

LUMBER RAFT TOWED BY RAFT BOATS

## Memories of Lumbering On the Black River

BY CHARLES P. CROSBY

In those days the chopper was a very important man at the camp. He had to fell trees, after which they were cut into lengths by the sawyers. The limbs were clipped off by the swampers, and then the skidding team and the driver would put them on the skidways. It took muscle and will power to stand up beside those big pines all day long, slashing into them with a double bladed axe. A chopper took a good deal of pains with his axe, ground it every noon and every night and carried a pocket whet stone. It had an edge like a razor. More than once I have borrowed an axe from the sawyer and placed myself behind one of those large pine trees and chopped and chopped until I was weary before it come down.

It was about as hard work as there was in the woods. These choppers had muscles like iron, and endurance. They earned \$26 to \$30 per month. A very few years later the custom of sawing down the trees instead of chopping them became common. The two sawyers would stand up on one side of a tree, one striking right handed and the other left, cutting a deep notch in the trees; then with a six foot saw working from the other side, the tree would soon crack, then topple and fall. When it started to fall someone would shout "Timber" in a loud voice so that the men working around would have warning, and get out of the way. Occasionally one of the sawyers would be injured, as the tree in falling struck some other tree which caused it to shoot back towards the stump. It was possible for a man to be struck and injured, and perhaps killed.

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Now, the story of Bean-Hole-Beans has not been told. The first thing a cook would do when they started a new camp was to dig a round hole in the ground on some place where the water wouldn't seep in, and along in the afternoon he would fill that hole with chips and bark and make a big hot fire. His pot of beans would be parboiling on a big stove and about 6:00 p. m. he would take the kettle out, dip all the coals and ashes out of the bean hole. The bean kettle had a number of pieces of fat pork inside, and a tight fitting iron cover. This would be set down into the hole and then the ashes and coals raked back over it, and then they were left to dry and steam. This kettle of beans was enough to supply the men with breakfast, dinner and supper. They were cooked slowly so that they wouldn't break or become soggy, and the pork melted and lubricated them, so that they were easy to eat. Nowhere could anyone get bean-hole beans except in the logging camps or on the drive. Hotels and restaurants were unable to produce them.

NOTE: Under this title are gathered extracts from articles written by Mr. Crosby for the La Crosse Tribune and Leader-Press under the following dates in 1926; July 4, 11, 18, 25; August 8, 15, 29; September 7, 12; October 10. (See p. 32).

But to cook these beans properly the right amount of heat must be applied, not too much nor too little.

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While the drive itself was in progress it was an interesting sight to see the men in their red and blue Mackinaws, their staggd-off trousers, high caulked shoes, loosening up wing jams and center jams, which gather on tow heads, small islands or rocks in the center of the river. Logs would collect against such obstacles until they formed jams that would dam up the regular flow of the logs. It was necessary to keep such places free, and drivers would work out upon them, and with their peavies attack some vulnerable spot and break a hole in the wing, till the water would get behind it swing the logs off into the stream.

The movies and the magazine stories have led people to believe that there is always a key log in a jam. Often there are a good many keys, and the foreman decides where to attack them. A group of men with their heavy peavies would clamp their hooks onto a log and sluice it out into the water, and continue this till the jam became loosened up enough to allow the logs to begin to pull, and then with every man pushing, rolling or prodding they moved down the river. A good driver couldn't stand on the bank and push logs with a long pole as you see in these calendars that we have on our office walls; these poles were all right and necessary for sluicing through the dam, but after that nothing but a good hard maple peavy stock, fitted with a steel pike and hook, would do the business.

Sometimes it was necessary to get wet, but that was part of the day's work. A good driver mustn't be afraid of wetting his feet. He had to jump out on logs when they begin to loosen up and keep them running, although he might sink down to his knees or waist and occasionally might have to swim. It was good steady hard work, none too spectacular. If any logs lodged on a rock or an island, somebody had to go over there with a boat and break them loose, but that was about all the danger there was.

Ed Tolford was a hard worker, a big six footer, strong as an ox, always good natured, but insisted on things going his way. I remember Paul Sullivan, Jack Clark, and "them Durans," two boys who could ride anything. They would each take a little log about six or eight inches in diameter and paddle it up or down the stream, with the log rolling under their feet all the time, and perhaps sunk a foot or more under water. And they were good steady workers, too. I never was a good log rider, so always picked out good sized logs that would at least hold me up, but they were likely to commence rolling and drop me in. But this never troubled me, swimming or wading to shore and going to work again. I learned to wear low shoes, as light as possible, so if the water got into them, and it generally did, it could get out again pretty easily.

