

Title (en)  
Civil engineering structure

Title (de)  
Baukonstruktion

Title (fr)  
Ouvrage de génie civil

Publication  
**EP 1520933 B1 20111109 (FR)**

Application  
**EP 04300644 A 20040930**

Priority  
FR 0350644 A 20031003

Abstract (en)  
[origin: EP1520933A1] The barrier (13) has its face (16) exposed to impacts of moving masses made from individual blocks (1) that can be degraded by impacts and are filled with a material (6) capable of plastic/elastic deformation, e.g. shredded tires, plastic, earth, sand, gravel, stones or crushed concrete.

IPC 8 full level  
**E01F 7/04** (2006.01); **E02D 29/02** (2006.01)

CPC (source: EP US)  
**E01F 7/045** (2013.01 - EP US); **E02D 29/0208** (2013.01 - EP US); **E02D 2300/0003** (2013.01 - EP US); **E02D 2300/0062** (2013.01 - EP US)

Citation (examination)

- US 4643271 A 19870217 - COBURN DAVID E [US]
- US 5575121 A 19961119 - LAJAUNIE PHILIPPE [US]
- GB 2221941 A 19900221 - DEACON DAVID
- GB 2372279 A 20020821 - TOTAL TYRE RECOVERY LTD [GB]
- DE 19652636 A1 19980625 - ROTHFUSS THOMAS [DE], et al

Cited by

WO2021260336A1; EP1881114A3; FR2910914A1; EP1777350A1; EP2136002A3; EP4293161A1; ITRN20110011A1; EP1775388A3; FR2904337A1; FR2903712A1; FR3097574A1; FR2902808A1; WO2011154714A1; EP2459809B1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
HR MK

DOCDB simple family (publication)

**EP 1520933 A1 20050406; EP 1520933 B1 20111109;** AT E532905 T1 20111115; CA 2481161 A1 20050403; CA 2481161 C 20120313; ES 2372490 T3 20120120; FR 2860529 A1 20050408; FR 2860529 B1 20061215; PT 1520933 E 20111215; US 2005262794 A1 20051201; US 7425107 B2 20080916

DOCDB simple family (application)

**EP 04300644 A 20040930;** AT 04300644 T 20040930; CA 2481161 A 20040930; ES 04300644 T 20040930; FR 0350644 A 20031003; PT 04300644 T 20040930; US 95471504 A 20040930