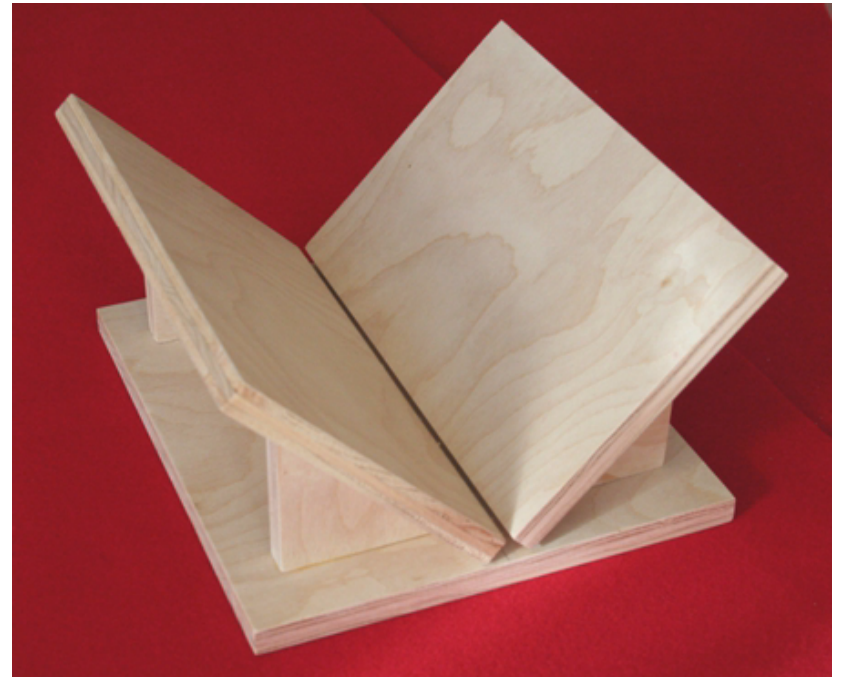

 *Tony
Firman
Bookbinding*

Making Simple Bookbinding Equipment



A Punching Cradle

Tony Firman

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Making Simple Bookbinding Equipment: A Punching Cradle

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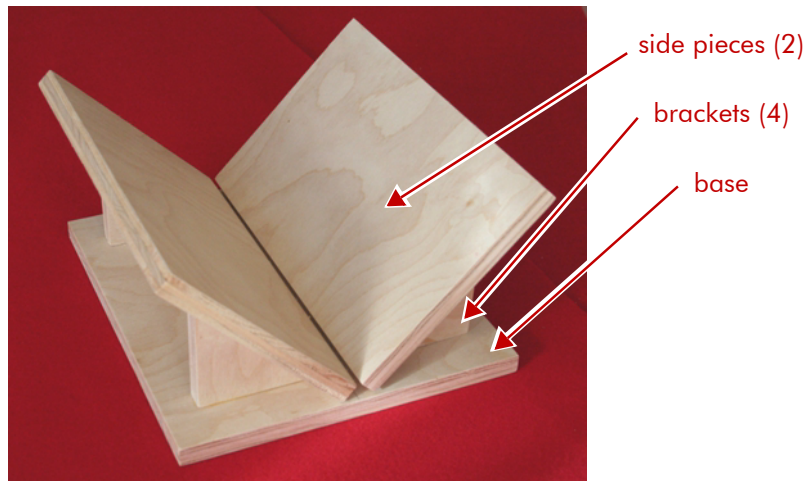
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The punching cradle

A punching cradle is a simple but useful piece of equipment for holding a signature while you punch holes for sewing through the fold, as shown in the photograph below.

The photograph below shows the finished punching cradle with its component parts identified.



The punching cradle is extremely simple and cheap to make – in fact, it can usually be made from scraps, and in less than an hour, using only simple hand-tools. The instruction in this book describe using plywood, but alternatively you can make it from thick cardboard with good results.

The punching cradle described here is suitable for A size (8½"x11") paper, to be folded in half to make 5½"x8½" books. [If you use metric-size paper, the punching cradle is suitable for A4 size (210x297 mm) paper, to be folded in half to make A5 books.]

