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 *Tony  
Firman  
Bookbinding*

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## Making Simple Bookbinding Equipment



## A Sewing Frame

**Tony Firman**

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## Notes

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## Making Simple Bookbinding Equipment

### A Sewing Frame

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Making Simple Bookbinding Equipment: A Sewing Frame

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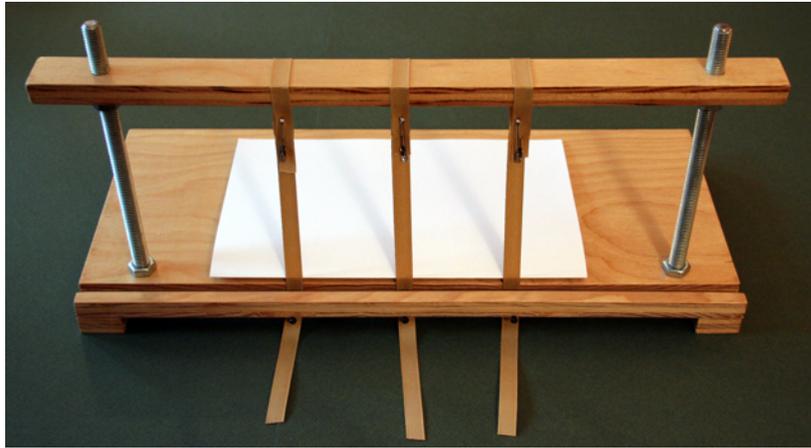
4. When all the tapes have been pinned in place, position them to exactly the right spacing. You can do this using a punched signature, or using the punching template you used to punch the signatures.
5. Using your fingers, turn the nuts under the crossbar so as to raise the crossbar and tighten the tapes. The tapes do not need to be very tight: just tight enough that they provide good support while you are sewing the signatures to them.
6. Tuck the bottom ends of the tapes back under the bed of the sewing frame, out of the way.
7. That does it. Start sewing your book!

If you wish to use cords instead of tapes, you can simply tie the top ends of the cords around the crossbar. Then clamp the bottom ends of the cords using short woodscrews with washers driven into the underside of the bed. Tighten up the crossbar using the nuts in the usual way.

## Using the sewing frame

Your sewing frame is now ready for use. Note that the dimensions have been calculated so that you can easily hold paper of A or A4 size, folded once (folio). Using this sewing frame, you can sew your signatures onto either tapes or cords.

Here is the sewing frame with three tapes mounted:



Using tapes traditionally required the use of small metal clips called trindles. If you don't have any trindles, you can use readily available pins instead, as described in the following procedure.

1. Attach the required number of tapes to the crossbar Wrap one end of each tape around the crossbar, and secure it with a safety pin. Position the tapes at approximately the right spacing.
2. Thread the tapes through the slot in the front of the bed.
3. Pull the lower end of each tape fairly tight, and insert a strong straight pin through the tape on the underside of the bed. The photograph shows large-headed pins; T-pins are also very suitable.

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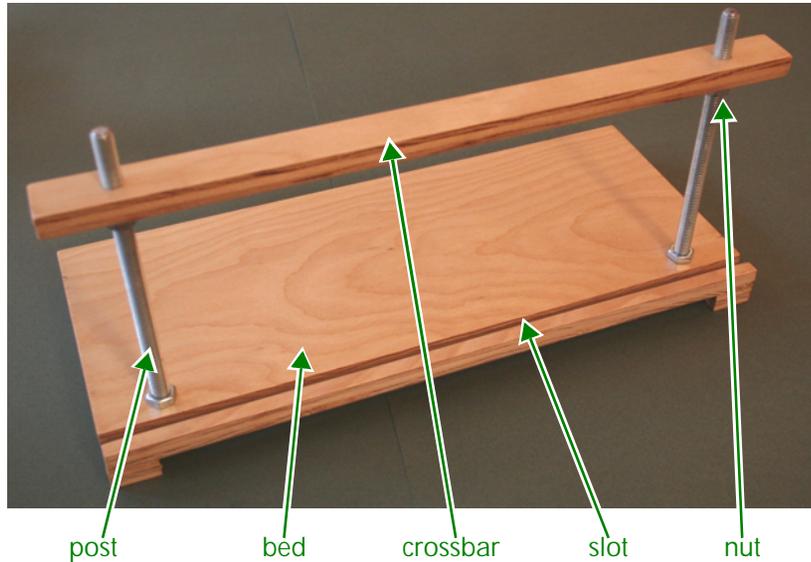
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## The sewing frame

A sewing frame is used in bookbinding to keep the signatures from moving around, and to keep them aligned, while you sew them up.

