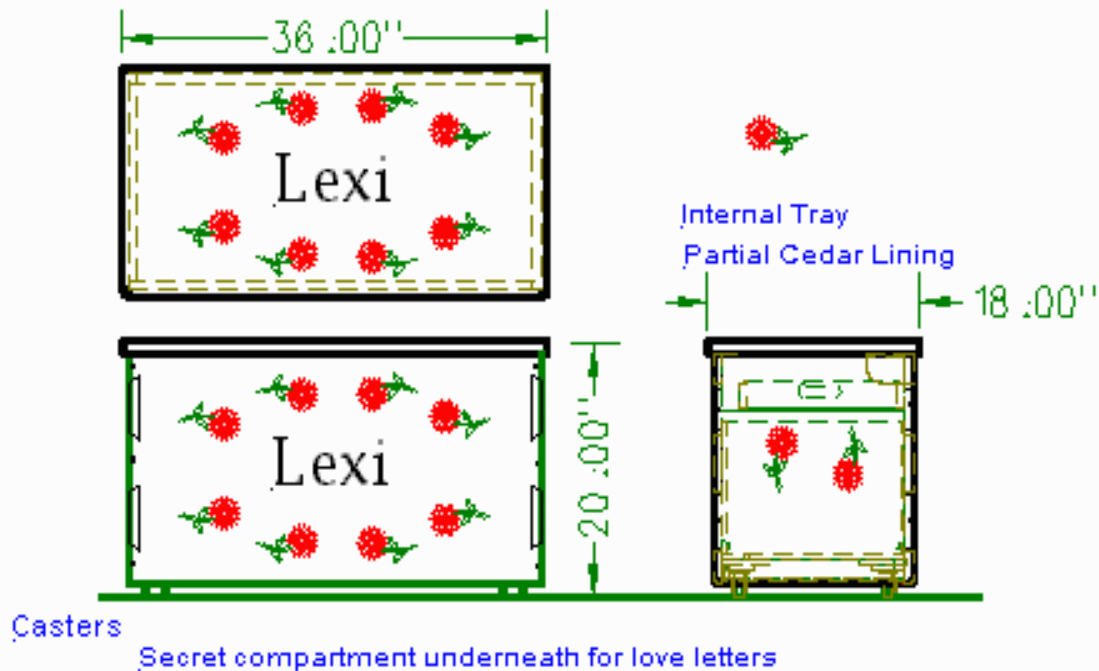


Six Plank Hope Chest

Woodware Designs

<http://www.charm.net/~jriley/woodware.html>

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02/03/01
hope.skf



Hope Chest

Hope Chests have been one of the premiere woodworking gifts for hundreds of years. They were given to young women to use to store all their things they collected in preparation for marriage.

Woodware Design's Hope Chest is low-cost and easy to build and decorate, but it will be cherished for a lifetime. It is a simple six-plank box with very basic wood carving on it. The carving is brightly colored.

The box is cedar lined and has a lift out tray. You may fit a lock and add a secret compartment beneath. It may be built by anyone with a few woodworking tools and modest experience. It may be carved with a single gouge and is an excellent first project.

Yet it will be treasured for 100 years.

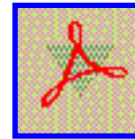
All the materials for this box can be bought at your local home improvement store or from a mail order house. The cost, using all new materials, is about \$350.00 for pine, with fancy brass hardware and a colorful finish. The cost can be much less if scrap wood and simple hardware is used. When completed, the Hope Chest will be worth twice the cost of the materials.

The patterns for this box can serve as well a very [first lesson](#) first lesson in wood carving.

1. Hope Chest Drawings

Several versions of this box design are currently available, each with a different flower and name. Just click on the link below to download sample drawings drawings in .PDF format. These construction notes cover all the box varieties and can be printed out with your Web browser.

1. [Hope Chest Drawings in .pdf](#)



2. A free Acrobat Reader (.87 meg) is available from:

3. Or, if these don't work or you need a new name and flower pattern, simply send in this [little freebie form](#).

If you like our fun Freebies, remember we can only keep this Web site open if we sell our [Low-Stress Computer Furniture Plans](#) or you follow our ad links and make purchases from our sponsors. Thank you.



