

Title (en)  
SELF-COOLING BEVERAGE CONTAINER HAVING A HEAT EXCHANGE UNIT USING LIQUID CARBON DIOXIDE AND A TWIST TOP ACTIVATION SYSTEM

Title (de)  
SELBSTKÜHLENDER GETRÄNKEBEHÄLTER MIT EINER WÄRMETAUSCHEREINHEIT UNTER VERWENDUNG VON FLÜSSIGEM KOHLENDIOXID UND EINEM VERDREH-OBerteil-Aktivierungssystem

Title (fr)  
RÉCIPIENT À BOISSON À AUTO-REFROIDISSEMENT DOTÉ D'UNITÉ D'ÉCHANGE DE CHALEUR UTILISANT DU DIOXYDE DE CARBONE LIQUIDE ET UN SYSTÈME D'ACTIVATION SUPÉRIEUR À TORSION

Publication  
**EP 3469275 A4 20210721 (EN)**

Application  
**EP 17813910 A 20170613**

Priority  
• US 201662349310 P 20160613  
• US 2017037189 W 20170613

Abstract (en)  
[origin: WO2017218494A1] A self-cooling container for holding a food or beverage which includes a heat exchange unit (HEU) secured internally thereof so that the food or beverage is in contact with the outer surface of the HEU, the HEU being closed by a frangible membrane which is punctured by a pierce pin when a twist base activator is rotated in a first direction to create dis-equilibrium to cause liquid carbon dioxide contained within the HEU to pass directly from the liquid to the gaseous state and pass through a restricted orifice to atmosphere to cool the food or beverage.

IPC 8 full level  
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CPC (source: EP US)  
**F25D 3/107** (2013.01 - EP US); **F25D 31/007** (2013.01 - EP); **F25D 2303/0842** (2013.01 - US); **F25D 2331/805** (2013.01 - EP US)

Citation (search report)  
• [XY] US 6167718 B1 20010102 - HALIMI EDWARD M [US], et al  
• [X] WO 2012095187 A1 20120719 - DO TECH GMBH [DE], et al  
• [XI] EP 1359380 A2 20031105 - MAYR-HASSLER RAINER DOMINIK [AT]  
• [YA] WO 2015168304 A1 20151105 - JOSEPH CO INT INC [US]  
• [YA] GB 2346204 A 20000802 - ALLEN TIMOTHY RICHARD [GB], et al  
• See references of WO 2017218494A1

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

DOCDB simple family (publication)  
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DOCDB simple family (application)  
**US 2017037189 W 20170613**; BR 112018075973 A 20170613; CN 201780049546 A 20170613; EP 17813910 A 20170613; JP 2018566428 A 20170613; US 201716308308 A 20170613