

HANDICRAFTS SERIES No. 9

# Finger Weaving

## Part I

IVAN H. CROWELL



*Creative*  
**HANDICRAFTS**

McGILL UNIVERSITY  
ADULT EDUCATION SERVICE

HANDICRAFTS DIVISION  
MACDONALD COLLEGE, P.Q.

Macdonald College Handicraft Pamphlets

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Principal Product of a Handicrafts  
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*Better people* because of the greater knowledge of their own latent talents for creative work.

*Better families* because mother and daughter, father and son and whole families can plan and work together on individual or joint handicraft projects.

*Better homes* because homes can be tremendously enriched by the innumerable articles that can be designed, knitted, woven, carved, thonged, moulded by the members of that home.

*Better communities* because an active handicrafts program encourages a community handicrafts centre where people can work together, use equipment in common, exchange ideas, hold exhibitions and become better acquainted.

Ample opportunities are also afforded for supplementing incomes through the sale of high quality handicraft products.

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*"Every rise in the quality of the work that men do is followed swiftly and inevitably by a rise in the quality of the men who do it."*

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# FINGER WEAVING - PART 1

by

IVAN H. CROWELL

## *Introduction*

Finger Weaving is the answer to the problem of a great many would-be weavers. Any individual, school, church, hospital or club can do finger weaving without any investment whatever in equipment; the basic methods are extremely simple and they can be quickly learned. The design possibilities of finger weaving are quite limitless. In this pamphlet the simplest types and designs of finger weaving are introduced.

The articles that can be woven include purses, tea cosies, shopping and hobo-bags, belts and sashes. In weaving the former articles no seams whatever are made. In weaving belts, one may start directly on the buckle; in sashes with the fringe.

One or more additional pamphlets are planned for other types of finger weaving. They will present a greater range of design possibilities including pictorial designs, and discuss a wider range of articles that can be created by finger weaving techniques.

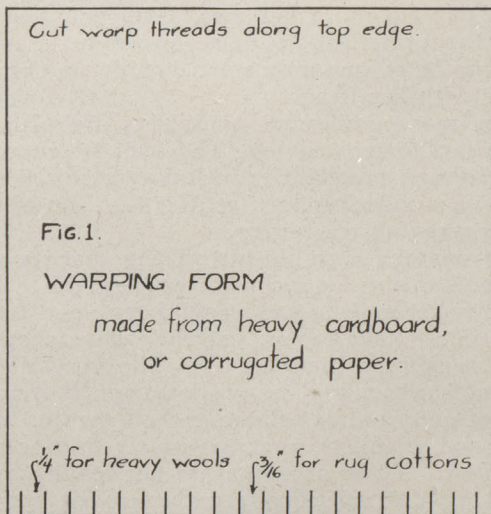
Finger weaving is so old historically that its origin is lost. Canadian and American Indians used the techniques both for basket making and weaving textiles. Years ago, Indians didn't have looms, yet they wove shopping or carrying bags, rugs, blankets, etc. The story of this sort of weaving has been told many times over. A tremendous wealth of information about techniques for weaving baskets and blankets, etc., is scattered in numerous publications. These accounts are not readily available nor do they deal specifically with weaving the sort of articles we care for now.

In this pamphlet some of the information already published has been adapted to descriptions of making articles of interest and use today, while some of the data presented are entirely new. As the technique for weaving purses and the like is quite distinct from that of weaving belts, the data are presented separately.

## A. WEAVING PURSES, TEA COSIES, SHOPPING BAGS

### *The Warping Form*

The only equipment required for this type of finger weaving is a piece of heavy cardboard or corrugated paper from which a *warping form* can be made. It should be cut to the desired width and about 3" longer than the necessary length of an article. Thus to weave a purse that measures 7" wide by 5" high, the warping form should be 7" wide by 8" high. Slits should be cut all along the lower edge of the form as shown in fig. 1. The slits at the edge should be only half as wide as the others.



### *Yarns*

Almost any kind of wool or cotton yarns can be used in finger weaving. Heavy types as rug yarns are especially valuable in beginning as the weaves can be easily followed. Knitting yarns are also excellent and very beautiful effects can be obtained from these finer materials.

## *A Few Terms Defined*

Three terms, new, so far as I am aware, are introduced in this pamphlet. *They are;* 1. *Warping Form*—Fig.

1. This is a notched piece of cardboard or heavy paper around which the warp threads are wound for weaving purses, tea cosies, etc.

