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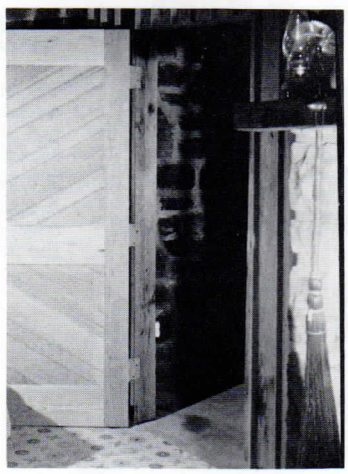
flying chips

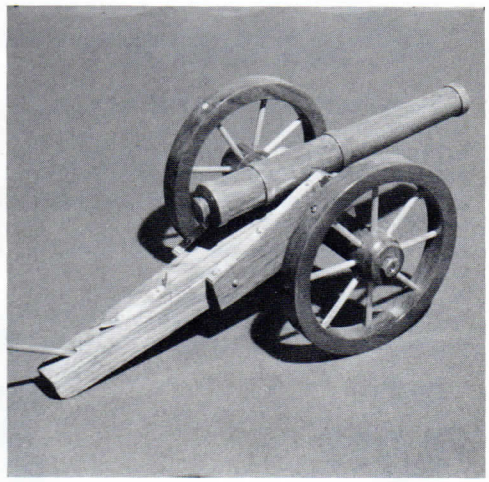
NOVEMBER - DECEMBER 1972

TURNED VASE

8 TRACK CASSETTE HOLDER



PANEL DOOR



MODEL CANNON REPLICA

CARVED SHAKER SUGAR SCOOP

New Model 46 Grass Trimmer

The only cordless, upright rotary action grass trimmer for under $20.00.

- Upright—no hands and knees!
- Rotary action—trims almost twice as fast as scissor-type trimmers.
- Cordless—low price includes recharger.
- Lightweight, balanced design.

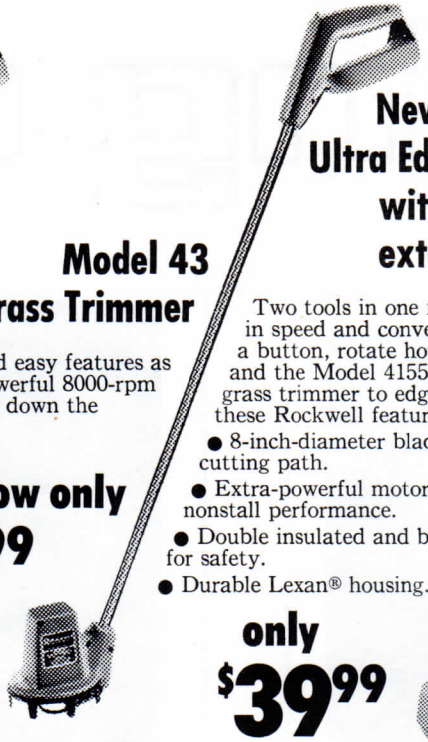
only $19.99

Model 43 Deluxe Grass Trimmer

The same fast and easy features as Model 46, plus powerful 8000-rpm motor for trimming down the biggest jobs.

Reg. $29.99 now only $24.99

Save $5.00



New Model 4155 Ultra Edger Trimmer with free 50-ft extension cord

Two tools in one for the maximum in speed and convenience! Push a button, rotate housing 90 degrees, and the Model 4155 converts from grass trimmer to edger! And check these Rockwell features:

- 8-inch-diameter blade for extra wide cutting path.
- Extra-powerful motor (1¾ hp) for nonstall performance.
- Double insulated and blade guard for safety.
- Durable Lexan® housing.

only $39.99

SEVEN WAYS TO MAKE YARD WORK FAST AND EASY WITH ROCKWELL

New Model 33

The only double edge, double action hedge trimmer under $15.00!

- Double edge 13-inch blades for speed and convenience (cuts in both directions).
- Double action (two moving blades) for cleaner, vibration-free trimming.
- One-inch blade gaps cut through thick, overgrown hedges with ease.
- Double insulated for safety.
- Lightweight, balanced design, side handle; durable Lexan® housing.

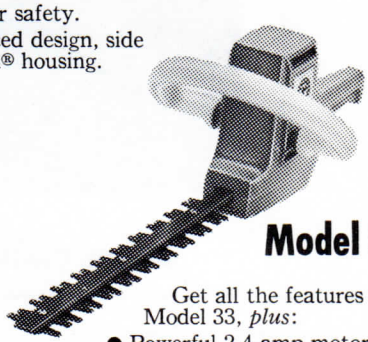
only $14.99

Model 39

The Rockwell Ultra Hedge Trimmer gives you all the features of Model 38, *plus*:

- 2.8-amp motor.
- Extra-long 23-inch double edge, double action blades for the maximum cutting sweep.

only $39.99



Model 37

Get all the features of Model 33, *plus*:

- Powerful 2.4-amp motor for faster trimming on the tough jobs.
- Wraparound front handle for maximum control and ease of use.

only $19.99

Model 38

The Rockwell Deluxe Hedge Trimmer has all the value features of Model 37, *plus*:

- 2.6-amp motor.
- 18-inch double edge, double action blades for fast trimming on big jobs.

only $29.99

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Rockwell

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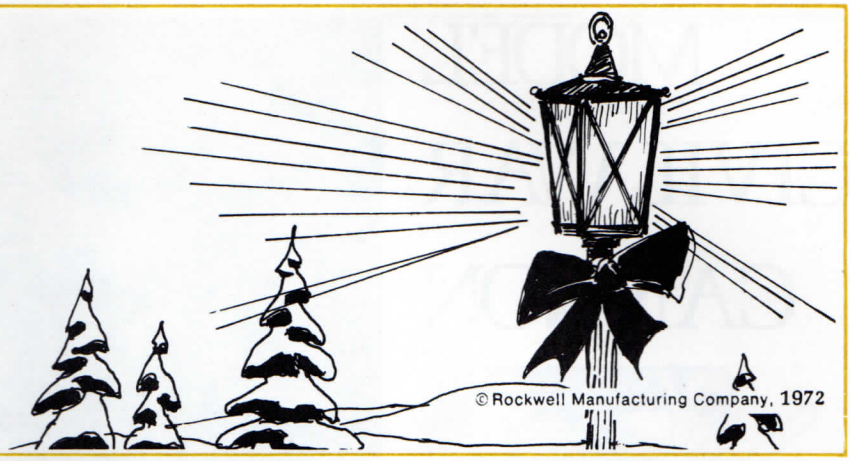
flying chips



As with all things, time requires that we change to keep pace with our modern and exciting society. Sometimes this change is a break with tradition and causes much soul searching before initiating the change.

Such is the case with Flying Chips. After 40 years we must tell you that this will be the last edition Rockwell will publish. Flying Chips has served as a useful means of communication with you, our close friends, over the many years and there is no way to put a value on that.

However, costs of publishing have continued to rise while we have maintained the subscription cost to you. At the same time, we believe your needs have changed over the years. The decision was difficult, however, we are convinced that we can better serve the many close friends we have made by concentrating our efforts on the manufacture of the world's finest and safest power tools.

You will be hearing from us shortly in regard to reimbursement for unexpired subscriptions and any other mutual committments.

Christmas is a time to think of others, a time of sharing and gift giving. Also, a time to receive and to accept gifts given in a spirit of love and friendship. In a far greater sense Christmas is centered around God's gift to us, the gift of His son. For many this is the greatest gift mankind can accept. In this true spirit of Christmas we wish you Merry Christmas and the best of the New Year.

ROCKWELL MANUFACTURING COMPANY
POWER TOOL DIVISION

TABLE OF CONTENTS

MODEL CIVIL WAR CANNON

Joseph Foytick

This model cannon and drawings were submitted by Joseph Foytick of Pittsburgh, Pa. We have found considerable interest in these small models so we pass along the idea for your consideration. For Joe's effort on our behalf, we are sending him a Rockwell merchandise credit for $50.00.

Here are Joe's comments concerning the replica. "Last year we purchased a model cannon from a retiree as a Christmas Gift. It was a rather handsome piece made from stained pine. Later, looking for a wintertime project, we decided to duplicate the gun using walnut wood and brass. This initial effort resulted in a desire to produce a more accurate reproduction.

Not wanting to repeat the copy-work from a "Plastic Kit" available in a local hobby store, we decided to look for suitable plans in books. Both a school library and a Carnegie Library Branch were visited without success. The books offered no really good detailed plans or photographs. The only thing left to do was to carefully examine the available photographs and draw "scale" plans. The nomenclature was also developed in a similar manner. The resultant Civil War period cannon is shown here.

Searching for detailed plans continued as the cannon was being built. When it was 90% completed, an excellent book entitled British-Smooth Bore Artillery,* by Major General B. P. Hughes, was located in a local hobby store (behind a counter under a stack of other assorted goodies). To our delight the scale and nomenclature of our cannon was reasonably accurate. Consequently, it will serve as a guide for future reproductions I plan to make." Additional reference books that were helpful to Joe were:

Colby, Carroll B., Civil War Weapons. Coward and McCann, 1962.

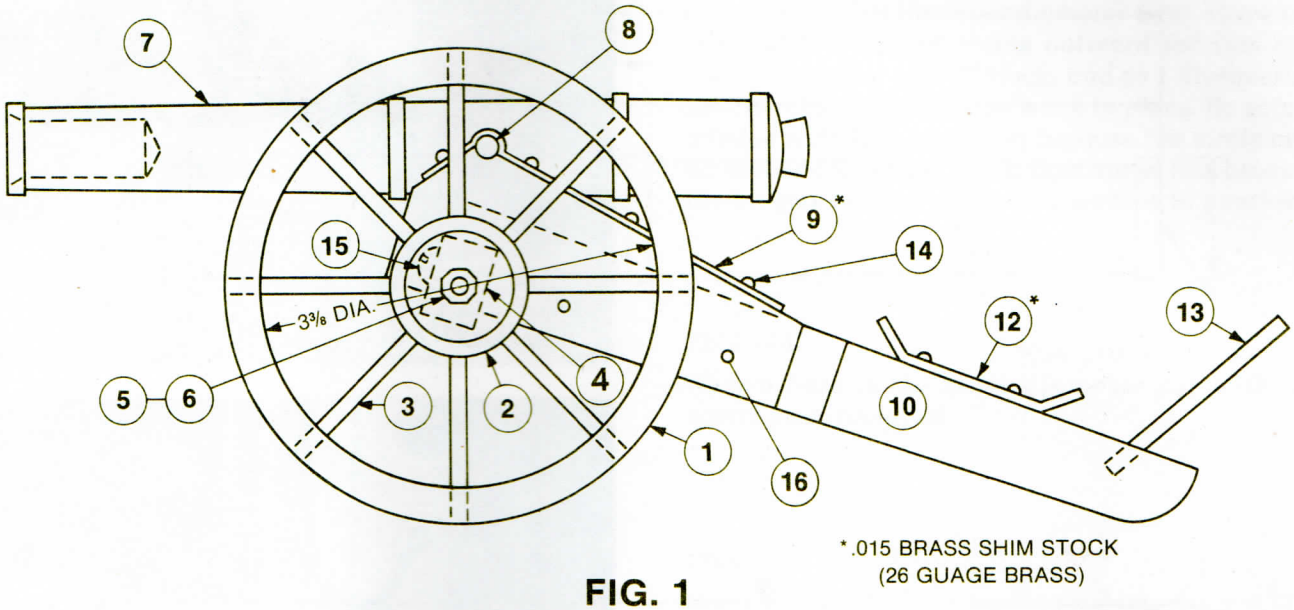
Tunis, Edwin, Weapons, A Pictorial History. Cleveland: World Publishing Co., 1954.

*Hughes, Major General B.P., British-Smooth Bore Artillery. Stach Pole Books, 1969, Harrisburg, Pa.

EDITOR'S NOTE: We have found a catalog of equipment and supplies for outdoorsmen Fall-Winter 72 P & S Sales, P.O. Box 45095, Tulsa, Oklahoma 74145. Page 90 of this catalog lists eight model cannon kits of all metal parts having fully shaped brass barrels, includes detailed instructions with each kit.

Building the Cannon

Most all the pieces can be cut out on the jig saw or band saw. The Rockwell Sander-Grinder is a real convenience in the final shaping of all the parts. You will use the wood lathe to turn the barrel and if you want to, you can make the trunnion, Part #8, on it instead of making it by hand. One of the keys in making this cannon is to keep the surfaces square, otherwise the parts will not fit together



*.015 BRASS SHIM STOCK
(26 GUAGE BRASS)

