

[54] ELECTRONIC CAMERA HAVING A PROCESSOR FOR MAPPING IMAGE PIXEL SIGNALS INTO COLOR DISPLAY PIXELS

0 456 369 A2 11/1991 European Pat. Off. .... H04N 5/14
0 533 107 A2 3/1993 European Pat. Off. .... H04N 1/21
WO 89/12939 6/1989 WIPO ..... H04N 5/232

[75] Inventors: Kenneth A. Parulski, Rochester; Timothy J. Tredwell, Fairport, both of N.Y.

OTHER PUBLICATIONS

"A Multimedia Color Camera Providing Multi-Format Digital Images" by Takuya Imaide, Toshiro Kinugasa, Yoshimichi Kudo, and Naoki Yamamoto. From IEEE Transactions on Consumer Electronics, Aug. 1993, No. 3.

[73] Assignee: Eastman Kodak Company, Rochester, N.Y.

Primary Examiner—Wendy Garber
Attorney, Agent, or Firm—David M. Woods

[21] Appl. No.: 367,399

[22] Filed: Dec. 30, 1994

[51] Int. Cl. H04N 5/225

[52] U.S. Cl. 348/220; 348/333

[58] Field of Search 348/220, 222, 348/221, 333, 273, 391

[57] ABSTRACT

An electronic camera uses a relatively more complex digital image processing technique in a still image mode to produce high quality still images, and a relatively more simple image processing technique in a motion preview mode to produce preview images of acceptable quality prior to initiation of the still image mode. The more complex digital technique is done in software in a general purpose processor section 35, while the more simple digital technique is implemented in a fixed digital circuit in an application specific integrated circuit 27, which also implements timing and control functions. The motion preview mode uses a shorter image readout period than the still mode and further involves mapping image sensor pixels into a fewer number of color display pixels on a color LCD display 10. The mapping further converts color pixel signals from a mosaic array into a different color pattern on the color LCD display 10.

