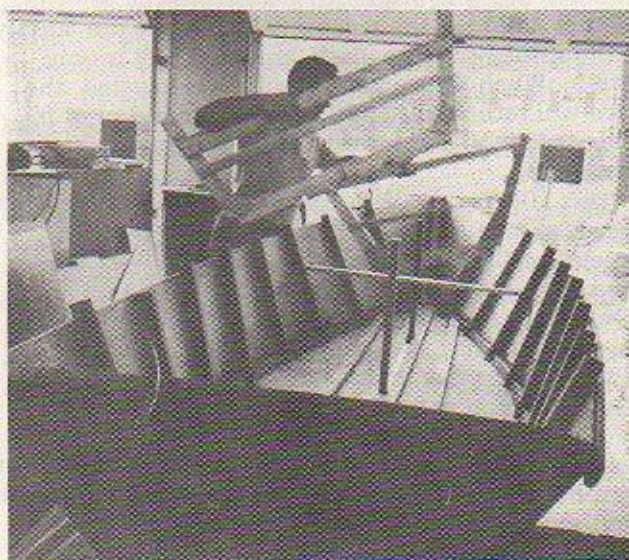


Wood News

c1982 by Highland Hardware, Inc.

Serving Woodworkers

Number 10, Fall 1982



BOATBUILDING COURSE in Atlanta Nov. 4-Dec. 5

For sometime now, people have been asking us to offer a course in boatbuilding. John Wermescher, a boatbuilder for the past 32 years, has stepped forward and organized a four-week course to be offered this November. The course will consist of Thursday night classes beginning November 4 in the seminar room of Highland Hardware from 7 till 9:30 PM, plus hands-on workshops at John's shop on Highland Avenue on Saturdays from 9 to 5 PM and Sundays from 11 AM to 3 PM. This schedule applies to the first three weeks of November and the first week of December. The class will not meet during Thanksgiving week.

During the Saturday and Sunday workshops, members of the class will participate in building a small wooden boat, probably a 10-12 foot skiff or sailing dinghy.

The Thursday sessions will be devoted to slides, lectures and group discussions covering the considerations one must deal with in going about building a boat, including choosing a kind of boat, seeing how boats are designed to perform well and be safe and comfortable, selecting a method to follow in building the boat, what tools and materials will be needed, and what the procedures are for getting construction underway. A manual of methods, techniques, engineering data, and supply sources will be provided to participants.

By the time the course is over, you will have actually built a boat, under the tutelage of an experienced boatbuilder, saving you countless hours of trial, error, and frustration, and making you prepared to build more boats on your own.

[Continued on page 8]

TOSHIO ODATE SEMINAR ON SHOJI SCREENS OCTOBER 15-17

Toshio Odate returns to Atlanta to teach his seminar on making Shoji screens using traditional Japanese techniques. The seminar at Highland Hardware includes a lecture Friday evening and demonstrations on Saturday and Sunday. Turn to page 7 for information on registering. Toshio Odate's article on setting Japanese planes also appears in this issue of Wood News.

Sharpening and Use of Bench Planes October 23

Zach Etheridge will teach a one-day hands-on workshop on sharpening and using bench planes at Highland Hardware on Saturday October 23. Most people taking this class experience a real breakthrough in using planes. Turn to page 8 for more information.

Cutting Dovetails by Hand November 13

Cutting dovetails successfully by hand will be taught on Saturday November 13 by Morgan Harrison. Come to this seminar prepared to actually do some joint cutting under Morgan's supervision. Registration information is on page 8.

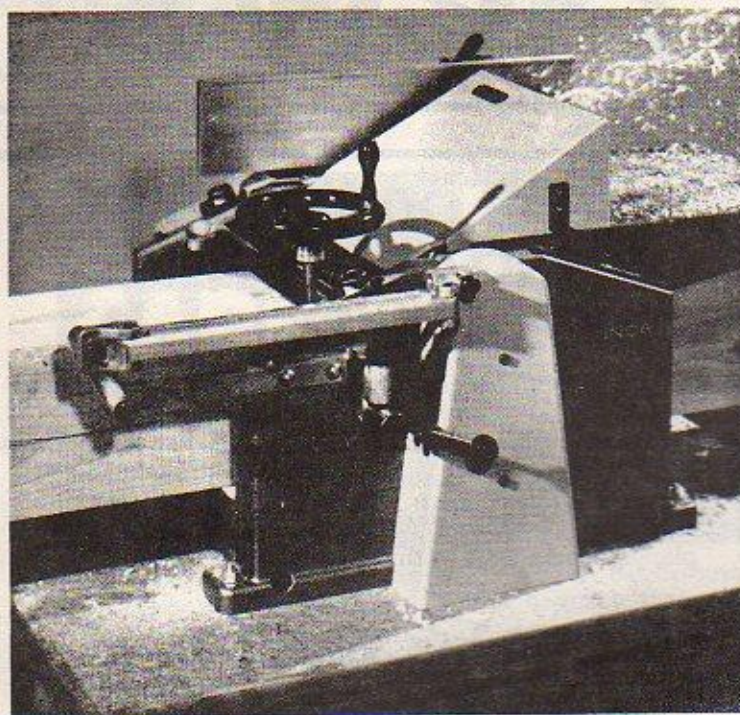
IAN KIRBY ON FRAME AND PANEL NOV. 19-21

Ian Kirby visits Highland Hardware November 19-21 to give a Friday evening lecture and teach a weekend seminar on Frame and Panel construction, covering modern and traditional approaches. See page 9 for details.

CONTRIBUTORS WANTED

Wood News is seeking contributors of informative articles on woodworking such as the ones on setting Japanese planes and using Watco finishes contained in this issue. Gift certificates for store merchandise are offered as compensation for articles we accept for publication. Submit articles or outlines to: Wood News Editor, c/o Highland Hardware.

INCA PLANER-JOINTER SALE



Just as it rarely snows in Atlanta in September, an Inca tool is rarely put on sale by the manufacturer. This fall is an exception, at least in the case of the Inca tool, because the Inca model 510 planer-jointer is now on sale for a very special price. A special purchase of these machines has enabled us to offer them at \$225 off the regular price. While our supply of the special purchase lasts, the Inca 510 is only \$1095. When the current supply is exhausted, the price will return to \$1320. These prices do not include the stand and motor, which are available separately.

This 10 $\frac{1}{4}$ " wide planer-jointer offers two feedrate speeds as an automatic thickness planer, and an exceptionally wide 10 $\frac{1}{4}$ " wide cut as a hand-fed jointer. Built solidly of castings with a stainless steel planer table and hard anodized jointer tables, this machine has always been an outstanding buy at its regular price, but is now an incredible buy at \$1095. If you're interested, hurry in to see it now as our supply of the machines at the special price is limited. If possible, visit our Inca demonstrations on October 30 and December 4, or see us for information anytime.

INCA & HEGNER POWER TOOL SEMINARS October 30 December 4

Woodworkers will have an opportunity to see live demonstrations of our Inca stationary power tools and Hegner jigsaws on two Saturdays this fall. October 30 and December 4 are the dates for these demos at Highland Hardware, and special offers will be available to participants who attend these Inca and Hegner power tool seminars.

The first seminar will begin at 10 AM on Saturday, October 30, and will last about two hours. It will be repeated beginning at 1 PM for a different group of participants. Those unable to attend on October 30 will have a second chance on Saturday, December 4, when we again will offer demos at 10 AM and 1 PM.

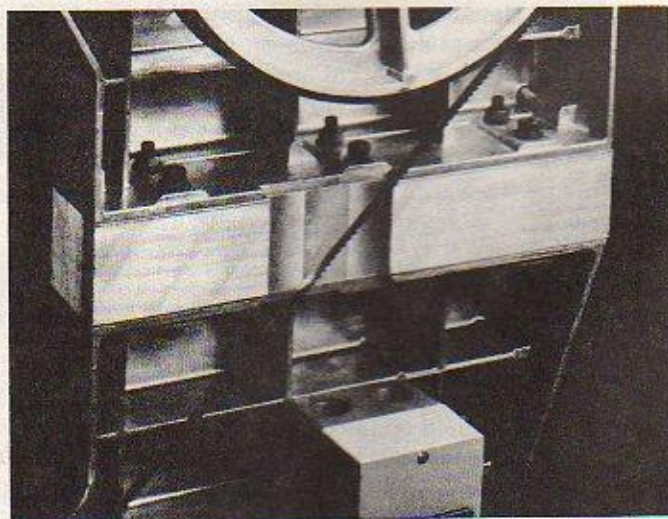
During each of these seminars we will teach how to produce boards that are flat and parallel sided using the jointer and thickness planer, how to cut joints accurately on the tablesaw, and how to use a bandsaw for scroll cutting and resawing. Time will also be taken to demonstrate the outstanding scroll-cutting capabilities of the new Hegner jigsaws.

Even if you already have a full complement of shop machinery, come and learn more. These demonstrations are always enjoyable and provide a good opportunity to get questions answered, trade ideas, and meet other woodworkers.

