THE FRENWAY* SYSTEM

of

FRENCH REWEAVING

* Trade Mark

FABRICON TM

THE FRENWAY * SYSTEM

of

FRENCH REWEAVING

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Detailed and complete instructions
in the art of
French Invisible Reweaving

Privately printed and published
by
THE FABRICON COMPANY
in a limited edition

* Trade Mark

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INTRODUCTION

Although an intense search has been going on during the last several years for job opportunities, a very satisfying occupation, FRENCH INVISIBLE REWEAVING, has been overlooked. In a sense, this is surprising because the occupation does not require formal education, does not require great strength or unusual physical attractiveness, does not require expensive office space or elaborate equipment, and does not demand a special knack for dealing with people. All that is necessary is sufficient intelligence to understand simple instructions, normal eyesight - with or without glasses, and the patience to learn the art and to practice it to perfection.

Probably the reason this art of reweaving has gone relatively unnoticed is the great secrecy which has heretofore kept all but a few people in the world in ignorance of the techniques involved. These secrets have been closely guarded and handed down from generation to generation to a select few. The only exceptions were people who paid huge sums in order to receive knowledge of the art. Every novice reweaver had to spend years as an apprentice.

The result of this policy has been a steadily increasing demand for the services of experts in the art of French Invisible Reweaving, from the very small number of people who are capable of giving that service. Consequently, these skilled reweavers can obtain good fees for the work they do. Also, they have the prestige always accorded skilled craftsmen.

In view of the fact that in these times the demand for persons who can repair burns, snags, tears, or worn places in any type of cloth fabric so skillfully that the damage cannot show, so far exceeds the number of such persons in this occupation, the authors are sacrificing the tradition of secrecy in order that more people may become aware of this vocation and will enter it. There is no danger that the field will become overcrowded, because there is so much invisible reweaving to be done and so few people who can do it.

There is considerable satisfaction in taking a beautiful cloth garment, table cover, or something else of woven material which has been ruined by accident, carelessness, or wear, and restoring it to its original attractiveness and durability. This is not mere sewing or mending. This is the art of reweaving - replacing by hand the INDIVIDUAL threads that have been damaged, following the same weave as the machine or hand-weavers that produced the original cloth. The occupation never becomes monotonous because the art of textile-weaving has, through the ages, created an inestimable variety of patterns by means of variations in weaving patterns, colors, and thread sizes.

But for all its intricacy, weaving can be learned by diligent and progressive application on the part of any normally intelligent person. Like any new undertaking, reweaving will make a person more fatigued during the first stages of learning than it will when the fundamental steps in the process have become automatic. This is especially true of the eyes. As long as one's eyesight is normal, either with or without glasses, all that anyone needs is proper lighting at the work table.

Once a person has mastered the art of reweaving, he or she may seek a position with a reweaving company, may set up a shop of his or her own, or may pursue the work as a profitable hobby at home. If the reweaver starts a new venture, some initial solicitation of work may be necessary, but after the excellence of the workmanship has been established, there will be an endless stream of customers to the shop. Jobs may be referred to you by tailors and dry cleaners as well. However, the business of direct customers may be encouraged by pointing out that the handling charges of tailors and dry cleaners can be eliminated.

In order to attain the degree of competence necessary to build and maintain a thriving reweaving business, one must do excellent invisible reweaving. This you can learn to do by carefully following the instructions given in this manual, never slighting the practice sessions outlined in each section, and proceeding slowly, step by step. If you plunge

into the learning process too hastily and unsystematically, you will become confused and discouraged. Read the instructions sentence by sentence, paragraph by paragraph, section by section, IN SEQUENCE, making certain that you master each before tackling the next one. If you find something which is not clear to you, go back over the instructions slowly and carefully, sentence by sentence and phrase by phrase, doing each movement just as it is presented.

Great care has been taken in preparing this manual of instruction. It could have been made much larger to include detailed information about the historical development of many kinds of plant and animal fibers for the manufacture of thread, of the variety of weaving methods, of the gradual introduction of machinery into the textile-weaving industry, of the displacement of fabrics by newly discovered ones, of the changes in fashion and taste, etc. But this information, while interesting, would not increase the value of the book, which was written strictly for the purpose of telling you the best way to learn how to do French Invisible Reweaving. Additional information would be distracting and confusing.

No effort has been spared in the attempt to make you an expert craftsman. The instructions have been put in the simplest possible language. There are drawings and photographs designed to make the text still clearer. Even samples of cloth have been provided in order that you may understand better and practice from the very beginning. Inasmuch as reweaving needles are imported and difficult to purchase, these are also provided. This manual is the only one of its kind. It is authentic and complete.

Now let us begin to learn this pleasant and profitable art.

PREPARING TO LEARN

EQUIPMENT NECESSARY

Experience has shown that it is best to have each worker supply his own scissors, tweezers, thimble, and darning needles and large safety pins for fasteners. However, reweaving needles of assorted sizes are supplied with this manual, since they are difficult to purchase.

The implements with which you outfit yourself should meet the following specifications:

The sewing scissors should be non-tarnishing (preferably plated) and not exceed four inches in length. Of course, they must be sharp and well made in order that snipping coarse threads with the points can be done easily.

The tweezers (forceps) must be of good quality so that the points will "justify" - come together exactly. You probably know how hard it is to pluck an eyebrow with poorly made tweezers; consequently, you realize how useless they would be on a reweaving task.

The thimble required must be a regular one, that is, one with an enclosed end. Perhaps you need to be reminded that a thimble should fit the middle finger of your sewing hand - not too loosely and not too tightly.

For fastening material to be rewoven, No. 5 darning needles are excellent, for they have sharp points and length without being disproportionately thick. Large safety pins are all right, too. Not so satisfactory are large straight pins, for they usually are quite thick and have rather blunt points.

PICTURE NO. 1 - Here is a weaver sitting at her desk.

Later, after you have advanced to learning and practicing reweaving on cloth made of fine threads, you may find it easier if you use an optical aid for magnification. Such an aid is known as Magni-Sighter Binocular Loops. But don't purchase this right away, for your eyes will adjust gradually to their new task as you become more accustomed to the work and remain more relaxed as you work.

There are weaving needles Nos. 6, 7, 8, 9 and 10 with this manual. No.6 and 7 are used on coarse cloth, No. 8 and No. 9 on medium to fine-threaded material, and No. 10 on fine and very fine weaves.

It is wise to keep on hand an emery bag through which you should occasionally run your needles in order to keep them smooth. It may be purchased at any counter selling sewing equipment.

Reweaving is done at a table or desk so provide yourself with the following:

A work table, 30 or 31 inches high, with a top approximately 30 x 20 inches.

A pillow of coarse feathers or of kapok, about 13 to 15 inches square, to which you will fasten the material which you are reweaving. Tack the pillow to the top of your work table thus: Tack down the front edge, push the feathers or kapok toward the back in order to make the back of the pillow higher than the front, then tack down the back edge of the pillow firmly.

An adjustable, fluorescent lamp, preferably with two tubes to eliminate flickering.

A straight chair that fits your body contours in order to minimize fatigue.

Photograph on Page 10 - shows you how you should be equipped in order to do reweaving efficiently.

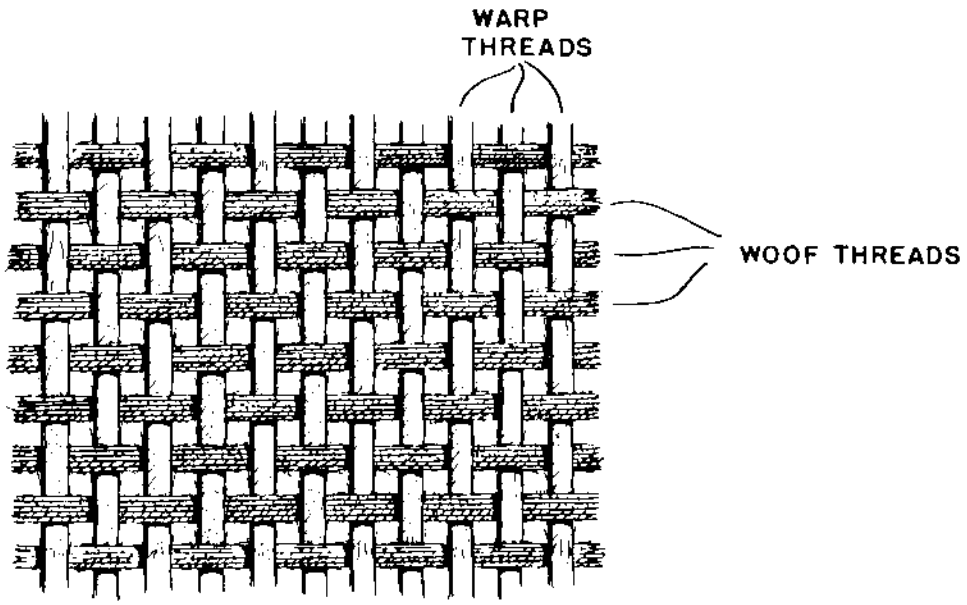
THE PURPOSE OF THE MANUAL

Experience has taught us that people getting ready for training in reweaving are often so tense that they find it hard to follow and to remember oral instructions. Also, persons who have become expert weavers find it hard to teach new people, for they have forgotten just what difficulties and feelings they had when they first learned. Furthermore, the experts are very busy and often must interrupt training sessions in order to tend to some special work.

