

“*Know Thy Threads*”, *A Motto of the National Conference of American Handweavers*

by OSMA COUCH GALLINGER, *Director of Cromaine Crafts*

When one experiences the interest in weaving shown by people coming a great many miles from a great many places, bringing valuable talents and contributions of enthusiasm and faith to share sincerely in a weaving conference,—it becomes not only an inspiration but an honor to have a part in planning the course of the National Conference of American Handweavers, a conference conducted annually in the beautiful estate and wild life sanctuary of Waldenwoods by Cromaine Crafts, Hartland, Michigan, and supervised by Mary M. Atwater, author of *Shuttlecraft Book of American Handweaving*. The course is planned with a vein toward meeting the varied needs of the student. It aims to analyze the activities of the weaver in 1. Shop; 2. School; 3. Home; and to add to the efficiency of each student in his or her particular sphere.

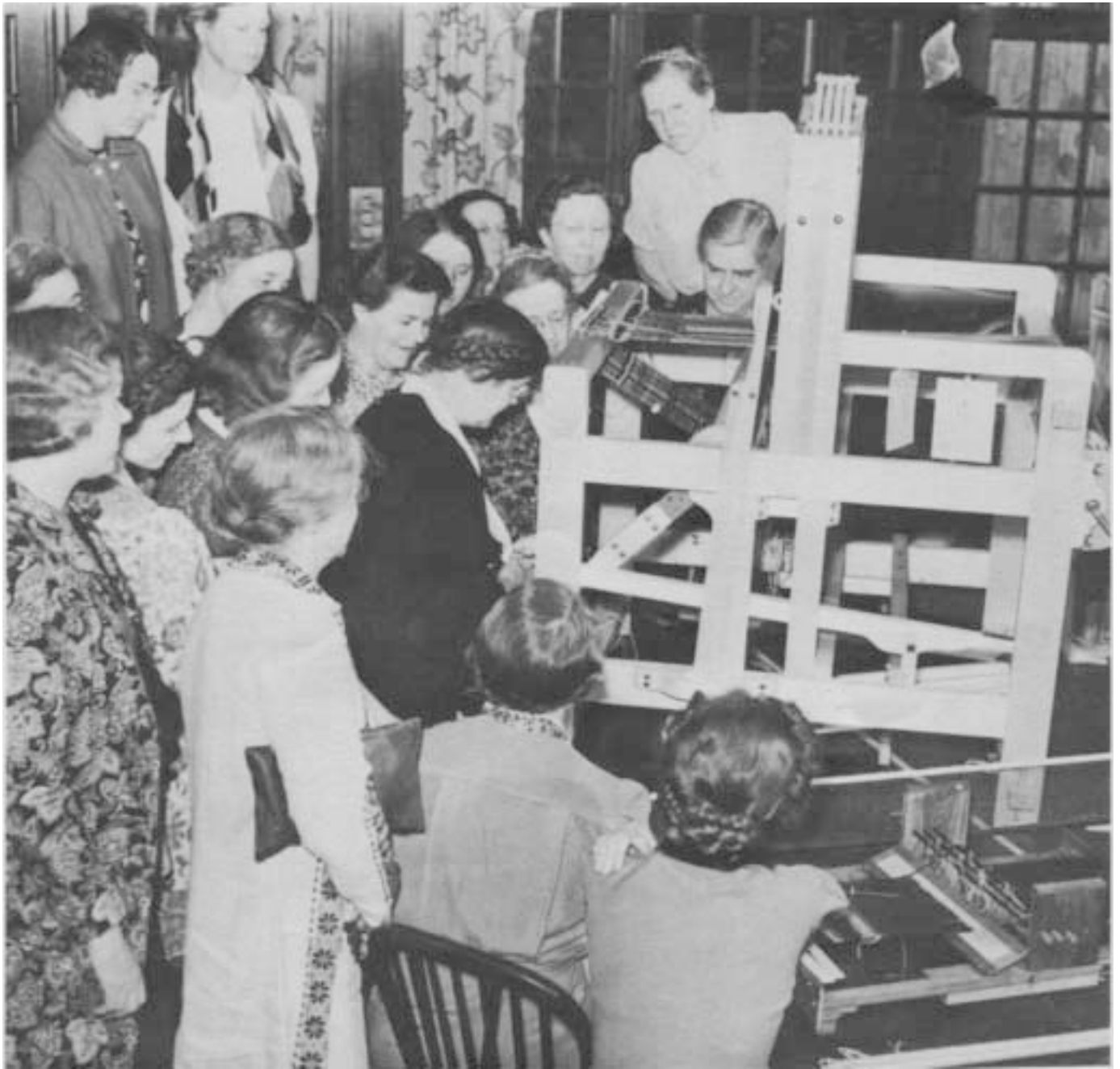
For instance, a weaver operating a shop wants to master not only the art of weaving, but the planning of patterns which may be incorporated into saleable woven articles; he or she must learn the pitfalls of the weaver who loses customers by putting on the counter shoddy and carelessly planned material, must learn how to give the handwoven object that smart distinctive look that will sell it for its own usefulness and beauty. The problem of the school teacher is quite different. He or she must learn the simple logical sequence of the steps in the rudiments of weaving in attractive enough form to relay them to students of weaving, young or old; must sell the idea of the pleasure of weaving rather than the finished goods. Lastly, the home weaver has an entirely different approach to the craft, which becomes more or less a sphere of creative joy, a hobby or a means of beautifying one's own surroundings. The weaver for fun wants a great many varied techniques to work out, but in learning them must be guided to the mastery of a standard of perfection, so that each creation may be a matter of pride and enjoyment to the user. The motto of the Cromaine Crafters themselves is much to the point; “Our ideal and aim is to create useful things, conceived in the spirit of their essential truth, goodness and beauty, and to fashion them by earnest skillful effort in which the worker progresses through his work in the service of the user.” This thought may be applied to those who weave either for pleasure or profit.

