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A Monthly Journal of the Textile Industries

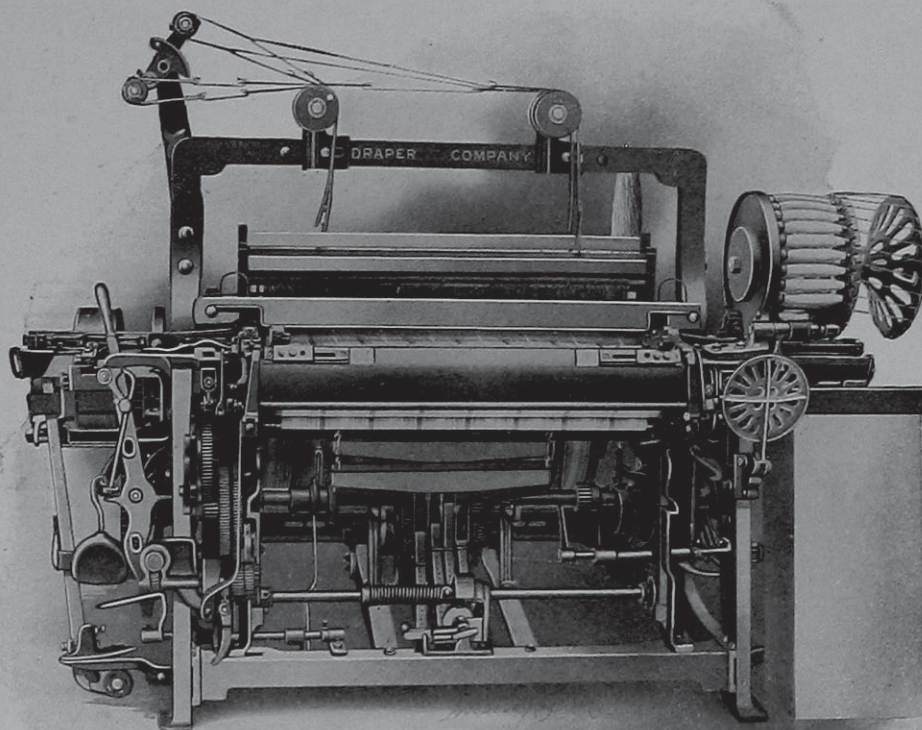
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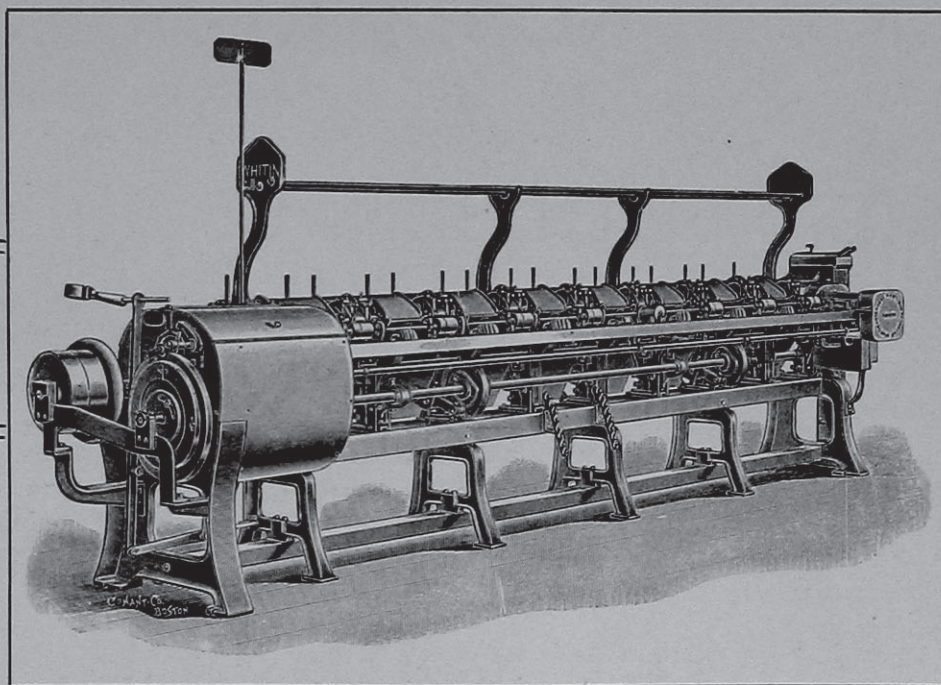
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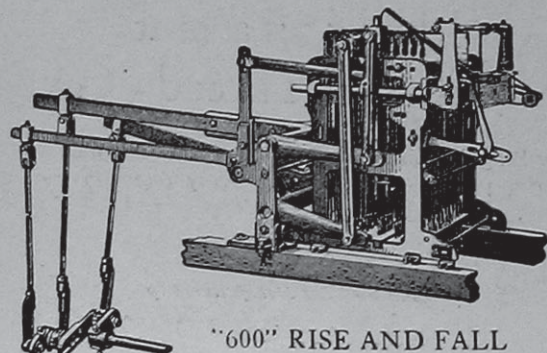
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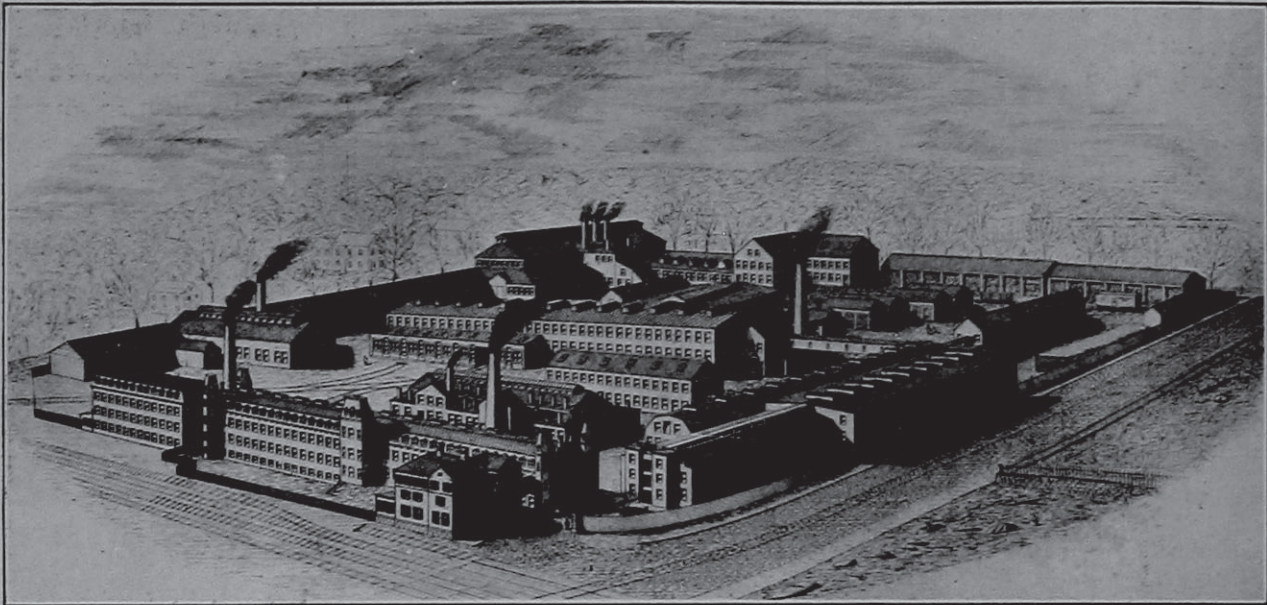
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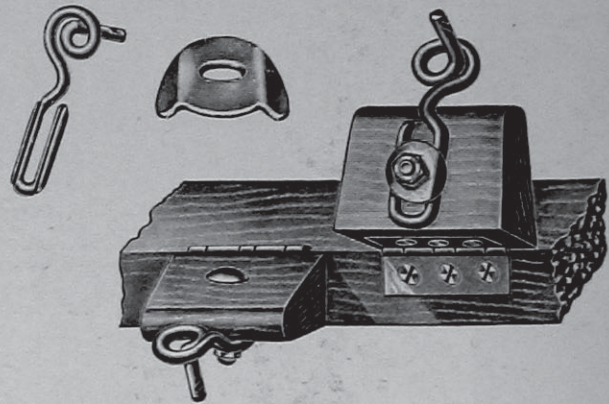
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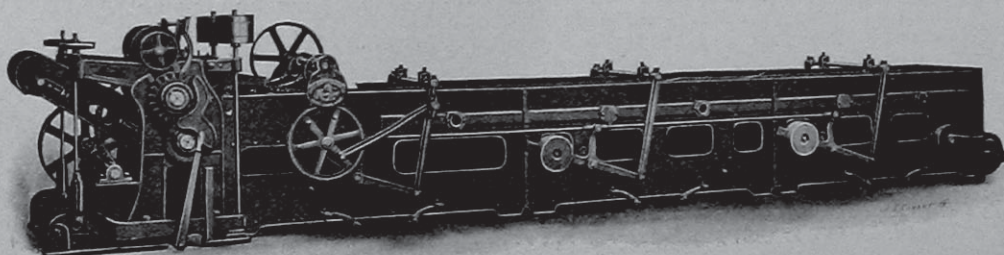
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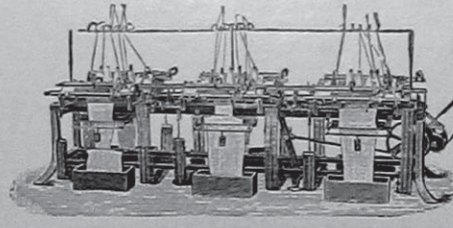
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Posselt's Textile Journal

