

Title (en)
Compound needle for flatbed knitting machine

Title (de)
Schiebernadel für Flachstrickmaschinen

Title (fr)
Aiguille de type compound pour les machines à tricoter rectiligne

Publication
EP 2397589 A3 20121114 (EN)

Application
EP 11005005 A 20110620

Priority
JP 2010139816 A 20100618

Abstract (en)
[origin: EP2397589A2] [Problem to be solved] The present invention provides a compound needle for a flatbed knitting machine in which sliding resistance can be made small and opening/closing accuracy to an aperture of a hook by a tongue can be enhanced with a simple structure.
[Solution] Tongues 1a, 2a have no bent and have linear shaped portions 1b, 2b provided at the rear side of the tongues 1a, 2a, so that the blades 1, 2 have stable finishing shapes and manufacturing thereof can be easily performed. Since lower portions of the blades 1, 2 are not bent in the blade groove, sliding resistance can be made small. Shoulder portions 1c, 2c which come out of the blade groove from rear portions of the tongues 1a, 2a are bent inward between the shoulder portions 1c, 2c opposed to each other such that front ends of the shoulder portions 1c, 2c make closer to and contact with each other so as to form contacting portions 1f, 2f, therefore, a centering effect can be obtained. A space generated between the tongues 1a, 2a is kept so that resistance when the hook 3a opens between the tongues 1a, 2a can be made small and opening/closing accuracy of the hook 3a can be enhanced.

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D04B 35/06 (2006.01)

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D04B 15/20 (2013.01 - KR); **D04B 15/22** (2013.01 - KR); **D04B 35/04** (2013.01 - KR); **D04B 35/06** (2013.01 - EP)

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• [AD] EP 1178141 A1 20020206 - SHIMA SEIKI MFG [JP], et al
• [AD] US 6233977 B1 20010522 - SCHULER BERNHARD [DE], et al
• [A] US 2003019250 A1 20030130 - RUOFF KLAUS [DE], et al
• [AD] EP 1229159 A1 20020807 - SHIMA SEIKI MFG [JP]

Cited by
EP3702506A1; EP3779009A1; EP3702505A1; CN109629099A

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