

DICTIONARY OF TEXTILE TERMS.

P

Pelote: A tuft of hair or wool.

Pelt: The skin of a sheep including also the wool.

Pelt-rot: A disease of sheep, causing the wool to fall off.

Pelt-wool: Wool from the skin of dead sheep or lambs.

Peluché: Hairy or shaggy.

Penistone: A coarse cloth of wool, formerly made in Penistone, England.

Penistone Sheep: An English breed of sheep found in the hills of Yorkshire, Lancashire and Derbyshire.

Pepper and Salt: Fine mixed effects produced in woolen and worsted cloth by using double and twist yarn having for its minor threads a heavier count of yarn of a dark color twisted with a finer count of yarn of a light color; black for the dark and white for the light color are the standard combinations; mercerized cotton or silk yarns are often used for the light colored minor thread. These twist yarns are introduced for warp and filling preferably all over, or every third or fourth end, using in this instance a corresponding dark color for the solid color threads thus added; again the pepper and salt effect may be produced by the warp only, the filling being then of one dark color.

Fine light effect spots on a dark ground, in quantities, well distributed all over the face of a fabric.

Pepperdust: A term used when referring to a leafy cotton, where the refuse of leaves are very minute but numerous, and give the cotton a black powdery appearance.

Pepperdust Staple: See Leafy Cotton.

Percalé: A term applied to a closely woven cotton fabric of the cambric class, made with a good quality of cotton yarn, differing from cambrics by lacking gloss, but containing more dressing than ordinary muslins. Percalés are brought in the market either white or printed. The finer qualities are used in the white (bleached) for handkerchiefs, aprons, etc., whereas the bulk is used for dress fabrics, and when used for this purpose, after having been bleached, is usually printed on one side with geometrical figures, generally black, although other colors may be seen.

Percaline: A highly finished and dressed percalé, used chiefly for linings, petticoats, etc., in solid colors, dark shades being preferred. The most attention must be given to the finishing process, a high texture being the foundation for the characteristic glossy finish, as produced on the calender. To give it this high gloss, the fabric, after dyeing and sizing, is doubled lengthwise or pieces put together back to back, and as it passes through the rollers of the calender, it is wet by steam, the rollers being for the process well heated and closely set together.

Percé: Perforated.

Perch: To examine cloth over a perch for imperfections, either before or after it is finished.

The framing over which the cloth is passed for perching. The same consists of two rollers or tin cylinders usually attached to wooden

hangers, fastened to the ceiling, or they may be put on posts in the room, in either case placed in such a position so as to bring the fabrics, when pulled over the perch, squarely in front of the window and thus examined in good light. In connection with 6/4 goods two persons as a rule attend to the perching, the inspector standing on one side and his assistant on the other side in front of the fabric to be examined, pulling the fabric slowly over the perch, both persons at the same time examining the fabric carefully as to imperfections.

Percher: See Looker-over

Perchloride of Tin: See Tetrachloride of Tin.

Perkin's Violet: See Mauvein.

Permanganate of Potash: Brilliant steel-blue, well-nigh black crystals, which dissolve in 15 to 16 times their weight of cold water, with an intensely blue-red color.

Permanganate of potash is a very strong oxidizing agent, and for this reason is applied sometimes also for bleaching purposes; the brown precipitate, viz., *manganese peroxide* which forms on the goods is very easily dissolved and removed by sulphurous acid or an acidulated solution of bisulphite. The same is used in bleaching wool (neutral, alkaline or acid bath; best in a neutral bath of 1 : 1,000, since the bath may always be used again; in an alkaline bath the bleaching is slower, in an acid bath quicker). After bleaching, the material is washed with sulphurous acid, generally with an addition of sulphuric acid (occasionally 2 to 3 mols., otherwise the material may readily turn brown). It cannot be used for bleaching silk, since the fibre is injured. Also called *Potassium Permanganate*.

Pernambuco Cotton: In this cotton we have the finest specimen of the Brazil crop, similar in color to white Egyptian but harsher and wirier in the staple. The fibres are longer and stronger than in any other variety of Brazil's product. It belongs to the *Gossypium Peruvianum* species, and is cultivated to a very considerable extent in or around Pernambuco. The port from which it takes its name. The color is of a slightly golden tint, resembling the white Egyptian cotton, but in comparison to it and the American cotton, the Pernambuco feels harsh and wiry, and is therefore best adapted for warp yarns. Average length of staple 1½ inches; used in spinning from 40's to 60's (warp) count; being clean and of a uniform quality and is principally used for the spinning of hosiery yarns.

Pernambuco Wood: See Brazil Wood.

Pernam Cotton: That obtained from *Gossypium peruvianum* in the mountain districts of the Andes (Peru).

Pernyi: The moth of the wild silkworm of China.

