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ABC's of Leatherwork



ABC'S OF LEATHERWORK

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The Leather Factory®, Fort Worth, TX 76101
www.leatherfactory.com

Tandy Leather Co®, Fort Worth, TX 76105
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INTRODUCTION

Leather, one of mankind's oldest natural resources, is a foremost gift to man from Mother Nature. Without it man might not have survived.

The history of leather is closely merged with the progress of mankind. Long before man devised a written alphabet, he communicated through simple drawings or sign language. Many of these "messages" were done on skins of animals which he killed for food. With the skins of animals he was able to clothe and shelter himself. Modern Archaeology has uncovered leather articles and artifacts from cultures dating back over 33 centuries and found them to be in an excellent state of preservation.

The ancient Romans used leather as currency, and the style and quality of a Roman's sandals conveyed his status in society.

When man realized the importance of recording his thoughts and knowledge in books which he could carry and store more conveniently than stone tablets, he began to express himself on parchment leather pages.

During the Middle Ages, however, only the wealthy could afford boots, capes, saddles, etc. made of leather. Leather workmanship was limited to a very narrow section of society. A secretive lot, Leather Guildsmen closely guarded knowledge of their art which they handed down from father to son.

When Cortez conquered Mexico in the early 16th century, leather artistry came boldly into the New World. The Conquistadores brought horses and with them came the need for saddles and other horse gear. Spain had long been a leader in leather artistry and the skilled craftsmen who came over to the New Land coupled their vast knowledge with the inspiration they gleaned from the beautiful floral patterns to be found all about them. Thus came the transition from basic geometric designs dating back to medieval times to the floral patterns of modern artistry.

Today anyone can enjoy leatherwork, the art of creating beautiful and useful articles of leather. Just as early man learned his "ABC's" on leather, this book is designed to teach you some of the basics of working with leather.

To decorate leather by carving, you need a small group of specially designed tools: swivel knife, camouflage, beveler, pear shader, veiner, seeder, backgrounder and mallet. These tools enable you to create basic leather articles. As your skill and enthusiasm grow you will want to add more tools to your collection. Of course you also need leather!

Leather is unique. . . different from any "cloth" put together by man. . . for it is the actual skin of an animal that grew as the animal grew. The skins of bovine animals (cows, oxen, etc.) provide most of the leather for carving. These skins must be vegetable tanned so that they will readily absorb moisture, allowing you to mold and form the leather easily.

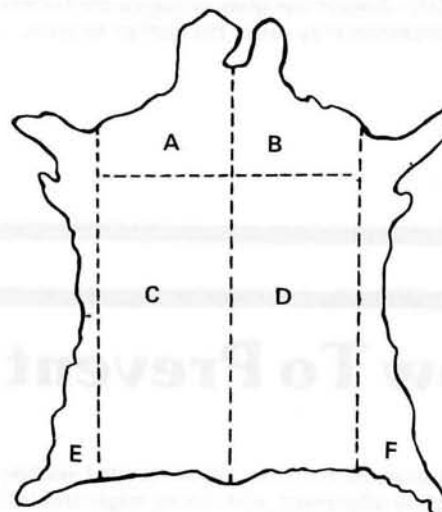
Leather is usually sold by the square foot and is measured by special machines at the tanneries. The number of square feet is usually marked on the underside of the hide with a crayon or chalk. Fractions of a foot are always to the nearest fourth (For example: $12^1 = 12\frac{1}{4}$ sq. ft.; $12^2 = 12\frac{1}{2}$ sq. ft.; $12^3 = 12\frac{3}{4}$ sq. ft.).

Known as a skin, the complete hide of the animal may be left whole or cut into sections: sides, bellies, backs and shoulders.

SUBDIVISIONS OF A HIDE

The definitions of the various parts of a hide are shown below:

Side	A + C + E or B + D + F	Shoulder	A or B
Back	A + C or B + D	Double Shoulder	A + B
		Belly	E or F



The thickness (or weight) of leather is usually measured in terms of ounces. One ounce equals approximately $1/64$ " in thickness. Thus, 7-8 oz. means the leather is 7 to 8 ounces in weight or $7/64$ " to $8/64$ ". . . making it approximately $1/8$ " thick. Lighter weight leathers such as calf or kip (large calf) range from $1\frac{1}{2}$ oz. to 3-4 oz. Heavier leathers, 4-5 oz. to 10-11 oz. and more come from the hides of mature cattle.

To make leather a uniform thickness, the hides are run through a splitting machine. Since animal hides are not of uniform thickness and since they are wet when put through the splitting machine, the thickness of the leather will not remain the same throughout the hide. There will always be slight variations and that's why leather weights seldom measure out in exact 64th's of an inch. This is why leathers are usually shown as 4-5 oz., 6-7 oz., etc.

Now that you have been introduced to the history of leatherwork, you are ready to begin to learn to create luxurious leather articles. Start with a billfold or keycase. Soon you'll be making handbags, bowling bags, sporting goods, etc. Or, you may wish to begin your leatherwork hobby by making a pair of moccasins or sandals, or decorating your home with wall hangings and other accessories.

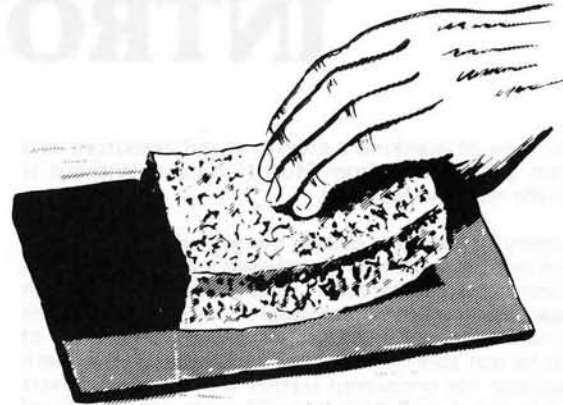
From the hides the cavemen used for clothing to the pressurized leather suits worn by today's astronauts, leather has fulfilled a great need in man's life. So, full speed ahead! You'll be entering a fulfilling, creative hobby you'll enjoy all the years of your life.

How To Moisten The Leather

Leather must be moistened with water before you can work with it. This procedure is called casing. As you wet the leather, the fibers swell and soften, thus enabling you to stamp and shape it.

Leather is moistened by rubbing a damp sponge on it. Be sure your hands are clean. Rub it first on the flesh side and then on the grain side. Apply the water as evenly as possible. When the leather begins to return to its natural color, begin stamping. If your leather dries before you complete the tooling design, it will be necessary to remoisten. Be sure you case the entire piece to avoid water spots.

CAUTION: Always use glass or plastic containers for the water. Metal containers may cause the leather to stain.

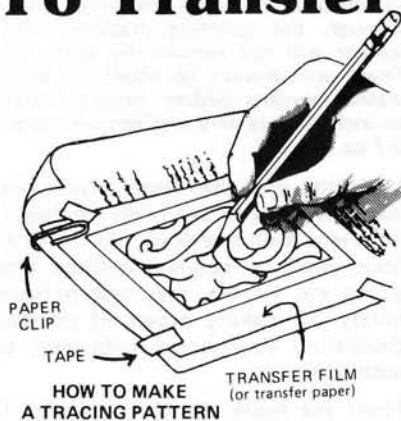


How To Prevent Leather From Stretching

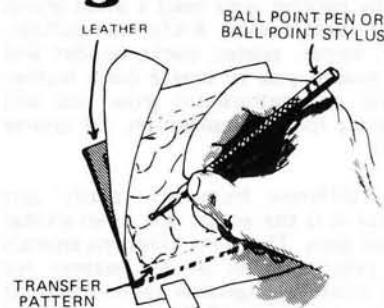
Leather projects cut from lighter weight leather that require a very close alignment with lining edges and lacing holes will need special handling to prevent stretching. To prevent leather from stretching while stamping the design, apply a light coat of rubber cement to the flesh side of the leather and to cardboard (use hard finish cardboard for easy removal of leather after stamping). Allow cement to dry, then adhere in place.

Case grain side of leather and carve and stamp design. To remove leather, place carved side down on bench and peel cardboard from the leather, holding leather as flat as possible so it does not wrinkle. If you do not intend to line your project, sprinkle a small amount of talcum powder over the flesh side of the leather to remove tackiness.

How To Transfer A Design To Leather



To decorate your leather, make a drawing of the outlines of your design. This transfer pattern indicates lines to be cut with the swivel knife. Place a piece of transfer film (glossy side down) over the transfer pattern and tape or clip it in position. Trace over the lines of the transfer pattern design.

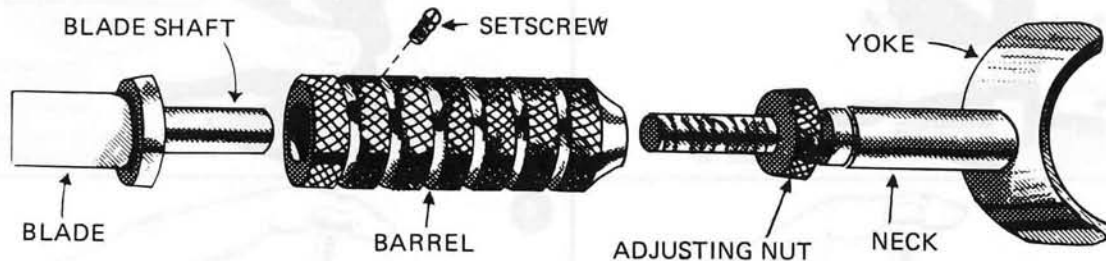


Place the transfer film pattern (pencil marks up) over the leather and tape in position. With a ball point stylus, retrace all lines of the design. . .beginning with the flower, then stems and leaves. Press firmly, but not too hard. Remove tape and film.

How To Use The Craftool Swivel Knife

To give depth to your design, cut the outlines of your design or pattern into the leather with a swivel knife. With properly cased leather, the cuts should stand open prominently...facilitating the use of the stamping tools.

When using the swivel knife or stamping tools, place your leather on a tooling board or similar smooth, hard-surfaced piece of material.



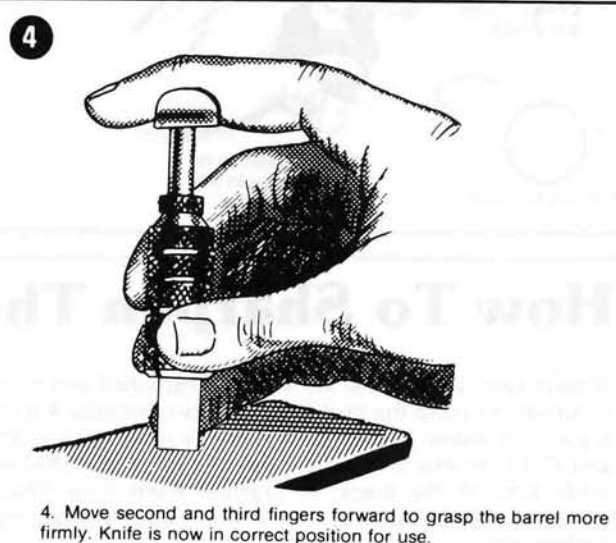
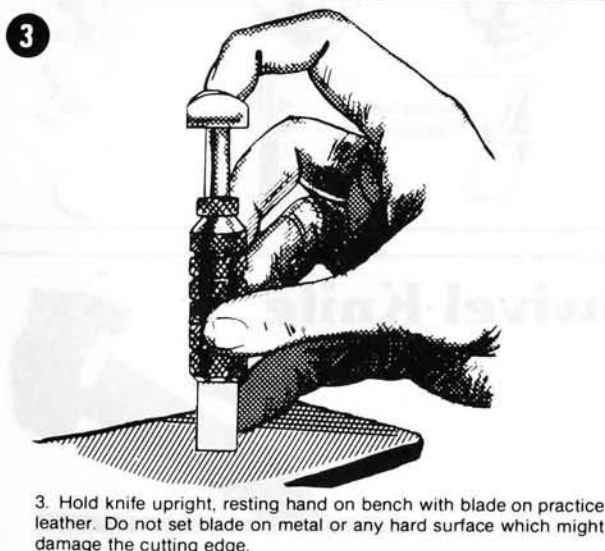
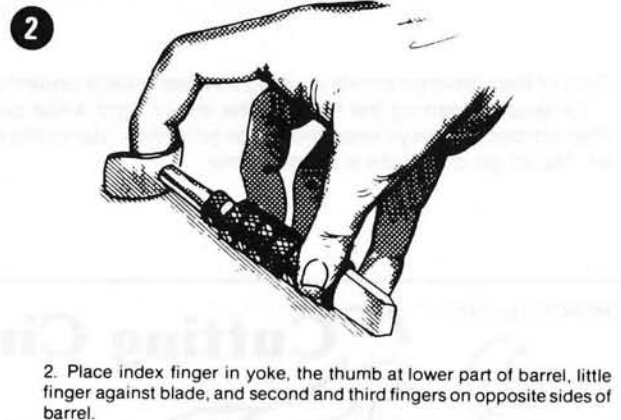
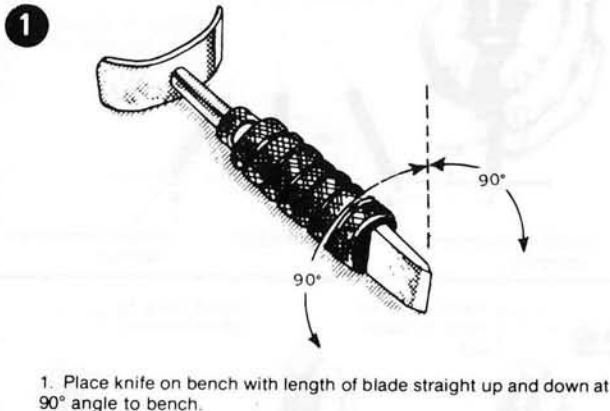
The exploded view above shows all the working parts of the swivel knife. When assembled, the yoke provides a rest and pressure point for the index finger to control the depth of the cuts. The adjusting nut varies the length of the knife to fit

different hands. The blade shaft inserts into the barrel and is secured by the setscrew. The blade, barrel and stem unit turns independently of the neck and yoke.

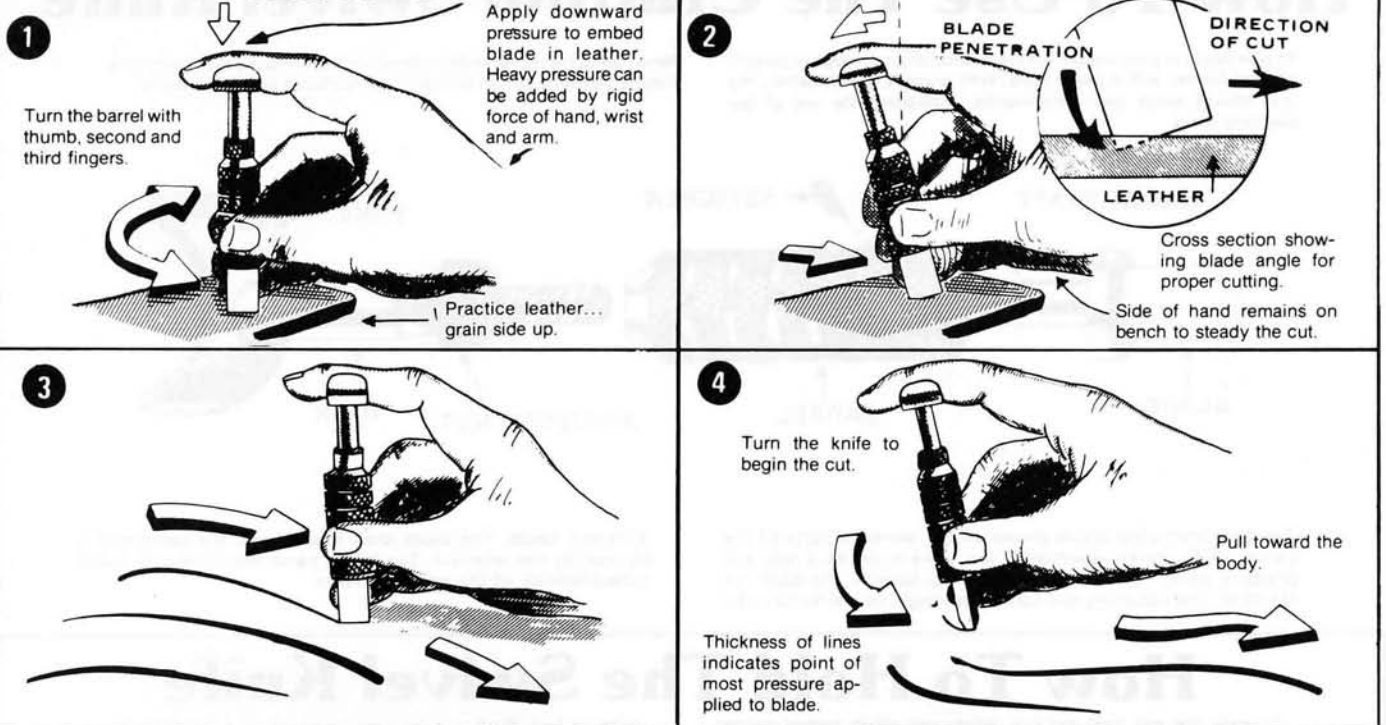
How To Hold The Swivel Knife

To enjoy the real thrill and rich satisfaction which leather carving offers, learn how to hold and use your swivel knife (see illustration). Acquiring control of the swivel knife takes patience and concentrated practice. Learn to relax. Be comfortably seated, and be sure to have excellent lighting to avoid eye strain and alleviate shadow from your

working area. Practice a few light curves, trying to maintain an even depth throughout cuts. Proper cutting depth for outlines of designs is one-third the thickness on heavier leathers and one-half the thickness on lighter leathers. Use your free hand to hold the leather. Turn the leather often to keep the cuts coming toward you.