2. *Warping Plan*. The warping plan is the arrangement or sequence of colors, kinds and lengths of threads on one side of a warping form (the other side is exactly the same) or in the upper series in a belt (again the other side is exactly the same). In discussing a warping plan it must be borne in mind that threads are doubled.

3. *Circuit*—A circuit refers to weaving purses. A circuit is made by weaving once completely around the warping form.

Two additional terms need explanation:

*Warp*—These are the threads that run lengthwise of an article. In purses they are wrapped around the warping form, while in belts they are the lengthwise threads.

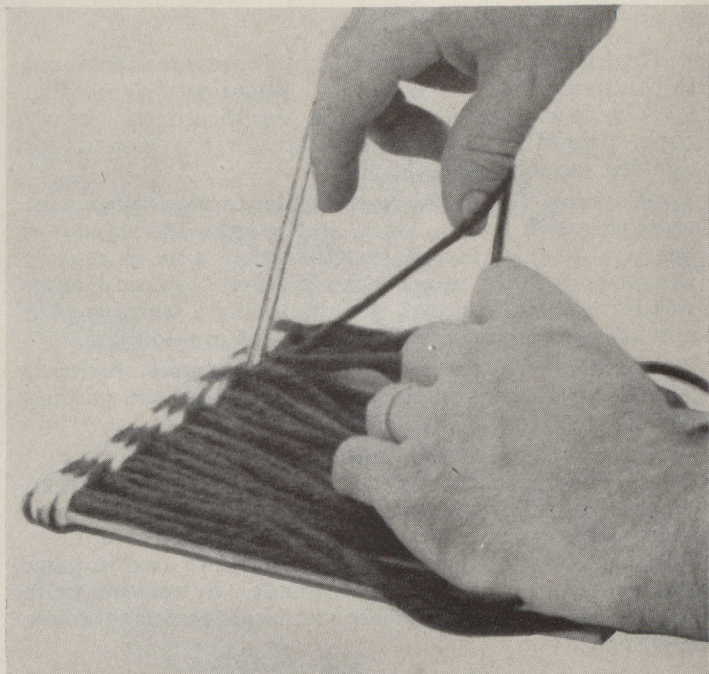
*Weft*—In weaving purses, weft threads are used in pairs and twisted around the warp threads. In weaving belts the weft threads run crosswise and bind the warp threads together.

### *Setting up the Warping Form*

Since warp threads do not show in finger weaving any color may be used. It is usually best, however, to use the same kind of yarn for the warp as for the weft.

To set up the warping form, wrap yarns around the board, catching a warp thread in each slit. When this is completed, cut the threads across the top edge. Weaving may start on any warp thread, but one at the edge is preferred. Tie the ends of the weft threads together and put them over a warp thread near the slits and weaving is ready to be started.

The method of holding the warp and weft threads while weaving is very important. Fig. 2 shows a method that has proven satisfactory. The right hand holds the two weft threads, gives the twist with the index finger



*Fig. 2*

and thumb and picks up the warp thread. The left hand draws each warp thread through the loop and holds all warp threads flat.

One of the problems of finger weaving is the proper tension. It is very difficult to say just how much tension should be used but the weaving should be firm and uniform.

Successive rows of circuits must be pressed together sufficiently so that the warp threads are completely covered by the weft. This can be done simply by holding each warp thread with one hand while pushing down on the weft threads with the other. It is not necessary to compact each circuit, six to eight may be pushed together at once.

You will find that as weaving progresses the weft threads become twisted around one another. A simple means of untwisting them is to unwrap a yard or so of yarn and pin the thread to the ball and allow it to hang over the edge of the table. The twists in the yarn are pushed over the edge of the table where the balls will rotate and untwist the thread while you can go merrily on with your weaving.

### *Basic Weaves*

Only two basic weaves are described in this pamphlet. One is produced by a half twist of the pair of weft threads around the warp thread. The other is a full twist of the weft threads around the warp thread.



Figs. 3, 4 and 5 illustrate the two basic weaves. It will be seen that the half twist, figs. 3 and 4, results in a change of the color of the weft thread over each warp thread, while the full twist, fig. 5, retains the same color of weft thread. For the purposes of this pamphlet, the full twist is used only to change the sequence of colors, i.e. if a circuit is running red, white; red white; a full twist will make it run white, red; white, red.