2. Construction Steps

You can make one of these boxes by:

1. Downloading this text.
2. Downloading and printing out the sketches.
3. Studying the information
4. Talking it up with your apprentice young person.
5. Purchasing the materials, some local, some mail order.
6. Rough cutting wooden pieces.
7. Making the box joints.
8. Cutting out the shapes.
9. Carving the patterns.

10. Sanding and finishing all pieces
11. Installing the hardware.

3. **Discussion of Sketches**

After you download the sketches, these notes will help you understand them. The Hope Chest sketches vary in surface designs but all consist of the following sketches:

1. **Top, Side, and End Views**

The size and carving pattern show clearly. The insides of the box are shown in dashed lines.

2. **Wide Boards, Sketch #2**

The wide boards needed to make the lid, back, sides, and end boards are shown. These boards may either be purchased preglued or edge glued from boards using biscuits.

3. **Bottom View, Sketch #3**

This sketch shows how the bottom fits together. Note the area for the recessed wheels and the compartment.

secret

4. **Plywood Layout and Tray, Sketch #4**

This sketches shows the size of the plywood needed for the chest bottom, the tray bottom, and the compartment door. The sides of the tray are also shown.

5. **Name Pattern Full Scale, Sketch #5**

This sketch shows the first half of the full size name pattern. If you need a new name, please e-mail me.

6. **Name Pattern Full Scale, Sketch #5**

This sketch shows the second half of the full size name pattern.

7. **Flower Pattern Full Scale, Sketch #6**

This sketch shows the pattern for the flowers.

8. Ceder Liner, Sketch #7

This sketch shows size of the standard ceder closet liner needed.

9. Cove Tail Gage, Sketch #8

This sketch shows how to make a tool to help you do the dove tail ends of this box.



4. Materials

The Hope Chest is made from inexpensive wood. The parts are assembled with glue, nails, and screws. The mail order source for any special hardware is given below.

1. Wood:

- Wood, Pine with only a few knots -- 18 board feet @ 3.50 /bf
- Plywood, 1/2 inch, 24"x48" ----- \$14.00
- Ceder lining, 8 sq. ft. ----- \$ 20.00
- Plywood, 1/4 inch, 24"x48" ----- \$ 9.00

----- Subtotal: \$106.00

2. Mail Order Hardware:

- Piano Hinge, 1 1/2" 36 inches, antique brass (219366) -- \$11.00
- Half Mortis Heavy-Duty Chest Lock (486) ---- 1 ----- \$21.00
- Cedar Chest Support (33159) ----- 1 pair ----- \$9.60
- Magnet Latches ----- 1 pair ----- \$2.40

----- Subtotal: \$52.00

These materials can be obtained from [Rockler Woodworking and Hardware](http://www.rockler.com) (<http://www.rockler.com>, 1-800-279-4441).



3. Local Hardware:

- Brass Screws for hinge, antique brass ----- \$8.00
- Casters, 1 1/2" ----- 4 ----- \$16.00
- Bolts for Casters -----16----- \$4.00
- Restoration cut nails, 1 1/2", 1 package of 50 (32388) -- \$1.50
- #4 finishing nails ----- 1 lb ----- \$1.50
- Glue ----- 1 pint ----- \$4.00

----- Subtotal: \$35.00

4.

5. Finish:

- Artist's Acrylics ----- 2 colors ----- \$12.00
- Polyurethane ----- 1 quart ----- \$12.00
- Paint for inside ----- 1 pint ----- \$ 4.00

Finish Subtotal: \$28.00

6. Omissions and Contingencies (~10%)

(Tax, sandpaper, etc.) \$29.00

7. Estimate Total Cost \$350.00

This is only an estimate (made in Winter 2004). The price may vary in your area. Getting a good price on the hardware and making use of scrap wood is critical to keeping the price down.

5. Tools

This box was designed so that it could be built by an adult/young person team with a modest home shop. Access to a table or radial arm saw is most helpful for making the box. The coarse dovetail joints shown can be made with simple hand tools.

The very simple carving needed to make the name and flowers can be made with one gouge. The one I use is a 3/16 inch #6 gouge. You also need a small, rounded-edged slip for sharpening it. A simple hand mallet can easily be cut from scrap wood. This is a very easy and fun way to start learning wood carving. Please e-mail me if you would like more information.



