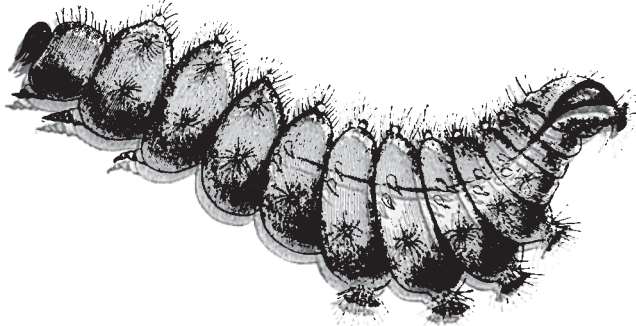


Dictionary of Technical Terms Relating to the Textile Industry

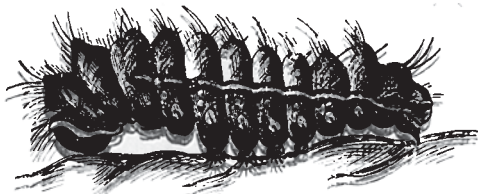
(Continued from June issue)

Wild Silk:—Silk from the cocoon of a silkworm raised in its native or wild state. Like true silk, the wild silks are found to consist of a double thread when magnified, but the threads, instead of being



TUSSAH SILKWORM.

structureless, are composed of individual fibrils, recognizable by decided, parallel, longitudinal striations. Again, they are more quadrangular and less circular in section, each bundle of fibres being of paralleloiped form, and each pair of such bundles attached together on their narrow side. Only very few of the wild silkworms produce cocoons of the same regularity as those of the true silkworm. On the contrary, they are more given to interrupt the spinning of the envelope, and thus produce several threads, which get mixed together; many of them plait leaves and twigs in with the cocoon, on which account the majority of wild silks are difficult or impossible to wind. On the other hand, they are highly suitable for spinning into yarn after the manner pursued with spun silk. The advantages of wild silk are: (1) Greater durability, by reason of the thicker condition of the threads; (2) pro-



YAMAMAY SILKWORM.

ductivity and cheapness of preparation, the larvæ not being necessarily grown in breeding stations, but thriving in the open and yielding two to eight crops of larger cocoons in the year; (3) absence of waste in dyeing, the wild silks not being encumbered with sericin, and consequently not requiring to be scoured. Against the undeniable advantages of wild silks, which have founded and called into existence one of the most promising branches of the textile industry, must be set the following drawbacks: (1) darker color which cannot be removed by any means short of a powerful bleaching agent; (2) inferior lustre; (3) inferior softness; (4) defective elasticity; and (5) coarseness (mean diameter, 0.050 *mm.*).

The most important varieties of the wild silk of commerce are: (a) Tussah silk, (b) Eria silk, (c) Fagara silk, and (d) Yamamay silk. Of these Tussah is the most valuable, *i. e.*, the one most extensively used.

Tussah Silk is the fibre spun by the Tussah moth (*Antheræa mylitta*), a large and beautifully-marked nocturnal moth, measuring about 8 inches across the wings, and widely distributed throughout India and Southern China. The cocoons, of large size and brown color, are suspended by stem-like supports from convenient twigs on the trees harboring the larvæ. The somewhat hard cocoons can be unwound with ease, after the agglutinant sticking the threads together has been dissolved by an alkali. Nevertheless the majority of Tussah cocoons are dealt with in the same manner as employed in spinning chappe silk. Tussah silk is of a light brown color, with a vitreous lustre and somewhat stiff, the fibres being not over regular, and measuring on the average 0.050 *mm.* across. It is mostly used in the manufacture of velvets, plushes and draperies.

Eria Silk is produced by the East Indian ricinus moth. Attempts made in Europe to reel Eria cocoons have not proved very successful, and consequently they are usually spun in the same way



TUSSAH SILK FIBRES (Magnified).

as spun silk. Morphologically and in chemical behavior this silk greatly resembles Tussah.

Fagara silk comes from the Atlas moth, the largest nocturnal moth known, since it measures over 8 inches across the wings. It is common throughout Eastern Asia, and feeds on various plants; attempts have also been made to breed it in Europe. The light brown cocoon, measuring nearly 5 inches in length, is open at both ends, so that the moth can escape without injuring the cocoon. This silk is also like Tussah.

Yamamay Silk comes from the Yamamay or Japanese oakleaf moth and most nearly resembles true silk, though somewhat coarser, the mean

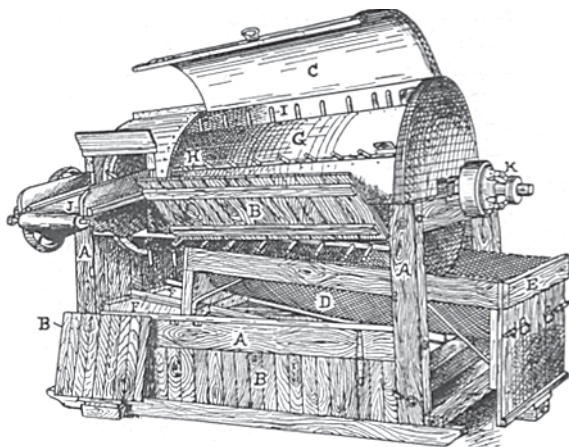


YAMAMAY SILK FIBRES (Magnified).

diameter being about 0.027 *mm.* The larva spins an unusually, regular cocoon of a beautiful pale green color, of which the silk can be readily unwound, and is preferred in Japan for use in figured fabrics along with true silk.

