(A) 70 parts Senegal Gum solution 1:2 are gradually added to

25 to 250 " Ciba-Blue 2 B D and slowly stirred with a brush.

200 "Dextrine Thickening 1:1 are added, whilst still stirring, and the whole filtered through a hair or silk sieve.

(B) 140 parts Potash or Soda Ash

100 to 60 "Senegal Gum solution 1:2

355 " 70 " Dextrine Thickening 1:1, are warmed together until the alkali is dissolved, where-upon

20 " 120 " Hydrosulphite NF conc. are added at 120° F.

Mixtures A and B are then mixed together at a luke-warm temperature.

After printing, the goods are dried and steamed for 2 to 3 minutes at 212 to 216° F.; after which they are rinsed and soaped for \$\frac{1}{4}\$ hour at the boil, with 2 to 4 lbs. Soap and 1 to 2 lbs. Soda per 100 gallons water.

For yarn printing, the same instructions may be followed, with the exception that the printing paste must be reduced 30 to 50 %, and instead of the Senegal Gum solution, Gumtragacanth Thickening 60:1000 is used. The yarns are steamed after printing in the apparatus usually employed for yarn-printing, in which case, the air present is previously displaced by steam. After steaming, they are advantageously allowed to green for a short time, then rinsed and soaped as hitherto indicated.

FOR HALF-SILK PRINTING instructions just given may be followed.

Manufacture of Multicolored Fabrics.

Hitherto dyed cotton goods containing differently colored wool effect threads could only be produced by very complicated methods. Lately a Mr. M. Böhler of Germany, patented a discovery of his, i. e., that excellent effects can be obtained if the material consisting of cotton and wool is subjected to a preliminary treatment with formaldehyde and tannin, and then dyed in a cold or lukewarm bath with sulfid colors.

When proceeding in this manner the coloring matter is absorbed by the cotton only, the wool remaining colorless; the latter may then be dyed with acid colors to any desired shade.

For example: Treat the material, which should be well washed, and may also be mercerized, for one hour in a boiling hot bath containing 20 to 25 grams formaldehyde and 2 to 5 grams tannic acid per liter of water, then rinse and dye in a cold or lukewarm dye bath prepared with the necessary sulfid color which has been dissolved with the addition of sodium sulfid and glucose. Prepare for instance, a liquor with 20 to 30 grams immedial black NNG conc. (katigene black, sulfur black, etc.), 20 to 30 grams sodium sulfid crystals, 40 to 60 grams glucose, 2 grams soda ash, 2 grams Turkey-red oil, 5 to 20 grams Glauber salt, I liter

water, boil for about 10 minutes and allow to cool to 20 to 40° C. Dye at this temperature for about $\frac{1}{2}$ hour, squeeze well and rinse thoroughly.

If it be desired to produce colored wool effects instead of white ones, the wool may be dyed with suitable dyestuffs before or after dyeing the cotton.

DECATIZING WOOLENS.

(Specially translated for Posselt's Textile Journal after the German by—B. Bratkowski—B. Kozlick.)

Decatizing (Ger. Dekatiren), derived from the French word décatir—to impart lustre, means taking lustre away, which meaning however is not absolute, since in many instances the press lustre of the face of a fabric is intensified by the present decatizing processes.

The nap of a fabric, i. e., the wool fibres protruding from its body structure, after being laid parallel near each other during the various finishing stages, are finally, during the process of pressing (whether hydraulic or rotary) pressed down onto the body of the fabric, a feature which imparts to the face of such fabrics their characteristic lustre. This nap thus laid, i. e., pressed down, provided the fabric is not decatized, will when the latter is made up into garments, during wear, soon leave this position, the various fibres attaining a varying raised position, some becoming raised higher than others, presenting in turn a roughened face and which in turn deteriorates the value of the garment to the wearer. This however will not be the case provided the fabric in question was decatized, and when then the nap will remain laid down in the garment in its pressed position, i. e., its finish will be preserved for a considerably longer time.

Another disadvantage to woolens not decatized is the fact that during the wear of the garment, drops of water, i. e., rain, will be the cause of showing spots, on account of destroying in these places the lustre of the fabric.

If however a larger space of a fabric not decatized becomes wet, say for example the wearer of the garment in question is caught in the rain, then not only is the lustre of the cloth lost, but at the same time the cloth, i. e., the garment in question will shrink, with the result of losing its value to the wearer.

Decatizing, as we might say, transforms the original press lustre, and which is not fast, into a somewhat less intense lustre, but which in its nature is considerably faster, *i. e.*, a lustre which will not be lost by subjecting the fabric afterwards to moisture, nor by successive following gigging and shearing, nor during the wear of a garment made from cloth that has been decatized.

Decatizing, besides being practised in connection with fabrics after the same have been pressed, may also be used as a sub-process of finishing and preceding pressing, *i. e.*, be practised previous to the completion of the gigging and shearing process.

For this decatizing process we must have a moist,

strong heat (either in form of steam or hot water) and which softens the wool fibre, giving it in turn an opportunity to re-form itself, since it must be remembered that the bending down of the fibre, respectively the fixing of the lustre to the nap, is one of the main objects of decatizing. As will be readily understood, the same as with any other process, the procedure must not be overdone, *i. e.*, the fibre must not be subjected too long a time to this moist heat, or its strength will be impaired, the fabric in question losing considerably then in its strength, elasticity and durability.

There are two methods of decatizing in use

(1) Dry decatizing, and where hot steam is used as the medium, and

(2) Wet decatizing and where hot water, event-

ually also steam is used.

For the process of decatizing, the fabric stretched out in its open width, is under a strong tension and clear of all folds or creases, by means of any suitable winding device, wound upon a hollow, perforated, copper or brass cylinder, provided all over its surface with fine holes. After winding on the entire length of the fabric, several layers of a somewhat wider coarse cotton linen, jute or ramie cloth apron is then wound on, after which the roll of cloth, *i. e.*, the apron, is tied down on both sides, with ropes around the stud-shafts of the cylinder. These two stud-shafts of the cylinder, as will be readily understood, are hollow, since they are the passage ways for entering or exit of the steam.

To prevent the formation of water spots in the fabrics, the copper or brass cylinder is also covered with a few layers of coarse cotton, linen, jute or ramie cloth, previously to winding on the fabric, so as to prevent drops or parts of water, as taken along by the steam, from coming into contact with the fabric to be decatized.