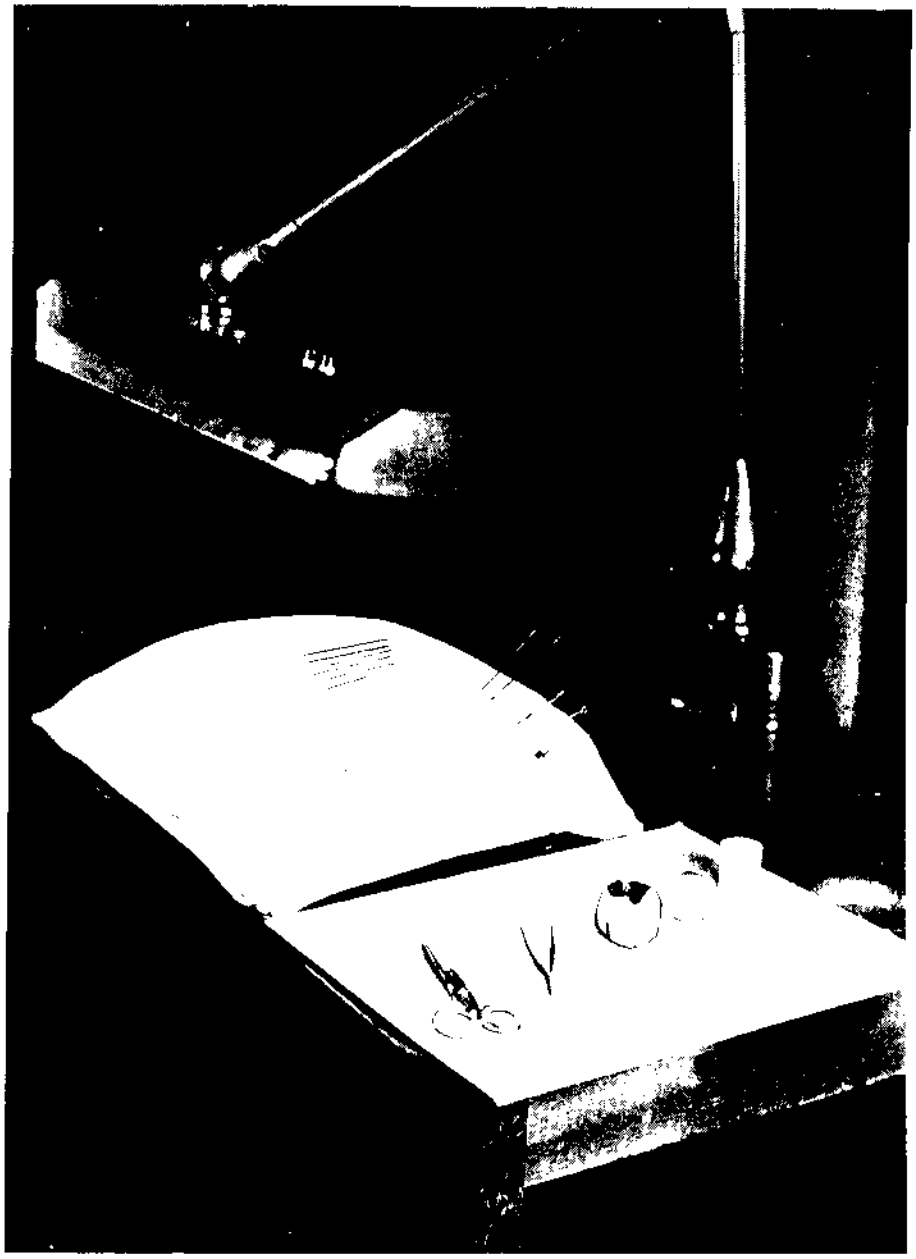
Therefore, this manual will teach you how to become an expert reweaver without having to rely on some one person to train you. Use this manual as a textbook. Rather than learn any part of the reweaving process incorrectly, write to us, if anything in the textbook is not completely clear to you as you go systematically through the instructions.

WEAVING RANGES FROM THE SIMPLE TO THE COMPLEX

Weaving is done by putting threads over, then under other threads running at right angles to the first threads. In order to make the process easier to explain, when cloth is made the threads fastened lengthwise in a loom are known as the Warp and those interlaced through the Warp crosswise are called the Woof. Therefore, weaving is done when the Woof is passed over and under the Warp with planned regularity. Visualgram # 1 shows the relationship.



VISUALGRAM NO. 1 - Simple basket weave, or "one and one" weave.



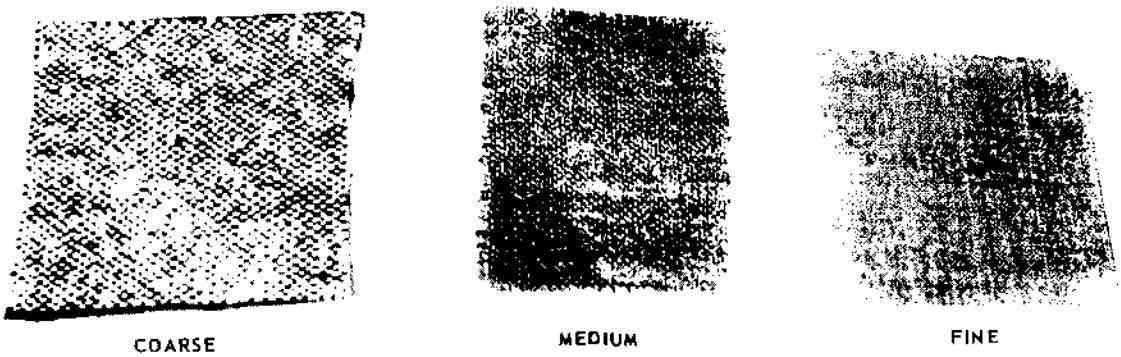
PICTURE NO. 2 - This is the top of the work desk showing proper placement and size of the pillow. Notice how the pillow is tacked to the desk at four corners - Also observe all the necessary equipment - scissors, tweezers, thimble and spool of thread - The safety pins and large needles standing upright are used to fasten the garment to the pillow while it is being rewoven. The needles lying on the pillow are the French Invisible reweaving needles with which you have been supplied. Notice the Emery Bag between the tweezers and thimble.

When each thread of the Woof (cross thread) goes over one thread of the warp (length thread), then under the next single thread, then over the third, under the fourth, etc., the result is a piece of cloth having a simple "basket weave". Examples of this type of weave are ordinary tweeds, which have coarse threads, and tropical worsteds, which have smooth, fine threads. For simplicity, Visualgram 1 was drawn as a one-and-one or basket weave, although it could have illustrated a more complex weave pattern.

A simple two-and-two weave is the result when each thread of the Woof (cross thread) passes over the next two threads of the warp (length thread), then under the next two, then over the next pair, etc. Herringbone Twill is a more complex weave which makes alternate diagonal lines in the pattern go in opposite directions.

You must learn these various patterns in order to reweave damaged garments correctly. But don't worry, you will learn one step at a time, from the simplest to the most complex, with plenty of time for practice at each step. You will learn and practice on samples, including those furnished with this manual, until your work is finally good enough for you to be allowed to commence reweaving damaged places in garments. (For pictures and description of the more commonly used fabrics see pages 69 and 70).

Below you see a simple one-and-one weave on three weights of cloth, coarse, medium, and fine.



COARSE MEDIUM FINE

PICTURE NO. 3 – Above you see a simple one and one weave on three weights of cloth, coarse, medium and fine.

REWEAVING A SIMPLE BASKET WEAVE

PREPARING A DAMAGED PIECE FOR REWEAVING

In order not to fall into any poor work habits, you must fasten the samples for learning just as you would a garment being prepared for reweaving. Always pin the cloth securely to the cushion on your work table with several of the heavy darning needles or pins. The cloth must be fastened firmly in order to prevent "drawing". It is hard to follow the threads of cloth which "draws" for then the threads are not lying in their naturally straight rows.

Adjust your lamp so that you can see the threads clearly.

Begin wearing your thimble when you work. Many people have to get accustomed to wearing a thimble, but use of one is necessary in order to prevent getting a painfully sore finger from pushing the needle through the fabrics.

As you work, hold the cloth firmly, but not so tightly that it will draw. Use the needle with your right hand. Your left hand will be holding the cloth, with your left thumb quite close to the line of the thread you are reweaving at the moment. Of course, if you are left-handed, you hold the cloth with the right hand and use the needle with your left.

Picture #4 shows the cloth fastened to the pillow and the proper holding position. You will find this is the position of maximum comfort and ease.

PICTURE NO. 4 – Proper method of holding damaged garment while it is being rewoven.

EXERCISE NO. 1

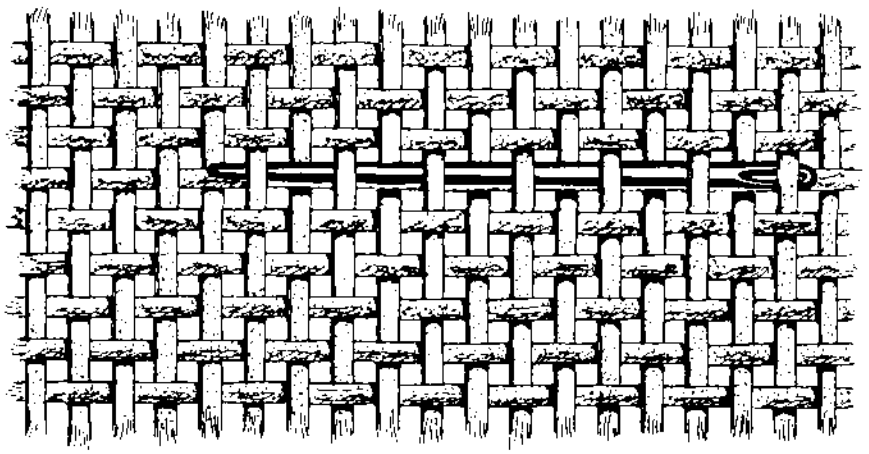
FIRST PRACTICE EXERCISE

You have been given a sample of a simple basket weave. It is marked Sample No. 1 and is a tweed. Note that the weave of each thread is over one warp (length) thread, under the next, over the third, etc.

