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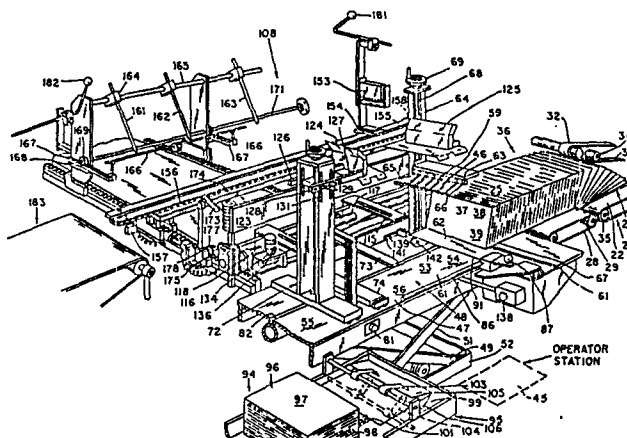
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**EUROPEAN PATENT APPLICATION**(21) Application number: **84309009.3**(51) Int. Cl.: **B 65 B 25/14**(22) Date of filing: **21.12.84**(30) Priority: **27.02.84 US 583640**(43) Date of publication of application: **11.09.85**  
**Bulletin 85/37**(84) Designated Contracting States: **DE FR GB IT**(88) Date of deferred publication of search  
report: **30.07.86 Bulletin 86/31**(71) Applicant: **Labombarde, Raymond André, South Daniel Webster Highway P.O. Box 787, Nashua, New Hampshire 03060 (US)**  
Applicant: **THE INTERNATIONAL PAPER BOX MACHINE COMPANY, 90 Northeastern Boulevard P.O. Box 787, Nashua New Hampshire 03061 (US)**(72) Inventor: **Labombarde, Raymond André, Daniel Webster Highway South, Nashua State of New Hampshire 03061 (US)**  
Inventor: **Tremblay, Robert Arthur, 22 Hillside Drive Hollis, State of New Hampshire (US)**(74) Representative: **Funge, Harry et al, M'CAW & CO. 41-51 Royal Exchange Cross Street, Manchester M2 7BD (GB)**(54) **Apparatus and method for packaging box flats.**

(57) An apparatus and method by which a single operator, at a single station (45) can pack pre-counted slugs (25, 26) of flat folded cartons, or trays (23) in one or more layers, in corrugated cases (27) for discharge to a case taper (183) several times faster than with manual packing by several operators. The "flats" (23) are advanced in a longitudinal path (31) on a secondary apron (28) of a stacker (21), erect on one edge (37), pre-counted and divided into slugs (25, 26), so that the single operator can slide each slug (25, 26) longitudinally past a one-way back stop (46) onto a transfer table (47). The slug (25, 26) may be turned on its longitudinal axis by the operator for inspection and then compressed longitudinally by a ram (73, 74) against the back stop (46). The operator has already been presented with a single, flat, tubular case (27), from a stack (97) of such cases, with the leading flaps (147) folded back, and has manually erected the case (27) and inserted it in a case gripper (107) preferably poised above the table (47), thereby closing the minor bottom closure flaps (143, 144). A start button (138) brings the case gripper (107) down to the level (70) of the transfer table (47) so that the operator can push the compressed slug (25, 26) laterally into the open case (119), resting on its side wall in the case gripper (107). The case (119) is automatically lowered to receive the next slug (26) and when full, is turned on a longitudinal axis through 90° onto its bottom and

discharged to a case taper (183) while the case gripper (107) returns to its original position above the level (70) of the transfer table (47).

**EP 0 154 093 A3**



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# EUROPEAN SEARCH REPORT

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Application number

EP 84 30 9009

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. 4)
A	US-A-4 070 960 (DILUIISO)  * Whole document *	1,4,5, 16,19	B 65 B 25/14
A	US-A-3 399 788 (HEYWOOD) * Column 4, line 61 - column 5, line 21; figures 15-18 *	1	
A	DE-A-2 406 012 (JAGENBERG) * Whole document *	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
			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 04-04-1986	Examiner CLAEYS H.C.M.
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	