This system of dry decatizing is known as Cylinder Decatizing and whereby the cylinder may be arranged either standing or lying down, with or without covering or box. Under all circumstances be sure to wind sufficient layers of the coarse cotton, linen, jute or ramie cloth around the outside of the roll of fabric to be decatized, in order that the outside layers of the latter receive sufficient heat and do not cool-off too quickly. If placing the cylinder in standing position, steam is only entered through one of the hollow shafts, the other being closed, whereas if dealing with a machine where the cylinder is placed lying down, steam is then entered from both sides, i. e., through both of the hollow shafts. The length of time the fabric is subjected to the influence of the steam, depends upon the effect (amount) of decatizing desired, as well as the amount of steam pressure present, final results being in the practise known as: (a) Dull, (b) Half-dull, (c) Lustre Decatizing.

As mentioned before, cylinder decatizing is practised either with standing (vertical) cylinders or laying down (horizontal) cylinders, the latter system being the one generally preferred; again the process, in either instance, may be carried on with the cylinder being left open or enclosed in a metal cover, or box,

for the process. The latter arrangement is the one to be used, the first, if met with, being only used for the sake of a lower cost of the machine.

Machines with standing cylinder have several disadvantages as compared to those in which the decatizing cylinder rests horizontally against which there is only one point of advantage. The transposing of the cylinder from its horizontal position in which it is wound, in the vertical position required in the process, is not only tedious but at the same time a loss in time. To overcome this trouble, some time ago, a patent was taken out here and abroad for a device for quickly transferring the cylinder, but which device can not be added to decatizing machinery in operation; again from a practical point of view, the device in itself was of little, if any value.

Another point of disadvantage to standing cylinders is the fact that the condensed water in the fabric, on account of its specific gravity, will try and percolate between the layers of the fabric, always more or less to the bottom of the roll of cloth, with the result of uneven effects in the decatizing in the fabric and which will clearly show afterwards in the finished fabric. The point of advantage in favor of standing cylinders is found in that with the standing cylinder (with a cover, i. e., hood) the condensed water, as forming inside the hood, will run down on the sides of said hood, without danger of dropping onto the roll of cloth.

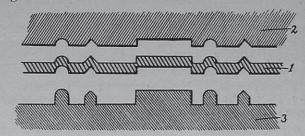
(To be continued.)

Embossing Elastic Webbing.

The purpose of this new (patented) process is to cheaply emboss flat commercial webbing with any suitable ornamental design without injuring the elastic properties thereof and which embossed design will not pull out and be destroyed on stretching the webbing.

Heretofore raised designs have been produced on such webs by weaving or embroidering the design dur-

ing the course of manufacture.



In the accompanying drawing 1 indicates the elastic webbing, 2 the shallow female die and 3 the high male die or counter.

The new process comprises the use of a very high male die or counter and a very shallow female die, both bearing the design so that the pressure will be received by the webbing only on the lines of the design and not on the body or flat part, *i. e.*, the life of the rubber threads and that of the regular yarn is preserved, and in this way differs from that used in embossing leather, paper, etc., in this respect. The pressure employed is quite heavy being sufficient to

give the webbing a permanent set wherever the dies bear.

The temperature to which the dies are heated is about 200° F., sufficiently high to mold the rubber strands lying between the dies. The pressure is quickly applied and released so that the vulcanizing effect of the heat is negligible.

The best results are obtained by elongating the webbing before the heat and the pressure are applied giving the embossing a clearer and sharper appearance and to enable it to hold its outlines under all conditions; the webbing contracting to its original length after the embossing is completed and the tension is released.

Special Cotton Finishes.

Bodice and Corset Fabrics. The principal difference between bodice and corset fabrics is that the former are of better quality. They contain more yarn than dressing, the latter more dressing than yarn. The fabric is gassed, bleached, dyed and dried. When dry it is beamed and dressed on the back. Mr. H. Dorning, writing in the "Deutsche Färber Zeitung," gives the following recipes:—

	wheat													
	starch													
White	glucose												4	"
Water													TO	0211

Boil the whole in a vessel with a closed lid for 15 minutes, stirring the whole with a mechanical stirrer. After allowing it to cool to about 72 deg. F., treat the fabric with it. Care must be taken that the squeezing bowls are so adjusted that the fabric gets the proper quantity of the dressing. After dressing dry allow to cool. It is then a good plan to sprinkle the goods with lukewarm water containing a little lard. Then mangle, right sides folded together. Bodice stuffs should have a softer feel than corset fabrics.

Another mixing for bodice fabrics is as follows:-

Wheat starch												3	lbs.
Glycerine wa	X											3	**
Dornimine . Lard			200	*	01	•		8		1		2	
Water													

These are boiled together in the open for from 30 to 45 minutes, or in a closed vessel for 15 minutes. The goods are then dressed with it as before directed. After the sprinkling with lard water, calender cold. If the calender has three bowls, run the goods between the second steel bowl and the paper bowl under it. With a five bowl calender, however, run them between the steel bowl and the bowl next above it. The pressure must not affect the appearance of the weave.

For corset goods which have to be very stiff, the following may be used.

Epson salt solution, 25 deg. B	7	gall.
Potato starch	15	lb.
Maize starch	15	"
Dornimine	20	**
Lard		
Linseed mucilage	9	S.
Water	00	gall.

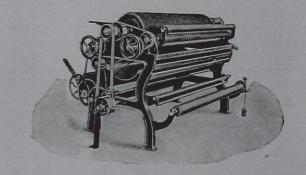
Boil these together for a short time and use the mass on both sides as hot as the dye present will stand. Then dry at as high a temperature as possible on the cylinder drying machine. The fabric thus heavily filled consists of a cotton warp and a vigogne filling and undergoes no treatment after dressing.

There are besides the fabric already mentioned goods bleached and dyed in the piece which are used both for bodices and corsets. These fabrics are gassed on both sides, bleached in the usual way with chloride of lime in a bath containing one lb. of bleach to 50 gallons of water, and with an acid bath of \(^3\)4 deg. B. After rinsing, boil in a soap and soda bath. Boil under pressure for 8 or 9 hours, and rinse, dye and dress according to the use to be made of the fabric.

THE BLEACHING, DYEING AND FINISHING OF KNIT GOODS.

(Continued from page 192, Vol. III.)

NAPPING. This is a process extensively practised with knit goods, for the purpose of raising a nap or pile on the back of the structure, in turn imparting warmth to the garment; the nap or pile coming next to the body of the wearer in turn permits air more readily to be retained in the pores of the fabric thus treated, and when said air acts as a poor



conductor to the heat of the body, hence keeps the wearer of such underwear comfortably warm. Napping regularly constructed knit goods would mean destroying the strength of the fabric in the interest of raising a nap, for which reason a back thread or a back structure, loosely stitched to the regular structure, is added, the napping then dealing only with this additional structure, the regular fabric structure then retaining its full strength. Goods thus treated are known by the trade as fleece lined underwear. However, there is also a disadvantage to napped underwear in the tendency of the thus loosened fibres to become detached from the fabric during wear, or to accumulate into hard lumps in washing. A long, well combed nap will present this tendency more pronounced to a short close felted nap. On page 164 (January issue) an illustration in connection with descriptive matter of such a fabric, primarily designed with a view of napping it in the finishing process, is given. The fabric then is shown face up, the latter stitches being shown shaded, while the back structure is shown in outline threads.