The sample on which you are learning probably has lighter woof (cross) threads than it has warp (length). It is easier to see and to follow a light thread. This will make practicing easier.

Pick up a needle and begin to trace one of the woof (cross) threads by inserting the needle under a warp (length) thread, then going over the next warp thread, under the next, over the next, etc. Be especially careful to be guided all the time by the same woof thread. It is so easy to get off the track that you should practice this at least a dozen times.

Do the step once more and leave the needle in the fabric. With another needle, trace the woof (cross) thread just below the first one in exactly the same way. If it has been done correctly, you will see that wherever the first woof (cross) thread goes over a warp (length) thread, the second woof thread goes under it; wherever the first woof thread goes under a warp thread, the second woof thread goes over it. See Visualgram 3.



VISUALGRAM NO. 3 - This shows a needle tracing one woof thread on a simple one and one weave. Notice how the needle goes under one warp thread, over the next warp thread under the next and so on.

EXERCISE NO. 2

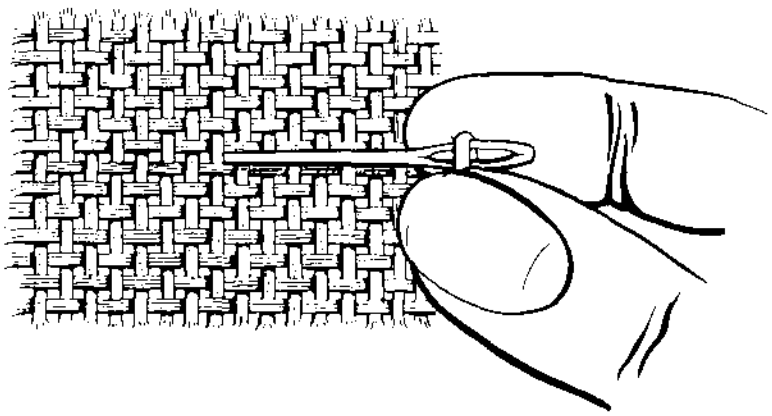
PRACTICE WITH THREADED NEEDLES.

After you have correctly traced several woof (cross) threads which run just below each other, you are ready to practice with threaded needles. So you must learn the professional way to thread a needle.

THE ART OF THREADING A NEEDLE.

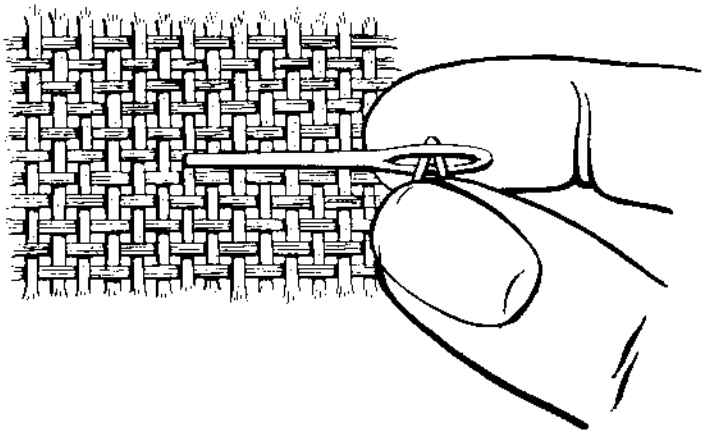
Get a thread from the bottom edge of the cloth. Probably you have never tried to thread a needle with a coarse wool thread before. The professional way is much easier than trying to poke a raw, easily frayed end through the eye of a needle. But even the professional way has to be done hundreds of times in order to be accomplished smoothly. So get started!

Loop the thread around the needle, pressing the thumb against the forefinger (index finger) - with the thread between them - just under the needle, which is held horizontally. See Visualgram No. 4 and picture No. 5. When you make the loop, do so in such a way that there will be very little doubled thread below the part looped over the needle. Make the loop as tight around the needle as possible, holding the thumbnail tightly against the forefinger. Draw the thread off the eye-end of the needle and push the tiny loop through the eye. Visualgram No. 5 and picture No. 6. Pull the entire doubled portion of the thread through the needle in order to keep the thread from coming out when the needle is being used. Now you can see why you should not start with too large a loop - it is too hard to pull a long doubled thread through the eye of a needle. Visualgrams Nos. 4 and 5 and pictures Nos. 5, 6, and 7 demonstrate the threading process. Study them carefully, but more important, practice this many, many times.



VISUALGRAM NO. 4 - This is an enlarged view of the first step in threading your needle. Notice the needle is inserted in the cloth. This is the proper place for the needle while it is being threaded -- in the cloth. Be sure to practice in this manner.

PICTURE NO. 5 – First step in threading the needle. Notice how the thread is *looped over the needle and held between thumb and forefinger.*



VISUALGRAM NO. 5 - This is a greatly enlarged drawing of the looped end of the thread being pushed through the eye of the needle.

PICTURE NO. 6 – Pushing the looped end of the thread through the eye of the needle.

PICTURE NO. 7 – This shows thread pulled through the eye of the needle.

Pictures Nos. 5, 6 & 7 showing the needle threading process do not show the needle inserted in the cloth. This was done to illustrate more clearly the procedure. However, in practice and work always have the needle in the cloth when it is being threaded as shown in Visualgrams Nos. 4 and 5.

If you did it easily the first time, or even the fifth or eleventh, you were just lucky, so practice away!

Actually, an expert reweaver does not thread the needle until after he has woven it through the cloth; consequently, you are to do likewise from now on. When you first try it, you will realize why so much practice in just threading the needle was so valuable.

Now that you have learned to thread a needle the professional way, let us review the step outlined in the Exercise No. 1.

Practice weaving over intact threads with the replacement threads. "Replace" first two threads, then three threads next to each other before proceeding.

EXERCISE NO. 3

A FURTHER STEP

After you have practiced weaving threads over intact threads in the sample until you no longer make errors, you are ready for the next step.

Use the blunt end of a needle to lift a loop of a woof (cross) thread and snip the loop with the scissors. Use the needle to gently unravel the cut thread from the weave for a length of about one inch. Hereafter this unweaving process will be called "teasing out."

Snip the thread again to get rid of the inch that has been teased out.

You are ready to replace the portion of thread just snipped away with a new thread of the same color. Do this by going over, under, over, under, etc, the warp (length) threads in the gap along the line where the woof thread was taken out, with your needle. Now thread your needle, draw it through and see whether the replacement thread takes the place of the original one correctly.

Remove the replacement thread and repeat this practice step not less than a dozen times.

NOTE: This is a most important point! All weaving is done on the "Right Side" of the material. The material is pinned to the pillow so the "Right Side" is facing you.

While weaving in a replacement thread in the woof (cross thread) always leave it slightly loose, this makes easier the reweaving of the warp whenever that is necessary. Whenever you find that the new woof is too tight, loosen the replacement threads gently and individually at one side with the tweezers.

When you have thoroughly mastered the technique of replacing one woof (cross thread, remove a one-inch portion of the next thread below the first and replace the two threads in the same way. Do this over and over. Each time you replace a thread, study the results. Be sure it has the right relationship to the woof (cross) thread above it.

Next, remove the next thread below the second and replace the three thread gap until you can do it without making a mistake.

Practice with four consecutive woof (cross) threads to replace and then five. Learn to do this without making an error.

Remember: When you have more than one thread to replace, weave first, the thread topmost, or farthest from you; then do the thread just below it, etc. When the manual mentions adjacent threads, it means having this sort of relationship to each other. Always consider the thread just above the one you are replacing as the guide thread.

BE CAREFUL! DO NOT PRACTICE THESE STEPS INCORRECTLY. DO NOT DRILL IN THE WRONG WAY TO REWEAVE. LEARN TO DO IT RIGHT.

Before learning anything really new, you are to drill yourself next in replacing one, two, three, four, and five threads in gaps, or breaks, of about 1-1/2 inches.

When filling in a damaged length of 1 1/2 inches - even when five adjacent threads are out - is not difficult to do any longer, make the breaks in the woof (cross) threads about two inches. Follow the same procedure as before. Replace just one two-inch woof thread first and do it several times; then replace two adjacent woof threads, also repeating the exercise many times; next replace three adjacent threads, practicing as before; then do four threads, and finally, five.

WARP (LENGTH) THREADS MUST BE REWOVEN TOO.

Inasmuch as most damage to garments affects the warp (length) threads as often as the woof, you must practice replacing warp threads as well. Do this by unpinning the cloth and repinning it so that the warp will lie crosswise on the cushion. Now practice reweaving just as you did before. Probably the threads you have to first trace, then replace, are darker than those of the woof; therefore, you will learn how to trace darker threads easily while you are improving your skill.

