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- Pint-Size Workbench
- Plate Rail

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Nº 256

November/December 1999



Arts & Crafts Clock - 66

HOMEWRIGHT

36

Keepsakes On Display

Don't abandon every home improvement project during the holidays. This plate rail will dress-up the festivities without causing a mess.



Keepsakes On Display - 36

WOODWORKING

44

Computer Desk

Turn a corner of a room into a tidy home office. Our desk provides ample room for a computer, lots of storage space, and big work surfaces.



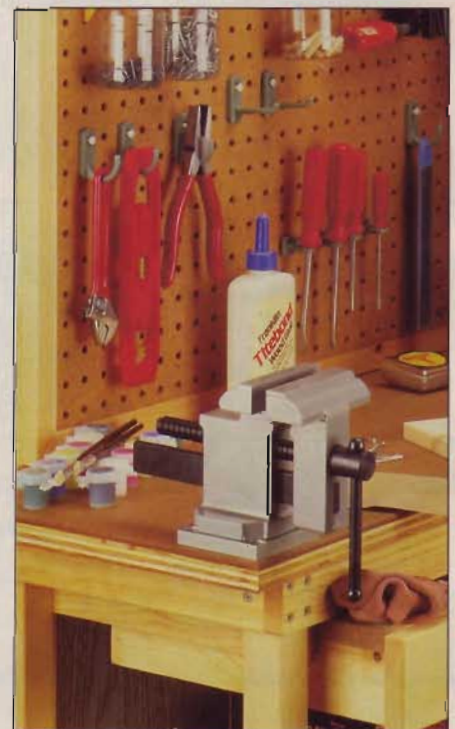
Computer Desk - 44

WORKSHOP

60

Pint-Size Workbench

A perfect gift for the woodworking youngster in your life — a scaled-down workbench with features the big boys will envy.



Pint-Size Workbench - 60

WEEKEND

66

Arts & Crafts Clock

Need a great gift idea for the special names on your holiday list? They're sure to appreciate a classic craftsman-style mantel clock.

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N° 256

November/December 1999

QUESTIONS &
ANSWERS

10

TIPS &
TECHNIQUES

20

NEWS & EVENTS

26

DESIGN NOTES

40

Home Office Basics

Here's what you need to know before you start building your home office.

IN-DEPTH REVIEW

54

Hot Products for 2000

The tool and hardware shows are over, so now it's time for you to get a peek at what's new.

TOOLS & SHOP
GEAR

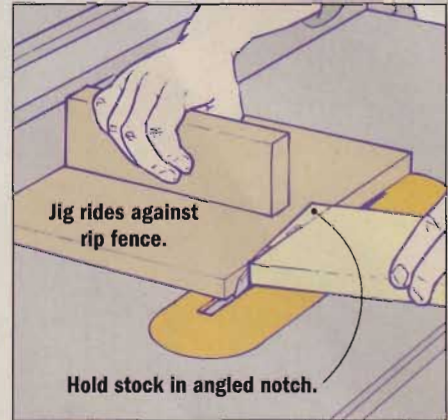
72

HOME & YARD
PRODUCTS

80

CRAFTSMANSHIP

88

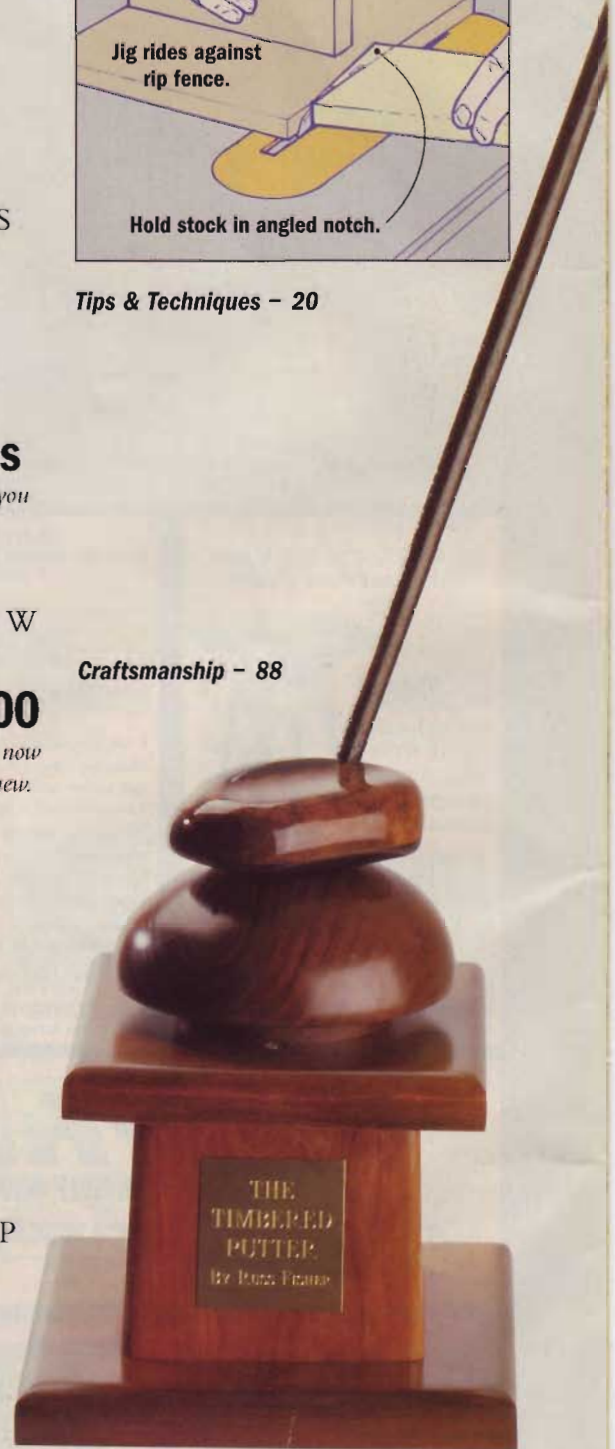


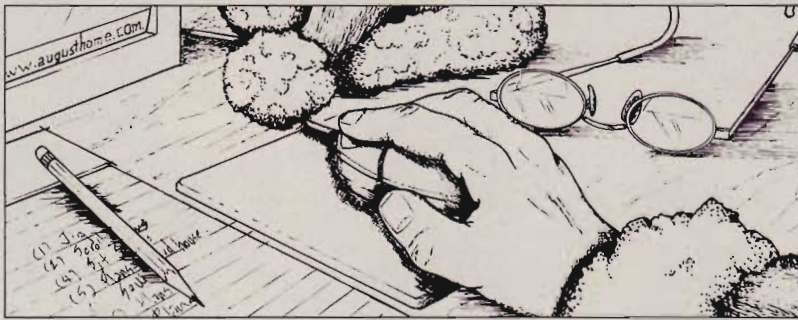
Tips & Techniques - 20

Hot Products for 2000 - 54

Craftsmanship - 88

Home Office Basics - 40





LETTER FROM THE EDITOR

HOLIDAY IMPROVEMENTS

Two years ago I gave myself a Christmas present — a brand new computer with all the trimmings. Although I've been happy with the computer, I've now struggled for too long with a makeshift desk. It's too small, the working height is all wrong, and there is no storage. So this year I'm giving myself another present — a real computer workstation.

Apparently, I'm not the only one who needs to improve his computer's lackluster home. According to a 1998 study by *Remodeling* magazine, converting a room to a home office ranks among the top 10 most popular remodeling projects. If this is in your future, you'll want to look at the corner computer desk featured in this issue (see page 44). In addition, spend some time with *Home Office Basics* on page 40. There's a lot to think about before you begin cutting wood.

But I have to admit, building a home office is a bit messy, and many of you would rather avoid this during the holiday season. So we've included plans for a terrific plate rail (see *Keepsakes On Display* on page 36). With this project you can keep the sawdust in your shop, and still enjoy big rewards when everyone who visits sees your craftsmanship and mementos on display.

There are also two exciting gift projects on board — an *Arts & Crafts Clock* (page 66) and a *Pint-Size Workbench* (page 60). Between them, you could have every special name on your list covered, from ages 4 to 104.

Enjoy the issue, enjoy your projects, and enjoy the holidays with family and friends. All of us at *Workbench* wish you the best.



Chris

Chris Inman, Editor

WORKBENCH

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NUMBER 6

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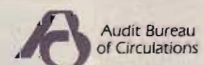
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Questions & Answers

Suspended Ceiling and Insulation Dampen Noise

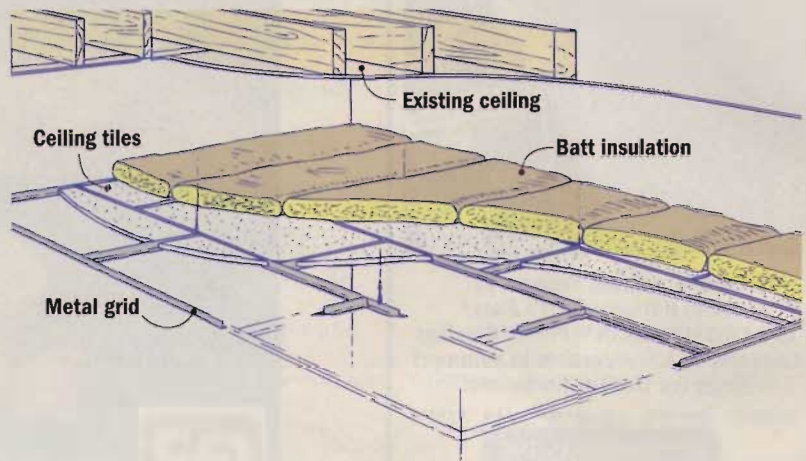
Q I live in an older home that was divided into apartments in the 1950's. How can I soundproof my ceilings to cut down on the noises from the upstairs apartment?

Karen Merkel
Fargo, ND

A Unfortunately, there isn't an inexpensive solution. If you're lucky enough to have 10-ft. ceilings in your apartment, you may want to consider putting in a suspended (drop) ceiling.

This requires fastening ledger strips to the walls around the room. The ceiling panels — typically 24" × 48" — are supported by the ledgers and a metal grid that hangs from wires fastened to the ceiling.

The air space between the two ceilings will dampen some of the sound, but for further reduction,



add batts of insulation on top of the suspended ceiling panels. There are encapsulated, "no-itch," types of insulation that work well for this application (see *Insulation That Works* in the Sept/Oct issue for more information.)

If you lack the ceiling height for a suspended ceiling, you can fasten 1x2 furring strips to the existing ceiling and install acoustic ceiling tiles. This still creates a sound buffer, although it won't be as effective as a suspended ceiling.

Tracking Down Finish Used On Picnic Table Project

Q I can't find the finish you used on the picnic table (July/Aug issue). Where can I buy Penofin?

G.A. Smith
Omaha, NE

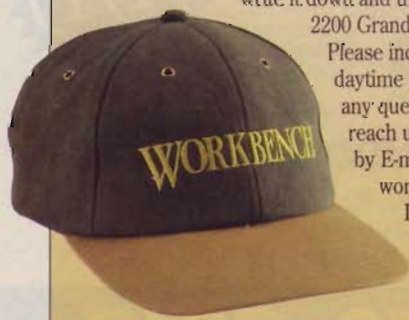
A Penofin Penetrating Oil Finish is manufactured by Performance Coatings Inc., based in Ukiah, Calif. We used the Blue Label finish. They also carry a

Marine Oil Finish and an Ultra Premium Finish (Red Label). You can find the nearest dealer by calling 1-800-736-6346 or go on the web at www.penofin.com.

SHARE YOUR QUESTIONS!

If you have a question about woodworking or home improvement, write it down and mail it to WORKBENCH Q&A, 2200 Grand Ave., Des Moines, IA 50312. Please include your name, address and daytime phone number in case we have any questions for you. You can also reach us via Fax at (515) 283-2003 or by E-mail message at workbench@workbenchmag.com.

If we publish your question, we'll send you one of our handsome and fashionable *Workbench* caps.



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Flashing Sleeve for Replaceable Posts

Q Many times I've had to replace fence posts that have broken off in high winds. The soil here is rocky and excavating footings is difficult. Is there some type of boot that allows you to replace a broken post while using the same concrete footing?

Michael Trynosky
Boulder, CO

A Under normal conditions, I would recommend imbedding a metal post bracket in a concrete footing and mounting the post to the bracket. But given the windy conditions you face, I can see why you want the lateral support gained by sinking the post in the ground.

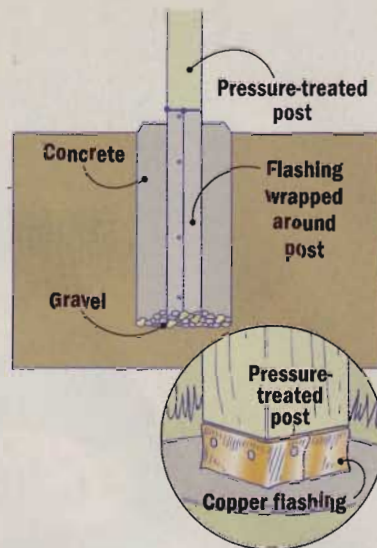
I'm not aware of a product available commercially that will do what you're asking. (If other readers know of one, please write or

email me at the address listed on page 10.)

Here's what I would do. When you set any post in a concrete footing, the post should rest on a bed of gravel. This allows moisture to drain away from the post, reducing the chance of rot. (And any wood in contact with the ground should be pressure-treated.)

Before setting the post in the hole, I would wrap it in a sleeve of galvanized tin or copper flashing. The flashing should extend from the bottom of the post to several inches above the top of the footing. Mark where the top of the flashing meets the post and use a circular saw to cut a shallow ($1/8$ "-deep) kerf around the post.

Crimp the top of the flashing so it fits into the kerf, then caulk the joint and nail the flashing to the



post so the nails will be above the top of the concrete. Plumb the post in the hole and pour in concrete.

If the post breaks in the future, pull the nails out of the flashing, remove the old wood from the footing, and insert a new post into the flashing sleeve.

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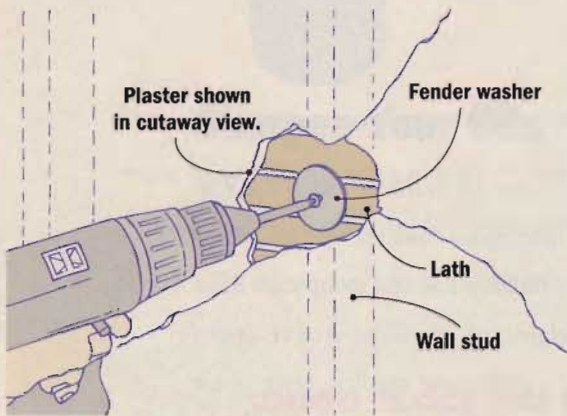


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Cure for Bulging Plaster

Q My home was built in the 1920's. It has plaster walls that are in fairly good shape, however, an area about 36" x 36" in the stairwell bows out. What might cause this and is there a way to fix it without having to hire a master plasterer?

Lawrence Tavernier
Wyandotte, MI



A Given the relatively small area affected, I imagine the lath backing the plaster has pulled away from the studs. (If the stud wall itself is bowed, you'll have a much more extensive repair.)

Tap the plaster at the bulge and if it sounds hollow, try this fix first. Locate the studs in and around the bulge. Chip away some plaster in the center of the bulge. Slip a large diameter fender washer over a 2"-long drywall screw and drive the screw into the stud, slowly pulling the plaster and lath back into place.

The washer should spread the pressure as you draw the plaster flush with the rest of the wall. With the screw snugged down, you can use plaster or joint compound to cover up the washer. For large bulges, use several screws with washers and space them around the area.

Glue Can Set Up Without Being Dry

Q I hear the terms set up and dry used to describe what wood glue does. But what does it really mean and at what point can I unclamp a project I've glued up?

Sam Gracey
Los Angeles, CA

A Yellow wood glues vary from brand, type, temperature, and humidity, but generally they have an *open* time of 5-10 minutes during which you can reposition pieces being glued. When clamping two pieces together, the glue will *set up* — reach most of its strength — in about an hour. At that point, you can usually remove the clamps, but don't stress the joint until the glue has dried completely (overnight or 24 hours).

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Rip Dowels into Half-Round Molding

Q A project I'm building requires some half-round moldings. What's the best way to rip a dowel in half and should I use a band saw or table saw?

Dennis Hackert, Jr.
Westmoreland, TN

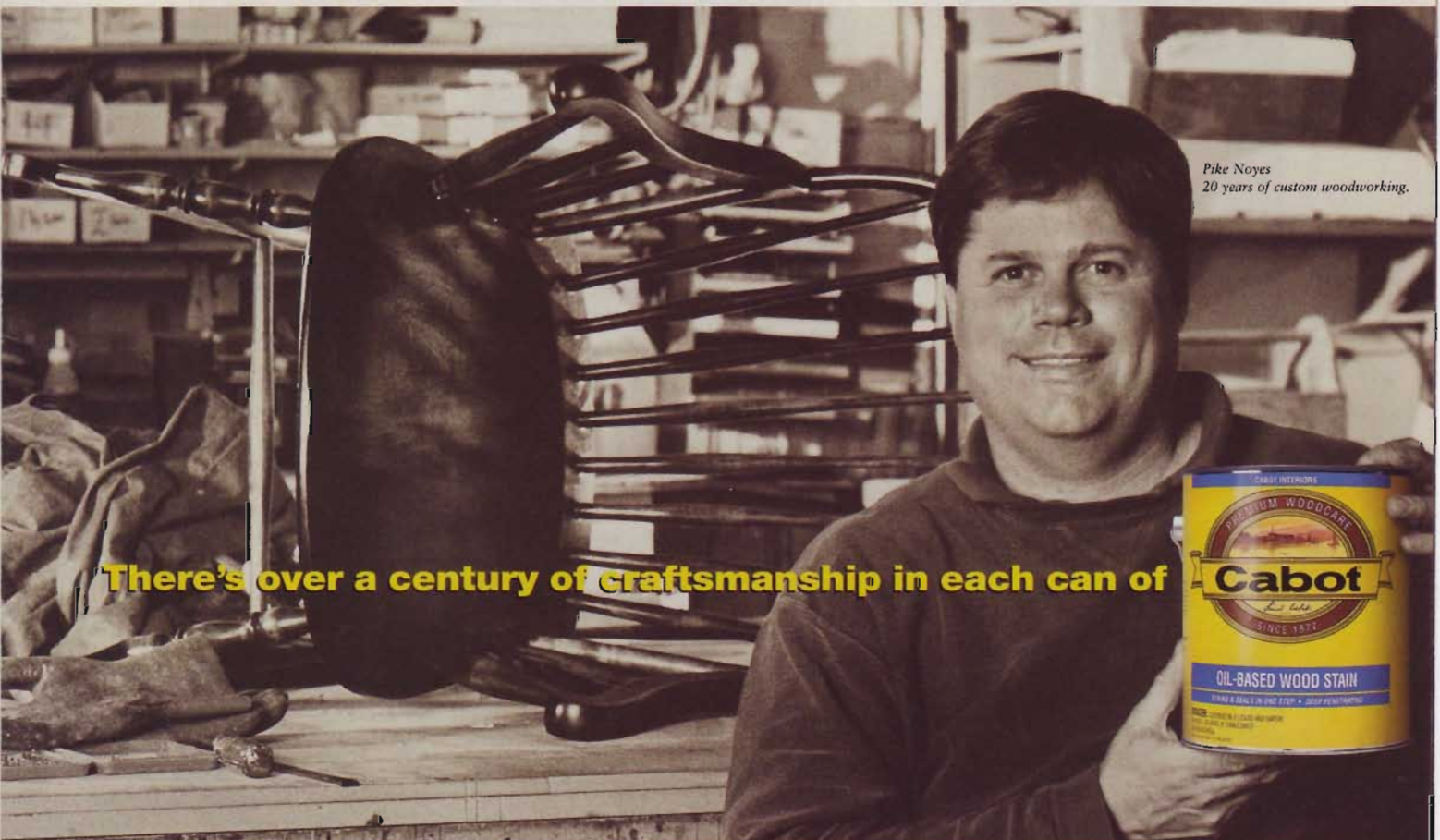
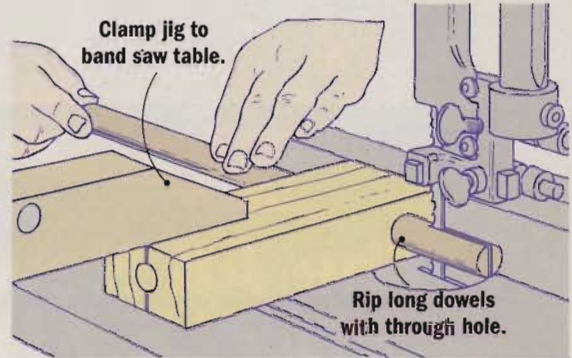
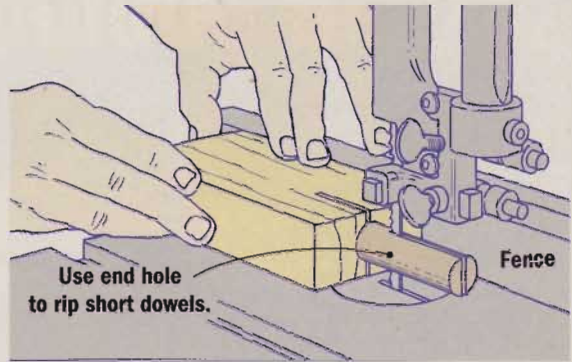
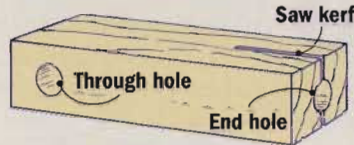
A If you have a band saw, I'd recommend using it for safety's sake and also because the kerf is much thinner, giving you a truer half-round shape.

A simple jig makes splitting dowels easy, whether the pieces are long or short. To build the jig, start with a piece of 2x4 scrap about 6" long. Drill a hole the size of your dowel in one end about 3" deep. Drill a second hole completely through the block across the 3 1/2" width. Sand the through hole with rolled-up sandpaper until the

dowel slips through the block without binding.

To rip a short dowel, place it in the jig's end hole and align the bandsaw fence to center the dowel on the blade. Run the jig and dowel past the blade far enough to complete the cut in the dowel.

Use the jig's through hole to rip long dowels. Center the dowel on the blade, and clamp the jig to the saw's table. Push the dowel through the jig and blade, then pull the dowel to complete the cut. Take care not to rotate the dowel as you push it through or the cut won't be even.

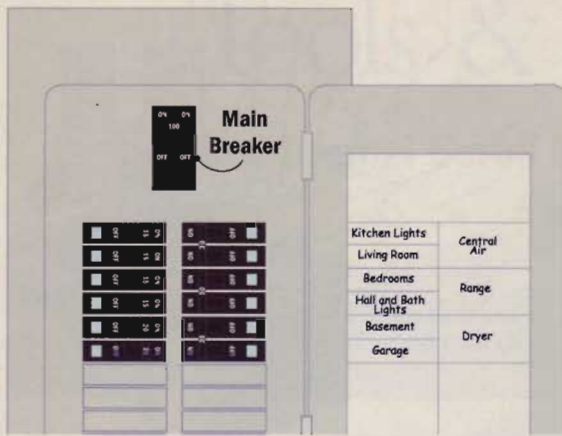


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Electric Panel Can Carry the Load

Q My household electric service is rated at 100 amps. But the panel has five 15-amp breakers on the left side and three 20-amp breakers, as well as two more 15-amp breakers on the right side for a total of 165 amps. How is it possible and is there any danger with the panel overloaded like this?

Kelvin Griffith
Detroit, MI

A The number and size of circuits in your panel is actually lower than what is typically found in residential situations. Normally, you'd find several 15-amp circuits for room lighting, 20-amp circuits for kitchen small appliance outlets, dedicated 30-amp circuits for an electric clothes dryer and air conditioner, and a 50-amp circuit for an electric range (see the panel illustration).

The rating on a circuit breaker is the maximum load that circuit can carry before the breaker does its job and shuts things down. The reason the sum of circuits can exceed 100-amps is that at any one time, you are only using a portion of the circuits and only a fraction of each circuit's capacity. If the total load were to ever exceed 100-amps, it would trip the panel's main breaker.

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Matching Dovetail Bit to Stock

Q It may sound silly, but which size dovetail router bit is best to use on 3/8"-, 1/2"-, 3/4"-, and 1"-thick stock.

Walter Tettenburn
Beaver, PA

A Router bits are typically sold according to cutter diameter, cutter height, and cutter angle. Cutter diameter — measured at the tip or widest part of the bit — typically ranges from 1/4" to 13/16". Cutter height — measured from the tip to the top of the cutting edges — ranges from 5/16" to 1 1/4", and the angles vary from 7.5° to 18°.

For through dovetails, the cutter height can't be greater than the material thickness for the through dovetail pins. The closer the bit height is to the thickness, however, the stronger the joint created.



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Tips & Techniques

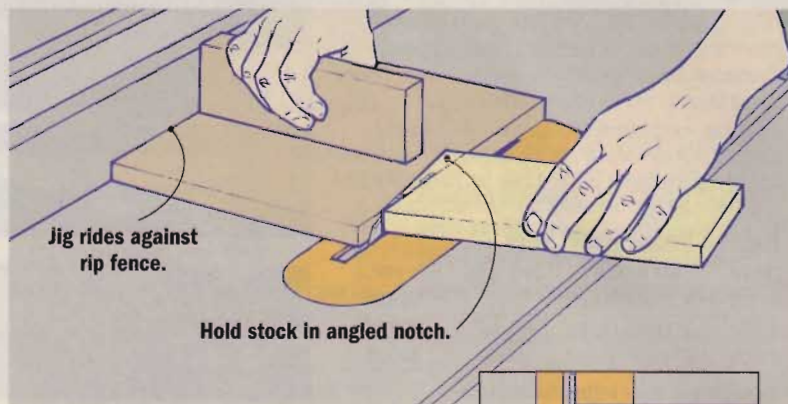
Jig Helps Turn Scrap Bin Cutoffs into Useful Shims

A wooden shim is one of those useful items I'm never able to find when I need it. On the other hand, wood scraps are always available, and often in my way, but I never know what to do with them.

It took building an end table with tapered legs to give me an idea about how to have a steady supply of shims and reduce my scrap pile at the same time. I built a shim-cutting jig similar to the taper jig I used to cut the table legs.

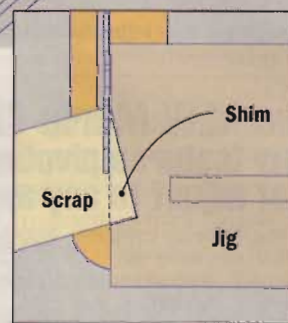
The jig is designed to ride against the rip fence on my table saw. I hold a piece of scrap wood in the jig, make a cut, then flip the wood over to make the next cut.

For general-purpose shims any stock will work, and I don't worry about cutting across the end grain.

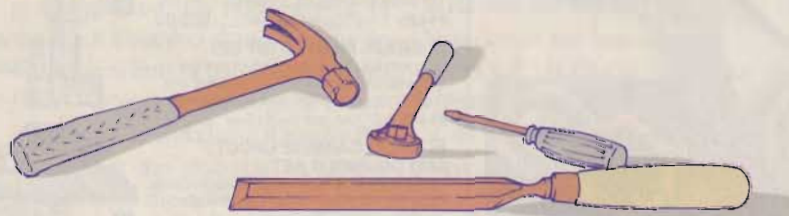


Though for sturdier shims, I use wide cutoffs (2x8's or 2x10's) cut with the grain. I prefer the sturdier ones when hanging a door or window — places where a nail could split an end-grain shim.