A description of some of the patterns that can be produced by the half twist weave gives an indication of

the creative design possibilities. These are only a few of the pattern possibilities. They can be combined to form an infinite variety of designs.

1. *Upright Lines*—Fig. 6.

Since a warping form contains an even number of threads, weaving round and round it with the half twist weave brings the same colors of weft threads above one another, thus forming upright lines of alternating colors. This weave is shown in the upper and lower part of figure 6.

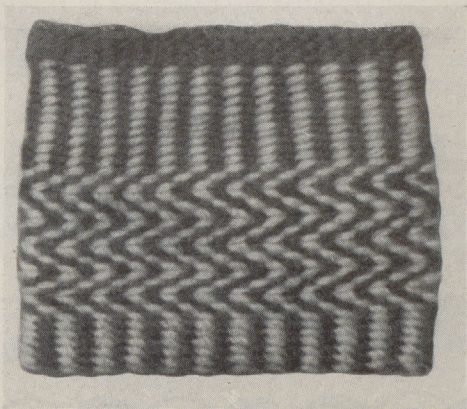


Fig. 6

2. *Sloping Lines*—Fig. 6.

Lines sloping to the right are produced by using a clockwise half twist weave. After completing one circuit, the weft threads are given a full twist at the beginning of the next circuit, fig. 5. This shows least when done at the edge and should be done at the same place each time. The result of this full twist is to change the sequence of colors. Successive rows of such changes produce sloping lines.

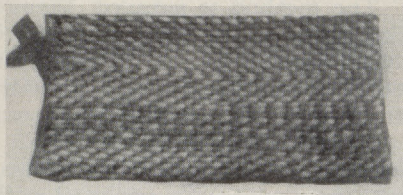
3. *Arrows*—Figs. 6 and 7.

The arrow pattern is composed of rows of lines sloping together. Two changes must be made when reversing the direction of slope of lines.

(a) The direction of the half twists must be reversed from that used in the former circuits. Thus, if a clock-

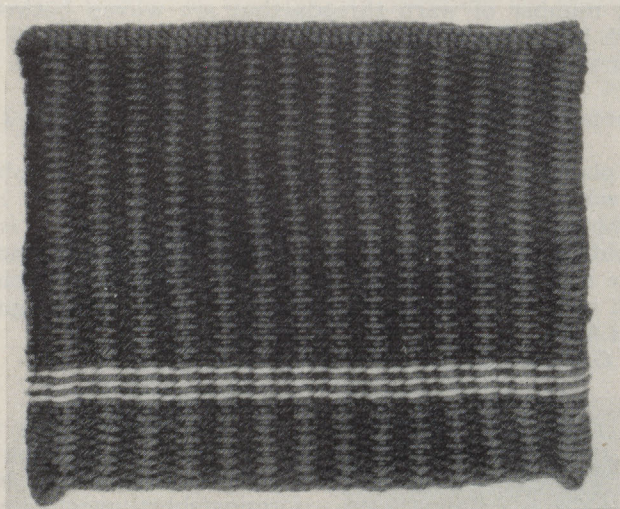


wise half twist was used in weaving sloping lines, counterclockwise half twists must be used to reverse the direction of slope of the lines.



*Fig. 7*

(b) The first circuit in the reverse direction should have the same colors above one another. This forms the points of the arrows. Only a half twist is given to the weft threads instead of the usual full twist required to make sloping lines. Successive circuits, however, require a full twist at the starting point in order to make sloping lines.



*Fig. 8*

4. *Herringbone*—Fig. 6.

Herringbones are made simply by weaving tiers of arrows. It is interesting to note that herringbones in finger weaving are formed across the warp while in loom weaving, herringbones run lengthwise of the warp.

5. *Four-color Combinations*—Figs. 8 and 9.

Thus far only two colors of weft threads have been used. With two sets of two colors of threads many interesting variations of upright and sloping lines and arrows can be woven. The method is simple. Weave around once with two contrasting colors. Next, start at the beginning warp thread with another pair of colored weft threads and weave around once. Then alternate with the original pair of weft threads. An example is shown as a band in the lower part of the bag in fig. 8.

Many interesting designs can be created with two, three, four or even more pairs of contrasting colored weft threads.

6. *Dot and Dash Weave*—Fig. 8.

