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THE WEAVER’S PALETTE  

BY NATALIE T. CORBETT

If we were, first, designers, then weavers, we could solve more easily, perhaps, one of our most baffling problems—color, and how to use it. Nature uses color courageously. The day from gorgeous sunrise to opalescent clouds at sunset flames with color. The march of the flowers in our gardens through the seasons from daffodils through delphiniums and snapdragons to gladiolas and chrysanthemums is as varied and brilliant as the rainbow. The shades and combinations of yellows, blues, and greens are infinite. A zinnia bed as a sampler would keep us forever at the dye pots.

Too many weavers forget or fear the glory of color. The Puritans and their influence nearly made the world color blind, and reduced colonial weaving almost to a blue and white existence. Never can we be thankful enough to our ancestors for the beauty of the designs which they bequeathed us—the Rose path, the Whig Rose, the Honeysuckle, the Log Cabin, Indian War—and dozens of others. To beauty of design, however, I make a plea that we, as weavers, add the spark that makes a beautifully handwoven fabric vibrate and live, color. Utilitarian objects today, whether linoleum, saucepan, shower curtain, or costume accessory, almost flaunt color.

No one who has been to The World’s Fair in New York can come away blind again to the wonder and glory of color. It runs like a theme through this World of Tomorrow. It is as persistent as the beat of Ravel’s “Bolero.” And we at our looms must beat in as repetitiously color upon color. The modern world exhibits it everywhere, and the commercial world demands it, if an article is to sell. Unfortunately, too few weavers know the technique of using color as does a designer or an artist. We either avoid, through ignorance or fear, bright or varied colors; or by trial and error trust to a lucky throw that will make a pleasing color combination. What follows is just a series of notes, not for the trained designer, but for those weavers still struggling wistfully, yet fearfully, for that color which they love, but dare not use with abandon.

Suggestion 1: Instead of weaving a table runner or square in a vacuum, as it were, take a specific piece of pottery, and select yarns that match, harmonize, or contrast with the individual piece chosen. Spanish, Italian, Guatemalan, Danish, and the subtle colorings of hand made pottery are particularly suggestive and beautiful. Illustration 1 is a table piece, 19” square, woven for a Danish fruit bowl, and matched in Bernat wools to its old blues, rose, and browns. All the pieces illustrated happen to be woven on the familiar Rose path warping. Any pattern, however, would do as well. The point is that our beloved colonial designs are given new life when woven in modern color. Illustrations 2 and 3 are table pieces, the motif in each case being taken from the brilliant Mexican colors so popular today. The effect is far removed from the sober coloring of the original Rose Path.

Suggestion 2: For costume, sport, and evening bags, make your bag part of a definite ensemble. Be sure you are up to the minute in your color scheme by weaving the bag to match the season’s latest chiffon handkerchief, scarf, or corsage. Know what are the stylish colors in velvets, chiffons, tweeds, and silks before laying in your wool or linen. If you are not near exclusive dress shops and department stores, send for samples of new dress goods, or consult the colored sections of fashion and pattern magazines. See what fun it is to weave with a bit of bright color—a handkerchief or a scarf—pinned to your loom. Look at it as does the artist painting with a model or still life on the stand before him.

Suggestion 3: Use swatches of cretonne, chintz, blocked linen, etc., for starting points in weaving. Weave footstool covers, pillow covers, table pieces, chair seats—all in harmony with the curtains that the swatch suggests. Remember there was a textile designer before there was the weaver of that swatch. It is on the market because the designer knew color. Make your article more marketable by profiting from the color sense and skill of that designer. If we are not designers ourselves, we can learn much from what every beautifully designed textile can teach us.

Suggestion 4: Luncheon sets and mats are more interesting to do, more apt to be woven colorfully, and more effectively displayed if they have been woven for specific, not imaginary, dishes. A piece of bright glass or pottery has sold many a handwoven table mat, and vice versa. Each enhances the beauty of the other.

Many years ago, the writer visited where old world tapestry weaving was done in this country. In the tour from dye room to display room, she was shown where literally hundreds, if not thousands, of spools holding as many shades of color filled the yarn room. Here, she was told, the weaver, cartoon in hand, came to select the colors he was going to use on the tiny shuttles he plied back and forth. We weavers have not that number of colors to inspire us and from which to choose, but we can take our bowl, swatch, or dress accessory with us whenever we buy new yarns or consult our sample yarn cards. Then before we start weaving, we have our colors spread out before us, as does the artist who spreads his oils upon his palette.

I have not attempted to give the number of picks or the treadlings in these three illustrations, because the greatest satisfaction, I believe, and eventually the most perfect art, come from originality and individual adaptations. We must be creative, as is the great designer and artist, to be great weavers. Moreover, she who creates beauty with her hands gains power and freedom for herself and leaves a rich inheritance to her children and grandchildren. As our grandmothers are remembered for their beautiful designs, let our children remember us as those who loved color and used it joyously and fearlessly. Then will our handweaving of today be a living part of The World of Tomorrow.

As suggestions for the use of color, I am giving the colors used in these three table pieces illustrated in this article.
Illustration 1: Bernat’s weaving special
Brown 627
Rose *808
Blue 797
Blue' *795
Black
Illustrations 2 and 3:
- Tan  *15
- Gold  111
- Green  616
- White  7911 (Imported Sport Tweed)
- Green  183 (Peasant Wool)
- Peacock  155 (Peasant Wool)
- Black
A FEW TWILLS

Success in weaving, it seems to me, depends very much on the choice of weave for the project in hand. We used to go blithely along honesuckling everything—rugs, dress-fabrics, upholstery fabrics, scarves, linens—often quite unaware that there was any other weave besides the "four-harness overshot" or any pattern but "Honesuckle." Those simple-minded days are gone forever, thank goodness! Instead of one weave we have many weaves, and our patterns are legion.

Among the most useful, varied and interesting weaves are the twills. Somebody should write a book about the twills. It would have to be a big, thick book to hold all that might be said to advantage on the subject, and within the limits of a magazine article all one can do is to present a few selected specimens and indicate the possibilities.

