Dictionary of Textile Terms.

W.

Wadding Pick: A thick pick, usually of low quality, loosely twisted yarn, which is often inserted without interlacing between the two structures in double cloths, or between the two warps in warp-backed structures; it gives weight and warmth to the fabric, also a certain degree of solidity, without being seen on either side of the fabric, or without its being detrimental to the fabric in other respects. Used either for increasing the bulk of the fabric, as in chinchillas, etc., or to impart to the fabric an embossed effect, as in piqués, matelassés and similar fabrics and where the interlacing of the back warp into the face cloth produces the outline of the design.

Wagria: Variety of raw cotton from Kathiawar, India. The staple is quite coarse.

Waistcoating: A textile fabric made especially for men's waistcoats, thus differing from cloth intended to be used for coats and trousers. The fabric usually contains silk threads and is of a fancy pattern.

Waldemar: A variety of velveteen or cotton velvet, apparently a superior quality of fustian.

Wale: A ridge or a ribbed effect on the face of a fabric, which may be wide or narrow; also, a wide or broad twill effect.

Walk Mill: Fulling mill. Also written *Wauk Mill.*

Wallachian Sheep: A sheep, native of Western Asia, and the adjacent portions of Europe, more especially Roumania and Bulgaria, characterized by its long twisted horns. It is also quite common in Crete, Wallachia, and Hungary. The fleece of this animal is composed of soft, wooly undergrowth covered and protected by long drooping hairs. The wool is exceedingly fine in quality and used in the manufacture of the warm cloaks worn by the peasantry, the skin being dressed without removing the wool. Also called *Cretan Sheep.*

Wammus: A thick, loose jacket, usually knitted and worn commonly with a belt.

Wara: Japanese name for cotton with which they line their winter kimonos.

Warangul Carpet: Carpets made at Warangul, India. The peculiarity of the rugs or carpets formerly made at this place was the exceedingly fine count of stitches in some of them being 12,000 to the square foot. They were also perfectly harmonious in coloring, and are the only examples in which silk was ever used in carpets with a perfectly satisfactory effect.

Warl: The small pulley fastened to the spindle, on which the band runs which drives the spindle in spinning and twisting machinery. Also called *Wharve, Warve, Whirl, Whorl* or *Wherve.*

Warm Colors: Those of the longer wave lengths, as yellow, orange and red.

Warp: The series of threads placed longitudinally in the loom and spread over any desired width. The threads which run lengthwise in a piece of goods. Each thread in the warp passes from the back rest (whip roller), sometimes through lease rods, and then through the mail or eye of one of the several harnesses and forward through the reed to the breast beam, over which the woven cloth passes. It is by means of the harnesses that warp-threads are lifted or depressed to enable the filling, thrown in by the shuttle, to be interlaced according to requirements with the warp-threads. Warp yarns, as a rule, are stronger than filling yarns, as they have to bear a more severe strain during the operation of weaving. Also called *Chain* or *Twist,* sometimes written *Chaine.*

Warp-beam: In a loom, the roller or beam on which the warp-threads are wound, and from which they are drawn as the weaving proceeds. The same is placed at the back, opposite the cloth-beam, which receives the finished fabrics.

Warp-dresser: In weaving woolen and worsteds, a machine for treating yarns with size before winding on the large reel and from there on the yarn-beam of the loom; in cotton manufacture the same is superseded by the larger machine called a slasher.

The person who attends to the machine also called *Warper.*

Warp-easer: A bar used in connection with gauze or leno weaving, over which the whip-threads are passed. By automatically lowering the bar when the whip-threads have to twist around their mate standard threads in weaving, the tension thus exerted onto the whip-threads is eased. Also called *Easer* or *Slackner.*

Warp Effects: Patterns which depend mainly upon the treatment of the warp in weaving.

Warp Frame: A kind of knitting machine in which yarns are supplied from the frames.

A lace-makers' frame in which the threads are wound on a beam, as in a loom; warp-net frame.

Warping: Winding the warp on the beam, *i. e.,* making the warp.

Warp Lace: Lace having a ground of warp-threads. Also called *Drawn Lace.*

Warp Net Frame: See Lace Frame.

