

Title (en)

Apparatus and system for the external cleaning of containers for loose substances

Title (de)

Vorrichtung und System zur Außenreinigung von Behältern für lose Stoffe

Title (fr)

Appareil et système pour le nettoyage extérieur de contenants de substances en vrac

Publication

EP 2821149 A1 20150107 (EN)

Application

EP 13175003 A 20130704

Priority

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Abstract (en)

An apparatus (10) and a system for the external cleaning of containers (12) for loose substances comprise a table (13) supporting the containers (12) having a spraying zone (14) provided with a plurality of openings, a plurality of spray nozzles (16) and a hopper (17) for collecting a cleaning fluid, dirt or pollutants, in a position below the support table (13). The apparatus and the cleaning stations (10) of the system comprise air sucking side walls (23) arranged peripherally on the support table (13) for the containers (12). A single device (11) for grasping the containers (12) transfers the dirty containers (12) to a spraying zone (14) of the apparatus, or of the system, respectively transfers the clean containers from the spraying zone (14) to a deposition point.

IPC 8 full level

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B08B 9/42 (2013.01); **B08B 15/02** (2013.01)

Citation (search report)

- [Y] US 2007056612 A1 20070315 - ROBERT MAXIME [CA], et al
- [Y] DE 4332857 A1 19940421 - MITSUBISHI ELECTRIC CORP [JP]
- [Y] DE 3014788 A1 19811022 - TILL HEINZ, et al
- [Y] EP 2524738 A1 20121121 - CLESON CO LTD [KR]
- [A] FR 2829714 A1 20030321 - ITALINNOVA SAS DE GRANDI RENE [IT]
- [A] DE 3715305 A1 19881201 - SILBERZAHN HELMUT [DE]
- [A] DE 9114761 U1 19920402
- [A] FR 2978685 A1 20130208 - ASCODERO PRODUCTIQUE [FR]

Cited by

CN109513649A; CN110732518A; CN110447318A; US11723328B2; CN108745997A; CN105013730A; CN105747995A; CN106269620A;
CN109731819A; CN104959335A; CN106423922A; JP2021195216A; US11951610B2; US11975442B2

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