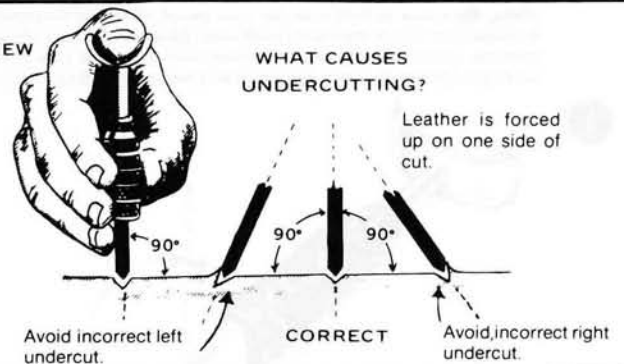
How To Use The Swivel Knife



One of the common errors in using a swivel knife is undercutting ...caused by leaning the hand to the left or right while cutting. Remember to always keep the blade perpendicular to the leather. Never go over cuts a second time.

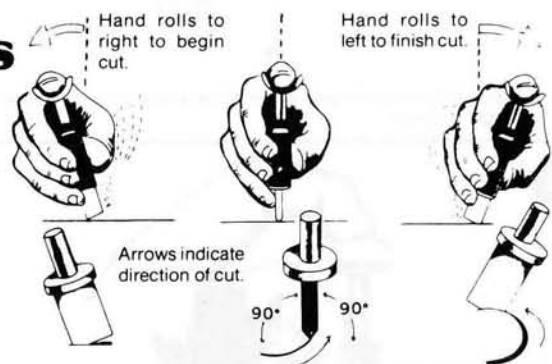
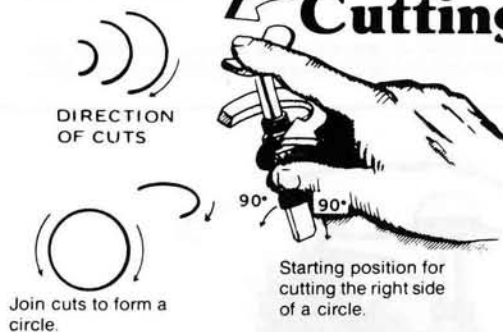
FRONT VIEW

WHAT CAUSES UNDERCUTTING?



PRACTICE CUTS

Cutting Circles

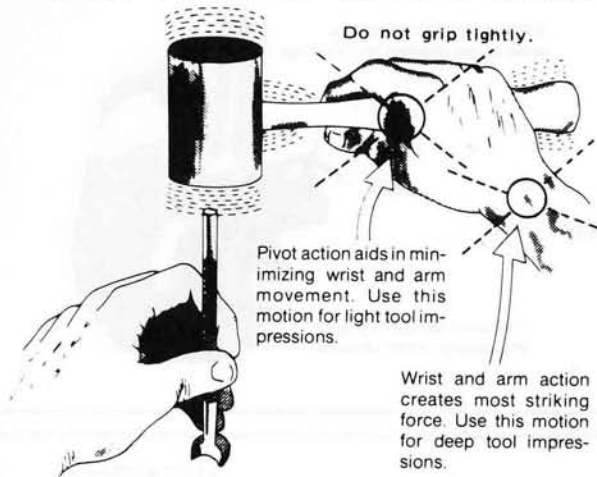


How To Sharpen The Swivel Knife

Always keep your swivel knife blade sharpened and smoothly stropped. To strop the blade, hold the beveled edge flat against a piece of leather coated with jeweler's rouge or a whetstone and PULL in one direction. Turn the knife and sharpen the other side of the blade. A Craftool Keen Edge Sharpener will hold your blade in perfect position while sharpening it on a whetstone.

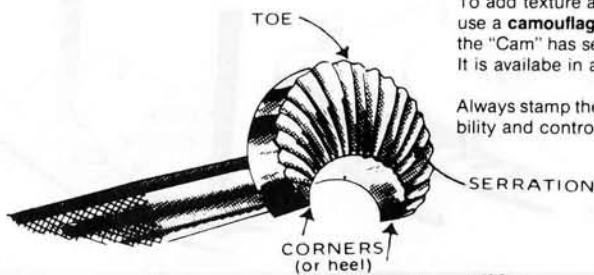


HOW TO USE THE CRAFTOOL LEATHER STAMPING TOOLS



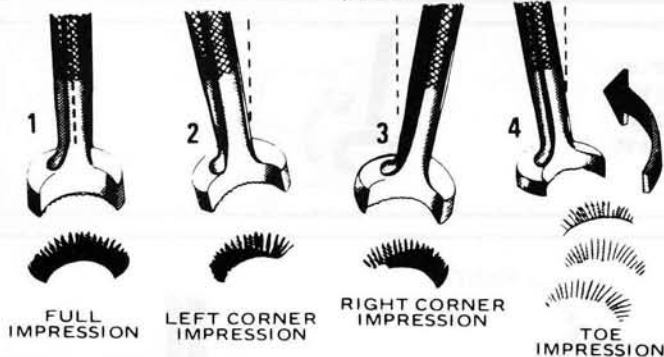
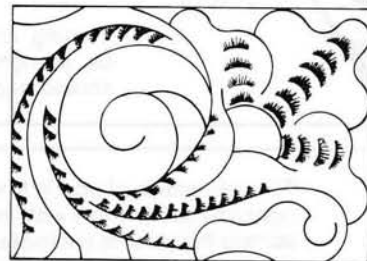
Enhance the beauty of your leather projects with stamping tools. These may be used to create original designs or for embellishing the beauty of your carved design. Use a wood or rawhide mallet head to strike the top of the stamping tool to obtain its impression in the leather. . . NEVER strike stamping tools with metal faced hammer, as this will damage tools.

Hold both the mallet and decorative stamping tool upright in a secure, but relaxed manner. Hold the mallet in the center of the handle with your fingers rather than the palm of your hand.

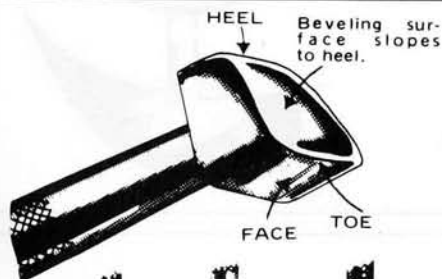


To add texture and to embellish the beauty of your design, use a **camouflage stamping tool**. A half-moon shaped tool, the "Cam" has serrations that fan out into a sunburst effect. It is available in a wide variety of sizes and shapes.

Always stamp the impressions away from you for better visibility and control. Space impressions evenly.



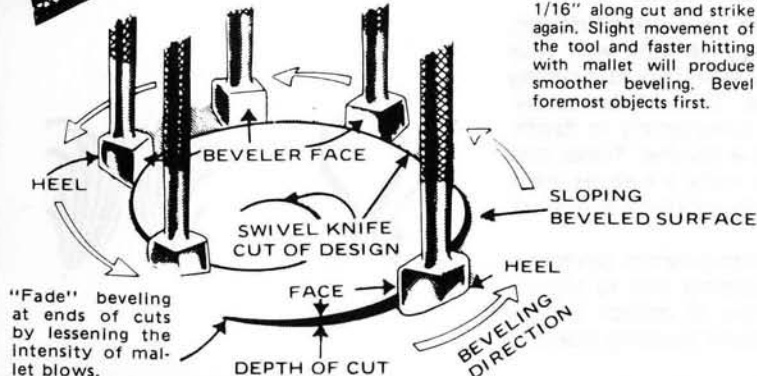
1. This is a full impression of the stamp. Hold the tool straight up and down and strike sharply with mallet.
2. Lean the tool to the left, holding securely with hand so tool does not slip when struck with the mallet. Impressions on right side should "fade" into nothing.
3. Leaning the tool to the right fades the left corner impressions and firmly imprints the right corner of the tool. Moisture content should be "just right".
4. Here the tool is tipped forward on the toe so that the corners do not dig in. Tap lightly with the tool in this position.



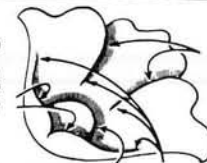
To create a three-dimensional effect, use a **beveler** (upright position) to bring the design into bold relief. Usually only one side of the swivel knife cut is beveled down.

The deepest part of the bevel is always next to the outline of the design, with the sloping bevel fading toward the background areas. The face of the beveler always faces the cut line of the design; the toe of the beveler is placed directly in the cut. When a line of the design does not join another, these cuts are usually beveled lightly to fade out at the end of the cut.

For smooth beveling, always "walk" your tool. Strike it with the mallet and as its recoil action lifts it slightly from the leather, move the beveler about 1/16" along cut and strike again. Slight movement of the tool and faster hitting with mallet will produce smoother beveling. Bevel foremost objects first.



These petals overlap seed pod... therefore, bevel as shown to make them appear raised.

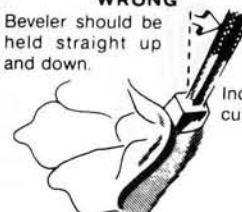


Outside petals overlap center petal. Bevel as indicated by shaded lines.

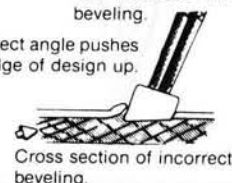
Seed pod overlaps back flower petals...so it is beveled around next.

"Fade" beveling at ends of these cuts.

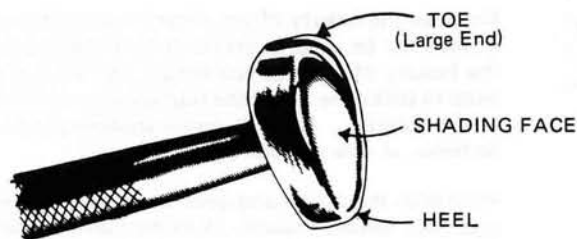
WRONG
Beveler should be held straight up and down.



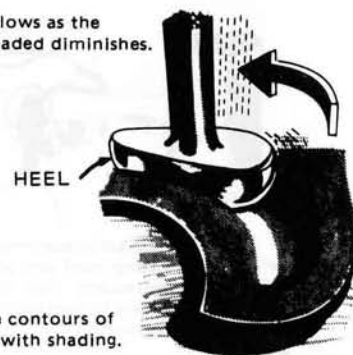
Heel of tool marks the leather, does not "fade out" the beveling.



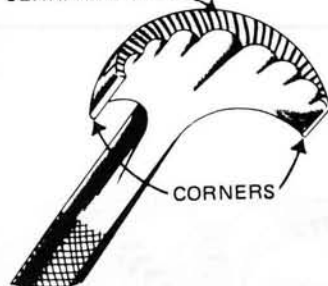
To shade or contour design, use the **pear shaders**, "walking" it as in beveling. Use to depress open areas away from cut lines. Deep impressions should fade away into nothing.



Lessen the blows as the area to be shaded diminishes.

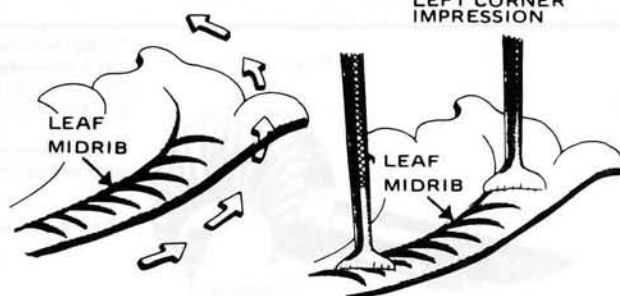


SERRATIONS



For veining leaves, use a **Veiner**. Space evenly. Make the deepest part of the impressions by leaning tool to greatest degree. Full tool impressions are usually not used; veins should fade out away from midrib or leaf.

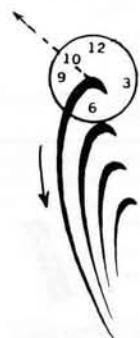
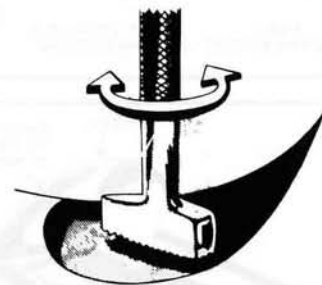
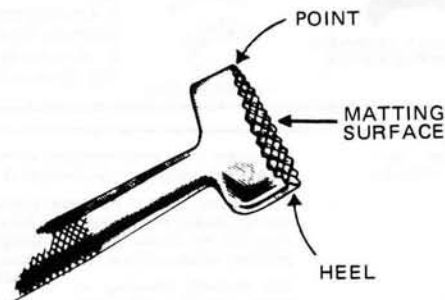
Veining impressions should never be at right angles to midrib, but should angle toward tip of leaf.



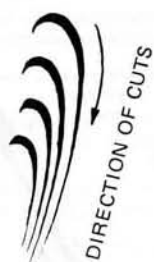
To make seeds of pod in flower center, hold **seeder** up-right and strike firmly with the mallet. Avoid striking tool so hard that seed is cut too far into, or all the way through, the leather. Begin stamping outside row of seeds first, then second, etc.



Backgrounding is one of the most important phases of carving...usually the final step of bringing design into full relief. For bold relief, walk the **Background tool**, matting down the background areas within and around the design. Use pointed end for narrow places. For broader areas, turn tool constantly for uniform background appearance.



1st cut
2nd cut
3rd cut
4th cut



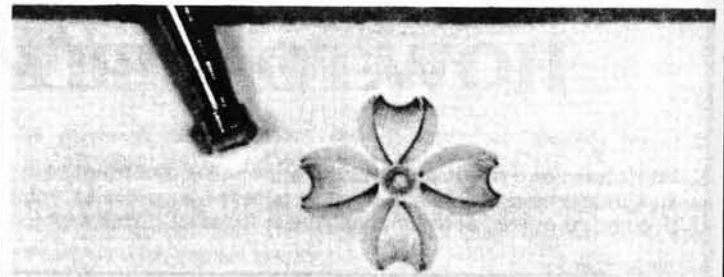
To enhance your carved design, make decorative cuts with your swivel knife as you would in cutting half circles. Turn knife sharply, gradually diminishing in depth, fading into a hairline. These cuts are usually made in a series, each succeeding shorter than the last.

After decorating leather, use spoon end of modeling tool to slightly round edges of design and to smooth around beveling marks.

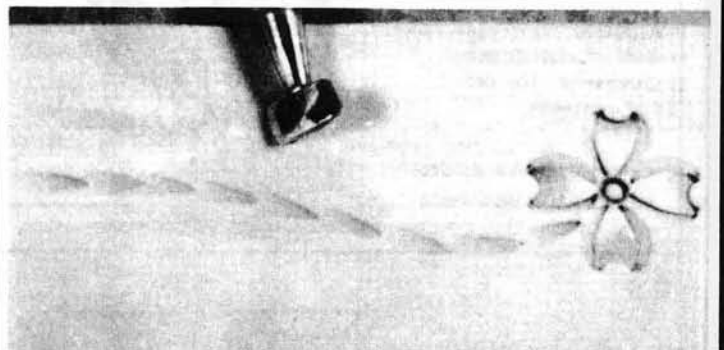


HOW TO STAMP NATURE DESIGNS

Many beautiful designs can be stamped on leather with a small number of stamping tools. The designs can be as simple or intricate as you want...and either floral or geometric. An example of this type of design is given in the procedure instructions on this page.



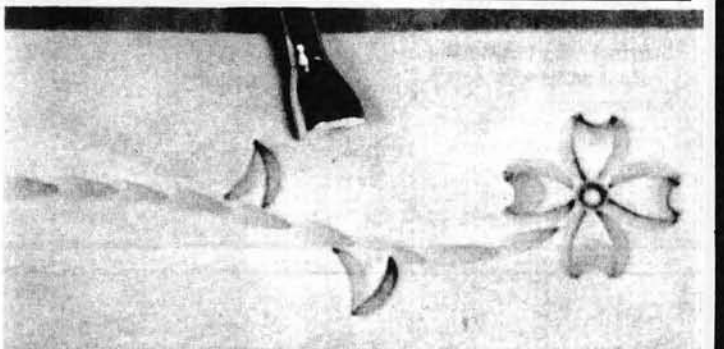
4. Add end of petal with the camouflage tool (C425).



