LIST OF PACKETS

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II Rosengang art weaving
III Flossa - Rya - Snillflossa
IV Arrow - Lightning
V Aklae - Rollakan
VI Dukagang - Half-Dukagang
VII Krabbasnar - Half-krabba

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HOW TO WIND A BOBBIN

The first step is to learn to wind a bobbin (figures 1 and 2). The word "bobbin" is used to mean a small hand-made shuttle of wool. A length of yarn about ten or twelve feet long is unwound from the skein. We shall designate the end of yarn that one picks up first as A, and after the yarn is put in the left hand, we shall call the remaining thread B. The left hand is held as in the illustration, stretching the thumb and the index finger as far apart as possible. End A is taken by the right hand and put in the palm of the left hand, allowing the end A to extend about eight inches below the palm of the left hand. The end B is put back of the thumb and brought around the thumb to the front. The last three fingers of the left hand now hold the A end of the yarn, while the right hand takes the end B and brings it over the index finger, back of it, around the index finger to the front, between the index finger and the second finger—which is now bent over—and is then crossed over the thread now between the thumb and the index finger as before. The process continues—always making a cross between the thumb and the index finger. A figure "8" is thus formed.

When the yarn has been wound nearly to its full length, the thumb and the index finger are relaxed, permitting the group of crosses to be easily removed from the hand. This cross is like the Fortee cross used in making a warp. This group of crosses is now grasped in the center by the thumb and the first finger, held securely, and wound around with the remaining B end several times and finally fastened with a slip knot so that all the crosses will be held firmly. The end A, which hangs below the palm of the left hand, is the end that is pulled from the bobbin and is the end that is tied onto or laid in the warp when beginning to weave.

Instead of actually winding the yarn with the right hand in the path that the yarn follows around the thumb and the index finger of the left hand, an extremely rapid winding will result if the left hand is rocked back and forth, picking up the yarn with the thumb and the index finger while the right hand remains practically still and only feeds the yarn. Make plenty of bobbins of each color before starting to weave.
Yarns Used to Weave Samples

| Single Woolspun | 10-2, 16-4 Cotton | Single Vegetable Dyed | 3-Ply Vegetable Dyed | Carpet Warp | 12-16 Twine | 12-2 Linen |

Sample of Monk's Bel Homecraft - Weaving - Service

Sample of Crooked Path Homecraft - Weaving - Service
SCANDINAVIAN ARTWEAVING

A SHORT DISCUSSION ABOUT ART WEAVING TECHNIQUES.

Scandinavian Art Weaving techniques are those techniques usually distinguished from shuttle techniques because the weaving is done principally without shuttles carrying the weft yarns, although some of the Art Weaving techniques employ shuttles to weave backgrounds of plain or "tabby" weave. The main figure or pattern designs in Art Weaving are done by the "laid-in" method; i.e., either the loom or the fingers "pick-up" the warp threads under which hand-wound bobbins of weft yarns are placed and thus the design is formed. A few weaves employ shuttles for the pattern designs.

Since Art Weaving permits the greatest freedom in weaving designs, this type of weaving might be called "creative weaving." Excellent opportunity is afforded the weaver who can create his own designs and carry them out on the ever receptive threads of warp that lie before him on the loom.

Two types of looms can be used to weave these Art Weaving techniques; an upright or high warp loom of two sheds, and our own horizontal low warp looms of two, three or four sheds. The upright loom has this advantage in some of the techniques over the horizontal loom: the work is more readily seen, and the bobbins ------ of which there are sometimes, many ------ are kept out of the way, while the advantage of the horizontal loom, to my way of thinking, is less strenuous on which to work. In Norway, before the war, a loom was made that could be used as an upright or a horizontal two harness loom, but it is impossible now to get any looms or any yarns from the Scandinavian countries. Most Scandinavian looms use string heddles which are, although picturesque, rather more stubborn than our own wire heddles. However, one can easily adjust one's way of working to either type loom, and our own domestic made looms are quite serviceable for all these Art Weaving techniques.

The techniques outlined in these packets have been practiced for ages in the Scandinavian countries for pleasure, profit and usefulness, and are the Art Weaving techniques most widely used in their textiles. So valuable have these techniques been considered in the Scandinavian countries that, for fear they will pass into antiquity, some thirty Homespun Societies have been established in Sweden alone (Svenska Hemslöjd). Similar projects have been inaugurated in other Scandinavian countries.

Because the knowledge of these techniques could provide our American or Canadian weaver with such satisfying results and a gratifying acquisition to his skill as a craftsman, it would be well worth while to persistently strive to acquire the working processes of these techniques.

Since the compilation of material for these packets was incepted ten years ago, a few particular treatises have appeared in print on two of the techniques, which I trust have been given an entree into your category of weaves. It is hoped that this series of packets will serve as a basic file to aid you in this most fascinating too-little-explored field of weaving.

Grateful acknowledgment is hereby given THE WEAVER, Emile Bernat & Co., and Den Norske Huseflidforening,Oslo, Norway, for permission to use material for these PACKETS.

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Monk's Belt in some form or other is a weave that is familiar to most weavers, but the threading is not strictly a Colonial draft as most weavers suppose. The Scandinavians use this threading draft extensively for "laid-in" and "pick-up" designs to embellish a plain background of tabby weave.

Monk's Belt, by the Scandinavians, is classified as an Art Weaving technique (Konstvanad). But when using a threading for Art Weaving, choose one in this text. More extended threading drafts which one finds among the American drafts will not be satisfactory. The skips are too long. The author once discovered this to his great sorrow.

For Art Weaving, with which this packet deals, designs are woven wrong side up on the loom. But, necessarily, the background of plain tabby weave is similar on both sides of the fabric. To weave this fabric wrong side up is not difficult. A small mirror held below the warp threads will give an idea of how the finished textile looks.

Of course, Monk's Belt pattern can be woven as an all-over design for the entire width and length of the fabric, resembling our own overshot weave, but it is more satisfying, for the present treatise, to use the pattern for borders and segregated spots throughout the web. Regardless how the pattern is used, one, two, or three shots of tabby weft follow each laid-in row of pattern weft according to the thickness of the pattern weft yarn. "Laid-in" is ordinarily referred to when the pattern weft, usually a thicker yarn than the tabby weft yarn, is laid in place in the shed, either for a single spot of design or for the design spots across the width of the web.

The "rose" figure of Monk's Belt can be woven in the usual form with which we are familiar and as the Scandinavians weave it in Art Weaving, but I have devised a variation to use in preference to the usual way of weaving the "rose" figure. It is believed that all weavers will welcome this variation as an improvement. This "exclusive" is distinctly different. This difference makes the unskilled weaver wonder how the effect is accomplished. There is an overlapping of unit design shots that makes the resulting effect strikingly distinctive from the customary "rose" figure. This innovation, however, has nothing to do with the overshot method of weaving Monk's Belt. The two different effects are given in Figures 1 and 2. Figure 1 illustrates the effect one gets from the regular treadling. Figure 2 shows the new interpretation of the
Monk's belt

of the "rose" figure. The difference is shown at "X".

The design motive for Art Weaving should be woven with single or multiple strands of wool yarns. For other adaptations of the Monk's Belt threading in spot weaving, use six-strand or Perle cottons thicker than the warp-----or any other thicker-than-warp yarns.

The woven fabric in wool is suitable for wall hangings when heavy yarns are used; finer yarns would give less pronounced skips and the fabric could be used for couch covers, draperies, cushions and hangings. The finished fabric is not suited nor serviceable for furniture coverings or where the woven material gets considerable wear-and-tear.

The "Rose" figures are formed with hand-wound bobbins of Bernat's Woollyarn, Caribou one-ply, Condon's one-ply or a similar one-ply yarn, usually of one, two or more strands. See PACKET directions (inside cover) for "How To Wind A Bobbin." The intervening borders are throw shuttle shots of single strand yarn; intermediate small bands (borders) are tabby shots of single strand weft yarn put in by a shuttle-----all of the same wool yarn used in the hand-wound bobbins.

It is well to have as many colors of hand-wound bobbins as the number of "rose" figures across the warp, altering the colors of the "rose" figures in the several rows which make up the length of the textile. Example: (below)

It is suggested that a single thread of Woollyarn, two threads of both Caribou and Condon's be used for winding the hand-wound bobbins. (The single-ply yarn used in the sample is Condon's, vegetable dyed by the author.) If a finer yarn is used, such as Fabri or 2/18 Lily's Weaving Wool, wind, preferably, three strands into the bobbins. I, just recently, discovered an excellent 2/18 wool yarn, manufactured by an old reliable firm, Thomas Hodgson & Sons, Concord, New Hampshire. This yarn has many weaving uses. The price is very reasonable. The firm has other yarns-----this particular 2/18 is called "Weaving Yarn." Caribou and Condon yarns are similar to the imported Scandinavian one-ply yarns, and are suited quite well for Art Weaving work-----at very reasonable prices.

"Overshot" drafts that have a distinct motif of a "wheel" and "rose" figure may be used with this same technique as Monk's Belt.

"HOW TO DO"

THE BEST DRAFT TO USE.

Art Weaving "set-up" for Monk's Belt Wall Hanging.
Warp: 12/3 unbleached or bleached linen, sub-

ACTUAL PHOTOGRAPH OF A MONK'S BELT WALL HANGING.
monk's belt

substitute 8/4, 8/5 Carpet Warp or No.5 Perle Cotton, in a neutral color, such as white, grey or natural.

CARPET WARP IS NOT TOO SATISFACTORY.
Number of threads for a textile with six "rose" figures across the web: 216 threads for pattern repeats plus 16 for selvages or 232 threads.
Warp: Single or double strands of one-ply yarn for pattern and a single thread of the same yarn for Tabby.

THREADING: One thread through each heddle.
SLUTING: No.10 reed, one through each dent, or a No.18 reed, skipping every other dent.
SEWING: Use two threads in first and last two heddles and dents of reed.
TREADLING: See "Tie-up" and directions below.

THE WEAVING PROCESS.

"A" (Weave a few shots Black tabby for heading.)
Tabby Green for 2 shots; tabby Rust for 3 shots; tabby Green for 2 shots; tabby Rust for 3 shots; tabby Green for 2 shots.

"B" Weave background in Black tabby for about 3/8 inch. Now use the pattern shed, depress Treadle 3 (Harnesses 3&4) and where the "rose" figures appear lay in SIX bobbins of different colors from the right of each "rose" figure to the left of it. Either tie the end of the bobbin around a warp thread by a slip knot or let it extend on top of the weaving. This can be worked into the weaving along side of a warp after the work is finished. (See sample.) (See Fig.5)
YOU ARE WEAVING THE "ROSE" FIGURES WRONG SIDE UP!
Then shuttle in TWO shots Black tabby—clear across.

Next, Treadle 3 again; carry bobbins up over the tabby shots that have been just put in, and take bobbins back through the shed— to the right side of the figure. TWO Black tabby are again put in. The third step is to depress treadle 3, taking the bobbin of each "rose" figure up over the just-made tabby shots and put bobbins through the shed from right to left. (See woven sample.) Eight "lay-ins" of weft are put through the sheds in this manner—with two tabby shots between each "lay-in"— four from right to left; four from left to right. (See Figure 5.)

The next unit of the "rose" figure is woven in the same manner—by making 8 "lay-ins" on each figure through shed made by treadle 1 (Harnesses 1&2) Two tabby shots follow each row of "lay-ins". See Fig. 5 and woven sample showing how weft is carried from Treadle 3 unit to Treadle 1 unit.

But now comes the distinctive "stunt"!
Through the shed produced by treadling treadle 3, lay-in a shot of pattern weft on each "rose" figure, and tabby only ONE shot of Black; treadle 1 and lay-in a pattern weft on each "rose" figure and follow with one shot of Black. Treadle 3 and lay-in pattern weft, and follow with one Black tabby. Treadle 1; lay-in

Tabby is omitted for clearness.

Monk's Belt WORKING PROCESS.

FIGURE 5.
monk's belt

pattern weft and follow with one Black tabby shot. (This makes 10 weft threads on the Treadle 3 unit—not 8 as was the first unit of the "rose" figures.)

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Then Treadle 3 and lay-in four rows of pattern weft on each "rose" figure, followed by TWO shots of Black tabby. Refer to sample for carrying bobbin weft from preceding unit of design. This is the center of the "rose" figure.

