

SHOPSMITH SHAVINGS



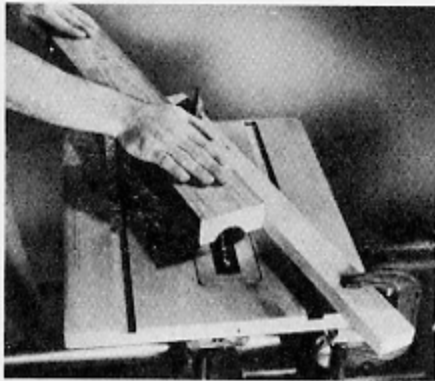
The Editor's Workbench

This editor was most pleased by your overwhelming response to our suggestion that we enlarge "SHOPSMITH SHAVINGS" with projects and added departments and that we publish it more frequently. For this vote of confidence we thank you.

As one of the SHOPSMITH Family wrote in, "We have the tool for the job, now give us jobs for the tool." We feel that all "SHAVINGS" projects should be tailored to complement SHOPSMITH's extreme versatility. Two projects appear in this issue,

Cove cutting

Coving is an often overlooked operation with the saw. Suggestions for its use and application have come in to us from Mr. John E. Caves, of Palo Alto, California. Mr. Caves, the owner of Cambridge Hardware in Palo Alto, is not only a SHOPSMITH dealer, but a SHOPSMITH owner and enthusiast. To cove, that is to cut an inside curve, he clamps a board fence across his saw table at the desired angle, making sure that his workpiece will be centered over the blade. By lowering the table no more than $\frac{1}{16}$ " for each pass over the blade, the desired depth of the cove can be made. The greater the angle of cut, the larger the trough will be—up to the arc of an 8" circle when cutting at 90 degrees to the saw blade. The heavy duty Magna Dado set for about a $\frac{1}{4}$ " dado cut is ideal for this operation, but a slow feeding of your workpiece is essential.



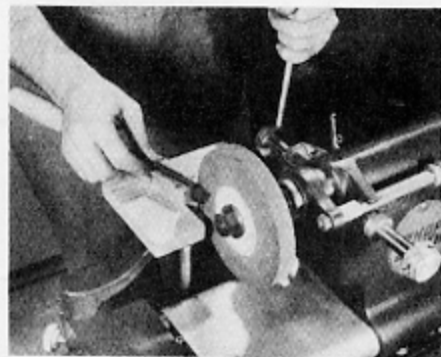
Its applications? Well, you can make anything from rain gutters to cove moulding. Much modern furniture, especially Chinese modern, uses a curved edge with great effect. If you want an inside and outside curve, glue two pieces of stock together with paper in between. Turn them on the lathe to the desired diameter, separate the pieces and cut your coves on the inside of each. By splitting your half round piece you're set to edge a table or cabinet in a professional manner.

the SHOPSMITH bench drawer and a full length drum sander. The latter is the result of many ideas sent in by SHOPSMITH owners.

Keep in mind that "SHOPSMITH SHAVINGS" is YOUR news bulletin designed to fulfill YOUR needs. You, in effect, are on the editorial staff. Let us know what you want and we will try to give it to you.

The latest accessory catalog is being mailed out to you with this issue of "SHAVINGS" to keep you current with new items that increase the range and usefulness of SHOPSMITH.

SHOPSMITH as a tool sharpener

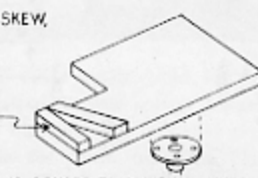


It has probably occurred to many owners that SHOPSMITH's movable carriage, quill feed and the proper grinding wheel add up to a good combination for tool sharpening. A 6", 60 grit, aluminum oxide wheel is the best for general purpose grinding. A simple tool rest is made with a floor flange fastened to a pipe which is set in the tool rest arm. A hardwood block fastened to the flange serves as a tool platform. Blocks cut at various angles and fastened to the platform align and support your tools for clamping. By feeding out the quill against the tool, smooth clean edges are obtained. Proper honing will supply the finishing touches. Never use excessive pressure when applying the tools to the wheel or you'll draw the temper out of them. For a fine finish on your grinding job try the sanding wheel with a fine grit paper. Two basic safety rules—protect your eyes and your tubular ways.

