

Title (en)  
SHOESTRING TIGHTENING DEVICE

Title (de)  
VORRICHTUNG ZUM FESTZIEHEN VON SCHUHBÄNDERN

Title (fr)  
DISPOSITIF DE SERRAGE DE LACET DE CHAUSSURE

Publication  
**EP 3287032 A4 20181219 (EN)**

Application  
**EP 16827899 A 20160304**

Priority  
• KR 20150103006 A 20150721  
• KR 2016002176 W 20160304

Abstract (en)  
[origin: EP3287032A1] The present invention provides a shoestring tightening device characterized by comprising: a lower body, which has at least one semi-circular shoestring passing hole formed on the periphery thereof, and which has a protrusion hole formed on the bottom surface thereof; a cylindrical rotation guide, which has a shaft protrusion that is fitted to the protrusion hole, which has a shoestring passing groove formed on the periphery thereof so as to communicate with the shoestring passing hole, and which has at least two fixing grooves formed on the inner peripheral surface thereof; a disk-shaped rotor, which has at least two fixing members that are fitted to the fixing grooves, which has a cylindrical spring containing protrusion protruding from one-side surface thereof, which has rotor teeth formed on the other-side surface thereof and arranged in a circular shape, and which has a shaft protruding from the center of the other-side surface thereof; an upper cover, which is assembled correspondingly so as to seal the upper surface of the lower body, which has a semi-circular shoestring passing hole formed on the periphery thereof so as to correspond to the shoestring passing hole, which as a through-hole formed on the ceiling surface thereof such that the shaft penetrates the same, and which has cover teeth formed on the periphery of the through-hole so as to mesh with the rotor teeth, thereby causing the same to rotate only in one direction; and a spring interposed between the rotation guide and the rotor such that the rotor teeth remain engaged with the cover teeth.

IPC 8 full level  
**A43C 11/16** (2006.01); **A43C 7/00** (2006.01); **A43C 11/20** (2006.01)

CPC (source: EP US)  
**A43C 7/00** (2013.01 - EP US); **A43C 11/16** (2013.01 - EP US); **A43C 11/165** (2013.01 - EP US); **A43C 11/20** (2013.01 - EP US)

Citation (search report)  
• [A] KR 200400568 Y1 20051108  
• [A] CA 2113149 A1 19940729 - HEINZ EGOLF [CH]  
• [A] US 2012228419 A1 20120913 - CHEN CHIN-CHU [TW]  
• [A] US 2007084956 A1 20070419 - CHEN CHIN CHU [TW]  
• See references of WO 2017014395A1

Cited by  
IT201800009715A1

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 3287032 A1 20180228**; **EP 3287032 A4 20181219**; JP 2018520728 A 20180802; KR 101611137 B1 20160408; US 2018132567 A1 20180517; WO 2017014395 A1 20170126

DOCDB simple family (application)  
**EP 16827899 A 20160304**; JP 2017560809 A 20160304; KR 20150103006 A 20150721; KR 2016002176 W 20160304; US 201615576683 A 20160304