



- [54] **TOUCH-PAD DIGITAL COMPUTER POINTING-DEVICE**
- [75] Inventors: **Sterling S. Du**, Palo Alto; **Yung-Yu Joe Lee**, San Jose, both of Calif.
- [73] Assignee: **02 Micro, Inc.**, Santa Clara, Calif.
- [21] Appl. No.: **549,422**
- [22] Filed: **Oct. 27, 1995**
- [51] **Int. Cl.<sup>6</sup>** ..... **G09G 5/08**
- [52] **U.S. Cl.** ..... **345/145; 345/157; 345/173**
- [58] **Field of Search** ..... 345/157, 158, 345/159, 173, 174, 175, 179, 180, 145

*Primary Examiner*—Steven J. Saras  
*Assistant Examiner*—David Lewis  
*Attorney, Agent, or Firm*—Donald E. Schreiber

[57] **ABSTRACT**

A touch-pad digital computer pointing-device, for controlling a position of a cursor appearing on a display screen of a digital computer, senses and resolves respective locations within an active area at which concurrent multi-finger contacts occur. Multi-finger contacts with the active area activate or deactivate a drag-lock operating mode, computer power conservation, and other touch-pad operating characteristics such as the touch-pad's sensitivity to finger contact. The touch-pad also senses a velocity and direction for finger contact with the active area for use in transmitting data to the computer which effects continuous cursor movement across the computer's display screen in a direction fixed by the initial direction of contact movement across the active area. While there is no finger contact with the active area, the touch-pad monitors the active area and adjusts its operation to compensate for changes in the surrounding environment such as changes in temperature, humidity and atmospheric pressure.

[56] **References Cited**

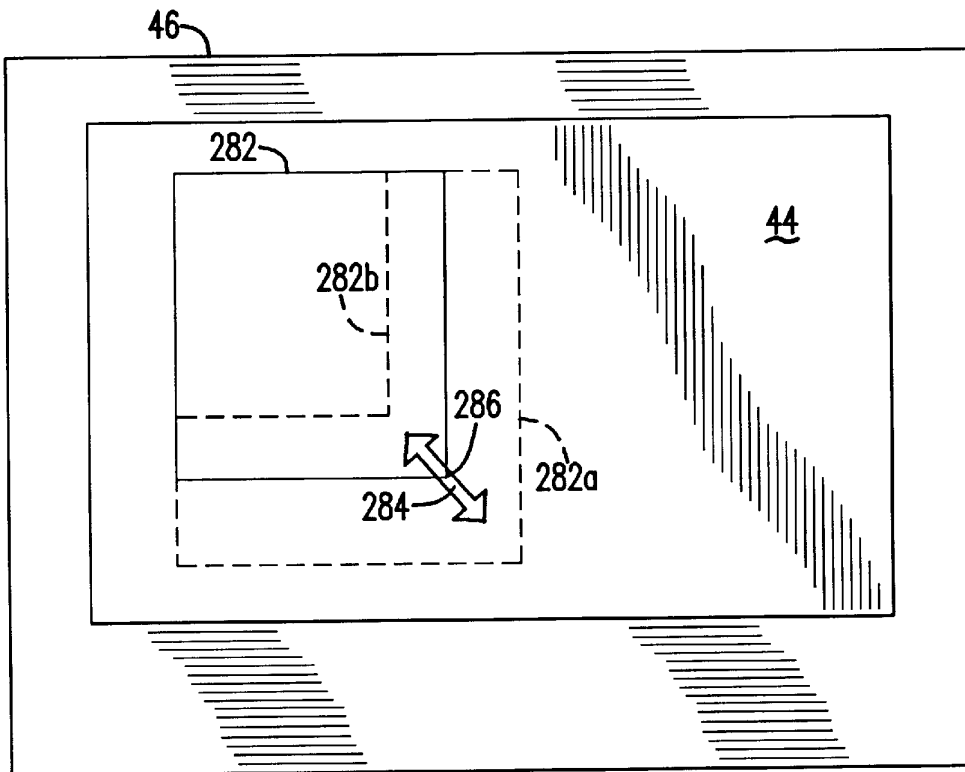
**U.S. PATENT DOCUMENTS**

4,734,685	3/1988	Watanabe	.....	345/157
5,305,017	4/1994	Gerpheide	.....	345/174
5,327,161	7/1994	Logan et al.	.....	345/157
5,424,756	6/1995	Ho et al.	.....	345/158

**OTHER PUBLICATIONS**

Diehl, Stanford, "Touchpads to Navigate By," Byte, p. 150, Oct. 1995.

