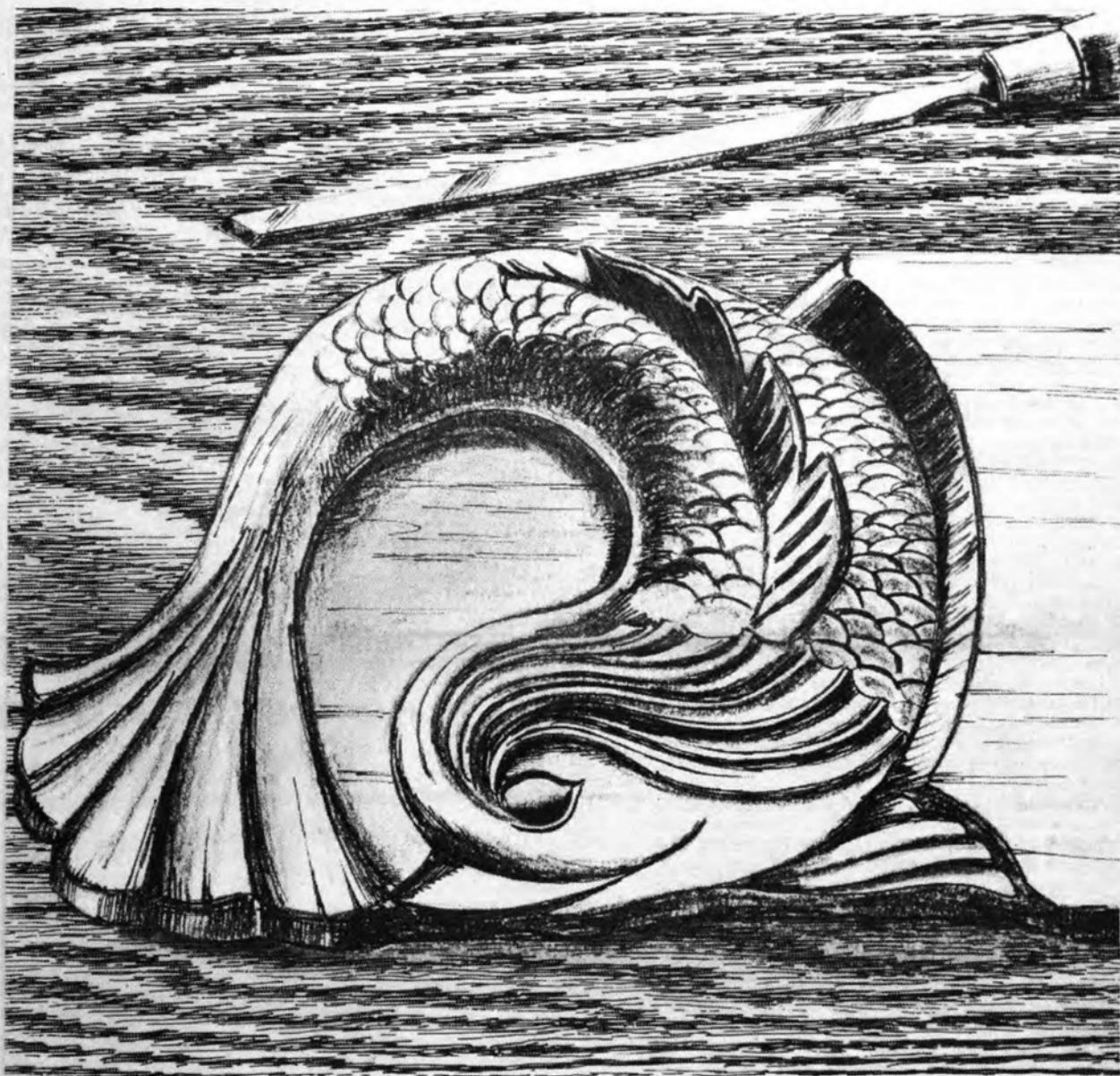


The Woodworker's Journal

VOL. 1 NO. 5

SEPTEMBER/OCTOBER 1977

16 PAGES \$1.25



Traditional Marine Carving

IN THIS ISSUE :

- Hutch-Cupboard
- Duck Decoys
- Shaker Step-Chest
- Counting-house Desk
- 2 Shop Jigs

and much more

Shoptalk

Shortly after mailing out our first issue early in January, a gentleman from the Mid-West wrote to us inquiring about the possibility of receiving a sample copy of our publication. He enclosed one dollar, and admitted to being hesitant about subscribing for he had previously subscribed to another woodworking (or so he thought) magazine and was disenchanted with its general content.

It seems that each issue of this magazine had a feature article on how to panel a living room, or bedroom, or kitchen, and he was beginning to wonder how long it would take them to reach the attic. What amused us most were his comments about an article on how to cut a piece of plywood in half, add legs, paint it black and call it a coffee table.

We don't know what magazine the gentleman referred to; he didn't mention the name, but we do understand his feelings about the situation, having had similar feelings ourselves in years past. So we sent him a sample copy, and made a mental note to ourselves that we would like to have this outspoken woodworker as a subscriber. We kept close watch on the incoming subscriptions and sometime later we received a two year subscription from him. Needless to say, his response certainly helped to make our day.

There will be no articles in the Woodworker's Journal explaining how to panel a room, or lay pre-finished flooring, or anything else involving home improvement. This particular area is so completely saturated by other publications that we could offer very little in the way of new information.

From the beginning our concept has been a simple one; and that is to provide, at reasonable cost, a wide range of interesting and useful projects for people who enjoy cabinetmaking. Our subscription renewal rate, which is at present an unknown quantity, will tell us how well we have chosen our projects. Letters from readers have been enlightening as to what kinds of projects they prefer, and we certainly get the message that Traditional or Early American type plans are popular; but our enthusiasm for woodworking is such that we feel almost compelled to coax readers into broadening their experience, and trying their hand at carving, veneer work, or marquetry. These related crafts all fall within the realm of cabinetmaking in general so we can hardly ignore them.

We are fortunate in being located in an area of the country where there is a great repository of fine American and European antique furniture; both in public museums and private homes. All of this is fair game to us, and armed with clip-board, camera, calipers and trusty steel rule, we hope to capture many fine specimens for these pages. Modern designs are more difficult to come by for so many pieces employ man-made materials...but there are still many modern projects, from chests to candlesticks, that we are anxious to present.

Whether it's traditional or modern, big or small, difficult or simple; if it's made of wood, it will merit our consideration...unless it's a coffee table cut from a sheet of plywood, painted black, with store-bought legs screwed on.

The Woodworker's Journal

P.O. Box 943 New Milford, Ct. 06776

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LETTERS

Where can I get details for making an authentic ox yoke? S. S., Foxboro, Mass. We've never seen a published plan for an ox yoke, but we know of one that was converted years ago into a chandelier. It's a magnificent piece and we would like to include it in a future issue.

As far as we know, the yokes were hewn from a solid timber, with holes bored for the neck hoops. Hickory was soaked, or steamed, and while still hot, bent directly into working position. The massive yoke could be laminated from smaller stock, but it's unlikely that this was done years ago because of the lack of good waterproof glue. A rather large log would be needed to carve the yoke, and white pine would probably be the best choice.

This subject would probably be of interest to many readers as ox yokes are getting scarce, and are a popular collector's item. If any readers are familiar with the dimensions of ox yokes, and the methods used to make them, we would appreciate hearing from them.

Now that I have every issue of The Woodworker's Journal tucked into a safe place, I'm afraid I will lose an issue if the kids find my hiding spot. It would be great if I had some type of newspaper holder that I could assemble each issue into as they come in. I am thinking of making myself a library type holder, but your readers may have a better idea.

How about a little contest for your readers to design a holder for back issues and submit to you for judging the best design. We could then copy that design as it appears in a future issue...maybe a free

year's subscription to the winner. I think it would be fun for all of us. C. S., San Francisco, Cal.

We think your suggestion is great! The contest has now officially begun, and the deadline for entries is December 31, 1977. The choice of materials is wide open, but all materials and hardware should be easily available to all woodworkers.

I was wondering if you intend to print plans for game boards for chess, backgammon etc. in a future issue. I'm also interested in plans for wine racks and cheese boards. Best wishes for continued success with your excellent Journal. P.P., Jackson, Ala.

Readymade checkerboard and backgammon veneer faces can be ordered from Albert Constantine & Son, Inc., 2050 Eastchester Rd., Bronx, N.Y. 10461 (catalog 50 cents). They are available in contrasting mahogany and maple, or walnut and maple with inlaid borders, and are ready to glue to a backing panel for an impressive table top. A wine rack is in the works for a future issue.

I am interested in making an assortment of whirl-a-gigs from wood. At one end of the contraption is a propeller; and as the wind blows, the propeller turns the arms and legs of the figures (people or animals). They are mounted on a garage roof or a pole in the yard. T. F., Los Angeles, Cal.

Two sources for plans for a wide variety of wind-animated novelties are: Albert Constantine & Sons, 2050 Eastchester Rd., Bronx, N.Y. 10461, and Craft Pattern Studio, Elmhurst, Ill. 60126.

The Beginning Woodworker

Before the advent of the wood screw and nail, woodworkers had to rely on the joint itself, as well as rope, pegs and hide glue to hold the assembly together. Some of the methods employed today in joining two pieces of wood together, are as old as civilization itself. The pegged mortise and tenon joint (Fig. 1) was used by Egyptian chairmakers as early as 1250 B.C.; and Greek chairs, dating from about the 5th century B.C. show the same sophisticated joinery. These chairs were both handsome and well-built, and would not appear out of place in a contemporary dining room.

The Romans developed furniture construction still further, but most of their knowledge was lost following the collapse of the Roman Empire during the 4th and 5th centuries A.D. Although furniture making suffered a 1000 year drought in

Medieval Europe, woodworking as a craft did not cease to develop, however slowly. Wood was still a relatively abundant and easily worked resource, and throughout the Dark Ages individuals worked at the construction of buildings, bridges, mills and machines of warfare. This was carpentry of course, but it involved the design of joints that would stay together and withstand stress and it required skill to form these joints with primitive hand tools. Furniture however was generally very crude, and confined to the most simple and utilitarian stools, tables and storage boxes.

The period from 1400 A.D. on, marks the beginning of increasing activity in furniture design and construction in Western Europe. This was due, in part, to a growing

Continued on Page 3

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The Beginning Woodworker (cont'd)

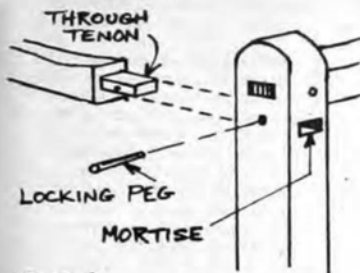


FIG 1

sophistication and better living conditions of the general populace. Spurred on by the Renaissance, craftsmen in the Netherlands, Spain, France and England began to outdo each other in the creation of incredibly elaborate pieces which combined complex joinery with carving, inlaying and veneering, in a demonstration of skill and monumental patience that boggles the 20th century mind.

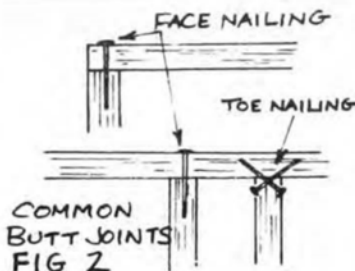
Cabinetmaking flourished until its apogee in the late 18th and early 19th centuries, when individuals such as Chippendale, Sheraton, Goddard and Phyfe carried design and workmanship about as far as it was possible to go, given the tools and economic conditions prevalent at the time. Up until the 19th century, practically all professional cabinetmaking was done for wealthy customers. The availability of the iron wood screw and cut nail in the early 19th century made possible the construction of utilitarian furniture without the necessity of resorting to complicated hand-cut joints. More furniture began to be designed and built for the average household, and more amateurs began building their own furniture. It was only a matter of time before the machines took over, and

furniture manufacturing became a big business.

In spite of the decline of the professional cabinetmaker in the late 19th century, the techniques of working and joining wood with hand tools have not only survived to the present, but have again begun to flourish and will continue to do so as long as individuals need to satisfy their creative urges by building something useful, or just beautiful.

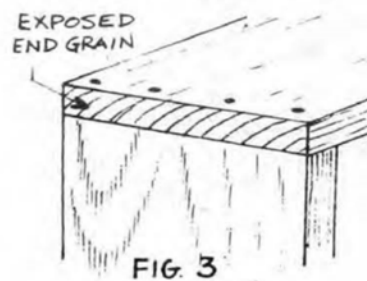
After the stock has been selected, squared and dimensioned, the woodworker is faced with the task of cutting the various joints needed to assemble the project. Generally speaking, the joint between two parts should provide rigidity to the assembly. Joints may be rigid and permanent; such as in a glued mortise and tenon joint between table legs and rails, or they may be rigid but non-permanent, as in instances where the piece must be periodically taken apart for storage. Knuckle and hinged joints provide for movement of one piece, such as the drop leaf of tables, or arms that swing out and support a leaf. There are joints to cover almost every conceivable situation, and many rely upon the addition of mechanical fasteners such as nails, wood screws or angle irons. Obviously, it's important to plan how the various parts of a table should best be put together. If you work from published plans, the joinery has been worked out for you...though it may not necessarily be the best joinery possible. As you gain in experience, you will begin to substitute joints that you feel are better, or more interesting than those found in the plan you are working from.

Today the beginning woodworker has at his or her disposal, a wide variety of fasteners, glues and tools with which to build. The simplest joint of all wood-working is the butt joint, and it relies upon these modern fasteners and glues. When one part is joined to another to form an ell or a tee, you have an example of a butt joint (Fig. 2) Most house framing is ac-



complished with butt joints, which of course rely on nails for strength. If little stress is to be put on a particular joint, and there is no concern over great shrinkage or expansion, the butt joint is adequate in even fine cabinet work in areas where it does not show end grain. (Fig. 3) Exposed end grain can be difficult to sand and stain.

Examples of butt joints can be seen throughout the pages of this issue, and generally speaking, it is used in non-stress situations, and where a rustic appearance is desired. Little skill is required to make a butt joint, but a few pointers will make things easier for the beginner. Try to join wide boards that have had equal seasoning. If a 10 inch wide air-dried board is butt joined to a 10 inch wide kiln-dried



board, the former will shrink considerably more than the latter (Fig. 4) Fasteners will work loose, and the whole assembly will be wobbly and unsightly.

