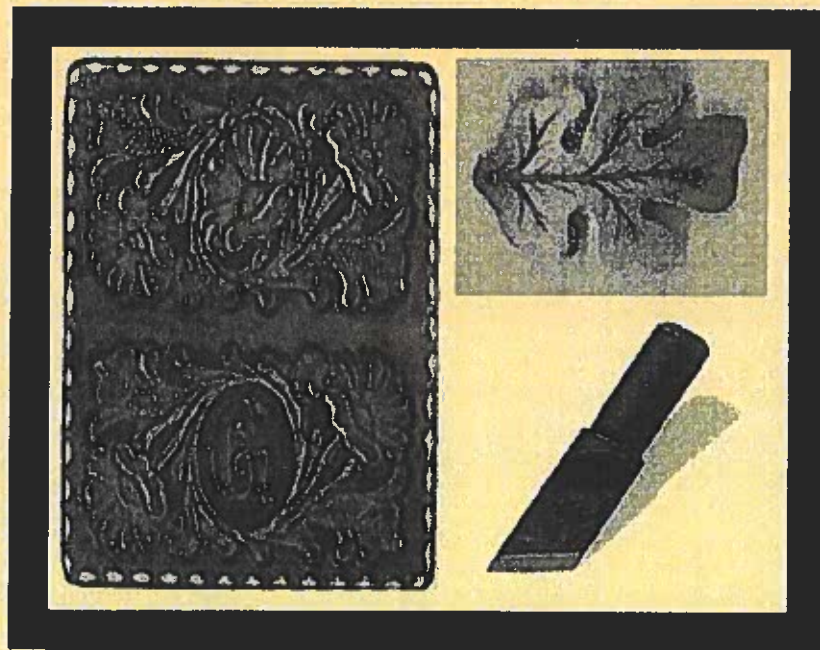


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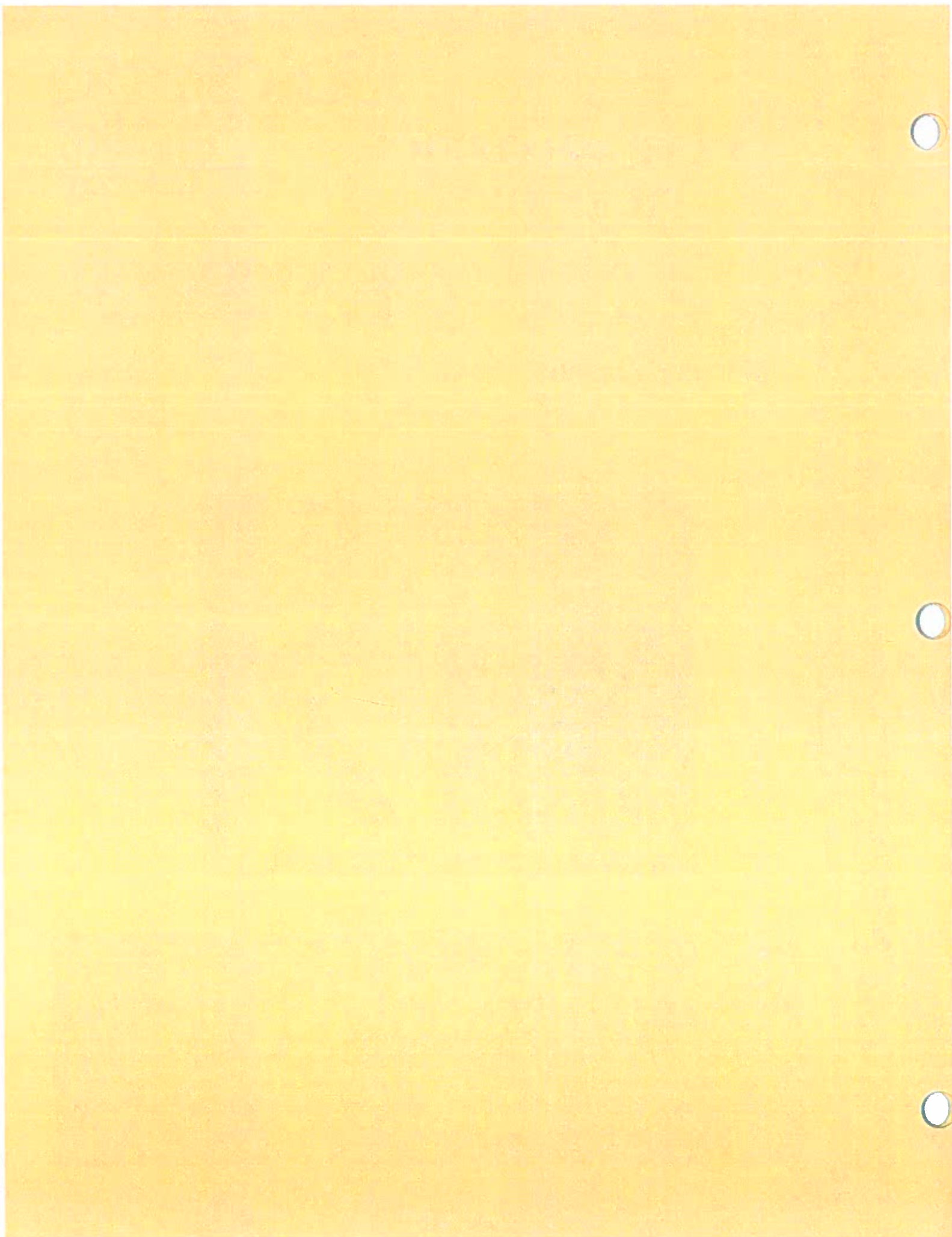
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Extension

MG2003C
Member's Manual



**4-H Leathercraft
Units 3-7**



UNIT 3

INTERMEDIATE LEATHER CARVING

INTRODUCTION

The basic skills of leather tooling, carving and stamping are outlined and taught in units 1 and 2. Unit 3 provides experiences for you to advance your skill in carving and tooling conventional or stylized designs, background dyeing, and using antique or two-tone finish. You will not do pictorial carving (framed pictures) or figure carving (realistic animal and human figures) in unit 3. These are taught in units 4, 5 and 6.

It is highly recommended that you complete unit 2 before taking unit 3. The basic carving techniques and construction skills are needed to produce creative and high-quality work in this unit.

ENROLLMENT INFORMATION

All units may be taken as many times as you want. If you re-enroll in the same unit, you should plan to learn new skills, gain new understandings and improve on previous skills. A list of references which may be helpful is on pages 31 and 32.

THINGS YOU SHOULD LEARN

More advanced leather techniques which may include:

- Inverted leather carving
- Using other stamping tools
- Using the skiving tool
- Using the gouging tool
- Lining
- Cleaning leather

- Beginning dyeing techniques (background, antique, two-tone)
- Edge beveling
- Burnishing edges
- Hand stitching
- Simple molding and shaping

TOOLS YOU WILL USE

All tools used in units 1 and 2 as well as the mule's foot, stop and single imprint stamps (alphabet, number, acorns, flowers) if needed for the design selected. You may also use wing dividers, overstitch wheel, gouge, skiver, edge beveler and edge slicker.

Additional tools may be used as needed.

WHAT YOU SHOULD DO THIS YEAR

Participate in your 4-H club meetings. Practice skills learned in previous units.

Select, carve and tool two or more articles. Try to select articles which are more difficult than those made in unit 2. Be sure the articles include one or more of the following: inverted carving techniques, beginning dyeing, lining, simple molding and shaping or hand stitching. The following are suggested:

Barbecue seat	Purse
Belt	Quiver and arm guard
Belt and holster	Travel or toiletry bag
Book covers	Wallet
Notebook	
Pistol caddy	

Share information learned through talks, demonstrations and displays.
Keep a record of project costs and experiences.

Evaluate your progress with your leader.
Exhibit the following:

- A. One completed article or set with carved conventional design. The article or set must also include at least one of the major skills: inverted carving techniques, beginning dyeing, lining, simple molding and shaping or handstitching.

Label the article or each item of the set with name, address, age and county. Be sure this information also appears on the front of your record book.

- B. Completed record.

EVALUATE YOUR WORK

Use the following check list to be sure you have completed the goals for this unit.

Yes

1. Record Book
 - a. Attended club meetings
 - b. Gave a demonstration or talk
 - c. Completed the record book
 - d. Listed skills which were developed
 - e. Gave information on two completed articles
2. One finished article
 - a. Shows good quality workmanship
 - b. Designs are appropriate for size and shape of article
 - c. At least one of major skills used on article

FOR EACH LESSON

Plan talks or demonstrations you could give.
Decide what equipment you will need.

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INVERTED LEATHER CARVING

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Inverted leather carving is a new skill which may be selected in this unit. It is not required.

Inverted leather carving can be classified into three groups:

- Inverted technique
- Silhouette technique
- Rough-out technique

INVERTED TECHNIQUE

Inverted carving differs from the regular raised carving in that the design itself is depressed (not raised). This is accomplished by beveling on the

inside of the design outline instead of the outside. All other tooling within the design outline is done in the traditional manner.

Background areas remain raised and untouched -- just in reverse of the usual beveling and stamping methods.



SILHOUETTE TECHNIQUE

Silhouette carving consists of cutting only the outline of the design, and then beveling, backgrounding and matting the leather within the design outlines. Silhouette designs should have fine lines with few, heavy overlapping segments or large, open areas requiring extensive matting.



ROUGH-OUT TECHNIQUE

Rough-out carving is actually no different from regular methods -- either raised, inverted or silhouette. Only the effect is different because the design is carved and stamped on the flesh side of the leather, rather than the customary grain side. After carving and stamping, the leather is sanded with coarse sandpaper, producing a suede-like finish.



USING DIFFERENT STAMPING TOOLS

ALPHABET, NUMBER AND OTHER SINGLE IMPRINT STAMPS

Patterns often call for a letter of the alphabet, numbers or single imprint designs such as an acorn.



Practice using these tools on scrap leather. Be certain the tool is accurately positioned before striking with the mallet.

STOP

The stop is used on dead-end cuts within the design. The stop gives a



"pinched" effect to floral carving and adds "sharpness" to the design.

Stops may be smooth or serrated; straight or curved.

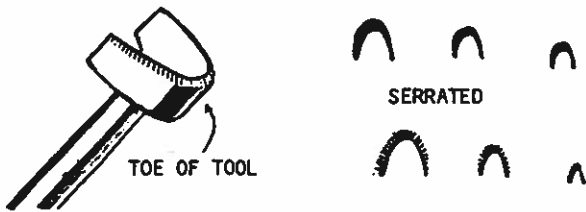


The stop must be used carefully to gain the correct effect. Hold the tool vertical and aligned so the "knife-like" heel fits into the cut. The rounded toe of the tool should be positioned slightly beyond the end of the cut in untooled leather.

