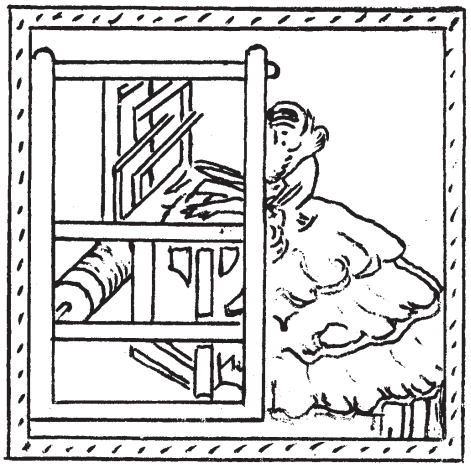
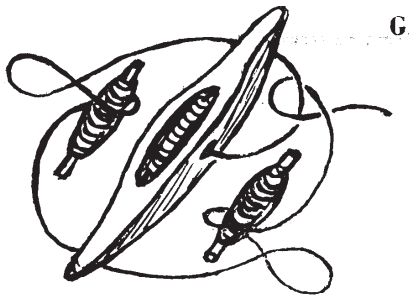
MANUAL

of

HELPFUL HINTS FOR HANDWEAVERS



OSMA GALLINGER TOD
CREATIVE CRAFTS SCHOOL



GENERAL HINTS TO THE WEAVER

There are various points of value to observe in the handling of one's loom and the weaving process itself. If the following suggestions are carried out, one's weaving will prove more enjoyable and the product is apt to be more satisfactory. These recommendations are the result of a lifetime devoted to one aim,- to make weaving easier and more rewarding for its many devotees.

1: Comfortable Position.

You will enjoy weaving much more if you are in a comfortable position. Choose a chair or bench of the right height for you. A chair provides the added comfort of support to the back between action periods. If you weave for long periods at a time, use a cushion. Sponge rubber knee pads are excellent.

We cannot recommend a standard height chair; every weaver prefers his own choice;but be sure to find a height at which arms and feet work freely without tiring. A good rule to follow is to sit at such a height that when the shuttle is in one's hand ready for weaving, the forearm slopes slightly downward from the elbow. This avoids the constant lifting of the weight of one's arm.

Also if possible, the treadles should be in such a position that the thigh can slope downward from the hip to the knee, thus avoiding the constant lifting of the weight of the leg.

2. Adjust Your Loom.

Be sure that your loom is working smoothly and that it provides a wide straight shed. A shed of from 2" to 3" is adequate for a throw shuttle $\frac{3}{4}$" to 1" deep; and a shed of 4" to 5" is adequate for a rug shuttle of rug yarn. The rule is not to have the bobbin of the shuttle "scratch" or rub against the top half of the shed.

Moreover, when the shed is made,the lower half of the warp threads should lie flat on the shuttle race, or bottom of the reed. If they do not, one should either lower the harnesses a bit, or adjust the beater to be a bit higher. *(See separate page in "Handweaving Hints for Everyone," The Adjustment of Your Loom.)*

3. Tying Down The Warp. Starting To Weave.

Select the method you find most efficient. Take time to get the tension perfect. Do not waste warp thread where the warps gap between sections of tie-down; rather weave in two 3/8" dowels, one on each shed, to pull warps together. Some weavers use heavy rags. *(See separate page, Ways to Cut Off and Tie Down)*

4. Practise Winding Bobbins.

A well wound bobbin can be the secret of weaving smoothly and maintaining a good selvage. When a bobbin is poorly wound, it will jerk in the shuttle, cause a dent in the edge, eventually hold up the works. Bobbins should be so wound as to flow smoothly,and they should be hard and firm. It will pay to practise this art. *(See separate page, Winding Bobbins, in "Handweaving Hints for Everyone"*.

5. Throwing The Shuttle

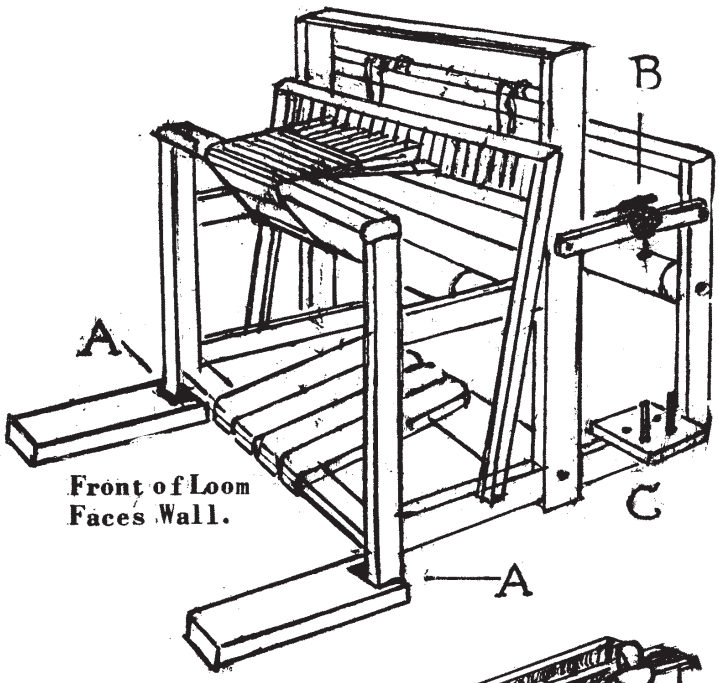
Practise throwing the shuttle through the shed with smooth even motion. Acquire a "weaving rhythm",- this too helps produce a good selvage. As you catch the shuttle,let it lie flat in the palm of the hand with the thumb just touching the bobbin, as well as preventing its unreeling. The thumb is the regulator of the tension on the weft thread. If you have been taught some other method, just be sure that one of the fingers controls the bobbin and its unreeling thread. It saves time to keep the weft short.

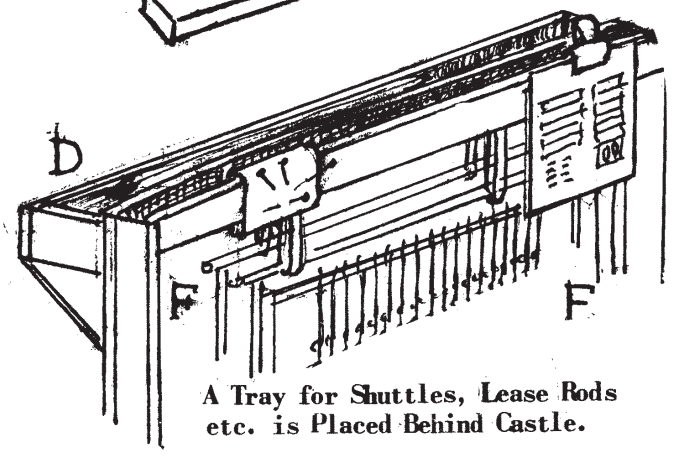
6. Beating The Warp.

The last row of material between the finished cloth and the unwoven warp is called the "Fell" of the cloth. The edge of the cloth or fell, should always be parallel to the front and back beams. To keep the beater square, so that it will produce this parallel edge, always place the hand on the center of the beater when beating.

It is hard for beginners not to beat the warp too frequently. This wears out the warp as well as the weaver. Beat once, change shed and beat again. For textures beat once.

YOUR LOOM- ITS PLACEMENT AND CARE





A Tray for Shuttles, Lease Rods etc. is Placed Behind Castle.

Handy Additions To Your Loom

Arrange for the efficient winding of bobbins at the back of your loom, as at B,C. A shelf. B, is of 5-ply. Bore holes for several 1/4 in. dowels to hold spools of yarn when winding, as shown at C. Directly above this fasten a bobbin winder, as at B. This arrangement saves time and space when necessary.

A Tray For Lease Rods, Shuttles, Scissors, etc

Somewhere along the sides, back or top of your loom, it is a good idea to fasten a long narrow tray or box to hold warp sticks, shuttles, scissors, etc. We attached such a box to the back of the loom castle, as at D. It was made of finished lathe, which is 2" wide and is easily nailed together into a tray 2 wide, 2" deep, and length desired. It was fastened to back of castle with screws. If one wishes a wider box, cut 5-ply and support it as shown. This tray proves ever so handy.

Use A Clamp to fasten directions, E, to top of loom, and attach a pin cushion, F, nearby.

To Keep Your Loom From Slipping

A loom tends to come forward as one weaves. One can of course place the loom on a carpet, but unless one protects this with a sheet, it soon becomes covered with lint.

Some weavers place small squares of sponge rubber under the legs of a loom to keep it from slipping, but in hot weather rubber tends to soften and leave a residue on the floor. However, certain kinds of hard rubber may prove satisfactory.

The best way to keep the loom in one spot is to turn the front of the loom toward the wall, in which case the weaver faces the room. This is no hardship for the weaver and if the warp of the loom is in neat condition, the back of the loom does not present an untidy appearance. Secure two solid pieces of wood, preferably 2 x 4's, notch them at one end as shown at A, and place them between the front legs of the loom and the wall. With this bracing, the loom is held firmly and does not move.

If one prefers the front of the loom out in the room, one can have a 2 x 4 fastened to the base of the wall in back of the loom, insert heavy screw eyes, and tie the loom legs to these. This makes a good solid fastening

One's method of beating also has something to bear on the shifting of a loom. A sharp, short, compact beat is not so apt to bring the loom forward rapidly as a long heavy beat.

Know All Parts of Your Loom

Master the tie-up which is essential and work out solutions to each process so that you can work efficiently. Check the shed, the balance of the beater, the release of the warp. Be sure your loom gives back to you the enjoyment and production that will make it a good investment. Learn the four knots necessary to keep loom and threads in adjustment, - Weavers' Knot, Square Knot, Snitch Knot and Slip Knot. (See separate page of diagrams). Keep your loom in good repair, waxed or varnished, which makes it easier to clean or dust.

Have a special loom bench or chair that has just the right height for comfort. Some weavers prefer a chair to lean back against for an occasional rest. A foam rubber pad or soft cushion to sit on makes weaving easier.

Arrange Your Equipment. Thread Cases-Storage

Make an attractive weaving corner with colorful threads in the background. Keep them on the shelves of a converted bookcase or in a closet. Take over a bureau, with fabrics in upper drawers, gadgets below, - such as the useful clamps, winders, extra shuttles, heddles, warp sticks, reeds, tape measure, etc.

THE ADJUSTMENT OF YOUR LOOM

The weaver's loom, like the equipment of any craft, should be efficient. It should be strong, in balance, ready to respond to his demands for service. Otherwise it is a poor investment and looses time and money.

THE SHED: The harnesses should be so tied that they may be raised or lowered with comfort, providing a good shed. If the shed is narrow or uneven, it proves a handicap. The points for a good shed are:

1. THE SHED SHOULD BE WIDE enough for the shuttle to go through without rubbing the warp. A narrow shed interrupts the flow of the shuttle and causes mistakes.

2. BOTH UPPER AND LOWER SURFACES of warp threads should be on a horizontal level; if any threads are out of line, the shuttle is apt to slip under or over them, thus causing mistakes.

3. ALL THREADS ON THE LOWER HORIZONTAL LEVEL of the shed should lie hard against the shuttle race, or right against reed base.

JACK AND COUNTERBALANCED LOOMS:

In a Jack loom each harness is attached to a separate lever and works independently of any other harness.

In a Counterbalanced Loom, the harnesses are in pairs, two swung on either side of a roller or pulley, and when one goes up the other goes down. This type loom is also called "Roller-type".

The adjustment of the warp threads to the proper level at which they should lie when the loom is at rest, is different for each type.

LOOM ADJUSTMENT FOR COUNTERBALANCED TYPE: A.B. When the harnesses are all even and the loom is "in neutral" WITH NO SHED, the warp threads, passing from front to back beams, should pass through the reed at a point 1/3 of its distance from base, or a little below its center. See A.

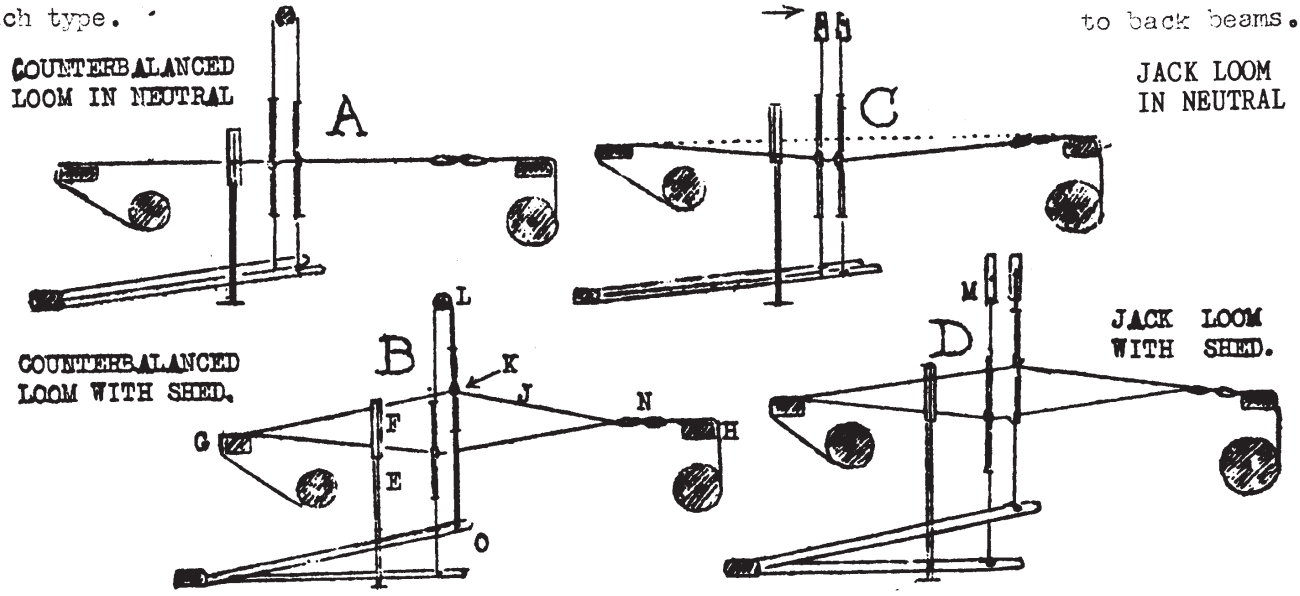
When the SHED IS MADE, part of the warp threads are raised to the top of the reed and part are lowered to its base, See B. By having the warp, when loom is in neutral, a little below reed center, there is greater certainty that when shed is made, its lower level will lie on reed base.

TO ADJUST this type loom, put hand on top of harnesses, press all down level. With harnesses still level, adjust and tie the treadles, making them all level. Now sight across warp from front to back beam. All heddle eyes should be level with this line and the warp threads should pass thru the reed 1/3 of distance from its base.

LOOM ADJUSTMENT FOR JACK LOOM: C.D. When the harnesses are even and loom in neutral, the warp should dip down at the heddle eyes, as at C. ALL THE WARP THREADS lie hard against the shuttle race or reed base.

When the SHED IS MADE part of the warp threads are raised to the top of the reed; the other part remain against reed base. The dipping of the warp makes it sure that the lower part of the shed will rest on reed base when shed is made. See D.

TO ADJUST a Jack Loom, press harnesses down level; tie treadles all level. Sight across warp from front to back beams, and be sure that all heddle eyes are level and below a straight line passing from front to back beams.



E. Beater
F. Reed
G. Front Beam
H. Back Beam
J. Warp Thread
K. Heddle Eye in Heddle
L. Pulley
M. Jack Lever
N. Lease Rods
O. Treadles

The phrase, "tie-up", refers to the tying of several harnesses at once to a single treadle, so that one foot or hand can press them all down with a single action. On a 2-harness loom no tie-up is necessary for the weaver simply alternates single harnesses. On a 4-harness loom a tie-up is not necessary but is often used. On looms of more than four harnesses a tie-up is the accepted method, except for Jack table looms where the hand lowers or raises one harness at a time until all are in position for the shed.

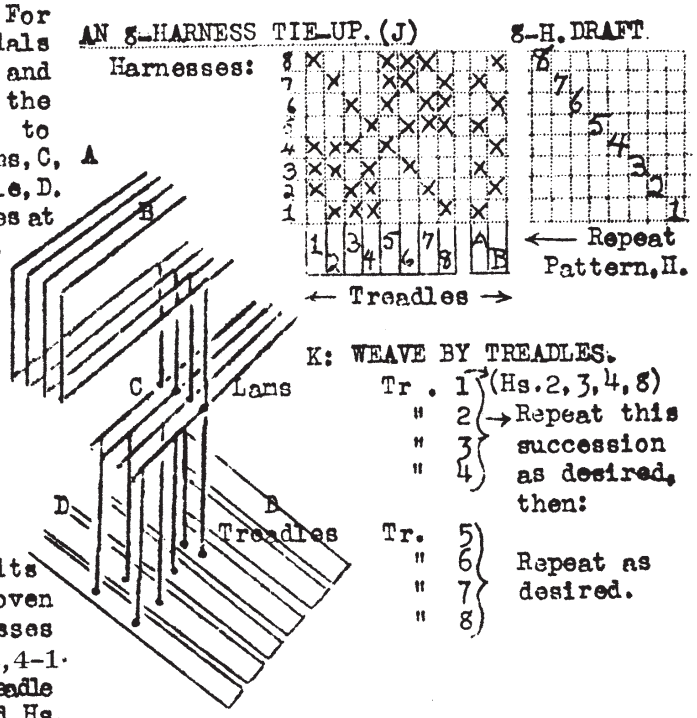
TIE-UP on a 4-HARNESS LOOM. The harness combinations most used on a 4-harness loom are:

Tabby: Harnesses 1 and 3; 2 and 4.

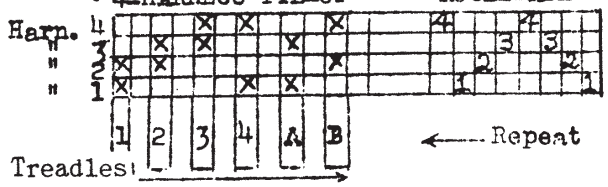
Pattern: Harnesses 1&2; 2&3; 3&4; 4&1.

If there is no tie-up, each harness is connected directly to a single treadle: H.1 to Treadle 1; H.2 to Tr.2; H.3 to Tr.3; H.4 to Tr.4. Two harnesses are thus raised or lowered at the same time by the use of two feet, for H.s 1&2, left foot on Tr.1, right on 2. This works simply and many weavers prefer it to the tie-up. Roller-type looms work best thus.

A tie-up is best for Jack-type looms. For this the loom must have intermediary pedals called "lams", midway between harnesses and treadles, and arranged at right angles to the treadles, as at A. Each harness, B, is tied to a lam, C, directly beneath it. Several lams, C, may be tied at the same time to a treadle, D. The treadle thus lowers several harnesses at the same time, with a single foot action.



E. 4-HARNESS TIE-UP F. ROSE-PATH



WRITING THE TIE-UP FOR A GIVEN PATTERN.

A tie-up, such as E, is given with its draft, F. This pattern, the Rosepath is woven without a tie-up by treadling two harnesses together as follows: 1-2, 2-3, 3-4, 2-3, 1-2, 4-1. For a tie-up, attach harnesses 1&2, to Treadle No.1; Hs.2&3 to Tr.2; Hs.3&4 to Tr.3, and Hs. 4&1 to Tr.4. Then attach Hs.1&3, or the 1st tabby shed to a treadle labeled, A, and Hs.2&4 to a treadle, B. You will see that in the diagram for the tie-up, the horizontal rows represent the harnesses and the vertical columns the treadles. The harnesses tied to each treadle are represented by crosses directly above the treadle.

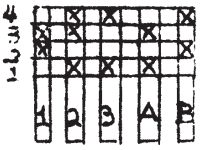
When desired to weave 1&2, use Treadle 1.
" " " " 2&3, " " 2.
" " " " 3&4, " " 3.
" " " " 4&1, " " 4.
For weaving 1st tabby, 1&3, " " A.
" " 2nd " , 2&4, " " B.

The two tabby treadles may be placed where convenient, often at the center, with the following plan: Trs. 1, 2, A, B, 3, 4.

TO ARRANGE A TIE-UP ON YOUR LOOM:

On any given pattern, see what harnesses are to be woven together: such as,- Hs. 2&3; 3,4,1; and 4&1. Attach each combination to a treadle,- 2&3 to Tr.1; 3,4,1 (or three harnesses,) to Tr.2; 4&1 to Tr.3. Put tabby combinations 1&3 to Tr. A, and 2&4 to Tr.B. See diagram at G.

G. A TIE-UP



TIEUP ON MULTIPLE HARNESS LOOMS: Here there are many more conbinations possible, and a tie-up is almost necessary. The pattern at H, is tied up as at J, woven at K.

AN 8-HARNESS TIE-UP. (J) 8-H. DRAFT

K: WEAVE BY TREADLES.

