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THE WEAVER

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THE WEAVER

VOLUME III NUMBER 4

C O N T E N T S

Authors' Index of The Weaver	page 3
Kate Van Cleve	
Subject Index of The Weaver	page 5
Kate Van Cleve	
Personalized Linens	page 6
Beta Ivey	
Tapestry	page 12
Lou Tate	
Something Different in Two Harness Weaving	page 15
Emmy Sommer	
Point Weaving on Multi-Harness Loom	page 17
L. L. Winans	
"Twice Woven" Rugs	page 20
Mary M. Atwater	
A Weaver Traveling in Chile	page 22
Helen Louise Allen	
Weaving from Czechoslovakia	page 26
Roma Crow Walters	
Questions and Answers	page 29
Mary M. Atwater	

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Authors' Index of *The Weaver*

by KATE VAN CLEVE

	<i>Date</i>	<i>Vol.</i>	<i>No.</i>	<i>Page</i>		<i>Date</i>	<i>Vol.</i>	<i>No.</i>	<i>Page</i>
Allen, Helen Louise									
Mexican Lace Weaving	July, 1937	II	3	4					
"Swing" in Summer and winter	July, 1937	II	3	27		Oct., 1937	II	4	11
Atwater, Mary M.									
Some Ancient Peruvian Textiles	March, 1936	I	2	26		July, 1936	I	3	17
Knotted Pile Rugs	Jan., 1936	I	1	16					
The Overshot Weave on Six Harnesses	Oct., 1937	II	4	14					
Patterns for Six-Harness Weavers	July, 1937	II	3	7					
Questions and Answers	March, 1936	I	2	10					
Questions and Answers	July, 1936	I	3	19					
Questions and Answers	Oct., 1936	I	4	25					
Questions and Answers	January, 1937	II	1	11					
Questions and Answers	April, 1937	II	2	23					
Questions and Answers	July, 1937	II	3	26					
Questions and Answers	Oct., 1937	II	4	25					
The Scottish Tartan Plaids	Oct., 1936	I	4	26					
Simple "Cross" Weaving	July, 1936	I	3	25					
"Stunting" on the Cards	Jan., 1937	II	1	25					
"Weave as Drawn In"	April, 1937	II	2	28					
Bolinger, Ruth									
Hand Woven Materials for Clothing	March, 1936	I	2	6					
Bratten, Florence D. and Johnson, Nellie Sargent									
"Loom Controlled" Patterns	July, 1937	II	3	17					
Brumbaugh, Grace L.									
A Wall Hanging in a New Technique	July, 1936	I	8	18					
Carr, Veva N.									
Baby Blankets	Jan., 1938	II	1	18					
Chaise Longue Coverlet	April, 1937	II	2	16					
"Drifting Shadows"	July, 1937	II	3	12					
A Studio Chair	July, 1936	I	3	20					
Why Not Change the Color	April, 1937	II	2	18					
Chombeau, Esther Herfurth									
The Visually Handi- capped Weave	April, 1937	II	2	19					
Clayton, John H.									
Only Four Harnesses	Oct., 1936	I	4	20					
Cole, Ellis Prentice									
Navajo Weaving with Two or Four Harness Looms	Oct., 1937	II	4	11					
Cranmer, Marjorie									
Simplifying the Tie-up	July, 1936	I	3	17					
Davies, Florence									
The Weavings of Loja Saarinen	Jan., 1937	II	1	13					
Dunbar, W. Clyde									
Some Weaving Projects In Coarse Materials	Jan., 1938	I	1	27					
Estes, Josephine E.									
Miniature Patterns for Hand Weaving	July, 1936	I	3	7					
Fisher, Anne									
El Conejo Blanco	April, 1937	II	2	24					
Ford, Bonnie Willis									
Sixth Annual Weaving Institute at Penland	Jan., 1936	I	1	19					
Gallup, Esther Hoagland									
Final Development on the "Rosengang"	Oct., 1937	II	4	26					
Threading									
Interesting Developments on the "Rosengang"	Jan., 1937	II	1	8					
More Developments	April, 1937	II	2	3					
Goodwin, Emily N.									
Tapestry Weaving	July, 1936	I	3	3					
Flat Tapestry	Oct., 1936	I	4	15					
Heartz, Robert Frederic Mattor									
Weaving the Scotch Tweeds	Oct., 1936	I	4	4					
	March, 1936	I	2	15					
Hickman, Elmer Wallace									
Scandinavian Art Weaving	Jan., 1936	II	1	20					
Scandinavian Art Weaving	April, 1937	II	2	5					
Scandinavian Art Weaving	Oct., 1937	II	4	3					
Unusual Knitting Bags on "Opposites"	March, 1936	I	1	2					
Hillman, Jane H.									
Bag Making	July, 1937	II	3	11					
Howells, Gertrude Whitman									
The Spanish Stitch	March, 1936	I	2	11					

	<i>Date</i>	<i>Vol.</i>	<i>No.</i>	<i>Page</i>		<i>Date</i>	<i>Vol.</i>	<i>No.</i>	<i>Page</i>
Johnson, Nellie Sargent Interesting Ways to use "Laid-in" Technique	Jan., 1937	II	1	4	Some Ancient Peruvian Textiles Mary M. Atwater	March, 1936	I	2	26
Mexican Indian Belts as Design Sources	July, 1936	I	3	23	Some Weaving Projects in Coarse Materials W. Clyde Dunbar	Jan., 1936	I	1	27
Simple Draw-loom Weaving	Jan., 1936	I	1	23	The Spanish Stitch Gertrude Whitman Howells	March, 1936	I	2	11
Neilson, Agnes K. Seamless Afghans and Bags	March, 1936	I	2	22	A Studio Chair Veva N. Carr	July, 1936	I	3	20
Pasmore, Jean Perow A Handwoven Outfit	Oct., 1936	I	4	19	"Stunting" on the Cards Mary M. Atwater	Jan., 1937	II	1	25
Quigley, Viola W. The Weaving Technique of Some Early Peruvian Textiles	Oct., 1937	II	4	18	"Swing" in Summer and Winter Helen Louise Allen	July, 1937	II	3	27
Ropes, Eleanor Towels	July, 1936	I	3	14	Tapestry Weaving Emily N. Goodwin	July, 1936	I	3	3
Shepherd, Beatrice A. New Ideas for Tablet Woven Rugs	July, 1936	I	3	13	Towels Eleanor Ropes	July, 1936	I	3	14
Steinhoff, Mrs. Maria The Creation of Smart Fabrics, Part I	Jan., 1936	I	1	3	Unusual Knitting Bags on "Opposites" Elmer W. Hickman	March, 1936	I	1	2
American Yarns, in In- spiration for Weavers, Part II	Jan., 1936	I	1	9	The Visually Handicapped Weave Esther Herfurth Chombeau	April, 1937	II	2	19
Stone, Cornelia Old Coverlets I Have Known	Oct., 1936	I	4	10	A Wall Hanging in a New Technique Grace L. Brumbaugh	July, 1936	I	3	18
Van Cleve, Kate and Davis, Myra L. and Powell, Julia A. The Business of Weaving	Oct., 1937	II	4	24	"Weave as Drawn in" Mary M. Atwater	April, 1937	II	2	28
Walters, Roma C. Yale School Weavers	July, 1937	II	3	23	Weaving the Scotch Tweeds Robert F. Hertz	March, 1936	I	2	15
Simple "Cross" Weaving Mary M. Atwater	July, 1936	I	3	25	The Weaving Technique of Some Early Peruvian Textiles Viola W. Quigley	Oct., 1937	II	4	18
Simple Draw-Loom Weaving Nellie Sargent Johnson	Jan., 1938	I	1	23	The Weavings of Loja Saarinen Florence Davies	Jan., 1937	II	1	13
Simplifying the Tie-up Marjorie Cranmer	July, 1936	I	3	17	Why Not Change the Color Veva N. Carr	April, 1937	II	2	18
Sixth Annual Weaving Institute at Penland Bonnie Willis Ford	Jan., 1936	I	1	19	Yale School Weavers Roma C. Walters	July, 1937	II	3	23

Subject Index of The Weaver

by KATE VAN CLEVE

	<i>Date</i>	<i>Vol.</i>	<i>No.</i>	<i>Page</i>		<i>Date</i>	<i>Vol.</i>	<i>No.</i>	<i>Page</i>
American Yarns: An Inspiration for Weavers—Part II					Mexican Indian Belts as Design Sources				
Mrs. Maria Steinhoff	Jan., 1936	I	1	9	Nellie Sargent Johnson	July, 1936	I	3	23
Baby Blankets					Mexican Lace Weaving				
Veva N. Carr	Jan., 1938	II	1	18	Helen Louise Allen	July, 1937	II	3	4
Bag Making					Miniature Patterns for Hand Weaving				
Jane H. Hillman	July, 1937	II	3	11	Josephine E. Estes	July, 1936	I	3	7
The Business of Weaving					More Developments	April, 1937	II	2	3
Kate Van Cleve and Myra L. Davis and Julia A. Powell	Oct., 1937	II	4	24	Navajo Weaving with Two or Four Harness Looms				
Chaise Longue Coverlet					Ellis Prentice Cole	Oct., 1937	II	4	11
Veva N. Carr	April, 1937	II	2	16	New Ideas for Tablet Woven Rugs				
The Creation of Smart Fabrics—Part I	Jan., 1936	I	1	3	Beatrice A. Shepherd	July, 1936	I	3	13
“Drifting Shadows”					Old Coverlets I Have Known				
Veva N. Carr	July, 1937	II	3	12	Cornelia Stone	Oct., 1936	I	4	10
El Conejo Blanco					Only Four Harnesses				
Anne Fisher	April, 1937	II	2	24	John H. Clayton	Oct., 1936	I	4	20
Flat Tapestry					The Overshot Weave on Six Harnesses				
Emily N. Goodwin	Oct., 1936	I	4	15	Mary M. Atwater	Oct., 1937	II	4	14
Hand Woven Materials for Clothing					Patterns for Six-Harness Weavers				
Ruth Bolinger	March, 1936	I	2	6	Mary M. Atwater	July, 1937	II	3	7
A Handwoven Outfit					Questions and Answers:—				
Jean Perow Pasmore	Oct., 1936	I	4	19	Mary M. Atwater	March, 1936	I	2	10
Interesting Developments on the “Rosengang”	Jan., 1937	II	1	8	Mary M. Atwater	July, 1936	I	3	19
Final Development of the “Rosengang” Threading					Mary M. Atwater	Oct., 1936	I	4	25
Esther Hoagland Gallup	Oct., 1937	II	4	26	Mary M. Atwater	Jan., 1937	II	1	11
Interesting Ways to Use “Laid-in” Technique					Mary M. Atwater	April, 1937	II	2	23
Nellie Sargent Johnson	Jan., 1937	II	1	4	Mary M. Atwater	July, 1937	II	3	26
Knotted Pile Rugs					Mary M. Atwater	Oct., 1937	II	4	25
Mary M. Atwater	Jan., 1936	I	1	16	Scandinavian Art Weaving:—				
“Loom Controlled” Patterns					Elmer Wallace Hickman	Jan., 1936	II	1	20
Florence D. Bratten and Nellie Sargent Johnson	July, 1937	II	3	17	Elmer Wallace Hickman	April, 1937	II	2	5
Mattor					Elmer Wallace Hickman	Oct., 1937	II	4	3
Robert Frederic Heartz	Oct., 1936	I	4	4	Scarves (neck)	Jan., 1936	I	1	30
					The Scottish Tartan Plaids				
					Mary M. Atwater	Oct., 1936	I	4	26
					Seamless Afghans and Bags				
					Agnes K. Neilson	March, 1936	I	2	22

Personalized Linens

by BETA IVEY

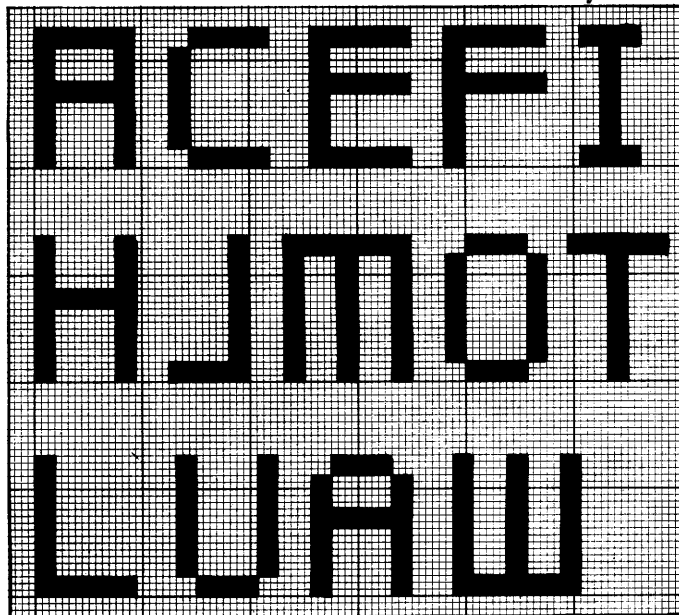


FIGURE 1

From time immemorial proud owners have marked their belongings with their own marks, crests, or names. Our great-grandmothers, after weaving linens, neatly cross-stitched their initials (and sometimes the date) before folding them carefully away in their dowry chests. We today embroider our initials or monograms on towels and napery. Woven-in initials are even more personal than embroidered ones, for they prove beyond the shadow of a doubt that the article not only belongs to, but was planned for its proud possessor.

There is nothing new about "Bronson" weave, but the use of it to form initials was a thrilling discovery to me. I believe a similar effect has been produced by the use of sticks, but I have not found drafts or directions for initials. Doubtless other weavers have thought of it, but for one reason or another have not worked out the system. As Chaucer remarked so long ago, "Life is so short, the craft so long to learn." The Swedes use this weave for curtains, though their draft differs in appearance from ours. Their name for it, "Myggtjall" is translated "mosquito net" and suggests its probable origin.

The sampler of letters shown in Illustration I was done in Bronson Weave on an eight inch Structo Loom. There are no warp threads cut to allow for rethreading in the entire length; and of course there has been rethreading.

Those weavers who use string heddles will know the trick, for it sometimes happens that a heddle-eye or heddle will break and a new one must be tied in. Metal heddles are not likely to break or wear, but if a mistake in threading has been made, rather than rethread several inches, haven't we all tied in a string heddle? And that is the whole trick of

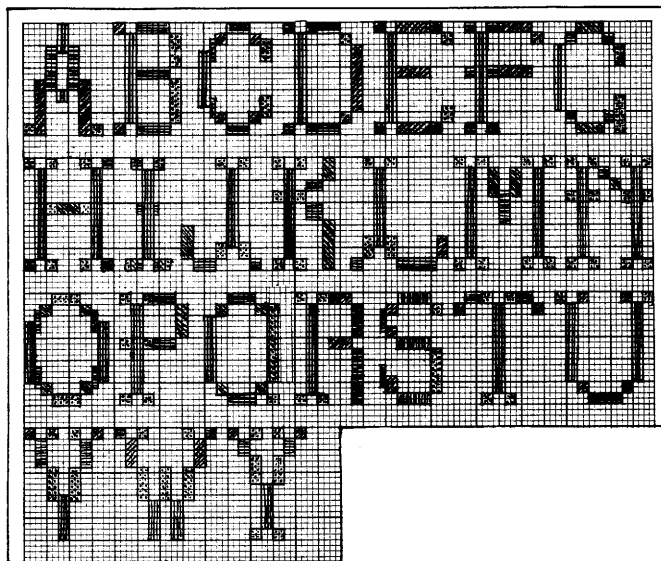


FIGURE 2

Bronson Initials—string heddles that may be cut out entirely, and new ones tied in around the warp threads on different heddle bars. Temporary string heddles may be tied onto frames, even though metal heddles are the permanent ones.