The accompanying illustration shows us such a

napper, specially designed for handling knit goods in the roll, and where a very thick and even nap is desired. The napping is done in the web or piece, one run of the fabric through the machine being in most instances all the napping required. The goods may be wound on the lower roll in front, or run from the fold and after passing through the machine are rolled up in the brackets at the back. Revolving spiral spreader rolls keep the goods out to their full width, and at the same time prevent their edges from curling over. The feed rolls, covered with card clothing, are placed close to the points of contact with the napping cylinder, to avoid any stretch of the goods, and insure even work. The napping cylinder, clothed with tempered steel clothing, is of large size, and acts upon the goods twice in their passage through the machine, napping them as they pass over the sharp edges of the cloth rests, which may be readily thrown away from the cylinder to allow a seam to pass, and be returned to the same position by means of levers. The amount of contact on the goods is easily regulated by hand wheels, and either light or heavy goods may be napped without delay in adjusting. An arrangement of hand wheels and ratchets is provided for convenience in threading the goods in the machine, and the feed of the cloth may be stopped and started while the cylinder is in motion. The speed of the cloth can be altered by change of pulleys or gears, so as to obtain the best results on different classes of goods. Brackets are placed on the machine, for holding a traverse grinder for grinding the cylinder when required. The machine is built in different widths, for 40 inch, 60 inch, 74 inch, or 90 inch goods; its usual speed being 300 r. p. m.

The Exhibition Weave Room of the Draper Company.

The accompanying illustration gives some idea of the great variety of looms that can be seen at the Draper Works.

fabric structures and a large share of their standard devices as to mechanical construction. Among them are the following:

are the following:

No. 1. 32 INCH E Model Loom. Goods, cotton worsted;
50 sley, 42 picks; cotton warp, No. 26 two ply worsted filling.
No. 2. 32 INCH E Model Loom. Goods, ginghams,
(stripes); 80 sley, 88 picks; No. 50 warp, No. 56 filling.
No. 3. 36 INCH E Model Loom. Goods, filling sateen;
64 sley, 130 picks; No. 28 warp, No. 36 filling.
No. 4. 32 INCH H Model Loom. Goods, corduroy; 48
sley, 300 picks; No. 26 warp three ply, No. 36 filling.
No. 5. 40 INCH E Model Loom. Goods, fine lawns; 88
sley, 92 picks; No. 80 warp, No. 120 cop filling.
No. 6. 34 INCH K Model Loom, with 20 harness dobby.
Cloth, figured dress goods. 80 sley, 84 picks; No. 50 colored warp, No. 56 filling.
No. 7. 40 INCH E Model Loom. Goods, sheetings; 80
sley, 92 picks; No. 28 warp, No. 36 filling.
No. 8. 28 INCH E Model Loom. Goods, standard print cloth; 64 sley, 64 picks; No. 28 warp, No. 36 filling.
No. 9. 64 INCH D Model Loom. Cloth, worsted dress goods; 42 sley, 48 picks; No. 28 two ply warp, No. 28 filling.
No. 10. 40 INCH SPECIAL D Model Loom. Goods, light duck; 50 sley, 40 picks; No. 10 two ply warp, No. 14 two ply filling. ply filling.

No. 11. 90 INCH L MODEL LOOM. Goods, wide sheetings;

No. 11. 90 INCH L Model Loom. Goods, wide sneetings; 64 sley, 72 picks; No. 22 warp, No. 21 filling.

No. 13. 32 INCH SPECIAL E MODEL LOOM. Goods, pillow tubing; 64 sley, 76 picks; No. 28 warp, No. 36 filling.

No. 14. 32 INCH K MODEL LOOM. Goods, fine lawns; 88 sley, 80 picks; No. 60 warp, No. 85 cop filling.

No. 15. 28 INCH SPECIAL E MODEL LOOM. Seamless grain bags; 25 sley, 22 picks; No. 7 two ply warp, No. 31 two ply filling.

No. 16. 30 INCH E MODEL LOOM. Goods, warp sateen;

No. 10. 30 INCH E MODEL LOOM. Goods, warp sateen; 110 sley, 72 picks; No. 22 warp, No. 21 filling.

No. 17. 36 INCH E MODEL LOOM. Goods, cotton flannel; 44 sley, 48 picks; No. 21 warp, No. 10 filling.

No. 19. 28 INCH E MODEL LOOM. Goods, denim; 68 sley, 48 picks; No. 9 warp, No. 9 filling.

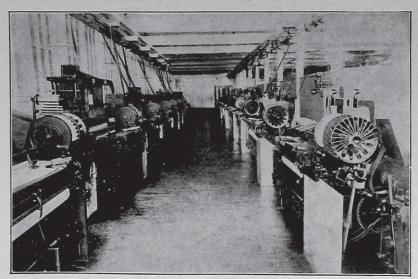
No. 20. 64 INCH D MODEL LOOM. Goods, sheetings; 68 sley, 72 picks; No. 20 warp, No. 20 filling.

sley, 72 picks; No. 22 warp, No. 22 filling.

DICTIONARY OF TECHNICAL TERMS RELATING TO THE TEXTILE INDUSTRY.

(Continued from page 190, Vol. III.)

FABRIC:-Derived from the French fabrique, i. e., Latin fabrica. A woven felted or knitted material produced for wear or ornament.



The looms shown there are equipped with warp and filling, and in condition to be operated at short notice. They include a great variety of weaves as to FACE-FINISH: - The finish given to a woolen fabric, in which the face is covered with a short, soft, laid down nap, as in beavers, kerseys, broadcloth, etc.

FACONNÉS:-The French for fancy weave effects.

FACTORY YARN:—Coarse 2-ply or 3-ply unscoured woolen yarn, or yarn in the grease; made mostly by the smaller western woolen mills, used for knitting heavy winter hose. Generally handled in four ounce hanks. Frequent washings remove the grease which the yarn contains, leaving the knitted article clear, soft, and extremely warm and durable.

FAG:—An imperfection or rough spot in woven cloth; an imperfection or coarse place in a fabric.

