

Title (en)

Method and apparatus for the perforation of flat material blanks

Title (de)

Verfahren und Vorrichtung zum Perforieren von Zuschnitten aus Flachmaterial

Title (fr)

Méthode ainsi que dispositif pour la perforation de pièces obtenues d'un matériau plat

Publication

EP 0864404 B1 20031217 (DE)

Application

EP 98103778 A 19980304

Priority

DE 19710350 A 19970313

Abstract (en)

[origin: EP0864404A2] The cut-out sheets (9) of flat material are conveyed by a continuous conveyor (2) into the operating range of at least one group of needles and removed from the perforating needles by at least one holder. The cut-out sheets are held on the conveyor by a holding-down belt (10) moved together with the conveyor and permeable by the perforating needles. The holding-down belt moves in synchronisation with the cut-out pieces through the operating range of at least one needle-roller (7). A guide roller (15,16) is positioned in front of the first and at least behind the last, needle roller.

IPC 1-7

B26F 1/24

IPC 8 full level

B26F 1/24 (2006.01)

CPC (source: EP US)

B26F 1/24 (2013.01 - EP US); **Y10T 83/0481** (2015.04 - EP US); **Y10T 83/6604** (2015.04 - EP US); **Y10T 83/6633** (2015.04 - EP US)

Cited by

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Designated contracting state (EPC)

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EP 0864404 A2 19980916; **EP 0864404 A3 19990506**; **EP 0864404 B1 20031217**; AT E256538 T1 20040115; BR 9800889 A 19990921; DE 19710350 A1 19980917; DE 19710350 C2 19990819; DE 59810430 D1 20040129; JP H10309698 A 19981124; US 6152001 A 20001128; ZA 981917 B 19980908

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EP 98103778 A 19980304; AT 98103778 T 19980304; BR 9800889 A 19980313; DE 19710350 A 19970313; DE 59810430 T 19980304; JP 5764498 A 19980310; US 3732598 A 19980309; ZA 981917 A 19980306