

The Woodworker's Journal

Vol. 8, No. 5 \$2.50



Included in this issue:

- Stereo Cabinet
- Shaker Woodbox
- Hall Table
- Toy River Ferry
- Bongo Box
- Shop Trammel
- Nesting Tables

Grandfather Clock, Part 1

TREND-LINES BEATS ANY AD THIS ISSUE

If another prepaid price is lower, we match the price and give you a gift certificate worth \$5.00 when purchasing from our catalog. Few restrictions apply. This ad expires October 31, 1984 watch for next ad.

Freight prepaid in all U.S.A. on orders of \$35.00 or more.

Under \$35.00 add \$2.00 per order. Misprints subject to correction.

Extra charge to Hawaii & Alaska on Stationary Tools

SPECIAL SALE TO READERS OF THIS AD!

You Must Mention This Ad When Ordering.

800-343-3248 Nationwide

800-322-6100 Mass.

617-884-8882 Non-Order Calls

TREND-LINES, INC.

375C Beacham St.

P.O. Box 6447C

Chelsea, MA 02150

Minimum Order \$15.00

30 day money back guarantee
Examine any item in your home or shop. If it's not what you expected, return it in original condition for a full refund.



Hitachi 14 1/2" Bandsaw B-600A \$1554.00
Hitachi Planer-Jointer F1000A \$1375.00
Hitachi 12" Planer P100F \$1095.00

NEW SALE ITEMS!

MILWAUKEE & ROCKWELL

BLACK & DECKER MAIL IN REBATES

Model	List	Our Price	Rebate	Your Net Cost
1179 3/8" Drill	113.00	69.95	10.00	59.95
1180 3/8" Drill	144.00	99.95	10.00	89.95
1575 3/8"				
Scrubgun	169.00	119.50	10.00	109.50
3030 7/4" Circ.	155.00	119.95	10.00	109.95
3051 7/4"				
Wormdrive	232.00	158.25	20.00	138.25
3103 Cut Saw	163.00	99.95	10.00	89.95
3105 Cut Saw	170.00	109.50	10.00	99.50
3107 Cut Saw	183.00	119.50	10.00	109.50
4010 Palm Sander				
Sander	80.00	48.95	10.00	38.95
4247 Disc Grinder	102.00	69.95	10.00	59.95

FREE CATALOG WITH ORDER OR BY WRITING TO POST OFFICE BOX.



Makita 1/2" Makita 16" Blade Sharpener \$119.95
Makita 3 H.P. Plunge Router Circular Saw \$119.95
Makita 3612BR \$189.95 5402A \$395.00
Makita 6" Makita 8 1/4" Circular Saw \$46.95
Makita 604510 Round Palm Sander \$52.95 5008NB \$105.00

MAKITA TOOLS

1100 3/4" Planer Kit	\$168.75
1805B 6 1/8" Planer Kit	278.75
1900BW 3/4" Planer w/case	97.95
2030 12" Planer/Jointer	1399.00
2040 15 5/8" Planer	1295.00
2400BW 10" Mitre Saw w/blade	259.50
2401BW 10" Mitre Saw w/blade	
w/electric brake	226.50
3601B Router	128.95
3608BK Router w/case	85.95
3612 3 H.P. Router	189.95
3700B Laminate Trimmer	84.25
4200N 4-3/8" Circular Saw	94.50
4301BV Jr. Sp. Orbital Jig Saw	129.95
5007NB 7 1/4" Circular Saw	103.95
5008NB 8 1/4" Circular Saw	105.00
5012B 12" Chain Saw	119.95
5081DW 3-3/8" Cord. Saw	110.40
5201NA 10 1/4" Circular Saw	226.50
5402A 16" Circular Saw	395.00
6000R Uni-Drill	106.00
6010D 3/8" Cordless Drill	79.95
6010DL Cordless Drill w/charger	
light & case	99.50
6010DWK Cordless Drill w/Charger	
& case	88.75
6012HDW Cord. Drill Kit 2 Sp.	105.95
6013BR 1/2" Reversible Drill	119.00
6300LR 1/2" Angle Drill	152.20
6510LVR 3/8" Drill Rev.	69.00
6710DW Cord. Screwdriver	107.10
6800DBV Drywall Screwdriver	97.50
9030 1-1/8"x21" Belt	123.50
9035 Finishing Sander	49.95
9045B Finishing Sander	99.50
9045N Dustless Sander	112.50
9207SPB 7" Sander Polisher	136.95
9401 4"x24" Belt Sander	171.95
9501BKIT 4" Sander-Grinder Kit	85.75
9900B 3"x21" Belt Sander	125.50
9924DB 3"x24" Belt Sander	132.75
B04510 Finishing Sander	46.95
B04530 6" Round Finish Sander	52.95
DA3000 3/8" Angle Drill	116.50
DP3720 3/8" Reversible Drill	56.90
DP4700 Drill Reversible	96.95
GV5000 Disc Sander	49.95
HP1030 Hammer Drill	105.00
JG1600 Jig Saw Single Sp.	91.25
JR3000V Recipro. Saw	134.75
JR3000W 2 Sp. Reciprosaw Kit	124.75

PONY CLAMP FIXTURES Each Pkg. 6

No. 50 3/4" Pipe Clamp	7.70	6.95 ea
No. 52 1/2" Pipe Clamp	6.90	6.40 ea
No. 1215 (WEB) 15"	6.40	5.80 ea
No. 7456 Bar Pads	2.50	2.25 ea

JORGENSEN BAR CLAMPS (Heavy Duty) Each Pkg. 6

No. 7224 24"	17.30	15.70 ea
No. 7230 30"	18.10	16.45 ea
No. 7236 36"	18.70	16.95 ea
No. 7248 48"	20.75	18.70 ea
No. 7260 60"	22.65	20.55 ea
No. 7272 72"	24.55	22.25 ea
No. 7284 84"	26.55	24.10 ea

JORGENSEN CLAMPS (Med. Duty) Each Pkg. 6

No. 3712 12"	\$6.15	\$5.60 ea
No. 3724 24"	7.55	6.80 ea
No. 3736 36"	9.20	8.35 ea

JORGENSEN HAND SCREWS

No. 3/0 3"	\$9.30	\$8.40 ea
No. 0 4 1/2"	10.90	9.85 ea
No. 1 6"	12.40	11.15 ea
No. 2 8 1/2"	14.80	13.35 ea

JORGENSEN BAR CLAMPS (5" reach)

No. 4512 12" Open	17.05	15.35 ea
No. 4524 24" Open	19.05	17.15 ea
No. 4536 36" Open	21.20	19.20 ea

JORGENSEN & PONY CLAMPS

No. 3325 3 Way Edging	\$5.40	\$4.90 ea
No. 1623 3" Hold Down	7.20	6.40 ea
No. 3202HT 2" Spring	2.15	1.90 ea

9x11 Non-Lodging Silicon Carbide Grit A Weight Pack of 100

400,360,320,280,240	
220,180,150,120	\$19.50

RYOBI TOOLS

B7075 3x21 Belt Sander	\$118.95
B7100 3x24 Belt Sander	148.50
B7200A 4x24 Belt Sander	167.90
D1010 3/8" Var. Sp. Drill	89.50
D1015A 3/8" Screwdriver/Drill	111.95
D1310 1/2" Drill	89.95
D1320R 2 Sp. 1/2" Rev. Drill	99.95
E3700A Drywall Screwdriver	77.95
J560 Jig Saw	99.95
JSE60 Electronic Jigsaw	125.90
L-120U 3 5/8" Planer	81.25
L-1323 ALS 3 1/4" Planer	129.95
LS-35 Finishing Sander	46.95
L-580 6 1/8" Planer	189.00
R-150 1 H.P. Plunge Router	88.00
R-330 2 H.P. Router	139.70
R-500 3 H.P. Plunge Router	165.00
RA-2500 10" Radial Saw	449.95
SS00A 3x5 1/2" Finishing Sander	43.95
SU-6200 Finishing Sander	
1/2 Sheet	89.50
TR-30 Laminate Trimmer	78.95
TS-251U 10" Mitre Saw	189.95
TS-251U w/accessories	199.95
W630 7 1/4" circular Saw	99.50
W730 8 1/4" Circular Saw	109.75

MILWAUKEE TOOLS

0228-1 3/8" VSR Drill	\$ 99.95
0234-1 1 1/2" VSR Drill	129.50
0375-1 3/8" Rev. Angle Drill	139.75
1107-1 1/2" VSR D Handle	147.50
1660-1 1/2" SSR Compact	174.65
5397 Hammer Drill Kit	177.50
5660 1 1/2" HP Router	142.00
5680 2 HP Router	224.95
5935 4"x24" Belt Sander	219.95
6014 1/2" Sheet Sander	125.50
6145 4 1/2" Angle Grinder	107.50
6255 VR. SP. Jigsaw	149.95
6287 H.D. Jigsaw Kit	225.00
6367 7 1/4" Circular Saw	119.95
6460 10 1/4" Circular Saw	249.75
6507 Sawzall w/case	137.50
6543-1 1/4" Screwdriver	137.50
6749-1 Magnum Screwdriver	123.50
6750-1 H.D. Drywall Screwdriver	119.50
6753-1 Drywall Screwdriver	79.95

Rockwell Power Tools

11-072 32" Radial Drill	\$ 379.95
22-651 13" Planer	1250.00
28-140 10" Band Saw	349.75
28-243 14" Band Saw	518.50
31-205 8" Table Saw	149.50
33-150 Sawbuck	525.00
33-990 10" Radial Arm Saw	489.95
34-010 Mitre Saw	158.95
34-410 10" Contractors Saw	725.00
34-695 10" Homecraft Saw	295.00
34-710 10" Tilting Arbor Saw	474.50
37-609 6" Jointer	295.00
43-122 Wood Shaper	539.95
46-140 11" Lathe	399.95

All Rockwell includes motors

FREUD SAW BLADES 10" = 5/8" Bore

No.	Size	Teeth Use	Price
LU72M10	10"	40 General	\$38.50
LU73M10	10"	60 Cut-Off	42.95
LU73M12	12"	72 Cut-Off	76.90
LU78M10	10"	80 Plastic	83.50
LU82M10	10"	60 Cut-Off	48.50
LU82M12	12"	72 Cut-Off	85.95
LU84M10	10"	40 Comb.	42.50
LU84M11	10"	50 Comb.	44.40
LU85M10	10"	80 Cut-Off	72.00
LM72M10	10"	24 Ripping	41.90
TR100 3 blades & Dado set			264.95
DS06 6" Dado			98.95
DS08 8" Dado			119.50

SUN GOLD SANDING SHEETS

9x11 Aluminum Oxide C Weight

Grit	Pk. of 100	Price
150, 120, 100		\$21.95
80		23.70
60		28.90
50		32.05
40		38.30

Black & Decker Industrial Tools

1165 3/8" Angle Drill	\$119.50
1179 3/8" VAR. SP. Drill	69.95
1180 3/8" VSR Holgun*	99.95
1310-10 1 1/2" VSR Drill	94.50
1311 1 1/2" VSR Drill	119.75
1575 3/8" VSR Scrudrill*	119.50
1940 3/8" Cordless Drill	
w/98060 Charger	118.50
1975 3/8" Cordless Screwdriver	
w/98060 Charger	129.50
2034-10 Drywall Screwdriver	91.50
2054 VSR Screwdriver	155.00
2931 Cordless Screwdriver	
w/98060 Charger	159.95
3027-09 7 1/4" Circular Saw	79.95
3030 7 1/4" Circular Saw	119.95
3034 7 1/4" Circular Saw	118.65
3035 8 1/4" Circular Saw	129.50
3051 7 1/4" Wormdrive Saw	158.25
3091 10" Mitre Saw	189.95
3103 2 SP. Cut Sawkit	99.95
3105 VAR. SP. Cut Sawkit	109.50
3107 VAR. SP. Orbital Cut Sawkit	119.50
3123 Port. Band Sawkit	305.00
3141 Cordless Jigsaw	
w/98060 Charger	149.95
3157 VAR. SP. Jigsaw	129.50
3265 Laminate Trimmer	145.65
3310 1 1/2" HP Router	139.50
3330 1 HP Router	99.95
3370-10 3 1/4" Planer	129.95
4010 Palm Sander	48.95
4018 1/2 Sheet Sander	99.50
4247 4 1/2" Disc Sander/Grinder	69.95
4260 Power File	189.50
6750 Heat Gun	69.75

Watco Danish Oil

Natural, Medium, Dark, Black or Colors

\$5.70 Qt. \$17.65 Gal

TITE BOND WOOD GLUE

\$5.75 Qt. \$12.95 Gal

HITACHI TOOLS

B-600A 14 1/2" Band Saw	\$1554.00
CJ65VA Electronic Jigsaw	132.75
CR10V Reciprocating Saw	124.75
C10FA 10" Mitre Saw	279.00
DR-10 Cordless Screwdriver	98.50
D6V 3/8" Drill/Screwdriver	108.00
D10V 1/4" Var. Speed Rev. Drill	71.00
D13V 3/8" V Sp R Drill	74.95
F-20A 1/2" Var. Sp. Rev. Drill	99.75
F1000A Planer/Jointer	1375.00
JG-60A Jig Saw	103.50
P50 6-5/8" Planer	210.00
P100F 12" Planer	1095.00
PSM-7 7 1/4" Circular Saw	114.95
PSM-8 8" Circular Saw	141.90
SB-110 4x24 Belt Sander 2-Speed	
w/dust bag	183.00
SO-110A 1/2 Sheet Sander	
w/dust bag	119.95
SB-75 3x21 Belt Sander-2 Speed	
w/Dust Bag	134.75
SB8T 3x24 Belt Sander-2 Speed	
w/Dust Bag	149.95
TR-6 Laminate Trimmer	92.25
TR-8 1 H.P. Plunge Router	126.95
TR-12 3 H.P. Plunge Router	194.75
W6V Screwdriver	94.50

SUNGOLD X-WEIGHT SANDING BELTS

Sold in packs Outlasts regular

Size of 10 only Grit 10, 15, 20, 30, 40, 60, 80, 100, 120, 150, 180, 220, 280, 360, 480, 600, 800, 1000, 1200, 1500, 1800, 2400, 3000, 3600, 4800, 6000, 8000, 10000, 12000, 15000, 18000, 24000, 30000, 36000, 48000, 60000, 80000, 100000, 120000, 150000, 180000, 240000, 300000, 360000, 480000, 600000, 800000, 1000000, 1200000, 1500000, 1800000, 2400000, 3000000, 3600000, 4800000, 6000000, 8000000, 10000000, 12000000, 15000000, 18000000, 24000000, 30000000, 36000000, 48000000, 60000000, 80000000, 100000000, 120000000, 150000000, 180000000, 240000000, 300000000, 360000000, 480000000, 600000000, 800000000, 1000000000, 1200000000, 1500000000, 1800000000, 2400000000, 3000000000, 3600000000, 4800000000, 6000000000, 8000000000, 10000000000, 12000000000, 15000000000, 18000000000, 240000000



Grandfather Clock, see page 50.

Editor and Publisher
James J. McQuillan

Managing Editor
Thomas G. Begnal

Editorial Staff
David F. Peters

Editorial Secretary
Jane Pratt

Contributing Editors
Paul Levine
John W. Olson
Roger E. Schroeder

Designer/Craftsman
Glenn E. Firmender

Advertising and Promotion
Kimberly Gellatly, Manager

Subscription Department
Lynne S. Walton, Manager
JoAnne Finkle
Maureen A. Murphy
Louise B. Ryan
Kathy Shook

Office
Patricia A. Friberg, Manager
Patricia Murphy, Receptionist

Art Department
Judy Robinson, Director
Dan Thornton, Assoc. Director
Kirsten Friberg, Paste-up

Photos by John Kane/Silver Sun Studios

The Woodworker's Journal (ISSN 0199-1892) is published bi-monthly in January, March, May, July, September and November by The Madrigal Publishing Co., Inc., P.O. Box 1629, New Milford, CT 06776. Telephone: (203)-355-2694.

Copyright 1984 by The Madrigal Publishing Co., Inc. No part of this publication may be reprinted without permission from the publisher.

Second class postage paid at New Milford, CT 06776 and additional offices.

Subscription Rates

In the United States and its possessions:
One year (6 issues) \$12.00
Two years (12 issues) \$22.00

Canada and other foreign:
One year - \$14.00
Two years - \$26.00

To Subscribe, Renew or Change Address

Write to **The Woodworker's Journal**, P.O. Box 1629, New Milford, CT 06776, including mailing label for renewals and changes. For gift subscriptions, include your own name and address as well as those of gift recipients.

Postmaster: Send Change of Address to **The Woodworker's Journal**, P.O. Box 1629, New Milford, CT 06776.

Contributions

We welcome contributions in the form of manuscripts, drawings and photographs and will be glad to consider such for possible publication. Contributors should include a stamped, self-addressed envelope of suitable size with each submission. While we cannot assume responsibility for loss or damage, all materials will be treated with care while in our possession. Payment for the use of unsolicited material will be made upon acceptance. Address all contributions to: Editor, **The Woodworker's Journal**, P.O. Box 1629, New Milford, CT 06776.

The Woodworker's Journal

VOLUME 8, NUMBER 5
SEPTEMBER/OCTOBER 1984

DEPARTMENTS

- 4 Shoptalk
- 6 Letters
- 11 Readers' Information Exchange
- 12 Workshop Income
Starting a Business: Part I
- 14 Restoring Antiques
Applying Filler
- 16 The Beginning Woodworker
Building a Basic Workbench
- 23 Special Techniques
Making Specialty Moldings with the Table Saw and Scratch Bearer
- 29 Cabinetmakers' Supplies
Hardwood Suppliers
- 41 The Gift Shop
- 56 Shop Tips

PROJECTS

- 31 Contemporary Stereo Cabinet
- 34 Shaker Woodbox
- 36 Bongo Box by Johanna Walton
- 38 Nesting Tables
- 40 Shop Trammel by Gerald H. Koch
- 41 Jackknife Letter Opener
by A.T. Johnson
- 42 Salt Shaker and Pepper Mill
- 44 Toy River Ferry and Car
by C.J. Maginley
- 46 Toy Top
- 47 Cookbook Holder
by Victor F. Ptasznik
- 48 Hall Table
- 50 Grandfather Clock, Part I

Shoptalk

A Big Project

For several years I've wanted to include plans for a classic 18th-century style grandfather clock in *The Woodworker's Journal* but, as is generally the case with such a complex project, I've been inclined to feel a bit uneasy about devoting a large number of pages to a project that perhaps only a small percentage of readers would undertake. But then I had the same misgivings about the roll-top desk we did back in 1979. Since that proved to be a very popular project, I've come to the conclusion that a great many readers are both willing and able to tackle the more challenging projects.

Presenting this clock was a fair challenge for us also. The starting point was a set of plans submitted to us by Roy B. Cook. In order to prove out the accuracy of the plans and the suitability of the joinery, it was obviously necessary for us to build the clock. Nearly one hundred and thirty hours of shop time (not including jig design) and \$750.00 in materials went into the construction of the prototype.

Probably the most difficult job was the joint efforts of the shop, art and editorial departments to convert the original blueprints and instructions into a presentation that would cover each step of the construction as clearly as possible.

Because of the many pages needed to present the clock

article, it was necessary for us to divide the project into two parts. The second installment, which concerns the upper case construction and movement installation, will appear in the next issue.

The clock now graces our reception area and we are all very proud of it. Of the hundreds of projects we've built over the past eight years, it stands, both literally and figuratively, head and shoulders above anything else.

I hope that many of you will undertake the building of this elegant piece. Taken one step at a time, it is a time-consuming but not overly difficult project. If you have any questions concerning the construction, please remember that our staff stands ready to assist you. Just call or drop us a line.

Binders....At Last!

In the January/February 1984 issue, I promised that a binder system for back issues would be forthcoming as soon as possible. After considering many binder systems we have finally made arrangements to furnish our readers with their choice of either a binder (which will hold issues without having to punch holes in them) or a slip case. Which-ever you choose, I'm sure you'll find them both handsome and durable. Ordering information can be found on page sixty-three.

Jim McQuillan

U.S.A. CUTTING TOOLS • NORTON ABRASIVES • MAKITA • DEWALT • BIESEMEYER • AIR TOOLS

BRATTONS' "PRICE WAR" SPECIALS

WE WILL BEAT ANYONE'S PRICES ANYWHERE

PORTER-CABLE (Prices include freight)

Model 360
Belt Sander
(Dustless) 3 x 24
List\$269.
SALE\$199.

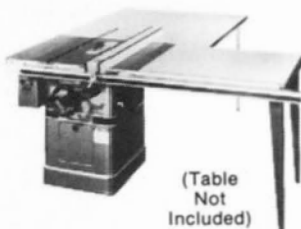


Model 505
Finishing Sander
4 1/2 x 4 1/2
List 145.
SALE 109.



Model 330
Speed-Bloc
Finishing Sander
4 1/2 x 4 1/2 1.2 amp
List 85.50
SALE 59.00

Powermatic



(Table
Not
Included)

Powermatic Model 66 with
Biesemeyer Fence 10"
model 66 Table Saw com-
plete with Biesemeyer
Model 50, 50 inches r.t. of
blade, 1 ph., 3 h.p., 230
volt, magnetic controls.
List 2,157.
SALE \$1775.

Hitachi

	List	SALE
F1000A Planer/Jointer	1999.	1299.
P100F 12" Planer	1530.	999.
B600A Bandsaw	2300.	1499.
TR-12 Plunge Router	299.	189.



Hitachi F1000A
Planer-Jointer

(F.O.B. Memphis, Tallahassee,
Salt Lake City, Wilkes-Barre, PA)

Powermatic

	List	SALE
Model 66 10" Table Saw	1989.	1659.
Model 50 6" Jointer	1048.	899.
Model 60 8" Jointer	1451.	1299.
Model 100 12" Planer	2509.	2299.
Model 180 18" Planer 1 ph.	4610.	4399.
Model 26 Shaper	1888.	1699.
Model 45 Lathe 12"	2074.	1788.
Model 141 14" Bandsaw	1218.	1142.
Model 81 20" Bandsaw	2705.	2620.

(F.O.B. McMinnville, TN,
Salt Lake City, UT)

Rockwell/Delta

	List	SALE
10" Tilting Arbor Unisaw 3 hp	1971.	1699.
10" Contractor Table Saw 1 1/2 hp	1078.	749.
14" Bandsaw, encl. std. 3/4hp	866.	649.
Unifeeder Stock Feeder	566.	475.
Belt & Disc Sander 1 1/2hp	1425.	1199.
13" RC-33 Planer, ext. std. 2hp	1914.	1699.
Light Duty Shaper 1hp	640.	515.
Sawbuck Trim Saw	676.	525.
15" Drill Press 1/2hp	451.	365.
8" Jointer 1 1/2hp	1853.	1595.

* Includes \$200 merchandise certificate
** Includes \$250 merchandise certificate

BRATTON MACHINERY & SUPPLY, INC.

ATTN: Dept. FWV
1015 Commercial Street
P.O. Box 20408
Tallahassee, FL 32316
Call toll free: 1-800-874-8160
In Florida: 1-800-342-2641
Local: (904) 222-4842
Write for catalogs.

Enclose \$3 for postage & handling.

POWERMATIC • ROCKWELL • HEGNER • BLACK & DECKER • PORTER-CABLE • HITACHI • BLACK & DECKER • HITACHI

PORTER-CABLE • HITACHI • BLACK & DECKER • HITACHI

• JORGENSEN CLAMPS • AIR TOOLS • U.S.A. CUTTING TOOLS • NORTON ABRASIVES • GREENLEE

HOW-TO BOOK CLUB

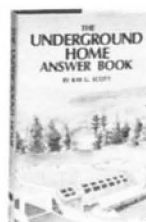
The Best Source for Quality, Service, and Value!

Practical Projects . . . Exciting Ideas . . . and Time- and Money-Saving Tools for Homeowners, Hobbyists, and Do-It Yourselfers!

Select 5 Books for Only \$2⁹⁵

Values to \$103.75

Join Now, Get a Work Apron FREE!



1562
List \$16.95



1537
List \$16.95



1587
List \$19.95



1687
List \$15.95



1463
List \$19.95



1122
List \$17.95



1675
List \$17.95



1128
List \$14.95



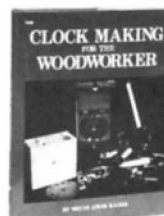
1044
List \$12.50 (paper)



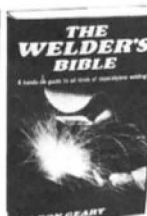
1547
List \$17.95



1238
List \$8.25 (paper)



1648
List \$16.95



1244
List \$14.50 (paper)



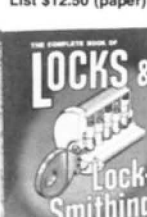
1409
List \$15.95



1639
List \$16.95



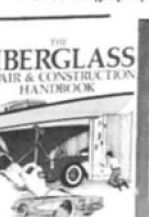
1461
List \$16.95



1530
List \$15.50 (paper)



1520
List \$18.95



1297
List \$17.95



1574
List \$19.95



1573
List \$21.95



1601
List \$19.95



1629
List \$19.95



1658
List \$18.95



1321
List \$13.95



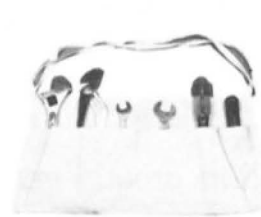
1484
List \$21.95



1610
List \$15.95



1504
List \$17.50 (paper)



FREE Work Apron

7 very good reasons to join the How-To Book Club

- **Big Savings.** Save 20% to 75% on books sure to increase your how-to know-how
- **No-Risk Guarantee.** All books returnable within 10 days without obligation
- **Club News Bulletins.** All about current selections—mains, alternates, extras—plus bonus offers. Comes 13 times a year with hundreds of up-to-the-minute titles you can pick from
- **"Automatic Order."** Do nothing, and the Main selection will be shipped automatically! But . . . if you want an Alternate selection—or no books at all—we'll follow the instructions you give on the reply form provided with every News Bulletin
- **Bonus Books.** Immediately get a Dividend Certificate with every book purchased and qualify for big discounts of 60% to 80%
- **Extra Bonuses.** Take advantage of added-value promotions, plus special discounts
- **Exceptional Quality.** All books are first-rate publisher's editions selected by our Editorial Board and filled with useful, up-to-the-minute information

HOW-TO BOOK CLUB

P. O. Box 8, Blue Ridge Summit, PA 17214

Please accept my membership in the How-To Book Club and send the 5 volumes circled below, plus, my FREE work apron, billing me \$2.95 plus shipping and handling charges. If not satisfied, I may return the books within ten days without obligation and have my membership canceled. I agree to purchase 3 or more books at reduced Club prices (plus shipping/handling) during the next 12 months, and may resign any time thereafter.

1044 1122 1128 1238 1244 1297 1321 1409 1461
1463 1484 1504 1520 1530 1537 1547 1562 1573 1574
1587 1601 1610 1629 1639 1648 1658 1675 1687

Name _____ Phone _____

Address _____

City _____

State _____ Zip _____

Valid for new members only. Foreign applicants will receive special ordering instructions. Canada must remit in U.S. currency. This order subject to acceptance by the How-To Book Club.

WWJ-984

Letters

I need to know how to repair a "bubble" (sometimes called a "blister") that has formed near the center of a veneered top. I guess it was caused by high humidity when I refinished it outside under my porch.

L.F. Swoope, Sulphur, La.

In an environment of high humidity, veneer will take on a lot of moisture, causing it to expand. If, under the expanding veneer, there is a spot where little or no glue was applied, or an area where it was inadequately rolled, a bubble is likely to form.

To repair the bubble, use a sharp knife or single-edge razor and make two cuts (parallel to the grain direction), one on each side of the bubble. Using the point of a sharp knife, work fresh glue into the opening formed by each cut, taking care not to further split the veneer. A glue injector, a tool

that's much like a big hypodermic needle, is ideal for a job like this. One can be purchased from: Constantine, 2050 Eastchester Road, Bronx, New York 10461.

Wipe away any excess glue, then apply clamp pressure. A scrap piece of wood will protect the veneer when clamp pressure is applied, and a piece of wax paper will keep the scrap wood from sticking to the glue. If a clamp won't reach the repair area, place a few heavy books on top of the scrap wood.

. . . I've found that wire reels (the kind the electric utilities receive wire on) make excellent workbenches. They are especially handy for staining, varnishing, or stripping a piece. Their circular shape makes it easy to work your way around a project, and when you've finished the job, they can be flipped on edge and rolled out of the way. And perhaps best of all, they are usually free for the asking.

David Honbarger, Jr.,
Salisbury, N.C.

In his article on restoring hopeless cases (January/February 1984, page 19) John Olson warns of hidden nails and the use of a sharp awl to locate them.

I find that I can remove such hidden nails (with a minimum of damage to surrounding wood) by drilling a 3/32 in. diameter by 1/4 in. deep hole on each side of the nail. Then, to pull it out, I use a good quality, medium-size needle-nose pliers. Once pulled, the holes can be filled with a wood filler.

Percy F. Hanson,
Walhalla, N.D.

I am having difficulty locating brass bed bolt covers. Can you suggest a source?

L.M. Waechter,
Columbia, Ohio

The Wise Company, 6503 St. Claude Ave., Arabi, LA 70032 sells a bed bolt cover measuring 1 1/8 in. diameter.

Editor's Note: John Olson, who writes our Restoring Antiques column, was

FELDER

Woodworking System

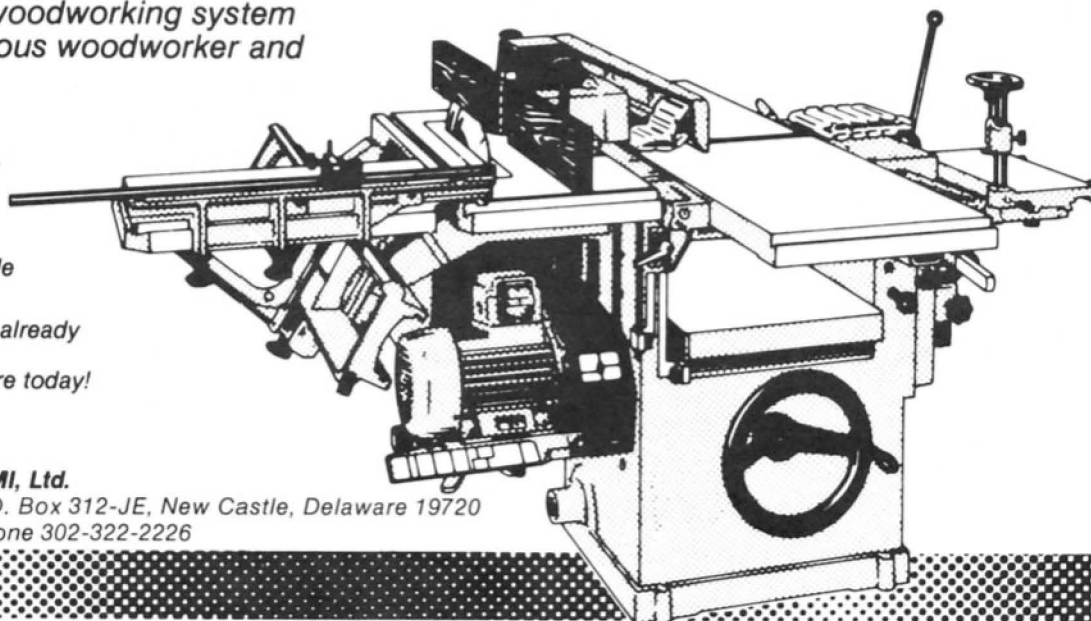
AMI, Ltd. proudly introduces to the U.S. the best complete woodworking system available to the serious woodworker and cabinetmaker:

- 16" jointer/surfacers
- 16" planer/thicknessener
- 12' table saw
- heavy-duty shaper
- heavy-duty mortiser
- heavy-duty sliding table

Over 25,000 machines are already in use in Europe.
Write for your free brochure today!



AMI, Ltd.
P.O. Box 312-JE, New Castle, Delaware 19720
Phone 302-322-2226



kind enough to help us with the next letter.

Our small Baptist church has 18 solid oak pews, each one 10 feet long. They are over 35 years old, in fact, most of them are broken in more than one place. To replace them would cost \$15,000 to \$20,000, which the church can't afford. I have started hand scraping them, and gluing and doweling them where necessary. The varnish is very hard to scrape off and regular strippers cost too much. I recently tried an old-fashioned stripper mix of lye and cornstarch but it turns the wood dark and now I will have to bleach before I can go any farther. Any suggestions you might have for refinishing the pews would be a great help.

D. Ray Hungate,
Las Cruces, N. Mex.

For a surface that gets a lot of wear such as pew seats, a clear hard finish is best — either polyurethane or an acrylic. The beauty of this type of finish is that it can be renewed time and again without stripping and refinishing.

The trick is to use a very fine sandpaper and remove about as much finish as you will apply. However, initial preparation is very important. The final finish will be no better than the surface to which it is applied. Oak is highly porous and should be filled to obtain satisfactory results. The filler should be mixed with enough stain to make a fluid with the approximate thickness of a very light coffee cream (half and half). Apply this mixture with a very stiff bristled brush working across the grain. Allow to become dull (about 25 minutes or so) then wipe off across the grain with a coarse textured rag such as burlap. Be careful not to remove the filler from the pores of the wood. Let dry at least 24 hours. If the resulting surface isn't satisfactory it may be lightly sanded to remove excess filler and further smooth the oak surface. If this sanding step is used it will be necessary to restain the wood. Then apply at least three (preferably four to five) coats of clear finish.

Your March/April 1984 issue featured a Rocking Horse on page 50. The basic idea is good, and any youngster

would get a real kick out of having such a toy, however, I feel there is a design flaw that should be pointed out. The carved ear, which comes to a fairly sharp point, can cause injury to a child — something I found years ago when I made a rocking horse with ears much like the ones you show. While rocking hard one day, my son lost his balance and knocked out a tooth on the protruding ear. Fortunately, the damage was not permanent, although it was plenty painful. To be on the safe side, it's best to make the ears from vinyl or leather scrap.

Don Kinnaman, Phoenix, Ariz.

A dimension needs to be clarified on the Folding Deck Chair plans featured on pages 26 and 27 of your May/June 1984 issue. On the drawing grid pattern, the outside leg is shown as 44 in. long, yet there are only 43 of the 1 in. grid squares. Which is correct?

Charles M. Parker, Greenville, S.C.

Sorry for the confusion. The correct length is 43 in.

(continued on next page)

Humfrey's Three Beautiful Basics For Your Shop

[1]

GENERAL



US\$1200.*

10" Tilting Arbor Saw #350

• 28" x 36" table • 385 lbs

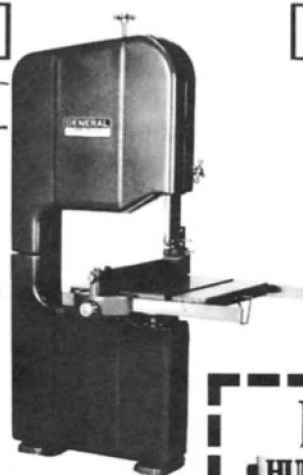
Complete with new adjustable metal table insert.

[2]

US\$645.*

GENERAL

15" Wood Cutting Band Saw #490
• 15" x 15" table
• 210 lbs
Enclosed metal stand available



[3]

GENERAL

12"

Standard Duty Wood Lathe #160

• 38" centers • 140 lbs

Metal cabinet-style stand available

*Plus Electrics. Shipped freight collect.
No other charges

J. Philip Humfrey Ltd.



3241 Kennedy Road, Unit 7 (Dept. 2222),
Scarborough, Ontario, Canada M1V 2J9
Telephone (416) 293-8624

☐ Please rush me your latest catalog.
I enclose \$1.00 (refundable against purchase)

Name _____
Address _____
City _____
State _____
Zip Code _____

SPECIAL OFFER

Now, when you buy our 32-page Catalog, you will receive 3 credit vouchers redeemable on any catalog purchase for \$10.00 per machine — a total of \$30.00

COMPARE OUR REMARKABLY
REASONABLE PRICES
CALL COLLECT TO ORDER TODAY!
(416) 293-8624

NOW! Call toll free in U.S.A.:
1-800-387-9789

Letters, (Cont'd)

In your "Letters" section of the July/August 1984 issue, you informed readers to write to The Consumer Product Safety Commission for safe standards regarding toy construction. However, you failed to list their mailing address and the cost.

Roger Szeszulski, Midland, Mich.

For a copy of their Regulations for Toys and Children's Articles, write to The Consumer Product Safety Commission, Washington, D.C. 20207. The information is available at no charge.

Odds and Ends

On September 28th, 29th and 30th, at the Westfield Armory in Westfield, New Jersey, the Garrett Wade Company and Force Machinery will present Woodworking: Tools of the Trade '84, a hand and power tools exposition for amateur and professional woodwork-

ers. Demonstrations and exhibitions will be held continuously, and scheduled seminars will cover European construction techniques, dovetail joinery, traditional Japanese woodworking, Windsor chairmaking, and fifty years of woodworking machinery. Admission to the exposition is \$5.00 per person. Seminar fee is \$10.00 per person. Seats for the seminars must be reserved by calling the Garrett Wade Company at (212) 807-1155.

The Woodworking Association of North America (WANA) has a couple of upcoming shows. Woodworking World — The Chicago Show, will be held at the O'Hare Expo Center in Rosemont, Illinois on October 12-14, while Woodworking World — The Philadelphia Show, will be held at the George Washington Lodge in King of Prussia, Pennsylvania on November 9-11. Admission fee will be \$5.00, and seminars are free with admission. For show or seminar information, contact: WANA, 35 Main Street, Suite 6, Plymouth, NH 03264. Telephone: (603) 536-3876.

The Woodworking Show for Craftsmen and Hobbyists will be held on September 28-30, at the Orange County Fairgrounds in Costa Mesa, California. It will feature over 100 exhibits of the latest tools, techniques, and supplies. Seminars are free and door prizes will be awarded. For more information, contact: Patricia Dillon, The Woodworking Show for Craftsmen and Hobbyists, 1516 South Pontius Ave., Los Angeles, California 90025. Telephone: (213) 477-8521.

Albert Constantine and Son, Inc., 2050 Eastchester Road, Bronx, New York will hold a Wood and Tool Expo on November 16 and 17. Admission is free. Qualified representatives of manufacturers of woodworking tools and supplies will be on hand to demonstrate their products and to answer questions. Experts in marquetry, woodcarving, and general woodworking will demonstrate their crafts. Also, a representative from a famous veneer mill will show veneer and talk about its use. For more information, call Constantine's at (212) 792-1600. WwJ

Mason & Sullivan clockbuilding supplies for more than just clocks.

We use our 38 years experience to offer you the highest quality clock movements available. That experience helps us recognize superiority in other products as well. In our catalogue you'll find, among other things, the finest Swiss music movements.

— Because we know fine workmanship, so will you —



DUTCH BRACKET CLOCK



Mason & Sullivan

"Fine Clockmakers Since 1947"

Dept. 3991, W. Yarmouth, Cape Cod, MA 02673

the ROUTER



THE ROUTER

FINALLY!
a comprehensive book
on the router

Let woodworker, Bob Rosendahl, show you how to use a router to turn fine wood into beautiful projects.

This book contains many project ideas. Learn how the construction industry uses routers to save time on difficult operations. Bob discusses router features, safety, uses, set-ups, cutters, jigs, products, and maintenance. To make it easy for you, the author includes over 200 original drawings and photos, with step by step instructions. Free brochure on router jigs and fixtures with book purchase.

Book Price - \$10.95 U.S. ppd.

available at:

Oak Park Enterprises Ltd.

dept.G, box 13, stn.A Winnipeg, Manitoba R3K 1Z9

JUST PLUG IT IN!
MAKES MONEY
FIRST DAY!
\$50 per hour



"DUST-FREE"
DUST COLLECTING
SYSTEM KEEPS
SHOP CLEAN



MODEL K 3

The K-3 is our most popular Model. All components are heavy duty and of commercial quality, with a wide working range, deluxe clamping and engraves woodstock of any length and any thickness. Engraves panels even larger than the machine. Signmakers, engravers and commercial woodworkers buy this Model.

The K-3 is our latest Model, most versatile, and with recent improvements. We recommend it.

Call or write for a free brochure.

KIMBALL WOODCARVER CO.

2602 WHITAKER ST. • SAVANNAH, GEORGIA 31401

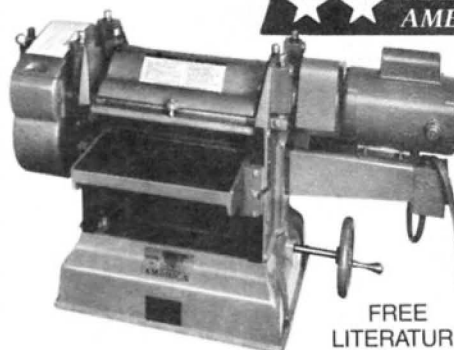
PHONE: (912) 232-6561

PARKS NEW MODEL 98

Compact, Ready-to-Run 12" X 4" Planer



MADE IN
AMERICA



FREE
LITERATURE



The best investment for your shop with these built in values:

- PARKS "Full Power" drive motor permits full 1/8" deep cut on the widest boards
- Steel Feed Rollers and Bed Rollers
- Ball Bearing Cutterhead
- Cast Iron Construction
- Microblade Adjustment
- And Much More...



Send for the latest catalog and price information.

PARKS WOODWORKING MACHINE CO.

1501 Knowlton Street/Cincinnati, Ohio 45223 Dept. WJ

Manufacturing quality woodworking machinery since 1887

TIMBERS COUNTRY STORE

WOODWORKERS, GET ORGANIZED!

Introducing a NEW organizer unit especially for the woodworker. Nine large interlocking plastic bin boxes hold hundreds of the most needed wood parts.

This special woodworkers organizer unit comes complete with:

- 64 1" Toy Wheels
- 24 1 1/4" Toy Wheels
- 12 1 1/2" Toy Wheels
- 100 Axle pegs for wheels
- 100 1/4 x 1 1/2" Glue Pins
- 80 3/8 x 2" Glue Pins
- 150 1/4" Maple Screw Hole Buttons
- 150 3/8" Maple Screw Hole Buttons
- 100 1/2" Maple Screw Hole Buttons
- 100 3/8" Maple Round Head Plugs
- 100 1/2" Maple Round Head Plugs
- 10 3 1/2" Hardwood Shaker Pegs
- 9 Large Plastic Interlocking Bin Boxes in three colors.
- 3 Plastic Bin Box Dividers
- 9 Descriptive Labels for Bin Boxes
- * Assembled unit measures 5 1/2 x 8 1/2 x 12"



MORE THAN 1,000 PIECES
ONLY \$29.95 PPD*

MORE THAN 1,000 PIECES IN ALL

Introductory offer: ALL FOR ONLY

\$29.95 PPD*/Regular \$55 retail value.

*California residents add 6% sales tax

Canadian orders, add \$5 Shipping and Handling

ACT NOW, SAVE SHIPPING CHARGES, after 12/1/84, add \$2.00 for shipping and handling.

