Glossary

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Automation: The use of advanced mechanical equipment, especially in combination with high-speed computers and other self-regulating controls. Automation includes almost every operation that dispenses with human assistance or control, whether because of newly developed control machinery or because of mechanical improvements on the assembly line.

Backward Integration: Where a firm extends itself into a previous stage of the production process.

Cambric: A very fine, thin linen.

Carding: The process in yarn manufacture in which the fibers are brushed up, made more or less parallel, have considerable portions of foreign matter removed, and are put into a manageable form known as sliver.

Cellulose: A substance which constitutes the chief part of the solid framework of plant life such as cotton. One of the greatest products made from cellulose base is the manmade fiber group of textile yarns—viscose rayon, cuprammonium, nitro-cellulose and acetate.

Chute-fed Cards: The pneumatic transport of cotton from cleaning through carding.

Clothing, Card: Rollers or flats that are clothed with fine, cylindrical pressed steel wire, and do carding.

Carding: Removal of all fibers below a certain staple length; i.e., shorter length fibers; and setting them in a uniform, parallel order ready for further manipulation.

Concentration Ratio: The percentage of total businesses in a given industry that is handled by a specified number of the largest firms—generally expressed as the percentage of business assets, production, sales, employment, or profits accounted for by the three to eight largest firms.

Contractors: Those who receive cut garment part bundles from jobbers and perform all necessary operations to assemble and process them into finished garments.

Creel: A device used as a spool rack for winding warp. Also used to hold warp ends for a sectional beam.

Dobbyweave: A weave with small, geometric patterns.

Doffing: Stripping the sliver from the carding machine.

Drawing: The process of combing individual ends of sliver (usually 6 to 8) and drafting them to a lower, specified weight per unit length (i.e., grains per yard).

Durable Goods: Pieces of equipment, for either consumers or producers, that in normal use are likely to last longer than three years.

End: A warp yarn or thread that runs lengthwise or vertically in cloth.

Ends Down: Warp ends which have broken in weaving, thereby impeding production.

False Twist: The major process used in texturizing filament yarns. A rotating spindle twists the yarn, then sets it in a heater-box or tube, and untwisting follows. The twist is not permanent but as a result the yarn becomes taut.

Filament: A fiber of indefinite length, such as filament acetate, rayon, nylon.

Filling: In woven fabric, the yarn that is inserted across the loom. Also referred to as weft, or crosswise yarns in the fabric.

Finishing: The art and science of making materials presentable to the consuming public. The final process such as bleaching, dyeing, pressing, printing, or waterproofing.

Fly Shuttle: Invented in 1938, the fly shuttle is thrown through the shed of the loom by pulling a cord.

Forward Integration: Where a firm moves into a succeeding stage of the production process or a succeeding stage of activity.

Geotextiles: Woven or nonwoven fibrous networks used in civil engineering applications. They are used principally for drainage control, where they serve as filters; for soil separations, where they serve as confinement media; and for foil reinforcement, where they serve to achieve optimal load distributions.

Greige: Unbleached and undyed cloth or yarn.

Hard Automation: New technological developments of custom-engineered automated manufacturing machinery, built to accomplish a specific set of tasks and incapable of doing other tasks without disassembly and rebuilding.

Hopper: a device into which material is deposited and from which it is automatically fed into a machine.

Horizontal Integration: The situation existing in a firm whose products or services are competitive with each other, the expansion of a firm into the production of new products that are competitive with older ones.

Jacquard Loom: A loom using a card punched with holes arranged to create an infinite variety of figured weaves.

Jobbers: Those with responsibility for their own designs, who acquire the necessary fabric and related materials and arrange for sale of the finished product. With the exception of cutting the fabric into the requisite garment sections, jobbers contract out the production operations. Many jobbers also contract out cutting and shipping functions.

Lap: Loosely compressed cotton sheets. The card changes a lap into a sliver.

Licker-in: A hollow grooved cylinder used in carding; it opens the tufts of cotton held by the feed roll and plate.

Noncellulosic Fibers: These are man-made, "synthetic" or manufactured textile fibers made from chemical polymers.

Nonwoven Fabric: A structure produced by bonding or the interlocking of fibers, or both, done by mechanical, chemical, thermal, or solvent means, and the combination thereof. The term does not include fabrics which are woven, knitted, tufted, or constructed by wool felting processes.

