

Title (en)
AIR SPRING

Title (de)
LUFTFEDER

Title (fr)
RESSORT PNEUMATIQUE

Publication
EP 4237700 A1 20230906 (DE)

Application
EP 21798560 A 20211012

Priority
• DE 102020213658 A 20201029
• DE 2021200151 W 20211012

Abstract (en)
[origin: WO2022089694A1] The invention relates to an air spring (1a) with an elastic air spring bellows (3a), wherein the air spring bellows is connected in an air-tight manner to an air spring cover (2) at its first open end and to an air spring piston (6a) at its second open end and, as a result, at least partially encloses a working chamber (4) which is filled with compressed air, wherein the air spring bellows configures a rolling fold (5) which can roll on the air spring piston (6a), wherein the air spring bellows has a fastening bead (7a) at least at its one end which faces the air spring piston, wherein a radially inwardly extending shoulder region (10a) is configured at the bellows-side axial end of the air spring piston (6a), wherein a conical sealing seat (9a) is configured radially on the inside on the shoulder region, wherein the fastening bead bears with a radially inner sealing surface (13a) against the conical sealing seat of the air spring piston so as to seal the working chamber, and wherein the fastening bead is pushed axially with its underside (14a) which points towards the air spring piston onto the shoulder region of the air spring piston. It is provided according to the invention that an annular piston shoulder attachment (16a) is arranged on the shoulder region of the air spring piston, that the piston shoulder attachment has a radial inner side (19a) which directly or indirectly adjoins the radial outer side (15a) of the fastening bead of the air spring bellows, and that the piston shoulder attachment has a radial outer side (18a) which, at least in the region of its greatest external diameter, adjoins a radial outer contour (12a) of the air spring piston in a radially flush manner.

IPC 8 full level
F16F 9/04 (2006.01); **F16F 9/05** (2006.01)

CPC (source: EP US)
F16F 9/0463 (2013.01 - EP US); **F16F 9/05** (2013.01 - EP); **F16F 2224/0208** (2013.01 - US); **F16F 2230/0005** (2013.01 - US); **F16F 2230/105** (2013.01 - US)

Citation (search report)
See references of WO 2022089694A1

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

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
WO 2022089694 A1 20220505; CN 220581575 U 20240312; DE 102020213658 A1 20220505; EP 4237700 A1 20230906; US 2023392663 A1 20231207

DOCDB simple family (application)
DE 2021200151 W 20211012; CN 202190000826 U 20211012; DE 102020213658 A 20201029; EP 21798560 A 20211012; US 202118251208 A 20211012