FILING VS. HAMMERING SAWS

"Since the hammering of circular saws has been taken up by filers and saw experts the impression has gained ground that all the sins of the lumber pile are due to bad hammering; that if the saw is well hammered it will make good work, whether it is well filed or well tended at the brakes; and on the part of the proprietor the mill is allowed to get out of repair, track crooked, saw arbor sprung, collars out or wobbled, and things generally loose," says a writer in the *Mechanical News*. "The saw is bundled off to the shop to be hammered, or a man sent to the mill and roundly cursed because he did not make the saw perfect. I have had considerable experience on both sides, and therefore this letter.

"When saw makers charged $15 to $18 for hammering a 50-inch saw, and it cost $3 to $5 more for express or freight, the mill man looked well to his works; but now the proprietor is easily 'fogged' by the lazy sawyer. He says, 'She is warped or rim-bound. I can't make good work. You must get a new saw.'

"I wish to say to my brother sawyer from an experience of many years as hammerer, filer and sawyer, that not one saw in a hundred gets 'rim-bound,' as he terms it; but as his assertion is indefinite anyway, this name may do as well as any. But if allowed to be a little pointed in my remarks, I should say the sawyer himself was 'rim bound,' that his conceptions were inclosed in too small a space. He is ready to blame the makers of the saw, when he himself is to blame. I will make here a pretty strong assertion, that I can make 90 per cent. of all the saws that leave the shop of the maker or of a good hammerer, run well without the use of a hammer. Once the sawyer resorted to every expedient to save the expense of repairs on saws; now he goes back at once on Mr. —'s saws and wants him to send a man forthwith. The maker meets competition and must keep his reputation, so he sends a man, a hammerer, of course, when he should have sent a practical sawyer. The saw maker of the shop will at once detect the variation of the saw from truth and yet be immensely puzzled because it does not 'stand up' to the work. He knows that a saw sent to Mr. —'s mill runs first-class, and this one is just as well made and runs the same speed. He comes from headquarters, and must not even look serious, but fix the trouble at once, when he can't. I pity him; if he had only been five or ten years at the brakes too, the mill man would not 'bamboozle' him so easily.

"The saw makers have a stereotyped paragraph in their catalogues that a saw must be filed square, set both sides alike, and the track straight and in line with the saw, the collars true, &c. &c. That is theory—a good one as far as it goes. His man, not one in ten that he sends out, is close enough in his work to make it so; besides, he is not quite loyal to his employers. He says, 'That is not my hammering.' Now the fact is, he would promote the reputation of his house much more if he located the trouble with the mill in place of the saw; but the tension of the saw is his hobby, and that covers all. So thinks the sawyer, and he forthwith opens the saw with his hammer. This helps the matter some, or a saw hammered so open that you can heat the rim considerably with the guide pins before it will run snakey will bear leading with the guides. The sawyer thinks this is good and sets it down at once that all saws should be so. Not so. You will soon have trouble from another source. Your saw will get canted and set bulged, when it will have to go to the shop sure, with lots of other sins. The fact is, the makers are generally right, (not always); the saw, if subjected to no accident, will get off at once if your mill is right. 'Well, tell us what is wrong.' That is what I am going to do in another article.

"I am a saw hammerer of years of experience, and make bold to 'say my say' at the risk of being called 'He knows it all.' The fact is a saw properly filed and set for the work it is doing and run on a true arbor, and properly lined with the carriage, incident to the kind of timber, time of year, whether hot or cold, whether above or below freezing point, whether dry or water-soaked, whether New England pasture oak or Vermont rock maple, or Quebec spruce, or western pine, should run well if properly hammered, is true; but every one of these conditions hinges on the other.

"Most makers prefer their saws to go in steam mills, for steam power averages better than water power. It is a hard task for the hammerer to strain his saw for 900 or 1,000 turns out of the cut, then dash it on three or four inch feed, and slow the speed down to 500 or even 300 revolutions per minute. This is the case in many water mills. The fact that a saw can do some business in a mill of 10-horse power does not hold good that the same saw will do in a mill of 80-horse power. It takes more power to drive a saw than most people think."

BAND VS. CIRCULAR SAWS.

(New York Lumber Trade Journal)

When the advocates of improved processes introduced the circular saw, few sawyers and mill men believed it possible that a log could be converted into lumber without the stubshort, or some means to hold the board and keep it from falling back against the machinery; but the circular, like all good inventions, came to stay, and the old Mulay saw was taken to the scrap pile, notwithstanding the violent and stubborn opposition. Belts superseded the cumbersome coarse gearing, and better lumber and more of it was the result. Following closely upon the circular saw came the adjustable tooth, which at the time of its first introduction was deemed equal to a dynamite factory in point of danger, and none would attempt to use them for fear of being shot; but the inventors were intrepid, and stood by their saws with adjustable teeth while making thousands of revolutions per minute and passing through hundreds of knots. Of course they were adopted and came to stay, and now the solid tooth circular saw mill is considered a fit companion for the key-winding watch and muzzle-loading shot gun, all of which have been crowded to the wall in less than a quarter of a century.