**1 Claim, 5 Drawing Sheets**



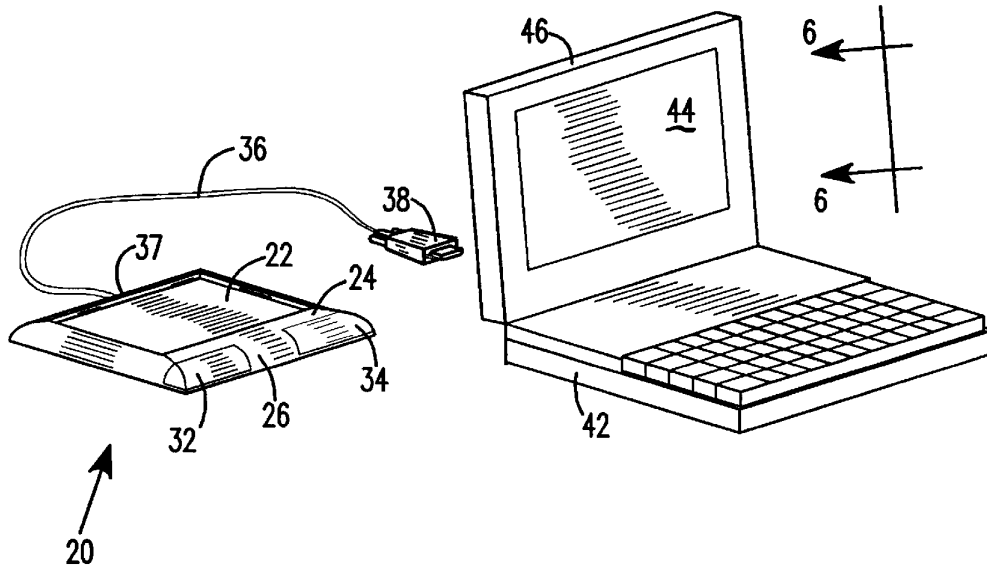


FIG. 1

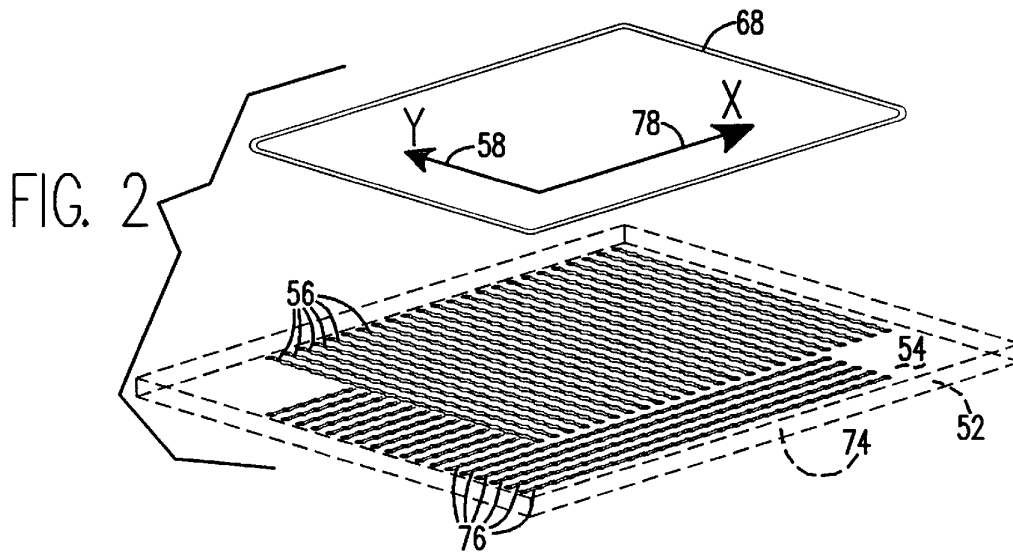


