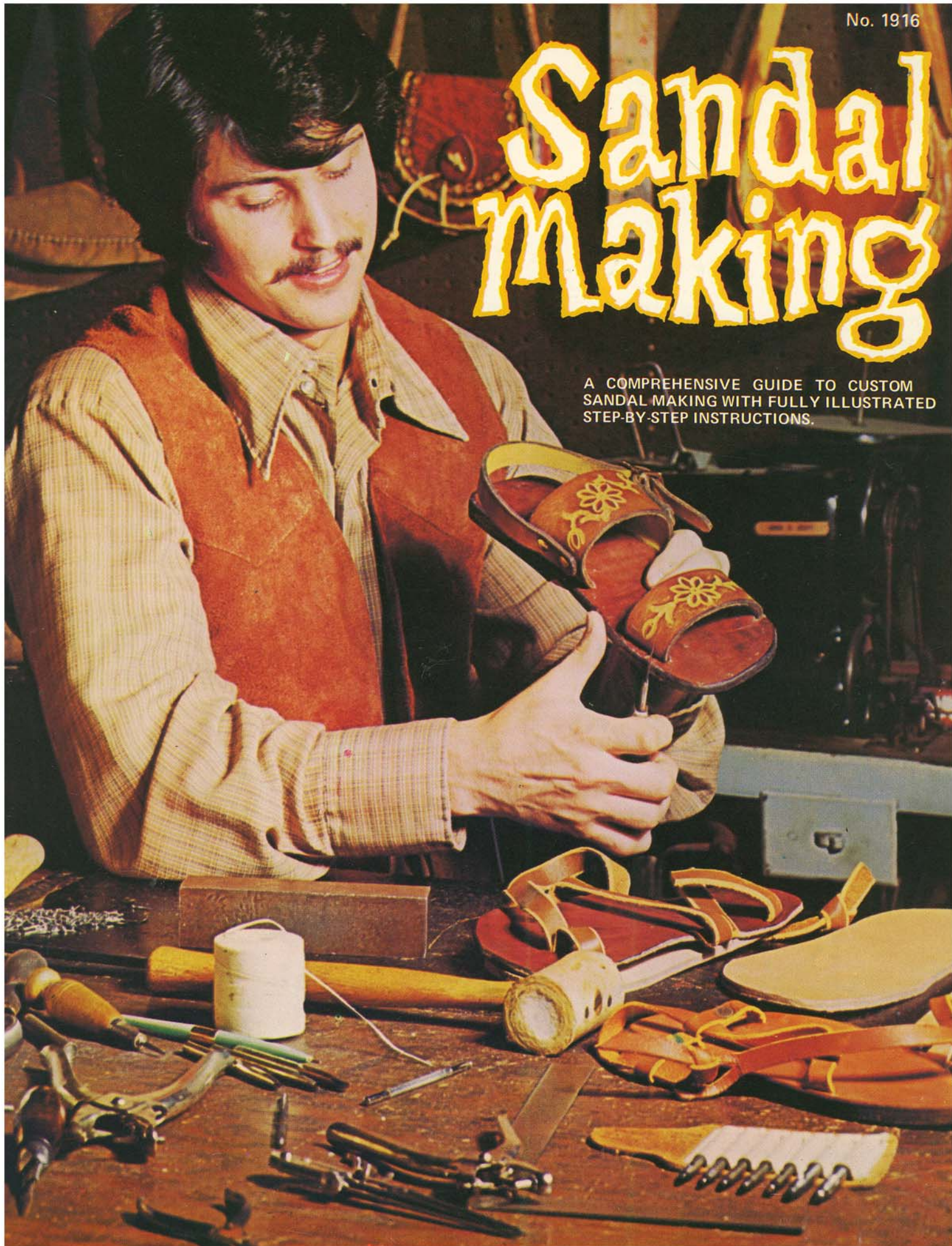


# Sandal making

A COMPREHENSIVE GUIDE TO CUSTOM  
SANDAL MAKING WITH FULLY ILLUSTRATED  
STEP-BY-STEP INSTRUCTIONS.





# Sandal Making

A comprehensive guide to custom sandal making.  
Fully illustrated with step-by-step instructions.

No. 1916

# introduction

Today is the "Age of Leather". The feel, the smell, the pleasure of having leather on you and about you evidences the fact that leather is the most appreciated material provided by nature.

No where is the "Age of Leather" more apparent than in the desire to have your own authentic, custom-made sandals, sandals you have created yourself from the most basic material of all . . . genuine leather. Not only do you enjoy the thrill of working with leather and learning to appreciate it more, but the pride and satisfaction derived from handcrafting sandals compounds the reward.

A substantial savings can also be enjoyed. Most custom-made sandals are worth no less than \$15.00, and most are more valuable.

A new area of rewarding interest can also begin by making sandals. The enjoyment and relaxation achieved by working with leather are valuable attributes. Working with leather also develops confidence and skills that are beneficial in other areas of life.

For many, a new vocational direction will be opened. Making and selling your custom-made leather products will provide you with additional income. Many craftsmen have developed a very profitable business from such a beginning. The demand for handmade leather products has never been greater. Working and creating with leather is not only very satisfying, but is also appealing as a vocational enterprise.

Working with leather can also prepare you for other rewarding occupations. Many opportunities are available in manufacturing, selling and tanning leather and leather products.

The instructions provided in this book are designed to acquaint you with sandal making in general, and to also acquaint you with the tools and supplies used in the art of leatherwork. In this book you will find a wide range of styles and designs to use as guides or as an inspiration to use in creating your own unique sandals.



# tools and supplies



- (A) 10-11 iron Sole Leather
- (B) 7-8 oz. Live Oak
- (C) 7-8 oz. Latigo
- (D) 1819-1821 Rawhide Mallets
- (E) 2016-2018 Craftsman Cement
- (F) 1983-1986 Neat-Lac
- (G) 2006 Carnauba Cream
- (H) 2027-2028 Omega Dye
- (I) 2053 Pre-Val Sprayer
- (J) Stript Ease
- (K) 1203-1204 Thread
- (L) 1192 Harness Needle No. 000
- (M) 1198 Size 8 Needles
- (N) 1211, 1212 Awl Haft and Blade
- (O) 1217 Scratch Awl
- (P) 1829 Wool Daubers
- (Q) 1792 Rotary Punch
- (R) 1207 Waxed Thread

- (S) 1760-1763 Bag Punches
- (T) Craftool Rivet Setter
- (U) Craftool Stitching Groover
- (V) Craftool French Skiving Groover
- (W) Craftool Bevel-eze Edge Beveler
- (X) Craftool Overstitch
- (Y) 1216 Awl for All
- (Z) 1594 4-Way Knife
- (AA) 1273 Medium Rivets
- (BB) 1330-1331 4/8 Sole Nails
- (CC) 1332-1333 6/8 Sole Nails
- (DD) 1135-1139 Solid Rectangle Dees-Brass Finish
- (EE) 1150-1153, 1183-1185 Solid Rings-Brass Finish
- (FF) 1611-1613 Brass Finish Buckles
- (GG) 1643-1646 Brass Finish Buckles



# general instructions

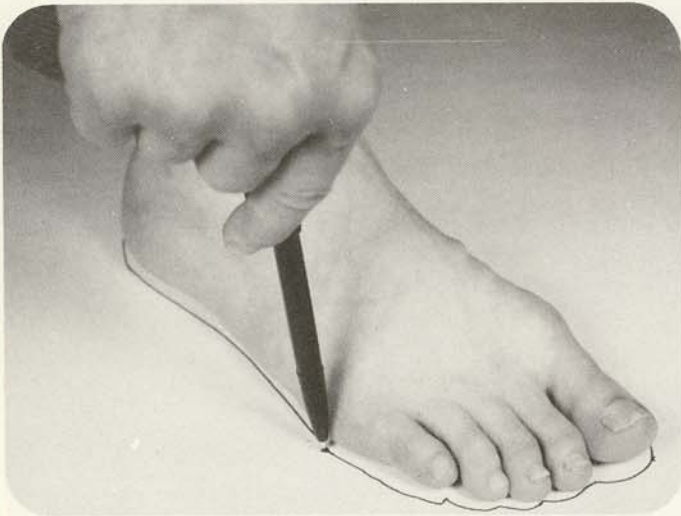
Sandal making procedures will vary according to your construction preference and the style of sandal you select. These instructions are general and will basically apply to construction of most sandals. All of the styles can be made in any size required.

Specific instructions for particular styles will be covered separately with each style. Use both the general instructions and the specific instructions for the style you select.

Carefully study these general steps and the additional instructions for your specific style before beginning to make your sandals.

A basic understanding of sandal making is the key to creating well-made custom sandals and to creating your own designs.