Begin by taking the several sheets of printed paper that form one signature in the book. Make sure the sheets are collated in the correct order, and with the correct orientation, so that the pages will come out in the right order. Then carefully fold the set of sheets in half: press the fold first with your fingers, then with a bone folder.

Now open the folded sheets again so that they form approximately a right-angle, and place them in the punching cradle as shown in the photograph opposite. Place your punching template over the left-hand pages, and use your left hand to clamp the template and the sheets to the left-hand side of the cradle. Then take the awl in your right hand, and punch the sheets through the fold as guided by the template. It is important that your left hand is clamping the sheets to the cradle, or they may be pushed down into the slot at the bottom of the cradle, rather than being punched.

(If you are left-handed, simply reverse "left" and "right" in the previous paragraph.)

Repeat the process for each signature in your book.

Using the punching cradle

Your punching cradle is now ready for use. It easily accommodates folded sheets up to ANSI A-size or metric A4-size – the vast majority of printed sheets in the world – and can be used with care for even bigger sheets. The only other thing you need is a bookbinders' awl of the appropriate size, which you can obtain for just a few dollars. And for consistent results in punching multi-signature books, make your own punching template like the yellow one you see in the photograph below.



The photograph below shows the punching cradle in use, punching a signature of A-size sheets.



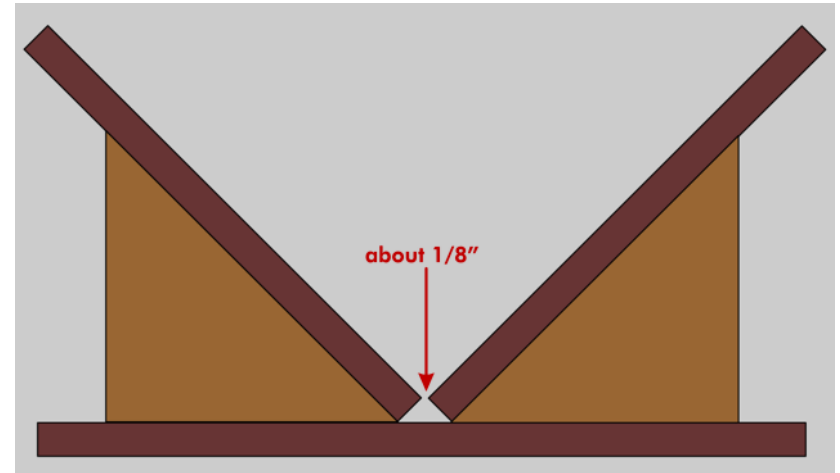
Materials required

To make the punching cradle you need a piece of plywood approximately 9" wide and 23" long. You can use plywood in any thickness from 1/4" to 1/2" thick; you can even use thick cardboard – the resulting cradle will have a shorter life, but if you don't do a lot of binding, that may not be an issue.

You will need interior-grade PVA wood glue. You may also wish to coat the cradle with a clear finish ("varnish"), preferably water-based. And you may wish to line the bottom of the cradle with a piece of felt.

These materials can be obtained from any hardware store – or perhaps even from your scrap bin.

Take the other side assembly, and apply glue to the edges of the brackets that will attach to the base. Place this assembly on the base alongside the first side assembly, so that there is about a 1/8" gap between them, like this:



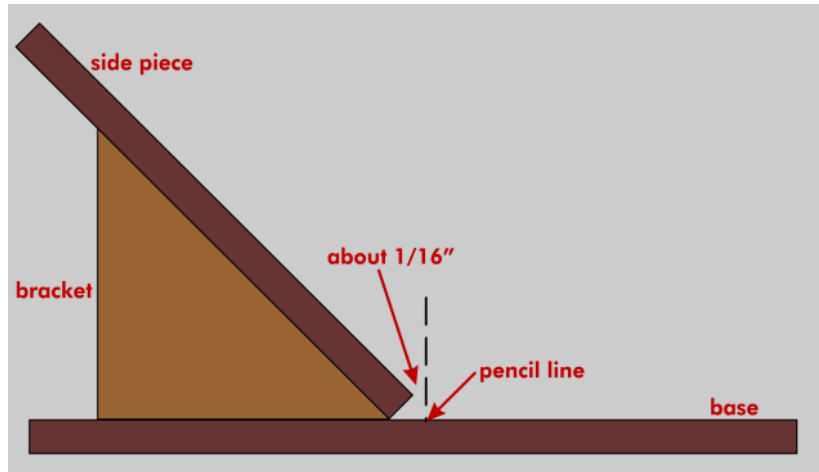
Leave the assembly undisturbed overnight for the glue to set thoroughly.

