Wood News

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WELCOME to Atlanta's IWF 84

You are cordially invited to visit Highland Hardware's exhibit at the International Woodworking Machinery and Supply Fair at the Georgia World Congress Center in Atlanta, August 25-28.

The exposition will feature 600 exhibitors representing over 1000 companies, and is expected to attract more than 25,000 people during its four days. With over 400,000 square feet of exhibitions, IWF 84 will rank as the western hemisphere's largest woodworking show, and one of the ten largest expositions of any kind in the U.S. this year. Seventeen foreign countries will be represented, and seven countries are sponsoring national pavilions, including Canada, Germany, Italy, England, Mexico, Spain, and Taiwan.

Highland Hardware's exhibit at Booth 2738 will feature a large collection of modern and traditional tools of particular interest to small woodworking shops. New items on display will include two new stationary tools from Makita, including their new 8" jointer which is due to be available at the end of 1984.

Show hours are 9 am - 6 pm each day. Admission is $10.00 at the door. Children under age 16 will not be admitted to the show.

INSIDE Wood News 14

Store Relocates

On Saturday, May 5, 1984, Highland Hardware closed the doors of the store where it had done business for the past six years, and began moving its inventory into new quarters across the street at 1045 N. Highland Avenue. Relying primarily on four-wheeled carts to transport the merchandise, employees and volunteers completed the move in 2½ days, allowing the new store to open for business on Tuesday, May 8. The new location is owned by Highland Hardware, and provides customers convenient free parking for the first time in the company's history.

The move increases the store's retail space to 4000 square feet, thanks in part to the new 1000 square foot mezzanine which houses most of the store's woodworking tools. Large racks displaying hardwood lumber are located in the back section of the new space. The retail area is augmented by a 4500 square foot warehouse at the rear, which provides hardware storage, additional storage of hardwood lumber, the store's custom planing facility, plus a 1000 square foot area for holding seminars and tool demonstrations.

In addition to the mezzanine with its spindle railing, the store's interior features a large arched window at the front, two large skylights, large exposed roof trusses, two oak staircases, and an oak floor. The building was designed by Peter Hand and Associates and built by LSI Construction Company of Atlanta.

More photos of the new store appear on pages 4 and 5.

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WOOD NEWS No. 14 Summer, 1984

Editor . . . . . Chris Bagby
Assistant Editor. . . . . Zach Etheridge

Wood News is published about 3 times a year. Subscription is free to Highland Hardware customers, or begin a subscription by sending $1.00 for our catalog.

Wood News solicits and depends upon manuscripts contributed by its readership. We pay $80.00 in tools for each two-page spread selected for use in Wood News. Submit material to Wood News Editor, c/o Highland Hardware. Deadline for next issue is October 15, 1984.

Plunge Router Update

This spring Makita has taken the nearly unbelievable step of discontinuing production of the extremely popular 3600B and BR routers, but fear not — the move makes sense when you see the replacement. The new model 3612BR will rank, like the older models, as the most powerful adjustable-depth plunge router on the market. Makita advertises the new router as 3 HP, but its 14 amp continuous duty rating causes us to rate it conservatively at 2 HP. Granted, it will handle peak loads of 3 HP with ease. The new machine runs at 23,000 rpm, 1000 rpm faster than the 3600, which should prove quite useful at the fast feed rates possible with this kind of power.

Other changes include a total plunge depth of 2½ inches and a three-way depth stop with two adjustable positions. Along with the new knob on the threaded-rod plunge limiter this is a very welcome feature; pre-setting final and intermediate depth of cut is easier than ever, and with three settings available there's almost no job that can't be preset and routed in a hurry. Another very handy feature is the built-in shaft lock, similar to the one on Makita's circular saws, which allows changing bits with only one wrench. The ½" collet has been redesigned to offer more positive grip with less pressure and eliminate the bit creep which was an occasional hassle on the older models. (3/8" and 1/4" collet adapters are still standard equipment). A clear chip-deflector shield, though no substitute for a user-worn face shield, greatly facilitates inspection of work in progress and reduces the customary omni-directional trashing of the entire shop.

The 3612BR is larger and heavier than its predecessors — 12" high and 12½ lbs. — definitely not the choice for hand-held overhead trim work, but equally clearly a good match for heavier work than is possible with any other router you've owned. As you might guess from its title, the new machine is available only with a round base, and though this might sadden those of us who've grown fond of the 3600B's unique rectangular footprint, it should prove to be no practical loss. (As was the case with the earlier routers, if you desire a different base configuration you can easily attach a plywood sub-base of any shape you choose.) It might have been hard to imagine making the Makita plunge router much better, but Makita has done it, and we think you'll be delighted with the result.

Highland Hardware Fall Seminar Calendar

Sat., Sept. 29	Sharpening with Zach Etheridge
Sat., Oct. 13	Using Planes with Zach Etheridge
Sat., Oct. 20	Stationary Tools with Zach Etheridge
Nov. 2 - 4	Dovetail Joinery with Mark Duginske
Nov. 16 - 18	Japanese Tools and Shoji Making with Toshio Odate
Sat., Dec. 1	Stationary Tools with Zach Etheridge

Stationary Tools Oct. 20 and Dec. 1

Zach Etheridge will once again be showing off our Inca stationary tools during all-day free demonstrations this fall. These sessions have over the years become an excellent source of general information on stationary tools, as well as the best way in town to learn about Inca tools in particular. Bandsaws, jointers, planers and the tablesaw will be discussed at length, with discussion, demonstration of safety practices and numerous uses of each on tap. If you're shopping for stationary tools or want to pick up new ideas about using the tools you have, plan to attend on of the demonstrations and share tips and techniques with other woodworkers.

Dates will be Saturday, October 20 and Saturday, December 1. Sessions will run from 9:00 am till 4:00 pm. Please register at least a week in advance by calling Highland Hardware at 872-4466. Class size will be limited.

Basic Woodworking Skills

This fall Zach Etheridge will begin a series of inexpensive one-day classes designed to provide familiarity and confidence with a range of essential hand tools and techniques. The classes will be presented in a loose sequence intended to take the novice step by step through sharpening, planing, basic joinery and finishing, though of course you're invited to take any single class or classes that seem particularly useful to you. Ideally, the aspiring hand tool user attending each class would then be prepared to participate fully in our more advanced hands-on courses, such as Toshio Odate's shoji seminar in November.

The cost for each class will be $20.00. Each class will commence at 9:00 am and probably run overtime as usual, though the official day will run until 4:00 pm. Bring your own lunch, or visit any of several local delis and restaurants. Enrollment will be limited, so sign up early.

Sharpening Sept. 29

This is one of our most popular classes, and a skill that can't be done without. You'll receive a full day's instruction in the use of Japanese waterstones (stones provided, or bring your own) and a guarantee that you'll be at your sharpest by day's end. Focus will be on plane irons and chisels, though Zach will also cheerfully tell you how to sharpen anything else, from drill bits to axes.

Using Planes Oct. 13

Sharpening skills a prerequisite. We'll begin with a general discussion of the various kinds of planes and their uses, and then spend the day at the bench making shavings. Instruction will be responsive to your needs; emphasis will be on the most commonly used bench planes, but we'll cover any other kind of plane you'd like to learn about. Zach will also discuss modifying and improving your planes along the lines of the article by Seymour Shortz-copft in this issue.

The series will continue this winter with seminars on Basic Joinery Techniques and Finishing.

Dovetail Joinery Nov. 2-4

Mark Duginske's innovative research in dovetail joinery will be showcased November 2 - 4 as he presents techniques for cutting this popular joint using hand methods, bandsaw, tablesaw, and router. His ingenious method of precisely jigging the cut with a series of wood blocks will be demonstrated on the tablesaw and bandsaw. Cutting pins, cutting tails, removing waste, and final assembly will all be covered in depth, as well as understanding, designing and using dovetail jigs.

Mark's introduction to the seminar Friday evening is free and open to the public, and will focus on jigs and jig design.

Cost of the entire weekend seminar is $50.00. Hours are Friday 7:30 - 9:30 pm, and Saturday and Sunday 9:00 am - 4:00 pm. Register by sending payment to Highland Hardware. Class size will be limited.

Mark Duginske is a fourth generation cabinetmaker from Wausau, Wisconsin, whose articles have appeared in *Fine Woodworking* and *Wood News*. He is currently working on a book on dovetails. His article on dovetail design begins on page 6 of this issue.

Japanese Tools and Shoji Making Nov. 16-18

Toshio Odate will combine his two most popular seminars during one weekend at Highland Hardware November 16-18. Toshio will demonstrate the use of Japanese tools as he prepares a group to participate in a hands-on effort at building shoji screens. While seeing Toshio review the use of Japanese saws, chisels, marking tools, and planes, each participant in the seminar will have the opportunity to build his own shoji. These traditional Japanese style screens offer uses as room dividers, window coverings, and as parts of furniture.

The seminar will begin Friday evening, Nov. 16 at 7:30 pm. During the opening lecture, Toshio Odate will discuss the history of the shoji, and describe the role of the shoji in the home. He will begin introducing the tools involved in shoji construction. Saturday and Sunday participants will be provided a set of materials and instructions for beginning. Participants will provide their own tools, and either Western style tools or Japanese tools can be used in the project, depending on what you have and are comfortable using. Tools required include a fine cutting backsaw, 1/4" and 3/8" mortise chisels, smoothing plane, jointer plane, marking knife, marking gauge, square, and rule.

Hours will be 7:30 pm to 9:30 pm Friday, 9 am to 4 pm Saturday, and 9 am to 3 pm Sunday. Fee is $75.00. Friday evening's lecture is open to the public for free, although reservations are requested in advance.

A limited number of positions are available on a first come-first served basis.

Register for Highland Hardware seminars on page 19.