Admission is free, but we do request that you reserve a space in advance as we will limit the size of each group to assure a good seat for everyone attending. Register by telephoning Highland Hardware at (404) 872-4466.

RESAW 10" THICK

Injecta Inca of Switzerland has recently expanded the resawing capacity of its model 710 20" bandsaw, which was introduced in the southeast by Highland Hardware last year. Inca has produced a spacer block kit to increase the maximum height of the cut by 2", now enabling the machine to resaw material up to 10" in thickness.



The spacer block is precisely cast and machined, and fits between the two heavy castings which make up the body of the 710 bandsaw. The kit also includes an extension for the bandsaw cover. New longer blades to fit the expanded saws are available.

The Inca 710 has become one of our most popular stationary power tools, and may be what you're looking for in a top quality bandsaw. Drop in at Highland Hardware soon for a demonstration.

HEGNER PRECISION SAWS

We are pleased to introduce two new saws which we can truthfully say outperform all other saws in their ability to produce smooth and accurate scroll cuts. These saws, which are made in West Germany, feature a unique patented design for holding and tensioning the blade while it is being driven, resulting in no twisting, bowing or wandering, and very little tendency for blade breakage.

Two models are available. The Hegner Multimax-2 is a full-feature standard size machine with 14¼" throat, while the Hegner Polymax-3 is a larger industrial model with 19½" throat.

The explanation for the exceptional performance and accuracy of the Hegner Saws lies in the patented blade attachment and suspension system. Each end of the standard 5" blade is clamped into a special prism. The blade assembly is then suspended

by the two prisms between two reciprocating arms, with the beveled edges of the prisms resting in V-shaped grooves in the arms. The arms are spread at the blade end by tightening the tension rod at the rear of the saw: this tensions the entire parallelogram (consisting of the two horizontal arms, the blade in front, and the tension rod in the rear). The end result is a firmly attached, highly tensioned blade, still, however, able to flex because of the pivot mounting.

Thus, the blade can be installed at a very high tension, which remains constant throughout the entire cutting stroke. The blade is always pulled, never pushed, through the workpiece. This means a complete absence of the cutting restrictions and inadequacies normally associated with reciprocating saws. The parallel-arm system is strong and durable, yet capable of significant flexibility to absorb stresses which normally cause blade breakage.

The motor drives the entire parallelogram at up to 1680 strokes per minute, with the blade reaching speeds up to 50 inches per second. A bellows attached to the lower reciprocating arm creates air movement across the cutting area to keep the cutting line clean.

The net result of these and other Hegner features is a combination of efficiency, precision, versatility, and low blade breakage never before known in this type of saw. For example, you can turn material on the spot without blade breakage, you always obtain clean, vertical cuts requiring little or no sanding, and you can change blades in less than thirty seconds.

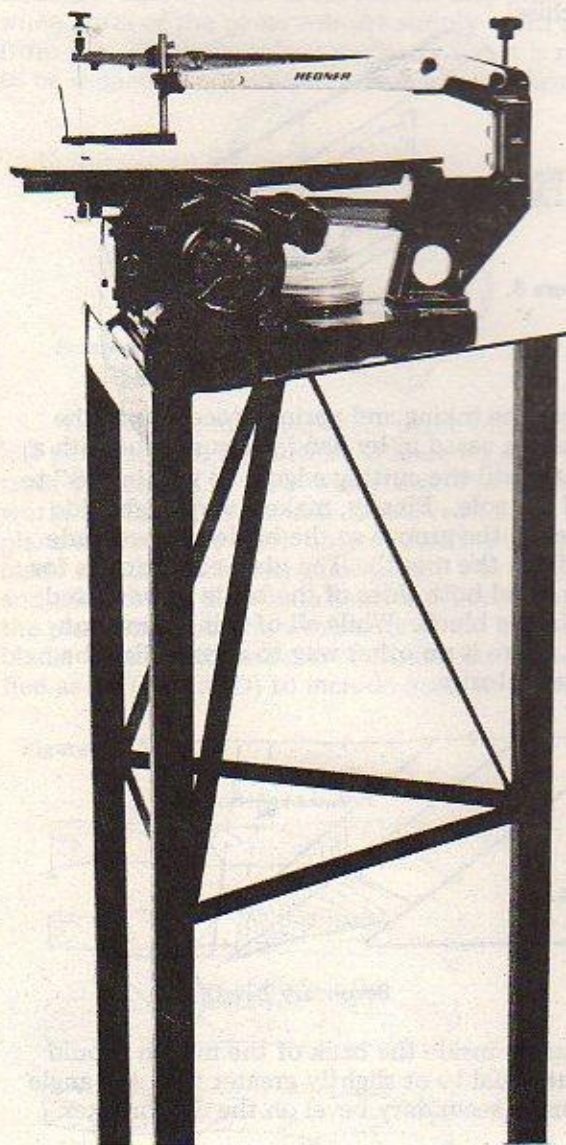
The Hegner Saws cut most materials, including all woods, plastics, plexiglass, brass, aluminum, copper, gold, silver, rubber, and graphite. Eighteen sizes of blades are available, including one as narrow as .02" up to as large as .10" for cutting thick material or ripping.

The entire machine is ruggedly constructed around the patented blade suspension system. Every part is precision-made in a fashion consistent with the straightforward and effective overall design. Each machine is assembled by European craftsmen and thoroughly inspected before leaving the plant, to assure years of trouble-free operation.

In addition to its extra-heavy duty construction and a substantial size increase, the industrial Polymax-3 also features a belt drive allowing operation at one of four speeds through a step pulley system, a choice of two stroke settings (5/8" or 15/16"), and a magnetic safety switch for the motor. The Multimax-2 has a ¾" stroke. Both units come with a generous supply of blades included.

The Multimax-2 model currently sells for \$829, including stand and motor. The Polymax-3 model complete sells for \$1799.

Convenient optional lamps are available made especially to mount on either of the two models. One features a round fluorescent lamp with 5" diameter magnifying glass offering 175% magnification for super precision sawing. The other combines a round fluorescent lamp with a 60 watt incandescent lamp for comfortable shadow-free viewing of the work.



SETTING THE JAPANESE PLANE

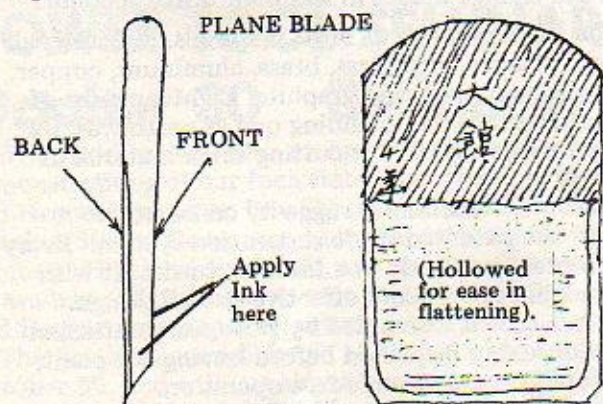
©1982 by Toshio Odate

Setting the Plane Iron

It is common practice for Japanese craftsmen to install their plane irons themselves after purchasing a plane. No matter how beautiful a tool the blacksmith may create, the blade will perform poorly or be useless unless the craftsman sets it correctly. Thus, setting a blade bears a direct relationship to the finished work.

Among Japanese woodworking tools, the plane is one of the most sensitive and most difficult to set or tune. In Japan, the blade and block are very often bought separately, so setting the blade in the plane block is an ordinary occurrence. The planes exported to the U.S. include the blade, but the setting process is only seventy percent completed; as purchaser you are expected to complete the other thirty percent. Particularly in a new plane, the blade is not completely fitted into the mouth of the block. Attempting to drive the blade into a too-tight mouth can cause splitting, or may otherwise damage the block on subsequent removal of the blade.

Figure 1.



To determine where the fit is too tight, ink the edges and front (flat side) of the blade with either a felt-tipped marker or a cloth dipped in *sumi* (Japanese calligraphy ink, available in art supply or stationery stores). With the ink still wet, seat the blade firmly in its groove by lightly tapping it with a mallet or hammer. You now remove the blade by tapping on the chamfered edge of the head of the plane block, alternating taps between the left and right sides of the edge. Do not strike the center or end grain directly or hit the edge of the sole; the force exerted by your tapping should be parallel to the blade for most effective removal. While tapping the block, it is advisable to push upward against the blade with the index finger of the hand which is holding the block (this also prevents the blade from suddenly popping out). Tap the chamfered edge squarely or you might splinter the plane block. See Figure 2.

