

D01G

PRELIMINARY TREATMENT OF FIBRES, e.g. FOR SPINNING (winding or unwinding, conducting or guiding laps, webs, slivers or rovings in general, sliver or roving cans, depositing in sliver or roving cans B65H; preparation of fibres for paper-making D21)

Definition statement

This subclass/group covers:

The preliminary treatment of fibres for staple yarn spinning.

References relevant to classification in this subclass

This subclass/group does not cover:

Fibre preparation for papermaking	D21
Drafting machines or arrangements	D01H 5/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Winding or unwinding, conducting or guiding laps, webs, slivers or rovings in general, sliver or roving cans, depositing in sliver or roving cans	B65H 49/00 - B65H 75/00
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Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Fibre	a relatively-short, elongated member of natural or artificial material
Filament	an endless or quasi-endless, elongated member of natural (e.g. silk) or artificial material
Yarn	a unitary assembly of fibres, usually produced by spinning

Thread	an assembly of yarns or filaments, usually produced by twisting
Drawing	stretching and elongating yarns or filaments
Draft	the amount to which yarns or filaments are drawn

D01G 1/00

Severing continuous filaments or long fibres, e.g. stapling

Definition statement

This subclass/group covers:

The transformation of filaments into staple fibres, whereby a distinction is made between processes where fibres are delivered in bulk and processes where fibres are delivered in parallelised forms (e.g. ribbons, tops, slivers).

D01G 1/02

to form staple fibres not delivered in strand form

Definition statement

This subclass/group covers:

Processes and devices where the obtained staple fibres are delivered in randomized orientation or bulk form.

Randomized orientation can for example be found for the cutting of mineral filaments like glass, or guillotine type chopping processes of fibres to shorten them.

References relevant to classification in this group

This subclass/group does not cover:

Processes and devices where the obtained staple fibres are delivered in parallelised form (e.g. strand, ribbon)	D01G 1/06
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D01G 1/04

by cutting

References relevant to classification in this group

This subclass/group does not cover:

Processes and devices where the cut fibres are delivered in parallelised form (e.g. strand, ribbon)	D01G 1/10
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D01G 1/06

Converting tows to slivers or yarns, e.g. in direct spinning (drafting arrangements, twisting arrangements D01H)

Definition statement

This subclass/group covers:

Processes and devices where the obtained staple fibres are delivered in parallelised form (e.g. strands or ribbons).

Typically, processes like the stretch breaking or converting of synthetic filament tows are found in this group.

References relevant to classification in this group

This subclass/group does not cover:

Processes and devices where the obtained staple fibres are delivered in randomized orientation (bulk)	D01G 1/02
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D01G 1/10

by cutting

Definition statement

This subclass/group covers:

E.g. the so-called converters for tow (i.e. tow to top).

References relevant to classification in this group

This subclass/group does not cover:

Processes and devices where the cut fibres are delivered in randomized	D01G 1/04
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orientation	
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D01G 3/00

Roughening of fibres

Definition statement

This subclass/group covers:

Mechanical and wet treatments that affect the surface of natural fibres e.g. sanding of fibres, degreasing of wool fibres.

Typically, techniques that increase surface roughness or permeability (for higher inter-fibre cohesion, higher absorption, higher binding affinity with polymers and the like).

D01G 5/00

Separating, e.g. sorting, fibres (separating fibres of differing lengths in silk-dressing machines D01G17/00; in combing machines D01G19/00)

Definition statement

This subclass/group covers:

Fibre sorting mechanisms and methods other than silk-dressing machines and combing, e.g. for preparing the natural fibres for a length diagram measurement step.

References relevant to classification in this group

This subclass/group does not cover:

Silk-dressing machines	D01G 17/00
Combing machines	D01G 19/00

D01G 7/00

Breaking or opening fibre bales

Definition statement

This subclass/group covers:

The opening of compressed bales of fibres into workable fibre tufts; e.g. sawtooth grinding of cotton bales.

