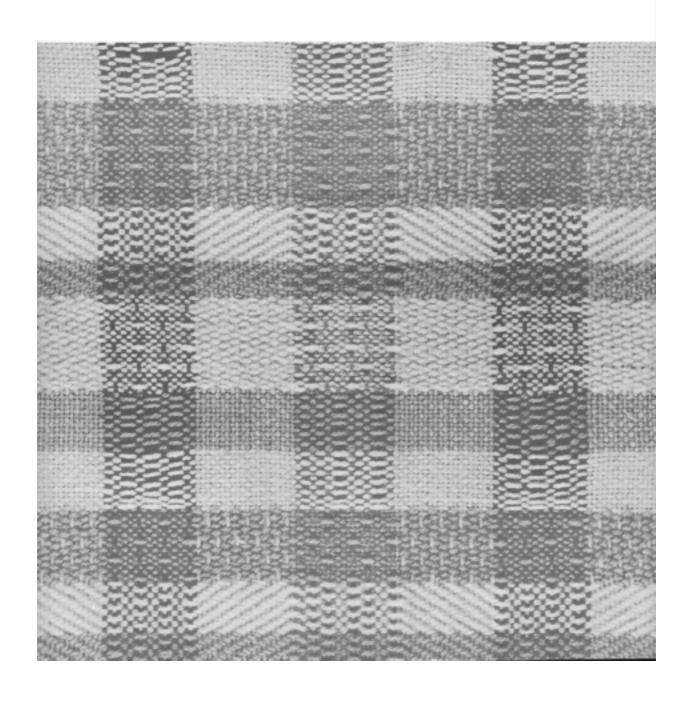
# SHUTTLE CRAFT

April PORTFOLIO 1958



## SHUTTLE CRAFT

THE MONTHLY BULLETIN OF THE SHUTTLE CRAFT GUILD

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The Shuttle Craft Guild was founded in 1922 by Mrs. Mary M. Atwand operated by her until 1946. Mrs. Martin (Harriet) Tidball was own director from 1946 to 1957. It is now owned and operated by  Miss Mary E. Black  and  Bedford, Nova Scotia, Canada	ner-
Associates	
Harriet Tidball—Multiple-harness weaves—Kelseyville, California.	
Boris Veren—Book reviews — Coast Route, Monterey, California.	
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Russell Heffler—Bedford, Nova Scotia.	

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## From Weaver 70 Weaver

#### "WHAT'S IN A NAME?"

by

#### Harriet Tidball

Why do we attach names to our various textile techniques, systems, patterns, skills, and what do these names mean? Mrs. Atwater always said, "A name is just a handle." That should be good enough, except that the use of handles has been challenged in recent years by some handweavers, whereas other weavers publishing in the field have insisted upon putting new "handles", onto common things each time they are used. A study of the handweaving literature leaves too often the impression that each writer is working with a set of removable handles, before presenting a subject every "thing" is stripped of its handle and the writer temporarily attaches his own set. In most cases there is the tacit admission that handles are necessary, since we need something to pick a subject up with.

Without names our lives would be mighty complicated. It would be awkward to have to refer to, "The man with brown eyes and hair, six feet tall, who teaches school and is the son of the shorter brown eyed man who runs the grocery store." We simplify this by saying George Hooserhoffer, which tells immediately that the man is of the Hooserhoffer family and the particular member called George. Much easier, and no chance for the listener to be confused.

There is an unfortunate and completely unfounded feeling these days among some handweavers that if one uses a traditional name for a weave, or even admits of knowing a generally established name, one's approach to the handweaving craft may be labeled as not "original" or "contemporary"—that a traditional name attached to a textile technique means that the textile is a copy of some textile of an earlier period. Such an attitude is the height of absurdity. An atomic scientist is not afraid to use the word "oxygen". He has no fear that someone will think he is simply imitating Lavoisier, and knows nothing of modern molecular science when he uses the conventional handle instead of laboriously saying, "The colorless, odorless, tasteless gas with a specific gravity of 1.10523 and an atomic weight of 16."

Yet, at a recent national meeting of handweaving leaders a well known teacher made the statement that though his students were taught "all about drafting", if they heard the words Summer and Winter or M's and O's they wouldn't know what was being mentioned because they were in-

terested in contemporary weaving only. The gentlest reaction one can have to such a statement is that these students are working under a great technical handicap, and that if after graduating they are to become true masters of their art, they will have a long, hard period of learning. This attitude is not denying the technical knowledge of the past, since learning "all about drafting" is a study of accumulated knowledge, but it is a blind refusal to credit the knowledge accumulated through the ages. And this creates a great handicap toward logical thinking through the refusal to use established terms which provide both short cuts and convenient handles. The same teacher did admit that the names Plain Weave, Twill and Satin were acceptable—which is good—but these terms constitute "first grade" knowledge, the A B C's of the craft.

Language and words are the means for formulating and conveying knowledge and ideas, and the more specific and generally understood the words are, the better can ideas be formulated and expressed. But no matter how apt and specific a term is, if it is known to and used by only one person or group of persons, it has no value as a means for conveying an idea to others. All branches of learning, whether arts or science, have a particular technical vocabulary to express the materials, techniques, and skills of the medium, and this vocabulary is established through the written word and its general acceptance. Let us not insist that of all the arts and sciences, handweaving be the one which has no language of its own. Let us not bury our heads to progress, nor deny the milenniums of thought which are behind our particular art, by a dogmatic refusal to use the language which has come to us, or by having a closed mind to the changes and additions to vocabulary which naturally accompany increased knowledge. Let us accept established words to express ideas, rather than foolishly demanding that the flow of communication be constantly interrupted by descriptions of processes and techniques.

Enough for the justification of names. If we are to know and to grow, we must use them.

Now for the particular names we use in the handweaving field. These have come to us from countless sources and languages and from ages back, since textile creation is the oldest of the practical arts and has been practiced everywhere by all peoples. Since each new generation of thinkers in any field cannot establish a new vocabulary, we accept those words which continue to fit. As with all things living and man-made, we build on tradition. But new things are constantly emerging. New discoveries, new processes, new interpretations, make the increment which we call "contemporary" and therefore "contemporary" is a constantly shifting rather than static concept. The new concept must be logically fitted into the structure of the whole, as they have grown from it, if they are to become useful and real contributions.

In handweaving there are not as many new things as we would often like to think. Something new may merely be new to the individual using it. It may have been rediscovered by this person, though also discovered by countless predecessors and contemporaries. Only a comprehensive search of *all* weaving literature and textiles can prove that anything is new. And few are the weavers who have either the facilities or the interest to make such a search. Consequently, because of the misconception of newness, considerable confusion in the weaving vocabulary arises through the attaching of a new name to concepts or things already named, because the older name is unknown to the "new" discoverer. This is natural, and it happens in every field of knowledge. The sciences handle the matter by accepting the first name used in a recognized, authoritative publication, if the name is logical and satisfactory.

The handweaving field has one very definitely new concept which has strongly influenced textile vocabulary. This is the power loom, the weaving "machine" which has brought with it new words for machine processes and products, words which apply to the automatic processes of weaving rather than to the manual processes which the handweaver uses. Therefore the matter of choice of names and terms arises often with very definite delineation. Shall traditional names which apply to the manual processes employed be used, or shall these be replaced by the newer terms which are descriptive of machine processes? This, like other problems of names and terminology, cannot be settled by any individual or any publication. The answer lies only in time and usage, but because of this it is well that anyone using the specialized vocabulary of an art be aware of the possibilities of selection and use the words which he believes are best. The safest course is to accept names that are traditional, when this is possible. When a suitable traditional word does not exist, the descriptive name is the best choice, rather than a geographic, personal or fanciful one, since more people will understand it.