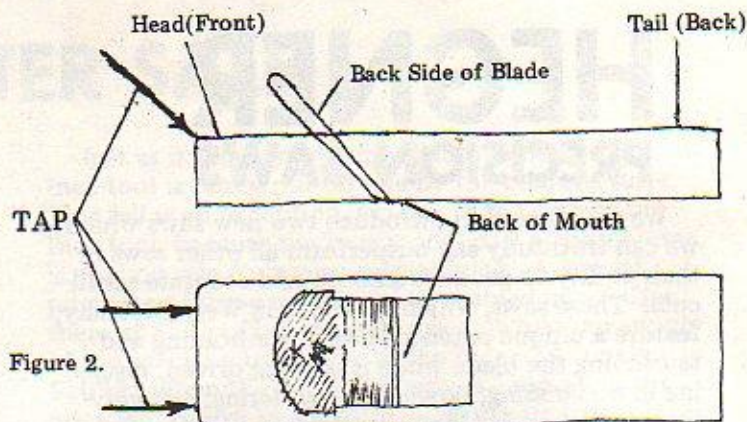


Figure 2.

Once the blade is removed, examine the groove carefully. Ink marks will indicate the high spots where the blade has rubbed. Using a chisel or small scraper, pare or scrape the wood from these areas on the bottom of the groove only—never remove stock from the upper surface of the groove. As these instructions indicate, the blade is fitted to the block to accommodate the blade's thickness, not its width. If the mouth is not wide enough to admit the blade after paring or scraping, then widen the opening carefully using a small, backless saw and a chisel.

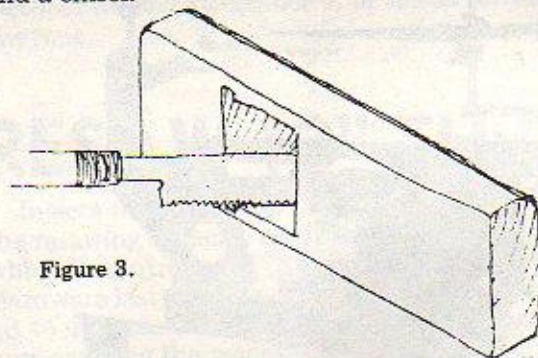


Figure 3.

Repeat the inking and paring process until the blade can be eased in by hand pressure (not with a hammer) until the cutting edge is to within 1/8" to 1/4" of the sole. Finally, make a very slight side clearance in the groove so the blade can protrude evenly from the mouth. The ideal condition is for the front and both sides of the blade to be seated evenly in the block. While all of this is time consuming, there is no other way to accomplish the task satisfactorily.

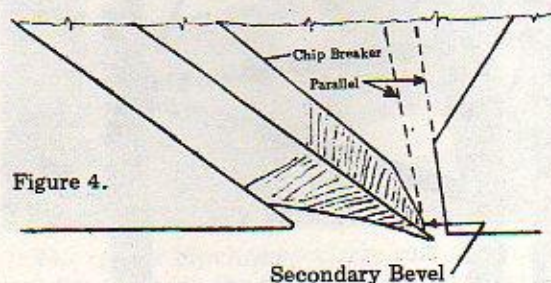
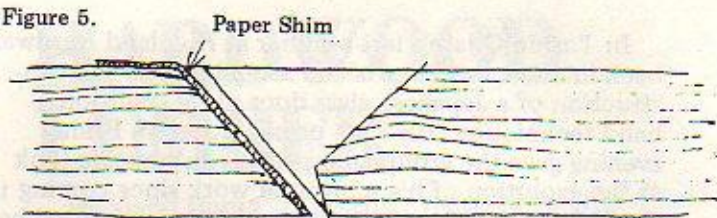


Figure 4.

The angle inside the back of the mouth should be about equal to or slightly greater than the angle of the small secondary bevel on the chipbreaker.

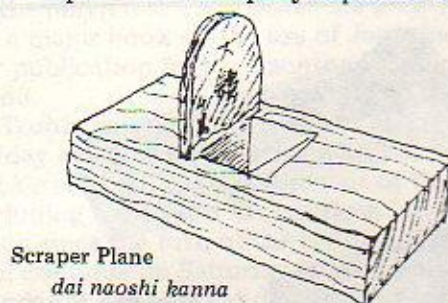
Very rarely, you might find that you have pared away too much wood. Such damage can be repaired by gluing a piece of paper (up to postcard thickness) as a shim onto the plane block beneath the blade. Also, the natural aging of the block sometimes loosens the blade; follow the same method of repairing the fit. Another potential problem due to aging is the size of the mouth. Check to make sure it is even and not too wide (front to back).

Figure 5.



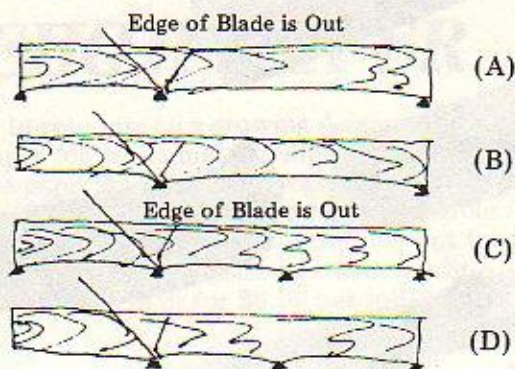
Preparing the Plane Sole

Since the block is a solid piece of wood, it changes with weather conditions. Therefore the plane sole must be regularly checked for proper adjustment. The first step is to establish that the sole is flat and out of twist. This is accomplished with the use of a straightedge to examine the sole lengthwise, crosswise, and along the diagonals to check for hollowing, twisting, or other distortion. Mark the areas you want to adjust, and using a scraper plane called *dai naoshi kanna*, or a common plane, level the sole by scraping across the grain. Check often for perfect flatness. This method of correction may also be used when parts of the plane sole are simply worn out from use. Once the sole is perfectly flat it is ready to be shaped into a uniquely Japanese configuration.



In practice, most Japanese plane soles are not left perfectly flat lengthwise. Figure 6 (A-D) illustrate differences in the sole surface. For truing work, for example, the sole is relieved (A) so the plane contacts the work only at the front of the blade and the back triangular point. For roughing and smoothing, the whole front is relieved (B) so the plane contacts the work only at the back and blade. Both of these basic contours can be modified as in (C) and (D) to include more than one

Figure 6.



contact point in back of the blade. Note that the drawings are exaggerated for purposes of illustration.) Of special importance to Western craftsmen is the fact that references to "front" and "back" are reversed; that is, because of the pull stroke, what you normally view as the back of the plane is, to the Japanese, the front. Please keep this in mind!

Japanese craftsmen create wave patterns so that only the back edge of the sole and the point behind the mouth touch the surface of the work. The relief measures about .030 inches deep from the sole front to the mouth and .015 inches deep from behind the blade to the sole back. When preparing the sole in this way, withdraw the blade slightly. Truing the sole with the blade completely removed is troublesome, for on reseating the blade, the section of the sole immediately in front of the blade will bulge out because of blade pressure. With a flat chisel, scrape the sole immediately in front of the blade about .004 inches (see Figure 6B, enlarged).

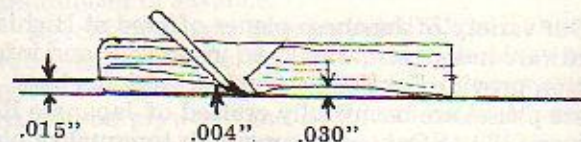


Figure 6(B), enlarged

Finally, note that the depth of the sole waves may vary slightly from craftsman to craftsman.

The final step is to chamfer the full length of both edges of the plane sole, leaving only about $1/16$ " to $1/8$ " of flat sole at either side of the mouth opening. This creates less friction and allows for a greater ease in pulling. If you also chamfer about $1/32$ " along the front of the mouth, you avoid picking up splinters when pulling the plane (Figure 7).

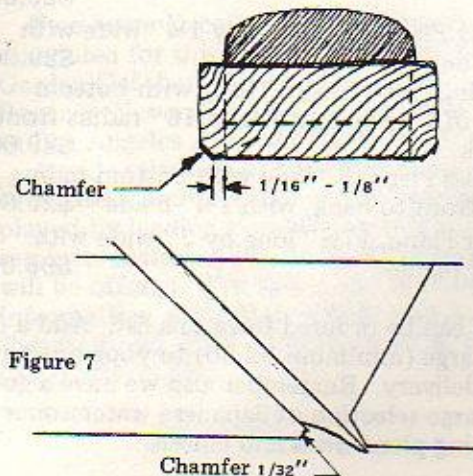
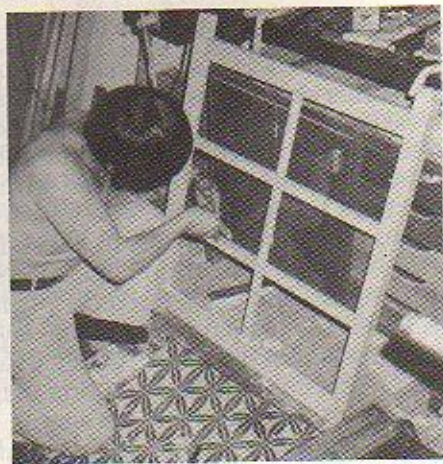


Figure 7

In Toshio Odate's last seminar at Highland Hardware back in June, local craftsmen attending saw the construction of a Japanese glass door using traditional hand techniques. His slide presentation on Friday evening gave the group an especially interesting look at the evolution of his sculptural work since coming to the U.S. twenty-four years ago. Toshio is pictured here chiseling mortises, chamfering frame members, and assembling the finished glass door.

