

Title (en)

DEVICE FOR TURNING OVER A FLATTENING ELEMENT, AND FLATTENING ELEMENT ENGAGING WITH SAID DEVICE

Title (de)

VORRICHTUNG ZUM UMWENDEN EINES RICHTELEMENTS UND RICHTELEMENT, DAS MIT DER VORRICHTUNG ZUSAMMENWIRKEN KANN

Title (fr)

DISPOSITIF DE RETOURNEMENT D'UN EQUIPAGE DE PLANAGE, ET EQUIPAGE DE PLANAGE ADAPTE A COOPERER AVEC LEDIT DISPOSITIF

Publication

EP 2408576 B1 20130717 (FR)

Application

EP 09779331 A 20090422

Priority

- EP 2009054764 W 20090422
- EP 09290208 A 20090320
- EP 09779331 A 20090422

Abstract (en)

[origin: WO2010105697A1] The invention relates to a device for turning over a flattening element (20), the flattening element comprising a plurality of cylinders (43) spaced apart from each other and rotatably mounted on a frame (44) and means (22) for securing the same to the turning-over device (10), the turning-over device being characterised in that it comprises: two uprights (12) extending vertically from a base (14), supporting and securing means (16) for the flattening element engaging with the securing means (22) of the flattening element (20), the supporting and securing means (16) being arranged between the uprights (12), means (19) for rotating the supporting and securing means (16) about a horizontal axis between a first position in which, when the flattening element (20) is connected to the turning-over device (10), the cylinders (43) of the flattening element (20) are oriented downward, and a second position in which, when the flattening element (20) is connected to the turning-over device (10), the cylinders (43) of the flattening element (20) are oriented upward, and driving means (18) for vertically translating the supporting and securing means (16), each translation means (18) being connected to one of the uprights (12).

IPC 8 full level

B21D 1/02 (2006.01); **B21D 1/14** (2006.01); **B21D 37/14** (2006.01)

CPC (source: EP KR US)

B21D 1/02 (2013.01 - EP KR US); **B21D 1/14** (2013.01 - EP KR US); **B21D 37/14** (2013.01 - EP US); **Y10T 29/49991** (2015.01 - EP US); **Y10T 29/5184** (2015.01 - EP US)

Designated contracting state (EPC)

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 SE SI SK TR

DOCDB simple family (publication)

WO 2010105697 A1 20100923; CN 102361705 A 20120222; CN 102361705 B 20140716; DK 2408576 T3 20130916; EP 2408576 A1 20120125; EP 2408576 B1 20130717; EP 2408576 B2 20170315; ES 2431306 T3 20131125; ES 2431306 T5 20170803; JP 2012520771 A 20120910; JP 5542907 B2 20140709; KR 101545042 B1 20150817; KR 20110128879 A 20111130; PL 2408576 T3 20131231; RU 2011142307 A 20130427; RU 2492953 C2 20130920; UA 102015 C2 20130527; US 2012096917 A1 20120426; US 8677798 B2 20140325

DOCDB simple family (application)

EP 2009054764 W 20090422; CN 200980158187 A 20090422; DK 09779331 T 20090422; EP 09779331 A 20090422; ES 09779331 T 20090422; JP 2012500085 A 20090422; KR 20117021810 A 20090422; PL 09779331 T 20090422; RU 2011142307 A 20090422; UA A201111152 A 20090422; US 200913257643 A 20090422