Open-end Spinning: A competitor of the ring spinning method, open-end spinning has a three to five times greater production rate. This is possible by isolating the twisting operations to a drum which rotates the open end of the yarn while additional fibers entering the drum are attracted to the yarn by rotational forces. The use of an air stream is the most common way for transporting fibers. In open-end spinning, twisting is not linked to the package and packages are not limited in size. Rewinding is often eliminated. Less power is needed to rotate the small end of the frame though the exact amount of reduction depends on the design of the frame and the speed at which it operates.

Opener Picker: An auxiliary cleaning machine used when high-quality cotton yarn is desired.

Opening: The initial treatment of raw cotton; the separation and opening up of the cotton to remove compression because of baling and shipping. Heavier impurities are also removed from the stock. Opening is concluded when the cotton lap is made ready for actual carding.

Pick: One passage or throw of the shuttle of a loom; one of the weft threads, or filling yarns; to throw (a shuttle).

Picker Lap: The lap or web obtained as the cotton comes from the finisher picker machine.

Picking: Continuation of the opening process which casts out the heavier wastes in cleaning the stock; the process in yarn manufacture of cleaning the fiber and forming it into a sheet which is compressed and wound on a cylindrical roll.

Ply: The number of individual yarns twisted together to make a composite yarn.

Ply Weave: Any cloth made from more than one set of warp and filling threads.

Polymer: A comparatively large molecule produced by linking together many molecules of a monomeric substance. Such a reaction is called polymerization.

Racking: Movement of the needle beds in a knitting machine in relation to each other.

Reed: One of a number of thin, flat pieces of pressed-steel wire between which the respective warp ends are drawn after they pass through the correct heddle eye on the proper harness frame in the loom.

Ring Spinning: In ring spinning, the package is rotated to insert the twist and to wind the new yarn onto the bobbin. Package speed is limited by the mechanical considerations and development of high tensions. Yarn package is limited in size so as to be confined within a yarn balloon and requires a great amount of power both for its rotation and to insert the necessary twist.

Robots: Reprogrammable multi-functional manipulators designed to move material, parts, tools, or specialized devices through variable programmed motions for the performance of a variety of tasks.

Robotics: The study of robots, their design, manufacture, use, etc.

Roving: The last process before spinning in which the soft strand of sliver is drafted and twisted sufficiently to hold it together during spinning. Also referred to as the strand of fiber produced by the process.

S.I.C. (Standard Industrial Classification)-Numerical classification of industries introduced in 1948 from where a larger number of digits indicates a more disaggregate classification. Establishments are allocated to digital categories according to their principle products.

Satin Weave: Has no distinguishable twill line despite its actual presence in the cloth. Brought about by the way in which the interlacing of the threads is arranged. Gives a more solid and glossy appearance on the face of the goods than any other type of weave.

Selvage (Selvedge): A narrow woven edge portion of fabric parallel to the warp, made with special stronger yarns.

Slashing: The sizing of warp yarns to protect the yarns against injury during weaving.

Sliver: The loose, thin continuous rope-like soft strand of parallel fibers which is the product from carding, combing, and drawing, and which is ready for drawing.

Spinning: The final process in forming yarn in which the soft roving strand is drafted by a series of rollers and twisted to provide strength.

Staple: The average length of the bulk of fibers.

Tappet: A projection or lever that moves or is moved by intermittent contact, as with a cam, in an engine or machine.

Texturizing: When a smooth continuous manmade fiber filament is given a new and permanent configuration which results in an appealing textural surface.

Twill Weave: A weave which repeats on three threads each way. The number of possible twill formations is almost limitless.

Twisting: The act of turning a strand of parallel fibers on itself to provide the necessary strength to hold it together. Also the process of combining two or more strands of yarn into a single strand.

Tieing-in Machine: A machine that automatically ties the ends of yarn from the run-out warp to the ends of the new warp which will be placed in the loom after the old warp has been taken out.

Upland Cotton: The standard American cotton and the one by which all other cottons are compared for properties and characteristics. It ranges from 3/4 inch to 1 1/4 inch in staple length.

Vertical Integration: The operation of a single firm at more than one stage of production. The most comprehensive type of vertical integration would include productive stages from the processing of the raw material to the completion and distribution of the finished product.

Warp: The threads running lengthwise in the loom and crossed by the weft.

Warping: The process in which several hundred individual strands of yarn are formed into a parallel sheet and wound onto a special beam for slashing or dyeing.

Weaving: Interlacing two yarns so they cross each other at right angles to produce woven fabric.

Weft: (Sometimes called woof or filling.) The yarns carried by the shuttle back and forth across the warp in weaving.

Winding: A process of transferring yarn or thread from one type of package to another; e.g., from bobbins to tubes.