

Title (en)

METHOD AND APPARATUS FOR MANUFACTURING BRUSHES

Publication

**EP 0143930 A3 19860514 (DE)**

Application

**EP 84111396 A 19840925**

Priority

- DE 3343071 A 19831129
- DE 3402050 A 19840121
- DE 8334183 U 19831129

Abstract (en)

[origin: US4647113A] The magazine of a brush making machine receives batches of parallel bristles from an opening station where the batches are relieved of their envelopes. The upper end of the envelope for a batch which is delivered to the opening station in upright position is engaged by a clamping device, and the batch is thereupon lifted so that its upper end becomes exposed and is ready to be engaged by a tongs which lifts the batch to thus complete its separation from the envelope prior to transfer into the magazine.

IPC 1-7

**A46D 3/04**

IPC 8 full level

**A46D 3/04** (2006.01); **A46D 3/08** (2006.01)

CPC (source: EP US)

**A46D 3/082** (2013.01 - EP US)

Citation (search report)

- [A] FR 2358126 A1 19780210 - ZAHORANSKY ANTON FA [DE]
- [A] DE 2643222 A1 19780406 - ZAHORANSKY ANTON FA
- [A] US 4390313 A 19830628 - HOEHN JOHN W [AU]
- [A] US 3889442 A 19750617 - GRAHN PER HERBERT, et al
- [A] FR 2423403 A1 19791116 - EMBALLAGE STE GLE POUR [FR]

Cited by

EP0193220A1; EP0184866A1; WO2020169420A1; EP3927212B1

Designated contracting state (EPC)

BE DE GB IT

DOCDB simple family (publication)

**EP 0143930 A2 19850612; EP 0143930 A3 19860514; EP 0143930 B1 19890322;** DE 3477345 D1 19890427; US 4647113 A 19870303

DOCDB simple family (application)

**EP 84111396 A 19840925;** DE 3477345 T 19840925; US 82606386 A 19860204