The twills, and the allied "Dornik," "Herringbone" and "Bird-Eye" group of patterns, are pre-eminently weaves for dress-fabrics, coat-fabrics, blankets and linens. This is their field, and though they might be used to advantage in other ways—such as for hangings—this should be done in the spirit of experiment and adventure.

The twill weave produces a thicker, softer, more durable fabric than plain tabby, but should always be woven firmly. It is not a suitable weave for thin, loosely woven fabrics—for light-weight summer scarves or window-curtains, for instance. The weaves are small in detail and produce a texture rather than a pattern, so that they are not highly decorative for the covering of large, plain surfaces, as for a coverlet. To use the twill for everything would be almost as bad as using the overshot weave for everything. But for many kinds of fabric no weave is as certain to give satisfactory results.

The twills belong to the class of weaves I have suggested calling the "Fifty-fifty" weaves—those weaves in which warp and weft are alike and play an equal part in the fabric. The warp-yarn may be harder twisted than the yarn used for weft, but should be of the same girt and of the same material; and the number of weft-shots to the inch should be the same as the number of warp-ends to the inch in the reed.

Twill on the lowest terms is the "Two-one" three-harness twill, known as the "Jeans" twill. This weave was much used in the old day for the making of a very solid, hard-wearing fabric used for work-clothes. Sometimes the warp was of cotton or linen and the weft of wool, to produce a "linsey-woolsey" fabric. The jeans twill in its simple three-harness form is little used by modern weavers because the fabric that results is too stiff and hard for modern ideas of dress. However, when used for pattern weaving in double-face twill, the jeans twill is an excellent weave for blankets and also for linens. A six-harness two-block pattern of alternating squares in this weave is shown on Diagram Four, sample No. 16.

The four-harness "Two-two" twill is much more familiar to most weavers than the jeans twill. When carried out in rough homespun yarns it produces the fabric known as "tweed," and is used also for serges—done in fine worsted yarns. When correctly woven, with exactly the correct number of weft-shots to the inch, the "twills" or diagonals run at an exact 45° angle. The fabric may be woven to twill in either direction, and both sides of the fabric are exactly alike.

This weave is illustrated on Diagram One, sample No. 1. The material used in weaving the samples, by the way, is Bernat's "peasant" yarn both for warp and weft, the warp set at 15 ends to the inch. This material at this setting makes an excellent fabric for light blankets, though it is too coarse and harsh for clothing. It should be noted that for any of the twill weaves the warp should be set closer than for plain tabby weaving.

But the four-harness twill threading may be woven in many ways beside the plain two-two twill. Some people dislike the strong diagonal rib and prefer the "broken twill" or other variation. Some of the ways in which the four-harness threading may be varied are illustrated on Diagrams One, Two and Seven. Of course many more variations are possible.

The double three-one twill, No. 10, Diagram Two, is not, properly speaking, a fifty-fifty weave as there is twice as much weft as warp, but it is included as it belongs to this group of weaves. It is a useful weave for heavy blankets, automobile robes, steamer rugs and the like.

The "Corkscrew" twills, Diagram Three, produce a particularly firm fabric with an interesting texture, making these weaves very desirable for suitings.

Diagram Four shows a few six-harness twills. The plain "Three-Three" twill, sample No. 13, Diagram Four, is an excellent weave for coat-fabrics. It is thicker and softer than two-two twill, with a bolder diagonal.

The eight-harness twills are more varied, of course, than either the four-harness or the six-harness twills. A plain "Four-Four" twill is sometimes used for heavy coat-fabrics, but for lack of space is not illustrated. It is bolder, thicker and softer than the three-three twill. The weave illustrated by sample No. 17, Diagram Five, is better for most purposes as it is firmer and more closely combined, and shows an interesting texture.

The other eight-harness variations illustrated are excellent for sweaters and blankets, and are also much used for linens. No. 22, especially, is a favorite weave for linens, especially when woven in two colors, on a warp of two colors in a bold checked or plaid arrangement. The photograph, unfortunately, does not show the effect as clearly as it should.

Diagram Six shows the eight-harness three-one double-face twill in a pattern of alternating blocks. This is similar, of course, to the six-harness jeans twill arrangement, but the effect is bolder. This is a very handsome weave for linens.

Sample No. 24, Diagram Six, is not a fifty-fifty fabric, as two kinds of weft are used, one much heavier than the other. It is an interesting and unusual weave, suitable for drapery and upholstery. The warp may be set in alternating threads of two colors, but the colors should both be fairly light shades, not too different in "value." The coarse weft should be black and the fine weft like the warp, all in one color—either of the light shades used for warp or a different color.

By MARY M. ATWATER
Diagram One

(1) No. 1. Two-two twill
Weave the treadles in order:
1, 2, 3, 4 (or 4, 3, 2, 1) and repeat.
This fabric is the same on both sides.

(2) No. 2. Broken twill
Tie-up as for No. 1.
Weave the treadles in the following order:
1, 2, 4, 3, and repeat.
This fabric is the same on both sides.

(3) No. 3. Variation of Broken twill
Special tie-up.
Weave the treadles in order:
1, 2, 3, 4, and repeat.

(4) No. 4. A "Fancy" weave on the twill threading
Weave: 1, 2, 3, 2, Repeat
Special tie-up

(5) No. 5. A "Fancy" weave
Tie-up as for No. 1.
Weave the treadles in the following order:
1, 2, 1, 3, 4, 3, Repeat.
No. 10 is Double three-one twill. It makes a thick fabric, like No. 8 on both sides. If the weaving is done in alternate shots in two colors, the fabric will be one color on one side and the other on the reverse.
A word should be said about the selvages in twill weaving. Many people find it difficult—in fact impossible—to keep a good edge in these weaves. The most satisfactory method of handling the selvages is to use two extra harnesses to carry the selvage threads and arrange the tie-up to weave tabby across these threads. Unfortunately this is not always possible. The most practical make-shift is to weave with two shuttles—both carrying the same weft-material, of course. Start these shuttles from opposite edges, and handle them so that the two threads interlock along the edges. This is a simple trick, easily acquired, and works fairly well for most of the weaves. The manner of using separate harnesses for selvages is illustrated on Diagram Three. With the corkscrew twills it is necessary, as shown, to tie a double set of treadles for the weave in order to get a correct tabby alternation in the selvage, because these weaves are woven on an uneven number of sheds. However for any of the other twills one set of treadles is enough, the selvage treadles being tied alternately to the pattern treadles.