Sometimes "name giving" other than descriptive handles, is justifiable. This is particularly true when applied to a technique or skill one individual has developed in a significantly creative manner if the person has been responsible for its wide and significant use so that many people have profited from his work and the general field of knowledge is enhanced through it. Then it is appropriate for this person's name to be associated with the technique or skill even if it has been invented and used before him. Among the fifty-two handweaving techniques or Systems given in THE HANDLOOM WEAVES there are several names which illustrate this: The Bergman Weave, the Quigley Twill-Block System, the Bateman Blend, for instance. None of these weaves are new to textile history, but the person whose name is attached to each has done outstanding creative work in the technique which was otherwise nameless, and this work has been widely influential. Therefore the name is merely giving credit where credit is due.

A more careful examination of the name "Atwater Lace" will illustrate a different type of name giving, since it is a suggested new name for a weave which for three decades was known as The Bronson Weave. This is a weave which was re-discovered in this country by the late Mary M. Atwater, who systemized its drafting system, broadened its applications, extended its use from four to multiple harnesses, and popularized it through many influential publications until it became one of the most used of all handloom threading systems. But at the time of her first publication, just to find a quick "handle" Mrs. Atwater gave it the name Bronson, which was historically and descriptively inaccurate. Also, she had already recognized the work of the early nineteenth century Bronson brothers by giving their name more correctly to another threading system. Atwater Lace is merely a name I have given, to give credit for this important weave where credit is due, to correct nomenclature confusion, and because it seems only right to honor the greatest modern American contributor to handweaving knowledge with one important technique name. The new name was proposed in the Winter 1952-53 HANDWEAVER AND CRAFTSMAN in an article honoring Mrs. Atwater's seventy-fifth birthday. But no single person can control language, and perhaps the name Bronson, which is older though historically and descriptively inaccurate, will stick, in the long run.

Another name example is Summer and Winter, which denotes a specific threading, tie-up and treadling system for weaving texture-patterns. This is a rather fanciful name brought to us through tradition, but descriptive in that it implies the dominantly light vs. dark, warm vs. cool texture as characteristically developed on the two sides of the fabric. The name is adequate and charming, and there is no logical reason for not continuing its use. Nor need one be ashamed of the traditional implications the name carries since, as shown in the 1957-58 series of SHUTTLE CRAFT articles on Summer and Winter, it can be interpreted as a thorough-going contemporary weave as well as a classical one.

Another type of name is the pattern or draft name. These are the given-names of textiles and anyone who arranges a new pattern draft is as much entitled to name it as a parent is to name a child. But just as a parent may name a child George, with no guarantee that he will always be called this (his playmates may call him Butch, his teachers may use his middle name to avoid confusion with another George, his business associates may call him by his initials, and even he may change his name for professional reasons. And since there are thousands of other Georges, he has no exclusive rights to the name. And so it is with the names which are given to patterns. They are temporary labels, and some people give them, while others do not. Such names are more apt to stick when they

are used in recognized publications. For instance, Bertha Grey Hayes and Josephine Estes named all of them miniature patterns, and Marguerite Davidson has given a name to almost every draft in her book, and people come to recognize these. Although there is all the confusion of trying to identify "George" among the names for colonial patterns, those which have been pin-pointed through publication in such books as Mrs. Atwater's Shuttle Craft Book or Eliza Calvert Hall's Coverlet Book, are more apt to be the lasting ones.

There is one further kind of given name which must be considered. This name is illustrated by the names Elmer Hickman gives his textiles, and the names one finds attached to many fabrics in Exhibits. These are actually titles rather than names and resemble the titles painters give their pictures. They apply to the specific interpretation and to the specific textile, and are usually impressionistic names. Thus, anyone can give a name of any kind to any textile he creates, and such name-giving can be great fun, but the name is applicable to that particular textile or to any exact copy of the textile.

So we conclude that there is a lot in a name. Names must be and will be used. They should be used carefully and thoughtfully, according to the level of the thing they are denoting.

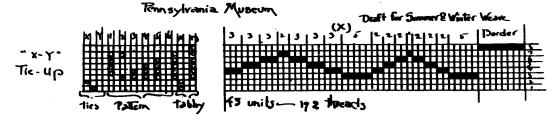
## LEARNED AT THE LOOM

To tie on or not to tie on a new warp onto the old is a "hot" subject. Those who do so are as strongly for it as those who don't are equally strong against it.

Me? I can take it or leave it. I can see value in both, but incline a bit perhaps toward the tie-on. This is probably because much of my weaving consists of samples and if the same threading is to be used why do it over? Perhaps I do not save actual working hours by tieing on but I can do a lot of thinking which I couldn't do if my mind had to concentrate on a threading draft. With a pad beside me all my brilliant—and non-brilliant—thoughts can be jotted down—and incidentally this squib was recorded while I tied the white rayon warp onto the yellow rayon warp! I find too, that the beater acts as a spreader for the warp. I save eyesight and also loom waste. Sometimes I tie the new warp on in front of the beater and sometimes from in back of the harnesses. For long warps single sleyed, I find it best to tie on from the front. Short warps, double sleyed, from the back.

## Shuttle Craft Tecipe for Church Weaving

Arranged from Bilton & 9 Speck Book of Drawings



Materials: Warp white spun silk set at 30 ends to the inch. Tabby like the warp.

Taken west theory your silk or rayon.

Thread as sallows: Dorder, & units

Pattern one repeat

172.

Pattern to (x)

Border

172.

Threads

172.

Threads

172.

Thread two or

32.

Thread two or

32.

Thread two or

32.

32.

Thread two or

32.

32.

Thread two or

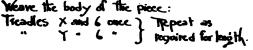
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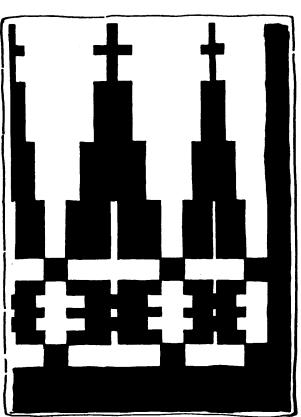
33.

Thread two or

33.

Weave as Pollows: Botton Border\_ Treadles × and 13 once Trepest for Patern: . Treadles x and 1. once } Trepeat for Y - 1. " } 20 shots ٤. 1.12 shots Y - 2 × · **3**. 12 345 Υ-3. у. У-2. -2. -8 shots 2 X-3. -3. -12 shots Υ-3. 2. . x -12 Shots Υ-2. 1 to slots Z 52 shots 2 3 25 sport 52 Shots 24 Shots E shats so shots Weave the body of the piece:





## EXPERIMENTING IS FUN

by Mary E. Black

This study, especially arranged for beginners, concerns one draft and a few of the variations which may be obtained by using different threads and treadlings and by making a few changes in the threading, all of which may sound difficult but even the novice will find it comprehensible if taken in stride, and carefully followed step by step.

If one or two other weavers can work together on it you will all get a great deal more out of it as one weaver will see something that has completely escaped the other.