Tr. 1 (Hs.2, 3, 4, 8)
" 2 → Repeat this
" 3 succession
" 4 as desired, then:

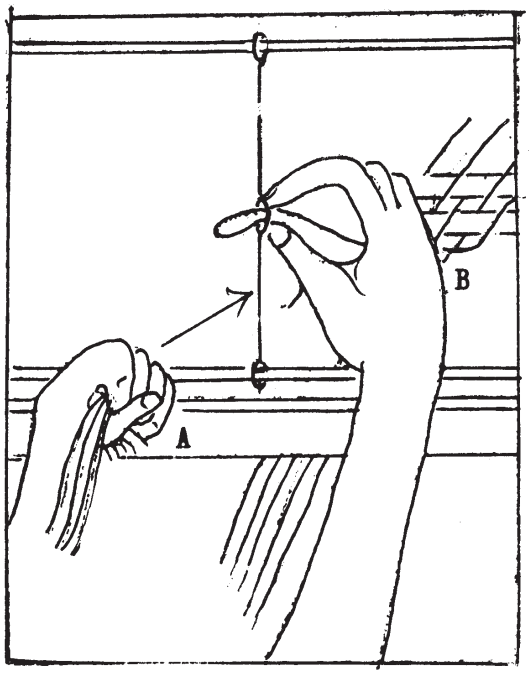
Tr. 5
" 6 Repeat as
" 7 desired.
" 8

HOW TO CHANGE TREADLINGS WRITTEN FOR JACK-TYPE LOOMS TO COUNTER-BALANCED, ETC.

In a roller-type or counterbalanced loom, the treadling refers to the lowering of the treadles; in a jack-type, to their raising. Hence, if directions are given for a roller-type and your loom is a roller type, use opposite treadles, and vice versa.

For 1&2, use 3&4. For 3&4, use 1&2
" 2&3, " 4&1. " 4&1, use 2&3

THREADING A LOOM IS FUN



When visitors look at a loom, the first thing they say is " Well it looks wonderful but how in the world do you get all the threads threaded through?" Don t we all wonder for even though you yourself are a full-fledged weaver, threading a loom may still be your bottleneck. Yet this is the one thing that if mastered and rendered enjoyable opens avenues of ever increasing enjoyment For if you thread easily and do not mind threading you can change your pattern at will and enjoy endless fabric textures and designs both traditional and modern. You can also cover varied techniques, and become a more experienced weaver in far less time than otherwise

Forinstance, here in our studio we set up a warp 18 inches wide for pillow tops, and rethreaded this to many different Colonial pattern motifs to find out more about their effect and appearance if we wished to use them for coverlets or rugs. We thus developed a series of colorful pillow tops.

Another very interesting project is to take the same design and develop it into different techniques. In our book, "Rugweaving for Everyone", on page 184* we give a chart which enables the weaver to develop the same design in ten different techniques.- Honeycomb, Summer & Winter, Bronson, M's and O's, Log Cabin, Six-harness Twill, African Vogue, Overshot on Opposites, Eight harness Twill and Eight-harness Double Face Weave With a knowledge of threading, all this is possible and it is truly fascinating to do.

1. This brings us to the first important consideration in threading develop an incentive and eagerness to discover what patterns look like With a goal in view, one is glad to attempt even a difficult project

2. The second important point is to work out a comfortable and skillful way of threading I get a low chair, so that my arms are level with the heddle eyes and I do not have to stoop forward. I also place a small pillow between my chest and the front beam of the loom, if the distance between the heddles and front of the loom causes one to lean forward. I make myself comfortable before starting, sometimes turn on the radio, (but not TV which is too diverting), and I plan to spend an hour or two of enjoyment

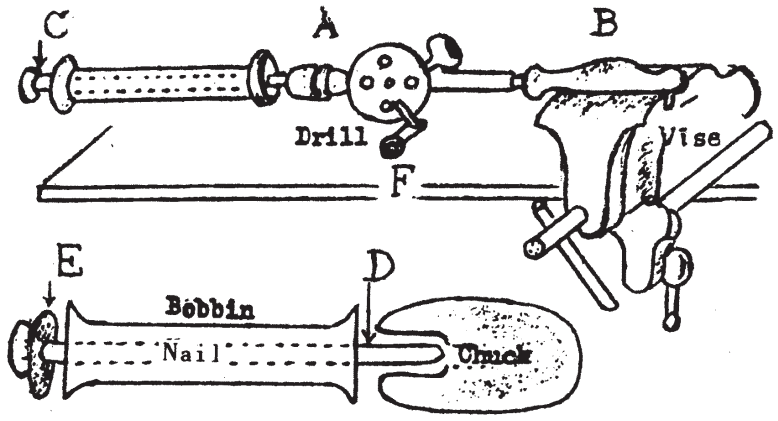
3. Third,- at first it is not wise to stay too long for a single threading period One or two hours is enough and more rewarding than pushing oneself into threading the entire warp at once. One's loom will not run away, and awaits your presence for another session. I use a half hour while waiting for a guest, or while dinner is cooking. Threading takes me off my feet and forms a nice interim The loom is finished in short order

4. Of course there are many weavers who love to thread a loom I myself, if I have the consecutive hours, often go right through a warp Some of my shop weavers in Michigan told me they preferred threading to weaving . Girls in textile mills thread so fast one can hardly see their fingers fly, and they are paid so much a hundred heddles. Learn to concentrate. It is too discouraging and not necessary to make mistakes ALWAYS check each pattern repeat; and if you leave the loom, note your place most carefully.

5. Know your draft. Most always one can group the notes on the draft so as to make them easy to follow. Forinstance in the draft of "Colored Diamond" with 24 warps, one can put circles around four groups of six each, thus: Hs.212121, 1st group; Hs.232343,2nd group; Hs.414141,3rd gr; Hs.434323, 4th gr and repeat We place a pin at the end of each group we are threading. Beginners should carry a pin for each pair only. For efficiency bring the warps under harnesses A, hold with left hand, pull out with right, B.

"*Rugweaving for Everyone", $3.95 , 294 pp; 138 illus.

HOW TO MAKE YOUR OWN BOBBIN-WINDER. ADJUSTABLE WARPING BOARD



The Bobbin Winder

A bobbin winder is quite necessary for the weaver. In most supply houses these cost from $7. to $8. To aid weavers in securing a substitute, we have worked out the following method of using a hand-drill in a vise.

The total expenditure of this arrangement is less than half of a bought winder, and one has three pieces of equipment when finished,- a winder, a drill and a vise.

Method of Making The Winder

Purchase a hand-drill, A, at the hardware store. Use a vise, B, to fasten it sideways to the edge of a shelf or table. The handle is inserted into the jaws of the vise. For the steel pin, C, to hold the bobbin, use a 10-penny nail or 16-penny vise, or the right size nail to hold your favorite bobbins, without having them slip off. Insert this nail into chuck of drill, as shown at D, the point within the chuck.

Now cut out a leather washer, E, to slip between bobbin and head of nail. The bobbin can be pushed against this to increase the friction and thus hold bobbin more firmly in place. The nail is removed from chuck to insert each bobbin. If one can secure a spike without a head, this can be left in the chuck permanently. One can also have the head of the nail removed, thus avoiding taking it out each time. The handle, F, turns the bobbin, just like a regular bobbin-winder. If a vise is not available, devise some method of attaching drill to table.

An Electric Bobbin-Winder

If you have an electric motor from an old washing machine or sewing machine, have the chuck of the drill attached to the shaft of the motor; or secure a pinion that is suitable for your bobbins and have this attached to shaft. The pinion should taper, like the spout of an oil can. This electric winder works well. Have the man of the family help put it together. It will save a great deal of time winding.

Adjustable Warping Board. Warping Suggestions

For an adjustable warping board, use two sections of peg boards and clamp to the opposite ends of a table or to two tables. Move as far apart as desired. A warp up to 15 yds. may be satisfactorily made thus.

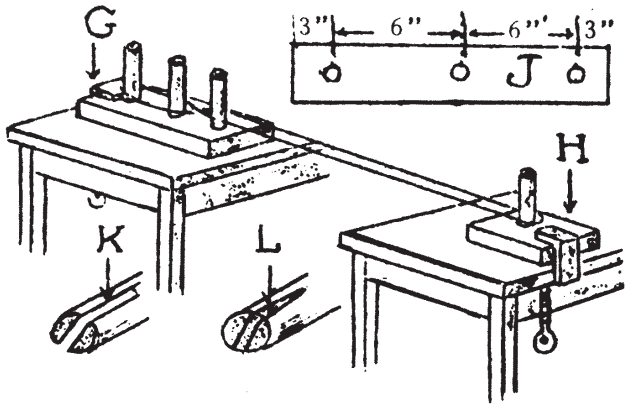
Materials:

For left section, G,- a 2x4 plank, 18" long.
For right section, H,- " " " 6" "
For pegs,- 4 dowels 1" diamer, 6" long.

Method: Bore holes in G, according to diagram at J. Pegs are 6" apart, 3" from ends of board. Bore holes in smaller section, H, for one peg at its center. Bore these holes clear through the 2"x4"s.

At base of each dowel, make a saw-cut 2" long, as at K. Then drive this down into hole. From base of board drive a wedge into this saw-cut , as shown at L. This will hold each peg firmly and prevent bending.

Suggestions: For winding warp on beam, use heavy paper, corrugated paper or thin sticks. In threading warp, start at center at middle of pattern and center of warp threads. This puts warp directly at center to weave.



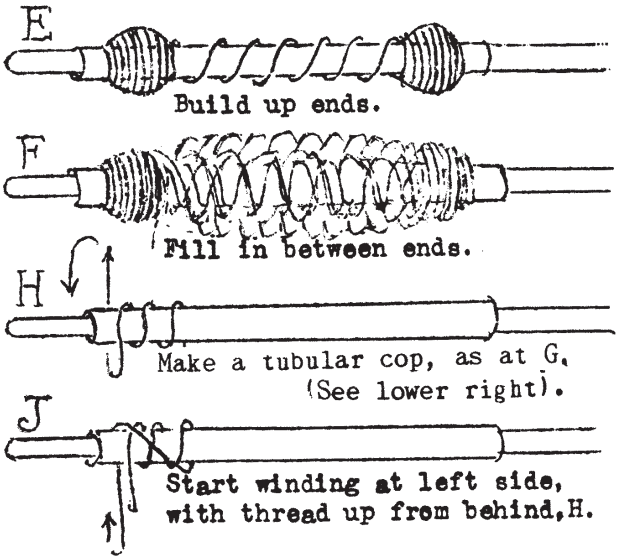
Osma Gallinger Tod Studio
319 Mendoza Ave.
Coral Gables, Fla.

KINDS OF BOBBINS:

The "cop" or "bobbin" is the small tube of thread placed inside of one's shuttle, to use for weft when weaving. If the bobbin is smoothly wound, the thread will unreel from it smoothly and without interference; but if it is carelessly wound,- either too loosely or overlapping at the edges, it will unwind in uneven jerks, or catch around the steel pin that holds it, thus stopping the even flow of the thread. One cannot produce good selvages with poorly wound bobbins.

WINDING A WOODEN BOBBIN:

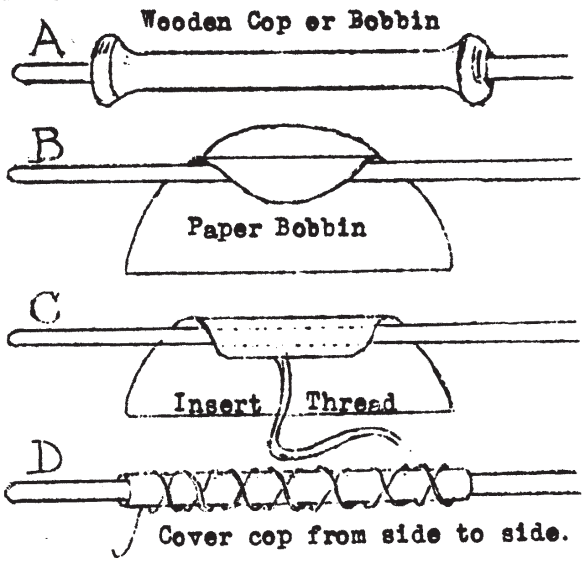
Wooden cops or bobbins are sometimes available, as shown at A. These can be wound easily from side to side, holding the thread taut so that the bobbin will be firm. Tubular bobbins may be made of paper at home, as at B and C. Cut pieces of brown paper in half-moon or oval shape, measuring 1" less in length than opening in shuttle.



HOW TO WIND A TUBULAR CARDBOARD BOBBIN:

Bobbins of stiff paper or cardboard are sometimes available; and one can make ones own at home. Roll ogals of paper around the small end of the metal pin without inserting any thread, as shown at G. Glue down the tab of paper left at last revolution. Let dry. Use this bobbin as shown at H, J. Place end of thread behind bobbin and upward; wind the left end of thread several times around the bobbin; then cross the long end at right in front of these few rounds, as at J. Hold the long end of thread in left hand; turn handle of winder with right hand, and wind bobbin as described at D, E, F.

There are really two good ways to wind one's bobbin. Method 1, shown at D, E, F, is excellent; but one may also wind a bobbin by passing rapidly from side to side, advancing ½ inch, then retreating ½ inch, like a sewing machine bobbin, and shown here at K, L. Each time across leave a bit more at ends uncovered, until bobbin tapers, as shown at L.

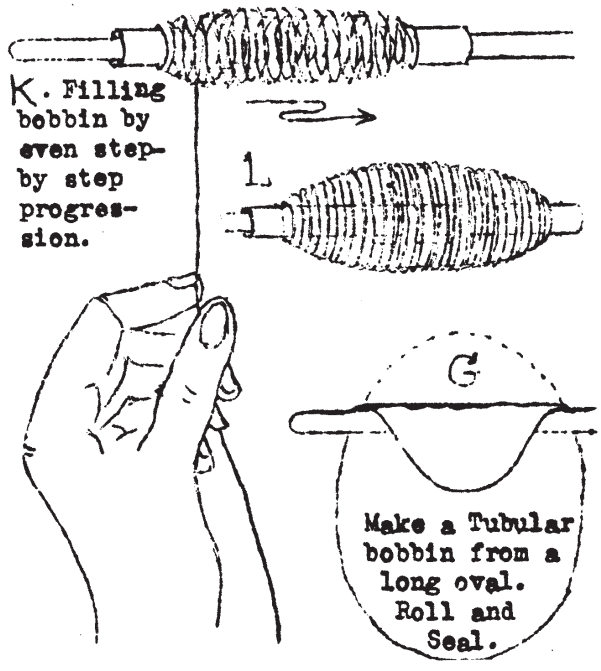


HOW TO WIND A PAPER BOBBIN.

Place the large spool or cone of thread holding the thread for winding, on the floor and if possible on an upright peg to keep it erect. Insert the end of thread under the circular lap of the paper, as at arrow B. Roll the lap of paper over the end, rolling from behind the steel pin of bobbin-winder, as at C. To tighten bobbin, shove it to the right around the thicker end of the bobbin-winder.

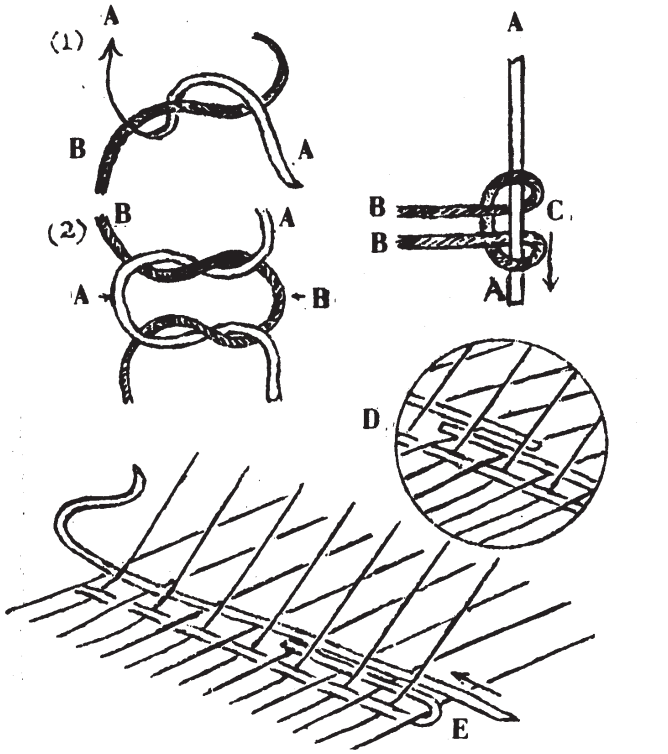
Start winding by passing thread rapidly around the bobbin from left to right, then from right to left, to close the paper, in order to make it firm, as at D.

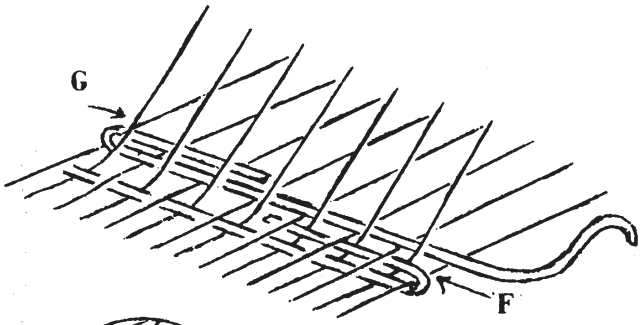
Now build up a small mound of thread at left side, and one at right side, ½" away from end of paper bobbin, as at E. These raised ends take the place of the phalanges of wood on the wooden cop. Fill up the bobbin in between these raised portions, as at F, winding back and forth between ends.

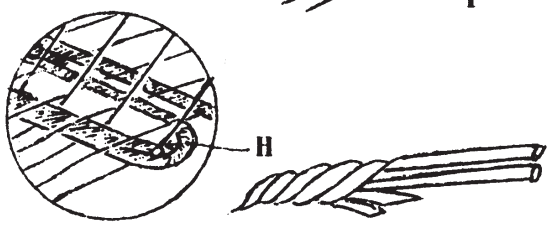


METHODS OF PIECING THREADS

There are several ways of piecing weft threads when a bobbin of thread gives out. There are advantages to each of the various methods described below.







Tear off half of weft

One can also cut half of a heavy weft out, as at I, and if the ends are tapered and matched carefully, this can make a smooth piecing anywhere across the warp.

1. Tying a Knot

When you wish to tie two wefts together to make a longer thread for winding, use the square knot, for this can be untied easily as follows:

Tie knot by putting end, A, over end, B; and again putting end A, which is now on opposite side, over end B. See sketch at left. Tighten knot. To untie, pull on both A ends; the B-loop will slip off, as at C.

This knot is convenient to use for one often comes to a short weft end, - and needs more thread on bobbin, but it has to be untied and spliced when the knot appears in weaving.

2. Method of Piecing, No. 2.

If continuing with the same color and kind of thread, the two ends can be spliced anywhere in the warp, as at D. Ends of wool or linen in which one notes a frayed texture at the end may be pieced thus. Cut cotton ends would show too much. Wherever there would be a lump in joining, piece as at E. Here one makes the new shed and fastens the old end back into this shed; then lays the new end right beside it and trims this off close to selvage, see arrow. The advantage of this method is that the weft thread keeps going in the same direction.

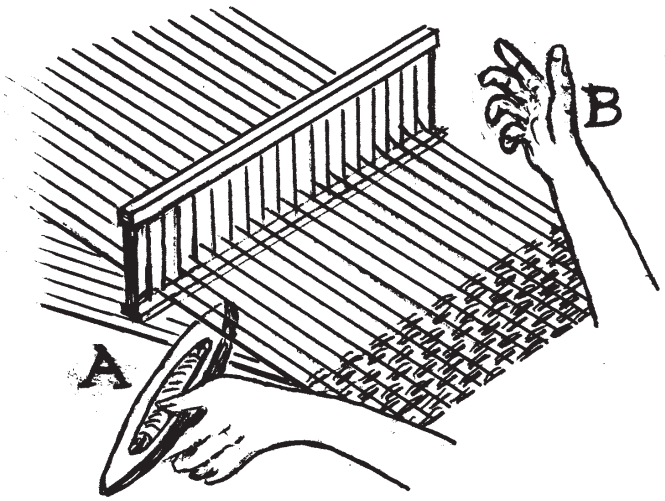
3. Method of Piecing, No. 3

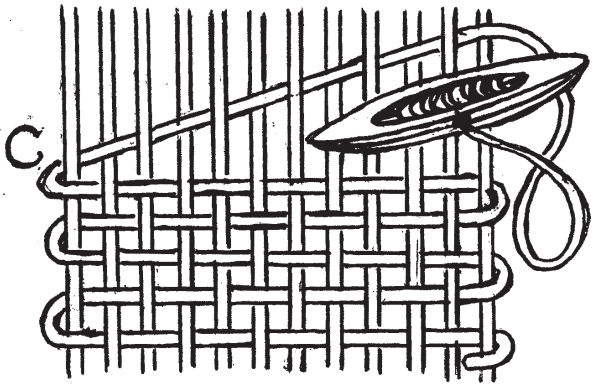
If there is a change of weft thread, such as when the texture or color that follows is quite different, piece as follows:

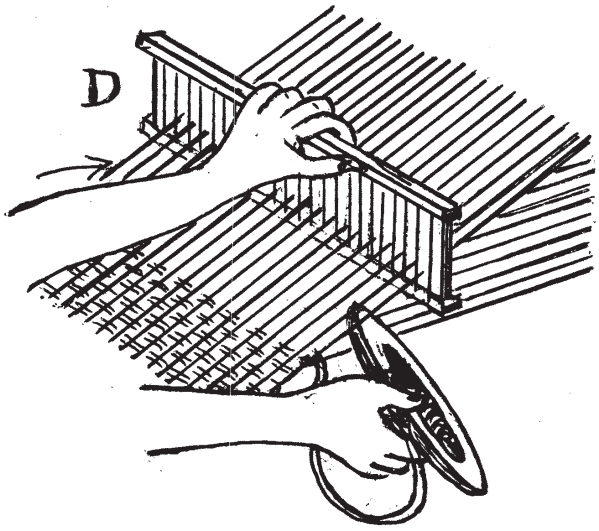
Before changing sheds, lay the old end back in the last shed of weaving, as at F. The end thus passes around the last 2 warps at edge and back into same shed. Change sheds; lay new thread in from opposite side, as at G, and lay its end around last 2 warps then back into same shed again, as shown. This method avoids the showing of a different color in same shed as old color, which shows up as a slight jag and color defect. It shows more in coarse threads than fine.

