

Title (en)

A COMPRESSIBLE LINER FOR IMPACT PROTECTION

Title (de)

KOMPRIMIERBARE EINLAGE ZUR STOSSDÄMPFUNG

Title (fr)

CHEMISAGE COMPRESSIBLE POUR PROTECTION CONTRE LES IMPACTS

Publication

EP 2293696 A4 20130717 (EN)

Application

EP 09772892 A 20090702

Priority

- IB 2009006133 W 20090702
- US 16644708 A 20080702

Abstract (en)

[origin: US2010000009A1] A compressible liner for impact protection, which may be installed in a helmet worn by a person. The compressible liner may also be applied to other impact protection situations, for example to baby capsules and child safety seats, as well as offering customized zones of impact protection. The compressible liner may have a relatively low density foam inner layer fused to a relatively high density foam outer layer. The inner layer may have many cone shaped protuberances which project into matching recesses of the outer layer. The compressible liner provides an initial low resistance to the impact for a desired part of the human body. As the impact progresses the level of resistance provided by the compressible liner increases in a controlled manner so that controlled deceleration of the part of the body is occurring throughout the impact for a desired impact protection zone of the compressible liner.

IPC 8 full level

B60R 22/10 (2006.01); **A42B 3/12** (2006.01); **B60N 2/26** (2006.01); **B60R 21/04** (2006.01); **B60R 22/26** (2006.01); **B62B 5/00** (2006.01); **B62H 5/08** (2006.01); **F41H 1/08** (2006.01)

CPC (source: EP US)

A42B 3/124 (2013.01 - EP US); **A42B 3/128** (2013.01 - EP US); **F41H 1/08** (2013.01 - EP US)

Citation (search report)

- [XY] US 2007000032 A1 20070104 - MORGAN DON E [AU]
- [Y] EP 1016352 A1 20000705 - CAMAU SYSTEM DI CASALE & C S N [IT]
- [XY] US 6070271 A 20000606 - WILLIAMS GILBERT J [US]
- [X] US 6032300 A 20000307 - BAINBRIDGE DAVID W [US], et al
- See references of WO 2010001230A1

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

US 2010000009 A1 20100107; CN 101827537 A 20100908; EP 2293696 A1 20110316; EP 2293696 A4 20130717; EP 2293696 B1 20161005; ES 2599957 T3 20170206; JP 2011506782 A 20110303; JP 2013227716 A 20131107; KR 101255716 B1 20130417; KR 20100088661 A 20100810; US 2011107503 A1 20110512; WO 2010001230 A1 20100107; WO 2010001230 A8 20140313

DOCDB simple family (application)

US 16644708 A 20080702; CN 200980000530 A 20090702; EP 09772892 A 20090702; ES 09772892 T 20090702; IB 2009006133 W 20090702; JP 2010536583 A 20090702; JP 2013117100 A 20130603; KR 20107000189 A 20090702; US 99900409 A 20090702