

Topic: TEXTILE AND CLOTHING

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Novelty Weaves

Novelty Weaves are also called as decorative, fancy, figure and design weaves. They are formed by predetermined changes in the interlacing of warp and filling yarns. The different weaves include dobby, jacquard, leno, pile and double cloth.

Dobby Weave

Dobby designs have small figures such as dots, geometric designs and floral patterns woven into the fabric. The design is produced by a combination of two or more basic weaves and the loom may have up to thirty-two harnesses. Examples of dobby weave are shirting madras, pique, huck towelling.

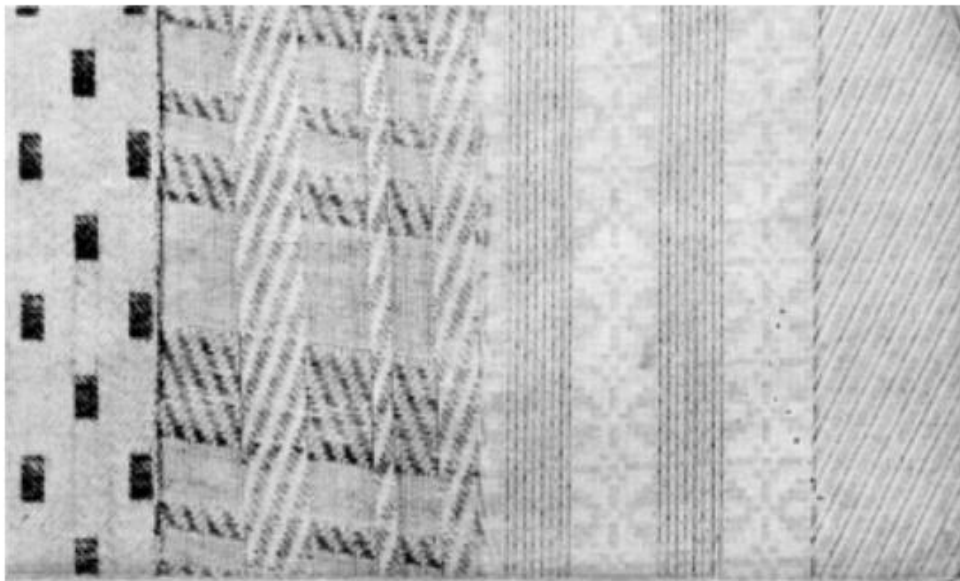


Fig. 18 - Dobby weave

Jacquard designs

Fabrics with elaborate designs are woven using the Jacquard loom attachment. It was introduced by Joseph Marie Jacquard in 1801. The Jacquard mechanism has the ability to control every warp yarn instead of a series as in regular harness looms. The machine is very

big and very expensive. The pattern for the Jacquard loom is transferred to a series of perforated cards, one for each filling pick in the pattern. The card is punched so as to permit the needles on the machine to be raised to pass through the card. The shed is formed and the pick passes through each card stops on the cylinder for its particular pick, moves on, and new card takes its place. This process continues until all the cards are used. Thus, when pattern is over the cards start for the next till the entire cloth is woven. Thus, extremely complicated and decorative woven designs are produced using jacquard loom attachment. Examples include brocade, damask, tapestry, terry-cloth towels.