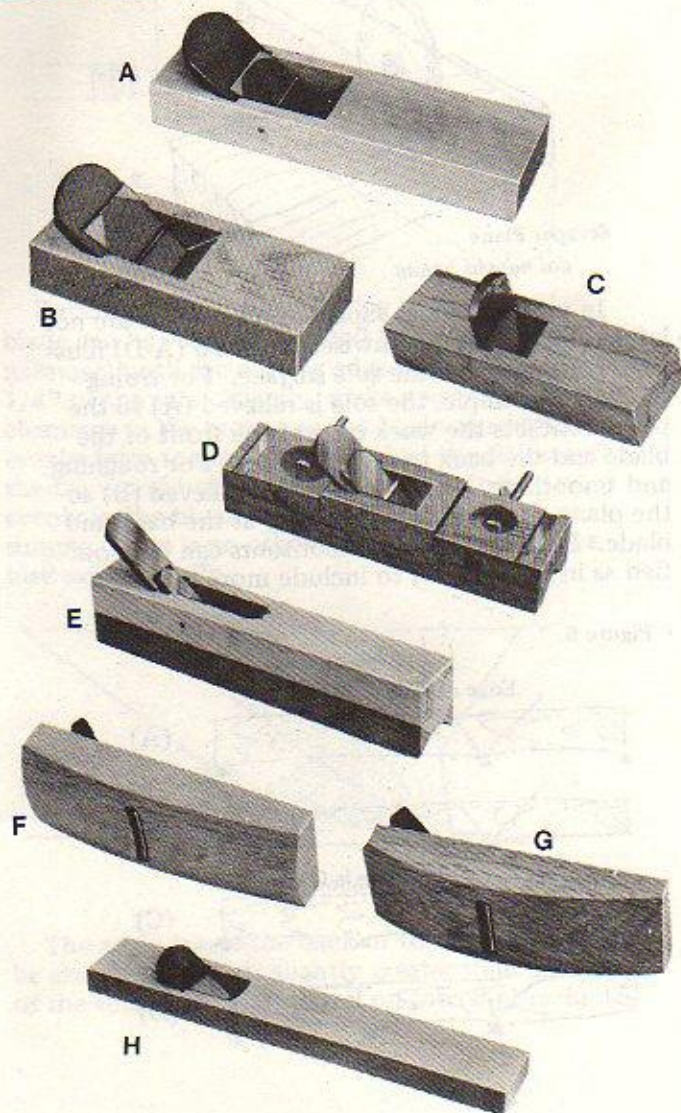


JAPANESE PLANES

Our variety of Japanese planes offered at Highland Hardware has grown, thanks to inspiration and information provided at Toshio Odate's seminars here. These planes are beautifully crafted of Japanese Red Oak and White Oak, and come with top quality plane irons of laminated steel.

- A. Smoothing Plane, 10-5/8" long by 2-3/8" wide with 2" blade \$39.00
- Smoothing Plane, 10-5/8" long by 2 3/4" wide with 2-3/8" blade \$41.00
- B. Block Plane, 6 1/2" long by 2 1/4" wide with 1 3/4" blade \$15.00
- C. Scraper Plane, 6" long by 2" wide with 1-3/8" blade \$24.00
- D. Chamfer Plane, 8" long with 1 1/4" blade \$29.00
- E. Beading Plane, 8 1/4" long by 1 1/4" wide with 3/4" blade \$29.00
- F. Scooping Out Plane, 6" long with bottom radius of 2" side to side and 16" radius front to back \$29.00
- G. Compass Plane, 6" long with bottom radius of 7" front to back, with 1 1/4" blade \$25.00
- H. Jointer Plane, 17 1/2" long by 3" wide with 2-3/8" blade \$95.00

Planes can be ordered from this list. Add a 5% shipping charge (minimum \$2.50) to your order for rapid UPS delivery. Remember also we have a good stock and large selection of Japanese waterstones for sharpening plane irons and chisels.



SHOJI SEMINAR OCTOBER 15-17

We are pleased to announce that Toshio Odate will return to Highland Hardware October 15-17 to present his excellent seminar on building Shoji screens using traditional Japanese tools and techniques. Toshio's article on tuning Japanese planes appears elsewhere in this issue of Wood News.

Toshio Odate's background includes a seven-year apprenticeship in Japan to a *tategu-shi*, a maker of sliding doors, after which he practiced as *shokunin* or master craftsman. Since coming to the U.S. in 1958, he has worked as artist and teacher, currently serving as assistant professor of sculpture at Pratt Institute in New York. His work has been exhibited at numerous museums and galleries across the U.S.

He is perhaps most familiar to American woodworkers through his articles in *Fine Woodworking* magazine, including a 9 page spread on making Shoji in the May/June 1982 issue. He is currently working on a major book on the use of Japanese tools due for publication by the Taunton Press in the Fall of 1983.

Toshio will begin the seminar at 7:30 PM on Friday evening, October 15 with a lecture providing background on the development of the Shoji in Japan, including the effects of American influence on the Shoji since the turn of the century. The seminar will continue on Saturday from 9 AM to 5 PM and Sunday 9 AM to 3 PM during which participants in the seminar will witness the construction of an entire Shoji screen. He plans to spend time on some advanced features of Shoji not covered before for the benefit of those attending who also attended his previous seminar on Shoji building here last November.

Cost of the entire seminar is \$75.00, payable in advance. For those wishing to attend only the lecture Friday night, admission to it will be \$5.00. Register by bringing or sending your fee to Highland Hardware. We urge you to register early because attendance will be limited.

SHOJI PAPER

In response to a growing demand for authentic rice paper for use in making Shoji screens, we now offer the paper in rolls 28 cm wide and approximately 60 feet long. The paper is currently available from us in the traditional plain white translucent for \$5.50 per roll, or in white translucent with a subtle "pine tree" pattern woven in for \$6.50 per roll.

HARDWOOD LUMBER

Highland Hardware recently received its largest load ever of hardwood lumber in preparation for woodworkers getting back to serious work this fall. We now have several thousand feet of high quality mahogany and oak, as well as large supplies of beautiful maple, birch, beech, cherry, walnut and other species.

We also have ready now a small load of very nice holly, a species of wood that is scarcely available, as well as a small amount of elm. Pay us a visit and spend awhile browsing through our well-stocked woodroom.

WOODWORKERS GUILD Meets Second Wednesday

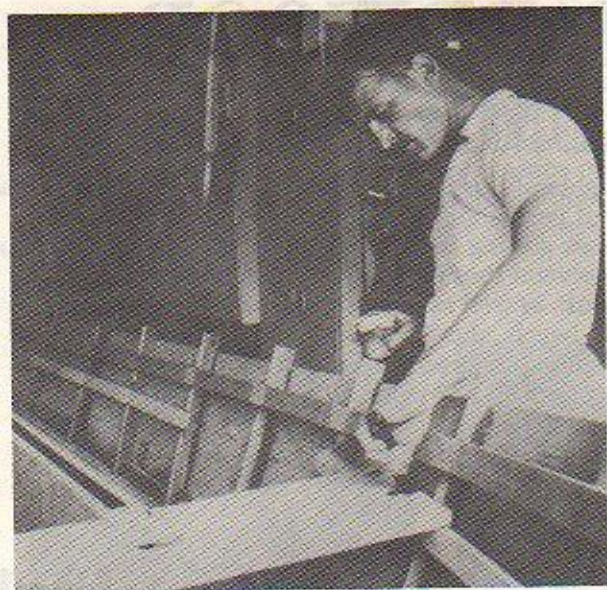
The Woodworkers Guild of Georgia has been active through the summer led off by an exhibition of members' work at the design show of the Atlanta Decorative Arts Center in the late spring, followed by a series of well-attended monthly meetings featuring interesting programs. The Guild now meets regularly on the second Wednesday of each month at 7:30 PM in the basement of Highland Hardware, unless otherwise announced in advance.

Recent programs have included Klaus Kohler on veneering, Leon Colwell on wood technology and north Georgia timber tales, Mike Neal on custom hardwood plywood and European cabinet hardware, and Dave Traylor of the American Red Cross on first aid techniques for the shop. Any active woodworker is invited to come and join the Guild.

EXCELLENCE IN WOODWORKING

Two more Excellence in Woodworking shows are scheduled for this Fall, in New York at Madison Square Garden October 15-17 and in Chicago at the Hyatt Regency November 12-14. The show will also return to Los Angeles April 22-24 of 1983.

