

Title (en)  
Device for opening a sliver

Title (de)  
Vorrichtung zum Auflösen von Faserbändern

Title (fr)  
Dispositif pour défibrer une mèche

Publication  
**EP 1006223 B1 20030115 (DE)**

Application  
**EP 99119919 A 19991009**

Priority  
DE 19850518 A 19981103

Abstract (en)  
[origin: DE19850518A1] The assembly to loosen fiber slivers into separate fibers, for an open-end spinner, has spiral combs (14) rotating in the opposite direction to the rotation of the loosening roller (8). They mesh together at the fiber loosening zone (11) with a meshing support roller (13) after the sliver clamping point (7), in the direction of the fiber flow. The assembly to loosen fiber slivers into separate fibers, for an open-end spinner, has spiral combs (14) rotating in the opposite direction to the rotation of the loosening roller (8). They mesh together at the fiber loosening zone (11) with a meshing support roller (13) after the sliver clamping point (7), in the direction of the fiber flow. The attack on the sliver by the combs (14) of the support roller (13) is in the channels formed by the intermediate gap zones between the spirals of the combs (9) of the loosening roller (8). The ratio of the rotary speeds between the loosening (8) and support (13) rollers is the same as the ratio between the pitch height of the comb spirals (9) at the loosening roller (8) and the pitch height at the support roller (13). The action of the combs (14) of the support roller (13) is at the center of the channels formed between the windings of the combs (9) at the loosening roller (8). The comb units (9) of the loosening roller (8) have a cutting angle of  $\leq 5^\circ$  to  $\leq 10^\circ$ . An underpressure source generates an air stream to carry the separated fibers from the loosening roller (8), using an underpressure of  $\leq 10$  mbar and especially 3-5 mbar. The surface speed of the rotating loosening roller (8) is  $\leq 15$  m/s and especially 5-10 m/s. The support roller (13) is driven by a cogwheel gearing, coupled to the sliver loosening roller (8). The gearing ratio between the loosening roller (8) and the support roller (13) is 1:2. The combs (9,14) have at least a partially roughened outer surface. The spiral combs (14) round the support roller can have an interruption at points along the roller length, and they form pointed threadings. The support roller (13) is fitted at a holder (12) which also carries the sliver feed. The loosening (8) and support (13) rollers have positioning markings (19).

IPC 1-7  
**D01H 4/32**

IPC 8 full level  
**D01H 4/16** (2006.01); **D01H 4/32** (2006.01)

CPC (source: EP US)  
**D01H 4/32** (2013.01 - EP US)

Cited by  
EP3296435A1; CN107841803A

Designated contracting state (EPC)  
CH DE IT LI

DOCDB simple family (publication)  
**DE 19850518 A1 20000504**; DE 59904034 D1 20030220; EP 1006223 A1 20000607; EP 1006223 B1 20030115; JP 2000136445 A 20000516; US 6226838 B1 20010508

DOCDB simple family (application)  
**DE 19850518 A 19981103**; DE 59904034 T 19991009; EP 99119919 A 19991009; JP 31131499 A 19991101; US 42736399 A 19991026