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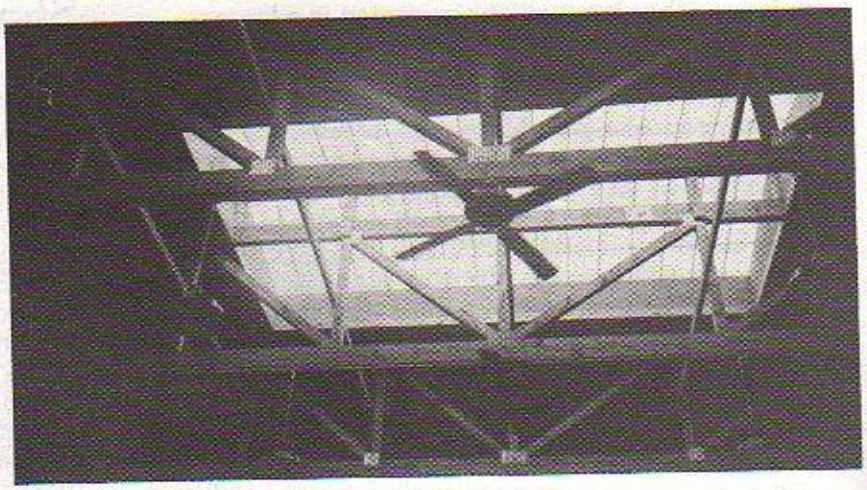
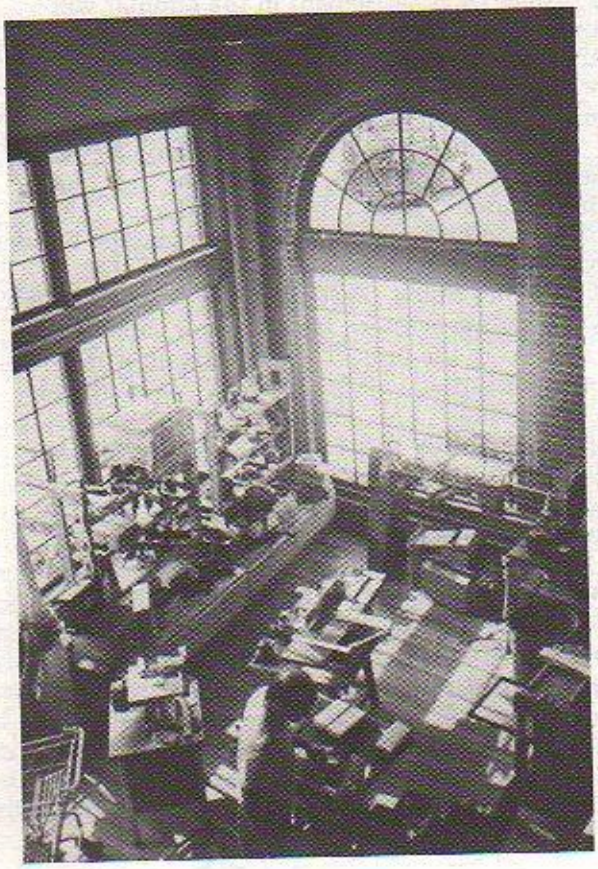
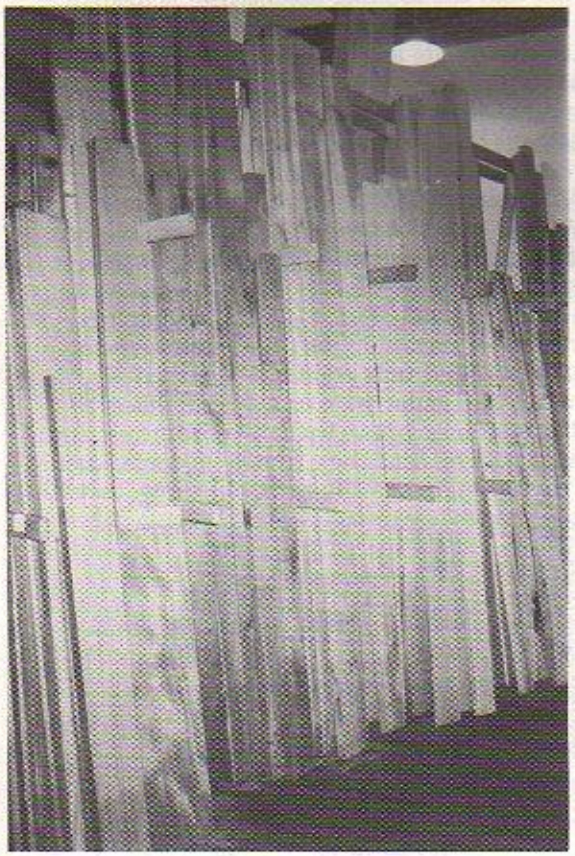
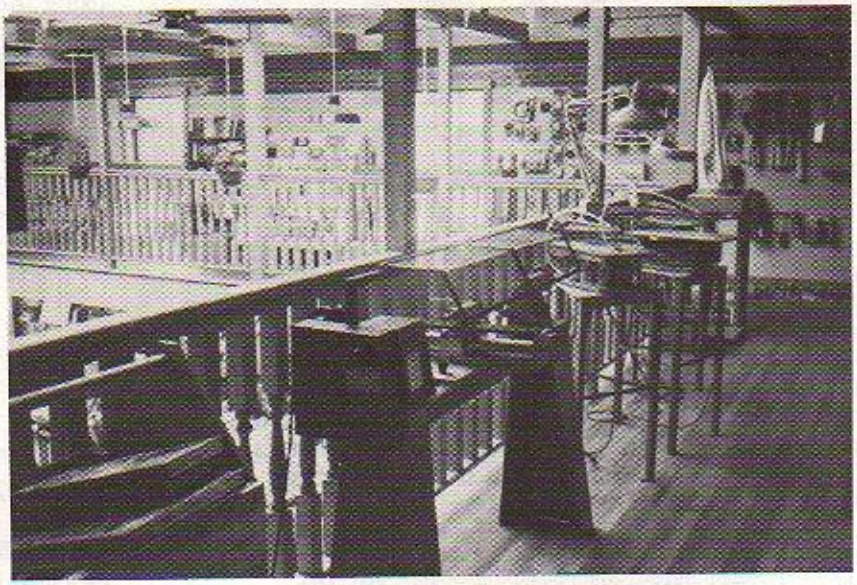
We appreciate the support of our customers from around the country whose loyalty over the years helped to make possible our recent expansion.

When traveling near Atlanta, please accept our special invitation to come and visit.









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DOVETAIL DESIGN

The exposed dovetail is both a structural and a design element in modern furniture. The idea is to expose the construction detail and to incorporate it as part of the design. This is in direct contrast with the goals of the past when structural elements were hidden. Moldings were used to cover the crude structural dovetail, ornamentation was then added in the form of carving. This change is perhaps reflective of the openness of our modern society.

Our "openness" isn't without problems. A joint which is meant to be seen is different than a covered joint where the only goal is strength. An exposed dovetail requires more technical expertise. Exposure of a joint also demands aesthetic judgement. The relationship between design and technique is complex. Good work requires a compatible blending of the two. Design without technical skill or consideration is superficial; it places the cart in front of the horse. When we begin to design things, we usually avoid creating pieces beyond our technical ability. This is how it should be. As we gain skill and confidence we can expand our repertoire. As our understanding increases, we develop a better grasp of design considerations. Part of the design process is the visualization of the options available. Good design involves making the best choice of options. Design is not a black and white situation; in fact, the resulting product is often a shade of gray.

The following is an attempt to explore visually the various factors that affect dovetail design. It is a collection of alternatives, each slightly different from one another. These drawings should help you visualize the options available when designing a dovetail joint. The quality of one's work is the result of the many individual decisions along the way.

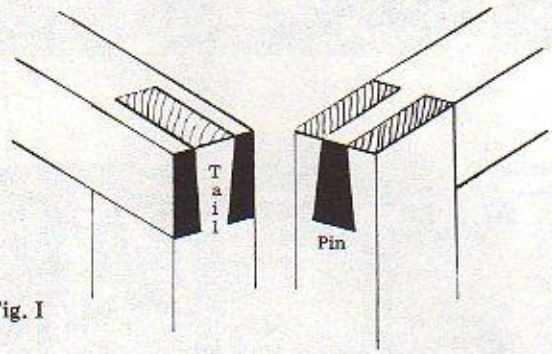


Fig. I

We will start with a review of dovetail anatomy. The dovetail is a locking joint consisting of two elements: the pin and the tail, for which the joint is named. The pins and tails only fit together from one direction. The single dovetail joint can either be a complete pin or a complete tail (Fig. I). The multiple dovetail usually ends with a half pin on the corner; the half tail is usually avoided (Fig. II). The tail board is a mirror of itself. Each side is identical and each side can function as either the inside or the outside of a box. The pinboard sides are not identical and thus not reversible. The outside of the pinboard is the side toward which the pins are tapered (Fig. III).

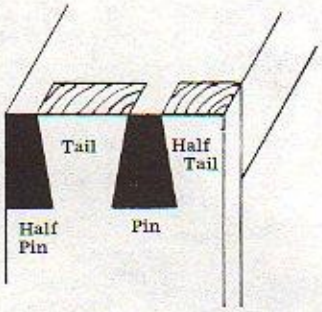


Fig. II

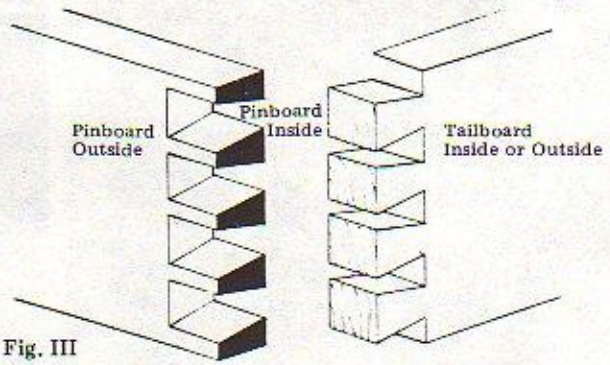


Fig. III

DOVETAIL ANGLE

The dovetail angle provides the mechanical lock. The angle of the pin (pictured in black) mates with the angle of the tail and that contact point is the workhorse of the mechanism. If the angle is too slight, the pin can slide between the tails and the locking mechanism is insufficient (Fig. IV). If the angle is too great, the wood at the corner becomes too fragile and will easily break under stress (Fig. V).