EXERCISE NO. 4

THE "PROBLEM" OF EXTRA THICKNESS

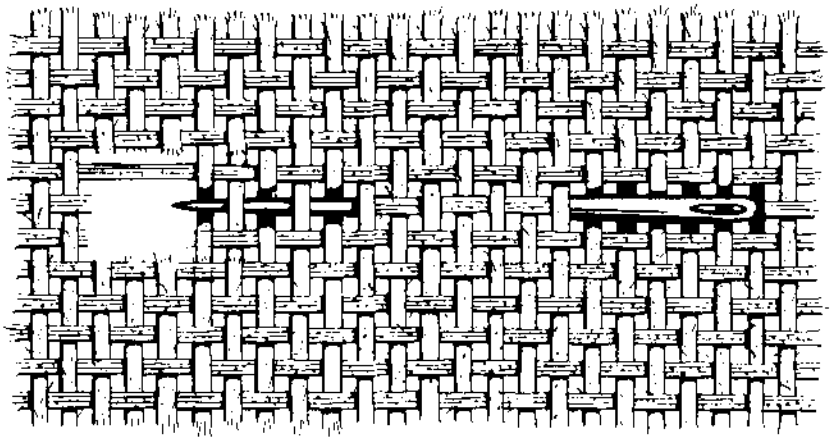
Replace breaks in several adjacent threads in the way you have learned, but begin to reweave along the intact threads for a short distance before reaching the damage and continue to weave for a similar distance after replacing the broken threads. You will notice now that the "joined" area around the damaged place will have twice as many threads as before and will, therefore, feel thicker and more bulky

The next steps explain how the replacement threads are anchored and how the extra thickness is made inconspicuous.

EXERCISE NO. 5

LEARNING "DIPPING"

The technique of dipping in French Invisible Reweaving is the practice of sticking the needle through the cloth and taking a rather long stitch - about 1/2 inch for the coarse material on which you are practicing - before commencing to reweave, and taking a similar stitch after you have rewoven past the damaged area. Visualgram 6 illustrates dipping; see following page.



VISUALGRAM NO. 6 - This illustrates dipping. Notice how the needle is inserted under the cloth for a distance here of seven threads before actual weaving is begun. The dipping is between the darkened threads.

Always dip along the line of the thread which is broken. If you don't keep the dips on a line with your reweaving, you are certain to get confused and make a mistake in your work.

NOTE: You must start a dip for replacing a second thread just a little farther away from the damaged place than you had to for the first thread. This means, also, that the dip on the other side of the damage will be farther away from the damage than the dip above it. Likewise the dips for the third replacement thread must be farther from the damaged area than the dips for the second. However, the dips for the fourth replacement are to be the same distance away as were the dips for the first replacement. As you will learn shortly, the stairstepping of the dips is caused by stairstepping of the "joinings".

Practice dipping until you do it accurately and automatically.

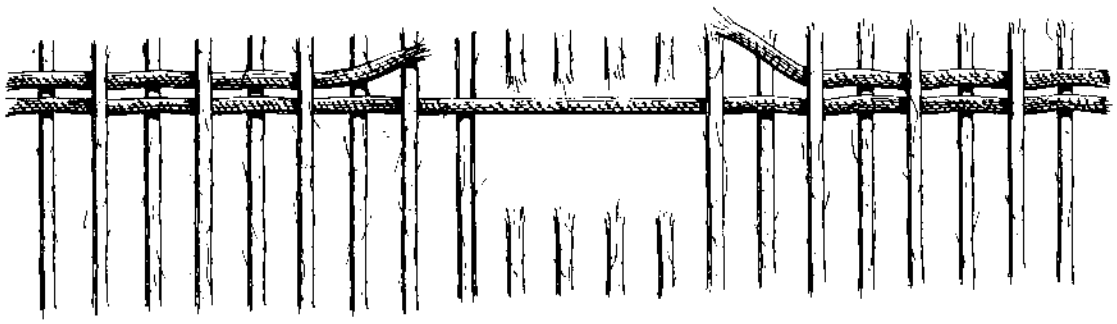
EXERCISE NO. 6

LEARNING TO MAKE "JOININGS"

The technique for securing sufficient anchorage without having too much bulk is called "joining".

Damage one woof (cross) thread. With your tweezers, pull up each end of the damaged thread and tease it out past two of the warp (length) threads. By using the tweezers, you avoid fraying the thread ends as you are likely to do if you try to grasp them with your fingernails.

Practice making joinings while replacing the single thread. Do this by making a dip and starting to reweave along the intact portion of the thread being replaced, commencing to reweave about the distance of five warp (length) threads before reaching the point where one end has been teased out. Continue to weave along the line of the damage, past the other broken end, and on along the intact portion for the distance of five warp threads on that side. Then make a final dip. Visualgram 7 shows the process.



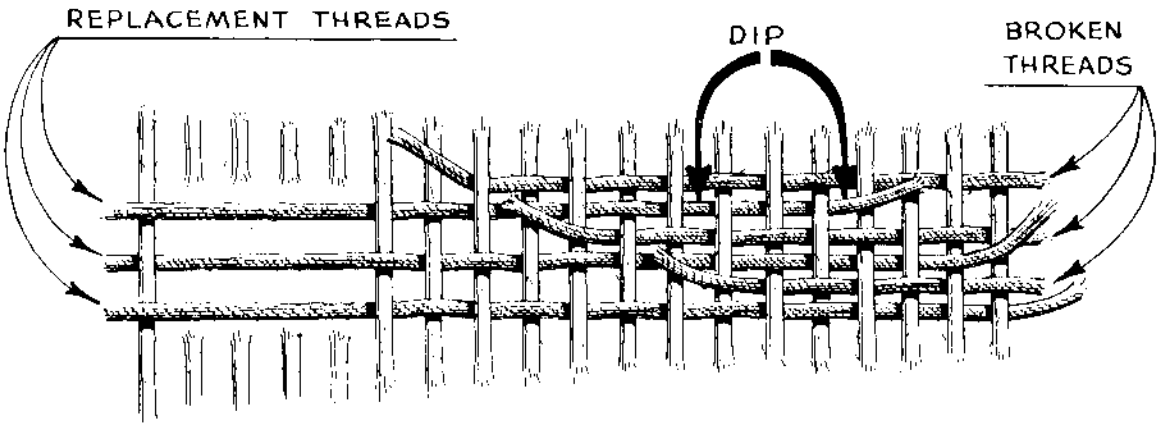
VISUALGRAM NO. 7 - This shows the damaged thread teased out. The replacement thread has been woven in. The place where these two threads appear together is the joining.

Practice the procedure of weaving and joining the one thread twenty-five times. Be sure that you are doing it correctly. Stay on the proper line when reweaving. Don't be in a hurry to go on to the next step until you have perfected this one, or the next will only confuse you.

Next, replace two adjacent threads. This requires that the ends of the second damaged thread each be teased out past four warp (length) threads. But you will overlap your reweaving on both sides of the damaged place by using the same method as you used before. Remember that the dip for the second thread begins farther away from the damage. Repeat this exercise a dozen times.

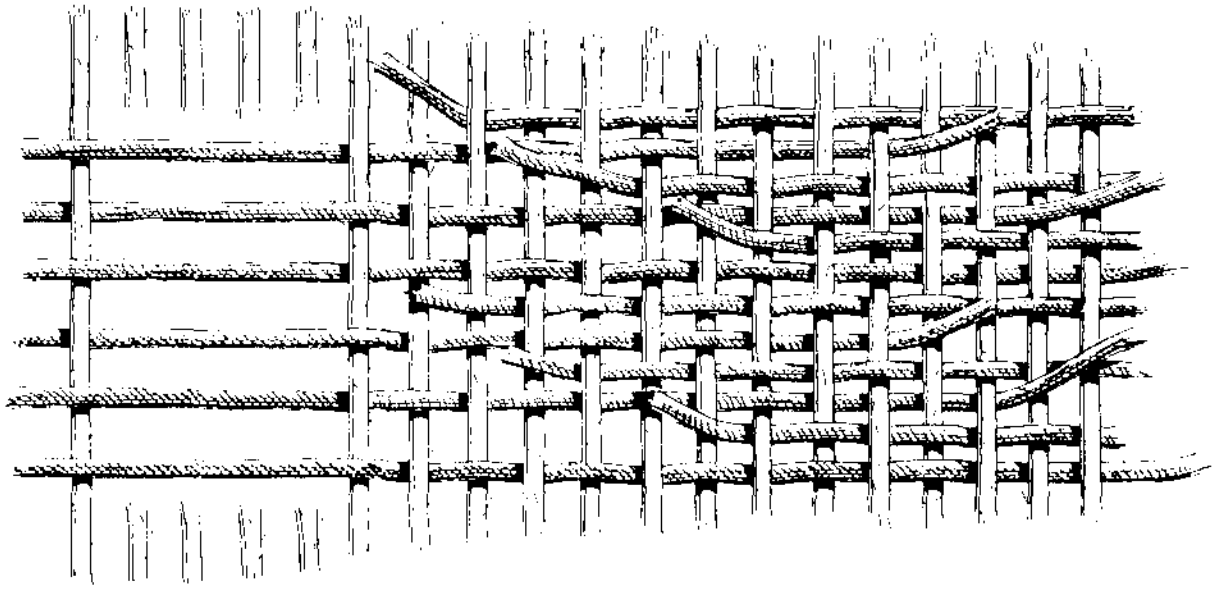
When you have mastered the replacement of two adjacent threads, learn to do it correctly for three adjacent threads. This requires that the ends of the third broken thread be teased out past seven warp (length) threads. When reweaving, do so over the intact portions of the thread for distances of five warp threads as before. Now you can see the stairstep arrangement of the joinings. This distributes the bulk of the overlapping threads in such a way that the double thickness is not all located right next to the damaged area. Visualgram 8 following page shows the stairstepping.