On the sampler, I found that it took from twenty to forty minutes to change the threading for the different patterns, depending on the number of warp threads to be changed. This figured an average of three minutes to remove the entire heddle from one heddle bar, and to tie a new heddle around the warp thread, but onto a different bar. And this on the tiny Structo where there is very little room in which to work.

It is axiomatic that lace Bronson weave requires two harnesses plus one harness for each block of the pattern; therefore on a four harness loom, initials may be woven which can be reduced to two blocks. Three block letters can be woven on a five harness loom, four block letters on a six harness loom, etc. Fig. 1 shows those letters which can best be drawn in two block style. In this diagram, two ways of weaving the letter A are shown, the first one where both blocks are combined in the cross bar and at the top, and on the bottom row, the blocks are combined for the cross bar only. The U is shown in the diagram with blocks woven separately, but on the sampler is woven with blocks combined.

In Fig. 2 the letters are drawn diagrammatically to show the separate blocks. Block A is represented by vertical lines and block B by horizontal lines. At the first diagram (in Fig. 2), it will easily be seen how treading of the blocks A and B separately or in combination, will form the letters

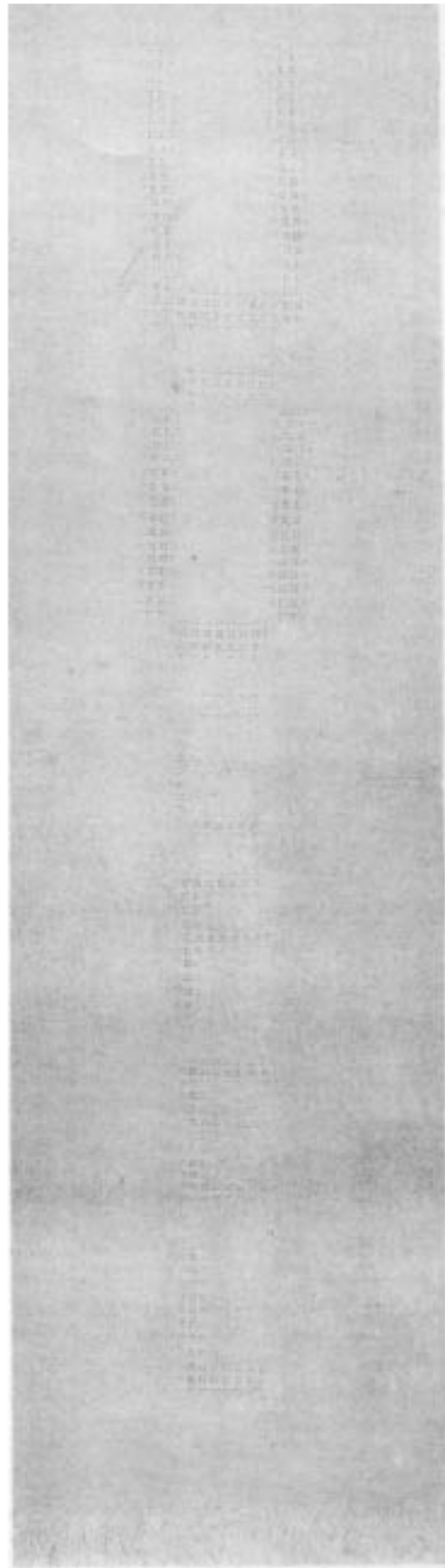


ILLUSTRATION No. 1

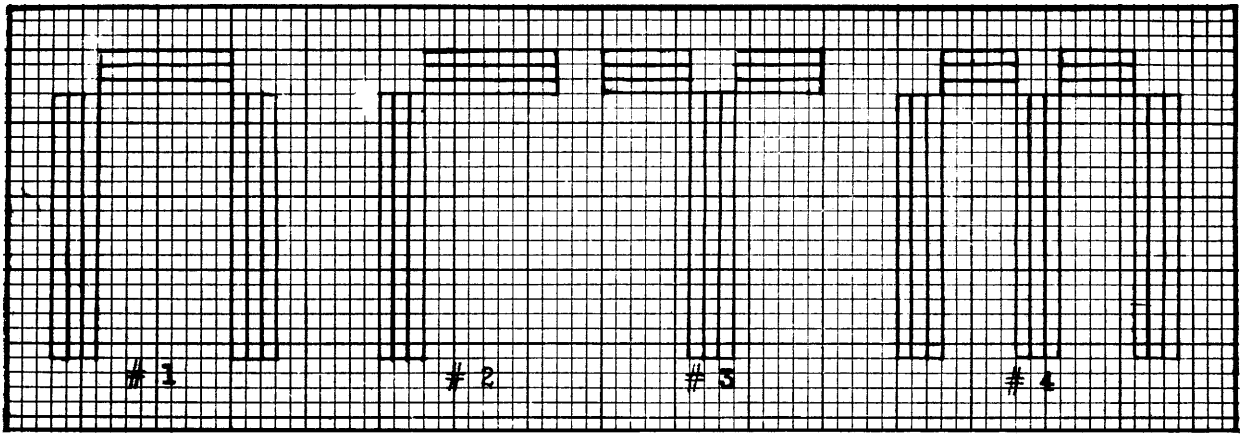


FIGURE 2

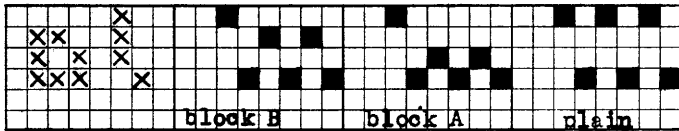


FIGURE 3

A, H, O, U. Similarly, the second grouping will weave C, E, F, L; third one will weave T and by shortening the cross bar it becomes I. Number 4 in Fig. 2 becomes M or W depending upon whether the cross bar is at the top or at the bottom. J may be formed by reversing the relative positions of blocks A and B; that is, the vertical on the right rather than on the left of the horizontal.

With the letters broken up into their component parts, writing the drafts for them is a simple matter. In Bronson weaves, alternate threads are on the No. 1 harness (some weavers use No. 4, but this is immaterial). Another harness, usually No. 4 is reserved for the tie threads of the warp. These are the warp threads which form the single vertical bars of the "windows" and help to give Bronson its characteristic appearance. Heddles on the No. 2 harness carry the warp threads for block A of the pattern, and the heddles on No. 3 carry warp threads for block B. Draft for the plain weave or background of the pattern is written: 1,4,1,4,1,4 and repeated as desired. Draft for block A is written: 1,2,1,2,1,4, and repeated; block B is written: 1,3,1,3,1,4 and repeated. See Fig. 3.

Since the draft shows alternate threads on No. 1 harness, it follows that No. 1 is tied to one treadle, or is used alone for one of the tabby shots. It takes all three remaining harnesses to give alternating threads, so the combination of 2, 3, and 4 constitutes the second or B tabby. Harnesses No. 1 and No. 2 give one block of the pattern so they are tied to the first pattern treadle; No. 1 and No. 3 for the B block are tied to second pattern treadle; and for the combination of both blocks, No. 1, No. 2 and No. 3 are tied to the third pattern treadle. Five treadles only are used in this weave.

Bronson is a single shuttle weave—tabby in this case refers to treadles or to combinations of harnesses used, and not to a second shuttle of weft thread. It is really a rather

speedy weave, and if one forms the habit of entering the shuttle from the right on the A tabby (No. 1 harness) and from the left on the B tabby (No. 2, No. 3 and No. 4 harnesses) shots, there need never be any confusion. Pattern shots enter from the right so an invariable rule may be set:—Shuttle on the left means, always and forever, three harnesses or the B tabby.

Treadling for initials is the same as for any Bronson weave. Alternate A and B tabby treadles give plain or tabby weave. Here it might be wise to say a word about looms. Bronson is an ideal weave for table looms and for those foot looms where the harnesses work independently. On the usual four-harness loom where two harnesses balance against each