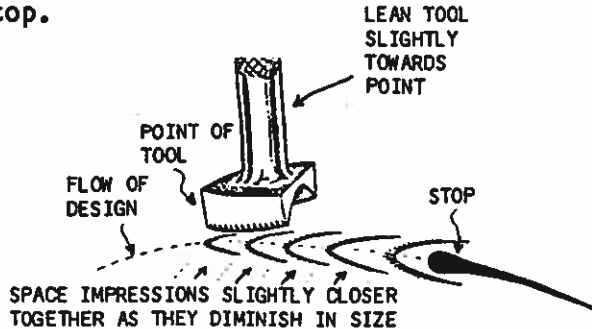
Tap the tool smartly to get good depth but be careful not to cut through the leather. The moisture content of the leather should be as low as it is when using the seeder.

Study the pattern shown to see where and how the stop is used.

THE MULEFOOT



The mulefoot is V shaped and used under dead end cuts and to decorate stems. It is often used in combination with the stop.

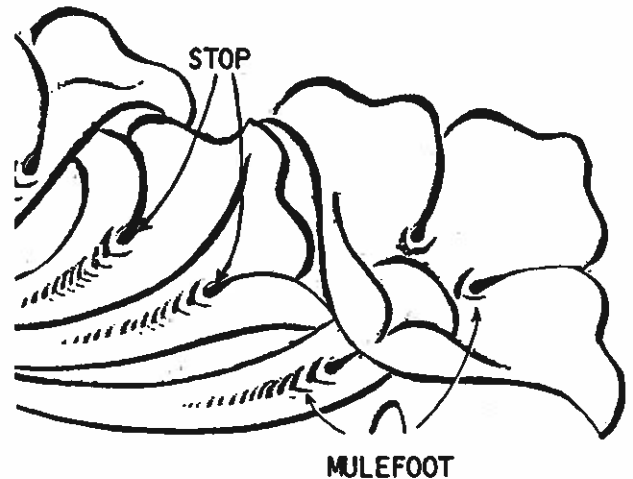


For decorating stems, start at the top of the stem with the point or toe of the V downward and the tool tilted slightly forward.

Strike the tool firmly and decrease the depth of the impressions as the tool is worked down the stem. For ending dead-end cuts, one or more impressions are tapped in just below the end of the cut or stop with the point of the tool.

Practice using the mulefoot on scrap leather before trying it on your finished article.

The mulefoot and stop should look like this.



USING THE SKIVING TOOL

Skiving reduces the thickness of the leather in areas where two or more pieces join or where the leather will be doubled over and cemented to make a facing. Places where skiving would be helpful include a belt end which must attach to a buckle or the edges of a handbag front and gusset which are to be faced together.

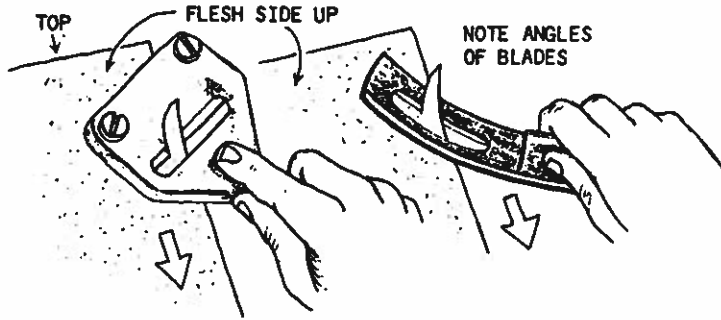
Several types of skiving tools are available. Two easy-to-use types are shown. Both use the injector type razor blades. The skiver shown on the left is recommended. It is more durable and generally easier to adjust and control.



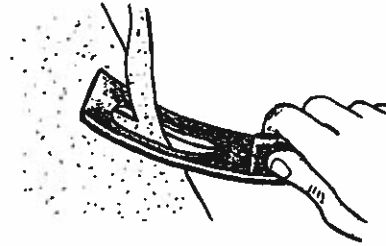
NOTE: Leather should be cased before skiving.

Place leather flesh-side-up on the work surface, holding down with the left hand. On light leathers, begin the skive down a bit from the top edge as it will be easier to start. You can begin at the top edge on heavy leathers. Hold skivers at angles shown, as a slicing action makes skiving easier.

The width of the skive should be at least 3/8" and about half the thickness of the leather should be skived away. If the skived area is not deep enough, or wide enough, simply repeat the process.

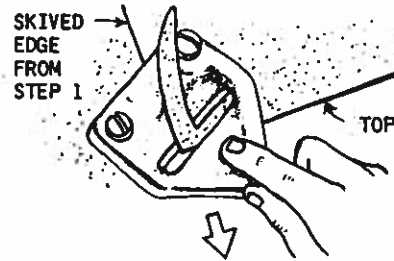


Pull skiver toward you, maintaining constant pressure, angle and a rigid hold on the tool. Uneven skives will occur if you do not have constant pressure.



It will take some practice to make uniform skives.

After skiving the full edge, turn the leather and complete the skive to the top on light leathers. Match the angle on the skive already completed.



USING THE GOUGING TOOL

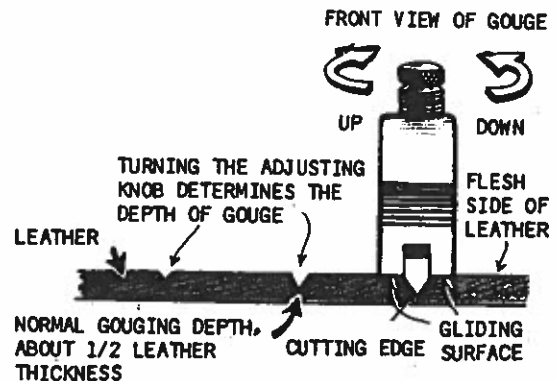
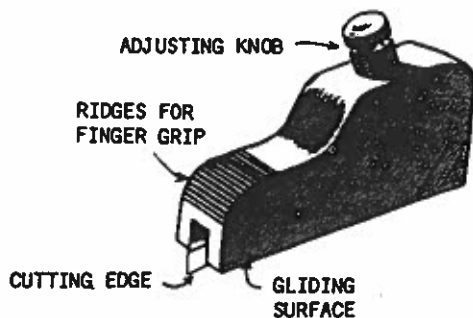
Gouging removes some of the leather from an area. It may be used on a fold line or to form a groove for stitching so it is below the surface and will not wear as rapidly.

Generally, gouges are made on the flesh side for folding and the grain side for stitching.

The adjustable "V" gouge has an adjusting knob on top that regulates the depth

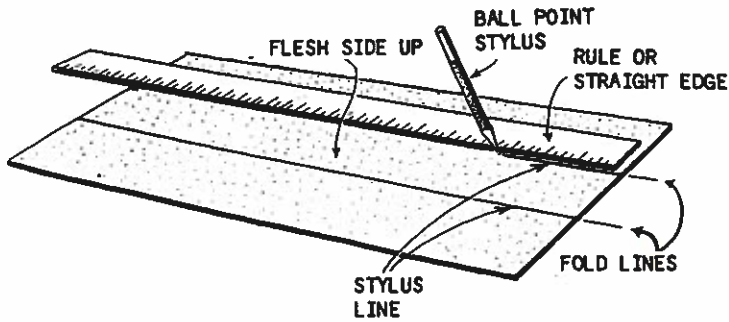
of the gouge. Turning the knob clockwise raises the cutting edge; counter-clockwise lowers the cutting edge.

Adjust the gouging depth on scrap leather before gouging lines on the project. Gouging depth depends on the purpose for the gouge.



Moistening the leather at the gouge lines often makes gouging easier.

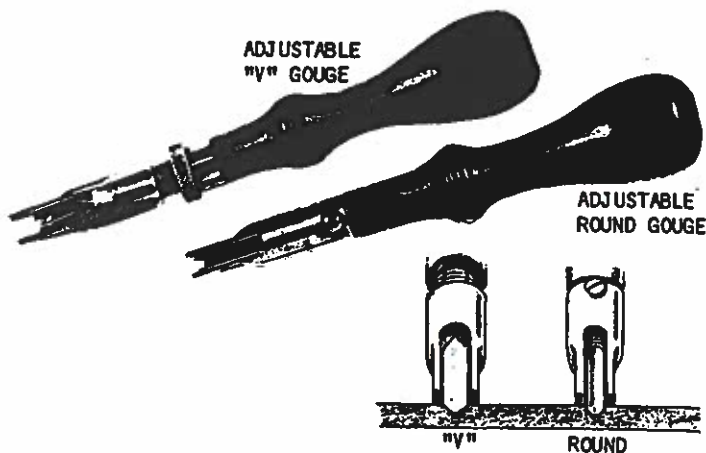
Center the cutting edge on the marked gouge line. Use a straight edge as a guide for the gouge so it will move evenly and smoothly along the marked line. The distance from center of gouge to side of straight edge will determine the position of the edge.



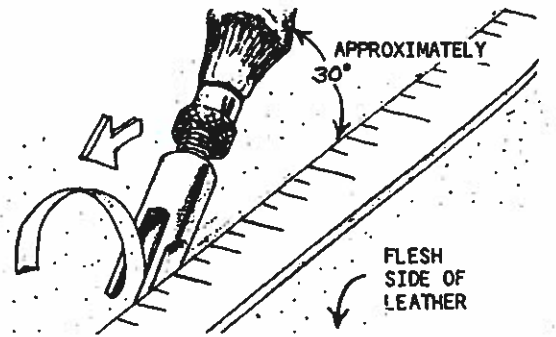
Since the cutting edge is at the extreme end of the tool for maximum visibility, it is usually best to begin the gouging at least 1/2" from the edge. The gliding surface then becomes effective at once and controls the gouging depth. Leather may be turned to complete the gouges.

Start with a shallow gouge and repeat with a deeper setting as often as necessary.

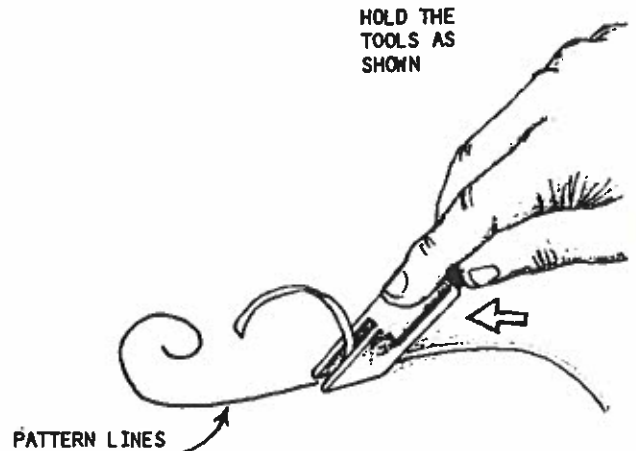
Other types of hand held adjustable round and "V" gouges are available.



