

Title (en)
CHILD-RESISTANT PACKAGE HAVING PRELOADED LOCKING MECHANISM

Title (de)
KINDERSICHERE VERPACKUNG MIT VORGESPANNTEN VERRIEGELUNGSMECHANISMUS

Title (fr)
EMBALLAGE RESISTANT AUX ENFANTS DOTE D'UN MECANISME DE VERROUILLAGE A PRECHARGE

Publication
EP 0606261 B1 19960228 (EN)

Application
EP 92919246 A 19920827

Priority
• US 9207286 W 19920827
• US 77272991 A 19911007
• US 88265992 A 19920513

Abstract (en)
[origin: WO9307071A1] A package for storing and dispensing potentially dangerous materials, such as medicament tablets or the like, said package being resistant to opening by children but readily openable by adults, particularly adults having impaired manual dexterity of their hands and/or fingers. In a particularly preferred embodiment, the package comprises a bottle (12), a collar (32) which is secured in place over the uppermost portion of the bottle (12) and a closure (52) which is secured to the finish portion of the bottle by means of complementary screw threads. The collar (32) preferably includes a pair of resiliently deformable spring-like pushtabs (34) containing vertical extensions (36) which engage interlocking teeth (62) on the innermost surface of the closure skirt (60) when the closure (52) is fully assembled onto the bottle (12). To remove the closure (52), the opposed pushtabs (34) must be manually depressed prior to applying unscrewing torque to the closure (52) to disengage the pushtab extensions (36) from the interlocking teeth (62) on the closure (52). In a particularly preferred embodiment, the spring-like pushtabs (34) are generally outwardly directed prior to application of the closure to the package. Advancing the closure (52) onto the package until the teeth (62) on the innermost surface of the closure's skirt (60) interlock with the vertical extensions (36) of the spring-like pushtabs (34) causes a degree of resilient deformation of the spring-like pushtabs (34) so that the vertical extensions (36) of the pushtabs (34) are in contact with and exert a preloading force against the corresponding innermost surfaces of the closure skirt once the closure has been securely applied to the package. Quite unexpectedly, it has been learned that preloading the vertical extensions of the resiliently deformable spring-like pushtabs against the corresponding innermost surfaces of the closure skirt in the foregoing manner considerably enhances the child resistance of the package without increasing the difficulty of opening for older adults or those having impaired manual dexterity. Methods for producing the improved package are also disclosed.

IPC 1-7
B65D 50/04

IPC 8 full level
B65D 41/04 (2006.01); **B65D 50/04** (2006.01)

CPC (source: EP)
B65D 50/046 (2013.01)

Cited by
WO2009050457A1; US8479935B2; US11660625B2

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB GR IE IT LI LU NL SE

DOCDB simple family (publication)
WO 9307071 A1 19930415; AT E134579 T1 19960315; AU 2547492 A 19930503; AU 665962 B2 19960125; CA 2120713 A1 19930415; CA 2120713 C 19990119; CN 1034007 C 19970212; CN 1071635 A 19930505; DE 69208676 D1 19960404; DE 69208676 T2 19961002; DK 0606261 T3 19960520; EG 19617 A 19950727; EP 0606261 A1 19940720; EP 0606261 B1 19960228; ES 2083762 T3 19960416; GR 3019158 T3 19960531; HK 1006162 A1 19990212; JP 2815703 B2 19981027; JP H06511218 A 19941215; MA 22636 A1 19930401; MX 9205009 A 19930501; MY 110040 A 19971129; NZ 244156 A 19950828; PT 8588 T 19930531; PT 8588 U 19951229; SG 50464 A1 19980720; TR 27036 A 19941010; TW 217381 B 19931211

DOCDB simple family (application)
US 9207286 W 19920827; AT 92919246 T 19920827; AU 2547492 A 19920827; CA 2120713 A 19920827; CN 92111072 A 19920829; DE 69208676 T 19920827; DK 92919246 T 19920827; EG 50592 A 19920831; EP 92919246 A 19920827; ES 92919246 T 19920827; GR 960400410 T 19960229; HK 98105309 A 19980615; JP 50689193 A 19920827; MA 22926 A 19920831; MX 9205009 A 19920831; MY P119921553 A 19920828; NZ 24415692 A 19920831; PT 858892 U 19920831; SG 1996002088 A 19920827; TR 82092 A 19920828; TW 81106821 A 19920828