A number of Shuttle Craft Guild members have written us that "they can throw a neat shuttle but when it comes to theory they are lost."

Others to whom this study may appeal is that large groups of weavers with little time at their disposal who want definite directions laid down for specific projects.

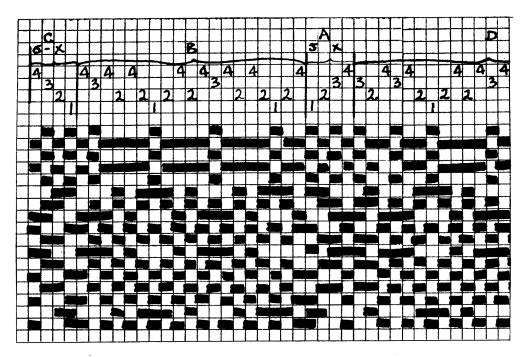
The study in itself is generalized and not concerned with only one aspect of weaving, but is a simplification of many aspects with some general tips about weaving thrown in for good measure.

First let it be said that the draft chosen for the study is a hybrid, or unorthodox draft. It is an old one called simply "textur draft". It does not adhere to any particular system of draft writing, therefore, we need have no qualms over any experimenting we may do, nor changes we may make in its structure. This we could not do if we were, for instance, working with an overshot, summer and winter or crackle draft, each one of which has definite rules laid down for its structure. Any deviation from the rigid structure plan and the weave ceases to belong to the group which name it bears.

Starting with an unbalanced draft, therefore, we can do as we wish, and, who knows, when you weave your samples, you may come up with something quite original and interesting.

Since this was originally called a "textur draft" by some unknown ancestral weaver, we can expect to produce a textured web, keeping in mind that there are three ways to accomplish a textured web—first by using a texture draft, secondly by using any combination of threads which contrast in size, twist, color and/or sheen, and thirdly through unbalanced treadling. Theoretically a textured web should not show a pattern but actually as any combination of treadling or threads, must of necessity after a certain interval, be repeated, a pattern does eventually evolve over the whole surface.

To begin the study it is assumed that the weaver knows how to calculate the amount of material needed to weave a given article a given size;



knows how to read a threading draft; thread the heddles; sley, and wind the warp on smoothly with an even tension; and, make the tie-up.

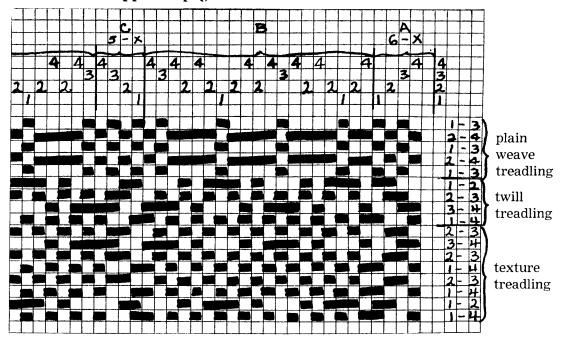
Perhaps what the weaver hasn't given much thought to is that weaving drafts are composed of a single, or a series of, blocks. It is these blocks, and the manner in which they are arranged, threaded and treadled which distinguishes and names the particular weave concerned. Therefore, a close study of the draft is indicated.

Here, because you are familiar with it, you will notice some twill sequence threading. Twill is a universally used threading which can be threaded and treadled countless ways. What happens to the traditional 1, 2, 3, 4 twill when treadled in other than the regulation 12, 23, 34, 41 treadling sequence is illustrated in the study.

The first block in the draft, starting from the right, which we shall call block A is a twill sequence threading. Above the block is a notation reading—"6 x"—which indicates that the block is threaded six times in succession, a total of 24 threads.

Block B, the block directly to the left of A, is the first texture block which calls for 19 threads. The sequence of threads in this block does not follow any definite structure plan, but skips about from harness to harness. The next block, although it is also a twill block, is called C instead of A because the threading runs in a reverse order from A. Calling it C will save confusion as the arrangement of the blocks is discussed later. With more experience behind you this block C would simply be referred to as a twill

#### ← continued on opposite page



block threaded in reverse. Block C is threaded 5 x, a total of 20 threads.

In block D, the threads are arranged slightly differently than in block B, requiring 20 threads. Block A, appears again, but is repeated only  $5\ x$  instead of 6, a total of 20 threads.

Block B is repeated again, and the sample ends with block C, threaded 6 x to balance in width the A block of 24 threads at the right. The extra threads are added to the two outside selvedges to offset the pull-in which would result in the two outside twill stripes being narrower than the two twill stripes in the body of the web.

Cotton, 2/8, which you can obtain from firms advertising in the Loom-Side Market, was used for sample number 1. To show the structure of the weave three colours were used, dark blue, light blue and white. The warp was wound as follows:

- 24 threads white for block A
- 19 threads light blue for block B
- 20 threads white for block C
- 20 threads dark blue for block D
- 20 threads white for block A
- 19 threads light blue for block B
- 24 threads white for Block C

146 threads in all

As you will want to do a good bit of experimenting wind at least a

yard and a half or 2 yards of warp plus your loom waste. If any is left, after you have the desired number of samples, make it up into hot pot holders, or as they are called on Cape Cod, "takers". This material and threading are quite suitable for placemats. However as the sample produces a web only  $6\frac{1}{4}$ " wide it will be necessary to double this in order to get a standard width 11" or 12" place mat, therefore, wind the warp as follows:

No.	threads	Color	Block
	36	white	A
	19	dark blue	В
	20	white	C
	20	light blue	D
	20	white	$\mathbf{A}$
	19	dark blue	В
	20	white	A
	19	dark blue	В
	20	white	Α
	20	light blue	D
	20	white	C
	19	dark blue	В
	36	white	Α

It will be noted that the first and last A blocks, that is those at the right and left selvedges, are each repeated 9 instead of 6 times, resulting in a wider stripe at the edges. This is better designing than having them all the same width. The end borders of each mat are woven so they will be the same width as the side ones. If all the stripes were the same width the mats would look as though they were cut off yard goods. If a wider mat is desired the outside blocks could be repeated more than 9 times.

In planning the length of the warp allow 18 inches for each mat, finished, plus loom waste and allowance for hems if the mat is to be hemmed rather than fringed.

A ten dent reed, double sleyed was used for the sample. In general it is considered better to double sley in a coarse reed, rather than single sley in a fine reed. There is less wear on the threads, with less breakage. If you do not have a 10 or 20 dent reed, use a 9 or 18 dent reed or use 4/8 cotton single sley in a 15 dent reed. This will change the width of the web a bit, but this is immaterial as far as the sample is concerned. *Treadlings* 

Wind three shuttles, one each in white, light blue and dark blue of the same material as used for the warp.

As yet we know nothing of the appearance of these blocks when woven. There are two ways of finding out how they will look. The first is to weave them on paper which is called making a draw-down. The second is to weave them on the loom.

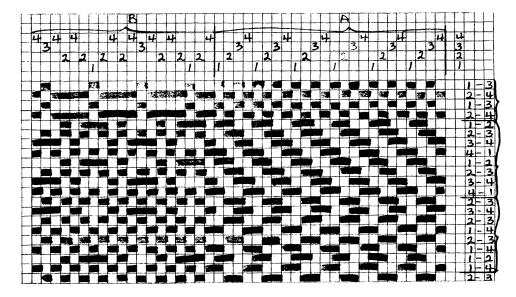
With the limited amount of space at our disposal we cannot go into the details of making a full size draw-down, this you already know or can learn from any of the good weaving books now available. To begin the draw-down we write the treadling along the right hand side of the draw-down directly under the edge of the draft, beginning with the treadling for the plain weave, then the twill and finally with the treadling for the texture weave which accompanied the original draft.