The "V" gouge is best for gouging folds. Hold the gouge at approximately a 30° angle. Use a ruler or straight edge to keep gouges straight.



The round gouge is not as good for folds but may be used to carve interior sewing channels or to carve decorative designs.

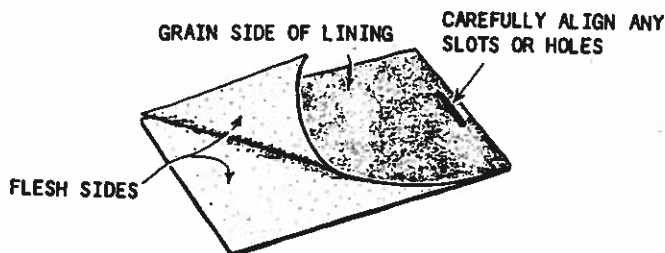


LINING

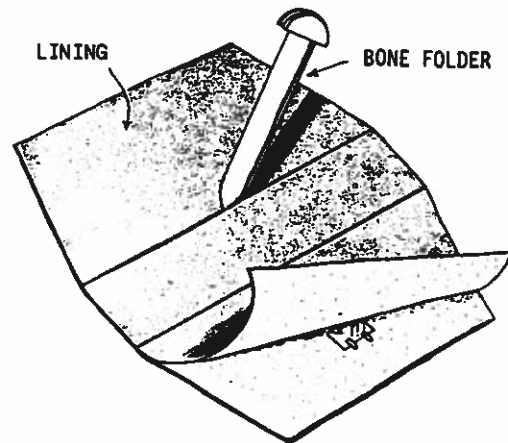
Proper preparation and installation of linings is vitally important to the appearance and utility of leather articles. After the exterior pieces of leather have been stamped or carved with the desired design, install the hardware such as bag clasps or snap fasteners, if they are part of the article. The underparts of the hardware will then be covered with lining.

For best results, lining material parts should be cut slightly larger than the exterior parts of the article. During carving and tooling of the design, the leather may stretch slightly. If the lining material is oversize, it allows for easier fit on the tooled part. The excess lining can later be trimmed away.

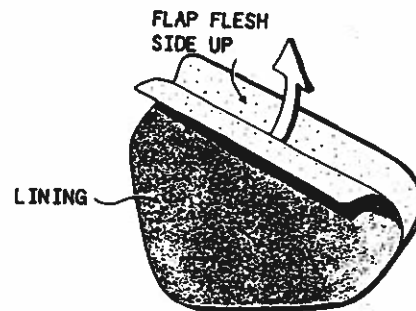
Place the carved leather and the lining with the flesh sides up. Apply a thin coating of rubber cement to each. Allow a few seconds for the cement to dry, then carefully align any slots or holes. If the lining is crooked, pull loose and restick in proper position. The main purpose of cementing the leathers is to hold them together until they are laced.



Smooth out any wrinkles in the lining by rubbing toward the edge with a bone folder. The bone folder may also be used to press lining into gouges where there will be folds.



There are times when you will need to shape the lining and leather together over a form. Other times you will need to hold them together on a curve.

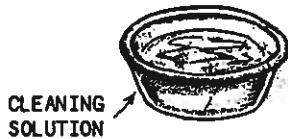


Carefully follow the instructions for each pattern you use. Trim away excess lining which projects beyond the leather.

CLEANING LEATHER

It is extremely important to keep the leather clean. Be sure your hands and tools are clean.

If the leather does become soiled, it may be cleaned. Be sure to have your leader help you.

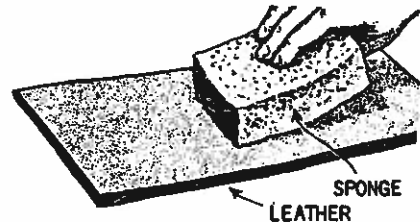


Use a mild solution of leather bleach or oxalic acid.

NOTE: Try leather bleach on a piece of scrap leather first. If solution is too strong or old or leather is not properly cleaned after solution is used, the leather will take on a pink cast. This will also change dye shades.

CAUTION: Oxalic acid is poisonous.
Be sure to read the label.

Apply the bleach solution sparingly to the carved leather with a damp sponge. Do not saturate the leather. A light scrubbing motion may be used to clean stubborn spots.



Be sure to sponge the leather with clean water after cleaning with oxalic acid.

BEGINNING DYEING AND STAINING

Dye or stain may be used to improve the appearance of your article. Beginning in this unit, you may use background dyeing, antique and two-tone finishing ONLY (no solid color dyeing or shading techniques).

The "grain layer" (hair side) of the leather consists of about one-fifth the thickness of the hide. The fiber structure of this part of the leather is finer than the remainder of the hide. It is, therefore, more suitable for carving, stamping and dyeing.

Vegetable tanned and bark tanned leathers are most suitable for carving and dyeing.

KINDS OF DYES AND STAINS

Water soluble dyes are the most commonly used for leather. Directions for use are on the containers of dye purchased from supply houses.

Oil stains, including antiques, are used to produce soft effects and make the article more durable. Thin them with turpentine. Apply oil stains and wipe off immediately.

Spirit dyes may be thinned with alcohol. They are inexpensive and easy to use.

GENERAL SUGGESTIONS

Be sure to have enough dye or stain to complete the project. The same color dye from the same manufacturer, in two

separate bottles may produce a different color.

Complete all carving and thoroughly clean the leather before dyeing or staining it.

The leather should be almost dry before applying dye or stain. Always test the color on a piece of scrap leather before you apply dye or stain to your project.

Avoid getting dye and stain on the backside of unlined leather articles.

BACKGROUND DYEING

Dyeing the background makes it appear to recede so the carving and tooling stand out.

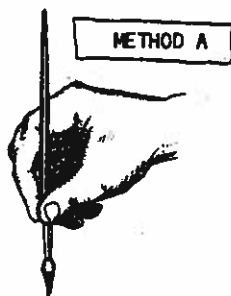
Use a No. 3 Red Sable brush for general background dyeing. It holds a good supply of dye yet points well for detail work. The brush should never be submerged in the dye. Dip it into the color not more than three-fourths of its length. Then touch the brush to the inside of the bottle to release the overload.

Before dyeing the article, practice on scrap leather. Twist the brush clockwise to point the bristles.

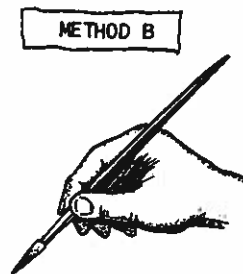
There are two methods of background dyeing; use either one or a combination of both. For a professional appearance, dye must be on the background only and not on raised edges of the carved design.

Hold brush straight up and down. The entire article can be dyed without

turning the leather to any great degree. The brush is alternately leaned slightly one way or the other to avoid getting dye on the raised edges of the design.

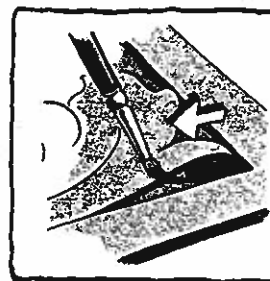


Or, hold brush at a comfortable angle. Dye one-half of all background areas that can be easily reached without straining the hand. Pointed areas are readily accessible with this method. Turn leather and complete dyeing. Overlap dye to be sure of full coverage.

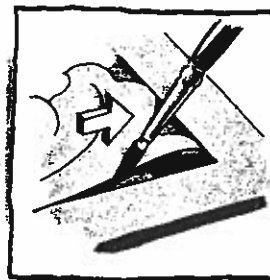


Begin dyeing in the open areas. Always touch the brush to scrap leather first to remove excess dye before applying to the article. Too much dye will run and "bleed" over the edges of the design.

Start in the widest area and work toward the fine points. When most of the dye has been exhausted, carefully point brush by twisting clockwise on scrap leather and dye into pointed areas.

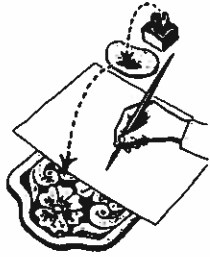


Use short pulling strokes to cover the area. Turn the leather as often as necessary to facilitate dyeing in the difficult areas. With the brush almost dry there is less chance for color to "bleed" over the edges in the small pointed areas.

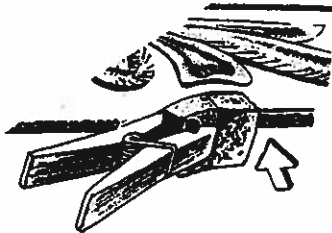


Backgrounds should be dyed for full and complete coverage.

TIP #1: When dyeing large articles, place a piece of clean cardboard or nonabsorbent paper over your work between dye bottle and working area to aid against accidentally spilling dye on your article. This also protects the leather from body oil which may accumulate on your hands as you work.



TIP #2: For neatly dyed edges left uncovered by lace, clip a piece of heavy felt in a clothes pin, dip in dye and pull quickly along the edge.



ANTIQUÉ FINISH

Antique finishes come in various shades of brown and are used to achieve color uniformity while keeping the full appearance of the leather's beautiful grain surface.

Apply a very light, but consistent, coat of moisture to the grain surface and allow a few minutes for the moisture to penetrate. This "primes" the leather and assures more even coloring. Dip lightly moistened applicator (large brush, lambs wool or small sponge) in antique finish, carefully wiping excess from surface of applicator on side of container. If leather surface has been carved and tooled, begin applying antique finish at center of carved design. Use a circular motion and apply antique finish over desired surface. Be sure tool marks are covered evenly.

Wipe off surface excess as directed, with a smooth, dry cloth. Brisk and thorough buffing with a soft, clean cloth will further amplify the beauty of the antique finish.

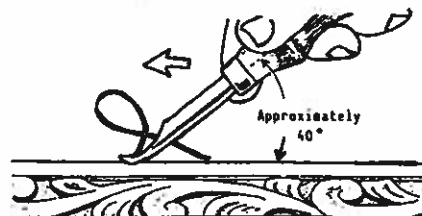
TWO-TONE FINISH

Apply a light coating of clear leather lacquer to areas which you want to keep the natural leather color. Let dry thoroughly. Then apply antique or a similar finish over the entire article. Rub hard to remove the antique finish from the lacquered areas.