## step 1

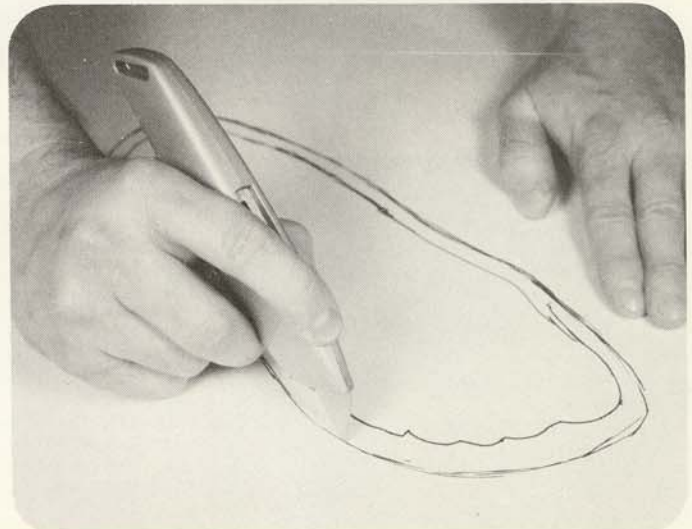


**a**

The first step is to make a pattern of your feet to use as a cutting pattern. Trace a pattern of your foot on poster board or cardboard with a pencil. Hold the pencil straight up. Keep your full weight on your foot. You may wish to trace both feet since there often is a slight variation in size.

**b**

Draw a line about  $\frac{1}{4}$ " around the outside of the footprint. Allow a little more on the front as this can be trimmed off later. The exact size of the outline is not essential as long as it is large enough. Now cut out the pattern with shears, scissors or a knife.



# step 2

The next step is to use your cutting pattern to cut your top soles.

**a**

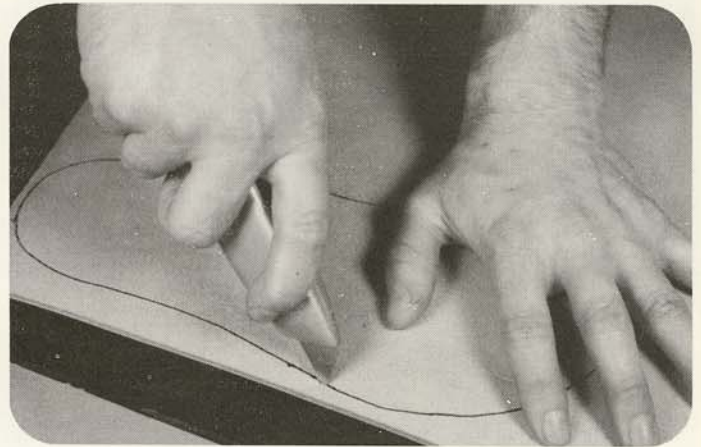
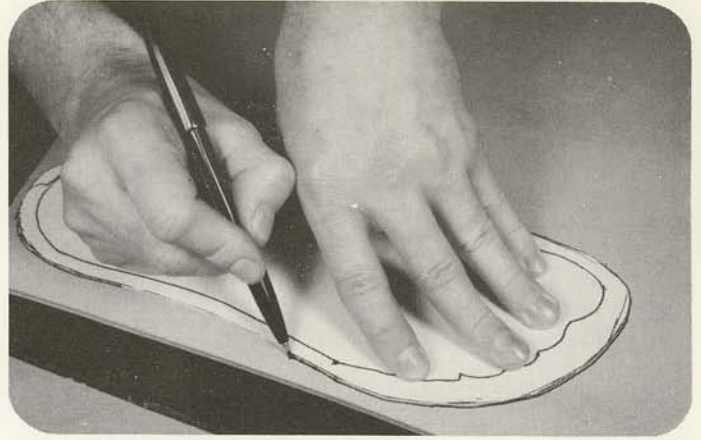
Use the pattern to trace both top soles. Reverse the pattern for a right and left sole if you made only one pattern. Place the pattern on the flesh side of 7-8 oz. natural Live Oak, Latigo, or other leather of your choice, and trace the patterns with a pencil or scratch awl.

The Live Oak can be dyed the desired color later, or you may prefer to use 7-8 oz. Latigo or a 7-8 oz. oil tanned leather. The top sole and the straps can be made from the same leather to provide a matching set. A light colored Latigo can be dyed a darker color.

If you use Live Oak top soles, you will need to mold them before you dye and finish them. Immerse them in water for about 10 minutes, remove them and allow to almost completely dry. Mold the flesh sides of the top soles against the flesh sides of the bottom soles. This step is to be performed after the bottom soles have been molded and are dry as explained in the next step.

**b**

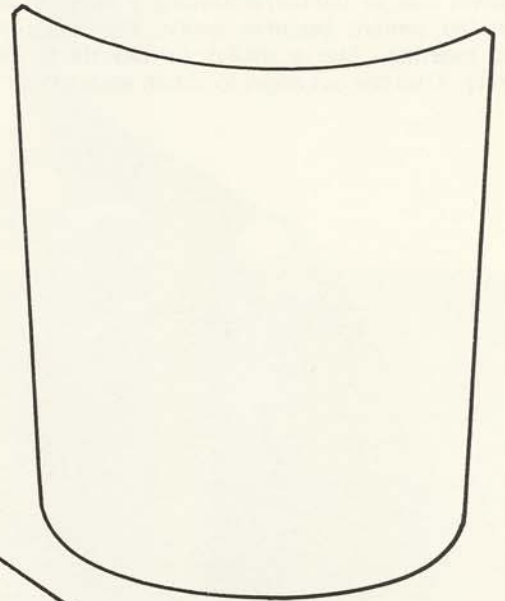
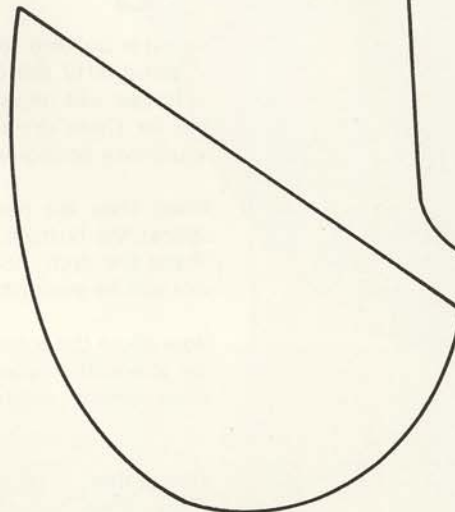
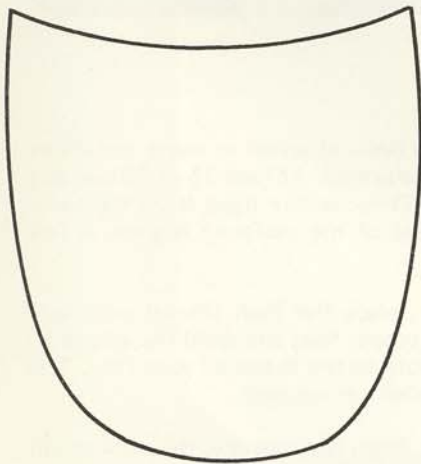
Cut out both top soles with a 4-way knife. Use a protective pad such as a Pouno Board or layers of paper to prevent damage to your knife and work surface.



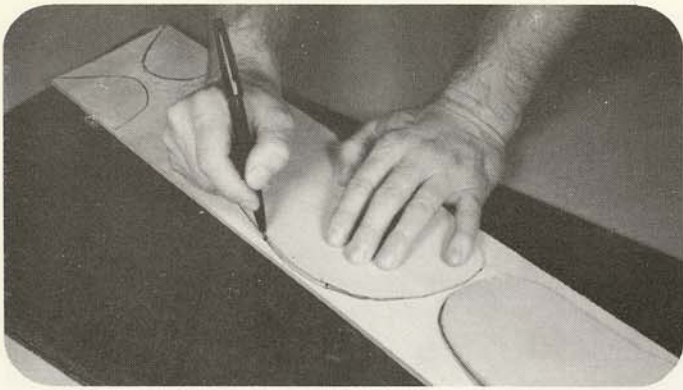
# step 3

The next step is to cut the bottom sole and heels. Make the size appropriate for your size bottom sole.

## SUGGESTED HEEL DESIGNS







**a**

Lay the top soles on the flesh side of 10-11 iron Sole Leather and trace the outline from them. Trace a pattern for both sole heels from the suggestions shown. The heels should be the same size as the back of the bottom soles where they will be attached. The sole heel is optional, but it is recommended.



