

## HUCK LACE WEAVE

Huck Lace is a very practical and beautiful lace weave but little is written about multiple harness huck lace. If the standardized threading that Mary Snyder suggests in "Lace & Lacey Weaves" is used the threading can be expanded to as many harnesses as desired.

### THREADING CHARACTERISTICS

1. There are two sets of harnesses used..  
 Ground harnesses ( Harnesses 1 & 2)  
 Pattern harnesses (Harnesses 3+).
2. If even numbered pattern harnesses are paired with ground harness 1 and odd numbered pattern harnesses are paired with ground harness 2 then tabby can be woven easily.
3. There are an odd number of warp threads in each block.. i.e., 3,5,7.
4. The ground harness is alternated with the pattern harness, starting and ending with a ground harness warp thread.
5. No block can be repeated unless an incidental thread is used between blocks, the opposite ground harness not used in the block.
6. Blocks do not have to be used in order of harnesses but care must be taken that an incidental thread is added if needed.
7. Sett should be for a loose tabby.

### TIE-UP & TREADLING

1. The treadling of a huck lace follows the threading order, i.e., if 5 threads are used in a block then there will be five shots to complete the block.
  2. A tabby shot starts the sequence and every other shot is the same tabby shot, ending with a tabby. (For a block with 5 threads, the first, third and fifth shots would be tabby.)
  3. If the tabby shot raises odd numbered harnesses then the pattern shot must include harness 2; and vice versa.
  4. The variation in the type of block produced is the result of which harnesses are raised for the pattern block. Usually even numbered pattern harnesses are used with harness 1 and vice versa.
  5. After weaving one block ( For a block of 5 threads - 5 shots) the next block starts with the alternate tabby so that there are two rows of tabby between blocks to hold the lace in place.
  6. There are other variations in treadling. For example, odd numbered pattern harnesses can be raised with harness 2 for the pattern shots.
- The changes that result with the various combinations of harnesses in the pattern weft shots is summarized in a table...

HUCK LACE PATTERN BLOCK TYPES				
PATTERN HARNESSSES	RAISE HARNESS 1		RAISE HARNESS 2	
	Pattern Harness:		Pattern Harness:	
	Not Raised	Raised	Not. Raised	Raised
ODD NUMBER	Weft Lace Block	Tabby Block	Tabby Block	Warp Lace Block
EVEN NUMBER	Tabby Block	Warp Lace Block	Weft Lace Block	Tabby Block

WARP YARNS LIGHT COLOR ○ DARK COLOR ◊

WEFT YARNS

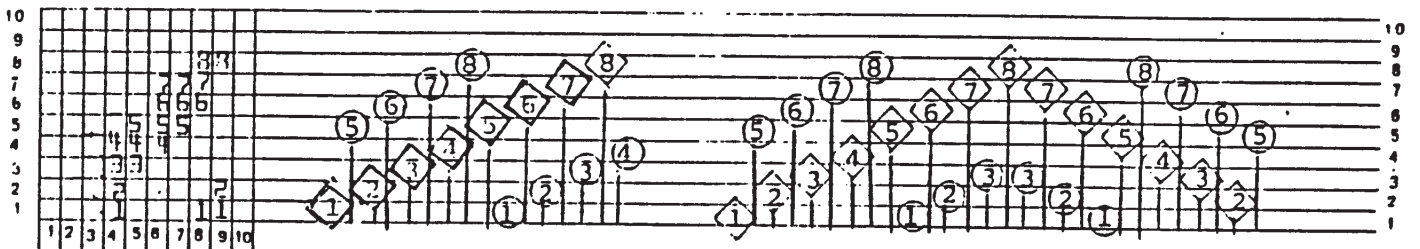
SETT 24 per inch

Note: Half sample is straight twill corkscrew threading; second half, point twill corkscrew threading.

Treading numbers indicate order of treading.

TIE UP

THREADING DRAFT



T-RE Repeat D L I N G

TIE UP

Repeat ORDER

TIE UP

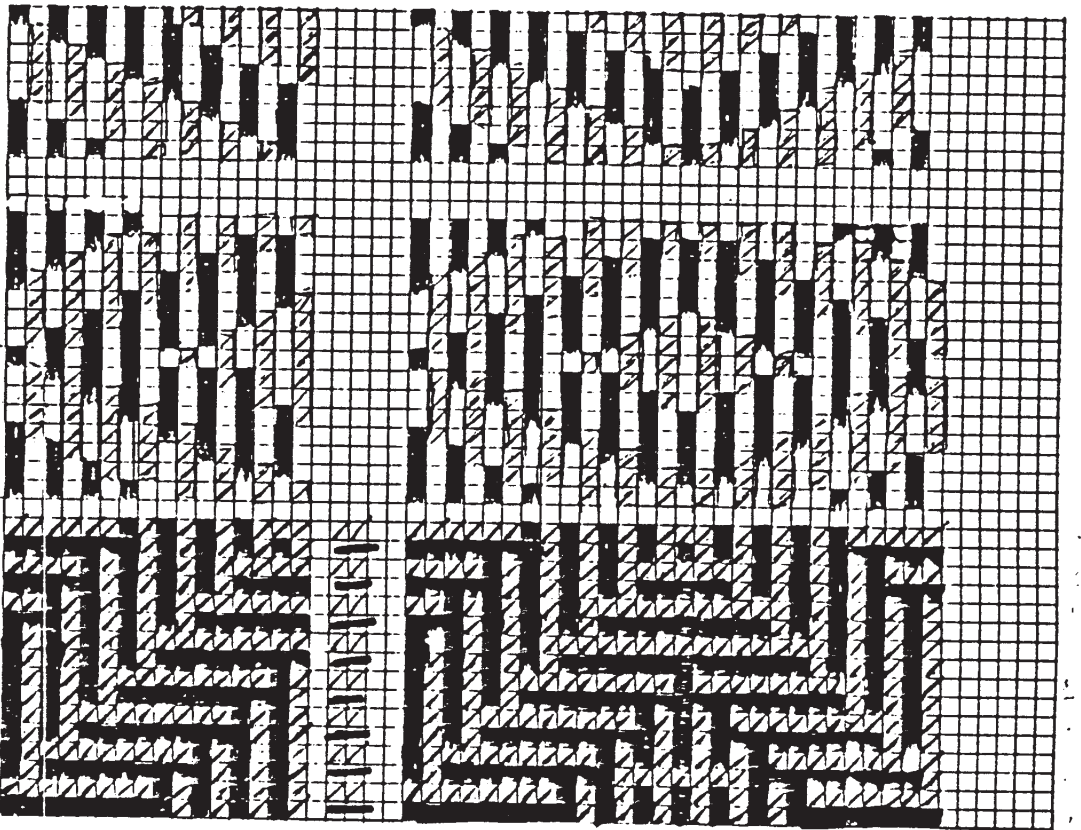
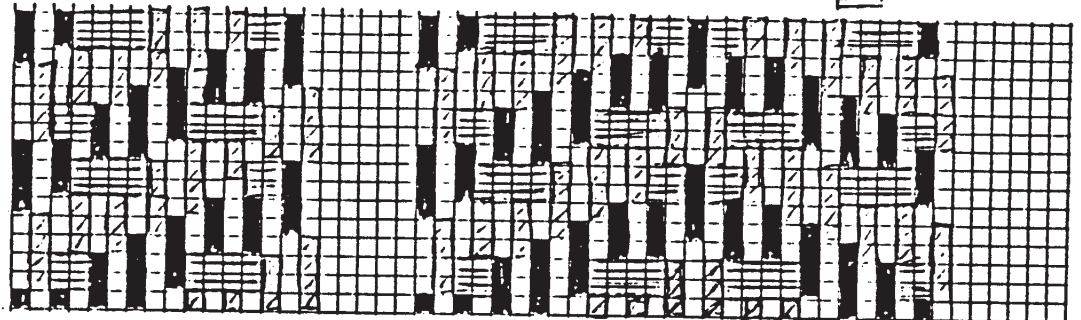
Shadow weave.

Dark \* - (1 3 5 7) (2 4 6 8) Lt /  
 Light \* / (2 4 6 8) (1 3 5 7) Dk \*

Repeat 2x  
and reverse

Corkscrew Twill with Weft Fill Blocks

Legend: Weft Block



\* Light and dark thread, same as warp.

# MULTIPLE HARNESS WEAVING DRAFT

WEAVER \_\_\_\_\_

TECHNIQUE 7 Harness Curved Corkscrew

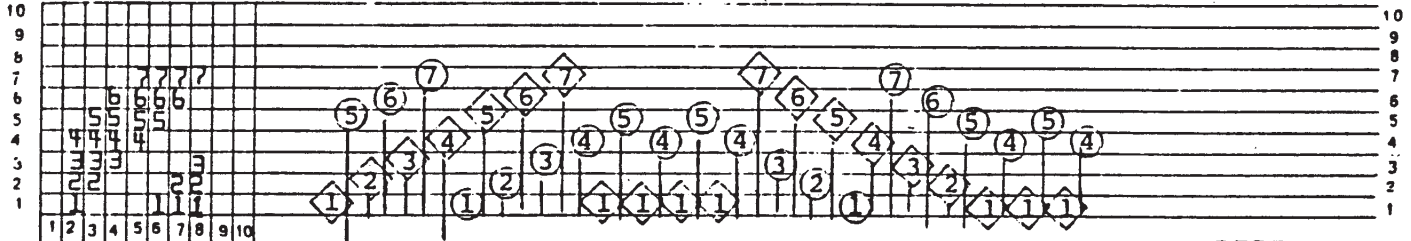
WARP YARNS Color 1-   
Color 2- 

WEFT YARNS Twill \_\_\_\_\_ SETT \_\_\_\_\_ per inch

Note: Treadingling numbers indicate treadingling order.

