

Title (en)  
PROCESS AND DEVICE FOR GUIDING AND SEPARATING GRAINS

Publication  
**EP 0357762 B1 19911127 (DE)**

Application  
**EP 89903742 A 19890303**

Priority  
• CH 17689 A 19890120  
• DE 3807843 A 19880310  
• DE 3812056 A 19880412

Abstract (en)  
[origin: WO8908501A1] Said device is designed in particular for the crushing of malt. It comprises at least two roller unit clusters (4, 5, 6) arranged vertically one above the other on supporting columns (2) of a machine body (3) and which are designed as self-contained power systems and a pair of swing units (7, 8) working in opposite directions above the lower roller unit (6) on a horizontal plane and thereby causing only minimal vibration in swinging the device as a whole. Said swing units (7, 8) are coupled to the machine body (3) by means of relatively short levers (27', 29, 31', 33), to which the driving forces for the swinging movement are transmitted from the middle of the machine in such a way that all the rotating parts of the driving mechanism (9) are situated outside the dusty swing space. In order to increase the swing surface, the swing units (7, 8) each comprise two constantly slanting swing compartments (10 to 13) equipped with swing frames. All swing frames (14, 14', 15, 15') of a swing unit (7, 8) can be securely fixed on all sides or released to be taken out by actuating a single locking flap.

IPC 1-7  
**B02C 9/04**

IPC 8 full level  
**B07B 1/30** (2006.01); **B02C 4/06** (2006.01); **B02C 4/28** (2006.01); **B02C 4/32** (2006.01); **B02C 4/38** (2006.01); **B02C 9/04** (2006.01); **B02C 11/06** (2006.01); **B02C 23/00** (2006.01); **B07B 1/42** (2006.01); **B07B 1/46** (2006.01); **B07B 9/00** (2006.01); **E05C 9/06** (2006.01)

CPC (source: EP US)  
**B02C 4/06** (2013.01 - EP US); **B02C 4/28** (2013.01 - EP US); **B02C 4/32** (2013.01 - EP US); **B02C 9/04** (2013.01 - EP US); **B02C 11/06** (2013.01 - EP US); **B02C 23/00** (2013.01 - EP US); **B07B 1/42** (2013.01 - EP US); **B07B 1/46** (2013.01 - EP US); **B07B 9/00** (2013.01 - EP US); **E05C 9/063** (2013.01 - EP US)

Cited by  
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**WO 8908501 A1 19890921**; AT E120986 T1 19950415; AT E153565 T1 19970615; BR 8906382 A 19901120; DE 58900497 D1 19920109; DE 58909179 D1 19950518; DE 58909800 D1 19970703; EP 0357762 A1 19900314; EP 0357762 B1 19911127; EP 0428183 A2 19910522; EP 0428183 A3 19920506; EP 0428183 B1 19950412; EP 0598705 A2 19940525; EP 0598705 A3 19940720; EP 0598705 B1 19970528; JP H02503401 A 19901018; US 5031845 A 19910716

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**EP 8900221 W 19890303**; AT 90122696 T 19890303; AT 94101739 T 19890303; BR 8906382 A 19890303; DE 58900497 T 19890303; DE 58909179 T 19890303; DE 58909800 T 19890303; EP 89903742 A 19890303; EP 90122696 A 19890303; EP 94101739 A 19890303; JP 50341689 A 19890303; US 43842289 A 19891113