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(54) Apparatuses for packing products

(57) An apparatus comprises weakening promoting means (14) suitable for generating weakening line means (15, 16) on a sheet material (4), said weakening promoting means (14) comprising a serrated profile; an apparameter of the service of the serv

ratus comprises folding means (25), suitable for folding a first portion of said sheet material (4), on an adjacent second portion of said sheet material (4), said folding means comprising comb means (25) that acts on localised zones of said sheet material (4).

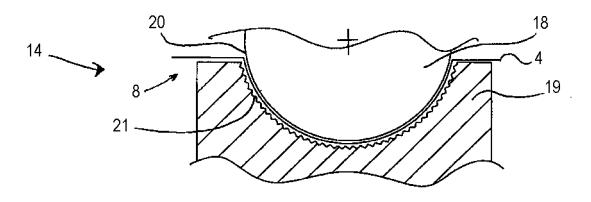


Fig. 2



EUROPEAN SEARCH REPORT

Application Number EP 06 12 6308

	DOCUMENTS CONSIDE	RED TO BE RELEVANT	1		
Category	Citation of document with inc of relevant passa		Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
Χ	WO 97/23398 A (WJC S FELDTHAUS CHRISTIAN 3 July 1997 (1997-0)	[DK])	1-7 8-24	INV. B26F1/14 B65B1/00	
A	* figures 13,14 *		0-24	B26D3/08	
X A	US 6 119 439 A (STEV 19 September 2000 (2 * abstract; figure 2	2000-09-19)	1-4,6 5,7-24	ADD. B26F1/18	
	, •				
x	US 3 255 648 A (BUT 14 June 1966 (1966-0		1-3,6,7		
۹	* figures 1-5`*	,	4,5,8-2		
χ		& L WERKZEUGBAU GMBH &	1-3,6,7		
4	* the whole documen	nber 2002 (2002-11-28) : *	4,5,8-2	1	
·	MINGHETTI BIANCA ELI	REEN PACK S R L [IT]; ENA [IT]; CAPPONI MARCO	1-12		
4	[IT]) 1 September 20 * pages 25,26; clair		13-24	TECHNICAL FIELDS SEARCHED (IPC)	
×	US 2 958 168 A (VOG		1-9	B26F	
A	1 November 1960 (196 * figures 1,1a *	00-11-01)	10-24	B65B B26D	
x	US 3 912 080 A (WINI	BERG RAGNAR O)	8-12		
A	14 October 1975 (197 * column 2, line 30	- line 60; figure 4 *	1-7, 13-24		
A	US 4 941 307 A (WOJCIK JOHN [US]) 17 July 1990 (1990-07-17) * the whole document * 		11,12		
	The present search report has b	pen drawn up for all claims Date of completion of the search		Examiner	
		28 April 2008	Wii	mer, Martin	
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		E : earlier patent doc after the filling dat er D : document cited ir L : document cited fo	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		
O : non-written disclosure P : intermediate document		& : member of the sa	& : member of the same patent family, corresponding document		



Application Number

EP 06 12 6308

CLAIMS INCURRING FEES
The present European patent application comprised at the time of filling more than ten claims.
Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
1-24
No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.
LACK OF UNITY OF INVENTION
The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:
see sheet B
All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
None of the first or a cook for a least beautiful in the first time limit. The supposed France of
None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION SHEET B

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-7

A scoring station with serrated elements working together with an abutment element. Such an abutment element seems to avoid the need of a penetration stroke to be adjusted, which leads to a higher scoring quality and improved reliability.

2. claims: 8-15

A packing apparatus with a forming station a folding station and gripping means that are suitable to lock together two edge portions. Such a gripping means eases the welding together of two portions to one container and thus improves the welding process.

3. claims: 16-24

A packing apparatus with a folding station comprising comb means that act on localised zones of said sheet material. Since the comb means touch the sheet material on dedicated zones, which do not interfere with zones that affect cavity portions, the problem of damaging these cavity portions is eliminated and therefore a more precise folding process is enabled.

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 06 12 6308

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.

28-04-2008

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 9723398	Α	03-07-1997	AU	1189797 A	17-07-1997
US 6119439	Α	19-09-2000	NONE		
US 3255648	Α	14-06-1966	NONE		
DE 10122312	A1	28-11-2002	NONE		
WO 2005079147	Α	01-09-2005	EP	1725457 A2	29-11-2006
US 2958168	Α	01-11-1960	NONE		
US 3912080	Α	14-10-1975	NONE		
US 4941307	Α	17-07-1990	CA	2004025 A1	24-10-1990

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