

Title (en)

Method for making spatial, one- or more layered knitted articles on a flat bed knitting machine

Title (de)

Verfahren zur Herstellung von räumlichen, ein- oder mehrflächigen Gestrickstücken auf einer Flachstrickmaschine

Title (fr)

Procédé pour la fabrication de tricot spatial à couche unique ou multiple dans un métier à tricoter rectiligne

Publication

**EP 0874076 A3 19990929 (DE)**

Application

**EP 98104749 A 19980317**

Priority

DE 19717415 A 19970425

Abstract (en)

[origin: EP0874076A2] The method makes three-dimensional, single- or multilayered knitted sections on a flatbed knitting machine. At least two needle beds and a knit hanging unit are used. In this novel approach the number of rows and their width, correspond with the required three-dimensional structure of the finished piece. Material and machine characteristics are also taken into account. The row succession and returns are selected such that the most uniform possible distribution of differing widths is achieved. The knit size is selected for each row, such that the desired geometric structure is obtained. Also claimed is a variety of three-dimensional knitted products. These have spherical regions, corners and edges. An example comprises a seamless spherical knit forming a helmet insert. Another is a concentric, connected formation of two tubes, which preferably includes a bend.

IPC 1-7

**D04B 1/22**

IPC 8 full level

**D04B 1/22** (2006.01); **D04B 7/00** (2006.01); **D04B 7/14** (2006.01); **D04B 7/28** (2006.01); **D04B 7/30** (2006.01)

CPC (source: EP US)

**D04B 1/108** (2013.01 - EP); **D04B 1/22** (2013.01 - EP US); **D10B 2403/0113** (2013.01 - US); **D10B 2403/021** (2013.01 - EP US);  
**D10B 2403/02412** (2013.01 - EP US); **D10B 2403/033** (2013.01 - EP US); **D10B 2403/0333** (2013.01 - EP); **D10B 2501/042** (2013.01 - EP US);  
**D10B 2509/028** (2013.01 - EP US)

Citation (search report)

- [A] FR 2113177 A5 19720623 - SCHUBERT & SALZER MASCHINEN
- [A] DE 3519677 A1 19861204 - OTTO FANKHAENEL & SOHN GUMMIST [DE]
- [PA] DE 19616003 A1 19971023 - BECKMANN WOLFGANG DR [DE]
- [PA] GB 2309709 A 19970806 - TSUDAKOMA IND CO LTD [JP]
- [A] DE 3937406 A1 19910516 - STOLL & CO H [DE]
- [A] EP 0599266 A1 19940601 - WACOAL CORP [JP]
- [A] HONG H ET AL: "FLACHSTRICKMASCHINEN ZUR HERSTELLUNG DREIDIMENSIONALER GESTRICKE FURTECHNISCHE ANWENDUNGEN", MELLIAND TEXTILBERICHTE, INTERNATIONAL TEXTILE REPORTS, vol. 77, no. 1/02, 1 January 1996 (1996-01-01), pages 41 - 43, XP000554341, ISSN: 0341-0781

Cited by

EP2952616A1; CN105442166A; CN102534972A; US6401262B2; CN105420902A; WO2014113352A3; US9241537B2; US9980534B2;  
US9132601B2; US9572403B2; US9226548B2; US9706810B2; US9474328B2; US10165829B2

Designated contracting state (EPC)

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

**EP 0874076 A2 19981028; EP 0874076 A3 19990929**; CN 1188558 C 20050209; CN 1199786 A 19981125; DE 19717415 A1 19981029;  
JP H1112903 A 19990119; US 6109068 A 20000829

DOCDB simple family (application)

**EP 98104749 A 19980317**; CN 98102949 A 19980425; DE 19717415 A 19970425; JP 14821498 A 19980422; US 6602298 A 19980424