

# The Story Of Cochrane Furniture Company, Inc.

(Continued from page 3)

ducting stock for the moulder is by the utilization of a gang rip saw. However, with the gang rip saw, there is little choice left in selecting wider widths from the wider boards. For this reason, Hunter Rudisill, superintendent of the plant, feels they are better off to produce all dimension on the straight line rip saws and to do this, they have two Mattison 404's, and three Mattison 302's. In addition, they use a Diehl jointer on some stock. The Diehl jointer is set in an area by itself with an automatic turning device which permits operation by one man. However, the present production calls for infrequent use of the Diehl jointer as most stock is now jointed on the Mattison straight line rip saws.

All moulding is done on a new Mattison 229. This machine has the latest equipment and is powered with a high-frequency unit with over 7,200 RPM for the cutting heads.

Two men are used to operate this machine; the operator is also the set-up man and does his own grinding and setting up of the knives.

### Carbide Tools Used

Hunter Rudisill is a firm believer in carbide tools wherever practical. It is admitted that much water has gone over the dam since carbide tools were first introduced and less spacing is now devoted to lengthy runs between sharpenings than were advocated in the beginning. Instead, more talk is heard of the quality improvements through carbide tools. It is now proper to recommend pulling the saw and cleaning regularly, even if sharpening is not needed. More frequent sharpening is even advised. It is now known that the duller a carbide tool becomes, the longer it will take to sharpen and the more expensive carbide is ground away.

The management at Cochrane Furniture Company admit that carbide is not economical on all machines nor on all types of work. For example, little is gained by routing soft Poplar with a carbide router bit. A

high speed steel bit is much cheaper, initially, and cuts better because it carries a keener cutting edge. On the other hand, to route plastic laminates with a high speed bit is a waste of time. The high speed steel dulls on the first pass. Small diameter bits tipped with carbide last only a short time because of breakage. Larger diameter bits, 1/2" and up, are satisfactory when made by tipping with carbide. For small bits, it is recommended they be produced of solid carbide.

### Cabinet Sanding And Assembly

At Cochrane Furniture Company, the sanding has been developed to a point where it constitutes a small percentage of the cost of the machining operation. For example, all flat work is drum sanded first on a Solem triple drum sander. To produce a surface that will require the minimum of polishing, Harvey Rudisill pointed out that they were loading the drum sander with 1/2, 60 garnet on the stock removal drum, followed by a 1/0 on the second drum and finishing up with a 2/0 garnet on the last drum. The flat stock is then sent to the sub-assembly operation for parts such as doors which require rimming before they reach the final polishing stage.

For polishing, all parts are sent to a new Danckaert semi-automatic polisher. This machine has many of the features of the fully automatic machine with this exception: the stock is placed on a hand-operated table and moved manually under the belt. The belt is lowered into position by air actuated cylinders and sands the full length of the panel. It requires only the movement of the table in and out of the operator to complete a satisfactory job. They have found that a No. 4/10 belt serves best on this operation.

For edge sanding, Hunter Rudisill said he has found nothing that will surpass garnet for this operation. It not only is the most economical type of abrasive he has found, but it also prevents burning and excessive loading. For the edge sanding operation, they are

using a Pearson sander loaded with 2/0 garnet cloth. Following the sanding operation, all parts are brought to the cabinet assembly room for assembling and forwarding to the finishing department.

A careful touching-up operation is performed on all cases in the white prior to their forwarding to the finishing room. Here the operator removes all dents, scratches, and minor defects and inspects the case thoroughly. Final sanding is performed with a jitterbug type sander using garnet abrasive for removing raised grain and sanding out glue spots.

In order to insure the removal of all glue, a dye is added to the polyvinyl type glue used in the assembly operation. This shows up through the various operations following the assembly and is easily detected at the last operation for its removal.

### Finishing

All finishing operations are performed on a rapid stand conveyor. This is a semi-mobile unit and permits the operator to get the work pace.

The stains are applied in a first booth. The first stain is an NGR stain which is applied with an NBC gun operating with a gun pressure of 45 pounds. Since this is a quick drying stain, it is immediately stained a second time with a toner type stain before it leaves the first booth. The toner type stain is a pigment formulation which adds a great deal of depth to the final finish.