The gray area between the two extremes is an angle of roughly 80 degrees (Fig. VI & VII,c). A couple of degrees either side of 80 degrees doesn't make a great deal of difference. What is important is that the pin and tail have the same angle and fit closely without gaps. On some of the softer woods such as pine, an angle of 82 to 83 degrees is suggested (Fig. VII,b). The dovetail router bit is an angle of 14 degrees (Fig. VII,e). This angle is not the strongest nor most desirable, but the large surface area of the many pins and tails creates a strong joint. Care must be used, particularly on hardwood, when using the 14 degree router bit so that the corners are not broken off (Fig. V). The tendency for the corners to chip is particularly disturbing when the tails will show, as with through dovetails.

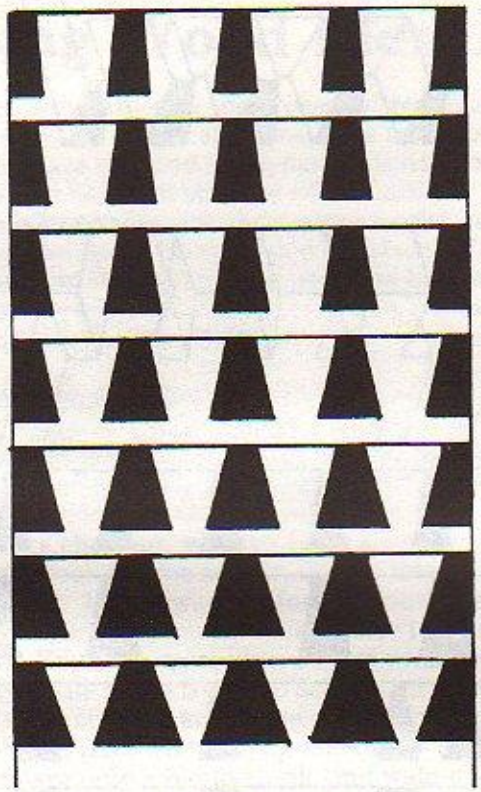
Fig. IV

Fig. V

Fig. VI

Mark Duginske is a designer-craftsman who lives in Wausau, Wisconsin. He is currently working on a book on dovetail joinery. His weekend seminar devoted to dovetail techniques is scheduled for November 2-4, and is described on page 3.

Fig. VII



PIN SPACING

The spacing of the pins in relationship to each other is an important design consideration. The spacing is best measured from the center of the pin (Fig. VIII, a). If the measuring is done from the outside corner of the pinboard, the pins will be bigger than the tails (Fig. VIII,b). If the measurement is taken from the inside corner of the pinboard, where the pin is the widest, the tail will be bigger than the pin (Fig. VIII,c).

The X's indicate equal measurements.

Fig. VIII

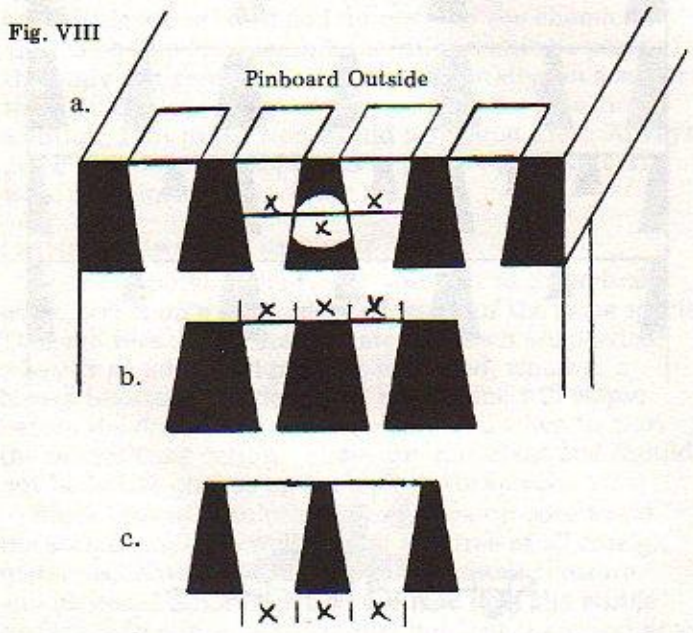
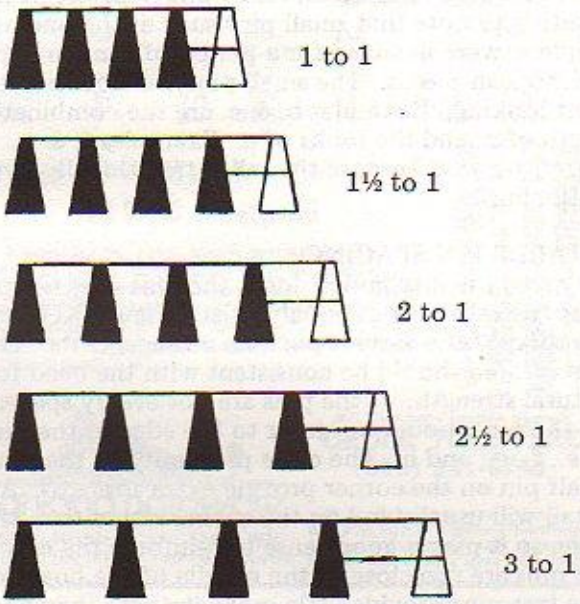


Figure IX is an illustration of various pin spacing ratios. The 1 to 1 ratio of the pins and tails is very mechanical looking. This is the type of joint created by a router jig or an industrial dovetail machine. This mass produced look is not consistent with high quality work. It is often used and is acceptable for kitchen cabinets. The other ratios are much more attractive looking. A ratio of more than 3 to 1 should be avoided, as the strength of the joint becomes questionable as the pin size decreases in relationship to the tail size.

Fig. IX



Three factors have an effect on the spacing of one pin to another. The examples in Figures X, XI, and XII are 1 to 1 ratios.

(1) Pin Size (Fig. X)
(2) Stock Thickness (Fig. XI)
(3) Dovetail Angle (Fig. XII)

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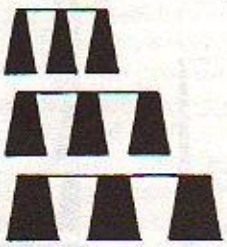


Fig. X

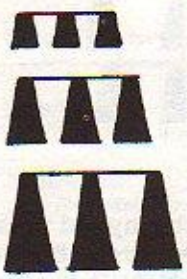


Fig. XI

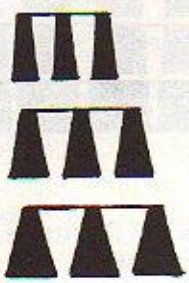


Fig. XII

Dovetail Design (contd.)

PIN TO TAIL RATIOS

Fix. XIII is an example of various spacing ratios of the pins (black) and the tails (white). The strongest joints would be the two middle examples, (d. & e.) because the pins and tails are similar in size and therefore strength. The weakest examples would be a. & h., the two on each end of the spectrum. The small pins of a. and the small tails of h. would both break easily under stress. It is interesting to note that small pins such as the one in example a. were in vogue for a period of time in expensive European pieces. The small pins were considered elegant looking. Examples b. & c. are the combination of strength of d. and the looks of a. Examples f. & g. wouldn't be used because the tail is traditionally larger than the pin.

VARIABLE PIN SPACING

To avoid the mechanical look, the pins may be spaced so that the tails are not equal in size. Figure XIV is an illustration of the various possible arrangements. The design created should be consistent with the need for structural strength. If the pins are not evenly spaced as in d., the pins should be closer to the edge of the piece as in e., f., g., and h. The close proximity of the pin to the half pin on the corner provide extra strength. A dovetail will usually fail on the corner rather than the middle, so it makes good sense to reinforce the corner. If the pins are too close to the middle of the board as in a., the two pins provide little more strength than a large single pin. Example e. is the one that I find the most visually appealing.

Fig. XIII

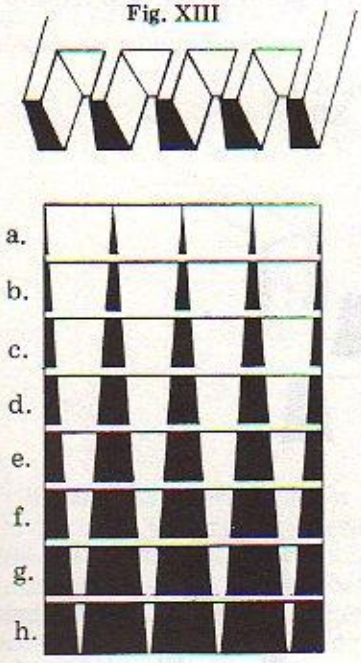
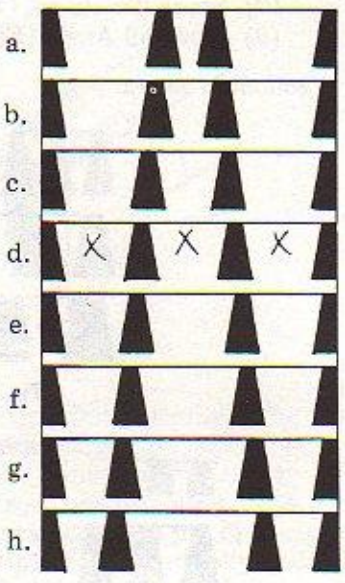


