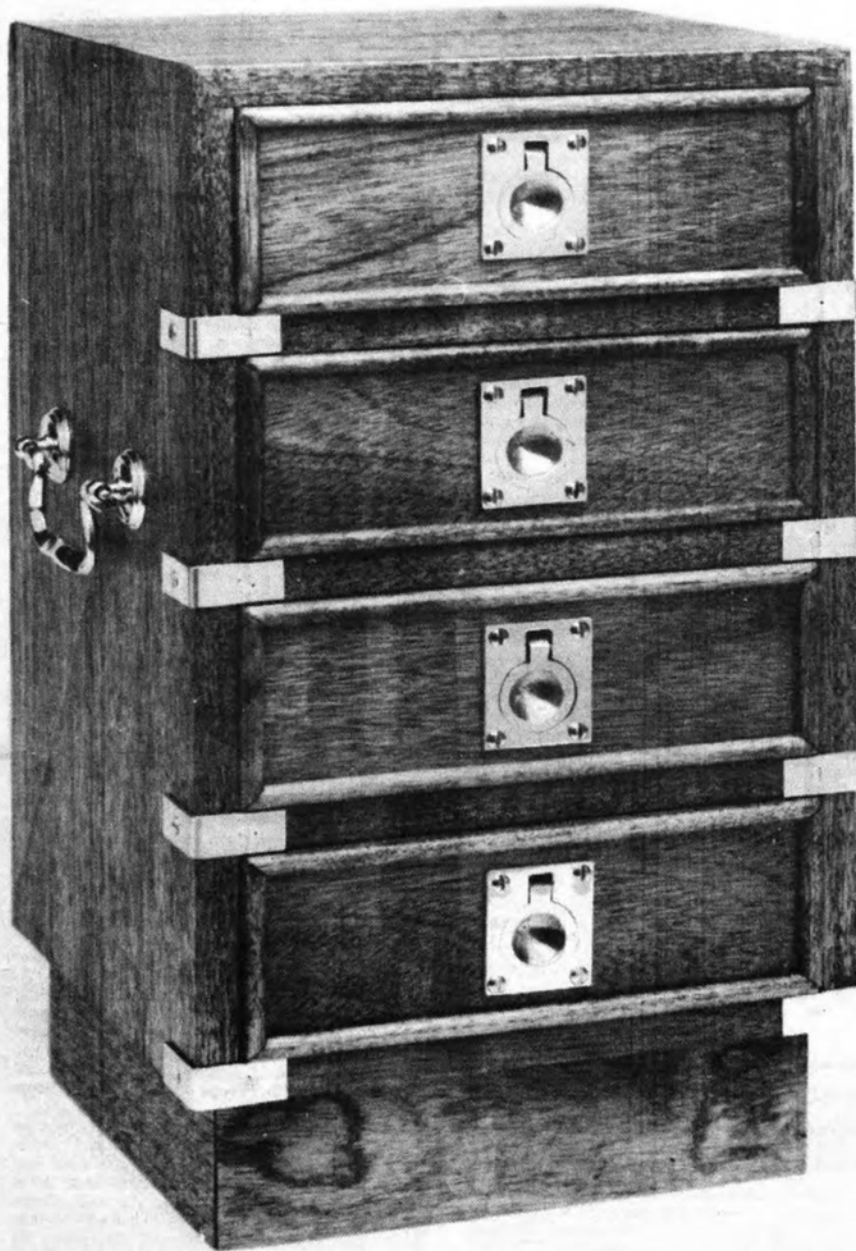


The Woodworker's Journal

Vol. 4, No. 3

May/June 1980

16 Pages \$1.50



In This Issue:

- **Mahogany Campaign Chest**
- **Oak Cottage Chair**
- **More 2 x 4 Furniture**
- **5 Great Gift Projects**
- **19th Cent. Sawbuck Table**
- **...and much more**

Shoptalk

It's a mild rainy April day as I write this, and from my window I'm happy to see that a very faint green haze has covered the valley as millions of leaf buds begin to open. The surrounding high hills to the north and west are still stark and wintry-looking with their ledge-rock exposed, so I prefer to look to the east bank of the Housatonic river where the big weeping willows are fountains of pale green. Spring has finally arrived.

Apart from the writing of this column, which is always done just a couple of days before printing, this issue has at last reached the stage where we can consider it finished. It all started several months ago as we began corresponding with contributors, requesting better photos or clarification of certain details in their project articles or sketches.

Rough ideas began to take form on the drawing board, and in some cases after much preliminary work, ended up in the wastebasket. Those ideas that survived were finalized with working drawings and lumber and special hardware was ordered from local and mail-order suppliers so that construction could begin.

Sometimes construction problems appear that did not seem obvious at the drawing board. This comes as an unpleasant surprise but after much discussion and a lot of rough sketches, the drawings are revised and the problem is solved.

Building instructions were written while the joinery problems were still fresh in our minds and, as usual, there was always the challenge to provide sufficient information within a limited amount of space.

Gradually, as the deadline drew near, the pace began to accelerate. Work in the shop ran to overtime in order to have the projects completed and ready for the scheduled photography.

Several small, last-minute contributions arrived and decisions were made to include them, provided the

photography could be postponed for a few days.

Little by little it all sorted out and the pages started to fill. Several days were allotted for going over each page in detail, checking out dimensions and procedures and looking for the ever-present typos that, like dandelions, seem to keep sprouting.

Finally, I sit here...looking over the finished pages and wondering if we've managed to cover it all properly; ruefully remembering how the errors that couldn't be spotted seem so obvious once the issue is printed and it's too late to correct them.

We are constantly on the lookout for projects that are relatively easy to make and, because of an unusual or unique design, have a definite gift appeal. With the present inflation rate stalking us unrelentingly, I know from letters received, that many more readers are hopeful of earning extra income from their woodworking.

This issue has a good number of projects that should be both profitable and fun to make. Woodworking does not have to be a monumental challenge all of the time; even the most skilled craftsman enjoys an occasional respite from blind dovetails. Among other things, I particularly liked the wooden lock on page 15. We built one of rock maple with a pine cover and it will soon be put to use on the door of a tool storage shed. It works like a charm, but if you plan to use it outdoors, give all moving parts plenty of clearance and seal everything before assembly.

Well...the issue is finished, and I'm looking less at the pages and more at those lovely green willow trees by the river. I think it's about that time to squeeze in a day of fishing. Have a good spring.

Jim McQuillan

LETTERS

On page 3 of the March/April 1980 issue, I read about the "new penetrating resin oil finishes." The clerk in my local hardware store seemed very confused about just what these are. Would you be so kind as to send me the brand names of some of these finishes. A. Smith, Wilmington, N.C.

The Penofin Co., 819 J Street, Sacramento, CA 95814 manufactures a penetrating oil finish in natural, medium walnut, dark walnut, and black walnut. Called "Penofin," it's available from them at \$3.50 per pint.

Also the Watco-Dennis Corp. manufactures a penetrating oil finish called Watco Danish Oil. For the location of their nearest dealer write to them at Michigan Ave. at 22nd St., Santa Monica, CA 90404 or order it from "The Woodworker's Store," 21801 Industrial Blvd., Rogers, MN 55374.

Would you be able to give me the name and address of a company that sells basswood, preferably 3" x 3" x 12". J. Eydeler, Phoenix, AZ.

John Harra Wood & Supply Co., 39 West 19th Street, New York, N.Y. 10011 sells a variety of domestic and imported hardwoods. They carry basswood in standard thicknesses of 13/16, 1 1/4, 1 3/4, 2 1/4, and 3 1/4, in widths of 4", 6", 8" and 10", and lengths of 18", 24", 36", 48" and 72". Minimum order is \$25.00. Catalog cost is \$1.00.

At present I am building the roll-top desk from your Jan/Feb and March/April 1979 issues. Every procedure is clearly shown except how the roll-top section is joined to the pedestal desk. This is important as they should be made to disassemble easily because of their size. R. Vallee, Findlay, OH.

The roll-top section is joined to the pedestal desk with 3/4" dia. x 2 1/2" long dowel pins. The pins are permanently glued to parts "C" (Fig. 2, March/April 1979) and "D" (Fig. 1, March/April 1979) of the roll-top and fit into (but are not glued to) corresponding holes in the pedestal desk top. This method makes for easy removal and replacement of the roll-top section.

Part "D" has 3 dowel pins, one at the center and one at a point 3" from each end. Part "C" (there are two) has 2 dowel pins, each one located at a point 3" from the ends. All told, there are seven dowel pins required to join the desk halves. Dowel pin holes in both the pedestal desk top and roll-top parts "C" & "D" are drilled to 3/4" dia. x 1 1/4" deep.

I thought I'd write and clarify the reason your author had difficulty with his auger bit and dowelling jig ("The Beginning Woodworker," Jan/Feb 1980).

I doubt it was production tolerances or even moisture content of his dowel pins. I have a little booklet published by The Irwin Auger Bit Co. In it, under the title "Size," it says "All auger bits, except those made especially for dowelling work, are ground approximately 1/64" oversize. This is done so that holes bored for bolts, pipe, cable, etc. can be bored with the same size bit (8/16" hole for a 1/2" bolt) and a snug fit will result. Dowel bits are made close to actual size so dowels will fit snug."

To obtain an auger bit of the exact specific type required will probably necessitate dealing directly with the manufacturer. R.F. Danzey, Minneapolis, MN.

When my first issue of *The Woodworker's Journal* arrived just before Christmas, I rushed right out to my shop and built the door harp project. I was so impressed with my handiwork that I made seven more as gifts for friends. Fortunately, they seemed quite pleased and I received orders for an additional 18 at \$35.00 each. G. Koch, Corpus Christi, TX.

Congratulations. We're always pleased to learn about readers who are able to profit from their woodworking hobby. This is one reason we feature "The Gift Shop" in each issue. Whether you make gifts for yourself, your friends, or for sale, we think this regular source of plans for small gift items will be of interest to many readers.

We have been looking for brass corner brackets that fit over the corners of a wood box. Do you know where we can get them? M. Henagin, Holland, MI.

Try the Decorative Hardware Studio, 160 King Street, Chappaqua, N.Y. 10514. Catalog is \$2.00, refunded with first order.

For some time now, I have been experimenting and making animated whirlygigs (sometimes called animated weather vanes). I would like to correspond with anyone in the U.S. and Canada who makes whirlygigs so we can exchange ideas, patterns, and photos. I have much to offer free of charge. Please type or print your letter. Send to Ted B. Finn, 3634 Motor Ave., Los Angeles, CA 90034. A stamped addressed envelope will be greatly appreciated.

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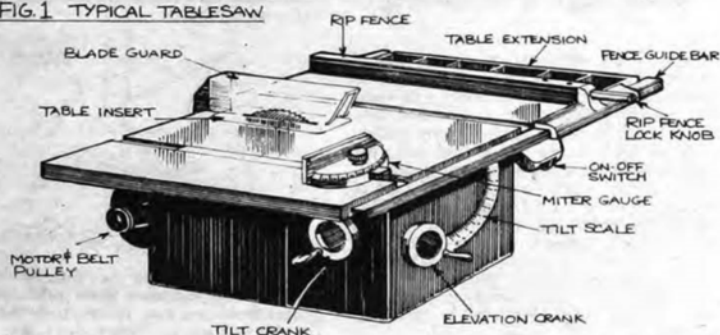
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M/J

The Beginning Woodworker

FIG. 1 TYPICAL TABLESAW



Tablesaw Basics

The purchase of that first new or used tablesaw is a momentous event for it indicates, by the outlay of cold cash, that you've committed yourself to more than just casual woodworking. Setting up and using a tablesaw for the first time can be a bit nerve-wracking for the novice who has had no previous exposure to such a machine. The purpose of this article is to help you get your tablesaw set up and properly adjusted so that you can proceed to basic operations with maximum safety and accuracy.

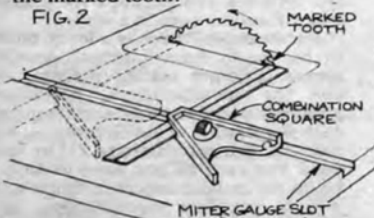
If you've got a new tablesaw, an owner's manual should be included. This will show you the steps necessary to assemble and adjust the machine. Do not assume that because the machine is new it will operate perfectly when assembled. It *must* be adjusted precisely and then double-checked.

The procedures that follow apply to all tablesaws regardless of size and make. Your owner's manual will give details on how to make specific mechanical adjustments. If you do not have a manual, you'll have to do a bit of checking to see which screws or bolts to loosen in order to make the various adjustments discussed here. Let's take it step by step from the beginning.

Figure 1 shows a typical assembled tablesaw with accessories. Assuming you have assembled the saw and mounted it on a stand, the first thing to do is unplug the power cord. This is *always* done when changing blades or making major adjustments.

The first check is to ascertain if the blade is parallel to the miter gauge slots, or in other words, is the blade parallel to the table itself. Raise the blade as high as it will go with the elevating crank and using a felt-tip pen, mark one of the blade teeth nearest you which is set (bent) to your left. As shown in Fig. 2, place the head of an accurate combination square in the left miter gauge slot and adjust the square so that its blade just touches the tip of the marked tooth.