All the weaves so far considered are illustrated with a warp of one color and weft of another. A whole series of twill weaves depends on special effects through threading the warp in two colors and weaving in the same two colors. A few of these weaves are illustrated on Diagram Seven. These weaves are much used for sport coats and also for blankets. Unfortunately space does not permit showing more weaves of this type, but these will give an idea of the possibilities. Perhaps at some future date it will be possible to pursue the subject of twills and the allied weaves a bit further.

MARY M. ATWATER
Diagram Four

No. 13.

Three-three twill
Weave: 1, 2, 3, 4, 5, 6, Repeat.

No. 14.

Three-three twill
Weave: 1, 2, 3, 4, 5, 6, Repeat.

No. 15.

Three-three twill
Weave: 1, 2, 3, 4, 5, 6, Repeat.

No. 16.

Double-face two-one twill

Weave: 1, 2, 3, - repeat as desired.
4, 5, 6, -

Patterns in double-face two-one twill require...
Diagram Five

No. 17

tie-up — rising Shed.
Weave: 1, 2, 3, 4, 5, 6, 7, 8. Repeat

No. 16

tie-up — rising Shed.
Weave: 1, 2, 3, 4, 5, 6, 7, 8. Repeat

No. 19

tie-up — rising Shed.
Weave: 1, 2, 3, 4, 5, 6, 7, 8. Repeat

No. 20

tie-up — rising Shed.
Weave: 1, 2, 3, 4, 5, 6, 7, 8. Repeat

No. 21

tie-up — rising Shed.
Weave: 1, 2, 3, 4, 5, 6, 7, 8. Repeat

No. 22

tie-up — rising Shed.
Weave: 1, 2, 3, 4, 5, 6, 7, 8. Repeat
Diagram Six

Double-Face Three-One Twill
Weave: 1, 2, 3, 4, repeated as required for first block
5, 6, 7, 8, " " " " Second "

Any two-block pattern may be woven in this weave on eight harnesses. A three-block pattern requires twelve harnesses. Short draft as for sample 16.

A "Fancy" Twill

Weave: 1, 10, 9, 2, 9, 10, 3, 10, 9, 4, 9, 10, 5, 10, 9, 6, 9, 10, 7, 10, 9, 8, 9, 10, 10, Repeat. Weave all shots on treadles 1 to 8, in a very coarse black material; all shots on treadles 9 and 10 in yarn like the warp.
Diagram Seven

No. 25

Tie-up: Sinking shed

Two-Two Twill in an 8-thread check.
Weave: 1, 2, 3, 4, twice — in dark weft,
1, 2, 3, 4, " light weft.

Repeat

No. 26

Tie-up: Sinking shed

Weave: 1, 2, 3, 4, — Dark weft,
5, 6, 7, 8, — Light "

Repeat

No. 27

Tie-up: Rising shed

Weave: 1, 2, 3, 4, 5, 6, — Dark weft,
7, 8, 9, 10, 11, 12 — Light "

Repeat

No. 28

Tie-up: Rising shed

Weave: 1, 2, 3, 4, — Dark weft,
4, 5, 6, 1, — Light "

Repeat
The subject for this article came to me while looking over the John Speck book of weaving patterns that is in the textile department of the Pennsylvania Museum at Philadelphia.

One of the drafts so strongly suggested trees that I decided to copy it and try various ways of weaving this lovely pattern.

It is suitable for double weaving, summer and winter weave and overshot weaving.

Although dated 1725, most of the drafts in this book are modern in design, and the one described herein looks well when woven in some of the color schemes in use today.

Illustration No. 1 shows the draft developed for 6 harness summer and winter weaving when woven rose fashion, and suggests three rows of trees which show up to advantage when woven on a warp of natural Egyptian cotton 16/4 with yarn such as Homespun or Spanish yarn in Colonial blue, or any color preferred, tabby the same as warp.
No. 3 John Speck Pattern

A woven as drawn in
Treading for B

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<td>4</td>
<td>1 2 3 4</td>
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<td>4 5 6 7</td>
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<td>8</td>
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<td>10</td>
<td>4 5 6 7</td>
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<tr>
<td>12</td>
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Table Looms:

1-5) tabby
2-4 shed
1-2-4 "
3-2-3 "
4-1-2 "

C. Myouse
No. 4. John Speck Pattern.
The mercerized cotton called Glosheen, that Bernat & Co. have had made especially for their crochet weave, is excellent to use for warp, is light in weight, and when used with Spanish or Homespun yarn, the result is a lightweight fabric with just enough sheen to make it pleasing, and would make a handsome coverlet.

Two colors may be used for weft and anyone familiar with this weave will have no trouble working it out.

No. 2 shows the same draft woven as drawn in, and is good to use for borders on towels or runners, etc.

No. 3 shows the pattern developed for four harness overshot weaving when woven as drawn in.

No. 4 shows same pattern woven rose fashion. One repeat consists of 58 threads and some very pretty end table scarfs could be made on a Structo loom that has a weaving width of 8 inches.

As this pattern seems complete without a border—thread one full repeat of 58 threads, then start at beginning and thread through thread 45.

This will take in 2 large trees and one small tree in center. Sley one thread through each dent of a 15 dent reed. If a closer setting is desired use 4 repeats and put 2 threads through each dent.