A crew frequently made a running drive down the stream, part of the men working along on each side of the river, or crossing back and



LOADING LOGS AT THE SKIDWAY



HAULING LOGS TO THE ROLLWAY

forth with their bateaus. The cook and cookee followed in their boats, with the tent, camp utensils, supplies and extra tools. A halt for dinner was made at some point decided upon by the foreman, a fire built on the bank and in a short time the tin baker would be stocked with bread or biscuits, baking before it. The pot of bean hole beans, cooked during the previous night and still more or less warm, a kettle of eggs boiling, potatoes, fresh vegetables, if any were to be had, probably soup with crackers, a big five gallon can of hot tea, all ready for them when the cook called "Grub Pile," for dinner. Men who had been in the woods all winter and confined to a steady diet and needing a change, would sometimes eat eight or ten eggs at a meal, besides boiled ham, beans, bread and butter, and potatoes. Then after a few minutes rest to take a smoke, back they would go to their work. The plan was to feed them well, give them fresh cabbage, onions and other spring delicacies, while in sauce and pies the cook used raisins, currants, and prunes. The cook was a very important member of the crew, second to no one but the foreman.

Most of the drivers were well known to the boss, who would take pains in selecting his crew. "White water" men, able to ride a log under any and all conditions, were useful, but the best of all was the steady, hard working fellow with a head on him, who could see where the jam could be attacked.

Sometimes the crew would make camp and be at one spot for several days. In fact, there were several permanent camping grounds at strategic points along the river where crews would be stationed as long as the logs were running.

Each man on coming up to the lunch ground would pick out a tin plate, a quart tin basin for his tea, help himself from the biscuits, gravy, potatoes, beans, pickles, fill his basin with tea strong enough to float an ax, and sit down on the ground, or on a convenient log, just as though he were at a picnic. If one helping did not fill him, there was more in the kettles. At breakfast time, the cook often made pancakes in a frying pan, one side cooked then loosened around the edge with a knife, tossed in the air and caught on the other side. A couple of slices of fried salt pork and two of these pancakes with pork gravy and syrup was about all that a man could hold, for the cakes were about an inch thick. On one occasion I lived on salt pork and these big pancakes and syrup for nearly a week; three of us were tending a dam and sluicing logs, when there was water enough. We slept in a tent, and at night the mosquitoes were so strenuous that it was necessary to pull the blankets over our heads in spite of its being June weather and pretty warm.

The mosquitoes in the woods and along the river were bad, but it was not anything like the annoyance given us by the black flies, midges and "no-see-ums". These were so small you simply couldn't see them unless they would light on your hand and you could see a trifling gray speck. They didn't confine themselves to singing; they went to work immediately without a word, and not only bit us on exposed parts, but

they went down our necks and up our sleeves, and if there was a tear in the clothing they went right in there. Heavens! how they did bite! More than once I kneeled down on a log and dipped my head and shoulders into the water to give me relief. But I have never liked mosquitoes ever since that.

By the first of July the real drive was about over, and contractors began hauling in stranded logs from the banks and poling them out from the sloughs. Scalers went along measuring all such logs and turning in the account to the Improvement Company. River police watched to see if anybody had cut up logs to produce hand shaved shingles. No doubt there are houses and other buildings along Black river today roofed with those hand made, straight grained shingles, made from logs at that time.

In connection with this description of the drive, I want to say something about fights. In all the winters I was in the woods and on the drive I never saw anything approaching a fight. If two men disagreed, they just took it out in talk; I had a couple of such affairs myself. But it was after they were paid off and gathering in some place where there were saloons, and they were "tanked up" that trouble arose. When a man is partly drunk it does not pain him to be struck; he doesn't feel the blow, but he feels the indignity of having someone strike him, and sometimes a very little matter will degenerate into a serious fight; perhaps the whole crowd will join in. But any sober, steady man who kept away from saloons and prostitutes could save his money and keep out of trouble. In my own case, I always went directly to La Crosse as soon as camp broke, and that is why I never saw any of that fighting.