[56] References Cited

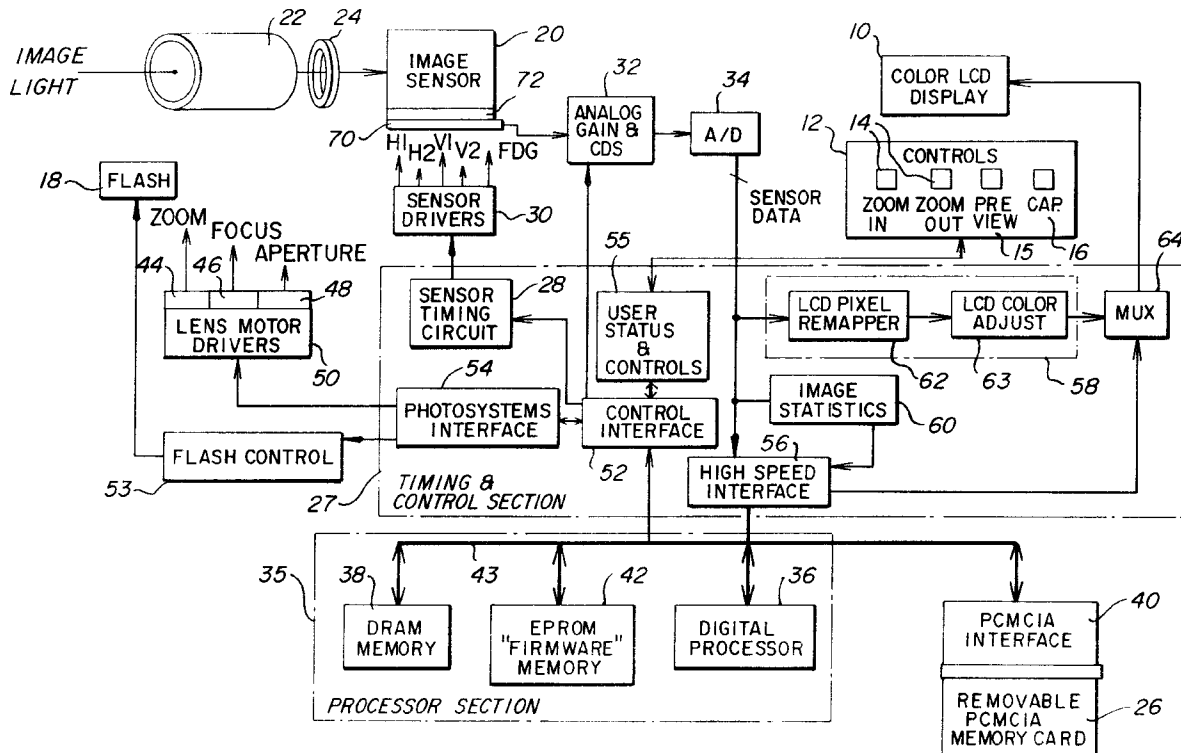
U.S. PATENT DOCUMENTS

Table with 4 columns: Patent No., Date, Inventor, and Reference No. Includes entries for Alston, Silver, Vogel, Parulski, Kinoshita, Smith, Parulski et al., and Maeda.