A wide selection of tools and other goodies appealing to amateur and professional woodworkers will be displayed by leading manufacturers and distributors. Three seminars featuring Ian Kirby, Sam Maloof and others will be offered. For ticket and seminar registration information, write Marvin Park and Associates, 600 Talcott Road, Park Ridge, IL 60068, or call (312) 823-2151.

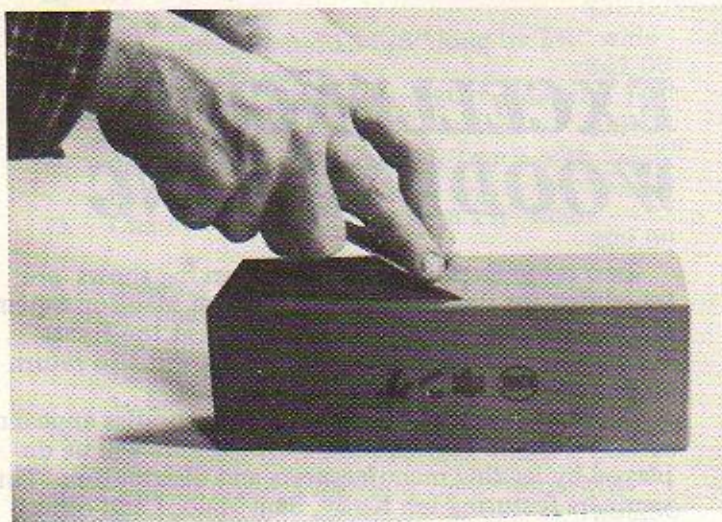


BOATBUILDING COURSE

[Continued from page 1]

Registration in the class will be limited to 6-8 people to allow everyone full participation in building the boat. Cost of the course is \$300, which includes use of tools and materials. A \$100 deposit paid immediately will reserve a space in the class for you. Final payment of the balance is due November 1. Registrations will be accepted at Highland Hardware through October 15. Your registration fee will be returned if there is no space left or if the class is canceled.

John Wermescher began building boats at the age of sixteen while living in Jacksonville, Florida. He later studied yacht design at the Westlawn School, and has built about a dozen boats including sailboats, motorboats and kayaks. He is presently refurbishing a Rhodes 19 foot sailboat in his shop.



Classes planned for next winter include such topics as: preparation and use of cabinet scrapers, machine joinery, routers and jigs, tablesaw dovetails, and whatever else we think of between now and then. If you're interested in learning about any topic related to wood-working not mentioned here, let us know.

SHARPENING AND USE OF BENCH PLANES OCTOBER 23

Highland Hardware will continue its program of basic woodworker education this fall with two hands-on classes taught by members of its staff.

On Saturday, October 23, Zach Etheridge will teach a class on sharpening and use of bench planes. This will be a six-hour session running from 9:00 AM to 4:00 PM with a break for lunch. The morning half will be devoted to sharpening plane irons and chisels on Japanese waterstones—bring your own tools, and stones if you have them. Stones will be provided for those who need them. During the afternoon, the sharpened tools will be put to use at the bench, where participants will practice their skills in jointing, truing and finishing of various woods. There will be opportunity for discussion and use of bench rebate and circular planes as well. Enrollment will be limited to fifteen participants, so if you're interested get your name in early. Cost of the class will be \$18.00.



CUTTING DOVETAILS NOVEMBER 13

On Saturday, November 13, Morgan Harrison will teach the making of hand-cut dovetail joints from 9 AM to 4 PM. Morgan will cover how to cut through dovetails as well as half blind dovetails using a variety of hand techniques, and will supervise as each participant goes about cutting several practice dovetails. You should bring tools including a backsaw or Japanese Dozuki saw or if necessary any fine tooth saw, and a $\frac{1}{2}$ " and $\frac{1}{4}$ " or $\frac{1}{8}$ " chisel. Also recommended if you have them are a cutting gauge, a sliding bevel, a square, a marking knife, and a coping saw. Enrollment in this class will be limited to ten participants. The cost is \$18.

If interested, register now by getting payment and the enclosed registration form to us at Highland Hardware.



IAN KIRBY LECTURE AND SEMINAR NOVEMBER 19-21

Ian Kirby, who has recently announced that he will be moving his full-time design studio to Atlanta in the Fall of 1983, will be at Highland Hardware to teach a weekend seminar on the Frame and Panel in Furniture Making.

Kirby is well known across America for his writing and teaching on woodworking and design and is familiar to most woodworkers in his role as consulting editor and frequent contributor to *Fine Woodworking* magazine. His seminar on Frame and Panels will be held from 9 to 5 on Saturday and 9 to 4 on Sunday, November 20-21. The seminar will be preceded Friday night by Kirby's lecture on "Woodworking in Evolution", in which he will take a broad view of the woodworking scene in the U.S. today, examining its roots since the turn of the century, analyzing the education of woodworkers, considering today's amateur and professional woodworkers, followed by sharing the approach to training woodworkers employed at Kirby Studios.

The \$90.00 seminar registration fee includes free admission to the Friday night lecture. Tickets to the Friday lecture only are \$5.00.

The frame and panel is the most widely applied and versatile of all the woodworking systems. Solid wood is still the basis, though man-made sheet material has given a new life and direction to it. Topics in the seminar will include:

An historical survey. Beginnings of the frame and panel system, the early use in buildings and furniture, its application since the 14th century, with special reference to its use since the time of 1900 and the Craft Revival movement.

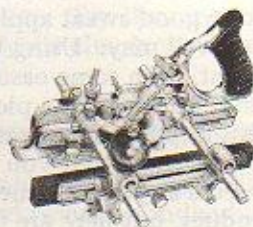
The Frame. Requirements for framing materials, traditional jointing methods using the mortise and tenon as basis, methods of chamfering the frame, jointing methods other than the mortise and tenon.

The Panel. Requirements for panel material, traditional and modern methods of panel manufacture, applied surface finishes and decorations, including veneers, inlay, leather, metal, and carvings.

Applications of the system. Design considerations, uses in building work, internal and external doors, wall paneling, uses in furniture, including carcass construction, drawer bottoms, backs on solid wood carcasses, doors, and other applications.

Many people have requested that Kirby cover the topic of Frame and Panel at Highland Hardware, so register early for this seminar, as space will be limited. Register by getting your payment and registration form to us at Highland Hardware.

Multiplane Growing Scarce



We announce with regret that Record Ridgway Tools of England has discontinued production of its model 405 Multiplane. Always a very popular tool in the U.S., the Multiplane was simply not able to sustain a great enough demand world-wide to continue its manufacture.

We have left in stock at present about a dozen of the Multiplanes, and are offering them for \$295.00 each plus shipping. If you would like to own one of these beautiful and versatile tools complete with 24 cutters and a wood case, now is the time to order.

MAKITA Belt Sander Sale

A special quantity purchase of Makita belt sanders allows us to make an outstanding offer on them while the supply lasts. Each of the three models includes a dust bag.

Model	Belt Size	List Price	Special
9900B	3" x 21"	\$191.00	\$129.00
9924DB	3" x 24"	\$208.00	\$149.00
9401	4" x 24"	\$273.00	\$199.00

Belt sander prices include delivery.



USING WATCO STAINS AND OIL FINISHES

by Roger Foster

Watco Danish Oil Stains have been available to woodworkers in this area for sometime now, but only recently do you hear those words on what seems like everyone's lips. It's either "What finish do you use?", "WATCO!", or "What finish should I use on this?", "Have you tried WATCO?"

Honestly, if you haven't tried Watco Danish Oil and Penetrating Five Minute Wood Stains, you should. The application of the oil finishes is an efficient and effective way to attain a beautiful wood finish both to the eye and to the touch. I'm always pleased to hear my customers compliment the warmth and glow of the wood finish: "It feels so good, I love it!" This is due to the fact that the oil finishes penetrate into the wood surface and create a type of bond with the wood. Even after several applications, the finish appears to be *in* the wood as opposed to a visible surface build-up created with lacquers and urethanes. Watco Oils form a hard, durable finish that is very maintainable. When the surface is damaged by water spots, stains, scratches, and minor burns, simply rub the area softly along the grain of the wood using very fine steel wool and a touch of Watco oil, wipe and buff. It looks as good as new.

Don't let me make it out as if you will never break into a good sweat applying these oils because you very well may. Using Watco Oils may be a one-step operation in some cases, but to achieve that glowing luster on those fine pieces of woodcraft, you may wish to put a little more work into the finish. Each of you know that you will evolve your own oiling process as you become more familiar with the product, but here are the steps proposed by the Watco manufacturers with a few tips and insertions of my own.

Initially, be sure that your piece is ready to finish. All glue and fill must be scraped from the surface for the oil will not penetrate it. Remember that any defects in the surface preparation will become apparent when the oil is applied, in a way a safeguard in finding small surface defects.

