

METALCRAFT

MODELING IN METAL – LIGHT GAUGE ALUMINUM OR COPPER



TIN PUNCH

DIVISION 1 – 3RD GRADE

Punch a simple design on a piece of copper or tin not exceeding 8" X 10". No antiquing or painting for first year members. (Examples: framed pictures, pie tin, etc.)

DIVISION 2 – 4TH GRADE

Punch a more advanced design adding techniques of antiquing on copper. (Examples: framed pictures, trays, etc.)

DIVISION 3 – 5TH GRADE

Punch an advanced design using acrylic or enamel paints to color the design. (Examples: framed pictures, pizza pan, pie tin, bulletin boards, etc.)

DIVISION 4 – 10 - 6TH – 12 GRADE

Any technique learned above but in an advanced article; such as wreath centers, lamp shades, cutout figures, large framed pictures, candle holders, set of articles, etc. May be painted or antiqued or any combination (entire surface of metal should not be completely painted, only the design)

TOOLING.



DIVISION 1 – 3RD GRADE

Select and apply a simple design using different types of tools to achieve a variety of design affects (house number modeled in metal, desk name plate, simple plaque – article must be finished and ready to use).

DIVISION 2 – 4TH GRADE

Select a more difficult design, one requiring interlining or shading. Apply design by modeling or tooling (pictures, wall plaque, planter).

DIVISION 3 – 10 – 5TH – 12TH GRADE

Choose a design with three dimensions. Project may involve application of color (room accessory such as wastebasket or other large article).

*Articles must be finished and ready to use.

*Articles must be sprayed with a clear sealer.

*Tooling kits can only be used in Division 1 and 2 and must be listed as such under MATERIAL PURCHASED on the back side of the Record Sheet.

Revised 2005'

Metals

Tin punch is worked on a variety of metals: copper, brass, iron, and brass, as well as tin. The tin punch technique works on the dashed and metal. Many people think the tin punch is or perhaps you prefer the old fashion of hammer. For some of the certain special qualities and other metal is purchased. The finishing techniques can be applied to enhance or change the metal surface. As you learn how to punch, try all the different metals and finishes to see what effects you can create.

Lead is available in different shapes, sizes, gauges and thicknesses.

Craft stores carry a nice selection of pre-cut tin pieces in varying shapes and sizes from a square as small as 1" x 1" to a large piece 8" x 12". Check to find out what sizes are available. If you need a different size or shape, the pieces can be trimmed to size. Decorative pieces for tin punch projects are available at the same store.

On tin goods, gauges vary from very thin (.005) heavy to medium (.008-.010). The .005 gauge metal is called tooling foil, and because of its thickness, these are some of the best punching techniques designed to use when working with it. Usually tin and aluminum are about .008 to .011. Copper is often thicker, .015 to .020, because it's too soft in the .005 gauge. Most craft stores carry brass only in the heaviest gauge.

Copper

Copper has a warm glow that has been used in many decorative schemes. It has a natural, slightly lustrous and smooth finish. If you don't like the natural, then you can use a spray (see Finishing Instructions) to give it a different look. It doesn't have to be polished - a dull finish is just as nice. In fact, rather than shiny surfaces, copper may be finished with a matte finish.

Tin

Tin is one of the more common metals found on antique punched pieces. If you want an Early American rustic look, it is a good choice. It's available in shiny or matte tone finishes, each of which may be enhanced to add the look of age. It's quite difficult to remove the natural patina of tin, so if you want a tin as bright as possible, or if you want a tin with a patina, print designs, clean the tin with a fine sandpaper.

Aluminum

Aluminum looks very much like tin. If you can't tell the difference, use a magnet. It won't stick to the aluminum. For the projects in this book you may use tin or aluminum interchangeably.

Tooling Foil

Tooling Foil is available in craft stores in rolls of 12" x 36" sheets. It's very light and flexible, and works fine for small projects, but must be backed with a heavier material. If used in larger pieces, it's commonly used for the back of a tin or brass, but it can also be used for the front of a piece. It's available in a variety of colors, including green.