Fig. XIV



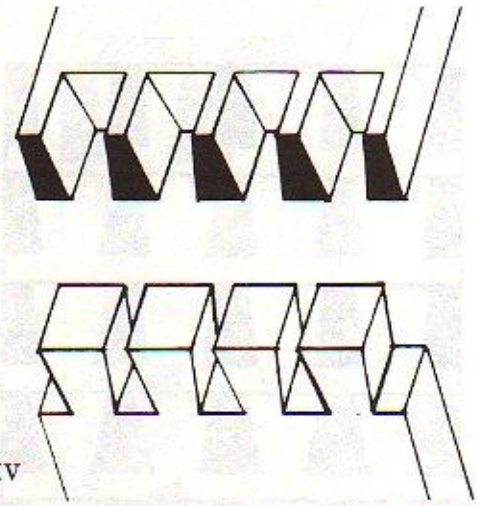


Fig. XV

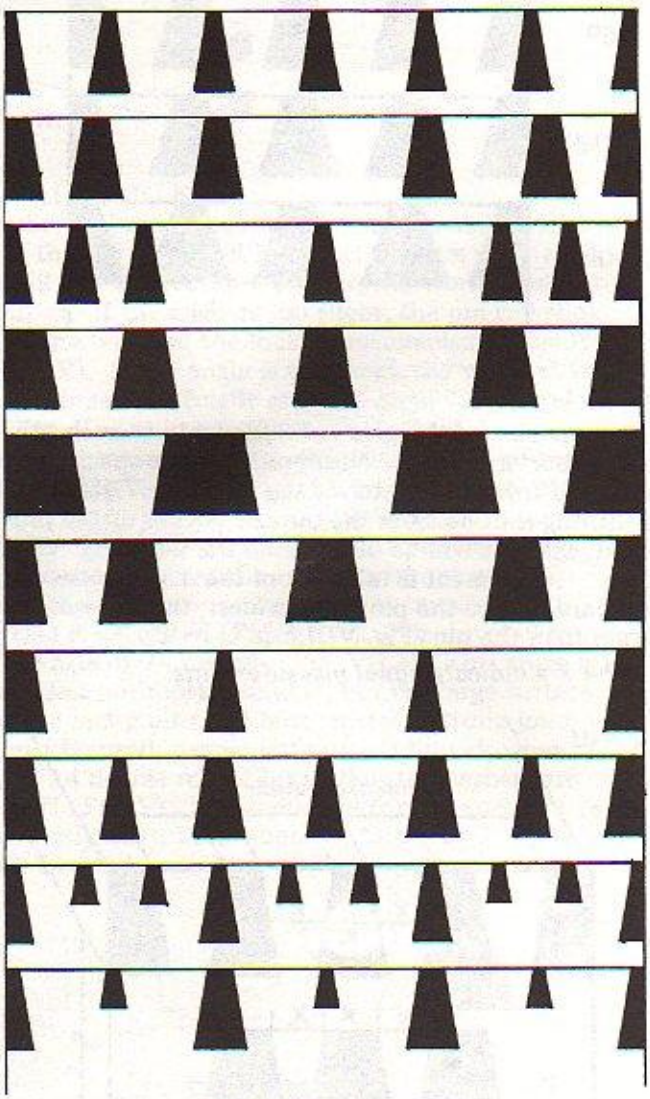


Figure XV illustrates some of the myriad possibilities one can achieve by mixing the various combinations of pin and tail spacing. All that are shown have a tail angle of 80°.

FINISHING

Courtesy of H. Behlen Bros., Inc.

Using Wood Bleach

Bleaching is described as the process of removing the color of a wood by chemical means. The term applies whether the piece of wood being lighted is new, or is an old piece which has been stripped of its finish, or whether the process is to remove unsightly water marks, stains, or other discolorations from a wood's surface. We will deal here only with commercially prepared bleaching solutions and not the many home remedies one hears about from time to time.

BLEACHING QUALITIES OF WOOD

It is important to realize that all woods will not take to bleaching in the same degree. Birch and oak are probably the easiest to bleach, followed by ash, mahogany, maple and walnut. Some of the more difficult woods are chestnut, western cedar and rosewood. Some woods, such as pine and fir, do not take well at all to bleaching. It follows therefore to know the species of the wood which you are bleaching prior to attempting the process. You may succeed in a short while, or else spend many futile hours trying to achieve an impossible effect. As an example, hard maple and birch can be bleached almost pure white, while mahogany can be made to achieve only a blonde look, and walnut a platinum effect. Knowing how a wood responds to the bleaching process will also help determine whether a single part bleach will do or a stronger two-part system is needed.

ALWAYS USE CAUTION WHEN BLEACHING

Prior to starting the bleaching process, it is well to remember that bleaching solutions are very potent chemicals. Although these chemicals are not generally toxic as such, they can cause severe burns when allowed to contact the skin. They can also cause adverse reactions when allowed to come in contact with metals. Therefore, insure that suitable gloves, aprons and eye protection are utilized and do not slop the chemicals around so that the bleaching solutionscontacts parts of the body not protected. If you are working on a surface that could allow dripping or run-off of the bleaching solution, foot protection would be a good idea. Always place your bleacing solutions in plastic, glass, or earthware containers. *Do not use metal.*

USING PREPARED BLEACH

Prior to applying the bleach solution to the actual work, test it on a scrap piece of wood of the same species. This will reveal how many coats of bleach are needed, whether an additonal product is needed, whether a bleach booster is needed, how much time will elapse before the desired color is achieved, and when to start the neutralizing action. These are important and should not be left to chance on the actual workpiece.

Since bleaching solutions only work on bare wood, the surface must be well sanded and free of all foreign materials. After the sanding, the use of air pressure will be beneficial in ensuring that not only the visible surface is free from sanding dust but that the wood pores are also clean.

From the original container, pour out only as much material as needed for the job. If there is any left over, it must be discarded and not poured back into the container.

Bleaching solutions may be applied by brush or with white rags. They should be applied evenly and without saturating or flooding the surface. When using a brush, ensure that it is designed for this particular task. As the solution begins to dissolve the color, apply as directed on the label, never intermixing unless specifically instructed. Placing the bleached surface in the sunlight will assist in the process; however, attempted forced drying will only retard the process.

When the piece has been bleached to the desired shade, the entire bleached surface should be cleaned with neutralizer to prevent problems from occurring in the subsequent finishing steps. After the neutralizer step, wash with water and let dry overnight prior to proceeding in the finishing process.

BEHLEN BLEACHING PRODUCTS

Color Dissolvent *For complete bleaching*	*Quart*	$4.95
Decolorant *For partial bleaching*	*Quart*	$6.95
Neutralizer *Afterwash for Wood Bleach*	*Pint*	$2.95
Oxalic Acid Crystals *1 lb. mixes several gallons*	*Pound*	$4.95

(When ordering, add $2.50 for shipping).

Perfecting the Steel Plane

by Seymour Shortzcopft

Several years ago, back in the dim dark ages of my impressionable youth, I accepted as gospel a load of advice about steel planes — advice which, through one of those curious twists of fate, turned out to be all kinds of screwy but which eventually brought me to my present happy state. What follows is not the gospel but merely a long-winded story about a simple idea, and how hard it was to realize how simple it was.

I was told, you see, that in order for a plane to really be right (and for any real gadgetophile the tool must really be right) the sole must be flat, dead flat. And that from the factory the soles did not come dead flat, but fell so woefully short of that condition as to be a perpetual thorn in the side of even the most slovenly perfectionist. And that of the two ways to make a plane's sole flat, one (going to a machine shop) was for wimps, and the other (doing it yourself) was for the tough, independent and self-reliant conqueror of new worlds. Purely out of curiosity, you understand, I inquired as to the proper method of doing it myself. The prescription that followed was of that class of absurdity so outrageous you figure it might even work, and besides, I was young and impressionable.

Not long afterward I was to be found down in the shop, brow covered with honest sweat, grinding away on the sole of my prized jointer plane. After about twelve hours of unremitting toil, I paused for a moment and thought to check my progress. According to my straightedge, a point about an inch or two behind the throat now stood a good, solid 32nd of an inch higher than the rest of the sole, and the last inch or so at either end of the sole had come to resemble a compass plane set for coopering pretty tight kegs. Hmm, something of a setback. The sole was also now 3 or 4 degrees away from being square to the sides. I was also somewhat amazed at how much gray iron one could remove from a large surface in so short a time, for the sole of my plane, though not exactly paper thin, bore little resemblance to the heavy artifact it had once been. As I calmly analyzed the situation, I realized that there was patently no way the method I was using could ever work in this universe. With a little sigh I set the plane aside and went upstairs to shoot myself.

Some months later, having swallowed a great deal of my pride, I set out to find a machine shop that could make my plane dead flat. Some months later, having swallowed a great deal of sarcastic abuse and other self-defeating forms of negative thinking, I found a shop whose foreman, a kindred spirit, accepted the challenge with confidence and promised to meet my highest expectations. It was even then a bit startling that the job took only slightly less than a month, and it came as something of a setback that it cost almost exactly as much as a new jointer plane, but then, this one would be better than new, and damn the torpedoes anyway — shirk no sacrifice in the pursuit of excellence, right? Well, this time my straightedge said the sole was hardly any worse than it had been before, only a little more convex and no more out of square at all. And back then it was only $10 to stop payment on a check.

At this point I'm afraid I succumbed to disappointment, put the plane on a back shelf, and went off to consider more uplifting matters such as taxes and mutually assured destruction. Time passed.

A year or two later, having recovered a measure of my equanamity, I came up with a clever idea and set out to salvage the poor old 07. I bought a $40 diamond stone (no 59 cent sandpaper for me), removed all removable parts from the plane, dug out the straightedge and square, and sat down on the front porch with a cold drink at hand a gleam in my eye. With the plane upside down on my knees I could see exactly where the work was taking place, and could check easily and frequently to make sure I wasn't getting carried away and buggering it up worse than before. I began by determining the highest spots on the sole with straightedge and square, and then set about grinding them down with the water-lubricated diamond stone, working only the most offensive areas and ignoring the rest. The stone cut pretty quickly, and a few hours' labor miraculously got the sole close enough to flat to be called functional.

The use of "close enough" there doesn't simply mean that I'd given up on getting the tool really right. During the years of frustration and recovery I had been using a variety of planes, developing more and more respect for their capabilities and more ability to use them well. Every now and then, after a plane did a particularly good job, I would (just for fun) check the condition of the sole — and would invariably find it grotesquely curved, twisted, rough or otherwise unusable. But the results were inarguably there. Hmm. It wasn't until Toshio Odate came along with his description of the deliberately hollowed soles of Japanese planes that I began to allow comprehension to set in. For a plane to work as it should, dead flat doesn't count; all you really have to have is three or more points of co-planar contact between sole and workpiece, and one of those points must be at the throat where the blade emerges and does the work. For a smoothing plane, contact at toe, throat and heel would be quite sufficient, while on a jointer plane it would seem appropriate to establish two or three points of contact along the rear in addition to the points at toe and throat.

