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Ullmann et al.

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(54) **RUBBER BAND GRAPHICAL USER INTERFACE CONTROL**

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(51) Int. Cl.^{7} **G09G 5/00**
(52) U.S. Cl. **345/786**; 345/787
(58) Field of Search 345/684, 688, 345/784–787, 830, 973

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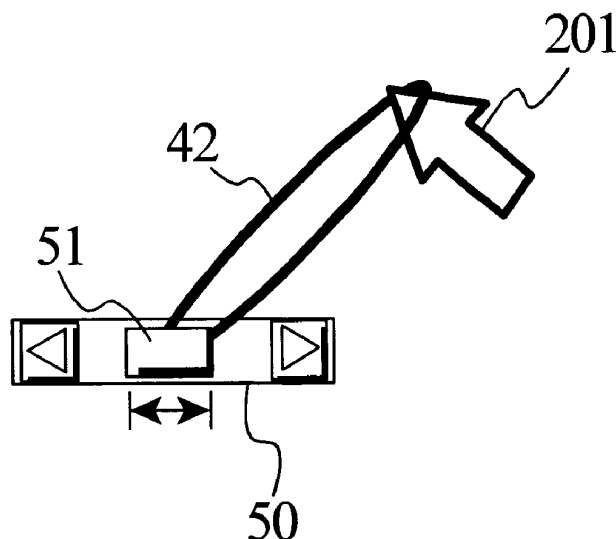*Primary Examiner*—Kristine Kincaid
Assistant Examiner—Le Nguyen
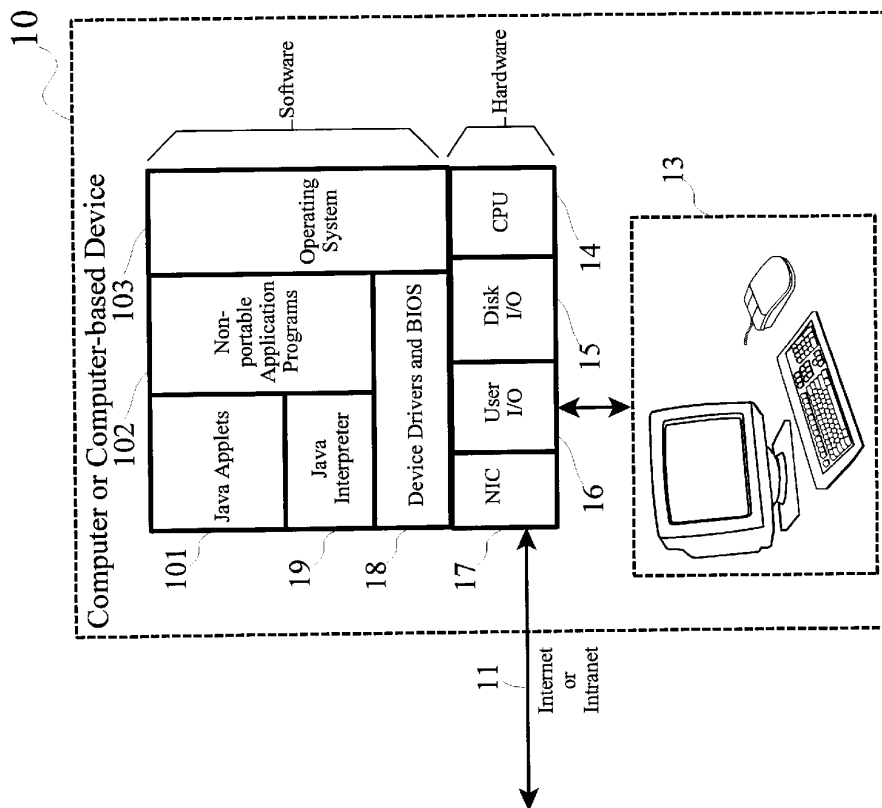(74) *Attorney, Agent, or Firm*—Robert H. Frantz; David A. Mims, Jr.
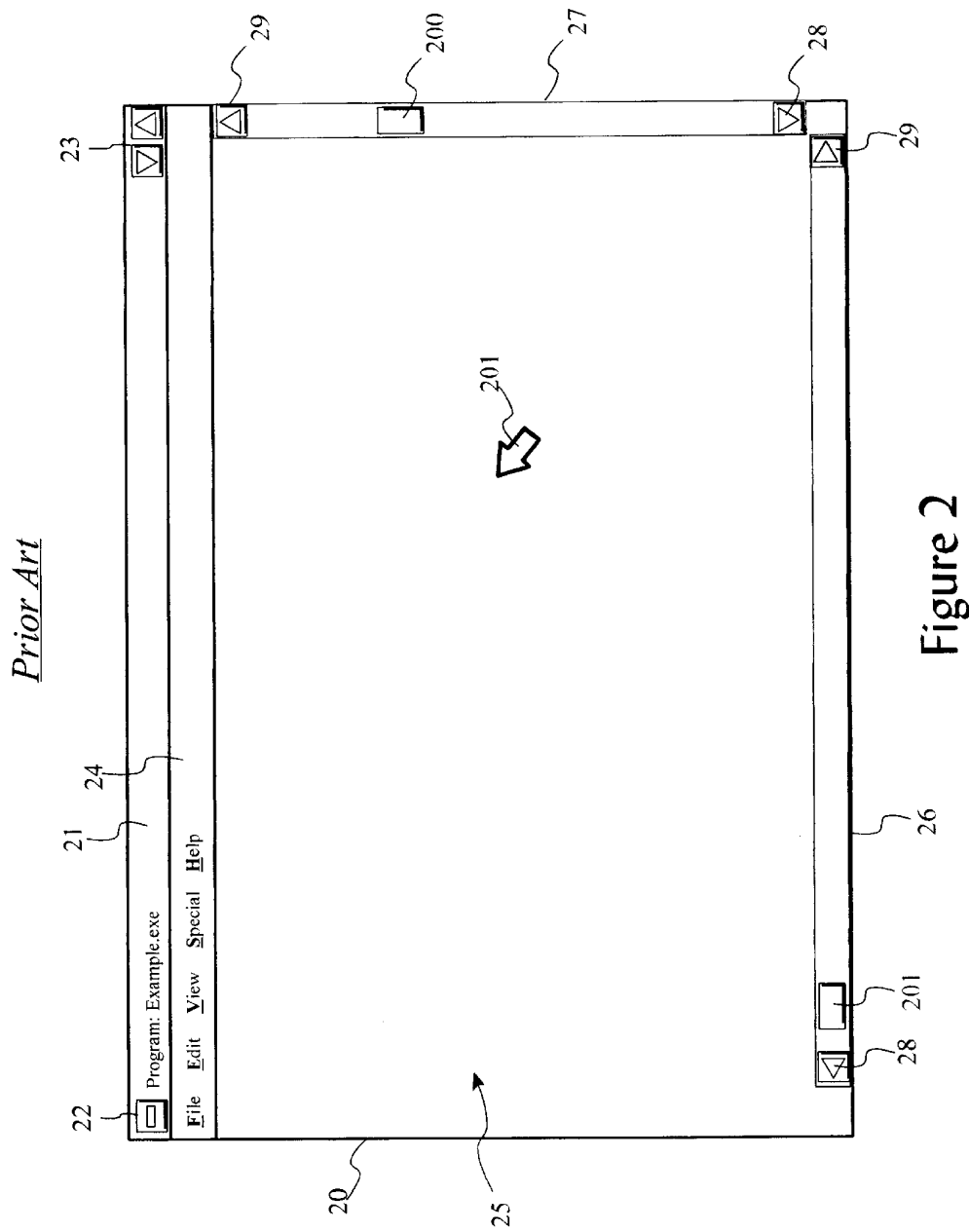
(57) **ABSTRACT**