FOREIGN PATENT DOCUMENTS

0 405 491 A2 1/1991 European Pat. Off. .... H04N 5/91

15 Claims, 10 Drawing Sheets



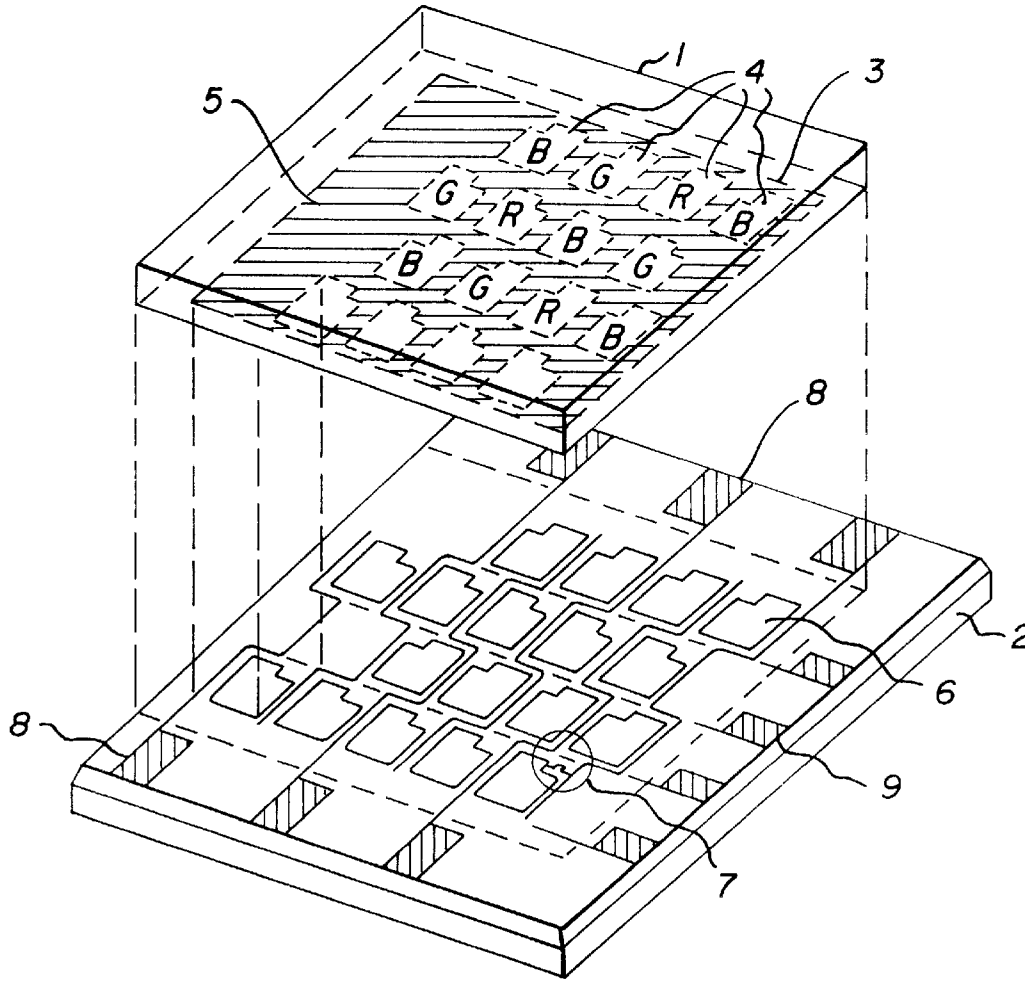


FIG. 1A

G	R	B	G	R	B	G	R
