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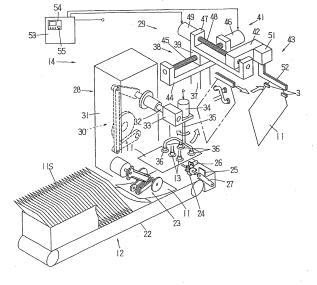
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(54) Method and apparatus for manufacturing spout-equipped bags

(57) Method and apparatus for manufacturing spout-equipped bags in which the lateral sides of a bag (11) are gripped by a pair of grippers (3, 3), the bag is conveyed along a conveying path, and a spout is attached to the bag mouth during the conveyance. Unloading suction members (13) adheres by suction to a bag in a horizontal orientation and takes out the bag (11); and then bag suction members (36) adheres to the bag (11) and changes the bag into a vertical orientation, the bag

is then rotated through a predetermined angle, making the bag mouth horizontal. A transfer chuck (52) grips the bag (11) and conveys it towards grippers (3, 3), and the bag is displaced a predetermined distance horizontally and supplied to the grippers. The horizontal displacement distance of the transfer chuck (52) is set in advance such that gripping margins on the bag (11) for the grippers (3, 3) are made substantially equal on the left and right of the bag (11).







PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 62a and/or 63 of the European Patent Convention. This report shall be considered, for the purposes of subsequent proceedings, as the European search report

EP 13 00 4668

	SIDERED TO BE RELEVANT	T p-/ :	01 4001510 4710 11 07		
Category Citation of document voice of relevant	vith indication, where appropriate, passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)		
A,D JP 3 261543 B2 (4 March 2002 (20 * the whole docu	02-03-04)	1-9,14	INV. B31B1/06 B31B1/12 B31B19/02		
US 2010/180550 A ET AL) 22 July 2 * the whole docu	1 (YAMAMOTO KAZUNORI [JP] 010 (2010-07-22) ment * 	1-9,14	ADD. B65B3/02 B65B43/12 B65B43/30 B65B61/00 B65B61/18		
			TECHNICAL FIELDS SEARCHED (IPC)		
			B31B B65H B65B B65G		
INCOMPLETE SEARCH		•]		
not comply with the EPC so that only a pa	esent application, or one or more of its claims, doer tial search (R.62a, 63) has been carried out.	s/do			
Claims searched incompletely :					
Claims not searched :					
Reason for the limitation of the search: See Sheet C					
Place of search	Date of completion of the search		Examiner		
Munich	18 January 2016	Sur	ndqvist, Stefan		
X : particularly relevant if taken alone Y : particularly relevant if combined with document of the same category	CATEGORY OF CITED DOCUMENTS T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date particularly relevant if combined with another coument of the same category echnological background con-written disclosure T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document oited in the application L: document cited for other reasons E: member of the same patent family, corresponding				
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INCOMPLETE SEARCH SHEET C

Application Number

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10	Claim(s) completely searchable: 1-9, 14				
	Claim(s) not searched: 10-13, 15-18				
	Reason for the limitation of the search:				
15	The search has been restricted to the subject-matter indicated by the applicant in his letter of 18.12.2015 filed in reply to the invitation pursuant to Rule 62a(1) EPC.				
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

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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.

18-01-2016

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
	JP 3261543 B2	04-03-2002	JP 3261543 B2 JP H0648401 A	04-03-2002 22-02-1994
15	US 2010180550 A1	22-07-2010	AT 541786 T EP 2208678 A1 ES 2381172 T3 JP 5324238 B2 JP 2010168053 A US 2010180550 A1	15-02-2012 21-07-2010 23-05-2012 23-10-2013 05-08-2010 22-07-2010
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