Having gotten my 07 back into working condition, I decided I liked the smoothly polished sole a lot better than the relatively rough factory version, and since nothing succeeds like excess I got out the waterstones and continued polishing right down to 6000 grit. Gray iron won't come up to a shine like tool steel will, but it will get awfully smooth if the weather's right and the front porch sufficiently congenial. When I put the plane back together and tried it out, it practically wanted to slide right off the workbench. (By the way, feel free to ignore any hot air about leaving the frog and handles in place while you work — doesn't seem to make a bit of difference.) The effort required for planing had been cut in half or better, and it became just that much more fun and efficient to use the tool.

I had a big project coming up, one where I'd be using the plane a lot, so it seemed entirely appropriate to let the necessary preliminary procrastination be taken up with the plane itself. I started out by rounding over and smoothing all the edges of the plane's body (smoothly rounded bodies have long been a favorite) and then took out the frog to flatten and polish its surface. That made a tremendous difference in the tool's performance; even

with the lever cap lashed down tight, the iron could still be adjusted with delightfully smooth, gentle precision, and there was never a hint of chatter or vibration. Working on the frog took some care. I didn't go so far as to remove the lateral adjust lever, so I had to work around either side of it, checking constantly to keep the surface flat from side to side.

Then of course the handles needed some work, so I stripped them and re-shaped the rear handle to fit my hand a little better, and then made a new handle out of cocobolo because I liked the way it polished up to a gloss and felt like silk sheets with no finish on it at all. Finally the plane looked and felt like a million bucks, and if I could only remember what that project was I'd be ready to get to work in style.

Since those halcyon days I've worked on a few more planes, and have gotten more liberal (cheaper, if you prefer) in my selection of tools for the job. From the $40 diamond stone I switched to a $2.95 combination waterstone for the main grinding work: the coarse side seems to cut at least as fast as the diamond, and the small size of the stone makes it easy to work specifically on the places that need it. Recently I've begun using sandpaper wrapped around a small block of whatever scrap I have on hand, and that seems to work pretty well too. Smoothness is the goal, while of course working the sole toward flatness in the process, and it usually doesn't take very long to get good results. If a plane sole is really so far gone as to call for drastic measures, there's always Tage Frid's method of taking the thing to the belt sander and going at it, though it would seem that a bit of caution might be in order.

Thus having started off working on my planes for the wrong reason and with the wrong method, I've arrived nonetheless at that perfect state of practical satisfaction and domestic tranquillity to which all woodworkers aspire. Based on this rewarding conclusion, I can highly recommend the exercise to one and all. The successful modification of a well-liked plane helps build a sense of physical competence, creates a tool of greatly enhanced worth and sublimely improved usability, keeps the shop clean while you're not in there working, and can leave a wonderful, if striped, tan on the thighs. By the way, don't forget to remove your shoes before you begin.

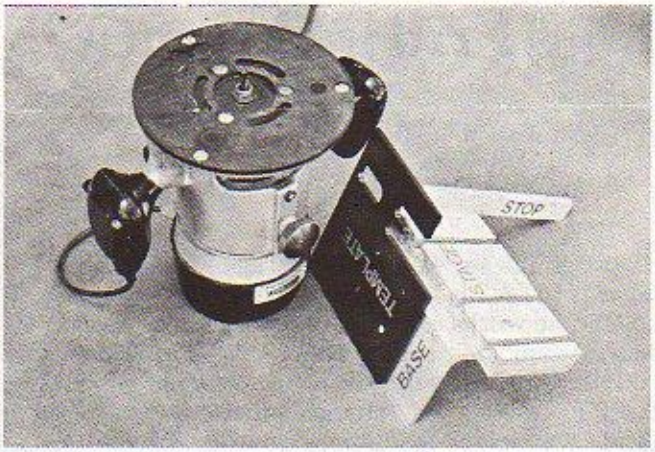
Seymour Shortzcopft is sometimes a woodworker in Lake Woebegone, Minnesota.

LETTERS

Dear Sir,

One gap in Tom Lathrop's table of wood shrinkage (*Wood News 13*, page 11) can be filled from "A Handbook of Hardwoods" published by Her Majesty's Stationary Office, London, 1956. Page 185 gives shrinkage for pear (*Prunus Communis*) "Green to 12% moisture content: Tangential about 1-1/16 in./ft. or about 9%. Radial about 9/16 in./ft. or 4.5 per cent. The book describes apple and dogwood but there are no data on shrinkage.

Yours faithfully,
John Fountain
Riverside, CT



Mortise and Tenon Jig

Back in February, Tage Frid told us about a new joinery jig he'd seen and liked, and showed us a sample of its work. We contacted the manufacturer and have now acquired a few of the jigs, and our early tests show that it's just about as simple and accurate as Frid claimed. The Morten is designed for use with any kind of router, though a plunge router is clearly the most convenient tool for the job. The router must be fitted with a 7/16" OD guide bushing and a ¼" straight bit — a spiral end mill is the best choice for the plunging cut to make mortises, but a conventional straight bit can be tipped into the work satisfactorily. Tenons are easy, calling for simple straight-ahead milling.

Set-up for a standard 90° joint is quick and uncomplicated, though it is actually one step more involved than the manual lets on — the manufacturer failed to mention that after a mortise is cut, the template must be repositioned to cut a matching tenon. You'll figure that out pretty quickly on your first trial run, but be advised that following instructions will waste your test piece.

Minimum stock thickness is listed as ¾", though it looks as though you might actually be able to get away with as little as 5/8". Maximum thickness is whatever you're working with, though mortises will be about 5/32" from one face (side by side mortises are an option). Minimum stock width is about 1½"; the jig is set up to cut a mortise 1-3/16" long starting ½" from the workpiece end, but that shoulder width can be reduced with shims against the jig's positioning stop. Maximum width is either 5½" or unlimited, depending on whether or not you're willing to do a little measuring and positioning without stops. The jig is built to handle ½, ¾, or 1" depth of cut, but deeper cuts could be made at the expense of the wooden stage against which the work is clamped.

A little bit of creativity (along with some pretty clear suggestions from the inventor) will enable the jig to handle tandem and side by side mortising, and a little more creativity yet will enable mortise and tenon or splined mitres as well as the joining of compound angles.

In some situations Tage Frid's own mortising jig (*Fine Woodworking* No. 30) might still be your best bet. But for general cabinet and furniture assembly it looks as though the Morten will be hard to beat with anything short of a Lamello, and at $49.95 it will be hard to beat anyway.

You can order the Morten jig from Highland Hardware for $49.95 plus $3.30 shipping.

Tage Frid in Atlanta

by Jack Warner

Courtesy of United Press International.

To watch master woodworker Tage Frid conduct a seminar is to see his books come alive. He looks just the same, and he works exactly as he does in the books. He makes the same hair-raising passes on the table saw, wields his Danish bow saw with the same continental elan.

Working in cramped and unfamiliar quarters with more than forty people — including former President Jimmy Carter — crowded around him, he spent a good deal of time hunting for the tool he had put down five minutes ago. As Frid worked, demonstrating every kind of joint and making them all look easy, he talked. Carter was instrumental in bringing Frid to Atlanta for the Friday night lecture and two-day seminar at the end of February in Highland Hardware's little basement auditorium.

After overcoming initial nervousness over meeting the former president, Frid's ever-present banter touched often on the well-known woodworker from Plains.

When Carter pointed out that Frid was using a measurement of mortise depth made before he had planed the piece, the master rechecked the measurement and grinned at the former president. "You're right," he said. "No wonder they made you president."

Carter is a dedicated and very accomplished woodworker. He certainly got his money's worth from the seminar — at a rough guess, I'd say that no less than 60% of the questions asked of Frid came from Carter, and he would not let go of the subject until he clearly understood the answer.

It was in a way a very strange weekend. An unheated little room, with one section of high bleachers plus some makeshift benches and folding chairs, was jammed. In the middle of all this was one of the world's great woodworkers, and among the several dozen people in his audience was a man who had held the world's most important job.

It was remarkable to see how smoothly Jimmy Carter fit into all this. Anyone who didn't recognize him would have assumed he was just another enthusiastic woodworker who, from the cut of his clothes, might not have had as much trouble scratching up the seminar fee as the rest of us. He sat in the third row of the bleachers, operating the projector during the hour or so each day Frid spent lecturing on slides, and during breaks chatted about woodworking with others.

One Secret Service agent was inside the lecture room at all times; several more stood in the hallway outside and there were others here and there, watchful but as unobtrusive as possible. There is nothing to set these people apart but their earpieces; seeing them for the first time, I thought they looked like members of a club for athletes with hearing problems.

Frid told us a lot of wonderful stories, but the best of all came from his years of apprenticeship in Copenhagen. The master of the shop where he apprenticed was a stern one — it is hard to imagine anything else — and was in the habit of charging his journeymen and apprentices alike a dollar every time they made a cut on their workbench.

One of the journeymen, Janssen, had gotten enough of cabinetmaking and joined the army. On his last day, he went to collect his pay and mentioned to the master that he had put another cut on his bench.

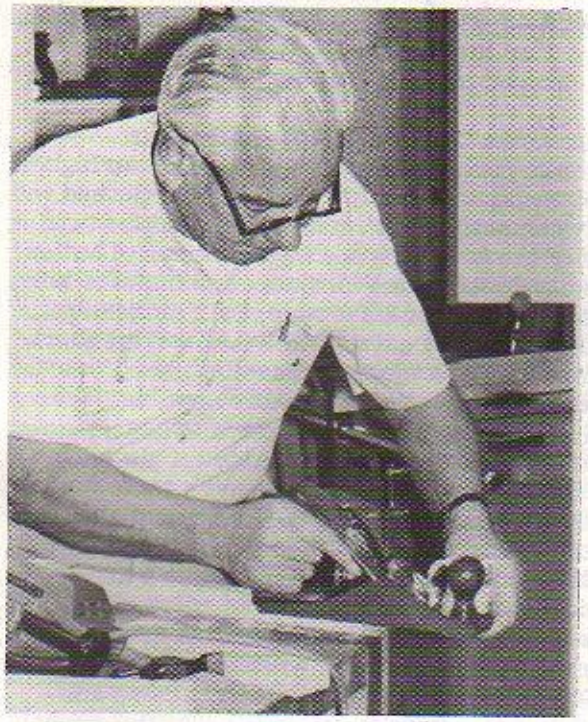
"All right, Janssen," said the master. "Thank you for telling me," and deducted a dollar from his packet. Jannsen left and a little while later the master came out to inspect the workroom.

