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*Three table saw accessories: Small-Piece Clamp, Push Block, and Table Saw Jointing.*

## Elu Plunge Router \_\_\_\_\_ 10

*The Elu #3338 plunge router is put to the test and comes out a real winner.*

## Crosscutting \_\_\_\_\_ 12

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## Table Saw Cabinet \_\_\_\_\_ 14

*This simple cabinet mounts to the side of a table saw providing storage for blades, a rip fence, various accessories, and even a miter gauge.*

## Router Table \_\_\_\_\_ 16

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## Book Review \_\_\_\_\_ 30

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## Radial Arm Saw Fence \_\_\_\_\_ 7

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## Combustibles \_\_\_\_\_ 10

*How to prevent spontaneous combustion from occurring in your shop. Also, tips on safe disposal of finishing supplies and materials.*

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## Storage System \_\_\_\_\_ 16

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## Joiner's Mallet \_\_\_\_\_ 22

*Laminated construction is combined with lead weights to create a mallet with excellent balance and heft.*

## Hand-Cut Mortises \_\_\_\_\_ 26

*The right tools coupled with a simple technique will have you cutting mortises by hand in no time.*

## Shop Solutions \_\_\_\_\_ 28

*Five shop-tested tips: A Countersink and Bit Organizer, Framing Square Stop, Finishing Stand-Offs, Radial Arm Saw Depth Stop, And an Idea for Gluing-Up.*

## Soss Hinges \_\_\_\_\_ 30

*A brief history, applications, and tips on installation.*

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## Slip-on Auxiliary Fence \_\_\_\_\_ 4

*This auxiliary fence slips over your rip fence so you can cut rabbets or support tall workpieces.*

## Bevel Grinding Jig \_\_\_\_\_ 6

*Grinding a precise, even bevel on a chisel or plane iron is easy once you've built this handy jig.*

## Router Trammel \_\_\_\_\_ 8

*Cut perfect circles or arcs with your router and this shop-made trammel.*

## Tool Carry-All \_\_\_\_\_ 10

*A removable tray for small jobs and a storage tray for organizing parts and hardware are just two of the features of this handy Carry-All.*

## Plate Joinery \_\_\_\_\_ 16

*Make tight-fitting joints quickly and easily by cutting matching slots and then gluing in a wood "biscuit."*

## Plate Joiners \_\_\_\_\_ 20

*A review of four plate joiners priced for the home workshop: Ryobi, Freud, Porter-Cable, and Skil.*

## Clamping Station \_\_\_\_\_ 22

*A flexible clamping station for gluing-up perfectly flat panels and frames. And it doubles as an assembly area.*

## Shop Solutions \_\_\_\_\_ 26

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## Toggle Clamps \_\_\_\_\_ 28

*A look at these versatile clamps along with tips and ideas on how to use them in your shop.*

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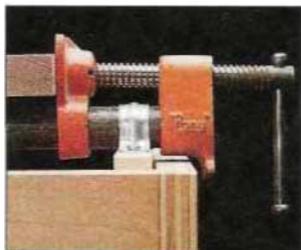
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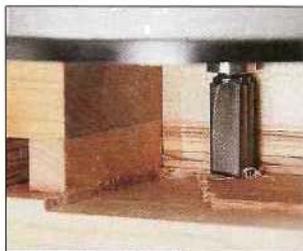


*Clamping Station* page 22

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## Hinge Mortising Jig \_\_\_\_\_ 4

All it takes to make perfect hinge mortises is a router and this simple jig.



Hinge Mortising Jig page 4

## Thickness Sanding Jig \_\_\_\_\_ 8

Sanding thin wood so it's smooth and uniform in thickness is easy with this jig for your drill press.



Thickness Sanding Jig page 8

## Shop-Made Drum Sander \_\_\_\_\_ 11

A bolt, some toy wheels, and a piece of PVC pipe are all you need to make your own drum sander.

## Sharpening Hand Saws \_\_\_\_\_ 12

There's nothing mysterious to sharpening a hand saw. All it takes is a few simple tools and a little practice.



Sharpening Saws page 12

## Panel Saw \_\_\_\_\_ 16

This shop-built panel saw allows one person to easily crosscut or rip a full sheet of plywood or Masonite. It's made with common materials and hardware.

## Panel Saw Tune-Up \_\_\_\_\_ 24

Tips on adjusting the panel saw to make precise cuts every time.

## Motor Vibration \_\_\_\_\_ 26

Some quick tips to reduce troublesome vibration in belt-driven machines.

## Shop Solutions \_\_\_\_\_ 28

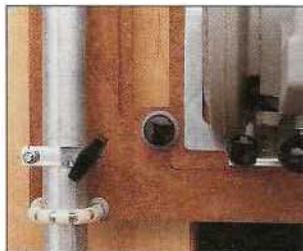
Five shop-tested tips: Saw Blade Storage Rack, Edge Jointing Tip, Installing Threaded Inserts, Clamping Irregular Shapes, and File Handles.

## Combination Screws \_\_\_\_\_ 30

A unique thread design and recess in the head make these screws the perfect choice for the shop.

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## Small-Piece Miter Box \_\_\_\_\_ 4

*Cut tight-fitting miters on small pieces of trim with this shop-made miter box.*



*Small-Piece Miter Box page 4*

## Small Shop Tips \_\_\_\_\_ 8

*Five space-saving tips to make your woodworking shop more comfortable and efficient.*

## Tool Handles \_\_\_\_\_ 10

*Manufactured handles are designed so "one size fits all." A custom-turned handle looks and feels better.*



*Tool Handles page 10*

## Turning Jig \_\_\_\_\_ 14

*You don't have to own a lathe to turn wood. This simple jig lets you turn small projects on your drill press.*

## Roll-Around Shop Cart \_\_\_\_\_ 16

*Pegboard panels and pull-out trays combine to create much-needed storage space. Adding casters converts the cart into a mobile work surface.*



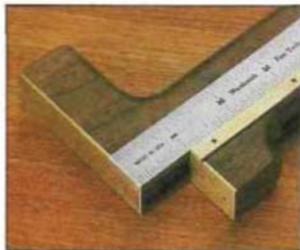
*Shop Cart page 16*

## Stub Tenon & Groove \_\_\_\_\_ 22

*The secret to this strong and simple joint is to glue a man-made panel into the grooves of a frame.*

## Adjustable Set-Up Gauge \_\_\_\_\_ 24

*This shop-built precision gauge ensures accurate height, depth, and distance measurements.*



*Set-Up Gauge page 24*

## Shop Solutions \_\_\_\_\_ 28

*Five shop-tested tips: Drilling Tip, Scroll Saw Blade Organizer, A Tip for Turning, Squaring a Miter Gauge, and Pads for C-clamps.*

## Lumber Thickness \_\_\_\_\_ 30

*Find out why saw mills, lumber yards, and retail outlets often use different terms to designate lumber thickness.*

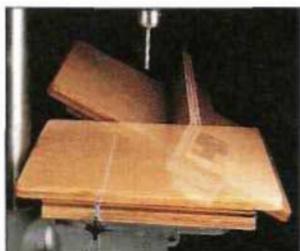
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## Tilting Drill Press Table \_\_\_\_\_ 4

A tilting table, an adjustable fence, and a replaceable insert make it easy to drill straight or angled holes.



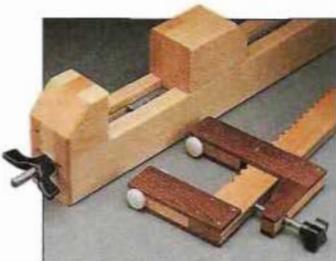
Drill Press Table page 4

## Adjustable Stop Block \_\_\_\_\_ 8

This stop block is ideal for making stopped cuts on a router table, band saw, or drill press. It's "micro-adjustable" so you can fine tune the position for an exact cut.

## Forstner Bits \_\_\_\_\_ 10

Guided by its rim instead of a centerpoint, a Forstner bit cuts near perfect flat-bottomed holes at any angle.



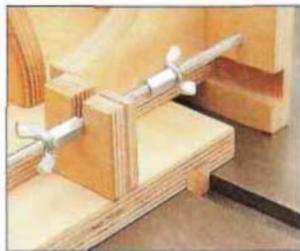
Shop-Built Clamps page 12

## Shop-Built Clamps \_\_\_\_\_ 12

Two clamps you can build at a fraction of the cost of store-bought clamps. One for gluing up panels and the other for quick clamping jobs.

## Table Saw Tenoning Jig \_\_\_\_\_ 16

Precision tenons are easy with this shop-made jig for your table saw. It features a unique double-stop so you can cut both sides of a tenon without flipping the workpiece.



Tenoning Jig page 16

## Tips for Cutting Tenons \_\_\_\_\_ 24

From stock preparation and layout, to cutting the cheeks and shoulders, these helpful tips will show you how to cut a tenon that fits perfectly.

## Shop Solutions \_\_\_\_\_ 28

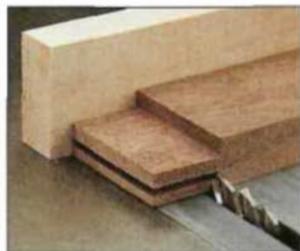
Five shop-tested tips: Zero Clearance Insert, Depth Gauge, Cut-off Jig for a Circular Saw, Squaring a Mitered Corner, and a Tip for Mortising Hinges.

## Knock-Down Fittings \_\_\_\_\_ 30

All it takes to build furniture that's easy to knock down and put back together again is the right hardware.

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Tenon Cutting Tips page 24

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## Raised Panel Jig \_\_\_\_\_ 4

*Rout a perfect raised panel door or drawer using a router, a straight bit, and this shop-made jig.*



Raised Panel Jig page 4

## Block Plane Tips \_\_\_\_\_ 8

*From planing end and edge grain to trimming small pieces, here's a few tips that will provide crisp, clean cuts every time.*

## Sanding a Surface Flat \_\_\_\_\_ 10

*All it takes to produce a perfectly flat surface is a belt sander and four simple steps.*



Keyless Chucks page 14

## Rust Removal \_\_\_\_\_ 12

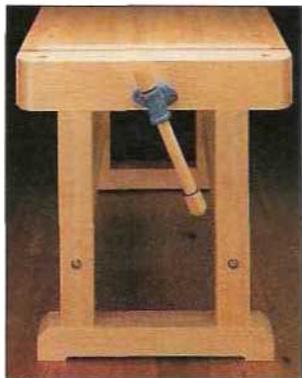
*Practical solutions for removing rust and restoring tools to a usable condition.*

## Keyless Chucks \_\_\_\_\_ 14

*Changing drill bits without a chuck key is quick and easy with this handy accessory for your portable drill.*

## Workbench \_\_\_\_\_ 16

*This workbench features a solid base that knocks down easily and a top that's built up of plywood and thin hardwood strips.*



Workbench page 16

## Shop-Made Vise \_\_\_\_\_ 23

*A massive wood face, iron guide rods, and a manufactured vise screw combine to provide even clamping pressure that holds a workpiece tight.*

## Shop Solutions \_\_\_\_\_ 28

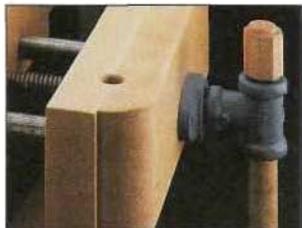
*Four shop-tested tips: Dowel Cutting Jig, Shop-Made Bench Clamp, Rip Fence Alignment Gauge, and a Glue Brush Tip.*

## Board Footage \_\_\_\_\_ 30

*Calculating board feet takes the guesswork out of determining the cost of a project.*

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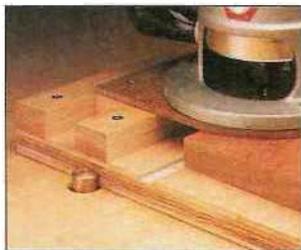


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## Router Jointer \_\_\_\_\_ 4

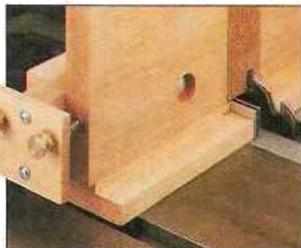
All it takes to get a perfectly straight edge on a workpiece is a hand-held router and this shop-made jig.



Router Jointer page 4

## Box Joint Jig \_\_\_\_\_ 6

This precision-made jig produces tight-fitting box joints. The secret is a micro-adjustment system that lets you sneak up on the perfect fit.



Box Joint Jig page 6

## Making Box Joints \_\_\_\_\_ 12

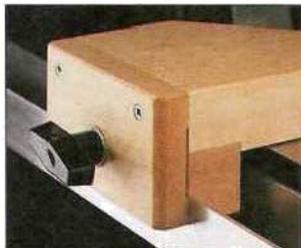
Professional looking box joints are easy to make with this simple step-by-step approach.

## Sharpening Brad Point Bits \_\_\_\_\_ 14

A file and a few basic techniques are all you need to restore the edge on your brad point bits.

## Band Saw Fence System \_\_\_\_\_ 16

Make perfectly straight cuts on your band saw with this rock-solid fence. It features a built-in clamping system, an adjustment for drift, and two shop-made accessories.



Band Saw Fence page 16

## Sliding Bevel Gauge \_\_\_\_\_ 22

Brass and wood combine to produce a fine tool that's both handsome and functional. Plus, some special techniques for working with brass and wood.



Sliding Bevel Gauge page 22

## Shop Solutions \_\_\_\_\_ 28

Seven Shop-Tested Tips: Dust Collector, Assembly Surface, Storing Waterstones, Auxiliary Fence Tip, Keyless Chuck Update, Drill Bit Spacer, and a Blade Guard for Hand Saws.

## Abrasive Pads \_\_\_\_\_ 30

Create a mirror-smooth finish on your projects by using abrasive pads in between coats.

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## Jointer Push Block \_\_\_\_\_ 4

The unique design of this push block allows you to safely flatten the face of a board.

## Vertical Raised Panel Jig \_\_\_\_\_ 6

All it takes to rout a professional-looking raised panel is this shop-made jig and a vertical raised panel bit.

## Router Tune-Up \_\_\_\_\_ 10

A close look at router maintenance problems. And tips on keeping your router in top shape.

## Edgebanding Plywood \_\_\_\_\_ 12

Three different types of veneer edging let you hide the exposed edges on a plywood project.

## Portable Planer Stand \_\_\_\_\_ 16

An adjustable outfeed extension provides support for long boards. To make it easy to store, the extension "knocks down" and the stand tilts and rolls on a set of wheels.

## Table Saw: Ripping \_\_\_\_\_ 22

Practical tips and shop-built accessories for ripping a workpiece safely and accurately on the table saw.

## Tool Storage \_\_\_\_\_ 24

A place for everything, and everything in its place. That's the idea behind this easy-to-build storage system for your portable power tools.

## Shop Solutions \_\_\_\_\_ 28

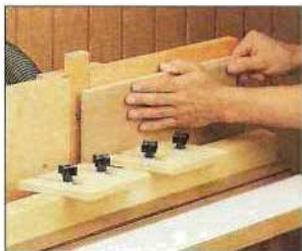
Five Shop-Tested Tips: Router Bit Depth Gauge, An Adjustment Block for your Router Table, Installing Threaded Inserts, Squaring-Up Large Panels, and a Cork-Bottom Sanding Block.

## Lumber Grades \_\_\_\_\_ 30

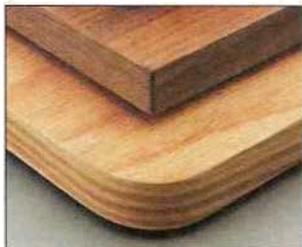
You can save money on materials for a project by using the different grades of lumber to your advantage.

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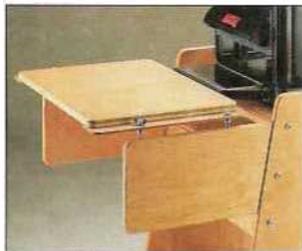
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Edgebanding page 12



Planer Stand page 16



Tool Storage page 24

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## Indexing Jig \_\_\_\_\_ 4

This jig for your router table lets you quickly and accurately position the fence. The fence can be moved in precise  $\frac{1}{16}$ " increments or fine-tuned for an exact cut.

## Drill Bit Case \_\_\_\_\_ 10

Protect and organize your twist drill bits with this simple case made from wood salvaged from the scrap bin.

## Perfect Miters \_\_\_\_\_ 12

All it takes to cut perfect miters on the table saw is a few basic adjustments and our simple cutting sequence.

## Lathe Stand \_\_\_\_\_ 16

A heavy bench with a unique sand-filled beam virtually eliminates lathe vibration. Two drawers keep lathe accessories handy. There's even plans for an optional tool rack.

## Layout Techniques \_\_\_\_\_ 22

Practical tips and techniques to increase accuracy and simplify measuring and layout.

## Sanding Products \_\_\_\_\_ 26

A look at new sanding products. New types of abrasives. New sanding belts. Even "metal sandpaper."

## Shop Solutions \_\_\_\_\_ 28

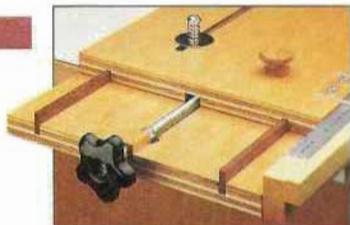
Six Shop-Tested Tips: Pipe Clamp Edge Vise, Supports for Cutting Plywood, Auxiliary Band Saw Fence, a Tip for Rust Removal, Glue Brush Tip, and a Shop-Made Cord Tie.

## Full-Extension Drawer Slides \_\_\_\_\_ 30

Adding a pair of full-extension slides is an easy way to increase the usable space of a drawer, tray, or shelf.

## Sources \_\_\_\_\_ 31

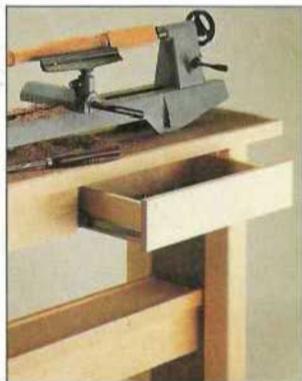
Hardware, project supplies, and mail order sources for the projects in this issue.



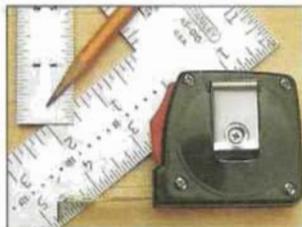
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Drill Bit Case \_\_\_\_\_ page 10



Lathe Stand \_\_\_\_\_ page 16



Layout Techniques \_\_\_\_\_ page 22

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## Drill Press Table Counterweight \_\_\_\_\_ 4

All it takes is finger pressure to move your drill press table once you've installed this simple counterweight.

## Pipe Clamp Rack \_\_\_\_\_ 6

Keep your pipe clamps organized and right at hand with this easy to build wall-mounted rack.

## Radial Arm Saw Return \_\_\_\_\_ 7

Make your radial arm saw safer to use with this accessory. It returns the blade after each cut and keeps it there.

## Random-Orbit Sanders \_\_\_\_\_ 8

A look at random-orbit sanders. What makes them different, how they work, and techniques for sanding.

## Hand Plane \_\_\_\_\_ 10

There's nothing complicated about making your own hand plane. Especially when you start with a special blade set and build the plane around it.

## Portable Miter Saw Station \_\_\_\_\_ 16

You can make your power miter saw safer and more accurate to use with this work station. A unique design offers support for long stock, yet knocks down easily for storage.

## Sharpening with Sandpaper \_\_\_\_\_ 24

You can achieve a razor sharp edge on your hand tools with this quick and inexpensive technique.

## Shop Solutions \_\_\_\_\_ 28

Seven Shop-Tested Tips: Frame and Panel Jig, Sanding Belt Storage Rack, Tip for Clamping Edging, Plugging Mortises, Peel and Stick Veneer Tip, No-slip Waterstones, and a Guide for Power Sanding.

## Plywood Grades \_\_\_\_\_ 30

What the various grades of hardwood plywood mean. And how to use them to your advantage.

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Hand Plane page 10



Miter Saw Station page 16



Sharpening page 24

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## Straight-Edge Cutting Guide \_\_\_\_\_ 4

A unique clamping system makes it easy to guide your circular saw for straight and accurate cuts.



Cutting Guide page 4

## Drill Press Foot Pedal \_\_\_\_\_ 8

This foot pedal frees up your hands so that you can accurately position a workpiece for drilling.



Foot Pedal page 8

## Dado Blades \_\_\_\_\_ 10

A look at the different types of dado blades. Plus some new variations on traditional blades.

## Tips on Using Dado Blades \_\_\_\_\_ 12

Tips and techniques to make clean and accurate cuts with a dado blade.

## Changing Jointer Knives \_\_\_\_\_ 14

All it takes to change and adjust the knives on your jointer is a straightedge and a little patience.

## Disk Sander \_\_\_\_\_ 16

Get professional quality results with this shop-built bench-top disk sander. It features a large, flat table that tilts for angled sanding, and a built-in vacuum port.



Dado Blades page 10

## Disk Sander Stand \_\_\_\_\_ 25

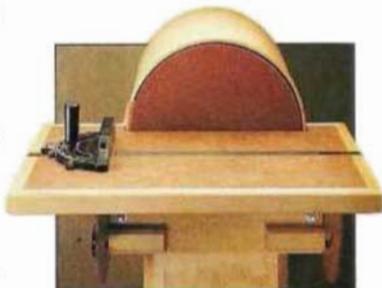
This stand provides a stable foundation for the disk sander. A hollow column can be filled with sand or bricks to "anchor" the stand in place and reduce vibration.

## Shop Solutions \_\_\_\_\_ 28

Six Shop-Tested Tips: Knock-Down Sawhorse, Alternate Bench Vise, Clamp Pad, Allen Wrench Organizer, Tip for Cutting Metal Threads, and a Leather Strop Tip.

## T-nuts \_\_\_\_\_ 30

These inexpensive knock-down fasteners hold a project together securely without stripping out. And best of all, they're readily available at most hardware stores.



Disk Sander page 16

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## Router Bit Storage Cabinet \_\_\_\_\_ 4

You can both protect and organize your router bits by building this handy storage cabinet.

## Scroll Saw Blades \_\_\_\_\_ 8

A look at the different types, styles, and sizes of blades that give the best results when using a scroll saw.

## Band Saw Set-Up \_\_\_\_\_ 10

Changing the blade on a band saw is easy when you follow these step by step instructions. We'll take you through tracking, tensioning, and adjusting the blade guides.

## Dust Collection System \_\_\_\_\_ 14

This shop-made dust collector features a two-stage system. The first stage removes large chips. And the second stage filters out fine dust particles.

## Cyclone \_\_\_\_\_ 15

Plywood and metal flashing combine to make the first stage of the dust collector — a cyclone that funnels large chips into a roll-around chip bin.

## Filter Box \_\_\_\_\_ 22

By wrapping an inexpensive fabric around a simple frame, you can form the second stage of the dust collection system which filters out fine dust particles.

## Pipe & Hook-Ups \_\_\_\_\_ 24

All it takes to connect your power tools to our dust collector or your existing collector is a system of pipes and these shop-built hook-ups.

## Shop Solutions \_\_\_\_\_ 28

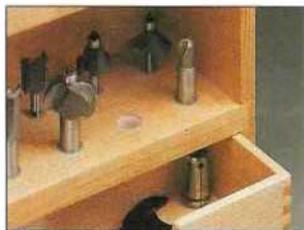
Six Shop-Tested Tips: Toggle Clamp Stop Block, Shop-Made Utility Knife, Measurement Tip, a Tip for Rubbing Out a Finish, Sawhorse with Insert, and a Tip for Installing a Strike Plate.

## Plywood Veneers \_\_\_\_\_ 30

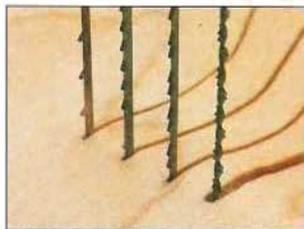
The appearance and cost of a sheet of plywood can vary greatly depending on how the face veneer is cut.

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Scroll Saw Blades page 8



Band Saw Set-Up page 10



Dust Collector page 14

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## Miter Gauge Fence \_\_\_\_\_ 4

Make quick and accurate cuts on the table saw with this shop-built fence for your miter gauge.



Miter Gauge Fence page 4

## Anti-Kickback Bits \_\_\_\_\_ 6

An in-depth look at how anti-kickback router bits work. Also, a comparison of the different bits available.



Chisel Plane page 8

## Chisel Plane \_\_\_\_\_ 8

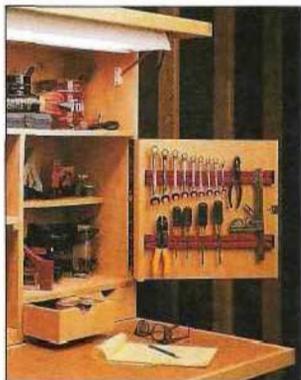
Cleaning up hard to reach places (like the corners of a drawer or panel) is easy with a chisel plane. All it takes to make your own is some simple hardware, a blade, and a scrap of wood.

## Stock Preparation \_\_\_\_\_ 12

The foundation of a quality project can be traced back to how carefully the stock is prepared before the actual building begins.

## Fold-Down Work Center \_\_\_\_\_ 16

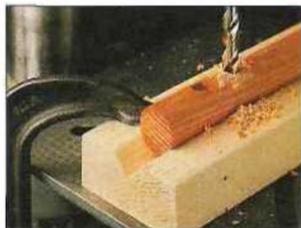
This wall-mounted work center offers plenty of built-in storage to keep your tools right at hand. It also features a bench that folds down to provide a solid work surface. And a flip-up door holds an optional shop light.



Work Center page 16

## Drill Press Tips \_\_\_\_\_ 24

Solutions to some of the most common drilling problems in the shop. Also, simple jigs you can make to increase your accuracy when working with a drill press.



Drill Press Tips page 24

## Shop Solutions \_\_\_\_\_ 28

Five Shop-Tested Tips: Pipe Clamp Caddy, Bench-Mounted Belt Sander, Shop-Made Chisel Holder, Foot Pedal Modification, and a Tip for Mixing Powdered Glue.

## Gel Stains \_\_\_\_\_ 30

The thicker consistency of gel stains offers a number of advantages over liquid stains.

## Sources \_\_\_\_\_ 31

Hardware, project supplies, and mail order sources for the projects in this issue.

# Contents

## Band Saw Circle Jig \_\_\_\_\_ 4

*Cutting perfect circles is easy with this shop-made jig for your band saw. A built-in tape and indicator let you quickly set up to cut almost any size circle.*



*Band Saw Circle Jig* page 4

## Belt Sander Maintenance \_\_\_\_\_ 8

*All it takes to keep your belt sander running smooth and trouble-free is a routine cleaning and inspection.*

## Shop Tote \_\_\_\_\_ 10

*A unique design provides a handle for each tray of this handy tote. Then the two halves combine to form one grip to carry parts, tools, or hardware wherever you need them.*



*Shop Tote* page 10

## Epoxy Systems \_\_\_\_\_ 14

*An in-depth look at using epoxy systems in the shop; from measuring and mixing, to tips on application. Plus step by step instructions on how to make your own filler.*

## Sliding Table \_\_\_\_\_ 16

*If you've ever tried to crosscut a large panel on a table saw, you'll appreciate this shop-built sliding table. It features a built-in fence that slips on and off for quick and accurate set-ups.*



*Sliding Table* page 16

## Chisel Techniques \_\_\_\_\_ 24

*Making a controlled cut with a chisel depends on using the right grip and a few simple techniques.*

## Shop Solutions \_\_\_\_\_ 28

*Five Shop-Tested Tips: C-Clamp Rack, Hole Saw Relief, Cut-Off Gauge, Pinch Blocks, and a Tip for Keeping Power Cords Out of the Way.*

## Springs \_\_\_\_\_ 30

*Two types of springs to improve the performance of your shop-built jigs and fixtures.*

## Sources \_\_\_\_\_ 31

*Hardware, project supplies, and mail order sources for the projects in this issue.*



*Chisel Techniques* page 24

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## Circular Saw Cut-Off Jig \_\_\_\_\_ 4

*This shop-built accessory allows you to use your portable circular saw to make perfectly straight or angled cuts with dead-on accuracy.*



Cut-Off Jig

page 4

## Flexible Veneer \_\_\_\_\_ 8

*A close-up look at the different types of flexible veneer. Also, step-by-step instructions for applying and finishing flexible veneer to produce professional-looking results.*

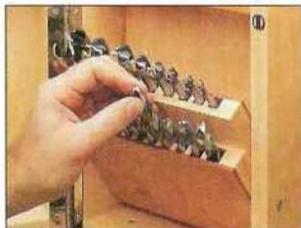


Flexible Veneer

page 8

## Drill Bit Cabinet \_\_\_\_\_ 12

*Organize your drill bits and accessories with this compact cabinet. It features storage trays that tilt out for easy access to your bits, and an optional drawer for accessories.*

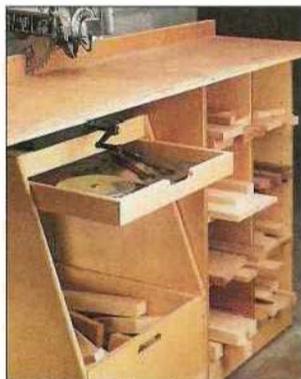


Drill Bit Cabinet

page 12

## Radial Arm Saw Stand \_\_\_\_\_ 16

*This modular system is more than just a stand for your radial arm saw. By taking advantage of the unused space under your saw, it makes it easy to organize cutoffs, sheet goods, and scrap pieces of wood.*



Radial Arm Saw Stand

page 16

## Reducing Tool Noise \_\_\_\_\_ 24

*The noise your tools generate doesn't have to drive your family (or neighbors) out of the house. Here are some simple tips for putting a damper on the worst offenders.*

## Shop Solutions \_\_\_\_\_ 28

*Six Shop-Tested Tips: Band Saw Fence, Adjustable Runner for Miter Gauge Slot, Putty Shield, "Window" for your Dust Collector, plus two Quick Tips.*

## Medium-Density Fiberboard \_\_\_\_\_ 30

*Because it's flat, smooth, and dimensionally stable, medium-density fiberboard (MDF) is an ideal material for many projects.*

## Sources \_\_\_\_\_ 31

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## Jigs & Accessories

### Combination Layout Tool \_\_\_\_\_ 12

*This unique tool combines a marking gauge to lay out joinery, and a beam compass to draw large arcs and circles.*

### Band Clamp \_\_\_\_\_ 26

*All it takes is a few hours to build this shop-made band clamp. It's ideal for clamping large or odd-shaped projects.*

## Projects

### Adjustable Sawhorse \_\_\_\_\_ 4

*A versatile sawhorse that raises up and down to handle almost any job. Then knocks down for compact storage.*

### Lumber Storage Rack \_\_\_\_\_ 16

*This sturdy storage rack provides easy access to all your long boards, short cutoffs, and sheet goods.*

## In the Shop

### Cutting Tapers on a Jointer \_\_\_\_\_ 8

*Get crisp, clean tapers on a jointer without using any special jigs or complicated layout procedures.*

### Containing Noise in the Shop \_\_\_\_\_ 22

*A step-by-step approach to treating ceilings and walls so noise from the shop won't slip through.*

### Aniline Dyes \_\_\_\_\_ 30

*Clear, bright colors that can be mixed to match an existing color make aniline dyes worth a close look.*

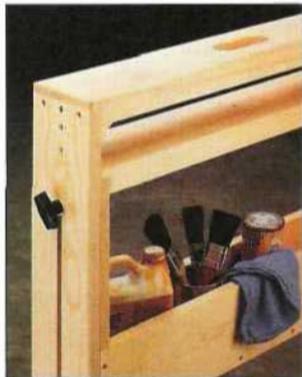
## Departments

### Shop Solutions \_\_\_\_\_ 28

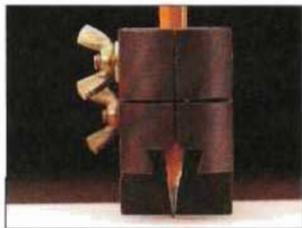
*Six shop-tested tips from our readers.*

### Sources \_\_\_\_\_ 31

*Hardware and supplies for projects in this issue.*



Adjustable Sawhorse page 4



Layout Tool page 12



Lumber Storage Rack page 16



Containing Noise page 22

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## Jigs & Accessories

### Drawer Joint Jig \_\_\_\_\_ 4

*Working on a project with lots of drawers? This shop-made jig turns your router table into a production tool.*

### Drill Press Table & Fence \_\_\_\_\_ 16

*Make quick, accurate setups on your drill press with this table. It features a large work area and a built-in fence.*

## Projects

### Hardware Bin \_\_\_\_\_ 10

*There are plenty of drawers in this compact storage bin to help organize small parts and loose hardware.*

### Dovetailed Bookcase \_\_\_\_\_ 26

*Strength and good looks. Two reasons why dovetail joints are a perfect choice for this wall-hung bookcase.*

## In the Shop

### Resawing on the Band Saw \_\_\_\_\_ 12

*Simple tips, jigs, and techniques you can use to make thin stock out of thick boards.*

### Hand-Cut Dovetails \_\_\_\_\_ 22

*You'll be cutting dovetails by hand in no time with our step-by-step approach and a few basic tools.*

### Wood Filler \_\_\_\_\_ 30

*Two types of wood fillers — each with a place in your shop. Here are the reasons why.*

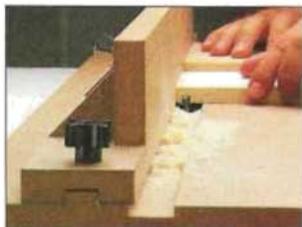
## Departments

### Shop Solutions \_\_\_\_\_ 28

*Five shop-tested tips from our readers.*

### Sources \_\_\_\_\_ 31

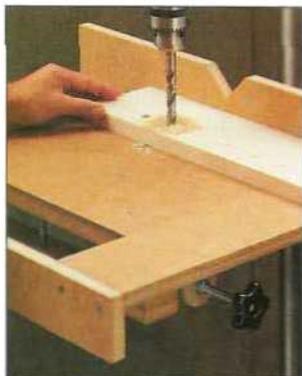
*Hardware and supplies for projects in this issue.*