Draw-downs are always made for the counter-balanced looms in which the threads over which the weft or patterns threads are to pass are drawn down by treadle action. When filling in the draw-down then, for instance when harnesses 1 and 3 are depressed a mark is made across all squares which lie under the ones and threes in the same horizontal row. This is the first row of weaving.

The second row, to be treadled 2 and 4 follows with a line drawn across all squares, in the same horizontal row, under the 2's and 4's. In blocks B and D this line will sometimes pass across four squares in succession. This is quite correct. It is this same long skip that shows up in the actual weaving as a four thread weft skip giving the web its textured effect.

Because of page limitations it is not possible to make a draw-down showing the full number of threads in the twill stripes, but a detailed draw-down of the first two blocks, the A twill block and the B texture block, is given below. When you make your own draw-down, use paper large enough to weave the entire draft.

In filling in the draw-down it will be noticed immediately that the filled in squares under the twill block A, woven tabby or plain weave, treadled 1 and 3; 2 and 4; follow a sequence of 1 filled square, 1 skipped square across the width of the A block, followed by an irregular skipping over the



textured block B. The twill sequence is clearly visible as it lies beneath the twill block A followed by skipped squares in the B block. At this point the weaver may ask—"why does the twill slant from left to right on the drawdown, just opposite to the direction it lies on the threading draft?" This is because on paper it is customary to weave below the draft while in actual weaving the threads are entered one above another instead of below each other. If this does not seem clear, weave the twill section in with light pencil marks above the draft on your draw-down.

Now, having seen the fabric woven on paper, weave it on the loom where the full effect of the threads crossing each other can be plainly seen.

When experimenting it is an advantage to have a direct tie-up, that is one in which each harness is tied directly to its own treadle, so the individual harnesses and what they do can be followed easily. However if your loom has the regulation tie-up, it is not necessary to change it.

The regulation tie-up is:

harnesses 1 and 2 tied to treadle 1 harnesses 2 and 3 tied to treadle 2 harnesses 3 and 4 tied to treadle 3 harnesses 4 and 1 tied to treadle 4 harnesses 1 and 3 tied to treadle a harnesses 2 and 4 tied to treadle b

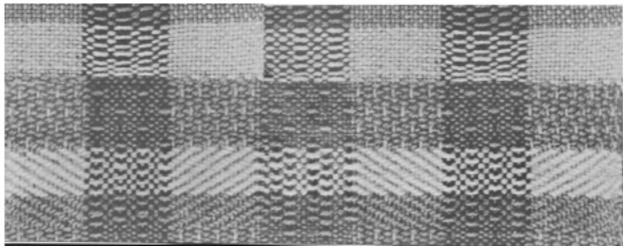
The first treadling on the sample is

harnesses 1 and 3, or a harnesses 2 and 4, or b

Theoretically there should be 24 weft threads in the square at the right hand selvedge. Did you get this number? If not check your beating and practise until you do. Remember in planning your warp that you allowed plenty for experimenting.

Now using the dark blue thread, weave block B in twill, 1 and 2, 2 and 3, 3 and 4, 4 and 1. It is seldom that the same sleying will produce a 50/50 fabric in twill, if it is sleyed to weave a 50/50 plain weave, so do not expect the diagonal of the twill to lie at a  $45^{\circ}$  angle across your web. Failure to achieve this in this instance is immaterial as our interest lies in producing a textured not a pure twill weave.

In case some of you may not be familiar with the term "a 50/50 weave" it means that there are an identical number of threads in both warp and



12



weft within a given space. For instance in the white stripes there are 20 warp threads. There should be 20 weft threads to square the square.

Following the twill treadling comes the texture treadling as given on the old draft, it reads:

treadle	harnesses	2	and	3	1	and	2	
		1	and	4	1	and	4	
		2	and	3	2	and	3	
		1	and	4	1	and	4	

The first reaction to this woven square is "oh that is a spot Bronson" but actually it is not, as it does not conform to the Bronson threading or structure which has every second thread on one harness.

A study of either the drawn-down or the woven fabric will reveal a plain weave background with four thread weft skips appearing every fifth row. By referring to the draw-down it will be seen that these 3 thread skips come on the 1 and 2, and 3 and 4 treadlings, in the B and D blocks, in alternating succession. There also appears throughout a 2 thread warp skip—more apparent when contrasting warp and weft thread are used. These also show on the draw-down.

While the use of three colors may confuse somewhat the textured effect, their use simplifies the study of the weave structure. It is much easier to follow a thread where it lies over or under another thread of a contrasting rather than a self color.

The plain weave, the twill weave and the texture weave all show up quite differently and offer the weaver three textures from which a choice can be made of the most desirable one for the project in mind.

Weave off the remainder of your warp, experimenting along the way. It will be noted, that the web is completely reversible so if you have woven your sample on a rising shed loom instead of a counter-balanced loom it does not matter, simply turn the web over when you remove it from the loom.

Now having satisfied our curiosity let us move on to another experiment.

Coarse cotton threads, even at their best are uninspiring, though they are irreplaceable for experimental purposes.

Experiment #2

The same threading and sleying are used for this experiment as were used for the first, but a 2/8 rayon in a soft yellow from Searle Grain was used for both warp and weft.

The new warp of 146 threads was tied on to the old warp ends just behind the heddles, rolled forward onto the cloth beam, ends cut and tied onto the warp beam rod and the warp rolled back onto the warp beam.

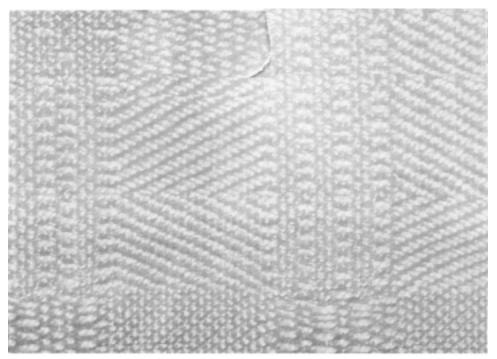
The weaving began with a plain weave square, followed by five repeats—20 shots—of twill treadling 12, 23, 34, 41 then 20 shots of reverse

twill treadling 43, 32, 21, 41 followed by the same texture treadling as used for the first experiment i.e. 23, 34, 23, etc., which continued for the remainder of the warp for some of the portfolio samples.

The difference between this sample and the first sample was amazing! Here was a shimmering golden textured web, seemingly quite unrelated to the first. The background of the textured blocks B and D had beaten back in a close, firm weave with the 3 thread weft skips shining like tiny stars across its surface.

This web, threaded according to draft #1 and sleyed at 20 threads per inch is quite suitable for place mats. Especial care should be taken in choosing the color which should blend or definitely contrast otherwise neither china nor place mat will be complimented.

For a soft sports scarf in yellow, or a man's dress scarf in white, sley at 16 or 18 ends per inch. Refer to your *Handy Reference Tables* for scarf sizes, and plan your warp accordingly. You know the formula—multiply the desired width of the article by the number of threads per inch to determine the number of threads needed. Decide on the length you wish the finished scarf including fringe. To this add the loom waste, which is that length of warp thread which lies between the back and breast beam, plus the amount of warp used for knots, plus allowance for take-up. This varies from loom to loom and each weaver should make it a point to learn early the amount required to cover the loom waste of his own loom.