6. **Fabrication Notes**

This is not intended to be a detailed step-by-step construction guide, but rather a number of points to consider. It is your project and you can build it to suit your likes.

1. **Options**

Look over the drawing and decide what you are going to do:

1. Choose your name and flower -- Talk the selection over with the person to receive the box.
2. Check Size -- If the box is too small it will not hold very much. If the box is too big, it will be too heavy and take up too much floor space. The box should be a good size to use as a bench.
3. Carving -- The name and flowers are only a few simple lines on the boards. These are intended to be cut with a hand gouge. This is easy to do and makes a safe, fun learning exercise but does require a few special tools. It is possible to cut them other ways, such as a free hand router, but the chance of error is much greater.
4. Fancy Hardware -- As the the box is based on simple Early American designs, you can use simple steel hardware. The lock is the most expensive part and can be omitted, but young people enjoy the privacy of owning their own lock box.

2. **Making the Box**

This box has six flat sizes and simple hand-cut dovetailed joints.

1. **Large Flat Boards**

The top, front, back, and two ends are shown made from large flat boards. In American Colonial times, boards of this width were common. Today they are not. You may either purchase preglued wood panels, usually make of pine, or glue

together several boards using biscuits in the edge joints.

2. Dove Tail Joints

Dovetail joints are classic for this type of box, look great, and are very strong but do take a little hand work. You can do them with only a few hand tools but it does take a little practice. (Use the scrap between the end pieces for practice.) The course joints needed for this box do not have to be a perfect fit.

Note that the dovetail shapes show at the front and that the joints are locked with a few finishing nails (no glue).

Sketch #8 shows a simple 30 degree tool to aid in marking out the dovetails. It is full size and you can transfer the shape to a piece of card board (shellacked) or sheet metal. Whenever you need a sloped line you simply slide the tool along the edge of the wood and mark the angle. It is more important that all angles be the same than they be exactly 30 degrees.

After practicing on scrap wood, start with the back. Draw a light line .75 inches in from the ends. Use the tool to make off the four sloped lines and the tri-square to come straight across the end grain. Use the miter box saw to cut four angled cuts being very careful to just leave the line.

Use a coping saw or jig saw to cut out the waste. use a rasp and chisel to remove any irregular saw marks. This is the step that needs practice.

Clamp the end piece that will mate with your we work inside to inside with the front piece. Use a square to transfer the exact cut lines to the end piece end grain. Use the Dovetail tool to mark off the angles on the end grain.

Hold the two pieces together at the final right angle and very carefully mark off the material to be removed. Draw a line .75 inch in on both sides and number the joint so that you will not later get them confused.

Use a Miter Box saw to cut the angle lines. Be very sure which side of the line you want to be on. Cut the waste away with a coping saw or jig saw. Clean up the saw cuts with the rasp and chisel. Check the fit. Remove small amounts of material with a chisel until you get a good fit.

Repeat this procedure for the four corners.

Drill holes for the 18 finishing nails in the four joints using a common #6 finishing

nail. Tack the nails in to temperately hold the joints but leave 1/4 inch showing so you can later remove them and drive in the antique nails. You can temporarily install the casters if it makes the box easier to work on.

3. **Fit the Bottom**

Fit the bottom plywood inside the box. Glue and nail the four caster blocks on the corners. Glue and nail small blocks around the inside of the box to hold the bottom in place so that casters stick down 1 inch. Hold the bottom in place with a few screws but do **not** glue it.

4. **Fitting the Lid**

Install the hinge with a few screws and trim the lid and the back piece to fit the top of the box. Round off all exposed edges with the box plane and rasp.

3. **Carving the Name and Flower**

Take the box apart for [carving](#). Clamp the pieces of wood flat on the bench and carve the internal lines in the patterns. Practice first on scrap.

Print out full size copies of the name and flower patterns. Tape several pieces of paper together if necessary. Think of the drawings as a series of lines. Take a sharp knife and cut small squares through the paper at the end of each line. Tape the paper to the board where you want the drawing. Draw small pieces of the lines through the holes in the paper. Take off the paper and connect-the-dots between the little sections of line that you have drawn.

