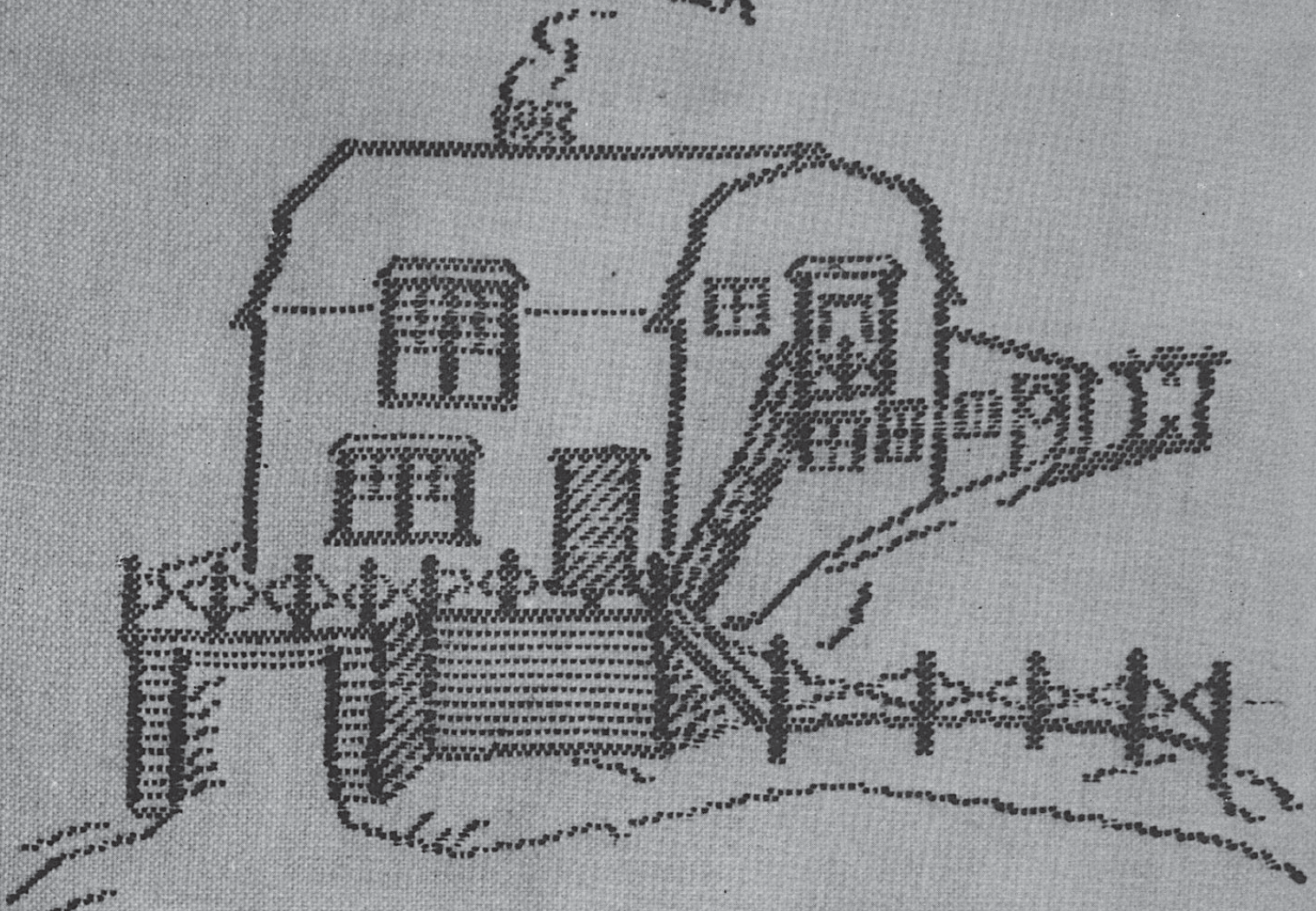


Woolen
at



The Little Loomhouse

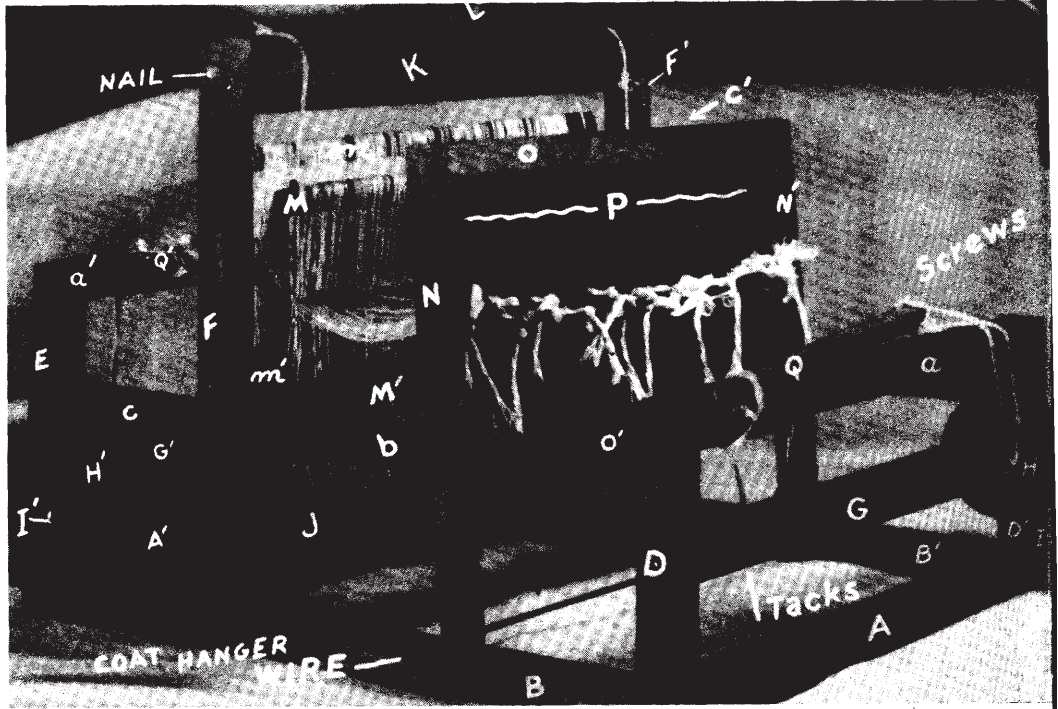
by
Louise
1910

A Weaving Manual *Designed Primarily for the Beginner,*

by a Professional Weaver Interested in American Folk Art Growths in Handwoven Textiles

WEAVING—being a creative folk art—has a wide appeal. So to the loomhouse of a professional weaver come many queries from people who wish to weave. To answer these adequately, we did much experimental work. Because it is difficult for the professional weaver to realize what the amateur needs when working without an instructor, we asked for volunteers who had no weaving knowledge. The developments in this manual are the outcome of the experimental work of these amateurs and of my associate weavers. The weavings of this experimental group became so fascinating to us and seemed such a dynamic contribution to folk art advancement that we opened a new little loomhouse to take care of the experimental work. And because we spoke of "Weaving at the Little Loomhouse", we have thus titled this manual. We have tried to give you the steps essential to the beginner and to include basic techniques so that you may advance to any type of handweaving.

One of the finest early American folk arts was weaving. If the contemporary attainments are to show continued folk art progress, the weaver must have a good loom. For professional weavers, there are several excellent looms at a fair price. For the amateur weaver, however, there seem to be no fully adequate looms at a minimum price. This handicapped our experimental work at first. Then, as the Hindu proverb runs, "The gods send threads for a web begun", a loom came to us.



Young Bob McKnight with the assistance of Dr. S. W. Mather made a loom which had many of the essentials needed for a good loom. Dr. Mather continued working on these small looms till he had a loom so simple in construction that it can be made at home and so accurate in action that fine textiles and small tapestries can be woven. A heavy metal reed is needed for fine weaving and is practically the only cost. You will note slight differences in the looms shown, as they come from different makers. If you make any changes in your loom construction which you feel are improvements and if you create new textiles, we hope you will share your developments with us just as our group is sharing our experiences with you. You can weave any textile shown in this manual and many more difficult ones if you are willing to think out each step and are willing to spend the time which is necessary for

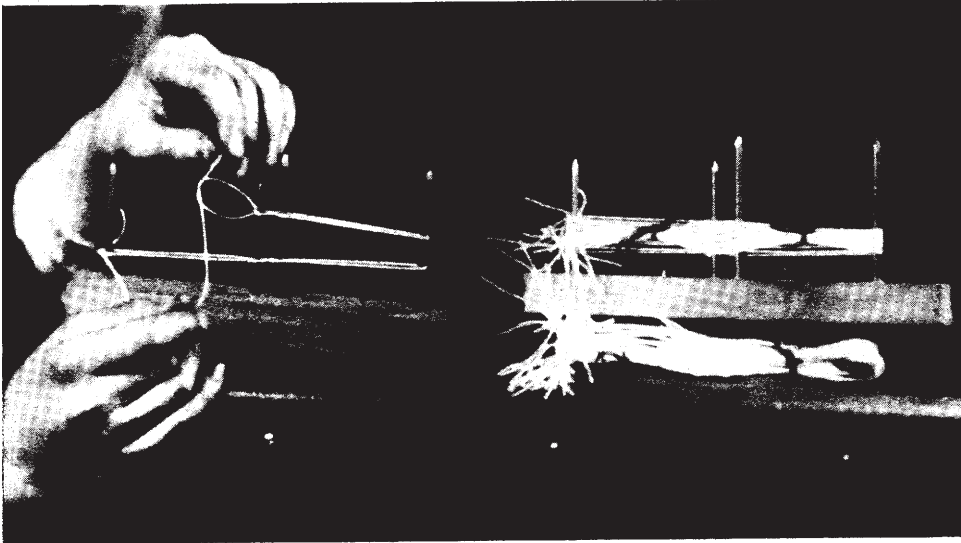
fine craftsmanship. Some of the finest textiles in the contemporary exhibitions on handwoven textiles come from amateurs who have started simply as you are starting now.

Dr. Mather used $\frac{3}{4}$ inch stripping, 14 screws, 6 tacks, 23 nails, glue, wire, metal reed $1\frac{1}{2} \times 6$ which is an excellent size for finely woven textiles. For loose weaves you may want to make a wider loom. We found the size given below is the most practical size for general use. For group use, you will want several sizes.

Before beginning your loom study carefully the illustrations of looms. Dr. Mather notched and fitted the four bottom pieces A,A', B,B'. He used glue on all parts except the four rollers which turn. Care should be taken that the rollers turn evenly.

	Inches
A,A' bases, front and back.....	16
a,a' tops, front and back.....	16
B,B' bases, sides-B screwed to A,D,F, and A'E'; B' screwed to AD', F', and A'E'.....	16
b,b' tops, side front—screwed to D,D' and glued to F,F'.....	9 $\frac{1}{2}$ to 9 $\frac{3}{4}$
c,c' tops, sides back—screwed to E,E' and glued to F,F'.....	4
D,D' uprights, front—screwed 3 places.....	4 $\frac{1}{2}$
E,E' uprights, back—screwed 3 places.....	5 $\frac{1}{2}$
F,F' uprights, side for harness rollers.....	11 $\frac{1}{2}$
G,G' broom handle rollers, front (or cloth beam) and back (or warp beam), attached to uprights by nails and to H,H' by glue and nails, or by fitting.....	13 $\frac{1}{2}$
H,H' 2 $\frac{1}{2}$ inches in diameter, 1 inch thick with holes for lock pins $\frac{1}{4}$ inch apart in front cloth beam roller and $\frac{1}{2}$ inch apart in back warp beam roller.	
I,I' lock and lockpins from coat hanger wire on D' and E to hold warp tight.	
J broom handle roller, lower harness, fastened by nails to F,F'.....	14 $\frac{1}{2}$
K larger upper harness roller which fits very tightly so when turned it will hold its position.....	14 $\frac{1}{2}$
L handle or lever inserted in K for turning or shifting harness.....	3
M,M', m,m' heddle or harness sticks to hold heddles, slight groove in ends.....	14
N,N' uprights for beater (which holds reed) $\frac{3}{8} \times \frac{3}{4} \times 10$ added last and fastened by wire to B,B'.	
O,O' shaped lengths of beater, hollowed to hold reed P.....	14
P metal reed for beater, $1\frac{1}{2} \times 6$, 15 dents to inch.	
Q,Q' small rods similar to M, to be attached to warp beam and cloth beam by cords....	13 $\frac{1}{2}$
23 nails—8 large for rollers, other smaller (one can be used on inner side of b about 2 $\frac{1}{2}$ -3 inches from F to hold the beater back from touching harness.	
14 screws as listed.	
6 tacks to use in attaching M,m to roller K; Q to G, and Q' to G'.	

Doubtless you have already noticed the thread or warp attached to rod Q' which, in turn, is fastened to the warp beam (roller G') by means of cord tied to the tacks driven in G'. You have seen the warp threads go thru the harness, which is composed of string heddles, on the heddle or harness sticks (M,M' front harness, m,m' back harness). The heddle sticks M,m are attached by cord to upper harness roller K at top; and lower heddle sticks M', m' are fastened by means of a cord or rubber bands under lower harness roller J. By turning roller K with handle L, you can raise or lower the harness, which in turn raise or lower your warp threads. The warp threads go thru the harness, thru the dents in the reed P, and are fastened to rod Q which is attached to the cloth beam G.



So after your loom is made, you will need to make your heddles. The heddle block is made by driving four nails in a strip of wood. You may like a small block or heddle bar which can be stuck into an old table or you may like a heavy block. The important part is to have accurate measurements. Especially in groups working together, the heddles should be exactly the same size. The long back nail is driven; the second long nail is driven $2\frac{1}{4}$ inches from the back one; the next nail is $\frac{1}{2}$ inch from the second nail; the last nail is $2\frac{3}{8}$ to $2\frac{1}{2}$ inches from the short nail previously driven.