FIG. 2

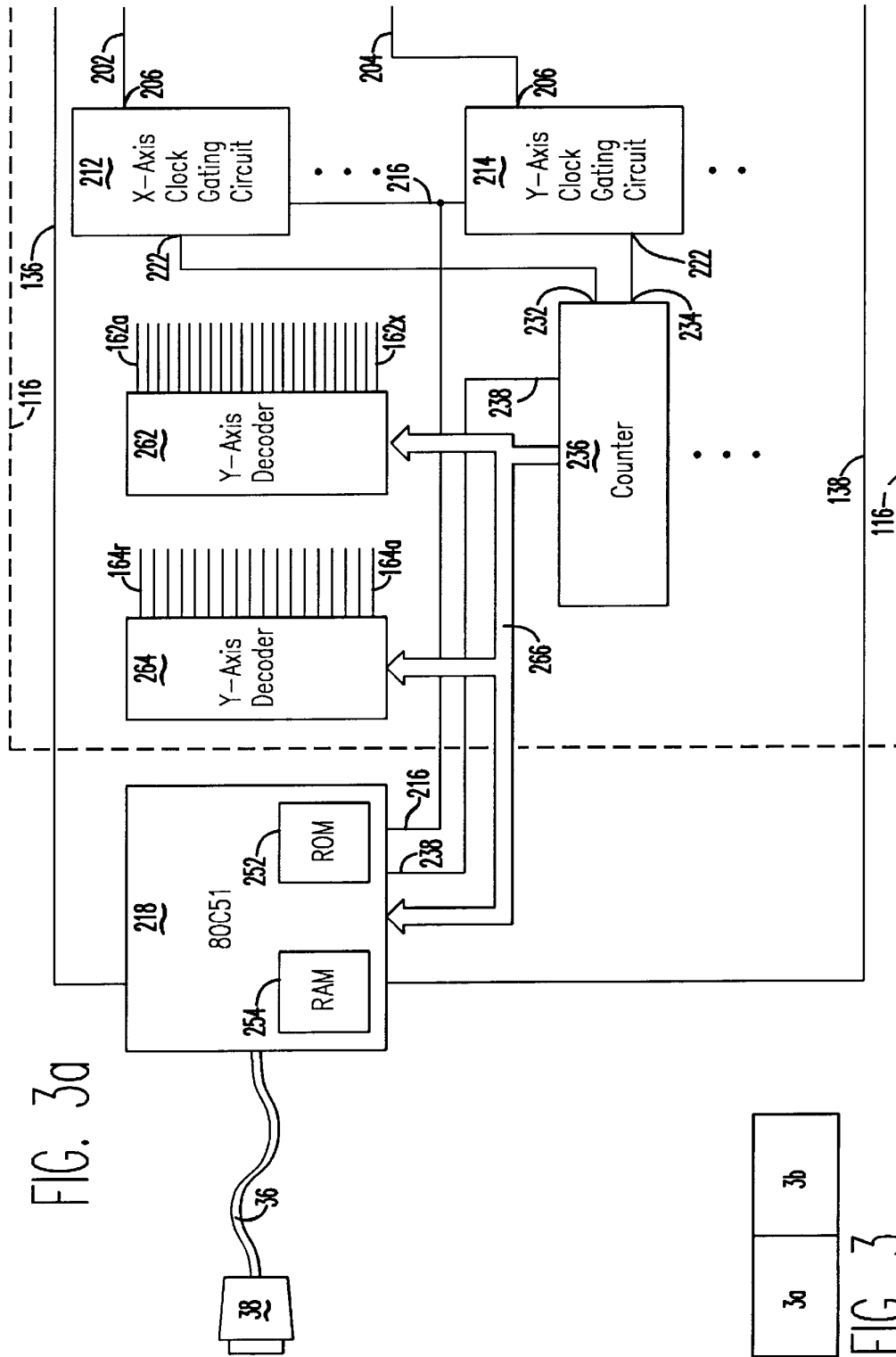


FIG. 3a

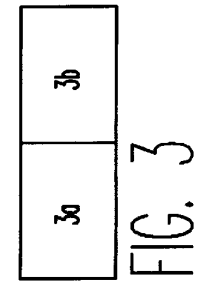


