Dictionary of Technical Terms Relating to the Textile Industry

(*Continued from page 18.*)

PEARL EDGE:—A narrow thread edging sewed on lace to give it a special finish. Also the narrow border on some styles of ribbons that have been formed by allowing the filling to project in loops.

PEARLIN:—A silk or thread lace.
Fine cambric or linen.

PEARL MOSS:—See Irish Moss.

PEARL-STITCH:—A loop-stitch in embroidery forming an edging; a seam-stitch in knitting.

PEARL-TIE:—A tie or loop in lace making.

PEAU DE MOUTON:—A woolen cloth having a very rough surface like sheepskin, used for ladies' cloaks, etc.

PEAU DE SOIE:—A variety of heavy, dull finished, plain colored dress silk, interlaced with an 8-harness double satin weave, the additional spot being added obliquely, imparting to the fabric a somewhat grainy appearance.

PEAU DE SUEDE:—A woolen cloth with velvet plaids on the surface, used for ladies' wear.

PECTIC ACID:—The gelatinous acid formed by the decomposition of pectin, which is found in nearly all vegetable substances.

PEELER:—One of the best and most widely cultivated varieties of Upland cotton, originated in Warren County, Miss., about 1864. It is a very large and vigorous plant, branching widely; bolls are large, maturing late; its staple is very strong and silky and about 1¼ inches in length.

PEERLESS:—A variety of Upland cotton, originated in Georgia. A medium plant well branched, pyramidal; the bolls are small or of medium size, round, sometimes clustered, maturing early; staple about 1⅛ inches in length.

PEG:—A bar or block of wood, soapstone, or granite used for pegging or rubbing the pile of velveteens, corduroys, or plushes to produce the required finish.

PEGGING:—The process of imparting the bloom or lustrous finish to cotton pile fabrics, by means of rubbing with a block of soapstone, granite or wood.

PEIGNOIR:—A loose wrapper worn by women during toilet.

PEKIN:—A trimming fabric, made in alternate stripes of satin and velvet. *Pekin gauze* is a variety in which gauze is substituted for the satin stripes.

PELERINE:—A long narrow, silk or lace, cape, cut to a sharp point in front, worn by women.

PELISSE:—A cloak; originally one of fur or lined with fur and worn by either sex, but now of silk or other material and worn by women.

PELOTAGE:—The name given in Spain to wool in bales or packs.

PELOTE:—A tuft of hair or wool.

PELT-ROT:—A disease of sheep, causing the wool to fall off.

PELT WOOL:—Wool from the skin of dead sheep or lambs.

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 salt and pepper 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.

PERBORATE OF SODIUM:—$NaBO_3$, 4 H_2O. The same is a white crystalline powder, 2.5 parts soluble in 100 parts of water of 60 degs. *F.* It is an almost chemically pure product containing about 10 per cent available oxygen. Where a mild steady oxidation and bleaching action is desired a Perborate of Sodium solution furnishes a desirable bleach bath for finer textile goods; its lower percentage of available oxygen, however, as compared with other peroxides, for instance, with Peroxide of Sodium, allows only a limited use as a bleaching agent at large on account of the cost of the bleaching. At present Perborate of Sodium finds its largest use as a bleaching assistant in soap powders, washing (laundry) preparations, etc.

PERCALE:—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. Percales 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 percale, 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.

PERCH:—To examine cloth over a perch for imper-

fections, either before or after it is finished.

The framing over which the cloth is passed for perching. The same consists of two rollers, usually attached to wooden hangers, fastened to the ceiling, or they may be put on posts in the room, in either case in such a manner as to bring the fabrics, when pulled over the perch, squarely in front of the window. 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.

PERNAM COTTON:—That obtained from Gossypium peruvianum in the mountain districts of the Andes (Peru).

PERNAMBUCO COTTON:—A variety of Brazilian cotton possessing a long staple, being clean and of a uniform quality; principally used for spinning hosiery yarns.

