

United States Patent [19] Brann

[11] Patent Number: 6,059,576 [45] Date of Patent: *May 9, 2000

[54] TRAINING AND SAFETY DEVICE, SYSTEM AND METHOD TO AID IN PROPER MOVEMENT DURING PHYSICAL ACTIVITY [76] Inventor: Theodore L. Brann, P.O. Box 1897, Mission, Tex. 78572 [*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Table with 4 columns: Patent No., Date, Inventor, and Reference. Includes entries for Stone et al., Spielman, McMillen et al., Cusimano, Kovacevic, Zaharkin et al., Cusimano et al., Petragallo, Waters, and Plotke.

Primary Examiner—Joe H. Cheng Attorney, Agent, or Firm—Locke Liddell & Sapp LLP

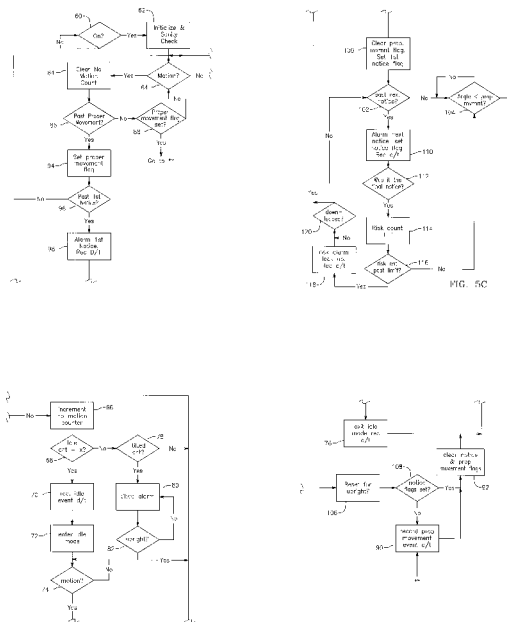
[21] Appl. No.: 08/976,228 [22] Filed: Nov. 21, 1997 [51] Int. Cl. 7 A63B 69/00; G09B 9/00 [52] U.S. Cl. 434/247; 128/782; 600/595; 601/34; 482/8; 482/901; 340/686.1; 702/101 [58] Field of Search 434/118, 247, 434/365; 482/3, 4, 6, 8, 9, 92, 137, 900-903; 128/897, 905, 782; 600/301, 502, 587, 594, 595; 601/5, 33, 34; 73/379.01, 379.06, 379.08; 340/573.1, 573.7, 686.1, 689; 364/167.12; 702/19, 41, 101, 141, 174

[57] ABSTRACT

An electronic device, system and method to monitor and train an individual on proper motion during physical movement. The system employs an electronic device which tracks and monitors an individual's motion through the use of an accelerometer capable of measuring parameters associated with the individual's movement. The device also employs a user-programmable microprocessor which receives, interprets, stores and responds to data relating to the movement parameters based on customizable operation parameters, a real-time clock connected to the microprocessor, memory for storing the movement data, a power source, a port for downloading the data from the device to other computation or storage devices contained within the system, and various input and output components. The downloadable, self-contained device can be worn at various positions along the torso or appendages being monitored depending on the specific physical task being performed. The device also detects the speed of movements made while the device is being worn. When a pre-programmed recordable event is recognized, the device records the time and date of the occurrence while providing feedback to the wearer via visual, audible and/or tactile warnings.

[56] References Cited U.S. PATENT DOCUMENTS 4,571,682 2/1986 Silverman et al. 482/903 X 4,665,928 5/1987 Linial et al. 4,911,427 3/1990 Matsumoto et al. 482/902 X 4,912,638 3/1990 Pratt, jr. 482/903 X 4,934,694 6/1990 McIntosh 482/902 X 5,042,505 8/1991 Mayer et al. 5,052,375 10/1991 Stark et al. 482/902 X 5,128,655 7/1992 Shore 5,348,519 9/1994 Prince et al. 482/903 X 5,373,858 12/1994 Rose et al. 5,375,610 12/1994 LaCourse et al.

