The Shuttle Craft Guild
Handweaver's BULLETIN
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For the 1954-55 season, the Shuttle Craft Guild has a new assistant, Mrs. Ruth Walker of Egg Harbor, Wisconsin. Mrs. Walker is a custom-weaver who has a small, summer studio-shop in her Wisconsin resort area. Her work is not new to us, as she was a student in the Virginia City studio of the Shuttle Craft Guild for eight months. We are delighted to have another assistant drawn from among the serious career-weavers in the Shuttle Craft Guild. (She can bake good bread, too!!)
The BOUND WEAVE for OVERSHOT

The variations of the Overshot weave are a bright adventure to the weaver who is familiar with it only in its Colonial interpretation and as a means for making colorful borders on small articles. Unknown to many weavers is the fact that it holds remarkable potentialities as an expressive medium for color effects and modern designing, when used as a basis for the various rotation methods of weaving.

The rotation methods are those in which harnesses are raised (treadles operated) in static treadling sequences known as rotations, based on the Circle Diagram, coordinated with the use of two to four shuttles, each carrying a different color of weft. Most of the rotation weaves use pattern sheds only, without a tabby binder. One of the most startling of the rotation weaves is an adaptation of the Swedish method known as Bound Weaving, which in Swedish books is given as a method for weaving the Rosepath threading.

Bound weaving produces a type of rep fabric in which the warp is completely covered by weft. The textile is thick, heavy and somewhat spongy, the sponginess varying in degree according to the length of the weft floats and the amount of weft which is forced over the warp. Although conceivable Bound weaving might be done with a single color, there are better methods for weaving a single-color rep fabric, so the Bound weaving method is considered a polychrome weave which utilizes many colors. Bound weaving is used primarily for color effects and requires serious attention to color harmony. The textile woven by this method has a jewel-like appearance due to colors appearing in small areas. Patterns are somewhat blurred because of the uniform surface of the fabric and the close association of areas.
Drafts for Bound Weaving: Bound weaving may be produced on any Overshot, Twill or Extended Point Twill threading, though the treatment must be somewhat different for Overshot and Twill interpretations and the Overshot is the method to be considered here. The Hybrid drafts which contain both Twills and Overshot blocks, such as the popular miniature drafts and drafts 15, 16, 17 and 21 in the HANDWEAVER'S INSTRUCTION MANUAL, are to be avoided because of the technical problems they create. Likewise, Overshot drafts which contain blocks of widely differing sizes should be avoided. Probably the best drafts are those which have from four to seven threads per block and produce patterns which, if woven in standard Overshot method, are somewhat monotonous. Since the desired effect of the textile is the jewel-like color spots with gentle movements of lines, large patterns with strong emphasis and considerable complication give a "busyness" which is unsuitable to the medium and may be downright ugly. Any of the motifs given in the September 1954 BULLETIN will make a good threading for Bound weaving, or at least the foundation for a good threading, or any two motifs alternated to give A and B units. The problem is the basic one of selecting a point of emphasis and using all other design elements with restraint so as to bring unity to the total effect. In the case of Bound weaving, the emphasis is automatically on the color harmony, so pattern must be used with simple restraint and texture likewise must be plain, to obviate distractions.

Treading: The Standard, balanced or twill tie-up is used for Bound weaving. This is the tie-up which is derived from the Circle Diagram (see BULLETIN for September 1954) by connecting adjacent points, in order, and tying these harness numbers to the treadles, in order. A differentiation between the rising shed (jack loom) and the sinking shed (counterbalanced loom) is necessary for the weaver.
who follows treadling directions, as sinking-shed directions used on a rising-shed loom, or vice versa, will make the desired pattern turn up on the under side of the fabric. For the person who designs directly at the loom, this difference is of no moment. The tie-up is as follows:

<table>
<thead>
<tr>
<th>Treadle</th>
<th>Sinking-shed</th>
<th>Rising-shed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>harnesses 1 and 2</td>
<td>3 and 4</td>
</tr>
<tr>
<td>2</td>
<td>harnesses 2 and 3</td>
<td>4 and 1</td>
</tr>
<tr>
<td>3</td>
<td>harnesses 3 and 4</td>
<td>1 and 2</td>
</tr>
<tr>
<td>4</td>
<td>harnesses 4 and 1</td>
<td>2 and 3</td>
</tr>
</tbody>
</table>

The treadling order is static, as is the case with all rotation weaves. Treadling order is: treadles 1, 2, 3, 4, repeat, with one shot in each shed, with no variation at any time. In other words, Bound weaving is treadled exactly like plain twill. Therefore, if a considerable amount of weaving is to be done in this technique, it is advisable, as for twill yardages, to reverse the tie-ups on treadles 2 and 3 so that the treadles may be operated in walking order: 1 (left), 3 (right), 2 (left), 4 (right), repeated throughout.