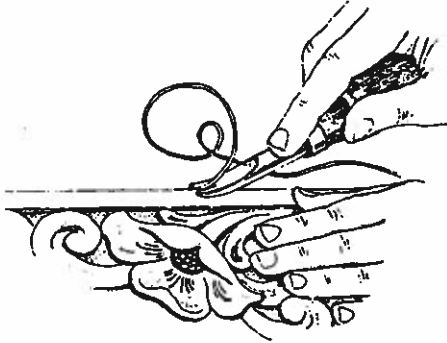
The final coat of leather finisher (whether sprayed or put on in other ways) should be applied with a delicate touch. There is a tendency to disarrange the antique tones in the application of the leather finisher.

EDGE BEVELING

For a professional appearance, always use an edger or edge beveler to round off or bevel edges that are not to be laced. The edge beveler cuts only at the proper angle, approximately 40°.



When edge beveling, hold the work firmly on table or bench. Hold the tool at proper angle to the work and with firm pressure push the tool along the edge.



A good bevel is indicated by one continuous "string" of leather cut from the beveled edge.

NOTE: If leather is to be stained with antique and/or the edge of the leather is to be dyed, edge beveling should be done first.

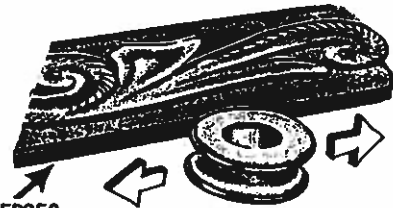
BURNISHING THE EDGES

Burnishing is done after edge beveling. Burnishing means smoothing the fibers along the edges of an article, giving them a rich brown color. Use this technique on belts, straps and other edges not covered with lacing.

The edges may be dyed in addition to burnishing. However, such dyeing should be completed before burnishing as burnishing closes the pores of leather so the leather will not accept dye. Use the dyeing technique indicated in tip #2, page 10.

To burnish, moisten the edge with a damp sponge. Hold the article securely (on strap-like articles, lay them on a table

or bench with the edge sticking out). Rub a circle edge slicker or canvas rapidly and firmly back and forth over the edge.



MOISTEN BELT EDGES WITH A SPONGE

Burnishing wax can be applied for a smooth finish and protection. Use the edge slicker again over the wax. Or you may put finish on the edges.

HAND STITCHING

Locate Holes

Locate and draw a very light line with a scratch awl or wing dividers for the row of stitching holes. This line should be 1/16" from the edge on small and light-weight articles. If the article is heavier and larger, the line may be up to 1/8" from the edge.

For items receiving heavy wear, gouge a groove in which the thread will rest. Countersinking the thread in this groove increases the length of service and adds to the appearance of the article.

Determine how many stitches per inch are to be made. For light work there should be eight to 10 stitches per inch, for heavy work five to six stitches per

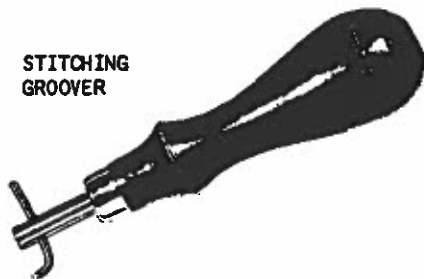
inch. Place the leather, grain side up, on a clean, smooth, soft board. Use the correct space marker to cut the holes through lightweight leather. A stitching punch (1/16 inch thonging chisel) may be used on heavier leather by holding it in a vertical position and tapping it lightly with a wooden mallet, just cutting through the leather.

For stitching small articles made from lightweight leather, use a common sewing needle, size 5 and buttonhole twist silk. Use a tapestry needle with a blunt end and linen or pre-waxed thread for larger projects made from heavier leather. Linen thread should be waxed, by pulling it through a piece of beeswax, before it is used. Pre-waxed thread is available in some kits and in spools from leather stores.

SADDLE STITCHING

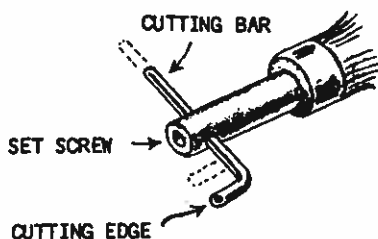
The saddle stitch is generally used in sewing heavy leather. It is the most common method of handstitching shown in kits.

With a leather compass gouge or an adjustable stitching groover, cut the channel in which the stitch will rest.



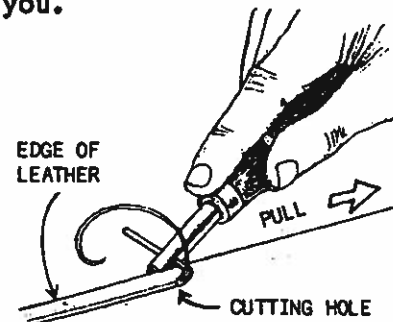
STITCHING GROOVER

The cutting bar of the stitching groover is adjustable. Loosen the set screw in the end to adjust.

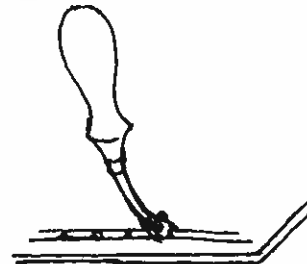


Turn the flat surface of the bar toward the set screws so the bar will not turn when gouging leather.

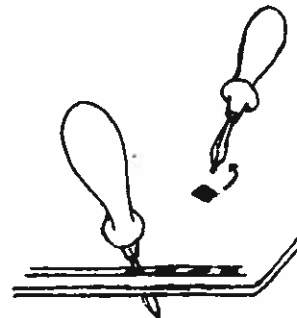
Hold the tool as shown and pull it toward you.



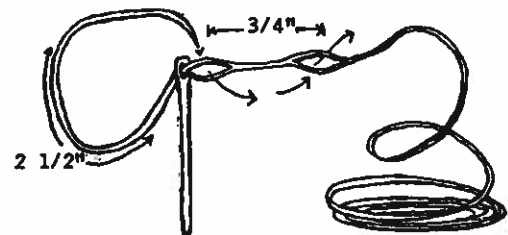
Mark the stitch spaces within the groove using an overstretch wheel stitching marker.



Use a diamond pointed awl to punch the lacing holes.



Two harness needles are required and one length of thread as long as your extended arms. Place one end of the thread through the eye of the needle. Twist the thread open near the eye and pass the short end through the opening. Twist open again about 3/4 inch further down and pass the end through again.

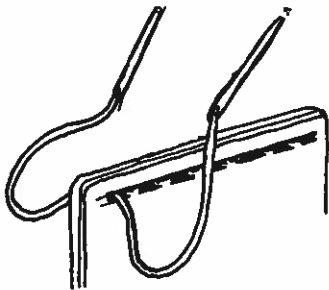


This will lock the thread in place. Repeat for the other needle on the opposite end of the thread.

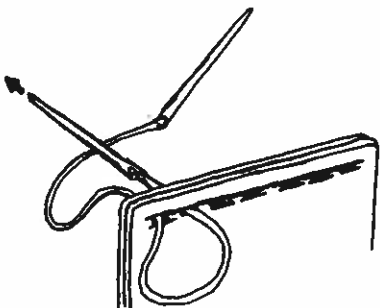
Pull thread over beeswax several times to fuse thread together.



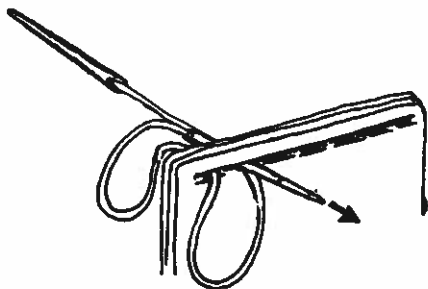
Start by placing needle through first hole. Even up the ends of the thread.



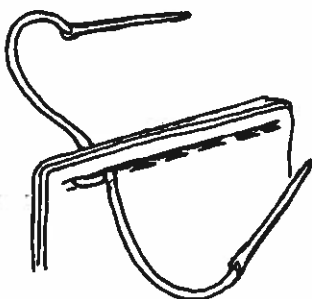
Push one needle through second hole.



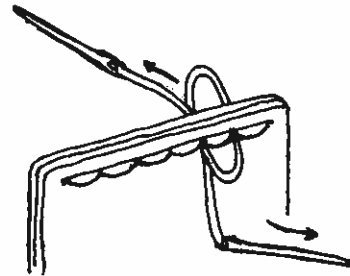
Push other needle through same hole.



Grasp thread on each side and pull tightly.



Continue stitching in this manner until last stitch is completed. To end, back stitch through two holes. Cut threads off flush with the leather.



Optional Stitching

A method similar to the saddle stitching just described is sometimes used in place of lacing.

The method is identical to saddle stitching except that a prepared thread and tapestry needle are used and the stitching is generally through regularly punched holes instead of through diamond holes.

The use of grooves is determined by the weight of the leather.

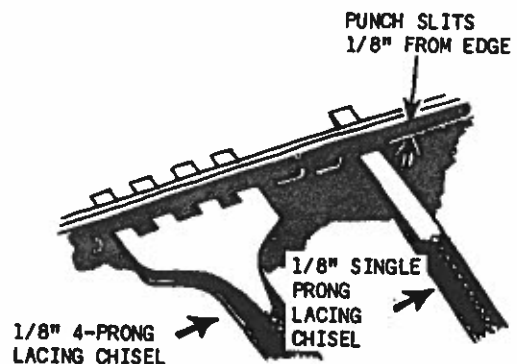
DECORATIVE STITCHING

Buckstitching

Buckstitching is a decorative stitch done with lacing and used especially to enhance bold designs.

● Using a Straight-Line Punch

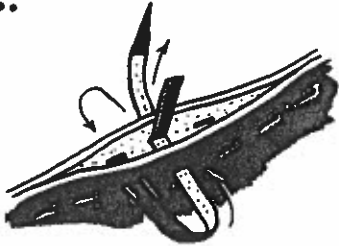
Punch lacing slits with single or multiple pronged lacing chisels.



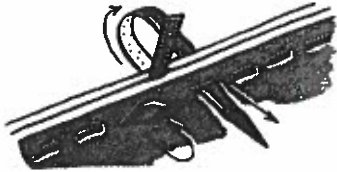
Begin with lace between the layers of leather. Note the correct sides of the lace and how it is looped so the same side is always on the outside.



Pull first loop tight and lace back through the first slits of both leathers.



Pull first stitch tight. Turn needle and go back through next slit as shown.



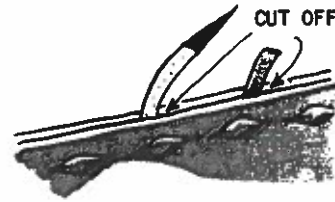
Continue lacing. Pull stitches tight as you go.



Lace to beginning stitch, through last slit. Lace back one slit (on back side) and push needle between leathers.



Pull all stitches tight. Cut off ends. Tap stitches flat with a mallet.