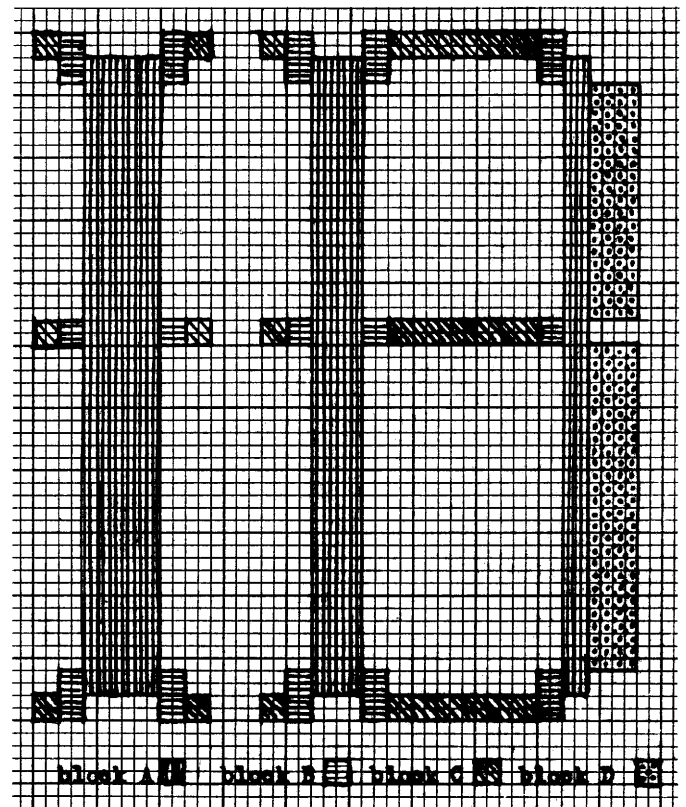


FIGURE 5

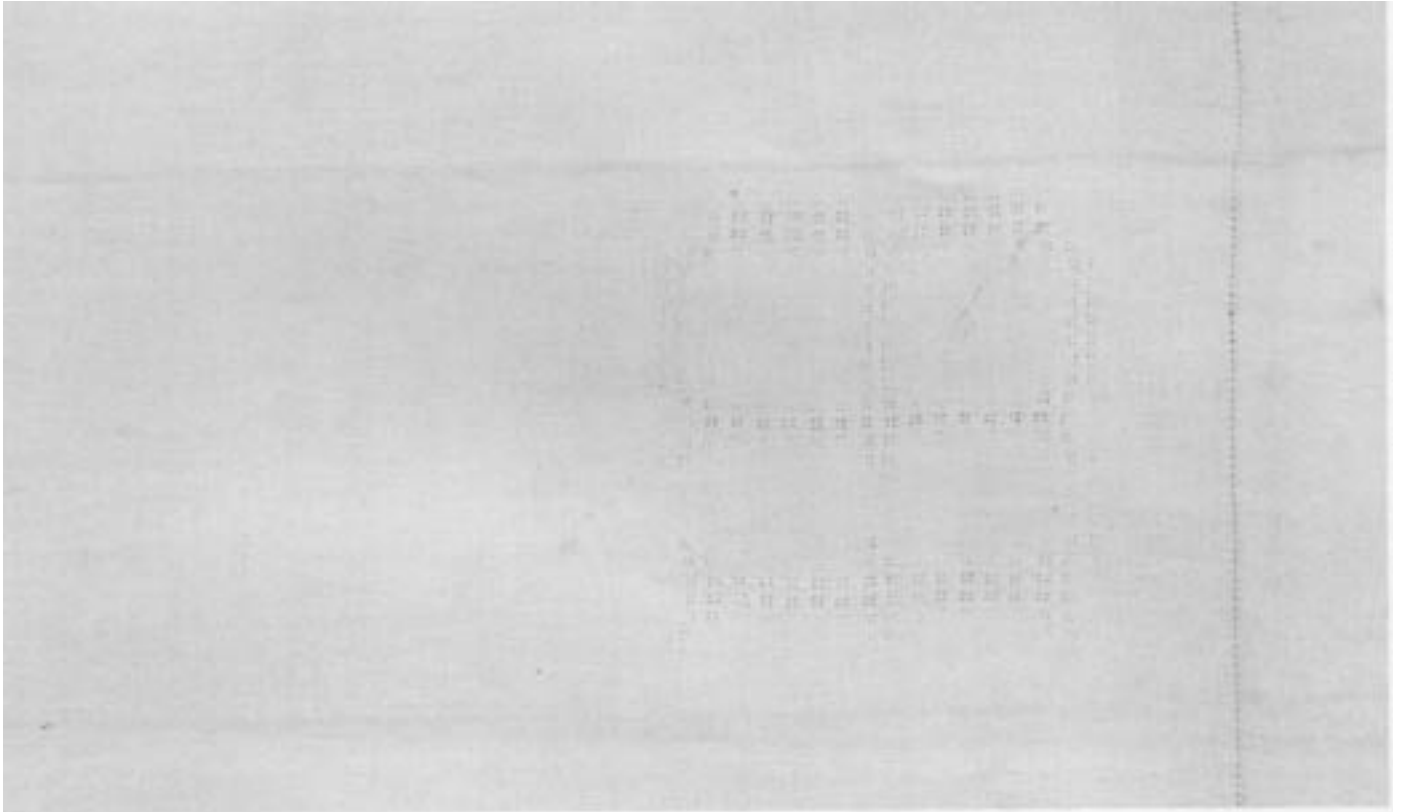


ILLUSTRATION No. 2—*Woven by Isobel Brazelton*

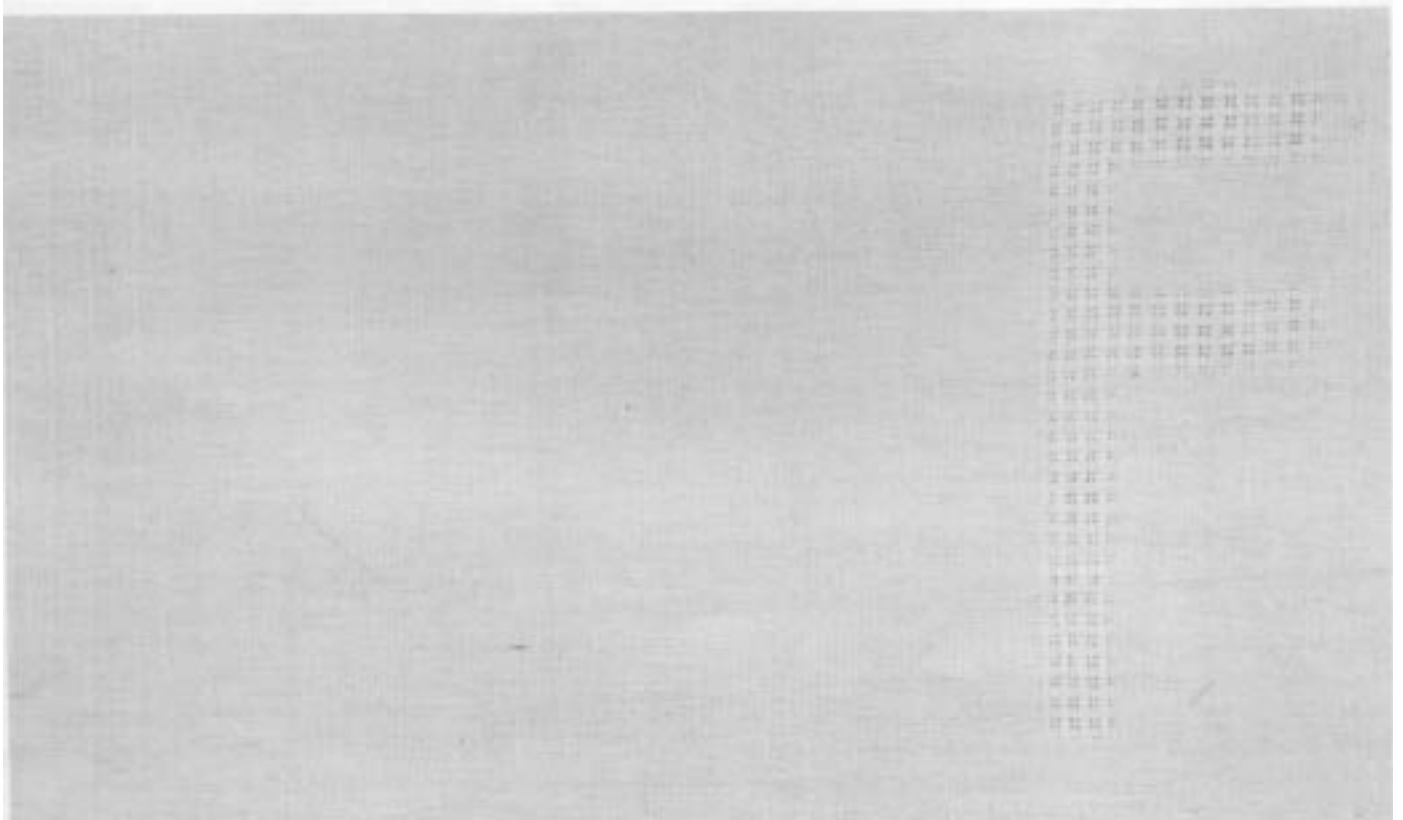


ILLUSTRATION No. 3

other on horses or pulleys, naturally a three and one balance does not give so good a shed as a two and two balance does. Work may be slower but the results can be as perfect.

Block A is treadled:

Harnesses 1 & 2 (pattern treadle No. 1)
Harnesses 2, 3, 4 (tabby treadle B)
Harnesses 1 & 2 (pattern treadle No. 1)
Harnesses 2, 3, 4 (tabby treadle B)
Harness 1 (tabby treadle A)
Harnesses 2, 3, 4 (tabby treadle B)

These six shots are repeated as often as is called for by the design. Similarly, block B is treadled:

pattern treadle No. 2
tabby treadle B
pattern treadle No. 2
tabby treadle B
tabby treadle A
tabby treadle B.

It takes six weft threads, just as it takes six warp threads to make a single unit of any given block. The single A tabby shot at the end of each group of six shots makes the single cross shot in the open "windows". It serves the same purpose in the weft that the No. 4 harness thread serves in the warp.

There is a difference of opinion among weavers as to which is the right and which is the wrong side of Bronson weaves. It seems really to be a matter of choice. In the IB towel (illustration II) the warp overshoots are on the right side; in the sampler, the weft overshoots are on the right side. The towel was woven on a six harness "jack" loom with a rising shed. The directions given in this article will give a weft overshoot on the right side if a *falling* shed is used. For the sampler, where the Structo gives a rising shed, the treadling was transposed. For some initials it does not matter—A, M, O etc. being bilateral designs; but C, E, F, and L have a decided right and wrong. When putting these last named four letters in the loom, this must be considered.

Articles should be well and thoroughly planned in advance. Since these initials are more than decoration, and are an integral part of the whole, the importance of good proportion cannot be ignored. Make a diagram to scale; use cross-section paper, letting each square represent $\frac{1}{4}$, $\frac{1}{2}$ or even one inch. Small squares representing one quarter inch will allow for more accuracy. The towel in Illustration II measures 14x27 inches. It is woven of 40/2 linen in both warp and weft (Bronson is usually more attractive where warp and weft are identical) sleyed at 30 threads to the inch. This same thread at 24 to the inch gives a softer and more lace like effect that is good for table linens, but not substantial enough for towels. Fig. 4 shows a diagram of half of the towel. Dotted lines represent the folds (which really constitute the outlines of the finished towel) and the hem. At Fig. 5 is the diagram in blocks of the IB monogram. Unfortunately, all letters, even in four blocks will not combine so nicely as these two.

In the sampler, the I and T are heavy sturdy letters of medium size; they are woven on a four unit scale. M and W were woven on a two unit scale, as were C, F, E, and L. The M is higher than these last named four, and the W is decidedly shorter. Note also that the W is not merely M turned up side down as in the diagram of Fig. 1. A, E, U, and O are woven in the three scale unit as given in Fig 1. Though larger than I and T, they are in themselves a daintier type of letter. The sampler is sleyed at 30 threads to the inch and the four small letters measure approximately $1\frac{1}{2} \times 2\frac{1}{4}$ inches. The letters of the A group measure approximately $2\frac{1}{2} \times 4\frac{1}{2}$ inches. Fig. 6 gives the drafts for the letters as given in Fig. 1.

In the IB towel the letters were set in the loom side by side and woven simultaneously; in the sampler the letters were set in the loom singly and woven in succession. In both cases the letters were woven vertically or standing up as they are read. There is no reason why, if properly planned, they may not be woven cross wise of the letters, in which case an entirely different grouping is possible. Fig. 7 shows what might be a place mat twelve inches wide by eighteen inches long. Borders of colors or contrasting textured threads could be woven at each end. M and T would weave on the same set-up if turned crosswise. Or if one is ambitious enough to change the heddles so often, letters of different groups could be used. Supposing that the letters do not work on the same set-up, such as H and F. By weaving mats from alternate ends, each set-up would serve for two letters. For instance, weave the first mat: border, space, F, H, border; and the next mat: border, H, F, space, border. Lucky the person whose initials belong in the same group. Towels might be woven with dropped monograms, or a single large letter as the main decoration. The possibilities are many.

A definite plan, well designed and in good proportion is the first requisite. Figure the inches needed for the plain weave, then the inches for the letters, and lastly for the second space of plain weaving. Multiply the number of threads per inch by the number of inches allotted to the letters. Since it takes six threads per unit, divide the total number of threads in the letters by six to obtain the number of units. Then plan the letter, or letters, accordingly to get the best proportions. The heddles must be rearranged on the harnesses. One-half of all heddles will be on harness No. 1. Most of the remaining ones will be on No. 4 and only the few necessary ones on No. 2 and No. 3. If the loom is to be set up for a single initial, it is safe to use all metal heddles, but if rethreading is to be done, tie in the string heddles where needed before beginning. It is sometimes hard to cut the metal ones, and too, with many changes and much cutting, so many heddles would be destroyed that it might work a hardship on future patterns. The heddles on No. 1 harness are never changed, even in the initial space, and it is safe to use the regular heddles—whether string or metal. The 4's will not be changed unless the size of the letter is changed,

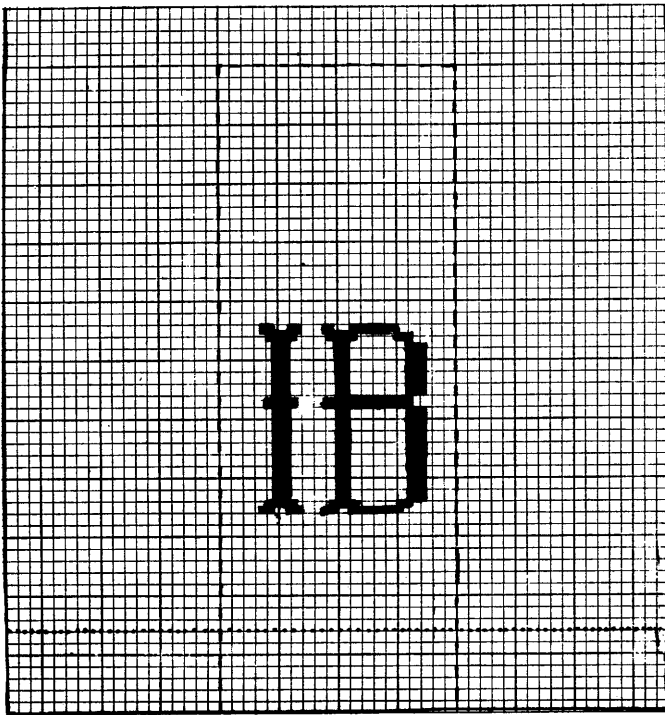


FIGURE 4

so they too may be considered permanent.

Four block letters are easier to design than two block ones, but these call for a six harness loom (one harness for each block plus two foundation harnesses). I have often won-

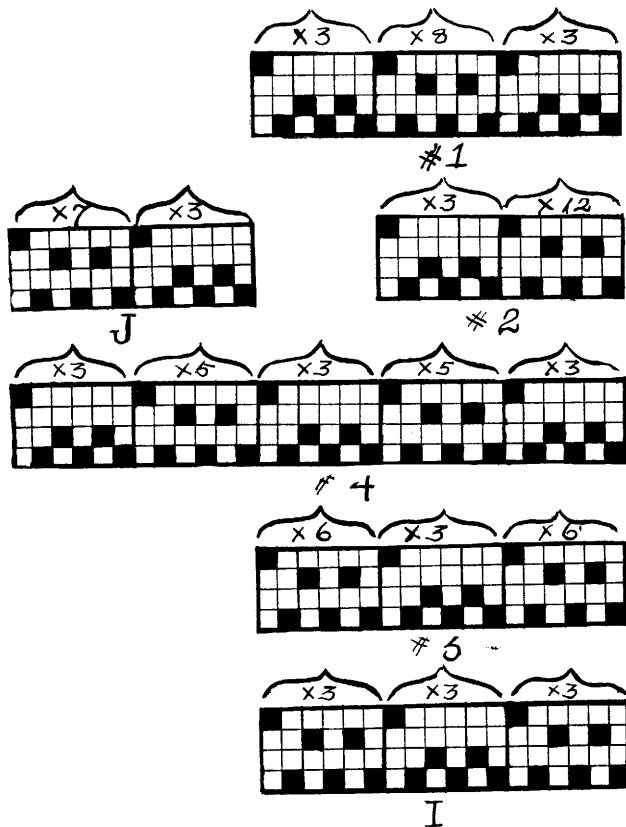


FIGURE 6

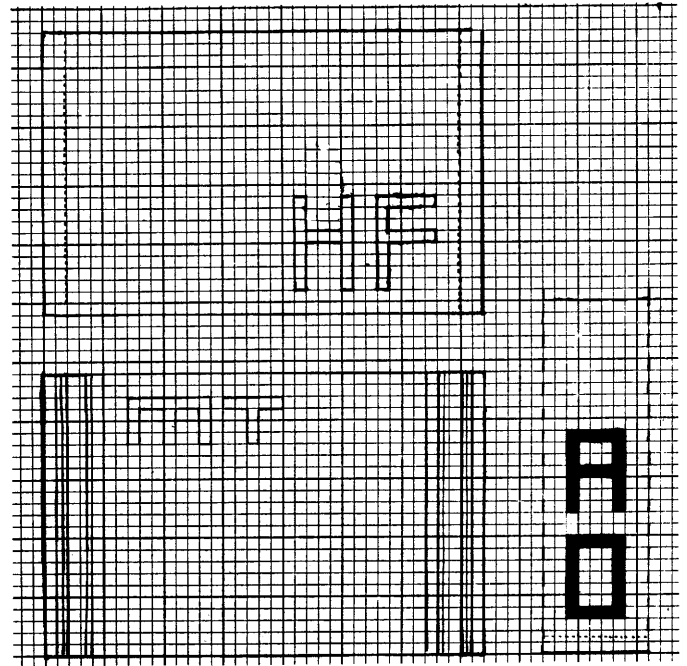


FIGURE 7

dered if, by setting up a twelve or sixteen harness loom, and making each block only one unit in size, would it not be possible to weave all letters merely by changing the tie-up to use different combinations of units? It is a good problem in design, at any rate. A four block alphabet is shown at Fig. 8.

A word to those who have never done a piece of Bronson: don't be discouraged if your weaving fails to show a definite pattern on the loom and is generally displeasing. Bronson is never attractive on the loom; it needs at least one trip to the tub and ironing board to settle the threads in their proper groups.

Tapestry

Simple laid-in tapestry for beginners
by LOU TATE

Definitely there is a trend in modern handloom weaving towards very creative forms of textiles. Hence, even beginning students want to do very individual weavings—usually some form of tapestry. The problem of the weaving teacher is to give beginning students a form of textile which will be simple enough in execution and which at the same time, will give full scope to the esthetic urge. Laid-in tapestry is a logical form. Here, the student has complete freedom of design; yet the weaving technique is sufficiently simple that even the inexperienced weaver can execute the design under supervision, and the experienced weaver can do it without assistance.

Taking as I do only a limited number of students (about half of whom live out-of-town and either have to take two lessons a day or have lessons at irregular intervals), I have to present in the short course all essentials of weaving in so concrete a form that the student can adapt weaving to her need—hobby, art, craft, research, business, occupational therapy, or teaching. For this reason, there is seldom time for more than one lesson on any one technique. Thus a lesson on laid-in tapestry forms the basis for all lettering, laid-in flower design, small figures, freehand tapestries, and pure tapestries. Sometimes there is time to have a later lesson on pure tapestry. The main point in this method of teaching is that the student herself anticipates the new work and does part of the reasoning involved. After all, if the student actually thinks, the work of the teacher is mainly guidance.

The work on the laid-in tapestry technique is usually taught between the fifth and twelfth lesson; consequently the weavings presented here are the work of very inexperienced weavers. As soon as a student asks to do a tapestry, that lesson is given. The subject of the tapestry and the amount of detail depend upon the character and the skill of the student. One of the last group of students remarked during her first lesson that she would never be happy till she started upon some form of tapestry. She is a brilliant person and has the



"Mountaineer-driving-a-razorback", woven by Elizabeth Bate Smith as her third piece of weaving.

