**AATCC**  
American Association of Textile Chemists and Colorists. A national association that concentrates on the preparation, dyeing, and finishing of textiles.

**Abrasion**  
Localized surface effect that changes the appearance and color of a substrate. Often called frosting.

**Absorption**  
The process of a gas or liquid being taken up into the pores of a substrate.

**Acid Washed**  
See Stone Washed.

**Adsorption**  
The movement of dyes or chemicals from the surrounding liquor bath to the surface of a fiber.

**Affinity**  
Tendency of a dyestuff to want to combine with a fiber.

**Afterwashing**  
Any washing that is done after fabric production. An example is washing to remove thickener and unfixed dyes.

**Air Jet**  
A loom that uses jets of air to move the filling yarns across the warp shed.

**Air Jet Filling Insertion**  
A shuttle-less filling insertion system developed in the 1950s that uses a jet of air to propel the filling yam across the warp shed. This is currently the fastest conventional method of pick insertion.

**Air Jet Spinning**  
A spinning system in which air is used to insert twist.

**Amorphous**  
Condition or region of the cellulose in cotton that is more open and accessible to water, dyes, and chemicals. Non-crystalline.

**Amylase Enzyme**  
Used in desizing woven fabrics to degrade starch size.

**Anionic**  
Negatively charged.
**ASTM**
American Society for Testing and Materials. A national organization that sets up standard methods for testing of textiles and other merchandise.

**Atmospheric Conditions**
Conditions of a process when not done under pressure.

**Auxiliary**
Any of several relatively simple chemical compounds mixed together and used as processing aides (i.e., lubricants, leveling agents, etc.).

**Auxiliary Nozzles**
Small nozzles spaced along the reed on an air jet loom that assist the filling yarn across the warp shed by releasing blasts of air as the yarn passes it.

**Back Loop**
A loop of yarn formed on a dial needle in circular weft knitting or on a needle in the back-bed in flat-bed weft knitting.

**Back Wale**
A wale formed on a dial needle in circular weft knitting or a back-bed needle in flat-bed knitting.

**Backrest**
This roll (also called the whip roll) determines the angle that the warp yarns are fed into the loom. The changing of its height will affect the appearance of the fabric. As the roll is raised or lowered, the appearance of the cloth will change. The whip roll is also timed to move forward as the harnesses rise to decrease the tension on the warp yarns.

**Balanced Twill**
A twill that has the same number of floats as sinkers in one repeat of the weave (i.e., 2 x 2 twill). This fabric will appear to have the same weave on the technical front as on the back.

**Balanced Weave (Basket)**
A weave that repeats its pattern on the same number of warps and picks (i.e., plain weaves, 2 x 2 baskets, etc.).

**Ball Warp**
A process where the yarn from the warp creel is condensed and wound onto a spindle device like a ball of twine. The yarn will later be dyed on a rope dye range.

**Ball Warp Dyeing**
Also known as long chain dyeing. A dye range that dyes the yarns in a rope form made up of many individual yarns. Seen mostly in indigo dyeing, but some other dyes can be used as well.
**Basic Loom Motions**
Shedding, picking, beat-up, and let-off are processes that make up the weaving cycle.

**Basic Twill**
A common twill (i.e., 2 x 1 and 3 x 1 twills) that can be produced on all types of looms.

**Basket Weave**
A variation of the plain weave where two or more warp yarns weave as a plain weave. Example: 2 x 2 and 3 x 3 are regular basket weaves. 2 x 1 (Oxford) or 3 x 1 are irregular basket weaves.

**Batch Cure**
Post-curing process for durable press garments where one group of garments is cured in an oven one at a time.

**Batch Processing**
Procedure in which a certain weight or length of a substrate is processed together at one time (i.e., 1000 lbs., 2500 yards, etc.). Can be a preparation, dyeing, or finishing process.

**Batik**
A resist-dyeing process in which portions of fabric are coated with wax so that only the un-waxed areas will take on the dye-matter. The operation can be repeated several times for multiple colors.

**Batt**
A mat-like structure composed of many individual fiber tufts.

**Beam**
A wood or metal cylinder, usually with a circular flange on each end, on which warp yarns are wound for weaving or warp knitting.

**Beam Creel**
A device on the back end of the slasher where the warper beams holding unsized yarn are loaded. The yarn is then pulled off by the slasher. Sometimes called slasher magazine or slasher creel.

**Beam Dyeing**
Wet process where either warp yarns or fabric is wound onto a perforated beam. The dye liquor is forced through the perforations on the inside of the beam to the outside (and vice versa) in order to impart color.
Bearded Spring Needles (spring needle)
A knitting machine needle invented by William Lee in England in 1589. The needle has a long terminal hook or beard capable of being closed during casting off by a device known as a presser. The hook returns to its original position when the pressure is removed. Spring needles are used in the production of very fine fabrics.

Beat-up
The process common to all looms where the loosely inserted filling yarn is pushed up into the fabric forming the fell-of-the-cloth.

Beck
Batch-dyeing machine that processes fabric in rope form. The rope is turned in a circular manner by an elliptical beam.

Bed Racking
Refers to the movement and alignment of two needle beds either to the right or left of each other.

Bedford Cord
A fabric that has cords or ribs formed by the weave running in the warp direction. Sometimes called a warp pique.

Binder
An adhesive applied to a fabric or garment that glues a pigment to the surface and imparts a degree of fastness to the substrate.

Binder (Satin)
The point in a warp satin weave where the warp float is tied down by a sinker pick. In a filling satin weave, it is where the pick is tied down by a riser warp yarn.

Binders
Chemicals used in slashing to glue down the hairs on the yarn to make them easier to process through weaving.

Bleaching
Preparation wet process that is done to a greige substrate in order to impart a white base for dyeing light and/or bright shades.

Blend
Two or more fibers in a substrate.

Blended Yam
A yarn produced using cotton and any other fiber, synthetic or natural.

Blending
Mixing different cotton to achieve a homogenous level of fiber properties.
**Blotch Printing**
Process where the background color of a design is printed rather than dyed.

**Bobbin**
A paper or plastic tube on which yarn is wound.

**Bouch!**
A rough, curly, knotted, fancy yarn made with two fine yams twisted together with a thicker hard-twisted yarn that is fed at a faster rate than the finer yarns normally in the opposite direction.

**Breaker Drawing**
The first pass or process of drawing-in yarn manufacturing.

**Broken Twill**
A generic term for a fabric where the twill line changes direction or twill count (i.e., pointed twills and herringbone weaves).

**Brushing**
Finishing process performed on a fabric that raises up fibers to create a specific feel (hand) or look. Not the same thing as napping.

**Bulk**
The area taken up by a yarn or fabric structure.

**Bull Denim**
Also known as bull shot or natural denim. Un-dyed denims that can either be left natural, bleached white, piece dyed, or garment dyed.

**Bullet**
A term used to describe the projectile that carries yarn across the warp shed on a projectile loom. It is fired across the loom like a bullet.

**Burn-out Printing**
Printing process that uses chemistry to dissolve a certain fiber in a blended fabric to create a sheer, open, or lace effect.

**Bust Rods**
The rods that separate the individual sized yarns as they come out of the drying section of the slasher. All yams are separated before they are wound onto the loom beam.

**CAD/CAM**
Computer-Aided Design and Computer-Aided Manufacturing. A powerful tool for textile designers and stylists that enables them to use a computer to design and color fabrics electronically.
**Calendering**
Mechanical finishing process in which fabric is passed between two rollers (one metal and one cotton fabric) under heavy pressure to create a variety of flattened looks and textures. Examples include chased, moire, and friction. Cotton must utilize a resin finish in order to impart some degree of durability.

**Cam**
The part of a knitting machine that controls the movement of the needles or sinkers to produce a desired knitted construction.

**Cam Carriage**
A device used to hold the knitting cams on a flat knitting machine. The carriage transverses the cam along the needle bed to activate the knitting needles.

**Cam Looms**
Looms or weaving machines that use profile cams to lift the harnesses during weaving.

**Cam Plan**
The graphical diagram that shows how the harnesses are weaving.

**Cam Shedding**
The type of harness drive that uses cams to actuate the up and down movement on a loom. This is the most basic type of drive and is used to make basic fabrics (plain, twills, and satins) only.

**Cam Track**
The path formed by knitting cams that controls the path a needle or needle jack follows to form knit, tuck, or float stitches on a weft knitting machine.

**Card**
A machine that straightens, parallels, and cleans cotton fiber.

**Carded**
The basic process in yarn formation in which the fibers have been separated and evenly distributed removing the majority of impurities and short fiber before the yarn is formed.

**Carded Cotton**
Cotton fiber that was processed through a carding machine.

**Cast Off**
The removal of a knitted or tucked stitch from a needle.

**Catalase Enzyme**
Used after the bleaching step to decompose residual hydrogen peroxide and prepare the substrate for dyeing.
**Catalyst**
Chemical that accelerates a reaction. Normally associated with resin finishing.

**Cationic**
Positively charged.

**Cellulase Enzyme**
Creates a smooth appearance with a degree of softness on a fabric by removing surface cotton fibers.

**Cellulose**
Naturally occurring polymer that makes up 85+% of cotton and enables it to be chemically bound with various dyes and finishes.

**Chain Plan**
The graphical diagram that shows how the harnesses will operate during weaving. This term references the days when dobbies used chains to store the pattern for the loom.

**Checkerboard Effect**
The visual effect of oscillating colors or weaves to produce a grid in the appearance of a chess or checkerboard.

**Chelating Agent**
Chemical that ties-up metals in a liquor bath thus lessening their negative effect of causing precipitation (spots). Also known as sequestering agent.

**Chemical Finishing**
Changing the appearance, feel, or performance of a substrate through the application of a chemical (i.e., water repellant, softener, resin).

**Chenille**
A yarn created with a pile originally made from cut woven fabric. Most chenille yarn is now made on special winding machines. The fuzzy and soft appearance of the yarn inspired its name, chenille, which is French for caterpillar.

**Chevron**
A weave pattern of pointed twill, creating a zigzag design. This weave is like the herringbone, but the pattern is not balanced like the herringbone.

**Chroma**
Measure of the vividness or dullness of a color. For example, red color in a radish versus a tomato.
Circular [Knitting]
The construction of fabric or garments knitted on a circular knitting machine in tubular form.

Cleaning
The removal of unwanted non-lint or trash.

Clearing
One of the five positions of the knitting cycle. This is when the knitting needle is raised high enough that the old loop clears the latch of the needle.

Coarse Cleaner
A cleaning machine designed to remove coarse non-lint or trash.

Color Separation
The process of separating the colors of a print design in preparation for the printing process.