Next: Treadle 1, tabby one shot; Treadle 3, tabby one shot; Treadle 1, tabby one shot; Treadle 3, tabby one shot. Shots of tabby are Black. Now Treadle 1 for eight rows of "lay-ins" followed with TWO Black tabby shots. Then Treadle 3 for eight rows of pat- weft with TWO Black tabby shots following each row of "lay-ins."

"A-1." Weave about 3/8 inch of Black background tabby and finish the bottom border unit with a repeat of "A." (This completes "A", "B" and "A-1.")

The border at the top of the textile should be like this bottom border, but in reverse.

**THE "BODY" OF THE WALL HANGING.**

"C" Weave about 1/8 inch Black tabby. Treadle 3 and shuttle Rust color for 4 shots with Two Black tabby after each shot. Tabby Black 4 shots (2 to right and 2 to the left); Treadle 3 and shuttle Rust color for 4 shots with TWO tabby after each shot; Tabby 2 shots Rust; Tabby 2 shots Black; Treadle 3 and shuttle 4 shots of Green; Tabby Two Black tabby between. Tabby 4 shots Black; Treadle 3 and shuttle 4 shots Green, 2 shots of Black tabby between each.

"D" Weave about 1/4 inch Black tabby. Then Treadle 3 and follow directions for unit "B." This is a repeat of the "rose" figure, but change the position of the colored weft bobbins. Make this position change every time you weave the "rose" figures. After the six "rose" figures are woven, reverse "C" and "A-1."

Repeat "A-1", "C" and "D" as many times as you wish, always alternating the colors in "D." (The wall hanging I made 18 years ago had top and bottom borders, with four units of "A-1" to "C-1." This length with the suggested width in the "set-up" gives an acceptable proportion.)

Of course, this same process can be applied to "spot" weaving where only one or two, or more, "rose" figures are desired in the web—either across the fabric or in a vertical position for a border. The same process can be used, also, with finer yarns.

**SUGGESTIONS WHILE WEAVING:** In lay-in hand-wound bobbins on the "Rose" figures start at the left side of loom, when the bobbins are being laid-in going toward the left; start at right side of loom to lay-in pattern bobbins when bobbins are going to- ward the right. Let pattern weft lie loose when putting in "rose" figures. Do not bunch together the group of 6 warp threads when putting in bobbins. (The design of the woven sample starts where the weft and lies to the right of the figure.) At the left of your design unit you will notice "spots or dots" where pattern weft has been turned in the shed. These "dots" of pattern color weft will tell you how many shots of weft have been "laid-in." When four "dots" appear you will know that your four double or eight single shots have been "laid-in."

Single-ply yarn, since it is not too tightly twisted, should be handled care- fully, especially in the hand-wound bobbins.

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Should the yarns you use not cover the warp, change your reed to a few dentsto-the-inch reed so that your warp will always be covered by the weft yarn. This is extremely important! Please remember that the directions above are only suggestions, and as soon as the methods of working processes are learned, the weaver may utilize other ways of forming endless designs and arrangements of the Monk's Belt figure.

**Notice:** It was found that in weaving the cloth samples, that Condon's yarn covered warp (carpet warp) set in a 10 dent reed much more easily than the Caribou yarn, therefore if you use Caribou weft, set warp in every other dent of a 18 reed or use a No.8 reed.
KROKBRAKD

Krokbragd, or Crooked Path, from the Norwegian is a little known weave to us, although a treatise of this weave was given in the "Shuttle-Craft Bulletin" for November, 1937. It is missing from practically all the Swedish weaving books, even though the back cover of the Swedish publication, Falgrena's "Yevbk" shows an excellent color reproduction of Krokbragd in three harness weave. I first became interested in this weave through my translations from Caroline Halvorsen's "Handbok i Veving." (Speaking of translations, I would like to say this: get a good dictionary! There are so many incomplete dictionaries (Ordbok) that are a waste of money and time. Of course, Scandinavian dictionaries are just as lacking in weaving terms as our American dictionaries are. There is now a new 3000 basic word book which is quite helpful—title: "Basic Swedish Word List" by M. S. Allgood and Inga Wilhelmsen. It sells for about $1.00 and is well worth the price. A good Swedish dictionary to go with this word list is Swedish-English Dictionary (Svensk-Engelsk Ordbok), School Edition, by Walter Harlock. To my mind the English-Swedish dictionaries are practically useless. A grammar is not absolutely necessary for translating. Mark a word when you find it in a dictionary; it will be easier to find the next time you look for it.)

The Norwegians use several threading drafts for Krokbragd. These are to be found in Halvorsen's book and include a single threading and a double threading on three harnesses with three treadles; a four harness threading with four treadles, and a six harness with five treadles.

The threading drafts are given on this page. The woven sample in this packet was done on the threading at "b."

Extremely versatile is this 3 harness weave, but unless you have color, daring or subdued, monochromatic or polychromatic, the weave has little appeal. Peculiarly enough, in an old Danish publication, dated 1890, by Maria Collin, the four harness threading at "c" is called the "old method" for doing Rosengang Art Weaving. From the cover on Falgrena's book one can agree that "Crooked Path", for once, is consistently named.

Crooked Path is not easy to weave at first, but when one becomes accustomed to the recurrent treadling, the process grows quite simple.

Any thickness of yarns for warp and weft may be used for this weave, depending upon the use of the finished material. I have one sampler I wove on draft "b" with a 10/2 warp, set at 12 to the inch with Shetland wool yarn for weft and, although the fabric is thick, it has the appearance of a finely woven textile. The wrong side of Krokbragd is unsaible.

Other than the fabrics woven with fine and medium weight yarns, the Norwegians weave rugs extensively in Krokbragd with coarse yarns. One draft for rugs in Halvorsen's book is called "thick aklæ" (tykk-aklæ). For rugs in Krokbragd use a heavy rug yarn.
such as Barlett's Rug Yarn (good but inexpensive) or a better grade yarn over a heavy cable cord or twine for warp, set at 6 to the inch—every other dent of a No. 12 reed. To me it is lamentable to recommend the use of "carpet warp" for any worth while weaving, but since there is a scarcity of warp yarns for Art Weaving one is almost compelled to use carpet chain as a substitute warp. However, do not use cotton rug filler for your Art Weaving work—waste of time! Knitting yarns, too (often recommended for rug weaving) are too soft and should be shunned. Absolutely no good! Do not use them for rug weaving! Imagine, if you can, you yourself buying a factory-made rug woven of knitting yarns.

A rug is made to be walked on, trampled under foot, as it were. So sensibly choose your yarns befitting the function of the textile. As one well knows, wool yarns are the only yarns to "stand-up" under foot, stand the wear-and-tear and, very important—remain clean for a reasonable length of time. Therefore, for rugs, especially, choose wool yarns with a "body" to them. Thrums (wool carpet remnants) from carpet mills are ideal in texture for underfoot weavings. Another excellent yarn is Persian Rug Yarn, wound double and triple on the shuttle and hand-wound bobbins. Persian Rug Yarn comes in an elaborate color selection and makes a beautiful finished product. (See "sources"). (A thorough discussion on rug weaving will be found in PACKET III) Tinkler & Company have a stronger carpet warp than the ordinary one, an 8/5 as well as a nice Perle carpet warp in 4/4. These are both more serviceable than the 8/4 one ordinarily used. Illustration No. 4 shows a rug in heavy warp and rug yarns, done in the "bound weaving" fashion, with a single treadle tie-up.

The pattern of Krokbred or Crooked Path is putting different colors in the several shades. NO TABBY IS USED between pattern shots. When tabby is wanted for background, refer to the treadle tie-ups. Since the 3 harness weaves require only three harnesses for threading, it is, nevertheless, unnecessary to remove the other harnesses from the loom—unless one wishes to do so. One needs only to separate the healds on each harness and tie them in near-equal numbers to each side of the heald frames. To leave the harnesses or harnesses on the Structo looms makes for less confusion in working the lever combinations.

The warp is set sufficiently far apart so that the warp is covered. The appearance of the finished fabrics is similar, regardless of the grist of yarns used.

The set-ups for several fabrics follow:
1. Fabric like the actual woven sample—use draft "b".
   Warp: 10/2 cotton or No. 10 Perle Cotton (Lilly Mills)
   Weft: Single strand Shetland or one-ply Homespun (Caribou or Condon’s); two strands of Fabri or 2/16 wool
   Sleying and Threading: One thread through each heald; one thread through each dent of a No. 12 reed for fine yarns such as given above for weft. For Bernat's Woolspun use 8 or 10 dent reed.
   Treadling Directions: (Colors: Black, Green, Gold, and Red)
   Black—Bk., Green—Gr., Gold—Go., and Red—R.
   Treadle separately: 1—Bk., 2—Gr., 3—Gr.; 1—Bk., 2—Bk., (4 shots each time.) 3—Gr., 1—Go., 2—Bk., 3—Gr.: (Cont’d.)
If your textile is rather long, it would be well to interrupt the continuous Krokbragd with stripes of plain weaving on the tabby treadles (1&3 and 2) or change the colors of yarns every repeat, or every other repeat.

If the Krokbragd drafts were woven with one color of yarn, a rep face fabric would be produced. This might be useful in some cases but uninteresting. The introduction of colored yarn shuttled through the different loom sheds transforms a would-be ribbed fabric into a striking design. The same grist of wools should be used throughout the weaving of the textile.

II. On the "single Krokbragd draft" the following treadling might be used successfully.

With three colors use the following treadling: 1-Brown, 2-Brown, 3-Rust; 1-Brown, 2-Rust, 3-Rust; 1-Rust, 2-Rust, 3-Yellow; 1-Rust, 2-Yellow, 3-Yellow; 1-Yellow, 2-Yellow, 3-Brown; 1-Yellow, 2-Brown, 3-Brown. Each color to be used 4 times on each treadle and no tabby is used in order to form the design.

III. With four colors on the "single" draft, treadle as follows: 1-Rust, 2-Brown, 3-Brown; 1-Rust, 2-Rust, 3-Brown; 1-Yellow, 2-Rust, 3-Brown; 1-Yellow, 2-Rust, 3-Rust; 1-Yellow, 2-Yellow, 3-Rust; 1-White, 2-Yellow, 3-Rust; 1-White, 2-Yellow, 3-Yellow; 1-White, 2-White, 3-Yellow; 1-White, 2-White, 3-White; 1-White, 2-White, 3-White; 1-White, 2-White, 3-White.

Of course, other color combinations may be used. The above color combinations are merely suggestions. Some other combinations in four colors may be chosen from these: 1. Yellow-Green, Coral, Tan and Brown. 2. Navy Blue, Rust, White or Cream and Leaf Green. 3. Grey, Yellow, Coral and White. 4. Black, Flame, Tan and Yellow-Green or Cream.

IV. For Four Harness draft "c": Figure of "Four Harness" No. 3

Warp: 12/3 cotton or linen, for heavy fabrics. 20/3 or 10/2 for lighter weight fabrics.

Weft: Single-ply wool yarn spooled double; single-ply with single strand for lighter weight fabrics. A substitute of Perle No. 5 may be used.

Colors suggested: Gold, Black, and Bright Red.

No. 10 or 12 reed. One thread through each heddle; one thread through each dent of reed.

Treadling: (Note: If you use a Structo loom the treadling of 4-3-2-1 (always the same) will have to be transposed to 1-2-3-1-2-4-1-3-4, and 2-3-4. But rather than think in terms of these triple numbers, think only of leaving 4 or 3 or 2 or 1 UP, and press down all the other levers. This principle is much easier and less confusing, when the Structo loom is used.)

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RETURN TO BEGINNING

Weave the four harness Krokbragd draft in the single treadle fashion with shuttles. No tabby is used. This process in finer wools gives a tightly woven small staggered, all-over design that is excellent for furniture covering, cushions, etc.
V. A RUG IN CROOKED PATH. Figure No. 4

Should you wish to weave a rug in the Krokrargd double threading (draft "b") use the following set-up. The resulting fabric will resemble the cloth sample but in enlarged design, and a rather heavy texture.