B	G	R	B	G	R	B	G
R	B	G	R	B	G	R	B
G	R	B	G	R	B	G	R

FIG. 1B

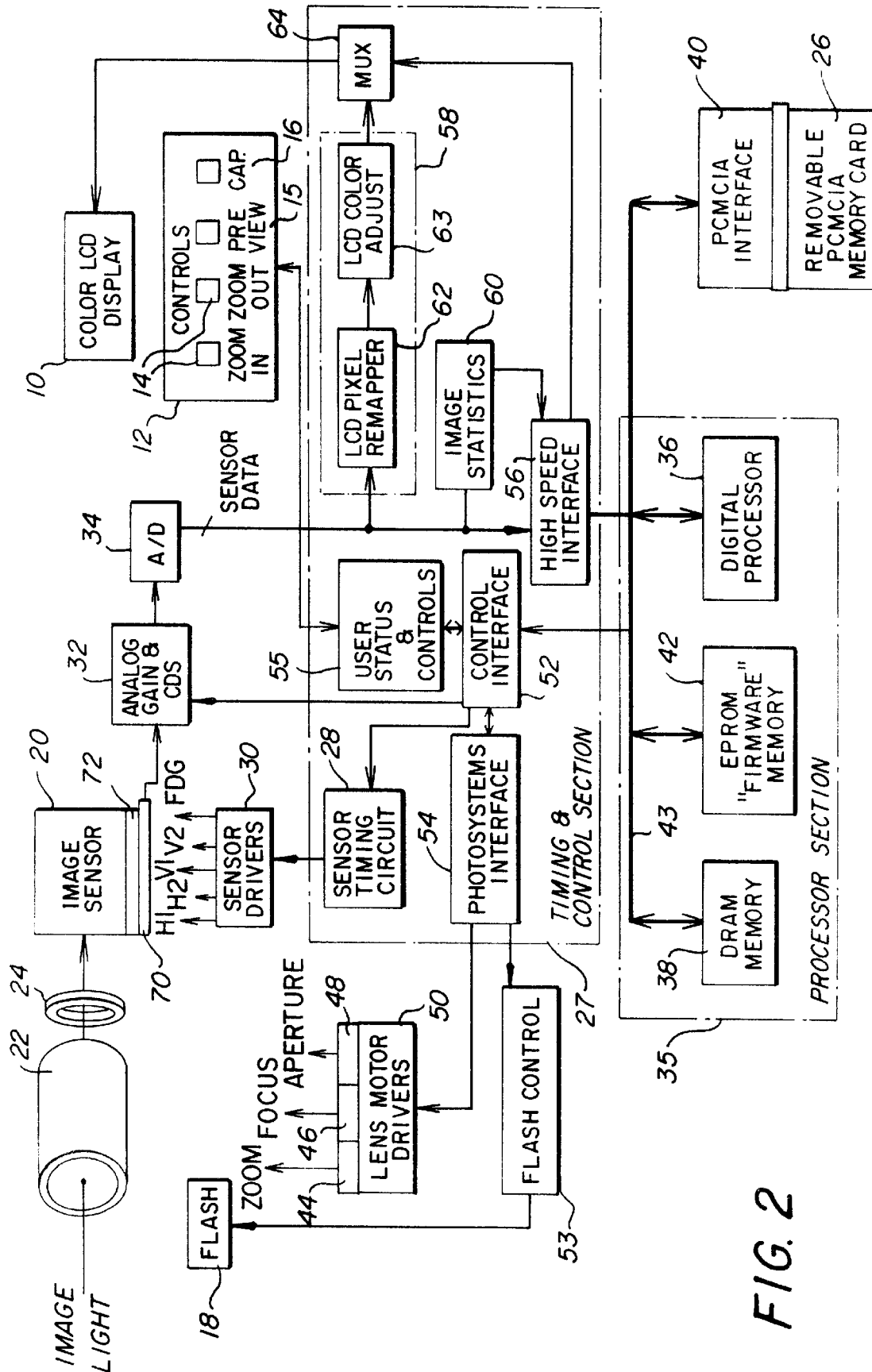


FIG. 2

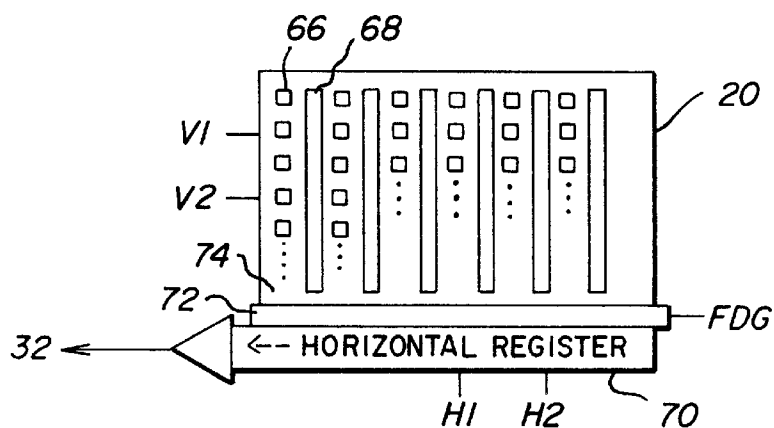
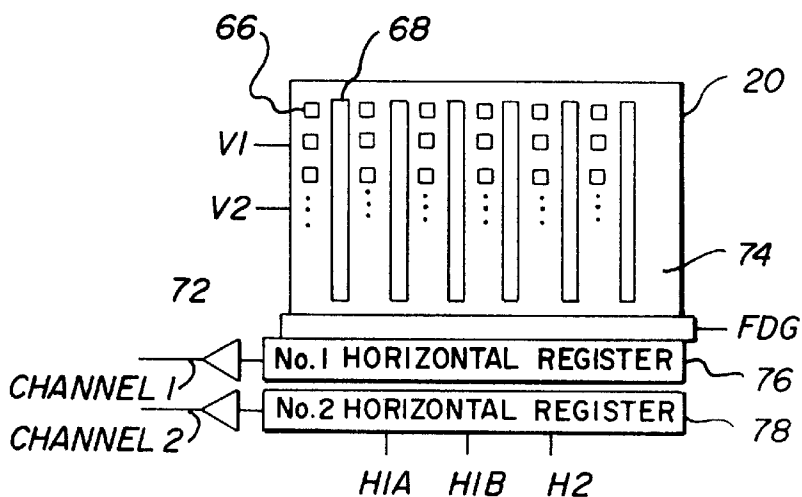