Heavily waxed heddle cord is most satisfactory for handtied heddles. If this is not available, a good 8/4 cord may be waxed and used. Your knots must be firm. The square knot is the one most often used for heddles. Place the left end over the right end and tie; next place the same end (now on the right) over the second end and tie, drawing the knots together evenly as John is doing in the photograph.

After you have tied a group of heddles (twenty-five makes a convenient number), tie them carefully in both the top and bottom openings so they may be handled in groups until you are ready to thread. It might be wise to test a few of your first ones to ascertain the knots are firm and will not slip.

You can slip your groups of 25 over the heddle sticks, M,M' and m,m'. You will place them exactly as they were on your block so they will not be twisted.

If you already have a loom which is differently equipped, you can adapt to your loom the parts of this beginner's manual which are suited to your loom.

If you have never woven before, and do not have an experienced person to help you with your

first warp, you will want to study each step carefully to make certain you understand each detail. If you have any doubts and feel that you need some help, send a self-addressed stamped envelope with your problem. Anyone can weave on a good warp, but not even a good weaver can do much weaving on a bad warp.

First, you will want to plan fully what you wish to warp. A short test warp of 8/4, 10/4, or 12/4 cotton or semi-mercerized cotton will be suitable. If you wish, make some coarse mats to use with your pottery and warp a colored border.

For any warping there are certain general rules. Read over the next few pages carefully. Check with a pencil when you start warping to see if you are following each step. We have tried to eliminate unnecessary words, so that means that each paragraph has details to follow accurately.

First, with the $13\frac{1}{2}$ reed, you can have a warp of any width up to $13-13\frac{1}{2}$ inches.

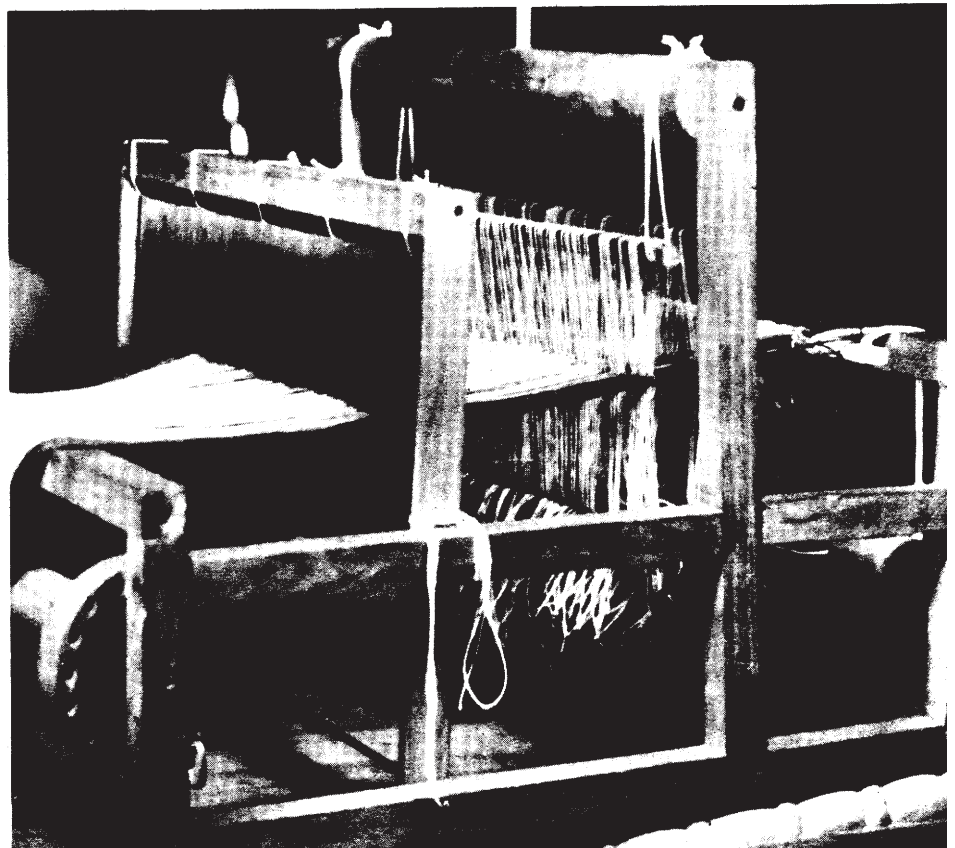
Second, the woven material will not be as wide as the warp is threaded into the reed, for you will draw your material in some and the weft threads will shrink some.

Likewise the warp length will shrink. So both warp and weft shrinkages must be allowed for. Often some minor details will detract from your weaving. Adjust the cords from harness roller K to make them hang so the warp runs thru the center of the heddle eye. If you have trouble with your shed (or the separation of your warp threads when half are raised and half are lowered), check on these cords.

The cords holding the heddle sticks and the ones used to attach the rods to the warp beam and the cloth beam should be very strong tho not too clumsy. These cords must stand the tension from 150-500 threads in your warps.

By tying the beater upright when you start to warp, you will find it easier in running the threads thru the dents.

Both tying the reed in quarters and having the number of dents counted help greatly in warping colored borders. On this loom every 45th thread is tied off and there are 188 dents in the reed.



Warping



Before starting to warp, study most fully the warping methods shown; decide which is best suited for you to use; "cypher" accurately on the amount of warp needed; check thru the procedure with a few yards of odd thread to make certain you are including every step. One old weaver, in telling folk tales of earlier weaving, lamented, "I never had no cyphering so I had to use a grain of corn for each cross. Sometimes my draft, hit didn't come out right". If this weaver who had no cyphering could weave fine coverlets, should we not put our cyphering to good use and avoid the errors of not having our patterns "hit out right" and of not having the right amount of yarns.

The first experimenters at the Little Loomhouse on Kenwood Hill adapted their warping methods from the professional weavers. Soon they learned methods which were more satisfactory for use with the small tablelooms. Undoubtedly it is better to warp and thread-in the draft or pattern at the same time on the small looms. Any of the variations shown are fully satisfactory if you make certain all your equipment is stationary. Should you hold your thread first tight and then loose and should you be careless in arranging your equipment, you will have a warp with some loose threads and will have difficulty in weaving. The best tension is obtained by letting the threads run lightly thru your fingers. If you hold too tightly, you will find it difficult to keep the same tight tension.

After you have glanced over the pages on warping methods, you will want to estimate the amount of thread necessary for your first test warp. It is advisable to estimate fully both the warp thread and the weft thread needed before starting. There are certain general rules, the first of which are given below. Especially in weft threads, you will find that each weaver varies in the amounts he needs. So, later, you will know what your individual allowances need be.

First to determine the number of warp threads needed in the width of the warp, multiply the number of inches wanted in width by the number of threads per inch. In coarse materials this latter will usually be 15 per inch or one thread to each dent in the reed.

However, if you actually weave this number, you will find that your cloth is too narrow, for the weft shrinks and the weaver draws-in her warp. So you will allow about 10% for shrinkage. Cotton draws-in more than linen; some weavers have a tendency to draw-in more than others do. You will judge your percent for yourself later. Be sure to avoid drawing-in as you weave or you will increase the tension of your edge threads and cause them to break.

Second, to determine the number of yards wanted in the length, you first make allowances for the "thrums" in the back (see the loom on page 2) and for the tying-on to the rod attached to the cloth beam in front—see illustrations 35 and 36.

Decide the number of pieces you want and the length of each. Allow for an extra piece or two to take care of possible mistakes and to try out new ideas which may come as you weave.

Allow for finishing—such as fringing or hemming which will be from 2 to 16 inches per piece depending upon whether you use a hem or long hand tied fringe.

Allow full 10% for shrinkage in length.

Multiply the total number by the length; add the number of inches allowed for wastage; change the number of inches to yards.

Third, for the total yardage needed for the warp, multiply the number of threads in the width (with drawing-in allowance) by the number of yards in length.

First, if you plan to weave cotton mats about 11 inches wide, multiply 11 (the number of inches wanted) x 15 (number of dents to inch with one thread in each dent), and thus you will have 165 threads.

To allow for shrinkage and drawing-in, add 10% or 17 threads.

The threads in the width of the warp number 182. This part on warping is for the little loom. Later in case of patterns, you will have to adjust your pattern to the number of threads necessary for the width as given on page 23.

Professional weavers make generous allowances for they know it is false economy to skimp.

For "thrums" in back allow 10 to 14 inches.....	14
For tying-on in front allow 6 to 10 inches.....	10
For wastage	24

Let's warp enough for four mats (from six to twenty may be warped later); 17 inches makes a good length; to this we will allow two extra mats of the same size; the total is now six mats, each 17 inches long.

With three inches each for hemming or for fringing, we now have 6 mats, each 20 inches long.

With 10% shrinkage, we have 6 mats, 22 inches long.

6 (mats) x 22 (length of each) gives 132 inches; add to this 132, 24 inches wastage and we find we need 156 inches or four and a third yards.

182 (threads in width) times 4 1/3 (length of each warp thread) gives us a total yardage needed of 789 or 800 yards.

Usually about an equal amount will be needed for weft. One 20c—1200-yard ball of 12/4 cotton will take care of this plain first warp.

To help you make your first try-out, we have lettered the parts, starting from the back—A (rod about which the warp threads are tied and which is attached to the warp beam that turns), B (back harness thru which alternate warp threads run), C (front harness), D (reed, each dent of which holds a warp thread in place), and E (end of the warp).

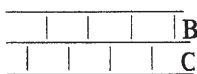
Actually in threading, you will run the end of the thread thru a dent in reed D starting at the front, thru the eye of the first heddle on back harness B, and tie around rod A.

Next, you will pick up the end of thread in front of reed D, take it to around E and back to reed D. Here you will measure so that it will reach A, and clip. Now take the end coming from E, run thru the next dent in reed D, thread thru the eye in the first heddle of front harness C, and back to A. Leave it there temporarily.

Next take the end coming from the ball or spool, and thread thru next dent in reed D. Then thread thru the eye of the next heddle on back harness B and run under rod A. Now tie to the loose end.

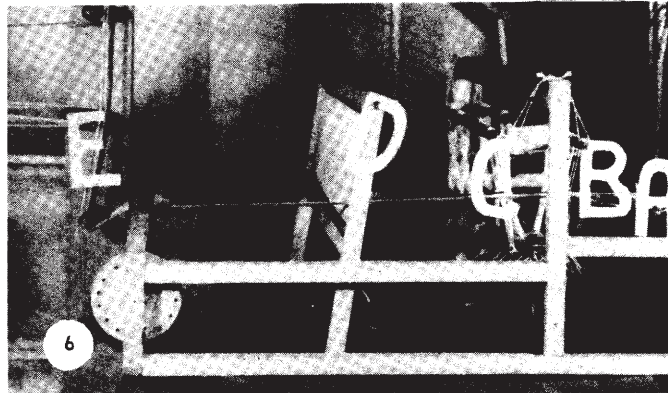
As these are fastened around A, you can again pick up in front of reed D and repeat.

Have you noticed that the threads first go thru one harness and then the other? This threading is called your plain weave pattern or draft, and may be written with the top space being the back harness B and the lower space being front harness C; the lines represent the warp threads.



Before warping a half dozen threads to see if you are certain, read pages 6-9.

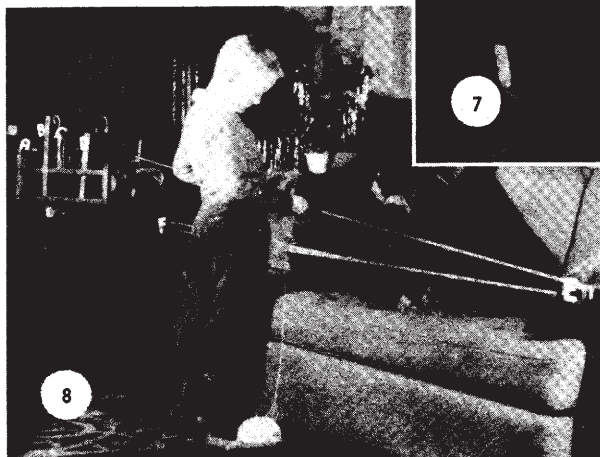
Have you noted that the loom in 11 is not stationary? We had to move it in order to take the photograph. Miss Lessie said if we made her loosen her warp, we would have to make a new one. However, by being careful a warp may be moved many times without damage. But woe to the person who is careless in warping.



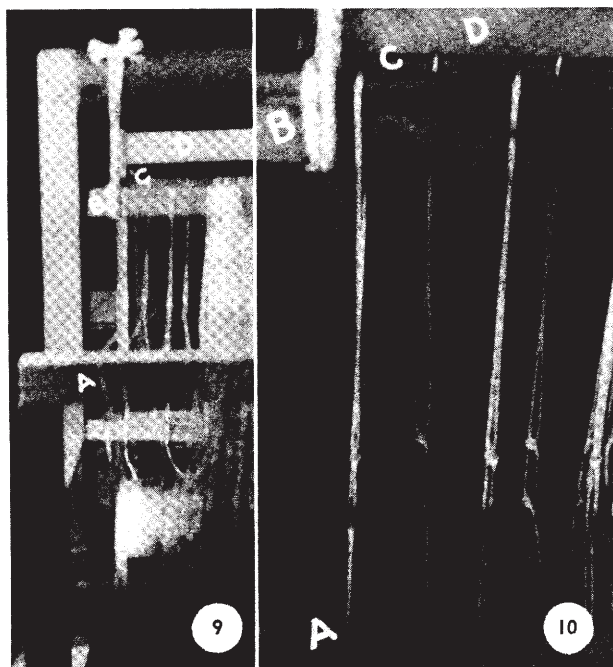
Detail of loom ready for warping.



Pegs in a door can be so arranged that you can make a 10-yard warp while sitting down.



For a longer warp, this lad takes his warp around both posts of the couch—from reed D to right end of couch E to other end F. The dog is “woofing” the warp!