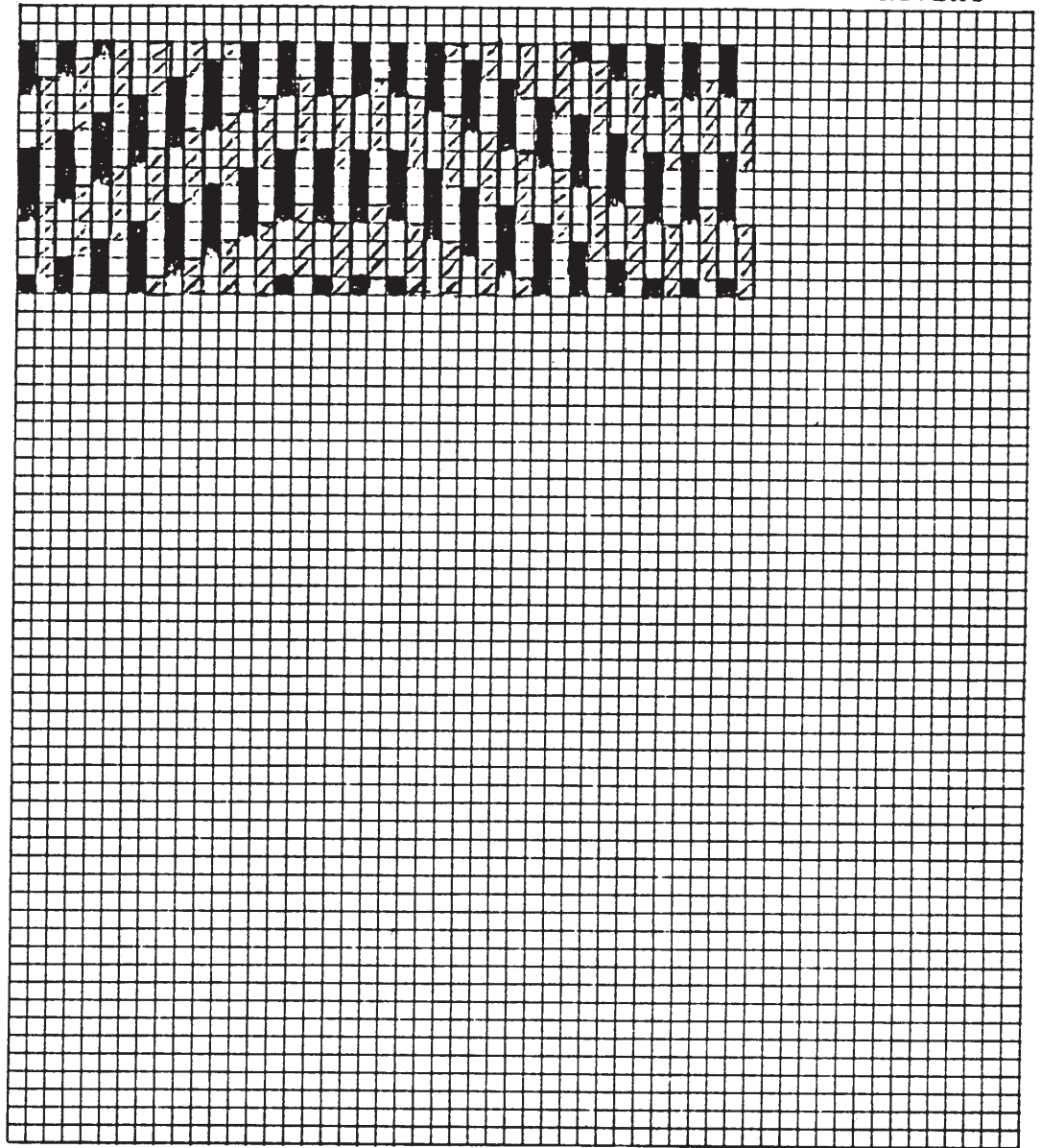
TIE UP

THREADING



REPEAT

1 2 3 4 5 6 7  
repeat



TREADING ORDER





# MULTIPLE HARNESS WEAVING DRAFT

WEAVER

TECHNIQUE

Mix & Match - Twill & Satin O

WARP YARNS

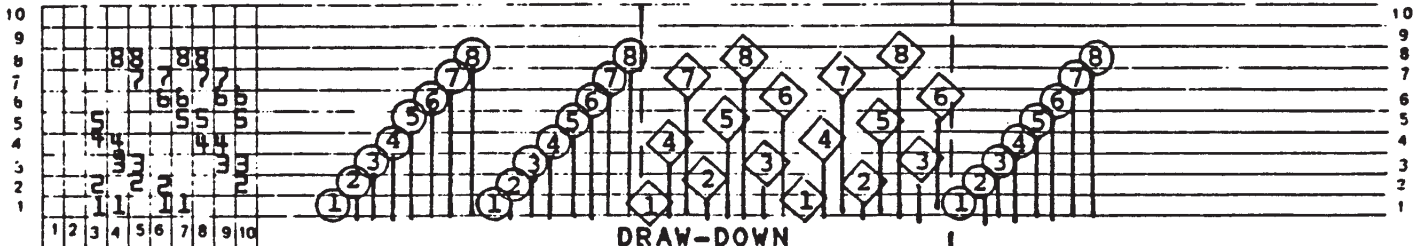
WEFT YARNS

SETT 24-30 per inch

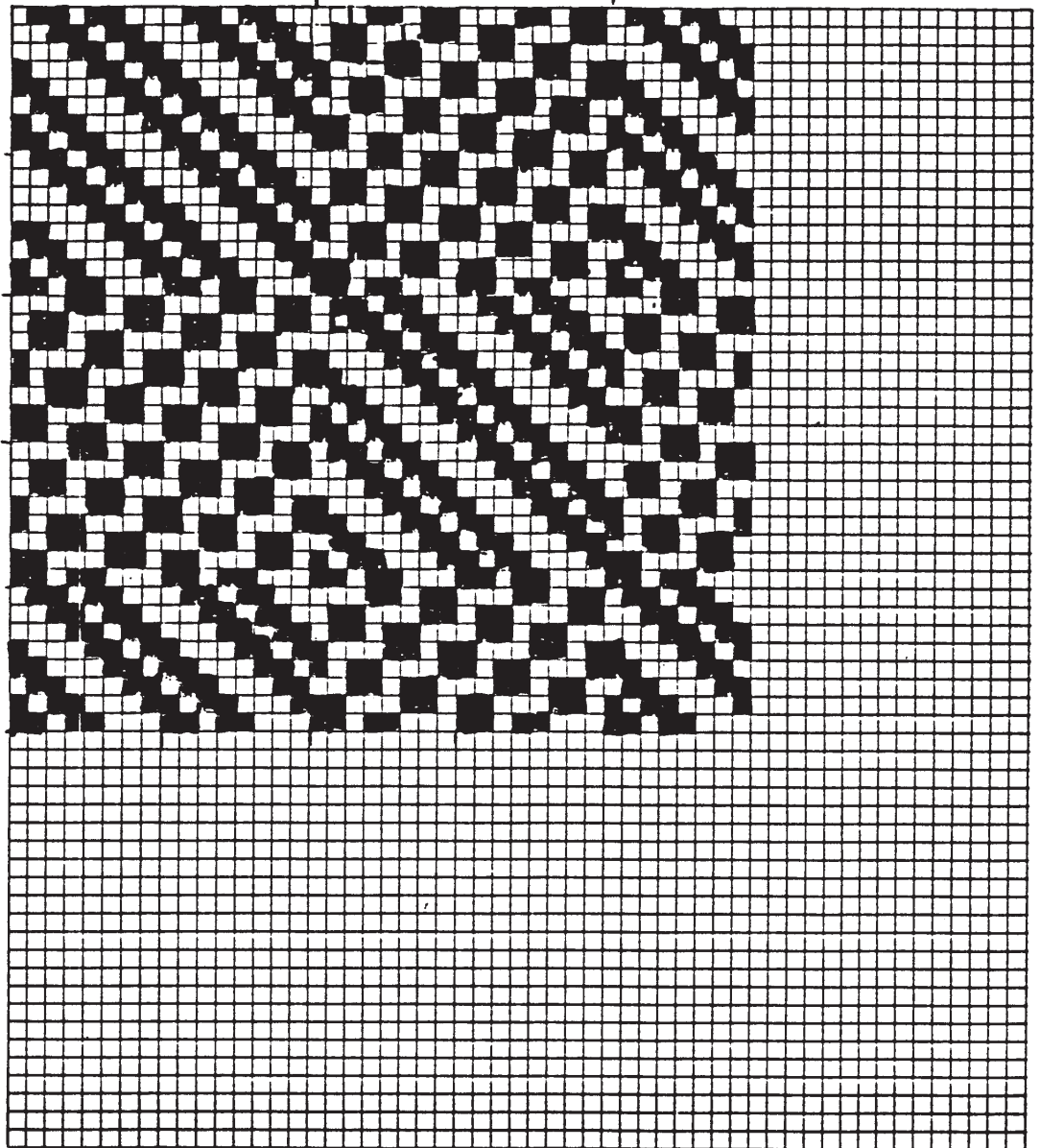
Note: Use a fine wool or cotton, make each block about 1 1/2 " wide and sample approx. 6 " wide. Weft yarn should be different color, same weight as warp yarns.