*Fred Doms
Boy River, MN*



Pink Paint Halts Disappearing Tools



For years, I've been trying to accumulate a set of tools that I like and is comfortable to work with, only to have them wind up in my husband's toolbox. To stop this "borrowing," I started painting my tools pink as

soon as I get them. I haven't lost a tool since. In fact, I have the neighborhood's only pink chain saw and no one has ever asked to borrow it.

*Kaycee Mayhall
Lebanon, OR*

Make Your Mark on Masking Tape

When working with rough-sawn lumber, it's difficult to mark an accurate cutting line — the pencil wants to jump around and follow the grain. The marks are also hard to see. A trick I learned is to press mask-

ing tape firmly to the stock, then make my mark on the tape. The mark shows up clearly and eliminates the guesswork.

*Tom C. Nielsen
National City, CA*

SHARE YOUR TIPS, JIGS, AND IDEAS

Do you have a unique way of doing something? Just write down your tip and mail it to:

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If you prefer, e-mail us at workbench@workbenchmag.com. We'll pay you \$75-\$200 and send you a *Workbench* cap if we publish your tip.

In addition, The Stanley Works is sponsoring Tips & Techniques, and will send an award for the tip in each issue that best describes the creative use, care or application of tools.



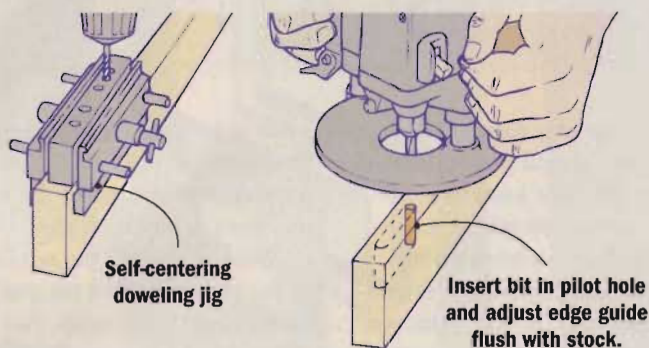
Doweling Jig Provides Alignment for Routing Mortises

I like to use mortise and tenon joinery in my woodworking projects because of its strength. I've cut mortises using various methods such as chopping them out with a chisel or roughing them out at the drill press, but for me routing is the quickest and easiest method.

The one drawback I experienced when routing mortises was getting my router aligned so the mortises were perfectly centered, particularly on narrow stock. I solved this problem by using my self-centering doweling jig to create a starter hole.

I align the jig over the mortise location and drill a hole the same width of the mortise. Then I position my router with the bit in the starter hole and slide the router's edge guide against the stock.

*Bob Wingo
Findlay, OH*



In recognition of his tip, **Workbench** reader Bob Wingo wins these tools from The Stanley Works. Send us your tip and you could be a winner too.

The Stanley Works
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www.stanleyworks.com



Hold Crown Molding Backer in Position with One Hand

I like to install a backboard behind the bottom edge of my crown molding. If you leave a reveal, you add an interesting detail. And the backboard provides an easy-to-see alignment tool for the molding installation. The trouble is, this job

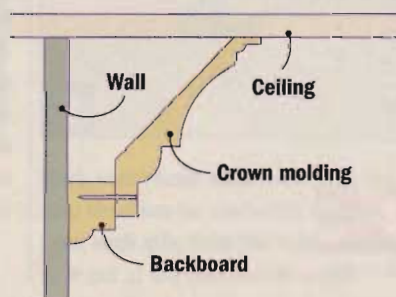
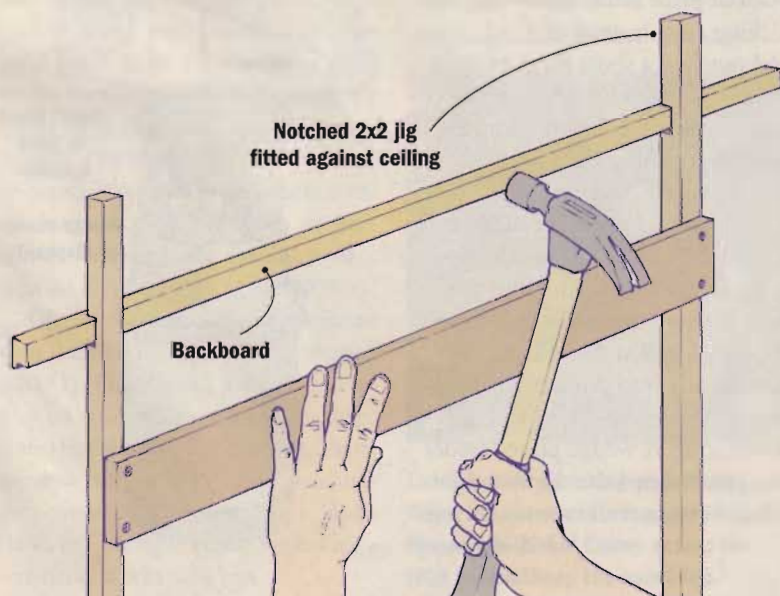
requires three hands. So I made a simple jig to hold the backboard a uniform distance from the ceiling.

To build the jig, I measured from the ceiling to where I wanted the top of the backboard, and marked this distance on a 36"

length of 2x4. At that location, I cut a dado to match the width and thickness of the backboard. Then I ripped the 2x4 in half, and screwed a 36" long 1x4 to these 2x2's to form an H.

To mount the backboard to a wall, I fit a piece into the dadoes in the jig, then I slide the jig up the wall until the 2x2's contact the ceiling. Drive in the nails and the backboard is installed. Then I fit the crown molding to the backboard and nail the crown in place.

*James W. Mahon
Chesterfield, VA*



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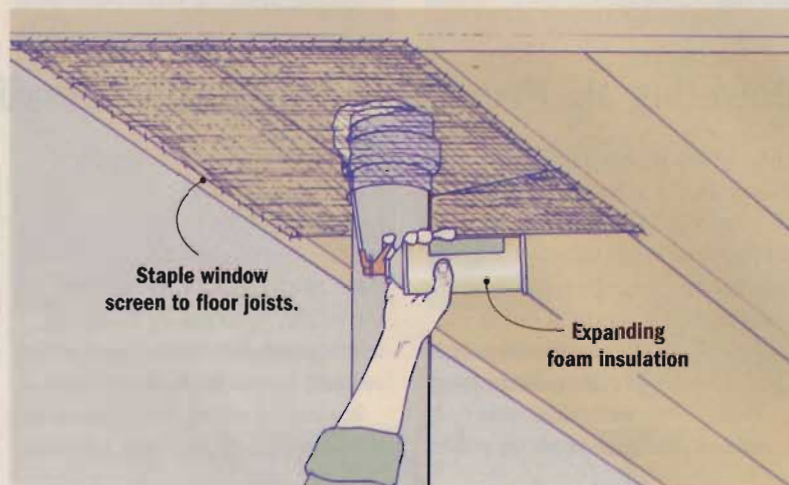
Ace Table Saw •

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Window Screen Corrals Spray Foam



While using spray foam insulation to seal gaps around pipes rising between the floor joists in my home, I wound up with a real mess. The foam dripped on my hands and shirt, and if you've ever gotten this stuff on your skin, you know how difficult it is to get off.

With several more gaps to fill, I cut a hole in a piece of old window screen to fit the pipe, and cut

a slot to let me slip the screen around the pipe. Then I stapled the screen to the bottom of the joists on either side of each pipe.

When I inserted the nozzle next to the pipe and filled the gap, the screen caught the excess that dripped and I kept my hands clean.

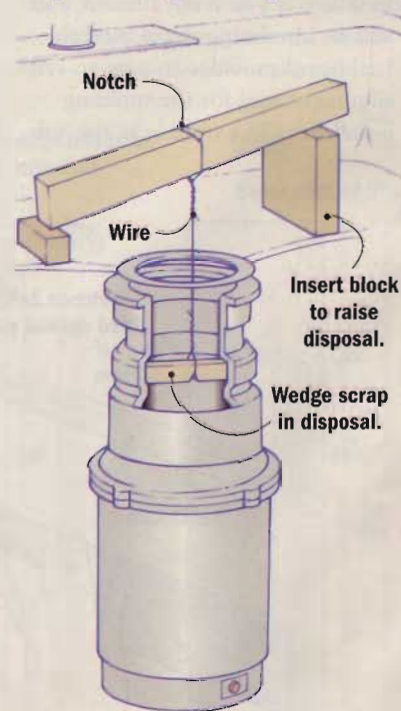
*Ken Erickson
Kennewick, WA*

Top-side Solution to Replacing Disposal

Like Steve Ruhl (see *Tips & Techniques*, page 20 in the July/August issue), I too was faced with trying to hold a garbage disposal in place while tightening the locking ring. Instead of a jack, I cut and notched a short piece of scrap wood that would fit through the disposal opening, but was longer than the opening's diameter.

I fastened a wire to the scrap, inserted it into the disposal, then fed the other end of the wire up through the sink drain. With the stick bridging the mouth of the disposal, I pulled the wire to lift the disposal into position, then fastened the wire to a second, larger wood scrap. A wedge placed under this piece pulled the disposal tight while I engaged the retaining ring.

*Jack Shaughnessy
Whittier, CA*



The right tools.

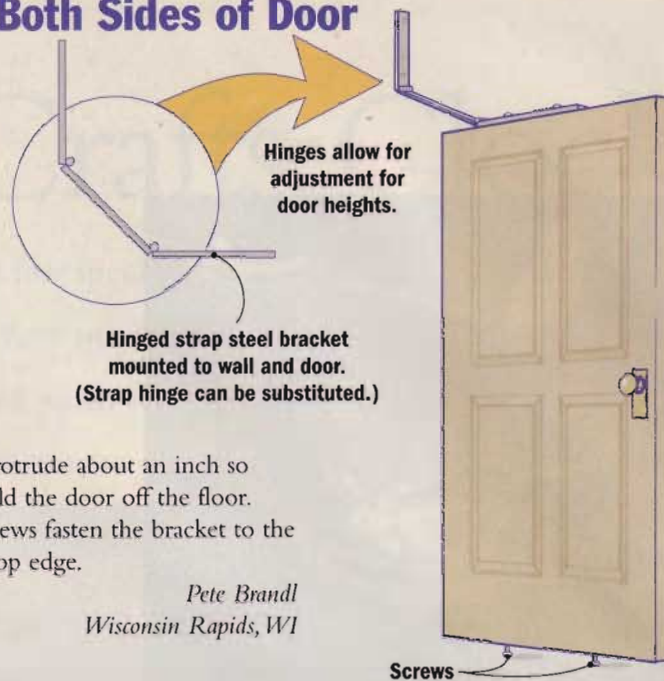
ACE
www.acehardware.com

Bracket Allows Finishing Both Sides of Door

I work in a university paint shop where we refinish many doors of various types and sizes. If you're restoring an older home with lots of doors to refinish, you may find this simple technique we use to cut finishing time in half.

Rather than lean a door against a wall so that you can only get to one side at a time, try fastening it to a bracket mounted to the wall. I made my hinged bracket out of strap steel, but a heavy-duty strap hinge mounted to the wall will work, too.

Before you attach the bracket, drive a couple of 2" long screws in the door's bottom edge, letting



them protrude about an inch so they hold the door off the floor. Two screws fasten the bracket to the door's top edge.

*Pete Brandl
Wisconsin Rapids, WI*

Jack Persuades Stuck Joints

I recently repaired a dining room set that had become a bit wobbly. Since some of the joints were already loose, I decided to

disassemble the table and chairs completely to refinish and reglue them. Of course, some of the joints wouldn't come apart easily, so I needed a way to separate the pieces without damaging them.

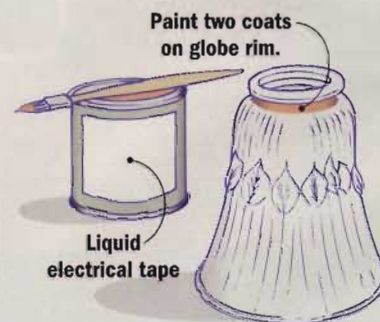
I tried switching the head around on a pipe clamp to fashion it into a spreading clamp. It worked okay but was hard to position, and didn't give enough leverage.

A better solution I found was to use a small 1½-ton, bottle-type hydraulic jack. It has plenty of power, yet I could easily control the force. Cardboard pads and blocking protected the wood.

*Henry Downing
Portland, OR*

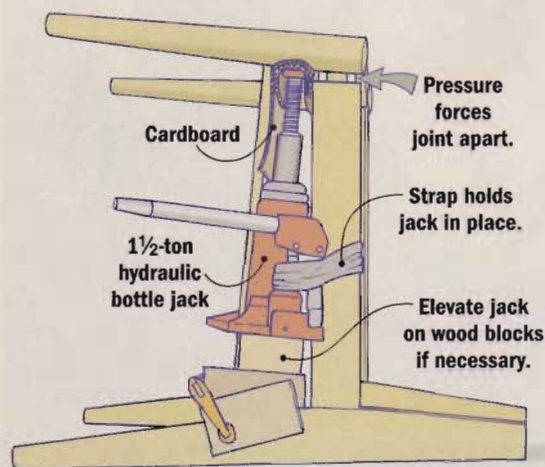
Liquid Tape Quiets Noisy Light Globes

There's little that's more irritating to me than the constant rattle of glass light globes in a ceiling fan fixture (especially when I'm trying to relax in front of the TV). Even with the retaining screws fully tightened, the globes on my fan wouldn't stay quiet.



I tried putting rubber bands around the globes to muffle the noise, as well as tape and hotmelt glue. But none of them worked as well as liquid electrical tape. (I use tape from Star Brite Distributing, 1-800-327-8583.) It sticks to the glass, and is soft enough for the retaining screws to bite into.

*Eddie Castelin
Jefferson, LA*



Sandbox Holds Parts for Soldering

Keeping small parts in position while I solder or weld used to be aggravating, until I discovered a trick that holds them firm and helps protect my benchtop from the heat.

I fill a 3-lb. coffee can with sand and push the parts to be soldered

into the sand. The sand holds the pieces together and keeps them from shifting. Since sand can't burn, the heat isn't transferred to surrounding wooden surfaces. You can wet the sand for added protection.

*Tennis Deselle, Jr.
Bunkie, LA*

News & Events

Furniture Design Contest Debuts with Impressive Projects

In just its first year, the Student Furniture Design Contest sponsored by the Association of Woodworking and Furnishings Suppliers (AWFS) attracted 40

impressive entries. The contest was open to students in high school and post secondary schools around the country.

The projects, ranging from the practical to the whimsical, were judged in five categories. A desk built by students from San Marcos High School in California,

demonstrated materials and techniques common in many of today's custom cabinet shops. Angelica Garcia-Schmidt's "Grandpepper Clock" provided a lighter look at what's possible with a little imagination.

Best of Show honors went to Peter Martin for his walnut armchair. The chair featured an S-curve design element incorporated in the legs, arms, and slats.

Coordinators were pleased with this year's contest, but hope as more schools hear about the competition, the number of entries will increase. They plan to hold the contest every two years in conjunction with their woodworking fair. Contact the AWFS at (800) 946-2937, or visit their website at www.awfs.org.



New Wooden Flagship Being Built In Old-World Tradition

Building a flagship for Wisconsin is no small feat, but the Wisconsin Lake Schooner Education Association (WLSEA) has taken up the challenge. The group is building a traditional Great Lakes Schooner. The ship will be the first one built in the state in more than a century.

Under construction since 1996, the *Denis Sullivan* will be launched in the spring of 2000. At that time, the ship's rigging will be put into

place and the interior work completed. The schooner will be open to the public as a floating classroom, passenger vessel, and goodwill ambassador for the state.

The ship is being built with Wisconsin timber, Wisconsin craftsmanship, and Wisconsin labor to a unique design indigenous to the state. When complete, Wisconsin's tall ship will measure more than 130 feet in length with three 95-ft.

native white pine masts donated and blessed by the Menominee Tribal Enterprises and the people of the Menominee Nation. The sails will cover 8,000 square feet and the ship will weigh 125 tons.

To learn more about the Wisconsin Lake Schooner project, including volunteer and donation opportunities, contact the WLSEA at (414) 276-7700, or visit their website at www.wis-schooner.org.



Woodcrafters Turn Scrap Wood into Teaching Tools

This is why we don't throw away scrap wood. Woodcrafters Unlimited, a group of woodworkers in North Central Illinois, have been turning their woodshop leftovers into teaching aids that assist blind children and their families with learning the Braille alphabet.

The group fashions small blocks of wood with a letter in Braille represented by fixed wood pegs. They make complete alphabet sets in two sizes, large for beginners and a smaller size for more advanced learners. Group members also make a third set that includes eight blocks with interchangeable pegs so the students can form their own letters and numbers. The removable peg sets include a rack that enables the students to arrange the letters into words and short phrases.

The group began making the Braille blocks after one of their members read about a similar project in a woodworking magazine. He then contacted the Hadley School for the Blind in Winnetka, IL, to see if they had a need for the blocks. The woodworkers have been providing the blocks to the school ever since.

The blocks are simple, but include some important elements. There's a saw kerf in the top of each block so the students can quickly tell which way the block should be oriented, dowel

pegs form the letters, and counter-sunk holes highlight the empty positions of the six-cell Braille letter system.

Since the partnership began in 1998, Woodcrafters Unlimited has built more than 100 sets of Braille blocks for the school to distribute.



Exotic Hardwood is a Growing Business

If you've wondered where you'll find your favorite exotic hardwoods for future projects, you're not alone. High prices, scarce supplies, and poor quality are challenges every woodworker has faced as they searched for the perfect stock for a special project. One solution might be to grow the trees yourself.

Well, not yourself exactly. But you can pay Steve and Sherry Brunner to grow them for you. The Brunners are the owners and founders of Tropical American Tree Farms in Costa Rica.

Since 1991, the Brunners have been planting 46 species of tropical hardwoods. Only 16 of the species will be harvested for profit initially. The others were planted to learn more about farming species that have not been widely grown.

The Brunners sell the trees in lots of 100 before they're planted. At harvest time, a tree owner can keep the wood, sell it, or have Tropical American Tree Farms sell it for them.

Besides the acres dedicated to commercial harvest, Tropical American Tree Farms includes more than 4,000 acres that will not be harvested at any time.

Contact Tropical American Tree Farms at (800) 788-4918, or visit www.tropicalhardwoods.com.



Museum Offers Tool Replicas

You may have read about the Museum of Woodworking Tools in this space before. Maybe you've even visited the on-line museum and appreciated the classic tools. If so, you've probably wondered what it would be like to use some of the fine tools of days gone by.



Well, you'll be interested to know that the museum now offers reproductions of many of the most popular tools on display. For more information, visit the museum store at www.antiquetools.com.

Western U.S. Tops the List of Least Affordable Places to Live

Go west young man, but be ready to pay top dollar when you get there. Of the 10 least affordable metro areas in the nation, nine of them are in the west coast states of California, Oregon, and Washington. That's according to the National Association of Home Builders (NAHB). The organization compared median incomes to housing prices in 181 metro areas across the country.

The least affordable metro area in the nation was again San Francisco, where a family earning the median income of \$72,400 could afford to buy just 21.3% of the homes sold there. San Francisco has been ranked least affordable all seven years that the NAHB has conducted the study.

Topping the most affordable list is Rockford, IL, where a family

earning \$52,600 could afford to purchase 93% of the homes sold in that market. Rockford is one of 10 Midwestern communities ranked among the top 25 most affordable.

Nationwide, the NAHB says the median income is \$47,800, which

would enable a family to buy 69.6% of the available housing.

For more information or to see the complete list of metro areas, visit the National Association of Home Builders' website at www.nahb.com.

MOST AFFORDABLE METRO AREAS

1. Rockford, IL
2. Utica-Rome, NY
3. Wilmington-Newark, DE-MD
4. Des Moines, IA
5. Binghamton, NY
6. Davenport-Moline-Rock Island, IA-IL
7. Springfield, IL
8. Muncie, IN
9. Lakeland-Winter Haven, FL
10. Melbourne-Titusville-Palm Bay, FL

LEAST AFFORDABLE METRO AREAS

1. San Francisco, CA
2. Santa Cruz-Watsonville, CA
3. Eugene-Springfield, OR
4. Santa Rosa, CA
5. Laredo, TX
6. San Jose, CA
7. Salinas, CA
8. Portland-Vancouver, OR-WA
9. San Luis Obispo-Atascadero Paso Robles, CA
10. San Diego, CA

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Our Shop Fox® Mobile Bases are extremely strong, very stable, have outrigger supports and are fully adjustable!

NEW EXTENSION KITS!

The **D2259 Extension Kit** includes a replacement cross bar to fit the D2057 mobile base (sold separately), an extension bar and an adjustable leg support which can be shifted forward or backward. This kit will handle tablesaw extension tables with legs that are up to 44" away from the base.

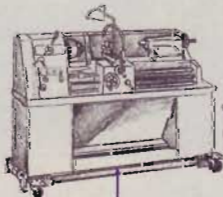
The **D2246 Extension Bars** are 36" long and replace the standard length side rails on the D2058. This allows the base to be assembled with a maximum capacity of 29" x 44", suitable for heavier and longer machines such as lathes.

D2259 • EXTENSION KIT
FITS D2057 AND SUPPORTS
TABLE FEET UP TO 44" AWAY

**D2246 • PAIR OF
EXTENSION BARS
FOR D2058**



ADJUSTABLE:



36" EXTENSION BARS



Patent Pending

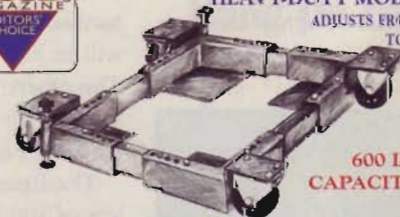


D2260

MINI-MOBILE BASE

ADJUSTS FROM 10 3/4" X 14 1/2" TO 17" X 21 1/2"

600 LB
CAPACITY

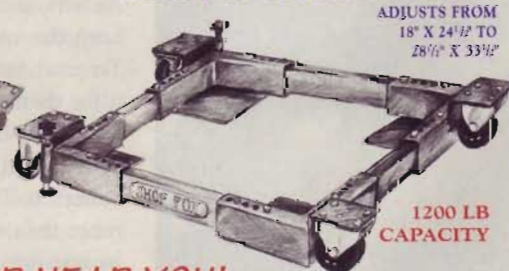


D2057

HEAVY-DUTY MOBILE BASE

ADJUSTS FROM 19" X 20 1/2" TO 29 1/2" X 29 1/2"

600 LB
CAPACITY



D2058

SUPER HEAVY-DUTY MOBILE BASE

ADJUSTS FROM 18" X 24 1/2" TO 28 1/2" X 33 1/2"

1200 LB
CAPACITY

Media Code

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Keepsakes On Display

Few improvements personalize a room more than a plate rail, and the one I designed has a wide shelf to allow a lot more than plates to be on display. I didn't limit myself to thinking only of the dining room for this project, either. Instead, I installed my plate rail in the kitchen and adjoining family room.

Now, I imagine you may not want to make a mess at this time of year, and that's another plus with this project. You can build the plate rail entirely in your shop, and when you get to the installation, the process is quick, easy, and nearly dust free.

The installation is centered around a mounting cleat system. The cleats are mounted to the walls of your room, then the plate rail slips right over the cleats and gets secured with screws.

I made my plate rail out of red oak to match the woodwork in my house. The rail consists of just seven pieces of material (PLATE RAIL CONSTRUCTION VIEW). You'll need to do some routing, and two types of store-bought molding are included to add pizzazz. But otherwise, this is about as straightforward as a project can get.

PREPARING STOCK

To get started, I recommend you take measurements in the rooms where you'll install the plate rail. I made plate rail sections to fit between permanent features of the rooms like door frames, window

frames, cabinets, and corners. As a result, the only seams I had to wrestle with were at the room's corners.

Once you know how long you need to build each plate rail section, you can go to work in your shop.

Begin by cutting enough pieces



1 Resaw in several passes, raising the blade about 1/2" between cuts. Cut into both edges before raising the blade.



2 Routing the shelf's edge takes two passes. For the second pass use an edge guide.



for the shelves, bottoms, filler strips, and shadow moldings. Since the stock for the shadow moldings is only $\frac{3}{8}$ "-thick, you may need to resaw thicker boards if this material isn't readily available and you don't have a planer. Don't worry, this isn't difficult with a table saw. Just make shallow passes into each edge, keeping the same face against the rip fence each time (FIG. 1). Make progressively

deeper cuts to ease the strain on the saw's motor and follow good safety procedures. Another good safety rule is to resaw stock that's at least 3" wide. You can rip it to width later.

ROUTING DETAILS

Some routed features of the plate rail are for looks alone, but others, like the shelf grooves, are very practical — they keep plates from falling.

To rout the decorative edge of the bottom pieces use a $\frac{1}{4}$ " roundover bit (PLATE RAIL ELEVATION). And to rout the edge of the shelves make two passes with that bit. But there's a hitch here: Once you make the first pass, the bit's bearing won't have sufficient material to ride against during the second pass. So, you'll need to mount an edge guide to the router for this second pass (FIG. 2).

PLATE RAIL CONSTRUCTION VIEW

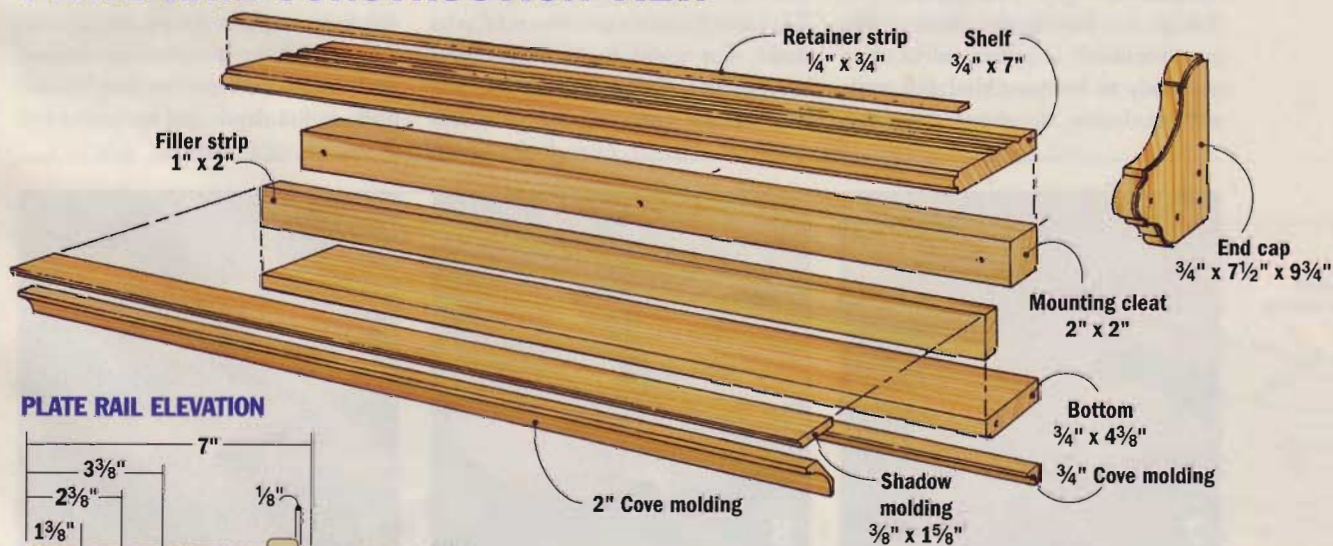
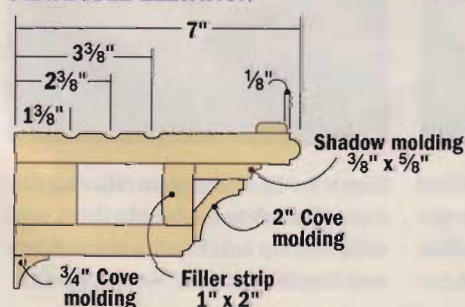


PLATE RAIL ELEVATION



NOTE: Thickness and widths of pieces are shown. Lengths vary depending on your room's dimensions.