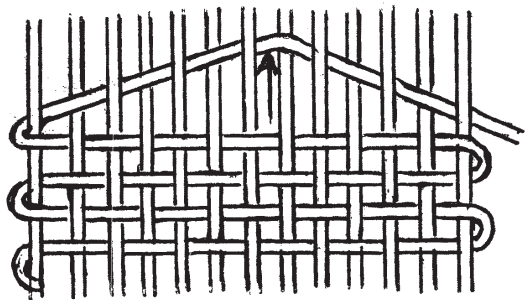
4. Piecing Heavy Threads

When material is quite heavy, such as Rug Yarn, Rugweave Yarn or heavy wools, do not attempt to turn in entire end, but split in half or thirds and cut out a portion, as at H.









The slant of the weft prevents pulling in of edges. For wide fabrics, use forefinger at corner to secure a double slant.

A smooth even selvage depends chiefly on two things,- one's method of weaving and the flow of the weft from the bobbin in the shuttle. Practise in establishing a consistent weaving rhythm may take some patience but it is well worthwhile; and skill in winding a smooth bobbin simply takes practise. However it is very important to learn to wind a perfect bobbin, for a good edge can be ruined by a bobbin unevenly wound that jerks in the shuttle. (See separate page on bobbin winding.)

Developing A Weaving Rhythm

A good weaver trains himself to follow the same succession of steps for each woven row. This soon develops into a rhythm which produces greater ease in weaving, a better texture, and a smoother selvage. The rhythm below has been used in our studio with success for many years. Try it, step-by-step at first, then as you keep repeating it, you will find that the steps blend into a lovely rhythmic motion that gives enjoyment as well as greater skill.

Step 1. Make the shed, throw shuttle through with left hand, A.

Step 2. Catch shuttle with other hand, B, that is open ready to receive it.

Step 3. Draw gently up on shuttle, C, leaving weft thread on a slant, and by touching thumb of right hand to top of bobbin, pull weft up snugly against left edge. The thumb can also keep the weft from unreeling too far. If you catch shuttle with forefinger on top, use this to secure edge tension as you catch shuttle.

You have now finished half of the weaving rhythm, noted briefly as "Throw, Catch, Rest" and at this point, the catching hand, B, can relax with shuttle at ease, see position at C.

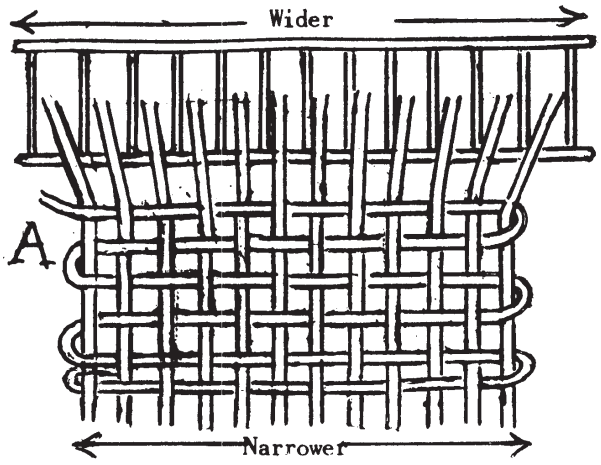
Step 4. Move hand that threw shuttle quickly to center of beater. This can be done as the finish of the throwing action, see D. Bring beater firmly forward with this hand. "Beat". Then hold beater firmly against the "fell" or last row of the cloth. This is all one beat. Neither hand should leave this motion to touch the selvage. It wastes time and does no good.

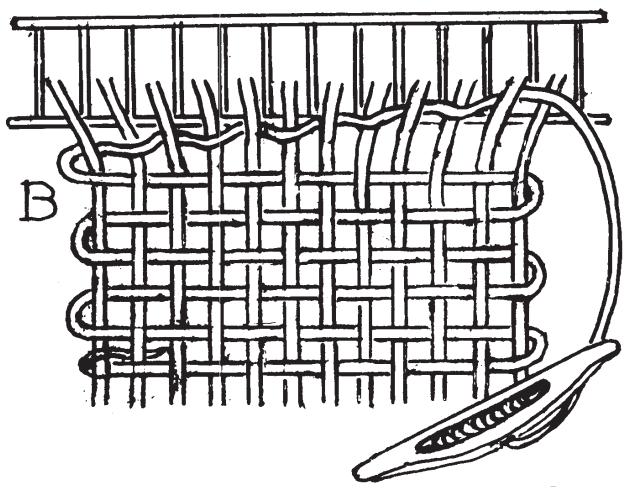
Step 5. Change the shed. When this is done with hand holding beater down tight, there is no strain on the back.

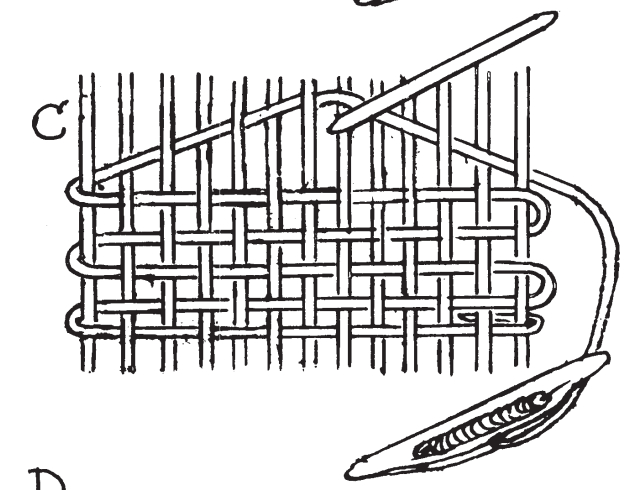
Step 6. AFTER changing treadles, beat slightly again, moving beater back only 1" or so. It secures a firmer texture to add a small beat.

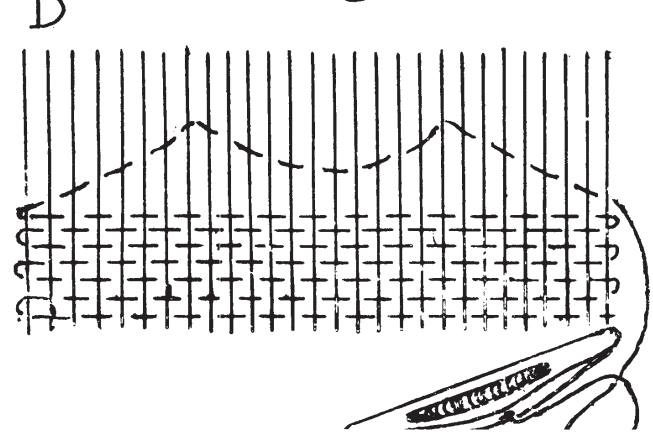
Repeat same six steps in other direction.

The completed rhythm has become: "Throw, Catch, Rest; Beat and hold; Change shed; Beat again." For textured fabrics and wool, omit last beat.









HOW TO SECURE A GOOD SELVAGE-2

The great danger with beginning weavers is that they are apt to pull the warp in at the edges. The outside warp threads then start to break and the narrowing width prevents a complete forward motion of the beater, so that the cloth changes its texture, and gaps at the selvage can result. We therefor urge weavers to take the following precautions.

Always leave the weft thread on a slant as shown on page 1. Follow the rhythm described,- or one of your own; but be sure to relax the tension of the weft before beating. In rhythm described, this comes on the 3rd step: 1 .. 2-Catch; 3-Rest."

It is a known fact that the better and more experienced the weaver, the wider can he or she keep the woven fabric,- the more nearly to the width of the warp in the reed, see sketch, A. The warps ALWAYS pull in slightly but with the slant maintained in the weft, there is leeway enough to prevent pulling in and warp breakage.

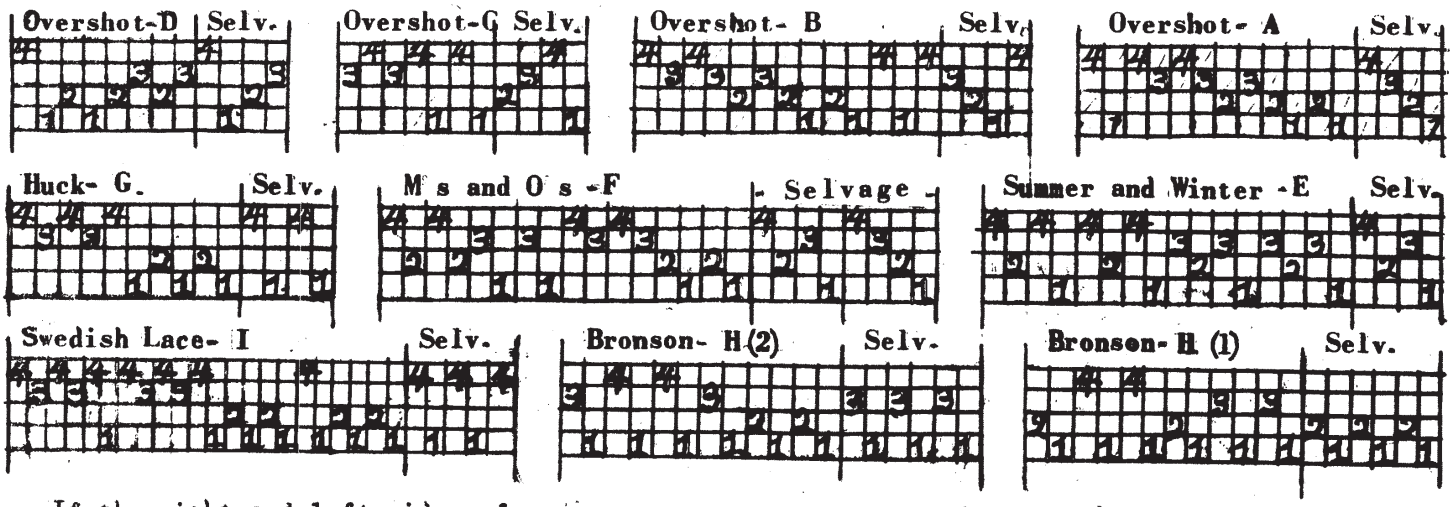
Explanation of Narrowing of Warp

The reason that leaving the weft on a slant solves the selvage problem is that provided the weft issnug against the outside warp thread and also left on a slant, there is room for the take-up necessary to keep the width out as far as possible. The sloping weft forms the hypotenuse of a triangle with a longer length than the last row of fabric. As the beater comes forward against the weft slant, there is a take-up all along, as shown at B. The small loops formed over each warp give elasticity to the row which widens out accordingly. The selvage remains exactly the same since the weft yields to the wider beater from the loose end. If the weft forms a visible kink at any point, the slant is too great; narrow it down a little.

If on the other hand one finishes each row of weaving with a weft horizontal and held down without relaxing its tension, then as the beater moves forward, it comes against warps that are roped in firmly, and the weft pulls in at the selvage, making a dent in the edge; or the warp threads break.

Leaving a Weft Slant on Wide Fabrics:

If the fabric is so wide that you cannot stretch the hand out comfortably, when throwing the shuttle to form a slant, weave as at C, bringing the weft down at the selvage, but using either the forefinger or a small pickup stick to shove the center of the weft back toward the beater. If the fabric is extremely wide, you may need to take several of these strokes with the finger to give enough leeway for the fabric to maintain its proper width, as at D. The use of the finger becomes automatic.



If the right and left sides of one s warp have not been correctly threaded to secure a smooth selvage, the weaver cannot hope to produce a good edge, no matter how hard he tries. For each technique there is a correct threading for the selvage.

Overshot ;A,B,C,D.

In the 4-harness Overshot, one adds one or more repeats of the Twill as a selvage. If the blocks proceed as at A, from Hs.1-2 to 4-1, write the Twill in the same direction; Hs.1-2 3,4. If the blocks proceed as at C, from Hs.4-1 downward to 3-4, 2-3, etc., write the Twill thus Hs.4,3,2,1. If the pattern begins on an odd harness, the Twill must end on an even one, and if it begins on an even harness, the Twill ends on an odd one.

In graph above at A, selvage ends on 4 even, pattern starts on 1, odd. At B, selvage ends on 3, odd; pattern begins on 4, even. (If selvage had ended on H.1, there would be a block of 5 threads on Hs.4-1.) At C, selvage ends on 2, even; pattern starts on 1, odd. At D, selvage ends on 4, to avoid a 5-thread block if it ended on 2.

The reason why we must use a Twill instead of starting with a pattern block is that if a pattern block is treadled, and it is at the edge, such as Hs.1,2,1,2,1,2,- the weft slips back to the next block and causes a bad skip. Since the Twill has each harness note in close succession, one can be sure of the weft catching close to the edge, with a smoother result.

If one has a Twill threading, and is weaving as Twill, Hs.1-2, 2-3, etc. one can thread the selvage Hs.1,3,2,4, to secure a better edge.

Crackle Weave, Matta, On Opposites-

Use a Twill selvage, same as Overshot.

Summer and Winter- E

Here the blocks are written: Hs.1323 and Hs. 1424. The tabby is every other note, or Hs.1-2, first tabby; all the other harnesses or Hs.3-4, second tabby. Therefor if the edge is to catch closely, write the selvage: Hs.1,3,2,4. What one really does is to alternate the harnesses of each tabby in the selvage thus: From first tabby, H 1; from 2nd tabby H 3; from 1st tabby H 2; from 2nd tabby, H.4. Selvage will always catch either for tabby or either block.

In Overshot tabby is: Hs.1-3; 2-4. Selvage alternates notes of each combination: - From 1st group, H 1; from 2nd, H.2; then 3 and 4.

In Multi-harness S&W, with blocks, 1,5,2,5, 1,6,2,6, etc., carry out same principle. With tabby Hs.1-2; then 3,4,5,6, etc., selvage becomes Hs.1;3,2,4,1,5,2,6,1,7,2,8. etc.

M's and O's, F.

Here the blocks are Hs.1212,3434; then Hs. 1313,2424. There is no tabby, so all we can do is to shorten each block to a minimum and put both in the selvage, -Hs.1,2,3,4,1,3,2,4; thus we have a double selvage one for each of the tabby systems used to make M's and O's.

Huck, G

Here there are only 2 pattern blocks, Hs.1-2 and 3-4. Tabby is Hs.1-3; 2-4. But a selvage simply of Hs.1 and 4 will catch each block, so this is all that is necessary.

Bronson, H.

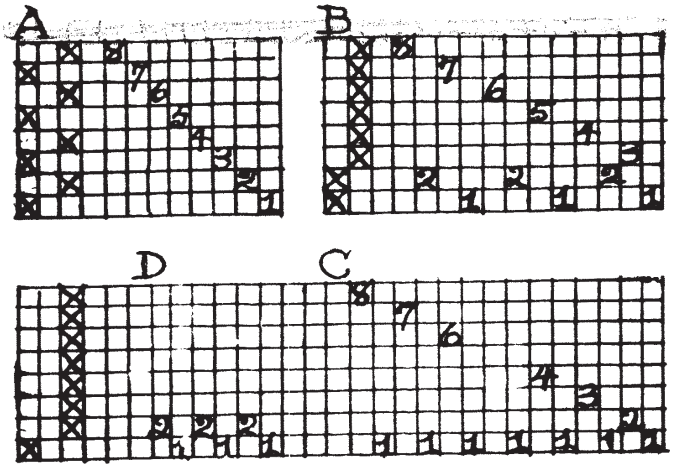
Here the blocks are Hs.131312 and 141412. Tabby is Hs.2,3,4 against H.1, alone. If the selvage is written as at H.(1) - Hs.1,2,1,2, the weft will catch for either tabby, and edge-portion will always be plain tabby desirable both for Lace and Spot Bronson.

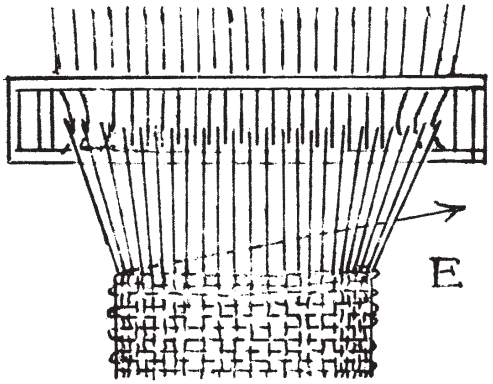
If your threading of Bronson gives tabby on Hs.1-3 in plain weave or binding points as at (H.2) make selvage the same, Hs.1,3,1,3.

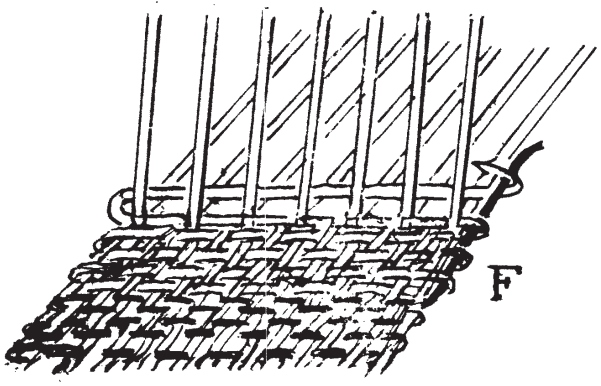
Swedish Lace-I

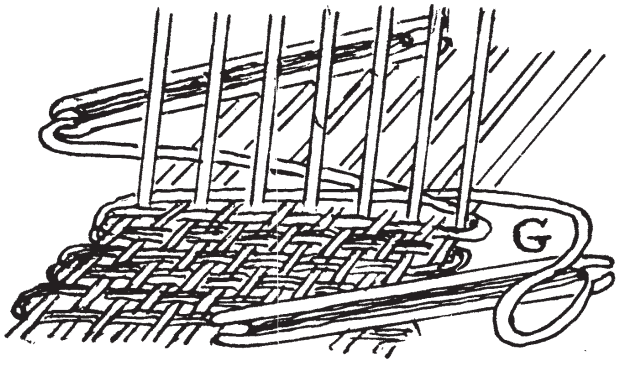
Swedish Lace has the same blocks as Huck and selvage is the same, Hs 4-1 repeated.

Multi-harness Selvages









Threading The Loom for Multi-harness Selvages

In 8-harness looms as well as 4- and 6-harness looms, the principle and rule for threading the selvages is the same. Find the two tabbies, then take the harness numbers from each tabby in alternation. This when applied to Overshot, or the 1-3, 2-4 tabby system, becomes as follows: H.1 from 1st tabby; H.2 from 2nd tabby; H.3 from 1st; H.4 from 2nd., or a twill selvage of Hs.1,2,3,4. If the Summer and Winter tabby, or the 1-2, 3-4 system is used, the selvage becomes, H.1 from 1st tabby, H.3 from 2nd; H.2 from 1st; H.4 from 2nd, or a selvage of: Hs.1,3,2,4 in succession.

In 8-harness Point Twill with tabby: Hs.1,3,5,7; then 2,4,6,8,- The Selvage becomes: H.1 from 1st tabby; H.2 from 2nd; then 3,4,5,6,7,8 or again a twill succession, shown at A, left.

In 8-harness Summer & Winter, the tabby is: Hs. 1&2; then all the other harnesses or: Hs. 3,4,5,6,7,8. Following the rule we have for a selvage: H.1 from 1st tabby; H.3 from 2nd: Hs. 2 from 1st; H.4 from 2nd; than H.1,5,2,6,1,7,2,8, as shown at B, sketch at left. It is obvious that when tabby is treadled, all selvage notes will be woven closely, or as closely as possible.

In 8-harness Bronson, the tabbies are: H.1, alone, then all the other harnesses, Hs.2,3,4,5,6,7,8. We then have for selvage: H.1 from 1st tabby; H.2 from 2nd; H.1, then H.3, etc.- or for selvage: Hs.1,2,1,3,1,4,1,5,1,6,1,7,1, and 8. Again it is obvious that when tabby is treadled it will catch the harnesses as closely as possible, and the same is true when the various blocks are treadled, C. The selvage can also be H.1,H.2 repeated, as at D above, for if tabby occurs right along, the 1st tabby catches Hs.1 in the selvage, and the 2nd tabby which contains H.2, catches H.2 in the selvage.

