
EXHIBIT G

(12) **United States Patent**
Mori et al.

(10) **Patent No.:** **US 8,378,401 B2**
(45) **Date of Patent:** **Feb. 19, 2013**

(54) **SOLID STATE IMAGING APPARATUS,
METHOD FOR DRIVING THE SAME AND
CAMERA USING THE SAME**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(21) Appl. No.: **13/335,537**

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(22) Filed: **Dec. 22, 2011**

United States Office Action issued in U.S. Appl. No. 12/202,804, mailed Dec. 6, 2010.

Prior Publication Data

US 2012/0098040 A1 Apr. 26, 2012

(Continued)

Related U.S. Application Data

(60) Division of application No. 12/178,250, filed on Jul. 23, 2008, now Pat. No. 8,106,431, which is a continuation of application No. 10/706,918, filed on Nov. 14, 2003, now Pat. No. 7,436,010.

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Foreign Application Priority Data

Feb. 13, 2003 (JP) 2003-034692

ABSTRACT

A solid state imaging apparatus includes: a plurality of photoelectric conversion cells each including a plurality of photoelectric sections arranged in an array of at least two rows and two columns; a plurality of floating diffusion sections each being connected to each of ones of the photoelectric sections which are included in the same row of each said photoelectric conversion cell via each of a plurality of transfer transistors, and being shared by said ones of the photoelectric sections; a plurality of read-out lines each being selectively connected to at least two of the transfer transistors; and a plurality of pixel amplifier transistors each detecting and outputting the potential of each said the floating diffusion section. Charges of the photoelectric conversion sections each being connected to one of the read-out lines and being read out by the transfer transistors are read out by different floating diffusion sections.

Int. Cl.

H01L 31/062 (2012.01)

(52) **U.S. Cl.** . 257/292; 257/223; 257/444; 257/E27.132; 257/E27.139

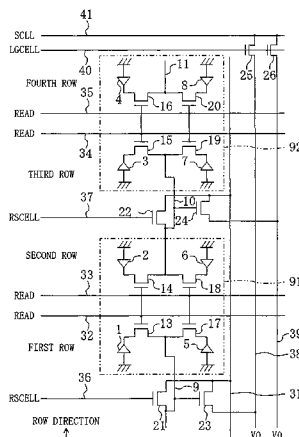
(58) **Field of Classification Search** 257/223, 257/291–293, 443–445, E27.132, E27.139
See application file for complete search history.

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42 Claims, 10 Drawing Sheets