**Weaving:** The weave requires four shuttles, each one carrying a different color of yarn, for full color effects. The four colors will be indicated by the symbols: L, M, N, O, and if further colors are used they may be called P, Q, R, etc. These symbols are advisable for avoiding confusion with the symbols for pattern blocks (which are A, B, C, D, E, etc), with tabby symbols (which are a and b, or a and b), with tie-down symbols (which are x, y, z), with harness or treadle or shuttle numbers (which are 1, 2, 3, 4, 5, etc), or with weave classification symbols (which are I, II, III, IV, etc).

Through the use of four treadles and four colors in unchanged rotation, there are four possible block orders. These blocks may be woven in
forward succession exactly as they are given here, or in reverse order: D, C, B, A, but the treading order or color succession never change. Jumping to opposite blocks is usually not advisable as it leads to spotty and banded effects. In the following block orders the figures represent treadles and the letters colors.

Block A --- 1-L, 2-M, 3-N, 4-O, repeated;
Block B --- 1-O, 2-L, 3-M, 4-N, repeated;
Block C --- 1-N, 2-O, 3-L, 4-M, repeated;
Block D --- 1-M, 2-N, 3-O, 4-L, repeated.

These rotations obviously present a problem in the mechanical organization of shuttles, to avoid error or confusion. The best system for weaving the rotations is to use two small tables, one at either side of the weaver's stool or bench. A pair of the small, wrought-iron, plastic topped tables available so inexpensively these days in department stores and from mail-order houses, are splendid weaving tables. Place the four shuttles on one of the tables, parallel to the breast beam, in the order in which they are to be thrown. First pick up and throw on shed 1 the shuttle nearest the loom, and lay it on the other table, close to the loom. Next pick up the second shuttle, which now lies nearest the loom, throw it in shed 2, and lay it down directly behind the first shuttle. Next pick up the third shuttle, treadle shed 3, and lay the shuttle back of the second. After the fourth shuttle is thrown in shed 4 and laid back of the third shuttle, all shuttles have been transferred to the opposite side and lie in the original order, ready for weaving the second rotation. Continue throwing the four shuttles back and forth in this order until a block of the desired size is built up.

The method for shifting the rotation from one block to the next block forward (from A to B, B to
C, etc.) is to pick up the shuttle which has just
been thrown to complete a rotation, and throw it in
shed 1, and lay it down in position 1 on the oppo-
site side. Then pick up shuttle 1 which is in the
first position, throw it on shed 2, and lay it down
in position 2. Follow with shuttle 2 from the
front, on shed 3, and lay it down in the third
position. Shuttle 3, in shed 4, is laid at the
back and completes the new order for the next
block. Weaving is continued in this order until
the block is built up to the desired size. Then,
once again, shuttle 4 is thrown first to start a
new shift.

When one wishes to shift the order of blocks
to the reverse direction (from D to C, C to B,
etc.), a different method is used for the change.
Instead of throwing two shots with the same shuttle
one omits one shuttle at the beginning of the rota-
tion. This is done by simply picking up the first
shuttle and instead of throwing it, placing it back
of shuttle 4. The second shuttle thus comes into
the shed 1 position, the third into the shed 2
position, the fourth into the shed 3 position, and
the one which was originally first into the shed 4
position. This method for shifting from block to
block is continued until the weaver desires to
reverse the motion of the flow of blocks. Then the
other method is resumed.

It might seem that the use of these two
methods for shifting block movement in opposite
directions would create an irregularity in the
weaving. This is of course theoretically true, but
in practice, the weft is packed so closely that the
distortion does not show up in the fabric.