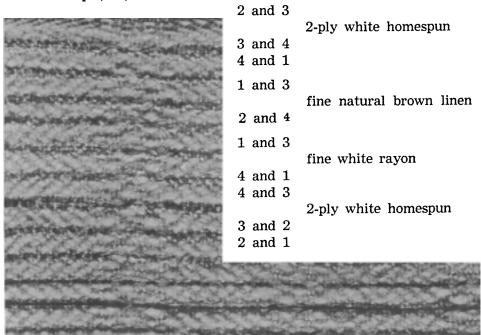


#### Experiment #3

This experiment concerns threads and the various results that can be obtained. Here is an opportunity to really experiment with all your odds and ends of threads. Those long samples sent out by some yarn companies are excellent for highlights.

A 2/8 white rayon warp was used. This warp of 146 threads, was in turn, tied onto the end of the yellow warp using the same method as for the yellow. If you prefer, of course—rethread, instead of tieing on.

With upholstery in mind, the first two samples were woven with a 2-ply natural white homespun (Tranquillity Studio) as the most important thread. Other threads were a nubby natural grey linen, fine white rayon, fine dark green wool (Weavecraft from Searle Grain) and 2/8 Lily cotton. A touch of metallic was thrown in for good measure here and there. The bottom sample, #1, was treadled—\*1 and 2



repeat linen and rayon stripe, then start at top\* and repeat treadling required number of times. The resultant fabric is heavy and firm. At first glance it suggests a horizontal directional material but on second glance the vertical texture stripes catch the eye.

The second treadling was at random using the 2-ply wool as the dominant thread with a blue wool boucle and white, rough spun cream linen. It was purely experimental. This and a third texture treadling of the rough blue wool were both uninteresting. On the whole the upholstery samples were disappointing thereby leaving the field wide open for your experiments.

Experiment #4

The 2/8 white rayon flake as used for the previous set of samples was used also for this second set dealing specifically with threads.

The same treadling was used for each of the six; i.e. plain weave treadling 12 shots; twill weave treadling 25 shots (reversing at centre); texture weave treadling 36 shots.

A—The weft used for the first sample of this group shown at the top of the photograph was a rough spun, heavy cream colored tow linen with bits of the flax stem still showing. This is a very inexpensive linen, and can be used by the novice without worry about the expense. It is an exciting thread with which to weave because of its roughness, and the beautiful fabric into which it weaves. A lovely material, long wearing for place mats, made lovelier still by repeated washings. The over skips, both in warp and weft show up very plainly. The reverse twill treadling would also be attractive if repeated and repeated the length of the web. Set more closely in the reed this combination of threads would produce a very good upholstery material in either the twill or texture treadling.

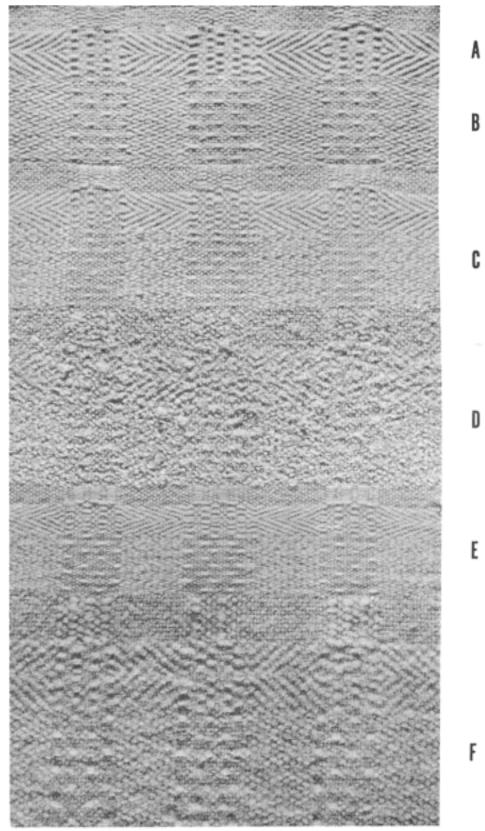
b—was woven with a 2/8 natural cotton weft. In this the contrast between the dull cotton weft and the shiny warp is well marked. Here, because of the nature of the threads, pattern as well as texture are both plainly evident. The result is not unpleasing and would be suitable for everyday place mats or for inexpensive, opaque, draw curtains for a child's room, summer cottage or play room.

c—In this sample the 2/8 rayon is used for weft as well as warp. It is as attractive as the samples woven on the yellow rayon warp. Place mats in this material, in a color to blend with the china, are much more formal than those of cotton or linen. It would lend itself to beautiful drapery material, with good draping quality.

d—has little to recommend it. Woven with a shiny white rayon boucle it lacks both texture and pattern interest. It is, however, a firm, close weave quite suitable for upholstery where something unobtrusive is desired.

e—Lily weaving wool, white, was used for the weft for this sample. Here texture interest is sublimated to pattern interest. If the warp was sleyed in an 8 or 9 dent reed, instead of the 10 dent, this would become a weft face fabric. At the 10 dent sleying there is a pleasing sparkle from the rayon warp where it makes the 2 warp skips. Small bags or purses, or a cushion top or bedroom furniture upholstery woven in a single color or two or three shades of one color would be pleasing, on the sophisticated side.

f—woven of 2-ply natural white homespun (Tranquillity Studio) is pleasing where a "homespunny" material is desired. The sheen of the rayon warp which shows up plainly in the warp skips against the heavy wool gives life to an otherwise dull fabric. This also would be suitable for



upholstery or pillows, but for an entirely different type of room than the foregoing. It would also be suitable for a bag. Where warmth in drapes is needed to shut out cold winter winds, it would serve the purpose well, however the drape would be better from a wider sleying.

The foregoing are but a few suggestions of various types of threads which may be used, and results obtained, and some uses for the finished webs.

The preceding experiments have all been based on the same threading draft with variations achieved through the use of different sizes and kinds of threads.

From these first experiments we learned a great deal about the importance of the weft threads. Now we can learn something of draft changes to meet our various purposes. In the first, or trial sample, we determined the width of the stripes in the finished web. These, because there are approximately the same number of threads in each pattern block. are practically the same width when woven. One of the cardinal principles of designing stripes is that uneven stripes are more interesting and attractive than even ones. Drapery material, threaded on this texture draft, of the 2/8 rayon would be very lovely, wear well and not difficult to weave. but it would be much more interesting if the stripes were of different widths. Once the width proportions have been decided upon, re-arrange the draft. First the decision must be made as to whether the twill or the texture stripe is to be the predominant one and whether it is to be twice or three times as wide as the other. After the decision has been made, simply change the number of times each block is to be repeated. The twill blocks A and C with the exception of the edge blocks are each repeated 5 times. If it has been decided to have the twill stripe three times as wide as the texture stripe then thread these twill blocks 15 times instead of 5 a total of 60 threads each. If the decision is made to have the texture stripes wider, then thread the texture blocks B and D three times instead of the once shown on the original draft. However, it must be borne in mind that when the block to be repeated starts and ends on the same harness (as in the B block on a 4, and the D on a 3) the 4 or 3 is not repeated, it is only threaded the once.

