

# DICTIONARY OF TEXTILE TERMS.

## S (Continued)

**Spin:** To draw out and twist into threads, as to spin wool, cotton, flax silk, etc. To form, by drawing out and twisting roving, yarn or threads of a required count.

Some historians claim LEONARDO DE VINCI as the inventor of the spindle, but if so, his idea or device as constructed in 1452 was never universally known. Spinning was carried on in its crudest state until 1533, when a German, by the name of JOHANN JÜRGEN, of WOLFENBÜTTEL, invented the well-known spinning-wheel. As the demand for cotton cloth increased, several efforts were made to facilitate the production of yarn, and in 1764 JAMES HARGREAVES produced his spinning jenny. In 1767 ARKWRIGHT received a patent on a device which laid the foundation for our modern cotton spinning, *i. e.*, drawing out the sliver by means of three sets of rolls and winding the same upon a bobbin placed on a spindle and between a flyer. The inventions of HARGREAVES and ARKWRIGHT were successfully combined by CROMPTON, who in 1779 invented his mule-jenny.

**Spindle:** The centre of the spinning action, and commonly a finely tempered, tapering pin of metal, which is used in spinning for imparting twist to the thread, and on which the latter, when twisted, is wound. A pin on which anything turns, etc.

**Spindle Foot:** The base of the spindle which revolves in the step; also called *shaft*. The *blade* is that part of the spindle extending upwards from the bolster. The length above the bolster varies, but in any case, whatever this length may be, the spindles are said to be so much out abreast.

**Spindle Step:** In spinning-spindles, the lower bearing of an upright spindle.

**Spindle Whirl:** The little round pulley fastened on the spindle, and round which the spindle band is passed. Also called *Spindle Wharve* or *Spindle Whorl*.

**Spine:** In hand-made laces, points decorating the cordonnet. (See Cordonnet.)

**Spinneret:** A tube projecting from the lower lip of the silkworm, and through which the silk issues.

**Spinning:** Drawing and twisting fibres to make yarns or threads.

**Spinning Gland:** A gland that spins silk or a silky substance, as in silkworms.

**Spinning Jenny:** A spinning machine which was the first to operate upon more than one thread. Invented in 1764 by James Hargreaves; he contrived a frame with eight spindles, which would thus produce eight threads at one time. The original jenny of eight spindles had been doubled in power by the time the patent was taken out. The spinning jenny was subsequently improved upon and largely superseded by Crompton's mule-jenny.

**Spinning Machine:** A machine for spinning, specifically, one that spins fibres continually (ring frame) as distinguished from a mule or other intermittent working device.

**Spinning Mule:** The mule spinning frame which automatically performs

drawing, twisting, winding-on and copping motions, being entirely automatic in its movements, which completes the spinning of the yarn and winds it on the spindle in a cop or cylindrical coil, conical at each end. It consists of a fixed part, creel, roller-beam, etc., and a traversing part or carriage, which runs out about 64 inches, drawing out and spinning the roving to the required fineness, then runs back, winding the spun yarn on the spindles. Mules contain as many as 1,500 spindles. Also called *Self-actor Mule*.

**Spinning Wheel:** A household implement formerly used for spinning yarn or thread, consisting essentially of a spindle that received rapid rotation by means of a band connecting it with a flywheel, which was driven by a treadle or crank.

**Spiracles:** The breathing holes of the silkworm; one row of nine down each side of the body.

**Spiral:** Any two threads of different count folded together will result in a spiral appearance; the greater the difference in thickness, the more striking the effect.

**Spiral Structure:** Secondary deposits on the outer cell wall of the cotton fibre, placed in a spiral form.

**Spiral Yarn:** Contains a soft spun yarn, twisted in a corkscrew fashion around a different colored single, or two-ply, hard spun core.

