CLASS 26, TEXTILES: CLOTH FINISHING

SECTION I - CLASS DEFINITION

This is the generic class for the treatment of textile fabrics subsequent to the fabrication thereof for putting them in better marketable condition.

Due to the similarity of the shearing of fur in the finishing of a fur skin to the shearing of the surface fibers or threads of cloth, particularly that of pile fabric, and the finishing of fur by shearing is included in this class.

SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

Due to the similarity of apparatus for the stretching of plastic film to apparatus for the stretching of fabric, the former has been placed in this class (26), along with the latter (see subclass References to the current Class, below). However, process for the stretching of plastic film is not in this class: rather it is in Class 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclass 288.4 (see particularly subclass 290.2).

SECTION III - SUBCLASS REFERENCES TO THE CURRENT CLASS

SEE OR SEARCH THIS CLASS, SUBCLASS:

15+, for finishing of fiber by shearing.

71+, for apparatus for stretching plastic film or fabric.

SECTION IV - REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, for processes of bleaching, dyeing, laundering, and chemical treatment of fibers and fabrics. for apparatus for fluid treatment of fibers and fabrics.

28, Textiles: Manufacturing, for miscellaneous operations relative to the production of textiles.

34, Drying and Gas or Vapor Contact With Solids, for the drying of cloth as a distinct step and when not carried out in connection with some other treatment.

38, Textiles: Ironing or Smoothing, for the finishing of cloth by ironing or smoothing and methods and means auxiliary thereto.

66, Textiles: Knitting, 87, Textiles: Braiding, Netting, and Lace Making; for finishing operations carried on in connection with the fabrication of the cloth.

68, Textiles: Fluid Treating Apparatus, for apparatus for fluid treatment of fibers and fabrics and for the finishing of cloth by fluid treatment or by combined fluid treatment and manipulation or working not provided for in this class.

101, Printing, for printing on cloth.

112, Sewing, for the sewing of cloth.

139, Textiles: Weaving, for finishing operations carried on in connection with the fabrication of the cloth.

223, Apparel Apparatus, for miscellaneous apparel apparatus.

226, Advancing Material of Indeterminate Length, appropriate subclasses for methods of, and apparatus for, feeding material without utilizing the leading or trailing ends to effect movement of the material.

242, Winding, Tensioning, or Guiding, appropriate subclasses for a winding, unwinding, or reeling device that may be used for handling material associated with a cloth finishing means.

270, Sheet-Material Associating, for pertinent subclass(es) as determined by schedule review.

427, Coating Processes, for processes of coating or impregnating in general.

SUBCLASSES

1 MISCELLANEOUS:

This subclass is indented under the class definition. Inventions falling within this class and not otherwise provided for.

2 PILE FABRICS:

This subclass is indented under the class definition. Inventions peculiar to the finishing of a fabric having a surface consisting of a plurality of upstanding thread ends or loops.

SEE OR SEARCH THIS CLASS, SUBCLASS:

8, see this class.

29+, for comparison with napping mechanisms in this class.

69, for pile fabric finishing with ornamentation.

3 SINGEING:
This subclass is indented under the class definition. Burning or scorching the projecting fibers or threads of cloth.

SEE OR SEARCH CLASS:
28, Textiles: Manufacturing, subclass 174 for clearing sheets of warp-threads by singeing, and subclass 239 for the clearing of an individual thread by singeing.
219, Electric Heating, appropriate subclasses for electric heater structure, per se.
431, Combustion, appropriate subclass for burner structure, per se.

4 Articles:
This subclass is indented under subclass 3. Singeing cloth in other than continuous-strip form.

5 On attached form:
This subclass is indented under subclass 4. The support on which the article is placed is connected to the machine during the operation.

6 Heated contact element:
This subclass is indented under subclass 3. The touching of a hot member, such as a plate or wire, accomplishes the singeing.

7 CUTTING:
This subclass is indented under the class definition. Severing the projecting threads or fibers of cloth by an edged instrument.

SEE OR SEARCH CLASS:
30, Cutlery, appropriate subclasses for the general structure of cutting devices.
83, Cutting, appropriate subclasses for devices which cut through the base or foundation of the cloth.
223, Apparel Apparatus, appropriate subclasses for devices peculiarly adapted to operate on hat bodies.

8 Pile loops:
This subclass is indented under subclass 7. Peculiar to the cutting of the looped threads on the surface of a fabric to produce a plurality of upstanding thread ends.

SEE OR SEARCH THIS CLASS, SUBCLASS:
15, for devices which are capable of, but not limited to, the cutting of pile loops.

