

Title (en)
NEEDLE BOARD

Title (de)
NADELBRETT

Title (fr)
PLANCHE A AIGUILLES

Publication
EP 3165660 B1 20180523 (DE)

Application
EP 15193390 A 20151106

Priority
EP 15193390 A 20151106

Abstract (en)
[origin: US2017130381A1] The needle board for use in a needling machine for needling a flat textile material comprises first needle rows and second needle rows, wherein the first needle rows and the second needle rows are arranged inclined with respect to a longitudinal direction of the needle board, which longitudinal direction corresponds to a direction in which the flat textile material to be needled is conveyed in the needling machine. The first needle rows are arranged at a first angle to the longitudinal direction, and the second needle rows are arranged at a second angle to the longitudinal direction. An absolute value of the second angle is different from an absolute value of the first angle.

IPC 8 full level
D04H 18/00 (2012.01); **D04H 18/02** (2012.01)

CPC (source: CN EP US)
D04H 18/00 (2013.01 - EP US); **D04H 18/02** (2013.01 - CN EP US)

Cited by
EP3744889A1; US11208746B2; US11384460B2; EP3896206A1; EP3896207A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 3165660 A1 20170510; EP 3165660 B1 20180523; CN 107012594 A 20170804; CN 107012594 B 20190709; US 2017130381 A1 20170511; US 9994983 B2 20180612

DOCDB simple family (application)
EP 15193390 A 20151106; CN 201610973989 A 20161104; US 201615342745 A 20161103