

Title (en)  
Unpacking device and method

Title (de)  
Auspakvorrichtung und Verfahren

Title (fr)  
Dispositif pour déballage et procédé

Publication  
**EP 2592007 A1 20130515 (EN)**

Application  
**EP 12186800 A 20121001**

Priority  
JP 2011244423 A 20111108

Abstract (en)

An unpacking device (100) unpacks a package and takes out contents. The package includes a primary package (3) formed by packing the contents with a primary packing material and a secondary package (5) formed by packing the primary package (3) with a secondary packing material. The secondary packing material of the secondary package (5) has an incision (8). The unpacking device (100) includes a robot (10), and a control unit (110, 120) for controlling the robot (10) such that the robot (10) takes out the primary package (3) through the incision (8) of the secondary packing material and then takes out the contents from the primary package (3).

IPC 8 full level  
**B65B 69/00** (2006.01)

CPC (source: EP US)  
**B65B 69/00** (2013.01 - US); **B65B 69/0008** (2013.01 - EP US); **B65B 69/0033** (2013.01 - EP US); **B65B 61/005** (2013.01 - EP US);  
**B65B 2220/18** (2013.01 - EP US)

Citation (applicant)

- JP 2002002638 A 20020109 - TCM CORP
- JP 2002249116 A 20020903 - MURATA MACHINERY LTD

Citation (search report)  

- [IY] JP 2005047571 A 20050224 - JGC CORP, et al
- [Y] JP H1191746 A 19990406 - SNOW BRAND MILK PROD CO LTD, et al
- [Y] JP H0385238 A 19910410 - SHIMIZU CONSTRUCTION CO LTD, et al
- [Y] US 2008159830 A1 20080703 - HAUGSTAD ROY INGE [NO]
- [Y] WO 2011070037 A2 20110616 - SHEEDY THOMAS [IE], et al
- [Y] EP 1334931 A1 20030813 - ITW GEMA AG [CH]
- [A] JP S619274 A 19860116 - MAKI MFG CO LTD
- [A] JP 2007204048 A 20070816 - GUNZE KK
- [Y] EP 1810925 A1 20070725 - METSO PAPER AG [CH]

Cited by  
EP4112240A1; EP4112238A1

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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 2592007 A1 20130515; EP 2592007 B1 20151230**; BR 102012027452 A2 20150623; CN 103086028 A 20130508;  
CN 103086028 B 20150909; JP 2013100118 A 20130523; JP 5413436 B2 20140212; US 2013125517 A1 20130523

DOCDB simple family (application)  
**EP 12186800 A 20121001**; BR 102012027452 A 20121025; CN 201210435067 A 20121105; JP 2011244423 A 20111108;  
US 201213669616 A 20121106