FAGOT:—To ornament (textile fabrics) by drawing out some of the threads and tying the cross threads together in sets at their centres.

FAILLÉ:—A soft textured, grosgrain fabric showing very fine ribs. It is heavier than foulard and finished without lustre.

FALLEN FLEECES:—Fleece wool, or mohair, taken from the carcases of diseased sheep, etc., and therefore inferior.

Fallers:—Two movable guides, part of the mule, which build the cops, known as counter faller and winding faller.

The steel bars, with upright pins set in them, which are carried by means of a pair of screws from the back rollers of a gill box, or a spread board, to the front rollers, and then fall down to a lower pair of screws, and are carried back again.

FANCY:—In a wool carding engine, the roller placed immediately before the doffer cylinder. It is generally covered with card clothing having long, straight wire teeth, and serves to raise the wool fibres on the swift, so that the doffer cylinder will take it off readily.

FANCY CASSIMERE:—A fancy woolen (or wool and cotton mix) cloth for suitings.

FANCY SHIRTINGS:—A cotton material used chiefly for shirts, woven and also printed in simple patterns of one or more colors

FANON:—A cloth used in the Catholic Church for handling the holy vessels, by a celebrant, at Mass.

A fold of linen laid under a splint in surgery.

FARINA, OR POTATO STARCH:—Used in finishing and sizing, producing a thicker paste than any other starch, hence has greater binding properties. It gives a firm, crisp finish, and is used wherever feel to the cloth is required without adding much to its weight. It also yields a much more transparent and viscid mass when boiled with solutions of caustic soda or chloride of zinc than other starches. The paste thus obtained has rather stronger binding properties than plain farina paste, and is therefore largely used whenever the cloths have to be weighted very heavily with china clay, mineral, etc. Farina, commerically, is generally fairly pure and free from nitrogenous matter; farina pastes are not liable to mildew, hence it is generally the safest starch to use for finishing purposes.

FARMER'S SATIN:—A variety of coat lining, made with cotton warp and wool filling, woven with a 5-harness satin weave, showing its double twill effect, and finished with a high lustre.

Fashioning Needle:—Needles in a spring beard knitting machine, which transfer loops from some of the bearded needles to others, in order to widen or narrow the work.

FAST COLORS:—The name of fast colors is given to those that resist the action of light, air, water, alcohol, dilute acids and alkalies, and other weak hypochlorites and soap solution.

FAT RUMPED SHEEP:—These sheep are found in the northern part of Asia and in Russian Europe. They yield a great supply of coarse wool (carpet wool); but in some districts of Russia care has been taken to cultivate this sheep, and as a result a finer quality of wool with only a small amount of hair intermixed has been derived.

FAT TAILED SHEEP:—These sheep are found in Palestine, Syria, Persia, India and China, and are very likely a variety of the fat rumped sheep. They have an enormous round of fat, like a cushion, weighing on an average from 30 to 40 pounds, in place of a tail. The wool derived from this sheep is coarse and freely intermixed with dark colored hair. Large quantities of this wool are shipped to Europe and this country.

Fearnaught, Fearnought:—A spur-tooth picker, used in the preparatory department of a woolen mill.

FEATHER-CLOTH:—An ornamental cloth made by adding fine feathers into wool structures during their manufacture.

Feather Edged:—An ornamental edging composed of loops or tufts, most often used in ribbons, trimmings, etc.

FEATHER STITCH:—A stitch used in embroidery, imitating the appearance of feathers.

FEATHER TRIMMING:—Feather bands, etc., used in trimming dresses, etc.

Fehling's Solution:—This consists of two solutions, namely,

(a) an aqueous solution of copper vitrol, which contains
in one liter 34.639 gr. crystallized copper sulphate, and

(b) a solution which is prepared by dissolving in a liter
flask 173 gr. sodium potassium tartarate, adding 572 gr.
caustic soda of 1.12 sp. gr. (containing 60 gr. sodium
hydroxide), and filling up to the mark.

Fell:—The edge of the fabric (in the loom) which has been woven last.

FELT:—Woolen cloth structures united with or without previously weaving.

FELTING:—The property which enables a number of fibres of wool to interlock and join together, so that they form a compact whole, and each fibre cannot be separated.

FELTING WOOLS:—The occasionally used term for the semiannual clips of portions of Texas and California.

Ferret:—A narrow worsted or cotton ribbon or tape, used for binding, etc.; when dyed in bright colors used for making cockades or rosettes, etc.

The name sometimes given to floss silk.

FESS:-A cloth or felt cap made in southern Russia.

Feston:—An embroidery stitch which produces a scalloped edge.

Fez:—A felt cap made in the shape of a truncated cone, usually red with a black tassel inserted in the middle of the top and hanging down to about the lower edge of the cap; worn by the Turks, etc.

FIBRE:—The fibres of commerce are divided into three classes:
mineral, animal, vegetable and artificial fibres. In the
first, asbestos is the only representative; in the second,
there are silk, wool and hair. The third class comprises
cotton, flax, hemp, jute and ramie. Artificial fibres refer
to imitation silks, which have gained commercial importance.

FIBRE TESTER:—An instrument for determining the elasticity and breaking point of fibres.

FIBRILLÆ:—The strands or minute chains of cells forming secondary deposits in the cotton fibre.

FIBROINE:-The substance of which silk is composed.

Fight :—A small triangular piece of muslin, lace, or any light material worn by women about the neck.

Fiddle:—In wool or worsted carding, an implement used for smoothing the points of card clothing. It consists of a piece of fine emery cloth stretched between two endpieces of wood connected by a curved handle.

In shearing (finishing) a similar tool used for sharpening the revolver blades.

FILAMENT:-A fine thread, fibre or fibril.

FILATURE:—An apparatus, machine or establishment for reiling raw silk from cocoons, for producing the raw silk of commerce.

FILIBEG:-The Scotch term for their modern Kilt as distinguished from the earlier large Kilt, which covered the body.

FILLET OR FILLETING: -A narrow strip of card clothing, used to cover rollers and cylinders of the carding engine.

FILLING OR WEFT:-The threads running crosswise in a cloth. Yarn forming the transverse threads in a fabric. The American expression for the words weft, woof, etc.

FILOSELLE: - A kind of ferret or floss-silk.

FIMBLE:-The male plant of hemp, which are smaller and mature earlier than the female plants.

FINE-DRAW:-To sew or close up faults in a fabric by inserting missing threads, etc., by hand with a needle.

FINEDRAWER:-The women who do the finedrawing or mending in a textile mill.

