

Title (en)

AUTOMATIC RISING STRUCTURE FOR BAR-LIKE MEMBER AND METHOD OF PRODUCING BAR-LIKE MEMBER

Title (de)

AUTOMATISCHE HEBESTRUKTUR FÜR STABARTIGES ELEMENT UND VERFAHREN ZUR HERSTELLUNG EINES STABARTIGEN ELEMENTS

Title (fr)

STRUCTURE SE RELEVANT AUTOMATIQUEMENT CONCUE POUR UN ELEMENT DE TYPE BARRE ET PROCEDE DE PRODUCTION D'UN ELEMENT DE TYPE BARRE

Publication

**EP 1625806 A1 20060215 (EN)**

Application

**EP 04732006 A 20040510**

Priority

- JP 2004006240 W 20040510
- JP 2003140492 A 20030519
- JP 2004122503 A 20040419

Abstract (en)

The present invention provides a self-erecting structure for a rod-shaped member, e.g. a brush, which enables the rod-shaped member to be readily taken out from an associated container while satisfying the demand that the rod-shaped member should be prevented from easily dropping from the container, and also provides a method capable of readily producing a rod-shaped member having such a structure. A rod-shaped member 5 has an erecting operation part 34 formed with a rolling surface 32 and an erection support surface 35. A first magnet 31 is provided in the vicinity of the erection support surface in a state where a first magnetic pole of the first magnet 31 faces toward one end of the rod-shaped member 5. Magnetic force from the first magnetic pole acts on the erection support surface. A second magnet 23 or a ferromagnetic material is provided in the vicinity of an erecting action surface 25. The second magnet has a second magnetic pole opposite in polarity to the first magnetic pole. The second magnetic pole faces upward so that magnetic force from the second magnetic pole acts on the erecting action surface. The rod-shaped member is constantly urged to pivot in the erecting direction by magnetic attraction force between the two magnets so that the rod-shaped member is automatically shiftable from a lying position to an erect position. A lid 11 of the container has an erection restraining part 37 capable of holding the rod-shaped member in the lying position on a mount surface 19 against the urging force when the lid 11 is closed.

IPC 1-7

**A45D 33/00**

IPC 8 full level

**A45D 40/22** (2006.01); **A45D 33/00** (2006.01); **A45D 40/24** (2006.01)

CPC (source: EP KR US)

**A45C 11/34** (2013.01 - KR); **A45D 33/008** (2013.01 - EP KR US); **A45D 40/22** (2013.01 - EP KR US); **A45D 40/24** (2013.01 - EP KR US); **A45C 11/34** (2013.01 - EP US)

Cited by

GB2460628A; FR3069141A1; EP1897462A1; FR2905567A1; WO2019015850A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

**EP 1625806 A1 20060215**; **EP 1625806 A4 20110601**; **EP 1625806 B1 20130821**; CA 2525030 A1 20041125; JP 2005000644 A 20050106; JP 4540384 B2 20100908; KR 101104850 B1 20120116; KR 20060022242 A 20060309; RU 2005139556 A 20060510; US 2007056603 A1 20070315; WO 2004100703 A1 20041125

DOCDB simple family (application)

**EP 04732006 A 20040510**; CA 2525030 A 20040510; JP 2004006240 W 20040510; JP 2004122503 A 20040419; KR 20057021994 A 20040510; RU 2005139556 A 20040510; US 55696404 A 20040510