Vol. III.

September, 1908.

No. 3.

Dictionary of Technical Terms Relating to the Textile Industry.*

(Continued from page 55.)

D

- DABBING BRUSH**:—A device to the Noble Comb (Worsted Comb) by which the wool fibres are pushed between, *i. e.*, in the pins, as it is termed, of the two circles of the comb.
- DACCA MUSLIN**:—An extremely thin variety of India muslin made at Dacca, in Bengal. The yarn used in the manufacture of these fabrics is measured by a hath or cubit ($19\frac{3}{4}$ inches), and is weighed by the ruttee (about two grains troy).
- DACCA SILK**:—Embroidery silk.
- DACEY**:—A specie of silkworms, having eight annual generations.
- DADO**:—Prominent borders in fabrics, more particular in draperies.
- DAGGER FIBRE OR SPANISH DAGGER**:—The fibre of the dagger plant—a name for several species of yucca.
- DAMASK**:—A cloth named after the city of Damascus, where they originated; a class of figured fabrics formerly made of silk, but now of worsted, cotton or linen; used for hangings, upholstery, table-covers, etc.; having floral or geometrical patterns, made either in one or more colors.
- DAMASK STITCH**:—In embroidery a stitch producing a smooth satin-like face.
- DAMASSÉ**:—Fabrics showing a contrast in lustre between the ground and figure effect of the design, produced by using either warp or filling of yarns of one color having different degrees of lustre, or using different colors, bringing these to the face of the fabric at the proper place to produce in the design the required amount of lustre or dulness.
- DAMASSIN**:—The term given to damasks having floral designs executed in gold or silver threads.
- DAMIER**:—A check pattern, derived from the equivalent in French of checker board.
- DAMPING**:—Also termed Moistening, Spraying or Sprinkling, has for its object the dampening or conditioning of a fabric, either before or after pressing. It is important that this dampening or moistening of the fabric is done even, uniform as well as thorough, for which reason the water must be thrown against the cloth in a very fine spray (mist) and this with such force that it will penetrate into the structure. It is upon this operation that the desired appearance of the finished fabric depends. The principle of the operation is based either on a revolving brush or a saw toothed cylinder throwing the moisture against the fabric, or the same is accomplished by devices based upon the atomizer principle.
- DANDY LOOM**:—A hand loom invented by a William Radcliffe, an Englishman, previous to the introduction of the power loom.
- DANISH EMBROIDERY**:—A name given to white embroidery put upon borders of (white) pocket handkerchiefs, etc., in patterns more or less imitating lace.
- DAPPERPY**:—In connection with woollen cloth, the Scotch expression for variegated.
- DARNEX OR DORNIC**:—A coarse damask, manufactured at Tournay.
- DASH WHEEL**:—A drum partly immersed in water and containing loose fabrics in its compartments. A cloth (garment) washer. By the revolving of the drum, the fabrics are tossed about in their compartments and thus more thoroughly washed.
- DEAD OR UNRIPE COTTON**:—Such cotton appears under the microscope to be extremely thin and transparent, and generally with little or no twist in it and is of little use. When it exists to any great extent in any lot, it seriously reduces the value of the material, it being in what is called a green state, it contracts and curls up when subjected to the warm atmosphere of the factory rooms, and by entwining itself around good fibres it becomes exceedingly difficult to remove. They are a source of trouble all along to the manufacturer, since they will not spin, (having a tendency to curl up or nep) they will not dye, (refuse to take color) or finish perfectly. When cotton is picked before ripe, there is always a great chance for dead cotton.
- DEAD WOOL OR SKIN WOOL**:—Wool taken from the sheep after life is extinct, and which is removed from the skin either by cutting or a chemical process. The first process requires more labor than the chemical process, hence is less practiced, but by means of it the wool fibres will not suffer in their quality. The chemical process, and the one most generally practiced, consists in steeping the pelts for a length of time in lime or in a dilute solution of sodium sulphide, by means of which the fibres become sufficiently loosened at their roots, so that they can be readily removed from the skin. Such wool is known as *pulled wool* and on account of the hurtful action of the lime or sodium sulphide, is inferior in quality to shorn wool.
- DEBAGE**:—A dress goods resembling Alpaca, constructed with a cotton warp and a wool dyed filling.
- DEBEIGE**:—A plain woven union dress goods, constructed with a cotton warp and a black and white wool mixed filling.
- DECOLOR OR DECOLORIZE**:—To free yarns or fabrics of its color, for example, by bleaching.
- DECORTICATOR**:—The name applied to a machine used for preparing Ramie, Jute or Hemp for its manufacture into yarns.
- DEGRAS**:—Another term for wool grease.
- DEGUMMING**:—The operations of freeing, wholly or in part, the silk thread from its covering of sericin or gum.
- DELAINE**:—An abbreviation of *mousselines-de-laine*. A term originally applied to a light worsted cloth made from specially selected fine, strong and long staple wools; in cheaper grades now made with a cotton warp and a wool filling, sometimes called *mi-laine*, which means half wool.
- DELAINE WOOL**:—Specifically, the term applied to long, fine wools from sheep of the merino breed; commonly applied to wools from sheep that have more or less of the merino strain; also to fine wools that are carded before they are combed, to distinguish them from the shorter wools of the

* The first complete Dictionary of the Textile Industry ever published.

- same quality which are only carded and are called clothing wools.
- DELIQUESCENT**:—A substance which tends to liquefy in the air; for instance chloride of magnesium tends to retain dampness and cause a fabric in which it is present to become moist.
- DEMI-STAGE**:—The term applied to a variety of tamin, or Scotch woolen fabrics.
- DENIER**:—See Counts.
- DENIERING**:—The method of dividing reeled nett silk into counts.
- DENIM**:—A heavy cotton fabric used chiefly for making rough garments, like men's overalls, working shirts, women's skirts, etc. Denim is made from coarse yarns in a twill weave, and is usually dyed dark blue or brown.