The name and plowers can be carved using one small gouge. The groves should be done in at least three passes to insure good control.

4. **Assembly**

Assemble the box first. The coarse dovetails will take some custom fitting and will not be completely tight when complete but that is just fine. Let in the hinges and lock with a chisel and custom fit the lid and bottom. You can glue the bottom and sides and lock them with a few finishing nails in pilot holes.



7. **Finish**

Finish your box any way you like. I recommend: Artist Acrylics, bright oil-based enamel inside of the box, a spit coat of shellac, and two coats of satin finish polyurethane or modern tung oil.

1. **Artists Acrylics**

Artists Acrylics are widely available in any art or crafts store. They come in a wide variety of very fast colors and are easy to apply. They will easily last a hundred years deep down inside wood carving.

Mop a thick coat of paint into the carved lines with a cheap brush. Don't worry about the color spilling out of the groove; use plenty of paint. Let the paint dry thoroughly (at least 4 hours) and then sand the flat surface of the wood. The effect is wonderful.

2. **Signature**

Be sure to have everyone on the team signs and dates the box. This is easily done by signing the outside bottom with a permanent marker before finishing.

3. **Stain**

If you are using hardwood, you can stain it. Be sure to wipe excess stain out of the carving with a cloth before it sets.

4. **Spit Coat**

A spit coat made of one part 3-pound shellac to five parts shellac thinner makes a good wood sealer.

5. **Paint**

This design of this box follows that of Early American plank boxes. These usually presented very plain outsides in dark wood colors but when the box was opened the brightly colored inside gave a surprising contrast.

I therefore strongly recommend that you paint the inside of the box a bright color (red or blue perhaps) with an oil-based enamel. Also mask off the outside 0.75 inches all round the inside of the lid and paint that rectangle too. Two coats are best.

6. Top Coat

For this box I like satin finish-polyurethane or a modern tung oil finish such as:

Formby's Tung Oil Finish

Tung oil finishes are applied with a cloth pad rather than a brush. Follow the instructions on the bottle carefully and apply a liberal number of applications on areas that will be handled. I would apply the finish over the painted surfaces also to produce a glazed effect, but try this on scrap first.

Do not let excess finish accumulate in the carving.

8. Completion

All that is left is to reassemble the box and install the hardware.

• Conclusion

Thanks again for using Woodware Computer Plans. We very much want to know how you are getting along with your project and will be happy to answer any questions by e-mail.

If you send us a picture of your finished box, we can put it on our Web page. We need pictures of projects with real people standing beside them.

