WOODS FOR FURNITURE.

A writer in a New York paper says: "The styles furniture now-a-days change nearly as often as those in women's bonnets or men's scarfs, and like these are continually reverting to modes that found favor in the days of our forefathers. Manufacturers have not yet exhausted their powers of invention as far as finishes are concerned, but they are busy puzzling their heads trying to ascertain what kind of woods will supercede the American white oak now so extensively used in the manufacture of furniture.

Several years ago black walnut was very popular, and an enormous quantity of stock made up from that wood was sold. After walnut came cherry stained black, or "ebonized," as it was then called. Its forbidding appearance ruined it in the minds of buyers, and it did not last long. Then came cherry stained to imitate mahogany, or "mahoganized." This proved a good venture, and is still popular. Oak is finished in every conceivable way. The latest is in imitation of an antique and Louis XVI. designs.

The cost of furniture to-day averages ten per cent. more than a year ago. Oak has advanced from twenty to thirty per cent. owing to its growing scarcity, while the trade is paying from ten to thirty per cent. more for mirrors, tacks, brass and bronze finishes than they did this time last year. Two years ago there was a craze for heavily carved furniture, and it ran to such an extreme that good taste was ignored. To-day the care is expended in finding fine-grained woods. The percentage of very fine furniture manufactured is small. The medium and cheaper grades constitute the greater part of the manufacturer's outfit.

To summarize: The woods used in making furniture are rosewood, mahogany, walnut, cherry, oak, cedar, ash, sycamore, birch, maple, beech, poplar, whitewood and pine. Rosewood is the most valuable, mahogany follows, and the others in the order named. Ebony, satin, tulip and olive woods are also used, but to a very slight extent.

Four qualities are bought by manufacturers. The first grade timber is entirely free from knots. The second contains a few knots. Rejected seconds rank next, and are almost as good as seconds. Culls which contain many knots and checks comprise the lowest grades.

Rosewood is no longer in great demand. It has been used in all styles, and, like mahogany, is always considered in good taste.

Walnut comes principally from the Southern and Western States.

Southern and Western walnut differs from that grown in the East in that it is softer, more easily worked, and warps less. It is much preferable for cabinet use. A small quantity is imported from France and called Circassian walnut. It is dark and smooth-grained. Both the domestic and foreign grades can be handsomely polished. The butts, or roots, which formerly were used in manufacturing gun-stocks only, have of late entered into fine grades of furniture. When finished naturally they show beautiful mottled figures.

Walnut is imitated, but not to a great extent, by white woods—maple, birch, and even poplar. The imitations are easily made. Maple is used in the west for this purpose and is difficult to detect. Cherry finished smooth is also brought into play at times, but the difference in price is so small that it does not pay. Walnut ranges in prices from forty to one hundred and forty dollars per thousand feet.

Two kinds of oak, plain and quarter-sawed, are the woods now demanded by manufacturers. Quarter-sawed oak is made by cutting a log in quarters, and then "slicing" off the boards with the grain. When finished naturally it has a grain and brown mottle of uncommon finish. When used for bureau tops it ranks with marble or agate. The grain is very hard to imitate.

The "antique" oak furniture sold nowadays is an imitation of English Brown oak. It is made from American oak, which is lighter in color. It is stained in order to obtain the dark brown and white mottle of the genuine. "Tinkering with any wood," an expert says, "destroys its beauty." This seems especially true of oak. Bleached oak is the latest thing in finishes. The plain oak is subjected to a treatment which brings it out white. The oak supply comes from West Virginia, Tennessee, Arkansas, Missouri and Indian Territory.

English brown oak is imported in comparatively small quantities; it is sold at fifty cents per foot. Owing to the large waste in finishing, it becomes nearly as expensive as rosewood. Only the oak trees are valuable. They are cut down just previous to the period of decay, so that the two shades of brown can be obtained. Dealers in valuable woods say that individual trees only are purchased. Cherry is one of the finer domestic woods, lighter in color than mahogany and having less character in the grain. It is used largely for its own good qualities and as an imitation. It can be and is imitated by poplar, birch and maple, but takes a better polish than any of these. New York State supplies considerable cherry to the trade. Pennsylvania also supplies a great deal. The balance comes from the Southwest and West. It is sold in grades ranging from forty dollars to one hundred and twenty dollars per thousand feet.

Cedar is used in making wardrobes, chests, etc. It is knotty, and difficult to obtain clear. A clear log is very seldom found. It comes principally from South America. This country grows considerable cedar, which is not used to any extent. In color it is a light red, which is hard to imitate. Cedar has a peculiar smell not possessed by any other wood. Owing to this bogus cedar can easily be detected. Only about one tenth of the cedar sold by dealers is used in the manufacture of furniture. It is principally made up in cigar boxes and lead pencils. In prices it ranges from ten to thirty cents per foot.

Ash is one of the domestic woods found in large quantities. It can be imitated by painting and graining birch and whitewood; but owing to its cheapness, this is not done by many manufacturers. This applies also to sycamore, birch, maple, beech and poplar.

