DICTIONARY OF TEXTILE TERMS.

Silk Rep: A corded silk stuff, the cords of which run across the width of the fabric; used for women's dresses, ecclesiastical vestments, etc.

Silk Scouring: See Boiling-off Silk.

Silk Seal-skin: A fine silk textile with long, soft pile, resembling the fur of seals.

Silk Serge: A prominently twilled silk cloth, of one color, used especially for the linings of fine coats.

Silk Shoddy: Resembles wool shoddy in origin, consisting of recovered fibres from manufactured silks.

Silk Tartan: A silk material for women's dresses and men's waistcoats, woven in tartan like plaid patterns.

Silk Tests: Silk may be distinguished from vegetable fibres by burning the fibres, when it emits a smell of burnt horn. Wool gives a similar odor. When submitted to the action of nitric acid, the fibre is turned yellow. Silk is dissolved by strong alkalies. Dilute alkalies affect it, but without solution; ammonia has no action on the silk fibre. Schweitzer's solution dissolves the silk fibre just as it does cotton. Silk, like wool, has an affinity for tinctorial dyes. A solution of zinc chloride of 1.7 specific gravity dissolves silk, but has no action on wool. The silk is reprecipitated on adding water. When flax, hemp, cotton and jute are mixed with wool and silk, the sample may then be boiled in an aqueous solution containing 10 per cent. of hydrate of soda; the wool and silk dissolve, while the vegetable fibres remain unacted upon. The whole is thrown upon a cotton filter, and the undissolved matter is then washed with hot water and afterwards acidulated with 5 per cent. of hydrochloric acid, to which, if the residue is black or dark colored, a few drops of chlorine water are added. Meantime, the original alkaline filtrate can be tested for wool with acetate of lead. If a white precipitate is formed, which dissolves on stirring, silk alone is present. A black precipitate indicates wool. The nitro-prusside of sodium gives a violet color if wool is present. If the tissue is deeply colored it may be cut up and steeped for from fifteen to twenty minutes in a mixture of two measures of concentrated sulphuric and one of fuming nitric acid. Wool, silk and coloring matters are destroyed, while the cellulose is converted into gun-cotton. White and pale mixed tissues may be tested by their affinity for colors. They must be cleansed and rinsed thoroughly in water to remove starch and similar dressings; soaked for ten minutes at 50 to 60 deg. *C.* in water containing 2 per cent. of sulphuric acid, and washed again. In the meantime the color bath must be prepared by dissolving a few decigrammes of magenta in 28 to 30 cubic centimetres of water, and heated to boiling. During ebullition, caustic soda must be added to it drop by drop, till a pale rose color only remains in the liquid. The liquid must be removed from the fire, and the sample immersed in it for some minutes, after which it must be removed and dried. Silk and wool are dyed by this treatment, while the vegetable fibres remain colorless. Wool may be detected in silk by the presence of sulphur. If it is immersed for a time in a plumbate of soda prepared by dissolving lead hydroxide in caustic soda, the silk will be colorless and the wool black; or a piece of the tissue 2 centimetres square may be boiled in 10 to 12 cubic centimetres of Schweitzer's solution. In from five to ten minutes the silk will be dissolved. If the silk is black, double the volume of Schweitzer's solution should be added, and the mixture soaked from ten to twelves minutes. The undissolved wool should be then removed and the liquid quickly neutralized with nitric acid. Silk will remain in solution, while cellulose will be precipitated. Hydrochloric acid is a solvent of silk, while it leaves wool and cotton unacted upon for a lengthened period.

Silk Throwing: The technical, but vague term used to include the various processes of winding, twisting, doubling, and re-twisting raw silk. For most uses, and weaving purposes in particular, several raw silk threads are united to form a new thread by doubling or twisting (throwing) together, each of the competent threads (singles) having been previously twisted in order to increase its strength and give it greater roundness. The twist is in the opposite direction to that given in the doubling process. Also referred to as silk spinning.

Silk Velvet: So called to distinguish it from other kinds of velvet, velveret or velveteen (cotton velvet).

Silk Wadding: Produced from the waste after bourette spinning. (See Bourette Silk.)

Silk Warp Flannel: It is a high grade, pure variety of flannel, woven with a silk warp and a fine woolen filling; used principally for infants' wear and shawls. It is a very soft, lightweight, loosely woven flannel and runs only in narrow widths, 27 inches. If fulling is carried to the extreme, the texture is rendered hard and firm, the cloth thus losing its softness and elasticity. In the gigging or napping process, it is necessary for the nap to be raised only slightly and which is commonly done in the direction of the twist of the warp. The perfection of a flannel finish lies not only in the smooth appearance of the cloth, but also in its full, rich softness. Sometimes this nap raised is sheared, but more often pressed down flat upon the face of the cloth. After a thorough drying, and careful examination for defects, the goods are rolled on boards, and are ready for market. Used especially for undergarments, bed covering, and also to some extent for outer-garments in weights and styles adapted for that purpose.

Silk Waste: This is the floss (or outer tangled mass of silk supporting the cocoons which cannot be reeled) and the reel tailings (that which is left when the reeling of each cocoon is completed); it also comprises pierced cocoons and the waste made in throwing and weaving. It is used in the manufacture of spun silk.

Silk Wool: Wool treated with an acid solution of bleaching powder, giving to it a silky appearance.

Silkworm: Silkworms are divided into two classes, the Bombyx-mori or mulberry feeding worm, from the cocoons of which is reeled the ordinary raw silk, and the wild silkworms, which feed upon certain kinds of oak, ailanthus, castor oil plant, etc. The product of the latter specimens (among which the Tussah worm, producing the Tussah silk, is the most prominent) was little heard of in Europe until years ago, and but for the outbreak of the silkworm disease in Europe, the Tussah worm (which now gets more and more introduced there) would probably have remained in India and China, where it has been utilized in both these countries for many centuries. The principal countries for carrying on the silkworm culture are Southern Europe, the Levant, China, Japan, and India. The silkworm exists in four stages: egg, larva, chrysalis, and adult or moth.

