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— of inventorship (Rule 4.17(iv)) for US only

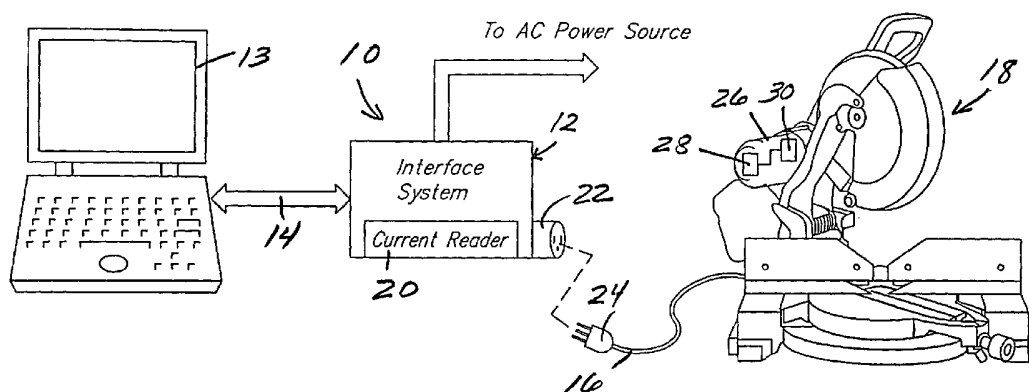
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(54) Title: SYSTEM AND METHOD FOR DATA RETRIEVAL IN AC POWER TOOLS VIA AN AC LINE CORD



(57) Abstract: An apparatus (10) and method for obtaining data stored in an electronic module (30) within a power tool (18) over a power line cord (16) of the tool (18), and without any disassembly of the tool (18) being required. An interface subsystem (12) applies a high frequency, low power AC input signal to the power cord (16) of the tool (18). A controller (28) within the tool (18) recognizes this signal as an indication that the tool (18) is to be placed in a communications mode. The controller (28) modulates a power switching device used for turning on and off the motor of the tool (18) in such a fashion that current pulses are transmitted over the power line cord (16) back to the interface subsystem (12). The current pulses correspond to tool (18) usage/performance/identification information stored in the electronic module (30) of the tool (18). This information is interpreted by a current reader circuit of the interface subsystem (12) as binary information which is then transmitted to an external computer (13) data logging device for analysis and/or recording.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/22570

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : E21B 7/00

US CL : 173/1, 2, 4, 6, 217

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 173/1, 2, 4, 6, 217

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, P	US 6,510,902 B1 (PROKOP et al.) 28 January 2003 (28.01.2003), See the entire document.	1-21
A	US 6,390,205 B2 (WALLGREN et al.) 21 May 2002 (21.05.2002), See the entire document.	1-21
A	US 5,174,387 A (ARNDT et al.) 29 December 1992 (29.12.1992), See the entire document.	1-21
A	US 5,203,242 A (HANSSON) 20 April 1993 (20.04.1993), See the entire document.	1-21
A	US 5,014,794 A (HANSSON) 14 May 1991 (14.05.1991), See the entire document.	1-21



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