29 Claims, 9 Drawing Sheets



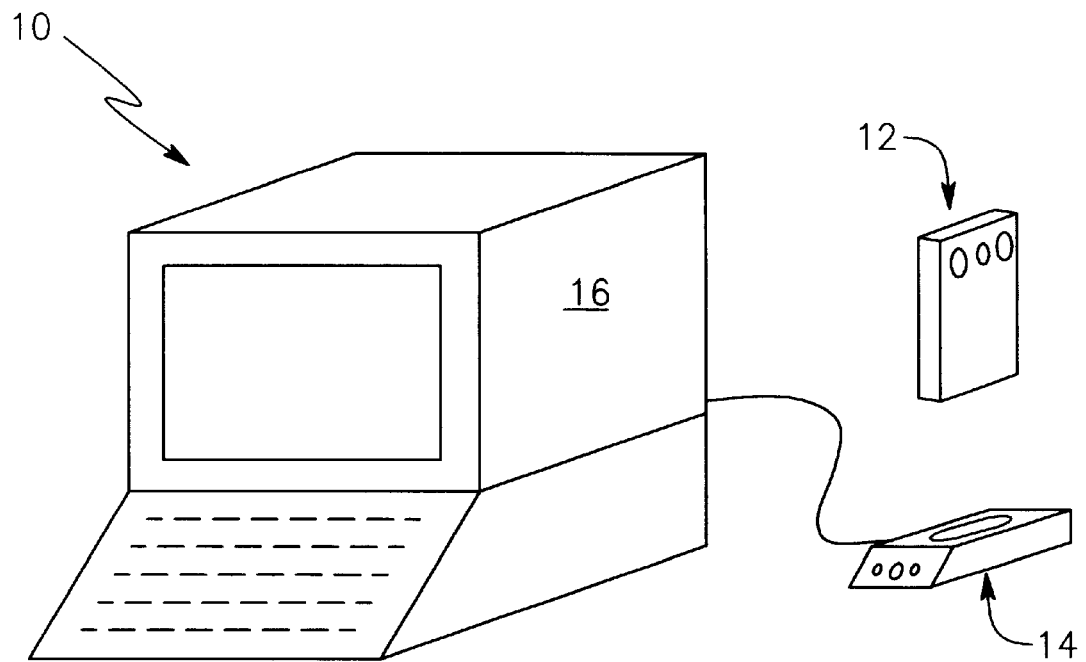


FIG. 1

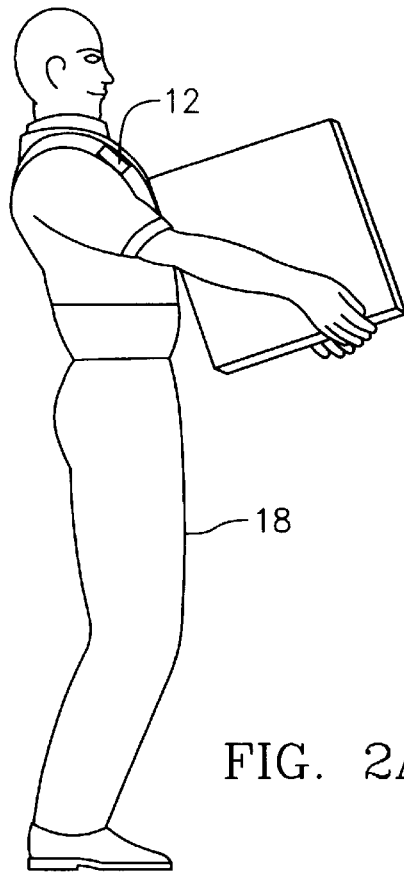