For the most part, the tin punch is a simple, easy-to-use, and fun-to-use tool. The tin punch technique works on the dashed and metal. Many people think the tin punch is or perhaps you prefer the old fashion of hammer. For some of the certain special qualities and other metal is purchased. The finishing techniques can be applied to enhance or change the metal surface. As you learn how to punch, try all the different metals and finishes to see what effects you can create.

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Punching

Basic Supplies

- Metal** – sheets or pre-cut pieces of copper, tin, or aluminum; rolls of copper, aluminum, or colored tooling foil; decorative pie pans
- Heavy Cardboard** – to work on
- Masking Tape** – to hold metal and pattern in place on cardboard while punching
- Pattern** – traced from book
- Ruler** – for positioning pattern on metal
- Lightweight Hammer**
- Tin Snips or Old Scissors**
- Punches** – awls, screwdrivers, small chisels, nail sets, nails, etc.
- Newspapers** – to pad work surface
- Gloves and Glasses** – protection while punching



Surfaces

The surfaces of punched metal pieces can vary from rather smooth with small holes and indentations to a puffy and almost padded look with large holes and deep ridges. The size and shape of the holes and lines are affected by what metal and punches are used, how often and hard punches are tapped with hammer, and variations in working surface.

The lighter the metal, the less depth it will have when punched. Lightweight metals such as tooling foil generally have a flatter appearance than punched heavy metals. The punches penetrate the tooling foil easily and do not distort the surface. Punching on heavier metals accentuates the thickness of the material and produces a padded, quilted effect. Sharp punches add more depth than very flat tools. A sharp screwdriver will pierce the metal while a dull one often just makes an indentation.

The harder and more often you hit the punch with a hammer, the larger the hole. However, three gentle taps might produce the same effect as one hard tap. To find out how you can achieve different results, you must practice and get the feel of tin punch before you start an actual project. Use different scraps of metal, tools, and methods following the techniques listed and develop your punching skills.

We suggest using protective eye coverings while punching and gloves when handling metal with sharp edges.

Practice Punching

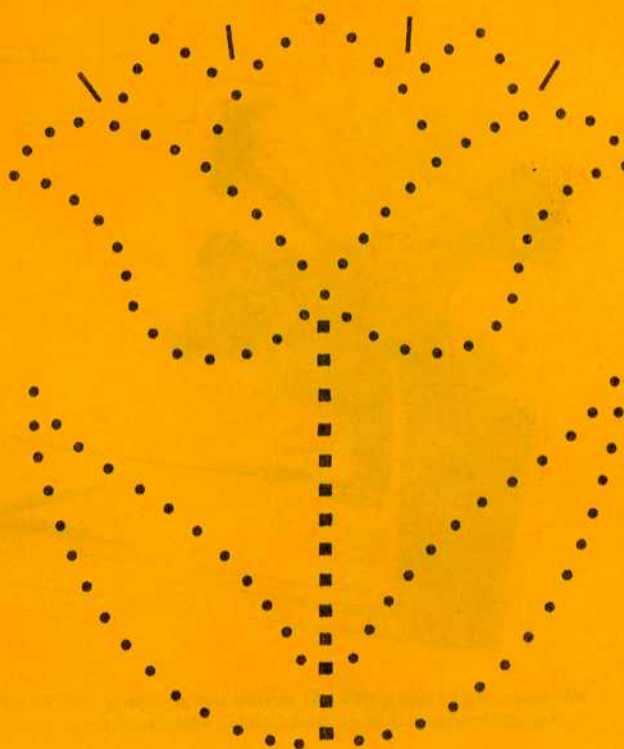
Step 1. For a workboard, use a heavy piece of cardboard larger than project you will be making. Place several layers of folded newspaper between cardboard and work table. The papers will protect your table and will help to muffle the noise as you punch.

Step 2. Trace practice pattern below, following instructions for Using Patterns on page 1.

Step 3. Select a piece of pre-cut metal, 4" x 5", or cut a piece to your specifications. This is for practice only, so don't spoil a large piece of metal by working in the center.