Warp: 12/6 Twine, set at 8 to the inch; 10/5 Linen warp set 6 to the inch, or Carpet Warp set at 8 to the inch.
Weft: Heavy rug wool or several strands of Persian rug yarn wound on the bobbins or shuttles.
Sleying: One thread in each dent. One thread through heddles.
(Carpet warp may be used with 15 dent reed—every other dent.)

The pattern in the groundwork is produced, without Tabby, by the interchanging of weft colors. The groundwork of Black and Grey, ends in Black and begins in Black. Treadling follows:
1. Treadle 1 then 2, separately with Black. Treadle 3 with Grey. Weave as many times to the desirable height.
2. Treadle 1, Grey; Treadle 2 and 3, separately, with Black. Weave these two combinations until the bottom band is high enough.
3. Krokrarg Border: (Grey, Grey, Black, Red, White, Green are suggested colors.) Treadle 1, Grey; Treadle 2, Black; Treadle 3, Grey--4 times. Treadle 1, Grey; Treadle 2, Grey; Treadle 3, Grey--4 times. Treadle 1, White; Treadle 2, Grey; Treadle 3, Grey--4 times. Treadle 1, Grey; Treadle 2, White; Treadle 3, Grey--4 times. Treadle 1, Grey; Treadle 2, Grey; Treadle 3, Grey--4 times. Treadle 1, Red; Treadle 2, Grey; Treadle 3, Grey--4 times. Treadle 1, Grey; Treadle 2, Grey; Treadle 3, Grey--4 times. Treadle 1, Black; Treadle 2, Grey; Treadle 3, Grey--4 times. Treadle 1, Grey; Treadle 2, Grey; Treadle 3, Grey--4 times. Treadle 1, Grey; Treadle 2, Grey; Treadle 3, Grey--4 times. Treadle 1, Grey; Treadle 2, Grey; Treadle 3, Grey--4 times. Treadle 1, Grey; Treadle 2, Grey; Treadle 3, Grey--4 times.

This is the middle. Reverse from last combination back to the beginning of Krokrargd border.

VI. SIX HARNESS, FIVE TREADLES IN KROKRARGD (See draft "d").

The ladies may like this weave. It is nicely adaptable to the weaving of cloth for blouses, using the tabby weave for the plain cloth of the garment with a brightly colored Krokrargd border in Art Weaving for decorative borders.
Warp: 30/2 or 24/2 white cotton yarn (Gill's Article 314).
Weft: White and colored 30/2 or 24/2 cotton yarns—in Black, Bright Blue, Light Red and Maroon. (Fig. No. 5)
Reed: No. 20 or 24 with one thread in each dent; one thread in each heddle.

The pattern design yarn can be used either in double strands or single strand. The plain cloth of the weave is produced with Treadles 1, 3, 5 together and 2, 4, 6 together. The treadling of the border is woven with:
First: Treadles 3 and 5 together; Second: 3 and 4 together; Third: Treadles 1 and 2 together. Follow the designs by using the sketch at the right. The white tabby cloth will resemble a net-like fabric. Makes a nice summer wear material—so they tell me. This type of blouse, nevertheless, is really a striking piece of wearing apparel. Section "A" may be used as a separate border as well as parts of the other sections "B" and "C".

---
SOURCES OF SUPPLY

YARNS.
Contessa Yarns, 3 Bailey Ave., Ridgefield, Connecticut.....Odd lots.
Wm. Condon & Sons, 65 Queen Street, Charlottetown, P.E.I., Canada. Wools.
Caribou Woollen Mills, Caribou, Maine..........................Wools.
Lily Mills, Shelby, North Carolina............................Cotton and 2/18 Wool.
Bartlett Woollen Mills, Harmony, Maine............................Good, inexpensive wools.
Paternayan Bros., Inc., 10 West 33d St., New York 1, N.Y.....Rug yarns.
George Berberian, 2805 Summit Ave., Union City, N.J.......Persian rug wool.
Searle Grain Co., Ltd., Winnipeg, Canada.............................Wools, Cottons, Linens.
J. L. Hammett Co., Newark 8, N.J...............................Wools, Cottons, Jute.

LOOMS.
Loom Craft Studio, Wilmington, Ohio..................Looms, heddles, rocking bench, reeds, shuttles.
E. Everett Gilmore, 330 S. Commerce St., Stockton 34, Cal......Excellent "jack" type.
Structo Manufacturing Co., Freeport, Ill..........................Best table looms made.
Cromaine Crafts, Glenside, Pa.............................Exceptional looms and accessories.
Universal Handicrafts, 1267 Avenue of the Americas, N.Y. 19, N.Y..Looms, etc.
Hughes Fawcett, Inc., 115 Franklin St., New York 13, N.Y..Domestic and Canadian looms, loom accessories and supplies. Address: Care of Annafreddie Carsten.
J. L. Hammett, Cambridge, Mass.....Looms, accessories and handicraft materials.
Jules Clement, St. Justin, Maskinonge Cte., Quebec............Excellent looms.
Milus LeClerc, Inc., L'ilelet Station, Quebec..............Looms from 27" to 90" width.
Lockeweave Industries, Como, Quebec......................Looms, accessories and supplies.

NOTE: It is just about as cheap to buy Canadian looms from Hughes Fawcett, New York, as to send to the manufacturers in Canada and pay duty, exit and entry charges and express. One is even charged for the wooden crate loom is shipped in. (The LeClerc loom is now shipped to Fawcett with linen aprons--Annafreddie Carsten.) The LeClerc is similar to the discontinued Loom Loom, with improvements. It is a good four-harness counterbalanced loom. The Clement loom is a four-harness "jack" type loom, handsomely made, works easily, but has a permanent single treadle tie-up. The treadles are worked by an unique arrangement of strong steel rods. Most of the shuttle weave samples will have been woven on the Clement loom. The permanent tie-up means transposing the treadling or weaving the fabric upside down, but one does not mind this, particularly. The Clement loom will have to be ordered from the manufacturer. The Clement loom has a sectional warp beam with one inch sections instead of the usual two inch sections, thus requiring only half the number of spools for warping. Less spools but twice as many turnings!

WEAVING INFORMATION.
LOOM MUSIC. Mary Sandin and Ethel Henderson. An intelligently written monthly publication on desirable and unusual weaves for the beginner and advanced weavers. This periodical unselfishly stands for a high ideal. Careful and elaborate directions for weaving drafts are given in each issue. Contains sources of supply, news items, personal notes that are always interesting to weavers. Subscription, $3.00 a year. Address: Mrs. Mary Sandin, University of Alberta, Edmonton, Alberta, Canada.

SHUTTLE-CRAFT BULLETIN. Shuttle-craft Guild. Mrs. Harriett Douglas, Basin, Montana. Most of us know this monthly bulletin that has stood the test of many years. Mrs. Mary M. Atwater has given us a wealth of material through its pages. An excellent publication. One shouldn't be without it. Subscription $5.00 a year.
YARNs USED TO WEAVE SAMPLES

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<td>Single Cotton</td>
<td></td>
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<tr>
<td>Single Vegetable Dyed</td>
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<td>3-Ply Vegetable Dyed</td>
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<td>Twine Linen</td>
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Sample of ROSENGANG
“Effect: Bargello” Homecraft Weaving Service

Sample of ROSEPATH SWEDISH PINE TREE Homecraft - Weaving - Service
Rosengang or Rosepath is known to most weavers, especially when it is woven in the overshot manner. But the "Bound Weaving" of the twill patterns, of which Rosengang is one, is becoming more familiar to our American and Canadian weavers. Rosengang woven in the Art Weaving technique is similar to "Bound Weaving." The difference, however, if you can call it a difference, is in the selection of the warp and weft. A great many of the ancient, as well as modern, textiles in the Rosengang Art Weaving technique have a heavy linen warp and a fine wool weft, often of only a one-ply yarn. If a fine wool weft is used today, ordinarily two or more strands of the weft thread are spooled together.

The single Rosengang threading is a most serviceable and versatile draft to weave innumerable combinations for wall hangings, draperies, cushions, etc. And to quote Mrs. Marguerite P. Davison's courageous conclusion, "It is without peer among weaving designs." The double Rosengang threading, Figure 5 is not so adaptable. Weaving by Method "B" is not good for textiles that demand "wear and tear," such as furniture coverings, but method "A" serves quite well for any fabrics. The resulting textile from either of these two methods will be a heavy, firm fabric with compactly bound-in skips on the right side, long unsightly overshots on the wrong side, with the warp threads entirely covered by the weft yarns. If proper yarns are used for the weaving of the textiles, the woven fabrics need not be inflexible. One old piece that I have, from which I took the design for Figure 3, is about 1 inch thick but of a surprisingly soft texture. It is woven with very fine wool weft over a 12/3 linen warp.

The threading of Art Weaving Rosengang is more often seen on 4 harnesses, although a threading draft for 3 harnesses produces good results also. Figure No. 2.

In the threading of 4 harnesses, the treadles are tied either by our standard tie-up, 1&2, 2&3, 3&4, and 1&4, or a single harness is tied directly to each of the four treadles, as 1--2, 3--4. If a rising shed type loom is used for the Rosengang Art Weaving with the single harness tie-up, the warp threads of three harnesses are on top of the weaving shed and one harness of the warp threads is on the bottom shed. Since the warp is set far apart in the reed, ----- and even when a closer dent reed is used----
the few warp threads on the bottom of the weaving shed make it difficult for the shuttle to travel. A light weight shuttle solves this difficulty some. It is much more easy to weave if the sinking shed tie-up is used for the rising shed loom; however, the design will weave wrong side up. On a counterbalanced loom, one with a sinking shed, if using the direct harness tie-up, there is one harness pulling against three harnesses, which causes a smaller shed than ordinarily, but the weavings can be done quite satisfactorily. Many Scandinavian looms are equipped with a double set of Larms (Kontra-marsh) which makes Art Weaving (Konstvavanad) easy. Some of our own looms are so equipped, thus permitting an independent harness tie-up, but such a loom isn't necessary. Table looms, such as the Structo looms, work well with Art Weaving threadings as each harness acts independently.

Color is of great importance in the development of the design; in fact, "Bound Weaving" of the Rosengang pattern depends solely upon different color weft yarns rather than the threading order. But, however, a certain order of threading is demanded. In regards to color, the typical characteristic Scandinavian textiles in Art Weaving (they are sometimes called Peasant Art Weaving) are woven of decidedly contrasting colors, usually on a dark background (Black, Dark Blue or Gray). We, ordinarily, do not see pastel tones or hues of the same tones. Shades, meaning the more definite tones or dark tones of a color, are prominent in the Scandinavian selection of colors for their textiles. There are exceptions, of course, but I purposely used the word "characteristic" above. We can have a few colors of yarn to work with and do a good job. These colors are suggested in the "set-up" of the different drafts.

Furthermore, the Art Weaving of Rosengang is simply an overshot weave woven in a different way than is ordinarily done. Other small overshot drafts may be woven by the same method, such as Herring Bone, Goose Eye, Diamond, Twill, etc., but the Scandinavians do not classify these threading drafts among their Art Weaving patterns. I, myself, do not think any of them so good as the Rosengang threading for designing weaving patterns. Two threading drafts taken from an old Danish publication, dated 1860, on Rosengang Art Weaving are given opposite. "A" is called "the old method" and "B" is called "the new method." However, I believe our regular Rosepath threading is the best to use for our use. The threading given at "B," nevertheless, is a good convenient tie-up when weaving "on opposites."

Two different methods of threading are used by the Scandinavians, i.e., (a) by depressing separately one treadle of the four pattern treadles in a respective orderly manner throughout the length of the web—1—2—3—4; 1—2—3—4 and continuing. Each treadle as mentioned above, is tied to one harness only. The four harnesses, from the front of the loom, are numbered 1, 2, 3 and 4. "b," the second method, is like our regular
standard tie-up such as two harnesses, 1&2, 2&3, 3&4 and 1&4
tied to one treadle. These treadles, sinking or raising two
harnesses are treadled in the "on opposites" fashion. This
"on opposites" treadling in Art Weaving is nothing more
than forming the first shed by depressing Treadle 1, (har-
nesses 1 and 2), for example, putting in a shot of pattern
weft yarn, then forming the next shed by depressing the
shuttle that controls the other two harnesses not used in
forming the first shed, i.e., harnesses 3 and 4. A shot of
pattern weft yarn (usually another color) is then put in
the second shed as though it were a tabby shot of yarn for
the first pattern weft that preceded it. However, the sec-
ond weft yarn shot is not really a "tabby" shot (it is not
on the tabby treadling); it forms the background or part
of the pattern for the design.