FIG. 1

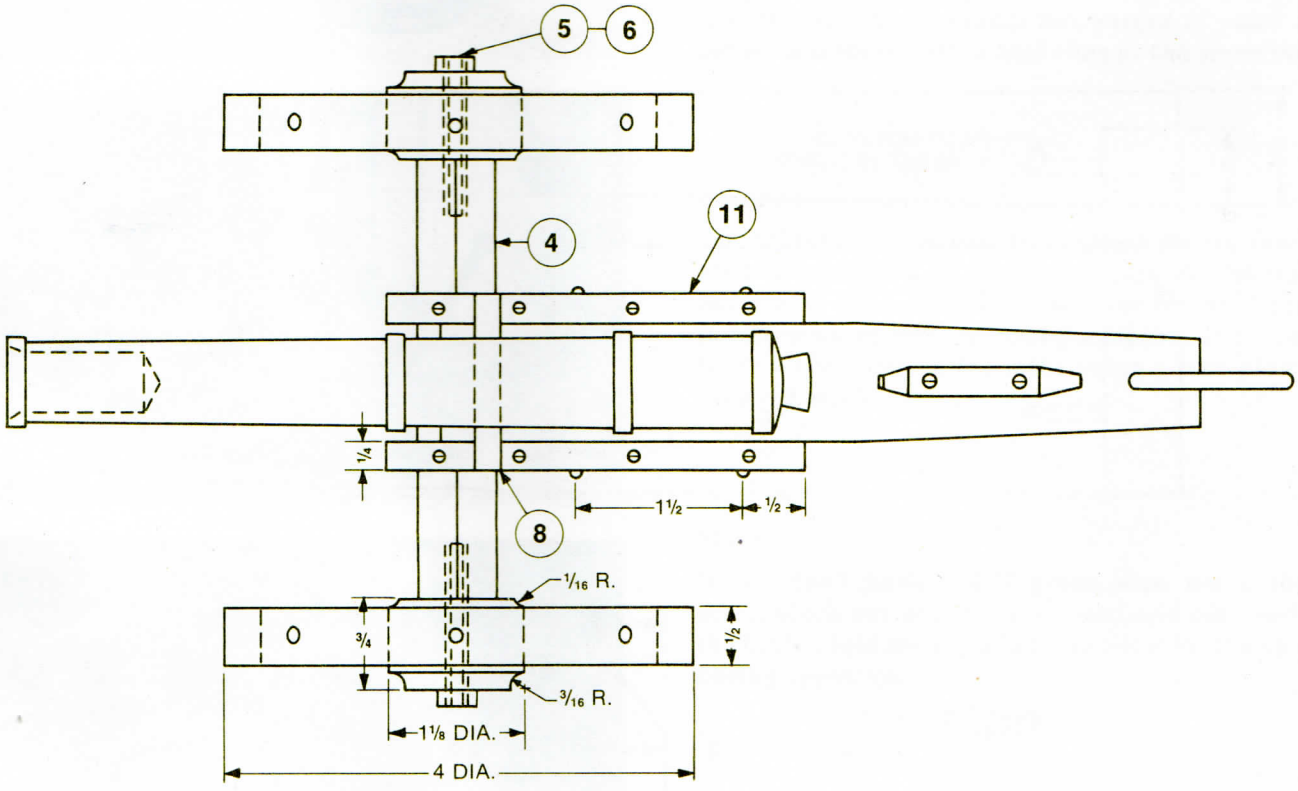


FIG. 2

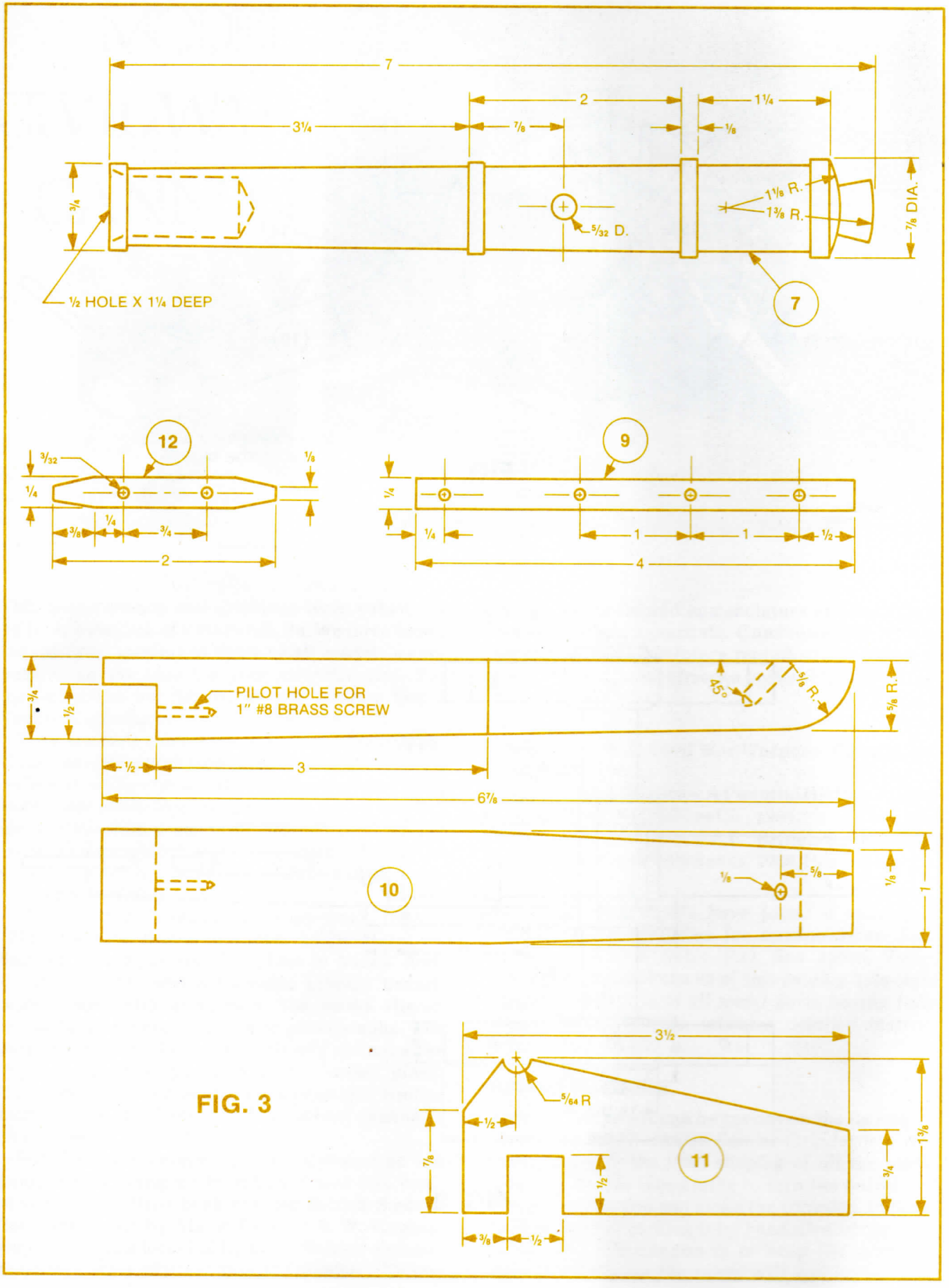
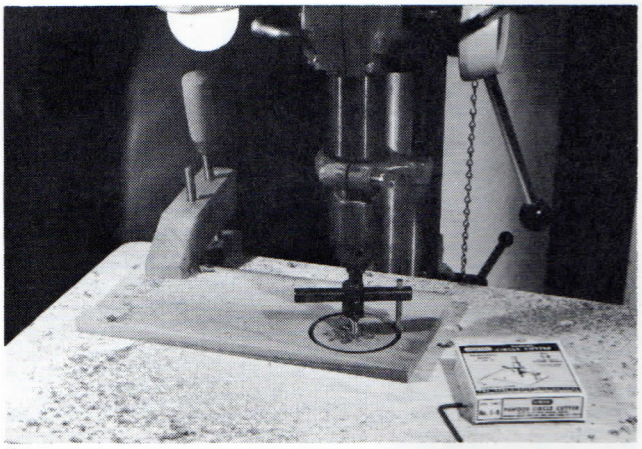

7
2
1¼
3¼
⅞
⅛
¾
5/32 D.
1⅛ R.
1⅜ R.
⅞ DIA.
½ HOLE X 1¼ DEEP
7
12
3/32
⅛
¼
¼
⅜
¾
2
9
¼
¼
1
1
½
4
¾
½
PILOT HOLE FOR
1" #8 BRASS SCREW
45°
⅝ R.
⅝ R.
½
3
6⅞
10
⅛
⅝
⅛
1
3½
5/64 R
½
⅞
11
1⅜
¾
½
⅜
½

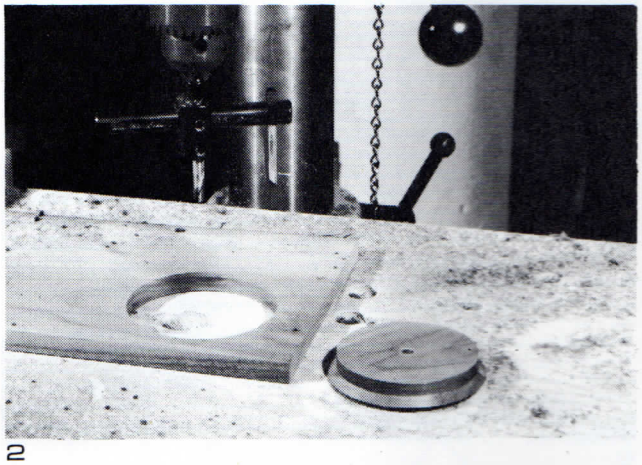
FIG. 3



1

Photo #1

If you have a circle cutter you can make very accurate wheels. Cut the inner diameter first. Have the point of the tool bit facing outward for this cut. Use a long piece of 1/2" stock, and as I discovered, use two clamps to hold the work in place. Be safety minded with this operation because the circle cutter makes a wide arc. Use a slow speed too, because the bit gets hot and you won't want it to overheat.



2

Photo #2

Shown here is the inner diameter cut with the waste piece removed.

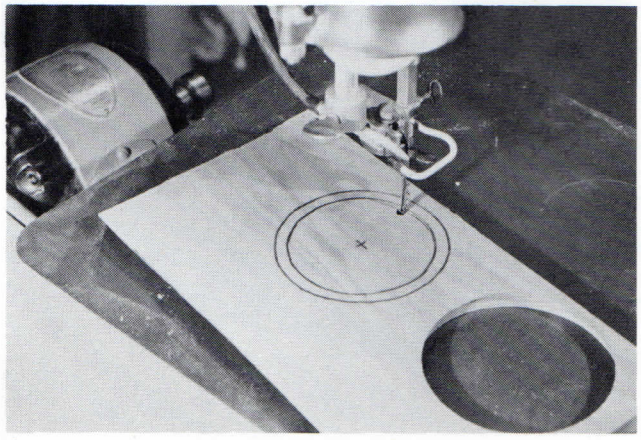
Photo #3

Reset the point of the tool to face inward. (NOTE: Notice the bevel on the waste stock. The point of the tool bit is turned to keep the bevel always on the waste stock side of the cut.) Adjust the cutter bar to cut the outside of the rim and make the cut. Keep the wood clamped in its original position. It's also possible to clamp two pieces of stock together and make both wheel rims at the same time.

3

Photo #4

The wheel rims can also be made on the jig saw as shown here. Drill an access hole and do the internal edge of the wheel rim first. Note the hold down is raised for clarity. A third possibility is to make these wheel rims on the lathe using a face plate to hold the stock.



4

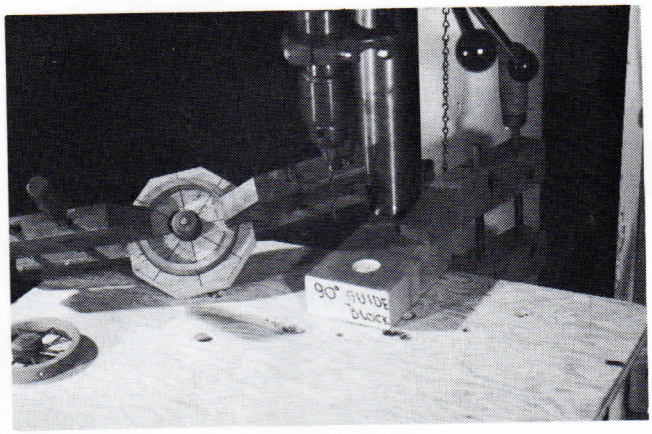
Photo #5

If you don't have a drill press vise, use a thick scrap block cut square on its end and clamped to the table. Hold the wheel jig against it for the spoke boring operation.

Photo #6

Make a drill jig as shown here, refer to Figure 4. Attach the hub to the jig by putting a common nail through the hole drilled in the hub and nail it to the center of the jig.

well. If you don't have the convenience of the sander-grinder, a cabinet file or course sandpaper wrapped around a block will do the job. A drill press will prove invaluable, particularly for the accurately cut wheels. The screws are all round head brass screws and the strapping and rope holder are also made from brass. .015 brass shim stock (26 gauge brass sheet) or any brass sheet stock available, approximately 1/64 inch thick will do nicely.



5

Photo #7

Position the 90° guide block (or the drill press vise) so you drill into the center of the rim, in line with the center of the wheel. Clamp the wheel rim to the jig and drill the first spoke hole through the rim and 3/8" deep into the hub. Temporarily install a spoke to insure accurate alignment of parts. Turn the clamped assembly 45°, bore the next set of spoke holes and install another spoke. Move the clamps around and bore all 8 sets of holes.

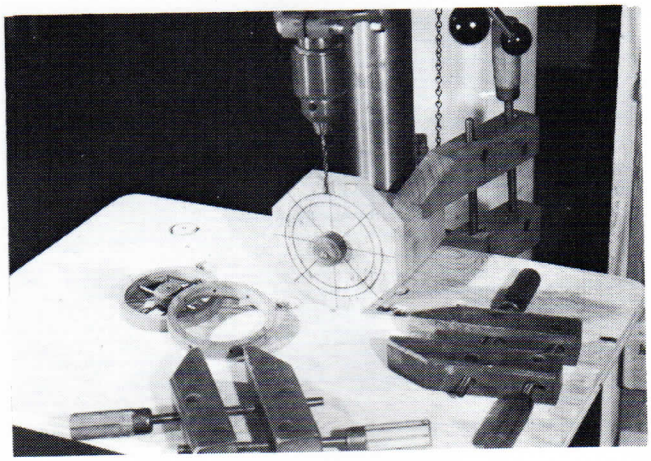

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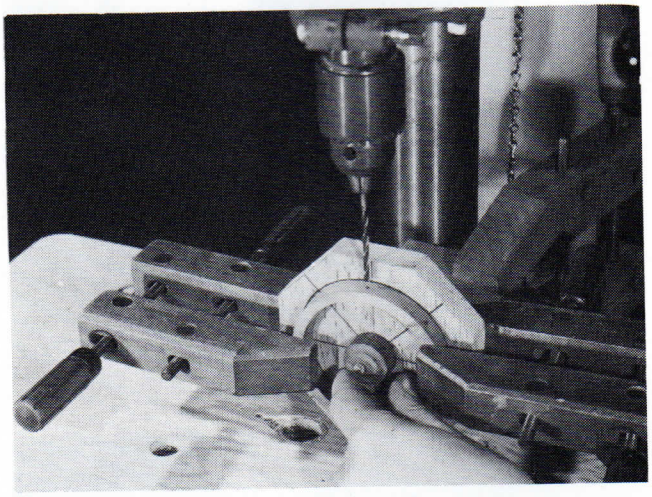
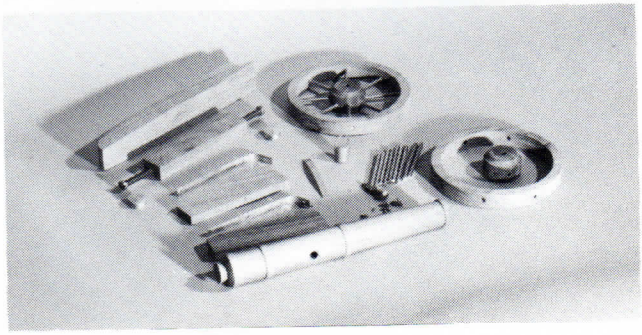
Photo #8

After all parts are cut out, drilled, shaped, and a trial assembly made, sand each piece carefully. Cut, shape and buff all brass parts using a buffing wheel "set-up" on the lathe or use brass polish and polish by hand. Finish each piece separately using a can of aerosol spray lacquer or a finish of your choice. Carefully clean brass parts using soap and hot water. Dry with a soft cloth then wax with a good paste wax. Reassemble the cannon and put it on display.


7

NOTES:

1. Brass wheel rims may be added to the wheels if desired.
2. The brass screw part No. 15 may be omitted if desired. The axle tree and trail may simply be glued in place or assembled as a glued, doweled joint.
3. If you have a metal lathe available to you, make the barrel from brass.
4. Add brass chain, cannon balls, a ramrod, etc., if you like.
5. Mount on a walnut base.