PERNYI:—The moth of the wild silkworm of China.

PEROXIDE OF HYDROGEN:—H_2O_2. The same is offered to the trade as an aqueous solution of generally 8-12 volumes strength, which means that one volume of the Peroxide Hydrogen solution gives off as many volumes of oxygen. A 10 vols. Peroxide of Hydrogen contains about 3 per cent H_2O_2, which is equal to about 1½ per cent available oxygen. 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 Hydrogen is used for the same purposes (bleaching of textiles, 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 alkalining agent, whereafter the bleach bath is slightly alkalined in the same manner as described under Peroxide Sodium. Peroxide of Hydrogen must be stored and kept in a cool place.

PEROXIDE OF SODIUM:—Na_2O_2. The same is a yellowish-white powder, which dissolves easily in water, forming caustic soda and Hydrogen Peroxide, which latter, at the intense heat thereby created, liberates at once its oxygen. When exposed to the air, Peroxide of Sodium absorbs moisture and carbon dioxide and gives off its oxygen. It contains about 20 per cent available oxygen. Its foremost use Peroxide Sodium finds in the bleaching of textiles, having over other bleaching agents the advantage that it can be used for the bleaching of all kinds of textile fibres, as well as for 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 alkalined with ammonia, a solution of borax, triphosphate soda, silicate soda, or any other suitable alkalining 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 ½ per cent strength bath from 2-5 hrs. at 160-170 degs. *F.*, wool and worsteds ½-¾ per cent bath at 120 degs. *F.* from 4-8 hrs., silk 1-2 per cent bath at 140-180 degs. from 2-8 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 crystallizers 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.

PERSIAN:—A fine silk used formerly for linings.

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

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 SHAWLS:—Shawls made in Persia. Those of Kirman are not much inferior to those of Cashmere. They are woven by hand, similarly to the carpets. The material called Koork, of which the shawls are made, is the under-wool of a particular kind of white goat.

PERSIAN SILKS:—Silks made in Persia. Silks are woven at Yezd and Kashan and Resht, which towns are also the centre of the cultivation of the silkworm, but the most artistic textiles of Persia are the beautiful shawls called Hussein Kuli Kani, probably from the name of the man who first produced them. The face of the fabric resembles that of a fine Cashmere shawl, the reverse side being loose and flossy.

PERSIAN WOOL:—The chief wool markets of Persia are Sebsevar and Mesched for the production of the Province of Khorassan and Kerman, or Kirman, where the wool of the southern provinces is sent. The Mesched wool, which is regarded

as the best in quality among the northern wools, appears mostly on the Sebsevar markets. Immediately in value after the Mesched wool comes that of Zurat, then that of Herat. The wool brought into the market is divided into two categories—spring wool (peshm-i-bahari) and autumn wool (peshm-i-paizi).

PERSIENNE:—An oriental cambric or muslin having a pattern printed in colors.

PETERKIN:—Originally a variety of cotton with smooth, black seeds, developed to its present form by repeated selection of seed from the most prolific plants. Plants of medium size, well branched; limbs short jointed; bolls medium in size, oval, not clustered, not maturing very early; staple $\frac{9}{10}$th to 1 inch; seed occasionally black and smooth. Originated by J. A. Peterkin, Fort Motte, S. C., about 1870. There are very few varieties which yield so large a percentage of lint, and this is one of the best of the Rio Grande type.

PETERSHAM:—A great coat, of heavy rough-napped woolen cloth, called after Lord Petersham, who set the fashion of wearing the greatcoat.

PETITS POIS:—Tiny dots or specks. The French for small peas.

PHENOL PHTHALEINE:—Used for titrating oxalic, acetic, critic, or tartaric acids, and when 5 gr. per liter is its proper strength. Crimson when alkaline, colorless when neutral or acid.