As for a man associating with the class of women just mentioned here I do not wonder at it at all, for that was often the only kind of woman he knew, or had any way to get acquainted with. Sometimes some man would marry one of them and they would move away to where the past was not known. The woman was no better nor worse than the man was, anyway.

The Black River Trail had some pretty tough joints along it, located right out on the road or back in the woods out of sight. They kept women and they sold whiskey, and money was what they were after. Robberies and occasional murders occurred in those places. If they could get the man drunk and rob him that way, all right; if not, they worked up a fight, knocked the man out and took his money. Sometimes they hit too hard and the fellow died.

But a man from a decent home, especially a farmer boy, would save his money, go home to marry the girl on the neighboring farm, buy a piece of land and work on it during the summer, and in the woods during the winter till he had his land paid for.

In a good year like this was, [1880], the logs in the main river reached from Onalaska to nearly, if not quite, Black River Falls. The boom was turning out at least two millions per day, often more, and

there were crews at different points to keep the jams broken. There was one crew at New Amsterdam where the river was narrow and another below Lytles. A jam always backed up the water, and then the logs would spread out over the low places in the bank, and out into the sloughs and bayous, and then they had to be poled or hauled back into the main stream. A good deal of this was during the summer. Contracts were let to farmers or others to take sections at a rate per thousand feet. Men, called river police, were sent over the ground to see that all the logs were hauled in.

H. A. Bright of Black River Falls was drive master for years. He knew how to handle men and how to avoid jams, although this could not always be done. A jam near Black River Falls one year was estimated to contain a hundred million feet of logs. It cost a lot of money to break a hole through it, because the water went down and there was hardly enough to float them away. Dynamite was used to break out the key logs if it could be done before the water fell, but after that nothing but ropes, chains, oxen or horses could slowly and laboriously eat a hole through.

It was not the intention of the drive master to drown any of his men or to have them risk their lives on the front of a jam. A chain around the key log and a team on the shore was the most certain way to break it out, or a stick of dynamite would loosen up the logs and they would come with a rush, every man working his utmost to prevent another jam.

As described above, the drivers had to work when there was water. The men left camp about 4:30 or 5 A. M. and worked till dark, then waded back to camp through the brush for supper and bed. Somebody carried lunch to them at 9 or 10 A. M. and again in the afternoon. A trail along the bank was called the "gigging" trail.

Many a time I have carried my own lunch, two big biscuits with a chunk or so of fried pork, tied up in my handkerchief and swung to my suspenders behind me out of the way.

Another year we had quite a lot of logs on the Upper East Fork near Thomas La Flesh's farm. He took the contract to drive them out into the main Black River. I remember Ed Tolford of Neillsville was the foreman of the drive. We had pretty good water, frequent rains, and we never were dry one day in two weeks while we worked down as far as Scranton. Three of us worked on the front to keep the jams broken and the logs running, but we were unable to handle all that. We should have had more men. As a consequence, every jam would back the water out over the banks and a great many logs would be left stranded. They had about 20 men on the "rear" crew, "sacking in" or rolling in these stranded logs. These men were mostly common hands unable to ride a log or work on jams, and they were getting \$20 per month. While the drivers were drawing \$3 per day. The rear crew must have left a great many logs for the next high water.

I never was dry, day or night, in those two weeks; either I was

in the river up to my waist or it rained. We slept in our wet clothes. The cook and his cookee followed along in a bateau which carried an immense load, bringing all the blankets, the tents, camp cook outfit, and the "grub." It was on that drive that I found an appetite for salt pork. Long days, 4:30 A. M. till after dark, hard work, wet all the time, I found that even beans were not enough strong food. Salt pork seemed to fill the bill and the appetite for it, cooked in any or all forms, remains with me to this day.

In 1854 the Black River Lumber, Driving and Booming Company was formed with my father, W. W. Crosby, organizer and chief owner. Then in 1864 the business was placed on a mutual basis by the organization of the Black River Improvement Company with a capital of \$50,000. While the Company often made a good profit on their business, yet as the loggers themselves were mostly interested in it, they received a dividend on their stock and were jointly interested in its success. Its office was first in the Mons Anderson building, but later when the Batavian Bank erected their present building, they moved in on the fourth floor, I think. I find in records that the Improvement Company reported the movement out of Black River of two billion feet of logs in the first thirteen years of its existence, and in the next fifteen years probably four or five billion feet more.