3
Using the router's edge guide, rout the three plate rail grooves with a 1/2"-dia. core box bit.



4
Clamp the shadow molding to another board for safety when routing the cove on this thin stock.



5
To make the retaining strips, roundover all the corners of some 3/4"-thick boards, then rip a 1/2"-wide strip from each edge.

Now trade your roundover bit for a 1/2"-dia. core box bit. Keep the edge guide mounted to your router and use this bit to rout the three grooves in each shelf (FIG. 3). Once you complete the grooves, rout the front edge of the shadow moldings (FIG. 4).

There's one piece of the plate rail that has been overlooked so far. I leave the retaining strips until I'm in full swing with the router. The safest way to make these is to rout the edges of some stock with a 1/8" roundover bit, then rip the edges from the boards (FIG. 5).

ASSEMBLING THE PLATE RAIL

Except for buying the ready-made cove moldings, the plate rail sections are ready to be assembled. For each section, begin by gluing the filler

strip to the bottom. Then glue the retaining strip to the shelf (FIG. 6). Give the glue time to set up, then glue the shelf to the filler strip.

The last piece to add is the 2" cove molding. Before you nail it on, though, think about where you may need to cut each section to length. You want to avoid driving finish nails in these areas.

MAKE THE END CAPS

Where each plate rail meets a window or cupboard, I used a decorative end cap to cover the rail's end. Use the END CAP PATTERN at right to make a hardboard template (FIG 7). Then cut, file, and sand the end cap to shape. For good looks I routed a beaded roundover on the outside edge of each cap using the 1/4"-radius

roundover bit. Clean up the inside corners with a chisel (FIG. 8).

The last step with the end caps is to drill counterbored pilot holes for the mounting screws.

CUTTING THE PLATE RAIL

At first glance you may think cutting the plate rail to length will be tricky, since many sections are too long and unwieldy for safe handling on the table saw. My solution, however, makes it fairly easy and goof-proof.

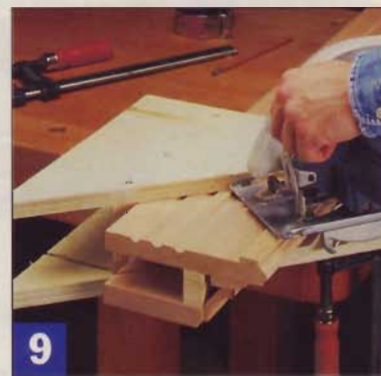
I made a simple jig to guide a circular saw through the cuts (CUT-OFF JIG DETAILS). One end of the jig is for 90° cuts, and the other end for 45° miters. To use the jig, slip it onto a rail and clamp it so the circular saw blade aligns with the cut line. Set the blade at full depth and make the cut



7
Trace the hardboard template onto your stock. Cut the end cap with a jig-saw, staying just outside the lines, then sand and file the cap to shape.



8
The roundover bit can't reach into tight, inside corners, so you'll have to chisel out what the router missed. Cut with the grain first to avoid tearout.

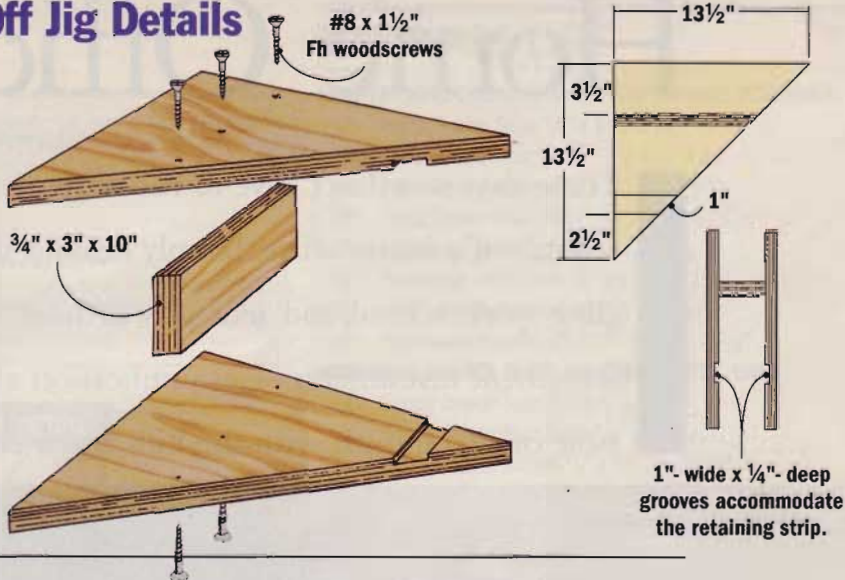


9
Clamp the jig to the plate rail, and clamp the rail to the bench, then make the top cut. Flip the rail and jig over together to make the second cut.



6
 Glue the plate rail pieces together in stages. First, glue the filler strip to the bottom, and glue the retaining strip to the shelf. Then glue all these together.

Cut-Off Jig Details



(FIG 9). Then flip everything over and make a second pass to complete the cut. Be sure to figure in the end caps when you plan the cuts!

After cutting the plate rail sections to length, fasten the end caps wherever they're needed. Put $3/8$ "-dia. wood plugs over the screws and sand the plugs smooth. This is a good time to stain and finish everything, including the $3/4$ " cove molding you'll use to complete the installation.

INSTALLING THE RAIL

Where you mount your rail is up to you. Just be sure to leave plenty of space above the shelf for displaying your mementos.

When you've decided, mark the wall where you want the top of a shelf to be. Then make a mark $3/4$ "

below it to indicate where the top of the cleat should go. Now use a level to extend that lower mark around the room wherever you intend to install a plate rail section. Watch the distance to the ceiling as you proceed! You may have to make adjustments if that distance varies too much.

After cutting the cleats to length and screwing them to the wall studs, you're ready to mount the plate rail sections (FIG. 10).

Hanging rail sections between obstacles like windows and doorways is straightforward enough. Just slip the rail into position, drill counterbored pilot holes through the shelf into the cleat, and drive the screws.

It's at the corners that you may have to fudge a little, since it's unlikely that the walls meet at perfect

90° angles. Test fit the miters and don't worry if you have to shim the plate rail away from the wall to get a good joint. These small gaps will be covered with the $3/4$ " cove molding.

Like before, drill counterbored pilot holes and screw the plate rails to the cleats, then drill pilot holes and fasten the $3/4$ " cove molding with brads. Be sure to sink the brad heads and putty the holes. Then touch up the stain or finish if it's needed.

So you see, very little dust ends up in the house, yet the payoff is pretty big. Plate rails give you great opportunities for displaying your favorite keepsakes, and those are the things that make your house a home. ■

Use a chisel to clean up routed inside corners.

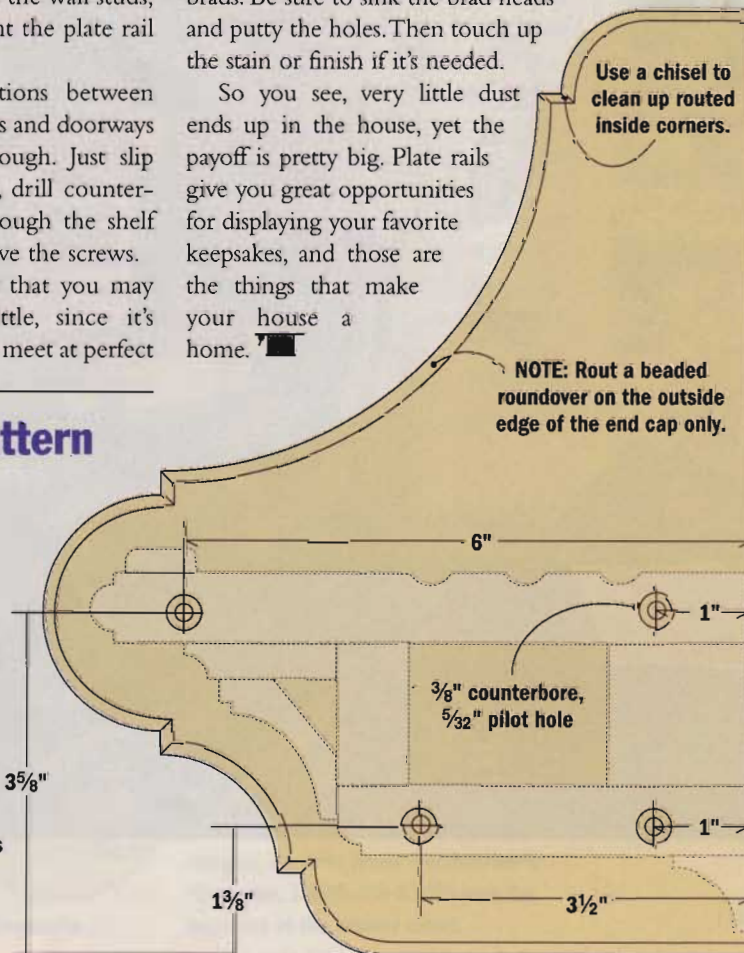
NOTE: Rout a beaded roundover on the outside edge of the end cap only.



10
 You can see how a cleat is screwed to the studs and a plate rail is positioned. Driving screws through the rail into the cleat completes the installation.

End Cap Pattern

Enlarge the pattern at right 200% and trace it onto a piece of $1/4$ "-thick hardboard. Cut the hardboard into a template and use it to layout the end caps on $3/4$ "-thick stock. Drill the screw hole locations into the template for easy layout, also.



Home Office Basics

These days you don't have to run a business out of your home to reap the rewards of a home office. Simply dealing with the business of home — juggling work, school, and activity schedules, tracking expenses, and managing retirement investments — is justification enough. Sitting down at the kitchen table once a month with the bills and a checkbook doesn't cut it anymore.



Consider, too, that according to the Bureau of Labor Statistics, more than 21 million Americans did at least part of their primary job at home in 1997. And that number is increasing steadily every year. It's no wonder that offices rank high on the list of amenities going into new home construction.

So how do you go about setting up a home office? First, decide which family business functions scattered throughout your home need to be consolidated in one location. Many families do at least some of their record keeping and correspondence electronically, so it makes sense to organize an office around your computer.

Second, you need to create an environment that offers the basics — privacy, adequate work and storage space, and utilities. Finding a spot that readily offers everything you need may be difficult, but with a little planning and effort you can carve out a spot that works for you.

Finally, you need to outfit and organize the space and yourself so you control the business of running your home instead of having it take control of you.

CHOOSE A QUIET PLACE

Privacy doesn't have to mean complete isolation, but you need a space where you can concentrate, free from interruptions by other daily household activities. The ideal home

office setup is a separate room — even a small one — since you can close the door and focus on the business at hand. But most of us can't afford to spare an entire room, so that means making compromises.

The corner of a bedroom or family room can make a great office because the intersecting walls define the space. That's the main reason I built a corner-style computer desk (see page 44). When I sit at the desk, I have my back to the rest of the room, which helps me concentrate on the work spread out in front of me (CORNER OFFICE LAYOUT).

In a large room, consider a wrap-around desk configuration (see the U-SHAPED OFFICE LAYOUT on

the next page). It still takes advantage of the corner, but doubles the desktop space by giving you separate positions for desk work and computer activity. A desk and credenza can form the sides of the U, but leave room for a chair.

If you're really cramped for space, consider turning a closet or the area beneath a staircase into an office. Though compact, a closet office provides close-at-hand storage, and you can close the doors to hide it when you're not working (see the CLOSET OFFICE LAYOUT on page 42).

Avoid high traffic areas such as the kitchen unless you plan to work during times when activity is low.

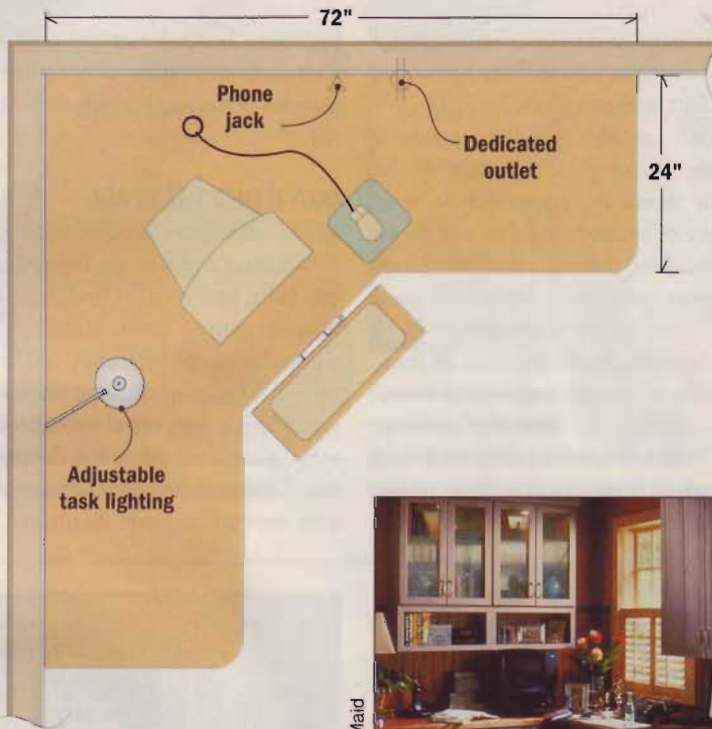
DETERMINING SPACE NEEDS

Once you've decided where to locate, you'll need to determine how much space you need. Since the focal point is the computer, consider who uses it and how. Do the kids use the computer for games and school work? You may need a space big enough for two or more people to work at the same time.

For starters, make a list of the main activities you'll perform, and write down all the equipment and supplies you'll use to perform each of those tasks. Next, measure all items and add up their sizes to get a rough total of your space needs.

Now you can sketch out a floor plan based on those requirements.

CORNER OFFICE LAYOUT



NOTE: Standard height for desks is 30". For most people, however, a comfortable keyboard height is slightly lower (27" to 28"). An adjustable keyboard tray lets you find the right level.

Photo courtesy of KratiMaid



Consider using custom cabinetry to create a high-end home office.



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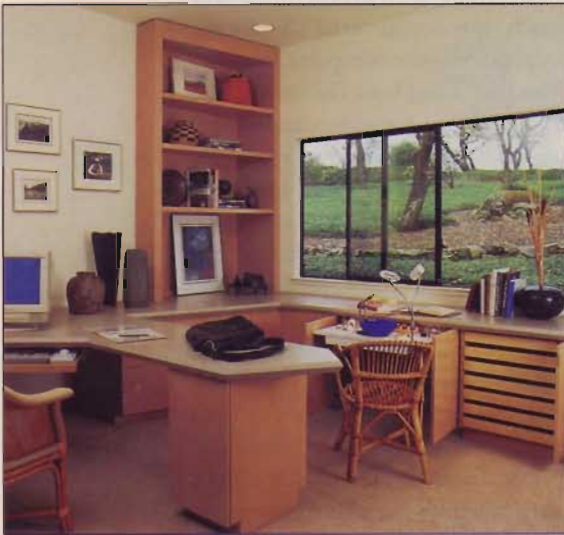
Even a small corner can be used to carve out some office space.



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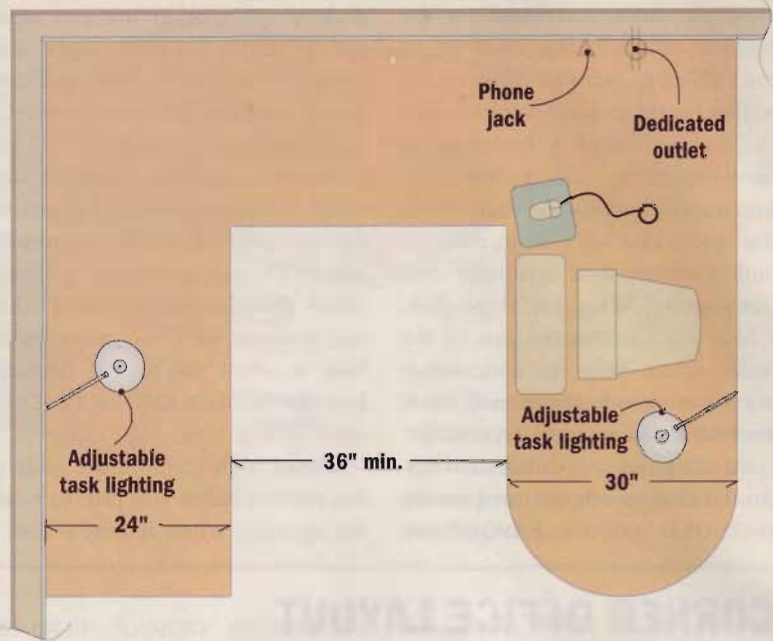
Freestanding office-grade furniture offers flexibility to reconfigure space.

U-SHAPED OFFICE LAYOUT



www.davidduncanlivingston.com

A U-shaped desk can allow more than one person to work at one time.



By stacking or nesting equipment, some of the space can serve double- or triple-duty and help keep your plan manageable. Take office items you don't use regularly and store them elsewhere in your home.

POWER AND LIGHT

While you've got your equipment list handy, take stock of how many machines have power cords. You can buy plug-in units that provide surge protection for the power supply as well as the phone lines. It may even be worth running a separate electrical circuit with surge protection.

Be sure to decide whether you'll need separate phone lines for voice, fax, and internet service.

Plan on adding lights — a lone ceiling fixture in the middle of the room won't be enough. You want plenty of indirect light to cut down on shadows. Adding adjustable lamps provides direct light where you need it — close to the work surfaces. Use blinds or shades on windows to minimize glare on the computer screen.

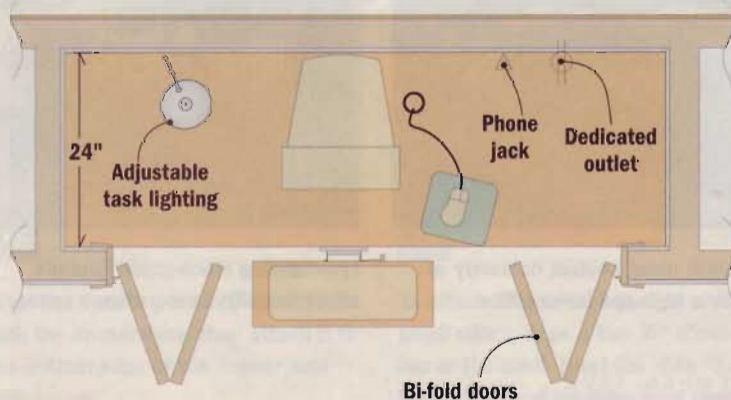
Consider the heating, cooling, and ventilation of the area, too. One forced-air heat register was plenty when my home office served as a

bedroom, but my feet got cold after sitting at my desk for awhile. A portable baseboard heater now keeps my corner cozy.

OUTFITTING THE SPACE

When it comes to outfitting your office, your options are limited only by your space and budget. Most office furniture manufacturers carry a line designed specifically for home offices. You can usually find some great deals on used commercial office furniture; often less than what you'd pay at department stores for new consumer-grade furniture.

CLOSET OFFICE LAYOUT



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Hide file cabinets in a closet if your office shares space in a bedroom.

Resources to Help with Home Office Setup

OFFICE PLANNING BOOKS:

- *Home Office Design* by Neal Zimmerman (1996, John Wiley and Sons, Inc.)
- *Home Offices, Time-Life Home Repair and Improvement Series* (1997, Time-Life Books)
- *The Home Office* by Candace Ord Manroe (1997, Reader's Digest)

OFFICE FURNITURE/SUPPLIES:

- Staples (1-800-378-2753 or on the web at www.staples.com)
- Office Depot (1-888-463-3768 or at www.officedepot.com)
- OfficeMax (1-800-283-7674 or at www.officemax.com)
- Reliable Home Office (1-800-869-6000)

CABINET MANUFACTURERS:

- Kraftmaid (1-800-571-1990 or at www.kraftmaid.com)
- Yorketowne (1-800-777-0065)
- Merillat (1-800-575-8763 or at www.merillat.com)

STORAGE SYSTEMS/ACCESSORIES:

- Crate & Barrel (1-800-323-5461 or at www.crateandbarrel.com)
- Hold Everything (1-800-421-2264)

BOOKS ON ORGANIZING:

- *Organizing Your Home Office for Success* by Lisa Kanarek (1998, Blakely Press)
- *Organize Yourself!* by Ronni Eisenberg (1997, Macmillan)

Kitchen cabinet manufacturers have also entered the home office game by offering custom touches such as file drawer base units, pencil drawers, keyboard trays, and bookshelf units.

If you can't afford to outfit your office all at once, focus on the chair first. At a minimum it should have:

- Seat height and tilt adjustment
- Swiveling, five-roller base
- Adjustable back and arm rests
- Contoured seat to ease leg strain

Put heavy-duty file cabinets high on the list, and chose those with full-extension, ball-bearing drawer slides.

One of the best investments I ever made was replacing a flimsy two-drawer file with a sturdier used commercial filing cabinet.

For storing supplies and small items, you can get creative. Plastic containers come in a variety of sizes, and many are designed to stack as an integrated system. Likewise, wire shelving and storage systems offer flexibility so you can adapt as your needs change.

Storage units on wheels let you easily move equipment to where you need it, plus they give you additional work surfaces.

ADOPT AN OFFICE ATTITUDE


The best home office setup in the world won't do you much good if you can't find it beneath the clutter. And the more family members using it, the greater the chance for chaos.

There are dozens of books on organization from simple tips to the mystic art of Feng Shui — a trendy far eastern concept that focuses on the flow of energy through a space.

I like to think of it in terms of my woodworking shop. By positioning the table saw, jointer, and other tools properly, the work flow is smoother. Projects go quicker, too, when I put tools away as I'm done with them. You simply can't work efficiently if you can't find what you're looking for.

Setting up your office is a prime time to get organized. Before you move your computer to its new location, take time to sort through the megabytes of outdated data residing on your hard drive. Your computer may even run better.

Likewise, sort through the paperwork lying around and toss or file every piece. If you aren't sure you'll need something, create a temporary holding file and empty it periodically.

Once you've got things neatly arranged, keep it that way by filing stuff on a weekly or semi-weekly basis. Keeping your home running efficiently may actually free up some time. Just be sure you spend it relaxing, perhaps in your shop. 



Covered metal shelving and a simple desk create a low-cost work space.



Desk space near the kitchen helps you track schedules, bills, and menus.



Photo courtesy of Yorketowne

Computer Desk

Just about everyone I know owns a computer. One friend just upgraded machines for the fifth time. Yet for all the money he's spent on cutting-edge hardware, he still has the same old desk he bought with his first computer.

You know the type — a prefab, pressed-board, bolt-together job that's short on storage, comfort, and style. When I gave him grief about his workstation, he challenged me to come up with something better. The result is the desk you see here.

If you look at the cover photo of your issue, you can see this desk offers loads of desktop space yet tucks neatly into the corner of a room. This arrangement gives you space to slide the monitor back, reducing eye strain.

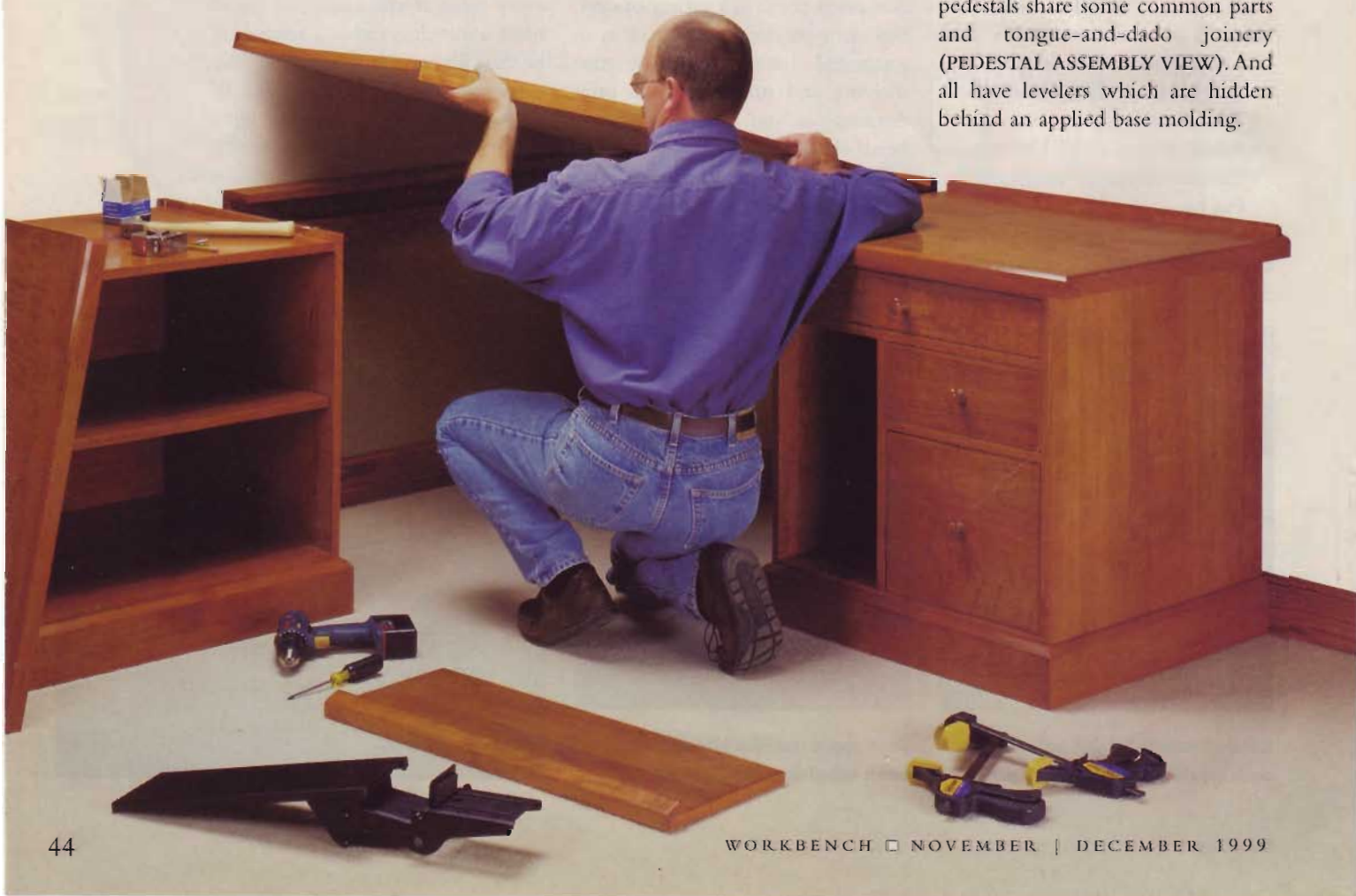
Supporting the top's corner section are wall cleats with built-in channels designed to manage the tangle of cables and cords (DESK CONSTRUCTION VIEW). Like any built-in design, it gives you a rock-solid work surface with plenty of leg room — factors lacking in many freestanding workstations.