D01G 9/00

Opening or cleaning fibres, e.g. scutching cotton (scutching flax or like fibres D01B; making cellulose wadding in papermaking machines D21F11/14)

Definition statement

This subclass/group covers:

The separation of remaining non-fibre elements (e.g. seeds, vegetal contaminants) from fibres in fibre opening and cleaning apparatuses, and the opening i.e. loosening of the fibres, in order to obtain better fibre individualisation for example before carding. Typically, the group refers to blowroom equipment.

References relevant to classification in this group

This subclass/group does not cover:

The processing of flax stalks in order to extract the flax fibres from the stalk	D01B 1/14.
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D01G 11/00

Disintegrating fibre-containing articles to obtain fibres for reuse

Definition statement

This subclass/group covers:

Apparatus and processes for disintegrating fibre containing articles to obtain fibres for reuse, i.e. recycling.

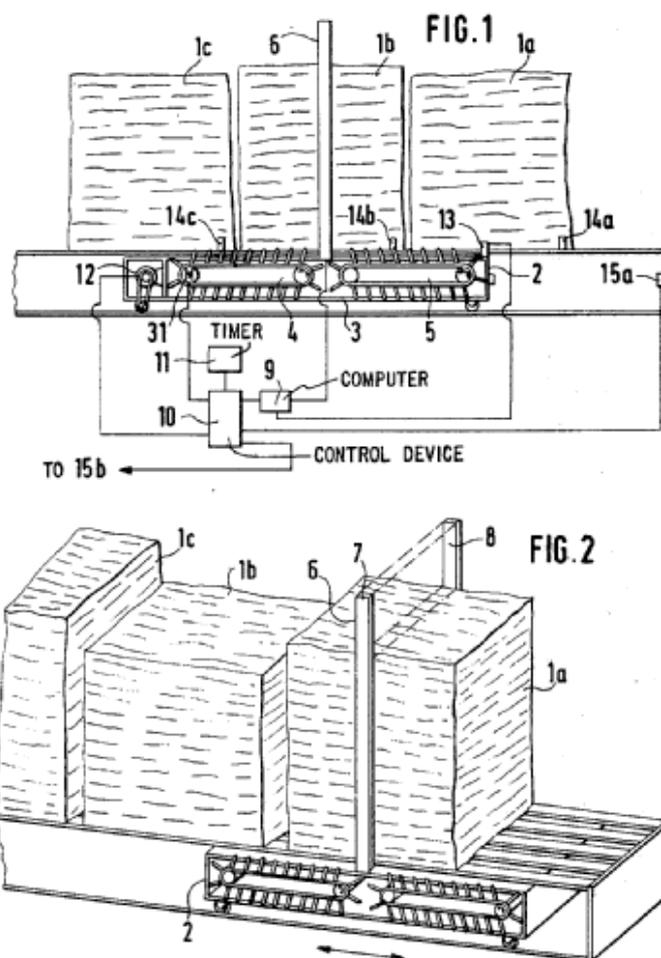
D01G 13/00

Mixing, e.g. blending, fibres; Mixing non-fibrous materials with fibres (mixing of fibres combined with other operations, e.g. bale-breaking of fibre-opening, see appropriate groups for such operations)

Definition statement

This subclass/group covers:

Apparatus and processes for mixing, e.g. blending fibres or mixing fibrous and non-fibrous material.



D01G 15/00

Carding machines or accessories; Card clothing; Burr-crushing or removing arrangements associated with carding or other preliminary-treatment machines (de-burring apparatus or machines operating independently D01B)

Definition statement

This subclass/group covers:

The technical elements and variants of cards, as well short staple cards (cotton cards) as long staple cards (wool cards).

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the

meaning indicated:

Carding	a mechanical process that breaks up locks and unorganised clumps of fibre and then aligns the individual fibres so that they are more or less parallel with each other. The aim of carding is to perfect the individualisation and cleaning of staple fibres.
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D01G 15/04

with worker and stripper or like rollers operating in association with a main cylinder

Definition statement

This subclass/group covers:

Long staple (e.g. for wool) cards, where the carding action is performed between the workers and the main cylinder.