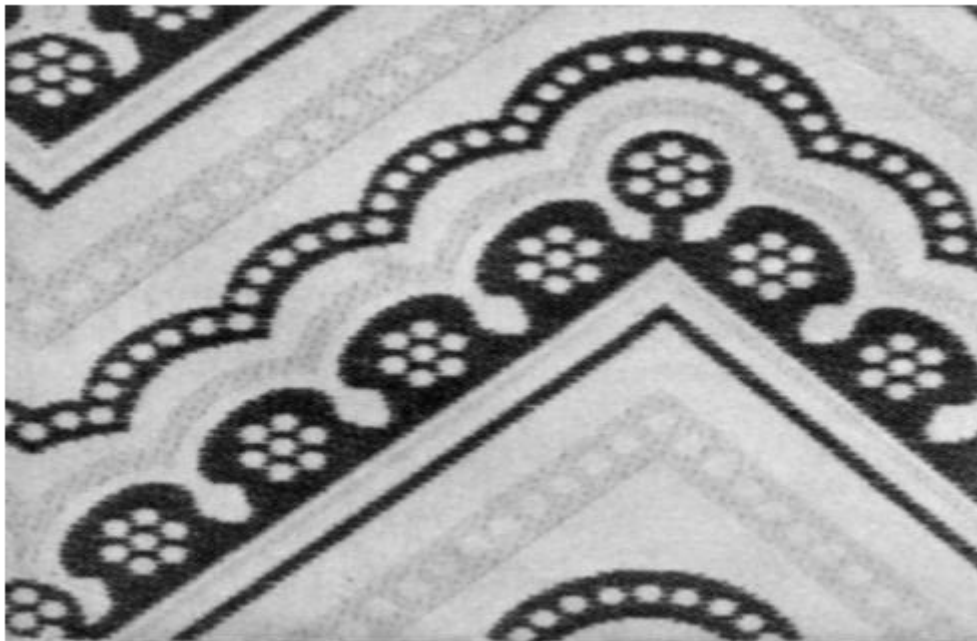


Fig. 19 - Jacquard weave

Leno Weave

The leno weave produces an open-textured fabric that may be sheer or heavy. It is produced by the doup attachment to the basic loom. The doup attachment controls the warp threads horizontally as well as vertically and the unusual warp interlacing prevents slippage of the filling and reduces shrinkage. Examples include mosquito nets, household bags and curtains.

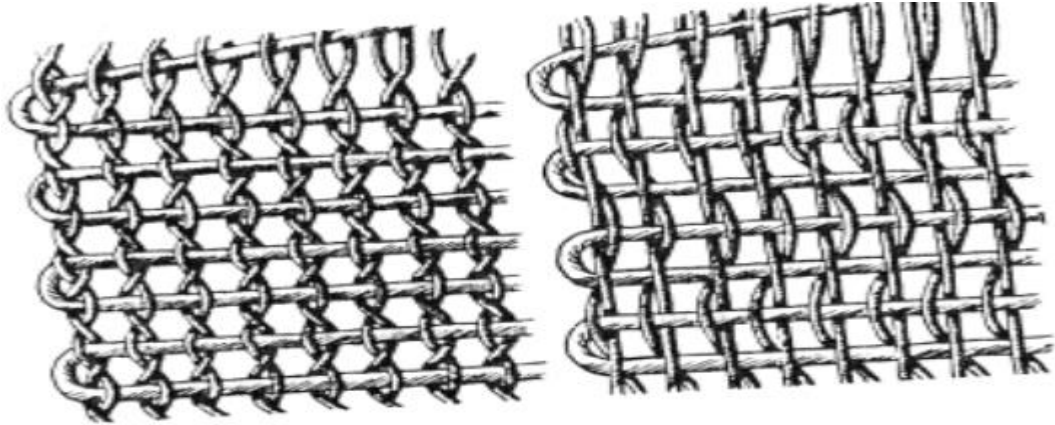


Fig. 20. Leno weave

Surface Figure Weaves

Extra warp or filling yarns can be interlaced on the basic weaves to produce different designs. These include

Lappet Weave

In lappet weave an extra warp yarn is introduced in a manner so as to create design on the base, fabric. Patterns are woven in the fabric by an attachment to the loom. Long floats formed on the back of the fabric are cut away, if floats are small, they are usually left. Example: fancy sarees.