For warp use No. 10 perle cotton, No. 1035 orange, tabby No. 10 Beauvais rose 1026 and for pattern thread No. 616 green Fabri. This color scheme seems to suit this tree design.

No. 5 shows the same pattern drawn for use in free-hand weaving.

The Swedish Dukagång in Scandinavian art weaving, which has been so adequately described in one of the previous numbers of The Weaver, seems to be a suitable way to work out this design.

The detail in illustration shows one tree worked up in this technique. A No. 5 shows the working side and B No. 5 shows right side of finished material.

In this weave the color schemes may be as varied as fancy dictates.

A lovely combination of materials and a color scheme that suggests autumn trees against the bluish haze that accompanies fall trees may be achieved by using warp thread No. 10 colonial blue 1006, weft or pattern thread peasant wool 184 leaf green, 158 burnt orange, 152 scarlet, for branches of trees and dark brown 170. For bases and trunks, with taupe No. 198. For background, tabby same as warp.

For a pillow top woven on a table loom that has a weaving width of 20 inches make a warp 2 yards long and of 300 threads. Thread up using Rosengang threading 1-2-3-4, 1-4, 3-2-1, 2-3-4, 1-4, 3-2-1 and repeat as many times as necessary. Two large trees and one small tree of the design will be 16 inches wide when woven and a 2 inch border on each side in background; if woven in peasant wool 13 inches long.

For a pillow top that shows design on one side only start with about one and one half inches in plain weave tabby thread, then weave stripes for 2 inches in the Rosengang pattern, 3-4 twice, 1-4 once, 1-2 once, 2-3 once, 1-2 once, 2-3 once and repeat.

Now start Dukagång weave.

The design shed is formed by pressing down levers 2-3-4. This brings down groups of 3 warp threads on top of shed, leaving one warp thread on harness No. 1, between each group of 3 on bottom shed. Tabby sheds are 1-3, 2-4.

To weave—Start with a tabby shot from right 1-3, then 2-4 from left, which will bring tabby on right side of loom. Now get the pattern shed 2-3-4, count the groups of 3 that are on top and find the number of units that are in the design and put the different colors where they should go—2 inches background color, 4 groups of 3-dark brown, then taupe—23 groups, 4 groups dark brown, 10 groups taupe, 4 groups dark brown, 23 groups taupe, 4 groups dark brown, 2 inches taupe—tabby across to left, change to 2-4 tabby across to right side.

Remember that 2 rows of tabby always complete the pattern row and be careful of edges. It depends upon what size yarn is used for pattern to know how many shots are necessary to square the block of design, sometimes 3, 2 or 4 shots will square block. For this particular pattern 3 shots were necessary. As this weave is woven wrong side up it will be found convenient to use a mirror to look at under side occasionally to see if design is correct. After design is finished weave 2 inches of 3-4 twice, 1-4 once, 1-2 once, 2-3 once, 1-2 once, 2-3 once and repeat.

Then weave 1 1/2 inches plain weave and continue plain tabby weaving for 20 inches to complete the pillow top. Take from loom, steam and press, sew side seams and top and bottom together for finished pillow slip. In this weave pattern yarn should be either homespun doubled or a yarn of sufficient thickness to completely cover the warp threads after a firm even beat of the batten.

Clara M. Youse
John Speck Pattern transposed for free-hand weaving
GREEK WEAVING

With all the fascinating weaving coming to our attention which is done on primitive looms, we treadle loom weavers are going to have to look to our laurels.

The accompanying illustrations show some bags from Athens, Greece, woven on the simplest of looms. The materials used are a firm but soft cotton warp, somewhat lighter weight than carpet warp set ten to the inch, and very fine stiff yarn—probably goat's wool. It is unusually tightly beaten and the finished product is an almost stiff piece of material which lends itself to the making of a practically indestructible bag. The handles are crocheted very, very tightly of the same yarn into a cord, and the bags when held by the handle keep their shape as well as they did when lying patiently waiting to have their pictures taken. They are lined with a firm cotton cloth which of course helps hold the whole in shape.

The technique is the simple one used for weaving on cardboard—that children are taught in the lower grades. No effort is made to interlace the warp threads when color is joined to color by the weft as in the Navajo method or Scandinavian art weaving. The stiffness of the wool used as weft, the even weaving, and firm beating all tend to hold the pattern distinct and regular.

Although Bernat's Peasant wool can be used satisfactorily to duplicate these bags, the effect is not as smooth as the
Greek bags made of the much finer yarn. However, Peasant wool does insure durability which the fine soft yarns would not give.

Illustration No. 1 shows a very lovely bag in shades of Bernat's Peasant Wool in Navy 162 and Delft Blue 188 on a background slightly darker in tone than Natural 197. It is eleven by thirteen and a half inches in size and has served as shopping bag, work bag and on several occasions as a book bag.

Illustration No. 2 is woven in a much more complicated pattern and is truly a thing of great beauty. The background is an old black—the color found in old hooked rugs—and the design is woven in dull blues similar to Delft Blue 187 and 188 and a red duller in tone than 186 on the peasant wool color card. It has a distinct Indian flavor in design but the colors might have been copied from an old carpet whose colors were "worn down" by the treading of many feet.

The three smaller bags (Illustrations 3, 4 and 5) have delighted children I know, and have been used to carry books and lunches to schools and picnic lunches to the park in summer. The rabbit and boat ones are woven in blues and the natural color wool. The wide eyed gentleman, No. 5, is made of brilliant red with a black face and bright blue eyes. The background is the same natural wool.

Of course these bags can be woven more quickly on a treadle loom, but they can also be done on the portable heddle looms that are becoming popular and that seem to be solving the problem for the person who does not wish to invest in the equipment for treadle loom weaving and yet who cannot quite stifle that longing to create something on a loom.
Writers and teachers of hand weaving are agreed in urging weavers to keep samples of their work, some going so far as to say that one should keep a sample of every piece put upon the loom. The real problem is how to keep them. If stored in a box or drawer they must be handled as one seeks a certain piece and soon becomes muddled and some, sooner or later, disappear. Further, and more troublesome, one may even forget the threading and tie-up for a pattern it becomes desirable to reproduce.