TIE-UP

THREADING DRAFT



DRAW-DOWN



repeat to square block

Note: Treading numbers indicate the order of treading.  
 LAUGHLIN ENTERPRISES

TREADING ORDER

MULTIPLE HARNESS WEAVING DRAFT

WEAVER

TECHNIQUE

Mix & Match -  
Through treading

WARP YARNS

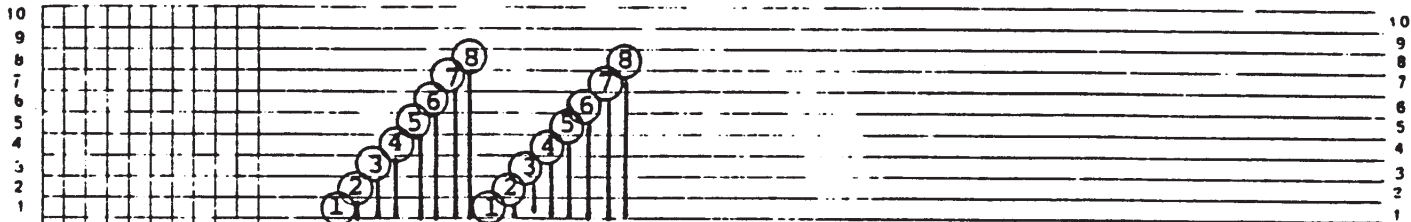
WEFT YARNS

SETT for twill

NOTE; This threading should be on a table loom so that experiments with various treadlings can be made easily.