SUGGESTED VARIATIONS

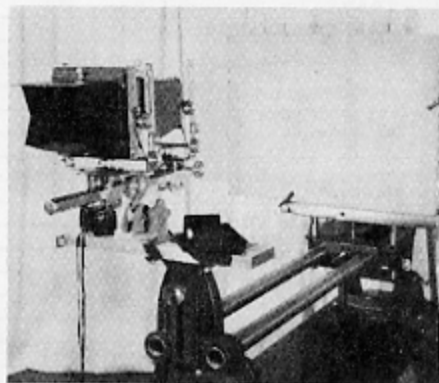
60° ANGLE FOR SKEW, PARTING TOOL

90° ANGLE FOR STRAIGHT EDGES



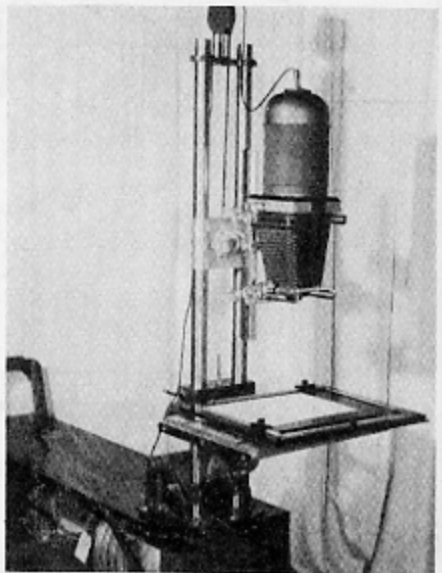
BE SURE PLATFORM IS SQUARE TO GRINDING WHEEL

SHOPSMITH for the photographer



Why limit your SHOPSMITH's use to wood-working? Leland C. Smith, Jr., of Elgin, Illinois, has put the sliding headstock and carriage to good use as a copying device, enlarging stand and as an adjustable support for studio work. As a copying stand Mr. Smith mounts the camera on the extension table and clamps a drawing board to the saw table which is reversed in its carriage and set in the vertical position. To increase the focal length, Mr. Smith removed the headstock. Where shorter focal lengths can be used, we suggest that finer focus can be had by sliding the carriage in combination with the quill. Looks like a good setup for movie tilting to us.

In the vertical position Mr. Smith has mounted an enlarger on a specially built carriage which is counter-balanced at the tube tie bar again using the table as an enlarging surface. Another version is to mount your camera on the spindle, possibly with a face plate, using the micro-adjustment feature of the quill for fine focusing.



BILL OF MATERIALS			
PART	AMT	SIZE	MATERIAL
DRAWER			
1	1	$\frac{1}{4} \times 2\frac{3}{4} \times 27\frac{1}{8}$	Fir Ply
2	2	$1\frac{1}{2} \times 2\frac{3}{4} \times 14\frac{7}{8}$	Pine
3	1	$\frac{3}{4} \times 7\frac{1}{2} \times 23\frac{1}{2}$	"
4	2	$\frac{3}{4} \times 7\frac{1}{2} \times 14\frac{5}{8}$	"
5	1	$\frac{3}{4} \times 7\frac{1}{2} \times 24$	"
12	1	$\frac{1}{4} \times 14\frac{1}{2} \times 23$	Fir Ply
13	2	$\frac{3}{4} \times \frac{3}{4} \times 14\frac{7}{8}$	Oak
TRAY			
6	3	$\frac{3}{4} \times 2 \times 11$	Pine
7	1	$\frac{1}{4} \times 2 \times 10\frac{1}{4}$	Fir Ply
8	3	$\frac{1}{4} \times 2 \times 3\frac{1}{8}$	"
9	1	$\frac{1}{4} \times 11 \times 13\frac{1}{4}$	"
10	2	$\frac{3}{4} \times 2 \times 12\frac{1}{2}$	Pine
11	2	$\frac{1}{2} \times \frac{3}{4} \times 22\frac{1}{2}$	"
HARDWARE			
1	SCREEN DOOR HANDLE		
4	CARRIAGE BOLTS $\frac{1}{4} \times 4\frac{3}{8}$		
8	WASHERS		
10	SCREWS, FLAT HEAD #9-1/4		
INCIDENTALS			
CASEIN GLUE, BRADS, FINISHING NAILS & ORANGE SHELLAC			