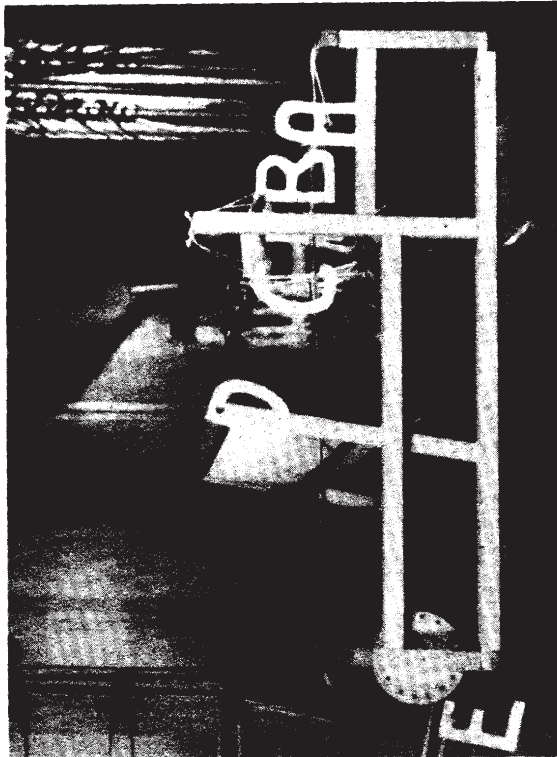


In detail, looking from the back of an already warped loom, you see the first warp thread go from A thru the first heddle-eye on harness B on to the first dent in reed D; the second goes from A thru the first heddle-eye in harness C on to second dent in D; the third thread goes to the second heddle-eye in B to third dent D; the fourth thread goes thru second heddle-eye in C to fourth dent D, etc.



Our experimental work was done by volunteers with the supervision of the local professional weavers. As we made the first little looms, everyone volunteered to warp so that he could weave sooner. However, as soon as several rows of little looms already warped with enticing designs were available, the number of volunteer warpers declined. So it is with professional weavers. The work of actual warping is not a fascinating part of weaving. Yet it is a part which must be

Eight-year-old Wood starts his first warp. It is 12/4 cotton such as may be bought at any dime store. He has already warped several threads which run from the warp beam rod at A, thru back harness B or thru front harness C, thru reed at D, thence to end of warp at E, and back.



12. A is the rod which is attached to the warp beam; B is the back harness; C is the front harness; D is the reed, 15 dents to inch; E is the end of the warp.

16. Now the second end—the one coming from the spool—is threaded thru the next heddle eye on the back harness. You will want this thread to come straight from the dent thru the heddle eye to the back with nothing crossing.

13. The thread is measured so that after being threaded it will reach rod A, and is clipped.

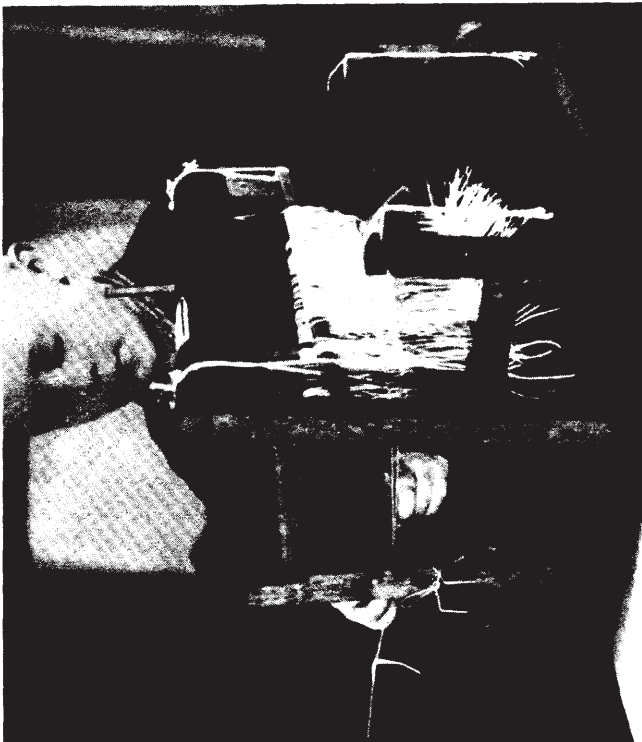


17. This same second end is slipped under rod A.

accurately done. Looms may be warped in several ways. Study the ways shown here and the ways shown in other books. If you work carefully, you will find warping is not so bad. Even the eight-year-olds were trained to make accurate warps. There is a tremendous thrill in warping a new idea for the first time—the suspense of waiting to ascertain whether you have a subtle texture or a madman's delight!

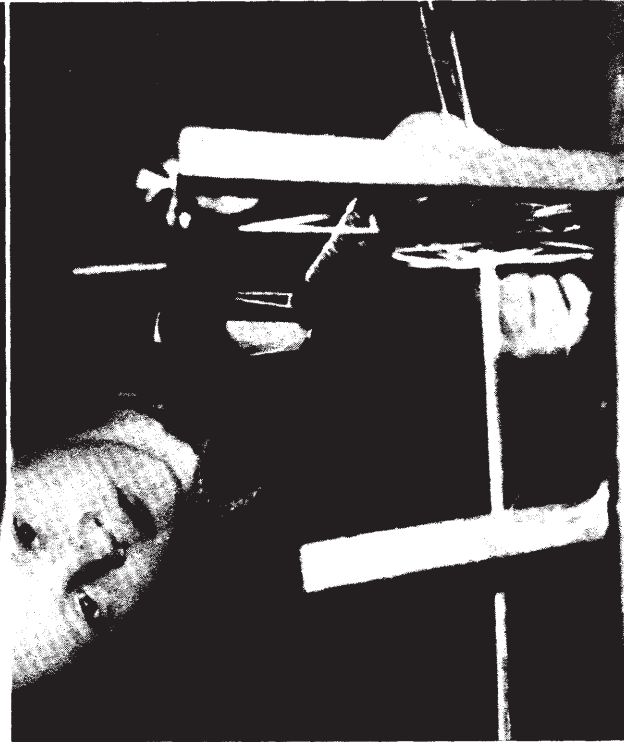
He has already warped several threads which run from the warp beam rod at A, thru front harness C, thru reed at D, thence to end of warp





14. The end coming from the end E is threaded thru the next dent in D; next the end coming from the spool is threaded thru the adjoining dent. Note that the beater which holds the reed is tied to make threading easier. It is most important to ascertain that you thread thru each dent in consecutive order.

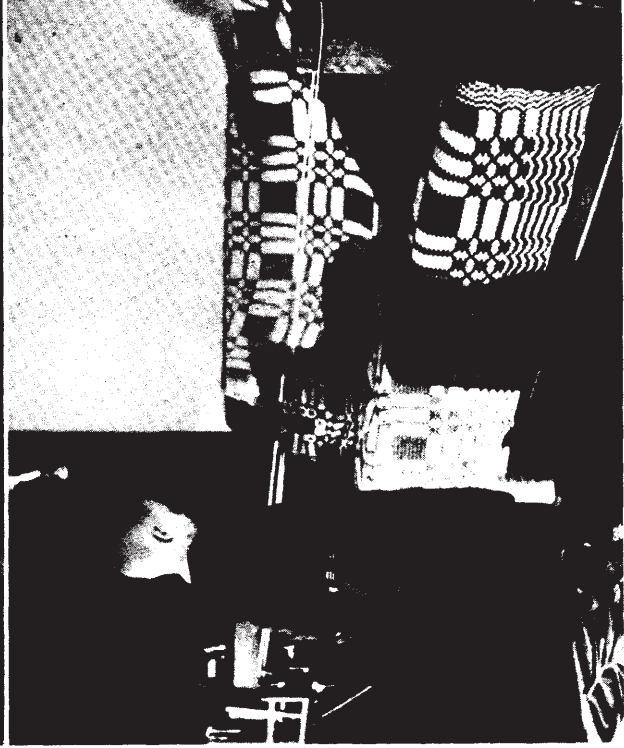
18. The second end is now tied to the first end. It is wise now to check that your threads come straight from the dents thru the correct heddle eyes in the harness. One mistake will throw your complete warp off.



15. The first end which was threaded thru the reed first is now threaded thru the next heddle eye in the front harness. You will watch that none of your heddles are twisted and that you do not twist your thread across the wrong way.

19. Now the thread is picked up in front of reed D and is taken to the end of the warp at E—in this case around a convenient post. When you reach the reed again, you are ready to start the process all over again.

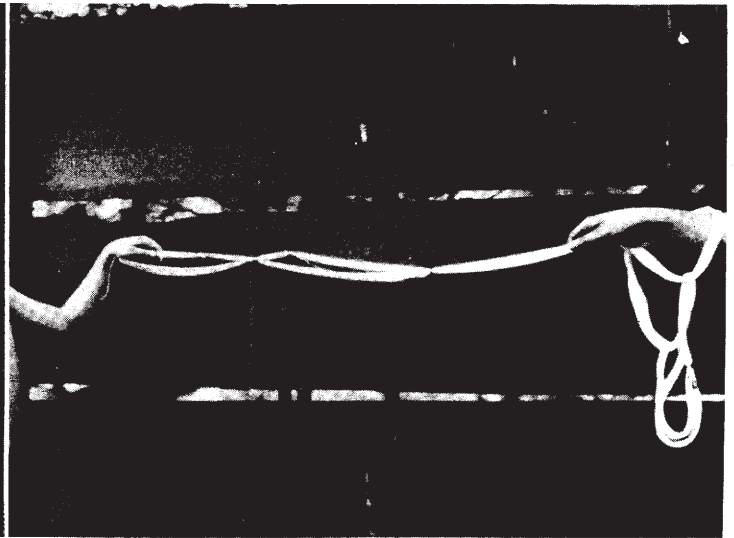
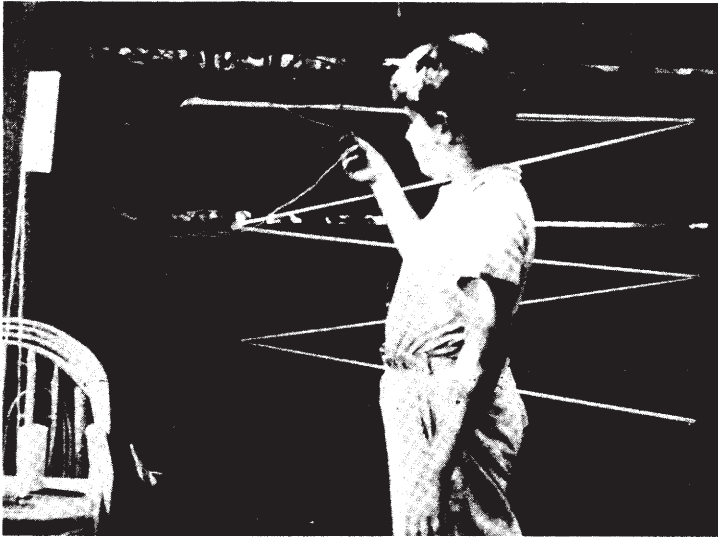
The experimental groups at the Little Loomhouse range in age from three thru eighty-two. The lively group of eight-year-old boys did excellent weaving with very little supervision. Teen-age girls often were interested in trying difficult techniques. For these, they needed aid from the trained weavers. One teen-age girl wove the legendary pot of gold at the foot of a curved rainbow in laid-in tapestry as her first piece of weaving. The middle-aged mixed group, several of



whom started after finding the weavings of their children beguiling, has been the group which has done the difficult experimental work of trying out questionable theories and yarns. The professional weavers, naturally, could not stand on the sidelines, so they have aided immeasurably in ascertaining what could be done with unusual materials.

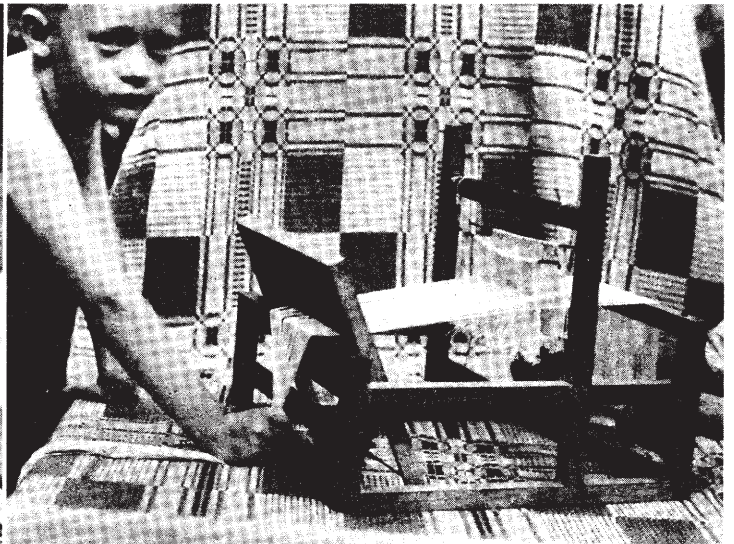
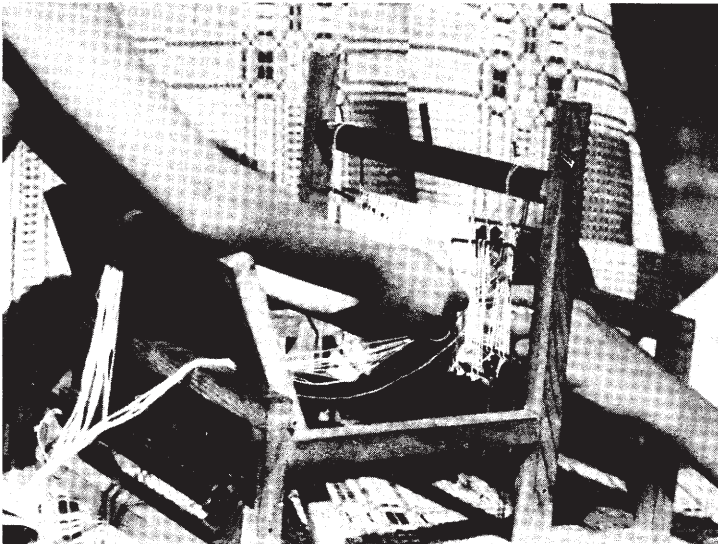
The boys started the little weaving project. They were all very excited over the little loom which Bob McKnight and Dr. Mather made. After Dr. Mather changed the wooden reed, which could be used only for coarse textiles, to a metal reed so that more interesting textiles could be woven, everyone else

wanted a loom. When Dr. Mather made the second loom, the top roller of which was made from a policeman's discarded "billy", the boys claimed the loom. Their warping method was adopted from watching students and professional weavers warp.



