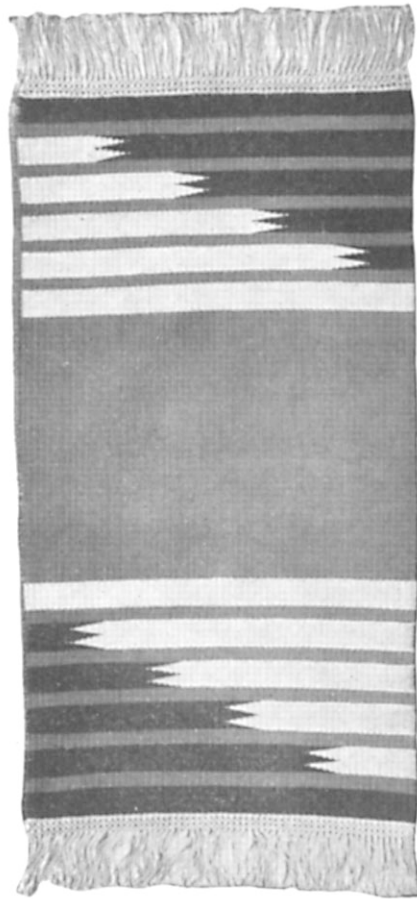


# RUG WEAVING



DRYAD HANDICRAFTS  
LEICESTER

## RUG WEAVING

RUG weaving is similar to tapestry weaving, but on a coarser scale. String is used for the warp or vertical foundation threads, while for the weft thread, which passes horizontally across the warp, coarse wool, chenille, rag, etc., are used.

In rug weaving the warp threads are entirely covered by the weft thread and not as in the weaving of cloth where the warp and weft thread show more or less equally in the finished material. This is because the warp threads are spaced further apart than in ordinary weaving and the weft thread is kept at a loose tension throughout. This will be explained more fully later.

### SUITABLE MATERIALS.

For the warp various kinds of string are favoured by workers. Many prefer a fairly thin yarn used double or treble, either of cotton or flax. Others use a thick soft cotton string singly. The former helps to give a flatter surface to the weaving than the thicker single warp.

For the weft, wool is undoubtedly the most popular material. A six-ply rug wool makes a firm thick rug and fills in fairly quickly during the weaving. Approximate quantities of these various materials are given as a guide to the worker on page 16.

A frame or loom is required on to which the warp strings can be stretched taut ready for weaving with the weft thread. Three types of loom are described here and shown in plates 1, 2 and 3. One is a simple, inexpensive frame made in two sizes, the larger one to weave a rug 64in. by 33in. and the smaller one a rug 40in. by 17in.

Another is a heavier loom conveniently designed to stand firmly on the ground without further support and is fitted with screw bolts for tightening the warp (plate 2). This loom will weave a rug 7 ft. by 31in. Smaller rugs can be made on either the frame or loom if desired.

The other loom illustrated on plate 3 is a foot power loom with rollers, therefore capable of taking several yards of warp, making it very suitable for professional workers and for hospitals for remedial treatment.

### THE DRYAD RUG FRAME.

This simple loom will be dealt with first. Its construction can be followed from plate 1. The frame has an additional bar of wood fixed with thumb screws to the top and lower cross bars in the form of a clamp to hold the warp strings in position. A stick with notches cut at regular intervals is placed above the top bar and beneath the lower bar to hold the warp, as described later.

**TO MAKE THE WARP.** For the larger frame 67 strands are required, 172in. long, which allows for tying on the frame and for making a fringe for the rug. Each length is doubled into half on the loom and

makes two warp strings. (The smaller frame requires 37 strands, 120in. long.)

To cut the warp strands to the required length, arrange two warping posts in some convenient place 86in. apart. Pass the warp thread round the posts 67 times, finishing at the starting point. Then cut through the strands at this point and there will be the 67 warp strings required.

Where the warp yarn is used double it should be first wound into two balls and then the ends from each of the balls passed together round the posts in the manner described, making 67 double warp strands.