Peroxide of Hydrogen: Used as a colorless aqueous solution prepared by the action of dilute sulphuric acid on barium peroxide, or sometimes sodium peroxide. The action of hydrogen peroxide is based on its property to readily develop oxygen, and it is therefore used for bleaching. The strength

of the commercial solution is usually expressed in volumes of oxygen evolved by one volume of the liquid, the usual strength of 12 volumes corresponding to 3 per cent. hydrogen peroxide. Of late, hydrogen peroxide corresponding to 70 volumes of oxygen is likewise being marketed. The product keeps best at a low temperature, in the dark and if acidulated with small quantities of acid. An addition of 1½ ounces naphthalene or 1 pint of alcohol or ether to 10 gallons of the solution improves its stability. In the presence of alkalies, or on heating, it readily gives off the oxygen it contains, and as certain metals have a decomposing effect on hydrogen peroxide, it is best to keep it in well-tarred casks or in carboys. Peroxide of Hydrogen is used for the same purposes (bleaching the various kinds of fibres, particularly silk, tussah silk, wool and hair, etc.) as the Sodium Peroxide, which latter, however, is universally considered the most economical of the two bleaching agents. To preserve its stability the commercial Peroxide of Hydrogen solution is manufactured in a slightly acidulated condition, for which purpose phosphoric, sulphuric and other acids are used. This excess of free acid has, for the practical bleaching use, to be neutralized with a suitable alkalinizing agent, where after the bleach bath is slightly alkalinized in the same manner as described under Peroxide Sodium. Also called *Hydrogen Peroxide*.

Recently a *new Hydrogen Peroxide* has been put on the market under the trade name *Albone*, which its manufacturers guarantee to be of 25 volumes strength. It was welcomed by the trade on account of the large saving in freight which its high concentration warrants.

Peroxide of Sodium: A yellowish-white deliquescent powder which absorbs carbon dioxide with the evolution of oxygen. It dissolves easily in water with generation of heat, and on boiling develops oxygen. On sufficiently cooling, it dissolves in acidulated water forming hydrogen peroxide and the corresponding sodium salt. It is frequently employed, therefore, in place of the latter, for the bleaching of textiles, having over other bleaching agents the advantage that it can be used for all kinds of textile fibres as well as mixtures thereof. Chloride of lime, sulphur, hypochlorites, sulphurous acids and its compounds cannot be used for bleaching such mixtures in one and the same bath without causing damage to one or the other class of fibres contained in these mixtures. Since Peroxide of Sodium, when dissolved in plain water, gives off, as before stated, its oxygen rapidly, the usual method of preparing a Peroxide Sodium bleach bath is to acidulate the water with sulphuric or oxalic acid, whereby the oxygen is very slowly and gradually liberated, just in sufficient quantity to effect the bleaching. Peroxide Sodium is slowly added in small quantities at a time to this acidulated water, under constant stirring, until the bath is entirely neutral (neither red nor blue litmus paper

changing their color), and then the bath is slightly alkalinized with ammonia, a solution of borax, triphosphate soda, silicate soda, or any other suitable alkalinizing agent as the special treatment may call for. Then the goods are entered and remain in the bleach bath as long as the material to be bleached requires it, *viz.*, cotton in $\frac{1}{2}$ per cent. strength bath from 2 to 5 hrs. at 160 to 170 degs. *F.*, wool and worsteds $\frac{1}{2}$ to $\frac{3}{4}$ per cent. bath at 120 degs. *F.* from 4 to 8 hrs., silk 1 to 2 per cent. bath at 140 to 180 degs. from 2 to 8 hrs., mixtures of these fibres are treated at relative temperature, strength of bath and time of bleaching. It is absolutely necessary that the goods, before the bleach, are thoroughly boiled-off or scoured. Metals (with the exception of lead), iron nails, etc., are to be excluded from the bleach-vats or machinery, since they act as catalysis, and liberate the oxygen rapidly. Besides the above mentioned textile fibres, Peroxide of Sodium is extensively used for the bleaching of straw, linen, tussah silk, jute, hemp, tampico fibre, hair (human as well as animal), horn, bone, ivory, cane, felts, bristles, sponges, feathers, wax, oils, grease, etc. When brought into contact with inflammable substances, like paper, etc., it ignites them, and as it is moreover apt to decompose with a detonation without any apparent cause, it should be handled with care. Peroxide of Sodium develops 20 per cent by weight of oxygen, whereas hydrogen peroxide of 12 per cent by volume only yields $\frac{1}{2}$ per cent by weight of oxygen. In addition, sodium peroxide possesses the advantage of remaining stable for an indefinite period when properly stored. Peroxide of Sodium is used for the same purposes as Peroxide of Hydrogen. Also called *Sodium Peroxide*.

Perrotine Printing: Done by blocks fastened to an iron frame. The cloth is passing between the blocks and iron plates; used for printing handkerchiefs.

Persan: Applied to patterns and colorings in Persian style.

Pershing: A peacock blue-green shade.

Persian: A fine, thin silk fabric, formerly much used for linings.

Persiana: A silk fabric, the design of which shows large flowers.

Persian Berries: See Berries.

Persian Carpet: A pile carpet made upon a vertical frame (loom) in its full width, instead of in breadths to be joined. The warp and filling are of linen or hemp; the pile or tufts of colored wool are secured to the body structure by twisting them around the warp, all along the row according to pattern desired. When a line of tufts has been introduced, a pick is then inserted and in turn beaten up by hand close to the fell of the fabric.

