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[Continued on next page]

(54) Title: OPEN GAP FILM ROLL CORE

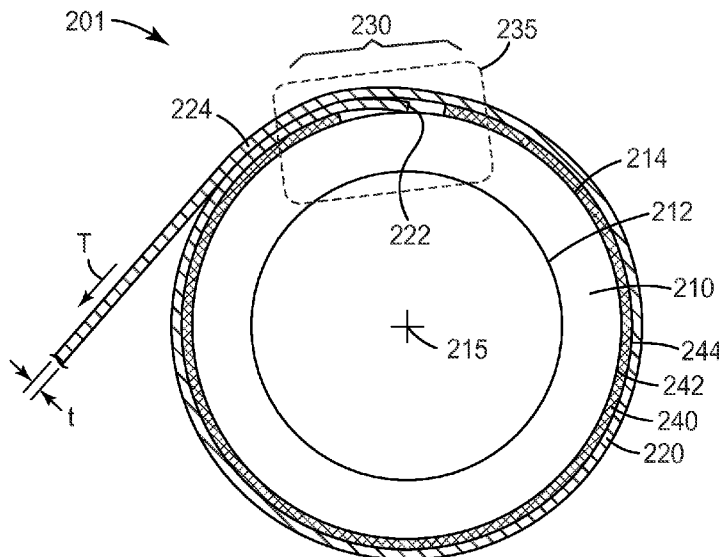


FIG. 2B

(57) Abstract: The disclosure generally relates to a film roll core used for winding a polymeric film around, an apparatus for winding the polymeric film on the film roll core, a process of winding the polymeric film on the film roll core, and a rolled film on the film roll core. The disclosure more particularly relates to an open gap film roll core that is capable of reducing defects in wound films.



- (84) Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, 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).
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
- Published:**
- *with international search report (Art. 21(3))*
- (88) Date of publication of the international search report:**
22 November 2012

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2011/065155

A. CLASSIFICATION OF SUBJECT MATTER
INV. B65H75/10 B65H75/28 B65H19/28
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)
B65H

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.
X	US 2006/214049 A1 (HERNANDEZ ISMAEL A [US]) 28 September 2006 (2006-09-28) paragraph [0026]; figure 4 -----	1,2,4,8, 25
X	DE 42 06 143 A1 (AGFA GEVAERT AG [DE]) 2 September 1993 (1993-09-02) column 2, lines 8-24; figure 1 -----	1,2,4,8
A	WO 2011/091006 A2 (SOUHEGAN WOOD PRODUCTS INC [US]; DUNN RANDOLPH A [US]) 28 July 2011 (2011-07-28) paragraph [0042]; figure 6 -----	12,19
X,P	WO 2005/000494 A1 (POSCO [KR]; LEE WON HO [KR]) 6 January 2005 (2005-01-06) figures 4-9 -----	1,2,4,8
A		1,4-8,25
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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

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- "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

20 June 2012

Date of mailing of the international search report

03/07/2012

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2011/065155

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 908 173 A (DE ROECK JOSEPH [BE]) 1 June 1999 (1999-06-01) column 3, lines 35-67; figures 2,3 -----	1,2,4, 6-8,10, 25
A	DE 203 17 826 U1 (CORENSO ELFES GMBH & CO KG [DE]) 12 February 2004 (2004-02-12) figure 3 -----	3
A	US 3 396 918 A (ADAMSON WILLIAM G ET AL) 13 August 1968 (1968-08-13) figures 1,5,6 -----	1,2,4,8
A	DE 21 63 485 A1 (WEISS RUDOLF) 5 July 1973 (1973-07-05) pages 7-8; figures 19-21 -----	12-14, 16,19, 20,22,23
A	US 6 443 387 B1 (MERCER BOBBY R [US] ET AL) 3 September 2002 (2002-09-03) figures 3-7 -----	12,19
A	JP 2003 192237 A (DAIKA KOGYO KK) 9 July 2003 (2003-07-09) abstract; figures 4,5,6,8 -----	12,19
A	EP 0 535 328 A1 (LS ELECTRO GALVANIZING [US]) 7 April 1993 (1993-04-07) column 5, line 54 - column 7, line 21; figure 4 -----	12,19
A	DE 36 44 950 A1 (SUNDWIGER EISEN MASCHINEN [DE]) 24 March 1988 (1988-03-24) the whole document -----	12-14, 17-21, 23,24
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/065155

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.:

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: 1-11, 25

A film roll core with a cylindrical tube having a compliant layer disposed on it and a longitudinal gap in the compliant layer to position a film edge.

2. claims: 12-19

A film winding apparatus and method comprising a cut and transfer system capable of cutting a film substrate and transferring a severed edge of the film substrate into a longitudinal gap.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2011/065155

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