

Title (en)
AUTOMATED FOOTWEAR HAVING CABLE AND UPPER TENSIONERS

Title (de)
AUTOMATISCHES SCHUHWERK MIT KABEL- UND SCHAFTTEILSPANNVORRICHTUNGEN

Title (fr)
CHAUSSURE À LAÇAGE AUTOMATIQUE À TENDEURS DE CORDON ET DE TIGE

Publication
EP 3628182 B1 20231115 (EN)

Application
EP 19206673 A 20180314

Priority
• US 201762471850 P 20170315
• US 201762475105 P 20170322
• EP 18767547 A 20180314
• US 2018022416 W 20180314

Abstract (en)
[origin: WO2018170116A1] A footwear assembly can comprise, an upper, a lace cable, a plurality of lace guides and a tensioner. The tensioner can comprise an elastic member extending between two lace guides of the plurality of lace guides, an elastic member extending between first and second portions of the upper, an elastic member extending between a portion of the upper and a lace guide of the plurality of lace guides, a heel channel connected to a heel portion of the upper and configured to facilitate access to an interior space, an elastic member coupled to the footwear assembly that functions to smooth out a torque versus lace displacement curve during tightening of the lace cable, a tensioning member secured to a side of the upper proximate a toe box and the lace cable, and a floating overlay attached to a side of the upper proximate a toe box and the lace cable.

IPC 8 full level
A43C 1/00 (2006.01)

CPC (source: CN EP KR)
A43B 3/34 (2022.01 - EP KR); **A43B 11/00** (2013.01 - KR); **A43C 1/06** (2013.01 - CN EP KR); **A43C 3/00** (2013.01 - CN EP KR); **A43C 7/08** (2013.01 - CN EP KR); **A43C 11/008** (2013.01 - CN); **A43C 11/165** (2013.01 - CN EP KR); **A43C 11/20** (2013.01 - CN EP KR); **A43C 11/22** (2013.01 - KR); **A43C 11/22** (2013.01 - CN EP)

Cited by
US12022915B2; US12004600B2

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 2018170116 A1 20180920; CN 110636772 A 20191231; CN 110636772 B 20211119; CN 111616466 A 20200904; CN 114145544 A 20220308; EP 3595481 A1 20200122; EP 3595481 A4 20210113; EP 3628182 A1 20200401; EP 3628182 B1 20231115; JP 2020039896 A 20200319; JP 2020511228 A 20200416; JP 2021154145 A 20211007; JP 2021154146 A 20211007; JP 2023017891 A 20230207; JP 2023089017 A 20230627; JP 2024116137 A 20240827; JP 6902085 B2 20210714; JP 6902107 B2 20210714; JP 7171833 B2 20221115; KR 102125361 B1 20200622; KR 102125378 B1 20200622; KR 102187717 B1 20201207; KR 102287565 B1 20210810; KR 102364775 B1 20220218; KR 102479220 B1 20221219; KR 102675697 B1 20240614; KR 20190131516 A 20191126; KR 20190133054 A 20191129; KR 20200078661 A 20200701; KR 20200078662 A 20200701; KR 20210099188 A 20210811; KR 20220025249 A 20220303; KR 20230003356 A 20230105; KR 20240096877 A 20240626

DOCDB simple family (application)
US 2018022416 W 20180314; CN 201880030117 A 20180314; CN 202010411118 A 20180314; CN 202111286609 A 20180314; EP 18767547 A 20180314; EP 19206673 A 20180314; JP 2019209870 A 20191120; JP 2019550635 A 20180314; JP 2021101806 A 20210618; JP 2021101813 A 20210618; JP 2022176161 A 20221102; JP 2023051231 A 20230328; JP 2024078813 A 20240514; KR 20197030164 A 20180314; KR 20197033846 A 20180314; KR 20207017148 A 20180314; KR 20207017149 A 20180314; KR 20217024441 A 20180314; KR 20227004937 A 20180314; KR 20227043894 A 20180314; KR 20247019502 A 20180314