- DENT**:—The space between the wires of a reed, also called *split*. The latter explanation is obtained by the fact that the reeds as now made of metal, were originally made of split reeds. Through the dents of the reed the warp threads (after being threaded in the harness) are passed. Technically indicated by X; for example, 14 X 3, in which case 14 refers to the number of dents per inch in the reed and 3 to the number of warp threads passed through each dent of the reed.
- DENTELLE**:—A small indented edging; a term also applied to bone lace or needlework.
- DEO COTTON**:—or *G. Arboreum* or *G. Religiosum*, cotton grown in India, used for making the turbans for the priests of India.
- DERBY**:—A stiff felt hat with rounded crown and more or less narrow brim, worn by men and also by women for walking or riding, introduced about 1874.
- DERBY-RIB**:—Hosiery having six ribs showing on the (face) outside, alternating with three ribs showing on the (back) inside.
- DESIGN**:—The arrangement of forms, effects or colors, to be applied to a textile fabric for ornamentation.
- DESIGNER**:—One who makes designs for any kind of textile fabrics; the person who designs styles for fabrics, garments, etc.
- DEVIL**:—A name often applied to fearnaught pickers or spurr-toothed pickers.
- DEVON SHEEP**:—One of the varieties of pure English sheep.
- DEVONSHIRE LACE**:—Lace made in Devonshire, England, especially that made in close imitation of Honiton lace.
- DEW RETTING**:—The exposure of hemp or flax to the action of dew by spreading it on grass, to render easier the separation of the fibre from the feculent matter.
- Dextrin or BRITISH GUM**:—A product much used in finishing dyed and printed cotton goods. It is prepared from farina by different processes, and varies in color from white to dark brown. The darker the color the more adhesive and gummy becomes the dextrin, its solubility at the same time increases and the solutions become more syrupy. It is used to give a crisp, elastic feel to the fabric, it does not give so stiff a finish as starch, however, it gives the fabric a much fuller feel, due to its more elastic and hygroscopic properties. Dextrin must only be used with care, since excess is liable to give the cloth a sticky feel, and if deliquescent bodies like chloride of zinc or chloride of magnesia are used, this evil is more pronounced. Provided such a hard feel, due to dextrin, must be remedied, use either glycerine or soap for this purpose.
- DHOOTIES**:—Plain cloth ornamented by stripes of grey or colored yarn. These stripes, in connection with grey dhooties, are tape edges formed by cramping grey or bleached yarn at the selvage. In colored dhooties, stripes of vari-colored threads are introduced near the selvage, varying from $\frac{1}{2}$ to 4 inches in width; in some cases they being introduced at intervals all across the fabric. In figured dhooties, as woven on the doobby or jacquard loom, these stripes are woven in a great variety of fancy figures and colors.
- DIAGONAL**:—A heavy twill running in a diagonal direction across the face of the fabric. The diagonal is produced by raising the warp threads in groups in a progressive order, having the filling make them stand out in ridges or heavy twills.
- DIALYSER**:—A membrane which possesses the power of allowing certain substances in solution to pass through it, while it rejects others in the same solution.
- DIAMETERS**:—When applied to microscopy, signifies the number of times that a linear inch is magnified by the eye piece and object glass in use.
- DIAPER**:—A cloth similar to damask, but with the pattern of a *chequered* character.
To ornament cloth with figures.
- DIASTAFOR**:—A solvent for starch; a malt preparation of very high diastatic power. It is free from acid and fatty substances and has no action upon the cotton fibre nor on fast dyes the cotton yarn has been dyed with. Since it is completely soluble in lukewarm water, it is ready at once for use. It is used in the preparation of supple and closely adherent finishes, the starch being converted by its fermentation into soluble starch, dextrin and maltose; additions of salts, fats, etc., giving it a basis for its use for special finishes. It does not dust or harden by exposure, and naturally is of advantage with fabrics requiring napping, like flannels, etc.; again, in connection with calendering, the dressing then takes a high lustre and will stand considerable resistance to the influence of the weather. It is specially adapted to be used in connection with farina.
- DIASTASE**:—A substance existing in barley, oats, wheat and potatoes after germination. It is obtained by digesting in a mixture of 3 parts water and 1 of alcohol at a temperature of 113° C., a certain quantity of germinated barley ground and dried in the open air and then putting the whole under pressure and filtering it.
Diastase is solid, white and soluble in water and diluted alcohol, but insoluble in strong alcohol. In solution it possesses the property of causing starch to break up at the temperature of 150° C. transforming it first into dextrin and then into sugar.
Used for removing starch sizing out of cloth, where a soft finish is demanded. One part of this active ferment is sufficient to change 2,000 parts of starch into dextrin and sugar.
- DIFFERENTIAL MOTION**:—The device by which the speed of the bobbins in fly frames is regulated, for the purpose of securing a uniform rate of winding on a circumference growing larger with the addition of every layer.
A differential motion or epicyclic train of gearing consists in introducing gears on movable centres into a regular train of gears.
- DIMETHYLANILINE**:—It is the basis of many coal-tar colors obtained from meth-aniline in the same process as those by which the latter is producible from aniline. It is a liquid, boiling at 202° C. or at 192° C. when perfectly pure.
- DIMITY**:—A light, fine white cotton dress goods, resembling a lawn, a distinguishing feature being raised stripes or cords woven into the fabric.
- DIMITY RUFFLING**:—A narrow ware cotton fabric plaited (drawn) lengthwise during weaving.
- DINNER NAPKINS**:—Napkins made three-quarters of a yard square by seven-eighths; also seven-eighths by one yard square.