20. First, Lawrence and Wood drove nails into a back fence to make a warping bar or board. They punched holes in a box to separate their threads to prevent twisting. Note the "cross".

21. Before chaining off the warp, they tied it at the end, about a foot from the cross, and at the cross. This "cross" is made by taking the warp threads first over and then under the second and third nail as the warp is made. The cross should be tied so that the threads remain crossed. It may interest you to know that many old weavers call their warps "chains" from this habit of chaining the warp.



22. Wood threads thru the dents in the reed and hands them to Bob who threads first thru the back harness and then the front. The wires first used for harness on the looms bent and are no longer used. Note also that Bob used old gears for his warp and cloth beams.

23. The boys wind their warp onto the warp beam just as regular weavers do now. However, in winding the warp, the winder should not hold onto the warp beam but should instead hold only at the roller.

Those experimenting with warping methods for the little loom have used these three warping methods with satisfaction. Reminiscent of early American warping are the pegs in the doorway. A warping bar or frame is not difficult to make. Many groups have a warping mill and most of the mills are large enough to carry small looms. Most weavers prefer threading their pattern thru the heddles as they warp.

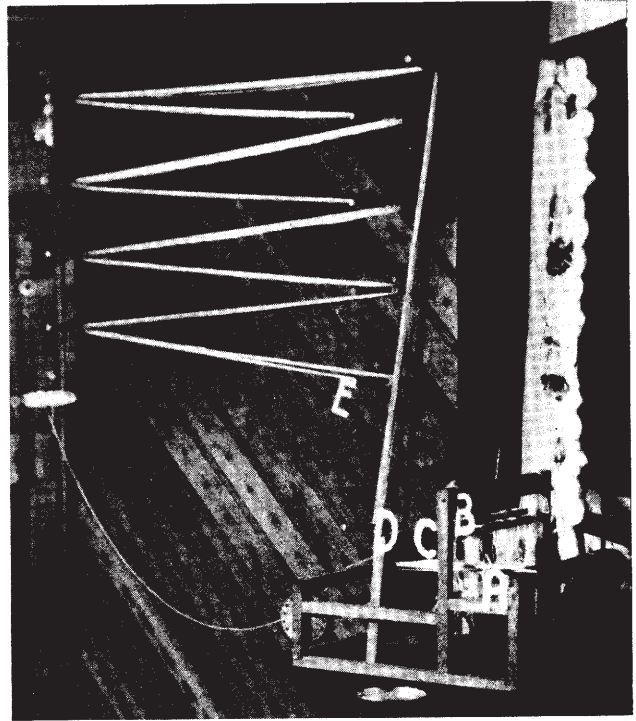
The original purpose of the Little Loomhouse project was to work out the essential steps in weaving for the beginner, who did not have a convenient weaving group to work with. However, a number of groups and schools which are using the project as their pattern have asked for some additional material. We are trying to give you information which will aid you to progress rapidly. So you will want to select that material which pertains to your interests in weaving.

Most groups find themselves limited in looms. On our project which is operated on a cooperative basis, we have found that extra looms kept threaded to certain techniques aid immeasurably. First for the new comers are 20 little looms which cost from \$1.30 to \$4.75 according to whether labor was given the project. This means each beginner may move rapidly thru the preliminaries. Warping is stressed from the first so no one will be afraid to experiment with different types of warps.

We find that the labor saving in having a number of looms kept threaded to certain techniques is worth more than the cost of the loom. This means that there are more than one loom per person. The cost of the looms in this group ranged from \$1.00 to \$5.50 and the width varies from 13 to 25 inches. If a light reed is used, a loom may be made for as little as 40 cents. At the Little Loomhouse we like the heavy reeds. If but one loom is owned, the one on page 2 is most satisfactory. However, for schools and groups, several wide looms will be wanted. The wider looms are good for loose textures in hemp, cellophane, rough silks, etc.

In the attempt to get a good four harness loom at a cost under \$2.00, several looms have been made. None of these are very satisfactory, but they are good to keep threaded to doukagang, leno, M's and O's, twill, and linen weaves for student practice use.

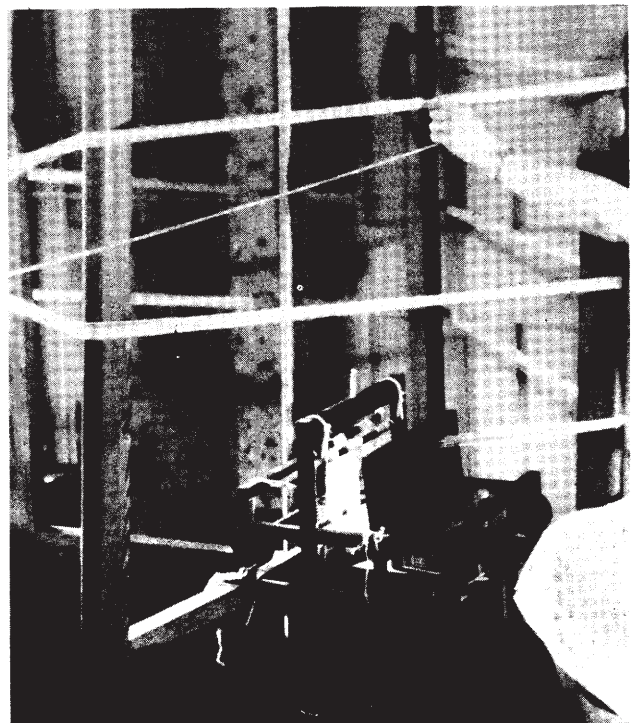
No little loom can replace the floor loom but they can supplement the work of a floor loom—especially in design and experimental work. We have been able to take only three floor looms from the other loomhouses so most of our experimental work is done on the small looms. You can start a like weaving project at practically no cost and let it grow as our project has grown. After all, our project is but nineteen months old and started from a discarded reed, the small loom Dr. Mather first made, and some scrap yarns. As the Little Loomhouse project is a private enterprise, we have gotten a picked group of volunteers who are exceptional. And now with each new member, we add experimental yarns and equipment. The growth is due to the maximum cooperation thru the sharing of warps, experimental work, and studies in design.



24. Two dowel sticks cut into 6 inch pegs and some carefully bored holes made this warping bar at the Little Loomhouse. Three of this type are used there—two are so planned that the warper can sit while warping, and this one is measured for the warper to stand. Just as we have a loom in the kitchen, so we have used the kitchen door for this warping bar. Mrs. Smith is experimenting with a rough and fine yarn to make a different texture.

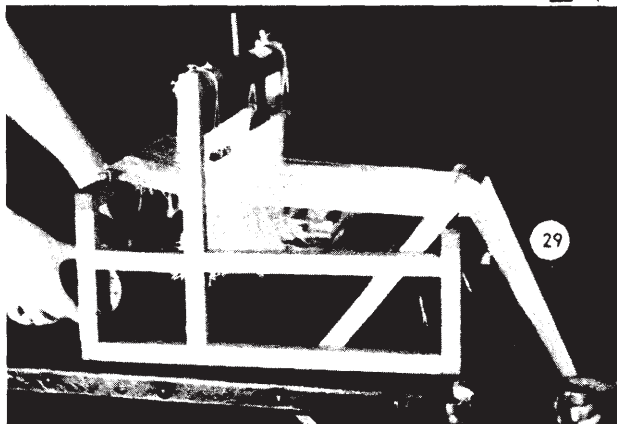
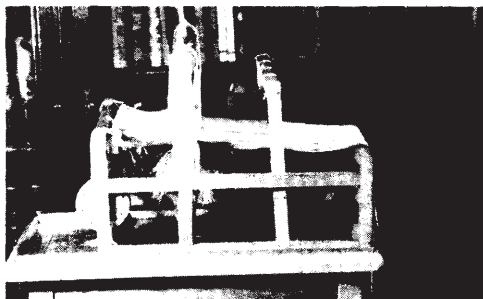


25. Jane's warping bar was made in the wood-working class in high school while she was using her floor loom in school. The loom is 25 inches wide and is being warped with gay cottons for curtain material designed to fit the windows.



26. Mrs. Christoffel is warping 18/2 cream linen napkins which have a colored linen border to go with her china. The mill is a convenient method of warping and is usually practical for any group weaving.

After the warp is finished, it needs to be wound on the warp beam of your loom. To do this on a warp for a large loom, you will need tie and chain your warp. For your little loom, you can simply release the end of your warp and let it lie on the floor. If you are not planning to wind it immediately, it will be safer to place the warp and loom in a large tray or box which can be handled as one object so there will be no danger of tangling. As many of our amateurs are very busy people, they often warp one evening, put the warp safely away, and wind on their next free evening. This can be done safely if you are careful and make certain that no individual threads get tangled.



27. After warping, you may simply let your warp lie on the floor provided you use reasonable care in handling.

28. Barbra holds her warp tightly with her right hand while turning the roller with her left hand.

29. It is easier for two people to wind a warp. Mary starts winding while her brother Lawrence holds the warp in the center so that one edge will not be looser than the other. Mary turns the roller counterclockwise so that the rod holding the warp moves towards her. The cord attaching the rod to the warp beam is very strong so as to stand the tension.

30. Now that the rod has reached the warp beam, Mary holds only the roller. If she held the other side, she might damage the even tension of the warp. Note that Mary has turned the harness roller so the threads will separate. Many of the amateurs say this makes winding easier. It is good to run a piece of cardboard wider than the warp around the roller at this time as it helps keep the tension even.

31. To keep the warp edges even, Mary runs a piece of cardboard every yard to keep the edges even and the tension the same. Make certain the cardboard is wider than the warp so threads will not run over the edge to tangle or change tension.

32. The end of the warp is reached. Mary continues to turn tightly, but she steadies the loom with her left hand, she is careful not to squeeze the warp anywhere and make the tension uneven.

Mary and Lawrence have a well-wound warp. Not everyone does so well on his warp. In case yours is too loose, you can rewind it. However, it is better to check carefully before starting to wind at first.