FINGERBOARD:-That small flap of the threadboard of a ringframe or twister, and to which the thread guide is adjusted. When the machine is running said fingerboard is down i. e., in a horizontal position, whereas it is raised in a vertical position for the purpose of doffing or repairing a broken thread, etc.

FINGERHEAD:-The modern name for fingerboards, as used in connection with metallic threadboards,

FINGERING:-A coarse woolen knitting yarn, used for the mending of stockings, etc.

FINISHER:-The last machine of a set of wool carding engines.

FINISHER-SPOOL:-In wool carding, the spool containing the roving, as taken from the finisher.

FINISHING:-The process of setting and giving a proper surface to goods after weaving or knitting (and dyeing) are concluded.

FLANDERS OR TEXEL SHEEP:-A cross of the Lincoln sheep of England with the long legged Guinea sheep.

FLANNEL:-A warm, loosely woven woolen stuff, used for under clothing, bed covering, etc., also for outer garments; others have a long nap on one side and none on the other.

(To be continued.)

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Asst. Designer, Expert Jacquard Cutter. Young man, single, thorough knowledge of Jacquard head, at present employed in a New England Mill, desires to make a change. References. Will go anywhere. F. T. (206) Posselt's Textile Journal.

Boss Carder. Young man, married, temperate and steady, at present em-ployed in New England mill, desires to make a change. Will go anywhere. References. O. W. (207) Posselt's Textile Journal.

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Expert Jacquard Designer and Colorist, also well versed in Harness Work and Fabric Structures. "Novelties" which pay a specialty. Address, "Jacquard," care of Posselt's Textile Journal.

MILL NEWS

Philadelphia: The last regular meeting of The Phila. Textile Overseers Assoc. was held Dec. 11th, 1908. Treasurer John Bellis, in absence of President Secor and Vice Pres. Stocks, who had to run their mills on overtime, was in the chair.

Among the various items discussed was a report of the committee on location for new clubrooms, the present hall, although able to accommodate about one hundred members in session, not providing the proper accommodations (spare rooms) desired for this growing Association. Several places in the Kensington district had been visited by the committee, one of which offered rather flattering inducements to the

society. No definite action was taken. The first new application cards for membership made their appearance, and several applicants were taken under consideration. (These cards can be obtained by members not present, either by writing or calling on Mr. A. Mug-ford the Secretary, or from the offices of Posselt's Textile Journal.)

The next Smoker was another item calling for a lively debate, in which all members present heartly joined, and matter voted to make it a big success, to be remembered a long time in Kensington.

The equipment of the Ideal Hosiery Mills, Philadelphia, has been increased

from 54 to 70 machines. The Saxonia Dress Goods Mill is pushed with orders for months ahead. Besides their own large weaving plant, they keep several local and outside the city located commission weaving plants

at work.

It is reported that the Miehpaul Manufacturing Company will soon have to double the capacity of its plant, they now running on a day and night schedule.

It is reported that Bradbury Brothers, proprietors of the Dalkeith Mills, have disposed of their dye works and will devote their plant entirely to the manufacture of upholstery goods.

The Matred Mills, operated by Regar & Oughton, are reported very busy and starting more looms.

It is mentioned that the name of the Blood Manufacturing Company has been changed to that of the True Shape Hosiery Company. The concern will Hosiery Company. The concern will remove its plant to Bristol street, where they will have increased facilities.

The Harrison Looping Company has removed its plant to 2632 North Mascher street, and the capacity of the plant

The Actual Knitting Mills are considering arrangements to remove their plant to larger quarters and greatly increase its output

The Way Muffler Company will build five-story addition to its plant, and will also manufacture a full line of men's underwear and bathing suits in

addition to its present product of mufflers and coat sweaters.

The Oak Lane Knitting Mill has increased its equipment to 25 knitters and 30 sewing machines, operating on women's and children's ribbed, cotton and worsted underwear.

Alliance, Pa. Ground was broken for a large addition to the plant of the Cen-Silk Manufacturing Company. addition will be 27 by 60 feet, and will be two stories high, to provide room for 50 new looms.

Macungie, Pa. The Macungie Silk Company has been incorporated with a capital of \$10,000.

Scranton, Pa. The Paul Clemens Silk Mfg. Co. will erect a brick addition, 52 x 83 feet, three stories high, at an

estimated cost of \$13,000.

Upland, Pa. Six hundred silk looms will be installed in the Crozer No. 3 mill by William R. Thomas, Jr., of Catasauqua; William M. Alford and F. W. Thomas, of New York, and when the plant is in full running order about

500 hands will be given employment. Paterson, N. J. J. J. Schaerer is erecting a new mill structure, 125 by 50 feet, one story high, to be able to increase the present production on men's and women's wool and worsted sweaters.

The Berwyn Silk Company has been incorporated with a capital stock of

\$25,000. The Sweeney & Buser Silk Company with a capitalization of \$25,000 has been incorporated and will engage in the manufacture of silk, wool and cotton fabrics.

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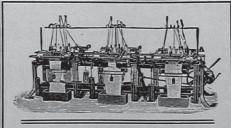
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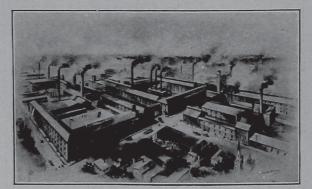
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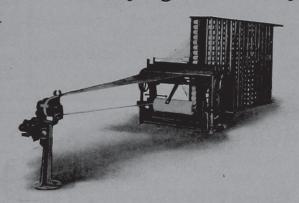
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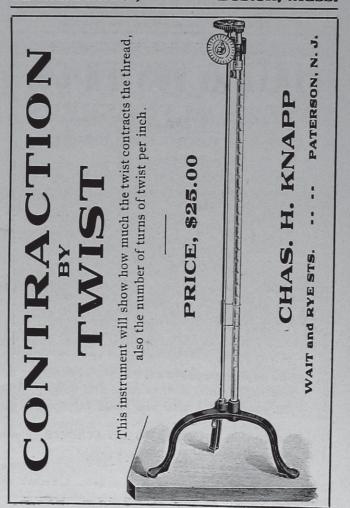
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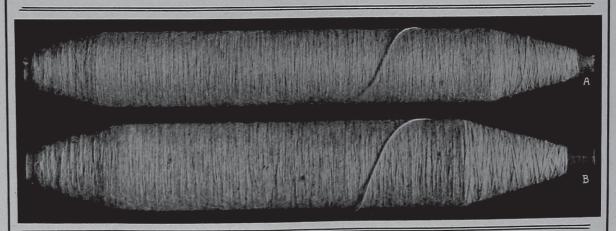
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The Paterson Knitting Works has been incorporated with a capital stock of \$25,000 and will engage in the manufacture of knit goods, woolen goods, etc. Peter S. Van Kirk has broken ground

for the erection of a large addition to the present Van Kirk Mill which, when completed, will be one-third as long as the present mill, making the entire structure 307 x 57 feet and three stories high.