We carefully organized our conference to meet these three needs of Shop, School, and Home. Out of fifty or more looms set up with different techniques, the shop operator found much to convert into the gift idea, and there was also a chance to see the “why and wherefore” of methods in the Hartland shops where both direct roadside sales and mail orders are filled. From the many

articles made by conferees, the home weaver could likewise choose according to fancy or need. The sharing of ideas together is one of the great advantages of attending a summer weaving conference. The very same course taken alone would yield possibly one-tenth the benefit, because one sees only one's own weaving in small quantity, and loses the benefit of comparing his creations with those of many other fertile minds and clever fingers. Then too, one gains a great impetus by being with others enthusiastic over the same craft. For the weaving teacher, we organized a simple course taking the steps in the weaving process as they follow each other in logical sequence, from the origin of fibers to their spinning and weaving, with simple techniques and simple draft writing. This was followed by an advanced course in draft writing given by Mrs. Atwater, with delightful results in the writing of original drafts, even a pattern dedicated to the conference.

Briefly enumerated, other valuable contributions of the Hartland Conference were the fireside chats discussing the finishing of fabrics, the characteristics of wool, cotton, silk, and linen, numerable weaving problems, contributions of addresses for equipment by many, talks and exhibits by trained weavers, creative folk games with the rhythmic idea of weaving back of them, and even the writing of a weaving song and its interpretation into motion. But to me the two most outstanding developments of our conference were: 1,—The teaching of the principle of “weaving as drawn in”; and 2,—The analysis of threads and their best setting to make reliable fabrics.

In “weaving as drawn in”, one follows the sequence of treadling indicated by the trend of a diagonal line which proceeds upward through the pattern. Each next treadling combination is indicated by the slight overlapping of the space for the overshot with that of the last treadling. After learning this method with its evident simplicity, weaving by note or by rote seemed as insipid a substitute as eating paper, goat-like, instead of food. The second important achievement was the planning of the proper setting of threads for the weaving of perfect textures. Months before the conference, it was planned to set up a different material and pattern on each of thirty large looms, in addition to twenty-four small table and belt looms and set-ups of weaving cards on which a dozen or more narrow band techniques were taught. Not only were textures carefully worked out and each kind of thread carefully planned for its perfect setting, but a chart was prepared and given each student as a guide, showing name of article, proper warp, setting in sley, tabby weft and pattern weft best to use, and the recom-