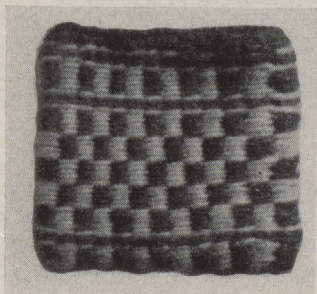
This weave is composed of upright bands of contrasting color. The pattern may be written (the figures indicate the number of warp threads that are woven between each half twist of the weft thread):

first and all odd circuits—1-3-1-3-1-3-1-3-1-3-1-3 = 24 warp threads

second and all even circuits—2-1-3-1-3-1-3-1-3-1-3-2 = 24 warp threads

In planning this pattern it is essential that the number of warp threads be in multiples of four so that the 1-3 combinations can always be formed completely. It is a rapid weave and many colorful combinations can be made. The shopping bag shown in fig. 8 is composed of blue and sand with lines of a four color combination of gold and fawn.

7. *Geometrical Patterns*



*Squares*—Fig. 9.

By weaving over two or three warp threads at a time with two colors and forming short upright lines of four or five rows, then changing the colors and forming a similar number of upright lines, tiers of squares are developed.

Fig. 9

### 8. *Diamonds*—Fig. 10.

The plan for weaving the diamond pattern requires that the weft threads cover one, two or three warp threads according to a definite plan. The plan may be written with figures which indicate the number of warp threads that are covered at each twist of the weft threads:

odd numbered rows—1st, 3rd, 5th, 7th—2-2-2-2-1-2-2-2.

even numbered rows—2nd, 4th, 6th—1-2-2-2-3-2-2-2-1.

After a series of circuits has been completed with the lines directed outward, the slope of the lines is reversed and directed inward, thus forming the diamond. Five circuits are required to form the lower half of a diamond while seven circuits are needed to form a diamond within a diamond as shown in fig. 10. Five or seven circuits with the lines pointed in the opposite directions are required to complete the upper half of the diamond pattern.

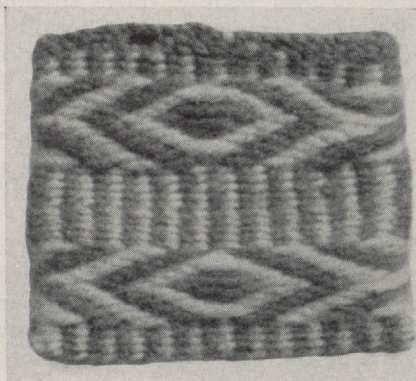


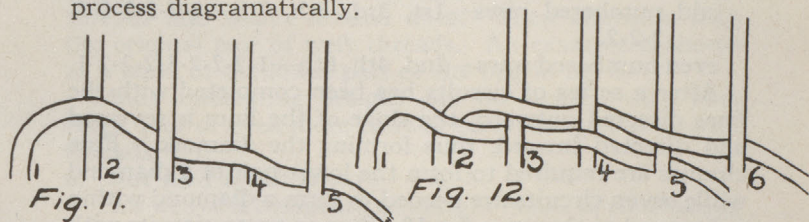
Fig. 10

### *Finishing*

When the desired height of a purse or bag has been reached, the weft threads are cut and tied on the inside. About three inches of warp threads will be needed for binding the top edge. Two types of binding have proven satisfactory. The warping form should be removed before the finishing is begun.

1. *Woven Binding*—Figs. 11 and 12, also figs. 6, 8, 9 and 10.

A warp thread near the middle side is a good one to choose for beginning. One may weave either to right or left. The plan is to weave a thread over its neighbor, behind the next, over the next and leave it behind the fifth thread inside the purse. Each successive warp thread is woven similarly. Figs. 11 and 12 show the process diagrammatically.



Considerable care will have to be given to completing the border. The last few warp threads will have to be woven in front of and behind those already woven in place. Precisely the same plan is followed. A pencil or awl will help separate the border threads to allow insertion of additional ones. The tension may be adjusted by pulling the ends of the completely woven warp threads.

After weaving is completed the border should be stitched or hand sewn as a precaution to the threads pulling out.

## 2. Cloth Binding and Sewn Types—Fig. 13.

Any good quality cloth of appropriate color can be sewn over the folded warp threads as indicated in figure 13. Still another method is to oversew the warp ends with yarn of the same kind and color as used in the weft.