You can raise and lower the keyboard tray, or slide it out of the way. And the tray is big enough to hold your mouse, too.

The computer's central processor unit (CPU) tucks into the pedestal on the right and is surrounded by spacious drawers. The other pedestal has an adjustable shelf to accommodate printers or accessory equipment.

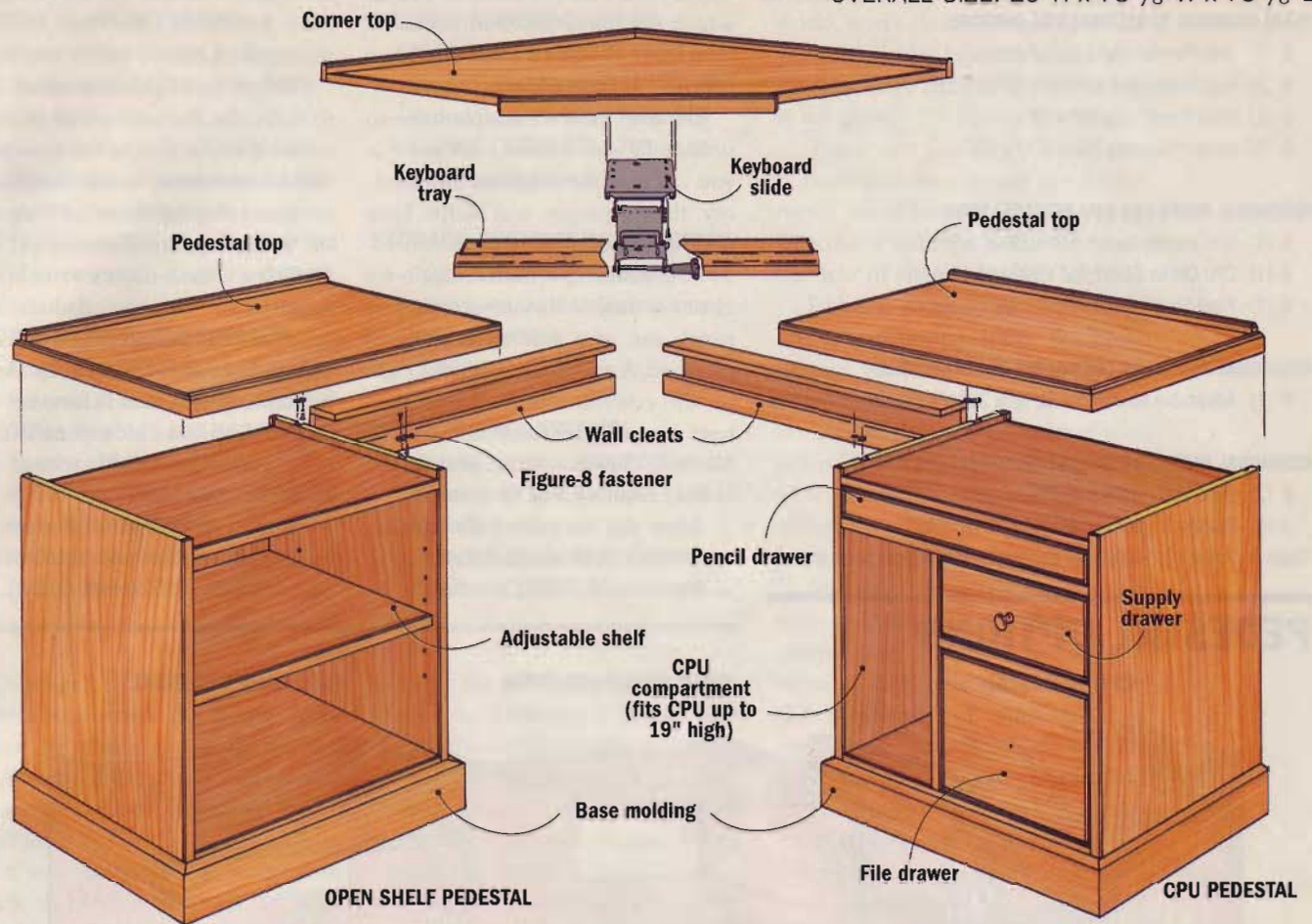
While I knew the desk already exceeded my friend's challenge, I didn't stop there. For those of you who need drawers instead of open shelves, there's an optional pedestal design (see pages 46 and 53).

Despite their differences, the pedestals share some common parts and tongue-and-dado joinery (PEDESTAL ASSEMBLY VIEW). And all have levelers which are hidden behind an applied base molding.

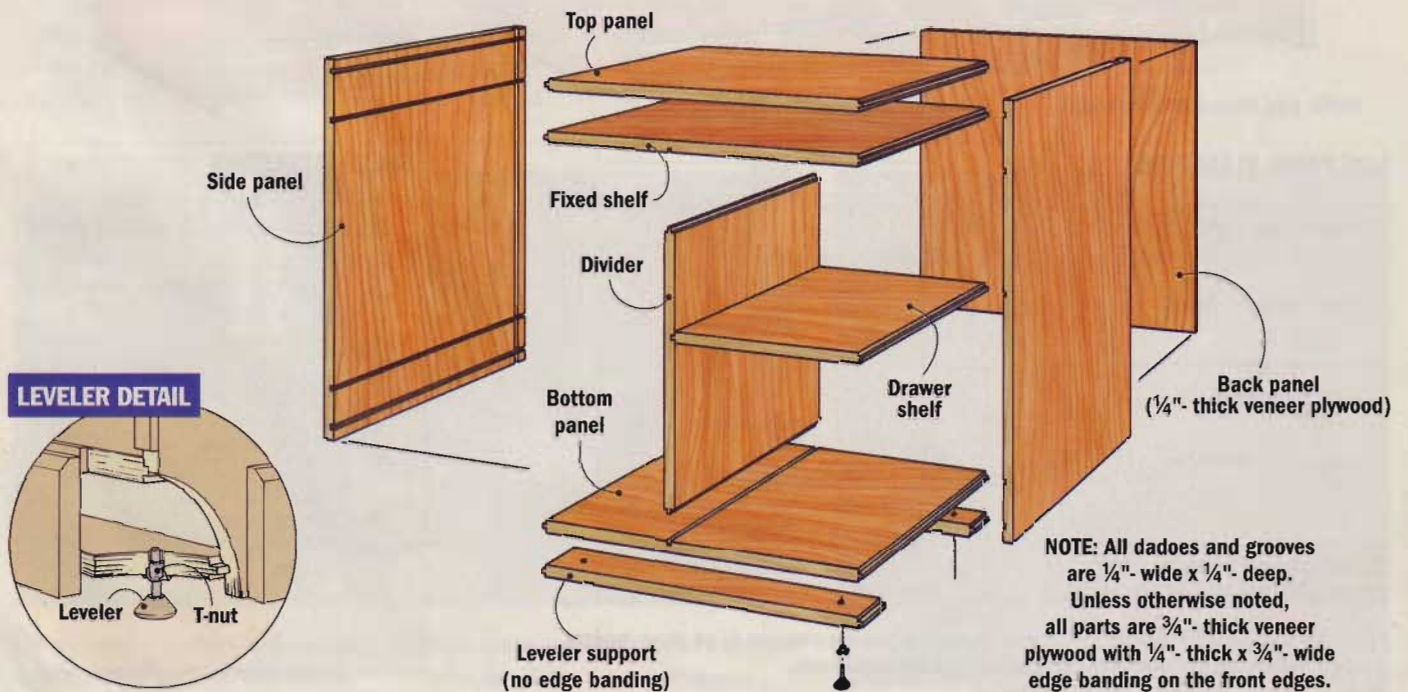


DESK CONSTRUCTION VIEW

OVERALL SIZE: 29"H x 73³/₈"W x 73³/₈"L



CPU PEDESTAL ASSEMBLY VIEW



MATERIALS LIST

PARTS COMMON TO ALL PEDESTAL DESIGNS:

- A (2) Side Panels* $\frac{3}{4}$ " x $23\frac{7}{8}$ " x $28\frac{1}{4}$ "
- B (2) Top/Bottom Panels* $\frac{3}{4}$ " x $22\frac{5}{8}$ " x 25"
- C (1) Back Panel $\frac{1}{4}$ " x 24" x 25"
- D (2) Leveler Supports $\frac{3}{4}$ " x $3\frac{1}{2}$ " x 25"

ADDITIONAL PARTS FOR CPU PEDESTAL ONLY:

- E (1) CPU Divider Panel* $\frac{3}{4}$ " x $22\frac{5}{8}$ " x $19\frac{1}{2}$ "
- F (1) CPU Center Shelf* $\frac{3}{4}$ " x $22\frac{5}{8}$ " x $14\frac{1}{2}$ "
- G (1) Fixed Shelf* $\frac{3}{4}$ " x $22\frac{5}{8}$ " x 25"

ADDITIONAL PARTS FOR OPEN SHELF PEDESTAL ONLY:

- H (1) Adjustable Shelf $\frac{3}{4}$ " x $21\frac{7}{8}$ " x $23\frac{7}{8}$ " (band all four edges)

ADDITIONAL PARTS FOR STORAGE PEDESTAL ONLY:

- G (2) Fixed Shelves* $\frac{3}{4}$ " x $22\frac{5}{8}$ " x 25"
- I (1) Storage Divider Panel* $\frac{3}{4}$ " x $22\frac{5}{8}$ " x 12"

*Apply $\frac{1}{4}$ "-thick x $\frac{3}{4}$ "-wide edge banding to front edge of these pieces.

PREPARE THE PEDESTAL PARTS

You'll need two pedestals, so decide which version(s) you want to build. The three designs are shown below (PEDESTAL OPTIONS).

Because the pedestal parts are so similar, it's wise to label each piece as you cut it to size. This lets you identify them quickly and helps keep track of the machining steps.

You won't have much margin for error — only $\frac{1}{4}$ " — to get the side panels out of a 4 ft.-wide sheet of plywood. A trick I use is to cut right on the centerline of the sheet, then reset my table saw fence and trim the pieces to finished width, putting the factory edges against the fence.

After you have the pedestal parts cut to size and marked, layout the

dadoes and grooves on the side panels (SIDE PANEL ELEVATIONS). Note that the left and right sides are mirror images.

To help you figure out which cuts to make, the dadoes have been color coded. (Just be sure to measure your CPU and adjust the dimensions if necessary to provide an inch or two of "breathing room" around it.)

Given the number of cuts required, I cut the dadoes and grooves on my table saw using a $\frac{1}{4}$ "-wide dado blade (FIG. 1). Begin by cutting the dado for the top panel in all four side panels, then reset your fence for each of the remaining dadoes.

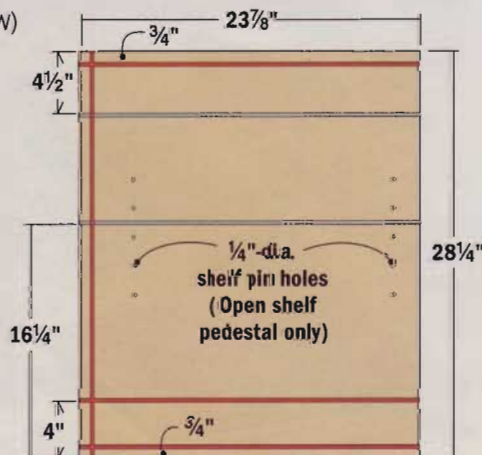
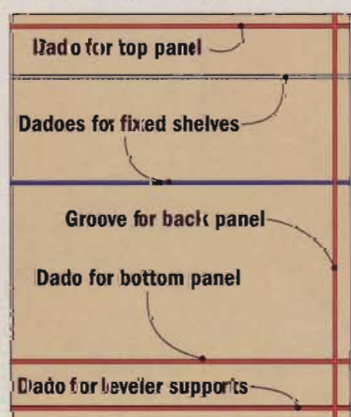
Once you complete all the cuts, glue and clamp $\frac{1}{4}$ "-thick edge

PEDESTAL OPTIONS

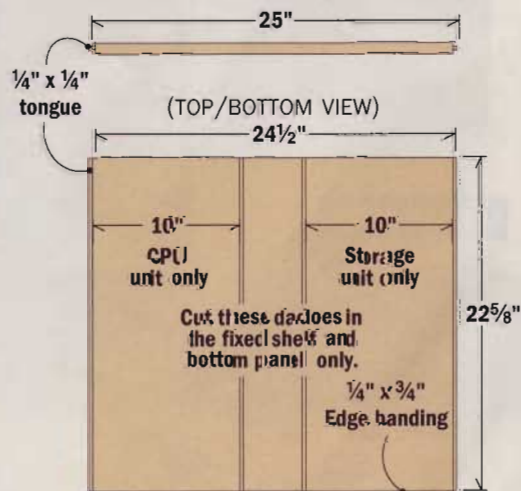


NOTE: See Materials List above.

SIDE PANEL ELEVATIONS (SIDE VIEW)



SHELF ELEVATIONS (FRONT VIEW)



NOTE: All dadoes are $\frac{1}{4}$ "-wide x $\frac{1}{4}$ "-deep. Dadoes in red are common to all three designs. Dadoes in green are common to CPU and Storage Pedestals only. Dado in blue is cut only for Storage Pedestal.

banding to the front edge of each side panel. It takes a lot of clamps, so you may want to borrow some from a friend.

While the glue sets up, machine the shelves and dividers. Layout and cut the dados for the dividers on the bottom and fixed shelves, and for the drawer shelf dado in the CPU pedestal divider (SHELF and DIVIDER ELEVATIONS).

At this point, I glued and clamped edge banding to the front edges of all the shelves and dividers. Leaving the shelves clamped up, I made test cuts in a piece of scrap plywood to form a tongue that fits snugly into a dado. To create a tongue, you remove equal amounts from each face (FIG. 2). Adjust the

dado blade height to fine-tune the thickness of the tongue. (An auxiliary wood face protects your rip fence.) It may take a few trial runs in test stock, but tight joints are the reward for your patience.

Before you start cutting the actual shelf panels sand the surfaces where the edge banding meets the plywood — a cabinet scraper can speed this job. This assures that the panels are completely flat.

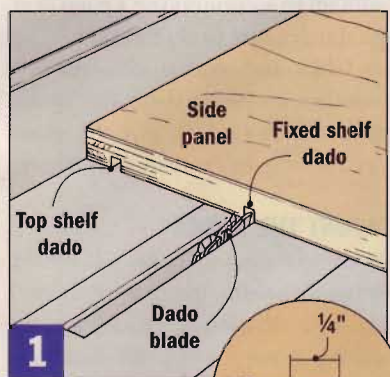
To complete the tongues, you'll need to remove the small piece of edge banding on each shelf panel's front edge. Otherwise, the shelves won't fit flush with the cabinet fronts. I left my table saw setup the same, but stood the panels on edge this time, and used my miter gauge to

help hold them vertical (FIG. 3). (Adding a tall auxiliary face to your miter gauge helps steady the panels.) Butt the panels against the fence to keep the cut properly aligned.

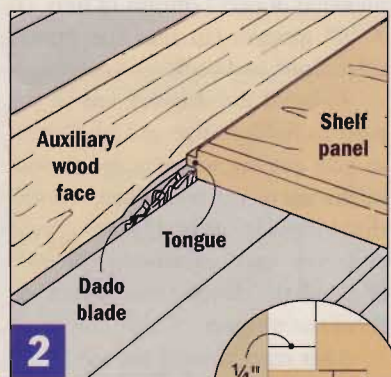
ASSEMBLE THE PEDESTALS

Start assembling the pedestals by gluing and clamping the top and bottom panels between the sides (PEDESTAL ASSEMBLY SEQUENCE). For the CPU and storage units, you slide the fixed shelves in next, followed by the dividers, and, in the case of the CPU unit, the drawer shelf.

Drill holes in the leveler supports, install T-nuts and the levelers, and slide the supports into place. Drive screws through the pedestal sides to secure the supports.



1 Use a dado blade to cut the dados in the side panels to accept the top, bottom, and shelf panels.

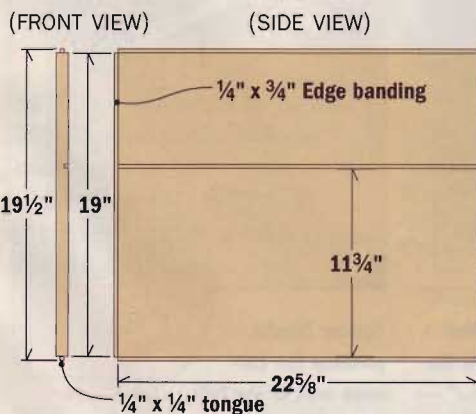


2 Form a tongue by rabbeting both sides of each shelf. Make test cuts to fine-tune the tongue's thickness.



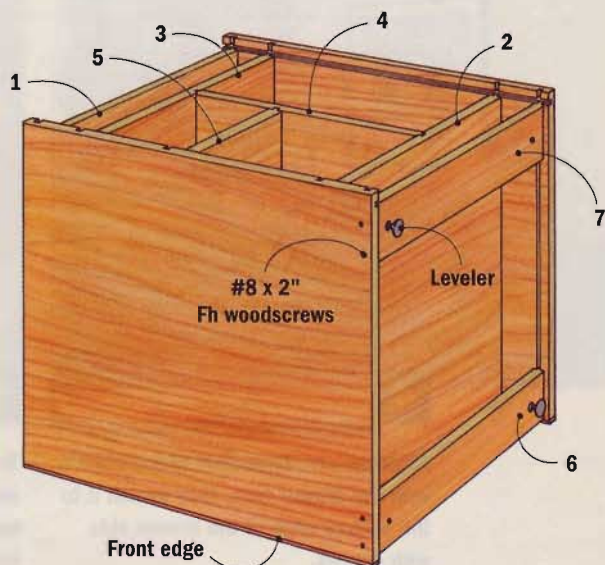
3 To trim the edge banding off the tongue, flip the panel on edge and guide it with your miter gauge.

DIVIDER ELEVATIONS



PEDESTAL ASSEMBLY SEQUENCE

This shows how the pedestals go together. With the side panels face down, assemble each pedestal by sliding the shelves, dividers, and leveler supports into the dados in the side panels in the order indicated. Apply glue to the corresponding dados before inserting shelves.



DRAWER CONSTRUCTION VIEW

(PENCIL DRAWER SHOWN)



NOTE: Construction of all the drawers is the same, with tongues cut on the front and back that fit into dadoes cut in the drawer sides. The plywood bottom is inset in grooves.

BUILD THE DRAWERS

The feature I wanted most was a drawer for hanging file folders. With that drawer size set, the sizes of the other drawers depended on the height of the CPU compartment.

For simplicity's sake, I made the drawer heights on the storage pedestal match those on the CPU pedestal — fewer drawer sizes means more common parts and fewer tool setups. If you changed the CPU compartment size to fit your computer, adjust the drawers accordingly.

Construction is the same for all the drawers — tongues on the drawer front/back pieces fit into dadoes cut into the drawer sides (DRAWER CONSTRUCTION VIEW and

DRAWER JOINERY DETAIL). The plywood drawer bottoms fit into $\frac{1}{4}$ " \times $\frac{1}{4}$ " grooves cut into the drawer sides, front, and back.

To build the drawers, cut all the parts to finished size and label them so you cut the tongues and dadoes in the correct pieces. Then reinstall the $\frac{1}{4}$ "-wide dado blade in your table saw and cut a rabbet at each end of the front/back pieces to form the tongues.

After repositioning the rip fence, cut the dadoes in the sides, then cut the groove for the drawer bottoms in all the pieces (GROOVE DETAIL).

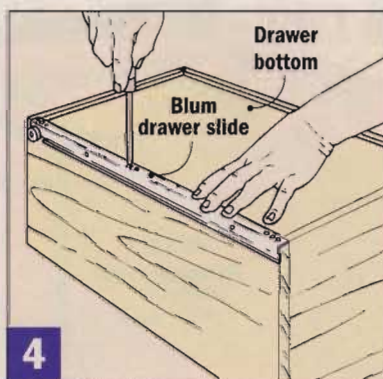
Before assembling the drawers, drill holes in the drawer fronts for the screws used to mount the false fronts.

Even though the drawers are deep enough to accommodate a hand drill, it's much easier to do this now.

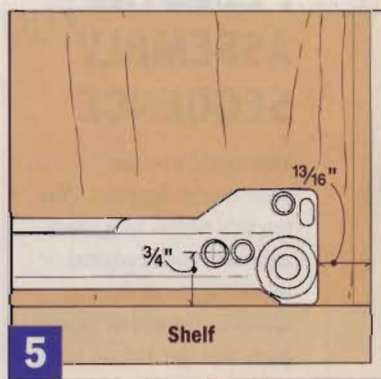
Glue and clamp the drawers together, checking them for square. After a little sanding, give the drawers a couple of coats of clear finish.

MOUNT THE SLIDES

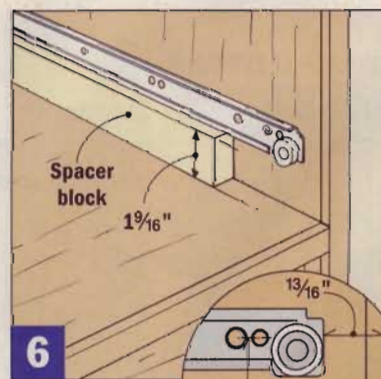
With the drawer boxes assembled, you can mount the drawer slides. I chose a self-closing model for the smaller drawers and a full-extension slide for the file drawers (Blum models 230M and 430E respectively). The drawer portion of these slides has a right-angle bend so they attach to the bottom of the drawer as well as the side (FIG. 4).



4 Align the drawer portion of the slide with the drawer face, then attach it to the bottom edge of the drawer side with screws.

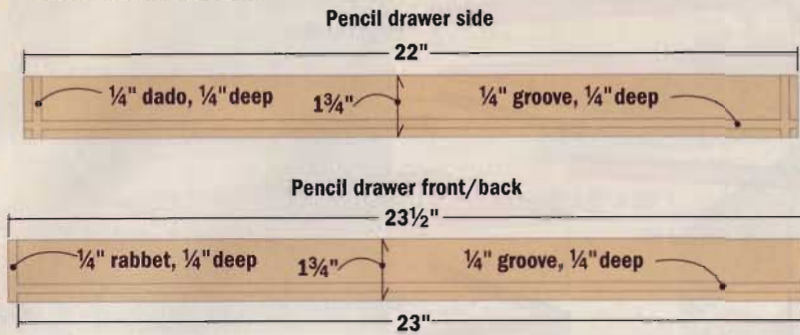


5 To attach the carcass portion of the small slides, draw a line $\frac{3}{4}$ " above the top of the shelf. Inset the slide $\frac{13}{16}$ " — the thickness of the false front plus $\frac{1}{16}$ ".

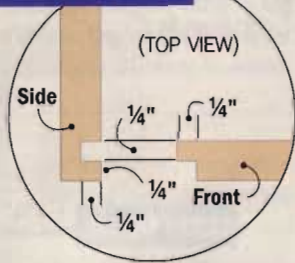


6 Spacer blocks position the carcass part of the full-extension slide above the bottom shelf.

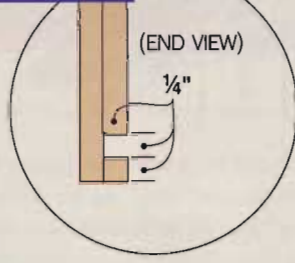
DRAWER ELEVATIONS



DRAWER JOINERY DETAIL



GROOVE DETAIL



To install the carcass portion of the small drawer slides, mark a line $\frac{3}{4}$ " above the shelf and center the mounting screw holes on the line (FIG. 5). The full-extension slides mount $1\frac{15}{16}$ " above the bottom shelf — spacer blocks help hold each slide in position while you fasten it in place (FIG. 6).

ADD THE FALSE FRONTS

The drawer false fronts are made from veneer plywood and banded on all four edges. Use the dimensions shown in the MATERIALS LIST as a

guide, but check them against the actual sizes of the openings in your pedestals before cutting the plywood false fronts to size. If you factor in the gaps and the edging, the plywood should be $\frac{5}{8}$ " smaller than the openings in both length and width.

When adding the edge banding to the false fronts, glue on the end pieces first, then sand them flush with the plywood's edges once the glue dries. Next, glue extra-long banding to the top and bottom edges and trim it flush with the banding on the ends.

MATERIALS LIST

DRAWER PARTS COMMON TO CPU AND STORAGE PEDESTALS:

- (2) Pencil Drawer Sides $\frac{1}{2}$ " x $1\frac{3}{4}$ " x 22"
- (2) Pencil Drawer Front/Back $\frac{1}{2}$ " x $1\frac{3}{4}$ " x 23"
- (1) Pencil Drawer Bottom $\frac{1}{4}$ " x $21\frac{1}{2}$ " x 23"
- (1) Pencil Drawer False Front* $\frac{3}{4}$ " x $2\frac{1}{8}$ " x $23\frac{7}{8}$ "
- (2) File Drawer Sides $\frac{1}{2}$ " x $9\frac{3}{8}$ " x 22"
- (2) File Drawer Front/Back $\frac{1}{2}$ " x $9\frac{3}{8}$ " x $12\frac{1}{2}$ "
- (1) File Drawer Bottom $\frac{1}{4}$ " x $21\frac{1}{2}$ " x $12\frac{1}{2}$ "
- (1) File Drawer False Front* $\frac{3}{4}$ " x $10\frac{7}{8}$ " x $13\frac{3}{8}$ "

ADDITIONAL DRAWER PARTS FOR CPU PEDESTAL ONLY:

- (2) Supply Drawer Sides $\frac{1}{2}$ " x $5\frac{3}{4}$ " x 22"
- (2) Supply Drawer Front/Back $\frac{1}{2}$ " x $5\frac{3}{4}$ " x $12\frac{1}{2}$ "
- (1) Supply Drawer Bottom $\frac{1}{4}$ " x $21\frac{1}{2}$ " x $12\frac{1}{2}$ "
- (1) Supply Drawer False Front* $\frac{3}{4}$ " x $6\frac{1}{8}$ " x $13\frac{3}{8}$ "

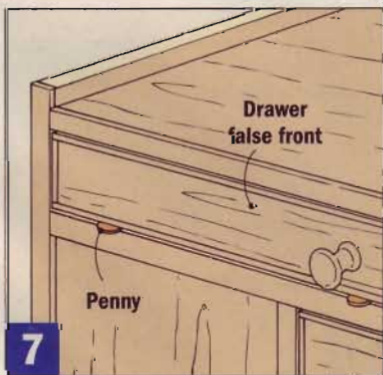
ADDITIONAL DRAWER PARTS FOR STORAGE PEDESTAL ONLY:

- (2) Center Drawer Sides $\frac{1}{2}$ " x $5\frac{3}{4}$ " x 22"
- (2) Center Drawer Front/Back $\frac{1}{2}$ " x $5\frac{3}{4}$ " x 23"
- (1) Center Drawer Bottom $\frac{1}{4}$ " x $21\frac{1}{2}$ " x 23"
- (1) Center Drawer False Front* $\frac{3}{4}$ " x $6\frac{1}{8}$ " x $23\frac{7}{8}$ "
- (1) Storage Compartment Door* $\frac{3}{4}$ " x $10\frac{7}{8}$ " x $9\frac{1}{4}$ "

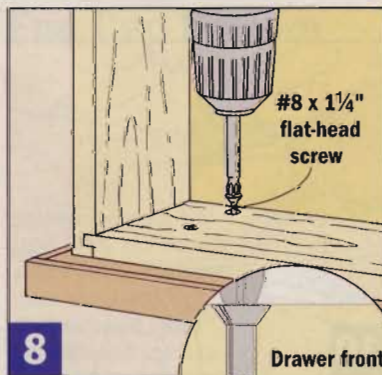
*Apply $\frac{1}{4}$ "-thick x $\frac{3}{4}$ "-wide edge banding on all four edges.

