

SHOP TEST: WE RATE 10 8-IN. JOINTERS

AMERICAN WOODWORKER®

APRIL 1997 #58

Build a Better **Workbench**

Quick & Easy
Drawer Joints
Solutions for a
Dust-Free Shop

PLUS PLANS

Bentwood Baskets
Clever Two-Way Table
Turned Napkin Rings



GRIZZLY'S LINE OF INCREDIBLE

Z SERIES™ MACHINES!



SPECIAL OFFER

G1014Z
\$169⁹⁵
Reg. \$199⁹⁵

Combination Sander 6" x 48" Belt — 9" Disc

Completely re-designed for added accuracy and efficiency. This sander offers an all new quick release for fast belt changes and a convenient, single knob tracking control system. Sized to fit any workshop.

FEATURES:

- Quick change belt release
- 9" cast iron disc
- Industrial bearings
- Reinforced stand
- Cast iron construction
- 2" dust port
- Shipping weight 120 lbs.

6" x 47" Jointer w/ Cabinet Stand

Our new 6" jointer features a re-designed fence mechanism that offers greater accuracy than ever before and a new cabinet-style stand. It also includes easy-to-use lever table adjusters.

FEATURES:

- 1 H.P., 110/220V, single phase, ball bearing motor, prewired 110V
- Re-designed 4" x 29 1/4" fence system
- New cabinet stand w/ chip chute
- 3-knife ball bearing cutterhead
- Shipping weight approx. 275 lbs.



INTRODUCTORY PRICE

G1182Z
\$395⁰⁰



G1022Z
\$449⁰⁰

10" Heavy-Duty Table Saw

FEATURES:

- 1 1/2 H.P. TEFC 16/8-amp motor
- 27 1/8" x 41" table w/ wings
- Table height: 37 3/4"
- Improved fence system
- Precision beveled edge
- Cutting capacity @ 90°: 3"
- Cutting capacity @ 45°: 2 1/8"
- 110/220V, pre-wired for 110V
- 32-tooth carbide tipped blade
- Shipping weight 270 lbs.

10" Tilting Arbor Super Heavy-Duty Table Saw

FEATURES:

- 3 H.P. 220V / 18 amp single phase motor
- 36" x 27" table w/ wings
- Table height: 34"
- Shop Fox® fence
- Built-in dust port
- Cutting capacity @ 90°: 3 1/8"
- Cutting capacity @ 45°: 2 1/8"
- 32-tooth carbide tipped blade
- Shipping weight 425 lbs.



G1023Z
\$1095⁰⁰



G5049Z
\$499⁰⁰

Combo Sander 6" x 48" Belt — 12" Disc **VARIABLE SPEED!**

FEATURES:

- 1 1/2 H.P., 110V motor
- 7-speed variable sanding control
- Large, 6" x 48" sanding belt
- 12" sanding disc
- Dust collection shrouds
- One touch tracking
- Cast iron 0° - 45° disc and belt sanding tables
- Shipping weight 200 lbs.

7" x 40" Swivel Head Wood Lathe

FEATURES:

- 1/2 H.P. TEFC motor, 1725 r.p.m.
- Cam action adjustment
- Cast iron bed
- 13 3/4" swing over bed
- 40" gap between centers
- 1" x 12" TPI RH spindle
- M.T. #2 spindle taper
- 1 3/32" bore through spindle
- 6 speeds: 600-2100 r.p.m.
- Shipping weight 200 lbs.



G1067Z
\$449⁰⁰

66Q 125996658

Call, FAX or Write Anytime - 24 hours A Day, For A Free Wood or Metal Catalog!



WEST OF THE MISSISSIPPI:

1-800-541-5537

P.O. Box 2069 Bellingham, WA 98227
Cust. Svc: (360) 647-0801 • FAX: (800) 225-0021



"Visit us at <http://www.grizzlyimports.com>"

EAST OF THE MISSISSIPPI:

1-800-523-4777

2406 Reach Rd. Williamsport, PA
Cust. Svc: (717) 326-3806 • FAX: (800) 438-5901

All machines are F.O.B. Bellingham, WA or Williamsport, PA

Features

36 Build a Better Workbench

A space-saving bench that does it all

By Ian J. Kirby and John Kelsey

41 What You Should Know About Sealers

Straight talk about a misunderstood finishing step

By Bob Flexner

43 Bentwood Basket

A classic English basket every gardener will enjoy

By Trish Walters

46 Decorative Inlay

Jazz up your work with multicolored banding

By Sandor Nagyszalanczy

50 Turned Napkin Rings

Simple turned tableware you can make from scraps

By Barnett C. Howard

52 Two-Way Table

A flip of the legs turns this coffee table into a dining table

By Bill Rusk

56 Drawer-Lock Joints

Strong, foolproof corners with a single router-table setup

By Bill Hylton

58 SHOP TEST 8-Inch Jointers

Serious machines for serious woodworkers

65 Tuning a Jointer

30 minutes to perfect, precise cuts

68 Applying Gold Leaf

Give your project the Midas touch

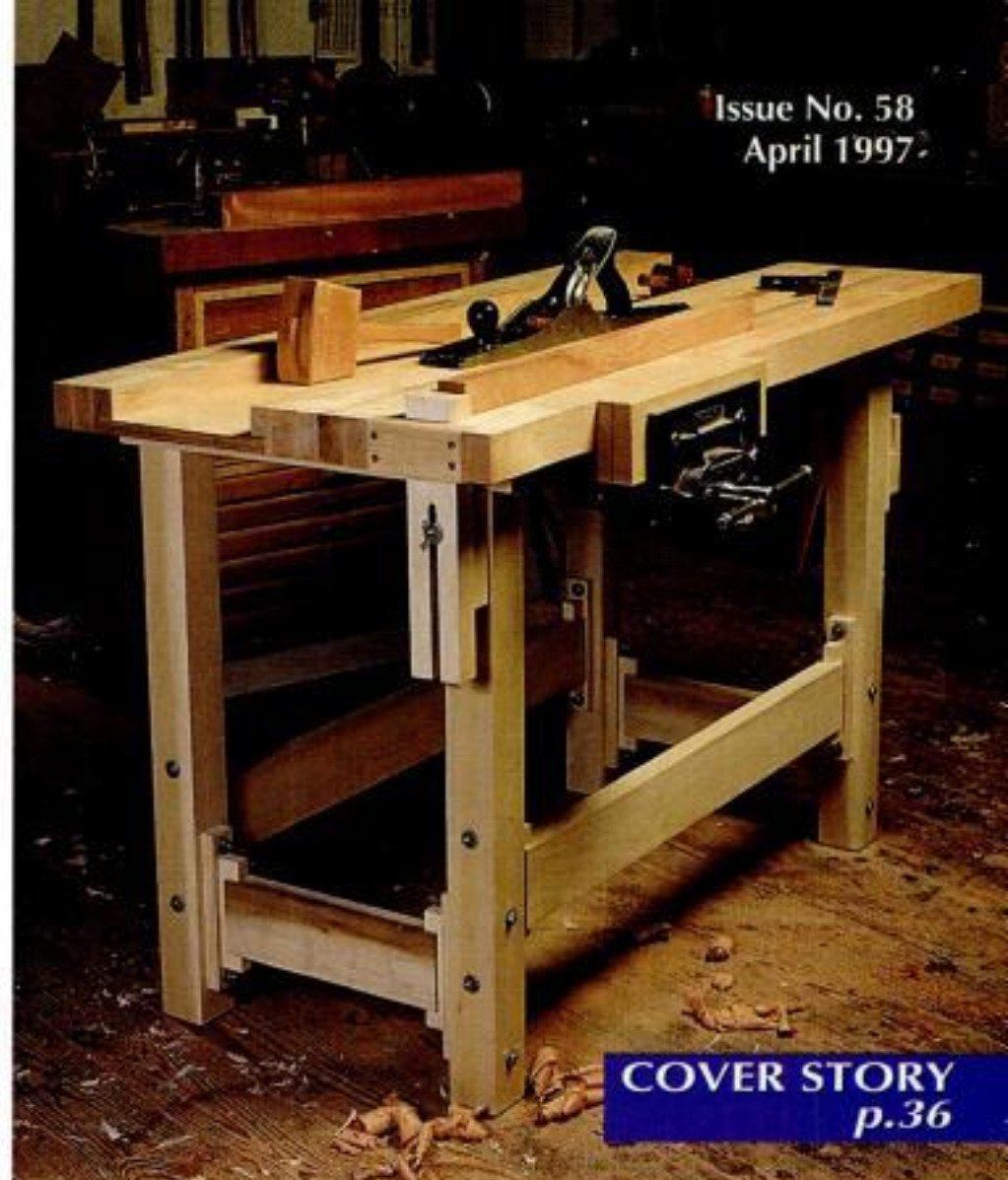
By David Marks

72 Dealing with Dust

Solutions for a cleaner, healthier workshop

By Andy Rae

On the cover: This compact bench packs all the features you'll ever need. See page 36. PHOTO BY JOHN HAMEL



COVER STORY
p.36

Page 36 Build a better workbench



Page 58 8-inch jointers



Page 43 Bentwood basket

AMERICAN WOODWORKER®

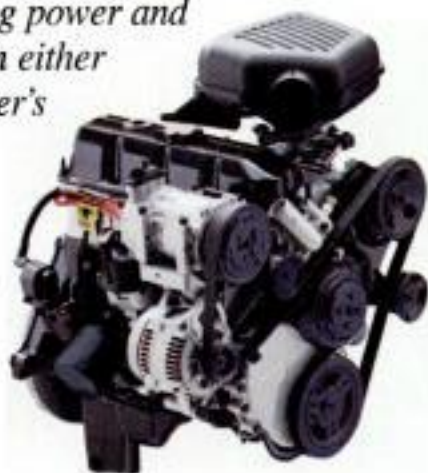


A RODALE PRESS PUBLICATION



We started with an open mind. And proved how surprisingly responsive, roomy, capable and comfortable a truck can be.

This is not a decaffeinated little wheezer of a standard 4-cylinder engine. This is a peppy Magnum® motor. As in Dodge Magnum. Which means it has more eye-opening power and torque than either Ford Ranger's or Chevy S-10's standard 4-cylinder engine.



We gave the new Dakota a roomiest-in-class interior. And we filled it up with conveniences, like an optional mini business console with hidden compartments. Check underneath Dakota Club Cab's roomy, forward-facing rear seat, and you'll discover some nifty storage bins.

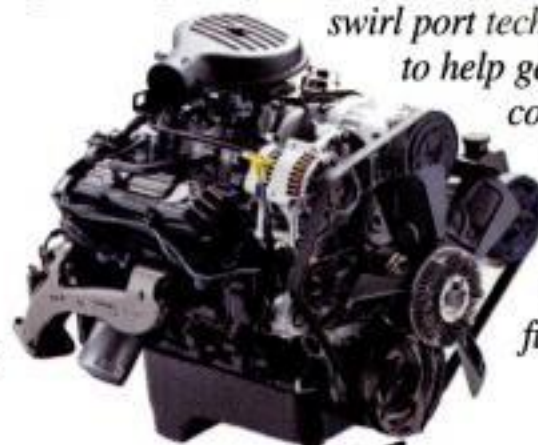
The new Dodge Dakota is like life. It's full of choices. With three different models and three capable Magnum engines to choose from, you're free to go in just about any direction.



The new Dodge Dakota has the longest wheelbase in its class, which makes for a smooth ride. Yet its turning circle is up to 5-1/2 feet smaller than before.



We gave Dakota's optional high-output Magnum V-6 a progressive bore throttle body, which optimizes airflow for any given engine speed. And we utilized swirl port technology to help get more combustion out of every drop of fuel.



Threedo



We designed the buttons and switches in the new Dodge Dakota to push your buttons, so to speak. It's those little touches, after all, that make driving more enjoyable.

The new Dakota 4x2 has 50% more torsional rigidity. Part of this greater sturdiness comes from a new, more durable frame. But the outer-body itself, which we designed utilizing advanced software, adds significantly to Dakota's surprising structural integrity.



Quick-ratio, variable-assist power steering means parking is easy. Dakota's precise cornering and exquisite road manners, however, make parking something you might never want to do.

The all-new Dodge Dakota's stable ride, cavernous interior and numerous comforts make getting there just as enjoyable as being there.



High-strength steel door beams give you the feeling of being in a real secure place.

The all-new Dodge Dakota has up to five cupholders in all. Hey, you never know when some thirsty friends are going to need a ride.





With a wide stance and bigger tires, the new Dakota doesn't just grip the road. It puts it in a vise.

We're willing to bet that you're a fun person. That being the case, you probably have some toys. With the new Dakota, we offer you some great places to put them.



Rear-wheel anti-lock brakes are standard. And if you want, you can opt for four-wheel anti-lock brakes.

m.

The fact that this 30-horsepower, 5.2L V-8 is the only one available in Dakota's class is nice. The fact that it's a Magnum, a modern legend in truck engines, is even better.



The large, well-illuminated speedometer and available tachometer dials are real easy-to-read.



Plus, the instruments are controlled by a microprocessor, for optimum accuracy.

For more surprising facts, call 1-800-4-A-DODGE, or visit our Web site at <http://www.4adodge.com>



Sport 4x2



Club Cab SLT 4x2



Club Cab Sport 4x4

The New Dodge Dakota

It's full of surprises.



This One



ZBDD-GJX-OGS1

etto da copyright

Departments

6 A Word from the Editor

Why a better bench?

10 Letters

Fancy CD cases from AW plans

18 Q&A

Disguising wood movement in breadboard ends

26 Offcuts

Wooden wagons hit the Mormon Trail

30 Tech Tips

Homemade jig for grinding plane irons

78 Wood Facts

Mahogany

82 Just Finishing

The best finishes for bartops and kitchen counters

88 Toolbox

DeWalt goes benchtop with four new machines

90 Shop Test

Sunhill "Baby" feeder

98 Gallery

Great work from woodworking guilds

104 Shop Solutions

A simple box to protect your chisels



Page 10 Custom CD cases



Page 26 Dremel-carved puppets



Page 98

Best of the guild shows '96



Page 90

Sunhill "Baby" feeder

AMERICAN WOODWORKER

EDITORIAL & ADVERTISING OFFICES

33 E. Minor St., Emmaus, PA 18098

Phone: (610) 967-5171 • FAX: (610) 967-7692

EDITOR & PUBLISHER David Sloan

EXECUTIVE EDITOR Ellis Walentine

MANAGING EDITOR Tim Snyder

ASSOCIATE EDITORS Paul Anthony, Andy Rae

ASSISTANT EDITOR Susannah Hogendorn

PRODUCTS COORDINATOR Dave Sellers

WEST COAST EDITOR Simon Watts

CONTRIBUTING EDITORS Lonnie Bird, Stephen Blenk, Jim Cummins, Michael Dresdner, Mike Dunbar, Frank Klausz

ONLINE HOST Jim Cummins

ONLINE SYSTEMS PRODUCER Julie Miller

DESIGN SHOP Fred Matlack

ASSISTANT TO THE PUBLISHER Maureen Peters

OFFICE MANAGER LaVerne Walker

ART DIRECTOR Kitty Pierce Mace

ASSOCIATE ART DIRECTOR Melanie Powell

ADVERTISING DIRECTOR Don Schroder

NATIONAL ACCOUNTS MANAGER Robert F. Izard

MARKETPLACE/CLASSIFIED Ian Tauber

DETROIT SALES REPRESENTATIVE Donald Hollinger

Rodale Press, Inc., 901 Wilshire Drive, Suite 300, Troy, MI 48064, (810) 269-8880

AMERICAN WOODWORKER SHOW™ MANAGER Jonathan I. Frank

ADVERTISING PRODUCTION COORDINATOR Lisa Unruh

PROMOTIONS COORDINATOR Shelley Drozd

PRESIDENT/MAGAZINE DIVISION John Griffin

VICE PRESIDENT, SINGLE COPY SALES Richard Alleger

DIRECTOR, RETAIL SALES Chuck Tripp

NATIONAL MARKETING DIRECTOR Diederik Terlaak Poot

VICE PRESIDENT CIRCULATION Edward J. Fones

CONSUMER MARKETING DIRECTOR Keith Follweiler

ASSISTANT CONSUMER MARKETING MANAGER Lynn Hower

SUBSCRIPTION SERVICES MANAGER David Bergeman

DIRECT SALES MANAGER Charlotte M. Walker

ATTENTION RETAILERS: To carry this title in your store, call the Direct Sales Department at (800) 845-8050.

AMERICAN WOODWORKER (ISSN 1077-7997) is published seven times a year in February, April, June, August, October, November, and December by Rodale Press Inc., 33 E. Minor St., Emmaus, PA 18098, (610) 967-5171. ©1997 by Rodale Press, Inc. J.J. Rodale, Founder; Arlo Rodale, Chairman of the Board; Robert Toulet, President of Rodale Press. SUBSCRIPTION RATES: U.S. one-year, \$21.88; two-year, \$41. Single-copy, \$3.95. Canada one-year, \$31.88; two-year, \$58 (Canadian funds). GST #R122988611. Foreign surface one-year, \$35; two-year, \$65 (U.S. funds). Foreign air one-year, \$42; two-year, \$80 (U.S. funds). U.S. newsstand distribution by Curtis Circulation Co., Hackensack, NJ 07610. PERIODICALS POSTAGE: Paid at Emmaus, PA and additional mailing offices. POSTMASTER: Send address changes to AMERICAN WOODWORKER, P.O. Box 7591, Red Oak, IA 51591. IN CANADA: Postage paid at Gateway, Mississauga, Ontario; Canada Post International Publication Mail (Canadian Distribution) Sales Agreement #718867. Send returns and address changes to AMERICAN WOODWORKER, 100 Armstrong Ave., Georgetown, Ontario L7G 5S4; GST #R122988611. CONTRIBUTOR GUIDELINES: Available upon request. (610) 967-8315.

Printed in USA.



SUBSCRIPTION QUESTIONS & ADDRESS CHANGES

At AMERICAN WOODWORKER, your satisfaction is important to us. For questions about your subscription and all address changes, please write to:

AMERICAN WOODWORKER Magazine
Box 7591, Red Oak, IA 51591-0591

Please include a recent mailing label with all correspondence.

Fax: (712) 623-5731 Or call: (800) 666-3111



"Freud's new Dial-A-Width Dado set is the most innovative dado set we've ever seen."

American Woodworker Magazine, December 1996

Spend your time being totally amazed with this incredible dado but don't spend a lot of time looking for shims . . . there aren't any. Now with a turn of the dial you can have the super fine adjustments that you have always needed in a stack dado. No more shimming and no more wasted time . . . a simple click of the dial is all that you need.

The new Dial-a-Width dado is the best dado that has come along in years. See for yourself how easy it is to use on your table saw or radial arm saw. Check out the precise joints. Look at the flat bottom groove. You will know immediately that it is not a wobble dado. Notice that the sharp, splinter-free cuts are those that you have come to expect from Freud. This dado produces the best finish and highest quality cuts of any dado available today.

The Dial-a-Width dado does perform like a stack dado but we have replaced the shims with a patented dial system. With our exclusive hub dial you can be totally sure of the accuracy of your adjustments. Each "click" of the dial adjusts the blade by .004". These are very precise adjustments. But if you need a closer adjustment . . . no problem. Simply stop the dial between "clicks".

The Dial-a-Width dado is easy to use, very precise and provides exceptional cuts. For the serious woodworker, there's nothing better.

freud®

Precisely what you need.

Call for a free catalog 800-472-7307, or E-Mail freudinc@aol.com

CIRCLE NO. 25 ON PRODUCT INFORMATION FORM



Splinter free, flat bottom grooves in all materials including problem materials like veneered plywood or melamine.



Dial system with precise width adjustment, eliminates shimmmg.



Includes arbor wrench and a sturdy storage case.

Always disconnect power before making adjustments. Red is a registered trademark of Freud, USA, Inc.

U.S. Patent 5,368,079

Material is protected by copyright

Why a better bench?

To build your skills, start with a solid foundation



A good workbench is the best woodworking investment you can make. That's a strong statement, but it's true. Your bench is the foundation for virtually every woodworking operation you'll ever have occasion to do: layout, sawing, planing, chopping, jiggling up, scraping, sanding, assembly, finishing—the list goes on. The better your bench is equipped to handle these activities, the more productivity, accuracy, and enjoyment you can expect from your time spent in the shop.

In "Build a Better Workbench," beginning on page 36 of this issue, you'll learn why a good bench is more

than the sum of its parts. Think of it as the centerpiece of a well thought-out *system* of woodworking—a system that anticipates every operation in your repertoire and provides an elegant means of dealing with it. Once you understand the system's logic, you're on your way to becoming a better craftsman.

A workbench doesn't have to be massive or expensive to be good, either. You can build our compact bench for about \$200, and it has all the features you'll ever need for top-notch woodworking. A brilliant rail-joint design gives this little workhorse the stability of a much heavier bench, and it's much

easier to build than the traditional through-mortise-and-tenon construction. You'll also appreciate the heft of the laminated maple top with its built-in tool tray and bench stop. If space, cost, or portability are important to you, look no further; here's the bench you've been waiting for.

Also in this issue, you'll find our comprehensive shop test of 8-inch jointers, along with a great lineup of intriguing projects and techniques to help you improve your skills. Best wishes for a happy and productive spring.

Ellis Valentine
Executive editor

PLAY IT SAFE

Woodworking can be dangerous. Safety equipment can greatly reduce your risk of injury; so can common sense and caution. Remember, if a procedure feels dangerous to you, don't try it—find a safe alternative. Your safety is your responsibility.



ULTRA-PRECISION WOODWORKING SYSTEMS

IPM JOINERY SYSTEMS



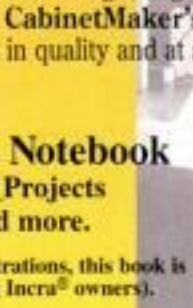
This multi-patented system has been recognized by the experts as the *best* and the *easiest* to use to make dovetails and box joints plus, the best, all around patented dovetail incremental fence system you will ever own. Because IPM's accuracy is based upon a fine-threaded chrome lead screw, fine joinery is made easy and accurate cuts assured every time. Micro-adjustability even allows you to move the fence in thousandths of an inch increments.



CABINET MAKER'S SYSTEM



This one can do it all. All cabinet making operations can be accomplished with this ONE System. JOINTECH'S CabinetMaker's Systems® include all the Joinery System components plus our award-winning SmartFence®. You don't have to be a master craftsman to build beautiful cabinetry, furniture or even jewelry boxes. Our 48 templates enable you to easily make every type of dovetail and box joint. SmartFence accommodates any cutter in your shop allowing you to make raised panels, rails & stiles, tongue & groove, face frame construction, drawer design, edge-work and more. JOINTECH'S CabinetMaker's System is simply the best investment in quality and at a very affordable price.



New Woodworker's Notebook

with Twelve Practical Projects plus jigs, fixtures and more.

Packed with over 300 photos and illustrations, this book is a must for any woodworker (including Incra® owners).

Incra is a registered trademark of Taylor Design Group, Inc.

CALL, WRITE OR FAX FOR A FREE BROCHURE & SPECIAL INTRODUCTORY OFFER DETAILS!

P.O. Box 790727 • San Antonio, Texas 78279

Toll Free: (800) 619-1288 • Fax: (210) 377-1282

CIRCLE NO. 44 ON PRODUCT INFORMATION FORM

The new **FELDER** Compact series!

TRUE professional quality for a limited budget!

KF-7 Compact

Sliding Table Saw-Shaper

Features that set the standards:

- Precision sliding table · 12" table saw
- tilting shaper · High Speed Router Spindle
- 4 HP motors · scoring unit



Call now!
800-572-0061

...and *Sie machen mehr aus Holz*

FELDER USA

4003 Seaport Blvd. · W. Sacramento, CA 95691

Phone 916-375-3190 · Fax 916-375-3194

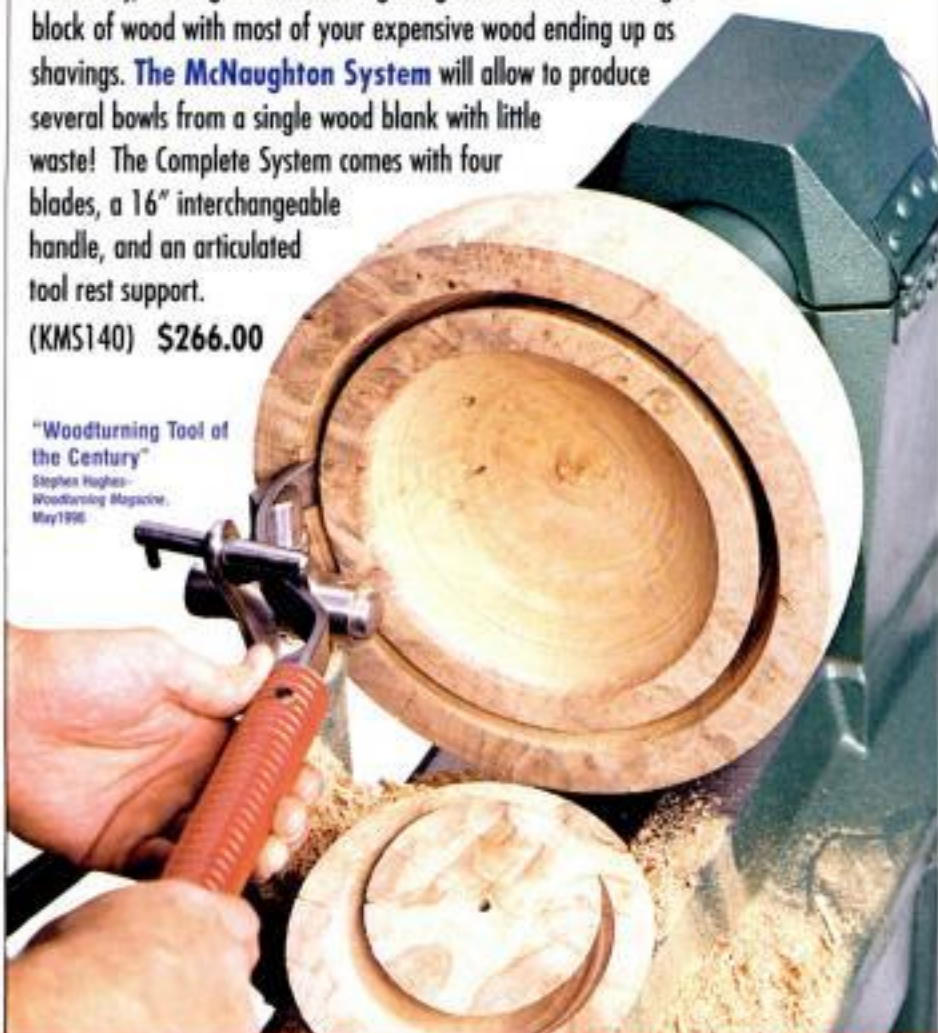
CIRCLE NO. 24 ON PRODUCT INFORMATION FORM

SAVE TIME AND MONEY BY PRODUCING SEVERAL BOWLS FROM A SINGLE BLOCK OF WOOD!

Ordinarily, turning a bowl meant getting one bowl from a single block of wood with most of your expensive wood ending up as shavings. The **McNaughton System** will allow to produce several bowls from a single wood blank with little waste! The Complete System comes with four blades, a 16" interchangeable handle, and an articulated tool rest support.

(KMS140) \$266.00

"Woodturning Tool of the Century"
Stephen Hughes
Woodturning Magazine,
May 1996



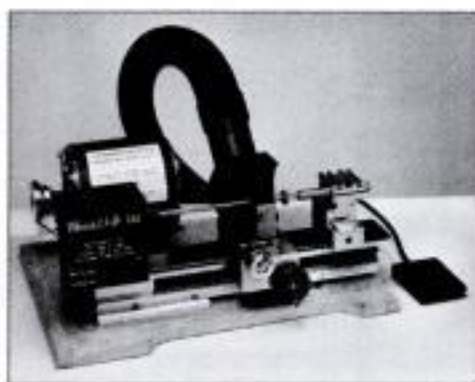
To order the McNaughton System or to receive a FREE copy of THE WOODTURNERS CATALOG

call toll free **1-800-551-8876**

CRAFT SUPPLIES USA 1287 E. 1120 S. Provo, Utah 84606

CIRCLE NO. 15 ON PRODUCT INFORMATION FORM

TURN PENS IN 2 MINUTES!



The WoodWrite Microlathe – a revolution in pen and pencil turning. Contact us for details, including information on our production systems, pre-cut, pre-drilled wood blanks and components for Slimline and WriteMaster™ pens/pencils.

WoodWrite, Ltd.

2121 Abell Lane, #10A Sparks, MD 21152
1-888-WoodWrite • Fax: 410-771-4879
(966-3974)

WoodWrite Ltd.

CIRCLE NO. 97 ON PRODUCT INFORMATION FORM

VEGA SAW FENCES ARE SUPERIOR!

NEW COMMERCIAL MODEL AVAILABLE

Vega Fences will add unequalled accuracy, productivity, and convenience to your Table Saw ... Pro, Utility and Commercial Models are ideal for Cabinet to Contractors Saws. Accessories are available for greater convenience and productivity. Vega uses only the finest materials available.



THE RESULT IS THE FINEST FENCE SYSTEM YOU CAN BUY

Call or write for free literature

Vega Enterprises RR3 Box 193 Decatur IL 62526 800-222-VEGA (8342)

CIRCLE NO. 82 ON PRODUCT INFORMATION FORM

"Out Ahead of the Pack..."

— American Woodworker 10/96

WOOD Magazine, CREATIVE WOODWORKS, AMERICAN WOODWORKER, and thousands of Hegner owners agree that HEGNER saws offer many advantages over all other brands. Try one yourself and discover the benefits:

- clean, accurate cuts with no sanding
- easy blade change
- smooth quiet operation
- long blade life
- Safety-Stop upper arm
- Space-saving design
- 6 year warranty



Call or write for your FREE 1997 Catalog

1-800-322-2226

(Please mention Ad 771)

ADVANCED MACHINERY

P.O. Box 312 • New Castle, DE 19720

<http://www.advmachinery.com>

☐ Send me FREE information on Hegner Scroll Saws!

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ 771

HEGNER makes it better!

CIRCLE NO. 4 ON PRODUCT INFORMATION FORM

CHOICE OF PROS NOW AVAILABLE AT 40% LESS!

THE **NEW** WAGNER L609
MOISTURE METER...



L 4.5" x
W 2.75" x H 1.0"

- Pin-Free
Narrow Sensor
Deep Penetrating

- Features
Wagner's Proven
electromagnetic
wave Technology

- Accuracy Verified
by Independent
Studies

Our Lowest Price
Was: \$225

Now: **\$129**

WAGNER
ELECTRONICS

"The Choice of the Pros"
1-800-933-3506

326 Pine Grove Road
Rogue River, OR 97537
Phone: (541) 582-0541 Fax (541) 582-4138
Web: <http://www.wagner.com>

CIRCLE NO. 84 ON PRODUCT INFORMATION FORM



S. LaRose, Inc.

If you're building
the outsides, we've
got the insides! Call
or write for our **FREE**
clock parts catalog, #W2

S. LaRose, Inc.
P.O. Box 21208
3223 Yanceyville St.
Greensboro, NC 27420
(910) 621-1936

CIRCLE NO. 67 ON PRODUCT INFORMATION FORM



SPRING SPECIAL

FREE SHIPPING SAVE \$4.50

ROLL TOP DESK
#151

36x48 CAD plan
w/detailed instructions

AMERICAN FURNITURE DESIGN
P.O. BOX 300100 ESCONDIDO, CA 92030
DESK PLAN \$19.95 + "FREE" S&H
CATALOG \$3.00 "FREE" with Order
619 743-6923

CIRCLE NO. 301 ON PRODUCT INFORMATION FORM

MAKE YOUR OWN beams, 2-sided logs, and framing lumber!

60-minute video: \$10.00;
all-products mill,
kilo and edger
catalog: \$2.00

Over 17,000
Sawmills
World-Wide!



- Saw trees up to
36" dia. x 21' long* on site.
- Optional hydraulic log handling
(LT40 and LT30 models).
- LT25 mills without trailer from:

\$6995!

1-800-553-0219

Wood-Mizer Products, Inc.
8180 West 10th Street Dept. AW32
Indianapolis, IN 46214-2400

CIRCLE NO. 202 ON PRODUCT INFORMATION FORM

Unlimited
Range And
Versatility

The World's Most Perfect Router Joints Start With Good Phone Skills.

When you phone our toll-free number and order your detail-rich, complimentary 32-page Leigh catalog you're well on your way to a new level of woodworking craftsmanship. The Leigh Dovetail Jigs and growing array of accessories remain the universal benchmark for precision, easy-to-use router joinery tools. And with the addition of the Multiple Mortise and Tenon Attachment and now the NEW F1 Finger Joint Attachment, the ingenious, patented Leigh Jig System sets new standards for quality, versatility and convenience. Do what thousands of serious woodworkers worldwide have done already; call us today.



Call For Your Free 32-Page Catalog Now!

1-800-663-8932

LEIGH

Joining Tradition With Today

Leigh Industries Ltd., PO Box 357, Port Coquitlam, BC, Canada V3C 4K6
Tel. 604 464-2700 Fax 604 464-7404

"Certainly no production workshop should be without one of these, and the serious home craftsman will certainly find great joy in using it."

JOHN SAINSBURY'S ROUTER WORKSHOP

"The Leigh Jig cut through dovetails that looked identical to those cut by hand and fit as if they had been cut by a master."

WOODSMITH MAGAZINE

CIRCLE NO. 51 ON PRODUCT INFORMATION FORM

FREE WOODWORKING CATALOG!

**OVER
400 NEW
PRODUCTS**

From high-tech euro style kitchen hardware to finely crafted humidior components, hardwoods, plans, tools and much more!



Call 1-800-403-9736

<http://woodworkerstore.com>

Since 1954



Dept. 63018

4365 Willow Drive
Medina, MN 55340

Hardware, Wood, Tools & Know How

CIRCLE NO. 93 ON PRODUCT INFORMATION FORM

MOLDER / PLANER

FOR

STRAIGHT, CIRCULAR, ELLIPTICAL* MOLDINGS
(Casings, Crowns, Picture Frames, Raised Panels)



**Our W • 7S Model offers
Versatility and Durability**

FEATURES:

- Duplication of historic profiles up to 3/4 in. deep
- Solid cast-iron base & head
- Molder-to-planer in less than 2 minutes
- Portable – on site or in the shop
- 7,000 rpm/two-knife system produces 78 cuts per in.
- 100 standard knives
- Custom knives
- Five-year warranty
- Fully American-made!

* Elliptical jig required

EJ Elliptical jig allows radii as small as 7 in.



WILLIAMS & HUSSEY MACHINE CO. INC.

Dept. 207CB

P.O. Box 1149 • Wilton, NH 03086

Tel: 800-258-1380 • Fax: 603-654-5446

CIRCLE NO. 86 ON PRODUCT INFORMATION FORM

BUY RIGHT THE FIRST TIME, BUY: THE **NEW** BRIDGEWOOD® BW-8J JOINTER

only \$949.00

THE BW-8J FEATURES:

- Equipped with a rugged, dependable 1 1/2 HP, single phase, AMERICAN MADE MOTOR.
- Smooth operating, easy to adjust fence system that tilts both inward and outward to 45° with positive stops at both positions as well as at 90°. Fence size is 4" X 36".
- 8" maximum cutting width.
- 1/2" maximum cutting depth.
- 1/2" x 8" rabbeting capacity.



WILKE
MACHINERY COMPANY
MACHINERY POWER TOOLS

TO RECEIVE A CATALOG FAST, SEND \$2.00 TO:
3230 Susquehanna Trail, York, PA 17402

FOR TECHNICAL SERVICE CALL: 1-717-764-5000

VISIT OUR SHOWROOM: One block west of I-83 exit 11

Hours: Monday through Thursday 8 am–5 pm Friday 8 am–7 pm Saturday 9 am–noon.



Shipped F.O.B., York, PA
Prices subject to change
without notice.



**FOR A DUST FREE
WORK SPACE...
BRIDGEWOOD®
BW-002A
DUST COLLECTOR**

- ♦ 2 HP, single phase motor 220V
- ♦ 2-bag unit ♦ 1059 CFM
- ♦ Dolly cart base
- ♦ Two 4" dust collection hose inlets.

ONLY \$279.00

ASK ABOUT OPTIONAL
DUST COLLECTION
HOOD FOR BW-8J



TO ORDER, PHONE TOLL FREE: 1-800-235-2100

CIRCLE NO. 201 ON PRODUCT INFORMATION FORM

A Gift to Improve In-Law Relations

I've just been doing woodworking for a couple of years, so I pick my projects carefully. After seeing Ellis Valentine's beautiful case for storing compact discs (AW #42), I knew I had to try and make my own version. I ended up making two and giving both of them away to my in-laws.

The one shown in the photo has a case made from solid rosewood and doors made from a single piece of bird's-eye maple. I installed mitered rosewood trim around the doors and around the top and bottom. The finish is Danish oil.

Peter M. Poon
Sterling, VA



CD storage. Peter Poon built this rosewood and bird's-eye maple CD case from plans in AW #42.

The Real Stone Pond™

Frank Klausz's shop-made waterstone container, featured in AW #56, should not be confused with the Veritas Stone Pond™, which is also used to store and hold waterstones. The Stone Pond™ is available from Lee Valley Tools (800-871-8158).



The real thing: Veritas Stone Pond™.

Feedback on the Benchtop Planers

I was very pleased with the timing and the content of your shop test of benchtop planers (AW #56). Having never used a benchtop model before, I was quite skeptical and was shopping for a

stationary planer in the 15-in. to 20-in. size. But I read and re-read your article and one key thought kept coming back to me: "When it comes to cost, a benchtop model will serve you well until you're in a position to trade up." That idea made sense and got me over the "bigger is always better" mindset.

My first choice was the new Delta 22-560, but I found it won't be available until later on this year. So I chose the Grizzly 1017. And I have to say it is a terrific little machine. Right out of the box it tackled a bunch of 6/4 mahogany and produced a consistently fine finish with very little snipe. Thanks so much for giving me the information I need to make good sound decisions. Keep up the excellent work.

Marcus Neal
Cassville, WI

According to Delta's latest estimate, their new model 22-560 benchtop planer will be available in mid-April.—Eds.

In reference to your shop test of benchtop planers, I wish to pass along the following information regarding the Ryobi

AP-12 planer. I am the proud owner of an AP-12 and your test results and comments were right on. However, the best price I've found for replacement blades is \$39.95—quite a bit more expensive than the \$30 price listed in your chart. I've found that the knives can wear quickly. And though the knives are double-edged, they're not resharpenable. Potential buyers need to consider this expense when deciding which planer to buy. Keep up the good work.

Jim Vaughn
Goodland, IN

Check the Rip Fence First



Lonnie Bird's advice on solving stalling and binding problems when making rip cuts on a contractor's saw ("Q&A," AW #56) ignored the most obvious and dangerous cause of the problem. He didn't mention "rip fence out of parallel" as a cause. Yet contractors' saws, with their cheaper rip fences, are very prone to this. An out-of-parallel rip fence that pinches the kerf together after the cut can definitely contribute to stalling. More importantly, it can also cause

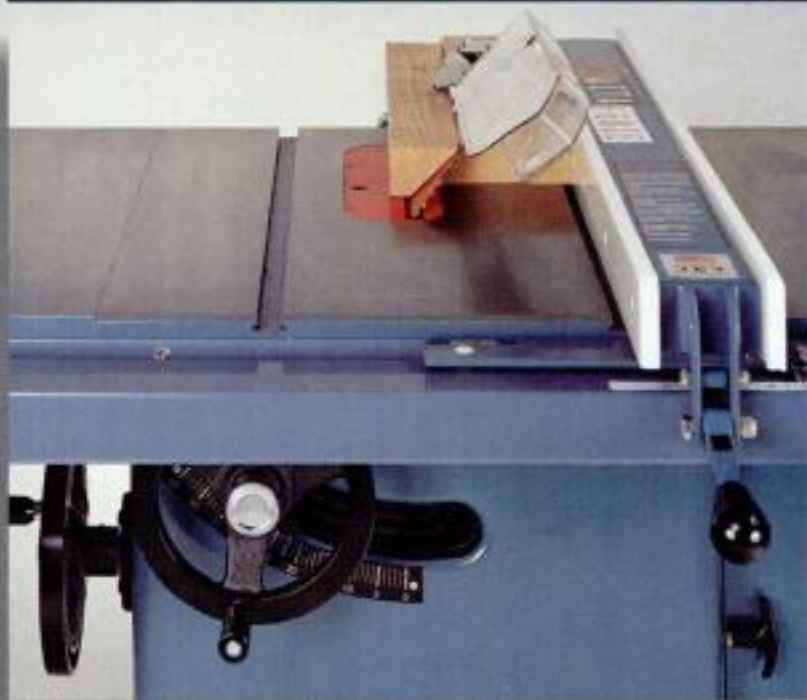
STAY IN TOUCH! If you have comments, corrections or news to share, we want to hear from you.

- ❖ To write us, address letters to: Editor, AMERICAN WOODWORKER, 33 E. Minor St., Emmaus, PA 18098.
- ❖ You can fax us at (610) 967-7692.
- ❖ Too busy to write? Call our Letterline: (610) 967-7776.
- ❖ For e-mail correspondence, send letters to: AWLetters@aol.com

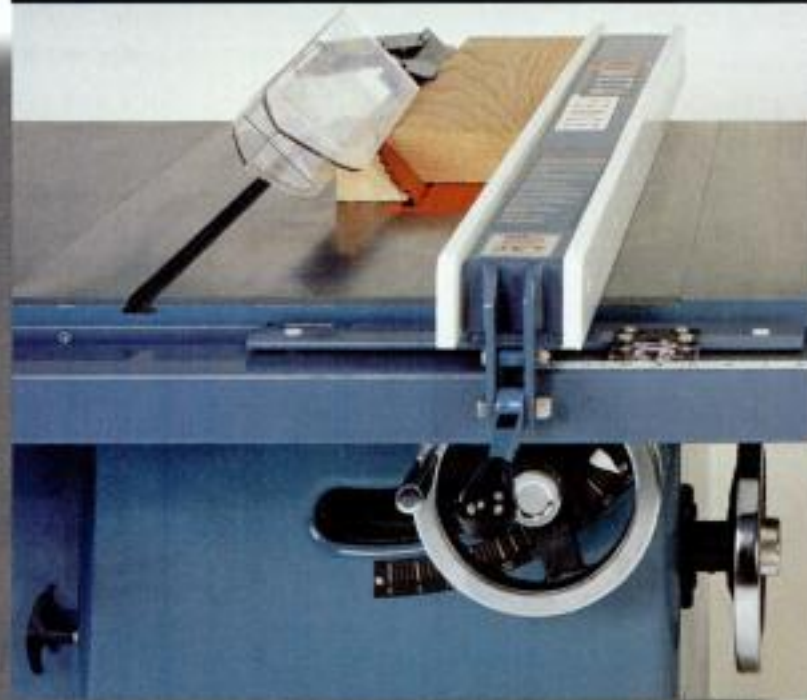


= Electronic Mail

CUT RIGHT



CUT LEFT



Only JET offers a choice of either Left or Right cutting tilting arbor tablesaws.

Introducing two great new tablesaws from JET: one with a blade that tilts to the left, one with a blade that tilts to the right.

The XACTA SAW™ Left and the XACTA SAW™ Right join JET's line of quality woodworking tablesaws. Both saws feature a powerful 3 belt drive with either a 3 or 5 HP motor. The cast iron tables are the largest

in the industry. Both saws also come fully equipped with the new, highly acclaimed XACTA FENCE™ System.

For a limited time each saw comes with a unique FREE accessory package valued up to \$336.

Expect
the best
from
JET.

Experts agree about JET. *American Woodworker* "Good features, performance and value. Delta and Powermatic, look out!" *Fine Woodworking* "The first thing we noticed was that the fit and finish were exceptional."

J E T
EQUIPMENT & TOOLS

kickback, turning the workpiece into a dangerous, high-speed projectile. For safety and accuracy, make sure that your tablesaw's rip fence locks parallel to the saw blade before you look for other causes of stalling and binding.

Jim Goding

Lonnie Bird replies: Good catch, Jim. You're right: Fence alignment is by far the commonest, and most hazardous, cause of binding. Always check this important adjustment first.

Whither Vicmarc?

 Stephen Blenk's mini lathes article (AW #52) sold me on the Vicmarc VL100 lathe. Unfortunately, when I contacted Willow Creek Tool Sales, they informed me that the lathe has been on back order for quite some time and Vicmarc's ability to deliver the lathes has been highly unreliable. I would imagine that Vicmarc's ability to service and support the lathe would be somewhat suspect as well.

Given the glowing review, this is quite a shame. Do you have any information on the company and the lathe?

Richard Mewes

David Spencer, of Willow Creek Tool Sales, replies: The demand for the Vicmarc has been great, especially following Steve Blenk's article. Unfortunately, the specifications and quality control have been inconsistent on our most recent shipments of Vicmarc lathes.

EDITOR WANTED

AMERICAN WOODWORKER is looking for a full-time editor with excellent writing skills and a thorough knowledge of woodworking. Must be willing to relocate to eastern PA. Send resume to:

AMERICAN WOODWORKER
c/o Personnel Department AE-AW
Rodale Press, Inc.
33 E. Minor St.
Emmaus, PA 18098

The long-term solution is to bring manufacturing closer to home, and we're currently exploring this possibility. Until then, the supply of sound Vicmarcs will be limited, and replacement parts will be hard to come by. This is a lathe worth waiting for, however. We'll be happy to update woodworkers on Vicmarc's status if they give us a call (800-592-8501; in Montana, 800-592-8500).

How Thin a Shaving?

I enjoy reading the articles by Ian Kirby and John Kelsey, but I'm puzzled and a little frustrated by their assertion that "A sharp bench plane takes a shaving that's about half a thousandth of an inch thick, precision unattainable with any other woodworking tool." (See AW #56.) A special interest group of the Albuquerque Woodworking Association studied planes, sharpening and shaving thickness. Measuring with Starrett and Mitutoyo calipers and micrometers, we found that the average metal plane of the Bailey type most commonly owned

A tablesaw built with you in mind

and the experts agree, **IT IS!**

The independent bimonthly magazine, **Shop Notes**, tested the **JET**, Delta, Sears, Grizzly, Powermatic, and AMT 10" tablesaws.

All three experts chose **JET!**

Ken:

"... I'd go with the **JET** in a heartbeat."

Steve:

"**JET** makes it my first choice."

Cary:

"**JET**...I chose it ..."



Now Available
with cast iron wing and
new XACTA FENCE™



Dust hood with 4" outlet is built-in for easy hook-up to your collection system.



Totally enclosed, fan-cooled motor. Quick-connect plug requires no wiring; just plug in male and female connectors.



Heavy-duty push button switch positioned for convenience and safety.

TWO YEAR LIMITED WARRANTY

JET
EQUIPMENT & TOOLS

For the name of the **JET** dealer nearest you,
call 1-800-274-6842

CIRCLE NO. 42 ON PRODUCT INFORMATION FORM

THE NEW RYOBI DETAIL BISCUIT JOINER

THE DIFFERENCE BETWEEN WOODWORKING AND WOODNOTWORKING.

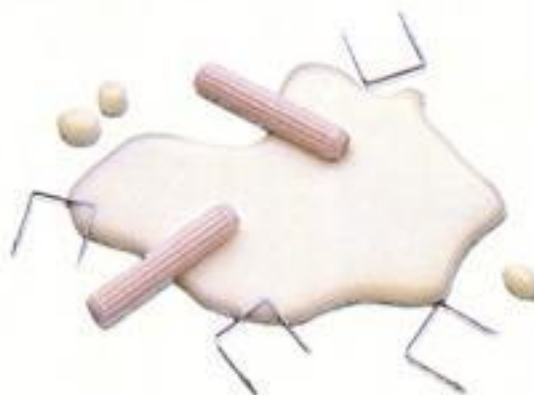
Staples, dowels, and glue won't do. Standard-size biscuits won't fit.

So how can you make neat, tight, professional joints even in small stock? With Ryobi's new

Detail Biscuit Joiner, that's how.



Standard biscuits stick out of small joints, and the mis-match shows, even after you trim the excess.



The new Ryobi Detail Biscuit Joiner uses miniature "Accu-biscuits" for neat, tight, professional joints.

This compact powerhouse cuts smaller slots and uses miniature "Accu-biscuits™" to fit where standard biscuits don't. And its price is as small as its biscuits. But the Detail Biscuit Joiner is big on performance, from its beefy motor to its die-cast

base and see-through fence. So see the

new Ryobi Detail Biscuit Joiner at your

local home center. It'll get

your wood working like

never before.



Ryobi "Accu-biscuits" (actual size).



The Ryobi Detail Biscuit Joiner does everything that a bigger tool does, and fits in small joints where a bigger tool won't.

RYOBI
Exceed Your
Expectations™

by our members (and pictured in your article) could not make reliable shavings much thinner than 0.003 in. in most woods. Careful tuning of the plane and sharpening of the blade can bring this down to around 0.002 in. Our findings seem to indicate that only exceptional planes on certain woods can produce a shaving down to 0.001 in.

In indicating that the average woodworker should expect performance of that caliber, the authors mislead the general reader. And they probably frustrate those readers who are able to measure their shavings accurately, and who can't come close to making shavings this thin.

Later in the same article, we are told "Flatsawn or riftsawn wood simply does not have the necessary stability, nor does any softwood." I agree with the quartersawn recommendation, but the assertion about the relative instability of softwood is quite bizarre. Using the tables in Bruce Hoadley's book, *Understanding Wood* (1980, Taunton Press, Box 355,

Newtown, CT 06470), we find just the opposite; in almost all cases, softwoods have a lower radial shrinkage than common hardwoods.

Derek Roff
Albuquerque, NM

Kirby and Kelsey reply: We share your frustration. There's never enough magazine space to explore the whole of a subject, so interesting asides often must be collapsed into a few words, which may then seem to be unsupported assertions.

Regarding the thickness of a plane shaving: We had no trouble planing under 0.001 in. thick in cherry, ash and walnut, using an English-made Stanley bench plane with a freshly sharpened iron. But our intention in this article was not to dwell on tuning and using a plane, but rather to show readers how to exploit the plane's precision when making drawers. The plane enables you to fine-tune the fit of the drawer in the minutest increments. And because the plane slices the wood rather than scrap-

ing it (which is what sandpaper does), the sliding surfaces of the drawer can be made exceptionally smooth.

Regarding quartersawn wood for drawers: We did not intend to say anything about the relative stability of softwood versus quartersawn hardwood, but only to say that no softwood except English yew is really suitable for a drawer that's destined to fit in a superb piece of furniture.

Corrections

The rat-tail hinges called out in the blanket chest article in AW #56 are actually blanket chest hinges available from Ball & Ball. The correct catalog number for these hinges is #H37. The correct toll-free phone number for Ball & Ball is (800) 257-3711.

A couple of photos were flipped in AW #57's grinding jig review. The photo shown with the Sabre jig (top of page 60) is of the AG100 Multi-Angle (top of page 61), and vice versa.

Dust

1.5 HP Cartridge Collector*
750 CFM at 8" Static Pressure

High Efficiency Cyclone (6" Inlet) preseparates 99.9% of dust.

High Tech Spunbond Synthetic Filter Media filters material down to 1 micron.

Cone and Barrel separate in minutes for access to the filter.

Clear Flex Coupling can be adjusted for different mounting heights.

Fiber Barrel with metal lid collects all dust.

*Patented Design



Collection

15 Years Experience in Air Filtration

Tired and frustrated with your chip collector clogging and spewing unhealthy ultra fine dust. Eliminate dust problems with an industrial grade dust collector.

Free Sizing & Duct Design

- Cyclones & filter media
- Complete ductwork packages
- 1.5 hp to 15 hp complete systems
- Custom engineering & technical assistance
- Systems exceed OSHA & EPA air quality standards.
- 100% U.S. made

ONEIDA AIR SYSTEMS, INC.TM

CALL or WRITE for a FREE BROCHURE

Email: oasinc@dreamscape.com www.dreamscape.com/oasinc
1005 W. Fayette St. Syracuse, N.Y. 13204 (315) 476-5151 FAX (315) 476-5044

CIRCLE NO. 60 ON PRODUCT INFORMATION FORM

Lee Valley & Veritas®

Innovation in tools®



Lee Valley Tools and its manufacturing arm, Veritas® Tools, bring you the newest products from their research and development activities.

The following 3 pages are a sample of what you can expect in the full-color, 236-page Lee Valley catalog.

A. Veritas® Sliding Square

This is a cabinetmaker's layout square. Laying out mortises and tenons, letting in hinges, transferring locations — all of these can be done faster and more accurately with this square than any other. The joy is that you always have ample reference face against your work without having to flop the square. You can also work in two axes at once, e.g., measuring in 2" and over 1 1/2" is simple, substantially reducing the possibility of error. The stainless-steel blade is 3" wide and 6" long, graduated on both edges (to 4") and across the end. It has a matte finish, which not only makes it easy to read by eliminating glare, but lets you record dimensions on it with a pencil. The diamond cut-out

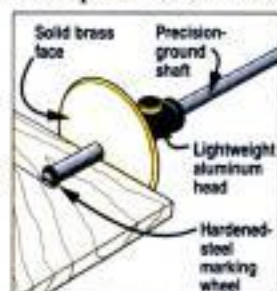
in the blade holds a pencil tip in position and makes it particularly easy to draw lines parallel to an edge. The locking mechanism is the traditional notched pin used on combination squares. The opposed bearing surface is a hardened steel rod, imbedded in the anodized aluminum stock.

AW110 Veritas® Sliding Square \$21.95

B. Veritas® Wheel Marking Gauge

There are two main problems with a standard marking gauge: the gauge has to be tilted just right to avoid pin chatter and, even then, the pin has a tendency to follow the grain of wood, throwing off your line. Our wheel gauge solves both problems. The hardened-steel cutter will perfectly scribe at any point of its circumference and, since the wheel is both sharp and bevelled only on the inside, it cuts through grain and forces the gauge face against the stock, maintaining accuracy. Because it cuts rather than tears, it leaves a clean mark, even on cross grain. The gauge is particularly easy to set, since it has an internal "O" ring to keep light but constant friction on the stem. The anodized aluminum head has a 1/8" thick brass face and a brass thumbscrew. A very comfortable gauge to use.

AW108 Veritas® Wheel Marking Gauge \$18.95



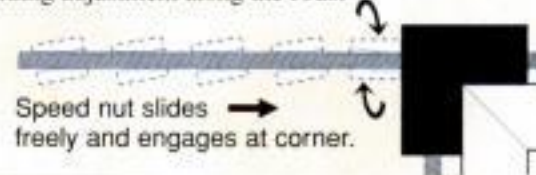
C. Veritas® 4-Way Speed Frame Clamp

The fastest-adjusting frame clamp on the market. Completely knurled for good grip, the 4 speed-clamping nuts* are designed to let you make fast adjustments, yet hold securely when you tighten them. They are cross drilled to slide easily on the rods until they come up against a corner clamp; then their threads engage. To release them, you just have to back them off a turn or two and they are then free sliding again. The clamp includes 4 corners (strong, glass-filled nylon with brass inserts), 4 speed-clamping nuts, eight 24" long 1/4"-20 threaded rods, and 4 coupling nuts. The rods and coupling nuts have a black-oxide finish. Maximum capacity is 47" square or 71" x 23" rectangle.

AW112 Veritas® Frame Clamp Set \$24.95

*Speed-Clamping Nuts

These nuts are quick-adjusting because they are cross drilled (at first glance the hole appears to be off-center). This unique design allows you to move them along a threaded rod without turning them; their threads do not engage until they meet the clamping corner (or any obstruction). Then you tighten them. The threads disengage when you loosen the nuts, allowing the same free-sliding adjustment along the rods.



A Catalog Of Solutions

Our 236-page, full-color catalog has the widest selection of woodworking hand tools in the market. The copy in this ad is taken directly from the catalog to show you the detailed information you can expect to find about each tool.

To Order: 1-800-871-8158

or fax: 1-800-513-7885

Our catalog is \$5 (refundable with first purchase) or free with any purchase from this three-page ad.

N.Y. residents, add sales tax.

Outside U.S.A., call: 1-613-596-0350 or fax: 1-613-596-6030



A. Veritas® Grinder Tool Rest

The major weakness of most bench grinders is that the tool rests are virtually useless. It is nearly impossible to find one with a rest that is solid and square. The Veritas Grinder Tool Rest can be used with 6" or 8" utility bench grinders and many belt sanders/grinders. It mounts directly to the bench in front of the grinder and can be readily folded out of the way for freehand grinding.

The 4" wide table straddles wheels up to 1" wide. It is grooved for sliding jigs and center drilled for rotating jigs. The slotted arms allow a wide range of angular and height adjustments. Spring-loaded gyratory handles lock it solidly in position and can be rotated out of the way after locking. You can easily move it from one grinder to another or quickly remove it from the bench. Accurately machined, anodized-aluminum construction. This is the only rest on the market that lets you do accurate grinding with utility bench grinders. Included is an angle-setting gauge to set the table to the common bevel angles of 20°, 25°, 30° and 35°. Patented.

AW09 Veritas® Grinder Tool Rest \$35.95

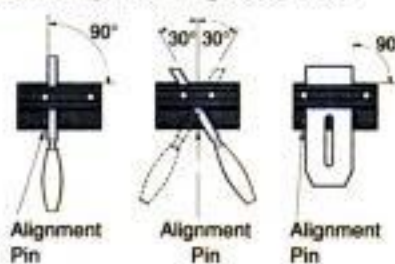


B. Veritas® Grinding Jig

Recently upgraded, this grinding jig works with any power or hand grinder that has a tool rest. Put a tool in the jig, slide it against the alignment pin and one clamping thumb-screw to square it, adjust the blade projection for bevel angle, and tighten in place. The tool is now held squarely in the jig at the chosen bevel angle.

Slide the jig back and forth across the tool rest and stone face to sharpen the tool. The back plate is offset for short chisels, such as Japanese or western butt chisels. The brass clamping bolts have nylon washers to prevent galling; other parts are made from hard aluminum, further hardened by anodizing to prevent wear. High-friction pads ensure solid clamping without inadvertent misalignment. The jig fits in the slot of the Veritas Grinder Tool Rest; the riding ledges adapt it to other tool rests. (Blade not included.)

AW11 Veritas® Grinding Jig \$16.95



C. Cool Grinding Wheels

The stones that usually come with a grinder are too coarse and too hard for dry-grinding hand tools. These stones are aluminum oxide with a soft bond (H) and an open structure. They will wear faster than hard

stones but will not burn tools as readily.

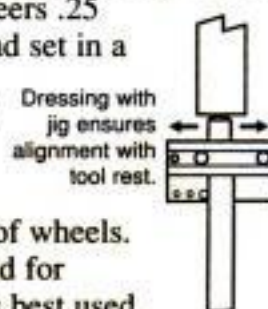
With a bit of experience, you will find that you can quickly grind a nick out of a chisel without overheating the tool. Two grits are available. The 80x wheel is best for chisels and plane blades; a 120x wheel is available for carving tools. Both the 6" and 8" wheels have 1" arbor holes; the 6" has 3 bushings (for 1/2", 5/8", and 3/4" shafts); the 8" has 2 bushings (for 5/8" and 3/4" shafts). Maximum rpm is 3820 for the 6" wheels and 3600 for the 8". These open-structure, friable bond stones are custom made for Lee Valley.

AW74 80x Wheel - 6" x 3/4"	\$19.95
AW75 80x Wheel - 6" x 1"	\$22.95
AW76 80x Wheel - 8" x 1"	\$29.95
AW77 120x Wheel - 6" x 3/4"	\$19.95
AW78 120x Wheel - 6" x 1"	\$24.95
AW79 120x Wheel - 8" x 1"	\$31.95

D. Diamond Point Wheel Dresser

Used for truing or shaping grinding wheels, this dresser has a DeBeers .25 carat industrial diamond set in a bronze tip. The 1/2" diameter shaft is 6 1/2" long. A very durable dresser that can be used to true hundreds of wheels. It can be used free hand for shaping a wheel, but is best used in a grinding jig.

AW19 .25 Carat Wheel Dresser \$13.95



Lee Valley & Veritas®

Veritas® Tools Inc. is the manufacturing arm of Lee Valley Tools Ltd. The intense research and development activities of the retail firm, Lee Valley, naturally led to the creation of Veritas® Tools Inc., the manufacturer.

Lee Valley Tools Ltd., 12 East River Street, Ogdensburg, N.Y. 13669

Guarantee - We pledge to you the best service we can provide with personal attention and the best value on every order. If you are not satisfied for any reason, just return your purchase within 3 months by insured parcel post to our Ogdensburg, N.Y., address. You can choose to either exchange the product, or receive a complete refund (including our regular shipping charges); we will also refund your return insured parcel post costs.



F. Forstner/Saw Tooth Bits

Made exactly to our specifications, these bits took over a year to develop and refine. Bits up to 1" diameter are forstner pattern and have 3/8" round shanks. Above 1", bits are saw tooth pattern and have hex shanks — a key feature for anyone who has tried to keep large-diameter bits from slipping in a chuck.

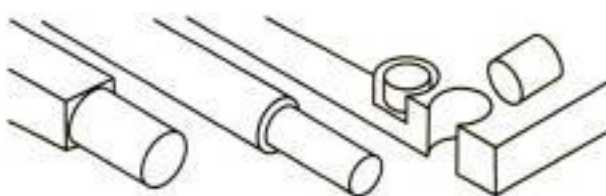
The rim on the forstners is proud of the chippers by only .005", reducing rim heat. The saw tooth styles are true saw teeth, not forstner bits with rim notches. The teeth have a skewed shear-cut design to prevent fiber pull and to give clean holes. Both styles have slightly sloped chipping bevels so that bits ride a cone of wood to keep them boring straight. Center brads can then be shorter, increasing bit versatility in thin material. Finally, bits have been finished with extra-fine grinding wheels to reduce friction.

