(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 0 909 634 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
27.12.2000 Bulletin 2000/52

(43) Date of publication A2:
21.04.1999 Bulletin 1999/16

(21) Application number: **98302321.9**

(22) Date of filing: **25.03.1998**

(51) Int Cl.[7]: **B31F 1/28**

(84) Designated Contracting States:
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **26.03.1997 GB 9706336**

(71) Applicant: **SCM CONTAINER MACHINERY LIMITED**
Ellesmere Port, South Wirral L66 1ST (GB)

(72) Inventors:
- **Reynolds Gordon Stuart**
  High Peak, Derbyshire. SK23 7NS (GB)
- **Ellis David**
  Mold,Flintshire. CH7 6DU (GB)
- **Strutt Ivan**
  Vicars Cross, Chester. CH3 5HD (GB)
- **Green Michael**
  Lockerbie, Dumfrieshire. DG11 1RP (GB)

(74) Representative: **Ajello, Michael John**
Urquhart-Dykes & Lord
Greg's Buildings
1 Booth Street
Manchester M2 4DU (GB)

(54) Corrugating apparatus

(57) Corrugating apparatus in which a continuous single faced board (10) consisting of a corrugated sheet glued on one face to a further flat sheet and with glue applied to the exposed tips on the opposite face of the board is to be brought together while continuously advancing through the apparatus, with a second flat sheet (12) to be adhered to the exposed tips, the apparatus comprising transport means (C) to advance the corrugated board and the second flat sheet simultaneously in the same direction through the apparatus and a dielectric heating means (B) to cure the glue to form a bond between the board and the sheet, initial bonding preferably being provided by a pre-heating section (A) in which the board travels across a hotplate surface (31), the board being held uniformly and in contact therewith by a series of fluid filled flexible vessels (32). Radio frequency generated in the heating section (B) considerably reduces the length of or obviates the need for a preheating section (A).

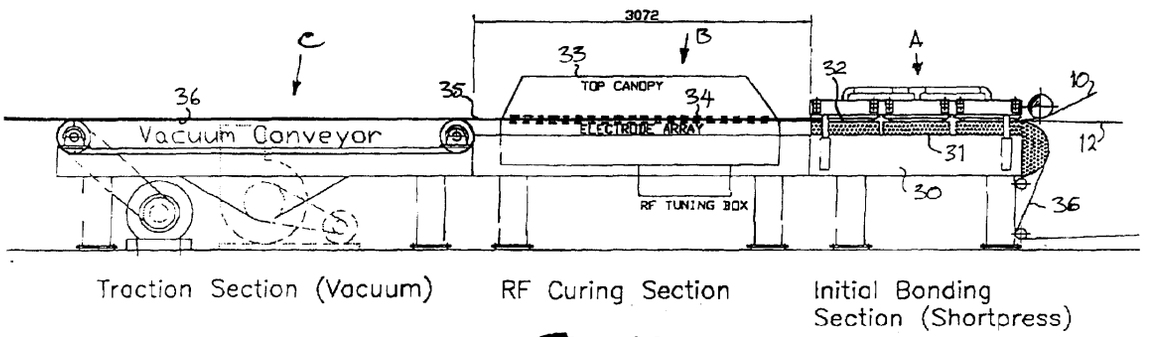


Fig. 3

EP 0 909 634 A3

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 30 2321

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	DE 42 21 904 A (BHS BAYERISCHE BERG) 5 January 1994 (1994-01-05) * column 1, line 3 - line 65 * * column 2, line 24 - line 29 * * column 3, line 3 - line 15; claims; figures *	1-3,5-7, 9	B31F1/28
Y		4	
A		8	
Y	GB 2 299 543 A (SCM CONTAINER MACH LTD) 9 October 1996 (1996-10-09) * abstract; figure *	4	
E	WO 98 28127 A (WHITE PETER ;MOLINS PLC (GB)) 2 July 1998 (1998-07-02) * abstract; claims; figure *	1	
A		2-9	
X	FR 1 359 232 A (SOFIPAG) 3 August 1964 (1964-08-03) * the whole document *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
X	DE 29 30 883 A (SIEMENS AG) 5 February 1981 (1981-02-05) * claims; figures *	1	B31F
A	DE 44 37 557 A (BHS CORR MASCH & ANLAGENBAU) 25 April 1996 (1996-04-25)		
A	US 4 947 559 A (BASLER PETER ET AL) 14 August 1990 (1990-08-14)		

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	4 October 2000	Soederberg, J

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 98 30 2321

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-10-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4221904 A	05-01-1994	NONE	
GB 2299543 A	09-10-1996	AT 189649 T	15-02-2000
		AU 720409 B	01-06-2000
		AU 5283796 A	15-01-1997
		CA 2214394 A	10-10-1996
		CN 1186462 A	01-07-1998
		DE 69606630 D	16-03-2000
		DE 69606630 T	21-09-2000
		EP 0819054 A	21-01-1998
		ES 2145442 T	01-07-2000
		WO 9631340 A	10-10-1996
		JP 11504579 T	27-04-1999
WO 9828127 A	02-07-1998	AU 5330398 A	17-07-1998
FR 1359232 A	03-08-1964	NONE	
DE 2930883 A	05-02-1981	NONE	
DE 4437557 A	25-04-1996	NONE	
US 4947559 A	14-08-1990	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82