Silkworm Gut: Used for fishing lines; the silkworms are immersed in strong vinegar for a couple of hours and then pulled apart, each worm yielding two thick strings of great strength.

Simla: The name of the first garment supposed to have been produced from wool. It was an upper garment which consisted of a piece of cloth about six yards long and two or three wide; in shape not unlike our blankets. It served as a dress by day and for bed at night.

Simple: The set of cords in a draw loom upon which the pattern was arranged.

Sina: A standard make of a Persian rug made partly of wool and partly of cotton.

Sinamay: Light, plain woven fabric, made by the natives of the Philippines of abaca fibres. It usually comes in contrasting colored stripes; used for garments by the natives.

Sindh Carpets: Carpets made in Sindh, India. These are the cheapest, coarsest and least durable of all carpets now made in India.

Sindon: An oriental fabric of fine texture.

Singapatti: Native East African name for fancy colored printed cotton shawls.

Singeing: An operation in finishing, to clear the yarn or cloth (by burning) from its fluffy nap. There are two forms, gas and plate singeing.

Singeing-Plate: A device consisting of a metal heated plate, over which cloth is allowed to pass for the purpose of singeing off the nap. The cloth is moved rapidly so as to avoid scorching.

Singer: The machine by which singeing is done. Two types are constructed, *viz:* the plate and the gas singer. In connection with the first type, the fabric is brought more or less in contact with plates which are heated either by coal or preferably oil, whereas in the gas singer the fabric is brought close to the action of series of gas flames.

Single: A length of silver, roving, or yarn, in which only one strand or thread exists.

Single Cloth: Woven with one set of warp and one set of filling, irrespective of the weave.

Singles: See Dumb Singles.

Single Scale: The tie up of a Jacquard loom where each end works singly.

Single Width: Same as *Narrow Width.*

Single Yarn: A term applied to yarn which has not been doubled or folded. It is softer to handle but weaker than doubled or folded material.

Sinkage: The losses such as grease, moisture (condition), burrs, seeds, fly and other waste, experienced in carrying materials through the various machines employed for converting them into yarn.

Sinker-bar: In connection with knitting machines, a movable bar which acts in conjunction with the sinkers in forming the loop. The sinker-bar is used for pushing the thread back on the sinkers, to be out of the path of the needle, and sufficient to insure the loop being retained by the sinkers until the proper time for casting-off, to take on the succeeding stitch.

Sinkers: In connection with a knitting machine, the projections which act in conjunction with the needles in forming the stitch. The sinkers carry the loops which the needles produce, and by their oscillating horizontal motion, cause the loops to be drawn to the proper tightness, and by means of the tension on the yarn forming the loops keep the same out of the path of the needles while making the succeeding loop or stitch.

In connection with weaving, the indication on the design or weave-plan showing that certain warp-threads are down, or in the lower shed, *i. e.,* are covered by the filling on the face of the fabric.

Sinker-Wheel: A disc or cam used in connection with knitting machinery constructed upon the spring beard principle, having oblique projections that depress the yarn between the needles, in order to form the loop.

Sisal Hemp: The same comes chiefly from Yucatan, where it is the principal article of export. It is cultivated in other parts of Mexico, in Central America, the West Indies, and to a small extent elsewhere. It is obtained from the fleshy leaves of *agave rigida,* the Century plant. The fibre is obtained by cutting the leaves and scraping the fleshy part away with a large wooden knife, or otherwise cleaning it by machinery. These fibres are stiffer and less strong, and not so large as those of Manila hemp, but are much used for making rope and twine. It has been also used in the manufacturer of sacking, for cotton and for hammocks.

Six-frame Brussels: The best quality of Brussels carpet, composed of six pile warp-threads for each row of loops seen running lengthwise in the fabric.

Six Oaks: A variety of cotton, originated by *J. V. Jones, Herndon, Ga.,* the original form being the *Jethro,* which was sent from Mississippi in 1846. It is similar to the *Jones Long Staple,* except that the plant is less vigorous, the bolls are not quite so large, and the seeds are smooth and black, producing from 28 to 30 per cent. lint, with a staple of from 1.4 to 1.6 inches.

Six Quarter Goods: Measuring 54 inches in width.

Sixth Combing: See Britch.

Size: A paste of either vegetable (or animal) stiffening substances which are applied to warp yarns previous to weaving, to give them strength and solidity. Any viscid substance used in the finishing process for stiffening and binding fabrics so as to give them body.

Sizing: The process of strengthening, laving smooth and more compact the fibres of warp yarn, by saturating it with a starchy substance, to prevent chafing during weaving. Judicious sizing adds to the strength of the yarn by filling up the spaces between the fibres, and by binding the loose ends on the outside of the thread to the body part. In order to accomplish this, a number of ingredients are used in the size preparation, since no single material used alone gives satisfactory results. The filling up of the minute spaces in the varns and the adhesion of the fibres produces a smooth thread, with sufficient hardness to resist the continual chafing of the shuttle, reed, and harness during the process of weaving.

Sizing-Machine: In textile manufacture, a machine for sizing warp-threads, around rollers set in a trough filled with size; in woolen manufacture called Dressing machine or Dresser, in cotton manufacture, Slasher.

Sjadra: East Indian coarse, unbleached cotton cloth.

Skein: A length of yarn taken from the reel and made up into a hank, different in size with different fibres.

Skeining: The process of winding yarn into hanks of definite lengths other than the normal.

Skeleton Harness: The harness frame to which is fastened the doup in gauze weaving; half-harness.

Skene: A Highland tartan, composed as follows: Red stripe, split in the centre by a green line; dark blue stripe, as wide as the red; red stripe, width and split as above; green stripe, as wide as one red and the blue stripes together; red stripe, width and split as above; green stripe, as above.

Skewer: A bobbin spindle.

