

Title (en)

Apparatus for quickly cooling packaged products, especially bottles.

Title (de)

Vorrichtung zur Schnellabkühlung von verpackten Gütern, insbesondere Flaschen.

Title (fr)

Installation permettant de réaliser la réfrigération rapide de produits emballés, notamment de bouteilles.

Publication

**EP 0451063 A1 19911009 (FR)**

Application

**EP 91420104 A 19910328**

Priority

FR 9004625 A 19900405

Abstract (en)

Apparatus for quickly cooling products stored in particular inside a bottle (5), consisting of a tank (1) which is arranged inside an insulating enclosure and contains a liquid (3) kept at very low temperature by means of a refrigerating circuit (2), it being possible to keep the products (5) to be cooled within the refrigerating environment by means of pockets (4) which are immersed within the refrigerating liquid and inside which the products to be cooled are arranged. <??>It is characterised in that the pocket(s) (4) has (have) the form of an envelope which is open in its upper part (6), made from a flexible impermeable plastic film, which is held along their open zone at the upper part (7) of the enclosure (1), and the closed base (8) of which is associated with means which make it possible to displace it from the open upper part (6) as far as close to the bottom (9) of the enclosure and vice versa. <IMAGE>

IPC 1-7

**F25D 17/02; F25D 31/00**

IPC 8 full level

**F25D 17/02** (2006.01); **F25D 31/00** (2006.01)

CPC (source: EP US)

**F25D 17/02** (2013.01 - EP US); **F25D 31/007** (2013.01 - EP US); **F25D 2331/803** (2013.01 - EP US); **F25D 2400/28** (2013.01 - EP US)

Citation (search report)

- [YD] WO 8803251 A1 19880505 - PROVEST PHILLIP BLAKE [AU], et al
- [Y] EP 0347286 A1 19891220 - ETIENNE LUCIEN [FR]
- [A] US 4715195 A 19871229 - KUCZA IOSIF [CA]
- [AD] US 2061427 A 19361117 - KING JESSE G
- [AD] US 2422350 A 19470617 - GROSS ESHCOL S
- [A] US 3782133 A 19740101 - DESPERIER J, et al
- [A] US 2087117 A 19370713 - REZOS LOUIS H
- [A] US 3843020 A 19741022 - BARDEAU W, et al
- [A] DE 285521 C

Cited by

DE19924563A1; US5698646A; EP2119987A1; EP2218995A3; ES2224875A1; CN105402990A; WO2010149402A1; WO2012090209A3; WO2005015096A1; WO2009011666A1

Designated contracting state (EPC)

CH DE ES FR GR IT LI

DOCDB simple family (publication)

**EP 0451063 A1 19911009**; CA 2038874 A1 19911006; FR 2660738 A1 19911011; FR 2660738 B1 19941028; US 5237835 A 19930824

DOCDB simple family (application)

**EP 91420104 A 19910328**; CA 2038874 A 19910322; FR 9004625 A 19900405; US 67911291 A 19910402