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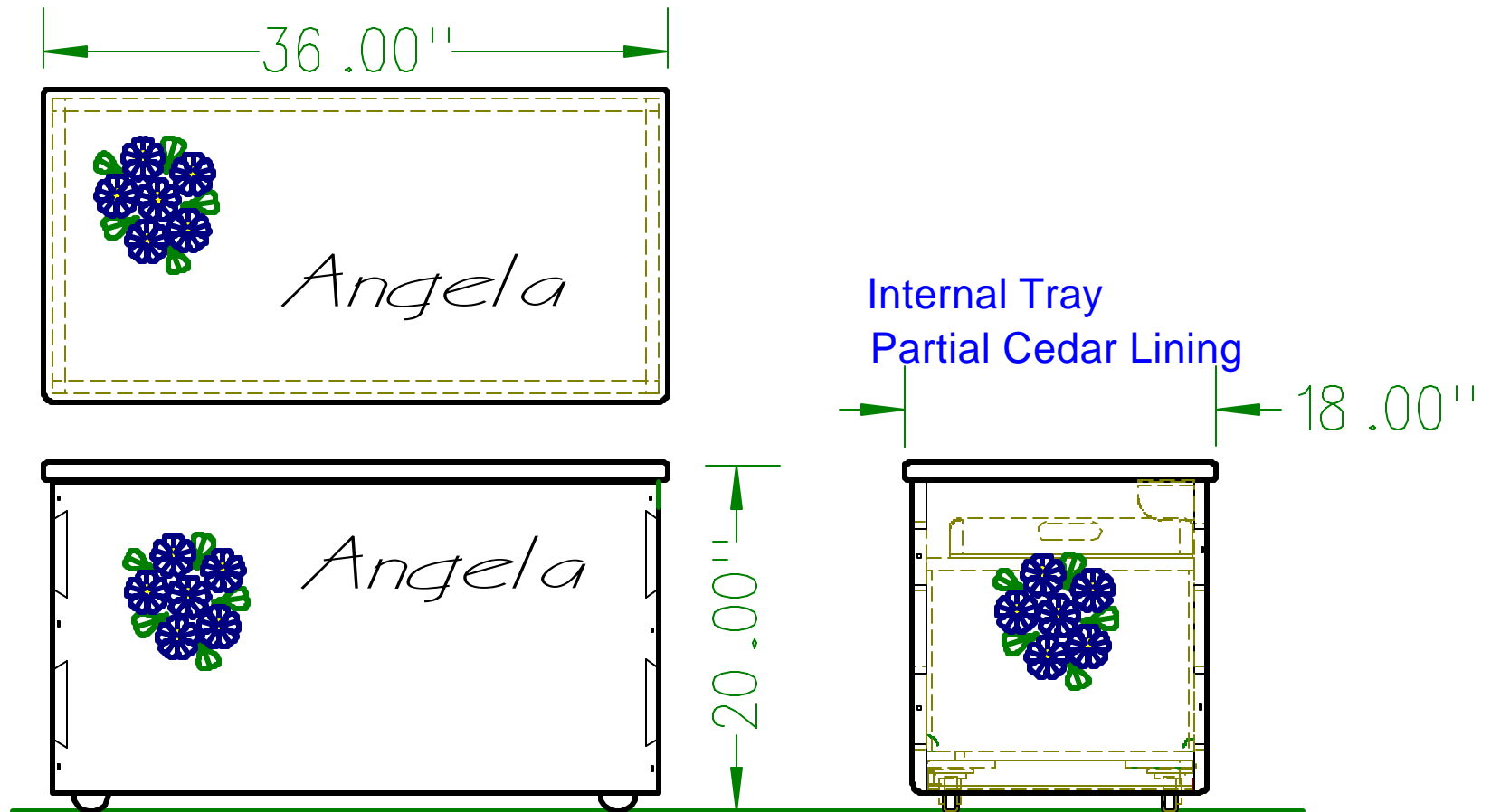
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<http://www.charm.net/~jriley/woodware.html>

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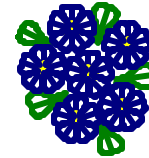


Casters

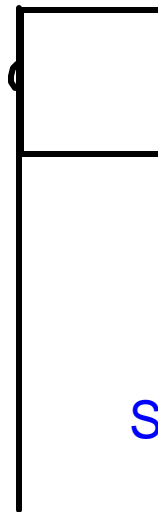
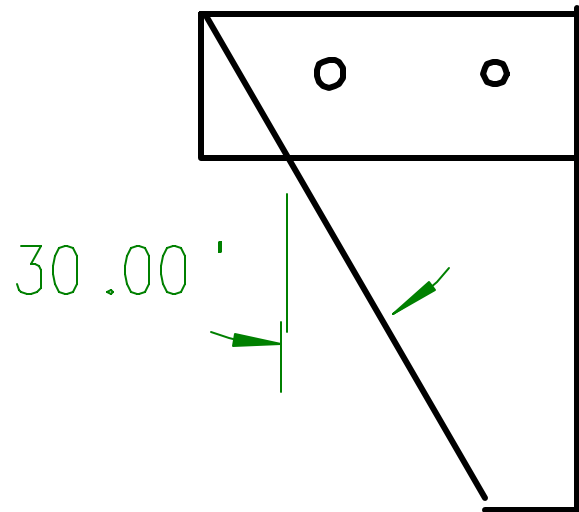
Secret compartment underneath for love letters