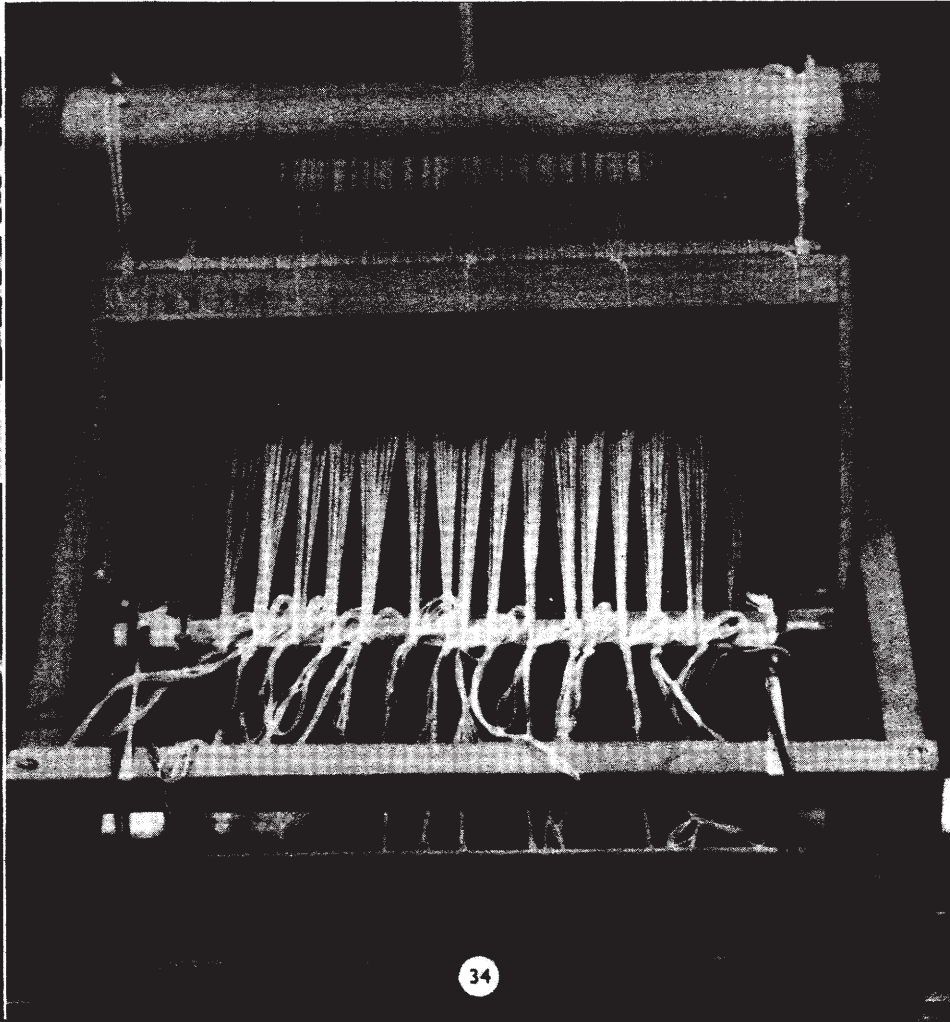
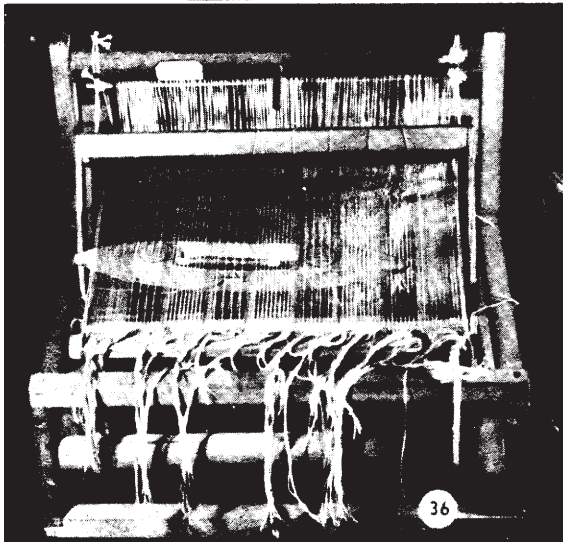
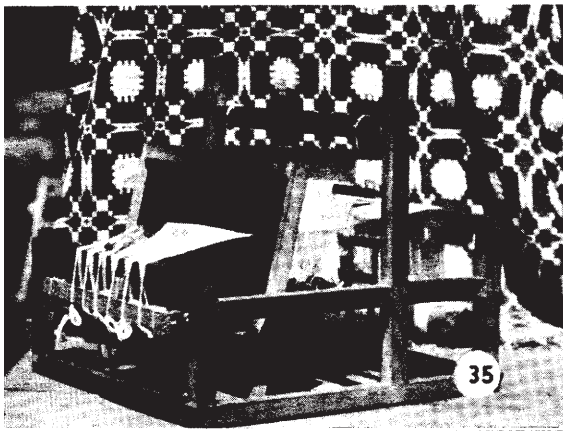
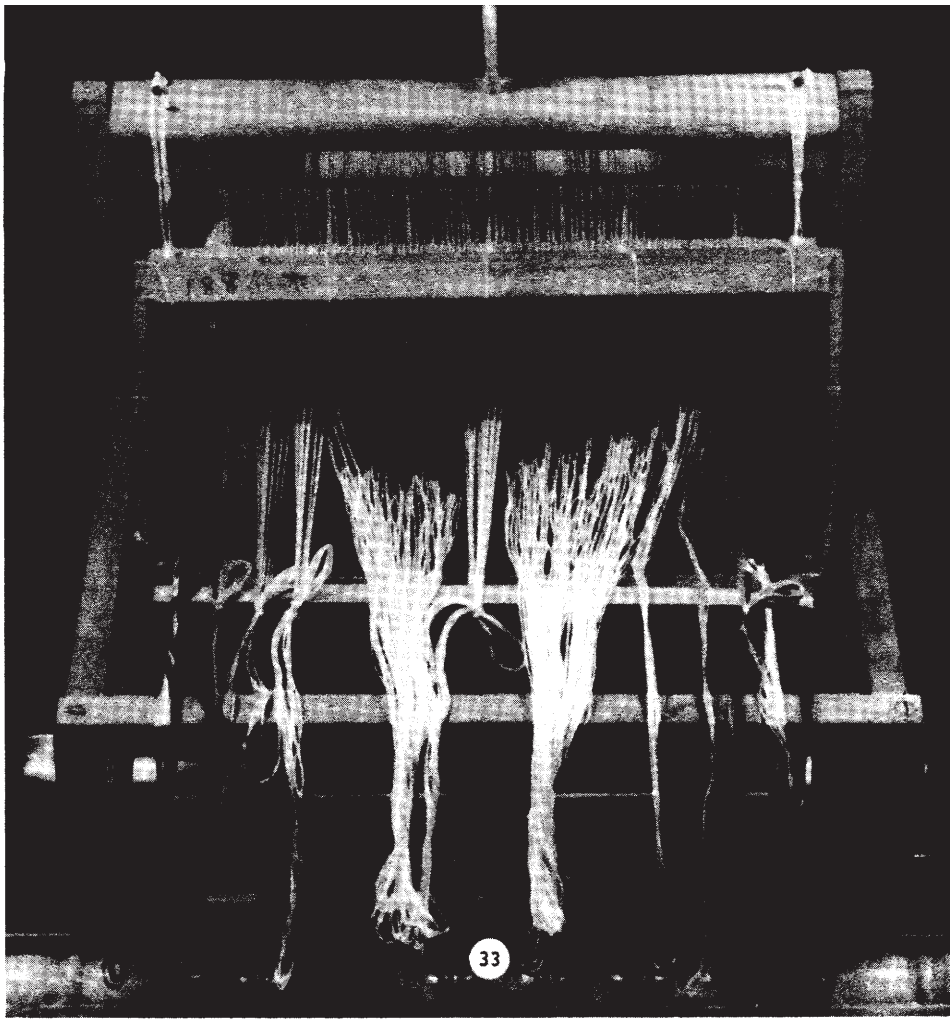
After your warp is wound onto the warp beam and you have only about 8 to 12 inches of warp in front of your beater, you are ready to tie your warp to the cloth beam. The pin in the back roller or warp beam is fastened.

Fasten the front rod to the cloth beam with a very strong small cord as this cord must withstand the pull of 150-500 threads. The pin in the front roller or cloth beam is fastened.

In tying, use a firm knot, but one which can be easily untied in case you do not have even tension to all of your knots. Many weavers like to tie the center group first. Next they tie first a group on one side and then a group on the other side. Usually the outer threads are placed on top. Ascertain that your tension is even before weaving.

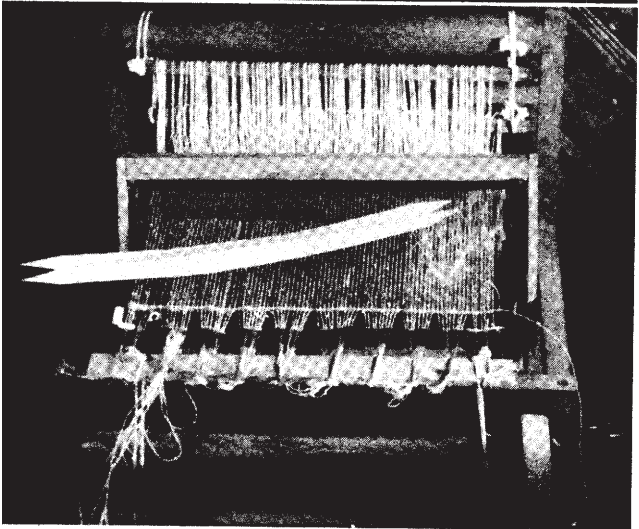
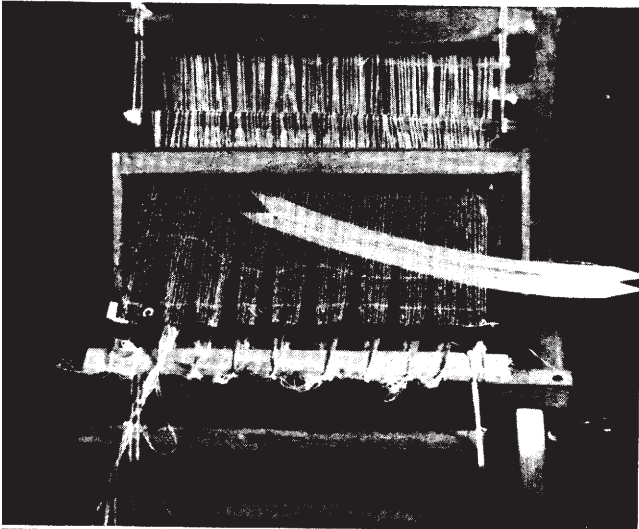
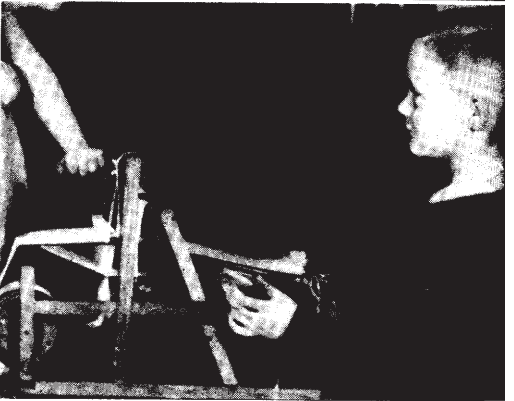
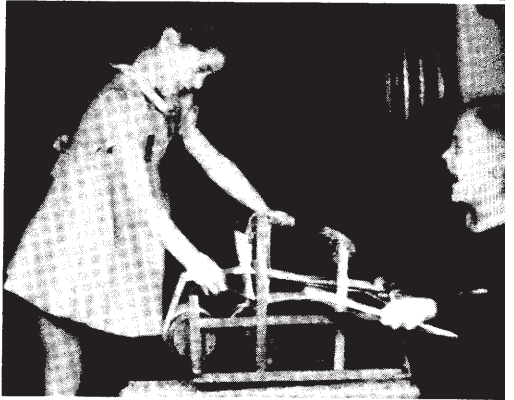
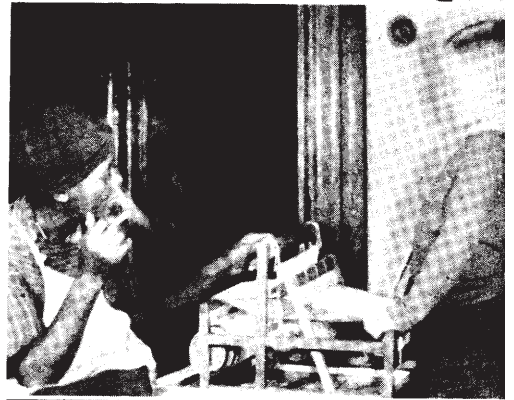
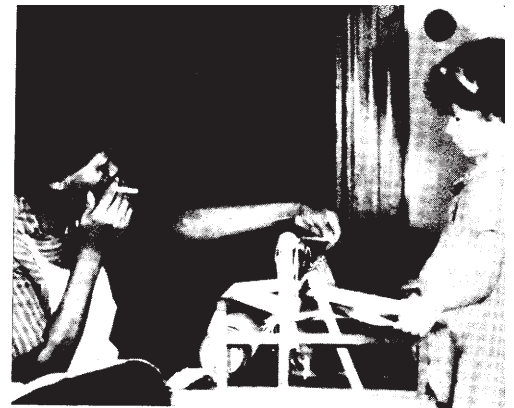
Illustration 33 shows the center and several side groups tied. In the next illustration 34, all the groups have been tied and tested for even tension. Now, the warp can be let out from the back roller and tightened in the front to a fairly tight tension, and you will be ready to weave.

Now that your warp is ready for weaving, you will need get your weft ready. For carrying your weft thread between the warp threads, you will need shuttles. These may be ones such as are used on larger looms, or ones which you may make yourself on the same order of the larger ones, or flat ones made from wood or cardboard. Several types are shown in the different photographs and ones for various type looms are shown in illustration 44. Below are two looms tied ready for weaving. Bob tied his with long knots and is trying his first fine yarns. 20/2 cotton thread 2 threads to each dent in the reed. The other shows an experiment in loose and fine threading. 12/2 cotton yarn in orange tones is used threaded, 30, 15, and 7½ to the inch, and will be used with pottery.