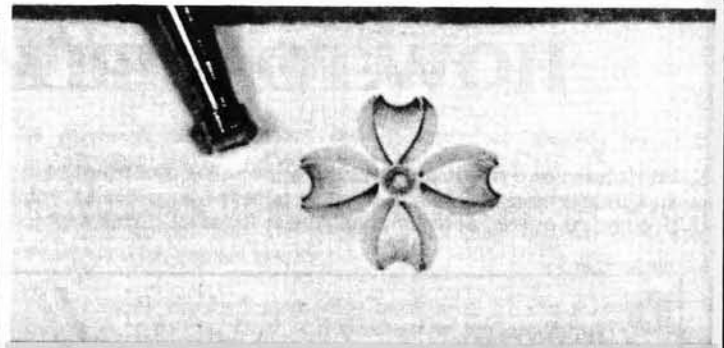
5. After the flower of the design is complete, make a stem by stamping with the pointed end of the pear shader (P368).



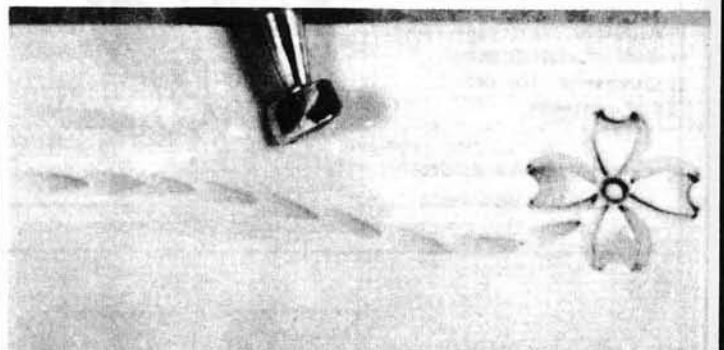
6. Locate and stamp leaves using the veiner.



7. Complete leaves by adding the upper portion with the veiner.



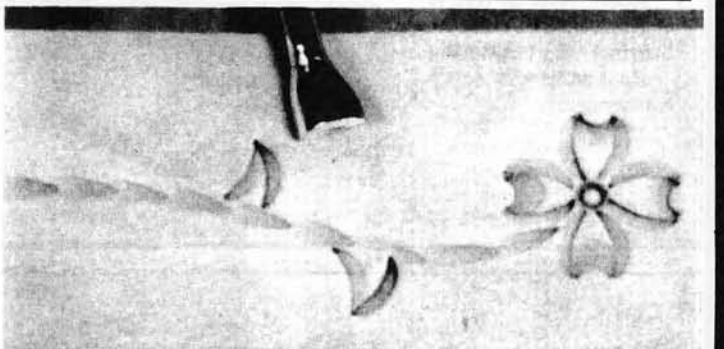
1. Locate the center of the flower on the leather and stamp with the seeder (S717).



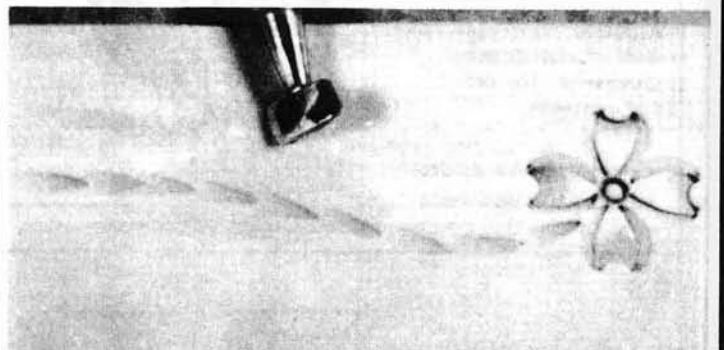
2. Next carefully space out petals of the design and stamp with the veiner (V745).



3. Fill in opposite petals of the design, spacing carefully.



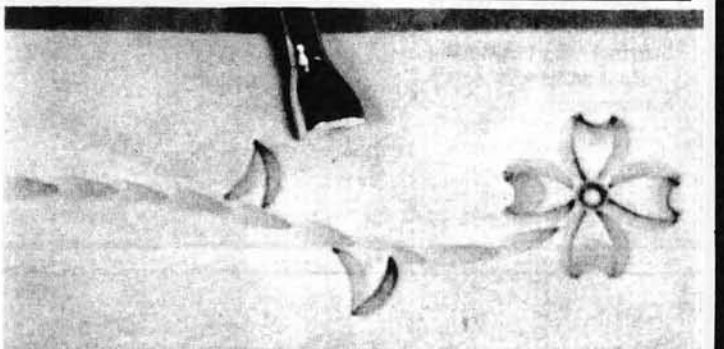
4. Add end of petal with the camouflage tool (C425).



5. After the flower of the design is complete, make a stem by stamping with the pointed end of the pear shader (P368).



6. Locate and stamp leaves using the veiner.



7. Complete leaves by adding the upper portion with the veiner.

HOW TO APPLY LEATHER DYES

Spirit Solvent dye is fast penetrating, permanent, alcohol-based and produces deep, rich colors. It is best for an overall solid dyeing job or overall color change. Use it for all surfaces which

will be flexed. Apply with a dauber or Preval Spray Maker for large areas, and with a brush for tight, limited areas.

1 PRO DYE

Practice on scrap leather; twist brush clockwise to point the bristles.

NO. 3 SABLE BRUSH
SCRAP LEATHER



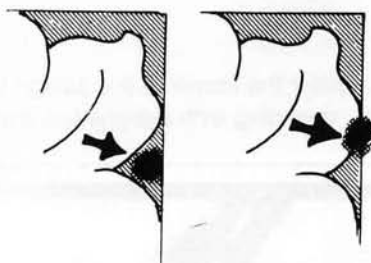
2

Begin dyeing in the open areas, touching brush first to scrap leather to remove excess dye. Too much dye will "bleed" over the edges of the design.



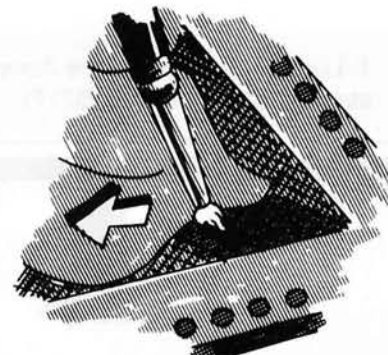
3

Touch dye to center of area to avoid bleeding. If you start in a small area, dye will crawl over the edge of the design.



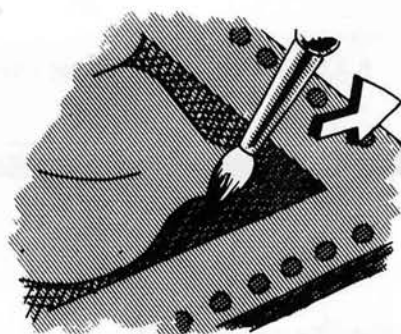
4

Begin dyeing in widest areas and work toward the fine points. Use caution near edges and border lines.



5

When most of dye is exhausted, point brush by twisting clockwise on scrap leather.



6

Use short, pulling strokes to cover the area. Turn leather as often as necessary to facilitate dyeing in difficult areas.



COVA DYE

Cova Dye is an acrylic based dye that requires a smooth, clean surface for proper bonding...it produces bright, lustrous colors. If both sides of leather are to be dyed, begin by dyeing the flesh side, and by the time you complete the flesh side, it will

be dry enough to dye the grain side. Brush dye on evenly. Allow to dry. Apply a second coat of dye to produce an even, solid-colored finish.

BLOCK DYEING INSTRUCTIONS

The block dyeing technique allows you to apply dye to the surface of the leather to contrast with the stamped and natural impressions in the leather. With this technique the dye will not enter the stamped impressions. The dyes used are spirit solvent such as Tandy's Pro Dye.

STEP 1. Dye leather any light color with Tandy's Pro Dye. Dip wool dauber in dye and begin in upper left hand corner. Move quickly in a circular motion so that each stroke slightly overlaps the last. When dauber is showing signs of exhaustion, dip again in color and resume the motion until the entire project has been covered. Make sure the dye gets into all impressions and swivel knife cuts. Let dye dry and buff the leather with a soft cloth.

STEP 2. Wearing plastic gloves, wrap a length of cloth around a sponge or wooden block several times. Apply a darker shade of dye to the cloth and blot on a paper towel until cloth has enough dye remaining to color only the surface of the leather. If too much dye remains it may run into the impressions. For shading an edge or a small area, use a small piece of sponge without a cloth, or use a wool dauber. With the cloth, apply dye to surface of leather, rubbing briskly so a burnished effect

is achieved. Apply more dye to cloth as needed, blotting before applying to leather.

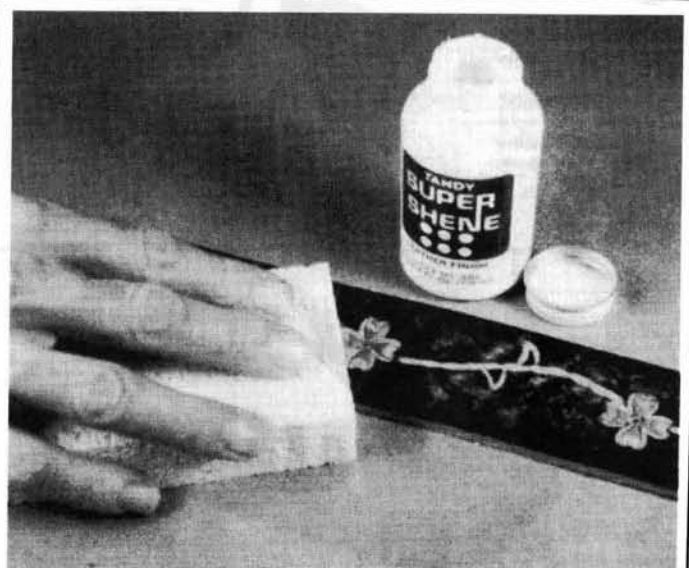
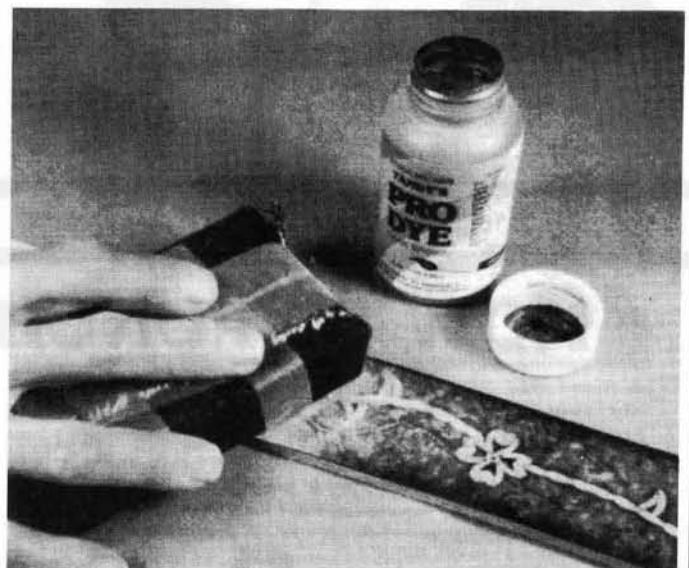
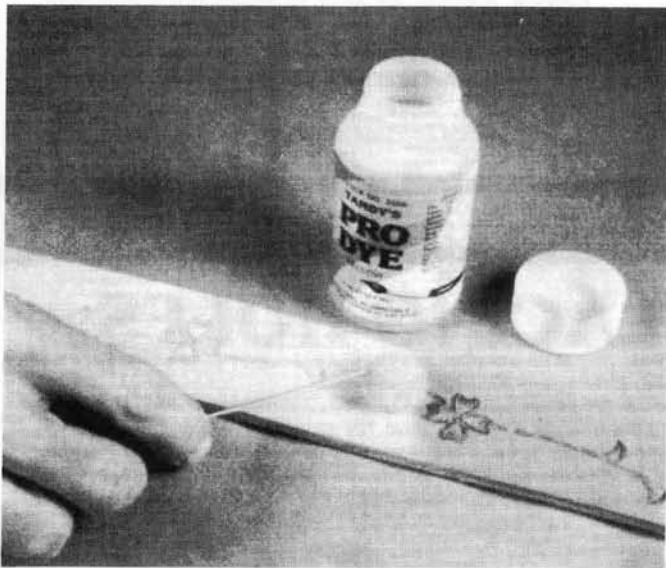
Dye the edges if desired. For a distinctive edge, dye the edges and the border area along them with Dark Brown or Black Pro Dye with a wool dauber.

For a more finished look, the back side of the leather may be dyed with Pro Dye and finished with Carnauba Cream or Atom Wax.

The basic colors recommended are: Yellow with Dark Brown, Medium Brown, Tan or Cordovan; Red reduced down to Pink and Cordovan; Blue with Black; Yellow with Green; the combinations are really up to you.

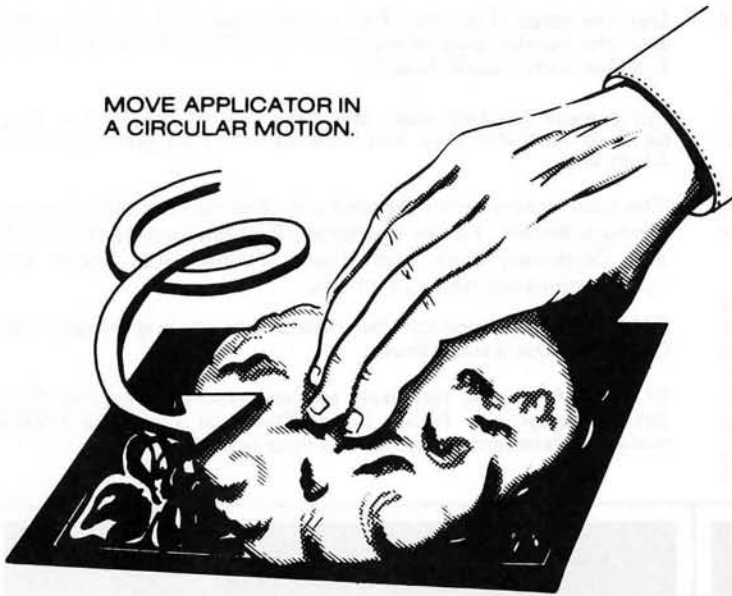
STEP 3. Your design can be enhanced by dyeing designs with Cova Dye. Use a small brush.

STEP 4. After dye has been applied, wait until leather dries before applying a finish. Super Shene or Carnauba Cream makes an excellent finish for this type leather dye.



HOW TO APPLY LEATHER FINISH

MOVE APPLICATOR IN A CIRCULAR MOTION.



Leather finishes are applied to protect the leather and preserve the qualities and appearance of genuine leather. Before applying the leather finisher, there are several points which you should know.

1. All tooling of the design must be completed before finish is applied.
2. Be sure that the surface area is clean and free of any dirt, dust or other matter.
3. Leather finishes must be applied prior to assembly. It is difficult to get a smooth, even coat over a curved structural surface.
4. Use a wool scrap, damp sponge or wool dauber. Remove any loose wool from the applicator.

Apply finish to leather surface with a smooth, circular motion. Be sure to cover the entire surface. A very light coat of finish is best. Apply it smoothly and evenly. Do not try to go back over the finished surface until the first coat is completely dry.

HOW TO PUNCH LACING HOLES

Unless otherwise specified, punch lacing holes after liner is attached. For lacing around edges, use a Wing Divider to mark a line around edges to ensure holes follow in a straight line.

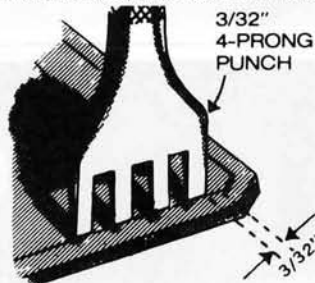
1. Use a single prong Crafttool thonging chisel (8040 or 8044) to punch around corners and in places where there is not room for multi-prong chisels.
2. Multi-prong thonging chisels (8042 or 8046) come with various numbers of prongs. A chisel of 4 or more prongs makes punching faster. After you punch once, set the end prong back in the last hole you punched and hit punch with

mallet. This gives you three new holes and by placing one prong in the last hole, all holes come out perfectly spaced.

NOTE: On certain items such as handbags, construction of the project makes it difficult to use a thonging chisel. The lacing nippers make it much easier to punch corners. Scribe a line with Wing Dividers then, using an Overstitch Wheel (Crafttool No. 8079), go over the line. This marks even spaces for a guide to punch holes. Hold lacing nippers as you would pliers and squeeze.

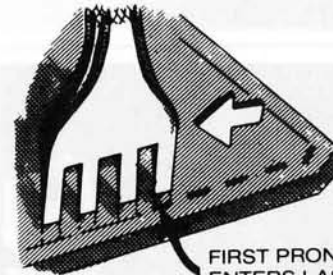
1

After punching corner holes, begin punching with multi-prong punch. Space first hole (from corner) same width as the punch blade ($3/32"$).