A rubber band variable-rate GUI control for use in conjunction with GUI controls, such as sliders, scroll bars, virtual joysticks, and oppositional buttons (up/down, left/right, plus/minus, next/previous, etc.). A user may place a pointer or cursor over a GUI control, select (e.g. click and hold a mouse button) and drag away from the control, and a virtual rubber band extending between the pointer and the GUI control is displayed. The further the user moves or "pulls" the pointer from the GUI control, the thinner and more elyptical the rubber band is displayed, and the faster the selections scrolls or the control operation is repeated. When the user moves the pointer closer to GUI control, the rubber band is displayed fatter and more circular in shape, and the scrolling or control operation repetition slows.
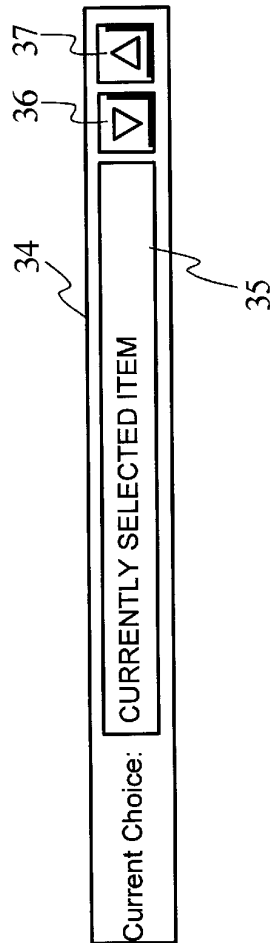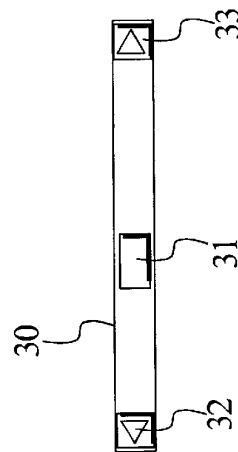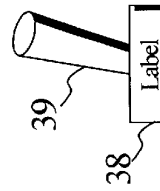
30 Claims, 6 Drawing Sheets

