

**Mull.** General term, very little used now, for soft or stiff cotton fabric, or silk and cotton mixture.

**Mummy or momie cloth.** From the French "momie", shriveled. An irregular weave, producing a pebbly surface similar to granite cloth in wool. Made in linen or cotton for towels and dresser runners; wider in white or colored for dress fabrics. See granite cloth. Weave—fancy. Width, towels, 16" to 20"; dress goods, 32".

**Mungo.** Remanufactured wool made from felted rags. Inferior to shoddy made from worsteds.

**Muslin.** Name from the ancient city of Mosul where first made.

1. In England and her colonies muslin refers to sheer materials suitable for summer dresses.

2. Firm, plain white cotton fabric, stronger and heavier than longcloth. Little sizing, except in poorer grades. Calendered finish disappears after washing.

Heavy and wide muslin is called sheeting. Uses: underwear, household purposes. White or unbleached. Latter called "brown" muslin. Width, 36", 42", 45". See Sheeting.

**Nainsook.** Fine, soft-finished white cotton fabric with a polish on one side. Lighter in weight than longcloth, more highly finished; not so closely woven as cambric but heavier than batiste. Sometimes mercerized and schreinerized. A fine nainsook may be called a coarse batiste. Uses: infants' wear, lingerie. Weave—plain. Width, 36", 45", usually 36".

**Nap.** Not to be confused with pile. The downy or fuzzy appearance of cloth produced by raising the fibres to the surface as in outing flannel.

**Napery.** General term for table linen.

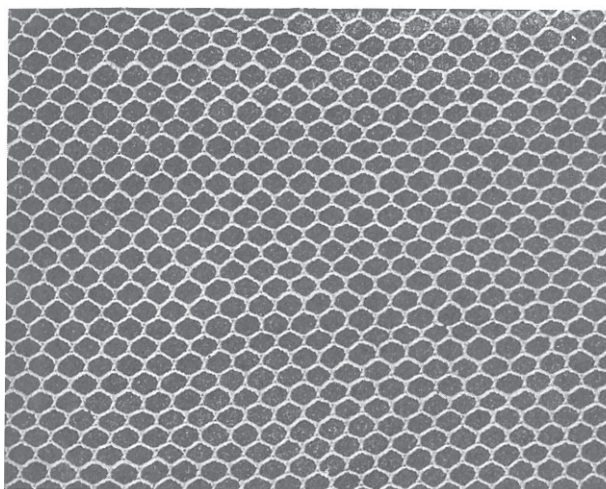
**Net.** Originally all nets and laces were made with a needle or with bobbins. Modern nets have the same effect made by machinery.

1. Blonde. Washable cotton net for curtains, linings and ruffles. Same construction as bobbinet net, but usually finer. White, ecru or flesh.

2. Bobbinet net is machine-made of cotton or silk yarns partially twisting around each other so as to produce hexagonal meshes. They appear round at a distance. Finer grades of bobbinet used for dresses and trim-

mings. Uses: curtains, linings, trimmings. White or colors. Width, 36", 54", 72".

3. Cable net has a coarse mesh. Not so satisfactory for curtains as bobbinet because it stretches when laundered. Not much used at present.
4. Filet net has square spaces and imitates hand-made filet made by knotting the thread at the corners.

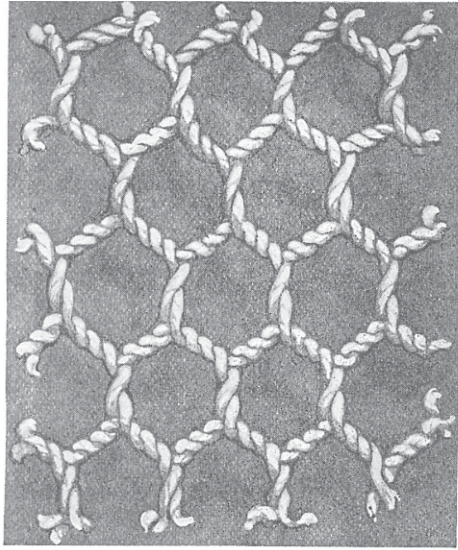


Net (bobbinet)

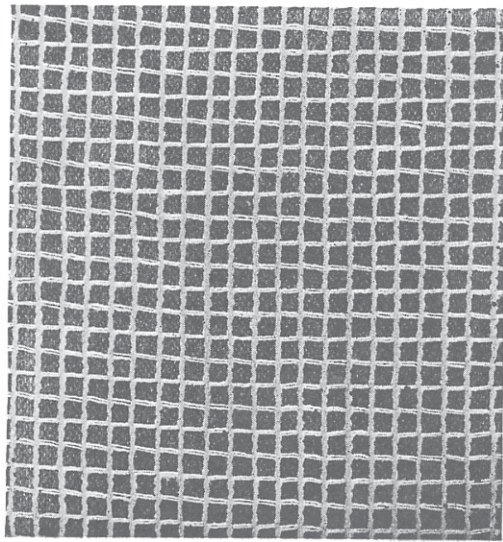
5. Novelty nets for curtains show a variety of effects. Weave—novelty net or lace. Width, 36", 40", 45", 72".
6. Net, silk for evening gowns. May be soft or finished with a dressing. White, black and all colors. Uses: evening gowns, trimmings. Weave—net. Width, 72".
7. Point d' Esprit white cotton net with small dots scattered over the surface in snowflake effect. Width, narrow as footing or 72".

**Nitro-cellulose.** See Rayon.

**Noils.** Short fibres which come from the combing process in preparing yarns as for worsted. Short wool fibres are wool noils. There are silk noils, ramie noils, cotton noils.



**Net**  
Detail showing structure



**Filet net**

- Non-Flam.** Process for making cotton goods non-inflammable, invented by William H. Perkin, Manchester, England. Non-Flam not on the American market.
- Non-run or non-ravel top.** Some hose made with device near top to prevent runners from going into leg of hose.
- Nottingham.** Type of machine-made lace or lace curtains. Originally made in Nottingham, England.
- Novelty fabrics.** Large class of materials particularly suitings, made to meet a style demand. They have not become staple.
- Nub yarn.** Fancy yarn having nubs or knots at intervals made by twisting one yarn about another forming lumps or knotty places, as ratiné yarns.
- Nun's veiling.** Originally made in black only and used for nuns' veils. Soft, light-weight fabric similar to voile, but closer and softer. Worsted yarns, also made in silk. Piece-dyed. Wears well. Uses: dresses, negligees. Weave—plain. Width, 36", 42".
- Olive drab.** Called O. D. official color for U. S. army uniforms; same as Khaki.
- Oilcloth.** Cotton fabric coated with a preparation of linseed oils and pigments. 1. Floor oilcloth made on a burlap base, treated with linseed oil, ochre and other pigments. Printed, varnished. 2. Table oilcloth has a foundation of muslin treated with oil, turpentine and amber. May be printed. Soft pliable oilcloth gives better wear than a stiff brittle one. Smooth, dull or pebbled finish. Plain or napped back. White, black, green or printed. Uses: table and shelf coverings, rain hats, dress trimming. Weave—plain. Width, 45", 54".
- Oiled silk.** Thin silk soaked in boiled linseed oil and dried. Waterproof and fairly pliable. Surgical uses.
- Opera hose.** Women's hose of extra length.
- Organdy or organdie.** Thin, transparent, wiry muslin made of fine cotton yarns. White, piece-dyed or printed. The best grades are finished to retain their crispness and transparency after washing. Crushes or musses but is easily pressed. Uses: dresses, neckwear, trimmings. Weave—plain. Width, 36" to 70".
- Orinoka.\*** Trade name for drapery fabrics. See Sunfast materials.

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- Osnaburg.** Originally from Germany. Strong unbleached cotton bagging similar to heavy muslin. Kind of crash used for cement bags and for sacks in cotton fields, also for coarse clothing. Weave—plain. Width, 32".
- Ottoman.** Heavy corded silk fabric having larger and rounder ribs than faille. Ribs or filling usually cotton which is completely covered by warp. Yarn-dyed. Uses: coats, trimmings. Weave—plain. Width, 36", 40".
- Outing flannel.** Soft, light-weight cotton fabric napped on both sides, highly inflammable, soils readily, nap wears and washes off. White, solid colors and striped (yarn-dyed). *Daisy Cloth\** is a trade name for a kind of twilled outing flannel. Uses: sleeping garments, children's underwear, interlinings. Weave—plain or twill. Width, 27", 32", 36".
- Oxford Gray.** Any fabric, woven or knitted, of black and white mixed yarns.
- Oxford suiting or shirting.** A variety of coarse weaves, mostly basket, in mercerized cotton; true Oxford has basket weave. Heavy grade suitable for suits and skirts, lighter weight for shirts. White, colors or stripes. Weave—basket or twill. Width, 32", 36".
- Paisley.** Designs, printed or woven, which imitate patterns in Paisley shawls.
- Pajama cloth.** Barred dimity or nainsook used for pajamas and athletic underwear for men, women and children.
- Palm Beach.\*** Trade named fabric first used at Palm Beach resorts for men's suits. Light weight, cool and durable; cotton warp with mohair filling; yarn-dyed, often striped, white, light or dark color; launders. Uses: men's and women's summer outing suits. Weave—plain, twill or fancy. Width, 36", 56".
- Panama.** Smooth, firm worsted similar to nun's veiling only closer and heavier; worsted yarns hard twisted; piece-dyed; very durable. Uses: dresses, skirts, suits. Weave—plain. Width, 48", 54".
- Panama cloth.** (millinery fabric). Closely woven fabric of cotton similar to flexible net, wiry and elastic. Color, usually deep cream. Uses: brims and crowns of hats. Weave—basket. Width, 40". See Flexible net.

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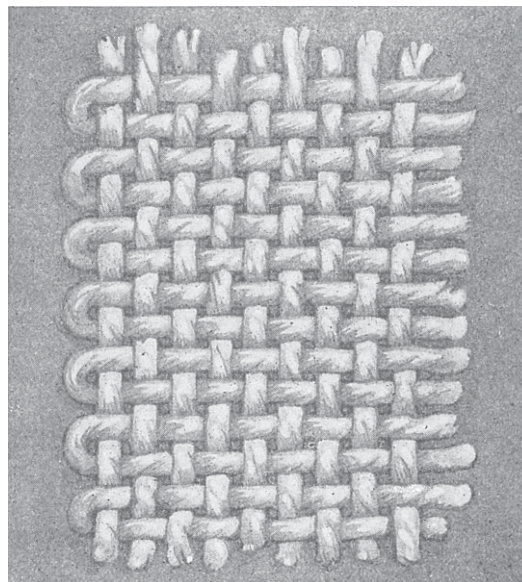
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- Panne.** (Fr. pr. pan). Light-weight velvet with "laid" or flattened pile.
- Paper cambric.** See Cambric (lining).
- Paper fabrics.** Materials made entirely or in part from twisted paper. Germany and Japan make paper fabrics.
- Peau de Cygne.** Obsolete silk fabric.
- Peau de Soie** (pr. po-de-swa). French, skin of silk. Strong, firm, leather-like fabric with dull satiny surface. Woven like grosgrain but with the rib so fine that it produces smooth twill face. Wears well. Uses: dresses, coats, trimmings, facings for men's dress coats. Weave—twill. Width, 21", 36".
- Penelope canvas.** See cross stitch canvas.
- Pepper and Salt.** Mixed color effect in woolen and worsted produced with black and white dyes, one or more ply of white is twisted with one or more of black.
- Percalé.** Closely woven, printed cotton fabric, stiff finish, heavier, finer and wider than calico. Service depends on yarn count. Typical counts, 64x60, 72x76, 80x80 in the gray. Count differs after finishing processes. Printed either by direct or discharge method. May be all white. Uses: women's and children's dresses, men's shirts, boys' blouses, aprons. Weave—plain. Width, 36".
- Percaline.** Fine, thin piece-dyed cotton lining material, sized and highly calendered or moiréd. White or colored. Use: linings. Weave—plain. Width, 36".
- Persian lawn.** Fine, white, sheer, cotton fabric similar to India linon only thinner, finer, and with a high polish. Stiffer and firmer than batiste. Not so sheer as organdy. Practically off the market. Uses: waists, neckwear, dresses. Weave—plain. Width, 32".
- Pick.** A filling or weft yarn or one throw of the shuttle across the warp.
- Pick glass.** Small, folding, magnifying glass used for making yarn count. Also called cloth glass and linen glass or tester. (See page 129.)
- Picot** (pr. pee-co). French for splinter of wood. A small loop on the edge of ribbon or a purl on lace. A picot edge may also be produced by a hemstitching machine.
- Piece-dyed.** Cloth dyed after weaving.



- Pile.** Fabric having a surface made of upright ends as in fur. Pile may be made of extra warp yarns as in velvets and plushes or of extra filling yarns as in velveteens and corduroys. Pile may be uncut as Brussels carpet. Warp pile may cause loops on both sides as in terry (Turkish toweling). Cf. Nap.
- Pilot cloth.** Heavy wool coating having a kersey finish. As the name implies, used for coats for sea-faring men. Weave—twill. Width, 56".
- Pima cotton** (pr. pee-ma). Grown in southern California and Arizona from Egyptian seed. Long staple fibre, lighter in color than Egyptian.
- Piña cloth** (pr. pee-nya). Thin and transparent fabric made from pineapple fibre in Philippine Islands.
- Piqué.** Stout cotton fabric usually in white with raised cords or welts running lengthwise. Originally cords were from selvage to selvage. See Bedford cord. Fancy mercerized stripes in figures may be introduced. Durability depends upon closeness of weave. Easily laundered; gives a tailored effect. Uses: infants' coats, carriage robes for summer, cravats, trimmings, skirts, dresses. Weave—fancy. Width, 27", 36".
- Plain knit or flat knit.** Simplest knit structure as in hose. Distinguished from rib knitting, warp knitting and fancy stitches.
- Plain weave.** The simplest of the fundamental weaves. Each filling yarn passes alternately under and over each warp yarn. Examples: muslin, taffeta, voile. Same as tabby.
- Plated.** Knit goods having face of one kind of yarn as worsted and back of another, usually lower priced, as cotton. The principle is similar to plated silver ware. The more expensive material appears on the surface.
- Plissé** (pr. plee-say). French for plaited. Puckered or crinkled effect given to fine cotton goods in the finishing process. See Plissé crêpe.
- Plush.** Cut or uncut pile fabric having a pile of greater depth than velvet; usually  $\frac{1}{8}$  inch or more.
1. **Mohair.** Pile fabric, usually made on a cotton back in a variety of effects produced by depth of pile, cut or uncut pile; pattern in cut and uncut pile called

**Frisé;** embossed designs, figures produced by pressing; brocaded effects made by shearing or burning part of the pile lower than other portions; designs printed on the surface; two-toned effects made by using warp and filling of one color and pile of another; fur effects obtained by imitating various furs in the dyeing, length and finish of pile. Uses:



Plain weave  
Detail showing structure

upholstery: furniture and automobile; lap robes, coats, muffs, scarfs, caps and trimmings. Weave—pile. Width, 50''.

