

Western Regional Button Association is pleased to share our educational articles with the button collecting community. This article first appeared in the Oregon State Button Society newsletter in November 2017. WRBA is honored to have been given permission from OSBS and author Julie Reifel to reprint it for our February 2018 WRBA *Territorial News*. Enjoy! WRBA gladly offers our articles for reprint, as long as credit is given to WRBA as the source, and the author. For this article, please receive permission from the author before reprinting.

TEXTILE BASICS: MATERIALS AND WEAVES *by Julie Reifel*

A textile is a flexible material consisting of a network of natural or artificial fibers (yarn or thread). Yarn is produced by spinning raw fibers of wool, flax, cotton, hemp, or other materials to produce long strands. Textiles are formed by weaving, knitting, crocheting, knotting, or felting. <https://en.wikipedia.org/wiki/Textile>. Following are descriptions of the four basic natural fibers, known and used for generations. Most fabrics currently found for sale are blends of natural and synthetic fiber, rather than 100% natural fiber.

Cotton is a soft, fluffy staple fiber that grows in a boll, or protective case, around the seeds of the cotton plants. The fiber is almost pure cellulose ... (It) is most often spun into yarn or thread. Cotton for fabric is known to date to prehistoric times. Although cultivated since antiquity, it was the invention of the cotton gin that lowered the cost of production and led to its widespread use. It is the most widely used natural fiber cloth in clothing today. <https://en.wikipedia.org/wiki/Cotton>

Linen is a textile made from the fibers of the flax plant. Linen is laborious and time-consuming to manufacture. Textiles in a linen weave texture, even when made of cotton, hemp and other non-flax fibers, are also loosely referred to as "linen". Such fabrics generally also have their own specific names, for example fine cotton yarn in a linen-style weave is called Madapolam. <https://en.wikipedia.org/wiki/Linen>

Silk is a natural protein fiber...The best-known silk is obtained from the cocoons of the larvae of the mulberry silkworm. The practice of breeding silkworms for the production of raw silk (sericulture), has been under way for at least 5,000 years in China. Later this process spread to Korea, Japan, India and West. The shimmering appearance of silk is due to the triangular prism-like structure of the silk fiber, which allows silk cloth to refract incoming light at different angles, thus producing different colors. <https://en.wikipedia.org/wiki/Silk>

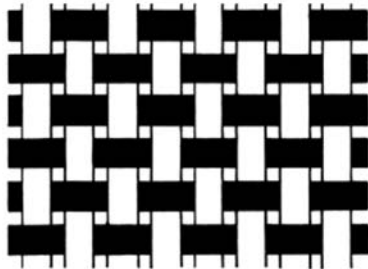
Wool is the textile fiber obtained from sheep and other animals, including cashmere and mohair from goats, qiviut from muskoxen, angora from rabbits, and other types of wool from camelids... Wool's scaling and crimp make it easier to spin the fleece by helping the individual fibers attach to each other, so they stay together...The quality of wool is determined by its fiber diameter (determines quality and price), crimp, yield, color, and staple strength... <https://en.wikipedia.org/wiki/Wool>

Weaving was probably developed some time before 6000 BC. It is the most universal fabric construction method using two sets of threads: the warp and the weft. Warp threads are held parallel to each other under tension, while the weft is worked over and under them, row by row. A loom may be used to keep the warp threads evenly spaced. The Jacquard loom used in English cotton mills by 1813 mechanized the weaving process and provided greater speed of production using a number of punched cards laced together into a continuous sequence https://en.wikipedia.org/wiki/Jacquard_loom.

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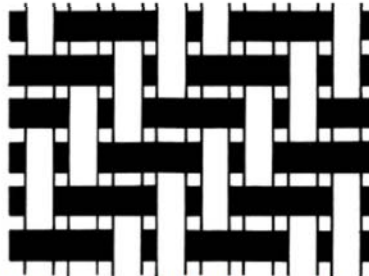
PLAIN WEAVE (also called tabby, linen, or taffeta weave) is the most common and tightest of basic weave structures in which the same pattern is repeated.

<https://www.textileschool.com/articles/119/plain-weaves>



<http://www.yatesdesign.net>

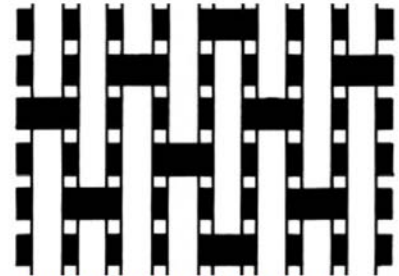
TWILL is a type of textile weave with a pattern of diagonal parallel ribs... done by passing the weft thread over and under the warp threads ... to create the characteristic diagonal pattern. <https://en.wikipedia.org/wiki/Twill>



<http://www.yatesdesign.net>

SATIN is a weave that typically has a glossy surface and a dull back. The satin weave is characterized by four or more fill or weft yarns floating over a warp yarn or vice versa.

<https://en.wikipedia.org/wiki/Satin>



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