Prior Art

Computer or Computer-based Device

Software

Hardware

10

103

102

Operating System

Non-portable Application Programs

CPU

101 Java Applets

19 Java Interpreter

18 Device Drivers and BIOS

Disk I/O

User I/O

NIC

17

14

15

16

13

11 Internet or Intranet

Figure 1

Prior Art

Program: Example.exe

File Edit View Special Help

Figure 2

Prior Art

36 37

Current Choice: | CURRENTLY SELECTED ITEM

34
35

Figure 3b

39

Label

38

Figure 3c

33

Prior Art
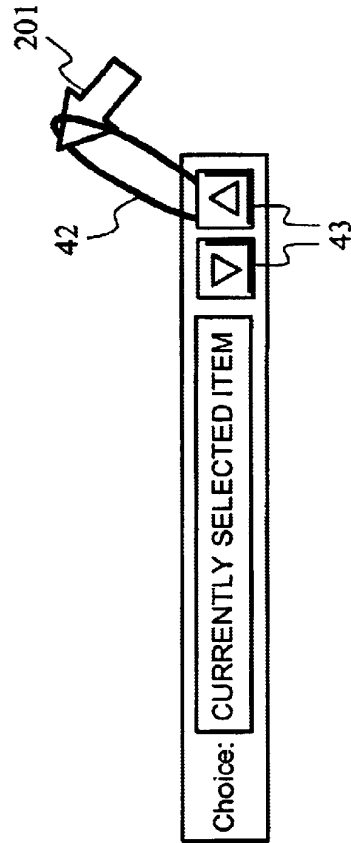
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31

32

Figure 3a
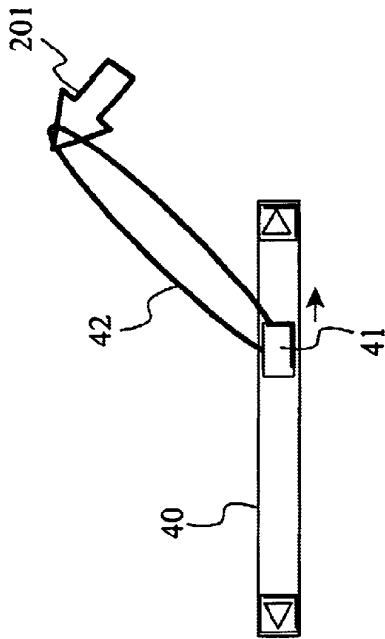
Figure 4a

Figure 4b

Figure 4c

Figure 4d

DOCKET ALARM
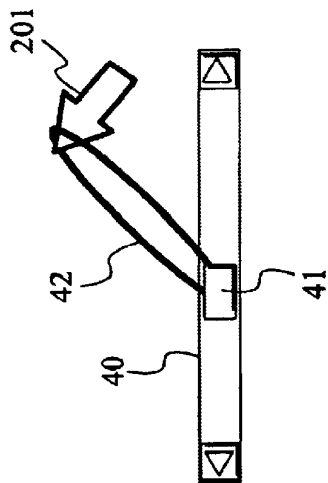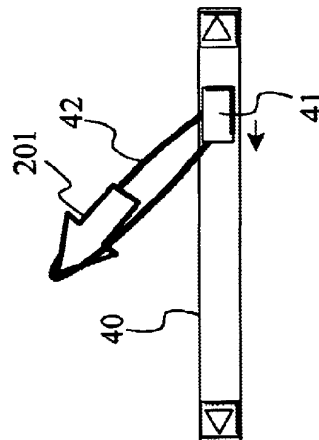
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