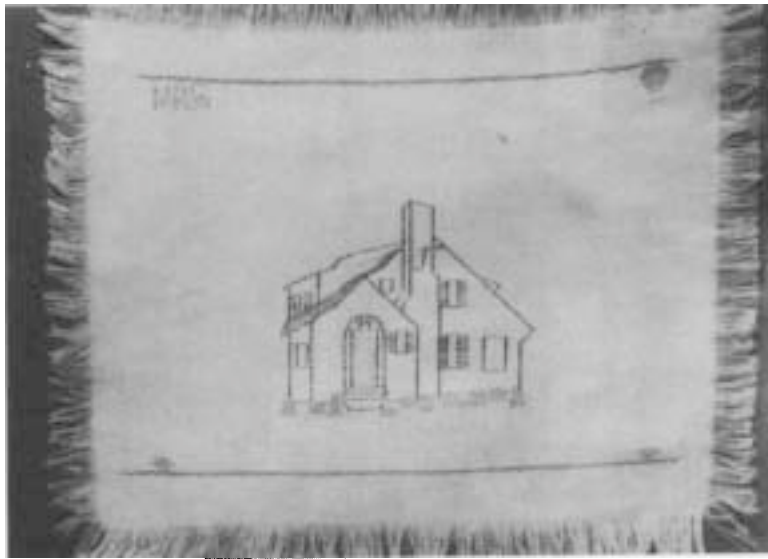
fortune to have an artist husband to aid her in cartooning, so she was told that she could do a laid-in tapestry for her next lesson. However, she was restricted to a single figure and to five colors, and was warned about detail. So in the second week of her weaving course, Elizabeth Bate Smith wove as her third piece of weaving "Mountaineer-driving-a-razorback". (Illustration 2. Cartoon by Bob Smith; warp 28/2 cotton, 40 threads to the inch, grouped threading, figure laid-in with linen weaver.) The weaver worked from the wrong side so that the cartoon faced right; whereas the finished tapestry faces left.

Most of the students "pick-up" lettering. They see weavers signing their textiles, ask a few questions, and then try signing their own weavings. It is only when they have difficulty that lettering requires a lesson. Naturally, their first lettering is cruder than it would be were it supervised. However, the student is definitely benefited by accomplishing such details on her own initiative. Signatures—at first only initials and date, then name of pattern, name of weaver, and date—on early American patterns are usually woven with the right side up. However, on all tapestries, linens, towels, etc., the weavers work from the wrong side of the textile. After the first adjustment of lettering backwards and drawing all people left-handed, the weaver has control of the design and can obtain a smoother finish and better design.

Stress is placed upon originality of design. Students are encouraged to continue their laid-in tapestries by weaving freehand figures and flower designs. As they select their own subject matter, silhouette or outline designs of subjects pertinent to their daily life are often chosen. In contrast to the silhouette type "Mountaineer-driving-a-razorback" is the outline design of a house. The child who wove this laid-in tapestry used her home as the subject. As the house itself



Miss Jessie Lambert weaving laid-in tapestry figures.



Woven by Mary Anderson Courtenay on her 16th lesson.

centered on the century old ancestral doorway, the cartoon was drawn with emphasis on the doorway. Although I do not take children for weaving students, twelve year old Mary Anderson Courtenay wanted to weave so much that she came to her mother's lessons and soon was taking the lessons. She justified being made the exception to the rule. From her first lesson, she had no trouble reading early American patterns from the warp, grasped the principles of drafting rapidly, and soon was signing her weavings. Then on the sixteenth lesson for the family, she wove the little laid-in tapestry of her home. (Illustration 3. Cartoon made by reversing outlines of a photograph of her home; warp 20/2 cotton, 40 threads to the inch; 20/1 linen binder, linen weaver for laid-in threads; signed MAC 1938.) The simple outline work, she used as high as thirty laid-in threads at one time to fill in the pattern. She worked from the wrong side of the tapestry with the cartoon folded to show the unwoven part of the tapestry; she used loose threads rather than small bobbins to lay-in the pattern (Illustration 4.).

If there is any set pattern for this laid-in tapestry lesson, it is a mat with a flower design in one corner and a monogram or name in another corner so arranged that the weaver works on only one laid-in part at a time and yet so designed that the textile is harmonious. Typical of this designing is the child's place mat woven by Jane Hall on her eighth lesson. She adapted one of the clever duck designs of Julie Peterson for the lower right corner and wove the name of the child in the upper left. (Illustration 5. Cartoon drawn with duck in the lower left corner and the lettering reversed in the upper right; woven from the wrong side of course; 20/2 mercerized warp thirty thread to the inch; peach and wine color linen weaver for the pattern.) Variations of this type can include flower designs, little figures, silhouettes of pet animals, classical Greek key designs, etc., so arranged that the weaver does not use many bobbins at once.

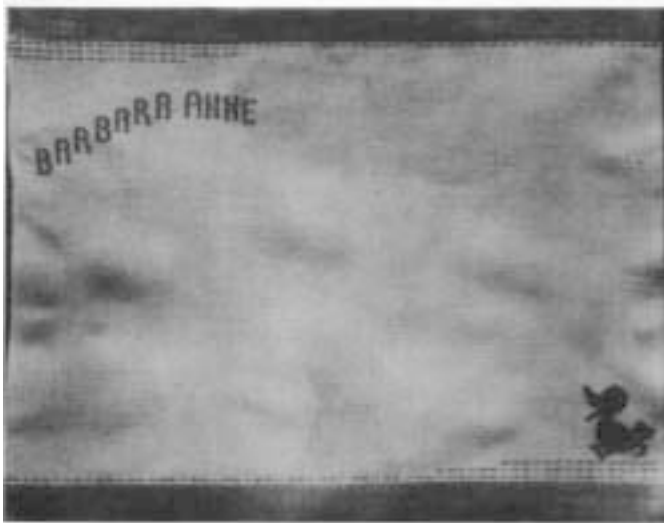
Naturally these first little laid-in tapestries are only preliminary work and are never even minor masterpieces. As the weaver is an interpreter, she is permitted to work from an artist's cartoon or to adapt her own cartoon from another designer. Whenever possible, she should create her own de-

sign. Never should she bother with conventional little log cabins and other trite designs so often woven by the score or gross. To stress originality, students should try freehand laid-in tapestries of flowers, fish, ships, figures, etc. Freehand tapestry with the laid-in pattern over a binder thread which runs across the warp, is rapid in comparison to pure tapestry and gives the student mastery of any tapestry form—knowledge of the "give" of threads, the shrinkage allowances necessary, angles and curves, and the general "feel" of designing. After a few preliminary sketches, the student is turned loose to weave a small laid-in tapestry having one to three figures—depending upon the previous weaving experience and native ability. Pos-

sibly she gets suggestions from the similar weavings of others, but the actual figures are created as she works. This seems the most valuable weaving angle which my students have worked on. There is an unlimited range of subject matter. Starting with a central theme—usually on a luncheon set—each piece is woven different. By the time, the set is completed, the student has a rather good command of the technique and has probably developed an original style to her weaving. Such individuality as expressed in freehand and other original design is manifestly a criterion of handwoven textiles.

In continuing with the use of freehand laid-in tapestry to build up a distinctive style, I will tell of a development since we began weaving in January 1938 the capricious little figures dancing to the folk tunes of Guapo the fiddler. Starting a definite trend, the figures are never duplicated (Illustration 6. Guapo-the-fiddler; 45 inch cloth woven freehand, three figures woven from foot to head, six on the side, and three from head to foot; 20/2 mercerized cotton warp; 30 threads to the inch; 20/1 linen binder; linen weaver in five brilliant colors for laid-in pattern). A second weaver following this trend increased the exaggeration of movement till her figures are whimsically grotesque. A third weaver eliminated detail till the symbolical simplicity of her figures approaches the subtlety of oriental symbolism. As these represent seven months of development, it tends to show that the weaver with an essential knowledge of the laid-in tapestry can soon attain an individual style. Altho the essentials for laid-in tapestry and for pure tapestry are taught in one lesson covering bare essentials, it must be remembered that complete mastery requires deep application.

As much of the laid-in tapestry weaving at the loomroom is decidedly experimental and as the number of weavers is restricted, I would like to get comments from experienced weavers on this form of textile, and to get the reaction of beginning weavers who may work from suggestions in this article. I am especially interested in knowing the worth of laid-in tapestries as a training field for finer tapestries, the value of freehand laid-in tapestry, the method of aiding students without art training and without a flair for design



Child's place mat woven by Jane Hall on her eighth lesson.



Weaver illustrating laid-in tapestry technique.

to make her cartoons, and the value of this trend to American development in handwoven textiles.

The following outline may be of help to beginning weavers in laid-in tapestries. Similar material is discussed at the loomroom before the student begins her first laid-in design. The initiative of the student is depended upon to carry the work into finer laid-in tapestries, freehand luncheon sets, and pure tapestry weaving.

Subject matter—a single silhouette figure, semi-silhouette, outline, flower, etc.—make it original.

later use groups of figures, airplane, skyline, ships in full sail, sprays of flowers, horses, symbolic designs, etc.



"Guapo—the fiddler"

Cartoon—use draft paper 10,13,20 blocks to the inch; if you use 20 paper for a 40 count warp, the lines will make one shed and the spaces will make the second shed.

draw your cartoon in reverse as you will weave from wrong side. Use carbon paper to reverse your drawing if necessary, use a photograph as basis if you are shy art training practice sketching cartoons.

Warp—use the plain weave warp now on your loom or 20/2, 16/2 mer., 20/2, 28/2. 24/3 cotton, 20/4 silk, 18/2, 40/3 linen for warps; experiment to find your preference.

warp 30 to 45 thread to the inch or coarser for laid-in tapestry; 20 to 30 or coarser for pure tapestry.

Binder—about the size of the warp; run across as usual, plain weave, add larger pattern thread on same shed.

a neutral tone in linen, silk, fine wool, etc., is best.

Pattern—yarn two or three times as heavy as binder; linen weaver, crewel wool, silk and wool, heavy silk, etc.

limit colors to four or five of same intensity at first; add more colors and shades as you add detail to your cartoons; use various types of yarn for effects.

for small tapestries use paper bobbins, small wood tapestry shuttles, or simply short strands of yarn.

make ample shrinkage allowance; for 30 count warp, usually 35 to 42 threads are needed to the shrunken inch.

beat evenly but not so hard as usually on plain weave as you have to allow for laid-in threads.

Don't be afraid to experiment; so far, no weaver starting a tapestry has failed to complete one that was good considering her weaving experience. If you think the student pieces illustrated here are good, you can do as well for they represent the work of beginners.

Something Different In Two Harness Weaving

by EMMY SOMMER



ILLUSTRATION No. 1

The two harness weaving—with all its possibilities—from plain colored stripes, using interesting materials for texture—to the real Gobelin Tapestry weaving, has always interested me more than mechanical weaves.

There have been written splendid Articles in "The Weaver" on interesting techniques and variations of these, where only two harness have been used. Several of these techniques have been described in Scandinavian and other Weaving books.

I have tried to keep informed on what has been published—though of course, there may still be Articles and techniques I do not know. However the technique I used in the illustrated piece, which I want to describe is rather different from anything I have ever seen or read about,—so as far as I know I think I have found something "New". I will give it the name of: "*Alternate Weaving*".

Besides simplicity of execution, the clearness and effectiveness of the completed woven design, are the characteristics of this technique.

Any kind of pattern which can be drawn on cross-section paper can be used. The simplest would be the silhouette

which requires only two colors. Very effective are patterns like those used for: Kelim—Rollakan—Rya—Dukagang—Inlay and all geometric designs.

The piece illustrated was done on a simple two harness loom.

Reed—12 dents to inch.

Warp and binder: No. 8 Perle, No. 5 Cotton.

Filling: Peasant wool, in different colors.

The proportion between the warp—binder and filling is very important. Warp and binder should be of same material—or anyway same size. Filling must be much heavier—so when woven it will make perfect small squares—framed between warp and binder. Illustration shows this clearly.

Make the design on cross-section paper, let each square represent four warp threads—two up and two down when loom is in shed,—use two rows of filling across—with binder between.

As this is a two harness weaving, we have only two sheds Nr. 1 and Nr. 2. They will be used alternately—one for binder—the other for filling, which consists of both pattern and background.

Whether your shuttel is on the left or the right side of the loom—never change from this rule: Shed No. 1—is always for the binder. Shed No. 2 is always for the filling. Work is done from the wrong side. (See Illustration.)

Wind material to be used for stripes and large pieces of filling on shuttels, and for small units of the pattern, wind each color in “Bobbins” as described by E. M. Hickman in the Weaver for April 1937.

In looking at the pictures I think it shows how each color can be carried on the wrong side over a number of unused threads—to be woven again in the same row—where the pattern calls for that same color. The background can be carried thru a whole row skipping over the threads, where the pattern has been woven thru in the same row. It all is so simple that too much explanation may make it confusing. However, for the less experienced weavers, I shall give a little more detailed description.

My loom had 368 warp threads in all. If there should be four warp threads to each square, my pattern will need 92 squares. The design for the border shows this.

Begin with a few rows of plain weaving, using the binder as a heading, then begin the border:

There are 2 rows green—2 rows yellow—and 2 rows red.

Use shed No. 1—	weave 1 row	binder	} This shows two rows fill- ing with bind- er between
“ “ No. 2—	“ 1 “	green	
“ “ No. 1—	“ 1 “	binder	
“ “ No. 2—	“ 1 “	green	
“ “ No. 1—	“ 1 “	binder	
“ “ No. 2—	“ 1 “	yellow	
“ “ No. 1—	“ 1 “	binder	
“ “ No. 2—	“ 1 “	yellow	

and so on, end on shed No. 1 with 1 row binder.

To begin the pattern—there are 22 squares red, so step on shed No. 2. Put the bobbin with red filling under 44 threads—then, a tan bobbin for background under 8 threads—green under 44—tan under 8—brown under 44—tan under 8—and blue under the rest 28 threads. Change to shed No. 1. Put the binder thru. Change to shed No. 2. Work the colors back under the same number of threads as before: blue under 28—tan under 8—etc. The whole row back. Change to shed No. 1. Put the binder thru.—Now we

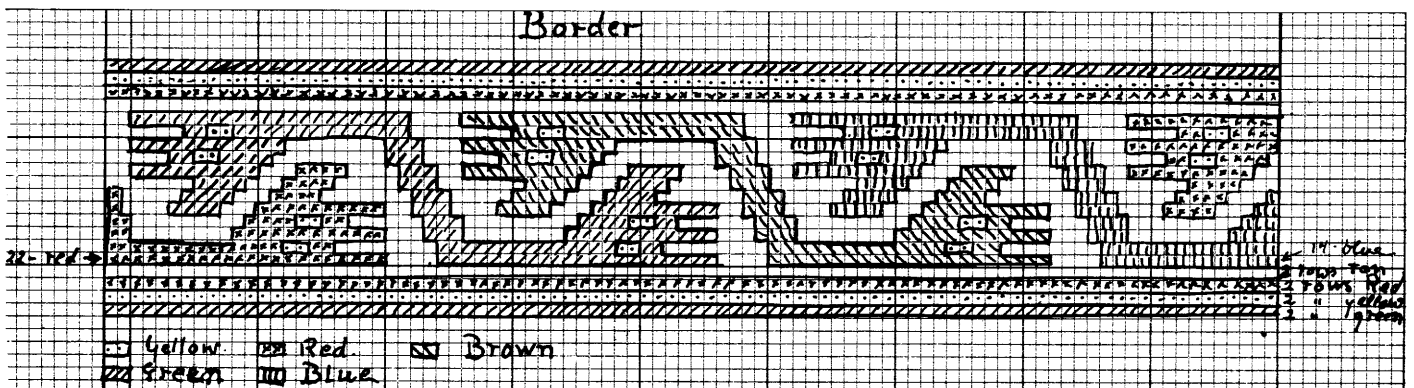


ILLUSTRATION NO. II

have one square across—completed with 2 rows of filling and two rows of binder.

The next row calls for—28 red—skip 4—weave in 4 red;—the skipped should be 4 yellow,—then 16 tan, 28 green—skip 4 for yellow,—then 4 green again, then 16 tan—etc.