Colorfastness
The resistance of a material to a change in any of its color characteristics, to transfer its colorant(s) to adjacent materials or both as a result of the exposure of the material to any environment that might be encountered during the processing, testing, storage, or use of the material.

Comb
A reed-like device that separates yarns individually for even spacing, width spread determination, and to prevent entanglement during processing.

Combed
Yarn made from sliver that has been processed through the comb.

Combed Cotton
Cotton fiber that was processed through a combing machine.

Comber
A machine designed to remove short fiber from the process.

Comber Lap
A wound "ribbon" of multiple slivers used as feed to a combing machine.

Combing Roll
A toothed or pinned roller used in rotor spinning.

Compaction
A mechanical process in finishing that causes the fabric to be reduced in length resulting in shortening and thereby less length shrinkage.
**Complex Twills**
Twill fabric that is constructed using two or more of the basic twill weaves (i.e., 2 x 1 twill, 3 x 1 twill). Most of these fabrics are made on dobby looms.

**Compound Needle**
Needle used in warp and weft knitting in which the hook is closed by a tongue that moves vertically during those steps in the formation of a knitted stitch where the needle must be closed to hold the yarn loop in place.

**Cone**
A plastic tube or cone on which yarn is wound. May also describe an already wound package of yarn.

**Consolidation Shrinkage**
A shortening of the length or width due to a mechanical or chemical process.

**Construction (of fabric)**
The number of warp ends and picks in one inch or centimeter of the fabric. Usually expressed as number of warp ends by number of picks (i.e., 115 x 56).

**Construction Shrinkage**
The amount of dimensional change in a fabric based solely on the construction variables used to create the fabric.

**Continuous Creel**
Also known as magazine creel. A warping creel that has two packages per yarn position. The first package is actively running, and the second package serves as a reserve. The leading end of the reserve package is tied to the tail end of the active package. As a result when the active package runs out, an automatic transfer occurs thereby allowing the warper to continue without stopping. This creel is ideal for mills running common end count beams.

**Continuous Dyeing**
Yarn or fabric is dyed in a continuous process as opposed to small batch dyeing. The textile product passes through more than one sequential process during continuous dyeing.

**Continuous Processing**
Method of preparing, dyeing, or finishing a fabric or yarn that is done on a continuous range rather than in a batch machine. Production speed of the substrate is normally measured in yards or meters per minute.

**Core-Spun Yarns**
Yarns with a core (usually a filament yarn) that is covered by spinning staple fibers around the filament until the core yarn is not visible.
Cords
A rib effect created by the weave pattern of the fabric (i.e., Bedford cord).

Corduroy
A cut pile fabric that was woven with filling floats. The floats are then cut after weaving, allowing the filling yarns to stand up, creating vertical ribs or wales.

Cotton Count
A numerical designation indicating the number of 840 yard lengths of yarn in one pound.

Cotton Grade
Defines the quality of a cotton bale with respect to its cleanliness, color, and ginning preparation.

Cotton Yarn
A continuous strand of cotton fibers in which enough twist has been inserted to give integrity and strength.

Counter (Satin)
The number that designates the spacing of the binder picks in a satin weave.

Counter (Twill)
The number that designates the spacing of the risers and sinkers and determines the twill angle.

Course
One horizontal row of loops produced by adjacent needles during the same knitting cycle.

Course Count
The number of courses per linear distance.

Course Length
The amount of yarn used in knitting one yarn across the width of the machine (flat bed) or around the circumference of the cylinder during one revolution of the machine. It is calculated by multiplying the stitch length by the number of needles knitting in one revolution. It can be measured by the amount of yarn used at a feed for one revolution of the machine.

Creel
A framework supporting packages of sliver, roving, or yarn, so they can be drawn-off smoothly without tangling.

Creeling Yarn
The act of placing packages onto a creel.
Crepe Weave
A weave that produces a rough textured fabric designed to have warp and filling intersections and floats in a random order. This fabric has no apparent lines or visible repeat and is usually produced on a debby or jacquard loom.

Critical Moisture
In drying, the moisture content of a cotton fiber where unbound moisture has been removed from the surface and the bound moisture can now be removed.

Crochet
As pertaining to warp knitting, a type of Raschel machine in which the needles on a needle bar form rows of chain stitches in the fabric length direction while width yarns are inlaid across the warp yarns to form various patterns.

Crock
To remove dye from yarn or fabric by rubbing.

Crockfastness
The measure of a substrate's colorfastness through crocking.

Crocking
The act of surface dye or fibers that rub off onto another substrate. Can be measured in either a wet or dry condition.

Cross Dye
A technique of dyeing fabrics that contains more than one type of fiber in different yarns such that each fiber can be dyed a different shade.

Cross Dyed
Dyeing fiber, yarn, or fabric that consists of two types of fibers with different dyeing properties, usually resulting in a heather effect.

Cross Dyeing
Process of dyeing different fibers different colors in the same dyebath.

Crosshatch
An effect created by sets of parallel lines crossing each other. In woven fabric, this can be created using dyed yarn or textured yarn in the warp and filling.

Crosslinking
The stabilization of cellulose fibers through a chemical reaction that imparts wrinkle-resistant properties.

Crystallinity
Condition or region of cellulose in cotton that is tightly packed and less accessible to water, dyes, and chemicals.
Curing
The process by which resins are set into a fabric or garment at elevated temperatures.

Cut
The number of tricks, slots, or grooves cut per unit length (usually one inch) in a needle bed, a dial, or a cylinder in a knitting machine. The number of needles per unit of length in a knitting machine. Often referred to as gauge.

Cut-and-Sew
A method used in making garments. This is when full-width fabric is placed on a cutting table or run through a cutting machine. A garment piece or shape is cut out and sent to sewing for garment assembly.

Cylinder
As pertaining to circular knitting, cylindrical frame with grooves to hold a set of needles.

Davis, Jacob
Partner with Levi Strauss; credited with inventing the rivet for denim.

Decitex
Weight in grams / (10,000 meters) direct yarn numbering system.

Defoamer
A chemical that reduces foam in a solution.

Delivered State
The dimensions of a fabric or garment after any particular process.

Denier
(Weight in grams / 9,000 meters.) Direct numbering system for describing linear densities of silk and manufactured filament fibers or yarns.

Denim
Popular cotton fabric constructed of warp yarns that are dyed continuously with blue indigo dye and filling yarn which is kept white. Normally a 2x1 or 3x1 twill weave.

Dent
The open space between the wire in a comb or reed.

Dents Per Inch
The number of open spaces between the wire in one inch of comb or reed.

Desizing
Preparation wet process that degrades and removes the size from the warp yarns of a woven fabric thus enabling the fabric to be dyed or finished evenly.
**Detergent**
Chemical that cleans a substrate by suspending insoluble foreign matter during wet processing.

**Dial**
A circular plate with radially positioned slots to hold a set of knitting needles; it fits over the cylinder in a dial and cylinder knitting machine.

**Dial Height**
The gap or distance between the cylinder and dial.

**Diffusion**
The movement of dyes or chemicals from the surface of a fiber to the inner core.

**Digital Ink Jet Printing**
Process that ejects very small drops of a color onto a fabric with a high degree of precision. There are two main types: continuous and drop-on-demand.

**Dimensional Stability**
The ability of a fabric or garment to retain its shape after wearing or cleaning. It can be improved by a number of different methods such as chemical, mechanical, blending, or by altering its construction.

**Dip**
The immersion of a yarn or fabric into a liquor bath, usually before being squeezed through a set of rollers.

**Direct Dyes**
Popular dyes for cotton that are easy and inexpensive to apply, but tend to have limited brightness and poor washfastness.

**Direct Printing**
A process where the colors for the desired designs are applied directly to the white or dyed cloth. See also screen printing.

**Direct Yarn Numbering**
A yarn numbering method in which the numerical value describes the weight to length ratio; like denier, the larger the yarn number, the thicker or heavier the filament or yarn.

**Discharge Printing**
Process where the fabric is first piece dyed and then printed with a paste that contains a chemical which destroys one of the dyes used (white). The paste can also contain a different color that replaces the dye which is destroyed (colored).
**Dispersing Agent**
Chemical that prevents dyes or chemicals from aggregating or clumping. Also known as suspending agent or surfactant.

**Dispersion**
An insoluble substance that is homogeneously dispersed in a liquid. A liquor bath of evenly distributed particles in a particular medium, normally water.

**Dobby**
A mechanism that controls the harnesses on a dobby loom, allowing weaves to be created using small geometric patterns. This is also a generic term for fabrics created on a dobby loom.

**Dobby loom**
A loom that uses a mechanical device called a dobby to control the movements of the harnesses. This loom is capable of producing small patterns and complex twills. Dobby looms can control up to 28 harnesses.

**Dobby Shedding**
The process of using a dobby device to produce the warp shed on a loom.

**Doctor Blade**
A metal blade that cleans or scrapes the excess dye from engraved printing rollers leaving dye paste only in the valleys of the engraved areas. Also used to describe other blades that are used to apply materials evenly to rollers or fabrics.

**Doffed**
The act of removing a full package of yarn or roll goods from the delivery end of a textile manufacturing machine or process.

**Doffer**
The final cylinder in a card machine from which the web of carded fiber is removed (or doffed.)

**Double Binder**
In a pile fabric, a single yam holding the cut pile yarns into the fabric at two distinct points. This type of pile would be referred to as a "W" pile.

**Double Flexible Rapier**
A loom that uses two rapiers that meet in the middle of the warp shed to transfer picks. These rapiers are flexible, allowing them to be wound into a coil to conserve space when not in the warp shed.
**Double Knit**
Weft knit fabric made with two sets of needles.

**Double Rigid Rapier**
A loom that uses two rapiers that meet in the middle of the warp shed to transfer picks. These rapiers are rigid and are usually stored on metal tubes on the sides of the loom when not in the warp shed. This loom requires a lot of floor space due to the storage of the rapiers.

**Double Telescoping Rapier**
A loom that uses two rapiers that meet in the middle of the warp shed to transfer picks. These rapiers are rigid, but collapse on themselves when not in the warp shed, thus requiring less floor space for the loom than a rigid rapier.

**Doublings**
The combining and blending of slivers in a manner to promote improved quality while reducing variability.

**Draft**
To reduce the linear density of a group of slivers or a single sliver or roving.

**Drafting Rolls**
A series of rolls designed to reduce the linear density of a fibrous strand in a controlled manner.

**Draw Blend**
The method of blending various components (i.e. cotton and polyester) on a draw frame creel.

**Drawing**
The process in yarn manufacturing in which a group of slivers are drafted by passing through a series of paired rollers.