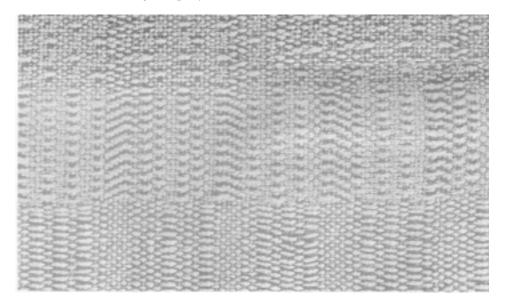
Experiment #5

A second way to change the width of the stripes is to cut down the number of threads in a given block.

This is what was done in experiment number 4. Instead of repeating the twill block A and C the number of times (5) as shown on the original threading draft it was repeated only once. This did not work out particularly well with this threading because of the structure. It was not possible to get a clean cut line between the two texture blocks with only 4 threads to work with.

Thread used for this experiment was Lily 20/2 mercerized cotton, light green, double sleyed in a 16 dent reed. The resultant fabric was very dainty, suitable for aprons, place mats, skirts, and evening bags with a bit of metallic added. Double sleyed in an 18 dent reed (36 threads to the inch) it would be quite firm enough for upholstery for bedroom chairs or dressing table stools, with some extra length woven for chest and dressing table covers.

To give glamour, gold lurex threads were inserted on the 1-2 and 3-4 shots which come up every fifth row. However, it was felt a much more subtle effect was gained by inserting them on other shots where they wove into the web structure rather than stood above it. Try some experimenting here. A very glamorous evening bag or cocktail skirt material could easily be your reward. The colors used in these experiments were not chosen especially for them, but were used simply because the threads were available, left over from other projects. Never discard unused materials and as a general rule don't purchase new materials to experiment with, at least not in quantity, you may find during your experiments that they are not suited either to your project or your draft.



#### Experiment #6

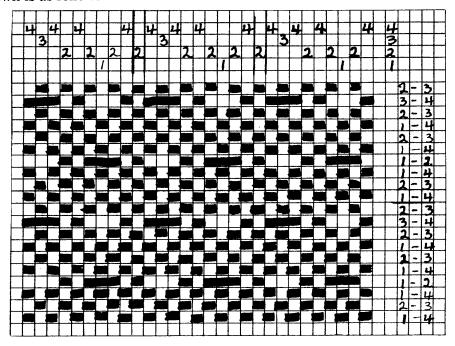
While we were weaving experiment number 4 in the white rayon there kept coming to mind a vision of a lovely silk web set on the texture part of the draft, completely omitting the twill blocks. Unfortunately no silk thread was available so a very fine white Lily mercerized 40/2 cotton was used. 270 threads were wound for the 1 yard experimental warp. This was sleyed at 45 ends per inch, triple sley in a 15 dent reed.



Before the threading could be started it was necessary to check the draft and make some adjustments.

The important item to remember in changing the draft is that the 1 and 2, and, 3 and 4, skips which lie on the surface of the web must continue in regular succession across the entire width. To achieve this end, and because there is little difference in the appearance of the two blocks B and D when woven, the decision was made to use only one of the blocks repeating it the required number of times.

A study of the original draft and draw-down revealed that there are actually two parts to the texture block B, the last 9 threads being a repetition of the first 9 with a thread on number 2 harness acting as a transition thread between the two parts. Therefore in repeating the block it would be necessary to add a similar thread (on number 2 harness) to preserve the continuity. This 2 is encircled on the draft indicating that it is from this point that the draft repeats. Actually the block could be cut to a nine from a nineteen thread block as it was written on the original draft. This would also simplify threading. The revised threading draft and drawdown is as follows:



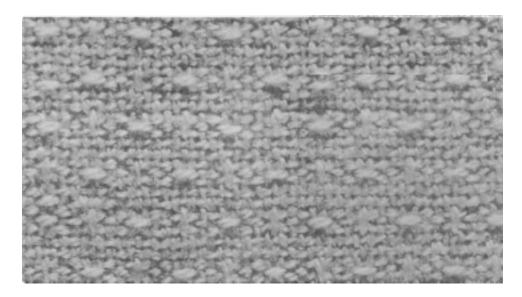
With the removal of the twill block between the texture blocks the draft assumes a much more logical appearance showing a plain weave background with the weft thread skipping over 3 warp threads every fifth row. One of these three thread skips occurs when harnesses 1 and 2 are treadled together and the other when harnesses 3 and 4 are treadled together.

A very fine, soft, nicely draping web resulted, which would be much more beautiful in a fine silk, lovely for a tailored blouse or child's dress. Silk threads are perhaps beyond the capabilities of the novice weaver but with care in handling there is no reason why a short, narrow width could not be attempted. The finer silks should be sleyed at 60 to 80 ends per inch. Patience and smooth hands are needed. Lacking silk, fine linen, rayon or nylon threads could be used.

Experiment #7

For this, the last experiment, Weavecraft 2/16 from Searle Grain, or Lily Weaving Wool are suitable.

Use the same texture threading as for experiment number 6 repeating the required number of times. Sley at 24 threads per inch, double in a 12 dent reed, and beat lightly. After pressing lightly under a damp cloth or with a steam iron, a lovely soft scarf should result.



Use the same threading with a very fine wool sleyed 30 or 32 threads per inch for dress material. Make a generous sample first, steam press and test for "hand" and "drape".

Have you noticed what has happened to the background web with this new threading in which the A and C twill blocks have been omitted?

It is plainly visible on both draw-down and web. Four rows of plain, or tabby, weave lie between each row of texture weave, that is the row in which there appears at regular intervals the three thread weft skip. With the preceding sample it was not possible to get a true tabby or plain weave. If you check your draw-down you will find however, that this plain background was treadled with harnesses 3 and 4 together, alternating with



harnesses 1 and 4 treadled together, rather than with the customary plain weave treadling 1 and 3, and, 2 and 4. It is quite possible that if this threading was transporsed onto a regulation 1 and 3, and, 2 and 4 tabby system, which process we will not go into at the moment, the resulting weave could be found and identified, under a familiar name, in some of the weaving literature. However, name or no name, it is an interesting attractive little weave, with its slightly broken surface, quite suitable for dress materials woven in the finest wools; scarves and stoles in the medium fine wools; baby blankets and couch throws in the coarser wools, and in various sizes and kinds of linens for household articles.

The photograph shows the use of both 2/16 Weavecraft and Lily Weaving Wool used for weft on the Weavecraft warp. Two quite different effects are obtained.

This by no means covers all the experiments that can be done on a single draft. These are only a beginning, a start to whet the appetite of the curious student of weaving. From this you have doubtless learned a great deal—at least we hope you have. No doubt questions have arisen as you have woven your samples. If you haven't been able to work out or find the answers in your reference books, do drop us a line and we'll try and clarify the problems for you. We would also like to hear of your successes as well—and do keep on experimenting and recording your results.

#### Mr. Veren Writes:

I have not received my copy of Mr. Elmer Hickman's latest folio, but Harriet Tidball did and sent me her comments which are printed here. The price is \$6.95, and I'll be glad to fill your orders.

