

Title (en)

Method and apparatus for joining two textile yarns together.

Title (de)

Verfahren und Vorrichtung zum Verbinden von zwei Fäden.

Title (fr)

Procédé et dispositif pour rattacher deux fils textiles.

Publication

EP 0249578 A1 19871216 (FR)

Application

EP 87810328 A 19870609

Priority

- ES 555928 A 19860611
- ES 8701457 A 19870518

Abstract (en)

[origin: US4813220A] Method and apparatus for splicing two textile yarn ends by untwisting the end portions of each to form a spread beard thereof, interpenetrating or intertwining the beards at both ends, and letting the twist accumulated at both ends progress towards the two mutually intertwined or interpenetrated beards. In the method, the untwisted end portions of both yarns are subjected to an axial traction force to set the beards of both yarn ends free and to separate and set the beard fibers substantially parallel with one another, while the beard bases are secured to retain the individual torsion or twist of the fibers, with the beards then being moved laterally to arrange the same adjacent to one another at zones of the beard bases, while the beards are simultaneously slid in longitudinal relative movement to one another. In the apparatus according to the invention, yarn holding nips are axially movable, while beard support members have two complementary surfaces are movable about rotation axes and along paths from outer positions regarding the yarns, to positions in which the complementary surfaces are mutually adjacent. The apparatus comprises as well, holding members for the ends of the beards retained by the revolving nips, to preserve the twist thereof. In a pneumatic embodiment, the twisting and untwisting of the yarn is accomplished by pneumatic chambers of substantially circular cross-section, and with a longitudinal gap for placing the yarn therein, along with a pair of tangentially-communicating ducts entering the chamber at diametrically opposed positions so that pressurized air injected alternately and in opposite directions through these ducts and into the chamber, generate within the chamber a swirl that causes the coaxially-arranged yarn therein to revolve in one direction for being twisted and in the opposite direction for becoming untwisted.

Abstract (fr)

Ce procédé consiste, après avoir détordu deux portions de fils (1,2) par rotations en sens respectifs opposés pour former deux barbes de fibre à les superposer tête-bêche, à leur appliquer deux forces transversales opposées (B) au voisinage des extrémités de ces barbes pour exercer une traction sur ces barbes et faire glisser les fibres respectives longitudinalement et à réintroduire la torsion dans ces barbes en faisant tourner les fils en sens respectifs opposés à ceux utilisés pour les détordre et en déplaçant progressivement les points d'application des forces transversales (B) vers la partie médiane de ces barbes avant de supprimer complètement ces forces transversales (B).

IPC 1-7

B65H 69/06

IPC 8 full level

B65H 69/06 (2006.01)

CPC (source: EP US)

B65H 69/06 (2013.01 - EP US); **B65H 2701/31** (2013.01 - EP US)

Citation (search report)

- [A] US 1345375 A 19200706 - LEMAY HENRY A
- [AD] EP 0029808 A1 19810603 - FOMENTO INVERSIONES IND [ES]
- [AD] US 4244169 A 19810113 - LIGONES HUBERT, et al
- [A] DE 1919149 A1 19691023 - MELBOURNE ROPEWORKS PTY LTD

Cited by

EP0491104A1; US5277018A

Designated contracting state (EPC)

CH DE ES FR GB IT LI

DOCDB simple family (publication)

EP 0249578 A1 19871216; **EP 0249578 B1 19910206**; DE 3767925 D1 19910314; ES 2021390 B3 19911101; US 4813220 A 19890321

DOCDB simple family (application)

EP 87810328 A 19870609; DE 3767925 T 19870609; ES 87810328 T 19870609; US 6153987 A 19870611