Pulling In Too Tightly at Selvage not only can break the edge warps, but it pulls on the end reed-teeth until they are bent and the reed is ruined. To avoid this, leave weft on a slant, E.

Carrying a Second Weft Along Selvage, F, avoids extra piecing if there are frequent changes of color at this point, and if the distance is a short one. Also be sure that the carried weft is covered by the other weft at the selvage.

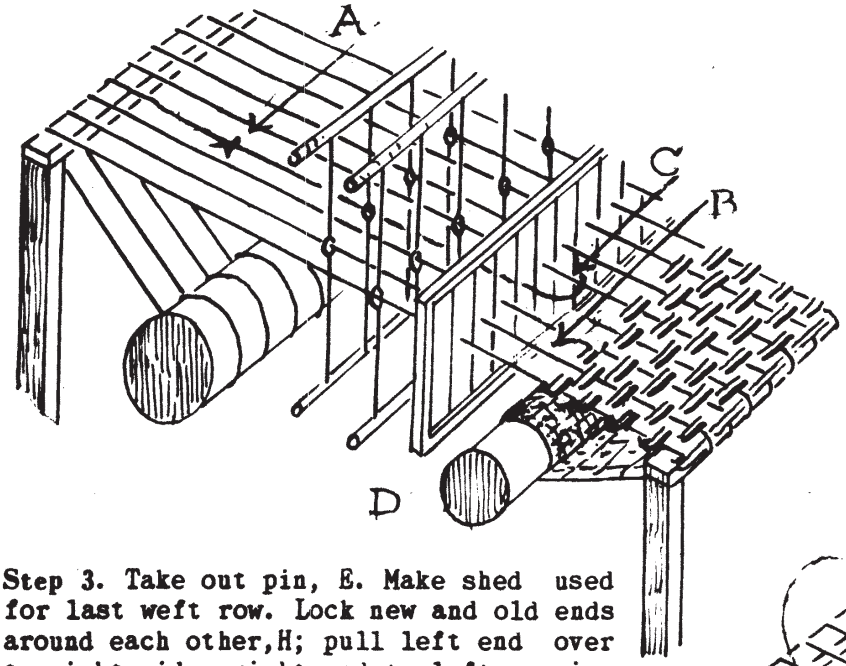
Using Two Shuttles for Extra Heavy Filler, G.

To produce a thick, sturdy mat or rug, use two shuttles, one from each side. This makes a single thread selvage, better than the bulkier one caused by winding two wefts on same shuttle.

Threading Selvages Double for Strength.

If you tend to pull your weft in too tightly at selvage, thread double warps on last warps of each shed at selvage. This is good for rugs.

HOW TO MEND AND REPLACE BROKEN WARPS

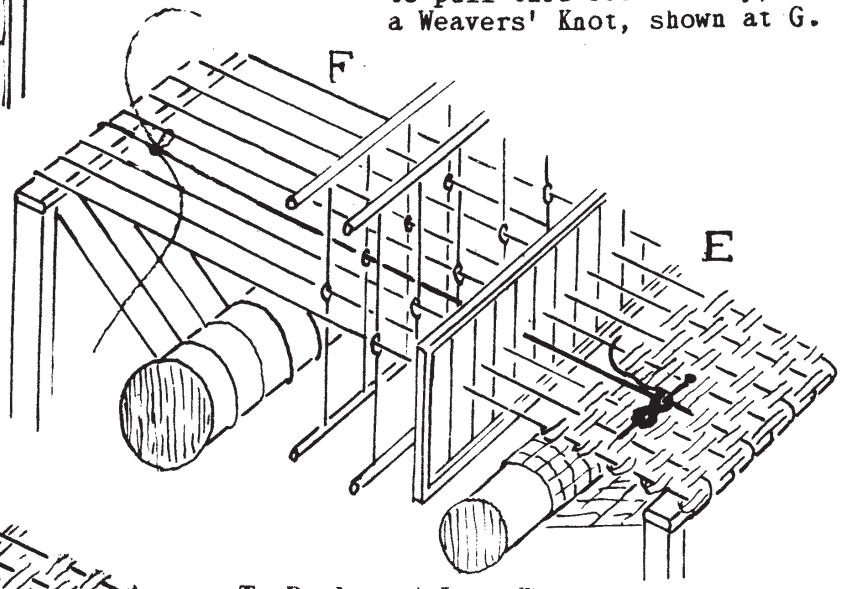


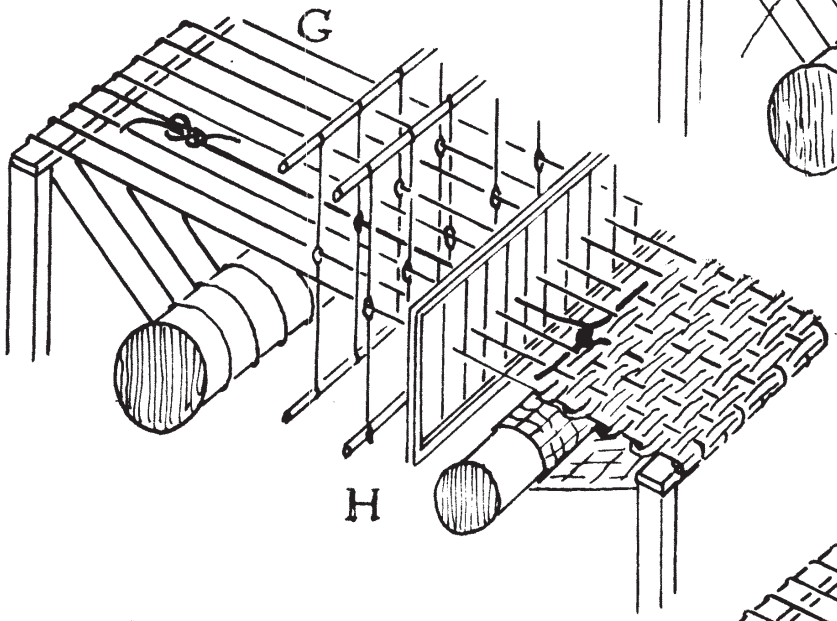
Step 1. When you see a warp knot, A, at back of loom, plan to mend it at once, before it catches in heddles or reed.

Cut across warp midway between finished cloth and reed, arrow B. Cut new warp 1 yd. or more long; tie this to old end in front of reed, C. With old end pull new end to back of loom. Cut end D of old warp should be 2" or more long.

Step 2. Fasten new warp temporarily to woven cloth, around a pin, E. Cut out knots at back of loom, but leave both ends as long as possible. Tie them together snugly in a slip or bowknot, F; these are quickly undone when old warp comes forward. If thread is fine, so as to pull thru reed easily, use a Weavers' Knot, shown at G.

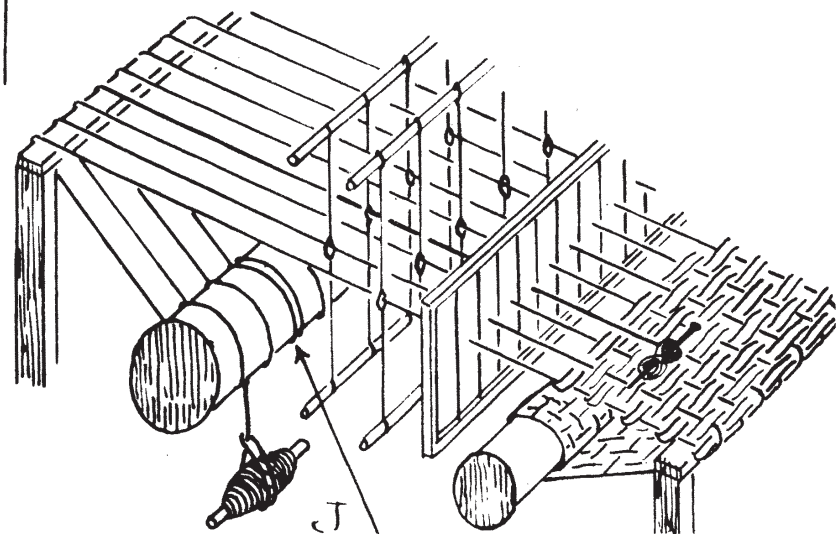
Step 3. Take out pin, E. Make shed used for last weft row. Lock new and old ends around each other, H; pull left end over to right side, right end to left, using fingers to slip into shed, 1 in. Change shed, holding ends in one hand; weave another row through. This holds ends firm. Pull up again to secure proper tension.





To Replace A Lost Warp

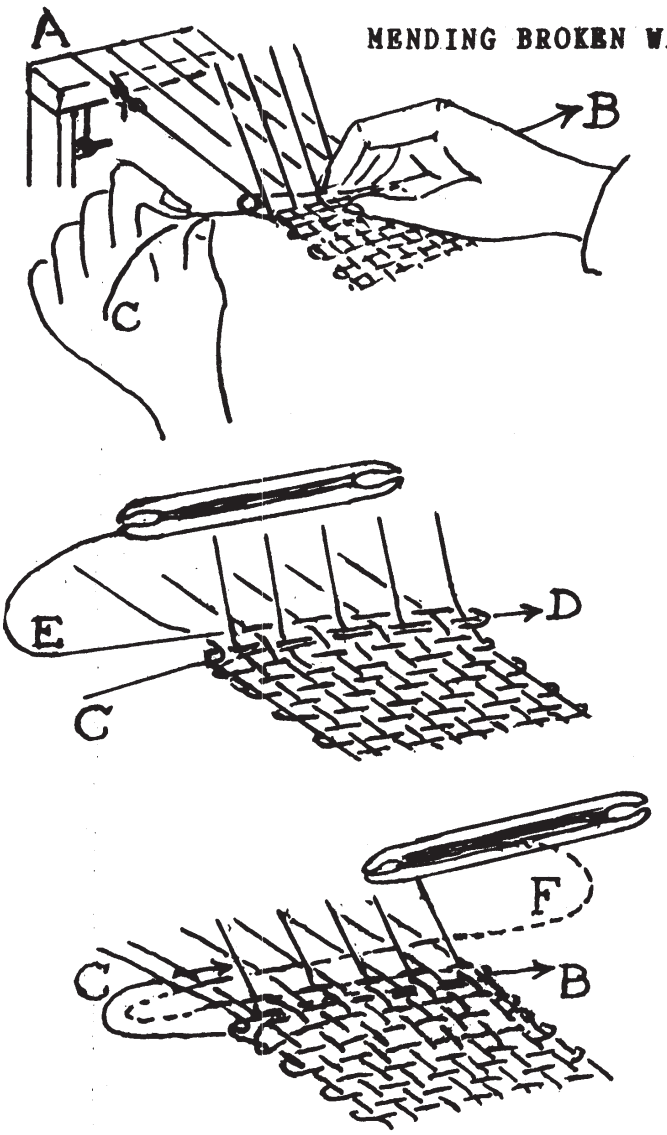
When a warp breaks and its end is lost, add a new warp on bobbin, J. First wrap end of thread around roller twice; let bobbin hang; find gaps in heddle and reed; bring new warp end thru; fasten with pin. When cloth comes from loom, sew in new end.



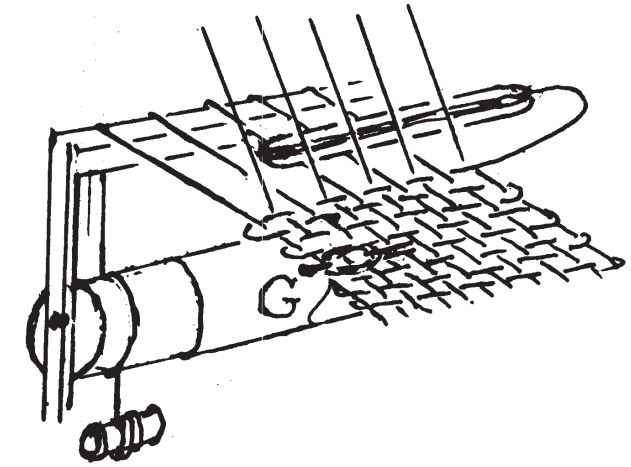
Step 4. As you weave, tied knot at back of loom gradually comes forward. When old warp is long enough to reach woven cloth, with 2" extra, untie knot, fasten both ends at tips with any knot; draw them thru heddles and reed. Cut off excess thread, repeat same locking process as at H

You have now concealed both ends of new warp into weaving, avoiding tedious sewing when taken off loom. If warp and weft are different colors, piece ends at points where colors change or a border begins, to conceal them better.

MENDING BROKEN WARPS AT THE SELVAGE



A-F. Steps in process of interlocking old and new warps and weaving them into the cloth with regular weft.



G. Pinning down new warp to be sewed into cloth after taking off loom.

Possibly the selvage is the most vulnerable point of the warp, for it is here that threads break most often. When a warp breaks and is fastened down temporarily to be darned in when material is taken off the loom, it is never too perfect a job, and takes considerable time to sew into the fabric later on. We have found that warps broken at the selvage can be pieced in the same way as broken warps at other points in the fabric. (See previous page).

Method of Piecing

When you see a warp thread that is weak or has a knot coming up, cut it before it breaks, at a point several inches in front of reed and long enough to tie on a new warp length. Draw this cut warp with a new warp attached to the back of the loom, through heddles and reed. This saves hunting for the openings in reed and heddles, with less danger of crossing one warp with another.

Draw the tied knot back out of the way, and when there is about 1 ft. of the new warp in front of reed, break the knot tying the warps together at back of loom, cut out excess loop and tie them together in a slip knot. A. As the work progresses this knot comes forward, and can be re-tied and pushed back until at end of piece. Then material is taken off the loom and the warp can be brought forward and tied to apron bar ready for next piece. Thus there is no warp knot apparent.

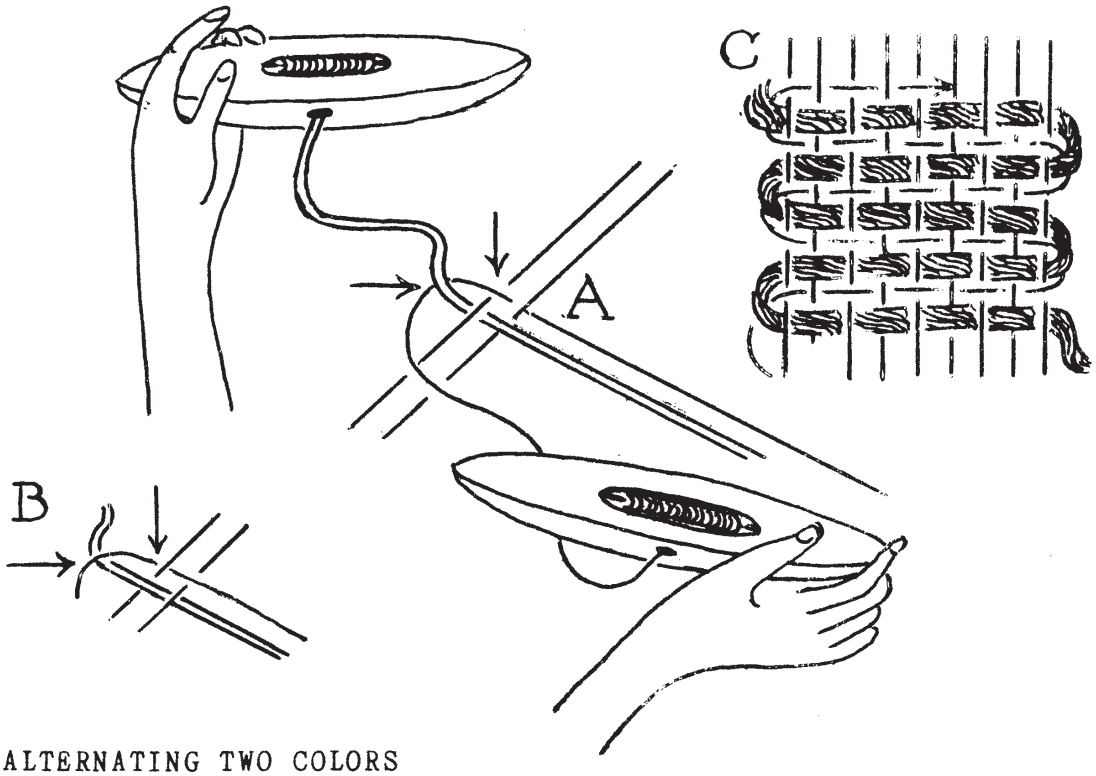
Our problem now is to fasten the ends of the new and old warps into the fabric. The old end B, still projects from the cloth, and the new warp, C, comes forward from the slip knot, A, see sketch, top left. Interlock them as shown: Carry end, B, through last shed made and right beside regular weft in that same shed, as at D, arrow. Change sheds at once so as to lock this old warp end firmly in place. Bring the regular weft through on new shed, as at E. Be careful not to let new warp slip out of the selvage; it is to be woven in through next row.

Change sheds again, see third sketch. Weave through with weft, as at F, then take new warp thread, C, arrow, and weave it through the same shed. Change shed at once, to lock the warp firmly into place. Pull up on both warp ends, B and C, to get back their regular tension. Practise this method several times, the most important step being to pull up on the ends after weaving into cloth. Fasten with a pin temporarily to prevent slipping if desired.

Method of Sewing Into Cloth When Finished.

If you prefer, simply fasten new warp down at G, with a pin, letting end dangle at back. Weave over the warp. When cloth is finished, remove pin and sew warp in-and-out of cloth.

SMOOTH SELVAGES FOR TWILL AND ALTERNATING WEFTS



ALTERNATING TWO COLORS

The securing of good even selvages is a "must" for the handweaver. There are certain rules that we have worked out in our studio that may prove of help. Two alternating colors are used in Log Cabin Weave. One finds it effective to alternate both a heavy and a fine thread at times.

In handling two alternating colors or textures, the wefts must be locked at the selvages or the warp will hang loose. Here is the rule:

" If the last row of weft, single line above has gone over the last warp at selvage A, the other weft, double line, must go OVER it. "

" If the last row of weft has gone under the last warp at selvage, the other weft must go UNDER it. See small sketch upper left at B. "

If the weaver works this out for one succession he will find that he can so place his shuttles that he can alternate them in routine.

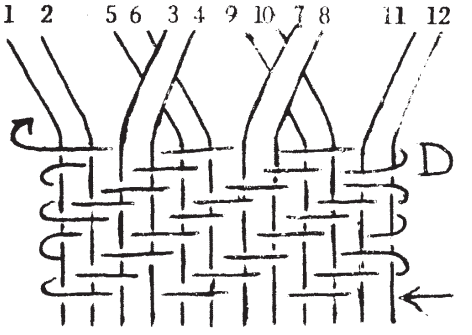
HEAVY AND FINE FILLER C.

An effective texture in mat or rug is made of a heavy filler on one shed and a light-weight filler on the other. Follow the same rule.

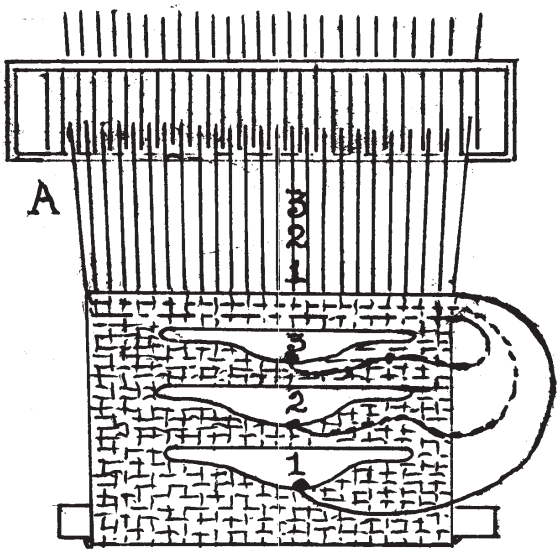
HOW TO MAKE A FIRM TWILL SELVAGE

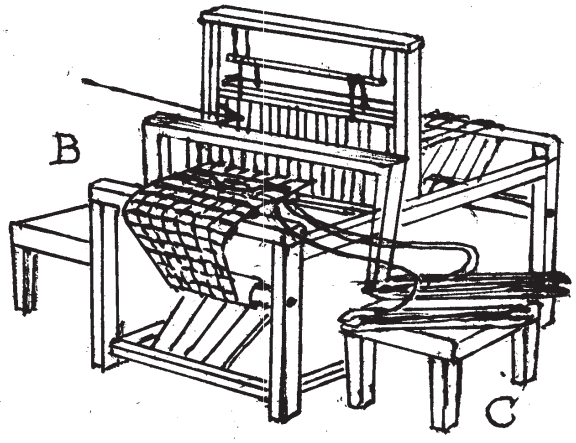
If you find that the last warp does not catch when weaving Twill, follow this rule "See that your threading on one selvage ends on an odd harness, as on H.1 or 3; and the other on an even, - such as H.2 or 4.