You may wish to apply a coat of clear finish ("varnish") to the whole thing, but it is not essential. You may also wish to glue a piece of felt across the bottom of the cradle, to make sure it never scratches the table you use it on, but again, it is not essential.

Gluing the side assemblies to the base

Take the base, and draw a pencil line down the middle of it.

Take one side assembly, and apply glue to the edges of the brackets that will attach to the base. Place this assembly on the base just to one side of the pencil line, like this:



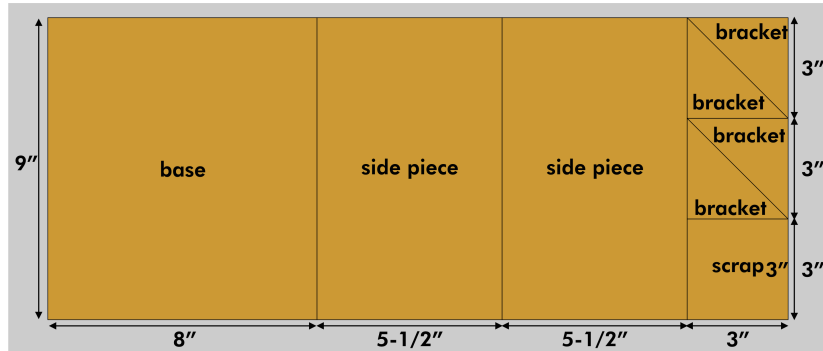
Tools required

To make the punching cradle you need the following tools:

- measuring tape
- square
- a handsaw; or if available a table saw or radial-arm saw
- sandpaper

Cutting up the plywood

Cut the plywood as shown in the diagram below. You can cut this from a single sheet of plywood, or just use up scraps. The resulting pieces don't even need to be all the same thickness, although the two side pieces must be of equal thickness.

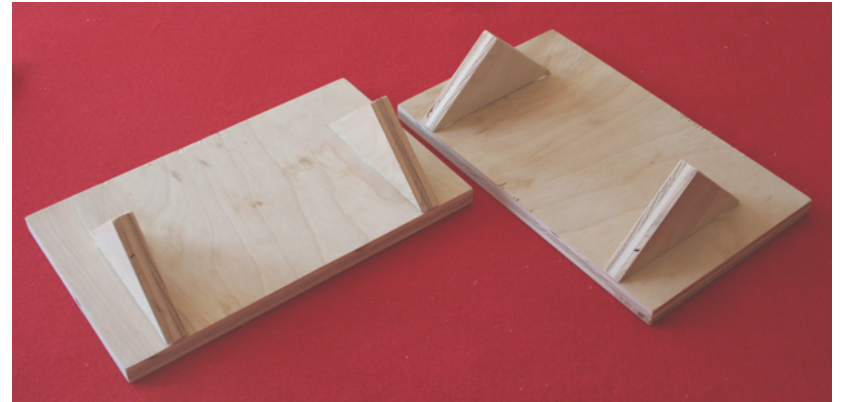


You can do this using a handsaw. If you have access to a table saw or a radial-arm saw, that will be easier and probably neater. Note that none of these dimensions is really critical.

Go over each piece with sandpaper and remove all splinters and sharp edges.

Gluing the brackets to the sides

Begin the assembly by gluing two brackets to each side piece. The photograph below shows how the pieces are to be arranged: apply glue to the long side of each bracket, and glue it to the side piece with one end of the bracket flush with one edge of the side piece, and about an inch in from the end.



You now have two *side assemblies*. Leave them undisturbed for a couple of hours (or more) for the glue to set up before you go on to the next step.