DESIGNING AND FABRIC STRUCTURE FOR HARNESS WORK.

LARGE TWILLS.

This sub-division of our regular twills has for its principle of construction, the combination, thread for thread, of any two suitable 63° twills, each of a different repeat; this combination in turn resulting again in a new 45° , *i. e.*, regular twill, of a large repeat, the latter depending upon the units of the two 63° twills selected, *i. e.*, the lowest common multiple with reference to their repeat. The lower this common multiple, the lower the repeat of the new twill, again the larger this l.c.m., the larger the repeat of the new twill weave thus obtained.

This subject is best explained by means of a few combinations.

For Example: Ascertain repeat, warp ways, for the combination of a 6-harness and 9-harness foundation 63° steep twill?

6 and 9 have 18 for their l.c.m.; *i. e.*, 18 warp threads of each weave have to be drafted until repeat ($2 \times 18 = 36$ warp threads) of the new, large twill, is obtained.

With reference to the repeat filling ways of the combination of the two steep twills quoted, we find that a

6-harness 63° steep twill calls for 12 picks for its repeat, and a

9 harness 63° steep twill for 18 picks for its repeat.

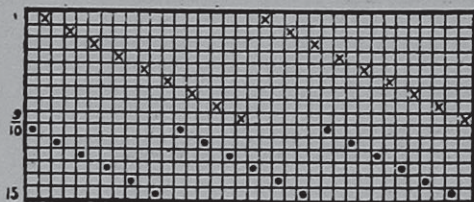
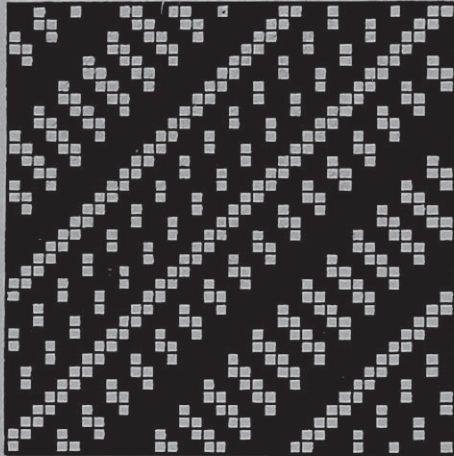


FIG. 1.

Considering these repeats, filling ways, of our foundation steep twills, will give us 36 as the l.c.m. for 12 and 18; hence the new large twill obtained, by combining two 63° twills of 6 and 9-harness repeats respectively, will result in a repeat on 36 warp threads and 36 picks.

Let us now explain the subject in a practical way, on the point paper, in connection with large twill Fig.

1. The same is the combination of the two 63° twills Fig. 2 and 3. The first, repeats on 6 by 12 and the latter on 9 by 18, or the same numerals as quoted before, hence the repeat of large twill Fig. 1 is 36 by 36.

Below the weave is given the drawing in draft, to show construction, *i. e.*, drafting of this combination weave, as well as its practical execution on the loom, calling for $(6 + 9 =)$ 15 harness only. To simplify matters for the reader, weaves 2 and 3 are given in different type; corresponding indications being used in the drawing in draft, viz.:

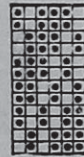


FIG. 2.

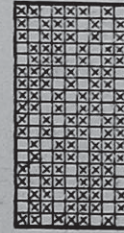


FIG. 3.

Dot type for weave 2 and its corresponding threads as drawn on harnesses 10 to 15 in the drawing-in draft.

Cross type for weave 3 and its corresponding threads as drawn on harnesses 1 to 9 in the drawing-in draft.