Skin Wool: This refers to wool removed from the skin of the sheep by any other than the lime process and thus to partially cleansed wool; the grease and dirt being removed while the wool is still on the skin, no felting or matting of the fibre can occur and thus this wool reaches in most instances the user in a free, open condition. For this reason these wools require very little agitation in the scouring process. The absence of natural lubricant leaves the fibre dry and wanting in suppleness, and in treating such wools the main object of the wool washer should be to replace this loss to the fibre by some other natural or artificial matter of a suitable nature. If these dry skin wools are mixed prior to washing with greasy wool, the excess of natural fats in the latter will often be absorbed to some extent by the skin wool, although a fibre once robbed of its yolk can never be made as good as new.

Skip Draft: Any type of drawing-in draft, in which the threads instead of being drawn-in straight, are drawn-in on alternating harnesses, *i. e.,* one, two, etc., harnesses are missed previously to drafting again, as for example: 1, 2, 4, 1, 3, 4, 2, 3 and repeat.

Skipping Boxes: Shuttle boxes fitted with appliances which bring the shuttles into play in any order required by the pattern.

Skips: Flaw in cloth where a warp-thread skips over more filling threads than intended.

Skip Twills: A subdivision of the regular twills; after drafting a certain number of threads of the twill weave warp-ways or warp and filling ways, one, two or more ends are missed, producing in turn a cut line effect on the face of fabric.

Skirting: Ladies' underwear material. In the finer makes of cotton skirtings, the plain weave is used along with colored stripe and check designs. The heavier makes include sateen skirtings, also a class of filling stripes, known as *cross-overs.*

Skirtings: Edgings, disconnected locks, etc., *i. e.,* the inferior parts removed from a fleece of wool in sorting.

Skyteen: A striped shirting cloth, woven with a light indigo-blue ground and a five-shaft satin weave.

Slackener: An attachment on the loom necessary in gauze or leno weaving, to ease up the whip-threads when douping. Also called *Easer.*

Slag Wools: The same is obtained by allowing molten slag (generally from iron) to run into a pan fitted with a steam injector which blows the slag into fibres, which are then cooled by running through water, the finished product being used as a packing material.

Slanting Gobelin Stitch: See Satin Stitch.

Slasher: A machine for sizing and drying cotton warps; taking them from what is known as back beams and delivering them to the weaver's, *i. e.,* loom beam.

Slaving: The breaking up of the flax fibre during its separation from the woody matter.

Slendang: See Pahom.

Sley: To separate and arrange the threads in a reed for weaving.

Sley Cap: See Cap.

Slip: A section of a moss, the moss being divided by the throwster into three or more, as nearly as possible even slips for easy handling. Six cuts, 1,800 yards of linen and jute yarn.

Slipe: Wool removed from the skin of the sheep by painting the flesh side with lime; used for serges, hosiery, woolens, blankets, corsets, etc. Also called *Flipe.*

Slipe Wool: This refers to pulled wool that has been removed from the pelts of the sheep by soaking them in lime. The wool thus becomes full of lime and this renders the scouring process very difficult. In many cases this excess of lime in the wool is brought about by carelessness on the part of the wool puller. Those who had to scour limed wool know what an enormous amount of soap it takes. The lime will decompose both soda and potash soaps which are used, forming from them harmful compounds because the lime salts have greater affinity for the acid fats than have the soda or the potash, contained in the soap. As lime is in itself an alkali, the addition of any other alkali is of no use. The lime must be neutralized before soap is applied to such wool, and this can only be done perfectly by the use of acid. This method of removing wool from the pelts of dead sheep is at present little used, pulling with the aid of sulphite of sodium having taken its place.

Slips: Trade name for common cotton velvets, in which only every alternate float is cut, whereas in the better class of velvets every float is operated upon, except if dealing with figured work.

Slip-stitch: A stitch in crochet work used for joining different parts of the work together; a stitch in knitting, also a stitch in darned netting, and similar embroideries on open work ground.

Sliver: The soft rope taken from carding and other preparing machines, in which the fibres have been laid more or less parallel, and smoothed out.

Sliver Calender: A pair of large rollers pressing into consistency the sliver as it comes from the carding and other preparing machines.

Sliver Can: A receptacle or can, generally made of paper-fibre, with metal top and bottom, into which the carded or drawn sliver falls from the machine.

Sliver Lap-machine: In cotton manufacturing, a preparatory machine for the comber which receives the slivers from the carding engine and passes them through drafting rollers (exerting only a draft of about 2 or less) which form them into a single broad sheet, *i. e.*, lap.

Slop Padding: A printing process used on chintzes and some calicoes. The fabric is first printed with resist, after which the color is applied to the entire face of the cloth by means of an unengraved roller.

Slop Work: The manufacture of slops or cheap ready-made clothing; hence, any kind of clothing done poorly or superficially.

Slub: Composed of slubs or lumps—possibly of various materials and colors—at various distances apart according to the type of yarn desired.

Slubber: See Slubbing Frame.

Slubbing: In cotton spinning, the sliver after having passed through the first fly frame, known as the slubber.

A reduced top of textile material into which a slight twist has been inserted so as to prevent slippage or breakage. Wool slubbings vary from about ½ inch to ¼ inch in diameter, and cotton slubbings from ⅜ to ⅛ inches in diameter.

Slubbing Frame: The same is the first machine to which the sliver of cotton, after leaving the drawing frame, is delivered, *i. e.*, the first machine of the set of fly-frames or speeders in a cotton spinning mill. The cans containing the slivers are placed in the rear of the slubber, and the ends of two or more slivers placed side by side between three pairs of drafting rollers which attenuate the same, *i. e.*, reduce their combined dimensions. After leaving the last roller, the slubbing (as the sliver is now called) is, by means of a flyer, carried on a revolving spindle, wound upon a bobbin, which in turn, in connection with others, is then put up in the creel of the intermediate frame, when the process is repeated. Also called *"Slubber."*

Slub Dyeing: After carding or combing, the thin film of wool fibre, in connection with worsted spinning, is condensed into a ribbon or sliver, and may be dyed in this condition either in the form of hanks, or wound into balls (tops). At this stage of yarn production the fibres have little coherence, and the hanks or tops require careful treatment. Tops are dyed in an apparatus in which mechanical circulation of the liquor is provided for, but hanks of slubbing are treated in the same way as yarn.

