

# Warping From The Front

Handweberei

(650) 967-0831

[webemit@sbcglobal.net](mailto:webemit@sbcglobal.net)



2263 Old Middlefield Way

Mountain View, CA 94043

## Procedures

1. Make your chain or chains with cross. Use counting ties at the cross if desired. Tie all four legs of the cross before removing chain from warping board. Make a very tight choke tie (all around the yarn in the chain) about one yard from the cross. Tie another choke tie at the opposite end of the chain. On a long warp tie additional choke ties at 3 to 4 yard intervals.
2. Remove the chain from the warping board and place on lease stick, with the cross showing between the two sticks. If more than one chain, place all on lease sticks. Tie the sticks to the front beam of the loom, warp loops hanging down between the breast beam and the reed. Fasten the beater to it so it will not move back and forth. Leave the reed in place.
3. Remove the counting ties and the ties on the cross. Do not remove the choke ties. With a reed hook (sley hook) pull the loops through to the back of the reed, in order as they come from the cross. Spread evenly and to the proper width. A gentle pull on the choke tie will fairly well even the length of the loops hanging behind the reed. (A rattle may be used instead of a reed on non-sticky warps; e.g., smooth cottons.)
4. You must have a removable dowel or stick on the back of the loom, the same length as the warp beam. With it pick up the loops in the back of the reed, in order, making sure that the threads on top of the lease stick nearest the reed are also on top of the dowel (or stick). Fasten the dowel to the back of the loom, making sure that the warps proceed in a straight line from the reed to the dowel at back. Be sure that the warp passes across the back beam, not under it. An extra pair of hands to hold the chains on slight tension helps a lot. Make use of the choke tie to even the lengths. The beater may now be untied. Also, free the lease sticks from the breast beam so they may move freely in the warp, but do not untie them from each other.
5. Roll the warp onto the warp beam. Use the chokes to grasp the warp chains whenever possible. Do "beat" the chains on the front beam to straighten the yarns. DO NOT comb with your fingers or a comb. Move the lease sticks and the beater back as you roll; thus both the reed and the lease sticks are helping to achieve an even tension. Separate the layers of warp on the warp beam with corrugated paper or brown paper and sticks, so one layer cannot sink down into the layers below and spoil the even tension. On wide warps two persons may be used to hold the chains. If so, change sides halfway through, as no two people pull with exactly the same tension.