A lesson in the tying of doupes for Leno-Weaving at the National Conference of American Handweavers, Hartland, Michigan. Center, Mary Atwater demonstrating the tying of a doupe. In this picture there are students from New York, California, Ohio, Minnesota, Rhode Island, Colorado, Michigan, Canada, Illinois, and Oklahoma.

mended threadings resulting from successful practice among weavers. This thread chart, welcomed as time-and-mistake saver, was an evolution of cooperation between Mrs. Mary Atwater and Cromaine Crafts and is submitted below for *The Weaver*. The conferees agreed that weavers fail most frequently in the proper setting of threads,—a regrettable fact when most of us use such lovely threads, of fine quality and beautiful coloring, and spend our valuable time weaving them. The successful weaver today must master this art, as well as that of choosing the right weft for the warp.

This chart is given below. In using it, read across each line horizontally. Where a paragraph of explanation is given, it applies to all the setting included in the span of space which it covers. Where several settings are given for the same thread, both may be used, one for a finer, the other for a slightly coarser weave. In cases where a thread of low yardage is set in a fine reed, and a thread of high yardage seems inconsistently to be set in a coarser reed, it is because of the close twist of the former and its resulting fineness. “Know thy threads” does indeed become the “Know thyself” motto of the weaver.

CHART OF THREAD SIZES AND TEXTURES AND THEIR PROPER SETTING

Prepared by Mary N. Atwater and Osma Gallinger

Name of Article	Name of Warp	Yards Per Lb.	Setting in Sley	Tabby Weft	Pattern Weft	Recommended Threading to Use	
A. DRESS FABRICS I. WOOLEN FABRICS a. Light weight woolens, such as neckties, scarves, berets, light-weight dresses, etc.	Choice of: 1. Bernat's Fabri	4800	24-loose 30-close	Same as warp with nubbed threads at intervals if desired.		a. Weave with tabby weft only. For best effects in woolen dress materials, do not use overshot patterns, but thread the warp in all-over surface patterns such as: Tabby in stripes or plaids; Twills in stripes or plaids; Herringbone; Goose-eye; Bird-eye; Shepherd's Check; Crepe Weave; Basket Weave; Log Cabin; Broken Twill; Bronson Weave; etc.	
		4200	15 or 16 loose	"			
	b. Fine, firm weaves for dress and jacket material.	1. Bernat's Fabri	4800	30, 32	Same as warp or very fine homespun of same grist.		b. Same as above.
		2. Bernat's Afghan	7000	36, 40			
c. Open-weave, lighter weight dress goods. Slightly coarser	1. Iceland Yarn	4200	20, 24	Same as warp.		c. Same as above, with stress put upon an even textured balance of warp and weft. Select patterns such as Bronson which will give an openwork effect, or tabby set far apart, with nubbed threads at intervals.	
	2. Bernat's Fabri	4800	20	Same as warp.			
	3. B's Afghan	7000	26, 30	Same as warp or fine imported homespun.			
	4. B's Fabricspun	3200	18, 20				
d. Heavy Suitings, Sport coats, etc.	5. B's Weaving Sp.	4000	20, 24				
	1. Imported Sports Tweed	2000 to 2300—	15, 16	Same as warp.		d. Tabby, Twill or Mottled patterns, as under a, above. Scandinavian or Colonial Suiting patterns.	
	2. B's Shetland	2000	15, 16				
	3. B's Homespun	2200	15, 16				
II. LINEN DRESS GOODS a. Fine smocks, aprons, blouse material.	1. B's 50/2 Linen	7500	36, 40	Same as warp, or 20 single.	Perle 10 used dbl. or 6-strand in small overshot borders.	Tabby, Twills, Small Dot Figures, Granite, Crepe, M's and O's, Broken Twills. For a large all-over figure, choose a Crackle Weave, such as Drifting Shadows.	
	2. B's 40/2 Linen	6000	30, 32, 34				
b. Coarse, heavy, for coats, etc.	3. B's 40/3 Linen	4000	24, 26	Same as warp, or 14 single.			
	1. Linen 18/2 2. Linen Floss	2700 1500	15, 16— 15, 16—	10/1 weft or B's Linen Floss		b. For textured coat materials, choose one of the patterns under a, Woolen Fabrics, above.	
III. COTTON DRESS GOODS a. Fine	1. Cotton, 30/2	12600	35, 36	Same as warp, or umbrian, or perle 20 in colors.	Perle 10 or Peruvian Filler for small overshot	Tabby backgrounds with borders in small overshot patterns,—Rose-Path, Honeysuckle, Monk's Belt, Lincoln's Rail Fence, etc.	
	2. Perle, 20/2	8400	32, 34				
	3. Cotton, 20/2	8400	30, 32				
	4. Egyptian Cotton	6720	28, 30				
b. Heavier materials for jackets, coats, etc., all-cotton, or part linen.	1. Egyptian 16/3	4500	24, 26	Same as warp, or linen of same grist. Same or Linen Floss.		b. For heavy textured cotton materials, choose one of the patterns under a, Woolen Fabrics, above.	
	2. Cotton 14/2	5880	20, 24				
	3. Perle 10/2	4200	24, 26				
	4. Perle 5/2	2700	15, 16				

