

Title (en)  
Grid arrangement

Title (de)  
Gitteranordnung

Title (fr)  
Arrangement de grille

Publication  
**EP 1704930 A3 20071114 (EN)**

Application  
**EP 06251498 A 20060321**

Priority  
GB 0506068 A 20050324

Abstract (en)

[origin: EP1704930A2] A self-cleaning grid arrangement (11, 19) is provided for use in bulk materials handling, e.g. quarry, chemical, waste or recycling industries during the conveyance of particulate material to prevent the passage of oversize particles or foreign objects to the destination of the particulate material. The grid arrangement (11) is formed of a first set bars (12) disposed substantially parallel with each other, the bars (12) extending between and being supported in holes (14, 21) in the sides (13, 22) of a chute (10) in which the bars (12) are free to rotate and/or reciprocate lengthways. At least some of the bars (12) have disturber plates (31) extending upwardly therefrom spaced along their length. As a result of such rotation and/or reciprocation, if particulate material does stick to or coagulate above a bar (12), there will be a lesser tendency for any material to bridge to an adjacent bar (12) and an increased tendency for the particulate material to fall between the bars (12). The bars (12) are curved along their length and have a radius of curvature greater than the length of the bars (12) between the sides (13). Each bar (12) has one end (16) depending from the remainder of the bar (12) in the direction away from the centre of curvature of the bar (12). A second set (19) of bars (20) that are substantially parallel with each other, is disposed substantially at right angles to the first set of bars (12). The bars (12, 20) may be inclined, and bars (26) may be tapered towards their lower ends. The support structure for the bars (12, 20) has inner (13) and outer (32) side plates so that particulate material passing through the holes (14) in the inner side plates (13) pass through a passageway (33) between the side plates (13) and outer side plates (32) and are returned to the lower part 28 of the chute (10).

IPC 8 full level  
**B07B 1/46** (2006.01); **B07B 1/12** (2006.01); **B07B 1/50** (2006.01); **B65B 37/00** (2006.01); **B65B 37/04** (2006.01)

CPC (source: EP)  
**B07B 1/12** (2013.01); **B07B 1/50** (2013.01); **B65B 37/00** (2013.01)

Citation (search report)

- [XY] CH 116294 A 19260816 - GUBLER EMIL [CH]
- [XY] DE 935481 C 19551124 - SITEG SIEBTECH GMBH
- [X] US 2367785 A 19450123 - MICHAEL KUTIL
- [DYA] GB 2379433 A 20030312 - RENBY LTD [GB]
- [A] US 5740950 A 19980421 - KANZLER ESTACIA [US], et al

Cited by  
CN112264293A; WO2011003599A1; WO2020098688A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA HR MK YU

DOCDB simple family (publication)  
**EP 1704930 A2 20060927**; **EP 1704930 A3 20071114**; GB 0506068 D0 20050504

DOCDB simple family (application)  
**EP 06251498 A 20060321**; GB 0506068 A 20050324