As far as weaving patterns are concerned,
simplicity should be the rule here even more than
in the threading. Elaborate patterns made through
complex block orders are not attractive. One of
the best systems is to repeat each rotation the same number of times so that all pattern blocks are built up to identical size, and to weave the blocks in simple diamond order: A, B, C, D, C, B, A. Or the diamond order may be extended by continuing the forward progression forward and backward farther, for example: A, B, C, D, A, B, A, D, C, B, A. Irregular movements in which the forward progression is always greater than the reverse are sometimes pleasant; for instance: A, B, C, D, A, D, C, D, A, B, C, B, A, etc.

Certain designs may call for the same color to occur on two, three or even all four pattern areas in the same block. This is particularly true in the type of interpretation known as Flame Point, which resembles Flame Bargello embroidery. When weaving in this manner it is advisable to use the four shuttles throughout in order to avoid confusion of shuttle order, but to use identical bobbins where required. An example of this type of design would follow the following directions:

1, 2, 3, 4, - L, repeat for ¼ inch;
1, 2, 3 - L, 4 - M, repeat same;
1 - L, 2, 3, 4 - M, repeat same;
1, 2, 3 - M, 4 - N, repeat same;
1 - M, 2, 3, 4 - N, repeat same;
1, 2, 3 - N, 4 - O, repeat same;
1, 2 - N, 3, 4 - O, repeat same;

Continue in this manner, entering and dropping colors one at a time as far as desired. Variations and elaborations of this manner of weaving may be made as long as the color changes are made according to a definite system. Very beautiful effects may be created by this method of handling the colors, if the colors are well harmonized.
Warp and Warp Settings: The warp for Bound weaving should be of smooth cotton or linen. So-called standard warps at the settings commonly used for tabby or for two-shuttle pattern weaving may be used, but slightly wider warp settings are often desirable. These settings might be generalized as follows:

<table>
<thead>
<tr>
<th>normal setting</th>
<th>suggested setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>24/2 cotton</td>
<td>at 36 per inch</td>
</tr>
<tr>
<td>20/2</td>
<td>at 30 &quot; &quot;</td>
</tr>
<tr>
<td>24/3</td>
<td>at 27 &quot; &quot;</td>
</tr>
<tr>
<td>10/2</td>
<td>at 24 &quot; &quot;</td>
</tr>
<tr>
<td>10/3</td>
<td>at 20 &quot; &quot;</td>
</tr>
<tr>
<td>40/2 linen</td>
<td>at 32 &quot; &quot;</td>
</tr>
<tr>
<td>20/2</td>
<td>at 24 &quot; &quot;</td>
</tr>
<tr>
<td>12/2</td>
<td>at 20 &quot; &quot;</td>
</tr>
<tr>
<td></td>
<td>at 27-32 per inch</td>
</tr>
<tr>
<td></td>
<td>at 24-27 &quot; &quot;</td>
</tr>
<tr>
<td></td>
<td>at 22 1/2 &quot; &quot;</td>
</tr>
<tr>
<td></td>
<td>at 18-22 1/2 &quot; &quot;</td>
</tr>
<tr>
<td></td>
<td>at 15-18 &quot; &quot;</td>
</tr>
<tr>
<td></td>
<td>at 24-27 &quot; &quot;</td>
</tr>
<tr>
<td></td>
<td>at 18-22 1/2 &quot; &quot;</td>
</tr>
<tr>
<td></td>
<td>at 15-18 &quot; &quot;</td>
</tr>
</tbody>
</table>

The reason for using somewhat wider warp settings for the Bound weaving is that close warp settings create resistance against the close placement of weft and the wider settings permit the weft to be packed in, to give a better rep-like surface. This problem, as with most warp-setting problems, is a matter of adapting to the type of fabric which is desired — that is, designing for function. The wider warp settings allow a fabric which is, as compared to the normal settings, heavier, firmer, and stronger in color areas. For certain textiles the closer warp settings may be more desirable. The wider warp settings should be used for Twill threading, and for weaving the Humanesque figures to be taken up in the next article. There is one problem regarding the wide warp settings which cannot be overlooked. If the technique is being used for pattern bands instead of for an all-over fabric, a true tabby fabric between borders would be so sleazy as to be almost useless. The substitute system of packing weft in to produce a plain, weft-emphasis fabric usually results in an unattractive textile. Therefore it is wiser to use a weft heavier than the warp for the plain-woven areas.
Weft Materials: The weft for Bound weaving must be selected with great care. It may be wool, cotton, silk, and even some of the man-made fibers are suitable. But it must be smooth, soft, and loosely twisted for best effects. And the same yarn should be used throughout. It is possible to mix yarn types, and expediency often necessitates this, but the types used together must be mutually harmonious (not cotton and wool, for instance) and similar in size, elasticity, and texture. The most important consideration is the size of the weft yarn, as it must be very fine. To the inexperienced weaver it may seem paradoxical, but the experienced weaver knows that the finer the weft yarn, the more easily it will pack in to cover the warp. Linen, which is wiry and will not pack or cover, is unsuited for this weave.