**Spitalfields:** A part of London famous at one time for its silks. Industry now almost extinct. Was vigorous rival of Lyons from 1727 to 1750. Innumerable silken fabrics made in Spitalfields; brocade lustreing, brocade tabby, brocade tissue, brocade damask, tobine, flowered tabby, figured tobine, fourcomber damask, double tissue, gold stuff, double tabby, brocade satin, Venetian brocade, India figured brocade, tobine tabby, tobine lustreing, and so forth.

**Spliced:** Reinforced parts of hosiery where the wear is the greatest.

**Splinter:** See Picot.

**Split:** See Dent.

**Split-edge:** Goods woven in two or more widths and separated by cutting between the edges.

**Split-foot:** A term used in connection with the manufacture of hosiery, to designate the grade or style. When used in connection with ordinary hosiery, knit on a circular machine, it refers to hosiery in which the foot is knit with yarn in natural color, or bleached, whereas the leg is dyed. When referring to full fashioned hosiery, it designates that the goods have been knit flat, and looped or sewed together, forming a seam up the centre of the sole and leg of the stocking.

**Split-ful:** The number of yarns passed through the split or dent of a loom reed.

**Split-motion:** A special selvage motion working on the leno principle, placed in the centre of a loom, for weaving two pieces of cloth (each having its own selvages) side by side.

**Splits:** Cloths woven two or more pieces in a width, and cut apart either while in the loom or after removal. The

inner selvages are either loose, *i. e.*, imperfect and which are then sometimes hemmed by a sewing machine, or their outside threads are worked on the leno principle, by what is known as a split-motion, to prevent ravelling.

**Sponge Cloth:** A cloth having a surface resembling that of a small sponge.

**Sponge Silk:** A woven or knitted fabric, made from waste silk, and which looks like rough crash, or low grade cotton toweling; used for draperies and underwear, also for wiping silvverware and machinery.

**Spool:** A wooden bobbin, consisting of a barrel with a head on each end; the thread or yarn being in this case drawn from the barrel in reverse direction from that it is wound on.

**Spool Cotton:** Sewing cotton thread, wound on a spool, made of three strands, each being a double strand.

**Spooler:** A machine for winding yarn or thread on spools. Also called Spooling Machine.

**Spoon Lever:** A part of the back stop motion in a drawing frame or sliver lap machine; a spoon shaped lever or tumbler grooved at the top, so that the sliver passes securely through it. When the sliver breaks or runs out, the release of its weight brings the other end of the lever into contact with other parts of the stop motion, in turn arresting the motion of the machine.

**Spores:** The germinating seed of fungi.

**Spot-proof:** See Proofing.

**Spooling:** Yarn being put upon bobbins or spools.

**Spots:** Applies in the cotton market, to cotton on the spot, visible and tangible in bales, the opposite of *utures*.

**Spot-stitch:** In crochet work, a stitch by means of which raised dots or figures are wrought at regular intervals.

**Spotting:** Weaving spots; planning spot designs; swivel weaving.

**Spraying:** Dampening fabrics automatically by machinery by means of the finest possible spray of water, in the process of finishing certain (cotton) fabrics.

**Spread-board:** Upon its table the flax fibres are spread in even layers, producing a continuous bunch of about the same thickness. The spread flax passes between the vertical partitions at the end of the table and connecting with the machine to a pair of rollers.

A second system of rollers in turn takes the flax from the first set. The bunches of flax spread on the feeding-table of the spread-board, are stretched or drawn out by means of two pairs of rollers, called feed and delivery rollers respectively, and are mixed in a solid, continuous sliver, by means of the gills of the fallers. The spread-board is capable of spreading, drawing, stretching, or extending the bunches of flax to from 25 to 40 times their original length. Refers also to Jute.

**Spring Take-up:** An elastic finger which takes up the slack of the yarn on knitting, winding, etc., machinery.

**Sprinkling:** See Dampen.

**Spun Glass:** When a glass rod is heated in a flame until perfectly soft, it can be drawn out in the form of very fine threads, and is used in the production of novelties, or for special fabrics. Spun glass can be produced in colors; but, on account of the low elasticity of these products, their practical value is small, though the threads are exceedingly uniform and have beautiful lustre. Spun glass structures are used as a substance for filtering strong acid solutions. A curly kind of glass wool is produced by drawing out two glass rods of different degrees of hardness to a capillary thread. On cooling, they curl up in consequence of the different construction of the two constituent threads.