Overall length is 3 1/2" for bits up to 1", 5" for bits from 1 1/8" to 2", and 6 1/2" for bits over 2". These are the best value we have in bits.

AW200	Box of 7 Forstners†	\$ 25.95
AW297	Box of 13 — 1/4" to 1"	\$ 44.75
AW298	Box of 16 — 1 1/8" to 3"	\$145.00
AW299	Box of 29 — all bits	\$179.00

G. Dowel, Plug and Tenon Cutters

For straight plugging operations, nothing works better in the 1/4" to 1/2" sizes than our Snug Plug® cutters. But for larger plugs or for cutting dowels and tenons, these are the best you can get. Not only are they made to very tight tolerances and will therefore cut accurate tenons and plugs, but we spent nearly two years in a design and test process to get the cleanest possible finish and the least heat build-up while cutting.



Although they run cooler than any other rim hold cutter, you still have to be careful. Cutting softwoods is okay, but care has to be taken in hardwoods to avoid overheating. Regardless, the convenience of being able to cut tenons and plugs up to 3" diameter makes it all worthwhile.

Plugs 1" long or less automatically side eject. Total available depth of cut is 2". Cutters up to 1" dia. have 1/2" round shanks, above 1", 1/2" hex. For use only in a drill press.

AW255	Set of 4 Cutters*	\$29.95
AW256	Boxed Set of 6 — 3/8" to 1"	\$49.95

Individual Bit Prices

Size	Forstner Bits		Dowel/Tenon
1/4"	AW261	\$ 3.10 †	
5/16"	AW262	\$ 3.40	
3/8"	AW263	\$ 3.50 †	AW230 \$ 7.25 *
7/16"	AW264	\$ 3.70	
1/2"	AW265	\$ 3.75 †	AW231 \$ 7.75 *
9/16"	AW266	\$ 4.00	
5/8"	AW267	\$ 4.25 †	AW232 \$ 9.25
11/16"	AW268	\$ 4.30	
3/4"	AW269	\$ 4.40 †	AW233 \$ 9.75 *
13/16"	AW270	\$ 4.60	
7/8"	AW271	\$ 4.80 †	AW234 \$10.50
15/16"	AW272	\$ 5.00	
1"	AW273	\$ 5.20 †	AW235 \$11.50 *
Size	Saw Tooth Bits		
1 1/8"	AW280	\$ 5.70	AW236 \$12.25
1 1/4"	AW281	\$ 5.90	AW237 \$12.75
1 3/8"	AW282	\$ 6.10	AW238 \$13.50
1 1/2"	AW283	\$ 6.70	AW239 \$14.25
1 5/8"	AW284	\$ 7.20	AW240 \$14.75
1 3/4"	AW285	\$ 7.70	AW241 \$15.25
1 7/8"	AW286	\$ 8.00	AW242 \$15.75
2"	AW287	\$ 8.40	AW243 \$16.75
2 1/8"	AW288	\$ 9.70	AW244 \$17.75
2 1/4"	AW289	\$11.75	AW245 \$18.25
2 3/8"	AW290	\$13.00	AW246 \$18.75
2 1/2"	AW291	\$14.50	AW247 \$19.25
2 5/8"	AW292	\$15.50	AW248 \$19.75
2 3/4"	AW293	\$16.75	AW249 \$20.25
2 7/8"	AW294	\$17.75	AW250 \$21.00
3"	AW295	\$19.25	AW251 \$21.50

A Catalog Of Solutions

Our 236-page, full-color catalog is filled with detailed information (like above), plus many technical tips. Smaller seasonal catalogs contain extensive technical bulletins.

To Order: 1-800-871-8158

or fax: 1-800-513-7885



Our catalog is \$5 (refundable with first purchase) or free with any purchase from this three-page ad.

N.Y. residents, add sales tax.
Outside U.S.A., call: 1-613-596-0350 or fax: 1-613-596-6030

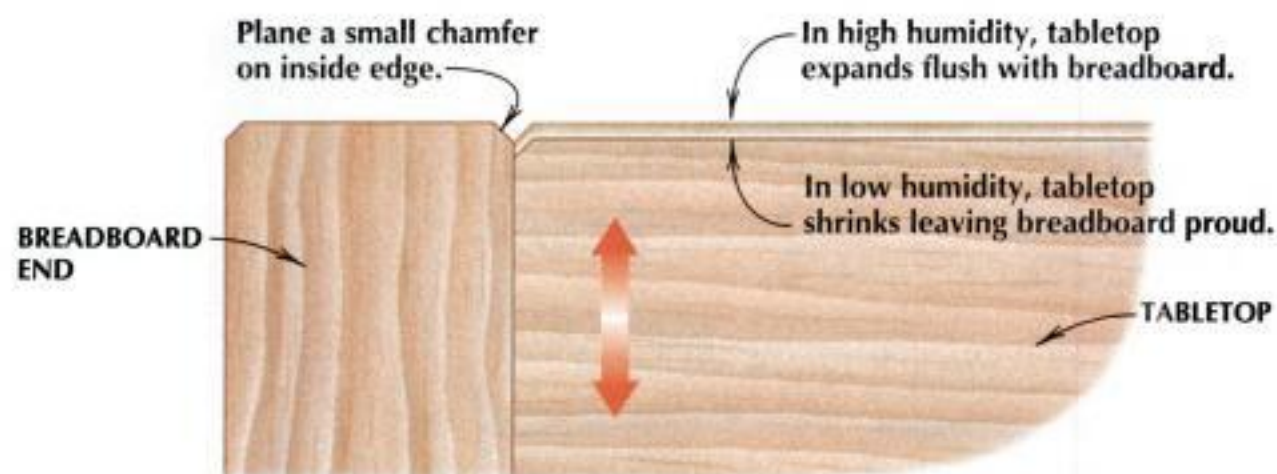
Good-Looking Breadboards

Q A few months ago our shop built two large tables with breadboard ends. We made the ends flush with the edges of the table, splined them to the table and pinned them with wood dowels—no glue—so the top could move across its width without breaking. But now the tabletop is projecting beyond the breadboards. How can we cope with this movement?

Mike McHugh
Rio Grande Woodworks
Albuquerque, NM

A Solid wood moves with changes in humidity. The trick with breadboard ends is to conceal the movement in a visually pleasing manner. I like to plane small chamfers on the corners where the tabletop and breadboard meet, as shown in the drawing. But before you do this, check the relative humidity in your shop.

If the humidity is high, the top proba-



bly won't expand any more across its width. In this case, make the breadboard flush with the edges of the tabletop. The small chamfers in the breadboard and the tabletop will form a pleasing V-groove. When the air becomes drier, the top will shrink across its width and the breadboard will stand proud. A slightly proud breadboard looks better than a protruding tabletop. The small chamfer on the corner of the breadboard pre-

vents a sharp edge from snagging passersby, and provides a visual transition from tabletop to breadboard.

Use the reverse method if you're building during drier weather: Make the breadboard slightly proud of the table's edge. This way, when humid weather rolls in, the table will expand flush with the breadboard.

Andy Rae
Associate editor of AW

Zero-Clearance Throat Plate

Q I'm new to tablesaws. Can you explain what a zero-clearance throat plate is? And can I make my own?



Paul Gauer

A The throat plate insert that comes with your tablesaw has an opening, or clearance, larger than the width of the blade. The clearance allows you to set the blade at any angle between 90° and 45°. But sometimes you need an insert with *zero clearance*—when you're cutting thin strips that might fall through, or when the workpiece needs support right up to the blade. (See photos, right.)

You can buy plastic zero-clearance inserts, but it's not hard to make your own wooden ones. Find a piece of wood the same thickness as your insert—melamine-covered ply is good. Trace the outline of your old insert onto it.

Bandsaw to the line, then sand or file until it fits snugly in the opening. Alternatively, you could bandsaw 1/16 in. outside the line, attach your old insert with double-faced tape and template rout the new insert, running a flush-trim bit



Tablesaw clearance. A regular throat plate insert leaves space to angle your saw blade. A zero-clearance insert fits the blade snugly, providing extra support for thin or delicate work.

or pattern-routing bit against the old one. If your original insert has a small nub or hook on the underside to keep it in place, be sure to copy this on your new insert.

Chuck an 8-in. or 9-in. blade in your saw. (A 10-incher might not clear the insert when fully retracted.) Crank the blade all the way down and put the new insert in the throat. Clamp a scrap lengthwise (not widthwise) across one side of the insert, to hold it down securely. Then turn on your saw and slowly bring the blade up through the new insert as far as it will go.

Reinstall your regular blade and complete the cut. Now you have a zero-clearance insert that fits it perfectly.

Paul Royko
Toronto, Ontario

Sticking Plunge Router

Q The plunge action on my plunge router is sticking. The plunge posts appear to need lubricating. What should I do?



A. Sarpard

A There are several possible causes of a sticking plunge mechanism. The most common is dirt. To find out

OWN THE ULTIMATE HOME SHOP

Do the work of ten tools with one compact, affordable machine

- Work on wood—and metal or plastic
- Easy and fun to use
- Built to last a lifetime



The perfect friend to relax with, the perfect partner to help get work done

SUPER SHOP 10 tools in 1

WOOD

34" Lathe
12" Table saw
12" Disc sander
Horizontal boring
Drill press
Router
Shaper

METAL

Lathe
Mill
Drill

Each machine includes:
✓ Premium Tool Pak
✓ Toll-free Helpline
✓ 2-year Warranty

FREE Info Pak 1-800-345-6342

Ask for operator AW3

or write **Smithy** Dept. AW3 PO Box 1517
Ann Arbor, MI 48106-1517

CIRCLE NO. 72 ON PRODUCT INFORMATION FORM



Bow Back
Bench &
Chair Plans
\$15.95

Octagon
Picnic
Table Plans
\$16.75
29" h x 77" w x 85" l



Specialty Furniture Designs

797 W. Remus Road, Dept. AW28
Mt. Pleasant, MI 48858
1-800-892-4026

Visa/MC/Discover • Prices above include S&H.
Color Catalog \$3.00 FREE with order. MI add 6%

CIRCLE NO. 303 ON PRODUCT INFORMATION FORM

RIP AW

The Portable Sawmill.

The "affordable portable" one man band sawmill. Weighs only 45 lbs. Cuts 20" diameter logs into lumber. Minimum 1/8" to maximum 9" thickness. Write or call for free brochure. Video also available.



Better Built CORPORATION

(508) 657-5636

789 Woburn Street, Dept. AW, Wilmington, MA 01887

MC / VISA / DISCOVER

CIRCLE NO. 10 ON PRODUCT INFORMATION FORM

ASK WOOD•KOTE

Reviving Hardwood Floors

Q: We're renting a house that is clean and freshly painted. The hardwood floors, however, are in terrible shape. Our landlord is unwilling to have them refinished. What can I do to improve their appearance?

K. Johnson, Seattle, WA

A: We suggest a four-step procedure we have personally used on worn hardwood floors in homes and apartments. The method consists of the following steps:

1. Wash the floor thoroughly using **LIN-SOAP™** linseed oil soap.



2. Allow the floor to dry completely.
3. Apply a light coat of **Sta-Wax™** wood polish.
4. Buff with a clean cloth.

Cleaning the wood surface using linseed oil soap will remove the built up grime. The wood polish will enhance the luster and appearance of the wood. We would like to remind you this is only a cosmetic process and is not a substitute for refinishing. Considering, however, the small investment of time and materials

versus the inconvenience and thousands of dollars it costs to refinish, most people are more than pleased with the outcome.

Have a staining or finishing question? Ask Wood•Kote!
Please write to Dept. Q.
P.O. Box 17192
Portland, OR 97217
or Fax to (503) 285-8374
<http://www.woodkote.com>

WOOD•KOTE

"The Professional
Woodworker's
Choice Since
1945"

Ask For Wood•KOTE PRODUCTS
AT PAINT STORES, HARDWARE STORES AND HOME CENTERS.

CIRCLE NO. 89 ON PRODUCT INFORMATION FORM

The Glue Pros Feel So Strongly About.



Introducing The Glue Anything To Everything Glue.

ProBond™, the super-strong, waterproof glue that can bond virtually anything to anything. Wood, Glass, Ceramics, Metal, Stone, Most Plastics. It's stainable, sandable, scrapable and paintable. Requires no mixing, contains no volatile solvents, so it's perfect inside and outside. Pros demand it, so should you.



© Elmer's Products, Inc., 1997

CIRCLE NO. 12 ON PRODUCT INFORMATION FORM

what's wrong, you'll need to partially disassemble your router. Fortunately, this isn't difficult to do.

Unplug the router first. Then remove the motor unit from the plunge posts like this: Lock the plunge lock. Remove the cap nut and height adjustment nut (or the height adjustment knob) from the height adjustment post. Holding the router by its handles, with its base sitting flat on a workbench, unlock the plunge lock and gently lift the motor unit off of the posts.

Now remove any sawdust, pitch and grease from the plunge post openings, the surface of the posts and the springs. Manufacturers use grease on the springs so they slide easily inside the plunge posts, but grease attracts sawdust. Over time—especially if you invert the router for table use—the sawdust can clog the plunge mechanism, making it difficult to move.

While your router is disassembled, it's a good idea to inspect the parts for wear. If your router has a height adjust-

ment knob, clean it out and inspect the threads. Then check the plunge posts and plunge post bushings in the motor housing for wear. Severe wear can cause the plunge posts and motor to go out of alignment, leading to poor performance. If this is the case, you will probably need to have a factory repair center give you an estimate on the necessary repairs.

If all the parts seem to be in good shape, you can reassemble the router. Lightly grease the springs again, but don't use grease anywhere else. Instead, use a wax or other dry-type lubricant on the plunge posts.

Brad Witt
President

Woodhaven, Inc.

Save That Burl

Q A couple of months ago, I bought an expensive 5-in. by 5-in. by 20-in. walnut burl blank from California. I sealed its ends right away with a proprietary wood sealer, but now it's check-

ing anyway. What can I do to stop the checking? And how can I tell when it's stable enough to work?

Joseph Polchik
Whitehall, PA

WHERE TO FIND IT

Toymakers' nontoxic dyes and clear finish are available from The Woodworkers' Store, 4365 Willow Dr., Medina, MN 55340, (800) 279-4441.

Linen wrap, leather tips, ferrules and other pool cue supplies are available from Atlas Billiard Supplies, 3721 W. Chase Ave., Skokie, IL 60076, (800) 283-7845.

Protective leather holders for drawknives, scorpis and other chairmakers' tools are available from J.M. Jobson Leatherwork, Box 305, Powder Springs, GA 30073, (770) 427-7527.

\$50 REBATE.

Contractor's Saw® with any Unifence®, Biesemeyer® Fence or Precision Saw Guide. (Shown here with Biesemeyer Homeshop Fence and accessory table board and legs.)



\$50 REBATE.

14" Band Saw with 3/4 hp Model #28-275
14" Band Saw with 1 hp Model #28-280



\$100 REBATE.

DJ-20 8" Jointer with any motor configuration.



\$75 REBATE.

DJ-15 6" Jointer with any motor configuration.

\$50 REBATE.

Cabinet Shaper Model #43-355

**HURRY! OFFER EXPIRES
MARCH 31, 1997**

Visit us on the web: <http://www.deltawoodworking.com/delta>

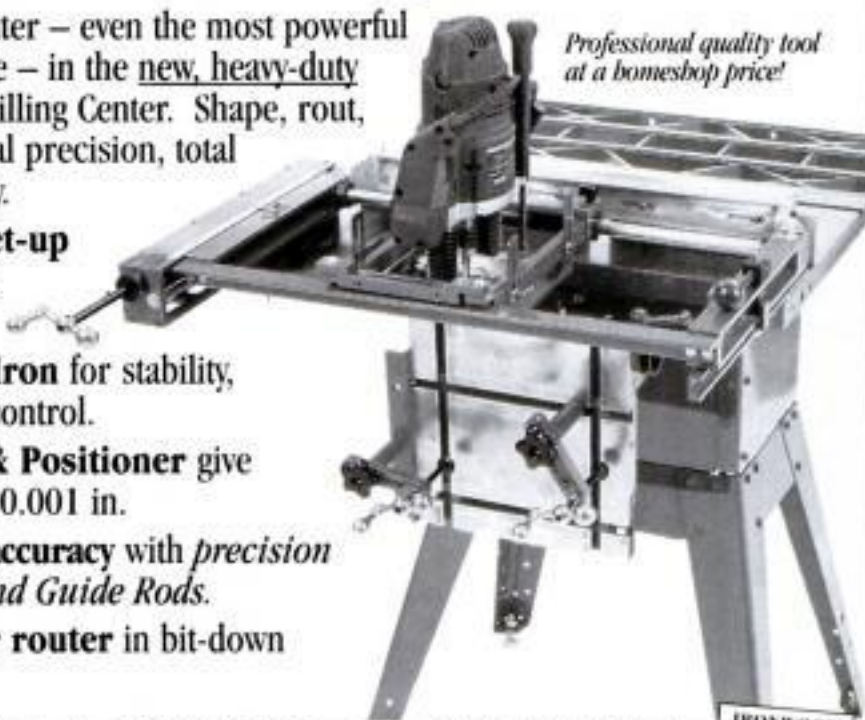
NEW! AFFORDABLE, HIGH-PRECISION WOOD MILLING CENTER!

Revolutionary IRONWOOD MILL•RIGHT 3-Axis Router Milling Center!

Mount virtually any router – even the most powerful standard or plunge type – in the new, heavy-duty MILL•RIGHT Router Milling Center. Shape, rout, and join wood with total precision, total freedom, total creativity.

*Professional quality tool
at a homeshop price!*

- **Fast, repeatable set-up** without jigs, fixtures, templates, guides.
- **High-quality Cast Iron** for stability, noise and vibration control.
- **Precision Guides & Positioner** give micro-adjustment to 0.001 in.
- **You get control & accuracy** with *precision ACME Leadscrews and Guide Rods*.
- **Simply attach your router** in bit-down or bit-up position.



FREE CATALOG! PLUS...ask about our Demonstration Video!

CALL TOLL FREE 1-888-478-2453

Or write: IRONWOOD MILL•RIGHT Wood Milling Center
1737 Union St.-BOX 620, Dept. 109, Schenectady, NY 12309

Ext. 118

©1997, Positive Position, Inc.

CIRCLE NO. 66 ON PRODUCT INFORMATION FORM

**Incro
RULES**

A NEW Concept in Precision Steel Rules

Precision T-Rules

PRECISE, versatile, and easy to use are the words which best describe the NEW INCRA T-Rule. Think of it as a combination square for marking or measuring that's *simultaneously* set to every scale position with perfect, instant accuracy. Why? ... Because like all INCRA RULES, we've put micro-fine marking holes and slots at every scale line to *instantly* locate your sharp pencil or scribe *exactly* on target with zero uncertainty and no eye strain!

When accuracy counts ... **INCRA RULES!**
Available in 6", 12" and 18" lengths. *Patents pending*

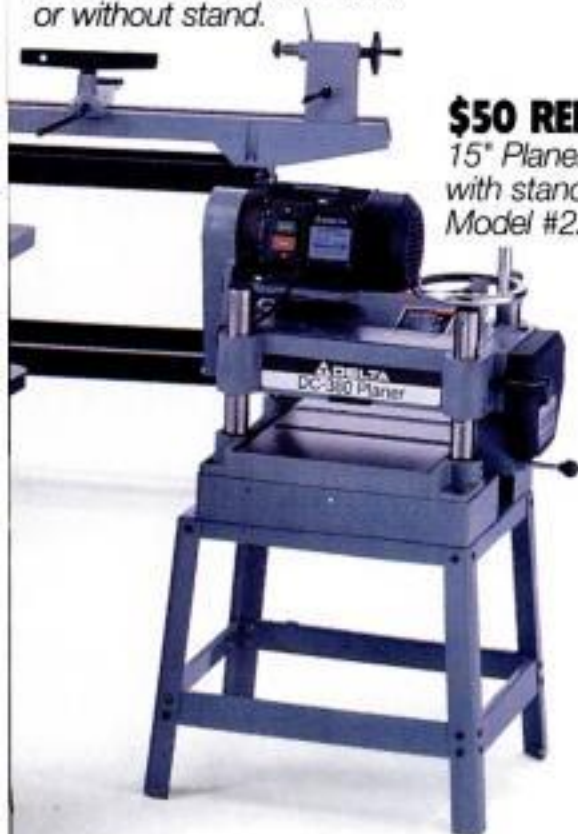
To learn more about this extraordinary line of precision Marking Rules, Bend Rules and T-Rules, call, write, or fax:
Taylor Design Group, Inc.
P.O. Box 810262, Dallas, TX 75381
Tel: (972) 484-5570 Fax: (972) 243-4277

Stainless Steel

CIRCLE NO. 78 ON PRODUCT INFORMATION FORM

\$25 REBATE.

12" Variable Speed Lathe
Models #46-700/701 with
or without stand.



\$50 REBATE.

15" Planer
with stand
Model #22-675

TODAY, YOU'LL APPRECIATE THE REBATES. LATER ON, YOU'LL APPRECIATE THE QUALITY.

Here's a chance that doesn't come along every day. A chance to put Delta Quality in your shop and get a check in the mail from Delta to boot.

But only until March 31, 1997.

Granted, that rebate check will probably be spent by the time you get around to cashing it. But that new Delta machine will become more valuable each time you flip the switch. And you can take that to the bank.

Call for the name of your nearest participating Delta dealer. Delta International Machinery Corp., 800-438-2486. In Canada, 519-836-2840.

**THE
POWER
OF THE
PROS**

DELTA
WOODWORKING MACHINERY
A Pantair Company



Delta is proud to nationally fund these two PBS programs for woodworkers. *The New Yankee Workshop* hosted by Norm Abram and *The American Woodshop* with Scott Phillips.

CIRCLE NO. 18 ON PRODUCT INFORMATION FORM

A Your burl is trying to adjust to its new environment, but it's losing moisture too quickly. I'm guessing that it was air-dried and that the humidity is higher in California than in Pennsylvania, where you live. The problem with true burl is that the grain is so convoluted, all of its surfaces are effectively end grain. Since the ends of the wood cells are exposed on all the surfaces, evaporation is rapid.

If you are planning to ultimately cut the burl into smaller pieces, you can do it now. This will reduce drying time. To slow down the drying, coat the *entire* surface of each piece with a green-wood sealer (available from Craft Supplies USA, 800-551-8876). Set the wood on sticks, in a well-ventilated area where air can circulate around the entire piece.

If you plan to turn the burl dry, you'll need to monitor the moisture loss every few weeks. Use an electronic moisture meter, or simply weigh the blank. The rule of thumb is, when the

wood stops losing weight, it's dry. Fresh-cut wood requires about a year per inch of thickness.

Another alternative is to turn your burl "green." A rough-turned bowl takes about half as long to dry as a solid blank. In addition, turning wet wood is a lot less dusty than dry wood, and it's easier on your tools. Turn your blanks to rough size, leaving the wall thickness equal to about one-tenth of the vessel's diameter. To slow down the drying, coat the entire piece with wood sealer and store it in a paper bag with some green shavings. Once the form has stopped losing moisture, proceed with final turning. (See "Harvest Your Own," AW #54.)

Paul McClure
Wood technologist
Denver, CO

Picky About Pipes

Q Why do the manufacturers of pipe-clamp fixtures always tell you to use black-iron pipes for these

clamps? Wouldn't galvanized pipes work just as well as black iron?

Rick Hampton
Albuquerque, NM

A Believe it or not, all pipe is not created equal. Galvanized pipe may actually be more resistant to rust, but it is also typically slightly undersized. American-made black pipe is not only less expensive than galvanized pipe, but it is also manufactured to closer tolerances. Consequently, if you use black pipe, your clamp's clutch discs will be less likely to slip on a wrong-size pipe.

Michael Watkins
Marketing manager
Adjustable Clamp Co.

WOODWORKING QUESTIONS?

Send them to: "Q&A," AMERICAN WOODWORKER, 33 E. Minor St., Emmaus, PA 18098. Or e-mail them to: AWQA@aol.com

Block Acrylic Vials.

Toughest. Easiest to read.

All Starrett top-of-the-line Builders' And Contractors' levels feature a unique "Block Vial System" that is unbreakable under normal working conditions.

These vials are precision-machined from a solid acrylic block for exceptional

durability and accuracy. The barrel-shaped, 360° system reads in any direction, while the vials in top-reading models are magnified and fluorescent. The net result is **the easiest-reading, toughest vials available anywhere.**

Builders' and Contractors' Levels reflect the quality, precision and strength that you expect

from Starrett, the world's greatest toolmaker. Levels come in a broad range of styles (mahogany/aluminum I-beam frame, brass-bound mahogany, aluminum I-beam), with fixed or adjustable vial options, and choices of side-reading or top-and-side-reading models.

Starrett®
Innovations That Work

The L.S. Starrett Company
121 Crescent Street, Athol, MA 01331
Tel: (508) 249-5330
Fax: (508) 249-8495



CIRCLE NO. 48 ON PRODUCT INFORMATION FORM

VAN DYKE'S RESTORERS

Supplies for woodworkers and antique restorers!



- Ising glass
- Curved & bubble glass
- Roll top accessories
- Hoosier accessories
- Carvings & moldings
- Furniture components
- Over 1,000 Brass, Glass & Wooden Hardware Items
- Much, Much More

Over 8,000 Items

Call or Write
For Your **FREE** Catalog

1-800-843-3320
Dept. 60007 • PO Box 278
Woonsocket, SD 57385

CIRCLE NO. 81 ON PRODUCT INFORMATION FORM

AMAZING SCROLLSAW FRETWORK PATTERNS

Easy to advanced designs

Clocks
Photo frames
Jewelry boxes
Candle holders
Furniture
Clock movements
Plywood



Silhouettes on Christmas religion farming western nature transportation & more.

Books
Saw blades
Hardwoods

FREE
catalog

1-800-470-9090

WILDWOOD DESIGNS
P.O. Box 661-S
Richland Center
WI 53581

CIRCLE NO. 85 ON PRODUCT INFORMATION FORM

STEVE WALL LUMBER CO.

LUMBER	SIZE	GRADE	BOARD FOOT*	UPS SPECIALS**
Ash	4/4	Select	\$2.15	\$73.00
Basswood	4/4	Select	\$1.80	\$59.00
Birch	4/4	Select	\$2.20	\$75.00
Butternut	4/4	1C	\$2.00	\$65.00
Cedar	4/4	1C+Btr.	\$1.60	\$62.00
Cherry	4/4	Select	\$3.40	\$92.00
Cypress	4/4	Select	\$2.15	\$70.00
Hickory-Pecan	4/4	Select	\$1.85	\$67.00
Mahogany	4/4	Select	\$3.60	\$92.00
Maple (Hard)	4/4	Select	\$2.50	\$77.00
Maple (Soft)	4/4	Select	\$1.80	\$65.00
Poplar	4/4	Select	\$1.55	\$60.00
Red Oak	4/4	Select	\$2.35	\$76.00
Walnut	4/4	Select	\$3.25	\$91.00
White Oak	4/4	Select	\$2.35	\$75.00
White Pine	4/4	F.G.	\$1.10	\$51.00
Yellow Pine	4/4	Clear	\$1.60	\$61.00

*100' quantities of kiln-dried rough lumber sold by the board foot. FOB Mayodan, NC. Call for quantity discounts. Other sizes & grades available. **20 board foot bundles of clear kiln-dried lumber 3'-10" wide, 3'-7" long (random widths & lengths). Surfaced 2 sides or rough. Delivered UPS prepaid in continental U.S. SEND \$1.00 FOR LUMBER CATALOG.

Box 287, Mayodan, NC 27027 • (910) 427-0637 • (800) 633-4062 • FAX (910) 427-7588

CIRCLE NO. 163 ON PRODUCT INFORMATION FORM

Custom Raised
Panel Doors.
Call for quotes.

Quality Hardwoods
& Woodworking
Machinery for
the Craftsman &
Educational
Institutions

NAIL IT! STAPLE IT! "2 Tools in 1"

THE NEW EZ-2 DOES IT ALL!

FEATURES

- Uses brads from 3/8" to 1 1/4"
- Uses staples from 1/8" to 1 1/2"
- Easy loading magazine
- Cushion grip handle
- No mar double trigger safety
- Easy depth adjustment

KIT INCLUDES

- Carrying Case
- 2000 Assorted Brads
- 2000 Assorted Staples
- Wrenches and Oil



USES STANDARD 18 GA BRADS
or STANDARD 18 GA STAPLES

"QUALITY YOU CAN AFFORD"

Our customers have come to expect the best and this new tool will not disappoint. The EZ-2 sets a new standard of excellence for the industry. Finally one tool that does it all—get the new EZ-2 and see for yourself.

AIRY SALES CORPORATION

1425 S. Allec Street, Anaheim, CA 92805

1-310-926-6192 • FAX 310-404-1400

AIRY
NAIL and STAPLE TOOLS

ASK YOUR DEALER ABOUT OUR COMPLETE LINE OF NAILERS AND STAPLERS

CIRCLE NO. 83 ON PRODUCT INFORMATION FORM

NEW! Inca Rules!
A NEW Concept in Precision Steel Rules
We've Bent the Rules

The NEW **INCA Bend Rule** is precisely what you need for layout and measurement along the edge of a board or other workpiece. Micro-fine marking holes at every scale line instantly locate your sharp pencil or scribe exactly on target with zero uncertainty and no eye strain! The 90° shape keeps it snugly in place while the two scale surfaces let you mark and measure on the top, edge, and corners simultaneously! There are even two vertical end scales with marking holes for drawing precision lines parallel to the edge of your work. When accuracy counts ... **INCA RULES!** Available in 6", 12" and 18" lengths. Patents pending. To learn more about this extraordinary line of precision Marking Rules, Bend Rules and T-Rules, call, write, or fax: Taylor Design Group, Inc. P.O. Box 810262, Dallas, TX 75381 Tel: (972) 484-5570 Fax: (972) 243-4277

Stainless Steel

CIRCLE NO. 78 ON PRODUCT INFORMATION FORM

NEW IMPROVED MODEL! Now with Electronic Brake that stops the chuck from spinning the moment you release the trigger. No waiting to drill the next hole, drive the next screw or change bits.

The 16.8v Cordless SUPER DRILL

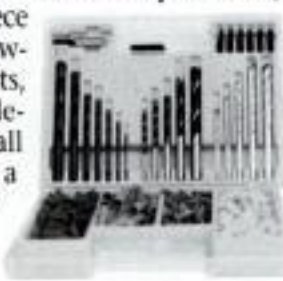
Save Big! As part of a nationwide media campaign, the world's largest cordless drill manufacturer has authorized us to introduce their high-powered 16.8v super drill that an unheard of \$89⁹⁵. Plus, you get 2 FREE BONUSES!

More power! Longer running time! Higher torque! Now you can get a fully-loaded 16.8 VOLT cordless drill for about half of what our competition charges for a 14.4 volt drill.

Why settle for less? This really is BY FAR the

2 FREE BONUSES!

If you're among the first 1000 people who take advantage of this exclusive direct-to-you offer, you'll also receive a 300-Piece Drill Kit containing screw-driver bits, twist drill bits, brad point bits, carbide-tipped masonry bits, drywall anchors and case **PLUS** a 21-Piece Bonus Accessory Kit (a \$39.95 combined value) absolutely FREE!



best cordless drill value available today!

TRY IT RISK-FREE

Your 100% satisfaction is guaranteed. If this drill doesn't exceed your expectations, return it within 30 days for a no-questions-asked refund.

To order your 16.8v Cordless Drill/Driver Set with carry case, charger and battery, call toll-free, 1-800-925-2005 or send your check for just **\$89.95** (\$8.95 S&H). Item No. 70-0A2. CA res add sales tax. No dealers.

Extra batteries are \$39.95 ea. (\$3.95 S&H). Item No. 75-0A2.

Upgrade to a One-Hour Fast Charger for just \$9.95. Item No. 20-0A2. 2 FREE Bonuses for the first 1000 orders. Call today.

"Your 100% Satisfaction is Guaranteed!"

6 Precision
Clutch Settings

0-900 RPM, variable speed,
reversible switch.

Industrial motor
delivers 200 in. lbs.
of torque.

Heavy
Duty
3/8"
Jacobs®
Keyless
Chuck



Superb power-
to-weight ratio.

Ergonomic
pistol grip

Powerful
16.8-volt
Battery for
20% longer
running
time.

UL Listed

Perfectly
balanced
T-handle
design
stands on
its own.

Visit our web site: <http://www.greattools.com>

Call Toll-FREE 1-800-925-2005 • Great Tools Direct! 587F Ventu Park Rd. - Dept. 801 Thousand Oaks, CA 91320



CIRCLE NO. 31 ON PRODUCT INFORMATION FORM

Materiale protetto da copyright

Work smarter, safer and cleaner

DESIGN BREAKTHROUGH

"You can either buy a filter or you can be a filter."

WoodMark's new ceiling-mounted air filtration system has been created for maximum efficiency in air movement for filtration.

By placing inlets on all sides of the unit you are provided with a unique and highly effective 360° collection of air, allowing your shop to be filtered from every direction at the same time.



Introductory Offer
\$499.95 + S&H

- 1100 CFM Motor
- Fluorescent Light
- 15' Power Cord
- 360° Air Collection

**It's the ultimate workbench.
It's a downdraft table.
It's a complete air filtration system.**



Deluxe • 30" x 69" x 2"
Has a larger, thicker work surface and includes twin screw vice

The Dust Eliminator workbench collects dust from sanding **before** it becomes airborne and dust created by other shop tools.

A generous select and better grade hard maple work surface sits atop a powder-coated, heavy gauge steel cabinet.

- Powerful motor (930 CFM)
- Optional 1600 CFM motor • Locking casters
- GFI convenience outlet • 20' power cord

Other Sizes & Options Available



Original • 30" x 54" x 1 1/2"
Only \$889.00 + S&H
Workbenches shown with some options.



WOODMARK

P. O. Box 211434 • Bedford, TX 76095

Call toll-free
for our FREE
Color Brochure
1-800-845-4400

CIRCLE NO. 88 ON PRODUCT INFORMATION FORM

Like Having A Lumberyard Right in Your Shop!



**NOW! Plane,
Mold, Sand
& Saw...
with
Infinitely
Variable
Power-Feed!**

**30-Day
Free
Trial!**

Put this versatile power-feed tool to work in your own shop. See how fast it pays for itself! Quickly converts low-cost rough lumber into valuable finished stock, quarter-round, casing, base mold, tongue & groove ... all popular patterns ... even custom designs!

Infinitely Variable Feed Rate!

Now, just a twist of the dial adjusts your planer from 70 to over 1000 cuts-per-inch! Produces a glass-smooth finish on tricky grain patterns no other planer can handle. Converts to Drum Sander or Gang Rip Saw in under five minutes. Made in U.S.A.

1-800-821-6651 ext. PY37
Woodmaster Tools, Inc.
1431 N. Topping Ave. Dept. PY37
Kansas City, MO 64120

America's Premier Wood Turning Lathe

The all new Powermatic Model 3520 Wood Turning Lathe is the most powerful, versatile, and dependable lathe of its time.

Using all the features recommended by Rude Osolnik, America's foremost wood turner, Powermatic has developed the only American made lathe of it's kind.

Equipped with a 2HP motor and an AC drive to provide full torque at low RPM, and a head assembly that slides the *entire* length of the bed, the 3520 is the only choice for serious wood turners.

POWERMATIC 

Internet Home Page: <http://www.powermatic.com>
or E mail us at: powermatic@worldnet.att.net



MADE IN U.S.A.

Endorsed by Rude Osolnik

CALL 1-800-248-0144 FOR YOUR NEAREST POWERMATIC DEALER

CIRCLE NO. 65 ON PRODUCT INFORMATION FORM

FREE TOOL CATALOG!



Your Best Work Starts With Us...

With over 4,000 of the finest woodworking tools in the world, Woodcraft can help you work more efficiently and skillfully than ever.

Call for your Free copy today.

1-800-542-9115

Visit us at: www.woodcraft.com

WOODCRAFT

Retail Stores In: Boston • Denver • Minneapolis • Seattle • St. Louis • Detroit • Salt Lake City • Portland • Indianapolis • Orlando • Houston • Kansas City • Dallas • Chicago • San Antonio • Sacramento • Philadelphia • Richmond • Parkersburg, WV
210 Wood County Ind. Park, Dept. 97WA045
PO Box 1686, Parkersburg, WV 26102-1686

CIRCLE NO. 90 ON PRODUCT INFORMATION FORM

FREE WOODWORKER'S CATALOG



Over 5000 products to **BUILD, REPAIR, RESTORE, REFINISH** anything made of wood!

- lumber
- veneers
- moldings
- carvings
- tools
- hardware
- glues
- finishes
- books
- plans
- ...and more

CALL TOLL FREE
1-800-223-8087



CONSTANTINE

Serving Woodworkers Since 1812
2050 Eastchester Rd., Dpt. 40703, Bronx NY 10461

CIRCLE NO. 5 ON PRODUCT INFORMATION FORM

ARROWMONT

School of Arts and Crafts
P.O. Box 307 • 150 Perry • Gettysburg, TN 37738 • 615-438-5968 • Fax 615-438-4101

WOODTURNING - Bob Sordley, Stoney Lerner/John Jordan, Johannes Rieber, Mark Sfrini/Michael Haselak, David Ellsworth, Kip Christensen, Mike Lee/**CARVING** - Tom Eckert, Craig Nutt/**FURNITURE** - Jo Stone, John McNaughton/**DESIGN** - Steve Looz/**FIBER-FABRIC/CLAY/METAL/PAPER/PAINTING/DRAWING/PHOTOGRAPHY/MIXED MEDIA**

Graduate/Undergraduate Credit
Resumes/Interviews/Scholarships/Residencies
Year-Round Gallery Exhibitions/Schedule/Library/
Bookstore - Open to Public
Elderhostel/Community Classes/Conferences

Small Opened by Invitation

One/Two Week Workshops

JUNE 2 - AUGUST 8, 1997

CIRCLE NO. 7 ON PRODUCT INFORMATION FORM

NEW! Incra RULES

A NEW Concept in Precision Steel Rules

Precision Marking Rules



INCRA has re-invented the steel rule by putting micro-line marking holes at every scale position to *instantly* locate a sharp pencil or scribe *exactly* on target! Now, instead of squinting at that blur of lines along the edge of your old steel rule, you can instantly put your mark precisely where you want it with zero uncertainty and no eye strain. Even if the lighting is less than perfect or your eyes are tired at the end of the day, you can still be sure that the precision built into every **INCRA RULE** actually shows up in your finished work! When accuracy counts ... **INCRA RULES!** Available in 6", 12" and 18" lengths. Patents pending

To learn more about this extraordinary line of precision Marking Rules, Bend Rules and T-Rules, call, write, or fax:

Taylor Design Group, Inc.
P.O. Box 810262, Dallas, TX 75381
Tel: (972) 484-5570 Fax: (972) 243-4277

Stainless Steel

CIRCLE NO. 78 ON PRODUCT INFORMATION FORM

NEW PRODUCT — POWERMATIC MODEL 3520 WOOD LATHE

Designed by RUDE OSOLNIK and the Powermatic engineers
Now Available Through

OSOLNIK MACHINERY & CRAFT SUPPLIES

114 Lester Street • Berea, KY 40403
606-986-3453 800-569-3453
FAX 606-985-0313

FREE with each lathe order! A signed copy of the new, full-color biography of Rude Osolnik, "A Life Turning Wood." ADDITIONAL COPIES AVAILABLE AT \$40.00 EACH.

CIRCLE NO. 127 ON PRODUCT INFORMATION FORM

FROM LOG TO LUMBER with the Alaskan Saw Mill

(available in 24", 30", 36", 48", 56" sizes)

G 776 MK III 30"



Cut lumber on site with the Alaskan MK III: beams, boards, siding and custom cuts.

G1012C Precision Grinder



CALL OR WRITE TODAY FOR INFORMATION ON OUR MILLS, SAW CHAIN SHARPENERS AND OTHER ACCESSORIES.

GRANBERG INTERNATIONAL

PO Box 425, Richmond, CA 94807-0425
(510) 237-2099 Fax (510) 237-1667

CIRCLE NO. 30 ON PRODUCT INFORMATION FORM

SUPER VALUES!



M-3 Baby Power Feeder

Sale **\$259** ~~COMET~~

- Perfect for table saws, router tables, and shapers
- 6.5 - 40 Ft./Min., Reversible

8"x72" Extended Bed Jointer

- 4 Blade Cutterhead
- 72" Long Bed
- 2HP TEFC Motor
- Double V-Belt Drive



Geotech

Sale **\$799**

1-800-929-4321

SUNHILL has the best values on SystiMatic sawblades and Freeborn shaper cutters

call for our



15" Wide Belt Sander



Sale **\$3237** plus motor \$358

SDM-15

- 5 HP, 1 PH or 7.5 HP, 3 PH
- All Cast Iron & Steel Plate Construction
- Open Design; 6" x 30" Capacity
- Pneumatic Tracking Control

Free! catalog

Call for more great values!

ALL MACHINES BACKED BY A FULL ONE YEAR WARRANTY



The Best Machinery Value in America.™

Sunhill Machinery, 500 Andover Park East, Seattle, WA 98188
U.S.: 1-800-929-4321 / CANADA: 1-800-544-1361

CIRCLE NO. 75 ON PRODUCT INFORMATION FORM

Wide Belt Sanders • Power Feeders • Table Saws
Sawblades • Planers
Jointers • Shapers
Shaper Cutters
Edge Sanders • Moulders
Dust Collectors
Chisel Mortisers
Round Pole Sanders
Round Pole Milling Machines
Finger Joint System

offcuts

Bits and pieces of woodworking news

Roll Over, Kermit the Frog!

When the Muppets have crumbled to dust, Alice Wallace's puppets will still be going strong. Today, most puppets are made from cast latex, which deteriorates rapidly. But Wallace's puppets are made the old European way: in wood and papier maché. Her realistic creations seem to stand on their own two feet, and unlike marionettes, they can pick up props and even throw them.

Each puppet is about 14 in. tall. Wallace carves hands, feet and moving jaws in maple, boxwood or ebony, using a Dremel tool. She even designs the costumes herself, researching them carefully for historical accuracy and executing them in natural fibers that stand the test of time.

Wallace preserves old-fashioned puppetry through her performances, too. She takes her puppets into Louisiana public schools, sharing old stories that they just don't teach anymore: Punch and Judy, Russian folktales—even Faust for the older kids.



Puppetry in its prime. Carved with a Dremel tool, Alice Wallace's puppets are lifelike down to their hands, boots and costumes.



Old saws. Sanders and saws dating back to the 1920s are part of Porter-Cable's historical donation to the Smithsonian Institution.

PHOTO COURTESY OF PORTER-CABLE

Earliest Power Tools at the Smithsonian Museum

They're not fossils yet. But you could certainly call them artifacts from the dawn of portable power-tool history. We're talking about a selection of very early portable power tools recently donated to the National Museum of American History by the Porter-Cable Corporation.

"We're honored to be recognized as a pioneer in the power tool industry," commented Porter-Cable

President Jim White at last November's donation ceremony, which was held in Washington, DC.

Porter-Cable's donation of tools, catalogs, manuals, advertisements and other historical items will become part of the Smithsonian's permanent collection. For information about tool exhibits and other Smithsonian events, call (202) 357-1300.

—Tim Snyder



What's up at AW Online

5 Great Reasons to Check Out AMERICAN WOODWORKER Online (if you haven't already)...

- 1 Print yourself a chart of wood toxicity
- 2 Tour a museum of antique hand planes
- 3 Visit the Delta factory
- 4 See original Arts & Crafts furniture
- 5 Impress your friends with your techno-prowess... and make new ones!

AMERICAN WOODWORKER Online makes it easy to find the places that interest you. You'll find us on the America Online computer service, at keyword "wood." **Call (800) 764-4400 for free software and 50 free hours of online time.**

Two Champions...

Certified
ISO 9001



NEW!

PARALLEL CLAMP

Offering Uniform Clamping pressure, with super strength and breakthrough engineering

QUICK STAR

Offering automatic tension loader, superior strength and ergonomic design.

Winning quality and innovation, only from...



P.O. Box 368, Coldwater, MI 49036
For more information call 800-671-0838

See us at the shows!

CWB Expo: Chicago, March 13-15

Woodworking Shows: Chicago, April 11-13

Woodworking Shows: Pleasanton, CA, April 25-27

CIRCLE NO. 34 ON PRODUCT INFORMATION FORM

Free Machine Catalog From Garrett Wade

The Best Woodworking Machinery, Jigs and Set-up Tools from Europe and America.

Garrett Wade specializes in the famous INCA brand of stationary machinery (Table Saws, Band Saws, Jointer/Planer & Shaper), Multico Hollow-Square Mortising Machines, Starrett Set-Up Tools, and the unique FastTrack jigs and fixtures for saws and router tables. For a FREE Copy Call:

East Coast:

Dept. 1108

800-221-2942

800-566-9525 -fax

West Coast:

Injecta Machinery

818-797-8262

818-797-8271 -fax



Garrett Wade Co. 161 6th. Avenue NY, NY 10013

CIRCLE NO. 27 ON PRODUCT INFORMATION FORM

Save up to
70%

PRICE CUTTER™

CARBIDE ROUTER BITS

High Quality...
Lowest Prices Guaranteed.*

AW 4-97

STRAIGHTS*

A	B	SHANK	ITEM#	COMPARE AT	SALE
1/4"	3/4"	1/4"	P1211	\$16.00	\$4.95
5/16"	3/4"	1/4"	P1218	19.00	5.95
3/8"	1"	1/2"	P1219	20.00	5.95
3/8"	1"	1/2"	P1222	21.00	4.95
3/8"	1"	1/2"	P1223	20.00	4.95
3/8"	1"	1/2"	P1228	20.00	5.95
3/8"	1"	1/2"	P1231	21.00	5.95
1/2"	1"	1/4"	P1237	19.00	5.95
1/2"	1"	1/2"	P1238	21.00	5.95
1/2"	1-1/2"	1/2"	P1242	23.00	7.95
5/8"	3/4"	1/4"	P1253	19.00	6.95
5/8"	1"	1/2"	P1255	27.00	7.95
5/8"	1"	1/2"	P1265	23.00	7.95
5/8"	1"	1/2"	P1266	26.00	8.95
3/4"	3/4"	1/4"	P1270	21.00	7.95
3/4"	1"	1/2"	P1272	27.00	9.95
3/4"	1-1/2"	1/2"	P1274	30.00	10.95

ROUNDROVER

R	SHANK	ITEM#	COMPARE AT	SALE
1/16"	1/4"	P3101	\$32.00	\$8.95
1/8"	1/4"	P3102	34.00	8.95
1/8"	1/2"	P3103	36.00	9.95
3/16"	1/4"	P3104	34.00	9.95
3/16"	1/2"	P3105	36.00	9.95
1/4"	1/4"	P3106	33.00	9.95
1/4"	1/2"	P3107	35.00	10.95
5/16"	1/4"	P3108	36.00	10.95
3/8"	1/4"	P3110	36.00	10.95
3/8"	1/2"	P3111	37.00	12.95
1/2"	1/4"	P3114	38.00	12.95
1/2"	1/2"	P3115	40.00	13.95
5/8"	1/2"	P3116	66.00	15.95
3/4"	1/2"	P3117	62.00	18.95
1"	1/2"	P3119	120.00	29.95
1-1/2"	1/2"	P3121	157.00	35.95
1-1/2"	1/2"	P3123	190.00	51.95

UNDERSIZED PLYWOOD BITS

3 Piece Set For 1/8", 1/4" & 3/8" Plywood
#P1001 - 1/8" shank
#P1002 - 1/4" shank
\$19.95

ROUNDROVER SET

4 Piece: 1/8", 1/4", 3/8", 1/2" Radius

\$39.95 1/8" shank #P1023
\$44.95 1/4" shank #P1024

SPIRAL UP-CUT*

A	B	SHANK	ITEM#	COMPARE AT	SALE
1/8"	1/2"	1/4"	P1501	\$22.00	\$9.95
3/16"	5/8"	1/4"	P1504	23.00	12.95
1/4"	3/4"	1/4"	P1508	24.00	11.95
1/4"	1"	1/4"	P1509	26.00	13.95
3/8"	1-1/4"	1/2"	P1514	56.00	26.95
1/2"	1-1/4"	1/2"	P1518	58.00	29.95
1/2"	1"	1/2"	P1520	52.00	29.95
1/2"	1-1/2"	1/2"	P1521	62.00	33.95

PATTERN / FLUSH TRIM*

A	B	SHANK	ITEM#	COMPARE AT	SALE
1/2"	1"	1/4"	P1237B	31.60	8.95
5/8"	3/4"	1/4"	P1253B	30.60	11.95
3/4"	3/4"	1/4"	P1270B	33.40	11.95
3/4"	1"	1/2"	P1272B	47.60	14.95
3/4"	1-1/2"	1/2"	P1274B	57.00	22.95

FLUSH TRIM*

A	B	SHANK	ITEM#	COMPARE AT	SALE
3/8"	1"	1/4"	P1804	\$21.00	\$6.95
1/2"	1/2"	1/4"	P1806	22.00	6.95
1/2"	1"	1/4"	P1809	22.00	6.95
1/2"	1"	1/2"	P1810	23.00	7.95
1/2"	1-1/2"	1/2"	P1813	29.00	8.95

COVE

R	SHANK	ITEM#	COMPARE AT	SALE
1/8"	1/4"	P2901	\$35.00	\$9.95
3/16"	1/4"	P2902	36.00	10.95
1/4"	1/4"	P2904	35.00	10.95
1/4"	1/2"	P2905	36.00	11.95
3/8"	1/4"	P2908	35.00	12.95
3/8"	1/2"	P2909	36.00	13.95
1/2"	1/4"	P2910	38.00	13.95
1/2"	1/2"	P2911	40.00	13.95
5/8"	1/2"	P2912	63.00	19.95
3/4"	1/2"	P2913	70.00	20.95

90° V-GROOVE

A	SHANK	ITEM#	COMPARE AT	SALE
1/4"	1/4"	P2102	\$17.00	\$7.95
3/8"	1/4"	P2103	22.00	6.95
1/2"	1/4"	P2110	28.00	7.95
5/8"	1/4"	P2112	30.00	11.95
3/4"	1/2"	P2114	42.00	11.95
1"	1/2"	P2116	70.00	14.95
1-1/2"	1/2"	P2117	85.00	22.95

RABBETTING

A	B	SHANK	ITEM#	COMPARE AT	SALE
1/8"	3/8"	1/4"	P2702	\$22.00	\$11.95
5/32"	1/2"	1/4"	P2703	23.00	11.95
1/4"	3/8"	1/4"	P2705	25.00	11.95
1/4"	5/8"	1/2"	P2706	26.00	11.95
3/8"	3/8"	1/4"	P2707	28.00	11.95
3/8"	3/8"	1/2"	P2708	31.00	11.95
1/2"	3/8"	1/2"	P2709	31.00	11.95
1/2"	3/8"	1/2"	P2710	35.00	12.95
1/2"	1/2"	1/4"	P2711	32.00	16.95
1/2"	1/2"	1/2"	P2712	36.00	16.95
3/4"	3/8"	1/2"	P2713	36.00	15.95

PICTURE HANGING / KEYHOLE

A	SHANK	ITEM#	COMPARE AT	SALE
3/8"	1/4"	P2401	\$22.00	\$6.95
3/8"	1/2"	P2402	25.00	7.95
1/2"	1/4"	P2403	22.00	7.95
1/2"	1/2"	P2404	25.00	7.95

ROMAN OGEE

R	SHANK	ITEM#	COMPARE AT	SALE
5/32"	1/4"	P3506	\$42.00	\$12.95
5/32"	1/2"	P3507	43.00	12.95
1/4"	1/4"	P3508	42.00	13.95
1/4"	1/2"	P3509	43.00	14.95



2 PC. MATCHED STILE & RAIL

STYLE	ITEM#	COMPARE AT	SALE
ROUND	P3821	\$150.00	
BEAD	P3822		
OGEE	P3820		
TRADITIONAL	P3818		
Cove & Bead	P3817		
Bevel	P3819		

Your Choice \$59.95

Over 700 Reasons to Choose PRICE CUTTER

*(See Catalog for complete details & selections)

- Chamfering
- Crown Mold
- Dieh Cutters
- Door Edge
- Drawer Lock
- Drawer Pulls
- Edge Bead
- Face Frame Trim
- Finger Joints
- Flute Cutters
- Handrails
- Laminate Trim
- Lock Mitres
- Molding Cutters
- Plunge Bits
- Slot Cutters
- Straight Bits
- Thumbnail
- Tongue & Groove
- Window Sash Jigs

Call toll free, 24 hours a day or send check to: **Price Cutter, P.O. Box 1100, Chardon, OH 44024.**
S&H add \$3.95, orders over \$100 shipped FREE!
1-888-288-BITS
FAX 216-286-3920

CIRCLE NO. 21 ON PRODUCT INFORMATION FORM

Westward Ho!

Larry England loves horse-drawn wagons. He's spent years collecting antique wagon parts at farm sales and reassembling them into authentic reproductions. But that wasn't enough. He wanted to join a wagon train—with 15 wagons and 200 people—and travel the old Mormon Trail from Illinois to Utah.

So England gathered some woodworking buddies and got to work. An Amish friend volunteered his all-pneumatic shop. There they refurbished several wagons and built the rest from scratch. The wagonette shown here was built from antique blueprints but has a few modern upgrades: Naugahyde upholstery, rubber tires, and an automotive finish.

England hit the road with the National Authentic Mormon Trail Wagon Train Reenactment Group last summer, covering 340 miles in 18 days. This spring they'll ride the other 1,000 miles—which should take about a month and a half. With a team of 2,000-pound Belgian horses pulling each wagon, they say the ride is "incredibly smooth." —Carolyn Noon



Happy trails. Larry England and friends built this wagonette from scratch. Now they're taking it down the Mormon Trail from Illinois to Utah.

PHOTO BY LEON WILKINSON, JR.



CALLING ALL CHAIRMAKERS

Enter your work in The Chair Show II, a juried exhibition of chairs by U.S. designers and makers. Distinguished jurors include Sam Maloof, Michael Monroe and Wendy Maruyama. You may enter up to three pieces; entries are due June 4, 1996 and the entry fee is \$15. The exhibition will run October 4, 1997, to January 4, 1998, at the Folk Art Center in Asheville, NC. For a prospectus, contact Katherine Duncan, Southern Highland Craft Guild, Box 9545, Asheville, NC 28815, (704) 298-7928.

PHOTO COURTESY OF SOUTHERN HIGHLAND CRAFT GUILD

PETER JOSEPH GALLERY CLOSES

The Peter Joseph Gallery, a leading New York gallery of American studio furniture, has closed its doors after six years in business. The gallery represented many of America's most prominent furniture makers, including Wendell Castle, Garry Knox Bennett, Rosanne Somerson and Wendy Maruyama.

"My objective for opening the gallery was to act as a catalyst for the field and to provide a highly visible venue for support, encouragement and promotion of the artists and their work," notes founder and owner Peter Joseph. Spokesperson Carole Hochman adds: "Peter planned to run the gallery for three years; it's been in business for six. In that time, many furniture artists have become known in a broader field; other galleries have been established; and schools and museums have begun to take a serious interest in furniture."

With its mission complete, the Peter Joseph Gallery hopes to increase public awareness by offering significant pieces as gifts to selected museums.

THE END OF BOOKS?

Nope, but we got your attention, eh? Enter our bookend contest: We'll pay \$50 for any design we publish. Send a sketch or photo to:
Bookend Contest: Offcuts
AMERICAN WOODWORKER
33 E. Minor St.
Emmaus, PA 18098

No Splintering, No Tearout, Life-Long Performance.

**Made &
Serviced in
AMERICA**

Now *That's* Precious Metal.

**FREE
SHIPPING**
1-800-733-7111
through 4-30-97

A quarter of a million satisfied woodworkers agree: the Forrest Woodworker II blade is worth its weight in gold. Maybe more. And it doesn't take a jeweler to see why. It rips through thick hardwoods with no scratches or tearouts. Miters and cross-cuts with flawless precision. It makes short work of one-sided laminates and splintery oak plywoods . . . flawlessly. In short there are saw blades . . . and there are Forrest blades.

Here's why. The hardness of C-4



carbide, combined with the low breaking point of C-2 carbide, creates a tooth that's as permanently tough as it is sharp. Once that tooth is hand-brazed to the plate, the blade is hand-straightened to a perfect flatness—and an astonishing $\pm .001$ " runout for peak performance.

Sawing is believing. Prove it to yourself—completely without risk! Call today—(800) 733-7111—for your chance to try a premium Woodworker II blade or any other Forrest blade in your own shop.

FORREST WOODWORKER II: 6"-14" dia. avail.

All-purpose—tablesaws and portable circular saws.

Special 10% Discount! Take 20% off second blade of your choice.

	Sale Price	10% Off First Blade	20% Off Second Blade
10" x 30 T (1/8" or 3/32" K)	\$99	\$89	\$79
10" x 40 T (1/8" or 3/32" K)	\$119	\$107	\$95
12" x 40 T	\$129	\$116	\$103
8" or 8 1/4" x 40 T	\$99	\$89	\$79
7 1/4" x 30 T	\$69	\$62	\$55

BLADE STIFFENER

Make all your blades cut better and quieter with a blade stiffener!

• 4" ...\$21 • 5" ...\$24 • 6" ...\$25

FORREST DADO-KING: 6"-12"

Unmatched Precision on Every Dado Cut!

The Forrest Dado-King gives you flat-bottomed grooves and no splintering—even when crosscutting oak plys and melamine. This award-winning set comes with six 4-tooth chippers (including 3/32" chipper), two 24-tooth outside blades plus shims. Cuts 1/8" to 29/32" grooves.

	Sale Price	10% Off First Dado	15% Off Second Dado
6" set	\$269	\$242	\$229
8" set	\$289	\$260	\$245
10" set	\$349	\$314	\$297



WOODWORKER I: 7 1/4"-14" dia. avail.

Designed for radial arm or tablesaws—fine crosscut.

	Sale Price	10% Off First Blade	20% Off Second Blade
10" x 60 Tooth	\$129	\$116	\$103
12" x 60 Tooth	\$139	\$125	\$111

DURALINE HI A/T: 7 1/4"-16" dia. avail.

Cuts melamine and plywoods perfectly.

	Sale Price	10% Off First Blade	20% Off Second Blade
10" x 80 T (1/8" or 3/32" K)	\$159	\$143	\$127
12" x 80 T (1" hole, 1/8" K)	\$181	\$163	\$145

FORREST

FORREST MANUFACTURING COMPANY, INC.

461 River Road, Clifton, NJ 07014

Phone 800/733-7111 • In NJ, call 201/473-5236 • Fax 201/471-3333

**2-4 Days
Sharpening
ON ALL MAKES OF
CARBIDE BLADES**

CHOP MASTER BLADE: 6 1/2"-15" dia. avail.

Specially designed for sliding compound and miter saws.

	Sale Price	10% Off First Blade	20% Off Second Blade
8 1/4" x 60 T	\$99	\$89	\$79
8 1/2" x 60 T	\$109	\$98	\$87
10" x 80 T	\$129	\$116	\$103
12" x 80 T	\$139	\$125	\$111

EXTRA BONUS! 9 AT \$5 EACH!

Buy a blade or dado and get \$45 worth of sharpening discount coupons from Forrest, good on any blade or dado set you own.

For Info, Tech Help, or to Order, Call:

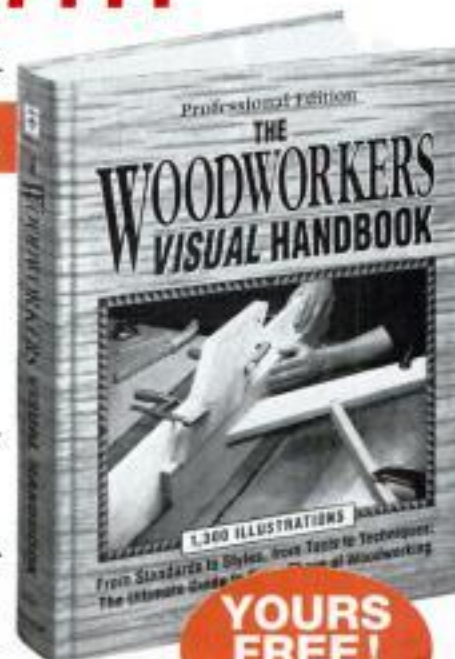
1-800-733-7111

All Major Credit Cards Accepted
FL, NJ, NY residents please add sales tax.

EXCLUSIVE OFFER

The ultimate step-by-step woodworking guide! This 438-page book retails for \$29.95 but is yours **FREE** with any saw blade or dado purchase from this ad. You must mention you saw this offer in AMERICAN WOODWORKER magazine at time of purchase.

Hurry! This special offer is limited while supplies last. Offer expires April 30, 1997. One book per order.



**YOURS
FREE!**
\$29.95 Value

Unconditional Money-Back Guarantee

Use any of these blades for a month. If you are not completely satisfied, return the blade for a complete refund. No other blade company will make that kind of guarantee—because there's no other blade like a Forrest blade!