Start the finishing process by flooding the surface with Watco Oil until the wood is well saturated. Let the oil sit for about thirty minutes or until the surface becomes slightly tacky. If any defects in surface preparation have shown up, now is the time to fix them. Wipe all excess oil from the surface and allow it to dry. Then scrape or sand out the defects. A second oil flooding is repeated just like the first, noting that the time for the oil to set up and become tacky will be less. Wipe and buff all excess oil from the surface and let it dry for at least four to five hours, longer if you wish. The next step is very important in achieving the "desired" finish, especi-



ally on hardwood plywoods and open-grained hardwoods. Flood the surface a third time with oil and wet-sand with 6/0 wet or dry sandpaper. Wipe off the surface thoroughly before it sets up and lightly go over the entire surface with fresh oil and clean rags. Wipe it off and buff it till it shines. Now—just let it set. This finish must harden at least 24 hours (longer is better) before any other finish is applied. Waxing is not necessary except for a gloss finish, but if desired, waxing too soon will result in a murky and blotchy finish. If you do not choose to use wax, additional coats of oil may be added to achieve a deep satin finish. Allow each coat to harden after buffing and lightly steel wool the surface before each subsequent oiling. If the surface should become tacky after you buff and let dry, it was not wiped off well enough. But this is no problem to fix. Add more oil (it's self-dissolving) and buff it down again.



Roger Foster is co-owner of Fosco Studios of Atlanta, specializing in design and fabrication of custom furniture and cabinets.

Recently Watco Five Minute Penetrating Stains have become available to us in this area, probably somewhat due to my constant insistence that Highland Hardware should start carrying them. Well, the phone call came saying they had arrived so I hustled to the store and picked up all nine of the Natural Wood Tones and some Stain Reducer. Application of these stains is simple once you get the hang of it. I think you'll be pleased, as I am, with the ability to use these stains in conjunction with the oils to create a more uniform natural wood finish as well as make other woods look like something they're not at all, the hardest trick of all (trade secrets, of course).

I would suggest buying the whole series of stains if you plan on using them. Make up your own sample boards and experiment. Use these stains on a series of hardwoods and their accompanying hardwood plywoods. Make some samples to show the difference in one, two, and three coats of stain. The different finishes available to you using various stains and the accompanying Natural, Light, Dark, and Black Oils are amazing, not to mention the introduction of the reducer to the stains and the stains to each other.



Remember that when mixing colors, keep track by measuring and mix in large quantities. Small amounts of mixed stains are not necessarily going to be the same in a larger quantity, an inherent quality of mixing many dyes. Watch for this problem especially when mixing in large quantities of the Stain Reducer and/or the Ebony Black, which you should not hesitate to use in achieving a desired color.

These stains are actually alcohol dyes that dry very quickly due to rapid evaporation of the alcohol from the wood surface. Evaporation is so fast that you may not wipe the stain off once it has been wiped on. It achieves nearly total penetration. Application of these stains should be done freely and quickly with a well-saturated applicator (cloth or brush). Although the product professes to be non-grain-raising, you may feel a slight fuzziness on the surface after applying the first coat of stain. This may be removed by a fine steel wooling of the surface. Additional application of stain may be necessary to deepen the color or to even out any overlapping marks of the first staining.

Uniform staining may be achieved in several ways. Either coat the surface again after five minutes with just the stain, or wait 45 minutes and oil the surface with Natural Watco Danish Oil. Wipe off the oil and let the surface dry slightly. Apply stain sparingly over the areas needing to be evened out. Let this dry thoroughly and then begin the oil finishing process. Another way to stain altogether is to mix the stain with with Natural Watco and apply, darkening the color if desired with stain over the dried oil/stain mix. It will be to your benefit to use the stains in conjunction with the oils in one way or another.

The greatest use of these is in allowing the wood to appear to have naturally aged and to create uniformity in color from board to board. This is not always the case with a totally natural finish.

Watco stains and oils are perfect for those who like to prefinish their pieces before assembly. Naturally you would not oil the areas to be joined before the glue-up, but staining and initial oiling of the elements to be joined will make the entire finishing process by not having to stain into corners and hard to reach places (inside of carcasses, etc.). Prefinishing with Watco aids in clean-up of glue squeeze-out because the glue will set up on the oil surface instead of in the wood fibres. After joining the pieces, if you need to chisel, scrape, plane, or sand, go right ahead. Fresh stain and oil are easy to add and blend into the original finish. Complete the finishing process with Watco Oils and Satin Waxes. For a wipe on-wipe off finishing process, it is not to be beaten.

A full line of Watco Stains and Oil Finishes are available from Highland Hardware. Try them now. You'll be pleased, especially if your clients are, and they will be.

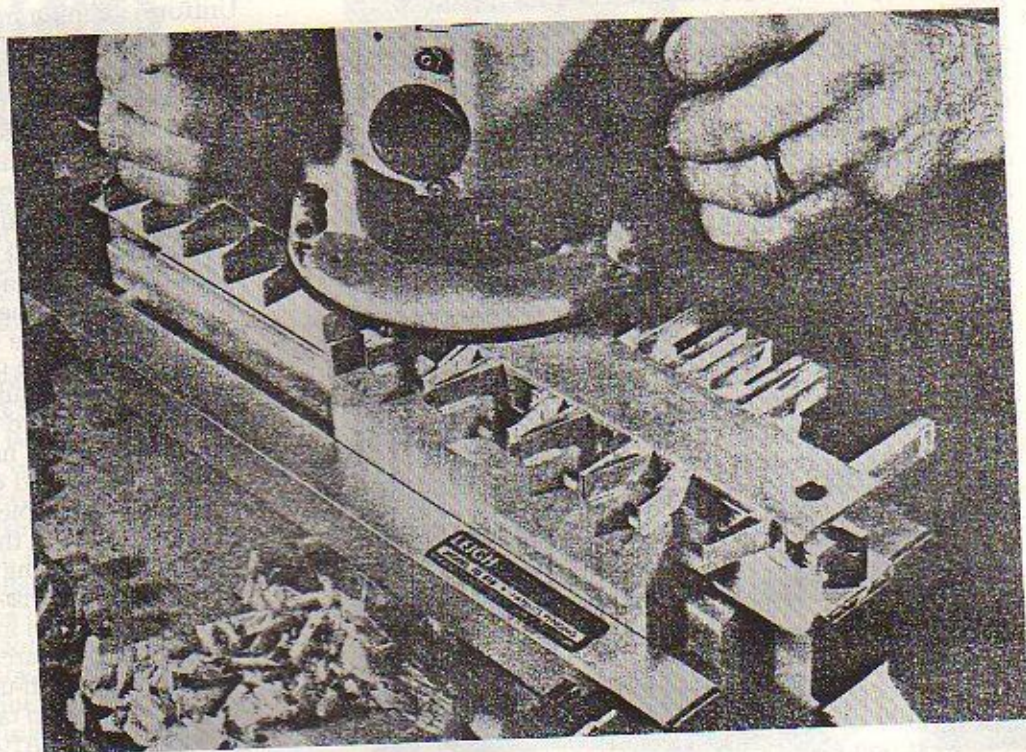
Watco finishes are now available from us by mail. Here are some package deals and prices on individual products:

A Half Pint each of the ten different Watco stains. American Cherry, Danish Walnut, Dark English Walnut, Ebony Black, Mahogany, Natural Walnut, Maple, Scandia Teak, Walnut Sap Stain, and Stain Reducer.
\$30.00 Postpaid

A Half Pint each of the four colors of Watco Danish Oil. Natural, Medium Walnut, Dark Walnut, and Black Walnut.
\$13.50 Postpaid

½ Pint of Stain	\$3.25 plus shipping
Quart of Stain	\$6.60 plus shipping
Quart of Watco Danish Oil	
Natural	\$6.00 plus shipping
Colors	\$6.60 plus shipping
Gallon of Watco Danish Oil	
Natural	\$18.30 plus shipping
Colors	\$19.99 plus shipping
Case of 2 gallons of Watco Danish Oil	
Natural	\$34.50 plus shipping
Colors	\$37.50 plus shipping
Quart of Satin Wax	
Natural or Dark	\$6.60 plus shipping

LEIGH DOVETAIL JIG



Until recently, router dovetail jigs required that the spacing and size of all the pins and tails be the same. The new Leigh Dovetail Jig manufactured in Canada now permits cutting through-dovetails with infinitely variable size and spacing of each pin, tail, and half pin, regardless of the width of the workpiece.

The jig consists of two vertical workpiece support faces (one adjustable), with corresponding clamp bars which serve to hold workpieces firmly in position under the guide fingers. When adjusted to the desired position the fingers guide the router guide bushing and cutters to form the two halves of the joint. The top slide bar is easily removed to adjust and set the guide fingers.

The angled ends of guide fingers extend over the adjustable pin workpiece support face. Under these angled guide faces the pins and half pins are formed with the straight cutter.