SEE OR SEARCH CLASS:
112, Sewing, subclasses 80.55+ for an embroidering, tufting device including a loop catcher with loop cutting means.
139, Textiles: Weaving, subclasses 43, 46+, 116.5+ and 291 for similar devices operating as part of the loom mechanism.

9 With simultaneous feeding:
This subclass is indented under subclass 8. Includes means for advancing the fabric during the cutting.

10 With stopping:
This subclass is indented under subclass 9. Includes means peculiarly adapted to stop pile cutting machines.

SEE OR SEARCH CLASS:
192, Clutches and Power-Stop Control, subclass 116.5 and the search notes contained in the definitions thereof.

10.4 Weft end or selvage float loop removal:
This subclass is indented under subclass 7. Processes and apparatus for the removal of projecting weft ends from the edge of fabric, or for the removal of loops connecting nonadjacent wefts and floating along the edge of the fabric.

(1) Note. Selvage float loops often are formed in weaving on looms equipped with multiple shuttle boxes, one or more of which boxes (at any stage of weaving) contain inactive filling packages each of which is still connected by an integral length of weft yarn to the last pick of filling laid from that package and which, upon re-entry into active filling laying,

operates to extend such length of weft adjacent to but outside of the fabric selvage in the form of a loop or external float thread.

SEE OR SEARCH THIS CLASS, SUBCLASS:
11, for inventions related to the cutting of threads floating along the surface of a fabric.

SEE OR SEARCH CLASS:
139, Textiles: Weaving, subclass 170.3 for means effective to prevent the fouling of inactive filling threads in multiple-shuttle-box looms, noting particularly subclass 170.4 for such apparatus combined with a cutter; and subclass 302 for loom-mounted selvage trimmers.

11 Float threads:
This subclass is indented under subclass 7. Peculiar to cutting threads other than pile loops and which have a portion spanning some part of the surface of the cloth.

SEE OR SEARCH THIS CLASS, SUBCLASS:
10.4, for inventions related to the severing of threads floating along the edge, but not over the surface, of woven fabrics (selvage loops).

11.4 Venetian blind tapes:
This subclass is indented under subclass 11. Processes and apparatus for severing the connecting or unwoven warp threads (float or cross threads) in Venetian blind ladder tapes.

12 With feeding:
This subclass is indented under subclass 11. Includes means for advancing the fabric.

13 Double pile fabric:
This subclass is indented under subclass 7. Cutting the connecting threads of two-ply fabric to produce two-pile fabrics.

14 Loom type:
This subclass is indented under subclass 13. Devices for cutting double-pile fabric which are adapted for mounting on the frame of the loom, but not necessarily a part of the loom combination.

15 Shearing:
This subclass is indented under subclass 7. Cutting the surface fibers or threads of cloth.

(1) Note. The shearing of fur in the finishing of fur is included in this subclass.

SEE OR SEARCH CLASS:
69, Leather Manufactures, subclass 25 for the removal of the coarse or "water" hairs from furs by clipping or shearing.

16 Ornamental:
This subclass is indented under subclass 15. Includes nonuniform shearing.

17 With seam detector:
This subclass is indented under subclass 15. Includes means actuated upon the approach of a seam to provided therefor.

18 Automatic extension rests:
This subclass is indented under subclass 15. Devices for holding a fabric strip adjacent the cutting means and whose lengths are controlled by the position of the strip.

18.5 SHRINKING:
This subclass is indented under the class definition. Apparatus and processes for working a fabric to increase its compactness.

SEE OR SEARCH THIS CLASS, SUBCLASS:
18.6, for regular shifting of the warp or weft threads.
19, for fulling operations.

SEE OR SEARCH CLASS:
8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, subclasses 114+ and 115.51+ for chemical processes of shrinking.

18.6 Thread compacting:
This subclass is indented under subclass 18.5. Apparatus and processes in which the compactness of the fabric is increased by crowding together the warp threads or the weft treads.

SEE OR SEARCH CLASS:
162, Paper Making and Fiber Liberation, subclasses 205, 206 and 361 for related structure.

19 Fulling:
This subclass is indented under subclass 18.5. Apparatus and processes for working a feltable fabric in wet condition.