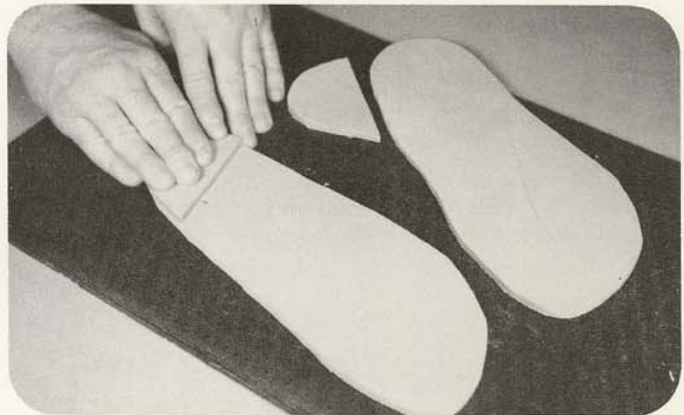
**b**

Cut out bottom soles and heels. Cut on the flesh side of the leather. (It is easier to cut it on the flesh side.) Use a 4-way knife for cutting. Make a light cut first to provide a guide, and then cut deeper.

Sole leather can be cut with a band, sabre or jig saw. Since the bottom sole and heel are to be trimmed and finished later, you need not be concerned about the appearance of the cutting edges.

**c**

Apply Craftsman Cement to the flesh side of the heels, and to the grain side of the corresponding area of the bottom soles. When the cement becomes tacky, align the parts and press them together. Use a mallet to tap them together more securely. Trim the cut edges to match each other.



**d**

Immerse bottom soles with heels attached in water and allow to stand until thoroughly saturated. At least 15 or 20 minutes or longer will be required. Then remove them from the water and let them dry until most of the moisture is gone. A few hours may be required.

When they are nearly dry, place the flesh side of each sole against the bottom of the proper foot and mold the sole to it. Shape the arch, heel and sole to the shape of your foot. The sole will be somewhat rounded and cupped.

Now allow the soles to dry. When they are dry, they will retain the shape that you have made. This shape will insure maximum comfort when wearing your finished sandals.

Remember, if you used 7-8 oz. Natural Live Oak for your top soles, they will now need to be molded to the dry bottom soles. The top soles should still be slightly damp. Allow the molded top soles to completely dry.





# step 4

Now you are ready to make the slots for the straps on the grain side of the top sole.

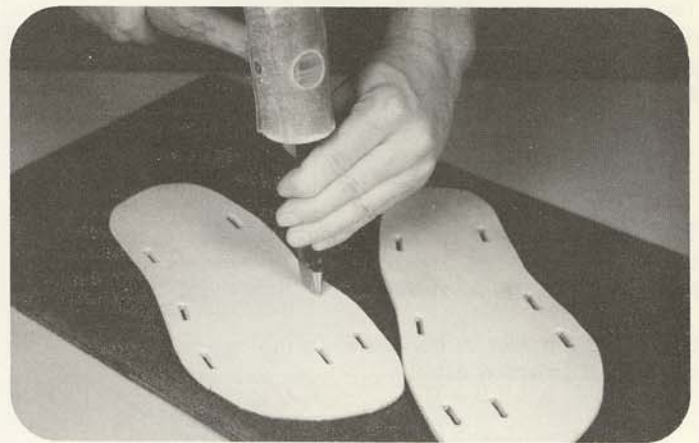
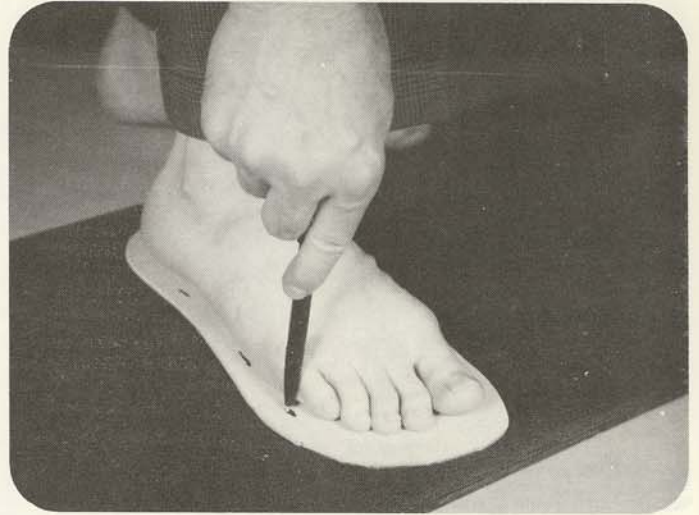
**a**

The slots will be  $\frac{1}{2}$ ",  $\frac{5}{8}$ " or  $\frac{3}{4}$ " wide depending on the width of the straps to be used.

The slots should be  $\frac{1}{4}$ " to  $\frac{3}{8}$ " from the edge of the top sole.

The placement of the slots will be determined by the style that you are making and by your size. Avoid having any strap cross your foot where a bone protrudes. Place your foot on the top sole and mark the slot on the edge of the sole at the base of the large toe. Make a corresponding mark between the large and second toe if you are making a style with a toe strap. The slot mark should be made from the base of the toes toward the front.

Mark the slot locations for the other straps for your style of sandal in relationship to your size.



**b**

Cut the slots with the  $\frac{1}{2}$ " Bag Punch, or larger size if needed for a wider strap. A knife can be used to cut them. Cut the slot  $\frac{1}{8}$ " wide. Use a protective padding under the leather for punching or cutting.



**c**

Use a knife or a Craftool French Skiving Tool to skive the flesh side of the top soles where the straps will lay for your style of sandal. Be careful not to skive too deep. By reducing the thickness in these areas, the sole will be flat and smooth without any lumps or humps to effect the comfort and fit of the sandal. Some of the straps will go underneath the top sole and out another slot, so this area will need to be skived. Other straps will go under only about 1" to  $1\frac{1}{2}$ ".

This skiving is recommended for all strap attaching methods, whether the method be riveting just under the edge of the slot, nailing under the edge, or running underneath and coming out another slot.





## step 5

The next step is to cut the two sets of sandal straps. The straps needed for each style are indicated in the specific instructions given with each sandal. The length of the straps will vary according to your size, but be sure to make them long enough.

**a**

The basic straps should be  $\frac{1}{2}$ " ,  $\frac{5}{8}$ " or  $\frac{3}{4}$ " in width. Most of the styles described use  $\frac{1}{2}$ " straps except for certain arch straps, but  $\frac{5}{8}$ " or  $\frac{3}{4}$ " straps may be used if you prefer.

If you use buckles or hardware, their size will need to correspond to the strap width.

**b**

Use either a Stript-Ease or a Draw Gauge to strip the leather for the straps, or use a knife and a metal straightedge for cutting.

Make the straps from 7-8 oz. Yellow Latigo, another color of 7-8 oz. Latigo or other 7 oz. leather of your choice. A strong, supple oil tanned top grain leather can be used. You may wish to make the sole tops and straps from the same leather.

**c**

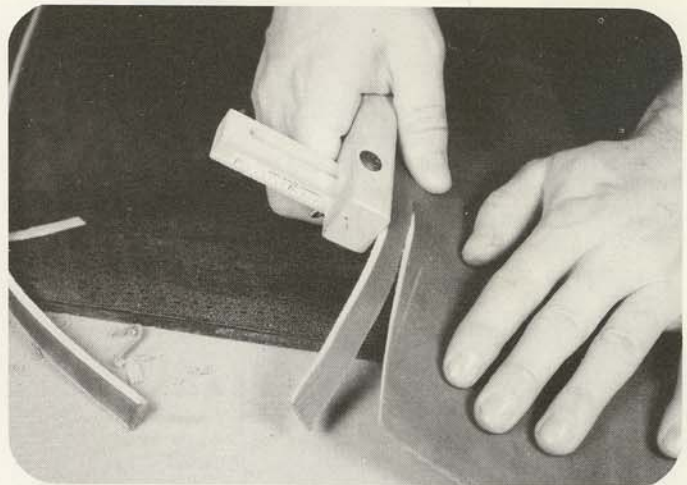
Use the Craftool Bevel-Eze No. 3 to round the edges of the straps. The edging is not absolutely necessary, but it will improve the comfort of your sandals.

**d**

Dye the straps the desired color with Omega Dye, if dyeing is needed. When the dye is dry, apply a thin coat of Neat-Lac and rub it in well.

**d**

Dye the top sole the color of your choice, if dyeing is required. Use Omega Dye applied with a wool dauber or Pre-Val Sprayer. You may wish to experiment dyeing on a scrap piece of the top sole leather before you begin dyeing the top sole. After dye is dry, apply a coat of Neat-Lac and rub it in well. Plastic gloves may be used when working with the liquids to prevent soiling your hands.



# step 6

This step is to attach the straps to the top soles. Depending on the style being made, you may need to set rivets, position hardware and do some sizing before attaching the straps.

**a**

Feed the straps into the proper slots in the top soles.

**b**

Place your feet in the top soles with the straps loosely in place to check the placement of the straps. Be sure the skiving has made the proper grooves for the straps on the flesh side of the sole tops.

**c**

Some of the straps that run underneath the top sole and out another slot can be treated to keep them adjustable after the sandal is completed.

Apply a heavy coat of leather finish such as Saddle Soap, Carnauba Cream or Lexol to the portions of those straps under the top sole. The leather finish will keep the straps from becoming permanently cemented when cement is applied later.