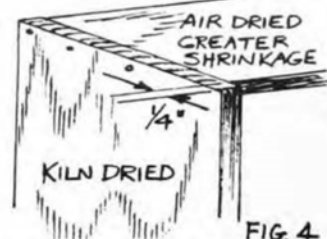
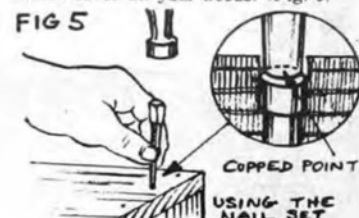


FIG 4

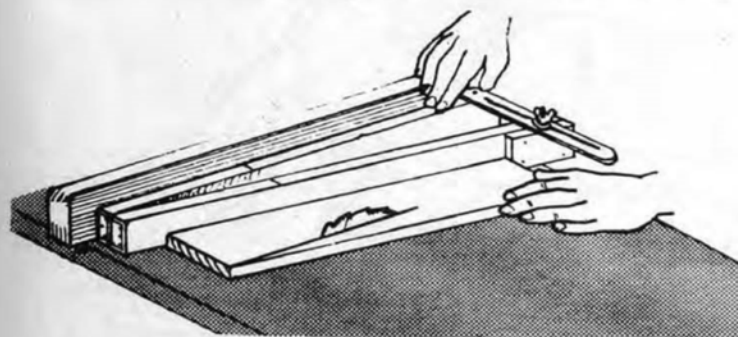
When it is necessary to nail a cupped board, place it with the bulge facing up. It is easier to flatten the bulge in the center when nailing than it is to get the ends down without splitting the wood. Splitting can be avoided by pre-drilling pilot holes, or with pine, by blunting the point of the nail by tapping it against a vise or other steel surface.

Small boards should be joined by partly driving nails into one board and then aligning it with the other board which is held in the vise. When edges are perfectly aligned, the nails can be driven home. Finishing nails are usually driven below the surface with a tool called a nail set. These come in various sizes, to match the head sizes of finishing nails, and 3 or 4 should cover all your needs. (Fig. 5)



Cont'd on page 16

Taper Cutting Jig

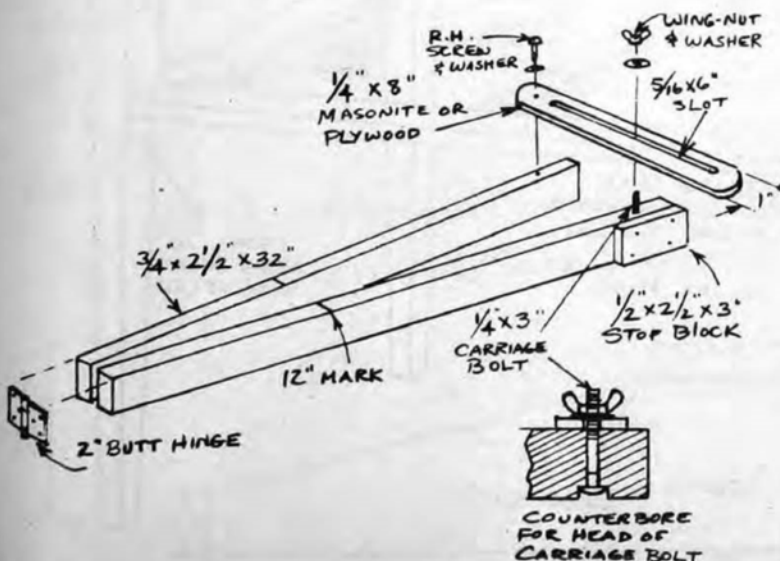


There's no problem in making rip cuts parallel to a fence when using a table or radial arm saw. However, making a tapered cut on one or both sides of a workpiece demands an auxiliary fence which is out of parallel with the blade. Tapered legs are common to many styles of furniture, and if you do much of this work, it's a big help to have some sort of jig which can be adjusted to cut a variety of tapers. Taper jigs can be purchased for ten dollars or more, but why buy one when you can make your own from scrap in less than an hour.

The overall length of the jig depends to some extent, on the front to back dimension of your table saw, but a length of 32 inches would be about maximum. As with most jigs, straight well seasoned stock should be used. Glue and nail a 1/2 inch thick stop block to one leg, and countersink the nails. The leg with the stop block is drilled and counterbored for a 1/4 inch carriage bolt as shown in the detail. The slotted masonite is cut from 1/4 inch tempered masonite and is fastened to the other leg with a round head screw and washer. The screw should be loose enough to allow the bracket to move slightly as the legs are pulled apart...otherwise a curved quadrant would be necessary.

Scribe a line across both legs exactly 12 inches from the hinge pin, and set the distance between the legs at this mark to establish the amount of taper per each 12 inches of the workpiece. After the jig is set, adjust rip fence to a distance that will accommodate jig and workpiece; then push jig and workpiece through as in a normal ripping cut.

When a taper is needed on opposite sides of the workpiece, make the first cut at the normal setting, and the second cut with the jig opened up to double the original setting. When tapering all four sides, use the first setting for cutting two adjacent sides, and the double setting for the remaining sides.



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Counting-house Desk



This desk is representative of the general type used in mercantile establishments of the early 19th century. There were many variations; some with an impressive array of pigeon-holes and drawers, and, of course, a matching high stool. Admittedly, the need for these desks went out with hand written ledgers and eye-shades, but they still have a lot of charm as decorative furniture with considerable storage space. If a mirror is fitted to the underside of the lid, the desk makes a most unusual vanity or dressing table.

Construction is relatively straightforward, and although the example shown was made of white pine, cherry or maple may be used for an equally handsome natural finish. The legs are cut from 2 inch square stock (actually 1 3/4") and they are tapered on all four sides, down to 1 inch square at the foot. The taper should begin about 7 inches from the top end, just below the drawer frames. A taper jig will be of help in roughing out the legs, though they should be finish planed after being cut with a table or radial arm saw.

Drawer frames, and upper rail are cut from 3/4 inch pine (actual). The front and rear drawer frames are secured to the legs with two 3/8" dowel pins. Side rails are glued and clamped between front and rear leg assemblies, and the center rail drawer support is doweled to front and rear frames. The top rail is glued in place flush with tops of the front legs. Be sure to set side drawer frames in 3/8 of an inch from outer surfaces of legs, to allow for addition of side panels which are inset 1/8 inch.

The side panels are added next, and are glued and nailed to lower side frames. Use finishing nails and set them below the surface. The counter may now be glued to width from two or three boards. The front to rear dimension of the counter top is exactly the same as the distance between

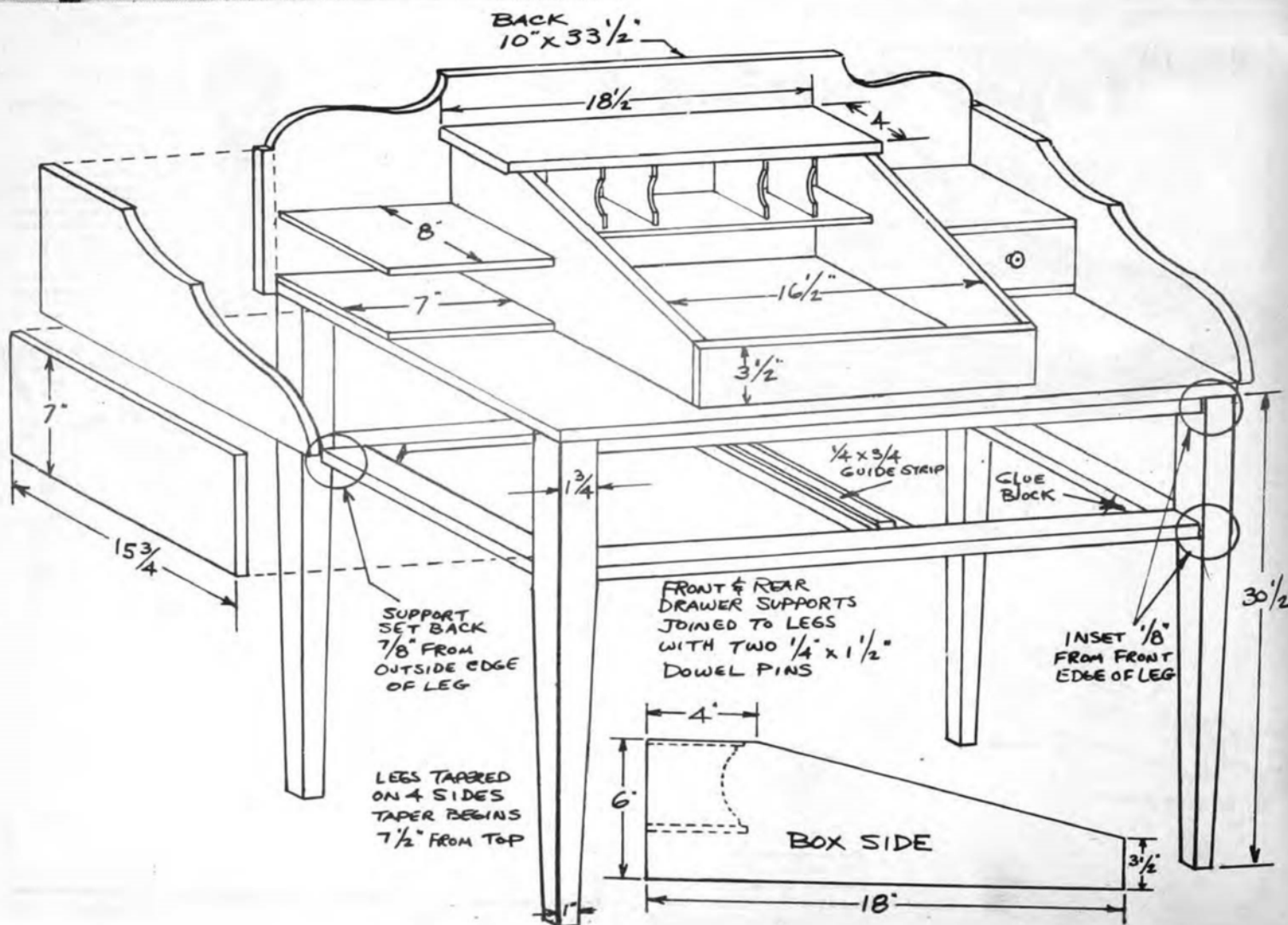
outer edges of front and rear legs. The counter is fastened in place overhanging the front legs by 3/4 of an inch. This leaves a 3/4 inch space at the rear for the back board.

Cut box sides and front as per the detail and join to counter with blind 3/8 inch dowel pins. The front of the slanted box can be joined to sides with two dowel pins at each corner as shown, but a dove-tailed box joint at this point will add considerable visual interest to the piece. A box lock and escutcheon should be added to the front of the box, and the mortising for this hardware can best be accomplished before the front is joined to the sides. The rear box top is glued and nailed to the sides.

Enlarge the pattern for the back board and transfer the shape to a 3/4" x 10" board. After shaping the backboard, fasten it to the rear counter edge, and box sides, with glue and finishing nails. The upper sides can now be shaped and fastened to counter edges and back board. The front edge of the counter should extend about 1/4" beyond the front ends of the upper sides.

Upper drawer supports are cut from 1/2" pine for a snug fit, and fitted in place with glue and nails. The pigeon-hole shelf is assembled separately, to fit snugly inside the box, and is fastened by glueing and clamping the plywood top to the underside of the box top. The 1/4" partitions are best cut by re-sawing from a thicker board. If plywood is used, the problem of hiding the plies can be solved by omitting the curved front edge, and glueing a thin strip of pine over the plywood edge. If you wish to take the time, the partitions are best fastened by cutting stopped dados in top and bottom shelf...otherwise join with glue and brads.

Cont'd on page 5



Counting-house Desk (cont'd)

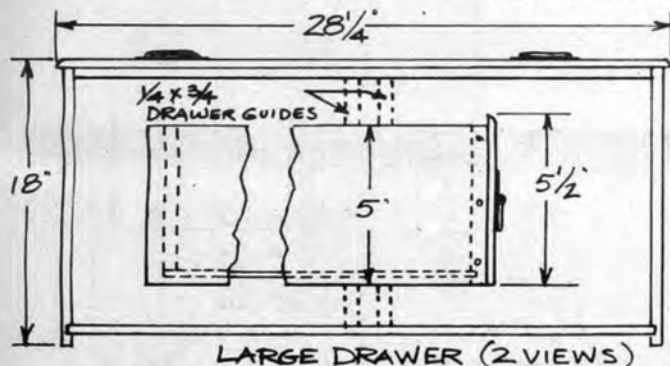
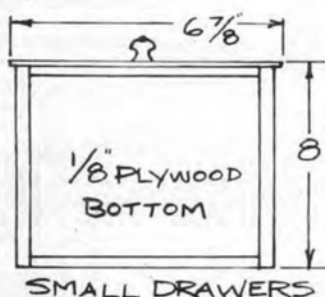
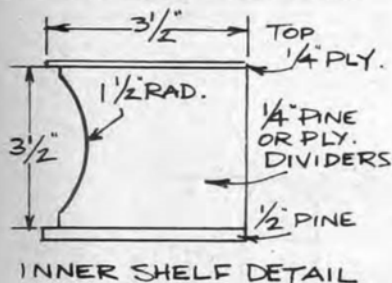
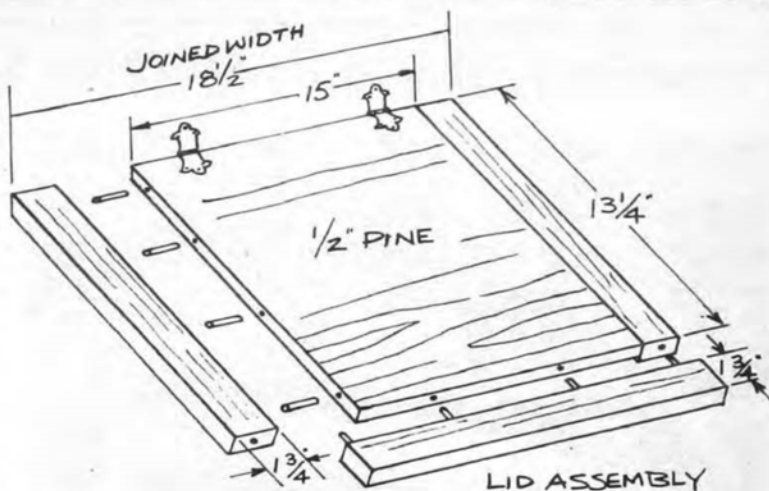
The lid consists of a glued up slab of 1/2 inch stock with the grain running as shown. Edge cleats are of 3/4 inch stock and are fastened with 1/4 inch blind dowel pins. The 1/4 inch recess thus formed on the underside of the lid can be used to hold a vanity mirror secured with small moldings bradded in place. The back edge of the lid should be planed to a bevel. Brass hinges of the type shown, are found at most hardware stores, and look very attractive against stained wood.