8

PARTS LIST

FINISHED SIZES

PART NO.	NAME	NO. REQ'D	MATERIAL	SIZE	
1	WHEEL RIMS	2	WALNUT	½ X 4 DIA.	
2	HUBS	2	WALNUT	¾ X 1⅛ DIA.	
3	SPOKES	16	BRASS	⅛ DIA. X 1⅞	
4	AXLE TREE	1	WALNUT	½ X ¾ X 3¾	
5	AXLES	2	BRASS	1¼ X 10-32	‡
6	AXLE NUTS	2	BRASS	HEX 10-32	†
7	BARREL	1	WALNUT	⅞ DIA. X 7	
8	TRUNNION	1	WALNUT	5/32 X 1½	

PART NO.	NAME	NO. REQ'D	MATERIAL	SIZE
9	STRAPPING	2	BRASS*	¼ X 4
10	TRAIL	1	WALNUT	¾ X 1 X 6 13/16
11	SIDE-PIECES	2	WALNUT	¼ X 1⅜ X 3½
12	ROPE-HOLDER	1	BRASS*	¼ X 2
13	POSITIONING ROD	1	BRASS	⅛ DIA. X 2
14	SCREWS	10	BRASS	¼ RH #4
15	SCREW	1	BRASS	1 RH #8
16	SCREWS	4	BRASS	¼ RH #6

*.015 BRASS SHIM STOCK (26 GAUGE BRASS)
‡MACHINE SCREW
†(ALTERNATE) ROUND CAP NUT

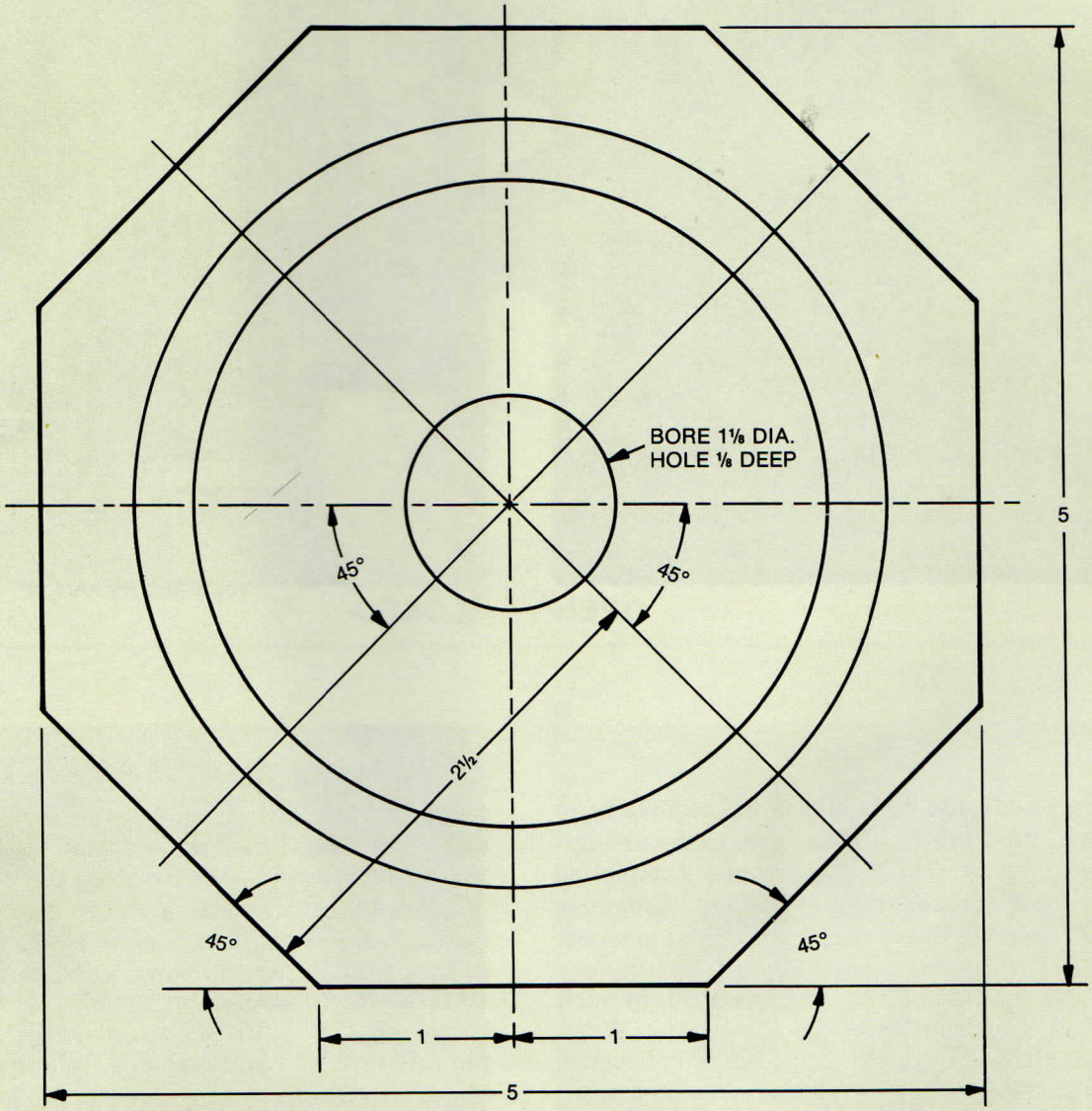
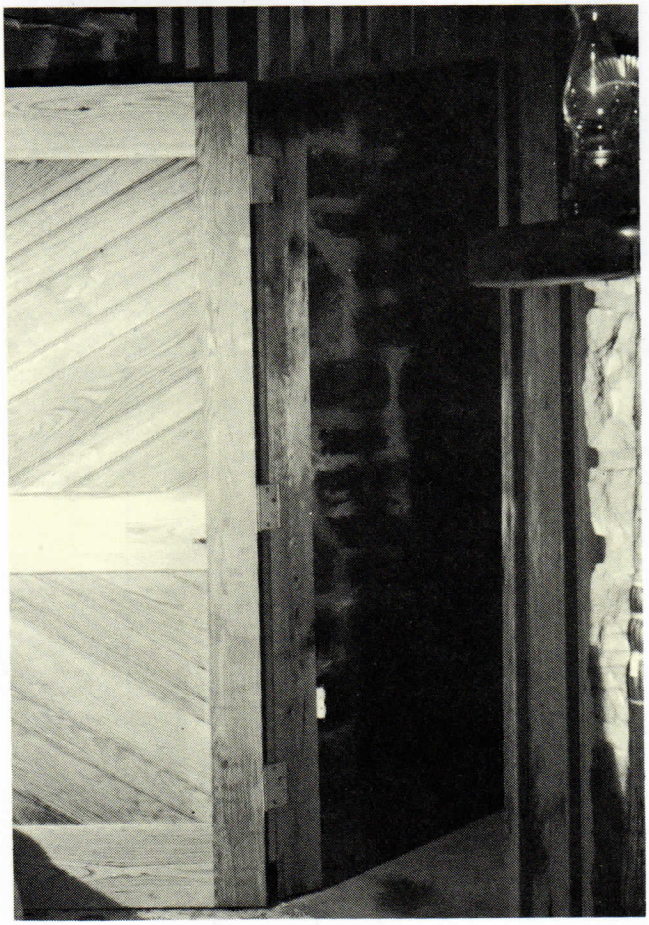
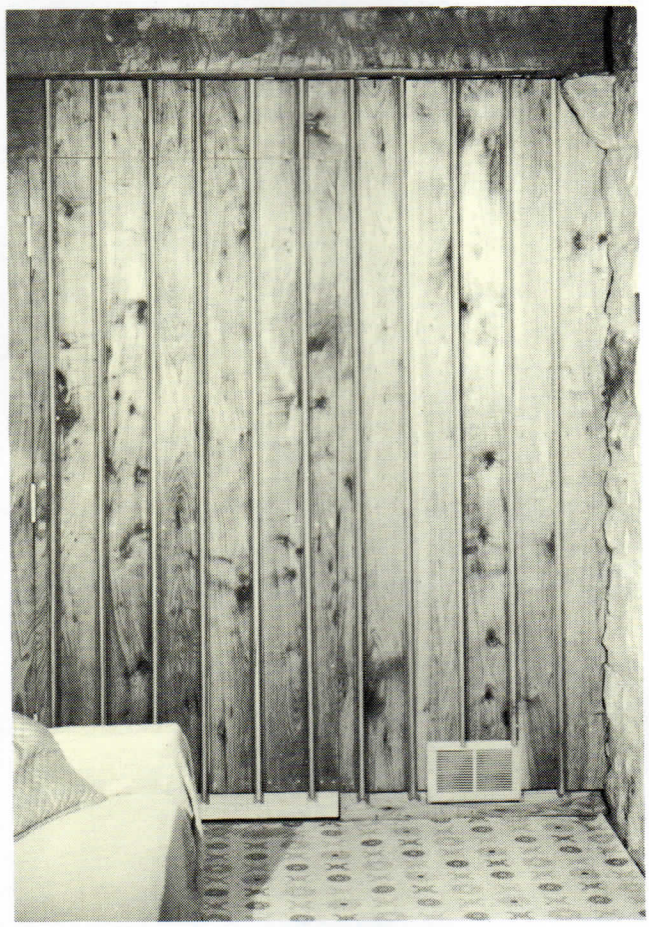


FIG.4 WHEEL JIG FOR SPOKE HOLES (RIM AND HUB)

HANDMADE PANEL DOOR AND WALL



OPEN



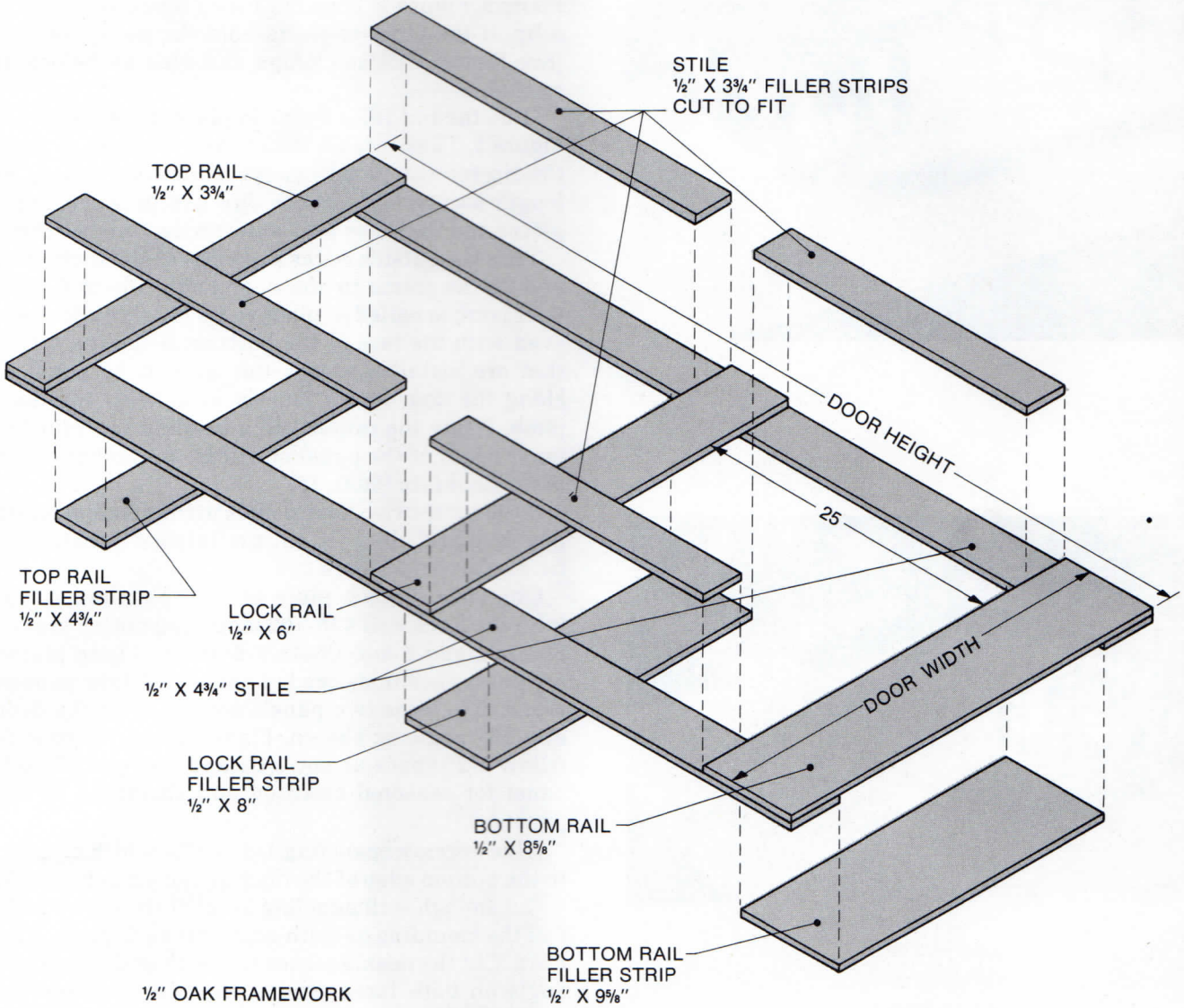
CLOSED

Here is a handmade door that is not expensive or difficult to make but it will take time as does everything worthwhile. The rewards upon completion are also great, such as pride in accomplishment as well as bringing to life the beauty inherent in wood.

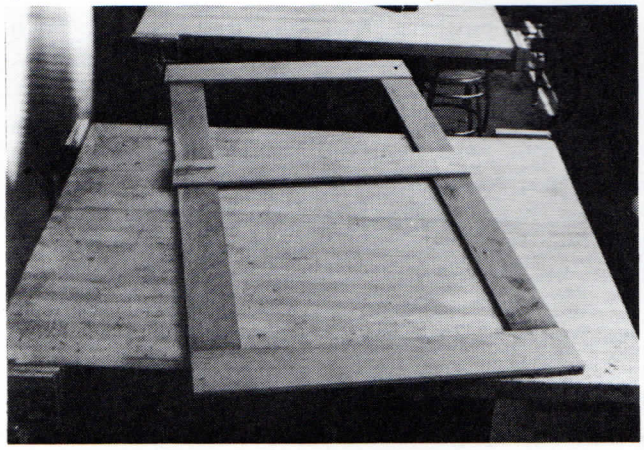
Any door with mortise and tenon joints is very strong. This one is built up, or laminated, in such a way that it accomplishes the same thing. When closed it's hard to notice that it is a door because the wall and door are paneled the same as a wall. Solid paneling is used here, if you don't wish to take the time to install the door and wall the old fashioned way of using dowel pins instead of nails, use cut nails or finish nails. If you wish, 1/4" x 4' x 8' sheets of prefinished paneling can be used.

