

Title (en)  
ROPE JOINING

Title (de)  
SEILVERBINDUNG

Title (fr)  
ASSEMBLAGE DE CÂBLE

Publication  
**EP 3999760 A4 20231025 (EN)**

Application  
**EP 20841617 A 20200716**

Priority  
• US 201916513623 A 20190716  
• US 2020042360 W 20200716

Abstract (en)  
[origin: WO2021011786A1] Integrated climb assist and fall arrest system and methods to assist users climbing ladders and vertical paths are disclosed. The integrated systems and comprise a controller connected to a user's harness, a static fall arrest cable, and a movable climb assist belt. The connection of the fall arrest components and the climb assist components may include physical connection, electronic connection, communication, or any combination thereof. The climb assist belt can be driven by a motor to provide an upwards climb assistance force to a user along a vertical path. The motor can be dynamically adjusted to continuously provide a level of climb assistance. The integrated controller is also configured to mechanically detect downwards movement and engage an overspeed braking mechanism when a threshold velocity or acceleration is detected.

IPC 8 full level  
**F16G 11/08** (2006.01); **A62B 1/00** (2006.01); **A62B 35/00** (2006.01); **A63B 29/02** (2006.01); **B23P 11/00** (2006.01); **F16C 11/06** (2006.01)

CPC (source: EP)  
**A62B 1/14** (2013.01); **A62B 35/005** (2013.01); **A62B 35/0081** (2013.01); **A62B 35/04** (2013.01); **E06C 7/186** (2013.01); **F16C 11/06** (2013.01); **F16G 11/02** (2013.01); **F16G 11/08** (2013.01); **F16G 11/09** (2013.01)

Citation (search report)  
• [XII] US 2013091690 A1 20130418 - STEPHENSON MATTHEW S [US], et al  
• [XA] US 6146049 A 20001114 - FARIS F DALE [US]  
• [XP] US 2019338593 A1 20191107 - KNICKREHM MORGAN [US], et al  
• See also references of WO 2021011786A1

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)  
**WO 2021011786 A1 20210121**; CN 114502815 A 20220513; CN 114729676 A 20220708; EP 3999711 A1 20220525; EP 3999711 A4 20231108; EP 3999760 A1 20220525; EP 3999760 A4 20231025; WO 2021011789 A1 20210121

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**US 2020042360 W 20200716**; CN 202080062704 A 20200716; CN 202080063960 A 20200716; EP 20839941 A 20200716; EP 20841617 A 20200716; US 2020042363 W 20200716