The drawing-in draft is shown inverted and may be used in this way, or the drafting may be done in the reverse way, *i. e.*, from front to rear, or which means the same as drafting from left to right.

Let us now consider another combination of 63° twills; for example, the repeats of 6 and 7. Although we use a smaller number in combination with the 6, than in the former example, yet at the same time the result will be a larger new twill weave, since 6 and 7 call for a larger common multiple, than 6 and 9; the same being in the present instance 42, giving us in return ($42 \times 2 =$) 84 warp threads, as the repeat for any new large twill constructed by combining any 6 and 7 harness foundation 63° steep twills, according to our lesson.

Filling ways, the 6-harness 63° s. t. calls for 12 picks for its repeat and the 7-harness 63° s. t. for 14 picks. The l. c. m. of 12 and 14 is 84, hence the new large 45° twill constructed by combination quoted, will repeat on 84 warp threads and 84 picks.

Weave Fig. 4 illustrates combination quoted, the 6 by 12 steep twill being shown in diagram 5 by *dot* type and the 7 by 14 steep twill in diagram 6 by *cross* type. The drafting of the large twill to its lowest number of harnesses ($6 + 7 = 13$), for its use on the loom, is shown again below weave in two kinds of types, the same corresponding in selection with the kind of types used in the two foundation steep twills, 5 and 6.

We will now consider again another combination, for example a 15 and a 12-harness steep twill.

15 and 12 have 60 for their l. c. m., hence ($60 \times 2 =$) 120 is the repeat warp ways for new large twill.

15 and 12-harness steep twills equal 30 and 24 picks

repeat respectively. The l. c. m. of the latter two numerals is again 120, hence repeat of resulting large twill is 120 warp threads by 120 picks.

Weave Fig. 7 illustrates this combination in a

diagonal, showing a broad twill band to alternate with a double satin effect band; a weave many a person would consider as pure Jacquard work, but which is still within reach of a high doobby. Diagrams Figs. 11

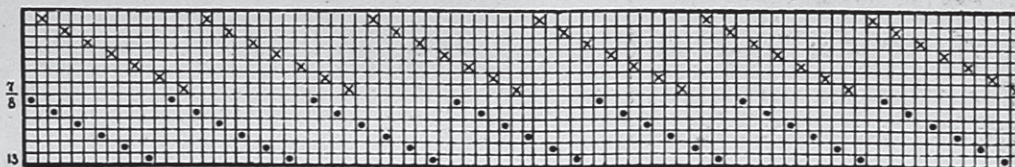
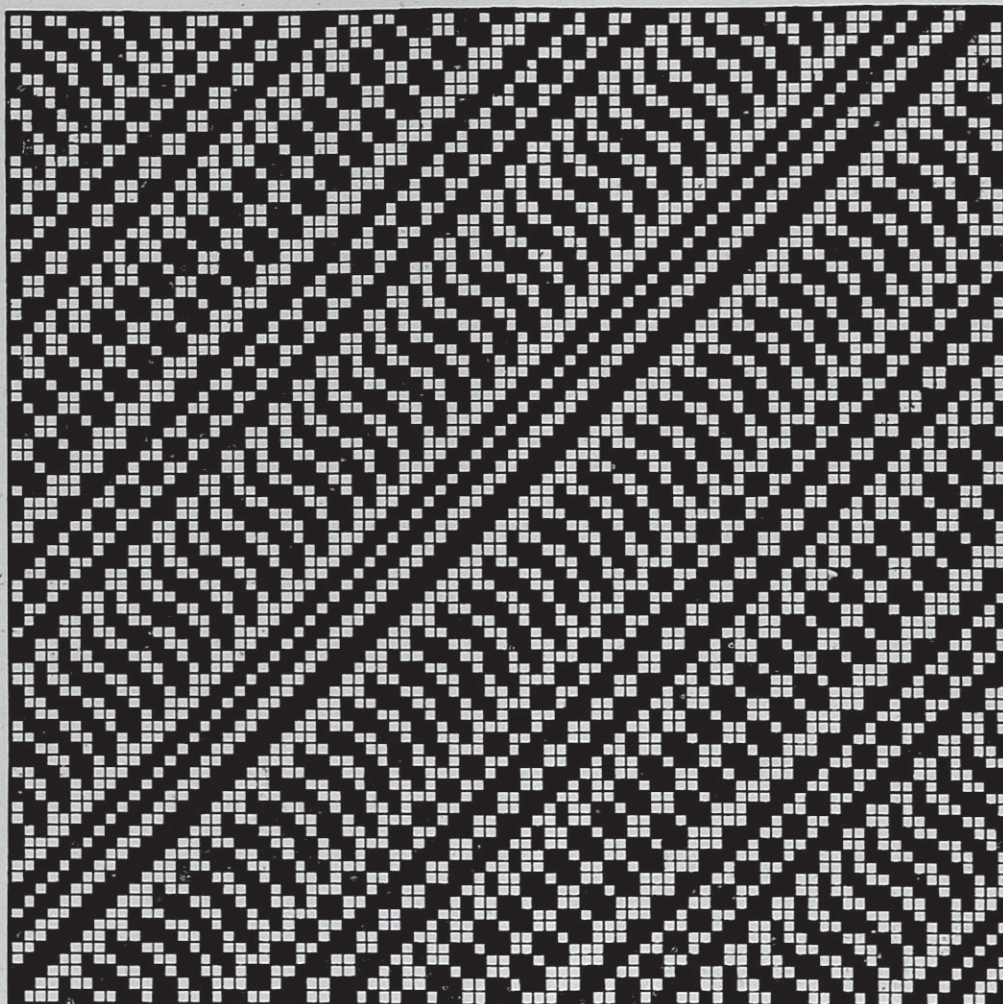


FIG. 4.

practical way on point paper, viz.: diagram 8, the 15 by 30 and diagram 9, the 12 by 24 steep twill. The

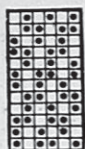


FIG. 5.

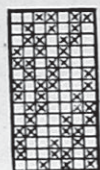


FIG. 6.

drafting of these two weaves in the large 45° twill is shown below; weave in-types corresponding to those as used for the foundation steep twills.