If left selvage ends on odd harness. start weaving right to left on Hs.1-2. D, arrow. (On Jack Loom Hs.3-4). or if left side ends on even harness. start left to right on Hs.1-2 to odd selvage.



Go left to Hs. 1-2, rt on Hs. 2-3





A Pattern and Tabby Rhythm

It is surprising how much time one can save as well as frustration, by figuring out how to place one's shuttles for efficient working. Even with only two shuttles one can make one's weaving much more enjoyable by placing them so as to have them handy. This also helps one to secure a better selvage, since the succession of wefts proves more consistent.

When using two shuttles, we find it logical to weave both in the same direction for any one row of pattern and tabby. Some weavers follow pattern with tabby; others weave the tabby first and follow with pattern. Whichever you do, be sure to always follow out the same succession. We prefer pattern then tabby.

For beginners, we find it best at first, to plan the pattern rows in pairs, or multiples of two; later they can use any number of repeats. For instance, for Hs.1-2, 2x, weave thus:
Hs.1-2, Pat, right to left; Tabby, Hs.1-3, R.-L.
Hs.1-2, Pat; left to right; Tabby, Hs.2-4, L.-R.
See arrows. This saves confusion, for when the beginner finishes with both shuttles at right, he knows that this pattern combination is finished and he is ready for the next group. One uses combinations of two, four, six, etc. times.

Keeping Shuttles On The Loom, A.

Some looms have a wide space between beater and the "fell" or front edge of cloth. It is convenient in this case to keep one's shuttles in front of one on the cloth. But always try to place them in the same order. First, find out how to place them so that the wefts will lock at the selvage, and then maintain this order.

At A three shuttles are placed on the loom in regular order. As you weave, first use No.1 and when finished with it, lay it above the last one used. Use No.2, place it above No.1; Use No.3, and place it above No.2 as shown.

Use Of Side Tables

We find it helpful to place a small stand or chair at both the right and left of the loom, ready to hold one's shuttles when one finishes a row. It is especially helpful with two or more shuttles. Keep the tabby on top of the finished cloth; use the stands for the pattern thread. Proceed as follows: see B.

After first pattern row, place shuttle on chair as at C; put through tabby, place on loom. Weave next pattern row, place on the stand; follow with tabby, place on loom, etc. In this way one does not become confused in alternating the shuttles, and they do not get tangled but always lock in the same way at the edge.

If there are three shuttles, place two of them on the stands, keep one on the cloth. But always place them in the same order, so that the hand can reach for the one desired with little trouble. This saves hunting for the next color and getting the wefts tangled.

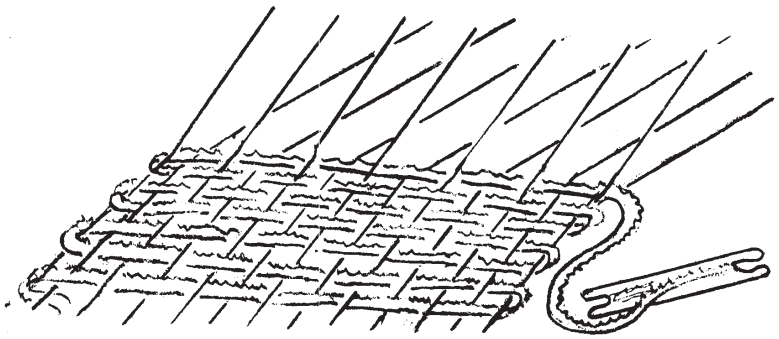
Never Place Your Shuttle On A Moving Part

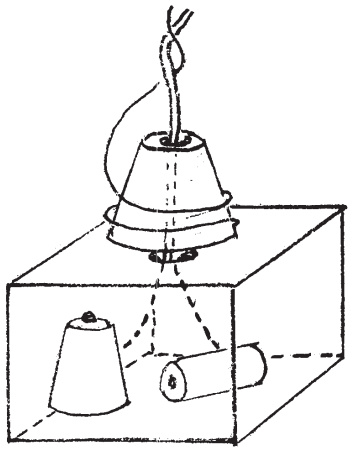
Some weavers carelessly lay their shuttles on the shuttle race, and someone jars the beater and it falls to the floor. Shuttles have carefully finished points that should be protected. When not weaving, place your shuttle on the cloth or on the stand beside the loom. A good place for the shuttle where it will not be disturbed, is between beater and heddles, see arrow in second sketch.

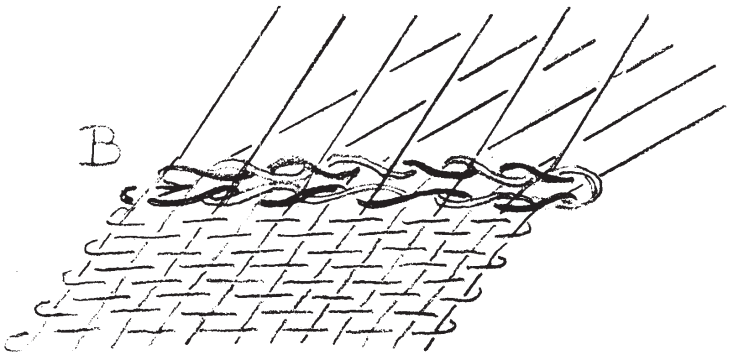
A Good Tray To Hold Shuttles

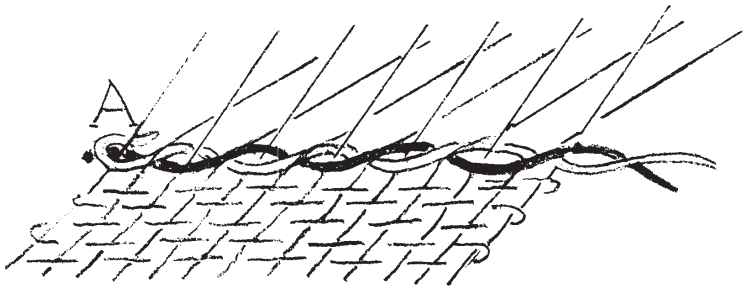
One can use a painted knife box beside the loom to hold one's shuttles. Place it on a stand. We keep a small stand beside all the looms in our studio. A shoe box is a good size to hold shuttles. Use the lid to act as a firm base when it is open. Oval baskets make excellent holders for shuttles.

INTERESTING TEXTURES FROM COMBINED WEFT THREADS









1. Wefts of Two or More Threads- Fig.1.

Different kinds of threads can be used together to form combined texture effects or blended color tones. Threads woven together as one produce quite a different texture and color; and they are further modified by the warp color.

One of the most interesting combinations is that obtained by weaving linen and lurex together. Wind them on the bobbin winder together but be careful to keep them together with thumb and forefinger; otherwise their lengths may vary. Even them up at selvages. The effect of lurex and linen is a shadowy attractive texture with highlights.

Combined wefts also make a transition between two stripes. Take a thread of each color, but half its size, then wind together. When woven this strand is same size as other wefts, and acts as a blending tone most effectively.

2. How To Wind Several Strands Together

The yarns may simply be wound on a bobbin as one thread; but better still, if you wish a firm twisted weft, wind as shown in Fig.2.

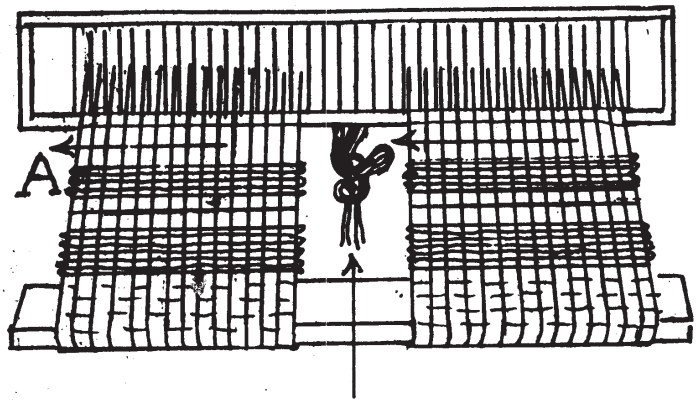
Place one of the yarns in a deep box with a hole in the lid. Now right over this hole place the second thread which should be on a cone with an ample hole at center. Bring the first thread upward from the box and through the hole, then together at top for winding. The thread from the box wraps around the cone or large spool, and the result is a slightly twisted thread which weaves better as one weft than separate yarns.

Three threads can also be wound together in this way; simply put two of the smaller thread tubes in the box. If they tangle, place each on a peg board, as shown.

3. Twisting Two Wefts in the Shed

One can make attractive twill or arrow borders by twisting two threads of a weight heavier than regular weft together, and putting into the shed in this way, as in Figs.3,4. Lay twisted yarns through shed with number of twists desired; fasten one of ends into left selvage, A. Beat snugly.

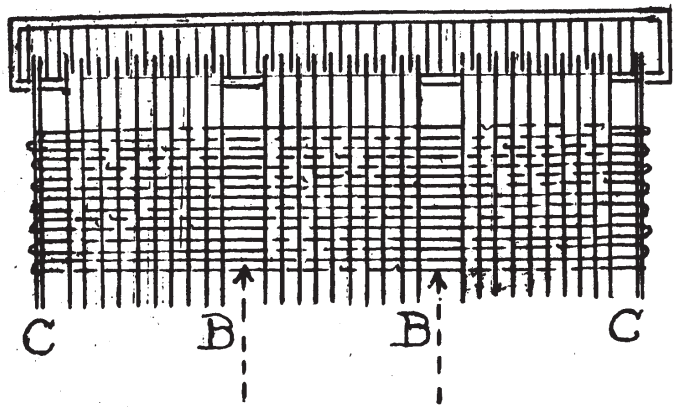
Now bring back into next shed. For a twill effect, twist in same direction as at B; for an arrow, twist in opposite direction, as at C.



Tie a Slip Knot with warps taken out.

Two pieces may be woven side by side with two separate shuttles on the same loom, as shown at A. We have often used one loom for two people in this way, if the loom is a wide one. One uses the same warp, but takes out several inches of warp between pieces. One need only remove the warp from the reed, and tie up the unused warps in a slip knot between reed and heddles. Also make a loose tie around the heddles concerned, so as to keep them in place and prevent the loose warps from tangling. One can also remove warps from both reed and heddles, maintaining the cross to re-thread at a future time. As the warp comes forward, retie the slip knot to prevent tangling.

There are some projects that can be set up at the start for two parallel pieces with a space in the warp between them. Sets of doilies can be woven in this way, matching curtain panels, pillows, etc. One person can weave both fabrics, using a shuttle for each and making selvages at edges. If one establishes a rhythm, weaving both shuttles in same direction for same treadling, it is simple. It may seem to take quite a bit longer to weave in this way, but it is sometimes worth it to make use of a wide warp already on the loom.



Small plaid napkins are attractive woven in this way. Add colored borders or centers to each piece.

Separate Pieces on a Wide Warp to be Cut Apart.

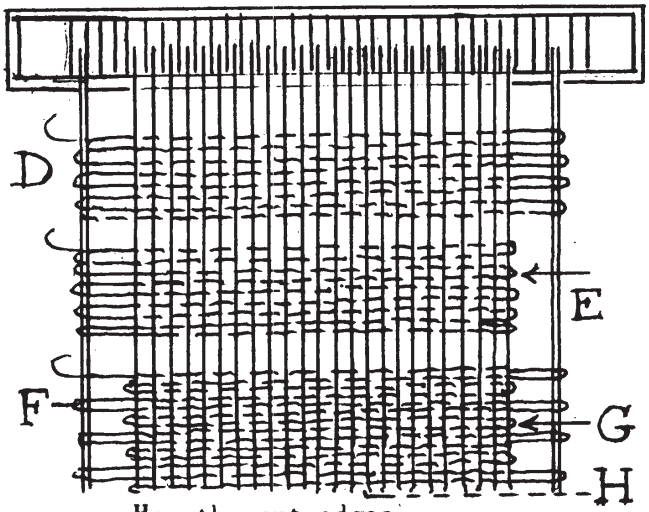
If you are weaving cocktail napkins or placemats with fringes, you will save time by planning a wide warp, weaving the entire width with one shuttle and cutting apart, B, on dotted lines. If you plan fringes, leave spaces between pieces, and also add four extra warps at each side, C. Weave around these, and this makes a side fringe as you weave. Cut at the edge and remove extra warps later.

In you wish pieces hemmed on all sides, set all warps at same texture, no spaces between. Simply cut apart and hem later.

Weaving a Runner or Towel with Side Fringes.

A clever guest-towel or runner can be woven weft-wise, with fringes at one or both edges, D. Add extra warps and weave around these. Overcast sides when on loom. If one adds the extra warps at one selvage only, one makes a guest towel with plain top, see E.

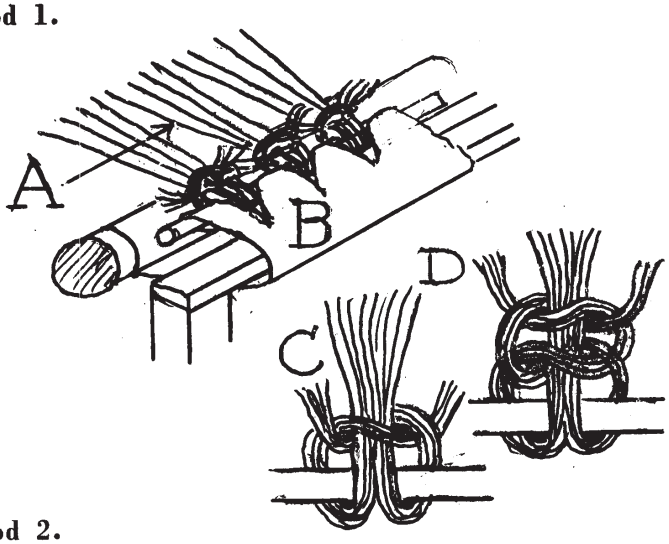
One can also make a firm, closely bound side edge on the inside of the fringe; Weave every other row around added warps, F, and in between, weave around regular main piece, as at G. This makes a thinner fringe, but it is firmly finished, and saves time overcasting the selvage. Hem the cut edges, H.



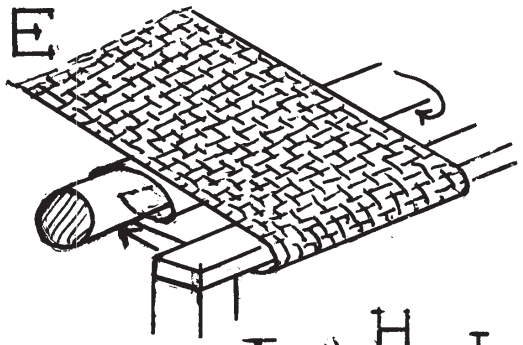
Hem the cut edges.

FOUR WAYS TO TAKE FINISHED CLOTH FROM THE LOOM AND TO TIE DOWN

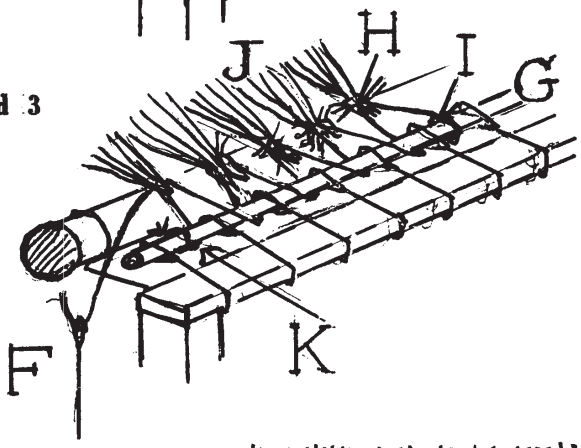
Method 1.



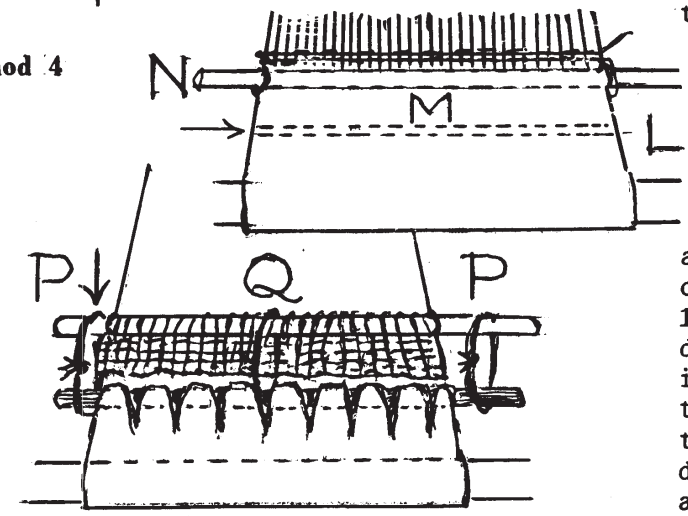
Method 2.



Method 3



Method 4



To tie the warp down for each piece cut off the loom takes times and also wastes thread. Several inches of warp are wasted while the weft closes up the gaps between groups, A. The wider the loom, the greater the waste. Moreover it requires skill to tie warps down with an even tension. We therefor have sought simpler methods.

Of course in starting a new warp there must be a fresh tie-down and we show this as Method 1.

Method 1. Cutting Off and Tying Down.

One uses this method in starting a warp; also if tension needs adjusting.

Divide warp into fairly equal parts opposite cuts in apron, or spaces between cord ties, B. Take a group; pass its warps over the rod, C, divide warps in half; pass under rod, then over the group; tie first part of a square knot left ends over. Do same to all groups.

Tighten all groups to same tension, pulling up on two parts at C; finish second part of knot, D, right ends on top of left ends, as a square knot. A square knot comes apart easily when correcting tension or at end of warp.

Method 2. Weaving Extra Cloth to Tuck Under Roller. (No loss of material)

Before cutting off, weave an extra yard; cut material at beginning of extra cloth, tuck under roller like an apron, as shown at E.

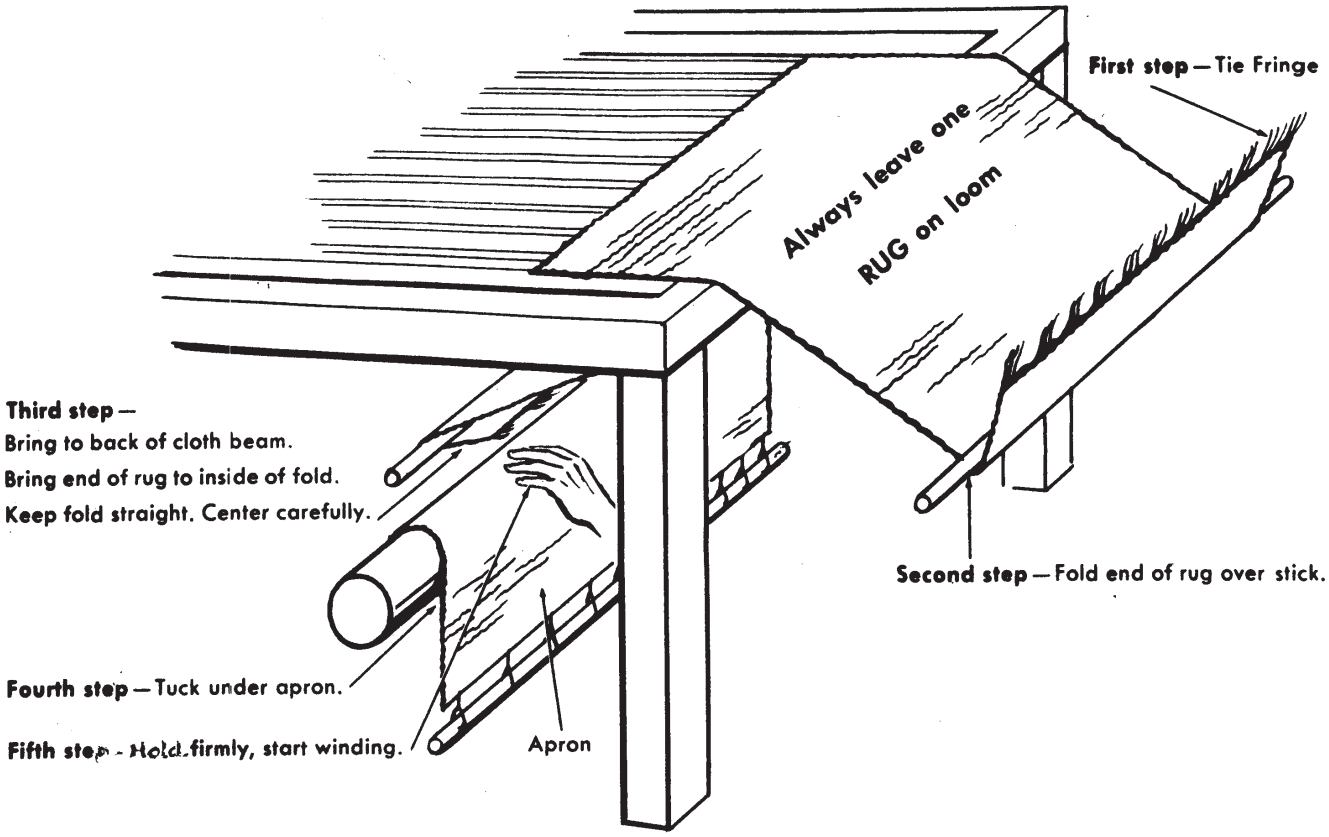
Method 3. Sewing Down The Warp Groups

An excellent method to give warps the same tension. A cord, F, sews warps to rod, G. After cutting off, tie all warps into small groups with overhand knots at ends, H. Fasten a strong cord to rod, I, sew through first group, H; bring down to rod, pass around, proceed to each group in succession, J. Before fastening cord at K, pull up on groups all across, see F.