Slubs: These occur when the twist in the yarn is not uniform. They appear as thick places, which have received insufficient twist. They are caused by what is called thick or jammed roving, that is, two rovings overlapping each other (say an inch or more) which thus pass through the rollers without receiving the proper amount of twist. Also called *Ooze.*

Slub Yarns: A fancy yarn made with slubs or lumps (possibly of different materials and differently colored) at various instances apart, according to the type of yarn desired.

Slugs: Thick, lumpy spots in the yarns or woven materials. Also called *Nubs* or *Nibs.*

Slur: In a knitting machine, the mechanism which travels on a bar called the slur bar, and depresses the jack sinkers in succession, sinking a loop of thread between every pair of needles.

Slur Bar: In a knitting machine, a straight iron bar beneath all the jacks, forming a guide on which the slur travels.

Slur Cock: The cam or wiper invented by William Lee, for lifting the jacks on the knitting frame.

Small Chain: The binder warp in a tapestry, Brussels or Wilton carpet.

Small-wares: Textile articles of the tape kind, such as bindings, braids and fringes, etc.

Smalt: The same is essentially glass colored with oxide of cobalt and is obtained by fusing a mixture of silica, potash and oxide of cobalt. The depth of color depends upon the quantity of cobalt oxide present. It is sometimes adulterated with ultramarine or barytes. It should, of course, be very finely ground, and its coloring powers tested, as with ultramarine. It is used as a blueing material in the finishing of cotton goods.

Smash: Synonymous with mash or trap.

Smith Standard: Commercial variety of medium maturing cotton from Louisiana, same as Ben Smith.

Smock-Linen: Strong linen, of which smick-frocks are made, especially in England.

Smoothness: This term is complementary to glaze and brightness, and is determined by the same causes.

Smooth Peruvian Cotton: With the exception of the differences which their name indicates, there is very little else to outward appearance to distinguish between the rough and smooth varieties of Peruvian cottons, but in their character the difference is very great. In its color, it has a great resemblance to Orleans cotton, it incorporates freely with it, and increases the productive capabilities and the range of yarns to which the latter is suited very considerably when they are blended together in one mixing. Average length of staple 1.28 inches; used for spinning 40's to 70's count. Also called *Soft Peruvian Cotton.*

Smyrna Carpets and Rugs: Pile fabrics of a special method of construction, made upon the Hautelisse loom. Imitation in rugs are made in chenille structures, woven with pattern upon each side so as to be reversible; in large sizes, known as Smyrna art squares.

Smyrna Cotton: Cotton raised in Asiatic Turkey, the greater portion of which is raised on the western coast in and around Smyrna. As the plant, however, is also cultivated in the Greek Islands, and the crops are similar to those of Smyrna, they are generally classed and quoted together by brokers. Some deliveries of these cottons are rather dirty, more especially in the lower grades, but on the whole they may be termed as fairly clean. The color is of a dull white, which of course does not improve their appearance, but, on the contrary, makes them look dirtier than what they really are. The fibres being only of a medium strength, they are better adapted for the composition of filling yarns, the counts of which do not exceed 42 hanks to the pound. Average length of staple 1 inch.

Snarling Motion: This is the term applied to those motions of the mule which have for their object the keeping of the rollers out of gear a little after the carriage has commenced its outward traverse.

Snarls: Small twisted loops of yarn, hence, any complication, entanglement, or confusion. Caused frequently by bad winding in the mule, which may sometimes be traced to faulty spindle-blades, the tops of which interfere with the coiling of the yarn on the cob.

Snicks: Places where the yarn is almost cut through. They are attributable to the use of badly covered rollers, or to over-weighting. Sometimes they are due to the draft rollers being too wide in the setting for the length of staple spun, thus causing undue stretch in the yarn.

Snowflake: In England, woolens having white nubs on the face. (See Bourette yarns.)

Soap: Chemically a soap is a metallic salt of a fatty acid. Animal oils and fats and certain vegetable oils consist for the most part of these acids, and when they are treated with caustic alkalies, under the proper conditions, they are said to saponify them and soaps are formed. There are three kinds of soaps, *viz.*, SOFT soaps, HARD soaps and INSOLUBLE soaps.

SOFT SOAPS, commonly known as potash soaps, are those which are formed when the caustic alkalies, used in the saponification, contain potassium. These soaps are the most soluble and have less felting action when used for scouring wool; therefore should be used in preference to other soaps for this purpose. As they have so little felting action, they should only be used for fulling in special cases.

HARD SOAPS are those made with caustic soda, and as they cause wool to felt when scouring with them, are not suitable for this purpose but are well adapted for fulling.

INSOLUBLE SOAPS are those formed from other metals, besides potassium and sodium. When water containing in solution, lime, iron, etc., is used for scouring, etc., these insoluble soaps are formed, which are worthless.

Soap Powders: These consist either of desiccated powdered soap or ordinary soap reduced to a state of fine division and mixed with such substances as carbonate of soda, silicates, borax, etc. The former class contain a high percentage of fatty acids and correspondingly little

water. The fatty acid content is, however, rather variable, and they should always be bought on analysis. The latter class of powders have of course nothing to recommend them and must be regarded merely as adulterated soaps.

Soap Value: The value of soap is determined by the amount of fatty matter it contains as against the alkali and water..

Sochs: Raw cotton from the Levant.

Sock: A knitted covering for the foot, coming halfway up the leg.