**Drawing-in**
The process of taking warp yarns off the loom beam and pulling each end through its own drop wire, heddle, and the proper dent in the reed.

**Drawing-in Draft**
A graph that represents how each warp end is drawn through its respective heddle and dent in the reed.

**Drop Stitch**
When a knitting needle clears the old stitch and does not receive a yarn to form a new stitch, a drop stitch is made.
Drop Wire
A metal device through which a warp yarn is threaded. If the warp yarn breaks, the metal device falls and completes an electrical circuit, stopping the loom.

Drying
Removal of moisture from a substrate.

Drying Section
The section on a slasher that dries the sized yarns. The process of drying can involve steam heated cans, infrared energy, or hot air.

Drying Shrinkage
The dimensional change in a fabric or garment when deswelling of fiber, yarn, and construction occurs during tensionless drying.

Durable Press
Describes a fabric or garment that has been treated so that it retains its smooth appearance, shape, creases, and/or pleats after laundering. In such garments, little or no ironing is required, particularly if the garment is tumble dried.

Dwell Time
Period of time that a substrate is subjected to a specific condition such as immersion into a liquor bath or passing through a drying oven.

Dye Beam
A warper beam that has perforations in it to allow the yarns on the beam to be penetrated with dye.

Dye Liquor
A solution (liquor) of dyestuff and dyeing auxiliaries.

Dye Range
A dye machine that dyes yarn or fabric.

Dye Set
A grouping of fibers, yarns, fabrics, or garments that is dyed together. As a result of being dyed together, the color throughout the set should be consistent.

Dye Vessel
A tank, trough, or container of fiber, yarn, or cloth in which dyeing takes place.

Dyeing
The process of imparting a somewhat permanent color to a substrate.
Dyeing Equilibrium
The final point in the dyeing process where the shade of a substrate will not change if allowed to continue under the same conditions (temperature, pH, etc.).

Dyes
Highly colored substances that can be applied to a substrate to impart color with some degree of permanence.

Dyestuffs
Highly colored substances that can be applied to a substrate to impart color with some degree of permanence.

EFS® System (Engineered Fiber Selection)
A bale management system that provides a consistent means for a spinning mill to control raw material input.

Elastic Shrinkage
A change in dimensions of a fabric because of the ability of the fabric to freely relax from tensions experienced during construction and other processing.

Embossing
Surface finishing effect by which fabric passes through engraved rollers under pressure (and sometimes heat) to impart a variety of raised effects.

Emulsion
A suspension of a liquid in another liquid (i.e., oil in water).

End
A single warp yarn that runs lengthwise in a woven fabric.

Ends Per Inch
The number of warp ends in one inch of woven fabric; on a loom, the number of warp ends in one inch of reed. Sometimes referred to as sley. Usually expressed as in loom, in greige, or finished to convey the condition of the cloth.

English Cotton Count
Also referred to as Ne or Number English. An indirect method of expressing the size of a cotton yarn (as the number increases, the physical yarn size decreases). It is the number of times the length of one pound of yarn can be divided by 840. Therefore, a 6/1 Ne yarn would have 5,040 yards in one pound of yarn.

Engraved Roller Printing
A continuous printing process in which a heavy copper cylinder is engraved with the print design and then electroplated with chrome for durability.
**Enzymes**
Specialized proteins that can be used for a number of specific operations such as desizing, scouring, smoothing the surface of a fabric, or creating a wash-down look. They are safe, easy to use, and can replace harsher chemicals.

**Evenness**
A measure of the variation in weight per length of slivers, ravings, or yarns.

**Exhaustion**
A percentage that describes how much of the total dye or chemical that resides on or in the fiber rather than in the dye liquor (i.e., 80% dye exhaustion).

**Expansion Comb**
A reed-like device that can be adjusted in or out to allow the yarn sheet to occupy the width of the section or loom beam being made.

**Fabric**
Any flexible material that is made from a textile fiber that is held together by mechanical processes (i.e., weaving, knitting, bonded, etc.).

**Fabric Body**
The portion of the cloth that is not the edge or selvage. It’s the area that is considered usable for cutting.

**Fabric Take-Down**
A device that the knitted fabric is run through to control the fabric tension while the needles go through the knitting cycle.

**Fabric Tightness**
Also know as cover factor, which is a relationship between the occluded area of a fabric and the open areas of the fabric. A measure of how much open space there is in the fabric.

**Fabric Weave Design**
The design of a weave usually over one repeat of the pattern.

**Face Loop**
A loop of yarn formed on a cylinder needle in circular weft knitting or on a needle in the front bed in flat bed weft knitting.

**Face Wale**
A vertical column of loops formed on a cylinder needle in circular weft knitting or on a needle in the front bed in flat bed weft knitting.
**Fashion Mark**
A small mark near the seam at the knee, calf, and sole of full-fashioned knit hosiery or at the shoulder seam in a knitted top. Rows of fashion marks are caused by transferring certain loops or stitches to adjacent needles in fashioning.

**Fastness**
A term used to describe color retention during the life of the fabric.

**Feeder**
A device that feeds fiber stock or yarn into a textile machine.

**Fell-of-the-cloth**
The point on a loom where yarns become cloth. The point of the last pick beaten up into the cloth.

**Fiber Fineness**
The linear density of fiber usually expressed in micronaire, denier, or millitex.

**Fiber Properties**
The various characteristics or descriptors used to define a fiber (i.e., length, strength, fineness).

**Fiber Reactive Dyes**
See reactive dyes.

**Fiber Web**
A sheet-like structure of semi-oriented fibers.

**Filling**
Any type of yarn that is inserted perpendicular to the warp yarns to make cloth. Also referred to as picks.

**Filling Count**
The number of picks per inch or centimeter of cloth.

**Filling Density**
The number of picks per inch or centimeter of cloth.

**Filling Face Twill**
A twill where the face of the fabric is predominantly filling yarns (i.e., 1/3 or 1/2 twills.).

**Filling Insertion**
The act of inserting the filling yarn into the warp yarns to make cloth. This process will be one of the following types: shuttle, projectile, air, rapier, or water.
Filling Slub Denim
Denim fabrics that have filling yarns with slubs or irregularities in them. This results in a fabric with texture in the weft direction of the fabric.

Fine Cleaner
A machine designed to open cotton into small tufts and remove non-lint or trash.

Fine Wale Corduroy
Corduroy that has 16 or more wales per inch in the fabric.

Finished Fabric
Fabric that has been treated by the mill to the customer's specifications and is ready to be shipped to the cutter.

Finisher Drawing
The second pass or process of drawing-in yarn manufacturing.

Finishing
Any dyehouse process other than bleaching and coloration that imparts useful characteristics to a substrate. May or may not be the last process used in creating a textile product. Will change the hand, appearance, or performance of the substrate.

Fire Resistant
Describes a substrate that burns slowly or is self-extinguishing after removal of an external source of ignition.

Fire Retardant
Describes a chemical that is used to reduce the flammability of a substrate.

Fixation
Process of a dye or chemical becoming bonded to a substrate to impart some degree of durability to future processes.

Flanged Beam
A beam with a rim on both sides to keep the yarn on the beam.

Flat Bed Machine
A weft-knitting machine with needles arranged in a straight line in a flat plate called the bed. These machines may have only one bed of needles or two beds opposite of each other. Commonly used to produce sweaters, trim, scarves, and similar fabrics.
**Flat-bed Screen Printing**
A semi-continuous method of printing in which a perforated flat screen is used to apply color. Designs are limited by the width and length dimensions of the screen and only one color per screen is allowed.

**Flats**
Wire covered segments on a card that are instrumental in achieving fiber alignment and the removal of nep, short fiber, and remaining impurities.

**Float**
A warp or filling yarn that stays on the face of the fabric over two or more corresponding filling or warp yarns. This is typically used as a design aspect for dobby weaves.

**Float Loop**
A yarn placed behind a knitting needle so that it does not knit or tuck.

**Fluorescent Whitening Agent**
See optical brightening agent.

**Flying Shuttle**
The shuttle is a boat like device that contains a quill (or spool) of filling yarn. In hand weaving, the shuttle is thrown across the width of the loom, through the warp shed, inserting the filling. This greatly improved the productivity of the hand weaver.

**Footprint (Loom)**
The amount of floor space a loom takes up on the floor of a mill. This is not just where the loom touches the floor, but the space on the floor that has to be clear for the loom to run safely.

**Friction Calendering**
Mechanical finishing process in which fabric is passed between two rolls under heavy pressure to create a bright, shiny appearance. Normally one of the rolls is turning faster than the other to get the effect. Cotton must utilize a resin finish to impart some degree of durability.

**Fringe**
The point of the fabric where the filling yarns stick out of the selvage.

**Full Fashioned**
A knit fabric or garment made on a flat-knitting machine and shaped by increasing or decreasing the number of wales. Fashion marks are formed by the way stitches are transferred.

**Functional Finish**
Chemical treatment applied to a substrate to improve its performance (i.e., water resistant, fire retardant, etc.).
Gaited
The way two beds of knitting needles and their housings are aligned with each other in a dial and cylinder knitting machine (circular) or flat bed knitting machine.

Galvano Method
A technique for creating screens using nickel-electroplating technology. This method allows for color gradients since the screen can be constructed with different sized cells. The process involves exposing a photosensitized base to UV light. Then the unexposed chemical is washed away, and the base is placed in a nickel-plating solution to allow the nickel to plate the areas without the cured photosensitive solution.

Garment Dyeing
The process where the garment is dyed or tinted after it has been cut and sewn. Usually occurs after any garment washing or aging step.

Garment Washed Denim
Denim garments that have been washed and treated to appear to have a worn and/or abraded appearance.

Gauge
The number of tricks, slots, or grooves cut per unit length (usually one inch) in a needle bed, a dial, or a cylinder in a knitting machine. The number of needles per given distance in a knitting machine. A measure of fineness or number of wales per unit across the fabric. Often referred to as cut.

Glue-trough
A long narrow receptacle that holds glue for application onto the print blanket.

Greige Fabric
Pronounced as gray. Unprepared fabric that is just off the knitting, weaving, or nonwoven manufacturing machine.

Greige Goods
Pronounced gray. Unprepared fiber, yarn, or fabric that is just off a spinning, knitting, weaving, or nonwoven manufacturing machine.

Greige State
The dimensions of a fabric directly off the knitting machine or weaving loom.

Groove
A trick or slot cut into the cylinder, dial, or needle bed in a weft knitting machine that holds a needle or other knitting element in place.
**Ground Pick Corduroy**
Corduroy that has a different blend of fiber in the yarns that make up the ground weave of the fabric.