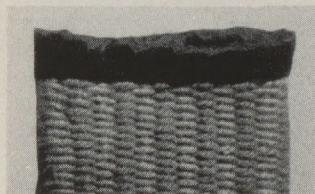


Fig. 13

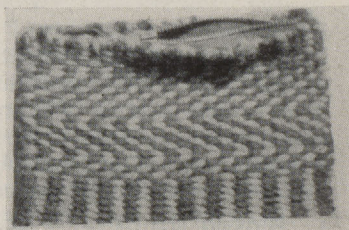


Fig. 14

### *Zippers and Handles—Fig. 14.*

Zippers may be sewn in purses. No special precautions are needed. Handles for shopping bags may be braided, the end threads fanned out and sewn on the inside of the bag, an inch or so below the top.

Pull handles for hobo-bags can be threaded through the material.

## **B. WEAVING BELTS AND SASHES**

The techniques of weaving belts and purses are direct opposites in some respects. In weaving purses the weft threads form the designs and the warp threads are covered. In weaving belts, the designs are developed in the warp threads while the weft threads are covered except at the edges of the belt.

### *Setting up the Warp*

The length of threads for weaving belts is very important. They are cut double length because they are folded. In the weaving process, the threads shorten about 2 inches for each foot of length. Thus if a belt 3 feet long is wanted, the threads must be cut twice as long as 3 feet plus 2 inches for each foot of length (3 feet plus 6 inches)  $\times 2$ , which equals 84 inches. When folded the threads are 42 inches long and when the belt is woven it becomes 3 feet long. Belts are usually made 1 to 2 inches wide.

In setting up the warp, the threads are folded to equal length over a buckle, if a belt is being woven, or over a piece of cardboard about 4 inches wide, if a sash is to be woven. The 4 inches of thread becomes a fringe when the sash is finished. The warp may be held for weaving by a string to a chair, table lamp, hook in the wall or by a heavy book placed on top of the buckle or cardboard.

### *Weaving*

Only one technique, with minor variations, is used to weave belts described in this pamphlet. After the warp is set up, it is separated into 2 series, an upper and a lower, figure 15. These threads are held in one hand, usually the right, with the index finger between the two series, fig. 18.

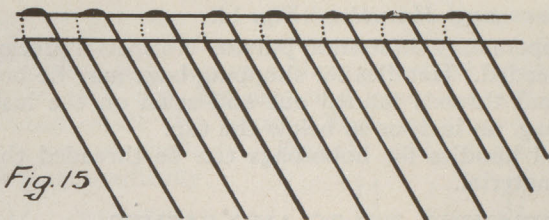


Fig. 15

The weaving technique is simplicity itself. With the left hand move the outermost top thread a little to the left and let it fall, fig. 16; then, lift the outermost lower thread and hold it on the left index finger. Continue by dropping the next upper thread and lifting the next lower one. This technique of dropping the upper thread and lifting the corresponding lower thread is the basic weaving plan for belts and sashes, fig. 17 and 18.

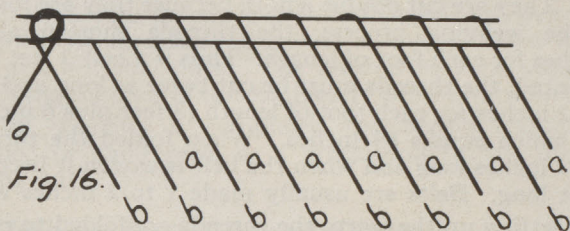


Fig. 16.

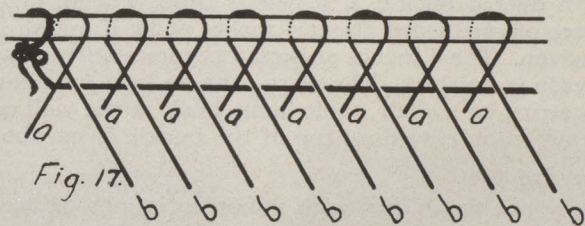
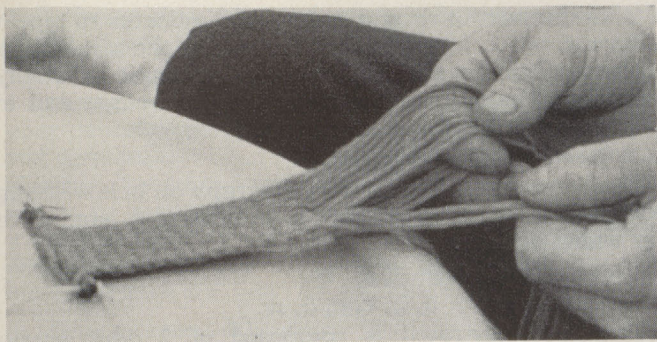


Fig. 17.