2. **Silk.** Similar to mohair plush in construction. Often made to imitate fur, particularly seal. Uses: trimmings, muffs, caps. Weave—pile. Width, 40''.

**Ply.** 1. Yarn composed of two or more single yarns twisted together. 2. Layers of cloth, as a "three-ply collar".



**Poiret twill** (pr. pwa-ray). Fine, worsted dress fabric named for the well known French dress designer, Paul Poiret. Fabric is similar to gabardine only finer and smoother; beautiful texture. Soon wears shiny. Uses: dresses, suits. Weave—twill. Width, 54".

**Polka dot.** Round printed, woven or embroidered dots of any size forming a surface pattern.

**Polo cloth.\*** Trade named fabric of camel's hair in natural color or dyed; napped imitations of *polo cloth\** sold by other names. Uses: sports wear for men and women. Weave—twill. Width, 54".

**Pompadour.** Dainty floral pattern, printed or woven. Usually in silk. Named for Madame Pompadour.

**Pongee.** Corruption of two Chinese words which signify "native color" because applied to silks which were not supposed to take the dye easily.

1. Fabric made of wild silk in the natural, tan color. Originated in China. Now made mostly in Shantung province on hand looms. Name Shantung applied loosely to a grade of pongee and to machine made cotton and silk combination and cotton imitations of pongee. Chinese pongee usually has rough yarns making an interesting texture. The practice of finishing with rice powder, which gives a dull effect, has been carried to excess resulting in adulteration of the silk; this fault of Chinese pongee has made it less salable than the Japanese product. Tussah, a Hindu word for a species of worm native to India, also refers to a variety of silk worms in China. Term is used loosely as a fabric name for a grade of pongee.

Japanese pongee is rapidly replacing Chinese pongee in this country because of its standard quality and freedom from rice powder finish. The grade is indicated by momme weight. Bolts are 50 yards in length.

Pongee is washable but loses much of its beauty after repeated washing which brings out a lustre. It should be dry when ironed to prevent stiffness which is not natural to the fabric. Pongee may be dyed certain colors but will fade in the sun. Name incorrectly applied to many

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and varied materials. Uses: curtains, shirts, bloomers, slips, linings, dresses, art needlework and hand dyeing. Weave—plain. Width, 27", 32".

2. Cotton pongee imitates genuine pongee, made of wild silk. The fabric may be all cotton or have spun silk or rayon filling. It may have a smooth texture or rough, uneven yarns when it is usually called Shantung. May be highly mercerized. See Soiesette. Uses: same as above.

**Poplin.** Named from "papeline" a 15th century fabric woven at Avignon, France, in compliment to the reigning pope. Originally made in silk for church vestments and hangings.

1. Fine, cotton ribbed fabric, usually mercerized. Laundered and wears well unless weave is loose which causes "slipping" of yarns. White and piece-dyed. Fades except in fast color fabric. Uses: dresses, children's suits, uniforms, hangings. Weave—plain. Width, 27", 32", 36".
2. Ribbed silk fabric having cords or filling of worsted, silk rayon or cotton. Worsted is commonly used, cotton filled poplin is inferior for service and beauty. Yarn or piece-dyed. Some silk poplins have the fault of "slipping". Otherwise very durable. Does not wrinkle or gather dust. Uses: dresses, coats, suits, trimmings. Weave—plain (corded). Width, 40".
3. Worsted fabric similar to panama except for corded effect; excellent wearing quality. Uses: dresses, suits. Weave—plain. Width, 44", 48", 54".

**Priestley.** Well known English manufacturer whose worsted fabrics are sold by that name.

**Print.** General term for a printed cotton fabric.

**Prints.** Small printed patterns on cotton cloth often called Grandmother prints. *Puritan prints*, a trade name. Drapery fabrics as cretonne and chintz with printed designs are often called "prints".

**Printed linen drapery fabrics.** Originally hand block printed, now mostly machine printed. Cost, largely determined by design and color. Weave—plain. Width, 30", 32", 36", 50".

**Printing.** Stamping a pattern with dye on warp or fabric with wood block (hand method) or engraved copper rollers (machine method).

1. **Direct printing.** The same principle as in paper printing. Separate engraved roller is required for each color.
2. **Discharge or extract.** Method used for dark prints having white or light designs. Cloth is piece-dyed, color is discharged or bleached in spots leaving white design. Ex.: blue calico with white dots. Dots tend to drop out after wear if the cloth has been weakened by chemicals.



Print (discharge method)  
Old fabric showing effect of chemicals

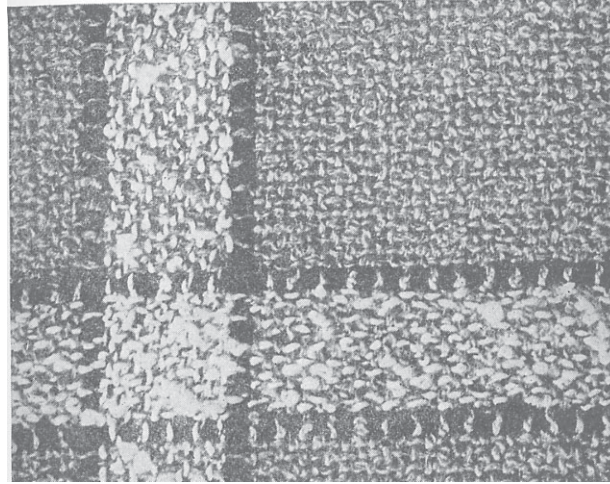
3. **Resist.** Principle used in batik dyeing (a hand process). Substances which will resist the dye are applied to cloth in designs. Then cloth is dipped in dye. "Resists," as wax or certain clays, are then removed. May be repeated for many-color effect. A combination of the above methods may be used. The resist process is somewhat used commercially.
- Prunella.** Strong, smooth finished worsted cloth; yarn-dyed. Plain or striped. Uses: dress goods, scholastic and ecclesiastical gowns; heavy grade formerly for women's shoe tops. Weave—twill or satin. Width, 42", 54".

**Pulled wool.** Taken from pelts of dead animals by chemical means. Inferior to sheared wool.

**Pure dye.** An unweighted dyed silk.

***Pussy Willow*\*** See Radium.

**Radium.** Fine, soft, closely woven fabric similar to good habutæ but having greater lustre; washable. Usually free from weighting. *Pussy Willow*,\* a trade name. Uses: waists, dresses, linings, negligeés. Weave—plain. Width, 40".



Ratiné

***Rajah*\*** Trade name for a pongee type of material having rough texture. Uses: dresses and curtains. Weave—plain. Width, 36", 40".

**Ramie** (pr. ram-my). Fibre, similar to flax, obtained from stalk of a plant native to China. See Canton Linen.

**Ratiné** (pr. ra-tee-nay). Loosely woven, rough appearing fabric of plain weave. Ratiné effect produced by specially prepared yarns. One yarn is twisted loosely about another so that it looks nubby or knotty. Warp may be of plain yarn with filling of rough yarns or the nubby yarns

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may be used both ways giving the cloth a loose, spongy character.

1. Cotton ratiné appears in many novelty effects in color and combinations with rayon. Yarn- or piece-dyed. No finish. When loosely woven, tends to sag. Uses: dresses, suits. Weave—plain. Width, 36", 40", 54".
2. Silk ratiné appears from time to time under novelty names similar to wool or cotton ratiné. See Eponge.
3. Wool dress fabric for women's wear, more or less loose and spongy. Tends to sag and the knots often pull. Uses: dresses and coats. Weave—plain. Width, 54".

**Raw fibres.** Textile fibres in their natural state as silk "in the gum" and "raw cotton" as it comes from the bale.

**Rayon.** (Fr. ray of light). Name adopted in 1924 for artificial silk. Formerly called manufactured silk, fibre silk and, for a short time, glos. Lustrous textile fibre made by converting cellulose (wood pulp or cotton linters), into a filament by means of a chemical and mechanical process. More lustrous and stiffer than silk; not so strong but less expensive; dyes readily. Four processes, viscose, nitro-cellulose, cupra-ammonium and acetate. Latter has distinct characteristics. Its products, sold under trade names as *Celanese*,\* and *lustron*, are more like silk than are other types of rayon. Rayon yarns used extensively in knitted goods, trimmings, laces, dress fabrics, alone or in combination with silk, cotton or wool.

Many novelty fabrics are known by trade names as *Milo Sheen*\*, *Luminette*\*, and *Trico Sham*\*. Rayon dress fabrics have a tendency to hold wrinkles.

**Rhea** (pr. ree-ah). Another name for the ramie plant.

**Reeled silk.** Silk filament wound directly from the cocoon into skeins; opposite of spun silk.

**Remanufactured wool.** Obtained by shredding woolen or worsted cloth and using the fibres again for making yarn and cloth. Called shoddy or reclaimed wool.

**Rep.** (Repp). (Probably a corruption of word "rib"). Closely resembles poplin. Rep has a heavier cord (filling yarn) and is a wider fabric used for hangings and upholstering. Cotton rep is usually mercerized. Piece- or yarn-dyed. Silk or

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wool may be used in combination with each other or with cotton. Variations in effect are produced by dyeing warp one color and filling another or by using an unevenly spun filling which gives variety in texture as Shiki rep. When a Jacquard figure is introduced on a rep background it is called armure. Uses: upholstery and drapery purposes. Lighter weight, skirts and suits. Weave—plain. Width 27", 36", 50".

**Resist printing.** See Printing.

**Rib.** 1. Ridge or cord effect in woven fabric made by heavy filling as in poplin or rep. 2. Knit fabric with lengthwise ribs formed by wales alternating on right and wrong sides. Called 1 and 1 rib. Swiss rib, originally made in Switzerland has two wales alternating, also called 2 and 2 rib. Rib knitting is more elastic and more expensive than plain knitting.

**Rice net.** Millinery fabric of stiff, white cotton woven with square mesh like marquisette; stiffer than crinoline; sometimes called cape net. Uses: crowns and brims of hats. Weave—leno. Width, 18", 36".

**Ripplette.\*** 1. Trade name for modern seersucker. 2. Also for crinkled or dimity bed spreads.

**Rodier Frères, Paris.** Famous designers of dress fabrics in silk, wool, cotton, rayon. Exclusive patterns.

**Romper cloth.\*** See Gingham.

**Roshanara.\*** Trade name for a novelty silk fabric of rough texture with worsted filling. Tends to shrink when wet. Practically off the market.

**Rubberized.** Silk or cotton fabric made waterproof by a coating of rubber, as rain coat material.

**Rubber sheeting.** Plain cotton fabric treated with coating of rubber. Heavy weight usually maroon color, used for hospital sheeting. Medium weight, white, double faced (coated on both sides) for hospital and home use. Light weight, white, single faced used for infants' pants and crib sheets. Weave—plain. Width, 27", 36", 54", usually 36".

**Russian crash.** see Crash.

**Sateen or satine.** Mercerized cotton fabric in satin weave which in the better grades resembles satin made of silk. True sateen has the filling on the surface while the better

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qualities as Venetian have the warp on the surface. White, dyed or printed. Some lining sateens have a twill weave. Heavy striped variety used for men's coat sleeve linings. Printed or yarn-dyed. Width of latter, 40". Uses: linings, petticoats, draperies, bloomers, comforters. Weave—satin. Width, 30", 32", 36".

- Satin.** 1. Name of a basic weave. Most lustrous surface possible. Warp yarns arranged to conceal the filling, or vice versa, thus making a smooth, shiny surface. In table damask the Jacquard pattern is produced by the contrast of warp face and filling face satin. Double faced satins, as in ribbon, are made with two sets of warp and one of filling. See Crêpe-back satin.
2. **Silk Fabric** with satin weave. May be all silk or have cotton back. Also in rayon as *Baronette satin*.\* Light weight satin is called messaline.
3. **Duchesse.** General term for rich, heavy silk dress satin, when in vogue.
4. **Lining.** Usually lighter in weight than dress satin. May be all silk or have cotton back. See Merveilleux.
5. **Wash Satin.** May have cotton back finished for laundering. White, flesh color and other light colors. Uses: blouses, brassieres, lingerie. Width, 36".

**Schappe.** Another name for spun silk.

**Schreinerized.** Kind of calendaring which produces a high, lustre on cotton cloth, usually on lining fabrics as sateens. Steel rollers covered with finely engraved lines, 400 to 700 per inch, press the cloth with weight of two tons. Lustrous effect, not permanent.

**Scotch wool rug.** Flat woven, reversible rug. A type of ingrain.

**Scrim.** Coarse, open fabric with little sizing. Distinguished from marquissette which has characteristic leno weave. Scrim is coarser than voile, usually mercerized, white, ecru, plain or fancy woven or printed border. Uses: curtains needlework. Weave-plain. Width, 36", 50".

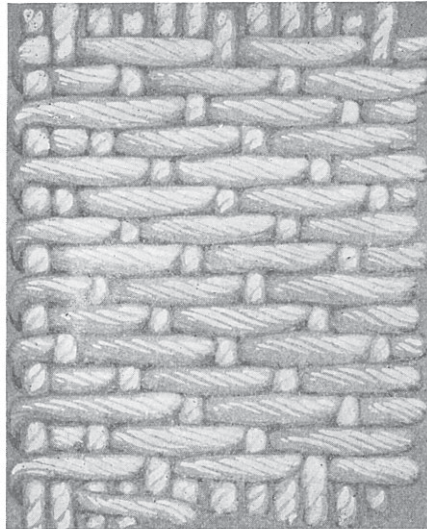
**Scroop.** The rustle or crunch of silk developed by treatment with dilute acids.

**Seamless.** Hose knitted, one at a time, on circular machine. Not fashioned.

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Satin weave (filling face as in sateen)  
Detail showing structure



Satin weave  
Detail warp face



**Sea Island.** Cotton grown on islands off southern coast of the United States. Noted for its fineness, length and silky appearance. Used for fine thread and delicate fabrics.

**Sealskin cloth.** Fabric imitating sealskin, with pile of wild silk, dyed black.

**Seco.** See Silk and cotton mixtures.

**Seconds.** Fabrics or knit goods with flaws or imperfections, from the factory. Labelled as seconds and sold at lower price. Defective garments called irregulars.