**Spun Gold:** Gold thread for weaving special ornamental fabrics, particularly that made by twisting or wrapping a very thin narrow ribbon of rolled gold about a cotton or silk thread.

**Spun Silk:** Silk thread produced from cocoons which the insect has pierced in eating its way out; floss, husks or waste from reeling, *i. e.*, silk which is too much entangled and cannot be commercially reeled; also waste silk made in throwing and weaving.

A yarn composed of fibres of silk, which fibres have been cut or dressed into lengths varying from five to twelve inches, to be later made into a cheaper type of yarn.

*Pliny and Aristotle* give an account of silk manufacture, in which the cocoon silk was first torn up and then spun on a spinning wheel. The increased use of wild silks, of which the greater part could not be reeled, augmented this method of silk spinning. The Persians, Greeks and Arabs were using this process in the 9th and 10th centuries.

**Spun Silver:** Silver thread for weaving special ornamental fabrics; particularly that made by twisting or wrapping a very thin narrow ribbon of rolled silver about a cotton or silk thread.

**Spyndle:** The largest standard measure of yarn, 14,400 yards in length, the weight in pounds of a spyndle being the count of the yarn.

**Squirrels:** A name sometimes given to the workers of a carding engine.

**Srinagar:** Knotted rugs made in Kashmir, India, of very fine wool.

**Stacking:** When roughing, in preparing flax for the mill, is found too expensive a process, stacking is substituted; *i. e.*, piecing the flax in double pieces, straightening out their length, next opening on the hackle and breaking the root ends. Stacking is done by boys, whereas roughing is men's work.

**Staff:** See Distaff.

**Stained:** (Cloth Term) Marks or stains or a different color of dye, etc., these getting on to the cloth while it is passing through the various operations, making it more or less defective.

**Stained Cotton:** Cotton fibres which in the field have been exposed to frost, with the result that the fibre is colored a pale buff, losing in turn some of its value to the mill using it.

**Stained Wool:** Wool which has become discolored through the effects of urine, etc. When scoured, it has a burnt appearance. Used in making goods of dark color.

**Stained Yarn:** May be caused by the working-up of stained cotton, but is chiefly due to carelessness of the mill

operatives in allowing oil to come into contact with the yarn. Is also often caused by a broken thread not receiving immediate attention, and striking some part of the machine, thus picking up grease and dirt. This it conveys to its neighbor when pieced up. Stained yarn may sometimes arise from operatives having dirty hands, or from impure water when the doubling is done on the *wet* principle.

**Stake-heads:** Posts at the side of the rope-walk for supporting the laid rope.

**Stamped Velvet:** Velvet having patterns stamped into the pile with heated engraved rollers.

**Standard:** The number of yards used as a basis for grading the counts or numbers of yarn. Cotton yarns have for their standard 840 yards (equal to 1 hank) and are graded by the number of hanks one pound contains. Worsted yarns have for their standard 560 yards to the hank. Woolen yarns are graded either by the run or the cut system; the former has for its standard 1,600 yards, the latter 300 yards. Silk yarns refer either to spun silks, which have the same standard as cotton, or to raw silks; where the adopted custom is to specify the size by giving the weight of a 1000 yards hank in drams avoirdupois, or they are graded by the denier system. Linen, Jute or Ramie yarns have for their standard 300 yards to the hank or lea.

**Standard Colors:** Those of the spectrum.

**Standard Harness:** In gauze or leno weaving one of the doup harnesses, the harness-frame or heddle to which the doup is threaded.