Overall measurements are not listed so that the design will be flexible enough to adapt to most any door opening, refer to Figure 1 and cut the framework pieces to size. Most doors have a standard height of 6'-8" with the width variable. Cut the top rail, lock rail, bottom rail and both stiles to fit the door jamb. Glue them together at right angles to each other as shown in Figure 1, and Photo 1 and 2. Use a quality wood glue and clamp at each cor-

FIG. 1


STILE
½" X 3¾" FILLER STRIPS
CUT TO FIT
TOP RAIL
½" X 3¾"
DOOR HEIGHT
25
TOP RAIL
FILLER STRIP
½" X 4¾"
LOCK RAIL
½" X 6"
½" X 4¾" STILE
DOOR WIDTH
LOCK RAIL
FILLER STRIP
½" X 8"
BOTTOM RAIL
½" X 8⅝"
BOTTOM RAIL
FILLER STRIP
½" X 9⅝"
½" OAK FRAMEWORK

1



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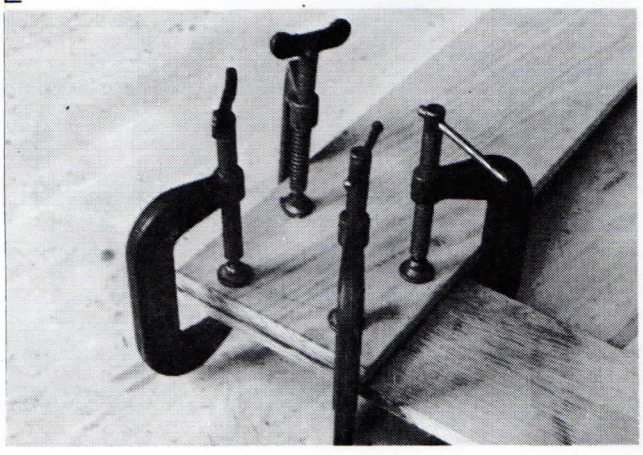

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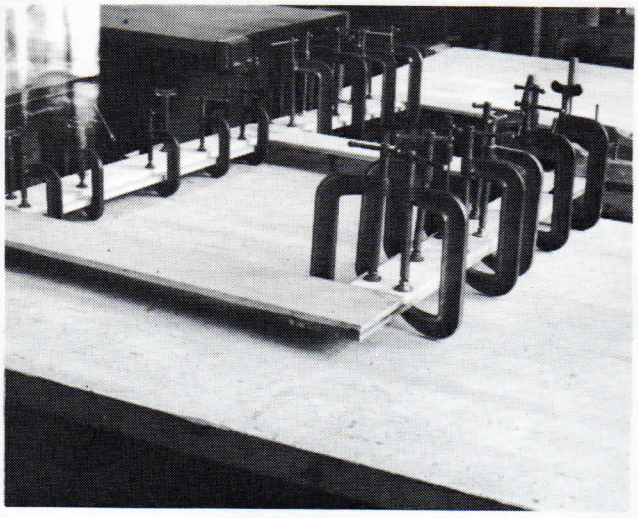

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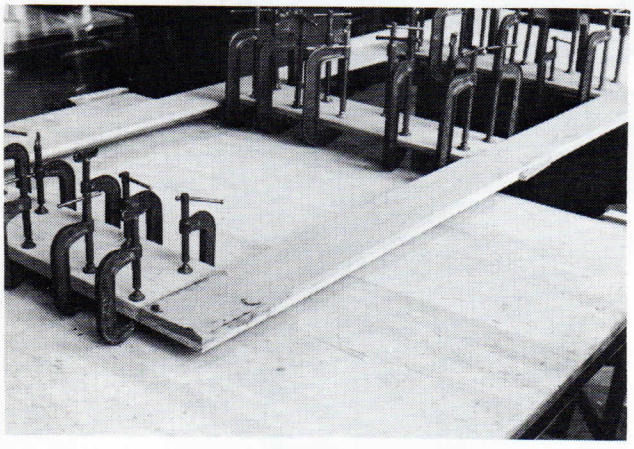

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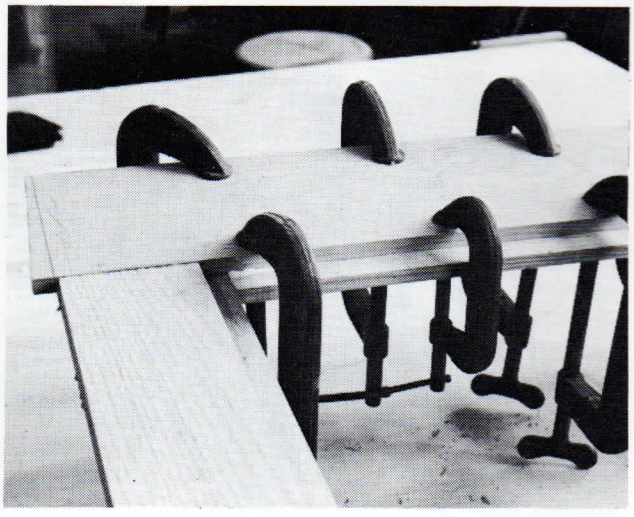


ner. If clamps are not available use nails or screws and glue. Install any nails or screws from the inside, or rail side, so they will not show when the door is finished. Install the stile filler strips next, Photo 3, Figure 1. They are 1 inch narrower to form a lip at the inner edges to hold the panel inserts. (See Figure 2.) Use clamps and glue as before, if available.

Glue the rail filler strips in place, Photo 4 and 5, Figure 1. These are all wider than the rails to form the lip for the panel inserts. Cut these pieces to length accurately because any gap between these pieces and the stiles will show on the finished door.

Trim the outside edges and ends of the door even and fit the frame to the door jamb, Photo 6. The door jamb is nailed in place so its outside edges are even with the face of the horizontal furring strips that are installed across the wall to be paneled. Hang the door so its face is even with the door jamb. Using the router and a beading bit, rout the inner edges of the panel openings on the back face of the door (see Photo 15).

Build up the two door panels using random width paneling 1/2" thick or cut prefinished paneling to fit, as shown in Figure 2.

One edge of each piece of 1/2" paneling is cut with the Rockwell #35-102 moulding cutter knives Figure 2 and 5 and Photo 7-8 and 9. These pieces are cut longer than needed and glued into panels. When dry, these two panels are cut to fit the door at a 30° angle as shown, Figure 3 and Photo #15. Allow 1/2" space at one side and one end of each panel for seasonal swelling and shrinking of the panels.

Glue a strip of paneling 1/8" x 3" x width of door, to the bottom edge of the door as shown in Figure 3.

Cut enough wall paneling to cover the entire wall. Cut the moulding on both edges off each piece, Figure 5. Cut the nosing pieces to width and saw a 10° angle on both faces. Round the end to shape, as shown, and remove the saw marks with a spoke shave. Leave the tool marks on, these pieces are left unsanded and installed that way, so do a good job with the spoke shave.

Panel the entire wall as shown in Photo 6. Each panel above the door is cut from full length pieces. The long ends are carefully numbered and saved. These longer ends are used for the door paneling in the same order as installed above the door, thus insuring perfect grain patterning on all pieces. Make sure the paneling at the right and left side of the door jamb is made from wide panel boards, Photo #6. This part of each panel extending beyond the door jamb is carefully cut and later used as paneling on the door, Photo 10 and 11. The nosing is nailed to the panels as shown in Figure 5 and Photo 11. The panels on the wall shown, are installed with pegs.

NOTE: 1/4" dowel pins are driven into undersized holes at a slight angle about 5° (Toenailed).

The paneling stops 3" above the floor, Photo 16. The bottom furring strip is a piece of 6" wide paneling, the bottom 3" of which shows. The nosing strips extend 1/2" below the paneling.

Glue the right and left door panel pieces to the door thus completing the build up mortice and tenon joints. Photo 10 and 11 and Figure 3.

Install the remainder of the panel pieces using the pieces saved and numbered, in the same order as those previously installed above the door. Again toenail the pegs in place. Install the pegs into the door rails. The holes are also bored undersize and do not go all the way through the door. Photo 12 and 13.

Cut off the pegs with a fine tooth saw and trim smooth with a chisel, Photo 14.

Photo 15 shows the inside face of the completed door and Photo 16 shows the outside or den side of the room next to the fireplace.

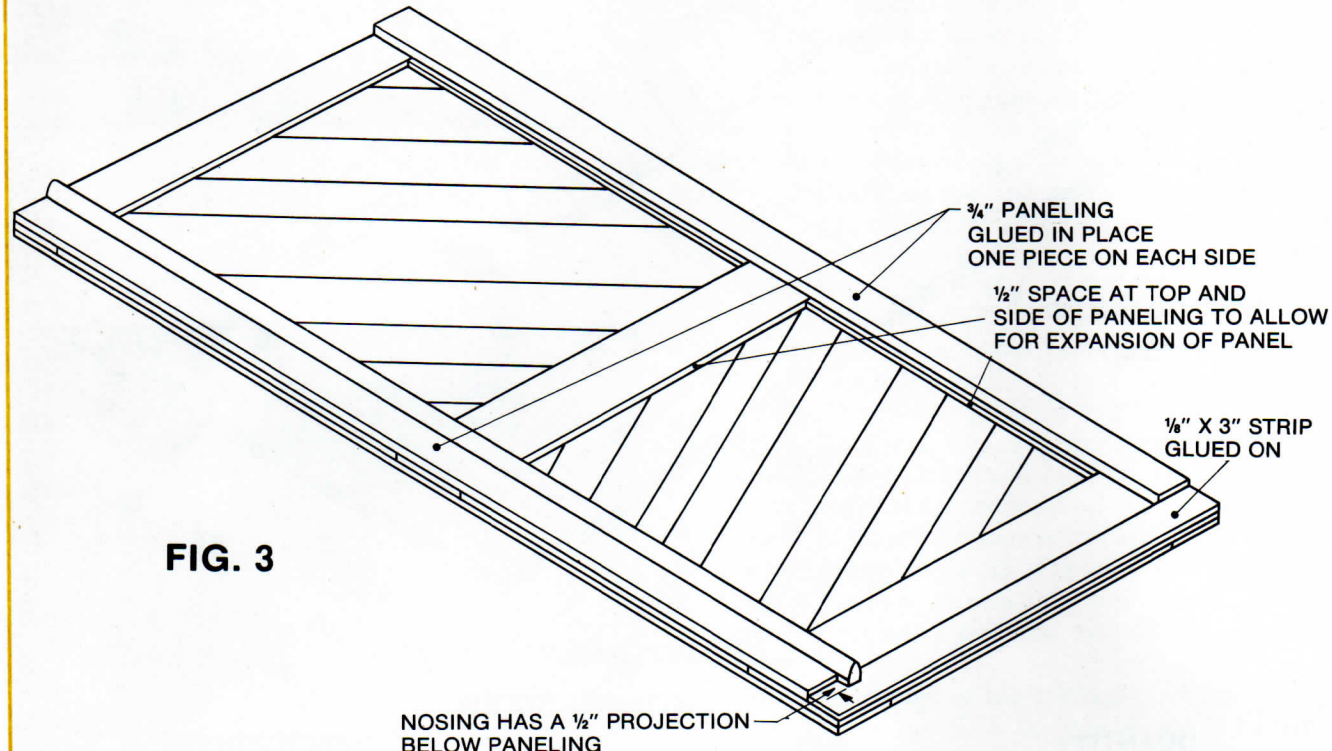


FIG. 3

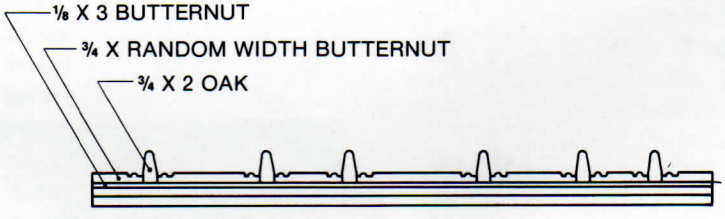
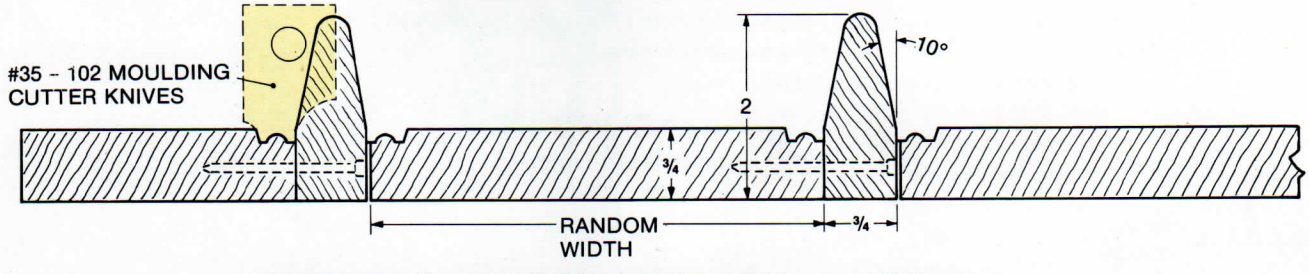
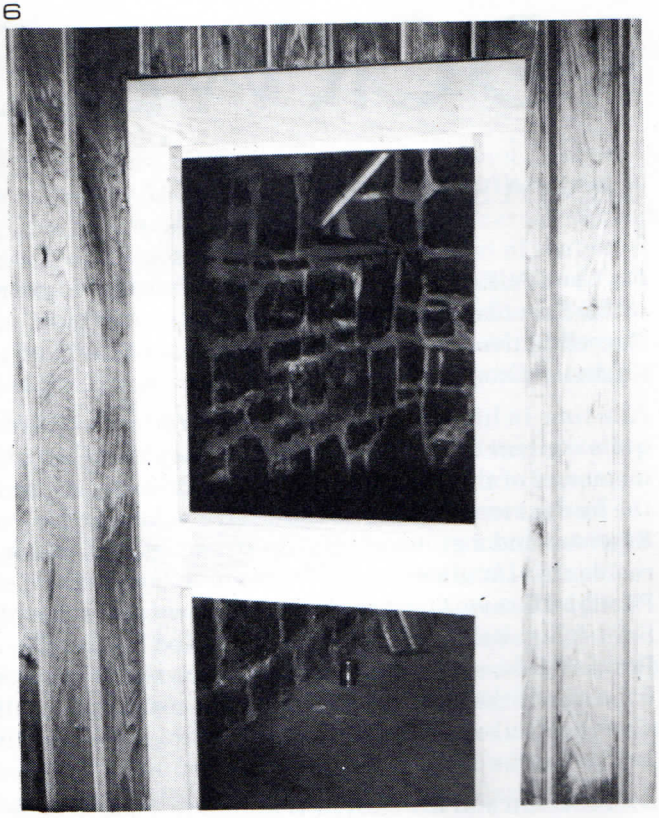


FIG. 4 DOOR BOTTOM END VIEW



PANELING CROSS SECTION FIG. 5

6



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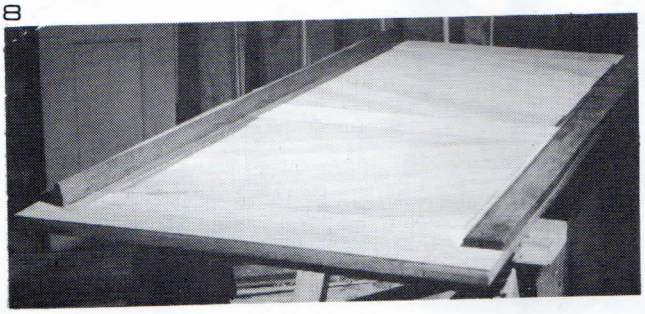