C. L. Colman was President of the Black River Improvement Company at one time, perhaps for many years. S. L. Nevins was treasurer. J. B. Webb, Alex McMillan and Forest Smith were connected with it and in the office more or less. The Company took charge of all the logs coming down river and through the main boom, and they saw to it that the logs were scaled and the reports were all made to them and copies delivered to the owners.

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Black River is said to have had more to do with the prosperity of La Crosse than anything else could have had. It brought down from 200 to 300 million feet of logs every year, all from the main Black River or its tributary streams. These logs came to the main piers, about one mile above Onalaska. The Black River Improvement Company made a charge, I think, of 45 cents per thousand, for bringing the logs down to the main piers. This meant the payment of the log drivers and breaking jams, and the hauling back of the logs which got beyond the banks. This part of the work was generally done in the summer when the water was low, and men and teams could work almost anywhere. The crew on the main piers was at work every week day, rain or shine, "breaking down" the logs and letting them pass down through what was called the log channel, which was staked out by booms on each side of a 24 foot strip; these booms were fastened to piers or to piles driven into the bottom. The C. H. Nichols Company took out their logs in booms of their own on one side just below the main piers. McDonald Bros. took out the logs that they handled for other parties for rafting or delivery to the mills on the other side. The Hixon mill was on the west side of the river near the Onalaska bridge. This later became the

property of the Island Mill Lumber company. Then the Polleys Bros. had a small rafting chance just below the Onalaska bridge, and beyond that Jenks and Healy on one side and R. M. Mooer "pulled in" on the other. H. H. Goddard also had holding grounds and his mill stood on the French Island side about half way down. The Jenks and the Mooer rafting chances were the largest on the river. They had deep water and more space for holding logs, and I think the Jenks grounds held about 15 pockets. They handled the C. L. Colman logs, and those of Brooks and Joyce, D. J. Spaulding, C. C. Washburn, B. B. Healey, Sawyer and Austin, W. W. Crosby, Lindsay and Phelps, and I think D. J. Murray. The logs were sorted into two grades, the No. 1, which were large fine logs, and the No. 2, which were knotty, rough or small ones. When rafted, these strings were dropped down to the holding grounds below and held there until ordered out. There were also convenient sloughs that were used as holding grounds. The Colman logs went out every day to their mill in La Crosse below. The Washburn logs were put into a pocket, which let them run completely down to the mill itself. There was no rafting required for them.

The timber which came out of the St. Croix and Chippewa rivers supplied the mills of Red Wing and Winona, and also to some extent those of La Crosse. And then there was a long line of mills below, among them those of McGregor, Lansing, Guttenberg, Dubuque, Sabula, Lyons, Clinton (a big lumber producing point), Rock Island, Davenport, Muscatine, Fort Madison, Quincy, Hannibal, Louisiana, Mo., and logs even went to St. Louis. To keep these mills supplied with logs required a navy of raft boats, nearly 40 of which had their headquarters at La Crosse.

The earlier methods of allowing a raft of lumber or logs to float down the river, tying up at night, became altogether too slow. Powerful stern wheel steamers were built which pushed the rafts ahead of them and made the round trip from the Chippewa or from Black River to destination in about a week, if the water was high enough to permit running nights. La Crosse people will remember some of the following names of the boats:

Abner Gile, Addie Johnson, Clyde, Iowa, Jim Watson, Lumberman, Mountain Belle, Natrona, Tiber. Abner Gile owned one boat; G. C. Hixon, one; McDonald Bros., five or six; P. S. Davidson had five. There were 39 boats registered at La Crosse, and most of them wintered in Black River harbor. The Little Frank, a McDonald boat, was busy in the river all the time, making up rafts and towing logs for anyone. The Davidsons not only owned raft boats, but a line of packets, called the White Collar line, or the St. Paul and St. Louis line. They had a large store, offices and storehouse on Front street near Pearl, and did a very large business, not only with their own boats but with others which landed at the levee.

McDonald Bros. had another similar store and offices on Front street, just north of Main. W. A. Suitor was the office chief, D. A. Mc-

Donald was storekeeper, and C. M. McDonald had the hardest job of all, looking after the rafting chance, the fitting out of rafts, and everything in connection with that. They had a lot of capable string runners and fitters. Captain McDonald seemed to have his part of the business under control.

