

Title (en)  
Winding device

Title (de)  
Wickelvorrichtung

Title (fr)  
Dispositif d'enroulement

Publication  
**EP 1006287 B1 20040218 (DE)**

Application  
**EP 99122553 A 19991112**

Priority  
• DE 19855781 A 19981203  
• US 45338499 A 19991202

Abstract (en)  
[origin: EP1006287A2] The arrangement has a removable winding shaft (1) with a winding body (10) and bearing journals (11a,11b) accommodated in outer bearings (2) with additional bearings. Each outer bearing has a coupling device movable along the central axis (MA) of the shaft and able to be connected to or decoupled from the bearing journals. The additional bearings are inner bearings (3) arranged between the ends of the journals for connection to the outer bearings and the winding body.

IPC 1-7  
**F16C 13/02**; B65H 16/06; B65H 18/02

IPC 8 full level  
**B65H 18/06** (2006.01); **B21C 5/00** (2006.01); **B65H 16/06** (2006.01); **B65H 18/02** (2006.01); **F16C 13/02** (2006.01)

CPC (source: EP US)  
**B65H 18/028** (2013.01 - EP US); **B65H 2301/4134** (2013.01 - EP US); **B65H 2402/52** (2013.01 - EP US); **B65H 2404/1372** (2013.01 - EP US)

Citation (examination)  
• DE 4439908 A1 19950601 - RUEEGG ANTON [CH]  
• DE 19636184 A1 19980312 - POEPPINGHAUS WINFRIED [DE]  
• DE 1009336 B 19570529 - BENCKISER GMBH JOH A  
• US 3038680 A 19620612 - ROSE WERNER P  
• GB 1136137 A 19681211 - EMERSON AND RENWICK LTD  
• DE 7536100 U 19760325

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

DOCDB simple family (publication)  
**EP 1006287 A2 20000607**; **EP 1006287 A3 20020403**; **EP 1006287 B1 20040218**; AT E259947 T1 20040315; DE 19855781 A1 20000615; DE 19855781 C2 20021212; DE 59908577 D1 20040325; ES 2216416 T3 20041016; JP 2000185851 A 20000704; JP 3310640 B2 20020805; US 6338453 B1 20020115

DOCDB simple family (application)  
**EP 99122553 A 19991112**; AT 99122553 T 19991112; DE 19855781 A 19981203; DE 59908577 T 19991112; ES 99122553 T 19991112; JP 34384999 A 19991202; US 45338499 A 19991202