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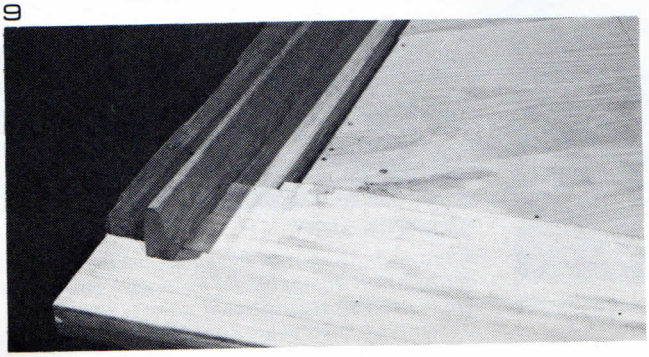

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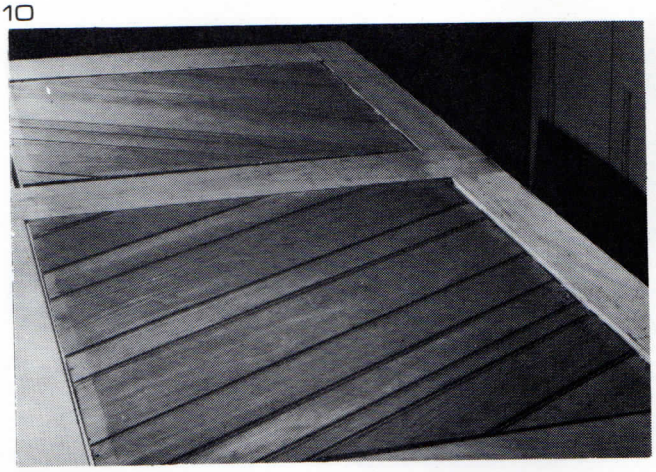

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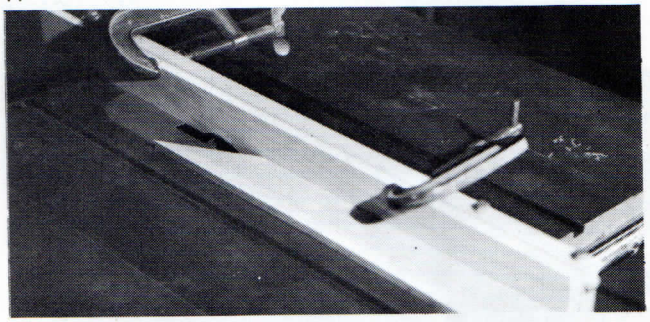

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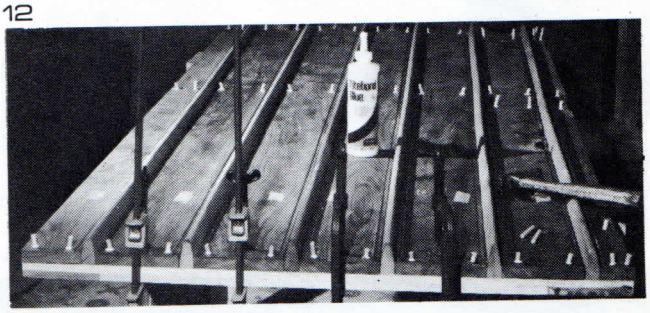

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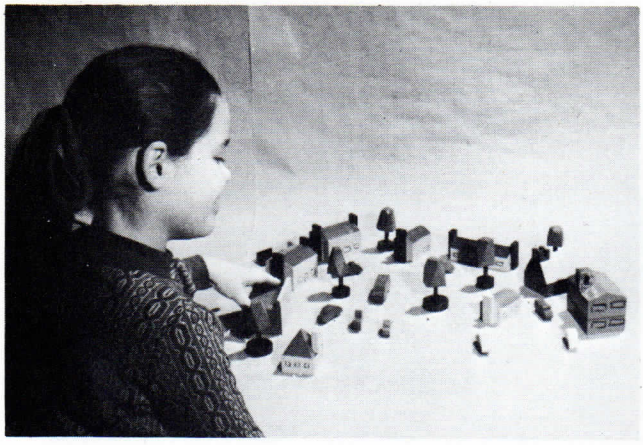
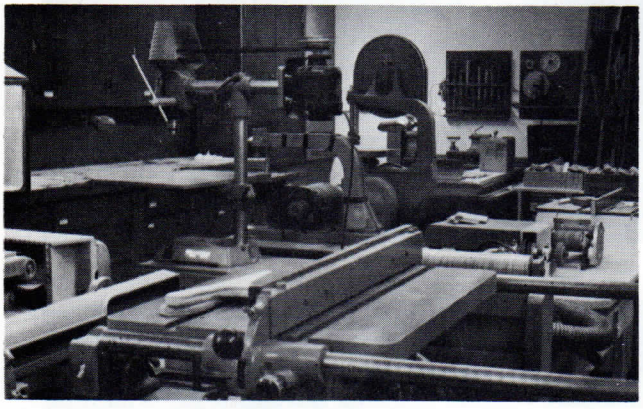


TOY VILLAGE

Houses, churches, schools, service stations, automobiles and what-not arranged to suit the child's fantasy.



WORKSHOP

A corner of the workshop where Santa and his helpers make the toys.

ROCKWELL

SANTA'S HELPERS

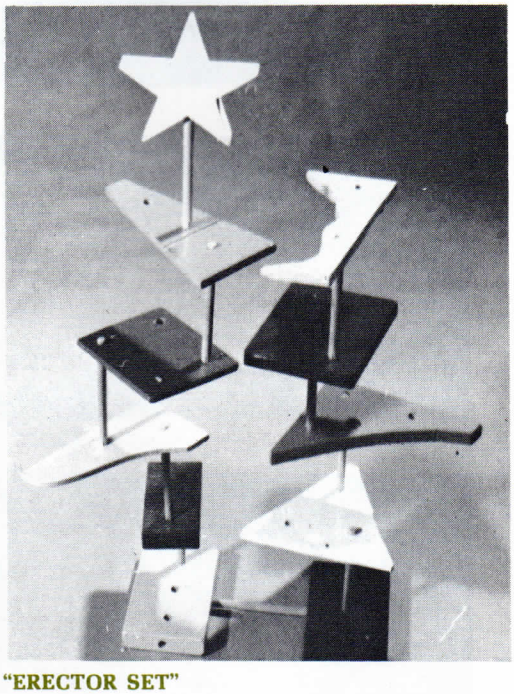
Dr. Lynn A. Emerson, professor emeritus and formerly of the School of Industrial and Labor Relations at Cornell University, will be the recipient of the final Rockwell Citation.

At a time in life when most men have retired and are quite content to sit back and take it easy to reflect on memories of the "good old days," Dr. Emerson is one of the busiest men we know. Some five years ago Dr. Emerson and a group of light-hearted senior citizens, residents of Willamette View Manor located near Portland Grove, Oregon, started their own version of Santa's workshop. With some well-used Rockwell Power Tools, some as many as 15 years old, purchased from one of the residents, they set out to make Christmas a more joyful experience for hundreds of needy children in Clackamas County, Oregon.

Dr. Emerson and his staff of Willamette View Manor residents, who range from about 65 years young to over 90, do all their own work producing over 350 wooden toys which they give to 10 special education schools and agencies. Dr. Emerson predicts "there will be even more".

These toys are designed, cut out, assembled and painted

Santa's helpers, under the direction of Dr. Lynn Emerson in the foreground, busily prepare toys for disadvantaged children in the true spirit of Christmas.



"ERECTOR SET"

Scrap plywood cut in irregular shapes with holes drilled in it for 5/16" dowels and slotted ends. Three are painted different colors. Kids build up structures sometimes six or eight feet high.

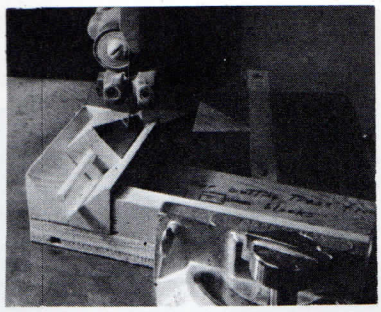
CITATION

by the residents. Some of these active senior citizens are accomplished artists and craftsmen in their own right, while some are just learning. Dr. Emerson, Robert Harris, and Frederick W. Otto handle most of the wood cutting duties for the projects on a Rockwell band saw, two table saws, two drill presses, and a belt and disc sander. Dr. Emerson pointed out a Rockwell lathe and floor grinder as well as many hand held power tools that also get heavy use.

Other residents at Dr. Emerson's year-round Santa's workshop paint doll houses, make play furniture, or turn out tiny block-like houses and churches which make up village scenes. Dr. Emerson pointed out there are other toys that are used by institutional groups and special schools to teach coordination, color identification, and the like. Last year's distribution list included Whitcomb, Lewelling and Linwood Schools in Milwaukee; Estacada TMR Center, the Big Brothers of Milwaukee; the County Child Care Center in Milwaukee; the County Welfare Dept.; the Oregon City Fire Dept; the County Child Training Center in Redland and the Canby Child Care Center.

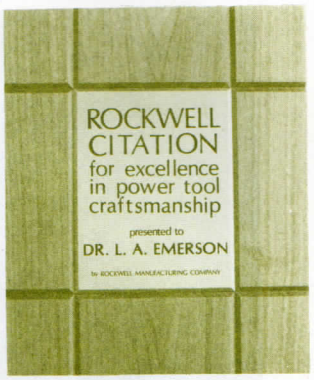
Dr. Emerson's group really loves what they are doing for the children . . . and it shows.

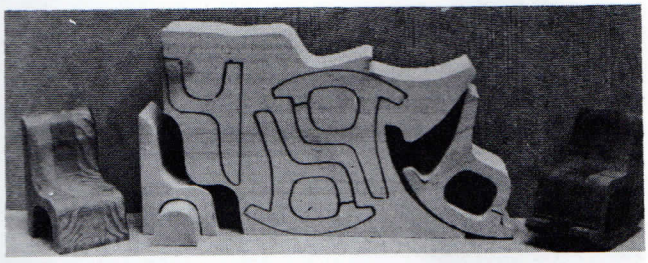
Good luck in your future endeavors and congratulations on your Rockwell Citation, Dr. Emerson — and Merry Christmas.



JIG

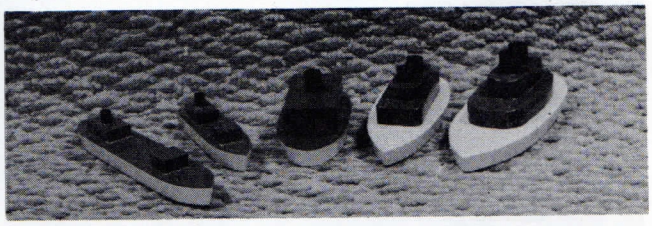
Jigs and templates are used wherever possible to save time, insure accuracy and mass produce the needed parts. Shown is a jig used for quantity production of trees for the toy village.





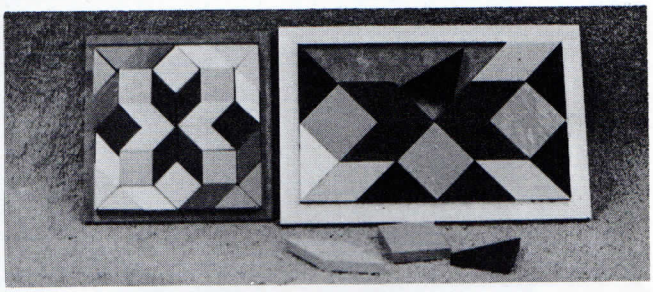
DOLL HOUSE FURNITURE

The house has a living room, dining alcove, kitchen, bedroom and bathroom with appropriate furniture for each. Chairs are made of laminated redwood using 3/4" stock. Note the slot cut to permit internal cutting of the rocker and later filled in.



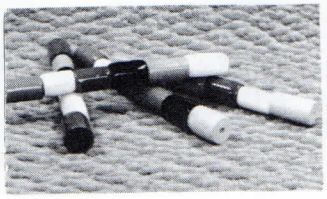
BATHTUB BOATS

Brightly colored boats, from a tanker to a tug to an ocean liner designed to float.



MOSAICS

Thin wood is precision cut on the radial arm saw and painted various colors. Parkayed blocks are put into different patterns with different colored blocks which are colorful and eye-catching.

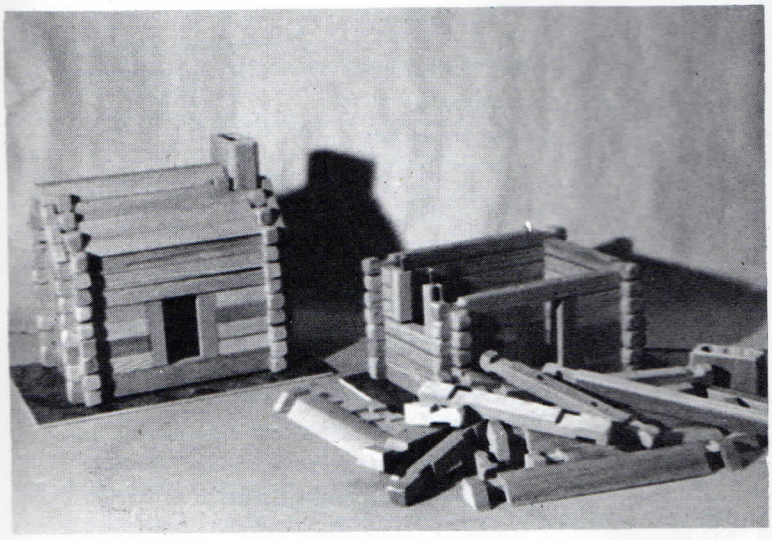


CLACKER OR RHYTHMS TOY

Spools turned to remove end flanges, painted in a variety of colors and strung on elastic cord. When the spools are pulled and released they clack to teach rhythm.

LOG CABIN

Made from redwood strips and notched to interlock.



EGG CUP...VASE

Not too long ago a friend showed me a clipping from a magazine of an egg cup with egg cozy. We both agreed that it was an attractive and useful gadget. With this in mind I redesigned the orignal, selected a piece of wood and went to work. The results looked good enough to pass on to you. Besides its primary function as an egg cup, there are alternate choices, such as a vase for a bouquet of delicate flowers. (Note the two different approaches in design. Fig. A — Fig. B).

PHOTO 1.

1. Make a full size pattern to follow or take your calipers and measure directly from the drawing.
2. Cut the stock to 2¼" x 2¼" x length needed.
3. Chamfer the corners as shown in Photo #1 to save turning time.
4. Square the top and bottom ends of turning using a blade that will give you a fine cut.
5. Sand the bottom smooth by hand with a flat block or, preferably the stationary belt or disc sander. The idea here is to achieve a flat, finished, and square base to start with. It's so much easier to do at this point than after the turning is completed.

PHOTO 2.

6. Bore a pilot hole in the center of the bottom to facilitate mounting the work on the lathe screw center.
7. Turn the cylinder round.
8. Move the tool rest parallel to the end and shape the inside.
9. Reposition the tool rest and turn the cup to the finished dimensions.
10. Sand with two or three grades of sandpaper, progressively finer in grit, finishing up with 220 grit or 6/0 sandpaper. My preference is aluminum oxide sandpaper.
11. Add the outline of a face if you wish (ours was done with India ink). Finish the cup to suit. We used a salad bowl finish available from Craftsman Wood Service, Chicago. See Sources Index, March—April or May—June, 1972 issues for other supply houses.