Furthermore, if harnesses 2 and 3 are depressed by
Treadle 2, then the next shed must be the shed formed by 1
and 4. Of course, if one has a loom with only four treadles
on it, it will be necessary to depress two treadles in or-
der to sink or raise two harnesses----unless one uses no
tabby sheds and has more than one screw eye on each of
the four treadles. On the Clement loom two treadles need to be
depressed. The fifth and sixth treadles need not be used
(harnesses 1&3 and 2&4) for tabby, since no tabby is used
in weaving the design. Tabby is used for background work,
when one wishes to relieve the pattern designs. However,
let the tabby treadles remain tied as in overshot weaving.
But should one want a tabby woven area in the textile, it
is well to have the shuttle bobbins wound with two strands
of weft yarn (yarn same as pattern weft) or the tabby area
will not be so thick as the surface of the main body of
the fabric-----but, please remember, that, even if a tabby
weave is used, the warp must be covered completely. NO
WARP MUST SHOW IN THE FINISHED FABRIC!

One of the most attractive designs to weave in the
Rosengang threading is the "Swedish Pine Tree", with the
very "woody" man and woman figurines. The pinetree design
was first called to my attention about 18 years ago by, who
was then, Miss Dorothy Schuman of Pittsburgh, Pa. The pines
were hanging that I wove then was has been always ad-
mired by everyone who has seen it. The "woody" figures are
original, having been designed especially for this packet,
and to act as a relief for the pinetree motifs. Borders
given in Figure 4 may also be used to break the monotony
of the pinetree design. Figure 3, "Effect: Bargello", or
Church Spire, as it is called by some, (see woven sample) has only one color combination
throughout the entire length of the fabric. But, should one wish different carefully cho-
en color combinations may be used which will give a magnificent result. The white "out-
lining" such as seen in the woven sample, will give good contrast and form----should that
be the desire of the weaver. Progressive color tones may also be used simulating more
closely the Bargello or flame effect. However, when one chooses to weave with such a com-
bination of colors, one is digressing from the "characteristic" appearance of the real
Art Weaving principle. Howbeit, the weaver must decide what is wanted.
SET-UP FOR ROSEN GANG ART WEAVING.

Warp: 12/2 Linen, 16/4 cotton or No. 5 Perle cotton. For finer fabrics use 10/2 Perle cotton. (Lily Mills) (Note: Ordinary carpet warp is not suitable for this work. I have found that when smooth surfaced carpet warp is used for warp, the wool weft creeps gradually out of the web that has been beaten down, thus causing the warp to show. This is undesirable. Besides, Art Weaving deserves a better warp than carpet warp.)

Weft: Bernat's Woolspun one-ply, single thread. Fabri or 2/18 Weaving Wool wound double on the bobbins.

Threading: The desired Rosepath draft given in text.

Treading: Method "A" or "B".

SWEDISH PINE TREE WALL HANGING. Fig. 1.

Color Key: Y-yellow, DB-dark blue, R-rust, G-green, MB-medium blue, S-scarlet, W-white.

Weave about 1/2 inch DB Woolspun, or weft yarn selected. For pattern of Pine Tree, weave colors below or as indicated on Figure 2.

THE PINE TREE.

Treadles:

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Tabby about 3/8 inch DB, or weave Twill (Treadles 1, 2, 3, 4 separately). Weave small bend of four shots, 2 G and 2 R in Twill or Tabby. Next, weave 3/8 inch Dark Blue Tabby.


WOMAN FIGURE.

Treadles:

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(Woman figure cont'd.)

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Tabby 3/8 inch Dark Blue.

Small Border.

(a) Treadles: 1-DB, 2-DB, 3-R, 4-R--4 times. (b) Treadles: 1-G, 2-DB, 3-DB, 4-R--4 times. (c) Treadles: 1-G, 2-G, 3-DB, 4-DB--4 times. (d) Treadles: 1-Y, 2-G, 3-G, 4-DB--4 times. (e) Treadles: 1-G, 2-G, 3-DB, 4-DB--4 times. (f) Treadles: 1-G, 2-DB, 3-DB, 4-R--4 times. (g) Treadles: 1-DB, 2-DB, 3-R, 4-R--4 times.

Weave 1/4 inch tabby: Then weave "A"---The Pine Tree.

Small Border. Each of these combinations 4 times. Treadles: (a) 1-DB, 2-DB, 3-G, 4-G. (b) Treadles: 1-R, 2-DB, 3-DB, 4-G. (c) Treadles: 1-R, 2-R, 3-DB, 4-DB.
(d) Treadles: 1-R, 2-DB, 3-DB, 4-G—4 times. (e) Treadles: 1-DB, 2-DB, 3-G, 4-0—4 times. Weave 1/4 inch Tabby, DB.

The Man Figure.

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Tabby Dark Blue for 1/4 inch.
Weave any of the small borders.

Weave next The Pine Tree. Then weave a Small Border, and about 1/4 inch Tabby, DB.

Woman Figure No. 2.

Treadle each combination 4 times.

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If this is your last design on your textile follow this with 1/4 inch DB Tabby and then end with The Pine Tree and a heading like the one you began the hanging with. Black weft may be used throughout instead of DB.

THREE HARNESS ROSEPATH, Figure 2

A three harness draft is given also for a wall hanging. Only three treadles are used for this textile. The fourth harness on the loom is not used but it need not be removed from the loom. Simply tie back the heddles to the sides of the harness frames, and you keep the balance of the other harness frames and your standard tie-up. The fourth harness from the Structure loom may or may not be removed. It is not needed for balance, but I believe that when the fourth harness is left on the loom, the working of the levers is less confusing. The treadling on a jack type loom must be transposed unless one wishes to weave the textile wrong side up.

The treadles for this draft are depressed in the same consecutive order: First, Treadle 1, Second, Treadle 2, Third, Treadle 3.

Color is again responsible for the design. One-ply Wool spun works up nicely.

Three Harness Wall Hanging.
Weave a heading, then weave the Pine Tree, the Woman Figure, the Pine Tree, the Man Figure, with small borders or plain tabby weaves between.

The Pine Tree. "B" - Black.

Treadles:

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Weave now your border or plain Tabby or both.

The Woman Figure.

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Weave Border or plain Tabby.

The Man Figure.

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"Effect: Bargello" or Church Spires. Fig. 3

Color Key: GO-Gold, W-White, R-Red, BL-Blue, BR-Brown, Green-GR.

Treadles: (Treadle each combination 4x.)

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From this point on the weaver can easily choose his own combinations. Four colors are used in any combination.

Double Rosengang. Figure 5.

This draft seems to be the least desirable of any of the Rosengang threadings, but it is given here for record. The threading is carried out in the same order as single Rosengang, i.e., 1, 2, 3, 4, with color changes as indicated in the Figure 5, or colors that the weaver may choose.

The borders can be woven either with method "A" or "B". Also a combination of methods "A" and "B" may be used in the same textile. The threading process, however, must be watched carefully.

Eight Harness Rosengang. See Double Plate of designs. For 8 harness drafts try the direct tie-up of separate treadles, 1, 2, 3, 4, 5, 6, 7, 8. These are to be used in this order without variation—one at a time. As there are 8 shots of weft for each row or "line" of pattern design, fine weft yarn must be used, set far apart in the reed. 2/18 Weaving Wool or Fabri, single strand, set at 8 or 10 to the inch, should give you the desired result.

When one has woven the 3 and 4 harness drafts, one can follow easily the treadling directions from the design plates.
Twin Pines.
A variation from the regular four harness Rosengang, Figure No.7, makes an attractive textile. A pine tree with twin pine trees design is produced with intervening borders and bands on "on opposites" from the draft of Figure No.7.
16/4 cotton (Lily Mills or J.L. Hammett Co.) but No. 5 Perle will do nicely for warp. Shetland wool yarn was used, but Woolspun as well as 2/18 Weaving Wool, wound double strand, will produce good results.


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Weave about 4 inch Black Tabby.

Small Bands. Weave "on opposites" the following (Weave about 1/8 inch Black Tabby before and after each band.)
(a) Treads: 2&3-R, 1&4-B; 3&4-R, 1&2-B; 1&4-R, 2&3-B; 1&2-R, 3&4-B; 1&4-R, 2&3-B; 3&4-R, 1&2-B; 2&3-R, 1&4-B.
(b) 1&4-Y, 2&3-B; 1&2-Y, 3&4-B; 2&3-Y, 1&4-B; 3&4-Y, 1&2-B; 2&3-Y, 1&4-B; 1&2-Y, 3&4-B; 1&4-Y, 2&3-B.
(c) 1&4-G, 2&3-B; 3&4-G, 1&2-B; 2&3-G, 1&4-B; 1&2-G, 3&4-B; 2&3-G, 1&4-B; 3&4-G, 1&2-B; 1&4-G, 2&3-B.
(d) 2&3-R, 1&4-B; 1&2-R, 3&4-B; 1&4-R, 2&3-B; 1&2-R, 3&4-B; 2&3-R, 1&4-B.
(e) 1&2-0, 3&4-B; 4 times; alternate 1&2-G, 3&4-B and 2&3-0, 1&4-B, 4 times; 1&2-0, 3&4-B, 4 times.

Borders. These two borders weave about 1-3/4 inches high, most pleasing and are reversals of each other. Woven on "on opposites."

Treads:
(a) 1&2-G, 3&4-R, 4x; 1&2-G, 3&4-B, 4x; 2&3-G, 1&4-B, 4x; 3&4-G, 1&2-B, 4x; 1&4-G, 2&3-B, 4x; 1&4-0, 2&3-B, 6x; 3&4-Y, 1&2-B, 2x; 2&3-Y, 1&4-B, 2x; Center. Reverse the treading back to beginning. Weave 1/8 inch Black before and after the border.
(b) 3&4-G, 1&2-R, 4x; 3&4-G, 1&2-B, 4x; 1&4-G, 2&3-B, 4x; 1&2-G, 3&4-B, 4x; 2&3-G, 1&4-B, 4x; 2&3-0, 1&4-B, 6x; 1&2-Y, 3&4-B, 2x; 1&4-Y, 2&3-B, 2x; Center. Reverse the treading to beginning of the border.

Bon voyage on your Rosengang excursion!
Warp: 10/2 set at 8 or 10 dents to inch. Weft: abri or 2/18 Wool. Numbers below figures give treadling directions. Treadling is 1, 2, 3, 4, 5, 6, 7, 8, separately, without variation. Beat well. Height of weft row is woven to square a square on the cross section paper. Cover warp completely.
I am sorry, but I am unable to make a report on the further development of the tapestry loom, which I mentioned in the last TABBY TALK. I hope that I shall be able to do so by the time the next packet is out. Packet V, Aklæ and Rollakan, will be out about the first of next year. My original estimate of "about six weeks between packets", I realize now, was thinking in terms of the "good old days", when service was pre-eminent; when there were no strikes, no labor trouble, etc., etc. But most of us have learned that one must accept conditions that exist today. Furthermore, while I had secretly hoped that the packet orders would reach a 200 high, I am sorry to say (I'm think of the weaving of samples) that the list is approaching the 450 mark. Consequently, I have had to thread my looms three times in order to get enough samples for the first two packet orders. So if your inquiry "when do I get my next Packet" goes unanswered, you will know that the time spent on letter writing is being used to hasten the publication of the packets, rather than having the "coming out" date even further delayed by attending to unnecessary correspondence.

And here's a very personal note to some: I have concluded that since my answer to inquiries isn't worth a 3d stamp, I see no reason for sending out valueless advice and information. Please limit inquiries to the packets. At present, I am not concerned about where shuttles for tweed weaving can be had, or where string heddles can be bought, or what set-up to use for some overshot weave. And the joke of it all is, that I have had inquiries from weavers who are not even on the list of packet subscribers. My whole time now is devoted, slavishly, to the packet readers—and to these packet readers I owe a great debt of gratitude. Many of you have told me how the packets have helped you—well, the packets have helped me, too. Along with the task of getting these packets out, I am having built a 16x36 new loom house (don't get envious), so that I will have a roomy place to work—and a place, to teach, and hold summer sessions for the teaching of this Art Weaving work. I often wonder how many readers of the packets are really trying to learn these techniques. I would like to hear some reports about your progress. I have had some amusing reports: "standing on my head trying to juggle all these shuttles while weaving the Rosengang wall hanging"; "gnashing my teeth with determination—but it turned out to be a BEAUTY"; "I'll need a six weeks rest cure at a sanitarium", and others. Don't just look at your packet and lay it aside, and wonder when the next packet will arrive, so that you can do the same with it. Try weaving!

