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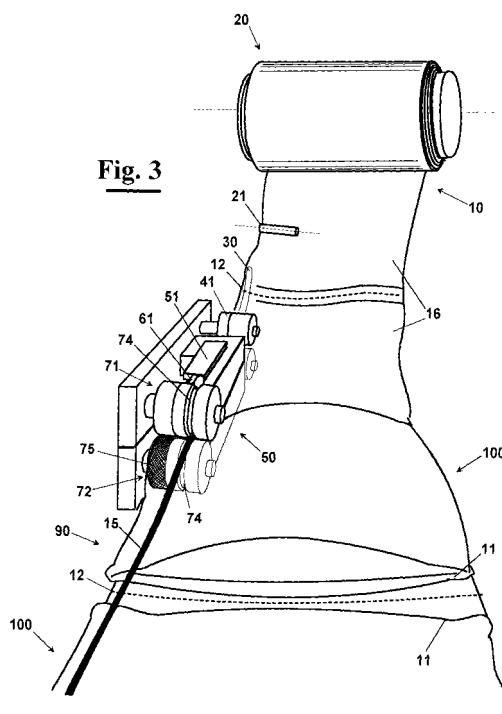
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(54) Improved machine for producing packaging cushions filled with air, or other gas, and method therefore

(57) A machine (1) for making packaging material in the form of cushions (100) of air, or other gas, comprises feeding rollers (21, 22) arranged to bring a web (10) of thermoplastic material along a longitudinal conveying direction (101). The web (10) comprises two films (10a, 10b) overlapped and can be unwound starting from a roll (20). When starting the machine (1), the web (10) is put on a longitudinal guide (30) arranged downstream of the feeding rollers (21) in the conveying direction of the web (10). The machine (1) comprises a means (50) for heating the web (10), arranged to cause a local melting the thermoplastic material along a longitudinal line (15). More in detail, the heating means (50) comprises at least one heating rod (51, 52), which in use is arranged in contact of the web (10) for causing a local softening to it. The, or each, heating rod (51, 52) comprises an electric resistance (53) coated with an outer layer (54) of a material having a low thermal transmission coefficient, for example less than about 0,5 W/mK such as polytetrafluoroethylene (PTFE), or Teflon.





EUROPEAN SEARCH REPORT

 Application Number
 EP 11 18 9492

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	US 2006/218880 A1 (SPERRY LAURENCE B [US] ET AL) 5 October 2006 (2006-10-05)	1,2,13	INV. B31D5/00
Y	* paragraph [0055] - paragraph [0007];	4,5	
A	figures 1,6,7 *	6	

X	US 2008/250753 A1 (SPERRY LAURENCE [US] ET AL) 16 October 2008 (2008-10-16)	1,2	
A	* paragraph [0084] *	6	

X	US 2006/213147 A1 (LOIBL BERND [DE]) 28 September 2006 (2006-09-28)	1,2	
A	* paragraph [0024] *	6	

Y	US 7 490 449 B1 (EIBERT RALPH [US]) 17 February 2009 (2009-02-17)	4,5	
A	* column 3, line 54 - column 5, line 9; figure 1 *	6	

A	EP 0 931 645 A2 (NOVA TEK TECHNOLOGIES LTD [IL]) 28 July 1999 (1999-07-28)	1-6,13	
	* paragraph [0031]; figure 7 *		

			TECHNICAL FIELDS SEARCHED (IPC)
			B31D
The present search report has been drawn up for all claims			
2	Place of search Munich	Date of completion of the search 16 May 2012	Examiner Bevilacqua, Vincenzo
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			



CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

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 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:

1-6, 13

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
EP 11 18 9492

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: 1-6, 13

machine for making cushions filled with air comprising moving means comprising counter rotating rollers where at least one of said rollers has a first portion made of a high friction material (rubber) and a second portion made of a metal with a knurled surface.

2. claim: 7

machine for making cushions filled with air comprising moving means comprising counter rotating rollers where at least one of said rollers has a circumferential groove, with said circumferential groove fitting, in use, said longitudinal weld bead that is made by said heating means.

3. claims: 8-10

machine for making cushions filled with air comprising moving means and level means provided between heating means and moving means.

4. claims: 11, 12

machine for making cushions filled with air comprising heating means and stretching means positioned upstream of the heating means.

5. claims: 14, 15

machine for making cushions filled with air comprising a longitudinal guide that is adapted, in use, to enter a longitudinal passageway made in said web of thermoplastic material, said longitudinal passageway defined through a plurality of transversal welding lines that separate a plurality of tubular bodies defined between said first and second sheets.

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

EP 11 18 9492

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.

16-05-2012

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