

VARYING LUMBER SCALES

Inspection is not the only feature in the lumber business that is chaotic. Measurement appears to be quite as chaotic. For instance, for the scaling of logs there are no less than five rules, and no two of them give the same result. The surprising variations consequent upon the use of so many rules in different sections may be seen in the following measurements of twenty foot logs, eight, twelve, twenty four and thirty six inches in diameter.

Log Rules	Length of log Feet.	Diameter of log Inches.	Amount in feet.
Bangor	12	8	33
Oughtred	12	8	28
Scribner	12	8	22
Quebec Government	12	8	24
Doyle's Rule	12	8	16
Bangor	12	12	78
Oughtred	12	12	68
Scribner	12	12	59
Quebec Government	12	12	50
Doyle's Rule	12	12	48
Bangor	12	24	327
Oughtred	12	24	300
Scribner	12	24	303
Quebec Government	12	24	315
Doyle's Rule	12	24	300
Bangor	12	36	770
Oughtred	12	36	
Scribner	12	36	692
Quebec Government	12	36	710
Doyle's Rule	12	36	786

Commenting on these differences, a Canadian lumberman says: "I have known those who ship round timber to the United States use the Scribner or even the Doyle rule for buying logs from the farmers, and sell by and pay the duty on the Bangor scale, by which they gain in actual measure from two hundred and fifty to five hundred feet on every thousand feet bought and sold, where the logs are ten, twelve and fourteen inches in diameter. As the Doyle rule is not figured for logs under ten inches in diameter, millers are in the habit of 'jumping' the scale of all such as contain twenty-four feet (for sixteen-foot logs). Now, if we take an eight-inch, a nine-inch and a ten-inch log, and measure them by the Doyle rule, the total result will be eighty-four feet, while the same logs scaled by the Bangor rule will give one hundred and sixty-four feet, or nearly one hundred per cent. more! In other words, it would take about eighteen logs of these three sizes to make one thousand feet of lumber by the Bangor rule, while the Doyle rule would exact about thirty-six logs for the same amount."

BAND VS. CIRCULARS.

Mr. John M. Stowell, of Milwaukee, Wis., a man of large experience in the saw-milling business, has been giving his experience and also his opinion in the *Lumberman* of the future of the band mill. Mr. Stowell says:—"When the circular mill first became a candidate for favor there was an almost universal consensus of opinion against it for various reasons. It took years to overcome this general prejudice. I was there myself and know whereof I affirm. I think I was the first to introduce it in the large lumber mills of the northwest, except that small circulars were used in what were termed 'siding mills.' I mean, of course, that circulars were not then used for cutting logs. So when the band saw had demonstrated its usefulness in small work, in pattern shops, furniture factories, etc., and the proposition was made to use it in cutting logs, there was the same nearly universal prejudice encountered by the circular saw in its introduction for log sawing.

Both did make a great deal of bad lumber at first, and the gain in the speed of work was comparatively small in the case of the circular. I remember that the first one ever put in at Manistee, Mich., was only sold on a warranty of 10,000 feet in eleven hours. On Saturday of the first week we ran, we saved 11,758 feet in eleven hours. The feat was heralded in the newspapers far and wide, as something remarkable, and from that day the success of the circular was assured. Now it is a poor circular that will not, with plenty of power, in the same timber, cut that amount of lumber in a single hour.

So the band mill started by cutting about the same

amount of lumber that the circular cut at first, which was quite in advance of the cut on any muley or sash mill. It has been constantly increasing the cut until, in the short time the experimenting has been going on, the performance of the average circular has been nearly overtaken. I predict that before the band mill has been in use as long as the circular has been, the product of the band will overtake, and, probably, exceed the cut of the circular.

Then the saving of stock demonstrates their immense superiority over the circular, and justifies its claim to be 'the coming mill.' The circular must inevitably be relegated to use only where cheap plants are wanted for very temporary purposes. But time will be required to replace the circular just as time was required for the circular to retire the older styles. In both cases these changing earliest manifest the greater wisdom, and pocket the greater amount of shekels.

GIVE THE SAW MILL MAN A CHANCE

By H. J. SUTHERLAND.

In order that the saw mill man may have a chance to secure fair returns for his money it is necessary that each individual employee shall contribute his best efforts to that end, for this business is a sort of chain, so to speak, whose links must support each other. The superintendent is the man I want to talk to first on this subject, for upon him devolves the greater part of the responsibility of managing the mill.

Are you sure, then, Mr. Superintendent, that your employer gets the full benefit of your business ability and saw mill experience? Are you sufficiently familiar with every department of the mill business that you can adjust the trouble in short order when the foreman reports the mill broken down, or the boss of the logging teams comes with a dolorous tale of crippled oxen, or five or six men short? If not, you had better step down and out. You are a weak link in the chain.

Do you, Mr. Foreman, go on the principle that a stitch in time saves nine, or do you wait for the belt to break before you put in a new lace or a few rivets? You should examine your pulleys, shafting, and boxes every day and be sure to re-babbit your boxes just a little before they need it. An ounce of preventive is worth a pound of cure.