Bernat Fabri (18/2 worsted) makes an ideal weft material for almost any type of warp if the fabric being woven should be of wool. The Fabri is a French-spun worsted yarn which cannot be confused with the more common types of Bradford or English-spun worsteds that are not good for this type of weaving because they give a stringy surface which does not effectively cover the warp. If a cotton fabric is desired, the best effects are gained by using a weft thread which is finer than the warp, though this practice requires a tremendous number of shots per inch. The soft-twist, stranded cottons such as the Lily Pearl floss (Art 114) and the Lily 20/6 filler (Art 914) are suitable if the wider warp settings are selected and the beating is done with great persuasion.

USES for Bound-Woven Fabrics: With a wool weft the fabric is very elegant and may be used as needlepoint fabrics would: fine upholstery and stool covers, handbags, and lamp-mats for tables. In cotton borders for aprons, mats, skirts, baby bibs, etc.
HUMANISTIC FIGURES in BOUND WEAVING

On an Overshot Diamond threading it is possible to design, using the Bound weaving method, highly stylized figures of a humanistic, alimalistic and botanical nature. These are of such lively nature that they make one of the most unusual, entertaining, and pleasurable textiles which can come from a handloom. The designs and textures are tapestry-like in superficial appearance, and it is difficult for the uninitiated to believe that they could be harness-controlled and produced on only four harnesses.

For a discussion of this type of designing, we have the pleasure of presenting the work done by Mr Alan Mackenzie of Victoria, Australia, for the lesson on this subject in the Advanced Home Study Course of the Shuttle Craft Guild. Although the lesson calls for the designing of original figures in this technique, Mr Mackenzie found a particularly sympathetic means of expression in the weave and carried through the lesson in far greater detail than is required. His original development of the use of the 5-harness Diamond for weaving more detailed figures is of particular interest. The article which he wrote on the subject was published in Volume V, Number 3, the November 1953 issue of the quarterly AUSTRALIAN HAND WEAVER AND SPINNER. The following article is quoted directly from this publication and the drawings on page 10 and the upper half of page 11 were first published here. The 5-harness designs from Draft 3 were among those submitted with his correspondence course lesson. I wish to thank Mr Mackenzie and the Australian Guild of Hand Weaver and Spinners for the opportunity to present this work to Shuttle Craft Guild members. From the personal angle, there is unbounded satisfaction in seeing the refreshing and original work which comes in the correspondence lessons. We plan to present more of this in the future, with the cooperation of the Home Study Course students.
HUMANISTIC FIGURES
by
Alan MacKenzie

One of the most fascinating techniques using Overshot threadings is the humanistic figure that can be woven by means of the no-tabby Swedish Bound method.

The threading for such figures is a simple 5-block diamond (Draft 1) or else a variation of this draft. The treadling is strict twill rotation: 1-2, 2-3, 3-4, 4-1. The weft is beaten firmly to give a complete warp coverage.

Each figure consists of nine vertical columns which correspond with the nine blocks of the draft. The ninth column of one figure is also the first column of the next.

As the treadling order always remains the same the weft shots fall in turn into Columns A, B, C, D. As many shuttles as there are colors in the design being woven are used and the figures are produced by altering the order in which the shuttles (colors) are thrown at those places in the design where the outline or the color changes.

For instance, if all shots on sheds made by raising 1-2 were black; on 2-3 were white, on 3-4 were black, and on 4-1 were white, the result would be alternating columns of black and white; black in columns A and C and white in columns B and D.