SHOPSMITH bench drawer

As the mobility of SHOPSMITH mounted on casters is one of its outstanding features, you'll want your most used attachments and accessories as mobile as your 5 in 1 tool. With the SHOPSMITH bench drawer no one can say, "You can't take it with you," for this well designed drawer will hold all but the largest accessories, and whether you're in a corner of the garage, out in the backyard, or working in the driveway, you will appreciate having attachments handy.

The bench drawer is a supplement to your regular accessory rack and a handy place to keep those small, easy to misplace items. Rabbiting and dado cuts which are specified in this design will be a cinch with your new Magna Dado blade, but with any good blade and SHOPSMITH's quill feed a dado cut is always easy.

Here is a two evening job that you'll start using the minute you've driven the last nail.

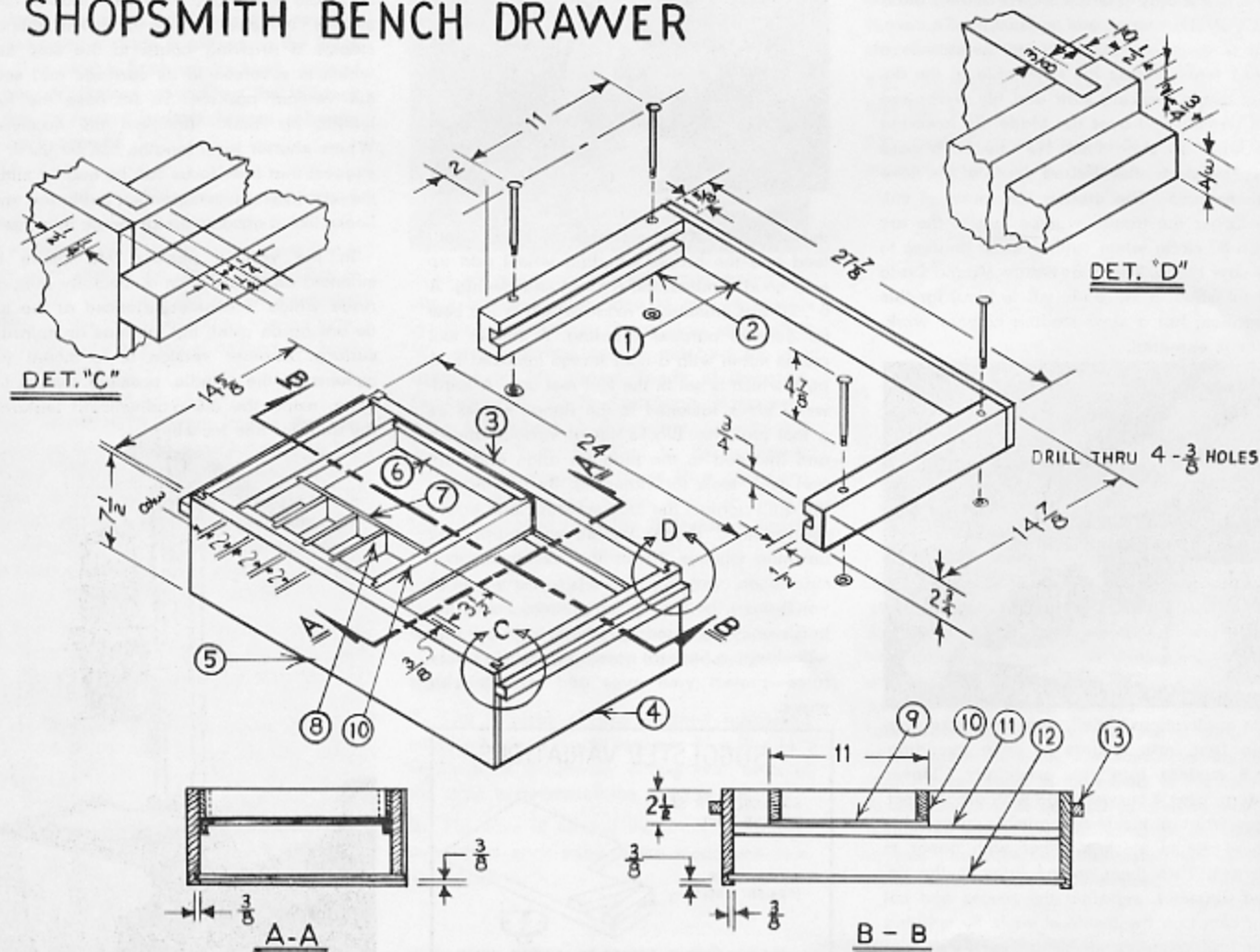
How to Build It

1. Cut all material to size as indicated in the Bill of Materials.

2. To avoid repeated settings for dado and rabbet cuts, make your cuts as follows:

- Dado ($\frac{3}{4} \times \frac{3}{4}$) both pieces of Part #2.
- Dado ($\frac{1}{4}$ " wide x $\frac{3}{4}$ " deep) both ends of Part #5.
- Dado ($\frac{3}{8}$ " wide x $\frac{1}{2}$ " deep) the back of both pieces of Part #4.
- Dado ($\frac{1}{4}$ " wide x $\frac{1}{2}$ " deep) the front of both pieces of Part #4.