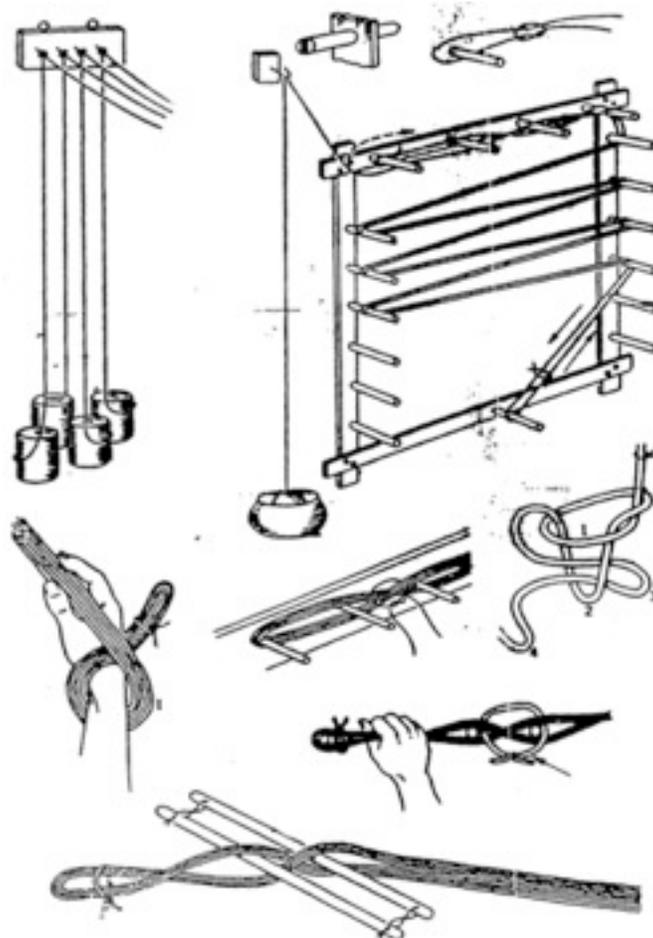


**Sett Chart:**

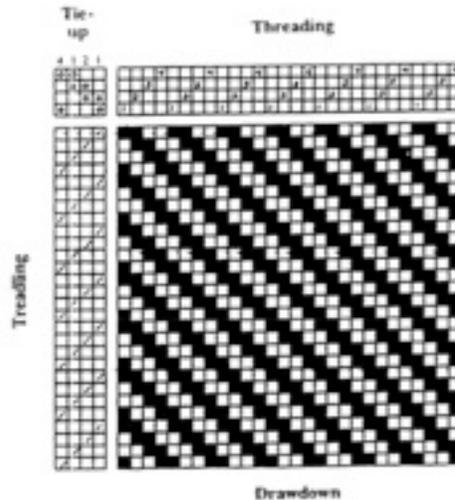
Use medium sett for firm tabby when crossed with yarn of same grist. Use closer sett for very firm tabby or twill. Use wider sett for loose, soft tabby.

Cotton	Approximate Yds./Lb.	Sett per Inch		
		Wide	Med.	Close
20/2	8,400	26	30	34
24/3	6,700	22	26	30
20/3	5,600	20	24	28
10/2	4,200	20	24	28
10/3 (Frostone)	2,800	14	18	22
Perle #5	2,100	12	16	20
Perle #3 (3/2)	1,260	10	12	15
Carpet Warp - 4-ply	1,600	12	16	18
1/1	840	Not suitable for warp		
3-ply extra	850	9	12	15
Linen	Approximate Yds./Lb.	Sett per Inch		
		Wide	Med.	Close
40/2	6,000	24	30	36
20/2	3,000	20	24	28
20/1	6,000			
10/2	1,500	12	15	18
10/1	3,000			
10/5	600	8	10	12
8/1	2,400			
1/1	300			
1-1/2 lea	450			

Cotton	Approximate Yds./Lb.	Sett per Inch		
		Wide	Med.	Close
1/10 worsted	5,600			
20/2	5,200	20	25	30
18/2	4,800	18	24	30
3-ply fingering	2,400	12	15	18
4-ply knitting worsted	1,100	8	10	12
2/10	2,800			
1/1 worsted	560			



# Weaving Draft



## Definitions

### tie-up:

**Definition:** indicates which harnesses are raised or lowered to open the shed. Conventionally numbers (1,2,3,4 etc.) or “o” are used to indicate a harness to be raised. Harnesses which are lowered are commonly indicated with an “x”. The above draft indicated which harnesses are raised.

The rows in the tie-up correspond to the harnesses. The bottom row is harness 1, the second row is harness 2, etc. The columns in the tie-up correspond to the treadles on the loom. The column nearest the threading draft is commonly referred to as treadle 1, the next as treadle 2, and so forth. The tie-up may appear at any of the four corners of a full draft but always appears at the corner where the threading and treading sequences intersect.

### threading:

**Definition:** (threading draft) shows the order in which warp threads are threaded through the heddles. The bottom row of the threading draft is harness 1, the second, harness 2, etc. The threading draft may be read either left to right or right to left. It always appears horizontally on the full draft but may be at either the top or bottom of the draft.

### treading:

**Definition:** (treading draft) shows the order in which harnesses are used (raised or lowered) to form the shed. The treading draft may be read either from top to bottom or bottom to top. If read from top to bottom the woven fabric will be the mirror image of the drawdown. The treading draft always appears vertically but may be on either the left or right of the draft.

### drawdown:

**Definition:** a graphic representation of the fabric structure, showing either warp threads passing over weft threads (warp drawdown) or weft threads passing over warp threads (weft drawdown). The threads which “pass over” are represented by black squares. The above draft shows a warp drawdown.

# Four-Shaft Twill Sampler

## Instructions

The threading is 1, 2, 3, 4 from left to right. Raise the shafts as indicated for the treading. Be sure to look at both sides of the fabric.