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FIG. 1

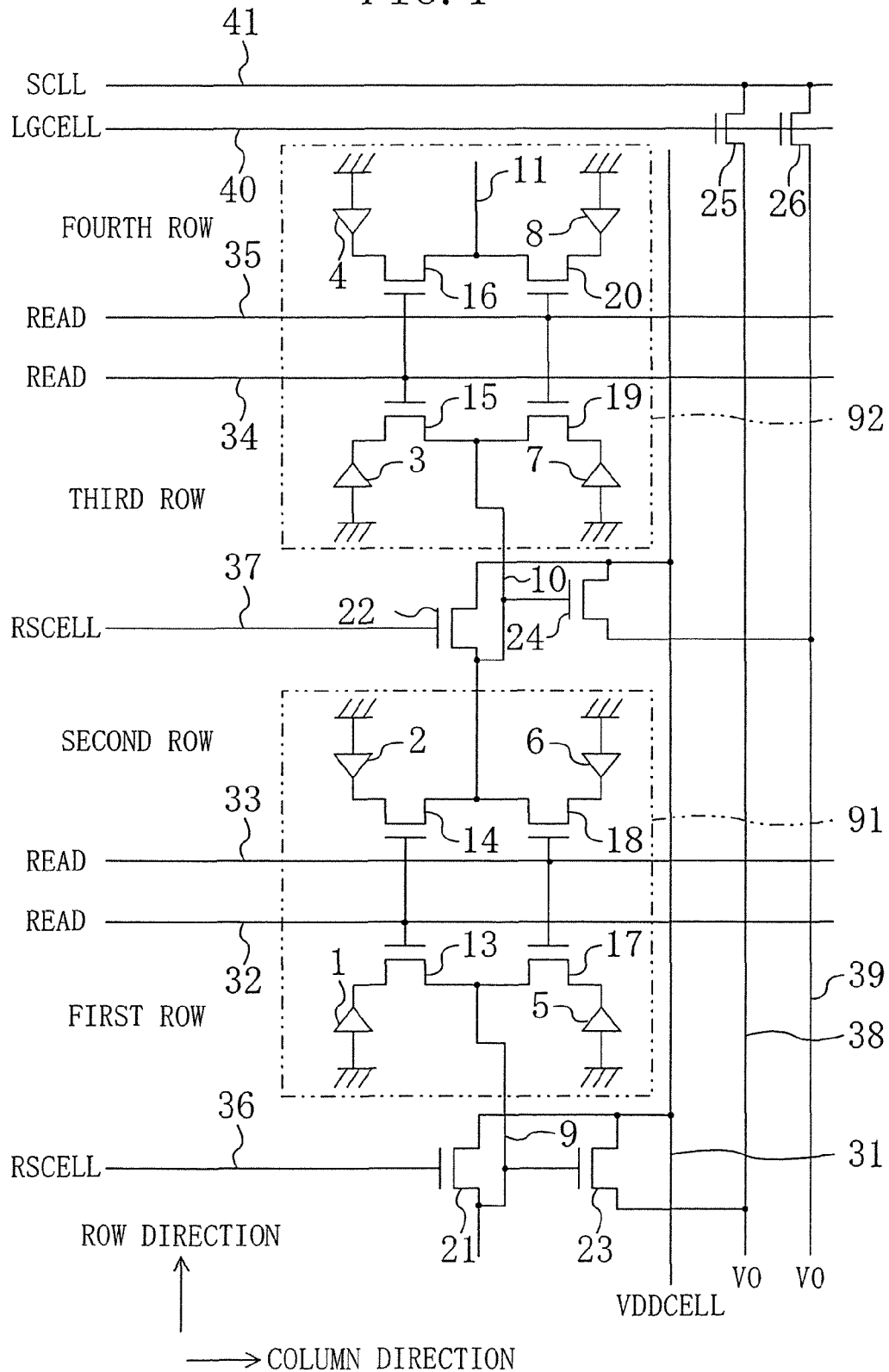
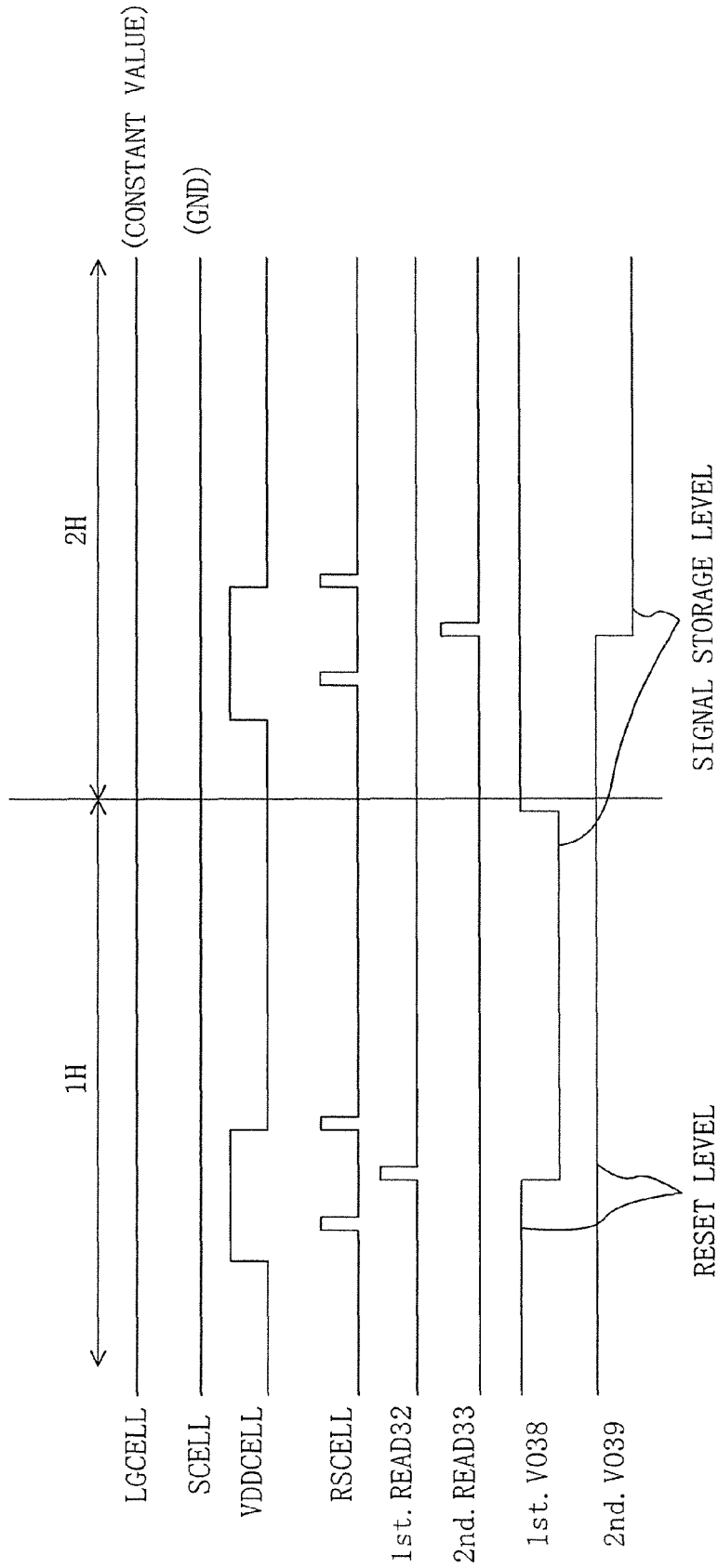


FIG. 2



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