Special rules of classification within this group

A worker designates a rotating cylinder of small diameter that cooperates with the main cylinder (or tambour) of the card, in order to perform the fibre carding.

D01G 15/08

with flats or like members or endless card sheets operating in association with a main cylinder

Definition statement

This subclass/group covers:

Short staple (e.g. for cotton) cards, where the carding action is performed between flats and the main cylinder.

Special rules of classification within this group

Flats designate longitudinal flat elements on a chain which cooperate with the main cylinder (or tambour) of the card, in order to perform the fibre carding.

D01G 15/98

Morel or like apparatus

Definition statement

This subclass/group covers:

Morel cylinder devices, where one cylinder has openings adapted to trap wool fibres entangled with burrs, while a cooperating cylinder will beat the burrs out.

D01G 17/00

Silk-dressing machines

Definition statement

This subclass/group covers:

A (rare) carding process for individualising silk staple fibres.

D01G 19/00

Combing machines

Definition statement

This subclass/group covers:

The combing out of short fibres (noils) from a carded fibre mass, in order to retain the longer fibres. The fibres are generally fed to and from the combing machine in sliver form.

D01G 19/02

with pinned circles, e.g. Noble

Definition statement

This subclass/group covers:

The so-called Noble combing principle where rotating pinned elements act on a passing fibre mass to remove short fibres from it.

D01G 19/04

with pinned cylinders, e.g. rectilinear

Definition statement

This subclass/group covers:

The combing technique (also called Heilmann combing technique), where combed fibre tufts are drawn out in linear manner from the combing area and are superposed.

D01G 19/30

Heating arrangements

Definition statement

This subclass/group covers:

E.g. heated crimping boxes, to increase fibre cohesion.

D01G 21/00

Combinations of machines, apparatus, or processes, e.g. for continuous processing (D01G1/06, D01G9/12, D01G15/46, D01G15/94 take precedence)

Definition statement

This subclass/group covers:

Partial or complete processing lines with a combination of fibre preparation machines and process steps; e.g. combed cotton producing line.