**Ground Weave**
The fabric that forms the base that holds the pile yarns in place. Usually tightly woven to prevent the pile yarns from pulling out of the fabric.

**Growth**
A dimensional change in a fabric or garment that results in a gain in that dimension, a lengthening.

**Guide Needles (corduroy)**
The needles that fit into the rib of uncut corduroy to keep the cutting wheels from cutting the non-pile yarns of the fabric. These needles create a valley for the cutting wheels to safely cut the pile yams of corduroy.

**Guide Teeth**
The devices that are spaced across a projectile loom to form a tunnel for the projectile to pass through as it goes through the warp shed. These devices keep the projectile from going off course during its trip across the loom.

**H. D. Lee Company**
Mercantile company founded in 1889 by Henry David Lee in Kansas. He saw the need to make more reliable and durable workwear. His company started making bibbed overalls in 1911. In 1913, he released the Union-All, a coverall, and the Lee Cowboy Pant, which was designed for seamen and loggers, but these were quickly adopted by rodeo riders and cowboys everywhere.

**Hack**
Also called comb. This reed-like device separates the yarns and keeps them from entangling during processing.

**Hand**
Term used to describe the feel of a substrate (i.e., soft, raspy, stiff, etc.). Also known as handle.

**Hand Modifier**
See Softener.

**Handle**
See Hand.

**Hank**
A unit of measurement in short staple processing: 1 hank= 840 yards of material.
Harness
A frame that holds heddles in the proper position on the loom during the weaving process to form the fabric.

Harness Cords
Cords that control the movement of each heddle on a jacquard loom.

Head End
The first piece of fabric woven on the loom after changing the warp and or pattern. It is checked for weaving and pattern defects and, if none are found, sent to the customer for approval. This is also called a strike off.

Headstock
The driving portion of a warper, beamer, or slasher that winds the yarn onto a beam.

Heat Transfer Printing
Process where patterns are transferred from paper to a fabric by passing both through heated calender rolls or a heated press.

Heatset
Process done to a thermoplastic substrate to impart dimensional stability.

Heatsetting
Mechanical process of imparting dimensional stability to a thermoplastic substrate by the application of elevated heat (either dry or moist).

Heddle
Usually a flat piece of metal with a hole or eye in it that is supported by the harness frame or a harness cord. The warp yarn passes through the hole and is raised or lowered in the harness during the weaving process. On some jacquard machines, the heddle may be made of round wire with a small loop for the yarn to pass through.

Heddle Eye
The hole in the heddle that the warp yarn passes through.

Held Loop
A loop that the knitting needle does not release (knock-over) at the next feed.

Herringbone
A broken twill weave that is composed of several right hand twills followed by several left hand twills.

Herringbone Draw
A drawing-in-draft that allows the loom to weave a simple plain or twill weave, allowing a herringbone design to be produced.
Hue
The color of an object that is perceived (i.e., red, yellow, blue, etc.).

Humectant
Water-retaining agent that helps maintain moisture.

HVI (High Volume Instrument)
A testing machine capable of measuring many cotton fiber properties including length, uniformity, micronaire/fineness, strength, color, etc.

Hydrophilic
Condition of a fiber or chemical. Having a strong affinity for or the ability to absorb water (water loving).

Hydrophobic
Condition of a fiber or chemical. Lacking an affinity for or ability to absorb water (water hating).

Hydrophobic Fibers
Fibers that do not have an affinity for water and will not absorb over 4.5% of water when immersed under normal conditions.

Indigo Dye
Originally, a natural blue dye extracted from Indigo plants. The indigo used today is synthetic; a blue color used for denim.

Indigo "Synthetic"
Indigo dye that is not derived from an indigo plant, but is synthesized from chemicals. Greater than 99% of all indigo dye in the world is this form.

*indigofera arrecta*
Also known as Natal indigo; it is a wild weed that grows in Africa. Thought to have originated in Madagascar. It was used to make natural indigo dye in that region.

*indigofera suffructiosa*
A wild weed that grows in Central and South America. Used to make natural indigo dye in these areas during the 1700s.

*indigofera tinctoria*
Shrub native of southeastern Asia and India. It was used to make natural indigo dyes in this region.

Inspection Stands
Device on the loom that allows for weaving and fabric quality. It has background and surface lighting for visual inspection of the woven cloth by the weaver.
**Indirect Printing**
A process where the print paste is applied to paper, block, or roller engraved with a pattern that transfers the color to the substrate. See heat transfer printing or engraved roller printing.

**Indirect Yarn Numbering**
A yarn numbering method in which the numerical value describes the length to weight ratio. Like cotton count (Ne), the higher the number the finer or lighter the yarn.

**In-feed Device**
A device that allows for precise straight feeding of fabric onto a rubber blanket.

**Intarsia**
A design created by having full control of a particular yarn into the pattern. The yarn can be placed into a pattern, completely removed from that pattern, and replaced with another yarn.

**Interlacing**
The crossing of warp and filling yarns over and under each other.

**Interlock Gaiting**
When needles in the cylinder and dial or front needle bed and back needle bed are directly opposite of each other. Needles opposite of each other cannot be selected at the same time.

**Intimate Blend**
A blending technique where the various components are blended before the carding process, usually with weigh pans or specially equipped conveyors.

**isatis tinctoria**
Also know as woad. It is a small plant that is native to central Europe. It was cultivated throughout Europe during the 1700s and 1800s to make natural dyes including indigo.

**Jacquard**
Patterned fabric produced on a knitting machine. May be sectional or all over design in color and texture.

**Jacquard Head**
A mechanism placed above a loom that enables the control of each individual warp yarn.

**Jacquard Loom**
A loom that is equipped with a jacquard head. Each warp end on a jacquard loom is controlled individually by a heddle connected by a cord to the jacquard head, allowing for limitless design capabilities.
Jacquard Shedding
The form of shedding that is the result of using a jacquard head to control individual heddles to form the weave pattern.

Jacquard, Joseph Marie
The French inventor of the head motion that bears his name. This head motion device is cited as being the first computer device to read punch cards.

Jeans
A hardy wearing pant with raised seams and with back pockets sewn on. They were introduced by Levi Strauss & Company as waist overalls. They resembled pants that Italian sailors from Genoa wore, and from this, they picked up the slang name "genes" during the 1950s by Americans.

Jet Dyeing
Wet process where dye liquor is circulated through a Venturi jet thus providing the force to move fabric in rope form in a circular motion through the machine.

Jig Dyeing
Wet process where an open-width fabric is repeatedly pulled off one beam, submerged into a dyebath, and wound up onto another beam. Each of these cycles is called an end.

Kay, John
The English inventor credited with inventing the fly shuttle loom in 1738.

Knit Stitch
The stitch formed by a needle when a new loop of yarn is pulled through an old loop which is then cast off.

Knitted Stitch
The basic unit of construction of knitted fabric, consisting of the loop of yarn formed by the needle.

Knitting
A method of constructing fabric by interlocking a series of loops of one or more yarns.

Knitting Elements
Refers to the mechanical devices that form yarns into loops on a knitting machine, includes needles, sinkers, jacks, etc.

Knockover
The moving of a knitted, held, or tucked loop over the outside of the needle latch thereby closing the latch and resulting in this loop being cast-off of the needle.
**Knotter**
A device used to make knots, tying the warp yarns from a new beam onto the warp yarns from another warp on a loom. Also called tying machines.

**Knowles, Francis B., Knowles, Lucius J.**
Together, Lucius J. Knowles and Francis B. Knowles developed the first upright loom powered by a steam engine, leading the weaving industry into the industrial revolution.

**Lacquer Engraving**
The most widely used technique for screen engraving on flat screens. A screen is first coated with a photosensitive resin. Then an opaque design is secured to the screen and the screen is exposed to light and cured to make the lacquer permanent. Only one color per screen is allowed.

**Laminated Fabric**
Fabric that has been bonded to another substrate, often foam, by such methods as adhesive glue, heat, or a chemical-bonding agent.

**Laser Engraving**
The most modern method for making rotary screens. Rotary screens are coated with resin and cured prior to engraving. The coated screen is then loaded on a mandrel and a laser engraves the design. One color per screen is allowed.

**Latch Needle**
The needle has a small terminal hook and a latch that moves on a pivot in order to close the hook.

**Laydown**
An arrangement of many individual bales representing a desired range and average of cotton properties.

**Lease String**
A string of yarn that is laced into warp yarns for easier separation during a latter process.

**Left-hand Twill**
A fabric with a twill line running from the lower right-hand side to the upper left-hand side of the fabric. Also called S twill.

**Left-hand Twist**
Also know as S-twist and reverse twist. The fibers in the yarn form the center of the letter "S" moving from lower left to upper right. This is caused from the direction the fibers are twisted into when making the yarn.
Let-Off
The device on a loom that controls the amount and speed of the yarn being released from the warp beam to the loom for weaving.

Leuco
The soluble and reduced form of an indigo or vat dye. It must be oxidized to return to the insoluble form. Oxidation occurs rapidly for indigo when exposed to the air.

Levi Strauss & Co.
Company started by Levi Strauss in the late 1800s. Levi is one of the world's largest retail brands of denim products. Credited with making denim jeans as we know them today popular.

Lightfastness
Degree of resistance of a dyed substrate to the color-destroying influence of sunlight.

Linear Density
The weight per unit length measurement, either direct or indirect.

Links-Links Machine
A flat or circular knitting machine that produces typical purl or fancy purl knit fabrics. Novelty effects can be produced by transferring double-ended needles from one needle bed to the opposite one according to pattern requirements.

Lint
Spinnable cotton fiber

Liquid Ammonia Treatment
Continuous wet process in which a fabric is subjected to liquid ammonia in an enclosed chamber. The treatment improves the hand, affinity for dyes, and smoothness of the fabric.

Liquor Ratio
Ratio of the weight of the liquor bath to the weight of the substrate being processed (i.e., 10:1).

Log
Term for the spindle-like device that a ball warp is constructed on. Originally it was made out of wood and resembled a log. Today, most are metal with some form of coating on them to protect the yarns from being cut.

Long-Chain Dye Range
A dye range where the yarns are dyed in a rope form that is made up of many individual yarns. Seen mostly in indigo dyeing, but other dyes can be used as well.
Loom Beam
The flanged beam that has the yarn on it that will be fed into the loom for weaving. This beam is made on a slasher if the yarn is sized and on a warper if the yarn is to be unsized.

Loop Pulling
The formation of a knitted loop by pulling the yarn through a previously formed loop.

Luster
The gloss, sheen, or shine of a fiber, yarn, or fabric.

