

Title (en)

BEARING MECHANISM FOR SLIDING PLUG DOOR

Title (de)

LAGERMECHANISMUS FÜR EINE SCHIEBETÜR

Title (fr)

MÉCANISME DE ROULEMENT POUR UNE PORTE ENCASTRÉE COULISSANTE

Publication

EP 2441641 A4 20130918 (EN)

Application

EP 10832672 A 20101129

Priority

- CN 2010079250 W 20101129
- CN 200910233162 A 20091130

Abstract (en)

[origin: EP2441641A1] The present invention provides a sliding plug door bearing mechanism, wherein, a bearing carriage, an upper connecting shaft, an upper hinge holder, and a door carrying frame are connected sequentially to form a turning pair I; the door carrying frame, a lower connecting shaft, a lower hinge holder, and the door leaf are connected sequentially to form a turning pair II; bearing rollers are connected to the bearing rail to form a prismatic pair I; a guiding slide is connected to a guiding wheel to form a prismatic pair II with a predefined trace; the bearing carriage translates along the bearing rail in X-axis direction, while the door carrying frame drives the door leaf to turn around the X-axis of bearing carriage; the door carrying frame turns around the X-axis of bearing carriage while it moves straightly along the bearing rail, so as to drive the door leaf to accomplish displacement in Y-axis direction along the trace of the guiding slide. The present invention has the following advantages: the bearing guide mechanism of the door leaf translates in X-axis direction and turns around in X-axis to accomplish displacement of door leaf in Y-axis direction. The bearing guide mechanism incorporates translation motion and turning motion, and therefore has compact structure, high reliability, reduced requirement for precisions of parts, good machinability, high performance, and low manufacturing cost.

IPC 8 full level

B61D 19/00 (2006.01); **E06B 3/46** (2006.01)

CPC (source: EP)

B61D 19/009 (2013.01)

Citation (search report)

- [X] US 2774998 A 19561225 - WILHELM KIEKERT FRIEDRICH
- [I] US 4457108 A 19840703 - KUSCHEL KONRAD [AT], et al
- [A] EP 1710381 A1 20061011 - FAIVELEY TRANSPORT [FR]
- See references of WO 2011063765A1

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

DOCDB simple family (publication)

EP 2441641 A1 20120418; EP 2441641 A4 20130918; EP 2441641 B1 20181003; CN 101716941 A 20100602; CN 101716941 B 20111116; DK 2441641 T3 20190121; ES 2706909 T3 20190401; PL 2441641 T3 20190430; PT 2441641 T 20190111; TR 201820657 T4 20190221; WO 2011063765 A1 20110603

DOCDB simple family (application)

EP 10832672 A 20101129; CN 200910233162 A 20091130; CN 2010079250 W 20101129; DK 10832672 T 20101129; ES 10832672 T 20101129; PL 10832672 T 20101129; PT 10832672 T 20101129; TR 201820657 T 20101129