SEE OR SEARCH CLASS:
28, Textiles: Manufacturing, appropriate subclasses for analogous devices used in the formation of a felt fabric.
68, Textiles: Fluid Treating Apparatus, appropriate subclasses for analogous devices for fluid treatment of textiles where the textile is not fulled.
118, Coating Apparatus, appropriate subclasses for apparatus for the treatment of fabrics with coating or impregnating materials.
252, Compositions, subclass 367.1 for soap compositions not adapted for use as detergents and subclass 8.61 for fulling compositions.
427, Coating Processes, appropriate subclasses for processes of coating or impregnating in general.
510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, appropriate subclasses for detergents and other compositions used for cleaning solid substrates.

20 Continuous web machines:
This subclass is indented under subclass 19. Apparatus and processes wherein the fabric is fed constantly through the machine.

21 Pleating type:
This subclass is indented under subclass 20. Apparatus and processes wherein the fabric is bent into short transverse folds for the purpose of carrying on the fulling thereof, usually by being forced through a constricted passage.

22 Beater type:
This subclass is indented under subclass 19. Apparatus and processes wherein the cloth is struck by a hammer.

23 Gravity stroke:
This subclass is indented under subclass 22. Apparatus and processes in which the hammer is actuated in one direction by gravity.

24 Stopping:
This subclass is indented under subclass 19. Apparatus wherein means is provided for stopping the operation of the apparatus.

SEE OR SEARCH CLASS:
192, Clutches and Power-Stop Control, subclass 116.5 and the search notes contained in the definitions thereof.

25 BEATING:
This subclass is indented under the class definition. Striking the fabric for purposes other than fulling.

26 Beetling:
This subclass is indented under subclass 25. Striking the fabric with a hammer to produce an ironing finish.

27 RUBBING:
This subclass is indented under the class definition. Treating the cloth by friction other than by pressing surface.

SEE OR SEARCH CLASS:
38, Textiles: Ironing or Smoothing, appropriate subclasses for rubbing by smooth surfaces to iron or smooth a textile fabric or article.
492, Roll or Roller, appropriate subclasses for a roll, per se, not elsewhere provided for, and see the notes thereunder.

28 Abrasive:
This subclass is indented under subclass 27. The rubbing is done by a sandpaperlike surface.

SEE OR SEARCH CLASS:
451, Abrading, appropriate subclasses for abrading not limited to the treatment of the cloth itself, especially subclasses 466+ for a rotary cylinder having flexible abradant flaps extending from the periphery thereof.

29 NAPPING:
This subclass is indented under the class definition. Raising the fibers of cloth to produce a pilelike surface.

SEE OR SEARCH THIS CLASS, SUBCLASS:
28, for the mere application of a sandpaperlike surface to the cloth.

SEE OR SEARCH CLASS:
223, Apparel Apparatus, appropriate subclasses for machines peculiarly adapted to operate upon hat bodies.

30 Ornamental:
This subclass is indented under subclass 29. Included nonuniform napping.

31 Napping surface feature:
This subclass is indented under subclass 29. There is some novelty in the teazlelike element or in the method of attaching it to a base.

SEE OR SEARCH CLASS:
15, Brushing, Scrubbing, and General Cleaning, appropriate subclasses for brushes, per se.
19, Textiles: Fiber Preparation, subclass 114 for the structure of card clothing which is not peculiar to napping.

32 Machines:
This subclass is indented under subclass 31. Machines coming for raising the fiber of the cloth.

33 Planetary:
This subclass is indented under subclass 29. Rotating napping rolls are carried on the periphery of a rotating drum.

34 Including drive feature:
This subclass is indented under subclass 33. Includes novelty in the means for driving either the drum or the individual napping rolls.

35 Drives:
This subclass is indented under subclass 34. Limited to the means for driving the drum or the napping rolls carried thereby.

36 Reciprocating napping element:
This subclass is indented under subclass 29. The member which produces the napping has a to-and-fro motion.

37 Single fixed-position napping roll:
This subclass is indented under subclass 29. Devices which have only one napping cylinder which has no motion other than that of rotation.

51 STRETCHING OR SPREADING AND WORKING:
This subclass is indented under the class definition. Applying tension and distorting strains to the cloth while it is spread out in sheet form.

SEE OR SEARCH THIS CLASS, SUBCLASS:
71+, for an apparatus for expanding a running web of cloth.

SEE OR SEARCH CLASS:
118, Coating Apparatus, subclass 33 for coating apparatus combined with means to stretch the work.

51.3 Weft angle adjusting:
This subclass is indented under subclass 51. Devices wherein the fabric working means comprises means for changing the angle of weft threads relative to warp threads in a traveling woven fabric.

(1) Note. These devices are usually intended for correcting weft bow or skew in woven fabrics, but may be used for positively skewing or biasing weft threads.