The writer found the first suggestion of a better way in the sheets of samples accompanying LaCour and Siegumfeld’s “Vaebog for Hjemmem” in which small samples are gummed on the sheets and each is accompanied by its threading draft, tie-up, and treadling draft. It was good but the samples were not large enough for any save small all-over patterns.

Before anything was worked out to make this fit our needs, an ex-student of Miss Walker, Berea College, Kentucky, showed us her sample book made in the class work at that school. It was almost exactly what was wished. Berea still uses the Swedish notation and their form had some items for which we did not care but it was easily revised and put into the form shown here.

The sheets are 10” x 13” of tough white stock that takes ink well and are punched at one end for binding. One side of the sheet is blank and upon this the sample is stapled. Unless one side of the goods is as important as the other a staple is driven in each corner of the sample. If both sides are to be studied, the two upper corners only are fastened. To reduce bulk the non selvage edges are simply turned under and stitched on the sewing machine. There is no wear to cause them to ravel and complete hemming would simply add another thickness. All samples are pressed before being mounted. Any stapler such as those found today in practically every office will do the work. In its absence tacking the sample on with strong thread will serve nicely. At pres-
ent a patented fastener is being used to hold sheets and covers together but the old-fashioned shoe string has advantages that are not to be scorned.

The large page permits a sample large enough to show the pattern in most cases. The one illustrated shows the corner of a runner with side and end borders as well as one and two half repeats of the body pattern. If a small sample shows all that is desired, more than one may be placed on a page and the note space on the back can then be arranged to suit.

The page of data tells its own story and, if notes are added whenever a variation of the pattern is worked out, will become more valuable with each addition. For personal use one may put in as much or as little as he pleases but if the book is to be used by students rather complete notes are desirable. One change in this form will be made with the next printing: Beginners find the ruled lines for the treadling draft somewhat troublesome and a cross ruled section will be used instead. A heading, "References," is being considered also.

The writer has a number of samples 20" square that are used for demonstration purposes in teaching and has made these up into books similar to the above. The paper is heavier and is not printed. Threading draft and tie-up are usually written on the back. The books are unwieldy to handle but keep the samples in the best shape ever and it is easy to find the ones desired. As needed for class work the sheets are taken from the books; they are easily held before a group; they can be passed around the class or hung on the wall.

This method of keeping samples is practical. They are kept clean and straight; each is accompanied by pertinent data; they do not get lost; and it is easy to locate any one that is desired.
HAND-WOVEN FABRICS FOR UPHOLSTERING

By RUTH BOLINGER

This is the story of my adventure in renovating old furniture and covering it with hand-woven material. After a hunt of months for some good pieces of old American furniture, imagine my delight at finding in a barnloft a set of four pieces and an odd chair of about the 1860 period.

The design and lines of the furniture were right, but as I scraped with my knife it seemed almost impossible that I would find the wood I hoped for—black walnut. I went through a layer of black lacquer, another of varnish stain, and finally a coat of red Jap-a-lac—relics of times when many believed that the beautiful grain of natural wood should be covered with thick and shining stuff.

With each coat of crime that covered the beautiful wood was an upholstery that fitted well in ugliness and lack of imagination. Little wonder that the last owners had discarded these pieces as unworthy when Grand Rapids bestowed on America its garish masterpieces.

When the furniture had been removed to my work shop and before work on it had progressed very far, an acquaintance stopped in one day and wondered why I was wasting my time on "that stuff." Before long however the beautiful soft brown velvet of old walnut, with its darker grain—giving it character and dignity—began to show up. The same person came back later to marvel and admire when the furniture was completed as shown in Illustration No. 1.

Of course for me the only covering for this fine old furniture was hand-woven material. It is by far the most beautiful and durable cloth that can be used in any number of places, but more than that, it was the eminently suitable material to be used for these chairs and the settee.

The furniture was to be used in a large room, 24 x 14 feet, with a fireplace at one end and a huge window on the porch side, which looked toward the distant mountains. Opposite the window would hang a large Kashmir tapestry, intricately woven of red and blue and gold, with other colors in lesser quantities. The combination of colors used in this hanging was such that in most lights the predominating shade was a rich warm wine, although not a bit of this color yarn had been used. This mirage color should be the one used for the odd chair, a nice old fashioned rocker. Of the colors actually woven in, a beautiful blue predominated.
This blue, then, would be the color of the upholstery for the four pieces—a 4-foot settee, an arm chair, and two straight chairs. According to the Bernat color cards it was a Colonial blue.

The upholstery should be a tightly woven material of good body but not too heavy. I decided on Weaving Special for the warp and Homespun for the weft, and planned to set it up at 30 threads to the inch. I needed 10 yards of finished material, 32 inches wide, so planned to have the warp measure 10 1/2 yards, 35 inches in width. This meant that I needed 11,025 yards of warp. I arrived at the yardage thus:

\[
\begin{align*}
30 & \text{ threads to inch} \\
35 & \text{ inches wide} \\
\hline
1,050 & \text{ threads} \\
10 1/2 & \text{ yards in length} \\
\hline
11,025 & \text{ yards of warp}
\end{align*}
\]

Weaving Special contains 4,000 yards per pound. Dividing the number of yards of warp by the yards per pound, or 11,025 by 4,000 made a little over 2 3/4 pounds. I ordered three pounds to be safe, and when my warp had been measured there was one skein left.

Since Homespun is a little thicker yarn, I figured that it would run about 27 threads to the inch as weft to the 30 threads to the inch of the Weaving Special as warp. I figured the amount of Homespun I needed as follows:
32 inches wide
37 threads to the inch

864 threads in 1 inch

and

864 yards in 1 yard

(Divide by 36 to get no. of yards in 1 inch and multiply by 36 to get no. of yards in 1 yard)

864

10 yards of woven material

8,640 yards of Homespun needed

Homespun runs 2200 yards to the pound. Dividing this amount into the yardage needed—8,640—gave a little less than 4 pounds, which is the amount I ordered. I finished weaving the last of the ten yards of material with the last bit of Homespun yarn.