FIG. 2

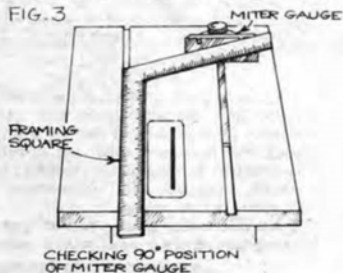


Now slide square to the rear of the blade (where it emerges from the table insert) and rotate blade backward until the marked tooth again contacts the square. If the tooth doesn't touch the square the same amount, the saw blade is obviously out of parallel with the gauge slots. To correct this, trunnion bolts underneath the table, which hold the entire tilt mechanism to the table, must be loosened so that either the front and rear trunnions or

the table can be shifted slightly about the axis of the sawblade to bring the blade and table slots parallel.

Repeat the check with the square and if everything looks good, tighten the bolts carefully; a few turns on each. After tightening, again check to make sure that nothing shifted.

FIG. 3



The miter gauge is checked next. We want to establish that when it is set at zero, the face of the gauge is exactly 90 degrees to the table slots and sawblade. As shown in Fig. 3, lay the long arm of a framing square against the side of a table slot. Hold the short arm flush against the face of the gauge and tighten the locking knob. The pointer on the protractor should now read exactly zero. If it doesn't, adjust it.

The proof of the setting is in the cutting so let's try a simple crosscut operation to check things out. Lay an 8 or 10 inch wide length of 1 inch stock flat on the table with one squared edge against the miter gauge set in the left slot. Set your blade for zero degrees tilt and elevate it 1 inch above table. Make sure the blade is firmly fastened and the blade guard is in place; then turn on the motor.

While holding the board firmly against the gauge, push the gauge with the right hand, feeding the work slowly and steadily until the cut is complete; then withdraw both work and gauge to the front of the table and turn off the motor. You have just completed a basic crosscutting operation used to trim a board to length across the grain at (we hope), 90 degrees to the edges (Fig. 4).

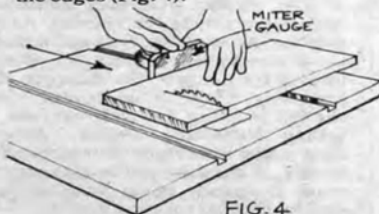


FIG. 4

Check accuracy of the cut using a combination square. If it's not "right on the money", reset the gauge as previously described and try again. If it's still off...and anything other than a

Cont'd on Page 4

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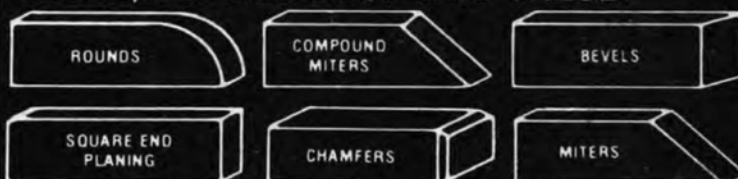
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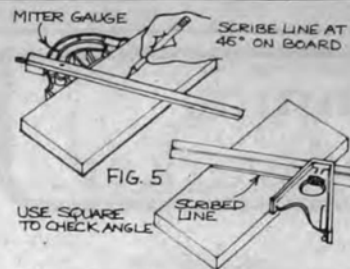
The Beginning Woodworker (cont'd)

perfect 90 degrees is unacceptable, go back and repeat the procedure for aligning blade and table slot. Keep trying until you get a perfectly square cut. It's very important to get it right.

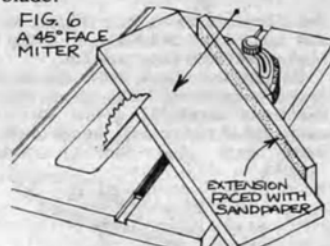
The miter gauge must also be checked for accuracy of left and right hand 45 degree settings. To do this, set gauge for 45 degrees on either side and lock it. Hold gauge face firmly against the edge of a wide board which is flat and has a perfectly square edge. Scribe a pencil line on the board along

the gauge bar; then check this angle by aligning the blade of your trusty combination square along the line. (Fig. 5). If the square blade is perfectly parallel to the scribed line, adjust pointer to exactly 45 degrees.

If scribed line is out of parallel with the square, adjust gauge setting one way or the other and keep checking until you get it right; then set pointer at 45 degrees or scribe a permanent mark on the protractor to indicate this setting. Repeat the process for the 45 degree setting on the other side of the gauge.



It's a bit difficult to cut a board across its width at a 45 degree angle as the board will have a tendency to slide across the gauge face as it's fed into the blade. In order to check our gauge setting by making an actual cut, we will have to make a simple fixture called a fence extension (Fig. 6). This is simply a 1/4 x 3 x 14 inch piece of flat stock fastened to the miter gauge fence with screws driven from the back. The extension is faced with medium grade sandpaper, glued on. Even with this aid it's necessary to hold the work firmly and feed slowly into the blade.

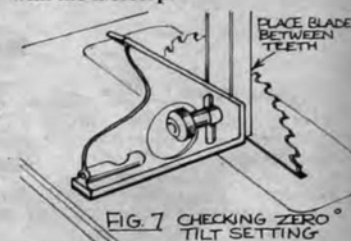


Choose a 1 x 6 x 16 inch piece of pine for the test cut and make the 1st cut (called a face miter) as shown in Fig. 6. Check the accuracy with the combination square. It should be perfect, but if it isn't, repeat the procedure for adjusting miter gauge.

Turn the miter gauge to the opposite 45 degree setting and make another

test cut, using the right-hand table slot and again check the cut with the combination square.

Now let's check the blade tilt or squareness of the sawblade to the tabletop when the tilt scale (on the front of the machine) is set at zero. To do this, raise blade to maximum height and place your square on the table so that the square blade rests against sawblade between two teeth (Fig. 7). Make sure that the table insert is flush with the tabletop.



If the sawblade is evenly snug against the square, from tabletop to gullet between two teeth, lock the tilt handle and set the pointer to zero.

If the blade won't incline to an exact vertical position, there may be some kind of stop collar on the tilt screw under the table. Go to the rear of the machine and, on the right end of the large tilt screw look for a collar held by setscrews. Loosen screws and rotate collar to the right. Then bring blade to vertical, lock it and rotate the collar as far left as it will go. Retighten the collar setscrews.

Crosscut a board with miter gauge set at zero and use your square to check the squareness of the end of the board (Fig. 8).

Now check the blade for a true 45 degree incline by loosening tilt handle and cranking blade over to the left as far as it will go. Use your combination square (less the blade) to check angle

Cont'd on Page 7

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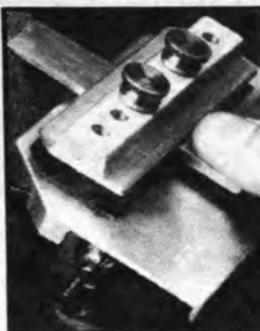
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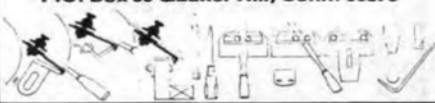
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Workshop Income

Charles Burke

I recently received a long and informative letter from an upstate New York reader, John H. Bunting. Mr. Bunting has worked both sides of the fence in the woodworking-for-profit game, having been both a maker and seller of woodworked products for a high-priced gift shop, so he's in a good position to make some experience-based points that should have attention paid to them.

Mr. Bunting notes that his experience as a buyer indicates that new woodworkers who want to sell to shops go wrong on the following three points:

1. *Their product design is faulty.* The items they offer simply don't fit in with current furniture and accessory styles.
2. *Their items are overworked.* This means, essentially, that their items are loaded down with too much unnecessary detail, that they're too complicated in design, particularly when compared with competitive items. Mr. Bunting's advice is: Keep it Simple!
3. *The market is already saturated with the items they're offering.* As he puts it, "Accessories, fads and notions are commonplace. Buyers are always looking for the new, the different, the appealing. There is no market when the fad is dying out and everyone is selling something similar. Always have a new item ready to replace slow sellers. If the item you're planning to make is already being price-cut and sold in discount stores, forget it."

Mr. Bunting went on to cover a number of other areas related to wood-working sales, one of them being that in his estimation one big value woodworkers derive from selling at craft fairs is that it's a good way to pick up commission work, but I'd like to comment here on his three expressed

reasons behind the failure of new woodworkers to sell. You'll notice that two of his points bear directly on an element that I've dealt with over and over again, one that I'm going to stress again in the future because it's so important. It's this: you have to keep up with the times. The way to cash in on a fad is to get in on it in the beginning, then ride its crest. To do that you have to be able to spot trends while they're developing, so you must pay attention to what's going on. You have to study—not just read, but actually sit down and study—newspapers and magazines to see what's on the public's mind. You have to figure out if what you can make can fit in with what's going on. Which means that you have to be able to anticipate trends, not just follow them once they've started to become old hat. Which also means that you have to experiment and be creative, take a few chances and perhaps let yourself look ridiculous once in a while.

For example, there is a lot of money to be made from political developments. Bumper sticker makers, doll and toy manufacturers, publishers, gimcrack peddlers of all sorts regularly cash in on political developments, both national and international. Why can't you? You can; all you have to do is be on the lookout and then figure out a way to put your woodworking skills into the action. I'm sure, for instance, that the woodworker who came up with some kind of item tying into the Iranian situation about half a year ago could have gotten a big play on it, just as I'm certain that the woodworker who prepares now to use a wood-worked product to capitalize on the elections in November has a shot at making a good profit. Indulge your loves, indulge your hates, but go get 'em!

Restoring Antiques

by John W. Olson

One of my oldest customers is a real aficionado when it comes to Italian-Venetian type furniture. I have repaired, rebuilt and in general resurrected 12 or 15 of these pieces for her. They all are highly ornate but each piece displays a separate and distinct theme in general form. They all have a grayish or greenish so-called antique finish with gilded carvings and other painted decoration. To make a satisfactory repair, not only must the piece be repaired and reassembled, but the finish must match well enough so that the repair isn't noticeable.

All of these pieces are made of a comparatively soft, brittle, but easily carved wood, usually pine or poplar or one of their relatives. Consequently, when they are submitted to too heavy a load there is a great deal of splintering and breaking so that the repairman ends up with a basketful of kindling to reassemble. Before the advent of space age adhesives the only remedy for this situation was to try to imagine what the broken member looked like by laying out and measuring the broken piece, then making a drawing and from it a completely new piece. The development of the epoxy adhesives made it possible to reassemble and resurrect badly broken members of a piece of furniture and to weld them into a unit that is as strong or stronger than the original.

The Venetian type pieces mentioned above were repaired using this technique. The first step is to lay out the pieces to determine their relative position to each other in the whole. Then the most satisfactory procedure is to glue together the larger pieces, a few at a time, over a period of days, using an epoxy adhesive that is specially formulated for gluing wood. Any marine supply store sells this type of epoxy as do most hobby shops. However, I have found that it is much less expensive to buy two gallon units from the manufacturer. Two gallons repairs a lot of furniture and lasts a long time. Fortunately, epoxy has an indefinite shelf life. To get back to our repairs: when making the first assembly be sure that the pieces being glued are in correct relation to one another and to the pieces waiting to be glued. If you happen to get this initial assembly out of line, you will have to take it apart and with epoxy this isn't easy. A good joint will be stronger than the wood and any breaks will occur in the wood not in the joint. There is a sort of solvent for epoxies. I say sort of because it really doesn't take the epoxy into solution but rather causes it to disintegrate in small flakes. To disassemble a joint requires two or three days and the epoxy must be kept moist with the solvent. Disassembly must be followed by a thorough cleaning. This point is imperative when using epoxy, the joint must be clean, right down to the bare wood. I use a small hand grinder with a steel burr for this work which makes it go fast. It doesn't matter if cleaning makes the joint loose and sloppy, the epoxy will take up the slack and make a nice tight joint. Anything up to a 1/4" or so can be filled with the regular 2 part mix. If the space is greater than this the adhesive should be mixed with wood dust from your sander or even fine sawdust to increase its viscosity. Sawdust isn't as satisfactory as sander dust because it makes a very coarse textured filler that is difficult to handle and to bring to a smooth surface for finishing.

Most old furniture has suffered repairs at the hands of mostly incompetent repairmen and the pieces under discussion were no exceptions. No really professional cabinetmaker or furniture repairman would use nails and oversize screws to repair delicately carved furniture. Nor would he use string, paper, bits of cloth and anything else that was handy to wrap around loose tenons and rungs in

hopes of obtaining a tight joint. It's true that, years ago, the epoxy adhesives didn't exist, but there were (and still are) methods whereby a good cabinetmaker or professional furniture repairman could make a satisfactory repair for loose tenons and round chair rungs.

It really isn't any great trick to cut a saw kerf in the end of a loose tenon and insert a wedge to tighten the joint. Orient the kerf so that it will lay at right angles to the grain of the wood in the containing member. Make sure the wedge is just thick enough to make a snug joint. If it's too thick it could split the holding member (the one with the mortise which holds the tenon.) If a wedge isn't feasible because a piece of the tenon has been split off, some wooden feathers cut to fit alongside the tenon will take up the slack. A round tenon, such as the end of a chair rung, presents a more difficult problem when a part of it has been split off at an angle. The cure here is to scarp on a wedge shaped piece of the same species of wood. This wedge should be slightly larger than will be needed. A hole drilled through the wedge and scarped tenon with a pin, will hold the wedge in the correct position while the glue sets. Be sure the faying surfaces are just that: a good smooth close fitting joint. After the glue sets the tenon is shaped to make a good snug fit in the hole.