Step 4. Using masking tape around the outside edges, fasten metal securely to cardboard work surface.

Step 5. Center traced pattern on metal, using a ruler to check placement. Remember, once you start to punch, you can't erase, so position pattern exactly where you want design to be. Use masking tape to hold pattern in place. Leave one edge of pattern untaped to lift and peek at work as you go along to check the results of your punching.



Step 6. Now the real fun begins! First, select an awl or nail and practice tapping once, twice, or three times gently with hammer, looking each time to see what marks are being made on the metal. You'll see that with each tap of the hammer, the hole gets bigger and more pronounced. Now, try hitting harder, and check the holes. A gentle tap may just make an indentation in the metal; a hard punch may pierce through. Decide what effect you are trying to achieve, and try to make three or four holes or indentations in a row all the same size. Establishing a tapping rhythm will help to punch holes that are uniform in size and depth. Do not be too overly concerned if all holes are not exactly the same. Tin punch is done by hand and does not have a machine-made perfection. That is what gives the craft its charming, quaint quality.

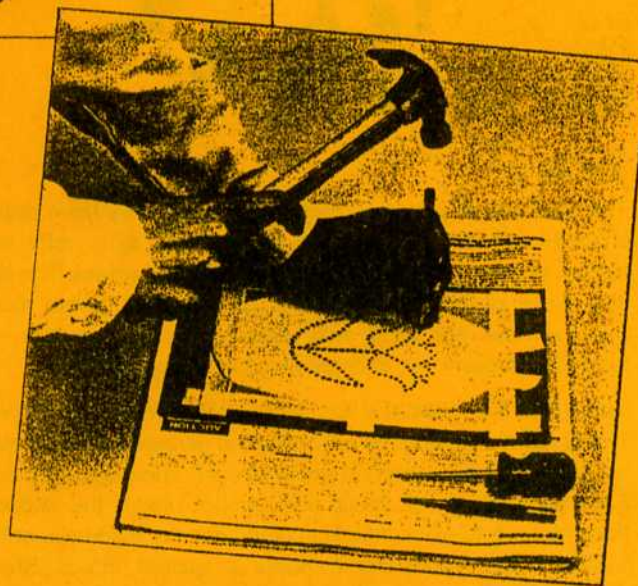
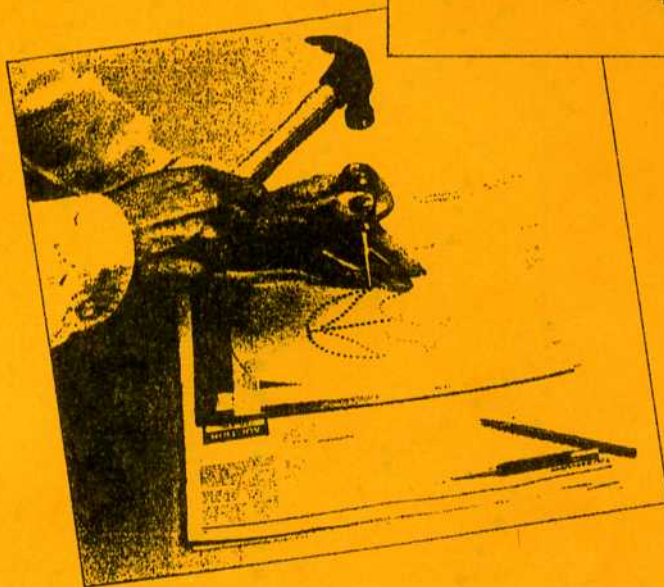
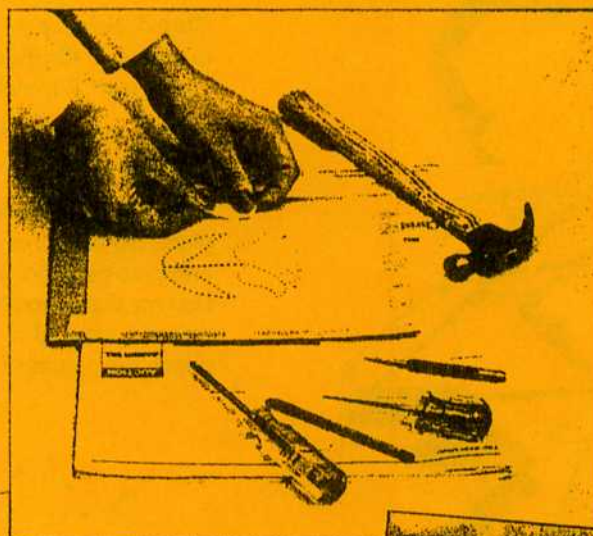
Step 7. Now, practice with the other types of punches. Notice that the chisels and sharp screwdrivers make lines instead of round holes, and the dull screwdrivers just dent the metal. A combination of dents plus holes can make a very interesting pattern. Use round punches for the small holes, chisels or