**d**

Apply Craftsman Cement to the portion of the straps underneath the top sole that are not adjustable. These straps will vary from style to style. Apply cement to the corresponding portion of the flesh side of the top sole. When the cement is tacky, press the parts together retaining the placement determined for proper sizing.



# step 7



You are now ready to cement the top and bottom soles together.

**a**

Apply Craftsman Cement to the flesh sides of both bottom soles and both top soles. Avoid applying cement to any straps that have been treated with leather dressing to remain adjustable.



**b**

When the cement becomes tacky, carefully align the top soles to the bottom soles and press them together. Place them together at the back or heel part first, and then move up the sole toward the front.

**c**

Use a mallet or hammer to firmly tap the surfaces together.



## step 8

Trimming the soles.

**a**

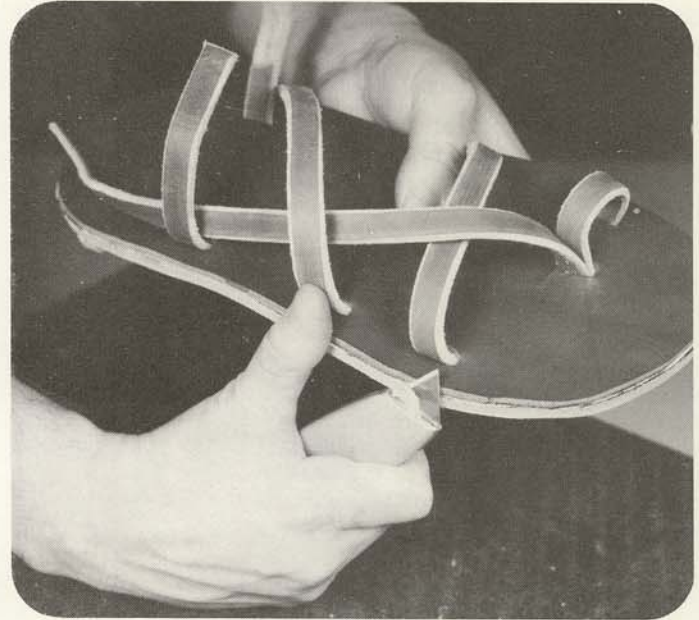
Trim the soles to remove any excess leather and partially smooth the edges. The edges will be finished later.

**b**

Place your feet in the sandals to check for overall sizing. The edges may be reduced more if needed.

**c**

The toe of the sandal sole may be shaped as space allows according to your style preference. You may prefer a rounded, slanted or squared sole at the toe.



## step 9

This step is to be used if you plan to permanently attach the top and bottom soles together with nails called cobbling, since the cement will not be adequate to provide durability. If you use this step, skip Step 10 and go to Step 11. If you prefer to stitch your sandals, skip this step and go to Step 10.

**a**

For nailing the soles you will need a metal hammer, a metal block for driving against, and a supply of 4/8 and 6/8 sole clinching nails. You will need about 40 to 60 4/8 nails and about 12 to 20 6/8 nails to make a pair of sandals depending on the size. The 6/8 nails are for the heel portion and the 4/8 nails for the remainder.





Practice nailing on some scrap sole leather before you begin nailing your sandals. Drive the nails through the leather into the metal block. When the nails reach the block the serrated edges allow them to bend back and clinch.

**b**

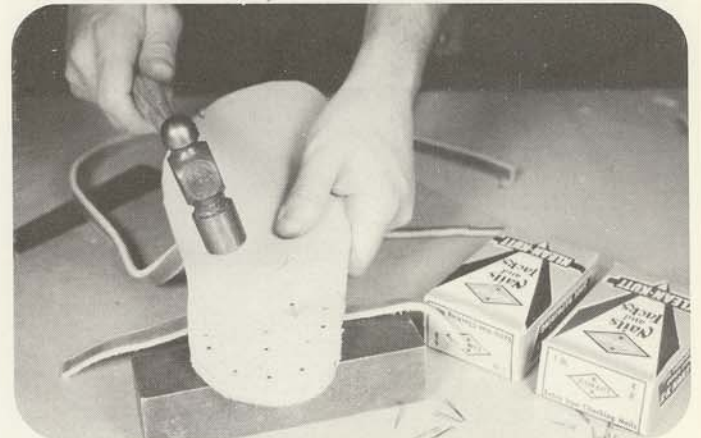
The nails should be alternately driven in from the bottom and top of the sole. Space the nails about 1" apart in  $\frac{1}{4}$ " from the edge. You may want to lightly mark a line  $\frac{1}{4}$ " from the edge as a guide.



**c**

Use additional 6/8 nails in the heel portion and use additional 4/8 nails as needed where the straps enter the slots.

If you decide to work with other thicknesses of leather or make stacked heels, always use a sole nail slightly longer than the thickness of the leather to be nailed.



## step 10

This step explains the procedures for stitching your sandals if you prefer stitching to nailing.

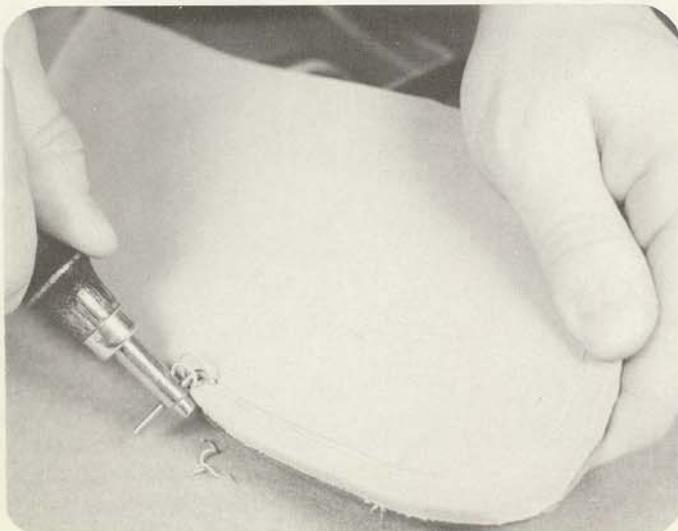
The preparation for the stitching will be covered first, and then the two ways of stitching will be explained.

**a**

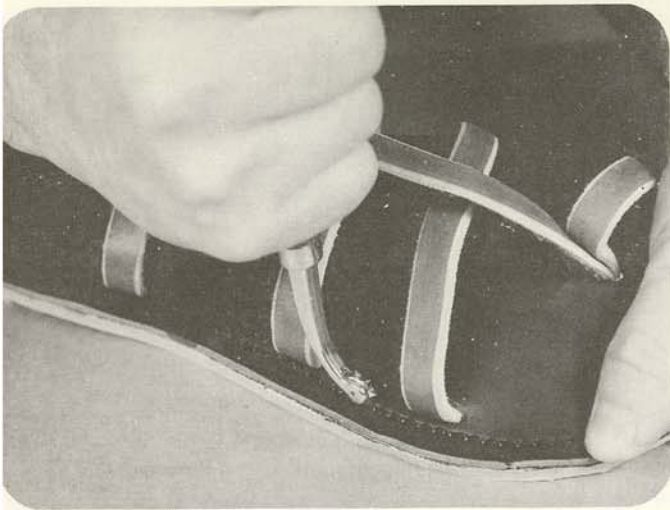
In preparing the sandals for stitching, you will need a Craftool Stitching Groover, a Craftool Overstitch No. 5 and an Awl Haft and Blade.

Use the Craftool Stitching Groover on the bottom of the soles. Groove a channel  $\frac{1}{4}$ " from the edge deep enough to allow the thread used for stitching to lay in it without being exposed to fray and wear.

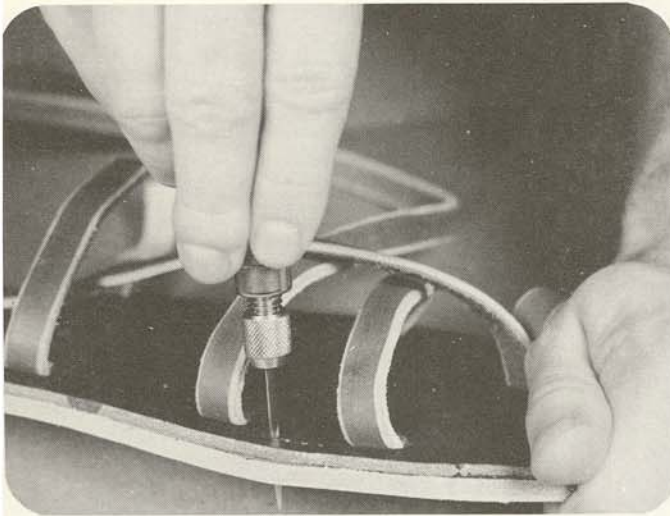
Now use the Craftool Stitching Groover to lightly mark a line along the top soles of the sandals  $\frac{1}{4}$ " from the edge. Try it on scrap leather first. This line will be used as a guide for the Craftool Overstitch.