For Bank Card Orders:

Call TOLL FREE

800-824-5897

(in California or Canada, phone 916-581-4141)

FREE
CATALOG
WITH
ORDER:



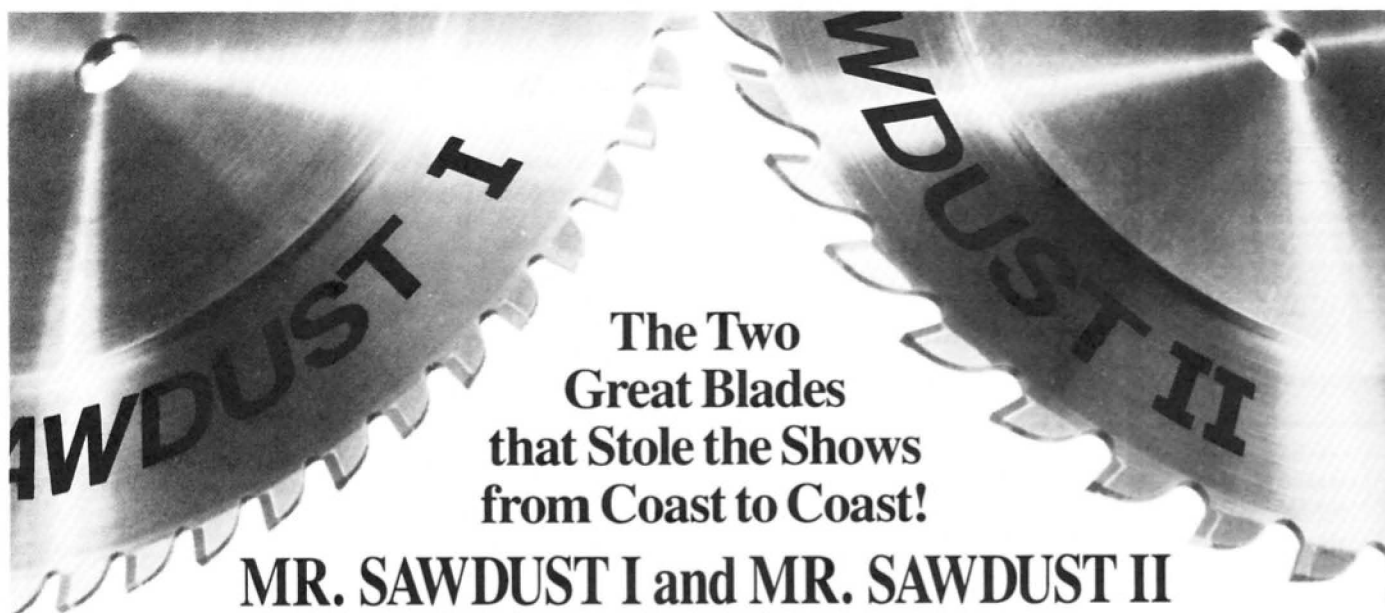
Catalog with hundreds of woodworking patterns and books, plus many hard to find specialty furniture and toy making parts and woodworking tools. The catalog is included free with your order, or is \$1 alone.

TIMBERS COUNTRY STORE

Woodworkers Catalog, Dept. WJ9

Lake Forest Rd.

Carnelian Bay, CA 95711-0850



The Two Great Blades that Stole the Shows from Coast to Coast!

MR. SAWDUST I and MR. SAWDUST II

...*MOST DESIRED BY AMERICA'S SERIOUS CRAFTSMEN!*

This has been quite an experience!

Less than two years ago, we dared to offer the quality of a Forrest blade to the small-shop woodworker. The kind of quality you never knew existed! We made our claims. We backed them up. And you began to believe us.

Today, I want to thank you for proving us *right!*

In our Spring shows, from coast to coast, you purchased more

of my blades than any other kind ... regardless of price. You gave serious attention to our demonstrations. You made it a pleasure to work with you. You put us on top of the heap!

Again, our sincere thanks.

About the Mr. Sawdust blade or dado-head you bought: It must work for you like it works for us. Like we told you ... YOU are the *final* judge!

MR. SAWDUST I (For the ONE-Saw Shop)

This is my *original* Mr. Sawdust blade -- most desired by the American craftsman. Kerf: 3/32", 60 teeth. Modified triple-chip with micro-finish grind. Exclusive Forrest 400 carbide. **Perfect, polished cuts in every direction.** The one blade that does it all -- for as long as you'll cut wood or plastics.

Designed for use on *either* table- or radial-saw. A **MUST** for your radial.

Available in 8",
9" and 10"
diameters.

MR. SAWDUST II (For the TWO-Saw Shop)

My new **special-purpose** blade -- *strictly* for your table-saw. 1/8" kerf. 30 or 40 teeth (see below). Modified alternate-bevel with micro-finish grind. Exclusive Forrest 400 carbide. Designed for super-fast and planer action in ripping heavy, solid stock with *glue-line quality* of cut. Slices ply-panels, particle-board and one-side laminates *quick and clean*. Crosscuts and miters with equal quality and ease.

Generally, I recommend 40 teeth. However, if your ripping includes a lot of heavy hardwoods, specify 30 teeth. See dampener information (*) pertaining to table-saws.

Available in 8", 9" and 10" diameters.

* WHAT YOU SHOULD KNOW ABOUT THE FORREST DAMPENER!

It's a vital part of the Forrest blade design -- to suppress harmonics caused by motor, belts, even change of grain in wood. For 10" blades, specify 6" dampener. This allows a 2" depth of cut. (For table-saws, if you cut a lot of full 2" stock, specify 5" dampener to

expose blade above material.) For *maximum* 3" depth of cut -- table-saw or radial -- remove dampener. (For 8" and 9" blades, figure dampener size accordingly.) Want some expert advice? Our 800-number is toll free!

For 16 Page Brochure and Prices
on MR. SAWDUST I and II...

PHONE TOLL FREE! 1-800-526-7852

(In NJ : 201-473-5236)

We honor Visa & MasterCard, Money Orders,
Personal Checks and CODs.

America's Foremost
Power Tool Professional

FORREST

FORREST MANUFACTURING COMPANY, INC., 250 DELAWANNA AVE., CLIFTON, N.J. 07014

We'll list our shows into 1985
in the next issue.



JOIN US

W.A.N.A.
35 Main St., Suite 6
Plymouth, NH 03264
(603)536-3876



Readers' Information Exchange

Looking for an owner's manual for an old band saw? Need a bearing for a hand-me-down table saw? Can't find a source of supply for an odd piece of hardware? Maybe our readers can help. Send along your request and we'll try to list it here — and hopefully one of our readers will have an answer for you. Due to space limitations, we will be unable to list all requests, but we will include as many as we can.

Does any reader have information on a Sears Craftsman push-pull 10 in. table saw model no. 109-22620? This saw may have been manufactured around 1947 just after the war. Any information would be greatly appreciated on locating the owner's manual and parts list and I will pay for any photocopying and mailing costs.

Richard M. Hunter
8323 N. 10th Ave.
Phoenix, AZ 85021

I hope one of your readers can help me. I have a Shopmate industrial listed orbital sander, model no. 1800-type 1. I would like to know if the company is still in business. I have this address: Portable Electric Tool Co., Geneva, IL 60134. I wrote to them and got my letter back stating forwarding address expired.

Marion W. Sulenski
1192 Richwine Dr.
Williamsburg, VA 23185

I am looking for plans/information to build a Chinese puzzle box — the type that has all those interlocking catches which need to be undone in order to open the box.

Richard M. Shields
P.O. Box 416
Mesilla Park, NM 88047

I am looking for a new or rebuilt motor for a 1964 Sears 9 in. radial-arm saw, motor no. 90-0723, model no. 103.29310. My motor burned out and Sears has discontinued this model.

James Loyd
2209 Hollywood
Muncie, IN 47304

I recently acquired a Sears Craftsman table saw model no. 113-22401. Sears no longer carries a manual for it. If anyone has a manual for it, I would be willing to pay for photocopying and postage.

C. Soldan
543 N.E. 3rd
Gresham, OR 97030

I am looking for the original parts list and manual for an 8 in. Sears Craftsman table saw model no. 103.22160 manufactured by King-Seely Corp. around the mid 50's. I will reimburse any costs incurred.

John Kasey
14 Taylor Ave., Apt. 2C
South Norwalk, CT 06854

I have an old Craftsman lathe model no. 101.07301, serial no. 6L030786. The local Sears has the parts list on microfilm but no manual of instructions. Can any of your readers help with the latter?

William C. Fletcher
2425 Highland Road
Upland, CA 91786

I have procured a 24 in. throat Craftsman jig saw model no. 103.23440, manufactured by King-Seely Corp. Our problem is how to tighten the blade assuming all parts came with the jig saw. If anyone can provide the know-how or has a copy of the manual, I'll gladly reimburse all costs involved.

Paul L. Eikenberry
5311 Staughton Drive
Indianapolis, IN 46226

I have noticed that all the suppliers of toy wheels have exactly the same wheels for sale. This indicates to me that some firm must make a tool for forming these wheels. Do you know of any company which makes a tool such as this to use on a drill press?

Norman A. Vining
895 Main Street
Wilbraham, MA 01095

Would you ask your readers if anyone has a copy of a manual and/or parts list for a Sears jig saw, model no. 103.23151. I'd pay for the copy.

L. Murray
7308 E. 10th
Spokane, WA 99212

Wvj

"I'm so certain this is the right saw for your shop, I'm making a 30-day Trial Offer."

J. PHILIP HUMFREY



**NOW! Call toll free in U.S.A.:
1-800-387-9789**

Full Size • EXCALIBUR • Full Power

TEST the Excalibur 24 like a professional. You'll convince yourself!

USE an Excalibur for 4 weeks. You'll be convinced it's everything we say it is — or simply return it for a full refund of every cent you've paid. Try asking our competitors to match this no-risk offer.

You'll know for sure, that the Excalibur 24 Precision Saw is the best machine!

EXCALIBUR 24" PRECISION SAW PACKAGE

\$1285. c/w 150 blades, rugged metal stand, instruction manual, 24-month warranty. Delivered to your door.
**CALL COLLECT TO ORDER TODAY!
(416) 293-8624**

J. Philip Humfrey Ltd.

3241 Kennedy Road, Unit 7
(Dept. 1111),
Scarborough, Ontario, Canada
M1V 2J9 Telephone (416) 293-8624

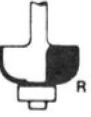
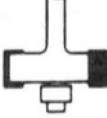
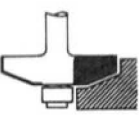
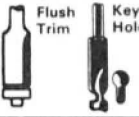
☐ Please rush me your illustrated folder on the Excalibur 24" Precision Saw.

Name _____
Address _____
City _____
State _____
Zip Code _____

EXCALIBUR FEATURES

- Cuts with all 5" blades #8/0 to .25" wide
- Cuts are true and require virtually no sanding
- Cuts to 2 1/2" thick stock and to center of a 48" panel
- Extra-large 14" x 24" workable tilts both ways
- Provides operator with absolute control and an infinite range of cutting speeds up to 1800 strokes per minute
- Ball-bearing construction — not bronze bushings
- Parallel arms will not distort under high tension cutting

**CARBIDE TIPPED ROUTER BITS
PROFESSIONAL PRODUCTION QUALITY
SPECIAL OFFER — SAVE 50% - 75% BELOW COST**

BEST CUT BEST PRICE	ITEM NO.	DESCRIPTION	RADIUS	LARGE DIAM.	CUTTING LENGTH	PRICE
	#01	COVE 1/4" R	1/4"	1"	1/2"	\$13.00
	#02	3/8" R	3/8"	1 1/4"	9/16"	14.00
	#03	1/2" R	1/2"	1 1/2"	5/8"	15.00
	#04	ROUND OVER 1/4" R	1/4"	1"	1/2"	15.00
	#05	3/8" R	3/8"	1 1/4"	5/8"	16.00
	#06	1/2" R	1/2"	1 1/2"	3/4"	19.00
	#07	ROMAN OGEE 5/32" R	5/32"	1 1/4"	15/32"	18.00
	#08	1/4" R	1/4"	1 1/2"	3/4"	20.00
	#11	3/8" RABBETING	Deep 3/8"	1 1/4"	1/2"	14.00
	#09	1/8" (KERF) SLOT CUTTER		1 1/4"	1/8"	14.00
	#10	1/4" (KERF) SLOT CUTTER		1 1/4"	1/4"	14.00
	#12	45° CHAMFER	45° Angle	1 1/2"	5/8"	15.00
	#15	RAISED PANEL	20° Angle	1-5/8"	1/2"	25.00
	DOVETAIL BITS					
	#16	3/8" DOVETAIL 9°		3/8"	3/8"	7.50
	#17	1/2" DOVETAIL 14°		1/2"	1/2"	8.50
	CORE BOX (ROUND NOSE)					
	#19	3/8" CORE BOX 3/16"		3/8"	3/8"	11.00
	#20	1/2" CORE BOX 1/4"		1/2"	11/32"	14.00
	GROOVE FORMING OGEE					
	#22	1/2" GROOVING OGEE		1/2"	3/8"	16.50
	#23	3/4" GROOVING OGEE		3/4"	7/16"	21.00
	#13	1/2" FLUSH TRIM		1/2"	1"	8.50
	#14	3/8" KEY HOLE (This Bit only HSS)	CUTS 3/8" KEY HOLE FOR FLUSH MOUNTING PICTURE FRAMES, ETC.			8.50
WHEN ORDERING ANY 3 OR MORE, DEDUCT \$1.00 EACH ALL PRICES POSTAGE PAID						
- Professional Production Quality 1/2" Ball Bearing Pilot 1/4" Diameter Shanks x 1 1/4" Long - One Piece Construction - Two Flute Thick High Quality Tungsten Carbide Tips						
To order by Master Charge or Visa Toll Free 7 Day — 24 Hour Order Service Call 1-800-523-2445 Ext. 56 (In PA 1-800-346-7511 Ext. 56) or send check to: MLCS, P.O. Box 53, Rydal, PA 19046						

Workshop Income

Starting a Business: Part 1

As we have noted before in this column, rare indeed is the hobby woodworker who has not, at one time or other, considered the possibility of transforming his hobby into a business. Many of our readers have indicated that they do in fact derive some income from their woodworking craft, and many others have expressed a serious interest in starting a full-time business. In response to their questions we have decided to take a closer look at the subject.

There are, of course, many degrees of involvement — from the full-time production woodworker to the retired part-time hobbyist. Since there is little, if any, risk for the hobby woodworker who occasionally sells a piece, we decided to concentrate on the problems facing those individuals who are seriously considering a switch to woodworking as a career or full-time business. We asked professional woodworkers who have successfully made the switch to share with us their experiences, suggestions, pitfalls, opinions, and plain old thoughts. In the course of researching this article we also interviewed businessmen and officials at the Small Business Administration.

The results of our inquiries offer, we believe, a frank look at what is, by all accounts, a most complex subject. Indeed, the scope of information we garnered was so broad that we have divided it into two features. This, the first feature, will offer an overview of the problems and considerations that one should be aware of when starting a woodworking business. The second feature, in our November/December issue, will examine specifics, from what tools to equip a shop with, to the best location for a woodworking business.

First, some sobering statistics. The Small Business Administration (SBA) tells us that 60% of small businesses fail after only one year. After three years this figure rises to 70%, and by the end of five years, fully 80% of small businesses will fail. The SBA strongly recommends that you consult with an SBA counselor *before* you make any firm plans. The SBA has counselors at offices throughout the country, and SBA officials conduct seminars geared for the individual who is considering starting a small business. You may contact the SBA through your local Chamber of Commerce.

The SBA also sponsors a Service Corps of Retired Executives (SCORE) whose volunteers offer free counseling, management advice and workshops for small businessmen. These retired executives are especially skilled in problem solving. Write to or call, SCORE National Office, 1129 20th Street N.W., Suite 410, Washington, D.C. 20416. Telephone: (202) 653-6279.

Although the woodworkers we spoke with each had a different story, many of the problems and challenges they faced were similar. All agreed that success depended on the right combination of financing, equipment, timing, marketing, location and skill. Other intangible, but no less important factors were motivation, experience, determination and a healthy measure of old-fashioned luck.

The woodworkers we surveyed shared certain opinions and conclusions that we feel are especially significant. There is, they all pointed out, a world of difference between being a hobby and a production woodworker. As a production woodworker you will be breathing sawdust all day, and often laboring long hours at repetitive tasks. Unless you are independently wealthy, are an artist-craftsman who commands thousands of dollars for his work, or are able to work

on a commission-only basis, you will be working very hard to maintain even an average standard of living. You will almost certainly never get rich. To better experience what it is like, the woodworkers surveyed strongly suggested spending some time working in a shop, or at the very least observing how a production shop operates.

Although the woodworkers we surveyed stressed the need to realistically approach the question of starting a business, they also pointed out the rewards. The satisfaction of creating something, the pride when your work is recognized and appreciated, the love of wood, and the gratification of doing something that you enjoy, were all listed as important to the woodworkers we surveyed.

To succeed with a full-time woodworking business requires sacrifice. You will need to make things that are not only competitively priced, but saleable. The woodworkers we surveyed said that it is nearly impossible to make toys on a competitive basis in a small shop. Inexpensive imports from countries such as Taiwan and Portugal make it especially hard for the North American woodworker to compete. Since woodworking is by nature so labor-intensive, the successful domestic woodworker must find a "niche"; he must create something that fills a consumer need and yet is not also produced in a low wage foreign country. There are many skilled American toymakers, yet nearly all are part-time or retired persons who do not depend on their craft as a primary source of income.

Most working woodworkers recommend making furniture. Tables and beds are the least labor intensive projects, and therefore offer the best chance for turning a profit. Chairs are generally more labor intensive, and several woodworkers made the point that manufacturing chairs is definitely *not* the best way to start a woodworking business.

It is important to establish a firm market base early on. It is equally important to match your product with your skill level. Every woodworker is certainly not a flamboyant artist, and one woodworker we surveyed even recommended starting out with the very simplest 2 x 4 style lawn and garden variety furniture, that can be easily sold through local hardware and department stores.

There are many ways to start a business, and many paths to success. Finding the direction that is best for you will likely be a process of trial and error. Take advantage of opportunities, use ingenuity and creativity, and temper your enthusiasm with common sense.

The full-time professional woodworker must have a dedication and commitment that go beyond what many amateurs describe as their "passion for wood." The professional's respect for and appreciation of wood and woodworking runs far deeper: it is a "feeling," an experience, a pride. Indeed, medieval woodworking fraternities ascribed magical qualities to certain woods, and attributed mystical powers to those artisans who were masters of their art.

Twentieth-century woodworkers know, of course, that success is grounded in a firm foundation of knowledge, planning and preparation. Still, starting up a woodworking business often requires something of a "leap of faith."

The woodworkers we queried were all people who, at one time or another, were locked into jobs they disliked. More importantly, however, they were individuals who measured success not with a dollar sign, but in terms of personal satisfaction. They spoke of their regard for quality, their sense of heritage or history, and the challenge in creating something lasting, useful, and possibly even beautiful.

At the very core of their experiences, they all agreed, is the fact that they are constantly renewed and rejuvenated by their work. It is a feeling, they revealed, that although hard to measure, is even harder to beat.

Woj

TOOLS ON SALE™

AMERICA'S LOWEST PRICED TOOLS

★ PLUS ★ Prepaid Freight On Every Item

MAKITA TOOLS

	List	Sale
804510 Sander	79.	43.
1900BW 3 1/4" Planer w/case	149.	89.
1100HD 3 1/4" Planer w/case	278.	165.
18058 6-1/8" Planer w/case	416.	205.
8012HOW Cordless Drill w/case	168.	99.
8010DL Cordless Drill w/case & light	114.	62.
6510LVR 3/8 Drill V.S.R.	88.	49.
DP3720 3/8 Drill V.S.R.	196.	120.
3601B 1-3/8" hp Router	128.	82.
3608BK 3/4 hp Router w/case	319.	185.
2401BW 10" Mitre Saw	349.	249.
2400BW 10" Mitre Box	189.	95.
JR3000V Recipro Saw V.S.	191.	125.
9900B 3"x21" Belt Sander	198.	135.
9924B 3"x24" Belt Sander	208.	135.
9924DB 3x24" B/sander w/bag	273.	169.
9401 4x24" B/sander w/bag	1980.	1350.
2030 12" Planer/Joiner	1780.	1195.
2040 15-5/8" Planer		

PORTER-CABLE

	List	Sale
587 7 1/4" Circular Saw	199.	130.
314 4 1/2" Trim Saw	180.	115.
9548 T2 HD SP w/bayonet saw kit	255.	169.
9627 2 SP. Saw Kit Recip	183.	120.
327 3x21 B/sander w/bag	174.	115.
360 3x24 B/sander w/bag	269.	180.
382 4x24 B/sander w/bag	284.	190.
363 4x24 Belt Sander	288.	180.
505 HD Finishing Sander	155.	105.
330 Speed-Bloc Sander	85.	56.
7511 3/8" X-HD VSR Drill	149.	100.
100 7/8 H.P. Router	124.	85.
690 1 1/2 H.P. Router	179.	120.
167 Block Plane	129.	86.
9118 Porta-Plane Kit	289.	195.
9652 Versa-Plane Kit	419.	285.

★ NEW LOW PRICES ★

PONY CLAMP FIXTURES

	List	Sale	Lots of 12
#50 for 1/4" Black Pipe	11.23	7.40	80.00
#52 for 1/2" Black Pipe	9.36	6.10	67.50

JORGENSEN HAND SCREWS

	Jaw Length	Open Cap.	List	Sale	Box of 6
#50	4"	2"	11.58	7.25	39.15
#40	5"	2 1/2"	12.45	8.10	43.75
#30	6"	3"	13.35	8.50	45.95
#20	7"	3 1/2"	14.35	8.95	48.35
#10	8"	4 1/2"	15.97	9.95	53.75
#1	10"	6"	18.25	11.35	61.25
#2	12"	8 1/2"	20.94	13.50	72.95
#3	14"	10"	25.56	16.75	91.35
#4	16"	12"	34.55	23.75	128.25

JORGENSEN BAR CLAMPS

STYLE 37 — 2 1/2" Throat 1/4" x 3/4"

	Jaw Length	List	Sale	Lots of 6
#3706	6"	7.88	5.50	29.70
#3712	12"	8.73	5.95	32.13
#3718	18"	9.64	6.95	37.53
#3724	24"	10.54	7.35	39.69
#3730	30"	11.78	8.25	44.55
#3736	36"	12.85	8.95	48.33

STYLE 39 — 3 1/2" Throat 5/16" x 1"

	Jaw Length	List	Sale	Lots of 6
#3906	6"	18.89	12.95	69.95
#3908	8"	19.45	13.50	72.95
#3912	12"	20.69	14.50	78.00
#3918	18"	22.55	15.85	85.50
#3924	24"	24.45	17.25	93.00
#3930	30"	26.16	18.35	99.00

STYLE 45 — 5" Throat 5/16" x 1 3/8"

	Jaw Length	List	Sale	Lots of 6
#4506	6"	22.49	15.95	86.15
#4508	8"	23.04	16.50	89.10
#4512	12"	23.85	17.50	94.50
#4518	18"	25.16	18.95	102.35
#4524	24"	26.61	20.95	113.15
#4530	30"	28.06	21.95	118.50
#4536	36"	29.54	22.95	123.95

MILWAUKEE TOOLS

	List	Sale
6507 TSC SawzAll w/case	178.	120.
6511 SawzAll 2 speed w/case	167.	117.
0210-1 3/8" Cordless Drill-new	148.	109.
5660 1 1/2 H.P. Router	230.	165.
5680 2 H.P. Router	299.	209.
0224-1 3/8" Drill 4.5A	149.	105.
0234-1 1/2" Drill 4.5A	155.	109.
6365 7 1/4" Circular Saw	149.	99.
6405 8 1/4" Circular Saw	167.	117.
6460 10 1/4" Circular Saw	329.	229.
6377 7 1/4" Worm Saw	230.	149.
6378 8 1/4" Worm Saw	245.	159.
0375-1 3/8 Close Qtr. Drill-new	168.	119.
1676-1 hd Hole-Hawg w/case	319.	225.
6012 1/2 sheet Orbital sander	139.	100.
6014 1/2 sheet Orbital sander	144.	106.
4901 1/4 hp 2.6A bench grind.	149.	110.
4921 1/2 hp 4A bench grinder	169.	130.
4981 1/2 hp 4A bench grinder	289.	195.
5041 1/4 hp 8.2A bench grind.	389.	270.

DRYWALL SHOOTERS

	List	Sale
6747-1 4.5A — 2500 RPM	139.	97.
6750-1 4.5A 0-4000 RPM	139.	97.
6751 4.5A — 4000 RPM	139.	97.
8950 Wet/Dry 8 gal Vacuum	129.	100.

SKIL TOOLS

	List	Sale
77 7 1/4" Worm Saw	240.	139.
367 6 1/2" Worm Saw	239.	149.
825 8 1/4" Worm Saw	270.	185.
807 7 1/4" Skilsaw 13A-Super	153.	100.
808 8 1/4" Skilsaw 13A-Super	172.	110.
810 10 1/4" Skilsaw 15A "	299.	199.
2016-02 3/8" Cordless Drill complete W/Charger Case & 2 batteries	199.	99.
3104 10" Band saw 4.2 amp vs	195.	159.
3102 8 1/4" Table saw 2hp 10amp	190.	155.

FREUD SAW BLADES

Univ. Bore — Professional Series CARBIDE TIPPED SAWBLADES

Item No.	Description	Diam.	Teeth	List	Sale
PS203	Gen'l Purpose	7 1/4"	24	27.24	17.50
PS303	Fine Cutting	7 1/4"	40	32.97	20.50

5/8" Bore — Industrial Grade CARBIDE TIPPED SAWBLADES

Item No.	Description	Diam.	Teeth	List	Sale
LU72M010	Gen'l Purpose	10"	40	68.58	35.00
LU81M010	Gen'l Purpose	10"	40	89.30	36.00
LU73M010	Cut-Off	10"	60	79.95	39.00
LU82M010	Cut-Off	10"	60	86.40	45.00
LU84M010	Combination	10"	40	70.99	36.00
LU84M011	Combination	10"	50	74.51	40.00
LU85M010	Super Cut-Off	10"	80	110.88	68.00
LM72M010	Ripping	10"	24	64.85	37.00

ROCKWELL TOOLS

	List	Sale
33-890 12" Radial Saw featuring "Turret-Arm" Action	1280.	975.
33-990 Deluxe 10" Radial saw	589.	475.
33-150 Sawbuck frame/trim saw	686.	519.
34-821 9" contr. saw w/o motor	500.	395.
34-410 10" contr. saw w/o motor	871.	650.
34-710 super 10" motorized saw	579.	450.
34-010 motorized mitre box 9"	231.	169.
15-091 15" floor model Dipress	467.	375.
15-090 15" bench model "	467.	375.
28-283 14" wood cutting Band Saw	897.	695.
28-243 14" " " w/o motor	594.	450.
37-207 Saw/Joiner Combination	1018.	810.
37-608 6" Motorized Joiner	413.	335.
37-290 4" deluxe Joiner w/o motor	346.	275.
22-651 RC-33 — 13" Planer	1943.	1450.
43-122 Wood Shaper w/stand and 1 HP Motor	869.	495.
46-140 11" lathe, gap bed model w/stand w/o motor	407.	335.
52-493 1 hp motor for #34-621	170.	130.
62-042 1 1/2 hp motor for #34-410	230.	170.
62-144 1/2 hp motor for #37-290	136.	105.
62-142 1/2 hp motor for #28-243 and #46-140	121.	85.

1984 TOOL CATALOG AVAILABLE

Call Toll-Free 1-800-328-0457 — In Minnesota Call (612) 224-4859

4 WAYS TO BUY: CHECK — MONEY ORDER — VISA — MASTERCARD

SEVEN CORNERS ACE HDW. Inc.

216 West 7th St. • St. Paul, MN 55102 • Est. 1933

Wood Moisture Meters

Pocket-Size
MINI LIGNO
6%, 7%, .. 20%

only
\$110

Incl. Case,
Batteries,
and Pins
for 7/16" and 7/8"
Measuring Depth.
Size: 1" x 2 1/4" x 5 1/2"



LIGNOMETER® H30, H60
4-30%
4-60%



*** Unique * Convenient * Easy to Use**

New accessories for moisture meters to monitor wood moisture and EMC during drying.
Specially suited for small dry kilns - conventional, dehumidifying or solar dry kilns.
New free brochures for moisture meters, electrodes and all accessories!

ignomat
USA LTD

P.O. Box 30145 WJ
Portland, OR 97230

Tel: 800-227-2105
503-257-8957

WOOD LATHE

WOOD LATHE

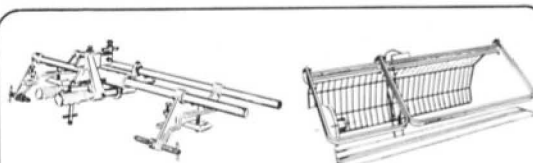
WOOD LATHE

WOOD LATHE

WOOD LATHE

WOOD LATHE

WOOD LATHE



Our Model 520B Slide Table Type or our Model 3010 Guide Rod Type Duplicator Systems will make identical wood turnings from either round or flat patterns, and can be used on virtually any wood turning lathe.

Call or write for free literature on our whole line of wood lathe accessories.

Toolmark Co.

6840 Shingle Creek Parkway
Minneapolis, Minnesota 55430
(612) 561-4210

"MAKER'S MARK"

BRANDING TOOL

SEND \$1.00
FOR YOUR
INFO PACK

iovs otup oqxb uoio
iovs otup oqxb

NO OBLIGATION

NOW! Brand your own name
permanently on wood
and leather handcrafts!

Simple to use. Long lasting
UL approved electric handle.

Brands full name. Guaranteed.

CRAFTMARK PRODUCTS, INC.

P.O. Box 6308 WJ9 • Marietta, GA 30065

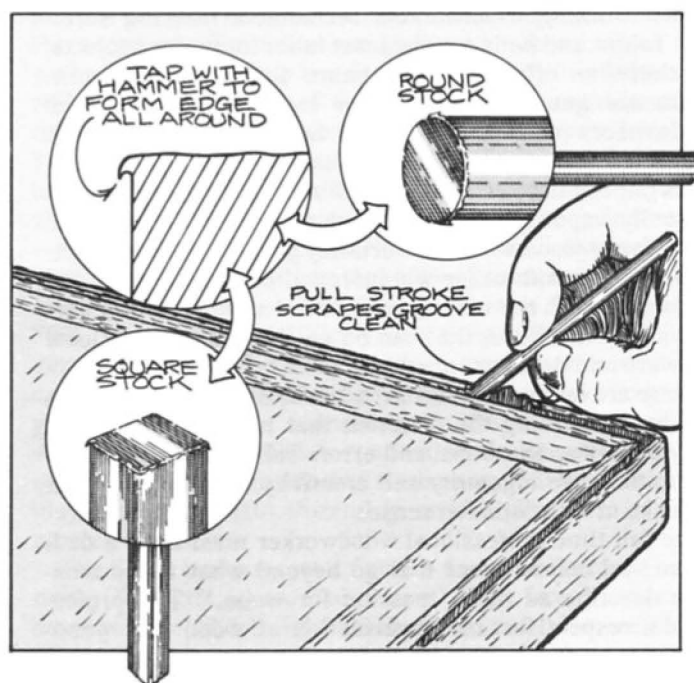
Restoring Antiques

Applying Filler

By John W. Olson

For several issues now, I've been discussing how to strip and clean furniture in preparation for refinishing. In this issue, I'll talk about how to apply filler and also how to select a final clear finish.

Before starting though, I'd like to mention a couple of tricks of the trade that I use when stripping and cleaning a piece. Flutes, grooves, and various kinds of small carving are common to many furniture styles, and these odd shapes can be very difficult to clean when you are forced to use the run-of-the-mill tools found around the workshop. In order to do a really satisfactory job, I've found that a few homemade tools will make the entire process a lot easier.



For cleaning grooves, a simple hook scraper can be made in a few minutes. Select a piece of steel rod that has a diameter equal to the groove to be cleaned, then cut both ends square. With the rod held vertically in a vise, use a hammer to gently tap around the circumference, rolling over the edge until you can just feel the wire edge being formed.

Give the tool a try. If it seems to need more work, roll over the edge just a little more and then dress it with a very fine file. A needle file, either flat or triangular, does a good job. The scraper works best when used with a pull stroke.

As shown on the sketches, other shapes can be made. Square or rectangular steel stock makes a good scraper for small corners or along the edges of small, straight square beads.

Once all the surfaces of the piece are clean and smooth, you'll need to decide whether or not you want to fill the pores of the wood. This step may not be necessary if the

wood is open-grained and it has been sanded with very fine sandpaper. Unfortunately, most old hopeless cases have undergone so much restoration and edge-rounding that there is no other choice. If the wood is open-grained, it must be filled. This being the case, check the surface again. Sand as smoothly as possible, going through the various grades of sandpaper step-by-step. Begin with a 100 grit garnet or aluminum oxide paper, then go to 120 and 140, before finishing up with 180. Brush the surface well to remove all wood dust from the pores. Even better, use a vacuum cleaner or a stream of air from a compressor equipped with a blower attachment.

Next, prepare the filler. If the piece is being stained, the filler should be diluted with the stain to a viscosity of thin coffee cream (half-and-half). I find that most amateurs err on the side of preparing too thick a mixture. The filler should pour and spread easily with no lumps or thick drops. Apply the mixture with a stiff bristled brush, working across the grain with a scrubbing-like action. A 1-1/2 in. wide stencil brush, the kind used to ink through metal letters, works well. The intention is to pack the wood pores full of filler, therefore some excess left on the surface is unavoidable.

Allow the filled surface to become dull but not quite dry then remove the excess filler with a coarse textured rag such as monk's cloth or burlap. Scrub across the grain, further packing the filler into the wood pores. Be careful not to remove the filler from the pores as this is very easy to do at this stage, especially when stroking parallel to the grain while using a circular motion. A straight back and forth motion across the grain is best.

Allow the filled surface to dry and set up for at least twenty-four hours. If quite a bit of the dried filler stain mixture is left on the surface (and this is commonly the case) it can be removed by gently sanding with fine paper. However, it is imperative that the filler be absolutely dry before sanding. The back of the sandpaper will build up a layer of filler and this tends to drag the filler from the pores as you sand parallel to the grain. If this happens, you'll be faced with restaining the surface. Here again, be careful not to drag the filler from the pores if the stain is applied with a rag. Some of the solvents used in stains may soften the filler and make it easy to remove. Apply the stain sparingly with a very soft bristled brush and then gently remove the excess with a soft cloth. Allow at least twenty-four hours before applying the final clear finish.

The choice of material is important and only quality products should be used. Stick to the well-known proven brands such as Minwax and Benjamin Moore. These are two of my favorites. Moore's house brand is Benwood, and their Benwood One Hour Clear Finish is one of the easiest to apply of all the finishes that I have tried. It flows and levels almost immediately, and dries to the touch in an hour or less. It can be recoated in approximately three hours, which means a three-coat job can be completed in one work day. Further, it is highly scratch and alcohol resistant.

The stains made by Benwood are also good, but my favorite brand is Minwax, which acts as both a stain and a sealer. I like the fact that Minwax stains are color compatible, which means their colors can be mixed to create almost any hue. Also, it is compatible with most other brands of clear finishes. Although I generally use Benwood clear finishes, I have experimented with other brands and have found all of them to work well with Minwax.

Next issue, I'll talk about applying the clear final finish.

W&J

Swedish Wood Dyes

Don't hide the beautiful grain of your wood project!

—enhance it, with **Swedish Wood Dyes**. Easy to use—it's a powder you dissolve in water—making one pint of Wood Dye that covers about 40 sq. ft. Available in 12 beautiful brilliant colors.

**Dealers
Inquiries
Welcome**



introductory offer....

Please send me three samples of Swedish Wood Dyes making one pint each. My check for \$5 is enclosed.

NAME _____

ADD. _____

CITY _____

ST. _____ ZIP _____

MAIL: Henningson & Assoc.
TO: P.O. Box 6004
Rockford, IL 61125

FREE CATALOG THE EXTRAORDINARY SCREWDRIVER AND SCREWS

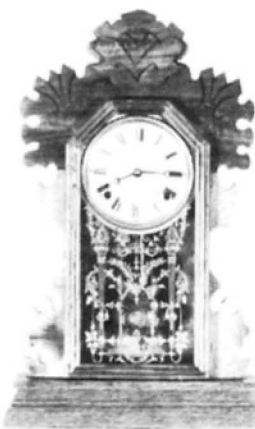


This exciting product—THE SQUARE HEAD—is now available to woodworkers at all levels of skill.

Used for years by the finest furniture manufacturers. It makes the Phillips and slot heads obsolete.

Essential for everyone's shop. Send for Free Catalog or send for starter set \$8.50 plus \$1.50 shipping (add 5.5% in Ohio), and discover why so many woodworkers prefer Square Heads. MasterCard and Visa welcome.

JEGT INDUSTRIES
P.O. Box 5264, Dept. FW
Poland, Ohio 44515



KITCHEN CLOCK KIT

Reproduced from one of the authentic kitchen clocks of the late 1800's, our kit features a fancy scroll made of a soft European wood that will stain to almost any shade you choose. The door, base and sides are solid oak. The back is veneer.

The kit contains everything you need for the complete clock except the glass and the glue.

Detailed instructions are included to guide you every step of the way.

The movement furnished with the kit has an hour and half hour strike, front mounted pendulum and lower mounted hammer. Mounting brackets are attached to the flat back plate of the movement so the movement can be attached easily to the case. FL21-8835 - Complete Kit \$59.50

(F.O.B. GREENSBORO, N.C.)

S. LaRose, Inc.

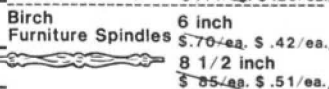
234 Commerce Place, Greensboro, N.C. 27420, U.S.A.
Phone: (919) 275-0462

Woodworkers' Hardware ORDER FORM

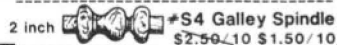
Qty. Total



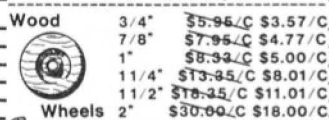
Birch Mug Peg
\$.37/ea. \$.22/ea.
Birch Shaker Peg
\$.42/ea. \$.25/ea.
Oak Shaker Peg
\$.44/ea. \$.26/ea.



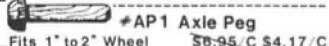
Birch Furniture Spindles
6 inch
\$.70/ea. \$.42/ea.
8 1/2 inch
\$.85/ea. \$.51/ea.



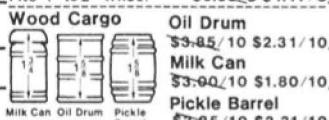
2 inch #S4 Galley Spindle
\$2.50/10 \$1.50/10



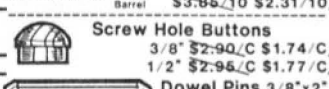
Wood
3/4" \$5.95/C \$3.57/C
7/8" \$7.95/C \$4.77/C
1" \$8.94/C \$5.00/C
1 1/4" \$13.85/C \$8.01/C
1 1/2" \$18.35/C \$11.01/C
Wheels
2" \$30.00/C \$18.00/C



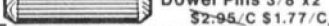
#AP1 Axle Peg
Fits 1" to 2" Wheel
\$6.95/C \$4.17/C



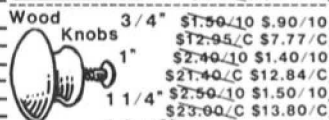
Wood Cargo
Oil Drum
\$9.85/10 \$2.31/10
Milk Can
\$3.90/10 \$1.80/10
Pickle Barrel
\$3.85/10 \$2.31/10



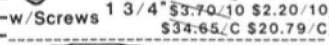
Screw Hole Buttons
3/8" \$2.90/C \$1.74/C
1/2" \$2.95/C \$1.77/C



Dowel Pins 3/8"x2"
\$2.95/C \$1.77/C



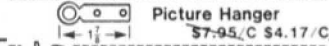
Wood Knobs
3/4" \$1.50/10 \$0.90/10
1" \$2.95/C \$1.77/C
1 1/4" \$2.40/10 \$1.40/10
\$2.40/C \$1.24/C
\$2.50/10 \$1.50/10
\$23.00/C \$13.80/C
w/Screws
1 3/4" \$3.70/10 \$2.20/10
\$34.65/C \$20.79/C



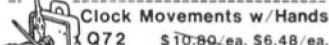
Saw Tooth Hangers
\$6.95/C \$4.75/C



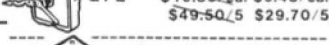
Picture Hanger
\$7.95/C \$4.17/C



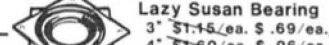
Clock Movements w/Hands
Q72
\$10.80/ea. \$6.48/ea.
\$49.50/5 \$29.70/5



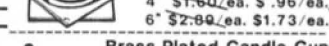
Lazy Susan Bearing
3" \$1.15/ea. \$.69/ea.
4" \$1.60/ea. \$.96/ea.
6" \$2.89/ea. \$1.73/ea.



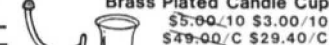
Brass Plated Candle Cup
\$5.00/10 \$3.00/10
\$49.00/C \$29.40/C



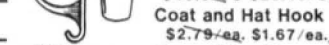
Coat and Hat Hook
\$2.79/ea. \$1.67/ea.



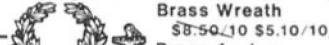
Brass Wreath
\$8.50/10 \$5.10/10



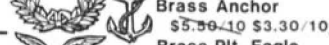
Brass Anchor
\$5.99/10 \$3.30/10



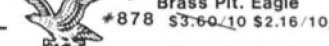
Brass Plt. Eagle
#878
\$3.60/10 \$2.16/10



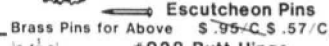
Escutcheon Pins
Brass Pins for Above
\$.95/C \$.57/C



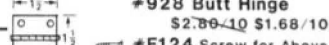
#928 Butt Hinge
\$2.89/10 \$1.68/10



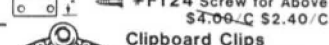
#F124 Screw for Above
\$4.00/C \$2.40/C



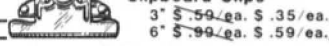
Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.



Plastic Shelf Pins
\$9.00/C \$5.40/C



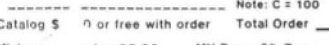
Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.



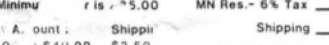
Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.



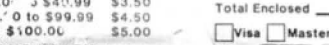
Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.



Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.



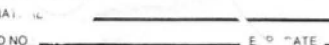
Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.



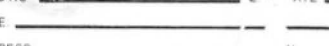
Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.



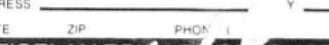
Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.



Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.



Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.



Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.



Clipboard Clips
3" \$.59/ea. \$.35/ea.
6" \$.99/ea. \$.59/ea.

The Beginning Woodworker

by Roger Schroeder

Building a Basic Workbench

Last issue, in this column, I discussed the basic hand tools that I feel a beginning woodworker needs in order to get started. Equipped with these tools — the panel saw, plane, hammer, bit brace, try square, tape measure, sharpening stone, chisels, screwdrivers, and files — a beginner will be able to take on a wide variety of projects.

Before actually starting on a project, however, there is one more "tool" that will be needed — a sturdy workbench. While a novice may not think of a workbench as a tool, an experienced woodworker will tell you that it is, and an important one at that. In this issue, then, I'll discuss how to construct a sturdy workbench; one that can be made using those basic hand tools, and one that can be expected to provide many years of service. The plans are shown on page 21.

A ready-made workbench can be a large investment and may not meet your needs in terms of size. Assuming, then, that you are not going to start in right away by making period furniture reproductions, I've designed a bench much like the first one I built for myself. It has several advantages. First, it is cost effective since it can be built for around \$60. Second, it is a good project to help you get acquainted with hand tools that you should have purchased as a beginning woodworker. Third, it can handle as much carpentry as it can cabinetmaking, the former being the way most of us start out. Yet, as I will describe at the end of the column, it can be adapted to more sophisticated woodworking.

The first consideration when building a bench is size. My advice is, if at all possible, to make the room for the bench rather than to build an undersized bench for that corner of the garage or basement that somehow got spared of garden equipment, snow tires or unused furniture. If you get hooked on woodworking, you'll likely discover that you are soon undertooled and your equipment is too limited for all the projects you'd like to plan.

My bench measures 60 in. in length, 24 1/2 in. in width, and 36 in. in height.