When a round rung is broken off at the entrance to a hole it can be repaired using a piece of dowel fitted to a hole drilled lengthwise using a jig as explained in this column in the November/December 1978 issue.

Next issue this column will take up the matching of new and old finishes for this Italian-Venetian style furniture.

Editors Note: There are a variety of epoxies on the market today, and choosing the best one to use for wood joinery can be somewhat confusing, especially for the novice. Hopefully, the following list will provide some guidance. It includes the names of several epoxy manufacturers, along with appropriate comments by John Olson. For current price information, he suggests writing to the manufacturer.

Miracle Adhesive Corp., 2501 Pettit Ave., Belmore, NY 11710, Tel. (516)-221-0950.

I have used Miracle's epoxy for years. It is very satisfactory and generally less expensive than other brands. I use NT 428 and buy it in 2 gallon units.

Chem Tech, 4481 Greenwold Rd., Cleveland, OH 44121, Tel. (216)-382-8386.

I have used Chem Tech's T-88 epoxy in the past and found it very good if somewhat more expensive.

Petit Pox.

This is sold in small units in most of our local hobby shops. I have used it in an emergency and found it satisfactory but very expensive.

Gougeon Brother's, Inc., 706 Martin St., Bay City, MI 48706.

These people are boatbuilders who sell epoxy as a side line. I'm not personally familiar with these products but all reports are good.

Hysol Dissolver, AC 4079, Hysol Div., The Dexter Corp., Olean, NY 14760.

This is the solvent I mentioned in the article. I bought it from a plastics supply house in Baltimore after a long telephone search. I recommend writing or calling the manufacturer to locate a local source.



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Miniature Campaign Chest



Constructed of solid $\frac{1}{2}$ inch mahogany and trimmed with brass, this little military-style chest is a striking decorator piece and great for storage of jewelry, or other small valuables. It's a fine example of the cabinetmaker's art and a piece that will be treasured for generations.

If you can't locate a local source for $\frac{1}{2}$ inch mahogany and campaign hardware, mail-order sources are given at the end of this article. About 7 linear feet of stock are needed and the cost will run about \$25.00. Drawer sides and parts of the drawer frames that are not seen can be resawed from scraps of hardwood.

Including solid brass hardware, the total cost of the chest should run about \$40.00. If this seems steep, we recently saw a similar chest, which was veneered, selling for \$230.00. If you enjoy veneer work, some savings can be realized by building the chest of $\frac{1}{2}$ inch birch plywood and veneering outside surfaces.

Needless to say, the joinery demands precision cutting and to achieve this, stock must be well seasoned and flat. Cupped or twisted lumber should be avoided.

First cut stock for chest sides and top. Cut sides to finish width and a rough length of 13 inches (in case you goof on cutting the miter-rabbit joint). The top is finish cut to 8" length and rough cut to a width of 8 inches.

The miter-rabbit joint, shown in the detail of Fig. 3, combines the clean beauty of the miter joint with the easy clamping of a rabbit joint. To cut this joint on sides, set your tablesaw blade $\frac{1}{4}$ " high, then set fence so it's $\frac{1}{2}$ " from an outside tooth (left side, facing you) of blade.

Using the miter gauge in a crosscut mode, run a cut across the end of both side pieces. Shift fence and make another cut halfway between first cut and the end of workpiece. Clean out the area between the two cuts with repeated passes.

Now sit fence $\frac{1}{4}$ " from an outside tooth and make a cut across both ends of the top. Tilt blade to 45 degrees and elevate it so that a miter cut just

reaches the root of the first cut. Use the same setup to miter the ends of side pieces. When joints are complete, trim sides and top to finish length of $12\frac{1}{2}$ " and $7\frac{1}{2}$ " respectively.

Next, set up your tablesaw or router to cut a $\frac{1}{4}$ " deep by $\frac{1}{2}$ " wide rabbet along back edges of top and sides. The $\frac{1}{4}$ " deep dados and lower rabbet are next cut across each side. At this point, the back can be cut and a shallow rabbet run along its lower end as shown in Fig. 2 and the detail.

Parts for drawer frames are cut from $\frac{1}{4}$ " stock as shown in Fig. 5. Front rails are mahogany, but remaining parts can be any clear hardwood. Join frames with glue and $\frac{1}{8}$ " blind dowel pins and be sure to keep frames square and flat when clamping.

The base, as shown in Fig. 3, is mitered at the corners and reinforced with $\frac{1}{4}$ " x $\frac{1}{2}$ " hardwood splines. An alternate, though less elegant, method is to glue triangular blocks inside each corner. A $\frac{1}{8}$ " x $\frac{1}{2}$ " x $7\frac{1}{4}$ " filler strip is cut and glued to base front, flush with its top edge as detailed.

Before assembling chest with glue, dry-fit parts and check for good fit and squareness. Spread a small amount of glue in the center of each dado and miter-rabbit joints and join sides, frames and top, clamping across sides at front and back. When this assembly has dried, glue and clamp back and base to sides.

Drawer construction is detailed in Fig. 4. Before joining fronts to sides, recesses must be routed for the drawer pulls. Because these recesses are almost $\frac{1}{2}$ inch deep, it's necessary to either use $\frac{3}{4}$ " stock for drawer fronts or laminate $\frac{1}{4}$ " thick fronts from thinner stock.

We used a $1\frac{1}{4}$ " dia. expanding bit to bore holes for the rounded cups on the back of the drawer pulls. The lead screw will, of course, punch through the back, so these holes were later plugged. A chisel is used to cut a notch for clearance of the pivot pin frame. To avoid a lot of tedious mortising, we elected to surface mount all hardware including the angled corner strips.

Drawer sides are joined to fronts with a pegged and glued rabbit joint as shown, but for such a fine piece you may choose through dovetails at sides and back and half-blind dovetails to drawer fronts. Drawer bottoms are $\frac{1}{8}$ " birch or mahogany. Small sheets of this plywood can be found at hobby shops selling supplies for models and miniature furniture. Bottoms fit in grooves (no glue) in sides and front and are bradded to bottom edge of back.

Each drawer front is trimmed with a small half-round molding glued flush and mitered at the corners. You can cut this molding from mahogany or simply rip $\frac{1}{4}$ " dia. birch dowels and stain to match. It's best to stain drawer fronts before adding moldings to avoid glue smearing problems.

A dark mahogany stain was applied

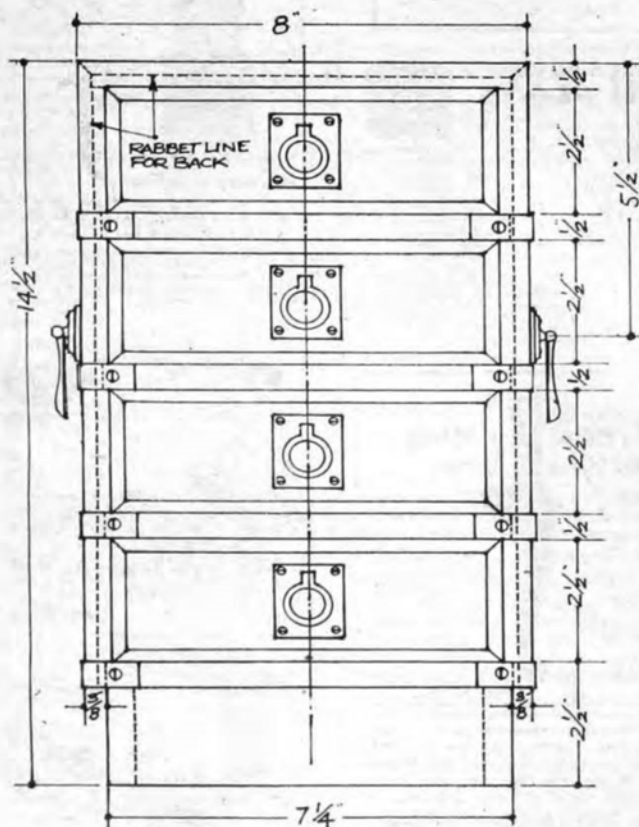


FIG. 1 FRONT ELEVATION

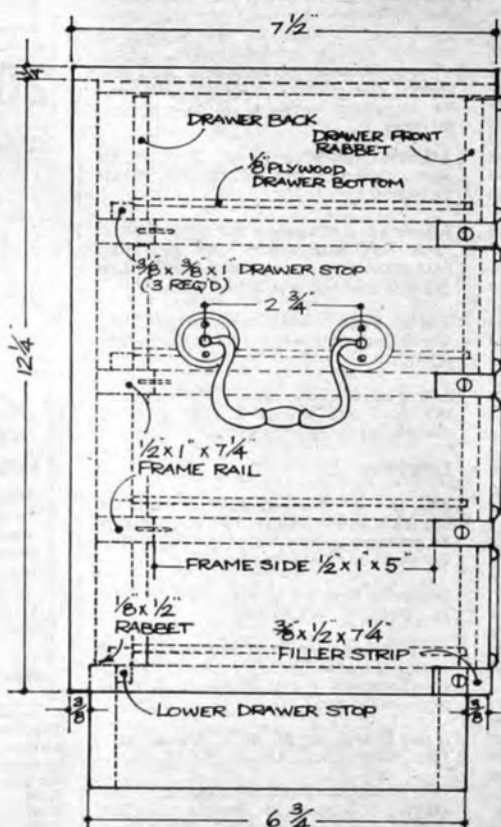


FIG. 2 SIDE ELEVATION

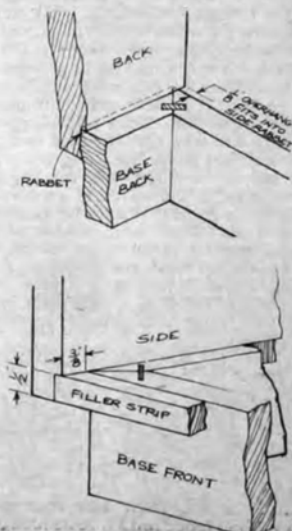


Photo: John Kane

to outside surfaces of chest and drawer fronts. After drying, mahogany tinted filler, thinned with turpentine to a creamy consistency, was brushed on and when dry, rubbed off with burlap pads. A coat of thinned shellac was applied and when dry, sanded lightly.

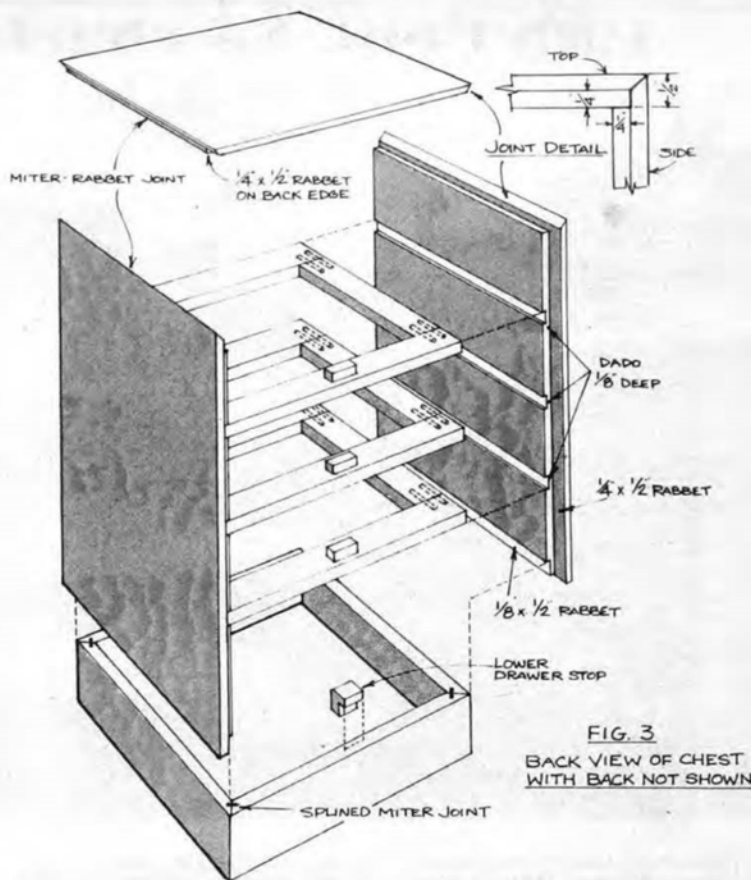
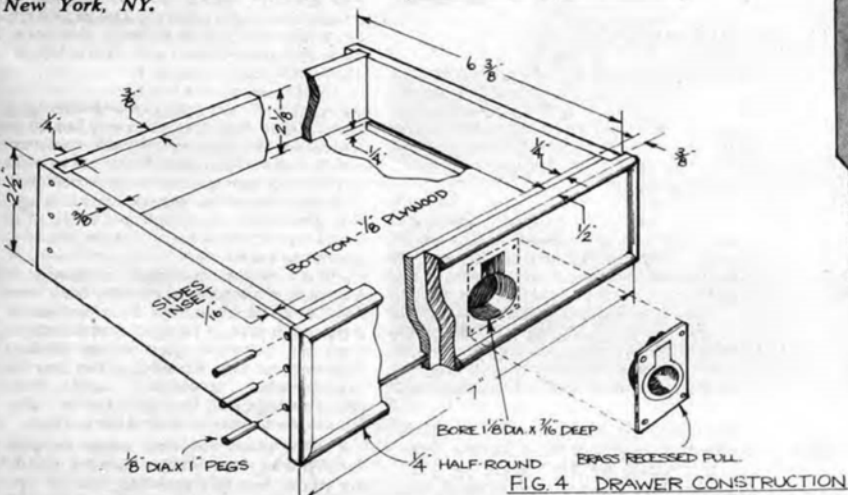
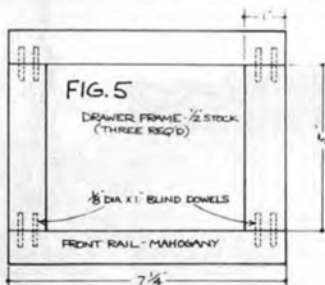
After careful dusting, three coats of varnish were applied, each coat being rubbed down with 3/0 steel wool. The last coat was rubbed down with XXX powdered pumice and rubbing oil, using a felt-padded block.