Burlington, N. J. Satisfied that American labor is superior, operators of the Burlington Silk Mills have confirmed reports that the concern would close several large silk mills in Japan and move its entire plant to this city.

Contracts for fine silk goods have kept the local plant working day and night for months.

The firm will begin immediately the erection of its new plant here, in which 1,000 looms will be installed and employment given to a corresponding number of employees, what will add nearly \$50,000 weekly to local payrolls.

Freehold, N. J. The plant of A. & M. Karaghensian is rapidly nearing completion, the company expecting to have the necessary machinery installed ready for manufacturing by February t, 1909. Twenty-five looms will be set up in the new addition for manufacturing rugs. The company is interested in receiving information on a full line of machinery and supplies.

Binghamton, N. Y. The Chenango Silk Company has outgrown its present factory and will rebuild a new mill 150 by 150 feet and three stories in height. The company has operated steadily during the year. It has 160 looms.

Cooperstown, N. Y. The directors of the new Berlin Silk Mill Company have decided to increase the capital stock to \$40,000.

Fonda. N. Y. The Wertheimer Silk Mill is installing new machinery and will shortly engage in the manufacture of silk neckties and other novelties.

Hamilton, N. Y. The Hamilton Hosiery Mills, Inc., with a capital stock of \$30,000, will resume operation with about 100 hands employed night and

Boston, Mass. The Eastern Worsted Co. has been incorporated with a capital stock of \$100,000 and will engage in the

manufacturing of worsteds.

The American Woolen Co. have declared their thirty-ninth consecutive quarterly dividend of 14 per cent. on the preferred stock, payable January 15,

Adams, Mass. The plant of W. C. Plunkett & Sons is running on a full time schedule with plenty of orders on

Fall River, Mass. The contracts for machinery for the No. 3 Sagamore mill have been awarded. The Mason Machine Works, of Taunton, to furnish the looms and spinning frames, and the Woonsocket Machine and Press Company the slubbers, intermediates and fine

Fitchburg, Mass. The Houghton Web Company is operating its plant on two shifts, 50 men being employed by the concern, which contemplates making an addition.

Great Barrington, Mass. The Reliable Knitting Company will operate its plant at night, and is said to be rushed with

Hudson, Mass. The Hudson Worsted Company will erect an addition to its plant 20 x 60 feet, four stories high, also a one-story office building and an additional story will be added to the present structure, thus making it four stories high, which will enable the company to greatly increase its output. An all-night schedule has been maintained for some time and a large number of orders are ahead.

New Bedford, Mass. It is reported that the Harding-Whitman interests, owners of the Whitman, Manomet and Nonquitt Mills, are having plans prepared for a new spinning mill, to be built opposite the Nonquitt Mill, which will contain 60,000 to 75,000 spindles, and the work of construction will be started early in the spring, according to present plans.

J. M. Masson, formerly superintendent of the Blackington Mfg. Co., has been 'appointed superintendent of the Oneko Woolen Mills.

Plymouth, Mass. Ground has been broken for an addition to the woolen mill of George Mabbett & Sons, and construction is to be pushed as fast as the weather permits.

Saundersville, Mass. The Saunders Cotton Mill is being operated to its full capacity and with a full force of help.

Spencer, Mass. A new hosiery plant will soon be started by Joseph Richards. some of the knitting machines having already been installed.

Westboro, Mass. J. S. Mason, manufacturer of cotton, mercerized and silk ribbons, is installing to more looms in

Greenville, R. I. The Winsor Mill, which was recently destroyed by fire, with an estimated loss of \$6,000, was operated by the Hygienic Fabric Company, that has been manufacturing absorbent cotton and cotton bandages for several years.

Mohegan, R. I. A two-story addition to the Mohegan Mill of the Wanskuck Company is being erected and will be

used as a weave room, and when it is completed from 30 to 40 looms will be added.

Pascoag, R. I. James E. Okell, president of the National Association of Woolen and Worsted Overseers, died of appendicitis at his home here January 2d.

River Point, R. I. The Warwick Lace Works are still being operated on a day and night schedule.

Woonsocket, R. I. The Rathbun Knitting Company will erect an addition to its plant 40 by 60 feet, for stor-

South Manchester, Conn. Messrs. Cheney Bros., the prominent silk manufacturers, have discontinued their branch plant in Hartford and concentrated all of their manufacturing at the local plants. Two new ribbon mills had for this reason been erected here, to accommodate said machinery.

Danielson, Conn. The Quinbaug Mills are adding 3,500 spindles to their equipment, also 480 Draper looms, increasing the number of looms at present in operation to 700.

Mechanicsville, Conn. The woolen mills of the French River Manufacturing Company have started on a day and night schedule, employing four hundred hands.

Montville, Conn. It is reported that the Pequot Mills will install at least 100 new looms.

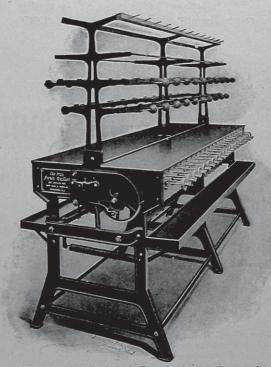
Plainfield, Conn. The Lawton Mill Corporation will erect a new weave shed, 150 x 227 feet, and a three-story extension of the main mill, 100 by 182 feet, of brick, the whole to be completed by September 1, 1909.

Thompsonville, Conn. The Upson-Martin Carpet Company will erect a new brick mill 150 feet long, 50 feet wide and three stories high, which will be used for the manufacture of Axminster carpets and rugs. When completed 30 new Axminster looms will be put in, which will mean practically the doubling of the present plant. It is expected the build-ing will be built and fully equipped for operation about March 1.

Union, Conn. The Aldrich Cotton Mills, with almost double their present capacity, have started working on a day and night schedule. The new weave shed holds about 700 looms, making a total of about 1,500.

Manchester, N. H. Work has been begun on the new factory for the Amoskeag Company. The building will be 700 by 100 feet, with wings extending 200 feet at each end, constructed of brick, stone and wood, and at least five stories, making a floor space of about twelve acres. It is understood that the new

(Continued on page xiv.)