Do this reweaving exercise over and over. Do not speed here. This is the crux of your profession. Learn it well.



VISUALGRAM NO. 8 - This shows "stair-stepping" arrangment of joining and dipping. Note the teasing out is stair-stepped also.

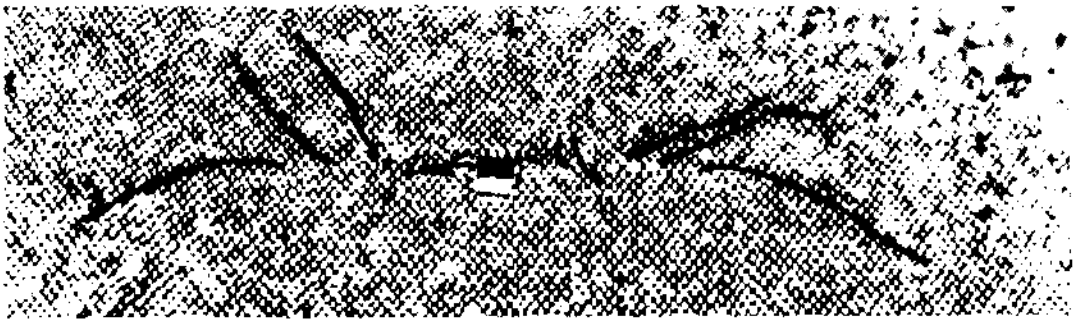
If the number of threads you must repair exceeds three, you do not need to tease out the broken ends of the fourth thread beyond more than two warp (length) threads. In other words, threads 4, 5, and 6 will have joinings located in the same way that the joinings of threads 1, 2, and 3 are located. See Visualgram 9, following page.



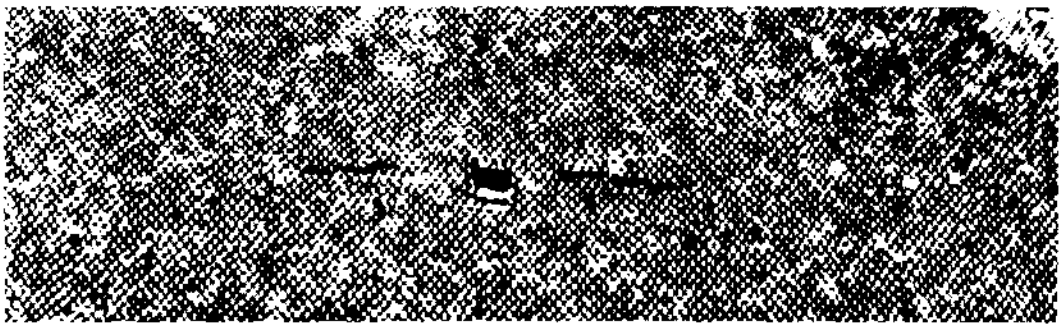
VISUALGRAM NO. 9

Notice that the ends of the fourth thread are teased out past two warp threads and that the ends of the fifth thread are teased out past four warp threads and that the ends of the sixth thread are teased out past six warp threads.

Practice properly reweaving and making joinings for damaged places up to six threads wide. Practice thus reweaving the warp (length) threads as well as the woof (cross). Practice this exercise many times - this is most *important*.



PICTURE NO. 7-A - This shows three threads woven in. Notice stair-stepping of teased out threads. This is the right side of the material.



PICTURE NO. 7-B - This shows the wrong side of the same work as in picture NO. 7-A. Notice again the stair-stepping of the dips.

EXERCISE NO. 7

CLEAN WEAVING IS ESSENTIAL.

One of the hardest things to learn to do is "clean" weaving. This means the art of using your needle so skillfully that you do not pick up any part of the woof (cross) thread which you may be following or run through any fibers of the warp (length) threads as you weave. When you do not weave "clean", you fray and weaken the threads of the cloth, especially when you attempt to pull the replacement threads into position. You may even break some previously undamaged threads.

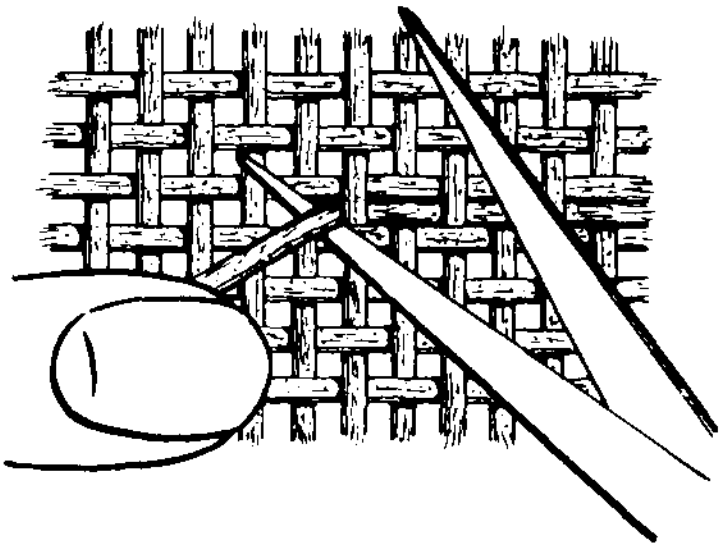
There is absolutely no other way to learn to do "clean" weaving besides lots of practice. The eyes must be trained to see the weave readily. The fingers must learn to manipulate the needle flexibly. One has to get the "feel" of it.

EXERCISE NO. 8

GETTING RID OF LOOSE ENDS.

Now that you have learned both dipping and joining, you are ready to learn how to remove the ends of the original and replacement threads from the top surface of the cloth.

As soon as you have replaced all of the damaged threads going in one direction - crosswise or lengthwise, you will want to get the ends of the damaged threads out of the way in order for you to see your work more clearly when you replace the damaged threads going in the opposite direction. You do this by snipping each end quite close to the surface as you hold the thread slightly taut with the thumb-nail of the other hand. See picture 8 and Visualgram 10.



VISUALGRAM NO. 10. An enlarged view of the actual snipping off of the damaged thread.

Most of the time, the snipped end will spring back and bury itself in the cloth, or spring out on the other side. If it does not, it should be pushed through to the under side with the needle so it will not show.

When a damaged area has been rewoven in both directions and the ends of the original, broken threads have been snipped in the manner just described, you must now snip the ends of the replacement threads at the beginning of the first dip and at the end of the second dip. See picture #9, on page 32. You have waited to do this last in order to have something to grasp readily whenever you needed to tighten, or otherwise adjust, the woof (cross) threads while you were reweaving the warp.

It is wise to pull each thread end slightly as you snip it, just as you did with the previous set. If the snipped end does not spring back to the under side, you must work it through so that it does not show on the right side.

PICTURE NO. 8 - Snipping the ends of the teased out (damaged) threads. Notice the posture of the hands and scissors.

PICTURE NO. 9 - This shows the damage completely rewoven. The teased out thread ends have been snipped. Now the ends of the replacement threads are ready to be snipped at the tips.

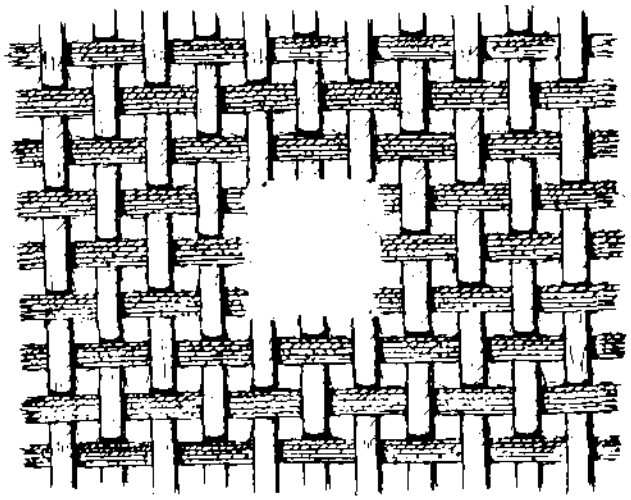
EXERCISE NO. 9

REWEAVING WHEN BOTH WOOF AND WARP ARE GONE.

When a damaged place is a hole, it means that both warp and woof are gone in that spot. You should always reweave the woof first, then turn the cloth or garment in order to replace the warp. When the damaged place is actually a hole, the new woof which you have just put in lies across the hole, waiting for the warp to be woven through it.

ALWAYS MAKE CERTAIN, WHEN PREPARING TO FIX A DAMAGED PLACE, THAT YOU START WITH THE TOPMOST DAMAGED THREAD. Do not leave a partially damaged thread to cause further trouble at a later time. It helps, especially for cloth with fine threads, to pull the intact thread nearest the top of the damaged area a little tightly with the tweezers in order to see it clearly and to use it as a guide. It can be loosened as soon as you begin reweaving below by stretching the cloth a bit with the fingertips. Do not ever leave it tight for it would mar your work.

Cut away the damaged portions of original threads in a damaged area so they will not obscure your vision as you reweave. If left there they may cause you to make mistakes. You should clip them leaving ends about 1/8 inch extending into the hole. This will guide you when you replace the broken threads and you will thus be sure to get each thread in its proper place. See Visualgram #11.