For example, when a McDonald boat delivered her raft at some down river point, her clerk would wire back to the office that they were on their way back, and it was up to Captain Dan to have another trip arranged for her. A boat seldom had any time to lay off; there was plenty of business for them, and a good profit.

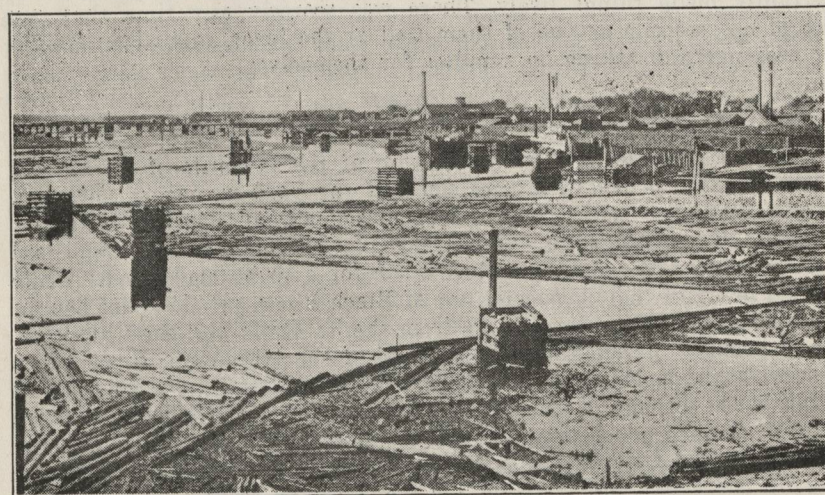
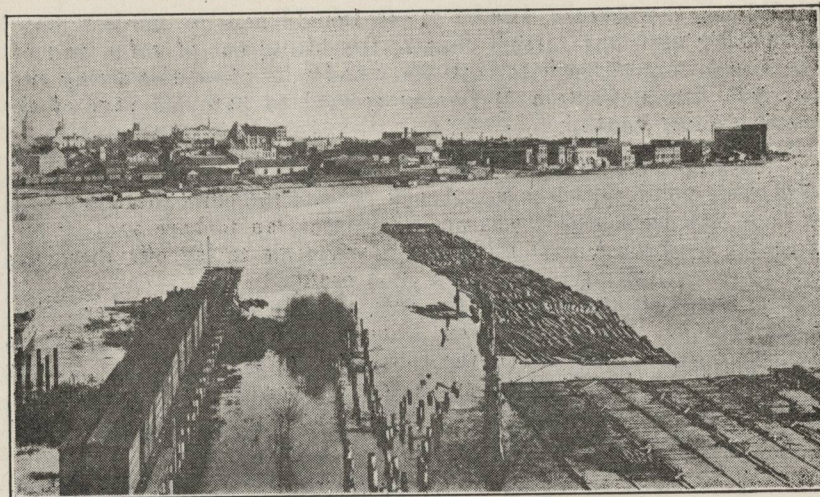
La Crosse boats were not the only ones on the great river. Stillwater, Winona, Dubuque, Clinton, Davenport, Rock Island, and others sent their own to the north for tows. Mr. A. S. Meriam of Quincy doubled the size of his rafts, put a tow boat on to assist in steering, and they could split the raft for a bridge and couple up again without having to lose any time.

The 39 boats belonging at La Crosse,\* with the tow boats from other points, two or three packet or passenger lines plying on the river, certainly made things lively. There was scarcely any time that you would not see one or two of them tied at the levee, unloading freight or passengers or taking on supplies for themselves.

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I will give you a brief description of the sawmills of La Crosse, the men who owned them and some of the yard managers, foremen, filers, and others with whom I became acquainted. Starting with the mills on the South Side, those of C. L. Colman and the John Paul Lumber Co., these two furnished labor for a great many men. While a good many of their logs came out of Black River, yet they also bought and brought in quantities of logs from the St. Croix and the Chippewa. Their booms adjoined the main channel of the Mississippi River a few blocks south of Main street. Each concern maintained a number of retail yards through Minnesota and Dakota, and some in Iowa. A large part of their product went directly to these yards. Mr. Allen was the auditor of the Colman yards, going from one town to another checking up the books and advising the managers as to various sales matters. The records of the year 1890 show that C. L. Colman Co. sawed 36,500,000 feet of lumber. The John Paul Lumber Co. evidently had more logs and no longer run that year, because they produced 43,000,000 feet. None of their lumber went down river in rafts. It was all shipped by rail or retailed in the city. For a number of years the only railroad in La Crosse was the C. M. & St. P. Later the Burlington came, (1886) followed by the Chicago and Northwestern, which gave the mills of La Crosse a much wider market.