Soda: Usually sold as a white powder (*Soda Ash, Solvay* or *Ammonia Soda*) or in the form of crystals (*soda crystals, crystal carbonate*). It is produced principally according to the older Leblanc process, or the more recent Solvay or ammonia process, and nowadays also by electrolysis. Before the introduction of the Solvay process Leblanc soda was often very impure, whereas Solvay soda, apart from common salt, cannot contain any soluble impurities over from the manufacture. Ammonia soda is, therefore, frequently preferred, but Leblanc soda has likewise been manufacturd in excellent purity for a number of years already. In the dyeing industry, soda is used particularly for scouring and wetting out, in the dyeing of Diamine Colors, Immedial Colors, Alkaline Blues, etc., for neutralizing acids, preparing soaps, and other purposes. In wool-washing, soda is used to remove grease (caustic alkali harmful); in calico-bleaching and linen-bleaching for fixing metallic oxides on the fibre (*i. e.*, tin oxides on silk); in alizarine-dyeing for softening and fixing alumina and chromium oxide on the fibre; to neutralize alum (Turkey red); in dyeing cotton with bluestone (logwood) black; in dyeing with the benzidine dyes, etc. Used also in scouring wool and as a bleaching agent for vegetable fibres; used also in weighting silk to fix tin salts. Also called *Sodium Carbonate* or *Carbonate of Soda.*

Carbonate or Carbonate of Soda: See Soda Crystals).

Soda Ash: The same is crude, unrefined sodium carbonate. It is liable to contain many impurities, such as caustic soda, sodium sulphate, chloride and sulphite, iron oxide and alumina. Used in Lye Boiling in the Bleaching of Cotton Goods. Sal soda is preferred for scouring of woolen knit goods. 106 lbs. soda ash is practically equivalent to 280 lbs. of sal soda.

Soda Ash Boil: The clearing process in bleaching.

Soda Crystals: A crystallized soda containing about 63 per cent. crystal water and small amounts of Glauber's salt, but no deleterious impurities. It contains mostly about 36 per cent. pure sodium carbonate. Since soda ash of good quality is obtainable, soda crystals are not used much nowadays in dye-houses, as it is too expensive comparatively; the only advantage it possesses over good soda ash is that its strength is nearly always the same and that it dissolves quickly in water without forming lumps. Also called *Sodium Carbonate*, or *Carbonate of Soda.* (See Soda.)

Sodium Acetate: This salt forms clear, very readily soluble crystals which decompose but very little. It serves for neutralizing free mineral acids, forming their salts and liberating free acetic acid. It is used, for instance, in the coupling and also in the developing Paranitraniline Red, *i. e.*, in the preparation of the solution of the diazotized Paranitraniline or of Nitrazol. For union goods whch have been cross-dyed an acid bath, a final impregnation with acetate of soda is very useful for preserving the strength of the cotton fibre, and an addition of acetate of soda to the last bath used for rinsing union goods dyed with Immedial Black is always advisable. The same is used in calico-printing and wool dyeing. Also called *Acetate of Soda.*

Sodium Aluminate: The same is very restricted in calico-printing.

Sodium Benzoate: A coal-tar product.

Sodium Bichromate: It is of a hygroscopic nature, generally more impure than its potassium salt; it contains more normal chromate and requires more careful control, while the potassium salt is generally obtained in a very good quality. The sodium salt is also used with reluctance in printing, since the goods dry badly; in wool dyeing, on the other hand, it is preferred because it is cheaper and more easily soluble. Used in calico printing as discharge, as a mordant in wool dyeing, as a developer in dyeing and printing with aniline black. (See Potassium Bichromate).

Sodium Bisulphite: A white crystalline mass very freely soluble in water. In a dilute aqueous solution this salt gradually dissassociates into neutral sodium sulphate (Glauber's salt) and free sulphuric acid, and for this reason is used in wool dyeing instead of a mixture of sulphuric acid and Glauber's salt as a slowly acting agent for gradually acidulating the dye liquor; it increases the affinity of the fibre for the dyes. Also called *Bisulphite of Soda.*

Sodium Borate: Borax—$Na_2B_4O_7$.-IOH_2O — mol. wt. 382. White crystals or powder soluble in water. It is a mild alkali, sometimes used in the dyeing of union goods in order to prevent the color from going too heavily on the wool. It is also used in conjunction with alkaline blues in the coloring of pale sky blue shades on union material.

Sodium Carbonate: Soda ash—Na_2CO_3 — mol. wt. 106. (See Soda.)

Sodium Chlorate: Used in oxidizing aniline black.

Sodium Chloride: See Common Salt.

Sodium Chloride of Common Salt: NaCl. Added in cotton finishing to mixings for the sake of its hygroscopic properties, and impart a crisp handle.

Sodium Ferrocyanide: Used in dyeing with Prussian blue.

Sodium Formate: Sodium formate possesses similar properties and is used for the same purposes as acetate of soda. It is marketed in a very pure quality. Also called *Formate of Soda.*

Sodium Hydrate: See Caustic Soda Lye.

Sodium Hydrosulphite: Hydrosulphite conc. powder. It is a very powerful reducing agent, and is used chiefly for dissolving and dyeing Hydron Colors. As it has a destructive effect on a good many colors, it may be used also for stripping the color off dyed materials. For this purpose the solution may be prepared for direct use by pouring a solution of

10 gallons bisulphite 64 deg. Two.and
10 gallons cold water over
10 lbs. zinc dust,

stirring for a short time, allowing to settle, and using the clear solution, filtered if necessary. For every 100 gallons water, 4 to 6 gallons hydrosulphite and ½ gallon acetic acid are added; enter the goods, heat to 50 to 60 deg. C. (120 to 140 deg. F), and work for ¼ to ½ hour until the color is stripped enough; then rinse well. Also called *Hydrosulphite of Soda.*

Sodium Hydroxide: Caustic soda—caustic — $NaOH$ — mol. wt. 40 — White powder or fused mass, soluble in water. Very corrosive. Used in the boiling off of cotton for bleaching and in soap making. Also used in mercerizing of cotton yarn.