When a perfectly level satin surface was achieved, the chest was wiped with clean cloths and a coat of wax was applied. Inside surfaces of chest, including frame and drawers should also be given at least two coats of finish. Finally, brass angles and pulls are installed.

Editor's Note: Source of supply for mahogany: John Harra Wood and Supply Co., 39 West 19th Street, New York, NY.

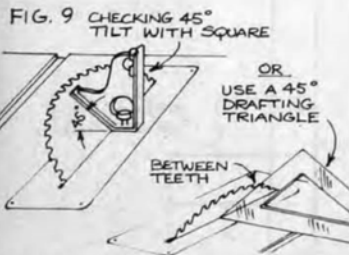
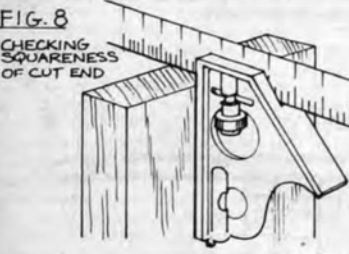
For brass recessed pull and lifting handles: The Wise Co., 6503 St. Claude Ave., Arabi, LA 70032.

For corner braces: The Stanley Works, Stanley Hardware Div., New Britain, CT, Part CD5351, 1" x 1/2" US3 (many hardware stores carry Stanley items).



The Beginning Woodworker (cont'd)

of the sawblade (Fig. 9). Again, the blade should rest flush against the inclined face of the square and the pointer should read 45 degrees. If necessary, reset the left-hand stop collar at the back of the machine. Cross-cut a board with the blade inclined and check the accuracy of this edge miter cut.



Finally, let's turn our attention to the rip fence which if misaligned will cause binding and kickback of the workpiece. The fence, when unlocked, should ride smoothly back and forth across the table. At any point on the table, it should be exactly parallel to the sawblade.

Since we now know that the sawblade is parallel to the tableslots, we can use the slots as a guide in establishing fence alignment. Set the fence spanning right side of the table and seated on the front and rear guide bars. Slide fence until it rests along the

edge of the table slot. If it's not parallel with the slot, adjusting screws (usually on the front top) are loosened, the fence aligned and the screws alternately tightened. Fence alignment should be checked frequently as some types go out of adjustment easily.

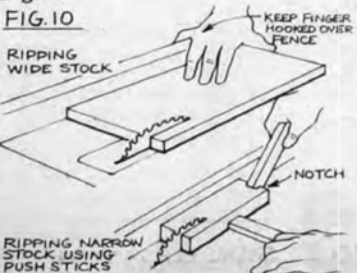
If your fence has a width-of-cut scale set it by measuring from a right blade tooth to the fence. This scale is a rough guide at best and should not be relied on except for rough work. For critical work (and most of it is) use a good steel rule to measure the exact distance the fence should be set from a tooth on the left side of blade.

The final operation is to make a ripping cut along the length of a board to reduce it to a specified width. For example, let's cut an 8 inch or wider board down to 6 inches.

Slide the fence so it's exactly 6 inches from a blade tooth set to the right and lock the fence in that position. Place board flat on table and hold firmly against fence with the right hand. Switch on the motor and use the right hand to push the piece through the blade (Fig. 10).

Continue pushing evenly until the piece is well past the rear of the blade. When it begins to tilt off the edge of the table, grasp it and lift well up and clear of the blade.

The 6 inch piece you have just cut is about as narrow a piece as you should attempt to cut by hand. Any ripping cuts made with the fence less than 6 inches from the blade should be made using a pushstick instead of your fingers.



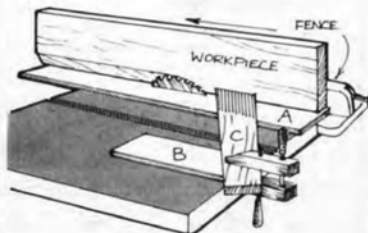
Now that your tablesaw has been adjusted, plan on keeping it that way by periodically going through the checking procedures described here. If you use the machine 10 hours per week, a monthly inspection is not too frequent.

The basic crosscutting and ripping operations outlined are a small part of the very many operations of which the

machine is capable. Hopefully, this article will help you to get started with some degree of confidence. *The Complete Book of Power Tools* by R.J. De Cristoforo has a 74 page section devoted entirely to the tablesaw and is probably one of the best reference works available for those who wish to use the tablesaw to its full potential.

Shop-Tips

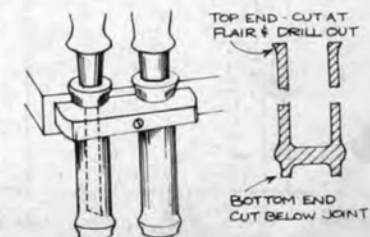
To measure short distances with maximum accuracy, instead of a flexible steel tape, use a 6" or 12" machinist's rule.



Instead of sanding dowel ends in order to make them fit into holes that are a bit too snug, it's usually easier to cross slot the ends with a dovetail saw.

Glue joints can be made more nearly invisible if, after clamping, the squeezed out glue is wiped off and the joint is sanded after the glue becomes tacky. This mixes the wood dust with glue to fill small gaps. When sanding, make sure all traces of glue are removed from surfaces adjacent to the joint.

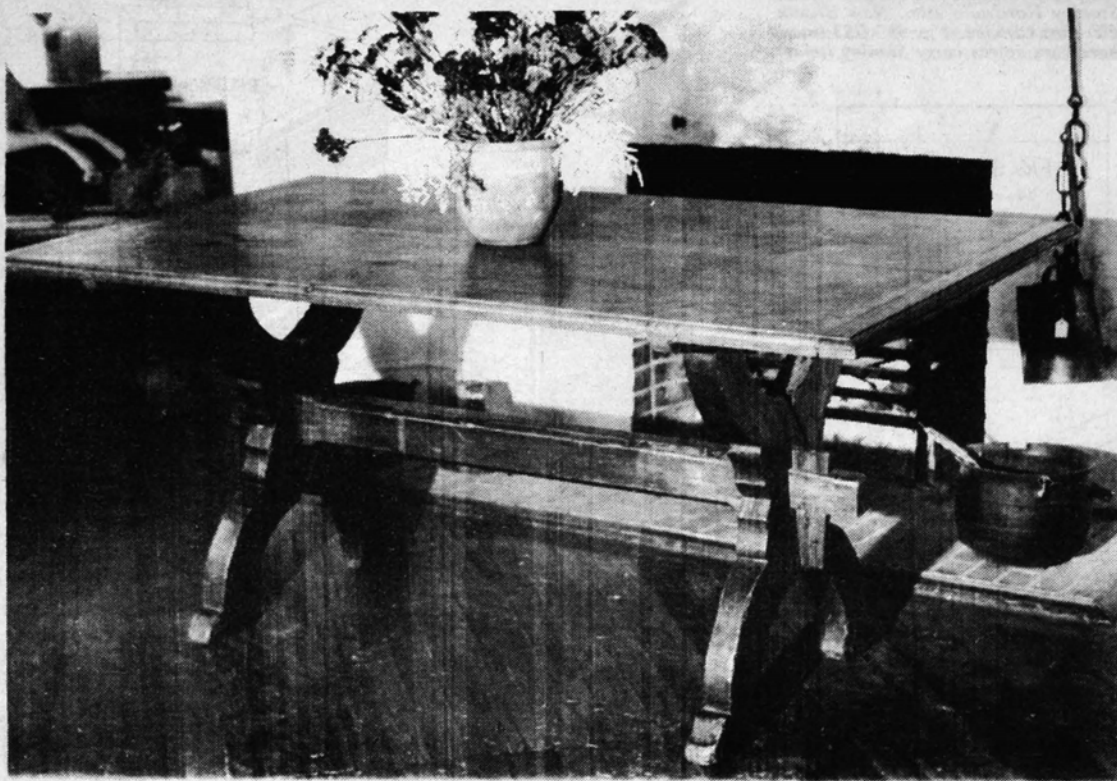
Lengths of bamboo, in various suitable diameters, make excellent "scabbards" for your lathe or other chisels. Cut them just below a joint so the natural partition serves as a bottom for the tube and mount to workbench as shown.



If you need to bevel boards that are too long to handle on the tablesaw with safety or accuracy, the set-up above will make the job easier.

Set blade to the proper angle and lower it below the table. Set fence the required distance from blade and clamp A, which is a strip of 1/2" plywood, to the table. Start saw and raise the blade to cut through A; then adjust blade to the correct height. Part B is also a strip of 1/2" plywood that brings spring-stick C level with A. The length of A depends on the length of your workpiece.

19th Cent. Sawbuck Table



This fine old sawbuck table was built in Pennsylvania about 1830, though we suspect that the top is a later replacement. The design of the cross-lapped legs is quite distinctive and though different from most so-called Pennsylvania Dutch tables we've seen, there is a definite European influence which gives this sturdy table a certain old world charm.

The original was built entirely of pine, but oak might be more appropriate for the legs at least. As seen in the photo, the feet have been considerably worn away.

Let's start construction with the legs which involve the most work. The original legs were a full 2½ inches thick, but any lumber that comes reasonably close to this dimension can be used. Four pieces, 7" x 38" long are needed. The dadoes cut at the center of each

leg for a cross-lap joint, should be laid out and cut with tablesaw and dado head.

To lay out the dadoes, lay each pair of legs on the benchtop so there is an equal distance of 11½ inches between the inner edges as indicated by the broken lines at the top and bottom of leg assembly in Fig. 2. With each pair in this position, the proper dado angles can be scribed.

A full size pattern of a leg is enlarged on heavy cardboard or masonite and then traced on each leg. Bandsaw the shapes, then round off edges for an antique, worn effect using file and sandpaper. Glue and clamp each pair of legs together and when dry, lay out and cut the mortises for stretcher tenons by using a brace and large auger to remove most waste before squaring off with a chisel.

The stretcher which is of 2¼" stock is cut to a length of 51½ inches. Tenons 6¼" long by 2½" wide by 1¼" thick are laid out and cut at each end (Fig. 4). The tenons should be trimmed for a good fit in leg mortises and identifying marks used to match each tenon and mortise. Chamfer stretcher as shown in Fig. 1.

Wedges, which lock the leg units to stretcher are next cut as shown in Fig. 4. Locate the wedge mortises 2 inches from the tenon shoulders. The mortise tapers from 2¼" on the upper edges to 2½" on the bottom. Again, an auger held at an angle will start the mortise which is later trimmed with a chisel.

The original top consists of two boards, each almost 18 inches wide. It's unlikely that you will find 1¼" thick stock this wide and the top will be

more stable if it is glued up of at least four boards. Cut board to a rough length of 61 inches (allowing for ¾" tongues and final trimming), and joint edges. Reinforce edge joints with blind ½" dia. dowel pins and glue and clamp top together.

When dry, trim top to finish length of 60½ inches and lay out and cut ¾" x ¾" tongues with a router (Fig. 5). Cut breadboard ends slightly long, groove them for a snug fit on tongues and clamp in place while drilling for four ¾" dia. x 1" dowel pins which are driven from underside, locking tongues to breadboard ends. Trim ends flush with sides of top.

On the original, the top is grooved 9½ inches in from each end for long brackets which are dovetailed to fit the top grooves, outboard of legs. A router and dovetail bit can be used to cut the top grooves while the dovetails on brackets are cut with the tablesaw. An alternate method is to omit the dovetails and counterbore and screw brackets to the underside of the top. If this method is used, the brackets should be cut about 3" shorter than shown and fastened so that the ends are set back from the tabletop edges. Also, screw holes in brackets should be elongated to allow for some seasonal movement.

If the dovetailed method is used and the dovetails are fitted properly, the brackets will have to be driven into top grooves; the friction being sufficient to hold the brackets tightly in place. If you get a loose fit, counterbore one 1½" x #8 R.H. screw four inches in from each end of bracket and fasten to top. Do not use glue when joining brackets to top. Finally, place top on leg-stretcher assembly and bore through legs and brackets for ¾" dia. birch dowel pins to lock table to legs.

The original molded edge around the top was done with a wooden molding plane but the molding can be approximated using a router and ½" radius bead cutter.

After a thorough sanding, the table is ready for finishing. The original is of a mellow tobacco brown color which can be duplicated by using a walnut-stone stain. After staining, finish tabletop with at least three coats of varnish, rubbing the first two coats with 4/0 steel wool to remove dust specks. After dusting, apply the final coat and rub with the steel wool until an even soft sheen is achieved. Legs and stretchers are given at least two coats of the same finish.