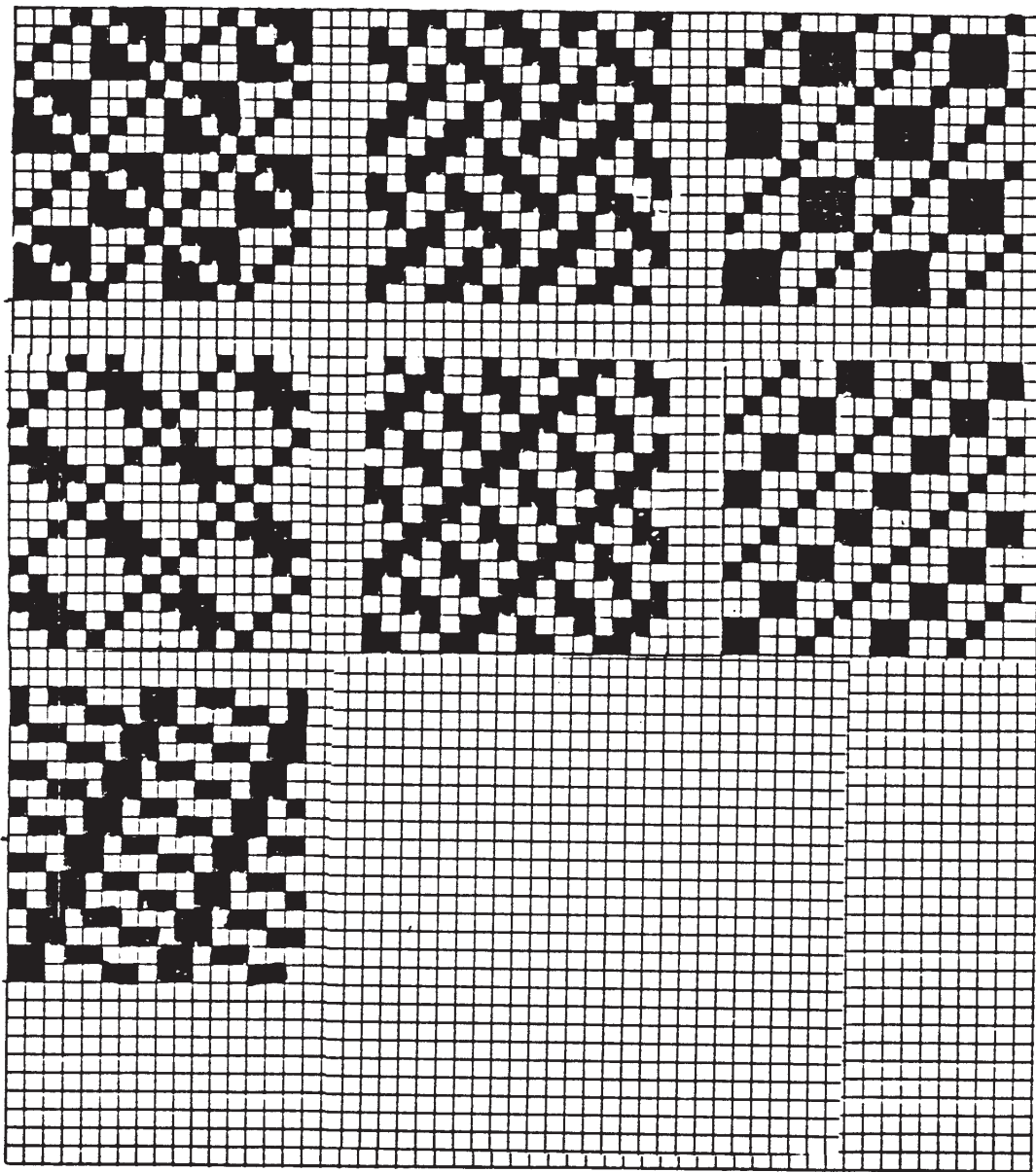
TIE-UP

THREADING DRAFT



DRAW-DOWN

T  
R  
E  
A  
D  
L  
I  
N  
G  
  
O  
R  
D  
E  
R



# MULTIPLE HARNESS WEAVING DRAFT

WEAVER

MIX & MATCH THRU TREADING  
TECHNIQUE 8 Harness straight twill

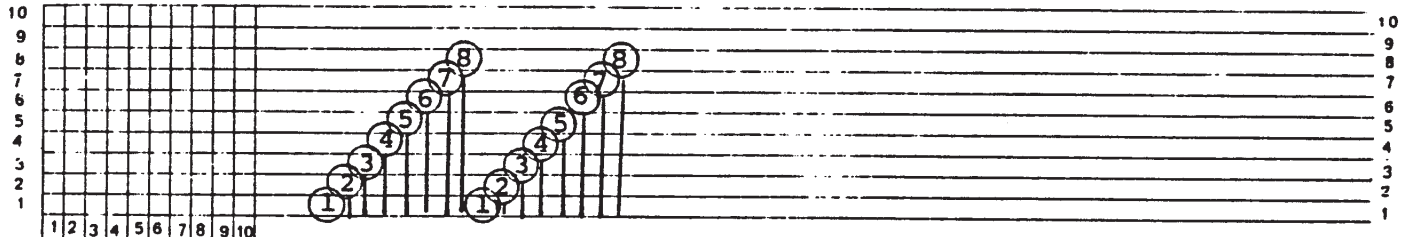
WARP YARNS

WEFT YARNS

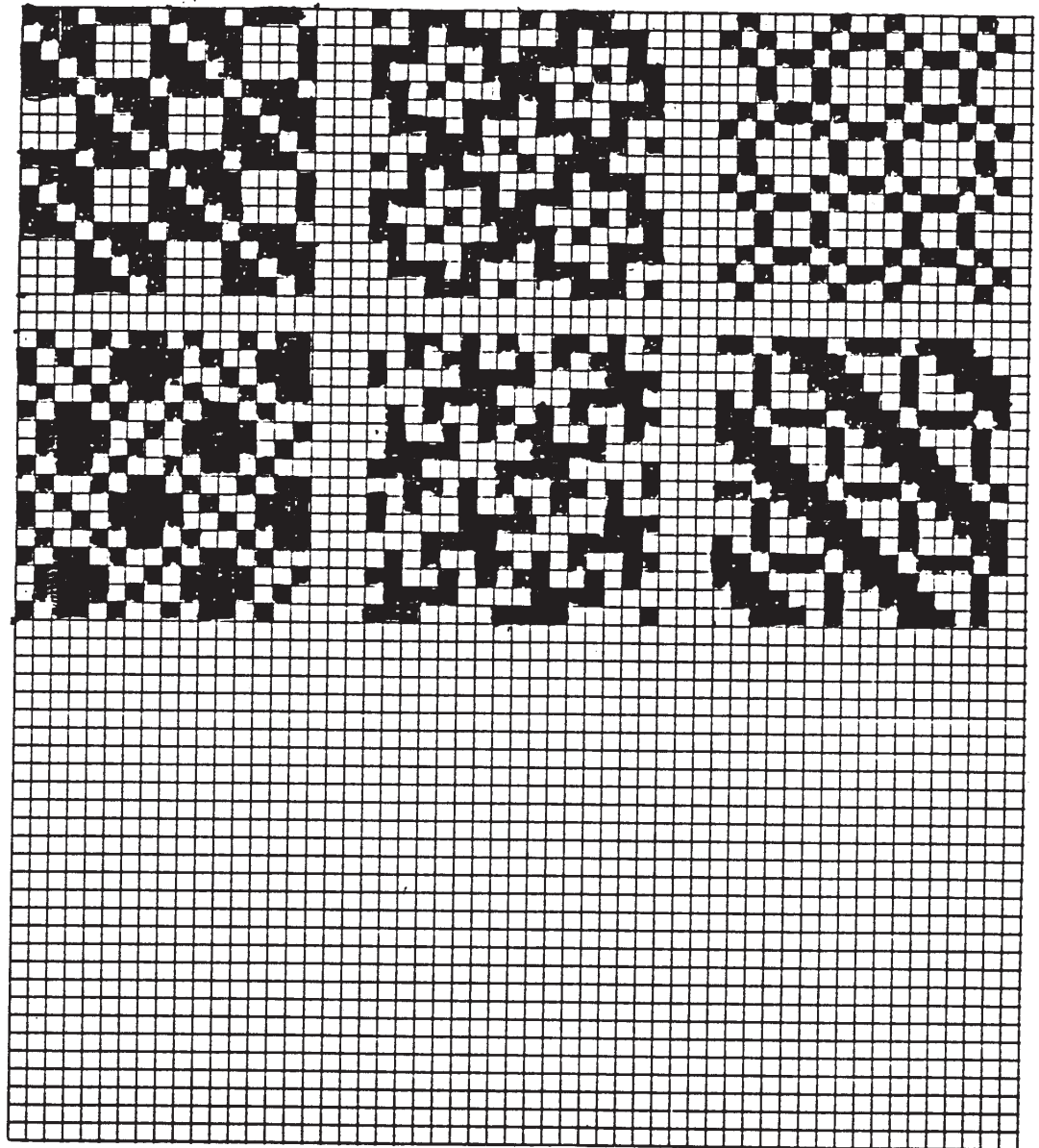
SETT

TIE UP

THREADING DRAFT



TREADING OR LER



# MULTIPLE HARNESS WEAVING DRAFT

Mix & Match - Straight Twill  
and Intermittent Twill

**WEAVER**

**TECHNIQUE**

**WARP YARNS**

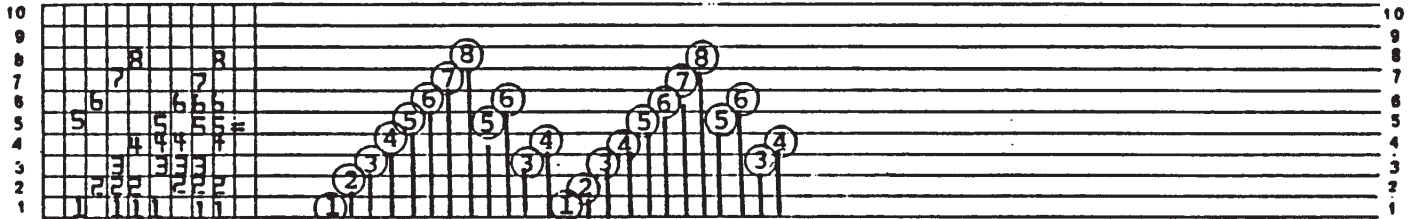
**WEFT YARNS**

**SETT**

Note: Treading numbers indicate order of treading.

**TIE UP**

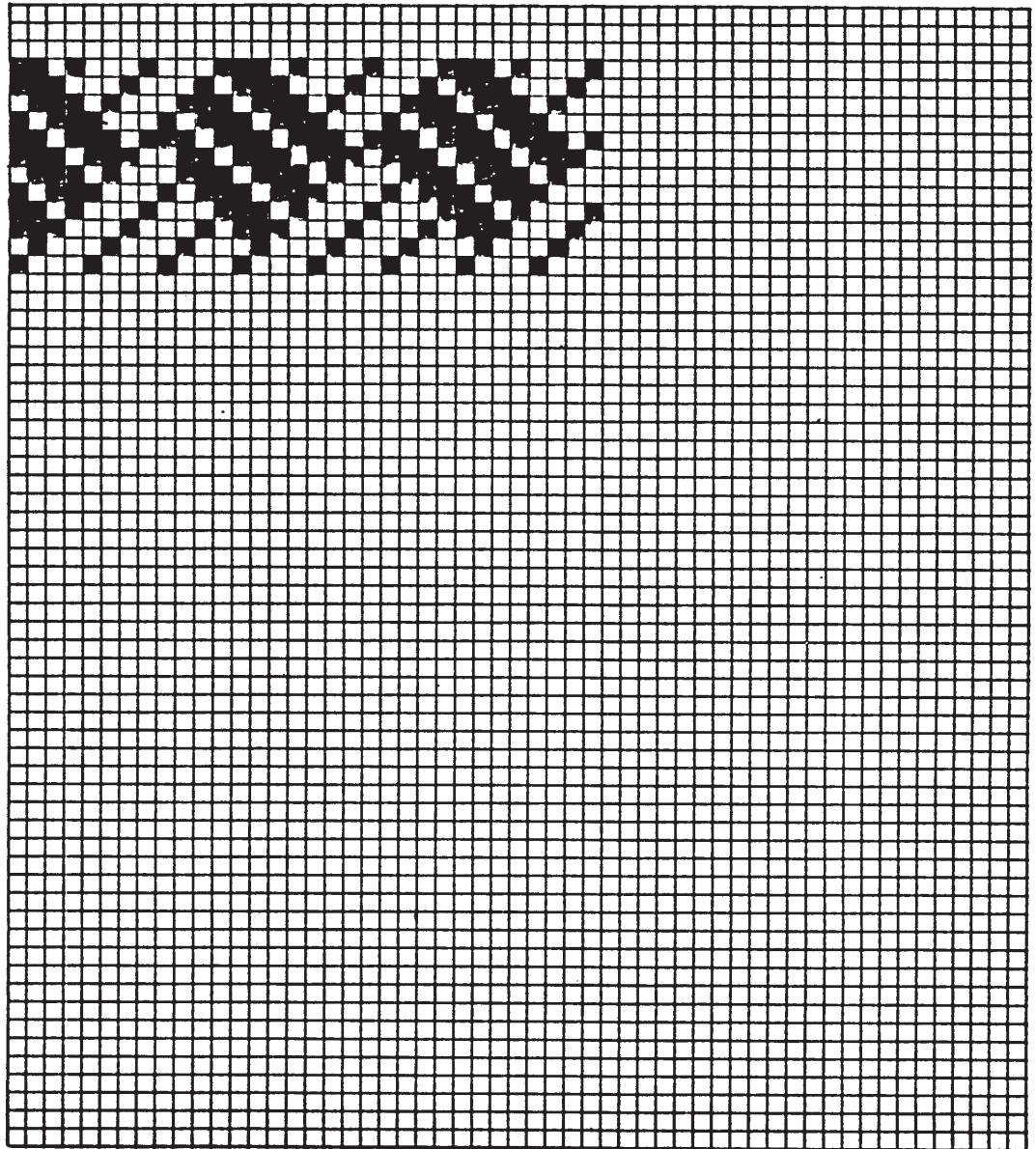
**THREADING DRAFT**



Repeat

T  
R  
E  
A  
D  
I  
N  
G  
  
O  
R  
D  
E  
R

1 2 3 4 5 6 7 8  
3 4 1 2  
Repeat





# MULTIPLE HARNESS WEAVING DRAFT

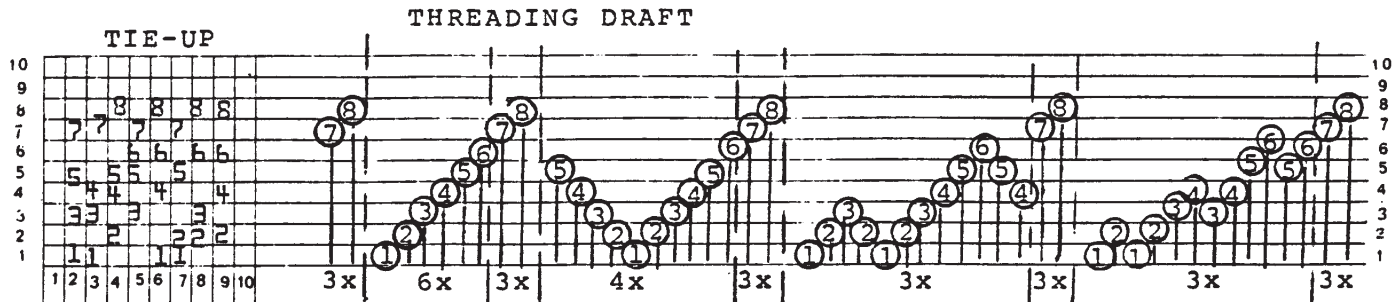
WEAVER

TECHNIQUE *Twill Sampler*

WARP YARNS

WEFT YARNS

SETT



T  
R  
E  
A  
D  
D  
I  
N  
G  
  
O  
R  
D  
E  
R

Tabby:

1                      2                      - x

Patterns:

123456                      -x

123456

4321

repeat

123

54

12345

876

repeat

12

3456

7812

34

repeat

Note: Put a tabby repeat (3x) between each Pattern .