SEE OR SEARCH THIS CLASS, SUBCLASS:
18.6, for working of woven fabrics by crowding together the parallel threads of warp and weft without necessarily changing the angular relationship between warp threads, on the one hand, and weft threads on the other.

51.4 Automatically controlled:
This subclass is indented under subclass 51.3. Devices having means, responsive to improper weft position, to correct or introduce skew or bow.

SEE OR SEARCH CLASS:
226, Advancing Material of Indeterminate Length, appropriate subclasses for control means for regulating the advance of web or stand material.

51.5 With photoelectric scanning or detecting means:
This subclass is indented under subclass 51.4. Devices wherein the weft position responsive means comprises photo-electric scanners, and wherein the operation of the weft position changing means is initiated by the detection of improper weft positioning by such scanning means.

SEE OR SEARCH CLASS:
250, Radiant Energy, subclass 200 for photoelectric cells, circuits, and associated apparatus.

52 Traveling clamp or hook type:
This subclass is indented under subclass 51. The cloth is gripped by clamps, hooks, or pins which travel along with the cloth.

SEE OR SEARCH THIS CLASS, SUBCLASS:
71+, for an apparatus for expanding a running web of cloth.

53 Reciprocating frames:
This subclass is indented under subclass 52. The members which carry the means for propelling the clamps, hooks, or pins have a to-and-fro motion.

69 ORNAMENTAL:
This subclass is indented under the class definition. The production of nonuniform effects on cloth, by mere operation on the material thereof, not otherwise provided for.

SEE OR SEARCH THIS CLASS, SUBCLASS:
16 and 30, for ornamentation produced solely by shearing or napping.

SEE OR SEARCH CLASS:
8, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, subclasses 478+ for special ornamental colored effects, and subclass 114 for ornamental effects obtained by chemical modification of textile fibers and fabrics.

70 INSPECTING:
This subclass is indented under the class definition. Devices for facilitating the inspection and examination of cloth.

SEE OR SEARCH CLASS:
73, Measuring and Testing, subclass 159 for fabric testing other than mere inspection or visual examination.
269, Work Holders, appropriate subclasses. Class 269 is the residual locus for patents to a device for clamping, supporting and/or holding an article (or articles) in position to be operated on or treated. See notes thereunder for other related loci.

71 EXPANDING DEVICE FOR TEXTILE WEBS:
This subclass is indented under the class definition. Structure for expanding a running web of cloth; i.e., to increase a dimension thereof or to apply tension thereto to inhibit shrinkage or to remove wrinkles, creases, or folds.

SEE OR SEARCH THIS CLASS, SUBCLASS:
51+, for apparatus for performing diverse operations on running length increments of a cloth web including a cloth expanding operation. (Note, moreover, the superior subclasses of this class (26) for apparatus for respective specified operations in which cloth expanding structure may also be provided).
69, for a device for imparting an ornamental stretch to a localized zone only of running length web increments.

SEE OR SEARCH CLASS:
69, Leather Manufactures, subclass 1.5 for a belt stretching machine, and in which running strip increments are stretched.
83, Cutting, subclass 18 for the method, and subclass 175 for apparatus for cutting and stretching work.
139, Textiles: Weaving, subclasses 291+ for fabric manipulating structure for a

textile weaving machine, which manipulation may include expanding the cloth.

140, Wireworking, subclass 108 for a device for stretching wire cloth.

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 494+ for a stretching device combined with laminating apparatus.

264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclasses 288.4+ for the method of stretching a running length of plastic; e.g., subclass 290.2 for the biaxial stretching thereof, etc.

427, Coating Processes, subclasses 171+ for a method of coating which includes the expanding (e.g., the stretching, spreading, or tensioning against shrinkage) of a running length web of cloth.

72 Biaxial expansion:

This subclass is indented under subclass 71. Structure for expanding cloth in both the longitudinal and lateral (or spreading) directions; i.e., coaxially and transversely of the running length direction.

73 By successively accelerating spreader members of traveling set:

This subclass is indented under subclass 72. Structure in which the cloth expanding means is constituted by the series of cloth edge retaining and accompanying spreader members defined in subclass 89; and in which means is further provided progressively forwardly to increase the spacing between adjacent members whereby simultaneous longitudinal expansion of the cloth is also accomplished.

SEE OR SEARCH CLASS:

264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclasses 235.8 and 290.2, for the method of biaxially stretching a running web of plastic fabric.

74 Web-condition-responsive operation control:

This subclass is indented under subclass 71. Cloth expanding structure including means responsive to a particular condition of the running length of cloth to control a cloth expanding operation; i.e., to modify, stop, or start the operation or to prevent or correct improper operation.