STOCKING CAP

Now for the woman in the family, here's how to make the egg cozy.

Bear Brand Babyfair — 1 ball

1 set double pointed needles No. 3 or any size needles which will give the stitch gauge given below.

6 sts = 1 inch 10 rounds = 1 inch

PHOTO 3. Cast on 40 sts loosely. Divide sts on 3 needles (13-13-14) and join, being careful not to twist sts. K 2, P 2 in ribbing for 1/2 inch.

Work in stockinette st for 1½ inches.

SHAPE TOP:

PHOTO 4. Continuing in stockinette pattern, K 10 sts, place a marker, K 10 sts and place a marker.* Continue in this manner twice more. You will now have 4 sections of 10 sts each. Decrease Row: K 2 tog, K next 8 sts, slip marker, K 2 tog, K next 8 sts, slip marker, continue in this manner to the end of the round.

Next round K.

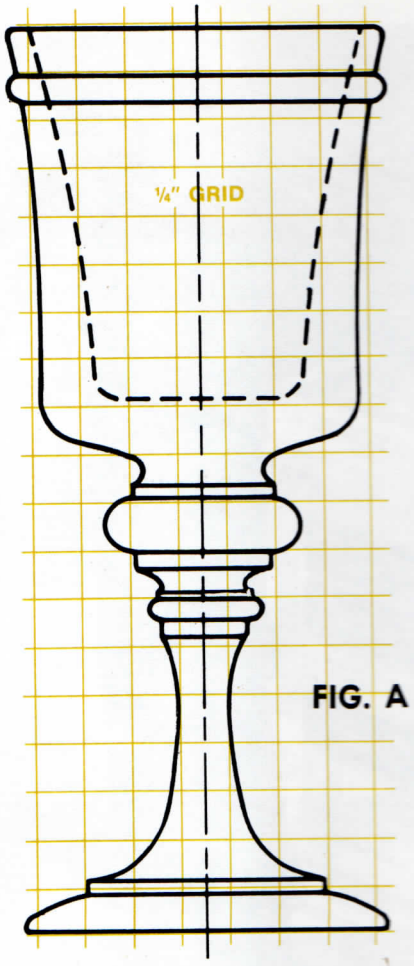


FIG. A

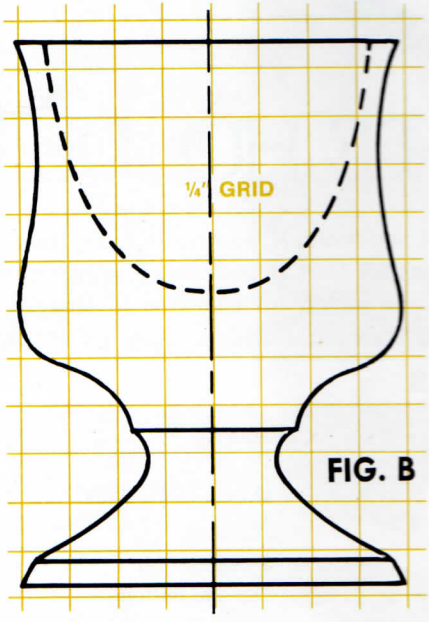


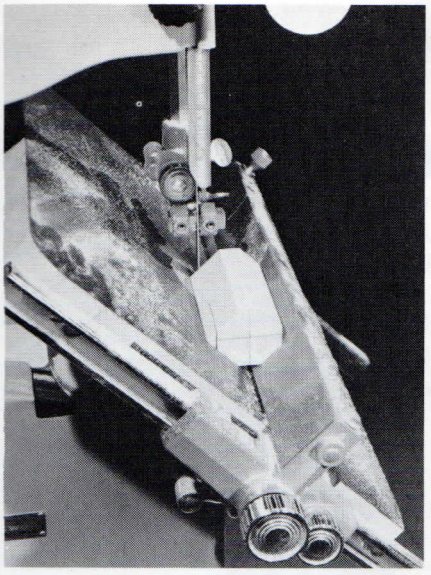
FIG. B

BILL OF MATERIALS

ROUGH SIZES

QTY.	SIZE	DESCRIPTION
One	2¼ x 2¼ x 3	Egg Cup — Maple
One	2¼ x 2¼ x 4¾	Alternate Design- Hardwood
One	Can	Salad Bowl Finish or Lacquer

1



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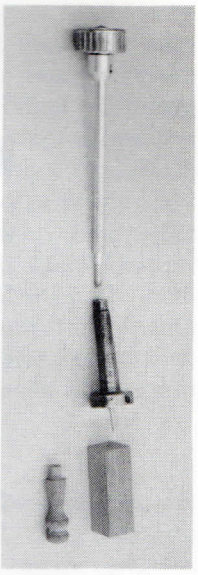


Repeat the two decrease rounds until you have a total of 20 sts remaining on all needles, ending with a K round.

Break off yarn, leaving a 6 inch end.

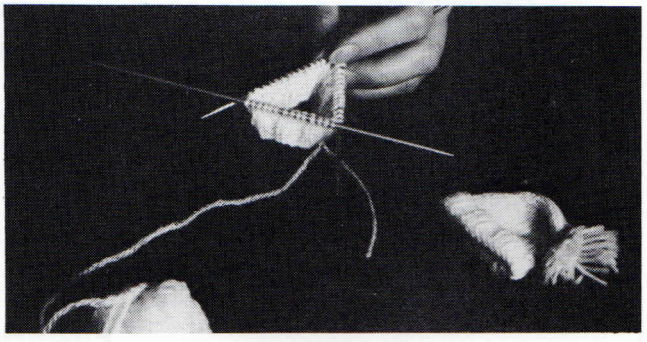
FINISHING:

Draw yarn through sts, pull up tightly and fasten off. Make a small pompon and sew to center of crown.

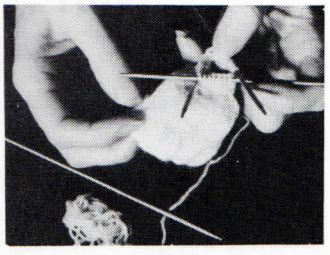
POMPON:

Wind yarn around a cardboard, cut to measure 2 inches, 50 times. Slip off cardboard and tie in center. Cut loops at each end and shake vigorously. Trim evenly.

3



4



Abbreviations:

K .....Knit
P .....Purl
Dec .....Decrease
Tog .....Together
St .....Stitch
Sts .....Stitches

***Markers**: When work specifies the use of a marker, use a small round paper clip for this purpose. In working, always slip this marker from one needle to the other.

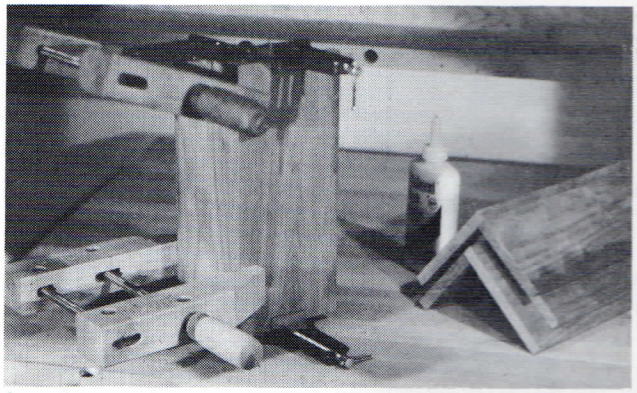
8 TRACK CASSETTE HOLDER

With so many 8 track stereo cartridge players on the market today, it's only natural to have a good holder to store the cartridges. The one we have designed for you holds 48 cartridges and for convenience it revolves. If you have cassettes instead of cartridges all that is necessary is to change a few dimensions based on the size of the tapes themselves.

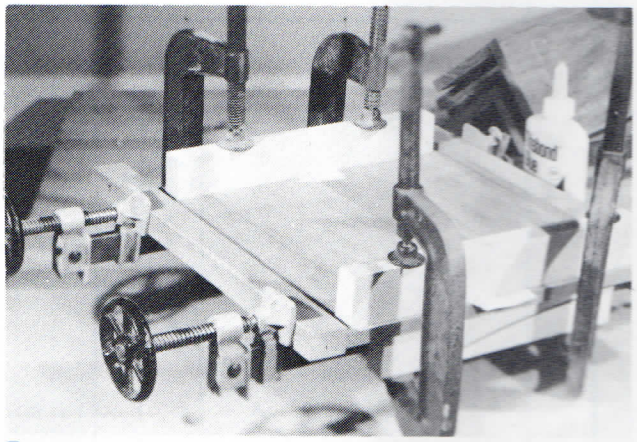
BILL OF MATERIALS

FINISHING SIZES

QUANTITY	SIZE	DESCRIPTION
4 Pcs.	1/2 x 5¼ x 11¼	Front Ⓐ
4 Pcs.	1/2 x 3½ x 11¼	Side Ⓑ
2 Pcs.	1/2 x 10⅞ x 10⅞	Top and Bottom
1 Pc.	1/2 x 8¼ x 8¼	Swivel Base
4 Pcs.	1/2 x 2 x 2 x 45°	Corner Blocks
1 Pc.	4" or 6"	Lazy Susan Bearing
4 Pcs.	3/4 x #6	Round Head Wood Screws
12 Pcs.	1½ x #6	Flat Head Wood Screws
8 Pcs.	1/4 x #3	Round Head Wood Screws (For Lazy Susan Bearing)

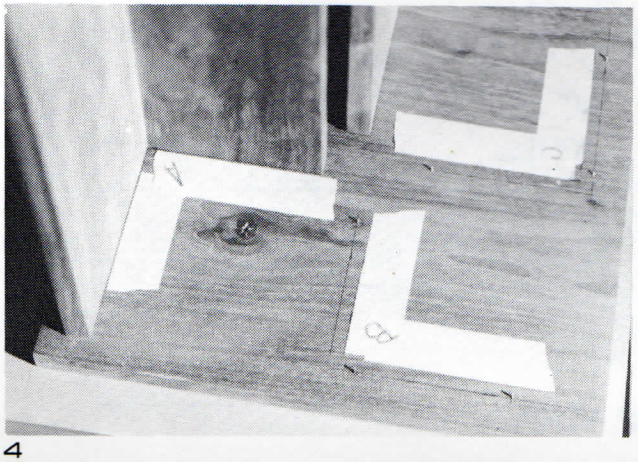


1



2

3



4

Square the eight upright pieces to size. Make sure they are all the same length. Sand the inner surfaces. Glue these pieces together using corner clamps and wood clamps or "C" clamps, keeping the ends even, Photo #1. Glue the pieces together for the top, bottom and swivel base, Photo #2. When dry, square these pieces to size and sand smooth. My method is to use a heavier grade of sandpaper (aluminum oxide) on the Rockwell #505 Orbital Sander and a finer paper on the Rockwell #303 Speed Block to save time. I also clamp four sheets of sandpaper to each machine, at the same time, and tear away each sheet as it wears out, again saving time, Photo #3.

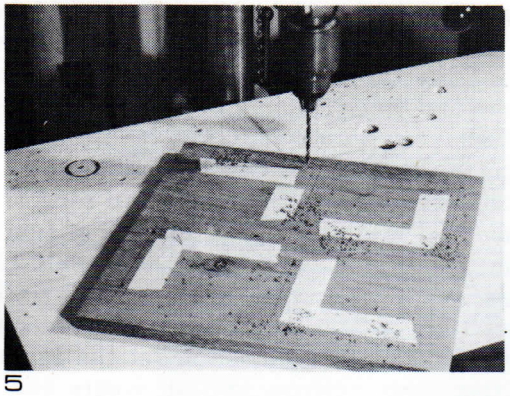
Photo #4 shows the layout for the wood screw shank holes in the bottom, Figure 1. The masking tape indicates the position of the inside corners. Small brads are driven part way into the bottom at the screw positions. These nails are cut off with side cutting pliers leaving 1/8" of the brad extending above the face of the wood. The upright corners are placed in position as at "A" in the photo and pressed down firmly enough to have the nails make holes in the end grain of the uprights. Remove the nails from the bottom and you have four sets of perfectly matched marks for boring the shank holes and pilot holes for the wood screws. Photo #5 shows boring the shank holes.

Assemble the uprights to the bottom, then glue the corner blocks in place as shown, using scrap blocks cut to fit the corner, Photo #6. Bore mounting holes in the corner blocks at an angle that will permit easy use of a screwdriver from the inside. Mount the top.

The lazy susan bearing is mounted to the swivel base using tiny round head screws. Bore access holes in the swivel base so it can easily be mounted to the bottom, Photo #7.

Mount a fancy handle to the top of the cassette holder and you are ready for a final sanding and finish.

NOTE: Tiny 1/8 strips (like drawer glides) can be added to the sides of each opening at the proper heights so that each tape may be removed individually without interfering with any other tape.



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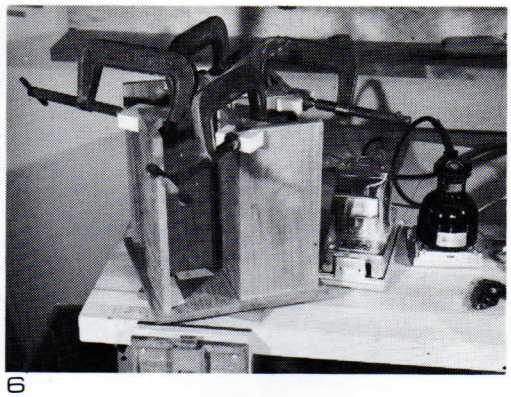