# MULTIPLE HARNESS WEAVING DRAFT

**WEAVER**

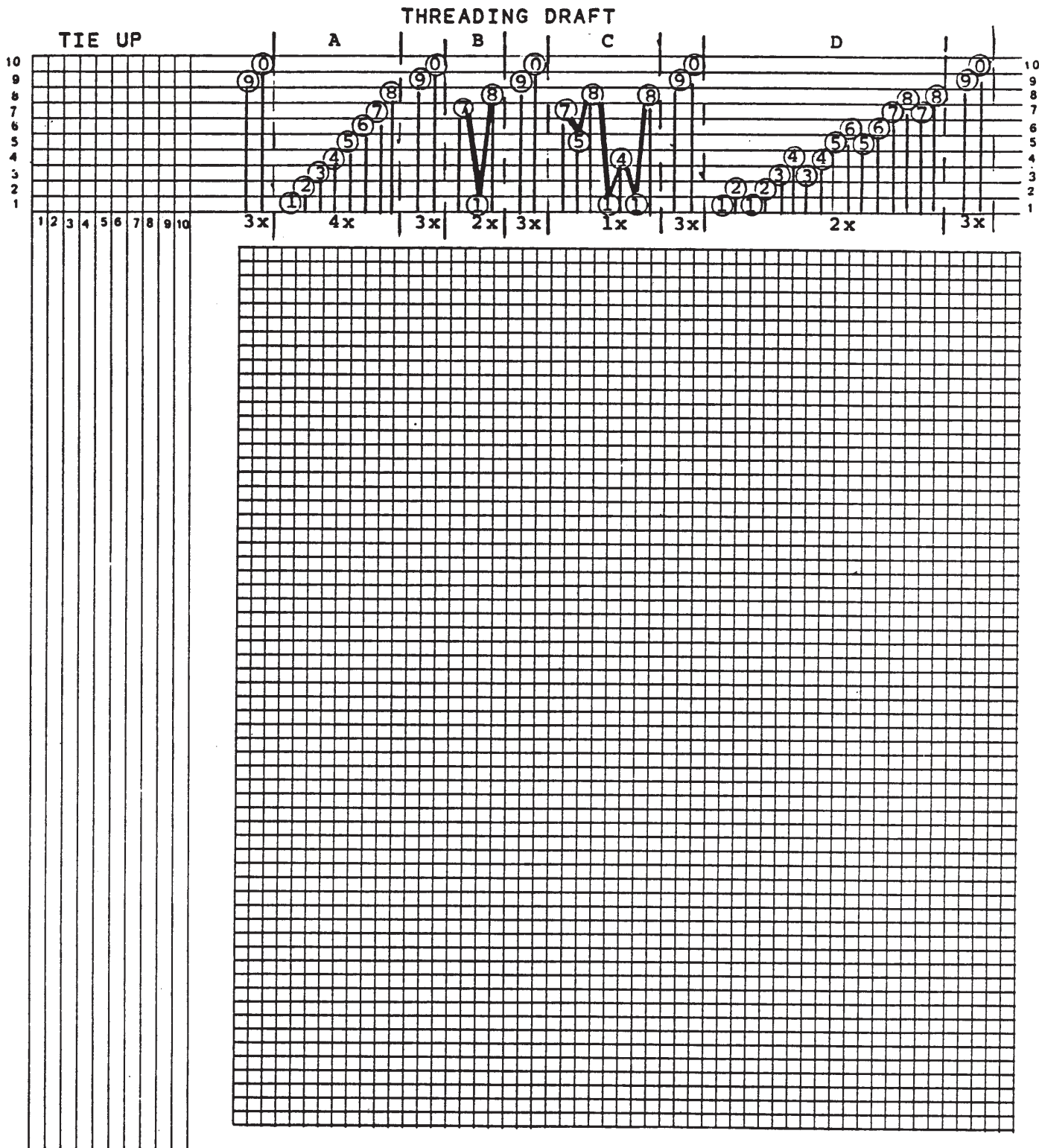
**TECHNIQUE** Twill Sampler

**WARP YARNS**

**WEFT YARNS**

**SETT** 16 per inch

Note: Treading numbers indicate order of treading.



A two block pattern is the simplest and, like a two harness loom which produces a simple tabby weave, it makes the simplest of block designs. Before we go further a definition of a block seems in order. In a pattern weave (as distinct from a twill) it is the interplay of *groups of threads* that make a design. This can be called a *block*. This block consists of groups of *both warp and weft threads* woven together to form a distinctive pattern. In a two block pattern when one block is woven, the second block obviously is not being woven in the pattern weave but in what might be called the background weave (there are a few exceptions but don't worry now). To a weaver, all this must be very obvious but now comes the first change. In designing by blocks you do not need to show the details of the threading and treading in a block (forget the pattern) and deal only with blocks. This frees you from considering minor details and allows one to concentrate on design.

**BLOCKS**

First we will need a type of shorthand similar to what we use in showing our draw-downs when we are working out a pattern. This time *the block will be designated by filling in the square* instead of filling in the square to show that the harness is being raised. When we fill in a square we are indicating that the pattern is to be woven there — whether we are weaving M's & O's, Summer & Winter, Overshot or whatever pattern weave.

My preference in drawing out a design is to start in the lower left hand corner and work up and across. Why is this done? Well, we read from left to right and as you sit at your loom the blocks will fall in that order as you weave. Why bottom to top? We don't read that way but when you start to weave a pattern if you started at the top it would reverse in the weaving process and would appear at the bottom, or closest to you. However, if you start at the bottom of the draw down to determine your treading patterns, your weave will develop just as you see it in the draw-down and you will not have to translate the picture in any way; however, each weaver can do what is most familiar to them. When a square is "drawn-in" it will be called a block with a letter notation following, i.e. Block A, Block B, etc. Breta Frey suggests using the alphabet and capital letters in order not to confuse numbers with harness numbers and it seems like a good idea.

**RULES FOR DESIGN**

- RULE 1: ALL BLOCKS IN A GIVEN VERTICAL OR HORIZONTAL ROW MUST BE THE SAME WIDTH OR HEIGHT, and
- RULE 2: PATTERN BLOCKS PROGRESS IN A DIAGONAL DIRECTION.
- RULE 3: BLOCKS IN A PATTERN MAY VARY IN HEIGHT OR WIDTH OR BOTH.
- RULE 4: DIRECTION CAN BE REVERSED AT ANY POINT — OR, in this case, AT ANY BLOCK.
- RULE 5: AT THE INTERSECTION OF IDENTICALLY NAMED ROWS AND COLUMNS, A PATTERN BLOCK MUST RESULT BUT ONLY AT THESE POINTS WILL IT RESULT.

FIGURE 4.1  
TWO BLOCK DESIGN  
Same size blocks

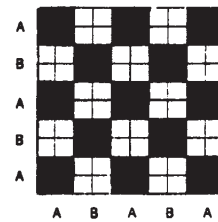


FIGURE 4.2  
TWO BLOCK DESIGN  
Different size blocks

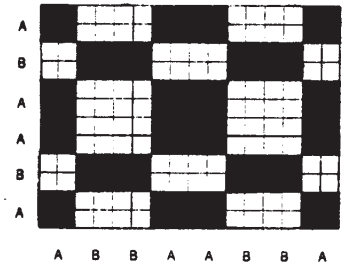
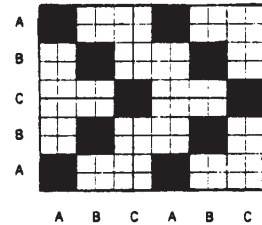


FIGURE 4.3A  
THREE BLOCK DESIGN  
Same size blocks  
Different sequence between  
threading and treading



Frey, Berta,  
*Designing and Drafting for Handweavers.*

FIGURE 4.3B  
THREE BLOCK DESIGN  
Different size blocks

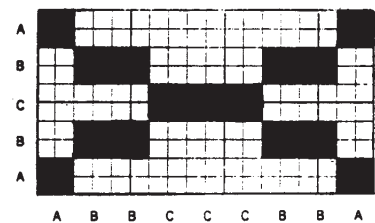
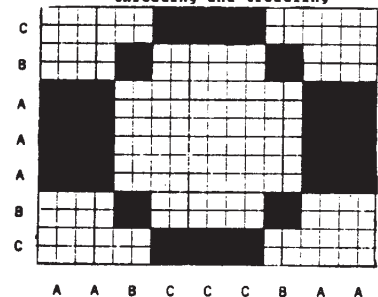


FIGURE 4.3C  
THREE BLOCK DESIGN  
Different size blocks  
Different sequence between  
threading and treading



## Exploring Multiple Harness Weaving Workshop -Huck Lace Weave - MEL.

### PATTERN DESIGN

1. Determine the number of harnesses available. There are two less blocks than harnesses used.
2. This weave is of two thread construction, one warp and one weft thread.
3. Three type of blocks result - Tabby Block, Weft Lace Block, & Warp Lace Block.
4. Blocks can be repeated in the threading as often as desired as long as an incidental thread using the other ground harness is threaded between blocks.
5. Plain weave can be placed between blocks either in the threading or the treadling.
6. The fabric is reversible with the warp lace blocks being weft lace blocks on the reverse side; the same reversal occurs for weft lace blocks.
7. The more often the warp and weft lace blocks are placed together the more open the lace effect. Use the tabby blocks to dramatize the lace effect.