Directions for weaving the Grenadier from Draft 1 (see first illustration).

\begin{tabular}{cccc}
\textbf{A} & \textbf{B} & \textbf{C} & \textbf{D} \\
\textbf{Feets}: & 1-L Blue & 2-L Blue & 3-Black & 4-Black \\
\textbf{Legs}: & 1-L Blue & 2-L Blue & 3-Navy & 4-Navy \\
\textbf{Trousers}: & 1-Navy & 2-L Blue & 3-Navy & 4-Navy \\
\end{tabular}
<table>
<thead>
<tr>
<th>Item</th>
<th>1-Red</th>
<th>2-L Blue</th>
<th>3-Red</th>
<th>4-Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belt</td>
<td>1-White</td>
<td>2-L Blue</td>
<td>3-White</td>
<td>4-White</td>
</tr>
<tr>
<td>Coat</td>
<td>1-Red</td>
<td>2-L Blue</td>
<td>3-Red</td>
<td>4-Red</td>
</tr>
<tr>
<td>Button</td>
<td>1-Gold</td>
<td>2-L Blue</td>
<td>3-Red</td>
<td>4-Red</td>
</tr>
<tr>
<td>Coat</td>
<td>1-Red</td>
<td>2-L Blue</td>
<td>3-Red</td>
<td>4-Red</td>
</tr>
<tr>
<td>Button</td>
<td>1-Gold</td>
<td>2-L Blue</td>
<td>3-Red</td>
<td>4-Red</td>
</tr>
<tr>
<td>Coat</td>
<td>1-Red</td>
<td>2-L Blue</td>
<td>3-Red</td>
<td>4-Red</td>
</tr>
<tr>
<td>Collar</td>
<td>1-Black</td>
<td>2-L Blue</td>
<td>3-L Blue</td>
<td>4-L Blue</td>
</tr>
<tr>
<td>Face</td>
<td>1-Pink</td>
<td>2-L Blue</td>
<td>3-L Blue</td>
<td>4-Pink</td>
</tr>
<tr>
<td>Forehead</td>
<td>1-Pink</td>
<td>2-L Blue</td>
<td>3-Black</td>
<td>4-Pink</td>
</tr>
<tr>
<td>Busby</td>
<td>1-Black</td>
<td>2-L Blue</td>
<td>3-Black</td>
<td>4-Black</td>
</tr>
<tr>
<td>Top of Busby</td>
<td>1-Black</td>
<td>2-L Blue</td>
<td>3-L Blue</td>
<td>4-Black</td>
</tr>
</tbody>
</table>

The only facial features necessary are eyes and mouth. These are placed in the appropriate positions by substituting two shots of red in Column A for the mouth, and a single blue shot in column D for the eyes. Ears are best omitted as square ears look more unnatural than none at all. Epaullets add to the appearance of military figures and are inserted by placing one or two gold shots on the shoulders in columns C and D.

As will be seen from the Grenadier, between each figure is a repeat of the central column A. While this is helpful in giving a suggestion of arms, it has the disadvantage of cluttering up the design above the shoulder level. The pink repeat, of the face, complete with lips, is a definite distraction. One way in which this can be avoided is to make this repeating or 'separating' column a repeat of column C instead of column A (Draft 2). However, while this modification is a decided improvement for those figures where only one column D is used for the leg, it is of no advantage in figures such as the Grenadier where two columns C and D are used. If woven on the modified draft such figures would have arms that reached to the ground which would be more disfiguring than the repeat of the face.
The only solution to the problem of these unwanted repeats is to add a fifth column independently of all others (Draft 3). While it is still possible to weave the arm in this separating column, a much more natural figure can be achieved by transferring the arms from this column to column B (Grenadier at right). Each figure now has two arms whereas in the previous drafts each arm was shared between two figures. The separating column instead of carrying a repeat of column A or C is completely woven in the background pattern. The same principle applies to the weaving of 5-shaft designs as to 4-shaft. The only differences are that for each shed three shafts are raised and two lowered and that there are five shots to complete each twill rotation. On the rising shed loom (since counter-balanced looms do not have 5 harnesses) these are: 3-4-5, 4-5-1, 5-1-2, 1-2-3, 2-3-4.

Uniformed figures seem to be more attractive than boy and girl figures. Graph paper is excellent for making the preliminary design. The writer has found that colored magazine illustrations of different military and other uniformed figures accompanying many of the articles on the Coronation are ideal for reference purposes when sketching a new design.