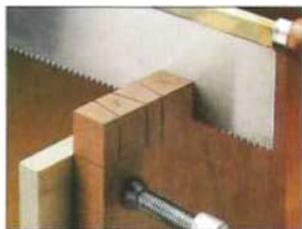
Drawer Joint Jig page 4



Resawing page 12



Drill Press Table page 16



Hand-Cut Dovetails page 22

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## Projects & Techniques

### Hand Plane Jointer \_\_\_\_\_ 4

*This shop-built jig produces a straight, square edge on a workpiece by converting your hand plane into a jointer.*

### Built-up Moldings \_\_\_\_\_ 12

*A router and some ordinary bits. That's all it takes to build up your own detailed moldings.*

### Wall Mirror \_\_\_\_\_ 14

*Use our simple built-up molding technique to make this handsome wall mirror in just a few hours.*

### Cutting Guide \_\_\_\_\_ 16

*A unique tracking system on this cutting guide lets you use your circular saw or router to produce straight, accurate cuts.*

### Routing Profiles \_\_\_\_\_ 22

*Create decorative profiles that are smooth and consistent with a hand-held router and our step-by-step approach.*

## Departments

### Selecting Tools

### Circular Saws \_\_\_\_\_ 8

*Buying a circular saw? Our team tests eleven popular saws and offers practical suggestions on what to look for.*

### Great Tips

### Pipe Clamp Tips \_\_\_\_\_ 20

*From gluing up flat panels to keeping clamps from marring the work, here's a collection of our best pipe clamp tips.*

### The Small Shop

### Clamp Storage System \_\_\_\_\_ 24

*This convenient storage system organizes all of your clamps so they're right at hand where you need them.*

### Readers' Tips

### Shop Solutions \_\_\_\_\_ 28

*Our readers offer their own shop-tested solutions to common woodworking problems. Plus two quick tips.*

### Lumberyard

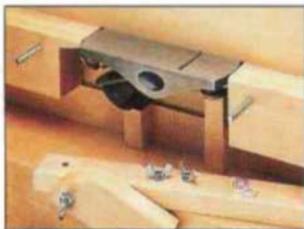
### Lumber Grain \_\_\_\_\_ 30

*There's more to lumber grain than appearance. It also affects the stability and cost of a project.*

### Finish Room

### Danish Oil \_\_\_\_\_ 31

*A natural-looking finish that's easy to apply. And you can repair it too. All this makes Danish oil worth a closer look.*



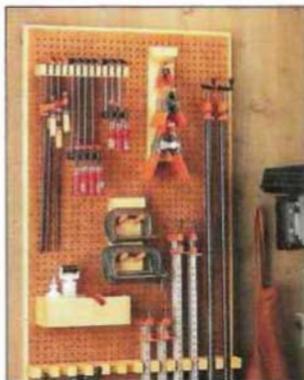
Hand Plane Jointer page 4



Circular Saws page 8



Cutting Guide page 16



Clamp Storage System page 24

# Contents

## Projects & Techniques

### Adjustable Dado Jig \_\_\_\_\_ 4

*This shop-built jig offers a quick setup and guarantees a perfect fit when routing dadoes (or rabbets).*

### Step Stool \_\_\_\_\_ 8

*Build this strong, sturdy stool in just a few hours with the help of our adjustable dado jig.*

### Cutting Tenons on a Band Saw \_\_\_\_\_ 10

*Accurate cuts. And a quick, easy setup. Two reasons why a band saw is an ideal tool for cutting tenons.*

### Outfeed Table \_\_\_\_\_ 16

*This outfeed table makes it easy to cut large workpieces on the table saw. And it folds away for compact storage.*

### Cutting Rabbets \_\_\_\_\_ 22

*Two basic techniques for cutting rabbets on a table saw without using an expensive dado blade.*

## Departments

### Great Tips

### Router Table Tips \_\_\_\_\_ 14

*Five tips to help you get the most out of your router table.*

### Selecting Tools

### Quick-Change Bits \_\_\_\_\_ 20

*Our team tests four quick-change bit systems for your drill. And offers practical suggestions on what to look for.*

### The Small Shop

### Overhead Storage \_\_\_\_\_ 22

*Three simple solutions to one of the most challenging problems in a small shop — storing lumber.*

### Lumberyard

### Hardboard \_\_\_\_\_ 26

*What it is. Where to find it. And how we use it.*

### At the Store

### New Products \_\_\_\_\_ 27

*We test three hot new tools for your workshop.*

### Readers Tips

### Shop Solutions \_\_\_\_\_ 28

*Our readers offer solutions to woodworking problems.*

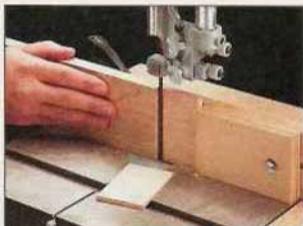
### Finish Room

### Surface Preparation \_\_\_\_\_ 30

*Careful preparation is the secret to a perfect finish.*



Adjustable Dado Jig page 4



Band Sawn Tenons page 10



Outfeed Table page 16



Overhead Storage page 22

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## Projects & Techniques

### Avoiding Kickback \_\_\_\_\_ 4

Safety is no accident. Here's a close-up look at some of the causes of kickback and what you can do to prevent it.

### Featherboard \_\_\_\_\_ 6

A unique design lets you adjust this shop-made featherboard to use on many of the tools in your shop.

### Tongue & Groove \_\_\_\_\_ 8

Cutting a tight-fitting tongue and groove joint is easy when you follow our simple step-by-step approach.

### Lap Desk \_\_\_\_\_ 11

This compact lap desk provides space inside to organize pencils and paper and a large stable surface to write on.

### Thickening Jig \_\_\_\_\_ 16

You don't need a planer to thickness stock accurately. All it takes is a hand-held router and this easy to build jig.

## Departments

### The Small Shop Power Tools \_\_\_\_\_ 14

Which power tools are best for the small shop? Full-size, benchtop, or combination tools?

### Great Tips Glue-Up Tips \_\_\_\_\_ 20

A collection of our best tips that includes everything from choosing the right glue to the best way to apply it.

### Selecting Tools Table Saws \_\_\_\_\_ 22

Our team tests six popular table saws and offers practical suggestions on selecting a saw that will suit your needs.

### Readers' Tips Shop Solutions \_\_\_\_\_ 28

Shop-tested solutions from our readers on their most common woodworking problems. Plus two quick tips.

### Lumberyard Softwood Grades \_\_\_\_\_ 30

Building a project out of softwood? Understanding the different lumber grades can affect its cost and appearance.

### Finish Room Water-Based Top Coats \_\_\_\_\_ 31

A durable finish that's easy to use. And no messy cleanup. All this makes water-based top coats worth a close look.



Featherboard page 6



Tongue & Groove page 8



Thickening Jig page 16



Table Saws page 22

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## Projects & Techniques

### Drill Press Hold-Down \_\_\_\_\_ 4

It's easy to drill precision holes on the drill press when you use this hold-down to "lock" your workpiece in position.

### Sanding Table \_\_\_\_\_ 10

Eliminate the cloud of dust produced every time you sand with this benchtop sanding table.

### Box Joints: Router Table \_\_\_\_\_ 12

Perfect box joints. That's what you'll get when you cut them on the router table using our simple step-by-step approach.

### Wall-Mounted Tool Cabinet \_\_\_\_\_ 16

This wall-mounted cabinet provides a home for all your tools. It not only protects them — but organizes them as well.

### Tool Holders \_\_\_\_\_ 20

One of the simplest ways to protect a tool is to make a holder for it. We'll look at customizing holders for nine different tools.

### Solid Wood Edging \_\_\_\_\_ 26

You can give a plywood project the appearance of solid wood by trimming the edges with hardwood. Here's how.

## Departments

### Great Tips

### Jointer Tips \_\_\_\_\_ 8

Our favorite tips to help you get the most out of your jointer.

### Selecting Tools

### Tape Measures \_\_\_\_\_ 22

Which of the eight popular tape measures that we tested is best for you? Our two-man team offers suggestions.

### The Small Shop

### Roll-Around Tool Base \_\_\_\_\_ 24

Moving heavy tools in the shop is no longer a wrestling match when you use this simple roll-around base.

### Readers' Tips

### Shop Solutions \_\_\_\_\_ 28

Six shop-tested solutions from our readers.

### Lumberyard

### Particleboard \_\_\_\_\_ 30

A look at different grades of particleboard and their uses.

### Finish Room

### Oil Stains \_\_\_\_\_ 31

True colors that don't fade. Oil stains offer this and more.



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Box Joints page 12



Tool Cabinet page 16



Tape Measures page 22

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## Projects & Techniques

### Saw Blade Storage \_\_\_\_\_ 4

Protect and organize your valuable saw blades with this handy storage cabinet.

### Turning with a Spindle Gouge \_\_\_\_\_ 6

This versatile turning tool can do it all — from roughing out spindles to shaping decorative coves and beads.

### Shop-Made Mallets \_\_\_\_\_ 8

Two traditionally designed shop mallets that can be turned with just a spindle gouge and a parting tool.

### Sabre Saw Table \_\_\_\_\_ 16

A simple table and a unique adjustable arm convert your hand-held sabre saw into a precision cutting tool.

### Dowel Joinery \_\_\_\_\_ 22

It's easy to make strong, accurate dowel joints with just an electric drill and one of our simple shop-made jigs.

## Departments

### The Small Shop

### Selecting Hand Tools \_\_\_\_\_ 10

What are the most practical hand and portable electric tools for the small shop? Here's a look at our top picks.

### Selecting Tools

### Random-Orbit Sanders \_\_\_\_\_ 12

Our three-man testing team offers suggestions on which palm-grip random-orbit sander is best for you.

### Great Tips

### Lumber Storage Tips \_\_\_\_\_ 24

Here's a collection of our favorite lumber storage tips.

### Finish Room

### Varnish \_\_\_\_\_ 26

A hard, durable finish for your special projects.

### At the Store

### New Products \_\_\_\_\_ 27

Tape Mate, Veritas Brass Insert Knobs, and Nobex Squares.

### Readers' Tips

### Shop Solutions \_\_\_\_\_ 28

Six shop-tested solutions from our readers.

### Lumberyard

### Buying Lumber \_\_\_\_\_ 30

A step-by-step approach to buying hardwood lumber.



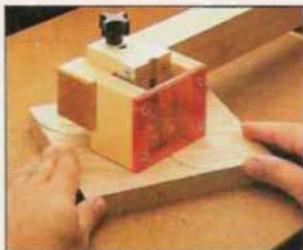
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Shop-Made Mallets page 8



Random-Orbit Sanders page 12



Sabre Saw Table page 16

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## Projects & Techniques

### Sanding Table & Air Filter System \_\_\_\_\_ 4

Solve two problems at once with this mobile sanding table. It collects the dust produced when sanding. And it filters fine dust particles out of the air.

### Pattern Cutting on a Band Saw \_\_\_\_\_ 8

You can cut identical curved pieces quickly and accurately on the band saw by using this simple technique.

### Arched-Top Clock \_\_\_\_\_ 10

It's hard to stop after making just one of these arched-top clocks. We offer several tricks to get "production" rolling.

### Heavy-Duty Workbench \_\_\_\_\_ 16

You won't spend a lot of time or money building this sturdy workbench. Made from ordinary construction materials, its large work surface provides several clamping options.

## Departments

### The Small Shop Sawdust in the Small Shop \_\_\_\_\_ 12

Two strategies for dealing with dust. Contain as much as possible at the tool that produces the dust. And use filters to keep the fine dust particles out of your lungs.

### Great Tips Layout Tips \_\_\_\_\_ 14

From making a center marker to drawing arcs, here's a collection of quick tips for getting accurate layouts.

### Selecting Tools Band Saws \_\_\_\_\_ 22

Confused about the best band saw to buy? Our three-man team puts six medium-duty saws to the test and offers practical suggestions on which one to choose.

### Readers' Tips Shop Solutions \_\_\_\_\_ 28

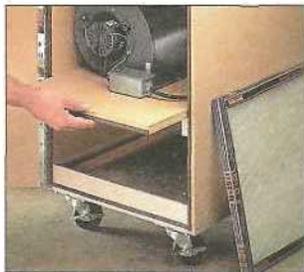
Our readers offer their own shop-tested solutions to some of the most common woodworking problems.

### Lumberyard Softwood Plywood \_\_\_\_\_ 30

Knowing the different grades of softwood plywood will help you select the best material for the project at hand.

### Finish Room Specialty Finishes \_\_\_\_\_ 31

Two special finishes with a twist. One creates the look and feel of granite. The other gives the appearance of marble.



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Arched-Top Clock page 10



Workbench page 16



Band Saws page 22

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### Table Saw Knee Switch \_\_\_\_\_ 4

With this knee-operated switch, you'll never again have to grope blindly for the power switch on your saw.

### Table Saw Tune-up \_\_\_\_\_ 6

A finely-tuned table saw not only does a better job of cutting wood. It's safer and more enjoyable to use too.

### Utility Ladder \_\_\_\_\_ 10

Here's a folding step ladder that won't wobble, is strong enough for two people, and has a tray for holding tools.

### Angled Dadoes \_\_\_\_\_ 12

Cut perfectly-aligned angled dadoes on the table saw using our simple technique and a shop-made jig.

### Table Saw Cabinet \_\_\_\_\_ 16

Extra Storage. A bin to collect dust. And an outfeed support. Three reasons to build this sturdy saw cabinet.

## Departments

### The Small Shop

### Lighting in the Shop \_\_\_\_\_ 22

Practical solutions for shedding light in your shop.

### Great Tips

### Hardware Tips \_\_\_\_\_ 14

A collection of five trouble-free tips to make your next hardware installation go quickly and easily.

### Selecting Tools

### Combination Blades \_\_\_\_\_ 24

Looking for the best saw blade? Our three-man team tests six combination blades and two general-purpose blades.

### Readers' Tips

### Shop Solutions \_\_\_\_\_ 28

Five of our readers offer their own shop-tested solutions to everyday woodworking problems.

### Finish Room

### Rubbing out a Finish \_\_\_\_\_ 30

The secret to a perfect finish isn't how you apply it. It's what you do after the finish dries.

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### Specialty Plywoods \_\_\_\_\_ 31

Three unique plywood products for special projects.



Knee Switch

4



Utility Ladder

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Table Saw Cabinet

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Combination Blades

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### Waterstone Basics \_\_\_\_\_ 4

*Tips on selecting, using, and storing waterstones.*

### Sharpening Station \_\_\_\_\_ 6

*Special holders for your sharpening stones are just one of the unique features of this wall-mounted station.*

### Sharpening a Chisel \_\_\_\_\_ 8

*A simple step-by-step approach to a razor-sharp chisel.*

### Shop-Made Knobs \_\_\_\_\_ 10

*Inexpensive and easy to make, these shop-made knobs can be customized to fit your tools, jigs, and fixtures.*

### Tapping Threads \_\_\_\_\_ 13

*A simple tap is all it takes to make a threaded part.*

### Finish Storage Cabinet \_\_\_\_\_ 16

*A drop-down work table and a lazy Susan make this cabinet a convenient place to store and apply your finishes.*

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### Great Tips

### Miter Gauge Tips \_\_\_\_\_ 14

*Add precision to your miter gauge with these special tips.*

### Selecting Tools

### Cordless Driver/Drills \_\_\_\_\_ 20

*Our three-man team tests twelve cordless driver/drills and offers suggestions on what to look for.*

### The Small Shop

### Benchtop Tool Stand \_\_\_\_\_ 24

*Build this "quick-change" stand for your benchtop tools.*

### Lumberyard

### Alternate Hardwoods \_\_\_\_\_ 26

*Tired of the same old hardwoods? Check these out.*

### At the Store

### New Products \_\_\_\_\_ 27

*Adjustable Featherboard, MiterMatic, Tru-Fit Miter Bar.*

### Readers' Tips

### Shop Solutions \_\_\_\_\_ 28

*Six of our readers offer their own shop-tested solutions.*

### Finish Room

### Pore Fillers \_\_\_\_\_ 30

*A look at when and how to use pore fillers on a project.*



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6



Shop-Made Knobs

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Finish Storage Cabinet

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Cordless Drills

20

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## Projects & Techniques

### Scrapper Plane \_\_\_\_\_ 4

Designed to hold an ordinary steel scrapper, this shop-built plane makes it easy to get a smooth, uniform surface.

### Splined Miters \_\_\_\_\_ 8

Here's a simple technique that adds lots of strength to your miter joints. Just rout a slot and glue in a spline.

### Picnic Table \_\_\_\_\_ 10

With splined miters and a "shortcut" version of a mortise and tenon, this good-looking picnic table is built to last.

### Sliding Cutoff Table \_\_\_\_\_ 16

Cut wide glued-up panels or pieces of plywood safely and accurately with this sliding cutoff table. And an adjustable fence allows you to make angled cuts as well.

### Drilling Holes for Screws \_\_\_\_\_ 22

There's more to drilling holes for screws than meets the eye. The key is the size and sequence you drill the holes.

## Departments

### Great Tips Plywood Tips \_\_\_\_\_ 14

A collection of our best tips for working with plywood.

### The Small Shop Pegboard Storage \_\_\_\_\_ 24

Lots of storage in a compact space. That's the idea behind the unique design of this pegboard storage system.

### Selecting Tools Quick Clamps \_\_\_\_\_ 26

We test three different "quick clamps" and offer practical suggestions on which one to choose.

### Readers' Tips Shop Solutions \_\_\_\_\_ 28

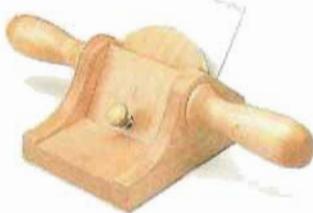
Our readers offer their own shop-tested solutions to some of the most common woodworking problems.

### Lumberyard Redwood \_\_\_\_\_ 30

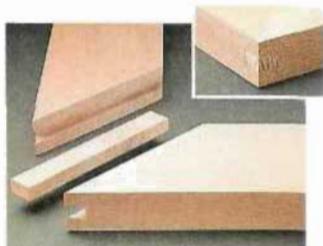
Building a project out of redwood? Understanding the different grades can affect both its cost and durability.

### Finish Room Outdoor Finishes \_\_\_\_\_ 31

A look at three finishes that resist the extremes of weather.



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Splined Miters page 8



Sliding Cutoff Table page 16



Pegboard Storage page 24

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## Projects and Techniques

### Vertical Glue-Up Station \_\_\_\_\_ 4

Gluing up solid wood panels is easy with this shop-built jig. And it doubles as a storage rack for your pipe clamps.

### Shop Stool \_\_\_\_\_ 8

Comfort and strength. Two reasons why this may be the only stool you'll ever build for your shop.

### Routing Tenons on Dowels \_\_\_\_\_ 11

A core-box bit and a simple jig. That's all you need to rout tenons on the dowels used for the legs of the stool.

### Gluing Up Panels \_\_\_\_\_ 12

Tips and techniques for gluing up an attractive solid wood panel that's perfectly flat — and stays flat.

### Drilling Guide \_\_\_\_\_ 16

Building a cabinet with adjustable shelves? A unique indexing system on this drilling guide lets you drill identically-spaced holes for both rows of shelf pins.

## Departments

### Great Tips

### Sharpening Tips \_\_\_\_\_ 14

A roundup of our best sharpening tips that will keep your chisels and plane irons in top shape.

### Small Shop

### Small Shop Layout \_\_\_\_\_ 20

Make a small shop work "big" by planning for work flow, tool groups, and infeed/outfeed requirements.

### Selecting Tools

### Portable Thickness Planers \_\_\_\_\_ 22

Our team tests six popular, portable thickness planers and offers practical suggestions on the best one to buy.

### Readers' Tips

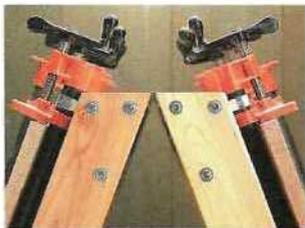
### Shop Solutions \_\_\_\_\_ 28

ShopNotes' readers offer their own solutions to some of the most common woodworking problems.

### Lumberyard

### Crotchwood \_\_\_\_\_ 30

The dramatic grain patterns in crotchwood can turn an ordinary project into something special.



Glue-Up Station page 4



Shop Stool page 8



Drilling Guide page 16



Thickness Planers page 22

# Contents

## Projects and Techniques

### Revolving Parts Bin \_\_\_\_\_ 4

Besides storing and organizing small parts and pieces of hardware, this shop-built bin revolves on a lazy Susan. To find the part you need, just give it a spin.

### Locking Rabbet Joints \_\_\_\_\_ 14

Looking for a strong, simple drawer joint? We show you how to make two types of locking rabbet joints.

### Rolling Tool Cabinet \_\_\_\_\_ 16

Park this rolling tool cabinet right next to your bench. Then enjoy the easy access to your tools provided by the three drawers and large storage area underneath.

### Craftsman Tool Chest \_\_\_\_\_ 23

Whether you build this craftsman tool chest to put on top of the rolling tool cabinet, or as a stand-alone project, it provides a special home for your hand tools.

## Departments

### Selecting Tools

#### Belt Sanders \_\_\_\_\_ 8

Our three-man team tests seven popular belt sanders to see which one is best. Also, practical suggestions on what to look for when buying a belt sander.

### Great Tips

#### Planer Tips \_\_\_\_\_ 12

A collection of our best tips to get the most from your planer. Everything from thickening short pieces, to trimming pieces to width by planing an edge.

### Readers' Tips

#### Shop Solutions \_\_\_\_\_ 28

ShopNotes' readers offer their own solutions to some of the most common woodworking problems.

### At the Store

#### New Products \_\_\_\_\_ 30

Here's a quick look at three new products that have earned a well-deserved place in our shop.

### Finish Room

#### Coloring Finishes \_\_\_\_\_ 31

It's easy to color a finish to get just the shade you want. Use our special recipes. Or mix your own.



Revolving Parts Bin page 4



Belt Sanders page 8



Locking Rabbets page 14



Rolling Tool Cabinet page 16

# Contents

## Projects

### Assembly Table \_\_\_\_\_ 4

No matter what size project you're building, this assembly table makes it easy to put it together. Raise or lower the table to hold projects at a comfortable working height. And flip up two wings to expand the work surface.



Assembly Table page 4

### Small Workbench \_\_\_\_\_ 16

Don't let its small size fool you. This sturdy workbench features two shop-made vises that provide more clamping options than many benches twice its size. There's even an optional cabinet for storing tools and supplies.



Plunge Routers page 10

### Drop-Down Tool Tray \_\_\_\_\_ 24

You can take advantage of the unused space under your bench with this handy tool tray. The lid drops down to provide quick access to your tools. And a set of unique tool holders keeps everything safely in place.

## Departments

### Selecting Tools

### Plunge Routers \_\_\_\_\_ 10

ShopNotes puts eight heavy-duty plunge routers to the test. Which one is best? And what are the key things to look for when you're buying a plunge router?



Small Workbench page 16

### Readers' Tips

### Shop Solutions \_\_\_\_\_ 28

Our readers offer their own shop-tested tips: Locking Tool Base, Band Saw Shelf, Box Joint Tip, a Shop-Vacuum Handle, plus three quick tips.

### Lumberyard

### Wood Moisture \_\_\_\_\_ 30

Using wood with the right moisture content can make or break a project. That's because the amount of moisture affects everything from the fit of the joints to the finish.

### Finish Room

### Spray Painting a Finish \_\_\_\_\_ 31

There's more to applying a spray-painted finish than just shaking up a can of paint. Especially if you want to produce a durable finish that looks good too.



Tool Tray page 24

# Contents

## Projects & Techniques

### Miter Saw Station \_\_\_\_\_ 6

*This miter saw station will spoil you. When you raise the folding wings, two extension tables provide all the support you need for cutting long workpieces. And with a flip-up stop block that slides along a fence, you can make precision cuts without measuring and marking.*

### Miter Saw Tune-Up \_\_\_\_\_ 14

*It's easy to keep your power miter saw running smoothly and accurately. All it takes is some routine maintenance and a few basic adjustments.*

### Low-Speed Grinding Jig \_\_\_\_\_ 16

*You can get razor sharp edges on your plane irons and jointer knives with this shop-built grinding jig. Along with a grinding wheel that's chucked in the drill press and spinning at low speed, it gives you complete control over every step of the grinding process.*

## Departments

### Tips & Techniques

### Readers' Tips \_\_\_\_\_ 4

*Our readers offer their own shop-tested tips: Magnetic Resaw Fence, Leg Leveler, String Clamp, Speed Control, and a tip for Hanging Full-Overlay Doors.*

### Selecting Tools

### Compound Miter Saws \_\_\_\_\_ 24

*Thinking about buying a compound miter saw? Our three-man team tests four popular models and offers practical suggestions on the best one to buy.*

### Finish Room

### Shellac \_\_\_\_\_ 28

*Shellac has been around for years — and there's a good reason for it. Besides providing plenty of protection, it's extremely easy to apply. This "old timer" also provides solutions to many modern finishing problems.*

### Tips From Our Shop

### Shop Solutions \_\_\_\_\_ 30

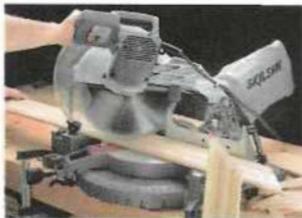
*Whether you're building the projects in this issue or another one altogether, this collection of tips from the guys in our shop is sure to come in handy.*



Miter Saw Station page 6



Grinding Jig page 16



Miter Saws page 24



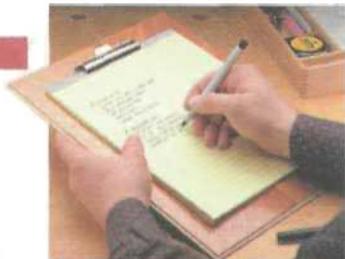
Shellac page 28

# Contents

## Projects & Techniques

### Clipboard Box \_\_\_\_\_ 4

*It's a clipboard...and it's a box. Together, they provide a handy way to plan your projects. In addition to serving as a writing surface, the clipboard doubles as the top of the box to organize your writing materials and supplies.*



Clipboard Box page 4

### Parquetry \_\_\_\_\_ 8

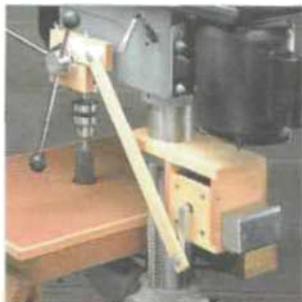
*Thin pieces of veneer cut in basic geometric shapes. That's the idea behind parquetry. And that's all it takes to create a striking wood pattern. Our step-by-step article shows you how to get professional-looking results.*



Parquetry page 8

### Oscillating Drum Sander \_\_\_\_\_ 16

*This simple, shop-built accessory converts your drill press into an oscillating drum sander. With a small, gearmotor and a unique drive system, the sanding drum spins around and goes up and down at the same time.*



Oscillating Sander page 16

### Sandpaper Storage \_\_\_\_\_ 24

*Keep your sanding supplies organized with these two storage projects. One presses sheets of sandpaper flat to prevent the edges from curling. The other holds a roll of sandpaper and makes it easy to cut strips to exact length.*

## Departments

### Selecting Tools Block Planes \_\_\_\_\_ 12

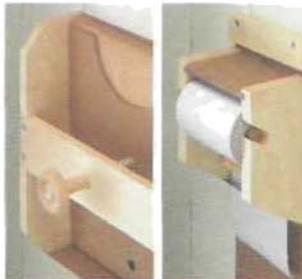
*A block plane that's used every day is like an old friend. We visit with four woodworkers about their block planes and find out what makes each one a "favorite."*

### Tips & Techniques Readers' Tips \_\_\_\_\_ 28

*Our readers offer their own shop-tested tips: Retractable Chuck Key, Wedged Sanding Block, Plastic Knobs, Pocket Holes, and a Pencil Cushion.*

### Tips From Our Shop Shop Solutions \_\_\_\_\_ 30

*We've also included a variety of tips from the guys in our own shop to help build the projects in this issue.*



Sandpaper Storage page 24

# Contents

## Tips & Techniques

### Readers' Tips \_\_\_\_\_ 4

Our readers offer their own shop-tested tips to common woodworking problems. Plus three quick tips.

### Shop Solutions \_\_\_\_\_ 30

A collection of four great tips from the guys in our shop that will come in handy for the projects in this issue.

## Projects

### Adjustable Taper Jig \_\_\_\_\_ 6

Three jigs in one. That's what you get when you build this adjustable taper jig for your table saw. Use it to make long, angled cuts on a workpiece, cut perfectly consistent tapers, or rip a straight edge on rough-sawn lumber.

### Folding Table \_\_\_\_\_ 10

The legs of this table fold up for storage. And the plastic laminate top is durable and easy to clean. Combine all that with the warm look of cherry, and this folding table is as good-looking as it is practical.

### Plate Joiner Table \_\_\_\_\_ 16

This shop-built table converts your hand-held plate joiner into a benchtop tool. Adjusting a sliding table up or down makes it easy to locate the slot for the biscuit. And a unique, foot-operated plunge mechanism lets you cut the slot without having to clamp the workpiece.

## Departments

### In the Shop

### Tool Talk \_\_\_\_\_ 14

Our mailbox is overflowing with questions about buying and maintaining tools. We answer six of them here.

### Selecting Tools

### Plate Joiners \_\_\_\_\_ 26

ShopNotes tests five popular plate joiners and offers practical suggestions on the best one to buy.

### At the Store

### New Products \_\_\_\_\_ 31

Here's a quick look at three new products that we've been using in our own shop.



Adjustable Taper Jig page 6



Folding Table page 10



Plate Joiner Table page 16



Plate Joiners page 26

# Contents



Serving Tray  
page 6

## Departments

### Readers' Tips \_\_\_\_\_ 4

Our readers offer their own shop-tested tips for solving some of the most common woodworking problems.

### Shop Solutions \_\_\_\_\_ 30

These tips from the guys in our shop make it easy to get professional-looking results on the projects in this issue.

## Tips & Techniques

### Ripping Thin Strips \_\_\_\_\_ 15

Two different methods for ripping thin strips of wood to a uniform thickness — just what you need to ensure success when making a bent lamination project.

### Bent Lamination \_\_\_\_\_ 20

What's the secret to bending wood into a graceful, flowing curve? It's the details. We show you how to "read" the grain of the wood strips used to make a bent lamination, design the bending jigs, and glue up the strips.



Flush Trim Jig \_\_\_\_\_ page 16

## Projects

### Serving Tray \_\_\_\_\_ 6

The curved sides and the bent wood handles of this serving tray are both made by gluing up thin strips of wood. But they provide two different bending challenges.

### Table Saw Insert \_\_\_\_\_ 15

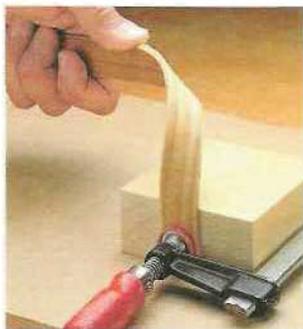
This shop-made insert for your table saw has a "zero-clearance" opening for the blade that provides a safe way to rip thin strips. And it reduces chipout as well.

### Flush Trim Jig \_\_\_\_\_ 16

Trimming solid wood edging flush with the surface of a workpiece is easy with this flush trim jig. All you need is a hand-held router and a straight bit. There's also an optional edge guide for routing rabbets.

### Fishing Net \_\_\_\_\_ 24

The bent wood frame of this fishing net is accented by a walnut strip and handle that are sandwiched between four maple strips. Just string the net on the frame and head off to your favorite fishin' hole.



Bent Lamination \_\_\_\_\_ page 20



Fishing  
Net  
page 24

# Contents

## Tools & Techniques

### Building Raised Panel Doors \_\_\_\_\_ 12

Building a number of raised panel doors? You can use a special set of router bits to make the frame and the raised panel quickly and easily.

### Stile & Rail Bits \_\_\_\_\_ 24

A matched set of stile and rail bits and a router table. That's all it takes to cut the joinery and create the decorative profile on the frame of a raised panel door.

## Projects

### Torpedo Level \_\_\_\_\_ 6

Made of highly figured walnut and brass, this torpedo level has the look and feel of a traditional hand tool. With a unique, built-in adjustment system, you can calibrate the level quickly and accurately.

### Revolving Tool Station \_\_\_\_\_ 16

Just give the circular platform on top of this station a spin to position the tool you want to use right in front of you. A rotating turntable in the base provides easy access to your portable power tools as well.

### Frame & Panel Jig \_\_\_\_\_ 28

This shop-built jig solves the biggest problem of gluing up a frame and panel door — keeping the door perfectly flat. The secret is a pair of cams that apply clamping pressure directly in line with the frame.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Our readers offer their own shop-tested tips for solving some of the most common woodworking problems.

### Shop Solutions \_\_\_\_\_ 26

Use these tips from the guys in our shop to get professional-looking results on the projects in this issue.

### Sources \_\_\_\_\_ 31

Hardware, supplies, and mail order sources for the projects in this issue. Also, a selected guide to past projects from ShopNotes that's sure to come in handy.



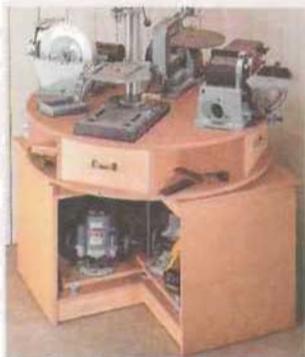
Torpedo Level

page 6



Raised Panel Doors

page 12



Tool Station

page 16



Frame & Panel Jig

page 28

# Contents

## Tools & Techniques

### Tuning Up a Block Plane \_\_\_\_\_ 8

All it takes to turn your block plane into a precision tool is a simple tune-up. Here's our step-by-step approach.