Magazine Creel
The type of creel on a warper that allows the tail of one package to be tied to the leading end of the next package. This is sometimes called a continuous creel, since the warper will never have to be stopped to change out empty packages.

Mandrel
The core around which materials may be cast or shaped.

Market or Finished White
Fabric or garment that has been bleached and finished with an optical brightener.

Mechanical Finishing
Changing the appearance, feel, or performance of a substrate through a mechanical process such as napping, calendering, or sanding (sueding).

Mercerization
Preparation process where fiber, yarn, or fabric is impregnated with a high concentration of caustic soda for a period of time under tension. The process swells the cotton substrate resulting in increased affinity for dye and luster.

Mercerized Cotton (Fabric)
Fabric that has been treated with sodium hydroxide or caustic soda to swell the fibers, to reduce neps, and to increase luster. This process was invented by John Mercer in 1844 and bears his name.

Mercerized Cotton (Yarn)
Sometimes cotton fiber but usually yarn that has been treated with sodium hydroxide (also known as caustic soda) before being woven into fabric. The process of mercerization causes the cotton fibers to swell permanently, making the yarn lustrous. Most mercerized yarns are plied to withstand the mercerizing process.

Mesh
Any fabric characterized by open spaces between the yarns and loops in the fabric.
**Metered Addition**  
Spraying process for the precise application of a solution (dye, finish, bleach, etc.) onto garments while tumbling in an enclosed apparatus.

**Micronaire**  
A relative measure of fiber fineness for cotton. Lower values indicate finer cotton, and higher values indicate coarser cotton.

**Migration**  
Movement of dyestuffs from the heavily dyed areas to less deeply dyed areas of a substrate or back into the dyebath.

**Miss Stitch**  
A knitted stitch done purposely for a desired effect. It is formed when the needle holds the old loop and does not receive new yarn. It connects two loops of the same course that are not in adjacent wales.

**Modified Starches**  
Starches that have been modified by breaking down the starch molecule to reduce cooking time or to improve adhesive properties.

**Moire**  
Mechanical finishing process in which fabric is passed between engraved rolls under heavy pressure to create a watermark appearance. The look is created by the different reflections of light by the crushed and uncrushed marks in the fabric. Can also be achieved by passing two layers of the same fabric as a "sandwich" through the calender.

**Moisture Content**  
Percentage of the moisture added to the bone-dried weight of a substrate (i.e., cotton-6%).

**Moisture Regain**  
Moisture of a substrate (percent by weight) gained after it has been bone dried to a constant weight and subjected to standard laboratory conditions.

**Motif**  
The arrangement of form and/or colors incorporated into a textile fabric.

**Multi-Cell Blender**  
A machine designed to homogeneously blend fiber from the laydown.
**Multi-Count Denim**
Made from yarns spun on a machine with variable count capabilities or by mixing yarns of different counts on the loom beam. This causes the warp yarns in the fabric to wash down and to be streaky in appearance and color due to the different diameters of the yarns.

**Multiphase Insertion**
The process of simultaneously inserting several picks at one time into multiple sheds. Only applicable to Sulzer Textil M8300 weaving machine.

**Napping**
Mechanical finishing process that raises the fibers on the face of a fabric by the continuous application of the fabric to rotating rolls covered by steel wire points.

**Native Starches**
Starches made from the local plants. For example, in the U.S. corn is used, in Europe the potato is used, and in Asia rice or tapioca is used.

**Natural Indigo**
Indigo dye derived from plants.

**Nee**
Number cotton count; yarn number described as cotton count; same as Ne - hanks/pound.

**Ne or Number English**
Common yarn numbering system used in North America for short staple, spun yarns (i.e., Ne=hanks/pound, 1 hank= 840 yards).

**Needle**
The knitting element used for forming yarn into loops.

**Needle Bed**
A flat metal plate constituting one of the essential parts of a flat knitting machine. The plate (bed) is slotted at regular intervals to hold the knitting needles.

**Nm or Number Metric**
Number of 1000 meter lengths/kilogram.

**Noil**
The waste byproduct from the comber composed of short fiber and some fine trash.

**Nonionic**
Neutral charge.
Normal Twill Angle
A left-hand or right-hand twill line in a fabric that runs at an approximately 45 angle.

Novelty Yarn
A yarn that possesses a unique slub effect or an unusual look due to the components or method for making that yarn.

OE/IOE
Fabric made with open-end rotor-spun yarns in both the warp and weft.

OE/Ring
Fabric with open-end rotor-spun yarns in the warp and ring-spun yarns in the weft.

Open-end Spinning
Type of spinning system that uses a rotor to spin sliver into yarn using centrifugal force to cause the fibers to align before pulling the yarn out of the open-faced rotor.

Open Width
A fabric that is held to its full width. A tubular fabric can be slit on one side and then finished fully opened or open width.

Opening
The initial stage in the yarn manufacturing process where cotton fiber is opened into small tufts.

Optical Brightening Agent
Colorless chemical compound applied during the bleach cycle or finish bath to increase the perceived whiteness of a substrate. It often has a slight blue tint.

Ounces per Square Yard
The common designation of cloth weight for denim and other fabrics sold in the U.S.

Over Dye
To dye a fabric containing previously colored yarns or, in some cases, uncolored yarns to get a cross-dyed effect. Also the overdyeing of a printed fabric.

Overfeed
The feeding of a fabric into a textile process, especially drying, where the fabric is fed at a faster rate than the process is running.

Oxford Weave
A variation of a plain weave where two warp ends are weaving as one in a plain weave, over and under each pick. Typically, the yarn size of the filling yarn is at least twice the size of the warp yarn. One exception is the pinpoint Oxford, which uses warp and filling yarns of the same size.
Oxidation
The process of making a dye insoluble by exposure to chemical with oxygen. Typical of indigo, vat, and sulfur dyestuffs.

Package
The finished product in yarn manufacturing. Yarn that is wound onto a conical or parallel sided tube.

Package Dyeing
A method of dyeing where yarns are wound onto small perforated tubes and dye liquor is forced through the perforations on the inside of the package to the outside (and vice versa) in order to impart color.

Padding
Wet process where fabric is passed through a trough that contains a bath and then passed through rubber rollers that squeeze out excess liquor. The amount of weight gained by the bath on the fabric is known as wet pick-up.

Panel Knitting
Consists of knitting only a specific section of the total garment pattern called a panel. These panels are defined by an exact number of courses and wales.

Paste
See print paste.

Pattern Area
The area that one repeating unit of a fabric occupies.

Pattern Repeat
The number of warp ends or filling picks that are required for the weave pattern to repeat. In yarn-dyed fabrics, it is the number of warp ends and filling picks that are required for the color pattern to repeat.

Pectinase Enzyme
Mild scouring agent that removes impurities and increases the absorbency in preparation of the dyeing step.

Peg Plan
The graphical representation of how the loom will activate the harnesses during weaving. Also called chain plan or chain draft.

Permanent Press
See wrinkle resistant finish.

PFP
Prepared for printing.
pH
Measurement value from 0 to 14 that indicates the acidity or alkalinity of a material. A pH of 7.0 is considered neutral, greater than 7.0 is alkaline (basic), and less than 7.0 is acidic.

Photosensitive
A chemical that is sensitive to light.

Pick Count
The number of picks in one inch or centimeter of cloth; the counting system must be specified (inches or centimeters).

Pick Insertion
The act of inserting the filling yarn into the warp yarns to make cloth. This process will be one of the following types: shuttle, projectile, air, rapier, and water.

Pick-Off
A print defect caused by printing over lint on the fabric.

Pick-to-Pick
Changing yarn characteristics from one pick to the next (i.e., one pick of 4/1 Ne followed by a pick of 20/1 Ne, etc.).

Picking Cycle
The function of the loom where the yarn is inserted into the warp shed.

Picks
A single filling yarn that has been inserted into the warp shed and beaten up into the cloth.

Picks Per Inch
The number of picks in one inch of woven cloth. Usually expressed as in loom, in greige, or finished to convey the condition of the cloth.

Picks Per Minute
The number of picks that a loom inserts within one minute.

Piece Dye
To dye a fabric.

Piece Dyeing
The dyeing of fabric rather than other substrates such as fiber, yarn, or garments.

Piecing
The result of connecting two ends of yarn or the starting point in the spinning process where yarn and fibers come together.
**Pigment**
Insoluble particles used to impart color onto a variety of fibers. Because they have no affinity for a substrate, a binder must be used to fix the pigment onto the surface of the fibers.

**Pile Fabric**
Any fabric that has yarns intentionally protruding from the surface of the cloth, either loops or cut loops (i.e., corduroy, terry, and velvet).

**Pilling**
The small entangled balls of fiber on the surface of a fabric.

**Pique**
A knitted construction that contains both knitted and tucked stitches. A simple pique would alternate knitted and tucked stitches in odd feeds on a knitting machine with all knitted stitches on even feeds. This fabric is often referred to as single pique or single cross-tuck. Other common single knit piques are double cross-tuck and six-feed piques.

**Plain Weave**
The simplest but most important of all weaves. Repeats on two ends and two picks. Each end weaves one pick up and one pick down and each adjacent end weaves opposite the other.

**Plush Fabrics**
Warp pile fabric with a pile height greater than 1/8 inch, usually not as densely woven as velvet.

**Ply Yam**
A yarn formed by twisting two or more single yarns together.

**Pointed Twill**
A weave containing right and left-hand twills where the two twills come together to form a point. Sometimes mistaken for a herringbone weave.

**polygonum tinctorum**
Also known as Dyer's Knotweed and Chinese Indigo, this weed grows from Europe to East Asia. Its leaves can be used to make indigo dye. It was used to make indigo dye in Japan until *indigofera tinctoria* was introduced to the area.

**Ponte Di Roma**
A double knit fabric. Two courses are knitting interlock. The third course is knitted only on the cylinder needles, and the last is knitted only on the dial needles.
**Post-cure Finish**
Durable press finish that is dried continuously in fabric form, but cured at a later time while still in fabric form (fabric post-cure) or after the cut-and-sew operation (garment post-cure).

**Pre-cure Finish**
Durable press finish in which the fabric is dried and cured in the mill before the garment is cut and sewn.

**Press Roll**
Sometimes referred to as the sand roll. It is the roll on the front of the loom that holds the cloth and controls the speed at which it is advanced. It was originally covered with sand paper to help hold the cloth, but now a course rubber tape covers most.

**Print Paste**
Mixture of thickener, dye, and auxiliaries that is printed onto a substrate to impart color.

**Print Table Harnesses**
The devices that lift and lower the screens in flat bed printing.

**Printing**
Wet process for producing a pattern on a substrate by a variety of different methods (i.e., rotary screen, roller, digital, heat transfer).