The large drawer and two smaller drawers are made up with 3/4 inch fronts, rabbetted and grooved to receive 1/2 inch pine sides and 1/4 inch bottoms. Glue sides to front, and when dry, drill through sides into front for three 1/4 inch dowel pins per side. This makes a sturdy joint without resorting to dove-tails.

Sand entire piece carefully, and round off all sharp edges. A little distressing with a tire chain and awl will add character to the piece if pine was used. Distressing should be done before the stain is applied. Brush or wipe on the stain of your choice

and keep an eye peeled for areas where glue smears prevent the stain from getting to the wood. Small glue-smear areas can be shaved off with chisel or gouge, down to bare wood for re-staining. Do this before the stain on adjoining surfaces dries, to facilitate blending of the patched area. Small gouged areas will blend in with the overall distressing.

After stain has dried, seal the entire piece with a thinned sealer such as shellac mixed 50-50 with alcohol. This is followed by a light sanding to cut raised grain "whiskers." Finish piece with satin varnish. At least two coats should be laid on, and after allowing plenty of time for drying, go over all visible surfaces with 4-0 steel wool to remove dust specks, and give the piece an even, soft sheen. Finally, add hardware of your choice. The Chippendale drawer pulls shown on the example are not really authentic for a 19th century piece, but they certainly look good with a dark stain. You may wish to consider Hepplewhite embossed oval pulls for the large drawer, and small, round brass knobs for the small drawers.



Workshop Income

Charles C. Burke

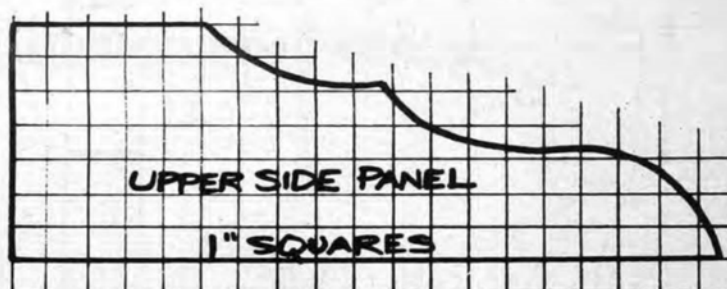
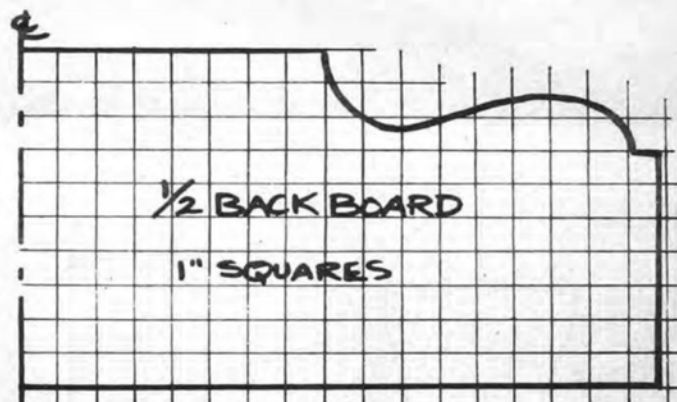
If you're serious about woodworking for profit, at some point you'll have to consider a name for your business. You can easily get one just by tacking a woodworky word or phrase onto your own name (Lance Schwartz, Woodworker; Muhammad Fetchit, Master Turner), but since in such cases your name—your last name, at least—is part of the name of your enterprise, your business doesn't have a completely "fictitious" name. Therefore in most places you won't have to register your business under a "fictitious name statement" or "business name certificate" before you open a separate checking account for your woodworking business. But if you want to use a business name completely different from your own, you're probably going to have to register that name before you can open a checking account with that name printed on the checks. And you should open a separate account if you're serious about making money from woodworking; having your business account jumbled up with your personal account is bad from every standpoint.

Getting your business name registered is no big deal, so don't get all sweaty about it. Check your phonebook and call your county clerk's office to see where you have to file, how much it will cost and how much other slop they'll put you through. (An

example of other slop: you might have to run an ad in a local newspaper informing readers of your intention of running a business under a made-up name.) The cost of filing shouldn't be very big, probably between \$10 and \$30, and even though the forms you have to fill out will be written in that simpaton jargon that passes as "legal" English, you shouldn't need a lawyer to help fill them out.

When you're choosing a name for your business you want one that lets potential customers know what you sell, so don't get too general or cute. A name like Quality Enterprises says nothing at all, and something like The Rapid Rabbit (with maybe a bunny as your logotype) will gain you nothing but old ladies and quiffs for customers. Also avoid names that depend entirely on your current woodworking passion, because your likes and dislikes can change; if you're working right now only on small stuff and therefore advertise under the name of Nik Nak Nook, you'll scare away customers for larger pieces when you have them available.

You might not need a business name at all and therefore might have no reason to register one, but if you have a good name and want to keep it for yourself, register it. You might not use it for a while, but no one can steal it from you while it's registered, and that's a big advantage. What's in a name? Profit, maybe, if you play it right.



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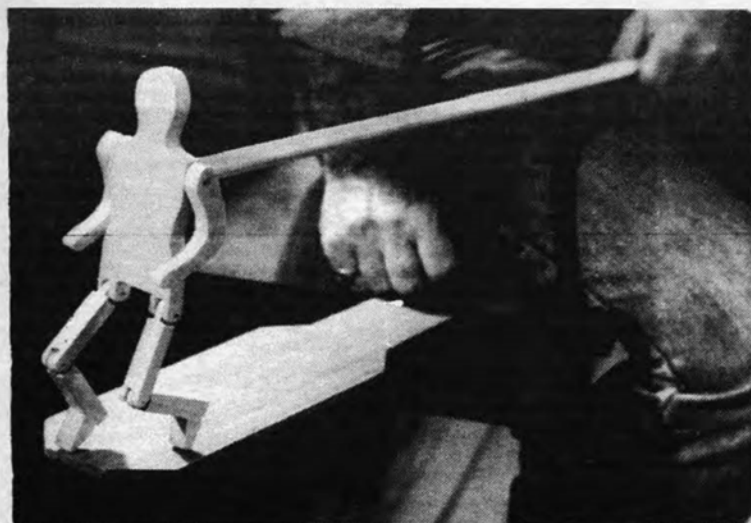
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Dancing Man Folk Toy

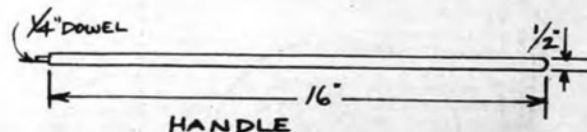
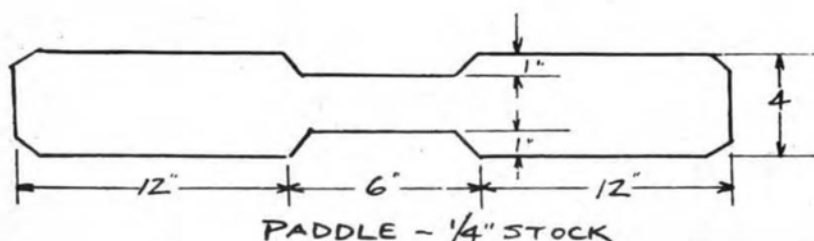
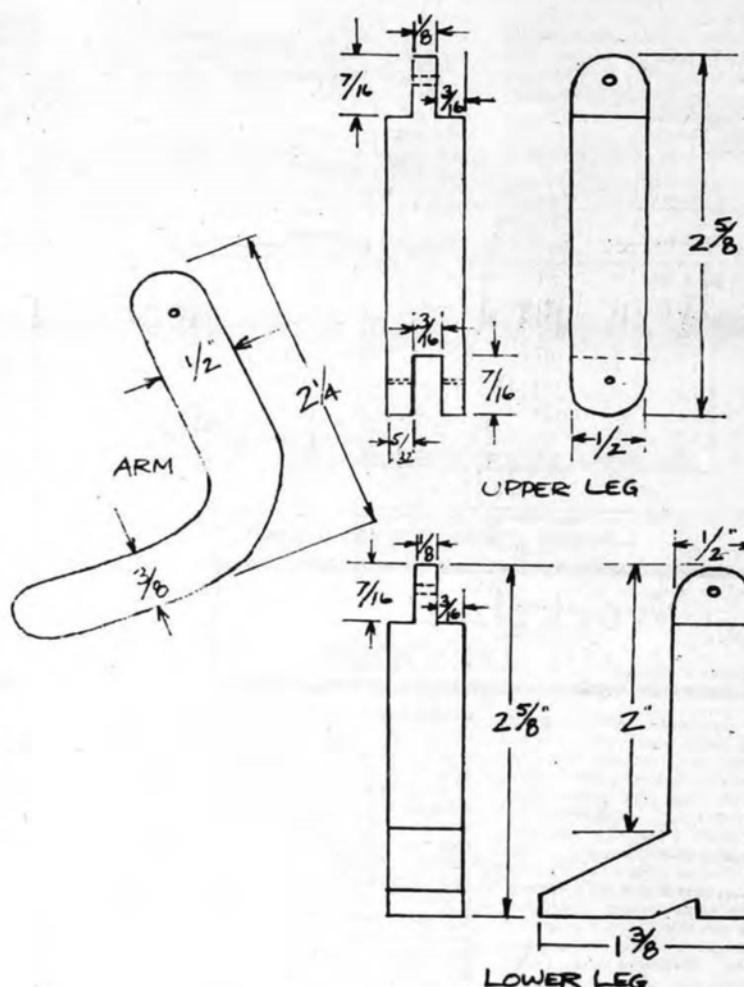
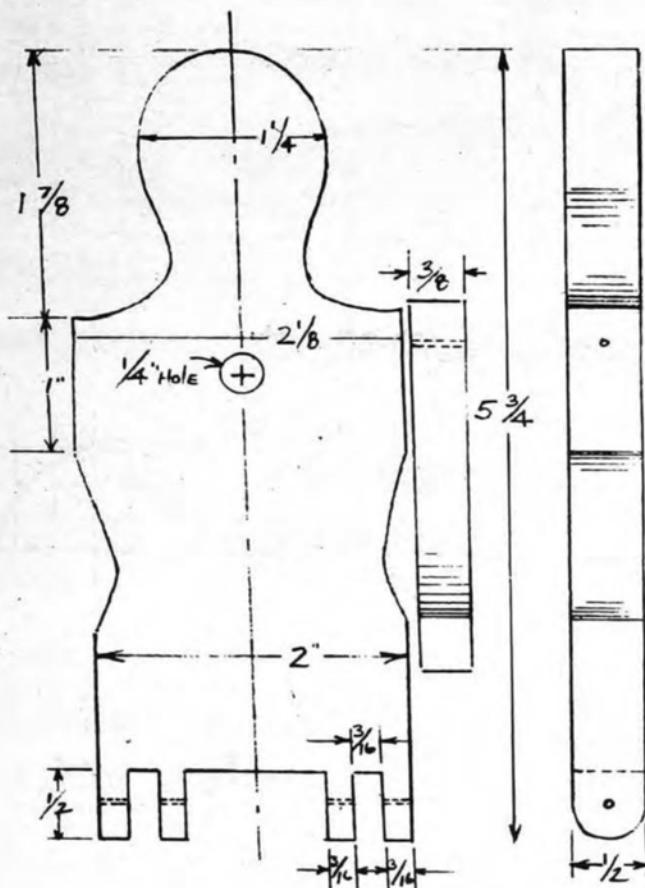


We don't know if this toy originated in early 19th century America, or if the idea was developed much earlier in Europe. It has been suggested that American minstrel dancers provided the inspiration for the toy, and that may well be true; but regardless of its origins, this is a delightful toy, and one that will provide many hours of amusement, for both children and adults. It's an interesting 2 or 3 hour project, and can be made entirely with hand tools.

Any type of wood can be used for the dancer, but hardwood can be worked more accurately. Use a coping or saber saw to shape the torso and arms. The slots can be accurately cut with a fine dovetail saw and small chisel. Don't worry if the various joints are a little on the sloppy side as all joints must be quite loose to achieve the proper tap-dancing effect. Joints are held together with 1 inch wire brads cut to length. Drill $5/64$ " holes in upper arm, upper thigh and upper leg; all other holes are drilled $1/16$ ". The brads are clipped to length so that the head is flush against the outside of joint, and the other end is clipped flush. If a small, sharp portion of the brad protrudes, it should be filed smooth. A drop of epoxy at each end of the pin will hold it in place.

Sand all parts of the dancer thoroughly before final assembly. No finish is necessary. The paddle is shaped from $1/4$ inch pine or other available stock. This can be re-sawn from a thicker piece with band saw or table saw, and then planed smooth. We used a length of beveled clapboard which was cut to width and planed to a uniform $1/4$ inch thickness. Avoid using a plywood paddle as it lacks the springiness of solid stock, and the more you can get the paddle to vibrate, the better the tap dancer performs. The dancer is held with a long thin handle which has a short stub of $1/4$ inch dowel at one end. This is inserted into the hole in the dancer's back.

To use the toy, sit on a flat wooden seat with about 8 inches of the paddle held under the thigh. The dancer is held out over the paddle so that his feet lightly touch the end. The narrow part of the paddle is then rapped rhythmically with the fist or finger tips to set the dancer in motion. With a bit of practice you will soon be able to coax quite a performance from the little fellow. Try using the toy in accompaniment to music; especially country or blue grass style. The results can be hilarious.