VISUALGRAM NO. 11 - This shows how the ends of the damaged threads extend about 1/8 inch into the hole.

For practice, damage both a warp thread and a woof thread at the same point somewhere in the sample you are using for learning. Reweave both threads correctly. Do this eight times.

Next, damage three threads each way. Reweave, repeat this at least six times.

Damage six threads each way. Reweave each six as two sets as you have already learned. Make the dips and joinings correctly. Practice until you can reweave such damage perfectly.

Finally, improve your skill by reweaving damaged areas up to 3/4 inch wide in the coarse cloth.

DON'T PRACTICE UNDER EXTREME TENSION

As you probably have learned by now, you do not improve your skill when you have worked too long and too intensely. You find yourself making more mistakes than usual. It is better to stop practicing entirely for awhile and to try to relax. If you are working on some rather difficult sample or garment, you may be able to get over your tenseness by going back to some simpler step in the reweaving process.

Special mention is made about taking it slow and taking it easy at this point in the manual because you are now ready to practice on one-and-one weaves made of finer threads, first of medium weight, (Sample No. 2,) then of the lightest weight.

GET ACCUSTOMED TO FINER THREADS.

Arrange the various samples that you have on hand of simple, basket-weaves according to the fineness of the threads. Some have been supplied with the manual; you can procure others. Starting with the coarsest weave, practice on each sample until you have mastered it. Finally, you will master the one with the finest thread, which will probably be a tropical worsted. Do not attempt to reweave a damaged place larger than the tip of a pencil in cloth of very fine thread.

Do not expect to acquire real skill in just a few weeks. Keep patient. Keep practicing. When you have become really good, the skill you have acquired will stick with you. You can be proud of it.

EXERCISE NO. 10

A CHANCE AT LAST TO DO A REAL REWEAVING JOB.

After all the practice you have had, you should be able to reweave a damaged place in a regular garment if that garment has a simple, basket weave.

First, you must be let in on a trade secret: Except in rare cases, you get thread to reweave a damaged place from hidden parts of the garment itself, from some place where the appearance and strength of the garment is not harmed in any way.

For instance, in order to reweave a damaged place in trousers, take threads from the bottom of an opened cuff for reweaving the woof (cross) threads. Take threads from the widest trouser seam, down in the cuff, for replacing warp (length) threads. When you open a cuff, open it from one seam to the other. In a coat damage the sleeve or the side seams are the best places to get your threads. Of course, damaged woof threads must be replaced with woof threads and damaged warp threads must be replaced with warp threads - Caution: Even though on some materials woof and warp threads may look the same THEY ARE NOT. Picture #10 shows threads being pulled from bottom of sleeve where lining has been opened. See following page.

PICTURE NO. 10 - Threads being pulled from bottom of sleeve where lining has been opened.

It will require experience to learn how to estimate readily how many threads are needed for a repair job. A small damaged place will not need as many replacement threads as a large damage.

Also, when taking threads from a seam, be sure the cloth has been cut straight enough for you to obtain threads of usable length without unraveling the garment past a seam and marring or weakening the garment. Every garment usually has one seam which is wider than every other seam, so get threads from that one.

You may receive a garment that has had a lot of general wear. When you reweave a damaged place with threads from a hidden part of the garment, which has had much less wear, the "newer" threads make the damaged area somewhat thicker. You can remedy this partly by pulling each thread that you are going to use for replacement between the thumb and forefinger to get the nap off. Then it will not contrast quite so much with the worn threads around the damaged place. As a matter of fact, the contrast will rarely be noticed by anyone except you and the customer, and after a few days of wear, neither of you will be able to locate the rewoven place, unless you look on the wrong side of the garment to find the ends of the threads.

MARK THE SPOT

Since most of the reweaving you do - if you have done it correctly, will not show, mark the damaged area with a red thread. This will tell anyone pressing the garment where the damage was and will assist the customer in locating the spot he wanted rewoven. After it has served its purposes, the red thread can be removed. See Picture #11 on following page.

PICTURE NO. 11 - Completed job. All thread ends have been snipped and the rewoven area has been circled with thread to mark the spot of former damage.

EXERCISE NO. 11

REWEAVING A TWO-AND-TWO WEAVE.

Now that you have had the thrill of actually reweaving somebody's damaged garment and have demonstrated that you can do good work, you are ready to learn how to repair cloth with a simple two-and-two weave. Sample No. 4 is of that weave.

Let's get one point clear first. When you read about weaving in books, you will get the impression that any two-and-two weave is a twill weave. However, reweavers do not call any two-and-two weave a twill unless the weave produces a definite pattern of diagonal lines or ridges, which are known as twills.

What is being described here is the simple two-and-two weave. The woof (cross) threads go under two warp (length) threads, then over the next two, then under the following two, then over the fourth pair, etc. You can see this best by pulling away the last thread at the top or bottom of your sample, noting the weave as you do so.

Notice how the very next thread is woven. It follows the same two-and-two pattern, but you will notice what is called Progression. The first woof thread started across by going under two warp threads, the woof thread just below it has been started across by going over only one warp thread before being put under two warp threads. Then, the third woof thread just below the second thread starts out by going over two warp threads. The next woof thread commences by going under one warp thread before going over the next two. The very next woof thread will start the sequence all over again. It will begin by going under two. Study Visualgram No. 12 on Following Page.

After you have familiarized yourself with the two-and-two weave commence practicing reweaving by taking the same steps as you did in learning reweaving the basket weave.

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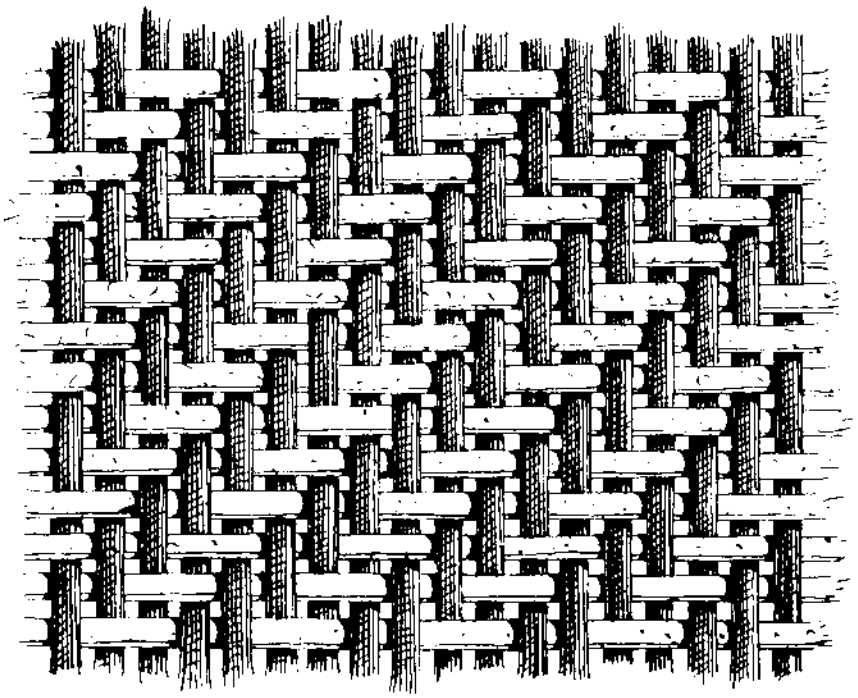
Upper Right
Hand Corner



VISUALGRAM NO. 12 - Study this diagram very carefully. One thread at a time. Start at the upper right hand corner working to the left.

EXERCISE NO. 12

First, trace the weave of a single woof thread with an unthreaded needle. Do this five times. Second, trace the weaves of two threads, one running just below the other. Then trace the weaves of three and of four such threads. Do each of these steps several times.

Repeat the exercise all the way through with threaded needles. Remember that only practice will eliminate mistakes and increase your speed and skill. In this type of weave it is very easy to go under or over only one warp thread, or to pick up too many, or to slip off the line of the thread being followed, for the diagonal pattern plays tricks on one's eyes.

Next, pull out one woof thread about 2 1/2 inches long in the center of the sample and practice replacing it without overlapping the intact portions of the old thread with the new thread.

When you can do that well, pull out two more woof threads just below the first one and practice replacing all three. Do not be upset if this proves to be much harder than you realized it could be. If you get tense about your mistakes, go back to work on simple basket weaves until you are relaxed enough to try the new skill again. The most experienced weavers often do this.

After you have mastered the replacement of woof threads, change the position of the sample on the cushion and practice replacing warp threads.

Finally, damage one woof and one warp thread at the same point in the sample and practice reweaving them. The same method of dipping and joining is used that you already have learned. Also, snip the ends of the damaged and replacement threads the way you have been taught. Repeat the process six times.

Practice repairing damage to two woof and two warp threads. Then do it for three of each lying together. Remember the stairstep arrangement of the dips and joinings!

Reweave damage that is six threads wide each way in order to fix in your mind the dipping and joining technique you have learned. Do it several times.

Samples Nos. 5 and 6 are also two-and-two weaves on which you are to practice. They have finer threads than Sample No. 4.

In order to notice how you improve in speed as you practice, time yourself on the replacement of threads correctly, then on the actual reweaving of a damaged area three threads wide. The more you practice the faster you become.

By this time you are probably noticing the weaves of peoples' clothing as they stand near you. It is good practice to try to determine what the weaves are.