**Process Shrinkage**
The dimensional change that a process adds to or removes from the construction shrinkage of a fabric.

**Profiled Reed**
A reed used on air jet looms that has a tunnel or profile in which the air and yarn are channeled across the warp shed.

**Projectile**
A term used to describe the device that carries yarn across the warp shed on a projectile loom. Sometimes called a bullet or gripper.

**Projectile Filling System**
A type of loom that uses projectiles to insert filling yarns. This loom is somewhat like the shuttle loom, except the filling yarn is not stored on the projectile, but is maintained on an auxiliary creel on the side of the loom.

**Purl**
A weft knitting process that requires a links-links knitting machine and the use of double-ended needles.
Quill (Shuttle)
The spindle contained inside the shuttle that stores the filling yam.

Racking (needle racking)
The sideways movement of one needle bed with respect to the other needle bed.

Rapier
Type of filling insertion that uses a mechanical arm to transfer the filling yarn across the warp shed.

Raschel
A type of warp knit fabric made on a Raschel machine. Raschel fabrics are coarser than other warp-knitted fabrics, such as tricot, and can be made in a variety of patterns.

Reactant
Chemical used in durable press finishing that reacts with the cellulose in cotton to form a crosslinking bond.

Reactive Dyes
Popular dyes for cotton that generally have good wash fastness and a variety of bright colors.

Re-beam
The process of taking the coils of rope-dyed yarns and separating and winding them onto section beams for further processing.

Reclining Twill
A twill weave fabric with a twill line less than a 45-degree angle to the filling yarn.

Reduction
The process that makes indigo, vat, and/or sulfur dyestuffs soluble. In the case with indigo or vat dyestuffs, the dye is reduced with hydro and caustic to make it water soluble. This is referred to as the leuco form.

Reed
A comb-like device that has warp ends drawn through it on a loom. The reed pushes the filling picks into the fabric during the beat-up phase.

Reed Number
The number of dents per inch in a reed.

Reference State
The state at which a fabric is fully relaxed and will not shrink further.
Registration
The fit of the pattern whether or not the colors in a design fit together without excessive overlapping.

Relaxation Drying
The drying of a fabric or garment under tensionless conditions.

Relaxed State
The state at which a fabric is fully relaxed and will not shrink further.

Relief Printing
Process where the raised areas of an engraved plate are inked for printing.

Repeat (Weave)
The number of ends and picks on which the weave pattern repeats itself.

Residual Shrinkage
The amount of shrinkage or growth that a fabric has at any given point in processing.

Resin
Chemical used to impart durable press properties in a fabric or garment.

Resist Printing
A printing method in which a resist agent is applied in the desired areas and the fabric is dyed, so that the areas with the resist agent remain undyed.

Rest
One of the five positions of the knitting cycle. The needle is in the rest position when it is not activated.

Reverse Twist
Also know as S-twist and left-hand twist. When observed vertically, the fibers in the yarn form the center of the letter "S" moving from lower left to upper right. This is caused by the fiber twist direction during spinning.

Rib Gaiting
When needles in the cylinder and dial or front needle bed and back needle bed are not directly opposite each other. All the cylinder and dial needles can be selected to knit at the same time.

Right-hand Twill
A fabric with a twill line running from the lower left-hand side to the upper right-hand side of the fabric. Also called Z twill.
**Right-hand Twist**
Also known as Z-twist or regular twist. When the yarn is viewed vertically, the fibers in the yarn form the center of the letter "Z" moving from lower left to upper right. This is caused by the direction the fibers are twisted when spun.

**Ring Dye Effect**
The effect caused when the dyestuff does not penetrate past the outer surfaces of the yarn. This leaves a white, undyed core.

**Ring/OE**
A fabric made with ring-spun yarn in the warp and open-end rotor yarn in the weft.

**Ring/Ring**
A fabric with ring-spun yarn in both the warp and weft.

**Ring Spinning**
Twist is inserted into parallel fibers by means of a rotating spindle.

**Ring Spun**
Yarn that has been spun on a ring-spinning frame.

**Riser**
The term given when a warp end is over the filling pick.

**Rope Dyeing**
Dyeing of yarn in a rope form. This is how most indigo dyed yarns are produced.

**Rotary Screen Printing**
A continuous method of printing in which a perforated cylindrical screen is used to apply color. Color is forced from the interior of the screen onto the cloth.

**Rotor**
A cup-shaped device in open-end spinning where loose fiber is collected and twist inserted as the formed yarn exits.

**Rotor/Open-end spinning**
A spinning process in which a rotating rotor is used to insert twist to the fed fibers.

**Rough Spun**
A yarn that intentionally has slubs or an unusually uneven appearance. The effect is to gain an authentic or rustic appearance typical of yarns made years ago.

**Roving**
The preparation process used only for ring spinning. The resultant bobbin is the feed for the ring-spinning frame.
Rubber blanket
A continuous blanket that moves the fabric under the screens.

S-Twill
The twill line runs from lower right-hand side to upper left-hand side of fabric. Also called left-hand twill.

S-Twist
The fibers in the yarn form the center of the letter S, moving from lower right to upper left. This is caused from the direction the fibers are twisted into yarn. Also called reverse twist and left-hand twist.

Sales Yarn Company
A trade term for a company that spins yarn exclusively for sale.

Sand Roll
Sometimes referred to as the press roll. It's the roll on the front of the loom that holds the cloth and controls the speed at which it is advanced. It was originally covered with sand paper to help hold the cloth, but now a course rubber tape covers most.

Sanding
See sueding.

Sateen
A satin weave fabric containing some fiber other than silk.

Satellite
A device that helps untangle the rope coming from the indigo dye tub before it is rewound on the section beam. The satellite sits above the tub.

Satin
A satin weave fabric containing silk as the textile fiber.

Satin Weaves
One of the three basic weaves, which is similar to a twill, but the intersection points are irregular so as not to form a twill line in the fabric. Satin woven fabrics have either long warp or filling floats, which give the fabric its flat and shiny surface appearance.

Schreiner Calendering
Mechanical finishing process in which fabric is passed between two rolls under heavy pressure to create a high sheen. The look is created by engraving one of the rolls (steel) with several hundred small angled ridges. The fine lines imprinted in the fabric reflect light differently thus creating the high sheen.
**Scouring**
Preparation wet process that cleans the substrate of surface wax and impurities thus enabling level dyeing and finishing.

**Screen**
Formerly, a woven structure with rectangular openings that permit the passage of print paste; now also a perforated metal sheet formed electrolytically, which performs the same task.

**Screen Printing**
Process where print paste is forced through the small holes in a patterned screen that is placed on top of fabric.

**Section Beam**
Also called warper beams. These beams, which are produced at warping, make up a section or portion of the yarns needed on a loom beam. Example: If a loom beam had 5,600 ends, then the following would be needed: 10 section beams with 560 ends, 11 section beams with 466 ends, and one with 474 ends, or some other combination of section beams that would produce the total number of required ends on the loom beam.

**Seed-coat Fragment**
In bale cotton, a small portion of the cotton seed, usually black or dark brown, broken off during ginning. Usually has fibers attached.

**Selvage**
The outside edges of the woven fabric. Usually consisting of a different construction than the body of the cloth. This ribbon-like weave on the cloth edges helps with the processing of the cloth in the mill.

**Separation Thread**
A thread inserted during the knitting process between the panels to allow for division.

**Sequestering Agent**
Chemical that ties up metals in a liquor bath, thus lessening their negative effect of causing precipitation (spots). Also known as sequestrant or chelating agent.

**Sequestrant**
See sequestering agent.

**Serge de Nimes**
Twill fabric thought to have originated in Nimes, France; originally made from wool and silk.

**Shade Sorted**
Sorting the finished fabric by its color and shade so that garment panels made from these rolls will match.
**Shaping**
Techniques used in weft knitting to produce contoured fabric panels or garments by changing the number of courses and/or wales. Also, various stitch lengths can be applied to form a shape.

**Shearing**
Mechanical finishing process that precisely trims off protruding fibers on the surface of a fabric.

**Shed**
The area formed by the two sheets of warp yarns created when some of the harnesses are lifted and the rest are lowered.

**Shedding**
The process of forming the warp shed and the mechanical system that creates the shed. There are three types of shedding: cam, dobby, and jacquard.

**Shedding of Size Particles**
The scuffing-off or abrading-off of size during the weaving of the yarn. If too much size is peeled off during weaving, the yarn will be damaged.

**Short Fiber**
The general term given to cotton fibers that measure 0.5 inches or less in length.

**Short Staple**
The general term given to cotton or other fibers that measure two inches or less.

**Shrinkage**
A dimensional change in a fabric or garment that results in a loss in that dimension; a shortening.

**Shuttle**
The boat-like device that carries a small yarn package across the warp shed.

**Shuttle Weaving**
Weaving fabrics on shuttle looms.

**Shuttleless Weaving**
Any weaving machine that does not use a shuttle to insert the filling yarn.

**Simulation (Fabric)**
A computer rendering, based on fabric parameters (construction, yarn size, weave), that shows how the woven cloth will appear.
**Singeing**  
Mechanical process in which a fabric is carried over a heated element (roll or flame) in order to remove any protruding fibers and create a smooth surface.

**Single Binder**  
In a pile fabric, a single yam holding the cut pile yarns into the fabric. This type of pile is referred to as a V pile.

**Single Jersey**  
A plain knit fabric made on a single set of knitting needles; all the knitted loops are pulled from the face side to the back side of the fabrics, so the two sides look different.

**Single Knit**  
A knit fabric made on one set of needles.

**Single Rigid Rapier**  
A loom that uses one rapier to transfer filling yarn across the width of the loom. The rapier is rigid and is usually stored in a metal tube on one side of the loom when not in the warp shed.

**Single Yams**  
A single strand of twisted fiber suitable for weaving or knitting operations.

**Sinker**  
A narrow blade inserted between adjacent needles on a weft knitting machine either to hold down the fabric during knitting, to assist in loop formation, or to allow formation of a pile loop in the fabric.

**Size**  
Chemical applied to warp yarns to bind and stiffen fibers to protect them during the weaving operation.

**Size Add-on Percent**  
The increase in weight of a yarn gained by the application of sizing materials in slashing. Expressed in a percentage.

**Sizing**  
A term referring to the chemicals applied to warp yams to protect them from the rigors of weaving. The term sizing also refers to the process of adding the size on to the yarn, which is also called slashing.

**Sizing Boxes**  
The boxes on a slasher that the warp yarns pass through that contain the hot size. This is the point in slashing where the size is applied to the yarns.
**Skying**
The process of moving reduced yarns (with soluble dyestuff) through the air so that the oxygen in the air can oxidize the dye on the yarn.