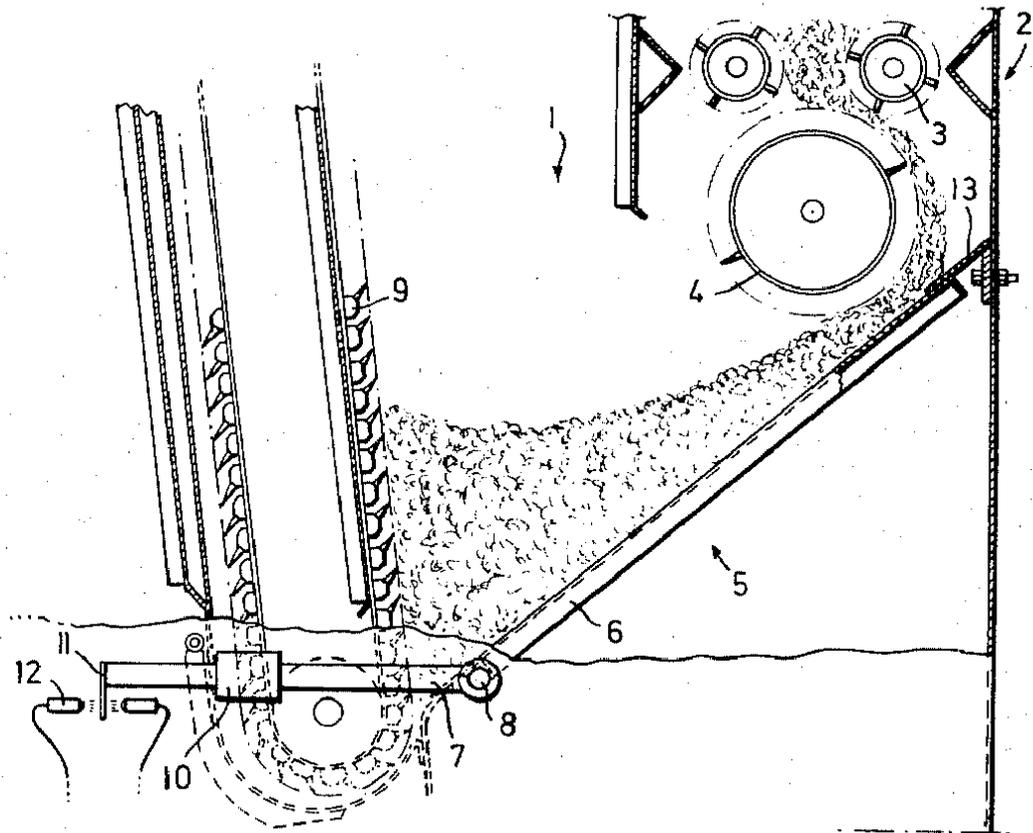
D01G 23/00

Feeding fibres to machines; Conveying fibres between machines (D01G21/00 takes precedence; intermediate feeds in carding machines D01G15/40)

Definition statement

This subclass/group covers:

Apparatus and processes for feeding fibres to machines.



D01G 25/00

Lap-forming devices not integral with machines specified above (forming mats or batts of continuous filaments for non-woven fabrics D04H)

Definition statement

This subclass/group covers:

Fibre packing devices, that wind fibre strands into a compact package (lap) that is easier to transport, e.g.:

- cross lappers after cards;
- lapping devices after cotton combing units.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Folding limp material	B65H 45/02
Depositing filamentary material in cans or receptacles	B65H 54/76

Forming mats or batts of continuous filaments for non-woven fabrics	D04H
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D01G 27/00

Lap- or sliver-winding devices, e.g. for products of cotton scutchers, jute cards, or worsted gill boxes

Definition statement

This subclass/group covers:

The re-packaging of laps or slivers into bobbins, in order to accommodate specific format requirements.

D01G 29/00

Arrangements for lubricating fibres, e.g. in gill boxes (processes involving the use of particular lubricants D06M15/00)

Definition statement

This subclass/group covers:

The application of lubricant, e.g. by spraying during fibre preparation.

Lubricant can be sprayed in drafting machines to enable a better fibre gliding or a better penetration of control pins in so-called gill boxes (i.e. fibre control units with pins, placed between drafting rollers in long staple drafting arrangements).

Informative references

Attention is drawn to the following places, which may be of interest for search:

Treating fibres, threads, yarns, fabrics or fibrous goods made from such materials, with macromolecular compounds	D06M 15/00
Moistening, sizing, oiling, waxing, colouring or drying filamentary material as additional measures during package formation	B65H 71/00

D01G 31/00

Warning or safety devices, e.g. automatic fault detectors, stop motions (safety devices of general application F16P; indicating devices of general application G08B)

Definition statement

This subclass/group covers:

Warning and safety devices, as well as quality monitoring devices applied to spinning preparation machines; e.g. evenness monitors of a card output; sliver breaking detectors etc.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Warning	monitoring, as monitoring systems are used to warn in case of value deviation and/or stop the machine.
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D01G 33/00

Hand tools for treatment of fibres

Definition statement

This subclass/group covers:

Auxiliary devices used by hand to facilitate intervention of fibres; e.g. superposing sliver ends in a comb to create a sliver junction.

D01G 35/00

Treatment of oakum

Definition statement

This subclass/group covers:

The cleaning and opening of entangled or agglomerated flax or hemp fibres, to obtain a parallelised fibre bundle (e.g. to be used as joint in connecting pipes).

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the

meaning indicated:

Oakum	a preparation of tarred fibre (e.g. hemp or jute) used in shipbuilding, for packing the joints of timbers in wooden vessels and the deck planking of ships, as well as cast iron plumbing applications.
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