

Title (en)  
SHOE CLOSURE

Title (de)  
SCHUHVERSCHLUSS

Title (fr)  
FERMETURE DE CHAUSSURE

Publication  
**EP 0673212 B1 19970319 (DE)**

Application  
**EP 94901731 A 19931128**

Priority  
• DE 9301140 W 19931128  
• DE 4240916 A 19921204

Abstract (en)  
[origin: DE4240916C1] A shoe closure consisting of a pulley rotatably fitted in a bearing component to wind up at least one cord-like tensioner to close the shoe, a rotary member to actuate the pulley and a reduction gear between the rotary member and the pulley in the form of an eccentric drive is to be improved in such a way that no irregular tensioning or pulling movements occur in the tensioner. This is achieved in that the pulley (3) takes the form of an independent unit which can be rotated centrically to the central axis (9). The eccentric disc (10) is fitted to move parallel to the pulley (3) and can be shifted via the eccentric drive pin (12) in a plane parallel to the pulley (3). The eccentric disc (10) has, on a circle concentric with its axis of rotation (13), one or more circular recess(es) (16), the mid-point(s) (15) of which lie(s) on the concentric circle (14) and the double radius (rK) of which is at least approximately equal to the sum of the diameter (D) of a coupling bolt (17) fitted to the pulley (3) and the diameter (DK) of the circle (18) of the eccentric drive pin (12).

IPC 1-7  
**A43C 11/16**

IPC 8 full level  
**A43C 11/16** (2006.01)

CPC (source: EP US)  
**A43C 11/16** (2013.01 - EP US); **A43C 11/165** (2013.01 - EP US); **Y10T 24/2183** (2015.01 - EP US)

Designated contracting state (EPC)  
AT CH DE ES FR GB IT LI SE

DOCDB simple family (publication)  
**US 5606778 A 19970304**; AT E150263 T1 19970415; AU 5622294 A 19940704; AU 677811 B2 19970508; CN 1046343 C 19991110; CN 1096572 A 19941221; DE 4240916 C1 19931007; DE 59305904 D1 19970424; EP 0673212 A1 19950927; EP 0673212 B1 19970319; ES 2100666 T3 19970616; JP 3373207 B2 20030204; JP H08503868 A 19960430; KR 100220321 B1 19990915; WO 9413165 A1 19940623

DOCDB simple family (application)  
**US 44673295 A 19950605**; AT 94901731 T 19931128; AU 5622294 A 19931128; CN 93120081 A 19931201; DE 4240916 A 19921204; DE 59305904 T 19931128; DE 9301140 W 19931128; EP 94901731 A 19931128; ES 94901731 T 19931128; JP 51364394 A 19931128; KR 19950702239 A 19950602