FIG. 3

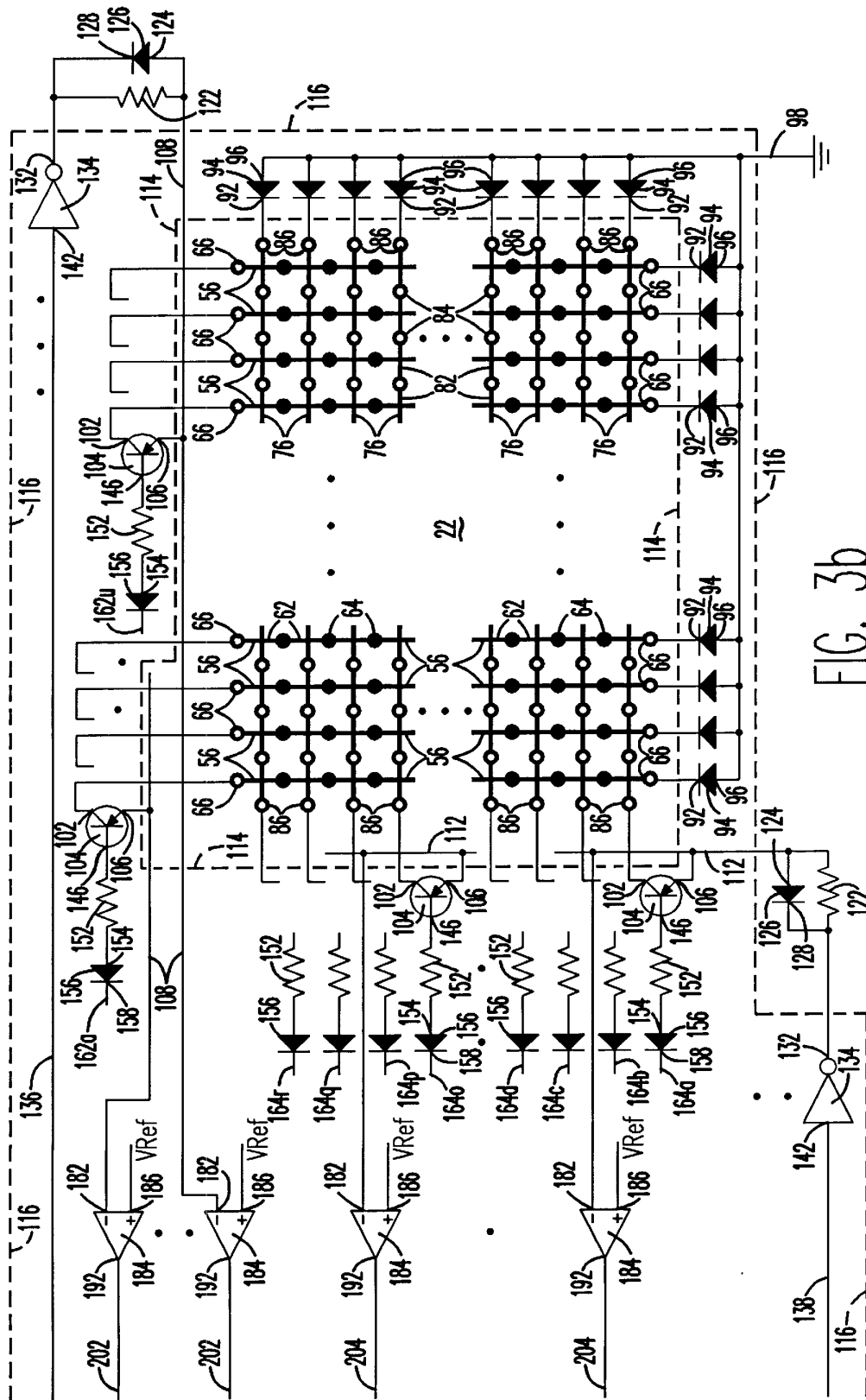


FIG. 3b

FIG. 4

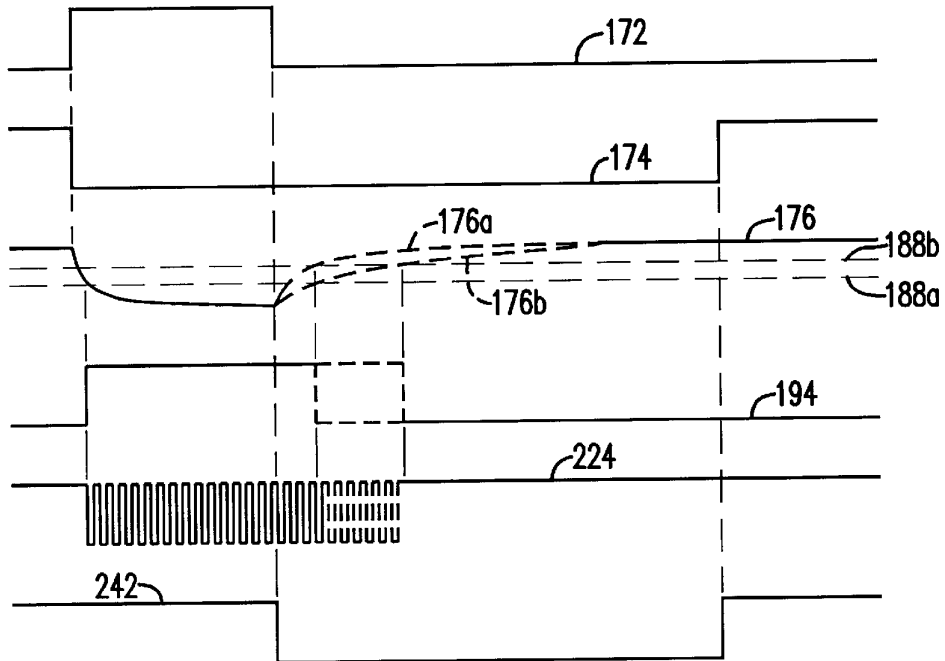