# MULTIPLE HARNESS WEAVING DRAFT

**WEAVER**

**TECHNIQUE** Huck Lace

**WARP YARNS**

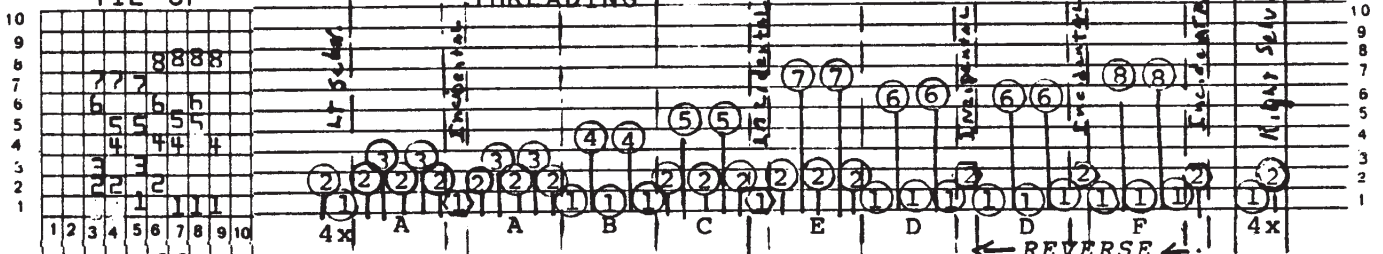
**WEFT YARNS**

**SETT**

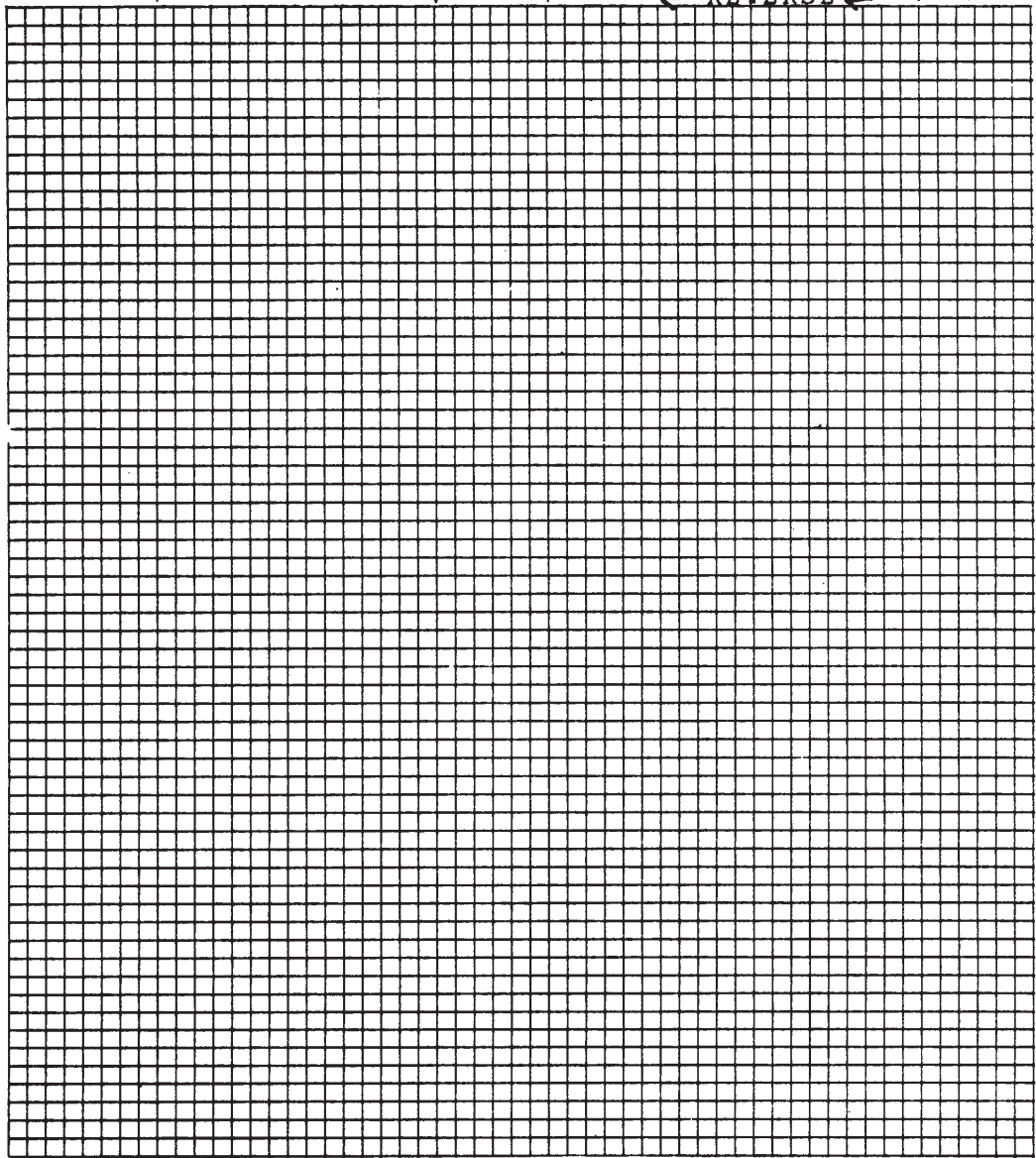
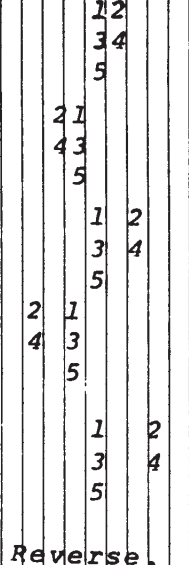
Block Threading : Selv., 2A,B,C,E,2D,2F, 2D,E,C,B,2A,Selv.

Note: Treading numbers indicate the order of treading.  
Duplicate numbers - use two feet.

TIE UP                      THREADING



T  
R  
E  
A  
D  
D  
I  
N  
G  
  
O  
R  
D  
E  
R



## SUMMER & WINTER WEAVE

One of the most versatile block weaves since most restrictions in design are eliminated by the threading draft.

### THREADING CHARACTERISTICS

1. There are four threads to a block.
2. A block can be repeated as often as needed.
3. There are two sets of harnesses used in a block. Every other thread is on a pattern harness alternating with the two ground harnesses - harnesses 1 and 2.
4. Sett is for a loose tabby.

### TIE-UP & TREADLING

1. Two type of tie-ups are needed:  
For a tabby weave  
For a pattern weave (Blocks)
2. When a block is being woven the pattern harness used in the block is NOT raised.
3. There are four weft shots in a repeat, 2 tabby shots (alternating) and 2 pattern shots. The two pattern shots use either harnesses 1 or 2 with the pattern harness not being woven.
4. Treadling orders can be varied.. see under Pattern Design.

### PATTERN DESIGN

1. Determine the number of harnesses available. There are two less blocks than harnesses used.
2. This weave is of three thread construction - one warp and two weft threads. .. one same as the warp and the other the pattern weft. usually of heavier weight.
3. If blocks are repeated the skip is no more than three warp threads.
4. Two type of blocks are woven - A pattern block and a tabby block.
5. Design by doing block draw-downs and then determine the tie-up and treadling to achieve design.
6. The order of treadling can change the block design. There are a number of variations which still weave the tradition blocks. The main difference is in the way the blocks connect. Examples below. (Note: T1=1,2;T2=3-8;P= Pattern Harness(es). Number before P indicate if harness 1 or 2 is raised with pattern harness.)

<u>Description of Block</u>	<u>Order of Treadling</u>
Tromp as Writ- Tabby Order	T1, 1P, T2, 2P, repeat.
Tromp as Writ - Tabby Order	T2, 1P, T1, 2P, repeat.
In Pairs- 8 shot rule Birdseye.	T2, 1P, T1, 2P, T2, 2P, T1, 1P repeat.
In Pairs - 8 shot rule No Birdseye	T1, 1P, T2, 2P, T1, 2P, T2, 1P repeat.

(Note: The In Pairs technique of treadling can be used on four shots and then change blocks being woven and continue in the In Pairs treadling order for the next block.)