Shaker Step-Chest

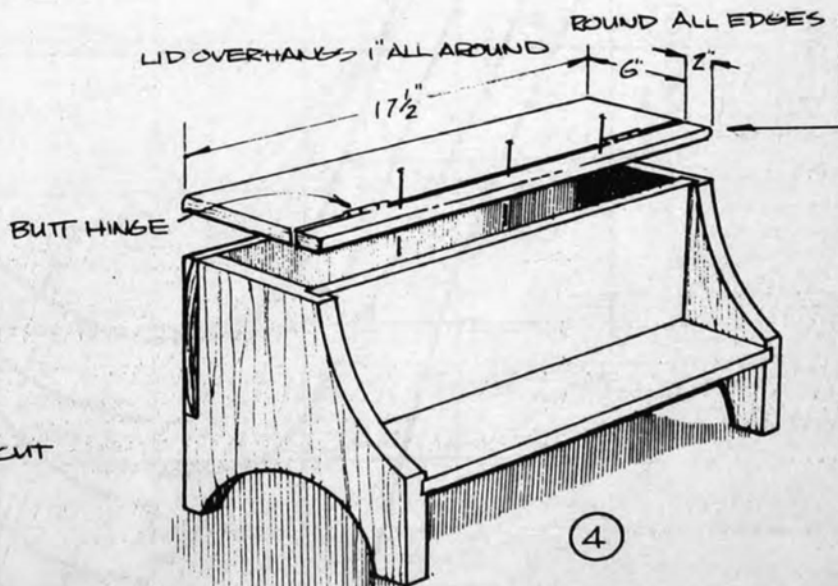
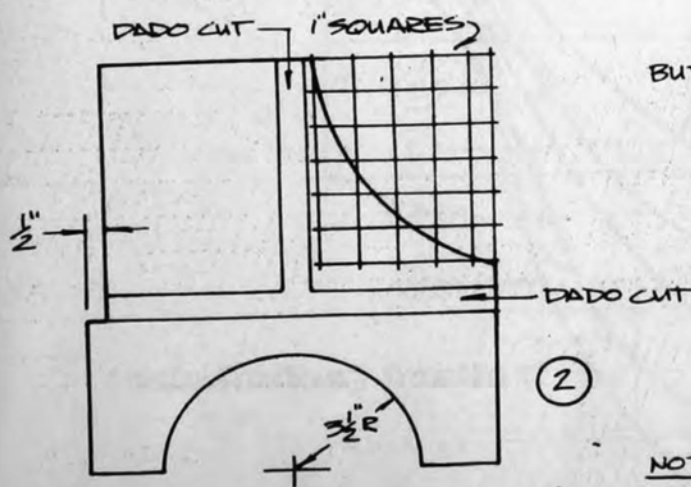
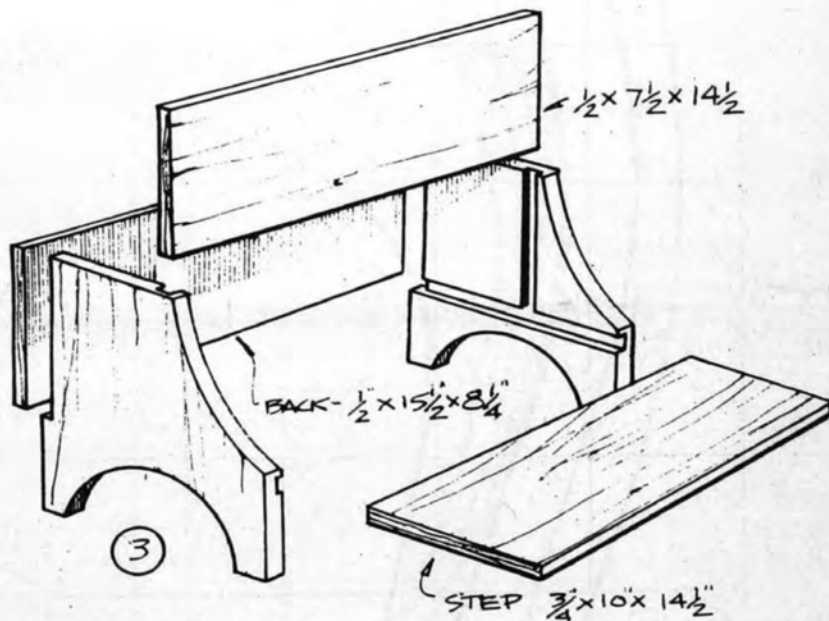
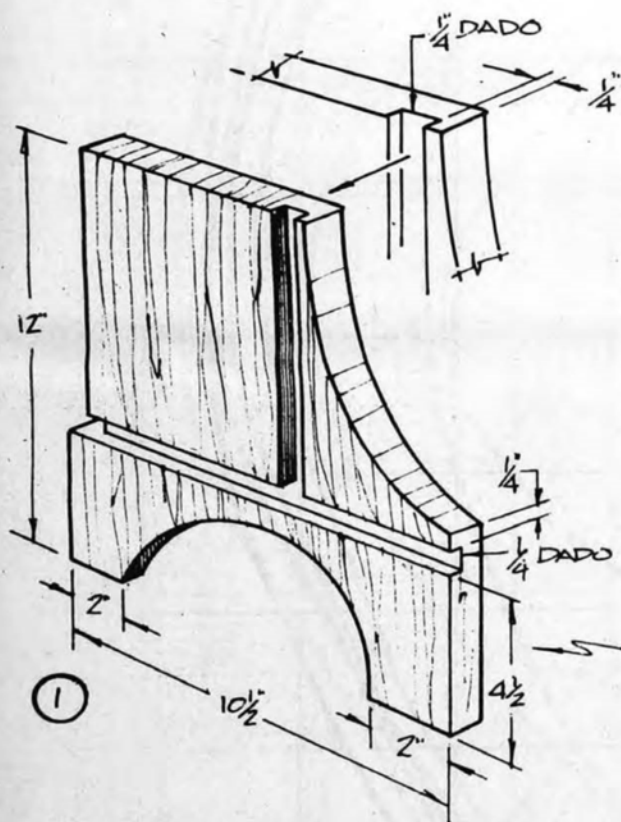
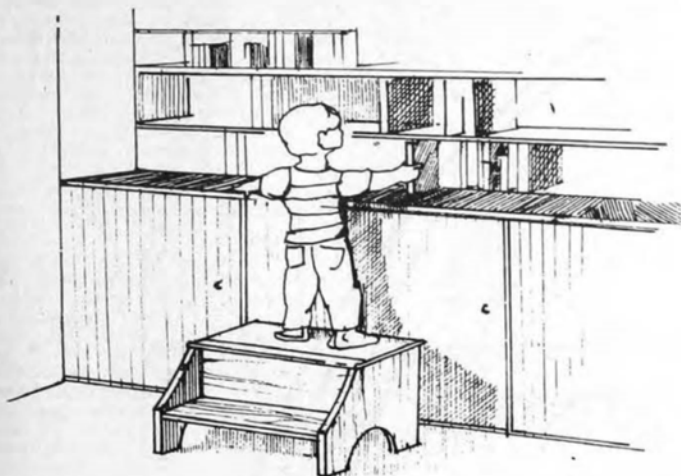
This small step-stool with a lidded storage compartment would be a handy addition to any household, whether traditional or contemporary. The piece is pure Shaker...combining sturdy construction with clean, functional design. Pine, oak or maple are all appropriate woods for building the step-chest. Just be sure to use well-seasoned, flat stock or you will have some problems cutting the dados.

Begin construction by cutting the sides of step-chest from $\frac{3}{4}$ inch stock. Lay out the dados on both pieces side by side so that the slots will coincide exactly. Note that the horizontal dado is $\frac{1}{4}$ " x $\frac{3}{4}$ ", while the vertical dado is $\frac{1}{4}$ " x $\frac{1}{2}$ ". Cut dados with saw and chisel or with power equipment. Next, lay out and cut notches for the $\frac{1}{2}$ " back panel, and then lay out and cut front and bottom curves.

The back and front panels are cut from $\frac{1}{2}$ " stock, while the lid and step are of $\frac{3}{4}$ " stock. Cut all parts squarely and sand carefully before joining with glue. Keep

the assembly clamped overnight if possible so that the glue has plenty of time to cure. Cut lid and cleat to size, and glue and nail cleat to top edge of front, using countersunk finishing nails.

Before adding hinges, go over the piece, breaking all sharp corners with sandpaper to give it a worn look; then apply the stain of your choice. At least three coats of a tough urethane satin finish will keep the step-chest looking good for years. Be sure to seal all surfaces including the storage compartment, and underside.



NOTE - ALL JOINTS GLUED EXCEPT LID CLEAT WHICH IS GLUED & NAILED

ck Decoys

6+7

8

9

10

1

2

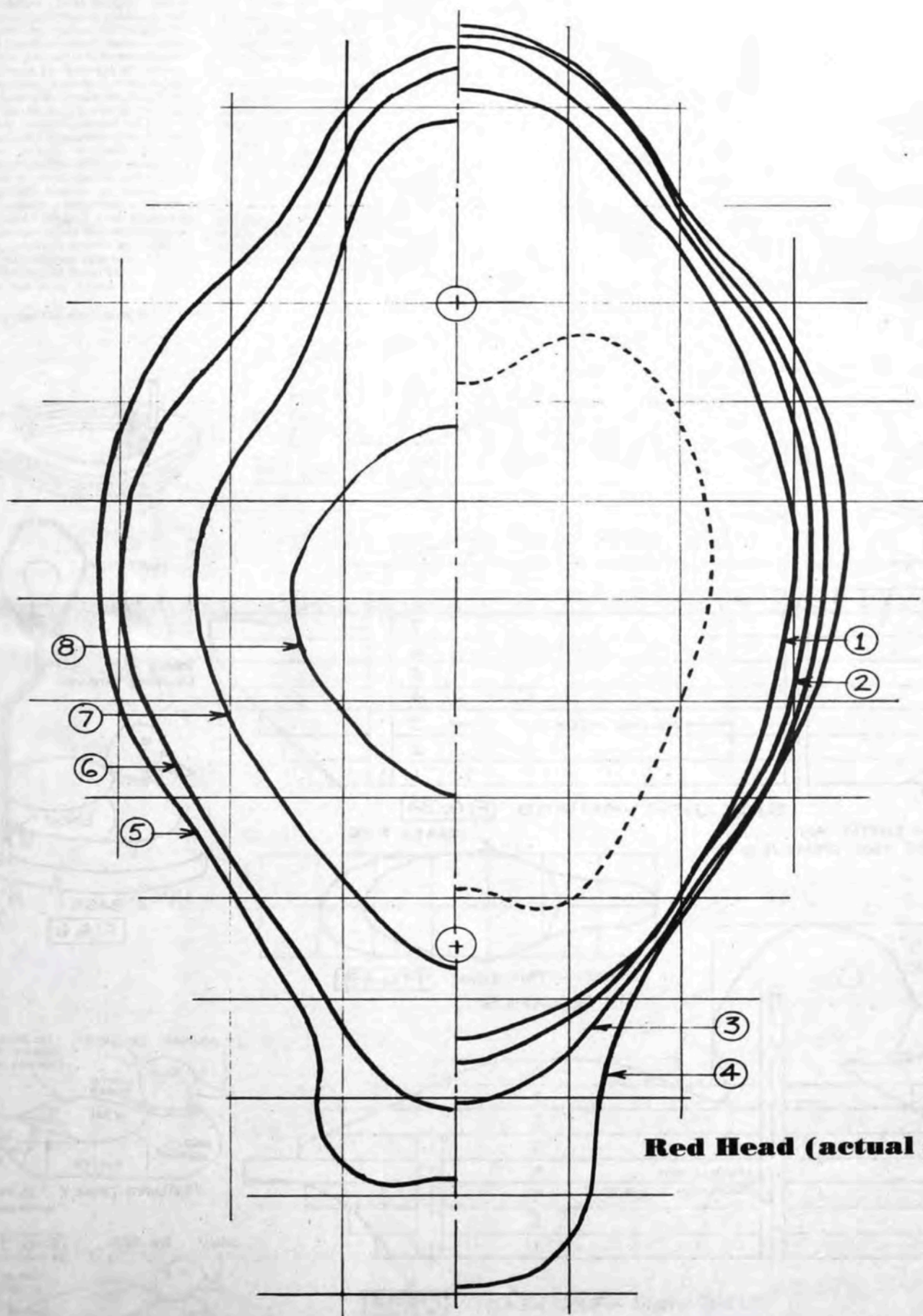
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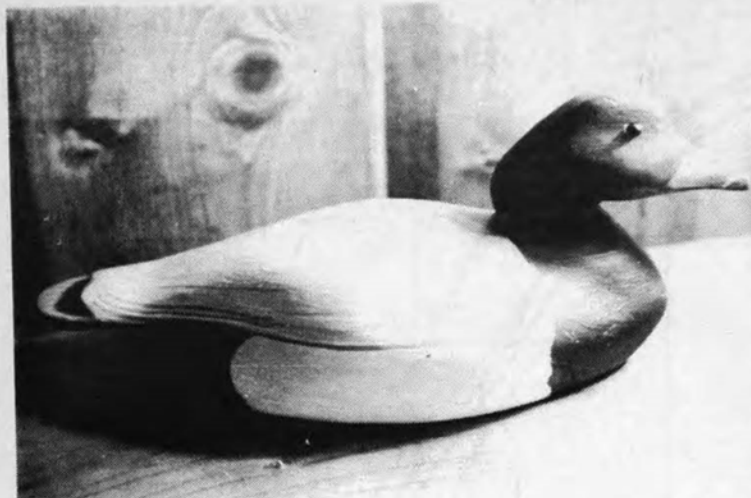
Mallard (actual size)

Mallard (actual size)



Red Head (actual size)

Duck Decoys (cont'd)



One thousand years ago, American Indians tied bundles of reeds and grasses together to form life-like duck decoys. The art of handcrafting wooden decoys flourished in the mid and late 19th century, when professional market hunters, armed with huge bore shotguns, inflicted a fearful toll on the wild duck population. Old decoys have since become prized collector items, and most now serve as decorative pieces.

The decoy designs offered here can be used either for hunting, or as decorator pieces. However you intend to use them, we're sure that you will find this a most enjoyable and surprisingly easy project as no great carving skill is required.

While many craftsmen prefer cedar for decoys, you'll find that white pine is entirely satisfactory, and much easier to work with as it does not splinter as easily as cedar. About 8 feet of $\frac{1}{2}$ " x 8" pine is needed for the body of the mallard, which is the biggest of the two designs. The head is carved from a separate block which can be solid or glued up stock.