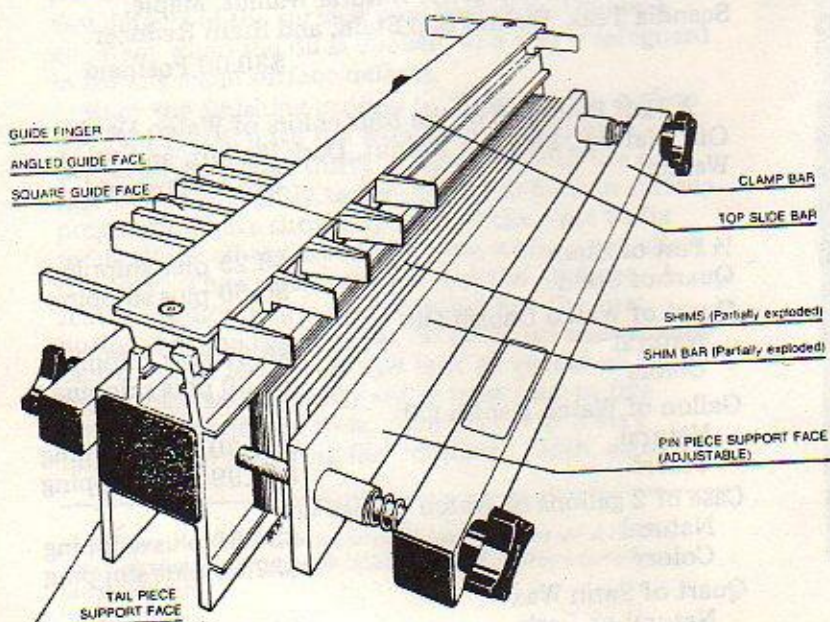
The square or straight ends of the guide fingers extend over the non-adjustable tail workpiece support face. Under these square guide faces the tails are formed with the dovetail cutter.

Looking down through the angled ends of the guide fingers it will be apparent that the position of the adjustable pin support face will determine the position of the inner face of the pins under the angled guide faces and will therefore determine the width of the pins. Adjusting this face by removal or addition of shims will enable the user to easily obtain precisely the fit or degree of tightness of the joint required with a few trial and error tests.

Maximum pin thickness is $\frac{1}{2}$ " to $\frac{3}{4}$ " rabbeted, maximum tail thickness is 1", maximum workpiece width is 12", minimum pin width is $\frac{1}{2}$ ", minimum tail width is $\frac{3}{4}$ ", closest centers is 1".

Using the Leigh dovetail jig on your router requires a $\frac{7}{16}$ " guide bushing, a $\frac{5}{16}$ " straight cutter, and a $\frac{1}{2}$ " dovetail cutter. The first model of the Leigh jig introduced last summer was engineered to use a dovetail cutter with cutter angle of 15° . The makers discovered this to be a non-standard item from most suppliers, and the new model TD514 offered here is now made for standard $\frac{1}{2}$ " dovetail cutters with a 14° cutter angle.

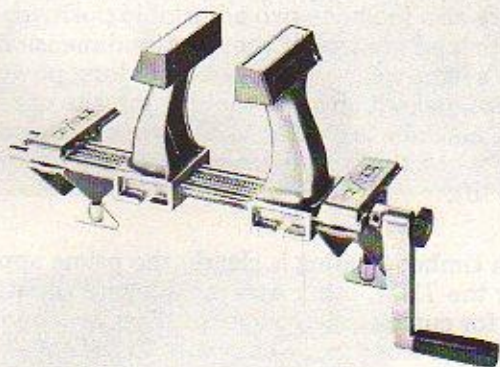
Order the Leigh dovetail jig from Highland Hardware for \$144.95 plus \$5.00 shipping.



INTRODUCTORY OFFER

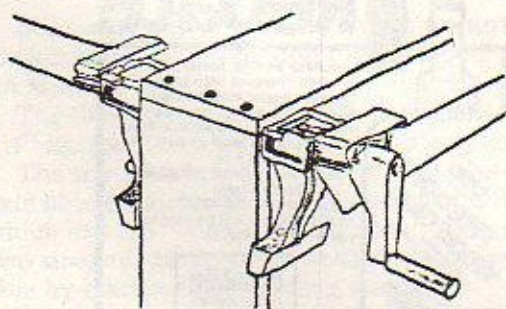
THE ZYLISS VISE

In response to popular demand, we have recently introduced the Swiss-made Zyliss vise. This versatile, portable vise-system has previously been available only at trade shows and from a few mail-order companies. Because so many of you have asked us about it and in many cases bought them from other sources, we have finally persuaded the importer to make them directly available here in Atlanta through Highland Hardware.



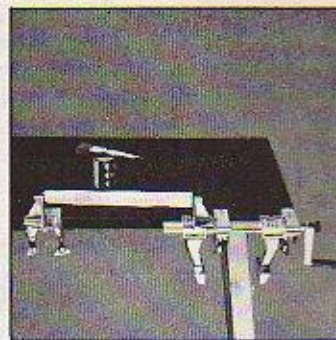
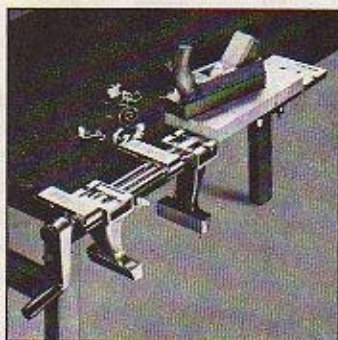
The basic vise consists of a large vise screw and two guide rods holding a pair of 4" jaws 6 1/4" high with a crank handle controlling one jaw. The two jaws open to a maximum of 8", and include a quick-release feature to allow instantaneous setting of the jaws without the need of cranking the handle. Two large clamps quickly attach the vise to a bench, worktable, saw horse, or most any other work surface up to 2 3/4" thick.

The unique jaws can grip material in a variety of ways, including vertically either thick or wide, and also horizontally along the bench. As the work is held vertically, it is gripped by a parallel four jaw grip, securely locking the work in.



By reversing the vise, a convenient low jaw grip is obtained. Material is cleanly held for sanding, routing or planing without obstructions near the surface. Miter joints and butt joints are also easily held for boring operations.

A separate flush end stop with its own bench-clamp extends the capacity of the low jaw position up to the entire length of your workbench. A pair of turning centers can also be mounted to the jaws for gripping long pieces and unusual shapes. A pair of soft liners for the main jaws are included for holding delicate work.



The entire vise system is manufactured of magnesium hardened aluminum alloy for durability.

Although the Zyliss vise lists for \$124.95, we are offering it for a limited time at the special introductory price of \$112.50, plus \$5.00 shipping. Vises are in stock for immediate delivery.

Most prices listed in Wood News No. 10 are valid through 12-31-82. Quantities at the sale prices are limited on special purchase items.

ORDER FORM

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Phone _____

TOLL FREE ORDER NUMBER 800-241-6748

QTY.	DESCRIPTION	PRICE	AMOUNT
_____	_____	_____	_____
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_____	_____	_____	_____
_____	_____	_____	_____

Unless Postpaid, add 5%
Shipping (Minimum \$2.50,
Maximum \$5.00).

Sub-Total _____
Sales Tax (in Ga.) _____
Shipping _____

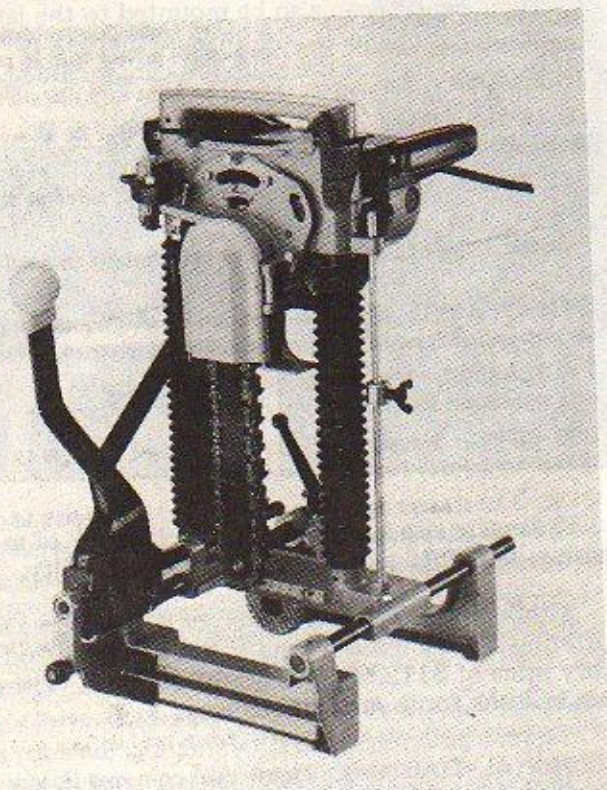
Visa/Mastercard Number _____
TOTAL _____
Amount Enclosed _____

Exp. Date _____

Cut here

MAKITA 7104 CHAIN MORTISER

Highland Hardware is proud to announce the introduction of another new Makita tool to the southeast region: the Makita model 7104 Chain Mortiser. This is a tool designed specifically for timber-frame construction techniques which call for large-scale mortises, half-lapped joints, or slip joints in architectural-sized timbers.



