

Title (en)

CELLULAR ENERGY-ABSORBING STRUCTURE FASTENING DEVICE

Title (de)

BEFESTIGUNGSVORRICHTUNG FÜR ZELLULARE ENERGIEABSORBIERENDE STRUKTUR

Title (fr)

DISPOSITIF DE FIXATION DE STRUCTURE D'ABSORPTION D'ÉNERGIE CELLULAIRE

Publication

**EP 4082373 A1 20221102 (EN)**

Application

**EP 21020237 A 20210429**

Priority

EP 21020237 A 20210429

Abstract (en)

Helmet (1) comprising: a shell (2); a head receiving system (3); at least one cellular energy-absorbing structure (4) comprising a plurality of interconnected open-cells (9) configured to absorb energy by deforming during an impact on the shell (2); at least one connecting plug (5) comprising an expandable elongated body (8) configured to penetrate and frictionally engage one or more cells (9) of the cellular energy-absorbing structure (4) and a head portion (6) that remains outside the cellular energy-absorbing structure (4).

IPC 8 full level

**A42B 3/06** (2006.01); **A42B 3/12** (2006.01)

CPC (source: EP)

**A42B 3/064** (2013.01); **A42B 3/124** (2013.01)

Citation (applicant)

- EP 2440082 B1 20150325 - MIPS AB [SE]
- WO 2016209740 A1 20161229 - 6D HELMETS LLC [US]

Citation (search report)

- [XY] WO 2020245609 A1 20201210 - HEXR LTD [GB]
- [Y] WO 2017152151 A1 20170908 - APEX BIOMEDICAL COMPANY LLC [US]
- [AD] US 2017231312 A1 20170817 - HALLDIN PETER [SE]
- [A] EP 3391765 A2 20181024 - GU ZHENGHUI [CN]

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)

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DOCDB simple family (publication)

**EP 4082373 A1 20221102; EP 4082373 B1 20240626**; CN 117222341 A 20231212; CN 117279536 A 20231222; CN 117460436 A 20240126

DOCDB simple family (application)

**EP 21020237 A 20210429**; CN 202280031184 A 20220427; CN 202280031293 A 20220427; CN 202280031294 A 20220427