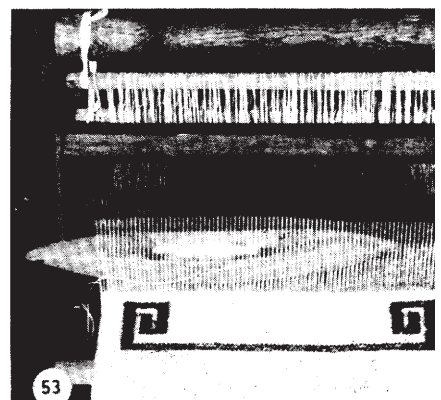
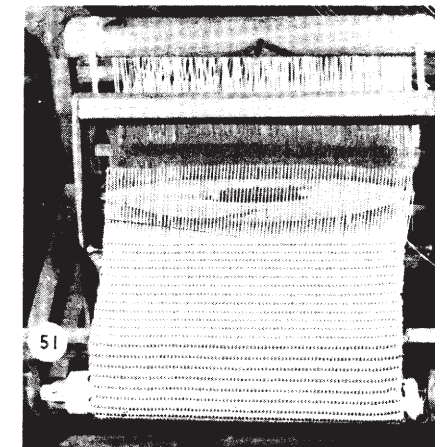
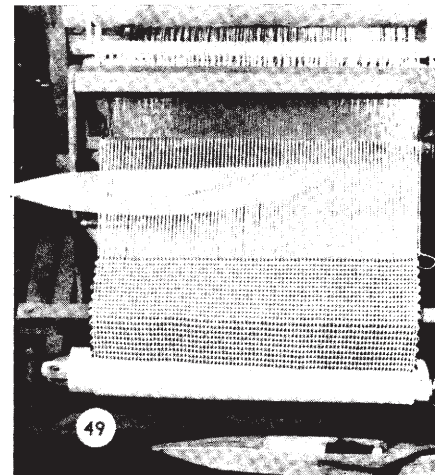
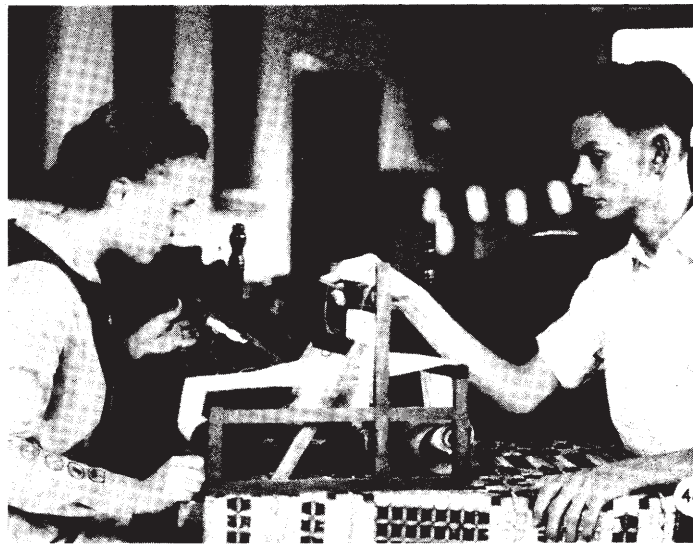
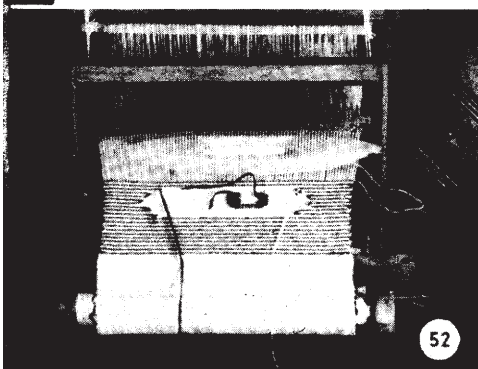
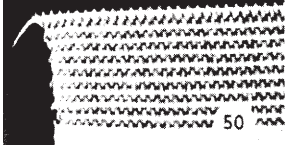
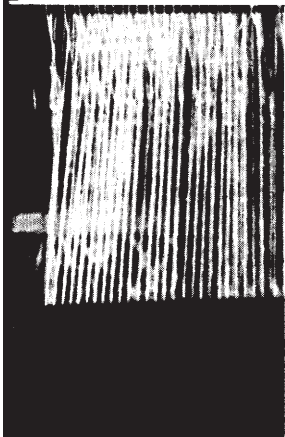
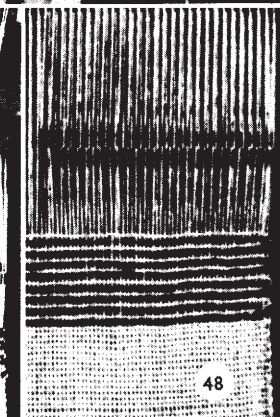
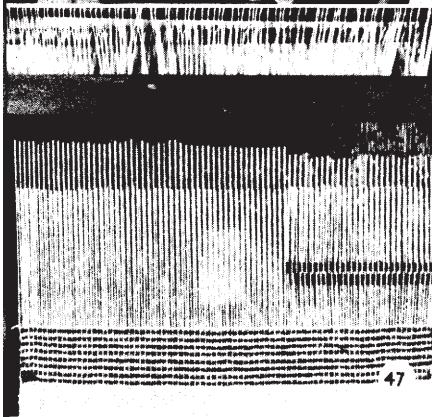
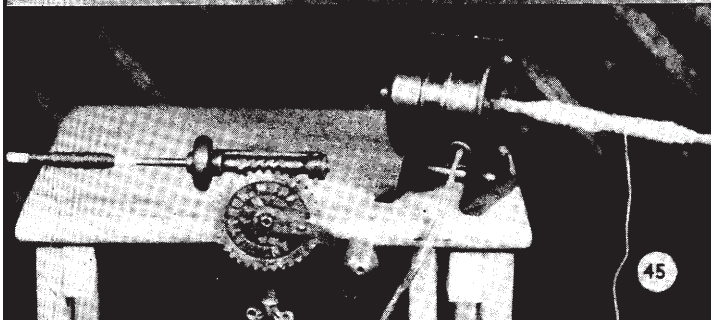
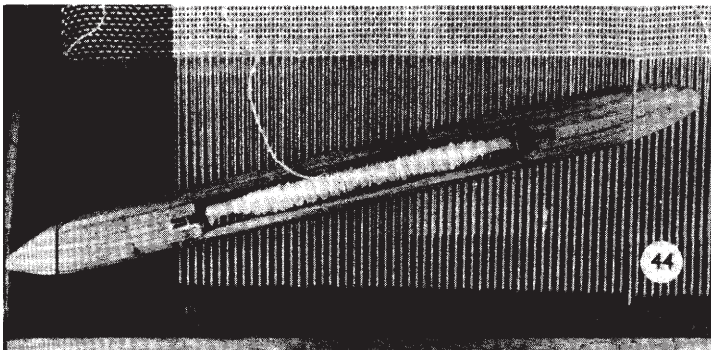
"Give me a little time," the very young lady says, "and I'll figure this out." Isabel first figured the necessary manipulation of a loom when she was three. Here she is discovering that if the handle of the harness roller is pushed forward, the warp threads running thru heddle-eyes on the back harness are lifted and a shed is formed so the weft yarn may be run thru between the warp thread. In like manner, if the handle is pushed back, the warp threads governed by the front harness are lifted to form the second shed. This alternating of sheds makes plain weaving.



Altho you will use a sturdy warp thread for your first warp, you will be interested in this cellophane and 30/3 mercerized cotton warp made by the ten year old boys. The cellophane was threaded with 30/3 cotton to lessen weaving difficulties. Alternate threads were used with the cellophane being on the back harness. Thus when the first shed was made by the handle turning the roller forward, the cellophane is raised and the shuttle of cellophane yarn is run thru. After this is beaten in, the roller goes back for the second shed. The 30/3 cotton is raised and the shuttle with 30/3 cotton is run thru. If you question the wearing qualities of cellophane and want to insure the permanence, you can use every third thread cellophane — thus changing your threading order, your texture effect, and the wearing qualities.



"You jest pokes dat thread thru whiles I holds dis handle in front," says Jenny as she coaxes Isabel to weave. Then she "larns" Wood to weave by turning the handle back to make the second shed. Isabel and Wood have fun weaving by taking turns in changing shed for each other. The warp is 12/4 cotton, which is both practical and inexpensive for children. Variation is added by having a colored border.



There are several types of shuttles. For rapid work, the boat type seems best. You can make good ones of your own like the one made by Gordon Williams and William Stark from a bit of wood, a paper clip and a bit of wire. Be sure to add a slit like the regular shuttles have as in 49, 59. You will want to build your bobbins from the edge towards the center. Your winder may be a bought winder, a toy motor or your sewing machine motor.

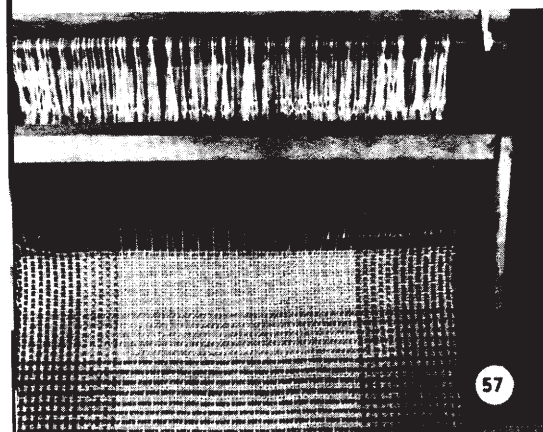
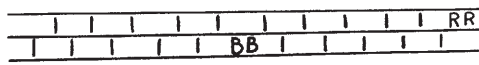
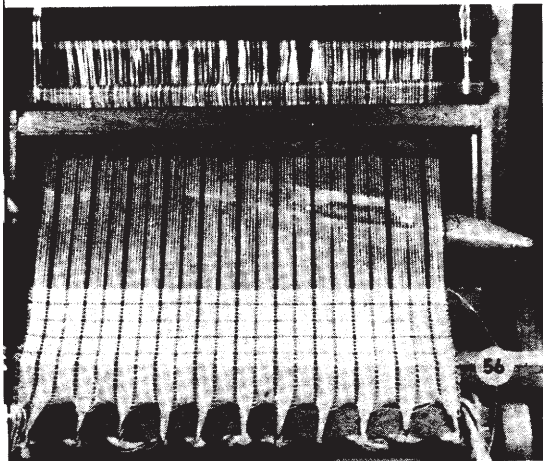
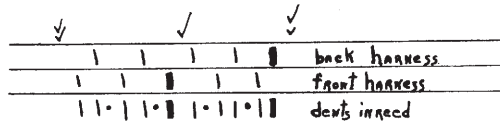
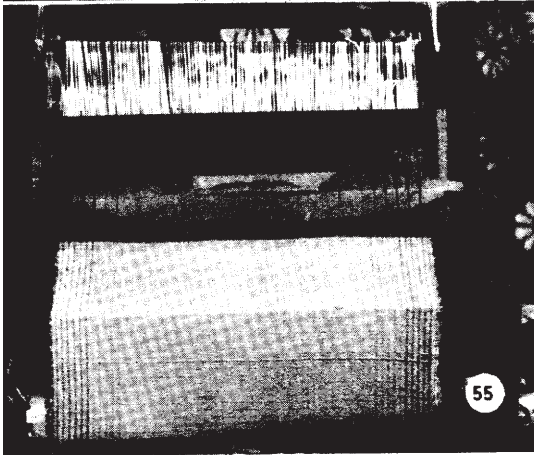
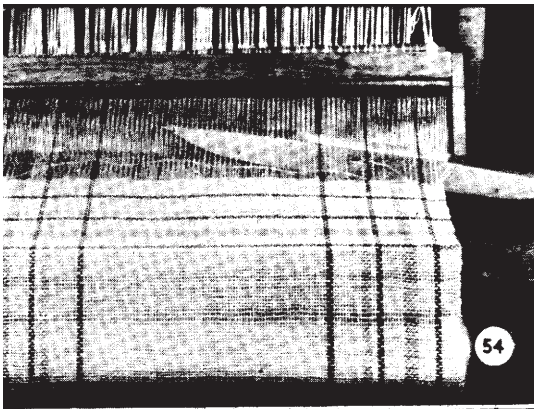
You may want to study the possible textures for your first warp and weave all your pieces alike. Or you may like to experiment from the first piece. On this page are shown six first pieces by as many weavers. Other weavers try even more difficult textiles but the ones shown here produce very pleasing textures. 47. You may like using one color on one shed and another color on the second shed. A different texture effect will come from having the second thread of a different type yarn. In 48, the detail shows the effect of a red chenille and a 12/4 white cotton like the warp.

A much heavier or finer thread may be used for one harness such as the candlewicking used in 49. You will have considerable pleasure in experimenting with texture effects from two different size yarns as 60, 63, 75. Just as you tried two colors, you may like rotating three colors or three tones of the same color, as in 50.

Another variation in plain weave is obtained by threading an occasional heavy thread to form a cord. There are many early American "corded dimities." You can either thread the cord in your warp or can run a heavy cord every 3rd, 4th, or 5th thread. The weaver who wove 51, ran a candlewicking yarn every fifth thread. You will see the same idea of a cord in the warp in 55, 57, 64; and will see both an early American and a modern development in 75-78 in a cord in the weft.

In 52, the weaver used a colored thread every third thread. For the white inset, a red thread is run part way; a white is picked up for the center; and a second red is used for the other side.

In 53 to give a fine effect to a coarse warp, several strands of white threads are wound together. The weaver, a young doctor, drew his design first on draft paper. He then wove it by the count shown on the draft paper and took care to allow for shrinkage. Even on your first warp, you can do laid-in tapestry designs. Geometric designs are easy and most effective. Draft paper or squared paper is easily obtained with 10, 13, 16 or 20 blocks to the inch.



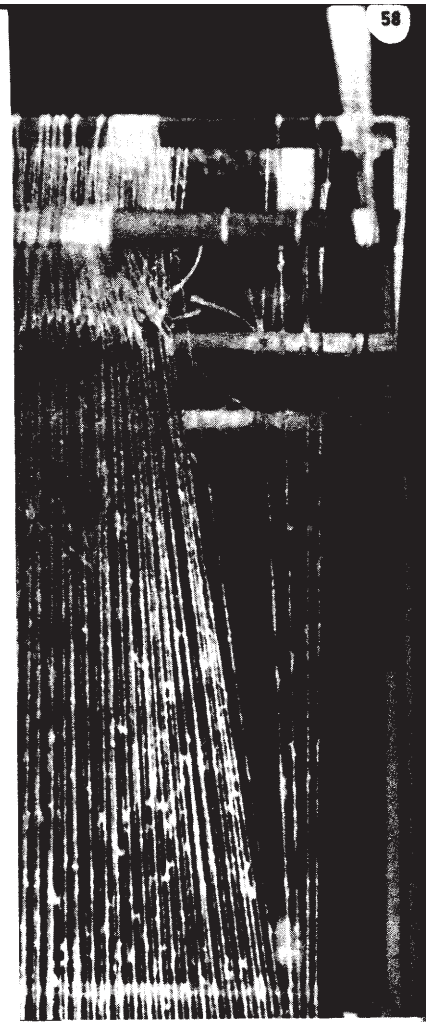
Naturally you are planning effective designs of your own. From the first you can do good designing and drafting tho it will take considerable time to become a master of the subject. On this page are six warps which may suggest to you the warp you try after your first test warp. These are developments of beginners during the first three months of the experimental project. On page 15 are the developments from the second season of the project from those who could benefit by the work of the first group.

A nine year old boy made stripes to harmonize with his grandmother's china. 18/2 white linen is used with red, 2 shades of coral, and sea green linen. This weight linen with one per dent is suitable for careful youngsters to use. Naturally, the total yardage for each color is estimated.

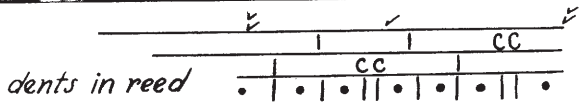
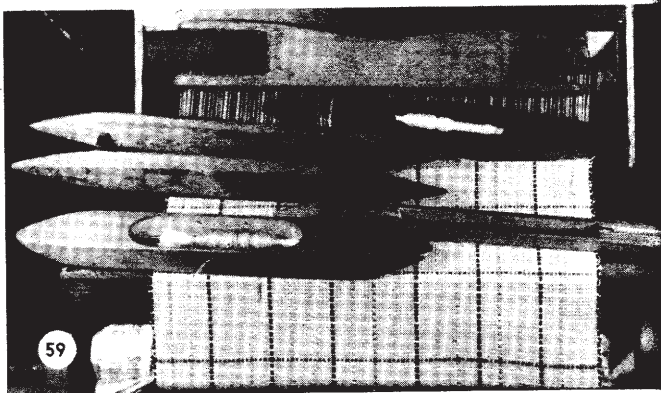
Also if you like fine warps, you may want to try a fine yarn, two to each dent, for your second warp. Mary has 30 threads to the inch. By using 20/2 linen in brown, turquoise, and sand (or 10/4 cotton) for every fifth thread, an effective cord is warped. The fine yarn is 30/3 mercerized cotton. The size 30/3 ply yarn could be 20/2 ply cotton or 20/2 mercerized cotton. This type of warp is suitable for teen-age or older, has infinite variety, and produces good texture. The same cord is woven every fifth thread in the weft. (55)

Altho many craft, or hospital, or school groups are limited in yarns, they need not be limited in style. There are interesting variations to checks in two or more colors. A score or so warps of this type have been made for civic use and as yet no duplicate warps have been made. In a 15 dent reed the double colored thread may be run thru the same dent. This particular loom is fifteen inches wide and has a 20 dent. You can see that every 11th thread is double and is colored—first two reds and then two blues. (56)

The use of a double thread every 3rd, 4th, 5th, etc., has been used for centuries. During the third month of the Little Loomhouse project, Ann Allen brought in a design which she "originated". Much to her chagrin, she learned that countless other people had also "originated" it. Her draft used every 3rd thread double to give a delightful texture effect. There have been dozens of variations tried—as two colors in 65, in four tones in 57, in many colors in 59, in sheer and nub wools in 73, etc. Usually the double thread is run thru the same dent in coarse materials and the two single threads each go thru separate dents. In fine materials the double thread is usually regarded as one thread. You will of course estimate your warp—yardage for each color—according to page 4. (57), (59).



