Title (en)

COMPOUND NEEDLE OF FLAT KNITTING MACHINE

Title (de

VERBUNDNADEL EINER FLACHSTRICKMASCHINE

Title (fr)

AIGUILLE À COULISSE DE MACHINE À TRICOTER RECTILIGNE

Publication

EP 3779009 A1 20210217 (EN)

Application

EP 20159247 A 20200225

Priority

CN 201910744599 A 20190813

Abstract (en)

The invention discloses a compound needle of a flat knitting machine, which includes a main needle and a needle sleeve sheathed on the main needle, wherein the main needle includes a head portion and a middle portion, the head portion has a needle hook, the main needle is provided with a boss below the needle hook, and accommodating grooves are arranged on two sides of the boss; a limiting strip is arranged on a right side of the middle portion and forms a U-shaped structure with a left side of the middle portion; the needle sleeve includes a front section and a main body section, the front section is provided with an apical angle, the apical angle is provided with a first hollow structure, the main body section is provided with a second hollow structure, and bottom portions are grooved and connected; the main body section is arranged at an opening of the U-shaped structure, the limiting strip passes through the second hollow structure, the middle portion is embedded into a groove on a left side of the needle sleeve, and two opposite surfaces between the U-shaped structure of the main needle and the needle sleeve are matched in a point-to-surface contact mode, so that when the needle sleeve moves, the apical angle moves from the accommodating groove of the main needle to the needle hook closing the main needle. According to the invention, a contact area is reduced through contact of a salient point and a track surface, so that a friction force is reduced, and stable sliding of the needle sleeve in the needle groove is ensured.

IPC 8 full level

D04B 35/06 (2006.01)

CPC (source: CN EP)

D04B 35/06 (2013.01 - EP); D04B 35/08 (2013.01 - CN)

Citation (search report)

- [XYI] CN 108035063 A 20180515 NINGBO CIXING CO LTD
- [XYI] US 2002112509 A1 20020822 BASEGGIO MARCELLO [CH], et al
- [XI] EP 1640489 A1 20060329 SHIMA SEIKI MFG [JP]
- [Y] WO 2006062205 A1 20060615 SHIMA SEIKI MFG [JP], et al
- [Y] EP 2397589 A2 20111221 SHIMA SEIKI MFG [JP]
- [Y] JP 2007231448 A 20070913 SHIMA SEIKI MFG
- [Y] EP 2397590 A2 20111221 SHIMA SEIKI MFG [JP]
- [Y] EP 1368520 A2 20031210 HOFMANN ULRICH [DE]
- [Y] DE 2245731 A1 19740328 MAYER & CIE MASCHINENFABRIK
- [Y] DE 4430705 A1 19960307 SCHELLER GMBH [DE]

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3779009 A1 20210217; CN 110438655 A 20191112; CN 110438655 B 20240402

DOCDB simple family (application)

EP 20159247 A 20200225; CN 201910744599 A 20190813