**Slasher or Sheet Dyeing**
The process of dyeing indigo or other yarns in sheet form rather than dyeing on a dye beam, rope, or skein form.

**Slasher Creel**
The device that holds the section beams while the yarn is fed into the slasher. Sometimes called a slasher magazine or beam creel.

**Slasher Magazine**
The device that holds the section beams while the yarn is fed into the slasher. Sometimes called a slasher creel or beam creel.

**Slasher Set**
The number of beams required to make up a warp beam. Example: If a loom beam had 600 ends, then the following would be needed: 10 section beams with 560 ends, 11 section beams with 466 ends, and one with 474 ends, or some other combination of section beams that would be needed to produce the total number of warp ends needed.

**Slashing**
The process of applying chemistry to warp yarns to protect them from the rigors of weaving. This process is also referred to as sizing.

**Sley**
The number of warp yarns per inch or centimeter of fabric. This is also called warp end count, warp count, or ends per inch.

**Sliver**
A rope-like strand of loose fibers with very little twist formed by collapsing the web of fibers coming off of the card.

**Slot**
A trick or groove cut into the cylinder, dial, or needle bed in a weft knitting machine that holds a needle or other knitting element in place.

**Slub**
A short, thick place in a yarn.

**SlubYam**
A novelty effect yarn where slubs are purposely inserted by mechanical or other means.
**Sodium Hydrosulfite**  
Also known as hydro. It is used to reduce the indigo dye into its leuco state so that the dye will be water soluble.

**Sodium Hydroxide**  
A chemical also known as caustic soda that is used with sodium hydrosulfite in the reduction of indigo dye to make it soluble to water.

**Softener**  
Chemical applied to a fiber, yarn, fabric, or garment to impart a certain hand (i.e., soft, slick).

**Soil Release Finish**  
Chemical finish that does not prevent soil or stains from entering the fabric, but facilitates their removal during washing.

**Space Dyed**  
The process of one continuous piece of yarn being dyed multiple colors at irregular intervals.

**Space Dyeing**  
Process in which dyestuffs are applied to yarn in a controlled irregular method to create a pattern of unorganized design on a subsequent fabric. Can be done in either a package or continuous form.

**Spandex Yarn**  
Yarn that has a spandex fiber or filament in it.

**Split Rods**  
Also called bust rods. These rods are used on a slasher to break up the sheet of sized yarns, so they can be put onto the loom beam.

**Spinning**  
The processing step where enough twist is inserted to give integrity and strength to a fibrous strand.

**Spinning Limit**  
The upper range of yarn count possible for a given fiber and spinning system.

**Spinning System**  
A method and/or machine for producing yarn.

**Split Stitch**  
A type of chain stitch employed in ecclesiastical embroidery.
**Spreader Mechanism**  
Device on circular knitting machines to assist in the uniform application of tension as the fabric is removed from the knitting elements. Also, this mechanism allows for the fabric tube to be evenly placed into a flat tube without wrinkles at the take-up mechanism.

**Squeegee Trough**  
A long narrow receptacle that holds print paste within the rotary screen.

**Squeeze Rolls**  
Rolls that extract or squeeze excess liquor (chemicals, dyes, etc.) from yarn or fabric that pass between the rolls. Used to evenly and thoroughly apply chemicals and/or water into the yarn or fabric.

**Stacks - Drying Cans**  
Groups of drying cans used to dry yarn or fabric. These cans are usually arranged into columns with multiple cans in each column. Each column of cans would be considered a stack of drying cans.

**Stain Repellent Finish**  
Chemical finish that prevents water, oils, or stains from entering the fabric and forming a bond. If stains do penetrate the finish (are pressed or ground in), they will be more difficult to remove.

**Standard Laboratory Conditions**  
Accepted testing conditions of a lab that ensures test results can be compared. It is made up of relative humidity (65% +/-2%) and temperature (70°F +/- 2°F, 21ºC +/- 1°C).

**Staple Yarn**  
A twisted fiber structure containing fibers of various lengths with the longest being less than two inches.

**Steep Twill**  
A fabric with a twill line ranging from a 45 degree angle to a 75 degree angle to the filling yarns.

**Stick-in**  
A print defect caused by printing with lint on the screen.

**Stiffening Agent**  
Chemical added to yarn or fabric to make it more rigid.

**Stitch Formation**  
One of the five positions of the knitting cycle. This is when the needle is drawn to various levels to make the stitch size, which can be small or large.
**Stitch Length**
Length of yarn in a knitted loop.

**Stock Dyeing**
The dyeing of fibers in staple form.

**Stone Washed**
Garment wet process that imparts a worn, washed out look. Can be done mechanically (pumice stone or dingers) or chemically (enzymes, permanganate, etc.).

**Stop Motion Controls**
Electrical or mechanical devices that automatically stop the machine's operation whenever a yarn break or defect is detected.

**Storage Feeder**
Also know as a yarn accumulator. A device that is used to continuously store yarn and allow for its continuous removal. The unit allows for a predetermined length of yarn to be accumulated under uniform tension, and then released under uniform tension. Commonly used in weaving for filling insertion.

**Storage Tubs**
Large tubs or boxes where the dyed ropes of yarn on a rope range are accumulated after exiting the dye range.

**Strauss, Levi**
Dry goods store owner in San Francisco and entrepreneur. He loaned Jacob Davis the money to patent the rivet in denim garments and founded the company that bears his name.

**Strike Off**
The first piece of fabric woven on the loom after changing the warp and or pattern. It is checked for weaving and pattern defects and, if none are found, sent to the customer for approval. This is also called a head end.

**Stuffer Yarn (Bedford Cord)**
An extra yarn that is incorporated into the weave to increase the height of the cord.

**Substrate**
A fiber, yarn, fabric, or garment.

**Sueding**
Mechanical finish that resembles the look of suede leather. The appearance on the surface of the fabric is created by the continuous application of the fabric to rotating rolls, usually covered by sandpaper or other similar surface.
**Sulfur Bottom**
When a sulfur dye is applied to yarn before it is indigo dyed. The resulting yam/fabric is referred to having a sulfur bottom.

**Sulfur Dyes**
Popular dyes for cotton which are inexpensive and produce deep black shades but have poor crockfastness and are sensitive to chlorine. Also used for navy, olive, and dull green.

**Sulfur Top**
When a sulfur dye is applied to yarn after it is indigo dyed. The resulting yam/fabric is referred to as having a sulfur top.

**Surface Finishing**
Process that alters the look and/or feel of the surface of a fabric (i.e., sanding, sueding, napping, brushing, etc.).

**Surfactant**
See dispersing agent.

**Suspending Agent**
See dispersing agent.

**Swiss Pique**
Double knit fabric made in a honeycomb pattern using knitting and welting.

**Synthetic Yam**
A yarn that is made from 100% man-made fiber (polyester, rayon, nylon, etc.)

**Take-up-Roll**
The roller, sometimes called the sand roll or press roll, that controls the advance of woven cloth on the loom.

**Take-up**
The weaving motion that involves the removal of the woven fabric from the loom. The take-up must be synchronized with the let-off to prevent breaking the warp yarns. The take-up and its relationship to the let-off controls how many picks per inch are woven into the fabric.

**Tear Strength (Fabric)**
The ability of a fabric to resist tearing. Measured by the force required to tear across a woven piece of fabric on a testing machine.

**Tenacity**
The measured force at the time a yarn breaks per unit linear density (i.e., grams/tex).
**Tensile Strength (Fabric)**
The ability of a fabric to resist rupture under tension. Measured by the force needed to rupture a piece of woven fabric on a testing machine.

**Tensile Strength (Yarn)**
The total force per unit linear density (i.e., grams/denier).

**Tension Controls**
Electrical or mechanical devices that limit tension variations in a yarn as it passes through a machine.

**Tension Devices (Yarn)**
A device that is used to control the tension of yarn coming off a package. This device can be a disk with a weight on it, or it can be more sophisticated using electromagnetism to maintain tension on the yarn.

**Tenter Frame**
A continuous machine that applies heat uniformly to a fabric while maintaining a desired width. Can be used for drying, curing, and heat setting. The fabric can be held on the machine by either small pins or clips that grip the selvages of the fabric.

**Tex**
(Weight in grams/1,000-meters). Direct yarn numbering system often used outside of the U.S.

**Thick Place**
A segment of a yarn that is at least one-quarter of an inch long and is noticeably thicker than adjacent portions of yarn.

**Thickener**
A chemical that increases the viscosity (thickness) of a mixture or solution.

**Thin Place**
A segment of yarn at least 25% smaller in diameter than adjacent portions of yarn.

**Threads Per Inch**
A term describing the total number of warp and filling yarns that are present in one square inch of fabric. When determining threads per inch, plied yarns count as one yarn.

**3 by 1 Broken Twill**
Can also be written as 3/1 or 3x1. This twill repeats on four ends and four picks. The weave pattern for each warp end is warp yarn on top for three picks and under for one pick. The twill line will be broken by weaving one of the warp yarns out of sequence.
3 by 1 Twill
Can also be written as 3/1 or 3x1. This twill repeats on four ends and four picks. The weave pattern for each warp end is warp yarn on top for three picks and under for one pick.

Top Feeder/Bale Plucker
The initial machine in the yarn manufacturing process that pulls small tufts of fiber from an assemblage of bales (laydown).

Transfer Printing
See heat transfer printing.

Transfer Stitch
Transference of loops from one needle to another during the knitting cycle to form a hole or lace design, to create a structural change from rib to single knit or vice versa, or to shape a sweater.

Trash
The unwanted impurities in cotton fiber or yam.

Traveling Package Creels
Warper creels that are also known as "V" creels. The outside of this V-shaped creel is used to supply yarn to the warper head while it is running. During warping, the inside of the creel is loaded with new packages. When the outside packages are spent, the operator rotates the creel, and the full packages move to the outside of the creel where they can be warped onto the next beam. Then the inside is staged again.

Tricks
Slots or grooves in a weft knitting machine that hold a needle or other knitting element in place.

Tricot
A warp knit fabric that is knitted flat and has fine wales on the face side and more or less pronounced crosswise ribs on the back.

Truck Creels
Warper creels that have wheels that allow fully loaded creels to be moved into place for warping after the previous creel's yarn has been spent. The empty truck creel is then staged for the next truck transfer.

Trumpet
A cone or funnel shaped device on the ball warper that condenses the sheet of yarns into rope form before being wound onto the ball warp. Also known as condenser.
**Tuck Stitch**
A knitting stitch that produces tuck or open effects by having certain needles hold more than one loop at a time.