screwdrivers for the lines, and Phillips screwdrivers for the square punches.

Step 8. If you are using tooling foil, there are some easy-to-do techniques in addition to regular punching methods. To punch small holes, just push an awl through metal; no hammer is needed. To indent, rather than pierce the metal, use a ball point pen or pencil. Push down hard and trace pattern onto metal. Children love to tin punch using these easy-to-do methods!

Step 9. Continue to practice punching until you become comfortable with the process. If the metal seems to be bending out of shape a bit, don't be alarmed. No harm is done. Just check to make sure that your pattern has not shifted out of place.

Step 10. When design is finished, always check to make sure no holes have been missed before removing pattern. Leave metal taped to cardboard while applying finishing and sealer coats.



We have made every effort to ensure the accuracy and completeness of these instructions. We cannot, however, be responsible for human error, typographical mistakes, or variations in individual work.

CUT-OUT DESIGNS

After punching a design that is to be cut out, use scissors and cut up close to design to get rid of excess metal. Then snip inward toward design (*Photo 1*). This relieves pressure and keeps metal from bending. Now cut up close to outline holes (*Photo 2*). Proceed with finishing instructions.

Cleaning and Sealing

When your metal project is completely punched and embossed, clean it thoroughly before antiquing or sealing. Rub it with .0000 steel wool to remove fingerprints and grease stains. If you don't antique it, spray with an acrylic sealer so the metal will stay clean and shiny. If you antique it, spray after the antiquing.

Antiquing

If you want your metal piece to look old and well used, use one of the following methods to "antique it"

Copper can be antiqued with either one of two chemicals; Liver of Sulphur or Sodium Sulphite (commonly called copper toner). Liver of Sulphur turns copper dark, even black and Sodium Sulphite colors it reds, greens and blues. Apply the antiquing agent a second and third time if desired.

To use either one, mix approximately $\frac{1}{2}$ cup of solution following the directions on the bottle. Apply the solution to your picture with a small piece of steel wool. The chemical reaction will start immediately. When the picture is completely covered and is as dark as you want it, rinse the solution off with water to stop the action.

Using a fresh piece of .0000 steel wool, rub it back and forth across the picture in a horizontal direction to buff away some of the dark areas and allow the copper to show through. Rub the areas you want highlighted and leave the antiqued look in the recessed areas.

If you aren't satisfied with the results repeat the process until you are.

Aluminum or tin is antiqued by applying color to it rather than using a chemical reaction. Acrylic or oil paints can be used. Wipe or brush it on and wipe off gently with a paper towel or soft cloth while the paint is still wet. Leave color in the recessed areas. Antiquing defines and emphasizes the contours of the picture.

Another way to color any of the metals is to brush on glass stain, water or lacquer based. Some projects in this book were finished in this way.