Weave Fig. 10 shows a rather more elaborate large

and 12 are the foundation steep twills, the first repeating on 4 by 8 and the latter on 30 by 60; the large twill Fig. 10 repeating on (4 and 30 = 60 l. c. m. and 8 and 60 = 120 l. c. m.) 120 warp threads and 120 picks. Below weave is given its construction, i. e., its drafting onto 34 harnesses, of which harnesses 1 to 30 refer to foundation weave Fig. 12 and harnesses 31 to 34 to foundation-weave Fig. 11.

For the construction of 63° twills, i. e., the construction of the foundation twills used in the present lesson; see pages 310 and 311 of the May issue.

Questions;

(1) Combine the $\frac{6}{2} \frac{2}{3} \frac{4}{3} \frac{2}{2}$ 12-harness 63° twill with the $\frac{6}{1} \frac{1}{2} \frac{1}{4} \frac{1}{1}$ 8-harness 63° twill; the large 45° twill obtained repeating on 48 warp threads and 48 picks.

(2) Combine the $\frac{4}{2} \frac{2}{2} \frac{2}{2}$ 5-harness 63° twill with the $\frac{3}{2} \frac{1}{2}$ 4-harness 63° twill; the result being a large 45° twill, repeating on 40 warp threads and 40 picks.

with the $\frac{2}{4}$ 3-harness 63° twill; the result being a large 45° twill repeating on 78 warp threads and 78 picks.

(8) Combine the $\frac{3}{3} \frac{3}{3} \frac{3}{5}$ 10-harness 63° twill with

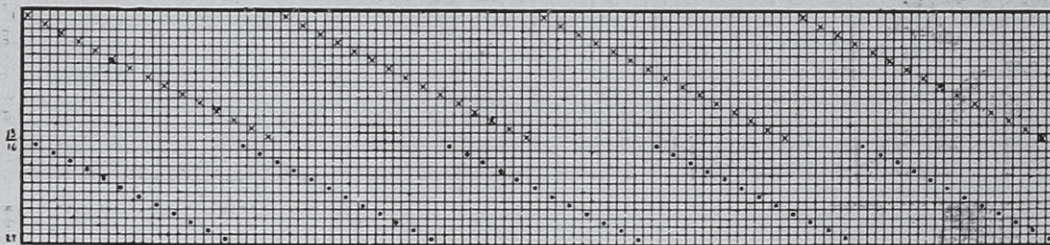
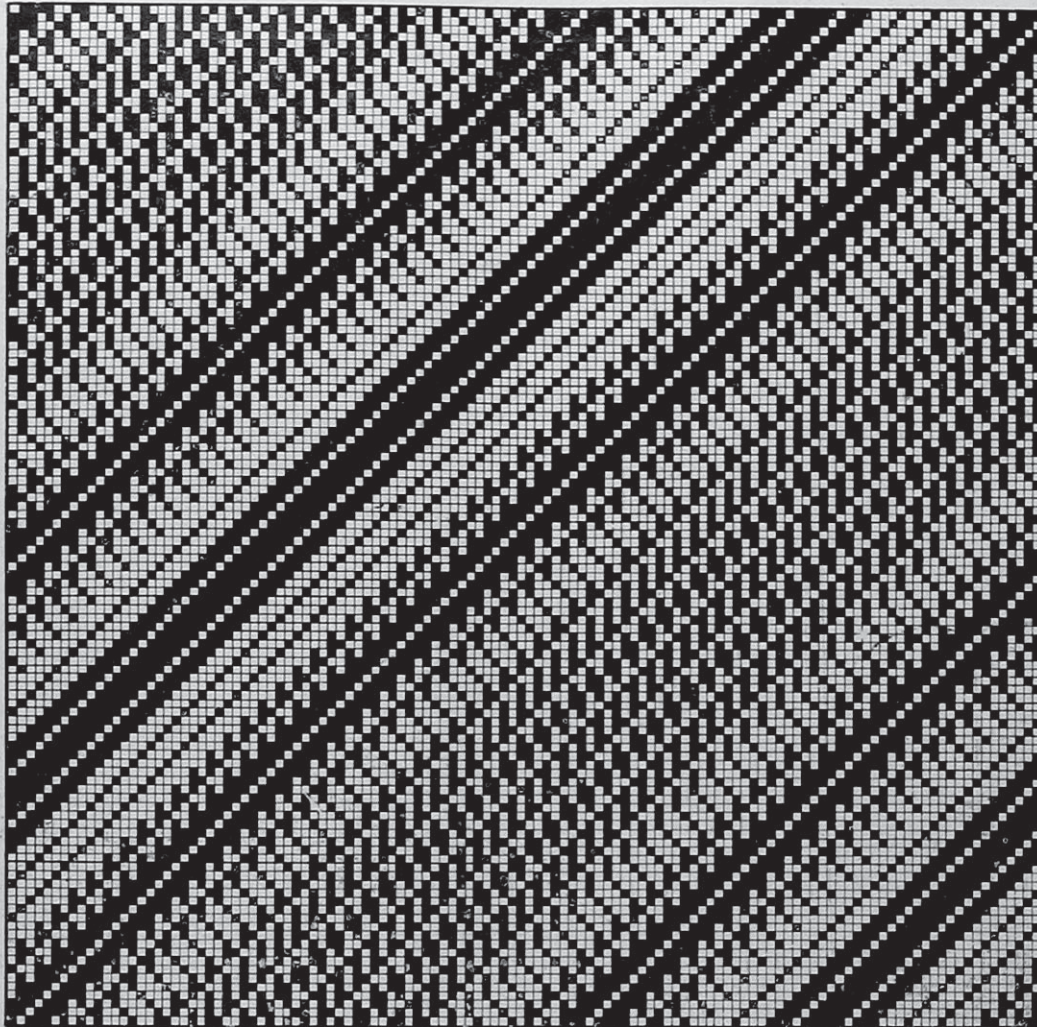


FIG. 7.

(3) Combine the $\frac{2}{2} \frac{2}{2} \frac{2}{3}$ 13-harness 63° twill with the $\frac{2}{2}$ 2-harness 63° twill (being nothing else but the $\frac{2}{2}$ 2-harness rib weave, warp effect) and an excellent new large 45° twill, repeating on 52 warp threads and 52 picks will be the result.