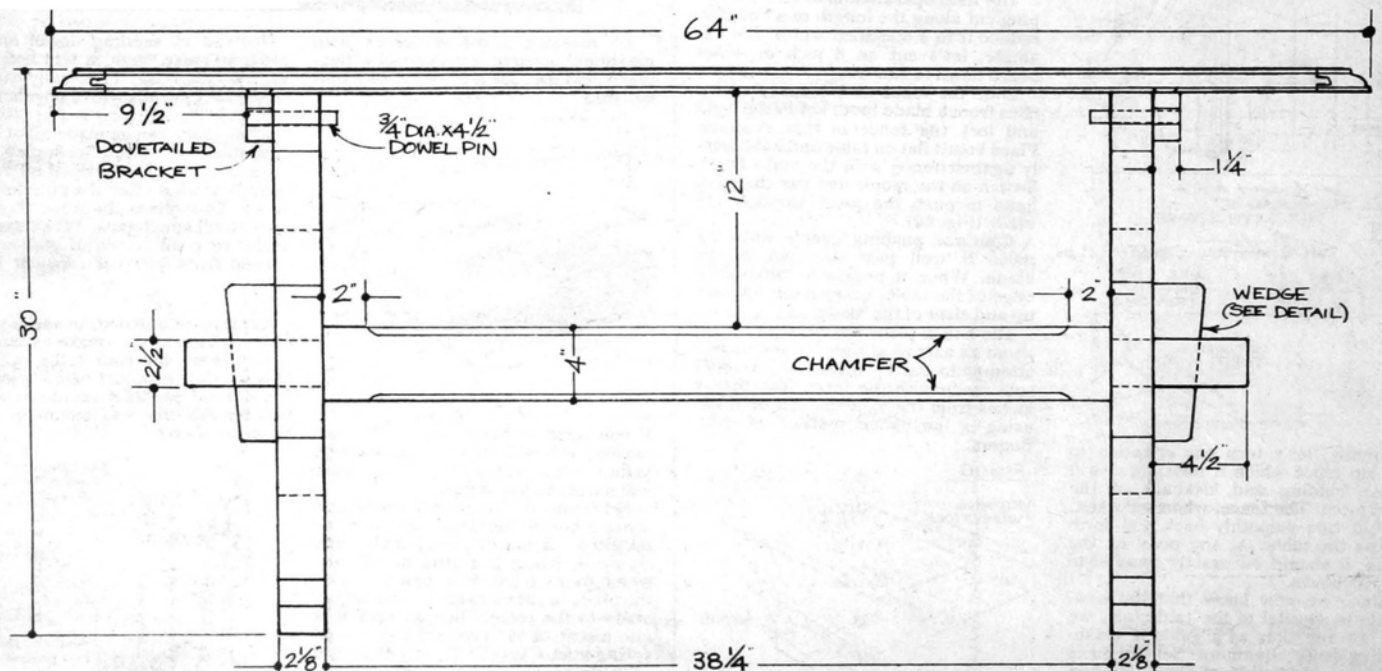


FIG. 1 FRONT ELEVATION

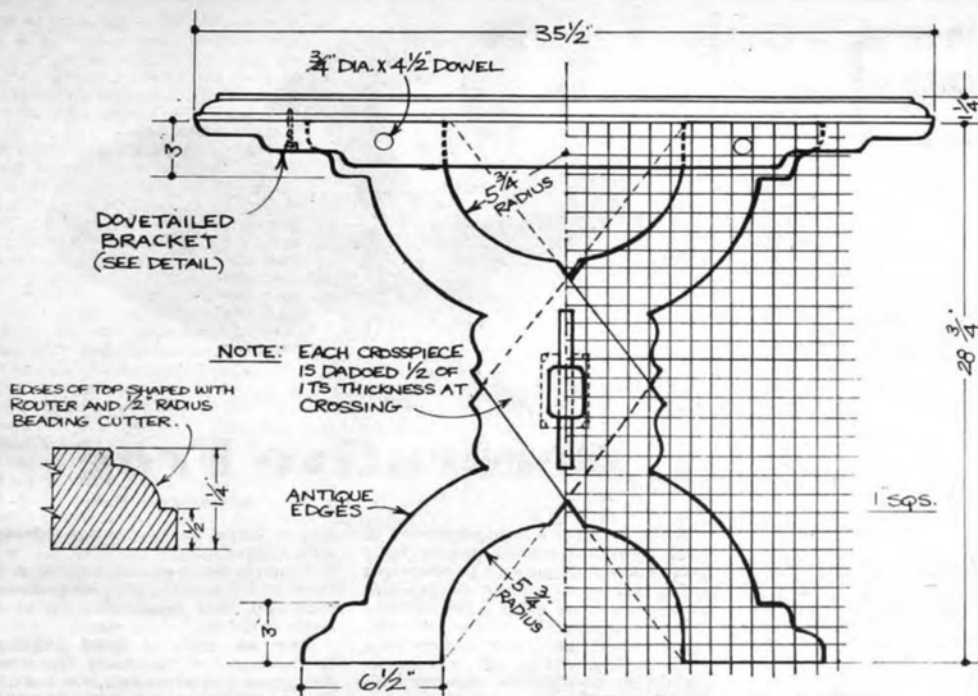


FIG. 2 END ELEVATION

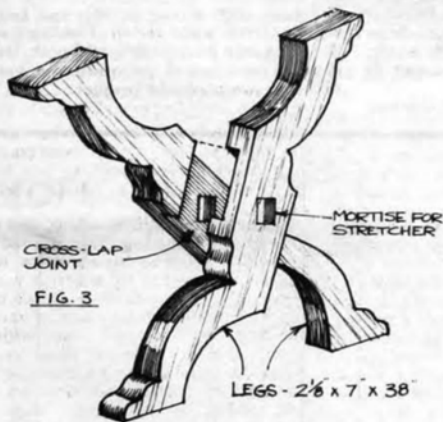
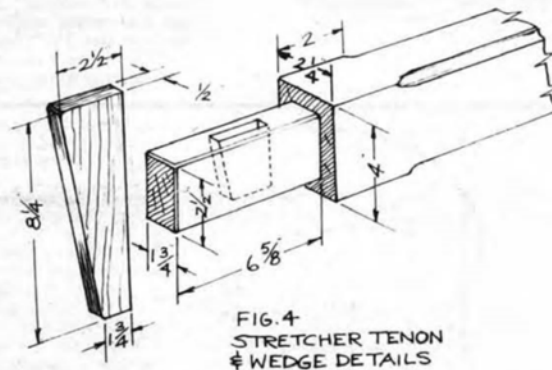
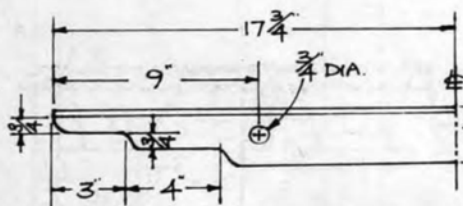


FIG. 3

FIG. 4
STRETCHER TENON
& WEDGE DETAILS

SIDE VIEW - DOVETAILED BRACKET

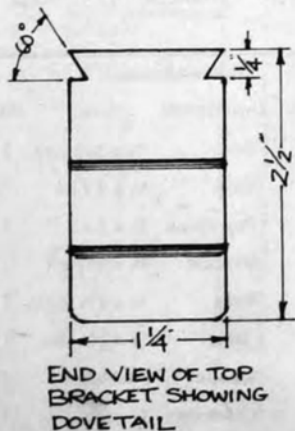
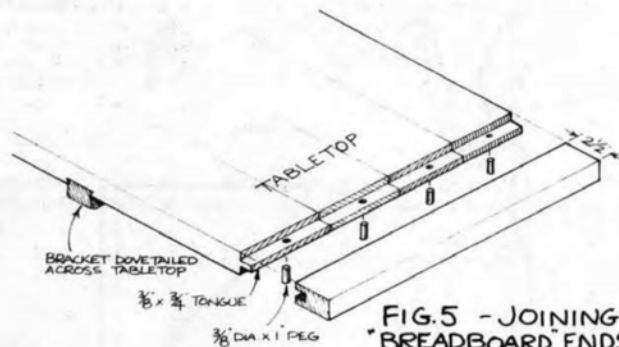


FIG. 6 BRACKET DETAILS

FIG. 5 - JOINING
"BREADBOARD" ENDS

Bill of Materials

Description	Size	No. Req'd
Leg	2 1/8 x 7 x 38	4
Stretcher	2 1/8 x 4 x 51 1/2	1
Wedge	1/2 x 2 1/2 x 8 1/4	2
Bracket	1 1/4 x 2 1/2 x 35 1/2	2
Peg	3/8 dia. x 4 1/2	4
Top	1 1/4 x 35 1/2 x 60 1/2	1
Top End	1 1/4 x 2 1/2 x 35 1/2	2

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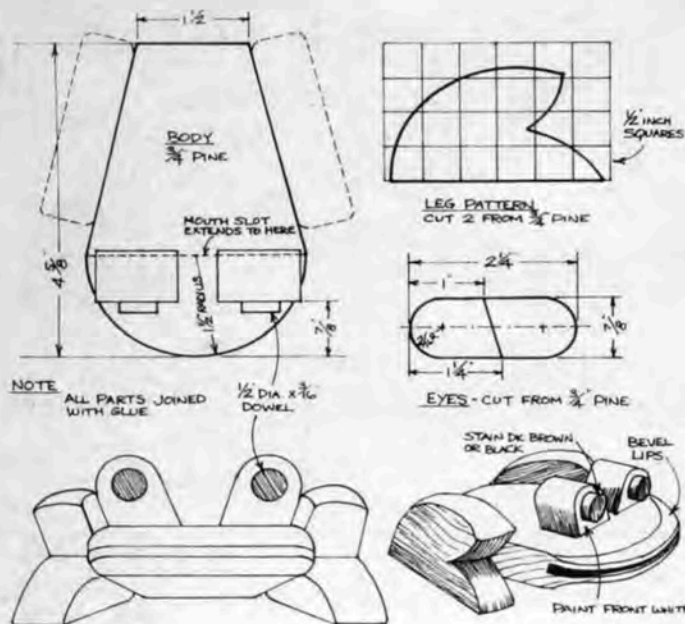


Photo: John Kane

Decorative Frog

by Harvey E. Helm

We've found this little amphibian to be an ideal desk-top companion. He's heavy enough to use as a paperweight while that great mouth holds telephone memos or even a few letters. Others may want to use him outside, as a garden decoration or perhaps on a porch railing. After all, a face as friendly as this will be welcomed almost anywhere.

To make the body, cut a piece of stock 1 x 3 x 4 3/4. The mouth is a 1 1/2" deep x 1/4" wide slot. Use a backsaw to make two cuts 1/4" apart, then clean out the excess material. Next, layout and cut the 1 1/2" radius and taper to 1 1/2" at the back as shown.

Referring to the pattern, cut the two

legs to shape. Remove rough surfaces with a file or rasp.

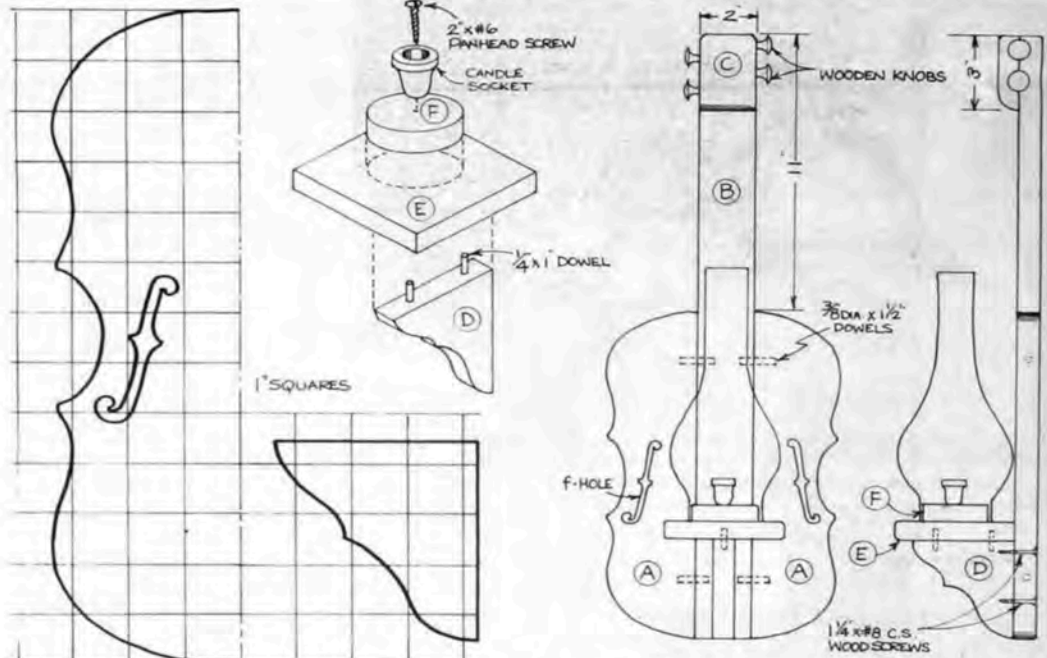
To make the eyes, cut a piece of 1" stock to 3/4" width x 2 1/4" long. Round each end, then layout and cut at an angle as shown.