- Dado ($\frac{1}{4}$ " wide x $\frac{3}{8}$ " deep) the bottoms of both pieces of Part #4.
- Dado ($\frac{1}{4}$ " wide x $\frac{3}{8}$ " deep) the bottom of Part #5.
- Dado ($\frac{1}{4}$ " wide x $\frac{3}{8}$ " deep) both pieces of Part #10.
- Dado ($\frac{1}{4}$ " wide x $\frac{3}{8}$ " deep) the front piece of Part #6.
- Rabbet ($\frac{3}{8}$ " wide x $\frac{1}{2}$ " deep) both ends of Part #3.
- Rabbet ($\frac{3}{8}$ " wide x $\frac{1}{2}$ " deep) both ends of both pieces of Part #6.
- Rabbet ($\frac{1}{2}$ " wide x $\frac{3}{8}$ " deep) both ends of both pieces of Part #10.

SHOPSMITH BENCH DRAWER



1. Rabbet (1/2" wide x 1/4" deep) both ends of Part #5.

Assembly — Bench Drawer

1. Assemble drawer sides (Part #4, 2 pieces) and front (Part #5) with glue and nails.
2. Glue up and slide in drawer bottom (Part #12).
3. Add back (Part #3) with glue and nails.
4. Add runners (Part #13, 2 pieces) with glue and screws.
5. Locate position of one side of the drawer slide (Part #2). Using it as a template, drill through bench top.
6. Bolt slide in place but tighten bolts only slightly.
7. Hang drawer to locate position of other slide. Do not make drawer fit too tight or it will not slide easily.
8. Bolt both sides firmly into position.
9. Add slide stop (Part #1) with glue and screws.
10. Coat all mating edges with glue and reinforce with finishing nails or screws as directed.