I forgot to mention in Packet III (I was a little ashamed of that packet, so badly done, being rushed) that Tinkler & Co., have a heavy wool and Rayon rug yarn that would do nicely for Flessa and Rye base—was 35¢ a pound, recently. In Packet III, the "moderne" rug pattern should be woven with a bottom and top border, solid, of about 3 inches in BLACK. Also, I have finally learned that there are about 750 yards to a pound of Persian Rug Yarn. In calculating yarn consider this: For Flessa, 36 inches makes about 6 inches of knots (24 knots with warp set 3 to the inch). A 24" rug would require, roughly, one strand of yarn 144 inches long, or 576 inches of 4 strands of yarn, or 16 yards of yarn for one row of knots. There are 3 rows of knots to the inch (of length) or 12 yards to make one inch of length. 40 inches long would require 48 yards X 40 or 1920 yards of yarn to make a 24x40 rug. For a rug this size I would order, ½ pound of Black, and ½ pound of each of other colors.

For those who have to use cotton rug yarn, get Lily's TULIP FILLER, Art. 1014. Use 3 or 4 strands in the bobbins. There is a nice variety of colors in this TULIP FILLER.

I recently received linen samples from Frederick J. Fawcett, 129 South Street, Boston, Ill, Mass. Among the samples was a linen rug yarn. It sells for about $1.00 a pound, and would make a nice rug base. Samples are attached to this sheet.

I hope some day soon to send a "paid in full" acknowledgement to all those who have sent in the full price of the packets. However, it is credited to your account, and will save the annoyance of having to return the "Now Ready" cards. Furthermore, I must assure you that my integrity is unquestionable. I am planning other packets (as one reader put it, you'll have to, in self defense)——some on unusual four harness weaves from the Scandinavian, linens, wools and cottons—with the 8th packet, a folio of designs, drawings and photographs to be used in connection with the other seven packets. The reproductions for this 8th Packet will cost considerable; consequently, the price needs must be about $2.50
The tufted pile weavings, or knotted weavings—such as Hel-Flossa (Whole Flossa), Halv-Flossa (Half-Flossa) and Rya are characteristic of all the Nordic peoples—and at least in some parts of each of the Scandinavian countries. These techniques are not thoroughly unfamiliar to some weavers on this continent, and, in all probability, are the easiest to do of all the Art Weaving techniques.

** Of interest to us weavers is the following enlightening information, taken from a beautifully printed and admirable volume, EUROPEAN AND AMERICAN CARPETS AND RUGS, by Cornelie Bateman Faraday, published by Garden City Publishing Company, Inc., Garden City, N.Y. (Condensed for want of space.)

"The Danes, Swedes and Norwegians, who comprise the Scandinavian countries, were originally one race and spoke a common tongue. When the Viking raids began, the dialects of this common language gradually changed into the distinct languages of Sweden, Denmark and Norway. How natural, then, is a close tie between these northern countries. This is why the rugs of the Scandinavian peoples, being an expression of their life and traditions, are so related to one another.

"In the ninth century Swedish Vikings crossed the Baltic and made their way to the Black Sea. From this time they began trading with Constantinople and were known there as the 'Rus' people. This was the foundation of 'Russia' which later became Russia. Finland, or Soumi, was for many centuries, a province of Sweden, until in 1809 she became a part of Russia. Finland was the scene of strife between Sweden and Russia for many years and finally won her independence from Russia. Finland, for centuries, was influenced greatly by her close contact with Sweden. The rugs of Finland are intimately related to those of Sweden and other Scandinavian countries.

"The cold climate of these northern countries made warm coverings necessary. The rugs or 'ryor' (pronounced ree-or or singular, 'rya'——ree-ya) were made by peasants for warmth and were generally used as bed covers, cushion covers, and wraps rather than on floors. The word 'rya' is from the old Scandinavian, 'ry', meaning rough or shaggy. These ryor were sometimes used to hang over the back of a carriage. Sometimes both sides of the rug were tufted, less closely, however, on the underside—for greater warmth.

"The early ryor were without design, crudely woven, in one color, made to meet the necessity for warm coverings to keep out the cold. Wool, flax and hemp warp was used with wool, sometimes mixed with cow hair, for weft. Inventiveness began to change the plain ryor into ones with zigzags and crosses. As knowledge of weaving increased, the designs became more intricate. These rugs became a young girl's marriage dowry. The real marriage rug was usually embellished with its special symbols—double heart, initials of the couple, date of marriage, also two figures, crude representations of the bride and groom, usually hand in hand. The couple stood on this rug during the marriage ceremony, and later it was used for a bed coverlet.

"Rugs were woven in small sizes, woven on hand looms, and afterwards three strips were sewn together. The home..."
FLOSSA AND RYA RUGS IN THE STUDIO OF DEN NORSKE HUSELDIGTERNING, OSLO, NORWAY.
(The women at the upright loom are tying knots with short pieces of yarn.)

of a well-to-do farmer was warm and gay with homecraft weavings, as these constituted a large part of the owner's wealth and prestige. They were handed down from one generation to the next, testifying to ancestral industry and skill and adding luster to the family name.

"The natural colors of the wool, white, gray and black, were used in the early rugs; but the home weavers became proficient in making their own dyes from native roots, berries and leaves and produced clear, simple colors which formed pleasing contrasts. The colorings of Finnish rugs are considered particularly bright and clear. The Swedish 'ryor' are gayer and brighter, as a rule, than those of Norway and Denmark. The rugs from southern parts are richer than those from the far northern ones. Generally speaking, the farther north, the colder the rug colors, as the weavers reproduced the hues with which nature surrounded them."

The rya, perhaps, should be attributed most correctly to Finland, where its popularity extended to the end of the nineteenth century, but was gradually forgotten, until at a not too distant past the rya "was brought from old hiding places and attained the seat of honor as a national Finnish product."

We find many varieties of the knotted fabric or textile, known as "fossa" in the old "ryor" of Scandinavia and Finland. The knot itself is similar to the Turkish or Chiordes knot, but it is believed to be an independent invention and development in these northern countries—not a copy of the Oriental. Modern times demanded modern taste, so there came into the rya rugs modern designs and a distinctive style.

Flossa and Rya are not dissimilar in technique. Flossa is usually done with a finer reed than Rya, thus making more knots in the width of the fabric. In Flossa not so high a guide is used as in the Rya technique. This calls for less
weft shots between the Flossa rows of knots than between the rows of Rya knots. Flossa, therefore, has more knots in the length of the textile as well as the width—or more to the square inch. We, on this continent, are more concerned with Flossa than Rya, for when we think of these two textiles we think of rugs, and Rya is more for wall hangings in our modern day and age. Should we want wall hangings, the Aklae or Rollakan techniques are more acceptable by far. Rya has a long pile in modern textiles that often makes the design indiscernible.

Flossa is generally divided into two techniques—Whole Flossa, which has the entire surface knotted, and Half-Flossa, which has only a pattern or design done in the Turkish knot and the background is formed by a tabby or an overshot weave. Figure 1 shows the knot used in the techniques of both Flossa, Half-Flossa and Rya processes. Originally, this knot was tied onto the warp threads with short pieces of yarn, 4 cm., or about 1 ½ inches long. (The British still use a similar method, called the Lichfield Method, whereby short pieces of yarn are pulled through a mesh-like canvas by a Lichfield hook. Figure 2. One buys the mesh-like canvas already stamped, in colors, with the design, and this canvas answers to what a weaver makes with the warp and weft of a Flossa rug.)

The laborious task is now replaced by winding yarn over wooden or steel guides, forming loops which are cut through with a knife or scissors, thereby forming the pile or "nap" of the rug.

Tools Used. Besides the actual loom, the tools for the making of Flossa or Rya rugs are few. The two main accessories are, preferably, a steel guide and a knife, called Flossalinjalier and Flossa knivar, respectively. The guide is a strip of flat steel, see Fig. 3, "a" and "b", with rounded edges, ranging in width from 1/4 to 7/8 of an inch. This strip of steel, originally twice the length of the finished tool, is bent in half to form two strips, having, of course, a slit between them. The knife travels in this slit to cut the loops formed over the top of the steel guide. The two separated ends are joined together by solder, or fastened with a block of wood slotted in two places to receive the two ends of the steel bar or strip (Fig. 3, "a"). The knife (Fig. 3, "b") is a blade set in a handle.
le with an adjustable screw on one side of the handle, thus permitting the blade to be lowered or raised, according to the height of the guide used. On the other side of the knife handle is a triangular metal or wooden protector, which projects, always, lower than the knife blade. This triangular protector rides along on top of the warp threads and keeps the knife blade above the warp threads, so that the blade does not cut nor injure the warp. While the triangular plate remains outside the steel guide, the knife blade travels between the two bars—in the slit. See Fig. 5. As the knife blade travels along in the slit of the guide, the knots are severed, or loops rather, that have been tied and thus the pile of the textile is formed.

Sometimes a grooved wooden bar is used and the loops are cut with scissors, run under the loops and in the groove of the wooden bar. (Fig. 5, "a" and "c"). This method, however, is really passable, and not so satisfactory as when the steel guide and knife are used. The real Flossa knife makes a cleaner cut and the pile is of a more even height. A less expensive razor blade is now on the market in Sweden, but one has to be extremely careful with such an accessory for fear of the blade cutting the warp. The steel guide, as well as the wooden bar, will lie flat (not upright) on the warp while tying the knots, but the guide is easily placed upright so that the knife blade may be run along in the slit. The block of wood or the iron ring which was once put upon guides made in this country (an American misconception of the use of that end of the guide) is placed at the left of the loom, the highest part of the wood block being turned down to the floor. This block acts as a "catch" so that the guide stays in place on the warp and does not move in toward the center of the loom. The entire length of the guide is placed across the warp when beginning to weave, and not placed partly on the warp and then pulled along by some method as
as the work progresses, as is usually supposed. Of course, if one prefers to pull along the bar as one ties the knots, all right. But if anyone has ever woven Flosa and Rya, and pulled the knots tightly—as they should be—one will have found that the guide bar is bound taut, and could be pulled through the knotted loops only with difficulty. This "pulling" to which some weavers have been accustomed, has a tendency to loosen the already tied knots, which is definitely not good.

With the entire Flosa guide laid across the warp, the guide is tilted (after the first knot is tied) and the bobbins of yarn brought under the guide with a quick movement—another reason why the weaver does not want any obstruction on the right end of the guide.

WARP AND WEB FOR FLOSSA AND RYA.

The warp used for Rya and Flosa by the best weavers is an unbleached linen yarn, 12/3 or 12/4 grist, using the heavier for Rya. But as these grists are not now obtainable in this country, a good substitute warp is the 10/6 linen rug warp from Hughes Fawcett Company or the 4/4 Carpet Chain warp from Tinkler Brothers & Company. I am including in the yarn samples for warp, one of 10/5 linen and a 12/3 imported linen warp from Sweden (not obtainable now) and the 4/4 cotton Perlé Carpet Chain. The 10/5 linen warp is rather expensive (it is used in the woven sample), but since not a great deal is used to weave a rug, it would not be too excessive; and it is nice to know one has the correct materials to use, and with which to work. Ordinary 8/4 Carpet Warp, either singly or doubled, is not satisfactory. DO NOT USE IT.

The yarn for tabby or base of rug is usually a one-ply or two-ply cowhair yarn (cowsilk). A good substitute, since cowhair is a natural product, of course, cannot be had at present, is one of the following: evenly spun jute (J. L. Hemmert Co.), a thin or light weight rug yarn, such as Hemmert’s “Craftsmen Rug Wool” or a newly found “shoddy” one-ply wool which comes in “cops” @ 60¢ a pound from Oriental Rug Co., Lima, Ohio. Samples of the “shoddy” wool and jute are on the sample card. I once used Hertlett’s Rya yarn, because it is a light weight rug yarn, and had good results. Two shots of any of the above tabby weft yarns should be sufficient between each pair of knot rows. Wool Thrams, a thinner grist than any of the above yarns, is excellent, if one could get them. They should be given three shots after each row of knots.

