

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)

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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)

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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