This may sound complicated but try it and you will soon see how easy it all is.



Point Weaving on Multi-Harness Loom

by L. L. WINANS

I have used my eighteen harness loom principally for "Point Weaving." In this technique a white warp and a single shuttle with a colored weft is used.

Good effects have also been obtained with white weft also. So far I have used only cotton, Bernat's Perugian Filler and Perle No. 10, but better effects can no doubt be secured with linen or silk.

Sixteen harnesses are used for the pattern and two for the Selvage.

Many different small patterns and textures may be made with one threading of the loom. With one set of cards in the Jacquard operating mechanism a great variety of pattern effects can be made by running the cards forward and backwards with selected portions of the card belt and an entirely different series of patterns made by putting other cards in the Jacquard machine.

Each card is equivalent to a tie up to a treadle and makes a shed for a single pattern shot of weft. The Jacquard machine is reversible so the pattern may be pointed at will. In order to reduce the reversings, I usually duplicate cards for a given pattern so that it will be produced by not more than one reverse and leave a space in the belt to warn me when I have completed the set. Otherwise mistakes are made by not reversing at the proper place. Mistakes made are easy to unweave however by running the cards in reverse until the correct shed is obtained.

The accompanying threading diagram has been used for

all of the different patterns shown in the illustrations.

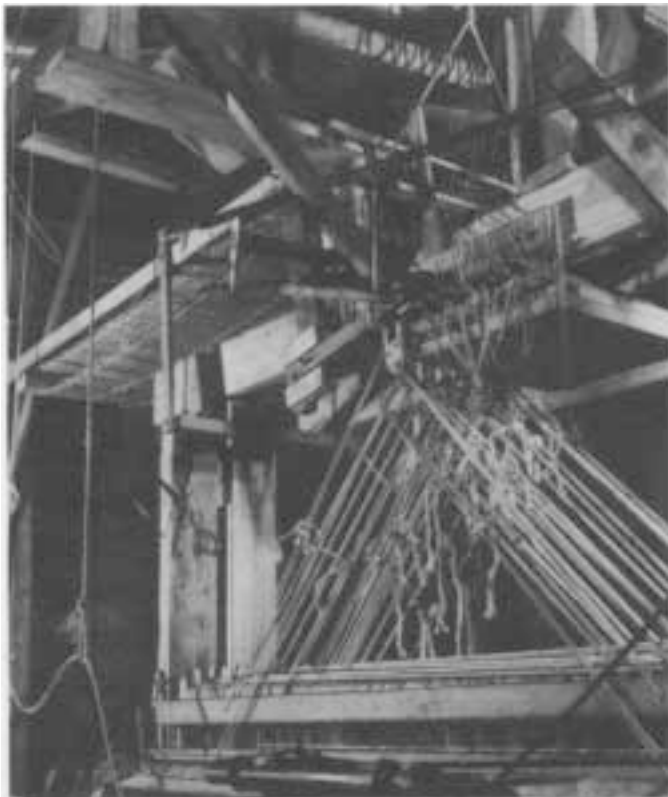
The sampler illustrated was made by variations of a series of twills and the different designs were produced by running selected portions of the card belt forward and backward as desired.

The slip covers and draperies illustrated were woven with other sets of cards as were other designs shown in the composite illustration.

These pieces have been used for pillow covers, luncheon sets, draperies, slip covers, bed spreads and towels.

The threading of the design thru the heddles has been an onerous chore to the writer and the ability to change the design completely without having to rethread the harness and reed has been a source of great satisfaction. It has also been a great pleasure to work out different designs on paper and see them developed on the loom.

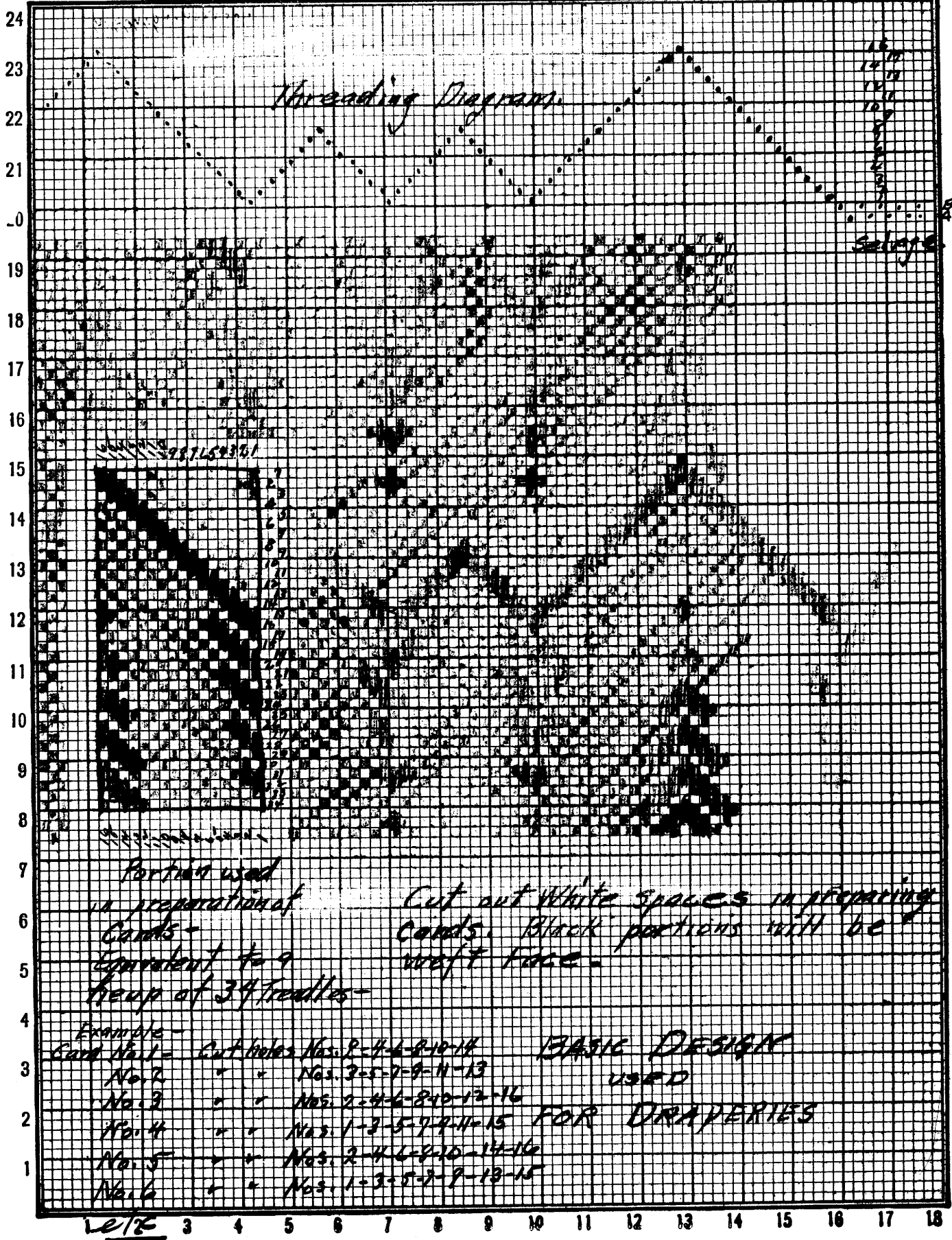
When the construction of a multi harness loom was contemplated, the number of treadles, the appalling number of tie-ups and their adjustment in the limited space under the loom and the trouble of selecting the proper treadle during weaving operations seemed prohibitive obstacles. From a study of the "Jack-in-the-Box", Draw-Boy Machine, Dobbie machines and the Jacquard machine, I decided to construct a Jacquard machine for the operation of the harnesses. After several trials and many modifications, mostly by the trial and error method, a reliable device was produced. With this Jacquard machine the eighteen harnesses are operated faster



Jacquard operating mechanism 18 harnesses.



Draperies and slip covers woven on "point" threading.



Threading Diagram

18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1

Seloge

*Portion used
in preparation of
Cards -
Equivalent to a
heap of 34 treddles -*

*Cut out white spaces in preparing
Cards. Black portions will be
wraft face -*

Example -

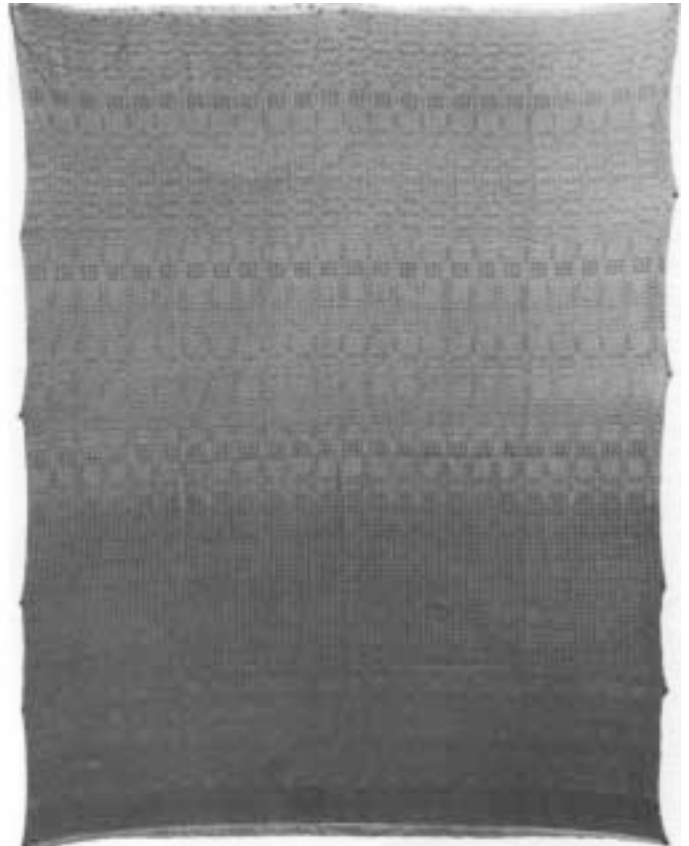
<i>Card No. 1 -</i>	<i>Cut holes Nos. 2-4-6-8-10-14</i>
<i>No. 2</i>	<i>" " Nos. 3-5-7-9-11-13</i>
<i>No. 3</i>	<i>" " Nos. 2-4-6-8-10-12-16</i>
<i>No. 4</i>	<i>" " Nos. 1-3-5-7-9-11-15</i>
<i>No. 5</i>	<i>" " Nos. 2-4-6-8-10-14-16</i>
<i>No. 6</i>	<i>" " Nos. 1-3-5-7-9-13-15</i>

**BASIC DESIGN
USED
FOR DRAPERIES**

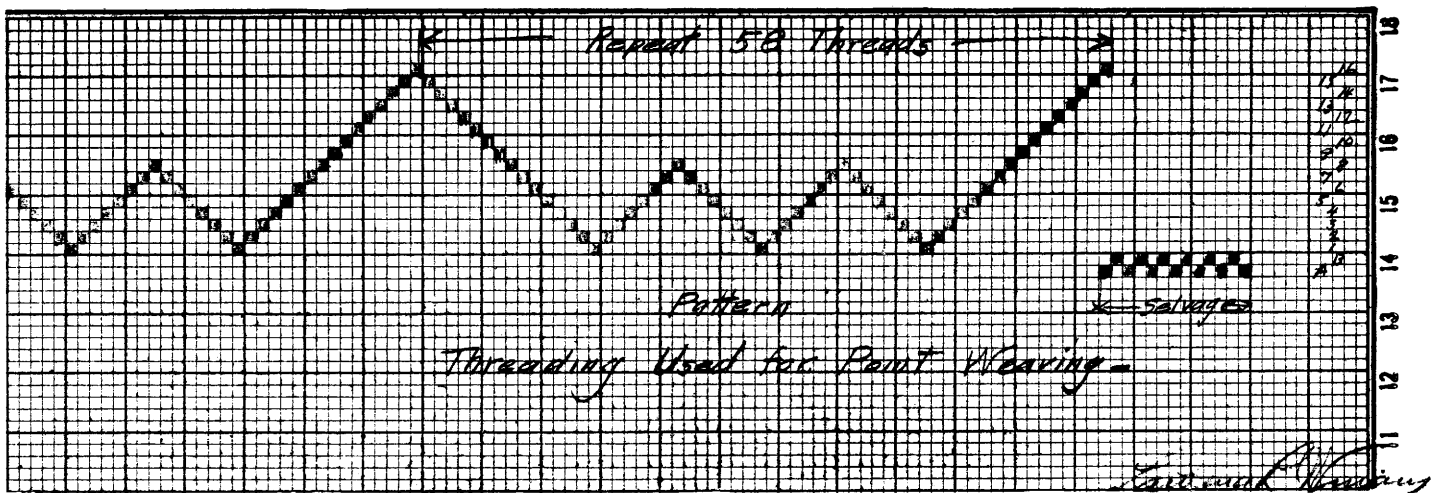
Le 12 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



Different textures woven on same "point threading".



Samples of varied twills woven on "point threading".



and with less effort than were four harnesses of a counter-balanced rig.

Cards to select the sheds are prepared by punching the holes thru a steel template from the design drawn on cross section paper one card for each different shot of weft. Either all of the pattern spaces or all of the background spaces are punched, selecting the part to punch that, in the whole pattern, has the fewer number of threads. Each hole in the card lifts the corresponding harness and shows the warp in the finished goods. Since it is immaterial which side is uppermost in the loom, it is better to so cut the cards to obtain a majority of weft on the upper side. This reduces the number of holes to be punched and the number of harnesses to

be lifted during the weaving operation. This difference is great if small separated figures or satin effects are made.

It would be especially beneficial to weave weft face if jacks and many treadles are used as a minimum of lifters, means a minimum of tie-ups and effort expended raising the weighted harnesses.

The accompanying Illustration shows the machine used in weaving all goods illustrated. Blue prints of an improved Jacquard machine, to operate up to 26 harnesses have been prepared by the writer and may be secured from L. L. Winaus, 2812 Travis Avenue, Fort Worth, Texas, for \$5.00 per set. These are drawn $\frac{1}{2}$ full size.

“Twice Woven” Rugs

by MARY M. ATWATER

“Twice-Woven” rugs are good-looking and durable. They are simple to make, and waste materials and odds and ends of left-over yarns can be used in their production. Why don't we make more of them? That is a question I am unable to answer. Apparently the technique is little known among American handweavers.

It is undoubtedly an ancient technique, and has gone over into commercial weaving. It is said to be a Scandinavian technique, but I do not find it described in any of the Scandinavian books—or anywhere else, for that matter. As far as I know, this is the first description of the process—as practised by hand-weavers—that has appeared in print, except some notes on the subject recently published in the Shuttle-Craft Guild Bulletin.

Rags may be used for this form of rug-making. Rags cut from knit fabrics are especially good, and fairly light-weight fabrics are better for the purpose than heavy fabrics. The rags need not be sewed but weave better if folded or rolled. Wool rug-yarns, however, make a handsomer rug, with much the texture of knotted pile fabrics at far less cost in time and trouble. The cut yarns in short lengths obtainable from mills at low cost can be used in this type of weaving, and any left-over odds and ends of yarn may be used, though if the materials are very fine they should be woven in strands of several ends. Cotton chenille is not practical for these rugs and cotton roving is undesirable because of its extreme coarseness and its tendency to flake off. Candle-wicking cottons may be used to better advantage than roving.