2

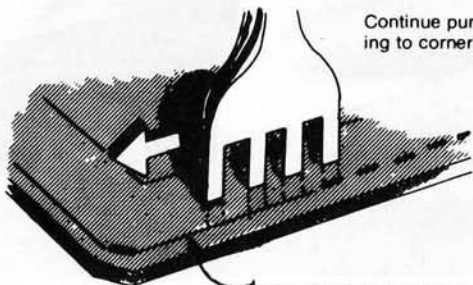
Remove tool; place first prong in last hole, punch again.



FIRST PRONG ENTERS LAST HOLE

3

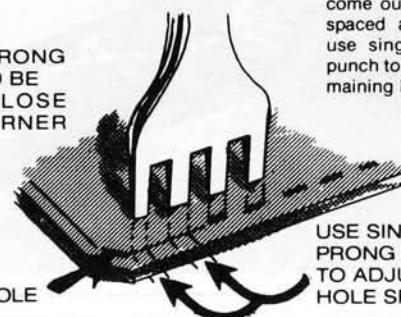
Continue punching to corner.



STAY ON GUIDE LINE

4

END PRONG WOULD BE TOO CLOSE TO CORNER HOLE.



If holes do not come out properly spaced at corner, use single prong punch to punch remaining holes.

USE SINGLE PRONG PUNCH TO ADJUST HOLE SPACING

HOW TO LACE

Lacing puts the finishing touch to handmade leather articles. How good the finished project looks depends very much on the lacing. Thus, how you lace and your technique have a great deal of importance in the appearance

of the finished project. With the following instructions and illustrations, plus a little practice, you will soon be doing a neat, smooth job of lacing. Always lace with front or outside of the project facing you.

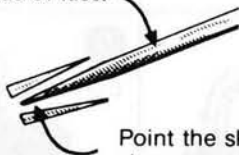
THREADING THE NEEDLE

NOTE: You should load two yards of lacing in lacing needle at a time. Working with longer pieces of lacing will be

difficult and can cause the lacing to wear and become frayed as it is pulled through the lacing holes.

1

Skive end of the flesh side of lace.



Point the skived end as shown.

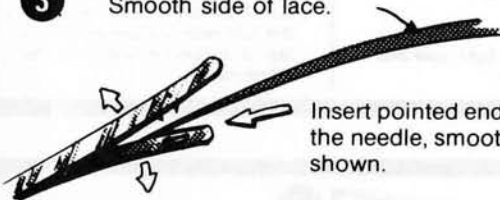
2



Spring the threading end of the needle open

3

Smooth side of lace.



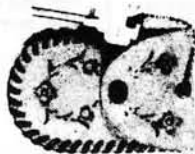
Insert pointed end of lace into the needle, smooth side up as shown.

4



Close needle on lace and squeeze gently with pliers so prongs pierce lace and lock in place. To remove lace, spring needle open as shown in Step 2.

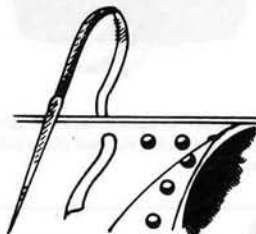
HOW TO LACE THE WHIPSTITCH—1



The following instructions for the Whipstitch are for use on a project with separate beginning and ending points. The amount of lacing required for the Whipstitch is three to three-and-a-half times the distance to be laced.

1

Begin lacing, starting in between the layers of leather. Leave about 1/2" at the end.



2

Lace through hole as shown. Keep the lace from twisting. Pull the stitch up tight to lock the lace.



3

Push needle through the second hole. Pull stitch up tight. Continue lacing, tightening the lace as you go.



4

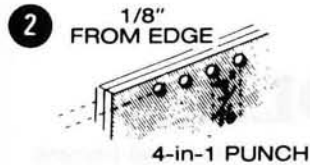
Push needle through the last hole as shown. Bring it up between the leathers and out between the lacing.

Carefully cut off the end of lacing.



HOW TO LACE THE WHIPSTITCH-2

The following instructions for the Whipstitch are for use on projects with common beginning and ending points such as billfolds. The amount of lacing required for the Whipstitch is about three to three-and-a-half times the distance to be laced.



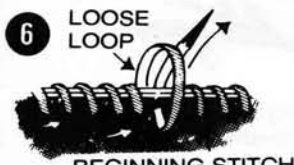
Make your lacing holes if the project is not pre-punched. Space the holes, as shown above, about 1/8" from the edge. Be sure they are spaced equally.



Begin lacing, starting between the two layers of leather. Leave about 1/4" at the end where you slit the lace.



Push needle through the second hole, then thread it through the slit in the end of the lace and through the opposite hole, as shown.



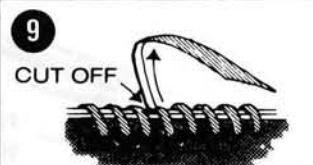
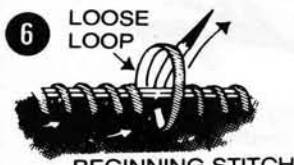
Lace around the project leaving a loose loop in the second hole from the beginning stitch. There will be one unlaced hole between your very first and your last stitch, as shown.



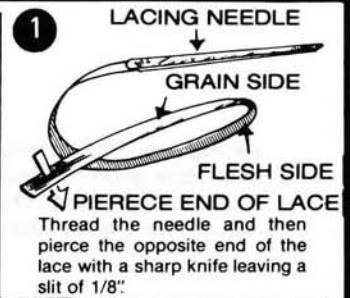
Spread the two leather layers and lace through the last hole, up between the leathers and through the first loose loop as shown.



Pull the first loop tight, over end of lace, as shown.



Pull end of lace tight to take slack out of last loop. Cut off the end of the lace with a sharp knife and tap all lacing flat with smooth-faced mallet.



Thread the needle and then pierce the opposite end of the lace with a sharp knife leaving a slit of 1/8".



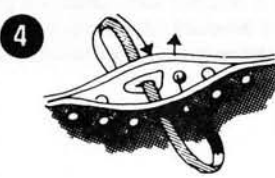
Continue lacing, tightening the lace as you go.

HOW TO LACE THE RUNNING STITCH

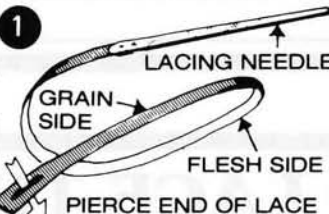
The amount of lacing required for the Running Stitch is about 1 1/2 times the distance to be laced.



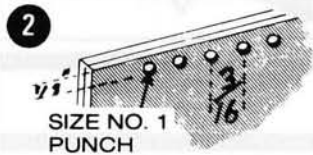
Begin lacing, starting between the two layers of leather. Leave about 1/4" at the end where you slit the lace.



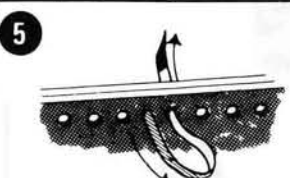
Push needle through the next hole from the back, through the slit and out through the opposite hole in front, as shown.



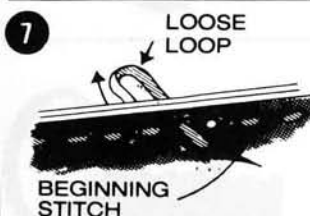
Thread the needle and then pierce the opposite end of the lace with a sharp knife leaving a slit of 1/8".



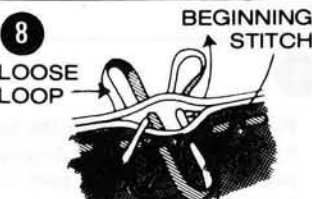
Make your lacing holes if the project is not pre-punched. Space the holes as shown above about 1/8" from the edge and approximately 3/16" apart. Be sure they are spaced equally.



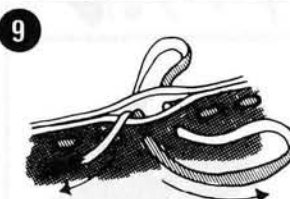
Pull stitch up tight to lock the lace. Continue lacing the rest of the project.



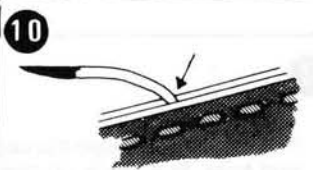
Lace to the last hole and leave a loose loop in the next to the last hole



Push needle through last hole. Spread leathers; push needle through next to the last hole, bringing needle up between leathers.

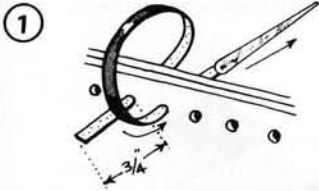


Pull the loose loop tight and continue pulling all the slack out of the lace.

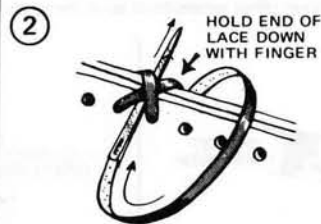


Pull all stitching tight and pull end of lace tight. Cut off the end of the lace close to the leather and tap all lacing flat with a smooth mallet.

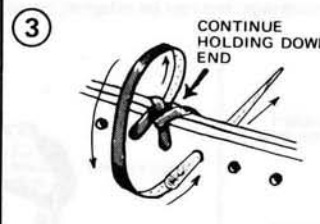
HOW TO LACE & SPLICE THE DOUBLE LOOP STITCH



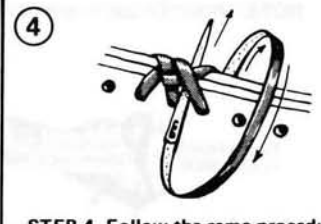
STEP 1. Beginning on front side of project, pull the needle and lace through the 1st hole. Leave about $\frac{3}{4}$ " of the lacing end and go on to lace the next hole.



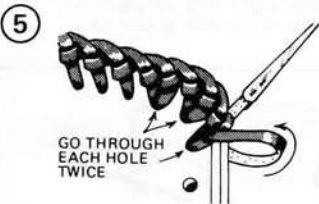
STEP 2. Pull the stitch tight, lacing over the end you left free. This forms a cross or "bight".



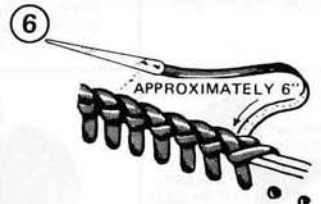
STEP 3. Pull the stitch under the bight snug but not tight. Lace through the next hole.



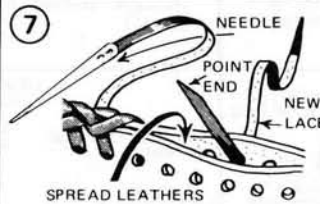
STEP 4. Follow the same procedure as in Steps 1 and 2 making a cross or bight. Once again go under the bight and pull the stitch snug.



STEP 5. When lacing a corner, stitch through the three corner holes twice each. Be sure to go through bight on corner stitches.



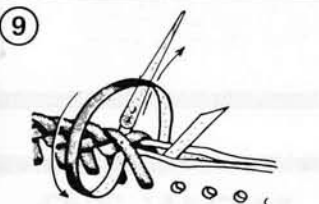
STEP 6. Lace until only 5" or 6" of lacing remain. You will now have to splice with a new length of lace.



STEP 7. Insert new lacing down between leathers, 4 holes from lacing; pull out back side. Leave $\frac{3}{4}$ " of lacing between leather.



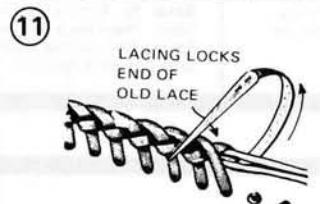
STEP 8. Tuck end of lace between leathers and continue lacing your project with the old lace.



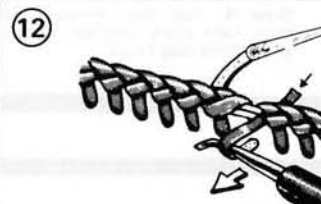
STEP 9. Pull the old lace up tight, cut off the end at an angle, allowing about $\frac{3}{4}$ " to remain. Attach needle to new lacing.



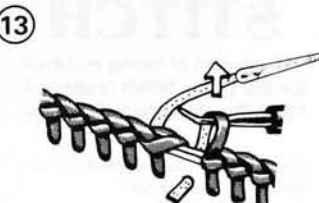
STEP 10. Tuck the end of the old lacing between the leathers and lace over it with the new lace so that it is caught and won't show.



STEP 11. Continue lacing to starting point.



STEP 12. To tie off lacing, pull end of beginning lace free of stitches.



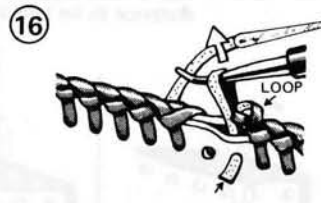
STEP 13. From back side pull the end of lace out of the hole.



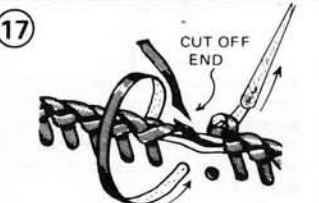
STEP 14. From front side, pull end of lace out of the loop.



STEP 15. Push tool or needle down between leathers and hook it over the lace.



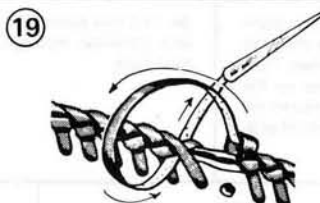
STEP 16. Pull end of lace out of hole and up between leathers. Two empty holes should appear on the front side; one on the back.



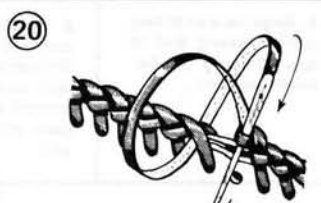
STEP 17. Cut off the end of the lace you have pulled out and tuck the end of the lace between the leathers. Lace through the next hole.



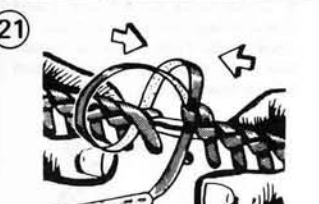
STEP 18. Pull stitch tight and lace up through loop from the back side. All holes on the back side should be filled.



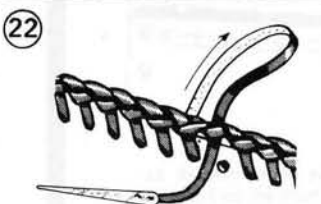
STEP 19. Lace under the bight... do not pull this stitch tight.



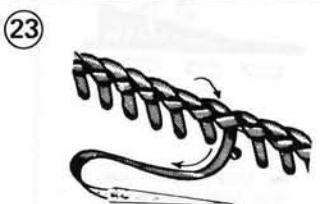
STEP 20. Carefully cross over as shown... and push needle down through the loop.



STEP 21. Pull needle through. Push laced edges together to adjust starting loops for easier completion.



STEP 22. Pull any slack out of the first loop and adjust lacing with fingers to make all your stitches appear equal.



STEP 23. Pull the end of the lacing down tight. Make sure all stitches appear even and equally spaced.



STEP 24. Push needle through the last hole as shown. Bring it up between the leathers and out between the lacing. Cut off the excess lace.

HOW TO BACKSTITCH

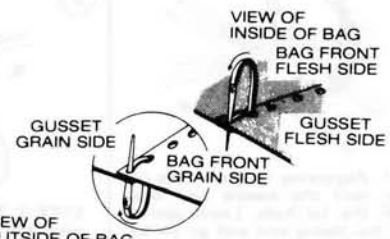
NOTE: Shown for use in assembling handbags, but can be adapted for assembling other projects or as a decorative stitch on belts and other items.



Step 1. Begin lacing bag front to gusset at second hole from top in gusset. Place gusset (flesh side up) on bag front (flesh side up), aligning holes. Lace as shown in illustration, lacing through gusset only in second hole, then through gusset and bag front in first hole.

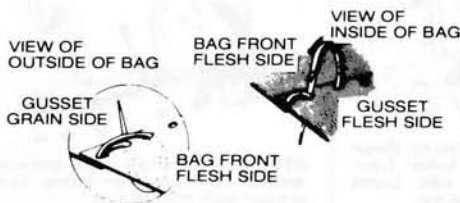


Step 2. Pull lace through first hole (gusset and bag front) and take needle back through second hole (bag front and gusset).



VIEW OF OUTSIDE OF BAG

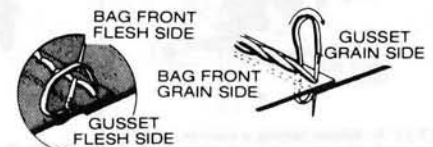
Step 3. Take needle back through first hole, pull stitch tight and proceed to third hole in bag front and gusset (skip second hole).



Step 4. Pull lace through third hole, then take back through second hole of gusset and bag front.