### Sabre Saws \_\_\_\_\_ 12

Our team of woodworkers tests six popular sabre saws and offers practical suggestions on the best one to buy.

### Strengthening Miter Joints \_\_\_\_\_ 26

Three shop-tested techniques to strengthen the end grain to end grain glue surface of a miter joint. Also, three fasteners for making a strong mechanical connection.

## Projects

### Picture Frame Clamping Jig \_\_\_\_\_ 6

This simple clamping jig uses an ordinary band clamp to keep the mitered corners of a picture frame from slipping out of alignment during glue-up.

### Miter Trimmer \_\_\_\_\_ 16

It's easy to get a perfect-fitting miter joint with this shop-made miter trimmer. With a built-in clamp holding the workpiece at a 45° angle, just take a thin shaving with a block plane to "true up" the mitered end.

### Desktop Picture Frames \_\_\_\_\_ 22

You can build both of these desktop picture frames in a weekend. But with their intricate looking profiles and contrasting strips of wood, no one would ever guess.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Our readers offer their own shop-tested tips for solving some of the most common woodworking problems.

### Shop Solutions \_\_\_\_\_ 28

Use these tips from the guys in our shop to get professional-looking results on the projects in this issue.

### New Products \_\_\_\_\_ 30

Here's a quick look at three new woodworking products that have earned a well-deserved place in our shop.



Picture Frame Clamp page 6



Sabre Saws page 12



Miter Trimmer page 16



Picture Frames page 22

# Contents

## Techniques

### Dovetail Keys \_\_\_\_\_ 12

Small wood "keys" create the traditional look of a dovetail joint — without all the work. Plus, they add strength to the mitered corners of a box.

### Cutting Wood Plugs \_\_\_\_\_ 30

What's the secret to making a wood plug blend invisibly with the area around it? And which plug cutters are best? We take a look at the answers to both questions.

## Projects

### Chisel Case \_\_\_\_\_ 6

Made of quartersawn white oak and mahogany, this chisel case is as attractive as it is practical. Whether the case is hanging on a wall or sitting on a bench, a unique tilting rack provides easy access to your chisels.

### Edge Sander \_\_\_\_\_ 16

This shop-built edge sander makes quick work of tough sanding jobs. It's made of common materials and hardware. Yet it offers a precision tracking system for the sanding belt, two adjustable sanding tables, and a convenient dust hook-up for your shop vacuum.

## Departments

### Readers' Tips \_\_\_\_\_ 4

A small parts cabinet with a special drop-down sorting tray is just one of the shop-tested tips provided by our readers.

### Shop Solutions \_\_\_\_\_ 14

Use these tips from the guys in our shop to get professional looking results on the projects in this issue.

### Sources \_\_\_\_\_ 31

Here's a list of hardware, supplies, and mail order sources for the projects in this issue.



Chisel Case *page 6*



Dovetail Keys *page 12*



Edge Sander *page 16*



Cutting Wood Plugs *page 30*

# Contents

## Techniques

### Lathe Scrapers \_\_\_\_\_ 10

A simple burr. That's the secret to getting crisp, clean cuts with a scraper when turning a project on the lathe.

### Logs to Lumber \_\_\_\_\_ 24

There may be a great source of inexpensive lumber in your own backyard. Here's one woodworker's story.

### Finishing on a Lathe \_\_\_\_\_ 28

The best time to apply a finish to a turning project is before you take it off the lathe. We show you how.

### Making a Jam Chuck \_\_\_\_\_ 29

You don't need a special chuck to mount a project to the lathe. Just fit it onto a "jam" chuck that you turn from scrap.



Adjustable Planer Jig page 6



Ring Boxes page 12

## Projects

### Adjustable Planer Jig \_\_\_\_\_ 6

A unique tilting table lets you bevel a workpiece safely and accurately using a portable thickness planer.

### Turned Ring Boxes \_\_\_\_\_ 12

Three simple ring boxes that can be turned from start to finish with just a scraper and a parting tool.

### Drill Press Stand \_\_\_\_\_ 16

This roll-around stand for your benchtop drill press features three pull-out trays to help organize all your drill bits and accessories.

### Drill Press Table & Fence \_\_\_\_\_ 22

Turn your drill press into a real woodworking tool with this simple table and adjustable fence.



Drill Press Stand page 16

## Departments

### Readers' Tips \_\_\_\_\_ 4

Our readers offer their own shop-tested tips.

### Shop Solutions \_\_\_\_\_ 30

Handy tips and techniques from our own shop.

### Sources \_\_\_\_\_ 31

Hardware, supplies, and mail order sources.



Logs To Lumber page 24

# Contents

## Features

### Lathe Tool Rack \_\_\_\_\_ 6

*This wall-mounted rack holds your lathe tools securely in place. Yet it only takes a second to grab the one you need and start turning. We feature two versions of the tool rack — each one using a different type of joinery.*

### Tool Test: Lathes \_\_\_\_\_ 10

*Thinking about buying a lathe? We've rounded up a team of woodturners to test four popular models and offer practical suggestions on which one to choose.*

### Marking Knife \_\_\_\_\_ 14

*It's hard to get accurate results when cutting to a "fuzzy" pencil line. But this shop-made marking knife scores a fine line so you know exactly where to cut.*

### Modular Wall Storage \_\_\_\_\_ 16

*Organize all your tools and supplies with this handy wall storage system. The individual modules hang on a grid that's attached to the wall, so you can quickly rearrange the entire system if your storage needs change.*

### Portable Power Tool Storage \_\_\_\_\_ 26

*Four custom storage units designed to hold your portable power tools and accessories. Each unit hangs conveniently on the wall-mounted grid.*

## Departments

### Readers' Tips \_\_\_\_\_ 4

*Our readers offer their own shop-tested tips to some of the most common woodworking problems.*

### Shop Solutions \_\_\_\_\_ 30

*These two tricks from the guys in our shop will help you build the projects in this issue quickly and safely.*

### Sources \_\_\_\_\_ 31

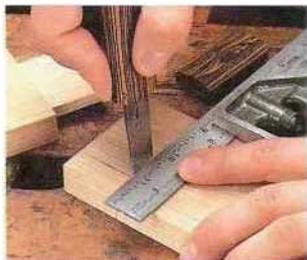
*Hardware, supplies, and mail-order sources for the projects featured in this issue.*



Lathe Tool Rack page 6



Tool Test: Lathes page 10



Marking Knife page 14



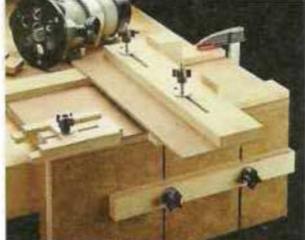
Modular Wall Storage page 16

# Contents

## Features

### Router Tenoning Jig \_\_\_\_\_ 6

*This shop-made tenoning jig makes it easy to cut perfect, square-shouldered tenons. All you need is a hand-held router and a straight bit.*



Tenoning Jig page 6

### Files & Rasps \_\_\_\_\_ 12

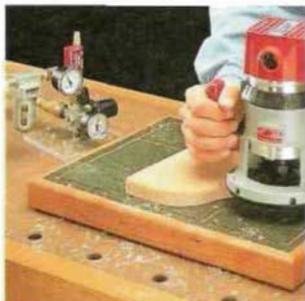
*Whether you're sharpening a scraper, roughing a workpiece to shape, or smoothing a surface, a basic set of files and rasps is sure to come in handy.*



Files & Rasps page 12

### Vacuum Clamping System \_\_\_\_\_ 16

*A simple valve and an air compressor. That's the key to the extraordinary clamping pressure provided by this vacuum system. It features five simple accessories that use a vacuum to hold small (or difficult to clamp) workpieces securely in place.*



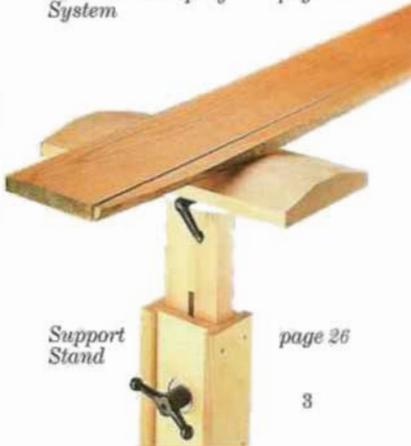
Vacuum Clamping System page 16

### Vacuum Veneer Press \_\_\_\_\_ 24

*Setting up a vacuum system is just a start. By hooking it up to a vacuum bag, you can make a press that applies perfectly uniform pressure — just what you need to veneer flat panels or tricky curved surfaces.*

### Roll-Around Support Stand \_\_\_\_\_ 26

*A telescoping post lets you raise and lower the head of this support stand to match the height of your tools. And a rock solid base keeps it from tipping.*



Support Stand page 26

## Departments

### Readers' Tips \_\_\_\_\_ 4

*Our readers offer their own shop-tested tips to some of the most common woodworking problems.*

### Shop Solutions \_\_\_\_\_ 14

*Tips from the guys in our shop that are sure to come in handy when building the projects in this issue.*

### Sources \_\_\_\_\_ 31

*Hardware, supplies, and mail-order sources for the projects featured in this issue.*

# Contents

## Features

### Portable Hose Reel \_\_\_\_\_ 6

Build this shop-made hose reel and you'll never waste time untangling the hose on your air compressor. Just give the hose a pull, then wind it up when you're done.

### Drafting Tools \_\_\_\_\_ 12

Whether you're making a detailed drawing or a simple cutting diagram, it pays to have a basic set of drafting tools. Here's a look at the tools we recommend.

### Fold-Down Drafting Table \_\_\_\_\_ 16

This wall-hung drafting table folds down to provide a large drawing surface. With its built-in T-square and a compartment to hold your drafting tools, it has everything you need to make detailed shop drawings.

### Scratch Stock \_\_\_\_\_ 24

Looking for a way to add a subtle detail that will set your next project apart? Try cutting a decorative profile with this scratch stock. With a metal cutter filed to the desired profile, just pull the scratch stock across the workpiece.

### Bird's-Eye Maple \_\_\_\_\_ 30

It's a mystery how the tiny "eyes" in bird's-eye maple are formed. But they're certain to attract a lot of attention. We offer tips on working with this highly-figured wood.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips from our readers to solve their most common woodworking problems. Plus two quick tips.

### Shop Solutions \_\_\_\_\_ 14

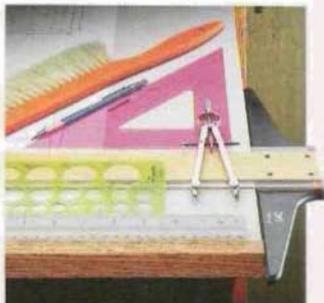
Here's a selection of tips from the guys in our shop that will make it easy to build the projects in this issue.

### Sources \_\_\_\_\_ 31

Hardware, supplies, and mail-order sources for the projects featured in this issue.



Hose Reel page 6



Drafting Tools page 12



Drafting Table page 16



Scratch Stock page 24

# Contents

## Features

### Edge Clamps \_\_\_\_\_ 6

*These shop-made edge clamps are bound to come in handy when gluing hardwood edging on plywood.*

### Cutting Plywood \_\_\_\_\_ 10

*Tips and techniques for cutting a full sheet of plywood down to size. Also, tricks on preventing chipout.*

### Tool Test: Miter Gauges \_\_\_\_\_ 12

*Is it worth buying an "after-market" miter gauge for your table saw? We test four popular models to find out.*

### Pocket Hole Jig \_\_\_\_\_ 16

*Make pocket hole joints quickly and easily with this simple jig. It features a tilting carriage to rout the pocket. And a built-in guide lets you drill the pilot hole accurately.*

### Stacking Sawhorses \_\_\_\_\_ 24

*Practical and inexpensive — two reasons to build this set of stacking sawhorses. You can make four complete sawhorses using just a single sheet of plywood.*

### Spiral Upcut Bits \_\_\_\_\_ 30

*It cuts sideways like a router bit. And it has the plunge cutting ability of a drill bit. That's what makes these router bits ideal for cutting deep mortises.*

## Departments

### Readers' Tips \_\_\_\_\_ 4

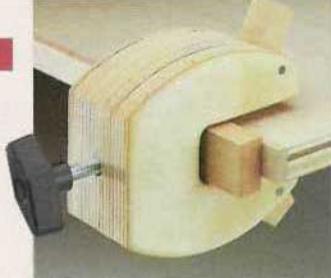
*Our readers offer their own shop-tested tips to some of the most common woodworking problems.*

### Shop Solutions \_\_\_\_\_ 28

*Here's a selection of tips from the guys in our shop that will make it easy to build the projects in this issue.*

### Sources \_\_\_\_\_ 31

*Hardware, supplies, and mail-order sources for the projects featured in this issue.*



Edge Clamps page 6



Miter Gauges page 12



Pocket Hole Jig page 16

Stacking  
Sawhorses  
page 24



# Contents

## Features

### Dovetailed Toolbox \_\_\_\_\_ 6

With its solid wood construction and strong dovetail joints, this sturdy pine toolbox is built to last. It also features two removable bins for organizing small tools.



Toolbox

page 6

### Dovetail Jig \_\_\_\_\_ 16

This shop-made dovetail jig provides an easy way to rout perfect-fitting dovetail joints. The secret is a set of finger-shaped templates that establish the basic size and shape of the dovetails.



Working with Plastics page 14

### Steady Rest \_\_\_\_\_ 26

If you're turning a long, thin spindle on the lathe, this steady rest provides all the support that's needed to keep it from flexing. A simple wood wedge ensures continuous contact as the spindle gets smaller in diameter.



Dovetail Jig

page 16

## In the Shop

### Plastics in the Woodshop \_\_\_\_\_ 12

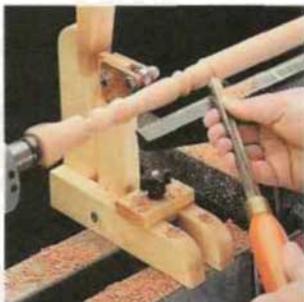
Four different types of plastic that are sure to improve the performance of your woodworking jigs and fixtures.

### Working with Plastics \_\_\_\_\_ 14

Here are some handy tips that will help you get good results when working with plastics.

### Buying Pine \_\_\_\_\_ 30

Building a project out of pine? You can save money by knowing the different grades. Also, avoid problems by working around defects in the lumber.



Steady Rest

page 26

## Departments

### Readers' Tips \_\_\_\_\_ 4

Our readers offer their own shop-tested tips to some of their most common woodworking problems.

# Contents

## Features

### Dowel Storage Rack \_\_\_\_\_ 6

With four "stairstep" compartments, this shop-made storage rack makes it easy to organize dowels by length. Also, a set of drawers provides storage for all your doweling supplies.



Dowel Storage \_\_\_\_\_ page 6

### Using a Skew Chisel \_\_\_\_\_ 10

This versatile turning tool does it all — from making a glass smooth planing cut, to turning a bead. Here are some simple tips and techniques to show you how.



Skew Chisel \_\_\_\_\_ page 10

### Selecting Grinding Wheels \_\_\_\_\_ 14

The secret to sharpening a tool on a bench grinder is using the correct grinding wheel. Check out these handy guidelines for choosing the right one.

### Grinding Station \_\_\_\_\_ 16

A sturdy mounting platform, a clean, well-lit sharpening area, and plenty of storage. That's what you get when you build this wall-mounted station for your benchtop grinder.

### Benchtop Drill Presses \_\_\_\_\_ 22

Our editors test four benchtop drill presses — and the results are in. Find out which one is best. Also, a close-up look at a drill press designed especially for woodworkers.



Drill Presses \_\_\_\_\_ page 22

### Scratch Awl \_\_\_\_\_ 26

Each of these scratch awls has the look and feel of a finely crafted tool. Yet it only takes an hour or two to complete. Our step-by-step plans make it easy.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Our readers offer their own shop-tested tips dealing with some of the most common woodworking problems.

### New Products \_\_\_\_\_ 31

Three new products that are sure to come in handy in your shop. Plus, information on where to get them.



Shop-Made  
Scratch Awls  
page 26

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### Socket Set Storage Boxes \_\_\_\_\_ 6

Keep the tools in your socket sets organized with these handy storage boxes. You can customize each box to suit your needs. There's even a case to hold the boxes.

### Custom Fit Dadoes \_\_\_\_\_ 10

Two simple methods to cut an accurate, tight-fitting dado joint — without using a dado blade.

### Lumber Cart \_\_\_\_\_ 12

This shop-built cart provides plenty of storage for scrap pieces of wood and sheet materials. Plus, the top of the cart doubles as a convenient work surface.

### Benchtop Router Table \_\_\_\_\_ 16

Take a close look at this space-saving router table. It features a large table, an adjustable fence, and three different accessories. Yet it folds up into a compact box.

### Mounting Plates \_\_\_\_\_ 28

Building a router table? To make it easy to change bits, attach your router to a removable mounting plate. We offer some practical suggestions on which one to buy.

### Dovetail Jigs \_\_\_\_\_ 30

You can rout professional-looking dovetail joints every time with these two commercial dovetail jigs.

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Custom Fit Dadoes page 10



Lumber Cart page 12



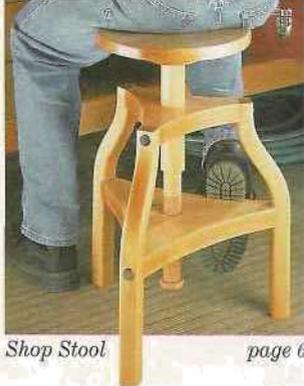
Router Table page 16

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## Features

### Adjustable Shop Stool \_\_\_\_\_ 6

*It's easy to adjust this shop stool to a comfortable working height — just give the seat a spin. The secret is a shop-made wood "screw" that threads into the base of the stool.*



Shop Stool

page 6

### Cutting Threads in Wood \_\_\_\_\_ 12

*There's nothing mysterious about cutting threads in wood. We show you how to cut threads by hand. Or you can rout the threads instead.*



Cutting Threads

page 12

### Utility Workbench \_\_\_\_\_ 16

*This utility workbench is ideal for those tough, dirty jobs around the house. It has a durable metal top that cleans up quickly. And a solid base provides plenty of storage.*



Utility Workbench

page 16

### Roll-Around Clamp Cart \_\_\_\_\_ 24

*Keep clamps and glue-up supplies handy with this roll-around cart. Custom-made hangers hold different types of clamps securely yet still provide quick, easy access.*



Clamp Cart

page 24

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### Readers' Tips \_\_\_\_\_ 4

*Our readers offer their own shop-tested tips dealing with some of the most common woodworking problems.*

### Shop Solutions \_\_\_\_\_ 28

*Useful tips for building projects in this issue — how to rabbet long pieces, drill angled holes, and cut perfectly round disks.*

### Tool Talk \_\_\_\_\_ 30

*Tips and talk about the tools of our trade. In this issue, we take a look at saw blade stabilizers and extension cords.*

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*Information and mail-order sources for the hardware and supplies used to build the projects in this issue.*

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### Dado Blade Storage Case \_\_\_\_\_ 6

The "hanging files" in this storage case hold the chippers and blades of a stacked dado set. This provides easy access to the individual pieces and protects them from damage.

### Restoring a Bench Plane \_\_\_\_\_ 10

Turn an old rusty bench plane into a hard-working tool that looks great too. Also, we include step-by-step instructions on making a new handle or front knob.

### Tuning Up a Bench Plane \_\_\_\_\_ 14

A bench plane is a precision tool — when it's tuned up properly. Here are some simple tips and techniques to help you get the most out of your bench plane.

### Mortising Machine \_\_\_\_\_ 16

This shop-built mortising machine lets you rout perfect mortises every time. With a router carriage that moves up and down and a table that slides in two directions, you can set up the machine and cut a mortise in less than a minute.

### Brush Basics \_\_\_\_\_ 26

One of the secrets to getting a smooth, even finish is the quality of the brush. We offer practical suggestions on selecting brushes, applying a finish, and some clean-up tips.

## Departments

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### Tool Talk \_\_\_\_\_ 30

In this issue, we take a look at an innovative new router collet that doesn't require a wrench to tighten the bit.

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Bench Plane Tune Up page 14



Mortising Machine page 16



Brushes page 26

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### Panel Cutting Guide \_\_\_\_\_ 6

*This wall-mounted panel cutting guide makes it easy to break sheet goods down to manageable size. And a simple fence ensures accurate cuts.*



Panel Cutting Guide page 6

### Tool Review: Jointers \_\_\_\_\_ 12

*Here's an in-depth look at four different types of six-inch jointers. We offer practical suggestions on selecting a jointer that's best suited to the kind of woodworking you do.*

### Modular Storage Bins \_\_\_\_\_ 16

*Organize all your small pieces of hardware with these tilt-out bins. The bins are part of a unique modular storage system that can be customized to suit your needs.*



Modular Storage Bins page 16

### Tuning Up a Jointer \_\_\_\_\_ 20

*Flat, straight, and square stock. That's what you get when you use our simple technique to tune up a jointer.*

### Jointer Extension Tables \_\_\_\_\_ 24

*Jointing a long workpiece is a snap when you add these shop-made extension tables to your benchtop jointer.*



Jointer Tune-Up page 20

### Benchtop Jointer Stand \_\_\_\_\_ 26

*This sturdy stand turns your benchtop jointer into a stationary tool. Plus it offers a handy way to collect chips.*

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### Readers' Tips \_\_\_\_\_ 4

*Our readers offer their own shop-tested tips dealing with some of the most common woodworking problems.*

### Tool Talk \_\_\_\_\_ 30

*Tips and talk about tools of our trade. In this issue, we look at a unique turning tool and roller guides for a band saw.*

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Extension Tables page 24

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### Lathe Disk Sander \_\_\_\_\_ 6

It's easy to convert your lathe into a disk sander. This shop-made tool features a large sanding disk that removes stock quickly and a tilting table to support the workpiece.



Lathe Disk Sander page 6

### Veneering Small Panels \_\_\_\_\_ 12

From making crisp, clean cuts in veneer to gluing and clamping it in place, these helpful tips show you how to apply veneer to small, hardboard panels.



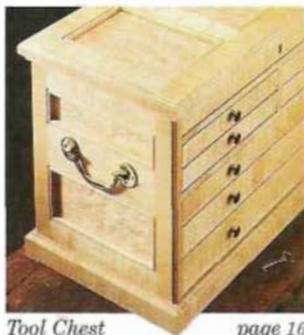
Veneering Panels page 12

### Full-Mortise Lock \_\_\_\_\_ 14

There's no mystery to installing a full-mortise lock. All you need is a little patience, a careful layout, and our step-by-step instructions.

### Cabinetmaker's Tool Chest \_\_\_\_\_ 16

This figured maple tool chest is constructed of simple frame and panel assemblies. With seven drawers and storage under the lid, it's designed to hold your favorite hand tools.



Tool Chest page 16

### Table Saw Dust Collection \_\_\_\_\_ 28

Get the most out of your dust collector. Together with a few scrap pieces of material, you can quickly create an efficient dust collection system for your table saw.



Dust Collection page 28

## Departments

### Readers' Tips \_\_\_\_\_ 4

Our readers offer their own shop-tested tips dealing with some of the most common woodworking problems.

### Tool Talk \_\_\_\_\_ 30

Tips and talk about tools of our trade. In this issue, we look at a micro-adjustable edge guide that attaches to a router.

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## Features

### Table Saw Workstation \_\_\_\_\_ 6

A table saw is one of the most versatile tools in a shop. Now you can make it even better. Here's a quick overview of three great projects we're featuring in this issue that will convert your table saw into a complete workstation.

### Router Table Extension \_\_\_\_\_ 8

This router table replaces the extension wing on your table saw. Besides saving space, a lift-out insert plate, miter gauge slot, and adjustable fence make it extremely versatile as well.

### Table Saw Cabinets \_\_\_\_\_ 16

Add weight and stability to your table saw by mounting it to these roll-around cabinets. Then enjoy the storage, mobility, and built-in dust collection they provide.

### Tongue & Groove Joinery \_\_\_\_\_ 24

A tongue and groove joint is an ideal solution when it comes to joining solid wood and plywood. We show you a few simple tricks to cut these joints quickly and accurately.

### Fold-Up Outfeed Table \_\_\_\_\_ 26

If you're ripping long boards, it only takes a second to hook this outfeed table onto the table saw. Plus, its unique design lets you fold the table for storage.

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### Readers' Tips \_\_\_\_\_ 4

Our readers offer their own shop-tested tips dealing with some of the most common woodworking problems.

### Router Table Tips \_\_\_\_\_ 14

Five great tips to get the most out of your router table.

### Tool Talk \_\_\_\_\_ 30

Tips and talk about tools of our trade. In this issue, we take a look at a precision, T-square rip fence for your table saw.

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Router Table Extension page 8



Table Saw Cabinets page 16



Tongue & Groove page 24



Fold-Up Outfeed Table page 26

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### Jig Storage Rack \_\_\_\_\_ 6

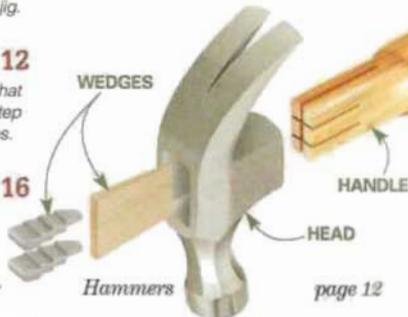
This ceiling-mounted rack provides the perfect solution for storing large or odd-sized jigs and fixtures. They're suspended from wire hangers that are bent to shape using a simple jig.



Jig Storage Rack page 6

### Four "Must-Have" Hammers \_\_\_\_\_ 12

Here's a close look at four different types of hammers that are useful to have in your shop. Also, step-by-step instructions for repairing or replacing damaged handles.



page 12

### Band Saw Upgrade \_\_\_\_\_ 16

Two shop-made accessories to help you get the most out of your band saw. An auxiliary table provides rock-solid support for large workpieces. And an adjustable fence makes it easy to produce accurate cuts every time.

### Resawing on a Band Saw \_\_\_\_\_ 24

Learn how to cut thick wood into thin stock on the band saw. Here are some simple tips, jigs, and techniques that will have you resawing lumber to uniform thickness in no time.

### Fold-Out Magazine Rack \_\_\_\_\_ 28

Do the plans in your woodworking magazines get covered up with clutter as you work? This shop-made rack holds them up off the bench and folds out for easy viewing.



Band Saw Upgrade page 16

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### Readers' Tips \_\_\_\_\_ 4

Our readers offer their own shop-tested tips dealing with some of the most common woodworking problems.

### Assembly Tips \_\_\_\_\_ 10

These five great tips ensure a squared-up assembly when you're gluing up a project.

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Mail-order sources and supplies to help you build the projects featured in this issue.



Magazine Rack page 28

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## Features

### Adjustable Miter Jig \_\_\_\_\_ 6

*This shop-made jig makes it easy to cut perfect 45° miters on a radial arm saw. It features a short and a long pair of fences for different length workpieces, an adjustable stop for consistent results, and a hold-down to make cuts safely.*



Adjustable Miter Jig page 6

### Radial Arm Saw Tune-Up \_\_\_\_\_ 12

*All it takes to improve the performance of your radial arm saw is a simple tune-up. We show you seven quick steps to producing smooth, accurate cuts.*



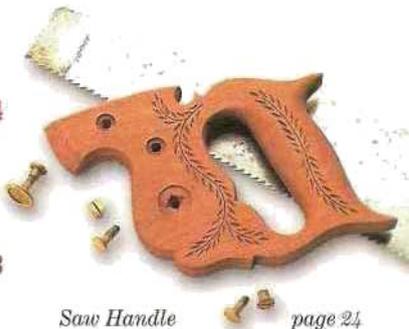
Knock-Down Workbench page 16

### Knock-Down Workbench \_\_\_\_\_ 16

*Whether you use this plywood bench to build a woodworking project or a deck in the back yard, its three different clamping options are sure to come in handy. Once you complete a job, it only takes a minute to "knock down" the bench for storage.*

### Cherry Saw Handle \_\_\_\_\_ 24

*The graceful curves and the carved wheat pattern of this cherry saw handle resemble a traditional design. But to simplify the construction, we've taken a unique approach to fitting the saw blade into the handle.*



Saw Handle page 24

### Chip Carving \_\_\_\_\_ 28

*You can add an old-fashioned accent to your saw handle by using a chip carving knife to make stems of wheat. With a little bit of practice and a few helpful hints, you'll be chip carving like a pro in no time.*



Chip Carving page 28

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*Our readers offer their own shop-tested tips dealing with some of the most common woodworking problems.*

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### Edge Sanding Jig \_\_\_\_\_ 6

Convert your portable belt sander into a handy edge-sanding tool with this simple, shop-made jig.

### Bowl Gouge Basics \_\_\_\_\_ 10

Whether you're shaping the outside of a bowl or scooping out the inside, knowing how to use a bowl gouge is the key to success. We'll show you the basics.

### Turning a Bowl \_\_\_\_\_ 12

You don't have to be a master to turn a bowl on the lathe. With our simple, step-by-step approach, you can turn a bowl from start to finish in an afternoon.

### Miter Gauge Fence \_\_\_\_\_ 16

Quick, accurate setups. That's what you get when you build this adjustable miter gauge fence. It features a sliding fence and two stops that guarantee precise cuts every time.

### Drill Bit Storage \_\_\_\_\_ 24

Organize your drill bits with a set of custom hangers. Then hook them on a wall-mounted cleat next to your drill press or take them with you when working away from the shop.

### Power Sanding Systems \_\_\_\_\_ 28

Sanding a bowl that's been turned on the lathe doesn't have to be a chore. These two power sanding systems remove material fast and produce a smooth, consistent surface.

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Our readers offer their own shop-tested tips dealing with some of the most common woodworking problems.

### New Products \_\_\_\_\_ 30

Get a handle on the problem of rust with Rust Blocker.

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Turning a Bowl page 12



Miter Gauge Fence page 16



Drill Bit Storage page 24

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### Marking Gauge \_\_\_\_\_ 6

A traditional marking gauge — with a twist. Made of maple and brass, it features two ways to make precision layouts.

### Power Tool Tune-Up \_\_\_\_\_ 12

If your portable power tools are running rough — or not running at all — there's usually an easy fix. Here are some practical tune-up tips for top notch performance.

### Roll-Around Tool Cart \_\_\_\_\_ 16

Keep all your portable power tools right at hand with this roll-around cart. Adjustable trays help organize tools and accessories. Plus they can be customized to fit your tools.

### 5 Quick Circular Saw Jigs \_\_\_\_\_ 22

Who says a circular saw is only for rough carpentry work? These five great jigs will turn it into a precision tool.

### Power Cord Caddies \_\_\_\_\_ 26

Untangling a power cord is a hassle. Here's a one-hour solution — a shop-made caddy that keeps it coiled. Also, plans for a simple cabinet that holds three caddies.

### Heirlooms from a Basement Shop \_\_\_\_\_ 28

Extraordinary furniture from an ordinary shop. See how one woodworker creates classic heirlooms — in spite of the challenges of working in a basement shop.

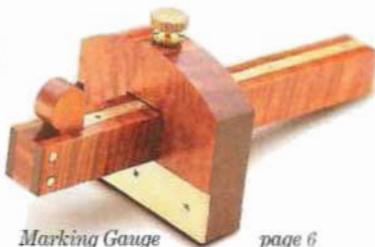
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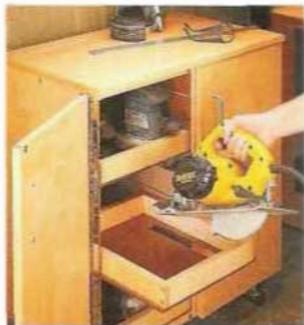
Mail-order sources and supplies to help you build the projects featured in this issue.



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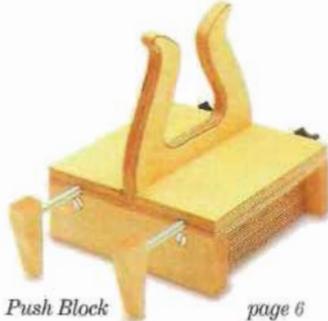
Power Cord Caddy page 26

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### Two-Handled Push Block \_\_\_\_\_ 6

Two handles, two clamps, and two replaceable backer boards — together they make a handy push block for the router table that eliminates end-grain chipout.



Push Block page 6

### HVLP Spray Systems \_\_\_\_\_ 10

A high-volume, low-pressure (HVLP) system makes it quick and easy to spray on a glass-smooth finish. Is it right for you? To find out, we take a look at two types of HVLP systems.



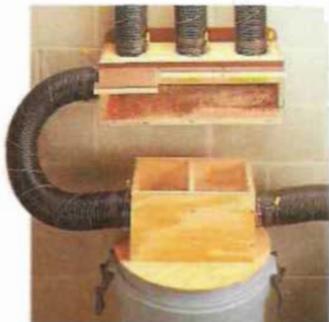
Spray Finishing page 12

### Spraying a Flawless Finish \_\_\_\_\_ 12

There's more to spraying a perfect finish than squeezing the trigger on a spray gun. We show you practical tips and techniques to ensure a professional-looking finish.

### Dust Collector Upgrade \_\_\_\_\_ 16

Take a good thing and make it better. That's the idea behind these two shop-built projects designed to improve the performance of a portable dust collector.



Dust Collector Upgrade page 16

### In-Line Chip Separator \_\_\_\_\_ 18

Don't get caught holding the bag — on your dust collector that is. This separator captures the large chips produced by your tools and deposits them in a trash can.

### 3-Tool Dust Control Box \_\_\_\_\_ 21

Tired of switching a dust hose from one tool to another? Build a control box and connect three tools at once.