FIG. 3A

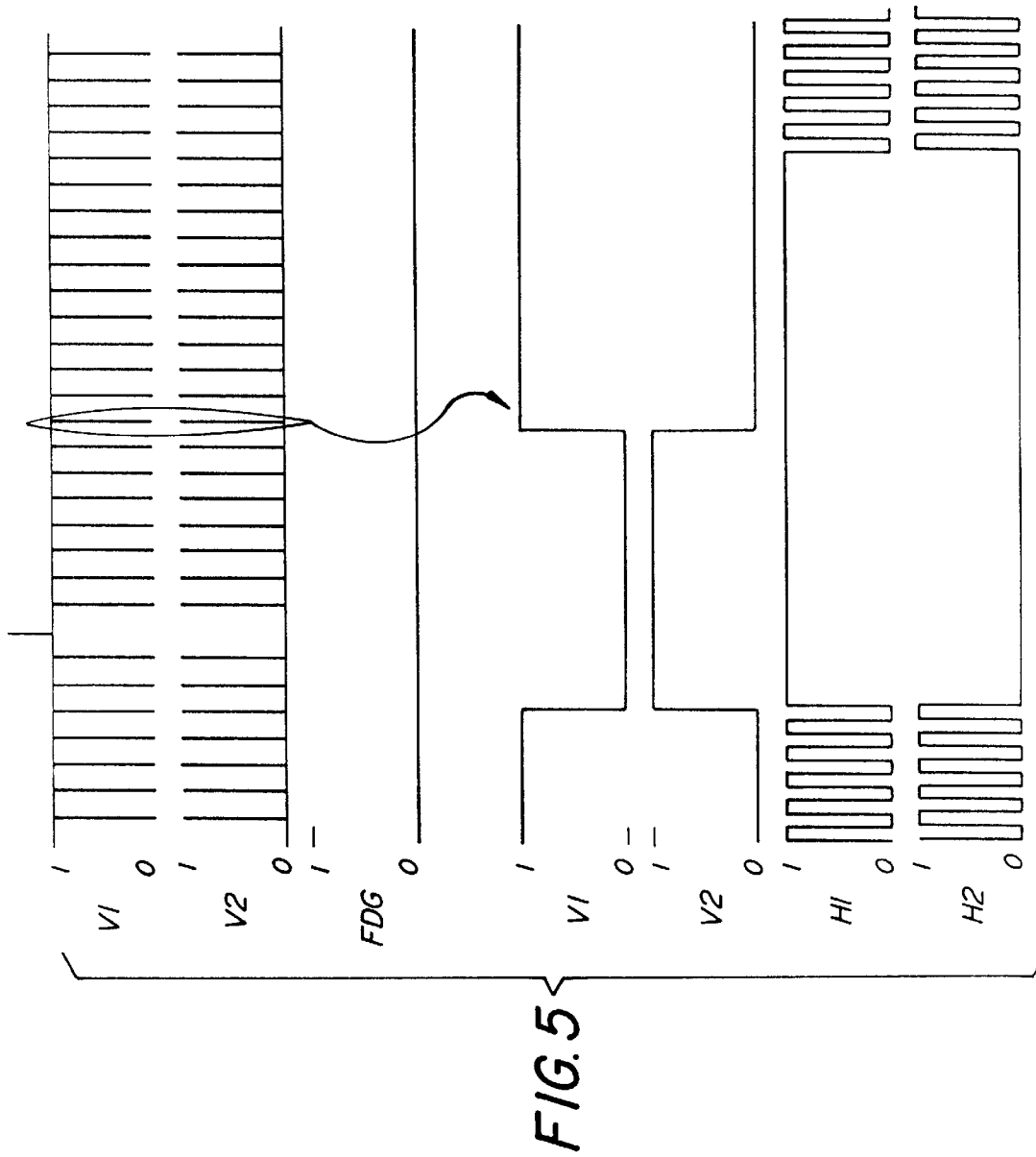
FIG. 3B



CCD LINES

LINE 1	G	R	G	R	G	R	G	R
LINE 2	B	G	B	G	B	G	B	G
LINE 3	G	R	G	R	G	R	G	R
LINE 4	B	G	B	G	B	G	B	G
LINE 5	G	R	G	R	G	R	G	R
LINE 6	B	G	B	G	B	G	B	G
LINE 7	G	R	G	R	G	R	G	R
LINE 8	B	G	B	G	B	G	B	G

FIG. 4



# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.