Step 5. Continue lacing through next hole, then back through preceding hole. Using this lacing technique, lace bag front and gusset together.



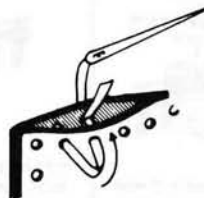
Step 6. To tie off the lacing; at the last hole in gusset and front, lace back through next to last hole in bag front and lace between gusset and front to secure lacing. Trim off excess lacing. (See illustration.)

HOW TO BUCKSTITCH

The amount of lacing required for the Buckstitch is about 3 times the distance to be laced.



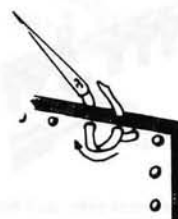
1. Begin lace as shown above, leaving end of lace sticking up between leathers.



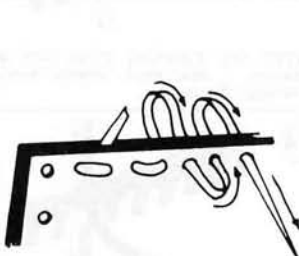
2. Pull first loop tight and lace back through 3rd hole as shown. Turn lace each time so the smooth side shows on back and front of project.



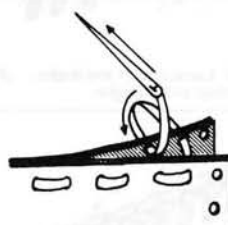
3a. Pull first stitch tight and continue through next hole.



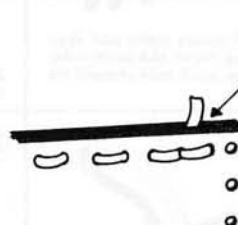
3b. Back view of 3a. There will be 2 stitches together on back.



4. Continue lacing as shown. Pull stitches tight as you go.



5a. Lace to next to last hole. Now go back one hole and pull lace out between leathers.



5b. Back view of 5a. There will be 2 stitches together on back as at beginning (Step 3b.) Cut lace off flush with leather at both ends.

HOW TO CROSS STITCH

The amount of lacing required for the Cross Stitch is about 6 times the distance to be laced.

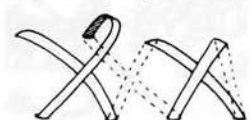
Cross Stitch can be used for assembly or decoration.



1. Punch 2 rows of holes (an even number of holes in each row) across area you wish to lace. From under side of leather insert ends of lace up through first pair of holes to top side.



2. Cross laces on top and insert through second pair of holes to under side. Cross lace on under side and insert up through third pair of holes to top.



3. Continue lacing as in step 2. After inserting lace through last pair of holes to under side of leather tie or cement ends.

HOW TO THREAD THE NEEDLE

NOTE: Attach a needle to each end of thread, following these instructions.



Step 1. Push end of thread through needle eye about 1/2".

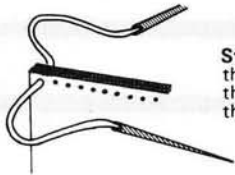


Step 2. Pierce thread with needle point as shown.

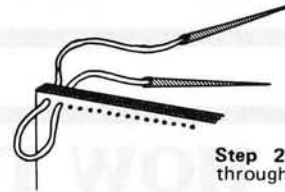


Step 3. Push thread up on needle to eye. Pull end of thread through eye as far as it will go. Hold needle and pull thread over eye to lock end of thread.

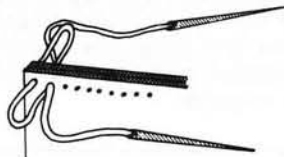
HOW TO HAND STITCH



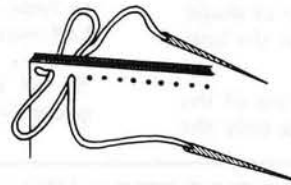
Step 1. Place a needle onto each end of thread as shown above. Push one needle through first hole and pull to center of thread.



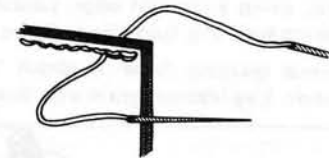
Step 2. Push needle from front side through second hole.



Step 3. Push needle from back side through same hole, going over first thread. Use care not to puncture thread with second needle.



Step 4. Pull stitch tight. Push needle from front side through third hole. Push needle from back side through same hole, again going over first thread. This makes the stitches appear straight. Pull stitch tight.



Step 5. To finish off, back stitch through last two holes and cut threads off flush with leather.

HOW TO DO 3 & 5 STRAND MYSTERY BRAID

Fig. 1

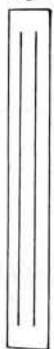


Fig. 2

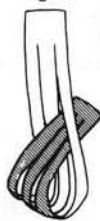


Fig. 3



Fig. 4



Three-Strand Mystery Braiding

Step 1. Make two cuts in leather strip dividing it into 3 equal parts joined at both ends. Edge and burnish each strip if you wish. (Fig. 1)

Step 2. Pass the lower end of strip through the slit between strands 2 and 3 (Fig. 2)

Step 3. With resulting braid kept at the bottom, go to the top end and pass strands 1 over 2, 3 over 1 and 2 over 3. Now pass the lower end of strip between strands 2 and 3 (Fig. 3)

Step 4. Again pass strands 1 over 2, 3 over 1 and 2 over 3. Braiding cycle is now complete, appearing as in Fig. 4. To continue braiding, follow steps 2, 3 and 4 until strands are not long enough to complete another full cycle (steps 2, 3 and 4). Equalize and smooth braid

Fig. 1



Fig. 3

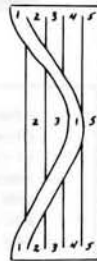


Fig. 3

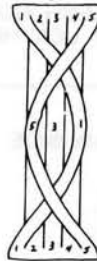


Fig. 4

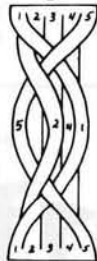


Fig. 5



Five-Strand Mystery Braiding

Step 1. Make 4 cuts into strap, dividing it into 5 equal parts as in first illustration

Step 2. Bring strip 1 to the right over strips 2 and 3 as in second illustration. Now bring strip 5 over strip 4 and 1 (Fig. 3)

Step 3. Take strip 2 and bring over strip 5 and 3 (Fig. 4) and pass strips from right to left over strips 1 and 2 (Fig. 5)

Step 4. In Fig. 6 two steps are shown. First bring strip 3 around and over strips 5 and 4. The upper portion of this strap must be held intact. Next, take the bottom of the strap and pass through the opening between strips 3 and 4

Step 5. Now the braid should look like Fig. 7. Pay no attention to the tangled strips at the bottom and continue to work at the top

Step 6. Take strip 1 and bring over strips 2 and 3 (as shown in Fig. 8). Repeat this operation from each side four more times. Then you will take the bottom of the strap through strips 3 and 4 as shown in Fig. 9. The lower part of the braid will then straighten itself out (Fig. 10). When you reach this point begin all over again. Pass strip 1 over 2 and 3 as in Fig. 1. When the point corresponding to that in Fig. 6 is reached, turn in the bottom as before, then continue as in Fig. 7 until the end

Step 7. Tighten up the braid at the top so it will be easier to work at the bottom. When the braid is completed loosen it until it is even throughout

Fig. 6

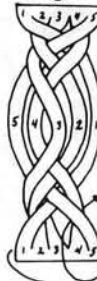


Fig. 7



Fig. 8



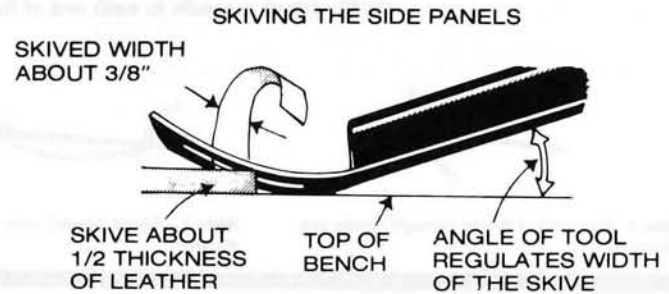
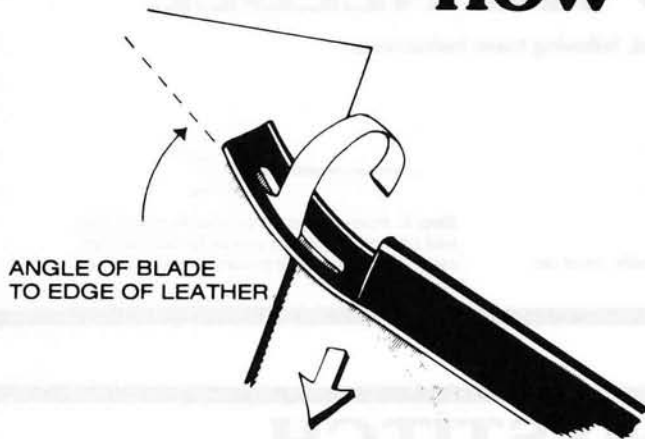
Fig. 9



Fig. 10



HOW TO SKIVE



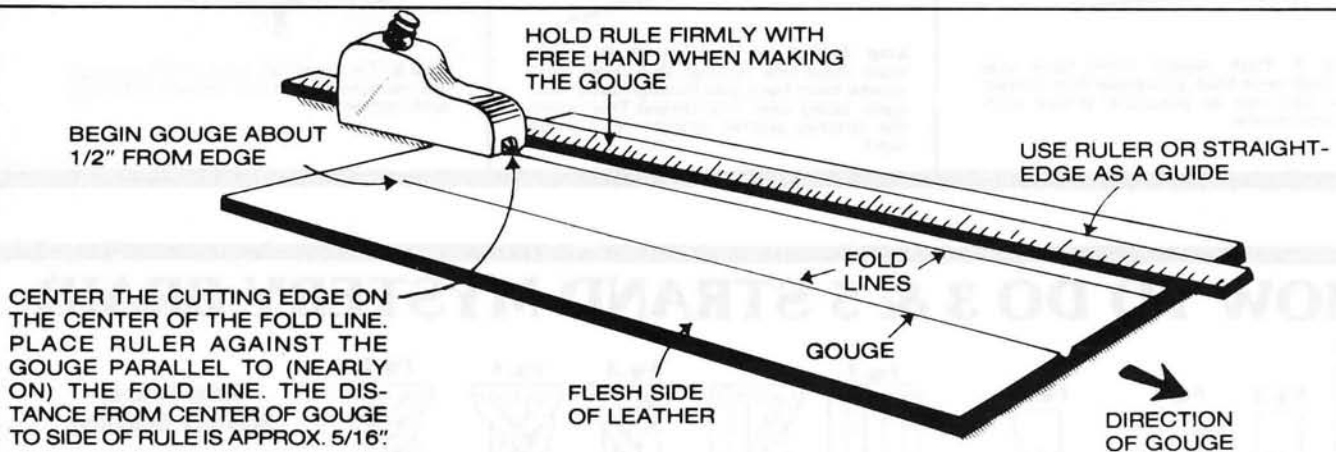
Skiving reduces the thickness of the leather where pieces will be joined or where leather is to be doubled over and cemented to make a facing. This paring down is done on the flesh side only. Use either a No. 1574 Safety Beveler, a Head Knife or a Beveled Edge Skiving Knife.

HOW TO GOUGE

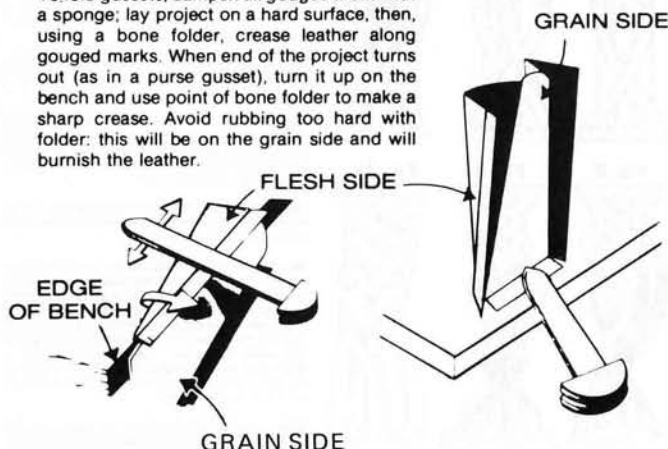
Gouging removes some of the leather for easier folding. First, be sure the leather has not stretched out of shape. Now, using a straight edge, pencil in a line for the fold, making sure this fold line is in the right place.

Normal gouging depth is about 1/2 the thickness of the leather. Lay leather, grain side down, and gouge only the

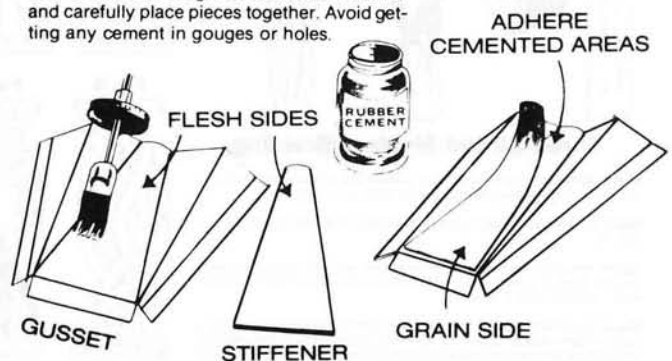
flesh side. Using an adjustable gouge and a straight edge to hold gouge steady along marked line, begin about a half-inch from the end of the leather. Gouge to end of leather, then turn around and gouge the remaining 1/2" of leather. If you moisten leather along marked gouge line it may be easier to gouge.

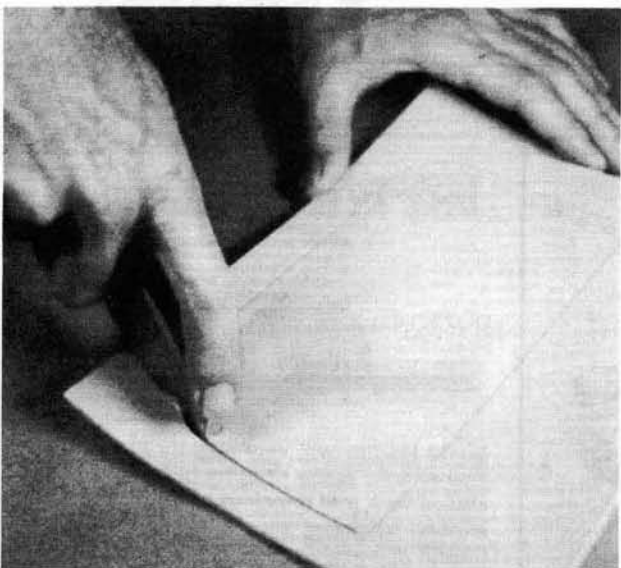
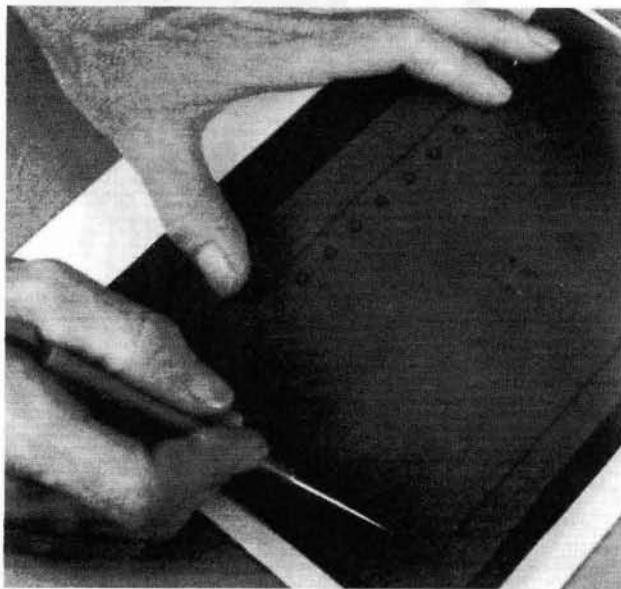
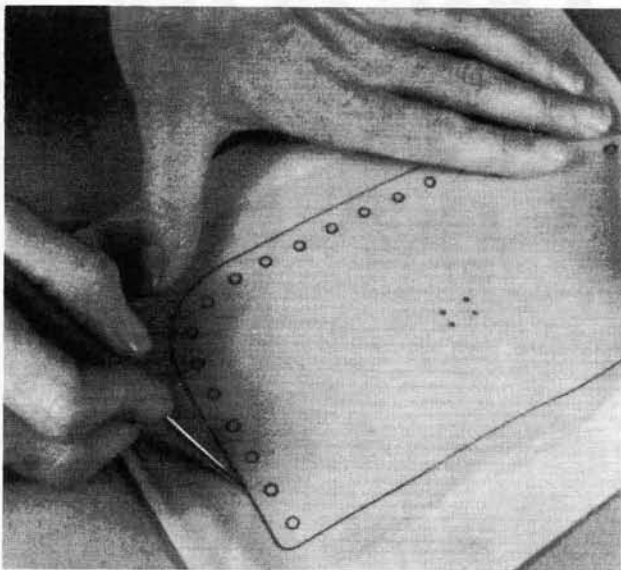


To fold gussets, dampen all gouged areas with a sponge; lay project on a hard surface, then, using a bone folder, crease leather along gouged marks. When end of the project turns out (as in a purse gusset), turn it up on the bench and use point of bone folder to make a sharp crease. Avoid rubbing too hard with folder: this will be on the grain side and will burnish the leather.



