

Title (en)

ADIABATIC HEATING AND COOLING METHOD AND PORTABLE DEVICES ACCORDING TO THE ADSORPTION PRINCIPLE

Publication

EP 0167989 B1 19910313 (DE)

Application

EP 85108308 A 19850705

Priority

DE 3425419 A 19840710

Abstract (en)

[origin: US4752310A] The invention describes portable cooling and heating devices and their process of operation in accordance with the adsorption principle utilizing the adsorption substance pair of zeolite-water. The devices operate without substance and heat exchange from the environment, in that the evaporation heat originates from the solidifying heat of a non-evaporating amount of water and that the released adsorption heat is stored in the form of tangible heat of the zeolite filler. The ice which had been generated during the adsorption process is suitable for human consumption.

IPC 1-7

F25B 17/08; F25B 29/00; F25D 5/02

IPC 8 full level

F24V 30/00 (2018.01); **F25B 17/08** (2006.01); **F25B 29/00** (2006.01); **F25D 5/02** (2006.01); **F25D 7/00** (2006.01)

CPC (source: EP US)

F25B 17/08 (2013.01 - EP US); **F25B 29/006** (2013.01 - EP US); **F25D 5/02** (2013.01 - EP US); **F25D 2400/28** (2013.01 - EP US)

Cited by

EP1361402A3; EP0505381A4; DE4119507A1; EP0404805A4; FR2696533A1; EP0527466A1; EP0439819A3

Designated contracting state (EPC)

AT CH FR GB IT LI NL

DOCDB simple family (publication)

EP 0167989 A2 19860115; EP 0167989 A3 19890830; EP 0167989 B1 19910313; AT E61657 T1 19910315; DE 3425419 A1 19860123; DE 3425419 C2 19931209; DE 8420664 U1 19900322; JP S61153342 A 19860712; US 4752310 A 19880621

DOCDB simple family (application)

EP 85108308 A 19850705; AT 85108308 T 19850705; DE 3425419 A 19840710; DE 8420664 U 19840710; JP 15214385 A 19850710; US 74857385 A 19850625