Trying to position false fronts on inset drawers is next to impossible without something to hold onto. That's why I always mount the knobs to the false fronts first. Install each drawer box in the carcass, apply double-face tape to the inner face of the matching false front, shim it in position, and press the front against the drawer to adhere the tape (FIG. 7). Carefully remove each drawer and drive the mounting screws (FIG. 8).

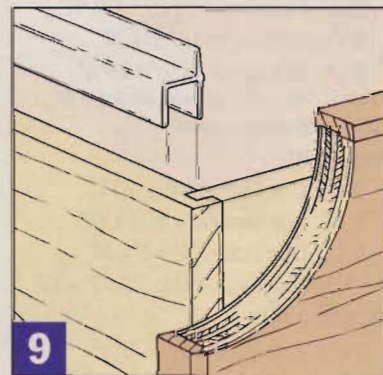
Complete the assembly by installing the hanging file rails on the file drawer (FIG. 9).



7 Use pennies to position the false fronts on the drawers. Double-face tape applied to the back of the false fronts temporarily holds them in place.

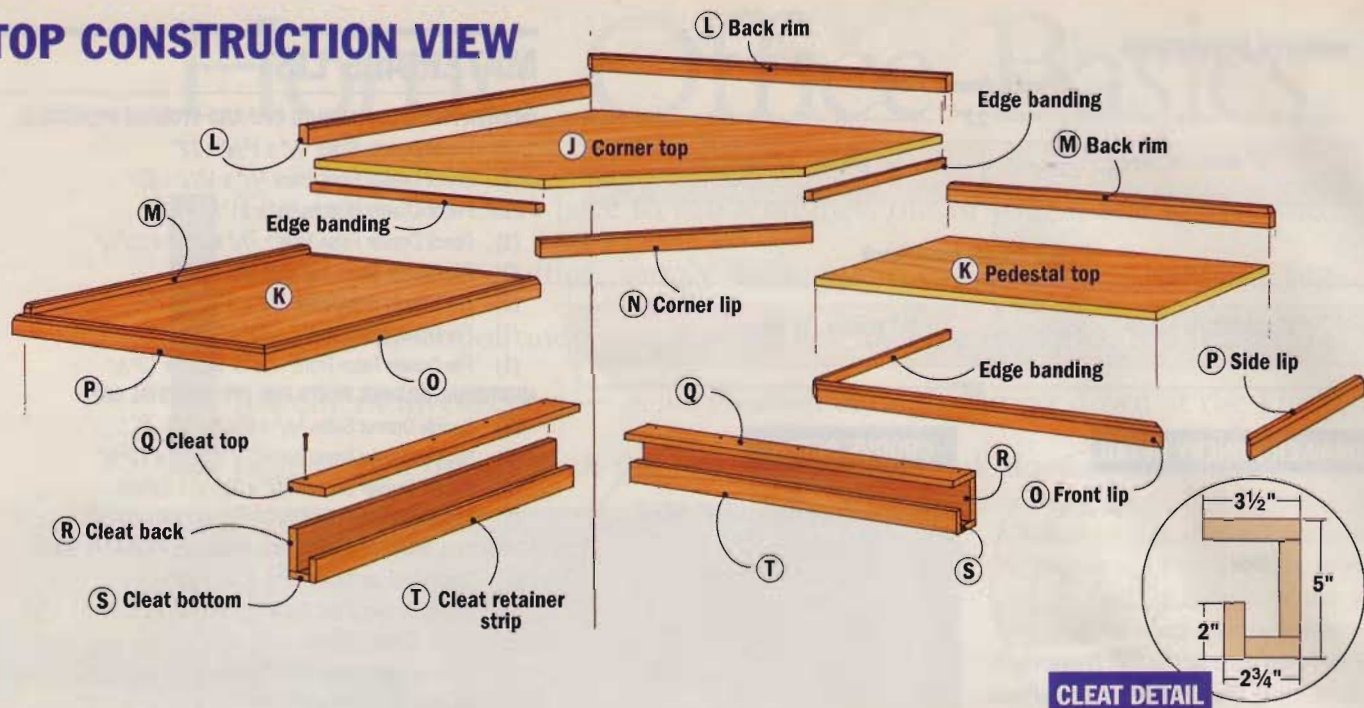


8 Without moving the false front, drive mounting screws to attach the fronts permanently.



9 Complete the file drawer by slipping the hanging file rails (from Woodworker's Hardware, 1-800-383-0130) over the top edge of the drawer sides.

TOP CONSTRUCTION VIEW



TIME FOR THE TOP

Remember hearing that computers would make paper obsolete? Most of the time, I have to hunt to find my desk under the avalanche of memos and computer generated paperwork. That's why I wanted this desk to have plenty of space for both the

MATERIALS LIST

CORNER TOP:

- J (1) Corner Top* $\frac{3}{4}$ " x $45\frac{5}{8}$ " x 57"
- L (2) Back Rims $\frac{3}{4}$ " x $1\frac{1}{2}$ " x $41\frac{7}{16}$ "
- N (1) Corner Lip $\frac{3}{4}$ " x $1\frac{1}{2}$ " x $24\frac{13}{16}$ "

PEDESTAL TOP:

- K (2) Pedestal Top* $\frac{3}{4}$ " x $23\frac{7}{8}$ " x 31"
- M (2) Back Rims $\frac{3}{4}$ " x $1\frac{1}{2}$ " x $31\frac{1}{4}$ "
- O (2) Front Lip $\frac{3}{4}$ " x $1\frac{1}{2}$ " x 32"
- P (2) Side Lip $\frac{3}{4}$ " x $1\frac{1}{2}$ " x $25\frac{3}{8}$ "

*Apply $\frac{1}{4}$ "-thick x $\frac{3}{4}$ "-wide edge banding to the mating edges of these pieces.

WALL CLEAT:

- Q (2) Cleat Top $\frac{3}{4}$ " x $3\frac{1}{2}$ " x 36"
- R (2) Cleat Back $\frac{3}{4}$ " x $3\frac{1}{2}$ " x 36"
- S (2) Cleat Bottom $\frac{3}{4}$ " x 2" x 36"
- T (2) Cleat Retainer Strip $\frac{3}{4}$ " x 2" x 36"

KEYBOARD TRAY:

- (1) Base $\frac{3}{4}$ " x $10\frac{1}{2}$ " x $29\frac{1}{2}$ "
(band all four edges)
- (1) Keyboard Lip $\frac{3}{4}$ " x $1\frac{1}{2}$ " x 30"

PEDESTAL BASE MOLDING:

- (2) Front $\frac{3}{4}$ " x 4" x $27\frac{1}{2}$ "
- (4) Sides $\frac{3}{4}$ " x 4" x 25"

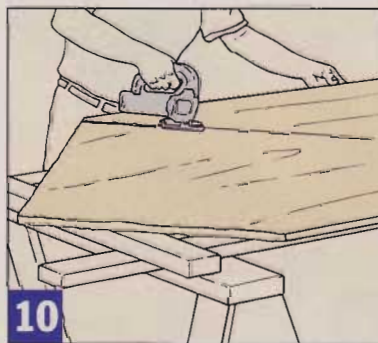
computer and paperwork. By pushing the monitor back into the corner and the keyboard tray in, I have a work surface for handwritten tasks.

Though it seems large, you actually cut the three-piece top from one sheet of $\frac{3}{4}$ "-thick veneer plywood. The corner and pedestal tops are oriented so the grain runs parallel with the front edge of each piece. Layout all three pieces as shown in the CUTTING DIAGRAM. Because the corner piece is awkward to handle, I cut it roughly to shape with my jig saw, then used a straightedge, router, and pattern-cutting bit to finish the cut (FIGS. 10 and 11).

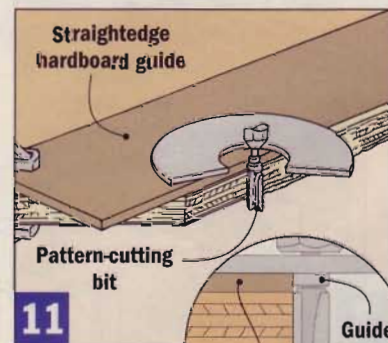
The edges where the corner and pedestal tops meet get edge banding to help protect the plywood veneer from chipping when you assemble the desk. Trim the banding flush with the top panels' front and back edges.

Where the tops meet the walls, I added a $\frac{3}{4}$ " x $1\frac{1}{2}$ " rim, the front edge of which is chamfered. (For a smooth cut, I suggest routing the chamfer.)

The rims for the corner top are mitered where the two pieces meet, then square-cut the pedestal top rims to length (TOP ELEVATION). Attach the rims with glue and finish nails. (You can use nails because they'll be hidden against the wall.)

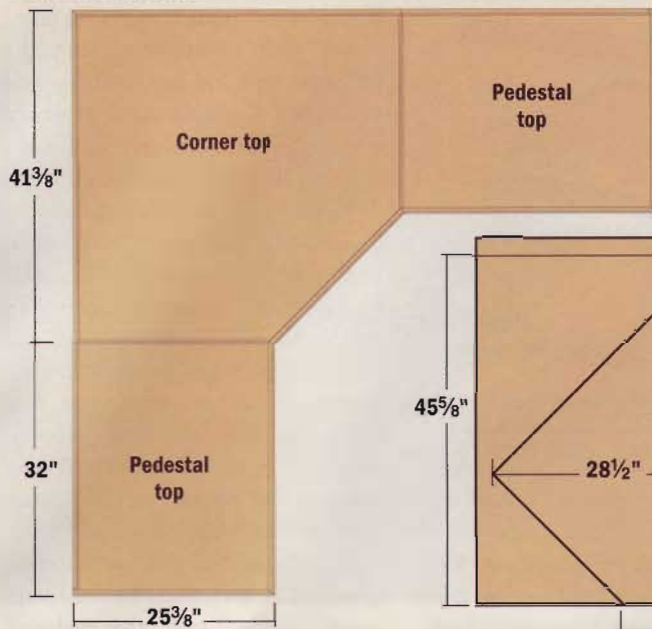


With the corner top laid out, use a jig saw to rough out the piece. Keep the saw blade about $\frac{1}{8}$ " to the waste side of each layout line.

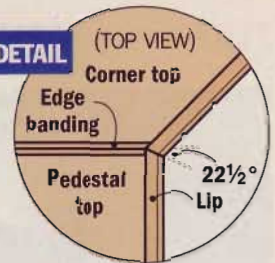


Clamp a straightedge along the layout lines and use it to guide your pattern bit.

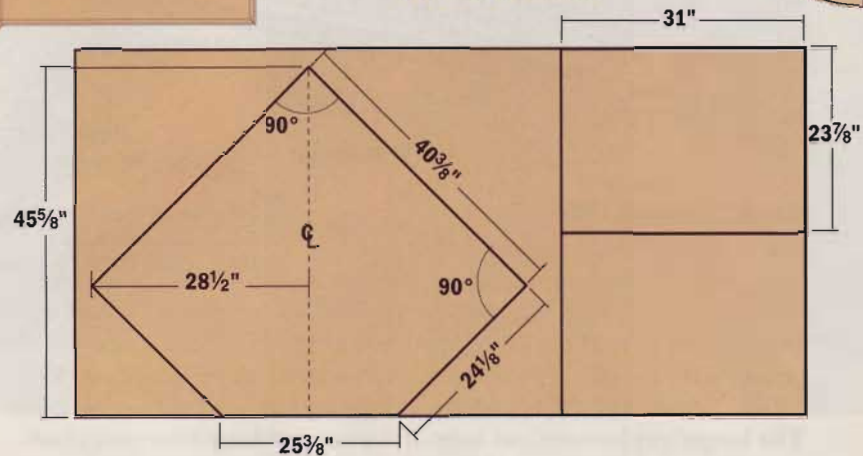
TOP ELEVATION



LIP MITER DETAIL



CUTTING DIAGRAM



The front edges of the tops get a lip that's identical to the back rim, except the top edge of the lips aligns flush with the face of the plywood.

You'll notice that the lips are mitered at the two inside corners where the top pieces meet (LIP MITER DETAIL). Start by mitering the piece to length for the corner top and glue it in place (FIG. 12).

Before moving ahead, you'll have to clear your benchtop or set up sawhorses to support the corner top and one pedestal top in their assembled position. (Masking tape helps hold the joint together temporarily.)

Cut the pedestal front lip extra

long to fine-tune the fit of the inside miter joint first. Once it fits, hold the lip in place, mark it for length and miter the outer end at 45° (FIG. 13).

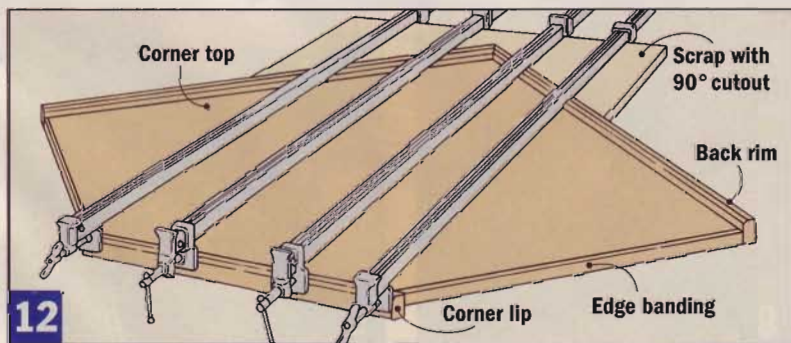
With the two tops still taped together, glue and clamp the lip to the pedestal top. Repeat this fitting process for the second pedestal top.

You need to add lips to the ends of the pedestal tops as well. Cut them extra long and miter one end to mate with the lip on the front edge. For now, let the excess extend beyond the back edge of the pedestal tops. Glue and clamp the side lips in place. Complete the top by trimming the side lips flush with the back rims.

SUPPORT FOR THE TOPS

The corner top is supported by cleats attached to the wall (TOP CONSTRUCTION VIEW and CLEAT DETAIL). While a 1x4 screwed flat to the wall would have worked just fine, the C-shaped cleats create a channel to keep power cords and cables tucked neatly out of the way.

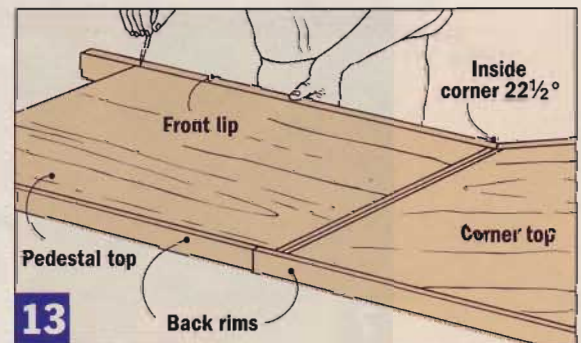
Rip stock to width for the cleat bottoms and retainer strips and cut all the cleat parts to length. Then glue and screw the top and bottom to the back. When the glue dries, add the retainer strips. Complete the cleats by drilling countersunk pilot holes for mounting the corner top.



12

Using a right-angled piece of scrap from cutting out the corner top, glue and clamp the chamfered corner lip to the front edge of the top.

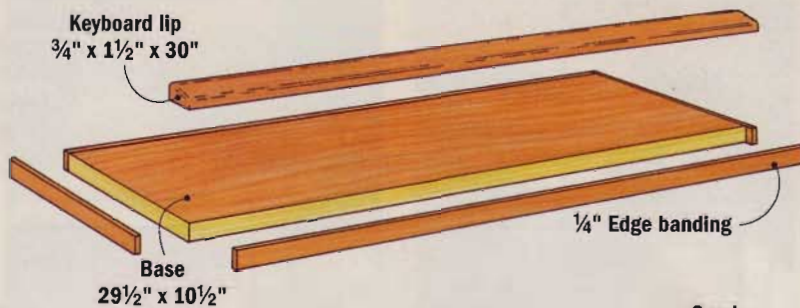
Make sure the top of the lip is flush with the surface of the plywood and its mitered ends align flush with the edge banding.



13

After adjusting the fit of the pedestal lip at the inside corner, hold it in position and mark it for length. Cut the outer corner at 45°.

KEYBOARD TRAY CONSTRUCTION VIEW



LIP ELEVATION
(END VIEW)



ADD A KEYBOARD TRAY

Just as you did with the pedestals, you'll need to decide what type of keyboard tray you want. My design is large enough to hold both the keyboard and mouse (KEYBOARD TRAY CONSTRUCTION VIEW). This longer tray, however, can interfere with opening the top drawers.

The tray mounts to a steel keyboard slide. The model I used swivels and adjusts for height (about \$30). Fully adjustable slides allow you to tilt the trays and some come with a built-in tray. These cost about \$100.

WRAPPING THINGS UP

If you haven't done it as you've completed each component, stain the pedestals, tops, and keyboard tray and give them a couple coats of finish. (Since the top is subject to wear, I gave it a third coat of polyurethane.)

Unlike most furniture-style computer desks, this one is designed to be installed permanently, similar to a kitchen base cabinet or bathroom vanity. As detailed below, you can scribe the pedestals to the wall for a custom fit. If you think you may move the desk sometime, you can simply fit it around the room's base molding and not worry about small gaps between the pedestal and wall.

To simplify the installation (detailed below) the base moldings aren't installed until the pedestals have been leveled and fitted to the

INSTALL YOUR DESK FOR LEVEL-BEST RESULTS



1 Locate one pedestal approximately 48" from the corner and level it side-to-side as well as front-to-back. Raise or lower the leveler feet as needed.



2 Move the second pedestal into position and hold a level between the pedestals. Raise or lower the second pedestal until it's level with the first.



3 Mark a level line on the wall from each pedestal to the corner. Locate the studs along the line.



7 Drill $\frac{1}{32}$ "-dia. pilot holes in the base molding, then attach the molding with 4d finish nails. Attach the front molding first, then add the side pieces.



8 To scribe the side base molding, hold it in place and mark it along the scribed back edge of the pedestal. Cut and trim the molding as marked.



9 Drill two $\frac{3}{4}$ "-dia. holes $\frac{1}{16}$ "-deep in the top edge of the pedestal sides. Figure-eight fasteners hold the pedestal tops to the pedestals.

walls. (This gives you easy access to the levelers during the installation.) I mitered the front base molding to length, then mitered the side moldings, but left them extra long — you'll cut them to length later. Double-face tape can hold the moldings in position while you check the fit of the miters. Apply a coat of finish to the molding pieces once you've fit the miters.

INSTALLATION AND SETUP

Chances are, the walls won't exactly match the right angle of the desk top. To hide small gaps between the wall and back rim, I suggest applying a bead of paintable latex caulk along the top of the back rim.


For larger gaps, tack a strip of 1/2" quarter-round molding along the top of the back rim. The quarter-

round is flexible enough to conform to dips or bows in the walls. In extreme cases, you can scribe the back rim to the wall and use a belt sander to remove excess stock.

To reduce the mess during the installation, drill holes for cable grommets out in your shop. Make sure the heads of all your cables and cords fit through the grommet before you start drilling with a hole saw or large diameter Forstner bit.

Once you have the desk installed and your computer hooked up, take some time to sort through your floppy disks, software manuals, and stacks of paper before you move that stuff. (For some tips on setting up and organizing your office, see *Home Office Basics* on page 40.)

Even though the desk has plenty of storage, it would be a shame to

clutter up such a great looking work space. Besides, you'll want it nice and tidy when you show it off to your own computer-savvy friend — the one who probably has a new computer sitting on a desk that came in a box. 



4 Position the wall cleats along the level lines and drill mounting screw holes at the stud locations. Drive #8 x 2" screws to hold the cleats in place.



5 Place masking tape along the back edge of each pedestal and use a compass to scribe the pedestal to the wall and base molding.



6 Use a jig saw equipped with a fine-toothed blade to trim each pedestal along the scribe line. Use a file to make fine adjustments to the fit.



10 Position the corner and pedestal tops firmly against each other and clamp them together. Attach a wooden cleat across the joint for reinforcement.

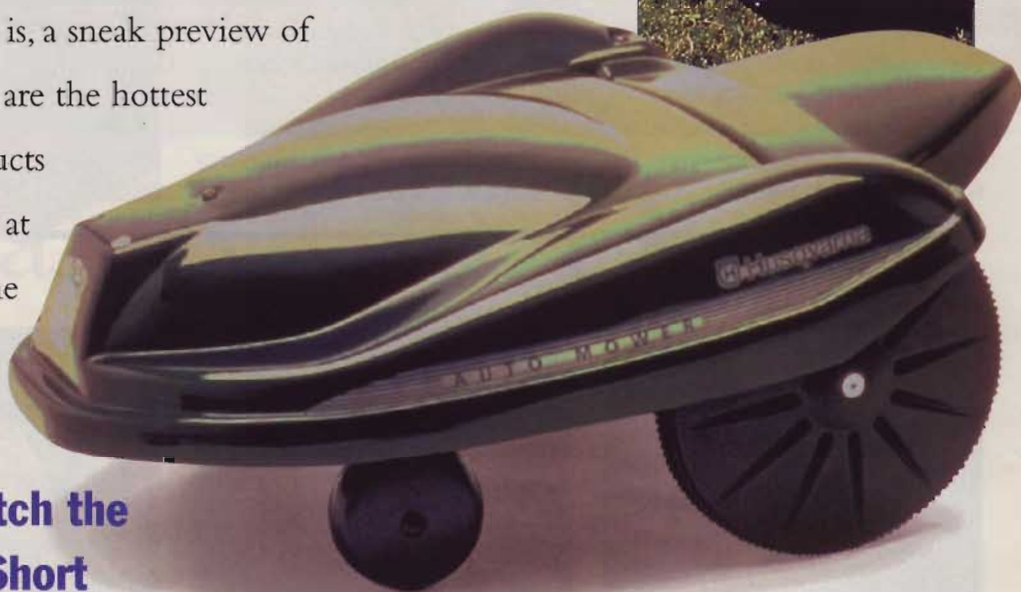
Then drive screws through the figure-eight fasteners and the wall cleats into the top.



11 Attach the keyboard slide to the underside of the corner top according to the manufacturer's instructions. Then install the keyboard tray to the slide.

Hot Products for 2000

Once again, the annual tool and hardware shows have come and gone. The *Workbench* staff attended every one, sorting through hundreds of manufacturer's displays to discover what's new. So here it is, a sneak preview of what we think are the hottest tools and products you'll soon see at your local home center or hardware store.



Sit and Watch the Grass Get Short

Trust me, you've never seen a lawn mower anything like the AutoMower from Husqvarna. As the name implies, this machine mows on its own.

The mower runs on a 12-volt battery, and covers up to 13,000 sq. ft. unattended. It works by

randomly rolling around the area you define by laying out a border wire. When the mower reaches the boundary, or bumps into a tree or some other object, it turns back into the area and continues mowing. If battery power gets low, the AutoMower seeks out a wire connected to its docking station,

returns to it, and recharges. Once charged, the mower goes back to work. Cutting height is adjustable, and you program how often and for how long the machine runs. An anti-theft alarm helps deter thieves.

AutoMower will sell for \$1,500 to \$1,800. Call (800) 438-7297 or visit www.husqvarna.com to learn more.

Powerful Hand Cleaning To Go

Heavy-Duty Hand Cleaner Towels from Lava (part of the WD-40 Co.) make it easier to clean your hands after a messy project, even without a sink around.

These disposable towels contain citrus-based cleaners that quickly eat through most household mess-makers like paint and stain, glue, caulk, grease, and oil. The towels are made of fiber-reinforced paper, and have a rough texture that also helps remove grime. Moisturizers keep skin from drying out. You don't

need to rinse your hands with water after using the towels.

Lava Heavy-Duty Hand Cleaner Towels are available in 50-count dispenser packs for around \$10, and in resealable 10 packs that sell for around \$2.50. You can call the WD-40 Co. at (800) 448-9340, or visit www.wd40.com on the web.





Bessey Adds More Clamping Options

The K-Body Maxis system from American Clamping Corp. attaches to your benchtop to convert a bar clamp (either Bessey's K-Body or a regular pipe clamp) into a tail vise. Cost is around \$65.



Also new is the One-Handed Edge Clamp (\$80). Turn the handle and pads grip both panel faces, then the third pad engages to hold edge banding. Call (800) 828-1004 or visit www.americanclamping.com.

One Insulation for Many Applications

Most insulation is designed for a specific application, such as attics, walls, or floors. But Miraflex Multi-Project Insulation from Owens Corning is designed to work in all these areas.

This versatility comes from the product's ability to compress or expand as needed. In a 2x4 wall it achieves an R-13 value. In a 2x6 wall, the insulation yields a value of R-17.

Fully expanded in an attic, the value is R-18. Retail price is around \$11 per roll. The product is currently available in test markets, but wider distribution is coming. Call (800) 438-7465 or go to www.owenscorning.com.



DeWalt Introduces an Intriguing New Table Saw

DeWalt's Woodworker's Table Saw (model DW746) is filled with an interesting array of features that position it somewhere between a contractor's saw and a full-blown cabinet saw.

Power comes from a 1 $\frac{3}{4}$ -hp, 120/240-volt motor, which is a bit larger than the 1 $\frac{1}{2}$ -hp motors usually found on contractor's saws, but shy of the 3-hp motors standard on beefier cabinet saws. The motor, which resides inside the saw cabinet, drives the blade via a single belt. Most cabinet saws have triple belts.

The saw's main table is cast iron. The base model saw comes with two stamped steel wings. A cast iron sliding table with miter gauge (\$450) is optional. A T-head fence comes standard, and gives 30" cutting capacity right of the blade. A 52"-capacity fence is available. The fence operates smoothly, and can be

positioned left or right of the blade. Blade height and tilt adjustments are smooth and positive. When we can get our hands on a saw for in-depth testing, we'll tell you more about its overall performance.

At this point, all we know are DeWalt's suggested prices of \$950 for the base model, and around \$1,500 fully-loaded (as shown). Call the company at (800) 433-9258 or visit www.dewalt.com.



Compound Miter Saw Goes Cordless

Makita's 7½" Cordless Slide Compound Miter Saw has an 18-volt motor that's powered by a Nickel-Metal Hydride (NiMH) battery. It cuts 2½"-thick × 7½"-wide stock at 90°, miters to 57°, and

bevels to 45°. In testing, the saw made 200 cuts through 4" crown molding on a charge. The saw weighs 23 lbs. Street price should be under \$500. Call (800) 462-5482 or visit www.makitatools.com.



A Tool Tote and a Workbench

Combine a rolling tool cart with a work surface and you've got the Mobile Tuff Mate Workbench from ZAG, a division of The Stanley Works. Place the top on risers above the main compartment, and you've got a small workbench with a full-length vise. The Tuff Mate sells for under \$70. Call (800) 782-6539 or visit www.stanleyworks.com.

Film Adds Etched Look to Glass

Get the look of etched glass with Wallpaper For Windows from Decora North America. The plastic film sticks by static cling, and looks very realistic. A variety of patterns are available, priced from \$29 to \$69. Call (800) 320-8439 or go to www.wallpaperforwindows.com.



Keep Band Saw Blades on Track

Replace the upper blade guides on your band saw with the Stabilizer and, according to manufacturer Carter Products, you'll get better blade tracking, plus cooler-running blades and smoother cuts. Models are available for many popular saws. Each sells for around \$70. Call (616) 451-2928 or visit www.carterproducts.com.