**Standard Thread:** In gauze weaving, the thread or the threads, around which the whip-thread or threads twist.

**Stands:** Refers to cotton growing; a group of the best plants which is allowed to go forward in its growth after the rest have been chopped or weeded out; stands are separated by due distances from each other, about a foot being allowed on high land, while those on low land, where the growth is more luxuriant, are left at distances of from eighteen to twenty inches.

**Stannate of Soda:** A salt made up of stannic oxide dissolved in a solution of caustic soda, used in printing steam colors. Used extensively in weighting silk, also in mordanting cotton and in dyeing wool with alizarine. Also called *Stannate of Sodium*.

**Stannic Chloride:** A salt obtained by treating tin crystals with hydrochloric acid and chlorate of soda.

**Stannic Oxalate:** A tin salt used in steam colors and obtained by dissolving stannic chloride in oxalic acid.

**Stannic Oxide:** Produced by adding carbonate of soda to stannic chloride, and used for making stannate of soda.

**Stannous Acetate:** A chemical, useful in the discharge style of calico printing, made by mixing together solutions of stannic chloride and acetate of lead.

**Stannous Chloride:** Used as a mordant in silk dyeing; as a discharging chemical in calico-printing; in dyeing wool with cochineal. (See *Tin Crystals*.)

**Stannous Oxalate:** The same is used as a reducing agent and discharge, especially for silk and half-silk goods.

**Staple:** A group or lock of fibres. To sort or classify any fibre according to its length and strength. The tuft, bundle, or lock of wool fibres which, although growing separately on the body of the sheep, owing to their wavy or crimp nature, cling together and form themselves into locks on the back of the sheep. Sea Island cotton is a long-stapled cotton, Upland a short-stapled cotton. Formerly worsted yarn called for a long staple wool, whereas clothing or such wools as referred to woolen spinning, called for a short staple, but which is no longer the case, on account of improved machinery invented since then for combing the latter.

**Stapler:** A merchant who buys wool and sorts it into its various qualities for the manufacturer.

**Staplings:** Loops or broken ends of filling, showing on the face of the cloth when dealing with imperfect shedding.

**Starch:** One of the most important of the materials used by the finisher of cotton goods, and in one or the other of its varieties enters into the composition of nearly all finishing mixtures. It is also used in the sizing of cotton warps, to insure better weaving.

The same is generally prepared from potatoes and wheat, less often from maize, rice, barley, etc. A direct quantitative estimation of the percentage of starch is hardly ever required for technical purposes in the textile industries, since it gives no criterion of the applicability and source of the material. Microscopic examination is of the first importance, and quite unavoidable if it is desired to form a comprehensive opinion of the sample. Owing to its characteristic form and the different dimensions of the grains of the various varieties of starch, it is not difficult, not only to distinguish qualitatively between the different varieties, but also to obtain a certain idea of the purity and uniformity of the material, since inorganic and organic impurities or admixtures, such as sand mould spores, products of decomposition, etc., may be detected with certainty in this manner. Of great importance is also the amount of water, which increases considerably when the starch is stored and may reach 35 per cent. The permissible quantity of water is 20 per cent. in potato starch, and 16 per cent. in wheat starch, while the normal amounts are 16 to 18 and 14 to 16 per cent. respectively. Pure white material (for wheat starch) or fabrics dyed in sensitive colors (benzopurpurin, Turkey red, logwood black) are treated with the starch in question on the padding machine, dried and examined. Attention is to be paid to the general appearance of "feel," *i. e.*, the stiffening produced, the action on the dye, etc.; comparative trials may also be required. In printing, especially calico-printing, starch is used on an equally extensive scale as in finishing.

**Starching:** A finishing process, consisting of treating the fabric (usually cotton) with a solution of starch, for appearance, strength or weight.

**Starch Powder:** The same comes into the market in a soluble form, a preparation generally obtained by the action of sulphuric acid under pressure at the boiling point; it is sold both in the form of paste and powder.