"Color, variety, glamor are words to describe Elmer W. Hickman's latest folio GLAMOROUS TABLE LINENS. On glancing through the 24 neatly mounted samples, each one accompanied by full weaving directions, one's first response is to the gloriously vibrant, and delicately suggestive color harmonies. Each one is altogether different from the others and I doubt if there is a set of dishes from the finest of porcelain to the freest of handmade pottery for which one of these 24 color themes would not make a perfect background. The weaves too, differ widely within simple four-harness limits, so there is a texture suitable for any style table setting or occasion. There are not traditional weaves or interpretations here. All designs are modern, and all designs are new, young in spirit, and exciting. Weavers who have found Mr. Hickman's previous dozen or more Folios useful and inspirational, will feel that he has reached his creative peak in this one." Harriet Tidball.

## HAND WEAVING FOR THE CHURCH

#### by Cliff Hotchkiss Cornwall Bridge, Connecticut.

Planning the textiles and weaving them for ecclesiastical purposes is a wide open field for weavers with imagination and skill. There is such a range of possibilities, from the most intricate tapestry work to common tabby weave, that any hand weaver can go as far as his capabilities will allow him.

This is particularly true for the liturgical Churches. Proper colors are prescribed for the various seasons of the Church year, and many symbols are universally used for their particular purposes.

When ecclesiastical weaving first comes to mind, the average person thinks of beautiful tapestries or richly embroidered work; yet stop to think that the altar of a church "should be covered with a fair white linen"; the linen is plain tabby weave, and what weaver can't produce a good fair white linen cloth if good yarns are used and good craftsmanship is employed!

Being connected with church work all my life (I am now an organist and choir director), I have seen the frequent need for more or better hangings in the churches. These hangings are expensive, mainly because of their weaving designs; many churches simply do not have financial ability to pay for the hangings that they want. I said to myself, "If I can develop some design that can be woven by the average hand weaver, in a pattern that can be woven fast, it will meet a great need." Of course, this idea throws out any patterns requiring a jacquard loom, because the average hand weaver does not have one. Pick-up or laid-in work is also eliminated, because it requires too much time to be practical. What pattern meets my requirements?

The first practical idea I had was Summer and Winter weave. By using blocks of pattern in different combinations, a large variety of results can be attained. Of course, the patterns come out in more or less geometrical designs, but the idea had possibilities.

Each season of the Church year has an appropriate color for the hangings; purple for Advent and Lent; white for Christmas and Easter; green for Trinity; red for Saints' Day and Whitsunday. You are not limited to "clear" colors; the range in greens, for instance, in the "green" season,

may go through the bright greens to the olives, and if the reds or other colors are also modified, many pleasing combinations may be found.

Using the usual Summer and Winter weave, where the pattern is in the color of the warp threads (usually white) and the background is the color of the weft, it would require four pieces to provide the four colors for the seasons. I wanted to cut down on the number of pieces, so as to reduce the costs.

One day I had an idea; why not use two colors on each piece, one for the background and one for the pattern, using proper colors for two seasons, and making them the opposite on the reverse side. For instance, a red background with a white pattern on one side, and a white background with a red pattern on the other side. In this way, the white background would be for Easter and the red background for Saints' Day. This is alright, but that would leave purple and green together for the other seasons; not a good color combination.

So, another attack; try red and green for one combination and purple and white for the other. It works.

If these color combinations are not liked, it is possible to make a separate piece for each of the four seasons; it means twice as many pieces, and more expense; for Trinity, green background with gold pattern; for Christmas and Easter, white background; for Advent and Lent, purple background; for Saints' Days, red background.

Now the colors were settled; how could I weave them to get the desired effects? I tried Summer and Winter threading, weaving on opposites without a tabby; that was it! After using several different types of yarns, I found that cotton chenille was the best. The soft yarn lets the warp threads sink in almost out of sight, and the color on one side almost completely hides the color on the other side.

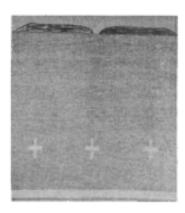
So far, the colors, the weave, and the material had been determined. The next step was to decide on the pattern. I wanted to put on a warp so that I could use it for an altar frontal, a super-frontal, a dossal, a lectern hanging, the Bible place marking ribbons, and the minister's stole. This was quite a contract.

For a frontal, three designs were worked out; first, a large cross in the center, with no other pattern; next, three horizontal stripes at bottom and three at top, with no other pattern; then, a combination of those two, having the three horizontal stripes top and bottom and a large cross in the center; next, a whole series of small crosses all over the frontal; then, three stripes at top and bottom with the space between filled with small crosses; and finally, a large cross in the center, small crosses both sides of the large one, with the three stripes top and bottom or not, as desired. This gave me seven different patterns on the same warp. In addition, I could weave in a series of three vertical stripes at each end.

For a superfrontal, I could use the three horizontal stripes only, or a horizontal row of small crosses, or a series of groups of three vertical stripes located as desired.

The dossal would be the pattern of all small crosses, with or without vertical stripes each side.

The lectern hanging could have small crosses on it, or the large cross, or vertical or horizontal stripes.





For the ribbons marking the place in the Bible, there could be a small cross at the end, or the three horizontal stripes, or several small crosses.

The minister's stole could be any of the patterns described for the Bible ribbons.

All of these different patterns and pieces can be made on the one threading, by proper weaving and then cutting afterward.

For the pattern I used, an eight-harness loom is required. By simplifying and eliminating some of the possibilities of combinations, a six-harness loom can be used. For a four-harness loom, some of the designs can be used, and all of the pieces can be made.

The loom must be threaded wide enough so that the finished cloth width is at least equal to the height of the altar, for a one-piece frontal. If the dossal is wanted wider, it can be made of two or three strips of cloth sewed together or hung in overlapping folds.

Diagram 4 shows the pattern as woven, with lines showing how to cut it for different pieces.

For the Summer and Winter pattern, the threading calls for using two harnesses for the plain background pattern, and each of the other harnesses for a block of the pattern. Therefore, a four-harness loom can weave a pattern with a maximum of two blocks; a six-harness loom four blocks, and an eight-harness loom six blocks. The pattern finally used was made with six blocks, using the full capacity of the eight-harness loom. By eliminating some of the possible variations, similar patterns can be woven on a six-harness loom.

This is a rather complicated pattern to tie up and treadle. My loom has fourteen treadles, which makes it possible to tie up so that it is never necessary to step on more than two pattern treadles at once. Two treadles are required for harnesses 1 and 2 which leaves twelve treadles for the pattern tie-ups. By arranging the tie-ups properly, it is possible to get along with a total of only twelve treadles; this is the tie-up shown in diagram 1. In some cases here, it is necessary to step on four treadles with one foot and one treadle with the other foot at the same time. The arrangement I worked out brings the treadling so that the four treadles necessary to treadle together are adjacent to each other; they can all be stepped on together by putting the foot crosswise on them. The "tabby" treadles, for harnesses 1 and 2, are operated alternately throughout the weaving, in combination with the proper pattern treadle or treadles.

Breaking down the various combined designs, they can be individualized as:—

- 1. The groups of three stripes near each edge of the cloth.
- 2. The large cross in the center of the cloth.
- 3. The small crosses arranged in three rows on the cloth.
- 4. The stripes running crosswise on the cloth.

The blocks, as drawn in, are shown in the draft; they are used as follows:—

Harness 7 gives the three stripes near each edge of the cloth.

Harness 6 gives the arms of the small crosses.

Harnesses 5 and 6 together give the legs of the small crosses.

Harness 8 gives the arms of the large cross.

