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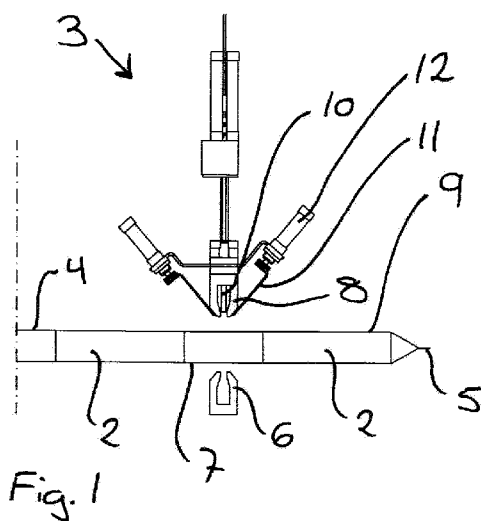
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(54) Title: SEALING AND CUTTING UNIT FOR A FORM FILL SEAL MACHINE



(57) Abstract: The present invention concerns an apparatus for packing articles (2), wherein the packing is formed by at least one web material (4), wherein typically a plurality of individual juxtaposed runs of web material (4) and a number of more or less packed articles (2) are conveyed on the runs, wherein the apparatus includes first means which during packing of articles (2) join the web material (4) continuously in its longitudinal direction, as well as other means (3) for individual joints (5) and for separation in transverse direction of the web material (4), wherein the mentioned other means (3) are arranged on moving means adapted to move in the same direction and at the same speed as the web material (4) and the articles (2) being packed, called the X-axis, and in a direction against the web material (4) and the articles (2) arranged thereon, called the Y-axis.



INTERNATIONAL SEARCH REPORT

International application No  
PCT/DK2013/050390

A. CLASSIFICATION OF SUBJECT MATTER  
 INV. B26D7/26 B29C65/00 B65B9/067 B65B25/00 B65B51/30  
 B65B57/16 B65B59/04  
 ADD.  
 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)  
 B65B B29C 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 practicable, search terms used)  
 EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 1 457 075 A (SIG SCHWEIZ INDUSTRIEGES) 1 December 1976 (1976-12-01) page 1, line 43 - line 64; figures 1-7 page 2, line 14 - line 21 page 2, line 93 - page 3, line 6 page 3, line 73 - line 79 -----	1,2,8-10
Y	JP 2007 191197 A (ISHIDA SEISAKUSHO) 2 August 2007 (2007-08-02) abstract; figures 3, 7-8 -----	1,2,8-10
A	CH 647 994 A5 (HOEYER AS O G) 28 February 1985 (1985-02-28) figures 1,3,4 -----	1,2,8-10
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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 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  2 June 2014	Date of mailing of the international search report  12/06/2014
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer  Cardoso, Victor
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## INTERNATIONAL SEARCH REPORT

International application No  
PCT/DK2013/050390

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 2006/003634 A1 (MICROMECC S R L UNIPERSONALE [IT]; PRATAIOLA ALESSANDRO [IT]) 12 January 2006 (2006-01-12) abstract; figures 1-2,4-5 column 31 - column 33 column 41 column 48</p> <p style="text-align: center;">-----</p>	1
A	<p>EP 1 116 658 A1 (MICROMECC S N C DI PRATAIOLA E [IT]) 18 July 2001 (2001-07-18) abstract; figures 1-7,9 paragraph [0028] paragraph [0031] paragraph [0062] paragraph [0069]</p> <p style="text-align: center;">-----</p>	1

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/DK2013/050390

## 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:

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 fees, this Authority did not invite payment of additional fees.
  
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, 2(completely); 8-10(partially)

### 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.

**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, 2(completely); 8-10(partially)

Apparatus for packaging individual items on a longitudinal web of film, comprising a first longitudinal sealing unit, a second combined sealing and cutting unit, being the later provided with sensing means adapted to determine the distance separating its opposing sealing elements and feeding said information to a control means that may act on said second combined unit.

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2. claim: 3

Apparatus for packaging according to claim 1, comprising a quick-release for the cutting unit.

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3. claims: 4, 5

Apparatus for packaging according to claim 1, comprising energy supply lines and pneumatic moving means.

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4. claims: 6(completely); 8-10(partially)

Apparatus and method for packaging according to claims 1 and 8 respectively, comprising a strickler.

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5. claim: 7

Apparatus for packaging according to claim 1, comprising a coupling station.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/DK2013/050390

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			WO 2006003634 A1 12-01-2006
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			DE 60003385 T2 01-07-2004
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