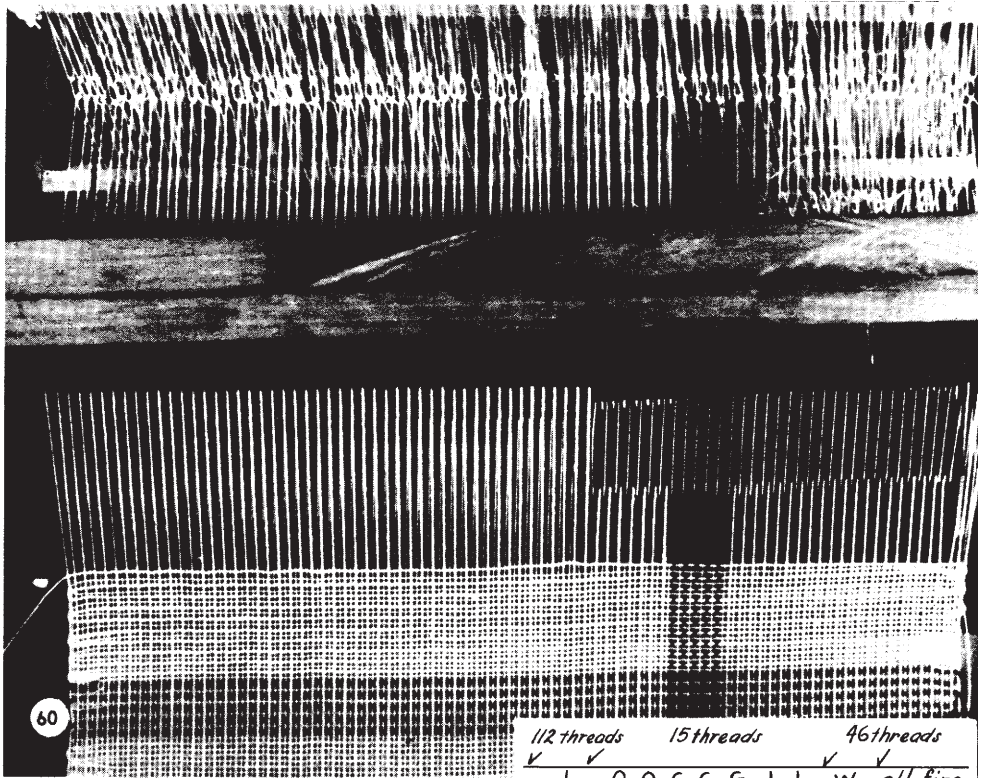
From the back in 58, the first thread on the right comes thru the first eye in the back harness and goes thru the first dent; the second thread comes thru the first eye of the front harness and goes thru the second dent; the third goes thru the second eye on the back harness and thru the third dent; the fourth goes thru the second eye of the front harness and thru the fourth dent, etc. The yarn is 10/2 cotton with a rayon nub.



Texture effects are one of the most fascinating angles of handweaving. First at the Little Loomhouse, the experimental group tested fifty-odd warps to ascertain how well they were adapted to the little homemade looms. As we were limited in looms and materials, this work took much of the first season.

The next group started with this experience; our cooperative plan was enabling us to add some unusual experimental yarns; the additional number of looms gave the more experienced group a chance to keep many types of warps or weaves threaded.

You may consider yourself a member of the new Little Loomhouse experimental group. Just as if you were at the Little Loomhouse, you can look over the warps threaded on the looms in the hundred odd different warps shown in this beginner's manual. You can use some of these warps or you can redesign to develop another texture effect. Just as the local group shares their warps with you, we hope you will share your developments with us. In modern American life, the stress in handwoven textiles is on texture. One texture effect which has innumerable variations is the use of two weights in yarns. This may be combined also with the use of different colors.

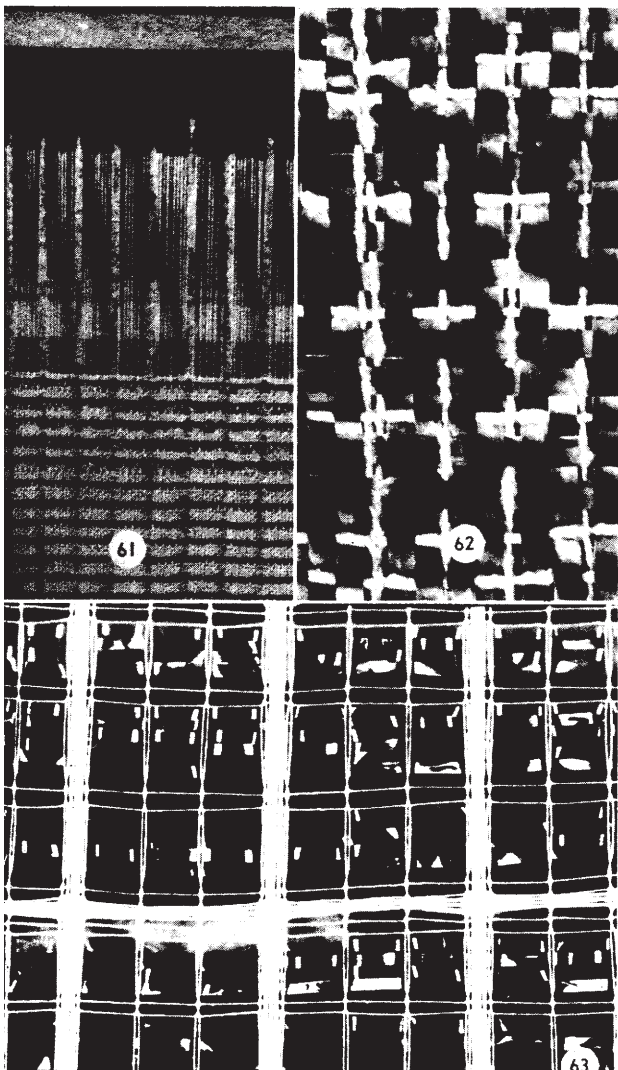
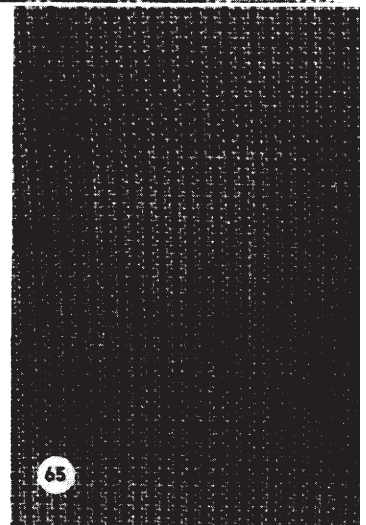
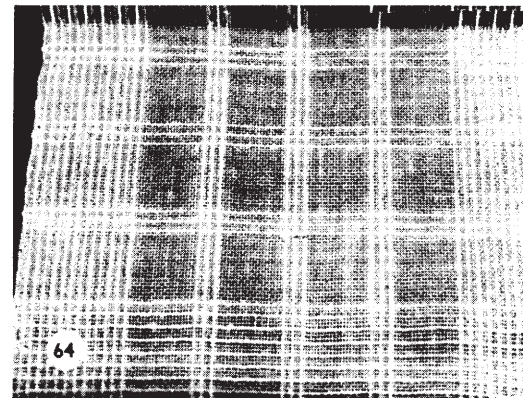


112 threads	15 threads	46 threads
✓	✓	✓
L	O O G G G L L	W all fine
W	B B B B B O O O	L all heavy
56	once	23
times		times

A heavy yarn as 3/2, 5/2, 10/4, etc., may be combined with 12/2, 20/2, and 30/3. If you are in doubt of the effect, try a little test piece with the yarns over a bit of cardboard. You will be careful to avoid sleazy material by more threads to the inch on fine yarns. The one illustrated in 60, shows 10/4 cotton on the back harness and 30/3 on the front. In the draft the color is indicated by the letter (o) orange, (l) light orange, (b) brown, (g) green, and (w) white.

At the Little Loomhouse the weavers have a tendency to avoid duplications by redesigning constantly to suit personal tastes. Among the yarns giving unusual effects are the rough silks, hems, linens, fibers, cellophanes, and wools. Before starting on unusual yarns, do enough weaving and warping to make certain that you have sufficient skill. Then try anything and let me know your success. If you are interested in draperies, you may like three tangents which have been followed by the beginners at the Little Loomhouse. Chenille, 10-15 to the inch or 15 to the inch when combined with cotton, can be used with the warp being wound at a loose tension and with paper being run with the warp to keep the same tension as on 61. The coated cellophane which is washable offers much to the designer tho the beginner may like to combine it with other yarn to take the strain from the cellophane (6 thread to the inch, no beater used) as in 62. In 63 a lattice cotton was designed to give body to the sheer cellophane. The leno twist is provided by a separate stick with heddles tied to those threads to be twisted. See also page 21.

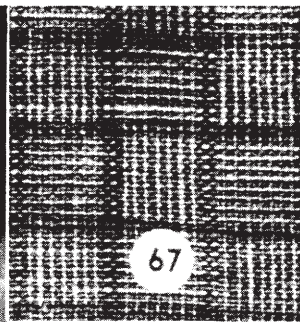
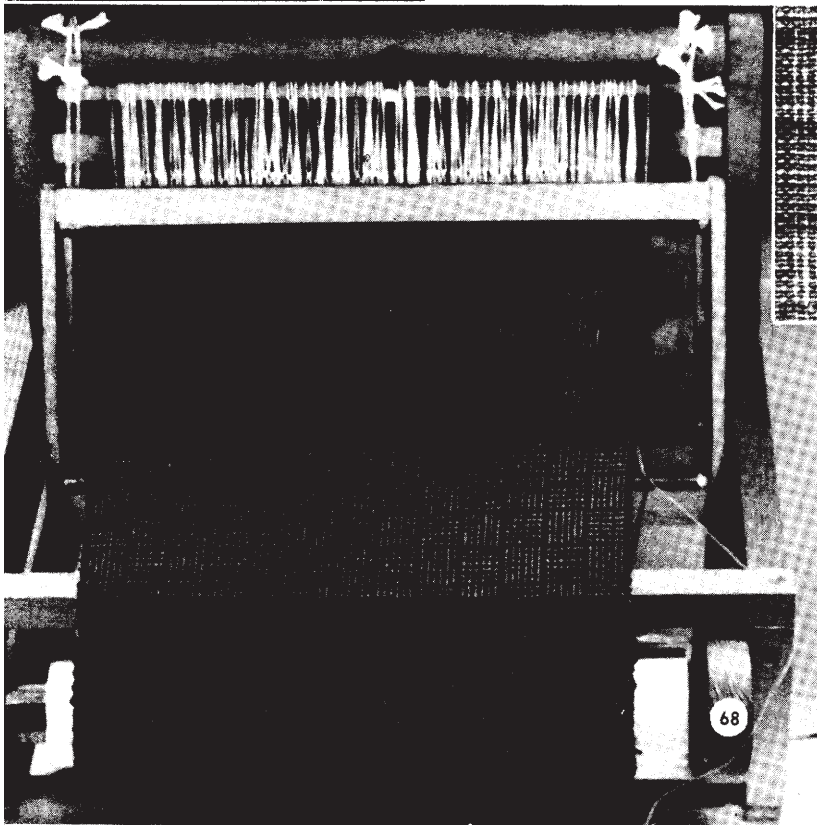
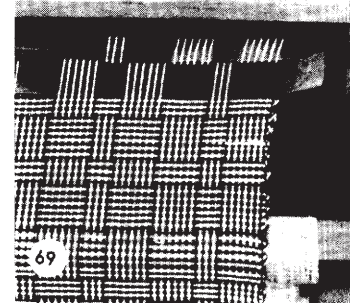
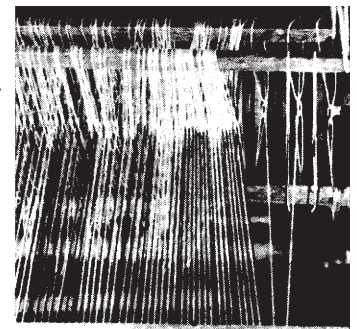
Just as alternate threads make for interesting textures, so do the use of third threads. In 64 a heavy white silk is used on the thirds for the border. 18/2 blue linen is the other yarn. If you like this type of table mat, you can try a similar warp for your second warp. This use of thirds is shown in a very fine warp in 65. The count here is 40 threads to the inch.





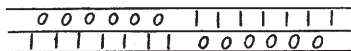
Scarfs and bags are always popular so it was natural that they were among the first textiles woven on the little loom project. As the project started on a "shoestring" we were very limited in materials. The first group of scarfs came from the scrap bag. In 66, are shown the first ones woven on the project. The AWB came from eight odd balls of yarn; the basket weave from three odd skeins; and the LBF from four odd lots.

Naturally the later groups on the experimental project learned easier as they saw what the first group had accomplished and profited by avoiding many errors. As the first group wished to remain in the weaving group and as the later weavers were aided by the more experienced ones, several of the weavers began experimenting with early American shawl patterns. As the project has been operating but nineteen months, only a few have been tried. It is fascinating to watch the different weavers work out patterns. Some work with their own ideas and develop patterns which are original with them. Others start work from the developments of other weavers and convert these patterns to modern living. The most intriguing part is that often the result is the same. In 68 is a scarf which has been worked out "originally" by one weaver, and adapted from (see 67) the late 18th century textile at the Kentucky State Historical Society by another. Hence we seldom use the term original as the textile originated by one individual is apt to be one originated by countless people.