**Tucking Unit**
A device on a loom that tucks the loose end of the pick back into the selvage of the cloth.

**Tuft**
A group of fibers small enough to be carried by the air flow within the transport or duct system of a mill.

**Turns Per Inch (TPI)**
The number of turns of twist in one inch of yarn. TM-twist multiple is derived from the TPI and the yarn count and describes the relative twist level in a yarn (TPI = TMvNe).

**Twill**
One of the three basic weaves. The diagonal lines easily identify a twill weave across the face of the fabric.

**Twill Line**
The line made by the floating warp yams in a twill fabric.

**Twist Multiple**
The ratio of turns of twist per inch to the square root of the yarn size in Ne.

**2 by 1 Twill**
Can also be written as 2/1 or 2x1. This twill repeats on three ends and three picks. The weave pattern for each warp end is warp yarn on top for two picks and under for one pick.

**2 by 2 Broken Twill**
Can also be written as 2/2 or 2x2. This twill repeats on four ends and four picks. The weave pattern for each warp end is warp yarn on top for two picks and under for two picks. The twill line will be broken by weaving one of the warp yarns out of sequence.

**2 by 2 Twill**
Can also be written as 2/2 or 2x2. This twill repeats on four ends and four picks. The weave pattern for each warp end is warp yarn on top for two picks and under for two picks.

**Tying-in Machine**
Machine that ties a new warp beam sheet of yarn to the old warp yarns on a loom when the old beam weaves out.
**Union Dyed**
Dyeing fabric or yarn containing more than one type of fiber in a dye bath to achieve a uniform color.

**Upland Cotton**
Designates the origin and type of cotton typically grown in the U.S. (not Pima cotton).

**USDA Classing Offices**
Twelve locations strategically located across the cotton belt equipped with HVI technology. Their purpose is to measure the various properties of individual bales.

**V-Bed Machine**
A latch needle weft-knitting machine with two needle beds at roughly a 90-degree angle to each other in the form of an inverted V. Each needle bed is at a 45-degree angle to the horizontal. Used primarily for sweaters, collars, rib trim, etc.

**V-Shaped Creels**
Warper creels that are shaped like the letter "V." The headstock is located at the bottom point of the V. This allows for a shorter more compact creel. Traveling package creels are a type of V-creel.

**V-Shaped Pile**
The shape of the pile yarn in a corduroy, velvet, or velveteen caused by a single binding of the pile yarn with the ground yarns in the fabric. This is the not the most durable type of pile, since it only has one interlacing holding the pile yarn into the fabric.

**Value**
Measure of the degree of intensity of a color (i.e., lightness vs. darkness of a color).

**Vat Dyes**
Popular dyes for cotton that have excellent lightfastness. Normally they are not sensitive to chlorine but have limited brightness and are sensitive to abrasion.

**Vegetable Dye**
Dyes that are made from plants or vegetables.

**Velvet**
Warp pile fabric with a woven cut pile, which is cut to a uniform height, giving it a very lush and soft hand. The pile on a velvet fabric is created in the warp. The high number of pile yarns per inch enhances the appearance and hand of the fabric.

**Velveteen**
Filling pile fabric with a woven cut pile, made to resemble a velvet fabric. The pile is created in the filling, and the use of many pile yarns per inch gives the fabric the appearance of having a uniform pile height. This fabric can have as many as 400 picks per inch, making it a very expensive cloth to produce.
**Verge**
The leading edge of a cylinder, dial, or needle bed where the knitted loops are placed after knitting and before fabric take-up.

**Vertical Company**
A self-sufficient operation where fiber is converted into yarn all the way through to a fabric or finished product.

**von Baeyer, Adolf**
Johann Friedrich Wilhelm Adolf von Baeyer October 31, 1835- August 20, 1917, German, Chemist who created the first synthetic dyestuff (synthetic Indigo).

**Wale**
Vertical column of loops produced by the same needle knitting at successive knitting cycles.

**Wale Count**
Number of wales per linear distance.

**Wales**
A series of cords or ribs in a fabric, such as corduroy, Bedford cord, or pique.

**Warp Control**
The function on the loom that controls the take-up of the cloth and the let-off of the warp.

**Warp Count**
The number of warp yarns per one inch or centimeter of fabric. This is also called sley, warp end count, ends per inch, or ends per centimeter.

**Warp End**
A single yarn that runs lengthwise in a woven fabric.

**Warp End Count**
See warp count.

**Warp Face Twill**
Twill fabric in which most of the yarns on the face are warp yarns (i.e., 3/1 or 2/1 twills).

**Warp Knitting**
Loop formed in a vertical direction.

**Warp Shed**
The area formed by the two sheets of warp yarns created when some of the harnesses are lifted and the rest are lowered.
**Warp-Siub Denim**
Denim that is made with warp yarns that have been made with yarns containing slubs or textural effects.

**WarperHead**
The drive device on the warper that turns the beam or ball warp log and causes the yarns to be wound onto the beam.

**WarperSet**
A set of beams or ball warp logs that are wound from the same set of yarn packages or indigo dye lot.

**Warping**
The act of placing yarn onto a warp beam or log from yarn supply packages located in a creel.

**Washfastness**
Measure of the resistance of a substrate to a loss of color due to commercial or home laundering.

**Washing**
See afterwashing.

**Water Jet**
Type of loom that uses a jet of water to propel the filling yarn across the warp shed. Not used with hydrophilic yarns, such as cotton, since the yarn would absorb the water and the fabric would mildew before drying.

**Water Repellent**
The ability of a fabric to resist surface wetting.

**Water Resistant**
The ability of a fabric to resist water penetration.

**WaterProof**
The ability of a fabric to prevent water penetration.

**Water Soluble**
Dyestuffs or chemicals that can be dissolved in water.

**Weave Room**
The area in a mill where the looms weave the cloth. Also called weave shed.

**Weaving**
The process of interlacing warp yarns and weft yarns together to form a fabric.
**Weaving Cycle**
One complete cycle of shedding, filling insertion, beat-up, and warp let-off.

**Weaving Efficiency**
The term used to express what percent of time in a given period the loom is running and making cloth. Example: If a loom is weaving at 95% efficiency, then the loom is running 57 minutes per hour.

**Weaving Machine**
Any machine or device that weaves yarn into fabric. Not to be confused with loom, which requires a back and forth motion across the warp shed by the weft yarn. Most modern weaving machines only insert the weft yarn from one side, so they are not looms but weaving machines.

**Weft Knitting**
Loops formed in a horizontal manner by adjacent needles.

**Welt Stitch**
A miss or float stitch.

**Wet Pick-up**
The amount of dye, size, or other fluid by percent weight picked up by the fiber, yarn, or fabric during an application process.

**Wetting Agents**
Chemical that changes the surface tension of the fiber, yarn, or fabric that allows fluid to more easily penetrate and saturate the material.

**Whip Roll**
The roller on the back of a loom that changes the angle of the yarns coming off the warp beam to feed into the harnesses. Also used to control the angle at which the yarn enters the harnesses and the resulting tension on the warp yarns. As the roll is raised or lowered, the appearance of the cloth will change. The whip roll is also timed to move forward as the harnesses rise to decrease the tension on the warp yarns.

**Whole Garment Knitting**
The individual body and sleeve parts of a garment are knit in tubular form to the proper shape. These individual parts are knit together on the machine with widening, narrowing, and certain binding-off techniques executed so that a complete garment is produced.

**Wide Wale Corduroy**
A corduroy fabric that has large, pronounced, and broad wales, usually less than 16 wales per inch.
**Winding**
One of the final processes in yarn manufacturing where yarn is taken from a bobbin and put on a cone or parallel-sided package, usually associated with ring spinning.

**Woolen Cut**
Number of 300-yard lengths/pound.

**Woolen Run**
Number of 1600-yard lengths/pound.

**Worsted Count**
Number of 560-yard lengths/Pound.

**Wrinkle-resistant Finish**
Describes a fabric or garment that has been treated, so that it retains its smooth appearance, shape, creases, and/or pleats after laundering. In such garments, little or no ironing is required, particularly if the garment is tumble dried. Also known as durable press finish.

**W-Shaped Pile**
The shape of the pile yarn in a corduroy, velvet, or velveteen caused by a double binding of the pile yarn with the ground yarns in the fabric. This is the most durable type of pile, since it has two interlacings holding the pile yarn into the fabric.

**Yarn**
A continuous strand of fibers twisted together to form the most basic of textile products.

**Yarn Accumulator**
Also known as storage feeder. A device that is used to continually store yarn and allow for its continual removal. The unit allows for a predetermined length of yarn to be accumulated under uniform tension, and then released under uniform tension. Commonly used in weaving for filling insertion.

**Yarn Carriers**
Yarn guide that delivers yarn to the knitting elements of a weft knitting machine.

**Yarn Count**
A numerical description of the linear density of a yarn.

**Yarn Creel**
The place where yarns are positioned either on or off the knitting machine, so that yarn can be delivered to the knitting cycle.

**Yarn Dyed Filling**
Yarn that has been dyed before being used as the filling yarn in a fabric.
Yarn Dyeing
A method of dyeing where yarns are wound onto small perforated tubes and dye liquor is forced through the perforations on the inside of the package to the outside (and vice versa) in order to impart color. Also known as package dyeing.

Yarn Feeding Devices
Mechanical devices that present yarn in a measured manner to the knitting elements.

Yarn Guides
Mechanical devices, usually a pig-tail, hollow disk, or tube, that position yarns in a path of movement to allow for proper positioning on a knitting machine.

Yarn Number
See yarn count.

Yarn Receiving
One of the five positions of the knitting cycle. This is when the needle has been raised high enough in the knitting cycle to receive a new yarn.

Yarn Separators
Devices that cause the sheet of yarns coming off of the drying cans on the slasher to break apart into individual yarns before going onto the loom beam. Also called bust rods.

Yarn Size
The system for measuring the fineness and size of a yarn. Expressed in units of length per weight in the indirect method (cotton count, Ne, which is the number of 840-yard lengths/lb., Nm, which is the number of 1600-yard lengths/lb.); and expressed in units of weight per length in the direct method (denier, which is the number of gram/9000 meters). Also called yarn number.

Yarn Tension Controls
A device used to control the tension of the yarn at various positions of the yarn path on the knitting machine.

Z-Twill
Also called right-hand twill; the twill line runs from lower left-hand side to upper right-hand side of the fabric.

Z-Twist
The fibers in the yarn form the center of the letter Z, moving from lower left to upper right. This is caused from the direction the fibers are twisted into yarn. Also called regular twist and right hand twist.