After all gouging and skiving have been done, allow leather to dry. Carefully apply a thin layer of rubber cement over the flesh side of the piece where stiffener is to be laid and on one side of stiffener. Begin at bottom of stiffener and carefully place pieces together. Avoid getting any cement in gouges or holes.





HOW TO CUT LEATHER

Trace pattern onto leather...

Step 1: Use the pattern to trace the outline of the parts onto the leather. A modeler or other pointed tool may be used.

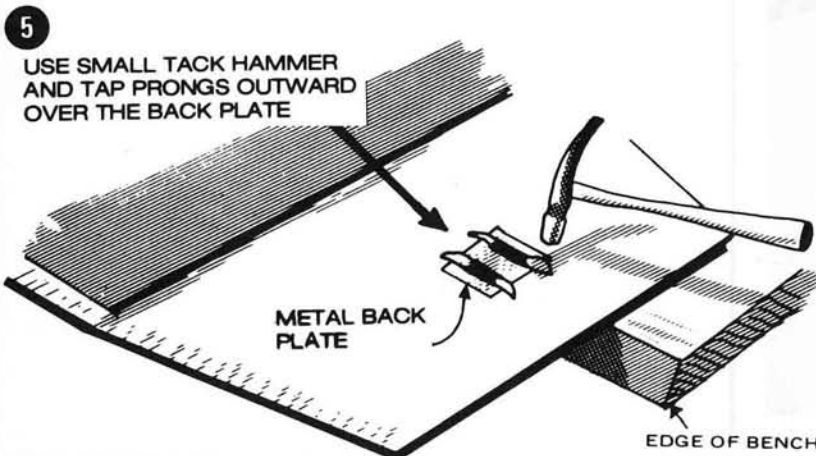
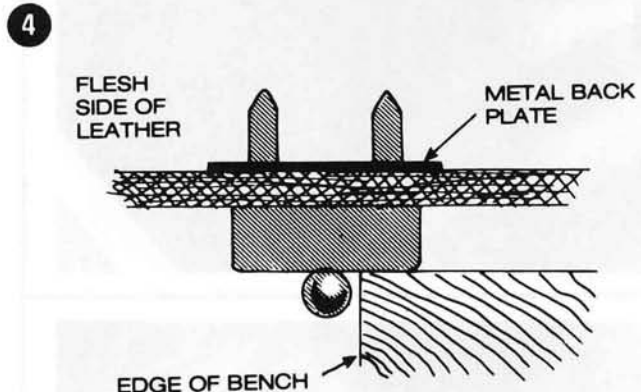
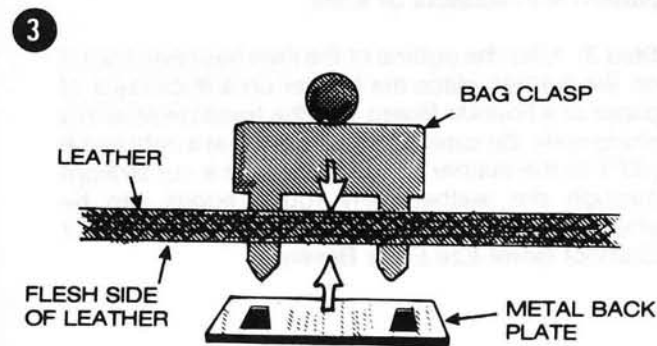
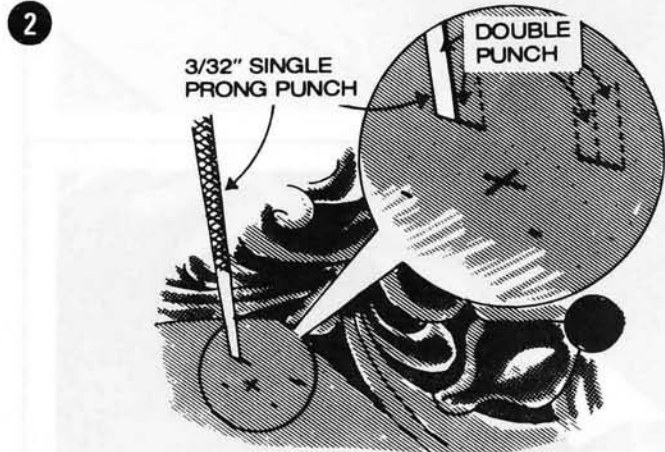
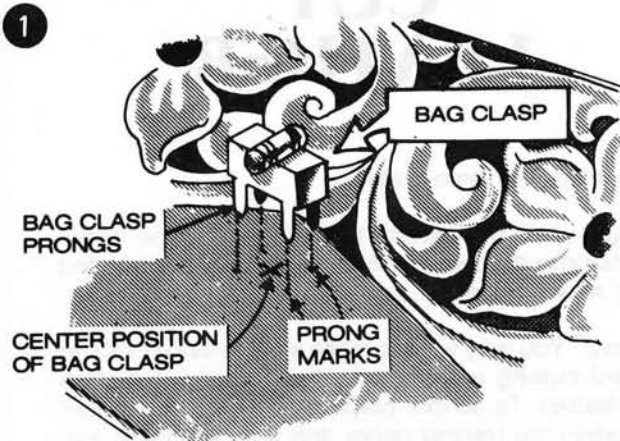
Step 2: You may wish to make a cardboard or poster board cutting pattern to trace the cutting lines on the leather. To do this, place a piece of carbon paper between the tracing paper and the cardboard and trace the outline with a pencil. Cut out the cardboard pattern with scissors or knife.

Step 3: After the outline of the item has been traced on the leather, place the leather on a thick layer of paper or a Pouno Board. Cut the traced lines with a sharp knife. Be sure to keep the blade at a right angle (90°) to the leather in order to make a cut straight through the leather. Any rough edges can be smoothed by further trimming with the knife or a Craftool Bevel-Eze Edge Beveler.

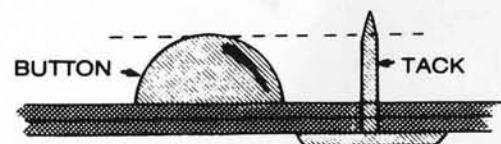
HOW TO INSTALL A BAG CLASP

Mark position for clasp on the leather as indicated on the pattern. With prongs straight, position clasp over mark and press firmly enough to make indentations from the prongs. Remove clasp and use a No. 8044 thonging chisel (size 1/8") to punch holes for prongs. Place prongs through the holes and fit back plate over the prongs. Bend prongs down over the back plate. Install strap hangers the same way.

To install a bag clasp eyelet, fold over the flap and pencil mark center of clasp. Open flap and lay it flat. Position eyelet on leather and draw around the inside with a pencil or stylus. Cut out this area with a sharp knife. Place eyelet into slot from the carved side; turn, lining side up, and slip back plate into position. Fold prongs over, embedding in depressions, then secure with tap of mallet.

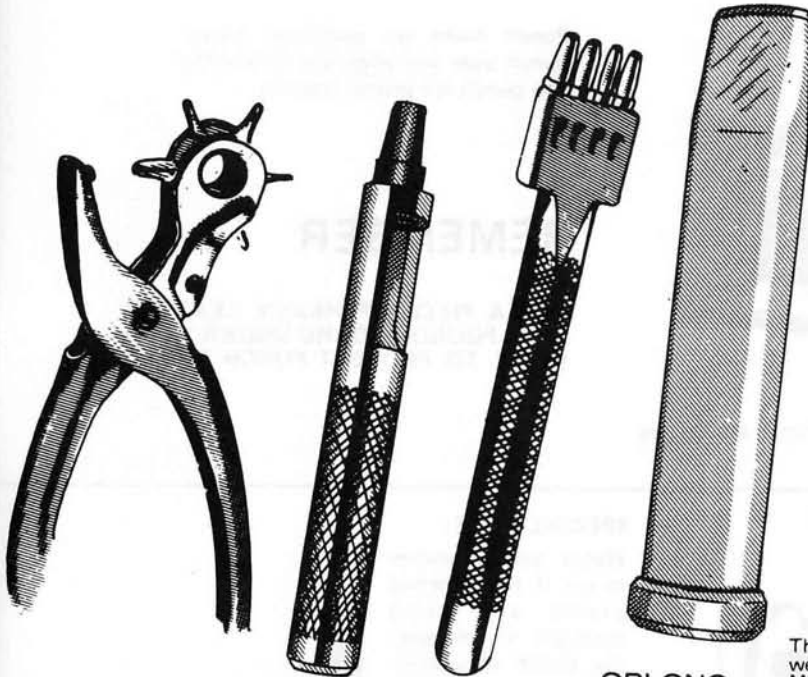


HOW TO SET KNOBBY RIVETS



Since leather will vary slightly in thickness, you should place Knobby button beside installed tack and check to see that it does not exceed height of button. If it does, as illustrated, clip end of tack to insure proper fit.

HOW TO USE LEATHER PUNCHES

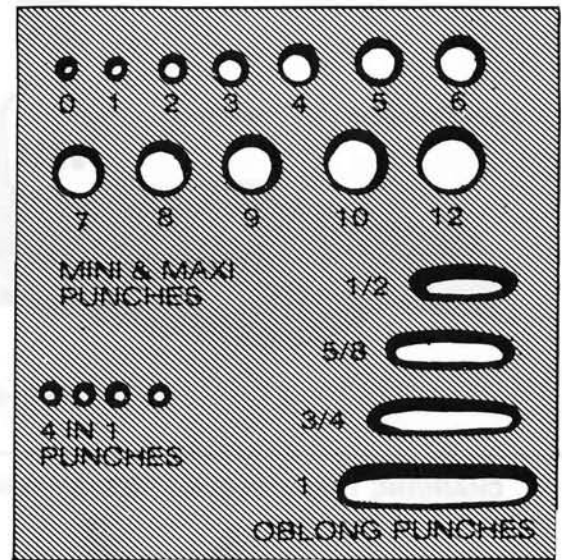


ROUND REVOLVING

MINI OR MAXI PUNCH

4-IN-1

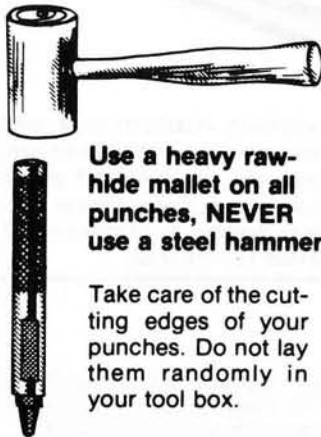
OBLONG PUNCH



The Rotary Punch with tube sizes 0 through 7 is for use on lighter weight leathers where holes are to be punched close to the edge. The Mini and Maxi Punches in sizes 0 through 12 are used on light or heavy weight leather, and in areas inaccessible to the Rotary Punch. The Mini and Maxi Punches are used for punching holes for rivets, eyelets, snaps, buckle tongue holes, and lacing and stitching holes.

The Oblong Punches are used for punching buckle tongue slots, slots where bag straps are inserted in bags, etc. They come in 1/2", 5/8", 3/4" and 1".

The Crafttool 4-in-1 Punch is used on straight edges for punching lacing holes more quickly than with a single punch.



Use a heavy rawhide mallet on all punches, **NEVER** use a steel hammer.

Take care of the cutting edges of your punches. Do not lay them randomly in your tool box.

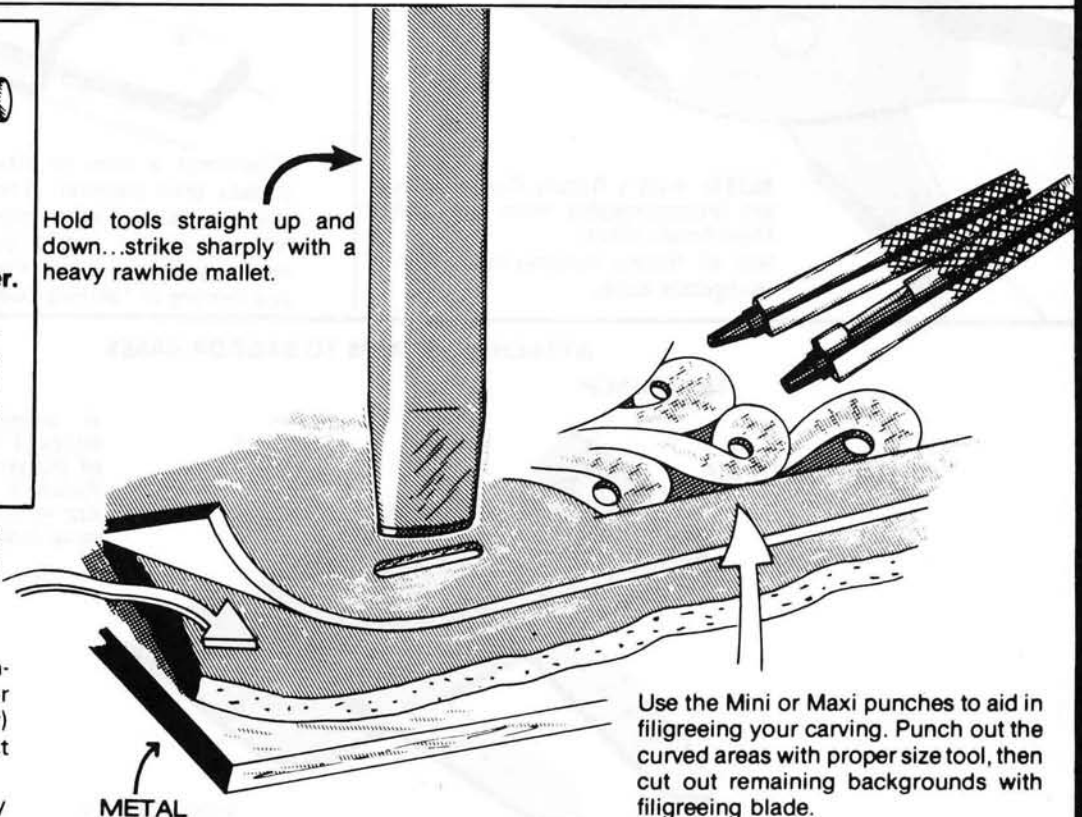
PLACE THE LEATHER TO BE PUNCHED ON A FIRM SURFACE.

REMEMBER

...use a **HEAVY** piece of leather (or double thickness or Pounbo Board under leather) before punching to protect your punches.

Use a metal or other very firm surface to punch against. **DO NOT** strike tool so hard as to drive it into the metal.

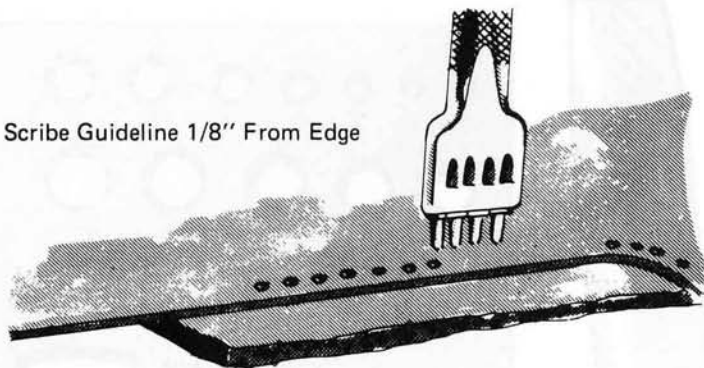
Hold tools straight up and down...strike sharply with a heavy rawhide mallet.



Use the Mini or Maxi punches to aid in filigreeing your carving. Punch out the curved areas with proper size tool, then cut out remaining backgrounds with filigreeing blade.

PUNCHING LACING HOLES WITH THE CRAFTOOL 4-in-1 No. 8052.

Scribe Guideline 1/8" From Edge



Use Single Punch On Curves

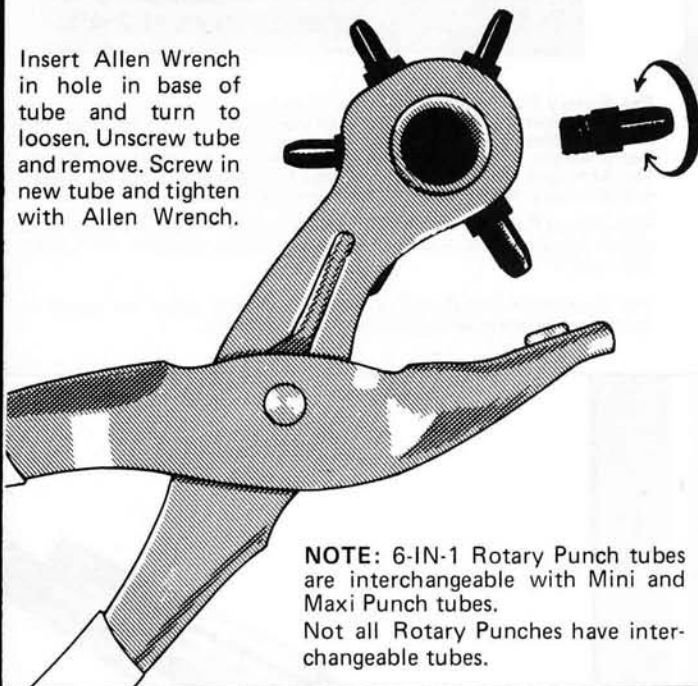
Punch holes on guideline. Move punch over and align last hole with end punch for proper spacing.