The 7104 is basically a small electric chain saw mounted on columns which allow the cutter chain to be plunged vertically into a timber, quickly and accurately cutting a mortise up to 6-1/2" deep. The machine is positively loaded with the kind of ingenious features we've come to expect of Makita: fast lever-action clamping to the workpiece; an adjustable depth stop; a smooth-acting crank for transverse movement of the cutter chain coupled with a fast-action lever that moves the cutter instantly up to 5/8" at a time. The trigger switch and plunge release are both mounted on the handles for safe and efficient use. The cutter chain assembly can be pivoted to one side and then plunged to cut mortises longer than 2-1/16"—up to 5-1/4" maximum—this feature also includes two adjustable positive stops for precise control of the mortise dimensions. The 7104's light weight (35.2 lbs.) and long power supply cord make it an ideal tool for job-site use where the machine is carried to the work—a decided advantage when the workpiece is too heavy for one person to lift.

Though timber-framing is clearly the prime application for the 7104, other uses include any situation that calls for cutting fairly large mortises or lap joints in 8/4 or larger wood; one customer found the machine ideal for installing several hundred mortise locks, a job that at first had presented a challenge of heroic dimensions. Playground equipment, decks, docks and small bridges are a few of many constructions where use of the 7104 suggests itself as an excellent way to increase efficiency and expand one's design horizons.

Minimum hole size: 5/8" x 2-1/16". Maximum hole size: 7 1/4" x 5-1/4". Maximum depth of cut: 6-1/2". Maximum clamping capacity: 7 1/2". Motor is rated at 10.5 amps, 3200 RPM.

The machine is currently available for \$545 postpaid.

Seminar Registration Form

Name _____

Address _____

City _____ State _____ Zip _____

Phone (Day) _____ (Night) _____

I wish to register for the following seminars:

Name of Seminar	Price
1. _____	_____
2. _____	_____
3. _____	_____

TOTAL	_____
Amount paid, Deposit	_____
Balance Owed	_____

Cut here

\$1.00 Rebate



Purchase an 8 oz. bottle of Franklin Titebond Wood Glue from the dealer shown below. Clip out this ad and peel the words Titebond Wood Glue from the back of the label and affix it to the ad. Send it to:
Franklin Chemical Industries
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Columbus, Ohio 43207
Your \$1 Rebate will be sent to you by return mail.

Franklin
CHEMICAL INDUSTRIES

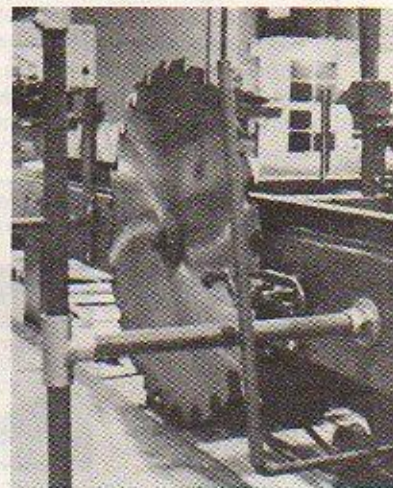
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WORLD WOODWORKING EXPO 82

We at Highland Hardware were pleased with a successful exhibition at the World Woodworking Expo 82 held in Atlanta in August. Over 8000 woodworkers and furniture manufacturers visited the five-day event put on by the Woodworking Machinery Importers of America. Four hundred exhibitors from more than a dozen countries showed what's new for manufacturing furniture and cabinets on all scales of production, ranging anywhere from the individual woodworker with perhaps a single multi-tool for his shop to huge production machinery with fully automated controls. Highland Hardware's booth stretched half the length of an aisle with our Makita and Inca stationary tools, other power tools, our fine imported hand tools, as well as sharpening equipment, workbenches, and books.

We sent out over 3000 invitations to the show to our customers, and we appreciate all who attended. We were amazed and pleased to learn that one of those we invited, John Widener of Atlanta, was the winner of the 1982 fire-engine red Porsche 944 car given away by the Holz-Her equipment company. Mr. Widener had recently purchased a Makita bandsaw from us, and he, among many others, said he was glad he attended the Expo!



WHEELS & SHAKER PEGS

Because many of you requested, we now offer Shaker pegs and a selection of hardwood wheels for wooden toys.

The Shaker pegs are smooth top quality turnings 3 1/2" long with a 5/8" long by 1/2" diameter tenon.

The toy wheels are extremely well made with axle hole diameter of 1/4", except for the 2 1/4" wheel which has 3/8" diameter axle hole. Axle pegs in the two sizes are available. Wheels and pegs are available by mail in the following quantities:

Shaker Pegs	Pack of 6	\$2.50	Add 5% Shipping Charge, minimum shipping \$2.50.
1" Wheel	Pack of 36	\$2.80	
1 1/4" Wheel	Pack of 36	\$3.00	
1 1/2" Wheel	Pack of 36	\$3.80	
1 3/4" Wheel	Pack of 36	\$5.00	
2" Wheel	Pack of 24	\$5.00	
2 1/4" Wheel	Pack of 12	\$4.00	
1/4" Axle Peg	Pack of 36	\$2.80	
3/8" Axle Peg	Pack of 24	\$3.00	



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Atlanta, Georgia 30306

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SUCCESSFUL CABINETMAKING IN THE 80's

TO BE SUCCESSFUL IN A TOUGH MARKET REQUIRES:

1. THE RIGHT PRODUCT

Cabinet styles change. Your customers are looking for today's styles, and if that's what you're selling, you have a competitive edge. Freud has the cutters for what's happening in your market, now!

*Select among 26 different raised panel cutters, 16 different rail and stile sets and start selling the cabinet door that's the right product for today's customer.

*All cutters 3 wing 1 1/4" bore.

Freud offers 26 different raised panel cutters. Here are 7 of our favorites.



UP 209
List 185.80 Sale 172.00



UP 210
List 185.80 Sale 172.00



UP 211
List 185.80 Sale 172.00



UP 212
List 185.80 Sale 172.00



UP 213
List 191.30 Sale 177.00



UP 214
List 214.40 Sale 199.00

Bottomcutter Fits 3/4" panel flush with rail and stile.



UP 230
List 107.70 Sale 100.00

Freud offers 2 precision drawer cutters.



UP 160
List 357.40 Sale 332.00



UP 240
List 109.90 Sale 102.00

2. THE RIGHT PRICE

Today's cabinet buyer is more price conscious than ever. If your cabinets are going to be priced right, every tool in your shop has to be more productive than ever. For your shaper that means cutters that are affordable, quick to set up, clean cutting, and require little maintenance. And that describes Freud cutters. Freud shaper cutters are always competitively priced, and at these prices you're getting the right product at a super price.

Freud offers 16 different rail and stile sets. Here are 6 of our favorites.



UP 260
List 423.90 Sale 399.00



UP 261
List 423.90 Sale 399.00



UP 262
List 499.90 Sale 474.00



UP 263
List 423.90 Sale 399.00



UP 264
List 423.90 Sale 399.00



UP 265
List 505.90 Sale 480.00
(Each set consists of 5 cutters and 1 spacer)

Freud offers 16 different door lip cutters. Here are 4 of our favorites.



UP 291
List 180.30 Sale 167.00



UP 293
List 180.30 Sale 167.00



UP 296
List 180.30 Sale 167.00



UP 299
List 180.30 Sale 167.00

3. THE BOTTOM LINE

Freud cutters are money makers. Here are 3 hard reasons why:

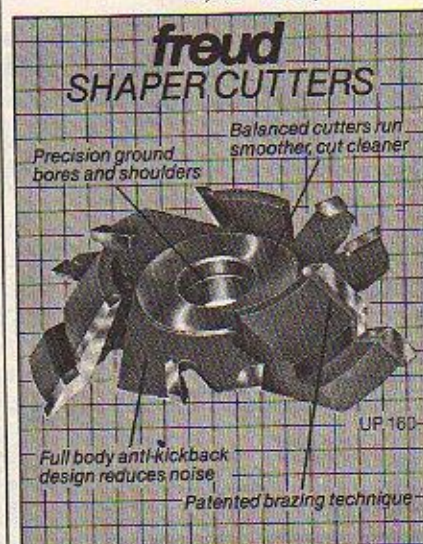
Freud cutters start sharper. Freud hones their cutters sharp with 600 grit, the competition usually stops at 180 or 220 grit. The sharper the cutter the cleaner the cut.

Freud cutters stay sharper. No one uses harder carbide than Freud, many competitors use softer carbide. The harder the carbide, the longer the cutter stays sharp.

Freud uses more carbide. Compare the size of the tips, Freud's are 50% larger than most of their competitor's. The larger the carbide, the longer the cutter lasts. 3 hard reasons Freud cutters mean more profit for you.

Bushings All cutters come with 1 1/4" bore. Order bushings if you need to reduce bore.

1", 3/4" 6.00 per pair



freud®