The sewing frame described here is quite simple, and is designed for the kind of books that you make yourself from standard-size paper either A size (8½"x11") or A4 size (8¼"x11-3/4"), folded in half (folio) for sewing. The sewing frame is extremely cheap to make. Anyone can make it for a few dollars, in an hour or so, and using only simple hand-tools.

The photograph below shows the completed sewing frame, with the various parts identified.



## Final assembly

The only work left to do is to thread another nut onto each post, and to place the crossbar onto the posts. However, before you do that you may wish to give all the plywood a coat of varnish. Let the varnish dry overnight, then go over all the woodwork with fine sandpaper to ensure that it is smooth.

The varnish makes your sewing frame look nice, of course, but it also ensure that the wood is smooth, with no snags to catch in your books or the thread as you sew them up.



Note: If the crossbar is too tight on the posts to move up and down fairly easily, you can enlarge the holes by drilling them out to 7/16", or even 1/2" diameter.

## Adding the posts

Now you will add the posts to the bed assembly

1. Cut the length of threaded rod into two equal lengths, each about 7" to 8" long.
2. Clean up the ends of the threaded rod so that nuts can be threaded on easily. You can do this with sandpaper and a fair bit of work. If you have access to a power sander or a grinder, that will make it go much more quickly.
3. Take one piece of threaded rod, and screw a nut onto it an inch or so from the end.
4. Push that end of the threaded rod into the bed from the top.
5. Screw a second nut onto the end of the threaded rod, on the underside of the bed. The threaded rod should project about two threads below the nut, like this:



6. Tighten up the top nut against the face of the wood.
7. Repeat steps 1 to 6 with the second threaded rod and two more nuts.

## Materials required

To make the sewing frame you need the following lumber and other materials:

- A sheet of plywood 15 inches long, about 9 inches wide, and either 1/2" or 3/8" thick. (You may be able to use scraps: see the cutting diagram on the next page.)
- A piece of 3/8" diameter threaded rod 14" to 16" long.
- Six nuts to fit the threaded rod.
- Interior-grade PVA wood glue.
- Clear finish ("varnish"), preferably water-based.

All these materials can be obtained from any hardware store.

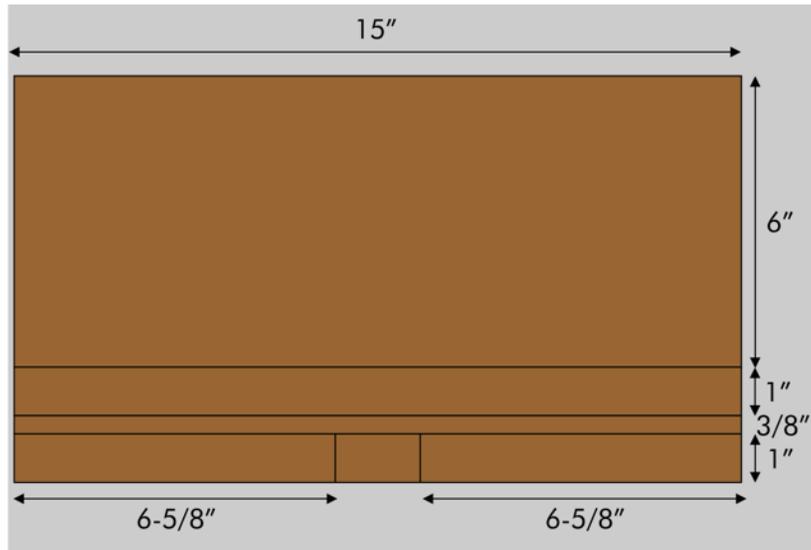
## Tools required

To make the sewing frame you need the following power and hand tools and associated accessories:

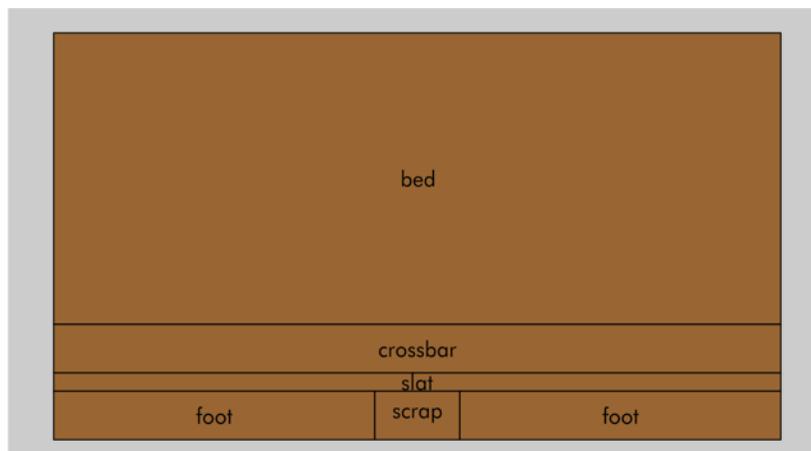
- an electric drill or drill/driver with a 3/8" chuck; or ideally a drill press
- 3/8" diameter drill bit
- measuring tape or ruler
- a wrench to fit the 3/8" nuts
- handsaw; or ideally a table saw or radial-arm saw
- sandpaper

