(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 22 February 2007 (22.02.2007)

(51) International Patent Classification: A45C 5/14 (2006.01)

(21) International Application Number:

PCT/US2006/031213

(22) International Filing Date: 11 August 2006 (11.08.2006)

(25) Filing Language: **English**

(26) Publication Language: English

(30) Priority Data:

11/202,202 12 August 2005 (12.08.2005) US

(71) Applicants and

(72) Inventors: SNOWDEN, Nancy, C.G. [US/US]: 1603 Cambridge Lakes Drive, Mt. Pleasant, SC 29464 (US). DURDEN, Janice, E. [US/US]; 434 Harrods Lane, Charleston, SC (US).

(74) Agent: FLEMING, John, M.; BANNER & WITCOFF, LTD., 1001 G. STREET, N.W., 11th Floor, Washington, DC 20001-4597 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, (10) International Publication Number WO 2007/021851 A3

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

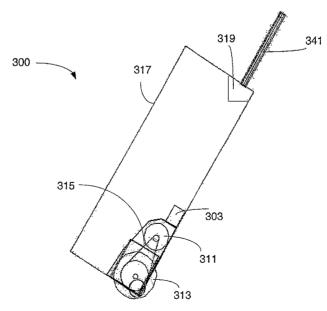
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 19 April 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: POWER-ASSISTED TRANSPORT DEVICE



(57) Abstract: The apparatus includes an external housing (317) with an opening, an interior storage compartment, a drive wheel (313) operatively connected to a drive belt (315), configured to propel the device across a surface, and at least one input switch, operatively connected to the power controller, configured to engage movement of the device upon activation of the at least one switch. The interior storage compartment may include a battery, a power controller operatively connected to the battery, circuitry, operatively connected to the power controller, configured to control input of power to a motor, and the motor, operatively connected to the circuitry, configured to turn the drive belt operatively connected to the motor and the drive wheel . The battery may be connected to an outlet, in the external housing, configured to permit insertion of a device to use the battery.



INTERNATIONAL SEARCH REPORT

International application No PCT/US2006/031213

A. CLASSIFICATION OF SUBJECT MATTER INV. A45C5/14

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)

A45C A63B

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 practical, search terms used)

EPO-Internal, WPI Data

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
Х	FR 2 844 496 A1 (PERRET FRANCOIS [FR]) 19 March 2004 (2004-03-19)	1-4, 10-15, 19,22-27		
Υ	page 1, line 4 — line 5	5-9,20, 21,28-32		
	page 2, line 13 - line 34 page 3, line 18 - page 4, line 34; claims; figures			
Х	US 5 316 096 A (GOOD SIDNEY R [US]) 31 May 1994 (1994-05-31)	1-4, 10-15, 19,22-27		
Υ	column 1, line 5 - line 8	5-9,20, 21,28-32		
	column 1, line 55 - column 2, line 23; claims; figures			
	-/			

X Further documents are listed in the continuation of Box C.	X See patent family annex.
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search 5 February 2007	Date of mailing of the international search report 13/02/2007
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Authorized officer Acerbis, Giorgio

INTERNATIONAL SEARCH REPORT

International application No PCT/US2006/031213

O(COHUNUS	tion). DOCUMENTS CONSIDERED TO BE RELEVANT	
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Υ	WO 02/078483 A1 (KADER SARTEEP [GB]) 10 October 2002 (2002-10-10) page 2, line 5 - line 25; claims; figures	1-4, 10-15, 19,22-27 5-9,20, 21,28-32
Y	US 5 180 023 A (REIMERS ERIC W [US]) 19 January 1993 (1993-01-19) column 1, line 8 - line 14 column 18, line 24 - line 44; claims; figures	8,9, 28-30
X	WO 2004/107141 A (KONINKL PHILIPS ELECTRONICS NV [NL]; MARMAROPOULOS GEORGE [US]; MAMA K) 9 December 2004 (2004-12-09)	31,32
Υ	<pre>page 1, line 16 - line 20 page 3, line 12 - page 4, line 14; claims; figures</pre>	5-7,20, 21,31,32
		

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2006/031213

	atent document I in search report		Publication date	Patent family member(s)	Publication date
FR	2844496	A1	19-03-2004	NONE	
US	5316096	Α	31-05-1994	NONE	
WO	02078483	A1	10-10-2002	EP 1381296 A1 JP 2004520912 T US 2004129469 A1	21-01-2004 15-07-2004 08-07-2004
US	5180023	Α	19-01-1993	NONE	
WO	2004107141	Α	09-12-2004	CN 1833213 A EP 1642198 A1	13-09-2006 05-04-2006