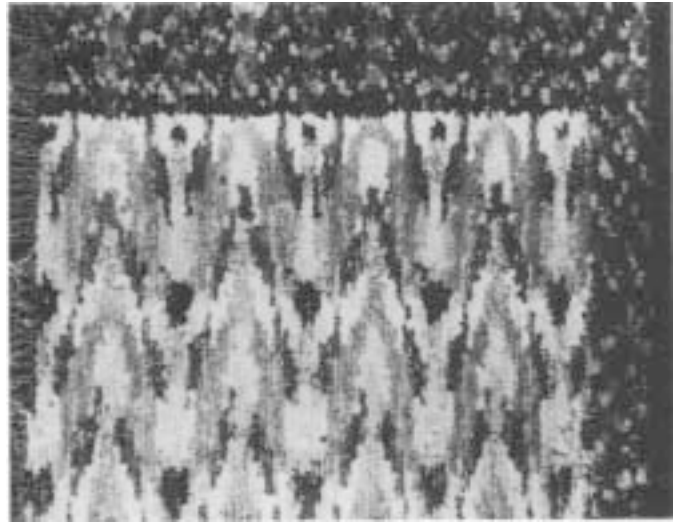
Patterns, as elaborate as one chooses, may be produced in this technique, and as the weave is plain tabby a very firm and durable rug is produced.

Rugs of this order are literally woven twice—once to produce the weft material and once to produce the rug.

For first-weaving make a warp of ordinary carpet-warp thread, at a setting of 8 ends to the inch. Thread as for plain tabby, on two harnesses. Sley as follows: (using a 12-dent reed) four threads through the first dent; skip five dents; four threads through the seventh dent; skip five dents, and so on. The warp will be in four-thread groups, set at half-inch intervals. Do the first-weaving on this warp, beating as firmly as possible. When a sufficient yardage has been woven, cut the fabric lengthwise between the groups of warp-threads. The resulting chenille-like strips are the material used for the second weaving.

For the second weaving make a warp as for an ordinary rug—carpet-warp at 12 ends to the inch is suggested. Thread as for plain tabby weave and sley in the ordinary manner. In weaving the rug alternate shots of carpet warp and the first-woven material may be used, or the weaving may be done entirely in the first-woven material. I recommend the use of the alternate shots of warp-thread as it seems to me to make the more durable rug.

The yardage of first-weaving required for a given rug depends on the linear yardage of first-woven material that will be needed for a rug of the size desired. Allowing four weft shots to the inch, which is correct for most materials, a rug 36" wide and 60" long will require 240 yards of first-woven material. It is obvious that if our warp for first-weaving consists of 24 groups of four threads each—96 ends—we shall need to make ten yards for first-weaving. If, however, we make a warp of 48 groups or 192 ends, five



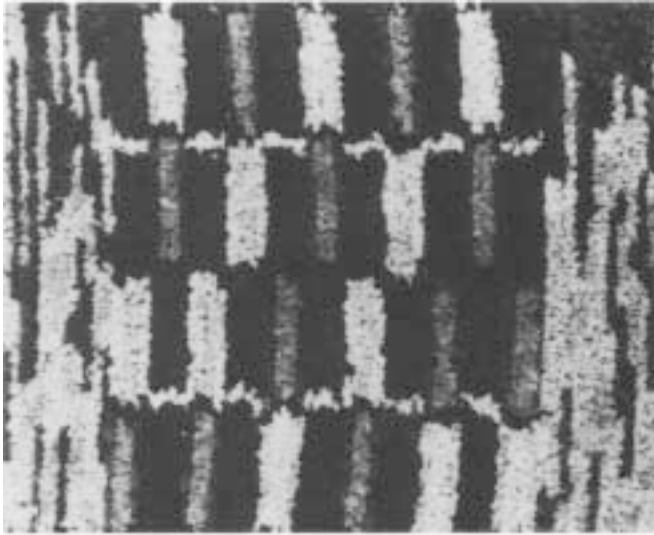
An old Twice-woven Rug in many colors.

yards of first-weaving will be sufficient. The warp for first-weaving may be as wide or narrow as we find convenient, but the yardage to be woven depends on the yardage of material required for the proposed rug. There is an advantage in making the first-weaving on a fairly narrow warp, as the strips of first-woven material will then be longer and require fewer joinings, but it is a matter of convenience. If first-woven material for several rugs is made on the first warp it saves time to make the first warp as wide as the loom will accommodate.

It is obvious that if the first-weaving is done in material all of the same color we shall have at the finish a plain-colored rug. To produce patterns in this weave the various colors must be so arranged in the first-weaving that when the material is stripped and woven into a rug the colors will come together to produce the desired figure. Simple patterns are easy to make. Elaborate patterns are entirely possible but require a bit of careful figuring to bring out the desired affect.

Suppose, for instance, we wish to make a rug with a plain center, in a light color, with a dark border all around: suppose that for the 36" x 60" rug we are considering we want end-borders 10" deep and 6" borders on each side. The end borders will require 80 yards in solid dark color. If for our first-weaving we have a 24" warp of 48 groups of warp-ends, a yard and three quarters woven in solid dark color will give us a bit more than the required yardage. The strips of dark color will, however, be only a yard and three quarters long and will require frequent joining. If we prefer, we can set aside 16 groups of warp-ends and weave these in solid dark color for five yards, weaving the rest of the groups in the color-arrangement required for the body of the rug. It is not necessary to carry the weft all across the fabric as the fabric will be cut apart later in any event. The weaving for the body of the rug should be done as follows: 6" dark (for the beginning); then: 24" in the light color, 12" in the dark color, and repeat: 24" light, 12" dark and so on for the required yardage.

The strips may be joined by tying the wrap-ends together. This is better than merely overlapping them as an



Twice-woven samples.

overlap may make the pattern come out uneven.

When a number of colors in odds and ends of material are to be used they should be sorted into two groups—light and dark—and may then be woven in “hit and miss” fashion, the dark yarns for the border and the light yarns for the center. Some very attractive effects result from weaving in this simple manner.

Illustration No. 1 shows part of an old twice-woven rug done in rags. The warp for first-weaving for this piece was set somewhat closer than as recommended above,—a group of four warp-threads to each $\frac{3}{8}$ ” in the reed. The manner of slewing through an 8-dent reed, would be four threads to the first dent, skip two dents, and so on. Or, through a 15-dent reed—which would be better—four threads through the first dent, skip five dents, and so on. The border is woven in a hit-and-miss mixture of dark colors,—black, brown, dark grey, dark green, dark blue and dark red. The figure has a light background in shades of tan and light blue, and the lines of the figure are in a mixture of the dark colors, chiefly red.

In this piece of weaving only the first-woven material is used for weft and the alternating shot of warp-yarn is not used.

Illustration No. 2 shows a small experimental piece done in rags, also, but more coarsely cut and not as firmly beaten as the piece in illustration No. 1.

The following suggestions for several simple pattern effects for twice-woven rugs may prove useful: (a) 36” rug with dark borders as described and with the center in checker-board squares. Weave material for plain end-borders as described, and for the body of the rug weave as follows: 12” border; 6” dark, 6” light, 6” dark, 6” light, 12” border; 6” light, 6” dark, 6” light, 6” dark Repeat for the required yardage. In weaving the rug, weave twenty-four shots—or the number of shots required to make the first set of blocks square. Then break off and start over at the opposite edge to reverse the colors, and weave till the second row of blocks is square. Reverse again, and continue in this manner till the center of the rug is as long as desired.

The dark and light squares need not be in solid color, but may be woven in a variety of dark or light shades in hit-and-miss fashion as explained above.

(b) A 36” rug with a border all around, and the center

in broad lengthwise stripes in four colors can be made this way: border 12”; 6” color (1), 6” color (2), 6” color (3), 6” color 4; 12” border; 6” color 4, 6” color 3, 6” color (2), 6” color (1), Repeat as required.

If desired, these wide stripes may be separated by narrow stripes in black, or in color like the border. To produce this effect weave the last shot of each color-band and the first shot of the next in the dark color.

(c) For an effect of diagonal stripes for the center of the rug weave as follows: 6” border; 3” color (1), 3” color (2), 3” color (3), 3” color (4), 3” color (1), 3” color (2), 3” color (3), 3” color (4); 12” border; 3” color (3), 3” color (2), 3” color (1), 3” color (4), 3” color (3), 3” color (2), 3” color (1), 3” color (4); 12” border; 3” color (3), 3” color (4), 3” color (1), 3” color (2), 3” color (3), 3” color (4), 3” color (1), 3” color (2); 12” border; 3” color (1), 3” color (4), 3” color (3), 3” color (2), 3” color (1), 3” color (4), 3” color (3), 3” color (2). End, 6” border.

If this pattern is woven all one way it will produce a diagonal arrangement. If after eight shots, you break off and reverse the colors by starting from the other side, a zig-zag effect similar to the old piece shown in Illustration No. 1 will be the result.

(d) Here is a simple arrangement for the center of our rug that will give an interesting effect if a variety of colors are used—say half a dozen dark shades for the dark part and as many light shades for the light part. Weave 12” border; 8” light; 12” dark; 4” light, for the first yard. For the second yard: 12” border; 10” light; 12” dark; 2” light. For the third yard: 7” light; 14” dark; 3” light. And so on, varying the arrangement in each yard but starting always with light, dark in the center, and a narrower band of light at the end, making the space always 24” between the 12” border stripes.

To make crosswise stripes of solid color weave 24” in plain color between the border stripes.

Elaborate figures of flower-forms, ships, fish, trees, and so on, may be produced in this technique by laying out carefully the color arrangements for the first weaving. These figures, however, smack of the commercial when too complicated and exactly executed. For the hand-weaver the simpler patterns are probably more suitable. As the pattern is entirely in the arrangement of the colors in the first-weaving, in doing the second weaving to produce the rug the weaver needs merely to be careful to keep the edges of the border and the pattern figures even and true.

The directions as given are all based on a 36” rug with six-inch side borders. If a rug of different width is to be made, or if wider or narrower borders are desired, the calculations for first-weaving must, of course, be modified accordingly. A 24” rug without side-borders can be made by following the directions as given, simply omitting the “12” border” direction each time it occurs.

The “twice-woven” technique is not advised for anything except rugs, though possibly if done in quite fine materials it might be used for foot-stool tops. The fabric, even if fine materials are used, is too coarse and heavy for bags or similar pieces. Rug-weavers, though, will find it an interesting variation from ordinary practice. There is nothing much more stupid to make, or more uninteresting to possess than the ordinary “hit and miss” rag rug. By the “twice-woven” process materials that seem unsuited to anything but hit and miss weaving can be converted into really handsome pieces, and though a little more time and trouble are involved, the time is well-spent and the trouble is interesting.

A Weaver Traveling in Chile

by HELEN LOUISE ALLEN

Most people know that Chile is in South America. Some know that it is almost—3,000-mile-long, 100 mile-wide saber curved country that lies on the western coast at the bottom next to Argentine. There may come to mind the spectacular flight over the Andes or the equally famous gambling casino at Valparaiso. The business man may think of Chile in terms of the copper mines high in the mountains or of the nitrate deposits in the arid rainless plains. All these things lie in the north. Few know about the rich agricultural lands, of the lake regions and their fine summer resorts. Few know of the fruits; pears so large that one slice is as large as one of our pears, of ordinary grapes that are as large as hot house ones, of peaches four and five inches in diameter and dripping with juice; and of coal mines running three miles out under the ocean, or of the Indians of Chile. All these things lie in the south. Tying these two regions together are the two large cities of Santiago and Valparaiso: Valparaiso, the coastal shipping center and Santiago, the old Spanish and ultra-modern capital lying further inland.

In one travel folder of Chile I saw mention of the Indians and where there are Indians there is usually weaving. Most of the people that I asked about the Chilean Indians said they did fine silver work but no weaving. This means one of two things, I have found by experience; they do not do any weaving or they do weaving of such unusual types that the average American business man, tourist or missionary does not recognize it as weaving and thus it is quite pure in type and "untouristy".

Notwithstanding that statement when I reached Chile I found where the Indians were located. There are estimated to be about 50,000 to 150,000 of the Araucanian Indians located south of the BioBio river with their trading center at Temuco. When I told an American copper miner at the hotel that I was leaving in the morning for Temuco to see the Indians he cheerfully told me, "Well, I hope you see some Indians. My wife was down there for two weeks and didn't see an Indian." How I wish I had taken his address. I would have written him, "Does your wife know an Indian when she sees one?" She must have been looking for feather headdresses and Navajo blankets, just as I looked in vain for the colored porter on the Chilean sleeping car.

Temuco is a comparatively new city celebrating its 50th anniversary only a few years ago. It lies in a rich agricultural district of rolling hills and broad rivers, a fifteen hour train ride south of Santiago. The country has been so recently timbered off that some of the fields had the stumps in them. It looked much like northern Illinois except that "on a clear day" one can see the snow capped mountains of the high Andes off on the horizon.

After watching the Indians come into the city with their high two wheeled oxen carts and after following them around the market while they did their shopping, I could understand somewhat why the miner's wife did not see any Indians and why the people told me they did no weaving. The women dress entirely in black. Over a cotton blouse is worn a heavy black woolen blanket fastened around the waist for a skirt, with one corner pulled up from the back and fastened to the skirt in front with a large silver dagger-like pin. At least in original costume it was but now all too often a safety pin does the job. Over this is worn another

large thick woolen blanket for a shawl. It is held together at the neckline in front with a large silver ornament like a breast-plate. At the top is a silver plate about three by five inches. From this hangs either three or five inch-wide flat silver chains about seven inches long. Hung from these is a smaller plate from which hangs silver bugles like a fringe. Fastened to the blouse on the right side is another flat silver chain with a Maltese cross on it and from each arm hang small and large circles or small Maltese crosses. I was told that each large circle or cross marks a child. A small circle for a daughter and a large circle or a cross for a son. A gingham or percale apron is always worn. The skirt is held up by a woven belt which the apron band covers up. On her head the woman wears a two-inch leather band studded solidly with silver with silver circles or crosses hanging in a thick fringe from it. The band is fastened in front with a wide ribbon tied in a bow and the top of the head is filled in with gay ribbons and velvets. These are the only bits of colour that show on the costume. The hair hangs down the back in braids that are closely wound with silver studded leather bands. The whole effect is sombre but with a carefully planned center of interest.

The design and the colour scheme of the women's belts are always the same. Ill. 1. They are white and a dull red, sometimes a yellowish red, sometimes a purplish red, with a few yellow or blue threads in the selvage. The weave is the typical warp type found in South America. The weft does not show. There are no long over shots. It is the reverse on one side from the other and seems more like a warp Summer and Winter weave. Both background and pattern are picked up for each shed and at every third weft the design changes. One of my women's belts is of the old vegetable dyed fine wool but the other is coarse and dyed with aniline dyes so that the colours are much more brilliant. This one shows a change in design at the two ends. The weave found in these belts and used on some of the ponchos is also found to be the typical weave of Peru and Bolivia. According to tradition the Auracnians were taught their weaving by the Incas of the north who came down to conquer them but didn't. This weave is not found in Central or North America.