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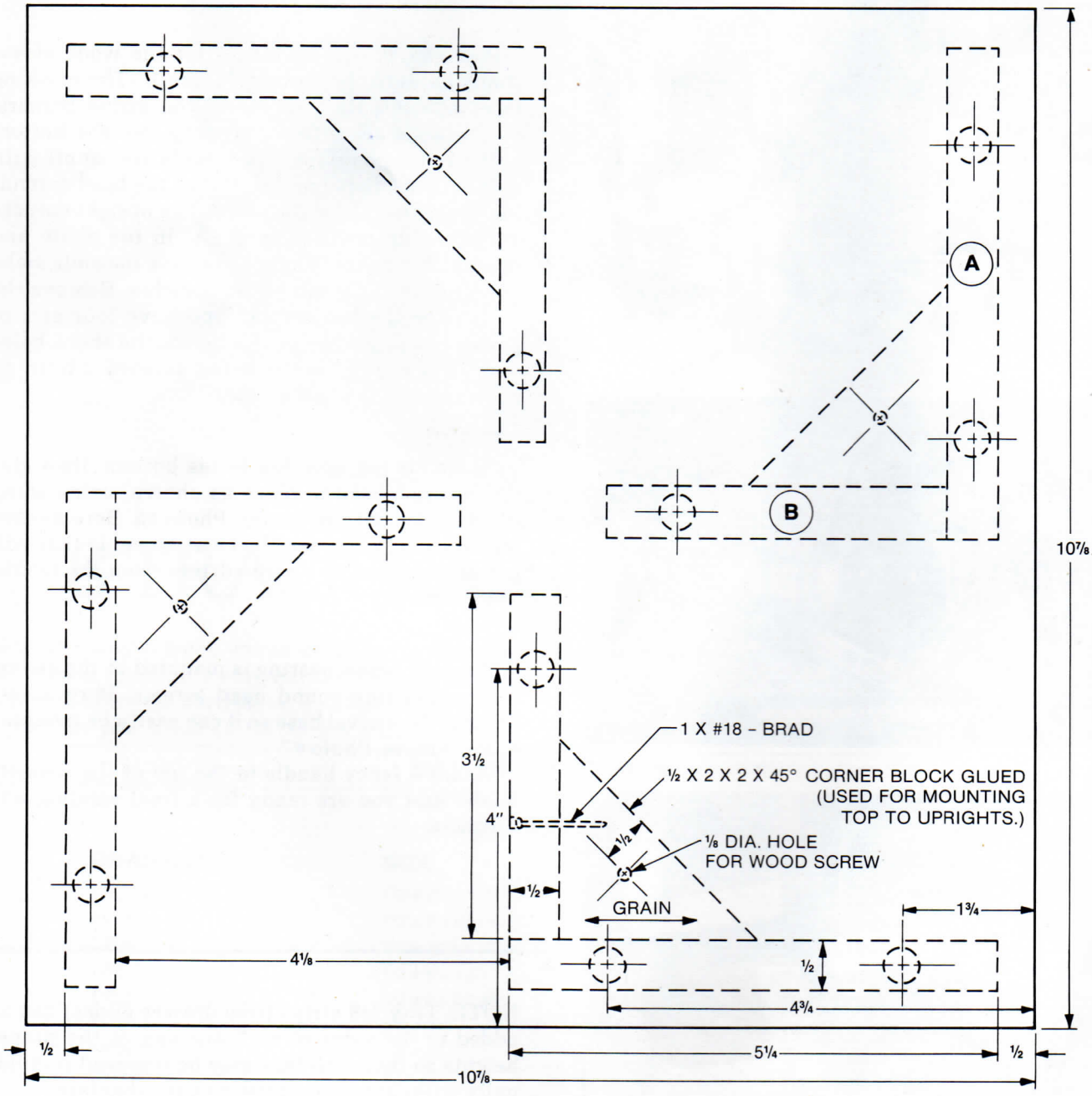
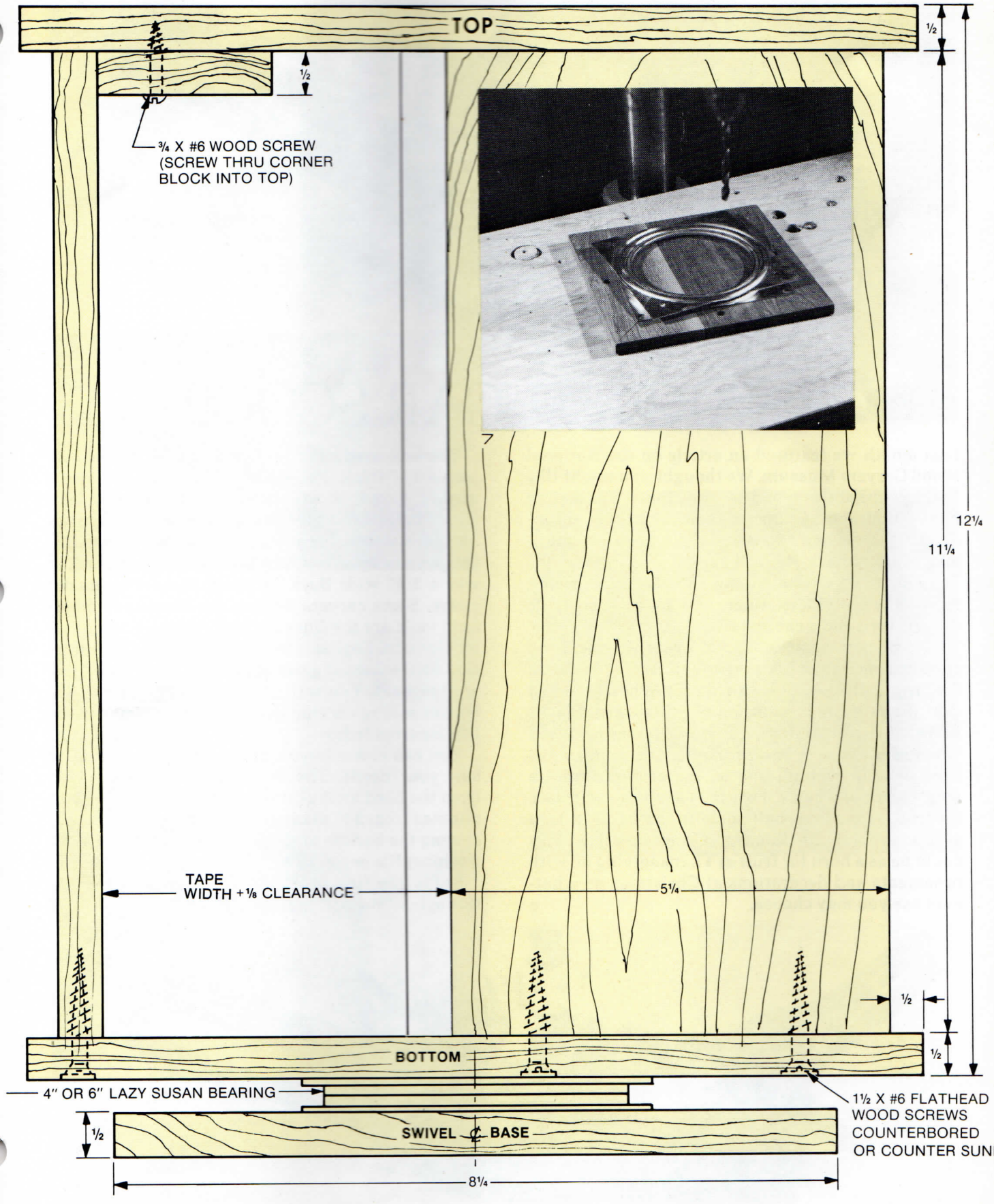


FIG. 1 TOP VIEW

FIG. 2 FRONT VIEW



SHAKER SUGAR SCOOP

Last month we featured an article on the National Wood Carvers Museum. We thought you might like to try your hand at wood carving. It is a fascinating hobby that can be done without elaborate equipment. This carving was done with a 3/4 wide gouge and a spoke shave. Rough shaping was done on the band saw and with a coping saw. We also used a hand plane, dividers, ruler, pen knife, a portable electric drill and a cabinet file.

This Shaker sugar scoop has beautiful lines, and is quite functional. It's easy to tell it was designed and originally carved by an expert. When I studied it at the Fruitlands Museum near Harvard, Mass., it was difficult to distinguish what kind of wood was used, I believe it was maple. Our replica has been done in walnut, and as the original, from a single piece of wood. I'll use it as a table centerpiece for fruit. If made in half scale it can be used as a scoop, around the kitchen. Other creative uses could be as a horn for fruit at Thanksgiving or with ornaments and decorations at Christmas or whatever use you may choose.

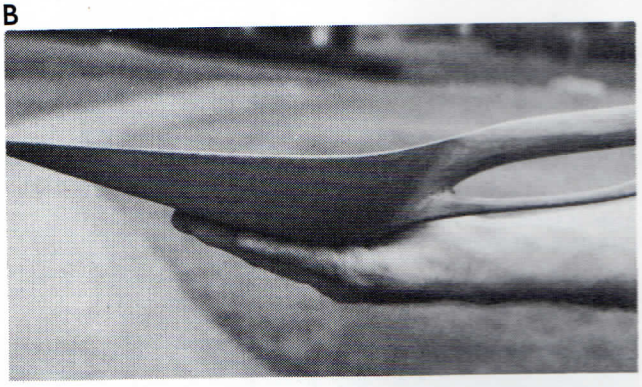
You will need a block of pine or a hardwood like maple 3⅛" thick, 5½" wide and 16" long. Choose a quality gouge, it will hold an edge better, stay sharp longer and give more satisfaction than an inexpensive one. In carving, choose the best quality gouge you can afford. The one used in this carving was a 3/4" wide Buck Brothers (American made) gouge. Some carvers believe the handmade Sheffield tools are the finest, others maintain top quality German, English, Italian, or Japanese are superior. Still others suggest high grade American tools are the best. You will find a number of supply houses selling carving tools in this issue under the title Sources Index.

You can either buy or make a carver's mallet to suit your needs. The one shown has been made from the hard knot of walnut. It can be made in 15 minutes from a 3" diameter limb of a tree, by bandsawing the handle to shape and smoothing it with a cabinet file or rasp.

Study the five photos of the original carefully throughout the carving.

A

B



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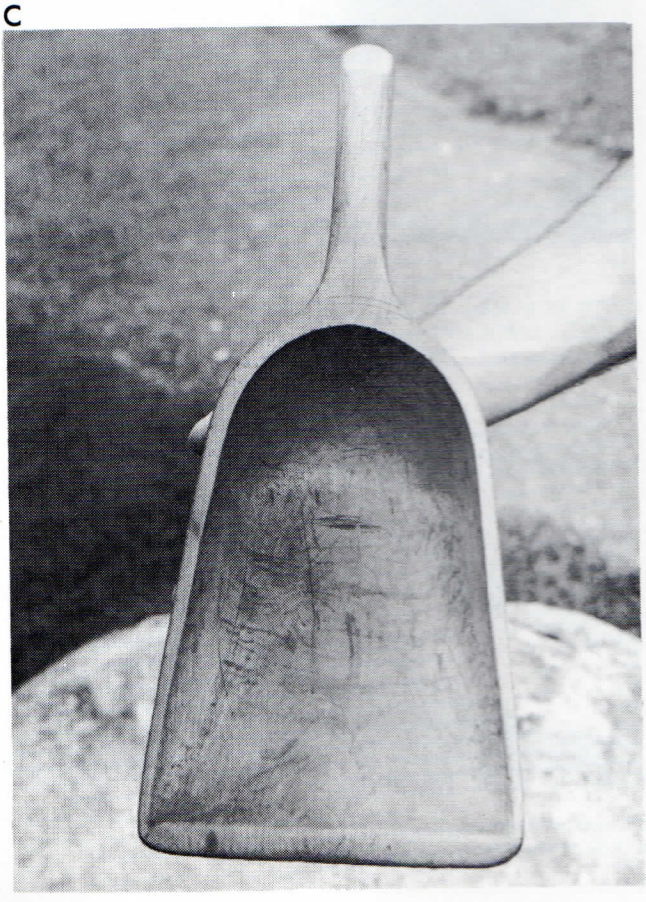
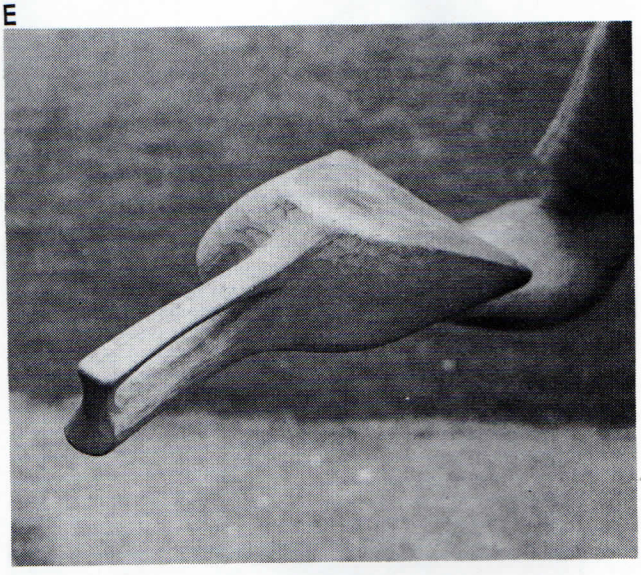


D

E

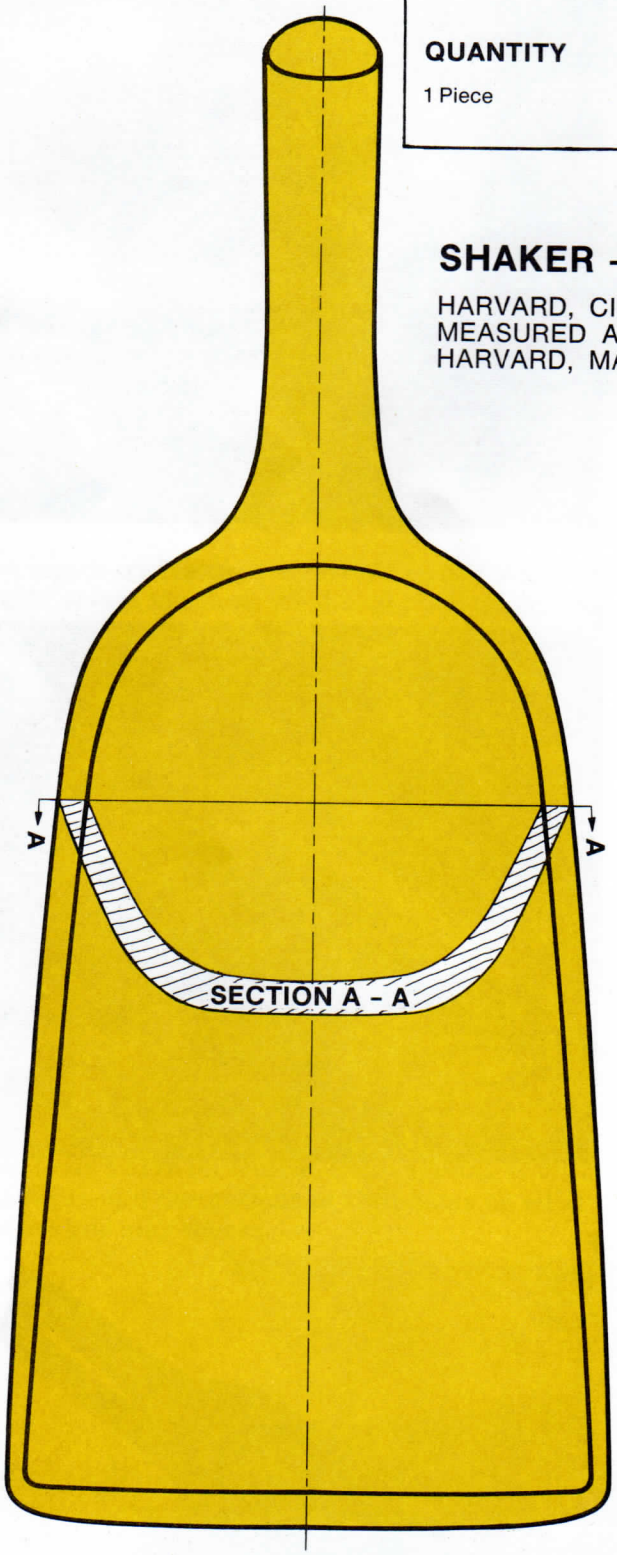


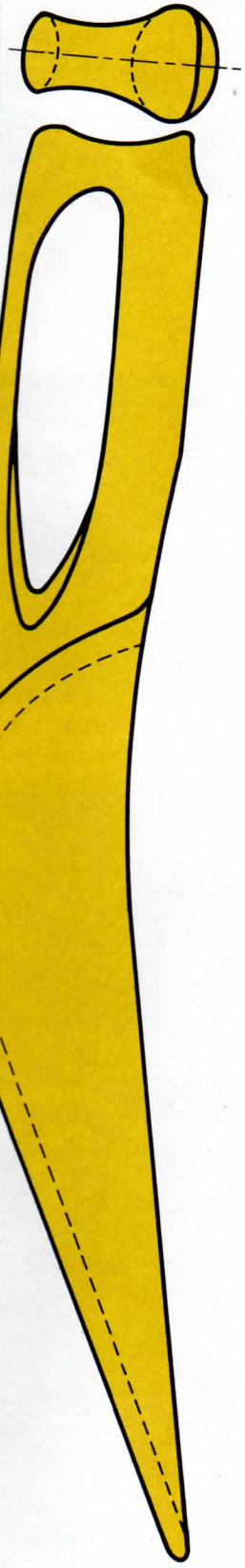
F

BILL OF MATERIALS		
ROUGH SIZES		
QUANTITY	**SIZE**	**DESCRIPTION**
1 Piece	3⅛ x 6½ x 16	. Maple-Pine-Walnut

SHAKER - SUGAR SCOOP

HARVARD, CIRCA 1830
MEASURED AT FRUITLANDS MUSEUMS
HARVARD, MASS.