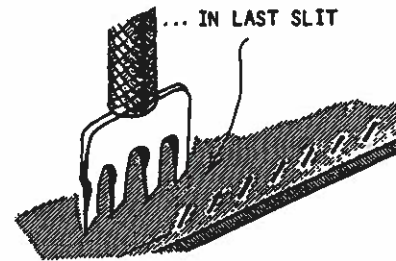


This stitch looks like elongated diamonds with the lace smooth (grain side out) on both sides.

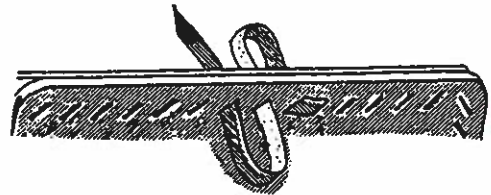


● Using an Angled Chisel

Punch lacing slits with an angled chisel. Fit the first prong into the last slit of the previous punch and stay on the guide line to ensure even spacing.



Begin with lace between the layers of leather. The lace is looped as it was with the straight-line punch, except the rough (flesh side) of the lace will appear on the back side of the article and the smooth side (grain side) will be on the right side.

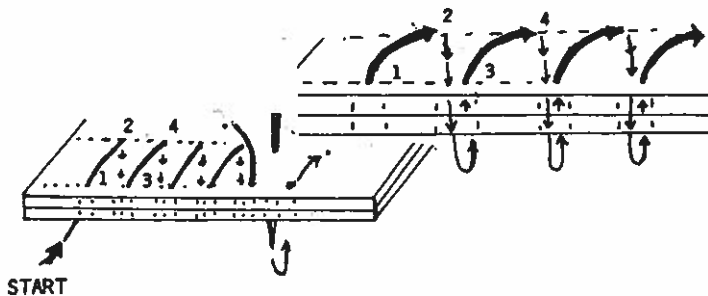


With angled slits the diamonds are less elongated than with straight slits.



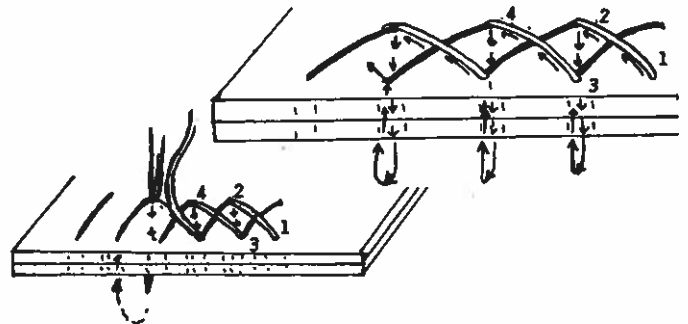
Diagonal Stitching

Mark two guidelines and the stitch spacing on each guide line. Punch holes and stitch as shown using either lacing or thread. Make diagonal stitching.



Cross Stitching

Start the same as in diagonal stitching, then sew back filling in spaces to form the crosses.



MOLDING AND SHAPING

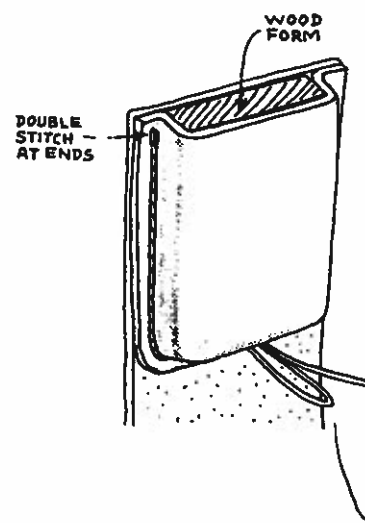
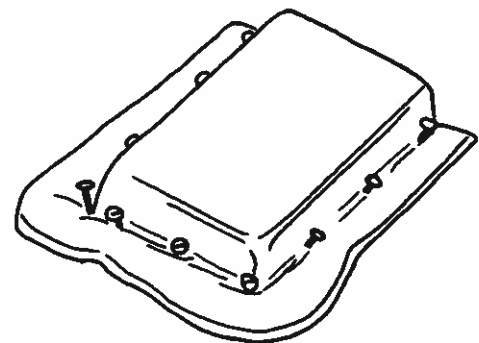
Leather often needs to be molded or shaped to make an article such as a knife case, bookcover, purse or holster.

This requires moistening the leather in order to shape it and obtain "set". To obtain sharp, neat folds for bookcovers and box purses, the gouge and bone folder illustrated on pages 5 to 7 must be used.

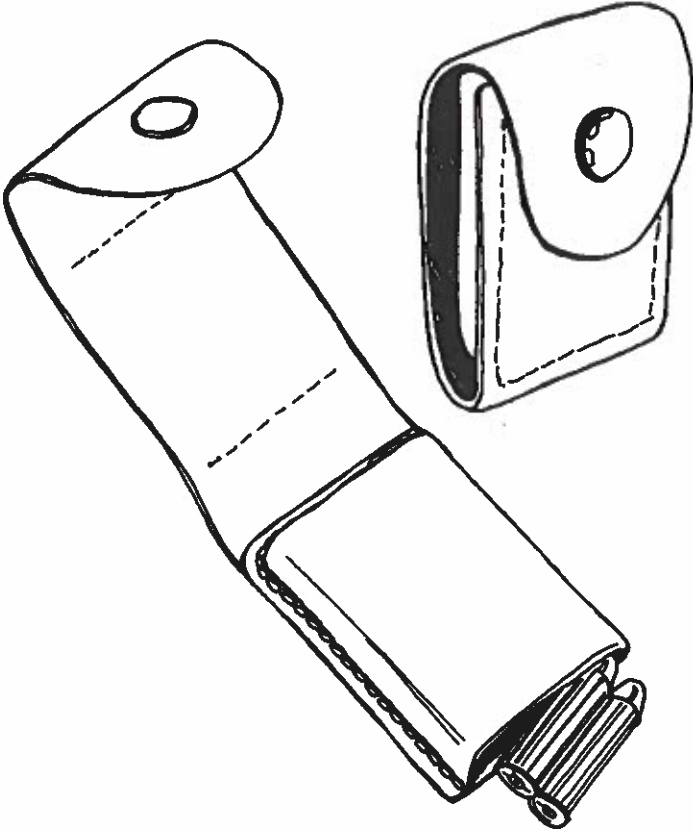
Simple shaping of leather required for knife cases, holsters and similar articles can usually be accomplished by forming directly over the object to be held and protected. This can be done by first submerging the completed article, without finish, in water for a few moments to quick-case the leather. This accomplished, the object should be shoved into the damp leather article, stretching it to shape. After a few minutes the object can be removed and the leather allowed to take its "set" as it dries to shape. Once dry, the article can be given the final leather finish.

More difficult or advanced shaping requirements such as those required for form fitting hand-sewn cases are best

accomplished by molding the leather over a shaped wood form.



Consult the references listed on page 31 for instructions on this technique.



UNIT 4

ADVANCED LEATHER CARVING

INTRODUCTION

THINGS YOU SHOULD LEARN

Figure carving on articles other than pictures
More advanced leather carving techniques which may include embossing and filigree work
Beginning dyeing and staining techniques as outlined in unit 3 are optional.
Solid color dyeing and color shading will not be included in this unit.

ENROLLMENT INFORMATION

Units 4 through 10 need not be taken in sequence. All units may be taken as many times as you want. If you re-enroll in the same unit, you should plan to learn new skills, gain new understanding and improve on previous skills. A list of references which may be helpful is on pages 31 and 32.

TOOLS YOU WILL USE

Tools used in previous units and others as determined by the design you select.

It is recommended that you add to your leathercraft library. Many of the techniques listed are not illustrated in detail and require additional resources or instructions for you to do them well. See pages 31 and 32 for suggested references.

WHAT YOU SHOULD DO THIS YEAR

Participate in your 4-H Club meetings. Perfect skills learned in previous units. Learn one or more of the skills listed below:

Figure carving on articles other than pictures
Embossing
Filigree work

Share information learned through talks, demonstrations and displays.

Keep a record of project costs and experiences.

Evaluate your progress with your leader. Exhibit the following:

A. Any article or set, other than a picture, demonstrating advanced carving skills. The decorative design can be either conventional or realistic. Beginning dyeing and staining according to unit 3 are acceptable but color shading and solid color dyeing will not be permitted on this article.

Label the article or set with your name, address, age and county. Be sure this information also appears on the front of your record.

B. Completed record.

EVALUATE YOUR WORK

Use the following check list to be sure you have completed the goals for this unit.

Yes

1. Record Book
 - a. Attended club meetings
 - b. Gave a demonstration or talk
 - c. Completed the record book

- d. Listed skills which were developed
 - e. Completed one article or matching set
2. One Completed Exhibit Article
 - a. Shows good quality workmanship
 - b. Designs are appropriate for size and shape of article
 - c. At least one new skill used on the article

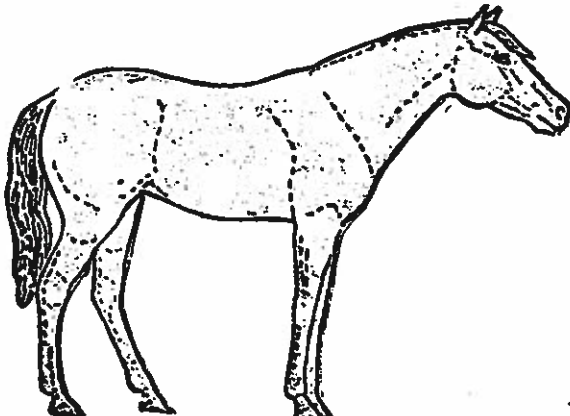
FIGURE CARVING

Persons, animals or objects may be carved on belts, wallets, book covers or other items for this unit. This is called figure carving. If you wish to make a framed and mounted figure carved picture, you must enroll in unit 6 (pictorial carving).

Figure carving is similar to floral carving except it is more difficult. There are smaller details and many depth planes required with the swivel knife and stamping tools as you try to achieve a three-dimensional effect.

Patterns often show dotted lines. These should be traced and transferred to the damp leather, but should not be cut with the swivel knife. They are guide lines for beveling contours and muscles.

DO NOT CUT DOTTED LINES ON PATTERNS



Always cut the foremost objects first.

Picture the figure in your mind.

- o On which side of the dotted lines should beveling be placed to emphasize the muscle structure you want?
- o Where should the figure be shaded to show how light strikes it?

Various sized bevelers are helpful in figure carving. Use the heel of bevelers to slope and mat down away from figures. This creates an illusion of depth. Don't worry about tool marks. They will be smoothed out later.