The men wear an uncolourful but strikingly bold costume. Over short ill fitting trousers and a cotton shirt, they wear a large-patterned poncho in dark blue and white. The design is of stepped herringbone or diamond shaped figures sometimes in all-over pattern, at other times with the pattern only over the shoulders in stripes. Each motif of the design is about a foot long. Ill. 2. Seeing these animated bedspreads walking along the street with their oxen, I supposed that the ponchos were done in tapestry-like technique of the Navajo blankets but on closer inspection that proved to be of a tied and dyed warp technique, an enlarged Mexican reboso in wool. The wool is very smooth and very tightly twisted and the warp so close together that they are practically water proof. The ponchos are woven full width on the loom with the head hole woven in and reinforced on the loom. The men give the appearance of large blue and white patch work quilts going down the streets and the women look like complete silver stores and the miner's wife didn't see an Indian in two weeks.

The men's belts are the only humorous bits of weaving

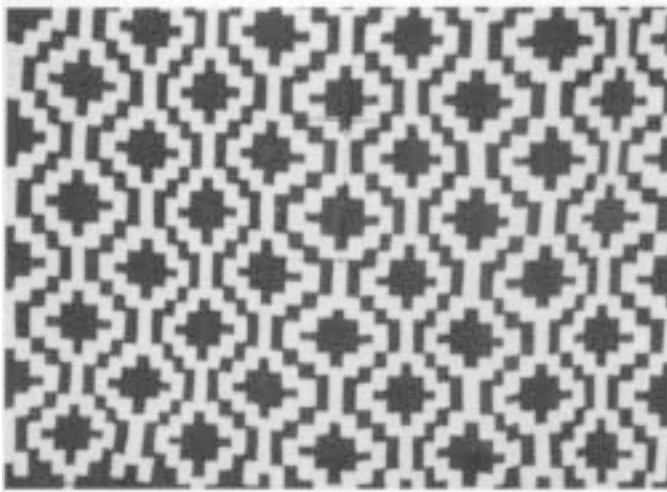


ILLUSTRATION No. 2a—*Man's Poncho in "tied and dyed" warp technique.*

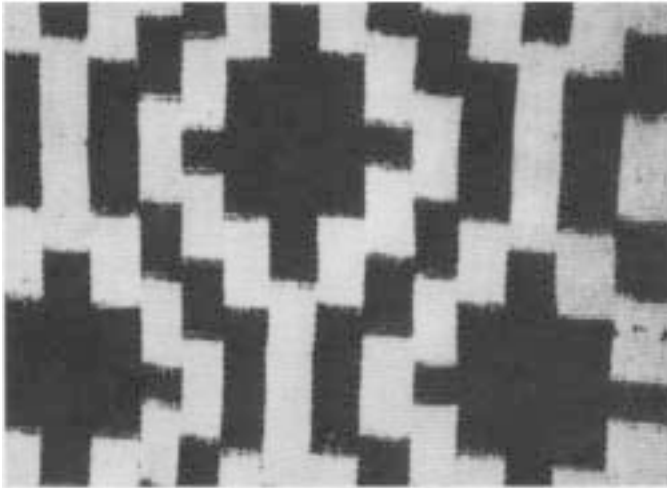


ILLUSTRATION No. 2b—*Detail of 2a.*

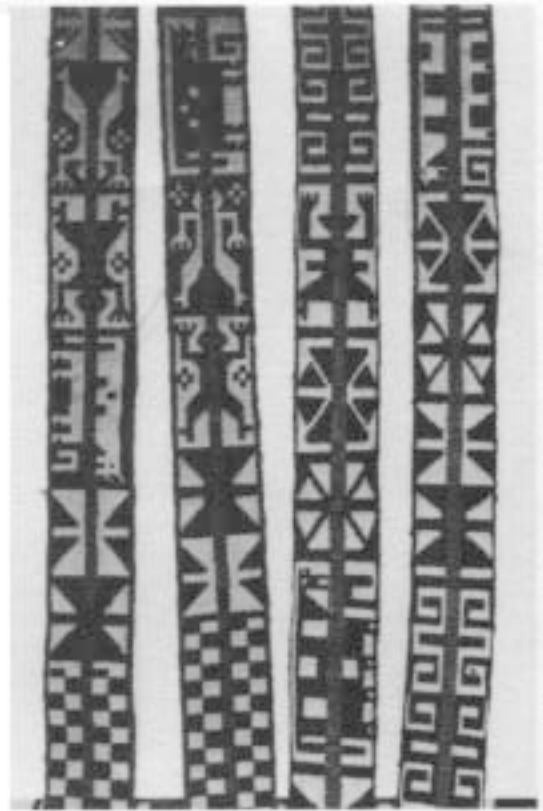


ILLUSTRATION No. 3—*Men's Belts in Double Weave.*

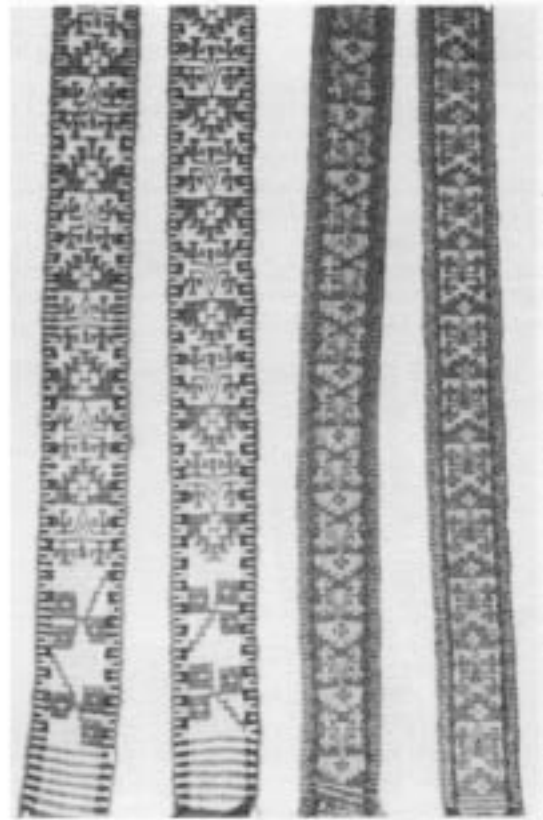


ILLUSTRATION No. 1—*Women's Belts. The narrower one is quite old, the other is new.*

of the Mapuche, "People of the land", as the Araucanian Indians call themselves. These belts are done in double weave in quite heavy wool. The colour schemes vary. White and two dark colours are used, the third colour always coming as a streak down the center of the belt. Red and blue, blue and henna, red and brown or purple and blue are some of the colour schemes that I saw. The designs show men with the hands held up or bent down and very recognizable cows. Ill. 3.

All the elaborate weaving and colour of the Mapuche is used on the horse trappings and the horsemen. One large poncho I have is a full bed size woven in one piece with the head hole woven in and is made of exceptionally fine wool. Ill. 4. The plain weave dark and light stripes are of blueish-black and white and the pattern stripes of a purplish blue and white. The technique is the same as the women's belts and the design is a variation of that on the belts. They are made on huge upright looms and each row must be picked up with two different sticks all the way across for each pick of the weft. The weaver has to move from section to section of the loom for each row. Each poncho takes three



ILLUSTRATION No. 4—Section of a very large Poncho.

or four months to make. This type and size is very rare and I was extremely fortunate to be able to find one. There is one like it in the Heard Museum of Textiles in Phoenix, Ariz.

My smaller and much more usual poncho is in a peculiar red, brown and white and has many different designs altho it is in the same technique as the large one. Ill. 5. I saw many horse men come into town with these on. They hang over the shoulders only slightly.

The saddle blankets are the most colourful of all the weaving. They are in white with brilliant purples, reds, browns, greens, oranges, and magentas, but with not more than two brilliant colours in any one blanket. In size they



ILLUSTRATION No. 5—Small Red-Brown Poncho.

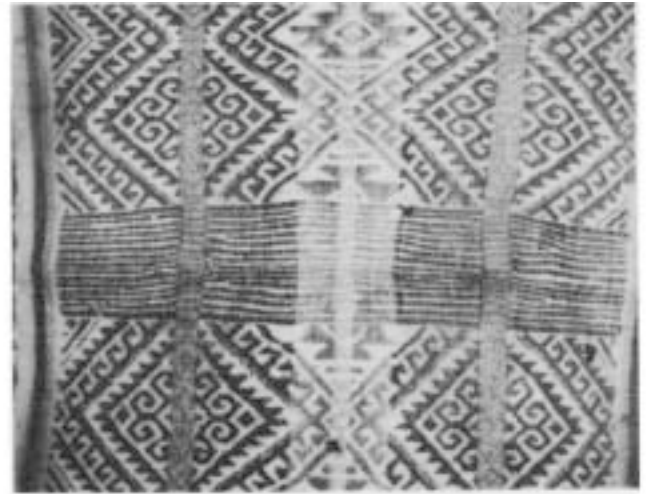


ILLUSTRATION No. 6—Old Saddle Blanket.

are almost square being about three by four feet. The technique is the warp over-shot that is used so much in Mexican belts and also in the Scandinavian belt and garter weaving. The design thread is loose in varying length over-shots going from back to front of the article as needed and making the back the exact reverse of the front. The designs are bold geometric patterns based entirely on diagonal lines. Ill. 6 & 7.

In all these articles each piece is complete on the loom. There are no raw edges or tied fringes, or cut ends. The warp is woven from the looped ends on one end tight to the



ILLUSTRATION No. 7—Modern Saddle Blanket.

loops at the other. This means that the weaver weaves a short ways at one end of the loom and then she reverses her loom, begins at the other end and weaves to meet her first bit. As the space for weaving becomes narrower and more awkward the Mapuche weaver gives up all attempt at a pattern and just alternates her dark and light threads and of course eventually has to give up trying to put in any more weft. This leaves a "soft spot" in the article, as I call it. The better the weaver the least soft spot. The center area can be very plainly seen in my old saddle blanket in Ill. 6 but is very narrow and inconspicuous in the modern and

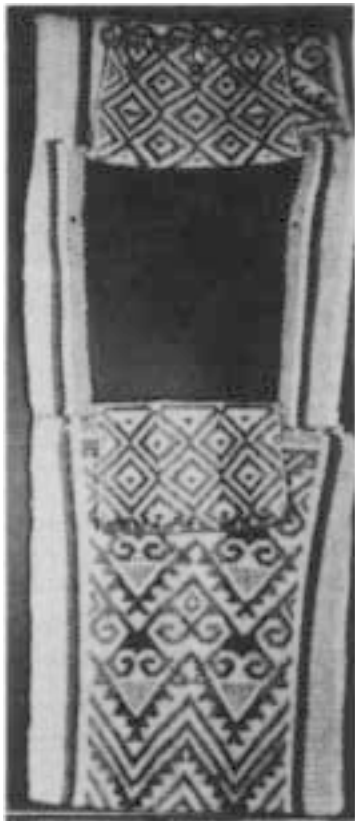


ILLUSTRATION No. 8 — *Saddle Bag*

coarser one shown in Ill. 7. The blanket is folded in the center and put under the saddle.

Over the saddle comes the most unusual piece of weaving of the Mapuche. I wonder how old a type it really is. It is the "choapina". The old ones are entirely in black or white. The newer ones come in colours and some with designs in brilliantly crude colours. Mine is an old black one of beautiful soft black wool worn to a satin smoothness. It looks and feels like a huge soft silky black pussy cat. The "choapinas" in the center are made with a tied knot like a Swedish "rya" knot but much closer together like an oriental rug with a very long thick pile. The wool is combed out at the ends so that

the effect is more of thick fur than of wool. Only by burrowing down thru the pile can one see and feel the individual strands of wool and feel the knot. For about six inches at each end of the "choapina" an area of flat plain weave has been made on which long very twisted threads have been laid in, giving the appearance of fringe but actually being a solid material. These rugs are supposed to be folded in the center and laid over the saddle as a pad. Now-a-days most of them are sold in town for small scatter rugs. All the houses in Temuco that I went into had many of them around, beside the beds, at the door ways, or in front of the fire places. The white ones look like white fur rugs.

Then there are the saddle bags. They are of all colours and of many designs altho all geometric and based on diagonal lines. They, too, are woven in the over-shot warp technique and have the pattern only on the front and on poles. She explained in Indian and the car driver translated to me in Spanish that this was not permanent but just the warp. The poles would be taken out when she was thru warping. They would then be put together again further apart and warp bound taut between them thus allowing the weaver to start weaving at both ends tight to the end of the warp.



Loom weaving a saddle bag. At the foot of the loom is a "choapina" and in the distance a "rucca".

Further on, after much enquiry of the Indian auto driver, we found another woman who had not yet taken down her loom for the winter. She was working on a saddle bag. The two bag parts are woven at the ends of the loom but in the center three wefts are used. The center which will make the flaps is woven at the same time that the side strips that make the handles are woven. When the bags or bag is finished the center part is cut in two making a flap for each bag. But this gives our weaver a difficult problem. She now has cut ends to attend to. The bags are of such heavy wool that there is no turning the ends under and fringe has not occurred to her so she blanket stitches them in heavy wool with very large coarse stitches in what ever colour comes at hand. My bag is white with red purple and blue purple and the ends are finished in brilliant orange. Ill. 8.

Unfortunately I arrived in Chile in April, just as winter was setting in so that I could not get far into the country and did not try to get down to the lakes. In the summer, in December and January, the weather is warm and sunny and one can travel around by car quite far into the farming lands. Chile is so far "down" that it takes 21 days by boat to get there and Christmas vacations are so short up here that most weavers cannot get down in the warm season. But if any of you can, I can heartily urge you to go to Temuco "where you can't see any Indians" and "they don't do any weaving."

Weaving from Czechoslovakia

by ROMA CROW WALTERS

It has been my pleasure during the summer to conduct a weaving project at the International Institute in Youngstown, Ohio. The International Institute, as you may know, is that branch of the Young Women's Christian Association which is of particular service to the foreign born in helping them become assimilated in our American life. This is an industrial community which means, of course, that many nationalities are represented among its citizens. The hope which prompted the Secretary of the Institute, Miss Mable Marquis, and me to start the work was that we might develop a center of weaving from all lands—with a twofold end in view. First, we wished to bring the women from other countries into the pleasantest association we could think of with the women of America—that is, a craft program. A sane and safe way in which to develop international understanding might be thru the arts and crafts of all lands. We wanted the foreign born to realize that they had a contribution to make to the land of their adoption in addition to their efforts to become good citizens. Second, in these hard days of unemployment for so many workers, we hoped to enable the women to make the contribution of their weaving to our community, at the same time a paying contribution to themselves. The project was in no sense a money making plan for the Institute.

Large classes in English and Citizenship are conducted at the Institute for foreign born women, and it was to these

classes that the women were asked to bring any weaving they had done in their old home. An interesting collection came in—almost entirely from Czechoslovakia, which was not surprising since the Slovaks comprise the largest nationality group in Youngstown. The next step was to bring an exhibit of my own weaving to show them—and that established me at once as a friend—true of the weaving sisterhood all over the world. Then with the aid of an interpreter I explained that I wanted to bring a loom to the Institute and invited any of them who wished to use it, to come and talk over the plan. Having only one loom available, we had to choose only one weaver. It was difficult to choose. They were all so eager, their faces so interesting, their samples of weaving so lovely. It was perhaps a piece of weaving one of them had done ten years ago in her old home that helped us decide.