## Procedures

- |   |   |   |
|---|---|---|
| <b>1.</b> Plain weave - 13, 24              | <b>22.</b> 12, 14, 34, 14                 | <b>43.</b> 13, 24, 34                           |
| <b>2.</b> 2/2 Basket - 12, 12, 34, 34       | <b>23.</b> 12, 4, 1, 34                   | <b>44.</b> 1, 2, 31, 4, 3, 24                   |
| <b>3.</b> 2/2 Twill - 12, 23, 34, 41        | <b>24.</b> 13, 24, 34, 23                 | <b>45.</b> 12, 4, 12, 34, 2, 34                 |
| <b>4.</b> 1/3 Twill - 1, 2, 3, 4            | <b>25.</b> 12, 34, 14, 23, 14, 34         | <b>46.</b> 12, 4, 2, 34, 1, 3                   |
| <b>5.</b> 3/1 Twill - 123, 234, 341, 412    | <b>26.</b> 13, 24, 34, 13, 24, 12         | <b>47.</b> 13, 2, 123, 24, 3, 234               |
| <b>6.</b> 2/2 Broken Twill - 12, 34, 23, 14 | <b>27.</b> 12, 23, 34, 12, 14, 34         | <b>48.</b> 123, 234, 134, 4, 1, 2               |
| <b>7.</b> 1/3 Broken Twill - 1, 2, 4, 3     | <b>28.</b> 12, 23, 12, 14, 34, 14         | <b>49.</b> 12, 23, 12, 34, 23, 34               |
| <b>8.</b> 13, 12, 24, 34                    | <b>29.</b> 12, 2, 4, 34, 3, 1             | <b>50.</b> 12, 34, 24, 14, 23, 24               |
| <b>9.</b> 12, 34, 14, 23                    | <b>30.</b> 12, 34, 4, 14, 23, 2           | <b>51.</b> 13, 1, 24, 13, 4, 24                 |
| <b>10.</b> 12, 13, 34, 13                   | <b>31.</b> 12, 24, 12, 34, 24, 34         | <b>52.</b> 1, 3, 234, 3, 1, 124                 |
| <b>11.</b> 123, 4, 14, 124                  | <b>32.</b> 1, 24, 1, 3, 24, 3             | <b>53.</b> 1, 14, 34, 234, 3, 12, 14, 34, 4, 23 |
| <b>12.</b> 13, 234, 13, 124                 | <b>33.</b> 12, 13, 23, 34, 13, 14         | <b>54.</b> 1, 24, 3                             |
| <b>13.</b> 12, 1, 34, 3                     | <b>34.</b> 1, 24, 34, 12, 13, 4           | <b>55.</b> 12, 14, 34, 23, 14, 12, 23, 34       |
| <b>14.</b> 12, 34, 24, 13                   | <b>35.</b> 12, 13, 23, 24, 34, 13, 14, 24 | <b>56.</b> 12, 14, 34, 14, 12, 14, 34           |
| <b>15.</b> 12, 2, 3, 14                     | <b>36.</b> 12, 34, 12, 14, 34, 12, 34, 14 | <b>57.</b> 1, 2, 4, 1, 3, 4, 2, 3               |
| <b>16.</b> 13, 24, 4, 1                     | <b>37.</b> 1, 24, 2, 13, 3, 24, 4, 13     | <b>58.</b> 1, 2, 3, 4, 1, 2, 4, 3, 2, 1, 4, 3   |
| <b>17.</b> 13, 234, 134, 124                | <b>38.</b> 1, 12, 2, 23, 3, 34, 4, 14     | <b>59.</b> 1, 2, 3, 4, 13, 24                   |
| <b>18.</b> 1, 2, 3, 14                      | <b>39.</b> 1, 14, 2, 12, 3, 23, 4, 34     | <b>60.</b> 13, 2, 3, 24                         |
| <b>19.</b> 123, 4, 1, 234                   | <b>40.</b> 1, 2, 3, 1, 4, 3, 2, 4         | <b>61.</b> 12, 23, 34, 4                        |
| <b>20.</b> 12, 123, 234, 34                 | <b>41.</b> 2, 24, 2, 13, 4, 24, 4, 13     | <b>62.</b> 12, 13, 34, 24, 23, 13, 14, 24       |
| <b>21.</b> 12, 34, 4, 1                     | <b>42.</b> 1, 34, 2, 14, 3, 12, 4, 23     |   |

Sources: The Weaver's Book by Harriet Tidball and A Handweaver's Patternbook by Marguerite P. Davison.

Jean Scorgie