Use the Craftool Overstitch No. 5 to run along the light line marked on the top sole of the sandals. The No. 5 will mark 5 holes per inch for making the stitching holes.



## b

Now use the Awl Haft and Blade to make the holes through the soles where the Overstitch marks were made. You can use it by hand, tap it with your hand or tap it lightly with a mallet. Use a protective pad under the sandal to protect the blade when tapping. Be careful in tapping the Awl Haft so the handle and blade are not damaged.

A small nail can be used to punch the holes. After it is driven through the sole remove it with pliers. It is also possible to drill the holes with a 1/16" drill.

## c

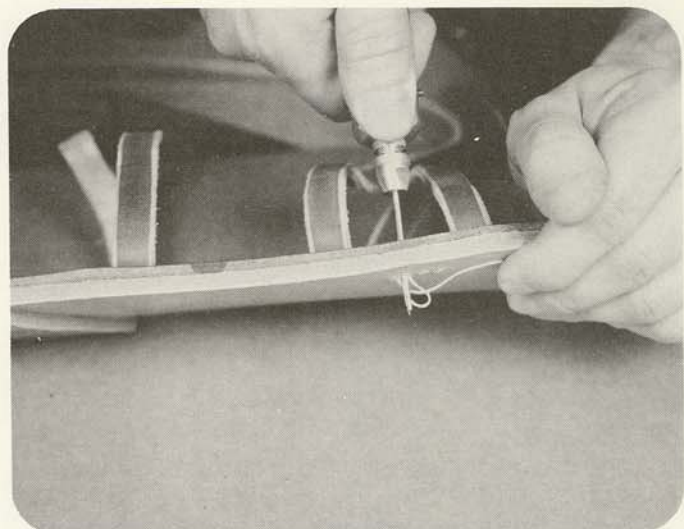
One way to stitch your sandals is to use an Awl for All. It is a complete package including sewing awl, needles, waxed thread and instructions for use.

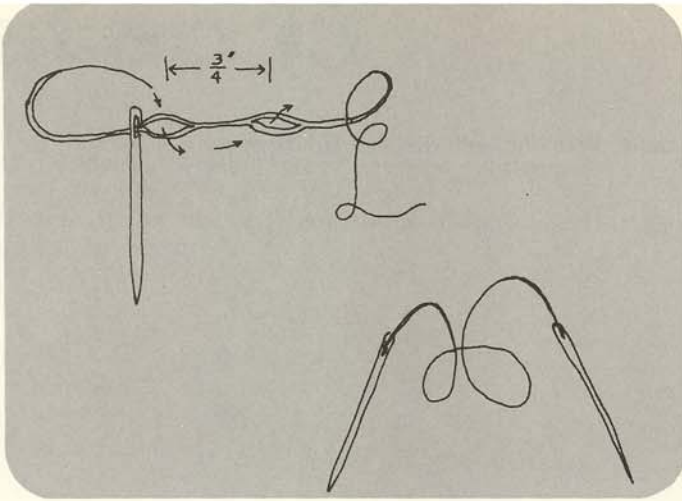
Insert the No. 8 needle and thread it as instructed. Practice using it on scrap leather. Follow the instructions provided to learn the use of the Awl for All.

Do not be concerned if you break or cut the thread. Cut off the broken thread at the point of the break, back up 3 holes and start again. Double stitching the 3 holes will prevent weakness or fraying.

Double stitch 3 holes when you end the stitching. Extra needles and thread may be purchased for the Awl for All. Black thread is included in the set, but it is also available in brown and white.

After you have completed the stitching, tap down the thread with a mallet to flatten it.



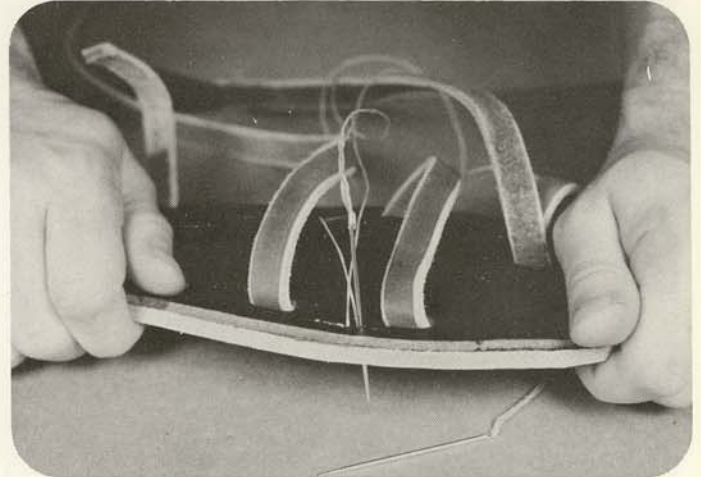


Another method of stitching is to use two Harness Needles No. 000 and Waxed Thread.

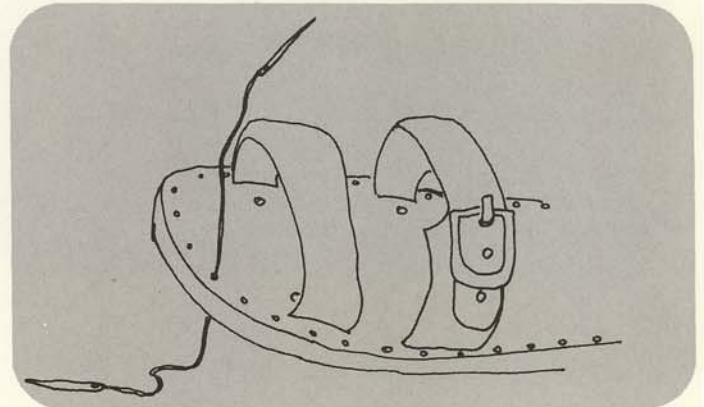
Cut a piece of the waxed thread and thread each end through a needle as illustrated.

To lock thread, unravel close to eye. Pass end through. Unravel  $\frac{3}{4}$  " further down and pass end through.

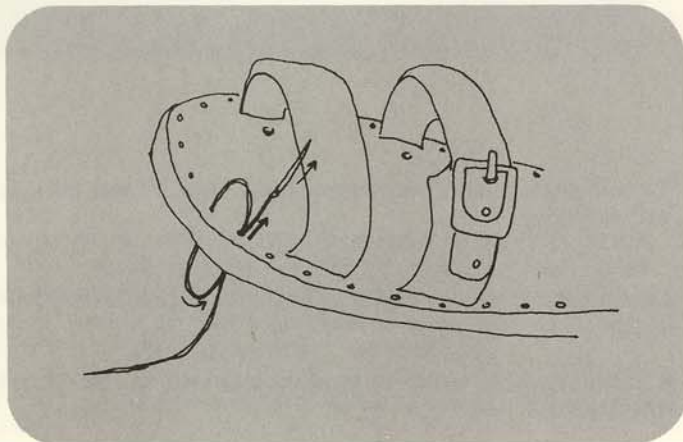
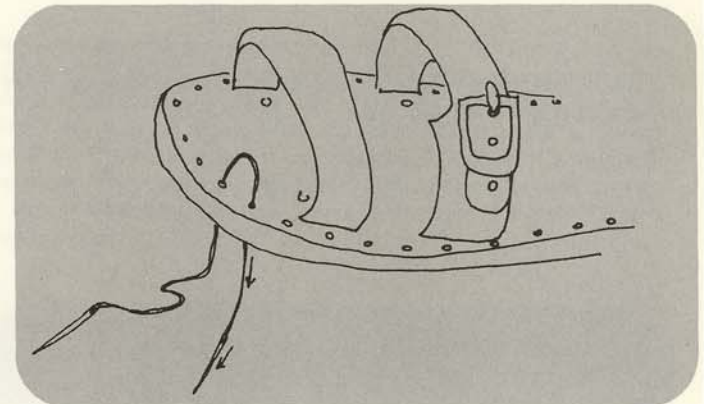
Two needles are required, one at each end.



Start by placing needle through first hole. Even up the thread on each side.

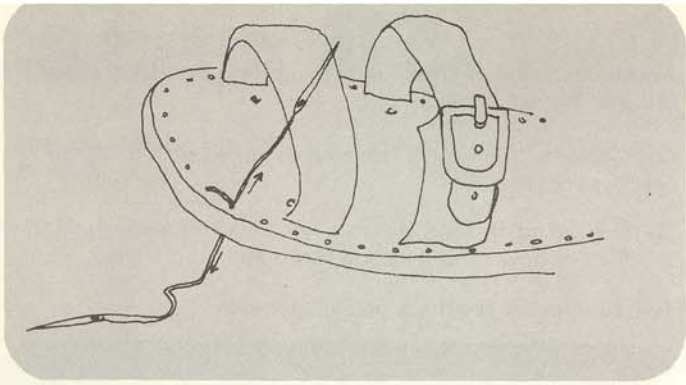


Push one needle through second hole.