**Star Stitch:** See Double Stitch.

**Statute Galloons:** Narrow cotton or silk braids, used in England for binding flannel underwear.

**Stauracin:** A mediaeval silken fabric, figured with crosses; used for vestments.

**Stave:** An English term for harness.

**Steam Punjums:** Allied to both punjum and steam waste. They are said to possess the virtues of both, *i. e.*, they yield well and have the color of steam, and combine the lustre of punjum. The latter has peculiar characteristics of its own, and is supposed by many people to be the most lustrous of all silks. It is a stringy waste in appearance, and loses very heavily in boiling off—something like 50 per cent. It is reeled from cocoons, a number of ends together, and put into book form very similar to the tsatlees, as described under the heading "Tsatlee Reel" in "Raw Silk;" but owing to the admixture of rice water, or some such substance, the threads mat together and are consequently unwindable. In this form the waste is known as punjum books, which are divided into grades 1's, 2's, 3's, and 4's—3's and 4's being the general run for English spinners, generally half-and-half. The waste is produced in exactly the same manner, except that no attempt is made to run it into a mass; but as an end breaks or runs off the waste is thrown aside.

**Steam Style:** The method of calico-printing, in which the mordants and colors are mixed together and printed, steam being used to bring up the colors and reduce the mordants.

**Steam Waste:** The best known and most widely used silk waste is Canton filature waste, better known as steam waste. It is not a gum waste. There are two varieties, and several grades of each. The one which has generally found most favor with spinners is the *Opened* waste, but owing to its lending itself so easily to adulteration, spinners are now paying more attention to the unopened quality. "Opened" steam waste is the unopened waste pulled out by the natives who work among it with their fingers and teeth, opening out the hard knobs which have been formed when the wet waste has been thrown down by the reeler and allowed to dry and mat together, on account of the natural gum which has been softened by the hot water in the basin attached to the reeling machine. Owing to the labor difficulty in China it is becoming more and more important that spinners accustom themselves to the use of unopened steam waste. There are really three grades of steam waste, which some years ago were known as *Selected*, No. 1, and No. 2. But year by year the Chinaman seems have got the better of the European silk inspector, and has let down the quality. In the "selected" he would leave a certain amount of No. 1, and in No. 1 he would put the No. 2, until at length the admixture of 1's and 2's was so much that No. 2 as a separate grade disappeared, all being mixed up with the No. 1, and passed as all No. 1. Naturally, the so-called "selected" got a greater percentage of No. 1, so that in time the European shippers decided to work up a better grade and call it *Extra selected*. This latter came forward very

nicely for a time; but gradually the Chinaman's cunning got the better of the inspector, with the result that he again lowered the quality of the so-called "extra selected," and therefore the "selected." This process was again repeated, and there came a grade known as *Extra extra selected* steam waste, but this was likewise doomed to the fate of the former changes, and to-day there is known what is called the *Extra extra extra selected* steam waste, which in point of fact is to-day not so good as the old well known "selected," and the "extra extra selected" is a mixture of the old 1's and 2's. The deterioration goes on year after year, each succeeding year being worse than the preceding one, and each season showing a gradual falling away from the standard established at the commencement of the season. It is a lamentable state of affairs, but so far the cunning Chinaman seems to have always managed to get the better of all the European inspectors, and so long as the present system of buying and passing of the waste is in vogue at Canton, so long will the Chinaman be able to hoodwink the inspectors. The reeling is done by steam power, and the cocoons are softened in water and treated by steam; hence the designation steam waste. The wet waste made in reeling is thrown on the floor, and the gum hardens again and forms the silk into hard knobs or balls. These are collected and put into bales for shipment as unopened steam waste.

**Stearic Acid:** A white mass melting at 69 deg. C. (157 deg. F.); insoluble in water, difficult to dissolve in alcohol and easily soluble in ether and in alkalies. It is used for rendering certain color bases, particularly Nera-zine Base, soluble in oil and in benzine. Also called *Stearine*.

