

Title (en)  
DEVICE FOR ASSISTING THE CLOSING AND OPENING OF A LIFT-AND-SLIDE ELEMENT, AND LIFT-AND-SLIDE ELEMENT EQUIPPED WITH SUCH A DEVICE

Title (de)  
VORRICHTUNG ZUR UNTERSTÜTZUNG DES SCHLIESSENS UND ÖFFNENS EINES HEBE-SCHIEBEELEMENTS SOWIE MIT SOLCH EINER VORRICHTUNG AUSGERÜSTETES HEBE-SCHIEBEELEMENT

Title (fr)  
DISPOSITIF D'AIDE À LA FERMETURE ET À L'OUVERTURE D'UN ÉLÉMENT DE LEVAGE ET DE COULISSEMENT, ET ÉLÉMENT DE LEVAGE ET DE COULISSEMENT ÉQUIPÉ D'UN TEL DISPOSITIF

Publication  
**EP 4097322 A1 20221207 (DE)**

Application  
**EP 21716656 A 20210329**

Priority  
• DE 102020109074 A 20200401  
• EP 2021058172 W 20210329

Abstract (en)  
[origin: WO2021198185A1] The present invention relates to a device for assisting the closing and opening of a lift-and-slide element. The device comprises a basic body for mounting on a wing frame of a lift-and-slide element; an axially extending first preloading element having a first end and a second end, which is articulated on a basic body; an axially extending second preloading element having a first end and a second end, which is articulated on the basic body; and a switching mechanism having a first and a second defined end switching position, via which mechanism the first end of the first preloading element is coupled to the first end of the second preloading element. Here, the switching mechanism has an unstable equilibrium position between its two end switching positions, wherein the two preloading elements are aligned with one another only in the unstable equilibrium position.

IPC 8 full level  
**E05F 1/16** (2006.01); **E05D 15/56** (2006.01); **E05F 5/00** (2017.01)

CPC (source: EP)  
**E05F 1/16** (2013.01); **E05F 5/003** (2013.01); **E05D 15/565** (2013.01); **E05Y 2201/412** (2013.01); **E05Y 2201/414** (2013.01); **E05Y 2201/424** (2013.01); **E05Y 2201/426** (2013.01); **E05Y 2201/478** (2013.01); **E05Y 2201/624** (2013.01); **E05Y 2201/686** (2013.01); **E05Y 2900/132** (2013.01); **E05Y 2900/148** (2013.01)

Citation (search report)  
See references of WO 2021198185A1

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 102020109074 A1 20211007**; CN 115210441 A 20221018; EP 4097322 A1 20221207; WO 2021198185 A1 20211007

DOCDB simple family (application)  
**DE 102020109074 A 20200401**; CN 202180018066 A 20210329; EP 2021058172 W 20210329; EP 21716656 A 20210329