Following the application of the toner, a washcoat is applied. The washcoat consists of a diluted sealer. The washcoat is permitted to dry for 40 minutes and then goes through a sanding operation. The hand sanding is done with a combination of jitterbugs and hand operations. For both the sealer sanding and the washcoat sanding, a No. 7/0 garnet finishing paper is used. Hunter Rudisill explained that they had found the garnet type abrasive to be the most economical at the operation.

The next operation following the washcoat sanding is the application of the glaze. The glaze is sprayed on the wood and then handwiped by skilled operators who are experienced in leaving just the correct amount of glaze stain. The glazed parts are then plac-

ed in a high temperature oven for drying. They remain in this oven for approximately 10 minutes at 160 degrees F.

Two lacquer coats are applied with a drying period between. Following the last lacquer coat, the parts are placed on a lift and lowered to the second floor where they are stored overnight for complete drying before rubbing, polishing and packing.

### New Plant Manufactures Dining Room Chairs

Jerry Rucker, superintendent of the chair plant, pointed out that over 55,000 feet of floor space was available for chair manufacturing. The new plant is completely fire-proof, and is capable of producing over 600 chairs per day. With some modification in the addition of critical machines, the plant production can be doubled.

### Automatic Turning And Sanding

With the exception of the seat panel, practically all parts manufactured by the chair plant must go through the turning lathes. To perform these operations economically and at a rapid rate, a battery of Mattison No. 66 automatic lathes were installed. These lathes are operated by the minimum number of men and require only that the hopper be kept loaded.

To increase the efficiency of the turning operation, it is a practice of the chair plant to run all squares through the doweling machine to reduce them to turnings before placing them in the automatic lathe. The automatic doweling operation is very fast and turns out a large volume of dowels with the minimum amount of labor. The saving is reflected in the output of the automatic lathe, in that little time is required to round up the squares.

Additional turning capacity is obtained with a Hempel back knife lathe. This lathe is used for turning narrow diameter rounds for chair backs and spokes.

### Garnet Used For Sanding Chair Parts

A problem faced by every manufacturer of dining room chairs is that of sanding economically the tapered turnings produced on the Hempel back knife lathe.

The Cochrane Chair Company secured a Krutz double verticle belt sander to perform these

jobs. The parts are fed to the machine by means of a rubber tire feeding device which forces the work against the belt and also gives it a rotation upon the impact of the belt. It has been found that two belts of the same size produce the best work. For this operation they are using a No. 150 grit size.

However, for sanding the parts which are produced on the Mattison turning lathe, a Nash automatic turning sander is used. This machine is loaded with garnet abrasive using a 2/0 grit on the first loading followed with a 3/0 and 4/0 in this order.

One of the new sanding machines that has been added to the chair plant is that of a Timesaver belt sander for sanding curved parts. This machine takes a narrow belt, approximately 12" wide.

Jerry Rucker pointed out that the best abrasive was garnet, resin bonded on X-weight backing. The garnet continuously sharpens itself during the sanding operation and completely eliminates burning, a major factor in sanding the type of work needed to produce dining room chairs of Hard Maple and Oak.

### Bulk Storage Of Finishing Material Has Cut Costs

When management started investigation of ways to reduce manufacturing material costs, they took a sound approach in looking into the finishing material procurement problem.

The sound approach to finishing material cost reduction has been in the realm of procurement through bulk storage, thus reducing the cost to the material manufacturer and to the furniture manufacturer in many ways.

Actual studies conducted show that a savings of 10¢ to 15¢ per gallon is possible for lacquers, sealers, and wash coats. Thus, for the concern using 1,000 gallons per week, this is approximately \$7,000 per year.

Studies of savings to be realized from bulk storage of finishing material show that the differences in price per gallon of bulk deliveries constitutes enough to pay for the storage tanks in less than one year.

At the main plant, two storage tanks were adequate to take care of the finishing material bought in volume. One tank is for sealer and one tank is for

lacquer. The storage tanks are equipped with agitators to keep solids and flattening agents in suspension. The storage tanks at the Cochrane Furniture Company are equipped with recirculation pumps which recirculate the entire tank on a cycle of approximately five minutes. The same pumps are used to force the liquid into the pump house for distribution to the finishing room.