Overshot - Tabby Order	T1, 1P, T2, 1P, repeat.
Overshot - Tabby Order	T2, 1P, T1, 1P, repeat.



# MULTIPLE HARNESS WEAVING DRAFT

**WEAVER**

**TECHNIQUE**

Summer & Winter

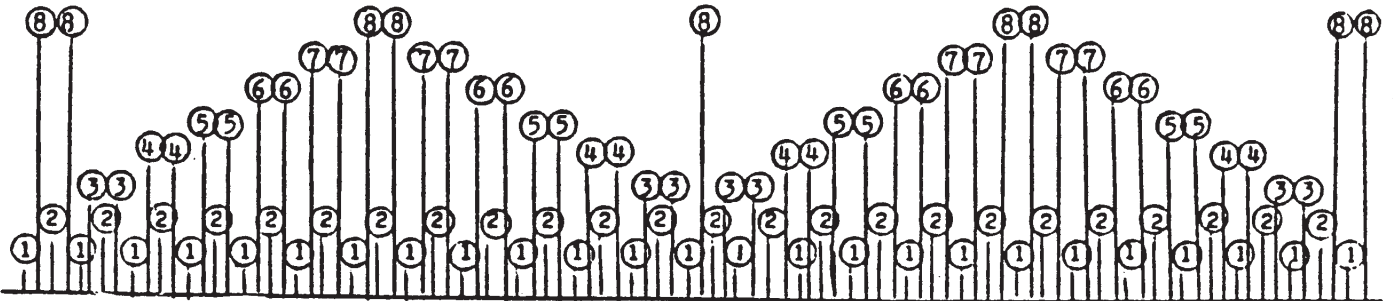
**WARP YARNS**

**WEFT YARNS**

**SETT**

Note: Treading numbers indicate order of treading. If more than one number appears, use both feet.  
 When the treadle order is an even number- use pattern weft.  
 When odd number - use ground weft - same as warp.

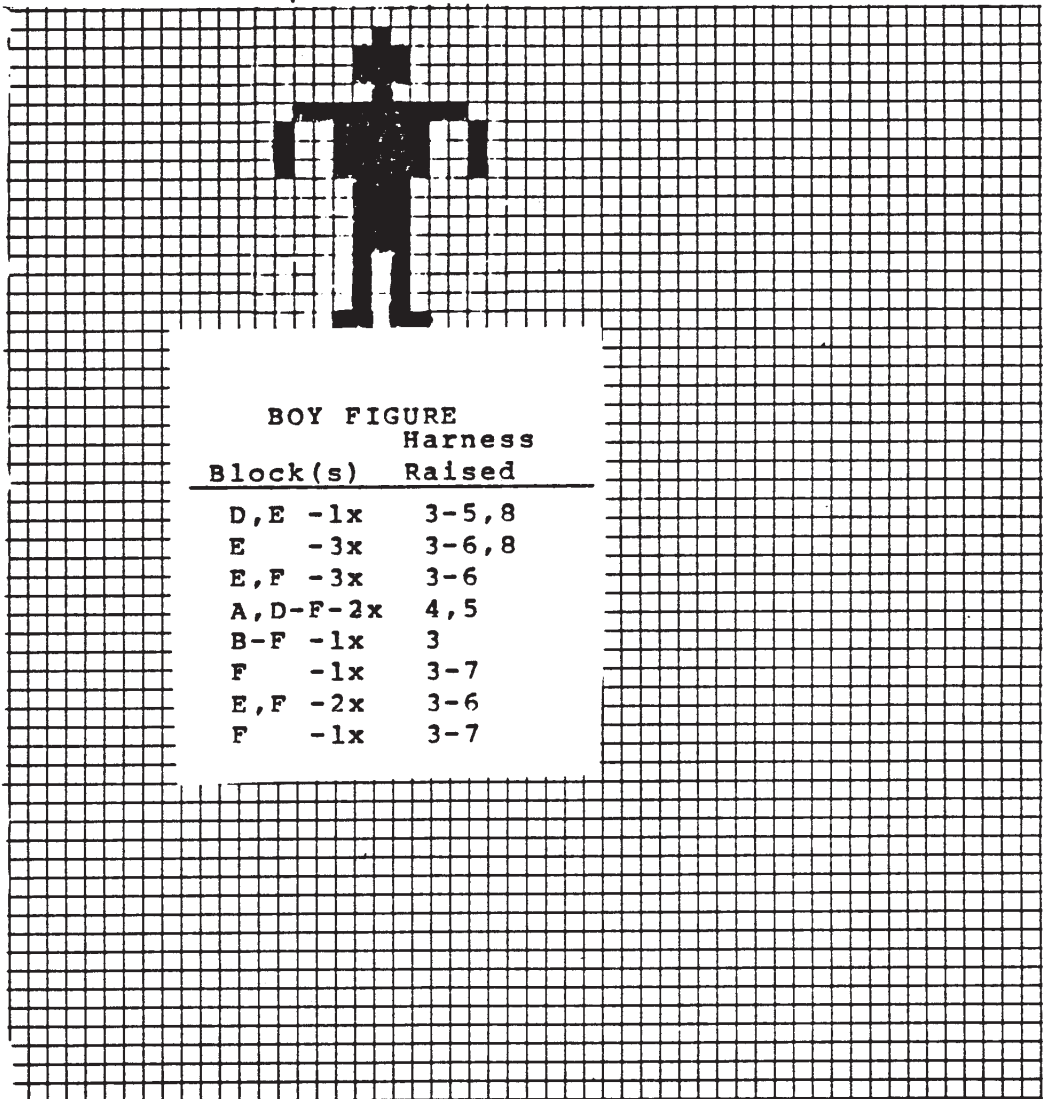
### Threading Draft - Summer and Winter Experiment



#### TIE UP

10										
9										
8		8		8						
7						7				
6	6			6		6				
5		5						5		
4	4			4		4				
3										
2		2		2						
1										
	1	1								
	1	2	3	4	5	6	7	8	9	10
	Tabby									
	Boy Pattern									
	"As drawn in"									
	2	2	2	1						1x
	4	4			3	4				
	2	2	2	2	1					3x
	4	4	4			3	4			3x
	2	2		2	1					2x
	4	4				3	4			
			2	1				2		2x
			3	4				4		
			2	1					2	1x
			3	4				4		
	2	2		2	1					2x
	4	4				3	4			
			2	1					2	1x
			3	4				4		

TREADING ORDER



BOY FIGURE	
Harness	
Block(s)	Raised
D, E	-1x 3-5, 8
E	-3x 3-6, 8
E, F	-3x 3-6
A, D-F	-2x 4, 5
B-F	-1x 3
F	-1x 3-7
E, F	-2x 3-6
F	-1x 3-7

## CRACKLE

The crackle weave threading draft is a derivative of a three harness point twill threading grouped into blocks. Experiments will be in threading and treading.

### THREADING CHARACTERISTICS

1. There are four threads to a block, threaded in a point twill order.
2. Transition between blocks needs an incidental thread.
3. Never more than three threads together on two harnesses.
4. The direction of the twill should change regularly, usually no more than four threads in order before a reverse.
5. Odd and even harnesses must alternate.
6. Sett for a tabby weave.

### TIE-UP & TREADING

1. Two type of tie-ups are needed:
  - a. For a tabby weave.
  - b. For block weaves.
2. To weave a block, on a jack loom, two adjacent harnesses will not be raised.
3. There are 4 weft shots in a repeat, 2 pattern and 2 tabby shots.
4. For an eight harness crackle there are four possible breaks in the tie-up, see Figure 1.

### PATTERN DESIGNING

1. Determine the number of harnesses available. There are as many blocks as harnesses used.
2. This weave is usually a three thread construction weave, one warp and two weft threads.
3. Blocks can be repeated as often as desired.
4. Two adjacent blocks are woven with each pattern threading.
5. There are three type of blocks that can be woven when you use more than four harnesses in the threading. - Weft pattern blocks; warp pattern blocks; and tabby weaves with the weft pattern thread.
6. The warp and weft pattern blocks are reversed on the other side of the fabric.
7. Use Figure 1 to determine design wanted and read off the treading.

Note: You may want to do your block draw-down using the following notations: Weft pattern blocks - fill in; warp pattern blocks - leave blank; tabby blocks - make a line through the block.

FIGURE 1.

