The 1839 School Box

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The plan for this box came from an 1839 book of fiction about an apprentice in a rural shop in England.

And so since January, I have been constructing these three projects by following the instructions in “The Joiner and Cabinet Maker.” And as I followed the text, I learned a great deal about the fine details of English style handwork, which rested on skill and cunning as much as sharp tools.

When I read it for the fourth or fifth time, I still picked up tips I’d missed during previous readings.

The 1839 book is, in fact, published in 1839—years of one of a series of short hardbacks written to introduce young people to the basic knowledge needed for a trade, such as baking, coopering, printing or joinery.

What’s amazing about this particular little book is that it is an engaging work of fiction that tells the tale of young Thomas, a lad who is apprenticed to a joiner’s shop in a rural English town. Thomas begins his apprenticeship by sweeping the shop, managing the hide glue pots and observing the journeymen.

Then, to a plot twist, Thomas is tasked to build a rough box for a customer who is leaving on a journey that same day. The book follows Thomas every step of the way, from stock selection through construction and finally to delivery.

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Then, to a plot twist, Thomas is tasked to build a rough box for a customer who is leaving on a journey that same day. The book follows Thomas every step of the way, from stock selection through construction and finally to delivery.
One of the advantages of cutting the pins first is that it’s easy to reach in to mark out the mating tails with a sharp pencil. The disadvantage is that you have to balance the pin board on end while you do this.

The easy way to plane up the assembled box is to sleeve it over a piece of scrap that hangs off your benchtop. In this instance as to have none of this fitting to do, and to be able to drive the joint up at once. But for a young hand like Thomas, it is very well to make a good dovetail at last, after some trouble in easing and fitting, much better than either to cut the pin-holes too large at first, or too small, and then to split the wood by driving the joint tight in a hurry.

When applying glue, paint it on all surfaces of the joint. While end-grain surfaces don’t offer as much strength as long-grain surfaces, they do add strength to the assembly. Knock the box together. If your joints are tight you shouldn’t need clamps.

One interesting piece of advice from the book is to hammer the pins after assembly to tighten up the joints. You can over-do this, but it will mushroom and compress the wood a bit improving your fit.

Some careless workmen knock this hammering to fill up all the spaces which their bungling has left, but it is impossible to hammer a bad dovetail into a good one, though a good one may be made better by this means.

With the glue dry, plane the box all around.

A Questionable Bottom

The bottom piece is planed up so it is oversized. Then it is glued and nailed to the carcase. It sounds simple enough, but “The Joiner and Cabinet Maker” specifies that the bottom piece should have its grain running from front to back, not end to end. Why? “For strength.” I’ve seen this approach in old tool chests especially, but I was surprised to see it in such a small piece of work. Running the grain as the book suggests introduces more wood movement problems than running it end to end.

While the grain running from front to back, the bottom will push the moulding away from the ends of the school box. Wipe the bottom’s grain running from end to end, you could encourage the movement to push out the rear of the box, where there is no moulding to hinder it. Plus, the bottom wouldn’t move as much because its width would be narrower.

To work around this “problem” I came up with a couple other wild ideas, but then I decided to just do what I was told and see what happens.

Once you’ve sanded out the waste, mark your tails from your pin board. Place the tail board flat on your workbench and balance the joint board on the end. Reach in with a pencil and mark the tails. Then saw out the tails. Be sure to leave the entire pencil line behind.

After completing all four corners, tweak your joints for assembly. The dovetail elite will work right from the saw and chisel with no testing or dry-fitting of the joint. If you aren’t able to do this, don’t fret. Thomas couldn’t, either.

“The really good workman, by long practice, will make even a large dovetail so exactly in the first instance as to have none of this fitting to do.”

This keeps the grain and the profile consistent at the corners – even if you aren’t consistent. Lay out the miters on your moulding and cut them with a handsaw (use a miter box if you have one). Then clean up the mouldings with a plane. If you’ve never tried this, give it a whirl. It’s much easier than you think – especially if you don’t have to fit the moulding on all four corners.