Don’t use too heavy a rug yarn for tabby weft as such a material will produce a flimsy result. Such a yarn produces too much space between the knots, with less compact body than is needed, thus keeping the finished rug from lying flat on the floor. Do not use Chenille yarn for Flosa or Rya for the knots, because, when cut, Chenille yarns unravel. Cotton yarns have their place in weaving, but, to my mind, they have no place in Art Weaving—unless one wishes to weave a bath mat. But who wants to exhibit Art Weaving in a bath room?

For Pattern Weft, or Knots, there is nothing more ideal, now obtainable, than Persian Rug Yarn. Four strands of this yarn are used for the knot tying bobbins and two or three strands for the selvage bobbins—all wound by hand after the manner described on the cover of this Packet. This rug yarn comes in 160 beautiful colors, simulating vegetable dyed yarns. George Berberian, 2805 Summit Ave., Union City, New Jersey, is the real place to deal with. Mr. Berberian will be glad to send readers of these packets his sample swatches. The yarns used on the “Color Key Card” are of the yarn mentioned above. (Please let me add here, even more "hastily" than Mrs. Mary Sendin once did in her LOOM MUSIC, that I have no connection, thank goodness, with any yarn firm and am not promoting any particular yarns—only giving, to my way of thinking, the most serviceable and most economical yarns for use in these techniques, in the interest of our weavers. The yarns mentioned are recommended only from my "shopping around", seemingly endless correspondence and my actual weaving experience with them—and at my own expense.)
In seems necessary again to emphasize the fact that one should not use, for rug weaving, any soft yarns like our so-called "Knitting yarn", "Germantown" and "Shetland" wool yarns. They are absolutely unsuited for Flossa or Rya. And above all, don't use cotton weft yarns. To me it would seem like sacrilege to use a cotton "filler" yarn for Art Weaving. Even for practice work, I do not think it advisable. Use the right yarn in order to get the "feel" of the real materials—while getting the technique "pet". In a "practice piece" one needs a finished result that looks sufficiently enticing to encourage one to go farther and develop an exhibition fabric. I'll wager that people who encourage such impractical wools as suggested above, do so from misguided theory and not from actual weaving experience.

Since Rya, which is woven generally for floor use as well as more generally for wall hangings—or some off-floor use—and Flossa mostly always for floor use, choose a wool yarn that befits these techniques as well as a yarn that weavings deserve. The above mentioned Persian Rug Yarn is ideal for these techniques.

For Snijeflossa (pronounced Snil-jay-flossa) the weft, with the Swedish and Canadians (O.A. Beriau's HOME WEAVING, page 213-214, English version) is usually woven by the weaver on his hand loom, but when again available from our own carpet mills, a Chenille Fur, an already prepared weft used in factories for carpet weaving is more desirable. It is, of course, more accurately woven than the hand woven Chenille weft, and, although it comes "factory made" would not make a hand-woven product any less hand-woven than does any other yarns we now use—-which we use without questioning. (Sample of this Chenille Fur is on the sample card.)

DESIGNS AND COLORS

Designs are first made on cross-section paper—each square representing two warp threads, or one knot. It takes two warp threads on which to tie a knot. Too complicated designs are not advisable at first. However, elaborate designs may be woven in this knotted technique. Two Finnish publications, Finska Rymöläster, (Finnish Rya patterns), Nos. 1 and 2, give handsome illustrations, entirely in color, of Rya rugs. The same patterns may be used for Flossa also. It surprises one what Scandinavian and Finnish weavers do with these techniques. And they are really nice to do.

The design, or cartoon, is NOT placed behind or under the warp threads. The design sheet is placed conveniently near the weaver for reference, while one follows the design faithfully. No less than one knot, naturally, can be incorporated in the design, since one knot—or two warp threads—is the smallest unit in the design.

Scandinavian designs have a peculiarity all their own, just as American Indian designs have their own characteristics. It seems that when we, on this continent, design for these techniques, we miss that necessary something or foreign touch that is typical of the Scandinavian Art Weaving techniques. Such being the case, it is probably well for us to adapt our designs from native patterns.

Although aniline dyes are being used to dye yarns, especially in Sweden, yarns dyed with these chemical dyes do not possess the color quality that vegetable dyes produce. Color, of course, is important, and color in these Art Weaving techniques should simulate the colors typical of Peasant Art Weavings—from which these techniques come. In short, the solution of color selection by the Scandinavians is summed up in the statement of a Swedish teacher, "When I want a color combination, I go outdoors and look at nature. I select, I eliminate, and use colors in proportion to their intensity". Try this sometime. Different seasons of the year will suggest entirely different color combinations. But use the most brilliant colors in small proportions, and the less brilliant colors for your basic colors. I believe, however, that whether you look at nature or not, the good taste of the individual is the important thing in harmonious color selection.
In a later packet I hope to give some valuable suggestions on vegetable dyeing.

**LOOMS**

Flossa, Pysa and Smiljeflossa are woven, preferably on a counterbalanced or jack type loom. Only two sheds (two or four harnesses) are required, unless one cares to weave a patterned bottom or foundation, such as a Rosengang pattern. Then four sheds, or four harnesses, are necessary. All that is required, then, for the regular technique is a tabby shed formation. NO SHED is needed on which to tie the knots, but a tabby shed is used for the bottom or foundation of the rug. The patterned bottom will be explained later.

**THE SELVAGE**

I am making the discussion of the selvage a separate part of the text, because it has been of great controversy. There are several ways to make a selvage on a Flossa rug, but the method I shall give is simple, and I might almost dare to say, new. Four extra warp threads are beamed on each side of the loom, making eight extra warp threads in all. These four warp threads on the right and four on the left side of the loom are NOT threaded through the heddles, but are only threaded through the reed---two threads through a dent. The weft yarn for the selvages are hand-wound bobbins, double or triple strands, of the same yarn that is used for tying the knots. These selvage bobbins are carried over and under two warp threads---by hand. We will later in the weaving process say "darned" in. See Figure 4. Two tabby shots are put in with any type of shuttle, flat, boat or rug shuttle, but if only two shots of tabby are put in the web after each row of knots, then the weft yarn used for tabby must be sufficiently heavy to fill the space between the rows of knots, but not so heavy that the tabby yarn will show through to the surface of the rug. (If you use a flat shuttle for weaving, a good one, maple, may be had from J. L. Hemmett Company for 35c, while I know of another company who prices a similar flat 18 inch and 22 inch shuttle at $1.20---quite a saving!) Any of the weft yarns suggested should give good results. If you have the fortune to use cow-hair yarn, please remember that the fibers are short, thus making the yarn not too stout; consequently, it must be handled carefully.

In weaving the heading---when one begins the rug or hanging---weave about 8 rows of tabby. As the tabby sheds are formed, catch the four extra warp threads on each side of the loom by putting, or "darning", the shuttle over and under two selvage warp threads at a time. Of course, the tabby weft shuttle is thrown from one selvage to the other selvage, just as in any plain weaving, but because the selvage threads are not threaded through the heddles, it will be necessary to pick up these selvage threads with the shuttle for the depth of the heading, both at the beginning and the end of the rug. See Figure 4.

Important: when beginning the selvage with the first hand-wound bobbin (two strands of Persian Rug Yarn) put the end of the bobbin yarn "M" in the same shed that you will for the first tabby shed, after the first row of knots has been tied in, "X". See again Figure 4. It is well, also, to get your very first shed of the heading to correspond with the shed on the drawing (Fig. 4) i.e., the warp thread "S" will be on top of the first shed made. In the drawing (Fig. 4) only two knots are shown, to save confusion, but there will be a knot on every two warp threads---clear across the web---on every two warp threads that are threaded through the heddles. The whole drawing of Figure 4---knots, tabby weft, heading and selvage will be pushed down compactly in the actual weaving, and not separated as in the crude distorted drawing of Figure 4. The "extra" selvage pass or "darning" at "Z" is to fill in the space occupied by the row of knots. Should one "darning" not cover the selvage warp threads sufficiently, put in two "darnings". Whether or not more than one "darnings" are necessary, usually depends on these things: the strength of the weaver's beat of the batten, the weight of the batten itself and the thickness of the tabby and knot tying yarns used. Too many "darnings" may cause a slit, because the tabby weft will not have been adequately caught. The selvage is an addition to any rug, if neatly and accurately done. The four selvage threads must not show through.
the selvage weft yarn. I have dwelt at length on this selvage catching or "Kantverning" as it is called by the Swedish, because I think weavers need a more sure, more simple and more clean-cut way of making the selvages than has yet been introduced to our craftsmen.

THE WEAVING PROCESS

FLOSSA.

Pattern Weft: Persian Rug Yarn, Chinese Rug Yarn ("tomato" colored wool yarn on sample card), Wool Thrums, (carpet remnants) or Scandinavian Porseik (Persian) Wool Yarn. Wind four strands of any of the above into bobbins as instructed on Packet cover. (It might be well, when doing the selvage, at first, to wind 3 strands of weft into selvage bobbins.)

Tabby Weft: Wool Thrums, evenly spun jute, imported Cow-hair Yarn or light weight Rug Yarn.

Threading: One warp thread in each heddle, except the selvage threads, which are threaded only through the reed.

Reed: 6 dents to the inch for 10/5 warp (every other dent of a No. 12 reed); 7½ or 8 dents to the inch for 12/3 warp; 6 dents to the inch for 4/4 Perle Carpet warp.

If one wants a rug about 24 inches wide, use a 24 inch Flossa steel guide. With 6 dents to the inch 144 threads will be required plus 8 extra warp threads for the selvage threads. Tie these 8 warp threads ---- 4 on each side of the loom ---- separately to the cloth beam rod. However, I would suggest that when one is just starting to learn Flossa technique, to omit the selvage and work only with the knot tying. The selvage "catching" requires careful watching, and this makes the learning process a double chore. Flossa rugs can, by the way, be woven always without the selvage, but the selvage, if done well, gives the rug a finish, and protects the edges from undue wear. The selvage bobbins pass over and under two selvage threads in both directions ---- in toward the body of the rug, or the knots, and out toward the edge of the selvage warp threads. Figure 1 shows the knot used for the main body of the rug.

To repeat: NO SHED IS USED WHILE THE Weaver IS Tying THE Knots.

After a sufficiently deep heading is put in as described under the "Salvage" discussion, and the beginning selvage bobbins are laid in the shed on both sides of the loom, the steel guide is laid clear across the warp threads. Since the end "A" of the first knot (and "A" is the end of the first bobbin used) is not attached to any thread, the guide is placed over this end ---- see Figure 2, next page. Of course, the "B" part of the bobbin is yet uncut, and goes under the guide. The bobbin, after "A" has been placed on the warp and under the guide and held by the left hand, is put in between "C" and "D"; under "C", in the direction of the arrow; around "C", up over it, crossing over "D" and over it; around "D" and under it; up between "C" and "D". Then the bobbin, with a quick movement (after one learns the technique), is thrown under the guide. The left hand is over the guide; pressure is put on the guide with the left hand; the bar is tilted upwards, permitting the bobbin to be brought under the guide as at "B". DO NOT TRY TO TIGHTEN THE KNOT made before the Bobbin is Brought Under the Guide. The knot is tightened as the bobbin is brought under the guide and into a position to carry up over the guide as at "B". In other words, the bringing of the bobbin and the tightening of the knot is done in one movement. This makes for speed, after one has mastered the knot tying, as well- evenly tied knots. This process is repeated from the beginning until all the knots are tied. The process is quite simple.

You will notice, however, that the end "E" is now over the guide ---- unlike the end "A" ---- but every knot except the first knot ---- end newly added colors, which will be so-called first knots of that particular color ---- will be like the one at "E". The dotted lines on Figure 2 drawing indicate that the yarn is under the guide. Bobbins of different colors may be added or dropped whenever and wherever one chooses. One knot only may be made ---- if one wishes ---- but each color when added, must be regarded as was the first
Addendum: You will find that the left hand fingers will automatically assist in tilting the guide—in order that the bobbin may pass under—by lifting up on the warp threads.

knot at "A". The little extra yarn from these newly added bobbins may be clipped off with scissors later. When a color is ended in the design, cut off the yarn from the bobbin a little higher than the end would reach to the top of the guide. Trim off afterwards. This is done because when the real loops of the knots are cut, the loop ends will be slightly higher than to the top of the guide, as half the yarn that crosses over the top of the guide is added to the length of the pile—after the loop is cut, of course. Fig. 5 shows this. (Don't worry too much about this point as this will be readily seen after the work progresses.) Use a guide several inches longer than rug width planned.