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B. WEARING APPAREL ACCESSORIES. I. BELTS. a. Heavy type.	1. Carpet Warp used double.	1200	8, 10	Same as warp.	Thrifty-Knit Cotton or Candlewicking.	1. Card-weaving, Inkle Loom Weaving, Tabby, Twills, Small Overshot Patterns, such as Monk's Belt, Diamond, Rose-Path, Raindrops. 2. Same as above.
	2. B's Perle 3	1350	10, 12	Same as warp.	Heavy Cottons or Linen Floss.	
	3. Germantown Wool	1200	8, 10	Same as warp.	For very heavy warp it is best to use an all-over texture weave, such as the Twills, Bird-eye, Herringbone, Goose-eye, Shepherd's Check, Plaids, etc. Same patterns as for Germantown.	
	4. B's Peasant Wool	945	6, 8	Same as warp.		
b. Fine type, soft and flexible texture.	1. Perle 10	4200	26, 28	Same as warp.	Crochet Cotton or Perle 5.	Card-weaving, Inkle Loom Weaving, same as 1 above. Same as 1 above. Same as 1 above.
	2. Perle 5	2700	18, 20	Same as warp.	Perle 3, or Linen Floss.	
	3. Crochet Cotton	2400	16, 18	Same as warp.	Perle 3, or Linen Floss.	
II. HAND-BAGS, PURSES.						
a. Fine texture	1. Cotton 20/2	8400	16	Bernat's Fabri packed down entirely over warp.	None	a. Tabby, with colorful horizontal stripes in many shades.
b. Medium weight	1. Linen 40/3 2. Egypt. Cot. 24/3 3. Perle 10/2	4000 6720 4200	24 30 24	Same as warp. Same as warp. Same as warp.	Raytone, Perle 3 Bernat's Fabri. Perle 5.	b. Tabby, Twills, Texture Weaves, Short Overshot Patterns, such as Diamond, Monk's Belt, Rose-path, Honeysuckle; for large bags, Whig Rose.
c. Heavy weight	1. Carpet Warp 8/4 ply	1200	8	Fine silk rags or narrow loops of stockings.	None	C,1. Tabby, weaving with the rags only, in colorful stripe designs.
	2. Carpet Warp	1200	8, 10, 12	Same as warp.	Candlewicking, or Germantown wool.	C,2. Well-knit Overshot Patterns:- Cleveland Web, Butternut, Chariot Wheel, etc. Also Summer and Winter Crackle Weaves.
	3. Perle 5	2700	20	Same as warp.	Same as warp.	C,3. Finnweave, with designs planned to fit shape of bag.
C. BED COVERINGS I. HANDWOVEN COVERLETS ALSO PILLOWS, RUNNERS a. Fine	1. Cotton Warp 30/2 2. Bernat's Perle 20	12600 8400	35, 36 32, 34	Same as warp. or perle 20 in colors.	Bernat's Fabri or very fine Homespun.	Large Overshot Patterns, such as: Whig-Rose, Lover's Knot, Dbl. Bow-Knot, Sunrise, Lee's Surrender, Pine Bloom, Kentucky Gar-

