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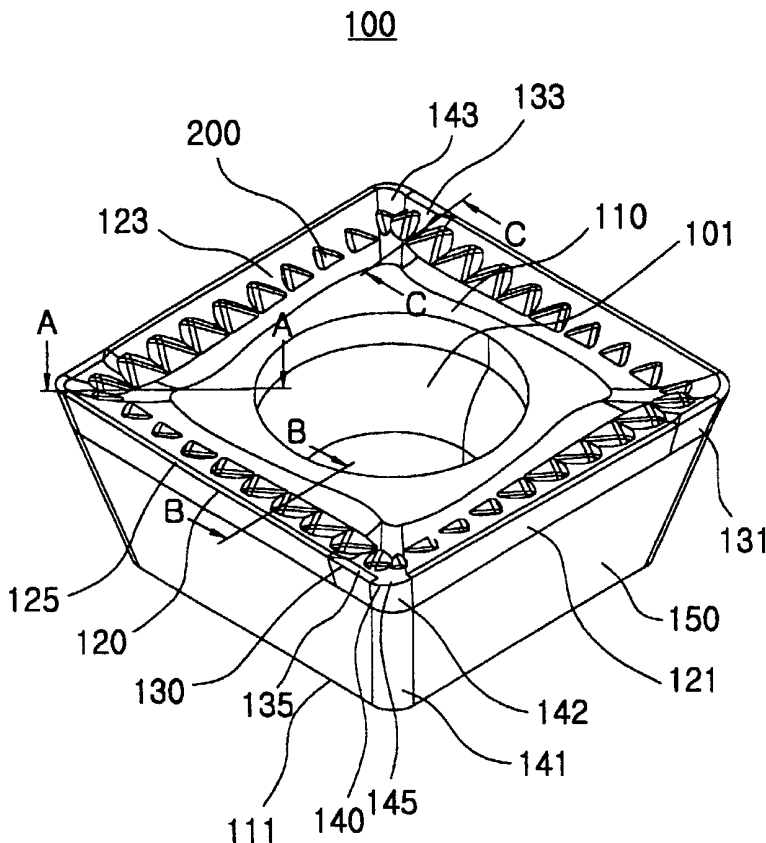
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[Continued on next page]

(54) Title: CUTTING INSERT WITH CURVED CUTTING EDGE



(57) Abstract: A cutting insert for milling machining adapted to be mounted on a milling cutter to carry out cutting operation and having primary and secondary cutting edges provided at sides of a rectangular body, each primary cutting edge having a curved line tangential to the adjacent secondary cutting edge, to reduce cutting force and improve flatness of side surface of a machined workpiece, is disclosed. The cutting insert includes an upper face, a bottom face and a plurality of side faces connecting the upper face and the bottom face. The primary cutting edge has chip breakers for guiding chip flow, primary cutting edge land faces and primary cutting edge clearance faces. The primary cutting edges enable a bottom surface and a side surface of a machined workpiece to have a right angle therebetween.



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A. CLASSIFICATION OF SUBJECT MATTER**IPC7 B23C 9/00, B23C 5/02**

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)

B23C 5/00, 5/02, 9/00

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)

KIPONET "Cutting" "Insert" "Tool" "Edge" "Milling" "Chip" "Breaker" "Surface"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--------------------------------------------------------------------------------------|-----------------------|
| Y | JP 6-226523 A (DAEHAN JOONG SUOK CO..LTD) 16 AUG 1994 Claims 1-16, Figure 1, 6, 9 | 1-3, 5-13 |
| Y | KR 95-17026 A (DAEHAN JOONG SUOK CO..LTD) 20 JUL 1995 See the whole document | 1-3, 5-13 |
| Y | KR 94-2876 U (KOLOY inc) 15 FEB 1994 See the whole document | 1-3 |
| A | KR 96-555 B1 (NIA BAUA KENETH WELL) 9 JAN 1996 Claims 1-20, Figure 1-6 | 1-3, 5-13 |
| A | US 5,447,396 A (SANDVIK AB, Sweden) 5, SEP 1995 See the whole document | 1-3, 5-13 |

 Further documents are listed in the continuation of Box C. See patent family annex.

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