Corner Clamping Made Easy



Gross-Stabil's new MCX Miter Clamping System allows you to clamp mitered joints with straight bar clamps. Jaws straddle stock up to 4"-wide, and accept adapters angled at 22.5°, 30°, 45°, and 60°. The unit sells for around \$30. Call (800) 671-0838.

Make Any Drill an Auto-Feed Driver

Slip Vermont American's Rapid Fire over the chuck on most any $\frac{3}{8}$ " drill and you've got an auto-feed screw driver — great for installing drywall or decking. Collated screws are available in four lengths, from $1\frac{5}{8}$ " to $2\frac{1}{2}$ ". Suggested retail is less than \$50. Call (800) 742-3869 or visit www.vatool.com.



Two-Way Tool Shelf

Need a small tool shelf to hang on the pegboard over your bench? Try the Versa-Shelf from ROK Solid Products. It has integrated hooks that grab the pegboard holes. No pegboard in your shop? Turn the shelf around and hang it between two

studs. There's a basic shelf, one with holes for tools, and another with four shallow compartments. Each sells for under \$5. Call (770) 339-8140 or check out www.roksolidproducts.com.

Finally, a Locking Adjustable Wrench

An adjustable wrench is great when you don't have the correct size box wrench handy, although an adjustable wrench can loosen up and slip off the fastener. Locking pliers won't slip, but sometimes aren't the best choice when a wrench is what you need. The \$25 MaxGrip

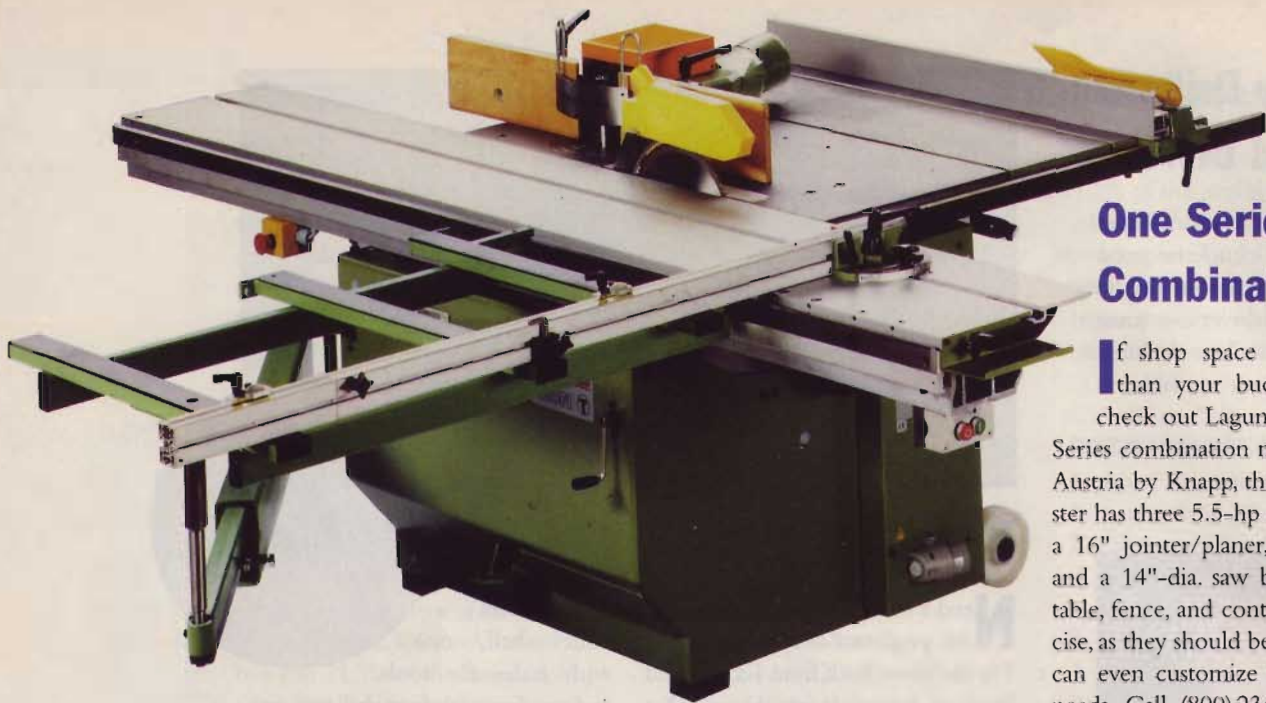


Locking Adjustable Wrench from The Stanley Works combines both tools into one handy wrench that adjusts, yet still locks tight. Call (800) 782-6539 or visit www.stanleyworks.com.

Accessory Attachment Expands Grinder Capability

Want to make your bench grinder more versatile? Replace one wheel with the Multi-Tool from PA Products and you'll have a superior grinder that also works as a $2" \times 36"$ belt sander and 7"-dia. disk sander. At \$150 the tool isn't cheap, but it's well-built and works great. You can get aluminum oxide or silicone carbide belts (24- through 600-grit), Scotch Brite belts, even polishing belts. A sharpening jig (\$50) properly holds chisels and plane irons. Contact H and B Distributors at (800) 660-0880.





One Serious Combination Tool

If shop space is more limited than your budget, you should check out Laguna Tools' Signature Series combination machine. Made in Austria by Knapp, this 3,250-lb. monster has three 5.5-hp motors powering a 16" jointer/planer, a tilting shaper, and a 14"-dia. saw blade. The sliding table, fence, and controls are very precise, as they should be for \$28,000. You can even customize one to suit your needs. Call (800) 234-1976 or go to www.lagunatools.com on the web.

Get the Green Light for Proper Cutting Height

The Blade Gauge from Pacific Rack and Machine has notches at each end spaced at $\frac{1}{8}$ " increments. Put the gauge on your saw table, crank up the blade, and when it contacts a notch, the blade completes an electrical circuit, lighting an LED to show you've hit the setting you want. The tool sells for about \$50. Call (541) 779-6753 or visit www.bigleg.com.



Double-Sided Diamond Bench Stone

A leading manufacturer of crystalline diamond sharpening tools, Diamond Machining Technology Inc. (DMT), has just

introduced a new line of DuoSharp Diamond Whetstones.

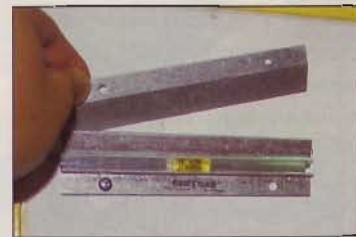
These stones (the first double-sided diamond bench stones on the market) are available in four grits: extra-fine/fine, extra-fine/coarse, fine/coarse, and coarse/extra-coarse. Each is available in two sizes: 2 $\frac{3}{8}$ "-wide \times 8"-long at \$99, and 4"-wide \times 10"-long for \$140.

An optional base (\$15) holds the stones in place while you use them, and features a handle underneath that allows you to turn the stone over to hone large surfaces. You can call DMT at (508) 481-5944 or visit www.dmtsharp.com on the web.



Hang On the Level

The Hangman consists of two aluminum extrusions: one mounts to the object you want to hang, the other goes on the wall. A bubble vial in the wall piece simplifies leveling. Lengths from 6" to 30" are available that hold up to 300 lbs. Prices start around \$4. Call (818) 347-8622.





Multi-Use Measuring Device

Giza Industrial Associates' new RascalRule is a level, square, bevel gauge, and ruler in one. Made of a fiberglass/nylon composite, the tool is 24" long, and folds down to 6" long. It works as a 180° protractor, reads grades up to 30%, and has preset stops every 45°. RascalRule sells for around \$20. Call (888) 972-7225 or visit www.rascalrule.com.

Protect Your Saw Blades and Your Hands

Changing table saw blades isn't the most difficult task in the shop, but it can be a chore. You jam the blade against a scrap of wood to keep it from turning, then loosen the arbor nut with a wrench.

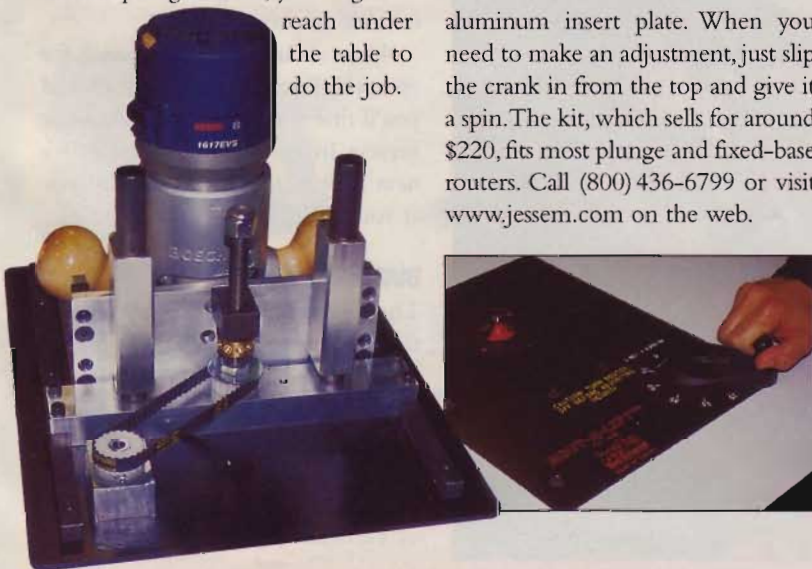
To simplify the process and prevent injury to hands and blades, try the Blade-Loc from Bench Dog Inc. This device slips over the blade and holds it stationary while you loosen the nut. The Blade-Loc sells for under \$20. Call (800) 786-8902 or visit www.benchdog.com.



Above-the-Table Router Adjustment

Adjusting the depth of cut on a table-mounted router can be a hassle. Whether you have a fixed-base or plunge model, you've got to reach under the table to do the job.

The Rout-R-Lift from JessEm Tool Co. simplifies the process by mounting the router to a gear-driven mechanism attached to an aluminum insert plate. When you need to make an adjustment, just slip the crank in from the top and give it a spin. The kit, which sells for around \$220, fits most plunge and fixed-base routers. Call (800) 436-6799 or visit www.jessem.com on the web.



Pump Up the Cordless Voltage

As cordless power tools become increasingly common, user demands for more power and capability have risen as well. Manufacturers have responded with a steady march up the voltage scale, from 12- to 14.4-volt, then 18-volt. Apparently, our lust for more power remains unsatisfied, because two companies, Bosch and DeWalt, have now introduced cordless tools with 24-volt power.

Both offer 24-volt drills, circular saws, and a reciprocating saw. In addition, Bosch offers a flashlight, and DeWalt has a rotary hammer for really tough jobs.



Bosch boasts that their tools are as powerful as corded models, and DeWalt's claims are similar. An AC/DC converter lets you plug the DeWalt tools in while your batteries charge. Prices from both manufacturers vary but, like the voltage, they continue to rise.

For more information contact Bosch at (877) 267-2499 or www.boschtools.com. You can reach DeWalt at (800) 433-9258 or www.dewalt.com.

Pint-Size Workbench



Like any budding woodworker, a kid starting out needs good tools. And the best place to begin is with a quality workbench, the heart of any shop.

Now I'm not talking about a toy bench here. That wouldn't do at all. What's needed is an honest-to-goodness workbench that has the same features as yours.

As you can see in the photo, the only thing childlike about the workbench I built is the scale. The rugged construction will stand up to all the hammering, cutting, wrench turning, and abuse your youngster can throw at it. And it has things you'd expect on your own bench, like drawers, a pegboard tool hanger, a vise, and a tough work surface. All this, and you can probably build it in a weekend.

How about a matching bench for yourself? Take a look at page 64 and you'll find the plan for an adult-size version. Imagine, you and the family's next craftsman working side by side at your matching benches.

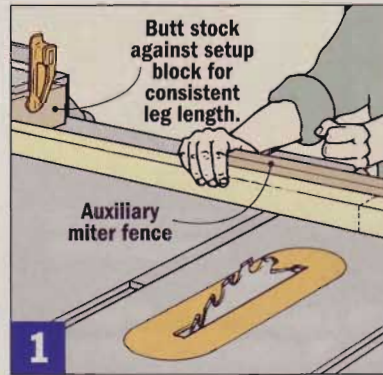
BUILDING THE BASE

The best way to start is by cutting the stretchers and side rails to length (WORKBENCH CONSTRUCTION VIEW). Then drill countersunk pilot holes at the ends of each piece — four holes at both ends of each stretcher and one hole at both ends of each rail (STRETCHER DETAIL

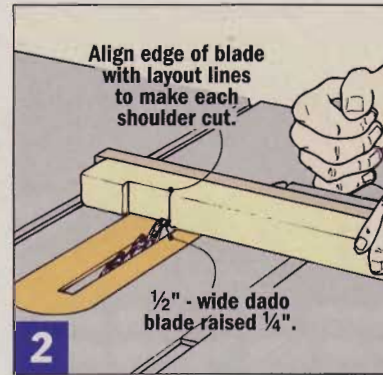
and SIDE RAIL DETAIL). Use screws to assemble the stretchers and rails into two frames.

Rip the legs from 2x4s to get straight, knot-free material. Cut the legs a little long and roundover all four edges — the extra length helps you avoid rounding over the ends. Next, cut the legs to length (FIG. 1).

Layout the dados on the legs so you can align the marks with the saw blade. Use a 1/2"-wide dado blade and make the shoulder cuts first, then cut out the material in-between with repetitive passes (FIG. 2).



1 Clamp a setup block to your fence ahead of the blade to measure consistent lengths when cutting the legs.

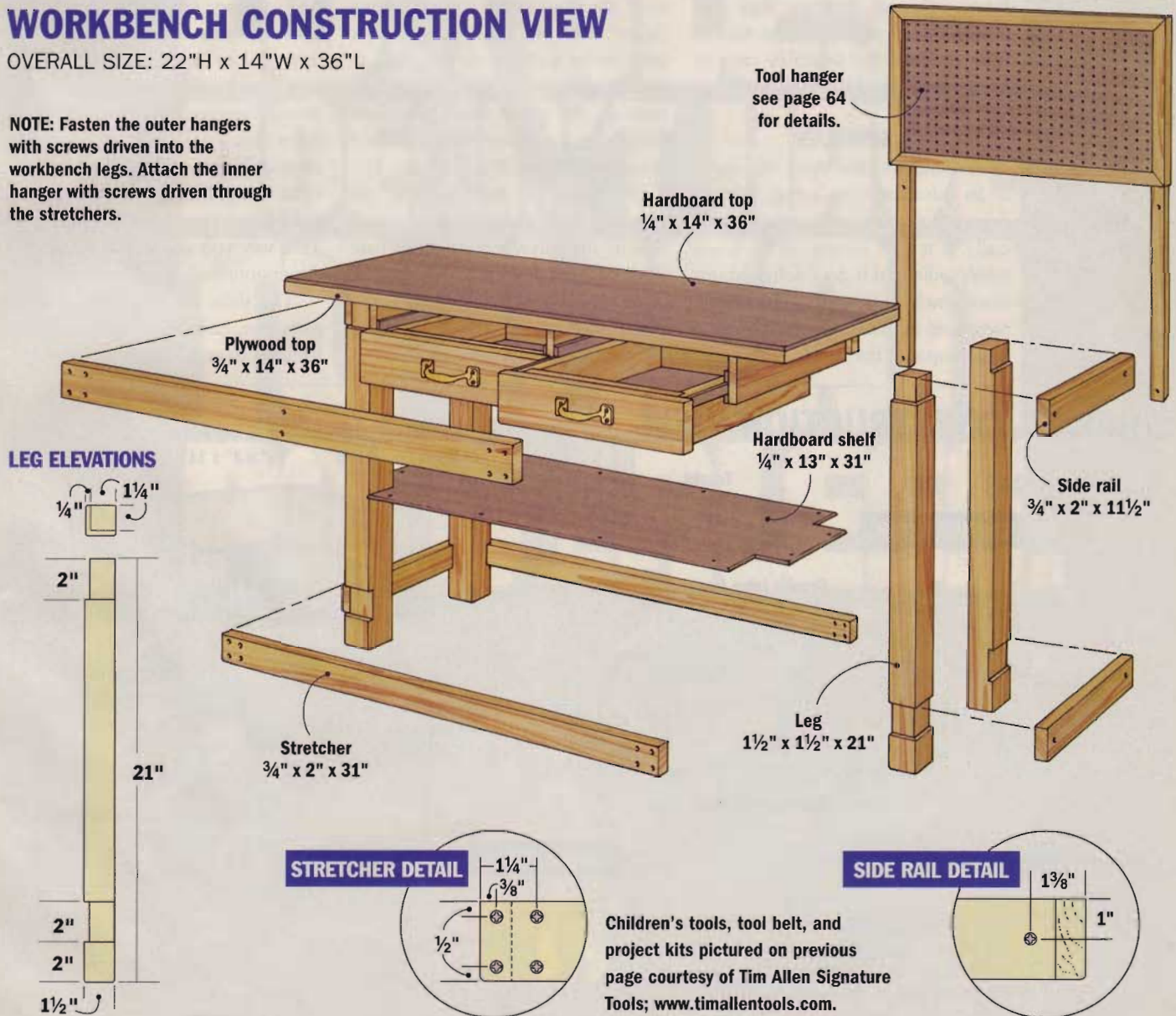


2 Attach an auxiliary fence to your miter gauge to help control the stock as you cut dados on two sides of the legs.

WORKBENCH CONSTRUCTION VIEW

OVERALL SIZE: 22"H x 14"W x 36"L

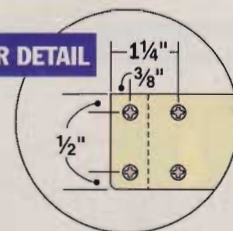
NOTE: Fasten the outer hangers with screws driven into the workbench legs. Attach the inner hanger with screws driven through the stretchers.



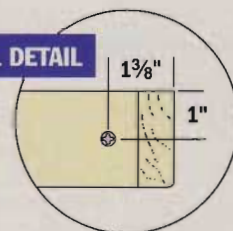
LEG ELEVATIONS



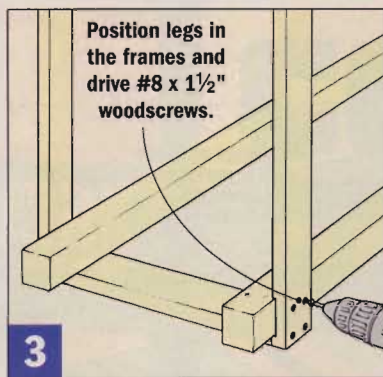
STRETCHER DETAIL



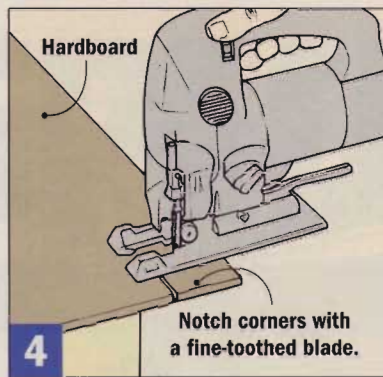
SIDE RAIL DETAIL



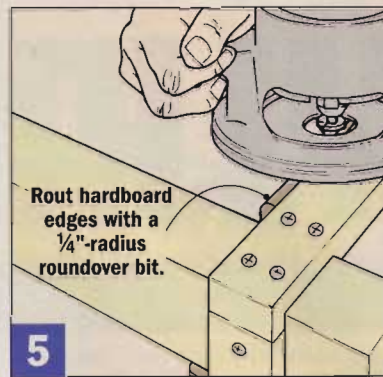
Children's tools, tool belt, and project kits pictured on previous page courtesy of Tim Allen Signature Tools; www.timallentools.com.



3 Assemble the frame with two screws at each corner. Then use two screws through the stretcher and one through the side rail to attach each leg.



4 With a jigsaw, cut 2" x 2" notches from the corners of the tempered hardboard shelf. The hardboard will nest inside the legs.



5 With the shelf attached and the workbench on its side, your router can ride on the rails and stretchers to shape the hardboard edges.

To assemble the base, stand the frames on end, set two legs into position and drive in the screws (FIG 3). Turn the assembly over to attach the other legs the same way.

HARDBOARD SURFACES

I've found over the years that there is an advantage to being able to swap out a worn work surface, especially if it gets motor oil or wood finish spilled on it. So I designed this workbench with easily replaceable, tempered hardboard surfaces on the benchtop and the shelf.

Cut hardboard to size for the shelf, then notch the corners with a jigsaw (FIG. 4). Drill countersunk pilot holes and fasten the shelf to the lower frame with screws. Make sure all the screw heads are flush with the hardboard surface, then roundover the shelf edges (FIG. 5).

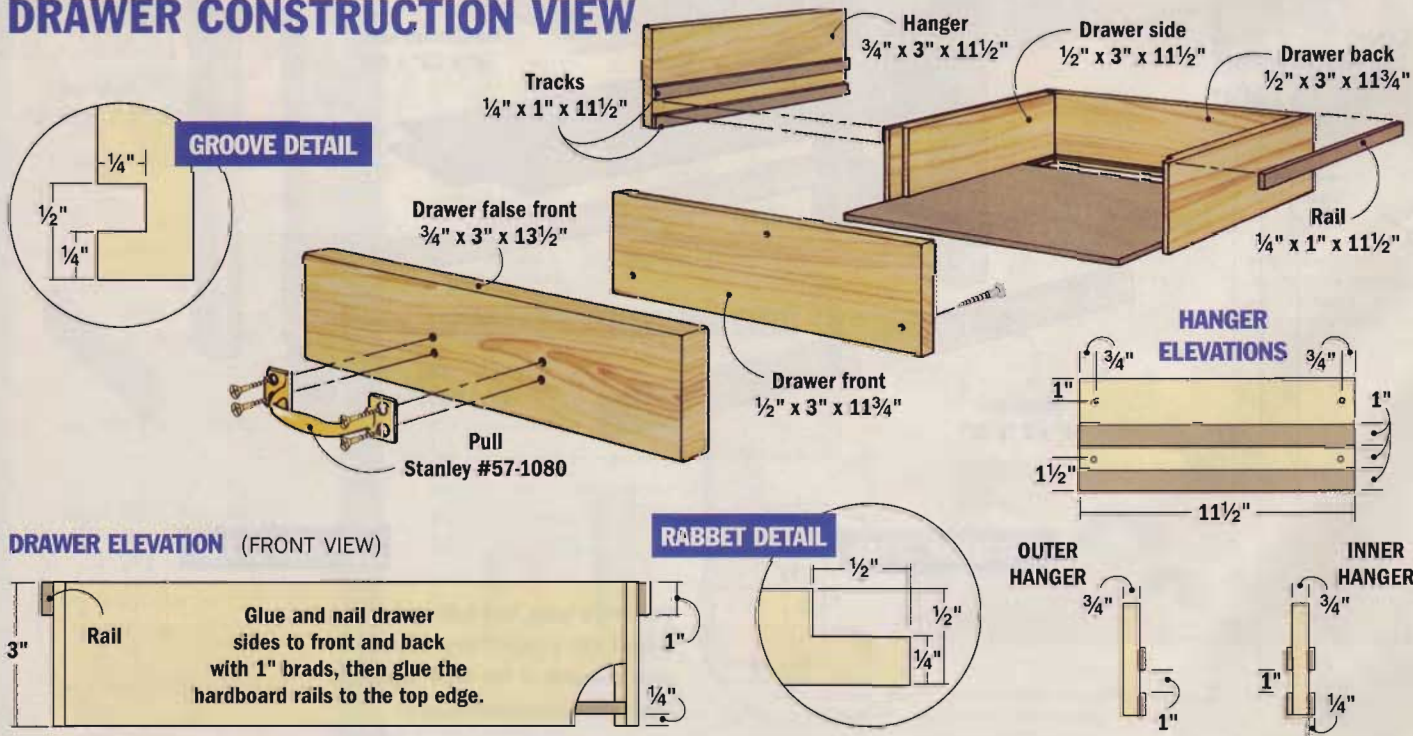
To construct the benchtop, cut plywood and hardboard to size and attach the plywood to the base (FIG. 6). Then add the hardboard, but don't glue it or you won't be able to replace it (FIG. 7). Now roundover the sharp edges of the benchtop.

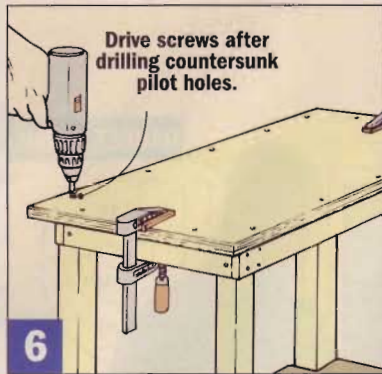
ADD THE SLIDES

Any young craftsman will need drawers with his or her bench, though I'm afraid to guess what might end up in them. I kept the drawer construction simple, and built slides from material already laying around the shop (DRAWER CONSTRUCTION VIEW). I recommend building and installing the slides first. That way you can adjust the drawer dimensions for a perfect fit.

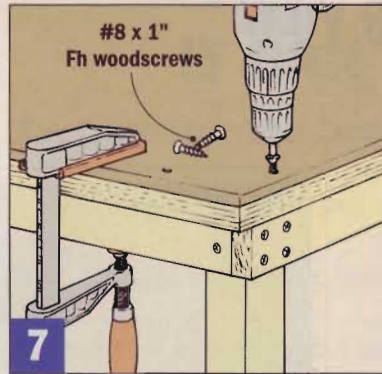
The slides are made up of three parts: the rails, the tracks, and the hangers. To guarantee smooth perfor-

DRAWER CONSTRUCTION VIEW

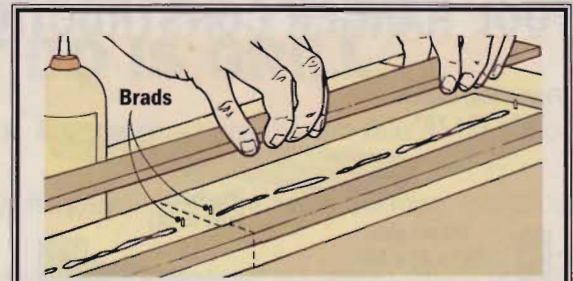




6 Position the plywood on the base so it's centered lengthwise and flush at the back of the bench. Clamp it in place and fasten it with screws.



7 Attach the hardboard with wood screws. Be sure to sink the screw heads far enough below the surface so they won't scratch future work.



SKILL-BUILDER

Holding Hardboard Steady

Tempered hardboard can slide out of position when you glue it. Drive small brads into the hanger and nip off the heads. The sharp ends will hold the hardboard in line while you glue and clamp the pieces together.

mance, the slides need to match perfectly. One way to avoid differences between them is to assemble the hangers and tracks as one long piece, then cut that piece into the three sections you need for this project.

Find a piece of stock long enough for all three hangers, and rip it to width. Next, rip long strips of hardboard to width for the tracks.

To keep the tracks from sliding around while gluing them to the hanger stock, I used an old trick with brads (SKILL-BUILDER). After the glue sets, cut three sections to length to fit your workbench and add the second set of tracks to one hanger to make the inner hanger (HANGER ELEVATIONS). Now you can fasten the hangers to the workbench (FIG. 8).

DRAWER CONSTRUCTION

You'll have to build the drawers to fit inside the hangers, so measure these distances and start cutting. First, cut pieces for the drawer fronts, backs, and sides. Then, with a dado blade in your table saw, cut a 1/4"-wide groove in each piece to accept the drawer bottom (FIG. 9). Now, without changing the saw setup, rabbet the drawer sides.