### Roll-Around Store-All \_\_\_\_\_ 24

It's like having a lumber yard in your shop. Storage for long boards, short cutoffs, and sheet material. Also, an optional guide for cutting large panels into manageable-sized pieces.



Roll-Around Store-All page 24

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### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Tool Talk \_\_\_\_\_ 30

Twist bits dull? Get them sharper than new with Drill Doctor.

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### Top Five Router Jigs \_\_\_\_\_ 8

Trim edging perfectly flush, cut smooth mortises, rout custom dados, and more—these five great jigs will turn your hand-held router into a shop workhorse.

### Cordless Tool Batteries \_\_\_\_\_ 14

Prevent a power outage—learn how cordless tool batteries work along with some quick and simple steps you can follow to keep your cordless tools running at full power.

### Circular Saw Miter Station \_\_\_\_\_ 16

Lock in perfect miters and crosscuts from your circular saw with this miter station. A foolproof indexing system and a custom-fit saw guide guarantee a precise angle every time.

### Drilling Large Holes \_\_\_\_\_ 22

Need to drill a large hole? Here are some options and a few handy techniques you may want to consider.

### Drop-In Drawer Organizers \_\_\_\_\_ 26

What's the best way to deal with the jumbled mess inside a drawer? Divide and conquer, with an adjustable drawer insert and a pair of removable totes.

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### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Tool Talk \_\_\_\_\_ 6

Tired of kneeling on the floor to adjust the bit in your router table? Here are two innovative products that get you back on your feet.

### New Products \_\_\_\_\_ 30

Two problems, two solutions. The Woodworker's Guide makes locating a past article in your old woodworking magazines a snap. Plus, the Blade-Loc turns the job of table saw blade removal into a simpler and safer task.

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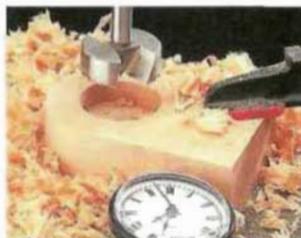
Mail-order sources and supplies to help you build the projects featured in this issue.



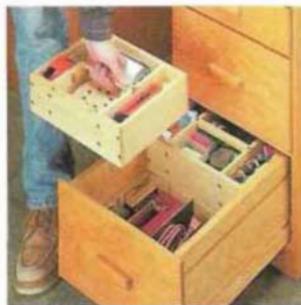
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Drop-In Organizers page 26

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### Parts Bin Cabinet \_\_\_\_\_ 6

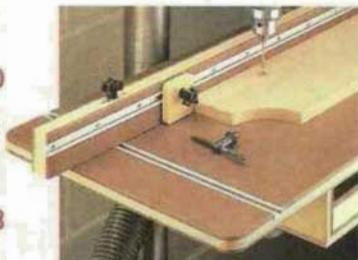
Plastic parts bins are great for storing hardware and other items. But how do you keep the dust out? The answer is a shop-made storage cabinet with a see-through, flip-up lid.



Parts Bin Cabinet page 6

### Drill Press Table \_\_\_\_\_ 10

With a large worksurface, an adjustable fence and stop, and storage space, this will be the last drill press table you'll ever need. Plus it doubles as a drum sanding station with replaceable inserts and a built-in shop vacuum hookup.



Drill Press Table page 10

### Pin Router \_\_\_\_\_ 18

With a hand-held router and this handy jig, you can rout a wide variety of decorative designs in your projects. A metal pin and a shop-made template guide the workpiece while you rout the design.



Pin Router page 18

### Building a Custom-Fitted Case \_\_\_\_\_ 24

Fine tools, collectibles, and valued keepsakes deserve special storage. And a custom-fitted case is the answer. We show you step-by-step how to build one—working from the inside out.

### Water-Based Finishes \_\_\_\_\_ 28

Water-based finishes have a lot going for them. They're easy to use, there's no messy cleanup, and they're tough and long-lasting. We share what we've learned in our shop about buying and using water-based finishes.



Water-Based Finishes page 28

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### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Tool Talk \_\_\_\_\_ 16

Tuned up your plane and still aren't getting the results you expect? A new blade may be just what your plane needs.

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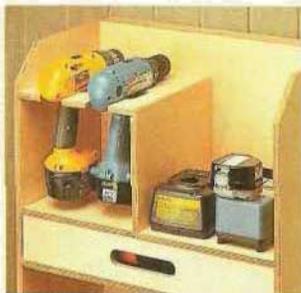
Mail-order sources and supplies to help you build the projects featured in this issue.

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## Features

### Cordless Tool Storage Cabinet \_\_\_\_\_ 6

Here's a project to help you keep it all together. It's the perfect solution for keeping your cordless tools, chargers, and accessories organized and ready to go.



Cordless Tool Storage page 6

### Polyurethane Glue \_\_\_\_\_ 10

If you think that wood and water don't mix, you're in for a surprise. In this article, we give you a few tips and techniques we've learned in our shop about working with polyurethane glue.

### Country Shop \_\_\_\_\_ 12

Take a tour of a country dream shop. It has plenty of wide open space, an impressive collection of power tools, and ideas you can put to use in your own shop.



Miter Saw Station page 16

### Miter Saw Station \_\_\_\_\_ 16

Whether you're working in the shop or on site, this miter saw station offers both accuracy and portability. Plus, it has a movable fence system that quickly adjusts to match the length of your stock.

### Molding Heads \_\_\_\_\_ 24

Your table saw is already a workhorse in the shop. Adding a molding head makes it even more versatile. Here's how to get the most out of a molding head and a set of cutters.



Molding Heads page 24

### Molding Head Fence \_\_\_\_\_ 28

Attach this auxiliary fence and guard to your rip fence to make smoother, safer cuts with a molding head.



Molding Head Fence page 28

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### Modular Shop Cabinets \_\_\_\_\_ 6

These cabinets are the ideal storage solution for any shop. Constructed with framing lumber, the modular design allows you to configure them to match the space in your shop.



Shop Cabinets page 6

### Two Favorite Pull Saws \_\_\_\_\_ 16

If you've never used a pull saw, you're in for a treat. They cut quickly and cleanly, with little effort. Here's a look at a couple of our favorite types of pull saws.



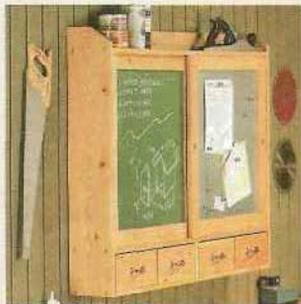
Pull Saws page 16

### Pull Saw Miter Box \_\_\_\_\_ 18

If you're tired of splintering delicate moldings and small pieces with your power miter saw, take a look at this solution. This shop-made miter box allows you to make quick, clean cuts using a hand saw.

### Sliding-Door Wall Cabinet \_\_\_\_\_ 22

Make better use of your wall space with this clever cabinet. Sure it has lots of storage. But the sliding doors also double as a handy chalkboard and a spot for hanging up plans or notes.



Wall Cabinet page 22

### Pegboard Tool Holders \_\_\_\_\_ 28

Pegboard can be found in just about every shop. But these tool holders make your pegboard work harder by organizing the wall space into versatile, customized tool storage.

### Cutting Perfect Half Laps \_\_\_\_\_ 30

Half laps offer an ideal combination of strength and speed. Here are some step-by-step instructions to help ensure your success the next time you use this joint on a project.

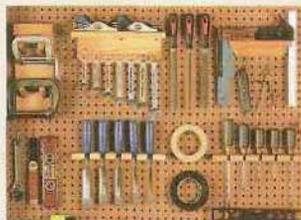
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Mail-order sources and supplies to help you build the projects featured in this issue.



Pegboard Tool Holders page 28

# Contents

## Features

### Air Compressor Caddy \_\_\_\_\_ 6

Lugging around a "portable" air compressor can get to be a real chore. This caddy is the ideal solution for easily moving your air compressor and its accessories.

### Buying a Portable Air Compressor \_\_\_\_\_ 10

Oil or oil-less? Single tank or twin? Learn what to look for when buying a portable air compressor. Plus, find out which handy accessories you need to have.

### Adjustable-Height Assembly Table \_\_\_\_\_ 14

Whether you need an extra assembly area or an outfeed support for a stationary tool, this adjustable-height assembly table is the answer. Our unique adjustment system makes raising (or lowering) the top a smooth task.

### Six Solutions for Successful Ripping \_\_\_\_\_ 22

Having problems ripping stock cleanly? Our six solutions will make the whole process a lot easier. They'll come in handy whether you're a seasoned pro or just a beginner.

### Auxiliary Fence \_\_\_\_\_ 26

Adding a featherboard, a stop block, or a scrap face for "burying" a dado blade to a typical rip fence can be a real hassle. Not any more. With this auxiliary fence, adding any of these five must-have accessories is quick and easy.

## Departments

### Readers' Tips \_\_\_\_\_ 4

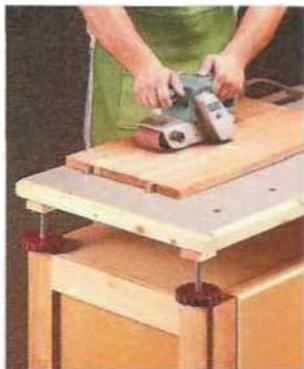
Shop-tested tips to solve common woodworking problems.

### Sources \_\_\_\_\_ 31

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Air Compressor Caddy page 6



Assembly Table page 14



Auxiliary Fence page 26

# Contents

## Features

### 5-in-1 Router Base Plate System \_\_\_\_\_ 6

A unique router base plate system makes it easy to use a number of shop-built accessories—mortising jig, circle cutter, flush trim jig, edge guide, and benchtop fence and table.



5-in-1 Router System page 6

### Brad Nailers \_\_\_\_\_ 14

A brad nailer can now be standard equipment for every workshop. We'll give you the reasons why and the features to look for when selecting one for your shop.



Brad Nailers page 14

### Drill Press Sharpening Wheel \_\_\_\_\_ 18

Use the low speed of your drill press to sharpen a plane iron or chisel in minutes. Plus, this sharpening wheel features a leather top for honing a razor sharp edge.

### Tapping Threads \_\_\_\_\_ 25

A jig, fixture, or tool will often work better and more accurately by tapping the metal parts to accept threaded fasteners. Here's what you need to know about tapping threads.

### Adjustable Hand Plane \_\_\_\_\_ 26

The look and feel of a traditional wood plane with some of the easy-to-use features you find on a metal plane: an adjustable throat opening and a secure blade-mounting system.



Sharpening Wheel page 18

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### NEW Shop Talk \_\_\_\_\_ 32

We take on the left or right tilt debate. When it comes to table saws, is one really better than the other?

### NEW Tool Chest \_\_\_\_\_ 34

In this new department, we take a look at tools we use day in and day out. First up—Sandvik scrapers.

### Sources \_\_\_\_\_ 35

Mail-order sources and supplies to help you build the projects featured in this issue.



Adjustable Hand Plane page 26

# Contents

## Features

### Box Joint Jig \_\_\_\_\_ 6

Unlike most box joint jigs, this one uses runners in both miter slots to make an extremely smooth-working jig. And replaceable fences allow you to make different size box joints without having to "retune" the fit.

### Making Box Joints \_\_\_\_\_ 10

You can't help but appreciate the craftsmanship of precision box joints. Learn how easy it is to make them with our simple step-by-step approach.

### Carpenter's Toolbox \_\_\_\_\_ 14

With its classic lines, solid wood construction, and strong box joints, this carpenter's toolbox will be around to use (and admire) for generations to come. It also features a removable tray for organizing small tools and hardware.

### Great Glue-Ups \_\_\_\_\_ 20

There's more to creating a wide, solid-wood panel than just gluing a bunch of boards together. Learn the step-by-step process we use to glue up panels that look great and stay flat.

### Clamping Station \_\_\_\_\_ 24

Glue up a panel without taking up valuable bench space? And without pipe clamps? This shop-built station makes it possible.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Shop Talk \_\_\_\_\_ 32

We share the "secrets" used in our shop for creating a smooth, even profile with a router bit and a hand-held router.

### Tool Chest \_\_\_\_\_ 34

Unconventional design, great results. Find out about an unusual bit that cuts perfect countersinks in wood or metal.

### Sources \_\_\_\_\_ 35

Mail-order sources and supplies to help you complete the projects featured in this issue.



Box Joint Jig \_\_\_\_\_ page 6



Carpenter's Toolbox \_\_\_\_\_ page 14



Clamping Station \_\_\_\_\_ page 24

# Contents

## Features

### Chisel Rack \_\_\_\_\_ 6

*Our new chisel rack makes use of a unique design (and a secret method) to keep chisels easily accessible and on display.*

### Sharpening with Diamond Paste \_\_\_\_\_ 9

*Put a razor-sharp cutting edge on any plane iron or chisel in minutes with this new sharpening method.*

### Table Saw Accessory Shelf \_\_\_\_\_ 12

*Keeping table saw accessories organized and close at hand has always been a problem — until now.*

### Crosscut Sled \_\_\_\_\_ 16

*A lightweight crosscut sled that's dead-on accurate? You bet. Plus, a couple optional accessories to make it even more useful.*

### Crosscutting Tips \_\_\_\_\_ 21

*Get better crosscuts in minutes. We offer a few tips from our own shop for smooth, accurate crosscuts time after time.*

### Router Storage System \_\_\_\_\_ 24

*Besides keeping your router bits organized and accessible, this storage system expands as your needs grow.*

### Spade Bit Tote \_\_\_\_\_ 30

*Keep your spade bits stored and ready to go with this handy tote that you can make in an afternoon.*

## Departments

### Readers' Tips \_\_\_\_\_ 4

*Shop-tested tips to solve common woodworking problems.*

### Shop Talk \_\_\_\_\_ 32

*Want to know the "in's and out's" of table saws? We cover the basics from benchtops to cabinet saws.*

### Tool Chest \_\_\_\_\_ 34

*This issue's tool is the perfect example of getting what you pay for. When it comes to the "details," this tool has it all.*

### Sources \_\_\_\_\_ 35

*Mail-order sources and supplies to help you complete the projects featured in this issue.*



Chisel Rack page 6



Diamond Paste page 9



Table Saw Crosscut Sled page 16



Router Storage System page 24

# Contents

## Features

### Wall-Mounted Drill Press Shelf \_\_\_\_\_ 6

Open up space on your workbench by moving your drill press to this handy, wall-mounted shelf. Then add an optional storage rack that keeps all your drilling accessories close at hand.

### Painting a Hammered Finish \_\_\_\_\_ 12

One of the best ways to finish MDF is with paint. Learn how to spray or roll on a "hammered" finish in an afternoon and give your shop projects a professional-quality look.

### Plunge Router Mortising Jig \_\_\_\_\_ 14

This shop-made mortising table lets you rout perfect mortises with a hand-held plunge router. You can set up the table and make identical mortises time after time in less than a minute.

### Hardware Storage Cabinet \_\_\_\_\_ 22

All your hardware stored and organized in one spot? With this hardware storage cabinet and a set of plastic storage bins, you'll never have to hunt for hardware again.

### Shop-Built Drawer Dividers \_\_\_\_\_ 29

Eliminate cluttered drawers forever with a set of custom dividers you can make in your own shop.

### Cabinet Clamping Tips \_\_\_\_\_ 30

Clamping large cabinet projects can be a daunting task — especially if you don't have a lot of clamps. We show you how to clamp a large assembly with just a few clamps.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Shop Talk \_\_\_\_\_ 32

When it comes to joining pieces of MDF together, a few tips and techniques will ensure quality results and solid assemblies.

### Tool Chest \_\_\_\_\_ 34

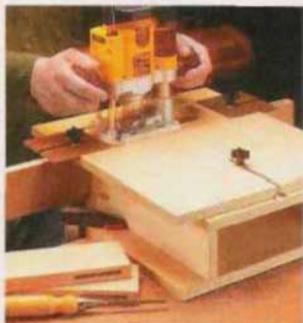
There's an old saying that good things come in small packages. And our featured tool is a perfect example.

### Sources \_\_\_\_\_ 35

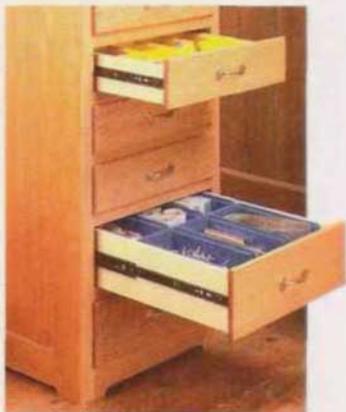
Mail-order sources and supplies to help you complete the projects featured in this issue.



Drill Press Shelf page 6



Router Mortising Jig page 14



Storage Cabinet page 22

# Contents

## Features

### Adjustable V-Block System \_\_\_\_\_ 6

You've never seen a jig that looks — or works — like this one. This is more than just a V-block. It's a whole drill press system. With it, you'll be able to drill accurate holes in anything from simple dowels to irregular-shaped objects.



Adjustable V-Block page 6

### Shooting Board \_\_\_\_\_ 12

Need to "bweek" a mitered joint or plane the end of a workpiece perfectly square? With this shop-made shooting board, you can slice razor-thin shavings for a perfect fit.



Shooting Board page 12

### Using a Shooting Board \_\_\_\_\_ 16

Using the shooting board starts with setting it up for your hand plane. Then get the most out of it with a few handy tips and techniques that will work with any shooting board.

### Heavy-Duty Workbench \_\_\_\_\_ 18

This heavy-duty workbench incorporates easy-to-build features with up-to-date materials and hardware. With its rock-solid construction and two handy vises, this bench can handle just about anything you can throw at it.



Workbench page 18

### Edge-Sanding Block \_\_\_\_\_ 30

There's no doubt sanding is a hassle — especially when it comes to plywood edging. Our adjustable, edge-sanding block makes sanding less of a chore and more accurate.



Edge-Sanding Block page 30

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Shop Talk \_\_\_\_\_ 32

When it comes to hand planes, it's hard to know exactly what you need. In this issue, learn about some basic planes and what they are used for.

### Tool Chest \_\_\_\_\_ 34

Here's a look at a couple products that are designed to make your woodworking safer and more enjoyable.

### Sources \_\_\_\_\_ 35

Mail-order sources and supplies to help you complete the projects featured in this issue.

# Contents

## Features

### Thin-Stock Hold-Down \_\_\_\_\_ 6

Need to cut thin veneer or laminate on the table saw? You'll get chip-free results safely with our shop-made hold-down, whether you're cutting narrow strips or wide ones.

### Convertible Shop Storage Cabinets \_\_\_\_\_ 10

It's easy to see how much storage you can pack into these handy cabinets. What you can't see is how versatile they are. You can stack them, like you see in the photo at right, or set them side-by-side under a bench.

### Tongue & Groove Joinery \_\_\_\_\_ 18

Solid, dependable, and easy to make — tongue and groove joinery gets high marks for all three. We show you how to cut this basic joint on the table saw, providing tips and techniques for getting great results every time.

### Table Saw Workstation \_\_\_\_\_ 20

Any shop can benefit by combining tools in a central location. Our two-cabinet workstation features a portable table saw, table-mounted router and fence, and a shop vacuum — along with a pair of drawers for storing all your accessories.

### 6-Step Router Plate Installation \_\_\_\_\_ 30

Fitting a router plate into the top of a table doesn't have to be a hassle. We'll show you step-by-step how to do this successfully using a hand-held router and a set of shop-made guides.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Tool Chest \_\_\_\_\_ 32

Sometimes the smallest tool packs the biggest punch. This issue's tool slips easily in the pocket of your apron so it's always close at hand when you need it.

### Shop Talk \_\_\_\_\_ 34

See how something as simple as the grain of a workpiece can dramatically affect the look of a project.

### Sources \_\_\_\_\_ 35

Mail-order sources and supplies to help you complete the projects featured in this issue.



Thin-Stock Hold-Down page 6



Shop Cabinets page 10



Tongue & Groove page 18

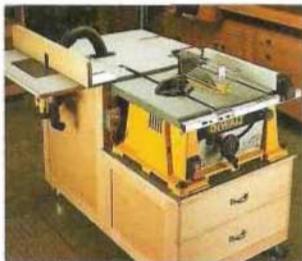


Table Saw Workstation page 20

# Contents

## Features

### Miter Saw Table & Fence \_\_\_\_\_ 6

Finally, a better way to cut small pieces on a miter saw. This shop-made accessory fits over the saw and makes cutting small, hard-to-hold pieces easy, accurate, and safe.

### 10 "Must Have" Router Bits \_\_\_\_\_ 12

You don't need a drawer full of router bits to build great woodworking projects. We "profile" ten bits that will allow you to accomplish just about any routing task you'll face.

### Mini-Lathe Stand \_\_\_\_\_ 14

Turn your mini-lathe into a full-fledged turning center. This stand has everything you need — it's rock solid, easy to build, and provides storage for all your turning tools and accessories. Plus, you can easily move it anywhere in the shop.

### Miter Saw Quick Tips & Simple Jigs \_\_\_\_\_ 22

It's often the little things that help you get the most out of a tool. With a few tips and jigs, you'll be turning to your miter saw more often for more of your woodworking needs.

### Rotary Tool Storage Case \_\_\_\_\_ 26

A rotary tool is a handy item to have, but it can be a real challenge to keep track of its accessories. This wall-mounted storage case organizes and stores it all — yet its convenient size makes it easy to carry to right where you need it, whether it's in the shop or around the house.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Shop Talk \_\_\_\_\_ 32

Learn what's new in construction materials. In this issue, we talk about the changing world of pressure-treated lumber.

### Tool Chest \_\_\_\_\_ 34

The final look of a project "hinges" on adding the hardware. We feature a set of special bits that will make installing hinges easy by drilling perfectly centered screw holes.

### Sources \_\_\_\_\_ 35

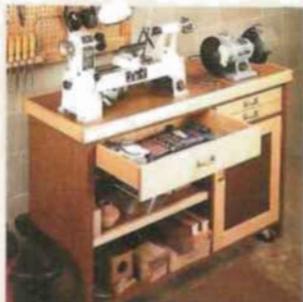
Mail-order sources and supplies to help you complete the projects featured in this issue.



Miter Saw Table & Fence page 6



Router Bits page 12



Mini-Lathe Stand page 14



Tool Storage Case page 26

# Contents

## Features

### Benchtop Tool Organizer \_\_\_\_\_ 6

Does a cluttered workbench keep you from doing your best work? Not anymore. With our tool organizer you'll have all your tools within easy reach — and a cleaner benchtop too.

### Jig Saw Blades \_\_\_\_\_ 10

Don't give jig saw blades a lot of thought? Well, maybe you should. We'll show you how to pick the right blade for the job.

### Horizontal Mortising Machine \_\_\_\_\_ 12

Our all-new, shop-built mortising machine lets you rout perfect mortises every time. A table that moves in two directions and a carriage that slides in and out allow you to set up and cut a mortise in less than a minute.

### Materials & Hardware for Shop Jigs \_\_\_\_\_ 22

A shop-made jig can make your woodworking easier, faster, and more precise. Learn what materials and hardware we use day in and day out when we build our jigs.

### Roll-Around Shop Cart \_\_\_\_\_ 26

Moving a pile of workpieces around the shop can be a hassle. Or if you're working at one tool, it's nice to have an extra worksurface to help keep everything organized. With our roll-around shop cart, both problems are solved.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Shop Talk \_\_\_\_\_ 32

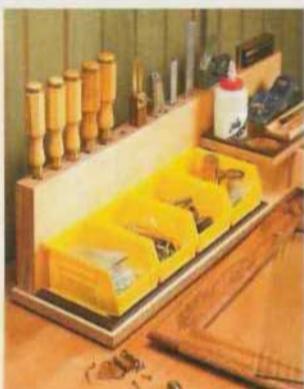
For only \$20 you can dramatically improve the accuracy of your shop tools. Here's what you need to know about dial indicators.

### Tool Chest \_\_\_\_\_ 34

Porter Cable's 690 router has been a workhorse in our shop for years. Find out what makes their updated model an even better choice for your workshop.

### Sources \_\_\_\_\_ 35

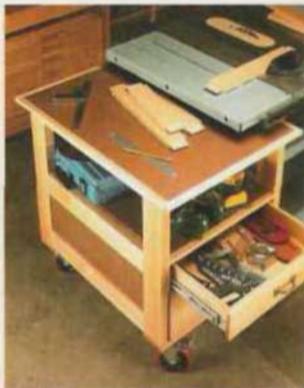
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Benchtop Tool Organizer page 6



Mortising Machine page 12



Roll-Around Cart page 26

# Contents

## Features

### Small Parts Storage \_\_\_\_\_ 6

*Bits and pieces. Odds and ends. This shop-built storage system solves the problem of how to organize them.*

### Japanese Chisels \_\_\_\_\_ 12

*If you're looking for a chisel with the ultimate edge, you owe it to yourself to take a look at these chisels.*

### Router Table Fence & Accessories \_\_\_\_\_ 16

*An all-new, shop-built router table fence that never needs aligning. Plus, some handy accessories to go along with it.*

### Scroll-Bending Jig \_\_\_\_\_ 22

*This simple jig allows you to bend metal rods and bars into decorative shapes and useful objects with ease.*

### Bending Press \_\_\_\_\_ 26

*With this easy-to-use bending press, you don't have to be a blacksmith or ironworker to create angled bends in metal.*

### Set-Up Gauge \_\_\_\_\_ 30

*You'll find many uses around your shop for this simple set-up gauge. And you can build it in an evening or afternoon.*

## Departments

### Readers' Tips \_\_\_\_\_ 4

*Shop-tested tips to solve common woodworking problems.*

### Shop Talk \_\_\_\_\_ 32

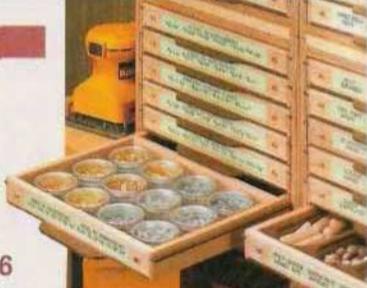
*Learn why cast iron is the material of choice when it comes to power tools. Plus some tips for keeping it in shape.*

### Tool Chest \_\_\_\_\_ 34

*A dial caliper can be one of the most useful tools in the shop. Here's a look at our favorite one.*

### Sources \_\_\_\_\_ 35

*Mail-order sources and supplies to help you complete the projects featured in this issue.*



Small Parts Storage page 6



Japanese Chisels page 12



Router Fence page 16



Scroll-Bending Jig page 22

# Contents

## Features

### 15 Hold-Down Solutions \_\_\_\_\_ 6

*Hold it! That's the whole idea with each of these items.*

### Drill Press Hold-Down \_\_\_\_\_ 10

*Get a grip on practically anything with this accessory.*

### Workbench Board Jack \_\_\_\_\_ 12

*This adjustable support is an extra hand when working with long stock at your workbench.*

### Six Solutions for Drilling and Driving \_\_\_\_\_ 14

*Simple tips and tools for getting the best results with screws.*

### Shop-Built Gear Box \_\_\_\_\_ 16

*Rugged construction and heavy-duty hardware make this a versatile storage box that you won't have to baby.*

### Table Saw Storage Drawer \_\_\_\_\_ 24

*Clear the top of your table saw once and for all with this quick project that fits in unused space.*

### Trim Routers \_\_\_\_\_ 26

*Big results in a small package. Trim routers can handle a lot more than just plastic laminate.*

### Working with Plastic Laminate \_\_\_\_\_ 30

*Find out how to put this versatile material to use in your shop.*

## Departments

### Readers' Tips \_\_\_\_\_ 4

*Shop-tested tips to solve common woodworking problems.*

### Tool Chest \_\_\_\_\_ 32

*Get sharp edges fast with these new ceramic stones.*

### Shop Talk \_\_\_\_\_ 34

*Learn what drives the cost of milled hardwood lumber.*

### Sources \_\_\_\_\_ 35

*Mail-order sources and supplies to help you complete the projects featured in this issue.*



*Gear Box*

*page 16*



*Table Saw Drawer*

*page 24*



*Trim Routers*

*page 26*



*Shapton Stones*

*page 32*

# Contents

## Features

### Stow-Away Router Table \_\_\_\_\_ 6

*This space-saving shop essential has features some bigger router tables only dream about. It stows away when you don't need it and mounts to your workbench in less than a minute.*

### Super-Strong Box Joints \_\_\_\_\_ 12

*Cutting small box joints is one thing, but cutting them with fingers 2" long requires a little different technique. We show you how to do it with our step-by-step instructions.*

### Shop-Made Benchtop Vise \_\_\_\_\_ 14

*Round stock, carvings, odd shapes — this benchtop vise can handle it all. We've designed it with a variety of jaw faces and updated a classic design to meet today's needs.*

### Working with Plywood \_\_\_\_\_ 22

*Do you dread the thought of moving, storing, or cutting a large, heavy sheet of plywood? Learn a few of the techniques we use to make working with plywood hassle-free.*

### 5 Plywood Shop Projects \_\_\_\_\_ 26

*It won't take a lot of time, effort, or material to outfit your shop with storage, worksurfaces, and several handy accessories. Each project can be built from a single sheet of plywood.*

## Departments

### Readers' Tips \_\_\_\_\_ 4

*Shop-tested tips to solve common woodworking problems.*

### Tool Chest \_\_\_\_\_ 32

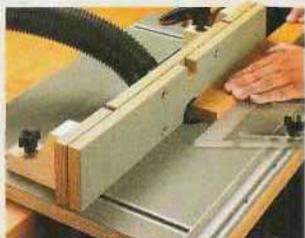
*Block planes have been around for a long time. But we've found one that incorporates some new features and accessories that are sure to make it one of your favorite tools.*

### Shop Talk \_\_\_\_\_ 34

*Glue doesn't keep forever. Here's what you need to know to determine if it's "too old to hold" on your next project.*

### Sources \_\_\_\_\_ 35

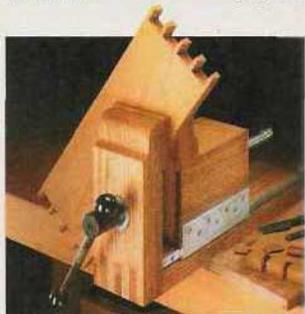
*Mail-order sources and supplies to help you complete the projects featured in this issue.*



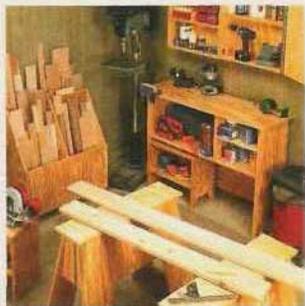
Router Table page 6



Box Joints page 12



Benchtop Vise page 14



5 Plywood Projects page 26

# Contents

## Features

### Drill Press Belt Sander \_\_\_\_\_ 6

Get more out of your drill press by making it work harder. This shop-made accessory turns your drill press into a belt sander that works every bit as well as a floor model.

### Removing Rust with Electrolysis \_\_\_\_\_ 14

Removing rust from tools can be a big hassle. With a little "power" you can make quick work of it. We'll show you how to do it with ease using our step-by-step instructions.

### Modular Outfeed System \_\_\_\_\_ 16

Make it easier to handle large or long stock safely on the table saw. This handy outfeed system can be configured in a number of ways to support long stock, large sheet goods, or anything in between.

### Building a Laminated Benchtop \_\_\_\_\_ 20

Nothing says solid and heavy duty like a laminated benchtop. But making one without spending a lot of time getting it flat and smooth seems almost impossible. Check out the procedure we use that results in a perfectly flat top in no time at all.

### Fold-Down Workstation \_\_\_\_\_ 22

A heavy-duty woodworking bench that takes up a little over four square feet of floor space when it's stored? You bet. Add some storage — an easy-access tool rack and a wall-mounted cabinet — and turn it into a full-fledged workstation.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Tool Chest \_\_\_\_\_ 32

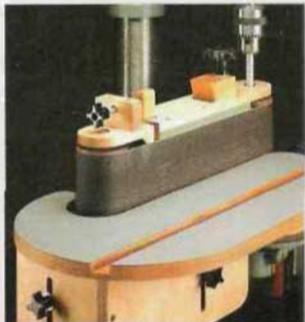
Most sharpening systems can't do it all. But the one we use every day comes as close as you can get.

### Shop Talk \_\_\_\_\_ 34

Have a great woodworking invention and want to protect it? Here's what you need to know about patents.

### Sources \_\_\_\_\_ 35

Mail-order sources and supplies to help you complete the projects featured in this issue.



Drill Press Belt Sander page 6



Rust Removal page 14



Outfeed System page 16



Fold-Down Workstation page 22

# Contents

## Features

### Lathe Tool Cabinet \_\_\_\_\_ 6

Keeping your lathe tools and accessories within easy reach can be a hassle. This storage center can be placed right next to your lathe to keep your tools and supplies close at hand. When you're done, just fold up the top and roll it out of the way.

*Lathe Tool Cabinet* page 6



### Router Circle-Cutting Jig \_\_\_\_\_ 12

This all-new circle-cutting jig makes it a snap to cut circles and arcs quickly and accurately with your hand-held router.

*Circle-Cutting Jig* page 12



### Benchtop Mini-Lathe \_\_\_\_\_ 16

Build your own lathe? Absolutely! With this shop-built mini-lathe you can try your hand at turning without spending a lot of money. The optional accessories make it easy to turn small bowls or outfit your lathe as a disk sander.

*Shop-Built Mini-Lathe* page 16



### 7 Must-Have Turning Tools \_\_\_\_\_ 26

You don't need a shopful of turning tools to turn a table leg or a bowl. As a matter of fact, we'll show you the seven tools that will allow you to turn just about anything.

### Clamp Storage System \_\_\_\_\_ 28

When you have a wide assortment of clamps, finding a convenient way to store them can be a challenge—until now. Our adjustable clamp storage system can be changed or expanded over time to suit your needs.