Apart from the Coronation figures — Grenadiers, Yeomen, Life Guards, Royal Canadian Mounted Police, and even the Coronation robes of a Baroness — there are very many more figures that will appeal to weavers. Nurses, kilted Scots, footballers, scouts, Royal Show Equestriennes, and the many national costumes can be woven. In addition, animal and geometrical figures provide ample scope for imaginative designing.

Weaving: Each shot must be well beaten up until it lies in contact with the previous shot thrown on the same shed. Care is necessary to maintain good selvages, especially on the 5-shaft threading. It will
often be necessary to 'lock' weft threads at the sel-
va ge by passing them around another weft thread before
throwing the shuttle. When changing colors always
enter and remove the weft from the underneath of the
material, as it is not possible to clip off the end
without leaving disfiguring evidence.

**Selvages:** A selvage in the usual sense is best
omitted although in the 4-shaft threadings it is de-
sirable to add a block of threads at each edge.
These extra blocks are not needed in the 5-shaft
threading.

For a somewhat different treatment of this same
technique, the BULLETIN for March 1950 is still avail-
able at 25¢ for Guild members, 35¢ general price. This
gives directions for weaving baby bibs with boy and
girl and animal and flower borders.

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**A NEW WEAVE for UPHOLSTERY**

Another one of the Overshot rotation weaves is
similar to Bound weaving in method, but it produces an
altogether different textile. The textile has a top
surface which is all tabby but an under surface with
long weft floats which makes it impractical to use with-
out lining. The Overshot patterns show in shadow
effect in three mixed-colors. It makes the finest
upholstery fabric we know of, and weaves fast enough to
be practical for upholstery projects.

The Tabby-surface Overshot weave may be done on
any Overshot threading or on the Hybrid (Overshot with
Twill) threadings. Appropriate warp settings are the
normal ones shown on page 8. With a cotton or linen
almost any material of fairly fine grist may be used
as weft. We used 20/2 mercerized warp with two colors
of Bernat Fabri for weft for a very elegant fabric, but
good all-cotton effects were gained from size 10 Pearl
(Lily Art 114), 10/3 Soft Twist (Lily Art 714) and 20/6 filler (Lily Art 914) and many other materials could have been used, suiting the selection to the purpose for which the textile is intended. Since the warp is evident throughout and is used as a color harmonizer, colored warps are much more satisfactory than white or natural. The weft is of two colors and they should be identical material.

The tie-up for this weave is the unbalanced, three harnesses up and one harness down tie-up used for weaving Honeycomb. It is made:

Treadle 1 tied to harnesses 1-2-3;
  " 2 " "     " 2-3-4;
  " 3 " "     " 3-4-1;
  " 4 " "     " 4-1-2.

For the weaving these are operated in twill order: 1, 2, 3, 4, repeat; without change. The two colors of weft are thrown in alternate pairs of shots for each block. Patterns are produced through shifting the color relations according to the following block system:

Block A: 1, 2-color N, 3, 4-color O, repeat;
Block B: 1-color O, 2, 3-color N, 4-color O, re;
Block C: 1, 2-color O, 3, 4-color N, repeat;
Block D: 1-color N, 2, 3-color O, 4-color N, re.

Pattern blocks are built up by repeating the four-shot, two-color rotation as many times as desired. Patterns in almost infinite variation are designed as they would be with standard Overshot weaving.

A search of the literature indicates that this is a new technique to handweavers, as no publication of it, nor photographs of any textiles of this nature can be found.
Question and Answer: BEAT CONTROL

Question: Apparently you have no difficulty beating 24/2 cotton to 36 threads per inch. Do you use a single or a double beat? I prefer the single beat, but cannot seem to balance the fabric.

Answer: This seemed a particularly suitable question for this month since Overshot weaving in any method brings the problem of beat control into sharp focus, and that is particularly true for Bound weaving for which the weft must be beaten to cover the warp.

Actually, I cannot answer the question as to whether I use a single or a double beat (or a pair of single beats, or a pair of double beats) as I have no 24/2 warp threaded at the moment to try it out. As I use a different beating system for almost every warp or technique, I find it necessary to use a few shots at the beginning of each weaving project for determining which type of beat will produce the type of fabric desired. The beginning weaver usually needs to weave several inches in order to determine the correct beat, stopping to measure and even to count weft threads each inch and then adjusting the beat to give fewer or more shots per inch, according to the situation, until the correct balance (or unbalance, as the case may be) is achieved and becomes perfectly natural.