I thought it would be a simple matter to equip a four harness loom with a framework to hold up dowel rods—a method described by Nellie Sargent in "The Weaver". I also thought all I had to do was to thread the loom in a simple pattern so that if anything happened to our experiment I could use the warp myself. A threading for plain weaving is all that is necessary for their type of weaving. But those ideas were all wrong. My weaver insisted that the loom must have only two treadles, two harnesses and string heddles (not wire ones) with eyes an inch long. I



Luncheon Set—Red and Blue.



Sampler.

held out for an inch and a quarter or an inch and a half but I might as well not have expressed an opinion. "In the old country" string heddles an inch long were used, and they were carefully measured off on the yard stick for me. There was a good bit of discussion (thru an interpreter of course) about whether or not I could make string heddles and they seemed inclined to doubt that I could although I gave a demonstration. "In the old country" two women made them, working together, on some kind of framework and from the description they gave, the process began to assume the proportions of a major operation involving a blood transfusion and serious complications.

It suddenly occurred to me to call in my husband—HE could understand the drawings they were making and perhaps could construct the contraption for them. Well, he is a very patient man and interested in any weaving project I take up, but when the framework the Slovak women were trying to draw began to look about as intricate as a Korean chest, he asserted himself as American males do sometimes, and drew for them the simple contrivance for making heddles, pictured in Mr. Worst's book, "Foot Power Loom Weaving", on page 25. They finally agreed to let me try it, although from the shaking of heads and the conversation in Slavish which was not translated to me, I sensed that the American woman was being humored and that they were skeptical about the outcome. Making string heddles was not much of a job—particularly when I did it in the evening listening to the radio or better still, to the family's conversation.

I have taught a good many children to weave and really thought I knew a good bit about it, but my experience with the first of the Weavers of Other Lands has taught me many new methods—some an improvement on our own and some not. The loom was finally set up to Slovak specifications—two harnesses, two treadles, string heddles—and it was with real relief that I saw my Weaver's look of pleased surprise and heard her "Oke" that universal symbol of approval. The weaving started.

Slovak weaving, as I believe you can tell from the illustrations, has a style all its own. You may be able to tell that the patterns are developed almost entirely in groups of four threads. The background is invariably white cotton—No. 20 the women tell me, but it doesn't have the same texture as our 20 cotton. It seems not to be so tightly or evenly twisted. Their cloth is very firm and closely woven. The favorite color is a bright red—like our old turkey red. The next choice is blue—dark blue or a rather vivid blue with a good bit of green in it. When they combine colors, they use yellow and orange and some green, occasionally a magenta shade that is the only jarring note to me in any of their weaving. The women told me that the various patterns were distinctive to various provinces and they like to weave the patterns they are familiar with. This presented another problem with which everyone is familiar who has done any work with the foreign born—that is, what provincial prejudices which they have brought to America to try to break down and which to cherish. In getting our program started, it seemed to me wise to use their pride in their own province as an asset, so our first weaver is doing almost entirely the patterns native to her province or zupa—Zupa Zvolenska No. 18, Czechoslovakia, Village Pohorella.

At the Institute we are trying to adapt their technique to our color scheme in order to produce an article that will be

saleable and usable in the American home but which will retain its Old World individuality and the character of its native land. The warp used in our pieces has been Bernat's Egyptian Cotton 24-3 and the pattern thread perle 5. We set the first yardage 24 to the inch but our next threading will be 30 in order to cut down on the size of the over-shot since they must use four threads as their scale in working out the patterns.

Illustration No. 1 shows a 12 x 18 inch place mat from one of the luncheon sets. The border on either side is done in Bernat's perle 5 red No. 1046. The center design is in perle 5 blue 1042. This is a striking and beautiful luncheon set. This is a Zupa Zvolenska No. 18 pattern. We have made it in several color combinations. It was copied from a very lovely bed spread, made by the Weaver in her old home, which was done in very fine bright red thread. We made a table runner in dark red with fringed ends which lent itself readily to an American interior with mahogany and oriental rugs.

Illustration No. 2 was a sampler which I had made for myself in order to help me plan work for prospective customers both as to pattern and price, for the Weaver kept close watch on her weaving time for each pattern. This piece is done in clear peasant colors—red, yellow, blue and green.

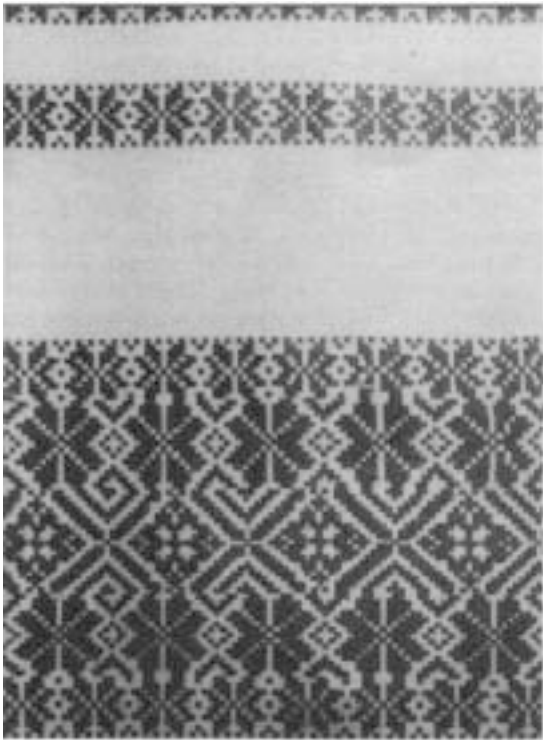
Illustration No. 3 is an unusual piece of older Czechoslovakian weaving. The background is very firm and close, the color a bright green blue, and it is made for a man's shirt. The wide stripe is for the front of the shirt and the narrower stripes for the collar and cuffs. This was not done at the Institute but is an example of the fine weaving which the secretary, Miss Marquis, has in her own collection which we may copy if we wish.

Illustration No. 4 is an old piece of weaving. It is a table cover about a yard wide with several stripes of the pattern running thru its length. The fringe is beautifully tied.

Using four warp threads as the unit, these patterns could be copied by any American weaver with patience, time and squared paper.

Although the method described by Mrs. Sargent in her article mentioned before is much simpler than that employed by the Slovak weavers at the Institute, I will describe their way of doing the work. After the long eyed heddles are made, the only equipment required are some leash sticks (we use yard sticks), the number depending on the changes in the pattern, and a very thin smooth board two and a half inches high. We use a piece of composition wall board—the thinnest we could get.

Take the simple pattern marked off on squared paper. It is pictured also in the sampler. With a bodkin and a very heavy thread, skip the first four threads, pick up the next four, skip the next four, pick up the next four and so on across the material. (If your warp has the customary leash sticks already in it, you would of course not have to count off these four threads since they would already be separated on the leash sticks.) Lift up the threads counted off on the bodkin and thread, and back of the harnesses, put a leash stick thru them and slip it to the back of the loom. (The long eyed heddles make it possible to raise this pattern back of the harnesses from the front of the loom.) Next with the bodkin and heavy thread pick up the first four, skip the next eight, pick up the next four, skip the next eight, pick up the next twelve and so on. Holding up the



Czechoslovakian Shirt Front.



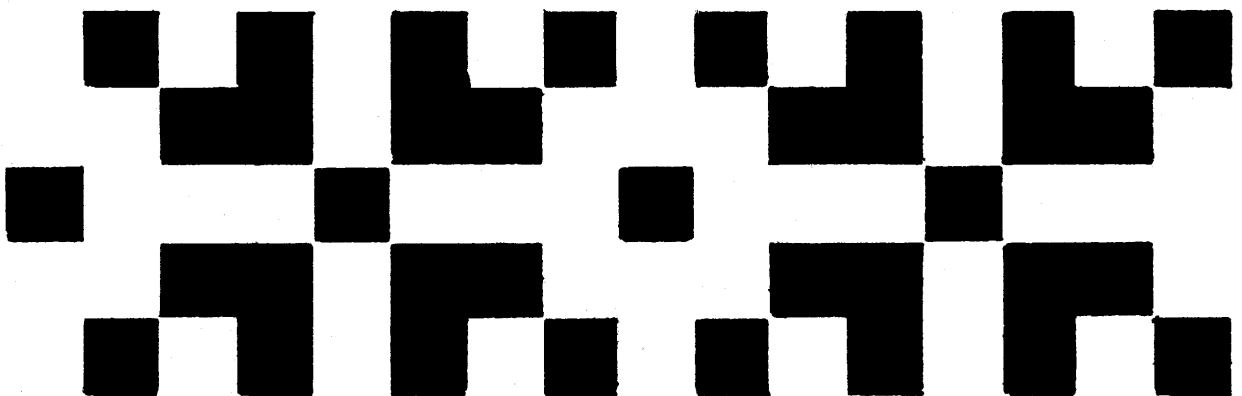
Table Cover.

pattern thread and bodkin put a leash stick thru in the same manner and push to back of loom. For the center of the pattern, pick up twelve threads and skip four all across the material. This pattern requires only three leash sticks. Heavy threads might be used instead.

Now for the weaving. Weave the amount of plain weaving required. Lift the first leash stick and put the two and a half inch pattern board thru the ways and push it upright very close to the back of the heddles. It stays in place and serves to hold up the warp in front of the harnesses so you can throw across the shuttle of colored pattern thread. Beat, treadle for tabby thread. Throw pattern thread and so on. Four pattern threads were used in the sampler. For the second section in picture, the same procedure is followed, putting the pattern board thru the warp held up by the second leash stick and so on. Although the weaving takes much more arm movement than ours does (moving the pattern board up and down) it is done remarkably fast.

We hope the program at the Institute will grow. Its growth will depend on our efforts and the interest in the community. Certainly, the Institute and the weavers will do their part. After every Slovak woman who wishes to weave has had a chance, we hope other nationalities will become interested. There are many to draw from in Youngstown.

I learned something else which I am sure no school of weaving has ever taught. I learned to weave bare foot! I noticed when I went out of the room, my Slovak friend slipped off her shoes but hastily put them on again when I came in—until I urged her not to. As soon as I got home I tried it myself! (What good weaver ever failed to try something new?) It was fun. Then when the weather got hotter and hotter this summer I dispensed with stockings. As a result the muscles of my feet have gone thru a set of exercises which might have come from the bag of tricks of an orthopedist!



Questions and Answers

by MARY M. ATWATER

A great many questions relating to the sale of hand-woven fabrics come to me every week: "What are the chances of making my weaving a source of profit?" "If I go in for the making of coverlets, like the ancient ones, how and where can I sell them? And what price do they sell for?" "I like to weave, and people admire my work. It occurs to me I might sell my things and so add to the family income. Will you please tell me where and how to sell my weaving?" "I want to weave as a business — what kind of thing sells best and returns the best profit?"

It is difficult to answer these questions because the craft is not at present organized on a commercial basis and there are no large, well-established, sales-agencies for the handling of hand-woven fabrics. It is true that many people are making a profitable occupation of weaving, either in part time or as a full-time business, but these weavers have built up their own sales outlets. At present this appears to be the only practical way to attack the problem.

It is, in my opinion, absolutely essential in weaving for profit to select some special "line" and to develop that exclusively. No one can hope to make a profit by weaving this and that as fancy dictates — a rug this week, two or three little bags next week, a few linen pieces, — no two the same size or shape — in the week after that — trusting to luck to find a buyer. Pin-money, perhaps, by selling to one's neighbors and friends, but not a business.

To make a profit both the production and sales must be carefully and fully organized, as for any other type of business. To sell through an agent or through shops it is necessary to be able to promise supply in quantity of a standardized article. Baby blankets, for instance, sell well and are easy to make. But no shop or agent could sell at a profit three or four baby blankets, all of different kinds at different prices. It would be necessary — in planning to make a business of baby blankets — to experiment with various sizes, materials and patterns, till a baby blanket is developed that is attractive enough to find ready sale, that can be made rapidly, standardized as to size, material and selling price, though differing as much as possible in the manner of the weaving in order to give the "uniqueness" (if I may be permitted to coin a word) that appeals to many people. It is necessary to be able to assure a large enough supply of the article to interest an agent, — who, as a rule, talks by the gross, not by the dozen. For this it may be necessary to enlist other weavers, as one weaver working on

one loom cannot produce a commercial quantity. The buying of the material must be gone into very carefully to insure getting the desired yarns at the lowest possible price. It is true that weaving the same thing day after day and week after week and year after year is not as interesting as weaving a variety of articles, but this is business, this is a job, not a handicraft pursued for pleasure.

The line to select depends a great deal on the sales-possibilities in the field and also on the capacity of the weaver. Hand-woven neckties are being made and sold at a profit in some places; hand-woven tweeds and dress fabrics are a profitable line almost anywhere, linens also sell well — especially when some special style of, say, towels or table pieces is developed.

The line that probably is least likely to show a profit is the weaving of bags, but for some reason many weavers select bags as a line. It is true that some have succeeded in this line, but it is particularly difficult.

Coverlets of the Colonial type are being made in quantity in the South, by weavers who are content with a very small return for their labor, so this line is not advised.

In my opinion, the best opportunity for real profit is in the making of high grade drapery and upholstery fabrics. But this requires a high degree of skill in the weaver, and suitable sales outlets through decorating firms and manufacturers of high grade furniture. It is not a line for a beginner.

A weaver is rarely a good salesman, so that it is advisable to sell through agents or shops unless one has a promising local field — such as a tourist trade. But selling "on consignment" is not advisable. This method of merchandising rarely returns a profit either to the weaver or the agent.

Yes, it is possible to make a profitable business of hand weaving. Many people are doing it. But only by working out the problems of supply, production and sales in a business-like way.

Suppose you wished to make your cook-stove return a profit: you would not bake a few pies today, a cake tomorrow, a batch of cookies the next, or perhaps roast a chicken, and expect people to come with money in their hands to give you a profit. Make some one thing that people will want so much that they are willing to part with their money to obtain; make plenty of it; arrange to sell it in a business-like way. That seems to be the secret of success in such a project.

MARY M. ATWATER

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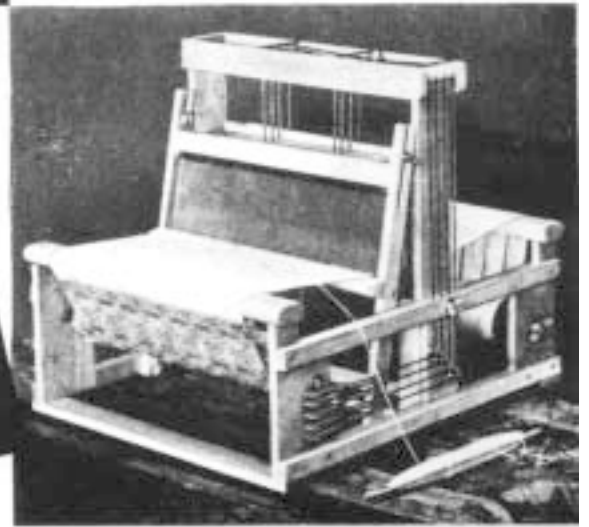
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