Its components are obtainable at any lumberyard. One is the common construction lumber called hemlock or fir found in nearly all house frames. Another is called tempered hardboard (Masonite), a dark composite material of wood fibers found as cabinet backing and drawer bottoms. The tempered variety is extra strong and stiff, and it will last a long time. My first workbench has had the same hardboard for fifteen years, and it still shows no signs of needing replacement. The only other material you'll be needing is a pound of 10 penny nails (which measure three in. in length), and a box of 1 in. finishing nails.

Though you are not limited to the five-foot length, you should not have a bench wider than two feet, since it becomes impractical in terms of floor space and, of course, it becomes difficult to reach for things. I chose this length not only for its convenient size, but also because the combined measurements make use of a standard 8-foot length of building material with very little waste: This bench, then, comprises nothing more than common 2 x 4 stock. Twelve pieces, each 8 feet long, are all that you will need.

When buying hemlock or fir 2 x 4's, you will probably be taken out to the back of the lumberyard to an uncovered pile of wood. At best, the pieces will be wet to the touch. In the winter, they are likely to be frozen together. But at worst, they will be soaked. An 8-foot 2 x 4 can hold up to four quarts of water. What you end up with, then, is useless extra weight, and you are taking the chance of the lumber twisting as it dries out, a problem that will be discussed in a future column. What is needed is lumber that has been kept indoors and is dry.

Still, you should check each piece by lifting up an end and noting that the board is not twisted (Fig. 1A). Another problem, though not as serious, is crook (Fig. 1B). Both problems are common to lumber and will leave the top of your bench with gaps or a wavy surface. Still another difficulty with lumber is cupping. That is why I do not recommend larger 2 x 6 boards for the

☐ Catalog \$ ☐ or free with order Total Order
☐ Minimum \$5.00 MN Res. - 6% Tax
Ord. A. amt. Shipping
\$25.00 \$40.99 \$3.50
\$50.00 to \$99.99 \$4.50
Over \$100.00 \$5.00

MONEY BACK GUARANTEE!
Alaska Hawaii AP. Quets Add.

SIGNATURE _____
CARD NO. _____ E. DATE _____

NAME _____
ADDRESS _____ Y _____

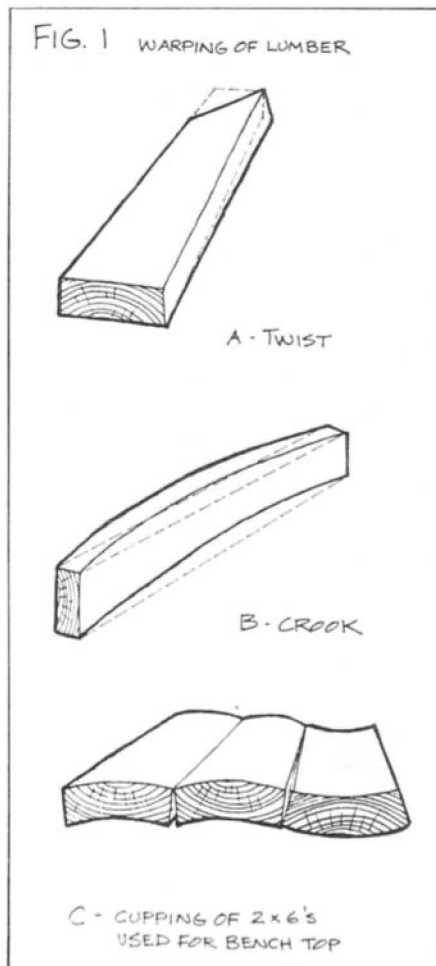
STATE _____ ZIP _____ PHONE _____

MEISEL HARDWARE SPECIALTIES
P.O. Box 258 - J. Mound, Minnesota 55364 • (612) 472-5544



top, since this problem is more common with that size (Fig. 1C).

I suggest fir or hemlock for several reasons. First, they are strong. After all, it's the same wood used to hold up



most houses. Second, when dry, fir and hemlock are surprisingly lightweight, and this makes them easy to manage. And, when using hand tools, fir and hemlock are easier to work than a hardwood such as maple, a wood used in many professional quality workbenches.

Also, be aware that 2 x 4 stock does not measure 2 in. thick by 4 in. wide. The rough lumber starts off this size, but is planed at the mill to 1 1/2 in. x 3 1/2 in. This is why the top measures 24 1/2 in. wide, because seven pieces of 1 1/2 in. x 3 1/2 in. laid edge-to-edge equal this odd dimension.

Another thing to be careful of is that you are not sold pressure-treated lumber. Used mostly for outside construction of decks, its greenish coloration comes from the chemical treatment that makes it more rot-resistant than the untreated kind. It is not necessary for a workbench, and it costs more.

The tempered hardboard you will need for the top and shelf comes in 1/4 in. thick 4 x 8 foot sheets. Though it

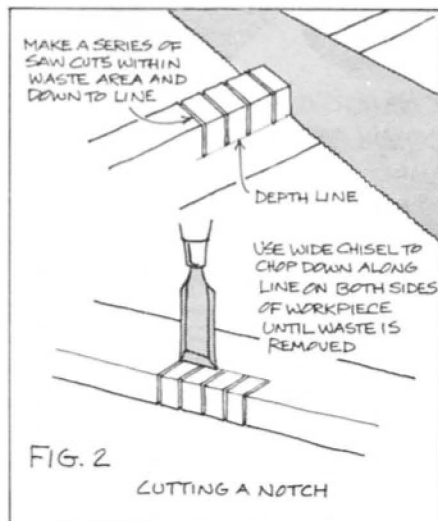
may cost a dollar extra, having it cut to size by the lumberyard would be of help and would make the two smaller pieces more manageable than the larger one.

With your materials in hand, the next step is cutting the 2 x 4's to size (see bill of materials). Realize that there is a logical and efficient way to saw them. Two legs (A), and one side rail (B) roughly equal 8 feet, the length of one 2 x 4. Two front or two back rails (C) also equal 8 feet. One piece for the top (F), plus a cross member (D), can also come out of a single length of 2 x 4. Cutting the pieces to size this way eliminates waste.

The measuring tools most useful are the retractable tape measure and the try square, the former giving you the lengths needed, the latter giving an edge to draw a line across the board. Cutting the pieces can be accomplished with a 10-point crosscut saw. Know, when using the saw, that 75% of the cutting is done on the downstroke.

When all the pieces are cut to size, with the brace's ends left square for the time being, it would be a good idea to label them. A charcoal pencil will work well here.

The next step is to cut the notches into the legs, done to make the framework more rigid and less wobbly. Laying out the notches can also be done with that try square and tape measure. They all will measure 3 1/2 in. wide and 1 1/2 in. deep with the bottom notches being 12 inches from the floor. The top notches of each leg can be sawn out with the handsaw, but the notches used to accept parts B are cut out with a hammer (or preferably a wooden

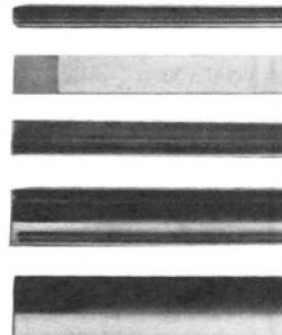


mallet) and chisel.

First, lay out the lines on the two faces and one edge of the leg where the wood is to be removed. Using the

(continued on next page)

We Supply The Best...



Superior 'Swiss Made' Carving Tools

For over 20 years, Woodcraft has been the exclusive U.S. agent for 'Swiss Made' carving tools. Three generations of experience and a commitment to quality combine to make these the finest woodworking tools available—unsurpassed in excellence.

Skilled Swiss craftsmen forge, finish, and sharpen the blades by hand. High quality steel alloy is hardened and tempered to Rc58-60, resulting in an edge which will stay extremely sharp during long periods of carving. The octagonal handles are select European ash and designed for optimum control. We believe our 'Swiss Made' carving tools shape all woods more precisely than any other tools made.

This set includes six of the most popular shapes, making it perfect as a starter set—or a replacement for those tools that fall short of your expectations. It's also the perfect set to build on. We offer over 200

additional styles, all of unequaled quality. Our 6-pc. set contains:

3mm veiner; 8mm chisel; 6mm "V" parting tool; 10mm #9 sweep gouge; 10mm #7 sweep gouge; 12mm #5 sweep gouge. Overall length 9 1/2" to 11". All presharpener and ready to use. Money back guarantee. Reg. \$59.95.

Now only \$49.95ppd.

Credit card orders call 800-225-1153

Yes, please send me your 6-pc. 'Swiss Made' Carving Tool Set 05W10-ZZ. I enclose \$49.95 (add 5% sales tax for delivery in Massachusetts) or charge my ☐ VISA ☐ MasterCard ☐ AMEX

Acct. # _____
Exp. Date _____
Signature _____
Please print
Name _____
Address _____
City _____
State _____ Zip _____

☐ Please send me your FREE tool catalog.



WOODCRAFT

Dept. W94, 1 Atlantic Avenue,
Box 4000, Woburn, MA 01888

FREE SANDING BELTS

DIRECT FROM THE MANUFACTURER

GET SIX FREE BELTS FOR EACH DOZEN ORDERED. All belts are aluminum oxide first quality. Our electronic presses make smooth bump-free splices.

Check your size and how many dozen. We will ship assorted grits unless otherwise specified.

☐ 1" x 30"	— \$12.70/doz.
☐ 1" x 42"	— 12.75/doz.
☐ 1" x 44"	— 12.80/doz.
☐ 3" x 18"	— 13.75/doz.
☐ 3" x 21"	— 14.25/doz.
☐ 3" x 23 1/4"	— 14.70/doz.
☐ 3" x 24"	— 14.75/doz.
☐ 3" x 27"	— 15.25/doz.
☐ 4" x 21 1/4"	— 16.75/doz.
☐ 4" x 24"	— 17.25/doz.
☐ 4" x 36"	— 20.95/doz.
☐ 6" x 48"	— 26.95/1/2 doz. (3 FREE)

Other size belts on request.

9" x 11" Paper Sheets

A/O Cabinet Paper

50/pk.	100/pk.
40-D ☐ \$17/pk.	☐ \$31/pk.
50-D ☐ 16/pk.	☐ 28/pk.
60-D ☐ 15/pk.	☐ 26/pk.
80-D ☐ 14/pk.	☐ 24/pk.
100-C ☐ 13/pk.	☐ 22/pk.
120-C ☐ 13/pk.	☐ 22/pk.
150-C ☐ 13/pk.	☐ 22/pk.

No Load Finishing Paper

50/pk.	100/pk.
180-A ☐ \$11/pk.	☐ \$19/pk.
220-A ☐ 11/pk.	☐ 19/pk.
280-A ☐ 11/pk.	☐ 19/pk.
320-A ☐ 11/pk.	☐ 19/pk.
400-A ☐ 11/pk.	☐ 19/pk.

Wet or Dry S/C Paper

50/pk.	100/pk.
220-A ☐ \$15/pk.	☐ \$25/pk.
320-A ☐ 15/pk.	☐ 25/pk.
400-A ☐ 15/pk.	☐ 25/pk.
600-A ☐ 15/pk.	☐ 25/pk.

NEW ITEM!

☐ BELT CLEANING STICK - \$6.95

Prompt delivery from stock.
MONEY-BACK GUARANTEE

Shipping Charges - Under \$35 add \$2.50; \$35 or more add \$4.00—PA residents add 6% sales tax.

☐ Check or Money Order.

☐ MasterCard ☐ VISA Exp. Date _____

Acct. # _____

Name _____

Address _____

City, State & Zip _____

CALL TOLL FREE

1-800-428-2222

PA Only - 1-800-222-2292

INDUSTRIAL ABRASIVES CO.

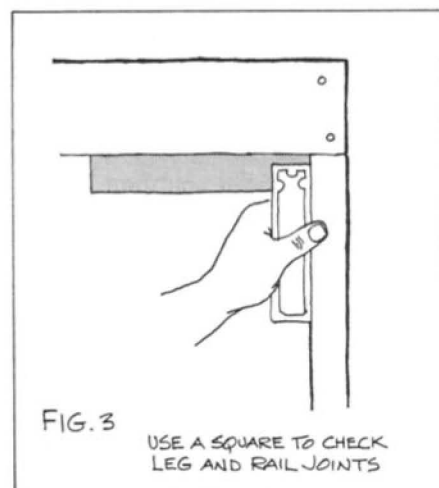
645 North Eighth Street

Reading, PA 19603

Beginning Woodworker (cont'd)

handsaw, cut down 1 1/2 in. into the leg from the edge. Now the widest chisel you have will come into use to remove the wood. One trick in chiseling through a board is to cut in on both sides of the wood. A quarter inch of depth is all that is needed on one side. This will keep the wood from being chipped away as the chisel finally goes through from the other side (Fig. 2). If you've purchased a rasp, which is a coarse file, you can use it to clean up any irregularities left by the chiseling.

With the legs notched out, they should be assembled with their rails. A nailing trick used by carpenters is to hammer the nails into the rails until just their points show through the wood. This makes nailing much easier, especially when holding boards together is awkward. You can also put the try square to use again by checking with it to insure that the rails and legs are at right angles (Fig. 3).



I might note that screws and even bolts have been used for assembly, but nails have held my bench together with no problems, though every couple of years I give them a few raps with the hammer to tighten up the joints.

With the sides assembled, you must join them with the front and back rails (C). Because the sides have to be laid on one edge, it would probably be best to lean each against a chair while you are nailing one pair of parts C into place. The framework can then be turned over and the other pair of rails can be nailed to the inside of the legs.

Nailing the rails (C) on the inside rather than the outside of the legs serves a couple of purposes. For one, it allows for a shelf (H) to be put into place easily without a lot of cutting out to get around the legs. But it also leaves a slight overhang of the top that can be useful when it comes to clamping small pieces to the bench with C-

Solid Walnut Clock Kit Only \$17.95 Complete!

COMPLETE WITH M88 QUARTZ MOVEMENT

Beautiful solid walnut cases are pre-sanded and milled for movement recess. Simply attach the movement and numerals, apply the finish of your choice and you have a complete clock.

Precision quartz movement runs over 1 year on a "AA" cell (not included). Two year guarantee. 1" thick x 11" dia.

ORDER TODAY!

\$17.95 ea.

add \$2.00 per order postage & handling



ROUND



OCTAGON

COMPLETE KIT INCLUDES:

- QUARTZ MOVEMENT
- MOUNTING HARDWARE
- BEVELED EDGE SOLID WALNUT CASE
- NUMERALS
- HANDS

#730-500 ROUND #730-501 OCTAGON

M88 QUARTZ MOVEMENT

Made in Japan by the world's largest producer of quartz timepieces.

2-3/16" square x 5/8" thick
Step sweep hand, Uses AA cell.

NEW LOWER PRICES

1-2 \$6.95	25	50 \$3.65
3-9 \$4.95	@	
10-24 \$4.35	\$3.95	

**FREE
HANDS**

PRICES INCLUDE HOUR AND MINUTE HAND. ADD 25¢ FOR SECOND HANDS. Add \$2.00 per order for postage & handling.

TWO YEAR GUARANTEE



NEW CATALOG

50 pages of clock movements, dials, accessories, hands, tools, and more!

Catalog #784 \$1.00
(Free with order)

Cas-Ker Co.

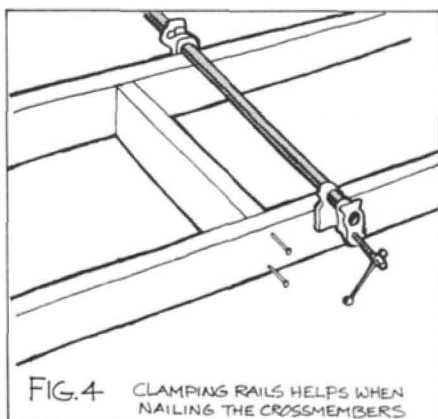
BOX 2347-B CINTI., OH 45201

WE ACCEPT
\$25 minimum
charge card sale.



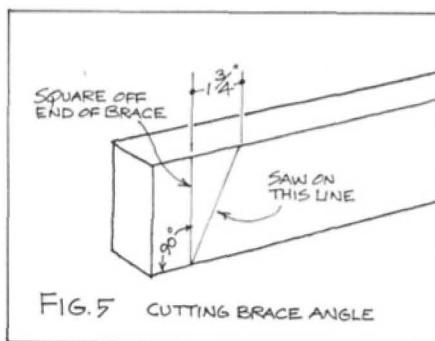
clamps or wooden clamps called hand screws.

A larger clamp will be needed, however, when attaching the cross members, parts D, which give support to the top and to the shelf. These should be spaced so that they divide the framework into three equal spaces. A pipe clamp laid across the top of the front and back rails, but to one side of the cross member, will hold it until you



can drive nails through the rails (Fig. 4). Another trick would be to cut parts D last so that you can make them $\frac{1}{8}$ in. longer than the opening between the rails. They can then be hammered into place and nailed from the outside.

The brace (E) in the rear of the bench lends rigidity to the frame, especially when you are putting stresses on it from either end. But attaching it takes special consideration since its ends are not square. I made its length longer than need be so you could have some extra wood to work with when laying out the lines to be cut.



For cutting the brace to size, I've worked out a strategy that should be of help. First, cut one end with the saw after laying out a triangular area with the try square that measures $1\frac{3}{4}$ in. x $3\frac{1}{2}$ in. (See Fig. 5). Before cutting the other end, hold the brace up to the space between the legs as best you can. This way, you can see where the contact point will be where the other end of the brace and leg meet. There

(continued on next page)

MITE-R-GAGE
MEASURES OUTSIDE ANGLES

MITE-R-GAGE Shows You All The Angles!

You'll never have to guess at angled cuts again — **MITE-R-GAGE** measures even those odd angles! It's so easy to make simple or compound miter cuts.

- Clear Lexan® Resin guaranteed not to break, crack, or warp.
- Accurate to $\frac{1}{2}$ degree
- Locks in any position
- Easy to use instructions

Enclosed is my check or money order for _____ **MITE-R-GAGE(s)** at \$14.95 each (postage paid). Please allow 2-3 weeks for delivery.

Send To: **NOWLIN, INC.**
961 East 21st Avenue
Columbus, Ohio 43211

Excellent Gift Idea!
Actual size in length: $11\frac{3}{4}$ "

TRANSFER THE EXACT ANGLE DIRECT TO STOCK TO BE CUT

Name _____
Address _____
City _____
State _____ Zip _____

The Tradition

Lives On...

High Speed Steel
Turning Tools of Old-World Quality

For 150 years, the mark of Henry Taylor has signified excellence. Current technology has joined with this tradition to create these exceptional high speed steel turning tools, which sharpen easily and hold a keen edge much longer than carbon steel models.

The blades are outstandingly resistant to breakage and frictional heat, and will hold their sharp edges during long periods of use. The handles of these strong and well-balanced tools are of lacquered hardwood, shaped for positive control, and reinforced with solid brass ferrules. The superior quality of this set makes it *the one* to have, whether you're a beginner or a professional. This set of the three most useful turning tools includes $\frac{1}{2}$ " gouge, $\frac{1}{2}$ " skew chisel, and $\frac{3}{16}$ " wide parting tool. Overall length, $16\frac{1}{2}$ " with 7" blades. Factory ground, require honing before use. Money back guarantee. Reg. \$49.95.

Credit card orders call 800-225-1153

Yes, please send me your 3-pc. set of Henry Taylor Turning Tools 12Z60-ZZ. I enclose \$39.95 (add 5% sales tax for delivery in Mass.) or charge my ☐ VISA ☐ MasterCard ☐ AMEX

Acct. # _____
Exp. Date _____
Signature _____

Please print

Name _____
Address _____
City _____
State _____ Zip _____

☐ Please send me your FREE tool catalog.

WOODCRAFT®
Dept. WJ94-HT, 41 Atlantic Avenue,
Box 4000, Woburn, MA 01888

Now Only \$39.95^{ppd.}

SHARPENING A BLADE IS EASY

IF YOU HOLLOW GRIND IT FIRST WITH THIS RIMA GRINDING JIG #WJ3

Perfect hollow ground bevels on blades to 2 1/2" wide, aluminum construction, brass screws, nylon washers and urethane no-slip clamp surface.

HIGH SPEED GRINDING WITH RIMA JIG

With this jig, the bottom lip holds the tools at the same bevel at all times. By using a light touch and sliding the jig from side to side, you will find that the tool will not overheat and burn.

HONING

You can hone 1/32" to 1/16" from the cutting edge of a blade, but it is rather difficult to hone the whole bevel. Therefore you should hollow grind the blade and then just touch or hone it on your oil or water stone.

MONEY BACK GUARANTEE



This jig is not made to grind gouges, scissors or knives. But it does an excellent job on chisels, plane irons etc. to 2 1/2" wide.



Only 4 1/4 ozs. \$11.00 ppd.
Check or Money Order only

RIMA MFG. CO.

P.O. BOX 99 QUAKER HILL, CT 06375

NEW! Power Feed DRUM SANDER!

At last!
A complete,
power-feed drum
sander priced for the
home shop!

SANDER FACTS

FREE
DETAILS!

This heavy-duty, 12-inch sander comes ready to use including motor & stand... nothing extra to build or buy!

A Finish Sander... A Thickness Sander

You can use this high-tolerance machine for light dimensioning as well as the finest finish work. Because stock is power-fed at a uniform rate, you'll achieve results impossible to duplicate with hand methods or hand-held sanders. Dimensions remain exact... no more low spots, waves or cross grain marks!

Improves Results!

Use the Woodmaster to dimension and finish-sand cabinet pieces, resawn stock, paneling, grandfather clocks, toys, tabletops, knees, buris, crotches, and much, much more! You'll soon find it's one of the most valuable tools in your shop!

30-Day FREE Trial!

Send for Complete Facts! See how you can use the Woodmaster Drum Sander in your own shop for 30 days completely without risk! Easy terms.

Call Toll-Free 1(800) 824-7888 Oper. 642

Woodmaster Tools, 2849 Terrace, Dept. DR9
Kansas City, Missouri 64108

☐ YES! Please rush my FREE Information Kit and details on your 30-Day Free Trial Guarantee.

Name _____

Address _____

City _____

State _____

Zip _____

Introductory Offer—SAVE 75%

Clock Plans Collection

12 Detailed Clock Plans

—PLUS—

The American Clock Builder

100 Page Clock Catalog

BOTH for only \$7.95

Clock Plans Collection—a \$31.15 Value

Includes full-size plans for 12 of our most popular wall and mantel clocks. CRAFT'S attention to traditional styling and detail allows you to create heirloom timepieces of the finest quality.

100 Page Catalog—Reg. \$2.00

America's largest selection of clock kits, movements, dials, hardware and hardwood moldings and shaped parts. Over 80 quartz movements, as low as \$5.95 each, and an incredible variety of brass movements.

Clock Plans Collection & Catalog—Only \$7.95

Connecticut Mirror Clock . . . \$2.50	Steeple Clock \$2.50
Picturesque Wall Clock 2.90	School Clock 2.50
Halifax Bracket Clock 2.50	Twin Steeple Clock 2.75
Wall Clock & Planter 2.50	Ogee Clock 2.50
Colonial Wall Clock 2.50	Total Retail — 12 Plans \$31.15
Minute Man Shelf Clock 2.75	Clock Builders Catalog \$2.00
Decorative Planter Clock 2.50	
Bow Dial Bracket Clock 2.75	

TOTAL VALUE \$33.15

We Welcome Phone Orders
CALL TODAY 312-584-9600

We
Accept



☐ YES — Please send me No. 10011 Clock Plans Collection and 100 Page Catalog for only \$7.95. (Plus \$1.50 for Shipping and Handling)

Name _____

Address _____

City _____

State _____

Zip _____

☐ Check ☐ MasterCard ☐ Visa

Card No. _____

Exp. Date _____

Craft Products Co.

CLOCK BUILDERS SUPPLIES

Serving America's Craftsman Since 1940

Dept. WJ4S, 2200 Dean Street, St. Charles, IL 60174

Beginning Woodworker (cont'd)

you can mark with a pencil a line indicating the profile of the leg along the face of the brace. If you held the piece correctly, that line should be fairly accurate for cutting the angle.

Putting the top into place comes next. Here you may want to use screws for securing parts F to the cross members and side rails, but nails will work. I would put two nails in at each of the four points of contact with the cross members and rails.

Before attaching the hardboard top, check the surface of the top boards with a straight edge at least two feet long. Even the best 2 x 4's may not leave a truly flat surface, and now is the time to find that out. If you can see light under the straight edge or if it rocks back and forth, you should plane off the high spots. A jack plane will do the job, and it's a good introduction to this tool. But first you will have to countersink those nail heads at least 1/4 in. below the surface of the boards so the plane iron doesn't hit them.

What is left is the shelf and top surface. Finishing nails, 1 in. long, will hold them secure. If the shelf is a bit too wide to slide in between the legs, the jack plane can be used to trim an edge. For the top, the nails should be sunk with a nail set at least 1/8 in. below the surface. This measure will keep the steel of plane blades and chisels from getting nicked. For both pieces, make sure the smooth side of the hardboard is up.

As you get more involved in wood-working, you will find a greater need for clamping devices. A bench vise is a good investment, and one attached to the front and to one side would be useful. What will have to be done, though, is to remove a portion of the top front rail to accommodate the vise's spindles and screw. This can be done, if the top has already been attached, with a bit brace and a sizeable auger bit. Overlap the holes slightly and remove the excess with the chisel.

Many hardware stores carry bench vises, but if you cannot find one, you can purchase a fairly decent vise from Fine Tool Shops, Inc. for about \$20. Order number 300-0165. A toll-free number is 1-800-243-1037. This one will fit nicely to your now 1 3/4 in. thick top and is held with screws. That set of screwdrivers you should have bought will come in handy here.

But to me a vise on the end of the bench is just as useful. Called a tail vise, it can hold a board flat along the bench length. For this, a sliding "dog" must be incorporated into the

vise. Nothing more than a bar of steel, the dog, in conjunction with a bench stop, acts as a clamping device. Vises with sliding dogs are also available from Fine Tool Shops, Inc. Prices range from \$30 to \$90.

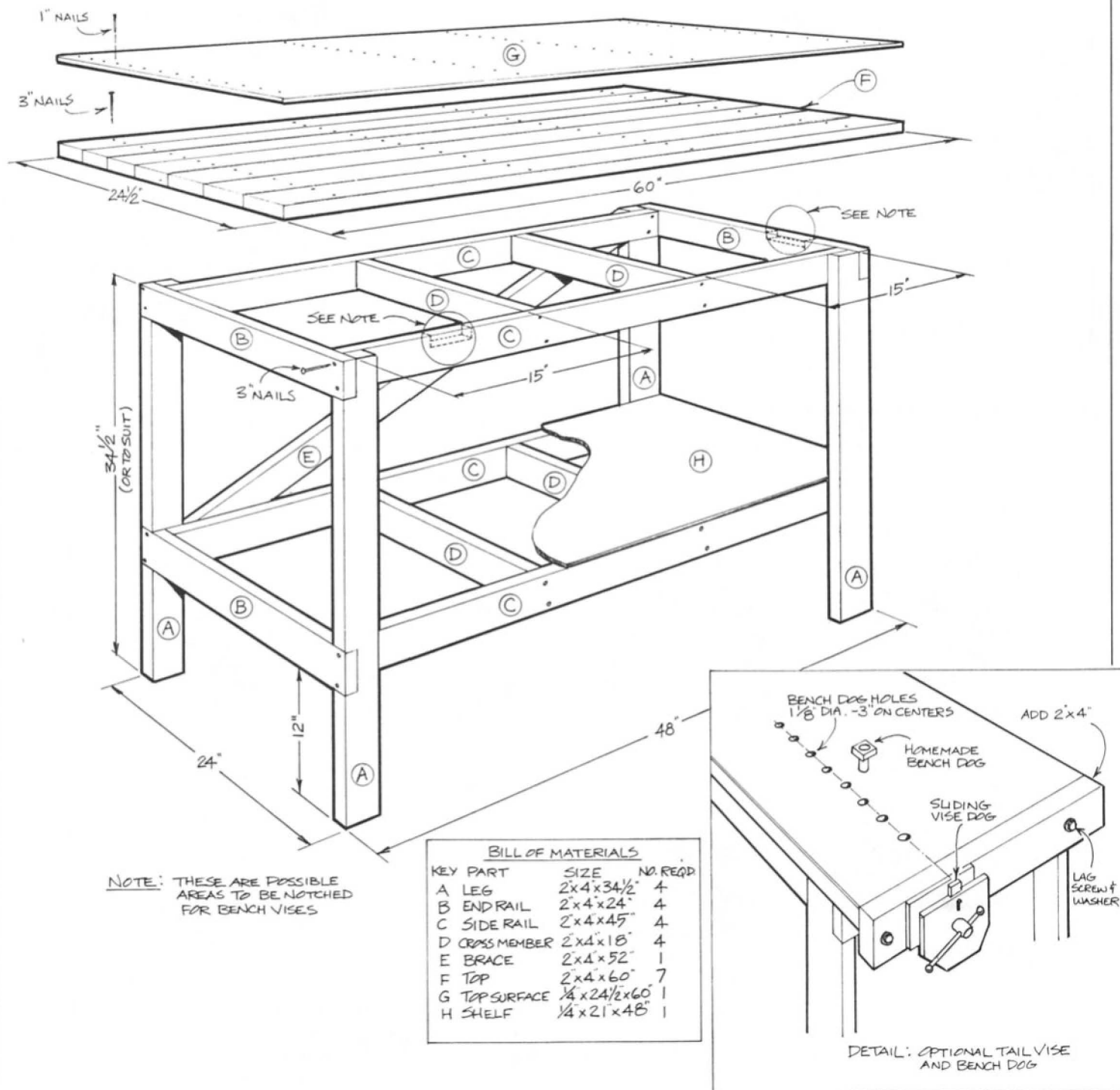
If you want a tail vise, you will have to add a length of 2 x 4 to one end of the bench, preferably with long lag screws. Place the vise toward the front of the bench so you do not have to reach to work on a board. Also, if you are right-handed, put the vise on the right side of the bench. This puts the stresses of planing a board in toward

the bench, not on the vise. If you are left-handed, put it on the opposite side. You may again have to notch out a piece of the upper side rail to allow for the vise's spindles and screw, and this can again be done with the bit brace and chisel.

You have probably seen pictures of workbenches with square holes in their tops. These holes take the bench stops that are also called dogs. Making square dog holes is not easy, but you can get the same clamping action by using round dogs and round holes that are bored with the bit brace. Space

them every three inches in a row from where the vise dog is. Also, space them so they do not cut into any of the cross members.

A simple dog you can make requires a 1 in. diameter dowel about 3 in. long and a piece of hardwood such as maple that is 1/2 in. thick. Drill a hole into the hardwood with a 1 1/8 in. auger bit and glue the dowel flush with the top of the board. Cut the hardwood so it is 2 in. square. All that is left is drilling 1 1/8 in. diameter holes into the bench top as shown in the detail below. Wwj



USEFUL TOOLS AT SPECIAL PRICES!

MARPLES CHISEL SET

These famous English made chisels are bevel edged with straight grained ash handles. Hardened and tempered Sheffield forged steel sharpened and honed to a perfect cutting edge. Heavy steel ferrules permanently mate the blades to the handles. Ideal for light mallet work as well as hand chiseling. Set comes complete with a protective soft vinyl case which hangs up for convenience. Blade guards are included with the set. 4 pc. set: 1/4", 1/2", 3/4", 1".



4 Pc. Chisel Set

\$18.95 ppd

DELUXE SQUARE RECESS WOODSCREW KIT



These screws shouldn't be confused with cheap hardware store screws — the soft kind with the shiny plating. All of our screws are hardened and tempered with a black oxidized finish to retard rusting. Widely used in furniture and cabinet making, the square recess helps prevent slippage (and damage) and lets you sock screws down tight. Thin shank eliminates the need for oversized pre-boring. Set consists of 600 #8 screws (100 each 1", 1 1/4", 1 1/2", 2", 2 1/2", 3"), hand screwdriver, power drill bit and a 6 bin unit which can be wall mounted or stacked on a bench.

\$19.95 ppd

Square Recess Kit

(Also available in Phillips for \$17.95)

TREND-LINES, INC. 375C Beacham St., Chelsea, MA 02150

800-343-3248 Nationwide **800-322-6100** Mass.

Freight prepaid on orders of \$35.00 or more — add \$2.00 for orders under \$35.00.

FORSTNER BIT SETS

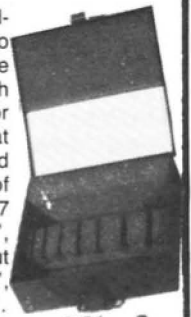
We've sold thousands of these bits. Woodworkers have been delighted with their ability to cleanly drill flat bottomed holes, part of a circle or very thin materials. These bits leave a smooth edge even when drilling end grain — perfect for doweling. And now we've added another great feature. A sturdy metal case with a cushioned interior to protect the cutting surfaces. Best of all, we include the case at no extra charge! 7 pc. set consists of 1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1" with a metal case. A 15 pc. set (without a case) includes the above plus 1-1/8", 1-1/4", 1-3/8", 1-1/2", 1-5/8", 1-3/4", 1-7/8" and 2".

7 Pc. Set with Case

\$49.95 ppd

15 pc. set

\$169.95 ppd



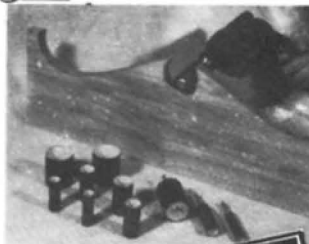
DRUM SANDER SET

Use your drill or flexible shaft tool to sand contours and holes, grind and polish tools and perform many difficult finishing jobs. Sanding bands easily mount to our expandable drums without adhesive. Standard 15 pc. set contains 5 drums, 1 fine and 1 coarse band in sizes 1/2" x 1/2", 3/4" x 1", 1" x 1", 1 1/2" x 1 1/2", 2" x 1 1/2". Wide (2") band 12 pc. set contains 4 drums, 1 fine and 1 coarse band in sizes 1/2" x 2", 3/4" x 2", 1" x 2", 1 1/2" x 2". Refills available.

Standard Set **\$10.95** ppd

Wide Set

10.95 ppd

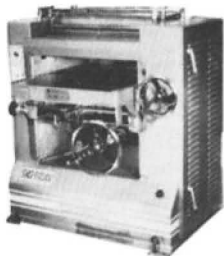


PLANERS—PLANERS—PLANERS

BRIDGEWOOD™ — A NAME YOU CAN TRUST

SEND \$1.00 FOR OUR MACHINERY CATALOG

MODEL SHG-610 7 1/2 HP
24" x 8" \$5995.00



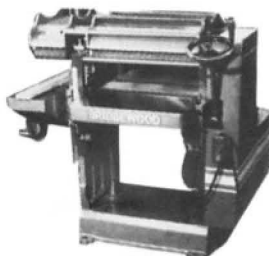
MODEL 2400 — 5 HP
24" x 6" \$3995.00



MODEL SHG 508 — 5 HP
20" x 8" \$3995.00



MODEL R-500 5.5 CV
20" x 9" \$4395.
MADE IN EUROPE



MODEL SPS18A 5 HP
18" x 7" (6 x 6 M) \$2895



MODEL SHG 200A 3 HP
20" x 6" \$2495.00



MODEL RE-40 3 CV
16" x 7" \$2995.00
MADE IN EUROPE



MODEL SHG 1300 3 HP
13" x 6" STD \$1595.
13" x 6" DELUXE \$1995.

ALL PRICES QUOTED F.O.B. YORK, PA PRICES SUBJECT TO CHANGE WITHOUT NOTICE



WILKE MACHINERY CO.



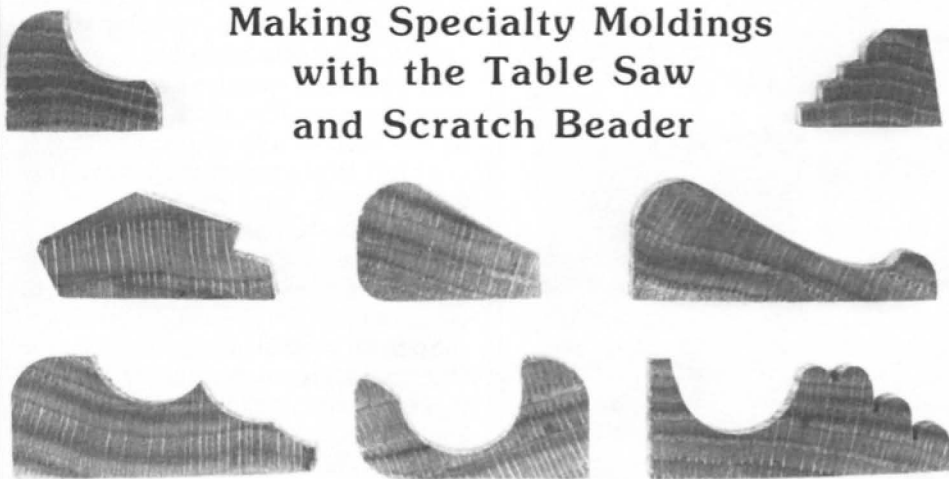
717-846-2800

120 Derry Ct. • RD #5 • York, PA 17402

717-846-2800

Special Techniques

Making Specialty Moldings with the Table Saw and Scratch Bearer



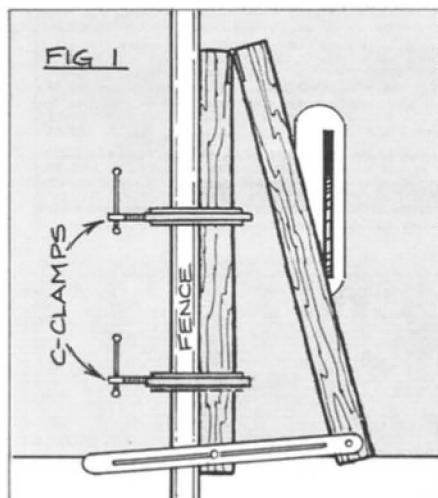
Moldings are an important element in woodworking. The origins of the molding plane can be traced some 2,000 years back to ancient Rome. From the latter half of the 19th and well into the 20th century, multiple molding planes, such as the classic "Stanley 45" (so named because of its 45 different blades) were the favorites of woodworkers. Today, of course, carbide tipped router bits and molding cutters can easily reproduce most common moldings.

Specialty moldings that cannot be reproduced with commercially available cutters are often called for in woodworking, however. From broad coves to intricate step cuts and even fine beads, practically any molding imaginable can be cut with either the table saw or scratch bearer. In fact many veteran woodworkers actually prefer designing their own moldings to compliment a particular piece.

TABLESAWN MOLDINGS

There are several techniques for making tablesawn moldings. The most common technique involves passing the stock through the saw blade with the stock set at a given angle, instead of parallel, to the blade. Depending on the specific angle, this method can be used to create anything from wide circular cross-sections to an extremely narrow elliptical cove molding. If, for instance, the stock is passed through the blade at a direct right angle, the cove will be identical to the saw blade's radius. Substituting a smaller saw blade will result in a smaller radius. An adjustable-angle fence (Fig. 1) is a useful device that will enable you to accurately reproduce a wide

range of cove moldings. The adjustable-angle fence is simply clamped on to the regular tablesaw fence.



The secret in cutting tablesawn cove moldings is patience. The moldings must be cut gradually by repeated passes over the saw blade. Never attempt to force the work or complete the cut with a single pass. Most experts recommend setting the blade height so that each pass will cut away between 1/16 to 1/8 in. of material.

It is a good idea to sketch the desired profile on the end of the stock. When the blade is almost to the line, set the blade height so that the final passes will only cut away about 1/32 of an inch. On the final pass, send the stock through slowly. This will result in a smooth surface requiring less sanding and finish preparation. If you intend to make a quantity of tablesawn cove moldings, you might do well to consider purchasing a 60 tooth carbide combination blade. This blade will leave a surface that requires almost no finish preparation.

(continued on next page)

*Lifetime beauty
for your fine
wood finishing*

WATCO®

The Original and Still the Best

DANISH OIL WOOD FINISH

LIKE MAGIC One easy application seals, primes, finishes, hardens, protects and beautifies. True, long-lasting elegance.

SAVE MONEY Doing your own wood finishing is a big money saver and with Watco, anyone can finish wood like an expert!

For complete information, fill in and mail the coupon today.

WATCO-DENNIS CORP., 1756-22nd St.
Santa Monica, Ca. 90404, Dept. WJ-94

☐ Send free booklet "How to Beautifully Finish Wood."

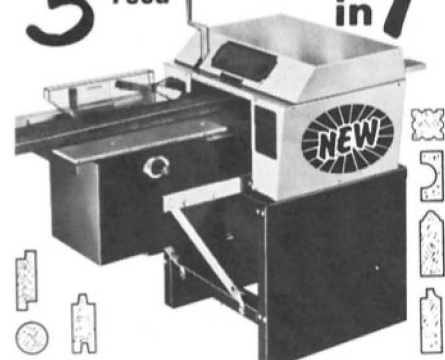
Name _____

Street _____

City _____

State _____ Zip _____

Planer Molder Saw 3 Power Feed TOOLS in 1



Now you can use this ONE power-feed shop to turn rough lumber into moldings, trim, flooring, furniture —ALL popular patterns. RIP-PLANE-MOLD... separately or all at once with a single motor. Low Cost... You can own this power tool for only \$50 down.

30-Day FREE Trial! SEND FOR EXCITING FACTS
NO OBLIGATION—NO SALESMAN WILL CALL
RUSH COUPON TODAY! FOLEY-BELSAW CO.
90562 FIELD BLDG.
KANSAS CITY, MO. 64111



Foley-Belsaw Co.
90562 Field Bldg.
Kansas City, Mo. 64111

☐ **YES** Please send me complete facts about PLANER—MOLDER—SAW and details about 30-day trial offer.

Name _____

Address _____

City _____

State _____ Zip _____

RING MASTER

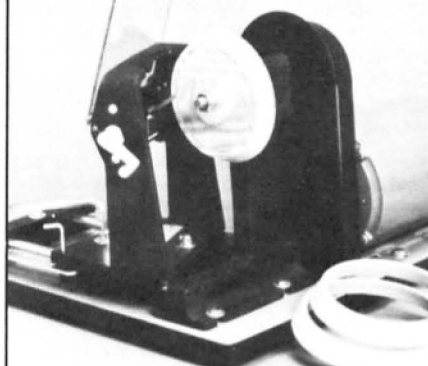
"The second new idea
in power woodworking
to come along in 100 years."

Cut Perfect Rings In Any Wood...

any angle, any size up to 1" thick, 12" diameter.

1

Cut flat wood into angle
or straight-edged rings,
stack the rings and create
ANY HOLLOW CYLINDRICAL
SHAPE...Just glue, sand
and finish...create
matched
sets of items.



Ring Master is simple to operate. Only 2
adjustments to set up, 3 operating steps to
cut rings.

In just two years Ring Master is the center
of attention in SCHOOLS, BUSINESS, and
HOMES, AND is a welcome profit-maker
for many—

NOW Ring Master Model 2 works on your
Shopsmith® Mark V. OR SIMILAR MACHINE
—attaches in 15 seconds.



Mr. B.W.H. of Santa Barbara, Cal. recently
wrote about the Model 2; "Ring Master — is
a new and fantastic machine — it fit(s) on
the Shopsmith, it has simplicity and durability
incorporated into it — I find it a tremendous
addition to my woodworking shop."

3 To request a color brochure or to order —
PHONE TOLL FREE 1-800-854-9815,
in Florida 305 859-2664.
We honor Visa, Master Card,
personal check and COD.

Ring Master, Inc.
P.O. Box 8527A, Orlando, FL 32856, 305/859-2664
Please send me complete facts about the ALL NEW
Ring Master.

Name _____
Address _____
City _____ State _____ Zip _____
Ring Master DEALERS wanted in all areas.