Warp Pile: Fabrics woven in such a manner that certain of the warp-threads form the pile.

Warp Prints: Fabrics in which designs have been printed on the stretched warp before the weaving.

Warp Reel: A frame for winding on warp-threads to permit its formation into hanks for convenient handling in dyeing; the regulation size is 54 inches circumference.

Warp Rib: A warp-surface weave, in which the filling either of a heavier count or grouped two or more picks together, lie straight, causing the warp-threads to bend around them and thus produce a ribbed appearance across the fabric, presenting a warp surface; hence the term *warp rib.*

Warp-stitch: An embroidery stitch in which the warp-threads are exposed.

Warp-thread: A thread forming part of a warp.

Warp Wool: Wool of a sound type, full, bold, compact, and free in its growth; in fact, of a character specially suiting it for warp yarns.

Warp Yarn: Warp yarn is generally stronger than filling, the hardness being obtained by a heavier twisting of the thread. Owing to this peculiarity, warp yarn is also called *Twist.*

Warve: See Warl.

Washable: Fabrics which can be washed without affecting the color or finish.

Washed Wool: Commercial name for wool, the washing of which was done at the ranch as a preliminary step to sheep shearing, *i. e.,* while the fleece was still on the back of the sheep, driving the sheep for this purpose into water courses and when a portion of the yolk and foreign impurities is washed away. The alkaline portion of the yolk may thus be entirely removed leaving only the free, colorless animal oil in the fleece. A fleece thus thoroughly washed should be free from the color of the yolk; otherwise it passes as unmerchantable.

Wool, unlike cotton, is not capable of being worked into yarn, without being thoroughly cleansed of its impurities. These impurities consist of greasy and sweaty secretions, of the nature of a lubricant to the fibre. Combined with dirt, sand, etc., which adhere to the wool, these secretions form an encrusting compound, known as yolk, which acts as a natural preservative to the wool, keeping it soft and supple, and prevents felting while on the sheep's back. This compound, with other extraneous matter, must be removed before the wool is in a workable condition. The amount of the yolk varies, the greatest amount being found in fine, short wools from the warm climates. In long-stable wool the amount of yolk is comparatively small.

Washing Soda: These are the common large crystals, which effloresce rapidly on exposure to air. The chief impurities are sulphates and chlorides. Used in Lye Boiling in the Bleaching of Cotton Goods.

Waste: The by-product of the various machines used in textile manufacture and varies as follows:—

Card Waste: Short fluffy waste thrown out of the carding machines. It is used for blending purposes in low woolens, and for flock wallpapers.

Lap Waste: Waste of a long and useful type, formed in drawing and spinning processes by the breaking of the ends between the front rollers and the bobbins. This may be remanufactured according to type for the original class of stuff or for lower classes.

Thrum Waste: The threads of woven-out warps, cut from warp beams, etc. This waste is often tightly twisted, and must be *garnetted* before it can be re-used in lower goods.

Thread Waste: The waste often left on bobbins or collected during spinning and weaving.

Sweeping Waste: The sweepings from the floors of the various rooms in the mill. This is usually of a short and fluffy character.

Burr Waste: The waste from which burrs and seeds have been removed by carbonization. It naturally varies according to the wool from which the burrs were taken.

Flocks: The waste made at gigging or napping.

Shear Flocks: The clipping of the protruding fibres from the fabric in the process of shearing.

Shoddy, Mungo and Extract are also waste products of the woolen industry.

In silk manufacturing, all waste made in any department is re-used in the manufacture of spun silk yarn.

All this waste can be classified either under hard waste or soft waste.

Hard Waste: Under this name we may classify headings, as separated from the finished cloth before making the same ready for the market; old samples; woven waste made in the weave-room by starting warps; hard-twisted or double and twist-yarn waste made in the weaving or spinning department, etc.

Soft Waste: Thus we classify such yarn-waste as has received only a little twist, also roving and card-waste, etc. We do not wish to say by this that all the waste in a woolen mill shall be graded in these two divisions and worked up by two rules; the practical superintendent will grade his waste with equal care as he does his different wools, and make several divisions of each, since if carefully and knowingly treated, waste will take the place of wool, only in a minor quality.