After you have gained experience in this procedure, (DO NOT try before), you will find that the first damaged thread can be lifted up - no teasing out - then that thread replaced; the second damaged thread teased out one or two threads and the third thread teased out only one or two more threads. This will save you time in reweaving. Do not attempt this until you have had considerable experience. You can lose track of which thread you are replacing unless you have trained yourself in knowing and following patterns. Do just as instructed. This time saving hint is for your benefit -- it is taken from our years of experience. Do not attempt to use this method until you know your weaving.

EXERCISE NO. 13

LEARNING MORE COMPLEX WEAVES

By now you realize how essential it is to master step-by-step the technique of reweaving each new pattern and to practice again and again. Since this is so, you will not be told from now on what the steps are, for you already know them by heart. How much you practice each step from now on will be up to you, but remember; It takes more practice to master fancy weaves, not less. And you are next to familiarize yourself with weaves which are more complex than simple basket and two-and-two weaves.

It is at this stage that the real fun comes in. It is fascinating to see the endless variations in design of fabrics made possible by varying the weave, the color scheme, and the sizes of threads. Yet, all you must do is follow the pattern of the cloth you are reweaving until you know how it is woven. In order to discover this pattern, you must "count out" the weave of several threads, one just below the other, for some very fancy weaves involve changes in a long series of threads.

COUNTING OUT

To determine a weave, fasten the sample firmly to the pillow at one end in order to have both hands free for counting out the pattern. Examine the threads at the edge of the sample. Using a needle, loosen about three of the outermost woof threads and remove them from the weave. This will leave exposed ends of the warp threads that are long enough for you to turn back in counting.

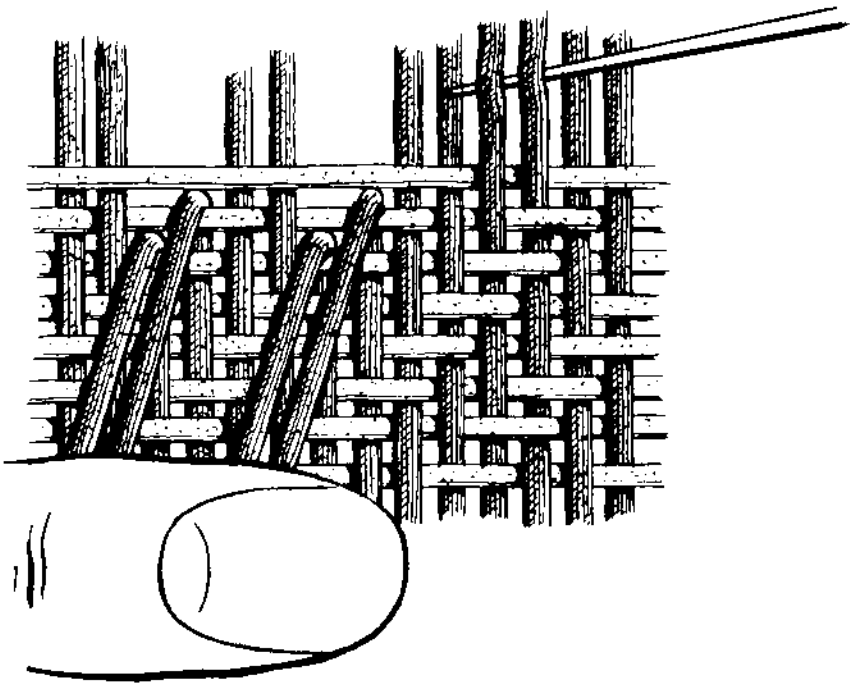
Choose a point along the first woof thread left in the sample where it is going over one or more warp threads. Write down how many it is passing over. Next, determine how many warp threads it is passing

under and write down that number. Using a needle or the tweezers to separate the threads is helpful while trying to count. Keep going along the same woof thread, noting and writing down the weave until you are sure that you have a picture of the total weave pattern. It is easier to count the threads being passed under if you turn each one down and hold it with your thumbnail, counting as you go. See Visualgram #13 on the following page. Be sure to write down each step. Do this for the next four or five woof threads below the first one, until you are certain that you have recorded the entire weave pattern. When you begin to count each line, begin directly below the point where you began counting out the first line, for this will enable you to visualize the progression more readily.

A simple two-and-two weave is written, U2, O2, U2, O2, U2, O2, etc., for the first thread: O1, U2, O2, U2, O2, U2, etc., for the second thread: for the third, O2, U2, O2, U2, O2, U2, etc.; for the fourth, U1, O2, U2, O2, U2, etc. For the fifth, U2, O2, U2, O2, U2, O2, etc. By thus counting out along five threads, you obtain complete knowledge of the full progression of the simple two-and-two weave. You know by now that this is very important in starting correctly any reweaving you are doing.

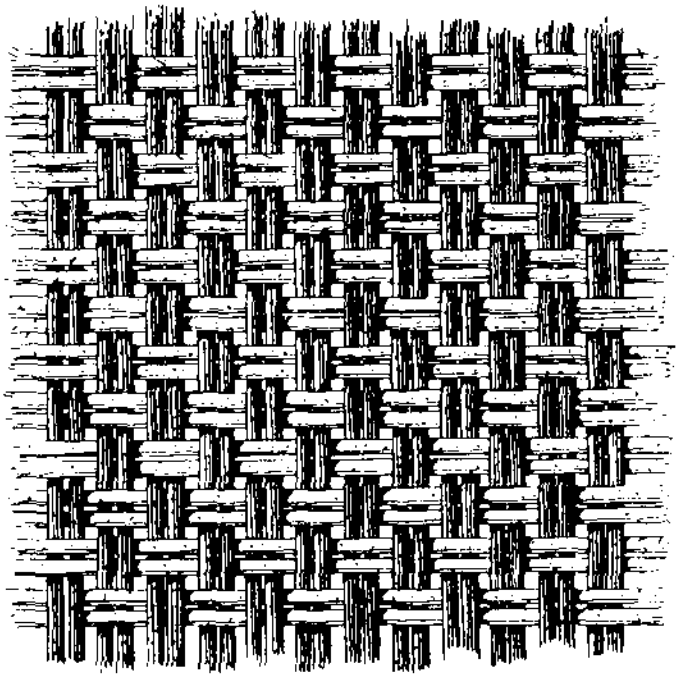
Just as often you will find that a simple two-and-two weave will be as follows: for the first thread, starting under two threads, U2, O2, U2, O2, U2, O2, etc. For the second thread it will be U1, O2, U2, O2, U2, O2, etc. For the third thread it will be O2, U2, O2, U2, O2, U2, etc. For the fourth thread it will be O1, U2, O2, U2, O2, U2, O2, etc. For the fifth thread you will find it repeats the first thread. This is why you must count and watch your weave.

NOTE: Throughout the book "Under" is indicated by the letter "U" and "Over" is indicated by the letter "O". For example: Under 2 over 2 under 2 will be written U2, O2, U2.



VISUALGRAM NO. 13 - "Counting out" Notice carefully how counting out is done along one thread. Left thumb hold threads already counted out down. Needle is inserted counting out the next thread.

As you form the habit of counting out and writing down the various weaves, you will discover that some which seem fancy, prove to be quite simple. For instance, there is the double basket weave, in which two threads together are treated as one. The weave pattern is still the simple one-and-one; you merely have to remember to pick up two threads with your needle each time. See Visualgram #14.



VISUALGRAM NO. 14 - A double basket weave or a double one and one weave. *This weave is usually found in more expensive garments.*

NOTE: A double one-and-one is rewoven two threads at a time if the two threads are the same color. When each of the two threads originally woven at the same time are of different colors, they must be replaced one at a time. Be especially careful to weave them in just as the pattern in the material requires. (Sometimes there is one light thread and one dark one.) Be particularly careful to make neat joinings when replacing these threads one at a time.

Color treatment may disguise a simple basket weave also. Count out sample No. 3, which looks very intricate. Whenever there are two or more colors of warp threads and two different shades used for the woof, the contrasting colors make the pattern seem intricate. By running a needle along one color, weaving as you go, you will often find that the weave is really a simple one.

THE WEAVE OF THE WARP

It is important to know what the pattern of the warp threads is for each piece of material, too. Count out these on the samples. You will find that most weaves of the warp are simple one-and-one or two-and-two. There are exceptions, however, so do not neglect to count out the warp weave to make certain what the pattern is.

EXERCISE NO. 14

HERRINGBONE

Herringbone twills which occur in cloth used for overcoats, are very coarse. They are less coarse for topcoats and even less so for suits. Herringbone stripes vary in width from 1/4 inch to one inch. The pattern is changed by "breaks" at the edge of each stripe. At each "break" the weave pattern changes. Take sample No. 7, which is a herringbone pattern, and count out the weaves for the first six woof threads at the top.

You will discover that the weave is U2, O2, etc. except where the slanting (diagonal) lines change direction. At those points, the woof thread goes O1, U1 (or U1, O1) before continuing the U2, O2, weave a bit further before making another break. Those points are the breaks. In fact, it is by changing the weave from U2, O2 at intervals to O1, U1 or U1, O1 that the Herringbone pattern is made. See Visualgram #15.