Situated near the bulk storage tanks is the pump house where various stains are mixed and added to the line and forced into the finishing room by means of air pumps.

Hunter Rudisill, superintendent of Plant #1, pointed out that the pumps also contained a return line so that the material was continually in circulation. This prevents undue settling of material in the lines. When the system was first installed, return lines were not provided on some of the material. It was found that this material lying in the lines for a prolonged time settled out and caused undue maintenance problems. However, since the installation of the return circulation system, this has been completely eliminated.

The procedure is to draw the lacquer and sealer from the storage tanks into the pump house. The material is pumped into barrels and then lifted from the barrels into the lines which carry it into the finishing room.

By this method, it is possible to produce their own wash coat by adding the correct amount of thinner to sealer drawn from the bulk storage tanks.

It is also practical to mix flattening agents at this point to produce a finish with a lower sheen.

### Sales Are Wide Spread

The Cochrane Furniture Company is shipping to all states East of the Mississippi River and to some as far West as the Pacific.

Sales are handled by a staff of salesmen located in the principal cities.

At the present time, most shipments go by commercial truck lines. However, approximately 20% of the products manufactured go by rail.

Since the prime products consist of dining room furniture, rock'ng chairs, and coffee tables, extreme care is taken to insure that the product arrives at the customer's store undamaged.

All case goods are shipped with skids attached to give the maximum protection to the legs and prevent damaging corners of cases in handling.

### DECOUPAGE SKILLS

"I didn't realize that learning the art of decoupage would pay off so soon," Mrs. Arcelia Martin, Vance County, said, as she held a pocketbook she made in the Extension-sponsored workshop.

"One lady offered me \$45

## Capt. Jones Presented Bronze Star Medal

AN KHE, VIETNAM - Army Captain Ernest M. Jones, Jr., son of Mrs. Annie J. Sykes, Littleton, N. C., recently received the bronze star medal near An Khe, Vietnam.

He was presented the bronze star medal for distinguishing himself through meritorious services in connection with military operations against hostile forces in Vietnam. The medal, adopted in 1944, recognizes outstanding achievement.

Capt. Jones received the award while assigned as commanding officer of Company D, 1st battalion of the 4th infantry division's 12 infantry near An Khe.

The Captain was last stationed in Germany. His wife, Marilyn, lives at 3509 Woodbury Drive, Hopkins, S. C. He was graduated in 1954 from John Graham High School, Warrenton, N. C.

for the bag during the workshop," Mrs. Martin noted. "Within two weeks, I had orders for three more bags," she added.

Mrs. Martin enjoys doing decoupage and believes the extra family income will help her buy materials for her other hobbies. Mrs. Esther Roscoe, home economics extension agent, relates.

**Congratulations To**  
**COCHRANE EASTERN**  
INCORPORATED  
*Makers Of Fine Maple Furniture*  
**FOR LOCATING IN WARREN COUNTY**  
WE ARE HAPPY TO HAVE SUPPLIED THE CARPET  
FOR THE COCHRANE EASTERN OFFICES.  
**BENTON FURNITURE COMPANY**  
PHONE 257-3476 WARRENTON, N. C.

*Congratulations*  
— TO —  
**COCHRANE EASTERN**  
INCORPORATED  
*Makers Of Fine Maple Furniture*  
*Welcome*  
TO OUR COUNTY  
WE ARE GLAD TO HAVE YOU!  
**Peoples Bank**  
NORLINA, N. C.

**WE EXTEND EVERY GOOD WISH**  
— TO —  
**COCHRANE EASTERN**  
INCORPORATED  
*Makers Of Fine Maple Furniture*  
— ON ITS —  
*Grand Opening*  
  
**PAVING & BUILDING CONTRACTORS**  
BUILDING CONSTRUCTION OF ALL KINDS  
FREE ESTIMATES  
**HENDERSON ASPHALT & PAVING**  
CORPORATION  
DAY PHONE: 436-8518 WALDO ALEXANDER, Owner  
1106 NICHOLAS - HENDERSON, N. C. AFTER 6:00 P. M. GE 8-3939