Waste Duster: A machine for cleansing mill waste. It consists of a series of beaters which rotate above a wire grating in which the waste is retained while the dust and impurities fall through.

Waste Silk: Raw silk that will not reel, and the waste made in the various operations of silk throwing. Really tangled masses of silk which have to be cut or dressed into lengths before they can be remanufactured into yarn on the *spun silk* principle.

Spoilt (pierced) cocoons and *wild* cocoons, which are only suitable for being treated on the *spun-silk* principle.

Wasty: A heavy shrinking wool, owing to the large percentage of grease and dirt it contains.

Wata: Japanese trade term for raw cotton. Also called *Menkwa.*

Waterette: Trade name for water, spot, and perspiration proof black taffetas.

Water-frame: Arkwright's first spinning frame, which, in conjunction with Need and Strutt (his partners) was originally employed in a mill on the Derwent, at Cromford, Derbyshire, England. This was the first water spinning mill ever erected, and the parent of the present great factory system. The fact that the machines were moved by water-power led to their being called water-spinning machines, and the yarn produced was known as *"water-twist."*

Water Glass: Commercial water glass frequently contains a considerable excess of caustic soda, which would be very harmful to animal fibres, and must, as far as possible, be absent; caustic soda would also have a solvent action on alumina mordants.

APPLICATION: Similar to sodium phosphate; also in bleaching with hydrogen peroxide (instead of ammonia); in silk-dyeing in place of borax (Alkali Blue, Logwood); as a mordant for cotton; for fire-proofing fabrics; as an addition to soap; as an addition to varnishes; for dressing cotton warp; in printing, as a substitute for albumin; in finishing, as a fixing agent for alumina mordants and tin (silk), to produce lustrous and tensile effects. Used since 1893 in silk-dyeing to produce the important *zinc phosphate-silicate* weighting. Also called *Sodium* or *Potassium Silicate.*

Watering: A finishing process by which watered patterns are produced on plain woven fabrics. The principle of this operation is that two fabrics of precisely similar build, when pressed together naturally *water* one another, owing to the coincidence or non-coincidence of the threads or picks causing "flatness" or "ribbedness" of a sufficiently marked character under conditions of heat and pressure. Used most often with silk fabrics.

Water Mangle: A most useful and important machine in the bleach-works; the objects of its use being: (1) A washing with the cloth open, which is certainly very good. Some finishers shade the cloth during this operation by adding a little blue to the water. (2) A squeezing of the cloth. By having one or more cylinders attached, over which the cloth is chased, we get as much water out of it as possible, especially if the cloth is to be filled wet. (3) A closing of the threads by flattening them. This flattening of the threads is one reason why the water mangle ought not to be used for all kinds of finishes, especially heavily filled goods, because, the threads being flat, hard, and closed, the starch mixture can neither penetrate nor get between them. It is all on the surface, and does not adhere to the cloth with the same tenacity as cloth not water-mangled; and (what is more) it has a very artificial appearance.

Water of Hydration: The water which forms an integral portion of the structure of a body.

Water-packed Cotton: Cotton, the bales of which have been penetrated by water during the baling process, causing damage to the fibre, or bales, that through exposure to the weather or by other means, while apparently dry on the exterior, have been damaged by water in the interior.

Waterproof: A fabric which is made waterproof by one of three methods: (1) By some physical action on the material of which the fabric is composed. (2) By impregnating, or coating, the material with some water-resisting agent.

Waterproofing: Treatment for rendering fabrics impervious to moisture.

Waterslain Flax: Flax which has been wholly deprived of its gum. It may result toward the end of the retting, when that portion of the gummy matter which should remain in the fibres is reduced to a mucilaginous state and therefore readily removed by too strong a flow of water.

Water Tabby: A watered, light-weight, silk tissue.

Water Twist: Throstle twist.

Watteau: Applied to patterns similar to designs produced by the well known painter, Watteau.