Method 4. Taking Cloth Off On Rod.

For a quick take-off whenever needed, and no warp waste: Weave 2 rows at end of finished piece in a color, L. Weave 1 inch more, tabby, M; then weave in a dowel, N. Weave 2 rows tabby to hold it in. Cut off weft. Now loosen tension to prevent fraying as you cut. Cut material between colored rows, L, and tie dowel, N, to apron bar, as at P, Q. Tie at center first to balance.

LEAVE A LENGTH OF WEAVING ON YOUR LOOM TO SERVE AS AN APRON



WEAVE AN EXTRA YARD TO LEAVE ON YOUR LOOM

Among the four ways of taking material off the loom, the method shown here is one of the easiest. These four methods are:

1. Cut off all the warp threads and tie them down again to the apron rod, from which the woven piece has been removed.
2. Cut off the finished piece. Then tie the warp threads as they come from the back of the loom, into groups of about 1 inch measured along the reed, then sew the knots of these groups to the rod of the apron, between openings.
3. Do not cut the finished cloth away from the warp threads. Instead, weave in two rows of a colored weft, and after this weave 1 inch of weft, either tabby, or pattern if you wish to show how the loom is threaded.

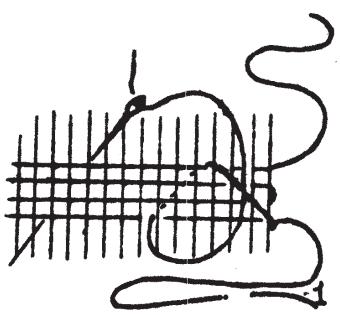
   After this extra inch of weft, weave in a ¼ inch dowel on a tabby shed, and beyond the dowel, 2 rows only of weft. Now cut the cloth off 1 inch below the rod between the 2 rows of color, being sure to release the tension on your loom first. Take off the cut cloth, thus leaving 1 inch of cloth below the stick. Tie the stick down at both sides and in the center, to the apron rod.
4. Weave an extra yard to leave on the loom. This method is shown above. It is excellent when you are weaving material right along and are not in a hurry to take off the last piece.

   Cut off the finished weaving, all except the last piece, then finish its edge. If a rug, tie a fringe, see Step 1 above. Now roll the end of the piece over a rod as in Step 2. Bring the rod and its rolled end over the cloth beam and under loom to apron rod, and tuck it in between the fold of the apron, as in Step 3 and 4. Last, adjust piece until even and roll up tight under the apron, as in Step 5. The finished piece really becomes an extended apron. Cut off finished rugs thus leaving one on loom.

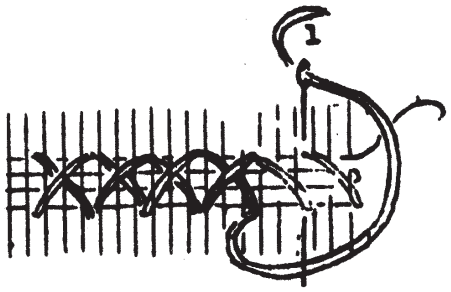
WEAVING FINISHES

The ends of handwoven pieces can be finished on or off the loom. Where it is wise to leave a fringe, it is easiest to complete a sewn edge while warp threads are stretched taut. A finished edge does not unravel when taken from the loom. Edges A, B, C, below, are best finished on the loom, as well as D. E is done after removing from loom. Effect F is possible off the loom but easiest to work on the loom.

Finish A. Overcasting: The very simplest finish is just an overcasting of the edge. Weave 4 or 6 rows at starting, as shown. Leave an end, 1, 4 times the length of the edge you wish to sew over. After these 4 rows, set shuttle aside, thread end 1 and sew over definite groups of warp thds. Count off same number each time, as over 4 thds., under 4, etc. as shown by needle.

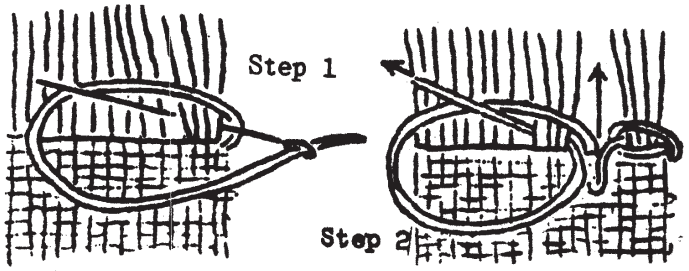


Finish B. Crosses Over Edge



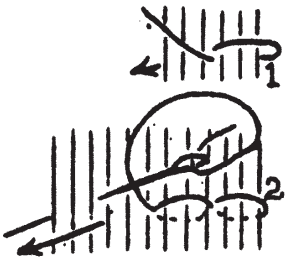
This finish is the same as Finish A except that at the end of the row from right to left, one reverses and sews crosses 1. to r. Stitch vertically down.

Finish C. From a Russian Hand-woven



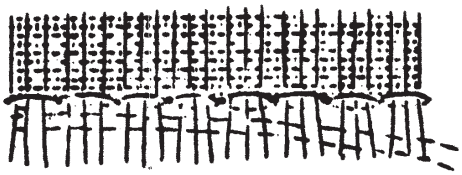
This is a splendid finish for runners, drapes, mats and bags where fringe is preferred. Take up 4 thds. of coarse warp, or 6 to 8 thds. of fine for each stitch. One starts at right, Step 1. Take a regular button-hole stitch. Step 2. Stitch vertically upward, arrow, between groups. Repeat.

Finish D. Hand-Stitched Chain.



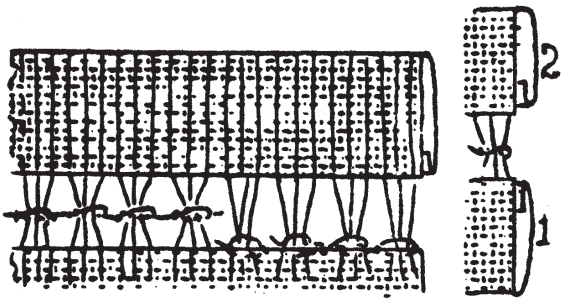
This finish proves a useful one, easy to make. Use 2 ends of sewing thread with 2 needles. First decide how long the stitch should be, 1/4" to 3/8" is good. Make a loop at right selvage, D, 1. Thread ends through needles. Carry one needle over the first group of threads, D, 2. Carry other end over second group, under the third. Alternate thus with needles, taking each one over the next group and under the group at left of this. Use same thread as weft for beat effect; or a bit heavier.

Finish E. Sewing-Machine Edge.



It is possible to set a sewing machine to a long stitch so that it will pass over a certain number of warp threads. A chain stitch surrounds each group, and resembles a hand chain somewhat. One should test the length of the stitch and get it right for the desired effect. For this edge, pullout a weft thread several threads back from edge. Stitch along this open row.

Finish F. Hemstitching On the Loom

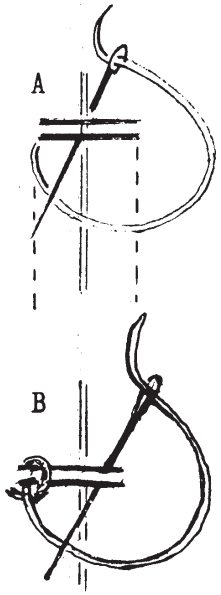


When a hem is preferred, this finish is excellent, providing a hem-stitched edge already finished on loom. First, work a regular hem-stitch or an edge stitch such as that at C, along end of weaving, either 2" after start, as at 1, or 2" before ending, as at 2. Now continue weaving. When material comes off loom, simply hem the end back to stitch.

STITCHES TO JOIN HANDWOVEN STRIPS

Weavers making large pieces of fabric from handwoven panels, as well as those weavers who have narrow looms, should learn some decorative stitches to join these strips together in attractive ways. Sometimes the joining can be as effective as the textile. Such is the case in a beautiful handwoven bedspread of nubby linen recently woven by one of our new men weavers, Mr. H.W. Heyberger of Lancaster. Mrs. Heyberger made a very heavy ridged joining which adds great beauty to the whole effect. One can use a heavier yarn or different color to enhance this effect still further. Weavers who have narrow looms can use such stitch methods to make wide fabrics out of narrow ones. These can be equally attractive as entire lengths. Both of the stitches below will be found simple and effective

THE LADDER STITCH



This stitch makes a design by itself. Be careful to mark off the sides so that you will get them straight.

Starting at top left, make two horizontal stitches of equal length, quite close together. Draw the thread around to the right counter-clockwise to form a loop. Hold loop down, then stitch under the two horizontal stitches only, not into cloth at all, A.

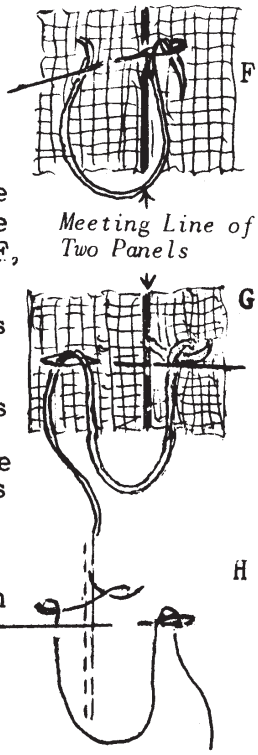
Carry thread to right side of horizontal stitches and make similar loop, B.

Make a third horizontal stitch, C, just below other two from right to left.

Insert needle between the second and third rungs of ladder and pass it under both threads of left-hand loop, without taking up any fabric, as at D.

Carry thread across to right and pass under right hand loop in same way. Now pass needle under fabric and to left as before, to make next rung of ladder. See E. The stitches appear like little braids.

THE CRETAN STITCH



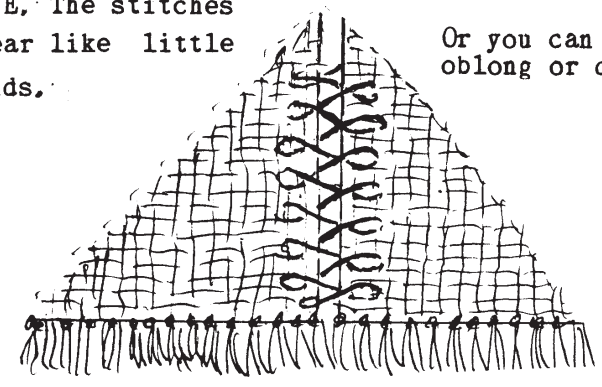
This stitch is effective but very easy to do. Work either from top to bottom or side to side. It consists in passing needle under a few threads of the fabric first on one side, F, then on the other, G.

Each time the needle is pointed back toward the center, and the thread is carried across the previous stitch, H. One stitches at equal distances on each side of the center line which is the line where the fabrics meet. Each stitch is taken a little below the one you have just made, rather than just opposite, see J.

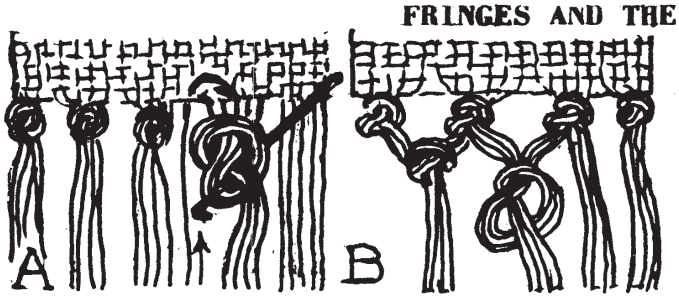
This stitch is regarded as a "filler" stitch. If you increase the distance of the stitches from the center line, but keep the others closer, you produce an effect like that at K, with heavier ridge and a more textural look.

You can also build up a triangle or pyramid of these stitches by making those at the base wider than those at top, tapering width of stitches off gradually.

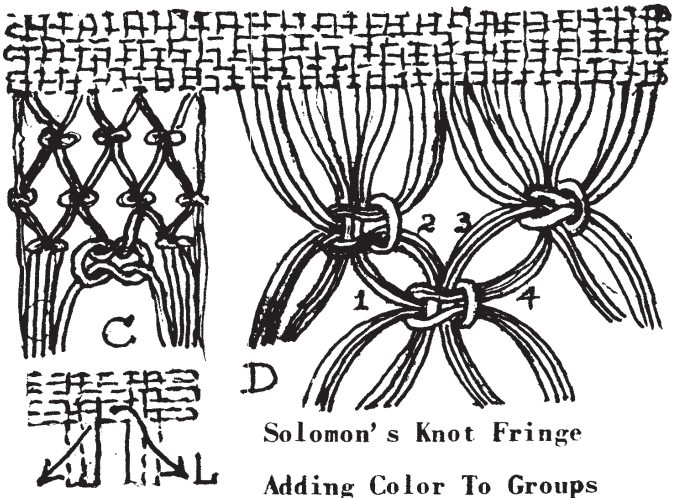
Or you can make square oblong or diamond figures.



FRINGES AND THEIR VARIATIONS

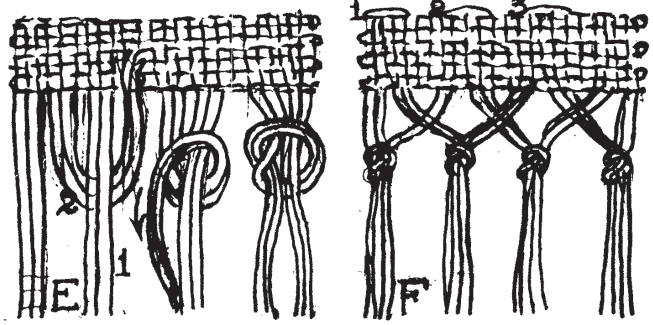


Simple Fringe Double Fringe

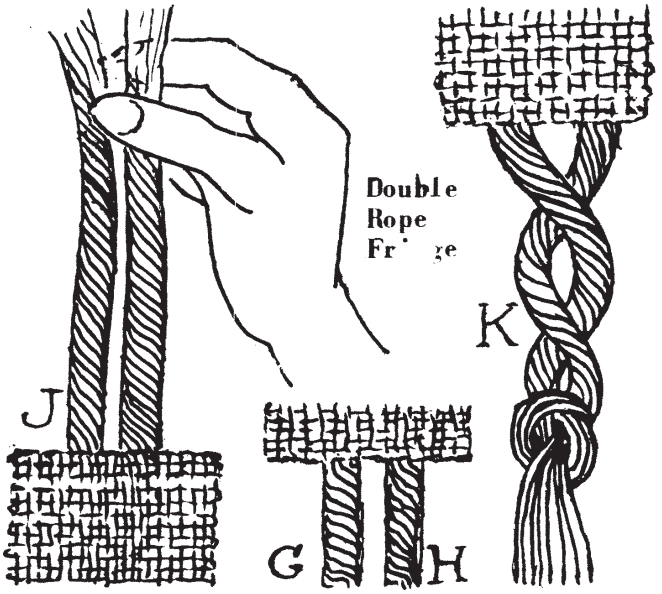


Solomon's Knot Fringe

Adding Color To Groups



Lightweight Fringe Lattice Fringe



Handwoven articles can be greatly enhanced by adding an attractive finish,-hem or fringe. It is a good idea to learn several finishes, then select the one most suited to your piece. A heavy rug should have a heavy fringe, but a knotted fringe is too heavy for a table runner. If the warp is sparse, either add threads for a fringe, A, arrow, or use a hem instead of a fringe. If the warp threads are colorful, be sure to make use of them in an effective fringe.

Simple Fringe, A. The simplest fringe is a regular overhand knot tied with a group of warps. Use a crochet hook to push the knot close up to the weaving before tightening.

Double Fringe, B. Tie a row of single knots as at A; then divide each of these in two parts. Use half the warps in each knot and tie with half those in adjacent knot, as at B. This makes a second row of knots. One can continue splitting the knots to make successive rows. This fringe is more decorative than that at A.

Solomon's Knot Fringe, C, D. A very pretty effect is given by using Solomon's Knot- same as a regular Square Knot shown on page of knots. Tie as at D, using four groups of warps, two middle ones, 2,3, for the core, and the two outside ones, 4,1, for tying around core. Make as many rows as desired. A delightful fringe to tie.

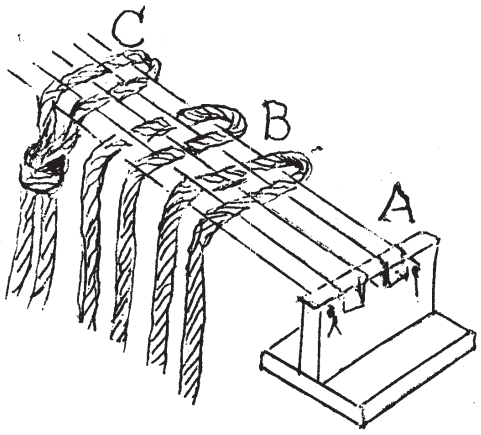
Lightweight Fringe, E. If the warp threads are heavy and the resulting fringe too bulky, split each group in half. Use half the group, 1, as a core to tie over, and the other half, 2, to tie with. Bring ends, 2, under ends, 1, then down over both groups, see arrow. Bring ends 2 in under its own loop and down through loop beside ends 1, as shown. Tighten. This is really a necktie knot, a fore-in-hand.

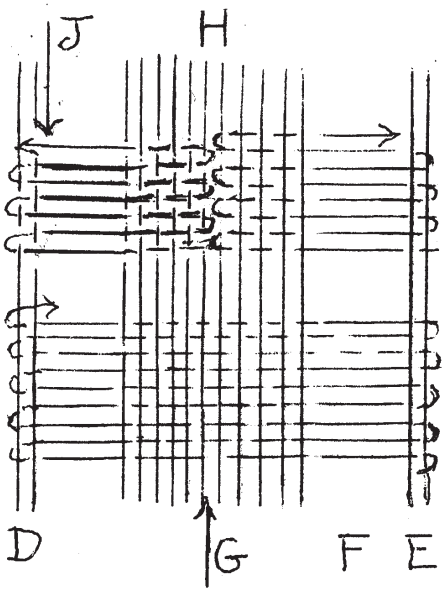
Lattice-work Fringe, F. A Dainty Fringe. Divide each group of warps in half. Carry right half of group 1, across left half of group 2; then tie it with left half of group 3. Tie each half in this way, skipping a group between knots.

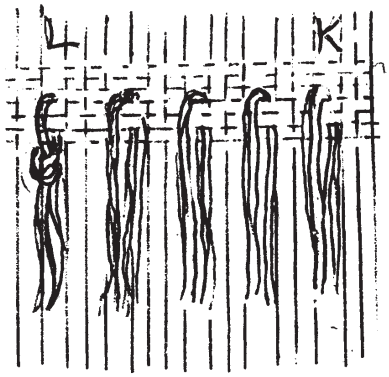
Double Rope Fringe, G. In this fringe, one combines two groups of warps for each tassel or fringe unit. Divide warps, such as 8 or 10 into two groups. Twist one in each hand, both in same direction, G, H. Twist well until they tend to kink. Then take both parts, as at J, between thumb and forefinger, turn article upside down, and let dangle while it twists itself into a snug, single rope, K. If warp is of several colors, use dark for one part and light for the other to make a 2-color fringe.

Add Colored Threads To Thin Warps, either between warp groups or at knot center. See L.

HOW TO MAKE AN EXTRA FRINGE FOR COLORFUL EFFECT







The weaver sometimes needs to increase the size and effectiveness of a fringe; or a piece can be taken from a loom too late to add a needed fringe. Again a warp can be too sparsely set in the reed, or too colorless for the attractiveness of the final product.

So we find that it is practical to know how to weave a fringe to be added to a woven piece; or to add colorful yarns to a thin fringe to make it more appealing.

We show here several ways of weaving an extra fringe or adding yarns to any fringe.

Method No. 1. Weave a Fringe on a Small Loom

A loom frame or a toy loom can be used for the fringe at A. The warps can be set from 1 8 to 1 4 in. apart. Make taut. With the fingers weave in added fringe lengths, as at B. Knot yarns as at C.

Method No. 2. Use a Regular Warp; Weave a Strip; Cut Apart for Two Fringe Strips.

Stretch a narrow warp on the loom, or use the end of a warp already wound as at D. Leave the selvage threads, E, but take out warps between these and main warp for 3 or 4 in. namely desired length of fringe. This is marked F.

Weave from selvage to selvage as shown for desired length of strip; then cut in center, as at G. Turn under this cut edge, and add to fabric.