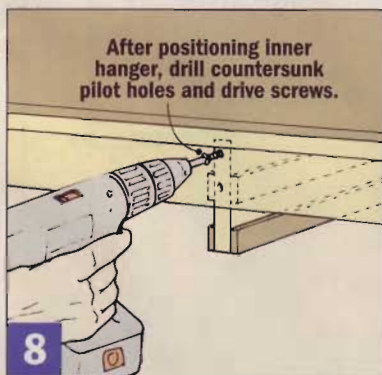
Before you get to the drawer assembly, cut the false fronts and the hardboard bottoms to size. Roundover the edges of the false fronts with coarse sandpaper. Now drill pilot holes in the drawer fronts for securing the false fronts.

Fasten each pair of drawer sides to a back with glue and finish nails, and insert a bottom into the

grooves. This helps square the assembly. You can now glue and nail in the drawer fronts.

Next, rip hardboard to width for the rails and glue these strips to the drawer sides, flush with the top of the drawers. The old trick with the brads comes in handy here again.

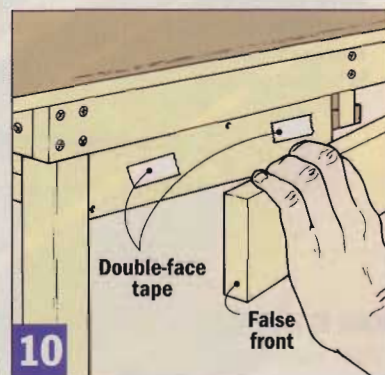
Give the glue some time to set on the drawers and rails, then remove the clamps. Slip the drawers into the workbench and temporarily add the false fronts (FIG. 10). Be sure there is plenty of clearance on the sides and top of each false front so the drawers will open and close without catching. Mark the pilot hole locations with an awl, remove the false fronts, and drill pilot holes. Then attach the false fronts to the drawers and add the pulls.



8 Fasten the outer hangers to the workbench legs first, then attach the inner hanger to the stretchers at the exact center of the bench.

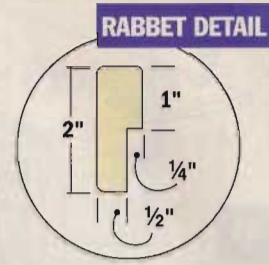
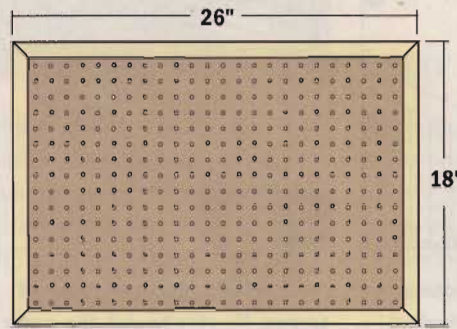
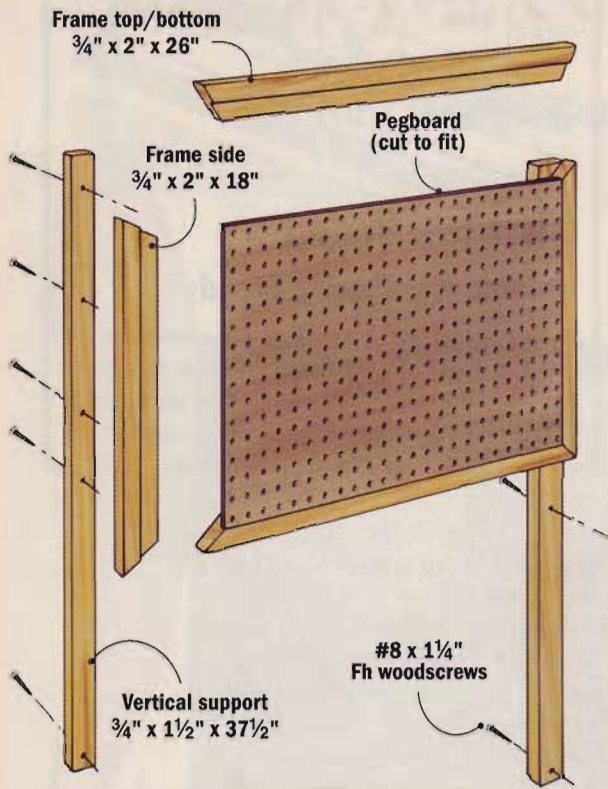


9 Groove the drawer sides, fronts and backs, and rabbet the sides without changing setups.



10 Double-face tape will hold the false fronts to the drawers temporarily while you mark for pilot holes. Peel off the tape before screwing the fronts on.

TOOL HANGER CONSTRUCTION VIEW



TOOL HANGER

A pegboard tool hanger adds a “real-shop” look to the bench and can help teach your youngster to treat tools right. Using simple joinery, you can build this tool hanger so it holds up to youthful enthusiasm and keeps its good looks.

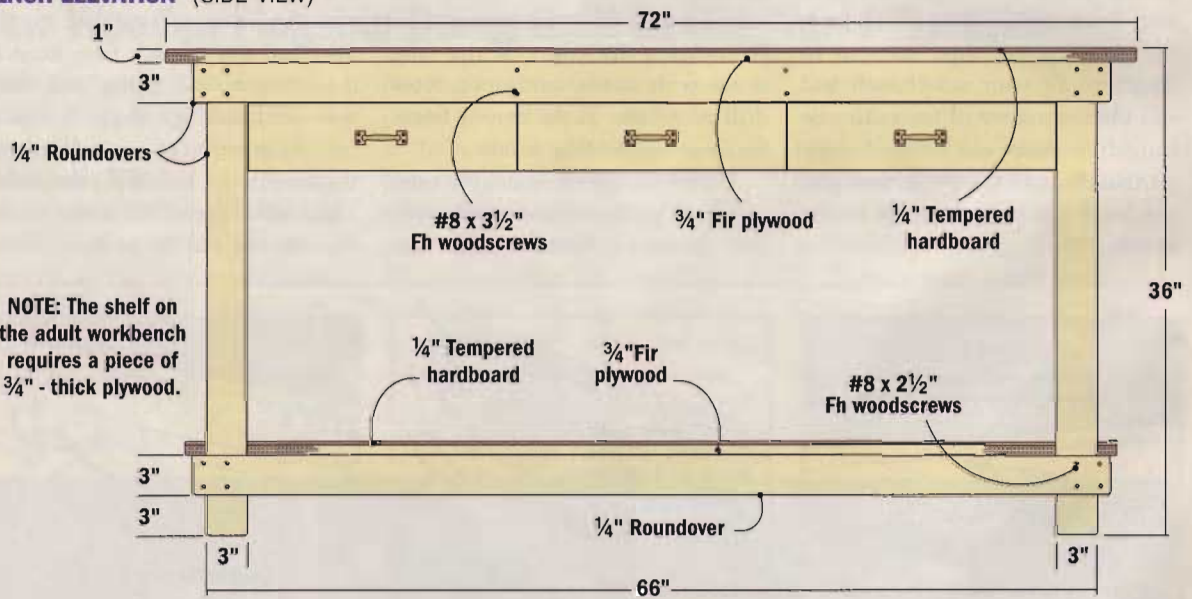
Start work on the frame by ripping stock to width (again, it’s

handy if you have a piece of stock long enough to cut all four frame pieces from). Next, roundover three edges of each frame piece with a 1/4”-radius roundover bit — the fourth edge is going to be rabbeted.

Cut the frame pieces slightly long and equip your table saw with a 1/2”-wide dado blade. Rabbet each frame piece in two passes (FIG. 11).

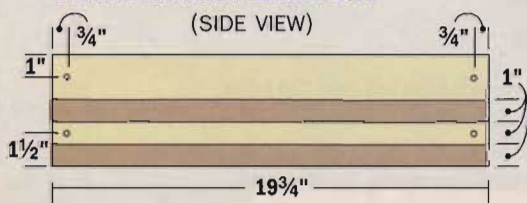
ADULT BENCH MEASUREMENTS

BENCH ELEVATION (SIDE VIEW)

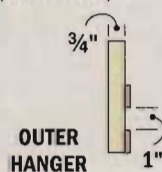


NOTE: The shelf on the adult workbench requires a piece of 3/4" - thick plywood.

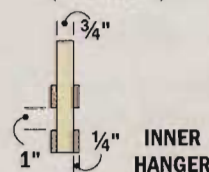
DRAWER HANGER ELEVATIONS



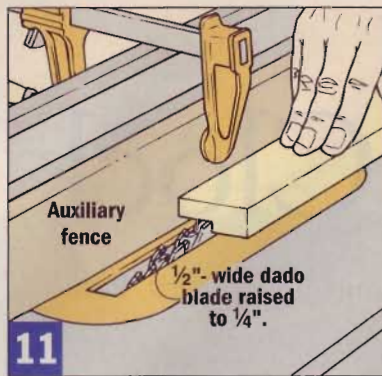
(END VIEW)



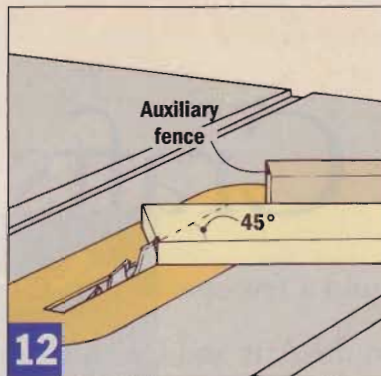
(END VIEW)



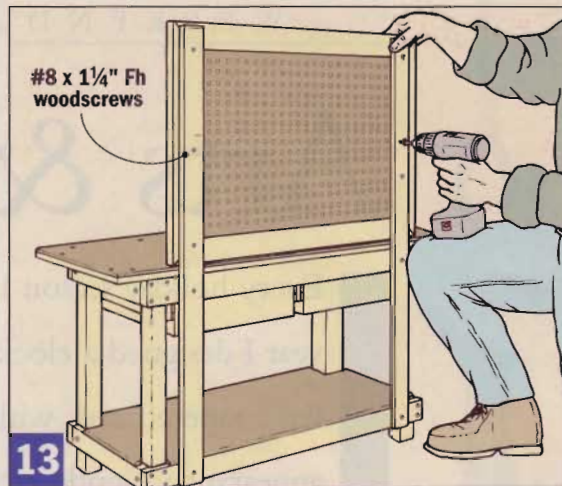
NOTE: The adult workbench requires four drawer hangers — two inner hangers and two outer hangers. The hangers are identical except for a second set of tracks on the inner hangers.



11 Cut the rabbet in the frame pieces in two passes. An auxiliary fence protects your rip fence.



12 Cut the frame pieces long and miter them to length. Dry fit the frame and measure for the pegboard size.




13

Miter the four frame pieces and dry-fit them together (FIG. 12). While you have the frame together, measure for the pegboard panel. Cut the pegboard to size and test fit it in the frame.

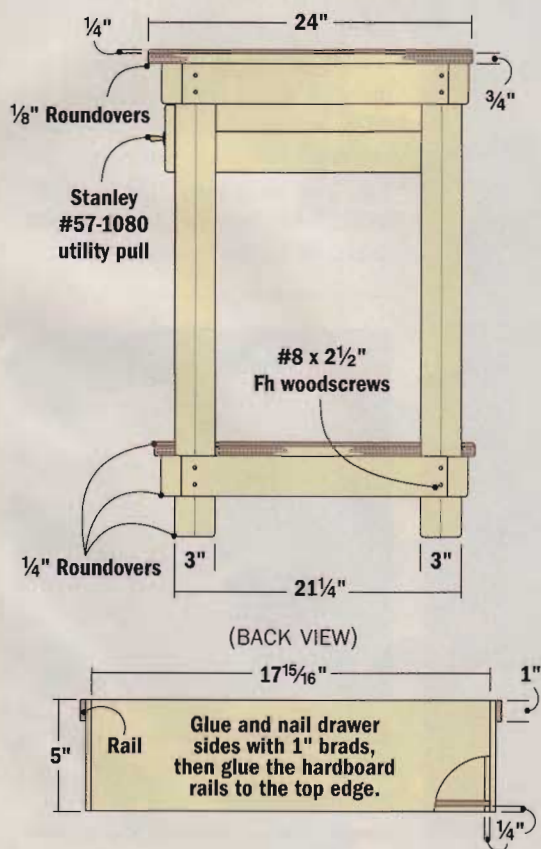
When everything fits, spread glue in the rabbets and along the mitered corners. Assemble the tool board and secure it with clamps.

Now cut the two vertical supports and roundover all their edges. Then screw the supports to the bench. When the glue has set on the tool board, attach it to the vertical supports to complete the construction (FIG. 13).

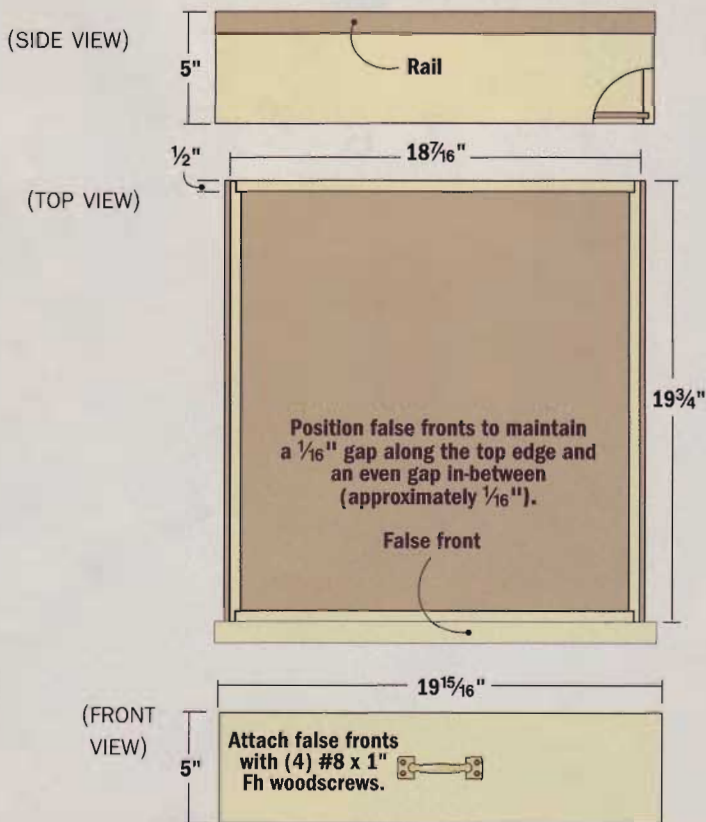
A couple coats of penetrating oil finish on your workbench will make it look great and protect it for a long time to come. That's important since

this sturdy workbench, with all its "real-shop" features, will get a lot of use by your young craftsman. And someday, when your child finally does outgrow it, you can both enjoy the lessons and memories that are recorded in the cuts and gouges that scar the benchtop. The experiences, just like the bench, will be something to build on. 

BENCH ELEVATION (END VIEW)



DRAWER ELEVATIONS



Arts & Crafts Clock

Every holiday season I build a few special gifts for family and friends. This year I designed a clock in the Arts and Crafts style. True to its roots, this clock has a tapered case, with mitered joints between the sides and front for a clean appearance. Gentle arches further echo the style. The dial is a home-spun

design, simply printed on nice parchment paper. For another authentic touch, I built my clock from quarter-sawn white oak, a wood commonly used in the Arts and Crafts era. Cherry would also look nice, but I like the classic look and ray fleck figure of white oak.

When selecting white oak, check each board closely — some boards show more figure than others. You'll need about 5 board feet of 4/4 stock for each clock you build.

As with any gift project, I wanted to keep the construction simple so I could get several done in a short time. To speed up the process I came up with a few tricks. Much of the work was done on the router table, but don't fret if you haven't got one. I've provided plans for a simple router table you can build (see the SKILL-BUILDER on page 69).

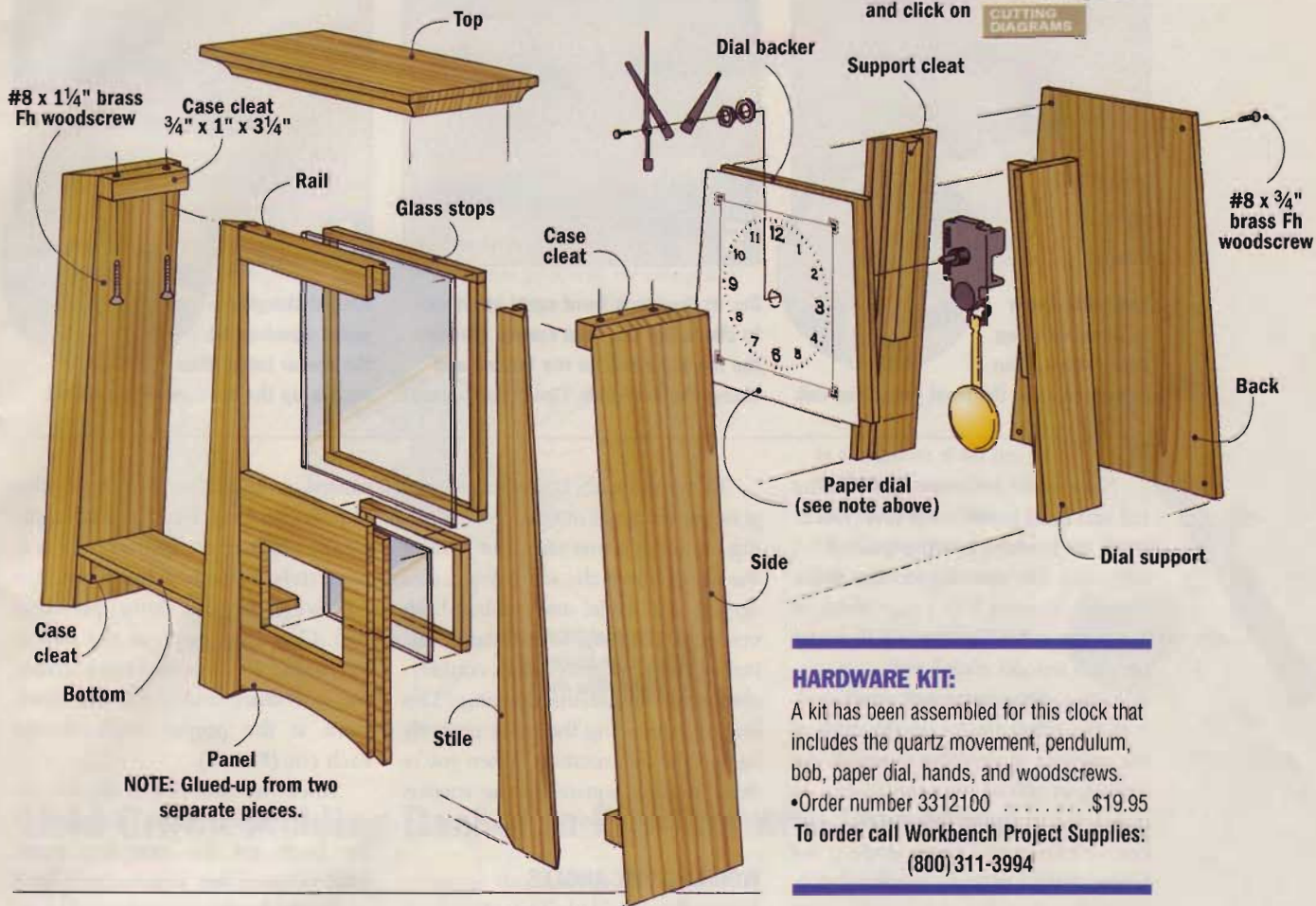


1 Cut ends of pendulum window first, then make multiple passes between. Clean up with a chisel.

CLOCK CONSTRUCTION VIEW

OVERALL SIZE: 15³/₄"H x 11³/₈"W x 5³/₈"D

NOTE: You can download the clock dial in PDF format free from our website. Go to www.workbenchmag.com and click on **CUTTING DIAGRAMS**



HARDWARE KIT:

A kit has been assembled for this clock that includes the quartz movement, pendulum, bob, paper dial, hands, and woodscrews.
 •Order number 3312100\$19.95
 To order call Workbench Project Supplies:
 (800) 311-3994

TIME TO BUILD

Before you start building, take a look at the **CLOCK CONSTRUCTION VIEW** above and the **CLOCK ELEVATIONS** on the following pages. Then start by making the front panel.

The front panel looks like one solid piece with a rectangular hole for the pendulum window. In fact, it's made by gluing two pieces together (**PANEL ELEVATIONS**).

Select two pieces of stock with similar grain, and cut them to size. While you're at it, cut the rail to size, then set it aside (**RAIL ELEVATIONS**).

Clamp the panel pieces together with their ends and one edge aligned (**FIG. 1**). Then install a wood extension on your table saw's miter gauge. Raise the blade to half the pendulum window height (1¹/₄") and machine the opening. You can use a dado blade, but multiple passes with a regular blade works well too.

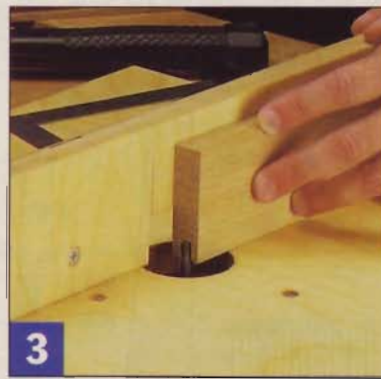
After cleaning up the opening, glue up the front panel (**FIG. 2**).

Now you can prepare stock for the front stiles (**STILE ELEVATIONS**). Cut the pieces to exact length, but leave the stiles an extra 1/4" wide.

Cutting the stopped mortises in the stiles that receive the front panel and rail is easily done at the router table (**FIG. 3**). Install a 1/4"-dia. straight bit, set the fence to center the mortise on the stock, then machine each stile.



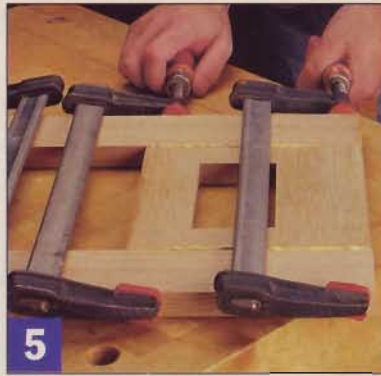
2 Careful grain matching and gluing make the two-part front panel look like a solid piece. Clamp across the joint to help keep the panel flat.



3 Mark your router table fence with the stop locations for each stile mortise. Feed each stile from the right, stopping your cut at the appropriate mark.



4
Test your router table setup using scrap stock, then form tenons on the front panel and rail.



5
Dry fit the clock front parts together to check the fit. Then spread glue in the mortises and on the tenons and clamp the assembly. Check for square.



6
Rabbet the glass panel openings at the router table, then square up the corners with a chisel.

Now you can form tenons on the rail and front panel at the router table (FIG. 4). I used a bearing-guided $\frac{3}{8}$ " rabbeting bit, and aligned the fence with the bearing. Use a push block to guide the rail. Then cut the shoulder on each tenon.

Once the tenons are machined, you can either square up the ends of the mortises in the stiles to match the tenons, or round over the tenons to match the mortises. I chose the latter since it's faster and easier, shaping the tenons with a sanding block.

Now glue up the clock front (FIG. 5). Make sure the rail sits square to both stiles.

To cut the rabbets that receive the glass panels, again use the $\frac{3}{8}$ " rabbeting bit in the router table, but remove the fence. Place the clock front face up on the table, and rabbet both openings (FIG. 6). To maintain control of the workpiece, work counterclockwise around the openings. This keeps you feeding the stock properly against the bit's rotation. When you're done routing, square up the corners of the openings with a chisel.

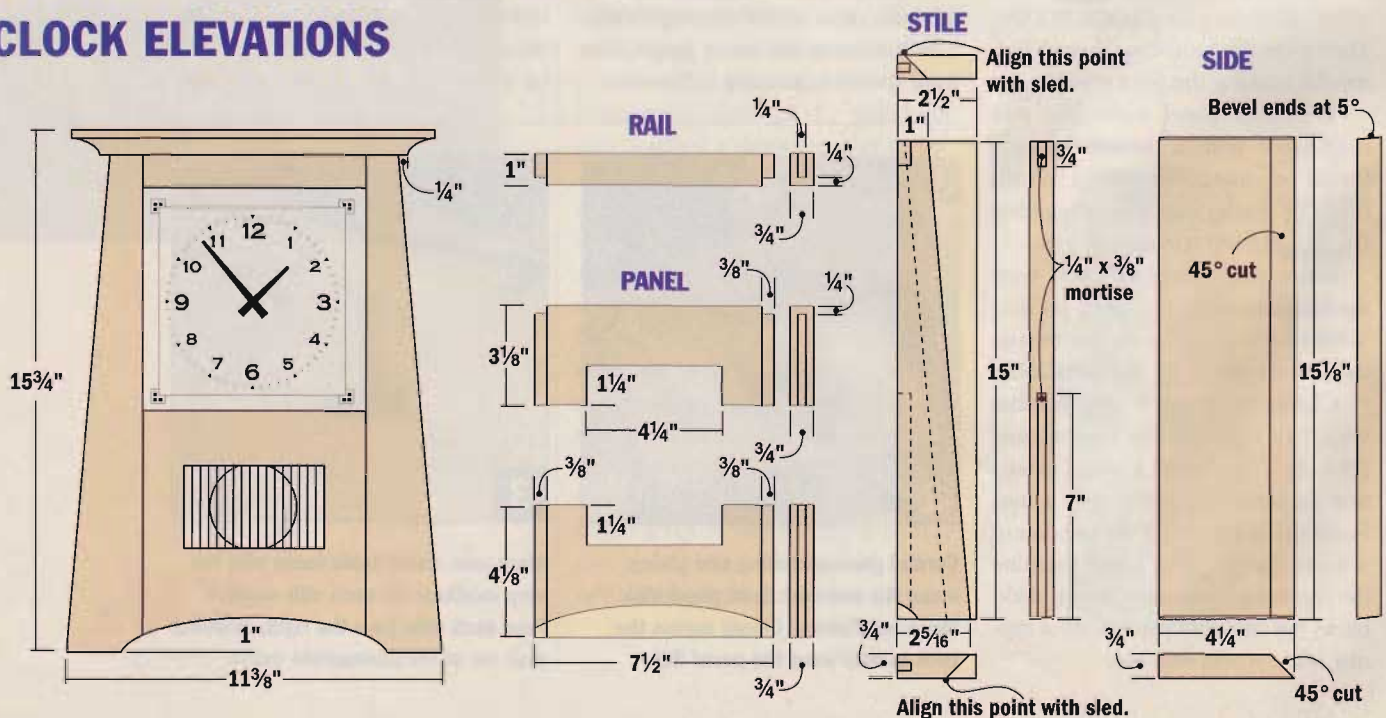
WORKING THE ANGLES

Mitered joints between the front and sides add to the clock's good looks. But because the sides are

canted outward at the base, this requires cutting a compound angle on the clock front. To make the cuts accurately, I attached the front to a 14"-wide by 18"-long plywood sled. One long edge of the sled is beveled at 45°. The sled rides against the saw fence and holds the clock front at the proper angle during each cut (FIG. 7).

Since my saw blade tilts to the right, I positioned the fence left of the blade for the next few steps. This ensures the pieces can't bind under the blade — a potential kick-back hazard. You will have to push downward as you guide the sled to

CLOCK ELEVATIONS





7 Aligning the clock front with the edge of a plywood sled lets you cut the angle for the sides and the 45° bevel in one step. Take it slow for a straight cut.