Ebony, satin, tulip and olive woods are used principally in making small fancy cabinet work. Ebony can be obtained only in small logs. Those which are ten inches in diameter are considered of good size. It comes chiefly from Ceylon and Madagascar. It is not able for its hardiness. Importers sell it at eight cents per pound. Satin wood is grown on the Island of San Domingo and in Porto Rico. It is one of the beautiful woods, and is described as a "canary yellow." It is scarce, and is now considered a rare wood. In the log it sells at seventy-five cents a foot.

SAW-MILL EVOLUTION.

[SOUTHERN LUMBERMAN.]

From the primitive hand saw to the modern circular saw was a long step in the path of mechanical progress, and the band saw now coming fast into general use, bids fair to signalize a more important advance still in woodworking industries. Just as coal gas eclipsed the tallow dip of our grandfathers, and the incandescent and arc electric lights in turn eclipsed the gaslight as an illuminant, so does the band saw threaten to consign the service of the circular saw to the limbo of the lost arts. That it is destined ultimately to supercede the circular saw for most purposes of wood manufacture we do not entertain a doubt. The chief obstacle to its perfect success at present seems to be the lack of skilled band sawyers. But it is maintained by the advocates of the band saw process, that the circular saw in its inception encountered a like obstacle and experienced the same ordeal which the band saw is now experiencing. It is a matter of history that at one time many circular sawmill experiments were practically abandoned by reason of the fact that operators were not sufficiently expert in the management of them.

In the introduction of the band saw it was found that many of the parts were too light, the wheels too small, and the saws too thin and narrow, and when it was attempted to run at the same feed as the circular, the saw ran "snaky," in the sawyer's vernacular, and when strained sufficiently to avoid that they were broken. Experience has demonstrated that the band saw must have sufficient strength to sustain it against the feed required, the saws must be wider and thicker; the wheels of greater diameter, and the whole machinery heavier. New devices are now being supplied with improved methods for supporting the wheels, improved construction of saw guides and band wheels and a superior system of straining the saw. A Cincinnati machine, much favored, has a cast-iron lower wheel, much heavier than the upper wheel, so that its inertia, together with that of the heavy driving pulley will "carry on" when the saw enters a cut and lead the top wheel even should the lack of sufficient power permit a slight slackening of speed in the cut. With this arrangement it is claimed there can be no trouble from crooks at the commencement of the cut or from dished boards. It is further claimed that these band mills can be made to run so that the travel of the saw will be 10,000 feet per minute, which is from 1,500 to 2,000 feet more than is accomplished by other forms. The output, however, depends not less on improvements in the machinery than upon the training and skill of the operator. A sawyer may be a first-class operator of the circular saw, and yet a very indifferent band saw operator, until he has become an expert by training. Very likely as the band saw comes into more general use, apprentices will be specially trained for their manipulation, just as printers are being trained to operate the new type-setting machines. Doubtless there will be much "snaky" wood turned out, and many saws broken before the band saw process reaches the perfection that will enable it to successfully compete with the circular saw. Band saw mills are being erected in various parts of the South, and a Chicago firm will try one in Mississippi on yellow pine. That success will attend their efforts is devoutly to be wished.

INSERTED TOOTH SAWS

By J. H. Miner.

The inserted tooth saw is the best saw in its place. The question is, how is the mill man to know this? Many men have failed in the business when if they had had a good inserted tooth saw they would have made money. Then this subject is a matter of interest, that is for mills of small capacity.

I will now explain the advantages of a good inserted tooth saw. Some are not worth buying. If the mill man is sawyer, filer, engineer, yard clerk, etc., the inserted tooth saw is much the best saw. This is with a man who may understand fairly well about gumming and filing. The principal difference comes in the saving of time. If a mill man's time is worth more attending to customers, belts, engines and machinery at odd times than it is to be buying emery wheels and files, losing time filing and gumming, to say nothing of saw growing smaller and requiring hammering, then there is no question about the inserted not being the best saw. In small mills, from four to eight thousand capacity only, I have noticed that the owner or sawyer attended very nearly to all the machinery, looking after the water. On the other hand, if mill is to be run regular and the sawyer knows his business, has an engineer and has time to file his saw and gum it, and does it right, the solid saw may be used, but then there is an inclination to favor a good inserted tooth unless mill goes above fifteen thousand capacity. The great trouble about solid tooth saws is, as I have stated already, they get too many teeth in them. It is a fact that with too many teeth and light power the best man in the world could not run a saw successfully, especially in hard wood. The inserted tooth overcomes this in that the makers do not and cannot put in so many teeth. The inserted tooth requires less hammering, which is an advantage to small mills, and many inserted tooth saws are run one to two years without regumming or hammering.

The same mill with the solid would stand a good chance of not only having saw hammered several times, but would probably have hammered into a new saw. Why? Because a man that cannot file or swage a solid saw soon ruins it. With the inserted there is some retort, viz: Put in a set of sharp teeth; hence a new saw every time. Inserted teeth saws are generally not abused half as much as the solid, and I have had many to ask why, in the same hands, this is plainly seen. With the solid saw running bad, what is done? Cannot stop and file, as saw has just been filed and