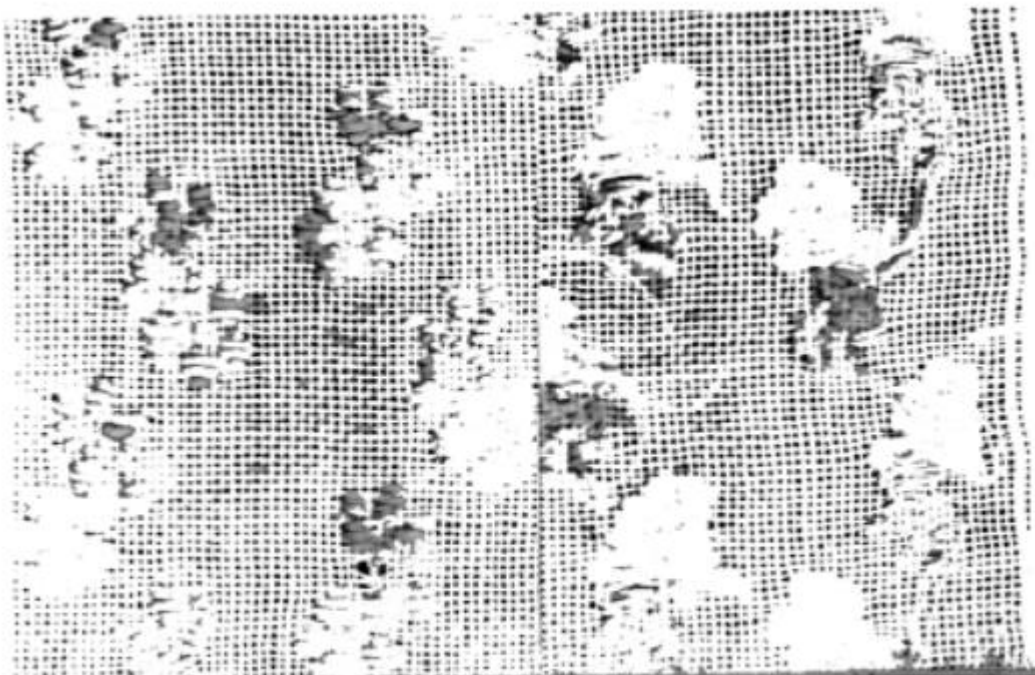


Fig.21 -Lappet weave

Swivel Weave

The Swivel weave differs from lappet in that designs are produced by extra filling yarns. Separate shuttles are placed at each point where the design has to be made. The shed is formed by the pattern, where the shuttle carries the yarn through the shed, the distance of the pattern. The extra filling floats on the back of the fabric, the long floats are cut away after weaving is completed. Example: silk sarees.

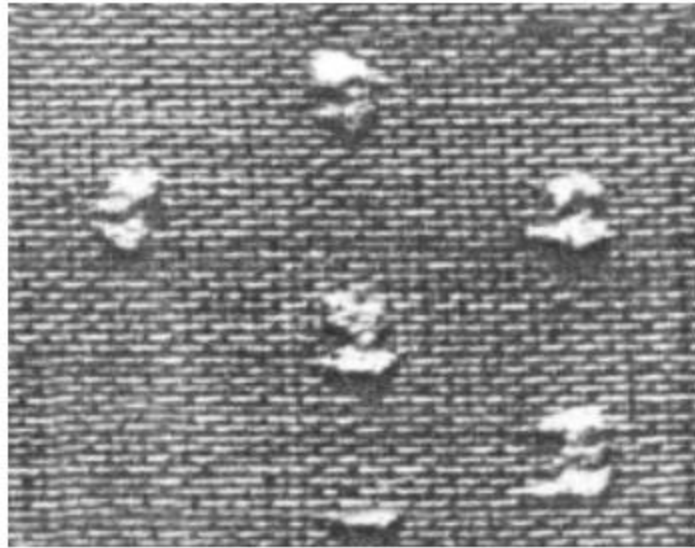


Fig. 22-Swivel weave

Spot Weave Spot designs are formed by extra warp or filling yarns. The yarns are inserted the entire length or width of the fabric, spots or dot designs are formed. The long floats on the back side are cut away, leaving the dots. The threads can be pulled easily. Filling threads are easy to cut but warp floats are difficult. Example: dotted swiss.