A basic beating fallacy is indicated in the question by the statement of a preference for the single beat. Such a preconceived preference is apt to reduce flexibility and to lead to the weaving of poor textiles. Preference should be for any efficient beating system which weaves the correct fabric.

However, chances are that the problem in this case was not one of whether the beat should be single or double. It is without doubt a problem of the speed with which the beater is thrown. The effectiveness
of the beat increases with the square of the speed with which the reed reaches the fell. Therefore the most efficient way to increase the firmness of the fabric (to pack in the weft more closely) is to increase the speed of the beater motion, instead of adding a second beat.

The beater should be held rather lightly between the fingers, and thrown forward with the wrist relaxed, instead of clutched with a fist and pulled. The weaver who has developed, erroneously, strong beating habits, will have considerable difficulty in changing to this method. But it is worth learning. A good weaver must have a completely flexible beat.

There is another factor which may have caused the question-asker's difficulty, -- incorrect warp tension. If a warp is tensioned too heavily, it is almost impossible to weave a true tabby with one of the normal warp settings.

My dear Guild member:

The problem of whether or not the Shuttle Craft Guild will permit subscription agents to handle BULLETIN subscriptions is constantly recurring. Current circumstances have forced a decision on this matter. We have decided that if there are to be any subscription benefits from the Shuttle Craft Guild, these should go to loyal Guild members only. Therefore we have determined a policy whereby every Guild member is a potential agent -- a policy which should solve the problem for teachers who recommend the BULLETIN to their students, but will also apply to subscribers who are not teachers.

For every subscription (new, not renewal) which any Guild member sends in, we shall note on his or her
Guild-membership card $1.00 credit toward the next renewal fee. We shall include references made by any new subscriber who writes that the subscription was suggested by a Guild member. If the subscription is for the PORTFOLIO-edition of the BULLETIN, the credit will be $2.00. Accumulated credits will be noted at the time of billing for the next renewal. If credits exceed the value of a PORTFOLIO subscription ($17.50) the balance may be used in the purchase of Shuttle Craft Guild publications. We do hope that Shuttle Craft Guild members will find this system satisfactory and will tell your friends sending in new subscriptions to mention your name. The policy cannot be extended to letters of inquiry, regardless of what the inquirer's future subscription may be.

It seems from our correspondence that many of you do not understand the PORTFOLIO edition of the BULLETIN. This is a special edition to which anyone may subscribe at an additional $10 a year, $17.50 total. The Portfolio has a fold-in flap on the back cover to which is stapled samples (one, two or three according to the situation) of the textiles taken up in the Bulletin. There is also an extra short article on the samples. We try to make the Portfolio attractive, with a different lay-out each month, but its main purpose is to provide illustrations and models. Portfolio subscribers become our most enthusiastic Guild members because of the vitality the samples add, and many have written us that having the samples has saved them much more than the cost in time and materials and as technique models. Single issues are available to Guild members at $1.25 and all 1954 issues and some from 1953 and 1952 are still available. In January 1955 there will be price changes on single copies of the BULLETIN and the PORTFOLIO-BULLETIN because of the enlarged, all-in-one BULLETIN now adopted.

Next month we shall continue with further Overshot weaving methods, including further unpublished ones.

Sincerely yours,

[Signature]
The warp for these samples is the same one used in September -- 20/2 red mercerized cotton, set at 30 ends per inch, threaded to the Overshot motif-gamp. This was 2" Overshot threadings separated by a few Twills. The tabby-surface rotation weave in two strongly contrasting color values shows the pattern-block, background and half-tone characteristics of the typical Overshot, but without floats. Woven with two closely associated colors and harmonized by a third color in the warp, a mystic shadow-effect results. This fabric is incomparable for upholstery. Weft is Bernat Fabri.

For the four-color Bound rotation, the setting of 30 per inch gives a soft weave which does not cover the surface tightly. For this sample, the twill threads separating motifs were removed (simply drawn out of the heddles and hung with weights back of the loom) because they created too much resistance to the beat. It is plain that the Hybrid type drafts (Overshot blocks combined with Twills as in Honeysuckle) are not altogether satisfactory for Bound weaving. A warp setting of 24 to 27 ends per inch would have produced a firm rep surface, as the weft would have packed in more tightly. Thus, the warp setting should be selected according to the final effect desired.