ROUGH STOCK SIZE — 3⅛" X 5½" X 16" (MAPLE)

The original was left unsanded and perhaps unfinished or lightly coated with vegetable oil. Ours has four coats of Watco Penetrating Oil Finish.

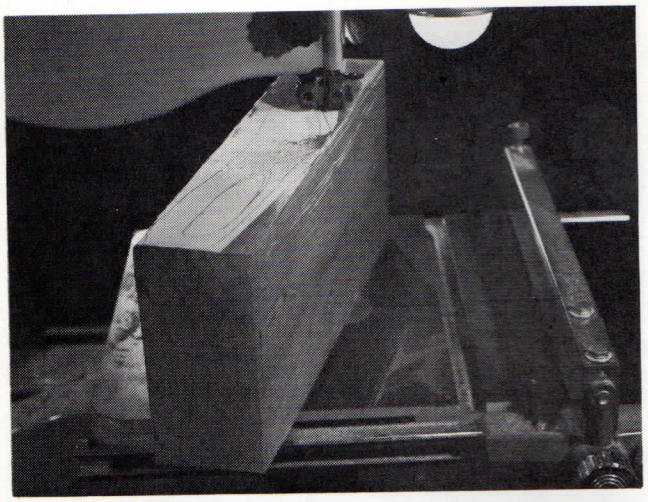


Photo 1.

Make full sized templates, using the squares method, if you are going to copy the full sized original, although some readers will prefer to use our half size patterns. We used rubber cement to glue the pattern to the wood. The 14" band saw has just enough capacity to accept the wood for a full size scoop. Use a narrow blade, preferably a new one, because you will be making very heavy cuts. A dull blade with improper "set" that "leads" to one side will give very inaccurate results.

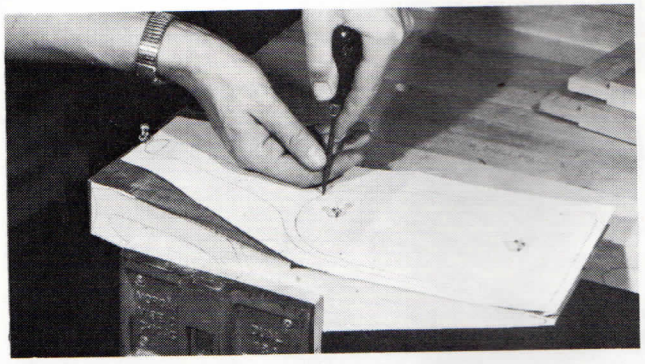


Photo 2.

Hold the pattern in place with "push" pins and use a scratch awl to make the outline on the wood. Carbon paper can also be used for this and is the better method.

Photo 3.

The bottom is smoothed and planed using a spoke shave or hand plane.

Photo 4.

Start the carving by beginning in the deepest section and by carving to the center of an imaginary circle. With each cut raise the handle forward to break the chip. The carving mallet is used as shown to tap the gouge and make each cut.

Photo 5.

Hold the gouge and mallet as shown, turn the wood around and carve the second half of the imaginary circle. NOTE: Carve "with the grain."

Photo 6.

Practice removing the torn fibers that develop in the carving so that when you get to the bottom you will have developed a technique to eliminate these tears. There is a danger of carving too deep and cutting through the bottom, so be careful as you approach the bottom.

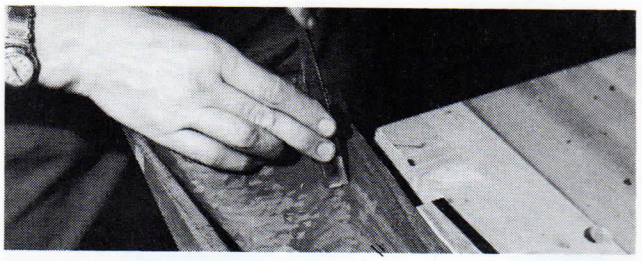


Photo 7.

The final refining of the inside is done without the carver's mallet and is done with light hand pressure. The idea is to cut away the high spots to make the surface relatively smooth. By turning the gouge handle as you carve, the cuts are easier to make and are smooth and clean. Depth of cut is controlled by the height of the handle. By lowering the handle at the end of each cut, you end the cut cleanly without tearing the wood fibers. It's also very important to cut "with the grain" to prevent tearing away the fibers. The original sugar scoop was made leaving all the tool marks as cut and was unsanded, thus giving it "added character."

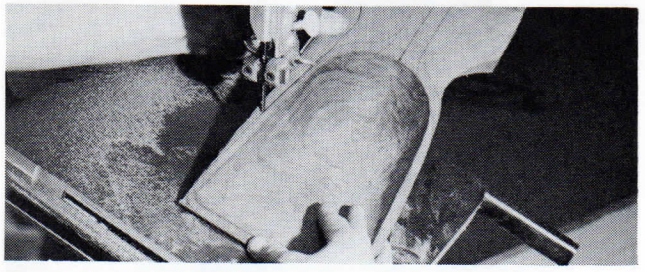


Photo 8.

The sides of the scoop are cut on the band saw with the table tilted to a 25° angle.

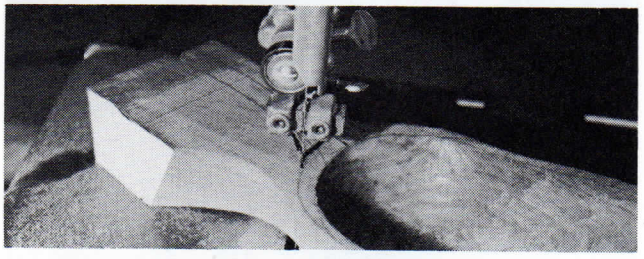


Photo 9.

The handle is cut with the table square with the blade.

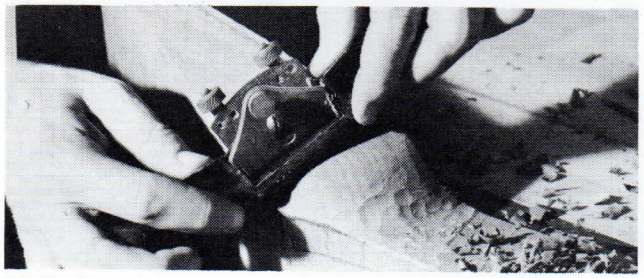


Photo 10.

Shape the sides of the scoop with the spoke shave. Use center lines and a divider to keep the contour of the right and left sides equal. Carve the curved area between the bowl and handle. Refer again to the photos of the original scoop.

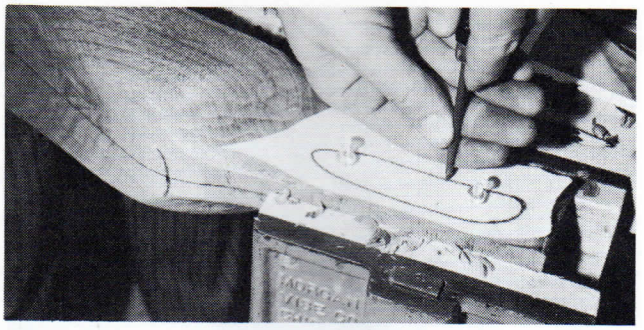


Photo 11.

Trace the handle opening and the end contours.

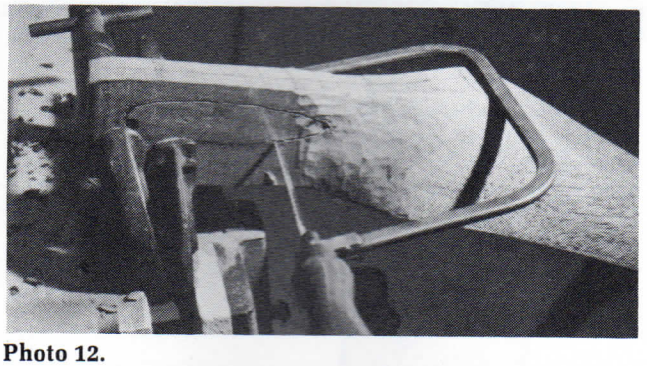


Photo 12.

Bore a hole in the handle opening. Insert a coping saw blade and reassemble. Cut along the layout lines and file smooth.

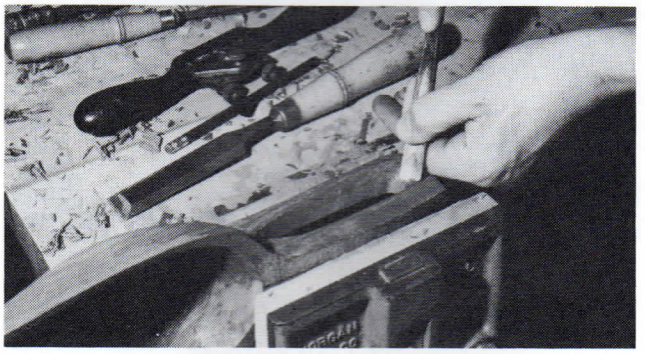


Photo 13-14.

Final shaping of the handle is done with the gouge, spoke shave and a particularly sharp pocket knife.

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Crown Publishers, Inc.,
New York
Fourth Printing May, 1972

WOODTURNING
By Eldon Rebhorn
McKnight & McKnight
Publishing Co.
Bloomington, Illinois
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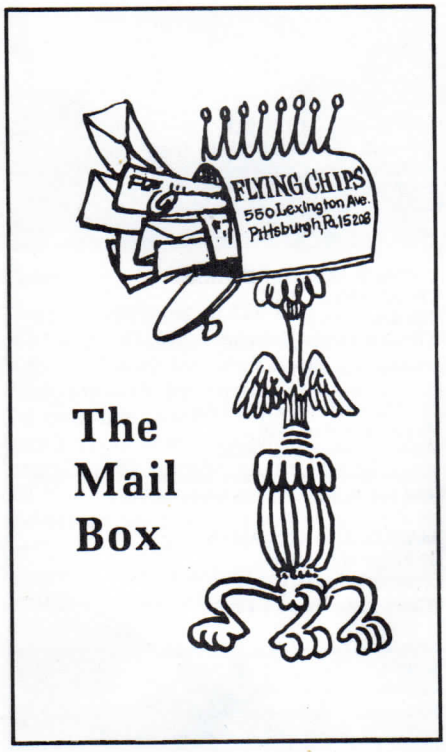

Hal E. Seagraves of Lyme, New Hampshire, has sent us some pictures of his work done in his Rockwell shop.

Mahogany Corner Cupboard

Tiger Striped Maple Desk

Cherry Queen Ann Low Boy, Stool & Mirror

EASTERN PINE FOR OUR WESTERN READERS

"I would like to pass on to a gentleman that inquired in the last issue of Flying Chips a suggestion which I think will fill his need and requirement. He asked for information on pine wood, a pine harder than white or sugar pine. I would suggest that he explore poplar. Upon close examination of the good and rare Pennsylvania Dutch antiques suppose to be pine, are not pine at all, but poplar. There are however about four different kinds of poplar, the white poplar being the better grade. I'm afraid the harder eastern pine which he mentioned would bring him into the Pitch Pine family.

"I mention my willingness to help in any way to stimulate the home workshop effort and to keep alive the art of craftsmanship."

George M. Kroninger
Kutztown, Pa.

MULTI-SPUR BITS

The July-August edition of the Flying Chips magazine, on page 121, Photo #2, shows the use of a multi-spur bit for boring holes. The bit illustrated appears to be a better fabrication than I've seen before. Could you tell me if it can be obtained through a Rockwell dealer or what other source.

Henry Langlois
North Bay, Ontario

also

Glenn Q. Bannerman
Richmond, Va.

The multi-spur bit is the finest bit I've ever used for boring holes in wood. The ones we use are made by the Greenlee Tool Co. The multi-spur bit is a fast cutting, smooth boring bit. It will bore any arc of a circle on the edge of a piece of stock. Bores veneers without tearing. Bores at an angle, overlapping, or on close centers without splitting stock. Available from 1/2" to 3" by 16ths.

HOME WORKSHOP CLUB

We received a letter from Fred Taylor, Roseville, Illinois, telling us about the Knox County Home Workshop Club in Galesburg, Illinois. Fred claims his club is possibly the oldest club of its kind in the U.S. It was organized in 1932 and only one original member is still living.

We feel this is a good thing and hopefully more people will see this article and form clubs throughout the country.

A REAL CRAFTSMAN —

Louis A. Desrosiers of
North Providence,
Pawtucket, Rhode Island

CRAFTSHEET

INDEX OF PROJECTS

Here's the complete list of projects and articles that appeared in the six issues of FLYING CHIPS in 1972. If you missed any of the issues, you can purchase back issues at 30¢ per copy. The bound volume consisting of all six 1972 issues will be available in February, 1973, at $2.50 each.

FOR VOLUME 41, 1972

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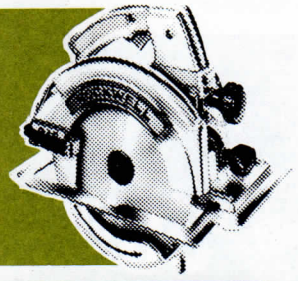

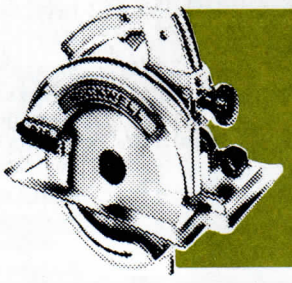

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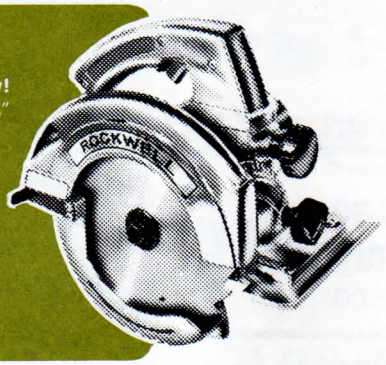

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