**Seersucker.** 1. Light-weight cotton fabric, with alternating crinkled stripes. This is done by holding alternate groups of warp yarns slack in the loom. May be laundered without ironing. *Ripplette\**, a trade name. Uses: children's clothing, house-dresses. Old use, tan or gray and white for office coats. Weave—plain. Width, 29" or 32". 2. Bedspreads are made with crinkle stripes called dimity. See Austrian cloth and *Ripplette\**.

**Sello\*.** See Silk and cotton mixtures.

**Selva or selvedge.** Also called "list". Finished edge on a woven or knitted fabric.

**Semi-fashioned.** Seamless hose with mock seam to imitate full-fashioned. Confusing term.

**Serge.** Fabric of twill weave with four harnesses 2/2.

1. Mercerized cotton lining material used for coat linings. Weave—twill. Width, 32".

2. Mohair lining fabric for men's overcoats. All mohair or cotton warp with mohair filling. Weave—twill. Width, 32".

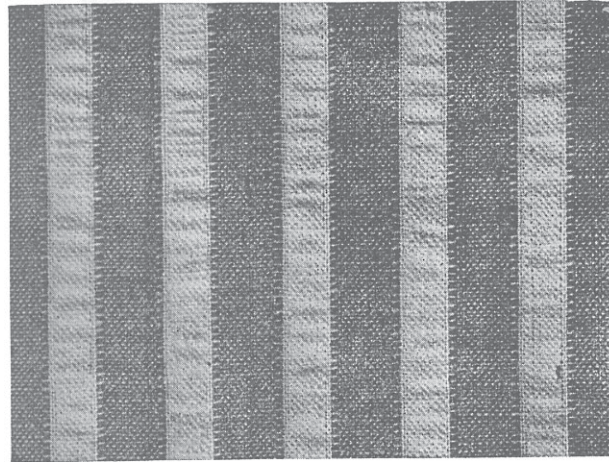
3. Silk. See Surah.

4. Worsted dress fabric. Seldom has cotton warp. Sometimes combined with rayon for variety in texture. Serge is often cravenetted. No wool fabric, more universally used than serge. Many weights and finishes. The twill runs from upper right hand selva diagonally to lower left hand selva on right side. It is just the reverse on the wrong side. The right side of the cloth is folded in when rolled on the bolt.

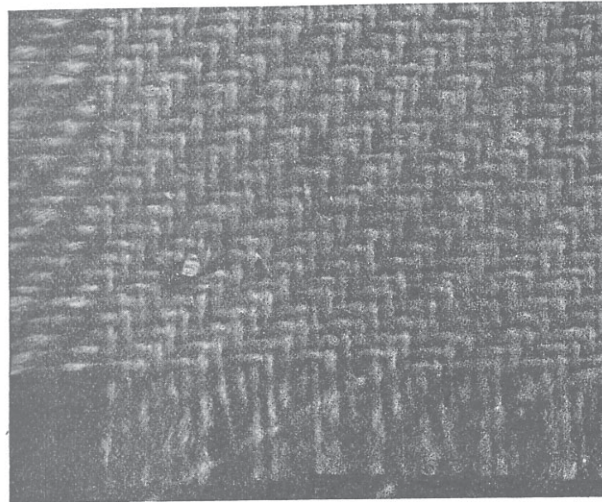
Storm serge is a coarse, wiry and more or less heavy variety. French serge is very fine and smooth and always wears shiny.

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Seersucker  
Crinkle stripes are characteristic



Serge  
Even-sided twill. Four harness or 2 and 2 twill

- Light weight qualities of serge are made in narrow width. Uses: dresses, suits, coats, caps. Weave—twill. Width, 36", 44", 50", 54", 60".
- Sericin.** The natural gummy substance surrounding the silk fibre (fibroin). Removed by "boiling off."
- Serpentine Crêpe.\*** See Crêpe.
- Shade cloth.** See Holland.
- Shaker.** Heavy jersey knitting for athletic or school sweaters. Seven to fourteen two-ply yarns used.
- Shaker flannel.** Originally made in gray by communities of Shakers. Wool, cotton or mixed fabric napped on both sides. Now, usually cotton, white, unbleached or gray. May be softer and thicker than outing flannel. Uses: interlinings, diapers, underwear. Weave—plain. Width, 24", 26", 30", 36".
- Shadow print.** See Warp print.
- Shantung.** Heavy grade of pongee, or cotton fabric or silk and cotton mixture. See Pongee.
- Sheer.** Very thin, diaphanous; as sheer organdie.
- Sheeting.** 1. **Cotton.** Heavy white or unbleached muslin, any width between 36" and 108". Referred to by quarter yards as  $\frac{1}{4}$  (4 quarters) equals 36". Better qualities are made from 2 ply yarns both warp and filling, and have firm, close weave, with little dressing. Poor grades contain much sizing. Twills are sometimes used for greater strength in hospital sheets. Uses: sheets, pillow cases, uniforms, aprons. Weave—plain or twill. Width,  $\frac{1}{4}$ , 42",  $\frac{5}{8}$ , 50",  $\frac{3}{4}$ ,  $\frac{7}{8}$ ,  $\frac{1}{2}$ ,  $\frac{10}{16}$ , 100".
2. **Linen** sheeting is like cotton sheeting except for its composition. Linen sheets stay clean longer than cotton, feel smoother, keep whiter, and are more beautiful but they wrinkle and absorb moisture which is objectionable in a damp climate. Tightly twisted uniform yarns are desirable. Linen sheeting is used largely now for lunchcloths, napkins, skirts and uniforms. Weave—plain. Width, 72".
- Shepherd's plaid or Shepherd's check.** Name of all fabrics with small even checks in black and white. Made in wool, cotton, and various combinations of wool and cotton. Uses: men's suits in heavy weight, but largely for children's

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wear, also women's suits, dresses. Weave—usually twill (serge); sometimes plain or basket. Width, 36", 40", 52" 54".

**Sherette.\*** See *Flaxon\**.

**Shiki rep.** See Rep.

**Shirting silks** (also called tub silks). Wash silks usually in plain weave with satin stripe in color. Durability depends upon character of yarns and closeness of weave. Uses: men's shirts, women's blouses and dresses. Weave—plain or fancy with satin stripe. Width, 36", 40".

**Shoddy.** See Remanufactured wool. Silk and rayon fabrics or yarns are also converted into fibres and respun, called silk shoddy or rayon shoddy.

**Shot.** 1. The same as pick. 2. Changeable effect, as in silk by use of filling colors different from warp.

**Showerproof.** 1. Process which renders fabric waterproof or spotproof. 2. Registered trade mark for a fabric having this finish.

**Shuttle.** Device used to carry weft or filling yarns back and forth in the warp to form cloth.

**Shrinkage.** The amount of contraction to which most fabrics are subjected from the loom to the finished state. 1. In wash cotton, the shortened length after washing is due to releasing the tension of yarns which have been stretched and sized. 2. For wool shrinkage see Felt (process).

**Sicilian.** See Brilliantine.

**Sign cloth.** Muslin heavily sized for printing.

**Silcot.\*** See Silk and cotton mixtures.

**Silence cloth.** Soft, cotton fabric napped on both sides or quilted goods similar to bed pads; used under table cloth to protect table and avoid noise of dishes. Width, 64", 72".

**Silesia.** Originally made in Silesia, a province of Prussia. Closely woven, light-weight, smoothly finished cotton fabric. White, piece-dyed or yarn-dyed (striped). Uses: dress linings, heavy grade for trousers pockets. Weave—twill. Width, 27", 28", 30".

**Silk and cotton mixtures.** Large class of materials combining cotton warp and spun silk, wild silk or rayon filling or silk stripes in warp. Fancy weaves and prints. Durability de-

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depends upon strength of filling yarns which are often light causing goods to split when under strain. Sold in dress goods and lining sections. Known by various trade names as *A.B.C.*,\* *Seco*, *Aledo*, *Sello*,\* *Silcot*,\* *Tezzo*,\* etc. See Canton fabrics. Uses: linings, dresses, curtains, undergarments. Weave—plain or Jacquard. Width, 27", 32", 36".

**Silkaline.** Thin, soft, glazed, cotton fabric, plain or printed. Lustre is lost in washing. Does not soil easily. Uses: comforters, linings, curtains. Weave—plain. Width, 36".

**Silk floss.** See Kapok.

**Silk gauze.** Term loosely applied to thin silk curtain fabric of plain weave and to rayon and cotton curtain goods of leno construction.

**Singeing.** See Gassing.

**Sizing.** Finishing process. Yarns and cloth treated with stiffening substance to give strength, stiffness and smoothness. Size may contain starch (potato, wheat, corn, sago), glue, casein, gelatin, gluten, minerals, wax, gum, paraffin, and antiseptic substances.

**Slip cover fabric.** Many drapery materials used for making slip covers for chairs and davenport, as linen crash, warp print, cretonne, etc.

**Smyrna.** Kind of chenille rug that is reversible. Flat color or figured.

**Snia-fil.** Artificial or manufactured wool fibres made in Italy. Introduced into the United States in 1926. It is a cellulose product; rayon filaments broken into short lengths and curled to give wooly and dull appearance.

**Soiesette\*** (pr. swa-zet). Trade named fabric of fine, smooth, even texture, highly mercerized; launders exceptionally well; in white, plain colors and prints. Name stamped on the selvage. Uses: dresses, linings, curtains, pajamas, shirts, children's clothes. Weave—plain. Width, 32", 36".

**Souple.** A dull effect obtained in silk dyeing by removing a portion of the gum.

**Spinning.** Process of twisting fibres together to produce a yarn or thread. Fine spun yarns require great skill and entail much expense; used only in high grade fabrics and laces.

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**Splicing.** Hose re-enforced by different kind of yarn in heel or toe, usually cotton to add strength.

**Split foot.** Black hose with white or Egyptian cotton sole.

**Sponging.** Process of shrinking wool goods before making. Sometimes done to keep cloth from water spotting.

**Sports silk.** Wide variety of novelties used for sports wear, many of which are known by trade names as *Khaki Kool*,\* *Ruff-a-nuff*.\* Rayon is often combined with silk or cotton.

**Spring needle.** Type of needle used in making silk hose and some fine underwear.

**Spun silk.** Yarn and cloth made of silk filaments which cannot be reeled from the cocoon. Silk is broken into different lengths, carded, combed and spun. Used extensively in knit goods, pile fabrics and in combination with cotton. Spun silk is distinguished from reeled silk which is stronger, more lustrous and more expensive.

**Stafford cloth.** See Mercerized dyed fabrics.

**Staple.** 1. Any kind of textile fibre. Term used as an index of quality or fitness as "long staple." 2. Any fabric or article sold year after year in contrast to a novelty.

**Stock-dyeing.** Process of dyeing fibres in raw state before spinning.

**Stockinette.** Elastic fabric, flat or tubular, made on a knitting machine. Used for infants' sleeping garments and diapers.

**Strand.** Weight of silk hose, designated by number of strands used in knitting. Reeled silk is composed of filaments from several cocoons. Six is average number; 5 to 7 are unwound at a time. Twelve strand hose means the yarn is made of 12x6 or 72 filaments of silk which are counted before degumming. Each filament represents two filaments fastened together with silk glue. Therefore after degumming there will be 72x2 or 144 single filaments in a 12 strand yarn. Chiffon hosiery may have 2, 4 or 6 strand yarns; 10 or 12 is average weight; 14 strand is very heavy.

**Suiting.** General term applied to a variety of weaves and finishes. Many novelties are introduced from time to time. Light weight for women's wear, heavier for men's suits. Weave—plain, twill or fancy. Width, 48", 52", 54", 56".

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**Sunfast materials.** See Mercerized dyed fabrics.

**Suede finish.** Produced on novelty wools and warp knit cotton fabrics for gloves. See Fabric gloves. Surface is emerized as for duvetyn, or cloth is passed between carborundum cylinders which raise a fine nap resembling chamois leather.

**Surah.** Soft twilled silk, often woven in plaid. Heavy grade of twilled silk is called "silk serge." Wears well unless heavily weighted. Uses: waists, dresses. Weave—twill. Width, 36".

**Surgeon's gauze.** See Hospital gauze.

**Swatch.** Piece of cloth used as a sample.

**Swiss.** So called because first made in Switzerland. Fine, sheer, cotton fabric which may be plain or embroidered in dots or figures. White or piece-dyed or embroidered in colors. Design may be introduced by swivel weaving which produces shaggy surface on one side. Flock dot or figure may be applied chemically. Swiss is crisp or stiff without a lustre. Uses: dresses, aprons, curtains. Weave—plain with swivel or lappet design. Width, 28", 32", 36".

Curtain Swiss may be plain, dotted or figured. It is always stiff or crisp in appearance with no lustre or polish. Colored dots or figures are sometimes used on a white ground. Laundered well, but tends to shrink. Weave—plain with swivel or lappet patterns. Width, 36", 40".

**Swiss rib.** See Rib.

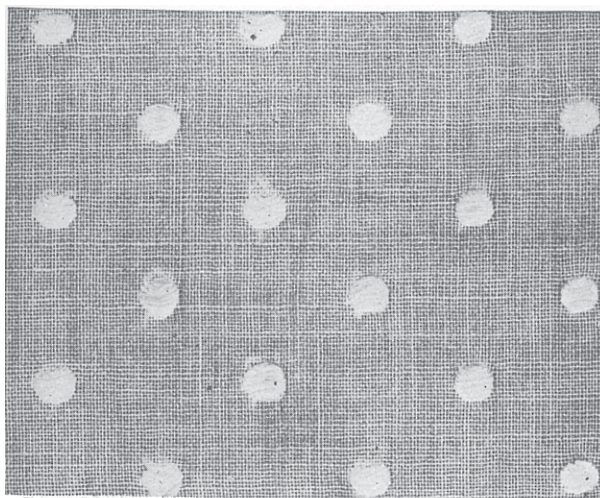
**Swivel.** Pattern of dots, as in Swiss, or small figures woven in ribbon. Differs from embroidery or lappet weaving. Swivel patterns are formed by tiny shuttles carrying extra weft, which weaves a figure (often in contrasting yarns or colors) while the regular weft or filling is operating. The wrong side has a shaggy appearance where ends of swivel weft have been cut.

