

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
6 September 2002 (06.09.2002)

PCT

(10) International Publication Number  
WO 02/068143 A3

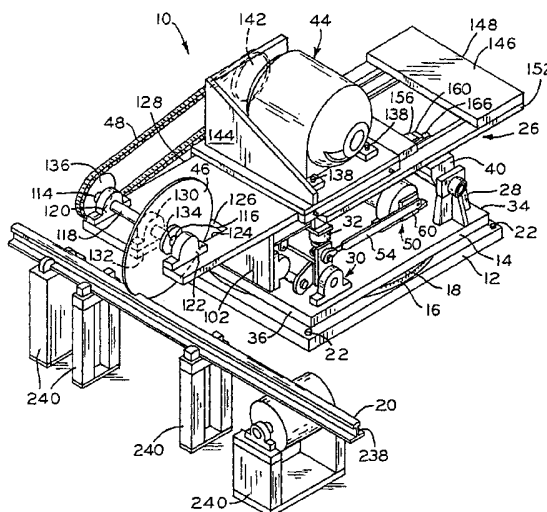
- (51) International Patent Classification<sup>7</sup>: **B23D 45/04**, 47/08, 47/10, 47/04, 45/02
- (74) Agent: **ERDMAN, Kevin, R.**; Suite 2700, 300 North Meridian Street, Indianapolis, IN 46204 (US).
- (21) International Application Number: PCT/US01/49526
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 27 December 2001 (27.12.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 09/751,645 29 December 2000 (29.12.2000) US
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application: US 09/751,645 (CIP) Filed on 29 December 2000 (29.12.2000)
- (71) Applicant (*for all designated States except US*): **DEL-SAW, INC.** [US/US]; 1539 Estella, Fort Wayne, IN 46803 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (*for US only*): **LANZER, Delmar** [US/US]; 22725 Gar Creek Road, Woodburn, IN 46797 (US).

**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

[Continued on next page]

(54) Title: COUNTERBALANCED ADVANCING METAL CUTTING SAW



(57) **Abstract:** The invention relates to an advancing power saw used for any metal cutting application. The power saw (10) is provided with an oscillating mechanism (30) that drives the saw (46) up and down in a vertical direction. A hydraulic cylinder (260, 262) and/or a pulley assembly (194) advances the saw toward the metal being cut while the saw is oscillating creating a circular pathway for the saw blade during the cutting operation. A balancing apparatus (26, 244) is provided in association with the saw blade that advances in an opposite direction to that of the saw blade to act as a counterbalance (146) for the saw. The balancing apparatus has a weight provided at one end which dampens the vibrations created by the saw during the cutting operation and substantially equalizes pressure on the saw blade. For cutting high tensile strength metals having a combustion point within the operating temperatures of cutting apparatus, for example titanium bars, a rotating holder (300) is provided for significantly reducing the cutting time.



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**(88) Date of publication of the international search report:**  
20 November 2003

*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.*

**(15) Information about Correction:**

**Previous Correction:**

see PCT Gazette No. 18/2003 of 1 May 2003, Section II

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/49526

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B23D45/04 B23D47/08 B23D47/10 B23D47/04 B23D45/02

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)

IPC 7 B23D B24B

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, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 072 573 A (ECO WHEEL CO) 7 October 1981 (1981-10-07) page 2, line 5 - line 107 page 2, line 128 - page 3, line 32 figure 1	1,2,8,9
Y		11,12
A		10,13
Y	----- PATENT ABSTRACTS OF JAPAN vol. 001, no. 016 (M-009), 23 March 1977 (1977-03-23) -& JP 51 130978 A (MIMURA NOBORU), 13 November 1976 (1976-11-13) abstract figure 7	11
A	----- -/--	3,12

Further documents are listed in the continuation of box C.

Patent family members are listed in 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

16 May 2003

Date of mailing of the international search report

17. 09. 2003

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

Chariot, D.

## INTERNATIONAL SEARCH REPORT

International Application No

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3 709 096 A (STENDER ROBERTZ J) 9 January 1973 (1973-01-09) column 6, line 17 - line 34 figure 3	12
A	-----	1
A	US 4 094 102 A (LAUZE DECEASED ROBERT LAVERN ET AL) 13 June 1978 (1978-06-13) the whole document -----	1

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 01/49526

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-13

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-13

Advancing power saw for cutting metal objects  
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2. claims: 14-18

Rotatable workpiece holder  
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/49526

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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JP 51130978	A	13-11-1976	JP 1022870 C	28-11-1980
			JP 55013846 B	11-04-1980
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