

Title (en)
SAFE TELESCOPIC LADDER CAPABLE OF PREVENTING HAND FROM BEING PINCHED

Title (de)
SICHERE TELESKOPELEITER ZUR VERHINDERUNG VON HANDEINKLEMMUNG

Title (fr)
ÉCHELLE TÉLESCOPIQUE DE SÉCURITÉ ANTI-PINCEMENT

Publication
EP 2770155 B1 20160629 (EN)

Application
EP 13810359 A 20130422

Priority
• CN 201210217317 A 20120626
• CN 2013000455 W 20130422

Abstract (en)
[origin: EP2770155A1] The invention relates to an extendable ladder with a safety feature for preventing finger injury, which comprises: two vertical stiles with a plurality of rungs disposed between two stiles, each stile being formed by a plurality of telescopically collapsible columns (1), characterized in that each column (1) receives a cover (2) at the bottom opening to cover the bottom opening, the cover (2) has a small cylindrical portion (21) and a large cylindrical portion (22), an annular groove (23) is formed on the peripheral surface of the large cylindrical portion (22), a plurality of through holes (24) are vertically provided on the bottom inner wall of the annular groove (23) for enabling air to exit from the annular groove, a sealing ring (3) is disposed inside the annular groove (23) and capable of sliding up and down in the annular groove (23), and the sealing ring (3) touches the inner wall of the next lower column (1) when the stile is extending or collapsing and forms a movable frictional seal for the next lower column (1). During the collapsing of the next upper column (1), the cover (2) of the next upper column (1) will be affected by the resistance of gas inside the closed space, and the gas inside the closed space may be exited slowly from the gaps at the junctions of components of the extendable ladder, therefore the purposes of preventing finger injury and eliminating potential safety hazards are achieved; since through holes (24) are provided inside the annular groove (23), when the columns (1) move upward while the extendable ladder is extending for use, air in the columns (1) may be in circulation by the through holes (24), which saves labor to extend the extendable ladder.

IPC 8 full level
E06C 1/12 (2006.01); **E06C 1/30** (2006.01); **E06C 7/08** (2006.01)

CPC (source: EP)
E06C 1/125 (2013.01); **E06C 7/087** (2013.01)

Cited by
WO2018160064A1; WO2017034399A1; FR3057600A1; NL2018437B1; NL2015340B1; CN108026755A; GB2536297A; GB2536347A; GB2536297B; GB2536347B; EP3374589A4; US2021156197A1; US10435946B2; WO2016147109A1; WO2017088891A1; WO2018088906A1; US11441354B2; WO2019011082A1

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 2770155 A1 20140827; EP 2770155 A4 20150422; EP 2770155 B1 20160629; CN 102733751 A 20121017; CN 102733751 B 20150225; DE 202013011753 U1 20140704; DK 2770155 T3 20161003; WO 2014000407 A1 20140103

DOCDB simple family (application)
EP 13810359 A 20130422; CN 201210217317 A 20120626; CN 2013000455 W 20130422; DE 202013011753 U 20130422; DK 13810359 T 20130422