Better Plane-Iron Sharpening

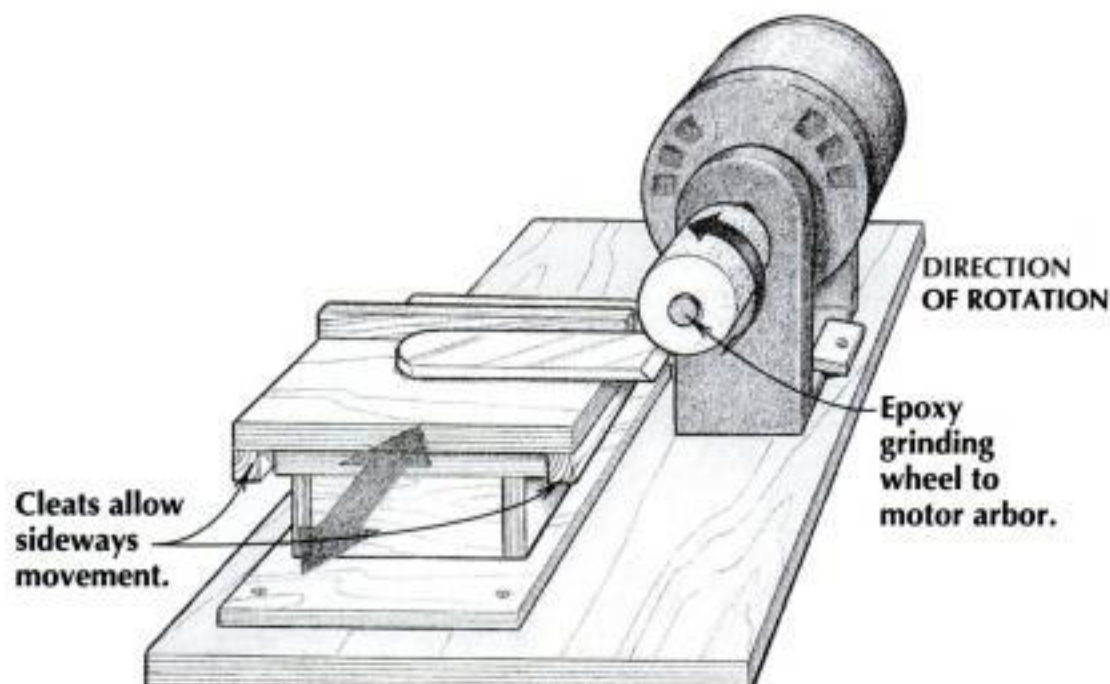
Best tip of the issue

This simple device takes the guesswork out of sharpening plane irons and speeds up the process. I epoxied a 2-in.-dia. by 3-in.-wide aluminum-oxide grinding wheel to the 1/2-in.-shaft of an electric motor. Then I built the platform as shown in the sketch.

The height of the platform determines the exact angle of the grind. To allow for different blade thicknesses and grinding angles, I place thin spacers or shims under the blade.

The wheel, Norton's #3SG120-JVS, costs about \$20. For local dealers call (800) 543-4335.

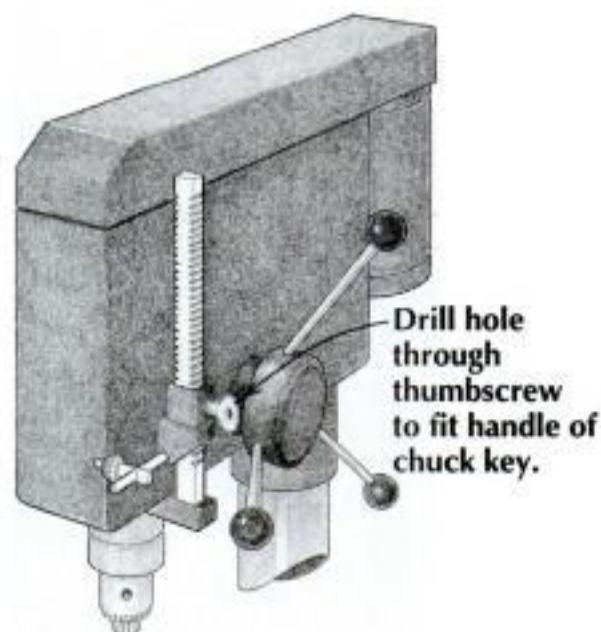
Derek Roff
Albuquerque, NM



Best tip wins \$200. Know a better way of doing something? Designed a clever jig? Send your original woodworking tips, along with a sketch or a snapshot to: "Tech Tips," AMERICAN WOODWORKER, 33 E. Minor St., Emmaus, PA 18098. We'll pay \$50 for each tip we publish and \$200 for the best tip of the issue.

Thumbscrew Lockup

My drill press has a depth gauge that's locked in place by a thumbscrew. Tightening it by hand is awkward, and



any slippage could ruin a project. My solution is to drill a hole through the flat of the thumbscrew and insert one end of the chuck key as a lever.

Herbert Akers
Rockville, MD

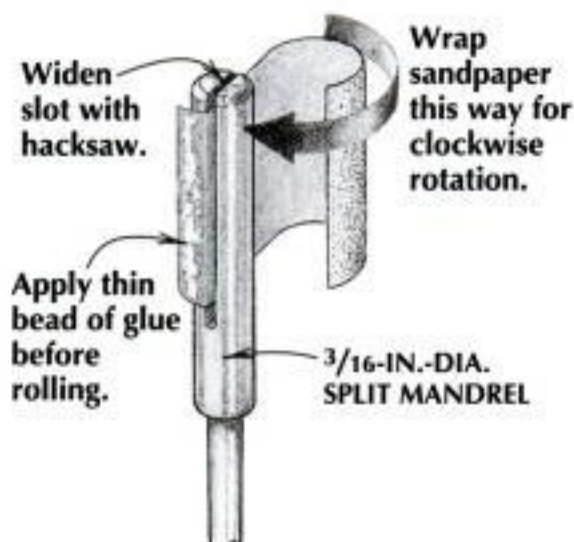
Mandrel Sands Small Work

I use this small mandrel in my drill press to sand small work. By modifying a split mandrel (available at hobby stores) you

can get all the advantages of drum, roll and flap sanders, but on a miniature scale. Widen the slot in the mandrel with a hacksaw, then round the tip with a file. Cut a strip of cloth-backed sandpaper 5/8 in. wide by 5 to 6 in. long—enough to make several wraps around the dowel. Slide the sandpaper onto the mandrel, leaving a 1/4-in. tab. Run a bead of glue on the tab, wrap the strip around the mandrel and secure it with a twist tie. I make up several like this so I can change grits quickly.

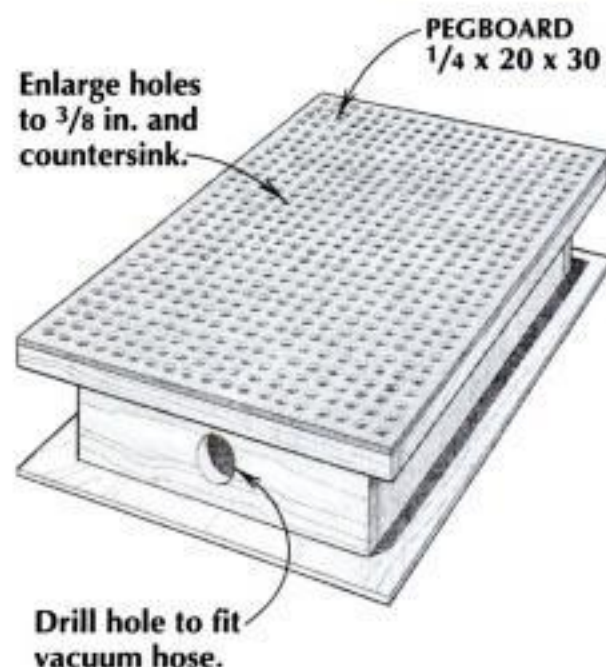
Run the mandrel at about 5,000 rpm. Bearing down gives the effect of a drum sander; with less pressure, the roll expands and acts more like a flap sander.

Chuck Malven
Bremerton, WA



Vacuum Sanding Box

I made this vacuum sanding box from 3/4-in. pine with a top and bottom surface of 1/4-in. hardboard. The top surface is pegboard, the bottom one solid. I found that enlarging the pegboard holes and countersinking them increased the effectiveness of the box.



To further improve suction, place a thin cardboard mask over the holes adjacent to your work. I made the top removable and provided a lip for clamping the box to my bench.

John Becker
Berwyn, PA

We're Not Too Big To Think Small

The items shown here are only a small sampling of our wide selection. And, we can custom turn your design. So, make us your source for special wooden parts. Call or send for our free catalog.



Osborne Wood Products, Inc.

8116 Hwy. 123 North, Toccoa, GA 30577

800-849-8876 706-886-1065 FAX: 706-886-8526

CIRCLE NO. 61 ON PRODUCT INFORMATION FORM

HVLP Spray Painting Made Easy!



Turbinaire Minipro Plus Model 1235

3-stage turbine-powered HVLP spraying system with built-in variable speed controller.

"...outstandingly smooth atomization... excellent spray performance... ideal for spraying water-based urethane" - *Canadian Workshop*

Turbinaire VSC-15 Electronic Speed Controller

Control the speeds of your routers and sanders with our CSA approved electronic speed controller.

"Turbinaire unit is head and shoulders above the others" - *Canadian Workshop*



TURBINAIRE

For more information, contact us directly or visit our booths at the '97 American Woodworker Shows.

T: 1-800-866-HVLP, F: (514) 332-5360, E-mail: sales@turbinaire.com

CIRCLE NO. 60 ON PRODUCT INFORMATION FORM

The Right Combination

Europe's finest line of combination woodworking machines is now customized for the American woodworker. Whether you're a beginning woodworker or a seasoned pro, we have a machine to fit you and your budget. Call now to receive more information.

800-203-0023

EuroShop C-300



- 12" Tablesaw with Sliding Table
- 12" Jointer • 12" Planer
- 4 Speed Reversible Shaper / Router
- Slot Mortiser / Horiz. Borer
- 3 3HP 220V Motors

OLD WORLD
MACHINERY CO.
San Clemente, CA

CIRCLE NO. 162 ON PRODUCT INFORMATION FORM

Dust-Free Sanding

**Eliminate hazardous dust
Before it becomes airborne**



Airborne dust is now being recognized as a major health hazard. Imagine sanding in a dust-free environment, where 98% of the dust created by sanding is gone.

How It Works

Dust produced by sanding is immediately sucked away through holes located in the sandpaper, the bottom of the sander's pad, AND around the outside edge of the pad (a FEIN exclusive). The extracted dust is contained by a powerful vacuum.

Unbeatable Finishes

Typically when you sand with normal sanders, your sander ends up riding on a bed of dust and broken abrasive. With the FEIN Sanding System, this "bed" of dust doesn't exist. Your paper cuts faster, cleaner, and lasts up to 10 times longer. You simply can't get the same finish by any other sanding method.

Automatic Vacuum

When you turn your Fein sander on, the vacuum starts. When you switch your sander off, the vacuum stops... automatically. The Fein Turbo II Vacuum is built to handle large amounts of super-fine dust.

It's easy to get more information, simply call and ask for a free color brochure: (800)441-9878

FEIN Power Tools Inc.

3019 West Carson St.,
Pittsburgh, PA 15204

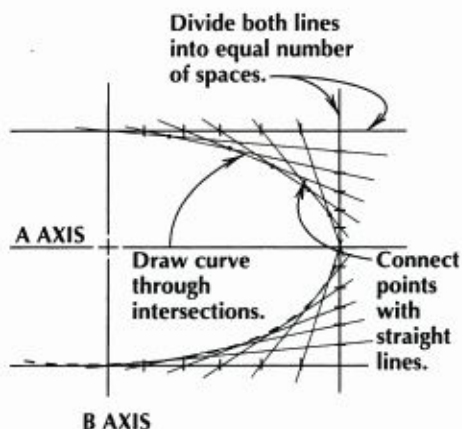
(412)331-2325 fax: (412)331-3599



CIRCLE NO. 23 ON PRODUCT INFORMATION FORM

No-Jig Method for Drawing an Ellipse

Here's an easy way to draw an ellipse, without making a special jig ("Tech Tips," AW #52 and #57). Draw a quar-



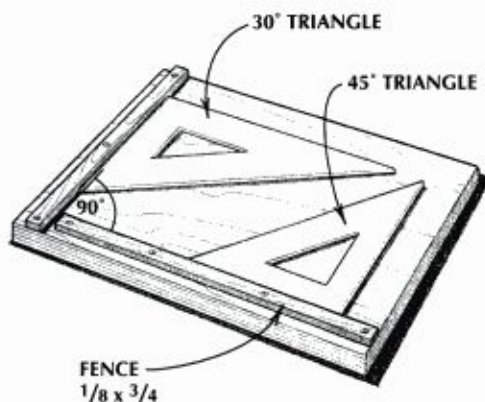
ter of a rectangle, with A and B axes. Divide each line on the outside of the rectangle into an equal number of spaces—six in this example. Connect the points with straight lines, then draw a smooth curve through the intersections. To generate different-shaped arches, simply change the relative length of the axes.

Thurston Caswell
Venice, FL

Shop Sketchboard

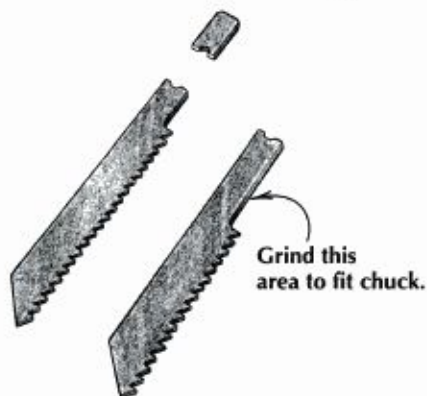
I find this miniature sketchboard a great convenience around the shop. No T-square necessary—just 30° and 45° drafting triangles. I made my board from 3/4-in. plywood, and sized it to accommodate 11-in. by 17-in. paper—the largest size that can be conveniently photocopied.

Arthur Chism
Hot Springs, AR



Born-Again Blades

When a jigsaw blade breaks, it's usually right at the setscrew hole. Instead of discarding the blade, take a few minutes to grind a new shank as shown in the sketch. Hold the blade with pliers or

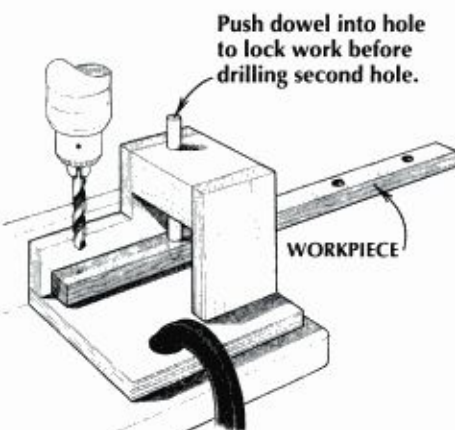


I've found that a few less teeth on the blade has only a marginal effect on performance.

George Earley
Mount Hood, OR

Hole-Spacing Drill Press Jig

With this simple jig I can drill equally spaced holes quickly and accurately. I place a slightly tapered, waxed dowel in a "bridge" spanning the work as shown.



Then I bore the first hole, slide the work sideways, engage the plunger, drill the second hole and so on.

James Skeen
Cape Canaveral, FL

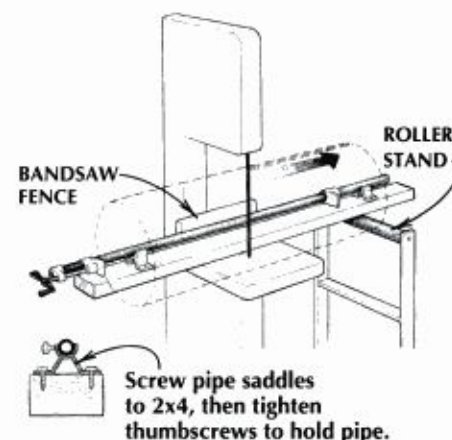
Sawing Skinny Logs Redux

I made this bandsaw jig to take advantage of the small logs—under 10 in. in diameter—that sawmills pass by. My jig

can handle longer stock than Laval's device ("Tech Tips," AW #56).

I screwed two 3/4-in. Pony pipe saddles to a 50-in.-long 2x4. I clamp the log and run it through the saw using the bandsaw fence as a guide. (You may need to make a larger, auxiliary fence and attach it to the original fence.) Pony pipe saddles are stocked by Grizzly Imports, (800) 541-5537.

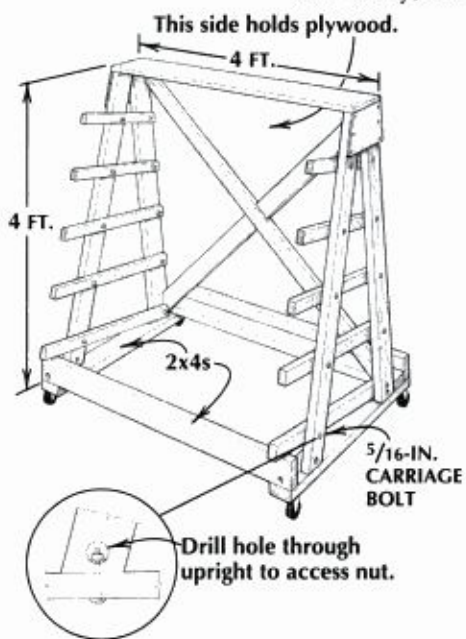
Paul Fertell
Chester Springs, PA



Lumber Storage Rack

I find this movable lumber rack a great convenience in my small shop. It can store boards as well as sheet materials such as plywood and MDF. Vary the dimensions shown in the drawing to suit your own needs.

Robert McMurray
Mill Valley, CA



GIANT SELECTION BIG SERVICE

Small Prices



Get your hands on some of the best woodworking tools and supplies around. All at the lowest prices every-day. Tons of items only available from us.

FREE CATALOG

Call or write us today to receive your FREE catalog of over 900 unique woodworking tools.

ALL GUARANTEED FOR LIFE!

Hartville Tool Company
13163 Market Ave N Dept. AW397C
Hartville, OH 44632

1-800-345-2396

CIRCLE NO. 35 ON PRODUCT INFORMATION FORM

ACCURACY FOR SALE!



Carter Band Saw Guides increase cutting accuracy, reduce blade friction and improve overall saw performance. A variety of models to fit saws 14" and larger. Conversion Kits also available for many popular saws.

Carter

Send \$1.00 for Brochures
PRODUCTS CO., INC.

437 Spring St., NE • Grand Rapids, MI 49503
(616) 451-2928 • FAX: (616) 451-4330

CIRCLE NO. 181 ON PRODUCT INFORMATION FORM

• FASTENERS • BOATBUILDING AND WOODWORKING SUPPLIES

JAMESTOWN DISTRIBUTORS

FREE CATALOG

PO BOX 348
JAMESTOWN, RI
02835

1236 TRASK PKWY
SEABROOK, SC
29940

800-423-0030

FAX 800-423-0542
US & CANADA

LOCAL 401-423-2520
FAX 401-423-0542

LOCAL 803-846-9500
FAX 803-846-9005

CIRCLE NO. 40 ON PRODUCT INFORMATION FORM

If you were
stranded
on an island...
what is the one
machine
you couldn't
live without?
The X3I!

Gilligan would have made it back to civilization sooner, if he had our X3I Combination machine.

- 38" Rip Capacity Saw
- 10" Table Saw
- 50" Cross Cut
- Cast Iron Tables
- 12" Jointer/Planer
- Mortiser
- 20 seconds to change functions
- 3HP Reversible Shaper
- Three 3HP German Motors

Don't get left stranded in the sand...call (800) 234-1976 today, for your FREE demonstration video.

LAGUNA TOOLS

2265 Laguna Canyon Road • Laguna Beach CA 92651

800-234-1976 • FAX 714-497-1346 • Internet Website: lagunatools.com

CIRCLE NO. 49 ON PRODUCT INFORMATION FORM

Materiale protetto da copyright

Makita

IT'S ALL THE POWER YOU NEED.



#N1900B
3-1/4" Planer With Case

\$134.⁹⁵



#5007NBK
13 Amp 7-1/4" Circular Saw Kit

\$119.⁹⁵

#LS1011
10" Slide Compound Miter Saw

\$429.⁹⁵

Includes
50T CT
Blade



#2012 12" Portable Planer

\$499.⁹⁵



#LS1211
12" Slide Dual Compound Saw
Shown with optional extensions

\$759.⁹⁵

With
96T CT
Blade



#6233DWE
14.4 Volt, 3/8" Cordless Driver Drill Kit

\$194.⁹⁵

Two
Batteries



#9820-2
Blade Sharpener

\$209.⁹⁵



#2708W
8-1/4" Table Saw

\$299.⁹⁵

With CT
Blade



#6221DWE
9.6 Volt 3/8" Driver Drill Kit
With 2 Batteries

\$99.⁹⁵

TOOL CRIB

OF THE NORTH

1-800-358-3096

Or Fax Your Order 24 Hours A Day 1-800-343-4205



Call today for our
FREE full color
100 page catalog,
featuring our most
popular selling
tools at the
lowest prices.
1-800-582-6704

OUR PRICES
PRICE GUARANTEE
WON'T BE BEAT

FREE SHIPPING
on most orders over \$75.00



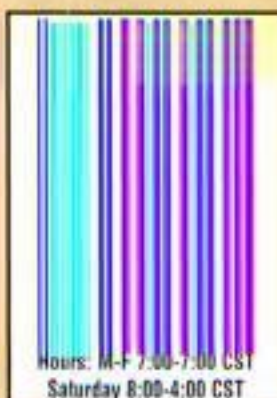
AWW
Mar/April '97

There's More....

CIRCLE NO. 79 ON PRODUCT INFORMATION FORM

Materiale protetto da copyright

Tool Crib - An Easy Call To Make!



SAME DAY SHIPPING

FREE FREIGHT!

DELTA

36-900 3 HP Special Unisaw w/52" Unifence & Motor Cover \$1699*

36-820 3hp uni 52" uni f & cv 1599*
36-830 3hp unisaw 30" uni f 1499*
36-8213hp unisaw w/50" Bies 1599*
36-8313hp unisaw w/30" Bies 1499*
34-7785hp unisaw w/52" uni 1849*
34-445 10" Contractor's Saw w/30" Unifence \$799*

36-460 10" cont saw 28" Bies 729*
36-470 10" cont saw 40" Bies 769*
36-480 10" cont saw 52" Bies 799*
34-444 10" contractor's saw 649
34-555 sliding table attach 329
36-275 8-1/4" bnch table saw 269
28-280 14" 1 HP Bandsaw \$699*

28-275 14" 3/4hp bandsaw 589*
33-055 8-1/4" sawbuck w/legs 619
37-154 6" jointer w/stand 1224*
17-900 16-1/2" floor drill press 429
34-080 10" mitre saw 219
23-710 New sharpening center 174
37-350A 8" Jointer w/Stand \$1549*

43-355 1-1/2hp wood shaper 749*
43-379 3hp hd 2 spd shapr 1699
36-220 10" comp miter saw 209
22-675 15" planer w/stand 1149*
37-190 6" jointer w/stand 449
31-280 sanding cntr w/std 799
*Price After Mail In Rebate Rebates Expire 3-31-97

BOSCH

1587VS VS Top Handle Jig Saw w/Case \$149

1584VSK barrel jigsaw w/case 149
1587DVS top hdl dstlss jigsaw 179
1584DVS barrel dustlss jigsaw 179
1634VSK vs recip saw kit 179
3310K New 12 Volt T-Handle

PORTER-CABLE
The Woodworker's Choice

9444 PK Profile Sander Kit \$114

333 5" Quicksand dstlss sander 79
332 5" Quicksand PSA sander 74
334 5" dustless PSA sander 79
97355 5" vs sander w/case 145
97366 6" vs sander w/case 149

DA250A 1"-2-1/2" Finish Nailer Kit \$249

FN250A 16g 2-1/2" fsh nail kt 209
FN200 16g 2" finish nailer kit 169
BN200 18g 2" finish nail kit 149
BN125 18g 1-1/4" finish nail kt 99
NS100 18g 1/4" crown stplr kt 99
NS150 18g 1-1/2" finish stplr 169
FC350 2-3-1/2" clip hd nailer 329
FR350 2-3-1/2" full hd nailer 329

352VS 3x21 VS Belt Sander \$165

7810 tool triggered vacuum 269
556 plate jointer w/cs & fnc 139
360 3x24 sander with bag 214
362 4x24 sander with bag 219
9862 12v 3/8" dr kit w/2 bat 174
743K LH 7-1/4 saw w/case 129

90690K 1-1/2 HP Router w/Case \$159

7539 3-1/4 5speed pl router 274
691 1-1/2 hp D handle router 164
7518 3-1/4 hp 5 speed router 284
7403 paint remover 179
9737 Quick change tpr sw kit 164
7499 New cut-out tool 69
97549 top handle vs jigsaw 144
7800 drywall sander 339
693 1-1/2 hp plunge router 184

HITACHI

NR83A Full Head Stick Nailer \$389

NR83AA clipped head stick nlr 379
NV83A full head coil nailer 419
NV45AB coil roofing nailer 399
N5008AB 5/8" to 2" hd stapler 299
EC12 2 HP air compressor 299

David White

LP6-20 20X Sight

C8FB2 8-1/2" Compound Mitre Saw \$489

C10FS New 10" slide compound 739
P12RA 12" planer/6" jointer 1049
C10FC 10" compnd mitre saw 199
C7BD 7-1/4" circ. saw w/bk 139
DN10DYK vs 9.6v R.A. drill 179
M12V 3-1/4 hp vs pl. router 199

JDS COMPANY

AT2000 Air Filtration System \$259

8-12 air filtration system 489
10-16 air filtration system 689
18-34 accu miter gauge w/bar 149
24-48 accu miter gauge w/bar 164

4045 Construction Master IV Calculator \$69

44045 bench top Const Master 79

MSXE-636-2 VS Triangular Oscillating Sander w/Case & Paper \$199

STANLEY BOSTITCH

N60FN-2 Kit 1-1/4" - 2-1/2" Finish Nailer \$339

N80S-1 16d stick nailer 339
BT50-2 1-3/16"-2" brad nlr kit 209
RN45B-1 New roofing nailer 369
M111FS floor stapler 539
S32SX 1/2-1-3/8 stapler kit 169

RYOBI

BT3000SX 10" Sliding Table Saw w/Stand \$549

RE-600 3hp vs plunge router 229
AP12 12" portable planer 409
OSS450 osc. spindle sander 169
WDS1600 16-32" s drm sdr 589
WDP1850 18-1/2" wdr dlr prs 439

STABILA

24670 4' Level w/Hand Holes & Padded Case \$59

02859 New 80LMS laser kit 399
24640 2' level w/hand holes 45
24680 6' level w/hand holes 105
27000 78" lvl w/hand holes 115
27010 96" lvl w/hand holes 125

DELTA

22-540 12" Portable Planer & Extra Knives \$359

31-780 osc spindle sander 194
36-250 10" sliding comp. 499
36-230 12" compnd miter saw 319
11-990 12" bench drill press 189
46-700 12" vs wood lathe 469
43-505 router/shaper 299
11-090 radial drill press w/std 309
14-650 mortising machine 249
37-070 6" VS Bench Jointer \$259

40-650 New 18" vs scroll saw 479
40-540 16" vs scroll saw 189
40-560 16" 2 speed scrl saw 174
31-460 4x36 belt/disc sander 134
28-185 bench bandsaw 179
23-700 wet/dry grinder 159
11-950 8" bench drill press 129
36-540 10" bench saw 179

SENCO

SFN40K 1-1/2 - 2-1/2 Finish Nailer \$389

SN325+ 6d - 12d nailer 419
SFN-1 Plus 1"-2" finish nailer 349
SN60 full hd stick nailer 459
SLP-20 5/8"-1-5/8" brd nail kt 279
SLS20 New finish staplr w/cs 249
SKS 1/4" crown finish stapler 279

PERFORMAX PRODUCTS, INC.

16-32 Plus 16" - 32" Bench Drum Sander \$899

BOSCH

1613EKS

FT-2000E 3.25 HP VS Router \$179*

JS102 plate jner cs & adj fnc 149*
TR215 8-1/2" slide saw 299*
*Price After Mail In Rebate Rebates Expire 3-31-97

Porta-Nailer

401P Hardwood Floor Nailer \$214

501 floor face nailer 214
120 New univ. router table 339

Milwaukee

6527 Variable Speed Super Sawzall \$169

6496-6 10" slide comp. saw 589
6497-6 10" comp saw w/acc 649
0408-6 12v kit w/kls ch & bat 174
0234-6 1/2" vsr 0-850 magnm 134
0236-6 1/2" drill w/case 149
6368 7-1/4" sw w/cd bl,cs,inc 139

Emglo

AM78-HC4V 1-1/2 HP Vertical Twin Tank \$309

AM79-HC4V 1-1/2 hp v ank 329
0453/8" x 50' Goodyear hose 20

DEWALT

DW995KS-2 18 Volt Drill/Saw Combo Kit \$389

DW935K 14.4 cds saw kit 239
DW930K 12 volt cds saw kit 199
DW705 12" compnd mitr saw 349
DW621 2 HP VS Plunge Router \$219

DW625 3hp vs plunge router 279
DW673K laminate trimmer kit 189
DW321K new vs jigsaw w/cs 164
DW364 7-1/4" saw w/brake 164
DW675K 3-1/8" planer w/case 164

DW682K Plate Jointer Kit \$199

DW106 3/8 4 amp keyless drill 74
DW431K 5" HRI dstlss wdr wdr 3v

JTAS-10X 10" Jet Saw 3 HP w/50" XACTA Fence & Motor Cover \$1399

JTAS-10LX50-13hp lft tilt sw 1699
JPM-13 13" planr/moulder 799
JWS-18HO 1hp wood shapr 519

JWTS-10JF 10" Saw w/Jet Fence \$599

JWBS-14CS14" 1hp wd bds w 579
JDP-17MF 17" 16 sp dr pr 429
JJ-6CSX 6" long bed jointer 489
JWL-1236 12" vs wood lathe 569
JWP-15HO 15" 3hp w/plnr 1099
DC-650 1hp 650 cfm dust col 229

POWERMATIC INTL

1660760 66 Saw 3 HP w/50" Accu-fence \$1999

1791210 64 Art saw w/acc F 749
1791211 64 Artisan w/50" Accu 849
1791208 osc. spindle sander 299
1791209 New 15" planer 1329
17910516" jointer with stand 549
1791070 1-1/2 hp dust col 399

HONDA

EB2500XK1A 2500 Watt Construction Generator \$1039

EB3500XK1A 3500 w gen 1499
EB5000XK1A 5000 w gen 1939
EB6500SXA 6500 w gen 2479
EX1000A 1000 watt gen 689
EM2500XK1A 2500 watt gen 1099
EM3500SXA 3500elec str 1639
EM5000SXA 5000elec str 2199
ES6500K1A 6500 elec str 2679

For optimum safety & performance we recommend you read the owner's manual before operating your Honda Power Equipment. Connection of generators to house power requires transfer device to avoid possible injury to power company personnel. Consult a qualified electrician.

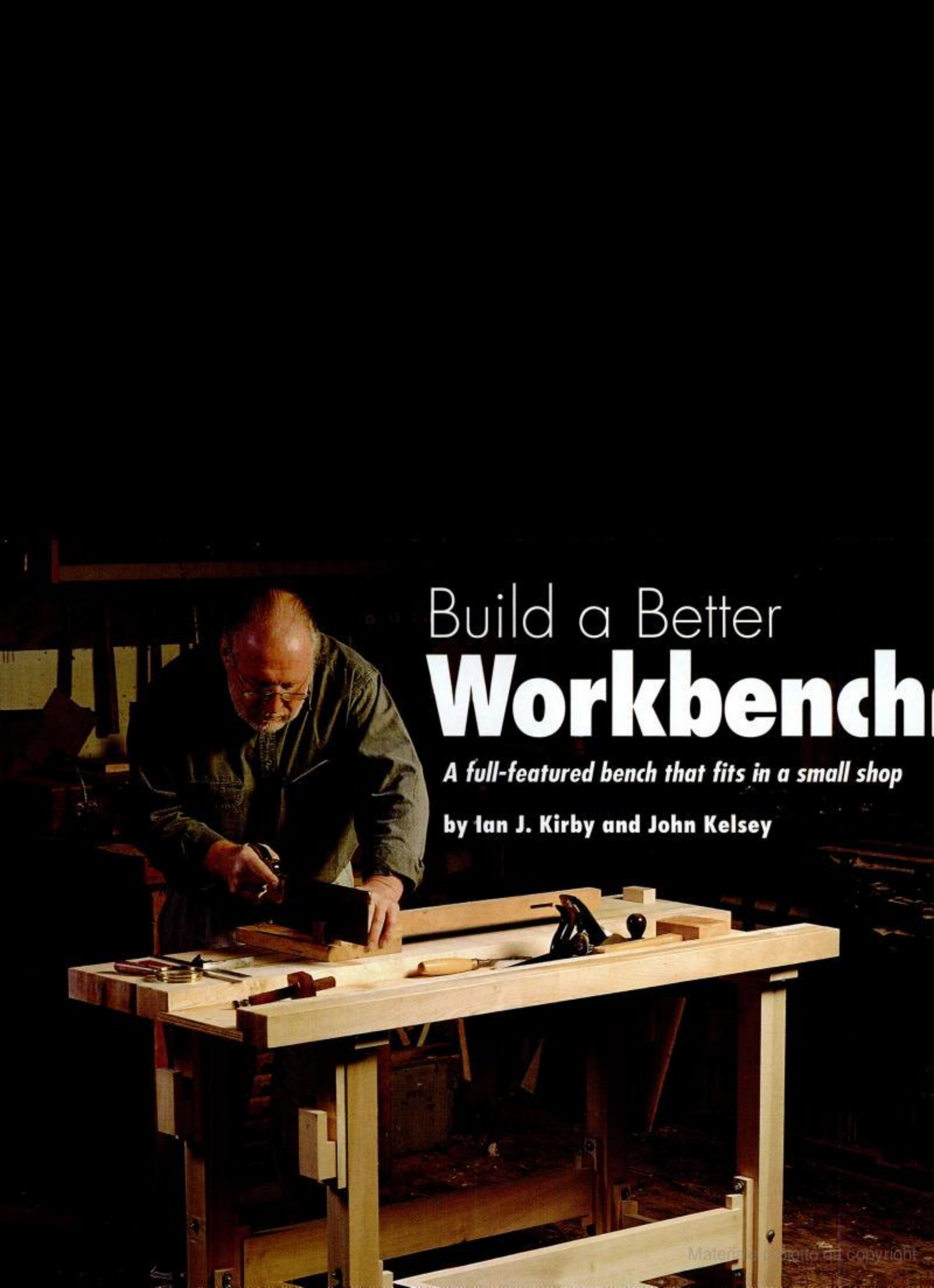
ESC

C4 Homeshop Panel Saw \$1099

H5 64" capacity panel saw 1749

Paslode

404400 Impulse

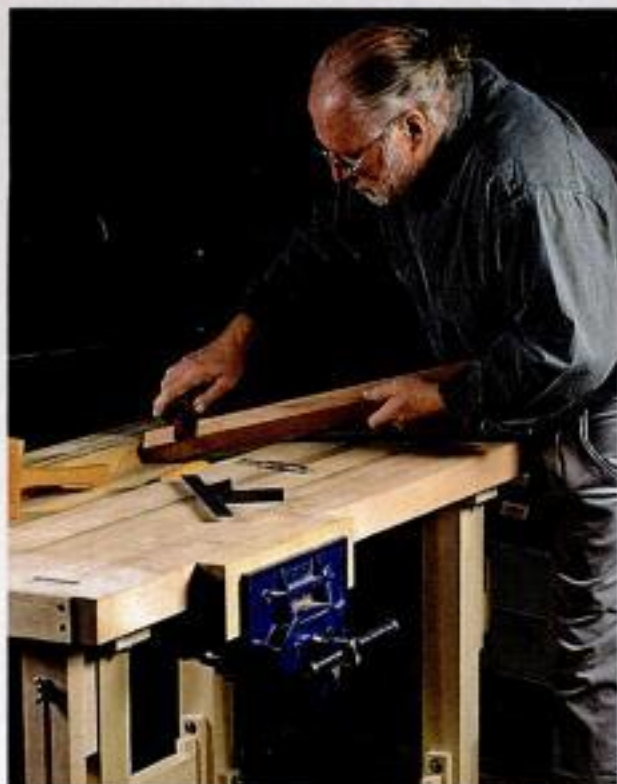
A craftsman with glasses and a beard, wearing a dark jacket, is working on a wooden workbench. He is using a hand plane to smooth a piece of wood. The workbench is made of light-colored wood and has various tools and clamps on it. The background is dark and shows other parts of the workshop.

Build a Better **Workbench**

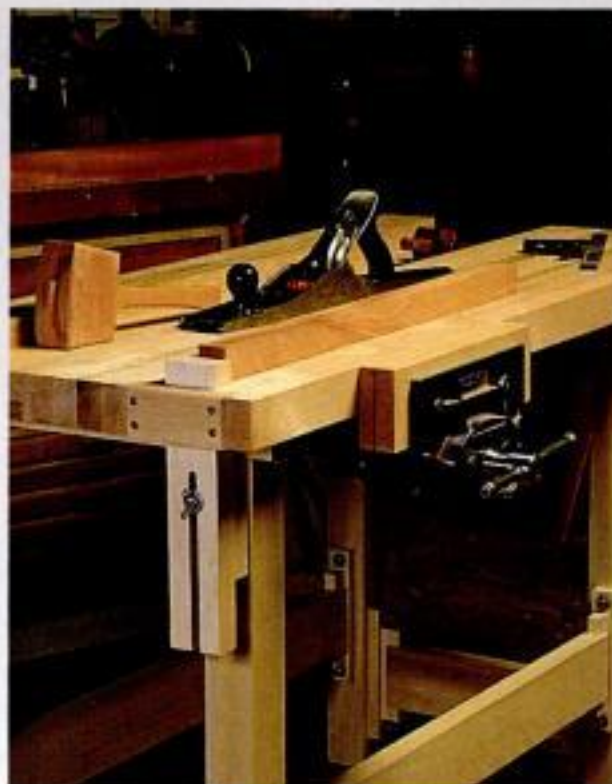
A full-featured bench that fits in a small shop

by Ian J. Kirby and John Kelsey

WORK ZONES ON A BENCH



Layout zone. The vise and the area around it form the layout zone. Your layout and measuring tools—straightedge, square, dial caliper—should always be close at hand.



Planing zone. Plane against the bench stop, with the workpiece flat on the top. You get instant feedback: If the plane isn't centered, the wood skids away or falls over.



Chopping zone. Take heavy pounding to the far end of the bench, directly over the leg. If you bang up the bench surface here, it won't interfere with layout and planing.

on it come out flat and square as well. If the bench is off, you have a lot more difficulty making anything accurately.

As if that weren't enough, the workbench is a sturdy anchor, a rock on which to tether the most awkward piece of furniture. If you can get one end of it up on the bench, or backed up to the bench, you can prop it up and clamp it up tight, as shown in the photos on page 40. Similarly, the bench can be the foundation for jigs, fixtures and outriggers.

The workbench system includes a number of accessories: a substantial iron vise with replaceable wooden cheeks, a built-in bench stop, plus a panel stop, bench hook, and cutting board. All of these are shown in the photos. You can also make a shooting board with miter block, and a sharpening outrigger.

The bench is for making parts and subassemblies. To put furniture together, you should also have a low assembly table. If space is tight, the bench is the one that can do double duty, but in that case, make a plywood or hardboard cover for those times when you want to bang clamps, strip antiques or grind the valves of your motorcycle.

Sizing Your Bench

The size of your bench depends on your shop space, the scale of work you do most, and your own body size. The upper limit is the space in the shop. You

will handicap yourself if you can't move all around the bench, and work from any side of it. Ideally, you need four feet of working space on each side; you can get by with three feet but no less.

If you knew you would be making rowing skiffs or entry doors, you might decide to tailor your bench to them. This doesn't mean that you couldn't build a pool table on a 4-ft. bench, because you can. Get the area on which you want to work onto the bench itself, then support whatever hangs over with sawhorses or clamped props.

The bench shown in the drawing is 55½ in. long and just over 25 in. wide, which is big enough for general woodworking, furniture making and cabinet-building. If you don't have room for a separate assembly table, then consider making a longer bench. If you add to the width as well, don't make the bench so wide that you can't reach from one side to the other. Finally, for stability, whatever you do to the top has to be reflected in the understructure.

Standard bench height is the same as your machine tables, 34½ in. It's no surprise that this works for people of average stature, and this height also allows the bench to provide auxiliary support for sheet goods and long planks. If you are not the average soldier, tailor the bench to your own physique, rather than to your machines. Block up a test

WHAT MAKES A GOOD BENCH?

Any workbench needs to satisfy a number of technical criteria:

■ It must be rigid in every direction. You need to be able to clamp pieces to every side of it, and push against it from all directions. This means you need a rigid and substantially joined underframe securely fastened to the top.

■ The top has to be flat to within 0.01 inch—and 0.001 is not impossible for a sharp jointer plane. The flat benchtop is the foundation of accurate work.

■ The edges have to be square to the top, and the ends have to be square to the sides and top. This way you can clamp workpieces and jig parts anywhere, without introducing geometric error.

■ The understructure must be open to avoid interfering with the vise, the bench stop, and your clamps. This means no drawers or built-in cabinets. It's a workbench, not a countertop.

A COMPACT WORKBENCH

Screws, bolts and glue join the parts of this tough little bench. The top is made of maple and plywood; the understructure is poplar. Assemble the legs to the top rails and end rails, then connect them with the side rails. The T-shaped cutout for the bench stop is created when you glue up the top, not sawn out afterward.

TOOL TRAY

1 5/16 x 10 x 55 1/2

Glue and screw tool tray into 3/4 x 7/8 rabbets under top.

LAG BOLT

5/16 x 3 1/2

Glue bolt into counterbored hole, then plug.

TOP LAMINATES

9 - 1 5/16 x 2 1/4 x 55 1/2

2 - 1 5/16 x 2 1/4 x 54 3/16

2 - 1 5/16 x 2 1/4 x 52 7/8

LAG BOLT

5/16 x 3

Counterbore spacer for bolt head; epoxy bolt into hole.

SCREWS

#10 x 2 1/2

STOP RETAINER

1 5/16 x 2 1/4 x 5 1/4

BENCH STOP

1 5/16 x 2 5/8 x 13

SPACER

1 5/16 x 2 5/8 x 9

NOTE: Attach the spacer and the bench stop to the leg first, then use the stop to register the top on the leg assembly before you drill the holes for the top attachment bolts.

Route recess for vise.

TOP RAIL

1 5/16 x 3 x 23

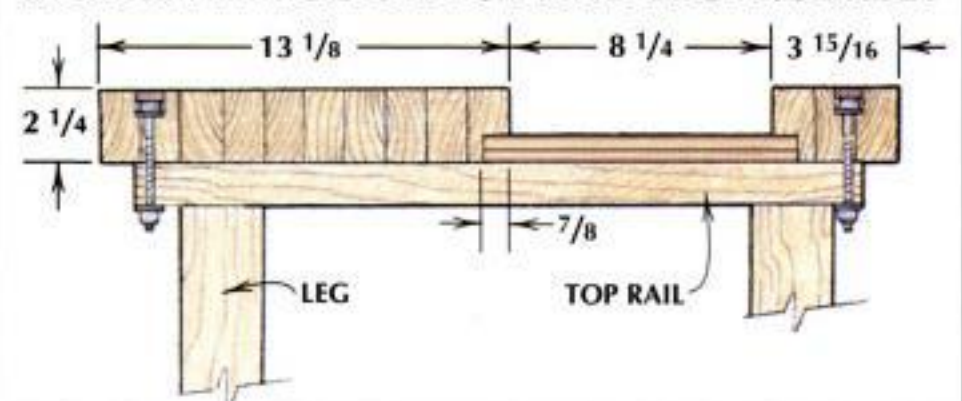
LEG

2 5/8 x 2 5/8 x 30 15/16

SIDE RAIL

1 5/16 x 4 x 35 1/2

SECTION THROUGH TOP AND LEG ASSEMBLY



END RAIL

1 5/16 x 4 x 13

RAIL ASSEMBLY

(See detail, below.)

GROOVE

3/4 x 3/4

RAIL CONNECTOR

3/4 x 1 1/4 x 6

LEG CONNECTOR

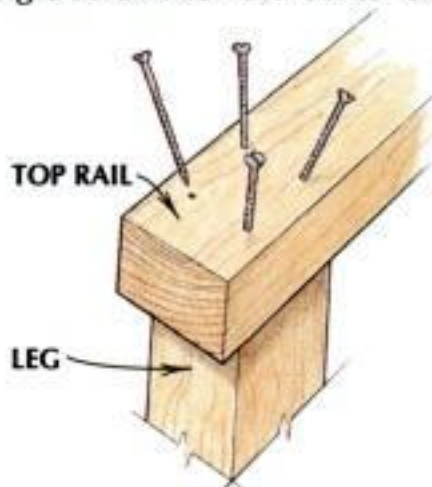
3/4 x 1 1/2 x 8 1/2

LAG BOLT

5/16 x 4

TOP RAIL ATTACHMENT DETAIL

Angle screws toward center of leg.



SECTION THROUGH RAIL ASSEMBLY

SCREW

#10 x 1 1/2

SCREW

#10 x 2

SCREW

#10 x 3

LEG

LEG CONNECTOR

RAIL

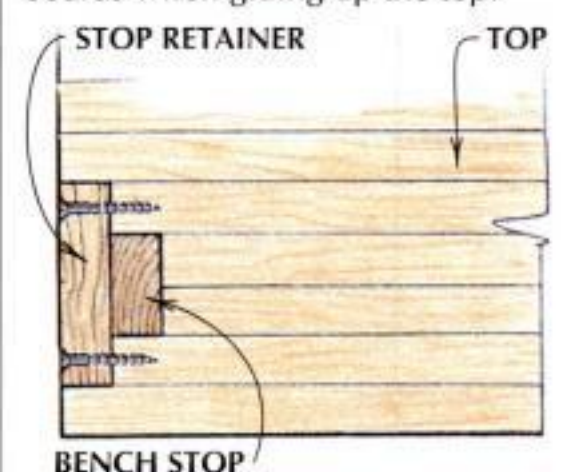
RAIL CONNECTOR

LAG BOLT

5/16 x 4

BENCH STOP DETAIL

Create the recesses for the bench stop and stop retainer by using shorter boards when gluing up the top.



MAKING PARTS ON THE BENCHTOP



Thin wood. The replaceable stop can be set low enough for any wood.



Wide panel. The panel stop, held by bench stop and vise, traps wide work.



Wide plank. Clamp a beam to the bench legs to support weighty work.



Drawer stop. A plank draped across the bench supports a delicate drawer.

surface until you find the height that suits you best.

Height also depends on what you want to make. You're always up in the air by the thickness of the workpiece, and if you are making staircases or harpsichord bodies, that could be quite high. In that case, you would need a lower bench. If you are a relief carver or a marquetarian, you might need a higher bench.

Making the Top

The top has to be a heavy and stable slab, 2 in. to 2½ in. thick, as shown in the drawing. Lengthwise rails would interfere with clamps, so the top has to be stiff enough without them. Stability is essential for flatness, so if you can find quartersawn wood, use it. A good alternative is 6/4 flatsawn wood planed to a uniform thickness of 1⅝ in., then ripped into pieces 2¼ in. wide. Gluing these together makes a quartersawn plank stiffened by the vertical glue lines.

Maple, soft or hard, makes an excellent benchtop, as does beech, cherry and most any diffuse-porous hardwood. Ash and white oak, though ring-porous, are also suitable. Softwoods dent and ding too easily. Light-colored woods reflect light onto the work, making it easier to see what you're doing.

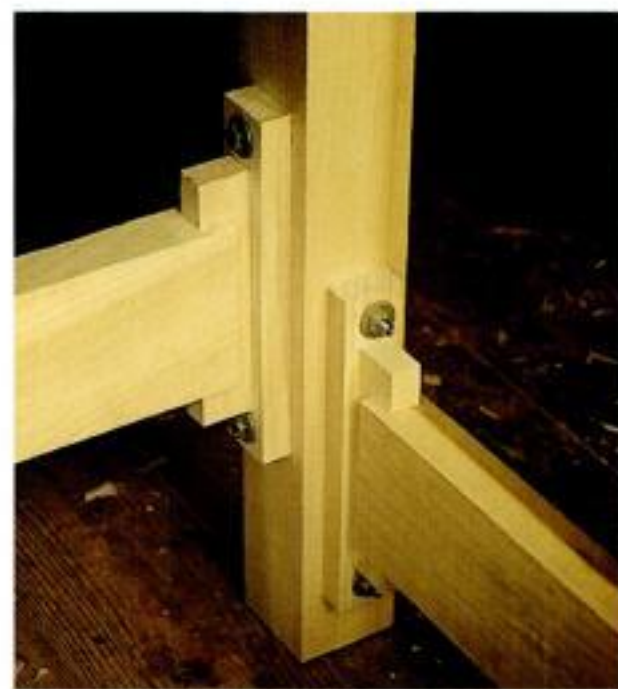
The edges of the top have to be square to the working surface and to one another. Glue the laminates together in groups of two and three, then glue the groups together. This helps keep the pieces in line while you clamp, and you can glue up around the T-shaped opening for the bench stop. The ends will be fine straight from the chop saw or table-saw. Plane or joint the long edges square before you mount the vise and fasten the top to the base.

The tool well is a matter of taste. I think it's luxurious to have a full benchtop with no well, but such a bench is more expensive, heavier, and takes longer to make.

The Bench Understructure

Screws and bolts, not conventional wooden joints, connect the parts of the bench shown in the drawing. This construction method is more than strong enough, and it builds a bench without the entanglement of through-wedged mortise-and-tenon joints.

The legs of the bench in the drawing are 2⅝-in. squares milled out of 3-in.-thick poplar. If you can't get 3-in.-thick wood, you can laminate the legs. Legs



Rail-to-leg joint. The connector pieces bridge between the rail and leg. Offset the rails so they don't interfere.

milled out of Douglas fir 4x4s are also excellent.

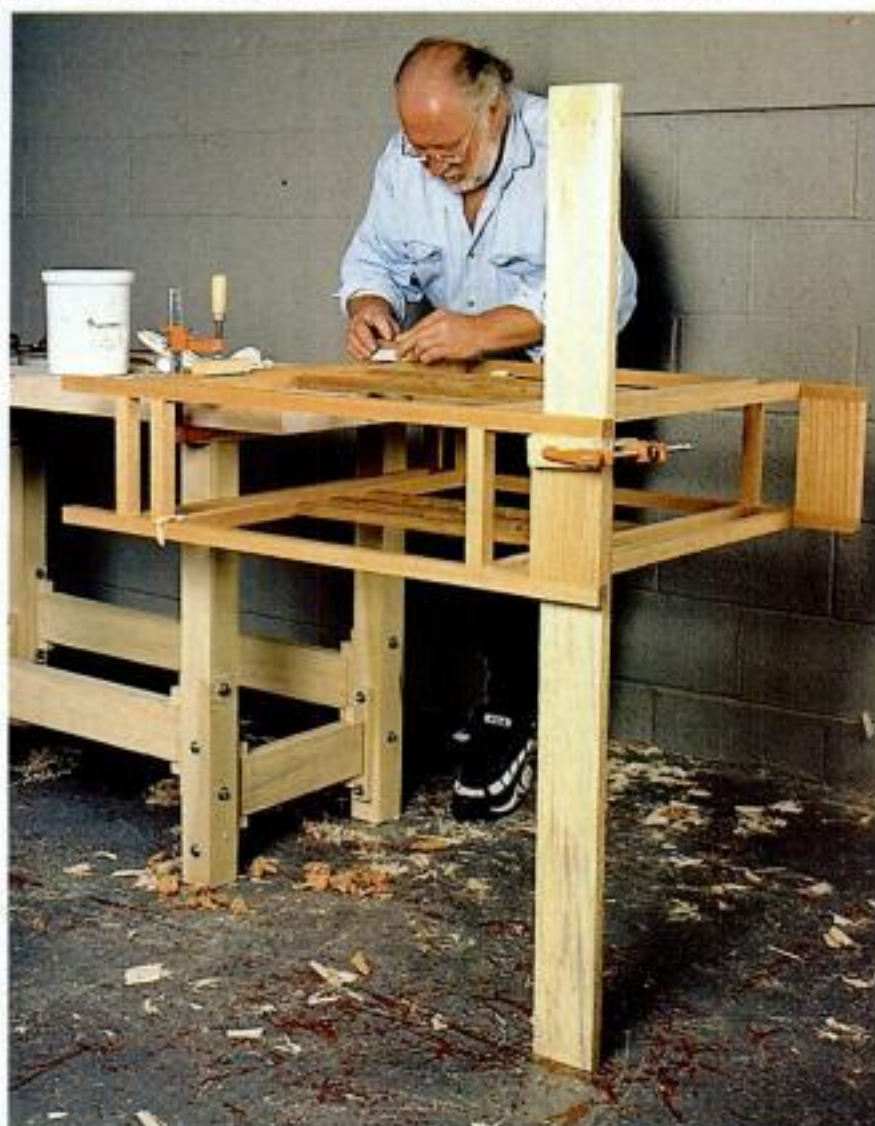
The rail-to-leg joint is the key to a rigid structure. It needs a wide, stable shoulder to resist racking stress without introducing cross-grain problems. The stepped three-piece connector shown in the drawing and in the photo above is one good solution. It relies on a lot of glue area and on stainless-steel screws, with ⅝-in. bolts through the lugs and legs. If the joint loosens up due to wood movement, tightening the nuts takes care of it.

The two top rails are screwed to the ends of the legs, with four #10 x 3½-in. stainless-steel screws into each leg. Drill the clearance holes and pilot holes on an angle, so you get some dovetail action.



Sturdy support. The workbench can support any number of specialized accessories and stands, such as this removable sharpening outrigger.

SUPPORTING LARGE WORK



Holds anything. Two clamps and a scrapwood prop bring the joint that needs work tight onto the benchtop (left). Furniture of any size can be backed up to the bench and compelled to hold still (right).

Then attach the top to the rails with through bolts, counterbored and plugged. (See drawing.)

Flattening the Top

Mount the vise to the top and bolt the top to the rails before you plane it flat. If you flatten first, mounting is going to pull it out of flat and you'll have to start over. Sharpen up your longest plane, such as a Stanley or Record No. 6 or No. 7. Plane at a small angle across the grain, not with it. Check your progress with a steel straightedge and winding sticks, and go for dead flat over the entire top surface.

Flattening the top will take you a strenuous hour and half-a-dozen sharpenings the first time, less every time afterward. Expect to flatten the benchtop two times during its first year of life, and perhaps annually after that, just to remove dings and take care of wood movement.

While it's tempting to just shove the whole top through the wide-belt sander at a commercial shop, don't do it. The sander will embed tiny abrasive particles in the wood, so once it's been sanded it can't ever be planed. You'd have to disassemble the bench and take it back to the

sander every time it needed flattening.

When you're done flattening, give both sides of the top a rag coat of linseed oil or tung oil. Flood it on, let it sit for a while, then rub it off. The oil increases the wood's resistance to wear, it resists glue, and it helps you keep the bench clean. However, don't get carried away—don't varnish the bench. You'll make it too slick to work on, and you'll have to plane the varnish off to flatten it.

It's a System

When I demonstrate using a bench like this, someone always asks why there are no bench dogs and end vise. My reason is that these appliances lift the workpiece and distort it, giving up the flat reference surface you've worked so hard to create. Planing against an end stop or a panel stop, as shown in the photos on

page 39, gives you instant feedback about your technique. If the board falls over or flies away, you're not centered. It's also a matter of convenience and efficiency. When the wood isn't fastened down, it's much quicker to pick it up, check it against your square or straightedge, replace it as is or turn it around, and carry on.

By offering these thoughts I certainly don't intend to provoke arguments with other woodworkers about their own workbench systems. The point is that every good workbench is the heart of a system or a tradition of woodworking. The details of its design and use are the direct, logical consequences of that whole system. When you design a workbench for your shop, you must align it with the totality of your own woodworking experience. ▲



IAN J. KIRBY
is a furniture designer
and teacher
with studios
in Connecticut.



JOHN KELSEY
is a writer
and occasional
woodworker
in Connecticut.



Clog-free sanding. Sanding sealers combine a soaplike lubricant with a finish to make sanding easier. The finish powders easily when sanded, so the sandpaper doesn't clog.

What you should know about **SEALERS**

Straight talk about a misunderstood finishing step

by **Bob Flexner**

There is probably no finishing step more confusing than sealing wood. Three very different products are commonly identified as wood sealers: sanding sealer, vinyl sealer and shellac. Sometimes, one of these is recommended by the finish manufacturer; other times, using these products is discouraged—the finish is “self-sealing.” Sometimes, one coat of a sealer is used, or the finish itself is thinned by half and used as a sealer. Other times several coats of a particular sealer are recommended. How can we make sense of these seeming contradictions?

What is “sealing”?

There is really nothing complicated about sealing wood. All finishes do it; you don't need a special product. The first coat of any finish runs down into the pores, cures and keeps additional coats of the same finish, or other liquids, from getting through. (Glue does the same, causing splotching when you apply a stain.) The first coat of *any* fin-

ish is therefore, by definition, the sealer coat; it seals the wood. All additional coats, no matter what type, are top coats: They lie on top of the sealer coat. ([See drawing, page 42.](#))

The paradox is that products we buy as “sealers” aren't primarily for sealing wood. The first coat will do this, of course, but the reason to use a “sealer” for the first, and sometimes second, coat is to accomplish something else—to make sanding easier, to achieve “hold-out” (partial filling), or to block or “seal off” oil, resin or wax in the wood that can interfere with finishing.

Sealers for Sanding

The most common reason for using a special sealer is to make sanding easier. The first coat of any finish locks raised wood fibers in place, causing the surface to feel rough after the finish cures. This roughness telegraphs through each subsequent coat of finish. It's easiest to sand off the roughness after the first coat of finish, because the finish is thin and eas-

ier to sand at this point. Once the roughness has been removed, each additional coat will cure smooth.

Most finishes, particularly lacquers and varnishes, are difficult to sand because they gum up the sandpaper. So manufacturers provide “sanding sealers”—special, easy-to-sand finishes for the first coat. Sanding sealers are like regular finishes, but with a soaplike lubricant added, usually zinc stearate. But they are commonly referred to and even labeled as “sealers,” and this causes confusion. It makes you think that their primary purpose is for sealing, not for sanding.

Sanding sealers speed production in situations where a large surface area has to be sanded after the first coat. You can achieve almost the same ease of sanding by thinning the first coat of finish about half with the appropriate thinner. This makes the resulting film thinner, so it cures harder faster, making sanding easier. (Easier sanding is the correct rationale for thinning the first coat—not achieving a better bond to the wood, as is often



Thicker isn't better. Too thick a coat of sanding sealer will weaken a finish significantly. The sealer will fracture if the finish receives a sharp blow, leaving a white mark deep in the film.

stated.) Alternatively, you can use a full coat of finish as the sealer coat and just spend a little more time sanding it smooth. (See sidebar.)

Applying more than two coats of sanding sealer (the first as a sealer coat, additional coats as top coats) is not wise, because the soaplike lubricant absorbs moisture and is soft. Sanding sealers are weak moisture barriers, and they scratch and fracture easily. (See photo, above.)

Sealers for "Holdout"

When finishing porous woods like oak, ash and mahogany, you may want to achieve partial filling without using paste wood filler. This is called "holdout." In most cases, you can achieve it more easily and at less expense by using a sanding sealer or a vinyl sealer, not the finish itself.

Sanding sealers fill better than finishes because the soaplike lubricant makes them higher in solids, and they are easier to sand off the surface. By sanding off some of the sanding sealer you create a surface with reduced pitting, which is the same as better holdout.

However, sanding sealer weakens the bond and the moisture resistance of finishes like polyurethane and catalyzed finishes. So, polyurethane, which is high enough in solids to produce good holdout on its own, is commonly used without a separate sealer (it sands easily enough). Catalyzed finishes are often applied over a vinyl sealer. A thin coat of vinyl sealer provides better holdout than a thin coat of the finish itself, without weakening moisture resistance, because of vinyl resin's unique characteristic of "cobwebbing," which causes

the sealer to lie more on top of the pores instead of "shrinkwrapping" into them.

When vinyl sealer is made with vinyl resin alone, it is very resistant to moisture. But it is gummy, so it is difficult to sand. Manufacturers sometimes add nitrocellulose, cellulose acetate butyrate (CAB), or zinc stearate to make sanding easier, but these reduce water resistance. (To my knowledge, no manufacturer tells us the relative qualities of its vinyl sealer.)

Sealers as a Barrier

Sometimes finish won't flow out, bond, or dry well because of oil, resin or wax in the wood. To prevent this, you can use shellac to block or "seal off" these substances. Shellac will flow out, bond well to and dry quickly over oil, resin or wax, as long as it is relatively freshly made—no more than about a year old.

Many refinishers routinely seal

stripped wood with shellac before applying a lacquer finish. This reduces the possibility of leftover wax from the stripper, or silicone oil from furniture polishes, interfering with the curing or flowout of the lacquer.

Any finish can be applied successfully over shellac (dewaxed shellac gives the best results) as long as the shellac is applied thin—a 2-lb. cut or less—and you scuff it first with fine sandpaper to dull it. But shellac is not especially easy to sand, and it weakens the moisture resistance of most finishes. ▲



BOB FLEXNER is the author of *Understanding Wood Finishing* (1994, Rodale Press, Inc., 33 E. Minor St., Emmaus, PA 18098).