**TO PUT THE WARP ON THE LOOM.** Stand the frame up against the wall and remove the top clamp. Place the notched stick on the two screws at the top of the loom and, supposing that double warp strings are being used, take each double string at the centre of its length and place it in one of the notches. When all the strands have been used, screw the clamp on again, being careful to keep the double strings at equal distances apart in the same order as arranged on the stick. Now place the frame flat on a table and unscrew the bottom clamp sufficiently to draw the warp strings through. A long coarse needle is helpful for this purpose. Place the second notched stick below the clamp, bring the first double string over the stick and the second under it; after pulling the threads taut tie them securely in the first notch, leaving the ends hanging. Repeat this with the other strings in the same order as on the top stick, being careful not to twist the strands and to keep an even tension throughout. When all the warp strands are tied, screw the clamp again to secure.

Divide the ends of the warp into groups and loop into bows to keep them clean during the weaving process.

**MAKING THE SHED.** Before starting to weave the warp strings must be divided to make an opening or shed through which the weft thread can be passed. This is done as follows:—

Take the shed stick, 40in. by 2in. and about  $\frac{1}{4}$ in. thick, which is provided with the frame, and thread it through the warp, taking up each alternate double string, *i.e.*, the strands on the front of the notched sticks. By turning the shed stick on its edge, an opening 2in. wide will be made between the set of strings on the back of the stick and the set on the front. This opening is termed the shed.

In order to lift the threads for alternate rows of weaving, without removing the shed-stick, the set of warp strands which the stick does not raise are looped together in groups with lengths of string known as leashes. This method enables the worker to produce a second shed by pulling the groups of leashes forward in turn and thus interchanging the sets of warp strands. The leashes are attached as follows:—

Turn the stick flat so that the first shed is closed, cut 67 pieces of string 9in. long and tie a knot at both ends of each piece of string. Loop one of these round each of the first six back warp strings below

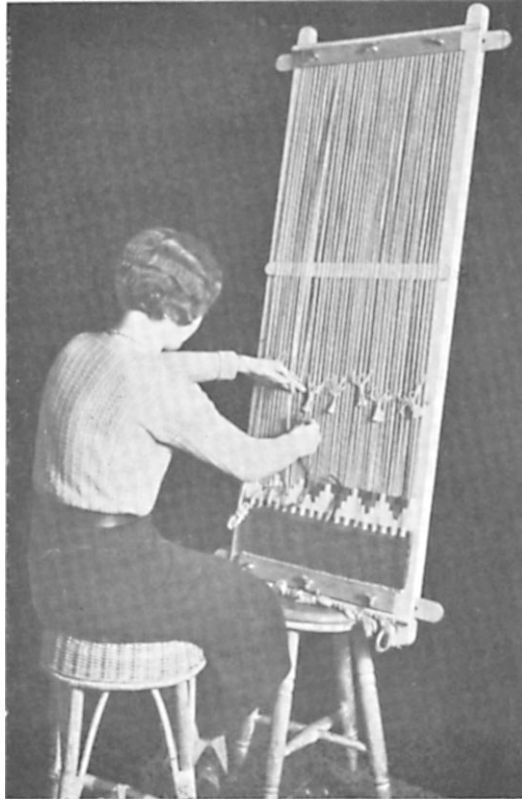


PLATE 1. THE RUG FRAME IN USE.

the shed-stick and bind the ends together with a length of string. The knots at the ends of the strings will prevent the binding from slipping off when in use. See plate 1, where the leashes are shown clearly tied in bunches hanging on the front of the warp.

Repeat in this way across the entire width of the warp so that the back warp strings are tied together in groups of six except for the last group, in which there will be seven.

#### TO WEAVE.

The position of the frame in use is shown in plate 1 standing on a stool and resting against a wall. Where possible it is even more convenient suspended with string from a picture rail.

The wool must first be wound evenly onto the shuttles, using one for each colour. The shape of the shuttle can be seen on plate 2. Leaving about 16in. unwound, the end of wool is secured with a half hitch knot as follows: With the wool on the right hand side of the

shuttle hanging point down, place the first finger of the right hand behind the wool, twist the finger downwards over it, picking up a loop, and slip this off the finger over the shuttle. In this manner the wool will unwind freely as required.

As an alternative to using the shuttle, the wool is wound in a small bunch between the thumb and little finger of the left hand, making a cross at the centre, round which the end is looped, see plate 1.