Give all parts a good sanding. Round edges as necessary and bevel the upper and lower lips. Glue a 1/2" dia. dowel button (first stain them) to each eye, then glue eyes and legs to the body.

Finish with a coat of Minwax Lexington Green wood finish. The front of the eyes can be painted white or left clear. Two coats of polyurethane varnish will complete the project.

Violin Sconce

by Roger E. Schroeder



Whether you plan on making one or a dozen of this interesting sconce, it's an easy to build project that results in a unique gift. The one pictured is constructed of African mahogany, though pine or most any hardwood would be appropriate.

Parts A can be cut out with a saber or band saw and are attached to the neck, part B, with 3/4" dia. x 1 1/2" long dowels. I begin the f-holes (see sketch) by starting with a 1/4 inch drill at their tops and bottoms. It's a good idea to save the waste wood from the sides since it can be used when clamping the three parts together.

Part C can now be glued to the top of part B and the 1" wood knobs, available at most Sears, Roebuck & Co. stores, are attached with 1/4 inch dowels. Notice they are offset as on a violin.

The candle stand consists of three pieces. The bracket, part D, is attached to part B with two countersunk wood screws in the back. The square base, part E, is attached to part D with 1/4 inch dowels. Part F, the globe disc, can be glued to the base. A long wood screw through the candle cup will also secure the disc.

I use metal candle cups because they are locally available, but wooden cups can be purchased from Colonial Castings, 73 Westwood Drive, No., Dartmouth, Mass. 02747. A catalog is free on request. The diameter of part F may have to be changed depending on the size of the glass chimney purchased.

My sconce is finished with a brown mahogany paste filler and sealed with several coats of tung oil.

Bill of Materials

Part	Description	Size	No.
A	Body	3/4 x 3 1/2 x 13	2
B	Neck	3/4 x 2 x 24	1
C	Peg Block	3/4 x 2 x 3	1
D	Bracket	3/4 x 3 3/4 x 4	1
E	Base	3/4 x 4 1/4 x 4 1/4	1
F	Disc	3/4 x 2 3/4 dia.	1
G	Knobs	1 inch	4
H	Chimney	To suit	1

Shaker Cutlery Tray

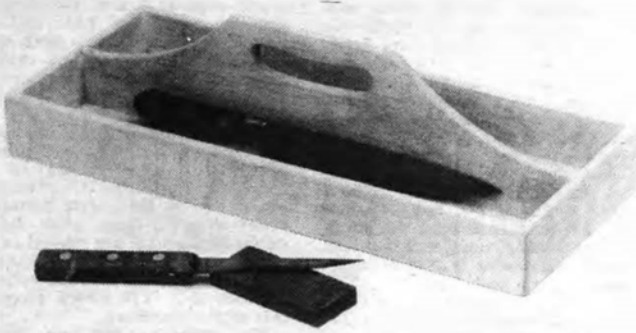


Photo: John Kane

Simple, strong, and functional, this small cutlery tray has all the characteristics of Shaker design. Although ours is made entirely from $\frac{3}{8}$ " clear pine, $\frac{1}{2}$ " stock can be substituted without affecting the overall appearance. Added strength is attained by using rabbet and dado joints, although some readers may choose to use butt joints to simplify construction.

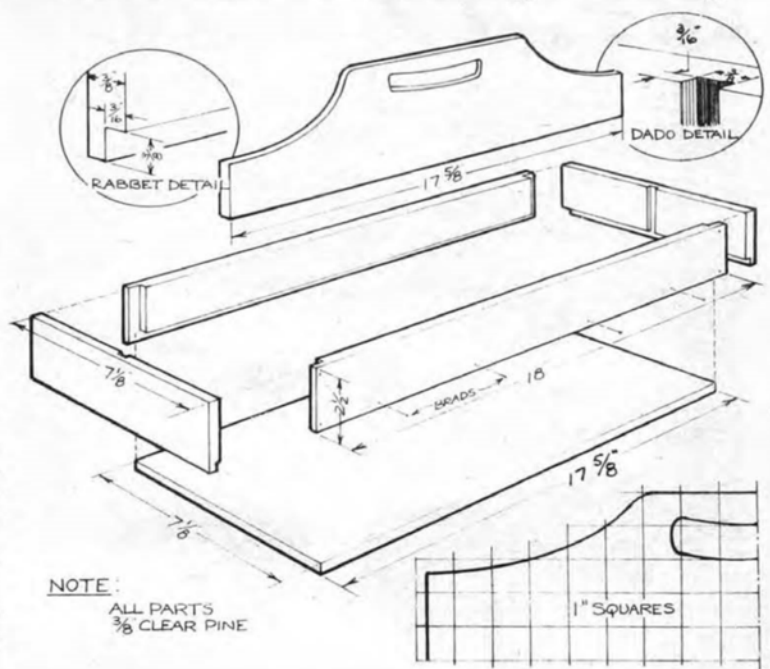
Begin by cutting the front and back to $\frac{3}{4}$ x $2\frac{1}{2}$ x 18. A $3/16$ x $\frac{3}{4}$ rabbet is cut along each end and along the bottom as shown.

Next, the two ends are cut $\frac{3}{4}$ x $2\frac{1}{2}$ x $7\frac{1}{8}$. A $3/16$ x $\frac{3}{4}$ rabbet is cut along the

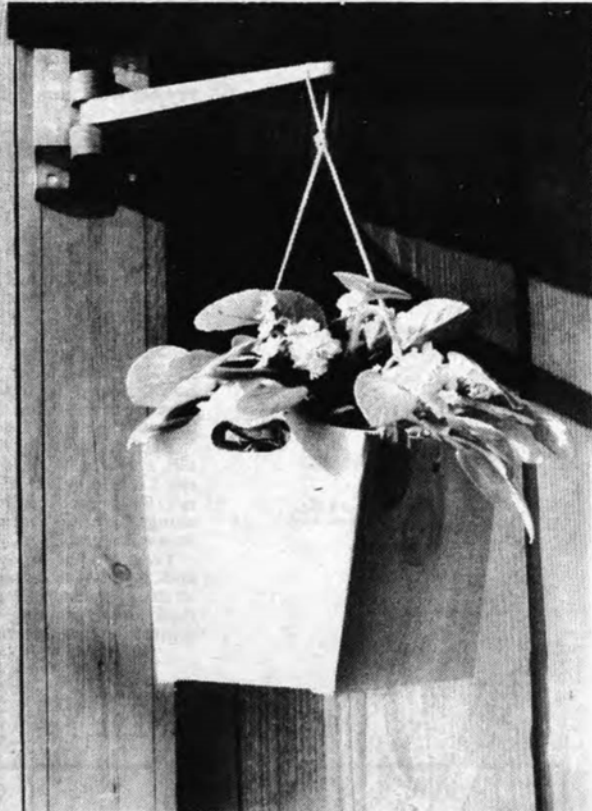
bottom edge and a $3/16$ x $\frac{3}{4}$ dado is cut at the center as shown.

The divider is cut $\frac{3}{4}$ x 5 x $17\frac{1}{4}$, then cut to shape using the grid pattern provided. The bottom measures $\frac{3}{4}$ x $7\frac{1}{8}$ x $17\frac{1}{8}$. It may be necessary to edge-join two pieces of stock to get the $7\frac{1}{8}$ " width.

Sand all parts thoroughly and round edges to simulate wear. At this point we applied two coats of Minwax Ipswich Pine stain. When dry, the tray was assembled with glue and finishing nails. Two coats of Minwax Antique Oil Finish completes the project.



Bracket & Planter



Rough-sawn red cedar is an excellent wood for constructing simple weatherproof planters that will greatly enhance your small potted plants. Using $1\frac{1}{4}$ " (actual) cedar for all parts, this lovely hanging planter can be built in little time. The use of water-resistant glue and $1\frac{1}{2}$ " galvanized finishing nails results in strong and lasting joints. If necessary, the dimensions can be scaled down to accommodate a smaller potted plant.

The two $\frac{3}{4}$ x $1\frac{1}{4}$ " beveled sticks are wedged between the sides and support the pot. Cut the sticks to a length that best suits the height of your pot, noting that the length of the

sticks will regulate how far the pot sits in the planter. This technique makes the planter adaptable to either deep or shallow pots.

The swing-out bracket is adapted from a folding Shaker towel rack design. By mounting the bracket on a porch post, the plant can be moved to take advantage of the sun or to protrude just beyond the roof edge for an occasional gentle rain. All parts are of $5/4$ inch hardwood, held together with water-resistant glue and dowel pegs.

Those readers looking for potential workshop income may want to consider selling these projects at local nurseries and gift shops.

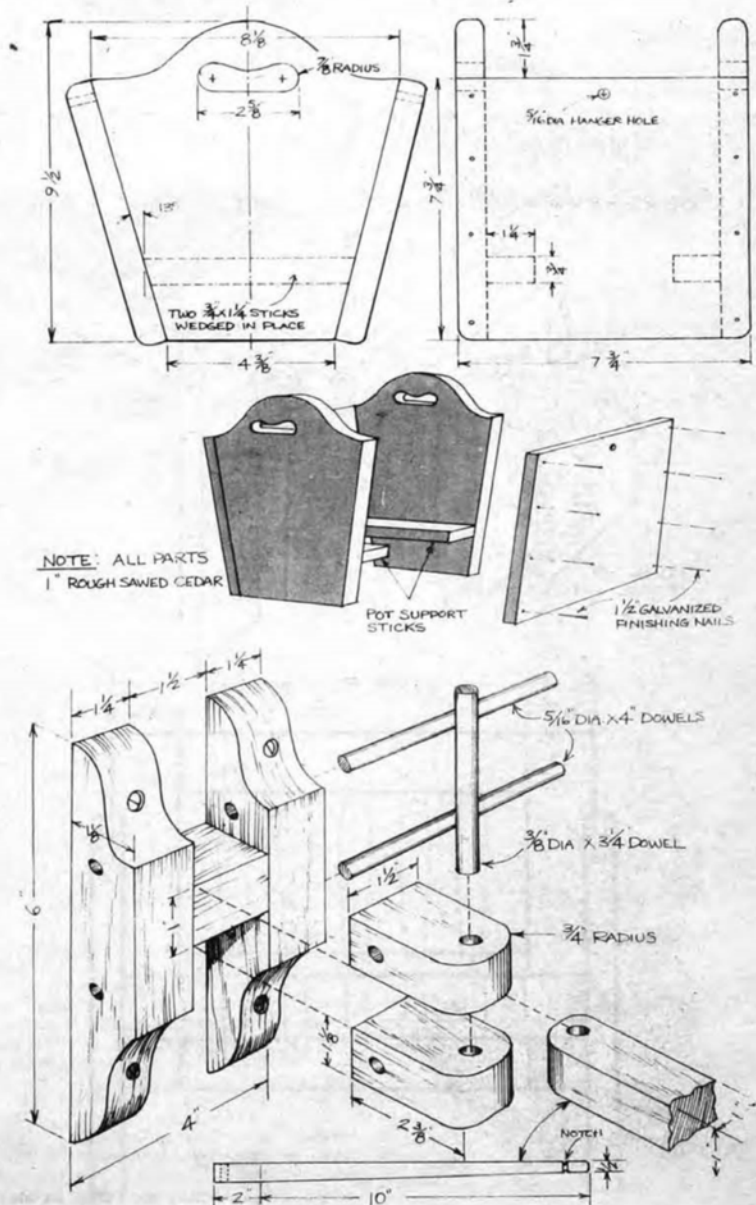




Photo: John Kane

2 x 4 Furniture

This club chair and matching ottoman are the final two pieces in our series of low-cost contemporary furniture. Like the love seat, coffee and end tables, the chair and ottoman are easy to build from 2 x 4 framing lumber and are nicely scaled down for a small apartment or family room.

Including the cost of a cushion set (we got ours from Montgomery Wards) the chair shouldn't cost over \$35.00 to build. If red oak or other hardwood is substituted for the framing lumber the additional building cost will still be far below that of comparable store-bought furniture.

The chair is sized for a 4 1/4" x 22" x 23" seat cushion and a 4" x 17" x 23" back cushion. Our button-tufted set costs \$25.00 but many readers will probably prefer to make up their own cushions for a considerable savings.

You'll need 27 linear feet of 2 x 4 lumber (1 1/2" x 3 1/2" actual). Take care to choose pieces with no splits, bow or twist and as few knots as possible. We picked over a pile of hemlock studs for the choicest sticks, then left them to dry in a heated room for one month to reduce moisture content and lessen future shrinkage problems. A piece of 1 x 1 1/2 x 32 hardwood is also needed to slice up for back slats.

Three yards of reinforced rubber webbing of 2 inch width is also needed to support the seat cushion; also 12

metal clips to fasten the webbing to grooved front and back rails. Most upholstery shops carry both webbing and clips but they can be ordered by mail from The Woodworkers Store, 21801 Industrial Blvd., Rogers, Mn 55374.

Framing lumber generally has slight rounded corners. This will present no problem except where legs (B) of end frames and uprights (G) of back frame are joined to horizontal members. In order to get a flush joint, the inside edges of B and G are ripped or planed to remove the rounded corners. Figures 2 and 3 show these members with a width of 3 7/16 which accounts for this slight trimming.