**Tabby.** Same as plain weave (taffeta or muslin). Warp and filling alternate. Also called  $\frac{1}{1}$  weave.

**Table felt or padding.** See Silence cloth.

**Taffeta** (from the Persian word, "taftah"—to spin).

1. Plain, closely woven, smooth silk fabric, the warp and filling of the same or nearly the same count. May have



Swiss (lappet)



Swiss (swivel)

a small figure introduced on plain background. Skein, piece-dyed or printed. Tends to split if heavily weighted. Chiffon taffeta, soft and light weight. Uses: dresses, trimmings, millinery, hangings. Weave—plain. Width, 36", 40".

2. Fine, smooth, closely woven, light-weight wool fabric, much lighter and finer than Panama. Similar to nun's veiling, but has a smoother surface and harder twisted yarns. Like wool batiste, only closer and stronger. Washes and wears well. Plain color or light stripes. Often made with cotton warp and fine wool filling. Uses: men's shirts, women's and children's dresses. Weave—plain. Width, 40", 52".

**Tapa cloth.** Bark cloth, made without spinning or weaving, from inner bark of certain tropical trees in the South Sea islands. Valued for excellent printed designs, applied by primitive means.

**Tapestry.** Originally a hand woven fabric made with a bobbin worked from the wrong side on a warp stretched vertically or horizontally. The bobbin is carried only to the edge of the pattern and not from selvage to selvage. The Gobelin tapestries in France are most famous; used for wall hangings in cathedrals and palaces. The same methods are used in making tapestries to-day. Original designs are employed and historic patterns are reproduced.

A machine reproduction of tapestry is a yarn-dyed, figured fabric composed of two sets of warp and filling yarns woven on a Jacquard loom. Power loom drapery fabrics imitate real or bobbin tapestries. The wrong side is smoother than in a hand-woven tapestry. Wool, cotton, silk, rayon, and mixtures. Use: upholstery and wall hangings. Weave—Jacquard. Width, 50".

**Tapestry Brussels.** Kind of carpet imitating body Brussels. Yarn for pile printed, before weaving, to make design.

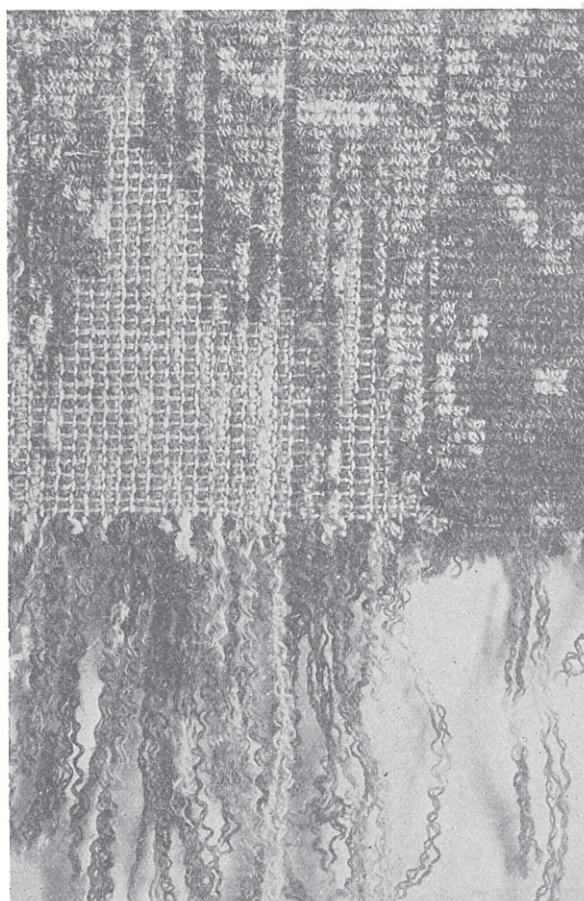
**Tarlatan.** Thin, very open cotton fabric highly sized. About as coarse as thin cheesecloth, only very wiry and transparent. White or colors. Will not launder. Uses: pageant costumes, doll dresses, Christmas stockings, bed canopies instead of mosquito netting, millinery purposes. Weave—plain. Width, 54", 60".





Tapestry





Tapestry Brussels  
Carpet imitating body Brussels. Note the printed yarn which is  
looped in weaving to make pattern

**Tartan.** Originally Scotch plaids in woolens or worsted with distinctive designs and colors for each Highland clan. Now, plaid wool or wool and cotton goods.

**Teasel.** A prickly bur used in woolen cloth manufacture for raising nap. Nap is raised on lower priced fabrics by use of fine wire brushes.

**Tentering.** A finishing process. Cloth is attached by the selvage on tenter hooks in a frame where it is stretched the desired width and dried. Small holes in selvage sometimes show marks of hooks.

**Terry.** Cotton fabric covered with loops on both sides. It requires two sets of warp and one of filling. One set of warp is held taut while weaving, the other set is released to form loops. 1. When woven in linen (rare) or bleached cotton in narrow widths, it is called Turkish toweling. Made in checks, stripes or plaids for bathrobes and slippers. Good Turkish towels have two loops (called double loop terry). A poorer quality with less absorbing surface has single loops on surface. Fancy towels made of mercerized yarns with colored Jacquard borders have least absorbing power. Mercerized loops are single and far apart. Wash cloths, which imitate terry, have loops fastened in the knitted fabric which pull out like a chain stitch when a yarn breaks. Turkish towels are often woven towel length and hemmed. Weave—looped pile. Width, 18", 20", 22", 24". 2. Drapery fabric is dyed or printed; reversible; rich texture; tends to hold dust and to fade. Uses: hangings, pillows. Weave—looped pile. Width, 36", 50".

**Texture.** The surface effect of cloth.

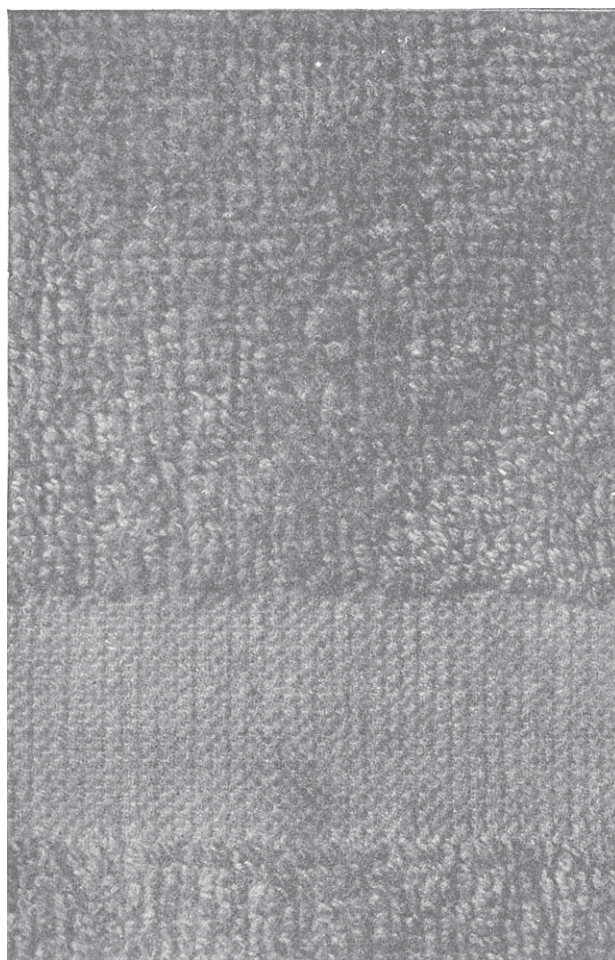
**Tezzo\*.** See Silk and Cotton Fabrics.

**Theatrical gauze.** Loose, open, linen fabric, more transparent than scrim. Originally for background of stage scenery. Desirable for window curtains because of transparency and beautiful texture. Natural linen color, yarn-dyed or striped. Uses: theatrical scenery, window curtains. Weave—plain. Width, 36", 72".

**Thread.** Made of cotton, silk or linen for sewing purposes or lace making. Contains three or more hard spun yarns twisted. Soft or glazed finish.

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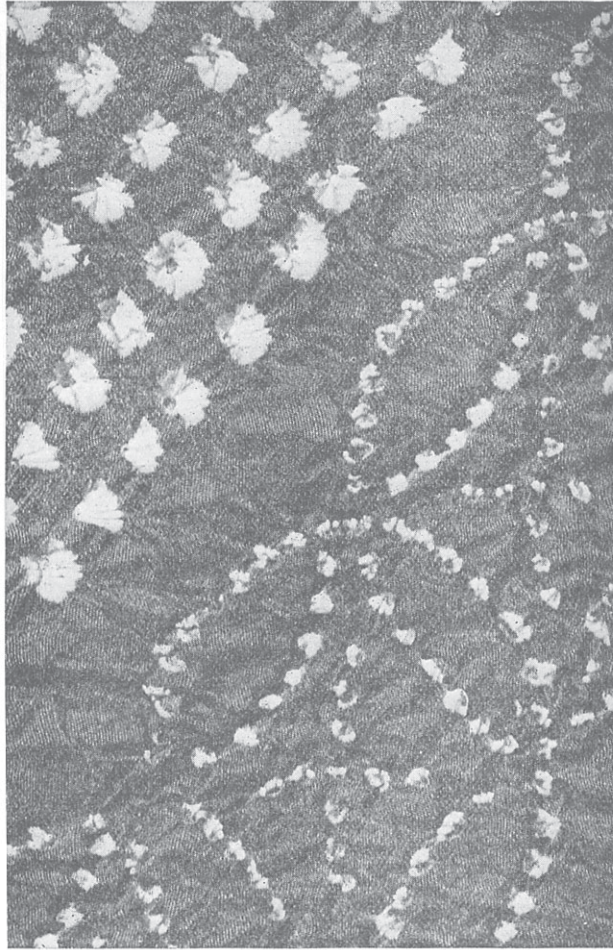
Turkish towel (looped pile). Terry  
Same structure as drapery fabric

- Thread and Thrum.\*** Trade name for a plain woven rug (plain color with striped borders). Cotton warp, worsted weft; reversible, in all sizes.
- Thread silk.** Pure silk yarn for woven or knitted goods. Not weighted. Means reeled, not spun.
- Three-quarter goods.** Measuring twenty-seven inches wide.
- Tickling.** Strong twilled cotton fabric with yarn-dyed stripes lengthwise in blue, red, brown, etc. on white. Similar to denim in texture; often herringbone twill in stripes; should be light in weight and feather proof. Uses: pillows, mattresses. Weave—twill. Width, 27", 30", 36", usually 30". See Art Ticking.
- Tied and dyed.** Hand method of producing patterns on cloth. Tied portions which resist the dye make the design. Imitated in machine printing.
- Tinsel.** Synthetic metal filament wound around cotton yarn used in metal cloth and metallic silk brocades. Imitates strips of gold and silver used in historic brocades and "cloth of gold."
- Tire fabric.** Firm cotton cloth to be vulcanized for automobile tires. Plain, fancy weave and "cord" fabric (heavy warp and light weight filling which disappears in vulcanizing).
- Tissue.** ("Tissu" Fr. for fabric.) Any light weight open fabric. Usually refers to tissue gingham. See Gingham.
- Toile** (pr. twal). General French term for cloth.
- Toile de Jouy.** Modern reproductions of famous French prints of the 18th century. Typical designs are landscapes and figure groups in monotone of brick red, blue or other colors on a white or light background. Widths, 30", 36", 45", 50".
- Top.** The longer wool fibres which are separated from the short ones (noils) by combing. Used for worsted yarns.
- Tow.** The shorter flax fibres separated by combing from the longer fibres (line).
- Toweling.** A term which covers the following fabrics: Crash, birdseye, damask, glass, honeycomb, huck, twill, Turkish and fancy weaves. See these terms. Toweling is often woven in linen with a stripe of cotton near the selvage.

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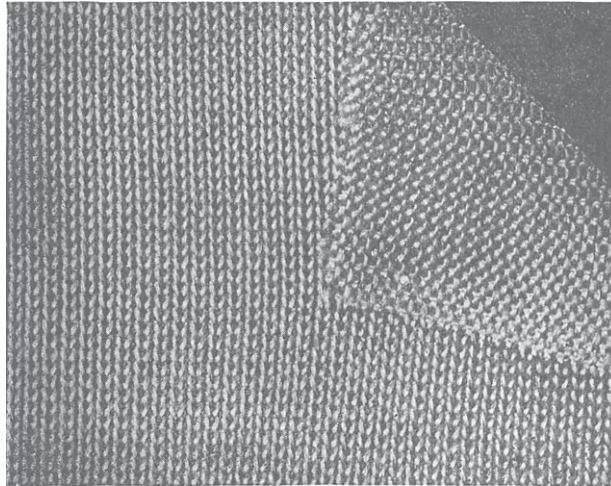
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Tied and dyed fabric  
Wrinkles show where portion of cloth has been tied to resist the dye

Such a towel could not be sold for all linen; yet, its usefulness is not lessened by the small amount of cotton, which lowers the manufacturing cost. Towels are often made for hotels or institutions with the name woven in a colored band or in white. Unbleached towels are less expensive than bleached and should wear longer. Cotton and union towels are harder to launder, they do not let go of the dirt easily and are more difficult to keep white than linen.



Tricolette

Durability depends upon the quality of yarns and weave. A cotton huck may outwear an all-linen crash towel. If linen yarns are made of short fibres and loosely woven or weakened by chemical bleaching, the fabric will not give good service.

**Tricolette** (pr. tree-co-let). Fabric knitted from rayon. Plain or novelty effects in knitting. *Trico Sham*\* is similar to tricolette but of finer gauge. Width, 36" and 54".

**Tricot** (pr. tree-co, French "tricoter", to knit). Old name for Jersey cloth. Modern warp knit silk fabric. On the right

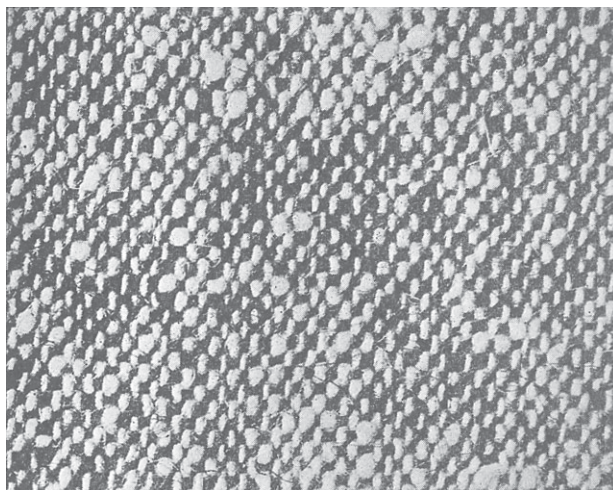
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side it appears like rib knitting and on the wrong side the ribs run cross-wise. Tends to shrink lengthwise. Not sold by the yard. Tricot for glove silk underwear is made in 3 grades or weights. Uses: underwear; cotton tricot is used for brassiers and girdles. Width, 14 ft.