After the row of knots is tied, put in two tabby shots. Then, and only then, may one cut the loops over the guide. DO NOT CUT ANY LOOPS OF THE KNOTS UNTIL THE TABBY HAS BEEN PUT IN. The tabby "seals" the knot formations. Two tabby shots should be enough if tabby weft suggested is used. Before cutting the pile turn the guide upright, insert Flossa knife in the slit on the left side of the loom, pulled steadily—not too quickly—through the loops, cutting each group completely. The left hand should hold the guide at intervals as the knife is cutting the loops. The guide is then laid aside until one is ready to tie the next row of knots.

When using a selvage with the knot tying, "darn" in under and over two warp threads into the body of rug and cut again from the knots—once, at least—before the tabby weft is put in. After the tabby has been put in from right to left, bring the selvage bobbin up to the tabby, putting the selvage around the tabby weft, and continue "darning" out to edge of weaving, then put in your second shot of tabby from left to right. If the selvage weft does not cover the selvage warp threads "darn" in another back and forth shot before interlocking the tabby weft—for that is really what one is doing with the selvage and tabby threads—interlocking.

While the left hand, or the side of it, is holding down the guide bar, and also tilting up the bar, in order that one may pass the bobbins underneath, the fingers of the left hand are busy picking up the warp thread on which to tie the knots. Usually the thumb is on top of the warp, the first finger inactive, while the other three fingers are under the warp threads selecting the correct two warp threads on which the knot is tied. Be careful not to miss any warp threads while tying the knots.

When the knot is pulled tight on the two warp threads, it will look as though the two warp threads become like one, but this will be righted when the tabby is put in. As soon as the knot rows are completed, "darn" in your selvage yarn thread, then the tabby shot from right to left. This will become a habit—and a good one.

In winding your bobbins for the knots, take about 56 feet from the skein; fold the length in half, fold in half again and this will make a bobbin easy to handle.
Rya is done exactly like the Flossa technique with these exceptions: a 7/8 inch steel guide is used for tying the knots. The knots must be longer. The best warp to use is the 10/5 linen, although 18/4 linen will do. One may also use the 4/4 cotton Perle Carpet Chain warp (Tinkler & Company—see "Sources of Supply" sheet, Packet I). The same weft yarn, Persian Rug Yarn, is the best now obtainable in this country. Bernat's Tapestry Yarn would do well for wall hangings in Rya and Flossa, but not for rugs. The Swedish and Danish have a "Taeppegarn" (Rug Yarn) of one- ply—looks like Bernat's Woolspun, but is much thicker and of a hard, long fibered wool. The Danish Persiak-garn (Persian Yarn) is really exactly like the Persian yarn I have recommended, except the Danish yarn is vegetable dyed, while the Persian yarn in this country is chemically dyed. The Swedish and Danish yarn firms have yarns of all descriptions that are never seen in this country, but, unfortunately, cannot be had at present. Let us hope that some day soon we will be able to get them.

The same reed set-up for Rya is advised as for Flossa—6 dents to the inch, but there will have to be more tabby shots—or binder shots—in the Rya than in the Flossa. This is because the higher steel guide is used, which, of course, will make longer loops when cut. Weave only sufficient tabby shots, however, so that they will not show through to the surface of the rug or hanging. If one makes a selvage on the textile, there will have to be more "darnings" than was suggested for Flossa. Individual weavers will have to determine this, since hardly two weavers weave exactly alike.

An additional suggestion about selvage "catching"; be sure the tabby thread or yarn lies just beside the selvage weft thread that catches it—neither on top nor under the selvage weft thread. A neat selvage is thus assured, if this is watched closely.

Some ancient Rya have a patterned bottom or foundation. A photograph of such a textile may be seen in May Sterner's HOME CRAFT IN SWEDEN, page 78, English translation. The best draft to use, if one wishes to try this novelty, is the draft given below.

**NOVELTY RYA WITH KORNDRALLS BOTTOM**

This draft above is the old Art Weaving Rosengang threading with double threads on harnesses 1 and 4, so that two warp threads will be together on which to tie the Rya knots. Use harnesses 1 and 4 for tying on the knots, on a counterbalanced loom, and harnesses 2 and 3 on which to tie the knots for a jack type loom—-as well as the Structo table loom. The two designated harnesses are used at the same time, of course, both being tied to one thread. The foundation or tabby is put in on the harness combinations of 1&3, and 2&4 on a jack type loom while the true tabby (counterbalanced loom) is 1&2, and 2&3. The pattern threading is given on the draft—-that is the Rosengang pattern of the foundation. This pattern of Rosengang will show only on the underside, but if a Rya or Flossa is made with only a part of the surface in the pile loops, the rest of the rug surface will show the Rosengang pattern. The Rosengang pattern is woven with the same tabby yarn as is the tabby or binder—-with jute, cow-hair yarn, etc. The regular overshot Rosengang threading may be used, but the draft above is more workable for this technique. Of course, if this Rosengang threading is used, four harnesses will be required, while regular Rya requires only two harnesses, or a threading that will give the two plain weave sheds.

**HALF FLOSSA**, also known as Relief-Flossa. Background is a flat surface, pattern is raised. This type of Flossa is used mostly for finer textiles, for only the design is knotted——more generally without a selvage——for use in scarfs, cushions and hangings. A smaller guide ——1/4 inch high is used. Both wool and cotton weft yarns are woven into this technique. When one has learned Whole Flossa technique, one can readily weave the Half-Flossa. The basic principles are the same. The technique is used for rugs, also.
CORRECTIONS AND ADDITIONAL INFORMATION FOR PACKETS I, II and III.

PACKET I. On page 2 of KROKBRADG, line 26, please change the word "shades" to sheds.
Page 1 of MONK'S BELT, line 11, the word should be (Konstvaynad).

PACKET II. Please add the following to the Rosengang "Set-up": Thread one warp thread through a heddle. For 12/2 linen warp and 16/4 cotton warp or No.5 Perle cotton warp, use a No.10 reed, with one warp thread in each dent. For 10/2 warp a 12 dent reed, one thread in a dent, should be a satisfactory sleying. Use this set-up for all the three and four harness threadings. The woven samples have a 16/4 warp, sleyed 10 to the inch.

Some of the paragraph on eight harness Roseganger is certainly confusing!!!

On page 6 of Rosengang, beginning with line 10, from the bottom of the page, have it read thus: As there are 8 shots of weft for each row or "line" of pattern design, fine weft yarn must be used, 2/18 Weaving Wool, Fabri or Bernat's Afghan, single strand. Set warp far apart in the reed, set at 8 or 10 to the inch (preferably 8 to 10 inch) should give you the desired result. Thread one warp thread through each heddle and one thread in a dent of the reed. 16/4 or 10/2 cotton warp are good for this 8 harness threading.

IMPORTANT! It has been called to my attention that in some sections of the country, because of climatic conditions, it is not advisable to use wool yarns. In such an unfortunate situation, rather than be deprived of these Art Weaving techniques, I would suggest Candlewick yarn for weft, or the No.5 and No.3 Perle cottons. Lily Mills Co. has excellent Perle cottons, and Sears Roebuck and Montgomery Ward have candlewicking yarns. The colors, however, in candlewicking yarns are limited, but this yarn is superior to the soft cotton fillers now on the market. Candlewick yarns are mostly 11 or 12 ply yarns. Candlewick yarn would be a good substitute for wool yarn, in this case, for Flossa and Rya------but Candlewick yarn is still cotton! The result? I guarantee nothing.

PACKET III. Subject: NOVELTY RYA WITH KORNDRALL BOTTOM. The following should make this technique more clear. Korndrall threading is simply the Ancient Art Weaving Rosepath with 2 threads on harnesses one and four, instead of the regular one thread on these two harnesses, i.e., 4, 4, 3, 2, 1, 1, 2, 3, instead of 4, 3, 2, 1, 2, 3. With this Korndrall threading use a No.10 reed, with a No.6 (19/6) FORMOS LINEN THREAD warp (Ederer, Inc.) or a 20/9 Cotton Gilling Twine. I have been advised by Ederer, Inc., that the readers of the Packets may have this 20/9, and other Cotton Gilling Twines wound on 4 oz. tubes for them at about $1.40 a pound. This Gilling Twine is what Packets IV and V need for warp, and have been most fortunate in being able to get the 12/6 from Ederer, Inc.) One thread through each heddle and one in each dent of the reed. On Korndrall this will give 3 knots to the inch. If a No.6 reed were used with Korndrall, one would get only 2 knots to the inch. This would be too nice a textile. In the special woven sample of Rya (mentioned elsewhere) I am using the Ancient Art Weaving Rosepath threading, end tying the knots on the warp with a closed shed (no shed). I am using a No.12 reed, with a thread of 10/5 Linen Warp in every other dent, with the bottom design in Persian Rug Yarn, single strand, and a cow hair tabby weft. (Write Ederer for samples of two above warps.)

It is well to note here that the bottom of the rug is the side to show the Roseganger design, but, of course, it is not the "top side" while weaving on the loom. The design that shows on the "top side" is the reverse of the one that shows on the underside. Therefore, one uses, in weaving, the rising shed threading on a counterbalanced loom in order to get the desired design on the under side, and vice versa. For threading, when using Korndrall (refer to page 10, Rya) or Ancient Art Weaving Roseganger threadings, on a rising shed loom THREAD as thus: (Page 10, tie-up) 1, then 2, then 3, then 4, then 3, then 2, then 1---tabby one shot after each pattern shot, 1×3 harnesses from right; 2×4 harnesses from left. On a counterbalanced loom use THREAD 3, then 4, then 1, then 2, then 1, then 4, then 3. One shot of tabby after each of these pattern shots---1×4 harnesses from right; 2×3 harnesses from left. The same weft yarn may be used for tabby as well as pattern weft; a color pattern weft (one strand of Persian Rug Yarn) may be used for pattern shots, and cow hair for tabby, or a substitute such as jute, "shoddy" wool weft (gray speckled on color card) or a thin rug yarn. A 7/8 inch metal guide is used for all Rya mentioned. One may weave two shots of each pattern shot, repeating the middle shot and breaking the design in half by a row of Rya knots---half, then on one side of a row of knots and half of design on the other side of this same row of knots. As indicated on page 10, Rya, both tabby and pattern shots may be of the same weft yarn; in this case, cow hair or similar yarn.
Addenda: FOR THE ROSENGANG PACKET. Some weavers may not like the thickness of the Rosepath woven samples, but coarser yarns were purposely used so that the technique could be more readily observed. For a lighter weight textile use Bernat's Fabri Wool Yarn, or a more fine yarn such as Bernat's Afghan. Afghan comes in a good assortment of colors. Use either doubly or singly. For the eight harness Rosepath, Afghan would give a beautifully textured fabric. Finer yarns, however, require more time to weave a certain length of web.

SPECIAL NOTICE: JUST RECEIVED! Samples of excellent quality tightly twisted linen warp for Flossa and Rya techniques, called FRESHOND LINEN Lockstitch Thread, from Eders, Inc., Unity and Elizabeth Streets, Phila., Pa. Comes in 10 different thicknesses. The lead of this thread is 19. The No.10, which I recommend for Rya and Flossa, has 556 yds to a pound. This thread is the nicest linen warp I have seen, and the price is more reasonable than less desirable linen warps. A sample of the No.10 is on the sample card. And Eders, Inc., will supply this warp on 4 ounce tubes for readers of the packets. Write them for prices.

AFTER WAITING SEVEN MONTHS, the following items below have arrived from Sweden. The prices given—although some may sound fabulous—are "cut rate". The supply is limited and all items are offered "subject to prior sale"—first come, first served. Should you send for any item and we are out of it, your money will be promptly returned. THESE ITEMS ARE NOT OFFERED FOR SALE TO CANADIAN WEAVERS. Add 5% of your order for postage and packing.