The parts for the two end frame assemblies are gotten out first. Cut 4 legs (B) and notch top ends for the 1/2" x 2 3/4" tenons of A rails. Use a high auxiliary fence or a tenon jig to provide adequate support for legs when passing them vertically over the table-saw blade.

Matching tenons are then cut on ends of A rails. Two C rails are then cut to a length which is exactly the distance between tenon shoulders on A rails. Lay out and drill 1/2" dia. x 1" deep holes in ends of C rails and edges of legs for dowel pins as shown in Figure 1.

Before gluing up end frames, check them for squareness, and lay out the angled dados which cross both A and C rails and hold the back frame. Set a bevel gage to 110 degrees or table saw miter gage to 20 degrees and mark the dado on each rail. Cut with a dado head, or by making repeated passes over the blade, using the miter gage set at 20 degrees in a crosscut operation. Keep the dados slightly on the snug side to allow for later sanding.

Sand parts of end frames and reassemble with glue, clamping until dry. Later you can drill through mortise and tenon joints for a 1 inch dia. x 1 1/2 inch dowel peg which is glued in place.

Next, cut the front rail D to length, bore holes in each end for two 1/2 inch dia. dowel pins and groove the top edge, as shown in the detail, with the blade tilted to 20 degrees. This groove should be carefully sized to hold the webbing clips snugly. A kerf of 1/4 to 5/32 inches is about right. The webbing clips have a hole by which they can be screwed to the tops of rails but this method doesn't look as neat as hiding the clips in a groove. When boring matching dowel holes in front legs for rail D, note that the rail is set back 1/4 inch from front edges of legs.

Back frame rails E and F are a full 1 1/2 x 3 3/4 x 24 inches, while the slat rail I is 1 1/2" x 2" x 17 1/4". The lower rail E is grooved for webbing clips along the edge that will face up when frame is assembled.

Temporarily assemble back frame and lay out locations of 1/4 wide x 1/2 deep x 1 inch long mortises for the back slats. Starting from either end, locate the first mortise exactly 2 1/16

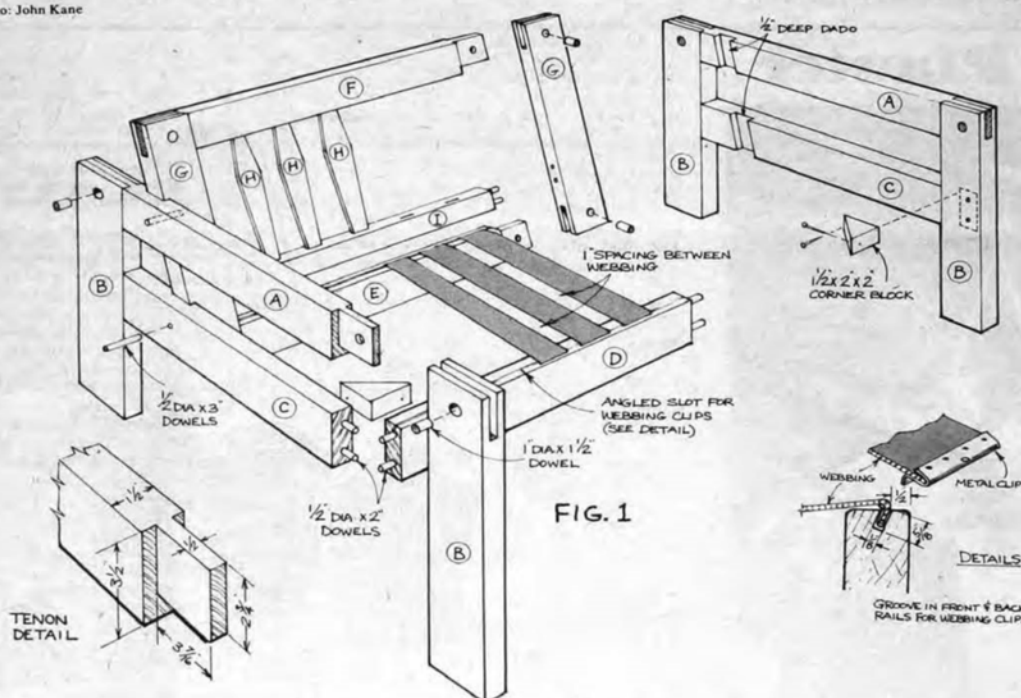


FIG. 1

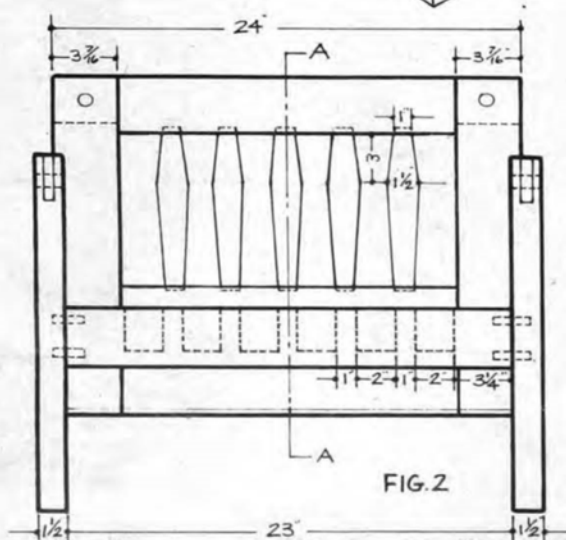


FIG. 2

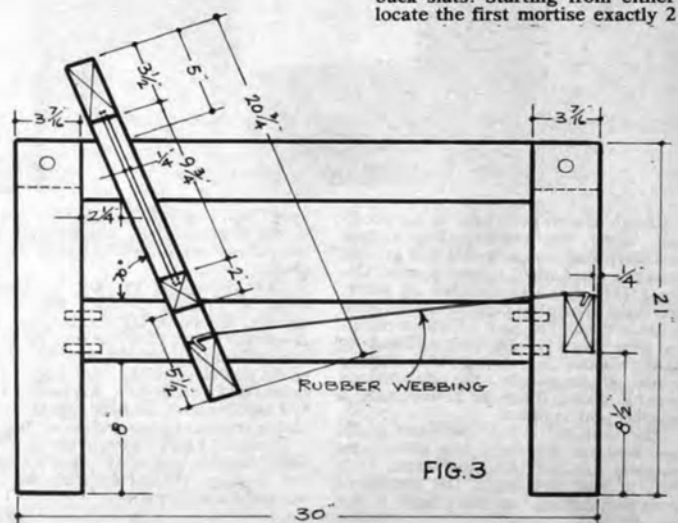


FIG. 3

Cottage Chair

by Roger E. Schroeder



Called a cottage or peasant's chair, this piece dates back to the 1920's when it was made as part of a kitchen set. White oak throughout, it makes an ideal chair for almost any room with a Colonial, Spanish or Victorian setting.

The legs are splayed in two directions with no tenons fitted into the seat. This means that the tops of the legs will have to be cut at a beveled miter (also called a compound or double miter). This can best be done on a radial arm saw that allows the blade to cut a variety of horizontal and vertical angles at the same time. The compound cuts are best made before lathe turning, while the legs are still square and lay flat on the table. Use 8/4 oak or other hardwood for the legs. Pine, I feel, will not hold up.

To bevel miter the legs, set motor and blade to 5 degrees on the bevel gauge. Then swing the arm to the left to a 7 degree setting. The cuts can be made with the legs flush with the fence. If a radial arm saw is not available, a tablesaw with miter gauge set at 5 degrees and blade inclined to 7 degrees will do the job.

For lathe turning so many beads, hollows and ogee curves, I find a 3/4 inch gouge with a long or elliptical end very useful. If a number of chairs are to be made a full size plywood template of the reverse profile of a leg will be a big help in keeping all turnings uniform.

The four aprons, parts D, E and F are next made. Again, a radial arm saw or tablesaw is used for making the compound cuts though a miter box is a good deal safer for this operation on small pieces. Be sure to allow sufficient length to include 3/4 inch tenons at each end. Two side aprons are required and these are a mirror image of each other. To avoid the possibility of ending up with two left aprons, defer cutting the scrolls on bottom edges until last.

Go back to the legs and bore appropriate mortises in leg shoulders. Since the aprons splay out with the legs, the mortises are cut square to the shoulders. Mortises and tenons should be numbered or otherwise identified to avoid confusion. Round off the front outer corners of front leg blocks and rear outer corners of rear leg blocks.

Before laying out and cutting the seat, temporarily assemble the legs and aprons. This assembly placed upside down on the seat blank will help serve as a guide in laying out the seat shape. Note in the seat pattern illustration that the rear outer corners of

back legs align with both edges of the seat.

After making a full-size template of the seat including location of centers for the 1 1/4" dia. sockets for carriage bolt nuts, transfer the shape to 13/16" glued up oak and cut with a bandsaw. Also cut a 10 degree bevel on the back edge. Sand smooth with a sanding drum on a drill press or radial arm saw's outside arbor.

Cut the seat back, again using a full-size template and sand curves. The forward edges of the back, from the seat on up, should be well rounded off.

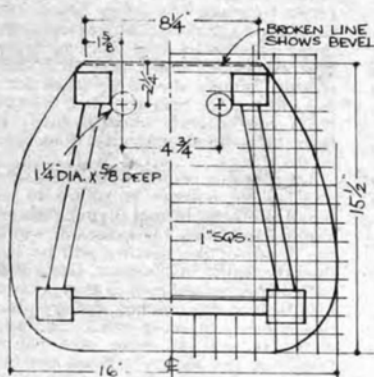
Bolt cover G and two each of the braces H and I are then cut. To assure that braces are a good fit, it may be wise to first cut cardboard templates and lay them across aprons at the proper angle. These are scribed with a pencil, the exact angles taken off with a bevel gauge and transferred to the stock. Note also that the braces should be beveled to conform to the outward slope of the aprons. This can be easily done with a Surfform plane. When braces fit well, pre-drill small pilot holes for finishing nails. Note that rear braces are cut out to provide access to carriage bolt nuts.

To assemble the chair, begin by drilling into the seat bottom the two holes that will hold a square nut to tighten the carriage bolts brought through the chair back. Place seat on your workbench so its bottom faces up. With the back overhanging the bench, bolt it to the seat. Prop the back so its 10 degree angle is maintained.

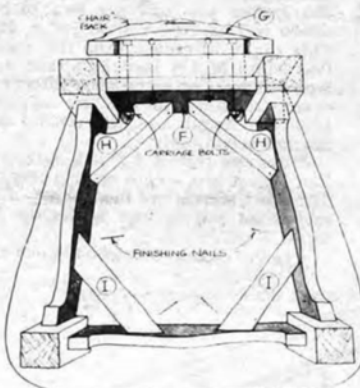
Assemble aprons and legs with glue, using web clamps to hold them together. Make sure that you pre-drill the holes through apron bottoms for screws driven into seat. Next, position legs on the seat bottom so the rear apron is touching the back and the side aprons are equidistant from seat edges. Run the two 3/8" machine screws through back and rear apron F, securing with nuts on the inside.

Now braces can be nailed and glued in place on the seat bottom. I would also drive nails through the leg blocks into tenons, setting them below the surface as was done on the original. The bolt cover G is pre-drilled and nailed and glued into place over countersunk bolts and your chair is ready for finishing.

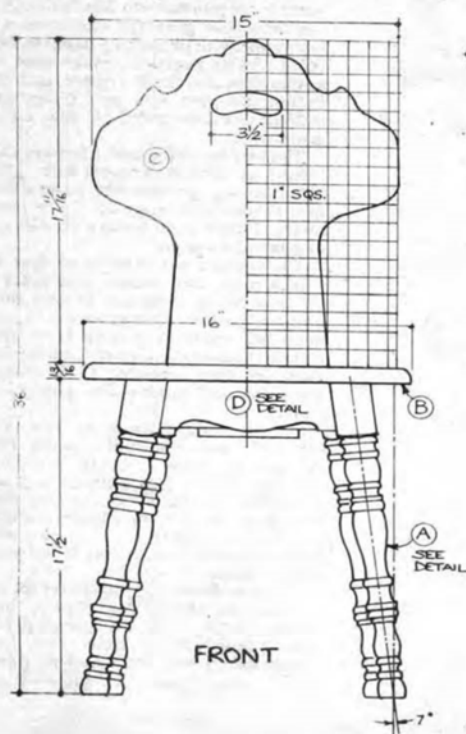
My refinished chairs were stained with Minwax Jacobean stain (a dark stain that looks good on oak) and sealed with several coats of McCloskey's satin varnish.



