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BAND SAW CRACKS.

Having noticed inquiries as to the cause of both edge and center cracks, I will tell how I steer clear of them. Five years ago, where I am at present employed, edge and center cracks were an every day occurrence. The firm sent to New York City for an expert to locate the trouble. After looking the machine, saws and filing room equipment over, he told them what they wanted was a filer. When I came they had four saws, two of which had not been run for some time. They were full of center cracks from 1-8 inch to 3/4-inch long, and saws not worn down 1/4-inch yet. The other two saws were practically new, but there were two brazes in one saw and four in the other.

The first thing was to overhaul the machine and line up the wheels. I did not tip the upper wheel, as some filers do, but left it plumb with lower wheel. I think it bad practice to do so, and will try to make my reason clear. What is the sense of running a long-back saw and tipping upper wheel forward to take up the extra length in saw? There is nothing gained by that. You might better run a straight-back and leave the upper wheel alone. It takes some stretching to put the back in a saw, and if you tip upper wheel forward, the tooth edge of saw, while in the cut, will be the longer, which is the reverse of what you want to cut straight lumber. I always put up my saws with 1-8 inch back in 12 feet.

The next thing was the guide blocks. They were made of soft brass, and by the looks of the saws it seemed as if the sawyer had tried to hold the saws in the cut with the guides, as the saws were brass-plated where they run through the guides, and consequently crystallized. I substituted maple, not having lignum-vitæ on hand. I always have an extra set- of

guide blocks soaking in oil, and don't use dry end wood, as some filers do.

The next operation was to get the saws in shape to cut lumber. Looking them over, I found the saws with the center cracks had the least tension and the edge-cracked saws the most. Some filers blame all center cracks to too much tension. Admitting it, yet I have seen saws run with so much tension that when lying on the beach they were all wavy, yet they did not center crack. My opinion is that more saws are center cracked from rubbing on the guides and having cross lumps in them than from any other causes.

I prick-punched all the cracks I could find and fitted the saws up as explained in a previous number of The Wood-Worker, then took off 600 pounds of straining weight, and was ready to make a run. I started the machine and watched all boxes, letting machine run light for a few minutes. Everything seemed right except a little vibration of machine, as there was no foundation under it, no is there yet. There was about 10,000 feet of white pine to be resawed, and after I got started sawing there wasn't a man about the place that did not come in to rubber, as I was feeding 105 feet of 1x12 pine. Getting another man to help take away, I finished the run, then looked over the saw and found 1 had a few new center cracks, but I expected that, as a saw that is crystallized will keep on cracking; the only way to stop it is to send it back to the factory and have it retempered. I made those saws go until I go four new ones. Since then the machine has made its two runs every working day and I have had but two cracks, and those in the braze. I attribute my success to never slighting my work and keeping my saws as nearly perfect as it is possible to have

'In conclusion would say, don't use metal

guides, but use wood well soaked in oil. Don't try to make the guides make up for poor saw filing, as a saw that is poorly put up won't stay in the cut, no matter how close the guides may be. Have the tension as even as possible, as a little tension evenly distributed is better than a lot unevenly put in. See that there are no "round-corners" on the teeth. See that the box nearest lower wheel fits snugly, as any jump there will crack a saw every time. And, above all, don't have any cross-bars in your saws; they are easily found by wiping the saw with kerosene oil and drawing straightedge from tooth edge to back edge; every one will be marked. Take them out with longface hammer. Don't try how quickly you can put up a saw, but how well. Go over your saws often; don't wait until they begin to dodge.

Use little clearance; a saw with little set will stand up better, cut smoother and use less power. Don't use the tilting device at all, and if you use the crossline, be careful; when you use that you are running your saw in a twist, and that is something to be avoided. I use neither crossline nor tilt, but put up all my saws alike, and when they begin to crowd back, I sharpen again. There are lots of saws broken by trying to make them cut five hours, whereas three would be better. I have found that saws will become crystallized on the back edge by bearing on the sharpener rest while sharpening, but that can be removed by holding a piece of emery wheel at back of saw while running.-John Holland; in The Wood-Worker.

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