Before starting to weave with the wool, it is advisable to weave four or five rows with double string or yarn similar to that used for the warp except when a thick cotton has been used. This not only sets the strings in order and makes a firm edge but helps to soften off the ends of the rug into the fringe. The double string is wound into a bunch as mentioned above.

For the first row, turn the stick on its edge and pass the string through the shed with the fingers a short distance at a time, leaving it in a slightly arched position after each movement and pressing it down to the bottom of the loom with the fingers.

For the second row turn the stick to close the shed and push it up the loom. Pull the first group of leashes forward and pass the string through the shed, continuing across the width of the loom in this manner. When the rows of string are completed the wool is introduced.

Make the shed with the stick as already described, and work from left to right. Hold the shuttle in the right hand between the thumb and first finger, with the pointed end upwards tilting a little towards the left. With the remaining fingers grasp the first few warp strings and insert the shuttle, blunt end first, behind them. Release the warp strands and roll the shuttle behind them with the fingers, bringing it back to its original position in the hand. Draw the wool through, leaving it in a slack arched position. Although this may sound rather complicated, it becomes quite a simple process with a little practice and develops into one continuous movement. Repeat in this manner across the entire row and then beat the wool down into a horizontal position with the point of the shuttle or a pronged metal beater.

The next row will be worked from right to left, using the leashes to make the shed. With the left hand take the first group of leashes and pull them forward, holding the shuttle in the right hand this time with the point tilting towards the right. Insert the shuttle behind the warp strings, removing the thumb ready to receive it again into the hand.

It is most important that the wool should be left slack as described so that when beaten down the rows of



Diagram 1.

weaving fit closely round the warp strings as shown in the sectional drawing in diagram 1. If pulled too tightly it will be difficult to beat the rows down and to cover the warp, apart from the fact that the edges will be drawn inwards.

The weaving is continued in this manner as required. In addition to beating each row down with the shuttle it is necessary to use a metal beater, shown at E in plate 2 after every few rows to keep the lines of weaving horizontal and to make the work solid.

When introducing a new length of wool, allow the new end to commence where the old end finishes, leaving two or three inches hanging from each end at the back of the rug. After a few more rows of weaving these ends are threaded down by the nearest warp strand with a coarse needle. Where possible arrange for the joins to come some little distance from the edge so that it is not weakened.

The natural tendency for beginners is to draw the edge of the weaving in so that the finished rug is not of a uniform width. Special attention must therefore be given to this. Some workers use a tenter-hook, an expanding apparatus designed to keep the weaving stretched at its original width. Actually, however, the worker is recommended to do without this assistance when more proficient in weaving.

As the weaving progresses the frame can stand on the floor to bring the weaving to a more convenient height for the worker.

Should the warp strings become slack towards the end of the weaving they can be tightened by inserting a wooden slat similar to the warp stick, passing it behind the right hand upright of the frame, in front of the warp strings and behind the left hand upright.

The weaving should only be continued to within 10in. of the top of the frame, as it is not possible to obtain a good shed beyond this. The ends of string can be used for a fringe as mentioned on page 16.

To take the weaving off the frame, unscrew and remove the clamps. Untie the warp strings at the bottom edge and remove the notched stick. Also remove the one at the top of the frame and cut through the loops.

### THE DRYAD RUG LOOM.

The loom is shown in plate 2. The warp string is wound continuously round the top bar A and the lower one B, so that half the length of the warp strands are in front of the bars, and half behind. The weaving is begun on the front half, and when this has been used, is moved round so that the warp from behind is brought to the front, thus enabling a long rug to be made if desired.

### THE REED.

The reed D consists of a long bar of wood provided on each side with a series of nails or teeth, which regulate the warp strands in place of the notched sticks on the previous frame. Before the warp is started the reed is placed in position on the loom, between the uprights, resting on the two projecting arms. The warp strands on the front of the loom are taken alternately in front and behind it, and are thus divided into two sets, with a space or shed between, through which the weft thread passes. This does away with the necessity for the warp stick used with the frame.

## TO PUT THE WARP ON THE LOOM.

First lower the bar A to the bottom of the slots provided in the uprights so that it can be screwed up later to tighten the warp. The rod C should be removed from the loom while the warp is being put on.