(1) Note. Cloth pull to drive an element (even such a spreader element as specified in the the roller of subclasses 97 or 99+) in itself does not constitute operation control for these subclasses (74+). Compare, however, with subclass 77 indented hereunder (74+), in which cloth pull not only drives the spreader but, further, controls and adjusts the angle of the roller and thereby of the selvage position responsive to the selvage location.

SEE OR SEARCH CLASS:

226, Advancing Material of Indeterminate Length, subclasses 10+ for web-condition-responsive means to control the web advancing mechanism, particularly, subclasses 15+ for detection responsive control of the location of an edge of the web.

75 Responsive to edge location to control spreader:

This subclass is indented under subclass 74. Spreader in which the condition and the control is that of the lateral position of a selvage of the running length of cloth.

(1) Note. The “spreader”, of the title of these subclasses (75+) is defined in subclass 87.

(2) Note. The terms “edge” and “selvage” are used interchangeably and are completely synonymous with one another.

76 To adjust tenter frame:

This subclass is indented under subclass 75. Spreader in which selvage detection means controls mechanism for adjusting the lateral position of the guide or support for the traveling series of spreader members which successively retain the selvage increments of the traveling web to accompany the web for the spreading operation. Generally, the angle with the running web axis or the distance from the axis is controlled.

SEE OR SEARCH THIS CLASS, SUBCLASS:

91, for the structure of the guide or support for traveling series of cloth-edge retaining and accompanying spreaders. This subclass (91) further includes means for manually and volitionally adjusting said guide or support structure.

77 To adjust angle of selvage-engaging roller spreader:

This subclass is indented under subclass 75. Spreader in which the condition responsive means controls the (acute, forward) angular position of the axis of the selvage-engaging roller spreader relative to the longitudinal axis of the running length of cloth.

SEE OR SEARCH THIS CLASS, SUBCLASS:

97, for the structure of selvage-engaging roller spreader.

78 Roller spreader pair nip control:

This subclass is indented under subclass 75. Spreader in which the condition responsive means controls adjustment of one of the rollers of roller-pair spreader means toward or away from cloth-directing engagement with the other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

97, for the structure of a selvage-engaging spreader of roller-pair construction.

99+, for the structure of the roller spreader pair which completely traverses the successive increments of the running length of cloth.

SEE OR SEARCH CLASS:

226, Advancing Material of Indeterminate Length, subclass 35 for nip control means responsive to the condition of a web in web advancing apparatus.

79 To activate traveling spreader member responsive to removal from feeler:

This subclass is indented under subclass 75. Spreader in which the condition is the inward movement of the (selvage, or) edge from the gripped position between the jaw members of the traveling series of spreaders of the clamp type; and in which, responsive thereto, a second, inward companion, traveling spreader is conditioned to retain that edge at a position closer to the longitudiinal axis of the traveling web.

SEE OR SEARCH THIS CLASS, SUBCLASS:

93+, for the structure of the traveling series of selvage-retaining spreaders, which subclass may further disclose the (unclaimed) inboard-outboard companion pair of grippers and means responsive thereto for activating the companion inboard spreaders.

95, for spreader structure which includes the series of accompanying series of clamp-type spreaders and also a companion series of the edge-penetrating, pin type.

80 Tubular-fabric-enclosed spreader:

This subclass is indented under subclass 71. Spreader including a member positioned to be enveloped by continuous tubular cloth web increments and dimensioned engagingly to force the cloth increments outwardly in a plane transverse to the running direction of the web.

SEE OR SEARCH THIS CLASS, SUBCLASS:

18.5+, for the combination of shrinking and spreading tubular fabric.

81 Including heater or dryer:

This subclass is indented under subclass 80. Spreader in which (a) the enveloped member is heated for transfer of heat to the cloth web or (b) means is provided for impinging gaseous heating or drying fluid against the cloth.

SEE OR SEARCH THIS CLASS, SUBCLASS:

18.5, for the combination of shrinking, including fluid-treating and drying, with spreading tubular fabric; e.g., expanding the fabric widthwise to cause it to shrink lengthwise.

82 With slitter, for opening up:

This subclass is indented under subclass 80. Spreader further including cutting means parting adjacent portions of the tubular cloth web

from one another along a line coinciding with the web advance direction, whereby the cloth is made available for single width use.

SEE OR SEARCH CLASS:
83, Cutting, subclass 18 for the method, and subclass 175 for apparatus for cutting and stretching work, where the work could be a tubular fabric web and the stretcher could be a web-enclosed spreader. Where details of the spreader are at all involved, however, the original document is placed in this instant Class 26, subclass (82).

