

Title (en)

Apparatus for producing individual rolls of packing material

Title (de)

Vorrichtung zur Herstellung von individuellen Rollen für Verpackungsmaterialien

Title (fr)

Appareil pour la production de rouleaux séparés de matériau d'emballage

Publication

EP 0978372 A2 20000209 (EN)

Application

EP 99115817 A 19940912

Priority

- EP 94928574 A 19940912
- US 11947293 A 19930910
- US 25506294 A 19940607

Abstract (en)

Apparatus for expanding slit sheet material into a cushioning material includes expander rolls (702, 704) and drive rolls (706, 708), at least one of the expander rolls having means on its surface for gripping the slits, and being run at a higher rotational speed than the drive rolls. <IMAGE>

IPC 1-7

B31D 5/00

IPC 8 full level

B65B 25/14 (2006.01); **B31C 5/00** (2006.01); **B31D 5/00** (2006.01); **B65B 63/04** (2006.01); **B65D 81/03** (2006.01); **B65D 81/09** (2006.01)

CPC (source: EP KR)

B21D 31/04 (2013.01 - KR); **B31C 5/00** (2013.01 - EP); **B31D 5/00** (2013.01 - KR); **B31D 5/006** (2013.01 - EP); **B31D 5/0065** (2013.01 - EP); **B65D 81/03** (2013.01 - KR); **B65D 81/09** (2013.01 - EP); **B31D 2205/0047** (2013.01 - EP); **B31D 2205/007** (2013.01 - EP)

Cited by

US11207860B2; CN113415494A; AU2015346110B2; CN107257733A; US2018079161A1; US11260615B2; US11504937B2; US11351750B2; WO2016137740A1; WO2017039792A1; US11059256B2; US11787145B2; WO2016077728A1; US11649128B2; WO2022256174A3

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 9507225 A2 19950316; **WO 9507225 A3 19950406**; AT E190948 T1 20000415; AT E350215 T1 20070115; AU 7796094 A 19950327; BR 9407529 A 19970826; CA 2168979 A1 19950316; CA 2168979 C 20081125; CN 1134687 A 19961030; CZ 62396 A3 19970212; DE 69423634 D1 20000427; DE 69423634 T2 20001123; DE 69434910 D1 20070215; DE 69434910 T2 20070830; DK 0978372 T3 20070514; EP 0717714 A1 19960626; EP 0717714 B1 20000322; EP 0978372 A2 20000209; EP 0978372 A3 20020508; EP 0978372 B1 20070103; ES 2146257 T3 20000801; ES 2281946 T3 20071001; FI 961088 A0 19960308; FI 961088 A 19960308; HK 1026175 A1 20001208; HU 9600584 D0 19960528; JP 3420770 B2 20030630; JP H09502410 A 19970311; KR 960704782 A 19961009; NO 960968 D0 19960308; NO 960968 L 19960502; PL 313490 A1 19960708; TW 307713 B 19970611

DOCDB simple family (application)

US 9410209 W 19940912; AT 94928574 T 19940912; AT 99115817 T 19940912; AU 7796094 A 19940912; BR 9407529 A 19940912; CA 2168979 A 19940912; CN 94194068 A 19940912; CZ 62396 A 19940912; DE 69423634 T 19940912; DE 69434910 T 19940912; DK 99115817 T 19940912; EP 94928574 A 19940912; EP 99115817 A 19940912; ES 94928574 T 19940912; ES 99115817 T 19940912; FI 961088 A 19960308; HK 00104599 A 20000725; HU 9600584 A 19940912; JP 50881495 A 19940912; KR 19960701227 A 19960311; NO 960968 A 19960308; PL 31349094 A 19940912; TW 83109947 A 19941028