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[Continued on next page]

(54) **Title:** CYCLE-BY-CYCLE CURRENT LIMIT FOR POWER TOOLS HAVING A BRUSHLESS MOTOR

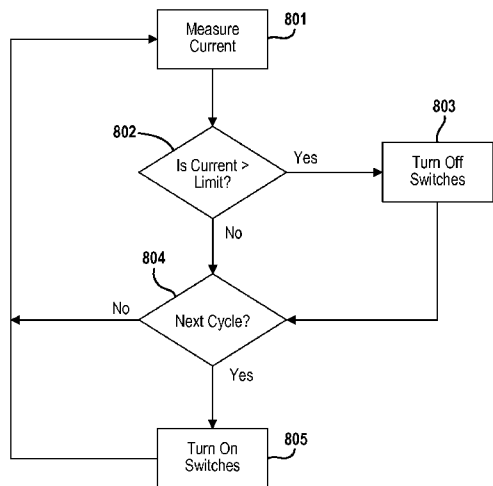


FIG. 8

(57) **Abstract:** A handheld AC power tool is provided. The power tool is comprised generally of: a brushless DC motor; a power cord connectable to an AC power socket; a converter circuit configured to receive input power from the power cord and operable to output a DC bus voltage, a switching arrangement interposed between the electric motor and the converter circuit; a motor drive circuit interfaced with the motor switches; and a power switch operable by a user to selectively energize the motor drive circuit and thereby power on the tool. The converter circuit includes a rectifier and a capacitor electrically coupled across the rectifier, such that the capacitor has capacitance sized to produce a DC bus voltage whose magnitude from an AC power source is substantially same as magnitude of voltage from a DC power source.





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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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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)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2012/235661 A1 (ROESSLER WERNER [DE] ET AL) 20 September 2012 (2012-09-20) paragraph [0017] - paragraph [0024]; figures 1,2,5 paragraph [0040] - paragraph [0056] -----	1-25
Y	US 2006/221528 A1 (LI QIONG M [US] ET AL) 5 October 2006 (2006-10-05) paragraph [0023] - paragraph [0025]; figures 2,5 paragraph [0040] - paragraph [0058] -----	1-25
Y	US 2003/132725 A1 (CHEUNG WAI KUEN [HK]) 17 July 2003 (2003-07-17) paragraph [0010] - paragraph [0026]; figures 1-4 -----	1-25

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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