## Cutting up the plywood

Cut the piece of plywood as shown in the diagram below:



You can do this using a handsaw. If you have access to a table saw or radial-arm saw, that would be even better. From here on these pieces of plywood are identified as follows:



5. Apply a dab of glue to the two projecting ends of the feet, and place the slat on them so it is flush with the ends of the feet. Your bed assembly now looks like this:



The dimensions of the various pieces of plywood should have left a slot 1/4 inch wide between the bed and the slat in the front.

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

## Assembling the bed

The next step is to assemble the bed. This involves gluing four pieces of plywood together, as follows.

1. Take the bed (6" x 15"), lay it on the workbench, and apply a line of glue along one short side about 1/2" in from the side.
2. Set one of the feet down on the glue, flush with the side of the bed, and also flush with the back. This strip is 6-5/8" long, so it projects 5/8" beyond the bed at one end. This projection must be at the front of the bed, that is, the edge where the drilled holes are.
3. Repeat this with the second foot at the other end of the bed. The resulting assembly should look like this:



4. Wait a few minutes for the glue to set up a bit, then turn this assembly over so that it is standing on its feet.

The cut pieces are shown in the photograph below

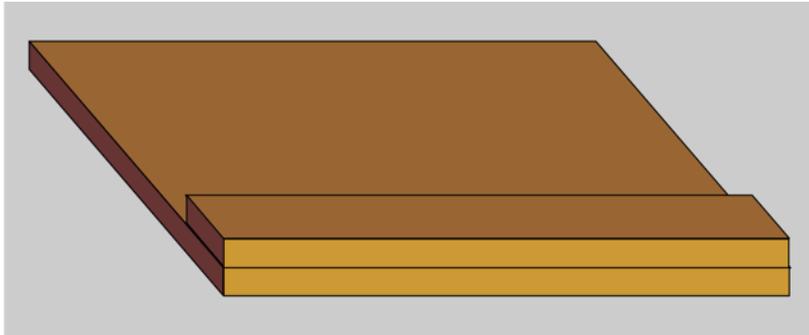


Go over each piece with sandpaper and remove all splinters and sharp edges.

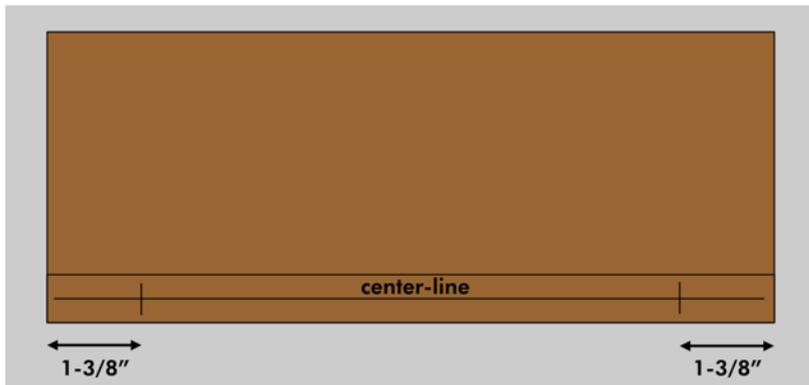
## Drilling the holes

The bed and the crossbar must each be drilled with two holes, and the holes in these two pieces must line up. The procedure is quite simple, as follows:

1. Take the crossbar (1" x 15") and the bed (6" x 15"), and place them together so they are flush at one side, like this:



2. Strap them together with a strip of masking tape.
3. Mark a center-line on the crossbar, then mark off 1-3/8" from each end:



4. Drill a 3/8"-diameter hole through both pieces of plywood at each marked location. Since these holes must line up as nearly perfectly as possible, it is best to use a drill press for this job. If you use a hand-drill, be very careful!
5. Remove the masking tape and separate the two pieces of plywood.