- No.13—Open bottom Shuttle, with rollers (20 only) Birch, plain tips ............. $1.75 each
- No.12—Double Bobbin Shuttle, closed bottom, to hold two bobbins, bone tips ........ 2.50
- No.18—Small Shuttle, closed bottom, bone tipped, excellent for small sheds, 8 inch ........................................ 1.75
- No.68—Unusual shaped Rug Shuttle, thin type, semi-closed ends, 19 inches long ........ 1.25
- No.54—Flossa Knife, with plywood guide, Swedish Steel blade .................. 3.75 Only
- No.49—Flossa Steel Guide, to weave 8 inch rugs ........................................ 1.25
- No.61—Umbrella Swift, unfinished wood, but strong. For skeins of wool .................. 3.75
- No.62—Bobbin Winder, none better made than this imported winder, winds swiftly .... 4.50

Please Notice: I do not have any yarns for sale, at present. Minerva Shantz, 106 Filbert Street, Kitchener, Ont., Canada, advertises Handspun, Vegetable Dyed Yarns for sale. Write this lady for information. **AFTER JUNE 10, 1948, only orders for the entire seven PACKETS will be honored at the price of $13.50. Thanks for your many wonderful complimentary letters about the PACKETS! EWH.**
Reservations or buying of these PACKETS does not entitle the purchaser to correspondence about the techniques nor criticism of work done from these techniques. I would like to be able to serve my readers in this way; but, if I did, no time would be left for the actual preparation of the PACKETS.

Therefore, should anyone find it compulsory to inquire about the techniques, or wish constructive criticism on work done from these techniques, it will be necessary to make a charge of $1.00 for each inquiry by letter, and $1.00, plus postage, for the criticism of any woven material done from the techniques of each PACKET.

Sincerely yours,

Elmer W. Hickman
Snijflossa or Chenille Flossa is a textile which is woven from Chenille Fur or yarn, without knotting——with a pattern or just a plain surface. When the Fur pile is pushed through the warp to one side or surface of the rug, the result is similar to real Flossa. However, this is not always done, but more often the Chenille Fur is put in the shed and let go where it will.

There are two processes to real Snijflossa: the weaving of the weft yarn itself and the weaving of the actual rug, after the weft yarn has been produced. One may find accounts of this process in the Canadian book mentioned previously (HOME WEAVING), and in these Swedish sources: Sigrid Falgren's VAVBOK, Vol.II, pages 52, 53 and 54; also Falgren's new edition, pages 71 and 72; Mulda Peters' VAVBOK, page 91, under Konstvävand; Mary Block's DEN STORE VAVBOKEN (THE BIG WEAVING BOOK), pages 140 and 141. Mrs. Mary Atwater also devoted the March, 1958 number of SHUTTLE CRAFT BULLETIN to this weave.

The weft yarn, or Chenille Fur, is woven by the draft given in Figure 1. A good stout rug yarn, such as Persian Rug Yarn or Bartlett's hard twisted 3-ply, is best to use, although the Swedish recommend their one-ply Mattgarn or svenskullgarn. The Swedish also use cloth strips to make this Chenille Fur.

Warp: 16/2 cotton or a cotton yarn of equal grist.
Weft: Persian Rug Yarn or Bartlett's 3-ply yarn (Homespun), wound double in the shuttle.
Reed: 15 dent.

Threading: The pattern draft opposite is the threading draft used by modern Swedish weavers. The draft is divided by double lines into eight threads. These 8 threads are threaded through the heddles, according to draft, and all eight threads are threaded through one dent of the reed, skipping 6 dents between each dent with the eight threads in it. Should one want a higher pile weft yarn, skip more dents than six.

About 22½ times the amount of this Chenille yarn is required to make a rug the desired size; i.e., a rug 24 inches x 40 inches would take, at least, 24 x 120 inches (33⅓ yards) for the width, and 2 times 40 inches (the length) or 80 yards. It is well to weave more, say, 100 yards for a 24 x 40 rug. This will allow for the curving the weft takes in the shed.

The weaving of this Chenille Fur is simply Tabby weaving (no tabby thread between the shots, however). When the weaving is finished, the web is cut into strips, at "X", and thus the Chenille Fur weft yarn is formed. Each group of warp threads will have the "cut pile" on each side of the warp threads. A sharp scissors should be used to cut the strips. The lengths of Chenille yarn are taken from the loom, and each strip tied at both ends to prevent raveling. If rags are used for the weft, instead of wool yarn, the rags must be cut fine, such as 1/4 inch wide. A good example of rag Snijfle may be seen in the color illustration on page 72 of Falgren's VAVBOK. Although this rug is woven differently than is described herein, the effect is the same.

Of course, wool rags are better to use than cotton ones.

The ordinary way of weaving the actual rug in Snijflossa is with two harnesses.
but one may also thread the loom with a three harness threading as: 3, 2, 1, 2, 3, 2, 1, 2, and repeat. This threading some weavers prefer as it will give the regular tabby (1A3 and 2 a lone) and a third shed formed by either treadle 1 or treadle 3, with the warp threads far apart to take care of the heavy Chenille Fur weft. If one wishes all (or nearly all) of the Chenille pile to be on the top surface of the rug, one will have to do so with a table fork, or some similar accessory. But if one would rather have the rug with the appearance that the old Olson Rug Company's rugs had, then just let the Chenille Fur weft go where it will. This will give a two surfaced rug, with both sides of the rug fairly well covered with pile. Furthermore, these two surfaced rugs may be woven without tabby—and very quickly—if the 4/4 warp is set at 10 to the inch and the 10/5 warp is set at 10 to the inch. The 10/5 warp may prove a little too heavy for this process; if so, then use a 12/5 linen warp.

In the weaving of the actual rugs a heading of one strand of weft, same as the warp yarn, should be put at the beginning and at the end of the rug. No selvage is woven on the Snijle rugs. One must be careful to allow the heading weft to lie loosely in the shed, and not to pull in the edges of the warp. The Chenille Fur is thicker than this heading weft, therefore, one must make concession for this. The Chenille Fur is fastened around an outer warp thread and put back into the same shed as the weft shot occupies—when beginning to weave or when a new weft strand is added to the weaving. If a binder is used, put in two weft shots of tabby after each shot of Chenille. Tabby to be same as warp.

Attractive are the Snijflossa rugs that are just "hit and miss," or with a plain color body with 5 inch stripes at either end of the rug. If a pattern is desired (which I wouldn't advise doing at first), the weaving, at once, becomes extremely important, and requires pre-determined calculations for the design. When factory-made rugs are woven of this Chenille Fur, the design is first woven into the Chenille weft; then the weaver, generally using a fly-shuttle loom, shoots the fly-shuttle through the shed and places the design (usually the design fits almost exactly), so that all the "curly queues," "spirals," rings, leaves, "posies" and "what-have-you" come at the right spots and form the design, as we see it, in the finished product. We cannot do this very conveniently, but we can put in different colors of weft at pre-designed places and form patterns.

AMERICAN VERSION OF SNIJFELOSSA.

When again obtainable, one may weave a rug in one simple operation, with factory made Chenille Fur. (I have tried to get a source for the readers of these packets, but answers to my many requests have been a polite "No." I bought 50 pounds of this Chenille years ago—-—it's tantalizing to tell you this—-—but I paid the extravagant price of 20c a pound for millends of this Chenille Fur. The samples on the Color Key Card are of this factory-made weft yarn. Perhaps some of our weaving friends may have some influence with a carpet factory and thereby be able to help us.) From this Chenille, I wove two types of rugs—one with tabby and one without. They were woven with a plain weave threading. The rugs without tabby were woven with the 4/4 Carpet Chain warp, set at 12 to the inch. These rugs have been tub-washed, time after time; have had hard wear, and are still presentable after ten years. The other rugs were woven with a 10/3 linen warp, set at 12 to the inch. The Chenille weft was pushed through the warp, on each shed, with a silver table fork, down onto the under side of the fabric (like weaving wrong side up). The binder was Berlett's light weight Rug Yarn, two shots between each Chenille weft shot. This latter rug has the appearance of a closely woven Flossa technique rug. Both rugs lie flat on the floor, and both are attractive in their simplicity. The first rugs mentioned were two surfaced rugs, the latter ones had a plain color body with stripes at either end. Even though we cannot get this Chenille Flossa at this time, the samples will serve to show what the factory-made Chenille Fur looks like, as well as what one might expect to see by weaving one's own Chenille weft.

Let's hope that some day soon we will be able to get the factory-made Chenille so that weavers might enjoy weaving the Snijflossa type rugs—-—American style.

(The sample of Snijflossa enclosed is woven with factory-made Chenille Fur yarn.)

Loom Craft Studio, Wilmington, Ohio, is planning to supply the Flossa guides and knives.
"TAHEY" TALK

The Packets, because of the woven cloth samples and being less than eight ounces in weight, have to be sent by Third Class Mail, which takes a "back seat" for other mail classifications. Thus the delivery of the Packets is delayed. This delay, especially, is noticeable when mail has to be transferred to other railroads and through numerous post stations. Therefore, give the poor Packets a chance to reach their destinations before writing me. This will save me considerable time that is otherwise wasted on seemingly endless correspondence. This "saved time" can be more adequately employed toward the production of the Packets, since I must do most of the work myself. There is one consolation, nevertheless, about these many inquiries I receive, and that is that so many are extremely concerned that they do not want to miss getting the Packets. Most of the subscribers have been most patient for which I thank you. Of course, in case a subscriber does not receive any Packet within a reasonable length of time, say two weeks after mailing, I shall be only too glad to know about the matter and replace any Packet not received.

Some of the Packet readers have already asked about Rya samples. These inquiries have prompted me (I don't have enough to do, as is), while the linen warp is still on the loom, to re-thread the set-up with the ancient Art Waving Rosengang and weave some Rya samples with the Rosengang bottom or base, described in Packet III as "Novelty Rya". These samples will measure about 2\(\frac{1}{2}\) x 4 inches (more or less); woven with linen warp, the Rosengang base in cowhair weft (imported), with Persian Rug Yarn for the Rya surface, embellished with a very simple design. The samples will be mounted on a card, the Rya surface brushed, enclosed in a glassine envelope, and mailed, postpaid, first class for $1.00—to any address in the United States. (Sorry, none mailed to Canada.) Orders for Rya samples must be sent in immediately so that I can determine how many to weave.

Inquiries have come to me about a cloth label similar to the Homespun paper label that is so popular. The same firm that prints the paper label have suggested their cloth Homespun label (sample attached) might be extremely useful to weavers. They are! One's work can be very conveniently labeled by simply pressing the label on a textile or fabric with a medium hot iron. The label is there to stay, "tub fast" and "adhesive fast". The price of these Homespun labels, in 9 different colors, is 50 labels for $1.00, 100 labels for $1.75, 200 labels for $3.00. Send remittance and order to me with wanted imprint plainly typed or printed. Labels mailed free. (Sorry, none mailed to Canada.)

May I also add here that I do not sell yarns of any kind, nor do I sell looms. However, in Packet IV, I hope to be able to have good news for Packet subscribers about a new two harness upright tapestry loom, which I and a well known loom maker are planning. The loom will be a floor model, with treadles to change the sheds and a moving reed to beat down the work. Since Packets IV and V are the numbers particularly concerned with this type of loom (although any two-harness loom may be used for these two mentioned Packets), I expect to have a report on the working possibilities, description and photograph of the loom. Such a loom, of course, is an accessory to a weaver; therefore, consequently, this particular loom will be reasonably priced. More about this tapestry loom later.

Some of the future Packets will contain photographic reproductions of exquisite modern Art Weaving textiles—through the courtesy of Den Norske Husflidforening (The Norwegian Home Craft Association) of Oslo, Norway. I consider it a rare privilege to be able to offer these reproductions, for the first time, to Packet readers, all designed by eminent textile designers. And I am extremely grateful to this wonderful group for their kind generosity in permitting us to use these photographs.

Sample of the No. 10 Formost linen thread is on this sheet instead of on the Yarn Sample Card. I have a letter today that Mr. Berberian will supply Persian Rug Yarn in 4 ounce skeins, making possible a larger variety to individual weavers at not too great an expense. The Persian Rug Yarn is also "moth proofed".