Title (en)

SOUND ABSORBING BUILDING BLOCK WITH SEQUENTIAL CAVITIES

Publication

EP 0138712 B1 19900926 (FR)

Application

EP 84402051 A 19841011

Priority

US 54101983 A 19831012

Abstract (en)

[origin: US4562901A] A sound absorbing block of molded structural material has a sequence of internal cavities that communicate with a region containing the sound to be suppressed through a first elongated slot located in an exterior wall of the block. The internal cavities are defined by interior walls, at least one of which also contains an elongated, sound-communicating slot. Each slot and its associated cavity define an acoustical Helmholtz resonator that dissipates sound energy incident upon the slot with an absorption peak at a natural frequency fn. The value of fn for each resonator is inversely proportional the square root of the volume of the cavity. The internal cavities are arranged to cascade in order of decreasing stiffness beginning at the first slot. In one form, two sequences of cavities in a block use a common final cavity. Also, the exterior slots can be formed in more than one wall to absorb sound produced in multiple regions.

IPC 1-7

E04B 1/84; E04B 2/14

IPC 8 full level

G10K 11/16 (2006.01); **E04B 1/84** (2006.01); **E04B 1/86** (2006.01); **E04B 2/14** (2006.01); **E04C 1/39** (2006.01)

CPC (source: EP US)

E04B 1/8404 (2013.01 - EP US); E04B 2001/8485 (2013.01 - EP US); E04B 2001/849 (2013.01 - EP US)

Cited by

CN106121123A; AT399187B; EP0692585A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0138712 A2 19850424; **EP 0138712 A3 19870930**; **EP 0138712 B1 19900926**; AT E56994 T1 19901015; CA 1214396 A 19861125; DE 3483300 D1 19901031; DK 162849 B 19911216; DK 162849 C 19920518; DK 480884 A 19850413; DK 480884 D0 19841008; FI 843986 A0 19841011; FI 843986 L 19850413; GB 8425776 D0 19841121; JP H0369420 B2 19911101; JP S60112952 A 19850619; NO 164268 B 19900605; NO 164268 C 19900912; NO 844077 L 19850415; US 4562901 A 19860107

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EP 84402051 A 19841011; AT 84402051 T 19841011; CA 465297 A 19841012; DE 3483300 T 19841011; DK 480884 A 19841008; FI 843986 A 19841011; GB 8425776 A 19841012; JP 21158484 A 19841011; NO 844077 A 19841011; US 54101983 A 19831012