Wind the warp string into a ball—or for a double warp into two balls—of a convenient size to hold. Tie the string temporarily to the lefthand end of the lower bar and pass up the loom and between the first two nails on the *front* of the reed. Pass it over the top bar and down the back of the loom. Unloose the ends and tie them to the warp string underneath the lower bar and bring the string up the front of the loom again, this time *behind* the reed, and between the first two nails at the back of this. Pass over the top bar again, down the back of the loom, and up the front in the next space between the nails in the *front* of the reed. Pass it over the top bar, behind the loom, round the lower bar, up the loom and *behind* the reed in the next space between the nails. Continue in this manner, passing the warp alternately in front and behind the reed. When it is necessary to join on a new supply of string, tie the ends separately to each of the old ones, arranging for the knots to come on the underneath edge of the lower bar B.

When the string has passed through the last spaces between the nails on the reed, secure it by tying it to the last warp string under the lower bar. Care should be taken to keep the tension of the string as even as possible.

To keep the warp strands in position in the spaces between the nails, take a long piece of string, knot the end round the first nail and carry it along the reed, looping it round each nail. Knot it round the last nail to make it secure and treat the other side of the reed in the same way.

To make the second shed the set of strands passing behind the reed must be brought to the front with string leashes as with the frame. Here the leashes are made with a continuous length of string, which, after passing round a strand, is brought each time to the front rod C, plate 2, as follows. Use strong string of medium thickness. Place the rod C in position on the protruding brackets. First tie a length of string to the peg at the left of the end of the rail. Take it along the rail and tie it to the peg at the other end, leaving the remainder of the string hanging. The leashes are attached to this string and the rod C. Now insert the metal rod provided with the loom between the back and front warp strings about 8in. below the rod C, allowing it to protrude equally at each end. This ensures the leashes being of uniform length and is removed when they are complete. With the end of the string left hanging on rod C, pass down below the rod and from here round the first back warp string, including the metal rod. Bring it back over the top of rod C and make three or four buttonhole stitches on the rod string. Then proceed in the same manner round the second back

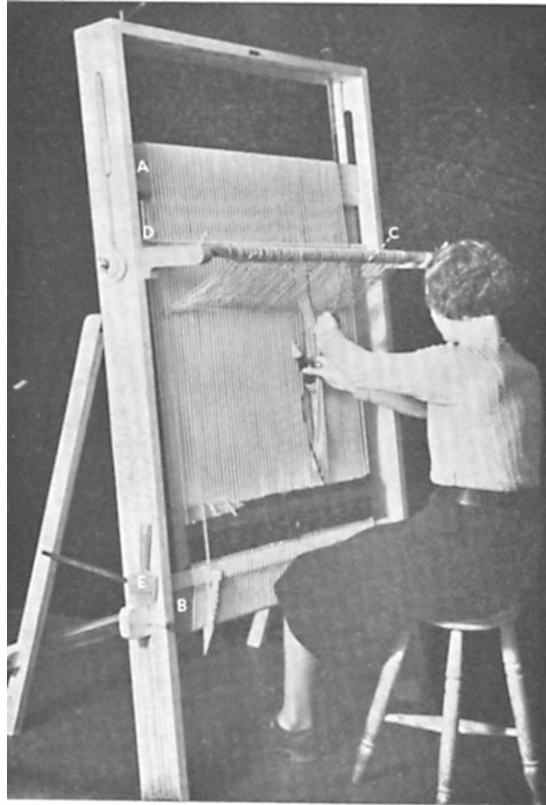


PLATE 2. SHOWING RUG LOOM IN USE.

*Frontispiece shows a rug woven on this loom.*

warp string and the metal rod, and back over the rod, not forgetting to pass the front warp strands along each time before making the next leash. Make three or four buttonhole stitches on the string again and repeat in this way across the entire warp, securing the end by tying it round the string. The metal rod is then removed. The leashes can be left on the loom for future use, the new warp being threaded through them.

#### TO WEAVE.

Tighten the warp with the screws at the top of the loom before starting to weave until the strings "twang" when "plucked" with the fingers. Now weave 3 or 4 rows with the warp string and insert the flat wooden stick, provided with the loom, in the second shed made by pulling the leashes forward, placing it immediately above



the bottom bar B, so that a firm starting point is provided for the weaving.