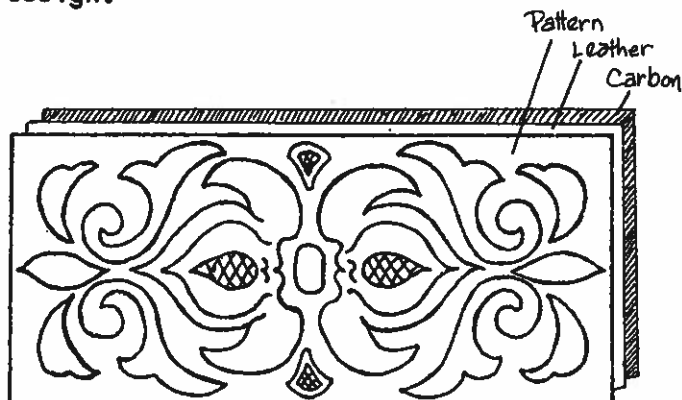
The modeling tool is very important in figure carving. Use the spoon to round edges of figures to make them look real and to smooth out rough beveling marks. Use the point for fine details and as a tracing stylus. Scratch in hairlines with the point of the spoon or use a hair blade in the swivel knife. Add facial expression and press in nostril and corners of eye with point of spoon. Shape the eye round. Do not smash down the eyeball.

EMBOSSING

In embossing, the design is brought into relief by raising it above the surface of the background. This technique is suitable for light or craft leathers. It is frequently used on figure carved articles.

Moisten and prepare the leather for tooling.

Select a design which lends itself to surface raising and transfer it to the leather. If leather is thin enough, you might transfer the design to both sides of the leather at one time so they will coincide exactly. Place special carbon paper, carbon side up, on the work table. Put moistened leather, flesh side down, on top of the carbon paper. The paper pattern with design should be placed on top of leather. Transfer design.



Press design lines deeper into moist leather with the tracer end of modeling tool. Continue pressing design deeper until the lines are visible when viewed from the under side.

If desired, use modeling tool to depress background around the design outline. You may tool the background, if you wish.



Place leather with flesh side up, so the portion to be raised fits into the hollow part of the hand. Press design to be raised with spoon end of modeling tool until that portion stretches. This may require repeated pressing with additional moisture added if the leather becomes dry.

Place flesh side down on a hard surface and bevel around raised portion of the design.

Another method is to push the leather up by working it on a piece of felt. By keeping the flesh side moist and using sufficient pressure, you can get a high degree of relief. After working on the underside, turn leather over and work on the topside, pressing close beside the lines to sharpen them. Repeat this process several times to make sure leather will retain the embossing evenly and distinctly after it has dried.

To get a higher degree of relief, fill depressed parts of design with cotton or leather skivings and hold in place with rubber cement. When filling is completed, cover the whole under-surface of leather with a layer of paper skiver or cloth. This method is used extensively on book covers and handbags.

FILIGREE WORK

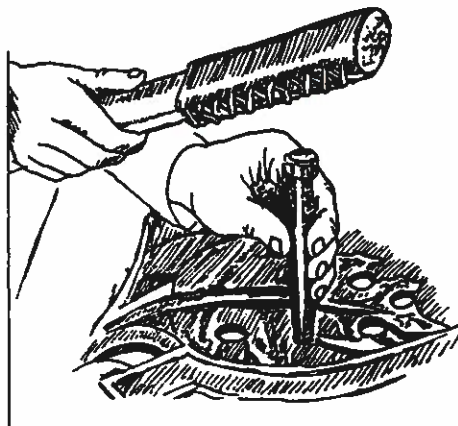
Filigreeing is done by cutting out the background part of a design. Suede or felt may then be used behind the work to show through and emphasize the design. This works well on most carving leathers.

Glue a piece of heavy linoleum to a smooth board. This makes a good cutting block for filigree work, cutting stencils, punching holes, etc.



Do all carving and stamping in the usual manner before starting to filigree.

Begin filigreeing by placing carved leather on a linoleum block. Fit size 4, 6, or 7 drive punch into the curved parts of the design background.

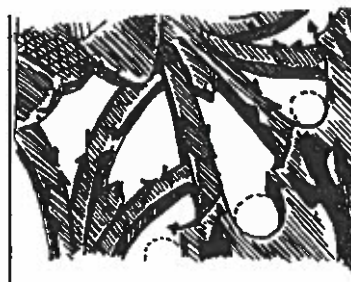


Punch or cut out these portions of the background. Removal of the remaining background may be done with a swivel knife using a sharp filigree blade or with an x-acto knife. Alternatively, the entire background may be removed with punches. A one-prong thonging chisel is handy for small areas because you can see exactly where it will cut before striking with the mallet. There

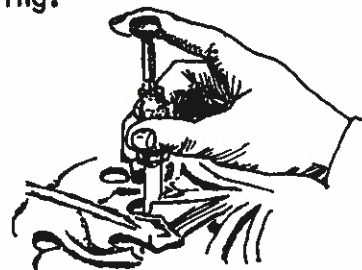
is little danger of it slipping out of place. Experiment to see what method works best for you.

Always cut away from holes, or corners. Cut into free areas and away from intersecting lines. Then, if the knife should slip, it will not cut into the design.

The arrows in the design below indicate the proper direction of cuts.



Keep the knife sharp for clean cutting. Hold it straight up and down to prevent undercutting.



After filigreeing, apply leather dressing to carved panels. Use a small brush to thoroughly cover edges of filigreed areas.

Colored leather, suede or felt may be used between the lining and the filigreed panels.

UNIT 5

COLORING AND SHADING

INTRODUCTION

THINGS YOU SHOULD LEARN

Dyeing and shading techniques on carved leather including solid color dyeing. (This work will be done on items other than framed pictures.)

ENROLLMENT INFORMATION

This unit may be taken as many times as desired, but different skills should be used each time. Different dyeing or coloring techniques should be used or the same dyeing and coloring techniques used on articles using different skills learned in units 3 and 4 (filigree, embossing, inverted carving, etc.)

TOOLS YOU WILL USE

Tools used in previous units and others as determined by the design you select.

It is recommended that you add to your reference library as necessary to secure additional information on the skills you select to learn.

WHAT YOU SHOULD DO THIS YEAR

Participate in your 4-H club meetings. Practice skills learned in previous units.

Learn about:

- Solid color dyeing
- Other forms of dyeing
- Shading

You may work on any carved leather item, other than a mounted or framed picture, using one or more colors, solid color dyeing, block dyeing, or shade dyeing as discussed in this unit.

Share information learned through talks, demonstrations and displays.

Keep a record of project costs and experiences.

Evaluate your progress with your leader.

Exhibit the following:

- A. One completed article or matching set other than a picture, which demonstrates advanced carving skills and which is colored by solid color dyeing, block dyeing or shade dyeing. The design can be either conventional or realistic carving.

Label the article or each item of the set with your name, address, age and county. Be sure this information also appears on the front of your record book.

- B. Completed record.

EVALUATE YOUR WORK

Use the following check list to be sure you have completed the goals for this unit.

Yes

1. Record book
 - a. Attended club meetings.
 - b. Gave a demonstration or talk.

- c. Completed the record book.
 - d. Listed skills which were developed. Used at least one new skill on exhibit article.
 - e. Gave information about one completed article or matching set.
- 2. One completed exhibit article
 - a. Shows good quality workmanship.
 - b. Designs are appropriate for size and shape of article.
 - c. Dyeing and/or shading techniques are used skillfully.

DYEING AND SHADING

DYEING HINTS

Be sure to have enough dye to complete the article.

Check the shade of dye on a piece of scrap leather from the article as all leather does not dye the same because of tanning methods. Wait until test piece dries. The intensity of the dye will change when it dries.

Place bottle conveniently so you can dip brush easily yet not reach across the leather.

Always begin dyeing with the lightest shade, end with the darkest.

Have only one color of dye opened so you will not accidentally dip into the wrong bottle.

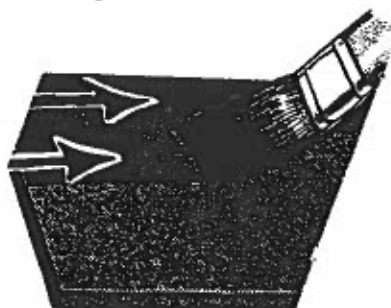
Hold the brush in an almost vertical position.

Never have brush overloaded where it may drip on an unwanted area. A small amount of dye in a small container aids in loading your brush correctly.

SOLID COLOR DYEING

Water solvent dyes should be applied with brushes.

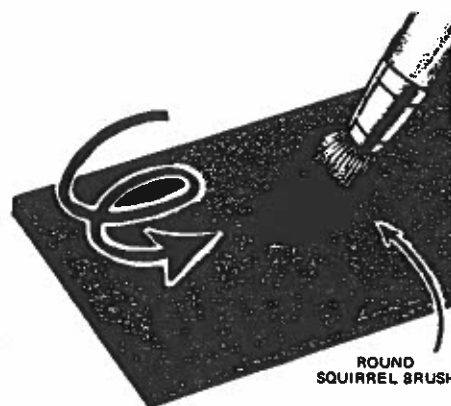
The edge of a flat lettering brush should appear tapered sharply when wet with the proper amount of dye. Your brush stroke should be from left to right, if right handed or right to left, if left handed.



Always keep the area to be dyed in full view. Use cross and diagonal strokes for second and third applications of dye to obtain a more even job.

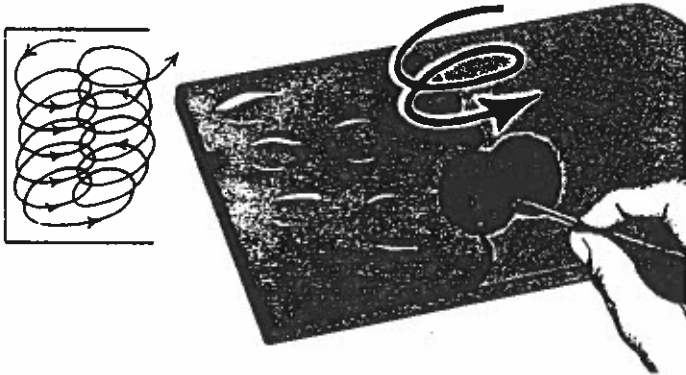
A round squirrel-hair brush may also be used. A scrap of leather from the article you are making should be handy when using this brush. The brush should be gently touched to the scrap to exhaust any excess dye. The proper dye load should always leave the brush tip pointed.

Follow a circular motion so each stroke slightly overlaps the last. When the brush contacts leather, the bulk of the dye is immediately exhausted into the leather. The circular motion redistributes this heavy area evenly over that part of the surface.