SEALERS AND PRIMERS

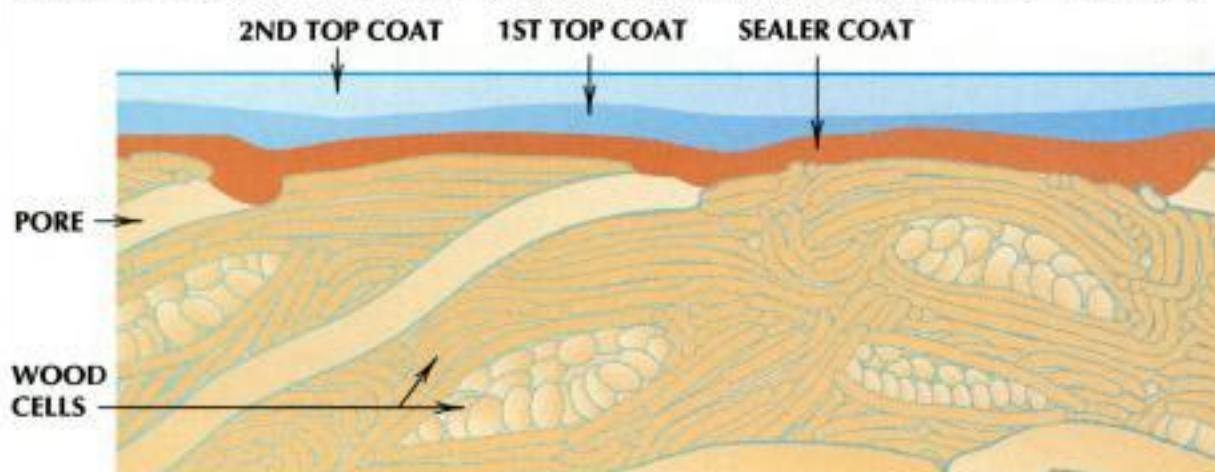
Part of the confusion about "sealers" is that they are often represented as equivalent to primers for paint. Because a primer should be used under paint, the assumption is that a sealer is required under a finish. But this is not true. Primers and sealers perform entirely different functions.

Primers are necessary because paint won't bond well to bare wood. Paint contains a high percentage of pigment (in order to cover well) and only enough binder to glue the pigment particles to each other and to an underlying smooth surface. Since wood is porous, and thus not smooth, more binder is required to achieve a good bond. Paint primer contains a higher binder-to-pigment ratio than does paint, so primer creates a smooth surface for subsequent coats of paint to bond to.

In contrast, finishes always bond well to wood because they are essentially pure binder. Sanding sealer, vinyl sealer and shellac do nothing to improve bonding. On the contrary, shellac that has not been dewaxed and any product that contains zinc stearate weaken bonding, because the finish doesn't bond as well to them as to the wood. In general, use the finish itself as the sealer, unless you need one of the special functions described in the main article. —B.F.

HOW SEALERS WORK

To seal wood means to stop up the pores so other liquids can't penetrate into the wood. The first coat of any finish does this as long as it isn't too thin. The first coat is, therefore, by definition, the "sealer" coat. All additional coats are "top coats."



make a Garden Trug

A simple greenwood basket with English country appeal

by Trish Walters



Greenwood for the garden. This English basket is a simple exercise in green woodworking. Boiled-and-bent slats are tacked onto a steam-bent frame.

Trugs are boat-shaped English farm baskets. They have been used to harvest fruit for many generations, and their name is older still—it comes from the Anglo-Saxon word for “trough.” My friend Peter Pearson is one of very few craftspeople still making trugs. Over years of trial and error, he has created a basket that is stronger than the originals yet faithful to the traditional form.

Like many traditional baskets, trugs are made from green wood. But unlike most baskets, trugs are not woven. Instead, Pearson creates the curved basket shape by nailing five thin, boiled-and-bent slats onto a simple, steam-bent frame. The finished product is light but sturdy, and capable of carrying quite heavy loads.

Materials

The trug’s frame—two rim pieces and a one-piece handle—is traditionally made of sweet chestnut saplings. Pearson, however, prefers ash. “It’s stronger than sweet chestnut,” he explains, “and if I cut it in the summer, the bark won’t come off.” Bark on the outside of the frame provides a pleasant contrast to the smooth slats inside. If you don’t have access to ash, hazel will also work. Choose a green log about 50 in. long and about 5 in. in dia.

The slats and legs are traditionally made of white willow, but you could also use birch. To make the slats and legs for one trug, you will need a green slab about 2½ in. thick, 5 in. wide and 3½ ft. long.

Copper nails and tacks hold the trug together. Copper is rust-resistant and malleable, so you can easily *clench* or pound over any points that protrude through the workpiece. For this project you will need ¾-in. and 1-in. copper tacks, and 1½-in. and 1¾-in. copper slating nails (available from Jamestown Distributors, Box 348, Jamestown, RI 02835, 800-423-0030).

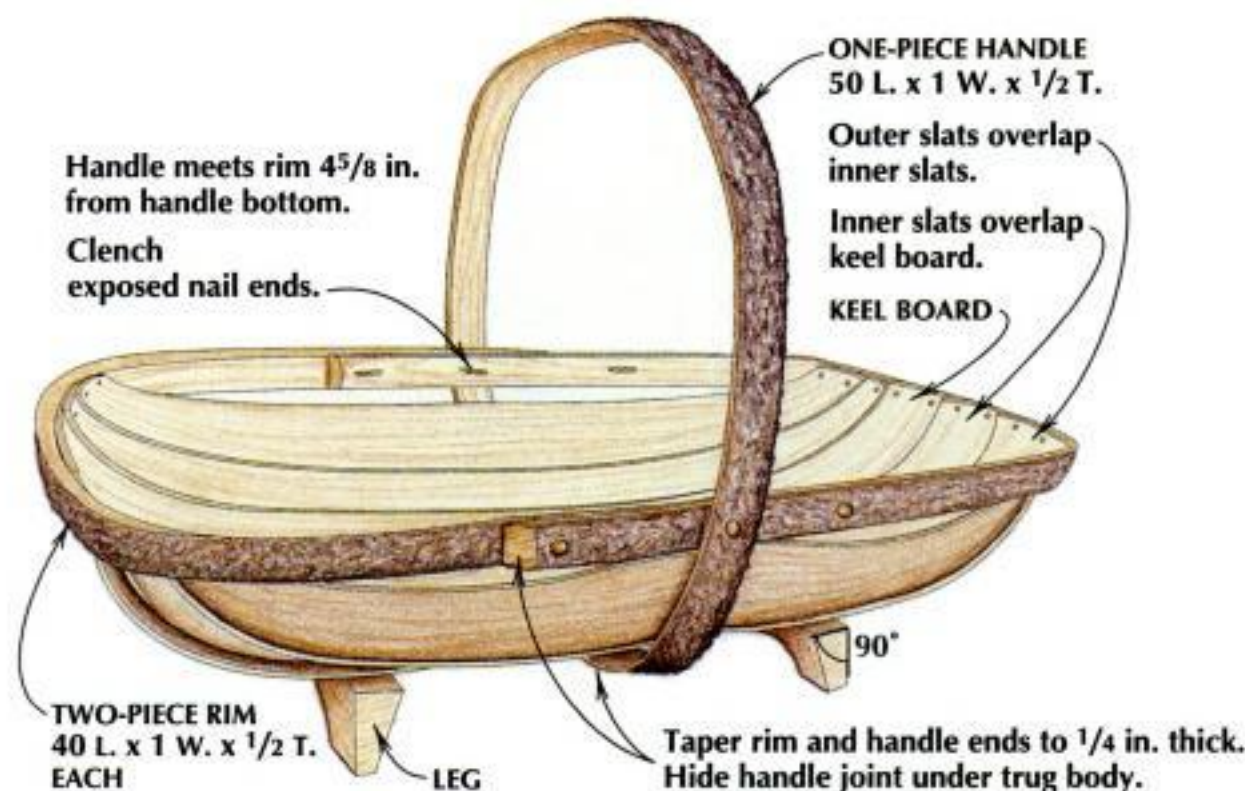
Making the Frame

To make the frame, you bandsaw strips from a green log, then steam them and bend them around one of two forms. (See Fig. 2.) Once the strips are dry, you assemble the frame by predrilling and tapping home copper tacks and nails.

Bandsaw several strips to the dimensions given in Fig. 1. (It’s always a good idea to cut a few extras, in case some break during bending.) Sand any jagged edges off each strip.

FIG. 1: GARDEN TRUG

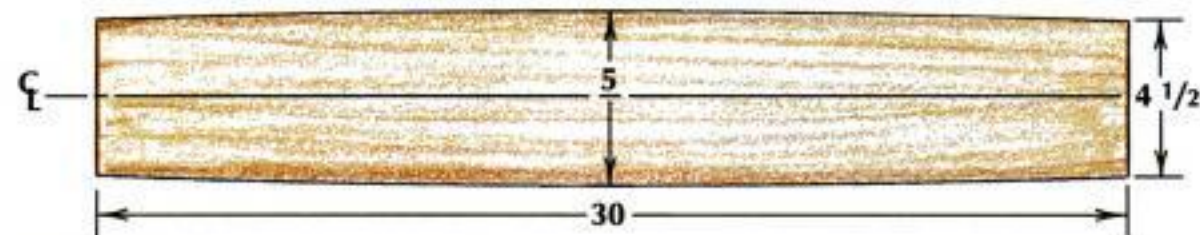
This English basket consists of a three-piece frame lined with five slats. The handle and rim pieces are steam-bent (see Fig. 2) and assembled to form the frame. Then the ends of each slat are boiled and bent, and each slat is individually tacked to the frame. Finally, the legs are bandsawn to shape and nailed to the finished trug.



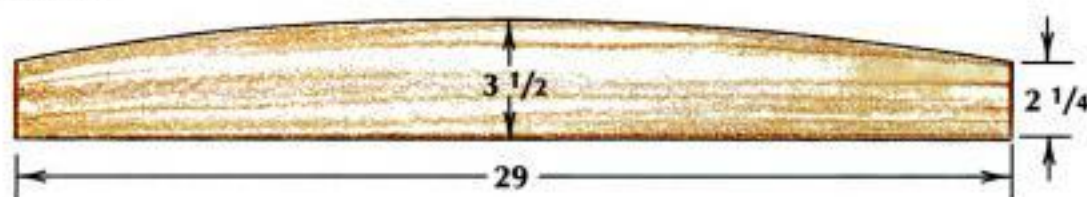
SLAT DETAILS

Five slats line the frame: a central "keel board," two inner slats, and two outer slats. All are 1/8 in. thick. The keel board is curved on both sides; each inner and outer slat is curved on only one side, where it overlaps the previous slat.

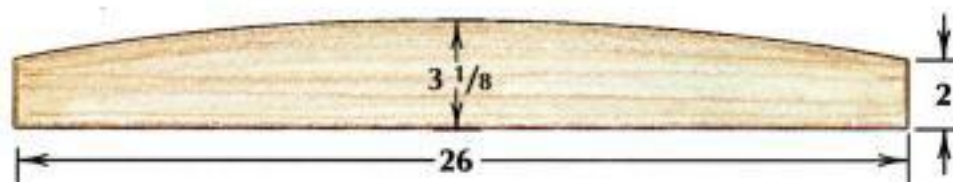
KEEL BOARD



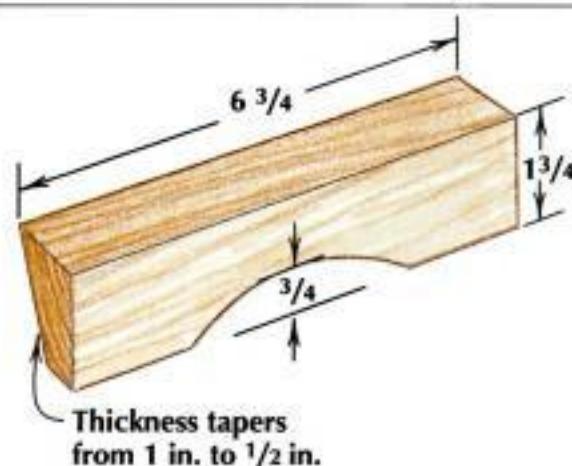
INNER SLAT



OUTER SLAT



LEG DETAIL



Next, steam the strips. Pearson uses a basic wooden box fed by a gas-heated water tank. You can rig up a wooden box with a couple of steaming kettles; or, for a more powerful steam box, see AW #43. Pearson's setup produces pliable strips in about 20 minutes. Yours may take longer. *Caution: Steam can burn you. Use gloves and tongs when removing your strips.* See AW #44 for more steam-bending tips.

Wrap the steamed strips around the forms and allow them to set there for a couple of days. (See top photo, Fig. 2.) They will dry more quickly in summer than in winter.

Now assemble the frame. The rim and handle are nailed individually with 3/4-in. tacks; then the two parts are joined with 1 1/2-in. copper slating nails to make the frame. Predrill for all the fasteners here. The two rim pieces should overlap about 4 1/4 in. at each side, while the two ends of the handle overlap about 4 1/2 in. (See Fig. 1.) Set the completed rim perpendicular to the handle, predrill and tap in the slating nails to form the frame. (See bottom photo, Fig. 2.)

Making the Slats

Traditional West Sussex trugs have seven slats, but Pearson's have five: the central "keel board," which is the largest; two inner slats; and two outer slats. (See Slat Details, Fig. 1.)

First, cut a 7-in. block off the end of your slab; you'll use this for the legs later on. (See Leg Detail, Fig. 1.) Then resaw the remainder into 1/8-in.-thick slats, and bandsaw these to shape. Leave them a little over length; you will trim them back after they're nailed to the rim. Plane the slats clean, and chamfer or sand the edges to ensure a smooth finish on the inside of the basket.

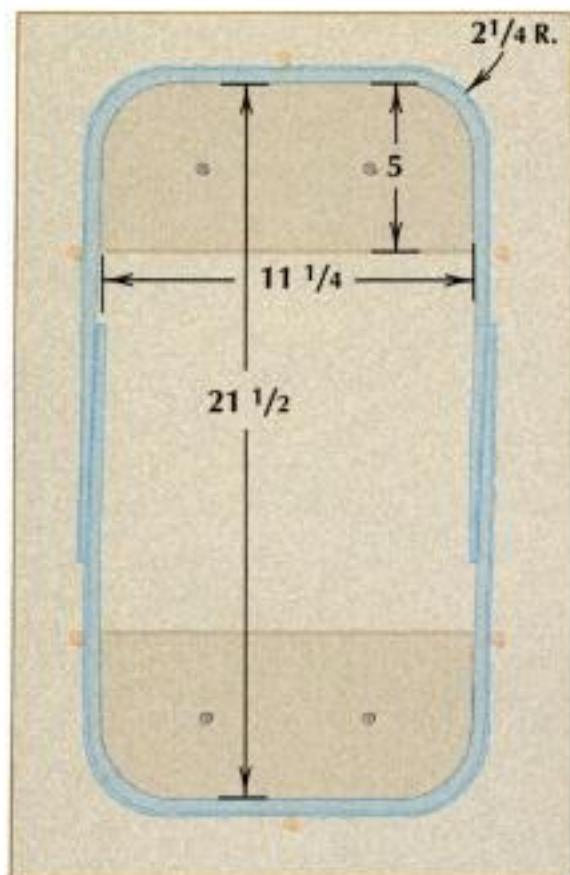
Boil, bend and apply the slats. This process looks simple but requires some dexterity. You dip each slat's ends in boiling water for about 10 seconds, and quickly bend each end around a log about 3 1/2 in. in dia. Then, while the ends are still pliable, you must quickly fit the slat into place and tack it to the frame. (See Fitting the Slats, opposite.)

Pearson begins with the keel board, centering it carefully on the frame and fastening each end with two 3/4-in. tacks. The curved edge of each inner and outer slat must slightly overlap the previous slat. (See Slat Details.) After fastening each end of the slat with two 3/4-in. tacks, he uses a knife to trim the

FIG. 2: STEAM-BENDING THE STRIPS

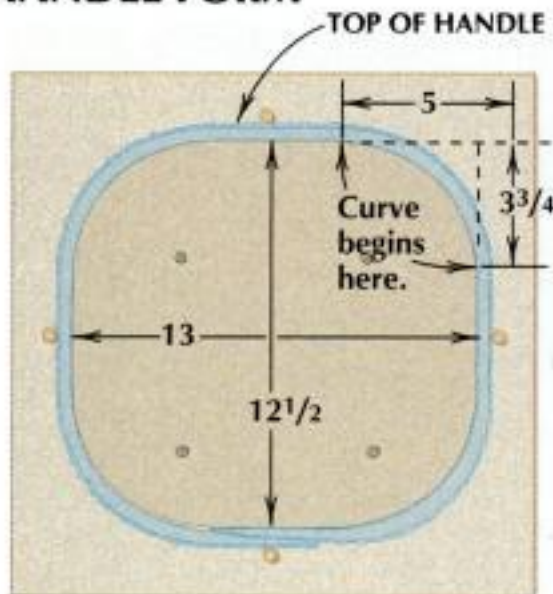
Steam the frame pieces—two rim pieces and a one-piece handle—until they are pliable, then bend them around these simple forms to dry. Pearson makes his forms from 1-in.-thick particleboard. Dowels hold the strips tight to the forms.

RIM FORM



Bend the strips. To shape the steamed strips, wrap them around the bending forms and let them dry. Dowel pegs hold the strips in place.

HANDLE FORM



Assemble the frame. Join the handle to the rim with 1 1/2-in. copper nails. Clench, or bend over, the ends of the nails so the joint will hold.

ends flush with the rim. On the outer slats, Pearson uses the longer 1-in. tacks for extra strength.

Finally, the Legs

Bandsaw the legs to shape (see Leg Detail) and sand them clean. Then fasten them to the trug body with 1 3/4-in. slating nails. Pearson holds the legs upright in a slotted piece of plywood.

Even if you don't garden, there are a thousand uses for trugs. Filled with

flowers or fresh fruits and vegetables, they make excellent centerpieces. And filled or not, they make lovely gifts. ▲



TRISH WALTERS is a freelance writer and photographer in England.

FITTING THE SLATS



Bend the ends. Dip the ends of each willow slat into boiling water, then quickly bend them around a log.



Nail the keel. Center the keel board carefully in the frame, and fasten it with copper tacks.



Four more slats. Install the remaining slats, overlapping each slightly over the previous slat.

Trugmaking courses available. Peter Pearson would like to train North Americans in the art and business of trugmaking. To inquire, write: Peter Pearson, 17 Marlebrook Way, Roden, Telford, Shropshire TF6 6BN, England.

INLAYING BANDING

Jazz up your work with multicolored wood strips

by Sandor Nagyszalanczy



All dressed up. Banding adds a striking accent to just about any woodworking project. You can inlay it into boxes, tabletops, drawer fronts and more.

Banding is to woodwork as racing stripes are to sports cars: Both can add pizzazz to an already attractive form. Glued into routed grooves, these thin, decorative strips made from contrasting woods can lend definition to the edges of tabletops, legs and drawer fronts. They can also accent drawer pulls, or spiff up a box or chest lid as shown in the photo above.

Most banding designs involve straight lines, but you can also create gentle curves. You can bend 1/8-in.-wide banding to about a 12-in. radius without breaking it. In addition to its decorative applications, banding can be used to hide nail or screw holes, or seams such as the one between a plywood top and its solid-wood frame.

In this article, I'll show you my techniques for cutting the grooves and trimming, fitting and inlaying bandings. The sidebar on page 49 explains how to make a simple banding.

Design and Planning

Inlaying banding is fairly simple: You rout shallow grooves using a straight bit the same diameter as the width of the banding. After cutting banding pieces to fit the grooves, you glue them in place and then scrape or sand them level.

You can create all kinds of designs with banding. But avoid inlaying banding across solid-wood panels wider than 12 in.; the banding might buckle as the panel expands and contracts. Inlaying banding in wide veneered panels is fine.

Carefully calculate how much banding you'll need for your design. To allow for miscut parts, buy at least 25% more banding than you think you'll need.

If you want a banding's repeating motif to look the same at every corner, you'll have to space out the elements accordingly in your design. If you plan to do this, order yet another 25% extra to play with.



Groovin'. The author uses a laminate trimmer to rout the grooves for inlaying banding, but any router will do. An adjustable router fence guides the cut.



Chiseling the corners square. A chisel squares up the groove's rounded corners. Use a bent-tipped razor knife to lift the waste piece from the corner.

Cutting the Grooves

To prepare for groove cutting, first plane or scrape your workpiece level, then sand it smooth. If your pattern has corners or stopped grooves, mark these locations with a sharp pencil. Clamp the workpiece firmly to the benchtop.

You can cut the grooves with any router, but I prefer to use a laminate trimmer, which is really just a small fixed-base router. I just tip the base to lift the bit in and out of grooves that stop short of an edge. A router fence like the one shown above is great for making straight grooves that run parallel to an edge, but you could just use a straight piece of wood clamped to the workpiece. To rout curved grooves, use a circle-cutting jig.

Adjust your router so that its depth-of-cut is about $\frac{1}{64}$ in. shy of the banding thickness, which is typically $\frac{3}{64}$ in. This makes it easier to sand the banding flush to the surface afterward.

Always test the depth-of-cut and router-fence settings on a piece of scrap first, to prevent nasty surprises when cutting into your workpiece.

Rout cross-grain grooves first, then rout with the grain. This prevents tearout at groove intersections. As you cut, press the router fence firmly against the edge of the workpiece or, if you're using a straight board for a fence, keep the router pressed against it. End stopped grooves slightly short of your marks, to avoid the risk of overcutting. After each cut, sand away any fuzz raised by the cutter at the edges of a groove, so the router base won't catch during subsequent cuts.

Square up corners and the ends of stopped grooves with a sharp chisel. Square off the ends of very narrow stopped grooves using a narrow knife tip. To help remove tiny corner waste pieces, I use a razor knife with a bent blade like the one shown above. To bend the blade, heat it over a propane torch or a stove burner, then bend it to a 45° angle with a pair of pliers. The knife is also handy for removing banding from the groove during the fitting process, as I'll discuss later.

Fitting and Leveling the Banding

Fit the banding into the routed pattern by cutting individual sections to length—mitering their ends if desired. Start by trimming one end of the first piece. You can saw it in a small miter box, then slice it with a razor knife. But if you plan to inlay a lot of banding, I suggest making a trimming jig. (See sidebar, page 48.)

Lay the banding in the groove with the trimmed end against one end of the groove, then mark the other end of the banding to length. For precision, use a knife instead of a pencil.

You can glue banding pieces in one at a time as they're cut, or you can fit all the pieces first, then glue them in. Either way, work in sequence around the pattern. When fitting, check the length carefully and trim if necessary. And don't press the banding all the way in when fitting it.

If you have trouble removing a piece during fitting, don't pry it out along an edge. Instead, try working your bent-tipped knife under an end. Or try lifting

BANDING STYLES

Banding comes in many styles. It's commonly available in 36-in.-long strips, typically about $\frac{3}{64}$ in. thick and $\frac{1}{16}$ in. to $\frac{3}{4}$ in. wide.

The simplest banding is a line of a single color. Some traditional banding patterns, such as three-stripe and herringbone, contain two contrasting woods. These are often seen on American or English period furniture. More elaborate patterns may display up to a dozen different woods of natural or dyed colors. Use showy checkerboard, diamond or twisting vine patterns judiciously, so as not to overwhelm the work. —S.N.



A SHOP-MADE BANDING TRIMMER

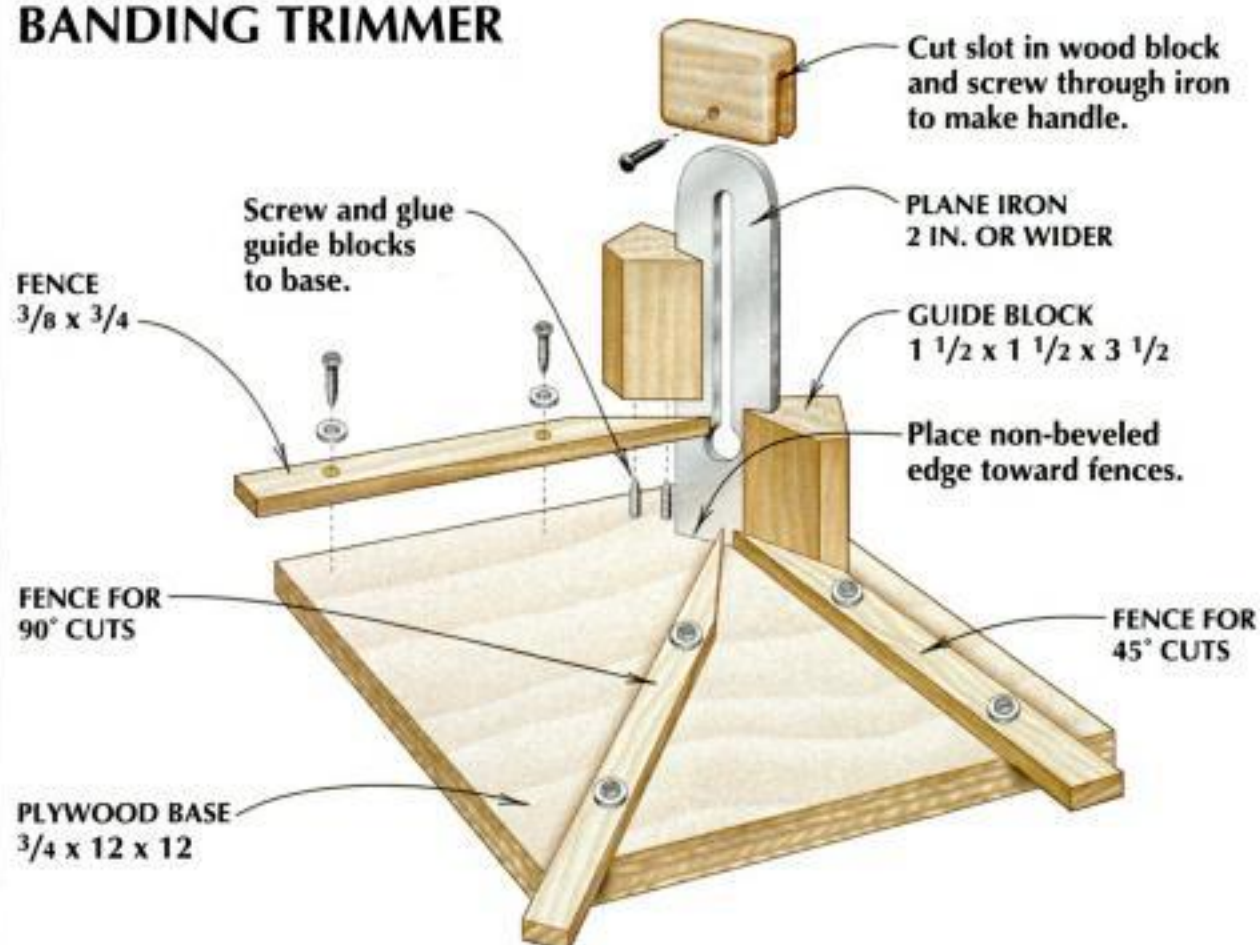
To cut banding, I made a trimmer that slices it quickly and cleanly with a guillotine-type action. The trimmer is made from a 2-in. plane iron, some maple and a piece of plywood. It can deftly trim just a gnat's hair from the end of a banding segment, if necessary.

A few notes on construction: The plane iron should fit snugly in the groove, yet slide easily. (Paraffin on the edges of the

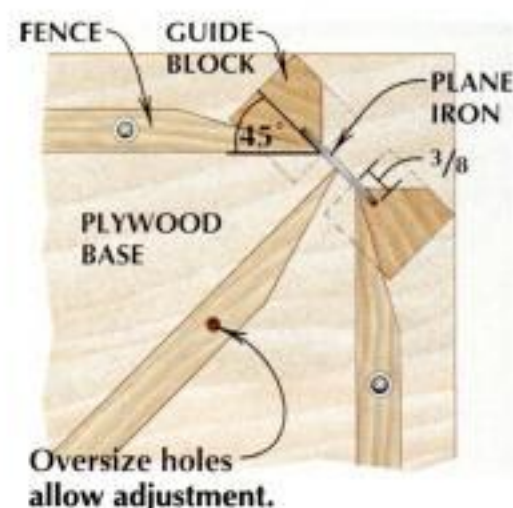
iron helps.) The fences are set at 90° and 45° to the blade, but they can easily be remounted for trimming other angles. They're screwed to the plywood through washers and oversized holes, to allow for fine angle adjustment.

To use the jig, hold the piece of banding against the appropriate fence, align your cutting mark with the blade and press down gently on the handle. —S.N.

BANDING TRIMMER



PLAN VIEW OF CORNER



it out with a razor knife after stabbing straight down into the banding. Orient the blade with the grain of the wood. You can putty the stab wound later.

After you've fit all the pieces, remove them and squirt a narrow bead of yellow glue into each groove with a glue syringe. Then carefully press each piece

into its groove, starting from one end and working along its length. I use a dowel to "roll" each segment into place. Be careful not to twist the banding as you press it down. It should sit snug in its groove without clamping.

Once the glue is dry, level the banding flush with the workpiece. You can scrape or sand it, but don't use a hand plane, which is likely to tear it up. When scraping, use a sharp, well-tuned cabinet scraper. When sanding, you can use a wood or hard rubber sanding block, but I use a shop-made "sanding plane." (See photo, left.) You can also level banding very quickly using a random-orbit sander fitted with a 120-grit disc on a stiff backing pad. But don't power-sand too enthusiastically or you may sand through the banding.

Finishing

Before finishing, scrutinize your work for gaps between the banding and its grooves, where a router or chisel might have slipped. Patch or putty these first, then spot-sand the area smooth.

You can apply almost any clear finish over banding, but film-type finishes such as lacquer or varnish provide better sealing and protection than penetrating finishes such as Danish oil or tung oil.

Staining a workpiece without ruining the banding can be tricky. Traditional methods include masking the banding with narrow tape or soaking the banding in shellac before glue-up. But with these methods, I've found that the color often bleeds through—particularly with dyes. I've had better success fitting and leveling the banding, then lifting it out and staining the background before gluing the banding. (Don't stain the grooves.) This method produces pristine bandings that are ready for a clear coat. ▲



Leveling the banding. Level the banding flush to the workpiece by scraping or sanding. Here, the author uses his shop-made "sanding plane."



SANDOR NAGYSZALANCZY is a furniture designer/craftsman and author of several woodworking books.

MAKING A SIMPLE BANDING

by Will Neptune

When many people see banding for the first time, they envision a craftsman with tweezers assembling it from tiny pieces of wood. Actually, bandings are slices ripped off of a laminated board of contrasting woods, called a "log." Making most bandings simply involves accurate tablesaw work. Some complex bandings involve slicing, dicing and flipping the laminations numerous times, but the principle is the same.

Making a simple banding, like the one on the box on page 46, is not very difficult. The sequence is shown in the drawings

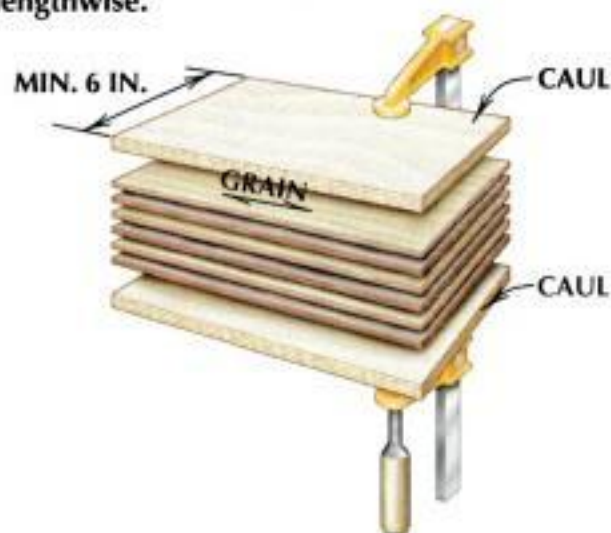
below. A couple of important points: When laminating the stock, always orient it so that the finished banding will display face grain, not end grain. This provides a better gluing surface and prevents the banding from buckling due to dissimilar expansion and contraction between face grain and end grain pieces. Regular yellow glue is fine for assembling banding.

WILL NEPTUNE teaches woodworking at the North Bennet Street School in Boston, MA.



STEP 1

Thickness-plane and laminate alternating woods for the banding core. Orient all grain lengthwise.



STEP 2

Rip slices of the desired thickness from the end of the blank.



STEP 3

Tightly stretch masking tape upside down on your bench. Lay slices flat, tightly next to each other, on the tape. Release one end of the masking tape, then apply veneer tape to the top of the strips.



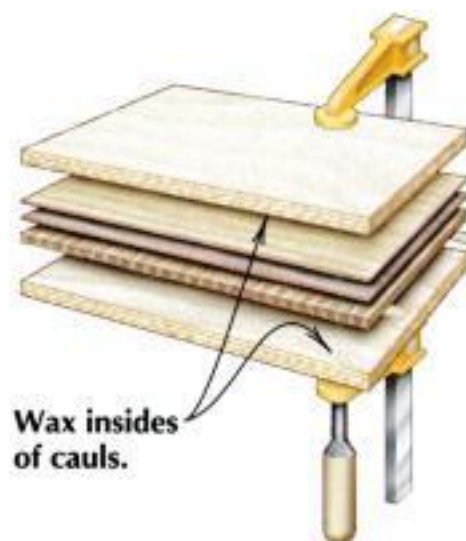
STEP 4

Remove the masking tape and hang the strips over the edge of the bench as you apply glue in each joint.



STEP 5

Glue the veneers to the untaped side of the strips.



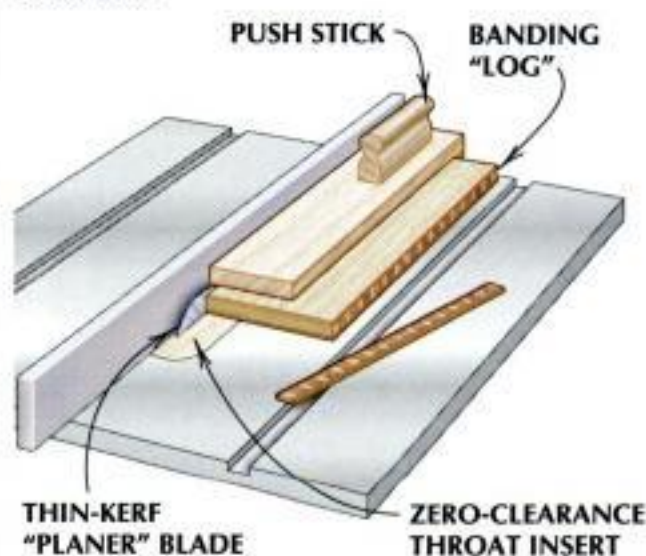
STEP 6

Remove the veneer tape and glue the veneers to the opposite side.



STEP 7

Rip 1/8-in.-thick banding strips from the edge of the "log," using a push stick that straddles the blade.



SOURCES

Bandings and veneer tape are available from the following mail-order sources:

Constantine's (800) 223-8087 Circle #601

Lee Valley (800) 871-8158 Circle #602

Woodcraft (800) 225-1153 Circle #603

The Woodworker's Store (800) 279-4441 Circle #604

Napkin Rings

Simple table accents you can make without aftermarket lathe chucks

by Barnett C. Howard

A nice napkin deserves an equally nice napkin ring—made from wood, of course. Here's a method I worked out for turning napkin rings and wooden bracelets without using an expensive aftermarket lathe chuck. All you need is a lathe with a faceplate, a Jacobs-type chuck for your tailstock, and some basic turning tools.

Preparing Blanks and Plates

You can make napkin rings from scraps of just about any kind of wood. I've used maple, pine, myrtle, walnut, oak, and other hardwoods. To make a blank, use the flat side of any board 1 or more in. thick and 3 in. square, cut to rough circular shape. You'll also need softwood scrap to make the wooden backing plate that holds the ring blank. Each backing plate should be flat-sided, 1 in. thick and 1 in. wider than the diameter of your faceplate. Saw your backing plates into rough circles—one for each napkin ring you plan to turn.

Fasten each backing plate to your faceplate with lag screws, and turn it true. When you've got all the backing plates you need, glue a ring blank to each one. Don't glue the two parts directly together; instead, glue a layer of paper grocery bag between the backing plate and the ring blank. This allows for safe turning and drilling, but lets you separate the ring blank quite easily. Locate the ring blank as close to the center of the backing plate as possible.

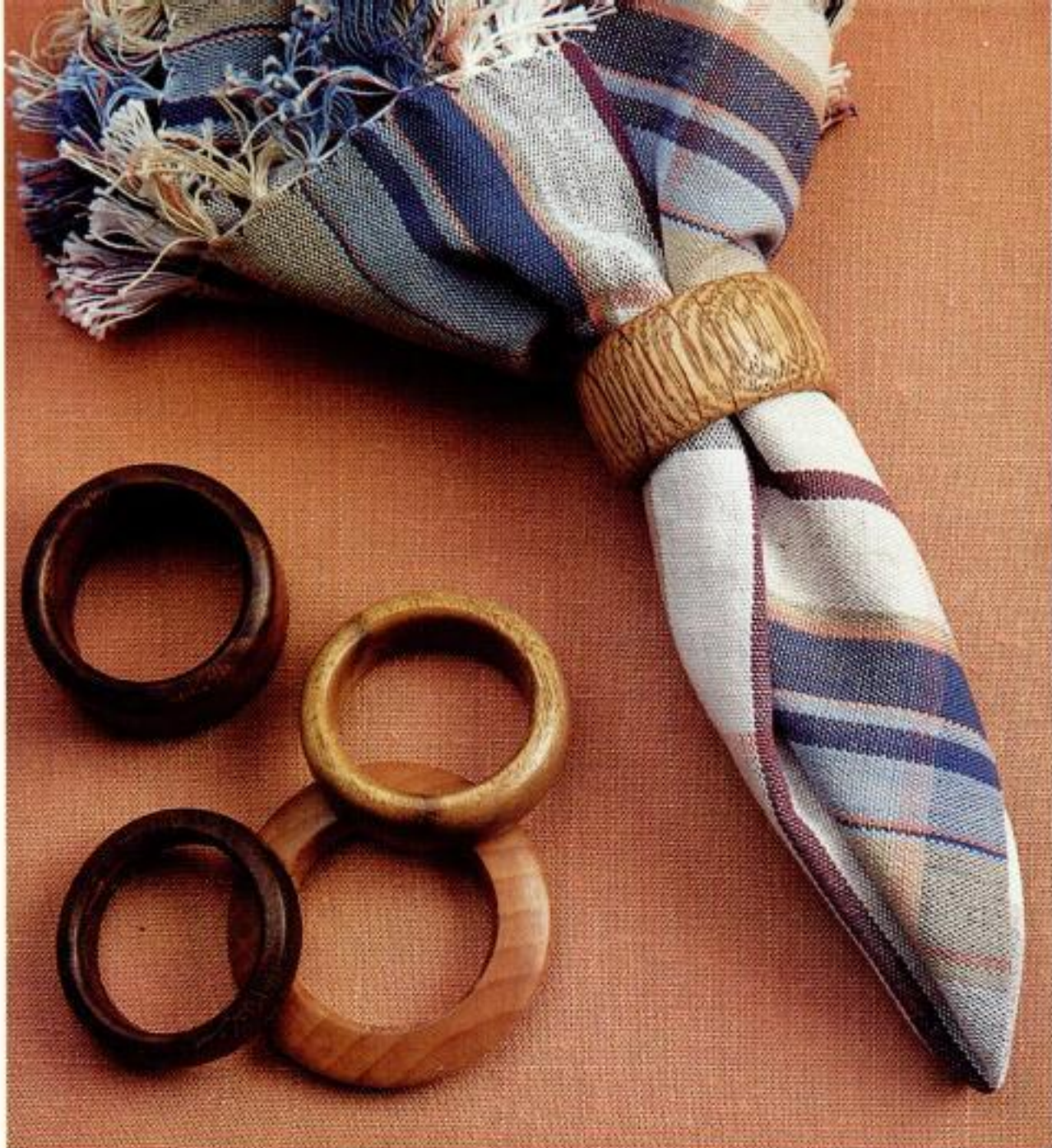


Table manners. Faceplate and jam-chuck turning can transform wood scraps into beautiful accents for your dining table.

First Turns

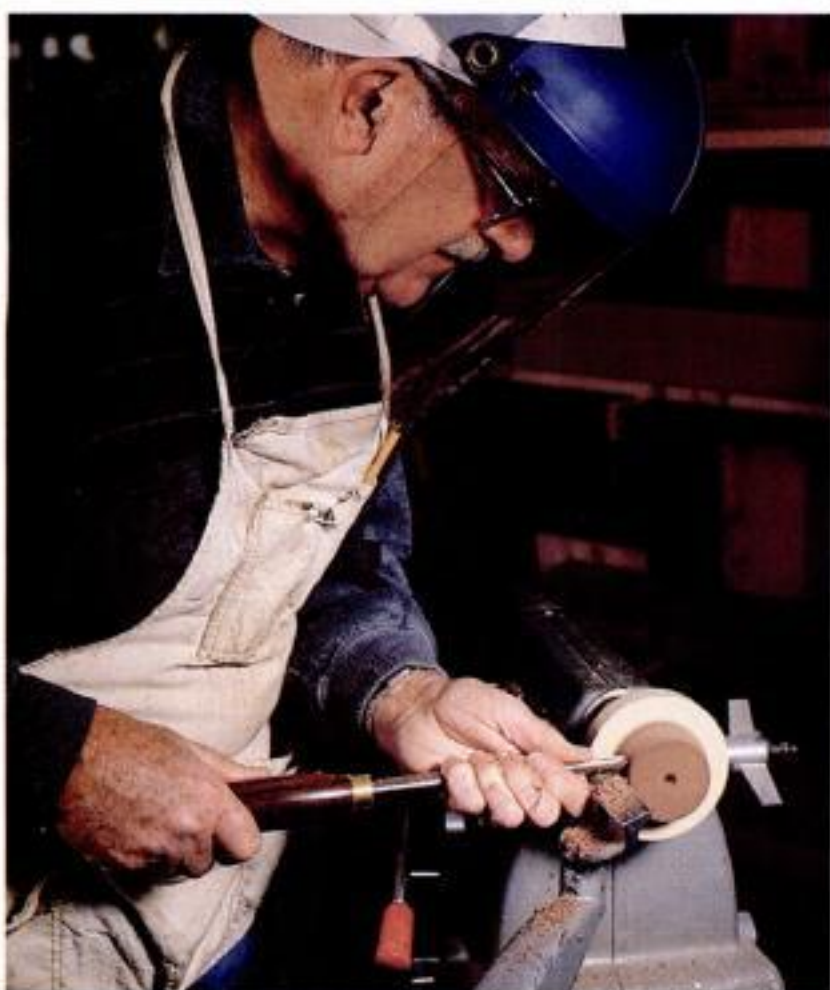
After the glue has dried, remount one of your backing plate/ring blank assemblies on your lathe's faceplate. Use a gouge to turn the ring blank to a cylinder. Then use small gouges or a skew to form the desired profiles on the outside and outer end of the napkin ring. (See Step 1 photo, opposite page.) There's no need to risk catching a tool against the backing plate by working too close to it; you'll finish turning the rest of the piece later.

Now chuck a large bit in your tailstock arbor—I use a 1³/₈-in. Forstner. With your lathe spinning at its lowest speed, bore a hole through the ring blank and barely into the backing plate. (See Step 2 photo.) After boring the hole, use a chisel to gently split the ring blank away from the backing plate. (See Step 3 photo.) Then unscrew the backing plate, attach a fresh backing plate and ring blank to the faceplate, and turn as before. When you've turned and separated all your ring blanks, it's time to make a jam chuck.

Making and Using a Jam Chuck

To put the finishing touches on your napkin rings, you'll need to mount each ring on a "jam chuck." This kind of chuck does just what its name suggests, holding a workpiece that is jammed onto it. I made my jam chuck from some 2x6 cedar stock. Glue two squares together, cut this 3-in.-thick block roughly round, and mount it on the lathe faceplate with lag screws. Turn the block round, true up the outside face, and cut a 1/8-in.-deep recess that exactly matches the diameter of your faceplate. When you reverse and remount the block, the matching recess ensures that your finished jam chuck will always run true.

Once the recess is cut, reverse the chuck blank, fitting the faceplate into the recess and securing it again with lag screws. Now you can begin forming the peg, or "mandrel," that will fit tightly inside your workpiece. When you're finished, you'll have a wooden peg with a gently sloping diameter. At the peg's end, the diameter should be about 1/16 in. less



Step 1: Detail the outside. Using small gouges or a skew, finish up as much of the ring's outside and outer end as possible. Paper, glued between the ring blank and the wooden backing plate, creates a bond that holds well but can be easily broken later.



Step 2: Bore out the center. With a 1 3/8-in. Forstner bit chucked in the tailstock and the lathe spinning at its slowest speed, drill through the ring blank and just slightly into the backing plate.



Step 3: Free the ring. Use a chisel to gently break the paper bond between the ring and the backing plate.



Step 4: Chuck it backwards. Mount the ring on a shop-made wooden "jam chuck." A flat pushpad in the tailstock pushes the ring evenly onto the chuck.



Step 5: Finish the end. Detail the unfinished end of the ring with gouges or a skew. The jam chuck holds the ring securely by friction.



Step 6: Smooth the inside. Lightly sand away the drill marks on the inside of the ring, using a small sanding drum wrapped with 320-grit paper.

than the diameter of your napkin-ring hole. At the peg's base, the diameter should be about 1/16 in. greater than that of your ring hole. Use one of your drilled ring blanks to test for diameter and slope. When properly fitted, the peg should not project through the ring blank.

After completing my jam chuck, I rigged up a wooden pushpad so it would be easier to mount each ring blank evenly. (See Step 4 photo.) The pad is simply a wooden backing plate with a 1/4-in.-dia. hole drilled at its center to accept a 1/4-in. by 2 1/2-in. carriage bolt. Wax the face of the backing plate and

chuck the carriage bolt into the tailstock arbor. Then, with the jam chuck turning at low speed, move the pushpad to gently push the ring blank onto the jam chuck. Be careful: I split a few blanks by pushing them too far onto the peg.

Finishing Up

Now run the lathe up to turning speed and finish turning your napkin ring. (See Step 5 photo.) You can finish-sand the outside of the ring while it's still mounted on the mandrel. You can sand the inside of the ring by hand, by wrapping 320-grit sandpaper around a

dowel, or by using a 1-in. sanding drum in a drill press. (See Step 6 photo.)

I've tried many stains and finishes on my napkin rings, but simple is better. A coat of Danish oil, followed by carnauba wax, illuminates the grain beautifully. ▲



BARNETT HOWARD

is retired and works wood in Oregon.

Two-Way Table

Clever leg assemblies support the top at dining or coffee-table height

by Bill Rusk



Twice as nice. Thanks to leg assemblies that work in two modes, this dining table can also work as a coffee table.

One tabletop with two table heights. The request came from a customer, and the design started to evolve as I sketched a pair of short-legged sawhorses to support an elliptical tabletop. With the horses standing conventionally, the top would be at coffee-table height. But with both horses standing on end beneath the top, you'd have a dining table.

Sawhorses wouldn't do as table supports, however—too clunky in appearance, and too obstructive of legs belonging to people and chairs. After many refinements, I had what I wanted: a pair of L-shaped leg assemblies that work in low and high modes. There are no fasteners to hold the legs to the top. Instead, the leg assemblies bear against simple alignment blocks. Gravity, and the opposing forces of the legs, does the rest. (See Fig. 1.)

Making the Top

The table shown here is made from cherry, though any hardwood will work equally well. I recommend quartersawn wood for the top because it's more likely to stay flat over time. The top is cut to form an ellipse 51¼ in. long and 47½ in. wide—just about right for seating six people. Make the longer axis of the

ellipse parallel to the grain of the top.

After gluing up quartersawn boards to make the top blank, flatten both sides of the blank in preparation for cutting out the ellipse shape. If you plan on making more than one table, make a full-size hardboard template of the ellipse so that you can template rout the top to final size.

There are lots of ways to draw an ellipse. I use the string method. (See Fig. 3.) If you're not planning on template routing the top, draw your ellipse directly on the top blank, then jigsaw the shape and clean up your edges with planes and spokeshaves. *AMERICAN WOODWORKER* also featured an ellipse jig that lets you cut elliptical shapes with a router. (See AW #31.)

To template rout the ellipse, lay it out on $\frac{1}{4}$ -in.-thick hardboard. I equip my router with a $\frac{11}{16}$ -in. guide bushing and a two-flute, $\frac{1}{2}$ -in.-dia. carbide bit. The offset created by the guide bushing produces a top about $\frac{3}{16}$ in. larger than the template. Clamp the template to the blank, then rout a series of shallow passes around the template, running the guide bushing against its edge. To avoid taxing the router, lower the bit about $\frac{1}{8}$ in. with each pass. Eight passes will get you all the way through the blank, freeing up your tabletop.

Once you've completed the template routing, shape the bullnose around the top's edge, using a piloted $\frac{1}{2}$ -in. round-over bit. To reduce the chances of tearout, it's a good idea to round over each corner of the edge in two passes—a deeper initial pass followed by a shallow, cleanup pass that removes no more than $\frac{1}{16}$ in. Now, smooth the edges with some 180-grit sandpaper.

Joining the Leg Assemblies

You'll need about 25 lineal ft. of $1\frac{7}{8}$ -in.-square stock for the leg assemblies. This makes the milling process easy. Through dovetails and mortises and tenons join the assemblies.

It's important when making the leg assemblies that the parts are identical. This way, you can fit the assemblies in either of the alignment blocks under the table. For accurate assemblies, your joinery must be dead-on.

Start with the corners, which are joined with single through dovetails. (See Fig. 2.) I like through dovetails because they're beautiful and sturdy. For accuracy, I cut these relatively large

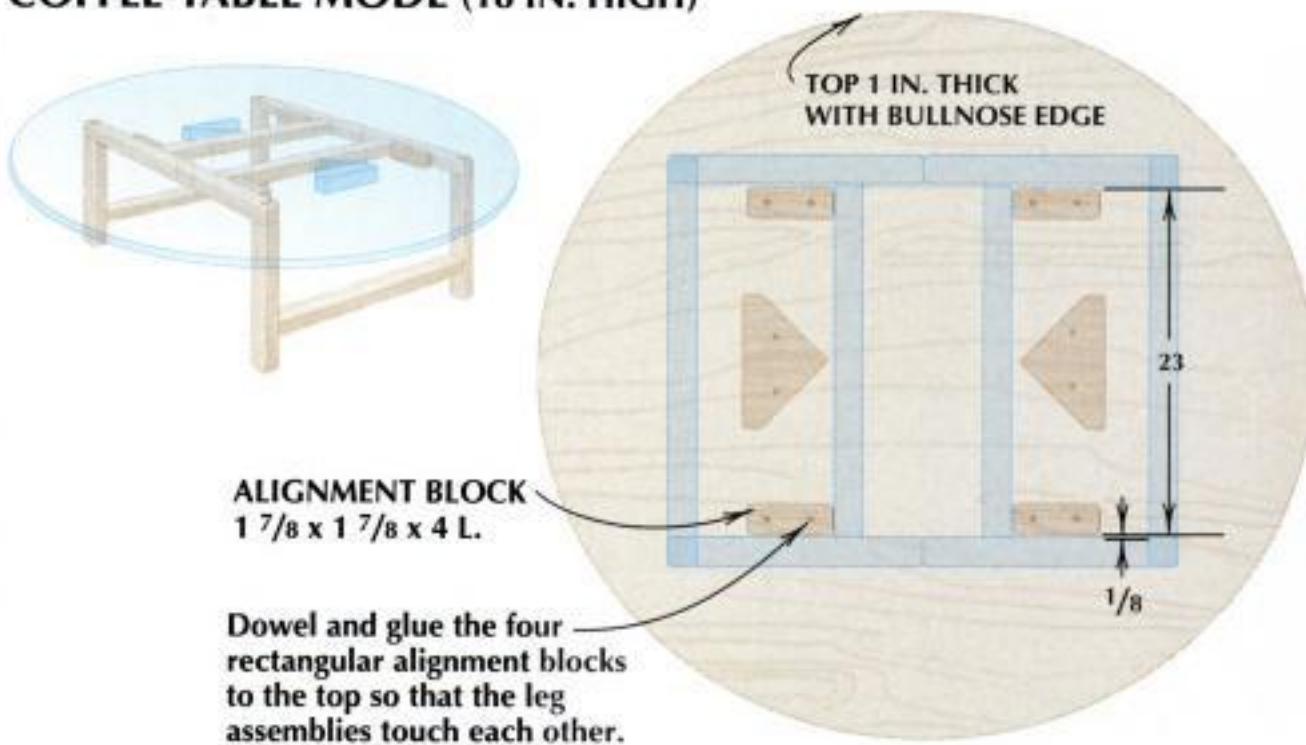


Coffee time. To lower the table, simply reposition the leg assemblies.

FIG. 1: HOW THE LEG ASSEMBLIES WORK

You can change the table's height by repositioning the leg assemblies.

COFFEE-TABLE MODE (18 IN. HIGH)



DINING-TABLE MODE (28 IN. HIGH)

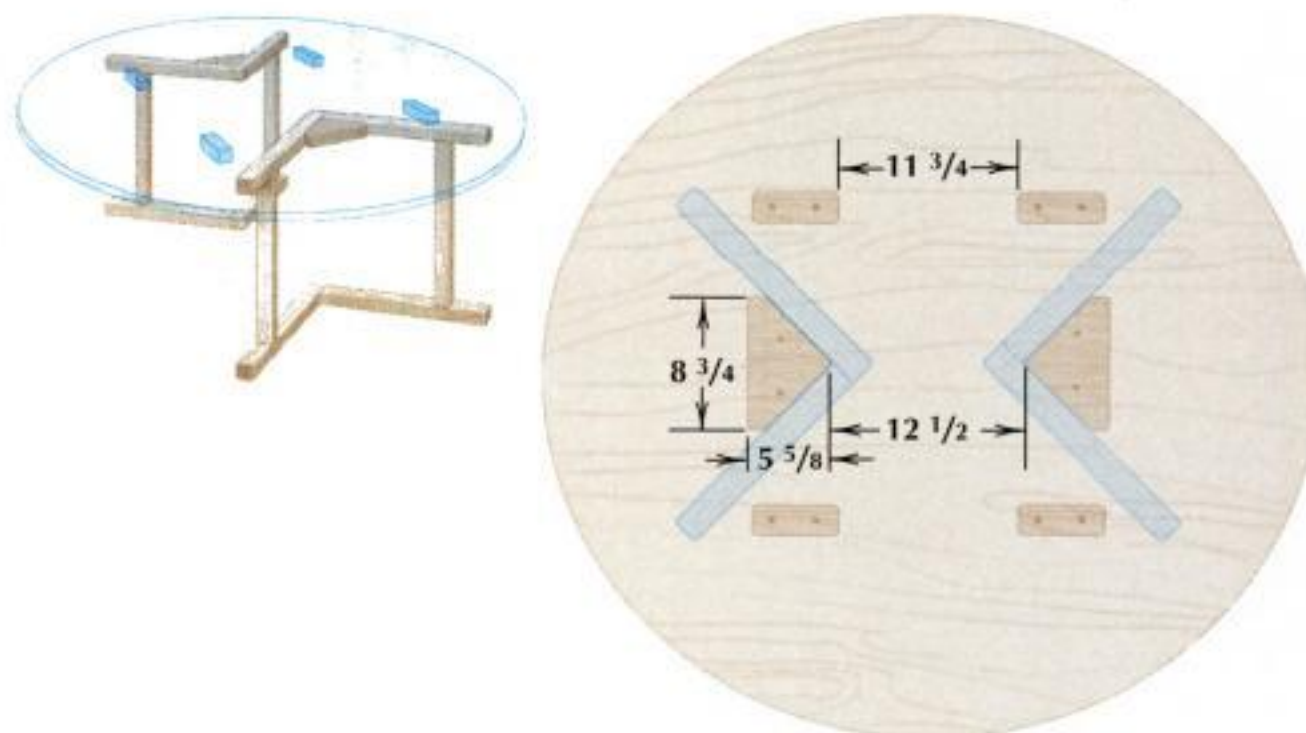
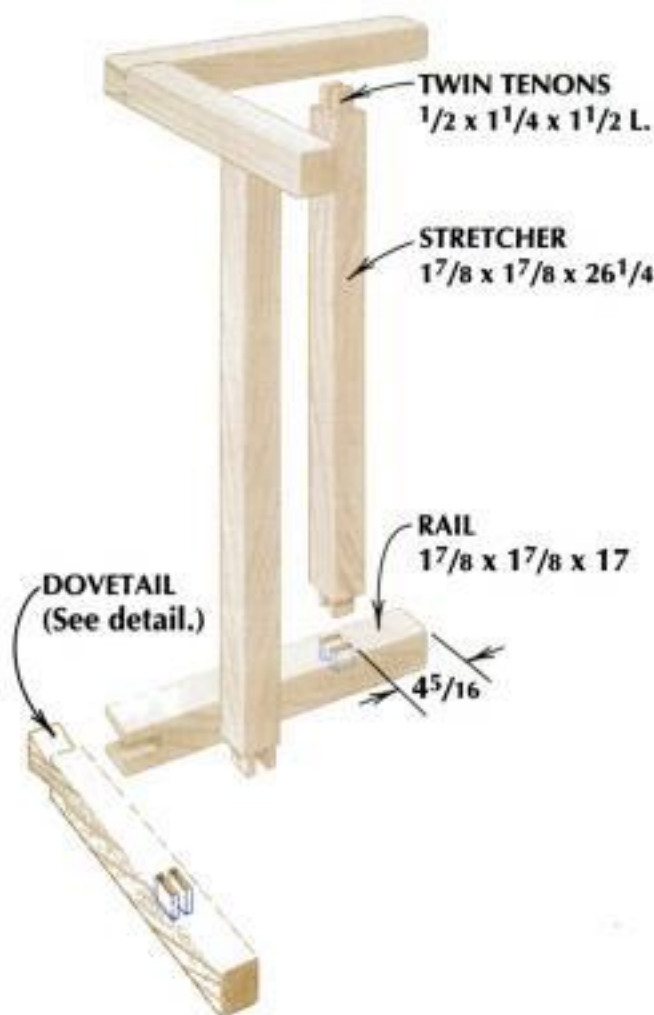
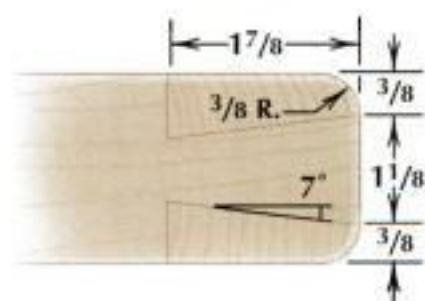


FIG. 2: LEG ASSEMBLY

Each leg assembly requires about 10 ft. of 1⁷/₈-in.-sq. stock.



DOVETAIL LAYOUT



joints on the tablesaw and with a router. (See sidebar, opposite page.)

To mill the twin mortises, I use an edge guide and a straight bit in my plunge router. If you're going to rout the mortises, gang-clamp the eight rails with an eye to the correct orientation of their tails and sockets. This way, they'll be identical. Then mortise each rail individually, clamping hardboard scraps at each end of the mortises to stop the router at the correct distance. (For more information on mortising with a plunge router, see AW #57.)

After you've cut the mortises, gang-clamp the eight pieces again and square the ends of the mortises with a chisel.

Next, I go to the tablesaw to cut the tenons on the stretchers. I make the shoulder cuts first, laying the stock flat and pushing it over the blade with a miter gauge. Then I clamp the stock vertically in the same tenoning jig that I

use to cut the dovetails (see sidebar, opposite page) and I saw the cheeks and the sides.

Before you glue up the leg assemblies, round over the ends of the rails. I use a 3/8-in. round-over bit on the router table. Using the router table gives me better control and avoids tearout on the ends of these pieces. Once you've glued up the assemblies, finish rounding over their edges with a hand-held router.

Aligning the Top to the Base

The alignment blocks locate the leg assemblies to the top, allowing you to position the legs in either dining-table or coffee-table mode. (See Fig. 1.)

Cut the six blocks from 1⁷/₈-in.-thick stock, then round over all edges except those that will contact the tabletop.

It's important to attach the blocks to the top in the correct position. The two homeplate-shaped blocks are spaced 12¹/₂ in. from each other, centered on the long axis of the table. (See Fig. 1.)

To locate the four rectangular blocks, pencil in the short axis line on the underside of the top, so the table is divided into two equal halves. Position the leg assemblies on the top in coffee-table mode, centered along the long axis and with their ends touching each other. (See Fig. 1.) Place the blocks in position, leaving about 1/8 in. between the blocks and the assemblies to allow for wood movement in the top.

Once the blocks are positioned, drill through them and into the top for the dowels. The dowels help to align the blocks in the exact position for glue-up.

Glue the blocks in place, placing some weight on each block to clamp it while the glue sets.

A Tough Enough Finish for Food and Beverages

I used a polymerized tung oil to finish the table, wiping on several coats by hand. It imparts a natural look to the wood, and it cures hard for a protective finish. Polymerized finishes can be tricky to work with since they dry relatively fast. If you opt for another finish, I recommend varnish or lacquer for durability since the top will see a lot of wear in normal use.

Dinner or Coffee?

Set up the table in dining-table mode by standing the leg assemblies on end, about a foot apart. Then lift the top onto the assemblies and align the blocks against the assemblies.