Wattle Gum: A hemispherical or stalactitic lump, with one flat side, by which the pieces — often as much as 4 inches long — have been attached to the bark of the tree. This flat side often contains embedded fragments of bark. The lumps are red-brown in color, translucent, and fairly homogeneous inside. The surface is smooth, with reticulated cracks. The fresh surface of fracture is wholly or partially dull, the dull portions frequently exhibiting delicate parallel markings. When dissolved, the gum has a faint sweetish taste. In spite of the dark color, this gum is superior to the other dark acacia gums, more particularly on account of its ready and complete solubility in water. Used as an adhesive dressing in the finishing of silk and cotton fabrics. Also called *Australian Gum.*

Watt Silk: A very irregular low grade of refuse waste raw silk.

Wauk Mill: See Walk Mill.

Waulking: Name for the fulling of homespuns, by walking on them, in Scotland.

Wave of the Crimp: A technical term indicating the most regular series of curves of a single fibre of wool.

Wax: Many varieties of wax are sometimes employed either in conjunction or in combination with tallow, fat, grease, and oil of some kind, as an emollient for size paste. Its use, however, is not generally advisable, and if used at all its application should be confined strictly to sizing warps for such fabrics as are to be sold in a grey state; that is, not bleached, dyed, or printed. Wax of any description should not be used in size-paste for sizing warps for fabrics that are to be subsequently bleached, dyed, or printed, because of the difficulty of removing it effectually from the yarn, even by the process of bleaching. Most varieties of wax of commerce, and more especially wax of mineral origin, as paraffine wax, do not readily dissolve or emulsify and combine freely with other ingredients of the size mixture; but they tend, during mixing and boiling, to rise to the surface of the liquid and collect in undissolved masses. This tendency appears to be more pronounced with wax having a higher average melting-point, such as carnaüba or Brazilian palm wax, Chinese or *insect wax,* beeswax, and paraffine mineral wax; and less pronounced with Japan palm wax or fat, and spermaceti whale wax, which have a lower average melting-point.

Wax also offers resistance, in a greater or lesser degree, even to such powerful detergents and bleaching agents as caustic alkali, chloride of lime or bleaching powder, and soda-ash; and it does not saponify completely under their influence, during the process of bleaching. For these reasons, therefore, wax of any kind, and in any form, is quite unsuitable as an emollient for size-paste, especially for sizing warps for fabrics that are intended for bleaching, dyeing, or printing, for should any trace of undissolved wax remain on the yarn after the bleaching or washing process, it will repel and effectually resist the coloring principle of the dye or printing color, and thereby incur the

risk of causing white specks, spots, and other blemishes to appear in the finished fabric. Apart from these objections to the use of wax as an emollient in sizing, however, it serves as an excellent lubricant for the warp-threads, and also keeps down effectually the free extremities of the fibres composing the threads, which it leaves quite supple and smooth. The effect of wax on warp-yarn, therefore, is to reduce the chafing action of the warp-ends against each other, and also their abrasion by the shedding harness, reed and shuttle raceboard of the loom during weaving, thereby reducing the number of breakages of the warp-ends, and also increasing the durability of the shedding harness.

Beeswax and paraffine wax are used in cotton finishing like stearine.

Wax Cloth: Cotton or silk made impermeable by paraffine; also an oil-cloth. Used for floor covering in England.

Waxing: Rolling velveteen with rollers of beeswax.

Wearing Apparel: Wearing apparel has been defined by the Supreme Court as "all articles which are ordinarily worn—dress in general."

Weather Fleeces: All clips of the sheep after hogg or hoggett wool has been taken off the animal. The ends of the staples are more or less square, the wool generally, is coarser and less elastic than hogg wool, and its individual staples may be easily pulled out without disturbing its neighbors.

Weave: (From Middle English weven, from Anglo-Saxon wefan, weave). To entwine or lace together (threads or strips of pliable material) into a texture, especially by interlacing filling-threads among warp-threads, as in a loom; also, to insert by intertwining, as to weave fibres, yarns, or filaments.

Weavers Knot: The proper knot to tie throughout any of the different processes in which yarn is handled to and including its being woven into cloth.

A knot presenting strength with the least possible bulk.

A kind of knot used for tying threads which has the peculiarity of getting smaller and tighter the more it is pulled.