Assembly — Sliding Drawer

1. Glue and nail 2 pieces of Part #6 to 2 pieces of Part #10.
2. Glue and nail drawer bottom (Part #9) to drawer sides.
3. Glue and nail Part #7.
4. Glue and nail 3 pieces of Part #8.
5. Glue and nail runners (Part #11, 2 pieces) to front and back of bench drawer.
6. Coat all mating edges with glue and reinforce with finishing nails as directed.

The Magna Dado

Did you ever want to make a "dead" accurate groove for shelving or other types of cabinet making? Magna Engineering has come up with a new type dado blade that makes accuracy a foregone conclusion. Magna Dado is a complete unit in itself. No shims, cutters, chippers or floating washers to grope for and fool with. 27 calibrated settings and an infinite number of intermediate ones can be had with a quick twist of an Allen wrench in the smoothly geared hub assembly. Magna Dado's special 1/8" thick blade eliminates "whipping" and provides phenomenal tooth life. A real companion for SHOPSMITH's precision construction, accurate cuts can be had from 1/8" to 3/8" and up to 2" deep. . . . \$12.95

Accessory board on casters



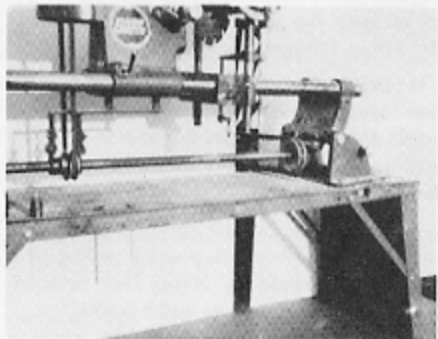
We think that the accompanying photograph amply describes the practical and mobile accessory board designed by Mr. Thomas F. Mills and his son, of Chicago, Illinois. Inside the accessory board convenient shelves are arranged for holding odd or hard-to-reach parts. Notice also the handy rotating tray under the SHOPSMITH bench.

SHOPSMITH adjustments

"Adjustments for Accuracy" accompanying this issue of "Shavings" is another valuable piece of SHOPSMITH literature. Your machine has been designed to produce extremely accurate work but, as in all good machines, perfect alignment of working parts can be maintained only by making these parts adjustable. After prolonged use, unusually heavy work, or perhaps after shipping, your SHOPSMITH can be returned to the proper alignment given it before it leaves the factory. To get the most out of your SHOPSMITH an occasional check on these adjustments will keep your work in the high class which it belongs.

SHOPSMITH powered by gasoline motor

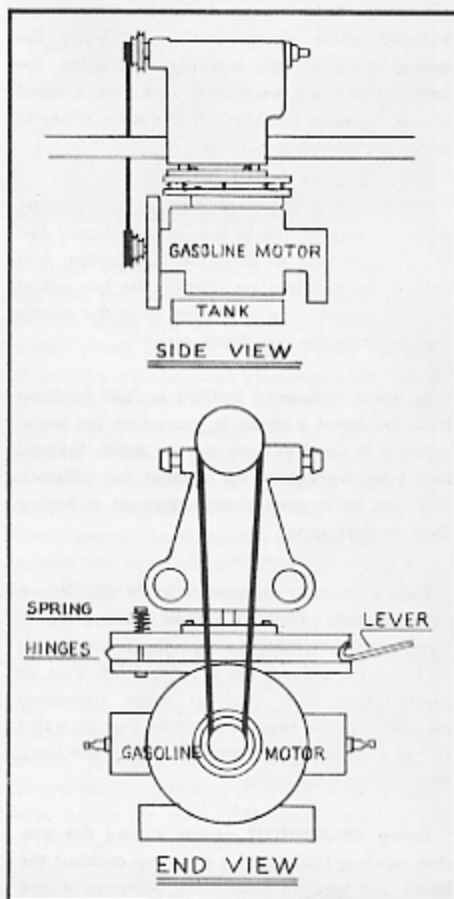
The SHOPSMITH owner has proved himself as determined as he is resourceful. Lack of electricity has proved to be no deterrent to getting work and fun out of this all-purpose tool. We were delighted to find in our "Shavings" mailbag two further ideas for powering the SHOPSMITH with a gasoline engine. The advantage of each of them is that there is no reduction in SHOPSMITH's famed flexibility.