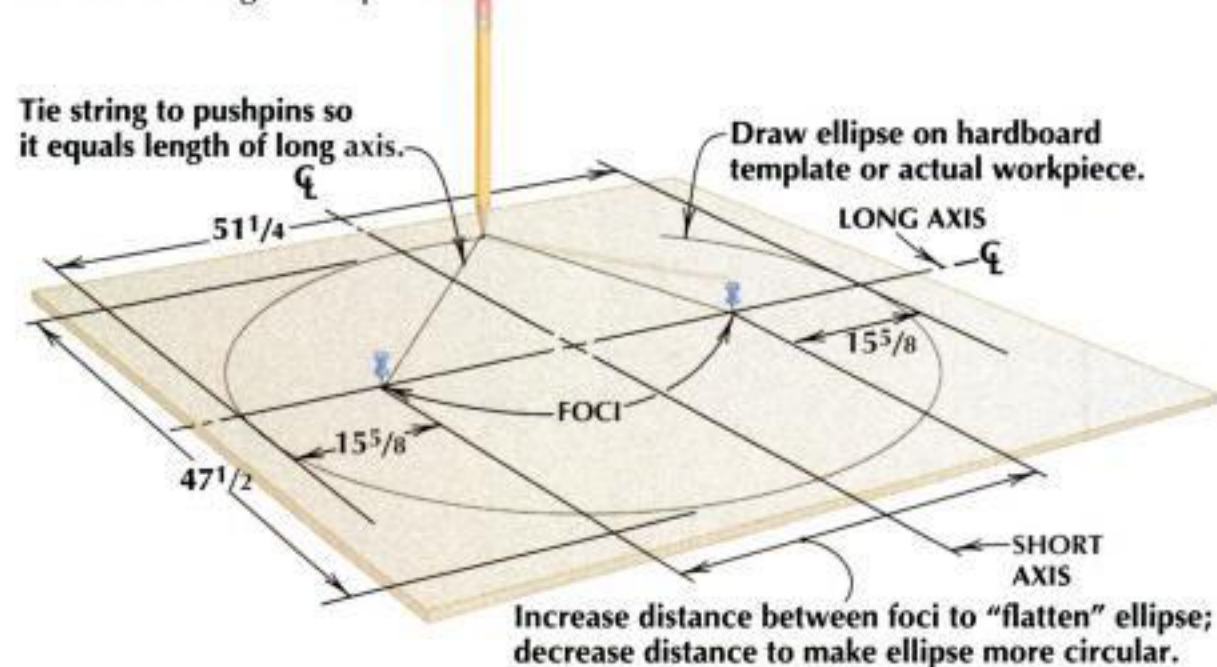
To lower the table, remove the top and stand it on edge on a rug. With one hand holding the top, use your other hand to lift each leg assembly in place around the blocks. Keep a hand on the pair of rails where they abut, and tilt the table down until the high legs are on the floor. (See photo, page 53.) Now you're ready for that cup of java. ▲



BILL RUSK is a furniture maker and a member of the Craftsmen's Guild of Mississippi.

FIG. 3: DRAWING AN ELLIPSE

Knowing the length of the long axis and the foci allows you to draw an ellipse with some string and a pencil.



CUTTING BIG DOVETAILS

Cutting large dovetails accurately can be intimidating. Most commercial dovetail jigs can't handle stock thicker than 1½ in. And cutting large dovetails by hand takes practice. My method is to cut the joint with standard shop tools: a tablesaw and a router.

I make the tails first. To cut the cheeks, I use a tenoning jig on the tablesaw. (For more on a similar jig, see AW #54.) Angle the blade to 83° and cut one cheek; then turn the stock around and cut the opposite cheek. (See photo, right.) Crosscut the shoulders using a miter gauge with the blade at 90°. Then clean up the inside corners with a sharp chisel.

After the tails are cut, I cut the sockets. For this, I use a shop-made jig and a router fitted with a template guide bushing and a ½-in. straight bit with a 2-in. cutting flute (available from Woodworker's Supply, 800-645-9292).

The jig holds the workpiece and guides the router bushing. A notch in the template matches the taper of the tails. (See drawing, below.) You set the depth of the router bit to the depth of the desired socket, taking into account the thickness of the template. If necessary, you can grind the end of the bushing shorter so it doesn't interfere with the workpiece.

When making the jig, temporarily clamp the template to the beam. Then rout a socket in a scrap piece and check the fit to your tail. The goal is to assemble the joint with light blows from a mallet. If the joint is too tight or too loose, adjust the template forward or aft of the beam. Once you've fine-tuned the position of the template, screw it to the beam. Then rout the actual workpiece by moving the router from left to right, taking light, ⅛-in.-deep cuts.

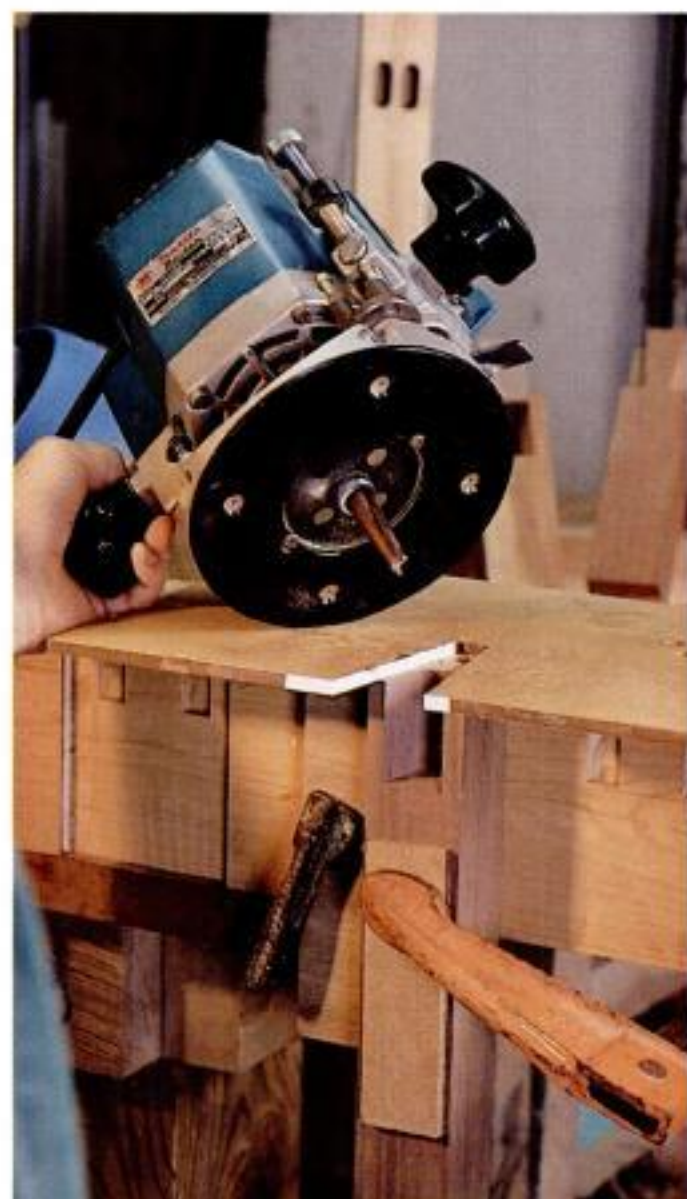
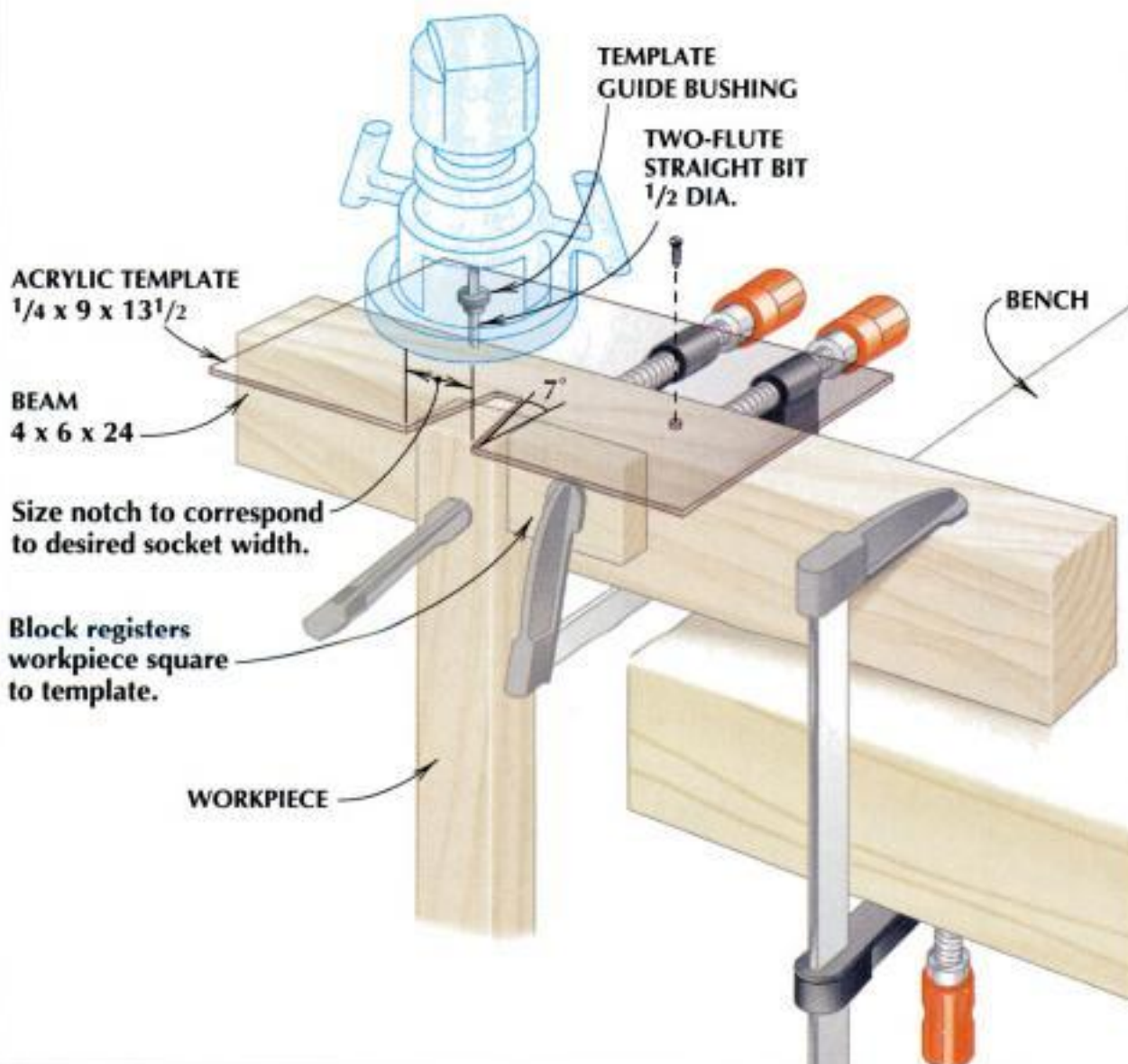
—B.R.



Big dovetail. To cut the dovetail cheek, tilt the saw blade and hold the stock vertically in a tenoning jig.

A JIG FOR ROUTING THROUGH DOVETAIL SOCKETS

The notch in the template guides the template guide bushing. Clamp the jig to the end of the bench, then clamp the workpiece to the jig. Rout the socket in ⅛-in.-deep cuts, moving the router from left to right.

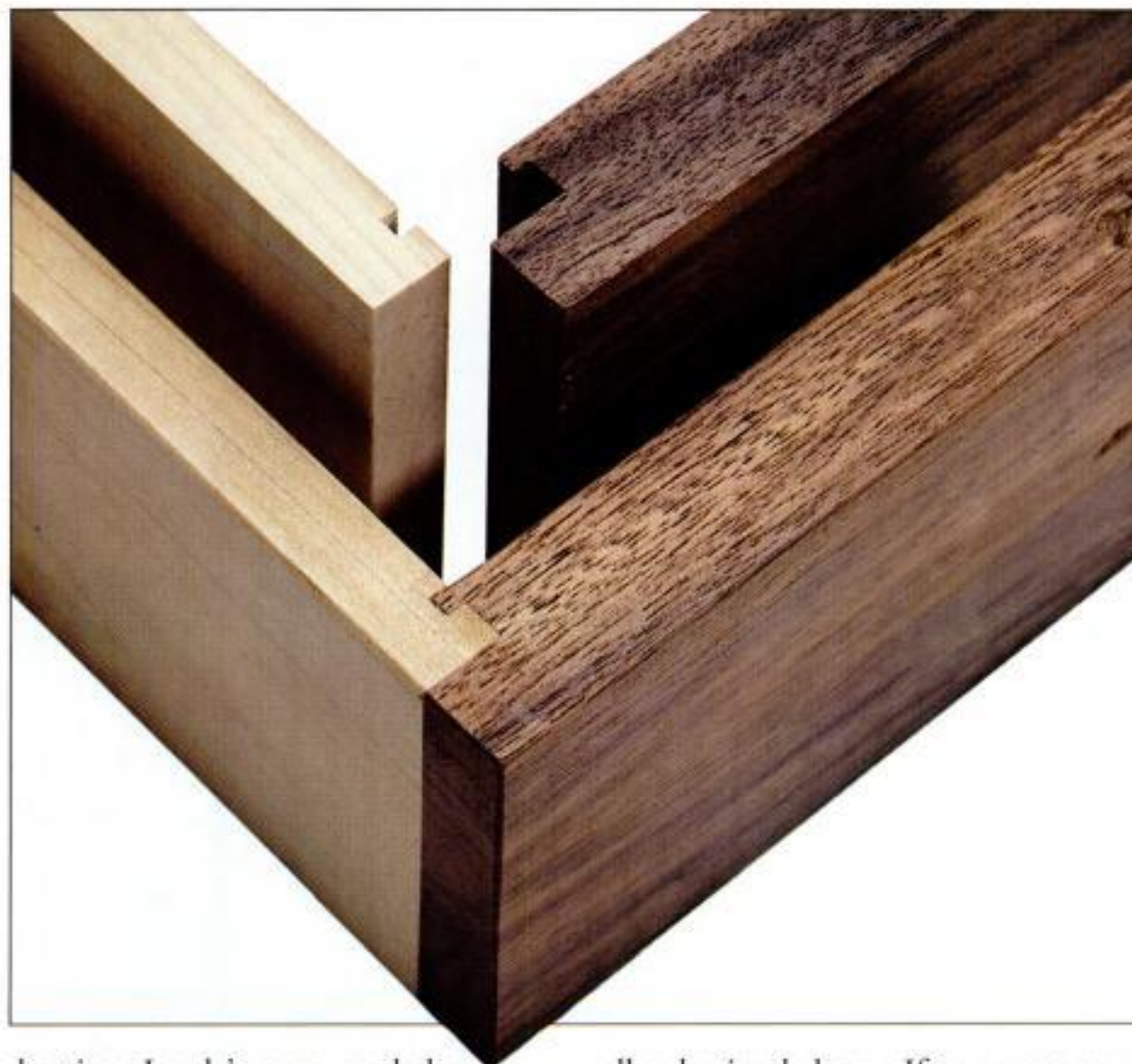


Big socket. Rout the matching dovetail socket by following the notch in the template with a template guide bushing.

Drawer Lock Joints

Strong, foolproof corners with a single router setup

by Bill Hylton



Strong and simple. This locking rabbet keeps your corner joints tight. It's easy to make with one setup on the router table.

Drawers take a beating. Load 'em up, and the weight of their contents puts stress on the corner joints as the drawers are pulled out and pushed in. That's why woodworkers look for ways to make a strong connection between sides, fronts and backs. The best connection is a mechanical one, where parts interlock. And one of the surest ways to avoid joint failure is to use the drawer lock joint shown here.

On this joint, tongues on the ends of the drawer front and back fit into slots in the drawer sides. For quite a while, I fussed with different tablesaw and router setups to make this strong, attractive joint. Then a friend showed me a much quicker, easier way to cut the mating parts, using a common 1/8-in. slot-cutting bit in the router table.

With this technique I can set the bit, position the fence, then forget about them. Each corner joint is cut in four passes, all with the bit and fence in the same position. To make the system work, you need two simple jigs: an auxiliary fence and a booster sled, as shown in Figs. 1 and 2.

Although the drawer lock joint can be customized to work with all sorts of stock thicknesses and drawer configurations, this particular setup has one limitation: To produce a flush drawer, where the sides are even with the ends of the front, your stock for the drawer sides must be exactly 1/2 in. thick. You can use thicker stock for the front; this will create a visu-

ally pleasing balance. If you want an overlapping front, you'll have to attach a false front after the drawer is assembled.

Making the jigs is simple. (See Figs. 1 and 2.) You can get all the hardware at your local hardware store, except for the knobs (available from Reid Tool, 800-253-0421, part #DK-42). To simplify things further, you can screw or bolt a 3/8-in.-thick piece of wood to your router table's fence instead of making the auxiliary fence jig. The real key to making this joint accurately is to follow the routing sequence that's shown in Fig. 3.

Once you've routed the parts, brush glue on all mating surfaces and assemble the drawer. Then clamp the joints home or, if you want to avoid clamps, nail the joint together by driving some finishing nails through the sides and into the fronts and backs. Once you've fitted the drawer into its compartment, you'll have a joint that's up to the task. ▲



BILL HYLTON is a woodworking author and editor. This article was excerpted from his new book, *Router Magic* (1996, Rodale Press, 33 E. Minor St., Emmaus, PA 18098).

FIG. 1: BOOSTER SLED

This sled raises the drawer front $\frac{1}{8}$ in. for the second pass. (See Fig. 3.) It also doubles as a backing block on the first pass.

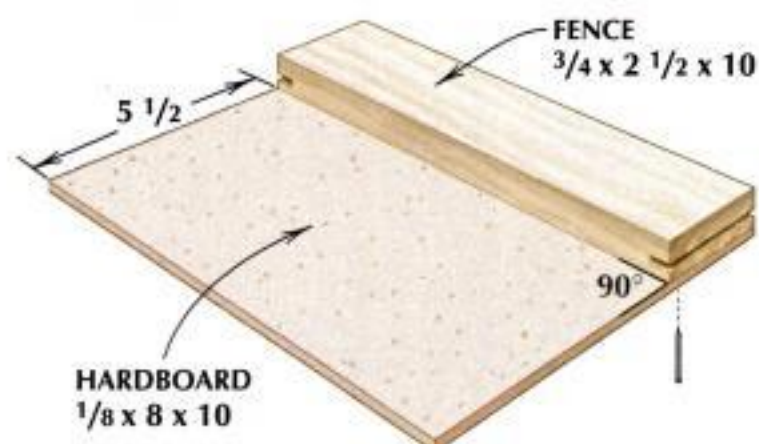


FIG. 2: AUXILIARY FENCE

This jig attaches to the router-table fence for the third and fourth passes. (See Fig. 3.)

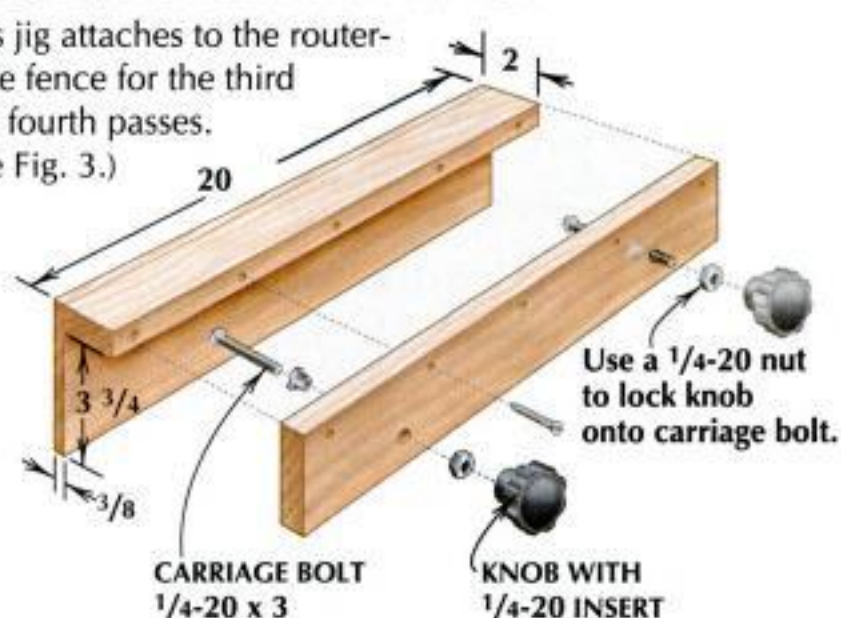


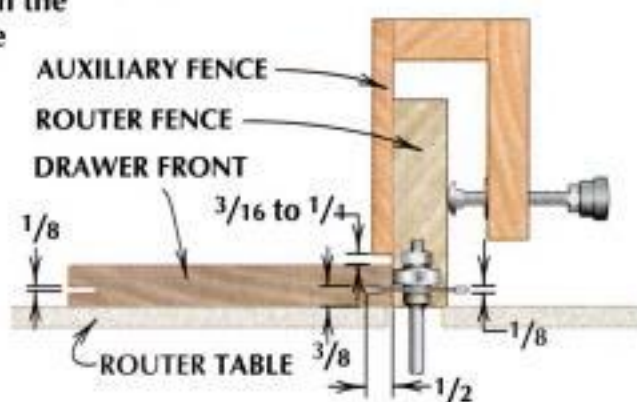
FIG. 3: ROUTING A DRAWER LOCK JOINT

This joint requires only four passes on the router table—all with the same $\frac{1}{8}$ -in. slot-cutting bit and fence setting. The first three cuts form the “hook” on the end of a drawer front or back. The fourth pass cuts the mating slot in the side.

ROUTING THE FRONT (OR BACK)

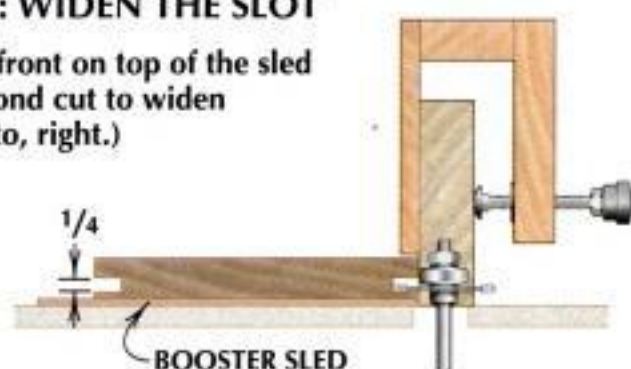
FIRST PASS: ROUT THE SLOT

Slot each end of the drawer front with the stock flat on the router table, and the outside surface facing up. Use a backing block for safety and to avoid tearout.



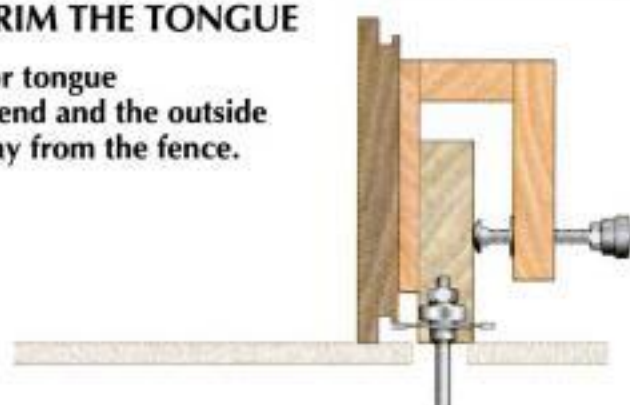
SECOND PASS: WIDEN THE SLOT

Place the drawer front on top of the sled and make the second cut to widen the slot. (See photo, right.)



THIRD PASS: TRIM THE TONGUE

Route the “hook” or tongue with the stock on end and the outside surface facing away from the fence.

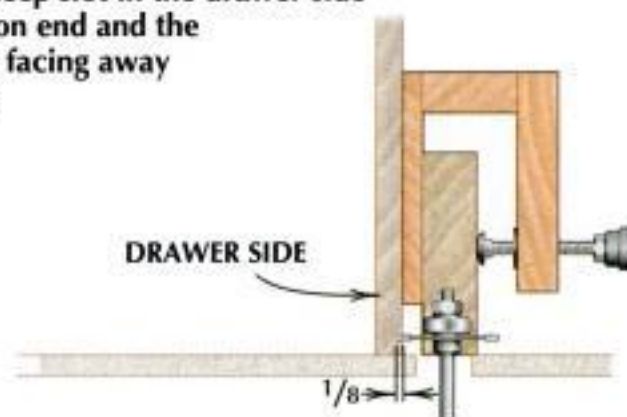


Simple setup. After routing the slot in the drawer front, widen it by placing your work on a “booster” sled.

ROUTING THE SIDES

FINAL PASS: GROOVE THE SIDES

Route a $\frac{1}{8}$ -in.-deep slot in the drawer side with the stock on end and the outside surface facing away from the fence.



PRODUCTION TIPS If you're making multiple drawers, try these tips to save time: Rout the slot in each end of all the drawer fronts and backs. Then set the sled on the router table and widen the slot on all the pieces. Set the sled aside and complete the fronts and backs by trimming all the tongues. Then groove the drawer sides. This approach keeps the work and the routine organized, and minimizes the number of times you fetch and set aside the sled.

8-Inch Jointers

We rate 10 machines priced from \$660 to \$1,900



Get it straight: An 8-in. jointer has the capacity to flatten, straighten and joint the boards that go into all kinds of woodworking projects.

Most woodworking begins with flat surfaces and straight edges. Jointers enable you to meet these requirements quickly and easily. Jointers play an important role in dimensioning stock because they true up the reference surfaces required for planing boards to thickness and ripping them to width. They're also useful for planing bevels and rabbets.

We tested 10 jointers, all 8-in. models, which means that they can face-plane boards up to 8 in. wide. (See photo, above.) There are several good reasons to choose an 8-in. machine over a 6-in. model. The gain in planing width is obvious. But with an 8-in. jointer you also get an increase in bed length—about 20 in. longer than that of a typical 6-in. jointer. With a longer

bed, you'll have a much easier time jointing long stock.

With just two exceptions, all the jointers we tested are manufactured overseas. The Craftsman, Woodtek, Jet, Sunhill, Bridgewood, Grizzly and Star are all made in Taiwan. In fact, the major castings on these machines look like they came from the same molds. The stand, motor and electricals for the Delta are U.S.-made. The Delta's cast iron work (jointer tables, fence, and base) is done in Taiwan. The Powermatic is built in the U.S., the General in Canada.

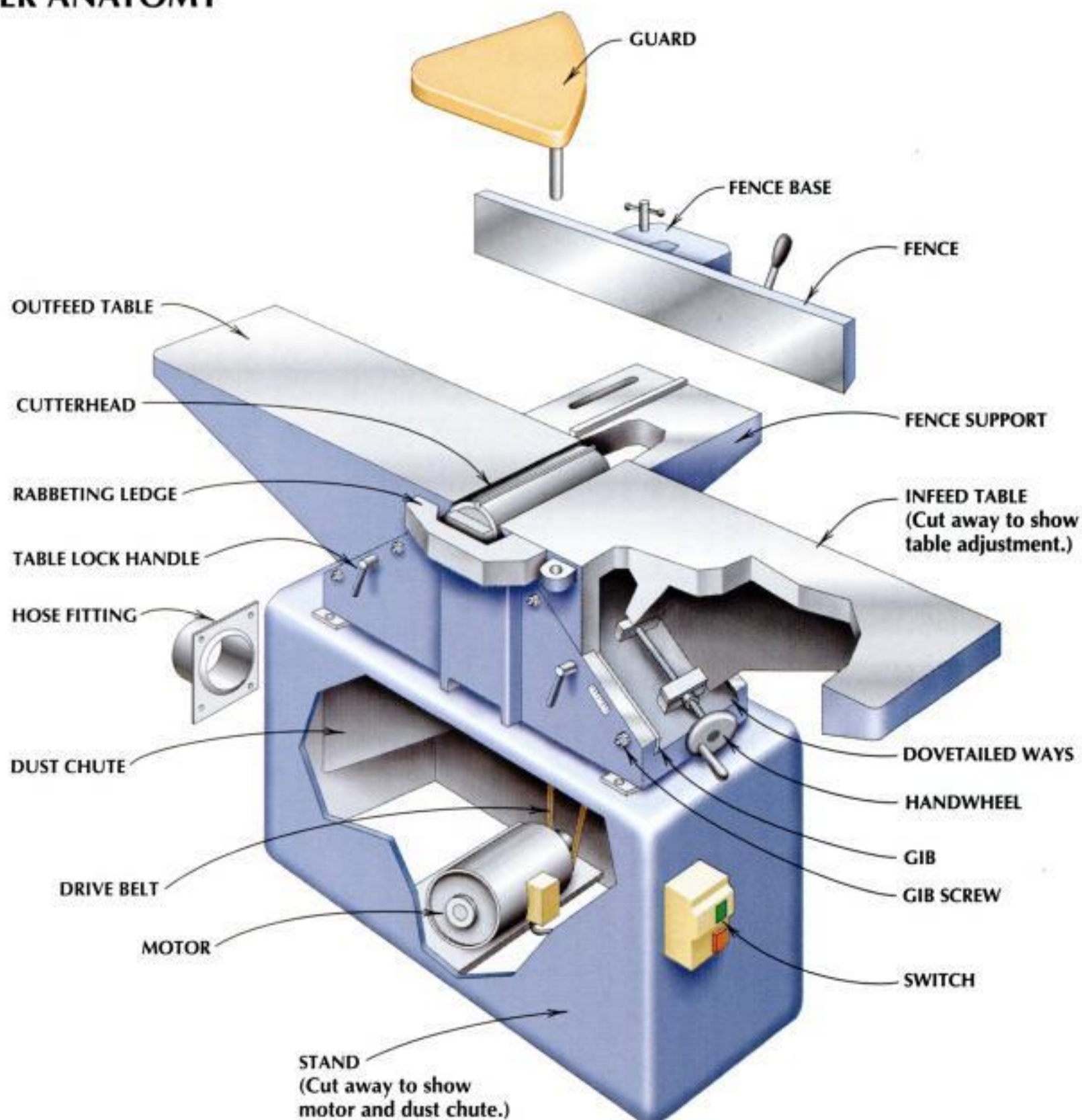
The price range for these machines is surprisingly broad—from \$660 for Grizzly's entry to \$1,900 for the General. Why the big price spread? Find out on the pages ahead. In this buyer's guide, we'll uncover the major and

minor differences between machines. We'll also explain the important features, specifications and performance ratings that will help you select the best 8-in jointer for your shop.

What's Important?

Jointers are simple machines. (See drawing, opposite.) All the models we tested have but four major moving parts: a cutterhead fitted with three or four knives, infeed and outfeed tables that adjust up and down, and a fence that adjusts to different angles and positions on the planer's bed to guide the workpiece. On all of our test machines, a rabbeting ledge is bolted to the infeed table, enabling you to mill rabbets and tongues when the fence is shifted over near the ledge. And all jointers are

JOINTER ANATOMY



equipped with a guard—a brightly colored cover for the cutterhead that swings open when a workpiece is pushed through. Guards have to be removed to use the rabbeting ledge.

Despite this simple anatomy, jointers are anything but “plug-and-play” tools. When you buy a new one, you can expect to spend at least 1½ hours unpacking the parts, assembling the machine and doing the wiring. Then tune-up work begins. (See “Tuning a Jointer,” page 65.) All of the models we tested required adjustments in order to work properly. This can be as simple as setting the stops on the fence, or as involved as shimming the ways to compensate for an out-of-parallel outfeed table. If this sounds like a lot of work, don’t be discouraged. Once set up prop-

erly, a good jointer will reward you with a lifetime of service.

All of the machines in our test proved to be good performers when properly adjusted. But we did find important differences in some key areas. Here they are:

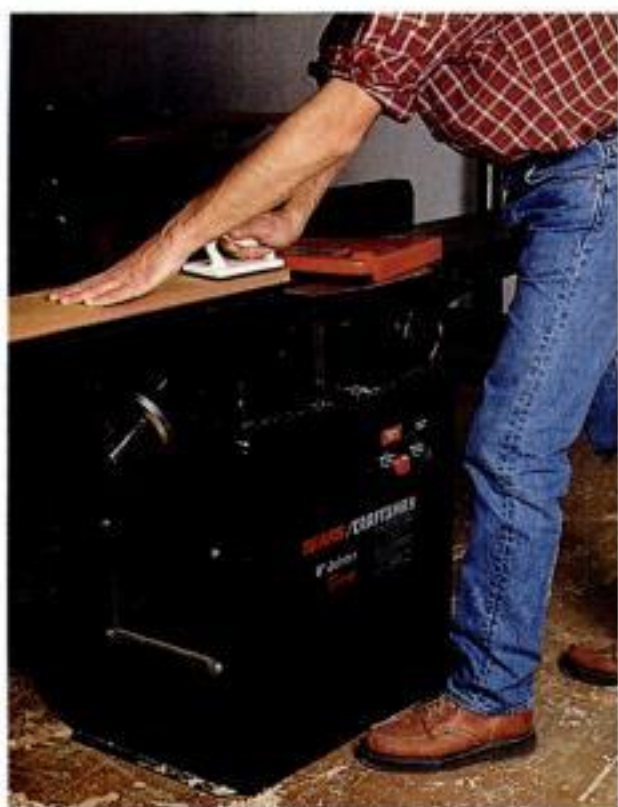
Instructions—If you haven’t set up a jointer before, you’ll benefit from a good instruction manual. Unfortunately, we found the quality of instruction manuals sadly lacking in this group of machines. Only the Bridgewood’s manual deserves an excellent grade; it comprehensively covers jointer assembly, setup, use, and troubleshooting. The manuals we considered good were the General, Grizzly, Delta, Powermatic and Jet. The manuals for the remaining jointers (Sunhill, Woodtek, Star and Craftsman) were poor. The sketchy instructions and inad-

equate illustrations would pose problems to a buyer unfamiliar with jointer setup and operation.

Switches—Magnetic switches are safer than manual ones because they prevent the machine from coming on again after a power outage. All of our test machines except for three came with magnetic switches. You’ll pay extra for this type of switch on the Delta, Woodtek and Powermatic jointers.

The Craftsman’s switch is the safest in this group of machines. Its large red “off” button is located on the front side of the stand, where it’s easy to reach with your hand or knee. (See top left photo, page 60.) Once you’ve turned off the machine, you have to reset the switch by twisting the “off” button. Though this twist-to-reset feature is

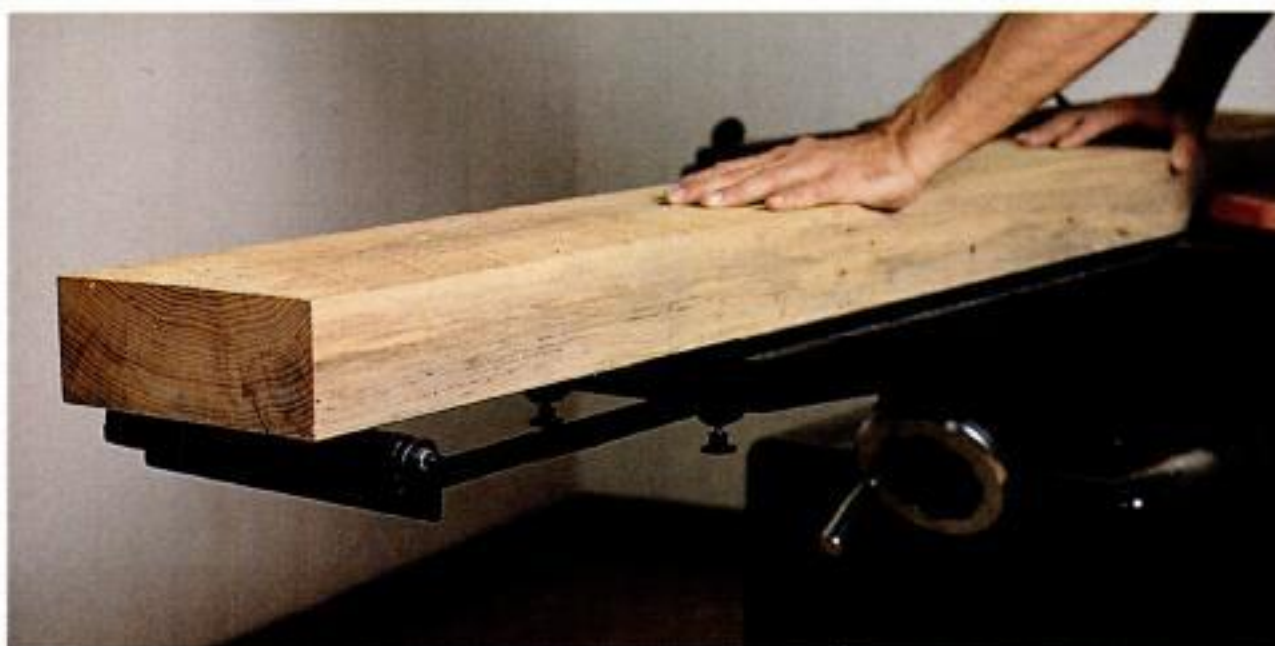
OUTSTANDING FEATURES



Panic button. The "off" switch on the Craftsman jointer is easy to reach with your hand or knee. But you have to reset it with a twist.



Switch and slide. The Star's switch wins the prize for accessibility. Plastic inserts on the bottom of the fence protect the tables.



Built-in extension rollers. Slide-out extension rollers on the Craftsman jointer extend bed length for handling long stock.

BEST IN THE TEST

Best instruction manual BRIDGEWOOD

Easiest setup WOODTEK

Safest switch CRAFTSMAN

Best knife-setting jig POWERMATIC

Highest fence DELTA (5 IN.)

Best fence GENERAL

Best guard GENERAL

Longest bed DELTA (76½ in.)

Easiest knife changing DELTA & GENERAL

Best fit and finish DELTA & GENERAL

Smoothest-working handwheels BRIDGEWOOD & JET

extra-safe, it could be an aggravation in a production situation where you need to turn the jointer on and off frequently.

The Star's switch gets highest marks for accessibility. Star recently relocated the switch from the side of the machine to the fence base, where it's easily visible and more convenient to reach. (See photo, near left.)

Table flatness, alignment and length—We tested each jointer's infeed and outfeed table separately for flatness. The Powermatic, Bridgewood and Star tested out with dead-flat infeed and outfeed tables. Among the remaining machines, the largest variation we found was just 0.004 in.—not enough to affect performance.

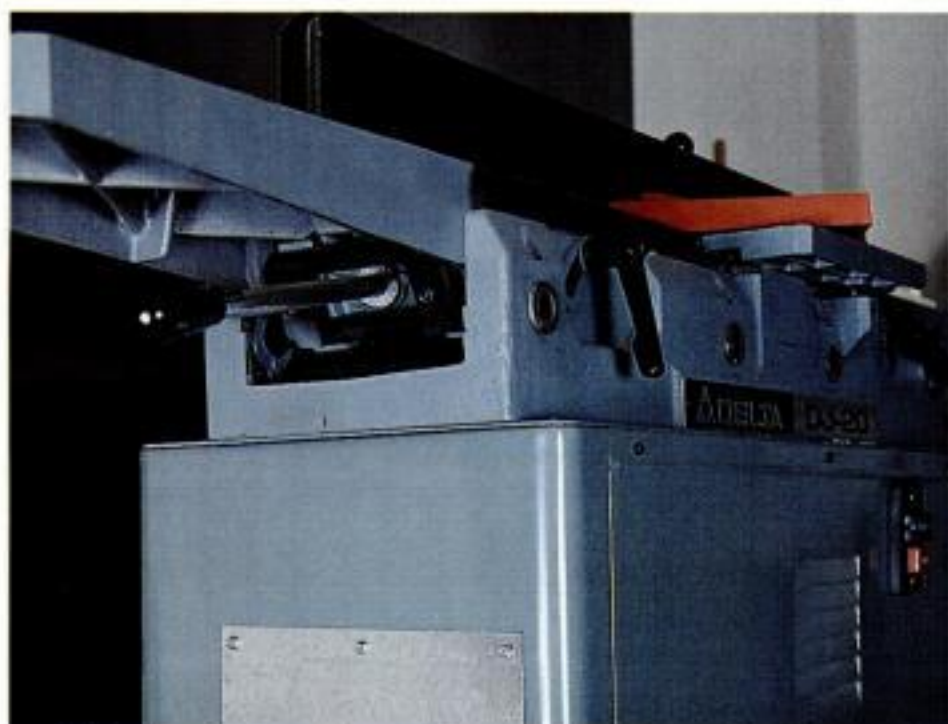
In addition to being flat, a jointer's infeed and outfeed tables must also be aligned parallel to each other to produce flat surfaces when planing and jointing. None of our test machines had perfectly aligned tables. But the degree of misalignment on all but one machine was no more than 0.006 in. These minor variations didn't affect performance.

The Grizzly proved to be an exception. Its infeed and outfeed tables tilted in toward the cutterhead, resulting in a depression that measured 0.024 in. at its deepest point. The boards we jointed on the Grizzly showed a slight but detectable bow. Grizzly agreed that this degree of misalignment would entitle a customer to a new jointer. (Grizzly covers shipping costs both ways if parts prove defective within one year of purchase.) But rather than pack up the machine and ship it back we chose to shim the beds into alignment, a process that took about 20 minutes. (See "Tuning a Jointer," page 65.)

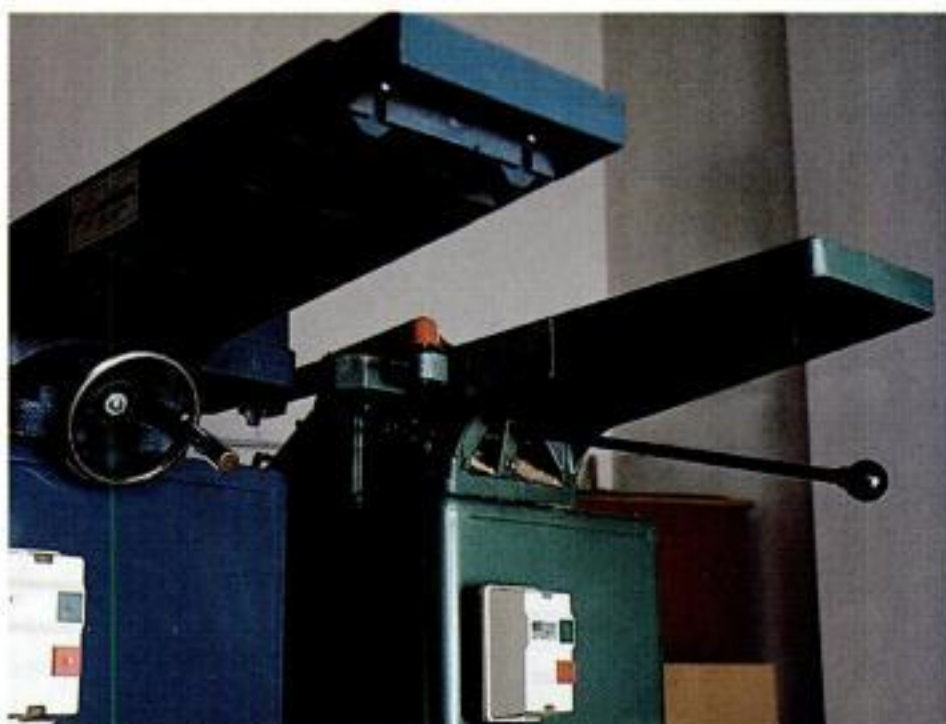
The length of the jointer bed may figure in your buying decision. If you frequently need to joint or plane long boards, you'll appreciate the extra length offered by the Delta, Powermatic and Sunhill. We especially like Delta's extra-long infeed table (46½ in.), and overall bed length of 76½ in. Sunhill and Powermatic share second place with 72-in.-long beds.

On the Craftsman jointer, both infeed and outfeed tables are equipped with built-in extension rollers. (See photo, bottom left.) You can slide each roller out from the end of its table to provide extra support for long boards.

With the exception of the Powermatic, all of our test jointers had table heights in the 32-in. range. The Powermatic's



A different design. On Delta's jointer, the tables don't rise and fall on dovetailed ways. Instead, each table moves on a parallelogram-type mechanism with four pivot points in the jointer base.



Handwheel or lever? Adjusting table height with a handwheel takes more time than using a lever, but offers more precision. Lever adjustment can be useful on an infeed table, for quickly changing depth settings.

34½-in.-high outfeed table could be too high for shorter woodworkers to use comfortably.

Table adjustments—The jointers in our test had either handwheels or levers to adjust table height. Each adjustment mechanism has pros and cons.

With lever adjustment, you can quickly raise and lower the table—an advantage on an infeed table when you're surfacing roughsawn stock. Of all the lever adjustment mechanisms, we liked Delta's best. Short and bent toward the operator, the levers are more accessible than those on other machines—you don't have to bend down to reach them. And while other machines with levers come equipped with a single adjustable stop for table height, the Delta has two stops on each table. This enables you to set maximum and minimum heights.

Handwheels are slower than levers, but they make it easier to adjust table height precisely. We preferred the handwheel's precision over the lever's speed. With handwheels, it's much easier to move tables up and down in tiny increments. This is a real advantage on outfeed tables, where it's critical to align the table surface with the knives.

The Bridgewood, Craftsman, Jet, Sunhill and Woodtek all have large cast handwheels on infeed and outfeed tables. The Powermatic and the Star come with lever-adjusted infeed tables and handwheel-adjusted outfeed tables. The Star, however, offers an optional (\$35) handwheel kit to replace the lever infeed mechanism.

The Jet and Bridgewood had the smoothest-working handwheels of all the models tested. The small handwheels on the General, Powermatic and Star required more effort to turn than the larger wheels on the other machines.

Despite its smooth-working handwheel, the Craftsman's infeed table has an aggravating feature: A locking pin engages when you lower the table more than ⅛ in., so you won't accidentally cut off more than that. Disengaging the pin to free up the table is a troublesome, two-hand operation. Fortunately, it's easy to remove this contraption.

The table mechanisms themselves need some discussion. On all jointers except for the Delta, infeed and outfeed tables move up and down on dovetailed ways. (See drawing.) The ways can be tightened to take up play by adjusting the gib screws, which bear on a thin steel strip called a gib.

The Delta's tables don't slide on dovetailed ways. Instead, each table pivots up and down on a parallelogram-type mechanism of linked steel rods that turn in eccentric bushings in the jointer base. (See left photo, above.) We were impressed by the Delta's table adjustment. With the parallelogram linkage, you get the speed of lever adjustment, plus precision that approaches handwheel adjustment—the best of both mechanisms. Another advantage is that misaligned tables can be corrected by rotating any of the four eccentric bushings in each table's mechanism. You won't find this adjustment information

in the manual, though; Delta recommends contacting your local dealer for adjustment details.

Fence operation—A good jointer fence should have stops at 90° and 45°, and it must lock solidly to provide flat, secure support for workpieces of all sizes. All of the fences we tested stand up to these requirements, but with varying degrees of refinement. (See chart.) We looked for ease of adjustment, accuracy of stops, and overall rigidity. We found that the ten fences fell into "Good, Better, & Best" categories. (See photos, page 64.)

The General and Delta had the best fences. The Star's fence ranked third. It has a solid locking action and a nifty pair of plastic inserts on the bottom that keep the tables from getting scratched when you adjust it. (See top right photo, opposite page.)

Knife changing and adjustment—Before we tested, we made sure the knives were sharpened and adjusted level with the outfeed table. Before you turn on a new machine, we recommend checking knife alignment and the tightness of all lock screws in the cutterhead.

Several factors contribute to ease of knife setting. The cutterheads in our test jointers rely on either springs or jackscrews to support individual knives during the knife-setting process. Jackscrews provide more positive support than springs, and knife setting was easier on the jointers with jackscrews—the Powermatic, Delta, General and Star.

The square-head knife-lock screws on the Jet and Powermatic were more

8-IN. JOINTERS



DELTA DJ-20



GENERAL 480-1-M2



BRIDGEWOOD BW-BJ



JET JJ-8CS



STAR S3101



Brand & Model	Street Price	Table Operation	Fence Operation	Knife Changing	Fit & Finish	1	2	3	4	5
Delta DJ-20 37-350A (800) 438-2486 Circle #605	\$1,695	5	4.5	4.5	5					
Pros: Longest bed; easiest table adjustment; best fit & finish; only model with upper and lower stops for table height; jackscrew knife adjustment; high-rated fence. Cons: Non-magnetic switch; no knife-setting jig; hose fitting optional; back of stand must be unscrewed to access motor. Final Pass: With its long bed and easily adjusted fence and tables, this jointer is a pleasure to use.										
General 480-1-M2 (819) 472-1161 Circle #606	\$1,900	4	5	4.5	5					
Pros: Best fence; best fit and finish; jackscrew knife adjustment. Cons: Shortest bed length; highest price; dust chute not tapped for hose fitting; hose fitting optional. Final Pass: A very high-quality machine at a premium price.										
Bridgewood BW-BJ (800) 235-2100 Circle #607	\$949	4.5	3.5	3.5	4.5					
Pros: Best instruction manual; American-made Baldor motor; excellent fit and finish. Cons: Awkward fence-stop adjustments. Final Pass: A high-quality machine at an affordable price.										
Jet JJ-8CS (800) 274-6848 Circle #608	\$1,190	4.5	3.5	3.5	4.5					
Pros: Smoothest handwheels; good instruction manual; excellent fit and finish. Cons: Awkward fence-stop adjustments. Final Pass: A high-quality jointer at a good price.										
Star S3101 (888) 678-8777 Circle #609	\$785	4	4	4	4					
Pros: Convenient switch location; jackscrew knife adjustment; plastic fence inserts protect tables from scratches. Cons: Thick cosmoline coating aggravating to remove; dust chute not tapped for hose fitting; hose fitting optional; small handwheel for adjusting outfeed table. Final Pass: For a great price, you get a solid fence and a jackscrew-equipped cutterhead.										
Powermatic 60 (800) 248-0144 Circle #610	\$1,700	4	3.5	3.5	4.5					
Pros: Second-longest bed; smoothest cuts; best knife-setting jig; jackscrew knife adjustment. Cons: Non-magnetic switch; stop in fence stops; dust chute not tapped for hose fitting; hose fitting optional; bed may be too high for short woodworkers. Final Pass: The only U.S.-made machine in the test planes very smoothly.										
Craftsman 20651N See your local Sears store. Circle #611	\$1,500	4	3.5	3.5	4					
Pros: Accessible "panic button" switch; retractable infeed and outfeed rollers extend bed length. Cons: Aggravating spring-actuated stop on infeed table; awkward fence-stop adjustments. Final Pass: Only the switch and extension rollers distinguish this jointer from other Taiwan-built models costing hundreds less.										
Woodtek 907-064 (800) 231-2748 Circle #612	\$799	3.5	3.5	3.5	3.5					
Pros: Motor and switch come pre-wired; easiest machine to assemble. Cons: Awkward fence-stop adjustments; hard-to-turn handwheels. Final Pass: This jointer will get the job done for a good price.										
Sunhill CT-204-L (800) 929-4321 Circle #613	\$859	4	3.5	3	3.5					
Pros: Second-longest bed. Cons: Awkward fence-stop adjustments; bolt-on bed extensions. Final Pass: Long bed for a low price.										
Grizzly G101B (800) 541-5537 Circle #614	\$660	3.5	3.5	3.5	3					
Pros: Lowest-priced jointer tested; good instruction manual. Cons: Below-average fit and finish; misaligned tables on our test model. Final Pass: Solid performer at a super low price.										

GUIDE TO THE RATINGS

We rated the jointers from 5 (excellent) to 1 (unacceptable) based on their performance in four categories. Then we averaged these four ratings to get the overall rating. Here's what we looked for in the four specific categories:



SPECIFICATIONS

Bed Length (in.)	Fence Size (in.)	Table Height (in.)	Infeed/Outfeed Adj.	Cutterhead No. of Knives, Rpm	Motor HP, Volts	Weight (lbs.)
76 1/2	5 x 36	32	Lever/ Lever	3, 5,500	1 1/2, 115/230	466
64	4 x 34 1/2	33	Handwheel/ Handwheel	3, 4,500	1 1/2, 115/230	405
66	4 x 38 1/4	31 1/4	Handwheel/ Handwheel	4, 4,500	1 1/2, 115/220	400
66 1/2	4 x 38 1/4	31 1/2	Handwheel/ Handwheel	3, 5,500	2, 230	466
65	4 x 36	32	Lever/ Handwheel	3, 4,500	2, 230	435
72	4 x 34 1/2	34 1/2	Lever/ Handwheel	3, 7,000	1 1/2, 115/230	584
66	4 x 38	31 1/4	Handwheel/ Handwheel	3, 4,500	1 1/2, 230	450
66	4 x 38 1/4	31 1/4	Handwheel/ Handwheel	3, 4,500	1 1/2, 115/230	445
72	4 x 38 1/4	31 1/4	Handwheel/ Handwheel	4, 4,500	2, 230	450
64	4 x 38 1/4	31 1/4	Lever/ Lever	3, 5,000	2, 230	445

- **Table operation:** Smooth, precise adjustments and accessible handwheels, levers and table-locking handles.
- **Fence operation:** Easy adjustments, solid locking, and accurate stops at 45° and 90°.
- **Knife changing:** Easy and accurate knife changing and setting.
- **Fit and finish:** Flat tables and fences, properly aligned tables, quality machining, and comfortable handles and controls.



POWERMATIC 60



CRAFTSMAN 20651N



WOODTEK 907-064



SUNHILL CT-204-L



GRIZZLY G101B

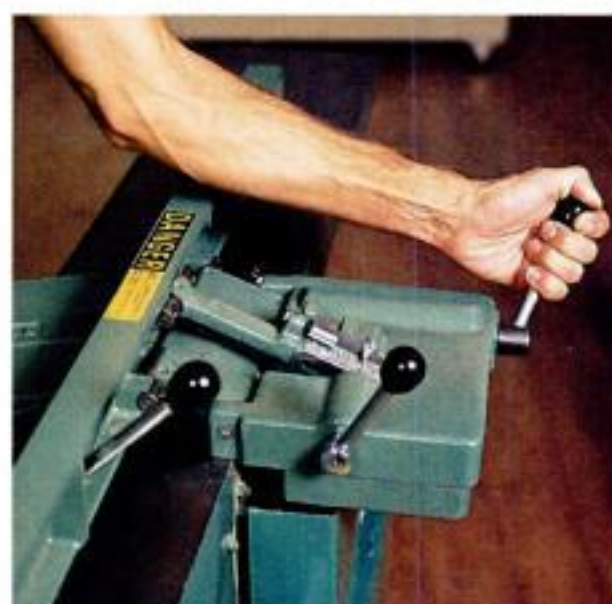
FENCE APPRAISALS



Good. The Woodtek fence is identical to those on the Bridgewood, Craftsman, Jet and Sunhill jointers. The two stop-adjustment setscrews are difficult to adjust.



Better. Delta's fence features a protractor, a ratchet-type locking lever for angle adjustments, and a spring-loaded stop for fence angle settings at 45° and 90°.



Best. Excellent machining makes the General fence the easiest to adjust and also contributes to rock-solid locking. Stops are accessible and the protractor is easy to read.

troublesome to turn than the hex-head screws on the other machines. And on the Powermatic, Grizzly and Star jointers, the fence can block your wrench when you're working on the locking screw closest to the fence support. To turn the screw, you have to remove the fence entirely, or move a fence-locking bolt into another hole so you can shift the fence back.

Power and smoothness—We expected horsepower to affect performance, but it didn't seem to in our tests. The 2-HP motors on the Jet, Sunhill and Star jointers demonstrated no noticeable edge over the other machines, which have 1½-HP motors. Single or double V-belt drives didn't seem to affect performance either. The Powermatic produced slightly smoother surfaces than the other machines, thanks to a cutterhead speed of 7,000 rpm—and a cuts-per-minute (cpm) rate of 21,000. (To get the cpm rate, multiply cutterhead rpm by the number of knives in the cutterhead.) The other nine machines spin their cutterheads at 4,500 to 5,500 rpm and have cpm rates between 13,500 and 18,000.

Dust collection—It doesn't take long to make a pile of shavings with a jointer. Fortunately, the enclosed stands and dust chutes on these machines easily accept hose fittings for hooking up to a dust collector. The Bridgewood, Grizzly, Jet, Craftsman, Sunhill and Woodtek jointers come with 4-in.-dia. hose fittings and have bases that are drilled and tapped for the fittings. General, Delta, Powermatic and Star offer hose fittings

for their jointers, but they cost extra. And on these machines, you'll have to drill your own installation holes.

Fit and finish—With the exception of the Grizzly's misaligned tables, we found no fit-and-finish flaws in our test machines that affected performance. But there were some fit and finish differences among these jointers that are worth noting. Given the General's premium price (\$1,900) you'd expect outstanding fit and finish. And you get it. Where the other jointers have simple lift-out doors to access their motors, the General's door swings open on a piano hinge and has a chrome handle. And the General's top-rated fence owes its smoothness and ease of operation to excellent machining. The Delta also earned an excellent fit-and-finish rating. (See chart.)

We liked the table-locking knobs on the Powermatic and General jointers, and Delta's quick-acting table-lock levers. On the other machines, each table-locking handle consists of a short metal rod set into a threaded post. These were hard on our hands.

Among the Taiwan-made jointers, the Jet and Bridgewood scored highest in fit and finish. Both machines tested out with flat tables and fences, excellent table alignment, and handwheels that were a pleasure to use.

Recommendations

All 10 of the jointers in this test have the capability to plane straight, smooth surfaces day after day. Take a look at the "Best in the Test" box on page 60, and

you'll see that we found superlative features in a number of the machines that we tested.

Delta's DJ-20 stood out as a clear Editors' Choice winner—best performance regardless of price. The DJ-20's well-designed table adjustment mechanism drew praise for its precision and ease of operation. The Delta has the longest bed of the bunch—76½ in. This extra length, especially on the infeed side, gave the Delta an edge over other jointers when planing and jointing long boards. Easy knife adjustment and good scores on its fence and fit and finish also tipped the scales in Delta's favor. And with a street price around \$1,695, the Delta costs less than the Powermatic and the General.

With a price tag of just \$660, the Grizzly jointer is a real bargain. We all liked the performance. But the misaligned tables on our test machine disqualified it as a Best Buy award winner.

Our Best Buy award—best performance for the price—goes to the Star S3107. Star's \$785 price tag puts it closest to the Grizzly in cost. And the Star has several important features you won't find on comparably priced jointers. The conveniently located switch is something you'll appreciate every time you use the machine. The Star has a better fence and easier knife changing than any of the other Taiwan-made machines. And it's the only jointer we tested that offers an optional (\$35) handwheel to replace the infeed table's adjustment lever. ▲

TUNING A JOINTER

*Table, cutterhead and knife adjustments
constitute the total tune-up*



Feel your way.
Use a straightedge
to check table
alignment. Measure
any gaps with
feeler gauges.

Jointers are designed to transform imperfect surfaces into perfect ones. But you can't expect perfect results from a new jointer. And jointers that deliver straight edges today can go out of alignment tomorrow. When this happens, you're in for some tune-up work. Tuning a jointer is like tuning a car engine: first you diagnose the problem, then you do what's necessary to fix it.

Take the Two-Board Test

The easiest way to determine whether your jointer needs adjustment is to joint two boards and see if the jointed edges meet perfectly along their entire length. But before you joint these test edges, make sure your jointer's outfeed table is level with the top of the knives' cutting arc, or just 0.001 in. to 0.002 in. below it. Place a straightedge on the outfeed table, extend it over the cutterhead, and rotate the cutterhead manually. The cutting edges

of the knives should just barely graze the straight-edge as they swing through "top dead center" of the cutting arc. If they don't touch the straight-edge, or if they lift it slightly off the outfeed table, raise or lower the table to compensate. If the knives don't contact the straightedge uniformly, you need to reset them. (See page 67.)

Now plane a pair of test boards that are at least 4 ft. long. Place the jointed edges together and take a look. If you see hollows or gaps, your jointer probably needs a tune-up. *Caution: Before attempting any of the following adjustments, be sure to disconnect the power to the jointer.*

Finding and Fixing Table Alignment Problems

A jointer's infeed and outfeed tables must be aligned parallel to each other if you want to produce straight edges. (See Figs. 1 and 2.) Look

PHOTOS BY DAVE SELLERS

FIG. 1: CORRECT JOINTER SETTINGS

For a jointer to produce straight edges on wood, the knives must be set level with the outfeed table, or just 0.001 in. to 0.002 in. above it. Also, the infeed and outfeed tables must be perfectly parallel to each other.