Full Size Plans



This Roll Top Desk
is one of our finest
furniture plans. It is
similar to those of the
1800's and is made of
oak lumber. Size: 55"
x 21" x 49"H. Plans
include base and roll-
top unit. You do not
have to purchase two
separate plans.
Desk - 311 \$14.50



Mr. Goodbank is a thrifty fellow who just loves to save
coins. This cute guy is actually a bank and is 10 1/2" tall.
Bank Plan - 329 \$3.00. Plan with eyes and nose \$4.50
Our Rocking Horse features a soft saddle and flowing
mane. Easily made of pine with basic tools. 36" x 25".
Kit available containing foam, mane, eyes, rings, etc.
Horse Plan - 245 \$7.00 Accessory Kit - HAK \$9.00
This collection of five toy vehicles will make any child
happy. Made of pine they are easily built with hand or
power tools. The trailer truck is 18" long and 7" tall.
5 Toy Vehicles - PLD \$8.50
This great Name Train spells out your child's name in
3" tall letters. Complete full-size alphabet included.
Name Train Plan - 323 \$3.50

Catalog \$1.00 - Free with plans. Phone (516) 667-3328
We accept Visa & Master Charge orders if over \$15.00

ARMOR Dept. H Box 290, Deer Park, NY 11729

NEW!
24 1/2-in.
3-SPEED
BAND
SAW
30-Day
Free Trial



At last, a pro-size, band saw priced for the home
shop! Big 24 1/2-in. throat easily handles large
scrollwork, complex curves, 4 x 8 sheets. 9-in.
vertical cut makes it easy to resaw valuable
hardwoods. Ball bearing construction, all-steel
welded frame to eliminate deflection. Can be
ordered complete with motor, stand, dust collector,
rip fence, scroll saw table. Full instructions.

30-DAY FREE TRIAL!

Send for complete facts on how you can try this
versatile saw without risk! Easy Terms.

Call Toll-Free 1(800) 824-7888 Oper. 642

Woodmaster Power Tools
Dept. SD14
2849 Terrace
Kansas City, MO 64108

☐ YES! Please rush me, free and without obligation,
your Complete Information Kit on the new
24 1/2" MODEL 500 BAND SAW plus facts on
Woodmaster's 30-Day FREE TRIAL Money-
Back Guarantee.

Name _____
Address _____
City _____
State _____ Zip _____

Special Techniques (cont'd)

Variations of tablesawn moldings
can be made by slightly tilting the saw
blade. This will cause one side of the
cove to be especially steep.

The tablesaw can also be used to cut
circular coves. The stock will need to
be mounted on a fixed point so that it
can pivot freely across the blade. This
technique was used to cut the curved
profile of the lazy susan featured in the
July/August 1984 issue of *The Wood-
worker's Journal*. It can also be used to
cut coved profiles in arched panels.

Stepped moldings may also be cut
with the tablesaw by simply making
repeated straight passes along the
blade with the blade set at various
heights to create the "steps." A light
sanding will smooth the kerf edges and
remove any blade marks along the
rises.

Almost any molding can be made by
roughing out the shape with repeated
passes of the saw blade. Extensive
clean up work with gouges and sand-
paper will be necessary, however, and
it is well near impossible to reproduce
identical pieces of molding this way.

When making any tablesaw molding
it is generally a good idea to first make
a test piece.

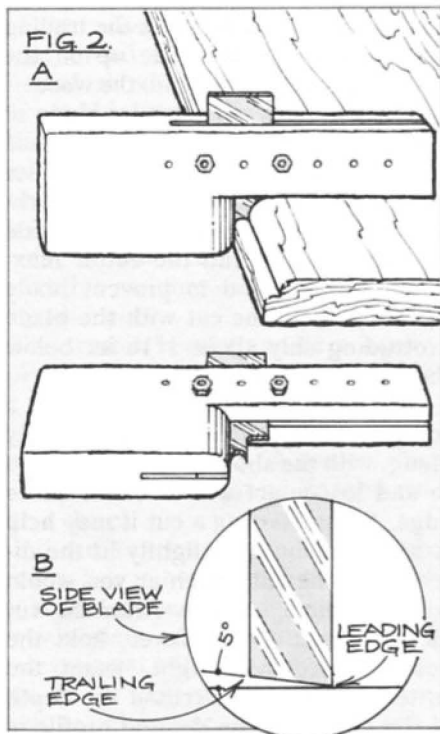
SCRATCH BEAD MOLDINGS

The scratch beader is a tool whose
usefulness is often underestimated
simply because many woodworkers are
unfamiliar with its purpose or have
never seen how effective it can be. In
this age of motor-driven machinery
and tools, the many applications of the
scratch beader are sometimes over-
looked as we've come to rely more
heavily on power equipment. The
scratch beader's deceptively simple
design tends to mislead one into think-
ing of it as exclusively for small or de-
licate finish and trim work.

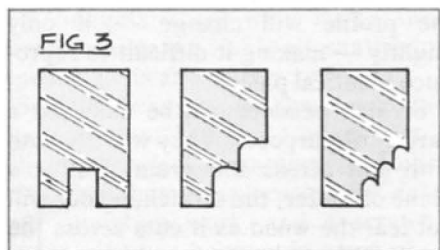
In fact, the scratch beader is a tool
that can be substituted for a router or
molding planes, and can be used in a
great variety of applications, both sim-
ple and complex. Knowledgeable
woodworkers have long recognized the
extraordinary versatility of this sim-
plest of tools. Cabinetmakers of old re-
lied on the scratch beader as heavily as
on any tool in their shop. The scratch
beader is a tool that one must use to
appreciate.

The scratch beader is nothing more
than an L-shaped piece of hardwood
with a vertical saw kerf extending the
length of the arm and part way into the
base of the L (Fig. 2A). The base of the

L has a rounded shoulder so the scratch beader will follow easily along curved edges. A series of bolt holes are drilled into the stock along the length of the saw kerf so that the steel cutter can be secured in various positions. Two bolts, one each located on either side of the cutter, hold it in place.



The cutter itself is nothing more than a piece of scrap steel. Old cabinet scrapers, saw blades, or small sections of sheet steel are ideal for making cutters. The cutter is shaped into the negative profile of the shape you intend to reproduce. It can be as simple as a rabbit, or as complex as a multiple bead (Fig. 3). Cut and file the desired shape into an appropriately sized section of steel. The steel should be wide enough so that it can be anchored in the scratch beader's shoulder, and long enough so that it extends out of the kerf. Naturally, the steel should be no thicker than the width of the scratch beader's kerf.



The cutting edge of the scratch beader should be almost perfectly square. It must never come to a point, as in a chisel or plane blade. The

(continued on next page)



WOODWORKING WORLD CHICAGO SHOW

Friday, October 12th, 2p.m. - 9p.m.
Saturday, October 13th, 10a.m. - 6p.m.
Sunday, October 14th, 10a.m. - 5p.m.

at
**THE O'HARE EXPO CENTER
ROSEMONT, ILLINOIS**

*Everything for the Hobbyist, Professional
& Do-It-Yourselfer*

EXHIBITS, SALES & DEMONSTRATIONS OF:

Machinery & Power Tools — Hand Tools
Hardwoods & Veneers — Sawblades
Bits & Cutters — Abrasives — Hardware
Stains & Finishes — Clockmaking Supplies
Lumber Drying Systems
Magazines — Books & Plans

MUCH, MUCH MORE

SHOW SPECIALS & DOOR PRIZES

FREE SEMINARS WITH ADMISSION

ADMISSION \$5.00

**ONE DOLLAR OFF ADMISSION WITH
THIS AD**

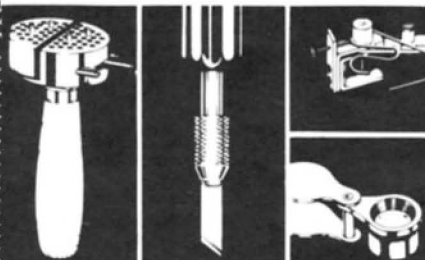
Woodworking World Chicago



Sponsored by
**WOODWORKING
ASSOCIATION OF
NORTH
AMERICA**

For More Information:
W.A.N.A.,
35 MAIN ST., SUITE 6
PLYMOUTH, NH 03264
(603) 536-3876

Tools for Creative Hands™



Over 800 hard to find Specialty Tools, to
make crafting easier and more enjoyable
...all as close as your mailbox or telephone.

Tools for:

- Metal Smithing
- Model Making
- Wood Carving
- Sculpting
- Miniaturizing
- Jewelry Making
- Toy Making
- Metal Casting
- Drafting
- Clock Making

To receive a copy of our latest catalog, use this
coupon or send name, address and \$1 to:

MICRO-MARK™
24 East Main St., Box 5112 QP,
Clinton, NJ 08809

Name (pls. print) _____

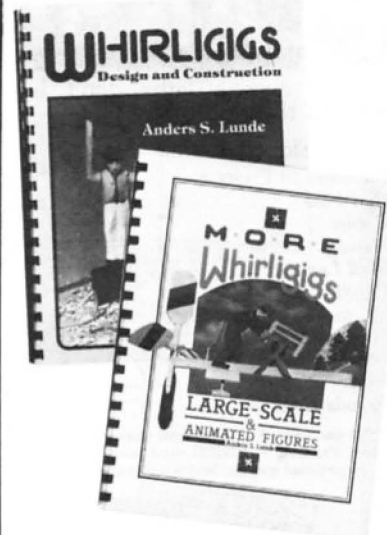
Address _____ Apt. No. _____

City _____

State _____

Zip _____

Build your own whirligig . . .
with these two books
by Anders Lunde.



WHIRLIGIGS: DESIGN AND CONSTRUCTION by Anders S. Lunde (THE MOTHER EARTH NEWS, Inc.). Whirligigs are delightful toys that whirl and turn in the wind. This book traces their origins and provides a large selection of traditional designs with detailed instructions and working drawings for each. 80 pages. Paperback. 66189 \$6.95

MORE WHIRLIGIGS: LARGE-SCALE AND ANIMATED FIGURES by Anders S. Lunde (THE MOTHER EARTH NEWS, Inc.). Lunde's second book on whirligigs provides scaled drawings and instructions for building such animated creations as Anne at the Pump, Pete Sawing Wood, Feeding Chickens, and many more. 172 pages. Paperback. 66239 \$12.95

MOTHER'S BOOKSHELF

Dept. 240908
105 Stoney Mountain Road
Hendersonville, NC 28791

Use coupon or call Toll Free 800/438-0238 (in
NC call 704/693-0238).

Please send me _____ copies of **WHIRLIGIGS: DESIGN AND CONSTRUCTION** (66189) at \$6.95 each.

Please send me _____ copies of **MORE WHIRLIGIGS: LARGE-SCALE AND ANIMATED FIGURES** (66239) at \$12.95 each.

Payment enclosed including shpg. & hdlg. (\$1.50 for 1 or 2 books). NC residents add 4-1/2% sales tax. Add 15% if remitting in Canadian funds except for charge card orders. Do not send cash in the mail.

Or charge my ☐ VISA ☐ MasterCard
Credit Card No. _____

Card Expiration Date _____

Signature _____

Name _____

Address _____

City _____

State _____

Zip _____

MOTHER'S BOOKSHELF®
105 Stoney Mountain Road
Hendersonville, NC 28791

Money refunded on books returned undamaged
in 10 days. Books shipped within 72 hours after
order arrives.

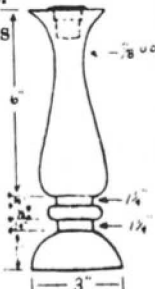
240908

10 FREE PLANS!

If you own a lathe don't be without these plans.

Dimensioned Plans for these 10 Projects:

Bud Vase
Goblet
Gavel
Wall Lamp
Candle Stick
Mortar & Pestle
Covered Dish
Potato Masher
Honey Dipper
Pagoda Bowl



You'll also receive FREE the latest catalog from Cryder Creek. Featuring TURNING wood, tools, books, kits, plans, pretuned spindles, finishes and much much more!

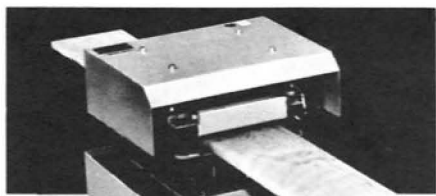


Yes! Send me 10 Turning Project Plans. I have enclosed \$1.00 (cash only) for shipping and handling. Send to Cryder Creek Wood Shoppe, 101 Commercial Ave., Whitesville, N.Y. 14897.

Name _____ (Please Print)

Address _____

City _____ State _____ Zip 10201



NEW!
4-IN-1

POWER FEED!

PLANER/MOLDER JOINTER/SANDER

New low-cost power snap makes you money... saves you money! Outperforms them all! Quickly turns rough lumber into high-value, finished stock. Molds all popular patterns... any custom design. Planes or joints without changeover. Quickly converts to power-feed drum sander! Comes complete with 115/230V motor, stand, knives, full instructions... ready to use. 30-DAY FREE TRIAL! Easy terms.

CALL TOLL-FREE 1(800)824-7888, Oper. 642

FREE INFORMATION KIT

Woodmaster Tools, Inc.
2849 Terrace, Dept. PS17
Kansas City, MO 64108

☐ YES! Please rush my FREE Information Kit and details on your 30-Day Free Trial Guarantee.

Name _____

Address _____

City _____

State _____ Zip _____



Special Techniques (Cont'd)

scratch beader cuts like a scraper, horizontally across the wood rather than vertically into it. Depending on the thickness of the steel, however, it may be necessary to apply a slight bevel, never more than 5 degrees, front to back along the edge (Fig. 2B). This bevel is important since with thicker steel, unless the leading edge of the cutter is slightly lower than the trailing edge, the cutter will ride up on the back edge and not bite into the wood.

Position the scratch beader blade so that it is recessed slightly into the base of the L, and so the beader's shoulder will ride along the edge of the workpiece, which in effect acts as a guide for the tool. To lend the cutter maximum stability and to prevent blade vibration, start the cut with the blade protruding only about 1/16 in. below the arm.

The scratch beader is used like a scraper. Draw the beader evenly along, with the shoulder always square to and in contact with the workpiece edge. When starting a cut it may help to angle the beader slightly in the direction of the cut, much as you would with a cabinet scraper. After the cut has been started, however, hold the beader perfectly upright. Reset the cutter regularly to increase the depth of the cut, until the desired profile is achieved.

The scratch beader is a hand tool, and as such is essentially an extension of the craftsman. His skill and experience will be reflected in the quality of work. Since the cutter is shaped by hand, success with the scratch beader largely depends on the care taken in forming the cutter's profile. As with so many of the finer woodworking disciplines, scratch beading is something of an art. There is no substitute for experience.

The scratch beader is certainly not a production tool. Cutters are essentially one-of-a-kind, and should be used only for individual projects. Once the cutter has been worn and then re-sharpened, the profile will change — if only slightly — making it difficult to reproduce identical pieces.

Scratch beadings can be used for a variety of purposes. They will cut both with and across the grain. Unlike a plane or router, the scratch beader will not tear the wood as it cuts across the grain. When cutting a rabbet across the grain, however, or approaching a corner work in from that corner to avoid splintering or chipping the wood at the workpiece edge. As a rule, the scratch beader is a tool that is best used with hardwoods.

DRILL • SAW • SAND • ROUT VACUUM VISE™

MODEL 550 PATENT PENDING

NOW, a power vise for the wood working craftsman.

Powered by your shop vacuum cleaner. Securely holds your flat workpiece without marring.

Lets you work with both hands free. Perform any number of operations effortlessly.



FEATURED DEALERS:

ALL AMERICAN HOME CENTER Downey, California
TWEEDY HARDWARE South Gate, California

Dealer inquires invited or for the dealer in your area, write:

VACU-PRODUCTS COMPANY
DEPT. WJ 710

3801 Abbott Road • Lynwood, California 90262

CRAFTSMAN'S 54th YEAR of SERVICE to WOODWORKERS

**World's Largest Selection of
fine dimensioned HARDWOODS
and quality VENEERS**

42 VARIETIES Amaranth to Zebra
1/64" to 4" thick

Save on Wood, Tools, Supplies

Fast service on all your needs in choice kiln dried Wood and Veneers, Complete choice of Moldings, Trim, Hand and Power Tools, Lamp Parts, Upholstery Supplies, Clock Movements and Kits, Hard-to-Find Hardware, Finishing Materials, Books... over 4000 items in stock! Craftsman has been the Woodworker's best friend for 54 years... and we always save you money!



Send for **NEW CRAFTSMAN**
148 page **CATALOG**

OVER 4000 ITEMS
for your Wood Projects

Please enclose \$1.00 to help pay mailing and handling



CRAFTSMAN Wood Service Co.
Dept. E-94

1735 W. Cortland Ct., Addison, IL. 60101

The most common application of the scratch beader is for cutting intricate, unusual, or complicated bead-type moldings. It is better used cutting a quarter-round than a cove molding, because the quarter-round will require far less removal of material. Generally speaking, the scratch beader is a tool that will be most effective on smaller, narrower molding, as opposed to large, broad molding. Because the rounded shoulder will follow almost any arc it is especially suited for the difficult work of cutting moldings into curved stock, such as the arms and backs of some chairs, and the edges of round and oval tables. The scratch beader is also often used to apply a decorative molding on picture or mirror frame stock.

The scratch beader can be a handy tool for cutting beads into the panels for frame-and-panel doors, or for cutting fine grooves for inlay work. When cutting blind grooves, however, the end of the groove must be cleaned out with a chisel.

If there is a trick to using the scratch beader, it is in holding the tool so that the shoulder always rides firmly along the workpiece edge, with no variation in elevation at either end of the beader arm. If, for instance, the beader arm starts to ride up or down at one end, the cut will be sloppy and uneven. To minimize this problem we suggest continually readjusting the cutter so that after several passes the arm will always bottom on the workpiece. Each adjustment should lower the cutter about 1/16 in.

The scratch beader is also a potential money saver for the hobby craftsman. For many small jobs that call for expensive, bearing-guided router bits, you might do well to consider making a scratch beader instead. The work will take a little longer, but the money saved in foregoing the purchase of an expensive bit that will probably not be used again for years, is certainly worth the extra effort. For those of us on limited budgets (and who isn't) the scratch beader is a viable alternative to expensive bits and cutters.

Scratch beadings can be made in many different sizes to accommodate individual project requirements. Hobbyists find them irreplaceable for delicate miniature work, and a scratch beader can even be used in place of a wing cutter to cut the tambour grooves into the sides of a roll-top desk. In fact, by combining scratch bead and table-saw techniques, the creative woodworker can reproduce or invent practically any molding imaginable. 



Mortimer V. Schwartz
Mortimer Schwartz, President
Fine Tool Shops Inc.

My favorite wood drill bits...

and they're yours for an incredible \$9.95

It's a 14 piece set. 7 professional quality drill bits and 7 matching stop collars.

Advertised up to \$17.95

You won't find these in hardware stores. These are *brad point* wood drill bits. With brad points, you make the holes exactly where you want with no "jumping" or "walking". Each bit has two cutting spurs with extremely sharp flutes. You get router clean holes every time with none of the splintering that happens with ordinary metal drill bits.

No serious pro would drill without a stop collar when precise depth is important. In doweling, for instance. This stop collar set comes fitted with slotted locking screws for exact no-slip drilling of clean unsplintered holes.

Drill bit sizes are 1/8", 3/16", 1/4", 5/16", 3/8", 7/16" and 1/2". Use for all 3/8" chucks.

Call **800-243-1037** (CT call 797-0772)
OR SEND COUPON TODAY



YES, please send me your 14 piece wood drill bit and stop collar set. If I'm not perfectly satisfied, I understand I can get a complete refund by returning my order within thirty days.

☐ Check or money order enclosed. (Include \$2.00 for shipping and handling.)
Charge my ☐ VISA ☐ AMEX ☐ MasterCard ☐ Diners.

Signature _____

Account No. _____

Exp. Date _____

20 Backus Ave.
Danbury, CT 06810
Dept. WJ S4

Name _____

please print

Address _____

City _____

State _____

Zip _____

*Connecticut residents must include sales tax

OLSON

Band Saw Blades

Now finest made-in-America quality costs up to 50% less

For fast, accurate cutting in metal, wood or plastic, our premium quality blades are made from the finest high carbon steel to our own exacting standards. Precision set, filed or milled teeth provide clean, sharp cuts, longer blade life. We've got the blade length and tooth style that fits your saw and your cutting requirements.

Ask about our new blades for popular bench-top band saws.



FREE. SEND TODAY

for price sheets and Catalog 35WJ

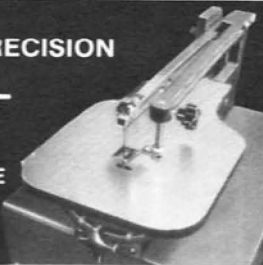
Name _____

Street _____

City _____ State _____ Zip _____

THE OLSON SAW COMPANY
A DIVISION OF BLACKSTONE INDUSTRIES, INC.
Bethel, CT 06801 • 203-792-8622

**AT LAST!
A HIGH-PRECISION
SCROLL
SAW
AT AN
AFFORDABLE
PRICE!**



Use this high-precision saw to make hundreds of profitable, unusual items... toys, name-bars, filigree work, clocks, holders... the list is nearly endless! Because the Model 1600 cuts so smoothly, sanding is virtually unnecessary!

BUILT FOR THE PROS!

The new Woodmaster Model 1600 gives you a big 16-in. throat capacity, 2-in. cutting depth, a generous, oversize worktable, ball-bearing drive... and much more!

30-DAY FREE TRIAL!

Send for Complete Facts! See how you can use the Model 1600 in your own shop for one full month without risk! MAIL COUPON TODAY!

Call Toll-Free
(800) 824-7888 Oper. 642

**SCROLL
SAW
FACTS**

Woodmaster Power Tools,
Dept. CD3
2849 Terrace
Kansas City, MO 64108

☐ YES! Please rush me Complete Information plus facts on Woodmaster's 30-Day FREE TRIAL Money-Back Guarantee!

Name _____

Address _____

City _____

State _____ Zip _____

Complete Plans

FOR THIS FINE EUROPEAN CABINETMAKER'S WORKBENCH



FOR ONLY \$2.50

- Detailed instructions, photos, and exploded view.
- Heavy, stable construction.
- Includes end vise and tail vise.
- Work surface 75" long, 15 3/4" wide, and 2 3/8" thick.
- Will last a lifetime.

This featured plan, plus 9 others, all in this best-selling back issue of
The Woodworker's Journal.

The Woodworker's Journal
P.O. Box 1629
New Milford, CT 06776

Enclosed is \$2.50. Please send me your Sept/Oct 1980 issue which contains the Workbench Plans.

Name _____

Address _____

City _____

State _____ Zip _____

Planecraft: A Woodworker's Handbook

If you are **\$9.95**
a woodworker,
you must own
this incredible book!



The definitive guide to one of woodworking's essential tools—the amazingly versatile plane. Step-by-step, plane after plane, master craftsman John Sainsbury provides meticulous instructions for beginner and seasoned pro alike to use an incredible variety of these marvelously efficient hand and power tools. With almost 300 easy-to-understand photos, diagrams and drawings and an information-packed 192 pages, learn how to assemble, adjust, sharpen, handle, set up and care for dozens of different planes—some ancient, others brand new—and best of all learn to use each to complete a wide variety of tasks. Discover how to:

- cut a groove or wide rebate
- make a raised panel
- fit drawers
- make mitred boxes
- create decorations
- square a piece of wood
- make several moulding styles
- make a butt, tongue & groove, dowel, corner, joints and more
- start mortises for haunched tenons
- make multiple reeds
- make return beads or toros
- make doors
- frame panels of doors
- tipping and facing
- many decorative applications
- the history of planes and technical advances

Whether you own or are buying any plane—block, rebate, plow, combination or multi, circular router, power or even a scraper—this book has all the information, even down to comparisons between manufacturers and models. Nothing is omitted, no basic operating procedure or specialized technique—making this a shop reference you can't afford to be without.

He covers every difficulty in planing, from simple problems like ridges on the planed surface (a result of poor sharpening techniques) to shooting an edge at various angles, with complete solutions. Plus—every contemporary plane maker, with technical analysis of each, and including a complete glossary.

Bonus! Projects galore. Each described with maximum clarity, step-by-step, with incomparable sequential drawings. This book is invaluable. If you are a woodworker, you must have this in your library. **Act now! Send your check for only \$9.95 (an incredible value) and we'll ship your book postage free.**

STERLING PUBLISHING CO., INC.
Two Park Ave., New York, NY 10016

Wood-1



Hand Crafted Desk by Oregon Pine Joinery.

**TUNG OIL
with
URETHANE
for greater
durability**



Deft, Inc., Irvine, CA 92714. Alliance, OH 44601.

Cabinetmakers' Supplies Hardwood Suppliers

As a service to our readers, **The Woodworker's Journal** periodically lists sources of supply for various woodworking products. In this issue we are listing companies that sell hardwood lumber via mail order, in both large and small quantities. This is by no means a complete listing, and we hope to include additional companies in future issues.

American Woodcrafters
1025 S. Roosevelt Ave.
Piqua, OH 45356
Domestic, imported

Austin Hardwoods
2119 Goodrich, WJ
Austin, TX 78704
Domestic, imported

Craftwoods
109 21 York Road
Cockeysville, MD 21030
Domestic, imported
Also carries hand and power tools.

Croy-Marietta Hardwoods, Inc.
Dept. WJ
121 Pike Street, Box 643
Marietta, OH 45750
Domestic

General Woodcraft
100 Blinman Street, WJ
New London, CT 06320
Domestic, imported
Also carries hand and power tools.

Hardwoods of Memphis
P.O. Box 12449, Dept. WJ
Memphis, TN 38182-0449
Domestic, imported
Also carries hand and power tools.

Kaymar Wood Products
Dept. WJ
4603 35th S.W.
Seattle, WA 98126
Domestic, imported

Kountry Kraft Hardwoods
R.R. #1, WJ
Lake City, IA 51449
Domestic, some imported

Leonard Lumber Company
P.O. Box 2396
Branford, CT 06405
Domestic, imported

Local Lumber Company
113 Canal Street
P.O. Box 825
Shelton, CT 06484
Domestic

McFeely Hardwoods & Lumber
43 Cabell Street
P.O. Box 3
Lynchburg, VA 24505
Domestic, imported

Native American Hardwoods
Route 1
West Valley, NY 14171
Domestic

Sterling Hardwoods, Inc.
412 Pine Street, WJ
Burlington, VT 05401
Domestic, imported

Wood World
1719 Chestnut, WJ
Glenview, IL 60025
Domestic, imported

Now at the Fine Tool Shops Forstner Bits at an unbeatable price

Forstner Bits are the most accurate and versatile of all woodbits. They produce flat bottom holes that are clean and round. Perfect for dowel and chair rungs holes and to secure table tops to their frames. These bits will easily bore any arc of a circle...even ovals, curves, or overlapping holes. They work smoothly in veneer, hardwood, even end grain and through knots. Won't walk, glide or dance when starting. Fit any electric drill or drill press with $\frac{3}{8}$ " or larger chuck.

Lowest Price Guarantee

If you can find these bits or any item you purchase from us at a lower price at any other mail order company, we'll refund the difference plus 10% of the lower price. It's our way of thanking you for helping us offer the lowest prices on the finest tools.

No Questions Asked Guarantee

If you aren't satisfied with any purchase you make from the Fine Tool Shops, send it back within 90 days. No questions asked. We'll promptly refund your money plus postage.

Why Buy by Mail from the Fine Tool Shops?

Because you get fine quality merchandise at unbeatable prices... and no sale is final until you're completely satisfied.

Don't Delay—Order Today!
Offer Ends Nov. 15, 1984.

Call Toll Free - 24 hours - 7 days - 800-243-1037

Or send today to:

The Fine Tool Shops, Inc., Dept. WJ94 P.O. Box 1262, 20 Backus Ave., Danbury, CT 06810



Set of 7
\$49.95

$\frac{1}{4}$ " thru 1"
($\frac{1}{8}$ " increments)



\$59.95 if purchased separately

Double Bonus Offer Get an even bigger value from the Fine Tool Shops!

15-piece
Forstner Bit Set

\$149.95

\$224.05 Value
($\frac{1}{4}$ " thru 2" bits)



Free— $2\frac{1}{8}$ " bit (\$29.95 Value)—
get 16 bits for the price of 15.

Free—Carousel (\$12.95 value) with
purchase of 15-piece set. Carousel
holds 15 bits and offers easy identification
indicating size of bit. Large
yellow letters on brown background.
Also, helps to prevent damage to bits.
A useful addition to every workshop.

- ☐ Set of 7 Forstner Bits—\$49.95
- ☐ With Carousel—\$54.90 (200-2537)
- ☐ Set of 15 Forstner Bits—\$149.95 plus Free $2\frac{1}{8}$ " bit and Free Carousel. (200-2595)
- ☐ Carousel Only—\$12.95 (200-2580)
- (Add a total of \$2.00 for shipping and handling)
- ☐ Just send Free 68 Page Full Color Catalog (\$3.00 Value)



P.O. Box 1262
20 Backus Ave.,
Danbury, CT 06810
Dept. WJ94

Check or money order enclosed for \$_____ (No COD's)
Charge to ☐ Master Card ☐ Visa ☐ Am Exp. ☐ Diners Club
Card No. _____

Name _____

Address _____

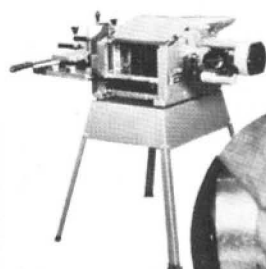
City _____

State/Zip _____

Free
CATALOG

NEW! ELEKTRA U.S.A.

The advanced technology woodworking system. One motor (2½ h.p.) powers a complete range of woodworking machines.



Jointer/
Planer/
Thicknesser
\$1023.50

Spindle Shaper
\$758.00



Unimex Motor
\$226.50



Lathe \$326.50



Not shown: 12", 3 h.p. "Combi" Table Saw—only \$380.00
Also available: Bandsaws, Dust Extractor. All prices F.O.B. Somerdale, NJ.
Dealer inquiries welcome. Call toll free 1-800-223-8600
Send \$1.00 for full color catalog to:

ELEKTRA BECKUM U.S.A. CORP., P.O. Box 24, Somerdale, NJ 08083

LIMITED SPACE IN YOUR WORKSHOP?



Our Modelmaker's Workbench

is the ideal solution for the smaller shop. Easily made by the intermediate woodworker, the bench features a good size work surface with a tool tray and seven finger-jointed drawers for extra storage and stability.

- Detailed instructions, photos and exploded views.
- Measures 34¼" high by 50½" long by 24" wide (not incl. vise).

—The Woodworker's Journal—

P.O. Box 1629, New Milford, CT 06776

Enclosed is \$2.50. Please send me your Sept/Oct 1983 issue which contains the Modelmaker's Workbench plans.

NAME _____

STREET _____

CITY _____

STATE/ZIP _____

FREE CATALOG!

Packed full of hundreds of top-quality items for the clockmaker, woodworker and home handyman
Earn extra income! Make beautiful gifts! Save time and money! Our free color catalog features top-notch kits, plans and supplies for building clocks, furniture, toys, lamps, music boxes and more! Many unique and unusual products. All at low, low prices! Mail coupon below or call us, TOLL-FREE 1-800-KLOCKIT! (556-2548)



The finest Westminster Chime precision weight driven Grandmother movement. Quality West German steel and brass construction. Slim three gear mechanism strikes full-toned melody on tuned rods. Attractive pendulum and weight shells included.
Prices start at just \$109.75 each!



Decorative, polished brass Tempus Fugit dial. Beautiful detailing. Perfect with Grandmother clock. Many styles to choose from.
Prices start at just \$8.50!

CALL TODAY FOR FREE CATALOG OR MAIL COUPON BELOW

TOLL-FREE 1-800-KLOCKIT
(556-2548)



NAME _____

ADDRESS _____

CITY _____

STATE _____

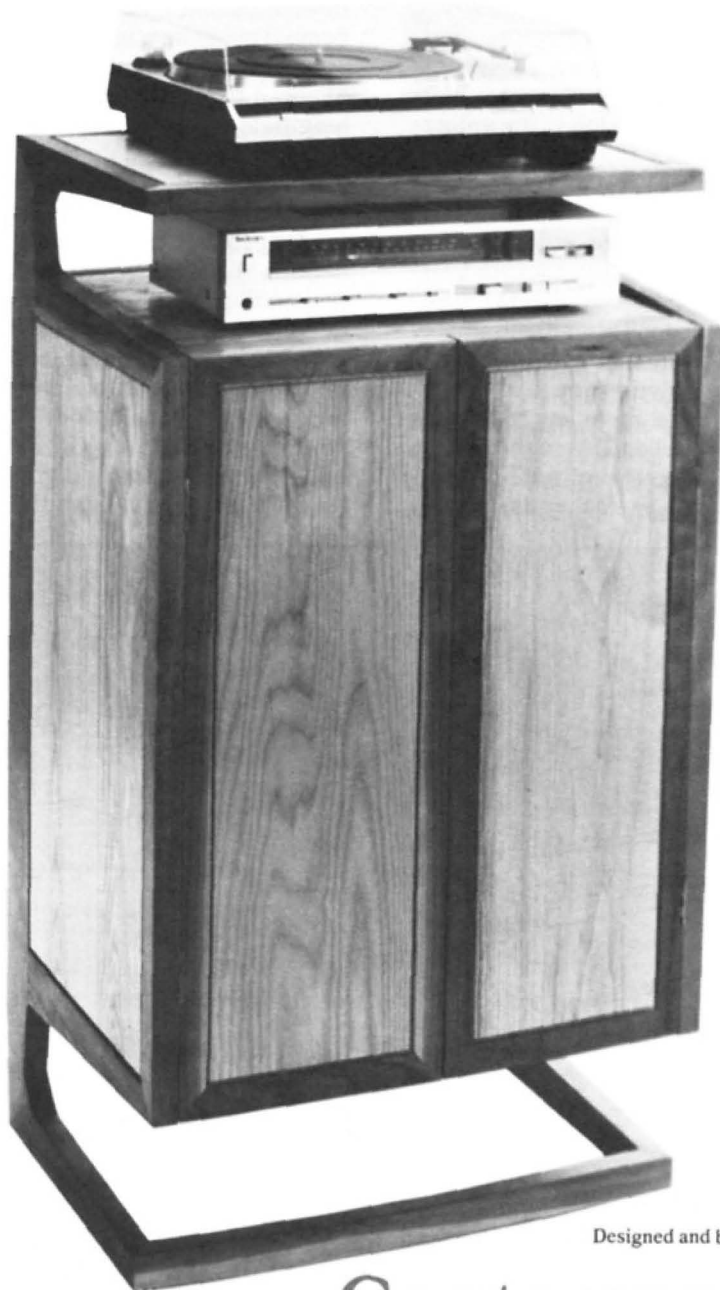
ZIP _____



KLOCKIT

DEPT. WJ94, P.O. BOX 542
LAKE GENEVA, WI 53147

CALL TOLL-FREE 1-800-KLOCKIT



Designed and built by Phil Bacon

Contemporary Stereo Cabinet

This contemporary stereo cabinet is one of the nicest designs that we have seen. The crisp angles and full panel construction lend this cabinet a distinct museum-piece quality. A combination of double-splined and mortise-and-tenon joinery, together with complicated miters and frame-and-panel construction, make this a project for the experienced woodworker.

The cabinet is designed to hold a complete stereo component system (not including speakers), in addition to a healthy supply of records and tapes. The top shelf is for the turntable, with the tuner located just below. The glass inner shelf (or shelves) will hold an amplifier and/or tape deck and tapes. Albums fit comfortably across the bot-

tom. Although our cabinet was constructed of cherry, with oak panels, any attractive combination of hardwoods should work well for this piece. As a rule, however, cabinets of this type look best when the panels are lighter in color than the frames.

Make the oak panels first. Because the panels are $\frac{3}{8}$ in. thick, a stock size not usually commercially available, it will be necessary to either thickness-plane $\frac{1}{2}$ in. stock, or resaw 1 in. stock to form these panels. Stock will have to be edge-glued to form the wider panels. An especially fine cabinetmaking technique is to bookmatch resawn 1 in. stock for the panels. The bookmatched stock is then planed to its final $\frac{3}{8}$ in. thickness. The two door panels (A) can be bookmatched, as can the side pan-

els (B) and shelf panel (C). Because they are less visible, the top and bottom panels (D) and back panel (E) need not be bookmatched. All panels are sized so that they extend $\frac{1}{4}$ in. into the panel dadoes in the cabinet frame.

The raised edge and $\frac{1}{4}$ in. radius profile of the panels (see detail) should be cut on the router table. Start with a straight cutter to make the flats, and use a $\frac{1}{2}$ in. core box bit to form the radius.

To build the cherry frame, which may be cut entirely from $\frac{5}{4}$ in. stock (nominal thickness $1\frac{1}{8}$ in.), begin by rough cutting all frame members. It is important that one edge of the frame members be trued, either with a jointer, or by hand. The two sides (F), shelf ends (G), top ends (H), bottom ends (I), and base ends (J) are first cut square. The tapers on parts G, H, and I narrow to a point where they are $1\frac{1}{8}$ in. square, while the taper on part J narrows to $1\frac{1}{8}$ by $1\frac{1}{2}$ in. These tapers may be cut with the bandsaw, or with the tablesaw using a tapering jig. Next, cut the stiles (K), rails (L), base front (M), shelf front (N), and the five stretchers (O). All these pieces are cut $1\frac{1}{8}$ in. square, except part M, which is $1\frac{1}{8}$ in. by $1\frac{1}{2}$ in.

The miters may now be cut. You will note that all miters are the standard 45 degrees, except where the shelf and sides meet — the shelf ends being mitered to 35 degrees, and the matching side ends being mitered to 55 degrees (see detail). The five stretchers (O) can be tenoned with the table saw dado-head, and the corresponding mortises can be cut by first drilling out each mortise, and then squaring it with the chisel. Although the mortise and tenon location of the shelf stretcher will be

(continued on next page)



close to the splines in the 35-55 degree miters, it should not actually interfere with these splines. Because the mortises extend across the miters, however, these mortises should be cut *after* the side assemblies are complete.

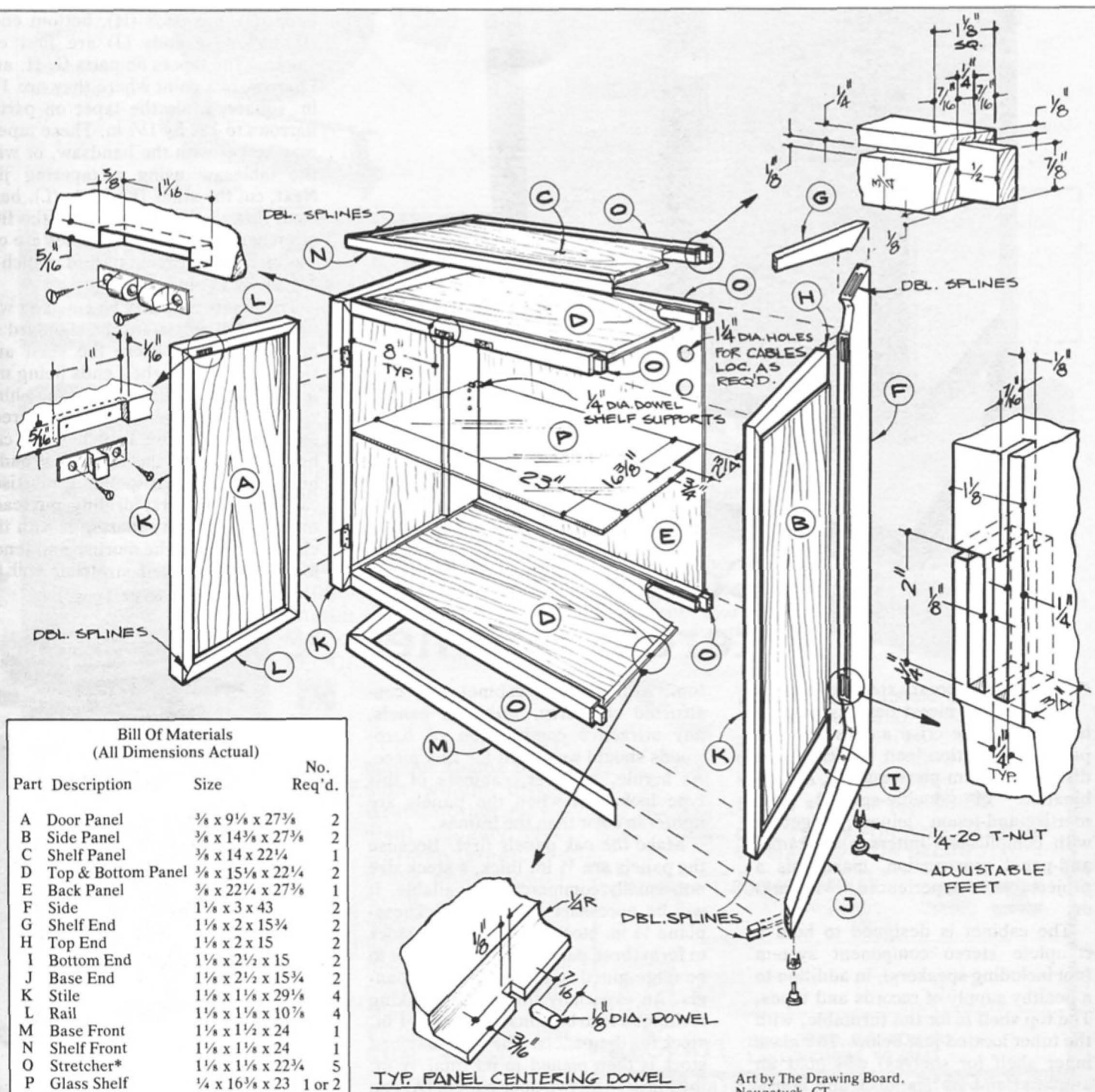
The 1/4 in. spline dados in the mitered corners (see detail), are best cut by setting up a router table jig that will enable you to gently lower the workpiece over a 1/4 in. plunge-cut router bit, with the jig serving as both a guide and a stop (see jig detail). Although a 45 degree guide board will work fine for the spline dados in all the 45 degree mitered corners, you will need to modify the jig with 35 and 55 degree guide boards in order to cut the spline

dadoes in the bastard size 35-55 degree shelf miter. The splines are cut from cherry which has been resawn to 1/4 in. thick. Remember, of course, that to provide an effective joint, the spline grain must always run perpendicular to the stock grain.

The 1/8 in. wide by 7/16 in. deep panel dadoes should be cut with the table saw. Take time, however, to first lay out the frame components and mark for each dado. This will eliminate the potential confusion of a dado cut into the wrong edge, or on the wrong side of the frame member. You will note that the panel dadoes in the frame members at the bottom of the five vertical panels, and at the ends of the

three horizontal panels are only 1/4 in. deep. This is because most expansion occurs side to side across the grain, as opposed to vertically along the grain's length.

Before the assembly process begins, notch panels B, C, D, and E to accept one end of the 1/8 in. diameter by 7/16 in. long panel centering dowels (see detail). You must also drill a corresponding 1/8 in. diameter by 1/4 in. deep dowel hole in each of the frame members at the panel ends. These panel centering dowels are important for the larger panels since they evenly distribute whatever tendency the panels have to come and go as they respond to changes in humidity.



Construct the two frame-and-panel side assemblies first. The $\frac{1}{4}$ in. and $\frac{1}{2}$ in. radii, and the angled cutouts at the top and base of these frames are made *after* the side frame assemblies are complete. Using the drill press, drill a $\frac{1}{2}$ in. diameter hole to make the $\frac{1}{4}$ in. radius, and a 1 in. diameter hole to make the $\frac{1}{2}$ in. radius. Then bandsaw between these holes to complete the cutout.