*Clamp Storage System* page 28

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Tool Chest \_\_\_\_\_ 32

Square up your assemblies automatically during glue up with parallel jaw clamps. We take a look at three top models.

### Shop Talk \_\_\_\_\_ 34

Looking for the perfect material for building shop jigs, fixtures, and storage projects? Baltic birch plywood is the answer.

### Sources \_\_\_\_\_ 35

Mail-order sources and supplies to help you complete the projects featured in this issue.

# Contents

## Features

### Hinge Mortising Jig \_\_\_\_\_ 6

Cutting a perfect mortise for a hinge on a project can be a challenge. Our new jig makes it automatic by using the hinge to set up the jig. Then a trim router does the work.

### Using the Hinge Mortising Jig \_\_\_\_\_ 11

Using the hinge mortising jig couldn't be easier. Once the jig is set to match your hinge, routing a mortise will take only minutes — whether you're routing a couple or a dozen.

### Hardware Storage Cabinet \_\_\_\_\_ 12

Keep hardware stored out of the way, yet easy to find, with this versatile storage cabinet. It features two different-size drawers, an adjustable partitioning system, and a unique drawer front that combines the pull and labeling system in a single unit.

### 3-in-1 Cut-Off Sled \_\_\_\_\_ 18

Cut-off sleds have been around a long time. What makes this one different is the reversible fences can handle 90° cuts as well as 45° miters — with precision.

### Add-On Tenoning Jig \_\_\_\_\_ 24

To make the cut-off sled even more useful, you can add an easy-to-build tenoning jig. With it you can cut smooth-faced tenon cheeks quickly and accurately.

### Extendable Drill Press Table \_\_\_\_\_ 26

Solve the hassle of supporting your workpiece with this drill press table. Wings extend out to provide solid support when you need it — and store out of the way when you don't.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Shop Talk \_\_\_\_\_ 32

What would you do if you lost all your shop equipment? Here's what you need to know about shop insurance.

### Tool Chest \_\_\_\_\_ 34

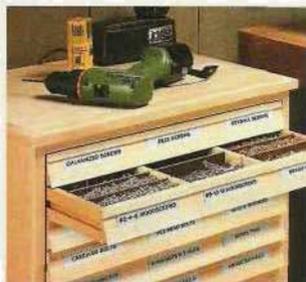
Quiet and powerful. Two words you don't expect in the same sentence describing a shop vacuum. But the vacuum reviewed in this issue is both — and it features automatic operation.

### Sources \_\_\_\_\_ 35

Mail-order sources and supplies to help you complete the projects featured in this issue.



Hinge Mortising Jig page 6



Hardware Cabinet page 12



3-in-1 Cut-Off Sled page 18



Drill Press Table page 26

# Contents

## Features

### Sharpening Supplies Box \_\_\_\_\_ 6

The inside of this stacking storage box features multiple compartments on two different layers — plenty of space for all your sharpening supplies.

### Making Box Joints \_\_\_\_\_ 12

Here's a simple table saw technique that allows you to cut the time spent making box joints in half. But don't worry, you won't have to sacrifice accuracy to do it.

### Plank-Top Workbench \_\_\_\_\_ 16

This heavy-duty workbench is equally at home in the shop or the garage. And while it only takes a weekend to build, it's guaranteed to give you a lifetime of use.

### Machinist's Vises \_\_\_\_\_ 22

Discover what a machinist's vise can do for you and what to look for when selecting one for your shop. Plus, learn about some handy vise accessories.

### Dual Tool Station \_\_\_\_\_ 24

This tool station pulls double duty by serving as a planer stand as well as a miter saw station — complete with extension wings and fences.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Shop Talk \_\_\_\_\_ 32

Looking for just the right part or hardware item for your next project? Here's a peek at some of our "secret" supply sources.

### Tool Chest \_\_\_\_\_ 34

Take the hassle out of fine-tuning the width of your dados with this innovative stack dado blade.

### Sources \_\_\_\_\_ 35

Mail-order sources and supplies to help you complete the projects featured in this issue.



Sharpening  
Supplies Box

page 6



Plank-Top  
Workbench

page 16



Dual Tool  
Station

page 24

# Contents

## Features

### Router Dado Jig \_\_\_\_\_ 6

With this shop-made jig, you'll be routing dadoes and grooves that fit perfectly. Plus, this router jig features a built-in clamp that makes setup a snap.

### Band Saw Tune-Up \_\_\_\_\_ 12

Think a band saw is only good for rough cuts? Think again. With just a handful of tools, a few simple steps, and a few hours, you can have your band saw working at peak performance.

### Band Saw Table & Fence \_\_\_\_\_ 16

Take your band saw to the next level with a new table and fence. This extra-large table provides rock-solid support for just about any size workpiece. And the adjustable fence and accessories make it easy to produce accurate cuts every time.

### Get More Out of Your Grinder \_\_\_\_\_ 22

With just six accessories, you can turn your bench grinder into a shop workhorse. Here's what you need to grind, sharpen, buff, and clean just about anything with ease.

### Sharpening System \_\_\_\_\_ 24

This sharpening system for your bench grinder features an adjustable platform with sliding tool sleds. You'll be able to grind perfect bevels at almost any angle on your chisels and plane irons in no time at all.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Shop Talk \_\_\_\_\_ 32

How many table saw blades do you really need? We take a look at two that will handle just about anything.

### Tool Chest \_\_\_\_\_ 34

Here's a splitter for your table saw you'll actually use. Why? Because you can install and remove it in seconds.

### Sources \_\_\_\_\_ 35

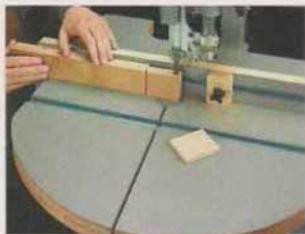
Mail-order sources and supplies to help you complete the projects featured in this issue.



Router Dado Jig page 6



Band Saw Tune-Up page 12



Band Saw Upgrade page 16



Sharpening System page 24

# Contents

## Features

### Sliding-Door Shop Cabinet \_\_\_\_\_ 6

*You'll be amazed at all the tools and supplies you can store inside (and outside) this slim cabinet.*

### Table Saw Tune-Up \_\_\_\_\_ 12

*Now's a good time to take a look "under the hood" and get your table saw in top shape. Our step-by-step process will have it running at peak performance in no time.*

### Hi-Tech Tune-Up Tools \_\_\_\_\_ 17

*Want to add a new dimension to your table saw tune-up? We take a look at a few hi-tech products to handle the task.*

### Fold-Away Tool Stand \_\_\_\_\_ 18

*Now you see it, now you don't. Build a rock-solid tool stand that folds out of the way in seconds.*

### Making Tools Move \_\_\_\_\_ 22

*Mounting your power tools on mobile bases can be a great solution for small shops. We'll tell you what to look for and give you the rundown on a number of popular models.*

### Under-Stair Storage \_\_\_\_\_ 26

*Make the most of the space beneath your stairs with this easy-to-build, adjustable storage system.*

### Router Bit Rack \_\_\_\_\_ 30

*Organize your router bits and accessories in an afternoon with this simple wall rack.*

## Departments

### Readers' Tips \_\_\_\_\_ 4

*Shop-tested tips to solve common woodworking problems.*

### Shop Talk \_\_\_\_\_ 32

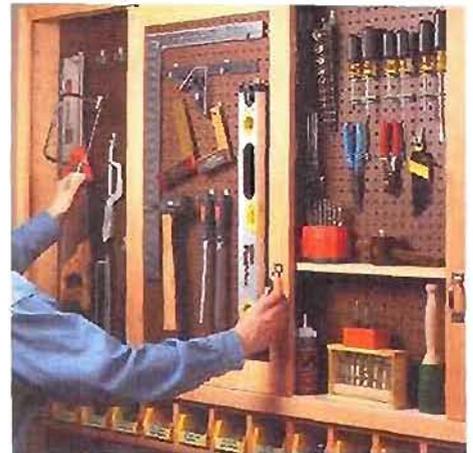
*These three simple knots will get your next lumber purchase home safely, without a lot of fuss.*

### Tool Chest \_\_\_\_\_ 34

*Tired of pegboard hooks that won't stay put? Learn more about hooks that keep tools in their place.*

### Sources \_\_\_\_\_ 35

*Mail-order sources and supplies to help you complete the projects featured in this issue.*



Shop Cabinet page 6

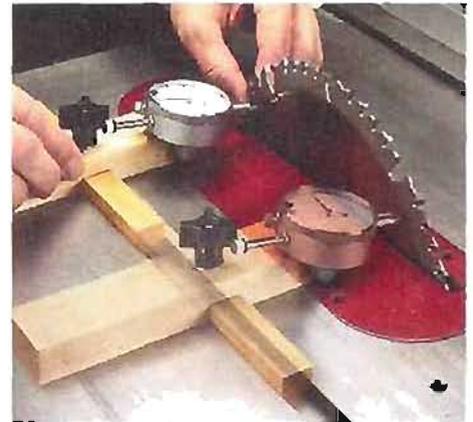
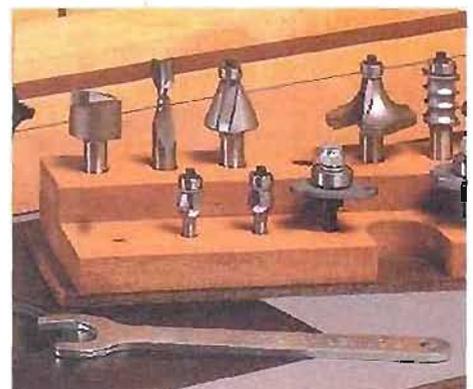


Table Saw Tune-Up page 12



Under-Stair Storage page 26



Router Bit Rack page 30

# Table of Contents

## Tenon Cutting Jig

This tenon cutting jig is built to slide on and off the rip fence on your table saw. A vertical stop block keeps your workpiece aligned as it passes through the saw blade. **page 3**



## Slip-On Auxiliary Fence

To bury the blade when cutting rabbets, just slip this auxiliary fence over the rip fence. Or turn the fence around to cut a tall workpiece. **page 4**



## Miter Gauge Fence

This adjustable miter gauge fence provides plenty of support for a workpiece. And a flip-up stop block makes it easy to square up and cut multiple pieces to identical size. **page 6**



## Crosscut Sled

Crosscutting wide panels on the table saw is often a tricky task. But not with the help of this crosscut sled. Its wide base carries the panel smoothly through the blade. **page 8**



## Band Saw Fence

Making a straight cut on a band saw is easy with this fence. A built-in adjustment allows you to compensate for blade "drift." And a toggle clamp locks the fence securely in place. **page 9**



## Flush Trim Jig

This jig eliminates the hassle of trimming solid wood edging flush with the surface of a plywood panel. A built-in guide keeps your flush trim bit perfectly aligned. **page 10**



## Edge Guide

Sometimes the best way to crosscut a wide panel is to use a circular saw. This jig will help you do just that. Plus, you also can use it to crosscut a workpiece using a router. **page 12**



## Drill Press Table

Get the most out of your drill press by building an auxiliary table. With the help of the attached fence, you can position a workpiece quickly and accurately. **page 13**



## Router Trammel

Rout perfectly-shaped circles up to eight feet in diameter with this handy trammel. It has a Plexiglas indicator for measuring the exact radius of the circle. **page 14**



## T-Square Router Guide

This guide helps you crosscut a wide panel with a router. It has an alignment notch for accurate cutting. And it's also a great jig for routing a dado in a workpiece. **page 15**

A good jig can make a woodworker's life a lot easier. Whether you're cutting tenons on the table saw or dados with a router, a jig can transform tricky jobs into safe and easy ones. All it takes is a little ingenuity and a few scraps of wood. In this spirit, we've compiled ten of our favorite jigs for this booklet. All of these can be made in just a few simple steps, and they're guaranteed to relieve a few headaches around the shop.

Donald B. Peschke, Publisher

# Contents

## Features

### Upgrade Your Dust Collector \_\_\_\_\_ 6

Looking to super-charge your single-stage dust collector? We'll show you a few handy add-ons that will help you keep your shop cleaner and save you time.

### A New Angle on Framing Squares \_\_\_\_\_ 10

There's more to this handy tool than meets the eye. Take a look at some unique "skills" in your framing square.

### Ultimate Layout Square \_\_\_\_\_ 12

With just a few simple changes, you can turn your framing square into a tool you'll be reaching for more often.

### Jointer Tune-Up \_\_\_\_\_ 14

Our straightforward techniques will have your jointer running better than new, so you can create perfectly flat, straight, and square stock with ease.

### Router Miter Trimmer \_\_\_\_\_ 18

Don't settle for poor-fitting miter joints. With this easy-to-build jig and a hand-held router, you can dial-in accuracy for miter joints that fit perfectly.

### 5 Plywood Shop Projects \_\_\_\_\_ 22

You can build each of these essential shop projects in just a few hours from one or two sheets of plywood.

## Departments

### Readers' Tips \_\_\_\_\_ 4

Shop-tested tips to solve common woodworking problems.

### Shop Talk \_\_\_\_\_ 32

Every shop needs a precision straightedge (or two) to keep tools tuned and to build projects that are flat and square.

### Tool Chest \_\_\_\_\_ 34

The perfect finish? It just might be. We'll show you the one we turn to almost every day for fast, consistent, high-quality results for all our shop projects — and furniture projects too.

### Sources \_\_\_\_\_ 35

Mail-order sources and supplies to help you complete the projects featured in this issue.



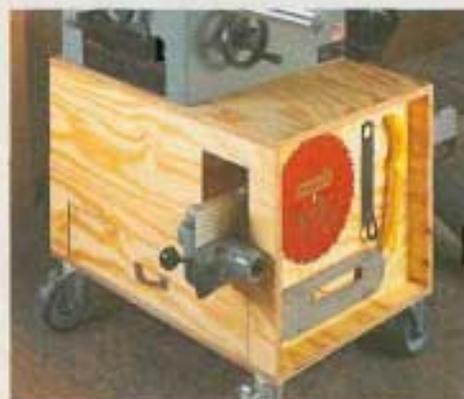
Layout Square page 12



Jointer Tune-Up page 14



Router Miter Trimmer page 18



5 Plywood Projects page 22

# Contents

## Features

storage solutions

### Slant-Front Tool Cart

ONLINE  
EXTRAS

18

Keep all your tools and supplies close at hand with this roll-around tool cart. There's even a matching tool chest you can build.

weekend workshop

### Dado Blade Storage Case

30

With just a couple hours of work, you can make a handy storage case to protect your stack dado set when it's not being used.

fine tools

### Brass-Body Hand Plane

ONLINE  
EXTRAS

32

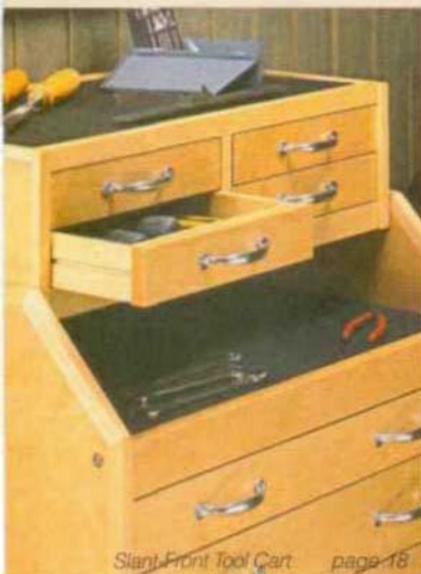
Nothing quite beats the feel of using a hand plane you've made yourself. And this brass-body model works just as good as it looks.

technique

### Working with Brass

37

Working with brass doesn't have to be a challenge. Here you'll learn how to cut, shape, solder, and polish brass to a fine finish.



Slant-Front Tool Cart page 18

Dado Blade Storage page 30



Working With Brass page 37

## Departments

### Readers' Tips

4

router workshop

### Straight Bits

8

NEW!

We give you the straight scoop on straight bits. You'll be surprised at all there is to know.

materials & hardware

### 4 Favorite Fasteners

10

NEW!

Keeping a good supply of hardware on hand is a must. Here are four fasteners to keep in stock.

jigs & fixtures

### Leigh Dovetail Jig

12

NEW!

The ultimate dovetail jig? Considering what you can do with this dovetail jig, you bet.

### Shop Short Cuts

16

NEW!

Shop-tested tips and techniques to solve common woodworking problems.

hands-on technique

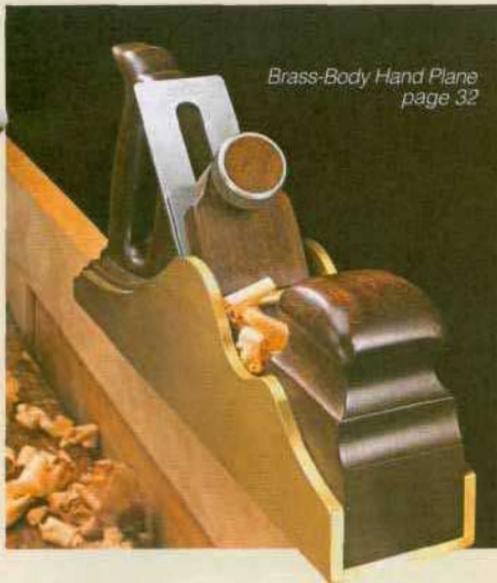
### Edging with T-Molding

28

NEW!

Cover and protect the edge of plywood and MDF. T-molding makes it quick and easy.

Brass-Body Hand Plane  
page 32



# Cutoffs

**M**ore. When I ask readers about how to make *ShopNotes* better, the word I usually hear is — more. Well I'm happy to say, starting with this issue, *ShopNotes* readers will be getting more than ever before.

For starters, *ShopNotes* has grown — we've added 16 more pages. But what's really exciting is what we're doing with those extra pages. If you take a look at the contents pages at left, you can see we've added several new departments.

Now with every issue you'll get more information on working with your router, mastering the table saw, setting up shop, hands-on techniques, and more. If you add it all up, you'll find 10 new departments.

Of course, we're still featuring great projects you can build for your shop. In this issue there's a slant-front tool cart, a dado blade storage case, and a brass-body hand plane.

In addition, we're offering plans for a bonus project — a brass-body block plane. These plans are currently available online at [www.ShopNotes.com](http://www.ShopNotes.com) and they're free.

Along with the additional pages we wanted to make *ShopNotes* easier to read and use. So we've made some changes to the headlines, typefaces, and page layouts.

As you can probably tell, I'm very excited about all of these changes to *ShopNotes* and I hope you will be as well.

*Terry*

in the shop

**Rotary Tools** \_\_\_\_\_ **40**

**NEW!**

What's new in rotary power tools? Take a peek at a few must-have accessories for your rotary tool.

setting up shop

**Best Place For a Table Saw** \_\_\_\_\_ **42**

**NEW!**

Locating your table saw is the key to efficient work. We show you the best place to put it.

mastering the table saw

**3 Ways to Cut a Rabbet** \_\_\_\_\_ **44**

**NEW!**

A table saw is the perfect choice for cutting rabbets. Learn three sure-fire ways to do it right.

great gear

**Space-Saving Storage** \_\_\_\_\_ **46**

**NEW!**

Here's a product that will allow you to reclaim storage space between the studs in your walls.

ultimate garage

**Roll-Out Shop Flooring** \_\_\_\_\_ **48**

**NEW!**

Make your floor look new again. All you have to do is roll a "new" one in place and cut it to fit.

**Q&A** \_\_\_\_\_ **50**

**Sources** \_\_\_\_\_ **51**



This symbol lets you know there's more information available online at [www.ShopNotes.com](http://www.ShopNotes.com)

# Contents

## Features

**dream shop project**

### Heirloom Tool Cabinet

**GO ONLINE EXTRAS**

16

*With solid frame and panel construction, this heirloom tool cabinet will be a welcome addition to any workshop.*

**technique**

### Fitting Inset Doors

26

*Fitting inset doors can be a challenge. But with these handy tips and tricks, sure-fire success is only a few steps away.*

**weekend workshop**

### Knock-Down Wall Shelf

28

*This knock-down wall shelf is an easy-to-build project for the shop. Or you can use it in the house to display just about anything.*

**best-built jigs & fixtures**

### Router Jointer

32

*Turn your router into a precision jointer that will give you an edge that's smooth, straight, and perfectly square.*

## Departments

### Readers' Tips

4

**router workshop**

### Multi-Profile Bits

8

**NEW!**

*With only a single bit, you can create dozens of profiles just by adjusting the router bit and fence.*

**materials & hardware**

### Working with Epoxy

10

**NEW!**

*Here's what you need to know about working with a versatile adhesive — two-part epoxy.*

**jigs & accessories**

### Dowelmax

12

**NEW!**

*Doweling joints don't get much easier or more accurate than with the Dowelmax system.*

### Shop Short Cuts

14

**NEW!**

*Shop-tested tips and techniques to solve your woodworking problems.*

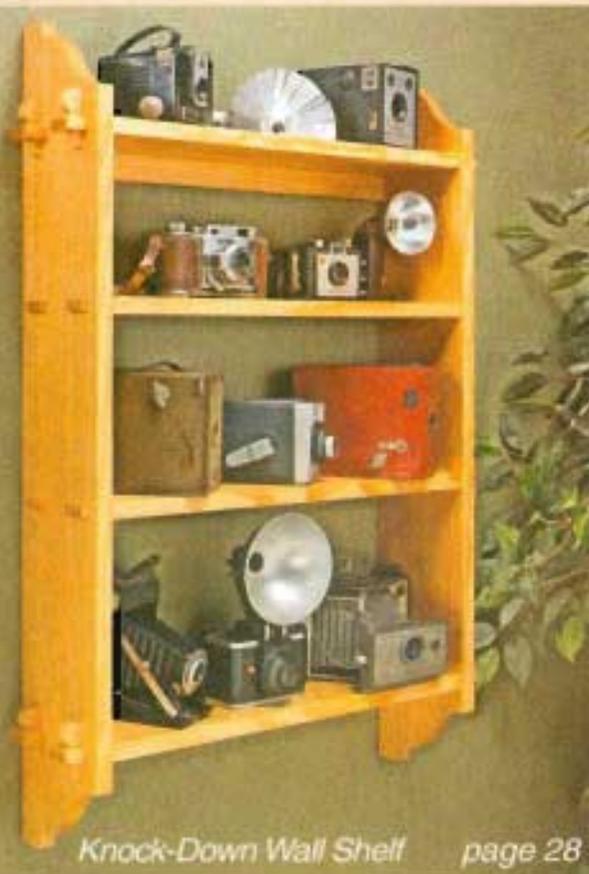
**hands-on technique**

### Wedged Mortise & Tenon

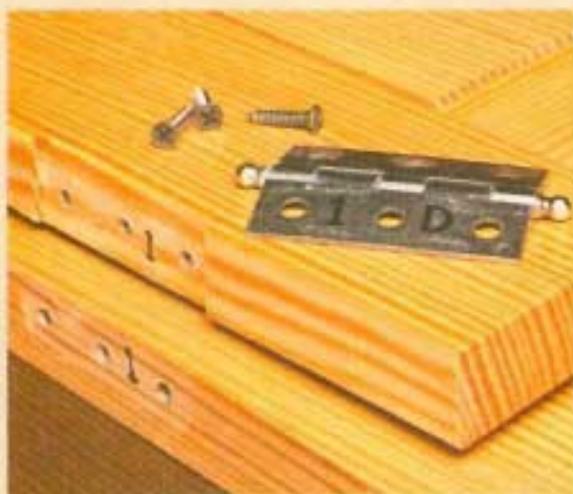
30

**NEW!**

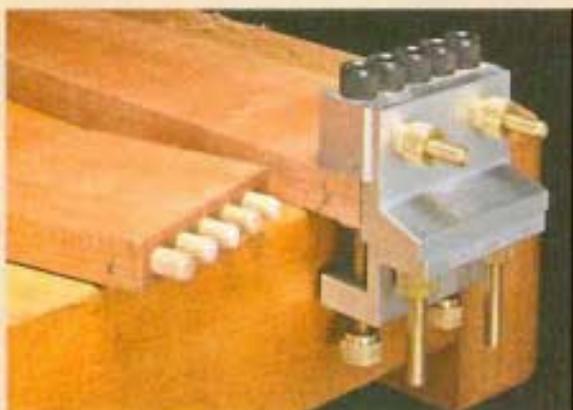
*Create a perfect-fitting mortise and tenon on the table saw — and then secure it with a wedge.*



Knock-Down Wall Shelf page 28



Fitting Inset Doors page 26



Dowelmax page 12



Heirloom Tool Cabinet

page 16

# Cutoffs

**S**torage. Sooner or later, it's a problem almost every woodworker has to face. But fortunately, there are a number of different approaches to the problem. In this issue we've put together a collection of projects and articles to help you address your shop storage needs.

The heirloom tool cabinet on page 16 and the knock-down wall shelf on page 28 both take a traditional approach to tool storage. But for a more modern solution, be sure to check out the article on slat-wall storage systems that begins on page 48.

And finally, on page 42, we've put together some practical ideas for lumber storage.

**New Face.** In the last issue of *ShopNotes*, I told you about some of the changes we made to the magazine. More pages and new departments. In my excitement, I forgot to mention one thing — we've added a new face as well. Mitch Holmes has joined us as an assistant editor.

**Help Wanted.** While I'm on the subject of new faces, we're looking for a project designer to join our team. If you have an in-depth understanding of project design, woodworking and home-improvement skills, and the ability to turn ideas into computer-generated drawings, we'd like to hear from you. Send a resume detailing your experience to: HR, August Home Publishing, 2200 Grand Ave., Des Moines, IA 50312. Or check out our website at [www.AugustHome.com](http://www.AugustHome.com) for more information.

*Tom*

in the shop

## High-Tech Rasps \_\_\_\_\_ 38

**NEW!**

*Rasps have been around for years. But there's a new breed of rasps every shop should have.*

setting up shop

## Lumber Storage \_\_\_\_\_ 42

**NEW!**

*Storing lumber doesn't have to be frustrating. We'll show you how to get it under control.*

mastering the table saw

## 7 Solutions for Perfect Dadoes \_\_\_\_\_ 44

**NEW!**

*In search of tearout-free dados? These seven proven techniques ensure the best results.*

**GO ONLINE EXTRAS**

great gear

## Preventing Rust \_\_\_\_\_ 46

**NEW!**

*The best way to deal with rust is to prevent it in the first place. Here's how we do it in our shop.*

ultimate garage

## Slat-Wall Systems \_\_\_\_\_ 48

**NEW!**

*No matter how serious your storage problem is, a slat-wall system can get you organized.*

## Q&A \_\_\_\_\_ 50

## Sources \_\_\_\_\_ 51

**ShopNotes**

**GO ONLINE EXTRAS**

This symbol lets you know there's more information available online at [www.ShopNotes.com](http://www.ShopNotes.com)

# Contents

## Features

### storage solutions

#### Ultimate Sharpening Station **GO ONLINE EXTRAS** 16

This sharpening station features a sliding top, ample storage, and a basin for water. Everything you'll need to keep your tools in top shape.

### weekend workshop

#### Sharpening Stone Holder 24

This stone holder is a great sharpening accessory. It's adjustable and the wedge clamp that holds the stone in place is simple and fast.

### fine tools

#### Japanese Saw Handle Upgrade 28

We'll show you how to cut and fit a new handle for your Japanese saw that not only looks good, but feels good as well.

### technique

#### Great Results With a Circle Cutter 30

Cut a perfect hole or disk — once you know how to put this tool to work for you.

### best-built jigs & fixtures

#### Adjustable Spindle Sander 32

Sanding curved edges was never so easy. This spindle sander uses common sanding sleeves that slip over shop-made drums.

## Departments

#### Readers' Tips 4

### router workshop

#### Get a Grip on Collets 8

**NEW!**

Small size, big job. Learn all you need to know about router collets.

### materials & hardware

#### Going Mobile with Casters 10

**NEW!**

Want to make your shop "mobile"? Learn the key to buying and using casters.

### jigs & accessories

#### All About Twist Bits 12

**NEW!**

Confused by the wide variety of twist bits? We'll help you sort out the differences.

#### Shop Short Cuts 14

**NEW!**

Shop-tested tips and techniques to solve your woodworking problems.



Spindle Sander

page 32



Laser Guides

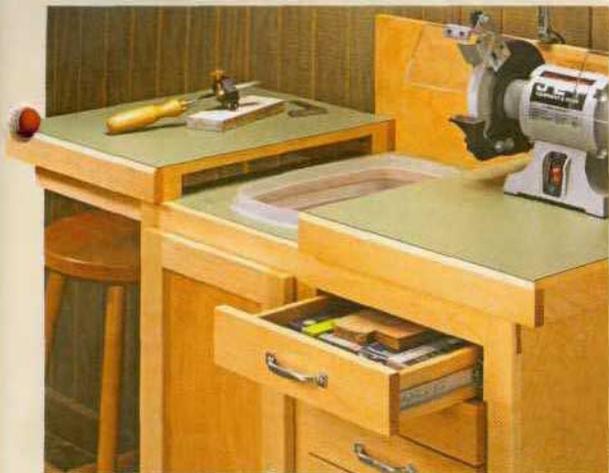
page 46



Stone Holder

page 24

# Cutoffs



Ultimate Sharpening Station

page 16

## hands-on technique

### Perfect Half Laps on the Table Saw \_\_\_\_\_ 26

**NEW!**

*Half-lap joints are easy to make, incredibly strong, great for face frames, and much more.*

## in the shop

### Getting Connected with Air \_\_\_\_\_ 38

**NEW!**

*The key to getting the most from your air compressor is choosing the right hoses and fittings.*

## setting up shop

### Breathe Right for Safe Finishing \_\_\_\_\_ 42

**NEW!**

*Protecting your health is important. Here's what you need to know about respirators.*

## mastering the table saw

### Table Saw Pattern Cutting \_\_\_\_\_ 44

**NEW!**

*Need help making hard-to-cut, identical parts? The secret is pattern cutting on the table saw.*

## great gear

### Miter Saw Upgrade — Laser Guides \_\_\_\_\_ 46

**NEW!**

*For accurately lining up a cut on your miter saw, you can't beat a laser.*

## ultimate garage

### Precision Parking Systems \_\_\_\_\_ 48

**NEW!**

*Stop your car at the same spot — every time. All you need is a high-tech parking system.*

### Q&A \_\_\_\_\_ 50

### Sources \_\_\_\_\_ 51

In this issue, we have several projects that can make a big improvement in the way you work. First off, there's the sharpening station that appears on page 16. It features plenty of storage and an easy-to-clean worksurface. But what really sets this project apart is the sliding top. Just pull it to the side to access an inset tub for storing and cleaning waterstones.

The shop-built spindle sander on page 32 is another great addition to your shop. It fits onto your drill press and uses extra-long, 5½" sleeves. And the adjustable worksurface allows you to get the most out of each sleeve.

But it doesn't take a big project to make a big difference in the way you work. If you're looking for a couple of quick projects, be sure to check out the article on upgrading a Japanese hand saw on page 28. And the sharpening stone holder on page 24 makes it easier to get a sharp edge on all your tools.

## HELP WANTED

We're looking for someone to join our editorial team. This is a full-time, staff position here in Des Moines, Iowa. So if you're an experienced woodworker, interested in writing, and would like to share your knowledge with others, I would like to hear from you.

Send a resume highlighting your experience to: HR, August Home Publishing, 2200 Grand Ave., Des Moines, IA 50312. Or visit our website at [www.AugustHome.com](http://www.AugustHome.com) for more information about this position.

*Temy*



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# Contents

## Features

### storage solutions

#### Mobile Planer Stand 18

*This mobile stand provides plenty of extra storage space and its outfeed support makes working with long stock a breeze. Best of all, it stores in a compact space.*

### hands-on technique

#### Tips & Techniques for Power Sanding 26

*Follow our simple, foolproof steps for great results with your random-orbit sander. You'll get a super-smooth surface in less time.*

### weekend workshop

#### Tab-and-Slot Tool Tote 28

*You'll be amazed at just how much this lightweight tote can hold. What's even more impressive is how easy it is to build.*

### fine tools

#### Aluminum Squares 36

*Build your own precision layout tool. All it takes are a few pieces of aluminum and a little time at the table saw and drill press.*

## Departments

#### Readers' Tips 4

### router workshop

#### Great Results with Profile Bits 8

*Here are a few tried-and-true tips for getting top-notch results from your router bits.*

### materials & hardware

#### Metal Drawer Slides 10

*Metal drawer slides can handle a lot of weight and are easy to install. Here's what you need to know before choosing and using them.*

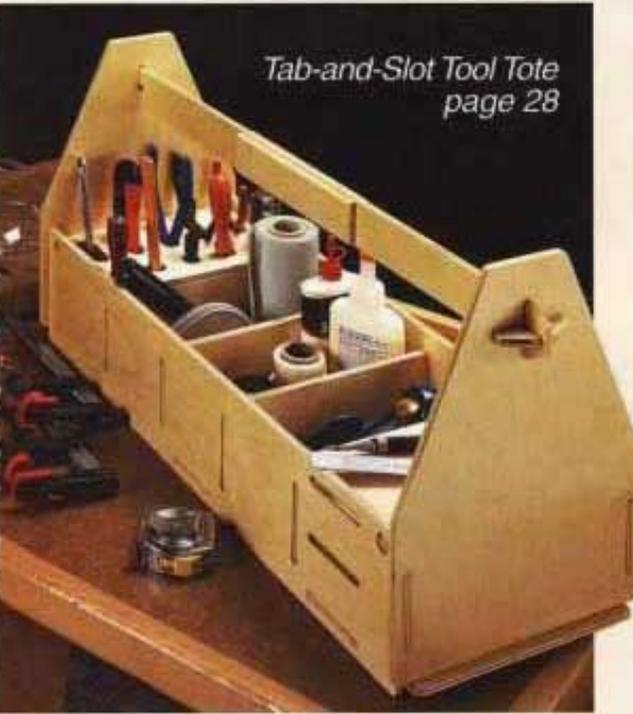
### jigs & accessories

#### Featherboards 14

*These inexpensive accessories will make working with your table saw, band saw, and router table safer and more accurate.*

#### Shop Short Cuts 16

*Shop-tested tips and techniques to solve your woodworking problems.*



Tab-and-Slot Tool Tote  
page 28



Working with Aluminum page 34



Featherboards page 14

# Cutoffs

**F**rom thick to thin. When you think about it, that's really all a planer does. It takes thick boards and makes them thinner.