Oil and spirit solvent dyes may be applied with cotton or felt swabs, a piece of sheep shearing or wad of

absorbent cotton held in the hand. Dip applicator in color and begin in upper left hand corner. Move quickly in a circular motion so each stroke slightly overlaps the last. When strokes of



color begin to thin, dip applicator into color and resume motion until entire project is covered.

CAUTION: Protect hands from direct contact with oil and spirit solvent dyes as stains are difficult to remove from skin.

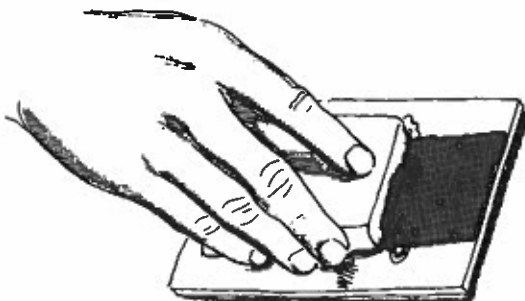
BLOCK DYEING

Wrap a piece of cloth (old T-shirts are fine) a few times around a block of wood and secure it with thumb tacks. Dip a wool dauber into a bottle of dark colored dye (black, dark brown). Wipe off the excess on the rim of the bottle.

Apply a small amount of dye on the cloth covered block.

Blot the dye on a thick pad of newspaper.

Rub the block across the top of the leather to obtain a mottled two-tone effect.



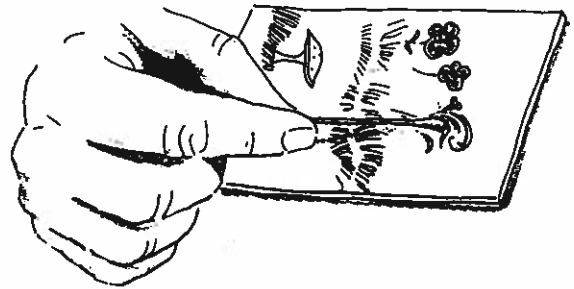
Repeat until color and effect is what you want.

Rub with a soft cloth or sheeps wool scrap.

Alternate techniques:

Small tooled areas can first be color accented.

Using a No. 3 brush or a small cotton swab (paper or wood shaft only -- no plastic) dab bright colors (blue, green, red, yellow) into the tool marks. Allow to dry.



Complete dyeing using the block-dyeing technique just described.

NOTE: Always cover the work area where dye is used. Lots of newspaper works well.

SHADE DYEING

Monochrome is a variety of shades, all of the same color. Since natural leather is actually a shade of brown, all of the other shades of brown will be in harmony with it. Therefore, dyeing will always be in good taste and harmony when you use shades of brown on leather. The lightest tones of the lightest colors should be applied first, progressing to the darkest tones of the same color.

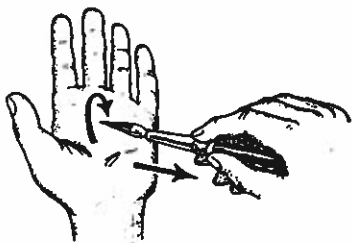
A highly reduced strength of dye should be applied over the entire area to be dyed. This reduced strength should be no stronger than 25 to 1 or approximately 30 drops of color to an ounce of

reducer. This strength can be called "zero." "Zero" strength acts as a primer for the colors applied to the article. Other reduction strengths you might use are:

- No. 1 -- 3 parts reducer to 1 part dye
- No. 2 -- 2 parts reducer to 2 parts dye
- No. 3 -- full strength dye

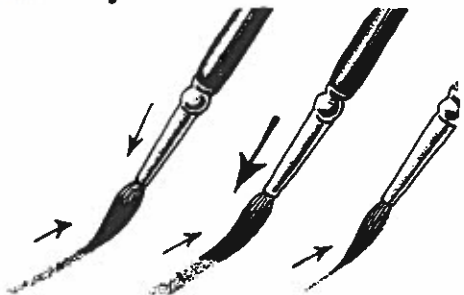
Prepare each strength of dye and reducer in advance. Be sure to label container with the formula. Test each formula for strength on scrap leather. It is better to mix formulas weakly, test and add more dye to your liking. Keep a notebook of formula strengths preferred so you can replenish at a later time, if desired. Always use a clean eye dropper when preparing the formula.

Before using a new brush, wash in warm soapy water, rinse clean and squeeze out most of the moisture. To shape the point, lay in palm of hand and twist clockwise, pulling it out of the hand as you twist. Repeat the operation two or three times until brush is well pointed.



You can control the size of each stroke with amount of dye in the brush and pressure exerted. The three illustrations show:

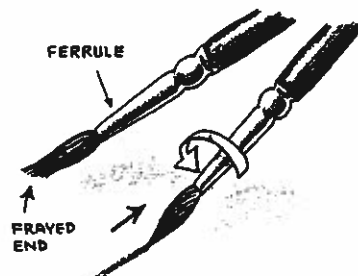
1. Proper direction of stroke with slight downward pressure.
2. More downward pressure, releasing more dye.



3. Fine line dyeing after excess has been exhausted from brush. Never try fine line dyeing with brush directly from bottle. Brush excess on scrap, twisting clockwise with the stroke to bring hairs to a fine point.

Always clean brush before using another color. First wipe brush with a rag, clean with reducer, then wipe brush dry and proceed to the next color.

If brush begins to fray at the point and hinders dyeing, turn slightly clockwise in the fingers as you make each stroke. If fraying persists, it may be due to too much dye that has dried and hardened the hairs at the ferrule. Clean brush in its proper thinner, wash with mild soap and warm water and reshape the point.



Combinations of colors are handled much the same way as monochromatic dyeing. Mix the full strength colors until you get the desired color. Then reduce, using the formulas given previously. Many colors can be used as they come in the bottle. Felt-tip pens may also be used.

Be sure to practice on scrap leather and wait until dye has dried to get the effect of the color.

SPECIAL SHADING TECHNIQUE

For special shading effects with diluted color strengths as in figure dyeing and floral petal and leaf shading, hold brush at about a 45° angle to work. Best results are obtained by quick

strokes of the brush so heavy concentrations of dye are not absorbed in one spot.

As brush is touched to leather, begin the stroke at once and apply considerable downward pressure. Simultaneously twist in fingers to "feather edge" the brush point and widen dye coverage. When the stroke is from right to left, twist brush clockwise. From left to right; counterclockwise.

A great deal of practice will be necessary to master the art of shading with leather dyes. Begin with weak solutions of color and practice shading on plenty of scrap leather. Begin with lightest tones, covering all except the highlighted areas. Then, mix stronger color, and gradually decrease the area covered and at the same time blend and darken the shading.

DRY-BRUSH TECHNIQUE

For dry-brush technique, the brush is held and used in the same manner as in shading. However, most of the dye is first brushed on a scrap of leather until all excess has been exhausted and only enough remains to carry color to stain the surface of the carving with very little penetration. The strokes are made quickly so dye does not run down the depressions of hair lines and other tiny details.

Many hours of practice will be required to master this technique. But the results are very rewarding and carved figures assume a much more life-like appearance. The same methods are used to achieve the blending shades, only dye is applied with a drier brush.

AIR BRUSH TECHNIQUE

Air brush dyeing requires special equipment including compressor, air brush, syphon bottle, hose and accessories. Air brushing like other dye techniques, requires practice. To prevent darkening at the beginning and end of "brush strokes" you must have the air brush moving.

Using a piece of scrap leather, experiment with the air brush.

- Turn the dye flow down and hold the tip about 1/4 inch from the leather to achieve fine lines.
- Then increase the distance between brush and work and note the difference in spray pattern and density.
- Practice outlining and shading on a simple carved design.

Interesting effects can be achieved with air brushing.

UNIT 6

PICTORIAL CARVING

INTRODUCTION

THINGS YOU SHOULD LEARN

To figure carve a portrait and/or scene on leather
Suitable mounting and/or framing of pictures and portraits

ENROLLMENT INFORMATION

This unit may be taken as many times as desired, but different skills should be used each time.

TOOLS YOU WILL USE

Tools used in previous units and others as determined by the design you select.

It is recommended that you add to your reference library as necessary to secure additional information on the skills you select to learn.

WHAT YOU SHOULD DO THIS YEAR

Participate in your 4-H club meetings.
Practice skills learned in previous units.

Learn more about:

Figure carving

Dyeing and shading (optional)

Select one or more pictures, scenes, or portraits to carve which are appropriate for your intended use and match your ability. (Check size with your extension agent.)

You may dye and/or shade your picture with one or more colors, using techniques explained in previous units, if you wish.

Frame or mount pictures as appropriate. Share information learned through talks, demonstrations and displays.

Keep a record of project costs and experiences.

Evaluate your progress with your leader. Exhibit the following:

A. One framed or mounted, carved leather picture (scene or portrait) or a matching set. The article may be left natural color, or it may be stained or colored according to any of the methods taught in previous units.

Label each picture with your name, address, age and county. Be sure the same information appears on the front of the record.

B. Completed record

EVALUATE YOUR WORK

Use the following check list to be sure you have completed the goals for this unit.

Yes

1. Record Book

— a. Attended club meetings
— b. Gave a demonstration or talk

- c. Completed the record book
- d. Listed skills which were developed
- e. Gave information on one completed picture or matching set

- 2. Completed, mounted or framed exhibit article
 - a. Shows good quality workmanship
 - b. Uses pictorial carving skills effectively
 - c. Designs are appropriate for size and shape of picture
 - d. Pictures are effectively framed or mounted

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TECHNIQUES

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Study the information in units 4 and 5 and from good references for techniques used in pictorial carving.

References are listed on pages 31 and 32.

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FRAMING AND MOUNTING PICTURES

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A frame is used to enclose a picture, to give it emphasis, and to add to its beauty. It should harmonize both with the picture and the room in which it will be used.

- The frame color should be in harmony with both picture and wall. A guide is to select a frame that is not quite as dark as the darkest color in the picture, however, it is all right to select a lighter shade.
- Frame lines should emphasize lines in the picture. If dominant picture lines are simple, complex, straight, curved, etc., they should be repeated in the frame.
- The subject of the picture influences choice of a frame.
 - Simple frames are appropriate with pictures of distant scenes and with elaborate, colorful or detailed pictures.
 - Frames that look worm-eaten or weathered are suitable for nature subjects used in an informal room.

- Sporting pictures might have boldly colored or black frames of flat wood molding.
- Subjects that suggest strength require heavier frames than pictures with more delicate subjects.
- Strong colors or diagonal lines in pictures call for heavier frames than do weak colors or horizontal lines.

- The frame width may be determined by the size of the picture. Narrow frames are usually best on small pictures, while wider ones are used on large or heavy-looking pictures.