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b. Medium weight.....	1. Cotton, 20/2 ply 2. Egyptian Cotton, 24/3.....	8400 6720	30, 32 28, 30	Same as warp. or Umbrian in colors.	Weaving Special, or Perle 5.	den, Sun, Moon and Stars, Missouri Trouble, Young Man's Fancy, Queen's Delight, Chariot Wheel, Governor's Garden, etc. Also Summer and Winter pat- terns and Crackle Weave pat- terns.
c. Heavier weight.....	1. Egypt. Cot. 16/3 2. Cotton, 14/2.... 3. Mercerized 10/2..	4500 5880 4200	20, 24 24, 26 20, 24	Same as warp or Perugian in colors.	Homespun, Shetland, or Perle 3.	All-over surface patterns, such as: Tabby, and Twill Weaves, using a warp of single color or stripes in the warp and weft for plaids. Small figures in the weaves are good, such as, Crepe Weave, Bird-eye, Goose-eye, Herring- bone, Dornick. Also Bronson Weaves, (using same tabby be- tween shots.) M's and O's, Honeycomb, Rain Drops.
II. BLANKETS, WOOLEN						
a. Fine.....	1. Bernat's Fabri.... 2. Weaving Special..	4800 4000	20, 24 18, 20	Same as warp or fine home- spun.	None.	
b. Medium.....	1. Shetland Floss....	2000	15, 16	Same in grist.	None.	
c. Heavy.....	1. Germantown 2. Peasant Wool....	1200 945	10, 12 6, 8	Same in grist. " " " " " "	None.	
D. UPHOLSTERY						
a. Fine.....	1. Linen 40/2..... 2. Perle 10/2..... 3. Egyptian 24/3....	6000 4200 6720	32, 36 28, 30 30, 32	Same as warp. Same as warp. Same as warp or Perugian.	Twisted silk or Fabri Yarn. Perle 5, Rayon. Perle 5 or Scotch Homespun.	All-over surface patterns, such as: Goose-eye, Herringbone, Rose- path, Wheat Stitch, Broken Twill, Double-faced twills, Damask, Finn-weave, Bronson Weaves with tabby shots alter- nating, Small overshoot patterns such as Diamond, Lincoln's Rail Fence, and for larger patterns Summer or Winter, or Crackle Weaves, such as Drifting Shadows.
b. Medium, (Soft and Flexible)	1. Linen 40/3..... 2. Fabri Yarn.....	4000 4800	24 30	Same as warp. Same as warp.	Linen Floss. Tightly-twisted silk or homespun.	
c. Heavy.....	1. Linen 18/2..... 2. Egypt. Cot. 16/3.	2700 4500	16, 18 24, 26	Same as warp. Same as warp.	Hard-twisted knitting yarns, French Tap- estry wools, Linen floss.	
E. DRAPERY MATRIALS						
I. SUN CURTAINS, LIGHT- WEIGHT DRAPERIES.						
a. Fine effects.....	1. Perle 20/2..... 2. Egypt. Cot. 24/3. 3. Umbrian Warp ..	8400 6720 8400	30 20, 24 30	Same as warp. Same as warp. Same as warp.	Perle 10, or 6-strand. Perle 10, or 6-strand. Perle 10, or 6-strand floss.	Tabby with heavy threads at inter vals; or tabby with small pattern borders, such as Monk's Belt, Honeysuckle, Solomon's delight, etc. The warp may also be threaded to tabby in color stripes; or all one color with designs finger-woven into tabby with 6-strand floss. Also open- work weaves, such as Bronson , or Tabby with spaces in sley. Also Mock Leno or Swedish Lace Weave, Leno, Bronson, Gauze Weaves, textured dress fabric weaves woven loosely.
b. Heavier effects.....	1. Linen Floss..... 2. Perle 5..... 3. Perle 3.....	1500 2700 1350	7 1/2, 8 12 7 1/2, 8	Same, or a Textured weft same grist. " " " "	None. " " " "	

