

Title (en)  
SYSTEMS AND METHODS FOR MAKING ENVELOPES AND/OR OTHER PROTECTIVE PRODUCTS WITH EXPANDED PAPER CUSHIONING

Title (de)  
SYSTEME UND VERFAHREN ZUR HERSTELLUNG VON UMSCHLÄGEN UND/ODER ANDEREN SCHUTZPRODUKTEN MIT POLSTERUNG  
AUS GESCHÄUMTEM PAPIER

Title (fr)  
SYSTÈMES ET PROCÉDÉS DE FABRICATION D'ENVELOPPES ET/OU D'AUTRES PRODUITS DE PROTECTION AVEC REMBOURRAGE EN  
PAPIER DÉPLOYÉ

Publication  
**EP 4110708 A4 20240515 (EN)**

Application  
**EP 21761628 A 20210227**

Priority  
• US 202062982662 P 20200227  
• US 202016870195 A 20200508  
• US 2021020131 W 20210227

Abstract (en)  
[origin: WO2021174150A1] According to some illustrative embodiments, a system and method is provided that includes, e.g., means for continuously conveying an assembly of layered sheets including a first paper sheet, at least one expanded sheet and a second paper sheet in a conveying flow between, e.g., a rotary mandrel or member at an upstream position in a direction of conveyance and a rotary die crushing and cutting tool, with said rotary mandrel or member and said rotary die crushing and cutting tool maintaining the at least one expanded sheet in an expanded state, said rotary tool having a crushing component that crushes a portion of the at least one expanded sheet such as to form a flap forming region of an envelope and a cutting component that cuts the assembly of layered sheets such as to separate individual envelope units.

IPC 8 full level  
**B65D 81/03** (2006.01); **B31B 70/00** (2017.01); **B31B 70/10** (2017.01); **B31B 70/16** (2017.01); **B31B 70/62** (2017.01); **B31B 70/64** (2017.01); **B31B 70/88** (2017.01); **B31D 1/00** (2017.01); **B31D 3/02** (2006.01); **B31D 5/00** (2017.01); **B31F 1/07** (2006.01); **B31F 1/22** (2006.01); **B31F 1/28** (2006.01); **B31F 5/04** (2006.01); **B32B 3/04** (2006.01); **B32B 3/26** (2006.01); **B32B 3/30** (2006.01); **B32B 29/00** (2006.01); **B43M 5/04** (2006.01); **B31B 155/00** (2017.01); **B31B 160/10** (2017.01); **B31B 170/20** (2017.01); **B31B 170/30** (2017.01)

CPC (source: EP)  
**B31B 70/10** (2017.08); **B31B 70/16** (2017.08); **B31B 70/256** (2017.08); **B31B 70/62** (2017.08); **B31B 70/645** (2017.08); **B31B 70/88** (2017.08); **B31D 3/0284** (2013.01); **B31D 5/006** (2013.01); **B31D 5/0065** (2013.01); **B31F 1/07** (2013.01); **B31F 5/04** (2013.01); **B32B 3/28** (2013.01); **B32B 3/30** (2013.01); **B32B 7/12** (2013.01); **B32B 29/005** (2013.01); **B31B 70/006** (2017.08); **B31B 2155/002** (2017.08); **B31B 2160/10** (2017.08); **B31B 2170/20** (2017.08); **B31B 2170/30** (2017.08); **B31D 2205/0023** (2013.01); **B31D 2205/0047** (2013.01); **B31D 2205/0058** (2013.01); **B31D 2205/0064** (2013.01); **B31F 1/225** (2013.01); **B31F 1/28** (2013.01); **B31F 2201/0756** (2013.01); **B31F 2201/0769** (2013.01); **B32B 2250/02** (2013.01); **B32B 2250/04** (2013.01); **B32B 2250/26** (2013.01); **B32B 2307/732** (2013.01); **B32B 2439/02** (2013.01); **B32B 2571/00** (2013.01)

Citation (search report)  
• [XYI] CN 110802876 A 20200218 - BETA SHENZHEN PACKAGE PRODUCTS CO LTD  
• [A] JP 3146559 U 20081120  
• [Y] DE 2817794 A1 19781026 - JIFFY PACKAGING CO LTD  
• [Y] WO 9624540 A1 19960815 - GOODRICH DAVID P [US]  
• [A] JP 2010208310 A 20100924 - FUJII CASE CO LTD  
• [A] WO 9601731 A1 19960125 - JIFFY PACKAGING CO LTD [GB], et al  
• See also references of WO 2021174150A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2021174150 A1 20210902**; EP 4110708 A1 20230104; EP 4110708 A4 20240515

DOCDB simple family (application)  
**US 2021020131 W 20210227**; EP 21761628 A 20210227