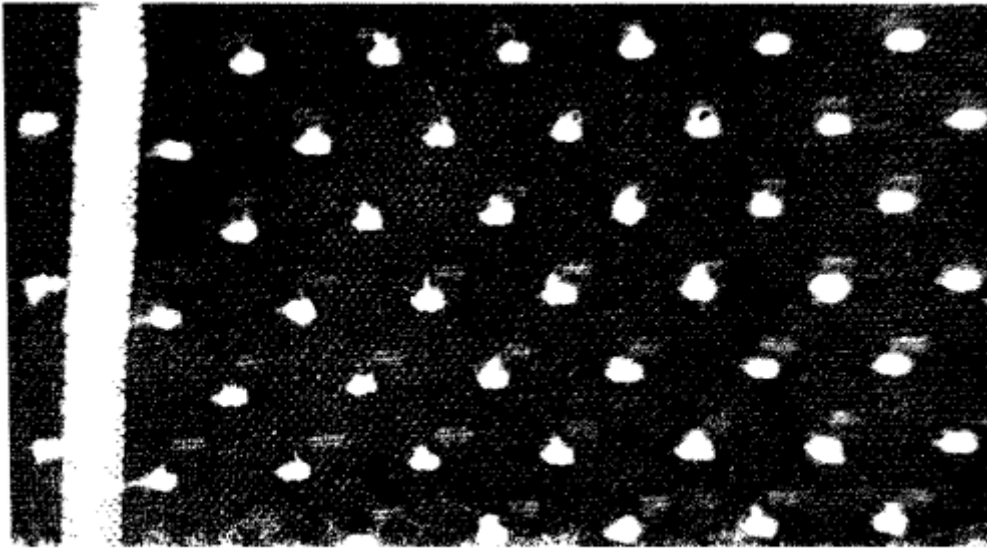


Fig. 23-Spot weave

Pile Weave

Pile fabrics are formed by having the basic plain or twill weave as a backing and a third yarn is woven to yield a surface pile. The pile may be warp pile or weft pile. For making ground fabric, plain or twill weave is used, the extra set of filling yarn floats over three or more warp yarns. The floats are cut and brushed up to form pile. This is called filling pile. Examples are velveteen and corduroy fabrics. If an extra warp yarn floats over the filling yarn, it is called warp pile. Examples are velvet, velour and rug velvet.

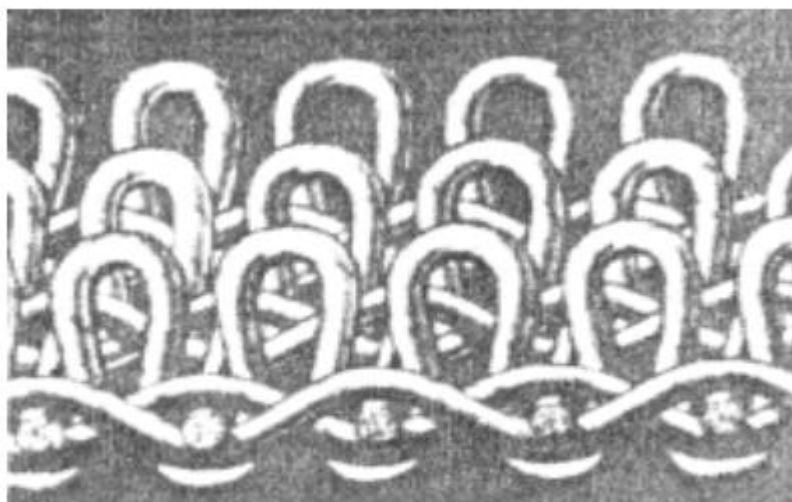


Fig. 24 - Pile weave

Double weave

Double weave fabrics are obtained by using five or more set of yarns. The most common types of double cloth have two set of warps and two set of weft yarns with an extra yarn interlacing both the cloth. The double cloth has additional bulk, strength and warmth. Examples are coatings, blankets, double brocade and brocatelle.