8 Use your band saw or jig saw to cut the arch opening. Stay just to the waste side of the layout line, then sand the arch smooth.

keep the workpiece from climbing up the blade.

Now mark the taper on the face of each stile (STILE ELEVATIONS), and use a combination square to mark the 45° angles on the ends of each stile. Stick the clock front to the sled using double-faced carpet tape (I prefer the cloth type). Make sure to align your 45° angle lines with the sled's beveled edge. Then cut the first edge of the clock front.

Before you remove the front from the sled, check the bevel with a straightedge to make sure it's flat from end to end. (If it's not, take another pass without moving the fence.)

Then turn the front around, realign it on the sled, and bevel the other edge.

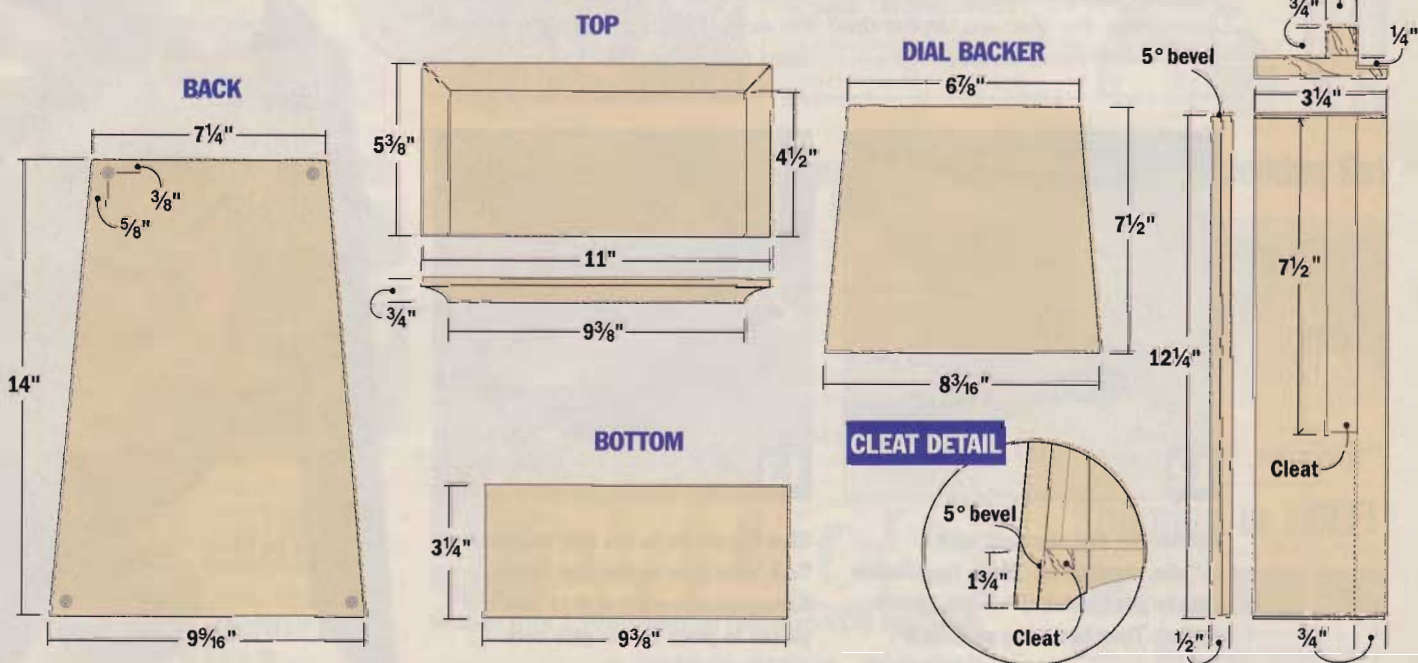
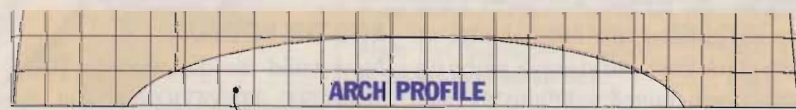
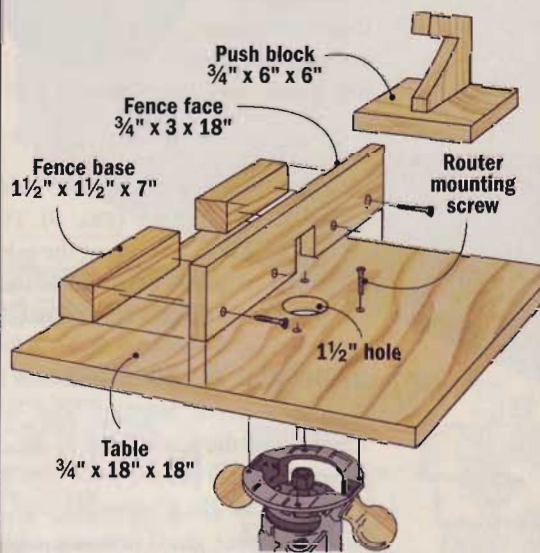
Cutting the arch in the front panel completes the clock front. Enlarge the ARCH PROFILE below to 400%, center it on the clock front, then mark the curve. I cut the arch with a band saw equipped with a 1/4"-wide blade (FIG. 8).

Rough cut stock for the two clock sides, leaving the pieces extra wide and long (SIDE ELEVATIONS).

SKILL-BUILDER

An Easy-to-Build Router Table

A router table doesn't have to be complicated to work well. This one's made from scrap 3/4"-thick plywood. Just use your router's baseplate to mark the bit opening and holes for the mounting screws. The fence is plywood too, with a base made from two sections of ripped-down 2x4. A push block lets you hold pieces square to the fence without need for a miter gauge.

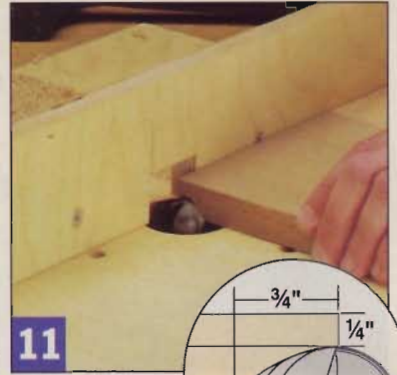




9 Press down on the side as you cut, and guide the stock with a push block. Bevel the ends at 5°.



10 The clock side rests against a tall fence in the gluing jig. Add case cleats after both sides are on.



11 Routing the top's arch profile takes three passes on each edge. Use a push block for support.

Then tilt your saw blade to 45° and rip the sides to width (FIG. 9). Tilt your saw blade to 5° and cut the sides to length. Rip stock to make four case cleats as well (CLEAT DETAIL).

BRINGING IT ALL TOGETHER

Gluing mitered corners can be tough, since the pieces tend to slip. A jig simplifies the process (FIG. 10). It's a piece of 1/4"-thick plywood with a 3/4"-thick fence glued near one edge. To keep from gluing the clock to the jig, line the jig with wax paper. Then spread glue on one mitered edge of the clock front and clamp it to the jig face down, butted tightly to the jig's fence. Put glue on the edge of a mating clock side and clamp it against the fence. After the glue sets, repeat this process with the other side.

With front and sides glued, you can cut the back and bottom (BACK and BOTTOM ELEVATIONS). Glue the cleats and the bottom in place.


The clock top has arched edges to match the arch in the front (TOP ELEVATIONS). I cut the arches at the router table, making multiple passes with a 1"-dia. core box bit (FIG. 11). Sand to remove any routing marks, then secure the top to the case cleat with screws so it overhangs each end equally.

INTO THE INTERIOR

Now build the dial supports (DIAL SUPPORT ELEVATIONS). Cut the supports to size, then rabbet one edge of each (FIG. 12). The dial backer fits between the rabbets and gets support from two cleats (FIG. 13).

I stained all the clock parts with Minwax Dark Walnut stain and applied three coats of oil finish. Then I mounted the dial using artist's spray-mount adhesive, drilled the hole, and installed the movement.

Refrigerator shelf glass purchased from a local glass supplier fills the pendulum window. In front of the dial I installed standard window glass. Thin wood stops hold both pieces of glass in place.

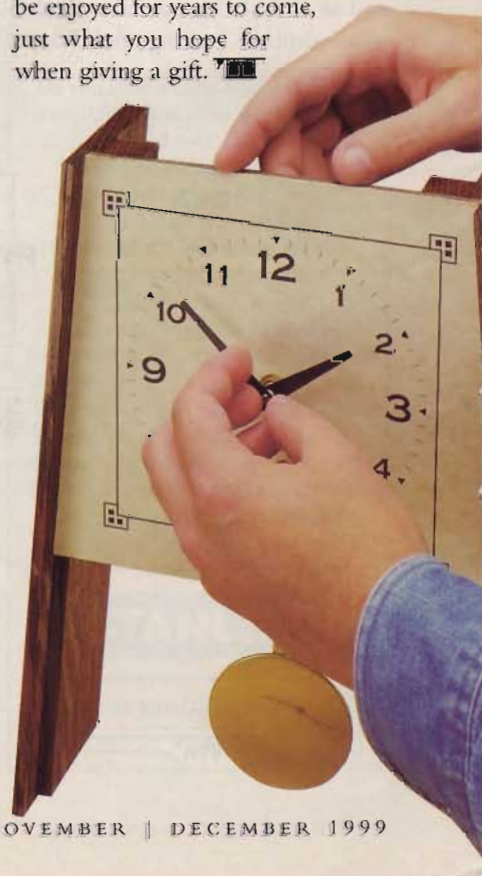
I enjoyed building these clocks almost as much as giving them away. With their classic style I know they'll be enjoyed for years to come, just what you hope for when giving a gift. 



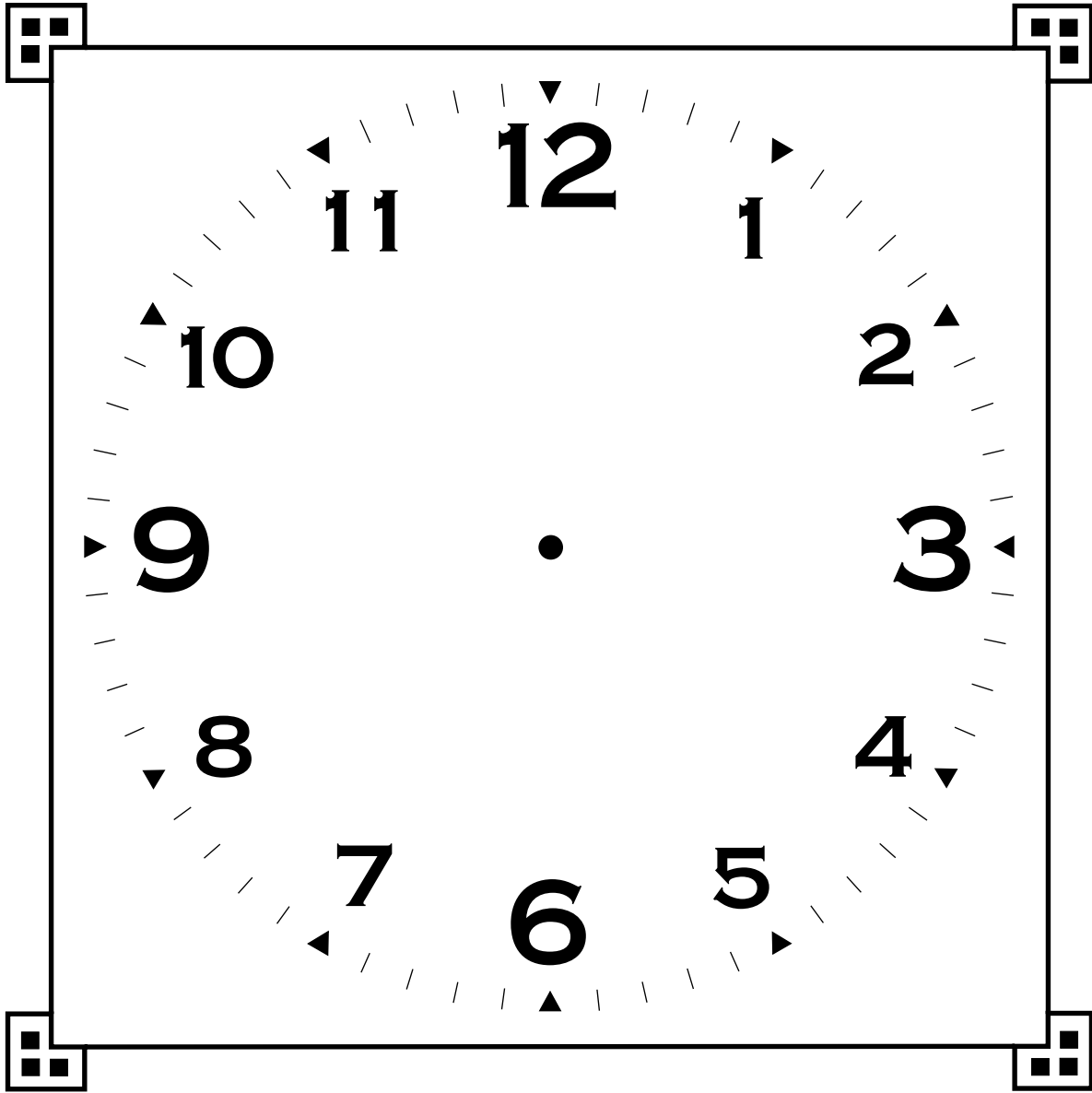
12 Rabbet the dial supports with a 3/8"-dia. straight bit. Make two shallow cuts to get the full 1/4" depth of the rabbet. Then bevel the ends at 5°.



13 Glue the cleats to the dial supports first, then glue on the dial backer. Spring clamps work well to hold the pieces in place as the glue sets.

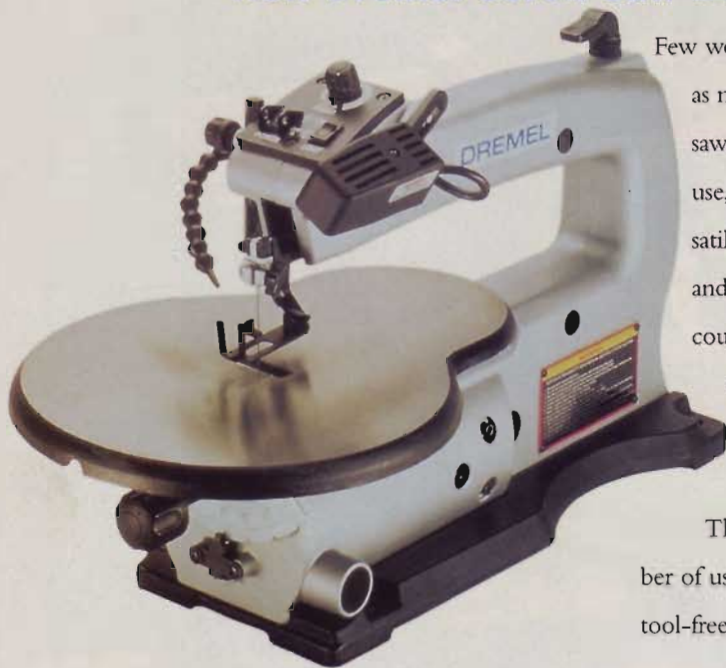


CUT LINE -- Align with top of dial backer



Tools & Shop Gear

New Dremel Scroll Saw Boasts User-Friendly Features



Few woodworking categories have as many enthusiasts as scroll sawing. The machines are safe to use, reasonably priced, and versatile. There are countless books and patterns available and, of course, a large number of saws.

One of the latest to hit the market is the Dremel 1680 Variable Speed Scroll Saw.

This saw incorporates a number of user-friendly features, such as a tool-free blade chuck — a must-have

in my book — that accepts both pinned and plain-end blades.

Controls are all top-mounted, which allows easy reach while sawing.

Speed is variable from 500 to 1,600 cutting strokes per minute. At low and medium speeds, the 1680 uses electronic feedback to maintain the set speed under load.

Retail price for the saw should be around \$230. Call Dremel at (800) 437-3635 or visit the company's web site: www.dremel.com.

Drive Brads with Electricity Instead of Air

Air nailers are handy and versatile tools, but not everyone can justify buying one. One inexpensive alternative is an electric nailer, such as the new Nail Master brad nailer from Arrow Fastener Co.

The Nail Master uses a 10-amp electric firing mechanism to drive

18-gauge brads in three different lengths: $\frac{5}{8}$ ", $\frac{3}{4}$ ", and 1". Moving parts and the nail channel are made from carbon steel for durability. Arrow kept the nailer compact to allow use in hard-to-reach areas, and added a padded, curved handle for a comfortable grip.

Arrow also offers brads in two styles for the nailer. All three lengths are available with brown painted heads, and the 1"-long nails are available in white. Suggested retail price for the Nail Master is \$66. Nails start at \$3 for a box of 500. Contact Arrow Fastener Co. at (201) 843-6906 or on their web site: www.arrowfastener.com.



Wood Glue Paste

Carpenter's Wood Glue Paste from Elmer's is thicker than regular wood-working glue to keep it from running. The paste formula is also designed for easy surface coverage without drips. A 16-oz. container sells for around \$6 from Elmer's Products. Contact the company at (888) 435-6377 or www.elmers.com.



Sharpen Your Bits

When a pencil gets dull, do you throw it away? Of course not. You keep sharpening a pencil until it's too short to use. So why do people throw away drill bits when they get dull? You could resharpen bits too, if you had a handy sharpener.

The Drill Doctor 250 may not be as foolproof as a pencil sharpener, and it certainly costs more, but this device sharpens bits quickly and easily using a diamond wheel.

Sharpening with the Drill Doctor is straightforward. Slip a bit ($\frac{3}{32}$ "- to $\frac{1}{2}$ "-dia.) into the bit holder, insert the bit holder in a guide port above the spinning wheel, and rotate the holder a few times. The bit emerges sharp and ready for action.

Suggested retail price for the Handyman 250 is \$129. For that money, you could buy a lot of cheap bits. But if you like to keep your bits sharp, this device really works. Go to www.drilldr.com or call Darex at (888) 693-7455.

A Welder Designed with DIY in Mind

Hobart, one of the top names in professional welding equipment, has introduced a MIG (or Gas Metal Arc) welder geared toward DIY use.

Dubbed the Handler 135, this portable unit weighs 55 lbs. and runs on standard 110-volt current. It will weld mild steel, stainless, and some types of aluminum from 22-gauge to $\frac{3}{16}$ "-thick.

The Handler's automatic wire feed accepts solid or flux-core wire in a variety of sizes. Drive rolls accommodate three wire sizes to reduce setup changes. A MIG gun,

a 10-ft. length of work cable, a regulator, extra contact tips, and a gas hose are included as well. Expect a price under \$500. Contact Hobart at (877) 462-2781, or on the web at www.hobartwelders.com.

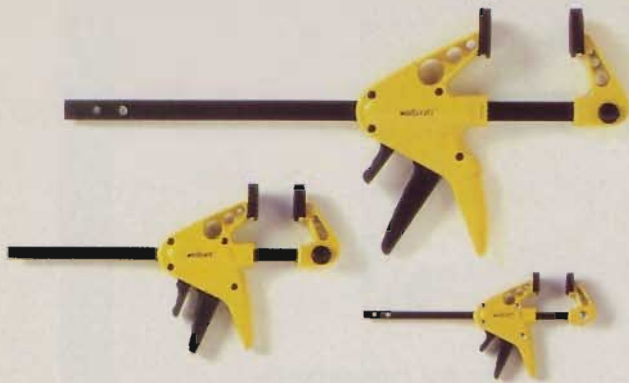


Versatile 18-Volt Drills

Milwaukee Electric Tool's Contractor Cordless 18-volt drills are available in T-handle or pistol-grip styles. Each has a $\frac{1}{2}$ " capacity chuck, a 20-position drive clutch, two speeds, and an electric brake.

The drills also feature new 2.0 amp hour batteries that slide onto

the drill from the front or back. This changes the drill's balance to accommodate working conditions. Both the model 0521-22 Pistol-Grip and the 0522-22 T-handle drill sell for around \$350. Contact Milwaukee at (877) 279-7819 or on the web at www.mil-electric.tool.com.



Wolfcraft's Double-Action Bar Clamps

Wolfcraft's Quick-Jaw clamps differ from other ratcheting-lever clamps. On these, the large lever moves the clamp head to increase clamping pressure, similar to other clamps. The small lever, though, is more than a

release. It ratchets too, relieving pressure as you squeeze. The clamps also work as spreaders. Capacities range from 4" to 36". Prices run from \$8 to \$28. Visit www.wolfcraft.com, or call Wolfcraft at (630) 773-4777.

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The Sand Shark

If you've got a sanding chore that you want completed in a hurry, take a look at the SandShark from Nicholson (a division of Cooper Tools). This tool has a file steel plate mounted to a palm-grip handle. The two-sided plates are available with coarse grit (equal to 60-grit sandpaper) on both faces, or with medium (100-grit) on one face and fine (150-grit) on the other.

Nicholson claims the coarse plate removes material up to 25 times faster than 60-grit paper, and lasts as long as 300 sheets of sandpaper. Retail price is around \$20. Call Cooper Tools at (919) 781-7200 or visit www.coopertools.com.

Home & Yard Products

Raised Panel Kits Add Style to Stairways



A couple of years ago we told you about the raised panel wainscoting systems made by New England Classic Interiors. The handsome systems are made of engineered wood substrates covered with Grade A select wood veneers in oak, maple, and cherry, or with a paintable surface. Precut pieces and joinery make installation easy.

Now the company has introduced the Stair PanelSet, a component system designed to make

adding frame-and-panel wainscoting just as easy on stairways.

The sets have precut components and joinery, and accommodate stair angles from $35\frac{1}{2}^\circ$ to $38\frac{1}{2}^\circ$ — 80% of common residential stair angles.

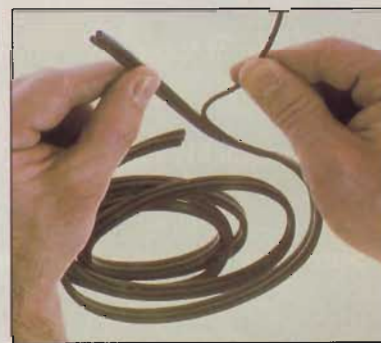
You can get a price and materials quote for your application through the company's free design service. It's available on-line at www.newenglandclassic.com or by calling New England Classic Interiors at (888) 880-6324.



Roll Out a Place to Leave Notes

MemoBoard and ChalkBoard from Con-Tact (the same folks who produce adhesive shelf liners) make it possible to put note boards wherever you need them. Both products have adhesive backing that sticks to most surfaces, but still allows easy removal or repositioning.

ChalkBoard is available in black and works with standard chalk and erasers, while the white MemoBoard is designed for dry-erase markers. Each roll is 18"-wide by 6-ft. long, and retails for around \$6. Call Con-Tact at (877) 353-6440, or check out www.con-tact.com.



Easy Screen Spline

Multi-Spline screen retaining spline from Elgar Products simplifies getting the correct diameter spline when replacing and repairing screens. Each package contains 20-ft. lengths of the three most common diameters. Multi-Spline sells for under \$3. You can contact Elgar at (800) 321-4970 or www.elgar-usa.com.



Shatter-Resistant Fluorescent Bulbs

Cov-R-Guard fluorescent bulbs from General Electric eliminate the dangers of sharp glass shards left behind by broken bulbs. Cov-R-Guard bulbs surround the glass tube with a polycarbonate casing that

won't break, keeping the glass contained. Cov-R-Guard bulbs will be available in lengths from 18" to 96", and in 15- to 40-watt ratings, starting around \$3. Visit www.ge.com or call GE at (800) 435-2677.

Three-In-One Yard Care Machine

The new Trail Boss from GrassMasters holds promise for those who like outdoor power equipment but hate storing and maintaining multiple machines. The Trail Boss consists of a four-stroke Tecumseh engine mounted to a set of handles and self-propelled wheels. Out front, the machine has a power takeoff that accepts a number of different accessories.

Currently, GrassMasters offers a 28"-wide sickle bar mower, a four-tine tiller, a garden plow, plus a

snow plow. The company is also working on a snow blower attachment that should be available sometime this winter. To swap accessories, you simply detach one and clip on another.

Retail price for the Trail Boss (without any accessories) is about \$800. Accessories cost around \$200 each. Call GrassMasters at (888) 810-5050 or check out their web site: www.grassmasters.com.



Fire Fighting Foam

The Fireout Foam extinguisher from Kidde Safety fights fire using foam rather than the dry chemicals found in most extinguishers.

According to the manufacturer, the foam smothers fire faster than dry chemicals, and it prevents reignition by forming a film on surfaces. The extinguisher is effective against common household fires including wood, oil, gasoline, grease, and electrical. The foam cleans up with water. Expect a price near \$50. Call Kidde at (800) 654-9677 or go to www.kidde.com.

Weather Shield Furniture Door Makes Moving Easy

To simplify moving furniture and appliances in and out of a house, Weather Shield Windows and Doors has introduced the Furniture Door Entry System. The door features a full-length, hinged sidelite which swings open when you need extra width. The rest of the time, the sidelite locks in place, allowing normal door operation.

By opening the sidelite, you can increase the door opening by as much as 40%, depending on the size door you install. Using a 36"-wide door with a 14"-wide sidelite, for example, gives you a

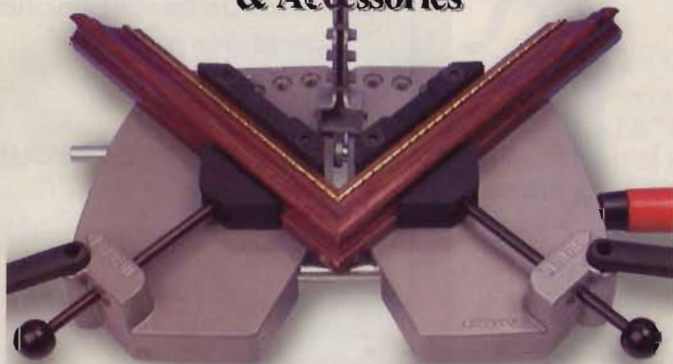
total opening of 49", instead of 35" with the door only.

Currently, the Furniture Door is available in Weather Shield's ProShield line. This means steel door panels with a polyurethane core. The frame is all vinyl. Options include insulated and low-E glass, as well as decorative brass caming (dividers). You can specify that the door and sidelite swing inward or outward. For a 36"-wide door set, such as the one shown, expect to pay around \$1,350. Call Weather Shield at (800) 477-6808 or visit www.weathershield.com.



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Timbered Putters

I Golf and woodworking have much in common. It takes years to develop real skill at either one, and both will alternately bring you

joy and frustration. It seems perfectly natural, then, that Russ Fisher would combine his love of both hobbies into a single craft to create The Timbered Putter.

Fisher builds putters with hardwoods such as cocobolo, black walnut, and ebony. Each finished putter represents 50 painstaking steps and nearly four hours of work. The putter heads are shaped and sanded freehand, with only Fisher's keen eye as a guide. He tapers the wood shafts on a table saw and rounds them with a cabinet scraper. The Timbered Putter trademark, along with the date the putter was built, is laser engraved in the sole of each club head. A clear epoxy finish protects the wood without changing its natural color.

Each club is one-of-a-kind, but all are meant to be used. Wood-shafted clubs are perfect for office putting. Clubs with metal shafts are suitable for the golf course. They all look great on display.

For more information, contact Russ Fisher at (515)287-6817 or visit his website at www.timberedputtergolf.com.