Weaving: The act of one who, or that which, weaves; specifically, the act or art of producing cloth, or other textile fabrics, by means of a loom from the combination of threads or filaments. In weaving all kinds of fabrics, whether plain or figured, one system of threads, called the filling, woof or weft, is made to pass under and over threads of another system of threads, called the warp, twist, web, or chain. The essential operations are the raising of certain threads of the warp and the depression of others, so as to form a shed for the passage of the shuttle, *i. e.*, filling, which is then beaten up by means of the reed secured in the lathe or baten. Literally, a waving or twining of threads together so as to form cloth.

The making of cloth by the interlacing of threads according to a predetermined pattern.

Many of the nations of antiquity claimed the honor of having invented weaving. Pliny gives the palm to the Egyptians, and says that they put a shuttle into the hands of their goddess Isis, to signify that she was the inventress of weaving. Mitford in his "History of Greece" says "of the arts, Egypt was probably the mother of many, as she was certainly the nurse of most." According to Bryant's Ancient Mythology, "the art of weaving was first practiced at Arach in Babylonia, and spread thence to neighboring cities, then south to Egypt, and in process of time west to Greece and the countries that afterwards formed the Roman Empire." The book of Job, no doubt the oldest piece of writing in existence, also referred to weaving, for he says, when complaining of his sad state "My days are swifter than a weaver's shuttle."

Web: A textile fabric, especially as in the piece, or as being woven in a loom.

Webbing: A woven strip of material made of strong fibres, used for girth's, surcingles, straining-pieces of saddles, and upholsterers foundations for seat-bottoms, *i. e.*, materials which are intended for strength. The strong edging of rugs, etc. Any woven texture; the structure of a web.

Wedgwood Cots: See Cot.

Weevel: A beetle of the Curculionidæ family, which attacks the bolls of the cotton plant.

Weft: The series of threads—technically termed picks or shoots—thrown into a cloth at right angles to the warp by means of the shuttle. Weft yarns, as a rule, are softer spun and consequently weaker than warp yarns, some in fact only just standing the strain of weaving. English term for our "Filling."

Weft Bars: Broad bars or stripes running across the fabric, usually caused by bobbins containing different counts or twists of yarn, *i. e.*, unevenly spun yarn, being woven in alongside one another. Such bars may also be caused by the let-off or take-up motion of the loom working defective, resulting in a variation in the picks per inch in the cloth.

Wefting: The actual operation of inserting the picks into a fabric; synonymous with *beating-up* or *picking*.

Weft Fork: The small pronged fork which acts as the medium for the operation of the weft, *i. e.*, filling stop-motion, in the loom in the event of breakage or failure of the weft, *i. e.*, filling. Also called *Filling Fork*.

Weft Pile: Fabrics woven in a way that certain of the weft yarns, *i. e.*, filling form the pile. Also called *Filling-pile*.

Weft-way: Yarn twisted over to the right in spinning. Also called *Filling-way*.

Weigh-box: Second drawing frame, or fourth gilling box in open drawing (worsted yarn spinning) at which the slivers are automatically weighed.

Weighted Silk: Silk yarns or fabrics which have been treated with solutions of metallic salts or tannin which are readily absorbed by the fibre. The original intention was to restore the weight which was lost in the boiling-off operation. Thus 100 ounces of raw silk yielded about 75 ounces of boiled-off silk; in order to return 100 ounces to the customer it was necessary to treat the silk in order to make up the 25 ounces. At the present day 100 ounces of raw silk in many cases come out of the dyehouse weighing 200 or 300 ounces. Sometimes what is sold as silk is a mere agglomeration of heterogeneous matter, devoid of cohesion, held temporarily together by a little silk. The elasticity and tenacity of the silk are sensibly diminished. Ordinary silk is sparingly combustible, but this weighted silk burns like tinder if touched with flame, and it is liable to undergo spontaneous combustion. It leaves an ash of oxide of iron exceeding 8 per cent. Weighting or loading of silk is the same as sizing is to cotton.

Weighting: The process of charging silk, wool or cotton with various foreign matters, to increase the weight and the scroop. The strength and durability of the fibre is often greatly reduced by it.