Hope Chest

Dove Tail Gage, Sketch #6



Forget-me-nots

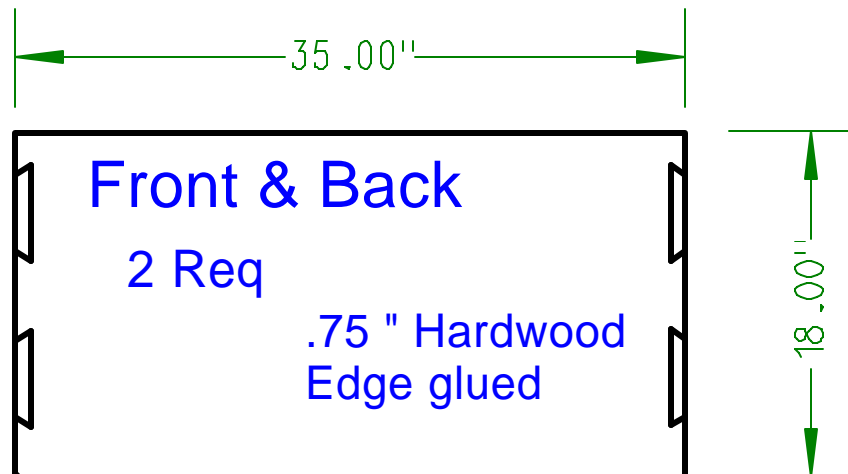
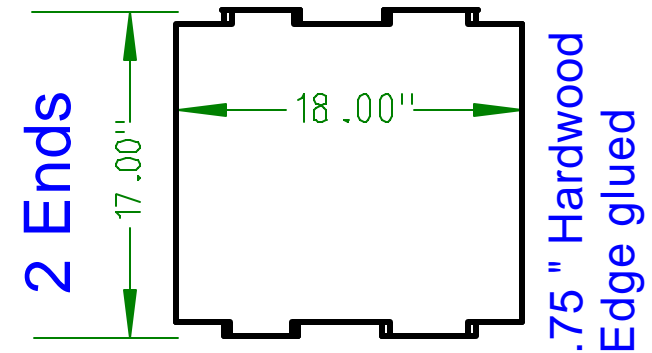
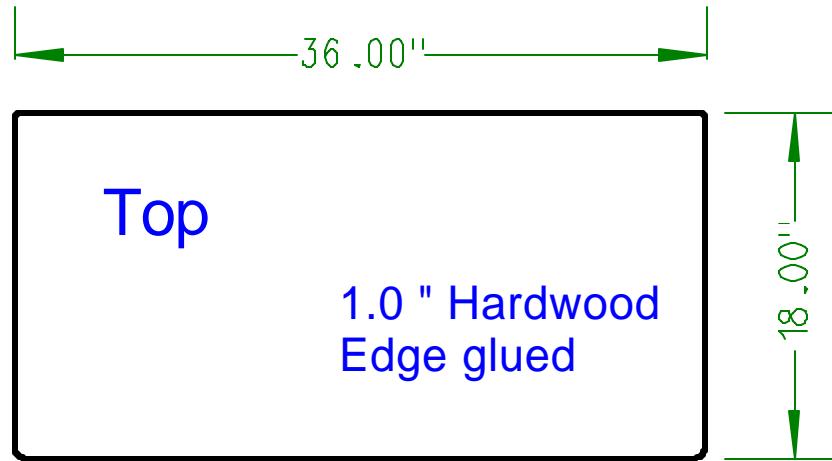