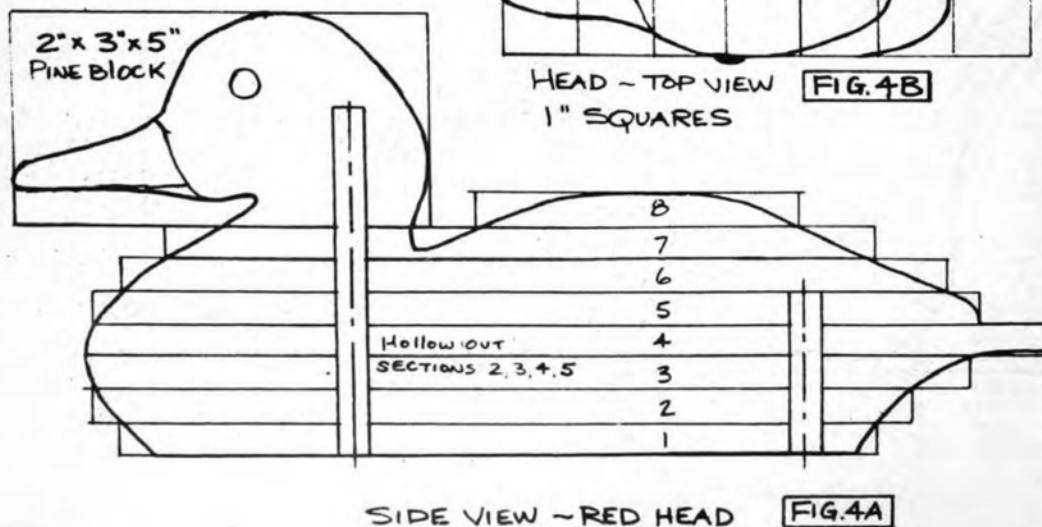
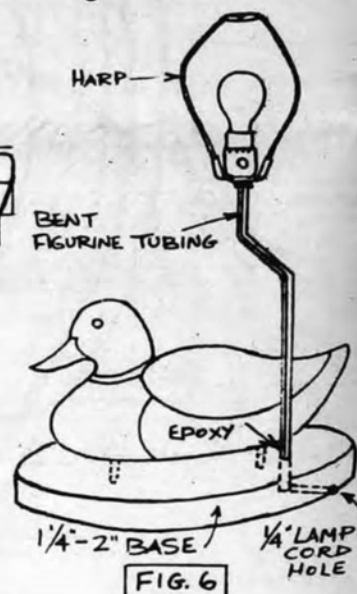
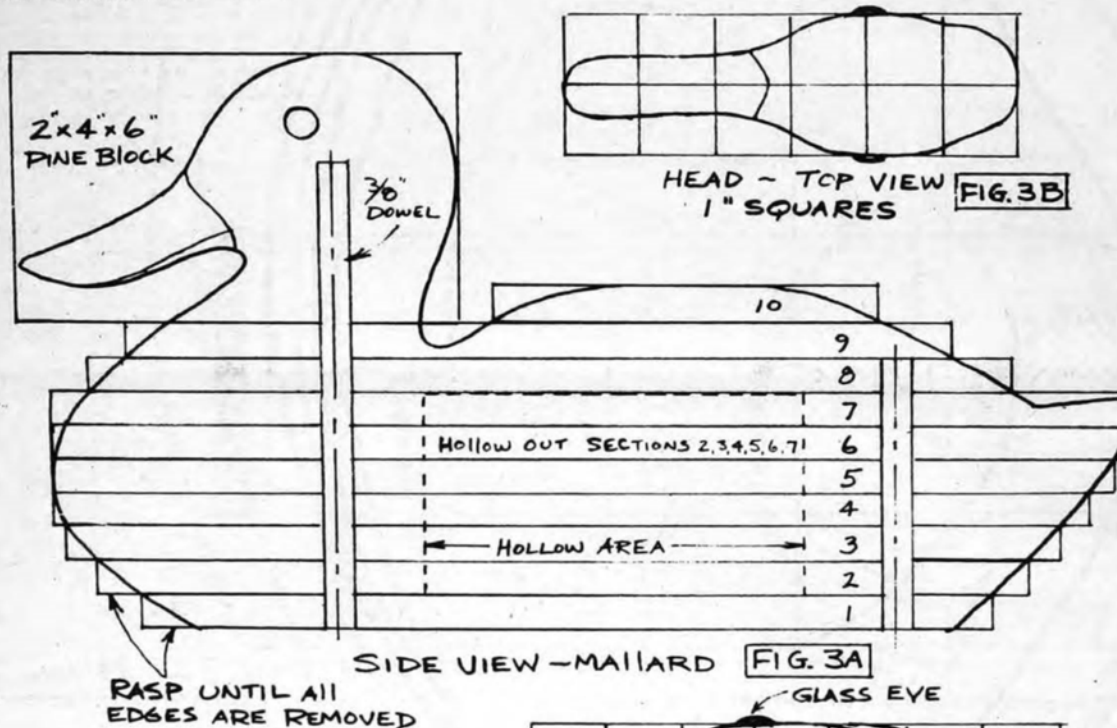
Transfer the shape of each layer to cardboard, or plywood patterns if you wish

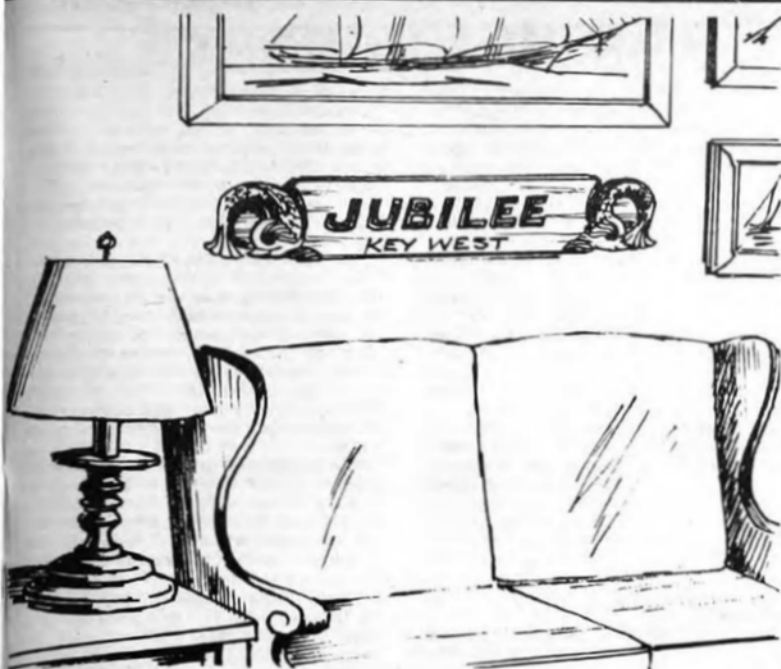
to make a number of the decoys. If you have one, a band saw is ideal for sawing several identical pieces at once; otherwise use a coping or saber saw. Note that certain layers have a central cut-out which forms a hollow cavity within the decoy. This provides added buoyancy, and helps to reduce the weight of the decoy...no small matter when a dozen have to be transported to the hunting site.

After the layers have been cut out and drilled for $\frac{3}{16}$ " dowels, assemble them as per Fig. 5. Be sure to use waterproof glue between layers if you intend to use the decoys for hunting. Clamp the stack and allow to dry overnight. The dowels should be cut about 2 inches longer than necessary, and the excess length extended beyond the bottom layer. A length of 2"x 4", drilled to receive the dowels, will provide a convenient means of securing the decoy in a vise, or clamping it to a work-surface for easier shaping.

Pencil the outline of the head of the head on a block of pine and drill the $\frac{3}{16}$ " hole for mounting the head. Rough cut the head to shape and mount it on the front dowel.

(Please turn to Page 15)





3 Wall Decorations

Any one of these three designs will make a striking wall decoration. The whale and stallion are both old American weather-vane designs, and are basically simple jig-saw projects. The whale, in particular, would be an excellent project for a young woodworker. Cutting and smoothing the stallion will require care for the legs and tail may easily split off if pine is used. Both pieces should have their edges well-rounded, and sanding should be especially thorough. Keep at it until the grain can be clearly seen around the edges. The whale will look well when distressed and given a dark walnut stain with a rubbed varnish finish. The stallion can be stained or painted.

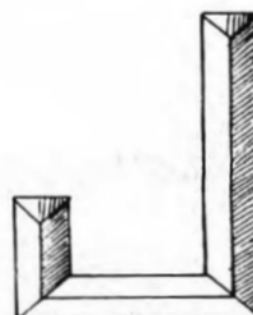
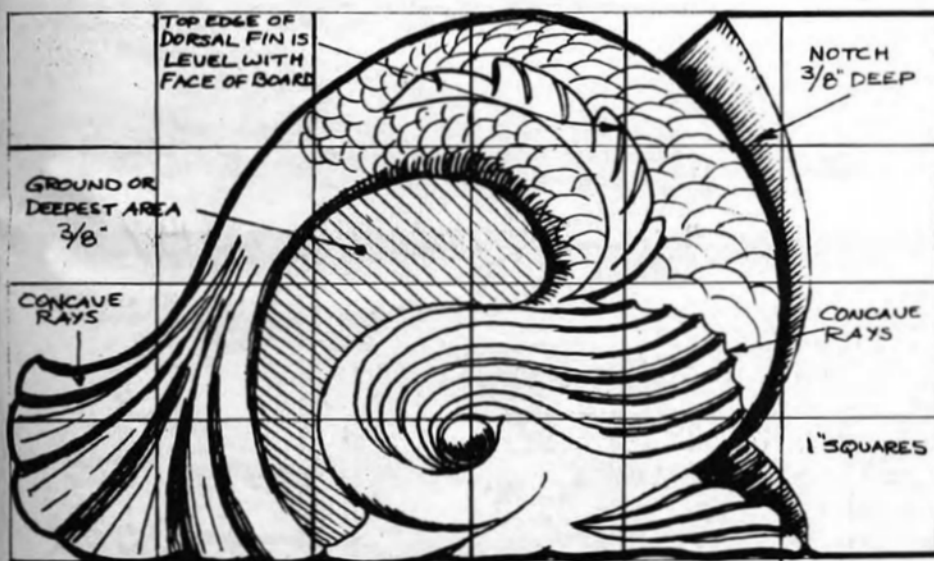
The stylized dolphin goes back to the ancient Greeks. It is shown here as a traditional marine carving on the stern board of a sailing vessel. Some marvelous examples of the ship-carvers art can be found on older sailing ships, and it's rather a shame that this type of work has all but vanished.

The stern board is a very interesting carving job, without being overwhelming for the inexperienced carver. Use clear white pine of at least 1 inch thickness or, if you have some skill and confidence use Honduras mahogany or teak. The overall size is up to you. The illustration shows 1 inch squares but you can double the size if

you wish.

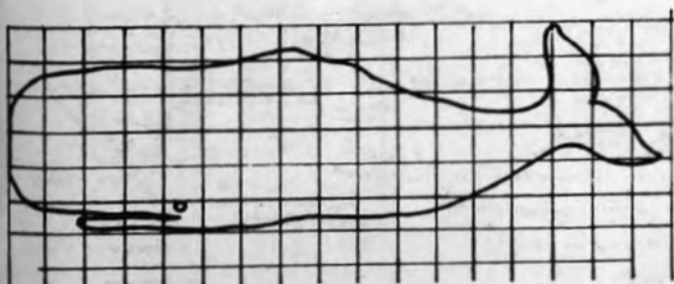
Transfer the shapes to each end of your stock, and jig-saw the outside edges. Then cut down to the center ground, using chisels and gouge. The bottom of the ground should be pared rather smooth. Next, begin to block out the design, working down to the various levels. The cover illustration of this issue will give a better idea of the modeling. The dorsal fin should be carefully shaped to stand out from the back. Details such as the swirls on the head and the scales can be worked with a small veiner, while a 1/4 inch gouge is used for the concave rays of the tail and head. Try to cut scales, and other details deep enough to produce shadow lines. Clean cuts will require no sanding, but if necessary, don't be afraid to clean up rough areas with small files and sandpaper. The lettering can, of course, be anything you wish, and may either be painted on or incised with a sharp knife or chisel as indicated.

Finishing can be handled in several ways. The entire piece can be stained and varnished, or it can be painted with perhaps an antique glaze rubbed into the carving and lettering. If you'd like to go all the way, gild the dolphins and lettering with gold size and patent gold leaf, and stain or paint the rest of the board. Drill two angled holes in back for hanging.



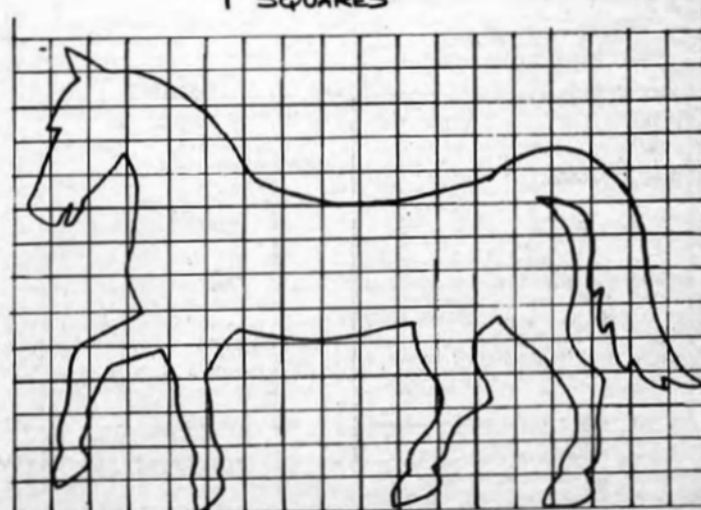
LETTERS ARE INCISED WITH "V" CUTS 1/4" - 3/8" DEEP

WHALE.
2" SQUARES



5/4" x 1 1/2" x 34" PINE

STALLION
1" SQUARES



3/4 x 14 x 18 PINE

Hutch-Cupboard

If kitchen floor space permits, this country styled cupboard will provide considerable storage space while adding a good deal more charm than additional wall cabinets. It's also a fine dining room piece, for storing that set of fancy dishes that are only used occasionally. This is a project that will take quite a few hours to complete, but the joinery is uncomplicated; all phases of construction can be handled by a woodworker with modest skill and equipment. It's a very rewarding piece to build.

White pine was used for the entire project, with the exception of drawer bottoms and upper and lower back panels; all of which are of $\frac{1}{4}$ " plywood. Start construction by glueing up $\frac{3}{4}$ " inch boards to form the sides of the cupboard. Use $\frac{3}{8}$ " dowel pins to re-inforce the joints. After the sides have been glued together, $\frac{3}{4}$ " dadoes are cut for the bottoms of upper and lower cabinets. A $\frac{1}{2}$ " dado is also cut to receive the upper drawer support, and the top edges of both sides are rabbeted $\frac{3}{8}$ " x $\frac{3}{4}$ " to receive $\frac{1}{4}$ " plywood back panels. Allow $\frac{3}{4}$ " for the counter top and shape curves starting them $\frac{1}{2}$ " inch above the counter top.

Next, the upper and lower front frames are constructed of $\frac{3}{4}$ " inch pine as per Fig. 3. All joints are secured with $\frac{1}{4}$ " x $1\frac{1}{2}$ " dowel pins, with the exception of the lower door divider and the horizontal drawer rail which are half-lapped together. Great care must be used in constructing both frames, to make them perfectly square with good, tight joints. A doweling jig is a must for this phase of the work.