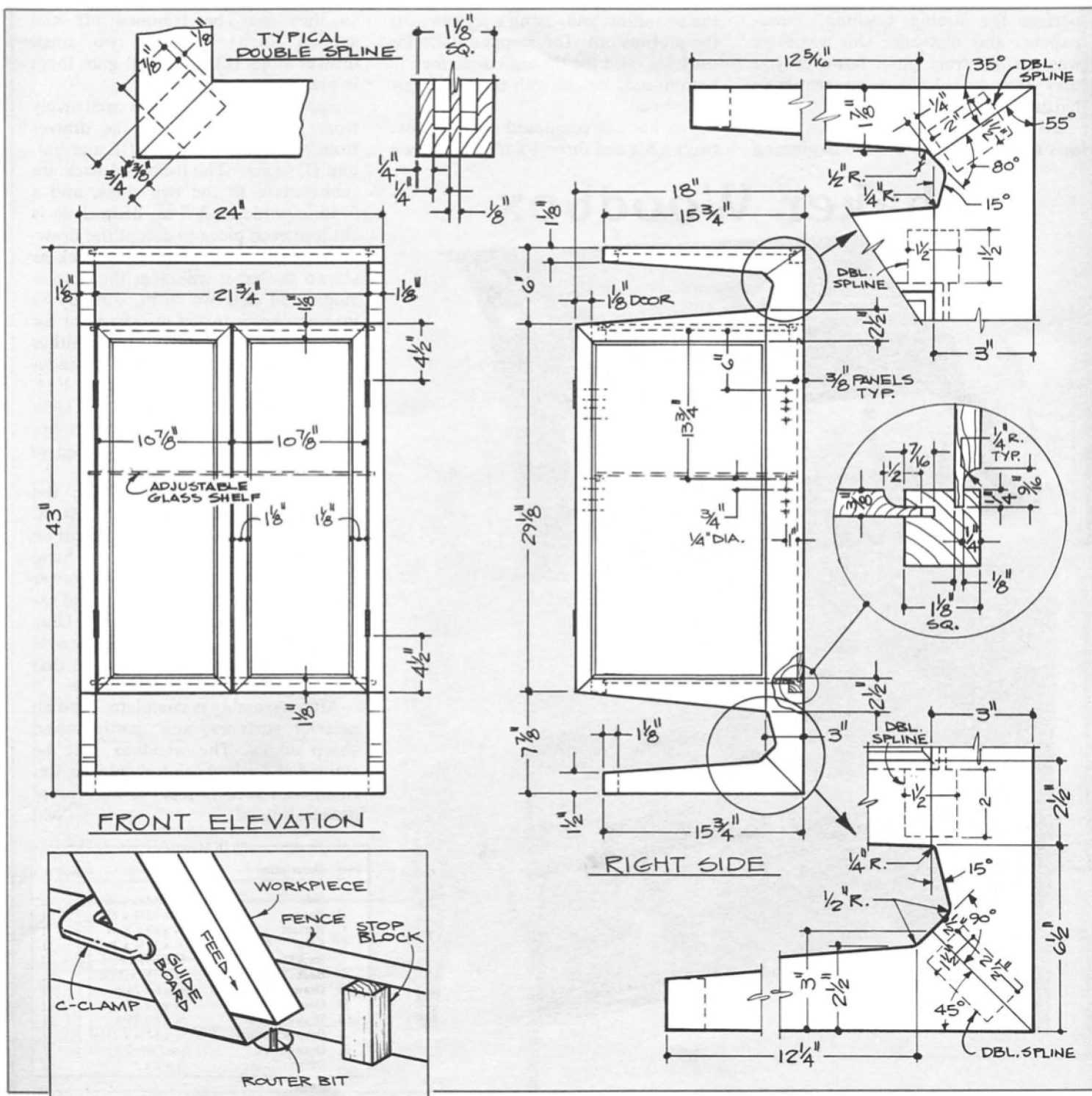
Now assemble the remaining frames and panels, together with the side assemblies, to complete the cabinet carcass. The cabinet doors are assembled separately. Mortise the doors and frame stiles to accept the 2 in. hinges. Any better quality brass-finish butt-

hinge will work well for hanging the cabinet doors. Also mortise the door stiles and cabinet edges (see detail) to accept the two ball-type catches. Finally, drill four $\frac{1}{4}$ in. diameter holes into the cabinet base to accept the $\frac{1}{4}$ -20 T-nuts and levelers. Both the ball catches and levelers are available from Craft Products Company, 2200 Dean Street, St. Charles, Illinois 60174. Order part no. 3231-F32 for the catches, and part no. 3263-L90 for a set of four levelers.

The glass shelf (P) is an item that must be custom cut at a glass shop. Check your interior cabinet dimensions before ordering the glass, and allow an $\frac{1}{8}$ in. all around so the shelf

will fit inside easily. The shelf is adjustable, supported on moveable $\frac{1}{4}$ in. dowels. Drill the dowel holes about 1 in. apart. Also, drill several $1\frac{1}{4}$ in. holes in the back panel, to accommodate speaker and electrical lead wires. The $1\frac{1}{4}$ in. diameter holes are necessary to allow the plug ends of the wires to pass through.

The stereo cabinet will look best if it is finished naturally. Fine sand the frames and panels, gently softening the cabinet corners. Do not sand over the raised panel radius, however. This sharp edge is important to the cabinet's crisp, contemporary look. Rub in three coats of Watco penetrating oil for a protective satin sheen. W&J



The seasons roll along, and we expect that many of our fellow woodworkers have already laid in a healthy supply of cord wood for the cold winter months ahead. If you burn wood, no doubt you have long ago resigned yourself to accepting the accompanying mess of sawdust, twigs, bits and pieces of bark, leaves, bugs, and plain old dirt. Although there is no way around the fact that there will always be some mess when you burn wood, a wood box will go a long way toward reducing and controlling that mess.

This Shaker woodbox is one of the better woodbox designs that we have seen. In addition to a generous cordwood bin, it features a drawer that is perfect for storing kindling, newspapers, and matches. Our woodbox was crafted from pine, however you may wish to substitute an attractive hardwood instead.

To simplify construction, and make this an ideal project for the beginning

woodworker, we decided to use dowel joinery throughout. (The advanced woodworker may wish to substitute dovetail joinery.) The entire piece can be constructed from $\frac{3}{4}$ in. thick material. Standard 1 x 6 and 1 x 8 pine boards, readily available at any lumberyard, are ideal for this project.

Begin by edge-gluing several 1 x 8 boards to form each of the 2 sides (A). Since 1 x 8 boards have an actual width of only $7\frac{1}{4}$ in., the two boards should give you exactly the $14\frac{1}{2}$ in. width needed for each side. Also glue up $\frac{3}{4}$ in. boards to form the base (B), bottom (C), front (D), and drawer bottom (J).

Referring to the illustration, now transfer the top and bottom contours to the two sides, and, using a jig saw, cut the profiles out. The stopped dado for the base, and the through dado for the bottom may be cut with the table saw dado-head.

The back is composed of 5 boards, two 1 x 8's and three 1 x 6's. As shown

in the illustration, the boards are ship-lapped for strength. The rabbets in each board, to create this ship-lapped effect, are cut with the dado-head, as are the rabbets along the back inside edge of the sides. After the base, bottom, front, two sides and back boards have all been cut to size, you may begin assembly.

Glue the sides, base, bottom, back boards and front together first. Do not glue the back boards along the ship-laps, however, and leave a $\frac{1}{8}$ in. space between these boards (See Detail) to allow for expansion and contraction in the wood. After the assembly has dried, drill out the dowel holes as indicated. Cut the dowels slightly long, so they may be trimmed off and sanded flush. Cut the two small drawer stops (L) next, and glue them in place.

The drawer is also made exclusively from $\frac{3}{4}$ in. boards. Cut the drawer front (G), sides (H), back (I), and bottom (J) to size. The front and back are rabbeted to fit the two sides, and a $\frac{5}{16}$ in. wide by $\frac{3}{8}$ in. deep dado is cut into each piece to accept the drawer bottom. Notch the drawer back as shown so that it will clear the drawer stops, and drill two $\frac{1}{2}$ in. wide by $\frac{1}{2}$ in. deep holes in the drawer front for the knobs (K). These knobs may either be turned on a lathe or ordered ready-made from: Shaker Workshops, P.O. Box 1028, Concord, Mass. 01742. Telephone: (617) 646-8985. Order Part No. W341. A package of 10 is priced at \$3.75 postpaid.

In traditional Shaker fashion, the drawer bottom is a bevel edged $\frac{3}{4}$ in. board. The bevels may either be cut on the tablesaw, or shaped with the hand plane. You will note that the drawer bottom is sized to allow for $\frac{1}{8}$ in. of expansion on all sides (See Detail). Glue up the drawer carcass, using dowels where shown, however take care that no glue gets on the drawer bottom.

After assembly is complete, sand all exterior surfaces, and gently round sharp edges. The woodbox may be stained if desired, and should be finished with several coats of waterproof penetrating oil.

Wvj

Shaker Woodbox



Bill Of Materials

Part	Description	Size	No. Req'd.
A	Side	$\frac{3}{4}$ x $14\frac{1}{2}$ x $35\frac{1}{2}$	2
B	Base	$\frac{3}{4}$ x $13\frac{3}{4}$ x $25\frac{1}{4}$	1
C	Bottom	$\frac{3}{4}$ x 13 x $25\frac{1}{4}$	1
D	Front	$\frac{3}{4}$ x $11\frac{3}{4}$ x 26	1
E	Back (Narrow Boards)	$\frac{3}{4}$ x $5\frac{1}{2}$ x $25\frac{1}{4}$	3
F	Back (Wide Boards)	$\frac{3}{4}$ x $7\frac{1}{4}$ x $25\frac{1}{4}$	2
G	Drawer Front	$\frac{3}{4}$ x 6 x $24\frac{1}{2}$	1
H	Drawer Side	$\frac{3}{4}$ x 6 x 13	2
I	Drawer Back	$\frac{3}{4}$ x 6 x $24\frac{1}{2}$	1
J	Drawer Bottom	$\frac{3}{4}$ x $12\frac{1}{2}$ x $23\frac{1}{2}$	1
K	Drawer Pull	See Detail	1
L	Drawer Stop	$\frac{1}{4}$ x 2 x 3	2

Bongo Box

by Johanna Walton

The bongo box is an ancient instrument that most likely evolved from a hollow log. The Aztecs, Mayans, and Incas in South and Central America, are but a few of the many tribal civilizations who used the bongo box in ritual and dance.

The bongo box is played by striking the different sized wooden tongues or keys. The sound is generated by the vibration of these tongues against air inside the box's hollow core. To experience the "feel" of this sound, place your hand over the sound hole while the keys are played.

Despite its apparently simple design, we have discovered that the construction of a box that will demonstrate good resonant quality requires adhering to very strict parameters. Type of material, thickness of stock — for top, bottom, and sides — size and shape of the box, size and location of the sound hole, width, length, and shape of the "tongues" and their distance from box sides — all these elements impact on the type of sounds and the box's resonant quality. Although we built a to-

tal of four boxes in various shapes and using different materials, none worked nearly as well as this first box. Because there are so many separate factors that effect the tonal quality, we strongly recommend carefully following our original design for best results.

The bongo box is built from $\frac{3}{4}$ in. redwood and cedar, with a $\frac{1}{8}$ in. mahogany-ply bottom. All joints are simply glued, butted tight and clamped. Begin by cutting the redwood sides (A) and ends (B) to size. Glue up and clamp these four sides. Next, cut the cedar top (C) and mahogany-ply bottom (D). Both these pieces should be cut slightly oversize, so they may later be sanded flush.

The tongue pattern is cut out *after* the box has been assembled. Transfer the illustrated grid pattern to the bongo box top, and first drill out the $\frac{3}{8}$ in. holes. These holes serve as starting points for the saber saw as you cut the individual tongues. Use a fine tooth metal cutting blade for the smoothest possible cut.

After the cutouts are complete, take

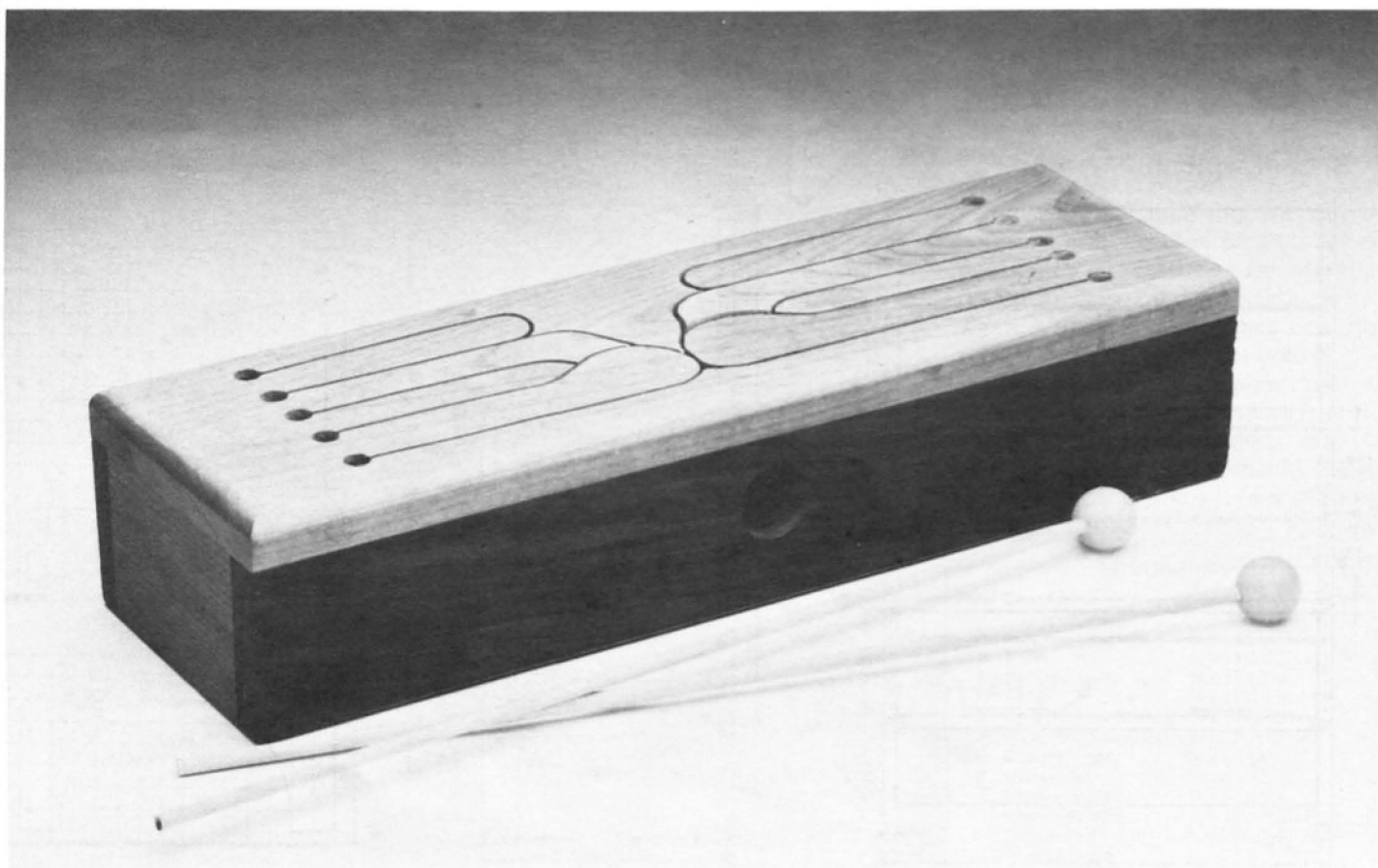
a hacksaw blade or thin file and carefully clean out the kerfs. This is especially important since any wood chips or fuzz that is caught in the kerfs will cause the keys to sound flat.

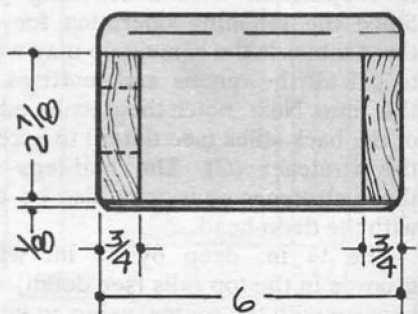
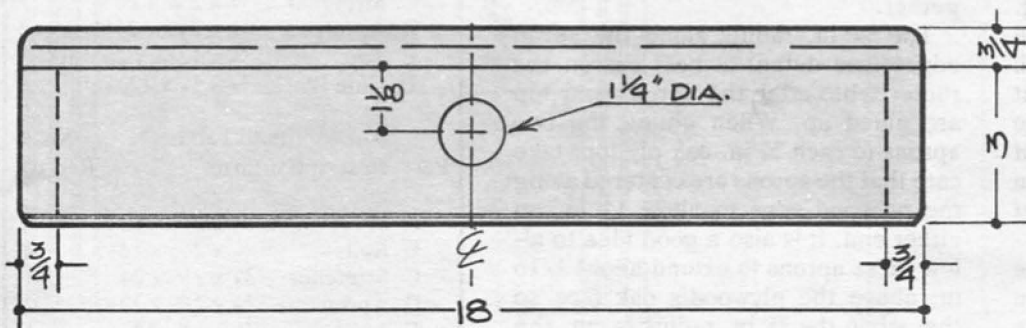
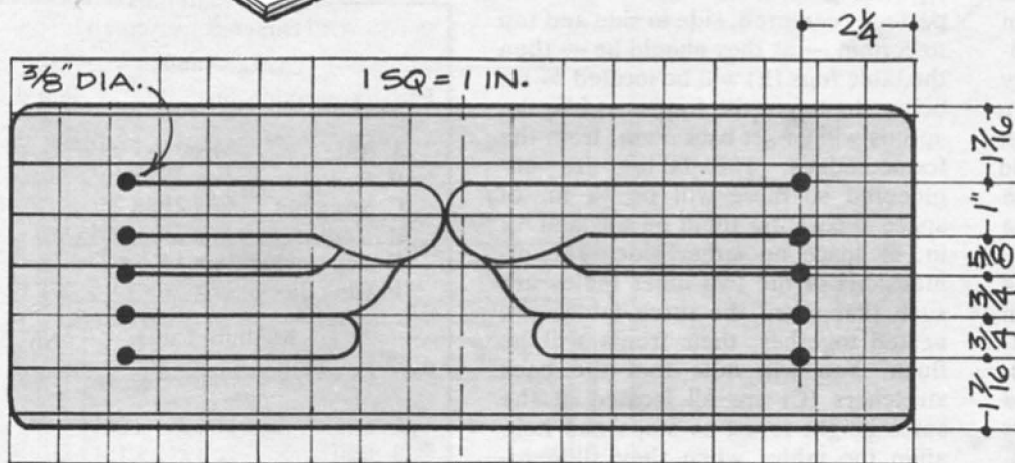
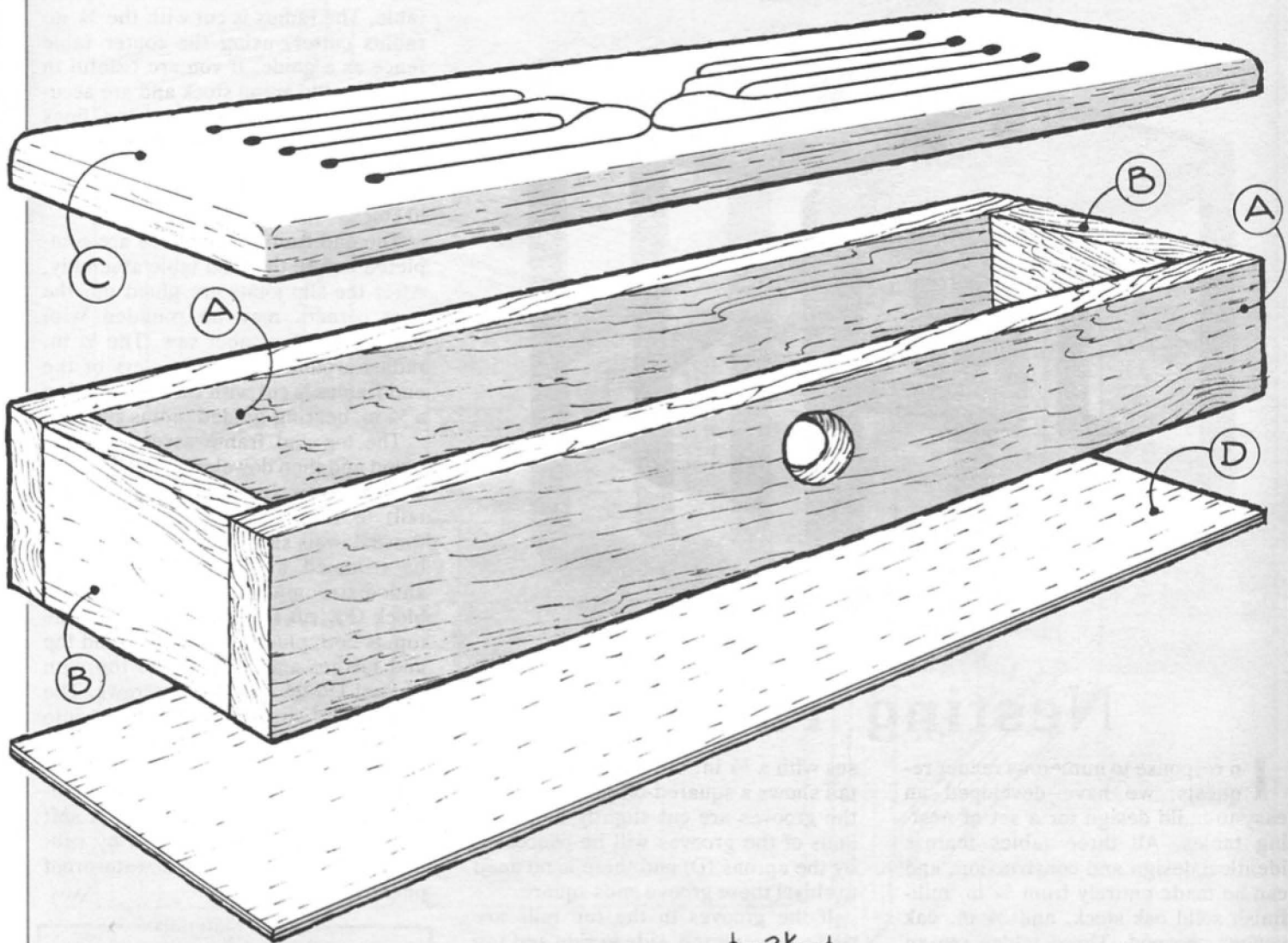
The $1\frac{1}{4}$ in. sound hole in the box side may either be cut with a Forstner bit on the drill press, or by first drilling a $\frac{3}{8}$ in. starter hole, and then cutting the circle out with the saber saw. The two drum sticks are simply $\frac{1}{4}$ in. dowel rod epoxied into plastic "jack" balls.

The bongo box looks best with a natural finish, achieved by rubbing in lemon or tung oil. WJ

Bill Of Materials
(All Dimensions Actual)

Part	Description	Size	No. Req'd.
A	Side	$\frac{3}{4} \times 2\frac{1}{8} \times 18$	2
B	End	$\frac{3}{4} \times 2\frac{1}{8} \times 4\frac{1}{2}$	2
C	Top	$\frac{3}{4} \times 6 \times 18$	1
D	Bottom	$\frac{1}{8} \times 6 \times 18$	1







Nesting Tables

In response to numerous reader requests, we have developed an easy-to-build design for a set of nesting tables. All three tables feature identical design and construction, and can be made entirely from $\frac{3}{4}$ in. mill-finish solid oak stock, and $\frac{3}{4}$ in. oak veneer plywood. These tables are an ideal project for the beginning woodworker, although their contemporary look requires that special care be taken with all cuts and joinery to insure that seams are even and tight. To build each of the tables, simply refer to the copy and illustrations, in combination with the appropriate bill of materials.

The nesting table frames feature a simple slip-joint mortise and tenon construction (see detail). Begin by cutting to size the stiles (A) and rails (B). Both the tenons in the stile ends, and the matching mortises in the rail ends are cut using the table saw dado-head, in conjunction with a tenoning jig. Since the tenoning operation for all three tables is the same, you may wish to cut all the tenons and mortises at this time. Next, notch the outside edge of the back stiles (see detail) to accept the stretcher (C). The half-laps on these stretcher ends may also be cut with the dado-head.

The $\frac{1}{4}$ in. deep by $\frac{3}{4}$ in. wide grooves in the top rails (see detail) are best cut with the router, using an edge guide. If you don't have a $\frac{3}{4}$ in. flat-bottom bit, simply make several pas-

ses with a $\frac{1}{2}$ in. bit. Although the detail shows a squared-off groove end, if the grooves are cut slightly long, the ends of the grooves will be concealed by the aprons (D) and there is no need to chisel these groove ends square.

If the grooves in the top rails are perfectly centered, side to side and top to bottom — as they should be — then the table tops (E) will be located $\frac{3}{4}$ in. below the top of the frames, while the aprons will be set back $\frac{1}{2}$ in. from the frame edges. The tables are engineered so there will be $\frac{1}{4}$ in. of space separating them on top and $\frac{1}{4}$ in. of space on either side. The dimensions of the two inner tables are such that when the three tables are nested together, their fronts will be flush. You will note that the back stretchers (C) are all located at the same height to act as stops and help align the tables when they slide together.

The $\frac{3}{4}$ in. radius along the apron edges (see detail) is best cut on the router table after the aprons and top are glued up. When gluing the two aprons to each $\frac{3}{4}$ in. oak ply top, take care that the aprons are centered along the plywood edge to allow $\frac{1}{4}$ in. on either end. It is also a good idea to allow these aprons to extend about $1\frac{1}{16}$ in. above the plywood's oak face so that when the $\frac{3}{4}$ in. radius is cut, the apron's top edge will be brought down perfectly flush with the oak face. To

cut this radius, flip the glued-up apron and oak ply top over on the router table. The radius is cut with the $\frac{3}{4}$ in. radius cutter, using the router table fence as a guide. If you are careful in selecting the apron stock and are accurate with your cuts, the glue lines where the aprons and top meet will be almost invisible, giving the assembly the appearance of a single piece of solid stock.

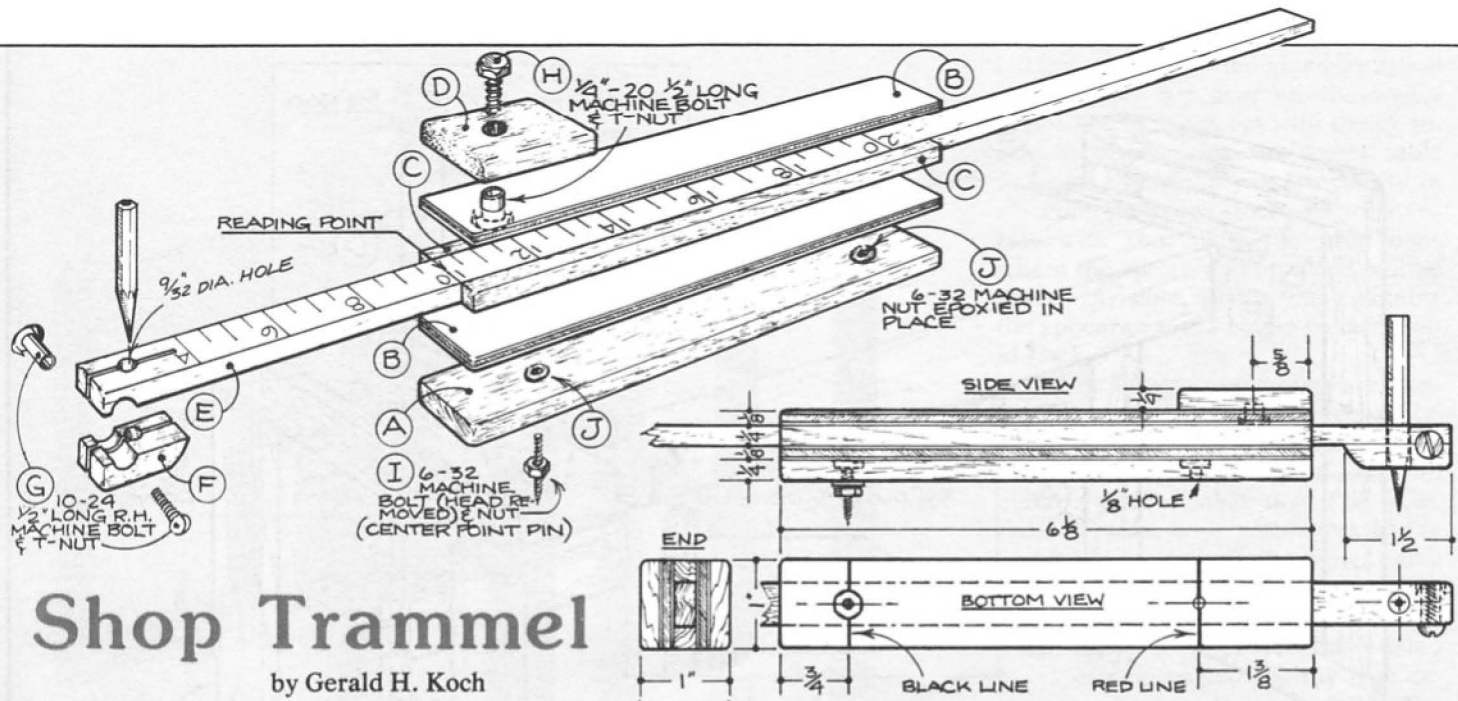
The end frame assemblies are completed before the final table assembly. After the slip joints are glued up, the four corners may be rounded with either a band or saber saw. The $\frac{1}{4}$ in. radius around both perimeters of the end frames is cut with the router using a $\frac{1}{4}$ in. bearing-guided radius cutter.

The top and frame assemblies are glued and then doweled together using $\frac{3}{8}$ in. dowels angled slightly (see detail) to create a locking effect. Cut these dowels slightly long so they may be trimmed and sanded flush. For added strength, a $\frac{3}{4}$ in. square glue block (F), cut the same length as the top, is both glued to the frame and top and further anchored to the top with several $1\frac{1}{4}$ in. long wood screws. The half-lapped stretcher (C) is glued into the corresponding notches in the back stiles.

Final sand the tables, gently rounding all remaining sharp edges. A soft satin finish may be obtained by rubbing in several coats of a waterproof penetrating or tung oil.

Bill Of Materials (All Dimensions Actual)

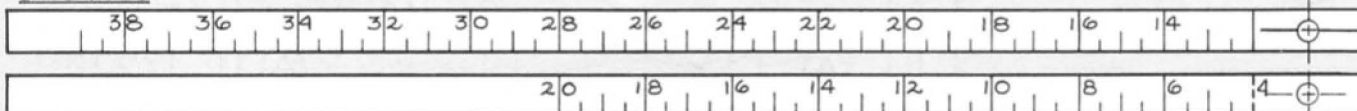
Large Table			
Part	Description	Size	No. Req'd.
A	Stile	$\frac{3}{4} \times 2\frac{1}{2} \times 29\frac{3}{4}$	4
B	Rail	$\frac{3}{4} \times 2\frac{1}{2} \times 16$	4
C	Stretcher	$\frac{3}{4} \times 2\frac{1}{2} \times 28$	1
D	Apron	$\frac{3}{4} \times 2\frac{1}{2} \times 26\frac{1}{2}$	2
E	Top	$\frac{3}{4} \times 13\frac{1}{2} \times 27$	1
F	Glue Block	$\frac{3}{4} \times \frac{3}{4} \times 13\frac{1}{2}$	2
Medium Table			
Part	Description	Size	No. Req'd.
A	Stile	$\frac{3}{4} \times 2\frac{1}{2} \times 26\frac{1}{4}$	4
B	Rail	$\frac{3}{4} \times 2\frac{1}{2} \times 15\frac{1}{4}$	4
C	Stretcher	$\frac{3}{4} \times 2\frac{1}{2} \times 26$	1
D	Apron	$\frac{3}{4} \times 2\frac{1}{2} \times 24\frac{1}{2}$	2
E	Top	$\frac{3}{4} \times 12\frac{3}{4} \times 25$	1
F	Glue Block	$\frac{3}{4} \times \frac{3}{4} \times 12\frac{3}{4}$	2
Small Table			
Part	Description	Size	No. Req'd.
A	Stile	$\frac{3}{4} \times 2\frac{1}{2} \times 22\frac{3}{4}$	4
B	Rail	$\frac{3}{4} \times 2\frac{1}{2} \times 14\frac{1}{2}$	4
C	Stretcher	$\frac{3}{4} \times 2\frac{1}{2} \times 24$	1
D	Apron	$\frac{3}{4} \times 2\frac{1}{2} \times 22\frac{1}{2}$	2
E	Top	$\frac{3}{4} \times 12 \times 23$	1
F	Glue Block	$\frac{3}{4} \times \frac{3}{4} \times 12$	2



Shop Trammel

by Gerald H. Koch

BLACK SIDE



RED SIDE

Despite its diminutive size, this little trammel will scribe circles anywhere from 4 to 39 in. in diameter. It is a tool that will take over where the average compass leaves off.

Although our trammel was crafted from walnut, mahogany-core birch plywood, and cherry, other woods can be substituted with equal success.

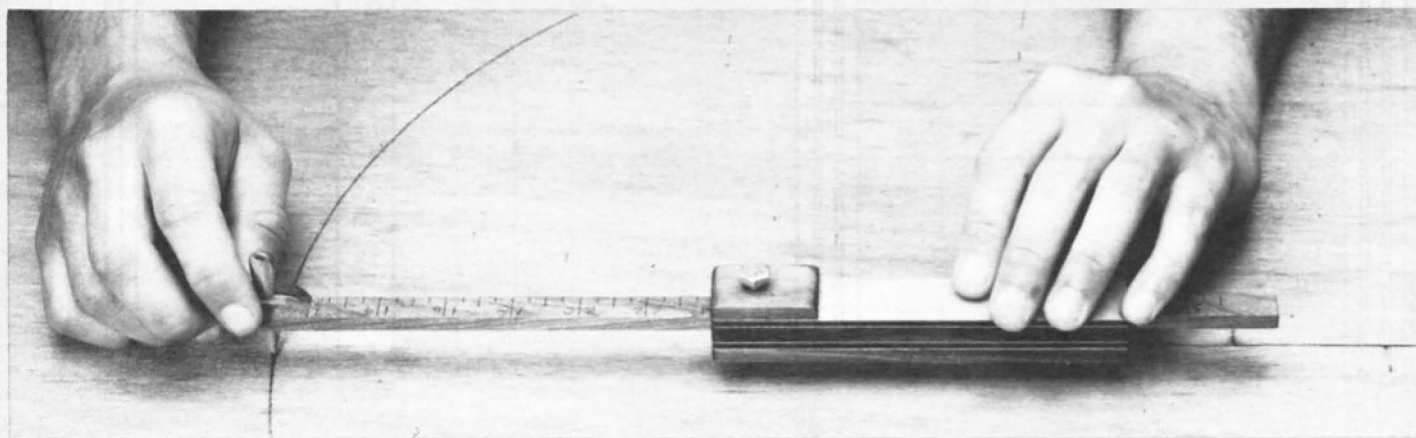
The secret of this trammel's versatility is a reversible sliding arm (E), used in conjunction with a movable center point pin (I). The trammel is used with either the red side of the sliding arm facing up and the center point pin located at the red line setting (for circles between 4 and 20 in. in diameter), or with the black side of the sliding arm facing up and the center point pin located at the black line setting (for circles between 12 and 39 in. in diameter). The circle's diameter is set by adjusting the sliding arm so that the desired diameter will be even with the end of the trammel body. This is the reading point. If, for instance, the circle is to be 10 in. in diameter, the center point pin must be located in the red setting and the 10 on the red side of the sliding arm must be even with the end of the trammel body.

To make the trammel, first cut the various component parts to size as shown in the illustration. Drill the 1/8 in. diameter screw holes into section A of the trammel body and mortise out for the 6-32 machine nuts (J). The two 6-32

nuts are then set into part A with epoxy glue. The measurements of all parts and the position of these nuts must be exact if the trammel is to be depended on for accurate circles. To make the movable center point pin (I), use a hacksaw to cut the head off of a 3/4 in. long 6-32 machine bolt, then sharpen a point on one end and use epoxy glue or solder to join a 6-32 nut onto the bolt as shown. Next, glue part D and top section B together, and drill out the hole to accept the 1/4-20 machine bolt and matching T-nut (H). Note that it will be necessary to mortise the bottom of part B slightly so the T-nut will be flush with that surface. Glue together parts E and F to form the sliding arm and using a 9/32 bit, drill out the pencil hole. Next drill out across the arm to accept the 10-24 round-head machine bolt and matching T-nut that will be used to secure the marking pencil. Finally, cut the lengthwise kerf as shown into the end of the arm.

Glue the trammel body assembly together, taking care so the arm will slide easily through without binding. Transfer the illustrated black and red units of measure to their respective sides on the trammel arm, using a black pen for the black side and a red pen for the red side. Also scribe the black and red lines across their respective center point locations as shown on the underside of the trammel body. Finish with a good penetrating oil.

WwJ



Although we have seen letter openers take many unusual shapes and forms, this jackknife letter opener is certain to be an instant conversation piece. It is an ideal project for that special section of scrapwood that was so richly grained you simply didn't have the heart to discard it.

Our letter opener was crafted from walnut and maple, with brass pins. Use only hardwoods, and for contrast make the body assembly and blade from different woods. You may substitute wooden dowels or steel for the brass pins, if necessary.

To make the knife, transfer the illus-

trated patterns to $\frac{1}{4}$ in. thick stock, and cut out the blanks with either a band, saber, or coping saw. Then, with a file, shape the knife blade to a fine, sharp edge. After rough sanding the blanks, lay out the brass pin locations. Drill out the $\frac{1}{4}$ in. blade pin hole first. The blade is held firm by a simple cam, and you will probably have to fine tune this cam and the center spacer to obtain the smoothest possible action as the knife is opened and closed. Drill the $\frac{3}{16}$ in. pivot pin hole next and dry-assemble the knife.

It is especially important in the assembly that the spacer end rides tight

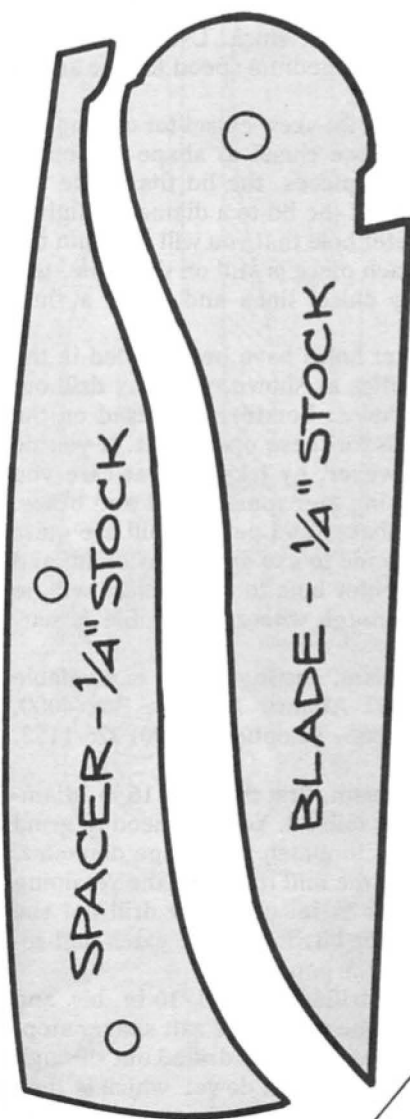
against the blade cam. Set the spacer to provide constant tension on the blade cam, and then clamp the knife end so that when the end pin hole is drilled, the spacer's tension will not be lost.

Reassemble the knife, and epoxy both the blade pin and the pivot pin into the two knife sides, being careful to avoid getting any epoxy on either the blade or spacer. The end pin may also be epoxied in place.

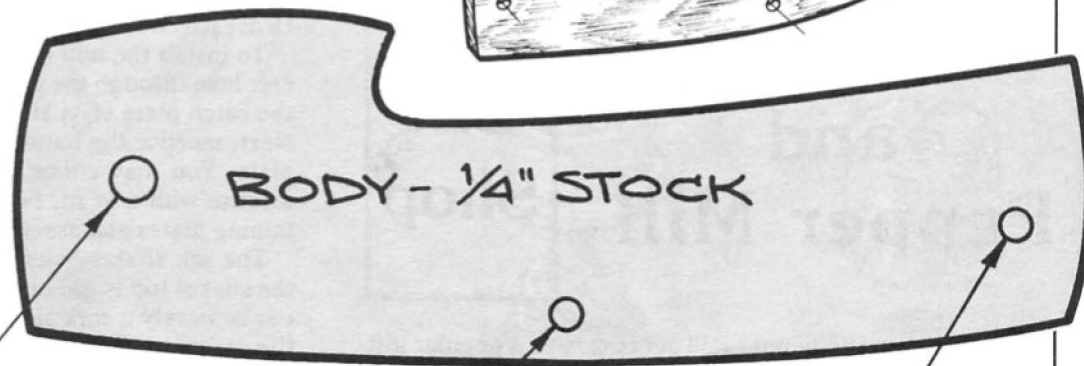
Fine sand the knife, and rub to a satin finish with tung oil. Wwj

Jackknife Letter Opener

by A.T. Johnson



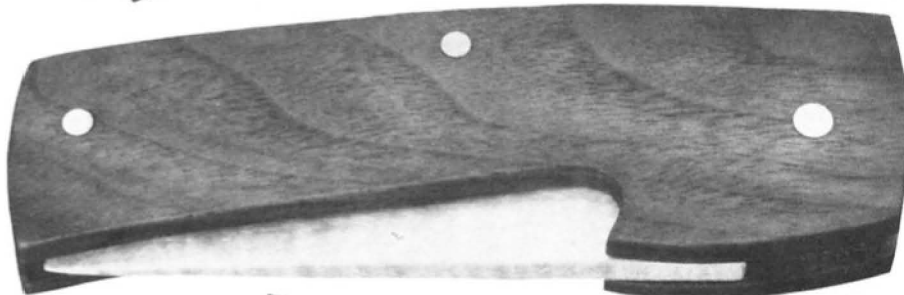
The
Gift
Shop



$\frac{1}{4}$ " BLADE PIN

$\frac{3}{16}$ " PIVOT PIN

$\frac{3}{16}$ " END PIN





Salt Shaker and Pepper Mill

The
Gift
Shop

A salt shaker and pepper mill set is always a popular gift item. Store bought wooden salt and pepper sets seem to have a predictable mediocre quality, largely because of the sameness of the wood from which they are made. As a

craftsman, you have the opportunity to select a wood that will be truly distinctive. If you are fortunate enough to locate an especially attractive length of wood, such as the finely spalted maple we used, you may just decide to keep the set for yourself.

You will need two turning blocks at least 2 1/4 in. square and 12 in. long for this project. Since most commercial wood suppliers do not stock material thicker than 2 in., you may need to mail-order the wood turning blocks. Turning squares of cherry, walnut, mahogany, oak, maple and several other suitable woods are available from: Constantine's, 2050 Eastchester Road, Bronx, New York 10461. Telephone: (800) 223-8087.

One other alternative is to make turning blocks yourself, by laminating sections of thinner stock.

Begin this project by trimming the corners off the turning blocks with the tablesaw. Because both the salt shaker and pepper mill have two separate parts — the lid and the body — you must separate each 12 in. long turning square into two smaller squares, 3 in. and 9 in. each in length. This will allow about an inch of waste for cut-offs on either end of each piece. Cutting both the lid and body from the same piece of turning stock will also result in the closest possible grain and color match.

After each piece is mounted in the lathe, round it over with the 3/4 in. gouge and then, using a pencil and following the illustrated grid pattern, transfer the high and low intersecting points of the profile to the stock. Use a slow lathe speed for rounding over, and a medium speed for the actual turning.

