Title (en)

SINGULATING AND ORIENTING OBJECTS FOR FEEDING

Title (de)

VEREINZELUNG UND AUSRICHTUNG VON GEGENSTÄNDEN ZUM ZUFÜHREN

Title (fr)

SÉPARATION ET ORIENTATION D'OBJETS DESTINÉS À ÊTRE ALIMENTÉS

Publication

EP 3774606 A4 20220105 (EN)

Application

EP 19786079 A 20190415

Priority

- US 201862657068 P 20180413
- CA 2019050462 W 20190415

Abstract (en)

[origin: WO2019195946A1] Objects in a stream in a duct are singulated and oriented by rotating at least some so that the orientations of all aligned. In one arrangement a slot is provided in the singulation duct into which the shank falls while the head remains in the singulation duct. In another arrangement there is provided a buffering device and a transfer member for transferring the singulated oriented objects from the buffering device to an operating location. In another arrangement a first path changes the orientation of relative to the second path. The objects can be fed from a singulation duct to a supply duct having an exit mouth lying on a rotation axis of the singulation duct.

IPC 8 full level

B65G 47/24 (2006.01); **B23P 19/00** (2006.01); **B65G 47/14** (2006.01)

CPC (source: CN EP KR)

B23P 19/002 (2013.01 - EP KR); **B23P 19/003** (2013.01 - EP KR); **B65B 15/04** (2013.01 - CN); **B65G 43/00** (2013.01 - CN); **B65G 47/1435** (2013.01 - CN); **B65G 47/1464** (2013.01 - EP KR); **B65G 47/24** (2013.01 - CN); **B65G 47/256** (2013.01 - EP KR)

Citation (search report)

- [XAI] DE 2320386 A1 19741107 - SPAHN KLAUS DIPL ING
- [XAI] US 2018029086 A1 20180201 - PRYSTUPA DAVID [CA], et al
- [A] US 4526269 A 19850702 - HENDERSON JERALD M [US], et al
- [A] US 7861846 B1 20110104 - SALDITCH IAN ERIC [US], et al
- [A] US 5454465 A 19951003 - BARANOWSKI JOHN [US]
- See also references of WO 2019195946A1

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

DOCDB simple family (publication)

WO 2019195946 A1 20191017; AR 114783 A1 20201014; BR 112020020692 A2 20210112; CA 3120440 A1 20191017; CN 112135784 A 20201225; CN 112135784 B 20230718; CN 116729950 A 20230912; EP 3774606 A1 20210217; EP 3774606 A4 20220105; JP 2021519687 A 20210812; JP 2024088735 A 20240702; KR 20200144122 A 20201228; MX 2020010600 A 20201020; TW 201943629 A 20191116

DOCDB simple family (application)

CA 2019050462 W 20190415; AR P190100989 A 20190415; BR 112020020692 A 20190415; CA 3120440 A 20190415; CN 201980033663 A 20190415; CN 202310785263 A 20190415; EP 19786079 A 20190415; JP 2020553597 A 20190415; JP 2024061699 A 20240405; KR 20207032792 A 20190415; MX 2020010600 A 20190415; TW 108113086 A 20190415