The weaving is carried out in the same manner as described for the rug frame, although here one shed is already made by the reed. The other shed is obtained by pulling down the leashes in groups as before.

When the weaving reaches beyond a comfortable height for working, loosen the warp by means of the screws and draw the weaving round the loom, bringing a new supply of warp from the back of the loom. Tighten the screws and proceed with the weaving to the required length, in any case terminating 10 in. from the starting point of the rug as it will not be possible to make a satisfactory shed beyond this point.

Cut through the warp strings, leaving sufficient string to make a fringe at each end, should this be desired.

### DRYAD FOOT POWER RUG LOOM.

All types of woven and pile rugs may be made on this loom (plate 3), and according to the texture required so the dentage of the reed will vary. A 3 dent reed 34 in. long is supplied with the loom. The warp is made on a warping frame, as shown in diagram 3, and on this board a warp up to 9½ yards long can be made. Determine the length of the warp necessary for the rug and arrange the pegs on the frame accordingly, being careful to allow sufficient for the wastage in tying on. When using a 3 dent reed two warp strands will be threaded through every space, therefore in order to calculate the number of warp threads to wind, multiply the number of inches in the width of the rug by

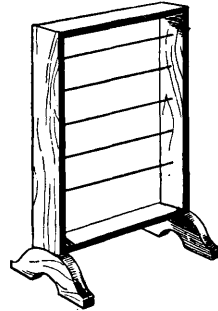


Diagram 2.

6. Wind the warp yarn into balls if not already wound on spools. When warping from spools a Spool Rack will be required so that the threads may unwind freely (see diag. 2). Balls should be put into receptacles of some kind for this purpose. Take two balls or

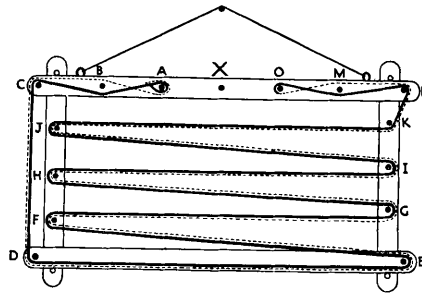


Diagram 3.

spools and tie the ends of the yarn together, and slipping the loop thus made over Peg A, guide the two threads together under peg B and then follow the dotted line in the diagram until peg O is

reached. Return over the same course until reaching peg B, when the thread is taken over instead of under and passed under and around peg A—thus making a cross between pegs A and B (see diag.3). To keep count of the threads while warping tie them with a length of string, in equal groups of approximately 10 strands, near the end of the warp at the peg next to O. When the warp is completed secure the cross by tying with string, as shown in diagram 4, also tie a piece of string through the loops at pegs A and O.

**TO REMOVE WARP FROM FRAME.**

Slip the warp from peg O and loop it up in the form of a crochet chain as follows:—

Hold the warp taut with the left hand about a foot away from the end. Slip the loop on to the right hand and grasp the warp with the right hand. Take the loop over the right hand, thus making another loop. Slip this on to the right wrist and repeat the process until the entire warp has been removed. The shed sticks are now inserted, one on each side of the cross in the warp, and tied together at the ends through the holes, allowing them to be about  $\frac{1}{2}$ " apart. The string tying the cross can now be cut as it is held in position with the sticks.



Diagram 4.

**TO MOUNT WARP ON THE LOOM.**

First remove the heddle frames but before taking them out of the loom they should be marked to indicate which is the top and which the bottom frame. If this is done there will be no difficulty in putting them back into their correct positions. When it is necessary, new heddles may be added by removing one end of each frame after they have been slipped from the loom. To do this unhook the iron bars at the sides and pull the frames forward out of the loom.

Now thread the reed, passing one double loop into every other space from the under side of the reed and place on a warp stick above the reed. Tie the stick to the canvas which is attached to the top roller. This is done with string through each hole in the canvas, as follows:—Cut a length of string approximately 12" long, double it and thread the loop through an eyelet—pass the ends through this and pull the loop tight. Then pass the ends of these strings over and round the stick which is holding the loops of the warp and tie securely, allowing about  $\frac{3}{4}$ " between the canvas and the stick.