(4) Combine the $\frac{6}{4} \frac{1}{3} \frac{1}{5}$ 10-harness 63° twill with the $\frac{6}{4} \frac{1}{5}$ 8-harness 63° twill; the result being a large 45° twill, repeating on 80 warp threads and 80 picks.

(5) Combine the $\frac{6}{2} \frac{1}{3}$ 6-harness 63° twill with the $\frac{5}{2} \frac{1}{2}$ 5-harness 63° twill, resulting in a large 45° twill repeating on 60 warp threads and 60 picks.

(6) Combine the $\frac{3}{4} \frac{2}{7}$ 7-harness 63° twill with the $\frac{3}{3}$ 6-harness 63° twill, resulting in a large 45° twill repeating on 42 warp threads and 42 picks.

(7) Combine the $\frac{2}{4} \frac{2}{4} \frac{2}{4} \frac{2}{2}$ 13-harness 63° twill

with the $\frac{3}{3}$ 3-harness 63° twill; the result being a large 45° twill repeating on 60 warp threads and 60 picks.

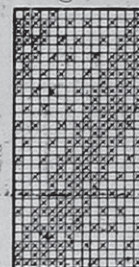


FIG. 8.

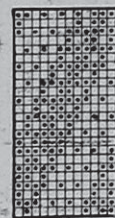


FIG. 9.

(9) Combine the $\frac{3}{3} \frac{3}{3}$ 7-harness 63° twill with the $\frac{3}{3}$ 3-harness 63° twill; the result being a new large 45° twill repeating on 42 warp threads and 42 picks.

The Mason Looms.

While on a recent visit to New England, we had occasion to visit the Mason Machine Works Exhibition Room displaying their looms. The various looms there

to 8 looms. It is a standard cotton loom in New England, as well as in the South.

NARROW SHEETING LOOM:—This loom is constructed either for cam work or with dobbies attached

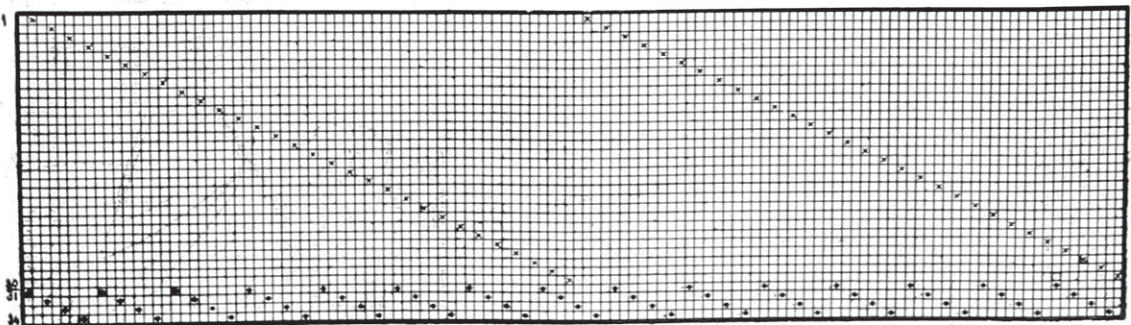
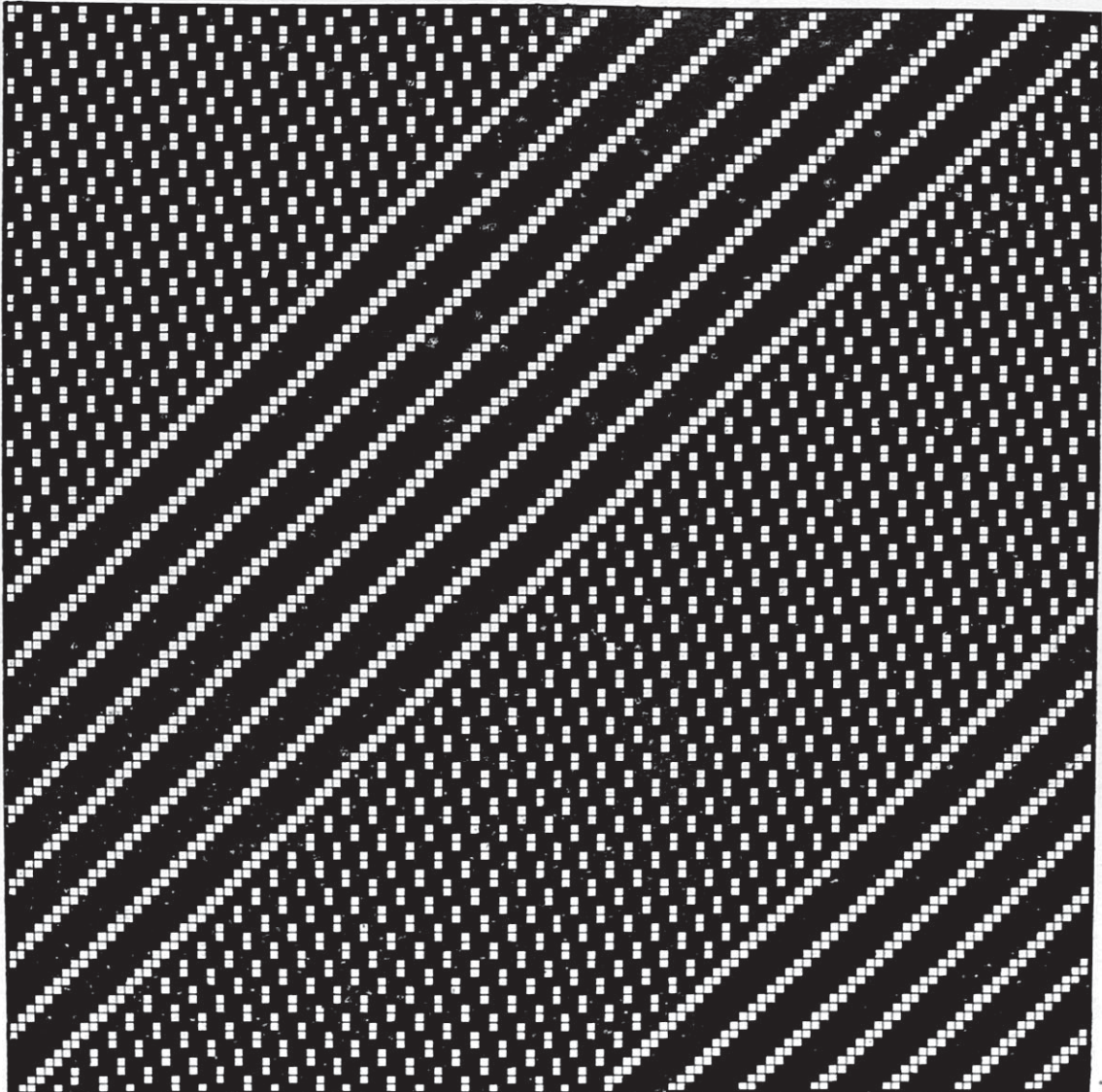