From Bird-in-Hand, Pennsylvania, Mr. Izack K. Zook writes that he has solved his problem by driving his tool with belt and pulley from an engine set apart from the SHOPSMITH. A jack shaft is suspended under the

ways from the headrest, motor mount and the base plate arm. The driven pulley takes up the power from the belt at the base plate arm and the drive pulley is mounted directly under the headstock pulley. Speed is regulated by fingertip controlled motor speed. In the vertical position the belt twists only a half turn which doesn't interfere with its operation. As the jack shaft is keyed, headstock and drive pulley slide the length of the ways.

We expect to hear shortly from some outlying SHOPSMITH owner with neither electricity or gasoline power available that he has successfully substituted a jackrabbit in a squirrel cage. Until that time, here is another idea for the gasoline driven SHOPSMITH.



Mr. Floyd L. Franssens of Platte, South Dakota fixed a two cylinder, opposed piston, ceiling mounted gasoline engine to the SHOPSMITH motor bracket. One side is suspended on coil springs and the other by shackle and take-up lever which serves as a clutch as pressure is put on or relieved from the drive pulley. Mr. Franssens recommends that the gas tank be hinged so that it can remain horizontal and feed smoothly when the SHOPSMITH is in the drill press position.

Don't Forget . . .

Magna wants your contributions for Shavings, too; and will pay \$5.00 for every item used.

Shop Chips —

We have been informed that Mr. Jake Petmecky, Jr., who operates Petmecky Sporting Goods in Austin, Texas, bought Austin's first SHOPSMITH. According to our information Mr. Petmecky, a real SHOPSMITH "fanatic", uses his machine to make gun stocks, to wind fishing tackle and for practically everything else. We'd like to hear from him about some of the ingenious uses to which he has put his SHOPSMITH.

If you want to "bring the mountain to Mohammed," try this quick way of sawing to a line scribed on an angle. Match your line with one edge of the miter gauge groove in the table top. Hold the work firmly. Loosen the knurled miter gauge knob and bring the gauge flush to the workpiece. Tighten the knob, slide your workpiece up till the scribed line is opposite the blade and you're ready to make an accurate cut.

Did you ever pinch your finger in the gears when changing bits in the Jacobs chuck? Mr. W. H. Edwards of Stockton, California, has solved the problem by driving the bar out of the key shank. Slip a washer over the shank and replace the bar. Neat, eh?

In some horizontal drilling or butt sanding jobs, too great a strain is placed on the fence when it is used to back up the work. Instead butt your workpiece up against the tailstock and use its rugged construction as a heavy duty backer-upper.

Here's another extension table tip. When sawing large plywood panels, always mount your extension table so that the fence bar is on the back side of the SHOPSMITH. This, in combination with a front table extension mounted on the fence bar, gives you an extra 10" of support for the panel beyond the back edge of the saw table.

Every SHOPSMITH owner knows the precise jointing that can be done by cocking the fence and feeding your work between it and the disc sander. But don't overlook its application for jointing a bevelled edge by merely tilting the table to give you accurate, clean bevel joints.

To saw on an angle too small to be held firmly with the miter gauge, try this one. Raise the saw table above the level of the saw blade. Clamp the workpiece to the table with the scribed line directly over the saw blade. Make your cut by letting the table down with the table raiser screw, the weight of the saw table supplying the pressure. Always use the utmost caution when working with the table raiser screw while the saw blade is in motion.

Sawing an extra wide board may be difficult even using a front table extension with the miter gauge. Your problem is solved by reversing the miter gauge in its slot and steadying the wide board against it in just the reverse of the usual manner.