After weaving once across the belt, a weft thread is inserted between the two series. The end is tied to the buckle or cardboard. The weft thread is pressed snugly against the crossed warp threads. The second crossing



*Fig. 18*

is woven in exactly the same way as the first. After the weft thread is inserted between the newly crossed series, it is pulled firm so as to compact the warp threads and the warp threads are also pulled so that the weft thread is held firmly in place and straight across the belt. Be sure to insert the weft thread after each crossing and pull it just tight enough to keep the width of the belt uniform!

Each pair of warp threads is given a half twist in weaving the belt. They are also crossed below in the free ends. It is desirable to untwist the threads after each crossing. This may be done simply by running the hand downward between the two series of threads. For the first few times they tend to tangle a bit, but by keeping the ends free of knots and snarls the threads easily slip by one another.

#### *Some Belt Patterns.*

Innumerable patterns for belts and sashes can be devised. A few of them will be described. By combining these and inventing new ones an unlimited number of them can be woven.

A simple method of writing patterns is to indicate the arrangement of threads in the upper series from left to right. For example, a, b, b, c, c, c, a, rr means one thread of color 'a', followed by two of 'b', three of 'c' and one

of 'a' and repeat in reverse order. 'rr' indicates to repeat in reverse order, 'r' indicates to repeat in the same order as the pattern is written. In weaving belts, it is usually desirable to have the same color along the edges and to use this color for the weft thread.

1. *Lines of Color*—Fig. 19.

These were described in the paragraph on belt weaving technique. The pattern reads a, b, a, b, a, b, etc., a, to any width desired.

2. *Bands of Colors*—Fig. 20.

Pattern—a, a, b, b, b, c, d, rr.

The belt illustrated is composed of 2 dark green, 3 light green, 2 fawn, 2 sand, 2 fawn, 3 light green and 2 dark green in each series. In weaving, each corresponding color of thread in the series is dropped and lifted. For example, begin by dropping the outer dark green and lift the first lower dark green; drop second upper dark green, lift second lower dark green; drop first upper light green, lift first lower light green and so on. The



Fig. 19

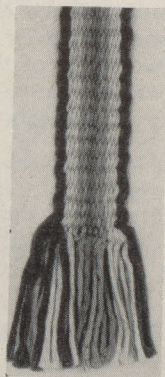


Fig. 20



Fig. 21

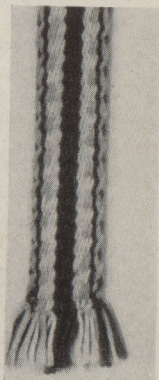


Fig. 22



weft thread should be dark green, the same as the color of the border threads.

With these variations of the belt weaving technique a tremendous range of possibilities is open to you to do your own designing. Various kinds of materials, colors and combinations can be experimented with. How many pleasing designs can you make? I'm sure you can design a belt to harmonize or contrast beautifully with every dress you have or ever will have. Try it. And after designing some line and stripe belts, here are some more patterns for you.

### 3. *Cross Lines*—Fig. 21.

Pattern—a, a, a, b, c, b, etc., a, a, a.

To make this design set up threads of two alternating colors and include one to three additional threads on each side for the border. The weaving plan for the border is to drop and lift alternate threads. For the interior portion, drop all threads of one color and lift all threads of the other color.

Numerous variations can be made of this interesting pattern. The cross lines may be broken in the middle by a narrow stripe; or the cross lines may carry half-way across in one color and continue the rest of the way with the other; again, the cross lines may be broken into squares by single threads of contrasting color.

### 4. *Blocks*—Fig. 22.

Pattern—a, a, b, b, a, a, b, b, etc., a, a.

In setting up the warp, arrange the threads in pairs of colors similar to that for weaving bands of color. If the set up reads:

2 gold, 2 blue, 2 gold, 2 blue for each of the upper and lower series, then the weaving procedure to form blocks would be:

Drop gold, lift blue; drop gold, lift blue, then: drop blue, lift gold, drop blue, lift gold and so on. For the next crossing the weaving plan is drop blue, lift gold, drop blue, lift gold then drop gold, lift blue, drop gold, lift blue, etc.

