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(54) **Method and apparatus for collating automatically produced packages or other production units.**

(57) A collator and collating method employs a continuous or intermittently driven thin web member (3) for collating a plurality of articles (1) supplied from an automatic production machine or the like. The web is preferably coated on one side with an adhesive which removably adheres to the articles being collated, permitting the articles to be secured in any desired collated pattern during handling and ship-

ping while allowing easy removal after shipment. The web may be cut into desired lengths with the collated articles adhered thereto for stacking one on top of another during shipment or storage. In alternate embodiments, openings or pockets are formed in the web, which may or may not also be adhesively coated, for locating the collated articles in desired patterns.

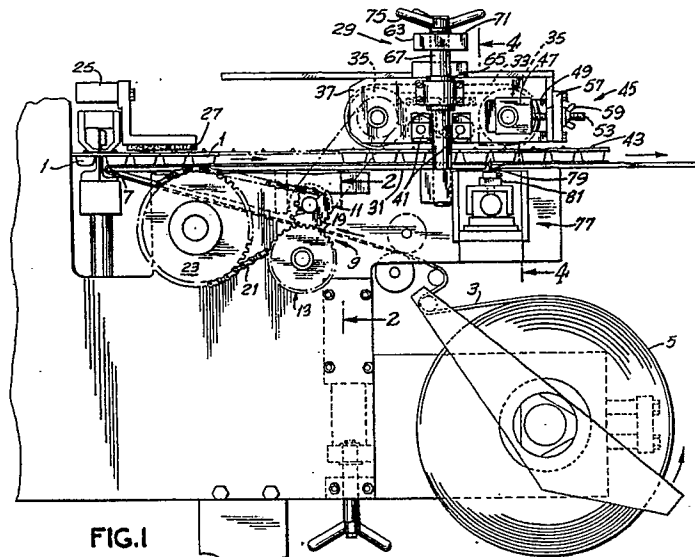


FIG.1

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EUROPEAN SEARCH REPORT

Application Number

EP 90 31 1184

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. 5)
X	US-A-2 813 033 (SCHNEIDER) * Column 1, lines 15-23, 34-39, 46-49; column 2, lines 32-64; figure 1 *	1, 2, 8-10	B 65 B 15/04
Y	---	3, 4, 12, 14, 19, 21	
Y	FR-A-1 550 681 (GENERAL BINDING) * Page 2, left-hand column, line 43 - page 3, left-hand column, line 35; figures 1, 2 *	3, 4, 12, 14	
A	* Page 3, left-hand column, line 36 - page 3, right-hand column, line 5; figure 3 *	20	
Y	---		
Y	DE-B-1 039 444 (WOLFF et al.) * Column 2, line 29 - column 4, line 3; figure 1 *	19, 21	
X	---		
X	US-A-3 256 784 (BOOTH) * Column 2, lines 27-46; column 3, lines 26-42; column 5, line 12 - column 6, line 5; figures 1, 7, 9, 11 *	1, 3, 4, 8-10, 12, 14, 15	TECHNICAL FIELDS SEARCHED (Int. Cl. 5)
	-----		B 65 B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 22-04-1991	Examiner SMOLDERS R.C.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			



CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees 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 claims:
- ☐ 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.

X LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement 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.
- ☒ 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: points 1., 2. and 4.
- ☐ None of the further search fees has 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

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

namely:

- 1) Claims 2,8,10,11: A method and system for collating a plurality of articles on a moving web including the step of cutting the web into individual sheets by transverse cutting means.
- 2) Claims 3,4,12-15: Coating a collating web with an adhesive and pressing each article onto the adhesive-coated collating web by pressing means.
- 3) Claims 5-7,16-18: Forming locating positions in a collating web by forming means.
- 4) Claims 19-28: Means for drawing a collating web.

After a first search it is obvious that the method for collating a plurality of articles of claim 1 and the collating system of claim 9 belong to the state of the art (see search report).
The depending claims 2,3,5,8,10,12,16 and 19 become independent, i.e. they are directly referring to the prior art.

Because the aforementioned groups of claims lack a common inventive concept, each of these groups has to be considered as an independent invention/subject (lack of unity of invention a posteriori).
Besides claims 1 and 9, the invention/subject first mentioned in the claims (i.e. subject 1) has been searched.