FIG. 2A

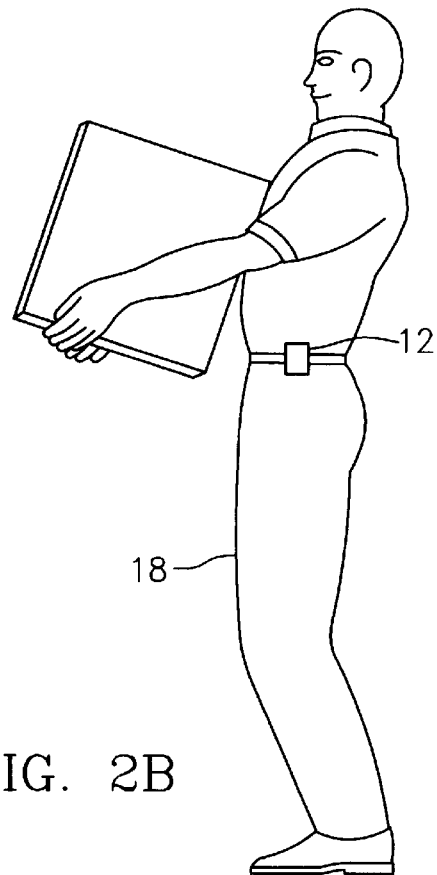


FIG. 2B

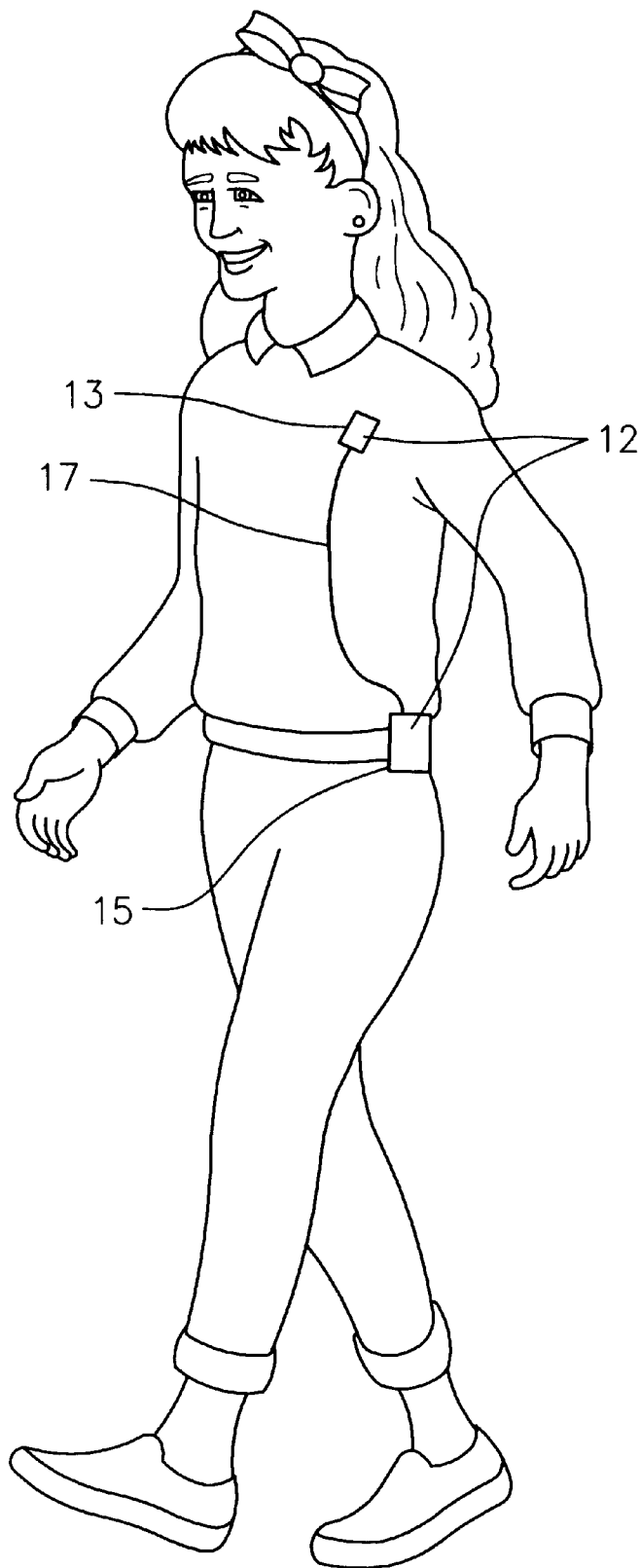


