

Title (en)
Packaging apparatus for bottles

Title (de)
Vorrichtung zum Verpacken von Flaschen

Title (fr)
Dispositif d'emballage de bouteilles

Publication
EP 1419968 B2 20120530 (EN)

Application
EP 03425596 A 20030915

Priority
IT MO20020335 A 20021118

Abstract (en)
[origin: EP1419968A1] The apparatus comprises a mobile conveyor plane (10) for a plurality of parallel rows of upright bottles, means (20) for gripping and rotating some of the bottles by 180 DEG about at east one horizontal axis (x), and for aligning the upturned bottles with upright bottles on the mobile conveyor plane (10) in at least a parallel direction to the mobile conveyor plane (10); the apparatus also includes means for gripping and moving ordered groups of bottles formed by rows consisting of upright and upturned bottles. <IMAGE>

IPC 8 full level
B65B 21/02 (2006.01); **B65B 21/18** (2006.01)

CPC (source: EP)
B65B 21/025 (2013.01); **B65B 21/18** (2013.01)

Citation (opposition)
Opponent :

- US 3443355 A 19690513 - BIRRELL STEWART H
- US 3702524 A 19721114 - JOHNSON LLOYD D, et al
- JP H09142411 A 19970603 - SHIBUYA KOGYO CO LTD

Cited by
CN105836183A

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 1419968 A1 20040519; EP 1419968 B1 20080123; EP 1419968 B2 20120530; AT E384665 T1 20080215; DE 60318805 D1 20080313; DE 60318805 T2 20090122; DE 60318805 T3 20120920; ES 2298494 T3 20080516; ES 2298494 T5 20120802; IT MO20020335 A0 20021118; IT MO20020335 A1 20040519

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EP 03425596 A 20030915; AT 03425596 T 20030915; DE 60318805 T 20030915; ES 03425596 T 20030915; IT MO20020335 A 20021118