Small Block

Sheet Metal or Cardboard

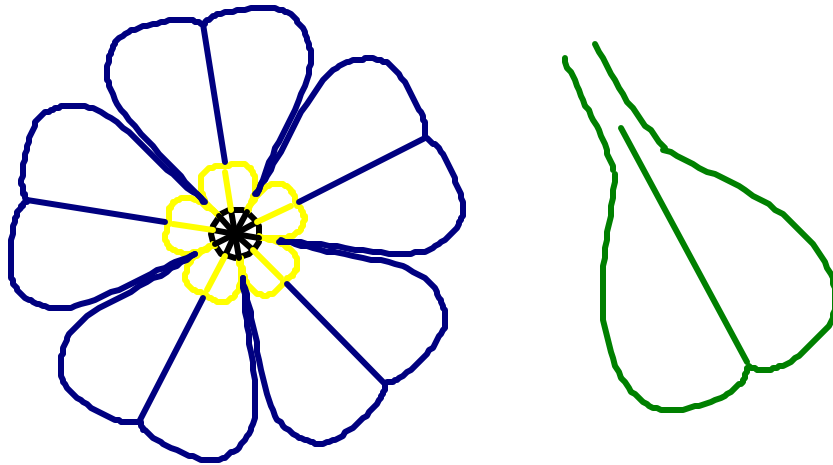
Hope Chest

Wide Boards, Sketch #2



Hope Chest

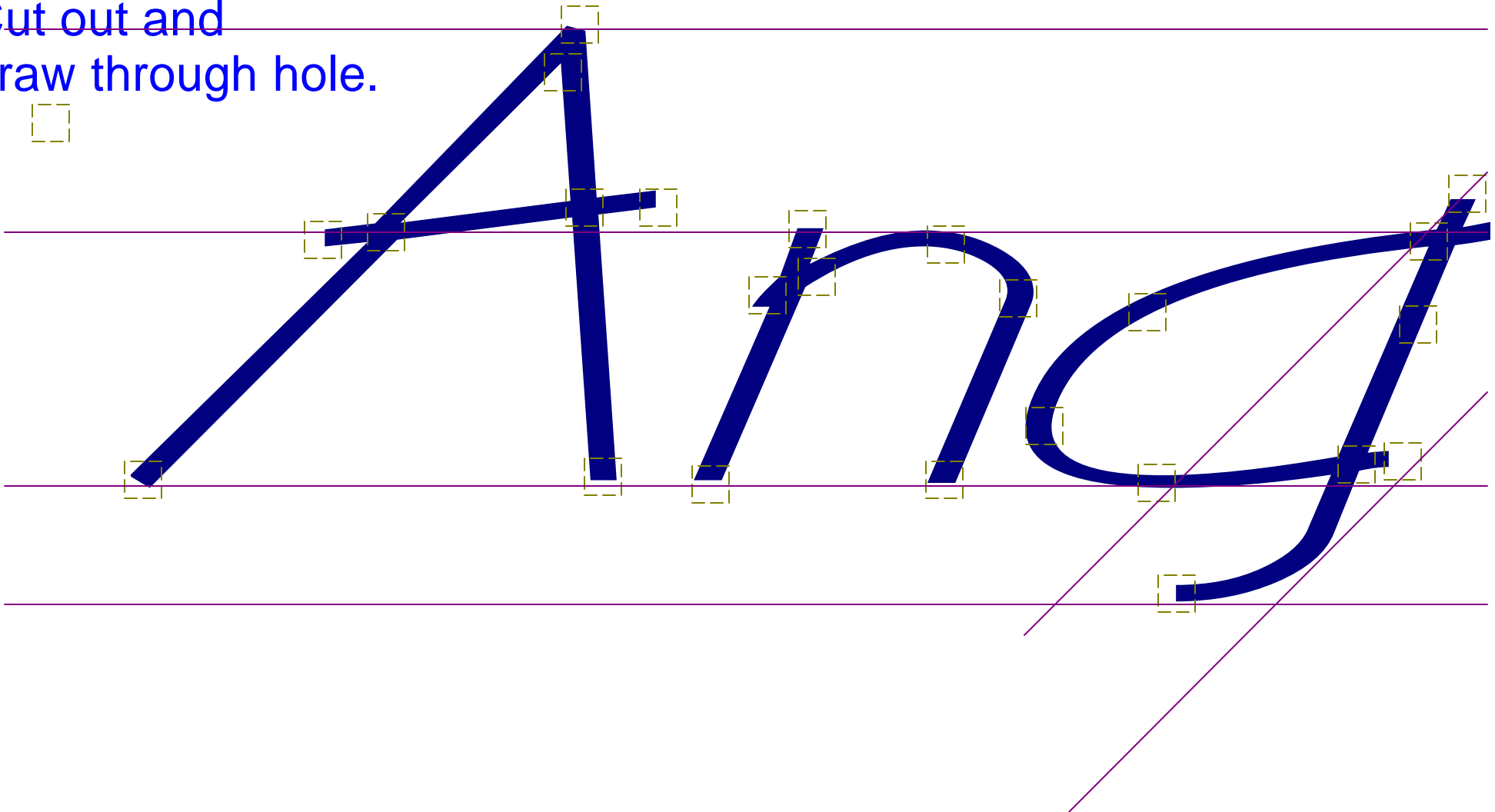
Single Flower Pattern
Full Scale, Sketch #7