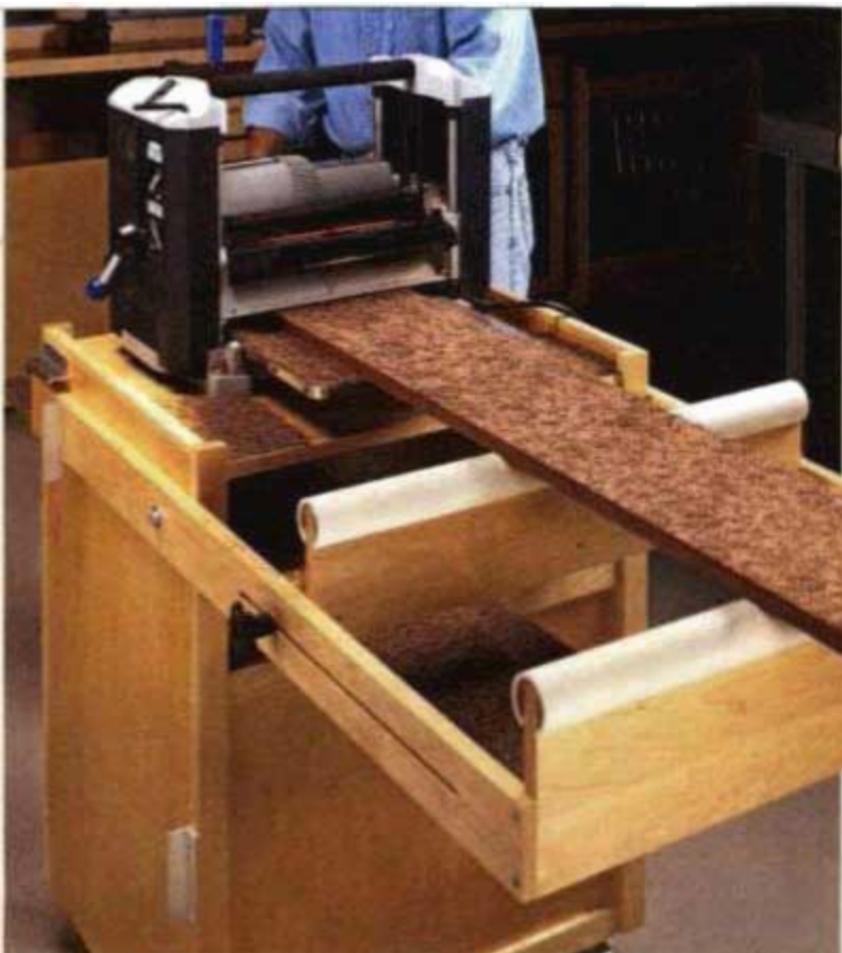
But what a difference it can make when it comes to building projects. With a planer, you can accurately thickness your workpieces to suit the project. This means you can cut tighter-fitting joints, create glued-up tops a consistent thickness, and turn rough stock into glass-smooth workpieces with little effort.

The thing is, over time a planer can get out of adjustment and when that happens it can cause more problems than it solves.

That's exactly what had happened to Bryan Nelson's planer. (Bryan is the Managing Editor). After years of service, his planer just wasn't cutting it any more (pun intended). What it needed was a full-scale tune-up. With a handful of supplies and just a few simple tools, his planer was back to peak performance in just an afternoon. You can find out exactly what you'll need to do to get your planer running smoothly by checking out the article starting on page 40.

Speaking of planers, be sure to take a look at the mobile planer stand on page 18. It's another great way to improve the performance of your planer. It features handy storage along with a solid outfeed support system that folds out of the way when you don't need it.

Tony



Mobile Planer Stand

page 18

## project technique

### Working with Aluminum \_\_\_\_\_ 34

*Aluminum can really dress up a project. And you won't need any special tools to work with it.*

## in the shop

### Planer Tune-Up \_\_\_\_\_ 40

*This step-by-step approach will have your planer creating perfect boards in a short time.*

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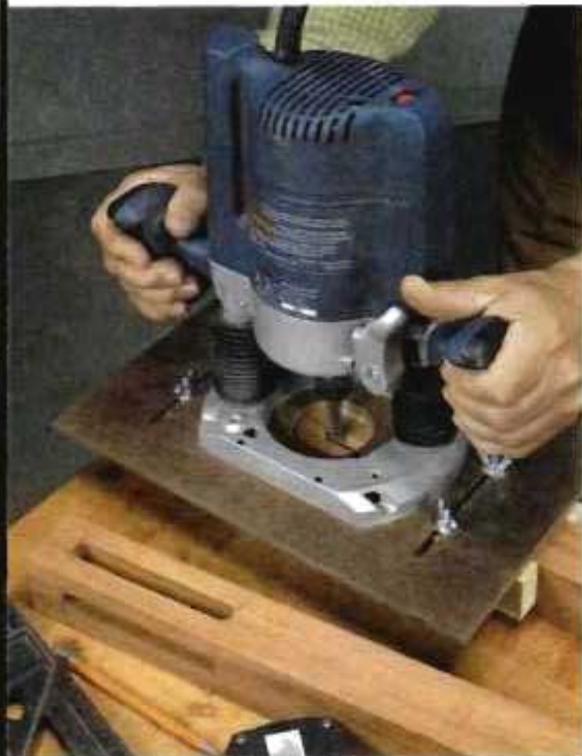
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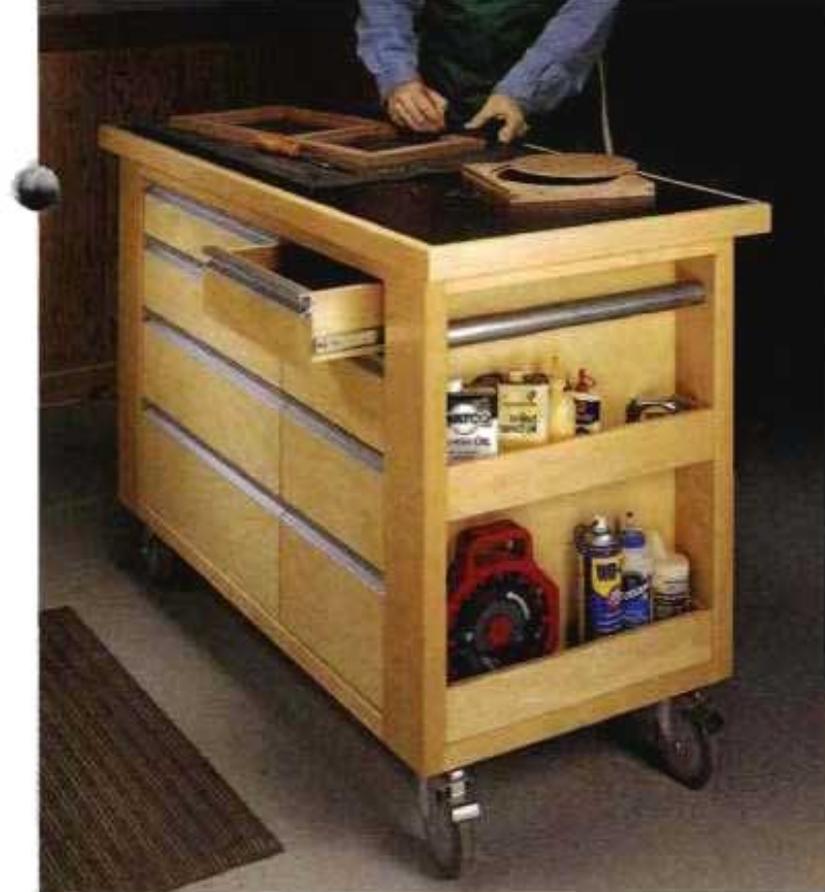
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# Cutoffs

**W**hen I bought my first router, it was a very basic tool. Not much more than a small motor with a couple handles attached. So, I was always looking for ways to make that router do more and work harder.

Now it seems like an endless array of routers are available, from heavy-duty plunge models to tiny powerhouses you can hold in the palm of your hand. Even though routers have improved, I still look for ways to make them work harder.

In this issue, we're featuring a couple articles that do just that. Beginning on page 8, we'll show you tips on choosing and using a plunge router. And we've included a simple jig to help you get more out of this versatile tool.

If small routers are more your style, be sure to check out the article on page 28. We'll show you how to turn a palm router into a 3-in-1 multi-tool.

*Temy*

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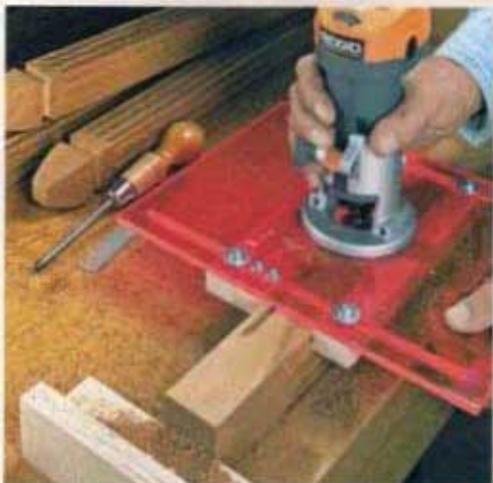
Looking to get less tearout and smoother cuts with your jointer? A spiral cutterhead might be the answer you're looking for.



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# Cutoffs

It's no secret. When it comes to making shop projects, I like using MDF (medium-density fiberboard). It's flat, durable, and best of all — inexpensive. Right now, a full-size sheet goes for about \$20 (or less) at the local home centers. In this issue, we're featuring two projects that take advantage of this versatile material.

For starters, check out the workbench in the photo at left. Here the idea was to design an easy-to-build bench that used a minimum of materials and hardware. Now, with just three sheets of MDF, some 2x6's, and a handful of hardware, you can build a rock-solid workbench in a weekend — all for less than \$100 in materials.

The other project in this issue that makes use of MDF is the Table Saw Workcenter on page 16. In this case, we took advantage of another property of MDF — its smooth surface. This makes it great for painting or for use as a substrate for plastic laminate. On page 10, we've even included some tips for applying laminate.

Speaking of tips, if you haven't already signed up for our free woodworking E-tips, I invite you to do so. Not only will you receive a woodworking tip by email each week, but you'll also have the

opportunity to give us your input on what kind of projects and articles you'd like to see. Plus, from time to time, you'll get updates and sneak previews on what's appearing in future issues of *ShopNotes*.

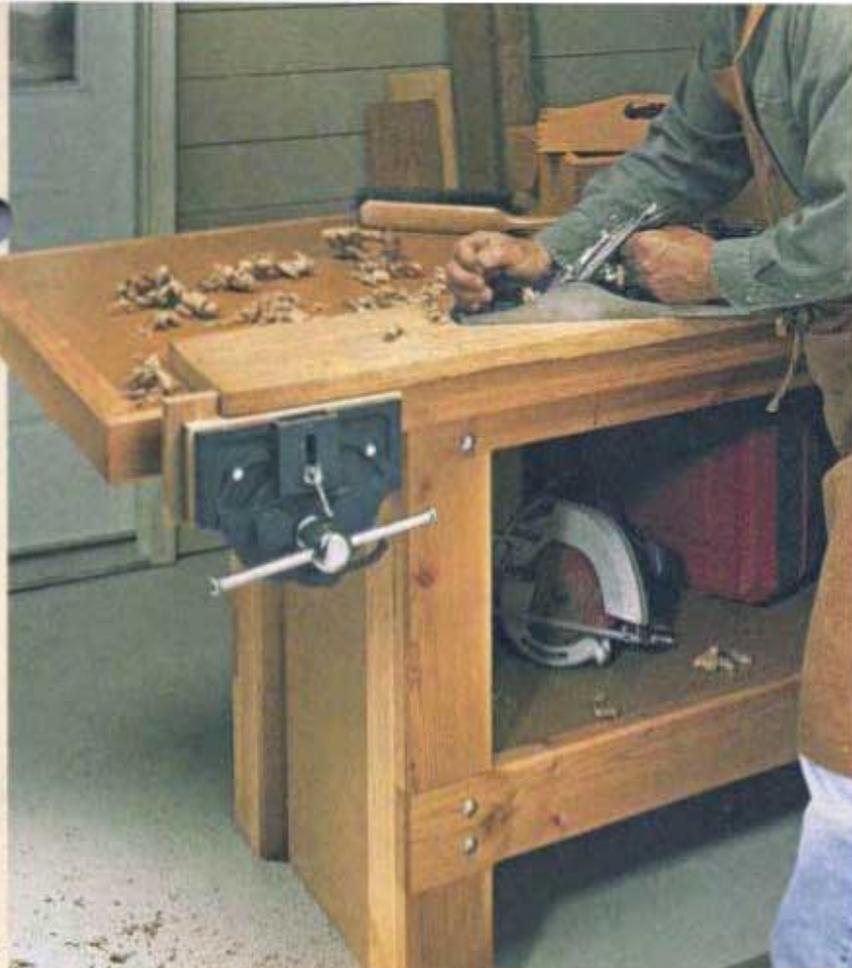
Terry

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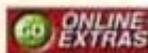
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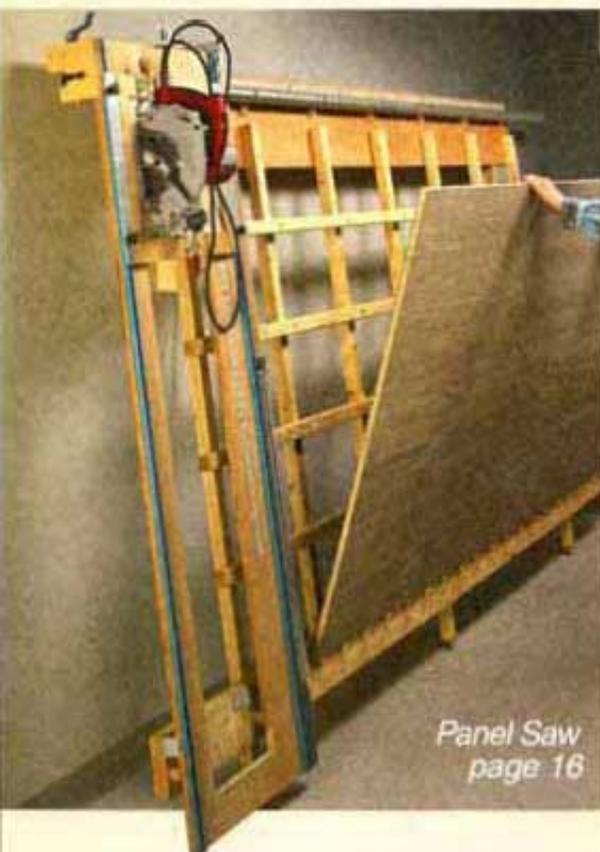
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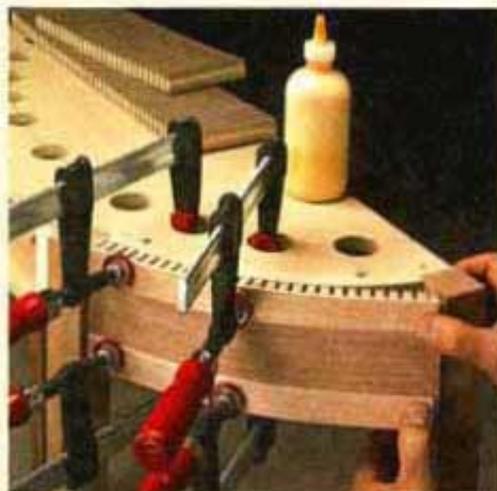
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# Cutoffs

**L**et's face it, maneuvering and breaking down full sheets of plywood on the table saw can be a real pain. The sheets are heavy, awkward, and difficult to control. Production shops solve the problem by using a panel saw to cut sheets down to size.

Commercial panel saws use a metal frame to hold a plywood sheet upright. Then a circular saw mounted to a carriage in the center of the frame is used to crosscut or rip the sheet. It's a slick set-up, but there are a couple of problems.

First, panel saws are expensive. A new one can set you back several thousand dollars. Second, you need a lot of wall space to accommodate one. (To rip a full sheet, you need a minimum of eight feet in front of the carriage and another eight feet behind it.)

In this issue, our feature project solves both of these problems. For starters, instead of a fixed, center-mounted carriage, our shop-built panel saw features a carriage that moves side-to-side. This way, all you have to do to make a rip cut is slide the carriage over the sheet. And since the plywood doesn't have to be pushed through the saw, you don't need as much wall space. In fact, all you need is ten feet — about half as much as a traditional panel saw.

Not only does this new design save space in your shop, but you can save money too. If you already have a circular saw, you can build the panel saw for about \$350 in materials. A real bargain compared to buying one.

*Tomy*



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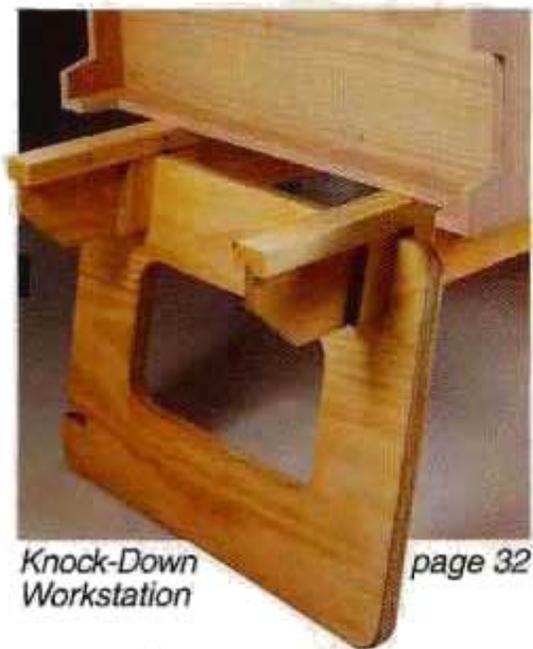
**hands-on technique**

### Mastering the Hand Scraper



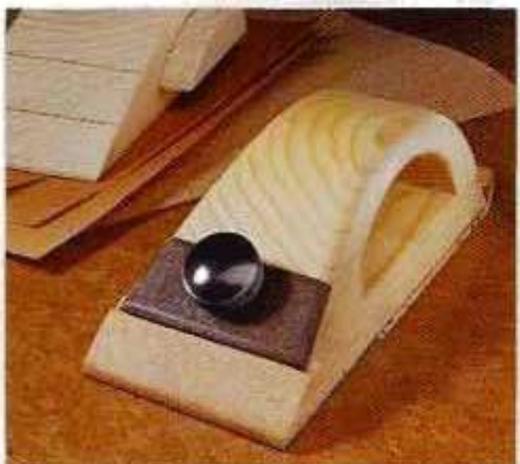
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In this issue, we have a couple of projects that prove, when it comes to woodworking, you can take it with you.

For starters, check out the Knock-Down Workstation featured on page 32. This entire dual-height workstation is easy to build and inexpensive. All you need is one sheet of plywood and some two-by material. Then, once the basic project is complete, you can add up to six different accessories. Each one is portable, practical, and will help you get the most out of your tools no matter where you need to work.

While I'm on the subject of portable, be sure and take a look at the Portable Hobby Chest that begins on page 26. It's part workbench, part toolbox, all rolled into one.

**Router Table Upgrades.** It's no secret — I think a router table is a "must-have" tool for any shop. But we're always looking for ways to make it better. So we've put together three upgrades to make this tool work harder.

The first is the Router Sled shown on the front cover. This shop-built jig allows you to make safe, precise cuts every time.

Second, if you've ever wanted an easy, accurate method for raising and lowering your router, be sure to read the article on page 38. There you'll find the inside story on router lifts.

Finally, on page 8, we'll show you how to turn your router into a jointer. All you need is a strip of brass and a carbide straight bit.

Terry

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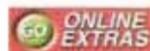
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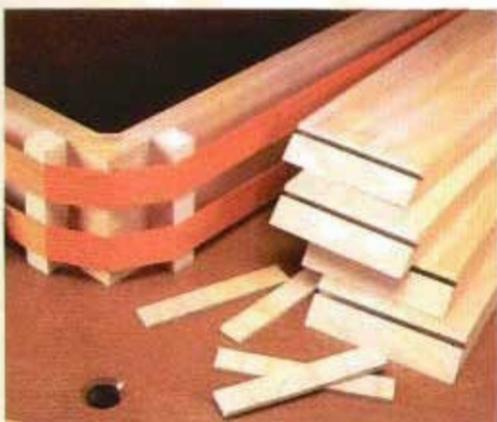
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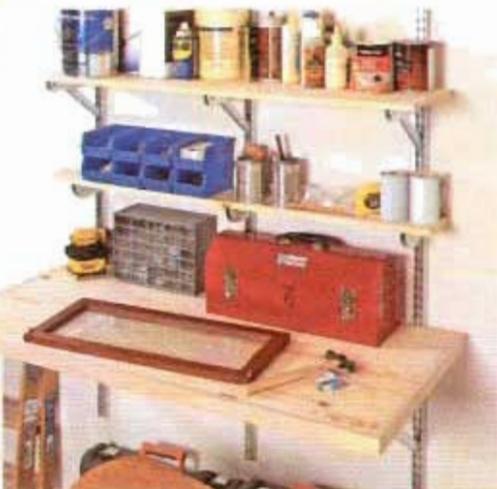
*With just a few simple tips and techniques, you can turn your jig saw into a precision cutting tool.*



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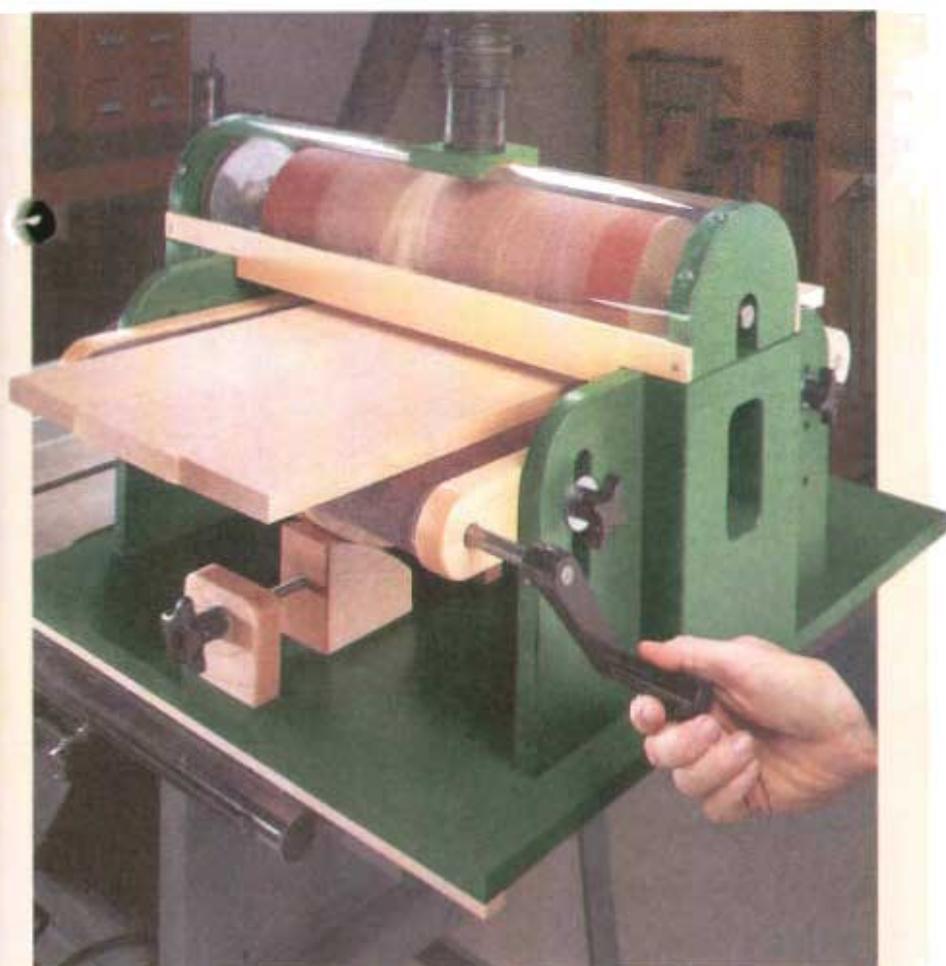


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**M**ost woodworkers I know really don't enjoy doing any kind of sanding, (myself included). Especially when it comes to leveling out large panels. Let's face it, it can be time-consuming, messy, and a bit tedious. That's why I've always been envious of woodworking shops that have a thickness sander.

The idea behind a thickness sander (also called a drum sander) is pretty simple. Sandpaper is wrapped around a large drum, and as the drum spins the workpiece passes under it and is sanded smooth. The result is a perfectly flat panel with a minimum of fuss. Of course, all this convenience comes at a rather hefty price. A sander that can handle a 16"-wide panel can cost up to seven hundred dollars. So I didn't have any immediate plans for putting a thickness sander in my shop — until now.

In this issue, we're featuring a thickness sander you can build yourself for less than two hundred dollars in materials. You don't even need to purchase a motor — the drum is powered by your table saw. Not only does this help keep the cost down, but it makes the sander easier to store when it's not being used. For the complete story, check out the article on page 28.

**New Face.** I'm happy to announce, Dennis Perkins has joined us as an assistant editor. Dennis is an accomplished woodworker with a shop full of very nice tools. (He even has his own thickness sander.)

*Terry*

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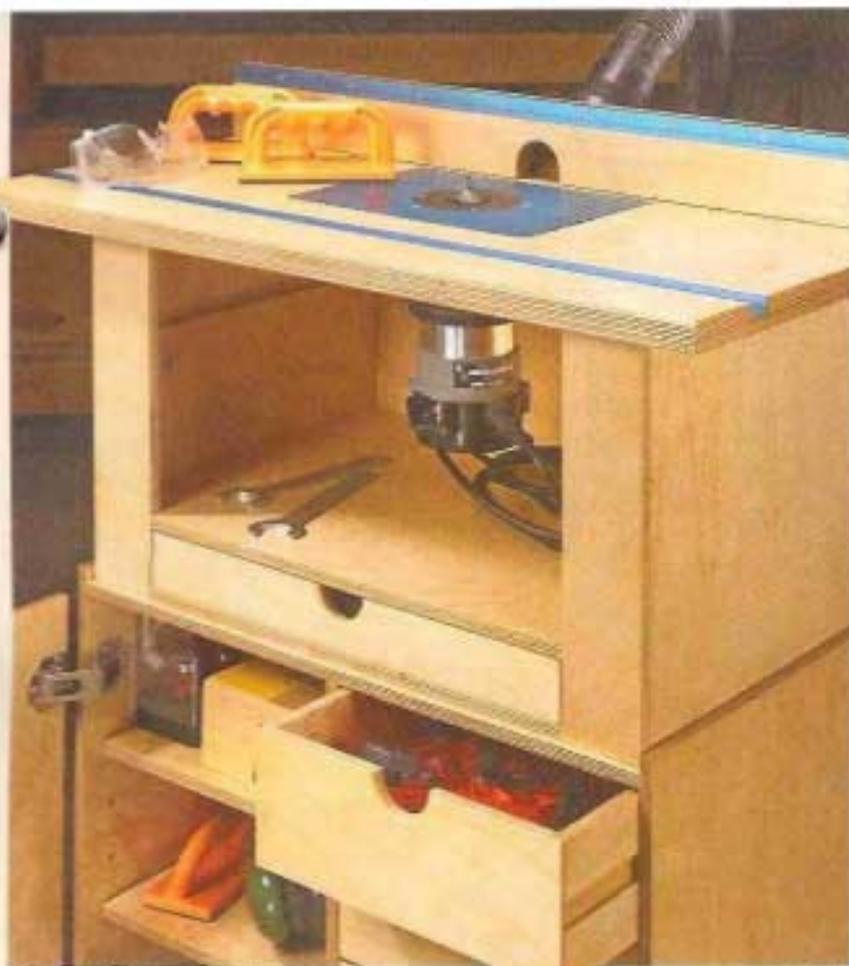


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Quick & Easy Router Table

page 18

**A** table-mounted router is at the top of my list of “must-have” shop tools. A router table allows you to work more safely, efficiently, and accurately. In fact, it’s such an important tool in my shop, I just can’t imagine working without one. So we decided to dedicate this issue of *ShopNotes* to one of our favorite tools — the router table.

For starters, we’re featuring an all-new router table design. The idea behind this project was to start out with a simple, practical design that could be built quickly and inexpensively. So we decided to limit ourselves to a single sheet of Baltic birch plywood — a \$50 investment.

The final design features a full-size table top that flips up to provide easy access to the router, an easy-to-adjust fence, and a handy storage drawer. All in all, a lot of router table for a small amount of money.

But the part of this project I like the best is how versatile it is. Start with the basic router table, then you can add a simple base cabinet. From there you can upgrade the cabinet even further by adding doors and drawers.

Finally, if you want to take this router table (or any other router table) to the next level, be sure and check out our Top 10 Router Table Accessories starting on page 8.

For me, this router table project is what *ShopNotes* is all about — helping you get the most out of your shop.

*Terry*

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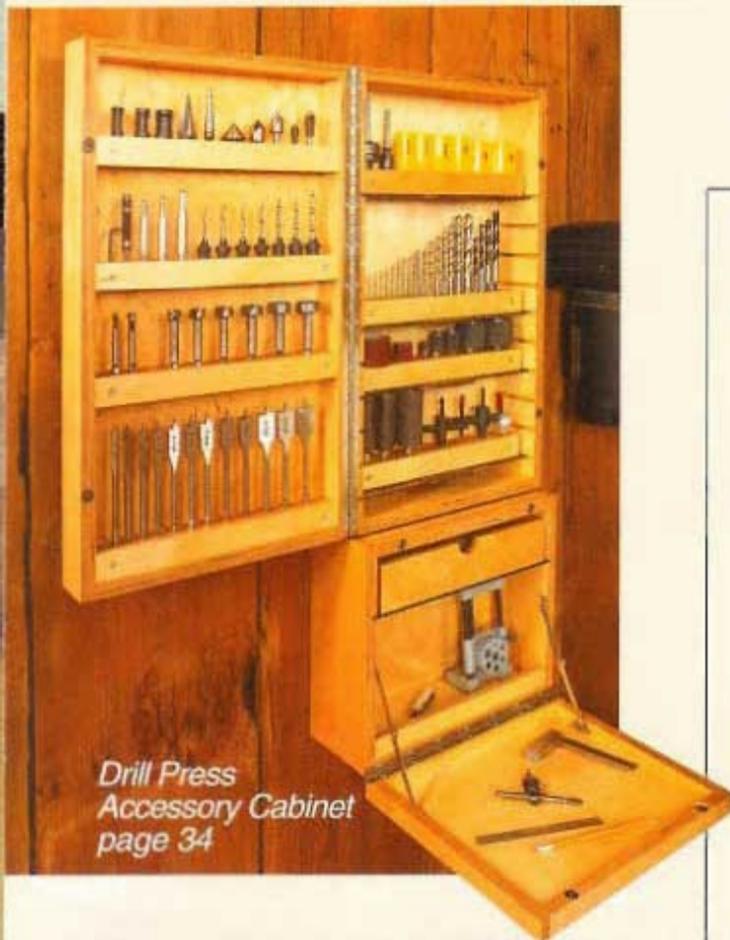
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*Keep your shop projects level and wobble-free from the ground up. Learn more about the best kinds of levelers to use in your shop.*

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### Using a Spokeshave \_\_\_\_\_ 32

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# Cutoffs

**S**everal years ago, I was down in my shop cleaning some rust off an old hand plane. As I went along, I tossed the used pieces of steel wool into a pile on the end of my bench. Suddenly, as if by magic, the pile of steel wool burst into a ball of fire.

The "magic" turned out to be a seemingly harmless, cordless drill battery lying on the bench. Some of the steel wool had touched the battery contacts. The electric charge instantly ignited the steel wool like tinder. Fortunately, after a moment of stunned shock, I was able to smother the smoldering steel wool before anything else caught on fire.

The next morning, I went out and purchased what's now the most important tool in my shop — a fire extinguisher. To find out more, check out the article that begins on page 42.

*Terry*



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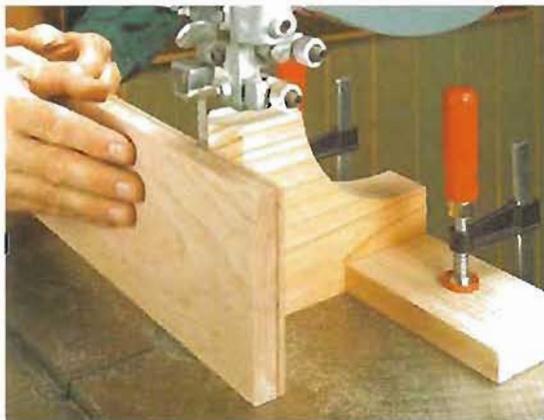
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# Cutoffs

**T**ake a good tool and make it better. That's really the key to many of the projects in *ShopNotes*. And often, this involves taking a good bit of time to build a jig or an accessory to make a power tool work harder, more accurately, or more safely.

But sometimes it's nice to be able to go into the shop and complete a project in an afternoon. That's part of the reason I enjoyed the marking knife project that begins on page 24 so much. We started with a simple, Japanese-style marking knife. The razor-sharp edge allows you to strike a clean, precise layout line. But the delicate blade can be a bit difficult to hold onto. So what's the solution? We designed a custom handle — one made out of scrap wood and some copper bushings — that looks good and feels great in your hand.