Mr. Saw Filer, a great deal depends on you, for the saws must make or break the saw mill man, and it matters not what your wages are, or what the surrounding circumstances may be, you, of all others, should do your very best. Don't give your saws a lick and promise, but every time a saw comes off the mandrel examine it carefully for all manner of defects. Often a few blows of the hammer will greatly improve them.

Hello, Mr. Sawyer, are you sawing good lumber, and plenty of it? If not, stop this minute and take off the bad running saw, unless the fault is in you, and in that case go to the foreman and tell him to give you your time; also that you wish to give the saw mill man a chance, as this is the best way you can do it. If on the other hand, the troubles are in the saw, call the filer's attention to it, and inform him that you will change the saws every fifteen minutes rather than make bad lumber. Remember, it is not the amount of lumber desired as much as the quality. The first care of the sawer should be to make good lumber, and all you can of it. Try to make each succeeding day excel the previous one.

Mr. Engineer, I am truly glad to see you; how is your part of the business going on, are you giving your employer a chance? Don't call him an old skinflint. How many times have you had to stop your engine for hot journals and other causes, that you know you could have prevented? Please bear in mind that if you understand your business ever so well and do not do your whole duty, you are no better than one who knows but little, and will do the best he knows. How about that knock in your engine? Don't tell the superintendent that the devil can not take it out: be honest, and tell him you can't do it. Don't measure all other men's skill by your own, or let your self-conceit outrun your knowledge of machinery. Keep your engine in good condition, do your repairing at night. I have no respect for an engineer that makes a practice of stopping his

engine between six and twelve o'clock A.M., and one and six o'clock P.M., except on signals, which is rarely done if the men are trying to give the employer a chance. Don't spend your time figuring horse-power and back pressure. There is as much sense in figuring on the number of yards of moonshine necessary to make a muley cow a petticoat. Such an engineer is fifty years behind the times. While you are figuring out what your engine needs, some good, practical engineer will do what is wanted and have the engine running and doing better work than the figuring man would ever accomplish. There is no rule of treatment that will apply to all engines alike and get best results, no more than the same medicine will have effect on all people alike. It is admitted by the best mechanics that it is an impossibility to make two engines alike, one being a perfect duplicate of the other. If I am not mistaken Dennis Long & Co., of Louisville, Ky., tried this several years ago with two steamboat engines and failed, and give it as their opinion that it was an impossibility, and no firm stands higher for fine machinery.

Now, Mr. Night Watchman, please wake up. How long have you been asleep? Have you not learned that a saw mill is neither a hotel or lodging house, but a saw mill in which is stored thousands of dollars' worth of machinery and lumber, and you are its only guardian twelve hours out of every twenty-four? So come to your senses, and realize the great responsibility that rests on you. Stop sleeping so much while on duty, or you will wake up some night in the neighborhood of the New Jerusalem, and your employer in bankruptcy; and if your wife does not miss you she will miss your wages.

Now, Mr. Shipping Clerk, if you will hold up from playing poker at ten cents ante with the book-keeper, I should like to give you a piece of advice. Be sure that every car load of lumber you ship is just what your order calls for. Be honest, mill men won't steal, and don't want others to steal for them. Don't imagine that if you succeed in swindling customers your employer will think more of you, and raise your salary; the chances are that he will raise your scalp, and you will find Jordan a hard road to travel.

Good-morning, Mr. Mill Man, I am glad to meet you, as misery likes company. I do not think I am capable of giving you any advice. I will only say this, be sure that every shipment of lumber you make is properly inspected, then do not allow any son of Adam to steal one foot of it. I would have one car or twenty cars of lumber returned from New York to Tennessee before I would allow one foot stolen under any pretense; take this advice and you will never regret it in the long run. By so doing you will give yourself a chance. Also bear in mind that it is the little things that need the most looking after: this done well the big things will take care of themselves. Fleas bother us more than elephants. If all the small streams that go to make up the Mississippi river were stopped there would be no "Father of Waters." Do not give any man a job for friendship's sake, but look to the qualifications regardless of friendship or wages.

Weight of Lumber.

The following table shows the weight of dry and green lumber per foot B. M. Although in some wood there is an occasional variation, the estimate is correct for all practical purposes.

	GREEN.	DRY.		GREEN.	DRY.
Ash	4½	3½	Holly	5½	4
Beech	5	4	Lignum Vira	9	8½
Birch	4½	3	Maple	5½	4½
Basswood	3½	2½	Mahogany	5½	4½
Chestnut	4	3	N. C. Pine	4	4½
Cheery	4½	3½	Oak	5	4
Cottonwood	4½	3	Pitch Pine	5	4
Cypress	4	3½	Poplar	3½	2½
Cedar	4	3	Sycamore	5	4
Elm	4	3½	Sweet Gum	3½	3
Hemlock	3	2	Walnut	4½	3½
Hickory	5	4	White Pine	3½	2½

The large shingle mill of Mr. Fred Moore, Woodstock N. B., was destroyed by fire Oct. 3rd. The mill was built in 1887 and contained five first class machines.