83 With rotary feeder or bearing at spreader ends:
This subclass is indented under subclass 80. Spreader including rotatable means (e.g., rollers, endless belts) engaging the cloth increments at the spreading plane extremities to drive or to facilitate movement of the cloth increments therepast.

SEE OR SEARCH THIS CLASS, SUBCLASS:
29+, for the combination of napping and spreading tubular cloth about an enclosed tube.

84 Driven:
This subclass is indented under subclass 83. Spreader including motor or transmission means to rotate the rotatable means at the spreading plane extremities for driving the cloth increments.

(1) Note. The driven web-feeding rollers may be at the ends of at least one pair of opposed, enclosed spreader arms or they may be feed roller contacting the spreader arm extremities from the outside, with opposed web increments passing between the rollers and the spreader arm extremities. It is possible, for indented subclass 85 for an enclosed driven cylinder to constitute the web drive means for this locus, with diametrically opposed peripheral points thereof constituting the driven extremities.

85 Multi-dimensional spreader (e.g., tube or spider):
This subclass is indented under subclass 84. Spreader in which the enveloped spreader member is of a width, in at least two intersecting dimensions transverse to the running length direction of the web, to spread the cloth along corresponding intersecting planes.

(1) Note. See (1) Note in parent subclass 84, particularly the last sentence. Note, moreover, driven rollers across any of the plurality (or infinite number) of transverse spreading planes is adequate to satisfy the requirement(s) of this subclass.

86 Overfeed arrangement; or rotary pinner for traveling pin spreader set:
This subclass is indented under subclass 71. Structure either (a) in an arrangement, or further including means repetitively to bunch successive increments of the running web of cloth; or (b) spreader structure including series of cloth edge penetrating and accompanying members and rotary disc means positioned to engage and force cloth edge increments through the members.

(1) Note. A rotary pinner is so common for overfeed that it is classified therewith whether or not used or useful, as disclosed, toward that purpose (e.g., even when they are idlers, etc.).

SEE OR SEARCH THIS CLASS, SUBCLASS:
18.5, for an overfeed arrangement to effect shrinking.
80+, for an overfeed arrangement comprising means about which tubular fabric is bunched; see, particularly, subclass 85 thereunder.
96, for the structure of series of edge penetrating and accompanying spreaders.

87 Spreader:
This subclass is indented under subclass 71. Structure including means to extend the running length increments of the cloth web in an outward direction (usually, both opposite directions) i.e., transverse to the running length direction.

SEE OR SEARCH THIS CLASS, SUBCLASS:

72, for structure to extend the cloth web in both the running length direction and transversely thereto.

75+, for a spreader including means responsive to a cloth web condition (commonly, the location of the edge) to control the cloth expanding operation.

80+, for a spreader for entering and spreading (i.e., transversely extending) tubular fabric.

SEE OR SEARCH CLASS:

19, Textiles: Fiber Preparation, subclasses 65+ for apparatus which may include means for spreading the discrete fibers constituting a web in which the fibers are free enough to be shifted relative to one another.

38, Textiles: Ironing or Smoothing, subclass 143 for a spreader combined with structure peculiar to ironers; e.g., an entrance end and means to feed cloth therethrough, etc.

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclass 496 for a spreader which is part of laminating apparatus.

427, Coating Processes, subclass 173 for the method of coating and spreading running length work.

88 Acting on fabric edge only:

This subclass is indented under subclass 87. Spreader positioned and dimensioned to act upon edge increments only of the running length of the fabric web; usually, a spaced pair of spreader elements, one for each edge.

(1) Note. The terms “edge” and “selvage” are used interchangeably and are completely synonymous with one another.

SEE OR SEARCH THIS CLASS, SUBCLASS:

18.6, for the shrinking of a cloth web of warp and weft construction including advancing it through the apparatus in a direction opposite to that which would cause spreading. Where the invention is to apparatus selectively to perform one or the other operation, the original will be found in that subclass (18.6) and a cross only in the instant subclass (88).

87, the parent subclass for spreader structure positioned and dimensioned to act upon the cloth web increments inward of the selvages.

89 Edge-retaining traveler set (i.e., tenter):

This subclass is indented under subclass 88. Spreader constituted by a (usually paired) series of discrete edge-retaining members which become affixed to and which thereby accompany successive edge increments of the running length (usually, again, both edges by each accompanying pair).