This transformation from a good tool to a great one is hard to describe. But I noticed that once the handle was added, everyone who picked the marking knife up had a hard time putting it back down again.

Another project that'll make a handy addition to your shop is the all-new router circle jig shown on page 32. What makes this jig unique is that it uses a lazy Susan in the design. So you just "spin" your way to a cleanly routed hole or circle. But seeing is believing. So be sure to check out the online video we put together showing the jig in action.

*Terry*

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# Cutoffs

**R**ules. As woodworker's we learn early on to follow the rules. Especially when it comes to working with power tools. And for good reason — power tools can be dangerous. So we develop a general set of rules for using them to get good results safely.

Take the router for example. One of the first rules you learn is which direction to rout — always move the router so you're pushing the bit into the workpiece. This way, as the bit digs into the wood, the router is pulled tight to the edge of the workpiece.

Routing in the opposite direction (back-routing) goes against the rule. So it must be wrong — right?

Well, not always. There are a few times when routing the "wrong" way can give you better results. When you backrout, the bit and the router are moving in the same direction, which can help eliminate chipout. However, the router may seem hard to control because the bit wants to skip along the edge of the workpiece.

Now this may sound a bit awkward and a little risky, but the fact is, you can backrout safely — if you follow a few simple rules. (It seems that even when you break the rules there are still rules to follow.)

To get the complete story on when to backrout and the techniques for doing it safely, check out the article that begins on page 8.

*Terry*



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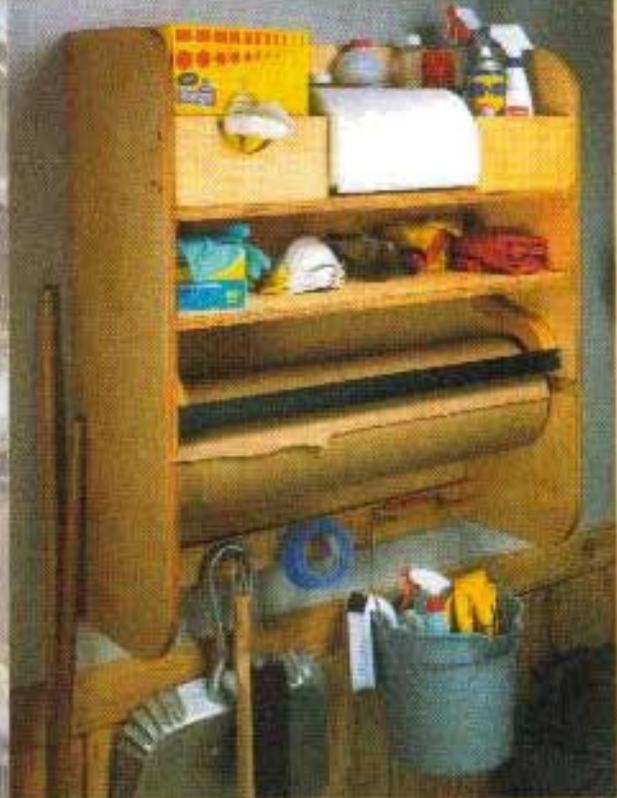
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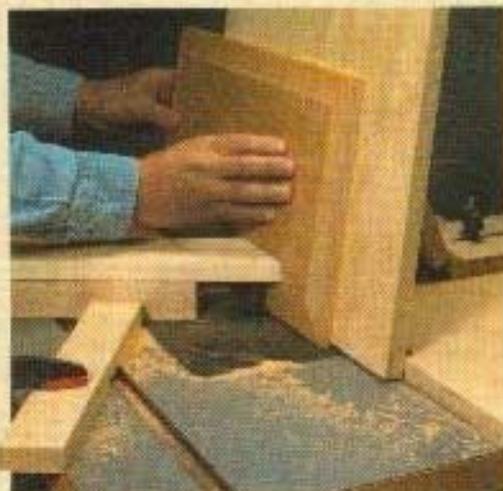
Hiding the edges of plywood is a snap with this easy-to-use router bit system.

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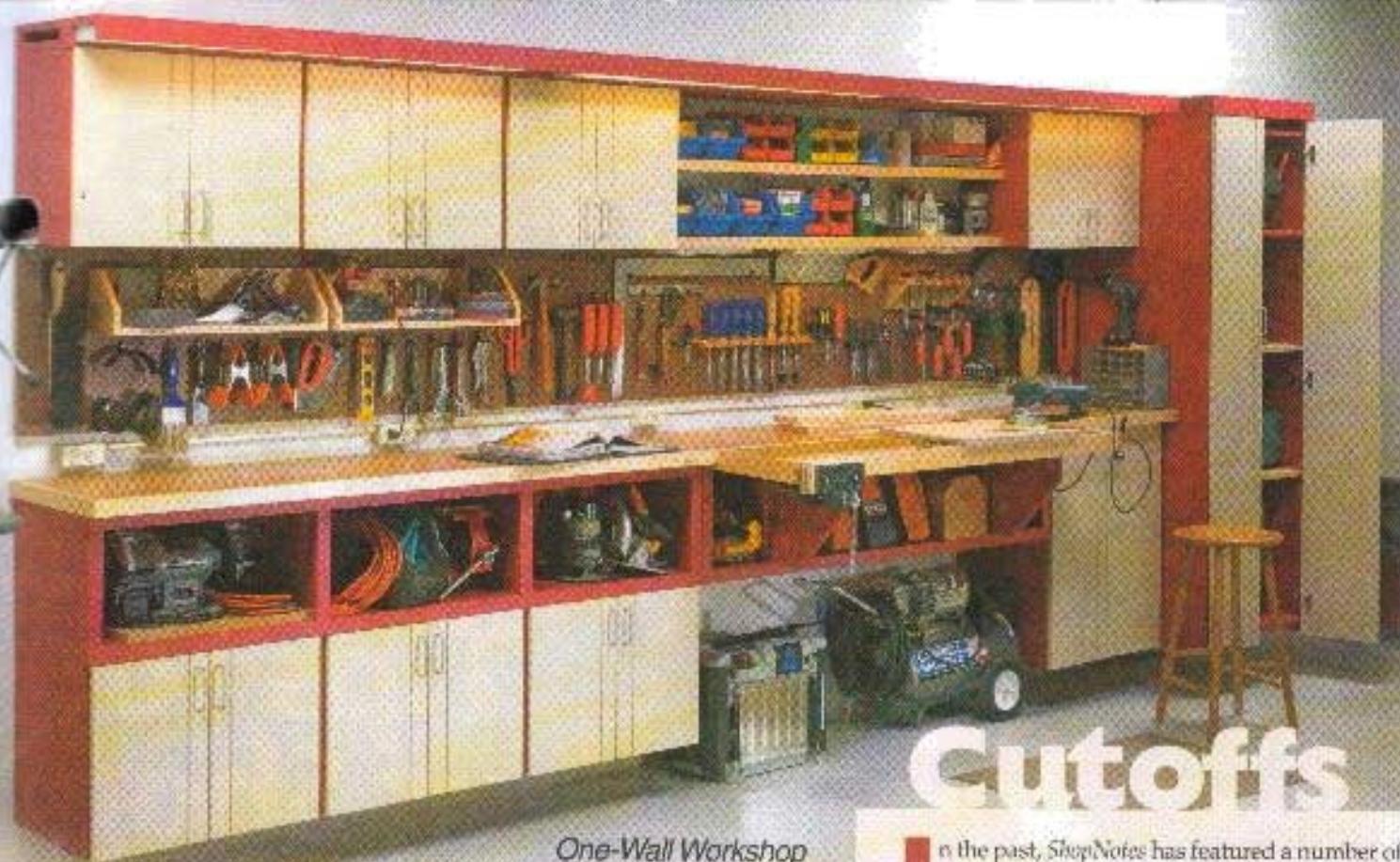
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# Cutoffs

In the past, *ShopNotes* has featured a number of different ways to help make your shop better organized. Typically, this involved some sort of shop-built cabinet system. The only downside to making a complete set of your own cabinets is it can be a bit time-consuming.

So this time we took a different approach by starting with easy-to-assemble, manufactured storage cabinets. Then we designed a few custom options to make the cabinets work even better. For starters, we built easy-access, under-counter tool cubbies, a space-saving flip-up workbench, and overhead lighting. Finally, we applied a sharp-looking, two-tone paint finish for protection.

The best thing about this project is you have lots of options, so you can easily make it fit your shop space and your needs. For more on creating your own one-wall workshop, be sure to check out the article beginning on page 16.

*Terry*

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*A lazy Susan is a versatile piece of hardware that allows you to make better use of limited shop space.*

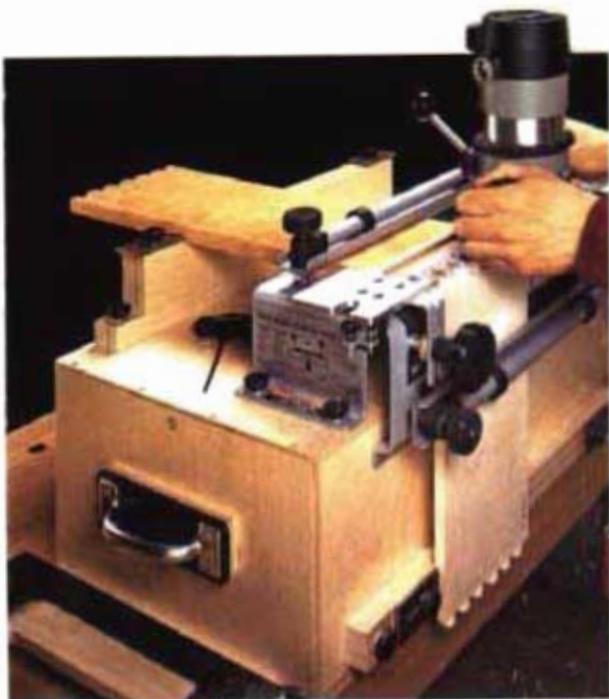
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# Cutoffs

**T**he weather is getting warmer and the days are getting longer. It's the time of year when many people start thinking about home improvement projects — I know I am. But in my case, I'm really thinking — shop improvement.

And I can't think of a better way to upgrade the shop than with a few easy-to-build projects. For starters, take a look at the plywood projects featured on page 16.

You'll find five projects in all: a lumber rack, a folding assembly table, a roll-around cart, a pair of stacking storage units, and a versatile sawhorse system. Any one of these projects would be a welcome addition to any workshop. But the best part is, each one can be built quickly and easily using just a single sheet of plywood. So you don't have to invest a lot of time or money to improve your shop.

Of course, improvement projects aren't the only things on people's minds this time of year. Spring cleaning and clearing the clutter are high on the priority list.

With that in mind, be sure and check out the article starting on page 44. There you'll find six simple ideas to help keep your clamp clutter under control.

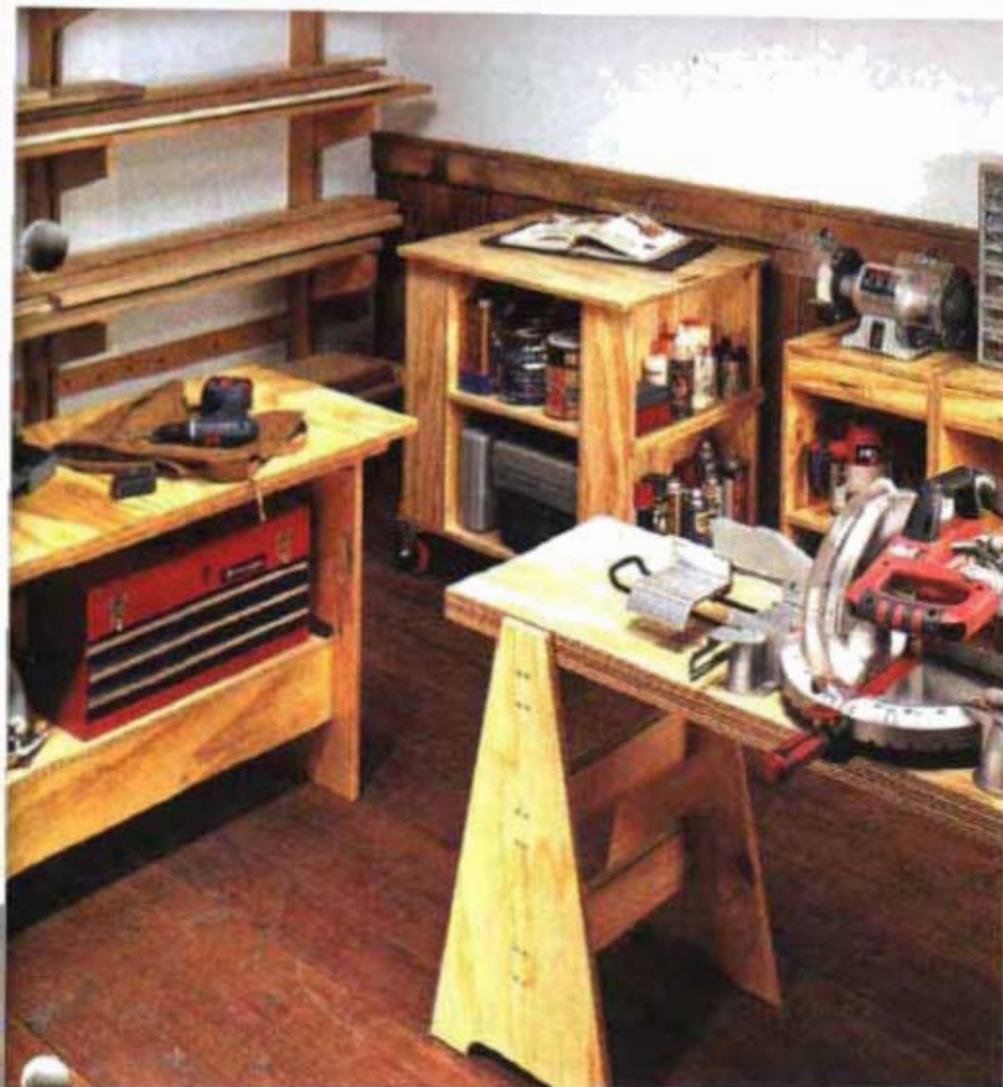
And to satisfy the urge to clean, take a look at page 42. You'll find an easy way to get more life from your table saw blades.

*Tom*

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**Cutoff Storage Bins**  **28**

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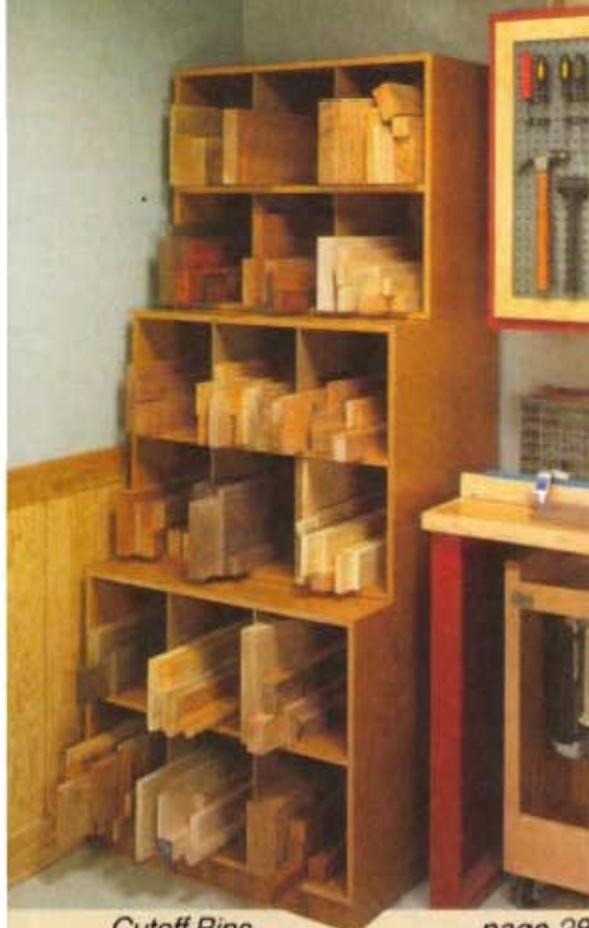
*Looking for great results when ripping thin strips? These techniques show you how.*

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# Cutoffs

**W**hat's your favorite

woodworking tool? For

many woodworkers, either

the table saw or router would come to mind first.

And I wouldn't disagree. But right near the top of my list is the drill press. For such a basic-looking tool, it can do so much: like drilling, sanding, and mortising.

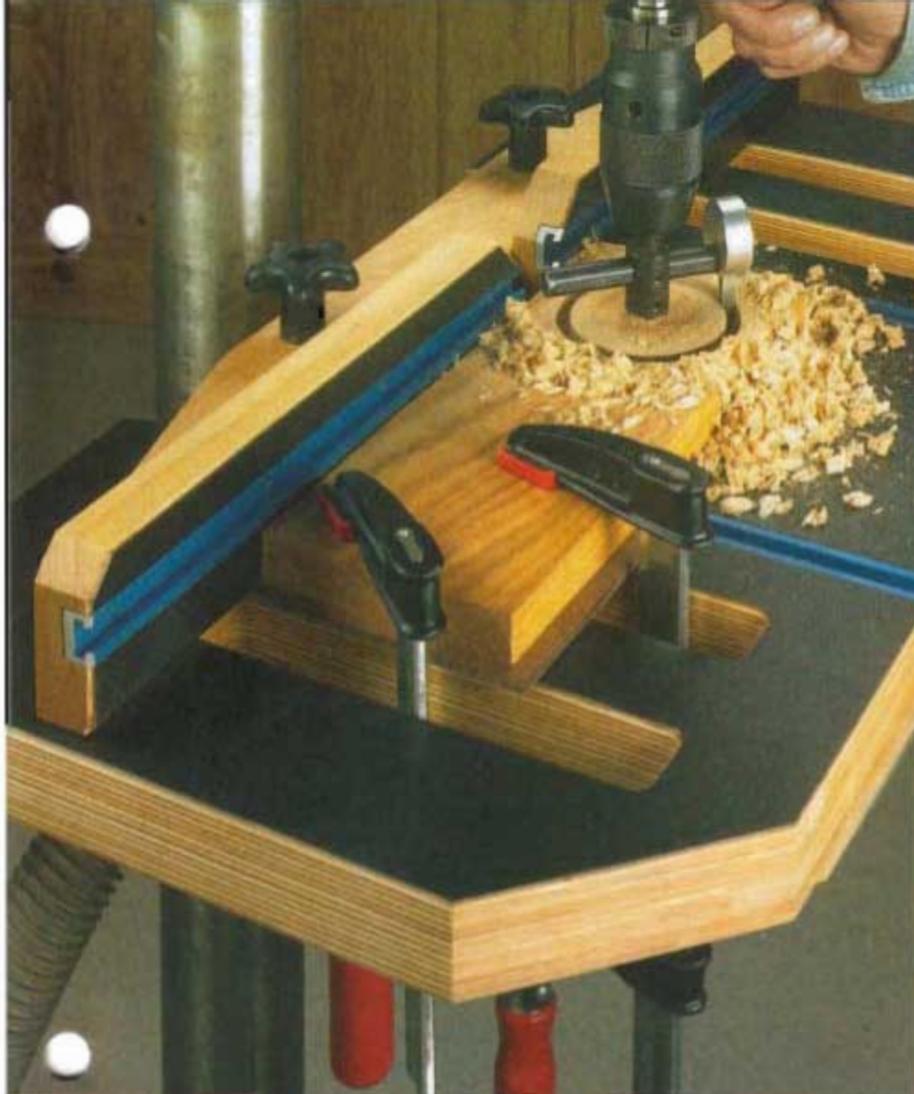
But to get the most out of a drill press, you need to transform it into a precision woodworking tool. The table and fence system you see at left is the perfect upgrade.

For starters, the table offers plenty of worksurface — it's over two feet wide. That's big enough to support just about any size workpiece you'll run across.

Then, to give you more control and more accurate drilling, we designed a built-in, two-part clamping system. For small pieces, a couple sections of T-track in the top allow you to position a toggle clamp right up close to the bit. For larger pieces that need extra holding power, you can slip a couple of bar clamps through the slots in the top.

The table also includes a couple of not-so-obvious features. A full-extension drawer keeps small tools and accessories within easy reach. And underneath the table you'll find a port for dust collection.

*Tomy*



Drill Press Table & Fence System

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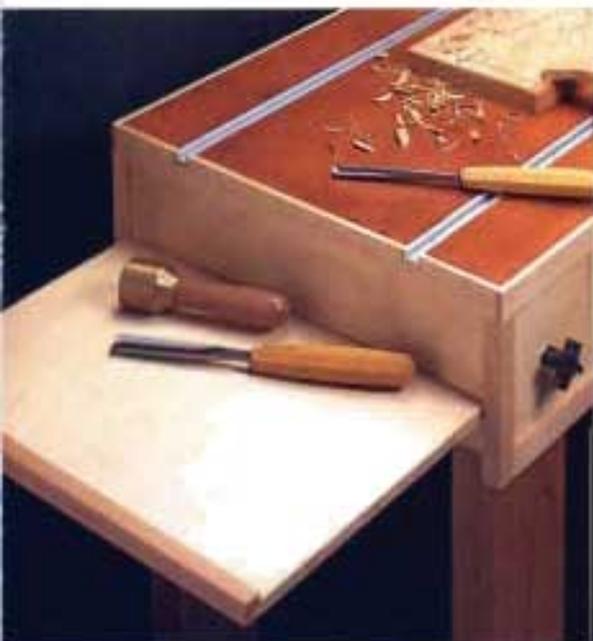
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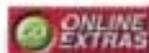
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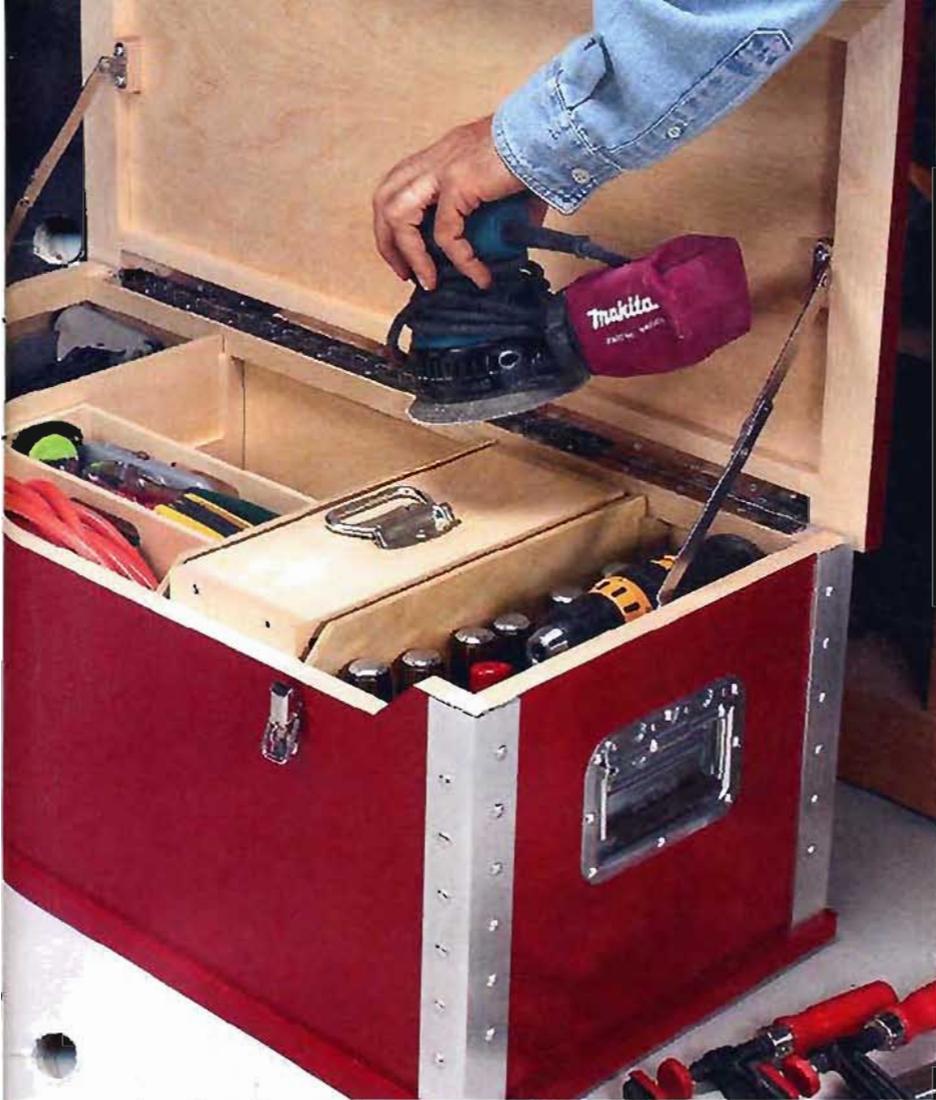
It isn't unusual to find myself working on a project that takes me out of the shop. Whether it's working around the house, helping out friends and family, or just enjoying a nice day outside, I need a way to bring my tools along with me. So in this issue, we have a couple of projects that make it easier to get what you need right where you need it.

**High-Tech Tool Chest.** Woodworkers have been building tool chests for hundreds of years. But a box that's strong enough to house a lot of tools is usually going to be heavy and difficult to move. So the challenge was to come up with a *lightweight, sturdy design* for our tool chest.

To keep the weight down, we started with  $\frac{1}{4}$ " plywood panels. Then the panels were riveted to pieces of aluminum angle. Now I know this sounds a bit unusual, but it really works quite well. The aluminum angle provides a rock-solid joinery method and protects the corners of the case as well. For more on building your own high-tech tool chest, check out the article on page 16.

**Multi-Purpose Table.** Another project you'll want to take a look at is the table on page 36. Here we've packed a small but surprisingly stable worktable in a compact package that's easy to carry outside or throw in the car (or RV) when you travel. Who says you can't take it with you?

*Terry*



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This table saw accessory keeps your work flat against the table. Then it automatically releases to slide with the workpiece.

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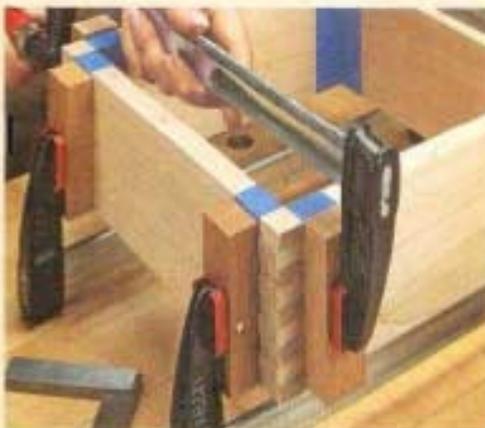
For rock-solid construction, it's hard to beat a draw-bolt joint. Here's how to do it right.



Custom Chisel Case page 30



Sliding Hold-Down page 36



Gluing Box Joints page 50

# Cutoffs

**E**very issue of *ShopNotes* is packed with articles and projects that will make you a better woodworker, and this issue is no exception. But I want to tell you about an exciting, new project we've been working on — a TV show.

For the past several months, we've been working overtime in our shop to create an all-new woodworking television show. It's called *The Woodsmith Shop*.

Each episode focuses on the techniques and tips you can use to get more out of the time you spend in your shop. Our hope is public television stations across the country will decide to air the show. If they do, you could start seeing it on your local public television station sometime in 2008.

To find out more about the show, go online to [www.WoodsmithShop.com](http://www.WoodsmithShop.com).

*Terry*



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### Before & After Shop Upgrade ONLINE EXTRAS 16

With a few sheets of plywood, MDF, some 2x4s, and common hardware, you can build this complete storage system and workcenter. It's designed for maximum utility in a minimum amount of space. Plus, you can customize it to suit your needs and shop layout.

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### Precision Beam Compass ONLINE EXTRAS 30

You can build this classic, precision layout tool in a weekend. Its simple construction and durability means it will last a lifetime.

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Sit in comfort at your workbench on this adjustable-height stool. Curved legs and metal footrests add good looks and stability.

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### All About Circular Saw Blades 12

Learn what to look for when shopping for a saw blade for this important shop tool.

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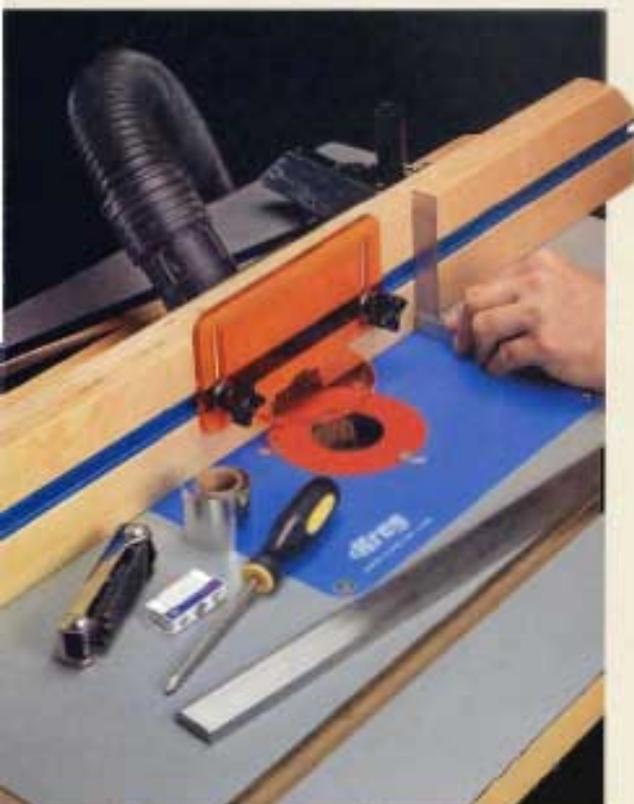
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Shop-tested tips and techniques to solve your woodworking problems.

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### Easy, Accurate Tenons with a Router 34

Cutting a tenon on the end of a long workpiece can be tricky. A simple jig and a router is all you need to get great results.



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Precision Crosscutting page 46



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Workshop Upgrade  
page 16

# Cutoffs

**A**bout a year ago, we featured a one-wall workshop on the cover of *ShopNotes*. And judging from your reaction, it was a very popular project. It seems that almost everyone is looking for a way to make their shop a better place to work.

So in this issue, we've come up with a totally new way to transform your shop space. Last time, we used ready-to-assemble cabinets. But for the makeover shown on the cover, we started from scratch and made our own.

Now I'm not talking about building complicated or time-consuming cabinets. The idea here is to use basic, inexpensive materials (2x4s, MDF, and construction-grade plywood). Then you build the different components using a single, straightforward joinery technique.

Each component starts with four posts cut from 2x4s, then horizontal plywood platforms are bolted between them. Once the framework is complete, the MDF "skins" are simply screwed in place. Finally, to dress things up a bit, we painted some of the MDF panels.

It's really a simple, rock-solid solution for getting the most out of your shop space. And you can customize it to suit your shop. Be sure to check out the article that begins on page 16 for all the details.

*Terry*

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**dream shop project**

### Curved-Lid Tool Chest

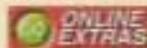


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Discover an all new joinery technique — “curved” box joints. We’ll show you how to create and assemble them for a perfect fit

**hands-on technique**

### Better Box Joints



25

Learn how to get dead-on accurate results from this classic table saw joinery technique.

**best-built jigs & fixtures**

### Benchtop Miter Saw Fence

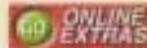


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Turn any surface into a precision miter saw workstation. All you need are a couple of easy-to-build fence sections.

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36

Strong and sturdy, this lightweight, portable work surface, featuring unique, “I-beam” construction, holds a “ton.”

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Tips and techniques to make your next glue-up go together quick and easy.

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Shop-tested tips and techniques to help you solve your woodworking problems.



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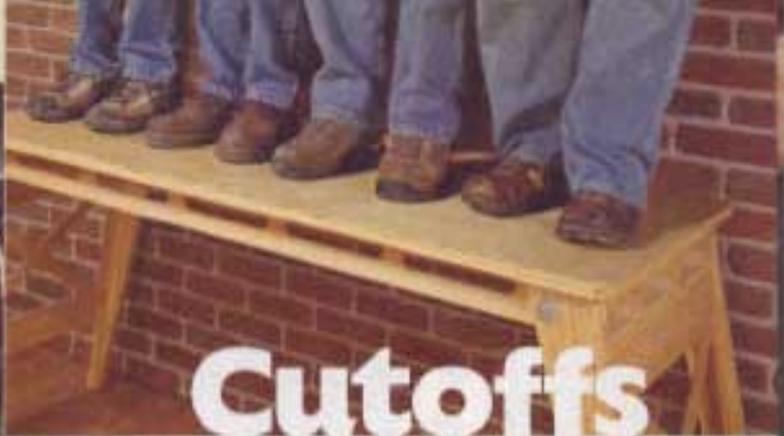
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# Cutoffs

**L**ightweight or sturdy. When it comes to building projects for the shop, you usually get one or the other but not both. But that's exactly what we wanted for the Worktable featured on page 36. A large, sturdy worksurface that was light enough to be easily carried anywhere.

To keep the weight down, we started with lightweight materials —  $\frac{3}{4}$ " birch plywood and some pine. Nothing fancy. In fact, everything came from a local home center. Then to make it even lighter, Chris Fitch (Senior Project Designer) started routing away any excess material. His challenge was to remove enough material to make it lighter, without making it flimsy.

Well, we ended up with a compact, folding table supported by four lightweight plywood "I-beams." The entire project weighs in a bit over 15 lbs.

Certainly lightweight, but is it sturdy? To find out we carried out a little unscientific test. We put four average-sized woodworkers on top of the table (photo above). Now I'm not going to recommend that you use this project as a scaffold or an engine stand, but as you can see it's plenty sturdy for a portable worksurface.