FIG. 10.

certainly show that this concern plays a most important factor with reference to weaving machinery.

Amongst the various looms shown is their

PLAIN PRINT CLOTH LOOM, running from 200 to 220 picks per minute, the weaver attending to from 6

for fancy work. If desired, the automatic (Northrop) filling changer can be attached.

HIGH ROLL (40'') SHEETING LOOM, with positive take up.

FANCY GINGHAM LOOM built either for cam or 24-

harness Mason Dobby—4 × 1 box or 1 × 1 box. If desired, a Leno motion is provided to this loom.

THE WIDE SHEETING LOOM built in 9, 10 and 11 quarter looms, *i. e.*, 81, 90 and 99 inches wide respectively. It is a steady, smooth running loom with 72 picks per minute. The loom is fitted with Compound Bartlett let-off, to permit using 2 short warp beams in place of one large beam.



FIG. 11.

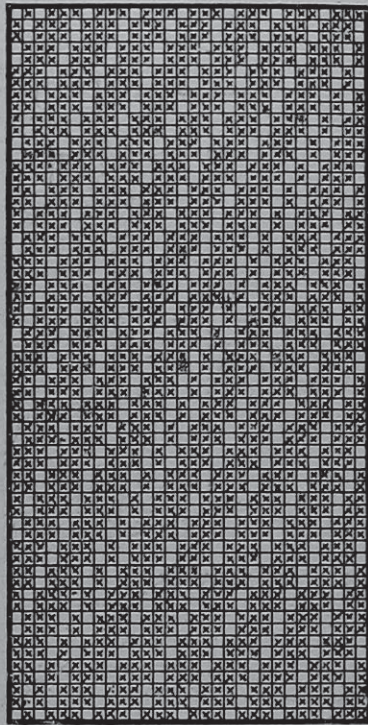


FIG. 12.

THE MASON COTTON BAG LOOM, designed for weaving bags for grain, flour, etc. They also build a

JUTE LOOM, for weaving either bag or plain weaving, also an

EXTRA HEAVY JUTE LOOM for burlaps for baling cotton, using a shuttle 30" × 3½" × 3½".

Another interesting loom of theirs is the

MASON STANDARD SILK LOOM fitted either for cam or 16-harness Mason Dobbies. It is provided with spring reeds, ratchet take up with 2 or 4 boxes × 1 box. This loom is fitted with an extra diameter (7½") take up, *i. e.*, friction roll.

All looms as built by the Mason Machine Works, are either provided with friction or loose and tight pulley drive.

That Heddle Question.

Editor, Posselt's Textile Journal.

With reference to the Flat Steel Heddle, especially the latest style, there is no better heddle for our work in the market. It makes a more even shed than the other heddles. One of the greatest difficulties this heddle will have to contend with in connection with cotton, woolen and worsted work, is that the weaver has to get accustomed to it. He is apt to twist the heddle in threading broken threads; in the same way, the drawing-in girl, not being used to this heddle, is apt to twist them and thus start trouble for the weaver.

However, if you will carefully explain to your help the advantages of the heddle and how to handle it, your trouble will soon be over, and you will never use another heddle. 8-8-08. J. S.

Editor, Posselt's Textile Journal.

I could not state positively whether there is much advantage in the Flat-Steel Heddle, as we are only using a small quantity on an easy weave, however, I don't think there is much difference over the German steel heddle. 8-19-08. J. H.

Editor, Posselt's Textile Journal.

I have read with great interest your article on the heddle question and with more interest the letters which you received from your practical readers. As there are always two sides to every question and as I am very much interested in the opposite view which some of your correspondents take, I hope you will allow me sufficient space in your columns for a reply.

"W. P." states that the flat heddles cannot be changed nearly as rapidly as the German heddle, because they are flat and handle awkwardly. It is evident that the writer of this sentence did not look into this question of handling the flat steel heddle himself or else he would not have written it. As a matter of fact the flat steel heddle is easier handled than any other heddle known to-day. You only have to observe one thing and that is to always have the heddle on the rods, as you very aptly stated in your July article. There are lots of reasons why a heddle, flat or otherwise, should be kept on the rods, there is no reason why they should lay around loose. One good reason why they should stay on is because in that manner waste may be prevented. Now if any one that has opportunity to handle flat heddles will lay them on the table and then count off the requisite number he can transfer on to the frame rods, the number counted, be they five hundred or two thousand, in just about three minutes.

Of course the important thing is to hold the heddles down on a flat board and as soon as the old rod is withdrawn the new rod should be inserted. In this manner the writer himself counted off and transferred in a Frankford Mill not long ago an eight shaft harness in thirty-five minutes. As for the drawing-in this depends on the operator being used to the heddles. Where the steel heddle is extensively used, and I do not mean silk mills by this, experience has shown that in the first few hours it goes a little slower but after that the speed is about the same.

The second objection of W. P. deals with the chafing of the yarn which he claims is more with the flat heddle because it is wider in the direction of the warp than the German heddle. I think that most any experienced man will agree with me as well as with you, Mr. Editor, that the thickness of the heddle is more important than the width provided as is the case with the flat heddle, this wider portion is extremely smooth. It is the universal testimony of all extensive users of steel heddles that the same does not create any fluff in weaving, at least not to the extent of the German heddle. Would this be the case, if the width of the