Method No. 3. Weave Two Separate Fringes

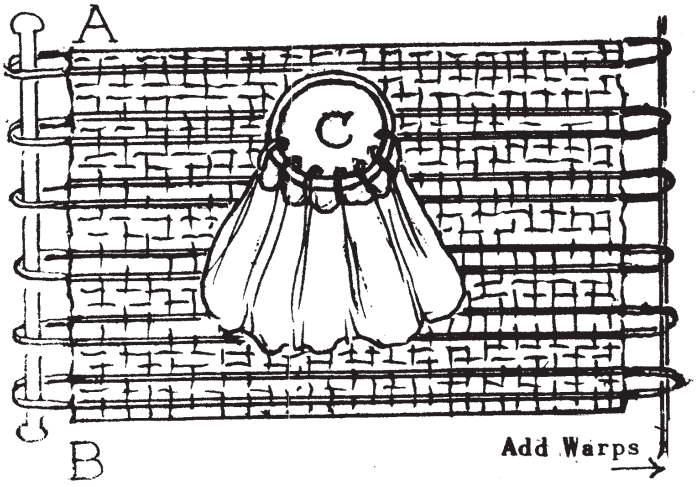
One can use a warp like that shown for Method 2, but weave with two shuttles, reversing at center of cloth, as at H. This gives a selvage edge to top of fringe and is by far the best method. When finished, pull out the selvage threads, J. One can use either 2 or 4 threads for this selvage. The fringe loops can be left as loops or made into cut ends.

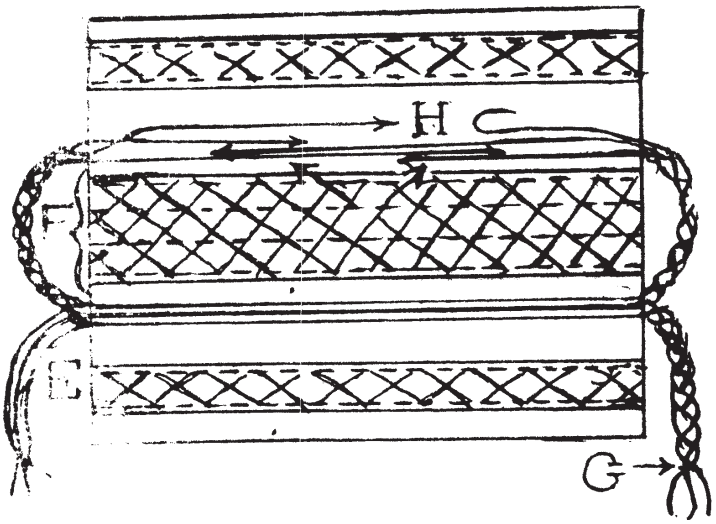
Method No. 4. Adding Fringe Lengths Between Warps Set Far Apart.

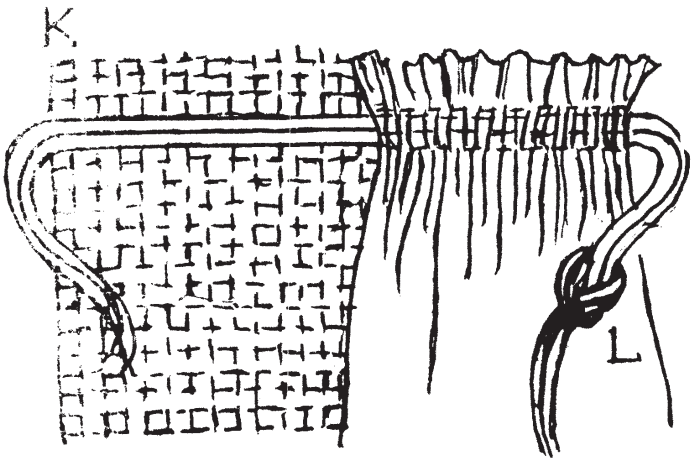
If you wish a fringe for a fabric where the warp is sparsely set, or if you wish to add gay colors to a drab warp, use Method No. 4. Cut lengths of yarn heavier than the warp, hook a group of these in between the warps with a crochet hook or coarse needle, as shown at K. Tie fringe lengths as shown at L.

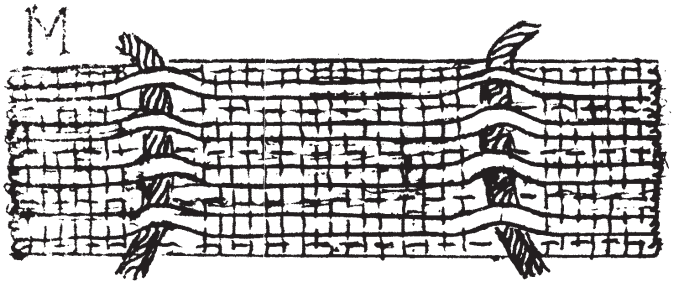
We have made attractive runners, chair-back sets, wall hangings and towels simply by adding colorful yarns to the fringe in this way.

Added fringes offer one a chance to use yarns of unusual color and texture. One's finished product can be made much more interesting and saleable by this extra effort. Bring out the colors of a laid-in motif, or a border by repeating in a fringe.









Weaving Loops Into The Bag

Loops to slip over bag handles can be woven right on the loom, as at A. These can be run over straight handles, B, or a round handle, C, that can be opened. To weave loops, add 2 or 4 extra warps at sides, 2 in. from selvage. At intervals of 1 to 1½ in., pass filler around these. If weft is heavy, one row is enough for a loop; otherwise, weave several rows of weft for each loop. Together they form one good loop.

Handles Woven Into The Cloth Are Strong

In so many bags the handles give way or pull out before the bag wears out. To avoid this, plan your bag design with the handles woven right into the cloth. Weave a distance such as D for the first side. For the handle to be started at this point, use heavy filler, such as rug yarn. Cut from 3 to 6 lengths of filler, measuring twice the width of piece plus 9 to 12 in. for each handle. Weave in the filler within 3 to 6 successive rows of tabby or pattern. Let ends hang, as at E, while you weave center of bag, F, distance desired. Now braid lengths of filler into a sturdy handle, G. Make length of handle at each side 6" to 7" and tie a cord here so as not to fray. Both handles must measure just the same.

Now weave in the filler ends, splicing them as at H. Splice at different points across width, so that at no one point will there be a noticeable change of texture. Continue with regular filler for rest of bag, J, same as first side. This handle is absolutely firm and will never give way.

Shirring Cords For Bags and Aprons

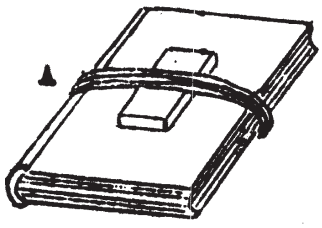
An easy way to shir up a bag or apron is to weave in fairly heavy wefts, right through the warps, as at K. Cut lengths of filler long enough to go around your waist if an apron, or length desired for a bag. Three lengths seem adequate. Weave in one length, then 3 rows of tabby loosely woven; then second length, and 3 rows of tabby, and finally the 3rd length; then continue weaving the heading or top of bag or apron. Take material off loom, shir, then tie the ends together in a knot, L. You can also braid the 3 strands, L, into a firm tying cord before tying end knot if desired

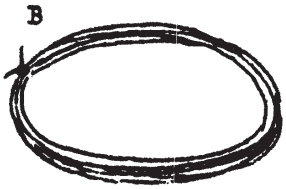
Leave Spaces in Warp For Bag Cords

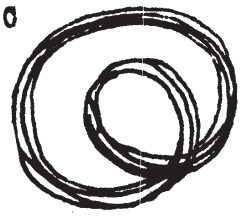
If your cloth is wide enough to fold over into a bag, in much the same way as at A, you can plan to leave gaps in warp at points desired, as at M. Or plan a pattern with a long overshot at these points. Run cord under loops.

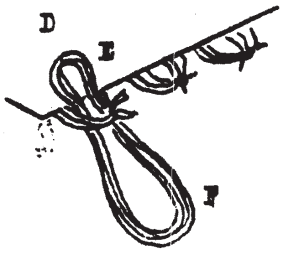
HOW TO MAKE TASSELS

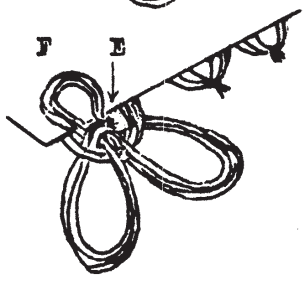
Tassels are used for rugs, runners, the corners of mats, ends of bell pulls, bag cords, purse bands, sandal straps, belts, curtain tie-backs, girdles and book-marks.

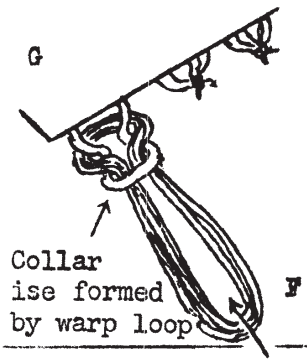












Two Methods For Making Tassels

Method No.1. A Clever Tasseled Fringe

Use this where the warp threads of rug are scarce. First tie cut ends of warp into loops,-a regular number for each loop at planned intervals. Wind warp thread for tassel, which may be a bright accent color,-around a book adding a piece of wood for leeway. To loosen thread,remove wood,slip circle of thread off book, see **A.**

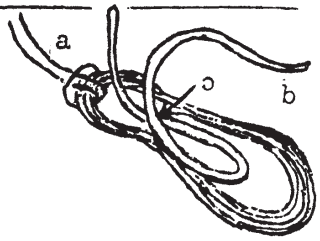
Tie the two ends of thread together,B. Fold circle of thread over on itself,C,to double number of threads. Insert circle of threads into loop made by tied warp ends, as at D. Call top loop,E, bottom one,F. Draw F up thru E as shown. Pull on F until E is fastened tight about warp loop, as at G. F is now down at bottom of tassel again; cut F thru center. Put a tassel in each warp loop; comb out.

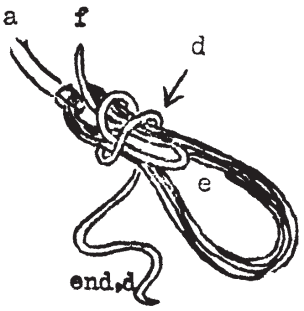
Method No.2. A Tassel with Collar.

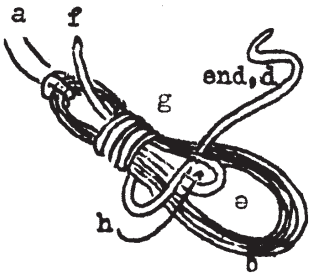
This is a way of making a tassel without using needle and thread.They say that sailors used it at sea. Wind thread for tassel around palm of hand. Slip a loop of cord around top or the head of tassel,a. This may be a colorful cord made by hand. Now hold the tassel in right hand with lower end,b between thumb and fingers. With left hand wind thread chosen for collar. Make a loop of this near top, see c.

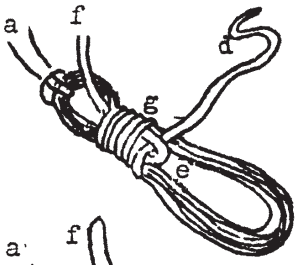
With left hand wrap cord around for collar, as at d, leaving loop, e, long enough to be uncovered; and end, f also uncovered. Wind close to each former round. When the collar,g, is desired width, put end,d, thru loop e as at h. Draw h entirely thru, then pull upward on f. This draws end,d,as well as loop e, up under collar to a more secure fastening. See enlarged drawing at j, showing interlocking of loops under collar. Cut end f and d off flush with collar,- see arrows.

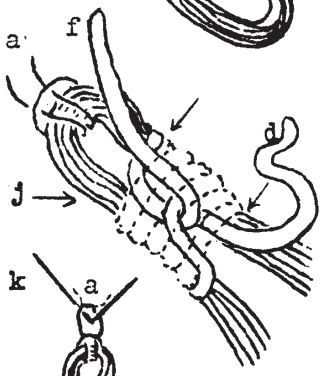
Tie tassel to corner of fabric by the two ends of fastening cord,a.Tie securely, then fasten both ends into fabric. Comb out tassel; trim even.

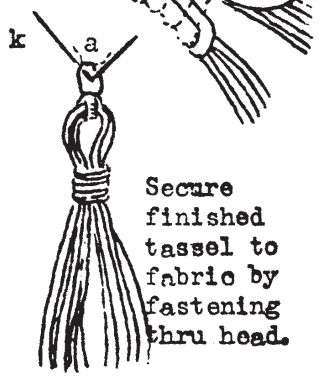












Secure finished tassel to fabric by fastening thru head.

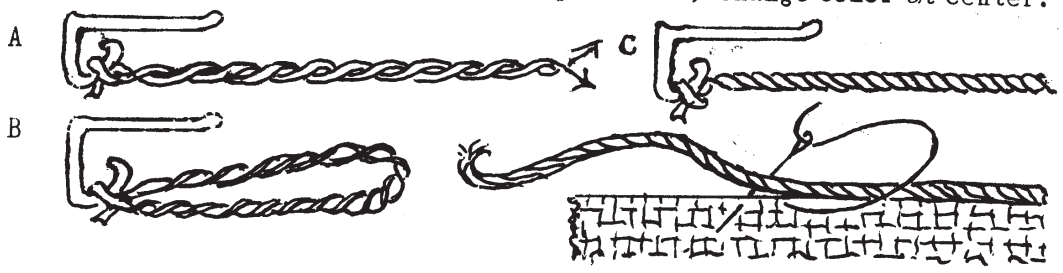
How To Make Rope

Rope-like cord is excellent in finishing handwoven articles,- pillows, purses, runners, belts, shirring cords for bags or aprons, edge-trim for book covers and linen folders. Making cord is a valuable skill to acquire for one can use the same yarns used in weaving to carry out the color scheme of a gift item, as well as the same texture. Rope-cords can be made any size or thickness,- and are simply smaller strands twisted together. As "great oaks from little acorns grow," large ropes grow out of the smallest of fibers. Alone, a single fiber is weak and amounts to little, but when tightly bound together with hundreds of similar fibers, it becomes strong and unbreakable. All thread except syntnetic yarns, is made in the manner described below. The great steel ropes that hold up the spans of the George Washington Bridge, are made of small steel wires twisted together in just this way, only by machinery. Thread has always seemed to me to be a lesson in the combined strengths of the individuals who make up a family, a city or a nation.

Hand-made rope has a great many uses. Home-made cords make just the right outside trim for novelties when it is impossible to match the perle floss with which they are made, in a store. Homemade cords can brighten up the edges of so many things,- collars, hats, the edge of a needlebook or pin-cushion, or tie-backs for curtains. Cords made of Perle yarns can be made into neck bows to take the place of ribbon, shirred cords for evening bags, a decorative cord and tassel for a bell-pull, a colorful cord for a light-pull, trim for chair-back sets or ties to fasten cushions into chairs. And best of all it is both simple and interesting to make cord, and anyone can do it.

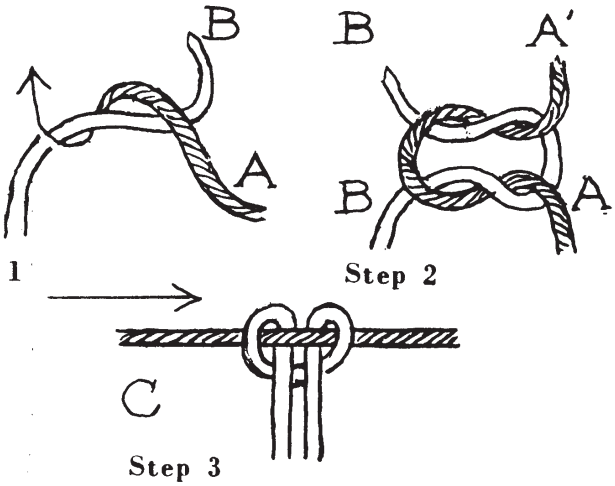
To make a cord, decide what length it is to be when finished, then measure off a little more than twice this length, and cut several strands of floss this length. You can make them all the same color, or half one color, such as your warp color, and the rest the weft-color. Tie the cut lengths to a knot at one end, slip over a hook, A. Grasp other end of strands between the fingers, and twist them, holding taut. Twist strands until they begin to kink, then fold double, as at B, taking center of fold in one hand and the other two ends in the other. Twist them the opposite way from the first direction, as at C. A rope is the result, double in size to the strands used when starting. So in making rope use bulk half the size of that desired.

Ropes over 3 ft. long should be made by two people. Each person can hold an end, twist taut together, double center around a chair leg or bedpost. Fasten ends in a knot to keep from untwisting. For a cord of two colors, for first length of long strands, change color at center.

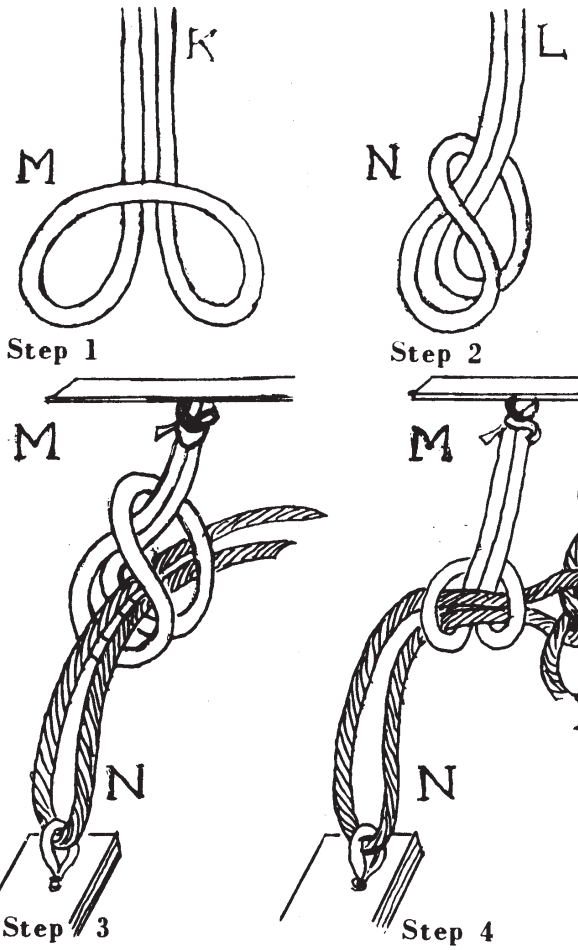


THE KNOTS FOUND USEFUL IN WEAVING

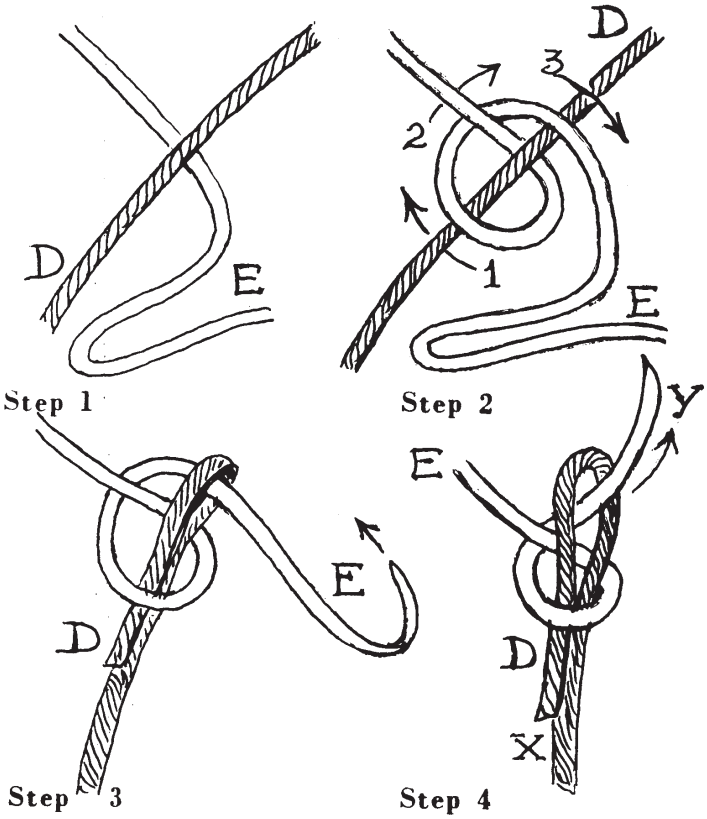
THE SQUARE KNOT



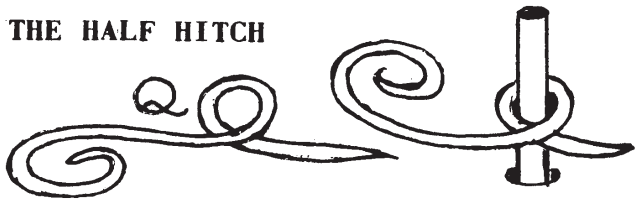
THE SNITCH KNOT



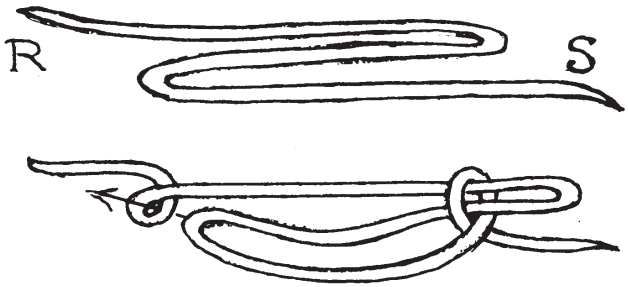
THE WEAVERS KNOT



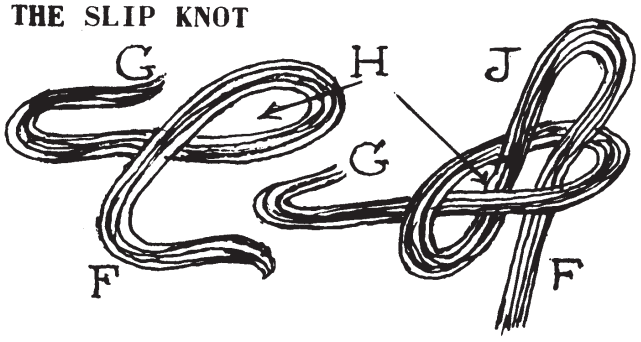
THE HALF HITCH



THE SHEEPSHANK KNOT



THE SLIP KNOT



THE FISHERMAN' S KNOT

From "Handweaving Hints for Everyone" - Osma Gallinger Tod, 319 Mendoza Ave., Coral Gables, Fla.