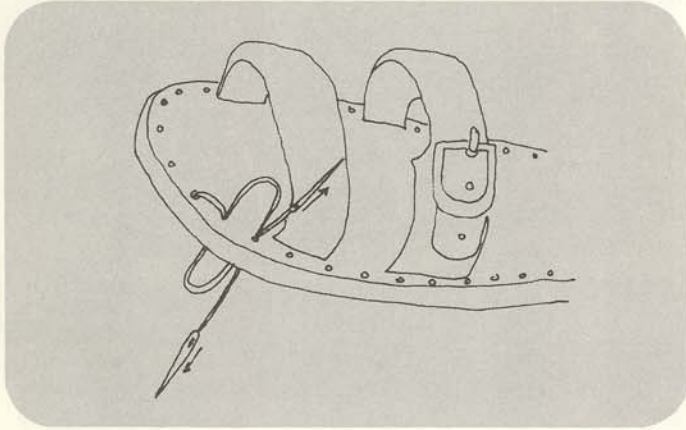


Push other needle through same hole.



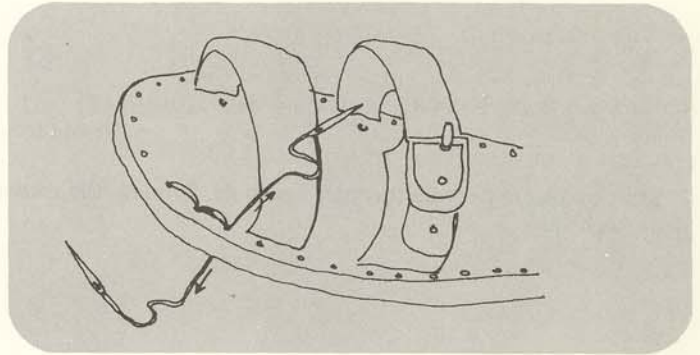


Grasp thread on each side and pull tightly.

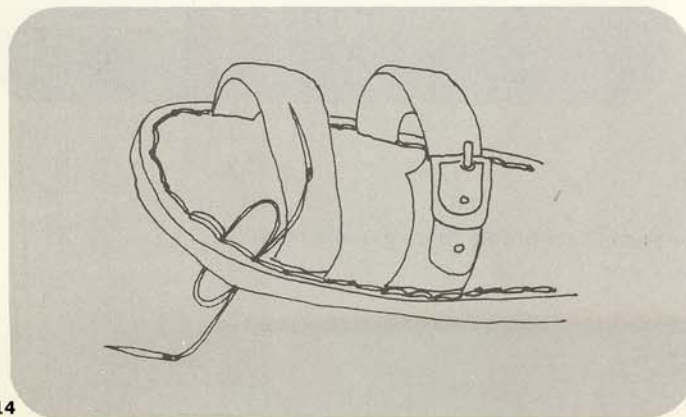
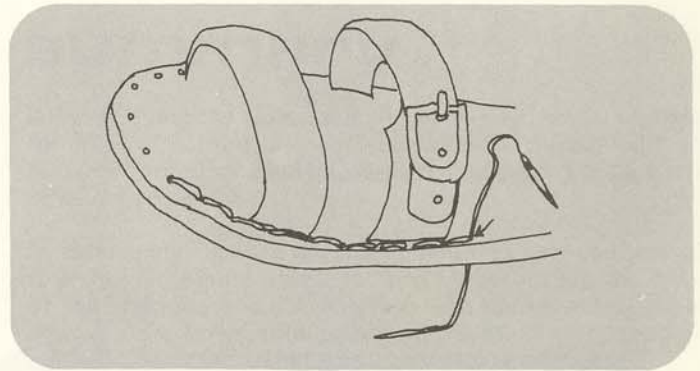


Push needle from back side through third hole. Then push other needle through same hole.

Tighten stitch as before. Continue stitching as instructed to end of sandal or until splicing is needed.



To splice, cut the thread off close to the sandal, back up three holes and begin stitching again.



To end, back stitch through three holes. Cut threads off flush with leather.

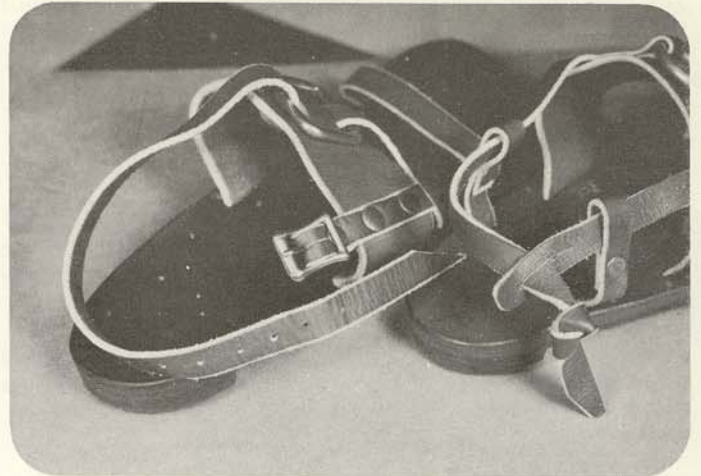
After finishing, tap down the stitching with a mallet to flatten it.

A Lacing Pony or clamp to hold your sandals as you stitch is very helpful.

# step 11

The next step is to finalize the heel closure strap and attach any ornamental hardware desired not previously attached.

The heel closure may be finished by attaching a buckle or by making a slit and knot.



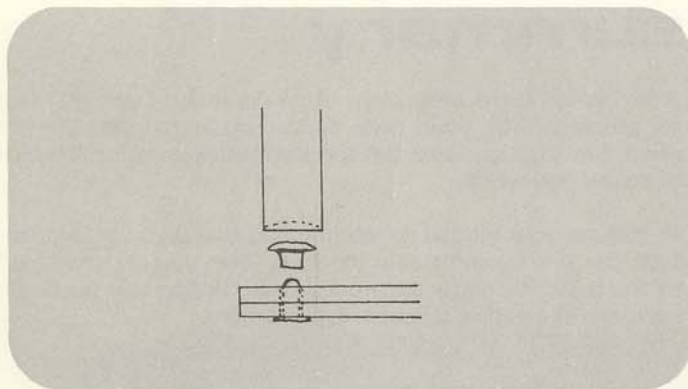
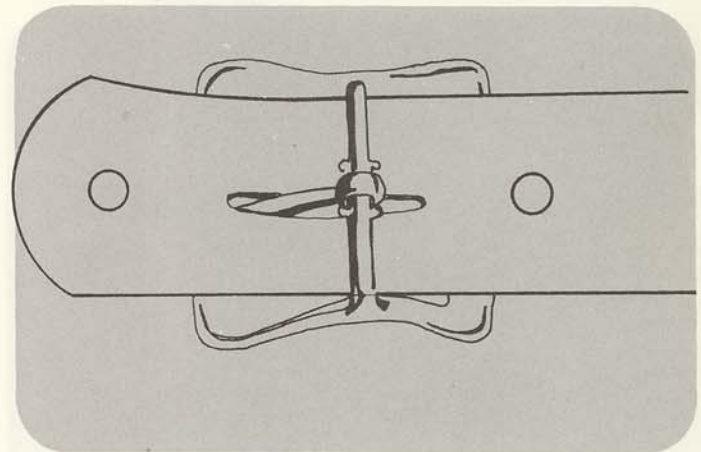
**a**

To attach a buckle, put the sandals on your feet and pull the straps fairly tight. Attach the buckle to the strap coming from the front of the sandal back along the outside of it, just behind the heel strap loop.

Skive the flesh side of the strap in the area the buckle and rivets are set. Cut a slit for the buckle tongue. Punch a hole for the rivet, and set the rivets.

Punch or stab the buckle tongue holes along the strap that comes around the heel. Place them along the center of the strap at the appropriate place about  $\frac{1}{2}$ " apart.

Skive the flesh side of this strap to make it easier to pass through the buckle. The end of the strap can then be tipped.

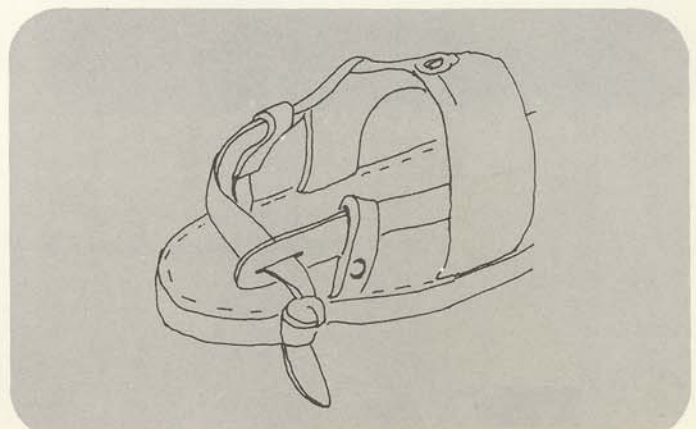


The rivets may be hammered together, but for best results use a Craftool Rivet Setter and a rawhide mallet. Place rivet post through leathers and place on hard, smooth, dense surface. Place rivet cap on post. Place concave end of rivet setter on cap (be certain rivet setter is centered so edges of setter will not mark rivet cap) and tap sharply with rawhide mallet once or twice. Check to see that rivet is set tightly in leather and does not turn.