REMEMBER

USE A PIECE OF HEAVY LEATHER OR A POUNDO BOARD UNDER YOUR WORK TO PROTECT PUNCH TUBES!

CHANGING TUBES ON 6-IN-1 ROTARY PUNCH

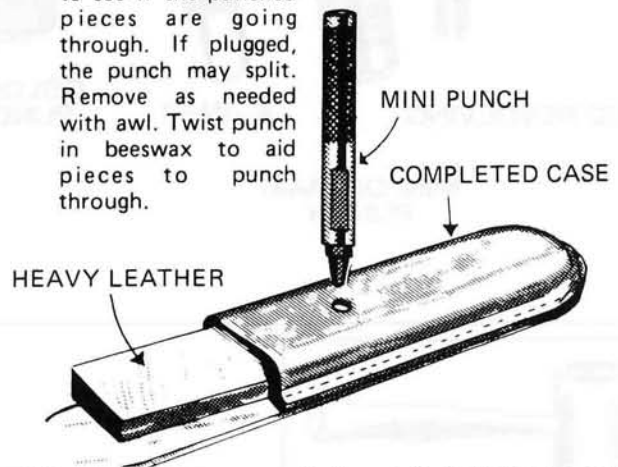
Insert Allen Wrench in hole in base of tube and turn to loosen. Unscrew tube and remove. Screw in new tube and tighten with Allen Wrench.



NOTE: 6-IN-1 Rotary Punch tubes are interchangeable with Mini and Maxi Punch tubes. Not all Rotary Punches have interchangeable tubes.

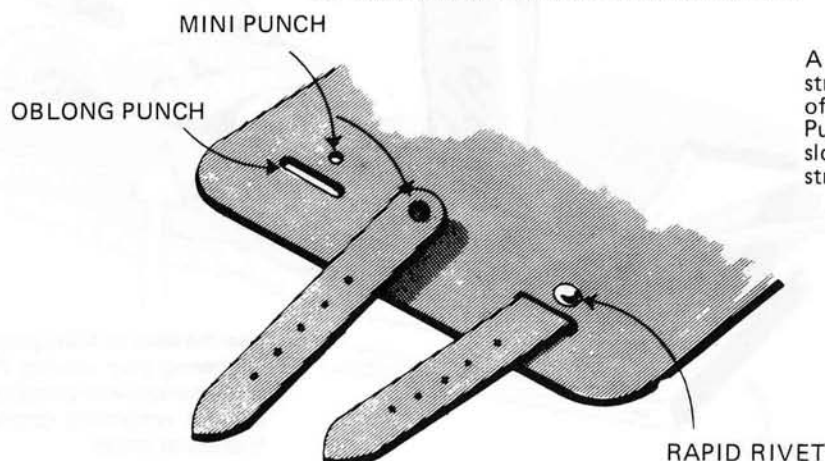
SPECIAL NOTE:

Watch your punches to see if the punched pieces are going through. If plugged, the punch may split. Remove as needed with awl. Twist punch in beeswax to aid pieces to punch through.



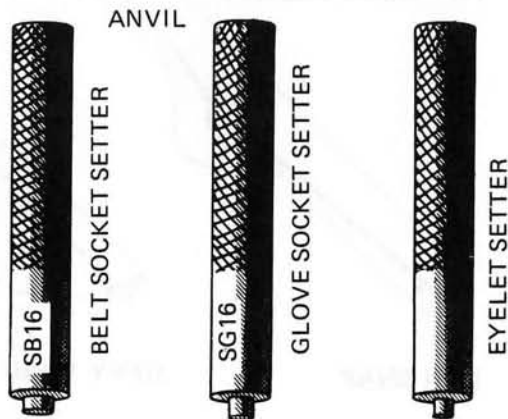
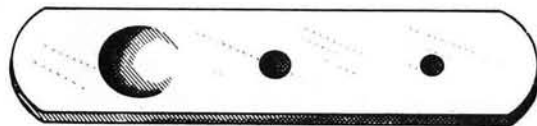
Oftentimes a snap or attachment is desired on a case already sewn together. A hole can be punched as shown. Insert a heavy leather piece into the case and punch hole. Insert snap post or eyelet from inside of case after removing heavy leather. Insert iron bar in its place to act as a riveting or "setting" surface for the snap.

ATTACHING STRAPS TO BAGS OR CASES



A simple method of attaching straps is to make a slot the width of the strap with an Oblong Punch. Punch a rivet hole just above the slot with a No. 2 Mini Punch. Insert strap in slot and rivet as shown.

HOW TO SET BELT SNAPS



CRAFTOOL SEGMA SNAP SETTER
This Setter sets the line 16 glove and belt snaps.



EYELET



STUD

SOCKET



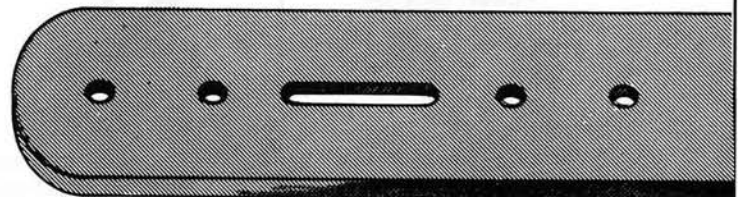
CAP

Usually the thickness of the leather must be skived off at the buckle end of belts. Cut out buckle slot and punch holes for the snap parts. Use proper size punches for eyelet and socket parts. Place snap parts together as shown.

FLESH SIDE OF LEATHER

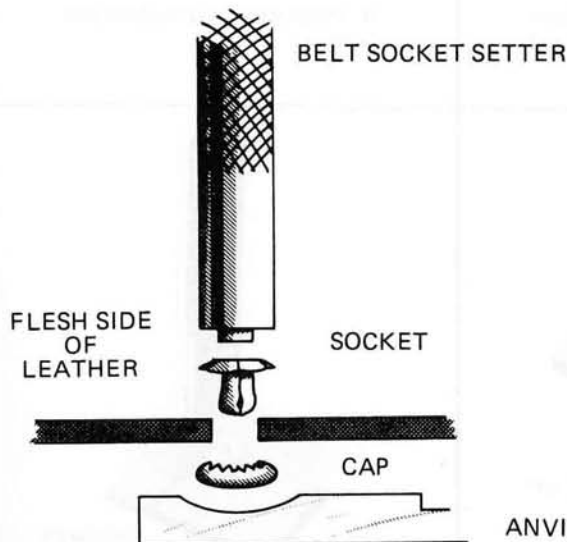
SOCKETS

STUDS

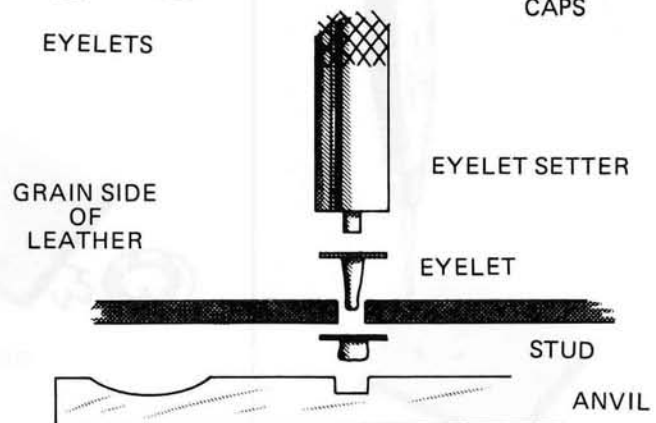


EYELETS

CAPS



Place cap in rounded indentation in anvil, open side up. Push socket through proper hole from flesh side of belt and position over the cap on the anvil. Push tip of large setter into socket. Strike setter sharply with a mallet until snap is set.

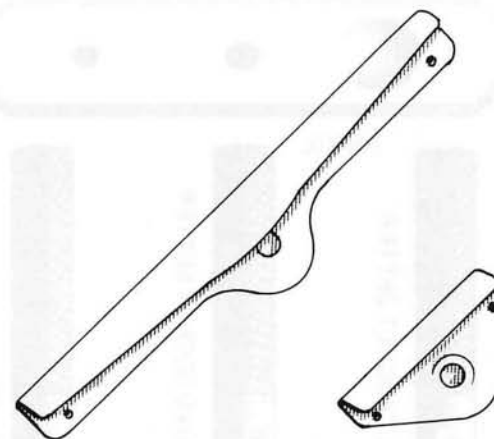


Place stud in large hole in anvil. Push eyelet through proper hole in belt from grain side of belt and push tip of eyelet into stud on anvil. Push tip of eyelet setter in eyelet and strike the setter sharply with a mallet until snap is set.

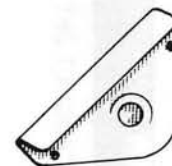
HOW TO SET BAR & JIFFY SNAPS



BAR SNAP SETTER
CRAFTOOL NO. 8101

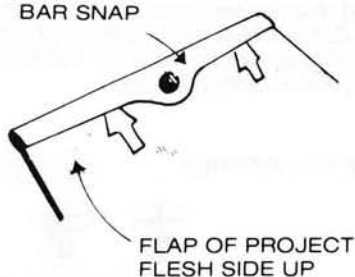


BAR SNAP

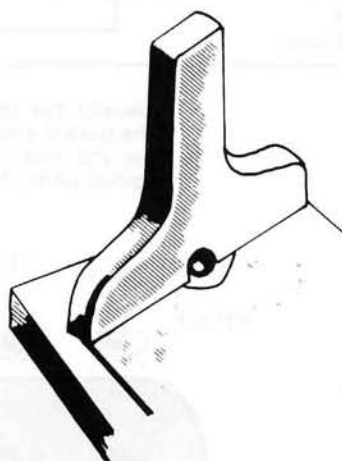


JIFFY SNAP

BAR SNAP



1. Slip bar stud on end of flap.



2. Lay project on metal or hard surface. Position tool and strike sharply with mallet.

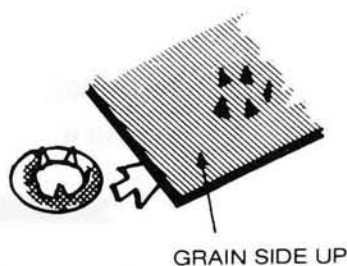


LOCATE POSITION
OF BUTTON

3. Press prongs of button into leather.



4. Stab holes through leather with an awl. Hold straight up and down.



5. Push button prongs through holes from the flesh side.

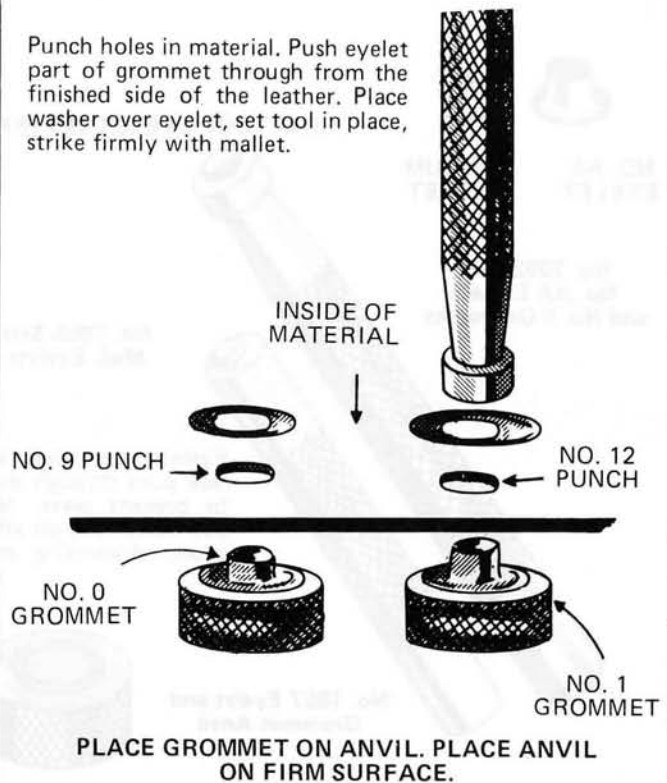


6. Place socket on prongs. Align socket tool and strike with mallet.

HOW TO SET GROMMETS



Punch holes in material. Push eyelet part of grommet through from the finished side of the leather. Place washer over eyelet, set tool in place, strike firmly with mallet.



HOW TO SET RIVETS

RAPID RIVETS

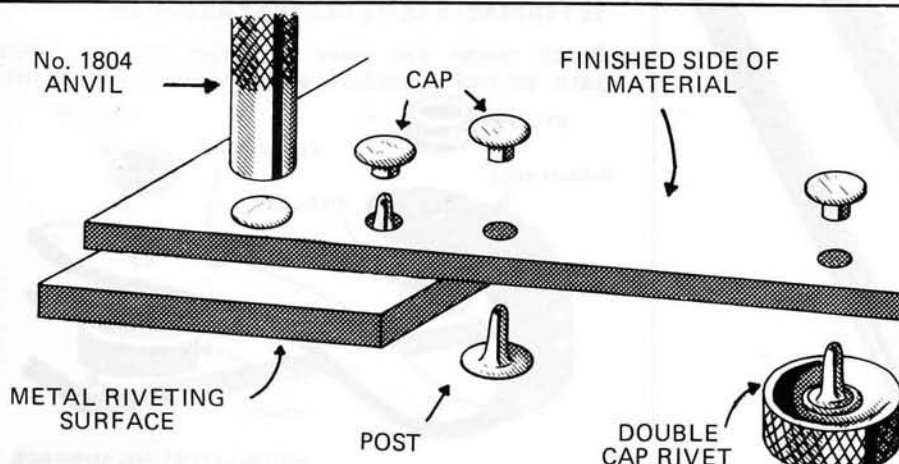


For permanently fastening leather and other materials.



CRAFTOOL RIVET SETTER NO. 8100 FOR SETTING RAPID RIVETS

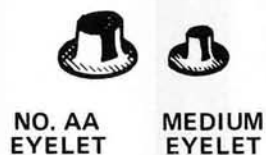
Rapid Rivets are available in several sizes and lengths. Select the proper size and length for your specific project. To properly adjoin, rivet post should extend about 1/8" above combined thickness of materials.



Punch proper size holes for the rivets. Push post through from back side of project. Place on metal riveting surface, place cap on post, with concave face of setter on cap, strike setter with mallet sharply.

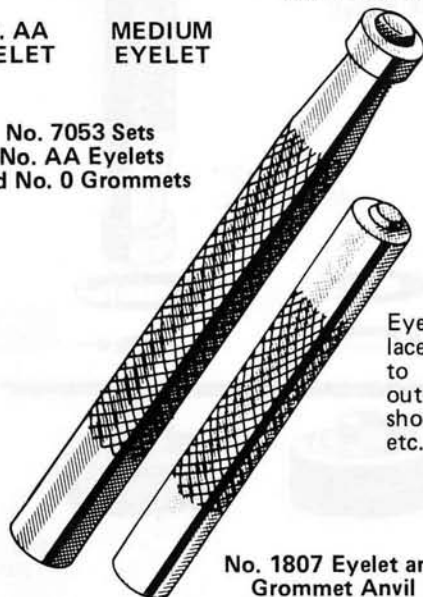
For double cap rivets, set the same way as regular rivets except you must use a No. 1804 anvil under the cap of the stud.

HOW TO SET EYELETS



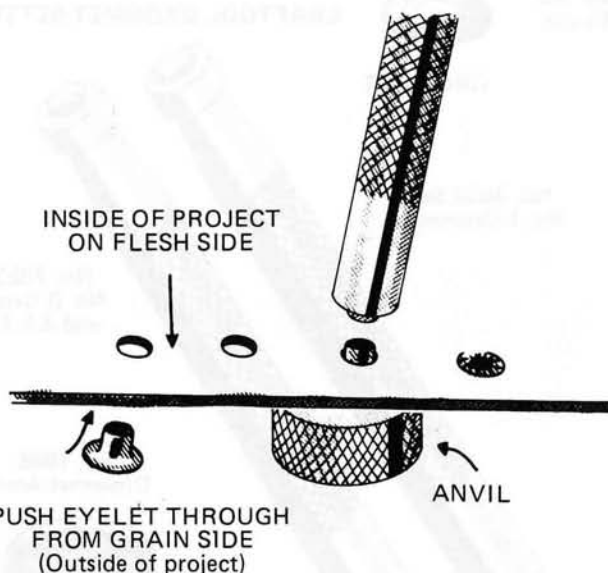
No. 7053 Sets
No. AA Eyelets
and No. 0 Grommets

CRAFTOOL EYELET SETTERS

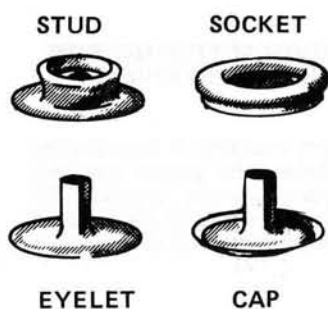


Eyelets are used where
lace pulls through leathers
to prevent wear, tearing
out holes. Use on albums,
shoes, drawstring purses,
etc.

