

Title (en)  
APPARATUS FOR CONVEYING VISCOUS MATERIAL

Title (de)  
VORRICHTUNG ZUM FÖRDERN VON VISKOSEM MATERIAL

Title (fr)  
APPAREIL POUR TRANSPORTER UN MATÉRIAU VISQUEUX

Publication  
**EP 4161864 A1 20230412 (DE)**

Application  
**EP 21745819 A 20210719**

Priority  

- DE 102020120748 A 20200806
- DE 102020120815 A 20200806
- DE 102020127440 A 20201019
- EP 2021070111 W 20210719

Abstract (en)  
[origin: WO2022028869A1] The invention relates to an apparatus (10) for conveying viscous material out of a barrel-like container having a container base and a container shell which extends upwards from the container base, said apparatus comprising: a follower plate (12) which can be moved towards the container base and away from the container base in a manner adjacent to the inner surface of the container shell facing the interior of the container and which has a material outlet opening (26) and at least one deaeration opening (30) and/or at least one aeration opening (30); a deaeration device for sucking air out of the interior of the container through the deaeration opening(s) (30) and/or an aeration device for introducing compressed air into the interior of the container through the aeration opening(s) (30); a lifting and lowering device (14) for lifting and lowering the follower plate (12); a control device for alternately controlling the lifting and lowering device (14) in a movement mode and the deaeration or aeration device in a deaeration or aeration mode, the lifting and lowering device (14) having at least one vertically extending holding rod (24) which is connected to an upper side (32) of the follower plate (12), the follower plate (12) being vertically movable in a limited manner with respect to the at least one holding rod (24); and a sensor device (42) for detecting at least one upper end position and at least one lower end position of the follower plate (12) with respect to the at least one holding rod (24) and for transmitting the detected positions to the control device.

IPC 8 full level  
**B67D 7/46** (2010.01); **B67D 7/64** (2010.01); **F04B 15/02** (2006.01)

CPC (source: EP KR US)  
**B05C 5/0225** (2013.01 - US); **B67D 7/645** (2013.01 - EP KR); **F04B 15/02** (2013.01 - EP KR); **F04B 23/028** (2013.01 - EP KR)

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

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**DE 102020127440 A1 20220210**; CN 116133977 A 20230516; EP 4161864 A1 20230412; EP 4161864 B1 20240904; EP 4417571 A2 20240821; EP 4417571 A3 20241016; KR 20230044397 A 20230404; US 2023249215 A1 20230810; WO 2022028869 A1 20220210

DOCDB simple family (application)  
**DE 102020127440 A 20201019**; CN 202180056991 A 20210719; EP 2021070111 W 20210719; EP 21745819 A 20210719; EP 24187303 A 20210719; KR 20237001575 A 20210719; US 202118013080 A 20210719