We recommend using a 1/2 in. skew chisel for cutting the bevels and a 1/2 in. round-nose chisel to shape the body. You will note that with both pieces, the lid fits inside the body. Turn the inner flange of the lid to a diameter slightly less than the 1 1/4 in. diameter hole that you will drill into the top of each body. While each piece is still on the lathe, use sandpaper to remove any chisel lines and apply a fine, smooth finish.

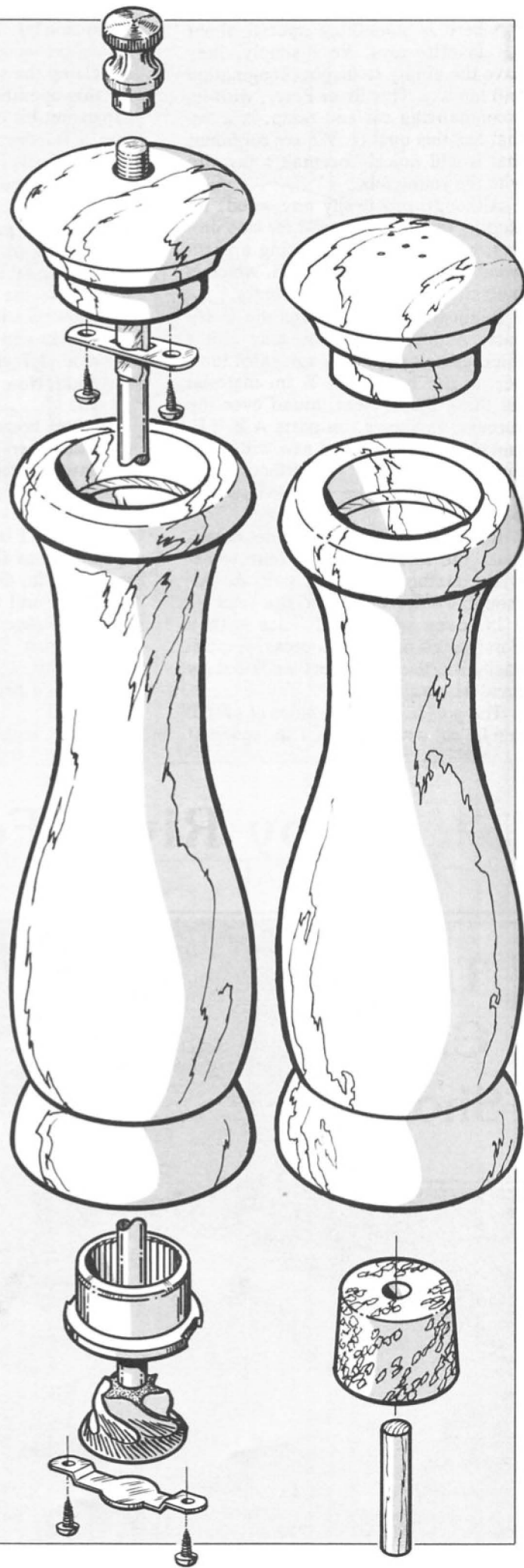
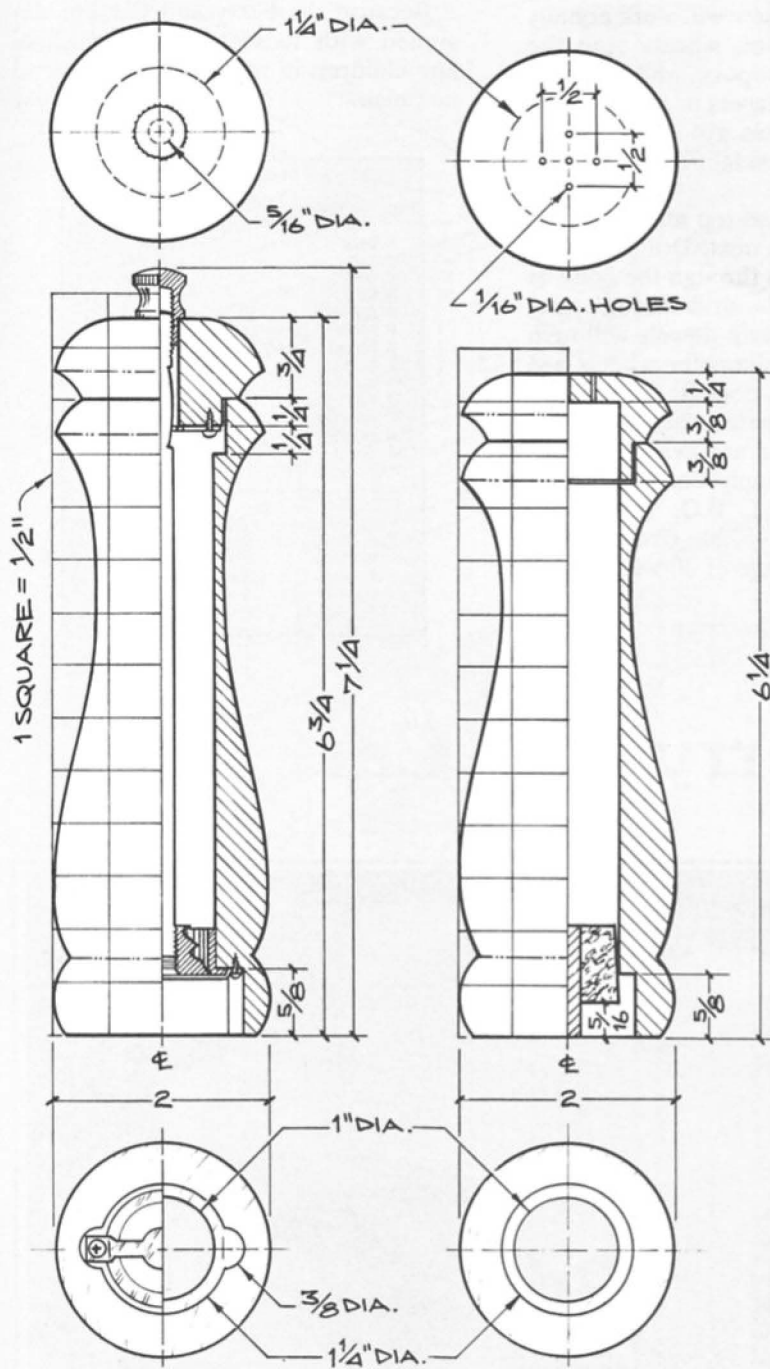
After the 1 1/4 in. diameter holes have been drilled in the top and bottom of both bodies as shown, you may drill out the 1 in. diameter center holes. Forstner bits used on the drill press are the best tools for these operations. If you do not have a drill press, however, by taking great care you could drill out the holes using an expansion bit and brace. The walls of both the salt shaker and pepper mill are quite thin in places, and if you decide to use an expansion bit and brace, by decreasing the center hole to 7/8 in. there will be less chance of breaking through where the profile is narrowest.

The pepper mill mechanism, costing \$6.20, is available from: Woodcraft Supply, 41 Atlantic Avenue, Box 4000, Woburn, Massachusetts 01888. Telephone: (800) 225-1153. Order part no. 16N20-D.

To install the mill mechanism, first drill a 5/16 in. diameter hole through the pepper mill lid. You will need to grind the catch plate ends slightly to match the flange diameter. Next, mortise the bottom of the mill to accept the retaining plate. You may either use a 1/4 in. chisel, or drill out the mortise with a 3/8 in. Forstner bit. Install the catch and retaining plates and assemble the pepper mill.

The salt shaker holes are drilled with a 1/16 in. bit, and the shaker top is glued onto the body. The salt shaker stopper is merely a cork sanded to size, and drilled out through the center to accept a section of 1/4 in. dowel which is then glued in place. This dowel acts as a tiny knob, facilitating the removal of the cork when the salt shaker needs refilling.

Stain the mill and shaker to suit and finish with tung oil.



There is something special about favorite toys. Very simply, they have the ability to inspire imagination and fantasy. This River Ferry, with its accompanying car and ramp, is a toy that has this quality. We are confident that it will quickly become a favorite with the young folk.

Although practically any wood, including pine, can be used for this project, we recommend choosing a hardwood such as maple or birch, which is both strong and resistant to nicks.

Begin by cutting to size the Ferry parts A through G. You may either thickness-plane 1 in. rough-sawn lumber, or use mill-finish $\frac{3}{4}$ in. material for these parts. Next, round over the corners, as shown, on parts A,B,E,F, and G. A saber or band saw will make quick work of this job, although the corners can also be rounded on the bench sander.

Referring to the underside detail, mark the location of the four wheel wells on the bottom of part A. Although we cut the $1\frac{1}{2}$ in. diameter by 1 in. deep wheel well holes with a Forstner bit on the drill press, you can easily mortise the wheel wells out by hand with a chisel.

The port holes in the sides of part D can be cut with either a 1 in. spade or

expansion bit. To avoid splintering the side of the wood where the drill bit exits, clamp the stock to a backing board for this operation. The 1 in. spade or expansion bit can also be used to cut the $\frac{1}{2}$ in. deep smokestack hole into the top of part F.

Next, cut the parts of the four wheel assemblies. The $\frac{5}{16}$ in. by $\frac{5}{16}$ in. axle dado in parts J may be cut with the dado head, although several passes with the table saw will work equally well. Glue the 1 in. wheels onto the axle blocks and spacers in place so that the axle and wheels will ride freely in the dado. Now assemble the Ferry as shown.

The car body and top may be cut to size and glued up next. Drill two $\frac{3}{16}$ in. diameter holes through the body as shown, running the drill through several times so the axle dowels will turn easily. The 1 in. diameter wheels are epoxied onto the dowels. The $\frac{1}{4}$ in. thick by 1 in. diameter wheels for both the Ferry and Car are available from The Toymaker Supply Company, 2907 Lake Forest Road, P.O. Box 5459, Tahoe City, CA 95730. Order wheel No. 15 — a package of 40 wheels will cost \$3.50.

Finally, make the ramps. Although

we cut and glued up separate sections to form the ramps, they can be just as easily cut from a single block of $1\frac{1}{4}$ x $3\frac{3}{4}$ x 7 solid stock.

The $\frac{3}{4}$ in. screw eyes and chains on the Ferry represent the chains that on a real ferry prevent the cars from rolling off. An open S link on one end of the chains will enable your child to fasten and unfasten the chains just like on a real ferry.

Because the Ferry and Car are designed with toddlers and pre-school age children in mind, we recommend no finish. W&J

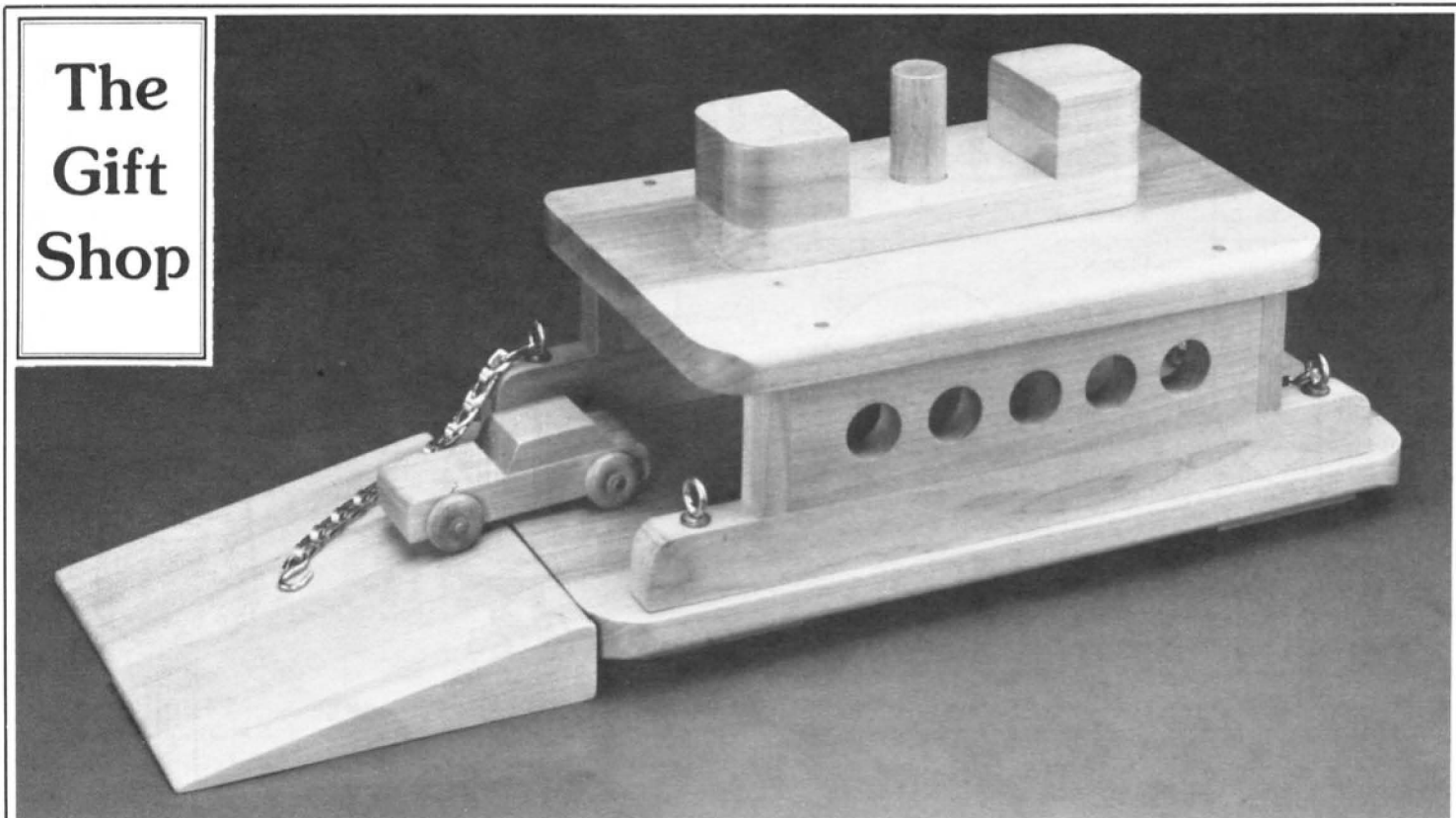
Bill Of Materials (All Dimensions Actual)			
Ferry			No.
Part	Description	Size	Req'd.
A	Deck	$\frac{3}{4}$ x 8 x 16	1
B	Rail	$\frac{3}{4}$ x $1\frac{1}{4}$ x 14	2
C	Trim	$\frac{1}{2}$ x $\frac{3}{4}$ x $2\frac{1}{4}$	4
D	Side	$\frac{3}{4}$ x $2\frac{1}{4}$ x 9	2
E	Top	$\frac{3}{4}$ x 8 x 12	1
F	Pilothouse Base	$\frac{3}{4}$ x $2\frac{1}{2}$ x 8	1
G	Pilothouse Top & Center	$\frac{3}{4}$ x 2 x $2\frac{1}{2}$	4
H	Stack	1 x $2\frac{1}{2}$	1
I	Dowel	$\frac{1}{4}$ x 1	4
J	Axle Block	$\frac{3}{8}$ x $\frac{3}{4}$ x 3	8
K	Spacer	$\frac{3}{8}$ x $\frac{3}{4}$ x $\frac{3}{8}$	8
L	Axle	$\frac{1}{4}$ x $2\frac{1}{4}$	4
M	Wheel	$\frac{1}{4}$ x 1	8
N	Ramp	$1\frac{1}{4}$ x $3\frac{3}{4}$ x 7	2

Car			
Part	Description	Size	No.
O	Body	$\frac{3}{4}$ x $1\frac{1}{2}$ x $4\frac{1}{2}$	1
P	Roof	$\frac{1}{2}$ x $1\frac{1}{2}$ x 2	1
Q	Axle	$\frac{1}{4}$ x $2\frac{1}{4}$	2
R	Wheel	$\frac{1}{4}$ x 1	4

Toy River Ferry and Car

by C.J. Maginley

The
Gift
Shop



Toy Top

Rare indeed is the child who has not professed a love, at some point in his youth, for toy tops. As any child knows, however, good tops are as hard to find as the proverbial "hen's tooth."

In an effort to design the best possible top, we incorporated a handle and pull string "starter." Our design proved so successful that some pulls resulted in spins that lasted over five minutes. In fact, the top was so popular here among the "big kids," we have a sneaking suspicion that it might just become the executive "toy of the year."

To make the top, glue up sufficient stock to form a 5 in. by 5 in. square 9 in. long. Although we used 5/4 material, any combination of stock adding up to 5 in. will be fine. Since even weight distribution is essential to the top's balance, try to use stock from the same board.

Before mounting the block in the lathe, find the center at both ends, and measure down from what will be the shank

end of the top to a point where the body begins. Saw away enough material so that a 1 1/2 in. square remains at the center.

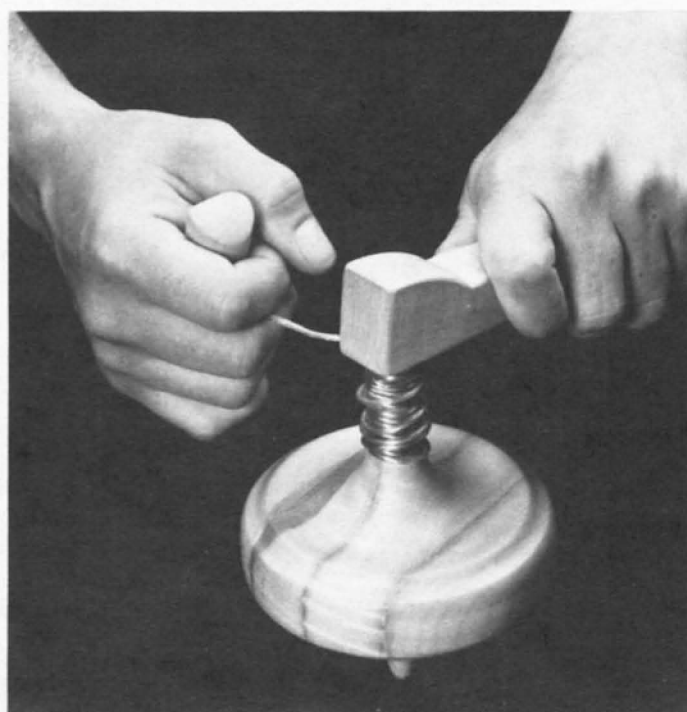
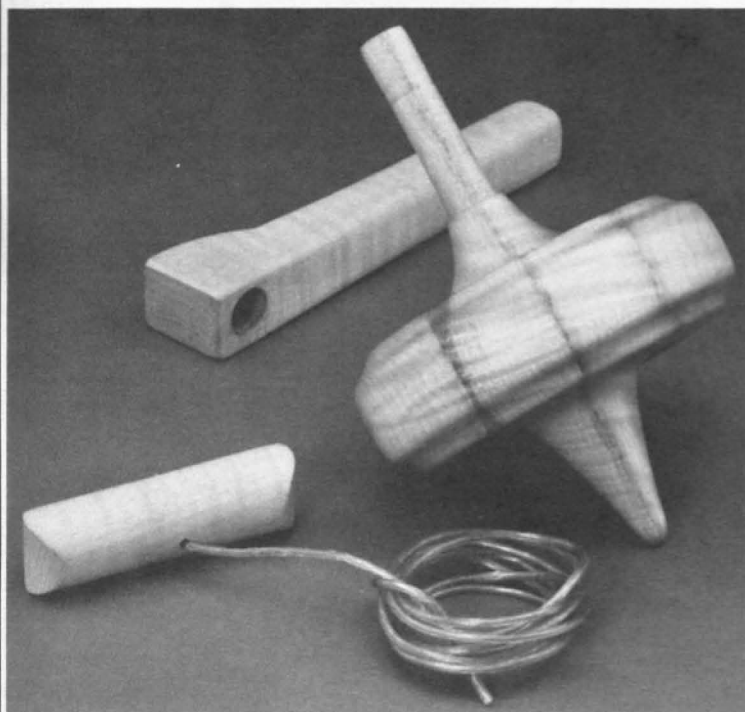
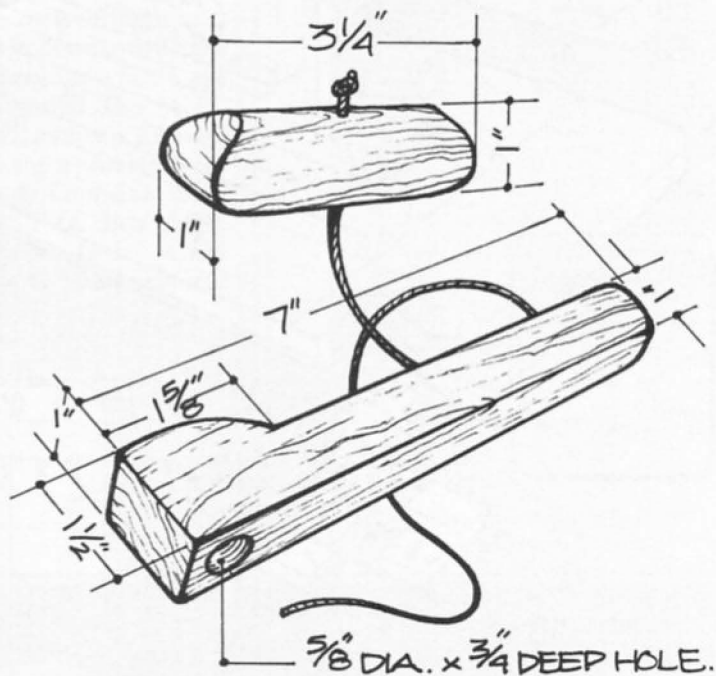
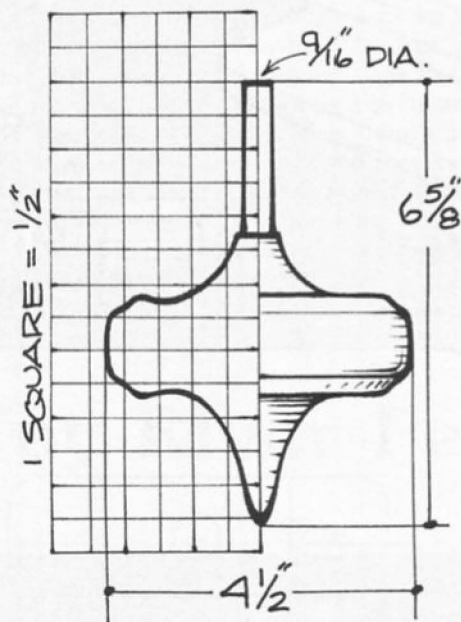
Mount the top in the lathe, and using a 3/4 in. gouge, round it over. Turn the body first, using a 1/2 in. roundnose to undercut both the top and bottom, and create the edge profile. Next, using a skew, cut down the stem to 9/16 in. diameter. After shaping the tip to a 1/4 in. diameter, sand the top over and cut off both ends. The center point must be shaped by hand.

The handle is cut out with a band or saber saw, and a 5/8 in. wide hole is drilled into the end to fit the top's stem. A section of 1 in. dowel will serve as the end pull.

After experimenting with various pull strings, we discovered that plastic-coated speaker wire worked best. Round over the handle edges and finish the top with several coats of tung oil.

Wvj

The Gift Shop



Cookbook Holder by Victor F. Ptasznik

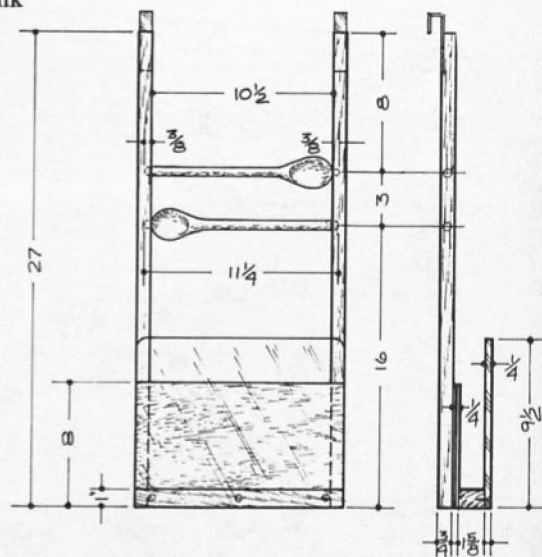
Anyone who has ever struggled with an unwieldy cookbook on a countertop cluttered with baking or cooking ingredients will appreciate how helpful this cookbook holder will be. Our holder is designed to be hung from a cabinet door, far above any countertop mess. The long sides are intended to bring the cookbook down to eye level.

The cookbook holder may be built from 5/4 oak stock, 1/4 in. thick birch plywood, 1/4 in. thick acrylic sheet, and .032 in. brass sheet. Begin by cutting to size the oak sides (A) and base (B). Next cut the plywood back (C). To make the two oak spoon-stretchers (D), resaw a section of 5/4 stock to 3/4 in. thick, then transfer the illustrated grid pattern to the 3/4 in. material and bandsaw the two spoon blanks. Shape the spoons with a gouge, and use a drawknife to trim down the handles. Both ends of the spoons are tapered to form 3/8 in. wide tenons, that fit into matching mortises drilled into the side pieces. Note that these spoons are glued in place to serve as decorative stretchers, and are not intended for use as actual spoons.

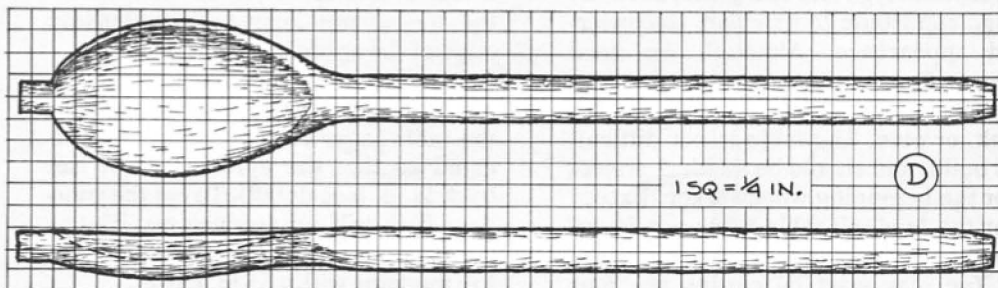
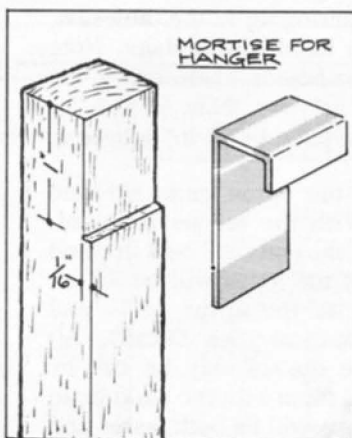
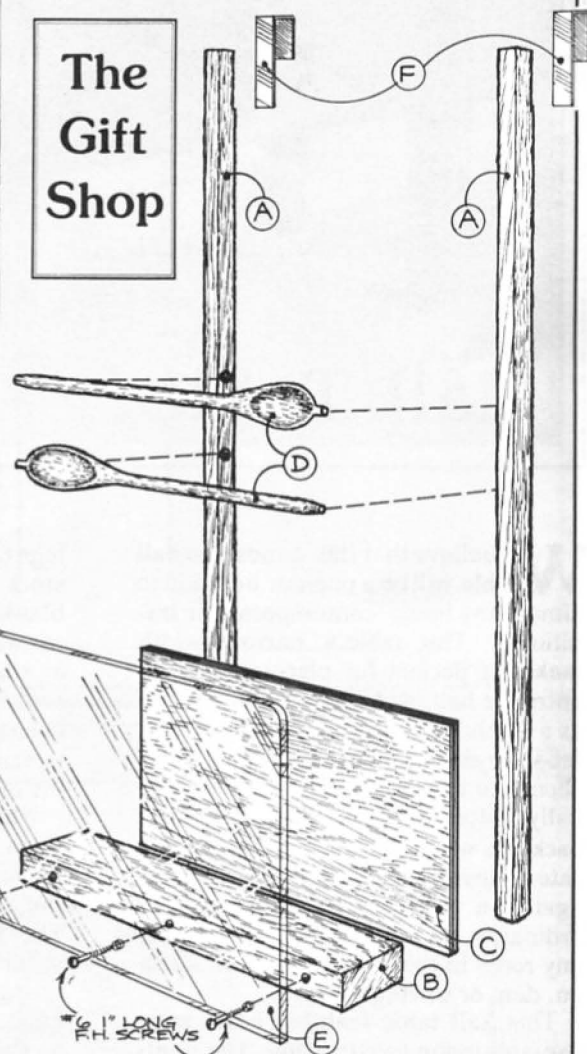
The 1/4 in. thick acrylic sheet front (E) may be purchased at glass and plastic supply stores. Round the corners as shown with a disk sander. Using a 5/32 in. bit bore the three holes for the #6 1 in. long wood screws, and countersink each hole so the screw heads will be flush with the front. Assemble the cookbook holder with glue on all mating surfaces *except* where the acrylic front is screwed to the base. When snugging up these screws, keep in mind that acrylic is sensitive to pressure, and likely to crack if the screws are set too tight.

The .032 in. thick brass hangers (F) are an item that must be custom-made to fit your particular cabinet design. Although the hangers are intended to fit over the top of a cabinet door so that the door may then be closed, if your cabinet doors are especially close fitting and there is insufficient clearance for the hangers, the door will need to be left slightly ajar. Mortise the back of each side piece about 1/16 in. deep (see detail) so that the hangers will be recessed to a point where they will not scratch the front of the cabinet door as the cookbook holder is slid into place. The hangers are then epoxied into the mortises. Sheet brass is available at most craft and hobby stores.

After assembly is complete, stain the holder if desired, and rub in several coats of tung oil.



The Gift Shop





Hall Table

We believe that this handsome hall table will be a popular addition to almost any home, contemporary or traditional. The table's narrow width makes it perfect for placement in an entrance hall, and it can easily double as a sideboard or serving table for buffet-style entertaining. Some folks may choose to use it as a sofa table, to visually soften the effect of the sofa's backside when the sofa is centrally located instead of positioned flush against a wall. Indeed, it is an extraordinarily versatile piece in virtually any room in the house, even the kitchen, den, or sewing room.

This hall table features basic mortise-and-tenon construction. The gently tapered legs and straightforward design contribute to its clean, uncluttered appearance. Although we used cherry for this piece, it would also look good in walnut, mahogany, maple, oak, or pine. The table is not difficult to build, and should be an ideal project for the beginning woodworker. Except for the legs, all table parts are $\frac{3}{4}$ in. thick.

You may start by cutting the four

legs (A) to size. A 28 in. length of 2 x 8 stock is ideal for roughing out the leg blanks. The leg tapers may either be cut with a tapering jig on the tablesaw, or shaped by hand with a plane. Note that the taper begins $\frac{1}{2}$ in. below the apron, and narrows from a $1\frac{3}{4}$ in. square at that point to a 1 in. square at the leg end.

Next, cut the apron ends (B) and sides (C). With the tenons included, the length of the ends will be 8 in., and the length of the sides will be 42 in. The tenons on the apron ends and sides are identical (See Detail). Although these tenons may be cut by hand, cutting them with the dado-head on the tablesaw will be both faster and more accurate. Note, however, that the tenons are flush with the inside edge of the apron boards.

After the tenons have been cut, mark their corresponding mortises on the table legs. These mortises are located so that the aprons will be set back $\frac{1}{8}$ in. (see detail). To cut the mortises first drill out as much material as possible with a $\frac{1}{2}$ in. bit; then square the mortises with a $\frac{1}{2}$ in. chisel.

The table top (D) is locked into the apron frame by means of a series of small blocks (E) that are screwed to the table top and mortised into the apron (see detail). The $\frac{1}{4}$ in. wide by $\frac{1}{4}$ in. deep stopped dado for each block may be cut with the dado-head. The 2 screw holes in each block should be countersunk $\frac{1}{4}$ in. so that 1 in. long flat-head wood screws will extend approximately $\frac{1}{2}$ in. into the table top. The table top itself may be a single board, although most folks will probably have to edge-glue narrower stock to achieve the full 12 in. width.

Assemble the table using glue on all the mortise-and-tenon joints of the leg and apron frame assembly, and clamp securely. Do *not* glue the locking blocks into either the table top or apron, however. The design of the table is intended to permit these blocks to ride free in the apron dados, accommodating changes in humidity that will cause the table top to expand and contract.

Fine sand the table, and rub in several coats of tung oil to achieve a satin gloss finish.

W&J



Grandfather Clock Part 1

Designed by Roy B. Cook

Clocks of this style, called long case clocks, originated in England sometime before 1660. In 1876, the American Henry Clay Work wrote a song about a long case clock which began: *My grandfather's clock was too big for the shelf so it stood ninety years on the floor...* The song was quite popular in the 1880's, and ever since the name grandfather has become synonymous with the long case clock.

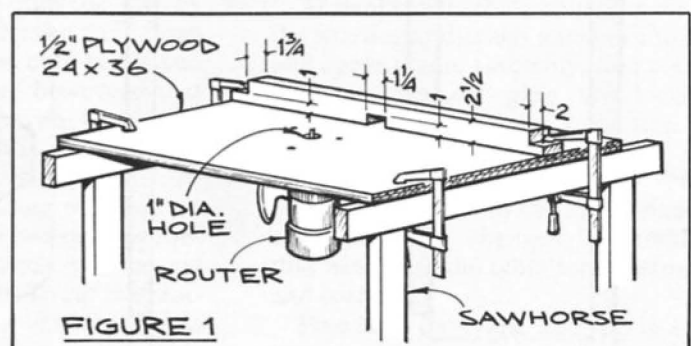
As a general rule, grandfather clocks stand between seven and eight feet tall. A somewhat smaller version, appropriately called the grandmother clock, usually measures around six feet high.

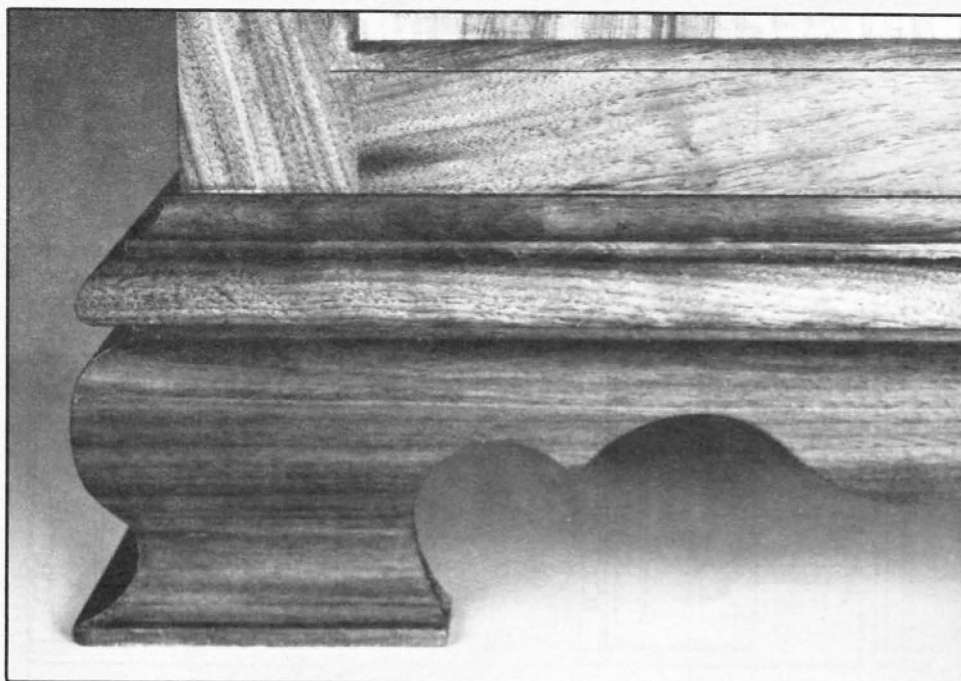
Grandfather clocks come in a variety of shapes and styles, but we think this one is especially handsome. It has a number of interesting features, including ogee feet, a raised arch base panel, arched panels for the waist and hood doors, a broken arch pediment and a calendar moon dial. We used walnut for ours, but oak, cherry, or mahogany is also quite appropriate. In his *Shoptalk* column, on page 4, Jim McQuillan talks about material costs for this project.

In this issue we will cover the construction of the base and waist members. Next issue, in part II, we will detail how to make the hood and install the movement. Movements for grandfather clocks come in many shapes and styles — and price ranges. The movement we specify will cost about \$250.00, with the calendar moon dial adding another \$150.00. However, some movements can run as high as \$1600.00, while those on the lower end of the price range will cost not much over \$125.00. More specific movement information, including part numbers and current prices, will be covered next issue.

Making a grandfather clock generally involves using a shaper — a versatile tool, but one that few woodworkers own. We feel that one of the important features of this design is the fact that a shaper is not needed. The operations normally done with the shaper have been worked out so that a table saw molding-head cutter or a router table will do the job.

A router table is easy enough to make (See Fig. 1). Cut a sheet of 1/2 in. thick birch plywood to a width of 24 in. and a length of 36 in. Bore a 1 in. diameter hole at the center, then make the fence from 1 3/4 in. thick solid stock as shown. The 1 in. by 1 1/4 in. notch is cut across the underside of the fence to allow clearance for the cutter. It also allows clear-





ance for wood chips. Remove the router's plastic sub base, then secure the router to the underside of the table with three screws, each one driven through the top and countersunk $\frac{1}{4}$ in. Two pairs of C-clamps will secure the router table and the fence to sawhorses as shown. Make sure the sawhorses are sturdy as it's important that the router table be stable as the cuts are made.

The ogee feet (parts A and B) can be made first. Cut $\frac{3}{4}$ in. thick stock to a width of 3 in. and a length of 42 in. (length dimension includes extra stock). The molding-head is used to cut most of the curved profile (see Fig. 2), but before starting you'll need a plywood inset for the table saw. The metal one that comes with the saw cannot be used with the molding-head and must be removed. Trace the outline of your present insert on a piece of scrap plywood — $\frac{1}{4}$ in. thick for a Sears 10 in. saw, $\frac{1}{2}$ in. thick for a 10 in. Rockwell Unisaw. Cut the pattern and fit it to the saw, then mount the three 1 in. flute cutters (Sears Craftsman 9-3206) to the molding-head. Lower the cutters below the table, then add the new plywood insert. With the power off, and the cord disconnected, rotate the cutters by hand to make sure they are below the plywood.

Using a push stick to hold down the insert, start the saw and raise the cutter very slowly. Continue raising the cutter, allowing it to cut through the plywood, until it is slightly above the desired height (about $\frac{1}{2}$ in.).

Lower the cutter to a height of about $\frac{1}{8}$ in. above the insert, and locate the rip-fence $\frac{3}{16}$ in. from the cutter. Using a push stick, run the stock

through the cutter to make the first pass. Do this three more times, raising the cutter $\frac{1}{8}$ in. after each pass. Making the cut in four passes produces a smooth surface with minimal strain on the saw.

Next, install the $\frac{1}{2}$ in. quarter-round cutters (Sears Craftsman 9-2351) in the molding-head. As before, raise the cutter to its desired height, then rotate the molding-head to make sure they don't hit any part of plywood insert. Cut the radius as shown, again making the cut in several passes.

The remaining material can now be removed using a hand plane. Plane the stock to the profile shown in Fig. 2, then sand smooth. When planing and sanding, be careful not to reduce the thickness to less than $\frac{3}{4}$ in. at the point where the $\frac{1}{2}$ in. radius is applied. It's important that this curved face of the stock have two points that are $\frac{3}{4}$ in. thick so that it will rest flat on the table saw when the miters are cut.

Next, cut the 45 degree miters on the front end of parts A and each end of part B. Note that the back ends of parts A are cut square. To look good, it's important for the miters to be cut at exactly 45 degrees, so it's best to make a trial cut with scrap stock. If the joints are square and the miter is tight, you can then proceed to cut the stock.

Now, transfer the curved profiles (shown on the front and side views) to the back side of parts A and B then cut out with a band or saber saw. It's best to cut slightly on the waste side of the stock, then sand exactly to the line. If you have one, a drum sanding set will prove handy here.

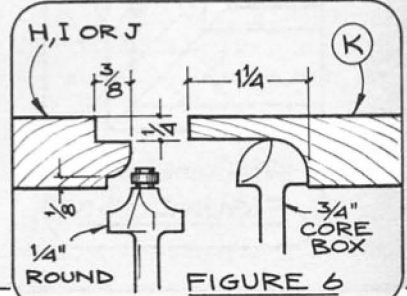
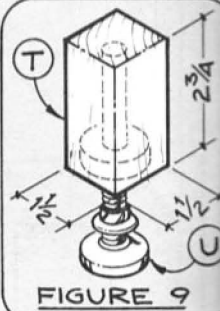
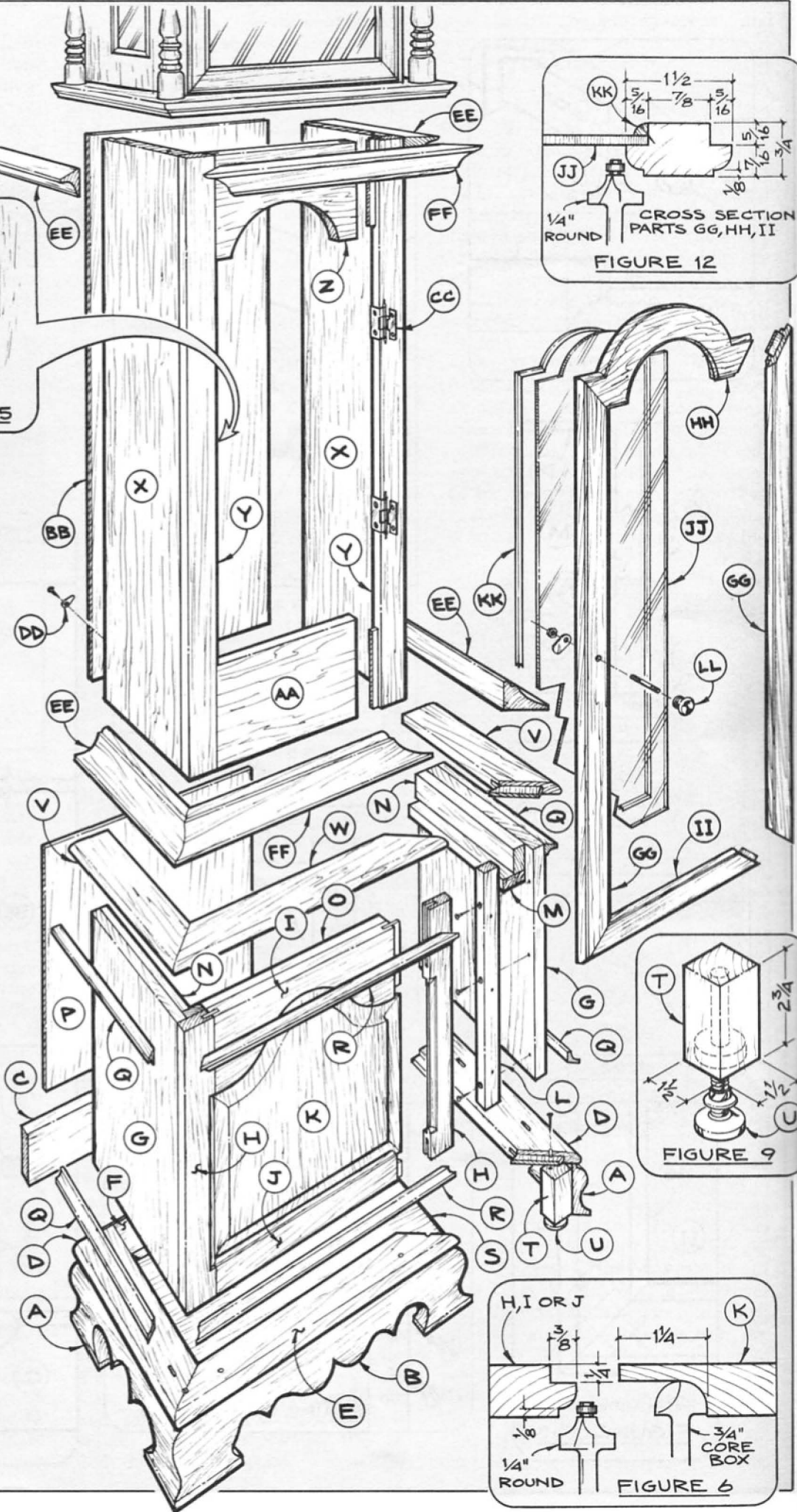
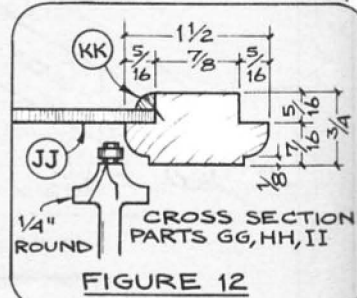
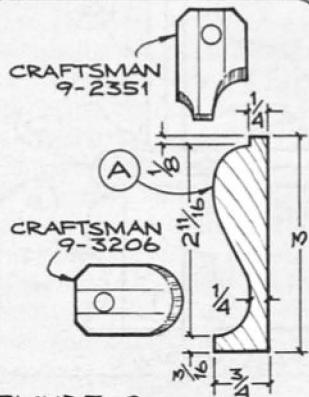
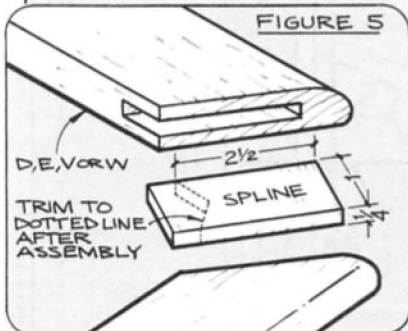
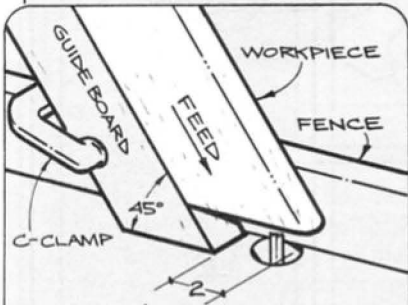
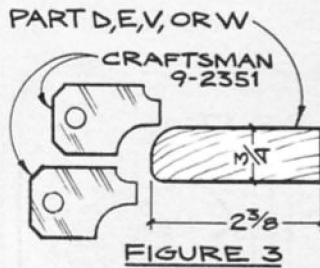
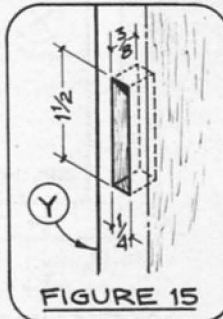
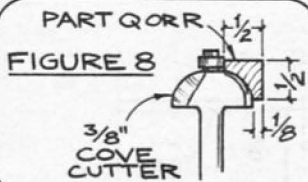
After cutting the foot support (part C) to size (see bill of materials) the foot frame (parts A, B, and C) can now be assembled. Apply glue to the mating surfaces of the four joints, then apply pressure with a pair of web clamps.