PHOTEE:—The finest kind of cotton used in India for the manufacture of Dacca muslins. It is grown along the banks of the Brahmaputra and its branches, and the Miqua.

PHULKARI:—Anything flowered; especially embroidery done by natives of India with patterns of flowers.

PIASSAVA OR PISSABA:—A coarse fibre yielded by two palms, Attalea Funifera and Leopodinia Piassaba. In South America it is made into coarse but durable ropes; in Europe, it is used chiefly for brooms. Also known as *Paragrass*.

BLEACHING LINEN WITH COLORED EDGES.

The Bleaching of linen with colored selveges or borders under ordinary conditions involves considerable skill in order to keep the colors from running or fading.

To make this matter more positive, and minimize the tendency of the colors to run and yet attain the desired results, a new process has beeen originated.

It consists in forming a diastase solution at about 150 *F.*, thoroughly impregnating the goods in the same, after which they are allowed to soak in water for about 24 hours, and then thoroughly rinsed.

Another solution is then formed by dissolving 27 pounds of sulphuric acid in 400 gallons of water. The goods are then immersed in this bath, to which is added gradually 20 pounds of sodium peroxide. After this has thoroughly dissolved, a portion of silicate of soda is added to the bath and the linen allowed to remain in the same for about six hours.

After this time the goods are removed and rinsed in a weak bleaching solution, and then given a thorough rinsing to remove all traces of the bleach and are ready for drying.

THE WOOL FIBRE.

By Walter M. Gardner, F.C.S.

(*Continued from page 93, April issue.*)

VARIATIONS IN PHYSICAL STRUCTURE.

When we remember that such apparently dissimilar things as the wool of the sheep, human hair and finger nails, birds' feathers, and horses' hoofs are all of very similar composition, and differ only in structural arrangement, it does not seem improbable that wool fibres themselves should vary somewhat in themselves. This, of course, is actually the case; fibres from different breeds of sheep, or even from different parts of the same animal, vary greatly, not only in length, thickness, etc., but also in actual structure. A typical fibre, such as may be obtained

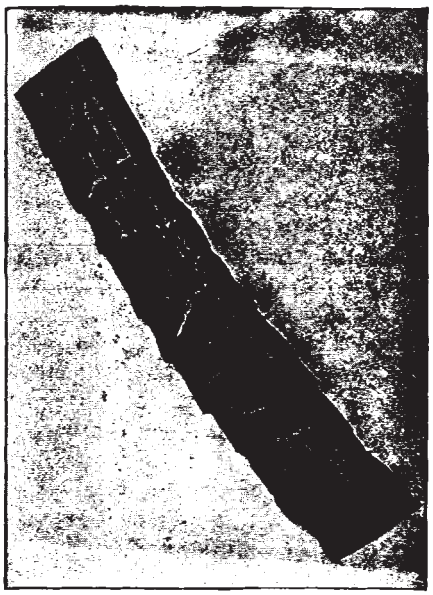

Fig. 4.

from a good Merino or Southdown fleece (See Fig. 4), will possess the typical structure described above, but frequently the type is departed from to such an extent that the central core of globular cells is entirely absent. The serrated character of the outer cells also reaches a much higher state of development in some samples of wool than in other.

PHYSICAL PROPERTIES OF WOOL.

It is very interesting, as well as instructive, to examine the various characteristic properties of wool in the light of the peculiar structure of the fibre, which has already been described. The physical properties of wool, which render it of such value as a textile material are: (1) strength and elasticity; (2) curliness; (3) felting property; (4) lustre; (5) avidity for liquids.

Each of these properties should receive careful attention and thought during all stages of manufacture, so that it may be utilized to the fullest extent in the process which is being carried out, or preserved uninjured either for use in some subsequent process, or to enhance the value of the finished article.

(1) *Elasticity and Strength.*—These are properties which, in common with silk, wool possesses in a greater degree than the vegetable fibres. When sub-