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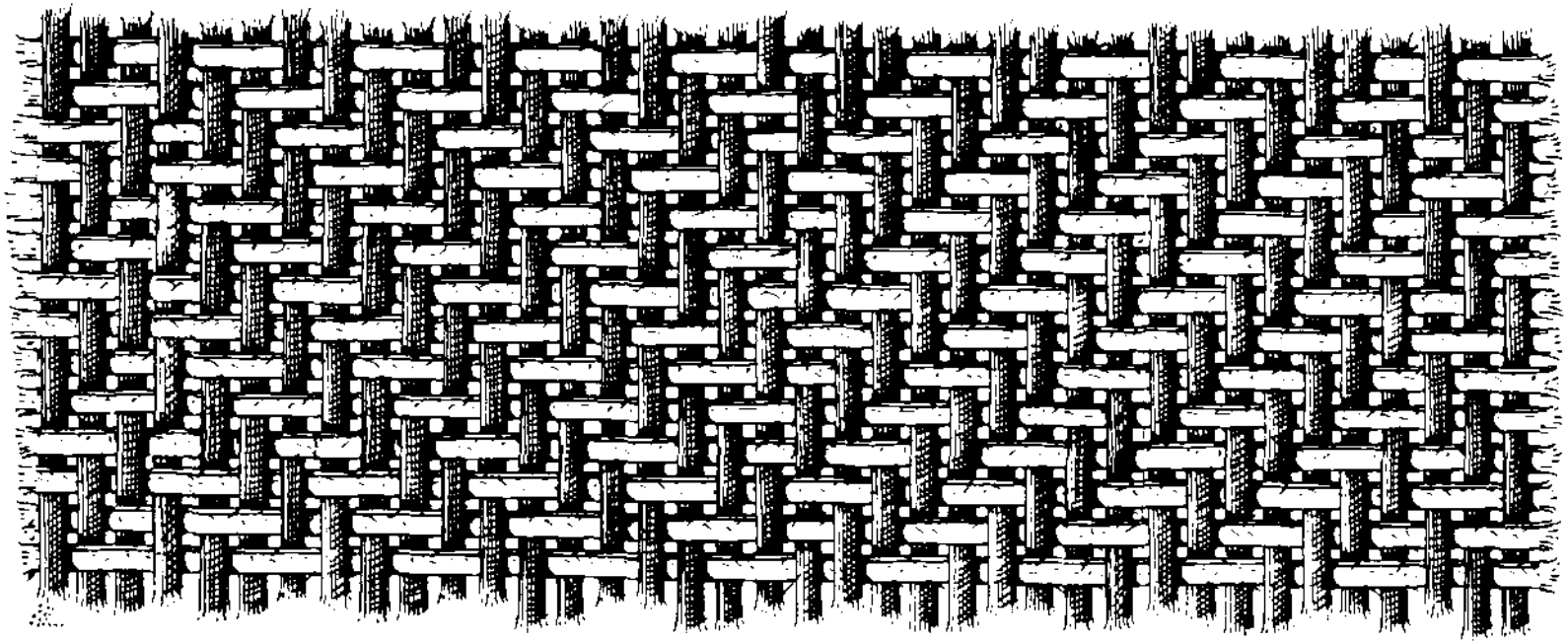

VISUALGRAM NO. 15 - This is a herringbone pattern. A two and two with a "break". Three "breaks" are shown in this diagram. Start at the upper right hand corner and follow each woof thread all the way across, counting as you go.You will notice it starts as follows - start at the 2 threads before break as illustrated and count from right to left TOP WOOF THREAD. Start reading here - but remember this is from Right to Left on diagram. O2 - U1 - O1 - U2 - O2- U2 - O2 - U2 - O2 - U2 - O1 - U1 - O2 - U2 - O2 - U2 - O2 - U2 - O2 - U1 - O1 - U2.

2nd woof thread is over 2 under 2 all the way across.

3rd woof thread - count from right to left as illustrated. Start here - U2 - O1 - U1 - O2 - U2 - O2 - U2 - O2 - U2 -O2 U1 - O1 - U2 - O2 - U2 - O2 - U2 - O2 - U2 - O2 - U2 - O1 - U1 - O2.

4th woof thread is over 2 under 2 all the way across.

5th woof thread repeats your 1st woof thread at the breaks and across.

NOTE: Where the break threads are U1 - O1 at one break, the next break on same thread will be O1 - U1 etc. This makes your herringbone pattern, regardless of the width of the breaks.

Warp threads are Over 2 Under 2.

At this point, you might be saying: "Wait a Minute. When I counted, I got a regular two-and-two weave for every other woof thread."

That is correct. Usually every other woof thread does follow the regular two-and-two weave. Now you see why it is necessary to determine the weave of several successive threads in order to find out definitely what the pattern is.

Perhaps the herringbone sample on which you are practicing is woven as follows: U2, O2, U2, O1, U1, O2, U2, O2, U1, O1, U2, etc. You may reweave one which goes over and under two threads fourteen times before making a break. That is why you must count along the woof threads for quite a distance in order to be sure that you are getting the complete picture.

Herringbone cloth with wide stripes is easier to reweave because there are fewer breaks to watch out for. Thus, the second weave just mentioned is easier to do than the one having breaks closer together, although the second took longer to count out.

EXERCISE NO. 15

PRACTICE ON A VARIETY OF SAMPLES

A wise thing to do at this point in your learning process would be to obtain scraps of woolen cloth of as many different patterns as you can and figure out the weave for each one. If you have only a few, ask your neighbors to let you have some more to practice on. By determining the weaves of a great many samples, you will find yourself becoming able to recognize the simpler ones without counting out. However, as this Manual warned you before, you can be deceived easily; therefore, test out every sample to see if your hunches have been correct.

Learning to count out has given you a brief rest from practicing reweaving. Now it is time for you to resume your practice. This time you should learn to reweave the Herringbone weaves and some of the fancy ones. Start with those made of coarse threads and take it slow. When you make a mistake, study it to be sure of what you did incorrectly before doing the thread over. Do not start out on a complex weave by trying to reweave a damaged place five threads wide; learn in the same methodical way that you mastered the simple weaves; First, weave over intact threads; second, replace small gaps in a single thread, then two, then three, etc.; third, reweave two-way damaged places, taking care to do the dipping and joining correctly; fourth, go gradually from coarse to finer fabrics; and fifth, rest and relax by going back frequently to do simpler reweaving which you have already thoroughly mastered.

EXERCISE NO. 16

OTHER TWILL WEAVES

The various twill weaves have different names. Flannel is most often woven in a two-and-two or a two-and-one pattern. Serge is commonly of the two-and-two weave with coarser threads than gabardine. Covert cloth is generally of the three-and-two weave. Gabardines are made in several different weaves, so they shall be described in more detail.

Gabardines often have woof threads running O1, U2, O1, U2, etc. However, the warp will follow the reverse pattern and be O2, U1, O2, U1, etc. Sample No. 8 has the two-and-one pattern. Nevertheless, commonly used gabardines have the two-and-two weave. Remember that it is the progression in the weave which creates the twills in the cloth.

A weave frequently found in gabardine has woof going U2, O1, U1, O1, U2, etc. and warp running O3, U2, O3, U2, etc.

Although gabardines are the most difficult to reweave, practice and patience will lead you to success. **DO NOT ATTEMPT TO REWEAVE ANY GABARDINES UNTIL YOU THOROUGHLY UNDERSTAND THE** PATTERN OF THE WEAVE. As the preceeding paragraphs show, there is quite a variety of weaves in gabardines. You must never skip the counting-out process.

Note the progression in each case and follow it. If you start U2, O1, U2, O1, etc. reweaving a woof thread in a two-and-one weave, you must reweave the next thread below it - starting from the same warp thread O1, U2, O1, U2, etc. The third woof thread, starting from the same point, would be rewoven U1, O1, U2, O1, etc. The fourth woof thread repeats the first. This is the technique for making the diagonal ridges called twills. In weaving, counting out is always done from right to left.

Becoming both accurate and skillful at reweaving any gabardine weave takes quite a long time, so do not get discouraged when you make mistakes. Profit by them, and restore your confidence in yourself by reweaving damaged areas in simpler weaves for awhile. Don't be in a hurry to reweave the finer-threaded gabardines.

Very tempting cloth on which to try your reweaving ability is gabardine which has O1, U4 woof and O4, U1 warp because it is quite soft and easy to handle. Topcoats are frequently of this weave and occasionally, men and women's suits. Almost every learner attempts to reweave on this cloth before he is expert enough to do it. The threads are extra-fine, which makes it difficult to get them into the proper pattern. But if you try and fail over and over again, there is no cause for alarm. It takes time to become an expert. Furthermore, you may become an expert at reweaving several types of cloth without becoming an expert at reweaving all the fancy weaves that you may encounter.

EXERCISE NO. 17

REWEAVING FANCY WEAVES

Some fancy weaves are so intricate and original that no one person gets enough of them to reweave to become an expert on them. Whenever a customer brings you a garment with a very fancy weave, tell him that you will do your best but that the rewoven place might be somewhat visible to keen eyes.

Count out the weave. Do your best to reweave the damaged area as closely as possible like the original pattern. You may be very successful. So much depends on the accuracy with which you figured out the weave of the garment and the amount of experience and skill you have had. Do not attempt these intricate tasks until you have been reweaving for many months.

Inasmuch as it is frequently impossible to duplicate fancy weaves exactly, the process is called camouflaging. It is best not to tease out the ends of the damaged threads because replacing them would be too difficult. As usual, you will learn to camouflage effectively the coarser weaves before you will be successful with the finer ones. Do not undertake to repair large damaged places by this technique. How diligently you practice and how painstakingly careful you are with your work will be evident by the kind of work you do.