Welborn Pet: A cotton plant originated by Jeff Welborn, New Boston, Tex. Developed from selected plants in a field of Barnes, Jones Big Boll (Jones Long Staple), and Zellner. Plant erect, slender; limbs short and numerous, very prolific; bolls round, medium in size, clustered, maturing early; lint 31 to 32 per cent; staple 22 to 25 mm., *i. e.*, 0.826 to 0.984 inch. This variety has but little foliage in proportion to the size of the plant, which many cultivators claim is an advantage in hastening early and uniform maturity. One of the best known cluster varieties.

Weld: The yellow dyeing-color employed before the introduction of quer-citron. It is the herb "Reseda-ruteola," and sold in the sheaf, like straw; the whole of the plant, except the roots, were employed in dyeing, but the greater part of the color resides in the seeds and upper extremity.

Well-covered: Cloth showing a faultless face.

Welsh Flannel: Flannel made from the fleece of the flock of the Welsh mountains; chiefly manufactured by hand. It is held in high esteem in Great Britain and elsewhere for under vestments and other purposes.

Welsh Mountain Sheep: A variety of English sheep peculiar to the mountains of Wales — regarded as one of the hybrid races of English sheep.

Welsh Wool: A typical wool of England lacking waviness of character and fineness of hair. It is largely used in the manufacture of Welsh flannels.

Welt: A strip of material applied to a seam to cover or strengthen it, or fastened to parts of a fabric or construction at their seam or joint; also, a covered cord or an ornamental strip sewed on a border or at a seam to give protection or greater strength.

Name for Piqué-weaves, producing continuous "warp or filling ribs" with narrow dividing runs between.

In knitting: (1) A flap knitted by itself and then engaged with the main body by looping or hand-knitting, as the heel-piece of a stocking. (2) A ribbed piece forming the finished-end, as the end of a sleeve or sock, to keep it from rolling together.

West Indian Cottons: Cottons more valuable in staple than other Indian

Cotton. The principle varieties are La Guayran, Mangarole, Macedonia and Carthagena. Average length of fibre: 1.22 inches. Suitable for spinning up to 40's warp and filling.

Wethers Wool: The term applied to the second and following fleeces yielded by sheep. The fibres are of a coarser nature than that of Hog's wool (first fleece) and such staples are used for a more medium class or counts of yarn or a coarser kind of woolen material. Wethers are generally good one or two year old fleeces. *Yearlings* is another term used for this class of wool. Sometimes written *"Wether Wool."*

Wet Spinning: In this process flax fibres, previous to their spinning, are wet in warm water of about 120 deg. *F.* This softening of the flax fibres is based upon the fact that they are, comparatively speaking, perfectly inelastic. When softened in hot water, their elasticity is raised to about $\frac{1}{10}$th, in addition to which they are rendered more adhesive to one another, and will lie closer in the process of twisting.

Wharve: See Warl.

Wheat Starch: This is obtained from wheat flour by a process of washing with water, which separates it from the other ingredients of the flour. It is the product always referred to when starch is spoken of without qualification. Wheat starch is largely employed in finishing and in sizing. It makes a stiff paste with water, not, however, so stiff as that yielded by farina or Indian corn starches, neither is it so clear and transparent; and it does not stiffen cloth quite as much, and is therefore mostly used for soft and light finishes. It is usually sold as a white powder, with a slight crisp feel and glistening appearance.

Wheel: In embroidery and fancy work, an opening filled with threads radiating like the spokes of a wheel.

Wheel-presser: The winged wheel acting as a presser on circular knitting machines.

Wheels: English word for gears.

Wherve: See Warl.

Whip: The extra warp-thread which forms the figures in lappet weaving. It is not interwoven with the fabric itself, except at the end of each run.

Whip-cords: Fabrics known as whip-cords are steep twill diagonals in which the warp is floated over several picks of filling in such a manner as to throw it on the surface in a decided roll. The finished goods have the appearance of well twisted cords laid diagonally on a plain surface. To get good results in fabrics of this nature the warp should be dressed of two-ply yarns. The filling may be, and invariably is, used single in dress goods of this weave.

Whip-net: A kind of netting woven on the gauze loom with a heavy warp, widely set.