Wind the warp at an even tension on to the top roller, inserting warp sticks on every round, and then transfer the cross to the upper side of the reed as follows:—Holding the warp taut remove the strings which secure the ends of the shed sticks—turn the top stick which is nearest the reed on its edge and place a temporary stick of the same length through the space which is made above the



PLATE 3. DRYAD FOOT POWER RUG LOOM.

reed. Remove the top shed stick and place it through the space in the warp by the side of the temporary stick, which is then removed. Repeat the process with the lower shed stick, after which the sticks are tied together securely as before, and to hold them in position while threading the heddles, sling them from the top crossbar.

Now replace the heddle frames and hook the metal bars to the small screws into their original position. Taking the threads in order

from the cross, thread the first two singly through two heddles on the top frame and the next two singly through two heddles on the bottom frame and so on across the warp. This means that there will be two threads together alternately on the heddle frames. Next re-thread the reed, putting two warp threads through every space. Then tie double warp strands in pairs to a stick attached to the calico on the bottom roller. If necessary turn the roller one or two notches to tighten the warp in readiness for weaving.

#### TYING UP THE TREADLES.

Cut a length of the cord supplied with the loom approximately 96" long, thread the end through the front metal eye on the wooden wheel on the crossbar at the back of the loom, pull the ends so that they are both of the same length, and tie them together in two knots close to the metal eye.

Now cut another piece of cord approximately 18" long and tie the two ends together, thread this loop up through the hole in the right hand treadle, pulling it right up so that the knot is against the treadle, then bring the two long ends down in front of the wheel and thread them through the bottom loop, holding the treadle so that it is approximately 6" from the floor and tie the two ends back round the cord.

Repeat this for the other treadle, only taking the cord through the other metal eye and down the back of the wooden wheel. The treadles may need regulating, but this can easily be done by adjusting the cords.

#### TO WEAVE.

With this loom it is possible to use a longer shuttle than those used with the rug frames, though for any inlay pattern it is advisable to use the smaller shuttles or bunches of wool. Commence the rug as already described with four or five rows of yarn similar to that used for the warp.

For the first row press down one of the treadles and pass the yarn through the space or "shed" with the fingers, if a shuttle is not used, a short distance at a time, leaving it in a slightly arched position and press down to the bottom of the loom with the fingers, and when the whole row has been woven beat it down with the reed. For the second row press down the other treadle and weave as before. When the rows of warp yarn are complete the wool is introduced. This is woven in exactly the same way, still leaving it very arched before beating down with the reed.

As the weaving progresses, release more warp from the top roller and wind the woven rug round the bottom roller. Place warp sticks along the roller over the knots made while tying on to protect the rug. If sufficient warp has been wound on to the top roller for more than one rug it is wise to remove each rug as completed and re-tie, allowing sufficient warp for the fringe of each rug.