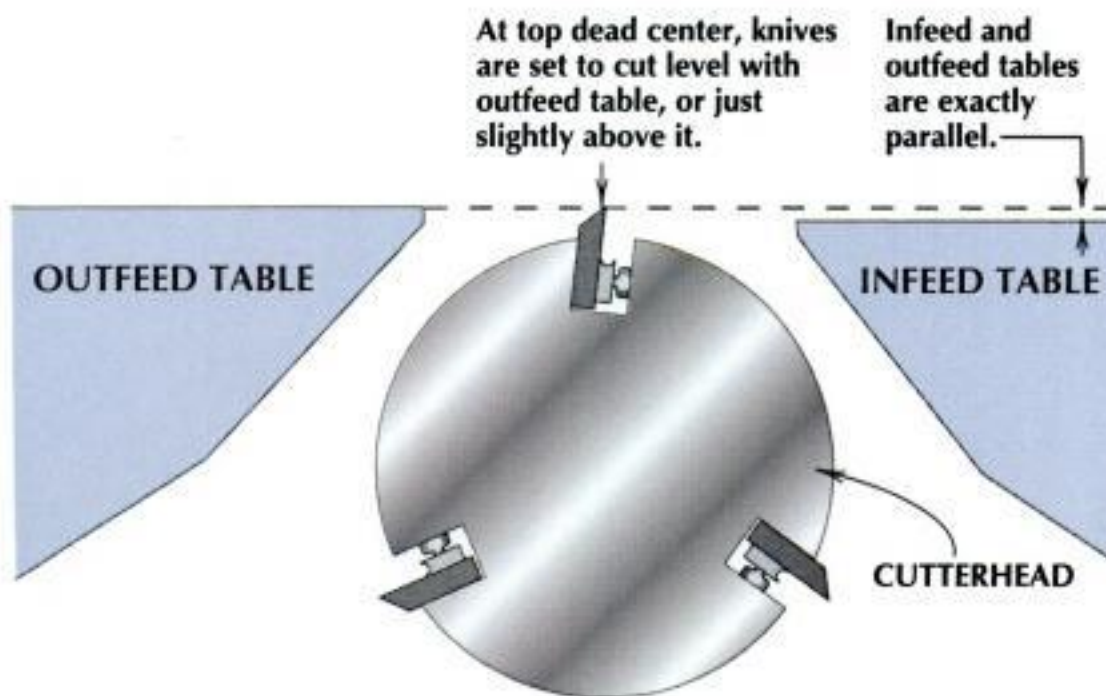
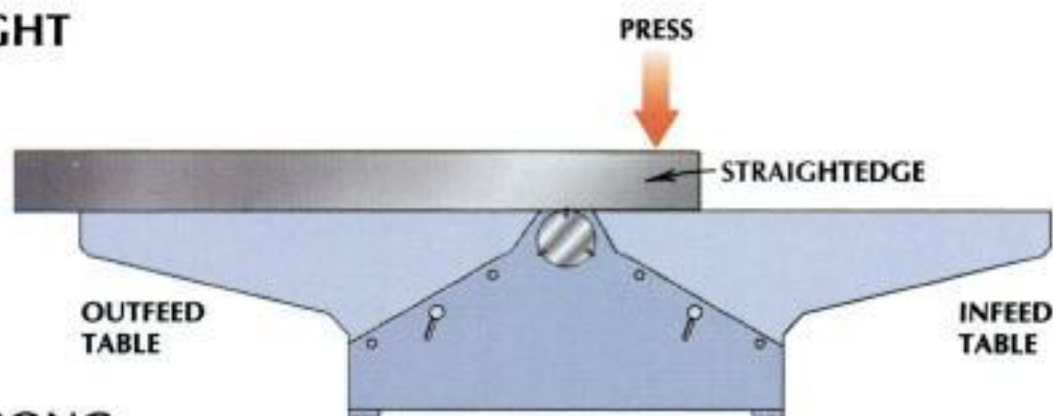


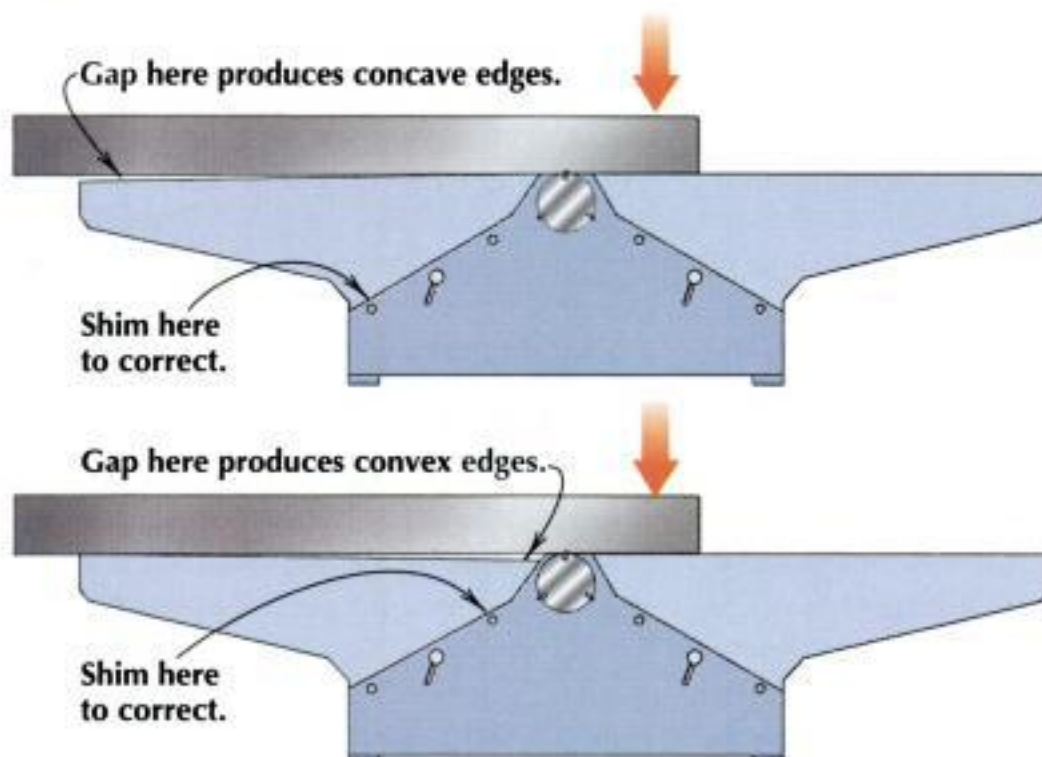
FIG. 2: CORRECTING TABLE ALIGNMENT

If your jointer's infeed and outfeed tables aren't properly aligned, you'll have difficulty producing straight edges on boards. The solution is to shim the outfeed table as shown here.

RIGHT



WRONG



closely at the joint between your test boards. If the joint is open in the middle, the outfeed table probably slopes away from the cutterhead. If the joint between the boards is open at the ends, the outfeed table may slope toward the cutterhead. (See Fig. 2.)

To test for table alignment, you need a reliable straightedge at least 4 ft. long. We used a super-accurate Starrett straightedge, but a good level or aluminum straightedge will also work. (See photo, page 65.)

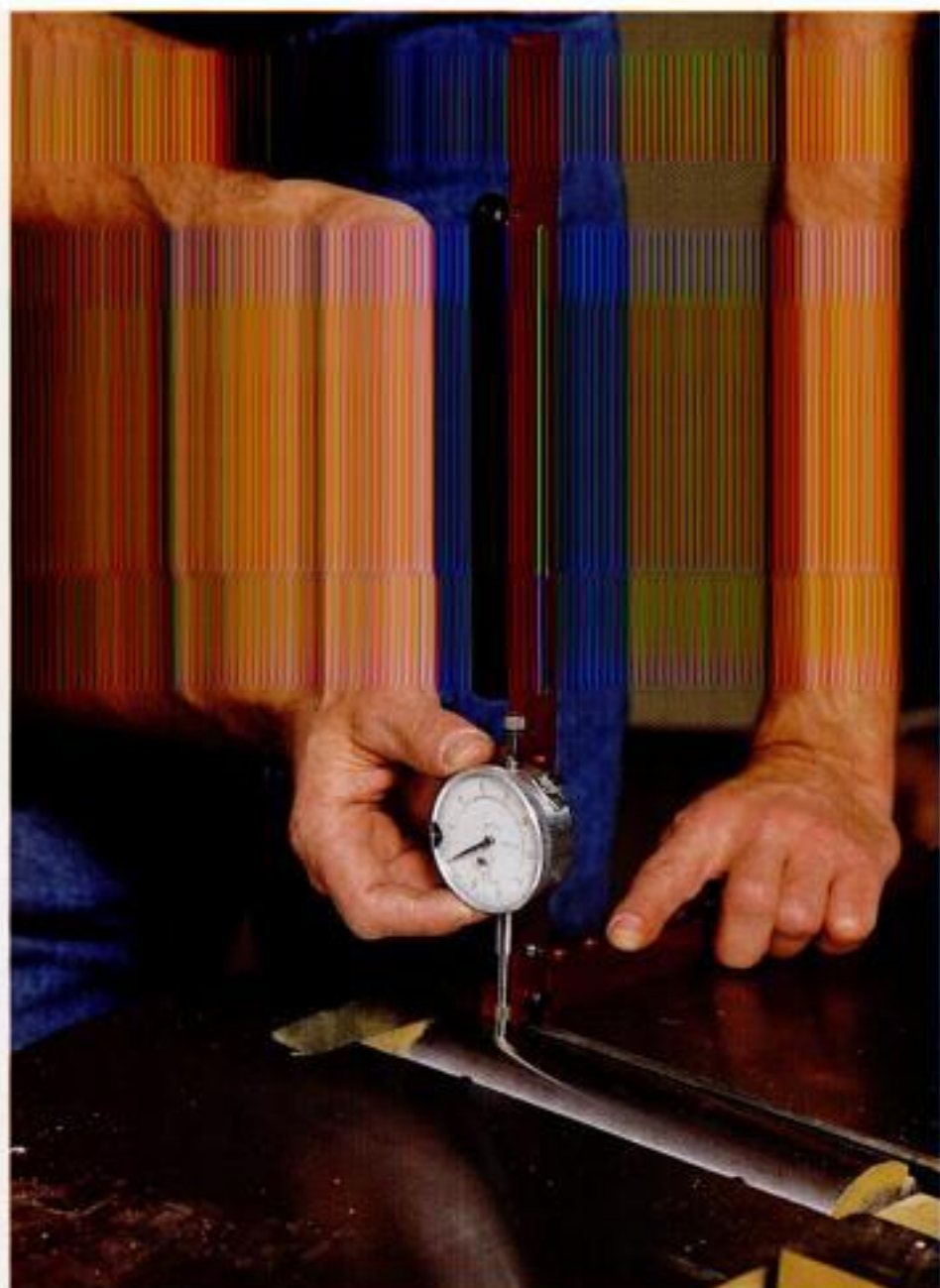
Begin by raising the infeed table slightly above the height of the outfeed table. (You may have to lower the outfeed table to do this.) Hold your straightedge flat on the infeed table, with one end extended over the outfeed table. Raise the outfeed table carefully until it contacts the straightedge. Misalignment will show as a gap between the outfeed table and the straightedge. (See Fig. 2.) Measure the gap with feeler gauges.

To bring the outfeed table into alignment with the infeed table, insert thin brass shims (available from MSC Industrial Supply, 151 Sunnyside Blvd., Plainview, NY 11803, 800-645-7270) at either the top or the bottom of the outfeed table's inclined ways. (See photo, above.) On most jointers, the shim will need to be about one-third the thickness of the gap you measured. If you want to get scientific, multiply the measured size of the gap by the length of the outfeed table ways, and divide by the length of the outfeed table. Check the alignment again with your straightedge, and change the shim thickness if necessary.



Shim it straight. Correct table misalignment by inserting brass shim stock in the ways of the outfeed table.

ALIGNING THE CUTTERHEAD



Is it parallel? A dial indicator will tell you if one end of the cutterhead is higher than the other. Take readings near each end of the cutterhead. The difference is the shim thickness required to correct the misalignment.



If not, shim it. A long bolt extends through the jointer base to hold the bearing block that supports each end of the cutterhead. Insert your shims under the bearing block to raise the low end of the cutterhead.

Aligning the Cutterhead

The basic geometry here is easy to understand: The axis on which the cutterhead spins should be parallel to your infeed and outfeed tables. If you use the outfeed table to set your jointer knives, it won't make a difference if the cutterhead is slightly lower on one side. But if you set your knives with a jig that indexes against the cutterhead (see photo, below) it's important for the cutterhead to be aligned with the outfeed table.

To test for cutterhead alignment, set a dial indicator on your outfeed table and measure down to the cutterhead

outfeed table, and bring each knife up to it. Other people prefer to use after-market jigs.

Many jointers and planers come with simple jigs that index knives off the cutterhead. These jigs are easy to use and effective. (See photo, below.) But if your two-board test reveals alignment problems, the cutterhead could require shimming. Test for cutterhead alignment as mentioned above, and make corrections as necessary.

Whatever knife-setting method you use, be careful when you're tightening the screws that lock each knife in place. Torquing down on a screw will often

shift the knife slightly, taking it out of alignment. This shifting can happen even on cutterheads equipped with jackscrews. To prevent it, get each knife into alignment with all the locking screws turned in just tight enough to hold the knife. Then tighten the screws gradually, working in from each end of the cutterhead. Auto mechanics use a similar approach to prevent a cylinder head from warping as it's bolted to the engine block.

After the final tightening, check for correct alignment against your straight-edge or jig. Then repeat the procedure for the remaining knives. ▲



Gilding

*Gold leaf can turn
your work into a treasure*

by David J. Marks

Go for the gold. Gilding produces a finish unmatched by any other technique. Above, the author applies a second layer of gold leaf to a picture frame.

Gilding is the practice of covering a surface with gold leaf or other metal. The art, which dates back to the ancient civilizations of Egypt, China and Japan, has been used to adorn everything from precious objects and furniture to royal mummy cases. You can gild all kinds of wooden objects, from picture frames to carvings. I often gild parts of my furniture to create lustrous accents. A properly gilded object can project the illusion of being solid metal.

Although gilding is sometimes viewed as a mysterious process, it can be fairly simple. Basically, it involves creating a glass-smooth surface on the object to be gilded and then applying remarkably thin sheets of gold or other metal to the surface.

The highest-quality gilding you can do uses gold leaf, and this is the type that I'll address in this article. There are two methods of applying gold leaf: water-gilding and oil-gilding. Of the two, water-

gilding produces the more brilliant surface, but it is also a much more labor-intensive process. It involves mixing, applying and smoothing a base of gesso, clay and rabbitskin glue before applying the gold leaf to your work. Because water-gilded work can be ruined by water, it can't be used outdoors.

I prefer oil-gilding, which I'll discuss in this article. Thanks to modern, pre-mixed paints and varnishes, oil-gilding is a fairly simple, predictable process. Oil-gilded work is durable enough for exterior applications and is often used in signmaking. The only comparative disadvantage to oil-gilding is that it produces a slightly lower sheen than is found on a water-gilded surface.

In this article, I'll show you the step-by-step process of oil-gilding a picture frame. The process involves four basic steps: filling and preparing the wood; applying a "base" coat of paint; "sizing" the work with a special varnish; and laying the gold leaf onto the tacky varnish. The supplies you'll need are shown in the photo at right.

About Gold Leaf

Gold leaf is very delicate—only about three one-millionths of an inch thick. It's available in various purities, but 23-karat gold is most commonly used for high-quality gilding. Gold leaf comes in two forms: loose and patent. *Loose* leaf comes in "books," with the leaves sandwiched between thin paper tissues. *Patent* or "transfer" leaf comes in either book or roll form and is lightly adhered to paper tissue for easier handling. I generally use loose leaf because patent leaf (particularly Italian-made leaf) sometimes clings too tightly to its backing paper. In my experience, German-made patent leaf is much easier to work with than Italian patent leaf.

A book of gold leaf contains twenty-five 3³/₈-in.-square leaves each. Book price varies greatly (currently from about \$20 to \$50) so it pays to shop around. (See Sources, page 71.) You can get a quantity discount by buying a "pack" of leaf, which contains 20 books. Rolls of leaf are available in different widths. Wide rolls are useful for quickly covering large, relatively flat surfaces. Narrow rolls can be used for striping. Allowing for normal waste, a book will cover about 1½ square ft. I used two books of loose leaf to gild the 30-in. by 22-in. frame shown at left.

If you're trying gilding for the first



Materials and supplies. Some of the supplies you may need for gilding include gold leaf; special "size" varnish; a cloth "bob" to apply the size; various brushes; putties; and a gilder's knife and "klinker," or chamois-covered pillow.

time, practice first on a small sample board to get a feel for the materials and techniques. The few bucks spent on "practice" gold is a good investment toward your finished project.

Filling and Preparing the Wood

The first step in gilding is to prepare a smooth surface on your wood. You can gild almost any kind of wood but I recommend using a closed-pore hardwood such as maple or birch, which requires minimal surface preparation.

If the workpiece has any large voids, dents or scratches, you can fill them with an auto body filler such as Bondo™. To repair broken carvings or other shaped details, I recommend using Elmer's epoxy ribbon. (See photo, above.)

If you're gilding an open-pored wood like mahogany, which is often used for carvings, you'll have to fill the wood pores first. I paint on several coats of Zinsser's B.I.N. white pigmented shellac, a hard, fast-drying interior primer available at paint and hardware stores. But you can also use water-based gesso, available at art supply stores. Whatever you use, sand the final coat to 320 grit.

Applying the Base Coat

After preparing the wood, apply the "base" coat, a thin primer coat of oil-based paint. The purpose of the base coat is to fill in any remaining tiny pores

or defects and to create a smooth substrate for the gold leaf. The base coat also provides a backing color for the gold leaf, which is so thin that it's slightly transparent. A reddish base coat is usually preferred because of the rich, warm glow it imparts to the gold. I generally use Kelly Moore's Kel-Guard 1710-120, but Japan paints are also excellent and allow you to alter the color to suit your taste. (See Sources.)

Spraying on the base coat is quick and yields excellent results, but you can brush it on as well. (See top left photo, page 70.) I recommend thinning the paint to improve its flowout and to speed drying. For spraying, I generally thin the paint about 50% with naphtha to speed the drying time. When brushing, I thin the paint about 30% with mineral spirits, which dries slower, allowing more time for brush marks to level out.

It's better to apply many thin coats than to apply fewer thick ones. I usually apply five thin coats, sanding in between with 320-grit Tri-M-Ite® free-cut sandpaper (available from paint and auto body stores). I sand the last coat to 600 grit for a glass-smooth surface, then I wipe the work with a clean, dry cloth.

Sizing

Next, apply the "size," which is a special varnish that seals the primer and bonds the gold leaf to the surface. I use Rolco brand quick-dry size (available from



Applying the base coat. Prime the wood with four or five coats of a good quality red oxide or japan paint, sanding between coats to create a glass-smooth surface.



Applying the size. Brush on the "size" varnish with a sable brush. The surface is tacky enough for gilding when your knuckle pulls back from the varnish with a slight snap.

gilding supply houses; see Sources). This clear varnish, used straight from the can, sets to the proper tack in 30 minutes to three hours, depending on room temperature and humidity and thickness of application.

To apply the size to curved surfaces, carvings, moldings and detail work, I generally use a 1/2-in.-wide brush—either sable or a combination of sable and synthetic bristles. Apply the size in a thin, even coat, leveling it with full-length strokes of the brush tip while it's still very wet. (See photo, above right.)

To size larger, flat surfaces, I apply the varnish with a "bob," which is simply a pad of upholsterers' cotton batting (available at fabric stores) wrapped in a silk cloth. (See photo, page 69.) A bob produces a thinner, more uniform coating than a brush. Saturate about half of the bob in the size, then coat the work, applying gentle pressure to the bob and moving it in long, even strokes across the workpiece.

Usually, one coat of size will do the trick. After coating the entire piece, inspect the surface for good coverage using the reflection of an overhead light. The whole surface should be shiny. You can touch up any dry-looking spots with more size within about five minutes. After that, it starts to tack too much to touch it up without ruining the surface. If, after about 10 minutes, the surface dries to an uneven shine,

you'll need to let it dry overnight, then lightly sand it with 600- or 800-grit paper and recoat the work.

Applying the Leaf

The next step is to apply the leaf as soon as the size reaches the right tack. If the size is too wet, it will soak through the leaf, ruining the sheen. If it's too dry, the gold won't stick properly. To test for proper tack, touch your knuckle to the size. When your knuckle pulls away with a slight click or snap without leaving touch marks, the size is ready.



Carrying leaf. Transport cut leaf to the workpiece with a "gilder's tip" brush. You can use another brush to help position the leaf.

Now, carefully apply the leaf to the surface. I often use the book to carry loose leaf to the work, then press the leaf into the sizing using the paper separator. (See photo, below right.) To hold the leaf in the book while I turn it over, I pinch one edge of the leaf between the book binding as I press the opposite, hanging edge into the sizing. (See photo, page 68.) After a little practice, you'll get the feel of the technique.

As you apply each leaf, overlap the previous one by about 1/8 in. Orient the laps in the same direction, like shingles. This prevents confusion when tamping the leaf, as I'll discuss later.

To cut smaller pieces of leaf, use scissors for patent leaf, or a gilder's knife for loose leaf. When using a gilder's knife, I place the loose leaf on a "klinker," or chamois-covered gilder's pillow, which cushions the fragile leaf while you cut it. Drag the dull-edged knife across the leaf without lifting up. (See top photo and drawing, opposite page.) To prevent the leaf from sticking to the klinker, dust the leather with talcum powder, then brush it off. I also dust the knife and wipe it off with a clean cloth.

Carry cut leaf to the workpiece using a "gilder's tip"—a wide, squirrel-hair brush made for the purpose. Flicking the gilder's tip across your hair will pick up enough oil to help carry the leaf. For carrying larger pieces of leaf, try applying lip balm or petroleum jelly to your wrist and rubbing the gilder's tip against that instead. To pick up the leaf, hold the tip parallel to the edge of the leaf, then slowly sweep down onto the leaf,



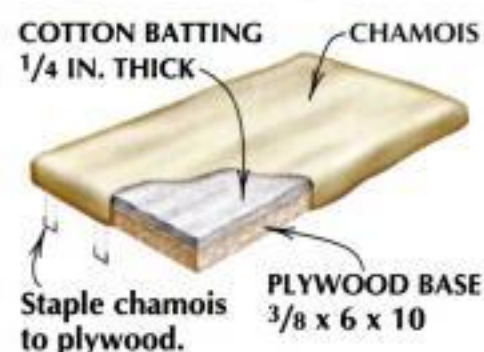
Applying the leaf. One of the easiest ways to apply leaf is to press it into the tacky varnish through the leaf's paper backing.



Cutting loose leaf. To cut loose leaf into smaller sections, place it on a shop-made gilder's pillow, or "klinker"—a soft, chamois-covered pad—and cut it with a dull-edged gilding knife.

MAKING A KLINKER

A klinker cushions loose leaf gold for cutting it into smaller pieces.



Tamping the leaf. Use a very soft-bristle brush to press the leaf into the tacky coat of size. Brush off excess that overlaps onto adjacent leaves.

picking it up near its edge. Use another brush to help carry the leaf if necessary. (See bottom left photo, opposite page.)

After you've covered the entire surface, tamp the leaf down with a very soft brush. Gently pull it diagonally across the leaf seams in the direction of the overlap, as shown in the photo at right. Only leaf that touches the size will stick. Any overlapping leaf will fall away.

After tamping the entire surface, patch any holes and tears with the small pieces of leaf, or "skewings," that fell away during tamping. Generally, the best way to do this is to press the leaf firmly into place with the tip of your pinky finger. To prevent scratching or soiling the leaf when pressing it in place, protect it by placing another scrap of leaf in front of it. To fill in very small pinholes, you can use the tip of an agate burnisher (available from gilding supply houses; see Sources) as shown in the bottom right photo. Use only as much pressure as needed to adhere the leaf to the size. If you're after an antique, distressed look, leave some of the holes unrepaired.

Let the work dry overnight, then burnish the surface with a small cotton ball wrapped in silk and covered with skewings to bring out a sheen on the metal. Rub using moderate pressure.

Double Gilding

Most of the time, I want to produce a thoroughly gilded surface, which is rich and truly lustrous. So I almost always

"double gild," completely covering the work with another layer of leaf. To double gild, simply repeat the same procedure, beginning by varnishing over the first layer of leaf. When applying the second layer of gold, stagger the leaves over the seams of the previous layer.

Finishing is easy; there's literally nothing to it. Gold leaf needs no protection. Lacquering or varnishing will only dull the luster. ▲



DAVID MARKS is a professional furniture maker and gilder in Northern California.

SOURCES

Gold leaf and gilding supplies are available from:

Dick Blick

(800) 447-8192 Circle #615

Constantine's

(800) 223-8087 Circle #616

M. Horowitz

(718) 263-9316 Circle #617

New York Central Art Supply

(800) 950-6111 Circle #618

Woodworker's Supply, Inc.

Also carries japan paints.

(800) 645-9292 Circle #619



Repairing holes. To fill in tiny holes or gaps, lay a scrap of leaf over the area and burnish it into place using a polished agate burnisher.

Dealing With Dust

Breathe easy and battle the mess with the right dust-busting gear

by Andy Rae

It's amazing how quickly wood chips and sawdust can accumulate in a woodworking shop. And when they do, you've got more than just messy floors to deal with. Breathing in wood dust can be a serious health hazard. Research has shown that long-term exposure to wood dust can contribute to

respiratory problems such as sinusitis, asthma and emphysema.

To win the battle against chips and sawdust, woodworkers rely on several lines of defense, each with its own type of equipment—from dust masks costing pennies apiece to central dust-collection systems that can cost several thousand

dollars or more. In this article, we'll cover the full range of options you can use to deal with wood dust and debris.

Shop Vacuums

In a small, garage-size workshop, a shop vacuum may be all you need in the way of dust collection. Shop vacuums are the most affordable dust collectors. They're easy to move around, and they're also versatile enough to be used outside the workshop for general household cleanup work. Many models have "wet-dry" capability—you can pick up water as well as dry material. (See "Buyer's Guide to Shop Vacuums," AW #45.)

To be most useful for workshop vacuuming, a shop vacuum should have a large-diameter (2½-in.) hose. Small-diameter hoses tend to clog easily. Hose fittings are important accessories. You need them to hook up your shop vacuum to the dust ports on portable power tools.

Powerful suction is another factor to consider when buying a shop vacuum. Manufacturer's power ratings—peak HP, airflow rate (measured in cfm, or cubic ft. per minute) and static pressure—don't really tell you much when it comes to picking up shop waste. Instead, look for models with two-stage fans. These units have two impellers instead of one and generally produce more suction so they can lift more weight.

Shop vacuums are powered by universal motors, the same kind you'll find on most portable power tools. These motors are noisy, so you'll need some form of hearing protection (earplugs or protective earmuffs) when vacuuming. Also, universal motors aren't designed for continuous use like induction motors are. They're really meant to be used for short periods of time. If you'll be vacuuming for extended periods, look for a shop vacuum equipped with a bypass fan, which is a separate auxiliary fan dedicated to cooling the motor.



Defend yourself. Keep your lungs and your shop clean with a combination of dust-eating devices such as a dust mask and a dust collector.

SHOP VACUUMS: LOW-COST DUST COLLECTORS



No frills. This Craftsman shop vacuum costs about \$100.



Middle of the road. This \$140 Hoover model has a larger drum.



High end. The \$599 Wap has an automatic on-off switch.

Shop vacuums come with either one or two filters. Models with two filters will trap finer particles because the primary filter captures the bulky stuff while the secondary filter collects the finer dust. This means less dust is blown back into the shop, and there's less chance of the secondary filter becoming clogged, which cuts down on airflow.

A no-frills shop vacuum can cost as little as \$50 and will be best suited for light-duty or occasional use. At the high end, you can pay \$500 or more for a large-capacity, industrial-grade model. On more expensive models, you'll find helpful features like automatic on-off switches, detachable blowers, and filter bags that let you empty waste easily.

Masks and Helmets

Although it's important to trap dust and chips where they originate, you can't avoid sending dust particles into the air. Particles smaller than 20 microns (one

micron equals one-millionth of a meter) may be suspended in the air for several hours. For protection against airborne dust, the easiest line of defense is a dust mask, which places a protective filter over the nose and mouth.

There are two main types of dust masks: disposable and non-disposable. Disposables are made from paper or cloth and are the least expensive and easiest to use. This type of mask should be thrown away when it becomes so clogged with dust that breathing through it becomes difficult. When bought in bulk—boxes holding 10 or more masks—disposables cost 50 cents or less per mask. ([See Sources, page 75.](#)) More expensive disposable masks are also available. These masks have a one-way air valve that allows exhaled air to escape easily. This helps to prevent glasses and goggles from fogging. No matter what type of disposable mask you buy, be sure to store your masks in

an airtight container to keep them dust-free. A resealable plastic bag is a good storage solution.

For durability, many woodworkers prefer non-disposable masks. One variety, made from cloth, is similar to the disposable type, but it can be washed when it becomes clogged. Expect to pay around \$30 for this type of mask.

For a better fit and more versatility, look for a respirator. These devices generally rely on flexible rubber or plastic to create a tighter face seal than you can achieve with cloth or paper masks. And respirator-type masks are fitted with replaceable particle filters and cartridges. You can buy different types of cartridges to protect yourself against chemical vapors and mists. For around \$20, you can buy a respirator that will protect you from dust. More advanced models, available for \$100 or more, will protect against harmful vapors as well as dust. ([See Sources.](#))

MASKS & HELMETS FOR DUST PROTECTION



Disposable dust masks. These throw-away masks protect your lungs and cost just pennies apiece.



Non-disposable masks. These more durable dust masks are easy to clean and reuse.



Respirators. These accept various cartridges for working with different materials. They cost from \$20 to \$100.



Dust helmets. You'll look like a sci-fi character, but your lungs and your face will be protected.

Though respirators make a better seal than cloth or paper masks—therefore keeping more dust out—these masks are also bulkier and heavier. Expect some discomfort if you'll be wearing a respirator for more than a few minutes.

Dust helmets offer yet another protective option—not just from airborne dust but also from flying debris—which makes them particularly attractive to turners. And many bearded woodworkers prefer helmets because filter masks leak too much when worn over a beard.

A dust helmet usually consists of a hard-hat-type helmet with a clear, shatterproof face shield and a cloth or paper collar that seals at the neck. A battery-powered fan, contained in the helmet or

clipped to your belt, provides positive air pressure to keep you cool. The face shield protects your eyes from dust and debris. (See "Dust Helmets," AW #33.)

Helmets cost between \$200 and \$800. If you're a hobbyist, you'll do fine with a lower-priced model. Turners or production woodworkers who spend eight to 10 hours a day in a dusty environment will be more comfortable and get better protection with a higher-priced model. (See Sources.)

Dust Collectors

Dust collectors are the main line of defense when it comes to collecting wood dust and debris at the source. Collectors have the capacity to handle

large quantities of dust and chips—the volume of material you'd generate with a planer, shaper or tablesaw. And these machines are powered by induction motors designed to run for extended periods of time.

Dust collectors can be used for specific dust-collecting tasks, and many of the smaller models come on mobile stands. But dust collectors can also serve as the heart of a dust-collection system in which steel or plastic ductwork runs from each machine to a centrally located dust collector. Hand-activated "blast gates"—small doors that block off individual ducts—act like valves, directing suction where it's most needed. Sawdust and chips are collected close to cutting

DUST COLLECTORS: HIGH-VOLUME SYSTEMS

Hooked up to a jointer, planer, tablesaw or other machine, a dust collector can suck up sawdust and wood chips before they reach your workshop floor. Larger models will serve several machines at once. Prices range from about \$200 to over \$1,500.

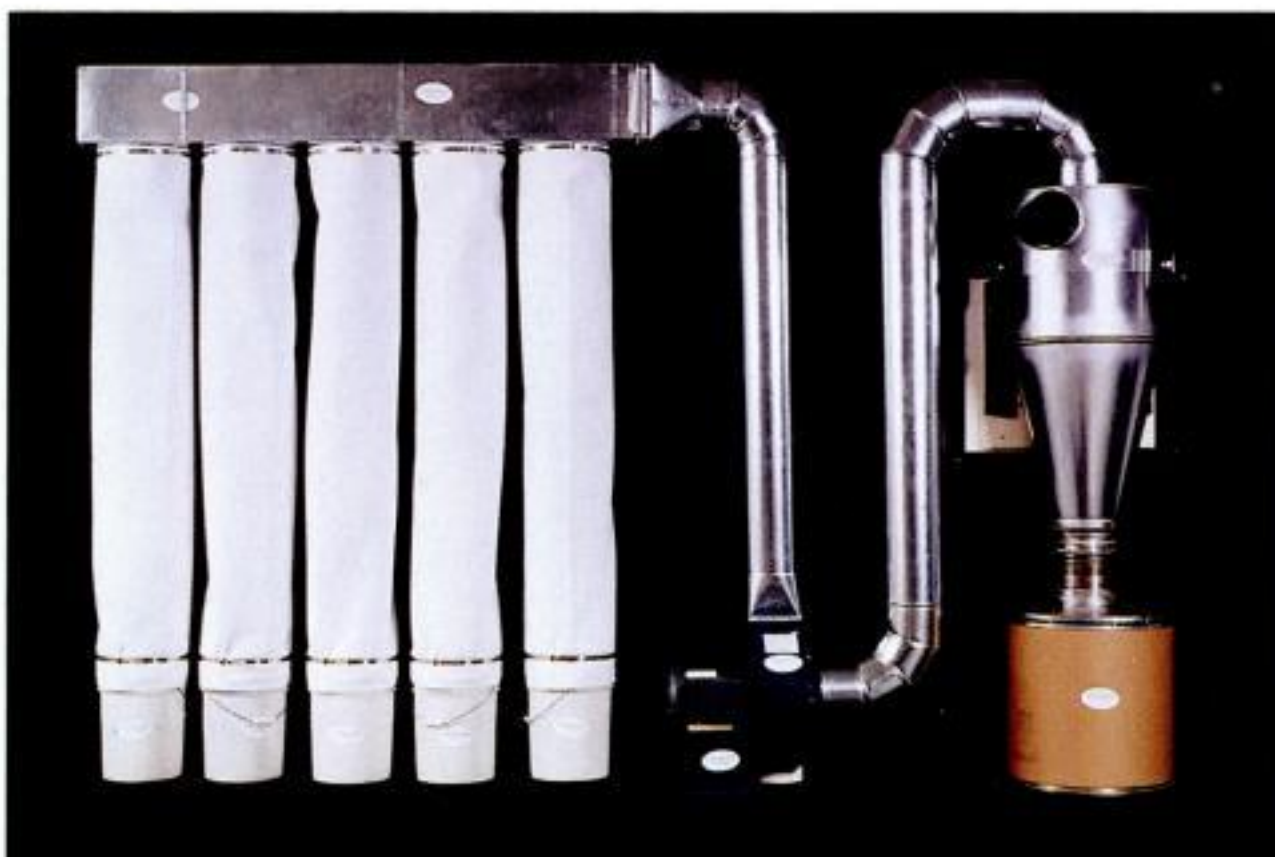
Single-stage system



Two-stage system



Cyclone system



edges and delivered to the collector's bags or barrels. You can also use a flexible hose and a floor-sweep fitting to pick up loose debris. But the greatest benefit of a dust-collection system is that most of the dust and chips never reach the shop floor.

There are three types of collectors: single-stage, two-stage and cyclone pre-collectors. Price tags range from \$200 to \$1,500. For more information on dust collectors, see AW #37 and AW #55.

Ambient Air Cleaners

Ambient air cleaners fill an important niche in dust control. The typical unit consists of a box with an electric blower and one or more filters designed to trap fine dust particles—10 microns or smaller. Ambient air cleaners capture the fine airborne dust that big collectors miss. It's this fine dust that causes the most harm to woodworkers.

Most woodworkers hang their ambient air cleaners from the ceiling, where they're out of the way. It's smart to position the filter above a workspace such as a bench where sawdust is likely to be generated on a regular basis. Benchtop and under-bench models are available, but they tend to get in the way. It's important to have the filters accessible so that they can be changed or cleaned when they become loaded with dust.

Ambient air cleaners range in price from around \$100 to \$1,000. The more expensive models have more filters that can trap finer dust particles down to 1 micron or smaller.

Before you shop for features and price, you'll need to figure out the airflow capacity your shop will require. The air cleaner should have a high enough cfm rating to filter and recirculate all the air in your shop about six to eight times an hour, depending on the type of work you do. Calculate your shop's cfm requirements like this: Multiply the length, width and ceiling height of your workspace (in feet), then multiply that figure by the number of desired air changes per hour. Divide the result by 60 to get a minimum cfm rating. ▲



ANDY RAE
is an associate editor
of AW.

AMBIENT AIR CLEANERS FOR AIRBORNE DUST



Clear the air. Keep your environment clean by capturing fine dust particles with an ambient air cleaner. Prices range from \$100 to \$1,000.

SOURCES

Dust equipment is available from mail-order suppliers (marked with an asterisk*) and local retailers. Call the companies below for more information.

SHOP VACUUMS

Bosch (312) 286-7330
Delta (800) 438-2486
Dirt Devil (800) 321-1134
Eureka (800) 282-2886
Fein Power Tools (800) 441-9878
Genie (800) 995-1111
Hoover (800) 293-4605
Makita (714) 522-8088
Milwaukee (800) 414-6572
Porter-Cable (800) 487-8665
Ryobi (800) 525-2579
Sears Contact your local Sears store.
Shop-Vac (717) 326-3557
Wap (800) 237-2368

DUST MASKS AND HELMETS

Airware America (800) 328-1792
***Craft Supplies USA** (801) 373-0917
Pajo, Inc. (941) 694-3627
Racal (800) 682-9500
***The Sanding Catalog** (800) 228-0000
3M Corp. (800) 364-3577
***Tool Crib** (800) 358-3096
***TrendLines** (800) 767-9999
Wilson Safety Products
(610) 371-7728
***Woodworker's Supply, Inc.**
(800) 645-9292

DUST COLLECTORS

***AMT** (800) 432-4268
Aget (517) 263-5781
Blue Tornado Cyclones
(800) 292-0157

Delta (800) 438-2486
Dust Boy, Inc. (800) 232-3878
***Grizzly** (800) 541-5537
Hitachi Power Tools (800) 598-6657
Jet Equipment & Tools (800) 274-6848
Murphy Rodgers (213) 587-4118
Oneida Air Systems (315) 476-5151
Powermatic (800) 473-5551
***The Sanding Catalog** (800) 228-0000
Seco Investments Co. (310) 949-7689
Shopsmith (800) 543-7586
***Star Tool Corp.** (888) 678-8777
***Sunhill Machinery** (800) 929-4321
***Tool Crib** (800) 358-3096
Torit & Day (800) 365-1331
***TrendLines** (800) 767-9999
***Wilke Machinery** (800) 235-2100
***Woodworker's Supply, Inc.**
(800) 645-9292

AMBIENT AIR CLEANERS

Aim Tools (800) 665-0900
Air Cleaning Equipment Corp.
(800) 221-5318
***CMT Tools** (800) 531-5559
***Grizzly** (800) 541-5537
***Hartville Tool** (800) 345-2396
JDS Company (800) 382-2637
***Penn State Industries** (800) 377-7297
Total Shop (800) 845-9356
***Tool Crib** (800) 358-3096
***TrendLines** (800) 767-9999
***Wilke Machinery** (800) 235-2100
WoodMark (800) 845-4400

You deserve a vacation... Our bandsaws will give you one

Who needs civilization when you have a Laguna Tools Bandsaw on a desert island? We give you more power, more re-saw and more Bandsaw for your money. Our European Bandsaws give you dynamically balanced cast iron wheels, professional guides, large blade capacities and heavy duty cast iron tables. Models range from 13" to 36".



Call now
(800)
234-1976
for your
FREE
demonstration
video
getting
you closer
to your
vacation.

LAGUNA TOOLS

2265 Laguna Canyon Road
Laguna Beach CA 92651
800-234-1976 • FAX 714-497-1346
Internet Website: lagunatools.com

CIRCLE NO. 50 ON PRODUCT INFORMATION FORM



Model DB-612
Made In U.S.A.

Pneumatic Drum/Brush Head Sander



NEW

30 minute

VIDEO

Showing the
DB-612 in Action
\$10.00 Postpaid

Charged to your VISA or MC

Sand-Rite

An Industry Leader Since 1942

Call for a **FREE** Catalogue and Price List

800-521-2318



CIRCLE NO. 59 ON PRODUCT INFORMATION FORM

FREE TOOL CATALOG

Helping You Become a Better Woodworker



highland hardware
Our giant tool catalog gives more than
just manufacturer's specs.

We provide detailed tool descriptions,
useful techniques, as well as a
schedule of educational seminars.

Visit us on the Internet at
<http://www.highland-hardware.com>
Call TOLL-FREE for FREE catalog

888-500-4466

CIRCLE NO. 36 ON PRODUCT INFORMATION FORM

CONOVER LATHE



Thinking of moving up? Need a
machine with greater length, more
horsepower, greater rigidity?

Most of our customers have exceeded the capacity of smaller machines.

Heavy cast iron construction, precisely machined, produces a lathe with 16" swing. With user supplied 2" x 6" timbers, this lathe can be sized to fit your workshop or project. Excellent for faceplate or spindle work. Guaranteed to please and compliment even the most discerning of craftsmen.

The Conover Lathe. A long tradition of pride in American-made quality.



Conover Lathe Div.
Alpha Fabrication Inc.

P.O. Box 418, Mentor, Ohio 44061-0418
www.conover-lathe.com

Grip-TiteTM magnetic featherboard



3 second,
one-handed setup
No clamping!

Lexan[®] springs push
wood down and against
the fence.

"Tremendous Power"
Fine Woodworking

Use it on tablesaws,
jointers, shapers.

Call
1-800-475-0293
for a dealer near you!

Satisfaction Guaranteed
30 day full refund.

MESA VISTA DESIGN
804 Tulip Road
Rio Rancho, NM 87124

CIRCLE NO. 56 ON PRODUCT INFORMATION FORM

"THE KIT" by KOETTER is here!



Ready to assemble dry kiln kits
using Koetter's "Constant Venting"
system ... produce top quality kiln
dried lumber in as little as 10 days!

Durable, low maintenance, highly
efficient units are easy to operate.

Get a size to fit *your* needs from 650
board ft. to over 50,000 board ft!



"Back to basics"
*no-nonsense
lumber drying!*

812-284-2638

P.O. Box 4129, Jeffersonville, IN 47131

CIRCLE NO. 46 ON PRODUCT INFORMATION FORM



STAR TOOLS, LLC.
TOLL FREE

1-888-678-8777

MON. - FRI. 7:00AM - 5:00 PM (Pacific Time)

CALL FOR NEW STAR TOOLS CATALOG

STAR TOOLS INTRODUCES OUR NEW MODELS FOR 1997



1-1/2 H.P. SHAPER

- 1/2" & 3/4" SPINDLES
 - 2 SPEEDS/ REVERSIBLE
 - **FREE** DUST HOOD
- S3302
\$455.00



3 H.P. SHAPER

- 1/2" & 3/4" & 1" SPINDLES
 - 2 SPEEDS/ REVERSIBLE
 - **FREE** DUST HOOD
- S3303
\$795.00



OSCILLATING SPINDLE SANDER

- 1 H.P. 110/ 220 VOLT
 - 1725 RPM
 - 24" X 24" TABLE TILTS 45°
- S3407
\$485.00



COMBINATION SANDER

- 6" BELT W/12" DISC
 - QUICK RELEASE ON BELT
 - 4" DUST PORT
- S3702
\$375.00



12" 5 HP CABINET SAW

S3206

SPECIAL INTRODUCTORY OFFER INCLUDES:

- TABLE SAW WITH 36" RIP
- STAR LOCK FENCE WITH MICRO ADJUSTER
- MOTOR COVER
- BUILT IN 4" DUST PORT

SPECIAL INTRODUCTORY PRICE
\$1,450.00



REGULAR PRICE
\$1,750.00

10" HEAVY DUTY CABINET SAW

S3202

SPECIAL PRICE
\$995.00

INCLUDES **FREE:**

- S3221 MOTOR COVER
- S3226 MICRO ADJUSTER
- S3857 DUST HOOD & FREE FREUD LU82 10" BLADE

\$850.00

(SAW AND FENCE ONLY)



14-1/2" BANDSAW

- 3/4 H.P. 110/220 VOLTS
 - 6" RESAW CAPACITY
 - 1/8"-1" BLADE
- S3501
\$325.00



20" BANDSAW

- 3 H.P. 220 VOLT
 - 12" RESAW CAPACITY
 - ROLLER GUIDES
- S3506
\$1,295.00



EDGE SANDER

- 1-1/2 H.P. 110/220 VOLT
 - 6" X 30" BELT SIZE
 - SANDS VERTICALLY & HORIZONTALLY
- S3406
\$465.00



25" DUAL DRUM SANDER

- 5 H.P. 220 VOLT
 - 2 SPEEDS 11 & 17 FPM/ REVERSIBLE
 - CAST IRON WORK TABLE
- S3409
\$1,275.00



2 H.P. DUST COLLECTOR

- 1182 CFM
 - 2 INTAKES @ 4" or 1 @ 5"
 - STEEL IMPELLER
- S3820
\$270.00



12-1/2" PORTABLE PLANER

- 2 H.P.
 - REVERSIBLE HSS BLADES
 - **FREE** 4" DUST HOOD
- S3712
\$385.00



8" JOINTER

- 2 H.P. 220 VOLT
 - 3 KNIFE JACK SCREW CUTTERHEAD
 - 8" X 65" BED LENGTH
- S3107
\$785.00



6" JOINTER

- 1-1/2 H.P. 110/220 VOLT
 - 3 KNIFE JACK SCREW CUTTERHEAD
 - 47" BED LENGTH
- S3104
\$485.00



(JOINTERS SHOWN WITH OPTIONAL MOBILE BASE)

**MAIN OFFICE
SHOW ROOM**
9825 PIONEER BLVD.
SANTA FE SPRINGS, CA 90670
TEL: 310-654-3065
FAX: 310-654-3066

WEST COAST



CIRCLE NO. 73 ON PRODUCT INFORMATION FORM

EAST COAST



**SHIPPING WAREHOUSE
SHOWROOM**
12 ARMORY ROAD,
CLARKSBURG, WV 26301
(TECH SUPPORT ONLY) TEL: 304-624-6685
FAX: 304-624-8928

Materiale protetto da copyright

Mahogany

By Paul L. McClure



Mahogany is one of the world's most important commercial timbers. Of the few existing species of mahogany, only bigleaf mahogany (*Swietenia macrophylla*) is widely available. It grows from southern Mexico south to Brazil and is often named after its country of origin—Honduras mahogany, Peruvian mahogany, etc.

Cuban, or Santo Domingan, mahogany (*S. mahagoni*) grows in the Caribbean. Once a treasured cabinet wood, it was long ago overharvested and now exists mainly as smaller ornamental trees.

"Philippine mahogany" or "lauan" (*Shorea* spp.) is similar in color, but is not a true mahogany. *Khaya* or "African mahogany" (*Khaya ivorensis*) is only a distant cousin of *Swietenia*.

Bigleaf mahogany trees can reach diameters of 10 ft. and heights of 150 ft. Mahogany is so widespread that its exis-

tence as a species is not yet endangered. However, its commercial sustainability has been questioned by the Convention on International Trade in Endangered Species (CITES). Brazil and Peru, two of the largest suppliers, are reportedly taking steps to restrict logging. As a result, prices are already rising in the U.S.

Appearance

Mahogany's heartwood is often yellowish when freshly cut, but soon turns reddish, pinkish or salmon. The color deepens with age to a rich red or brown. The yellowish to white sapwood is removed in the country of origin.

The wood has an open grain similar to walnut; its texture can range from fine to coarse. Mahogany is generally fairly straight-grained, but some boards display wild figure—roey, wavy, curly, quilted or blister.

Workability

Mahogany is a moderately hard wood. It's well-known for its excellent workability with both hand and power tools, although occasional interlocked grain can make hand planing difficult. Density may vary, depending on the growing conditions and country of origin. Mahogany is tough and very stable. It glues well and holds nails and screws securely. It's wise to prebore for screws. It sands easily to a very high polish and accepts all types of stains and finishes. It does not steam bend very well.

Uses

There are almost no limits to the uses of mahogany. It's widely used in cabinetry, indoor and outdoor furniture, millwork, turnings and boats. And it's one of the most preferred woods for carving, sculpture and patternmaking. ▲

MAHOGANY



Flatsawn bigleaf



Quilted bigleaf



Santo Domingan



Philippine mahogany



African mahogany

SPECIES AND COMMON NAMES

Swietenia macrophylla—Honduras, Brazilian, or Peruvian mahogany (or other country of origin); bigleaf mahogany

GROWING RANGE

From southern Mexico south to Peru and Brazil

SPECIFIC GRAVITY

0.45 to 0.60

DENSITY

33 to 45 lbs. per cu ft.

WOOD MOVEMENT¹

Tangential (flatsawn): small (less than 1/4 in. per ft.)

Radial (quartersawn): very small (less than 1/8 in. per ft.)

DURABILITY

Heartwood resistant to decay and insects; sapwood susceptible to both

SUSTAINABILITY

Sustainability as a commercial species is questionable (see main text)

AVAILABILITY

Hardwood and specialty lumber dealers

SIZE

Thicknesses: 4/4 through 16/4. Widths: 4 to 24 in. Lengths: 6 to 20 ft.

COST

Lumber: \$4 to \$6.50 per bd. ft., depending on thickness

Veneer: 95 cents per sq. ft.

¹Indicates wood movement across the grain from 6% to 12% moisture content.

Simply the Best...

Performax® owners agree – no other competitor model can compare.

Only Performax offers eleven different models. Only Performax offers patented features and exclusive technology. And only Performax offers the opportunity to see a Performax demonstrated at 200+ dealers nationwide.

We are the sanding specialists. Whether your sanding needs are a few hours on the weekend or all day, everyday, Performax has the model to fit your budget and your needs.

Call us today, let's talk abrasive planing, dimensioning and fine finish sanding in your shop.

1-800-334-4910

12257 Nicollet Ave. So. Burnsville, MN 55337 (612) 895-9922

CIRCLE NO. 62 ON PRODUCT INFORMATION FORM



MAKING WOODWORKING EASIER AND MORE ENJOYABLE THROUGH INNOVATION™



SlipStop

C	O	L	L	A	R	S
908-295	1/8" ID Slip-Stop™	COLLAR				\$ 3.90
908-302	3/16" ID Slip-Stop™	COLLAR				\$ 3.90
908-309	1/4" ID Slip-Stop™	COLLAR				\$ 3.90
908-316	5/16" ID Slip-Stop™	COLLAR				\$ 3.90
908-323	3/8" ID Slip-Stop™	COLLAR				\$ 3.90
908-330	1/2" ID Slip-Stop™	COLLAR				\$ 4.50
908-298	Set of 6 STANDARD					\$22.95
908-407	3mm ID Slip-Stop™	COLLAR				\$ 3.90
908-414	4mm ID Slip-Stop™	COLLAR				\$ 3.90
908-421	5mm ID Slip-Stop™	COLLAR				\$ 3.90
908-428	6mm ID Slip-Stop™	COLLAR				\$ 3.90
908-435	8mm ID Slip-Stop™	COLLAR				\$ 3.90
908-442	10mm ID Slip-Stop™	COLLAR				\$ 4.50
908-449	12mm ID Slip-Stop™	COLLAR				\$ 4.50
908-410	Set of 7 METRIC					\$26.95

FREE shipping when ordering from this ad. Mention code AW397.

ORDER TOLL FREE 1-800-645-9292
One year catalog subscription (6 or more issues) \$10.00, or free with your order.

INNOVATIVE SLIP-STOP™ COLLARS DON'T MAR WOOD SURFACES

Unlike conventional stop collars, Slip-Stop™ collars have a low friction polymer boot and washer combination that rotates freely when it contacts the stock preventing burns or burnishes. The stainless steel bodies resist rusting and corrosion. Patent Pending.

Woodworker's Supply®

where the experts buy their tools™

1108 North Glenn Road • Casper, Wyoming 82601

CIRCLE NO. 94 ON PRODUCT INFORMATION FORM

Enjoy unlimited opportunity! Be your own boss! BE A HOME INSPECTOR!

Work Part-Time Hours... Make A Full-Time Income!

The average home inspection takes only a couple of hours...and Home Inspectors across the country are charging anywhere from \$100.00 to \$300.00 per job for their specialized services. You can make a very comfortable income just working on the weekends, if you like.

No Previous Experience Needed! Start Your Own Business!

Now you can train at home, in your spare time, for a good paying career or business of your own. ICS—the world leader in home-study career training—has specially prepared this program so you can get started fast toward a great future in this booming career field. Home Inspectors are in demand across the country as banks, mortgage companies, and concerned

consumers want to know about a house before they put their money on the line. YOU can be the expert they turn to!

Learn How to Spot Trouble Throughout the Home:

- * WIRING
- * FOUNDATION
- * PLUMBING
- * ROOF
- * WINDOWS
- * INSULATION

Get Valuable Training on Environmental Concerns!

- * INSECT INFESTATION
- * ASBESTOS
- * LEAD

Take advantage of the proven ICS "Quick-Learn" method of instruction. Keep your present job while we teach you the skills to get a better one. Everything is explained in plain English. Help is available via a simple, toll-free phone call. There is no better way to get started toward a rewarding future in Home Inspection than with ICS!



GET YOUR FREE CAREER KIT!

YES! Tell me how I can train at home in my spare time for a better job, more money, and a new career or business of my own! No obligation. No salesman will visit. CHECK ONE ONLY!

- | | |
|---|--|
| ☐ 15 HOME INSPECTOR | ☐ 14 Air Conditioning/Refrigeration |
| ☐ 06 Electrician | ☐ 25 Gun Repair |
| ☐ 27 PC Repair | ☐ 89 Small Engine Repair |
| ☐ 07 High School | ☐ 01 Programming in BASIC |
| ☐ 31 Professional Locksmithing | ☐ 87 TV/VCR Repair |
| | ☐ 72 Appliance Repair |

Name _____ Age _____
Street _____ Apt. # _____
City/State _____ Zip _____
Phone () _____



School of Property Management
Dept. A2PS37S
925 Oak Street, Scranton, PA 18515

If You Like To Work With Your Hands As Well As Your Head, Send For Free Facts Now! ♦♦♦

OR CALL TOLL FREE: 1-800-595-5505 ext. 4307 CALL ANYTIME—24 hours a day, 7 days a week.
<http://www.icslearn.com>

CIRCLE NO. 38 ON PRODUCT INFORMATION FORM

Free Catalog

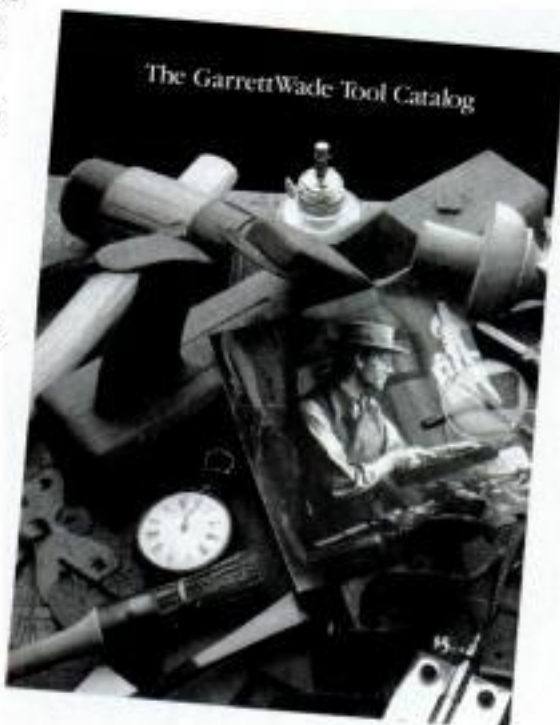
High quality woodworking supplies and tools are easy to find in the Garrett Wade Catalog. We have everything from traditional old-style hand planes and saws to the very latest in modern power tools.

As well as solid brass hardware, old world varnishes, stains, oils and much more.

For a Free Catalog send us a post card or letter with your name and address to the address below or call Toll Free:

Garrett Wade Co.
161 6th. Avenue
Dept. 1107
NY, NY 10013

800-221-2942
800-566-9525 -fax



From Garrett Wade

CIRCLE NO. 28 ON PRODUCT INFORMATION FORM

Pink Ivory
Dagame
Brazilian Rosewood
Pear
Plum
Burl
Snakewood
Bubinga
Koa
Satinwood
Cocobolo
Padauk
Rosewood
Bloodwood
Ziricote
Purpleheart
C. Ebony
Pau Rosa
Camphor

Quality Exotic Wood

»TURNERS«
Thick Planks for Bowls / Squares
»CABINET MAKERS«
Individually Selected Lumber
for
Furniture / Boxes / Inlays

Over 70 Species

All Inquiries Welcome...Call or Write

Berea Hardwoods Co.

6367 Eastland Rd. • Brook Park, OH 44142
216-234-7949

"It's a matter of pride for both of us"

Pernambuco
Mac. Ebony
E.I. Rosewood
Bocote
Curly Maple
Quilted Maple
African Ebony
Zebrano
Lacewood
Lignum Vitae
Osage
Tulipwood
Blackwood
Mahogany
Jelutong
Holly
Wenge
Goncalo Alves
Many More ...

"It's a matter of pride for both of us"

CIRCLE NO. 9 ON PRODUCT INFORMATION FORM

Her-Saf Router Bits

Made in the USA



Reverse Helix Carbide Cutters
Screw-on for Quick Change
Sizes Available from 1/8" to 1-1/2"+

For a **FREE** Catalog
Call 1-800-553-9344

Manufactured By:

Safranek Enterprises, Inc.
Atascadero, California

CIRCLE NO. 68 ON PRODUCT INFORMATION FORM



USE THE RIGHT TOOL!

HEAT YOUR SHOP WITH
RE-VERBER-RAY
GAS INFRA-RED TUBE HEATERS

Infra-Red Heaters work just like the sun by directly heating objects in their path. Capture this energy saving technology for your woodworking shop! Enjoy the benefits of a sealed combustion system and no drafts to ruin finishes etc. at a fraction of the operating cost of hot air systems.
Call today for a no cost-no obligation survey!



800-222-1100

Detroit Radiant Products Company
21400 Hoover Road, Warren, MI 48089
<http://www.reverberay.thomasregister.com>

CIRCLE NO. 19 ON PRODUCT INFORMATION FORM

EXCLUSIVE

The Ultimate Router Jig Video

With just a router and your tablesaw you can cut:

**Mortises, Tenons,
Sliding Dovetails,
Raised Panels and More!**

This half-hour tape, complete with detailed drawings, shows you how to build and use this incredibly versatile jig. Order your video today and see why this is the Ultimate Router Jig!



ONLY \$15.00

As seen in the April '94 Issue

ORDER FORM

Mail this form with a check or money order.
For Visa or MasterCard orders call: 610-967-8315.
Please send me _____ video(s) at \$15.00 each.

Name _____

Address _____

City _____ State _____ Zip _____

Mail To: AMERICAN WOODWORKER, Ultimate Router Jig Video,
33 E. Minor St., Emmaus, PA 18098

Quantities limited - order your copy today!

Over 800 exhibitors.
See the latest **technology**.
Get first-hand **experience** with
thousands of products.
**Discover new solutions and new
products** for your business.
Get the competitive edge with
practical **up-to-the-minute info**.
Don't miss the industry's most
comprehensive **conference program**.



**THE 1997
WOODWORKING
MACHINERY
&
FURNITURE
SUPPLY
FAIR**

FIND A WORLD OF IDEAS

Note: This form is for pre-registration only. Return completed form and \$5.00 by July 7th. After July 7th you will have to register on-site and pay \$20.00. **Incomplete forms will be returned.** Please photocopy for each additional registrant.

Source
AW[illegible]

Sponsored by the Association of Woodworking & Furnishings Suppliers. For the trade only. No one under 16 admitted.

SAVE \$15! REGISTER TODAY!
JUST SEND \$5 AND THE COMPLETED PRE-REGISTRATION FORM ABOVE.
FOR MORE INFORMATION CALL: (310) 445-1511.
<http://www.woodweb.com/~woodweb/anaheim>

Bar and Countertop Finishes

A combination of good looks and durability

by Michael Dresdner



There is no disputing the beauty of wood as a food-and-drink work surface. But counter surfaces—whether for bars or kitchens—take a lot of abuse. They are subjected to scratches from dishware and glasses. They're attacked by water, alcohol, acids (like vinegar and lemon juice) and alkalis (like baking soda). They're threatened by stains and barraged by heat from coffee pots, cookware and the occasional errant cigar.

The challenge is to find a finish that will withstand all these assaults. Unfortunately, most commonly available finishes fall short in one area or another. Shellac has poor heat resistance and can't tolerate alcohol or alkalis. Lacquer protects against most stains, but can be ruined by heat and some solvents such as nail polish remover. Traditional oil-based varnishes and "Danish oil" finishes withstand heat fairly well but don't offer much protection against scratching, alkalis and certain stains.

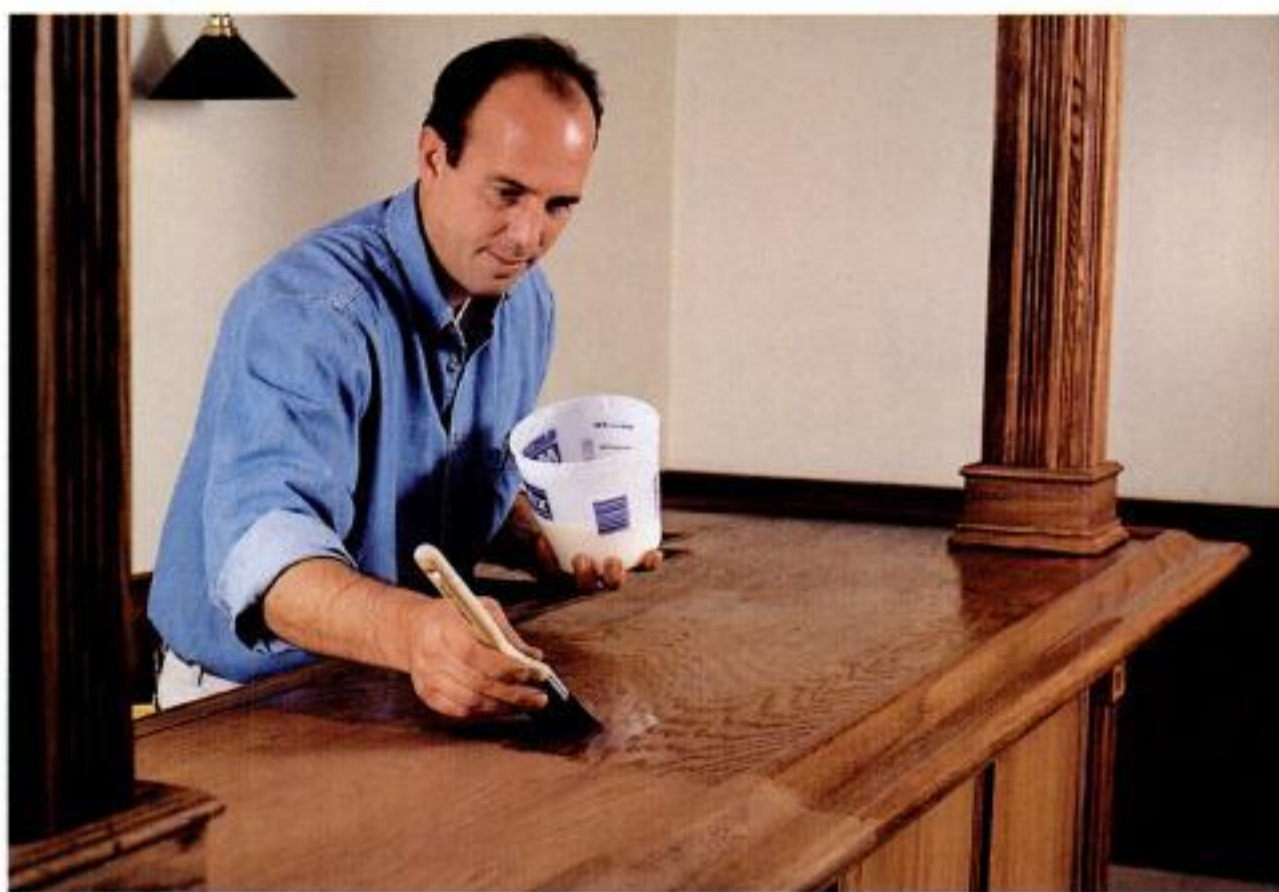
There are some good alternative finishes, though, which I'll discuss. I've listed them in descending order of durability. See the chart on page 84 for a quick reference to each finish's durability, ease of application and ease of repair.

