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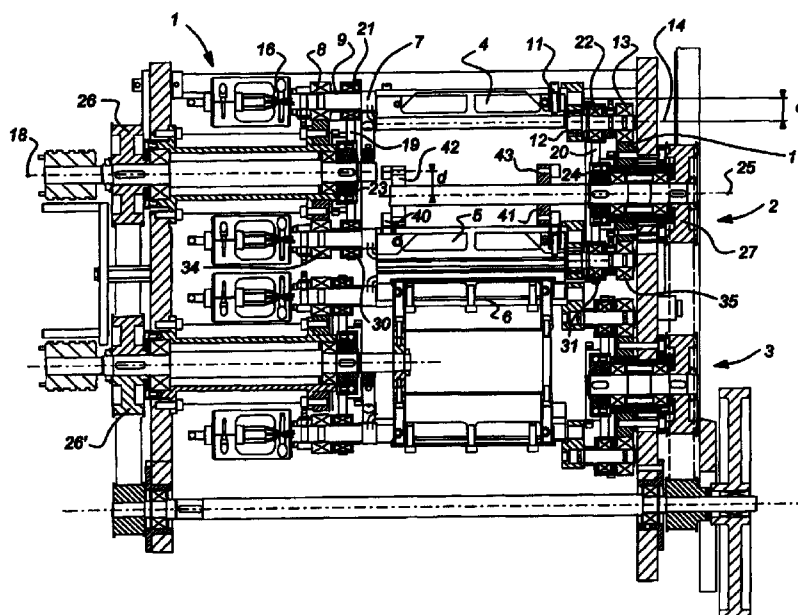
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(54) **Tool assembly for making transverse seams in packaging web**

(57) The application relates to a tool assembly (1) for use in a flow wrap packaging machine. The tools (4, 5) are provided at both ends with followers (8, 13; 34, 35), one follower (13, 35) being mounted on a bearing around a crank (12). The followers are able to roll over curved discs (16, 17) positioned eccentrically, whilst the tools are guided along guide rods (19, 20). The plain bearings (21, 30; 22, 31) of diametrically opposed tools

(4, 5) can be linked to one another so that the followers (8, 13; 34, 35) are in close abutting contact with the bearing surfaces of the curved discs (16, 17) even at high speeds of rotation. The construction according to the present invention results in a very lightweight and easily accessible tool assembly.

Fig 1



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EUROPEAN SEARCH REPORT

Application Number
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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.7)
X	EP 0 226 693 A (ROVEMA) 1 July 1987 (1987-07-01)	1,6-8	B65B51/30
A	* column 8, line 16 - column 9, line 15; figures 1,3,7 *	2	
Y	* column 11, line 17 - line 53 *	9	
Y	US 3 629 987 A (KLOPFENSTEIN) 28 December 1971 (1971-12-28) * column 6, line 1 - line 25; figure 1 *	9	
X	US 5 417 041 A (CLAMCO) 23 May 1995 (1995-05-23) * column 4, paragraph 1 * * column 5, paragraph 2; figures 4,5 *	14,15	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7) B65B B29C B26D
Place of search THE HAGUE		Date of completion of the search 6 September 2000	Examiner Claeys, H
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			

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing 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):
- ☐ 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 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:



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**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: 1-13

Guiding system for a tool assembly

2. Claims: 14-16

Hingeable joint between two tool assemblies

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

EP 00 20 0464

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
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06-09-2000

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