The base side and front molding (parts D and E), and the waist side and front molding (parts V and W) are made next. Note that all these parts measure $\frac{3}{4}$ in. thick by $2\frac{3}{8}$ in. wide (see Fig. 3). You'll need a piece of stock that's 41 in. long for parts D and E, and 40 in. long for parts V and W. Keep in mind that both these lengths provide a little extra for later trimming. Again use the molding-head cutter to cut the $\frac{1}{2}$ in. and $\frac{1}{4}$ in. radius as shown.

To make the cut with the $\frac{1}{4}$ in. quarter-round edge of the cutter, part of the cutter will be into the rip fence. This necessitates an auxiliary wood fence. Straight square stock should be chosen, as long and high as the metal fence and at least $\frac{1}{8}$ in. thick. Secure it to the metal fence with a pair of clamps. Move the wooden fence to its proper position with the cutter below the table. Lock the fence in place, then start the motor and raise the cutter to slightly more than its desired height before backing it off a bit. The $\frac{1}{4}$ in. radius can now be cut but, as before,

Bill Of Materials
(All Dimensions Actual)

Part	Description	Size	No. Req'd.	Part	Description	Size	No. Req'd
A	Side Ogee Foot	$\frac{3}{4}$ x 3 x $11\frac{1}{4}$	2	T	Leveler Block	See Fig. 9	4
B	Front Ogee Foot	$\frac{3}{4}$ x 3 x $18\frac{1}{2}$	1	U	Leveler	See Fig. 9	4
C	Foot Support	$\frac{3}{4}$ x 3 x $16\frac{1}{2}$	1	V	Waist Side Molding	$\frac{3}{4}$ x $2\frac{3}{8}$ x $10\frac{1}{2}$	2
D	Base Side Molding	$\frac{3}{4}$ x $2\frac{3}{8}$ x $11\frac{1}{4}$	2	W	Waist Front Molding	$\frac{3}{4}$ x $2\frac{3}{8}$ x $17\frac{1}{2}$	1
E	Base Front Molding	$\frac{3}{4}$ x $2\frac{3}{8}$ x $18\frac{1}{2}$	1	X	Waist Side	$\frac{3}{4}$ x $7\frac{1}{2}$ x $37\frac{1}{2}$	2
F	Base Molding Support	$\frac{3}{4}$ x $2\frac{3}{8}$ x $13\frac{1}{2}$	1	Y	Waist Frame Stile	$\frac{3}{4}$ x $1\frac{1}{4}$ x $37\frac{1}{2}$	2
G	Base Side	$\frac{3}{4}$ x $9\frac{1}{4}$ x $15\frac{1}{4}$	2	Z	Waist Frame Top Rail	$\frac{3}{4}$ x $6\frac{1}{2}$ x $9\frac{1}{4}$	1
H	Base Frame Stile	$\frac{3}{4}$ x $1\frac{1}{4}$ x $15\frac{1}{4}$	2	AA	Waist Frame Bottom Rail	$\frac{3}{4}$ x $6\frac{1}{2}$ x $9\frac{1}{4}$	1
I	Base Frame Top Rail	$\frac{3}{4}$ x $5\frac{1}{2}$ x $12\frac{1}{2}$	1	BB	Waist Back	$\frac{3}{4}$ x $12\frac{1}{4}$ x $37\frac{1}{2}$	1
J	Base Frame Bottom Rail	$\frac{3}{4}$ x 2 x $12\frac{1}{2}$	1	CC	Waist Door Hinge	Craft Products P/N 40406	2
K	Base Panel	$\frac{3}{4}$ x $12\frac{1}{4}$ x $12\frac{1}{2}$	1	DD	Back Lock	$3/16$ x $5/8$	10
L	Panel Block	$\frac{3}{4}$ x 1 x $15\frac{1}{4}$	2	EE	Waist Side Molding	See Detail	4
M	Support	$\frac{3}{4}$ x $1\frac{1}{2}$ x $8\frac{1}{4}$	2	FF	Waist Front Molding	See Detail	2
N	Spacer	$\frac{3}{4}$ x 2 x $8\frac{1}{2}$	2	GG	Waist Door Stile	$\frac{3}{4}$ x $1\frac{1}{2}$ x 25	2
O	Cleat	$\frac{3}{4}$ x 2 x $12\frac{1}{2}$	1	HH	Waist Door Top Rail	$\frac{3}{4}$ x $4\frac{1}{4}$ x $9\frac{1}{4}$	1
P	Base Back	$\frac{1}{4}$ x $15\frac{1}{4}$ x $14\frac{1}{2}$	1	II	Waist Door Bottom Rail	$\frac{3}{4}$ x $1\frac{1}{2}$ x $9\frac{1}{4}$	1
Q	Base Side Molding	$\frac{1}{2}$ x $\frac{1}{2}$ x $10\frac{1}{2}$	4	JJ	Waist Door Glass	$\frac{1}{8}$ Thick	1
R	Base Front Molding	$\frac{1}{2}$ x $\frac{1}{2}$ x $16\frac{1}{2}$	2	KK	Plastic Glass Retainer	$3/16$ Quarter Round	As Req'd.
S	Bottom	$\frac{1}{4}$ x $9\frac{1}{4}$ x $16\frac{1}{2}$	1	LL	Brass Latch	$\frac{3}{4}$ Dia.	1



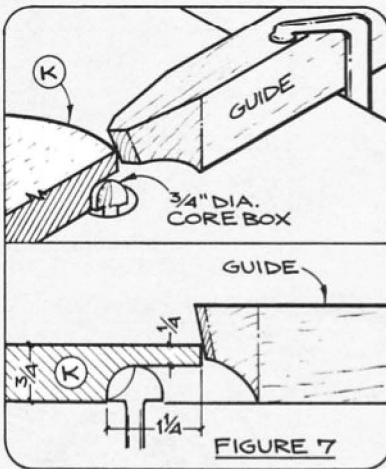


FIGURE 7

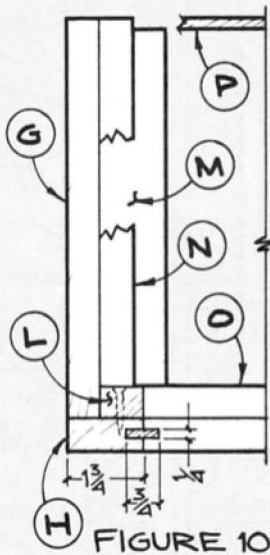


FIGURE 10

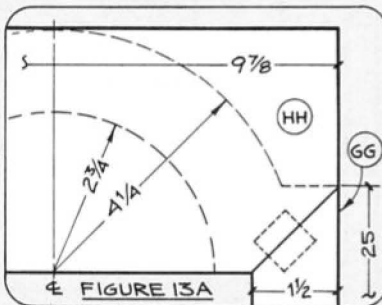


FIGURE 13A

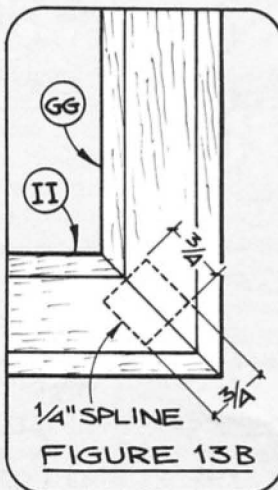


FIGURE 13B

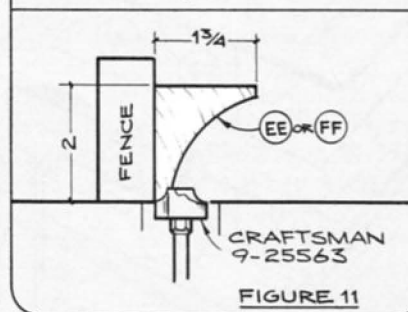
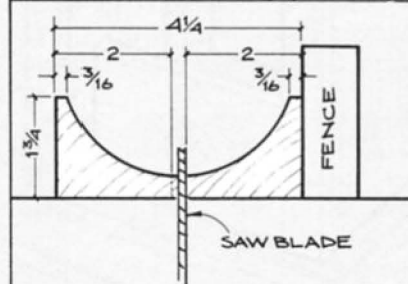
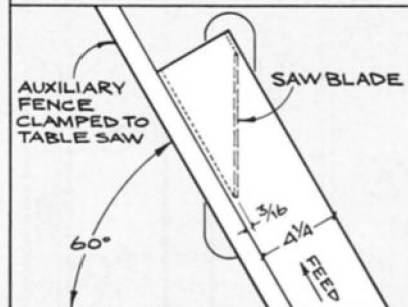
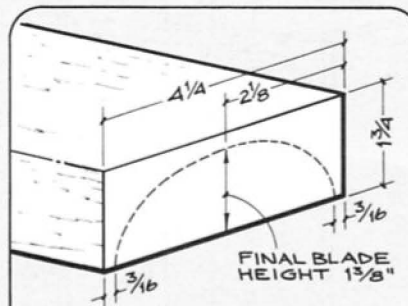


FIGURE 11

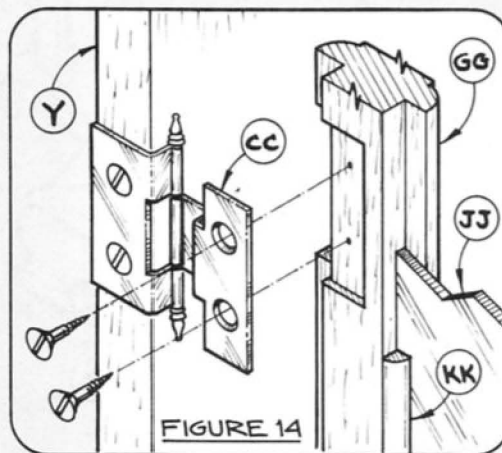


FIGURE 14

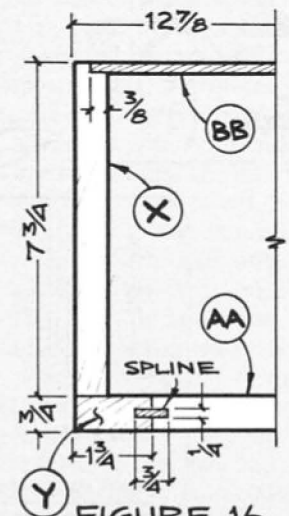
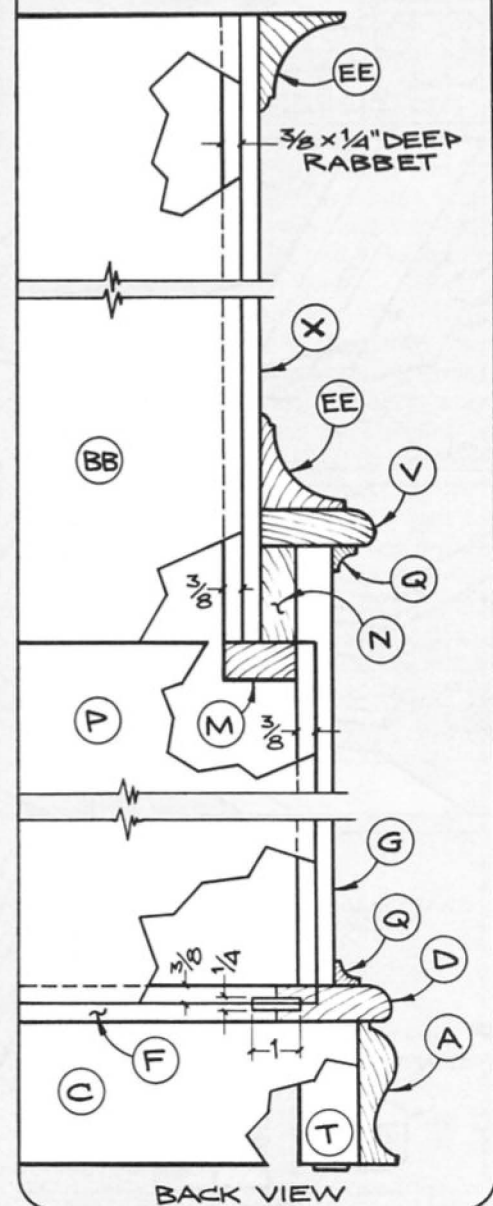


FIGURE 16

FIGURE 17

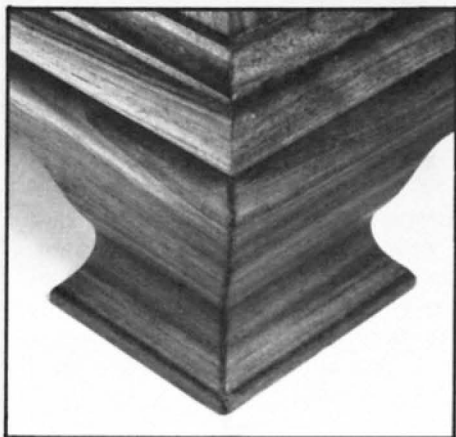


BACK VIEW

do it in several passes.

Cut the 45 degree miter on the front ends of parts D and V, and on both ends of E and W. To cut the spline mortises, a jig is used in conjunction with the router table (see Fig. 4). Use a $\frac{1}{4}$ in. diameter straight bit set to a depth of $\frac{1}{8}$ in. Start the router, then lower the stock into the cutter. When the workpiece comes in contact with the table, push the workpiece forward so that the bit cuts a mortise as shown in Fig. 5. Continue making $\frac{1}{8}$ in. deep cuts until the full $\frac{1}{2}$ in. mortise depth is achieved.

The base molding support, part F, can now be made. As shown in Fig. 17, a $\frac{1}{4}$ in. wide by $\frac{1}{2}$ in. deep spline mortise is cut on each end of part F. A



mating spline mortise is cut on the back ends of parts D.

Parts D, E, and F can now be assembled. Cut $\frac{1}{4}$ in. splines to fit the mortises, then dry assemble to make sure all parts fit well. Remember to cut the splines so that the grain direction is a right angle to the joint line. If the dry assembly is satisfactory, apply glue to the splines and the mortises, then clamp securely with a web clamp. Check for squareness before setting aside to dry.

After cutting the base sides (parts G) to size, work can begin on the base frame (parts H, I and J). Cut each part to the dimensions shown in the bill of materials, then use the router table to cut the $\frac{1}{4}$ in. wide by $\frac{1}{2}$ in. deep spline mortises. Note that on the ends of part I, the spline does not go entirely across the $5\frac{3}{8}$ in. width of stock. Instead, the mortise is cut $4\frac{1}{2}$ in. long, stopping short of the bottom edge. The mating mortise on parts H are cut to the same length. The spline mortise is also cut short on the ends of parts J, resulting in a length of $1\frac{1}{4}$ in. The mating mortise on the bottom of part H is also cut to a length of $1\frac{1}{4}$ in.

Next, on part I, use a compass to scribe the curved profile (see front view, page 51). Use a band or saber

saw to cut just outside the scribed line, then use a drum sander to sand exactly to the line.

Cut the splines to size and dry fit parts H, I, and J. If all looks satisfactory, add glue and clamp with bar or pipe clamps. Check for squareness before setting aside to dry.

When dry, remove the clamps and equip the router with a ball-bearing piloted $\frac{1}{4}$ in. round-over bit (see Fig. 6). Cut the $\frac{1}{4}$ in. bead all around the inside edge of parts H, I, and J.

Next, equip the router with a $\frac{3}{8}$ in. ball-bearing piloted rabbet bit to cut the $\frac{1}{4}$ in. by $\frac{3}{8}$ in. rabbet all around the inside back edge (Fig. 6). Once cut, use a chisel to square the corners.

The base panel (part K) can now be made. You'll probably need to edge-join two narrower boards in order to get enough width. Since this panel is a visual highlight of the clock, try to select stock that has a pleasing grain. Edge-join the stock so that you have extra length and width. When dry, rip to final width, then lay the base frame assembly (parts H, I, and J) on the panel and scribe the profile of part I. The panel must actually be $\frac{1}{4}$ in. larger than this curved line, so use a pencil to scribe a matching, but larger, profile. Cut out with a band or saber saw, staying slightly on the waste side of the line, then sand to the line with a drum sander. The bottom edge of part K can then be cut to final length.

The radius that's cut all around the edge of the panel is made using the router table equipped with a $\frac{3}{4}$ in. core box bit (see Fig. 6) and a guide clamped to the router table (see Fig. 7). Set the bit to make a $\frac{1}{2}$ in. deep cut, then locate the guide so that the first cut removes about $\frac{1}{4}$ in. of material all around. After the first cut, relocate the guide and remove an additional $\frac{1}{4}$ in. of stock. Repeat this process until the $1\frac{1}{4}$ in. width is achieved. It's a good idea to make some test cuts on scrap material before starting on the panel stock. After completing the radius, check part K for a good fit in the frame (there should be $\frac{1}{8}$ in. on the top and sides for expansion), then set aside.

After cutting the waist sides (parts X) to size, the waist frame (parts Y, Z, and AA) can be made. Both parts Z and AA are $6\frac{1}{2}$ in. wide and have $\frac{1}{4}$ in. wide by $5\frac{1}{4}$ in. long spline mortises cut in each end. A mating mortise is cut in parts Y. Use a compass to scribe the 4 in. radius curve in part Z (see front view, page 51) before cutting out and sanding smooth. Cut the four splines and dry fit the frame. If satisfied, add glue and clamp with bar or

pipe clamps. Check for squareness and set aside to dry.

The waist side and front moldings (parts EE and FF) are made as shown in Fig. 11. Cut $1\frac{3}{4}$ in. thick stock to a width of $4\frac{1}{4}$ in. Clamp an auxiliary fence (at 60 degrees) to the saw table. With the saw blade set to a height of $1\frac{3}{8}$ in. note that the fence is located $\frac{3}{16}$ in. from the blade. Lower the saw blade to a height of $\frac{1}{16}$ in., then pass the stock through the blade. Flip the stock, end for end, and make the same cut. Raising the blade in $\frac{1}{16}$ in. increments, continue this process until the final blade height of $1\frac{3}{8}$ in. is reached. To be sure your set up is accurate, it's a good idea to make a practice run on a short piece of scrap pine.

Once the cove is cut, rip the piece to a width of 2 in., then final sand. Next, use the router table and a $\frac{1}{4}$ in. beading bit (Sears Craftsman 9-25563) to cut the bead along one edge. Note that the cutter is used without the arbor (pilot).



The waist door (parts GG, HH, and II) can now be made. Cut each part to size, then add the 45 degree miters as shown in fig. 13A and 13B. The mortises for the $\frac{1}{4}$ in. thick splines are cut using the same jig that was used to cut parts D, E, V, and W (Fig. 4). However, the final cutter height setting will be $\frac{3}{8}$ in., and the dimension from the guide board to the outside cutter edge will be $1\frac{1}{4}$ in. Also you'll need to clamp a stop block to the table to limit the mortise length to $\frac{3}{4}$ in.

Apply glue to the splines and the mortises before assembling with bar or

pipe clamps. Check for squareness before setting aside to dry.

Once dry, remove the clamps, then use a compass to scribe the inner and outer radii on part HH. Cut out on the waste side of the line, then sand smooth with a drum sander.

To cut the front bead on the inside and outside edges of the waist door parts, equip the router table with a 1/4 in. bead bit that has a ball-bearing pilot (see Fig. 12). The back rabbets are cut with a ball-bearing piloted 5/16 in. rabbet bit.

Assemble parts G to parts H using glue and clamps. To keep the parts from sliding as the clamp pressure is applied, it's a good idea to first drive two or three small brads in part G, then clip the heads off so 1/16 in. is exposed.

Apply three or four coats of a good penetrating oil to the base panel (part K) before installing it to the base frame (parts H, I, and J). Parts L, which serve to hold the panel sides in place, can now be glued and screwed as shown. Part O, which secures the panel at the top, is also added now.

Glue and clamp parts N to parts G so that the top edges are flush. When dry, parts M are glued and clamped to parts N and G.

Cut part T to the dimensions shown in Fig. 9, then bore holes to accept the leveler (part U). Glue and clamp part T in place, locating it 1/4 in. from the top edge of A and B. The bottom (part S) can now be cut to size, given several coats of penetrating oil, and dropped in place.

Apply glue to the top edge of parts A and B, then attach the base molding frame (parts D, E, and F) with 1 1/4 in. long no. 8 flat head wood screws (FHWS) driven through the frame and into the tops of the leveler blocks. Be sure to locate the screws at a point that will not show after the addition of the part Q molding.

Place the partially assembled waist on top of parts D and E and scribe a pencil line to indicate the proper position of parts G and J. Remove the waist and, with the lines as a guide, bore screw holes down through parts D and E. Note that the screw holes in parts D are slotted. Add glue to the bottom edge of parts G and J, then join to parts D and E with 1 1/2 in. by no. 10 FHWS driven up through the bottom.

After joining X to Y, the waist can be joined to the base. Apply glue to the mating surfaces and clamp firmly.

When dry, add glue to the inside edges of parts V and W and slide in

from the front. Clamp firmly.

Moldings Q and R (see Fig. 8) can now be cut and applied with glue and several small brads, countersunk and filled. The lower parts EE and FF are added in the same manner, however the upper ones won't be applied until after the hood is added — which will be covered next issue.

All of the hardware for the base and waist sections can be ordered from Craft Products Co., 2200 Dean Street, St. Charles, Ill. 60174. The leveler (U) is p/n 43100, the waist door hinge (CC) is p/n 40406, the back lock (DD) is p/n 42800, the plastic glass retainer (KK) is p/n 43601, and the brass latch (LL) is p/n 40708.

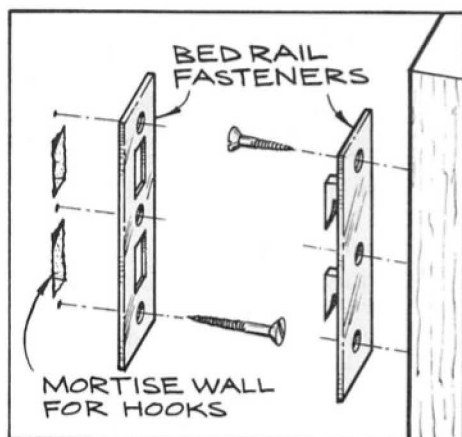
The waist door hinge (part CC) is mortised to part GG, but not to part Y (see Fig. 14). As shown in Fig. 15, a mortise is cut to accept the brass latch (part LL). The glass (part JJ) is cut to fit the door frame and held in place with plastic glass retainer (part KK).

Next issue we will cover the construction of the hood and discuss how to order and hang the movement. You'll need a lathe to do the four spindle turnings, but the remaining operations can be done with equipment already used in the base and waist construction.

W&J

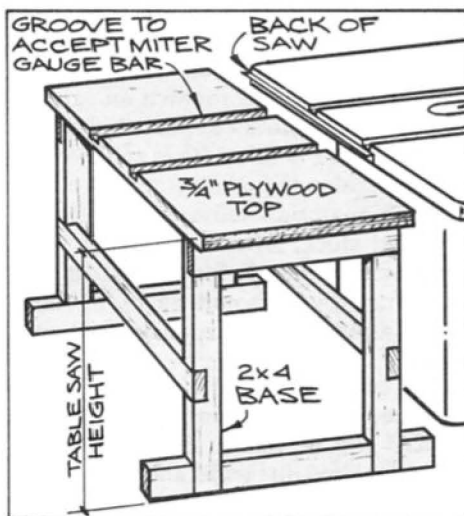
Shop Tips

Heavy wall-hung cabinets can be securely attached to a wall using bed rail fasteners. Screw the slotted half of the fastener to the wall, making sure the screw is into a stud, then cut a small mortise behind each slot. The



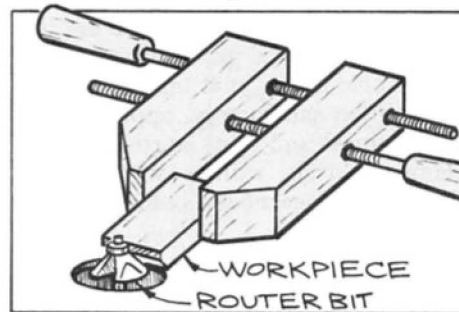
mating half is screwed to the cabinet. If desired, each half can be let into a mortise, permitting the cabinet to fit tightly against the wall. Bed rail fasteners are available from a number of mail order woodworking suppliers.

Stock that's long or wide can be cut easier and safer with the aid of a table saw support table. One can be made simply enough by using 3/4 in. thick plywood for the top and 2 by 4 stock for the base. Since it is not attached to the saw table, it is adaptable to any table



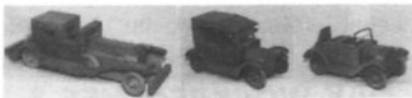
saw design. A pair of grooves are cut (using the dado-head cutter) to allow the miter gauge bar to run onto the support table. These grooves can be cut considerably wider than the table saw miter gauge slots in order to make it easier to align the two tables.

When working with small parts, a hand screw used as shown will help keep hands a safe distance from the router table or shaper cutters.



Brass pins, glued in place with epoxy, can be used as an attractive detail when substituted for small diameter dowel pins. However, small diameter round brass stock is not commonly available. A suitable alternative, though, is to apply epoxy glue to brass screws, then screw them in place and sand the heads off with a belt sander.

The Woodworker's Journal pays \$25 for reader-submitted shop tips that are published. Send your ideas (including sketch if necessary) to: The Woodworker's Journal, P.O. Box 1629, New Milford, CT 06776, Attention: Shop Tip Editor. We redraw all sketches so they need only be clear and complete.



TOY PLANS: Easy to make from standard lumber. Each car approx. 9 inches long. Specify which plan: P2 Lima; P3 Model T; P4 Model A with rumble seat. \$4 each; all three for \$10. Add \$1.50 postage and handling. **TAYLOR PRODUCTS** Dept. E, 4949 West Saint Charles, Lake Charles, LA 70605

WIPE-ON DUST-PROOF WOOD FINISHING

Manufacturers of the
SEALACELL Easy 3-Step
Beautiful Wood Finish
for over 50 years.

Write For Free Guide

GENERAL FINISHES CORP.
P.O. Box 14363 J
Milwaukee, Wis.
(414) 774-1050



CUSTOM 4 PANEL DOORWALL SHUTTERS



A REAL EYE CATCHER!

Unique new plans & instructions for these easy-to-make low-cost custom shutters, with complete framing & hanging instructions. Plans include templates, detailed drawing & easy-to-follow instructions. Plans also available for custom 2 panel sliding doorwall shutters.

4 PANEL BIFOLD — \$6.95
2 PANEL SLIDING — \$6.95
OR BOTH — \$12.95

HOLLAND HOME PRODUCTS
24875 Groesbeck
Warren, Michigan 48089
Suite 102

BANDSAW OWNERS!

A NEW TOOL is now available so you can make or repair any length Band Saw Blade in minutes!

This professional quality tool was developed for use in our own shop and has proven itself with hundreds of high quality, true running splices. We now offer this quality tool to craftsmen at a cost of \$39.00 ppd.

Our splicer enables any craftsman to purchase economical 100 foot rolls of bandsaw blade stock and make up any length blade QUICKLY and EASILY. The resulting silver brazed joint normally outlasts the service life of the blade.

This method of splicing offers the added advantage of being able to resplice the blade many times, thus making inside cutouts practical. The tool comes complete with supplies for approximately 100 splices of 1/4" bandsaw blade stock. We also carry additional supplies as well as bandsaw stock at reasonable prices.

Send LSASE for free information to:

NEW MILFORD SPECIALTIES CO.
24A SOUTH MAIN STREET, DEPT. WJ
NEW MILFORD, CT 06776

...learn how the pros

Carved Realistic Feathers



..HOT TOOL!

17.95 Plus \$1.50 Postage
MA Resident add 5%
Dealer Inquiries Welcomed
send today for brochures

HOT TOOLS Inc.

P.O. Box 615-J • Marblehead, MA 01945 • 617/639-1000

PUNCH TIN



THE ORIGINAL SOBY DO-IT-YOURSELF COMPLETE KIT

- 4 pcs. real tin 11" x 14" (approx.)
- Special steel hole punch
- Step-by-Step instructions
- Patterns and ideas for use

\$17.50 del'd; CA add \$1.14 sales tax

CUSTOM SIZE TIN AND COPPER
SHAKER STYLE PIE SAFE PLAN \$5.00

THE SOBYS

P.O. Box 68 Dept. W J
Claremont, CA 91711

PLAN A PROJECT

Take advantage of our large selection of plans.

Furniture designs, loom, spinning wheel, clocks, dollhouses, cradles, toys, alphabets, bird houses, weathervanes, kites, and more.

Catalog 50¢.



Craftplans

Industrial Boulevard
Rogers, Minnesota 55374



NON TOXIC FINISHES

LIVOS is a new approach in beautiful finishing without the use of toxic chemicals. Your environment will be improved through the pleasant fragrance of plant oils, essential oils and natural tree resins. Breathing problems, dizziness and other after-effects are eliminated.

No toxic fumes during application or from the dried product. No mineral spirits, no petroleum products, no chemical dryers.

Safe for children, animals and plants.

Send for FREE Mail Order Catalogue on:
Oil Finishes, Waxes, Shellacs, Lacquers, Polishes, Stains & Wood Preservatives.

WOODPECKER'S TOOLS, INC.

614 AGUA FRIA STREET #14,
SANTA FE, NM 87501
(505) 988-2288

Please send me also your FREE Mail Order Catalogue of Quality Tools for Professionals and Craftsmen.



WOODWORKERS!

Send For FREE Catalog Today

100's patterns, veneers, toy supplies, hardwoods, shaker pegs, candle cups, dowels, spindles, cane, rush, splint, books, repro hardware, abrasives, more! Bonus starter offers included! **Hurry!**

Morgan Woodworking Supplies, Dept. W04M19
1123 Bardstown Rd., Louisville, Ky. 40204

MAKE TOYS & WOOD PROJECTS

7 CAR TRAIN
\$6—Plan only
\$26.50—Plan &
turned parts
(92 parts
in all!)



62" long

100's of plans, kits, colored and unfinished hardwood parts for toys, crafts and furniture (Colonial, Shaker, primitive & modern). Bulk Prices available. Color catalog \$1.

Cherry Tree Toys, Box 369-31, Belmont, OH 43718

CLOCK COMPONENTS

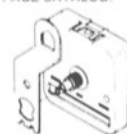


CLOCK MOVEMENTS, KITS, DIALS

WE FEATURE BATTERY, PENDULUM, CHIME QUARTZ MOVEMENTS OF ALL TYPES. URGOS, HERMLE, GRAND-MOTHER, GRANDFATHER CABLE DRIVE AND CHAIN DRIVE, KEY WIND MOVEMENTS OF ALL TYPES, 400 DAY CLOCKS, MUSIC BOX MOVEMENTS, FLAT AND BEZEL TYPE DIALS — PLUS A VAST ASSORTMENT OF WEATHER INSTRUMENTS. HUNDREDS OF CLOCK ITEMS. VERY COMPETITIVE PRICES. WRITE OR CALL FOR FREE 75 PAGE CATALOG.



THE QUARTZ FITUP



THE MINI QUARTZ

Send To
NEWPORT ENTERPRISES INC.
2313 W. Burbank Blvd.
Burbank, CA 91506
(213) 845 0555

FOR LIMITED TIME ONLY!

3" and 4" SANDING BELTS 21" and 24"

Coarse — Medium — Fine

Silicon Carbide on thick cloth stock

... 99¢ each, your choice.

Money Back Guarantee

Please add \$1.50 to cover postage.

Send check or money order with full name and address.

NORD ABRASIVES

P.O. Box 123

Cornwall Bridge, CT 06754

The Woodworker's Marketplace

McFEELY'S

FOREIGN AND DOMESTIC
HARDWOODS•SOFTWOODS•VENEERS
HANDTOOLS•FINISHES•MILLWORK

FREE CATALOG (804) 846-2729
P.O. BOX 3, LYNCHBURG, VA. 24505

Full-Size TRADITIONAL ROCKING HORSE PLAN



Plan No. 121 \$10.75

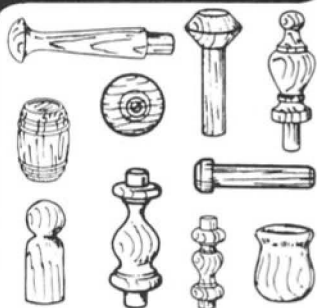
CATALOG
180 diff., full-size prof.
furniture plans — \$2.00
(catalog free with order)

Bring back the
magic of child-
hood using our
full-size plan for
the Traditional Rocking Horse.
Easy to build—body, legs and head
are shaped using files. Rockers are
curved for maximum action and
shaped for desirable safety. Use
pine or any available hardwood—
paint to resemble live pony. To-
morrow's heirloom today!

FURNITURE DESIGNS, Dept. JZ-94
1425 Sherman Ave., Evanston, IL 60201

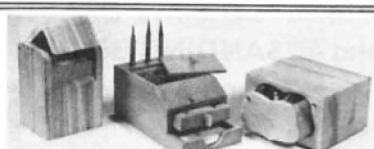
WOOD PARTS

WOODWORKS



Catalog \$1.00 First Class
Free Third Class
WOODWORKS

4013-A Clay Ave. • Ft. Worth, TX 76117



Discover a new world of satisfaction and creativity with your bandsaw making small, unique bandsaw boxes for fun and profit. This unpublicized, little-known technique is guaranteed to delight you as you easily turn common inexpensive lumber and scraps into valuable utility boxes for home and office. High demand in gift shops, stationery stores and craft fairs. Fully illustrated instruction booklet of 15 original and profitable designs. Satisfaction absolutely guaranteed. Send \$10.00 to: BOX-ART, Dept. J, Box 8069, Woodridge, IL 60517.

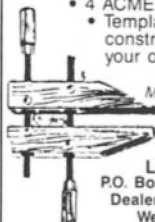
LINCOLN CLAMP KIT

"Build Your Own Clamps
At A Fraction Of The Cost"

14" Jaw Length — Jaws Open to 10"

DO IT YOURSELF KIT INCLUDES:

- 2 - 3/8 ACME Threaded Rods
- 2 Spring Pins
- 4 ACME Threaded Swivel Nuts
- Template and simple instructions for constructing jaws and handles from your own wood.



CUSTOM MADE CLAMPS ARE
MOST ADAPTABLE TO YOUR JOBS

TO ORDER SEND

\$850ppd to

LINCOLN TECHNOLOGIES
P.O. Box 3343 / Farmington Hills, MI 48018

Dealer Inquiries Satisfaction
Welcome Guaranteed

NEW
AFFORDABLE

BANDSAW MILL



The WOOD-MIZER is a one man portable sawmill with a huge 30" dia X 16' long cutting capacity. This safe, easy-to-operate mill cuts with an efficient traveling band saw carriage. Why waste lumber and money by cutting with an old fashioned circular mill when the WOOD-MIZER can give you 30% more usable lumber out of each log on less than half the fuel and horse power? This accurate cutting system is everything a sawmill should be and more.

For More
Information
Send \$1.00 to:

WOOD-MIZER, Dept. MM
4004 W. 50th St.
Indianapolis, IN 46222
(317) 243-7585

BUILD IT YOURSELF

TOYS • PUZZLES • PLAQUES • PLANTERS
FURNITURE • LAWN ITEMS • BIRD HOUSES
ROCKING & RIDING HORSES • PLAY SETS



SAME SIZE PATTERNS • WHEELS • HOW-TO BOOKS

40 PAGE ILLUSTRATED CATALOG \$100

Design Group, Box 514-F, Miller Place, N.Y. 11764

Sleeveless DRUM SANDER

USE ON:
Drill Press
Small Motor
Lathe
Combo-Tools
Radial Saw
1/4" Drill

NO PRE-MADE SLEEVES TO BUY

ECONOMICAL—Simply cut sandpaper from standard size sheets. UNIQUE way of holding paper to drum. Twist of key tightens. SPONGE RUBBER backing insures long wear of paper.



1"x3" long.....	\$13.50
2"x3" long.....	\$14.50
2 1/2"x3" long.....	\$15.25
3"x3".....	\$16.50
1" and 2 1/2" ABOVE.....	\$26.75
ABOVE 4 DRUMS.....	\$53.50
1/4"x3" long.....	\$14.50
2 1/2"x4 1/2" long.....	\$21.00
3"x4 1/2" long.....	\$22.50
2 1/2"x6" long.....	\$25.50
3"x6" long.....	\$27.50

Add \$2.50 Per Order For Shipping

MONEY BACK
GUARANTEE

FITTINGS AVAILABLE:

1/2" Bore with 1/2" or 1/4" adapter
1/2-20 R.H. Thread except 1/4"x3"
5/8" Bore except 1/4"x3" and 2"x3"

Send Check or Money Order
SINGLEY SPECIALTY CO. INC.
P.O. Box 5087-J Greensboro, N.C. 27403

OAK WORKBENCHES & LABORATORY TABLES

buy direct/\$97 up

free information on all our products

Tennessee Hardwood Co. 800 Main St.
Woodbury, TN 37190 615 563-2223

VISA &
MASTER CARD

Imported European Hardware

4295 South Arville
Las Vegas, Nevada 89103
(702) 871-0722

Send \$1.00 For Catalog • Refund with 1st Order



TIRED OF HUNTING FOR

22 1/2° ? **NEW**

OCTAGON GAUGE

TO SET MITER TO SAW BLADE FOR
22 1/2° CUT. HARDENED ALUMINUM
GAUGE HAS OCTAGON FORMULAS
AND 14" RULER SCREENED ON. ALSO
SCREW CHECKER AND INFORMATION.

\$7.95

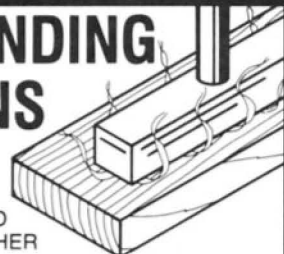
Plus \$2.00 Handling
and Shipping.

California residents add 6% sales tax. Send
check or money order to:

LYON

ELECTRIC
COMPANY, INC.
P.O. BOX 81303
SAN DIEGO, CA 92138

BRANDING IRONS



FOR WOOD
AND LEATHER

- Brands Your Full Name With
1/8" or 1/4" High Letters



GUARANTEED



SEND FOR FREE BROCHURE
NOVA TOOL CO.

4533 Colfax Circle, Dept. WJ-9
P.O. Box 29341, Lincoln, NE 68529

The Woodworker's Marketplace

Over 300 Router Bits

Plus 150 Carbide Tipped Saw Blades from 7" to 16", are now available to you through our illustrated catalog. Designed and manufactured specifically for the professional woodworker, these Bits and Blades are of the highest quality, and are available at the lowest prices to the trade.

Send \$2 for your brochure.

Nimrod Tools

P.O. Box 54, Cedarhurst, N.Y. 11516

OVER 2000 PLANS

Are available at no charge. The WOODWORKER'S INDEX helps you find these plans in your public library.

Projects in the INDEX are categorized by type and include publication, issue and page, as well as tools and materials required to help in your decision making.

Why buy plans when they are available in your library? WOODWORKER'S INDEX tells you where.

Send \$9.00 to:
WOODWORKER'S INDEX
P. O. Box 2376

W. Lafayette, In. 47906
IN. RES. ADD 5% SALES TAX



NATIVE AMERICAN HARDWOODS
WALNUT, BUTTERNUT, CHERRY
CURLY & BIRD'S-EYE MAPLE
Most Other Domestic Woods

- EXTRA WIDE/EXTRA THICK STOCK
 - TURNING SQUARES/BLOCKS
 - QUARTERSAWN/BOOKMATCHED LUMBER
 - SPALTED LUMBER/BLOCKS
 - THIN STOCK
 - FLOORING/PANELING
- NO MINIMUM
WHOLESALE & RETAIL

Comprehensive Listing—\$1 (Refundable) (716) 942-6631
NATIVE AMERICAN HARDWOODS LTD.
R1, W. VALLEY, N.Y. 14171

WOODWORKERS CATALOG

SEE 116 pages of hard-to-find products to build, restore, refinish anything of wood! Choose from 14 fine hardwoods, 109 veneers, 76 inlays. Cabinet & furn. hardware. Pro finishes. Uphol. supplies. Chair & table legs. 33 pic. moldings. Cane. Lamp parts. Carving tools. Specialty tools, shop equipment. 100's plans, how-to books. 2,000 products. Send \$1 for Catalog now. Get DOUBLE your money back!

CONSTANTINE Est. 1812
2044 Eastchester Road, Bronx, N.Y. 10461

★ Here's \$1 for 116-page Woodworkers Catalog

DOUBLE Your money Back!

Get \$2 BACK
Mail coupon now for dollar Catalog. We include \$2 refund Certificate good on 1st catalog order!