**b**

If you prefer to use the slit and knot heel closure method, run the strap coming from the front of the sandal on the outside edge through the heel loop. Cut a slit  $1\frac{1}{2}$ " long, beginning about  $\frac{1}{2}$ " from the heel loop toward the back of the sandal. Cut off and tip the strap leaving  $\frac{1}{2}$ " after the slit.

Pull the back strap around the heel area through the slit and tie a knot.





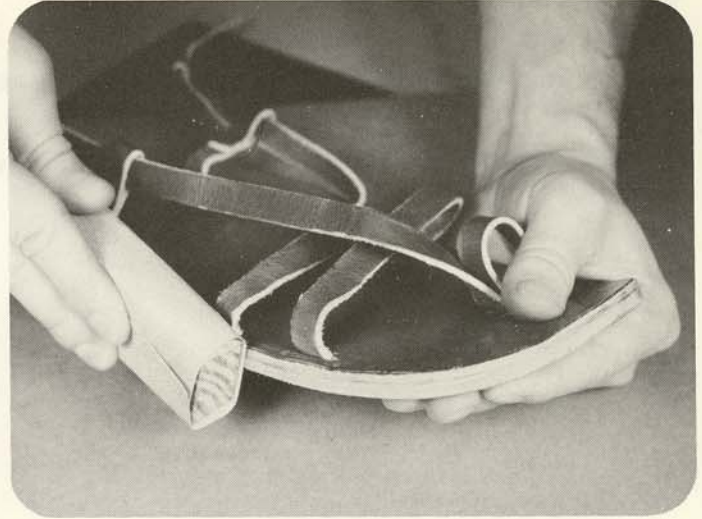
# step 12

The final step in making your sandals is to finish the edges of the soles.

**a**

Use your knife to do any final trimming needed. Then scrape the edges with the blade of the knife to smooth and shape the edges as desired.

Use a coarse sandpaper wrapped around a small block of wood to make a smoother edge. The sanding can also be done by a power sander or file.



**b**

Dye the edges of the sole a dark color and finish it with a coat of Neat-Lac.

## summary

After studying the basic steps of sandal making you are ready to proceed with your own custom-made sandals. Use the general instructions plus the specific instructions for the style of sandal you select.

In making your sandals use the method that suits you best and feels the most comfortable for you. After you get the "feel" of the tools and materials, working with leather will open up a new area of creative, stimulative enjoyment.

# sandal styles- GROUP I

This group of sandals is similar on the side straps at the heel. You will need a strap about 10" long that will run underneath the top sole about at the front edge of the heel. The slots in the top sole should be below the major protruding bones of the ankle. The inside slot should be centered under the bone, and the outside slot slightly forward of it.

A loop will be made in each end of the strap and secured with

a medium rivet. The loops, after riveting, will need to be slightly larger than the straps that will pass through them.

The heel strap length and all other strap lengths will need to be sized to your measurements. You can use a buckle or slit and knot closure method.

Hardware may be used as desired.

## the jamaican



For a pair of Jamaican Sandals cut two straps 36" long to be woven through the sandal and two straps 10" long for the heel strap. This sandal is adjustable, so treat the proper portion of the straps with leather dressing.



# the sebastian



To make a pair of Sebastian Sandals cut two straps 26" long to be woven under the top sole and around the heel, two straps 20" long for the toe strap and outside arch and two straps 10"

long for the heel straps. Use leather dressing for the adjustable portions of the straps.

# the beachcomber

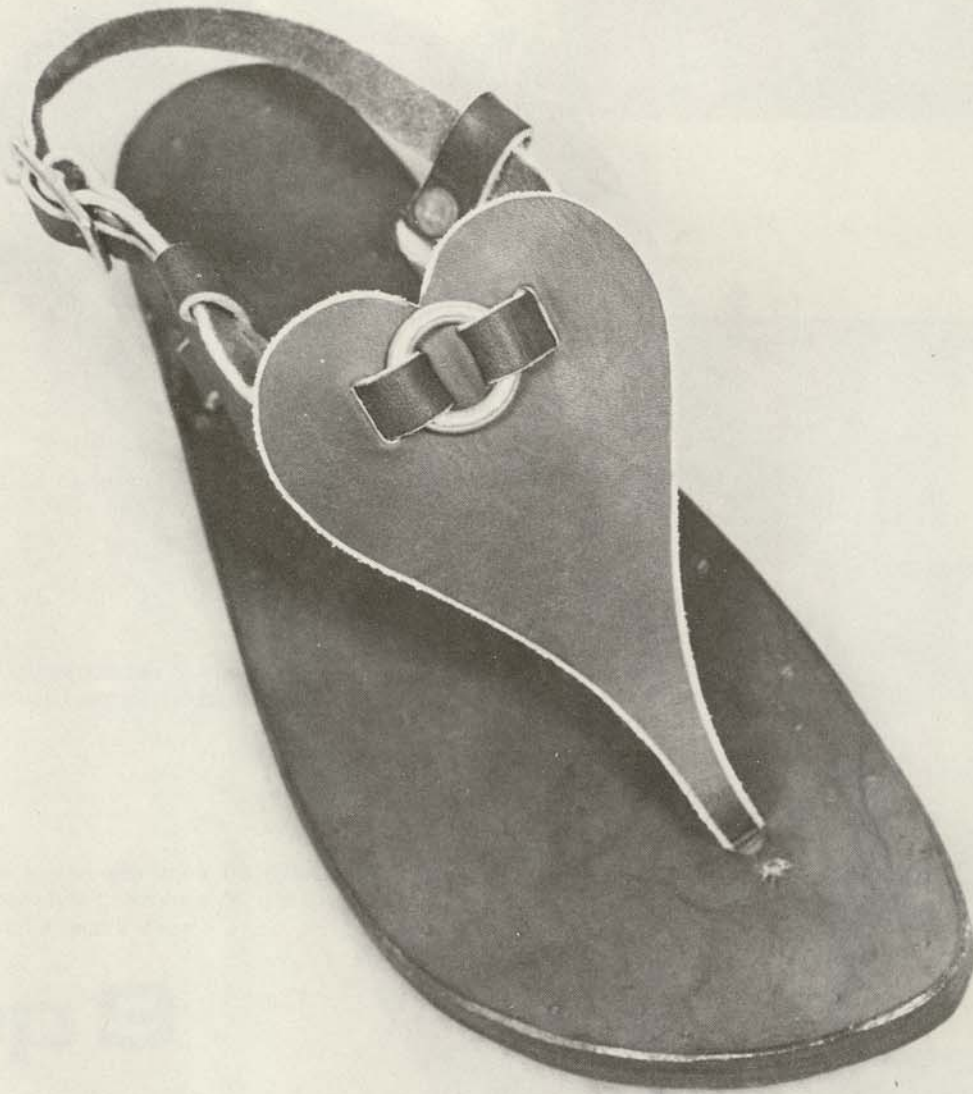


To make a pair of Beachcomber Sandals you will need two straps  $\frac{1}{2}$ " wide and about 42" long depending on the size of your foot, two straps  $\frac{1}{2}$ " wide and 12" long and two straps  $\frac{1}{2}$ " wide and 10" long. The 42" straps are the ones woven through the sandals. The 12" straps are to make the

toe strap and come back on the outside edge to the heel and the 10" straps are to make the heel strap. This sandal is adjustable, so treat the proper strap portions with a leather dressing.



# the love



For a pair of Love Sandals cut two straps 18" long to go around the back of the heel and through the heart, two straps 10" long for the heel strap and a piece about 4" by 7" to cut

the heart. Size the heart to your feet. Keep the portion between the toes narrow enough for comfort and the top of the heart wide enough to comfortably fit your arch.

# the Rambler



To make a pair of Rambler Sandals you will need two straps 36" long to weave under the top sole and two straps 10" long for the heel straps.



# the conqueror



For a pair of Conqueror Sandals you will need two straps 18'' long for the strap from your toe to around the back of the foot, two straps 12'' long for the outside strap from the toe for the buckle or slit, two straps 1¼'' to 2'' wide and 12'' long

for the main arch strap, four straps 6'' long for the straps to rivet to the main arch strap with the ring or rectangle dee between them.

# sandal styles- GROUP II

The next group of sandals use one or two arch straps, but do not have the heel strap that goes under the top sole. The strap that goes around the back of the foot is supported by the back arch strap or by the arch straps and a single heel strap on the outside of the sandal.