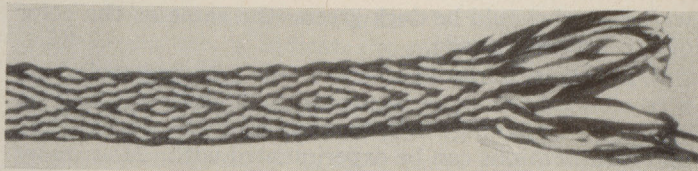


Fig. 23

5. *Arrows and Diamonds*—Fig. 23.

The warp for these patterns should be set up:

A/W B W B W B W B // B W B W B W B W /A  
 Left Middle Right  
 Portion Line Portion

The order of colors for the left portion of the belt or sash reads, white, blue, white, blue, etc., while for the right portion the order is blue, white, blue, white, etc. This results in two blue threads (or any other color) occurring on each side of the middle line of the belt. As the weaving plan is slightly different for each portion, the middle is of much importance. An outside border color, A, of one or a few threads, may or may not be used. Before weaving begins, the threads must be separated into an upper and a lower series as usual.

The weaving plan is as follows:

First crossing and for successive odd numbers of crossings

*Left Portion*

Lift lower A—drop upper A  
 Lift lower B—drop upper W  
 Lift lower W—drop upper B  
 Lift lower B—drop upper W  
 Lift lower W—drop upper B,  
 etc., to the middle line

*Right Portion*

Drop upper B—lift lower W  
 Drop upper W—lift lower B  
 Drop upper B—lift lower W  
 Drop upper W—lift lower B,  
 etc., to border  
 Drop upper A—lift lower A

For the second crossing and for successive even number of crossings

*Left Portion*

Lift lower A—drop upper A  
 Lift lower W—drop upper B  
 Lift lower B—drop upper W  
 Lift lower W—drop upper B  
 Lift lower B—drop upper W,  
 etc., to middle line

*Right Portion*

Drop upper W—lift lower B  
 Drop upper B—lift lower W  
 Drop upper W—lift lower B  
 Drop upper B—lift lower W,  
 etc., to border  
 Drop upper A—lift lower A

This plan looks very imposing in print, but it is simply directions for changing the colors blue and white in a certain order to cause them to slope together to form an arrow pattern. It is very important to observe that on the first crossing two B's, one on each side of the middle line are dropped, while on the second crossing, two W's are dropped. These two threads of the same color coming together form the points of the arrow.

These directions are intended to give you a start. As soon as you can see the pattern developing continue your weaving by observation to keep the threads in their proper order. When an error is made—as will occur, especially at the beginning, the weaving must be undone and corrected.

#### *Diamond Pattern—Fig. 23.*

This pattern is formed by reversing the direction of the arrows at certain crossings. In the sash shown in fig. 23, the reversals are made at each fourth crossing. To make the reversal, simply turn over the belt or sash, i.e., the upper series of threads is turned to become the lower series. After this, the weaving plan given above is followed.

#### *Finishing the Ends.*

Various plans can be chosen for finishing the ends of belts and sashes. Pairs of threads may be tied in hard knots, fig. 21. The end of the weft thread may be tied to the outside warp thread and the other warp threads left hanging, fig. 18. Upper and lower series of warp threads may be tied together in a neat knot, fig. 20. You doubtless can think of other attractive ways of finishing belts and sashes that you weave.

## MACDONALD COLLEGE HANDICRAFTS STORE

Through the Macdonald College Handicrafts Store, a co-operating organization of the Canadian Handicrafts Guild, various supplies and tools described in this pamphlet may be purchased in kit form or separately.

Everyone will understand the difficulties of obtaining adequate supplies of best quality materials. Substitutions may sometimes be necessary.

If a money order or cheque accompanies your order any balance due you will, of course, be returned. Otherwise kits must be sent C.O.D. postage extra.

### PRICE LIST

Because of the difficulties in furnishing satisfactory colors and color combinations, it is suggested that yarns be purchased locally. We are, however, supplying 2 kits so that finger weaving may begin with a minimum of delay.

<i>Purse kit</i> —heavy wool or cotton yarns in 2 colors to weave a purse 5" x 7" . . . . .	.60
<i>Sash kit</i> —heavy wool or cotton yarns in 2 colors to weave a sash 1 $\frac{1}{4}$ " wide x 48" long . . . . .	.50

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The investigational work for this pamphlet was made possible in part through the kindness of the Canadian Pacific Railway.