The lower cabinet bottom is glued up

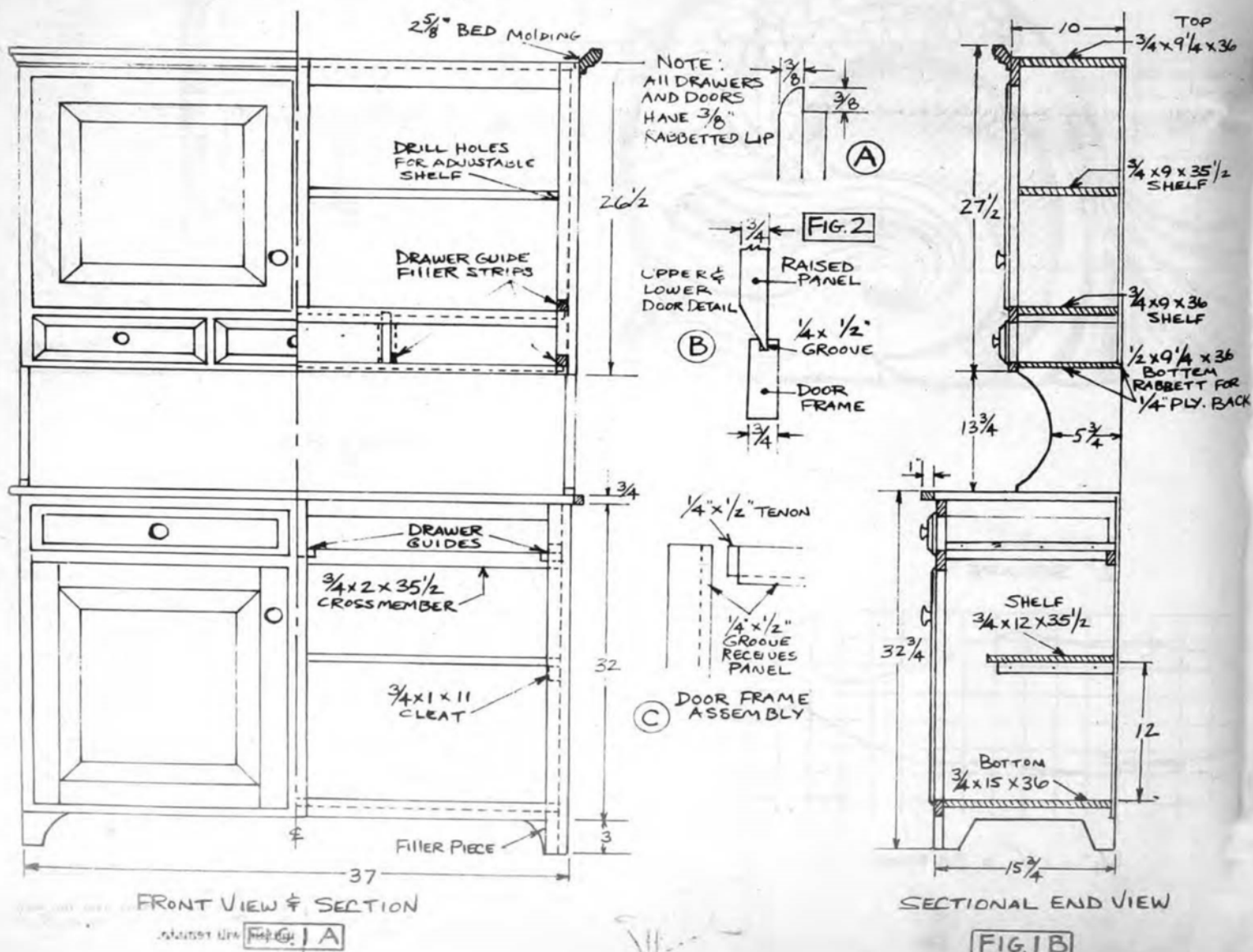
from two boards and trimmed to width, to fit in its dadoes; flush with front edges of sides, and back of rear rabbet. Cut the upper drawer support shelf from $\frac{1}{2}$ " pine with a rabbet to receive back panel, and the upper cabinet bottom from $\frac{3}{4}$ " pine. These pieces are dadoed to receive the two drawer dividers which are cut from $\frac{3}{4}$ " stock.

Slip the shelves into their respective dadoes, and join lower frame to sides with glue and finishing nails. Screws are better but must be counter-bored for $\frac{3}{8}$ " plugs. Add plywood back panels and top to help square up the assembly before clamping. Double check for squareness before applying pipe clamps and letting the glue dry. If you have enough pipe clamps, add the upper frame also; otherwise, do one at a time.

Next, begin work on the upper and lower doors. Fig. 2, details A, B, and C show details for construction of the raised panel doors. Cut all door frames, allowing for the $\frac{3}{8}$ " lip, and groove them to receive frame tenons and panels. Cut tenons on each end of horizontal frames, to match the grooves. Panels are glued up to width and run through table saw with the blade inclined at 18 degrees. When glueing up doors, apply glue to tenoned corner joints, but do not glue panels; they should be free to contract and expand in their grooves. After glue has dried, run a $\frac{3}{8}$ " rabbet around all edges of doors, then round off outer edges.

Glue $\frac{3}{4}$ " inch stock together to form counter top. Carefully cut notches in each

Cont'd on next page



Hutch-Cupboard (cont'd)

end to fit around cupboard sides and cut rabbet in back edge for back panel. Before adding counter top, and its trim, the lower drawer guides and shelf cleats should be installed. The back supporting crossmember is fastened level across the plywood back, with screws driven through the plywood. The three drawer supports are then cut, glued and nailed together so that the top piece, which is $\frac{3}{4}$ " longer, can be screwed to the rear cross-member. This is shown in the exploded view and Fig. 1B. The center support must be wide enough to support both drawers. Cut it to fit snugly between crossmember and front frame, and drill two $\frac{1}{4}$ " holes through frame and into support. Drive two dowel pins in to firmly attach this member. Side supports are screwed to cupboard sides, as are lower shelf cleats. The counter top can now be installed, glueing and nailing it to sides and front frame. Cut 1 inch trim and fasten to counter and sides with glue and finishing nails. The front corners of the trim should be mitered.

Drawers are all lipped, with beveled fronts, and Fig. 4 gives construction details. Drawer fronts are made up of two pieces of $\frac{1}{2}$ " pine, glued together to allow

a $\frac{3}{8}$ " lip at top and bottom, and a $\frac{7}{8}$ " lip at both ends. Drawer bottoms can be either $\frac{1}{4}$ " plywood or masonite. Finally, a length of 2 $\frac{3}{4}$ " bed molding is mitered and nailed to the top of the cupboard to provide a handsome trim. Crown molding, which is shown in the exploded view can also be used. The photo shows the cupboard with a bed molding which is a bit more difficult to miter.

Obviously, there's a lot of sanding work involved in finishing the piece, but some planing and distress marks will add character; so don't overwork yourself trying to remove every little defect. The example shown was sanded with medium grit paper before assembly, and after assembly a fine grit paper was used, but various dents and gouges which accumulated in the construction process were left. All edges were rounded a bit, and one coat of Minwax Early American stain was applied. This was followed by a coat of full strength urethane varnish. The entire piece was then given a light sanding followed by dusting with a tack cloth. A final coat of satin urethane varnish was applied. All nail holes were filled with color-matched wax and wooden knobs and black "H" hinges were installed.

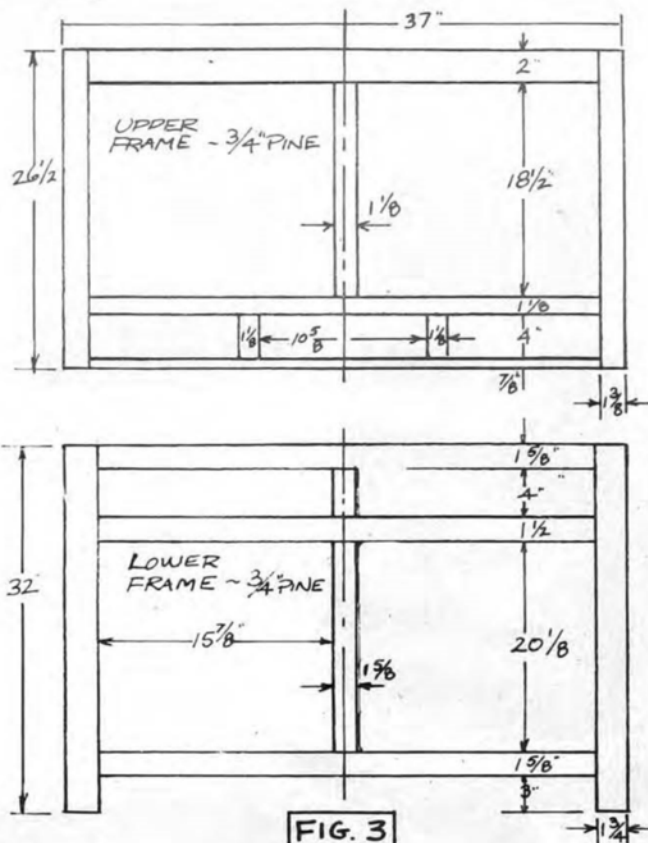


FIG. 3

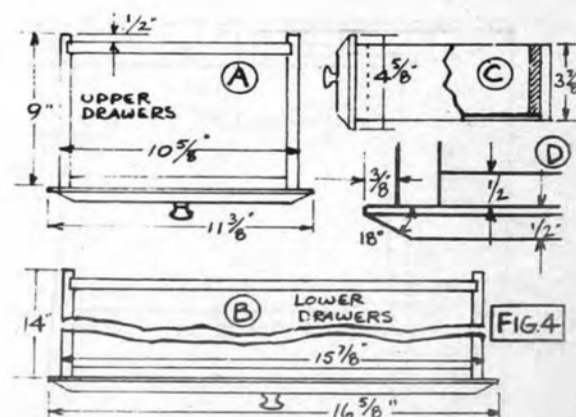
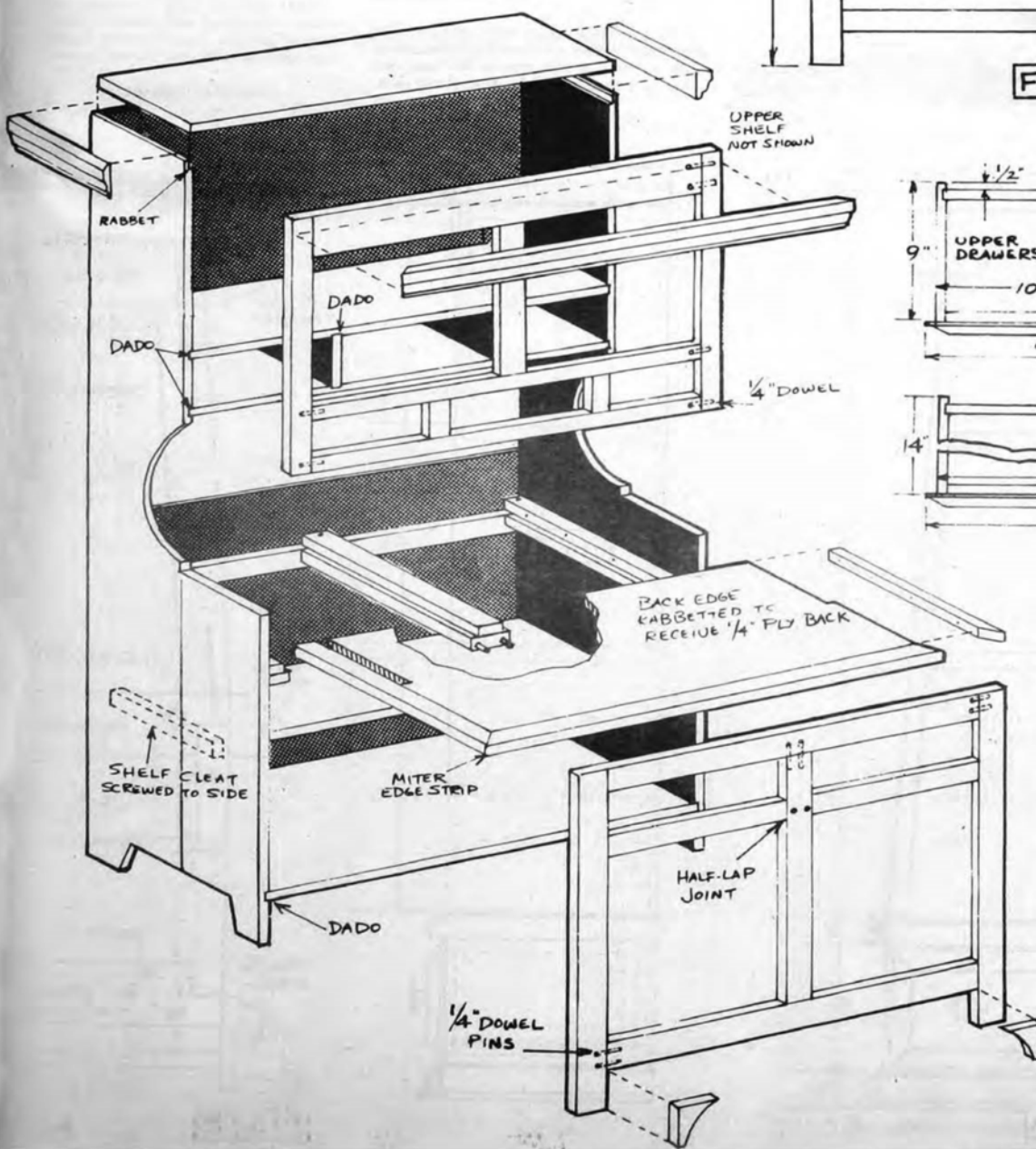


FIG. 4

Shop-Tips

A blackboard eraser makes an excellent low cost sanding block, and can be purchased at the toy department of most variety stores. It's already padded, and just about the right size.

You may take pride in forming tight mortise and tenon joints, but if they're too snug, the glue will be squeezed out as the joint is forced together. It's better to strive for an easy slip fit of such joints so that the glue is wiped in a thin film over mating surfaces. Ease tight tenons with a few strokes of a bastard file.

Loaned tools, like loaned money, can often lead to hard feelings. If you do lend tools, it's a big help to have your initials on them as a reminder that the borrower can easily see. Metal tools can be etched quite easily by coating a small area with melted wax. Scratch your initials into the wax and then dab ordinary iodine over the scratches. When the wax is scraped off, the initials will remain.

Collector's Pier Cabinet

This little cabinet, or etagere, will provide an elegant setting for small collectibles. Used separately, or in pairs on a wall or sideboard, they are a decorative accent, and display keepsakes to best advantage. A fine cabinet wood, such as cherry, is recommended for outside surfaces. Black walnut, though expensive, will put the piece in an heirloom category. Since the cabinet is relatively small, you may want to consider a fancy veneer treatment of flat surfaces with hardwood moldings stained to match.