FIG. 2C

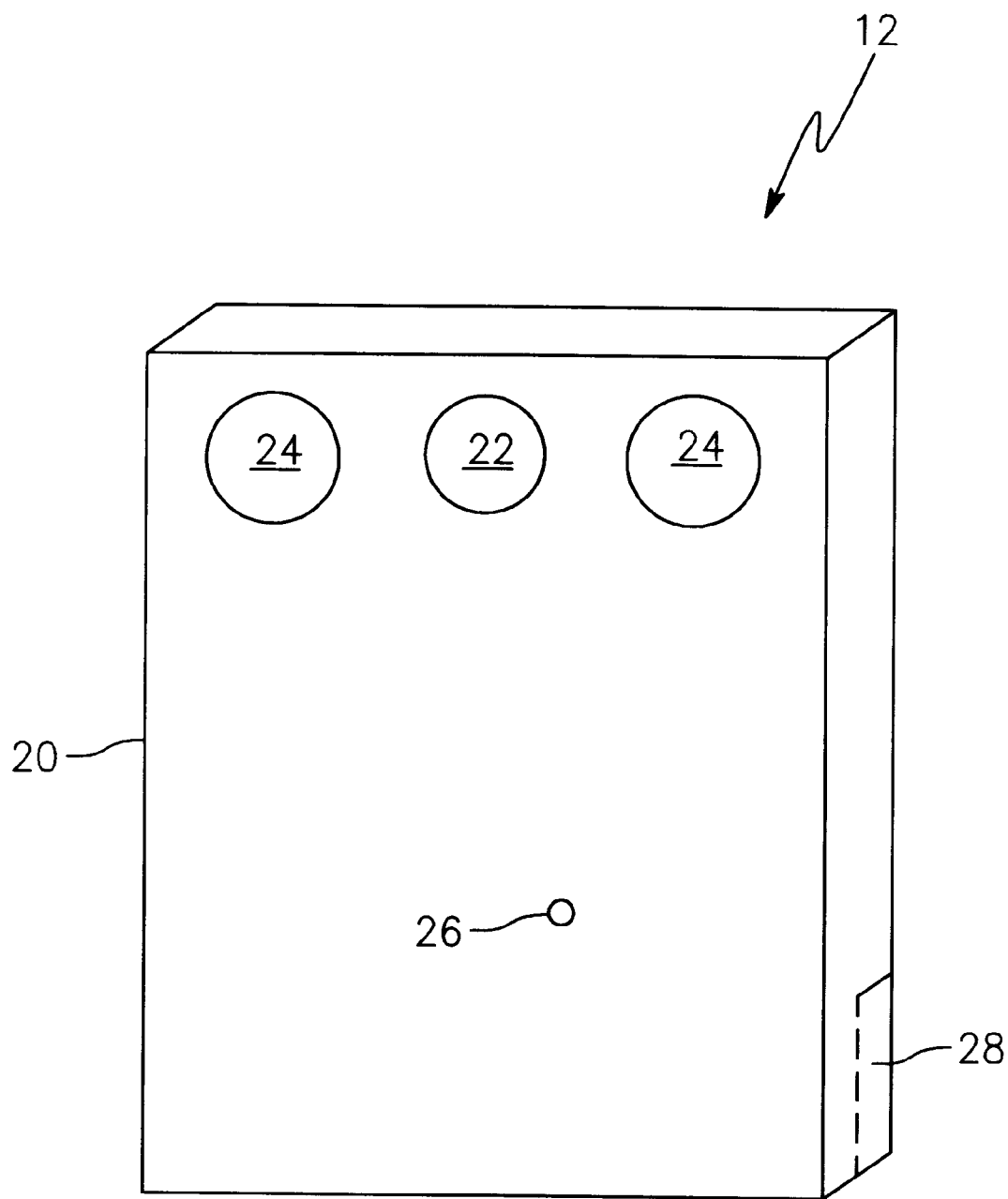


FIG. 3

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.