

INCREASING THE EFFICIENCY OF BAND RESAWS.

By A. J. BURTON.

A WRITER wants the opinions and experiences of expert band filers on how to increase the efficiency of band resaws. I do not consider myself expert, therefore will not give my opinion, but will tell some of my experiences and what has given me good results.

I think 75 feet a minute a slow feed for a 6-inch 19-gauge resaw. If he runs his saw 9,000 feet per minute, as he should do, and if the saw is the usual 30-foot length, the saw will go round 300 times per minute. Putting the stock through at the rate of 75 lineal feet per minute will only give him a 3-inch feed. If he will have his filer put up his saws according to the following instructions he can just as well make the feed 150 lineal feet per minute, the lateral movement of the saw at that speed will not exceed $\frac{1}{4}$ -inch, and will not reach that except in 20-inch cuts or over. Neither will the saw dart forward on the wheels when not in the cut, nor will it show a tendency to crack. How to do it:

First, get a good make of resawing machine, with perfectly balanced wheels and the face of wheels flat. Set the mill on a solid foundation. Pay as much attention to oiling the straining device as to oiling the bearings, so tension on saw will be entirely sensitive at all times. The



rolls must be in line with saw so stock will pass through straight and at even speed. Then comes fitting up the saws. Put a crown in back edge of saw equal to 1-32-inch in 5 feet 6 inches in length. Don't do this by guess or you will probably not get it even. Make a straight-edge 5 feet 6 inches long, then plane out the back edge until it shows proper concave on front edge. Now roll back edge of saw the length of straight-edge, then place straightedge against back edge of saw; by changing end for end you can easily see whether you have the proper concave or not. Now file it a little, or draw out back of saw as the case may be, until straightedge fits tightly to saw when held either end to. Fit back of saw to straightedge all the way round. Tension the saw to a 36-foot circle from one edge to the other. This must be well done. There must be no loose or stiff spots in the saw. All this should be done with the stretcher.

Next, level the saw by taking out all the cross-face lumps on the inside first, then the long-face lumps. Go over the outside in the same manner and repeat until saw is perfectly flat, with a true back and good, even tension. Space the teeth $1\frac{1}{4}$ inches, $1\frac{1}{2}$ -inch deep, with good, large, round gullet made by a $\frac{1}{2}$ -inch emery wheel. Use $6\frac{1}{2}$ -inch hook in 10 inches, which is equal to $3\frac{1}{2}$ inches in a 6-inch saw. Round or raise the back of teeth a little like 2 in sketch. You will observe that 1 has a hook of 35 degrees angle, which is $8\frac{1}{2}$ inches in 10 inches, while 2 has but $6\frac{1}{2}$ inches in 10 inches. Never raise back higher than shown by dotted lines. Sketch shows $1\frac{1}{2}$ -inch teeth, but you can make 2 with $1\frac{1}{4}$ inch space. Swage with a face swage and side dress with a pressure side dresser or shaper. Don't use a side file at all, and don't use a heavy swage. Do all your sharpening with the grinder;

if the machine is properly adjusted it will do better work than can possibly be done by hand with a file.

If you put saws up according to these instructions they will not oscillate, but will run straight as a string, without a quiver, making no noise in the guides—you can take off the back guide and sell it if you wish, for your saws will not run back on the wheels in the cut. You can feed them until they snake or break, but they will not go back on the wheels. Have wheels in perfect line and use the tilt but not the crossline. Don't use a top swage on a band resaw unless you desire to date yourself back 15 years.—The Woodworker.

SOME INTERESTING FIGURES.

The wholesale lumber dealers of Buffalo and Tonawanda held a joint conference at the former city on January 20th. Close comparisons of stock with those of a year ago were made at this meeting, and it was shown that no accumulations existed.

A very interesting feature of the meeting was the table of prices on white pine uppers and culls, compiled by Mr. M. E. Priesch, vice-president of the Buffalo Lumber Exchange. Mr. Priesch first set out to show also the prices on common, but found this grade had changed so radically as to make comparison impossible. His figures are as follows:

		Uppers.	Culls.
186	July	\$18 00	\$7 50
1873	January	19 00	8 50
	July	15 00	12 00
1884	January	30 00	13 00
	July	30 00	15 00
1885	January	38 00	16 00
	July	38 00	11 00
1886	January	30 00	12 50
	July	45 00	14 00
1887	January	45 00	14 00
	July	45 00	4 00
1888	January	45 00	14 00
	July	45 00	14 00
1889	January	45 00	14 00
	July	45 00	14 00
1890	January	45 00	14 00
	July	43 00	13 00
1891	January	40 00	13 00
	July	42 00	13 00
1892	January	50 00	16 00
	July	50 00	16 00
1893	January	50 00	17 00
	July	46 00	12 50
1894	January	44 00	12 50
	July	44 00	12 00
1895	January	42 00	10 00
	July	40 00	9 00
1896	January	37 00	9 00
	July	37 00	9 00
1897	January	30 00	9 50
	July	33 00	9 00
1898	January	30 00	9 50
	July	28 00	10 00
1899	January	26 00	12 00
	July	42 00	12 00
1900	January	45 00	12 00
	July	44 00	12 00
1901	January	46 00	13 00
	July	47 00	13 00
1902	January	47 00	13 00
	July	46 00	12 00
1903	January	46 00	12 00
	July	45 00	11 50
1904	January	45 00	11 00
	July	45 00	12 00
1905	January	45 00	12 00
	July	45 00	12 00
1906	January	45 00	12 00
	July	45 00	12 00
1907	January	45 00	12 00
	July	45 00	12 00
1908	January	45 00	12 00
	July	45 00	12 00
1909	January	45 00	12 00
	July	45 00	12 00
1910	January	45 00	12 00
	July	45 00	12 00
1911	January	45 00	12 00
	July	45 00	12 00
1912	January	45 00	12 00
	July	45 00	12 00
1913	January	45 00	12 00
	July	45 00	12 00
1914	January	45 00	12 00
	July	45 00	12 00
1915	January	45 00	12 00
	July	45 00	12 00
1916	January	45 00	12 00
	July	45 00	12 00
1917	January	45 00	12 00
	July	45 00	12 00
1918	January	45 00	12 00
	July	45 00	12 00
1919	January	45 00	12 00
	July	45 00	12 00
1920	January	45 00	12 00
	July	45 00	12 00

Mr. Priesch pointed out that present conditions were similar to those of 1879—a reaction following a long depression. He said 1879 ushered in a period of five very prosperous years, and he drew from this the pleasing conclusion that present prices on lumber generally would persist for at least that long.

A SIMPLE ELEVATOR.

THE simple form of elevator for use in mills, furniture and chair factories, carriage wagon and agricultural works can be cheaply erected. The elevator is operated between the corner of the building, A, A, the latter reaching from the floor. The cable passes around the grooved wheels, B, C, D and E, as shown, and a sheet iron cylinder is connected in and filled with lead to counterbalance the weight of the cage.



Therefore, in shifting loads from floor to floor the weight of the load is required to be lifted by hauling on the cable. The cage is in place at a floor level by means of the stop which presses against the upright at I, when the lever is drawn down with the hand piece J. Spring K releases the shoe when pressure is withdrawn from the hand rod F.—Lumber.

ABOUT CONDENSERS.

IN arranging for jet condensation with engines of any dimensions, it is necessary to use considerable care, says the American Machinist, as by reason of the short time required to overflow there is danger of backing up into the cylinder at stopping, or at starting, and in such a case a breakdown is likely to occur on again starting ahead.

It is not always convenient to arrange the valve within such range of the throttle that it can be once closed on slackening the speed, and even when it is so placed it is much more satisfactory to prevent against flooding in a way that allows the valve to be at normal opening, as the injection requires some attention to properly readjust after being once changed.

The best all-round method of accomplishing the desired result is to place a float in the condenser, an arrangement being operated by the lever when water rises above the safety point. This arrangement relieves the engine of all anxiety, his only responsibility being to see the apparatus is maintained in proper repair and in good condition.

If a float cannot be used, a simple air cock, taken from near the engine throttle, will be found the best device, as by a turn of the hand wheel at slowing down air enters the condenser and holds the condenser water back without necessitating the closing of the injection valve.

The class of engine known as "high-pressure condensing," in which there is no vacuum under the conditions—the exhaust steam being simply directed into a tank of feed water for the purpose of heating the latter—should be supplied with a float and air cock, stopping the steam in cylinder on exhaust side if it is liable to condense, and in that case, unless provision has been made to prevent it, the feed water will block up in the engine and possibly freeze the cylinder head when steam is again turned on.

The use of a float in either type of engine prevents flooding due to the pumps failing to function properly.

Air-pump valves are often found broken, if of soft metal, if of the soft rubber so often used, and in such cases the pump is likely to fail to clear the condenser.

Foreign substances, waste, chips, etc., are very liable to jammed in the passages, and where the valves are downward—hanging—held to their seats by spring studs are liable to work loose, letting the water into the chamber below. For this reason pumps are designed with lifting valves only, in which the springs can be much lighter, and the seating is more satisfactory than where both the weight of the column of water must be balanced by the stiff wire coil.

George Dowding & Sons have made improvements to their saw mill at Kerwood, Ont.

The construction of a new saw mill at Princeton, C., has been completed by Hardwick, Martin & Co. Their dam gives a direct waterfall of twenty feet, and a twenty-eight inch turbine.