Hope Chest

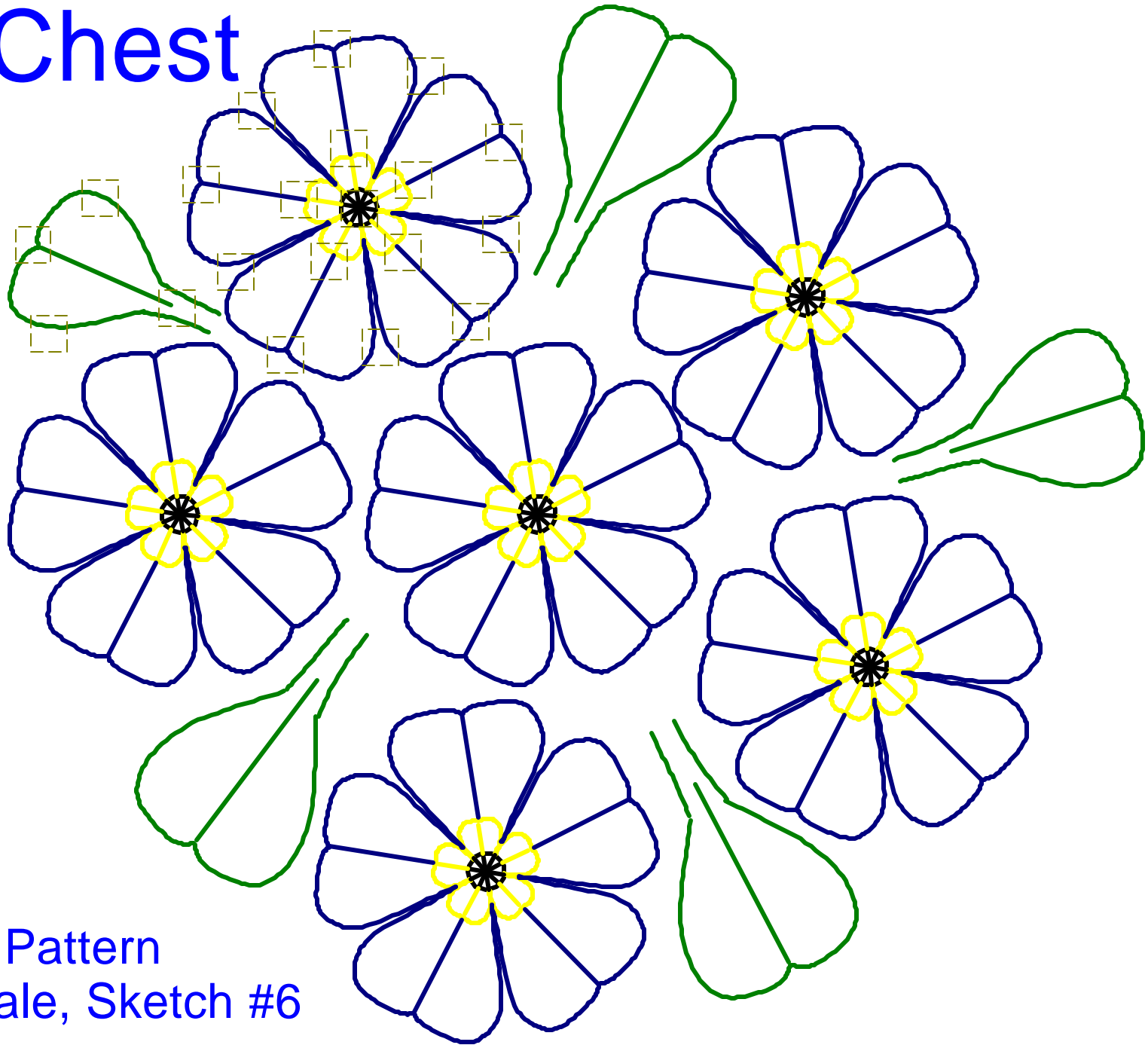
Name Pattern
Full Scale, Sketch #5

Cut out and
draw through hole.





Hope Chest



Flower Pattern
Full Scale, Sketch #6