The joinery is fussy enough to provide an interesting challenge for the experienced woodworker, but the project is by no means beyond the ability of a careful novice. Most of the case is constructed of $\frac{1}{2}$ inch stock, while the drawer front and top and bottom panels are of $\frac{3}{4}$ inch stock. Pine may be used wherever it will not be seen, including the drawer sides and back.

The best approach is to cut the sides to length first. If a power saw is used, set the blade to 4 degrees for cutting the bevel on the bottom and top edges of each side. The two upper shelves should be joined to the sides with $\frac{1}{4}$ inch tenons resting in stopped dadoes. Note that the shelves are set back $\frac{1}{4}$ inch from the front edges of sides. Lay out the sides together and mark $\frac{1}{4}$ " x $\frac{1}{8}$ " dadoes five inches in length from the back edge. Cut the dadoes with the blade set 4 degrees from vertical. Next, re-set the blade to zero and cut a $\frac{1}{4}$ inch rabbet along the back edge of each side to provide for a recessed back panel.

Cut and shape upper trim piece as per Fig. 1 and rabbet each end to fit over the $\frac{1}{2}$ inch sides. Cut this trim a bit long and after joining to sides with glue, it can later

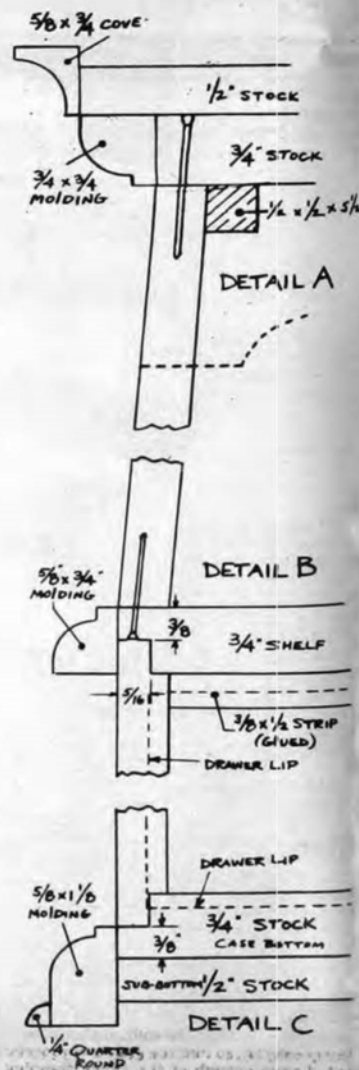
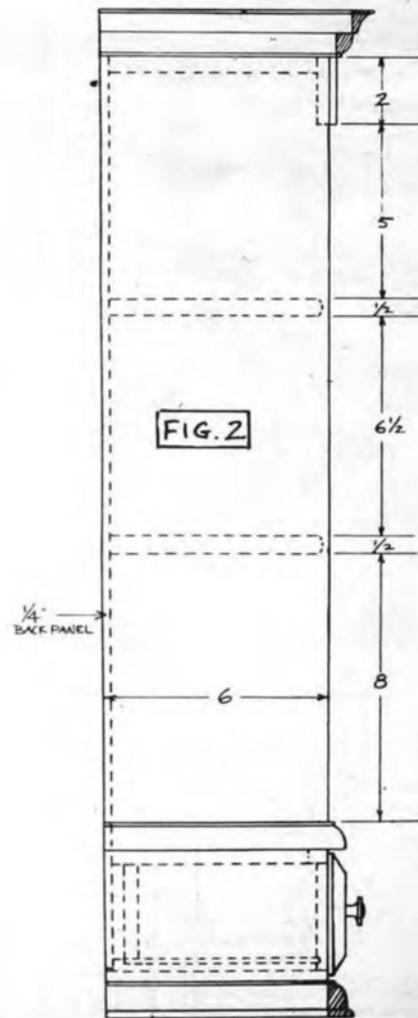
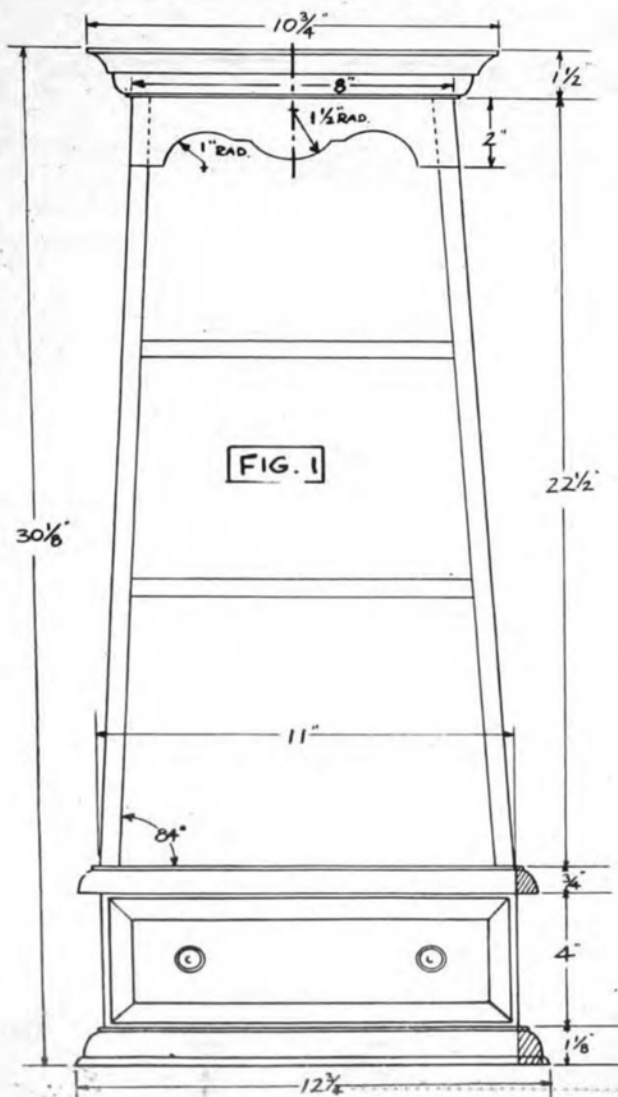
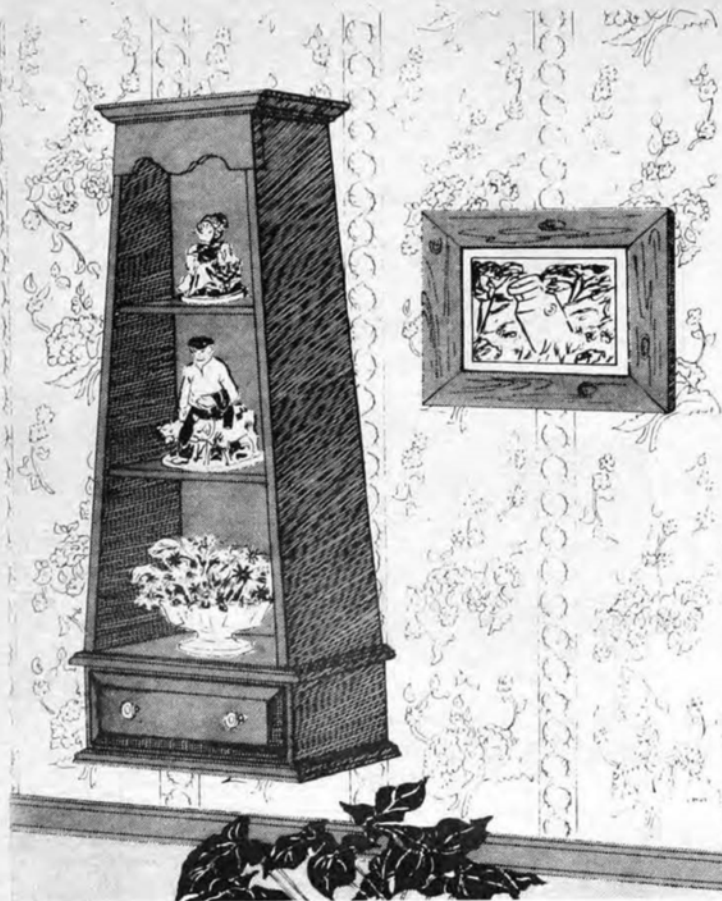
be trimmed exactly flush with the sloping sides. With the upper trim piece in place, you will have established the width of the cabinet top. Next, prepare the lower shelf from $\frac{3}{4}$ inch stock; cut 6 inches wide by 11 inches long. Take care to insure that all cuts are perfectly square to avoid later problems in fitting the moldings. Rabbet both edges of the shelf, as per Detail B, and join shelf to sides with glue and countersunk 3p finishing nails. Undersized pilot holes should first be drilled in hardwood.

After sides are joined to the bottom shelf, the two upper shelves can be cut for an exact fit. Cut the shelves $\frac{1}{4}$ inch longer than the measurement between sides to allow for a $\frac{1}{4}$ " x $\frac{1}{8}$ " lip on the top edge to match the 5 inch dadoes previously cut in the sides. All cuts should be made with the saw blade inclined to match the 4 degree slope of the sides. The shelves are $5\frac{1}{2}$ inches deep and butt against the back panel. Carefully round off the front edges before gluing in place.

Continue construction by glueing rabbetted drawer case sides to the lower shelf as shown in Detail B. Glue a $\frac{3}{8}$ " x $\frac{1}{2}$ " spacer strip to the bottom of shelf, between the sides. The drawer front will stop against this strip. The case bottom is cut from $\frac{3}{4}$ inch stock, rabbetted and joined to the sides as per Detail C. Pine can be used for this piece, as well as the sub-bottom, as these pieces will be covered by molding. Glue and nail sub-bottom in place, making all edges exactly flush with the bottom.

Shape $5/8$ " x $11/8$ " molding with a router, or by hand, and carefully miter and glue it and the quarter-round molding to the base assembly as shown in Detail C.

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Pier Cabinet Continued

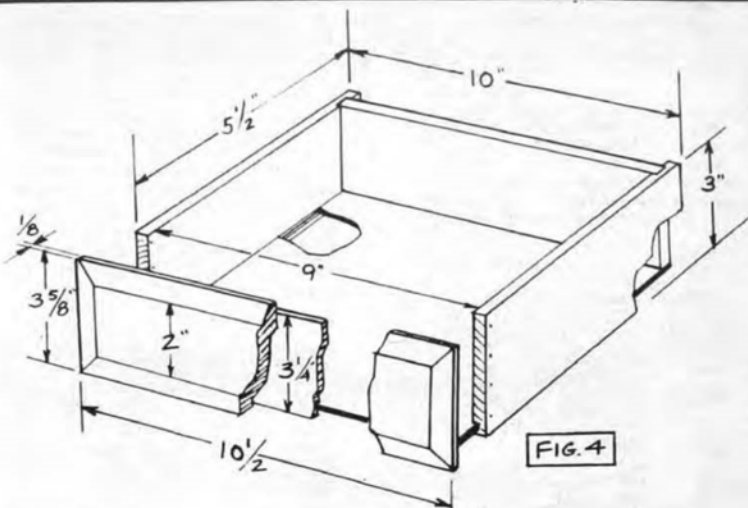
Assemble top by gluing two $\frac{1}{2}$ " x $\frac{1}{2}$ " x $\frac{1}{2}$ " pine strips to the underside of a $\frac{3}{4}$ " x $\frac{1}{2}$ " x $\frac{1}{2}$ " piece of pine. The strips are set in $\frac{1}{2}$ " inch from each side as shown in Detail A, and must be beveled to fit against the sides of the cabinet. The top assembly is then glued in place and finishing nails driven down through the top into the cabinet sides. Now add the $\frac{3}{4}$ " x $\frac{1}{2}$ " molding, gluing it to the top with mitered corners. Cut a piece of $\frac{1}{2}$ " inch pine to fit flush with the outer edges of the molding. This is glued in place as a base to provide support for the upper cove molding.

A back panel can now be cut to shape and glued and bradded into its recess. Use stained $\frac{1}{2}$ " inch plywood, or you can paint the back panel. Black, dark green, or Chinese red are excellent colors when used with stained cherry. Consider also the possibility of covering the back panel with a fancy wallpaper or veneer.

The drawer front is shaped from $\frac{3}{4}$ " inch white while sides and back are of $\frac{1}{2}$ " inch pine. After beveling the drawer front for a raised panel effect, cut an $\frac{11}{16}$ " wide x

$\frac{1}{4}$ " deep rabbet along both edges, and a $\frac{3}{16}$ " wide x $\frac{1}{4}$ " deep rabbet along top and bottom edges. Groove the back to take a $\frac{1}{4}$ " inch plywood bottom, and use this groove to locate matching grooves in drawer sides. After grooving and cutting dados, join the sides to front with glue and finishing nails. The bottom can then be slipped into its groove and nailed to the underside of the drawer back.

Sand all surfaces of the cabinet thoroughly, working down to a very fine grit. If cherry was used, it will take a stain very evenly because of the density of the wood. The particular shade is up to you, but a darker stain will give the cabinet an Old World look and accent the items on display. Follow stain with a sealer coat of shellac mixed 50-50 with alcohol. Sand lightly after sealer dries, and apply two or three coats of a satin finish varnish; the final coat being rubbed down with 400 steel wool. Walnut looks best with a penetrating oil finish applied according to the manufacturer's directions. Finally drill holes and add two $\frac{3}{4}$ " inch brass knobs.



Duck Decoys

(Continued from Page 10)

Carving the body to shape consists of merely removing stock until all the edges disappear. A Stanley Sureform does an excellent job of quickly removing excess wood. Follow up with a bastard file which will give the slightly rough effect needed for a natural appearance. Fair the neck into the body with small circular and half-round files, and carve the head to shape with a sharp knife and files. The head should be somewhat narrow on top, flaring out to the cheeks. Authentic glass eyes look the best, and can be purchased from a local sporting goods dealer or from taxidermy supply houses. Check the classified section of the hunting and fishing magazines for these suppliers. You can also drill holes for black beads or small glass marbles which are epoxied in place.

After the decoy has been shaped, apply a couple of coats of sealer, and paint the plumage with flat outdoor enamel or oil paint. Fig. 7 provides a general guide for

the final painting, but your best bet is to examine other decoys, or check with the local library for a book showing the drakes in full color.

If the decoys are to be used for decorative pieces, trim the projecting dowel stubs off, and cover the bottom of the decoy with green felt, or leave about 1 inch of the stubs and mount the decoy on a $\frac{1}{2}$ " to 2" thick base. Figure 6 shows how the decoy can be mounted on a pine or hardwood oval, or rectangle, with hardware added to convert into a lamp that will be a most handsome addition to the den or family room. If the decoys will be used for hunting, it will probably be necessary to add a strip of lead to serve as a keel. This can be secured with a flat head screw and a screw eye which will hold the mooring line. The floating characteristics of the decoy will determine how much lead is needed.