Whipping: This is the operation of giving the threads a few half turns under the cop bits a few draws after doffing. In some cases it entirely substitutes starching, and in others, where very good bottoms are required, both starching and whipping are resorted to.

Whip-roller: In weaving, a roller or bar over which the yarn passes from the warp-beam to the reed, the pressure of the yarn on the whip-roller serving to control the let-off mechanism.

Whip-thread: One of the systems of threads necessary for gauze or leno weaving; the crossing threads in gauze weaving, also known as *Douping warp,* and which in gauze weaving are made to twist around their mate standard threads.

Whirl: See Warl.

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 deg. *C.* 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 Schweiter'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 twelve 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 at lengthened period.

White Calico: Name of bleached cotton shirting in South Africa.

White Curd Soap: White curd soap should be made from pure tallow, lard, bleached palm oil, and olive oil in various proportions.

White Dutch: Trade term for flax retted mostly in Scheldt, Holland; has pale color.

White Egyptian Cotton: So called to distinguish it from the Gallini and Brown varieties. Average length 1¼ inches; used for spinning from 40's to 70's count.

White Goods: A commercial name given to a variety of cotton fabrics, embracing jaconets, cambrics, nainsooks, mulls, lawns, brilliantines, India twills, dimities, shirtings, dress-linings, quilts, piqués, Swiss muslins, French organdies, tarlatanes, percales, etc.

White Oakum: Coarse hemp or flax hacklings (positively untared oakum).

Whites: Those varieties of silk-worms producing white cocoons.

Whiting: Used in cotton finishing like China clay.

Whittle: In England, a heavy, coarse woolen fabric, used for Blankets and Shawls.

Whorl: See Warl.

Wick: A band of loosely twisted or woven fibres, or a substitute, operating by capillary attraction, to convey a constant supply of any liquid illuminant to a flame. For candles a round wick of loosely twisted soft spun cotton fibres is generally used; for oil-lamps, a flat woven wick.

Wide Sheetings: Cotton cloth, ranging in width from 72 to 108 inches; used largely for bed sheetings.

Width: The distance between the two selvages of a fabric. In former centuries, when the construction of many of the fabrics was regulated by law, a certain width was prescribed for every such fabric, at the present time, however, the greatest variety exists in this respect.

The width of the ribbons is expressed by the number of the line, or ligne, that of the woolens and worsteds in quarters, one-quarter measuring nine inches. As a rule, goods are called *narrow* which measure 27 inches or less; *wide,* which measure 54 or more inches. A fabric is of single width when it measures a yard, or less; of double width, from 48 to 60 inches.

Wigans: A stiff, plain or twilled gray canvas-like fabric of medium quality and weight, used for protecting and stiffening the lower inside edge or borders of garments, as on women's dresses under the train, or the bottoms of trousers.

Wild Hemp: Very white, strong, long, ribbon-like fibres yielded by the sesbania macrocarpa in Coloroda.

Wild Sheep: This designation comprises the Argali of Siberia; the Big-Horn or Rocky Mountain sheep of California; the Aoudad, or bearded Argali, of Africa; and the Mouflon of Europe. A sub-variety of the Mouflon family is the Nemorhedinæ, or goat-like antelope. One more subfamily is comprised in the species Prong-Horn Antelope. Whether or not the domestic sheep is derived from any of these wild, sheep-like creatures, there is no doubt but that the same was first domesticated in Asia, and from there, with the advance of civilization, introduced into Europe, America, Africa, and Australia. No doubt the wild sheep possesses great interest in illustrating the probable origin of our domestic varieties; yet the latter alone are of special interest to us as animals producing wool in quantities for textile purposes. Also called *Mouflon Sheep.*

Leicester.

A New Multi-Bleach Plant for the successful bleaching of knitted goods has recently been completed, and after having taken considerably more than a year to fix and get working, is now in operation at the Saffron Lane Works of Messrs. Shuttlewood & Fanshawe. Naturally this must be of decided interest to manufacturers, particularly those engaged in the underwear trade. Although the firm has been approached by several of the largest makers of knitted goods, it is not their intention to restrict the output of their plant to certain manufacturers, as in the immediate future they hope to be in a position to satisfy the whole requirements of the industry generally.