He found Janssen's bench cut in half.

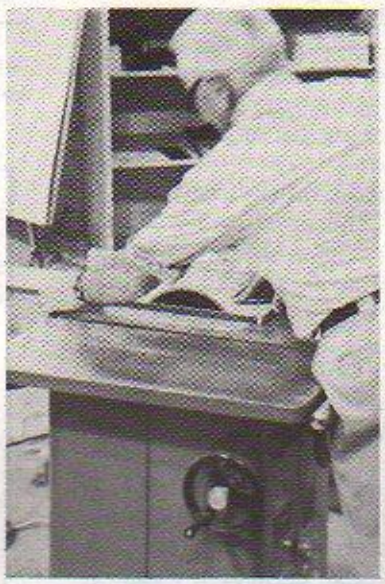
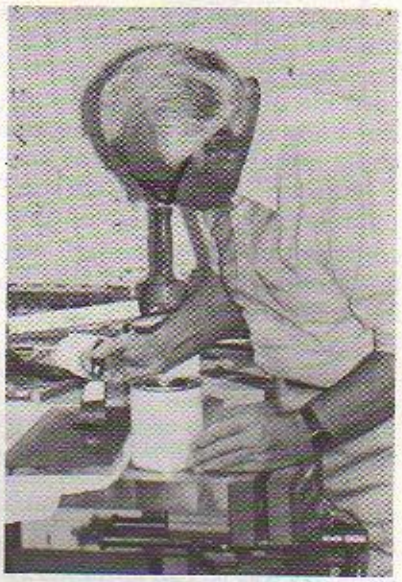
Frid is a great believer in the Makita plunge router, and used it to make hidden-spline miter joints, which he feels are stronger than secret dovetails and much easier to cut. However, as will often happen with this machine, the bit slipped down, ruined the workpiece and cut a considerable gouge in the bench.

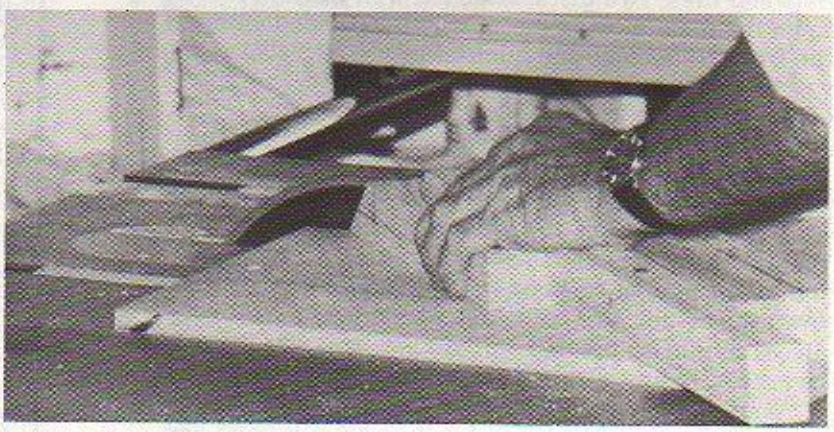
Any of you using the Makita have likely had the same problem. I have heard of it happening with other brands of router, too, but it is most common in routers with half-inch chucks and a quarter-inch collet in place.

John McGee, the eminent woodworker of Carrollton, Georgia, showed me how to deal with this problem in the Makita. Both the chuck and the collet have three slits in their tops, two short ones and one long. If you are careful to keep the long slits lined up together, the bit will rarely slip.







highland hardware

A Hard Lesson from Dr. Frankenduck

by Jack Warner

Courtesy of United Press International.

While I was on vacation recently, it fell my lot to construct a duck — a thing not in my ordinary line of work. Nor will it be after that experience.

My children have all far outgrown the stage where baubles so simple as a wooden pushtoy duck will satisfy them, even if its beak does flap up and down, and thus far they have had the grace not to elevate me to grandfatherhood, so I had no calls for ducks until a few weeks ago.

It all started on a fine Saturday morning. I had awakened to find the house empty and had scarcely begun to luxuriate in the peace and quiet when the telephone rang.

It was a gentleman from an advertising agency who said a friend had suggested I might be able to help him out of a tight spot. It seems that his agency was producing a book of some sort outlining different kinds of things the weekend hobbyist might do with plywood.

Among these things was to be this toy duck, and the rub was that the duck had to be ready to photograph on Tuesday. Had my wife been home, she might have rescued me from the insanity of accepting such a project. But I was feeling very jaunty and ready for anything, so I told him I would do what I could.

Thus on Saturday afternoon I had a murky copy of a photograph and a rough outline of this creature I was to construct in fir plywood. Readers of this column might not be surprised to learn that I had no fir plywood on hand, and Atlanta stores that stock the better grades of fir plywood, such as they are, do not open on Saturday.

I found myself driving through a blinding rain in search of stuff that I normally avoid like the plague. I finally wound up cadging half a sheet from the very friend who got me into this mess.

Now, those of you who construct toys regularly would have found this a simple thing, I'm sure. The duck was to have a long handle protruding from its stern. It was to roll along on two large discs at the rear. Between these two discs, attached well off-center, was to be the main moving piece, which extended along to the front to become the duck's lower beak. This part was to pivot on the part that ultimately became the duck's head and upper beak.

I put a ¼-inch blade in the bandsaw, drew out the parts and cut them out. I won't go into construction details — you can buy the book when it comes out. Then, having cut out the parts and assembled some of them, I stood there at the bench staring at the thing for the better part of an hour waiting for something to fall from the ceiling and point out where the two moving pieces should be pivoted. Obviously, this was going to be crucial to any sort of realistic movement.

As usual, the sky did not open and send down a beam to mark the spot for me, so I picked what looked like the best place and made the hole. Swiftly I put the thing together, set it on the floor and gave it a push. The lower beak dragged on the floor; obviously I had missed the mark.

Well, back to the bandsaw to cut another part. I was a bit low on the first part, so I moved the hole up higher this time. Once again I put duck to floor and pushed. It scudded reluctantly along on its breast, and for two revolutions of the wheel the beak worked nicely, but on the third it developed severe lockjaw. Too high the hole this time; back to the bandsaw again, Dr. Frankenduck.

To cut this catalog of cut-and-fit woodworking short, I finally got the hole in the right place, added a front wheel to get the contraption on a more even keel, filled the myriad voids in the plywood edges, and had a reasonably presentable and workable toy ready for the advertising man by Monday afternoon.

After several turns around the basement at the helm, he pronounced it acceptable, although I had the odd feeling he thought it looked rather more like a turkey than a duck.

I learned a considerable lesson from this: If you have no engineering background, you will do very well to find a good set of plans before setting out to build an animated toy. The woodworking is simple, but the mechanical part is far from duck soup.

Jack Warner is an Atlanta writer, woodworker, and potter.

Bandsaw Solutions

by Zach Etheridge

We've gotten a significant number of calls from bandsaw owners who've been having trouble doing straight-line rip cuts, and it seems worthwhile to pass along the solution (in most cases) to that problem. Bandsaw blades are like snowflakes in that every one is just a little different from every other, and this difference must be taken into account if you're going to get satisfactory results from fenced cuts. The alternate set of the teeth may not be exactly symmetrical, or the grind may have left more of a burr on one side than the other, or the stress induced by tensioning the blade may be making it act funny — whatever the cause, each blade will cut straight along a line which is not necessarily parallel to the blade or perpendicular to the fence rail. If you arbitrarily align your rip fence square to the front edge of the table, there's a good chance that an attempted rip will show the blade trying to wander left or right, cutting away from the line, cupping, binding, and generally being a nuisance.

The solution is to tune the rip fence to the particular blade in use. This assumes, of course, that your fence is adjustable laterally; if it isn't, it's time to make or buy a new fence. Take a fairly long (say 3 feet) piece of scrap and make sure that one edge is straight. Mark a line along the length of the piece about ½" from that straight edge. Now rip freehand along that line, not more than two feet into the piece but far enough to get a good feel for the direction in which the wood must be fed to cut exactly along the line. Stop the cut at least a foot shy of completion, and clamp the wood to the saw table without letting it move at all. Now loosen the bolts that hold your rip fence to its clamp head. Clamp the fence to the front rail next to the straight edge of the piece of wood you've been sawing on, and carefully align the fence dead parallel to the wood. Re-tighten the head bolts, and check your alignment by completing the rip with the fence in place, watching for any tendency for the wood to move away from the fence or for the blade to migrate inward toward the fence. Make any necessary fine adjustments as indicated. You should now be set up to rip or resaw with no trouble.

And another note: as part of my continuing research into the safe use of woodworking machinery, I recently managed to prove the effectiveness of face shields while using the bandsaw. I wasn't wearing one, and wound up with two stitches in my lip after a good-size chunk of wood punched me out in the sixth round of a simple carpentry project. As many of you already know, I'm something of an unabashed fanatic about machine safety, and I'm also very fond of the bandsaw as a general-purpose cutting tool, in part because it has so little tendency to become involved in emergency situations. In this case, however, I just got too comfortable with the saw and the situation (it was only a little job), and when the strangely-shaped workpiece I was cutting bound on the blade and bounced up off the table it caught me with no decent grip on the piece and no shield on my head. Oops.

The point should be that no matter how acute one's concern for safety, and no matter how unlikely accidents might seem, one simply can't count on never encountering the unexpected or on always being prepared to deal with it when it happens. You would most likely put in five hundred hours on the bandsaw with never a hint of trouble, but if you let that persuade you that no last-line-of-defense safety equipment is needed, you'll most likely end up with a story like mine about "dumb things I did last summer."