Sodium Hypochlorite: Sodium hypochlorite is known only in the form of its aqueous solution, which is produced either by the electrolysis of common salt or by mixing the solutions of chloride of lime and soda. Hypochlorite of soda, like chloride of lime, is used for bleaching vegetable fibres, but is not suitable for coloring the wool. As compared with chloride of lime, it offers the advantage that it can be easily obtained in form of a clear solution free from lime. Also called *Hypochlorite of Soda* or *Eau de Javelle.*

Sodium Nitrite: Sodium nitrite forms small crystals freely soluble, but not deliquescent in the air, and containing 95 to 98 per cent. nitrite. It is used for diazotizing dyestuffs to be developed, its action being based on the liberation of nitrous acid by the addition of mineral acids, such as hydrochloric or sulphuric acid; acetic acid has not the same effect. For one part of nitrite, 3 parts of hydrochloric acid, 32 deg. Tw. or 2 parts of sulphuric acid are used. Its value is estimated by the percentage of nitrite. Heavy metals are frequently found as impurities. It is used for the so-called diazotized colors, ice colors, developed colors, etc. In dyeing and calico-printing several of these coloring matters are largely used (*i. e.*, paranitraniline red). Also called *Nitrite of Soda* or *Nitrite.*

Sodium Perborate: A white powder very sparingly soluble in water which contains in its pure estate 10 per cent. active oxygen. More recently it is manufactured also in a crystalline form. It re-acts alkaline, and on being heated easily emits oxygen, thus exercising a strong bleaching action, similar to hydrogen peroxide. On this account it is recommended as a bleaching agent in substitution for hydrogen or sodium peroxide, and also as an addition to washing powders. It has the advantage over the former of excellent stability, and over the latter of safety in its application, which is also easier, because the product is simply put into the aqueous bath without the addition of acid. On becoming moist or when in an impure state, perborate very soon loses oxygen. Also called *Perborate of Soda* or *Perborate.*

Sodium Peroxide: Used for bleaching silk.

Sodium Phosphate: It is often contaminated by sodium chloride, sul-

phate and carbonate. Its value depends on the percentage of phosphoric acid and the basicity. It is used in Turkey red dyeing instead of cow and sheep dung (which are now almost entirely replaced by sodium phosphate, arsenate and silicate); with wood colors (a more brilliant black); in silk dyeing for weighting and to fix the tin and iron (4 deg. to 6 deg. B.) instead of, or together with soda; sodium phosphate is better than soda for weighting purposes, but it does not make the fibre voluminois, and overloading the fibre with phosphoric acid may be harmful. In dyeing with azo dyestuffs, used as a fixing agent for the aluminum mordant in the dyeing of turkey red. In this instance it is used to replace the cow and sheep dung baths of the original process. Its use in calico-printing in connection with the benzidene dyes depends upon its brightening effect. Used in weighting silk and in dyeing with azo colors and Turkey red. Also called *Phosphate of Soda, Secondary Sodium Phosphate* or *Neutral Sodium Phosphate.*

Sodium Silicate: Silicate of soda, as a rule, is marketed as a colorless or slightly tinted glassy mass or as a thick aqueous solution, frequently containing an excess of caustic soda deriving from its manufacture. It is very easily soluble in water, but not deliquescent; the solution decomposes, particularly under the influence of the carbonic acid from the air, and separates silicic acid. Silicate of soda is an alkaline salt, and is used for the weighting of silk and other purposes. It is largely employed for fire-proofing and water-proofing textile materials. Used in the peroxide bleaching baths in order to make the bath alkaline. Also called *Silicate of Soda* or *Soluble Glass.*

Sodium Stannate: Commercial sodium stannate contains 30 to 44 per cent of stannic oxide; its impurities are caustic soda, soda, common salt and iron, occasionally it is adulterated with arsenate and tungstate. It should dissolve with as little residue as possible, be free from iron and not be too alkaline. Application. — As a mordant for azo dyestuffs (4 deg. to 5 deg. B.), followed by a bath of neutralized alum (25 grammes of alum + 10 grammes of crystallized soda in 1000 c. c.); it was formerly used for weighting silk, but has now been entirely replaced by stannic chloride; in printing on cotton and wool. Also called *Preparing Salt.*

Sodium Sulphate: See Glauber's Salt.

Sodium Sulphide: Marketed in two qualities, *viz.,* as crystallized and as concentrated sodium sulphide. Crystallized sodium sulphide consists of brownish crystals containing 32½ per cent of pure sodium sulphide and in addition water of crystallization. The concentrated product has usually double the strength, and is sold in the form of grey or greyish black, irregular lumps. Sodium sulphide is used for dissolving Sulphide Colors. One lb. of fused sulphide equals 2 lbs. of crystals.

Sodium Thiosulphate: Used in calico-printing to fix metallic oxides; in dyeing as a resist for aniline black; in bleaching to remove the last traces of chlorine from the fibre (hence an *antichlor*); in mordanting silk (6 to 8 per cent of alum + 4 per cent of thiosulphate); in dyeing wool with eosine; in washing clothes; for precipitating finely divided sulphur upon wool for metal and malachie greens (Lauth). Also called *Anti-chlor, Hyposulphite of Soda, Hypo* or *Hypochlorite of Soda.*

Sodium Tungstate: The same possesses historic interest as an oxidizing agent (instead of copper sulphide), chromium tungstate was also used; also as a weighting agent for silk, fixed upon the fibre as iron or tin tungstate.

Soesjes: Light East Indian cotton cloth made in colored and white stripes; used for head covering.

Sof: A plain fabric made of Angora goat's hair.

Sofit: Cotton fabric in the West African trade, made in imitation of figured gauze.

Softening: Breaking down the hardness of finishes in fabrics, by various machines and methods.

Softenings: This name is applied to a number of preparations of highly divergent composition, some being true soaps, others merely mixtures of saponifiable fats with emulsifying salts, and also with borax, salt, sodium phosphate, etc. They are made by either boiling the finished soap with the requisite quantity of water and then adding the other ingredients, or by saponifying the fats with soda lye. Also called *Softners.*

Soft Finish: Fabrics, especially cottons, finished with very little or no size.