To decide on the pattern was the next step. I wanted a rather small but distinct all-over design and finally chose one of the Swedish upholstery patterns for an eight-harness loom. The threading, tie-up, treadling, and a drawing of the pattern is given here. I have written the draft in a little different form than the one I worked from. The way I have drafted it is in the form most of us use, I believe. The pattern, as pictured in the book I found it, was absolutely square, as would have been the case if the same weight of material had been used for warp and weft. Each of the small patterns in my material was a wee bit longer the long way of the material, since there were less Homespun or weft threads to the inch than there were Weaving Special or warp threads. Illustration No. 2 shows the material on the loom. A close-up of the pattern is given in Illustration No. 3.

The odd rocker was to be the ephemeral wine color of the hanging. After looking over the yarn cards for the exact color I desired and finding the shade, I remembered a wine colored suit—a skirt and three-quarter length coat—that I had woven in 1928. It had been worn for several years and then carefully put away. I found the suit was exactly the right color and there was enough material to cover the chair. It was still a perfect piece of cloth even with all that wear, which speaks well for the durability of hand-woven material it seems to me. It was woven of rather heavy yarn, about the weight of glorine, and in a plain weave. Perfect—the hanging with much design, the blue chairs and settee with a small all-over pattern and this rocker of a different color in a plain weave. I also found some material of the same yarn but in a different weave, one of the Danish 4-harness patterns, that was left from another suit I had woven for someone. This I used to cover a small stool.

I ordered the gimp for the blue upholstery from regular commercial stock. I decided to make the gimp for the wine material for the rocker with card weaving, and found an exact match in a thread called gimp. It was a heavy hard twisted silk thread. In looking over my card weaving patterns they all seemed to have quite a lot of design. It seemed to me that the gimp should be quite plain and flat. In using all four holes in each card the strip woven is the thickness of four threads. I wanted the gimp the thickness of just two threads, so worked out a pattern using just the A and B holes of each card. The first two threads were put through from the top of the first card; the next two through the second card from the back; the third set of two threads was put through the third card from the top; and the next two through the fourth card from the back, etc. Twelve cards were used, which made the gimp one-half inch wide. I used the same thread for the weft and turned the cards all in the same direction as long as it was possible and then turned them in the opposite direction. Illustration No. 4 shows the gimp being woven.

By the time the material was off the loom the furniture had been cleaned, sanded and re-glued. The upholsterer then began his work. I thought it wise to be present to make sure that he ran the pattern the right way and put it right side out. At my insistence he finally agreed to stitch the cut edges, which otherwise might have raveled. I would advise any weaver of furniture-covering material to choose an upholsterer who is not only skilled in his craft but also open to suggestions on handling this kind of material. One more skillful than I might have done the upholstering herself, but I found it a good investment to have a competent workman do the job.
**QUESTIONS AND ANSWERS**

**Question:** "The edges of my rugs have a ruffly look—the selvage threads seem looser than the rest of the rug. What is the matter?"

**Answer:** The difficulty may be due to defective warping, but the more probable cause is excessive narrowing in of the edges. When weaving with a coarse weft as in rug-making it is necessary to narrow in a little in order to make a firm edge, but if the fabric is narrowed in a great deal it becomes almost impossible to beat well, and the selvage threads become stretched through the sawing effect of the reed. While it is true that in coarse weaving of this kind most of the take-up is in the warp, there is quite a bit of take-up in the tabby weft, and the tabby thread should not be drawn tight. Keep the fabric out to almost the width of the warp as it passes through the reed. If you do this, provided the warp has been beamed correctly—you should have no trouble with your edges.

**Question:** In making a warp-face fabric, with the warp set very close in the reed, it is very hard to open the sheds, and it is almost impossible to beat closely. Is there any way to make these things easier to do?

**Answer:** Use a very coarse reed—four or six dents to the inch—and sley as many threads to the dent as may be required for the weave. To beat, insert through the shed a flat stick beveled to a sharp edge along one side and with a flat edge on the other side. Beat against the stick. The beveled edge, of course, should be next to the edge of the fabric and the flat edge against the reed.

**Question:** I have a great deal of trouble with my edges when weaving fancy twills and other similar weaves. How can this be remedied?

**Answer:** The best method is to thread the selvage on two extra harnesses. But as the selvage threads will take up more than the rest of the warp in most fancy weaves, the selvage threads should also be carried on a special beam. As this arrangement is not always possible it is necessary to take the shuttle around an edge thread in some cases, or to use two shuttles—both carrying the same weft—and lay them down in weaving, one behind the other, in such a way that the two threads catch along the edge. This is quicker and handier than going around an edge thread with the shuttle.

**Question:** Is it good practice to double the selvage threads to get a good edge?

**Answer:** In my opinion it is poor practice to double the edge threads. To get a good edge the weaving should be narrowed in a trifle. This brings the edge threads closer together than the rest of the warp. If the threads along the edge are also double threads a very thick, lumpy selvage is apt to result. The edge threads for a rug may be doubled if one wishes, but for a fine piece of weaving this should never be done.

**Question:** Why do I have rows of loops along the edges of my woven pieces?

**Answer:** You do not draw your weft tight enough. While the weft should lie loosely enough in the shed to permit take-up, it should not be loose enough to leave loops. Draw the weft tight enough to draw out any loop at the edge; then let the weft-thread lie at a slant through the open shed and beat.

**TRY THIS ON YOUR LOOM**

By JOHN H. CLAYTON

Many weavers are making articles for sale, and find it a very profitable and interesting occupation. In fact, there are very few occupations that are more interesting than hand weaving with all of the beautiful combinations of patterns and modern yarns.

When weaving articles to order, from samples, most weavers find that there is one pattern called for more often than any other, and it would be very nice to be able to keep one loom set up for this pattern all the time, but most weavers cannot afford to keep a loom tied up all the time just for one design.