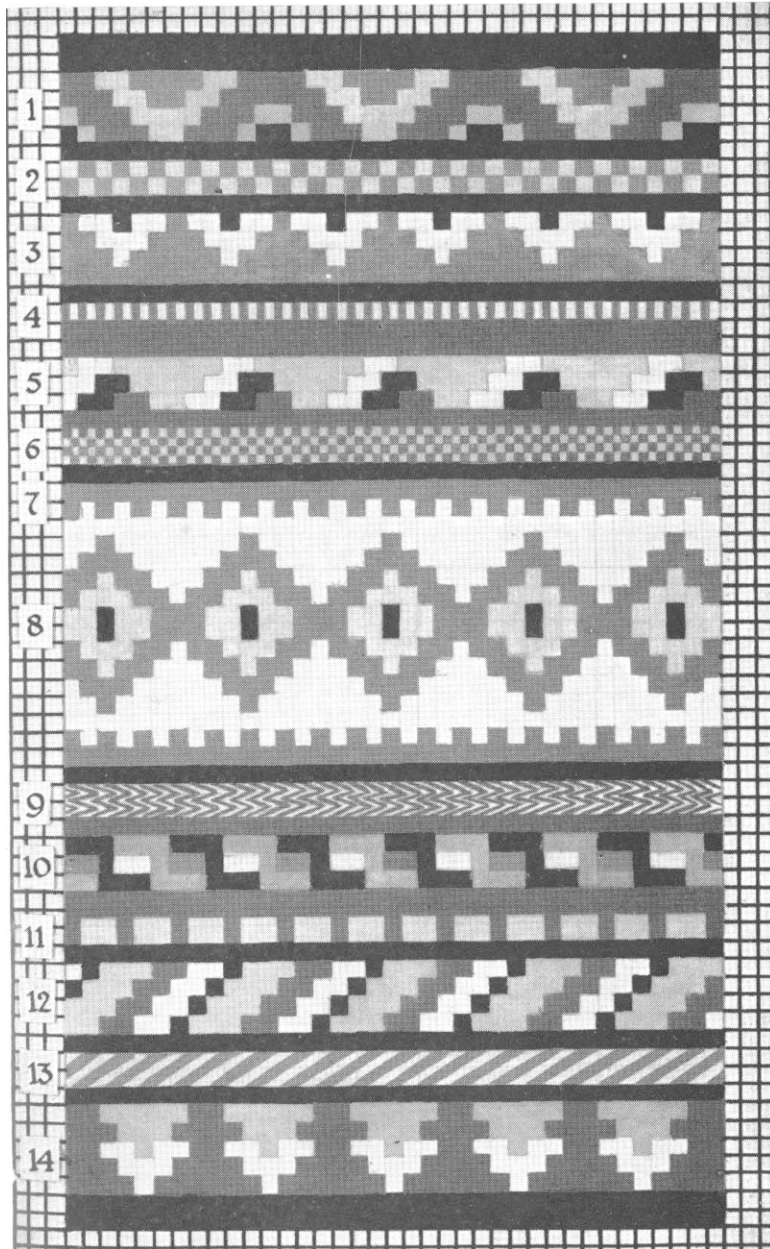


PLATE 4. SAMPLER RUG IN DIAGRAM FORM  
SHOWING VARIOUS PATTERNS.

## PATTERN WEAVING.

A variety of attractive rugs can be made by arranging various colours in bands extending across the entire width of the rug, either

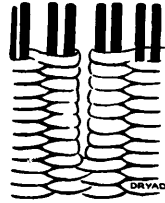


Diagram 5.

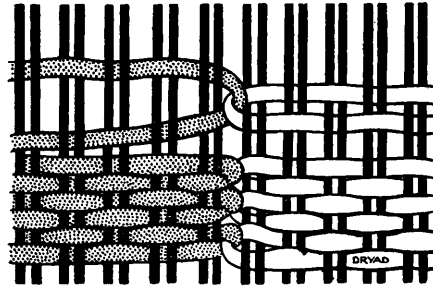


Diagram 6.

repeated along the whole length or confined to the ends or centre with the remaining portion in one colour.

Other patterns can be made by weaving to and fro on groups of the warp strands with various colours instead of continuing right across the warp. The design is first drafted on squared paper, allowing each square to represent two double warp strings in width, and  $\frac{1}{2}$  in. of weaving in depth, as shown by the sampler rug on page 13.

It will be readily understood that where the colours are continued on the same groups of warp strings for a considerable depth of weaving there will be an opening or slit where the two colours meet, diagram 5. It is therefore advisable to avoid long upright lines in planning designs. There is a method of dealing with these openings by a process of interlocking, *i.e.*, passing one coloured wool round the other at the meeting point of each row, diagram 6, or by terminating on the same warp string, diagram 7. Sometimes they are sewn up when the weaving is complete.

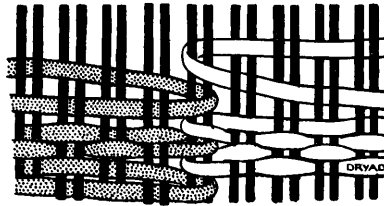


Diagram 7.

The most straightforward patterns to plan for this coarse type of weaving are those in which the edges of the shapes develop in a series of small steps, each consisting of several rows of weaving. Here again the steps should not be more than  $\frac{1}{2}$  in. deep.

The sampler rug shown in diagram form on page 13 will be useful for reference in planning designs as any of these patterns can be adapted and combined with large areas of plain weaving.

When weaving patterns, the various shapes can be completed so far and then the background worked up to them, as shown in plate

1. If the pattern starts over one block of threads and increases to more, for example, a V shape, then the background must be woven first as it would be impossible to fill in the background after several V shapes had been woven.

