

Title (en)

Method and apparatus for removing waste windows from web carton material

Title (de)

Verfahren sowie Vorrichtung zum Entfernen von Abfallfenstern aus Karbonbahnen

Title (fr)

Méthode ainsi que dispositif pour enlever d'une nappe en carton des chutes en forme de fenêtre

Publication

**EP 0878277 A3 19991103 (EN)**

Application

**EP 98303745 A 19980513**

Priority

CA 2205622 A 19970516

Abstract (en)

[origin: EP0878277A2] A method and apparatus are provided for removing waste die-cut windows from continuously moving carton board web material. A pair of juxtaposed parallel cylinders (12, 16) with their axes disposed transverse to the direction of web movement accept the moving web and knock-out the die-cut windows by virtue of a protuberance (20) on one cylinder mating with a recess (22) on the other, the protuberances and recesses matching each other and also matching the position of the die-cut window. In a variant, the non-male cylinder has an outer layer of substantially uniform thickness and is made of resilient polymeric material adapted to be elastically distorted sufficiently to receive the outward protrusion along with the waste window. <IMAGE>

IPC 1-7

**B26D 7/18**

IPC 8 full level

**B26D 7/18** (2006.01); **B31B 1/24** (2006.01); **B31B 50/83** (2017.01)

CPC (source: EP)

**B26D 7/1818** (2013.01)

Citation (search report)

- [XA] WO 9104139 A1 19910404 - MARQUIP INC [US]
- [X] US 3404607 A 19681008 - FEICK PAUL A, et al
- [XA] GB 2110148 A 19830615 - ISOWA INDUSTRY CO
- [X] GB 1122708 A 19680807 - KIRBY S ENGINEERS LTD
- [XA] GB 969753 A 19640916 - WILLIAM FRANK GOLDING
- [A] EP 0737554 A2 19961016 - BOBST SA [CH]
- [A] GB 2024081 A 19800109 - MITSUBISHI HEAVY IND LTD

Cited by

DE102017204595A1; DE102017204598A1; DE102017204596A1; DE102017204596B4; DE102018219715B3; DE102018219712A1; WO2017089423A1; CN104325498A; DE10300234B3; DE102015223095A1; DE10156664A1; DE10156664B4; DE102015223110A1; DE102017204598B4; CN103213307A; DE102017204595B4; US11993879B2; DE102016223225A1; WO20172322A3; WO20170511A3; DE102016223223A1; US7608033B2; DE102022104069A1; WO2005077621A1; WO2017089422A2; WO2017089421A2; US10442103B2; US10543674B2; DE102016226167A1; DE102016226175A1; DE102016226175B4; DE102018219712B4; US11878322B2

Designated contracting state (EPC)

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

DOCDB simple family (publication)

**EP 0878277 A2 19981118; EP 0878277 A3 19991103; CA 2205622 A1 19981116; JP H1110752 A 19990119**

DOCDB simple family (application)

**EP 98303745 A 19980513; CA 2205622 A 19970516; JP 13501598 A 19980518**