A very few dollars invested in an extra beam, set of harnesses and reed, will pay for itself many times over in the first few months. Forty, fifty or even one hundred yards of warp may be put on the loom at one time, drawn in, sleyed, and tied up for the much used pattern. Weave the articles required for the order, and when the loom is needed for another order, simply lift out the entire unit of beam, harness and reed, replace with the empty set and go right along with these in the usual way.

Upon receipt of another order for the popular pattern, remove the set already in the loom, and return the one already set up to the design needed, tie up and you are all set to weave. Fifteen minutes from the time you start to change over, you are ready to weave, instead of the usual four, five or more hours.

By careful calculating when planning the work on hand, you can make one warp serve several patterns that are woven in the same width and sett. When changing drawing-in draft on the same warp it is best to open one tabby shed and insert a lease rod behind the harness, open the other tabby shed and insert a second lease rod. When you pull the warp out of the harnesses, this gives you an end and end lease which makes it much easier to draw in to the other pattern.

Using the above system for the majority of your weaving will result in increased production and profits, in addition to taking much of the lost time and needless effort out of the work.
ADAPTATIONS OF A SIMPLE DANISH STITCH

By NELLIE SARGENT JOHNSON
(Instructor in Weaving, Wayne University, Detroit, Mich.)

The so called Danish stitch is a simple stitch which is very similar to the blanket stitch in embroidery. It is easy and quick to do on the loom, and has many effective variations.

A description of the Danish method of working the stitch is given on Page 16 of “Dansk Husfriiidselskabs Vaevbog” by LaCour and Siegumfeldt. A slightly different method of using the technique was given in my monthly leaflet “Handweaving News” for March 1939, and some of the variations of this will be given here.

Method of Working the Stitch. The loom is set up as usual. Any threading can be used, as long as there is a plain weave shed. This can easily be used also on the simple heddle belt-loom, and the bag and place mat illustrated were both woven on this kind of a loom. As the warp is being sleyed through the reed, several dents are skipped at regular intervals where the stitch is to be made. The Danish method is to make a blanket stitch with the weft to catch together the previous wefts which fall where the dents have been left free. The illustration at Figure No. 1 shows how this is done. Instead of leaving any skipped dents, set the loom up in the usual way and sley as usual. While the results are not quite as lacy, it gives one an opportunity to use the technique much more freely, as there are no set places where the blanket stitch has to be made, but it can be put into the fabric at any desired point. In this way many different types of design can be built up and used.

Weave the desired amount for a plain weave heading, for convenience weave this with white. Then thread a large eyed sail needle or netting shuttle with blue, and put in a shot of this all across the width of the loom in plain weave. Now weave three or four more shots of plain weave with the white. A netting shuttle for the color can be used only if the loom has been set up in the Danish method, that is by leaving skips in the sleying of the reed.

Now open the next shed which is for the blue colored weft. Carry it through the open shed up to the place where the first blanket stitch is to be made, let us say under eight of the raised warp threads. Now bring the needle out of the shed and down over the four rows of plain weave in white and the first row of blue, through to the back of the weaving, and out to the front at the top of the four rows to make a simple blanket stitch. Draw up slightly to pull the threads together. The amount this stitch is pulled up can be gauged by the effect one wishes to get. With the shed still open carry the needle with the blue thread through the open shed to the point where the next blanket stitch is to come. Make another stitch as before. Continue this as desired all across the width of the loom. This is very easy and simple to do, and takes very little time, yet is effective and interesting. The thread used for the blanket stitch should either be of a different weight from that used for the plain weave, or a thread of a different color for the best effect.

The stitches can be made directly above each other as in the bottom border shown in Illustration No. 2 or they can be staggered above each other as in the top border of this same illustration. In both of these borders the distance between the stitches is the same length. In the lower border note how the distances are arranged so as to form a center figure. This is very useful in planning bags or a large all-over pattern.

As soon as the first row of stitches are made, put in another row of blue weft all across the width of the loom, then four rows more of the plain weave in white, and then
another row of the Danish stitches. The number of rows of the plain weave between the blanket stitches can also be varied to suit the effect desired or the size of the thread being used.

At Figure No. 3 is shown a place mat woven on the heddle loom using carpet warp and candlewick cotton, natural for the plain weave center, with orange and dark brown used for the border. With the warp fastened into a picture frame or a hooked rug frame a simple inexpensive loom is available on which many articles may be easily woven. Almost any kind of yarn or thread can be used for this type of weaving. Heavy linen floss for the warp and weft, Peasant yarns and tapestry wools are all adapted to this simple form of weaving. Note in the borders on the place mat shown in Figure No. 3, how the length of the distance between the blanket stitches increases the effectiveness of the borders. Where the stitches come at irregular intervals as these do, it is necessary to center the pattern before beginning to make the stitches, so they will come out evenly on each edge. If desired the rows of plain weave may be of different colors. There are many ways of making effective variations of color with this stitch.

At Figure No. 5 is shown a bag woven of raw silk on carpet warp. This also was made on the heddle loom. It is mounted on a clear crystal frame 10" size. These frames were designed especially for handweaving by the author of this article. It is important in planning a bag to use a suitable frame for it. Much handweaving is often spoiled by a cheap overly decorated bag frame. To my mind it is better to use

**Figure No. 3**
Place Mat Woven with Borders in Danish Stitch

**Figure No. 4**
Danish Technique
Bag Woven on 12 "Heddle" Loom with Borders in a simple zipper and make a bag with it, than to use a cheap inexpensive frame on a nice piece of weaving. For this bag weave a plain heading of 2½" of plain weave with the raw silk. Then one shot of dark red raw silk, 4 shots natural plain weave. Now the first row of stitches are put in with dark red. Make the stitch nine threads apart, or in other words have the stitch come between the 9th and 10th warp thread. Then one row of natural raw silk. Then four rows of plain weave with dark red. The next row of stitches are staggered so they come in the center of the previous row. These are made with the natural raw silk all across the width of the loom. Now one row of plain weave with dark red, four rows of plain weave with rose color, and the third row of Danish stitch is worked with dark red placed so they come directly over the stitch made on the first row.