SEE OR SEARCH THIS CLASS, SUBCLASS:

88, for edge-entraining belt means (usually a pair of belts), for continuous and uninterrupted retentive contact with the fabric edge(s), rather than the successive contacts by the discrete member of the (usually paired) series of this subclass (89).

90 Edge-entraining wheel:

This subclass is indented under subclass 89. Spreader in which the series of edge-retaining members is (are) spaced connected about the periphery of a rotating annular member (usually paired) series about spaced peripheries of the member or about peripheries of spaced accompanying (disc) members) to retain the running length edge(s) of a fabric web to effect spreading during movement of the edge(s) about the peripheries.

SEE OR SEARCH THIS CLASS, SUBCLASS:

88, for edge-entraining-wheel spreader structure in which the selvage is continuously and uniterruptedly clamped for travel rather than at intervals by the traveling series of this subclass (90).

93+, and 96, for tenter chains of the clamp or hook series type, respectively, in which the course of the chain(s) may bring the series about the periphery of a sprocket or drum whereat fabric-edge spreading could possibly be

effected. The chain of clamps or hooks are guided, but not connected about the rotating annulus, as in the instant subclass (90).

91 Laterally adjustable tenter frame:
This subclass is indented under subclass 89. Spreader including means to support or guide the series of edge retaining and accompanying spreader members at the appropriate spacing or (forward, acute) angle relative to the running length axis (or, more commonly, relative to the companion support or guide for the opposite edge series); and further including means to adjust the guide or support to said appropriate spacing or angle.

SEE OR SEARCH THIS CLASS, SUBCLASS:
76, for tenter frame structure the adjustment of which is responsive to the detection of the selvage position of the running length of cloth web.

92 With heater or dryer:
This subclass is indented under subclass 89. Spreader further including either (a) a heated member engageable with the running length of cloth; or (b) means to apply drying or heating gaseous fluid to the cloth.

SEE OR SEARCH THIS CLASS, SUBCLASS:
81, for heating or drying structure for a tubular fabric spreader.
106, for heating or drying means for structure which expands cloth longitudinally of the running length; which subclass (106) further serves for the cross-reference collection of heating or drying means used with spreader structure of general character (i.e., other than of instant subclass 92 or of subclass 81).

SEE OR SEARCH CLASS:
34, Drying and Gas or Vapor Contact With Solids, appropriate subclasses for the drying of web material, generally, including tenter means to advance the material to or through the dryer. See, for example, subclass(es): 4 - 41, for methods of drying (the last being residual for the drying of webs); 43+, for the inclusion of web-condition-responsive dryer control; 115, for the conveying of the web over or around drying drums; 158, dryer-and-tenter-structure residually. This class (34) will take the combination of dryer structure for cloth with a tenter which is merely broadly claimed.

93 Set is series of traveling clamps:
This subclass is indented under subclass 89. Spreader in which each of the elements of the series is constituted by a pair of jaw members movable relative to one another to converge upon and grip opposite sides of successive cloth edge(s) increments and to diverge to release the edge(s).

94 Including clamp manipulator:
This subclass is indented under subclass 93. Spreader, further including wayside means successively engaging the traveling edge-retaining elements in their series at a part thereof, or connected thereto, to effect or control said convergent or divergent jaw movement.

(1) Note. Mere reference to the clamp manipulation in the disclosure of the tentering operation, without even illustration of the manipulator, will not serve for placement by disclosure alone of an original patent into this subclass rather than parent subclass 93.

95 And mating pin series set:
This subclass is indented under subclass 93. Apparatus in which the series includes a further series of accompanying companion elements constructed to penetrate the cloth at the edge(s).

SEE OR SEARCH THIS CLASS, SUBCLASS:
79, for a feeler resembling the clamp defined in this subclass and further including means activating the pin members of the series for cloth-edge penetration responsive to displacement of that edge from the clamp-like feeler member of the series.

96 Set is traveling pin series:
This subclass is indented under subclass 89. Spreader in which the spreader members of the series penetrate the running length edge increments.

SEE OR SEARCH THIS CLASS, SUBCLASS:
79, for a feeler resembling (temporary) clamp and matching inboard pins, each of which latter is activated responsive to displacement of the cloth edge increment from the former.
95, for redundant series of clamp and companion pin travelers which are volitionally selectively activatable.

97 Roller spreader:
This subclass is indented under subclass 88. Spreader including rotatable means dimensioned and positioned to engage the traveling web increment at the selvage area only and effecting outward spreading of the selvage by either (a) being mounted for rotation about an axis parallel to the face of the web and at an acute forward angle in the direction of the web travel or (b) mounted for rotation about said parallel axis and being of such surface configuration as to direct said selvage outwardly.