Keep working the corner miters until they look good. Then you can attach the moulding with glue and nails. Be sure to glue the mitered surfaces because those are critical.

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Handmade StoppedDados

The till inside the box is an interesting piece of work. The wall slides into 3/4” x 3/16” dados in the front and back pieces. The bottom of the till rests on cleats that are nailed to the front and back. The wall and the bottom are nailed at their corner and the whole assembly slides out. What’s the till for? Snacks for the student. Begin work on the till by cutting the stopped dados in the front and back piece. Saw out the walls and then remove the waste with a chisel (or a router plane).

When you saw out the waste, you can work against a fence – a traditional technique. Also, feel free to saw past the line where the dado will end. No-one will ever mind those kerfs. That will make chiseling out the waste quite painless. Chisel out the waste to a 1/8” depth. Use a small block of wood with a 1/8” notch as a depth indicator. Now nail the cleats to the front and back that will support the till’s bottom. Nail and glue the bottom and wall together and slip the assembly into the dados.

Install the Lockset

Before you put the lid on the box, install the lockset in the carcass. The key to installing the lockset is a single hole that is the same size as the lock’s pin (the round cylinder that the end of the key goes into). Place the lockset’s pin in the hole through the lockset’s top plate. This is the most critical part of the entire operation. Press the lockset’s pin into the hole from below. Once the hole is marked out, ream out a hole that is a single hole that is the same size as the pin in your lockset. Take your time here.

Now press the lockset’s pin into the hole from the inside of the carcass until the works of the lock rest on the inside face of the carcass. Use a pencil to trace around the works. Use a saw to define the left and right edges of the lockset’s works – then lay in a bunch of kerfs to make it easy to remove the waste between those two initial kerfs. Waste away that area with a chisel and router plane. You’ll need to use a short bench chisel or a special lockset chisel, which has a very low profile. Then fill the lockset’s pin back into the hole and mark out the shape of the back plate. Remove the lockset and waste away that area until the entire piece of hardware fits flush to the carcass. This gradual process ensures you remove only the material necessary, which maintains the strength of the front piece.

The Lid and its Hinges

Like the bottom piece, you should leave the lid slightly oversized as you fit it, so that if you make a mistake, you can trim things to fit. The first step is to mortise the hinges into the case and mark where you want the lower leaf to bend. Then bend the steel hinges to the correct shape and screw them in place.

This step in the case needs to be deep enough to accommodate both the hinge leaf and the thickness of the barrel. According to the book, the location of the hinges is key. It uses a proposition common in old furniture. Take the length of the lid and divide it in half. Then space the hinges so their centers are this dimension apart from one another.

Cut the mortises by sawing the walls and removing the waste with a chisel. Screw the lower leaf to the case as shown. Then mark where the bend should occur.

As far as bending hinges go, the ones in the Supplies box are a snap to manage. Secure the hinge in a metal-jawed vise then bend it with your hands and finish the job with a hammer. (If you are worried about mucking it up, buy three hinges instead of two.) Then screw the upper leaf to your lid piece.

Trimming and Adding Trim

With the lid secure, you can plane the lid so it has about 1/16” overhang on the front and ends. Then you can add a chamfer to the lid molding and miter it. A small spacer under the case makes it easy to line up the hinges on your lid.

Finish the School Box

The finish Thomas used on this school box isn’t discussed in “The Joiner and Cabinet Maker,” though several finishes for pine objects are mentioned in its pages, including boiled linseed oil and wax, straight paint or even grain-painting. I juggled a thinned oil finish with a little varnish added to give the piece a little protection. Six coats gave me an acceptable sheen and build. Then I waxed the piece. To keep the lid from opening too far, I screwed a small strip of leather to the inside of the lid and the case. I was so pleased with the proportions of the completed school box I sold something I’ve never done before with a project. Started another school box immediately. This one in cherry. Why?

Christopher Schwarz

Supplies

Lee Valley Tools
800-879-8158 or leevalley.com

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<th>#</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>3/4” x 3/16” box lock</td>
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Prices correct at time of publication.