

Title (en)  
Apparatus for needling a nonwoven material

Title (de)  
Vorrichtung zum Nadeln eines Vlieses

Title (fr)  
Dispositif d'aiguilletage d'un non-tissé

Publication  
**EP 1780324 A1 20070502 (DE)**

Application  
**EP 06450146 A 20061017**

Priority  
AT 17502005 A 20051027

Abstract (en)  
Apparatus for needling nonwovens, comprising a needle board connected to push rods, comprises a push rod drive in the form of a hydrostatic resonance drive comprising pistons (2) acted upon on both sides by hydraulic springs (4, 5) and a device for applying pressure to the pistons at a frequency corresponding to the resonance frequency of the vibrational system comprising the moving masses and the hydraulic springs.

IPC 8 full level  
**D04H 18/00** (2012.01)

CPC (source: EP US)  
**D04H 18/02** (2013.01 - EP US)

Citation (search report)

- [A] GB 1346894 A 19740213 - WOOL IND RES ASSOC
- [A] EP 0790343 A2 19970820 - FEHRER TEXTILMASCH [AT]
- [A] FR 2657094 A1 19910719 - FEHRER TEXTILMASCH [AT]
- [A] GB 2351090 A 20001220 - FEHRER TEXTILMASCH [AT]
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- [A] US 6785940 B1 20040907 - MUELLER KARL [AT]

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CN104131417A; CN107881654A

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

Designated extension state (EPC)  
AL BA HR MK YU

DOCDB simple family (publication)  
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DOCDB simple family (application)  
**EP 06450146 A 20061017**; AT 17502005 A 20051027; CN 200610172979 A 20061026; JP 2006316257 A 20061026; TW 95138688 A 20061020; US 58875806 A 20061027