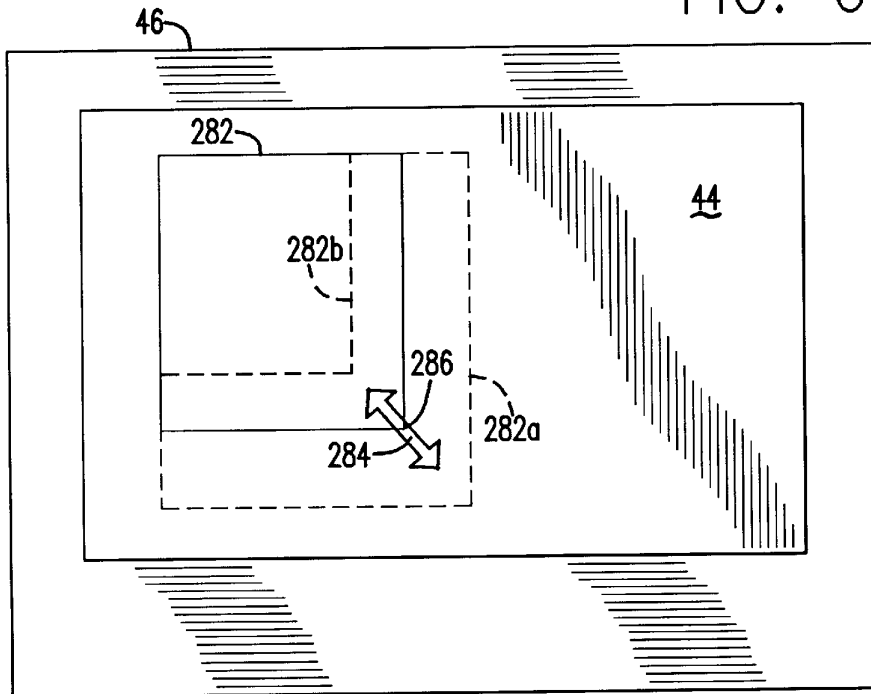


FIG. 6



# 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.