#### PILE RUGS.

It is perhaps easier to design for *pile rugs*, since different colours in the pile can be added at any part without the difficulties experienced in changing the weft colour in a woven rug.

For this type of rug the weft is of string similar to that used for the warp. Weave first about four rows with string to give a firm edge. Now add the first row of pile which had previously been cut into pieces of equal length (about 2" is a useful size). Fold one of these lengths in two, and place the centre over the first two warp threads, starting from the left. Take the left-hand end round and under the first of these threads, and the right-hand end round and under the second one, bringing both ends out to the front below the band formed by the centre part of the thread. Then pull both ends tightly (diag. 8). Complete the row thus, then do two rows of weaving with string, beat up firmly, and add another row of pile.



Diagram 8.

If preferred the pile may be added as a continuous thread. For this purpose a gauge (a piece of wood of the required thickness with a groove along its length) is required, and the pile wool must be threaded into a sacking needle. Place the gauge across the warp.

Starting from the right take the pile thread from front to back between the first and second warp threads, leaving a short end projecting in front. Take it under the first warp thread and out to the right, across the first two warp threads to the back, where it goes round and out to the front between these two threads

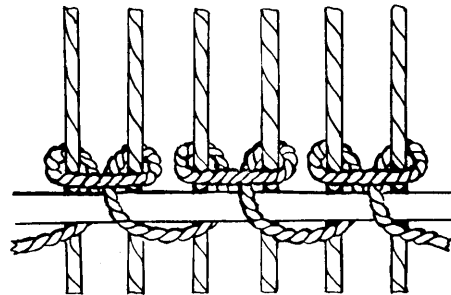


Diagram 9.

Up to this point the gauge has not been used, but before starting the next loop the thread is taken round this before passing between the next two warp threads, (diag. 9).

#### COLOUR.

A few words about colour may be helpful.

In choosing the colours of a rug they should be considered

primarily with its intended surroundings, either to harmonise or to serve as a pleasing contrast.

It is well to remember that colours tend to become subdued in wear, and it is therefore advisable not to let them be too dull at the outset.

A few well-chosen colours are usually more successful than a large number of colours and certainly much easier for the beginner to manage. Two or three tones of one colour look well with the addition of a neutral shade.

A combination of warm colours, reds and browns, or cool colours, blues and greens, is usually successful.

Where a plain coloured rug is required, a richer and more interesting effect is obtained if two tones of the colour are used alternately, one row of each, instead of only the one colour. Two contrasting colours used in this manner give a band of vertical stripes as No. 4 pattern in the sampler rug on page 13.

#### FINISHING THE ENDS OF RUGS.

The simplest way of finishing the warp ends is to knot the strands together to form a fringe. Knot the groups together in twos, pushing the knots close to the weaving. Cut off the ends of warp, leaving a fringe about 5in. deep. Another row of knots can be made if desired.

Another method of finishing is to plait the warp strands in groups and to knot the ends to secure.

#### APPROXIMATE QUANTITIES OF MATERIALS REQUIRED FOR THE VARIOUS LOOMS.

	Small Frame For rug 40" x 17"	Large Frame For Rug 64" x 33"	Large Loom For rug 84" x 31"
	WARP	WARP	WARP
Thin cotton yarn used double	$\frac{1}{4}$ lb.	$\frac{3}{4}$ lb.	1 $\frac{1}{4}$ lbs.
Flax thread used double ...	$\frac{1}{2}$ lb.	1 $\frac{1}{2}$ lbs.	1 $\frac{3}{4}$ lbs.
Thick cotton yarn used single	1 $\frac{1}{4}$ lbs.	3 $\frac{1}{2}$ lbs.	3 $\frac{3}{4}$ lbs.
	WEFT	WEFT	WEFT
Crofters 6-ply wool ...	1 $\frac{3}{4}$ lbs.	4 $\frac{1}{4}$ lbs.	5 $\frac{3}{4}$ lbs.

*This leaflet, one of a series covering practically every branch of craftwork, is published by*

DRYAD HANDICRAFTS  
SAINT NICHOLAS ST., LEICESTER

*London Showroom: 22 Bloomsbury Street, W.C.1.*

Made and printed in Great Britain by Nutt & Stevens Ltd., Leicester. RS/MA/I