Harnesses 4, 5, 6 and 8 together give the leg of the large cross.

Harnesses 3, 4, 5, 6, 7 and 8 together give the crosswise stripes in the cloth.

In weaving the pattern, no tabby thread is used. The warp threads in the block being woven are raised for one pick, using the pattern color, and then they are sunk for the next pick, using the background color. At the same time the pattern block warp threads are raised, harness 1 is also raised; harness 2 is raised when the pattern block threads are sunk. This means that harnesses 1 and 2 are raised alternately throughout the weaving, in combination with the pattern and background harnesses. The tieup and treadling draft shows this. Always, when the pattern block harness is raised, harness 1 is also raised; and always when the pattern block harness is sunk (or the background harness is raised), harness 2 is also raised. In my treadling, I used my left foot for harnesses 1 and 2, and my right foot for the other harnesses.

Diagrams 1 and 2 show the threading for the pattern; diagram 1 being a part of the long form, and diagram 2 the entire short form. In diagram 2 the number of warp threads is shown complete; the figures in the diagram being the number of pattern threads for each block; of course,

for each pattern thread there is also a tabby thread, which explains the total number of warp threads called for.

Diagram 1 also shows the tie-up and treadling diagram. The tie-up is arranged so that the necessary number of treadles can be treadled with the right foot, and a tabby treadle with the left foot. The two treadlings in each section (A, B, C, D, and E) are used alternately when weaving the pattern produced by that section.

Referring to diagram 3, the different parts of the pattern can be seen. An explanation is as follows:—

Using treadling A—the leg of the large cross and the three stripes along each edge; harnesses 4, 5, 6, 7, 8.

Using treadling B—the stripe crosswise of the material; if used continuously, a solid color over the entire cloth; harnesses 3, 4, 5, 6, 7, 8.

Using treadling C—the arm of the large cross and the three stripes along each edge; harnesses 7 and 8.

Using treadling D—the legs of the small crosses; harness 6.

Using treadling E—the arms of the small crosses; harnesses 5 and 6. If the three stripes are not wanted in the pattern, omit harness 7 from the combination; if these stripes only are wanted, use harness 7 alone.

Diagram 4 shows how a piece can be woven and then cut up afterward to produce several different hangings; this is explained as:—

Piece K—Superfrontal with three stripes at top and a single row of small crosses below; 108 inches long.

Piece L—Similar superfrontal 84 inches long.

Piece M—A superfrontal with only a single row of small crosses, by cutting the cloth the width between K and L. Or, a stole, by cutting the cloth narrow, as shown. Or the stole can be cut in short pieces and used for the place marking ribbons for the Bible.

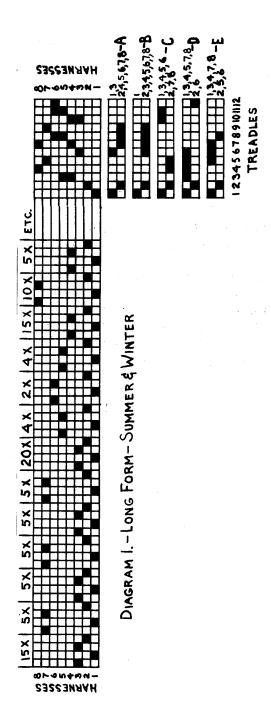
Piece N—A lectern hanging, with three stripes at the bottom, and small crosses above them.

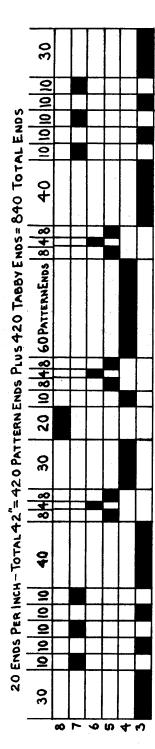
Piece P—A Lectern hanging with only the three stripes at the bottom. Small pieces each side of P—Place-marking ribbons for the Bible, with a single lengthwise stripe and three crosswise stripes.

For a dossal, hanging behind the altar, use the same as K, L, M and N together, not cutting them apart. This same can be used for an altar frontal, by cutting to the proper length.

This diagram 4 does not show the large cross anywhere. It can be incorporated in the frontal instead of the small crosses, or in the lectern hanging N if the hanging can be large enough.

There are many more combinations possible; a little imagination is all that is necessary.





. DIAGRAM 2. - SHORT FORM - SUMMER & WINTER

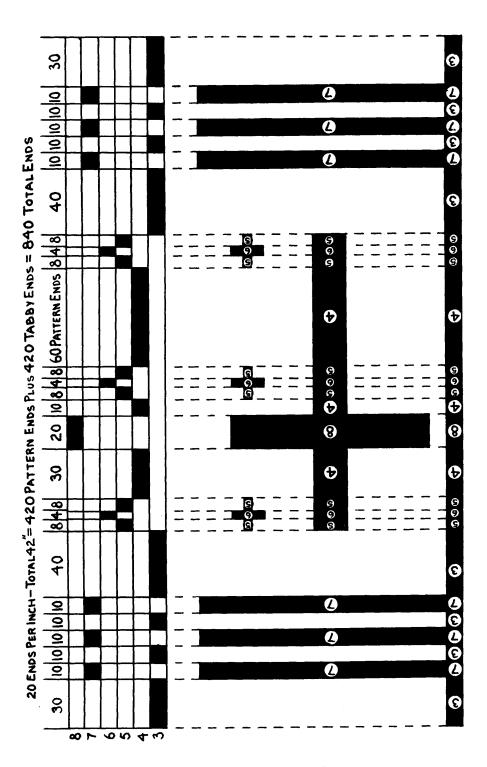


DIAGRAM 3.

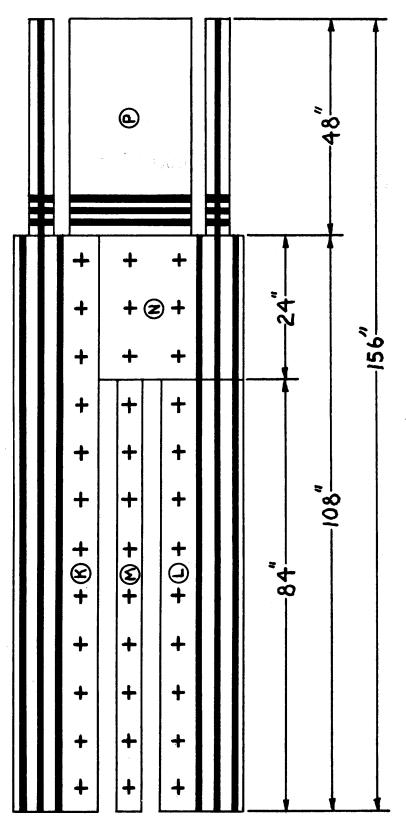




DIAGRAM 4.

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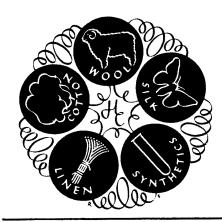
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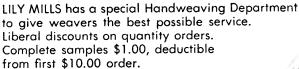


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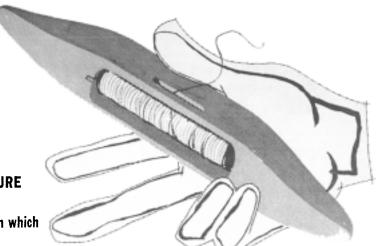


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