98 Edge straightener; e.g., uncurler:
This subclass is indented under subclass 88. Spreader which deflects the selvage area increments outwardly to eliminate folds or wrinkles; e.g., forwardly and outwardly directed air blast means, etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:
97, immediately preceding, for an uncurler or dewrinkler which is a selvage engaging roller spreader.

99 Roller spreader:
This subclass is indented under subclass 87. Spreader comprising a rotatable cylinder extending substantially continuously thwart the entire width of the running length of cloth and constructed to compel successive running half-width increments oppositely outwardly from the common center.

SEE OR SEARCH THIS CLASS, SUBCLASS:
97, for roller spreader structure consisting of a pair of roller members for the opposite edges.
99+, for spreader roll structure extending across the entire width of the running cloth web; see, for example subclass 100 or 102+ for spreader roll structure made of a plurality of contiguous members extending clear across the width of the running web; which members may include one which is central and merely passively rolling with the cloth and outside ones acting to spread opposite outside half increments.

SEE OR SEARCH CLASS:
492, Roll or Roller, appropriate subclasses for a roll, per se, not elsewhere provided for, and see the notes thereunder.

100 Axially slidable sections:
This subclass is indented under subclass 99. Spreader in which the rotatable cylinder includes members which are coaxially shiftable relative to one another to provide for (mutually opposite) outward displacement of the members correspondingly to spread the cloth (half-width) increments.

SEE OR SEARCH THIS CLASS, SUBCLASS:
99, the principal subclass, for a roller spreader which is stretchable to direct lateral half-width portion(s) outwardly to spread the engaged cloth increments.

101 Bowed:
This subclass is indented under subclass 99. Spreader of a configuration increasingly to diverge from the axis extending between its end supports, whereby the oppositely outward spreading of the half-width increments of the running web occurs by being: (a) wedge over the resulting intermediate bulged configuration; or (b) directed outwardly by contact with a respective one of resulting pair of oppositely forwardly angled members or portions.

SEE OR SEARCH THIS CLASS, SUBCLASS:

97, for spreader structure in which each one of a pair of forwardly obliquely angled members are located at respective opposite selvages only (rather than substantially coextensively athwart the entire width of the running length of the web.)

102 Plural member roller:

This subclass is indented under subclass 101. Spreader in which separate, coextensively contiguous members constitute the forwardly obliquely angled spreader pair.

(1) Note. The separate members may, or may not, abut or be joined at the common center by a separate third (idler) member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

97, for short, noncontiguous roller spreaders for engagement with the selvage area(s) only of the traveling web.

100, for separate coextensively contiguous members which are axially aligned and therefore slidable relative to each other along a common axis.

103 Multi-spindle:

This subclass is indented under subclass 102. Spreader in which the separate coextensively contiguous members constitute a multiplicity; i.e., a plurality between each opposite end to the common center, each member being self-adjustably movable relative to the rest to permit rotation thereof notwithstanding the overall bowed configuration.

SEE OR SEARCH CLASS:

492, Roll or Roller, subclasses 16+ for a roll, per se, rotatable relative to its supporting shaft, not elsewhere provided for.

104 Covered:

This subclass is indented under subclass 103. Spreader further including a flexible sheath enveloping the multiplicity of rotating members.

105 Bi-helical:

This subclass is indented under subclass 99. Spreader in which the opposite outward spreading of the running half-width increments is effected by contact with a respective one of a pair of helical configurations about the periphery of the roller, each winding oppositely outwardly from their common center.

SEE OR SEARCH CLASS:

492, Roll or Roller, subclass 35 for a roll, per se, having helically aligned surface projections, indentations, or slits, not elsewhere provided for.

106 Including heater or dryer:

This subclass is indented under subclass 71. Structure further provided with means to apply heat to the fabric web, or to subject the web to a gaseous (i.e., steam) treatment; e.g., to dry the fabric, etc.

(1) Note. By its position at the foot of this schedule (the last coordinate under subclass 71), this subclass can accept as an original the combination with a heater or dryer of cloth expanding structures which are not spreaders. This subclass is available, however, for the cross-referencing of the combination of a heater or dryer with spreaders of general construction; i.e., other than those of subclasses 81 and 92.

SEE OR SEARCH CLASS:

38, Textiles: Ironing or Smoothing, subclass 143 for the combination of a stretcher and structure peculiar to an ironer; e.g., means to manipulate the cloth through the entrance end of the ironer, etc.

END