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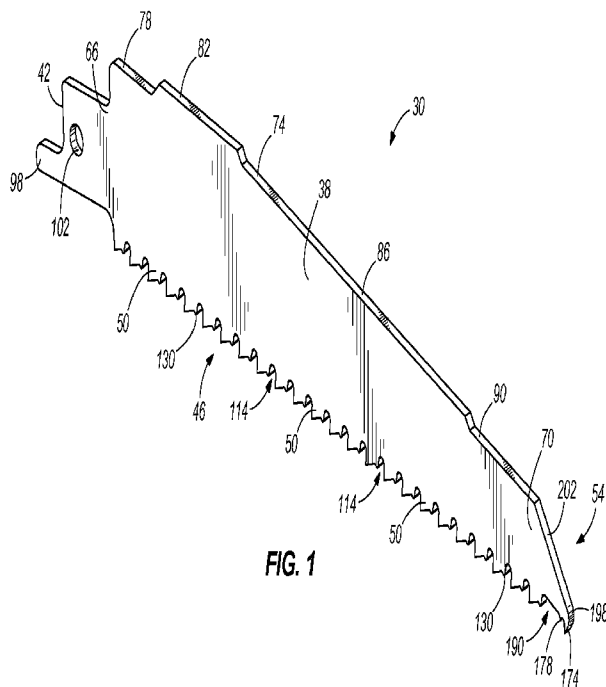
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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[Continued on next page]

(54) Title: SAW BLADE



(57) Abstract: A reciprocating saw blade for use with a reciprocating saw includes a body defining a longitudinal axis, an attachment portion configured to couple to the reciprocating saw, and a cutting portion formed on the body. The cutting portion includes a plurality of cutting teeth. Each cutting tooth includes a tip, a rake face extending from the tip generally toward the longitudinal axis and defining a gullet, and a relief surface extending from the tip. The blade also includes a plunge point formed on the body for initiating a plunge cut. The plunge point includes a leading tooth and a second tooth. The leading tooth includes a tip and a rake face extending from the tip generally toward the longitudinal axis and defining a leading gullet. The second tooth is positioned in the leading gullet adjacent the leading tooth and is generally smaller than the leading tooth and each cutting tooth.





MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

— before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
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Published:

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24 May 2012

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/033583**A. CLASSIFICATION OF SUBJECT MATTER*****B23D 61/12(2006.01)i, B23D 51/00(2006.01)i, B27B 33/04(2006.01)i, B27B 33/06(2006.01)i***

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)

B23D 61/12; B23D 51/00; B27B 33/04; B27B 33/06

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: saw, tooth, attachment, tang, tip, relief, rake, gullet, plunge and similar terms

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 2070624 A1 (BLACK & DECKER, INC.) 17 June 2009 See abstract, paragraphs 17-23 and figures 1-5.	1-14, 27-38
A	EP 0609791 B1 (ROBERT BOSCH GMBH) 16 December 1998 See claim 1 and figures 1, 2.	1-14, 27-38
A	WO 02-40233 A2 (AMERICAN SAW & MFG. COMPANY) 23 May 2002 See abstract and figure 1.	1-14, 27-38
A	JP 11-019821 A (AMADA CO., LTD.) 26 January 1999 See abstract and figure 1.	1-14, 27-38

 Further documents are listed in the continuation of Box C. 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 application or patent 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 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

28 MARCH 2012 (28.03.2012)

Date of mailing of the international search report

28 MARCH 2012 (28.03.2012)

Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2011/033583**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 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 No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

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

Group I: In claims 1-14 and 27-38, the feature about the second tooth comprises a corresponding special technical feature.

Group II: In claims 15-38, the feature about the angles of the rake faces of the leading tooth and the cutting teeth comprises a special technical feature.

Group III: In claims 39-80, the feature about the protrusion comprises a corresponding special technical feature.

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.:
1-14, 27-38

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/033583

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