The Square Knot. The Square Knot is used in joining weft threads when winding. It is a knot which can be loosened easily, so it is not suitable for joining broken warp ends. It is also used to fasten short threads together, but for weft use only.

If one pulls up on the two short ends of the knot, Figure 1, A'B', the knot tightens. If one pulls taut on the long and short ends of the same strand, A-A' or B-B', this yarn straightens out and the rest of the knot can be shoved off easily as at C, arrow.

The Square Knot is also known by sailors as the " Sailors Knot". It is composed of two overhand knots, one the reverse of the other. In learning this knot, it is a good idea to use two strands of different colors, coarse in texture. Later take two of the same color.

Step 1. Turn short end of A over short end of B and up again, as shown by arrow, passing A from right to left.

Step 2. Turn short end of A over short end of B, down under it and up again, passing from left to right.

To Tighten Knot: Pull up on both A' and B'.

To Loosen Knot: Pull on both ends of the same thread, as at C.

The Weavers' Knot. This knot is said to be the smallest tightest knot in the world. It is known to sailors as a " Bowline on a Bight". There are various ways of making it; we have chosen this method as being one of the simplest and easiest to execute.

Step 1. Place the short end of the old strand to be mended, B, from left to right across the short end of the new strand, E.

Step 2. Turn long end of E, from right to left, over long end of D, (arrow 1); under the short end of its own strand, E, (arrow 2); and over the short end of D, (arrow 3).

Step 3. Turn short end of D, down over both parts of other strand, E, and into opening below them, so as to lie next to its own strand.

Step 4. Hold both parts of D together with left hand as at X. Pull upward on long end of E with right hand, as at Y. The knot will tighten securely.

The Slip Knot. The Slip Knot is used for fastening groups of threads temporarily, such as groups of warp threads, preparatory to threading.; also for attaching belt warps to bars or posts, or tying weaving ends to bars, as when starting a warp; or fastening weft to a stick shuttle when starting to weave. It can be untied in an instant.

Directions for Slip Knot

Step 1. Loop the group of threads or the single end being tied, such as F, back over the long ends, G, thus forming a loop, H.

Step 2: Group the short ends, F, close to loop, H, and draw the loop formed by the F-threads up through opening H, but do not pull the short ends of yarn, F through. Instead, form a loop with them, J.

To Open This Knot, just pull on the short ends, F, and the knot will untie quickly.

The Snitch Knot: The Snitch knot is used to tie treadles to harnesses. It is made with strong twine, - either Jacquard twine or Carpenters' chalk line from the hardware store.

Two separate cords are used for the knot, M and N. The upper one, M, is fastened to the lams, or if there are no lams, directly to the harnesses in what is known as a "Direct Tie-up". The lower cord, N, is fastened to the treadles.

Step 1. Tie ends of first cord to lams or harnesses as at K; leave loop hanging downward. Turn loop back on itself as shown, forming two loops.

Step 2. Fold loops made at K together, as at L.

Step 3. Slip second cord, N, through screw-eye or the hole of treadle. Bring ends of N up, slip through loops of L, as at M, arrow.

Step 4. Overlap N ends around eachother in an overhand knot, as at O, P.

To Tighten Snitch Knot, pull O & P close up to M-loops. To shorten distance of your tie-up, simply pull up on O & P, bring them further through M, then tighten their knot to hold at this point.

To Increase Distance of Tie-up, loosen O & P, pull N-loop downward, thus giving more distance, and tighten O & P. This single overhand knot is supposed to hold wherever one places N-ends through M loops.

The Half Hitch. This knot is used to fasten warp threads, or groups of any yarns, to pegs. To make it, simply twist the short end under the long end as at Q; then slip over the peg as shown.

To Shorten Cords, - The Sheepshank Knot.

This knot is practical if wishing to shorten the length of a cord. To make it, fold the cord back and forth into 3 parts as at R, S. Take first end, R, make a half hitch with it, slip over the loop below it, as shown. Take second end, S, make a half hitch, slip over loop above it. Pull taut.

To Hold Slippery Yarns - Fisherman's Knot.

To hold slippery yarn ends together, follow directions for this knot. Lay two yarns side by side Tie an overhand knot with one, as at T, slip the other strand through. Do same with other end, U.

Working for many years in the development of drafts in the studio for the leaflets and Shuttle Service, it was necessary to draw down the drafts in detail to furnish true diagrams of the pattern involved. This is not only a tedious process, but it involves considerable eye strain. We therefor sought easier "draw-down" methods. We found several systems that have helped us no end. We wish to share these with our subscribers so as to make this very fascinating art of drawing down a draft easier and more enjoyable. We will present the methods in the order of their discovery.

Method 1 Shut Off Unused Parts of Draft.

See sample draft at right, "The Olive". If drawing down the first block, Harnesses 1&2, take a blotter and cover all the other rows except 1&2. If drawing down 2&3, take blotter above the 3rd row of draft, eliminating H.4. You can look over H.1, and the 2-3 rows stand out plainly enough. If you wish to draw down Hs.3-4, place blotter so that its top edge is under the Harness 3-row. To draw down Hs. 4-1, cut a thin piece of paper and cover rows 2-3.

It was the use of the cut piece of paper that suggested to us the next method.

Method 2 Make A Master Diagram of Units.

Make a diagram of each block unit, as at A-B, Use the regular graph paper for this and leave ½ inch between rows. Then cut them apart, so that the cut edge is directly beneath the row of pencil lines in the unit. Also leave 1 inch at right side with which to handle the slips of paper patterns, see C and D.

Mark down on the graph paper below the draft, the numbers representing the pattern units, such as Hs. 1-2, 1x; 2-3, 1x; etc. as shown at E. You now know which block comes first. Starting with Hs.1-2, pick up the paper pattern for 1-2; lay this directly above the line to be filled, and copy down the series of pencil marks for row 1-2. If this is to be repeated, copy down the marks you have made a second time. For next row, pick up the 2-3 pattern, place above next empty row, copy, etc. This method makes the drawing down of the draft exceedingly easy and it becomes a fascinating pastime. See arrow F, Method 2

Method 3. Make a Stencil to Cover Units.

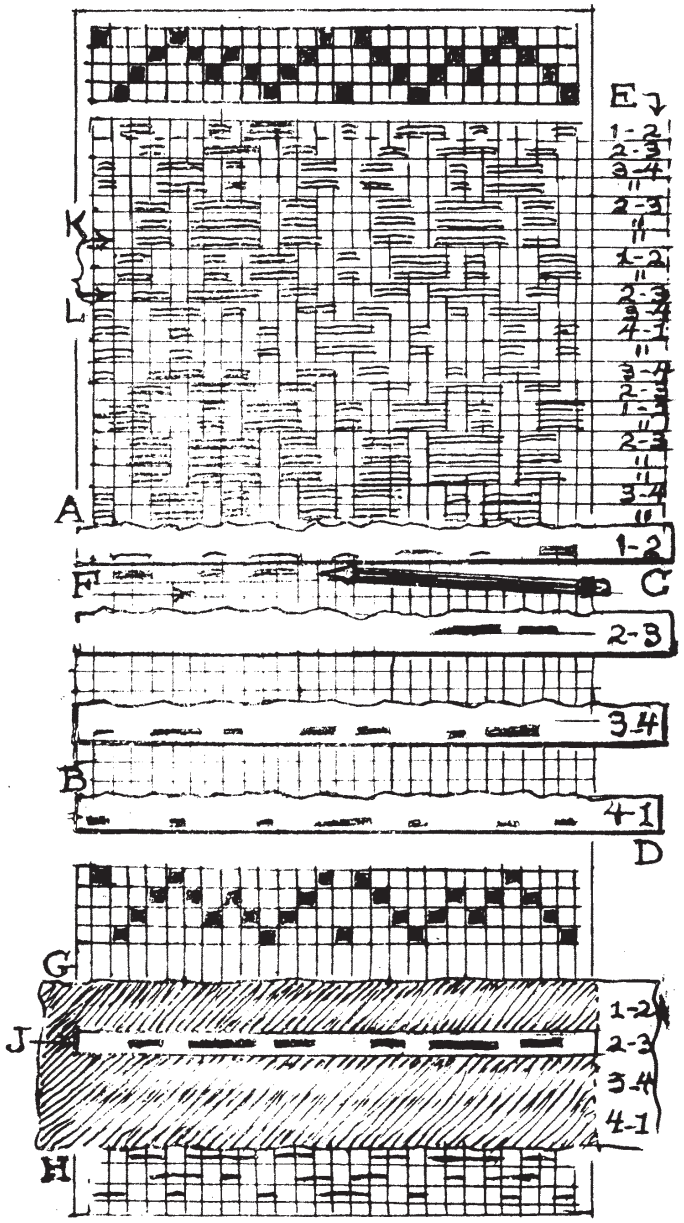
On the graph paper directly beaneath the draft, develop each unit, leaving one empty row between the unit-rows as at G-H. Again mark off your successive block units vertically just below G-H as shown at E.

Method 3- Continued

Next cut a piece of cardboard, a thin flexible cardboard, big enough to cover the diagram G-H just made, with 1 in. extending around edges, and at its center, cut a narrow slit, just big enough to allow one unit-row to show through, as at J.

As you come to each next unit-row desired in the drawing-down, simply slip this stencil-like card over the diagram, G-H, so that your desired row shows up through the narrow slit. Now copy this, in drawing down. Slip stencil over each row as needed.

It also helps a "drafter" to glance at last row where a desired unit was drawn, instead of back to draft- see rows K to L.



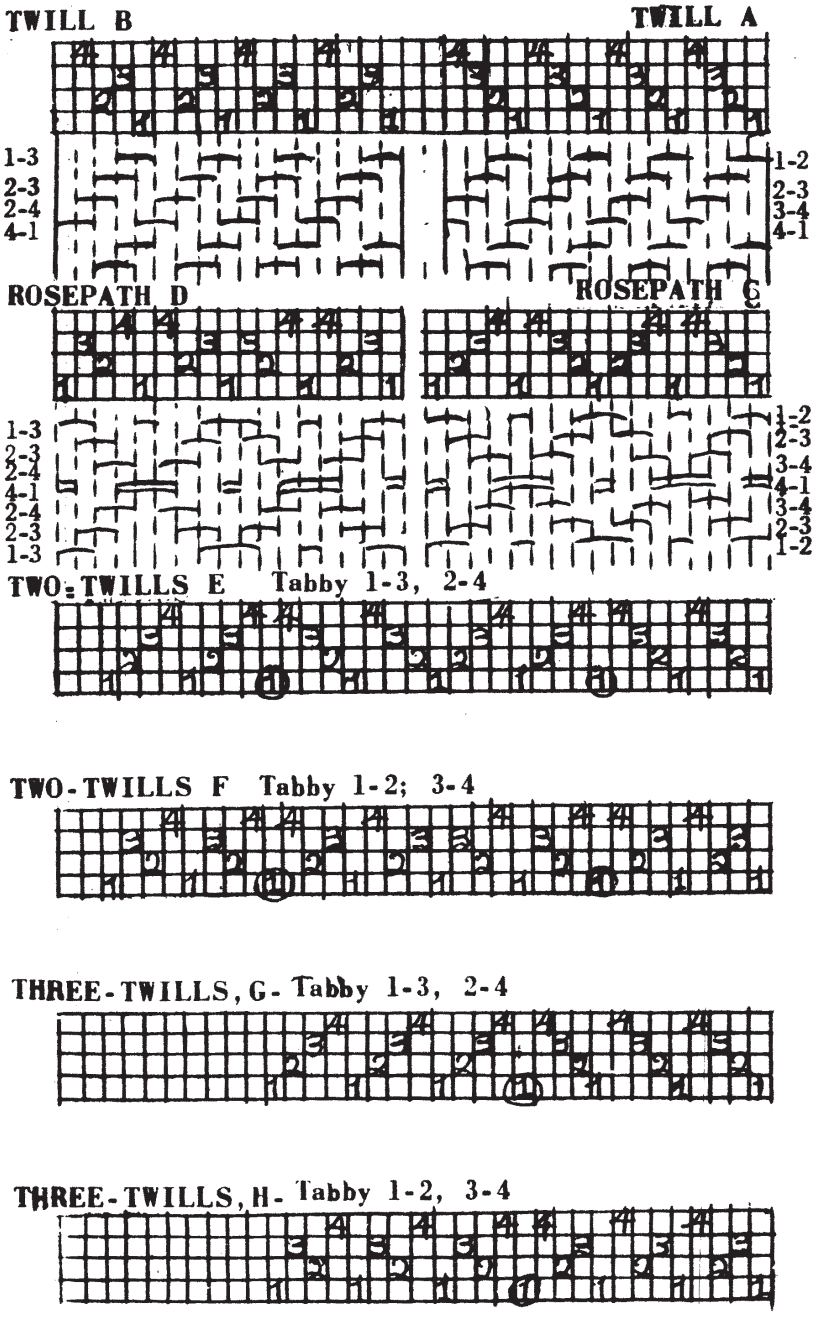
Osma Gallinger Tod, 319 Mendoza Ave., Coral Gables, Fla. 33134

GETTING THE MOST FROM A SINGLE THREADING
ROSEPATH, TWO TWILLS

Few weavers know that one can change the order of the harnesses when threading a pattern, and if one weaves the draft as-drawn-in the same results occur as for the original. This is best understood by looking at the Twill threading at A. If this is woven: Hs 1-2 2-3, 3-4, 4-1, a two-and-two twill results as shown in the sketch below the draft. Suppose you change the 2's to 3 and the 3's to 2, or write the draft as at B,- Hs.1,3,2,4, etc. If you treadle this draft also as-drawn-in, the same design results: Hs.1-3;2-3;2-4 and 4-1,B.

Let us look at the tabby combinations of the two systems. At A it is Hs.1-3 and 2-4, or every other thread; at B, every other thread gives us Hs.1-2 and 3-4.

The same systems can be applied to any overshot draft. If one weaves them As-drawn-in, either system can be used. There is no particular advantage in either one or the other except for specific purposes. Usually the 1,2,3,4 system is accepted, as it seems simpler on the graph. But the 1,3,2,4 system provides easier treadling in some cases.



Osma G. Tod. 319 Mendoza Ave. Coral Gables, Florida

We were seeking an all-purpose thread-on which to work out many techniques, not only variations of a single technique. We found that Rosepath, if threaded by the second system was easy to use and would yield the many results given by Twill, as well as its own attractive design. The threading at C was therefor changed to that at D. You can see by the design below the draft, that both C & D are one and the same. The tabby in C is 1-3 and 2-4; that at D, 1-2 and 3-4.

While the weaver can get the same results from either threading, for our purposes that at D seems logical. Twill is the usual threading for Dukagang and Double Weave. At draft D, either Hs. 1, or 2 can be used to provide groups of 3 threads for pick-up.

On Twill the Double Weave is easy to understand because one regards the draft as composed of two 2-harness looms, one on Hs.1-2; another on Hs.3-4. It is easy to see this in the threading at D.

The threading at D is also that system used for Summer and Winter, and one can also weave this as Summer and Winter, a small unit design resulting, the tabby being the same in both cases, 1-2; 3-4.

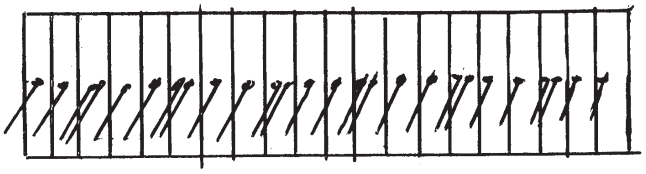
ROSEPATH VARIATIONS:

The same principle works out for both Two-twills and Three-twills, E-F, and G-H, provided there is a "drop of one thread at the center, H.1, encircled. By this reverse point, one maintains the possibility of Dukagang using Hs.1 or 2; and Summer and Winter and Double Weave, using the 1-2 and 3-4 tabby combinations.

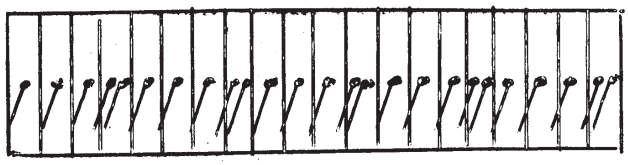
MAKING A REED SERVE SEVERAL SETTINGS

Adaptation of reeds to other settings sometimes adds to a textural effect. Moreover for rugs and pattern work settings other than single or double in the same dent are O K.

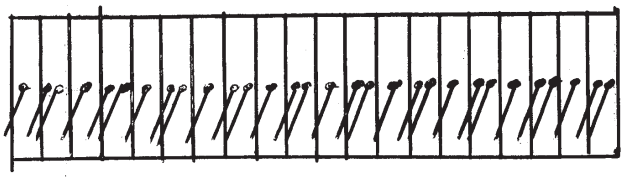
To Change a 15 dent to a 20 dent: Sley 1 per dent for 2 dents; then 2 in 3rd dent.



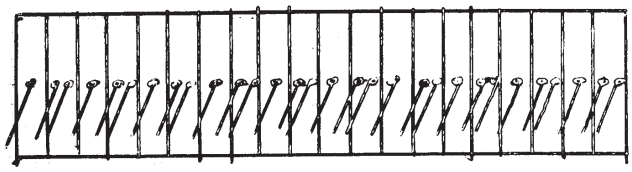
To Change a 12 dent to a 15 dent Sley 1 per dent in 3 dents then 2 per dent.



To Change a 15 Dent Reed to 22½ per inch This setting is desirable since it is close enough to 24 per in. to be good for 10 2 warp. Sley 1 per dent; then 2 per d.

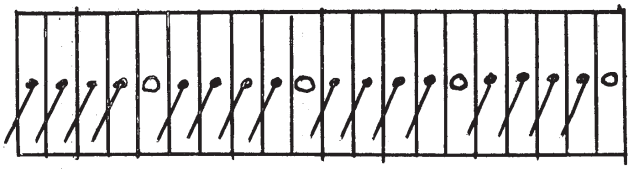


To Change a 12 dent Reed for 18 dents per in. Sley 1 per dent, then 2 per dent. Alternate all across reed.



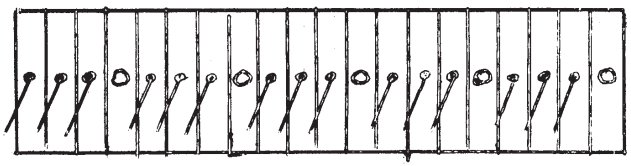
To Change a 15 dent Reed to 12 dent per in. Skip every fifth dent, thus. Thread one each warp through four successive dents, skip fifth dent, etc.

To Change a 24 dent Reed to 20 thds. per in. Follow same procedure.



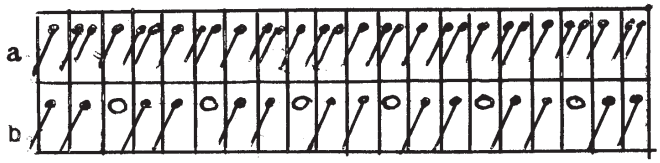
To Change a 20 dent Reed to 15 thds. per in. Skip every 4th dent, thus. 1 per dent, 1 per d., 1 per d., then skip a dent, etc.

To Change a 24 dent Reed to 18 thds. per in. Follow same procedure.



a. **To Change a 10 dent Reed to 15 thds. per in.** Sley 1 per dent; then 2 per dent, and keep repeating – 1 in a dent, 2 per d., etc.

b. **To Change a 15 dent Reed to 10 thds. per in.** Sley 1 in a dent; then 1, then skip a dent.



a. **To Change a 24 dent Reed to 30 thds. per in.** Sley 3 singles, then a double, 1 per d., 1 per d., 1 per d., then 2 per dent, etc.

b. **To Change a 20 dent Reed to 24 thds. per in.** Sley 4 singles, then a double, all across.