**Tricotine.** Worsted dress goods, resembling gabardine, but woven with a double twill. Wears well but grows shiny. Very fine tricotine appears to be knitted. Uses: suits and dresses. Weave—twill. Width, 54".



Tweed

**Tubing.** Cotton or linen fabric, woven in tube form for pillow cases. Weave—plain. Width, 40", 42", 45".

**Tub silk.** See Wash silk.

**Tulle.** General term meaning a fine silk net. Similar to maline, with softer finish. Adapted to draping while maline makes stiff frills and bows on millinery or dress trimmings. Use: chiefly for wedding veils, also for party gowns. Weave—net. Width, 36", 72", 108".

**Turkey red.** Fast red on cotton made from vegetable madder or modern synthetic madder. Plain red calico dyed in this

way, called Turkey red. Madder dye originally brought from Turkey.

**Turkish toweling.** See Terry.

**Tussah.** See Pongee.

**Tweed.** Originally an all wool home-spun made in Scotland. Rough, coarse cloth made from worsted yarns containing wiry and heavy wools. Stock-or yarn-dyed. Very durable. Uses: coats and suitings, suitable for sports wear. Weave—plain, twill or herringbone twill. Typical designs are Gun Club (a large check over a small one) and Glen Check (similar to shepherd's check but in a variety of color combinations). Width, 54".

**Twill.** A fundamental weave admitting of many variations. Found in serge, denim, Canton flannel. Intersection of yarns form lines running to the right or left diagonally across the fabric.

**Umbrella fabric.** Made of silk or cotton or mixtures in plain or twill weave. Waterproofed; yarn-or piece-dyed; many colors; fancy borders. See Gloria.

**Unfinished worsteds.** Worsteds that have a nap developed on the surface which is given a very light shearing so that the woven pattern is obscured. Term, a misnomer because this process is a finish on worsteds which are ordinarily unfinished after weaving.

**Union.** Fabrics having warp and filling of different fibres, as union huck with cotton warp, linen filling.

**Upholstery velour.** See Velour.

**Upland cotton.** General classification of all cotton grown in the highlands of the South. Short staple cotton, distinguished from long staple as Egyptian, Sea Island and Pima.

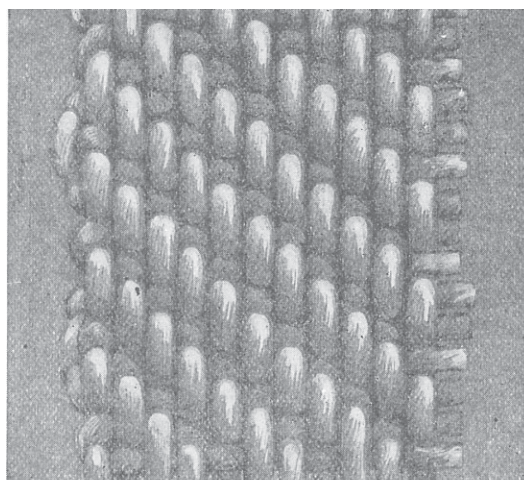
**Vanity silk.** Trade name for a kind of warp knit fabric used in underwear.

**Veiling.** Net fabric of cotton, silk or rayon. Fancy weaves and novelty patterns for face veils. Maline is a variety of veiling.

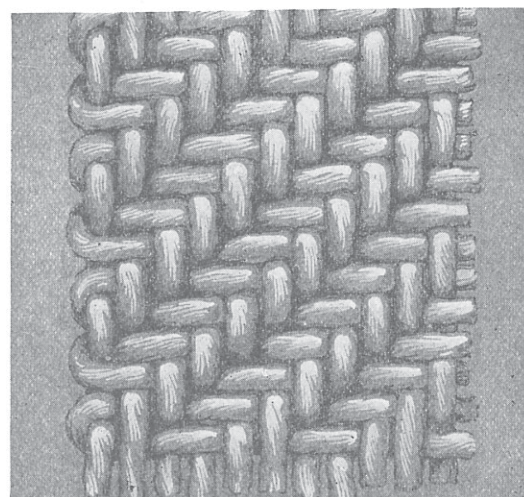
**Velour or velours.** (Fr. pr. ve-loor.)

1. General term for pile fabrics.

2. Drapery fabric with short pile, usually of mercerized cotton; also mohair and silk may be pressed flat (panned) or in figures. Rich looking and durable. Uses: hangings, couch covers, upholstery. Weave—pile. Width, 50", 54".



Twill Weave as in Denim



Twill Weave as in Serge

3. Woolen dress fabric, so called because of velvety texture due to dull rich looking nap. Catches dust. Poor qualities wear off and wrinkle. Uses: dresses, suits, coats. Weave—twill. Width, 54".

**Velvet.** Broad and inclusive term which covers all warp pile fabrics except plush and terry. Plush is a variety of velvet with a pile longer than  $\frac{1}{8}$  inch. Velveteen is a general term that should cover all weft pile fabrics though it is usually defined as meaning a cotton velvet. All-silk velvets have a silk back. Most velvets have cotton back and silk pile. May have silk warp and cotton filling with silk pile called "silk warp" velvet. The ground weave may be plain, satin or twill, formed by warp and filling. The pile loops are carried over wires and cut with a knife blade fastened at the end of the wire or by shearing. Many velvets are woven double, face to face, and cut apart while still on the loom by a small knife which moves back and forth like a shuttle. Velveteens and corduroys are weft or filling pile fabrics, having the pile loops or floats cut by a knife after weaving.

1. **Brocaded velvet.** See Brocade.
2. **Chiffon velvet.** Light weight, pile laid flat by pressing. Width, 40", 50".
3. **Costume velvet.** Wide velveteen (cotton velvet of good quality). Better grades have highly mercerized pile; beautiful texture, durable. Width, 27", 36", 40", 44". Uses: dresses and suits.
4. **Millinery or hat velvet.** Usually called Lyons velvet. Generally has an erect pile (silk) somewhat deeper than costume velvet. In poorer grades pile is not thick. Width, 17½", 18", 19", 24".
5. **Mirror velvet.** Highly finished velvet produced by calendaring. Pile is pressed flat or in different directions.
6. **Panne velvet.** Heavier, closer pile than chiffon velvet. High grade fabric having pile laid flat and pressed to give lustre. Weave—pile. Width, 18", 36".
7. **Paon velvet.** Heavier than panne with more pile which is also laid flat. Used for millinery purposes. Width, 18".

**Velveteen.** Fabric with short cotton pile made in imitation of silk velvet. Uses: dresses, coats, hats, linings for drawers and cases, theatrical curtains. Weave—pile. Width, 18", 20", 21".

- Venetian cloth.** 1. Mercerized cotton fabric, heavier than and superior to sateen; warp face satin, same as farmer's satin. Uses: linings, petticoats, aprons, pillows. Weave—satin. Width, 36". Better grades for lining men's overcoats. Weave—satin or twill or combination in stripes. Width, 32", 36", 54".
2. Fine, soft wool dress goods, resembling prunella only softer. Somewhat fulled but weave is apparent. Uses: dresses, suits. Weave—twill or warp satin. Width, 52", 54".
- Vicuña.** Wool from a small goat-like animal in South America. Very rare. Sometimes this name is given to a soft wool fabric.
- Vigoureux.** Named for the inventor. Process of printing worsted fibres before spinning to give a mixed color effect. Now used as a name of a fabric which shows a dark and light effect produced by vigoureux yarns.
- Virgin wool.** Any wool which has not been previously manufactured into cloth.
- Viscose.** See Rayon. One of the processes by which rayon is produced.
- Viyella.\*** See Flannel. *Clydella\**, a similar fabric contains less wool.
- Voile.** Thin, transparent, soft clinging cotton fabric made from two-ply yarns, tightly twisted. Dainty and durable. Poorer quality of single yarns becomes fuzzy and is difficult to handle in sewing.
1. **Cotton dress voile.** White, dyed or printed. Used for undergarments. Weave—plain. Width, 36", 40".
2. **Rayon dress voile.** Beautiful in texture.
3. **Curtain voile** in cotton or mercerized cotton is finer than scrim and a little heavier than dress voile. White, ecru, colors. Weave—plain, novelty, stripe or figure. Width, 40".
4. **Wool voile** dress goods is thin, smooth and wiry, made from worsted yarns very tightly twisted. Durable, does not wrinkle, sheds dust. Not always in style. Weave—plain. Width, 42", 50".

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**Wale.** Lengthwise line of loops which corresponds to direction of warp in woven fabric. Shows on right side of jersey and on both sides of rib knitting.

**Warp.** Set of yarns which run lengthwise in a piece of cloth. See End.

**Warp knit fabrics.** Used in gloves, underwear, and some hose. Made on a special knitting frame which produces a flatter, closer and less elastic material than other knit goods as plain or rib fabric. Some coats, suits and blankets, made of warp knit fabric and napped. Glove silk underwear is made of milanese or tricot. *Vanitysilk* is a trade name. *Swami cloth*,\* a trade name for a fabric used in brassieres; made of cotton, silk or rayon or combinations.

**Warp pile.** Fabrics woven so that an extra set of warp yarns form the pile.

**Warp print or shadow print.** Silks, ribbons and cretonnes woven with plain filling on a printed warp which gives a faint and shadowy design. See Chiné.

**Wash silk.** Fabrics finished for washing. Shirtings and dress fabrics in plain and novelty weaves. Usually 33".

**Waste silk.** Noils left after combing the unreelable filaments in the cocoon for spun silk. Carded and spun like cotton and used as silk shoddy in low grade mixtures or in novelty goods requiring a dull, limp effect. Used in cartridge cloth for machine guns.

**Watered.** See Moiré.

**Waterproofing.** Process of rendering fabrics waterproof or moisture repellent; the latter describes most so-called waterproof fabrics. Produced by treatment with aluminum salts. Actual waterproofing done by impregnating fabric with solution of crude rubber or preparation of oils and paraffin. See *Cravenette*\*.

**Weave.** The interlacing of warp and filling yarns with each other to form cloth.

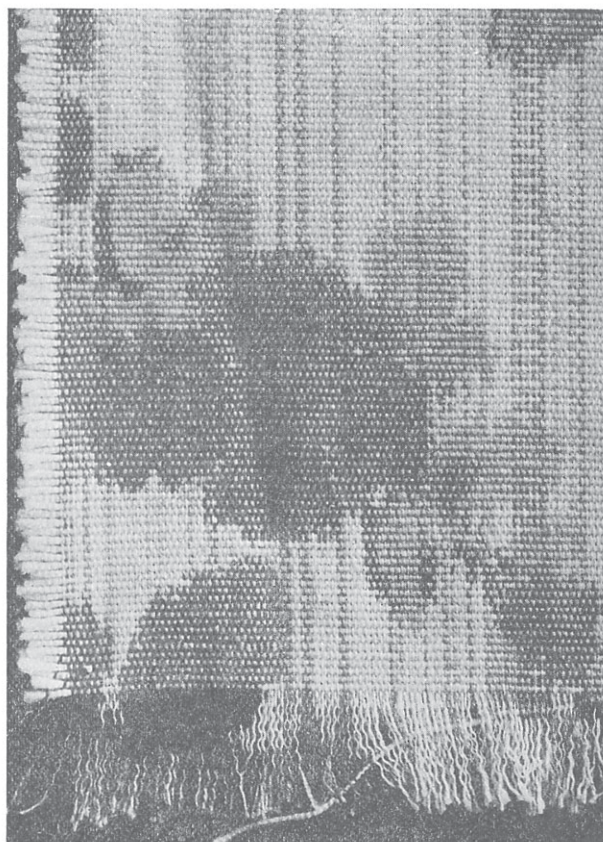
**Web.** Refers to warp or partly woven cloth in the loom.

**Weft knit.** Fabric constructed by simple knitting process as distinguished from warp knitting. A broken yarn causes a runner.

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Warp print or shadow print cretonne  
Note the printed warp

**Weight of cloth.** Many fabrics are sold by weight as wool goods for men's suits. Ex.: 8 oz. serge. See Duck.

**Weighting.** Addition of any substance to increase natural weight of fabric. Usually refers to weighted or "loaded" silks which contain metallic salts as chlorides or sulphates of iron, tin, aluminum or magnesium. Rice powder or sugar solution may increase weight of silk. Cotton or linen may be weighted with sizing, China clay, etc.

**Welt.** Hem or garter top of hose.

**Whip cord.** Twill with pronounced diagonal cord. See Gabardine.

**Width.** 1. Distance between two selvages of cloth. 2. Edges of flat knit fabric.

**Wigan.** Canvas-like cotton fabric, closer than crinoline, in varying degrees of stiffness. Colors, black, white, gray and tan. Uses: interlining for front of men's coats. Weave—plain. Width, 34".

**Wild silk.** Coarse, tan or natural color filament produced by species of silk worm which cannot be cultivated. Found in pongee.

**Willow.** Two-ply millinery fabric made from fine strips of woody fibre woven and pasted to crinoline. There are three grades; one stiff, one medium stiff and one without crinoline back. Originally made in Italy and Bohemia, but since the War largely in Japan. Uses: hat frames for velvet and cloth hats. Made in sheets, 24", 30".

**Wilton.** Kind of carpet, first made in England; cut pile fabric; back usually of cotton, may be hemp or jute; pile of woolen yarns or of worsted for the better grades, called Royal or French Wilton. Colors in pattern controlled by Jacquard loom. Carpet by running yard 27" wide or rugs made to standard sizes. The following, most commonly used: 27" by 54", 36" by 63", 4'6" by 7'6", 6' by 9', 8'3" by 10'6", 9' by 12', 9' by 15', 9' by 18'.

**Woof.** Some as weft or filling.

**Woolen.** 1. Cloth which has been fulled or shrunken after weaving, and finished by brushing or napping, shearing and polishing to a greater or less degree. Broadcloth and chinchilla cloth are examples. 2. Yarn used for knitting or weaving made from fibres (usually short and curly)

which have been mixed loosely before spinning. They tend to shrink more than worsted yarns.

**Worsted.** 1. Cloth made from worsted yarns as serge and gabardine. There is little finish after weaving which leaves a smooth surface with distinct weave. 2. Yarn made from fibres (preferably long and hair-like) which have been laid parallel before spinning. It is possible to combine some short fibres with long ones, but true worsted contains long wools. Worsted yarns are superior to woolen for knitting and carpets. They are necessary to produce a worsted type of cloth (see above).