Using safety equipment in woodworking is much like using the seat belt in your car: it's easy to be macho or lazy or forgetful when everything's going right, and you can even be tough and brave and cheerful while they're sewing you up, but it's awfully hard to feel anything but ashamed and angry at yourself when the machine reaches out and beats up on unprotected you. In our catalog under "Safety Equipment" you'll find the rather unequivocal sentence "Every shop should be equipped with eye, ear and lung protection for each person working there, and their use should be as much a habit as turning on the lights." One of these days I'm going to remember that before I get to the emergency room.

Large Waterstones

700 and 1200 grit stones are 3" x 8¾" x 2¾".
6000 and 8000 grit stones are 2¾" x 8½" x 7/8".

02.64.08	*Large 700 grit Stone*	*$24.50*
02.64.13	*Large 1200 grit Stone*	*$26.50*
02.64.10	*Large 6000 grit Stone*	*$18.50*
02.64.11	*Large 8000 grit Stone*	*$29.50*
02.64.12	*Set of 4 large stones*	*$89.00*

BOATBUILDING

We have talked about questions to consider before choosing a boat — important questions about why, where, when and howmuchwillitcost? The last one's the killer and is practically unanswerable. You must simply have courage.

Having answered the prime questions to the best of your ability, you must still deal with the big one — What kind of boat is best for me? You need to know about boats: their use, design and performance characteristics. We'll begin to get into this now. The subject is almost inexhaustable, for boats have been built in almost every part of the world for thousands of years to suit innumerable sets of conditions — from the reed rafts of Lake Titicaca to the skin curraghs of Ireland, from the tiny Eskimo kayak to the rugged kag of the Scandinavians, from a low cypress bateau poled through the marshes of Louisiana to the modern 12 Meter yachts of Newport. Endless variety.

Let's try to put some order to it. There are lots of ways to categorize boats and it's worth the trouble, probably, to say a few words about some of those ways. It helps in understanding the whole picture.

First, you can say that boats are Power, Sail or Oar. Designers and builders usually specialize in one of the three types, but are often eager to experiment in the others, too. The demands of these three categories are somewhat different, so their hull forms and general design characteristics will vary quite a bit from one type to the other. Each of the three divisions is, of course, further broken down into many sub types.

Under powerboats you would have speedboats, fishing boats, runabouts, houseboats, cruisers, motor sailers, and very specific boats like airboats and all kinds of work boats. Sail can be sub-classified into mono- or multi-hull, or into racers and cruisers, day sailers, skiffs, dinghys, workboats, etc. Rowing boats are basically classified as to fixed seat or sliding seat, the former being more utility or recreational oriented, the latter for racing or exercise. Such boats, both kinds, by the way, are rapidly gaining popularity throughout the world today. Terrific form of aerobic exercise.

Work or pleasure boat. At one time all boats were for work. Fishing, hunting, cargo, dredging. . . marine work of some sort. Some time back in the last century or so a prosperous Dutch waterman decided he'd use a boat for pleasure rather than just work. He called his boat a *jaght*, or today, a yacht. Many of today's pleasure boats have their origins in fishing or other workboats of the last century or so. The most modern trimaran traces its ancestry to the proas and war canoes of ancient Polynesia. Up until the last few decades the vast majority of boats were for work, not pleasure.

Place. Inland, offshore, or "blue water". Obviously a progression in size, weight, sturdiness and survival gear. Also, obviously, in cost.

Racing or cruising. Here is where some very important differences come in. The boat racer cares very little for comfort, stability, or sturdiness except as it relates to speed. All he wants is to go fast. Unfortunately at times, safety too is given short shrift in the pursuit of speed. Where reason, good sense and a spirit of sportsmanship prevail, boat racing — power, sail or oar — is an excellent sport. Many creative developments in craft and gear have come as a result of racing and the cruising man has benefited.

The cruising man is a different breed. He may not let a similar boat sneak far up on him without making some surreptitious adjustments, and though he will often rise to such a challenge openly, his main concern is not going fast, it is just going. As someone has said, "Enjoyment is not proportional to distance covered." In comfort and safety, he wants to explore, to adventure, to savor the salt air and have the craft and the gear he feels best helps him make an enjoyable passage. His destination is one in place but not in time.

Heavy and light is pretty much a discussion of the above categories. The racing boat must be light. The heavier boat has more weight to push through the water. It sinks lower in the water and thus more water must be pushed aside to allow it to proceed. Also, the lower it is in the water, the more wetted surface there is to the hull, which presents more skin friction. All these factors represent resistance to be overcome at the expense of power. Since power is nearly always limited, you can go fast to the extent that you limit these resistance factors.

And that suggests yet another way to classify boats: "planing hulls" or "displacement hulls". A displacement hull moves *through* the water. A planing hull rises up out of the water, to an extent, and moves over the water. This, of course, reduces wetted surface and allows much more speed. A displacement hull does not rise up at all, but plows through the water displacing a volume of water equal in weight to the boat's total weight. Each boat length that it travels, it must push aside *and* let back into place, that volume of water. More on this sort of thing when we talk about design.

We can talk about traditional and modern boats. The traditional boats are more directly descended from workboats. The more modern boats are often quite innovative. People tend to think of these differences in terms of appearance, and often boats are recognized as traditional or modern by the look of them. But I believe, at least for our purposes in boatbuilding, we should make the distinction on the basis of construction methods, materials, and techniques. Plainly, a lapstrake boat planked with white cedar over steam bent oak frames is a traditional boat, and a molded plastic hull is modern — forget about what they look like. It has little to do with appearance, or performance, or longevity. There is a wooden workboat which has been in steady use for the past 160 years and is in fine shape today. This claim cannot be made for any of the so-called fiberglass boats (and won't be for another 130 years.)

Another way to talk about the traditional vs. modern hull is to consider "working" vs. rigid hulls. You may have heard someone say that a hull must "work". That is, must give, bend, flex, twist. I believe that until modern times it just wasn't possible to have it any other way. Try as he may, a boatbuilder could not produce a craft that was stiff enough or heavy enough that it didn't *give* in rough seas. This is because the boat was constructed of many, many pieces of wood joined with nails, screws, pins, and less than ideal glues. To keep water from coming in between the working planks, the seams were caulked with a fiber material (cotton or "oakum") and white lead paint and a putty of oil-based material.

Today there are much better caulking materials for such working hulls if one builds in the traditional way. But there is also the choice of making a boat that has no working seams, is all of one piece, and is perfectly rigid. This is a modern hull in construction.

This immediately brings to mind yet another distinction, a truly modern one: dry sailed or wet. By dry sailed, we mean that the boat is trailered and stored out of the water, getting wet only while in use. It takes a traditionally planked boat, with caulked seams, some days to soak up water, swell and become tight. It could not stand trailering and drying out after each sail. For trailer boating, or dry sailing, the hull must be of modern construction, all of a piece, or "monocoque".

The traditional boat is wet sailed, stays in the water all season, or all the time. Once the planking takes on moisture and swells up, she stays tight.

Finally, let's talk about the classification most boatbuilders consider: hull type. These are, simply, Flat, Vee and Round. (Fig. 1)

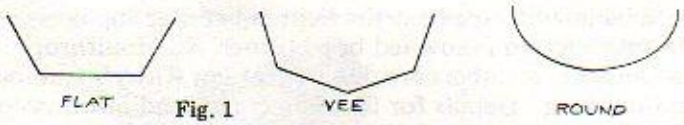


Fig. 1

The amateur boatbuilder will find the flat bottom boat the easiest to handle in terms of quick and simple construction. These boats are called punts or prams or scows if they are not pointed at the bow, but have a squared off section, similar to the stern (Fig. 2). If pointed at the bow they are known as skiffs, flat iron skiffs or sharpies (Fig. 3).


Fig. 2 PRAM or PUNT

The flat bottom boats encompass a fairly large variety of inland fishing, rowing and sailing boats. Familiar to most of us are the common pond fishing skiff, boatyard work work punt, kids' sailing prams, bass boats, John boats, houseboats, New England fishing dories and many small racing classes of sailboats, also called dinghys.

Traditionally the term "dinghy" meant the small boat used as a tender or lighter (for hauling supplies) for a large yacht. But as more such boats began to race and designs were changed for speed and whole new design classes created, the term came more to mean these small, light racing boats. A racing dinghy can be flat, vee or round bottom.

The flat bottom boat was usually built by setting up a framework over which the boat was planked, upside down, with boards of pine, cypress, fir or some local wood. The side planking ran longways, fore and aft, while the bottom planking was nailed on from side to side — athwartship. This was a bit of work, but the old timers had it down to a routine.

Plywood, the amateur boatbuilder's salvation, has made it even simpler. With simple mold setups and plywood sheets cut to shape, each side and the bottom can be of one piece. Modern adhesives, such as epoxy, assure an absolutely rigid and tight joint. Thus, the boat may be very traditional in design, but quite modern in construction.

The flat bottom boat consists of two sides, boards across the stern, called the transom, and bottom (Fig. 3). The line where sides and bottom join is called the chine and this joint is reinforced with longitudinal members called chine logs, or simply chines. This is a very important joint in any boat and is probably the most troublesome, involving as it does, curves fore and aft in both plan and profile views, a twist, and a bevel which often varies along the length. Getting chines properly in place is usually occasion for popping open a cold one and sitting back to admire a job well done.

Most often there is a central longitudinal member, inside, called a keelson, keel batten, or hog. Often, on the outside of the hull, there is a fore and aft member also, running from the transom forward just a small way, called a skeg. It helps the boat track straight.

The shape of the boat is maintained by a system of fore and aft members: sheer clamps, seat risers, and rub rails, or gunwales, and by the thwarts, or seats. Where the two sides come to a point forward, they are joined to an upright member, the stem, which is set up on the keelson and joined to it with a knee. Those are the basics for a flat bottom boat. There are other parts involved, such as knees, partners, breast hook, etc., which we'll go into in more detail later.