Punch holes to fit eyelets. Insert eyelet in hole from the
finished side of project. Then set it with the setter,
striking the tool with a mallet.



HOW TO SET DURABLE DOT SNAPS

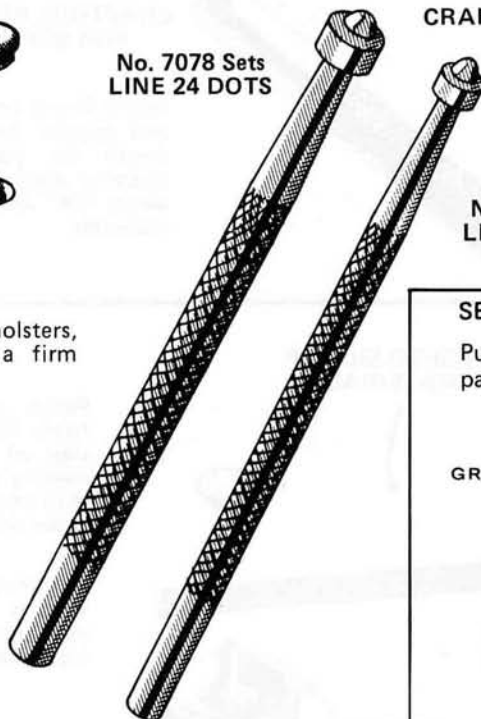


No. 7078 Sets
LINE 24 DOTS

CRAFTOOL DURABLE DOT SETTERS

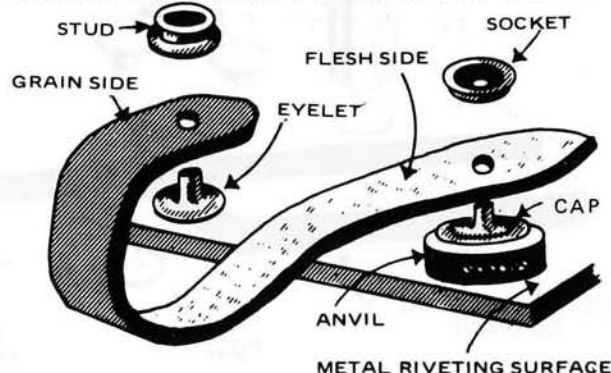
No. 7057 Sets
LINE 20 DOTS

Use Durable Dots for holsters,
straps, vests, etc. where a firm
fastener is required.



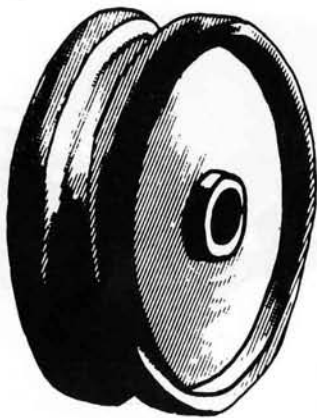
SET DURABLE DOTS IN STRAP AS SHOWN

Punch proper size holes for eyelet and cap. Insert
parts, set tool in position, and strike firmly with mallet.



HOW TO EDGE

CRAFTOOL EDGE SLICKER

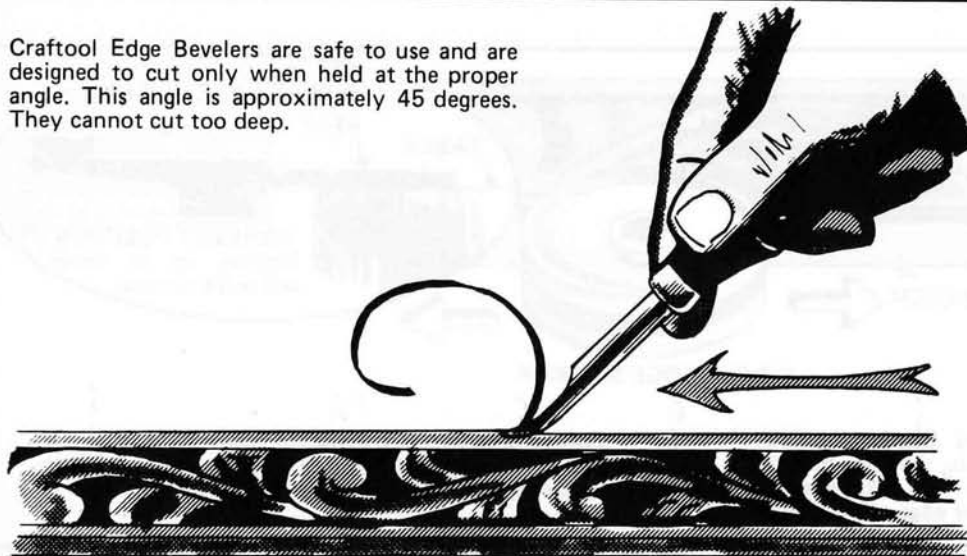


Crafttool Edge Bevelers are available in five sizes. The No. 1 size is used on lightweight leathers up to 3-4 oz. The No. 2 is used on 4 oz. to 6 oz. leathers. Use No. 3 on 7 oz. to 9 oz. Use No. 4 on 9-10 oz. and No. 5 on 10 oz. and heavier leathers. The purpose of the Edge Beveler is to round the edges of leather for a more professional appearance. Both the top and bottom edges should be edged. **NOTE:** Edge Beveling is usually the final step after all carving has been completed.



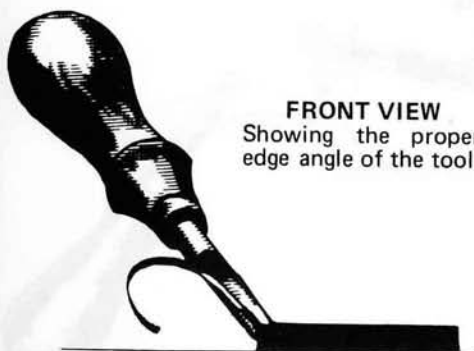
CRAFTOOL BEVEL-EZE
EDGE BEVELERS

Crafttool Edge Bevelers are safe to use and are designed to cut only when held at the proper angle. This angle is approximately 45 degrees. They cannot cut too deep.



CUTTING DIRECTION

WRONG EXAMPLES



FRONT VIEW
Showing the proper
edge angle of the tool.

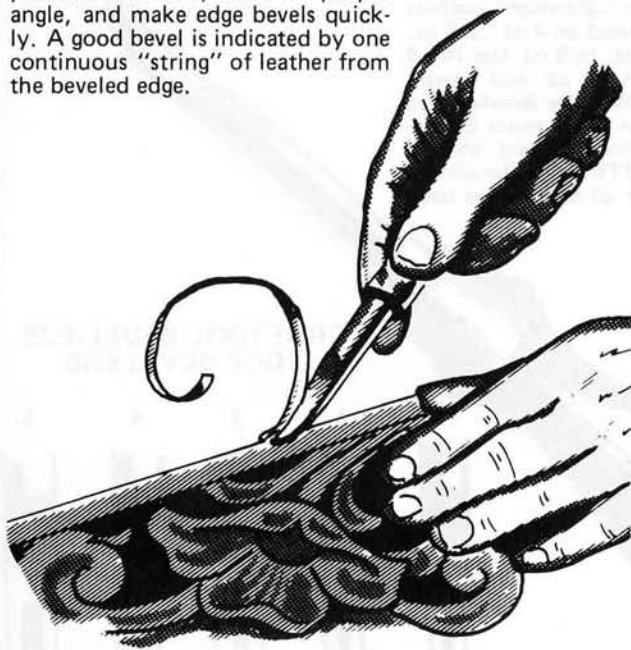


TOO STEEP
Points will dig
into the leather.

TOO SHALLOW
Tool will skip; will
not cut properly.

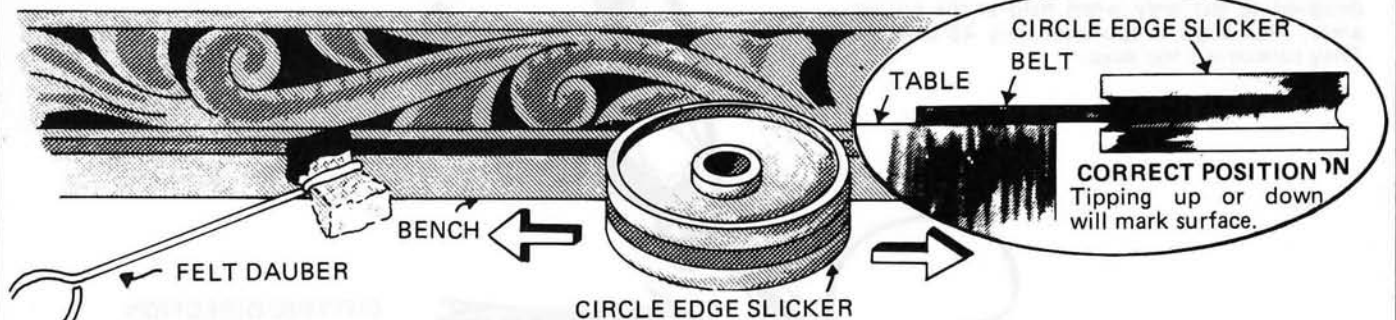
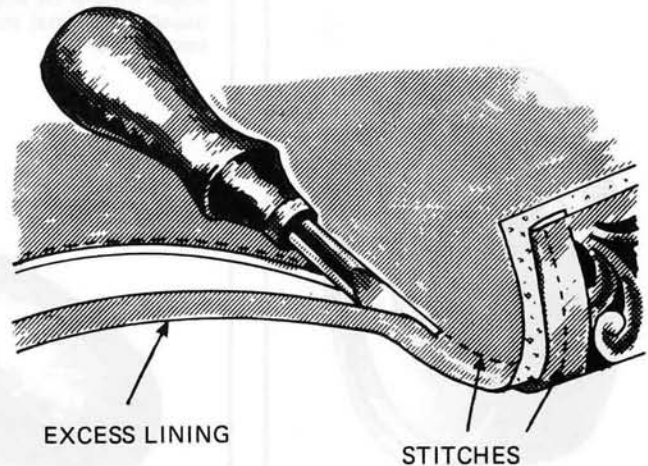


For best results, hold work firmly on bench with free hand. Use firm pressure on tool, held at proper angle, and make edge bevels quickly. A good bevel is indicated by one continuous "string" of leather from the beveled edge.



SPECIAL NOTE:

Your Edge Beveler, if sharp, can also be used as a trimming tool. To trim the excess lining material, stitched or glued to a project, trim the excess close to the stitches as shown below.

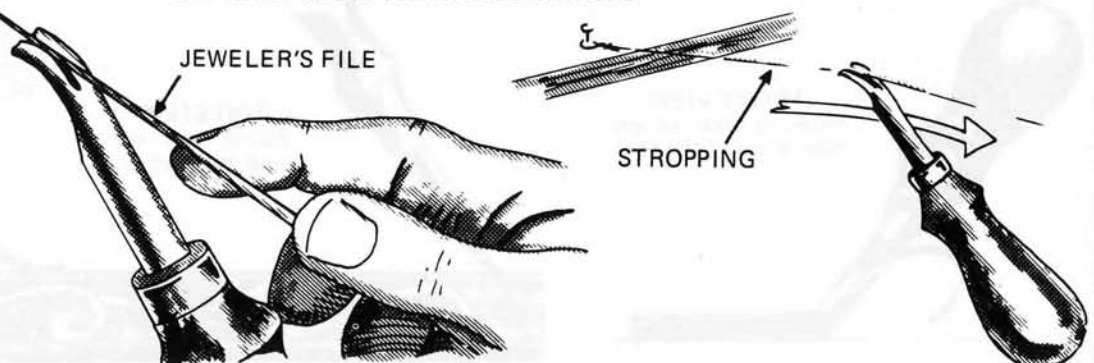


Dye the edges if desired. Dip felt in Edge Coat and pull evenly along the edge holding project firmly with free hand, with edge of project extending over the edge of the bench.

Moisten the beveled edge of the leather with a sponge dipped in water and rub briskly back and forth with the circle edge slicker. Hold project firmly.

HOW TO SHARPEN THE EDGE BEVELERS

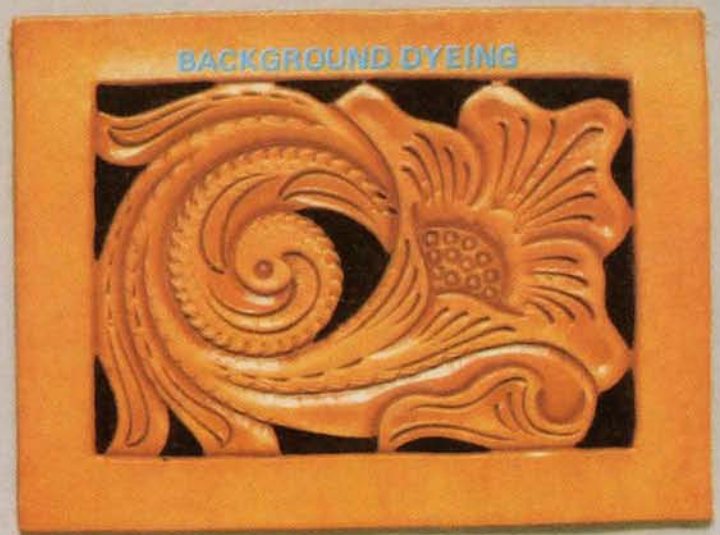
Sharpen the tools with a small round jeweler's file. File the rounded notch on the bottom, working toward the cutting edge. The tools can be stropped by pulling under a heavy cord thread impregnated with a fine cutting compound or jeweler's rouge.



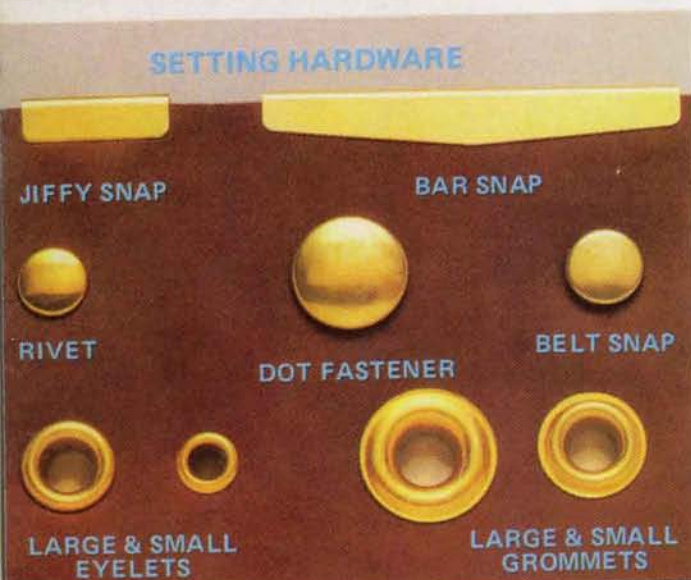
CARVING TECHNIQUES



BACKGROUND DYEING



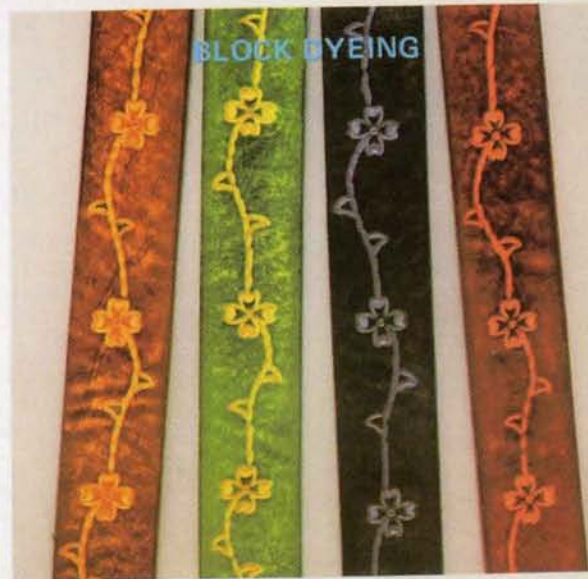
SETTING HARDWARE



MYSTERY BRAIDING



BLOCK DYEING



LACING TECHNIQUES



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