This completes three rows as shown for the side borders of the bag. Now weave 1½" plain weave with natural raw silk. Then repeat the Danish stitch in the same order and with the same colors as in the first border, for three rows. When these are finished, for the fourth row of Danish stitch, weave one row plain weave with rose color, 4 shots of natural, then do a row of the Danish stitch with the rose color, so the stitch comes directly above the stitches of the second row. For the fifth row, a shot of rose plain weave, four shots of dark red plain weave, then do Danish stitch with the rose color. For the 6th row of Danish stitches, repeat as for the 4th row. For the 7th row one shot of natural plain weave, 4 shots of dark red, then do the Danish stitch with the natural. This is the center of the wide border on the bag. Reverse this order of weaving right back to the beginning to complete one side of the bag. As this was woven on the 12" heddle, only one side of the bag can be woven at a time. So for the other side, repeat the borders in the same order. The total length of this piece of weaving when it was taken from the loom was 28". Note that the width of the weaving was used for the depth of the bag, so that the borders go up and down on the bag.

Many other arrangements of this simple technique are possible and may easily be worked out. And the stitch can be used on a regular loom with fine materials just as effectively. The author of this article will gladly answer any questions concerning this if anyone cares to write to her.
AFTER reading the article, “The Weaver’s Guild of Boston,” in the January issue, it occurred to me that the readers of THE WEAVER might also be interested in the start of a very tiny guild in a rural southern community—a guild organized with much the same purpose and aspirations of the larger and older one of Boston.

Organized craft work in our state is peculiarly lacking, and because of that lack in the back of my mind, I suggested to three women of our community that we meet once a month to discuss weaving problems, since they too were interested in weaving.

Something over two years ago we started those meetings, at that time having a covered-dish supper, after which we discussed threads, looms and what not.

As a nucleus of a real organization we thus started the Lake County Weavers’ Guild in which we pay yearly dues. These dues were allowed to accumulate until such time as we felt we might want to buy some books, or use the funds for some constructive purpose.

Later because we were having such pleasant times, a few friends expressed a desire to join the group. We continued with the suppers that winter and discussed various crafts, their origin and history.

The meetings were carried on in this manner for a time, but because of our limited facilities for research, we decided we were getting no place and that the weavers of the organization would go back to the original plan of studying weaving problems.

Last fall when we started the season’s activities, we found all of the women had become much interested in weaving and expressed a desire to stay in the guild.

We went along in a rather haphazard manner for some months, and it was not until the first of January that we got around to some real plans for our work.

With the definite interest expressed in the subject, I undertook to teach a class in weaving, and we then decided to buy a portable loom for our lessons—one that might be easily transported into the homes of the members who owned no loom on which to work.

At the time this article was written, we have had our loom just three months. In the January meeting the first instruction was given in draft writing, which, of course, is inclined to get the cart before the horse, but it got the class started and when our loom arrived just in time for our February meeting, we spent that evening in setting it up, warping and threading it.

It seemed best since all problems will have to be worked out without personal supervision, to do this preliminary work with coarse materials, so the loom was threaded with carpet warp set at 15 to the inch and using the Sweet Briar Beauty draft. (Please note we are not “honesucklers”).

It is true that an error was made in counting their threads, but the lesson was learned and because of the limited time for instruction, and the fact that the loom was to make the rounds of the weavers between lessons, an unbalanced pattern was allowed to remain on the loom.

The third lesson consisted of a carefully worked out demonstration on the first principles of plain and pattern weaving “as drawn in.”

The loom is making the rounds now, and one after another of our members is bringing me a square of plain and a square of pattern weaving—very well done in most cases.

I recall very vividly the struggle many of the women had with the problem of “weaving as drawn in” at a weaving conference I attended last summer, and it is a source of great satisfaction to feel that these women and girls have mastered this problem in one lesson, with no personal supervision, and nothing but their notes on that lesson to guide them.

The membership in the Lake County Weaving Guild has doubled since the first of the year, and consists of school girls, a home demonstration agent, office women and home women, whose ages range from 12 to 70.

It has been exceedingly gratifying to see the enthusiasm and interest shown in this movement. One younger was so keen to join the class that she gave up one night of basketball at school in order to find the time to attend the meetings. Another girl who is graduating this spring, suggested that if we held our meetings on Friday nights instead of Mondays she could come home from college on week ends next year and continue her weaving lessons.

The older women too are delighted to find so fascinating a subject with which to occupy their minds and their spare time. We have in our small group a number of women who are building a much needed mental poise from their enthusiasm in their weaving, and I am sure other organized groups of weavers can help to create an interest and constructive force in otherwise rather drab lives with such a guild.

We are working now toward a small exhibit a year hence, and we hope at that time to make a creditable showing of our accomplishments.

As the guild grows it is our hope to purchase more looms, some books, and perhaps find a central room where our looms may be housed and our weaving done. That, of course, is in the future, but right now we are thoroughly enjoying our regular meetings, learning something regularly, and some of the older weavers are already starting on their exhibit pieces.

It would be interesting to know of other organizations of this type, the work they are doing and their plans for the future. It is really a lot of fun—and a real inspiration—to be able to create such intense interest as most people seem to find in the subject of weaving.
You can't be too careful about the yarn you choose for weaving. Only a quality yarn will hold its original color and texture for years to come. Bernat specializes (and has for years) in the manufacture of fine yarns for weaving. The wool we buy is the best to be obtained; our colors are dyed by hand to prevent fading, and every ounce of yarn must pass a rigid test before it leaves our factory. Because of the large amount of weaving yarn we sell our stocks are always complete. This means that we can give you prompt delivery service. If you have never used Bernat yarn on your loom we'd like to have you try it. We're pretty certain you'll never go back to using ordinary yarns.

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