MOUNTING PICTURES

Leather pictures are not always framed. They may be mounted on weathered wood or other materials. The colors and lines of the picture should be repeated or enhanced by the material on which it is mounted.

UNIT 7

MAKING AND REBUILDING SADDLES

INTRODUCTION

This unit is recommended only for experienced leather workers. Secure good reference books and study them thoroughly before beginning any work on the saddle. There are several very complicated procedures in covering the cantle and the seat roll. Visiting with an experienced saddle-maker may help eliminate many potential problems.

THINGS YOU SHOULD LEARN

To make or rebuild a saddle to meet your needs.

WHAT YOU SHOULD DO THIS YEAR

Participate in your 4-H club meetings. Obtain and study references on saddle making.
Make or rebuild a saddle.
Share information learned through talks, demonstrations and displays.
Keep a record of project costs and experiences.
Evaluate your progress with your leader.
Exhibit the following:

- A. One completed saddle. The leather may be either tooled or untooled and may be finished in any suitable fashion.

- B. Completed record.

EVALUATE YOUR WORK

Use the following check list to be sure you have completed the goals for this unit:

Yes

1. Record Book
 - a. Attended club meetings
 - b. Gave a demonstration or talk
 - c. Completed the record book
 - d. Listed skills which were developed
 - e. Completed one saddle
2. One Completed Saddle
 - a. Explanation given on how saddle was made or work done to rebuild it
 - b. All designs are related to the shape of the areas on which they are used
 - c. Shows good quality workmanship

Label exhibit with your name, age, address and county. Be sure the same information appears on the front of your record.

ALTERNATIVES

There are three possible alternatives to choose in making a saddle:

1. Make a saddle from a kit. Purchase a kit which has everything needed to complete the saddle: hardware, lace, pre-formed saddle backs, covered trees, etc. Do all the tooling, assembly and finishing according to instructions provided.
2. Rebuild an old saddle. Secure an old saddle of the style you prefer. Make sure it has a solid and sound tree and all the leather covering on it.

Disassemble the saddle, paying very close attention to the way in which it was assembled. Keep track of the number and size of screws, rivets, nails, tacks, buckles and conchos as these should be purchased new for the project.

Using leather parts taken from the saddle, trace outline on a piece of heavy craft paper. Make sure parts are lying flat on paper before tracing the outline. Cut out paper patterns and lay them on the new leather. Move pattern pieces until you have found the best possible use and least waste of leather. Then, trace and cut all the new parts.

Transfer carving patterns or mark guide lines for geometric stamping onto the saddle skirts, fenders and seat that are to be tooled. All tooling must be done before beginning to assemble pieces.

After all carving and tooling is done, begin assembling the saddle. Use a good reference book for complete instructions.

Dampen only the flesh side of leather which needs to be formed to the tree. This will prevent staining of the finished side of leather.

Oiling and finishing should be done before boring and stringing the saddle.

Clean saddle with a solution of oxalic acid to remove any stains. Allow leather to dry thoroughly.

Apply saddle soap, using a piece of sheep's wool or soft cloth. Rub off excess soap with a piece of sheep's wool or dry soft cloth.

Oiling a saddle is optional. Saddles intended for heavy outdoor use are given a heavier oil treatment than others.

If you oil your saddle, use a good grade of neat's-foot oil; about a pint for a light color; up to a quart for darker colors. Heat the oil, as it is more easily applied if it is warm. Do not overheat. It should be cool enough to put your hand in the warm oil. Apply oil liberally with a sponge or wool skin to all parts. Keep oil off the sheep wool lining. Apply one, two or three coats, depending on the color desired.

Bore and string saddle to complete.

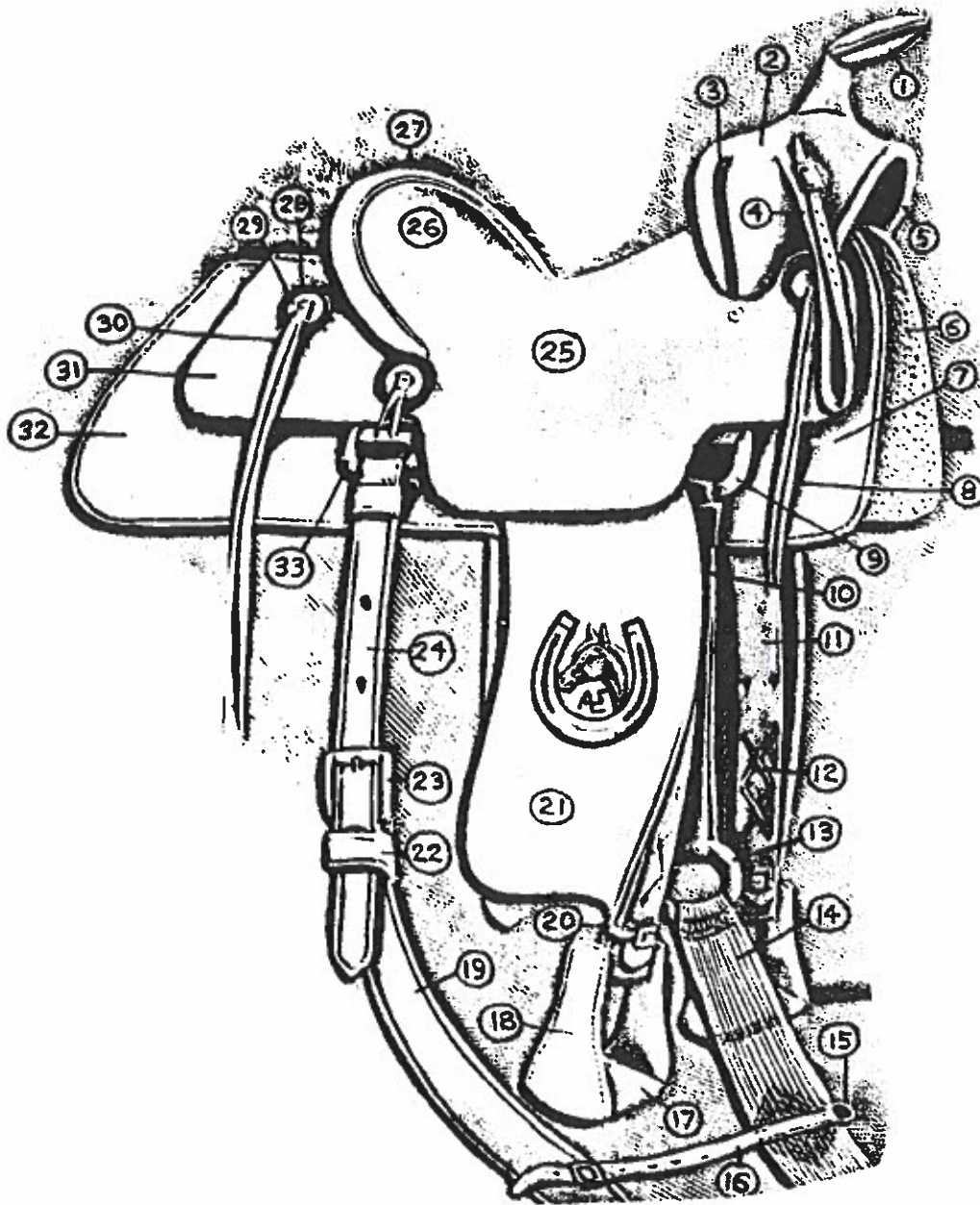
3. Custom build a saddle. The most difficult way to make a saddle is to buy a rawhide covered tree of size and type to suit the rider and build the saddle from this point. This involves many hours of painstaking cutting and fitting of paper patterns to the tree to ensure a proper fit before any actual cutting of leather begins.

After cutting leather, you may follow the steps given in rebuilding a saddle.

PARTS OF A SADDLE

Parts are shown for a double rigged square skirt saddle.

- | | | |
|-------------------|------------------------|------------------------|
| 1 -- Horn | 9 -- Front Rigging "D" | 16 -- Connecting Strap |
| 2 -- Swell | 10 -- Latigo | 17 -- Foot Tread |
| 3 -- Welt | 11 -- Stirrup Leather | 18 -- Stirrup |
| 4 -- Rope Strap | 12 -- Lacing Thong | 19 -- Flank Cinch |
| 5 -- Roll Binding | 13 -- Cinch Ring | 20 -- Stirrup Strap |
| 6 -- Wool Lining | 14 -- Cinch | 21 -- Fender |
| 7 -- Skirt | 15 -- Toe-Down "D" | 22 -- Billet Loop |
| 8 -- The Strings | | |



REFERENCES AND RESOURCES

You may wish to look at the following books for help in these units.

REFERENCE	AUTHOR	UNIT				
		3	4	5	6	7
<u>General Leather Carving and Use of Tools</u>						
How to Carve Leather	Al Stohlman	X	X	X	X	
Leatherwork Manual	Al Stohlman, A. D. Patten J. A. Wilson	X	X	X		
Leathercraft Tools	Al Stohlman	X	X	X		
Tech-Tips	Al Stohlman	X	X	X	X	
<u>Embossing, Filigree</u>						
Al Stohlman's Classic Patterns, Vol I	Al Stohlman		X	X		
The Art of Embossing Leather	Al Stohlman		X	X		
<u>Inverted Leather Carving</u>						
Inverted Leather Carving	Al Stohlman	X				
<u>Figure Carving</u>						
Figure Carving	Al Stohlman		X	X	X	
Figure Carving Finesse	Al Stohlman		X	X	X	
<u>Pictorial Carving</u>						
Pictorial Carving	Al Stohlman		X		X	
Pictorial Carving Finesse	Al Stohlman		X		X	
Pictorial Definition: The Fine Art of Leather Carving	Paul Burnett		X		X	
<u>Dyeing and Shading</u>						
How to Color Leather	Al Stohlman	X	X	X	X	
Coloring Leather	Al Stohlman	X	X	X	X	
<u>Molding and Shaping Leather</u>						
The Art of Making Leather Cases Vol. I and Vol. II	Al Stohlman	X	X	X		
Leathercrafting: Procedures and Projects	Ray Cherry	X				

REFERENCE	AUTHOR	UNIT				
		3	4	5	6	7
<u>Lacing and Stitching</u>						
How to Lace	Al Stohlman	X				
How to Buckstitch	Al Stohlman	X				
The Art of Hand Sewing Leather	Al Stohlman	X				
<u>Saddlemaking</u>						
How to Make Cowboy Horse Gear	Bruce Grant					X
Making and Repairing Western Saddles	Dave Jones					X
How to Make a Western Saddle	Bruce Grant and Lee M. Rice					X
<u>Patterns and Designs</u>						
Lucky-eight Belt Book		X				
Craftool Belts Galore	Al Stohlman	X				
Projects and Designs	Al Stohlman	X	X	X	X	