\*That is, they were registered with the U. S. Surveyor of Customs here and they found this a convenient center for their business. But fewer than one-half of them were owned in La Crosse. See p. 74.



VIEWS ON BLACK RIVER

The upper picture shows a boom brail of logs and the end of a lumber raft. The freight cars stand on a track near the site of the Milwaukee R. R. station.

In the lower picture may be seen piers and booms. Beginning at the right are Davidson's Old Packet Mill; the Sill and Fauver Mill (later Davidson's "New Mill"); and the La Crosse Lumber Company's Mill. Next in order are the McDonald and Sawyer and Austin Mills. The view is looking up the Black River towards the bridge at the foot of Clinton Street.

From "La Crosse by the Camera", a small volume of photographs published by W. A. Pryor in 1888.

Passing up Black River, the first mill was that of Polleys Brothers on the west bank, close to the Milwaukee and St. Paul Railroad bridge. In 1890 they produced 8,645,000 feet of lumber, all of which was put into rafts and sold down river. On the other side of the river, A. S. Trow and Company had erected a mill. This firm had formerly been in business somewhere near Oshkosh. They loaded their mill machinery on to their steamboat and came through the Fox River canal down through the Wisconsin River and finally arrived at La Crosse. They were the last mill to cease operations on Black River, because after all other mills were out of business they continued picking up and buying dead-heads (1906).

Above Black River bridge was the mill of N. B. Holway. He had bought this from Robert Ross, about 1878, and remodeled it into a double mill, two rotaries and a gang. They could turn out easily 100,000 feet per day. At first they used to raft their lumber, but later on they decided to yard it and ship out by rail. I think this was about 1881 or 1882. In the year 1890 they sawed 25,000,000 feet of lumber.

Above them were the two Davidson mills. The Davidson No. 1 being the first; this was one rotary and a small gang. I do not know how much that mill ever sawed, because the product of that and the Davidson No. 2 were reported that year at 22,000,000 feet. Nearly all of this lumber went into the rafts except their culls.

The next mill above was the C. C. Washburn, or "Big Mill." This was supposed to saw a million feet per week, and I think they could do it easily enough. In 1890 they put out 26,000,000 feet of lumber. Captain F. A. Copeland was general manager, A. G. Nevins yard superintendent, and George L. Kingsley was in charge of the mill. Besides selling its lumber down river in rafts they had one large distributing yard at Louisiana, Mo.; they also put a few million feet into pile in the yard at La Crosse each year and did a general retail business. One year I had a raft of logs sawed at their mill in the fall, and hauled the lumber up to my yard on Rublee Street. It kept us busy, men and teams, until they finished our cut. I had lumber sawed at the Davidson mill several times, and Captain Peyt and I were always great friends. Lafe Holmes was the chief book-keeper. One of the Davidson boys, Peyton, Jr., was also in the office. Arthur Davidson was learning to be a saw filer and Will Davidson was general manager around the yard. These years both mills ran steadily, putting out a heavy output of lumber each day. I happened to see their figures one day as to the entire cost of labor, saws, files, oil, and everything that they used, and it would only average about 80¢ per M ft. When you contrast that with what it costs now to saw lumber anywhere in Wisconsin, it is quite surprising that lumbermen can continue to do business, because very few modern mills can keep their operating expenses down under \$5.00 to \$8.00 per M ft.

The Davidson mills made shingles, as well as lath, and when they were sawing for me I had nine teams hauling from the mill to my

yard. One team hauled nothing but lath and shingles and the other eight were hauling lumber. I had a very competent yard foreman, H. P. Nelson, who later operated a lumber yard of his own at Caledonia, Minn. With Peter as foreman in the yard and a man named Andrew Sjoquist, each in a separate alley sorting lumber as it came in, myself in a third alley, with about four men to each sorter, we kept things cleaned up no matter how fast the lumber arrived. Within a half day after the last team arrived we had everything covered up, and my men were paid off. We prided ourselves on efficiency. It cost 21¢ per M ft. to haul that lumber one and one-half miles, and cost 25¢ per M ft. to sort and pile it, and there wasn't a mill on the North Side that could approach these figures.