Willeying:—The English term for a process known in Huddersfield as *teasing*; in Bradford as *devilhole* or *devilling* work, and in the United States as shoddy *picking*. It is performed by a machine which tears (opens) the material asunder.

Willow:—The class of heavy machines used in cleaning and opening wools, low-grade cottons, and other fibres, known in the United States as duster. The machines used for these different materials vary in size, but are essentially alike, and consist



WILLOW (Cone Duster).
A Main Frame, B Doors, C Cover, D Screen and E its Sliding Frame, G Cylinder and H its Rails, I Pins inserted in rails, J Feed Apron, K Friction Driven Pulley.

of a revolving cylinder, armed with spikes, in a cylindrical casing also armed with spikes. A part of the casing forms a grid or sieve, through which the waste falls by gravity or is drawn by a suction blast.

Willowing:—The shaking out of the material by means of the willow, in order to open the fibres and remove sand, dust, vegetable, etc., impurities present in wool, waste, or other fibres.

Wilt Sheep:—A variety of English sheep peculiar to Wiltshire, regarded as a hybrid race of English sheep.

Wilton Carpet:—A velvet pile-warp carpet, resembling Brussels in its construction, but with the looped pile cut; so named from being made originally at Wilton, England.

Wince:—A corrupt form of winch. In dyeing, a simple apparatus for changing a fabric from one dye-vat to another. It consists of a reel placed over the division between the vats. The fabric, placed over it and turned either way, is by means of turning this reel transferred from one dye to another. When several vats are placed in line, and contain dyes, mordants, soap-suds, water etc.; a wince or reel is placed between each two, and the combined apparatus becomes then a wincing-machine. In such a machine the vats are called wince-pots, or wince-pits.

Wincey:—A strong fabric composed of cotton warp and woolen filling, woven plain or twilled and made in different weights.

Winder:—A machine for winding thread, etc., being named according to the work they are designed for, like bobbin winder, cop winder etc.

Winders Knot:—A knot frequently made at winding but which knot will not stand chaffing of reed and heddles; it will slip, since one of the ends is simply passed through the knot formed on the other thread. To distinguish from a weavers knot and which will not slip while passing heddles and reed.

Winding:—The operation of winding yarn, whether hanks or cheeses, onto bobbins preparatory to weaving.

Winsey:—A cloth composed of a cotton warp and a woolen filling, of a fairly heavy type.

Winter Stain:—A dingy brown color of the fleece of wool, which is an indication that the wool is not in a thoroughly sound state. Such fleeces are thrown out by the wool-sorter, being suitable only for goods that are to be dyed black or other dark colors.

Wiper:—The English term for tappet or cam.

Witch:—The shedding-motion of a harness-loom; see *dobby*.

Witch-loom:—A loom containing a witch or dobbie for its shedding motion; dobbie-loom.

Witch-stitch:—Herring bone embroidery stitch.

Woad:—This dyeing matter, *Isatis tinctoria*, which was employed from the most ancient times, is now nearly unknown in this country. It is yet cultivated in some parts of Europe, where it goes under the name of pastel. The coloring-matter it contains is chemically and practically the same as indigo; it is still used in setting the indigo vats for dyeing woolen, but always in conjunction with indigo. It appears that the woad plant, as sold to the indigo dyer, readily enters into fermentation, and in that state is useful in deoxidizing or reducing the indigo to the soluble condition; but it contains very little coloring-matter itself, so that it was hardly possible to dye a deep blue with it.

Woaded Colors:—This term implies that the wool has been dyed in the indigo vat. A woaded blue should be dyed with indigo alone, but in the case of woaded blacks, greens, and browns, the indigo is necessarily combined with other dyes. The term has lost most of its significance since the introduction of the alizarin and other fast dyes.

Wonderful:—A cotton plant originated by J. H. Jones, the originator of several other varieties bearing his name. This is similar to the Jones Long Staple, but has a larger boll and a smaller seed, with a longer and finer staple. Lint 28 to 30 per cent., staple 35 to 40 mm.

Wongshy:—The pods of a species of *Gardenia* (*G. grandiflora*) grown in China and yielding a large quantity of yellow dyestuff, which colors silk and wool without mordants.

Wood Fibre Lace:—Applied to all laces made of wood silk (artificial silk).

Wood-pulp Silk:—A form of artificial silk resulting from the action of sulfuric and nitric acid upon cellulose or woody fibres.

Woof:—A term sometimes applied to the bar-trees (hand-warping stand) upon which warps are made, but more frequently a term (now almost obsolete) synonymous with weft or filling.