

Title (en)  
DEVICE FOR UNFOLDING TUBES LYING FLAT

Publication  
**EP 0328876 A3 19900425 (DE)**

Application  
**EP 89100564 A 19890113**

Priority  
DE 3804791 A 19880216

Abstract (en)  
[origin: EP0328876A2] A device is described for unfolding paper tubes (2) lying flat and having a longitudinal sealing seam (4), which are to be made into packages for liquids, comprising a transport means for seizing the tube (2) lying flat and guiding it into an axially aligned position between a mandrel and an ejector. <?>So that the tube can be held open reliably in a high work cycle to give a shape having a square cross-section, the longitudinal sealing seam always coming to lie at a defined point, the invention provides that the transport means comprises a distributing rocker having sheet metal holding plate (51) and centring web (56) which can be swivelled approximately about a semi-circle, the folding stop (10) which lies opposite the centring web (56) and has receiving faces arranged in a V-shape being provided in a stationary manner, that swivel levers (13) having vacuum openings (24) are provided swivellably on both sides next to the folding stop (10) in such a way that two bearing planes (14) in each case bounding a swivel lever (13) hold open a V-shaped roof corresponding to two side faces (72) of the unfolded tube (2) lying next to one another, and that the ejector is provided at its front with a square plate, has a stroke which is greater than the length of the swivel levers (13) and which can be moved back and forth along the bearing planes (14) which have been set in a V-shape, in a manner which is controlled synchronously with respect to the swivel movement of the distributing rocker (51, 56, 57). <IMAGE>

IPC 1-7  
**B31B 5/74**

IPC 8 full level  
**B65B 43/32** (2006.01); **B31B 5/74** (2006.01); **B31B 5/78** (2006.01); **B31B 35/74** (2006.01); **B65D 8/04** (2006.01)

CPC (source: EP KR US)  
**B31B 50/00** (2017.07 - EP US); **B31B 50/005** (2017.07 - EP KR US); **B65B 43/32** (2013.01 - KR); **B31B 50/78** (2017.07 - EP US); **B31B 2100/00** (2017.07 - EP US); **B31B 2120/30** (2017.07 - EP US)

Citation (search report)  
• [A] DE 1124799 B 19620301 - KARLSRUHE AUGSBURG IWEKA  
• [A] EP 0241916 A2 19871021 - TETRA PAK AB [SE]  
• [A] US 2357535 A 19440905 - MONROE CHARLES Z  
• [A] US 4530692 A 19850723 - WILLIAMS DONALD H [US]

Designated contracting state (EPC)  
AT BE CH DE ES FR GB GR IT LI NL SE

DOCDB simple family (publication)  
**EP 0328876 A2 19890823; EP 0328876 A3 19900425; EP 0328876 B1 19931013**; AR 243115 A1 19930730; AT E95757 T1 19931015; AU 2767789 A 19890817; AU 613690 B2 19910808; BR 8900667 A 19891010; CA 1301518 C 19920526; CN 1015880 B 19920318; CN 1036529 A 19891025; DD 283361 A5 19901010; DE 3804791 A1 19890824; DE 3804791 C2 19931007; DE 58905862 D1 19931118; DK 70089 A 19890817; DK 70089 D0 19890215; ES 2045198 T3 19940116; FI 87755 B 19921113; FI 87755 C 19930225; FI 890095 A0 19890109; FI 890095 A 19890817; JP H01254517 A 19891011; KR 890012790 A 19890919; NO 174188 B 19931220; NO 174188 C 19940330; NO 890646 D0 19890215; NO 890646 L 19890817; RU 1807947 C 19930407; US 4994011 A 19910219; YU 24089 A 19910228; YU 47300 B 19950131

DOCDB simple family (application)  
**EP 89100564 A 19890113**; AR 31307689 A 19890126; AT 89100564 T 19890113; AU 2767789 A 19890103; BR 8900667 A 19890215; CA 588517 A 19890118; CN 89100818 A 19890216; DD 32568689 A 19890210; DE 3804791 A 19880216; DE 58905862 T 19890113; DK 70089 A 19890215; ES 89100564 T 19890113; FI 890095 A 19890109; JP 3008889 A 19890210; KR 890001800 A 19890216; NO 890646 A 19890215; SU 4613349 A 19890127; US 30977889 A 19890209; YU 24089 A 19890202