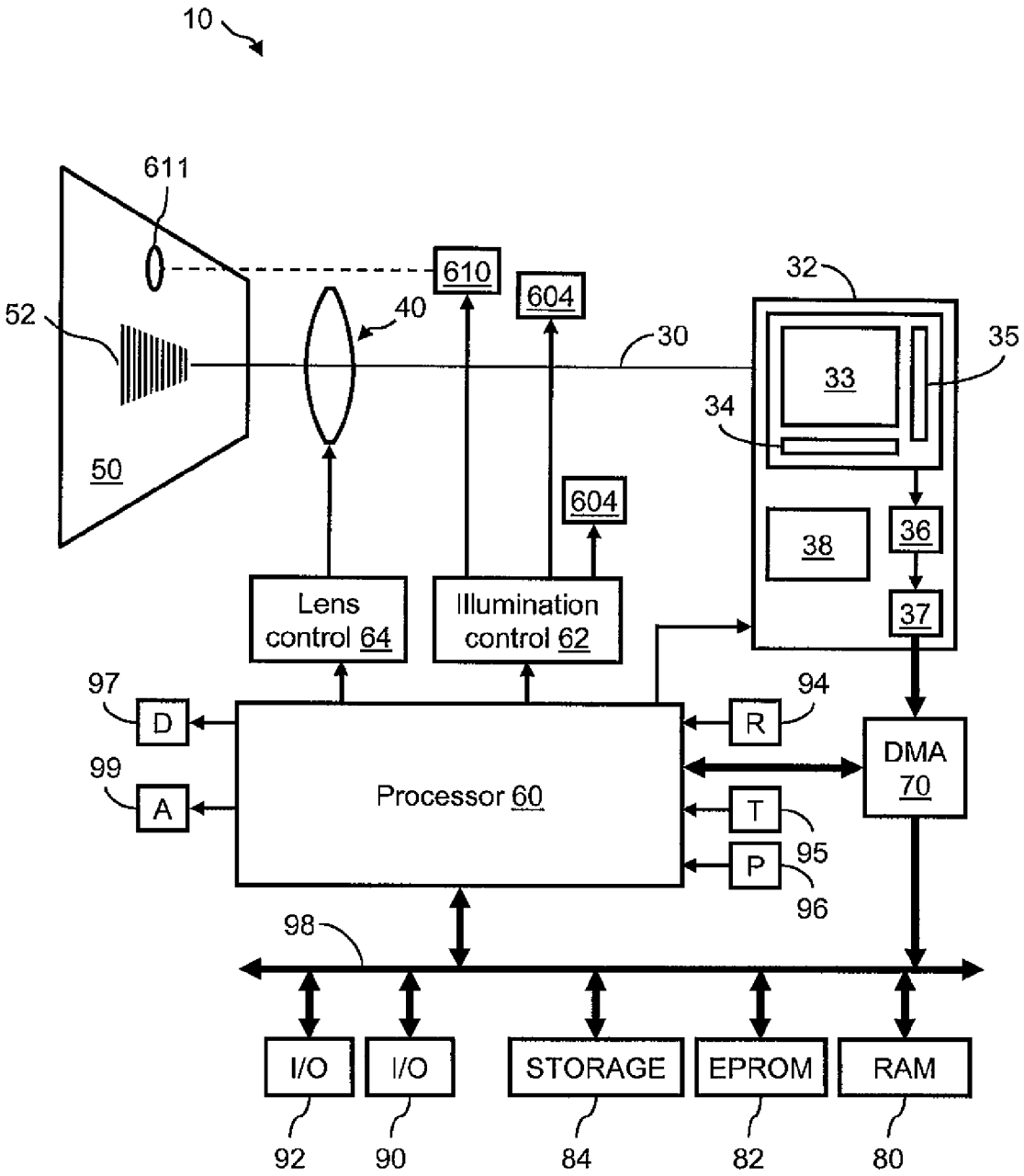

FIG. 4

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