Softness of Wool Fibres: The same is a result of the quantity as well as the quality of yoke found upon the fleece, and which nature put there both for nourishing the fibres as well as to impart the pliability known as *softness.*

Soft Peruvian Cotton: See Smooth Peruvian Cotton.

Softs: In England, same as shoddy.

Soft Silk: Boiled-off or degummed silk. In this case the boiling-off or ungumming of the (raw) silk is made complete, the silk losing by this process from 24 to 30 per cent. of its weight, vice versa *Souple silk* which loses from 5 to 12 per cent. and *Ecru silk* in which the loss is only 2½ to 5 per cent.

Soft Soaps: See Soap.

Soft Waste: Woolen and worsted yarn waste that has received only a little twist, also roving and card waste, etc. Such wastes as can be reconverted into the material from which they came, and used for the same purpose for which that material was originally purchased.

Soft Water: One that contains no such impurities as bicarbonates and sulphates of lime or magnesia.

Sofu: Plain woven unbleached cotton sheeting in Japan, made usually 36 inches wide 44/44.

Soif: French for silk.

Soie Batiste: Silk batiste, one of the most diaphanous of Summer silk fabrics. May be severely plain or with self-colored dots or other tiny figures.

Soie Mitorse: Half twisted silk yarn for embroidery.

Soie Ondée: A silk prepared by doubling a coarse and fine thread. It is used in making gauze, to which it gives a watered appearance.

Soisette: Highly finished mercerized cotton fabric; used for lining, etc.

Soleil: A name attached to shiny materials, such as are largely used in the millinery trade, and satin soleil for dresswear.

Solidonia: Proprietary name for a fibre of gloss and metallic whiteness and harsh feel; used for knit goods as substitute for silk or wool. It is made of a fibrous grass.

Solidonia: A bast fibre which has already found application in many kinds of textile materials. The yarn prepared from it, is claimed, has a beautiful lustre and a good tensile strength. The fibre is not used alone, but mixed with cotton and wool. Solidonia does not felt, and hence behaves like cotton when mixed with wool. The fibre can be bleached pure white, and can be dyed with any dyestuffs suitable for cotton. It is dyed at low temperatures and not above 80 to 90 deg. C., as the material becomes harder and more brittle at the boiling point. For the same reason the material should not be dried at high temperatures. When dyeing with the direct, the developed direct colors, and sulphide dyes, the addition of soap is advantageous to maintain the soft handle of the goods and aid in the production of even dyeing. In the case of the direct colors 10 to 20 per cent. of sulphate of soda and 1 to 2 per cent. of soap are added to the dye-bath, into which the material is introduced at 40 deg., slowly warmed to 80 to 90 deg. C., and dyed for one hour. The developed direct colors are dyed in a similar manner, then diazotized and developed. The sulphide colors are dyed with the addition of 4 to 8 per cent. soda ash and 1 to 2 per cent. soap at the temperatures named.

Solisooty: East Indian soft cotton muslin made of slack twist yarn.

Solomon Bar: In macramé lace, four threads braided together flat.

Soluble Aniline Blue: See Alkali Blue.

Soluble Glass: See Sodium Silicate.

Soluble Oil: See Olein.

Soluble Starch: The same is prepared by the prolonged boiling of starch with water or by the action of mineral acids. When made by the latter method the product requires very thorough washing to remove the last traces of acid. It is always advisable to re-wash it before use. This is easily done by mixing the starch with cold water containing temporary hardness and allowing it to settle. The carbonates of the water neutralize the acid present in the starch. After settling, the supernatant water is drawn off and the process repeated till the water shows no trace of acid. A soluble starch, when made into a cream with cold water and poured into boiling water, should completely dissolve and should not set when cooled. If it forms a jelly, it indicates the presence of unchanged starch. Used as a stiffening material in cotton finishing.

Solvay: See Soda.

Somerset Sheep: An English breed of sheep, a variety of the Dorset sheep, but more Leicester in character, differing from the Dorset in having a pink nose in place of black and white; the wool is also longer and heavier.

Soots Romal: East Indian cotton shawls with colored stripes or window plaid.

Sore Shin: One of the diseases the cotton plant is subjected to; due to fungous diseases. These are names applied to a very common disease which

causes young plants to rot off partially or entirely at or near the surface of the ground. Sometimes the tissues undergo a soft rot, which progresses very rapidly, and the early stages are not marked by any striking color characteristics. Another phase may progress rapidly or slowly and is usually quite well characterized by a reddish brown color which accompanies it. This phase is also characteristic in that it is usually manifested on one side of the stem in the form of an ulcer which gradually deepens until the vascular system is reached, when the life of the plant becomes really endangered. Even when this stage is reached, however, the plant may and does frequently recover. This latter phase is characteristic of a very common disease of seedling cotton. It is called *sore shin*. The term is sometimes applied to injuries upon quite large stalks of cotton, but it should not be confused with the *sore shin* of seedlings which is causd by the parasitism of a fungus. The fungus which is responsible for the phenomena of *damping off* is *Pythium debaryanum*. The diseased portion of the plant is just beneath the surface of the ground and presents an area of shrunken tissue of a dull brown or reddish color. It does sometimes recover, but frequently death results. Also called *Damping Off* or *Seedling Rot*.

Soria: Harsh raw wool from Spain.

Sorter: One who sorts or divides wool into its various qualities.

Sorting: The dividing up of fleeces of wool into the various qualities. These qualities range from six or eight in number in long wool, and from three to nine (according to breed) in short wool. Sorting is necessary to obtain the maximum spinning result from any given material.

Sorting Board: The table on which the wool is sorted.

Sosquil: Native Mexican name for the henequen of Yucatan.

Soucha: Chinese silk crêpon with blue stripes.

Souffle: Large designs of crêpon, showing a raised or puffed appearance; from the French, for puffed-up.

Soumak Rugs: All-wool tapestry rugs woven in Transcaucasia. They come in all sizes. The design is geometrical. The hook is often used, the stitches being made in the herringbone fashion. It is also called Kashmir. Modern Soumak Rugs are made in loose weave and with coarse dye.