#### MULTIPLE HARNESS CRACKLE EIGHT HARNESS THREADING

Treading	CRACKLE Blocks							
	A	B	C	D	E	F	G	H
3,5,6,8	P	T	T	W	W	T	T	P
1,4,6,7	P	P	T	T	W	W	T	T
2,5,7,8	T	P	P	T	T	W	W	T
1,3,6,8	T	T	P	P	T	W	W	T
1,2,4,7	W	T	T	P	P	T	T	W
2,3,5,8	W	W	T	T	P	P	T	T
1,3,4,6	T	W	W	T	T	P	P	T
2,4,5,7	T	T	W	W	T	T	P	P
3,4,6,8	P	W	W	T	T	T	T	P
1,4,5,7	P	P	W	W	T	T	T	T
2,5,6,8	T	P	P	W	W	T	T	T
1,3,6,7	T	T	P	P	W	W	T	T
2,4,7,8	T	T	T	P	P	W	W	T
1,3,5,8	T	T	T	T	P	P	W	W
1,2,4,6	W	T	T	T	T	P	P	W
2,3,5,7	W	W	T	T	T	P	P	T
3,5,7,8	P	T	T	T	W	W	P	P
1,4,6,8	P	P	T	T	T	W	W	
1,2,5,7	W	P	P	T	T	T	W	
2,3,6,8	W	W	P	P	T	T	T	
1,3,4,7	T	W	W	P	P	T	T	
2,4,5,8	T	T	W	W	P	P	T	
1,3,5,6	T	T	T	W	P	P	T	
2,4,6,7	T	T	T	T	W	P	P	
3,5,8	P	T	T	T	P	P	T	P
1,4,6	P	P	T	T	T	P	P	T
2,5,7	T	P	P	T	T	P	P	T
3,6,8	P	T	P	P	T	T	P	T
1,4,7	P	P	T	P	P	T	T	T
2,5,8	T	P	P	T	P	P	T	T
1,3,6	T	T	P	P	T	P	P	T
2,4,7	T	T	T	P	P	T	P	P

P= Weft Pattern Block being woven  
W= Warp Pattern Block being woven  
T= Tabby Weave with weft pattern thread

# MULTIPLE HARNESS WEAVING DRAFT

WEAVER

TECHNIQUE

Crackle

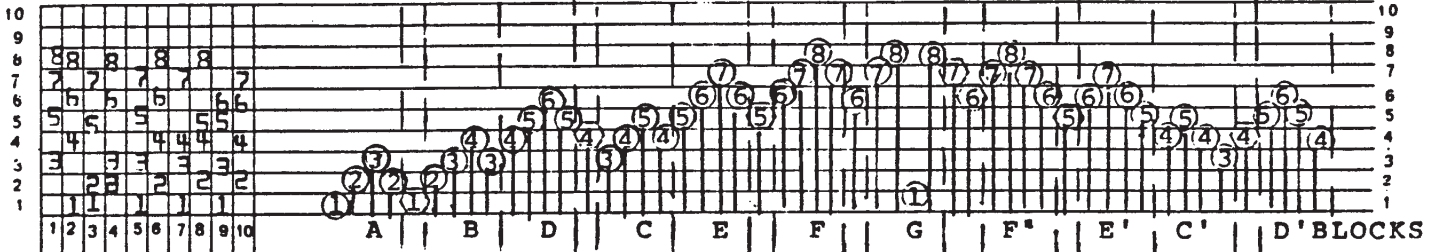
WARP YARNS

WEFT YARNS

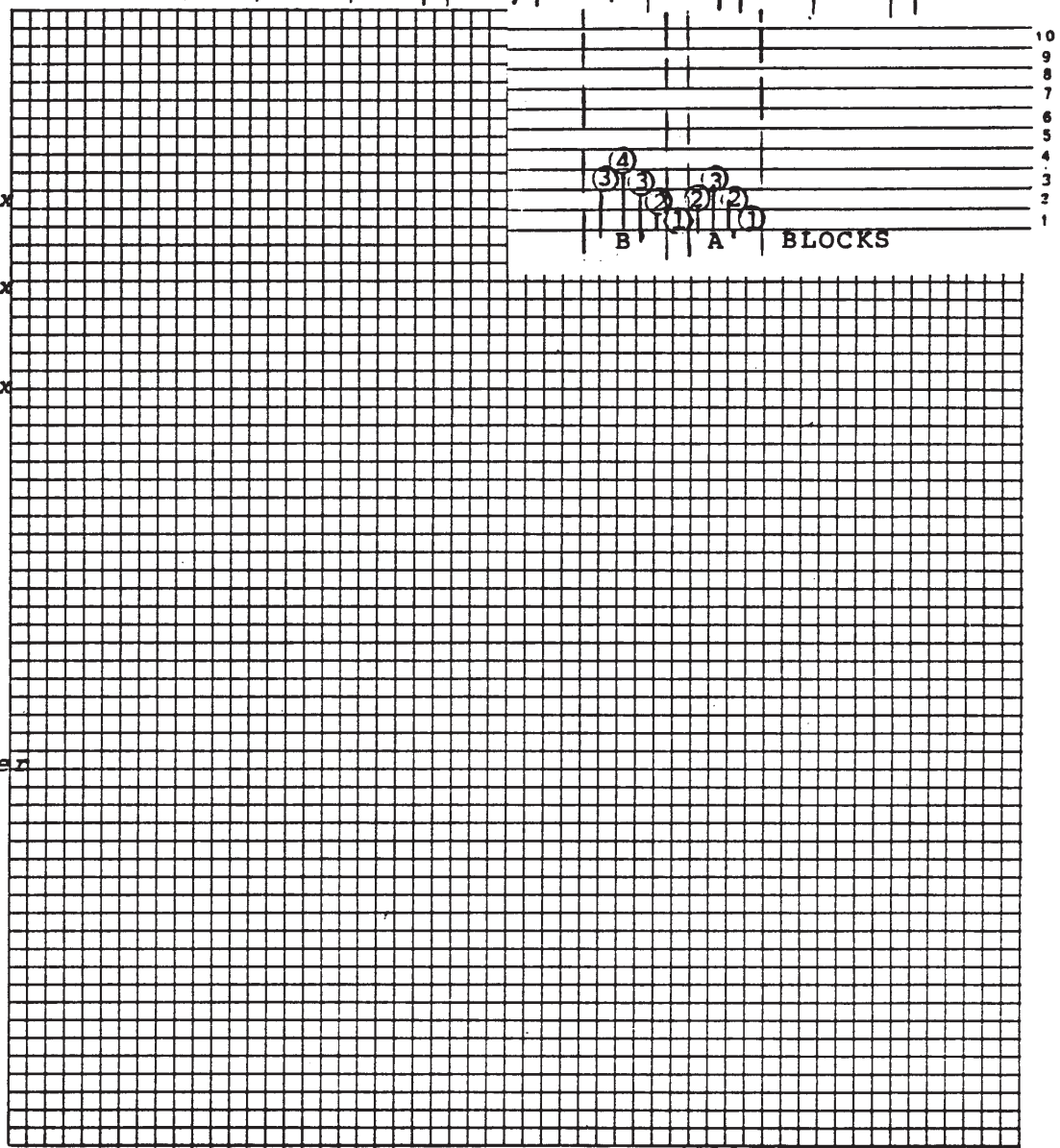
SETT

BLOCK DESIGN: 2A, 2B, 2D, 2C, 2E, 2F, 3G, 2F', 2E', 2C', 2D', 2B', 2A'.

Experiment: reverse order of one block, leave one block out,  
reverse order of threading blocks, check incidental  $\circ$   
threads needed.      TIE UP      THREADING



tabby:  
12 repeat  
Pattern:  
2 1  
4 3      -2x  
2 1  
4 3      -2x  
2 1  
4 3      -4x  
etc.



Example of treadling  
See the table on Crackle Weave sheet to plan pattern.

Note: Odd # order of treadling is with ground weft  
Even #'s with pattern weft.

Note: Treading numbers indicate order of treadling.





## Corkscrew Twill Weave (Cont.)

## DESIGN CHARACTERISTICS

1. Being a rib twill weave you can have either a warp rib or a weft rib; treading patterns determine this.
2. This weave is usually a three thread construction - two warp threads and one weft thread. However, if woven as a weft rib twill weave then it will have a four thread construction - two warps and two weft threads.
3. Consider that other than a straight twill threading draft can be used:
  - . A point twill threading. One adjustment needs to be made - One of the two point twill drafts must not come to a point. Delete one thread from the second point twill draft.
  - . Curved twill threading or undulating twill threading.
  - . Two regular twills with different breaks or different number of harnesses needed for the twill. If this is done then the number of harnesses needed becomes the sum of the number of harnesses of each twill draft.
  - . Three straight twill drafts can be combined if 11 harnesses or more are available. See Figure 1 for an example.
4. Advantages of using an odd number of harnesses in the threading occurs because it allows an equal breaking off of two rib twills on the right side of the fabric. It means there are no two thread skips as with a twill with an even number of harnesses.
5. It is possible to have a figured design with the warp rib weave. Consider what you can do with changing the treading order of the straight twill.
6. Possible to produce a shadow weave, see notes attached for a comparison.

**Comparison Between:  
Corkscrew Twill & Shadow Weave**

If the loom is threaded using the classic threading for Shadow Weave, (Atwater\*), then there is no difference between the threading drafts. What are the differences that produce such different looking fabrics?

The following table compares these differences:

	CORKSCREW	SHADOW
Number of harnesses used	Even or odd #	Even #
Threading draft	Same	Same
Warp	Two colors, alternating	Two colors, alternating
Weft	One color,	Two colors
Sett	Closer sett	Tabby sett
Tie-up	Can vary	Even break(s)
Treading order	In order of tie-up	In order but alternating colors

\* Shuttle Craft Guild Handweaver's Bulletin, Vol.30, No.6, June 1953, & Vol.30, No.7, July 1953.