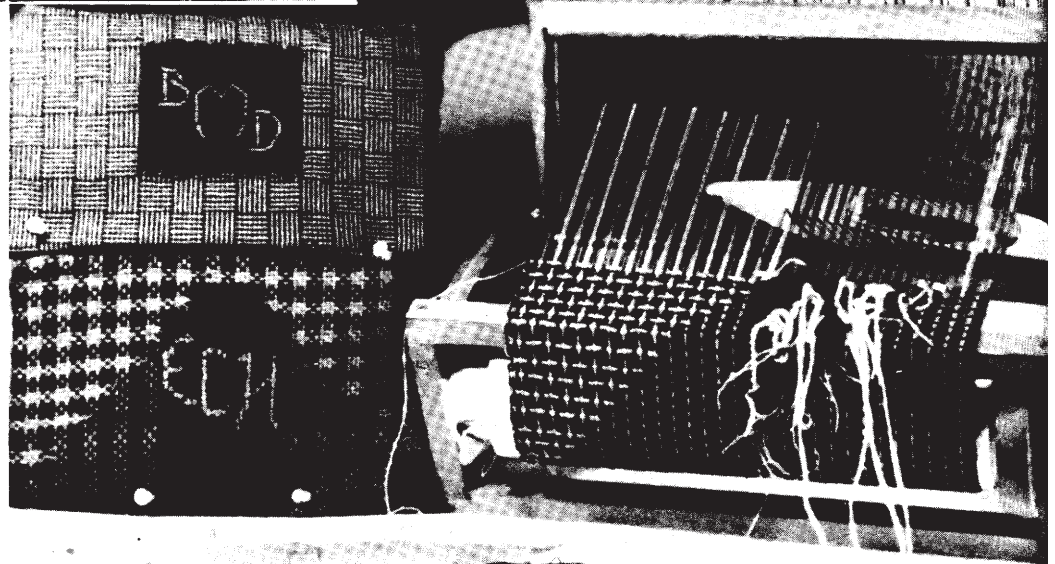


Note in 69 how the draft shows in the thread. A dark thread comes from the back thru the first back heddle eye to the first dent; the second thread (dark) comes thru the first heddle eye on the front harness and thru the second dent; the third thread (white) comes thru the second back heddle eye and thru the third dent; the fourth thread (black) comes thru the second front heddle eye and thru the fourth dent. Your blocks of dark and light may be uneven sizes as in 69 or even sizes as in 67, 68, 70.

The draft for 68 in case you have not already figured it out has alternate threads of dark and light with each pattern unit beginning and ending with dark. You can design this in many variations.



Last December nearly everyone at the Little Loomhouse decided to do some initialling of scarfs with tied-in insets. Three of these are shown with a detail of the right one being shown in 71.



Most of the weave variations we try have been tried by many other weavers of bygone centuries. Those typical of this country are commonly called "early American" now and from this group is the pattern in ill. 71. The particular draft came from a shawl owned by an old man whose third wife wove it for her second husband. You can see the detail of the tying-in and judge for yourself whether you want to try it.

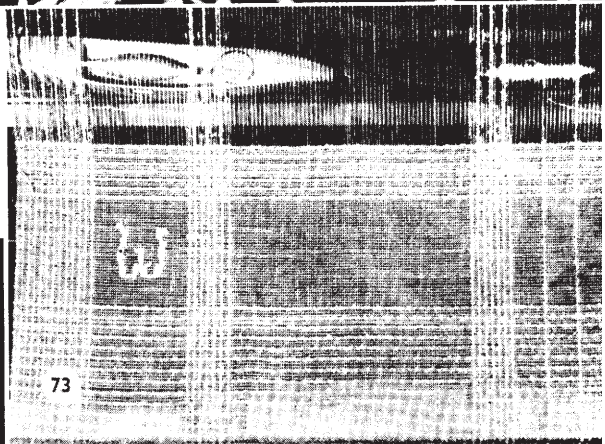
By civic cooperation a large group of small looms were made for civic use in Louisville at a cost of \$1.30 each. This meant that all parts were assembled together and each group constructed their own looms. Below in 72 is one made by George at the Home for Incurables, which has given two seasons of service. See if you can write the draft which was also taken from an early Kentucky shawl.

The diagonal ends are made by running the light thread part way and by using the predominating color for the rest of the weft. Many variations or small designs are possible.

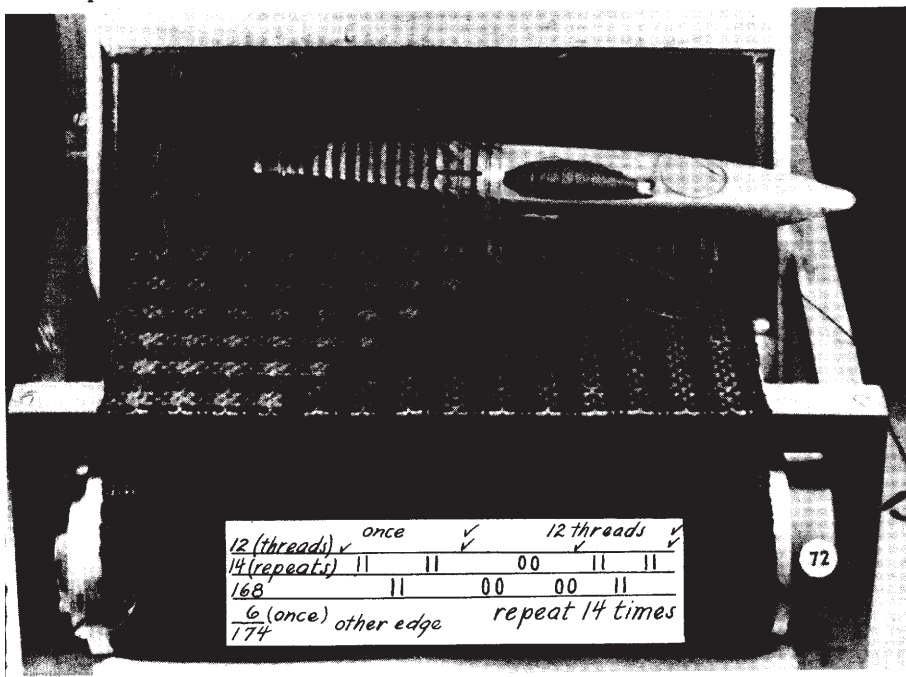


11	11	11	00	11	11	00	11	11	00
11	00	11	11	00	11	11	00	11	11

71



73

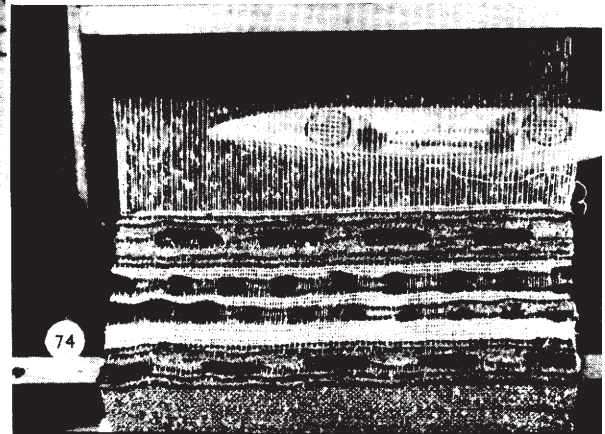


12 (threads)	once	✓	12 threads	✓	
14 (repeats)	11	11	00	11	11
168	11	00	00	11	11
6 (once)	other edge		repeat 14 times		
174					

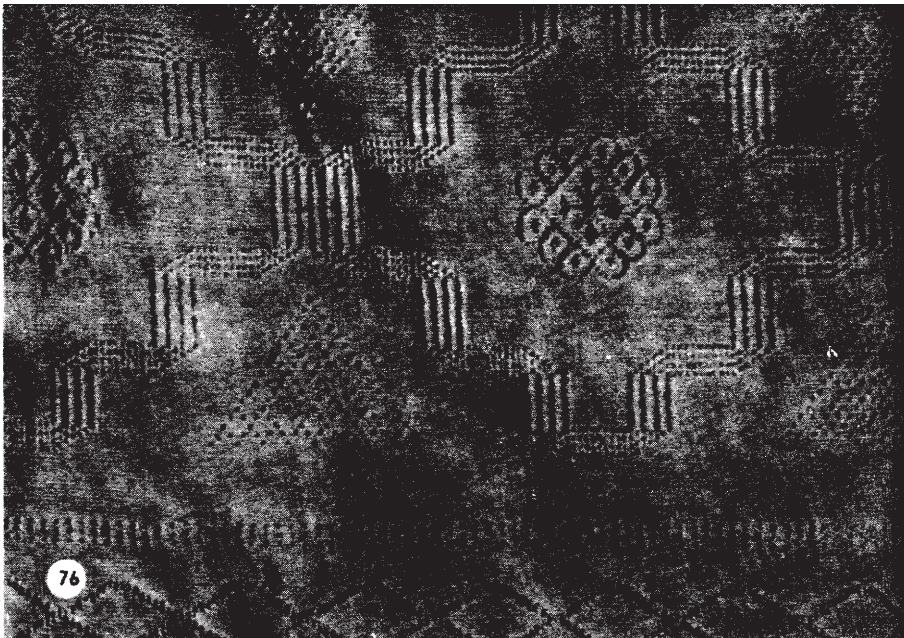
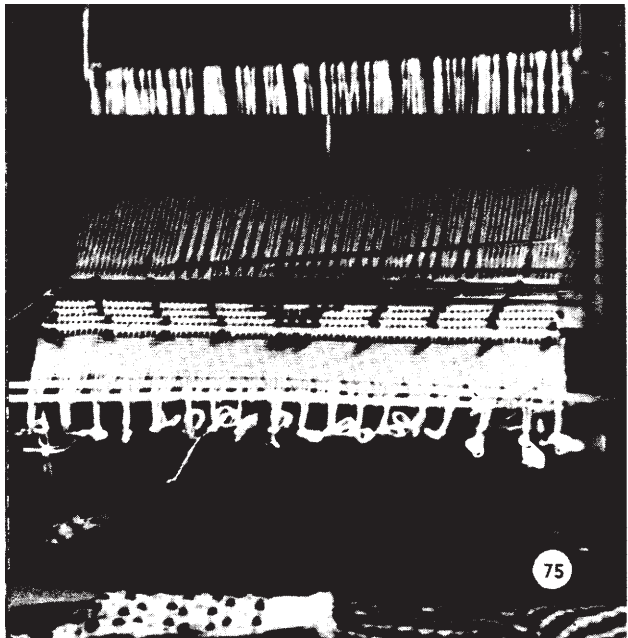
72

When you wrote the draft for 72, did you get this result?

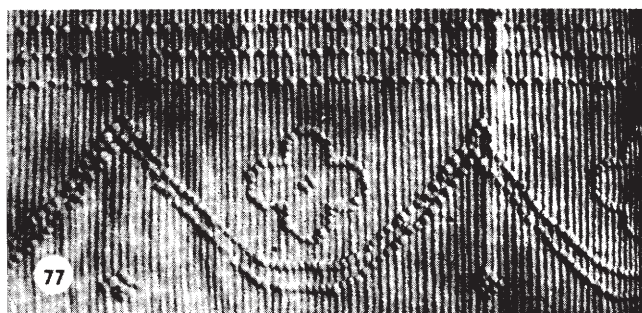
Here in 74 is another warp which you can use early in your beginning weaving and which you will find excellent for group use—it is inexpensive in cotton and rayon nub and has great beauty. It may also be used in finer wools and silks. The design is a beginner's attempt at a solid Spanish stitch in two colors. See page 21 for the technique.



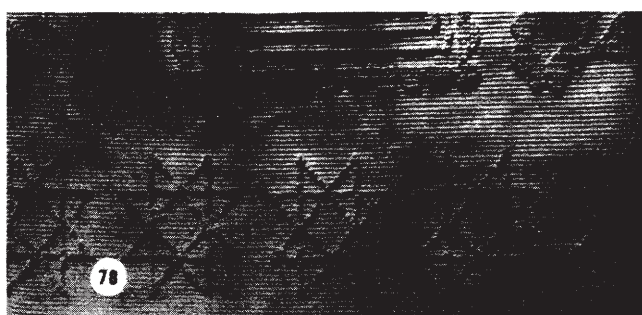
74



Among the early American weaves which are of interest to amateur weavers and which lend themselves to modern designing is the knot weave much in vogue in the early 19th century, usually in all white, and much in vogue in Canada today, in colors. Often in early textiles, an extra harness was used for the pattern. However, you can use it on either the floor loom or the little homemade loom as the weaver in 75 is doing. You will probably use four or five threads of the same size as the warp between every heavy cord. A soft cord—loosely twisted cotton, candlewicking, etc., in white or color—is used for the pattern which may be blocked off on squared paper. About four sets of wire or knitting needles are used in rotation. Three details from early counterpanes dated 1818, 1805, 1816 and having the name of the weaver knotted in are shown in 76-78.



This dating of weavings seems to appeal to modern weavers. There are several techniques. Probably the simplest is a "laid-in" thread over your weft thread. Usually it is better to work from the wrong side of the cloth and hence your letters will be reversed. The eight-year-old is picking up a thread in 79 to make part of his initial. You may like to use strands of yarn, small bobbins, or small tapestry shuttles. The warp is 40/3 linen 30 threads to the inch. Squared paper with 16 squares to the inch is good for cartooning the designs for 15 or 30 count warps.



10/4 cotton in colors make pleasing beginning warps. The initial is being made by a ten-year-old lad who is using a double strand for his initial.

In 81, this ten-year-old lad, first drew his initials and then drew the reverse. He is using 15/2 natural linen warp with a 10/1 slub linen filler. He used square paper 10 to the inch so his initials are drawn larger than the woven design.