The vee bottom boat, a bit more complicated, is put together on basically the same principles, but the bottom has two parts to it, since it forms a V. The curves of the bottom planking can be tricky. Obviously the chine is a bit more complex, especially where it joins the stem, and the keel joint becomes a factor which did not exist in the flat bottom boat. Many builders feel that the vee bottom boat is the hardest to build. The round bottom boat, in all its myriad variations, is a whole different kettle of fish.

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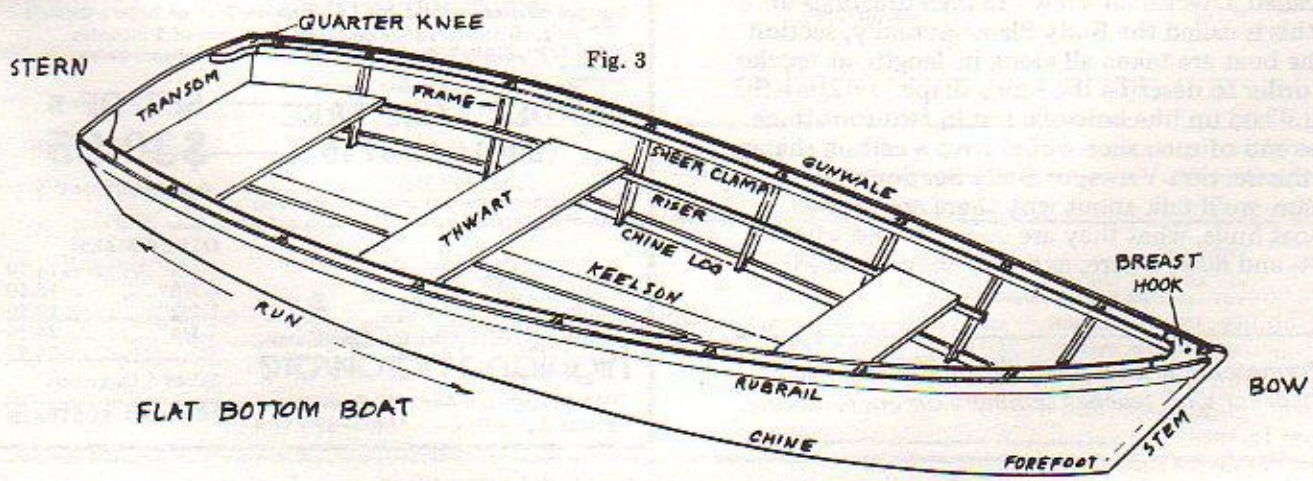

Fig. 3

Boatbuilding (contd.)

To wind up this time, let's talk a bit about the jargon used to describe boats, boatbuilding and things nautical. Some people think that sailors use the terms they do just to sound salty. Perish the thought. Who would do that?

Truly, every discipline has its terms and for a good reason. If a sudden gust of wind is about to capsize your boat, you just don't have time to yet, "Undo that piece of rope that runs from the roundish thing near the back of the boat up to the long wooden member extending. . ." By now you're over and gone!

Specifically, in describing the shape of a boat hull, there are terms we'll begin to use. They are ways of viewing the boat from different angles, which is what you have to do to understand its shape if you don't have the actual boat, or a model, in front of you.

Suppose you are up in a balloon looking down on a boat so that you see the outline of the deck and all the things on deck, as if they are drawn flat on the surface of the sea. This is called the Plan View. If you were lying on a rubber raft in the water off the side of the boat, looking straight at the side, you would be seeing the Profile View.

PROFILE

PLAN

BODY PLAN

BODY SECTION AT 4

If you paddled your rubber raft around in front of the boat, a ways off, and looked straight at the boat, as if it were coming toward you, you would be seeing what might be called a Sectional View. In plan drawings of the boat, this is called the Body Plan. Actually, section views of the boat are taken all along its length, at regular spaces, in order to describe the hull's shape. Imagine the boat being sliced up like bologna, but in two-foot-thick slices. One end of each slice would have a certain shape. These are the Section Views, or Body Sections.

Next issue, we'll talk about why there are various kinds of boat hulls, what they are good for and what they aren't, and how, where, and why they are used.

John Wermescher is an Atlanta commercial artist and woodworker who teaches seminars on boatbuilding.

Woodworkers Guild

The Woodworkers Guild of Georgia has continued its presentation of monthly meetings featuring interesting programs for members and guests. In June, Tom Lathrop and Mark Palmquist entertained the membership with a demonstration of the Leigh router dovetail jig. July's meeting was a family event, consisting of an all day picnic at Gross Lake in Conyers, complete with fishing, boating, swimming and softball.

In lieu of the August meeting, members have been provided with pre-registration forms for free admission to the International Woodworking Fair at the Georgia World Congress Center August 25-28.

Scheduled to speak at the September meeting is Atlanta's world renowned bowl turner, Ed Moulthrop. In October, members are due to visit Ian Kirby's studios in Cumming. Details for these meetings, and information regarding joining the Guild can be obtained by writing them c/o PO Box 20041, Atlanta, Georgia 30325, or by calling the Guild Secretary, Chuck Boelkins at 922-8866.

Guild officers for 1984-85 include:
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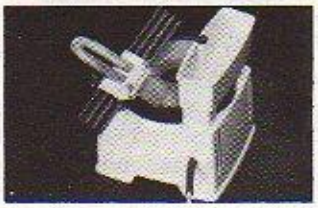

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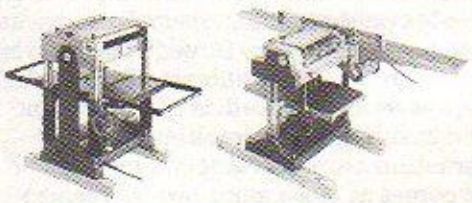

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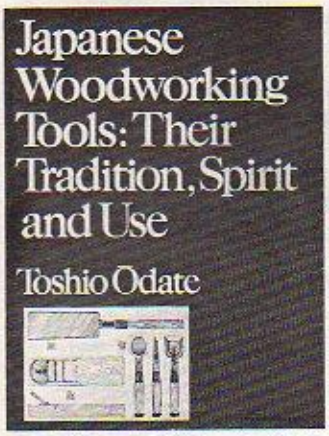

Those of you who have gotten to know Toshio Odate through his visits here at the store are in for a repeat treat, and those who have yet to meet him will get an introduction nearly as enjoyable as in person through his new book, *Japanese Woodworking Tools: Their Tradition, Spirit and Use.* Toshio and his editors at the Taunton Press have done a remarkable job of presenting a complex and detailed body of information in a clear, engaging, and thoroughly enjoyable manner — we're proud of the work they've done, and without reservation recommend this book to anyone interested in owning, using, or just knowing about Japanese tools. The book works equally well in each of the three approaches described in the title: as history, as philosophy, and as a user's manual as well.

Given the lifetime's worth of circumstances leading up to it, one could almost say that Toshio *had* to write this book, and indeed he has spoken of a sense of mission that imbues his lectures and writing on the subject of Japanese tools. In his introduction he describes how the sense of social responsibility which is an integral part of the traditional apprentice's education has, for him, found a new and broader voice in his attempt to describe and preserve here in America the skills and values of the Japanese *shokunin*. Those are skills and values which, arising as they do from a different and (to us) largely unknown culture and history, seem strange and yet familiar; this element of new perspective on an old topic is one of the most interesting aspects of the book, for as the editors mention on the jacket, it is "the kind of information that enriches while it teaches."

"The *shokunin* has a social obligation to work his best for the general welfare of the people." "[He] demonstrates knowledge of tools and skill with them, the ability to create beauty and the capacity to work with with incredible speed." Those words might well have come from George Nakashima or James Krenov or Sam Maloof, for any one of them along with practically any other woodworker, would readily testify to the need for efficiency and the need for the craftsman to respond and contribute to his society.

It is in this context that Toshio proceeds to examine and explain the shokunin's tools, from the work space to the toolbox and other working aids to the dozens of different tools themselves. Some of this information you've seen published in earlier issues of *Wood News*, and some of it you might have heard from Toshio himself. The familiar and the new alike are presented with characteristic attention to detail, the how-to fully supported by the reasons why the tools are used as they are, in most cases with the history of the tool included. Details on the tools include their origins (if known), how they were and are now made, how the shokunin uses them, and how they should be completed, tuned, maintained, sharpened or repaired as the case may be. In many cases, in fact, the information is explicit enough to be used as a guide for making your own tools, as in the case of the sumitsubo (inkline) or many of the marking gauges.

The chapter on saws is a real gem of informative writing. In drawings (by the author), photographs and text Toshio identifies a dozen kinds of commonly used saws and their variations. This is followed by an analysis of the different kinds of teeth typical of the different saws, along with instructions for filing and setting them, and then detailed suggestions for making and wrapping your own saw handles. All of this is introduced with a review of the last six or eight hundred years' worth of the history and development of Japanese saws and the sawyers who used them, and Toshio's own very moving stories of two old, once-cherished saws and how he almost accidentally rescued them from oblivion.

Further chapters in the same spirit cover chisels, planes, hammers, adze and axes, gimlets, knives and other tools. There are two highly informative chapters on waterstones: first an analysis of the stones themselves, with a fascinating collection of electron microscope photographs provided courtesy of Leonard Lee of Lee Valley Tools in Canada, portraying both the stones themselves and the edges they produce, comparing waterstones to oilstones and showing conclusively that waterstones have sharper particles to cut faster and produce finer edges than those of which oilstones are capable. The chapter on sharpening opens with discussion of how Japanese plane blades are forged — here, as in every other chapter, the tremendous amount of research done by the author gives us an extraordinary inside look at a vanishing art, and makes the information given far more than plain instruction on physical technique.

In sum, this book comes as close as any we've seen to offering something for everyone. If the art and sensitivity of beautiful tools appeals to you, you'll find it wonderfully present. If you're looking for straightforward how-to with a whole new range of tools, you've got it. And if you're looking for good, relaxing, informative and stimulating reading that has something to do with woodworking, this book was written for you. ZJE

Toshio will be here at Highland Hardware again this Fall for another seminar on Japanese tools and shoji-making. *For more information, see page 3.*

Japanese Woodworking Tools can be ordered from Highland Hardware for $22.95 plus $2.50 shipping.

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