Either a buckle or slit and knot closure method can be used except on the Bacchus sandal which must use the slit and knot method.

Hardware may be used as desired.

## the rivieria

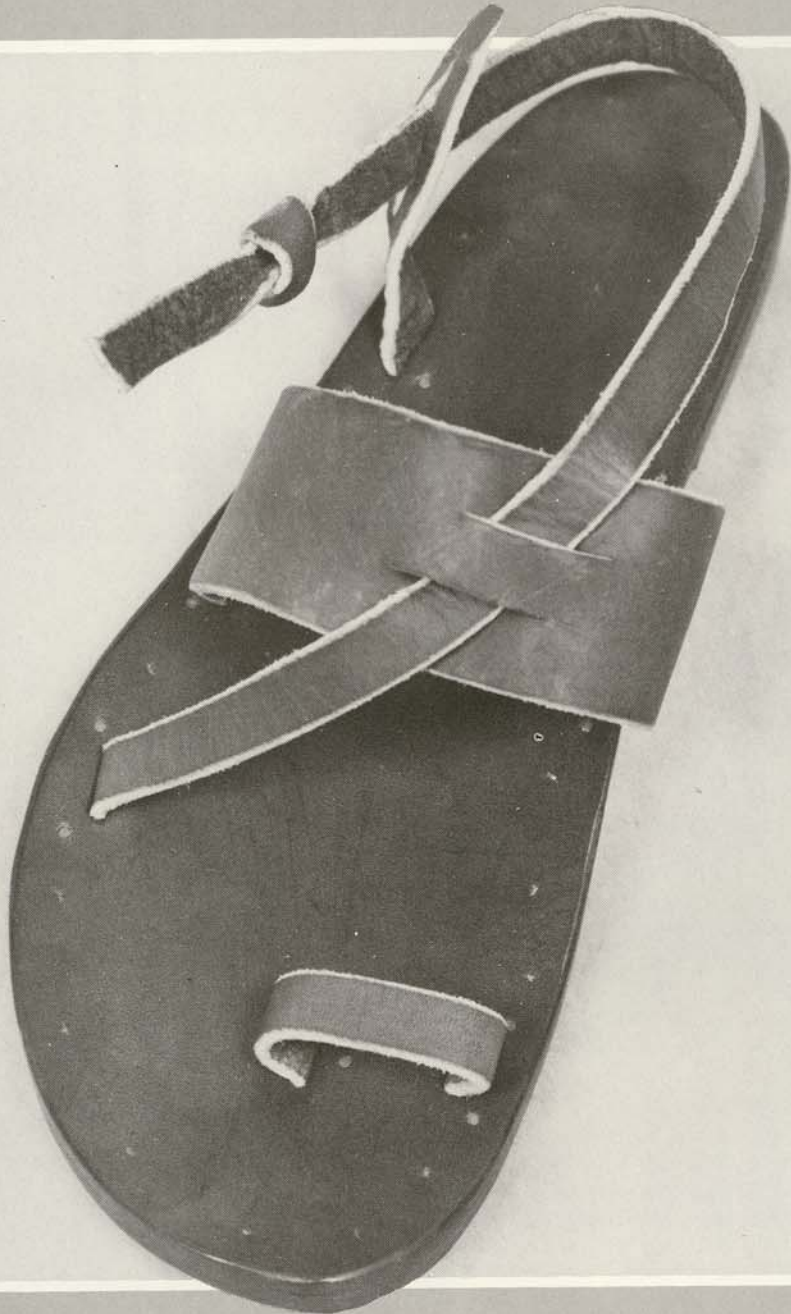


In making a pair of Riviera Sandals you will need two straps  $\frac{3}{4}$ " wide and 10" long for the front arch strap, two straps  $1\frac{1}{4}$ " wide and 12" long for the back arch strap, four straps  $\frac{1}{2}$ " wide and 5" long for the rectangle dee straps on the back arch strap,

four straps  $\frac{1}{2}$ " wide and 4" long for the rectangle dee on the front arch strap, two straps  $\frac{1}{2}$ " wide and 4" long for the buckle or slit and two straps  $\frac{1}{2}$ " side and 14" long to go around the back of the foot.



# the bacchus



In making a pair of Bacchus Sandals you will need two straps 14" long to go from the sole through the arch strap and around the back, two arch straps 1¼" to 2" wide and about

12" long, two toe straps 4" long and two outside heel straps about 4" long. This sandal can only use the slit and knot closure method.

# the magnum



To make a pair of Magnum Sandals you will need two straps  $1\frac{1}{4}$ " wide and 10" long for the front arch strap, two straps 2" wide and 14" long for the back arch strap, four straps  $\frac{5}{8}$ " wide and 4" long for the ring strap on the front arch strap,

four straps  $\frac{3}{4}$ " wide and 6" long for the ring strap on the back arch strap, two straps  $\frac{5}{8}$ " wide and 5" long for the buckle or slit strap and two straps  $\frac{5}{8}$ " wide and 16" long for the strap around the back of the foot.



# the spartacus



To make a pair of Spartacus Sandals you will need two straps 7" long for the strap across the toes, two straps 14" long for the strap through the arch and around the back of the foot,

two straps 4" long for the buckle or slit and two straps 1¼" to 2" wide and 12" long for the arch strap.

# the centurian



To make a pair of Centurian Sandals you will need two straps 7" wide and 12" long for the arch strap, two straps 3/4" wide

and 14" long to go around the back of the foot, and two straps 3/4" wide and 4" long for the buckle.



# the nature-tand



In making a pair of Nature-Tand Sandals, use Nature-Tand leather 7-8 oz. to make two straps 1 1/2" wide and 10" long for the front arch strap, two straps 2" wide and 12" long for

the back arch strap, two straps 3/4" wide and 14" long for the strap to go around the back of the foot, and two straps 3/4" wide and 4" long for the buckle.



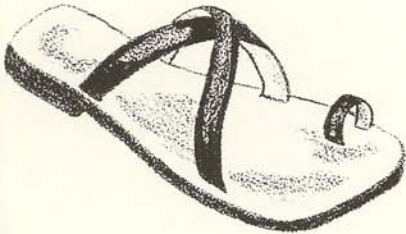
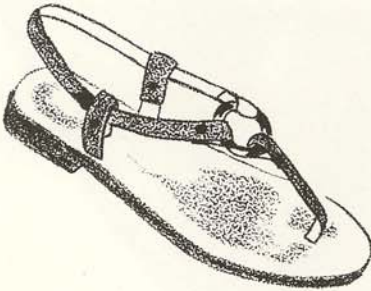
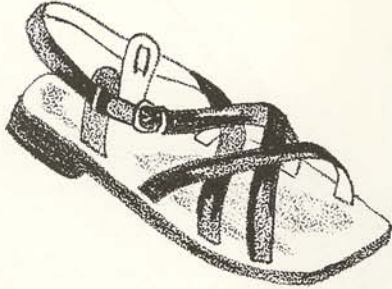
# the easy rider



To make a pair of Easy Rider Sandals, you will need two toe straps 5/8" wide and 4" long, and four arch straps 5/8" wide and 10" long.



# Suggested Variations





# sandal styles- GROUP I

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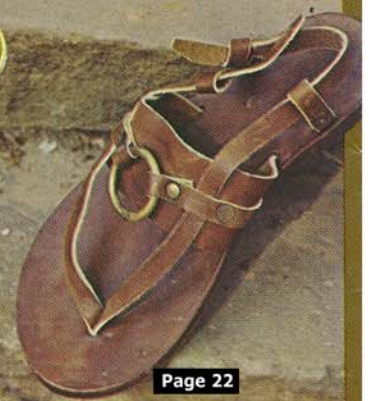
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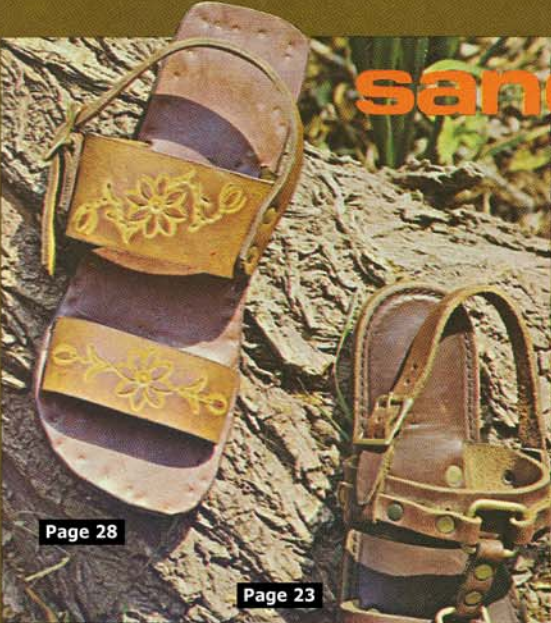
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# sandal styles- GROUP II

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