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Vol. 1, No. 2 Mar-Apr '77: Contemp. Coffee Table, Little Red Wagon, Shaker Bench, Five-Rail Table Lamp, Shaker Wall Cabinet, Picture Frame, 3 Handy Kitchen Items, Bookcase Desk, Butcher's Table, Home-Made Clamp, Practical Bird Houses.

Vol. 1, No. 3 May-Jun '77: Colonial Plate Rack, 17th cent. Hutch Table, Adirondack Lawn Chair, Crossbuck Picnic Table, Colonial Blanket Chest, Shaker Candlestand, English Tea Box, Swan Rocker, 3 Projects for Scrap Ends, Small Shaker Table, Toy Train, Table Saw Cove Cutting.

Vol. 1, No. 4 July-Aug '77: Shaker Drying Rack, Pine Trestle Table, Candle Sconces, Toy Riverboat, 19th cent. Shelf Clock, 19th cent. Wall Shelf, Wheelbarrow-Planter, Child's Desk & Bench, Cube Table, Parsons Table.

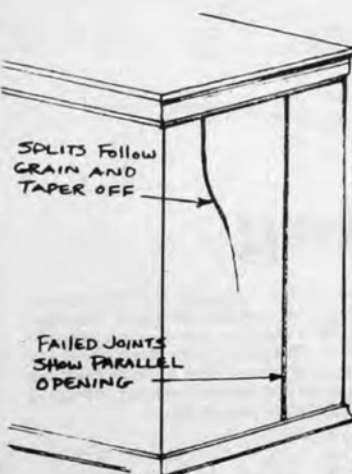
The Woodworker's Journal
Sunset Lane, Washington Depot, Ct. 06794

Restoring Antiques

Early cabinetmakers were not all superlative craftsmen, and even the really good ones made errors in judgment at times. The workmanship of a professional had to be excellent for they served long apprenticeships, and their living depended upon turning out quality work, but sometimes wood was used that was not sufficiently seasoned, or a method of joinery was chosen that did not allow for shrinkage or expansion. The common consequence of this was shrinkage splits in boards, and failed joints between boards.

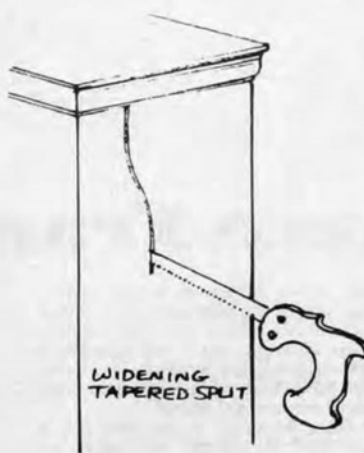
Splits commonly occur in the sides of chests, and the tops of tables, and can be repaired by either re-gluing and clamping, or more usually, by inserting glued slivers of matching wood into the splits. Sometimes, if the split is very slight, and not filled with dirt and old furniture wax, it's worth a try to feed glue into the split and clamp it shut. Chances are it will re-open during the tail end of the winter in a dry, warm house. The best bet is to fill the split with stick shellac, matching the wood color as carefully as possible.

Really noticeable splits should be cleaned out thoroughly, using thin sticks with sandpaper, nail files, or anything else that can be worked into the split to remove accumulated grime and clean the sides. Splits work down to a fine taper from their point of origin, and this fine taper would be opened up with a saw so that the split opening is as parallel as possible for its entire length. A bead of glue should be run along the opening, and worked into it; then a sliver of matching wood, cut with a slight taper, is driven into the split. It should be a fairly easy fit, so that the glue is not forced out. Leave enough of the sliver standing



out of the split so it can be planed flush after the glue dries.

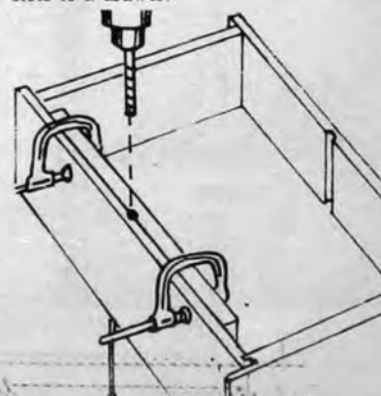
Failed joints between boards show a parallel opening the full length of the boards. If such a failure appears in a table top which can be removed, the best solution is to separate the boards, plane the edges clean for a new joint, and re-glue. Try to keep the new joint perfectly level to avoid having to later plane the surface flat, thereby damaging the patina. If it's not feasible to re-joint the boards, then the opening should be closed with a tapered sliver, in the same manner as described for splits.



Shop-Tips

Avoid shaking a can of varnish. This will produce bubbles which will transfer to the finish coat and later show up as small pits in the finish. Open the can and place it in a pot of hot tap water so that the water comes to within an inch of the top of the can. Allow the can to sit until the varnish becomes warm, and after stirring it gently, lay it on with a high quality brush. It will flow easily and be bubble-free. If the job is a big one, replace the cooled water with more hot tap water. Never heat the can over the stove.

If you lack a table saw, small dados can be cut by clamping a piece of scrap to the board to be dadoed, and drilling all the way down between the two pieces. Use a drill size that matches the desired dado width. This is a good way to add partition slots to a drawer.



The Beginning Woodworker

Wood screws provide a better means of re-inforcing a butt joint, but are generally unsightly on the outer surfaces of fine work. Flat head wood screws can be either countersunk in the areas where they will not be seen, or counterbored $\frac{1}{4}$ inch below the surface; the hole being concealed with a snug fitting plug cut from matching wood (Fig. 6). If dowels are used to plug the

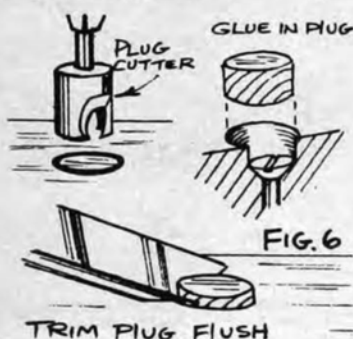


FIG. 6

hole, they will generally stain darker than the surrounding wood, and will give a pegged effect.

When drilling for screws, select a drill bit that's slightly smaller than the screw shank, or better still, use a pilot bit which will counter-bore, countersink, and drill shank and pilot hole all in one operation. Some pilot bits are designed for use with a specific screw size; others are adjustable to cover a range of several lengths. (Fig. 7)

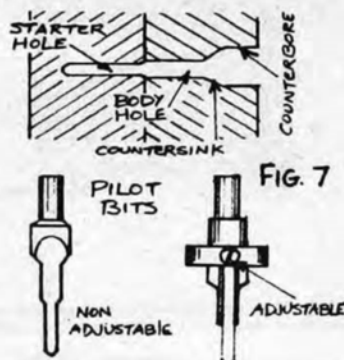
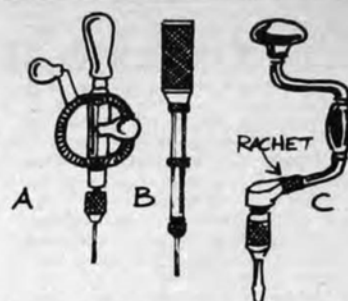


FIG. 7



A - HAND DRILL
B - PUSH DRILL
C - BRACE W/ SCREW DRIVER BIT

The tool generally used for boring screw holes is the electric hand drill, but there also are push drills, which are pumped up and down and use double-fluted bits, and the egg-beater type hand drill. Many woodworkers prefer these hand tools for fine work, but the electric hand drill should be purchased first as it can be put to many other uses.

Screws are driven home with a common screwdriver, an electric drill with a special screw-driving bit, or a hand brace with a screw-driving bit. The screwdriver will serve for most work. Buy them in various sizes as you need them, and beware of the junk sold in many discount and variety stores. Keep the bits ground square across the end, and always use a bit that fits snugly in the screw slot.

Electric hand drills with screw-driver bits do a fast job of winding screws down when you've got a lot of them to drive, but they are dangerous for fine work, as it's easy to slip with them and gouge the workpiece. A hand brace with a hefty screw-driving bit is the best way to drive large screws into hardwoods. A tremendous amount of torque can be applied; in fact it can be easy to twist the head right off a screw. Before driving screws into hardwood, always rub the threads of the screw across a piece of wax or soap. This makes the driving much easier and thus lessens the chance of shearing the heads off. Finally, when drilling for, and driving screws, it's best to firmly clamp the mating pieces together, whenever possible, and use glue when the joint is to be permanent.

Box-Joint Jig

The box, or finger-lap joint is often used to join sides of fancy boxes. It's a decorative joint, and one that provides an exceptional amount of glueing surface. In spite of its impressive appearance, this joint is quite easy to make with a table saw, dado blade and the proper jig. Generally, a finger width of $\frac{3}{8}$ inch looks the best on stock from $\frac{1}{2}$ inch to $\frac{3}{4}$ inch thick. For thinner stock use a $\frac{1}{4}$ inch finger. The jig shown is designed to ride in both miter gauge slots on a saw table.

To make the jig, replace your saw blade with a dado set to the desired finger width, and adjust blade projection to equal stock thickness. Using the miter gauge, run a cut through at the center of the 4"x16" extension. Then make a second cut exactly one groove width away from the first cut. Cut a guide block to fit snugly in the second cut, and glue it in place.

Line up the first groove with the dado

blade and locate hardwood slides by scribing their position on the extension. Screw slides to underside of 4"x16" extension and also to the two rear blocks which are glued and nailed to the back of the extension.

To use the jig, cut a spacer strip exactly the same width as the groove in the jig, and about 12 inches long. Place the spacer strip against the guide block and butt one of the pieces to be joined against the spacer strip. Hold everything firmly, and make a slow pass over the dado cutter (Fig. 1). Next, remove the spacer strip and butt the first cut against the guide block. Place the other mating part in front of the first work-piece, and against the guide block, and make a pass over the blade, cutting a groove in both pieces at the same time (Fig. 2). By holding the pieces firmly together, you can continue seating the last groove cut, over the guide block to locate the remaining grooves.

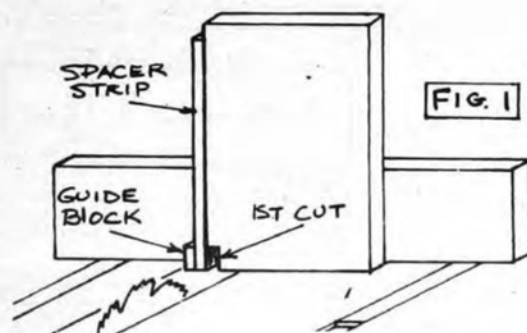
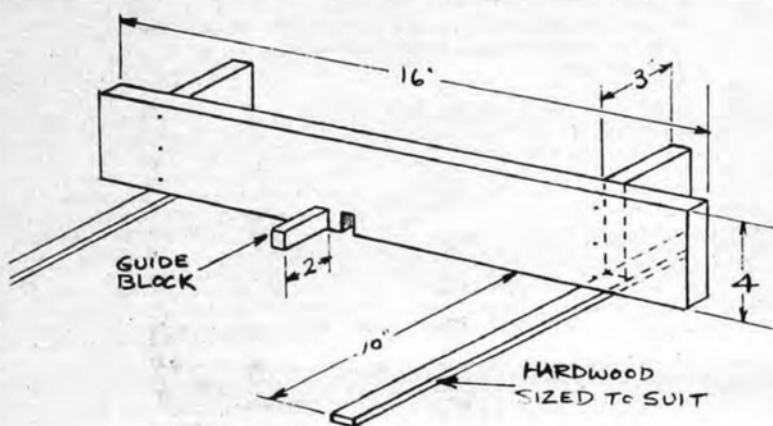


FIG. 1

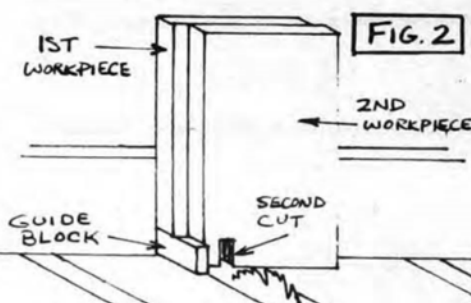


FIG. 2

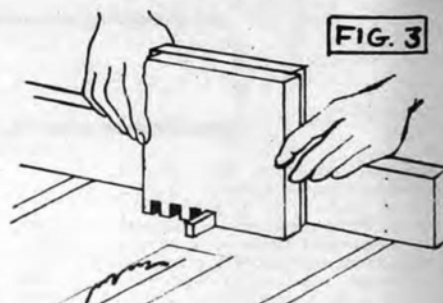


FIG. 3

Picture Framing

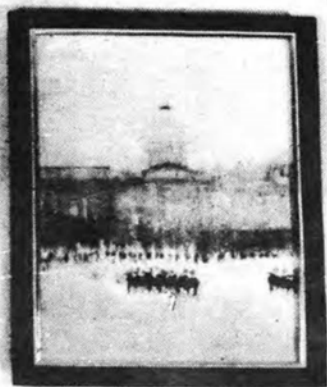
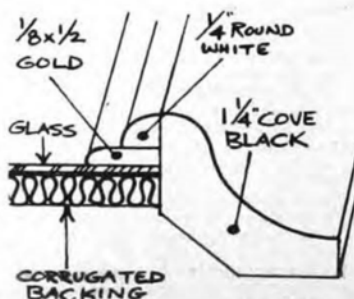
Many times it's easier to buy ready-finished picture frame molding than it is to make your own. This is true if the molding requires different colors and perhaps a gilded liner, and you don't feel like buying two or three cans of enamel, gesso and gold-leaf for just one frame.

On the other hand, we recently saw a frame that we thought was quite attractive, and since we couldn't easily locate a pre-finished molding to duplicate the frame, decided to make our own. An examination of the frame showed it to be essentially a cove molding with the top rounded off to flow into a quarter-round molding with a gold lower lip.

We purchased ordinary $1\frac{1}{4}$ inch cove molding and rounded the top edge. This was painted with black enamel, and later rubbed down with 4-0 steel wool for a soft shine. A length of $\frac{1}{4}$ inch quarter-round molding was spray-painted glossy white, and a thin strip of pine was sprayed with gold paint to serve as a liner.

All components were carefully

measured, cut to length and trial fitted; then the liner and quarter-round moldings were glued together, and in turn, glued to the cove. Mitered corners were glued and clamped, and when dry a small finishing nail was driven into each corner. Result: a very handsome small frame.



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