

# SAWMILL FORUM

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## **In the 60s being square was considered a bad thing, but in some of today's sawmills, squareness is everything.**

If you are sawing everything on your headrig, then squareness is probably not a big priority. That's because in that situation an out-of-square cant will still produce saleable lumber. But if your headrig is just making cants to send to a resaw, squareness becomes a huge issue. And if it's a big issue for you, the mill owner or general manager, then of course becomes a very important issue to people like me, who service saws for a living.

When you send an unsquare cant to a vertical linebar resaw, you end up completely wasting the first board, which often also happens to be one of the most valuable boards in that cant. Because of a different design, horizontal resaws, don't have that problem. If you have a vertical resaw, though, you find yourself constantly monitoring your cants because if they're not going into the resaw square, it's costing you a bundle in lost profits.

It's been my observation that mills with linebar resaws tend to keep their equipment in better shape--because they have to. And while they're at it, they also tend to keep their saws in top condition. They do this by sending them to me sooner, instead of later. A saw that starts sawing unsquare cants is one that should have been taken out of service earlier. This helps my business, of course, but it also benefits my customers and their bottom line.

Chasing squareness problems can often be a daunting task for sawmillers. That's because there are two distinctly different circumstances that can cause the problem, as well as the distinct possibility that both are at work compromising the saw's ability to produce true lumber.

If your cants have the same surface dimensions from one end to the other, but are out of square, chances are what you are dealing with is a carriage that is out of square with the arbor. People used to think circular saws had to be perfectly plumb to saw properly. We have since learned that the saw can be out of plumb and the arbor unlevel, as long as the carriage is in the same plane. Of course, it is a lot easier to level the

mandrel and then get the carriage level and plumb, instead of aligning everything to one bubble out of level. But it will work.

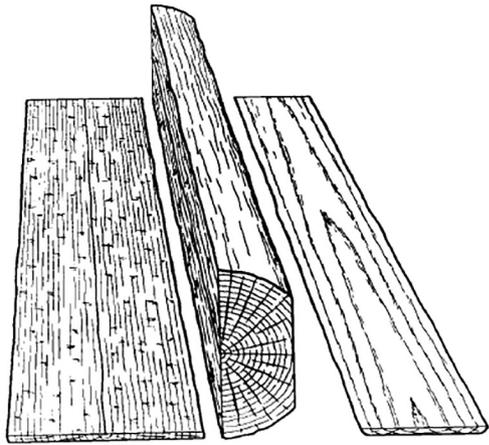
Depending on whether you are turning the log up or turning down when you are sawing, you might find that your unsquared cant resembles a parallelogram. If this problem is caused by your carriage not occupying exactly the same plane as the saw, it may have shown up gradually. In that case, you probably need some new wear plates on the headblocks.

If the cant's surface dimensions don't measure the same from end to end, on the other hand, they may be out of square because the saw was running out of the log. In the process, it was leaning out enough so that your cants are now unsquare. Why is your saw running out of the log? It could be slightly dished towards the board side, or the collars might be dishing the saw towards the board side, or you have an inaccuracy at the teeth. Although sharpening these inserted tooth saws accurately is fairly easy to do, it is also fairly common to get them just a little off.

I say "a little off" for a big reason. Your cants may be way out of square, but because of the direction you turn the logs on the carriage, the problem multiplies itself. That means that you might have to look for a very subtle problem at the teeth or the saw to determine the main reason why the cants are out of square.

I have seen many cases where the severity of the unsquare cants made the sawyer start looking for a huge issue--without considering the fact that turning down on the carriage can actually amplify the problem. I'm not saying that sawyers shouldn't be turning down. I am saying that they need to remember that turning down can exaggerate the problem. Start troubleshooting by first looking for relatively small things--like teeth that are just off a tiny bit or a saw that is just ever-so-slightly dished towards the board side.

Not that you should ever run a slightly dished saw, but I am talking about the amount you could easily get away with if you didn't have a resaw and therefore weren't so much under the gun to produce square cants.



Cants and flitches need to be sawn square if they're going to be processed on a linebar resaw (below).



In most cases, I've found that unsquare cants usually result from a combination of the saw or the teeth being slightly off and the carriage is also just a little bit out of level with the mandrel. Again, it is the subtle nature of the contributing issues that can make detection so difficult. I suppose when the problem is obvious, I don't hear about it much because it's easily fixed. But when the cause and accompanying solution don't stand out like a sore thumb, I do tend to hear about it.

Of course, the ultimate solution to having a resaw and the accompanying need for square cants is to keep your saws and your mill in better shape. And if that means sending your saws out to be hammered sooner instead of later, just look at it as part of the expense associated with the added maintenance of running a linebar resaw. It may require added maintenance and expense, but using a resaw instead of sawing everything on the carriage also presents an opportunity to get much better utilization out of each log, which of course transfers to higher profitability.

**Questions about sawmills and their operation should be sent to Forum, The Northern Logger, P.O. Box 69, Old Forge, NY 13420, FAX #315-369-3736.**

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