**Yard goods or yardage.** Cloth sold by the running yard as distinguished from made-up garments, rugs, blankets, bed spreads, etc.

**Yarn.** A continuous strand of spun fibres used for weaving or knitting. Distinguished from thread, composed of two or more yarns (ply) united by twisting. Thread is used for sewing, not for weaving.

**Yarn-dyed.** Fabrics, the yarns of which were dyed before weaving.

**Zephyr.** 1. Fabrics of light and delicate texture described by this term. See Gingham. 2. Light weight yarn for knitting, crocheting and needlework.

**Zephyrized.** Knit underwear manufacturers have agreed to use this term to indicate a light weight bleached knit fabric.

**Zibeline.** Origin, "zibeline" meaning fur or pelt of a sable. Heavy woolen fabric having a long hairy nap laid down on the surface. Stock-or yarn-dyed; fulled, napped, brushed; durable, depending upon quality; hairs tend to wear off the surface. Uses: coats and suits. Weave—twill. Width, 54".

PART II  
TEXTILE TESTS

## II

### TEXTILE TESTS\*

#### The Purpose of Textile Testing

The composition of the material is the information most frequently sought. This is because textile fibres have certain qualities which their substitutes do not entirely duplicate. A substitute is usually less expensive than the original fibre and for many purposes may be equally desirable. When sold on its own merits there is no cause for complaint.

An adulteration means the employment of materials or ingredients which masquerade as those of greater worth. If cotton is pretending to be wool, the purchaser would like to know the truth.

#### Practical Analysis of Fabrics

To know a fabric is to know its characteristics, composition, uses, advantages and disadvantages.

All staple materials are in demand because of certain desirable qualities. French serge, for example, is durable, holds its shape, sheds dust, is inconspicuous, conservative looking. Velour, a wool dress fabric, is wanted, when in vogue, because it has a rich texture, is warm and durable. Linen dress goods has a crispness and freshness which no other fibre can imitate. Yet, these same materials have inherent faults which should be recognized by the purchaser. No test is needed to prove that French serge will wear shiny, that velour will pick up dust and that linen will wrinkle.

Knit fabrics are desirable because they are warm, soft, elastic, absorbent, light in weight, porous, easily washed, require no ironing and are durable. For certain purposes, however, they cannot compete with woven materials which

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\*A thorough analysis may include all the following tests in comparing two or more fabrics: width, weight per square yard, character, size and twist of yarn, composition of yarns on percentage basis, character of fibres, yarn count, weave, tensile strength, and abrasion tests, determination of dressing, filling or weighting, fading tests (fastness to light washing, perspiration, spotting) and shrinkage.

will keep out the wind, hold their shape (not become baggy) and give a trim tailored effect not possible in knitted goods.

Another quality of the fabric must not be overlooked, namely, the appeal of fashion or beauty. It is usually registered in the price. Quick passing novelties reflect the value of style demand in their initial cost and later in the "marked down price." Materials appear every season which sell because they are new, unusual, novel or beautiful. Their purchasers are not primarily concerned with durability, warmth, non-wrinkling or dust-shedding properties.

Every estimate of the value of a fabric must take into account its particular use. For example, tarlatan, a net-like fabric, is adapted to many uses for which other materials are unsuited; yet, it has little strength, will not launder and will fade. A cotton and wool mixture may be more desirable than a wool article because of the lowered cost and the decreased tendency to shrink.

#### Identification of Fibres

##### Characteristics

**Wool** has a springiness, or resiliency, which cotton does not possess. There is a distinct hardness and heaviness about wool cloth which contains cotton. Its presence may not lessen the strength or wearing quality of the cloth. In fact a tightly spun cotton yarn has greater strength than a light-weight, loose wool yarn. Cotton mixtures are usually inferior to all wool because they tend to soil readily, to fade and wrinkle. They give less warmth and are not so beautiful. Some fabrics because of their very nature demand the use of soft delicate fibres. Challis is such a material, while tweed contains coarse, wiry wools. Two grades of the same type of cloth may present a different effect. For example, a soft, light-weight, smooth French serge may be contrasted with a coarse, wiry storm serge. An excellent zibeline may be soft to the touch and rich in appearance, due to the quality of wool used, while a lower grade of the same fabric may be harsh and unattractive because of inferior remanufactured fibres.

**Cotton** tends to be inflammable, is non-absorbent, and soils readily. These qualities are exaggerated in unbleached cotton due to the natural oil or wax in the fibre. Absorbent



cotton has been purified so that it absorbs moisture readily. Cotton is dull and limp contrasted with wool or linen. In a mixture it usually appears dead white while wool is creamy; linen shows a lustre and creaminess peculiar to itself. Mercerized cotton soils less readily than cotton, because it is smoother. It takes and holds dye better, is stronger and more lustrous.

**Linen** is characterized by its smoothness, cleanliness, coolness, whiteness, crispness and lustre. The quality desired in towels and handkerchiefs is absorbency. When linen cannot be had, a union fabric, as a union huck towel, is preferable to cotton huck. Linen for bed sheets is a luxury. In warm climates it is valued for its coolness but is not so desirable in a damp climate because it absorbs moisture. For table damask linen is preeminent from the standpoint of beauty. Cotton may replace it for economy and utility.

**Silk**, when pure, is the strongest textile fibre known. Many silk fabrics do not justify this statement. They split or drop to pieces after brief wear. They are not pure silk but have absorbed (usually in the dyeing operation) chemicals which, when dried in the silk, crystallize and cut the fibres; or when in contact with perspiration or salt air, decompose, destroying the fibre.

**Rayon** should not pass for silk because it is less expensive and less strong. On the other hand, rayon deserves its own place as a textile material. It is not to be despised but rather welcomed as a fifth textile fibre, the product of the chemist's skill. Because it is manufactured from cellulose (cotton or wood pulp), it has the nature of the vegetable fibres. It can never be like silk because its chemical composition is different. The two fibres can usually be distinguished by physical characteristics; rayon has a higher lustre or gloss than silk. If two pieces of cloth or skeins of yarn are compared (other factors being equal), the rayon is heavier. If two fibres or filaments are compared (even with the naked eye), rayon is coarser (larger in diameter) than silk (except acetate rayon). It feels stiffer, is less elastic; breaks more readily, showing lack of strength. A peculiar quality, not found in any of the natural fibres, is its loss of strength when wet and complete regain when dried. This fact must be borne in mind

when washing materials made of rayon. They should be handled very carefully while wet. Rayon in white has an advantage over silk where materials must be washed frequently; it remains white after repeated washings, whereas silk turns yellow.

### Physical Tests

#### Creasing

If a fabric is creased between the fingers lengthwise or crosswise the sharpness of the crease indicates somewhat the kind of fibres present. This test is obviously not entirely reliable. It is most useful in the case of a fabric which cannot be cut (as a ready to wear garment). Linen creases more readily and holds creases longer than cotton. If a large amount of sizing is present this test is useless. Cotton creases while wool or silk (unweighted) springs back into its original form.

#### Examination of Yarns

The composition of cloth may often be ascertained by raveling two sides of a sample. The wool yarns are springy and lustrous compared with cotton. They take the dye differently. This is apparent in many mixed suitings where the warp is cotton and filling wool. In a shepherd's check the white cotton yarns are dead white and the wool is creamy. Certain fabrics always have cotton warp as brilliantine, mohair and *Palm Beach* cloth.

**Cotton and linen** are combined by using cotton warp and linen filling. Such fabrics are known as "union." This combination occurs in towels. It is fairly easy to recognize union (cotton warp, linen filling) toweling if two sides can be fringed. The cotton yarns appear dead white, dull and soft while the linen are stiffer, more lustrous and often creamy in color. An experienced person can readily tell by touch and appearance where cotton and linen have been thus combined. Very rarely are the two fibres twisted together in the yarn.

It may be a question as to whether the material is linen or cotton. All linens do not have equal lustre. In fact some mercerized fabrics have a much higher lustre than linens they seek to imitate. This is true of linen finish suitings and also of fine mercerized handkerchiefs.

Technical authorities describe many tests for linen. Most

of them tell how to identify a union fabric (cotton warp, linen filling). This is fairly simple without the aid of chemicals, if the cloth can be fringed. The cotton yarns appear dull and limp while the linen yarns are more lustrous and stiff.

**Silk and Wool** may be combined in poplin, bengaline, silk warp henrietta, silk warp flannel and in many novelty fabrics. The warp is usually silk and the filling wool. In brocades the filling may be silk which is thrown to the surface in a design.

There is a large class of fabrics which combine cotton warp with spun silk filling. Silk and cotton crêpe are of this type; also trade marked fabrics as *Seco*, *A.B.C.*, *Aledo*, etc. Many novelty effects occur in fancy stripes and Jacquard patterns.

**Rayon** is frequently combined with cotton in knitted and woven fabrics. Sweaters of rayon with mercerized cotton on the wrong side are said to be plated.

Rayon is sometimes combined with silk as in metalline, a gauze-like material used for trimmings. The warp is of silk in the gum, and the filling, rayon, untwisted in the yarn so that it reflects light as if it were metallic.

#### Examination of Fibres

The first, easiest and most practical test is to ravel yarns from the fabric and untwist them in order to observe the fibres. This will show the kind of fibres better than breaking the yarn abruptly. For example, the wool filling in silk poplin is so tightly twisted that it breaks like cotton. However, if the yarn is merely untwisted, the fibres appear kinky and show a spring or resiliency absent in cotton. Likewise, the difference between silk and rayon may be determined by the way in which the fibres break after the yarn has been untwisted. (See rayon.)

In ready-made garments, it is often possible to get a yarn from a seam or pocket where a sample for a chemical test could not be obtained. The breaking test is not infallible. If wool and cotton are mixed in the yarn another method must be used. (See chemical tests.)

In the case of a highly napped blanket, the cotton nap may be distinguished from wool by moistening the finger and brushing it across the nap. Cotton will lie down while wool will spring back and not absorb the moisture.

To compare rayon with silk untwist the yarns from the fabric in question and notice the size and stiffness of the fibres. Silk is finer and softer than rayon except in the case of *celanese*\* which closely resembles silk.

Linen yarns, if untwisted and slowly drawn apart, end in a long point of varying lengths, while cotton breaks more abruptly with a flaring, brush-like end. This test is not dependable because a highly mercerized yarn behaves like linen in this respect.

Many other combinations of fibres are made and many more are possible. Wild silk is woven with cultivated silk. Jute, flax, hemp, and cotton are mixed in yarns. Novelty weaves in wool goods offer the greatest opportunity for mixtures of fibres. In one piece of cloth as many as five kinds of fibres have been found, to say nothing of the various grades of one fibre. Microscopic tests must be used to distinguish the kinds of fibres in a mixture.

#### **Burning yarns**

If a cotton warp or cotton stripes in the warp have been woven with wool filling it is very easy to ravel the cloth and burn each set of yarns. Cotton burns with a flash, like paper leaving no deposit. Wool burns more slowly, forming a bead at the end and giving off an odor like burning hair or feathers. The odor is due to the sulphur in its composition.

Combinations of silk and cotton (cotton warp and silk filling as *A.B.C.*\* or silk warp and cotton filling as poplin are easy to identify. Separate warp and filling yarns and burn them; the cotton will flash up quickly, leaving no deposit, while the silk will burn more slowly and form a bead at the end. (Exception, weighted silk.)

Rayon yarns when burned act like cotton, flaming up instantly with no deposit\*\*, while silk burns like wool (animal fibre), leaving a bead at the end (exception—see Finishes).

#### **Moisture Test**

An old fashioned test for linen was to moisten the finger and place it under the material. If the moisture readily penetrated

\*\* *Celanese*\* or acetate rayon is the exception. This material does not burn like a vegetable fibre but melts and sputters forming a hard black knob which is similar to the residue from burned silk.

the cloth it was pronounced linen. The same test will give a similar result if tried on fine cotton, as batiste. There are many mercerized fabrics which respond to the test as if they were linen. On the other hand some linens are finished with a sizing which prevents the spread of moisture. Therefore, this test is of little value in identifying linen.

### Chemical Tests

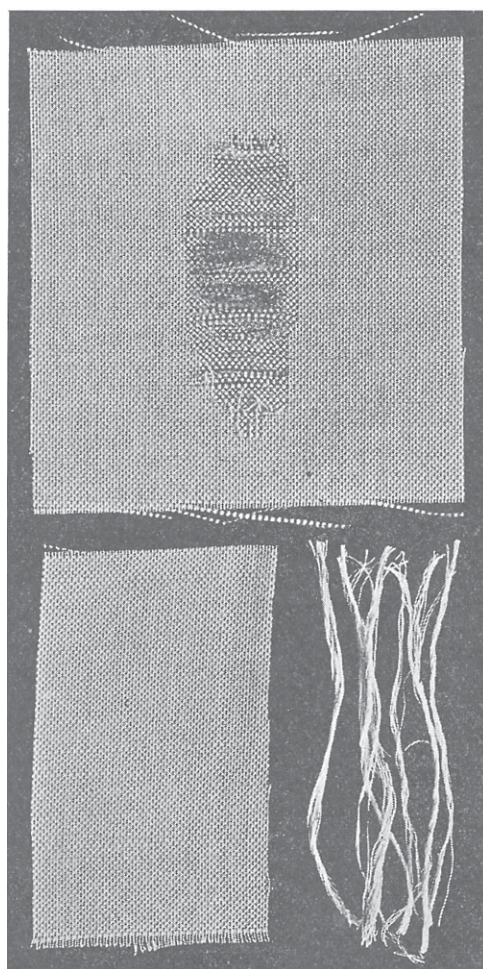
#### Lye Test

When cotton has been mixed with wool in the yarn it is necessary to use a chemical test. A simple home method may be employed. Place a sample (any convenient size) in a granite pan or cup and cover with a lye solution (one level tablespoon of lye to  $\frac{1}{2}$  pint of water). Cover and boil 15 minutes. The wool will be completely destroyed and the cotton left. Wash the remainder in dilute acetic acid (vinegar), and rinse. If an all wool piece is tried it will be completely dissolved. Silk, an animal fibre will also be destroyed. Shepherd checks combine cotton with wool in various ways. In many covert cloths the fine white yarn in the warp is cotton twisted around wool. This test reveals the amount and arrangement of cotton, linen or rayon. It is most satisfactory when the mixture contains one-fourth to one-half or more of cotton.

In the laboratory a 5 per cent solution of caustic potash or soda is used. The sample may be boiled in a beaker or evaporating dish and the residue washed in very dilute acetic acid. For quantitative analysis giving the percentage of cotton and wool see Woolman and McGowan "Textiles."