Name _____

Address _____

City/State/Zip _____



Furniture Hardware
Chair Cane
Lamp Parts

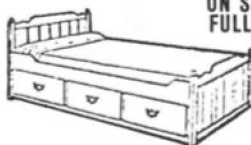
Pastor Hardware
7818 Bradshaw Rd., Dept. WJ
Upper Falls, Md. 21158
(301) 592-8505
Catalog: \$2.50 3rd Class
or \$3.50 1st Class

CREATE AN HEIRLOOM TOY DESIGNS

with CATALOG of PATTERNS & TOYMAKERS
SUPPLIES \$1.50 (U.S. dollars)

TOY DESIGNS, P.O. BOX 441, NEWTON, IA. 50208

SAVE \$100'S ON STORAGE BED! FULL-SIZE PLANS



& easy directions: twin, full & queen. 3 or 6 drawers: \$11 Money-back guarantee. Send for FREE illust. furn. list.

FLEXIPLANS Dept. DO
48 Lowell St., Westwood, NJ 07675



CONCEALED HINGES FOR WOOD AND GLASS DOORS
• Largest Selection
• Regular and Wide Opening
• 35mm and No-Bore

STEREO AND KITCHEN CABINET HARDWARE
SLIDES • CATCHES • SPECIALTY ITEMS

MAIL ORDER ONLY — CATALOG \$1.00
ALLEN SPECIALTY HARDWARE
P.O. BOX 10833 PITTSBURGH, PA 15236



WOOD PARTS

TOY, FURNITURE, CRAFT & GAME
Wheels • Spindles • Balls • Knobs • Shaker pegs • And more!

Since 1927! Send \$1.00 for Catalog.

BROWN WOOD PRODUCTS CO.
P.O. Box 8246WJ, Northfield, IL 60093 • (312) 446-5200



Garden WINDMILLS
FULL SIZE PATTERNS
Beautify your lawn with these picturesque old windmills, 4 to 6 ft. high. Easy to make with full size patterns and step by step instructions. Only \$7.00 Prepaid 1st Class for WINDMILL PACKET with patterns for both.

MASTERCRAFT PLANS WEST, DEPT. 519W
P.O. BOX 625, Redmond, WA 98073

Swinging CRADLE

Easy to make with FULL SIZE FURNITURE PLAN

Authentic spindle design straight out of Colonial America. Plans show alternate construction with panel sides. Perfect for baby or use for magazines or fireplace wood. Size: 20" x 39" x 30". Order plan #166.....\$9.00
FURNITURE DESIGNS, Dept. JS-94
1425 Sherman Ave., Evanston, Ill. 60201



CATALOG
180 diff., full-size prof. plans — \$2.00 refunded with 1st order.

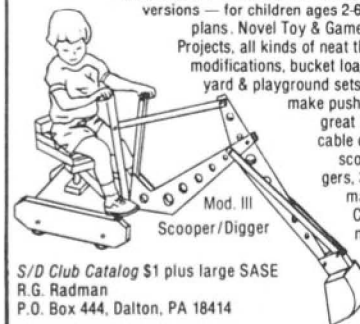
FREE HAND TOOL

CABINET-MAKER SCREWDRIVER OR
BEVELED EDGE WOOD CHISEL OFFER
SEND FOR FREE DETAILS

Ask About Our Early Bird Wood Screw Special
MASTER CRAFTSMAN CO. INC.
P.O. BOX 307 DEPT. 900 XENIA, OH 45385

BIG RIDING TOYS: Operational Backhoe, Shovel, Crane...

Much More! 6 arm sets, 4 ft. reach, 2 treaded versions — for children ages 2-6. Detailed plans. Novel Toy & Game Designs. Projects, all kinds of neat things: toy modifications, bucket loader, giant yard & playground sets, easy-to-make push cycles, a great block set, cable controlled scooper/diggers, 3 ways to make flying Cylinder, a new chess game, a 3-D game, etc.



S/D Club Catalog \$1 plus large SASE
R.G. Radman
P.O. Box 444, Dalton, PA 18414



Neary "split-type" Sanding Drum

— A great new sanding drum whose abrasive can be changed in less than a minute using strips cut from regular sheets of sandpaper. — No expensive sleeves to buy. — Use in any 1/2" (10mm) or larger drill chuck. — 2" (51mm) diameter by 3" (76mm) long drum presently available. — Other sizes to follow. — 30 day money-back guarantee.

Only \$12.00 (U.S.)

Canadian and U.S. orders, add \$1.50 to cover postage, handling and insurance. Other countries add \$3.00.

Visa and MasterCard accepted. Include card number and expiry date.

Neary Industries Ltd.
P.O. Box 543
Kentville, Nova Scotia
Canada B4N 3X7



POWERMATIC

MODEL 66 — 10" TA SAW



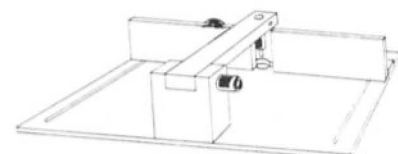
5 H.P. 3 PHASE
OR
3 H.P. SINGLE PHASE
48" RAILS
EXT. WINGS

WORKBENCH TOOL CO.
939 Stewart
Madison, Wisconsin 53713
1-800-792-3505 ext. 233

List Price \$2401.00
OUR PRICE \$1680.00
You Save \$721.00

Order No. 1660760
F.O.B. McMinnville, TN

ROUTER TABLE



The TEKTON Precision Router Table is for beginners and experienced woodworkers. A Model 1200 TEKTON router table gives you more features than any other router table available. You can shape, joint, pin-rout, plus many other operations on the big 18"x 24" milled table. For less than \$300 you can own this "Made in the U.S.A." precision tool. Write TEKTON, Box 3, Dalton, IL 60419 for free literature.

The Woodworker's Marketplace

101 PATTERNS

This wonderful packet contains 101 FULL SIZE PATTERNS of Gifts, Novelties, Lawn Figures, Bird Houses, Shelves, Action Windmills, Alphabets, and many more things. Just trace and saw out. Plus "Make Money Jig Sawing". Only \$7.00 Prepaid 1st Class for this big packet.

MASTERCRAFT PLANS WEST, DEPT. 55W
P.O. Box 625, Redmond, WA 98073



FREE VENEERING CATALOG

96 varieties world's rarest veneers and lumber at reasonable prices. Simplified veneering instructions plus full color wood selector included. Send for free catalog now and get special bonus starter offers. **SAVE 25% Hurry!**

BOB MORGAN WOOD, Dept. W04K18

1123 Bardstown Rd., Louisville, Ky. 40204



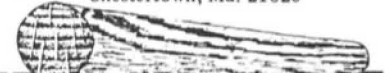
FREE CATALOG

DOWELS • BUTTONS • TOY PARTS
TEA CART WHEELS • TURNINGS
HARD TO FIND HARDWARE

One Catalog you'll be glad you have!

INNERWICK

Route 1 • Box 808 J
Chestertown, Md. 21620



North Bennet

- **CABINET & FURNITURE MAKING**
Design and Construction of Period Furniture. 1½ yrs.
 - **PIANO TECHNOLOGY**
Tuning and Repair 1st yr.
Restoration 2nd yr. (optional)
 - **VIOLIN MAKING & RESTORATION**
Repair, Restoration and Construction. 3 yrs.
 - **CARPENTRY**
Residential Construction and Renovation. 1½ yrs.
- NON-PROFIT SCHOOL
ACCREDITED MEMBER NATTS
FINANCIAL AID AVAILABLE

For Free Catalogue Write or Call 227-0155

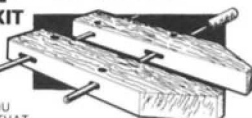
North Bennet Street School

39 North Bennet Street • Boston, Massachusetts 02113

Make a \$25 wood clamp for \$9.95

KLAMP KIT

14" JAW
LENGTH
JAWS OPEN
TO 10"



NOW YOU CAN CREATE THAT ESSENTIAL TOOL FOR FINE WOODWORKING PROJECTS!

PRICE INCLUDES SHIPPING

Fun, easy-to-do-it-yourself kit includes:

- Two 3/8" x 12" Acme threaded rods • 2 union pins • 4 specially threaded givert nuts
- Easy to follow instructions for making the jaw from wood and handles from dowels

Dealer Inquiries Invited

Mail to: THE ROCKLEDGE CO., INC.
Box 56, Dept. J, Milwaukee, WI 53201

Please rush me (no.) KLAMP KITS

☐ I've enclosed a check for \$9.95 per kit.

Please charge my ☐ VISA ☐ MasterCard No. _____

Expiration Date _____

Name _____

Address _____

City, State, Zip _____

Signature _____

(Credit card customers)



Western Burlwood Clock & Table Slabs

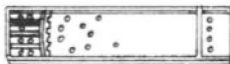
Redwood — Buckeye — Myrtlewood

Birdseye Maple — Juniper — Olive

TURNING WOOD • CLOCK MOVEMENTS — Finishes

Free Brochure **Redwood Burl Edge** Dept. WJ-984
1454 Orchard Home Dr., Medford, Or. 97501

DUTCH SHUFFLEBOARD



Play the old Dutch game of "SJOELBAK" — a wooden board game played with 20 discs. Plan and rules for the centuries-old Dutch game. Send \$5.00 to:

WOODEN SHOE LIKE THIS
39 N. STATE
GLENWOOD, IL 60425

CONSTANTINE'S Wood Center of Florida

Exotic woods in veneers, lumber.
Hard-to-find woodworking tools,
hdwe. specialties, wood finishes.
Catalog at store. Come on in.
1040 E. Oakland Pk. Blvd.
Ft. Lauderdale, FL. 33334



305-561-1716

Over 200 craft books, most under \$4.00! FREE DOVER CRAFT CATALOG

Fully illustrated guide to over 200 popular books, most under \$4.00, on woodworking, stained glass, stencils, decoupage, weaving, more. Absolutely FREE! No obligation. Write Dover Publications, Dept. A158, 31 E. Second Street, Mineola, NY 11501.

WOODWORKING TOOLS AND SUPPLIES

OVER 1500 ITEMS • NAME BRANDS
• MARPLES • SORBY • KUNZ •
CLAY • ULMIA • PLANS • BOOKS •
AND MUCH MORE CATALOG \$2.00
(completely refundable)

CUSTOM WOODWORKING

P.O. BOX 102J, MERCER, PA 16137

TOYMAKERS FREE!



Send for free price list of wood toy parts, wheels, patterns, books. Plus Toymakers' newsletter: "How To Create

Unusual Toys For Fun Or Profit". Hurry! Get in on the action now! Special Toymakers' starter offers included. Morgan Toy Supply, Dept. W04B16
1123 Bardstown Rd., Louisville, Ky. 40204



Quantity Prices
on Request

NAIL KEGS

Rustic Pine. Top Included. 18" high x 12" wide

Use For: Seating, Table, Planter,

Waste Basket — Be Creative!

\$19.95 Each - Postage Paid

3 or more \$18.95 Each

Send check or M.O. to:
COOPERAGE HOUSE OF INDIANA
Dept. WJ, P.O. Box 684
Whiting, IN 46394

POOL TABLE PLANS

BUILD YOUR OWN from PLANS & KITS

SAVE MONEY by building your own pool table

YOU supply the craftsmanship, we supply the plans and pool table parts. YOUR table can be built with deep pockets or a ball return. COMPLETE PLANS include drawings, instructions, specifications, etc. and information on prices of kits for the pool table parts (cushions, cloth, pockets, etc.).

START TODAY! SEND \$9.95 for plans (refunded on kit order)

TIERCRAFT, Dept. E, Box 8151, Erie, Pa. 16505



Pa. res.
add 6%

OVER 34 YEARS MANUFACTURING LATHE-TOP WOOD TURNING DUPLICATORS



Ours is the only ORIGINAL
Duplicator of its kind. Be a
professional in minutes.
New wide base model.

FREE LITERATURE

TURN-O-CARVE TOOL CO. P.O. Box 8315-WJ Tampa, FL 33674

THE MAGNIFICENT Mallet



Top Quality • Extra Durable • One-Piece

• 14-oz. ... \$6.60 • 24-oz. ... \$6.90

• 18-oz. ... \$6.60 • 32-oz. ... \$6.90

Liberal discount to Schools and Dealers.

FREE 24-P. GERMAN STEEL TOOL CATALOG

WRITE:

FRANK MITTERMEIER, INC.

Dept. WJ-409, 3577 E. Tremont Ave., N.Y.C. 10465

WOODTURNERS

TWO-DAY TURNERS' WORKSHOP (SINCE 1976)

For beginners and experienced turners. Midweek or weekend throughout the year. Two students per class for personal attention. Sharpening and proper use of tools for faceplate and centers turning. Build confidence and experience, or just find out if you like to turn. Full accommodations available. (Too far to come? Ask for our winter "on-the-road" schedule.)

MYFORD ML8 WOODTURNING LATHE

Finest quality and design, including outboard tool rest for bowl turning. 36" or 42" between centers.

THE ZIMMERMAN WOODTURNING LETTER

Comprehensive; instructive; the "why" as well as the "how." Excellent preview or review for workshop.

1983 EDITION: 76 PAGES, \$7 ppd.

1984 EDITION: 72 PAGES, \$8 ppd.

SEND 40¢ IN STAMPS FOR DETAILS

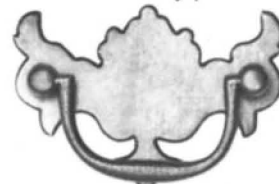
Including SORBY turning tools, chucks, and DOUBLE-STICK TAPE. (Why use messy glue and paper to hold on bowls?)

RUSS ZIMMERMAN, RFD 3, BOX 242
PUTNEY, VERMONT 05346

HORTON BRASSES

Nooks Hill Road P. O. Box 120 WJ
Cromwell, CT 06416 (203) 635-4400

HORTON BRASSES are authentic
copies of 17th, 18th, 19th & early
20th century pulls.



Mfrs. of Cabinet & Furniture
Hardware for Homes & Antiques.

Send \$2.00 for a Catalogue.

Free catalog of over 600 fiendishly ingenious devices.

Our extraordinary tools are
made to do the job right, saving
you time, effort and money, and
they're guaranteed for life.



Send me Brookstone's FREE
68-page tool catalog.

Name _____
Address _____
City _____
State _____ Zip _____

Brookstone

70 Vose Farm Road, Dept. 1172A
Peterborough, New Hampshire 03458

CLASSIFIED

The Classified Rate is \$1.00 per word, payable with order. Minimum ad length is 15 words, and the deadline date is the 1st of the 2nd month preceding the issue (for example 11/1 for the January/February issue). Send copy (count each word and initial) and check to **The Woodworker's Journal**, Classified Dept., P.O. Box 1629, New Milford, CT 06776.

Free Woodworker's Catalog!...Toymaking, veneering, caning supplies. Furniture plans, woodworkers' books, dowels, buttons, spindles, shaker pegs, mug pegs, candle cups. Hurry! Morgan, WO4M15, 1123 Bardstown, Louisville, KY 40204.

Bargains in Hinges, Handles, Dowel Pins, wood buttons, screws, nails and more. Send stamp for list. Roses, 184C Winter St., Weston, MA 02193.

Craftsmen — show pride in your fine work. Personalize your pieces with engraved solid brass plates. Send \$1.00 for 2 line sample plate. VB, Dept. WJ, 807 East Dana, Mountain View, CA 94040.

Shaker or Mug pegs \$10.50 per 50, buttons 3/4" or 1/2" \$8.95 per 500, gallery rail spindles \$8.25 per 50, bean pot candle cups \$5.95 per 25, people \$3.95 per 25, smokestacks \$6.95 per 25, maple toy wheels: 1" \$4.25, 1 1/4" \$4.95, 1 1/2" \$6.50, 1 3/4" \$11.00, 2" \$14.25, 2 1/4" \$17.40, 2 1/2" \$23.50 (all per 100). Axle pegs for 1" to 1 1/4" wheels \$3.00 per 100, pegs for 2" to 2 1/2" wheels \$3.50 per 100, drums \$6.95 per 25, barrels \$6.95 per 25, Milk cans \$4.95 per 25, oak shaker pegs \$3.50 per 10. Add \$3.25 for orders to \$35.00, over \$35.00 add 10% of order. Much more in brochure \$1.00, free with order. K & K Woodcrafters, RD 4, Box 270A, Scotia, NY 12302.

Woodworkers Make Money when they learn from "The Woodworker's Money Book". Covers how to sell retail and wholesale, pricing, credit, labeling, much more. Money-back guarantee. Mailed first-class for \$3.00. Inprint, Box 687, Farmingdale, NJ 07727.

Musical Instrument Kits — Dulcimers, hammered dulcimers, banjos, mandolins, harps, and more. Brochure — 37¢ stamp, Folkcraft Instruments, Box 807K, Winsted, CT 06098. (203) 379-7685.

Miniature Furniture Patterns. Dollhouse Plans. Basswood, Tools, Books, Wallpaper. 1" to 1' scale. Catalog \$1.00. Green Door Studio, Dept. WJ, Box 18200, St. Paul, MN 55118.

Five Unique original toy patterns, \$5.00. B & C Crafts, 1200 E. Ninth, Johnson City, TN 37601.

Catalog of Unique Wooden Toy Patterns. \$1.00 refundable. Playrite, Rt. 8, Box 343-J, Moultrie, GA 31768.

35 Full-size Toy patterns! Ten cars, six trucks, two airplanes, nine hot-rods, six piece train, two earthmovers! Only \$5.00! Frank's, 1202-J23 Second, Booneville, MS 38829.

Over 75 Full Size Patterns! Enjoy making profitable wooden gifts, toys, household accessories. Plus "Shop Secrets" only \$6.00. Accents (J-94), Box 262, Danvers, MA 01923.

Clock Builders: Name brand movements, hands, numerals, plans, and much more. Send \$2.00, refundable with first purchase, to: Clocksco, P.O. Box 1631, Charleston, SC 29402.

Idiot Stick. Plan for easily made wooden toy which befuddles victims. \$1.00: P.H. Boer, 39 North State, Glenwood, IL 60425.

Build Your Own Roll Top Desk at Low Cost! Complete easy-to-follow computer designed plans for raised panel construction. Send \$7.95 to: Bud's Plans, 2960 Egan Ave., Eagan, MN 55121.

100 Envelopes printed choice of 6 colors ink, 5 type styles \$4.00 postpaid. Stamp for samples. Countryside Press, Rt. 1, Bruce, MS 38915.

Inca Model 659 Shaper — Like New. Boxed Cutters, Extension Rails, Free Style Guide, Hold-downs, etc. \$1600.00 cash. D.R. Cruse, Lubbock, TX (806) 743-7212.

Sorby Lathe Chisels: Outstanding selection. BWT, Dept. 10WJ, 2413 Driftwood Drive, Wilmington, DE 19810.

Catalog Full-size Furniture Plans — \$2.00. Refunded with first order. Traditional, Early American, over 180! Furniture Designs, 1425 Sherman, Dept. CJ-94, Evanston, IL 60201.

Wanted To Buy: Handcrafted wood items of all types. Send photo, description and wholesale price. Unique Wood Products, Box 1044, Suisun, CA 94585.

Dulcimer Builders Supplies — precision milled and fine sanded dulcimer and hammered dulcimer woods. Cherry, Walnut, Paduk, Koa, Rosewood, Birdseye Maple, Sitka Spruce, W.R. Cedar: Related hardware and strings. 37¢ stamp for brochure. Folkcraft Instruments, Box 807W, Winsted, CT 06098. (203) 379-7685.

Woodworkers: Make \$100 every Saturday with your shop scraps! Complete instructions \$3.50. Cedartree, Box 744L, Oregon City, OR 97045.

Never Pay Retail Again!! Buy direct and save 50%+ on sanding needs/bandsaw blades. American made, huge inventory. Minimum order \$10.00. Thousands have saved since 1977. Free details, send self addressed stamped envelope: Fixmaster, Box 49511-6, Atlanta, GA 30359.

Wood Antique Models and other projects. Full-size patterns catalog \$1.00 refundable. Criss-Cross, Box 324, Dept. CJ, Wayne, NJ 07470.

Make Wooden Toys — Projects — 100's plans, kits, hardwood parts (toy, craft, furniture) — Catalog \$1.00. Cherry Tree Toys, Belmont, OH 43718.

Shopsmith Owners: Lathe Duplicator designed especially for you. Also 1/4" router bit holder. BWT, Dept. 10WJ, 2413 Driftwood Drive, Wilmington, DE 19810.

Chair Caning Supplies — cane webbing, rush, splint, ash, rawhide, cord. Catalog \$1.00 (refundable). Caning Shop (WJ), 926 Gilman, Berkeley, CA 94710.

Woodcrafts. Veteran Craftsman has experienced \$1000.00 craft shows, will send plans for 6 best selling wood items for \$5.00. Bennett Wood Products, Route 8 Box 680-S, Pensacola, FL 32506.

Over 400 Woodworking Designs! Shop-tested plans/full-size patterns. Create profitable toys, gifts, household accessories. Brochure plus sample pattern \$1.00. Accents (D-94), Box 262, Danvers, MA 01923.

Stainless steel and brass screws and bolts. Small quantities, free catalog. Elwick, Dept. 527, 230 Woods Lane, Somerdale, NJ 08083.

77 Beautiful Barn Plans. For workshops, cars, homes, storage. Many sizes, styles. Catalog \$4.00 refundable. Ashlandbarns, 990JW Butlercreek, Ashland, OR 97520. (503) 488-1541.

Unique Full-size Wooden Toy patterns. 8 easy-to-follow plans that are presently being shown in prominent craft shops. An easy money maker for extra income. Send \$5.00 to: Barrow, 204 S. Oakum St., Edenton, NC 27932.

Woodworkers — Exciting Home Operated Business. Fantastic sideline. \$6 Material = \$39.95. Free brochure! Pine Shop, 78-WJ, West Peterboro, NH 03468.

Bandsaw Owners: Produce over \$100.00 per day making bandsaw puzzle boxes. Plans \$5.95 includes 4 styles. Bennett Wood Products, Route 8 Box 680-S, Pensacola, FL 32506.

Make your own "Dead-Blow" (no bounce) mallet from scraps. Assemble/disassemble furniture without marring. Plans: \$2.95. Saggio, Box 787, Horace Harding Station, Flushing, NY 11362.

Stage Coach Planter or Conversation Piece. Detailed Plans, \$5.00. Southern Crafts, 10 Garrell St., Tabor City, NC 28463.

Poor man's catalog — U-build power tools, saws lathes, engraving machine, energy savers, crafts, furniture, toys and much more. \$3.00. Patterson Enterprises, Dept. W, P.O. Box 1390, Apopka, FL 32704-1390.

A Japanese touch for your home. Wonder book for builder/designer. Much more. Free brochure. East by East, 30 Chaske #7, Auburndale, MA 02166.

Never buy clamps or vises again! Make your own from common materials. Four designs fit any project. Simple construction. Plans \$8.00. Information free. Spence, 326 Sylvan, Leonia, NJ 07605.

Carnauba Wax #1 Prime Yellow, Flakes — \$6.75/lb., 1 lb. cakes — \$8.25/lb. Add \$1.75 postage. Write: W. Ambrosch, P.O. Box 3204, Ridgewood, NY 11386.

Hundreds Woodworking Patterns, books, tools, wood parts, best values; Timbers Free Catalog #WJ19, Carnelian Bay, CA 95711-0850.

Giant Catalog; patterns, parts, books for making wooden toys; \$1.00: Toymaker Supply Catalog #WJ19, Tahoe, CA 95730-5459.

Plans: Roll Top Bread Box, Tater Bin, Doll Cradle, Trunks, Novelties. Illustrated instructions. \$5.00 each. Brochure 50¢. Hickory Hollow, 104D Estates Dr., Opp, AL 36467.

Make up to \$40.00 an hour: "Custom Door-wall Shutters" — 4 panel bifold or 2 panel sliding can be made for under \$70.00 and sell for \$400.00 unfinished to \$600.00 finished plus installation. One of the hottest selling items on the market today. Send for complete plans, instructions and templates. 4 panel — \$6.95; 2 panel — \$6.95; both plans — \$12.95. Holland Home Products — (W), 24875 Groesbeck, Suite 102, Warren, MI 48089. (313) 445-2549.

Quality wood lathes. 45" between centers, 16" turn (gap), live centers, \$375.00. 57" centers, \$400.00. 350 lb. super lathe 60" centers, 18½" turn (gap), 3 bearing center, \$650.00. 96" centers \$800.00. Harold Barker, 3108 Klingler Road, Ada, OH 45810.

Child's China Cabinet. New, original 41" tall. Pine with plexiglass doors. Gorgeous. Money maker. Plans \$5.00. Chunn's Crafts, Dept. WJ, Rt. 4, Russell Rd., Franklin, TN 37064.

Woodworkers, looking for a new and profitable project? Try our plans for Storage Buildings, Playhouses, Greenhouses, Swimming pools, snowmobile bob-sleighs, garden carts, beach chairs, rocking horses, children's walkers, doll carriages, child's sled, wood toys. Plus: accessories kits, plastic and spoked wheels to 20" dia. \$1.50 for illustrated catalog. L.O.G. Woodcraft, Box 39-B, Grand Cascapedia, Bonaventure Co., Quebec, Canada G0C 1T0.

Planlist classifies hundreds woodworking plans from many sources. \$1.00. Meade, 4201J West Diana, Phoenix, AZ 85021.

Wanted! We would like to buy your original ideas for toys which use wood wheels. Send sketch or photo and price. Meisel Hardware Specialties, P.O. Box 258, Mound, MN 55364.

Doll Cradle Plans: Unique Colonial Design. 17" long 8" wide. Detailed drawings, pictures, and written instructions. Also how to obtain a professional finish without using stick varnish or lacquers. \$5.00. Norwegian Woods, Box 366, Dept. 12C, Flagstaff, AZ 86002.

Brass Post Office Box Fronts. \$7.50 postpaid. Postal money order only. Clayton, 1500 Huntcliff Way, Clinton, MS 39056.

Sawtooth Picture Hangers with nails: 1½" x ¼" wide, with three teeth. \$35.00 per thousand, ppd. Primitive Collection, 309 East Main. Starkville, MS 39759.

Woodworkers! 8 Full-sized patterns for cars and trucks from scrapwood. \$3.00. Tubecity Graphics, Box 322, Milton, MA 02186.

Bandsaw blades — splice your own using a plumber's torch! Saves ½ on blade costs. Easy and quick! Send \$5.00 and we'll show you how. Footsie's Woodshop, Route 2 Box 27-A, Roosevelt, UT 84066.

Colonial Cannonball Bed. Complete plans and material list for double size bed. Easily adaptable to queen or king size. Bed posts are 60" high. A guaranteed fun project. \$5.00. Hall's Woodcraft, 1246 Cribb, Toledo, OH 43612.

Red Oak — other hardwoods kiln-dried, planed two sides. Send stamp for catalog. Oak-N-More, 710 North Park, Salem, MO 65560.

Wide walnut lumber — \$3.00/bd. ft. Quantity discounts apply. Call Gerry Grant, Gettysburg, PA 1-717-528-4496.

Southern California Craftsmen & Hobbyists, if you are a professional or aspiring fine woodworker, plan to attend The Woodworking Show at the Orange County Fairgrounds September 28-29-30, 1984. 100 exhibits of the latest techniques, tools and supplies. Free seminars — door prizes. Call (213) 477-8521 for information and discount admission.

Wooden wheels and unique toy plans. Catalog \$1.00. Howee Toys, Route 7 Box 633WJ, Joplin, MO 64801.

Advanced Home Craftsmen: Plans for Hand & Power tools & Attachments. SASE for information. Wood-Met Services, 3314 Shoff, Peoria, IL 61604.

Toy Plans, Books, Tools, Video Tapes, audio tapes, the universal power tool jigs. DeCristoforo Designs 1984 Catalog! Over 80 years of woodworking experience combine with our unrelenting commitment to bring you the most innovative woodworking aids available! We offer full-size action toy plans, full-size plans for the universal table saw jig and the universal drill press jig. R.J. DeCristoforo's video table saw course! Jim Ingall's video sharpening course! R.J. DeCristoforo's woodworking books! The "Snap Stop" instant reference clamp for table saw cross cutting! Send for our catalog today! \$1.00 to DeCristoforo Designs, 27082 Horseshoe Lane, Los Altos Hills, CA 94022.

Dusty Splinters Enterprises, offering: American made professional quality Carbide Router Bits, Saw Blades, Wood Toy Parts, and Shaker pegs...all at reduced prices. Write: P.O. Box 3204, Desk C, Flushing, NY 11386.

Toymakers! . . . Free Catalog . . . patterns, wheels, dowels, parts, supplies! Hurry!! Morgan, W04B12, 1123 Bardstown, Louisville, KY 40204.

Handcrafted Items Wanted: Market your craft nationally through our country giftware catalog. For information send SASE to: Northwoods, 200 Sunnyvale Lane, Minnetonka, MN 55343.

Attention Woodworkers! Hardware, supplies at quantity discounts: pegs, spindles, hinges, knobs, pulls, toy parts and power tools. Catalog \$1.00. Benny's Woodworks, P.O. Box 656, Dept. WJ5, Antioch, TN 37013.

Solar Dog House. Winter warm, summer cool. Complete plans \$3.95. Currie, 1421 Locke, Millington, TN 38053.

Original Toy Plans, Build Sturdy Toys with easy-to-follow plans. Trucks, trains, bulldozer, crane, firetruck, rocking horse, doll cradle and more. Catalog of parts and plans \$1.00, refundable first order. Toy-craft, Dept. WJ-9, 601 East Main St., Waynesboro, PA 17268.

New — First time offering of unique plans for wooden pet products. Cash in on this profitable, growing market. Write today for free details: Woodworks, 63372 N. Hwy. 97, 616W, Bend, OR 97701.

Beautiful and Easy Wipe-On Wood Finishing explained in Free wood finishing guide and products catalog. General Finishes, Box 14363J, Milwaukee, WI 53214.

PROTECT YOUR COPIES OF **The Woodworker's Journal**

IN THEIR OWN SPECIAL BINDERS or CASES

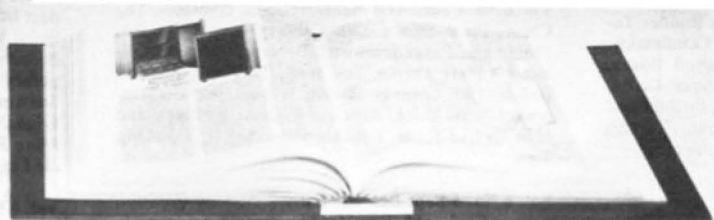
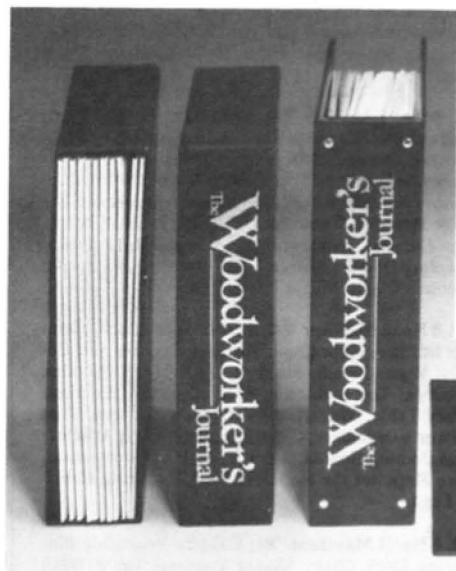
Keep your journals clean, orderly, and readily accessible with **The Woodworker's Journal** Binders or Cases. One Binder or box style Case is all you need to accommodate 12 issues. Both Binders and Cases are handsomely made with rich maroon leatherette covers and gold leaf embossed lettering.

The Woodworker's Journal Binders hold 12 issues, open flat for easy reading and reference and are economically priced at only \$8.50 each; 3 for \$24.75, postpaid.

The rugged, compact box Cases, which hold up to 12 issues, are only \$6.95; 3 for \$20.00, postpaid.

Free gold transfer slips included for indexing volume and year.

Orders outside U.S.A. please add \$2.50 each for postage and handling. Please allow 4-6 weeks for delivery.



Please send your order with payment directly to:

Jesse Jones Industries, since 1843
P.O. Box 5120, Dept. WWJ
Philadelphia, PA 19141

I enclose my check or money order for \$ _____ (U.S. currency only)

Send me _____ (Quantity) ☐ Cases ☐ Binders

Name: _____

Address: _____

City: _____

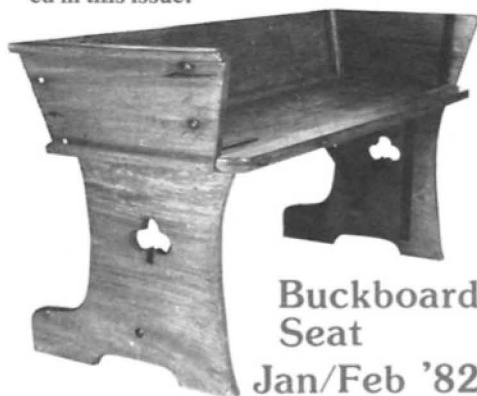
State: _____ Zip: _____

WWJ

NOTE: Satisfaction guaranteed or money refunded.

BACK ISSUES

Please Note . . . supplies are limited! To order, use the form and envelope included in this issue.



Buckboard Seat
Jan/Feb '82

Vol. 4 No. 5 Sept-Oct '80: Cabinetmaker's Workbench, Cobbler's Bench Coffee Table, 19th Century Cherry Table, Kitchen Utensils, Book Rack, Nuts & Bolts, Nutcracker, Walnut & Glass Bank, Schoolhouse Desk, Booster Seat, Articles: All About Wood Chisels, Being Your Own Salesman, Restoring a 19th Century Carved Table.

Vol. 4 No. 6 Nov-Dec '80: 17th Century Mantle Clock, Toy Truck, Bud Vase, Grain Scoop, Letter Rack, Phone Memo Caddy, Toy Circus Wagons, Animal Puzzles, Library Stool, Quilt Rack, Ratchet Table Lamp, 18th Century Trestle Table, Lathe Steady Rest, Articles: Lap Joints, Pricing Your Work, Correcting a Warped Top.

Vol. 5 No. 1 Jan-Feb '81: 18th Century Wall Shelves, Hand Mirror, Cutting Boards, Tic-Tac-Toe Game, 18th Century Vanity, Shaker Pine Cupboard, Tenon Jig, Towel Ring, Matchbox, Corner Shelves, Contemporary Cabinet, Black Forest Clock, Shop Drawing Board, Articles: Veneering Basics, Selling Quality, Repairing Loose Joints.

Vol. 5 No. 2 Mar-Apr '81: Child's Rocker, Bandsaw Jig, Push-Pull Toy, Half-Round Table, Spoon Rack, Salt and Pepper Shakers, Calculator Stand, Anchor Thermometer, Plant Stand, Oak Writing Desk, 18th Century Chair Table, Shop-Built Handscrew, Articles: The Minimal Workshop, Submitting Plans to Magazines, A Finishing Tip for Matching Colors.

Vol. 5 No. 3 May-June '81: 18th Century Sleigh Seat, Child's Step Stool, Kiddie Gym, Flying Duck, Dominoes, Trouser Hanger, Mug Rack, Folding Sun Seat, Ship's Wheel Table, Contemporary Buffet, Articles: Enlarging and Transferring Patterns, Selling at Fairs, Filling Wood Pores.

Vol. 5 No. 4 July-Aug '81: Longhorn Steer, Bike Rack, Miniature Chest, Doll House Bed, Curio Shelves, Belt Rack, Rocker Footrest, Early American Wall Shelf, Multipurpose Cabinet, Box Cutting Jig, Dish Rack, Articles: The Plain Rabbit-Miter Joint, Photographing Your Work, Restoring a Walnut Coffee Table.

Vol. 5 No. 5 Sept-Oct '81: 18th Century Rudder Table, Musical Jewelry Box, Colonial Candlestick, Deacon's Wall Shelf, Toy Hippo, Spalted Boxes, Woodbox, Sewing Cabinet with Tambour Doors, 18th Century Tavern Table, Router Jig for Stopped Dados, Articles: The Locked Miter Joint, Finding Used Equipment, Restoring Hitchcock Chairs.

Vol. 5 No. 6 Nov-Dec '81: Old-Time Ice Box, Victorian Sled, Tile Clock, Wine Glass Holder, Mahogany Wall Shelf, Inkwell, Bagel Slicer, Seal Push Toy, Wooden Combs, Antique Knife Tray, Memo Cube, Fireplace Bellows, Contemporary Shelving, Weather Station, Shop-Built Bar Clamp, Articles: Frame and Panel Construction, Casework, Replacing Old Cane.

Vol. 6 No. 1 Jan-Feb '82: Contemporary Sofa Table, Artist's Easel, Candle Box, Laminated Box, Butcher Block Knife Rack, Frog Pull Toy, Infinity Mirror, Japanese Style Table Lamp, Empire Footstool, Desk Caddy, Stepped-Back Hutch, Buckboard Seat, Laticework Cutting Jig, Articles: Working with Plywood, Insurance for the Workshop, Some Thoughts on Glues and Gluing.

Set of three Nesting Cube Tables Mar/Apr '83

Vol. 6 No. 2 Mar-Apr '82: Early American Blanket Chest, 18th Century Corner Shelf, Pine Footstool, Cheese Cutting Board, Napkin Holder, Trivets, Coaster Set, Pierced Tin Cabinet, Hutch Clock, Oak File Cabinet, Mahogany Tripod Table, Wall Hung Plant Bracket, Articles: Methods of Producing Thin Stock, Some Thoughts on Selling, A Pseudo-Colonial Spanish Chair: Part I.

Vol. 6 No. 3 May-June '82: Country Kitchen Cabinet, Rough-Sawn Cedar Clock, Swinging Cradle, Toy Helicopter, Casserole Dish Holder, Ship's Wheel Weather Station, Octagonal Planter, Tambour Desk, Band Saw Boxes, 19th Century Step-Chair, Sailing Ship Weather Vane, Articles: Bench Hooks and Shooting Boards, Bookkeeping: Part I, Pseudo-Colonial Spanish Chair: Part II.

Vol. 6 No. 4 July-Aug '82: Dovetailed Footstool, Toy Chest, Plant Stand, 18th Century Lawyer's Case, Frame and Panel Joint with Decorative Bevel, Collector's Plate Frame, Toy Jeep, Trestle Table and Bench, 19th Century Danish Washstand, Contemporary Wall Valet, Articles: Cabinet Scrapers and How To Use Them, Bookkeeping: Part II, Finishing Tips.

Vol. 6 No. 5 Sept-Oct '82: Early American Hanging Corner Cupboard, Breakfast Serving Tray, Veneered End Table, Chess Table, Chest of Drawers, Contemporary Writing Desk, Whale Toy, Laminated Shoehorn, Spaghetti Measure, Candle Holder, Horizontal Boring Jig, Cane Suppliers, Finishing Suppliers, Articles: Pinned and Wedged Mortise and Tenon Joints, The Craft Market, More Finishing Tips.

Vol. 6 No. 6 Nov-Dec '82: Lyre Clock, Geodesic Lighting Fixture, Sawhorse Dining Table, Oak Desk Clock, Shaker Wall Shelves, Old-Time Radio Case, Cider Press Lamp, Contemporary Hanging Light Fixture, Firewood Rack, Toy Tool Box, Christmas Tree Ornaments, Willie and Tuna Push Toy, Woodpile Trivet, Circle Cutting Router Jig, Articles: All About Box Joints, Don't Sell for Less than Cost, Finishing Tips.

Vol. 7 No. 1 Jan-Feb '83: Workshop Tote Box, Tinsel-Art Mirror, European Spinning Wheel, Key Holder, Dump Truck Toy, Bang-a-Peg Toy, Puzzle, Wall Cabinet with Reverse Glass Stencil, End Grain Table Lamp, Butler's Tray Table, Contemporary Clock, Pine Cabinet, Articles: Miter and Spline Joints, The Added Costs of Being in Business, Selecting Clear Finishes.

Vol. 7 No. 2 Mar-Apr '83: Porch Swing, Homemade Jig Saw, Cheval Mirror, Punched Tin Spice Cabinet, Television Stand, Nautical Table Lamp, Wooden Balance, Nesting Cube Tables, Steam Roller Toy, Back Massager, Mailbox, Wall Shelf, Chippendale Mirror, Clock Parts and Suppliers, Articles: Flat miter joints with the Table Saw and Router, Woodworking for Fun vs. Woodworking for Work, Applying a Clear Finish.

Boat & Trailer, Letter Opener, Contemporary Serving Tray, Hanging Mirror with Shelf, Carved Eagle, Early American Portable Bookcase, Hardwood Suppliers, Articles: Handtools and Table Saw Methods, Record Keeping: The Key to Profitable Costing, A Cure for Loose Legs.

Vol. 7 No. 4 July-Aug '83: Turned Lamp, Decoy Carving, Antique Sugar Chest, Record Album & Tape Cabinet, Chinese Tea Table, Old-World Weather Forecaster, Toy Tractor & Cart, Display Pedestal, Two Planter Projects, Collector's Plate Stand, Hardware Suppliers, Articles: Dovetail Joints: Part I, Keep Track of Costs or You'll Be Overtaxed, Some Spraying Techniques, Inlaid Edging.

Vol. 7 No. 5 Sept-Oct '83: Shaker Writing Desk, Modelmaker's Bench, Canning Jar Storage Shelves, Turned Bowl, Oriental Table, Router Table, Band Saw Box, Toy Pumper Firetruck, Toy Airplane, Spoon Rack, Magazine Rack, Bootjack, Furniture Kit Suppliers, Articles: Dovetail Joints: Part II, Some Thoughts on Low-Cost, No-Cost, Advertising, Correcting Flaws in the Finish, Routed Drawer Pulls, Work Wood Co-operatively.

Vol. 7 No. 6 Nov-Dec '83: Lighted Wall Planter, Roller Stand, Early American Wall Secretary, Dressing Screen, Wine Rack, Shaker Chest of Drawers, Waterbed, Toy Train, Mitten Box, Hooded Doll Cradle, Coal Scuttle, Elephant Push Toy, Articles: Basic Drawer Construction and Installation, Display Advertising, Some Repair Hints, Making a Raised Arch Panel.

Vol. 8 No. 1 Jan-Feb '84: Shaker End Table, Medicine Cabinet, Cassette Tape Rack, Captain's Clock, Stacking Storage Unit, Veneer Bracelets, Toy Car Carrier, Infant Bead Toy, French Bread Cutter, 19th Century Kitchen Clock, Early American Trestle Table & Benches, Table Saw Cut-Off Table, Coaster Set, General Woodworking Suppliers, Articles: Doweling Details, Sources of Information, Restoring Hopeless Cases, Mirror Image Panels.

Vol. 8 No. 2 Mar-Apr '84: Shaker Wall Clock, Compact Dry Bar, High Chair, Kitchen Canister Set, Colonial Water Bench, Stacking Desk Trays, Wooden Brooches, Toy Bulldozer, Rocking Horse, Contemporary Table, Wall Hung Telephone Cabinet, Pipe Smoker's Organizer, Clock Parts Suppliers, Articles: Edge-Joining Boards, More Sources of Information, More Hope for the Hopeless Cases, Making Cabriole Legs.

Vol. 8 No. 3 May-June '84: Country Vegetable Bin, Folding Deck Chair, Shaker Pedestal Table, Wall Hung Display Cabinets, Wooden Coat Hanger, Toy Car and Trailer, Paper Towel Holder, Carved Hand-Mirror, Writing Desk, Carved Walking Stick, Laminated Clock, Oak and Glass End Table, Articles: How To Lay Out and Make Circular Cuts, Mail Order Selling, Stripping Old Finishes, Carving the Ball-and-Claw Foot.

Vol. 8 No. 4 July-Aug '84: Wag-On-Wall Clock, Oak Swing, Candy Dispenser, Coffee and End Tables, Tugboat and Barge, Lazy Susan, Early American Mirror, Colonial Pipe Box, Sewing Machine Cabinet, Cam Clamp, Hamper, Articles: What Sells Best?, Homemade Removers, Buying a Basic Set of Hand Tools, Kerf Bending, Suppliers of Caning and Wood Finishing Projects.

Toy Tool Box & accessories

Nov/Dec '82