Two-Part Urethanes

Essentially automotive finishes, two-part acrylic urethanes (available at auto and marine supply stores) offer great clarity and bulletproof resistance to scratches, water, chemicals, stains and heat. On the downside, you need spray equipment and a spray booth to work in, and the cured finish is almost impossible to repair.

Once you mix the components (usually four or five parts resin to one part activator) they will start reacting to form a solid plastic.

The finish is ready to spray once it's mixed. You can thin it further for better spray flow using the appropriate solvent (check the label) but add the solvent only *after* mixing the two parts. The "pot life," or the amount of time the finish will remain liquid, is given on the label.



Arming a bar. Bartop finishes help these hard-working surfaces stand up to abrasion, spills and heat. This bartop is getting its first coat of polyurethane.

A four-hour pot life is typical, meaning that you must finish spraying and clean your gun within that time. Each coat generally takes eight to 24 hours to cure.

Conversion Varnish or Catalyzed Lacquer

In the sprayable category, my first choice for an attractive, durable and easy-to-apply finish is a conversion varnish or catalyzed lacquer (available at paint stores). The terms "conversion varnish" and "catalyzed lacquer" are often used interchangeably to describe a variety of tough, acid-cured coatings.

These finishes look and handle much like nitrocellulose lacquer. (See AW #57.) The only difference is that, before spraying, you mix in a small amount of acid activator, which makes the finish more durable than nitrocellulose lacquer. The cured coating resists water, alcohol, most chemicals and stains, and moderate heat.

As with nitrocellulose lacquer, you spray several thin coats, scuff-sanding in

between, then rub out one day after the final coat. The film dries quickly and can be sanded the next day, or even sooner.

Full chemical and scratch resistance develops over the next 30 days, with 80% cure occurring in the first 24 hours. Invisible repairs are possible, but not easy to make. You may have to recoat the entire surface to hide a spot repair.

Brushable Polyurethane

For an attractive, durable brush-on finish, polyurethane is my favorite. To my eye, oil-based polyurethanes look better than water-based polyurethanes, but both will resist water, alcohol, most chemicals and stains, and moderate heat.

You can find many choices at your local paint or home supply store. Brush on several coats according to the directions on the can. Let the finish dry a few days, then rub it out to satin or gloss. (See AW #38.)

Both oil and water types become tougher over time, with the water-based product taking up to 30 days to fully

Bartley Finishes... Your results will make everyone *Gel-ous!*



Ideal for
wood trim,
fiberglass
doors, and
unfinished
furniture.

- Nearly twice the coverage as liquids
- No sanding between coats
- Dries to the touch in minutes

BARTLEY

Call or send for product and dealer information

410-479-4480

65 Engerman Avenue • Denton, MD 21629

CIRCLE NO. 8 ON PRODUCT INFORMATION FORM

The Mirra Collection Beveled Mirrors

Your beautiful handcrafted projects deserve the best... a beveled mirror from Shapes + Surfaces!

We carry over one million pieces in stock for quick shipment and can fabricate almost any shape, color or size of mirror you may need. Call today to place your order and to receive a copy of our color catalog. *Circles, ovals, squares, rectangles & octagons.*

1-800-647-7670

1649 Sycamore Ave., Bohemia, NY 11716

SHAPES + SURFACES

CIRCLE NO. 70 ON PRODUCT INFORMATION FORM

•STEEL BUILDINGS• DISCOVER FACTORY DIRECT SAVINGS

FREE 16
PAGE COLOR
BROCHURE



Save on Select Sizes:
25'x36'•30'x48'
45'x82'•50'x120'

- Perfect Back-Yard Shop
- Easy Financing Available
- Build-It-Yourself

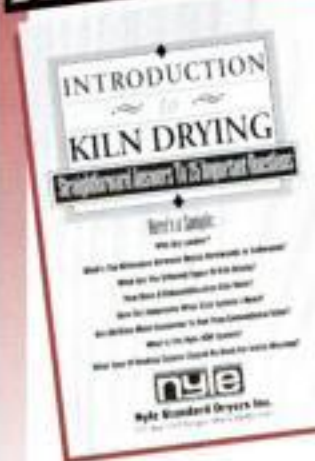
Ask about our Factory specials and save even more!

Call Now for FREE Info
1 800 888-4606
(Alaska & Hawaii dial 1-800-527-4044)



CIRCLE NO. 74 ON PRODUCT INFORMATION FORM

FREE Booklet! Get the Facts on Drying Your Own Lumber



Put the quality and reliability of the world leader right in your shop with an affordable Nyle kiln!

To learn more about drying your own lumber, call for a copy of this FREE booklet with facts on drying times, drying hardwoods and softwoods, and much more.

Our L-Series kilns start at 300 board ft.

800-777-NYLE

EASY PAYMENTS
AVAILABLE



(207)989-4335 • FAX (207)989-1101 • <http://www.nyle.com>

PO Box 1107 Bangor ME 04402-1107

CIRCLE NO. 59 ON PRODUCT INFORMATION FORM

CMT QUALITY THAT RUNS IN THE FAMILY

Nothing beats an original CMT for a quick, flawless performance. Whether it's our #1 rated router bit* or our award-winning dado blade**, if it's made in Italy, it's a CMT original.

The one that's prized for its durability and precision. Valued by serious woodworkers the world over. And only available through the manufacturer and selected, authorized dealers. #1 rated quality... bit or blade, it's a CMT family trait.

* rated #1 by WOOD magazine, December 1994 • ** AMERICAN WOODWORKER's Editor's Choice for 1994



For more information on CMT USA, Inc. products, call or fax for a FREE 124-page, full color catalog.

CMT USA, Inc. 307-F Pomona Drive Greensboro, NC 27407 • Toll free 1-888-CMT-BITS • Free Fax 1-800-268-9778 • e-mail: cmtusa@aol.com

© CMT UTENSILI SRL - TM: CMT, THE CMT LOGO AND THE ORANGE COLOR APPLIED TO TOOL SURFACES ARE TRADEMARKS OF CMT UTENSILI SRL

CIRCLE NO. 14 ON PRODUCT INFORMATION FORM

materiale protetto da copyright

JUST FINISHING

cure. Add a coat of paste wax twice a year to help protect against water, scratches and stains. After several years you may need to apply another coat. Be sure to remove any wax with mineral spirits or naphtha and scuff-sand the entire surface first, to provide good adhesion.

Oil

Oil is the clear choice for an easy-to-use, natural-looking finish that's very easy to repair. Unfortunately, it offers only minor protection against water spotting and staining, and it affords little or no protection against scratches or heat.

You can use a drying oil like linseed, tung or walnut, or a non-drying oil like mineral. You could also use an oil-varnish blend like Watco™, but it won't offer much more protection than a straight oil.

Drying oils cure to an ultra-thin film that you can build slightly with additional coats. Mineral oil stays "wet" forever and will not build; used on very tight-grained woods like hard maple, it will improve visual depth while barely altering the color of the wood.

To apply each coat of oil, wipe it on, let it soak into the wood, then wipe off the excess. Let it dry before applying the

next coat. To repair an oil finish, simply sand the affected spot and wipe on more oil. Oil is a high-maintenance finish. You should add another coat whenever the surface starts looking "dry."

Nothing

You read it right. Leave the wood natural. It will be "oiled" by frequent contact with oily foods. And food stains will be "bleached" out by the next round of acids and alkalis. Wood seems impervious to most common kitchen or bar chemicals and resists heat well. And the *easy to apply* rating is off the scale... ▲

TYPES OF BARTOP FINISHES AND THEIR WORKING QUALITIES

Finish	Durability	Ease of application	Repairability
Two-part urethanes	5	2	1
Conversion varnishes and catalyzed lacquers	4	4	2
Polyurethane	3	3	3
Oil	1	5	5

Numerical ratings range from 5 (excellent) to 1 (poor).



Join Michael Dresdner live
on America Online Sunday
nights from 9:30 pm to
10:30 pm eastern time for answers to
your finishing questions. Keyword
"wood" takes you to AMERICAN
WOODWORKER Magazine Online.
Click the "Shop Talk" icon to enter
the chat room.



TRIPLE PLAY!



AWARD WINNING PLANER!

12" Planer G1017 \$399⁰⁰

- 2 H.P., 110V MOTOR, 16 AMPS.
- NUMBER OF CUTS PER INCH: 55
- DUAL-KNIFE CUTTERHEAD
- CAPACITY: 12" W X 6" THICK STOCK
- MAXIMUM CUTTING HEIGHT: 5 1/2"
- SHIPPING WEIGHT APPROX 90 LBS.
- F.O.B. BELLINGHAM, WA OR WILLIAMSPORT, PA



15" Planer G1021 w/STAND \$795⁰⁰

- 2 H.P., 220V MOTOR, 10 AMPS.
- AUTOMATIC CHAIN DRIVEN INFEED & OUTFEED ROLLERS
- THREE-KNIFE CUTTERHEAD
- CAPACITY: 15" W X 6" THICK STOCK
- MAGNETIC SWITCH
- SHIPPING WEIGHT APPROX. 475 LBS.
- F.O.B. BELLINGHAM, WA OR WILLIAMSPORT, PA



20" Planer G1033 \$1295⁰⁰

- 3 H.P., 220V MOTOR, 16 AMPS.
- ANTI-KICKBACK FINGERS
- FOUR-KNIFE CUTTERHEAD
- CAPACITY: 20" W X 8" THICK STOCK
- PRECISION GROUND CAST IRON TABLE: 26" X 20"
- SHIPPING WEIGHT APPROX. 800 LBS.
- F.O.B. BELLINGHAM, WA OR WILLIAMSPORT, PA

66R

WEST OF THE MISSISSIPPI:

1-800-541-5537

Cust. Svc: (360) 647-0801 FAX: (800) 225-0021

CALL ANYTIME — 24 HRS A DAY!



"Visit us at <http://www.grizzlyimports.com>"

EAST OF THE MISSISSIPPI:

1-800-523-4777

Cust. Svc: (717) 326-3806 FAX: (800) 438-5901

CIRCLE NO. 32 ON PRODUCT INFORMATION FORM

Lion Miter
Trimmer

**A good miter
is hard to find...**

now you
know where
to look!

Made in New England

POOTATUCK CORPORATION

P.O. Box 24 • Dept. AW497
Windsor, VT 05089 • 802/674-5984

Name _____

Address _____

Zip _____

CIRCLE NO. 63 ON PRODUCT INFORMATION FORM

WOOD MOISTURE METERS



- Universal - Accurate -
Pin-point moisture prob-
lems from the surface
to the core! For heavy
timbers to veneer, for
rough, smooth and
curved surfaces. For
wet and dry wood.
New color brochure
- Lignomat USA -
Po Box 30145
Portland, OR
97294
-503-257-8957

Lignomat :: 800-227-2105

CIRCLE NO. 53 ON PRODUCT INFORMATION FORM

The Starrett DigiTape®

A better way to measure...electronically.



DigiTape uses the power of
advanced electronics to give
you a totally new way to
measure that's easier and
more accurate than ever.
With DigiTape, you can...

- Store a measurement in
memory, so you can take
"blind" measurements
and even measure in
the dark!

- Automatically add the case length for an inside measurement.
- Switch between "inches," "feet-and-inches," and "centimeters."
- Establish a zero point at any blade location.

Since DigiTape has a graduated blade, you can use it as a
rugged, reliable standard tape too!



Starrett®
Innovations That Work

121 Crescent Street, Athol, MA 01331
Tel: (508)249-5330 • Fax: (508) 249-8495



Feet-and-inches



Inches-only

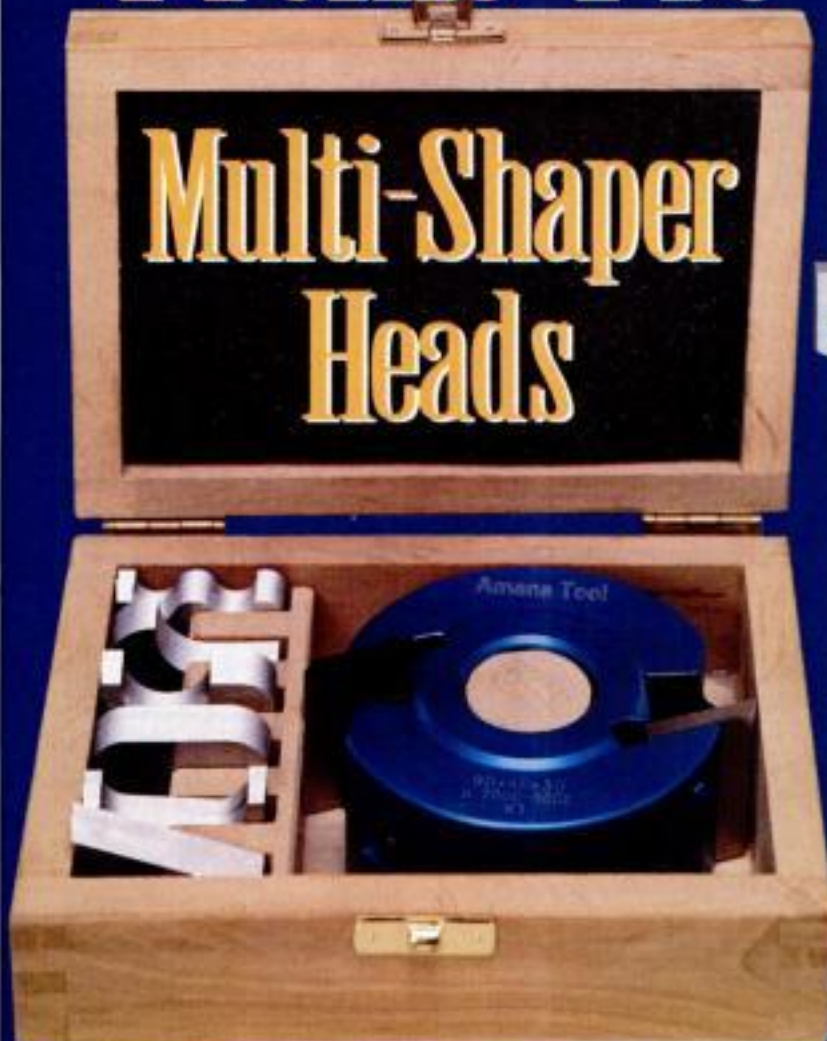


Centimeters

CIRCLE NO. 47 ON PRODUCT INFORMATION FORM

Profile Pro™

Multi-Shaper Heads



Introducing the new Profile-Pro™ Shaper Heads from Amana Tool

These precision, lightweight aluminum-alloy heads require less
horsepower and are ideal for all types of spindle shapers.
We stock over 135 different tool-steel knives to suit every need.

Special Introductory Offer!

SCS-1000: 90mm (3-1/2") dia. aluminum cutterhead, 1" bore.
or SCS-1002: same as above, with 30mm bore.



Both sets include these seven popular knife profiles
(shown above at approx. 35% actual size)
in a custom hardwood storage box.

Either set: \$133.00

(Offer good while supplies last)

Also available:

#BU-564 (1"x3/4" T-bushings) & #BU-565 (1"x1/2" T-bushings)
and a complete range of other insert cutterheads.



Amana Tool Corp.

Call (800) 445-0077 for the dealer nearest you,
or visit our web site at www.amanatool.com

CIRCLE NO. 6 ON PRODUCT INFORMATION FORM

Innovative Tools & Machinery for the Professional Craftsman / Woodworker



4" x 7" Pivot Jaw Woodworking Vise

- Fully enclosed spindle increases life of rapid acting nut
- Front pivot jaw can be easily removed and pivots 12° to clamp irregular parts
- Front jaw raises up to act as a full length dog



Magnetic Maple Jaw Inserts

- Prevent marring of work by using magnetic Maple Jaw Inserts
- Jaw faces have a powerful magnet and slide on and off



300 S. Hicks Rd. | Palatine, IL 60067
(847)934-6000 | FAX 800-626-9676
<http://www.wiltoncorp.com>

CIRCLE NO. 87 ON PRODUCT INFORMATION FORM



Fancy Leg Calipers

SIMPSON MACHINE TOOL CO.

Classic 18th & 19th Century tools recreated
with 20th Century precision and quality.

Request Your Catalog Today...

Phone: 1-717-338-9074

Mail: 619 Good Intent Rd.
Gettysburg, PA 17325

E-mail: tools@SMTCo.com

Internet: <http://www.SMTCo.com>



Big Carving Spoon



No. 1 Odd Jobs

Made in the USA from the finest materials including Solid Manganese Bronze and Tool Steel.

CIRCLE NO. 71 ON PRODUCT INFORMATION FORM

Enjoy the benefits of HVLP with a SUPER System!



Our SUPER model offers you the most powerful 3-stage turbine motor made by Ametek-Lamb.

"Quality of atomization rated 9.8 out of 10... This system includes an excellent three-stage turbine... the gun atomizes beautifully and has a full range of features."

— American Woodworker

FUJI
INDUSTRIAL SPRAY
EQUIPMENT LTD.

- High transfer efficiency
- Soft, easy to control spray
- Compact and portable

65 Martin Ross Ave, #5, Toronto, Ontario, Canada M3J 2L6
1-800-650-0930 • Fax: (416) 663-6238 • <http://www.fujispray.com>

CIRCLE NO. 26 ON PRODUCT INFORMATION FORM

BOSCH

12750VS	3" X 24" VS DUSTLESS BELT SANDER	208
12760VS	4" X 24" VS DUSTLESS BELT SANDER	228
1584VS	CLIC BARREL HANDLE JIG SAW, VS	138
1584VSW	1584VS JIG SAW W/CASE & 10 BLADES	159
1587VS	TOP HANDLE JIG SAW, VAR SP	138
1587VSW	1587VS JIG SAW W/CASE & 10 BLADES	159
1613EVS	2 HP VAR SP PLUNGE ROUTER	198
1613EVSK	1613EVS 2W/RA1051 DELUXE EDGE GUIDE	208
3310K	12V CORDS W/ HANDLE W/2 BAT, CS & CHRGR	175
3610K	14.4V CORDS DRILL KIT W/2 BATTERIES	188
3725DVS	5" DUSTLESS VS RANDOM ORBIT SANDER	143
3727DVS	6" DUSTLESS VS RANDOM ORBIT SANDER	148
3915	10" SLIDE COMPOUND MITER SAW	598

SKIL

HD1605-02	BISCUIT JOINER KIT	134
HD3400	10" TABLE SAW W/CARBIDE BLADE & STAND	198
HD77	7 1/4" WORM DRIVE CIRCULAR SAW	159

Jorgensen

ITEM	JAW LENGTH	OPEN CAP	OUR PRICE EACH	BOX OF 6
STYLE 37 2 1/2" THROAT 1 1/4" x 3/4"				
3706	6"		6.00	32.50
3712	12"		6.50	36.00
3718	18"		7.50	40.75
3724	24"		7.95	43.50
3730	30"		8.80	47.75
3736	36"		9.95	53.95
PONY CLAMP FIXTURES				
#50	3/4" BLACK PIPE CLAMPS		8.10	
BOX OF 12 \$91.95				

HITACHI

C8FB	8 1/2" SLIDE COMPOUND MITER SAW	498
C10FC	10" COMPOUND MITER SAW	209
C10FS	NEW 10" SLIDE COMPOUND MITER SAW	738
M12V	3 HP VAR SPEED PLUNGE ROUTER	249

POWERMATIC

ALL PRICES INCLUDE FREIGHT IN CONTIGUOUS U.S.A.		
15	15" PLANER	1295
64	1 1/2 HP TABLE SAW W/ACCU- FENCE	745
64L	1 1/2 HP TABLE SAW W/50" ACCU- FENCE	845
66	3 HP, 1 PH 10" T.A. SAW W/50" FENCE	1995
66	5 HP, 1 PH 10" T.A. SAW W/50" FENCE	2095
73	1 1/2 HP DUST COLLECTOR	419



BUSINESS HOURS:
MON-FRI 8-5 PM EST.
SATURDAY: 9-12 EST

FREE FREIGHT & SAME DAY SHIPPING ON MOST UPS ORDERS OVER \$50 MINIMUM PURCHASE WITHIN THE CONTIGUOUS U.S.A.

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

Model 906901K Includes 90690 router with case, 6931 plunge base, 42160 edge guide, 42000 laminate guide kit, 39993 routing pad, The World of Porter Cable Routers video, and a \$5.00 coupon towards future Porter Cable accessory purchase. OUR PRICE \$284.00

ALL CHECKS WILL BE HELD 10 BUSINESS DAYS
WE ACCEPT VISA, MASTERCARD, DISCOVER, & AMERICAN EXPRESS

INTERNATIONAL TOOL CORPORATION

2590 DAVIE RD., DAVIE FLORIDA 33317

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

1-800-338-3384

Makita

6095DWE	9.6V CDS DRILL KIT W/2 BAT	129
6172DWE	7.2V CORDLESS KIT W/2 BAT	99
LS1011	10" COMPOUND MITER	469
LS1211	12" COMPOUND MITER	798

DELTA

22-540	12" BENCH TOP PLANER	378
28-185	BENCH TOP BAND SAW	168
31-460	4" BELT/6" DISC SANDER	132
37-070	NEW 6" VS BENCH JOINTER	258
40-540	16" SCROLL SAW, VAR SPEED	192

DEWALT

DW423	5" DS TLS RNDM ORB VS SNDR, VLCRO	93
DW615	1 1/4 HP PLUNGE ROUTER, VAR SP	163
DW621	2 HP VS DUSTLESS PLUNGE ROUTER	218
DW625	3 HP HVT DTY PLUNGE RTR, VAR SP	274
DW682K	BISCUIT JOINER KIT	199
DW936K	18V CORDLS CIRCULAR SAW KIT	248
DW972K2	NEW 12V CORDLS KIT/W BATT & CS	188
DW972KS2	12V CDS DRILL & CIRC SAW KIT	274
DW991K2	14.4V CORDLESS DRILL KIT W/2 BAT	224
DW991KS2	14.4V CDS DRILL & CIRC SAW KIT	348
DW995K	18V 1/2" DRILL W/BATT, CHRGR & CS	238

scmi

SC3	SLIDING TABLE PANEL SAW	CALL
S45	18" BAND SAW	CALL

CALL FOR PRICES ON ALL SCMI MACHINERY

RYOBI

AP12	12" PORTABLE PLANER	368
DC509K	DC500 KIT W/CS & 5 PC CHISEL SET	62
DS2000K	2 SP DETAIL SANDR W/CS & 12 PC AST	62
HT20VSK	MULTIROTARY TOOL W/CS & 101 PC AST	57
DBJ50	DETAIL BISCUIT JOINER	69

freud

JS100	BISCUIT JOINER	167
FT2000E	3 1/4 hp VS PLUNGERROUTER	264
LM72M10	10" X 24T FLAT TOP RIP BLADE	36
LU8AM10	10" X 50T ATB COMBO BLADE	40
LU8SM10	10" X 80 T ATB FOR MIRROR FINISH	58
SD308	8" SAFETY DADO WITH CASE	116
SD508	NEW 8" SUPER DADO SET	167

**Cut faster, better,
just like the pros!**

Discover the faster way to a more beautiful lawn with the TROY-BILT® WIDE-CUT Mower. Designed like the mowers professional crews use, the WIDE-CUT Mower is sized just right for homeowners!

**Send for
your FREE
Catalog!**

Now your lawn can look professionally manicured, like a freshly mowed, deep green carpet. The twin bladed combination 2-in-1 mowing deck gives you a wonderfully smooth, even cut. And helps build a thick, lush healthy lawn, too. *Get all the facts...send for your FREE CATALOG today!*

CUT YOUR MOWING TIME IN HALF!

**And have a healthier,
more beautiful lawn!**

**Compare the WIDE-
CUT to your mower:**

Send for your FREE TROY-BILT WIDE-CUT Mower Catalog today and compare this breakthrough machine to ordinary mowers:

- **Learn** about the NEW 2-in-1 deck that converts from mulching to side discharge operation... *without tools!*
- **Compare** the advantages of a mower that's 50% wider and more powerful than ordinary mowers.
- **Discover** the secret behind its "spin-on-a-dime" maneuverability.
- **See** how the multi-speed transmission lets you mow at the right pace all the time.
- **Get all the facts** on our Best in the Business 7-Year Warranty. *(Write for details.)*



**NEW...
Combination
Mulching/Side
Discharge
Deck!**

**Big 33"
WIDE cut is
50% wider
than ordinary
mowers!**

TROY-BILT
Only the Best Built say TROY-BILT!

**FREE
Catalog!**

**THE TROY-BILT
WIDE-CUT MOWER**

*Cut Your Mowing
Time In Half!*

**FREE Catalog Call...
1-800-260-2211**
or mail this coupon!

Dept.
5235

TROY-BILT

1 Garden Way, Troy, New York 12180

Dept. A5235

☐ **YES!** Please send me information on the WIDE-CUT Mower along with details on the TROY-BILT EASY PAY Plan and current offer in effect.

Name _____

Address _____

City _____

State _____ Zip _____

Product Available in Canada

©1997 Garden Way Inc.

DeWalt Goes Benchtop!



Make room for some bright yellow on your benchtop. DeWalt has taken a dramatic leap with the introduction of four new benchtop machines. Their 10-in. Heavy Duty Table Saw (model DW744) has a unique, telescoping rack-and-pinion mechanism to keep the fence parallel to the blade. A new 12½-in. Heavy Duty Portable Thickness Planer (model DW733) features a turret depth stop for accurate return to four preset thicknesses and a head-locking system designed to deliver snipe-free cuts. DeWalt's Heavy Duty

Variable Speed Scroll Saw is a 20-in. benchtop model (DW788) with tool-free blade changing and a parallel-link arm mechanism. And the new 12-in. Double Bevel Sliding Compound Miter Saw (model DW708) tilts both ways, cross-cuts 12-in.-wide stock and miters 50° left and 60° right. The tablesaw will be available in July, the remaining tools in May. Stay tuned for prices and in-depth tests. *DeWalt Industrial Tool Co., Box 158, 626 Hanover Pike, Hampstead, MD 21074, (800) 433-9258. Circle #620*

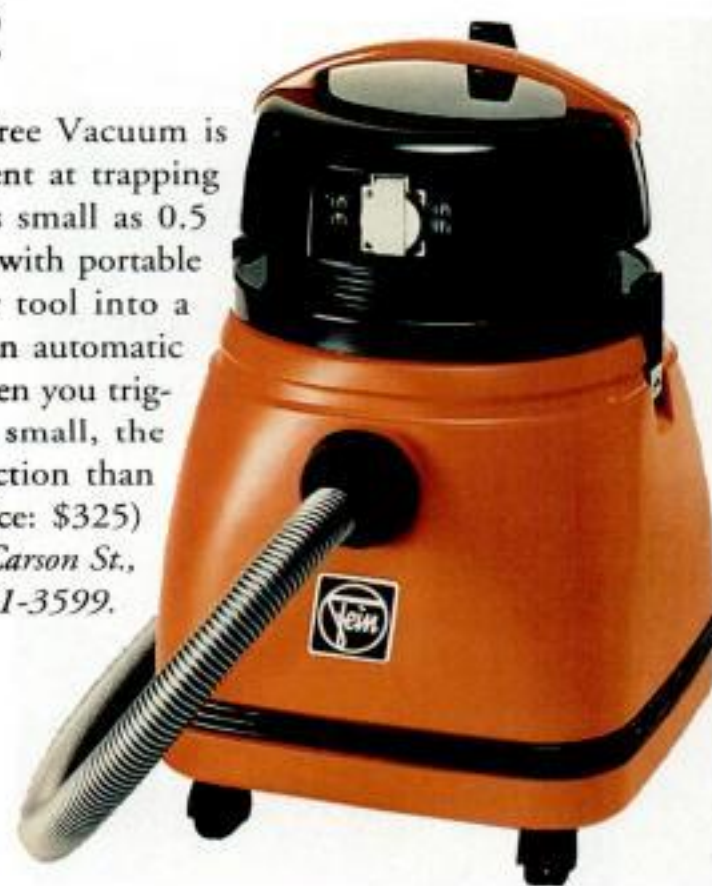


Double-Duty Drill Press

■ With the new Craftsman Multi-Function Drill Press, you get two tools in one: a benchtop drill press with five speeds (620 to 3,100 rpm), and an oscillating spindle sander that can accommodate drums up to 2 in. in diameter. You can vary oscillations from 13 to 62 strokes per minute. It just takes a couple of seconds to switch from drilling mode to OSS mode and back again. (Price: \$159.99) See your local Sears Hardware Store. **Circle #621**

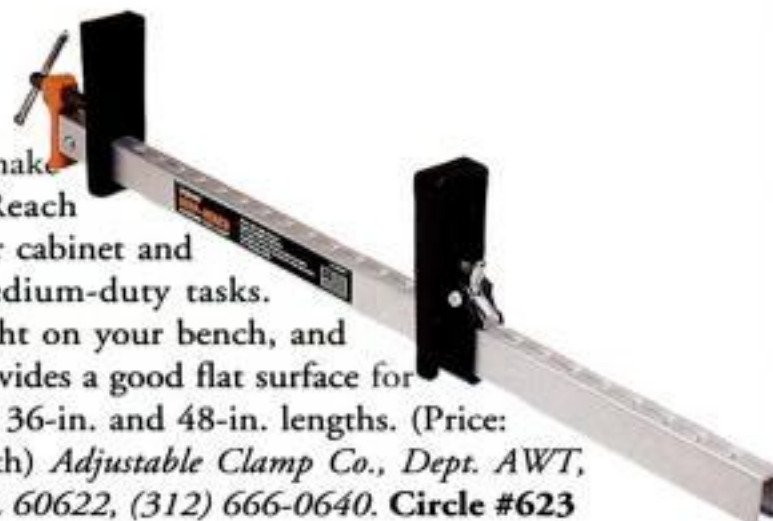
No More Dust!

■ Fein's new Turbo II Dust-Free Vacuum is compact, quiet, and super-efficient at trapping dust. It can capture particles as small as 0.5 microns, making it ideal for use with portable sanders. Plug a portable power tool into a receptacle on the vacuum, and an automatic switch turns the vac on or off when you trigger the attached tool. Though small, the Turbo II has more powerful suction than many larger shop vacuums. (Price: \$325) *Fein Power Tools, Inc., 3019 W. Carson St., Pittsburgh, PA 15204, (412) 331-3599. Circle #622*



Lightweight Bar Clamps

■ Light weight and long jaws make Jorgensen's new 3500 Deep-Reach Aluminum Bar Clamps ideal for cabinet and carcass assembly and other medium-duty tasks. The jaws keep the clamps upright on your bench, and the extruded rectangular bar provides a good flat surface for edge-gluing. Available in 24-in., 36-in. and 48-in. lengths. (Price: \$40 to \$44, depending on length) *Adjustable Clamp Co., Dept. AWT, 417 N. Ashland Ave., Chicago, IL 60622, (312) 666-0640. Circle #623*



SQUARE DRIVE SCREWS



Simply the Best

Square Drive Beats Driver Slippage
Deep Thread for Super Grip
Hardened Steel for Superior Strength
Made in the US or Canada!

Send \$5 for Samples, Catalog, & \$5 Off Coupon

McFEELY'S PO Box 11169 • Dept AWW
SQUARE DRIVE SCREWS Lynchburg • VA • 24506
Call Toll Free: 1-800-443-7937

CIRCLE NO. 55 ON PRODUCT INFORMATION FORM

For that
"SPECIAL"
project

OAK
TABLE
BASES



ALAMO

IN STOCK

**NO
MINIMUM**



COUNTRY
FRENCH
LEGS IN MAPLE

**FREE
COLOR
CATALOGUE**



TABLE
LEGS IN
MAPLE

Adams Wood Products, L.T.D., L.P.
974 Forest Dr., Dept. AW 25
Morristown TN 37814 • Phone (423) 587-2942

CIRCLE NO. 2 ON PRODUCT INFORMATION FORM

Oscillating Spindle Sanders
for discriminating woodworkers
who demand the best

FREE Color Catalog
1-800-971-5050

CLAYTON
MADE IN USA



CIRCLE NO. 13 ON PRODUCT INFORMATION FORM

POWERMATIC
HOT SHEET SPECIAL!

from New York State's
largest **POWERMATIC** dealer.
Call for special pricing.

Over 50 different machines in stock.

SYRACUSE INDUSTRIAL SALES
(Formerly Northland Woodworking Supply)
713 E. Fayette St., Syracuse, NY 13210
(315) 478-5751 FAX: (315) 472-0855

CIRCLE NO. 76 ON PRODUCT INFORMATION FORM

IMPORTED & DOMESTIC LUMBER

- Architectural Plywood
- Custom Millwork
- Veneers
- Mouldings
- Turnings
- Trims



Send \$2
for NEW
LUMBER
Catalog

**M.L. CONDON
COMPANY Inc.**

240 Ferris Ave. • White Plains NY 10603
Call 914-946-4111 • FAX 914-946-3779
Call for a FREE price quote!

CIRCLE NO. 54 ON PRODUCT INFORMATION FORM

Give Yourself Some ^{More} Breathing Room.

**The Best Just
Got Better!**

**Introducing The New
Model 350**

- 55% More Air Flow
- Ultra Quiet
- 95% Ashrae tested main filter
- All Components UL Listed
- Lifetime Warranty
- 30 Day Money Back Guaranty.



*Better Homes and Gardens®
WOOD * Magazine (Nov. '95)

JDS AIR-TECH 2000™

Recent medical studies show that breathing wood dust can be hazardous to your health. The JDS AIR-TECH 2000 will dramatically improve the quality of the air you breathe.

Our model 350 delivers 550 CFM of filtered air. This will clean the air in a 20 x 20 x 8 foot area ten times per hour. For larger areas, our dual speed model 8-12 will deliver 800 or 1,250 CFM of filtered air for only \$495. Our model 10-16 will deliver 1,000 or 1,600 CFM of filtered air for \$695.

The JDS AIR-TECH 2000 systems will remove 99% of particles as small as five microns and 80% of the particles as small as one micron.

Our unique design makes both ceiling installation and filter changing quick and easy. For the removal of odors, fumes and smoke, our optional charcoal filter is available.

Another quality product from
Manufactured in the U.S.A.

To place an order or for the dealer nearest you call us toll-free. And give yourself some breathing room.

\$259.00
Model 350

**JDS
COMPANY**
1-800-382-2637

CIRCLE NO. 41 ON PRODUCT INFORMATION FORM



Sand Any Shape

■ Sanding complex profile moldings is a snap with Sand Form. It's a kit of epoxy putty that lets you make one-of-a-kind sanding blocks to fit any shape. Just mix the two-part putty, put it into a special backup block and press it

against the piece you want to sand. When the epoxy hardens, wrap your sandpaper around the form and go to work. The backup block can also be mounted on the Porter-Cable Profile Sander. (Price: \$16.95 for one kit) Woodworker's Supply, Inc., Dept. AWT, 1108 N. Glenn Rd., Casper, WY 82601 (800) 645-9292. **Circle #624**

Get a Grip on Hex Nuts

■ Frozen hex nuts and bolts can ruin your day—ordinary wrenches just round over the corners. But Vise-Grip's new Locking Wrenches combine traditional vise-grip locking action with a unique jaw shape that locks tightly on



hex heads to free them without slipping. Available in three sizes at hardware stores and home centers. (Price: \$13 to \$18) American Tool Co., 8400 Lakeview Pkwy., Kenosha, WI 53142, (800) 838-7845. **Circle #625**

SHOP TESTED

Sunhill M-3 "Baby" Power Feeder

by Fred Matlack

Power feeders are great accessories when you have to run many boards through a blade, bit or cutter. The feeder's drive wheels push the workpiece and keep it aligned. Your hands stay clear of cutting edges, and your back and arm muscles can take it easy. But up until now, power feeders have been too large and too expensive for small shops like the one I work in.

Sunhill's M-3 "Baby" feeder has changed all that. This unit is priced affordably at \$230, and it's small and light enough (23 lbs.) to work on router tables, shapers, contractors' tablesaws, and other small shop machinery.

I approached the Baby feeder with some skepticism, wondering if this downsized model would be up to true production work. After several weeks, I was truly impressed. It's easy to mount and position the feeder. The base attaches to any work surface or support with four bolts. You can extend, pivot and swing the arm that holds the feeder mechanism. And a large ball-and-socket joint lets you orient the feed wheels vertically, horizontally, or at any angle in between. And when it's time to adjust or change bits or blades, you can quickly shift the feeder mechanism out of the way.

The Baby feeder's 1/6-HP motor drives three polyurethane rollers at

speeds that you can adjust from 6 1/2 to 40 ft. per minute, and feed direction is reversible. Sunhill's manual was not specific about recommended feed speeds, so I had to adjust the speed by listening to the sound of the saw or router motor. If it bogs down, you're going too fast or taking too deep a cut. A prominent emergency switch lets you shut the power off quickly—an important safety feature. An integral dust port lets you hook up a hose from a shop vacuum or dust collector.

I set up the feeder on the tablesaw, skewing the rip fence to guide 1x6 boards over the blade at an angle. The feeder powered 800 ft. of stock through this setup without missing a beat, and the resulting cove cuts were smooth and free of skips. To do the same work by hand pressure alone would have been exhausting, and I wouldn't have achieved the same smooth results.

I found the feeder equally convenient for running small stock. I set the unit up on the router table to run some mullions for a glass light door. Hand feeding in



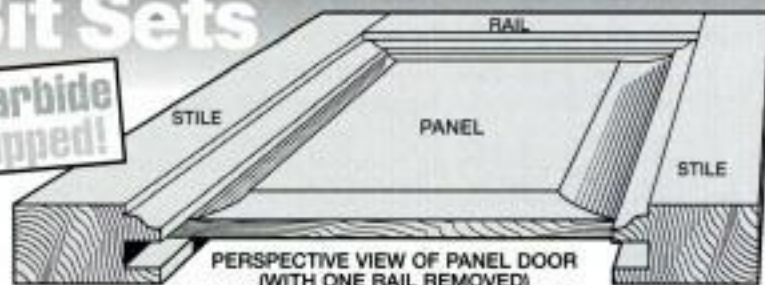
Feeding time. Sunhill's M-3 "Baby" power feeder is ideal for small-shop production runs.

this case would have been difficult and possibly more dangerous, since my stock didn't have much guide surface in contact with the table or fence. A little variation in hand pressure and I'd get snipe or bumps. The Baby feeder solved all of these problems, feeding the stock smoothly and accurately. My profiles came out perfect.

The Baby feeder gets my vote as one of the most innovative shop accessories I've seen in a while. Even in a small shop with short production runs, this helper will prove its worth very quickly. (Price: \$230) Sunhill, Dept. AWT, 500 Andover Park East, Seattle, WA 98188, (800) 929-4321. **Circle #626**

Save 55% on MLCS Raised Panel Door Bit Sets

Carbide Tipped!



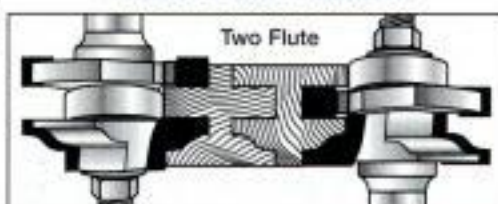
Make Beautiful Raised Panel Doors with your 1/4" or 1/2" Router, or with your 1/2" or 3/4" Shaper.

Our professional production quality router bits make it quick and easy to produce attractive raised panel doors. Our reversible combination bit makes a matching rail and stile frame. The panel raising bit with ball bearing guide makes a perfect raised panel every time!

Includes instructions & professional tips!



*Raised Panel Router Bit



*Reversible Combination Rail & Stile Bit
Works with stock from 11/16" to 7/8".

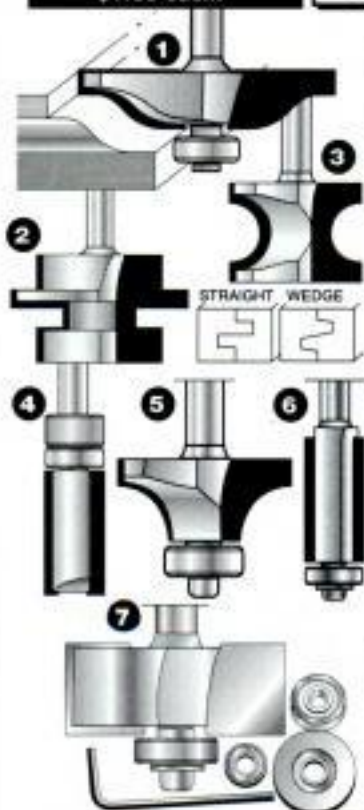
Carbide Tipped RAISED PANEL DOOR SETS			
SET#	BIT STYLE	RAISED PANEL LRG. DIA.	SET PRICE
#1301	1/4" Shank Router	* 2"	\$69.95
#1302	1/2" Shank Router	* 3-1/2"	\$79.95
#1303	1/2" & 3/4" Shaper	4-5/8"	\$99.95

*Ball bearing included

QUANTITY DISCOUNT
When ordering 3 or more router bits deduct \$1.00 each!

1/4" SHANK CARBIDE TIPPED ROUTER BITS

Professional Production Quality Guaranteed!



- OGEE RAISED PANEL**
#1423 2" Large Diameter\$29.95
- TONGUE AND GROOVE**
#1333 Straight\$29.00
#1335 Wedge\$29.00
- BULL NOSE**
#1330 1/2" Dia. of Circle\$16.00
#1331 3/4" Dia. of Circle\$21.00
- PATTERN/FLUSH TRIM**
#1340 1/2" Dia., 1" Cutting length\$15.00
#1341 3/4" Dia., 1" Cutting length\$17.00
- ROUND OVER**
#1314 (1/8" Radius)\$11.00
#1315 (3/16" Radius)\$11.00
#1394 (1/4" Radius)\$13.00
#1316 (5/16" Radius)\$14.00
#1369 (3/8" Radius)\$15.00
#1370 (1/2" Radius)\$17.00
- FLUSH TRIM**
#1337 3/8" Dia., 1" Cutting length\$8.50
#1338 1/2" Dia., 1" Cutting length\$9.50
- RABBETING KIT**
Change ball bearing guides and select 4 depth of cuts: 3/8", 7/16", 5/16", 1/4". Set: 1/4" shank rabbeting bit, 4 bearings (3/8", 1/2", 5/8", 3/4") and hex key.
#1425 1-1/2" Large Diameter\$25.00

MLCS Woodworking Accessories ON SALE!



25pc Brad Point Drill Bit Set

Drill accurate holes in wood, plastics & composites.

Bit sizes from 1/8" to 1/2" by 1/64" increments. Bits are deep fluted to clear chips quickly.

ITEM #1413
REG. \$34.95 **SALE \$18.95**

METAL CASE & BIT HOLDER INCLUDED!



Biscuit Joining Set

5/32" Slot Cutter-1/4" Shank and 250 #20 Biscuits

"Biscuit Joining with your Router", Instructional sheet included.

ITEM #1385
REG. \$35.00 **SALE \$29.95**

FAST & EASY



MERLE The ADJUSTABLE CORNER CLAMP

- Adjustable, uniform clamping pressure on all corners
- Great for wide cabinet frames (for center or edges)
- Forces a frame into perfect square
- Almost NO capacity limitation, ships with 23 FEET steel banding
- Aluminum & Steel construction

ITEM #1420
REG. \$39.95 **SALE \$24.95**

TOP 10 Woodworking Tools
American Woodworker
#20



Router Speed Control

Gets the best results with the wood and bit you are using!

- Works with all routers 3-1/4" HP or LESS - 120V 15 Amp
- Full horsepower and torque at all speeds
- Gives your router a feature only available on routers costing hundreds of dollars!

ITEM #1304
REG. \$49.95 **SALE \$34.95**

Includes Dust Cover



NEW!

Brass Piloted Router Bits

Carbide Tipped!

New bit saves hours of hand sanding!

Rout into those tight spaces and sharp corners! These professional grade router bits have smooth running Brass Pilots, measuring only 5/32" (approx.) in diameter, instead of the usual 1/2" ball bearing. Save hours of hand sanding or filing and get a more consistent edge.

Order 3 or more bits & deduct \$1.00 each!

Set #	Description	Shank Size	Price
#1428	1/8" R Round Over	1/4"	\$16.00
#1429	1/4" R Round Over	1/4"	\$17.00
#1430	3/8" R Round Over	1/4"	\$19.00
#1431	5/32" R Roman Ogee	1/4"	\$20.00

Expert Technical Help Before & After Sale

FREE 40 PAGE CATALOG!



FREE SHIPPING
-IN CONTIGUOUS USA FOR ALL ITEMS-



MLCS
Professional Woodworking Products

©1997

ORDER TOLL FREE
1-800-533-9298
24 HOURS A DAY
Order by Fax (215) 938-5070

VISA
MasterCard
Discover
Order By Credit Card or Send Check To:
MLCS, Ltd.,
P.O. Box 4053
Rydal, PA 19046

Power Feed DRUM SANDER

Quickly Pays For Itself!
Saves hours of tedious hand sanding!



Choose from 26" and 38"
Single or Dual Drum Models!

Craftsmen everywhere are using their Woodmaster Drum Sander to save hours of valuable shop time...you can, too! In a matter of seconds, you can produce a satin - smooth, absolutely level surface impossible with hand methods. No more low spots, waves or cross grain marks!

30-Day
Free
Trial!

SEE WHY WOODMASTER OUTPERFORMS THEM ALL!

Woodmaster's patented design includes infinitely variable feed rate and a superior dust removal system for longer paper life. Call or write today for free facts on how you can try this precision machine in your own shop for one full month without risk. Made in U.S.A. 5-Year Warranty. Easy Terms.

1-800-821-6651 ext. DB9
Woodmaster Tools, Inc.
1431 N. Topping Ave. Dept. DB9
Kansas City, MO 64120

AGGRAVATED WITH DULL KNIVES?

Don't let changing knives get between you and quality results. Dispose of your knife changing fears ... forever with

DISPOZ-A-BLADE Planer Knife System

- Never sharpen a knife again! • No big \$\$\$ outlay
- Save over 50% over current resharpener costs.
- No expensive cutterheads needed • Money back guarantee!

/ESTA-USA, INC.

Barryville, NY 12719 • (800) 557-8092
Fax (914) 557-6901 • rsw@magiccarpet.com

If you now use one of the following:
Delta • Rockwell • Powermatic •
Grizzly • Jet • SCMI
you CAN utilize the
DISPOZ-A-BLADE System ...
with these and many others.

SPECIAL!! 11" DELTA 22-540 OWNERS.
2 DOUBLE-EDGE HSS DISPOZ-A-BLADES,
PRICE BREAKTHROUGH! ONLY \$17⁹⁸

CIRCLE NO. 22 ON PRODUCT INFORMATION FORM

HARDWOODS

LUMBER • VENEER • TURNING STOCK

Exotic and
Domestic

Over 100
Species



WOODWORKERS Source

1-800-423-2450

IT IS FAST AND EASY. SATISFACTION GUARANTEED

CIRCLE NO. 92 ON PRODUCT INFORMATION FORM

WOODWORKERS SAMPLER

30 Gorgeous
Woods

From around the world.
1/2" x 3" x 6"
Sanded Finish, Labeled.

AND

**Book of Fine
Hardwoods**

Over 70 woods shown in
full color. Charts compare
physical properties.
60 pgs.

GREAT
REFERENCE
TOOL!

\$59.00

*postage paid in Cont USA

Econ-Abrasives

WE MAKE ABRASIVE BELTS ANY SIZE, ANY GRIT!

ABRASIVE SHEETS:

(9 X 11)

CABINET PAPER

	50/pk	100/pk
40D	\$18.90	\$35.60C
50D	17.80	32.25
60D	16.70	30.00
80D	15.60	27.80
100 thru 150C	14.50	25.60

FINISHING PAPER

	80A	\$11.15	\$18.90C
100 thru 280A	10.00	16.70	

WET/DRY PAPER

	220 thru 600	\$15.56	\$26.67C
--	--------------	---------	----------

NO LOAD PAPER

	180 thru 400A	\$12.25	\$21.25C
--	---------------	---------	----------

C = 100 SHEETS

JUMBO CLEANING STICK

ONLY \$8.80 2X2X12

* OTHER PRODUCTS *

*WIDE BELTS*ROLLS*FLAP WHEELS*PUMP SLEEVES
*PSA DISCS*ROUTER BITS*WOOD GLUE*WOOD BITS

ABRASIVE BELTS

PLEASE SPECIFY GRITS

	1X30	\$.81 ea.
	1X42	.81
	1X44	.81
	2 1/2X16	.85
	3X18	.86
	3X21	.90
	3X23 3/4	.93
	3X24	.93
	3X27	.96
	4X21 3/4	1.06
	4X24	1.10
	4X36	1.35
	6X48	3.50
	2 1/4X80	3.25

Other sizes priced
upon request

JUMBO ROUTER PAD(24" x 36")

It will not allow small blocks of wood
to slip out under router or sanding
applications. ROUTER PAD

ONLY \$8.95ea.

VELCRO® VACUUM DISCS

8 Hole pattern

For Bosch Sanders

Grit Price

5"	60	\$.48 ea.
5"	80	.46
5"	100*	.45

Dia. Grit Price

6"	60	\$.65 ea.
6"	80	.63
6"	100*	.62

Note: * - thru 320 grit * Now in 5 hole pattern *

Nuisance Dust Mask

This double absor-
ber filter material
screens out dust,
and lets air
pass freely!



ONLY
\$10.50/box of 50

STEEL BAR CLAMPS

Size	Price
2-1/2 x 6	\$6.50ea.
2-1/2 x 12	7.00
2-1/2 x 24	7.75
2-1/2 x 36	9.50

SPRING CLAMPS

Clamps come with PVC tips
and grips.

Size	Price
4"	\$1.75 ea
6"	2.25
8"	3.50

Lint-Free Wiping Cloths

Handy for all your
cleaning or finishing
jobs around the shop
or home.



3LBS. FOR
\$4.50

TACK CLOTHS



1-10 - \$.95 ea.
Box of 10 - \$7.60

Econ-Abrasives

ORDERING LINE
(800)367-4101

P. O. Box 1628
Frisco, TX 75034
(214)377-9779

*MINIMUM ORDER \$25.00
*MasterCard, VISA, Check or C.O.D.
*SATISFACTION GUARANTEED!!!
*CALL FOR FREE CATALOG
- TX & NV Add Sales Tax
- Continental U. S. Shipping
Charges add \$5.50

CIRCLE NO. 1 ON PRODUCT INFORMATION FORM

**Dovetail your next
drawer - in less
than 10 minutes...**

including setup!

**only with the Keller
Dovetail System.**

All other jigs require endless
test cuts and wasted wood.

The Keller Dovetail System is
very different: it is easy, quick,
accurate and versatile.

Cut unlimited widths. Classic and variable
spacing. Angled and curved dovetails.
Box joints. Projects from jewelry boxes to
entertainment centers. Made in USA
since 1976. 20-yr. warranty.

VIDEO: \$8.95 + \$2 P/H

KELLER & CO. Dept. R37
1327 'I' Street, Petaluma, CA 94952
(800) 995-2456 (707) 763-9336

**The Keller
Dovetail System**
Simply the best.



CIRCLE NO. 45 ON PRODUCT INFORMATION FORM

AMERICAN WOODWORKER 1997 Excellence in Craftsmanship® Awards Competition

**ENTER
NOW**
**DEADLINE
JUNE 6
1997**



It's time to enter your best work in the AMERICAN WOODWORKER 1997 Excellence in Craftsmanship® Awards Competition.

Send us photos of a project you've built, and you could win one of nine awards including a cash prize of up to \$1,000. The winners will be featured in AMERICAN WOODWORKER magazine and receive an award certificate. All types of woodworking projects are eligible: furniture, turnings, carving, sculpture, musical instruments, toys, etc. You may enter up to three pieces. Entries will be judged for craftsmanship and design, but designs need not be original to win.

Amateurs, professionals, and students* will be judged separately.

**To qualify as a student you must be enrolled in a woodworking school or furniture design school in 1997.*

Three Winners in Each Category

Amateur Category: 1st Prize • \$1,000 cash ♦ 2nd Prize
\$300 cash ♦ 3rd Prize • \$200 cash

Professional Category: 1st Prize • \$1,000 cash ♦ 2nd Prize • \$300 cash
3rd Prize • \$200 cash

Student Category: 1st Prize • \$1,000 cash ♦ 2nd Prize • \$300 cash
3rd Prize • \$200 cash



USE COUPON BELOW TO ENTER

To Enter

Fill out the form on this page (or a photocopy) and mail it with:

Photographs

- 1) Color slide transparencies or photographs of the piece(s) you want to enter (up to three pieces).
- 2) Label slides and photos with your name and address and the photographer's name.
- 3) Include a self-addressed, stamped envelope for return of slides. (Sorry, prints cannot be returned.)

Description

- 1) A description of each piece including dimensions and materials (100 words or less).

Deadline for Entries: June 6, 1997.

Finalists will be contacted for further information and winners will be announced in the December 1997 issue of AMERICAN WOODWORKER.

Conditions

The deadline for entries is **June 6, 1997**. AMERICAN WOODWORKER is not responsible for entries lost, delayed or damaged in the mail or elsewhere. Incomplete entries will be disqualified. Decision of the judges shall be final.

Award Category (check one only) ☐ Professional ☐ Amateur ☐ Student

Number of pieces being entered _____ (up to three)

Name _____ **Phone** _____

Address _____

City _____ **State** _____ **Zip** _____

Photograph Info (check one)

☐ I own all rights to these slide transparencies and/or photographic prints

☐ Rights are owned by _____

Photographer's Name _____

Phone _____

On a separate sheet of paper, describe each piece in 100 words or less.

Mail entry to: Excellence in Craftsmanship® Awards

AMERICAN WOODWORKER, 33 E. Minor Street, Emmaus, PA 18098.

I agree with the terms of the competition and accept the judges' decision as final.

Signature _____

DEADLINE FOR ENTRIES IS JUNE 6, 1997



**AMERICAN
WOODWORKER™**

MAKE IT MOBILE

WITH HTC MOBILE MACHINE BASES

For a FREE Full-Color Catalog of HTC's Complete Product Line Call: 1-800-624-2027



CIRCLE NO. 37 ON PRODUCT INFORMATION FORM

Full-Size Professional Plan MORRIS CHAIR

Build this comfortable chair with wide bow arms and adjustable 3-position back. An excellent example of the Arts & Crafts Style. Dimensions: 33" wide, 38 1/2" high and 38 1/2" deep.



- Plan #724 (postpaid)\$19.50
- Catalog (free with order)3.00

Fine Furniture Plans Since 1968
FURNITURE DESIGNS, INC.
Dept. NM-37, 1827 Elmdale Ave.
Glenview, IL 60025
1-800-657-7692

CIRCLE NO. 302 ON PRODUCT INFORMATION FORM

WOODLINE ARIZONA, Inc
P.O. Box 1530 • Payson, AZ 85547
• All Major Credit Cards Accepted
• Shipping is only \$3.75 per order
• 24 hours a day • 7 days a week
1-800-472-6950

Great Router Bits & Shaper Cutters!



One-piece RAIL & STILE CUTTER, raise bit 3/8" to make matching cut. Available in Ogee, Roundover, and Cove & Bead profiles • Great fit! • No changing bits or reversing the pieces.

PANEL RAISER W/ UNDERCUTTER, 3 profiles: Ogee, 15° Face Cut, and Convex avail. Tongue thickness perfectly matches groove in Rail & Stile—everytime!

Best Buy!
BOTH RAIL & STILE CUTTER & PANEL RAISER W/ UNDERCUTTER.
ONLY \$95.00 or \$49.00 ea

SUPER BUY!
Great sets in attractive wooden boxes! Available in 1/4" and 1/2" shank

- 8 pc. Joint Making Set 2 Straight Bits, 6 Dovetailis \$49.00
- 6 pc. Roundover Set 1/8", 3/16", 1/4", 5/16", 3/8", 1/2" radius \$55.00
- 5 pc. Cove Set 3/16", 1/4", 5/16", 3/8", 1/2" radius \$49.00

SUPER SALE!!

Cutters & Bearing Sets (to change depth of cut) Two-Flute Cutters avail. in 1/4" or 1/2" shank. Allen wrench included.

Priced at only

SAVE \$5. \$15.00 ea \$39.00 Set of 3

- 5/32" Kerf w/ 3 bearings, cuts slot to fit all biscuit sizes. Sample bag of biscuits incl.
- Rabbeting Bit w/ 4 bearings for rabbets of 1/4", 5/16", 3/8" & 1/2" depth
- 1/4" Kerf Slot Cutter w/ 4 bearings cut slots 1/4", 5/16", 3/8" & 1/2" depth

• Best Prices • Same Day Service • Super Selection
32-page Catalog included with every order

CIRCLE NO. 91 ON PRODUCT INFORMATION FORM

Free Workshops • Prizes • Hundreds of Products • Seminars by Mastercraftsmen

See the Widest Variety of Woodworking Products All Under One Roof!!



★THE WOODWORKING SHOWS★
tools • supplies • education

THE NATION'S PREMIER WOODWORKING TOUR

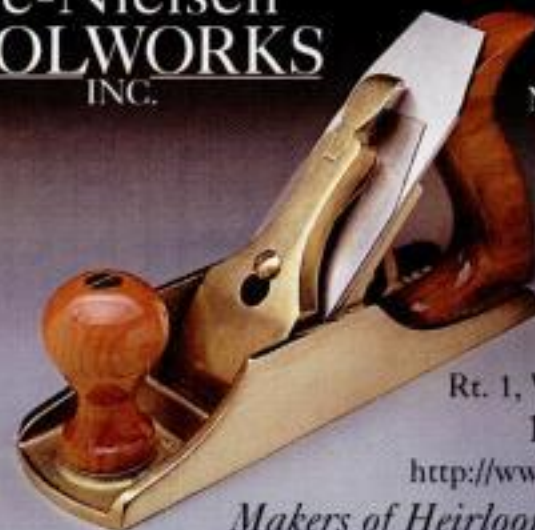
VISIT THE SHOW NEAR YOU!

- Atlanta
- Baltimore
- Buffalo
- Charlotte
- Chicago
- Cleveland
- Columbus
- Dallas
- Denver
- Detroit
- Harrisburg
- Indianapolis
- Kansas City
- Massachusetts
- Milwaukee
- New Hampshire
- No. California
- North Jersey
- Phoenix
- Portland
- Seattle
- So. California
- St. Louis
- Tampa
- Twin Cities
- plus others!

Call for free brochure Monday - Friday 8:30 am - 5 pm Pacific Time
1-800-826-8257 or 310-477-8521 e-mail: woodshow@earthlink.net

CIRCLE NO. 95 ON PRODUCT INFORMATION FORM

Lie-Nielsen TOOLWORKS INC.



No. 4 Bench Plane
Bronze or Iron
\$225

Free Brochure

Rt. 1, Warren, ME 04864
1-800-327-2520

<http://www.lie-nielsen.com/>

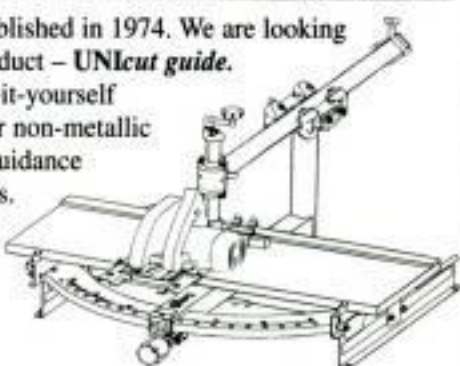
Makers of Heirloom Quality Tools

CIRCLE NO. 52 ON PRODUCT INFORMATION FORM

TAJFUN
SLO-3225 Planina pri Sevnici
Telefon: +386 63 791 011
Telefax: +386 63 791 016
Slovenija

TAJFUN is a Slovenian company established in 1974. We are looking for distributors for our brand new product - UNicut guide.

UNicut is a perfect machine for all do-it-yourself enthusiasts working with wood or other non-metallic materials. UNicut is used for precise guidance of all standard circular saws and routers. UNicut enables vertical and horizontal setting of cutting angle, cutting length of 24 inches (600 mm) and more. Do not hesitate to contact us for further information.