Soundness of Fibres: This characteristic quality of fibres signifies their elasticity or strength. It is readily ascertained in practice by drawing a few fibres out of a lot and grasping each singly by both ends, pulling them until they break. Special apparatuses are also constructed for thus testing the soundness mechanically, at the same time recording the breaking strain. In either case two or more tests are made to obtain an average.

Souple: A dull effect obtained in silk dyeing by removing only a small portion of the gum. Also called *Mi-cuit*.

Souple Silk: See BOILING-OFF SILK.

Sourbassis: White or yellowish Persian raw silk of fine quality.

Souring: Two of the processes of bleaching cotton, yarns or fabrics by the chlorine process. Brown sour, White sour, *i. e.*, acid treatment before and after chemicking. To decompose any lime soap that has formed and to wash out the lime.

Soutache: A very narrow, flat braid, made of wool, cotton, silk, or tinsel; sewed upon fabrics as a decoration, usually in fanciful designs.

Southam Sheep: The same was originated in Devonshire county, England, in the neighborhood of the Vale of Honiton, and up to the borders of Dartmoor. From thence they have extended into Cornwall, where they are extensively bred and have been much improved by crossing with Leicesters. They somewhat resemble the Romney Marsh sheep, but with brown faces and legs. Crossing with Leicesters has removed this color as well as materially improved them in every other respect, so that they fatten earlier, and a finer and more silky fleece is obtained. The quality is moderately fine and the staple long. The fleece weighs about 9 lbs.

Southdown: One of the most valuable of short staple wools. A native of England, and one of the most valuable sheep of that country, being raised in Sussex, Kent, Hampshire, and Dorsetshire. This sheep has also become naturalized in the United States, and its characteristic dark face and compact fleece have left their mark upon a large portion of our native sheep. It possesses a fine hair, is close and wavy and fairly sound in staple, but rather deficient in felting qualities. The shorter varieties are carded and made into flannels and other light-weight fabrics, while the longer qualities are used in the production of worsted goods. The weight of a Southdown fleece averages from 4 to 5 lbs.

Southern Hope: A cotton plant originated many years ago by Col. F. Robieu, of Louisiana, from seed said to have come from Peru. Plant pyramidal, limbs strong and straight, prolific; bolls large, pointed, maturing rather late; lint 30 to 32 per cent., staple 1⅛ to 1¼ inches. One of the best types for the southern cotton belt, but maturing too late for northern latitudes.

Southern Wools: Those produced in the United States in New Mexico, Arizona and Colorado.

Sow Box: The receptacle on the slasher for holding the sizing material.

Spanish Broom: The broom plant fibres have been used for cordage purposes; according to London, some of the earliest ropes were made from the fibres of *Spartium*. The plant grows profusely in dry hilly situations and on railway banks in Spain, where it is conspicuous for its yellow butterfly-shaped flowers.

Spanish Dagger: See Dagger Fibre.

Spanish Lace: Comprehensive term. Convent made, needlepoint lace. Cut drawnwork effects, also convent made. Needlepoint lace in large squares. Black silk lace in floral designs.

Spanish Merino: The fine wool derived from the merino sheep, a native of Spain, and which is sorted there into four parcels, as follows: (1) The *refina* or the choicest wool (picklock), begins at the withers and extends along the back to the setting on of the tail, reaches only a little way down at the quarters, but dipping down at the flanks, takes in all the superior part of the chest, and the middle of the side of the neck to the angle of the lower jaw. (2) The *fina*, being a valuable wool but not so deeply serrated or possessing so many curves as the first mentioned sort; it occupies the belly, and the hind-quarters and thighs down to the stifle-joint. (3) The *terceira*, being found on the head, the throat, the lower part of the neck, and the shoulders terminating at the elbow; also the wool yielded by the legs, and reaching from the stifle to a little below the hock. (4) The *interior* grade of wool procured from the tuft as growing on the forehead and cheeks from the tail and from the legs below the hock. A characteristic of the merino is what is called prepotency, that is, the power of imparting its excellence to inferior breeds with which it is crossed. Among the different varieties of merinos derived by crossing the Spanish merino with inferior breeds of other countries are the Saxon, the Prussian, the Silesian, the Hungarian, the French, the British, the American, the Australian merinos, etc.

Spanish Stitch: In embroidery, cross stitches arranged in a row to form a line on the face of the fabric and squares on the back.

Spanish Stripes: A light-weight, wide and fulled woolen cloth, originally made of Spanish wool with striped selvage, now made mostly in England. It is light, very soft and well finished with a light nap.

Sparterie: Woven work made from the fibre of the *esparto;* also, the articles made of this material, as mats, baskets, ropes, nets, and mattresses.

Speck: A small portion of any kind of foreign substance that has not been carded from the stock before spinning. To dress finally woven fabrics, as by touching spots of a foreign origin or color, to that of the fabric, with a specially prepared specking ink, using for this purpose a soft, coarse pen, or a quill.

Speckiness: See Lousiness.

Speckle: Uneven dyeing in yarns or cloths.

Spectrum: The result of the decomposition of a ray of sunlight into all the colors which form it; the streak of colors formed by a ray of light that has passed through a prism, or over a diffraction grating.

Speeders: See Fly-frames.

Spermaceti: A solid white crystalline fat, reduced from oil obtained from the head cavities and blubber of the spermaceti whale, which melts at a temperature ranging from about 115 deg. to 122 deg. *F.* Used in cotton finishing in the same way as wax or stearine.

Spiders: A kind of fine gauze in which an extra thick warp is woven with the ground.

Spider Stitch: A stitch in lace or netting, in which the arrangement of the threads somewhat resembles that of the threads in a spider's web.

Spider Weave: Name for weaves producing a net-like effect on the face of the cloth by floating and deflecting either the warp or the filling threads.

Spider Web: See Cobweb.

Spider Work: Lace worked in spider stitch.