The Sipp High Speed French Quiller Patented

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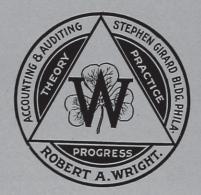
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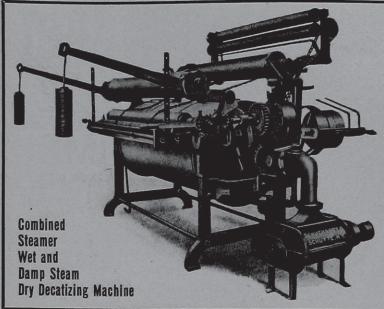
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Woolen and Worsted Finishing Machinery New Spinning Frame

mill will be equipped for manufacturing ginghams.

Meredith, N. H. The linen mill, which has been closed since last June, will resume operations, and it is generally supposed that A. F. and J. M. Hall, who had charge of the mill for several years, will again resume their former positions of managers.

Milford, N. H. The Middlesex Linen Mills have put on an extra shift running night and day, and they will probably be kept on this schedule all winter.

Dexter, Me. Fourteen new looms are being added by the Wassookeag Woolen Company, who plan to change their product, manufacturing lightweight goods instead of the heavyweight material

Kittery, Me. The Hudson Worsted Company has been incorporated with a capital stock of \$175,000, and will manufacture all kinds of worsted goods.

Kansas City, Kan. The Kansas City Knitting Company, recently organized will be in operation within a short time, and will employ between seventy-five and eighty hands.

Eaton Rapids, Mich. Improvements at the Horner Bros. woolen mills when completed will make their industry the most extensive of its kind in Michigan. The factory and warehouses will cover a ground space of nearly two full blocks, having grown from a small carding mill under the management of the Horners.

Cleveland, Ohio. The National Woolen Company is stated to have put 150 more men at work and is preparing to run its plant nights, and reports an increasing demand for its product.

Marion, Ohio. The Susquehanna Silk Mills will install 110 new looms of the most modern pattern, which will give employment to the same number of additional operatives.

Delevan, Wis. The erection of a three-story extension, 80 by 50 feet, by the Bradley Knitting Mills Company has been started and will represent an expenditure of \$15,000 when equipped with the required machinery.

Eau Claire, Wis. The Chippewa Falls Woolen Mills Company will enlarge its plant to about twice the present size, thus doubling its capacity, in the spring.

Charlotte, N. C. The second meeting of the Southern Textile Association was held on Dec. 26th with a large attendance of mill overseers, superintendents and master mechanics. It was decided to hereafter hold four meetings a year, the next to be held at Greenville, S. C., in April. The meeting was specially interesting in view of open discussion by members of a number of practical subjects. Considerable time was taken up with discussion of the advisability of double carding and its effect both on cost and quality. The question of uniform cost sheets and the giving out of cost information by mills also furnished an interesting topic of discussion.

At the afternoon session the question of methods of utilizing waste was taken up and a large number of men gave their experiences and methods. All who read papers were questioned considerably in regard to matters of interest. Among those taking part in the discussions were: T. F. Cuddy, of Clio, S. C.; B. F. Houston, of Kinston, N. C.; J. S. Osteen and C. F. McCall, of Greenville, S. C.; N. T. Brown and A. E. Escott, of Raleigh, N. C., and others.

At the morning session a paper was read by A. E. Escott, of Raleigh, on "The Earning Capacity of Mills." B. S. Cottrell, of Fitchburg, Mass., also read a paper on "Value of Humidification," and J. S. Osteen, of Greenville, S. C., on "Welfare Work." At the afternoon session W. A. Graham Clark, special agent of the Department of Labor and Commerce, spoke on "Foreign Methods of Utilizing Waste."

Mr. Brown Corneilson, a citizen of Oklahoma City, is trying to interest Charlotte mill men in a proposition to place a cotton manufacturing plant in his thriving city. There is at present only one cotton mill in the entire State of Oklahoma, and the prospects for a fine business in this line of manufacturing are exceedingly bright.

The Chadwick-Hoskins Company, operating five large cotton mills in and

about Charlotte, namely the Chadwick, Hoskins, Louise, Calvine and Dover, is considering the advisability of erecting at an early date a small coarse yarn mill for the purpose of utilizing their waste

Bessemer City, N. C. An additional building, 50 by 90 feet, has been completed for J. C. Hass & Co., and will be equipped for weaving fancy goods.

Cherryville, N. C. The Howell Manufacturing Company is reported to double its plant.

Concord, N. C. The Lock Cotton Mills Company, with \$1,000,000 capital authorized and \$200,000 subscribed, will operate the Odell Cotton Mills.

Mt. Airy, N. C. The Laurel Bluff Cotton Mill, J. L. Brown, proprietor, has about completed the installation of spindles and accompanying equipment to replace 2,400 old spindles. The Mason Machine Works, of Taunton, Mass., furnished the spinning machinery and the Draper Company, of Hopedale, Mass., supplied the spoolers, the improvements being made at an estimated cost of \$10,-

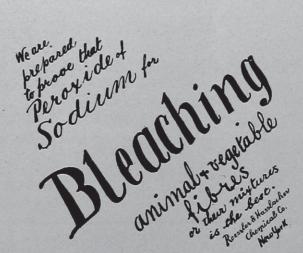
Salisbury, N. C. The Vance Cotton Mills has begun the construction of a one-story 40 x 50-foot addition, which will be equipped with warpers.

Shelby, N. C. The Shelby Cotton Mill is progressing with the erection of its addition, two stories high, 75 x 90 feet, which will be equipped with 6,500 producing spindles, 3,000 twisting spindles, etc., manufacturing Nos. 20 to 30 two-ply yarns.

Taylorsville, N. C. The Taylorsville Cotton Mills are now completed and preparations are being made to install the machinery—5,200 spindles and necessary preparatory apparatus for manufacturing 26s to 30s hosiery yarns, all to be double-carded.

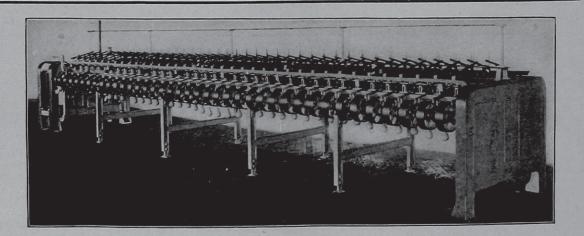
Zebulon, N. C. Fifty knitting machines have been added by the Zebulon Hosiery Mills, which will triple the present complement of twenty-five machines and increase the output to 450 dozen pairs daily.

(Continued on page xvi)





WOONSOCKET YARN GASSING MACHINE



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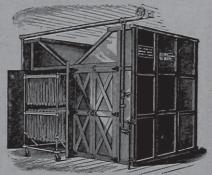
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Greenville, S. C. The Camperdown Mills has purchased the necessary machinery for a complete equipment for indigo dyeing, and in the future all goods made at this factory will be made out of the these colors, bringing them up to the standard staple ginghams made by the best Eastern mills.