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II. SIDE DRAPES, PORTIERES, etc.	a. Medium weight.....	2700	16, 18	Same as warp.	Perle 3 or Linen Floss.	Tabby or Twills with vertical stripes in warp, Log-Cabin threading, Shepherd's Check, Suiting Weaves woven closer than above. Short overshot patterns for all-over pattern effects.
	b. Heavy.....	2700	18, 20	Same as warp or B's Zephyr Yarn or Linen Floss.	None.	Bronson Weaves.
F. RUGS	1. Crochet Cotton..	2400	24	Same as warp	None.	Double Finnweave.
	2. Perle 3.....	1350	8	Same, or B's Peasant Yarn		Three-Harness Weave.
	3. Carpet Warp Perle 3.....	1200 1350	12 12	Same as warp. Same as warp.	B's Peasant or home-spun wools.	Patterns looking well on both sides; patterns woven on opposites; Summer and Winter Weaves, Crackle Weaves, Twill Weaves, 3-harness, M's and O's.
I. PATTERN RUGS.	1. Carpet Warp....	1200	16	Same as warp.	Rugro, rags, rug-yarn	Whig Rose, Diamond, Block Work,
	2. Linen 10/5.....	600	7 1/2, 8	Same as warp.	" " "	Dog Tracks, Twice-woven rugs,
	3. Perle 3.....	1350	16	Same as warp.	" " "	Navajo Saddle Blanket Weaves
II. PLAIN RAG RUGS.	1. Carpet Warp....	1200	10, 12	Rags, rugro, Stockinette.	None, Tabby or Twill weaves only.	with warp at least as coarse as 12 Summer and Winter or Crackle Weaves with warp at 12 per inch.
	1. DbL Carpet Warp 2. Linen 10/5	1200 600	8 7 1/2, 8	Same as warp.	B's Rug wool, also Smyrna Rug Worsted.	Special designs planned on check paper for surface effects, using rug knots such as Swedish Floss.
III. PILE RUGS	1. Carpet Warp....	1200	10, 12	Chenille	Tabby only.	
	2. Carpet Warp....	1200	16	Same as warp.	Candlewicking, Rugro, Chenille.	Small overshot, such as: Diamond, Raindrops, Rosepath; also Twills, Birdeye, etc.
IV. BATH MATS.	1. Carpet Warp....	1200	10, 12	Chenille	Tabby only.	
	2. Carpet Warp....	1200	16	Same as warp.	Candlewicking, Rugro, Chenille.	
	1. Linen 40/2 round 2. Linen 50/2 round	6000 7500	30, 32 36, 40	Same as warp. or same in grist	Weave these linens as all-over patterns; no tabby. (See suggested threadings.) If a small pattern is desired for borders at ends of pieces, thread in small over-shot patterns only. Tabby same as warp; pattern thread heavier, such as Linen Floss, Perle 5.	Betsy Ross, Herringbone, Goose-Eye, Double Twill, Birdeye, Diamond Weave, Bronson, M's and O's, Rosepath, Wheat Stitch, Huck, Summer and Winter, Crackle. (The latter two patterns are especially good for coarse linens) Spanish Open-work Weaves.
	1. Linen 40/3 round 2. Linen 30/2 round 3. Linen 18/2 round	4000 5000 2700	24, 26 26, 28 20	Same as warp (or 14/1 or linen special linen weft.)		
G. TABLE LINENS	a. Fine: Tablecloths and napkins.	2000	16, 18	Same as warp	Tabby same as warp; pattern thread heavier, such as Linen Floss, Perle 5.	
	b. Medium: Runners, tray cloths, dresser scarves.	2250	18, 20	Same as warp or 10/1 or linen floss.		
	c. Very Coarse: Runners, towels, etc.	1500	16	Same as warp		
	d. Half-Linen: Towels, table mats, (this material makes reasonable tabby texture. Borders may be added.)	8400 12600 6720 4500	32, 34 35, 36 30 30	Linen 20/1; Linen special. Linen 30/2. Linen 20/1; Linen special; 18/1.	Crochet Cotton. Linen Floss. Perle 10.	Small Overshot Honeysuckle Rosepath Diamond Solomon's Delight Crackle Weave Monk's Belt