Circular saws, as compared with the old Mulay, were great timber savers, but the demands have drawn heavily on our forests, and the sawdust taken as good timber to produce as the finest board. The inventor of the band saw now saw an opportunity to lessen the amount of sawdust and at the same time render plethoric his pocket book. He tried it, he worked it, and called it a success. He induced the lumbermen to do the same; they did, and indorsed his discovery; and now where the supply of timber and lumber corresponds, the band saw is invariably found. After the band saw, what?

A valued correspondent, who remained a skeptic as long as he could, now thinks all others lacking in enterprise that will not use band saws altogether. He has been using band saws for some time, and claims unvarying success. Of late years his company has at no time used a band mill with less than twenty thousand feet capacity, and has fifteen of them in use at one time. With one mill they sawed thirty thousand feet of inch boards in ten hours. The company, speaking of a general average, state they have sawed six million feet per year, and, outside the sawing of timber, *e. g.*, the production of more salable lumber per round thousand of logs, their lumber commands a much better price, as the surface is smoother, requiring much less time, power, and loss of material to plane down ready for use.

With reference to the economical features, these are varied. If we take a given quantity of logs, estimate the amount of lumber they will make, we must make due the allowance for sawing; this means sawdust, the production of which means power and plenty of it; hence the smaller the pile of sawdust made, the less power required in producing that lumber, other things being equal, and if we make the estimate of this unbiased, the result will be astounding.

It is claimed that a sixty-horse power engine will run three band saw mills, each having a capacity of twenty-five thousand feet per day, and still have a surplus power sufficient to run all the edges and cut-offs, to trim the lumber ready for market at one handling. The writer knows of several mills having thirty-horse power engines, that do not produce ten thousand feet of lumber in a day—from daylight till dark. Take the foregoing as a base of figures, place the average of these mills below what is positively known to be, say twenty thousand feet each per day of ten hours, at a very low estimate, see what will be saved in a saw kerf alone. The best band saws only consume an inch in making twelve trips through the log, now the ordinary circular saw, on the hypothesis of it being perfectly adjusted, evenly set, and by expansion at periphery does not wabble and cut a wider swath. Some saws will do this, we all know; here we have a saving of two thousand feet, or, in round numbers, one-fifth more lumber than what goes into sawdust, for which in some cases furnaces are erected to burn the gigantic piles, and many an entire saw mill has gone up in smoke thereby.

As a regular financial transaction, the following facts are readily deducible: taking the general average price for all kinds of lumber ordinarily made in large mills, this twelve thousand feet of lumber destroyed would be worth ten dollars a thousand, making just one hundred and twenty dollars absolutely lost every day the mill is running, in lumber alone. Of course the price given is a very low estimate, but all the quotients obtainable appear far too large; curtail these prices the best we may, the average proportion of this loss would be uppers, the best as well as the poorest lumber, leaving with this company's plant a saving of thirty thousand dollars in a two hundred days' run, making due allowance for breakage, stoppages, etc.

Say three mills cost six thousand five hundred dollars each, put up and started exclusive of power, there would still be left a neat little margin of twenty-three thousand five hundred dollars saving in two hundred days and still have the mills; figures that tell plainly what may be saved. With the above estimates no calculations are made of the increased power required to produce this great pile of dust falling from the circular saw; if this were added, the results would appear as the high wrought dream of some band saw crank, but they are already fearful, and we will not attempt to make them more so.

LUMBERING PAST AND PRESENT.

"Speaking of lumbering, said a prominent New Brunswick lumberman the other day: "There is no business in which the advance and improvements over old plans and methods have been more rapid and complete than in the lumbering operations in the woods. Why, said he, it is only a few years since the man who went into the woods in the fall, saw no signs of comfort until he came out in the spring. The accommodations were all of the most rude and primitive character, the camps were generally built after the men went into the woods, and were mere protections against the weather, the men laid down at night on some boughs, with such covering as they might happen to bring into the woods with them; the fare was the most common kind, being chiefly pork and fish—none of the present comforts being heard of in those days. It was on the streams that the men suffered most. From long before daylight in the morning until after sundown at night the men drove the lumber down the swollen streams, and often drenched through at night by an accidental bath in the cold water, or by a beating rain, they laid down on the cold ground without covering of any kind and slept until morning. They always laid close together and built huge fires, which two men of the party, in turns, kept blazing all night long, and by the time the men were ready to turn out they were pretty well dried, provided it did not rain during the night. Now these things are all changed and the old plan of getting along in the woods has given way to the progressive spirit of the times, and the man who goes into the woods for the winter very often goes to a house far better than the one he left his family in at home, and almost always more conveniently appointed. The lumber camps of the present day are substantial and commodious, are fitted up with all the modern improvements. A good cooking range and a good cook are the first essentials. The sleeping accommodations around the sides of the camp are well supplied with straw beds, and plenty of woollen blankets. The "grub" is of the best quality and the most nutritious that the country affords. Beans and pork and hot buns form the morning meal, a dinner of cold meat and bread is carried to the men in the woods, while a hot supper of