**Stearn Silk:** See Artificial Silk.

**Steeping:** The preparatory process in bleaching cotton goods, which has for its object the softening and opening up of the fibre preparatory to boiling with lime or caustic soda. The action of the lye and the impregnation of the material is thus assisted. Steeping also aids in the softening and distintegration previous to removal of the sizing materials and ingredients coating the fibre, by means of fermentation. This must not, however, be too energetic, or the actual fibre will be also attacked. The temperature most favorable to the fermentation process is 140 deg. F.

**Steep Twill:** See Diagonal.

**Stem Stitch:** In embroidery, stitches placed next to each other imitate the twist of a rope.

**Stenter:** Fine book muslin in England.

**Stenter Clips:** Clamps on the sides of stentering, *i. e.*, drying frames, for gripping the fabrics. Also called *Clamps* or *Hooks*.

**Stentering:** Stretching fabrics on frames to bring all the threads into proper line, while drying. To impart to thin fabrics the so-called *elastic finish*.

**Step:** A brass bush inserted, where so needed, for carrying the foot of a spindle, or a skewer; like, for example, the brass bush inserted in the spindle rail of a spinning machine, and in which the foot of the spindle works; also the brass bush inserted in the creel of the fly frame, for car-

rying the skewer holding the slubbing or the roving.

**Stephanie Lace:** Modern handmade lace in imitation of the Point Venise.

**Sticks:** See Leafy Cotton.

**Stiffeners:** Dressing pastes used for giving solidity and firmness to cloths.

**Stifling:** Killing the chrysalis in the cocoon of silk, in order to preserve the latter for reeling.

**Stitchel:** A kind of hairy wool.

**Stock Dyeing:** The process of dyeing fibres in raw state (in the grain) before being spun.

**Stocking:** A covering for the foot and lower part of the leg, close fitting, and knitted of wool, cotton, or silk; sometimes limited to one reaching to the knee, as distinguished from a sock.

**Stocking Frame:** Invented by William Lee in 1589; the first machine performing knitting automatically; an invention, the chief motion of which remains unchanged to the present day.

**Stocking Yarn:** Loosely twisted yarn, suitable for knitting stockings.

**Stocks:** The mallets or beaters of the kicker fulling mill, as used for the felting of knit goods; the original fulling mill for woven piece goods, now superseded by the Rotary Fulling Mill.

**Stone Cotton:** Trade name for Brazilian cotton.

**Stone Mangle:** An adaptation of a primitive type of mangle, in which two batches of cloth, on iron batch rollers, serve as rollers upon which is mounted a heavy stone-weighted chest or a block of stone. This is caused to travel backwards and forwards, and its weight, coming upon the supporting batches, imitates the later stage of the jacking process. Though slow and cumbersome, this method, it is claimed, is still occasionally used in England.

**Stop:** The point at which the warp-threads in a lace frame are brought together, forming a place from which the pattern may be measured.

**Stop Motions:** Appliances, devised to stop automatically spinning, reeling, winding, warping, sizing, weaving, finishing, etc., machines, when from any cause it is necessary to stop the machine, or parts of it, to prevent injury to the machine or material under operation. They are divided into two classes: (a) those operated by some mechanical means, and (b) those actuated by electricity.

**Stop Rod:** In looms, the rod which extends longitudinally in front, on the bottom of the lay, and forms a part of the filling stop motion, raising a catch, that, if not raised by the absence of the filling engages a mechanism which immediately stops the loom. Also called *Protector Rod*.

**Storm Serge:** A very light serge weighing about 7 ounces, made of single warp and filling; used for women's coats.

**Stove-pipe Finish:** A high superficial lustre, produced on a fabric by means of hydraulic or rotary steam pressing. It is applied mainly to fabrics made of mohair, etc., upon which the effect, when produced, increases the natural lustre of the yarn.

**Stoving:** Submitting wool, yarn, or cloth, in a damp state, to an agent, such as sulphur fumes, with the object of bleaching it.

Exposing printed calicoes to dry heat.