The next mill was that of H. Goddard, over on French Island. The only way you could reach his mill was by boat, and during the winter he would put teams to work hauling all the cull lumber from his mill to the yard and pile it up there. Now this cull lumber was practically unsalable in the raft. The mills would throw their culls into heaps and sell to anyone who wanted to buy a wagon load for a dollar, the buyer to haul it away.

Sawyer and Austin Lumber Co. were throwing out what they called "gilt-edged" culls, charging \$5.00 per load, and as my yard was near their mill, I bought all they put out for about a month. We kept a wagon over at their sorting shed and let them load the lumber on and a team would go over after it. But they soon saw that I was selling that lumber to advantage, and finally they decided they would yard it themselves, so from that time on they began to pile their lumber into their own yard instead of putting it into rafts. In 1890 they cut 27,389,000 ft. of lumber.

There was one more mill just south of there, that of McDonald Brothers. In the first place they built the mill to cut shingles, the same as the R. M. Mooer mill, but they also installed a rotary and sawed lumber for themselves and for others, putting out eight million feet. I had a raft of Gile logs one year sawed at their place, and we rafted the lumber and deck loaded it with shingles, taking the lower class of shingles and the lath up to our own yard.

The two mills at Onalaska, which were counted in as part of the La Crosse system, were the C. H. Nichols & Co. mill on the east side of the river and the G. C. Hixon mill on the west, which was built and operated by Wm. Listman, afterwards proprietor of the Listman Milling Co. of South Front street. This mill, I believe, burned down in 1881, and then the property was sold to the Island Mill Lumber Co., Gile, Bright & Withee. Their lumber all went out by water, but the Nichols stock was largely piled in the yard, dressed in their planing mills, and shipped out on the Chicago and Northwestern. Later on there was an extension of the Milwaukee and St. Paul from North La Crosse, and the Burlington line came through Onalaska, too, giving them new facilities and markets.

With all this lumber being sawed along Black River, there was a surplus of slab wood, edgings, trimmings, and shingle blocks. Every one burned pine mill wood in those days. If you were only two or three blocks from the mill you could get three big dump loads for a dollar. You could buy fifty or a hundred cords of pine edgings delivered at your yard and piled up for 40¢ to 50¢ per cord. Some wood was shipped; steamboats often bought a large load for kindling, but most of it was used at home. H. Goddard during the winter would haul all his slabs and edgings on sleighs to the water works. He used to haul tremendous loads with racks 24 ft. long and 6 ft. high, hauling six cords per trip, and one day he hitched one sleigh behind the first one and the team drew twelve cords of wood.

I referred in this article to the growth of North La Crosse, following the advent of the Burlington road. A great immigration of Scandinavians had been taking place for several years, every train from the east having several coaches loaded with these honest, industrious, healthy people, working toward the west and a home. Many of them went to Minnesota and the Dakotas, but others settled in Wisconsin. Most of our woodsmen were Norwegians, and our servant girls were the same.

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A modern band saw in a sawmill is a very fine piece of mechanism, consisting of two 9 ft. steel wheels, one above and one below, with a 48 ft. band saw passing over the faces of the wheels. The saw is kept in place simply by tension. Saws are changed twice per day. In case of any accident, a nail in the log or a pebble in the bark, struck by the saw teeth, bending or damaging several of them, then the sawyer slows down and stops the mill, the tail sawyer relieves the tension, the saw is slipped off the lower wheel and drawn up to the third floor where the filing room is, for attention. Another saw is lowered and adjusted on the wheels, tightened up, and the mill is started again. A saw with several teeth bent or with the points broken off, has to be worked down, the whole length of the 52 ft. taking off perhaps a quarter of an inch, perhaps more. One can see that a new 14 or 16 inch saw undergoing many such experiences, becomes ground down so narrow that it cannot be used any more on that mill, though they might be used on a smaller machine. We used to wear them down to 8 inch width, but these haven't sufficient strength on hardwoods. You can see small band saws in the wood working factories of La Crosse as narrow as half-inch, I think, but they are very thin, nothing at all like the great saws for a band mill, costing \$200 or more. An Allis band mill cost about \$2,500 and should have not less than four saws.