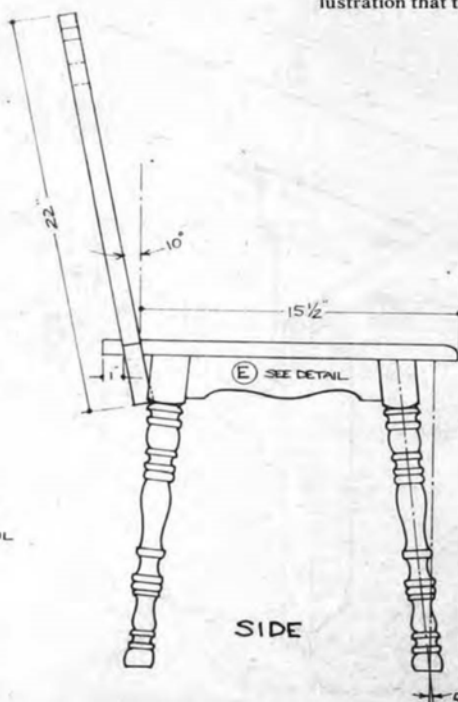
PATTERN FOR SEAT AND LEG LOCATION



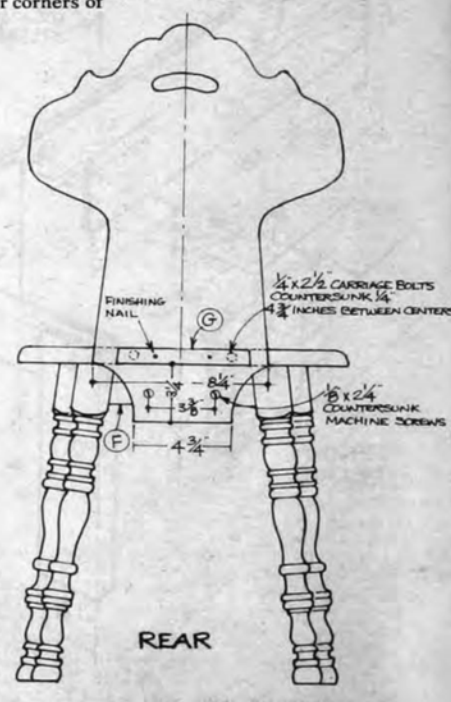
VIEW OF SEAT BOTTOM



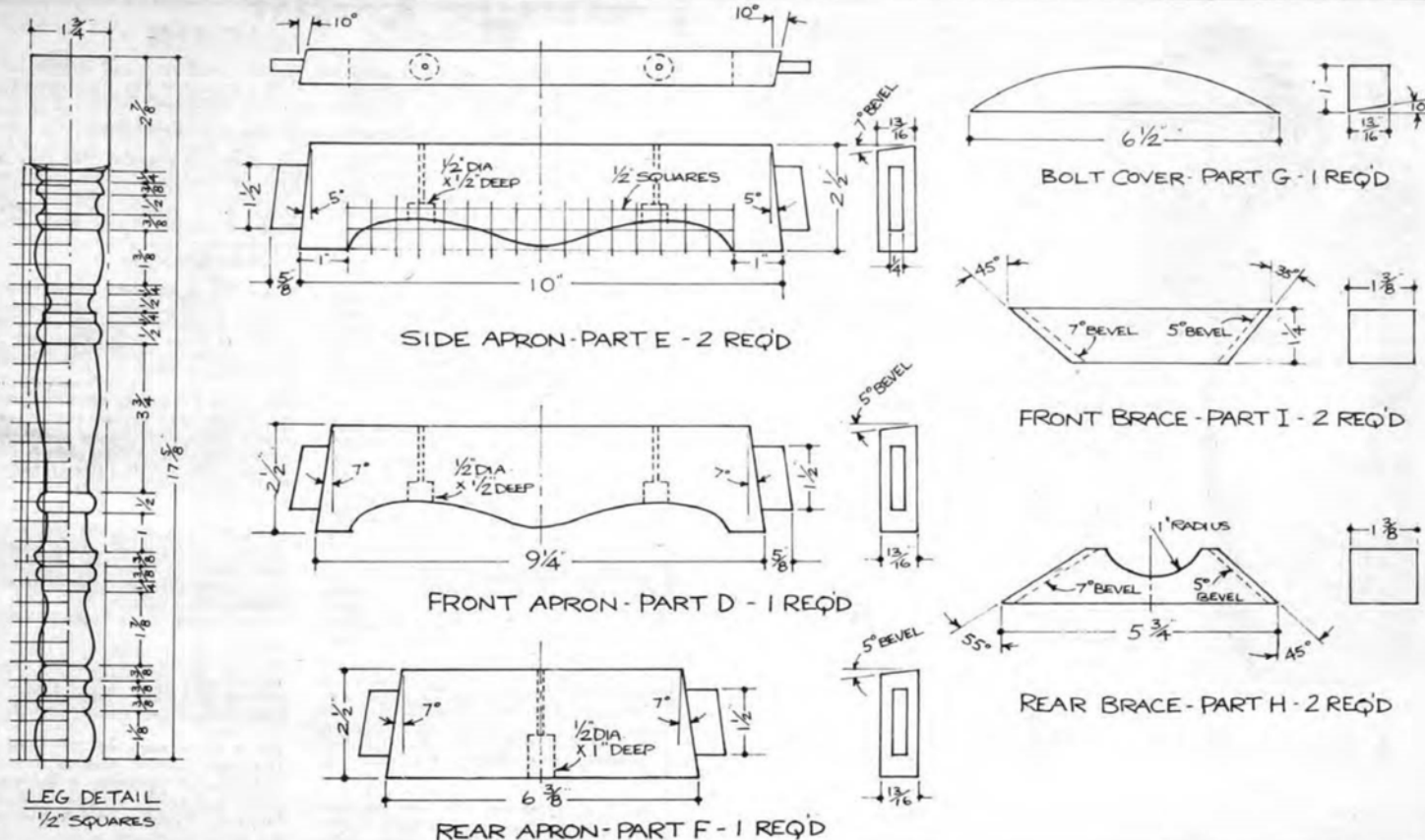
FRONT



SIDE

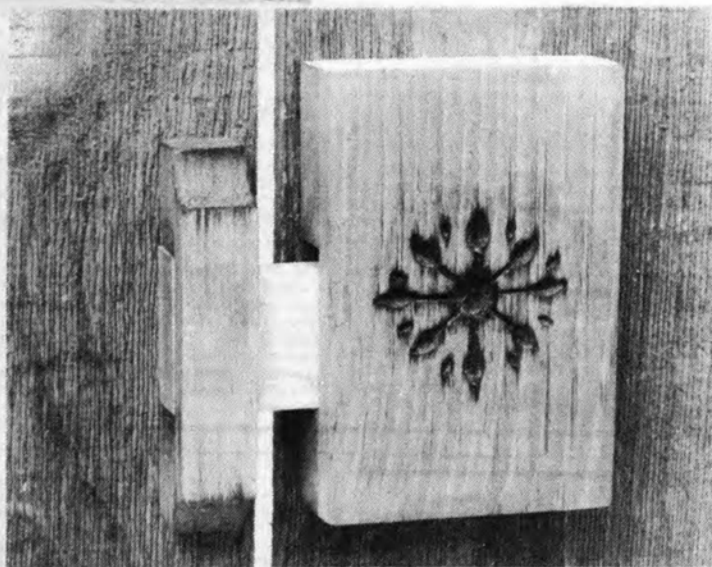


REAR



Wooden Lock

by R.E. Kirkpatrick



Photos: John Kane

Sometime prior to 1000 B.C., an unknown Egyptian locksmith made a wooden lock which found its way to Nineveh on the Tigris River, where early this century it was unearthed intact.

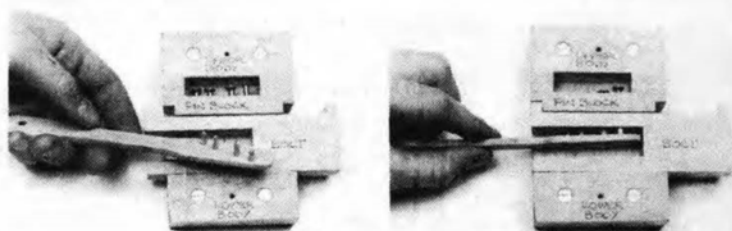
Just recently a wooden lock not unlike the much earlier Egyptian lock was purchased by the writer in a Moroccan market where it was being sold as an operating piece of hardware. This prompted me to build my own version using 1" (actual 13/16) maple for all working parts and 3/4" clear pine for the front. While not strong enough to put on the front door, it does make a most appropriate and interesting lock for a woodshed, garage, or even a woodshop tool cabinet.

Begin by cutting part A to 1 x 2 1/4 x 6. The extra 3" in length provides support and safety when making the dado cuts on the table saw. It can be cut to finish length after all dados are

completed. For part C, set the table-saw blade to 2 1/2" and use a tenon jig to make repeated passes and cut out the 1/4" wide key opening.

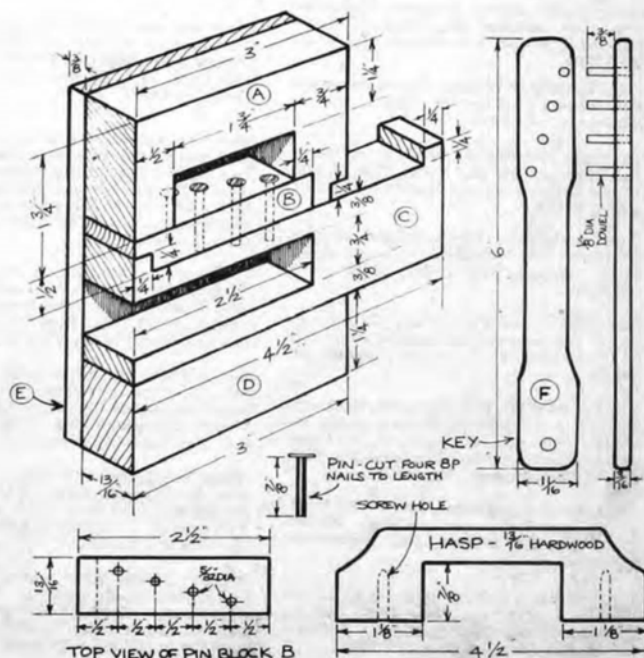
To accurately drill pin holes through parts B, C & F, position B on C (in locked position) and insert part F (key) into C. Cut a scrap piece of wood just thick enough so that it can be inserted in C and will firmly wedge the key against the upper part of C. This positions parts B, C & F in line with each other in the locked position. Now, layout and drill four holes as shown. The holes should extend through B, C & F.

Parts A & D are attached to E with water resistant glue and countersunk 1" x #8 FHWS. Insert pins in B and glue in place. In order to move freely, part C should be planed slightly thinner than parts A, B & D. To add interest you may want to include a carving detail on the lock front. Finish with 3 coats of polyurethane.



Removal from the door frame exposes the lock's movable parts. Note key (F) and partially unlocked bolt (C).

With bolt in locked position, key is used to raise pins, allowing bolt to be pulled back and unlocked.





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Vol. 3 No. 4 July-Aug '79: Sofa Table, Tea Cart, Candle Sconce, 2 Whittling Projects, Cabinetmaker's Table Lamp, Country Cupboard, Tablesaw Multifence, 2 Pull Toys, Inlaid Spool Chest.

Vol. 3 No. 5 Sept-Oct '79: Shaker Table, Contemporary Tier Table, Porch Swing, Traditional Wall Clock, Wall Cabinet, Record and Tape Cabinet, Steam Bending, Bandsaw Resawing Jig, Home-Built Fence for Table and Bandsaws, Clam Digger's Basket, Crocodile Pull Toy, Galleried Wall Shelf.

Vol. 3 No. 6 Nov-Dec '79: Clothes Tree, Pine Floor Lamp, Harvest Table, 5 Holiday Gifts, 19th Cent. Washstand, Tablesaw Round Tapering Jig, Quilting Frame, Tot's Tricycle, Swedish Door Harp.

Vol. 4 No. 1 Jan-Feb '80: Doughbox End Table, Contemporary Loveseat, Mahogany Chairside Table, Corner Cupboard Part I, Small Pine Corner Cabinet, Knife Rack-Cutting Board, Apple-Shaped Mirror, Pine Tape Dispenser, Auxiliary Cut-Off Table for Tablesaw.

Vol. 4 No. 2 Mar-Apr '80: Firewood Rack & Carrier, Red Baron Triplane Toy, Pine Pie Safe with Pierced Tin Panels, Contemp. Glass Top Coffee Table and Matching End Table, 19th Century Pine Commode, Corner Cupboard Part II, Butcher Block Toy Box, Mahogany Corner Shelf, Jig for Wooden Trivets, Radial Arm Crosscut Table.

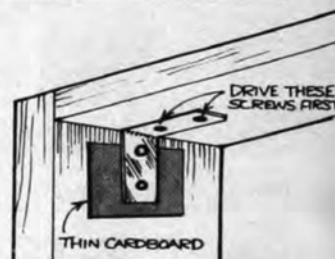
Shop-Tips

An old worn out crepe sole shoe can be used to restore clogged sanding belts. Remove the sole from the shoe and nail it to the side of your work table. Start the belt sander, then gently touch the belt to the crepe sole. It cleans the belt within seconds. Tag sales and thrift shops are good sources for old shoes.

Jeff Reynolds

Using narrow strips of sandpaper "shoeshine fashion" is often the easiest way to sand table legs or other similar turnings. However, the strips usually tear before wearing out. For longer lasting strips, cut them from old sanding belts. The sanding belts have a cloth backing that resists tearing.

James Spencer



Use this technique to get a good tight joint when fastening with a corner brace. Join one leg of the brace while using a thin piece of cardboard as a spacer between the second leg and the stock. When the second leg is fastened, the slight gap will close and draw the two pieces of stock tightly together.

Most pencil sharpeners will quickly and easily chamfer dowl pin ends.

Robert Merz