CIRCLE NO. 77 ON PRODUCT INFORMATION FORM

WOOD PARTS FROM MIDWEST DOWEL WORKS

Compare Our Low Prices!

	Qty.	Cost
3-1/2" Poplar Shaker Peg	\$18/100	—
1-3/4" Mini Shaker Peg	\$7/100	—
3-1/2" Country Wall / Mug Peg	\$18/100	—
2-1/2" Country Shorty Peg	\$14/100	—
Large Bean Pot Candle Cup	\$17/100	—
Brass Inserts	\$11/100	—
1/2" Mini Candle Cup	\$10/100	—
1-1/2" Toy Wheel	\$11/100	—
2" Toy Wheel	\$19/100	—
Axel Pegs	\$5/100	—

SMOOTH SANDED HEARTS

3/4" x 1/8" Hearts	\$3/100	—
3/4" x 1/2" Hearts	\$5/100	—
1" x 3/16" Hearts	\$5/100	—
1" x 3/8" Hearts	\$7/100	—
1-3/8" x 1/8" Hearts	\$8/100	—
1-3/8" x 1/4" Hearts	\$8/100	—
1-3/8" x 1/2" Hearts	\$11/100	—
2" x 1/2" Hearts	\$19/100	—

Great Buys!

	Qty.	Cost
3/8" x 36" Standard Dowels	\$34/100	—
3/4" x 36" Oak Dowels	\$19.80/10	—
3/8" Maple Buttons	\$2.25/100	—
1/2" Maple Buttons	\$2.35/100	—
1-1/2" Maple Spindles	\$10/100	—
2-1/8" Maple Spindles	\$20/100	—

ORDER NOW

☐ MC/Visa ☐ Check Enclosed

Total Cost

Handling \$3.00

Ohio residents add 5% sales tax

Final Cost

MC/Visa Number
Expires Phone
Name
Address
City/State/Zip

FREE! 16-PAGE CATALOGUE

MIDWEST DOWEL WORKS
4631 Hutchinson Rd., Cincinnati, OH 45248
513-574-8488

Same Day Service/
Order Before Noon

Factory Direct/
Satisfaction Guaranteed

CIRCLE NO. 57 ON PRODUCT INFORMATION FORM

Sharpen Router Bits



**Hones
Carbide
and
HSS**

Quickly sharpen router bits and shapers on DMT Diamond Whetstones™ and:

- ♦ Eliminate Grinding Service Cost and Excessive Carbide Removal
- ♦ Extend Tool Life 5-7 Times
- ♦ Enjoy clean cuts - no burn marks!

A shop with just 10 router bits can save \$1,600! For detailed information, circle the reader service number.

DMT Diamond Machining Technology, Inc.
Marlborough, MA 1-800-666-4DMT

CIRCLE NO. 20 ON PRODUCT INFORMATION FORM



**A MONKEY IS
NOT A GORILLA**

**DON'T RISK UNPROVEN WANNA-B'S!
ORIGINAL GORILLA GLUE IS THE ONLY
TIME-TESTED PREMIER POLYURETHANE**

AVAILABLE AT YOUR LOCAL HARDWARE/HOMECENTER

If not, tell the big ape who runs the place to get it for you.

**WATERPROOF • BEST CURE TIME & SHELF LIFE • SOLVENT FREE
BONDS WOOD, STONE, METAL, CERAMICS, PLASTICS, & MORE**

1-800-966-3458 24 HOUR 805-963-2234 TRADE DIRECT
THE GORILLA GROUP 122 Powers Ave. Santa Barbara CA 93103

CIRCLE NO. 29 ON PRODUCT INFORMATION FORM

"Jorgensen" E-Z HOLD™ II

THERE ARE ~~NO~~ TWO WAYS ABOUT IT!

Imagine the ease and convenience of a clamp that provides both bar and spreader applications in one tool! The revolutionary "Jorgensen" E-Z HOLD™ II is performance engineered with a double sliding-head design and in-line advancing handle... maintains greater applied force than other one-handed clamps. It's the most versatile, affordable, high quality clamp you can buy... no two ways about it!



MADE IN THE U.S.A.

For our catalog
send \$1.00 to:
Adjustable Clamp Co.,
443 N. Ashland Ave., Chicago, IL 60622

CIRCLE NO. 169 ON PRODUCT INFORMATION FORM

product index

	Page	Circle #		Page	Circle #		Page	Circle #
ABRASIVES			American Furniture Designs	8	301	Dust Boy, Inc.	100	104
Econ-Abrasives	92	1	Amish Workshops	100	100	Fein Power Tools	31	23
ADHESIVES			Furniture Designs, Inc.	94	302	Hartville Tools	33	35
Elmer's Glue	19	12	Specialty Furniture Designs	19	303	JDS Company	89	41
Gorilla Glue	95	29	Wildwood Designs	22	85	Oneida Air Systems	14	60
Gougeon Brothers Inc.	102	106	MISCELLANEOUS			Windsor Industries	101	126
AIR TOOLS			Dodge Ram Pickup	2,3	—	Wood Mark	24	88
Airy Sales Corporation	23	83	JB Dawn Products, Inc.	101	167	SOLID SURFACES		
BITS, BLADES & CUTTERS			Troy-Bilt	87	—	Shapes & Surfaces, Ltd.	83	70
Amana Tool	85	6	MOISTURE METERS			TOOL ACCESSORIES		
CMT USA	83	14	Delmhorst Instruments Co.	97	16	Carter Products	33	161
Esta-USA, Inc.	92	22	Electrophysics	102	—	DMT	95	20
Forrest Mfg.	29	—	Lignomat USA Ltd.	85	53	HTC Products	94	37
MLCS Ltd.	91	58	Wagner Electronic Products	8	84	INCRA Rules	21,23,25	78
Price Cutter	27	21	POWER TOOLS			Mesa Vista Design	76	56
Safranek Enterprises, Inc.	80	68	Advanced Machinery Imports	7	4	Tajfun Plania	94	77
Woodline Arizona	94	91	Caribou Tool Co.	100	—	Vac Sac	102	111
Woodworkers Supply	79	94	Clayton Machine Corp.	89	13	Vega Enterprises	7	82
BOOKS			Conover Lathe	76	—	TURNING SUPPLIES		
Guild of Master Craftsman	101	108	Delta International			Busy Bee	101	110
CARVING SUPPLIES			Machinery	20,21,Cover 3	18,17	Craft Supplies USA	7	15
Cutting Edge, Inc.	102	166	Felder USA	6	24	Cutting Edge, Inc.	102	166
CLAMPS			Freud	5	25	Osolnik Machinery & Craft Supplies	25	127
Adjustable Clamp Co.	95	169	Great Tools Direct	23	31	Packard Woodworks	102	116
Gross Stabil Corporation	27	34	Grizzly Imports, Inc.	84,Cover 2	32,33	WOOD & VENEERS		
Reid Tool Supply Co.	101	117	International Tool Corp.	86	39	Berea Hardwoods	80	9
Wilton Corporation	86	87	Ironwood Mill-Right	21	66	Blue Ox Brand	101	165
CLOCK PARTS			Jet Equipment & Tools	11,12	43,42	Good Hope Hardwoods	101	105
S. La Rose, Inc.	8	67	Koetter Dry Kiln, Inc.	76	46	Groff & Hearne Lumber Inc.	101	107
DOVETAIL/POSITIONING JIGS			Laguna Tools	33,76	49,50	M.L. Condon Co. Inc.	89	54
Jointech Corp.	6	44	Norwood Sawmills	102	115	Niagara Lumber	101	112
Keller Dovetails	92	45	Nyle Corporation	83	59	North Star Lumber	101	114
Leigh Industries	8	51	Old World Machinery	31	162	Sandy Pond Hardwoods	102	118
FASTENERS			Performax Products	79	62	Steve Wall Lumber	23	163
Jamestown Distributors	33	40	Porter-Cable	Cover 4	64	Tree Products Inc.	100	119
McFeely's	89	55	Powermatic	24	65	Tropical Exotic Hardwoods	102	120
FINISHING SUPPLIES/EQUIPMENT			Ryobi America Corporation	13	—	Tuckaway Timber	100	121
Bartley Collection	83	8	Sand-Rite Manufacturing	76	69	U.S. Mahogany Corp.	100	122
Fuji Spray Equipment, Ltd.	86	26	Smithy Company	19	72	Wood-Ply Lumber Corp.	100	168
Turbinaire	31	80	Star Tools	77	73	Woodworkers Source	92	92
Waterlox Coatings	110	124	Sunhill Machinery	25	75	WOODWORKING CATALOGS		
Wayne's Woods	101	125	Syracuse Industrial Sales	89	76	Constantine's	25	5
Wood-Kote Products, Inc.	19	89	Tool Crib of the North	34,35	79	Garrett Wade	27,80	27,28
FURNITURE & WOOD PARTS			Wilke Machinery	9	201	Hartville Tools	33	35
Adams Wood Products Inc.	89	2	Williams & Hussey	9	86	Highland Hardware	76	36
H.H. Perkins Co.	100	109	Woodmaster Tools	24,92	—	Lee Valley Tools/Veritas	15,16,17	501
Midwest Dowel Works	94	57	Woodwrite, Ltd.	7	97	MacBeath Hardwood Co.	101	204
Osborne Wood Products, Inc.	31	61	SAWMILLS			Van Dyke's Restorers	22	81
HAND TOOLS			Better Built Corp.	19	10	Walnut Creek Woodworking Supply Co.	101	123
Antique & Used Tools	100	—	Granberg International	25	30	Woodcraft Supply Corp.	25	90
Lie-Nielsen Toolworks	94	52	Wood-Mizer Products, Inc.	8	202	Woodworkers' Store	9	93
L.S. Starrett Company	22,85	48,47	SCHOOLS & ASSOCIATIONS			WOODWORKING SHOWS		
Pootatuck Corporation	85	63	Arrowmont School of Arts/Crafts	25	7	Folk Art Center	100	103
Simpson Machine Tool Co.	86	71	International Correspondence School	79	38	Woodworking, Machinery & Furniture Supply Fair	81	96
HARDWARE			North Bennet Street School	100	113	Woodworking Shows	94	95
Crown City Hardware	101	—	SHOP ACCESSORIES			WORKSHOPS		
KITS & PLANS			Airware America	100	98	American Structures, Inc.	100	99
Accents Plans & Patterns	101	203	Beall Tool Co.	100,101	102,101	Steelmaster Buildings	83	74
American Coaster	101	164	Blue Tornado Cyclones	97	11			
			Detroit Radiant Products Co.	80	19			

advertiser index

BLUE TORNADO CYCLONES

MADE IN USA



- HIGHEST QUALITY/VALUE
 - SATISFACTION ASSURED
 - 16 GA. DOMESTIC COLD ROLL STEEL, MIG WELDED
 - SIMPLE INSTALLATION
 - SIZED FOR A SMALL SHOP
- 1-800-292-0157

CIRCLE NO. 11 ON PRODUCT INFORMATION FORM

**YOU DEMAND FAST, ACCURATE
MOISTURE MEASUREMENT,
RAISE YOUR HAND.**



Get a grip on our J-Series wood moisture meters with convenient one-hand operation and the flexibility of using the integral contact pins. Available in three models to meet your needs and your budget.

Best of all, these are pin-type meters. The only instruments that can help you identify surface and core moisture content. The result? Readings you can rely on, fewer defects and better quality control.

Delmhorst Instrument Co., 51 Indian Lane East, Towaco, NJ 07082 FAX 201-334-2657
Call us toll free at 800 PINS DIC (746-7342).

DELMHORST
INSTRUMENT CO.

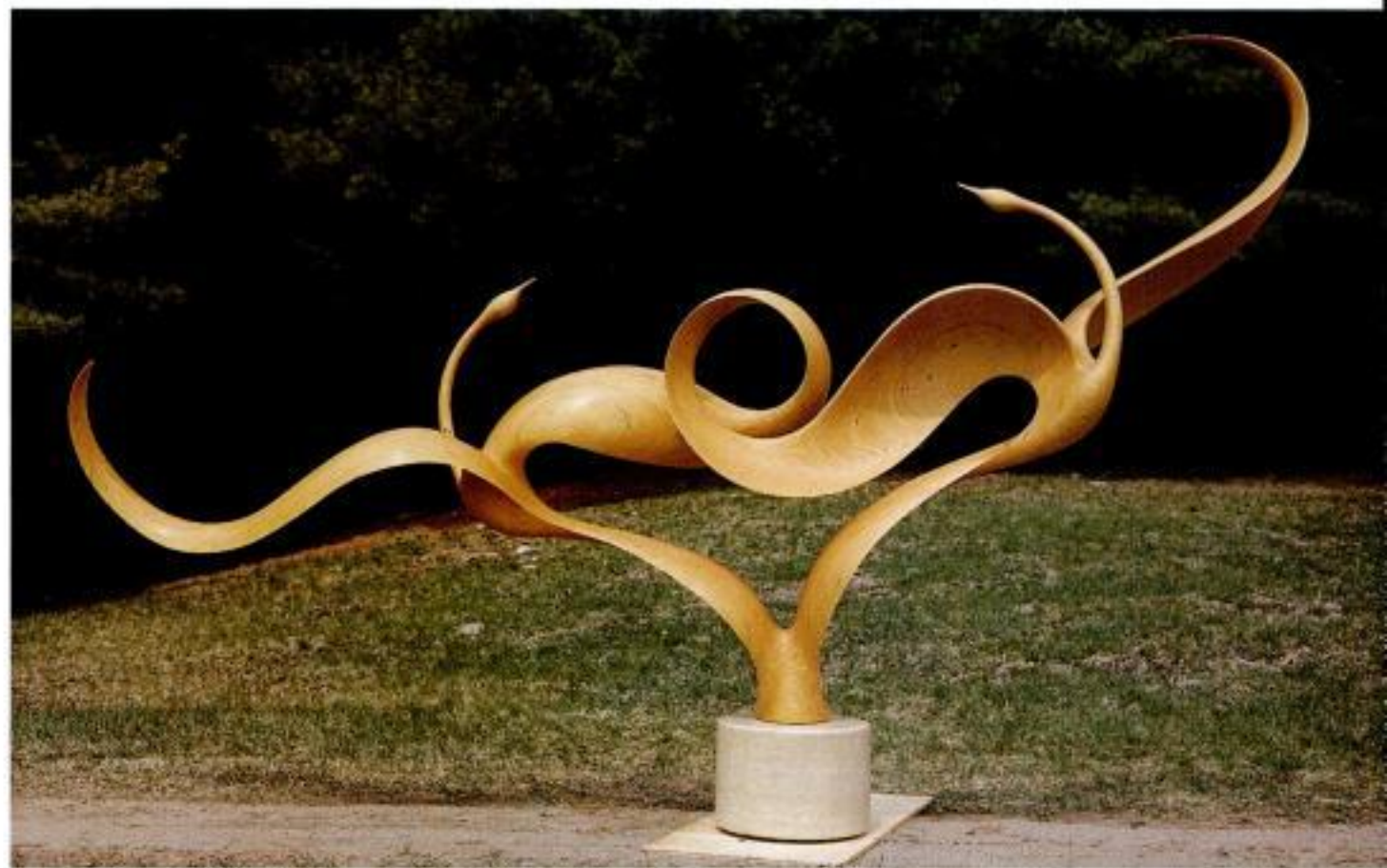
PINPOINTING MOISTURE PROBLEMS FOR 50 YEARS

CIRCLE NO. 16 ON PRODUCT INFORMATION FORM

	Page	Circle #		Page	Circle #
Accents Plans & Patterns	101	203	Lie-Nielsen Toolworks	94	52
Adams Wood Products, Inc.	89	2	Lignomat USA Ltd.	85	53
Adjustable Clamp Co.	95	169	L.S. Starrett Company	22,85	48,47
Advanced Machinery Imports	7	4	MacBeath Hardwood Co.	101	204
Airware America	100	98	McFeely's	89	55
Airy Sales Corporation	23	83	Mesa Vista Design	76	56
Amana Tool	85	6	Midwest Dowel Works	94	57
American Coaster	101	164	M.L. Condon Co. Inc.	89	54
American Furniture Designs	8	301	MLCS Ltd.	91	58
American Structures, Inc.	100	99	Niagara Lumber	101	112
Amish Workshops	100	100	North Bennet Street School	100	113
Antique & Used Tools	100	—	North Star Lumber	101	114
Arrowmont School of Arts/Crafts	25	7	Norwood Sawmills	102	115
Bartley Collection	83	8	Nyle Corporation	83	59
Beall Tool Co.	100,101	102,101	Old World Machinery	31	162
Berea Hardwoods	80	9	Oneida Air Systems	14	60
Better Built Corp.	19	10	Osborne Wood Products, Inc.	31	61
Blue Ox Brand	101	165	Osolnik Machinery & Craft		
Blue Tornado Cyclones	97	11	Supplies	25	127
Busy Bee	101	110	Packard Woodworks	102	116
Caribou Tool Co.	100	—	Performax Products	79	62
Carter Products	33	161	Pootatuck Corporation	85	63
Clayton Machine Corp.	89	13	Porter-Cable	Cover 4	64
CMT USA	83	14	Powermatic	24	65
Conover Lathe	76	—	Price Cutter	27	21
Constantine's	25	5	Reid Tool Supply Co.	101	117
Craft Supplies USA	7	15	Ryobi America Corporation	13	—
Crown City Hardware	101	—	Safranek Enterprises, Inc.	80	68
Cutting Edge, Inc.	102	166	Sand-Rite Manufacturing	76	69
Delmhorst Instruments Co.	97	16	Sandy Pond Hardwoods	102	118
Delta International			Shapes & Surfaces, Ltd.	83	70
Machinery	20,21,Cover 3	18,17	Simpson Machine Tool Co.	86	71
Detroit Radiant Products Co.	80	19	S. La Rose, Inc.	8	67
DMT	95	20	Smithy Company	19	72
Dodge Ram Pickup	2,3	—	Specialty Furniture Designs	19	303
Dust Boy, Inc.	100	104	Star Tools	77	73
Econ-Abrasives	92	1	Steelmaster Buildings	83	74
Electrophysics	102	—	Steve Wall Lumber	23	163
Elmer's Glue	19	12	Sunhill Machinery	25	75
Esta-USA, Inc.	92	22	Syracuse Industrial Sales	89	76
Fein Power Tools	31	23	Tajfun Plania	94	77
Felder, USA	6	24	Tool Crib of the North	34,35	79
Folk Art Center	100	103	Tree Products Inc.	100	119
Forrest Mfg.	29	—	Tropical Exotic Hardwoods	102	120
Freud	5	25	Troy-Bilt	87	—
Fuji Spray Equipment, Ltd.	86	26	Tuckaway Timber	100	121
Furniture Designs, Inc.	94	302	Turbinaire	31	80
Garrett Wade	27,80	27,28	U.S. Mahogany Corp.	100	122
Good Hope Hardwoods	101	105	Vac Sac	102	111
Gorilla Glue	95	29	Van Dykes Restorers	22	81
Gougeon Brothers Inc.	102	106	Vega Enterprises	7	82
Granberg International	25	30	Wagner Electronic Products	8	84
Great Tools Direct	23	31	Walnut Creek Woodworking		
Grizzly Imports, Inc.	84,Cover 2	32,33	Supply Co.	101	123
Groff & Hearne Lumber Inc.	101	107	Waterlox Coatings	110	124
Gross Stabil Corporation	27	34	Wayne's Woods	101	125
Guild of Master Craftsman	101	108	Wildwood Designs	22	85
Hartville Tools	33	35	Wilke Machinery	9	201
H.H. Perkins Co.	100	109	Williams & Hussey	9	86
Highland Hardware	76	36	Wilton Corporation	86	87
HTC Products	94	37	Windsor Industries	101	126
INCRA Rules	21,23,25	78	Woodcraft Supply Corp.	25	90
International Correspondence			Wood-Kote Products, Inc.	19	89
School	79	38	Woodline Arizona	94	91
International Tool Corp.	86	39	Wood Mark	24	88
Ironwood Mill-Right	21	66	Woodmaster Tools	24,92	—
Jamestown Distributors	33	40	Wood-Mizer Products, Inc.	8	202
JB Dawn Products, Inc.	101	167	Wood-Ply Lumber Corp.	100	168
JDS Company	89	41	Woodworkers Source	92	92
Jet Equipment & Tools	11,12	43,42	Woodworkers' Store	9	93
Jointech Corp.	6	44	Woodworkers Supply	79	94
Keller Dovetails	92	45	Woodworking, Machinery &		
Koetter Dry Kiln, Inc.	76	46	Furniture Supply Fair	81	96
Laguna Tools	33,76	49,50	Woodworking Shows	94	95
Lee Valley Tools/Veritas	15,16,17	501	Woodwrite, Ltd.	7	97
Leigh Industries	8	51			

The Best of the Guilds

Some of the finest work we've seen comes from woodworking guilds and associations. These groups are at the forefront of craftsmanship all across the country, mounting their own exhibitions and helping others do the same. Here's a sampling of winning work from the guilds in 1996. For a list of guilds near you, call AW at (610) 967-8315.



▲ "Double Swan" sculpture by Robert Longhurst, Northeastern Woodworkers Association, NY. *Best of Show, Woodworkers EXPO '96*. Baltic birch plywood. W: 13½ ft. D: 30 in. H: 84 in.

PHOTO BY ROBERT LONGHURST



▲ Jewelry chest by William Bardick, San Diego Fine Woodworkers Association, CA. *President's Award, Design in Wood Show*. Honduras mahogany, padauk, cedar, satin and glass. W: 43 in. D: 28 in. H: 76 in.

PHOTO BY DAVID BARDICK



▲ "Axel" cabinet by Andrew Pate, Northeastern Woodworkers Association, NY. *Best of Show, Woodworkers EXPO '96*. Quartersawn cherry, figured cherry, eucalyptus and ebony inlay. W: 32½ in. D: 23 in. H: 45 in.

PHOTO BY JONATHAN BARBER



Ship model "Bounty" by Charles Weise, Minnesota Woodworkers Guild. *Best Handwork, Northern Woods Exhibition.* Basswood, walnut, copper and linen. L: 38 in. W: 12 in. H: 30 in.

PHOTO BY POPULAR FRONT STUDIOS



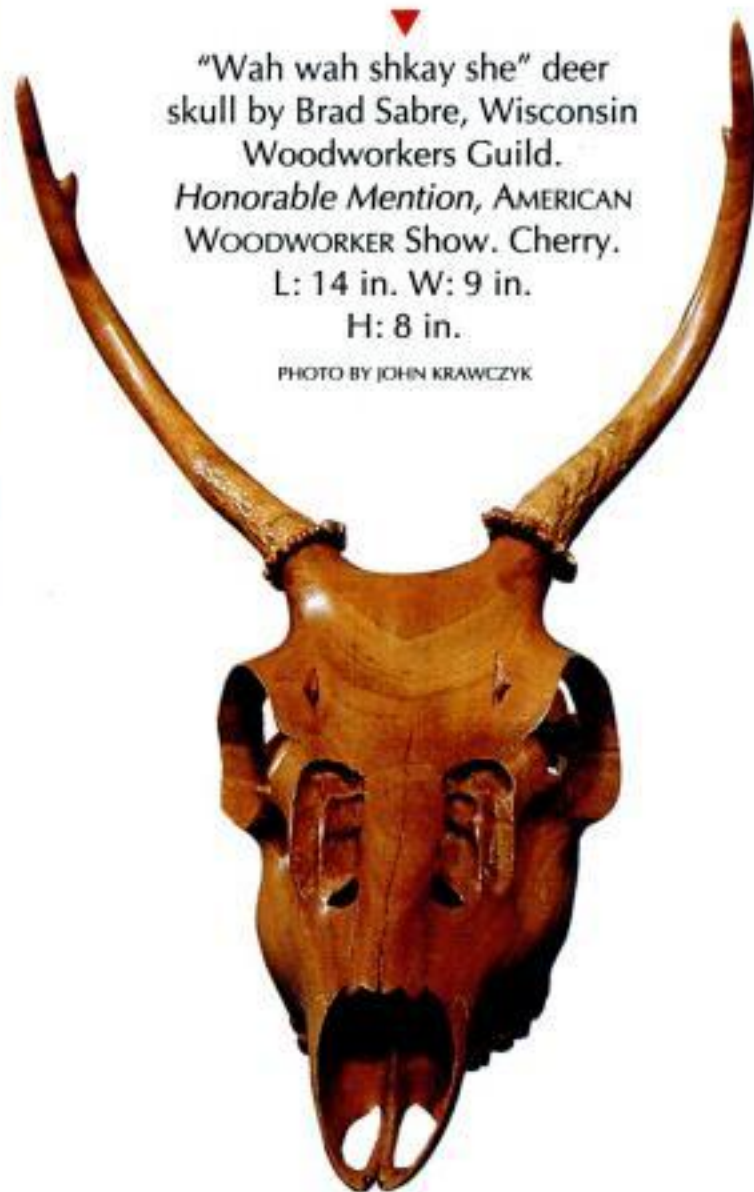
Silver chest by George Buck, San Diego Fine Woodworkers Association, CA. *First Place, Traditional Furniture, Design in Wood Show.* Purpleheart, narra, maple and vene. W: 28 in. D: 15 in. H: 34 in.

PHOTO BY GEORGE BUCK



Sideboard by Ross Peterson, Minnesota Woodworkers Guild. *Best in Show, Northern Woods Exhibition.* Cherry and hop hornbeam. W: 52 in. D: 17 in. H: 28 in.

PHOTO BY POPULAR FRONT STUDIOS



"Wah wah shkay she" deer skull by Brad Sabre, Wisconsin Woodworkers Guild.

Honorable Mention, AMERICAN WOODWORKER Show. Cherry.

L: 14 in. W: 9 in.

H: 8 in.

PHOTO BY JOHN KRAWCZYK

Want to see your work in "Gallery"? Send color slides or larger transparencies to: "Gallery," AMERICAN WOODWORKER, 33 E. Minor St., Emmaus, PA 18098. Please include a title, a brief description of techniques used, materials, dimensions, name of photographer, your name, address, and phone number. We'll pay you \$35 per entry published. If you want your photos returned, enclose a self-addressed stamped envelope.

marketplace

For more information write, call or fax: AMERICAN WOODWORKER,
Ian Tauber, 33 East Minor Street, Emmaus, PA 18098, (610) 967-8343. Fax: (610) 967-7692.

TREE PRODUCTS, INC.

QUALITY LUMBER at the LOWEST PRICE

RED OAK 4/4 FAS S2S \$2.75/BdFt
HARD MAPLE 4/4 FAS S2S \$2.90/BdFt
CHERRY 4/4 FAS S2S \$3.45/BdFt

ALL MAJOR CREDIT CARDS ACCEPTED

1-800-499-9663

**P.O. BOX 1585
BUFFALO, NY 14226**

CIRCLE NO. 119 ON PRODUCT INFORMATION FORM

American Structures, Inc.

Buy Steel Buildings Factory Direct

Nut & Bolt Construction
Maintenance Free
Trussless Roof
20 Year Warranty
Special Savings On
Overstocked Models



800-340-4398

CIRCLE NO. 99 ON PRODUCT INFORMATION FORM



Perfect for Woodworking Dust
AIRWARE AMERICA
Box 975, Elbow Lake, MN 56531
1-800-328-1792

Airmate
3
\$339⁰⁰
FREE
SHIPPING

Call for
Free Info
Credit
Cards
Accepted

CIRCLE NO. 98 ON PRODUCT INFORMATION FORM

GIANT HARDWOOD SELECTION

The finest selection of hardwoods, veneers, turning squares and hard to find exotics. All in stock and ready for prompt shipping. **FREE CATALOG**

U.S. MAHOGANY CORP. Serving the woodworking industry since 1954.
746 Lloyd Road • Aberdeen, NJ 07747
(908) 583-6300 • Fax (908) 583-6303

Mention this ad and receive 10% off first order.
(\$50.00 minimum, excludes S&H)

CIRCLE NO. 122 ON PRODUCT INFORMATION FORM

Now... Turn Your Router Into Six Precision Tools!



New patented tilting router table gives you 0° to 90° control. Joint, mold, shape and more — with greater accuracy and safety. Call for Free brochure or order demo video for \$5 and receive \$10 off your order.

SHOPCENTER
6-in-1 Routing Machine

1-800-800-3832 Dept. AW

Caribou Tool Co. • 1045 Main St. • Ceresville, OH 45458



10 South Bradley Road
Woodbridge CT 06525
FREE CATALOG
Retail - Wholesale

H.H. PERKINS CO.

Established 1917

CANE • RUSH • SPLINT
SHAKER TAPE • CHAIR KITS
Complete Line of Basketry Supplies

CALL 800 462-6660

24-hr Fax: 203 389-9501

Email: HPerkins@aol.com

CIRCLE NO. 109 ON PRODUCT INFORMATION FORM

An Education in Craftsmanship

For careers in:

- CARPENTRY
- PRESERVATION CARPENTRY
- CABINET & FURNITURE MAKING
- PIANO TECHNOLOGY
- VIOLIN MAKING & RESTORATION

Financial aid for qualified students. Accredited member ACCSCT. Short workshops also offered.

NORTH-BENNET-STREET-SCHOOL

39 North Bennet St., Boston, MA 02113 (617) 227-0155

CIRCLE NO. 113 ON PRODUCT INFORMATION FORM



Clear White Pine up to 24" • Northern Hardwood,
matched sets • Figured, Carving & Turning Wood
Free Price List
PH: 603-795-4534 • FAX: 603-795-4607
Rt. 10, Lyme, N.H. 03768

TIMBER CO.

CIRCLE NO. 121 ON PRODUCT INFORMATION FORM

BOB KAUNE

specializing in



buy and sell

ANTIQUE & USED TOOLS for
COLLECTORS & WOODWORKERS®

Quality selection of scarce, older and complete, working handtools for collectors and woodworkers—planes, scrapers, spokeshaves, chisels, saws, levels, rules, unusual items, etc. Hundreds of ready to use pre-1960 tools. Illustrated lists published 5 times a year.

SUBSCRIPTION \$12.00 for 5 LISTS
CURRENT LIST \$3.50

SATISFACTION GUARANTEED
511 W. 11th • Dept. AW97 • Pt. Angeles, WA 98362

(360) 452-2292

<http://www.olympus.net/bktools>

EXOTIC & DOMESTIC HARDWOODS

LUMBER • PLYWOOD • VENEERS • TURNING BLOCKS • BURLS



Wood-Ply
Lumber Corp.

100 Bennington Ave., Dept. AW
Freeport, NY 11520

We specialize in small
to medium size orders!
Over 70 species of
hardwood in stock.

CALL FOR PRICE LIST:

516-378-2612
FAX 516-378-0345

CIRCLE NO. 168 ON PRODUCT INFORMATION FORM

REPLICA WINDSOR KITS

• 20 different chairs & settees

• Exacting museum replicas

Work so special you'll find it in the

White House & major museums.

Free portfolio: 1-800-39AMISH

THE AMISH WORKSHOPS

P.O. Box 6115, Wyomissing, PA 19610



CIRCLE NO. 100 ON PRODUCT INFORMATION FORM

DUST BOY, INC.®

Portable • 1 & 2 HP Dust Collectors



- Cast Aluminum Blowers
- High Efficiency
- Extremely Quiet
- American Made
- 5 Year Warranty

"We Stand Behind

OUR Product With Pride"

DUST BOY, INC.

205 So. Walnut St.

Arcanum, OH 45304

(513) 692-8838

1-800-232-3878

CIRCLE NO. 104 ON PRODUCT INFORMATION FORM



SINCE 1916
TUNG OIL FINISHES USED
BY WOODWORKING
PROFESSIONALS FOR
80 YEARS.

For a **FREE Product Catalog** call

WATERLOX COATINGS CORPORATION

1-800-321-0377 • 216-641-4877 in Ohio

CIRCLE NO. 124 ON PRODUCT INFORMATION FORM

THE CHAIR SHOW II

ALL MEDIA NATIONAL

JURIED COMPETITION

October 4, 1997 - January 4, 1998

For prospectus write:
THE CHAIR SHOW II, SHCG, P.O. Box 9545
Asheville, NC 28815 • 704/298/7928

CIRCLE NO. 103 ON PRODUCT INFORMATION FORM

Humidor Supplies

Humidifiers • Hygrometers
Hardware • Spanish Cedar

For information, call or write: Dept. AW

THE BEALL TOOL CO.

541 Swans Road., N.E. Newark Ohio 43055

Toll Free 1-800-331-4718 Fax 1-614-345-5880

E-Mail Address: jbeall@aol.com

CIRCLE NO. 101 ON PRODUCT INFORMATION FORM



Windsor Forever PegHooks Guaranteed Never to Fall Out!

Over 80 sizes available!
No More Losing Valuable Tools due
to hooks falling behind your workbench!

Call (800) 678-2552 for a catalog

CIRCLE NO. 126 ON PRODUCT INFORMATION FORM

Plumb Bobbles

Keep yourself straight.



Turn a functional miniature plumb bob to find your true center or adorn your neck. Plumb Bobble kits come with gold-plated hardware, complete instructions -- everything you need to turn small pieces of wood into wearable works of art. Guaranteed to point down, no matter what direction the wind is blowing. Quantity prices available.

For information, call or write: Dept. AW

THE BEALL TOOL CO.

541 Swans Road., N.E. Newark Ohio 43055
Toll Free 1-800-331-4718 Fax 1-614-345-5880
E-Mail Address: jbeall@allink.com

CIRCLE NO. 102 ON PRODUCT INFORMATION FORM

WIDE SELECTION OF HARDWOODS



Mahogany, Quartersawn White Oak, Curly Maple, Cherry, Walnut, Basswood
Wide & Thick Stock
800-758-0950
P.O. Box 582, Buffalo, NY 14207
<http://www.localnet.com/blueox/homepage.html>

CIRCLE NO. 165 ON PRODUCT INFORMATION FORM

THE AMERICAN COASTER

7106 Lake Road, Dept. AW9, Montrose, MI 48457
1890 to 1930 Miniature Farm Wagon
28" x 18" x 40"
6 sheets each
set (30 x 36)
\$29.95
Plan #10



Easy-to-read
full-scale blueprints
(810) 639-7004
9:00 am-11:00 pm, E.S.T.
BROCHURE \$1.00
(Free with order)

CIRCLE NO. 164 ON PRODUCT INFORMATION FORM

Wayne's Woods, Inc.

Hardware & Refinishing Supplies



FINE REPRODUCTION
HARDWARE
Authorized Dealer For:

- Strippers
- Stains
- Finishes
- Touch-up Supplies
- Glues
- Books/Videos

Kwik-Kleen

BEHLEN

Catalog \$2.00 (Refunded on 1st order)

39 N. Plains Industrial Rd., Dept. AW • Wallingford, CT 06492
1-800-793-6208 FAX: (203) 949-0769

CIRCLE NO. 125 ON PRODUCT INFORMATION FORM



FULL SIZE PATTERNS

- Fun • Profitable • Guaranteed!
- 100 YARD ORNAMENTS — Animals, birds, signs & more!
- 25 Fun & Profitable "wind-action" WHIRLIGIGS.
- SHOW STOPPERS II — 22 Crafts Show best-sellers!
- Attractive DUTCH WINDMILL — 5 feet tall.
- 200 CREATIVE CUT Patterns for scroll, band or jigsaw.
- Create over 20 "Quick & Easy" BIRD HOUSES.

SEND \$8.00 per SET • PICK 3 for \$19.50 • ALL 6 only \$36.00 • FREE S&H!
MC/Visa • Fax/Voice Mail (603) 332-4579 • Catalog \$2.00 (free w/order)
ACCENTS, Dept. MG47, PO Box 7387, Gonic, NH 03839

CIRCLE NO. 203 ON PRODUCT INFORMATION FORM



FREE Woodworking Catalog BIG savings on a wide variety of: Band and Scroll Saw Blades

Sanding Supplies, Books, Clamps,
Hand Tools, Woodworking Saws, etc.
Walnut Creek Woodworking Supply Co.
Call: **800-942-0553**

CIRCLE NO. 123 ON PRODUCT INFORMATION FORM

BOWL TURNERS SAVE TIME * WOOD MONEY

Revolutionary Patented New Tools

For **BUSY BEE, PO Box 58870**
FREE info, Greenmount, Auckland, New Zealand
write to: Fax: +64-9-273-9173

CIRCLE NO. 110 ON PRODUCT INFORMATION FORM



GROFF & HEARNE LUMBER, INC.

Curly Cherry 4/4 to 16/4 • Birdseye & Tiger Maple
Premium Walnut & Cherry, etc. and Many Unusual Species!
Matching Ritches, slabs to 40" wide
K.D. Nationwide & International Shipping
No Order Too Large or Too Small
(717) 284-0001 800-342-0001 FAX (717) 284-2400
838 Scotland Road, Quarryville, PA 17356

CIRCLE NO. 107 ON PRODUCT INFORMATION FORM

The AUTHENTIC REPRODUCTIONS! Classical Collection



Since 1916
ALSO AVAILABLE —
General Restoration
Catalog, \$6.50

Quality handcrafted European hardware. Perfect for restoration or recreation of fine cabinetry, furniture, doors, and windows. Many hard to find iron, brass, wood, and porcelain olde worlde pieces. Beautiful catalog, nothing else like it! Over 1000 items pictured at actual size. 200 pages with brief history of European Styles.

Send \$35.00 to:
Crown City Hardware Co.
1047 N. Allen Ave. Dept. A92
Pasadena, CA 91104

WOODCARVING MAGAZINE

100% WOODCARVING — techniques, projects, new tools list, books, new products, everything for the dedicated woodcarver.
Send for details of this magazine and a unique range of woodcarving books and videos.

GMC Publications, 166 High Street,
Lewes, East Sussex BN7 1XU, England
Tel: Freephone 1 800 225 9262
Fax: 01144 1273 478606



CIRCLE NO. 108 ON PRODUCT INFORMATION FORM

Good Hope Hardwoods, Inc.

Fine Lumber — Personal Service

Tiger Maple

4/4 — 16/4 RWL & Matched Sets

Figured Cherry

Highly Figured Claro Walnut

Quarter Sawn White Oak

Figured Mahogany

Plain Cherry and Walnut

Plank Flooring

(610) 274-8842

1627 New London Road
Landenberg, PA 19350

CIRCLE NO. 105 ON PRODUCT INFORMATION FORM

SELF-ADHESIVE 70% WOOL FELT

TAPES • STRIPS • TABS • RIC-O-BAC
DOTS • SOFT BOTTOMS

1-800-796-2333

APPROX. 1/4" & 1/2" THICK
BROWN, GREEN, BLACK,
WHITE, AND SILVER GRAY

JBDANN
PRODUCTS, INC.

3905 W. 64TH PLACE
CHICAGO, IL 60629
312-735-2344 • FAX 312-735-2390

CIRCLE NO. 167 ON PRODUCT INFORMATION FORM

QUALITY NORTHERN APPALACHIAN HARDWOOD

FREE delivery. Bundled, surfaced shrink-wrapped.
Satisfaction Guaranteed.
NIAGARA LUMBER & WOOD PRODUCTS, INC.
47 Elm Street, East Aurora, NY 14052
(800) 274-0397

CIRCLE NO. 112 ON PRODUCT INFORMATION FORM

"NEW" WOODWORKING HAND TOOL CATALOG



Send \$2 for Catalog.

930 Ashby Ave.
Berkeley, CA 94710
(510) 843-4390

CIRCLE NO. 204 ON PRODUCT INFORMATION FORM

North Star Lumber

(207) 764-0301

FAX (207) 764-5138

E-Mail: NRTHSTR@AOL.COM

16a Dyer Street

Presque Isle, ME 04769

FREE CATALOG

- Domestic & Exotic Lumber & Veneer
- Thin Woods 1/8"-1/2"
- Specialties: Curly & Bird's eye Maple Spalts, Flame Birch, Curly Cherry, Quartersawn Oaks, Designer Veneers, Burls
- Variety Packs, Bowl Blanks, Veneer Packs

CIRCLE NO. 114 ON PRODUCT INFORMATION FORM

CLAMPS

In stock for same day shipping.



Reid
Tool Supply Company

Call for your FREE
catalog today!

1-800-253-0421

2265 Black Creek Rd. • Muskegon, MI 49444
FAX 1-800-438-1145 • (616) 773-4485
<http://www.industry.net/reidtool.supply>

CIRCLE NO. 117 ON PRODUCT INFORMATION FORM

marketplace

Sandy Pond Hardwoods, Inc.
AMERICAN EXOTICS
 Birdseye & Tiger Maple
 Curly Cherry, Flame Birch
Lumber & Flooring
800-546-9663
717-284-5030

Visit us at our Web site:
<http://www.figuredhardwoods.com>
 or e-mail us: sph2prlg@ptdprolog.net



CIRCLE NO. 118 ON PRODUCT INFORMATION FORM

Get a **Free Copy** of our
CATALOG for
WOODTURNERS
 Call Toll Free... **1-800-683-8876**
 or write... **Packard Woodworks PO Box 718 Tryon, NC 28782**
 E-Mail Address... PACKARDWW@AOL.COM



"The Woodturners' Source"

CIRCLE NO. 116 ON PRODUCT INFORMATION FORM

Tired of dumping dusty loads?
 Try **Vac Sac™**
 dust collectors?
 Ordinary plastic garbage bags **install**
 in your machine as disposable
 waste collection bags
 Fits most canister type systems
Only \$14.95
 Order toll free **1-888-801-9193**
 On the internet <http://www.VacSac.com>
 Major Credit Cards Accepted



CIRCLE NO. 111 ON PRODUCT INFORMATION FORM

To PIN ... or NOT to PIN?
WE HAVE THE ANSWER!



TWO-WAY MOISTURE METER
 ... PIN-TYPE OR PINLESS
 INSTANT PUSHBUTTON SELECTION
 WIDE RANGE 0% - 99% DIGITAL
 WOOD SPECIES COMPENSATION
 NEW DUAL-MODE MODEL CMT-908
 ... ASK FOR FREE CATALOG OF
 ALL OUR MOISTURE METERS

END WOOD WARPING NIGHTMARES
PIN-TYPE & PINLESS MOISTURE METERS FROM \$69
<http://www.icis.on.ca/homepages/london/electrophysics>

Electrophysics Box 1143, Station B
 1-800-244-9908 London, Ontario
 Canada N6A 5K2

CIRCLE NO. 120 ON PRODUCT INFORMATION FORM

WEST SYSTEM®
BOATBUILDERS SWEAR BY IT,
and so will you.

Strong, waterproof WEST SYSTEM® Brand epoxy is more than a 2-part adhesive. It's a complete system of resin, hardeners, fillers and additives from which you can easily create the perfect bonding, coating and sealing agents for your wood or composite project.

For a free copy of the 33-page WEST SYSTEM® Technical Manual & Product Guide, write:
Gougeon Brothers, Inc.
 Dept. 42, P.O. Box 908
 Bay City, MI 48707

CIRCLE NO. 106 ON PRODUCT INFORMATION FORM

SAWMILL DIRECT • BEST PRICES
OVER 70 QUALITY SPECIES INCLUDING:
 • COCOBOLO • EBONY • BOCOTE
 • PINK IVORY • MEXICAN KINGWOOD • ROSEWOODS
 • FIGURED MAPLES • MAHOGANIES
LARGE INVENTORY OF:
 • LUMBER • SQUARES • TURNING STOCK
 • SLABS • LOGS • BILLETS
WE HAVE WHAT YOU WANT!
 BASE FOR LIST
TROPICAL EXOTIC HARDWOODS
 of Latin America
MITCH TALCOVE 619-434-3030
 P.O. Box 1806 DIRECT IMPORTER
 Carlsbad, CA 92018 FAX 619-434-5423

CIRCLE NO. 120 ON PRODUCT INFORMATION FORM

SAWMILL \$3795.
FREE INFORMATION
 Norwood Sawmills
 90 Curtwright Dr.
 Unit 3
 Amherst N.Y. 14221
1-800-661-7746



CIRCLE NO. 115 ON PRODUCT INFORMATION FORM

A Complete Turner's & Carver's Supply
 • Henry Taylor Turning and Carving Tools •
 • Hi-Tec Turning Tools By Jerry Glaser •
 • Tools For Hollow Turning By D. Stewart •
 • OneWay Bowl Chucks and Ring Tools •
 Harmen • Ken Helvie • Foredom • Automach

Write or Call For Free Catalog
7123 SouthWest Fwy
Houston, TX 77074
Phone: 800/790-7980
Fax: 713/981-6104

The CUTTING EDGE, Inc.
 A Woodworker's Tool & Supply

CIRCLE NO. 106 ON PRODUCT INFORMATION FORM

AMERICAN WOODWORKER™ BACK ISSUES

COMPLETE YOUR COLLECTION

\$4.50 PER ISSUE (Includes Shipping) • SUPPLY LIMITED. ORDER TODAY!

- #13 April 1990: Turned Birdhouses, Slot Mortiser
- #15 August 1990: Carving Letters, Quilt Rack
- #22 October 1991: Drawer Making, Hanging Corner Cupboard
- #23 December 1991: Riding Locomotive, Slat-Top Desk
- #24 February 1992: Windsor Chair, Router Table
- #38 June 1994: Buyer's Guide to Bandsaws, Queen Anne Lowboy
- #41 1995 Tool Buyer's Guide (November 1994)
- #44 April 1995: Revolutionary Router Table,
- #45 June 1995: Colonial Tavern Table, Buyer's Guide to Shop Vacs, Breadboard Ends
- #46 August 1995: Buyer's Guide to Router Table Fences, Arts & Crafts Armoire, Vacuum Clamping
- #47 October 1995: Rustic Rocker, Japanese Toolbox
- #48 1996 Tool Buyer's Guide (November 1995)
- #49 December 1995: Queen Anne Tea Table
- #50 February 1996: Make Perfect Edge Joints
- #51 April 1996: Tablesaw Tapering Jig, Buyer's Guide to Jack Planes
- #53 August 1996: Joints for Better Cabinets
- #54 October 1996: Mortising Jig, Dovetails, Scrollsaws
- #55 1997 Tool Buyer's Guide (November 1996)
- #56 December 1996: Blanket Chest
- #57 February 1997: Entertainment Center

We have a limited supply of AMERICAN WOODWORKER back issues for sale. When these are gone, there'll be no more. Each issue features great articles, projects and woodworking tips. Don't miss out. Order today!

Check off the issues you want. Order by phone, or mail ad with check or money order to:
AMERICAN WOODWORKER
PO Box 7591, Red Oak, IA 51591-0591

NEW INDEX! \$4.95

The Complete AMERICAN WOODWORKER Index Includes Issues #1-49 (1988-1995). The AMERICAN WOODWORKER Index zeros in fast on the information you need. Includes every article, project, Tech Tip and more from 1988 through 1995 — all listed by subject and cross-referenced for easy use.

☐ **AMERICAN WOODWORKER BACK ISSUES \$4.50 Each**
 (Please check off the issues you want)

☐ **INDEX \$4.95**

Total Amount Enclosed _____

Name _____

Address _____

City _____ State _____ Zip _____



ORDER TOLL FREE:
1-800-666-3111
 M-F 7:00 a.m.-5:30 p.m. Central Time
 Visa or MasterCard only

classifieds

Classified rates — \$6.25 per word, 15 word minimum. For more information write, call or fax: AMERICAN WOODWORKER, Ian Tauber, 33 East Minor Street, Emmaus, PA 18098, (610) 967-8343. Fax: (610) 967-7692.

WOOD/VENEERS

IDE QUARTERSAWN SYCAMORE and white & red oak. Plus figured lumber. Talarico Hardwoods, D #3, Box 3268, Mohnton, PA. (610) 775-0400. VISA/MC.

IGER MAPLE, QUARTERSAWN YCAMORE, 1/4 WHITE OAK, her native exotics. Quality lumber, personal service. Retail & wholesale. See brochure. C.P. Johnson Lumber, 1 S. Sixth Street, Warrenton, VA 2186. Ph/fax: (540) 341-2881.

OMESTEAD HARDWOODS—Great domestic selection. (800) 241-770; (216) 889-3770. Grand opening—Alva Hardwoods, 7307 Route 3, Alva, FL 33920, (941) 728-2484.

ONGLEAF (HEART) PINE lumber and flooring. Resawn from salvaged members. 4–12 inch width. Specialty Lumber: (706) 541-1039. (GA)

IGURED MAPLE IS OUR FOCUS. Curly, quilted, burl & spalted maple. Boards, blocks & instrument. Randle Woods, P.O. Box 96, Randle, WA 3377. (360) 497-2071.

HINWOODS—1/16" TO 3/8" thickness. Ash to Zebrawood. Call for FREE informative brochure. Peerwoods (800) 514-3449.

ANTASTIC INVENTORY—Logs, lumber, turning blanks, instrument woods. Catalog \$2. Gilmer Wood Co., 2211 NW St. Helens Rd., Portland, OR 97210. (503) 274-1271.

TTENTION WOODTURNERS: Quality Oregon hardwoods. Discount prices. Free catalog. Call Central Valley Wood Products (800) 353-7999.

ALIFORNIA'S FINEST QUALITY exotic figured burlwoods. 30,000 pieces. Redwood, Maple, Buckeye, lanzanita, Madrone, Myrtlewood, Walnut, other burls. Any size/use! Guaranteed/direct. Established 27 years. Visa/MC. Burl Tree, Bruce emington, (800) 785-BURL.

ARDWOODS CUT TO ORDER. 20 species in stock from 1/4" to 4" thick, burls for turners, wood ID its \$59.95, veneers, woodworker's supplies. Colonial Hardwoods, Springfield, VA (800) 466-5451.

HE WOODSHOP AT WOODRAFT—From Aspen to Zircote, the Woodshop stocks over 40 different species of domestic and exotic hardwoods in sizes ranging from pen blanks to carving blocks. Satisfaction guaranteed! Call (800) 542-9115, Dept. 97WOWAC2 for a FREE catalog or see <http://www.woodcraft.com>

PLANS/KITS

SHOP BUILT SLIDING DOVE-TAIL MACHINE. Cut drawer fronts and sides accurately every time. Detailed plans. Send \$9.95 to Kennedy Cabinetry, 9 Oakglade Plaza, Hummelstown, PA 17036.

BEAUTIFUL, SIMPLE, STRONG! Elegant antique-style picnic table & two benches. Sets up and takes down quickly & easily without tools. Packs flat. No hinges, wedges or loose parts. NO UGLY 2x4's! Quick & easy to make. Inst. package with complete plans & full-size patterns only \$24.95. Morgan B. Smith, P.O. Box 317, Anthony, FL 32617.

BUILD YOUR OWN circular saw jig. Jig produces repetitive accurate cuts, project plans included. Send \$9.95 plus \$1.45 S/H, check or money order to: Wooden Designs, P.O. Box 7323, Somerset, NJ 08875-7323.

MUZZLELOADING RIFLE KITS: Assemble your own Pennsylvania or Kentucky rifle, 1861, 1863 Springfield, Brown Bess, Charleville, or other muzzleloading rifles with one of our kits. Order the GIANT 600-pg. Dixie Gun Works catalog today! Send \$5 or \$8.50 COD to: Dixie Gun Works, Dept. AW, P.O. Box 130, Union City, TN 38261. Or call: (901) 885-0700.

FULL-SIZE PROFESSIONAL PLANS, catalog \$3. Over 200 professionally designed plans for building fine furniture. Furniture Designs Inc., CN-37, 1827 Elmdale Ave., Glenview, IL 60025.

THE CLOCKMAKERS SOURCE! Over 2500 items wholesale! (example: 3/4" clockmakers forstner bit only \$19.50!) Color 64 page catalog and two clock plans \$3.00 deposit (credited). Steebar, P.O. Box 980-AW, Andover, NJ 07821-0980.

WOODEN PEN & PENCIL KITS—Woodcraft offers the greatest selection of pen and pencil kits you'll find anywhere! Not to mention key rings, letter openers, magnifying glasses, perfume applicators, etc. Call today for a FREE catalog! (800) 542-9115, Dept. 97PEWAC2 or <http://www.woodcraft.com>

TOOLS/EQUIPMENT

FIND CENTER FAST! Error free. 25ft. standard tape measure includes center-finding scale. CenterPoint™ is the only tape you need. \$16.95+4.25 shipping. Made in U.S.A. Order (800) 540-6604 Baklund-Hellar Inc. Rt. 1, Box 623, Eastsound, WA 98245. Washington residents add 7.8%.

TASHIRO'S SHARP JAPANESE TOOLS since 1888. Free ZETA™ saw system catalog. 2939 4th Avenue South, Seattle WA 98134. (206) 621-0199. FAX (206) 621-0157.

CUSTOM BRANDING IRONS—Any logo, design, signature. Absolutely lowest custom prices. Money back guarantee. Brochure \$1. Brand New, Dept. AW2, 6125 Pedernal, Goleta, CA 93117.

HAND-FORGED CHISELS, knives and custom work. Catalog \$1. Cape Forge, Box 987, Burlington, VT 05402-0987.

ROBLAND X31. ONE YEAR OLD. Large table, mobility kit, new fence, \$3,900. Old World Machinery (800) 203-0023.

TOOL ACCESSORIES

WOOD LATHE ACCESSORIES from Big Tree Tools, Inc. Spur center, steady rest, bowl caliper, screw center, more. Call (888) TURNING for free brochure.

DUST COLLECTION FOR SMALL SHOPS. Send S.A.S. envelope for description and catalog. F. Weiss, Box 92 Ashland, OR 97520.

WORKSHOPS

STEEL BUILDINGS! Easy to erect. Super heavy industrial steel! (25x30), (30x40), (40x60). Buy factory direct! Save 40%! (800) 942-1234.

HARDWARE

60 PAGE CATALOG—\$3.00. Professional Hardware & Supply, P.O. Box 11800, Casa Grande, AZ 85230. Receive \$5.00 "first order" coupon.

FINISHING SUPPLIES

SPRAY-ON SUEDE. FREE brochure and sample. New Mini-Flocker. Donjer Products, Ilene Ct., Building 8A, Bellemead, NJ 08502. (800) 336-6537.

CLAPHAM'S BEESWAX POLISH. ("My favorite wax" says James Krenov.) Clapham's edible Beeswax Salad Bowl Finish. (800) 667-2939.

BOOKS/VIDEOS/SOFTWARE

WOODWORKING INDEXES, software or printed—Locate information for better use of woodworking magazines. Yearly updates. DOS, Windows, Windows 95, \$56.95. Printed \$26.95. Free Brochure. Woodfind, Box 2703L, Lynnwood, WA 98036 E-mail: 103270.205@compuserve.com

WOODWORKING SERVICES

ATTENTION WOODWORKERS. Allow us to professionally draw (computer generated), print, and package your furniture and craft plans for marketing. Call, or fax your ideas for a quote. Niobrara Valley Consultants, PO Box 50, Valentine, NE 69201. Ph (402) 376-2691, Fax (402) 376-2692.

INSTRUCTION

APPRENTICESHIP—One year, hands on—fine furnituremaking with rare solid woods, design, and marketing. Tuition. Jeffrey Greene (215) 348-5232.

MISCELLANEOUS

PTO/NON-PTO WOOD CHIPPERS, chipper/shredders, stump grinders, skidding winches. Trailer, base frame, 3 point hitch mounting knuckle-booms. Hydraulic 4WD trailers pull heavy loads to hard road. Tractor tire chains. Literature kit #26-22. (800) 267-9450.

WOOD & TOOL EXCHANGE

Only for individual use.

DRY KILN. 2000 BOARD FEET. Complete with boiler and controls. Sacrifice, moving, must sell. You disassemble \$8,500. (812) 723-3767.

PARTS AND BLADES for vintage Stanley planes, shaves, and scrapers. Pete Niederberger, Box 887, Larkspur, CA 94977.

READERS ONLY!

BUY OR SELL

your used tools and accessories through

AMERICAN
WOODWORKER'S
"Wood & Tool
Exchange."

At only \$7 per line,
it's an inexpensive
way to reach over
300,000 fellow
woodworkers.

Mail us your ad today.

A Chisel Box

Keep your chisels protected and organized

by Paul Anthony

Chisels deserve protection. I keep mine in a box that I can easily move around the shop or bring to a jobsite. A notched piece of wood glued to the box bottom separates the chisels. Another piece glued inside the lid retains the chisels, keeping them from sliding out of their notches when the box is closed. The dimensions of the box depend on the type and number of chisels you want to put in it.

Make the notched separator piece first, using a strong, hard wood like maple. Cut the notch for each chisel about $\frac{1}{32}$ in. wider than the chisel blade, and deep enough to straddle the blade when it's lying bevel side down.

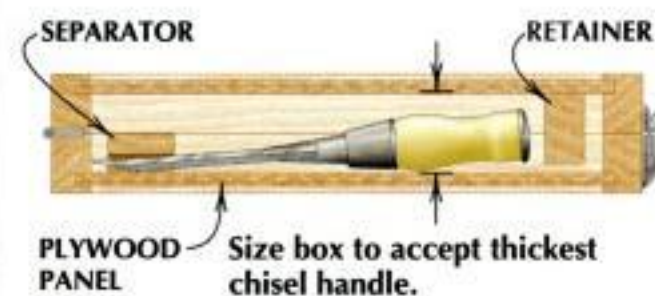
Next make the box, as shown in the drawing. It's easiest to assemble the sides, lid and bottom as a whole, then rip the sides apart to create the lid. Just remember to make the sides $\frac{1}{8}$ in. wider than needed, to allow for the saw kerf.

Glue the separator in place, then position the retainer in the box bottom, about $\frac{1}{4}$ in. away from the ends of the chisel handles. (If your chisels vary greatly in length, you can cut the retainer into sections.) Put a couple spots of double-faced tape or hot-melt glue on the retainer, and press the box lid on top of it. Mark the position of the retainer on the lid, glue it in place, and install the hinges and clasps. ▲

PAUL ANTHONY is an associate editor of *AW*.



SECTION VIEW



BEST SOLUTION WINS!

Have a shop jig or fixture you'd like to share? Send a photo or sketch with an explanation to "Shop Solutions," *AMERICAN WOODWORKER*, 33 E. Minor Street, Emmaus, PA 18098. Next issue's contributor will receive a Bosch 3725 DVS random-orbit sander—worth \$256.



Safe and secure. When this chisel box is closed, the retainer piece on the lid holds the chisels in their notches.

THE DELTA Q-3. LIKE A FORMULA RACE CAR WITH A BLADE.



We're talking pleasure here. Precision. Power. Wait 'til you get your hands on this high-performance machine. It just gets better and better around every turn. The Delta Q-3 18" Variable Speed Scroll Saw. A scroller's dream machine.

Its Quickset™ II Blade Changing System is the second generation of a Delta exclusive. The fastest in the industry. No wrenches, no aggravation, no wasted time while threading or changing blades. You'll find it on no other saw.

The arched, graphite composite arm eliminates vibration. So smooth and quiet you can listen to the sweet sound of your blade cutting wood, instead of your saw breaking the sound barrier. And at the very tip of that graphite arm you'll find the control switches. Right under your nose, instead of having to fumble around below the table.

As you'd expect, the cast iron table tilts to allow bevel cutting. But what you might not expect is the fact that the adjustable steel stand also tilts forward to give you a better view of the job, and just the right angle for comfortable operation.

This one's ready to test drive right now at your Delta dealer. If you're ready to cut circles around the rest, call us for the dealer

nearest you. Delta International Machinery Corp., 800-438-2486. In Canada, 519-836-2840.

Delta is proud to nationally fund these two PBS programs for woodworkers. The New Yankee Workshop hosted by Norm Abram and The American Woodshop with Scott Phillips.



Visit us on the WEB:
<http://www.deltawoodworking.com/delta>

CIRCLE NO. 17 ON PRODUCT INFORMATION FORM

**THE
POWER
OF THE
PROS**

DELTA
WOODWORKING MACHINERY
A Pentair Company

materiale protetto da copyright

Independent Tests Reveal New Cordless Drills The Competition.



Model 9862

In head-to-head comparisons, Porter-Cable's new 12 volt cordless drill put the screws to all the rest. Against seven different drills in seven different categories, Porter-Cable came out first in five out of seven and a close second in the other two. With more torque, higher performance and longer life.

And unlike many of our competition's comparisons, our tests were conducted by an independent lab, ensuring authentic, non-biased results.*

If you're ready to bear down on your work, don't screw around. Get your hands on Porter-Cable's new 12 volt cordless. Now with these improved features:

- Advanced Magnequench® rare-earth magnet motor for higher torque and longer run times
- High capacity batteries run 30% longer between charges than standard batteries
- 20 position adjustable clutch provides up to 288 in/lbs of torque
- Heavy-duty Jacobs® keyless chuck provides maximum gripping power
- Includes advanced charger with battery diagnostics for more efficient charging

PORTER+CABLE
PROFESSIONAL POWER TOOLS

The Numbers Speak For Themselves...Porter-Cable's 12-volt Beats Them All.

MAXIMUM TORQUE	1/4" x 3" LAG BOLTS	#14 X 1 1/2" WOOD SCREWS	1" AUGER BIT
PORTER-CABLE	PORTER-CABLE 34	PORTER-CABLE 132	PORTER-CABLE 57
BOSCH	BOSCH 28	BOSCH 97	BOSCH 29
DeWALT	DeWALT 19	DeWALT 119	DeWALT 41
MILWAUKEE	5 MILWAUKEE	MILWAUKEE 107	MILWAUKEE 40
MAKITA	MAKITA 19	MAKITA 84	MAKITA 34

*For complete independent lab test results and information on our line of new 12 and 14.4 volt cordless drills, write to Porter-Cable, Dept. CTR, P.O. Box 2468, Jackson TN, 38302, or call 1-800-487-8665 (In Canada 519-836-2840). Visit our web site at <http://www.porter-cable.com>.

CIRCLE NO. 64 ON PRODUCT INFORMATION FORM

Materiale protetto da copyright