

Title (en)
DEVICE FOR REMOVING PARTICLES FROM A MATERIAL IN MOVEMENT

Title (de)
VORRICHTUNG ZUR ENTFERNUNG VON PARTIKELN VON EINEM MATERIAL IN BEWEGUNG

Title (fr)
DISPOSITIF D'ÉLIMINATION DE PARTICULES D'UN MATÉRIAU EN MOUVEMENT

Publication
EP 3278878 A1 20180207 (EN)

Application
EP 16183005 A 20160805

Priority
EP 16183005 A 20160805

Abstract (en)
The present invention concerns a device (1) for removing particles from a material in movement, wherein said particles comprise or are made of a substance that is attracted by a magnet. In a practical embodiment, the device (1) is used to remove iron particles from a stream of flour, for example flour produced in a mill and being dropped by way of gravity through the device (1) of the invention. The device (1) comprises a trapping arrangement (7) that is movably connected with respect to the device (1) in such a manner that a first trapping area (7a) is in a trapping position inside a channel (4) of the device (1) while a second trapping area (7b) is in a release position, releasing trapped particles. The trapping arrangement (7) then moves such that said second area (7b) gets into the trapping position and the first area (7a) to the release position. The device is self-cleaning and allows continuous removal of iron particles.

IPC 8 full level
B03C 1/027 (2006.01); **B03C 1/033** (2006.01); **B03C 1/034** (2006.01); **B03C 1/28** (2006.01)

CPC (source: EP)
B03C 1/027 (2013.01); **B03C 1/0332** (2013.01); **B03C 1/034** (2013.01); **B03C 1/288** (2013.01); **B03C 2201/18** (2013.01); **B03C 2201/20** (2013.01)

Citation (applicant)
• US 8474629 B1 20130702 - ALLORE DAN [US], et al
• FR 2447228 A1 19800822 - DN GORNY I I
• FR 2722120 A1 19960112 - ETABLISSEMENTS RAOUL LENOIR [FR]
• US 4157955 A 19790612 - SPODIG HEINRICH [DE]
• US 5740919 A 19980421 - STOWE MICHAEL W [US]

Citation (search report)
• [X1] US 5932096 A 19990803 - SAHO NORIHIDE [JP], et al
• [X1] DE 2655140 B1 19780209 - KLOECKNER HUMBOLDT DEUTZ AG
• [X1] JP S61118112 A 19860605 - NEC CORP
• [X1] CN 2274532 Y 19980218 - CHANGSHA MINING AND METALLIZIN [CN]
• [X1] CN 204892115 U 20151223 - ZHENGZHOU INST MULTIPURPOSE UTILIZATION MINERAL RESOURCES CAGS

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3278878 A1 20180207

DOCDB simple family (application)
EP 16183005 A 20160805