

Title (en)
Plug

Title (de)
Stopfen

Title (fr)
Bouchon

Publication
EP 1284231 A3 20030827 (DE)

Application
EP 02015302 A 20020710

Priority
DE 10140590 A 20010818

Abstract (en)
[origin: EP1284231A2] The stopper (3) for the end of a tubular core for reels of paper or plastic sheet has a cylindrical shape. It has a recess (15) on one side of its upper edge which assists its removal from the core.

IPC 1-7
B65H 75/18; B65D 59/02; B65D 85/672

IPC 8 full level
B65D 59/02 (2006.01); **B65H 75/18** (2006.01)

CPC (source: EP)
B65D 59/02 (2013.01); **B65H 75/185** (2013.01); **B65H 2402/414** (2013.01)

Citation (search report)

- [X] US 3083928 A 19630402 - VOISSEM MARVIN C
- [X] US 3567146 A 19710302 - ARENSEN HERBERT
- [X] GB 2100227 A 19821222 - WESTVACO CORP
- [X] US 4460087 A 19840717 - DEMARCO RICHARD E [US], et al
- [A] FR 2740125 A1 19970425 - SOC ET ET DE GESTION D APP SAN [FR]
- [A] US 2196378 A 19400409 - BEBIE EDWIN W
- [X] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 19 5 June 2001 (2001-06-05)

Cited by
NL2012526A; CN102022533A; CN102937184A; CN103867718A; US7958911B2; WO2020076293A1; WO2005092758A1; WO2010150080A1; WO2022034312A1; EP3714751B1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)

EP 1284231 A2 20030219; EP 1284231 A3 20030827; EP 1284231 B1 20051207; AT E312044 T1 20051215; DE 10140590 A1 20030313;
DE 10140590 C2 20031120; DE 50205167 D1 20060112

DOCDB simple family (application)

EP 02015302 A 20020710; AT 02015302 T 20020710; DE 10140590 A 20010818; DE 50205167 T 20020710