Persian Cord: A cloth made from cotton warp and worsted filling, employing the plain weave, but with the warp-threads working in pairs, thus giving a rib effect.

Persian Effects: Showing the peculiar designs and color tones common to cashmere shawls and other Indian and Thibetan textile productions.

A Study of Practical Weaving.

It is agreed on all sides that education for any branch of an industry must be broad at its base. Now in connection with woven fabrics it is essential that a sound knowledge of actual weaving is obtained. The type of loom at the student's disposal when commencing his studies is the ordinary commercial loom and very often advanced students have to use the same looms provided with the same warps. If the loom and warp are suitable for advanced students, it is very likely that they are not suitable for the beginner.

The main features of the experimental loom are as follows:

(a) Full size model, 24 inches reed space, to weave 18 inches in reed, so that calculations for contraction, etc., could be based on half of a yard.

(b) The frame (loom sides and binder rails) would be a special design with planed faces and not beaded. Painted aluminium.

(c) The top shaft would not have the usual cranks, but an arrangement whereby the eccentricity of the slay could be increased or decreased by adjustment of the crank arm on a face plate. The bottom shaft would be driven either by the usual gearing or by chain drive, provision being made for both.

(d) The loom would be designed to suit an eight-tread cross-rod shedding motion, but would have space for the healds and an abnormal throw of the slay (up to 7 inch sweep). There would be provision under the healds to work tappets up to five shafts, so that cross-roads could be removed and the loom to weave as a roller motion.

Thus as regards shedding, all the positions of tappets could be demonstrated with very little alteration, and one loom would serve as three or four of the existing types. All levers would be marked off in divisions of $\frac{1}{4}$ of an inch, and inches stamped in numerals to reduce time when taking measurements in connection with calculations for size of shed, etc. All tappets would be marked plainly, showing duration of dwell, stroke, nearest point of contact, and diameter of bowl used during construction of tappets. Springs would be tested and labelled. The back rest would have an easy means of adjustment, and could be regulated to any point along a scale marked on the loom side. Oscillating, spring, and stationary rests would be available on each loom. The front rest would be adjustable to a greater extent than in the commercial loom. The inside of the beam flanges would be marked off in inches, taken from the centre of the beam, so that the diameter of the warp and beam could be readily ascertained for calculations. The collars of the beam would be highly polished, and the various forms of friction, such as coiled chains, ropes, and pressure clutch employed as desired. All these parts painted (where required) in black.

(e) The picking motion would be the cone over-pick. One of the bosses fixed to the low shaft on the saddle key principle, the other with the sunk key way and key. Each shell would be so designed that the shell and nose-bit could be removed without stripping the other parts from the shaft. The foot-

step and cannon brackets would be adjustable along a marked scale (normal, in and out). A brass plate marked off in degrees would be placed above the cone, and, by means of a centre line on the stud and pointer, degrees moved, in relation to degrees moved by the crank, could be noted. A brass scale would be fixed near the spindle to note the movement of picker in relation to crank shaft. All parts of the picking motion to be painted red.

(f) The loom would have two slays that were interchangeable, one with loose reed motion and one with fast reed motion. The box mechanism would be arranged for experimental work, and on the fast reed slay springs employed instead of check straps. All parts of the reed motion would be painted green.

(g) Filing fork motion, would be supplied with various types of forks and grids, such as serrated forks, etc., and glove attachments to grid. There would also be a satisfactory brake and other mechanism. All these parts painted (where required) in slate color.

(h) The various forms of temples would be supplied, to be used as required for different fabrics.

(i) The take-up motion would not be of the usual type. Picks per inch would be regulated by increasing and decreasing the leverage of a pulling catch or catches. All wheels would be marked with numbers of teeth, and drivers would be painted with a red rim to distinguish them easily.

In front of each loom near the wall would be placed a large box in which all spare parts not in use would be kept. The top of the box would be made to serve as a desk for the students. Above the box there would be a large diagram of the loom parts, each numbered with a number corresponding to that on the loom. The parts would be correctly termed, with names employed in the trade. Instead of the usual balance wheel, a metal disc, with an enamel face marked off in degrees, would be employed. Each loom would have a small vice fixed to the frame for the purpose of key fitting and repair work in the overlooking class.

There are many other features in connection with the loom, but the foregoing are sufficient to prove, that it is possible to produce a loom on which experimental work could be performed with accuracy and minimum amount of time.

Facts Whittled Down.

The gloss and feel of silk are said to be produced upon loose wool or wollen tissues by treating them for about half-an-hour at 30 to 35° C., upon a bath which contains 5 to 10 per cent bromine of the weight of woollen material. After rinsing, the wool is dyed as usual and the cracking touch of silk is obtained by passing the wool through a soap bath and then through a feebly acid bath. The great advantage claimed for this treatment is that after it no felting of the wool can take place in the following operations.

It is estimated that 5,500 fox pelts, valued at over \$1,000,000, will be exported from Prince Edward Island during the season which opened Dec. 1, closed January 24th.