*Terry*

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*We'll show you the tools you need to get super-smooth shapes in all materials.*

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**5 Small-Shop Finishing Tips** \_\_\_\_\_ **44**

*Quick tips and tricks to make finishing your next project hassle-free.*

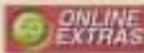
**mastering the table saw**

**Resawing on the Table Saw** \_\_\_\_\_ **46**

*From thick to thin. Learn a foolproof table saw technique that will save you time and money.*

**great gear**

**New Leigh Dovetail Jig** \_\_\_\_\_ **48**



*Find out how this new router jig does it all. Through dovetails, half-blind dovetails, box joints, and more.*

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Crosscuts are one of the most basic wood-working tasks. The design of this sled not only gives you dead-on crosscuts, but also chipout-free dados and rabbets. And a simple add-on jig makes cutting accurate box joints a snap.

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Create rock-solid joints quickly and easily with just a hand drill and the BeadLOCK system.

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# Cutoffs

**W**ow! That was the first word out of my mouth when I saw one of the shop-made awls we're featuring in this issue (photo at left). Now, you're probably wondering what could be so exciting about an awl. It's really one of the most basic layout tools in woodworking. And it's nothing more than a pointed piece of steel with a handle.

Well, the awl looked like nothing I had seen before — two sections of the steel shaft were twisted like an old-fashioned barber pole. This turned a plain piece of steel into a one-of-a-kind design. Add in a comfortable handle and you can see how easy it is to create a handy layout tool you'll find yourself reaching for every time you're in the shop.

Creating the projects and articles you find in *ShopNotes* takes a group of skilled and hardworking individuals. And to help us out, we're looking for a talented person to join our editorial team. This is a full-time position here in Des Moines, Iowa. If you're an experienced writer, have a strong interest in woodworking, and a desire to share your skills and knowledge with other woodworkers, I'd like to hear from you.

Just send a short resume highlighting your experience to: HR, August Home Publishing, 2200 Grand Avenue, Des Moines, IA 50312. You can also visit our website at [www.AugustHome.com](http://www.AugustHome.com) for more information about this position.

Terry

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*Turn your drill press into a shop workhorse with any of these handy, shop-made add-ons.*

### **mastering the table saw** Top-Notch Tenons \_\_\_\_\_ 44

*A tenoning jig and a few simple steps are all you need to cut perfect tenons every time.*

### **great gear** Razor-Sharp in a Snap \_\_\_\_\_ 48

*Take a look at two sharpening systems that will guarantee quick and easy results.*

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### Ultimate Router Table

**GO ONLINE EXTRAS**

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*This router table might just be the last one you'll ever need to build. It's loaded with storage, has a built-in dust collection system, and moves easily. Plus, the fence has a micro-adjust for "dialing in" accuracy.*

**best-built jigs & fixtures**

### Precision Mortising Table

30

*Take your mortising machine to the next level with this shop-built table. A dual sliding rod system allows for precise positioning and effortless mortising.*

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*You may never need to buy dowels again. With this simple step-by-step process, you can make your own dowels in minutes.*

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*Keep your cordless drills, chargers, and other tools organized in this easy-to-build, wall-mounted station. The handy drawer provides even more storage for all your accessories.*

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*The insert plate you select may well determine how well your router table works. Learn the ins and outs of what makes a good insert plate.*



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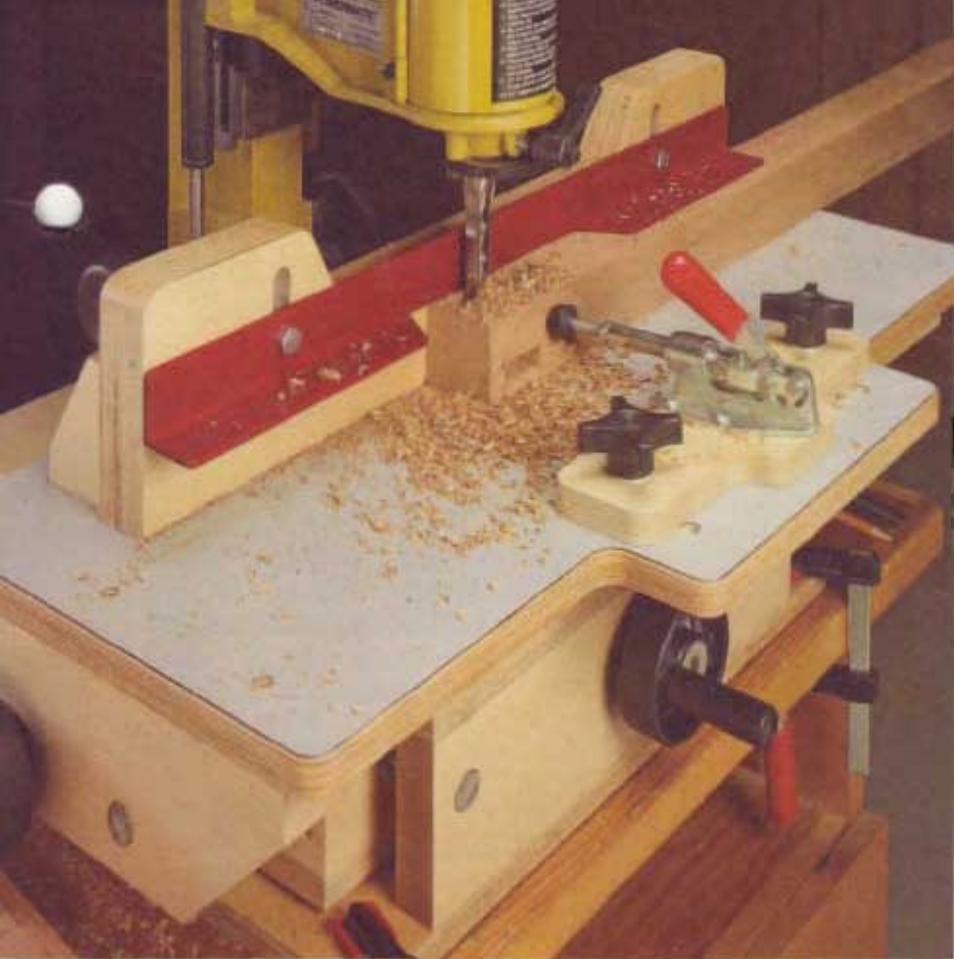


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# Cutoffs

**O**ne hundred issues. There was a time when some people around here wondered whether we'd make it past ten. Well, we all know woodworkers are a creative bunch. As a result, there are always new tools, techniques, and tips for getting more out of your shop. So I don't think we'll have a problem filling another hundred issues.

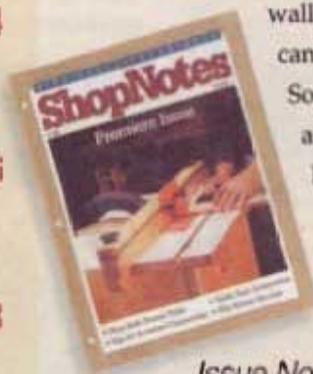
Our first issue featured a great router table. You can see it in the cover photo below. In fact, it still sees daily use in our shop. And since then, we've built at least a dozen more. With all that experience in hand, I think our latest version is the best yet. It has built-in casters, a top-notch dust collection system, and more than ample storage. But what really raises the bar is the fence. Need to replace the fence face? No problem. Add on a featherboard? Easy. And the handy micro-adjust and built-in guide system make tweaking the fence position a snap. All in all, it's a one-of-a-kind table.

But this issue has a lot more to offer. You'll also find a shop-built table for your mortising machine that makes creating a precise mortise a sure thing. And to keep a handle on your cordless tools, there's a

wall-mounted station you can build in a weekend. So take a look and stick around for the next hundred issues.

*Terry*

Issue No. 1



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*Protect your fine tools with a custom-fit, lined drawer insert. All it takes is an afternoon.*

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*Get more from your table saw with a dado blade and a few simple tips.*

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*Pocket hole joinery is quick and reliable. Learn how the Kreg K3 makes it even easier.*

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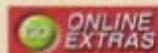
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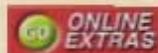


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*Fine tools deserve a special home. And this easy-to-build cabinet will display them in style. Plus, the innovative tool holders make it easy to customize the layout to suit your needs.*

**storage solutions**

### Air Tool Station



26

*Keep your air compressor, tools, and accessories close at hand with this roll-around cart. With loads of storage and an "air command center," it's ready to meet any task.*

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*Installing hardware is always a challenge. With these handy tips and tricks, guaranteed success is only a few steps away.*

**best-built jigs & fixtures**

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*This table saw tenon jig slides smoothly on any rip fence. Another key feature is the replaceable stop for making cuts at 45° or 90° on the end of a workpiece.*

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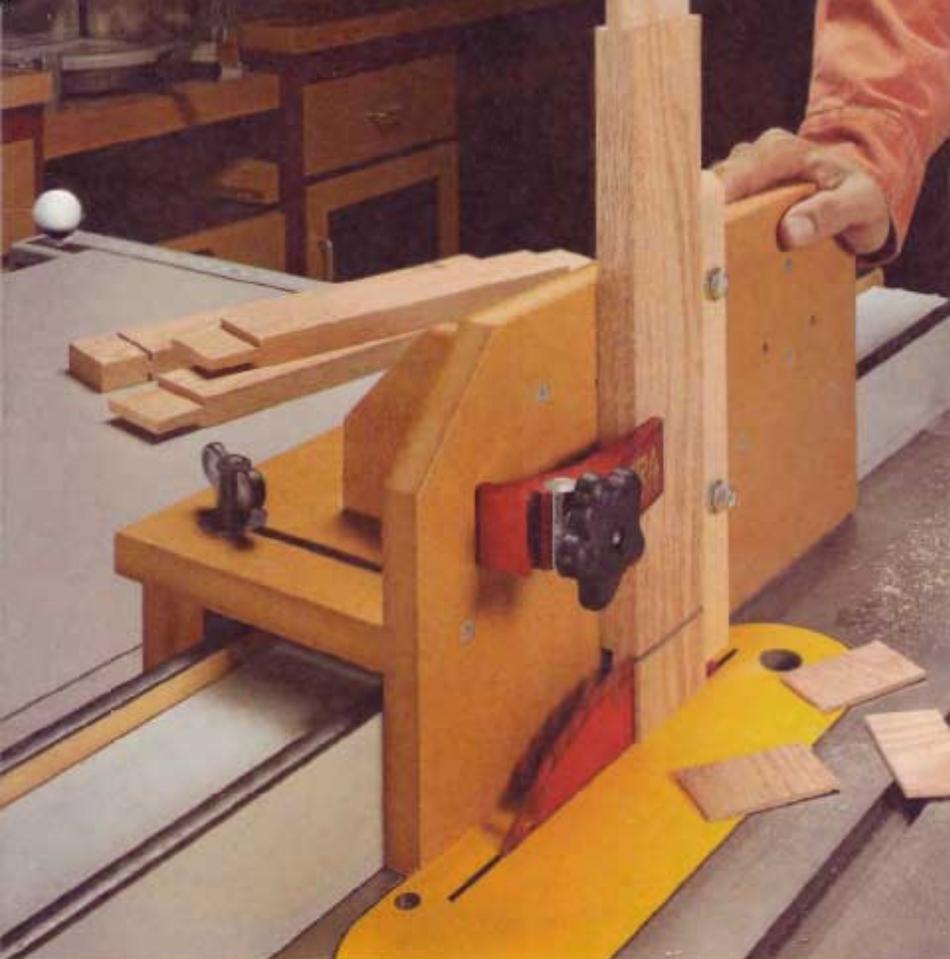
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# Cutoffs

**S**ometimes solving a small problem can lead to bigger and better things — especially when it comes to designing and building projects for your shop.

Take for example, a table saw tenon jig. The problem with many jigs that straddle a table saw fence is the fit. To be accurate, the jig needs to fit snug, but loose enough to slide smoothly over the fence. So you spend time getting the fit just right. Then the next time you use the jig, the humidity has changed. Now the jig is either a bit too tight, or too loose. Not a big problem, but certainly an annoying one that can lead to poor results.

The solution is simple — build a tenon jig that allows you to adjust the fit. Now you can easily get a perfect fit on the fence every time you use the jig. As an added bonus, the jig can be adjusted to fit virtually any size rip fence. A good example of a small problem leading to a big improvement. For more, check out the article beginning on page 38.

Speaking of improvements, our readers are very important to us. So we've made improvements to our online customer service page. It's been updated to make it easier and faster to change your home and e-mail addresses, renew your subscription, or pay a bill. Plus, you can contact a representative about a problem, submit a readers' tip, or send us a question you'd like an answer to. Check out [ShopNotesCustomerService.com](http://ShopNotesCustomerService.com) and let us know what you think.

*Tom*



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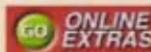
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*Shop-tested tips and techniques to solve your woodworking problems.*



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# Cutoffs

**T**he old-fashioned, traditional look of the workbench at left sure attracted a lot of attention in our shop. It seemed to remind everyone of a bench they used to work on, or wished they had, when they started wood-working years ago. It's sturdy, features a pair of handy vises, and has loads of storage. It's the perfect addition to any shop, old or new.

Speaking of new, we're offering a way to make it easier for you to build the bench for *your* shop. If you go to [ShopNotes.com](http://ShopNotes.com), you'll find a 3-D *SketchUp* model of the workbench you can download, complete with all the joinery. Besides helping you better understand how it all goes together, you can modify the model to suit your needs. You'll also find a complete set of bonus plans for building the storage drawers. Take a look and let us know what you think.



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*Terry*



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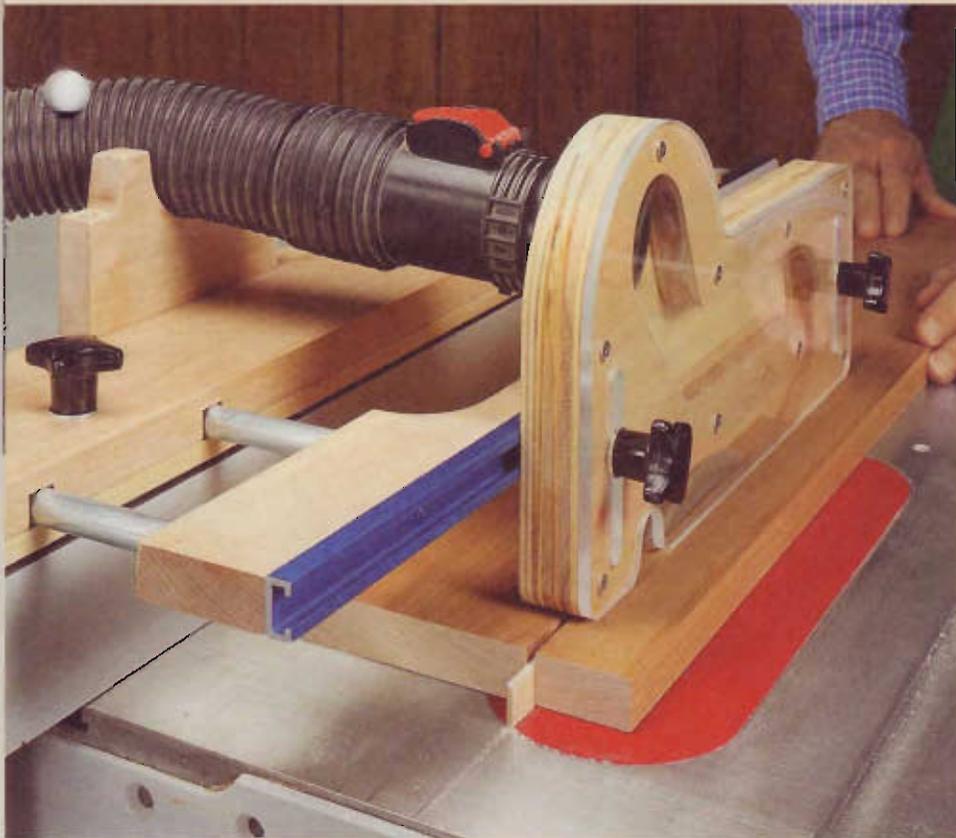
# Cutoffs

**P**art of the enjoyment I get out of working in the shop is trying out new ideas. And those ideas usually involve some jig or technique to make building a project easier, safer, and more accurate. This issue is filled with articles that meet all those requirements — and then some.

Inside, you'll find several projects that will make the time you spend in the shop more relaxing and enjoyable. It starts with the space-saving sharpening center with its drop-front door. Then, take a look at the mobile sanding station. It's a great way to keep your shop and lungs free from all that sanding dust. And for your table saw, you'll find some handy accessories for your rip fence. They make working at your table saw more accurate and safer.

Speaking of safety, in issue No. 102 we showed a shop-made jig used for bending brass bar stock while heating it with a propane torch. To build our jig, we used galvanized pipe. A concerned reader wrote in to warn us that heating galvanized materials to a high temperature can result in the release of dangerous fumes. While we didn't heat the pipe to a high enough temperature or for long enough to cause a problem, the concern is valid. The simple solution is to use black iron pipe when you build the jig or just make sure you have plenty of ventilation as you heat and bend the brass.

*Tom*



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*We'll answer your questions and take the mystery out of these useful guides.*

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# Cutoffs

If there's one lesson I've learned in the shop, it's that it pays to get back to basics every once in a while. The projects and techniques you'll find inside this issue allow you to step back and take a fresh look at the basics of woodworking.

To start off, you'll find some fundamental techniques you can use on any project — like tapering a workpiece on the jointer or getting more out of your router and table saw. You're sure to find something you can put to use right away. You'll also learn about some simple accessories you can use at the workbench to help you along with your everyday woodworking tasks.

The projects inside are sure to get your attention, too. The table saw workstation provides an extra-large worksurface for making a small benchtop saw work big. But it folds up for easy storage. The project workcenter is a heavy-duty small bench with a clamping top. So clamping workpieces or assembling a project is a breeze. Finally, the easy-to-build wall rack makes the most of wall space near your workbench. You can keep the tools you use most often within easy reach.

As you can see, there's a lot of great stuff packed inside. And you can find much more online at [ShopNotes.com](http://ShopNotes.com).

Terry



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*With this modular storage system, you can customize the number and size of the components to suit your needs perfectly.*

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*This precision fence system makes it easy to rip and crosscut very small workpieces.*

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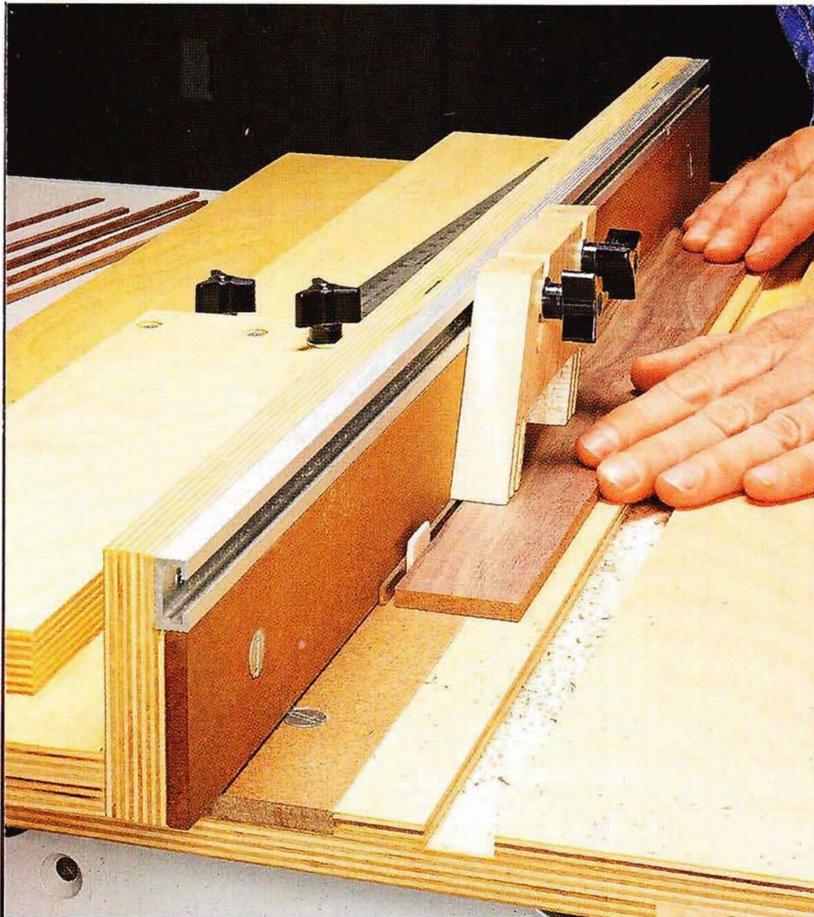
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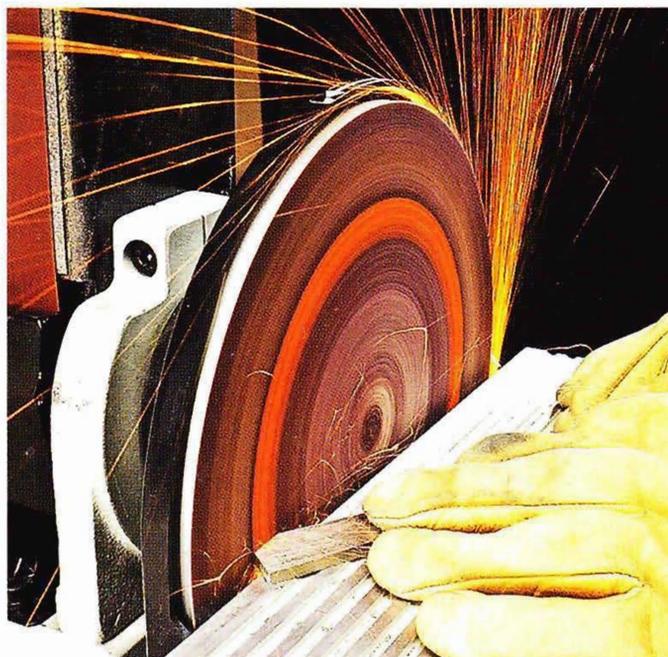
*Try out these shop-tested tips and techniques to solve your woodworking problems.*



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# Cutoffs

It's no secret that storage projects generate a lot of interest among woodworkers. It's a simple fact, we could all use more storage. In this issue, you'll find a couple of solutions to the problem — for large or small needs.

Take a look at the photo at left for a versatile approach. The concept behind this modular storage system is to create easy-to-build components that you can mix and match. This way, you build what you need to suit the space at hand. And if your needs change, simply add a new component (or two). Plus, the heavy-duty worksurfaces are a great addition to any shop.

We didn't leave small needs unanswered either. Chris Fitch, one of our designers, came up with a great way to store sharpening stones. You know, the ones you have sitting on a shelf or in a drawer where they can get chipped or cracked. Well, his solution (page 42) only requires a couple scraps of wood and an afternoon to make. And it's easy to customize the look of each box.

On page 34 you'll read about a unique jig for your table saw that allows you to accurately cut small-scale workpieces. And speaking of accuracy, check out the shop-made layout and measuring tools starting on page 16. These classic tools answer big-time needs. The construction is easy, but they will last for generations.

There's a lot going on and we wanted to include even more. Our solution? We've provided the extras online at *ShopNotes.com*.

*Terry*



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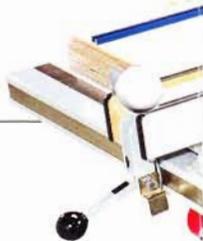
*Have a woodworking or shop-related question? Send it in — the editors will answer it here.*

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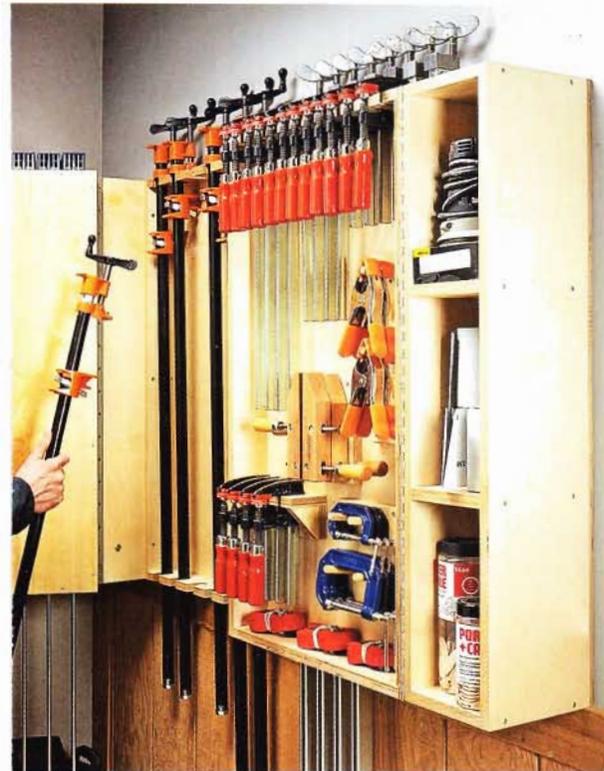
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# Cutoffs

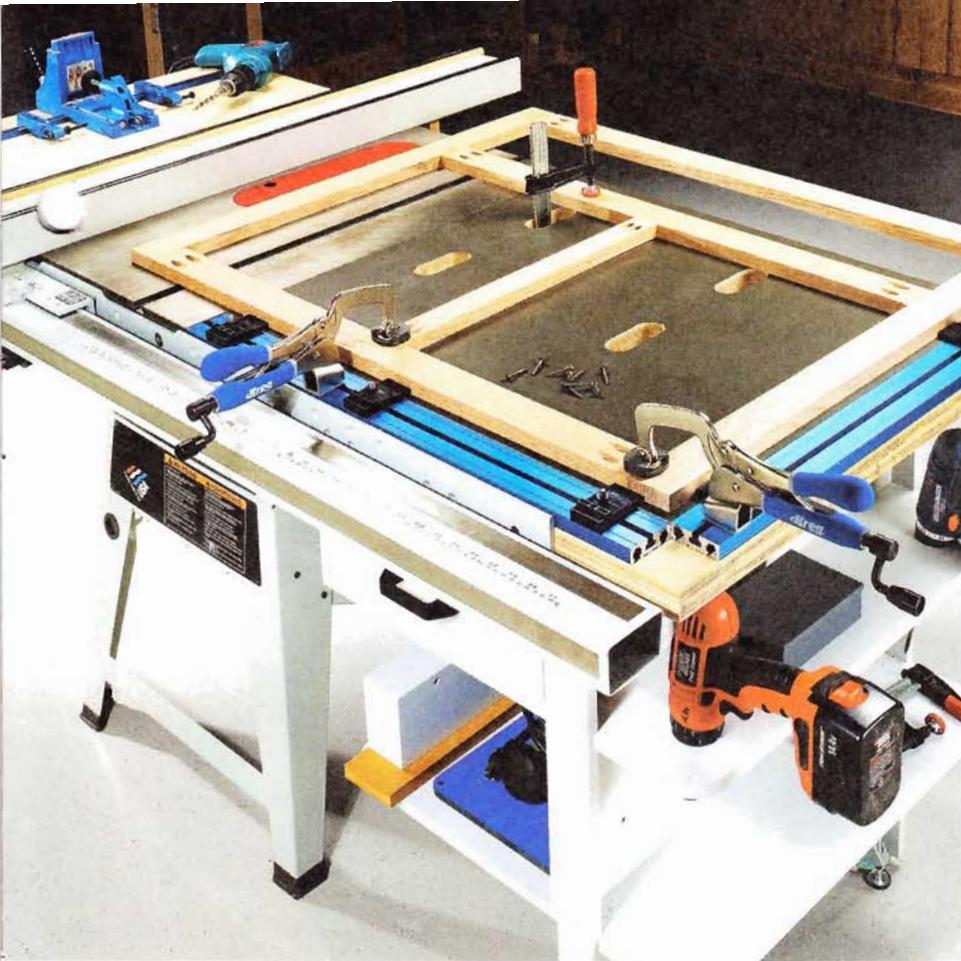


Table Saw Project Center

page 24

I'll be honest — I don't have a dream shop. You know, the shop where everything fits perfectly, there's always just the right amount and type of storage, and the latest tool is just an arm's length away. Like other woodworkers, I simply try to get everything I can from the tools I have and every square foot of storage space.

To help us all out, this issue is packed with projects and articles that address the needs of every woodworker — doing more with the time we spend in our shop.

The project center you see at left is a perfect example. At one time or another, we've all used our table saw to assemble a project. This project center takes it up a notch by replacing the stock wings of your table saw with shop-built versions. These new wings incorporate a router table, pocket hole station, assembly area, and loads of storage into a one-of-a-kind, compact work zone.

They say you can never have too many clamps. And that's true — until you try to organize and store them all. Our all-new, wall-mounted clamp rack (page 16) holds a ton of clamps in a compact space. And you can build it to suit the clamps you have. Buy more clamps? No problem. Just add a matching unit as your collection grows.

These two projects just touch the surface of what you'll find in this issue. Take a look inside for even more projects, tips, and techniques to get the most out of your shop.

*Terry*

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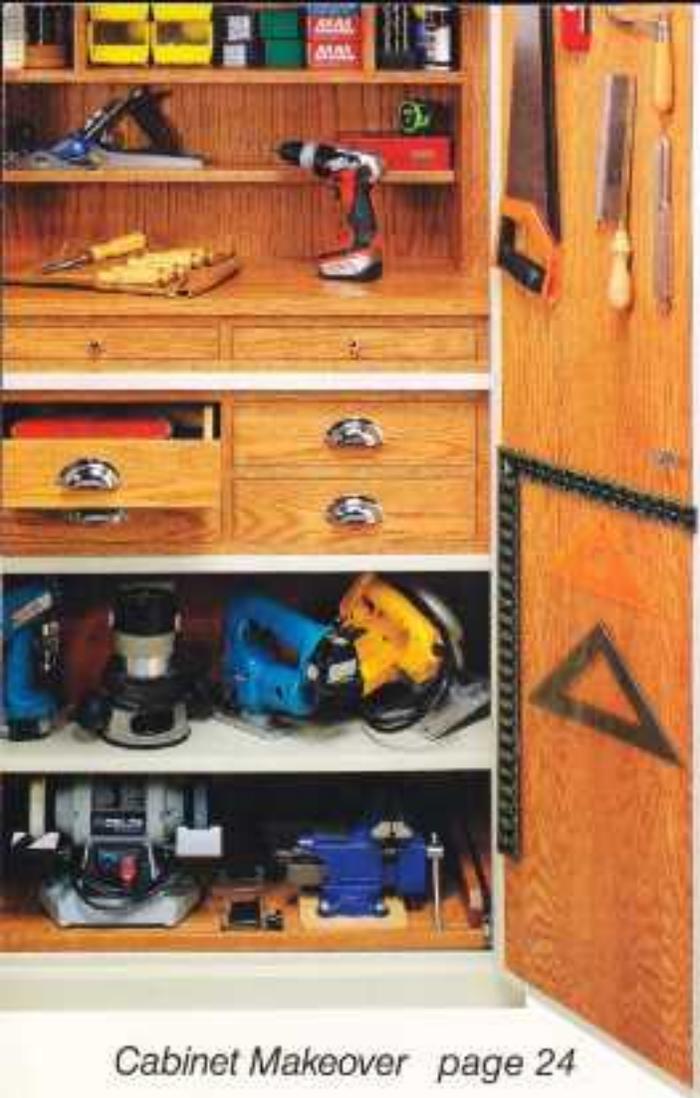
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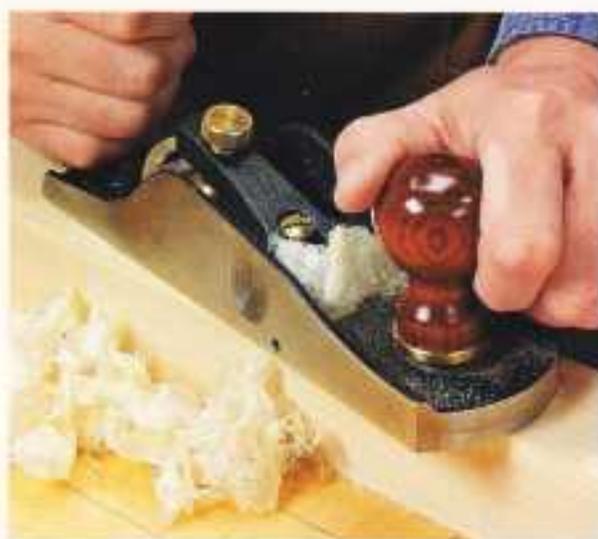
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Drill Press Sharpening Station

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# Cutoffs

**W**hen I head back into the shop in the fall, I usually spend some time getting back to the basics: like tuning up my tools and making sure everything is stored right where I can find it.

After that's done, I can focus on all the projects I plan to build. To help you get back into the groove in your shop, this issue is loaded with a lot of great information to improve your shop and your woodworking.

For starters, check out the photo at left. It's a great solution for sharpening the edge on any chisel or plane blade. Best of all, this machine is powered by your drill press. And the sandpaper-covered disks can be swapped out in seconds, so it won't take long to get to the razor-sharp stage on any tool.

Another great project you'll want to check out is the cabinet makeover on page 24. We took an ordinary metal cabinet and added a few shop-made components, turning it into a tool cabinet that any woodworker will find useful.

Besides projects, you'll find a number of helpful back-to-basics articles — from routing perfect profiles at your router table to getting better cuts at your table saw by making a zero-clearance insert.

And all this is just the tip of the iceberg. There's even more great information inside. And after thumbing through the pages of this issue, be sure to check out the additional information available online at *ShopNotes.com*.

*Tony*

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*Check out our shop-tested tips and techniques to solve your woodworking problems.*

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*The key to great results with a hand plane is the right bevel angle. Is a bevel-up plane the solution?*

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*These handy organizers will keep your table saw blades close at hand and stored safely.*

**mastering the table saw**

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