

Title (en)  
SOUND ABSORBER

Title (de)  
SCHALLABSORBER

Title (fr)  
ABSORBEUR PHONIQUE

Publication  
**EP 2203728 B1 20160525 (DE)**

Application  
**EP 08841320 A 20081021**

Priority  
• EP 2008064183 W 20081021  
• DE 102007000568 A 20071024

Abstract (en)  
[origin: WO2009053349A2] To provide an inexpensive, slender sound absorber, it has a plurality of porous layers or regions of different densities or different flow resistances. Of significance are the boundary surfaces between the different, porous layers, which are accompanied by changes in impedance. Homogenized and adapted flow resistance conditions should be avoided. Although the thermal frictional effect in the porous material is desired, in particular to absorb higher frequencies, according to the present invention it only forms one element of the absorptive working mechanism. In addition, the effect known in physics as refraction is used. At the boundary layer between two materials of different density or different flow resistance there is an abrupt change in impedance. This leads to a phase shift of the sound wave, and so a sound absorbing effect is made possible. By contrast with exclusively porous absorber layers with homogeneously or steadily increasing flow resistances, frequently changing transitions and porous materials having different, respectively suitable, direct impedances allow much higher degrees of sound absorption to be achieved in the range of low frequencies, in particular between 100 Hz and 500 Hz.

IPC 8 full level  
**G10K 11/168** (2006.01)

CPC (source: EP US)  
**G10K 11/168** (2013.01 - EP US); **E04B 2001/8461** (2013.01 - EP US)

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 MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**DE 102007000568 A1 20090430**; BR PI0818884 A2 20150505; CN 101911179 A 20101208; EP 2203728 A2 20100707;  
EP 2203728 B1 20160525; RU 2010117344 A 20111127; RU 2495500 C2 20131010; US 2010307866 A1 20101209; US 8631899 B2 20140121;  
WO 2009053349 A2 20090430; WO 2009053349 A3 20100617

DOCDB simple family (application)  
**DE 102007000568 A 20071024**; BR PI0818884 A 20081021; CN 200880122489 A 20081021; EP 08841320 A 20081021;  
EP 2008064183 W 20081021; RU 2010117344 A 20081021; US 73956708 A 20081021