#### Flat Iron Test

Another simple test for the amateur to try on wool and cotton mixtures requires a 2 per cent solution of sulphuric acid and a hot iron. Place a drop of acid (using a glass rod) in the centre of the sample and put it between layers of paper to protect the sample and the table from the heat. Press with a hot iron. This test has the opposite effect of the previous one. Here the cotton is destroyed and the wool left. As soon as the vegetable fibres (cotton or rayon) have been blackened or charred, rub the sample in the hands. The cotton will dis-



Action of chemicals on cotton and wool mixture  
(Upper) Flat iron test  
(Lower) Lye test



integrate leaving the wool. Hold to the light and note the results. This test is not so satisfactory when there is very little wool in the sample.

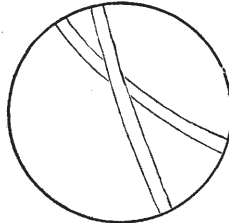
#### **Microscopic Test**

When a small amount of either wool or cotton is present in a mixture, when there are several kinds of fibres or when the quality of the fibres, as wool, is in question, micro-analysis is more satisfactory than a chemical test.

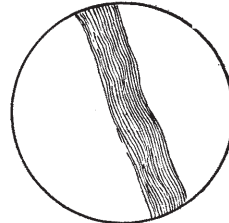
In some cases a sample for a chemical test cannot be obtained as in a knitted garment. A yarn may be pulled out where it will not show, and from it fibres may be secured for microscopic mounts. A little practice in the use of the compound microscope will enable any one to recognize the typical fibres. (P. 126.) There are cases where the opinion of an expert is needed. Much experience is necessary to judge the quality of wool fibres or the degree of mercerization. Fibres should be taken from warp and filling yarns and from several yarns in the case of plaids or mixtures. Not more than 5 or 6 fibres should be placed upon the slide at one time. Twenty or more mounts may be required to decide the percentage of fibres present.

This method of analysis is much slower than a chemical test but is more accurate and in some cases the only test to use. **Wool** fibres show epidermal scales which appear faintly in mohair. **Cotton** is a hollow fibre with a thin cell wall, flattened and twisted. The number of twists per inch vary widely in different grades of cotton. **Mercerized cotton** has a thickened cell wall with a part or most of the twists removed. The degree of mercerization determines the absence of twists. The straightness of the fibres causing them to reflect light gives mercerized yarns and fabrics a sheen resembling silk.

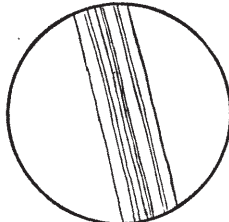
The only reliable test when in doubt about **linens** is to use the microscope. It is not difficult to tell cotton fibres which are spirally twisted from the long, straight, jointed linen fibres characterized by their tapering ends. The fibres may or may not show joints similar to those in bamboo. **Ramie** which in the yarn resembles linen is much broader and more irregular in structure.



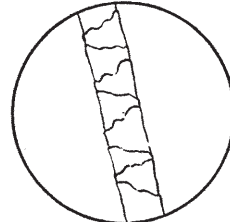
SILK



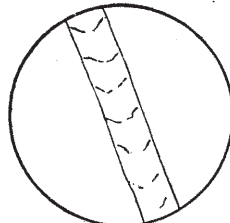
WILD SILK



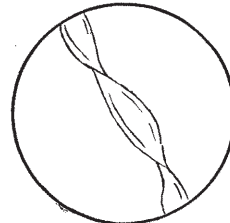
RAYON



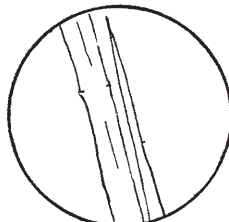
WOOL



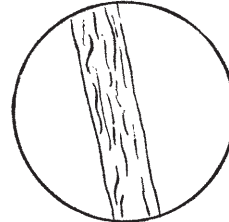
MOHAIR



COTTON



FLAX

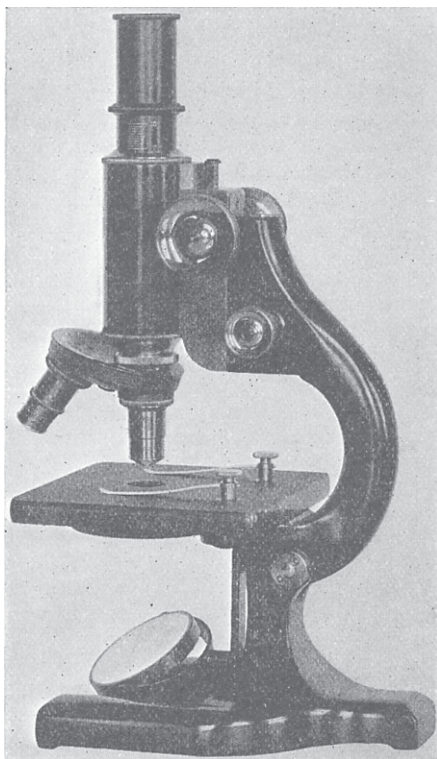


RAMIE

Microscopic drawings

These fibres are typical. Many variations occur. The viscose type of rayon is represented. Other types of rayon are finer, varying in diameter

**Silk** is like a solid glass rod with smooth surface reflecting light. At the beginning and the end of the cocoon the filament is not so uniform and may show uneven surface and



Courtesy of Spencer Lens Company

Microscope  
Necessary in final analysis of some fabrics

markings due to the irregularity of the flow of fibroin from the head of the silk worm. This however, is not typical of the best silk. **Wild silk** is easily distinguished from cultivated silk. The former is broader, and has fine parallel lines. **Rayon**

is usually broad with markings lengthwise as shown on page 126. By the newer methods of manufacture it is possible to stretch the moist filaments giving them approximately the diameter of silk. It is impossible now to tell silk from some varieties of rayon by the microscopic test.

#### Yarn\* Count in Cloth

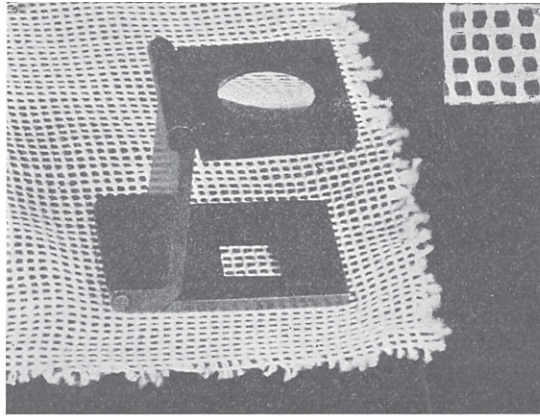
In comparing two grades of cloth for durability, the closeness of weave is an important factor. This is determined by counting the number of warp and filling yarns per inch. It is usually done with a small "pick glass" or "linen tester." This magnifying glass has an opening at the base  $\frac{1}{4}$  or  $\frac{1}{2}$  an inch square. By counting the number of yarns in this space and multiplying by 4 or 2 respectively the count per inch is obtained. The accompanying illustration shows a type of thread counting micrometer which facilitates the work.

For practice in making the yarn count, it is desirable to choose two fabrics whose texture is so different that the contrast in yarn count will be easily understood. Take, for example, calico† and batiste. Count (using tester) the number of warp yarns in one inch of calico at five different places. Record the average. Repeat for filling yarns. Compare with warp and filling count (taken in the same way) in batiste. Count  $\frac{1}{4}$  inch space and multiply by 4.

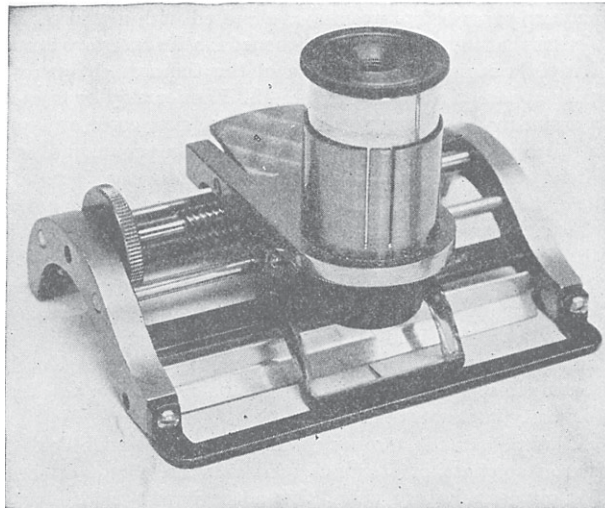
Calico		Batiste	
Warp	17	Filling	13
	17		13
	16		12
	17		13
	17		13
Average	$17 \times 4 = 68$		$13 \times 4 = 52$
	Calico $68 \times 52$ - Difference 16		
		Batiste $84 \times 72$ - Difference 12	

\*Yarn—The so-called threads of which cloth is made are technically named "yarns" to distinguish them from sewing thread composed of many yarns twisted together. The yarns running lengthwise of the cloth (parallel with the selvage) are called warp yarns or warp ends, and the crosswise yarns (those filled in by the shuttle in weaving) are called "filling" or filling yarns. Filling is also called woof or weft.  
For convenience and accuracy the term "yarn" will be used.

†Calico and batiste each vary widely in yarn count depending upon the grade of fabric. A typical medium grade of each was chosen for this count.



Pick glass (cloth glass, linen glass or tester)  
 $\frac{1}{4}$ " opening—magnification,  $2\frac{1}{2}$  dia. The count in this sample  
 is  $20 \times 20$



Thread counting micrometer  
 An instrument of this type facilitates the counting of yarns in cloth  
 9

The following points will be observed. Batiste has a greater number of warp and filling yarns to the inch than calico. The relation of warp to filling is closer in batiste (84x72) than in calico (68x52). In other words, the strength of batiste lengthwise and crosswise is more nearly uniform than in calico where the filling yarns are fewer in relation to warp. The calico has less strength crosswise than lengthwise (other factors being equal). It will further be noted that the yarns in calico are uneven in size, are lumpy and fuzzy. Those in batiste are more uniform in size and smoothness.

The above observations explain the difference in the cost of the two fabrics.

After contrasting calico and batiste, two grades of the same fabric, as sheeting, may be compared to determine which has the higher yarn count. This test is useful in checking up on goods ordered from specified sample.

#### **Finishes**

Many **cotton fabrics** and most **table linens** are given elaborate finishing processes after they leave the loom. In fact, the warp yarns before weaving are treated with a thin starch in order that they may be strengthened for the excessive strain of rapid weaving. This is true of the thinnest cheesecloth which apparently contains no starch. Fabrics may be treated to a size made of starch (wheat, potato, rice, corn, or sago) to which is added a filler as chalk, China clay or magnesium. When pressed between heavy rollers (see Calendering p. 28), the cloth presents a firm appearance, and may or may not be substantial underneath. The simplest way to discover the fabric minus the finish is to rub briskly a corner of the material, releasing the starch and other filling. By holding the cloth to the light it is easy to distinguish a close firm weave from a loose one held together by starch. Good quality in damask depends upon fine yarns and close weave. A loosely woven piece, starched and polished to look heavy, will lose its beauty with washing.

Most modern **silks** are weighted, *i. e.*, contain metallic salts as iron sulphate or stannous (tin) chloride. Some of these silks give satisfactory wear. One authority describes it as a "chemical fine art" to weight silks and not impair their strength. Chemically weighted silk may give reasonable wear



but it is not comparable with old fashioned silk (pure) which was often in service upwards of twenty years.

When silk splits lengthwise, it has evidently been yarn-dyed and the filling yarns only have received the bath of metallic salts. The warp yarns must be strong to stand the strain of weaving. Therefore, it is customary to weight the filling. Contrary to popular opinion, a stiff silk, as taffeta, does not necessarily indicate the presence of metallic weighting, nor a soft silk, as messaline, always imply the absence of weighting.

By creasing a silk fabric or ribbon lengthwise the presence of weighting can often be detected. In fact, when the silk has been tendered, mere creasing will cause it to split.

An unweighted silk burns like wool, forming a bead at the end, while weighted silk retains its form. The metallic deposit on the yarns prevents the flame from reaching the silk, therefore the silk does not burn. Unfortunately, this test will not reveal the lasting quality of the silk, for a piece may refuse to burn and yet give reasonable wear. It merely distinguishes a pure silk from one which contains metallic weighting. Metallic salts are not the only substances used to add weight to silk. Sugar, glucose, gelatin, glycerin, and paraffin are used for this purpose and to produce certain effects in finishing. Such treatment does not weaken the silk. Pongee, free from metallic weighting, is sometimes filled with a dressing of rice powder to make it appear heavy.

Wash silks as a class are usually not weighted. One can be reasonably sure that China silk, habutæ, pongee, and silk shirting will be free from metallic weighting. Fabrics combining silk and cotton, as cotton back satin, or silk and wool, (as poplin) generally have pure silk warp.

Silks as a rule are finished with some softening or stiffening agent as glycerine, wax or oil, gum arabic, dextrin, etc. This explains water spotting. The drops of water either do not mix with the oily constituent, or tend to dilute the sizing. The water spots may sometimes be removed by steaming or simply rubbing the silk in the hands.

Sizing and a high polish are not always deceptive. They are essential to certain fabrics as lining cambric and sign cloth. Likewise, the finishing process on table linen (see Beetling) is necessary to produce the smooth, leather-like surface on a

good table damask. Unless table linen has been put through this process, the laundry cannot bring out the characteristic polish on the cloth.

#### **Tensile Strength**

Fabrics purchased according to specifications are tested for strength on instruments designed for the purpose. Two or more fabrics being compared for quantity buying, as for a shirt factory, may be given a tensile strength test. The strength of a fabric is often used as a selling point.

Tensile strength depends upon the length and uniformity of fibres, size and twist of yarn and closeness of weave. A single ply yarn of long fibres however tightly twisted will not equal in strength a 2 or 3-ply yarn of the same specifications. This fact applies to yarns of which cloth is woven or knitted as well as to sewing thread and rope. A tensile strength record tells what strain the cloth will bear but it does not tell what effect laundering will have upon the life of the fabric nor does it tell the effect of surface wear.

#### **Surface Wear**

In some technical laboratories instruments are used to give the fabric an abrasion test which wears the surface in much the same way that constant rubbing wears on elbows, knees and coat fronts. Such tests are not possible for amateurs. The subject of surface wear is important especially in the case of wool coats and suits.