Bristol, Tenn. It has been decided to install a dyeing department in the new knitting mills which the Jonesville Manufacturing Company is erecting and arrangements for the necessary machinery are now being made.

Columbus, Ga. Another story is to be added to the building used as a finishing department at the Eagle & Phenix Mills, thus doubling the capacity of that department. The building is 40 x 100 feet, and the second story will be of brick and and the second story will be of brick and standard mill construction. The im-provement will represent an expen-diture of about \$5,000.

Millen, Ga. The Millen Mills, which had been shut down since May, resumed operations on full time.

Rome, Ga. The Rome Hosiery Mills will erect a new mill which will include the mill proper, the dyehouse and the boiler-room, provided with the automatic sprinkler system. The company now operates 100 knitting machines and complementary equipment on the production of seamless hosiery, which it dyes and finishes, employing about 150 operatives, which number will be doubled in the new buildings.

Thomaston, Ga. The Thomaston Cotton Mills will add 8,000 spindles to their present equipment of 15,000 ring spindles and 288 looms on the production of duck and sheeting.

Toccoa, Ga. The Toccoa Cotton Mill has leased and is now operating the Capps Cotton Mills. The capacity has been doubled and 4,000 spindles are now in operation on hosiery varns.

Trion, Ga. The Trion Manufacturing Company will install 292 Northrop looms in place of the common looms heretofore operated.

Eufala, Ala. Donald Comer, son of Governor B. B. Comer, is looking to the affairs of the Eufala Cotton Mills, the controlling interest of which was recently purchased by his father, and he expects to have the plant resume oper-

ations at once. Some entirely new machinery, the greater portion of which is now in transit, will be installed, giving employment to 1,200 or 1,500 operatives.

Hamilton, Ala. Night and day forces of 100 operatives are employed by the Hamilton Hosiery Mills, and the average output will be 1,000 dozen per week of children's hosiery and underwear.

Bonham, Tex. The Bonham Cotton Mills will expend \$30,000 for additional machinery for the manufacture sheeting.

Corsicana, Tex. The Corsicana Cotton Mills have resumed operations in full, after having been on short time for

Cuero, Tex. The Cuero Cotton Mill, which has been closed down for some months, has resumed operations with a full force. It is probable that the capacity of the mill will be doubled within the next few months.

Cuba. The first textile factory to be installed in Cuba, according to the Cuban Review, is to be started within a short time at Matanzas. The owner, an American, proposes at first to manufacture stockings and later to import cotton yarn for manufacturing cloth.

ke millions of new weav

"TEXTILE DESIGNING SIMPLIFIED."

Keep this charton hand for reference. Only

EXPLANATIONS FOR THE CHART OF WEAVES ON

Jesigning.

extile

The object of this chart is to show how easy weaves for all classes of Textile Fabrics can be constructed; it will be a search light in the misty matters in the field of designing Textile Fabrics. Keep this chart of weaves for reference. Millions of new weaves can be obtained by it.

PLAIN. -This weave and its sub divisions are explained on the chart in the top row by All weaves for Textile Fabrics have their foundation in Plain Twills and Satins.

16 weaves, the sub divisions covering common, fancy and figured Rib and Basket weaves.

TWILLS -The foundation of constructing regular (45°) twills is shown by rows 2 and 3 The sub divisions of twills are quoted next on the chart, being Broken twills, Skip twills, Combination twills filling drafting, 63° twills, 70° twills, Wide wale twills, Entwining twills, Checker-board twills, Pointed twills, Fancy twills, thus covering every sub division of twill with twenty six weaves, covering twill weaves all the way from 3 harness up to 13 harness. Corkscrews, Double twills, Drafting twills, Curved twills, Combination twills warp drafting weaves possible to be made.

How to PUT A BACK FILLING ON single cloth is shown below the satius by two exam-SATINS are next shown, giving also their sub divisions, viz: Double satins and Granites.

ples, and at its right hand is quoted the principle of

HOW TO PUT A BACK WARP ON single cloth.

THE CONSTRUCTION OF DOUBLE CLOTH, 2 @ 1; and above the same one example, with On the bottom line are given the four steps for :-

the arrangement I @ I.

Weaves for special Fabrics are quoted: Tricots (warp, filling and Jersey effects), Rib fabrics, Honeycombs, Imitation Gauze, Velveteen, Corduroy, Chinchillas Quilts Plush, Double-HOW TO BACK SINGLE CLOTH WITH ITS OWN WARP IS Shown by two examples. THREE PLY CLOTH is shown by one example.

piush, Tapestry, Crape, Terry, Worsted coating stitching, Hucks, and Bedford cords HOW TO WORK THIS CHART OF WEAVES.

CAPITAL, LETTERS of references refer to the plain weave and its sub divisions.

SMALL LETTERS of references refer to twills and their sub-divisions.

NUMERALS of references refer to satins and their sub-divisions

Example.-How to ascertain the construction of the weave at the right hand top corner that said figured rib weave is nothing else but the combination of the 2-harness 6 picks common of the chart; being the figured rib weave marked C C'? These two letters of reference mean rib weave warp effect C, and the 6 harness 2 picks common rib weave filling effect C'

Example -The letter of reference c, underneath the first broken twill indicates that the letter of references below each weave of any of the various sub divisions refer always to the same is obtained from the 1g 4 harness twill c, (third weave on the second row ; in other words, corresponding foundation weave.

Example.-Twills q, and o, are the foundation for the eight combination twills filling drafting, said common lwills are drafted I @ 1, the different designs being obtained by means of different starting. Example - The wide wale twill I' w', has for its foundation the 63° twills, marked also respectively V and w', the latter two weaves have again for their foundation respectively the common twills marked t and tw. Example. -Granites marked 8 have for their foundation the 8-leaf satin, such as marked 12 the 12-leaf satin.

Example -- Backed by filling e 8, means the common 2, 4-harness twill e, (fifth weave on second row) and the 8-leaf satin is used in the construction of this weave. Example - The complete design of double cloth, marked & 8 A, means that the common 2- 4-harness twill (e), the common plain (A) and the 8 leaf satin (8) are used in the construction.

It will be easy to substitute different foundations in constructing weaves for heavy weights. Example.—Rib fabric A, indicates that the plain weave forms the foundation.

In reference to single cloth weaves we only want to indicate that by following rulus shown in the chart, millions of new weaves can be made up from it.

Posselt's Textile Journal, Philadelphia, Pa.

