

Title (en)
PNEUMATIC FLOOR SPRING

Title (de)
PNEUMATISCHER BODENTÜRSCHLIESSER

Title (fr)
RESSORT DE PLANCHER PNEUMATIQUE

Publication
EP 3191668 B1 20181121 (EN)

Application
EP 15840470 A 20150814

Priority
• CN 201410459990 A 20140911
• CN 2015086937 W 20150814

Abstract (en)
[origin: WO2016037518A1] Disclosed is a pneumatic floor spring. The pneumatic floor spring comprises a fixed plate (2). A housing (1) is fixed on the bottom surface of the fixed plate (2) and a bottom cover (15) is arranged on the lower end of the housing (1). A convex rotor (4) is in the housing. The end of the convex rotor penetrates through the fixed plate (2) and is fixed with a rotating shaft (14). The lower end of the convex rotor (4) is mated with a guide base (6). The guide base (6) is vertically provided with guide grooves (7). And the guide grooves (7) match with the interior of the housing (1). A piston (8) is arranged on the bottom of the guide base (6). A supporting plate (11) is arranged inside the housing (1) and the piston (8) penetrates through the supporting plate (11). The piston (8) and the supporting plate (11) are provided with a sealing ring (10). The supporting plate (11), the housing (1) and the bottom cover (15) form a closed gas chamber (13). And the gas chamber is filled with compressed nitrogen gas. The spring has simple structure, convenient mounting effect and high working efficiency, moreover, it occupies less space, reduces production cost, mounting cost and mounting time of the convex rotor. Furthermore, it avoids oil leakage, and ensures rotating eccentric property so as to greatly improve service life.

IPC 8 full level
E05F 3/02 (2006.01); **E05F 3/14** (2006.01); **E05F 3/22** (2006.01)

CPC (source: EP)
E05F 3/02 (2013.01); **E05F 3/14** (2013.01); **E05F 3/225** (2013.01); **E05F 3/20** (2013.01)

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 2016037518 A1 20160317; CN 104234561 A 20141224; CN 104234561 B 20160928; EP 3191668 A1 20170719; EP 3191668 A4 20171011; EP 3191668 B1 20181121; EP 3191668 B8 20190109

DOCDB simple family (application)
CN 2015086937 W 20150814; CN 201410459990 A 20140911; EP 15840470 A 20150814