(51) International Patent Classification: B26D 7/18
(21) International Application Number: PCT/NL2003/000863
(22) International Filing Date: 4 December 2003 (04.12.2003)
(25) Filing Language: Dutch
(26) Publication Language: English
(30) Priority Data:
(71) Applicant(s) (for all designated States except US): FICO B.V. [NL/NL]; Ratio 6, NL-6921 RW Duiven (NL).
(72) Inventors/Applicants (for US only): RENSEN, Marcel; HERMANUS, Johannes [NL/NL]; Kasteelstraat 38, NL-7447 AX Hellendoorn (NL). VAN EGMOND, Henri; JOSEPH [NL/NL]; Wilzondreef 1, NL-6716 DN Ede (NL). VAN DALEN, Adrianus, Willem [NL/NL]; Zwanenveld 25-09, NL-6538 NG Nijmegen (NL).
(73) Agents: VAN DEN HEUVEL, Henricus, Theodorus et al.; Patentwerk B.V., P.O. Box 1514, NL-5200 BN `s-Hertogenbosch (NL).

(54) Title: METHOD FOR RELEASING SLUG AFTER PUNCHING, AND PUNCHING METHOD THEREFOR

(57) Abstract: The invention relates to a method for releasing slug (9, 15, 25) adhering to a stamp (2, 24) in a punching machine, by carrying the stamp (2, 24), after performing a punching operation on a sheet material (4), with the active stroke at least partially through a cutting opening (6) in a cutting plate (3, 13, 21) supporting the sheet material (4), and carrying the stamp (2, 24) during the return stroke back again through the cutting opening (6) in the cutting plate (3, 13, 21) which close-fittingly encloses the stamp (2, 24). The invention also relates to a punching machine (1, 12, 17, 22) for releasing slug (9, 15, 25) adhering to a stamp (2, 24) according this method.


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 August 2004

[Continued on next page]
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.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B26D7/18

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 B26D

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, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>EP 1 066 932 A (UHT CORP) 10 January 2001 (2001-01-10)</td>
<td>1,3-10, 12-14, 16,17</td>
</tr>
</tbody>
</table>

X Further documents are listed in the continuation of box C.

X 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 document on or after the international filing date
* 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

Date of the actual completion of the international search
2 July 2004

Date of mailing of the international search report
12/07/2004

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk
Tel. (31-70) 540-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016

Authorized officer
Rabolini, M
<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>DE 41 03 339 A (NAUMANN SPEZIALWERKZEUG&lt;br&gt;GMBH) 3 September 1992 (1992-09-03)</td>
<td></td>
</tr>
<tr>
<td>Patent document cited in search report</td>
<td>Publication date</td>
<td>Patent family member(s)</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-----------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EP 1066932 A2</td>
</tr>
<tr>
<td>JP 11333791 A</td>
<td>07-12-1999</td>
<td>NONE</td>
</tr>
<tr>
<td>JP 07132497 A</td>
<td>23-05-1995</td>
<td>NONE</td>
</tr>
<tr>
<td>DE 4103339 A</td>
<td>03-09-1992</td>
<td>DE 4103339 A1</td>
</tr>
</tbody>
</table>