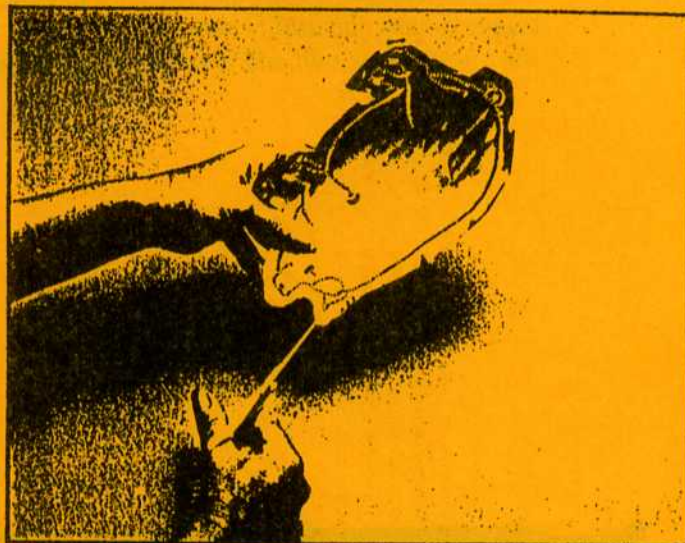


Photo 1

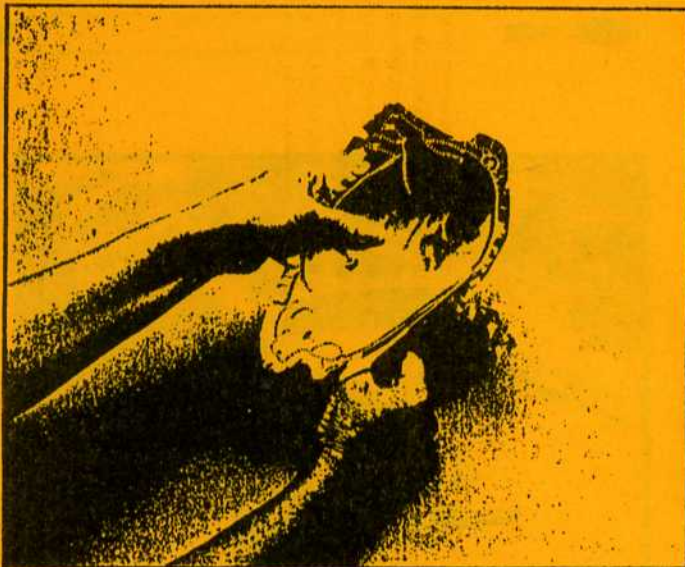


Photo 2



CREATIVE METALCRAFT - Ways to use finished copper and tin projects besides framing!

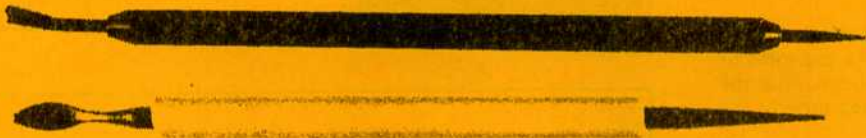
- Secure to decorative wood plaques.
- Secure to sectioned tree trunks/branches.
- Set in wooden accessories with cutouts, such as desk accessories.
- Weathervanes and cutouts - use 12" x 36" SHEET COPPER by The Village Sampler.
- Paint up as you would wooden decoys.

} Hang by chains or ropes

METALCRAFT

Tooling

Copper tooling is a craft you are sure to enjoy. This craft, like copper punch, uses 36 gauge copper tooling foil and is easy to do. You get professional results from the very beginning, and the country look will add warmth to your home.



Choose a tool that has both a smooth spoon end and a pointed end.



MATERIALS:

- Copper (36 gauge)
- Tracing paper
- Ball point pen
- Masking tape
- Household scissors
- Velour terry towel or several layers of felt
- Metal modeling tool
- Small awl
- Scrap of vinyl flooring or cardboard
- Clay
 - Sculpey or
 - Plasticene modeling clay
 - (such as Amaco Plast-I-Clay)
- Coppatina Copper Toner or Liver of Sulphur
- Small plastic bowl
- Steel wool (#0000)
- Distilled water
- Sponge brush
- Paper towels
- Clear acrylic spray
- Newspaper
- Ruler