A rotary or circular sawmill was a much simpler affair. It was much cheaper, could be readily moved and set up again, and would cut more lumber in a day than the band mill would, but a circular saw made 50 per cent more sawdust and the lumber was not as evenly sawn.

Most modern mills have a resaw in connection with the band, which almost adds 50 per cent to the daily cut. It saves lumber too, for all the thick slabs go through this machine and produce short boards, or "bark strips" used for crating, etc.

A gang saw was an upright vertical frame and within this was another frame in which were set a number of straight saw blades something like the way you do on a bucksaw. These were fastened tightly and keyed in, and this gate, as it was called, moved up and down rapidly. The logs to be sawed were placed on a set of rollers in front of this gang, and were fed by the rollers slowly through the gate.

It was a very economical machine, because the lumber was all cut very accurately the same thickness and there was very little waste in that respect. It took out less than one-eighth inch sawkerf, while the circular or rotary saw, as it is called, which slabbed logs for the gang, took off over one-quarter inch.

In slabbing for a gang, the circular saw was undoubtedly best, for it just took off two slabs and then the log was thrown to the gang. All it needed was a flat surface to lie on the rolls. It took a lively circular to keep the gang supplied with "cants" as they are called.

Nearly all of the La Crosse and Onalaska mills used gangs, although the Goddard and Polleys' were one rotary affairs and cut small logs, largely into lumber, for the down river trade. The Washburn mill had two gangs. Both the Colman and Paul mills did, too.

Moorer had a shingle mill. The logs were hauled up to the mill, cut into 16 inch lengths by a drag saw and then split into quarters on a splitting saw. The shingle mill did the rest. The shingles fell down into a sorting box where there were men sorting them into grades. Girls then packed the shingles, at that time I think, getting 10 cents per M. All the shingle mills in La Crosse used girls for packing. It was not hard work, but they had to work fast, and I have seen some of them on a hot day having their waists completely soaked and plastered to them with perspiration; but they got more money out of it than they got at housework or anything else.

In making shingles the log was worked parallel to the grain of the wood and the sawdust or shingle tow, as it was sometimes called, was long shavings. This sawdust was a good deal like the excelsior that is used for stuffing cheap mattresses and furniture, and in packing goods. It stood quite a lot of wear and tear before it broke up into fine dust. The mills could not burn this in their furnaces for fuel, because it packed down solidly, so they burned the sawdust from other saws, the circular, the gang and trimmer and edger saws. The Davidson mill No. 2 installed an arrangement that kept that shingle tow stirred up in their furnace, so it would burn, because if you didn't have a good hot fire you wouldn't have enough steam to keep the mill running at full strength.

## SMELL OF THE SAWDUST

BY DOUGLAS MALLOCH

(Recalled by the Reopening of the Craig Mountain Lumber Company's Mill at Winchester, Wash., Jan. 31, 1935.)

Take attar of roses, imagine cologne,  
Oh, each has an odor, a smell of its own,  
The lilac, the lily, arbutus in May,  
They all have their perfumes, all right in a way  
But nothing can equal, can equal, or will,  
The smell of the sawdust that comes from the mill.

I've walked in the meadows, I've wandered the wood,  
I've picked all the posies a man ever could,  
I've smelled the verbena, it surely is fine—  
But nothing can equal the smell of the pine.  
I know where the nectar the richest 'll spill,  
It comes from the sawdust that comes from the mill.

There's something about it, it's hard to say what,  
There's something about it the rest haven't got,  
Your honey is sickish, your perfume is faint,  
But sawdust is all that the other things ain't;  
It's cool as the breezes, as moist as the rill,  
The smell of the sawdust that comes from the mill.

I'm sick of the city, I'm tired of the town;  
I think I'll go back and I'll settle me down  
Some place there is timber, some place there is saws,  
A band and an edger and trimmer, because  
There isn't a tonic, when someone is ill,  
Like the smell of the sawdust that comes from the mill.

And when I pass over, and when I am thru,  
Up yonder in heaven I know what I'll do  
I'll stand by the gate and keep watching for those  
Who come with the smell of the pine on their clo's.  
For even in heaven I'll want it, I will,  
The smell of the sawdust that comes from the mill.