Want a quick and easy place to store your flexible shaft? Slip it down the inside of one of the tubular ways. This little trick is the brainchild of a SHOPSMITH owner's son. He found it a foolproof place to keep Dad from finding his flexible shaft. "Out of the mouths of babes. . ."

A full length drum sander for SHOPSMITH

We have received so many designs for a drum sander using a full length sheet of sandpaper that we feel this issue would be more rightfully entitled "SHOPSMITH Sawdust". In the world of inventions and bright ideas it isn't unusual to see several along similar lines springing up at the same time in widely scattered places. Such is the case here.



As so many of you submitted sound designs based on this idea to us, we dislike crediting one person more than any other. We are, however, greatly indebted for suggestions to: Mr. Ernest Tandy of Somerset, Kentucky; Mr. K. S. Armstrong, Vancouver, B.C.; Mr. Albert C. Rohmann, Queens Village, New York; Mr. Karl M. Rehm, Salem, Oregon; Mr. Russell B. Cross, New York City; Dr. R. F. Burlingame, Milan, Michigan; and a far off neighbor from Rio de Janeiro, Brazil, Mr. Arthur Martins Rocha.

Magna's engineers have tested many of your ideas and have come up with a solution which they feel combines the best features of each and yet is relatively simple to construct. **How to Build It**

1. Cut a piece of fine grained hardwood such as birch or maple to a size 3" x 3" x 14". Scribe lines diagonally across both ends of the stock to determine the exact center.

2. For ease of turning the drum, cut a half inch off of each edge of the workpiece at a 45° angle.

3. At one end drill a 1/8" hole 1/4" deep and make a shallow saw cut along the diagonals.

4. In the exact center of the opposite end drill a 1/4" hole 1/4" deep.

5. Mount a drive center on the spindle and fit on the end of your workpiece with the saw cuts so that the pin enters the drilled hole and the spurs seat firmly in the saw cuts.

6. Mount a live center in the tailstock and feed out the quill so that the 1/4" hole at the opposite end fits over the tip.

7. Turn the workpiece to a rough 2 3/4" diameter using pulley position No. 1 and a gouge chisel.

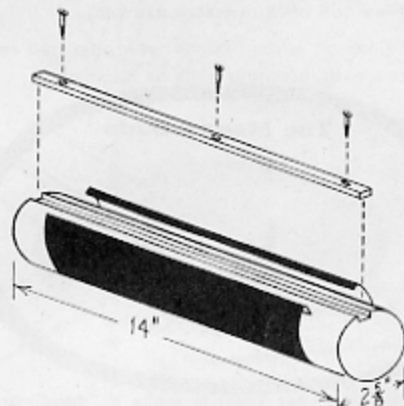
8. Using a skew chisel smooth the cylinder down to an approximate 2 5/8" at pulley position No. 2.

9. To achieve a perfect 2 5/8" diameter throughout the sanding surface of the drum, stretch a piece of sandpaper (or emery cloth) across a 3 or 4 inch board and tack it on the sides. With the table adjusted at the proper height, run the board back and forth under the drum until the proper surface is obtained. This finishing should be done at pulley position No. 3.

10. With a dado blade or with repeated passes on the saw, cut a slot 3/16" wide and 3/8" deep the length of the drum. Sand off the sharp edges of this cut.

11. Cut a hardwood key 11" long, 1/2" wide and 3/16" thick.

12. Drill four holes in the key and slot to accommodate a No. 6, 5/8" round head screw.



When your drum is finished roll on a standard size sheet of sandpaper (or emery cloth) of the desired grit, tuck the ends into the slot and force in the key, securing it with the screws. Now you're ready to sand any surface up to 11 inches. Be sure to center your table under the drum to take full advantage of the table supports. Feed your workpiece from the rear and in the center of the table. A constant feed is necessary in order not to gouge the wood. In order not to get too deep a "bite", no more than one-eighth turn of the table raising crank is advisable.