The shine which always develops on French serge is due to the nature of the material and cannot be prevented. The fine combed worsted yarns are very smooth; they are closely woven, producing a flat surface. The friction from ordinary wear produces greater smoothness which finally reflects the light. Frequent sponging, steaming and brushing tends to dull the shiny surface. When all projecting fibre ends have been worn down the cloth remains permanently lustrous. The shine is less apparent on a worsted suit of shepherd's check or a mixture than on navy blue or black.

#### **Laundry Tests**

Cotton and linen fabrics are worn out largely by washing. The effect of the laundering process on materials is the sub-

ject of much scientific investigation. Tests are made in many laundries for data on the wearing quality of certain fabrics, for example, sheets and men's collars. If one brand shows greater endurance, that one will be favored in future purchases.

Color tests are also carried on by progressive laundrymen. Their national organization maintains a research laboratory for the solution of many problems in which manufacturers of textiles are becoming interested.

Much popular instruction about the washing of rayon is given through advertisements and by sales people. Rayon should be handled carefully when wet, not rubbed or pulled or twisted violently. It is not permanently weakened but regains its strength on drying.

Mercerized fabrics are soft and should not be starched. The exception is mercerized table damask which is sized to give it the stiffness of linen. Mercerized curtain fabrics should be kept soft for beauty. The use of little starch however will keep them clean longer.

Wool fabrics should not be subjected to extreme heat because of their tendency to shrink. It is not always possible to tell which garment or article will shrink most because some wools have a greater tendency to shrink than others and some have been so treated in the bleaching process that they react differently from other wools which appear to be of the same quality.

The setting of colors in wash goods has long been thought to be accomplished by soaking the garment or article in salt water, vinegar or a solution of borax, alum, Epsom salt, salt Petre, etc. Extensive laboratory experiments have proven this test a fallacy. Colored materials were washed without treatment and duplicates soaked in the various solutions recommended. Both were dried in the sun. The processes had no permanent effect upon the staying power of the colors.

#### **Sun Fading**

There is a test for the effect of sunlight on colored fabrics which can be made in the laboratory by means of an instrument called the *Fade-ometer*. A violet carbon arc light accomplishes the fading in a short time. This is the only ac-

curate way to make such determinations because natural sunlight requires too much time for a practical test, and the degree of sunlight at one time of year or in one locality cannot be compared with another time or place. The increasing number of guaranteed colors on the market promises to eliminate to a large extent the difficulty of sun fading.

#### **Some Unsolved Problems**

There are complaints about the service of materials which so far have not been answered.

Some high grade woolen fabrics wrinkle. Soft delicate fibres are used which lack the resiliency of the coarser wools. Tests have been made to ascertain the wrinkling properties of coatings by making them slightly damp and subjecting them to pressure for a period which would correspond to sitting as in a theatre.

Some materials tend to sag and others to pull out at seams or to snag and rough up. The shrinkage of woolens and the sunburning of curtains are two other serious problems not yet solved.

## PART III

### CLASSIFICATION OF FABRICS

A—BY CLOTH STRUCTURE

B—BY FABRIC NAMES

C—TRADE NAMES

### III

#### A.—CLASSIFICATION OF FABRICS—BY CLOTH STRUCTURE

##### WEAVES

###### Fundamental

- Plain as in sheeting (page 81).
- Twill as in serge (page 108).
- Twill as in denim (page 108).
- Satin (warp face) as in satin (page 89).
- Satin (filling face) as in sateen (page 89).

###### Modifications of Fundamental Weaves

- Rib (plain) as in poplin (page 83).
- Basket (plain) as in friar's cloth (page 52).
- Herringbone (twill) as in fancy suiting (page 59).  
(Many varieties of twill.)

###### Figure Weaves

- Geometric as in birdseye and huck (pages 24, 60).
- Jacquard as in table damask, silk brocade, tapestry,  
etc. (pages 41, 27, 99).
- Figures introduced on leno weave (page 68).
- Lappet (embroidered dot as in dotted swiss) (page  
97).
- Swivel (dot or figure not embroidered, as in some  
swiss and voile) (page 96).

###### Other Weaves

- Leno as in marquissette (page 69).
- Pile (page 54).
  - Uncut as in Brussels carpet (page 100).
  - Looped as in Turkish toweling (page 102).
  - Cut (warp pile) as in velvet and plush (page 20).
  - Cut (weft pile) as in velveteen and corduroy (page  
36).
- Double cloth as in double faced chinchilla (page 45).

###### Combination Weaves

- Plain with satin stripe.
- Plain with twill stripe.

NOTE: Many novelty weaves cannot be classified.



**KNIT STRUCTURE**

Plain knit stitch as in jersey and tricolette (page 65).

Rib stitch as in Swiss rib underwear and hosiery tops (page 87).

Warp knitting as in Milanese (page 76).  
(Many novelty effects in knitting.)

**NETS AND LACES**

Filet net—related to gauze weave (page 75).

Bobbinet net—woven like chicken fence wire (page 75).  
(Many varieties of plain and fancy nets.)

**B.—CLASSIFICATION OF FABRICS  
AS FOUND IN THE AVERAGE DRY GOODS STORE\***

**Art Needlework—Domestics and Bedding—Draperies—  
Linens\*\*—Linings—Mechanical Fabrics—Millinery—Mis-  
cellaneous—Neckwear and Veilings—Rugs—Silks and Vel-  
vets—Wash Goods—Wool Dress Goods**

**ART NEEDLEWORK**

Ada or Java canvas	Cross-stitch or Penelope canvas
Art linen	Hardanger cloth

**DOMESTICS AND BEDDING**

Art ticking	Crêpe
Bathrobe cloth	Denim
Birdseye	<i>Devonshire</i>
Bunting	Diaper cloth
Calico	Drilling
Cambric	Duck
Canton flannel	Eiderdown
Challis	Flannel
Chambray	Flannelette
Cheesecloth	Galatea
Cheviot shirting	Gauze (surgeon's or hospital)
Cottonade	Gingham
Cotton covert	Hickory shirting

\*Mechanical and Miscellaneous fabrics are exceptions, not found in dry goods stores as a rule.

\*\*All fabrics sold at the linen counter.

<i>Indian Head*</i>	Pajama cloth
Japanese crêpe	Percale
Jean	Plissé
Khaki	<i>Ripplette*</i>
Kimono crêpe	<i>Romper cloth*</i>
Kimono flannel	Rubber sheeting
Long cloth	Seersucker
Middy twill	<i>Serpentine crêpe*</i>
Mosquito netting	Sheeting
Muslin	Tarlatan
Nainsook	Ticking
Oilcloth	<i>Viyella flannel*</i>
Outing flannel	

**DRAPERIES**

Armure	Holland shade cloth
Artificial leather	Madras
Art ticking	Marquissette
Austrian shade cloth	Mohair plush
Awning stripe	Monk's cloth
Bobbinet net	Novelty net
Brocade	Oilcloth
Brocatelle	Printed linen
Burlap	Rep
Cable net	Sateen
Casement cloth	Scrim
Chintz	Shiki rep
Crash	Silkaline
Cretonne	<i>Soiesette*</i>
Damask	<i>Stafford cloth</i>
Denim	Swiss
Druid's cloth	Taffeta
Felt	Tapestry
Filet net	Terry
Fortuny print	Theatrical gauze
Friar's cloth	Toile de Jouy
Frisé	Velour
Glazed chintz	Voile
Grenadine	

\*Reg. U. S. Pat. Off.

**LINENS\*\***

Art linen	Grass cloth
<i>Basco*</i>	Holland
Butchers' linen	Honeycomb toweling
Cambric	Huck toweling
Canton linen or Grass cloth	Lawn (handkerchief)
Crash	Momie
Damask	Sheeting
Embroidery linen	Silence cloth (felt)
Felt (cotton)	Terry
Glass toweling	Turkish toweling

**LININGS**

Alpaca	Merveilleux
<i>Buty Chine*</i>	Percaline
Cambric	Sateen
Canvas	Serge (cotton or mohair)
Coutil	Silesia
Crinoline	Silk and cotton fabrics as
Hair cloth	<i>A. B. C.,* Seco, Silcot,* etc.</i>
<i>Heatherbloom</i>	Silkaline
Lawn	<i>Soiesette*</i>
<i>Lingette*</i>	Venetian
Lustrine	Wigan

**MECHANICAL FABRICS**

Bolting cloth	Felt
Duck	Sign cloth

**MILLINERY**

Buckram	Mourning crêpe
Cape net	Panama cloth
Crinoline	Rice net
Duck cloth	Tarlatan
Flexible net	Velvet
Hatters' plush	Willow

\*Reg. U. S. Pat. Off.

\*\*All fabrics sold at the linen counter.

## MISCELLANEOUS

Balloon cloth	Tire fabric
Bolting cloth	

## NECKWEAR AND VEILINGS

Blond net	Metalline
Bobbinet net	Point d'esprit net
Georgette	Silk net
Maline	Tulle
Metal cloth	Veiling

## RUGS

Axminster	<i>Klearflax</i>
Brussels (body)	Scotch wool
Chenille	Smyrna
Fibre	Tapestry Brussels
Grass ( <i>Crex</i> )	<i>Thread and Thrum*</i>
Ingrain	Wilton

## SILKS AND VELVETS

Armure	Messaline
<i>Baronette satin*</i>	Moire
Bengaline	Ottoman
Brocade	Peau de Soie
Charmeuse	Plush
Chiffon	Pongee
China silk	Poplin
Corduroy	<i>Pussy Willow*</i>
Crêpe-back satin	Radium
Crêpe de Chine	<i>Rajah*</i>
Duvelyn	Satin
Eponge	Serge
Faille	Shirting silk
Flat crêpe	Sports silk
Foulard	Spun silk
Gros de Londres	Surah
Grosgrain	Taffeta
Habutæ	Tricolette
<i>Khaki Kool*</i>	Velvet
Kimono	Velveteen
<i>La Jerz*</i>	

\*Reg. U. S. Pat. Off.

## WASH GOODS

Airplane cloth	Madras
Batiste	Organdy
Broadcloth	Outing flannel
Crash dress goods	Oxford shirting
Crêpe (silk and cotton)	Persian lawn
Corduroy	Piqué
Dimity	Poplin
Fast color suitings	Prints
<i>Flaxon*</i>	Ratiné
Foulard (cotton)	Rayon and cotton fabrics
Gabardine	<i>Sherette*</i>
Gingham	Silk and cotton fabrics
India linon	<i>Soiesette*</i>
Lawn	Swiss
<i>Linene</i>	Tissue
<i>Linno*</i>	Voile

## WOOL DRESS GOODS

Albatross	Felt
Alpaca	Flannel
Astrachan	Forestry cloth
Balbriggan	Frieze
Beaver	Fur fabrics
Bedford cord	Gabardine
Bolivia	Granite cloth
Bunting	Henrietta
Brilliantine	Homespun
Broadcloth	Jersey
Camel's hair	<i>Kasha*</i>
Cashmere	Kersey
Challis	Mackinaw
<i>Charmeen*</i>	Melton
Cheviot	Mohair
Chinchilla cloth	Nun's veiling
Cotton and wool mixtures	<i>Palm Beach*</i>
Covert	Panama
Crêpe	Poiret twill

\* Reg. U. S. Pat. Off.

Poplin	Tricotine
Prunella	Tweed
Ratiné	Unfinished worsted
Serge	Velour
Shepherd's check	Venetian cloth
Suiting	Voile
Taffeta	Zibeline

## C—TRADE NAMES USED IN THIS BOOK\*\*

A. B. C.*	Kapock*	Rajah*
Aledo	Kasha*	Ripplette*
Basco*	Kiddy Kloth*	Romper*
Baronette*	Khaki Kool*	Roshanara*
Boott Mills*	Kindergarten*	Ruff-a-Nuff*
Boyduroy*	Klearflax*	Seco
Buty Chine*	La Jerz*	Sello*
Celanese*	Lansdowne	Serpentine*
Chamoisette*	Linno*	Shantung
Chamoisuede*	Linette*	Sherette*
Charmeen*	Lingette*	Silcot*
Cinderella	Lissue*	Snia-fil
Clydella*	Luminette*	Soiesette*
Cravenette*	Lustron	Stafford
Daisy cloth*	Marvella*	Sunfast
Diana*	Milo Sheen*	Surf
Devonshire	Orinoka*	Swami*
Duretta*	Palm Beach*	Tezzo*
Everfast*	Pamico*	Thread and Thrum*
Flaxon*	Peter Pan*	Trico Sham*
Friezette*	Polly Prim*	Viyella*
Heatherbloom	Polo*	Year Round*
Indian Head*	Puritan Prints	
Italian silk*	Pussy Willow*	

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\*Reg. U. S. Pat. Off.

\*\*Choice explained in preface.



PART IV  
LABELLING OF TEXTILE FABRICS

#### IV

#### LABELLING OF TEXTILE FABRICS

##### **Rulings of the Federal Trade Commission which Pertain to Textile Labels**

Most states have laws governing false advertising. When a statement is interpreted as misleading a prosecution may follow.

Some important rulings of the Federal Trade Commission are given below:

Order "to cease and desist from the use of cashmere for articles not composed entirely of wool," 1922.

Fine camel's hair wool or fine natural wool cannot be used for knit goods composed only in part of wool or camel's hair, 1920.

Winsted Hosiery Company ordered "to cease and desist from employing or using the labels and brands wool, merino, natural wool, gray wool, worsted or any similar descriptive brands or labels on underwear, socks or other knit goods composed only in part of wool except that such terms may be used where joined with the name of the other staple or staples contained in the knitted fabric", 1921. Decision sustained by the Supreme Court, 1922. This is referred to as the famous Winsted Hosiery case. It sets a standard for mislabeling of any article containing other fibres than wool.

The National Better Business Bureau of the Associated Advertising Clubs of the World exists to foster truth in advertising. This organization, with its local bureaus in all the principal cities, checks statements made in advertisements, sponsors city ordinances for fair business practices, conducts educational programs and prosecutes offenders.

Recommendations are made by the National Better Business Bureau which influence trade practices. For example, the definitions of full-fashioned and fashioned have had an effect upon the labelling of hosiery. Silk may be used only when the textile is woven entirely of genuine silk filament of the silk cocoon. The following terms are prohibited unless the article consists of all pure silk of the silk cocoon: Fibre silk, cilk, silk foot hose, art silk hose, American silk, silk lisle, oriental sylk, pure thread silk, and pongee

## **PART V**

**BOOKS OF REFERENCE ON TEXTILE FABRICS**

V

BOOKS OF REFERENCE ON TEXTILE FABRICS

Dictionaries:

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vised 1926.

NOTE: Only those books are listed which give some infor-  
mation on fabrics. There are many excellent references not  
included here.