

HARDWOOD MEN PROTEST.

A DEPUTATION of hardwood lumbermen, consisting of James Tennant, J. G. Cane, McBean Bros., Mr. Eyer, of Read & Eyer, F. N. Tennant & Co., and W. N. McEachren, held a consultation, on Dec., 6th, in the Grand Trunk offices, Toronto, with Mr. J. Burton, general freight agent, and District Freight Agent White, to ascertain if the G. T. R. could be prevailed upon to reduce the present freight rate of 8½c. per 100 lbs. on hardwoods to the former rate of 6½c. Mr. James Tennant was spokesman for the deputation and pointed out that in several respects the conditions of lumbering in hardwoods were favorable to the securing of a larger freight trade by the railroads than was the case with pine lumber. There was no large quantity of hardwood at any one point, and the result was that it had to be gathered in small quantities at different points and despatched to some central place for shipment. This meant additional carriage for the railroads. There was no such a thing as flottage with hardwoods, as was the case with pine. Hardwoods were much heavier than pine, a car of the former weighing from 36,000 to 40,000 lbs., where a car of white pine would only average, perhaps, 25,000 lbs. It was, therefore more profitable to the railways to carry hardwoods than pine. Then the hardwood men labored under the disadvantage of not being able to dispose of culls as was the case with pine, and this ought to be an item of consideration by the railways in fixing rates. Altogether the position of the hardwood man was handicapped in different ways, and it seemed unfair that his difficulties should be enhanced by a discriminating rate when it came to the shipment of stocks. Mr. Burton noted carefully the objections of Mr. Tennant, and these were supplemented by comments from other members of the deputation, but he would not promise any answer before the following Tuesday, at the earliest, when there was to be a conference of G. T. R. and C. P. R. freight managers in Montreal, when this question would, probably, be considered along with other matters and the lumbermen were asked to state their grievances in writing and forward such a letter to Montreal. Mr. Burton intimated that the railroads were desirous of seeing rates increased rather than lowered. White pine rates were regulated to some extent by vessel rates, a condition which did not apply in hardwoods. The deputation pointed out another grievance that bore unfairly upon the hardwood men, namely, the method of computing when the quantity of hardwood shipped fell below 30,000 lbs. F. N. Tennant & Co., for example, cited a case of a load of lumber that they had sent forward to a customer and which was billed to that customer as 30,000 lbs. where, when the car load was weighed it was found to contain only 25,500 lbs. The customer refused to pay freight except on the actual weight of lumber, and the shipper was out about \$4.00, a discount which, he remarked, hardwoods would not stand at present prices. Mr. J. G. Cane and others cited similar cases. Mr. Burton fell back on the clause, which fixed the minimum of weight, and whilst promising to look into the matter was not disposed to treat the subject seriously.

WASTE IN MANUFACTURE.

MANUFACTURERS are always looking for new uses for waste material by which value can be obtained, and thus diminish the cost of the material worked up. But about a large mill or other manufacturing establishment, says the Manufacturers Gazette, there are many sources of wealth which, though indirect, if neglected just as positively add to the cost of the final product as though the price of the raw material had been enhanced.

Cleanliness of machinery and buildings helps to diminish the cost. A proper system of lighting, natural and artificial, and of ventilation, effects the cost. The steam heating arrangements of a mill are often neglected and become wasteful.

An engineer of our acquaintance was once employed to reduce, if possible, the consumption of coal of a mill which every year required an increasing outlay for fuel, and was then consuming several thousand tons annually. He found that there were over one hundred leaking steam valves in the various departments, and that the help or overseers never gave the matter a thought, but

when the rooms were too warm opened the windows, and never shut off the steam. In many cases this could not be done on account of the worn condition of the valves. These were all removed and ground or new valves substituted. The result was a falling off in the coal consumption during the following months of nearly a ton per day average. Steam was carried in this mill about a thousand feet in uncovered pipes, and these were next covered, resulting in a further material reduction. Then the coal house door was kept locked, and records kept of the weight of coal consumed each day. By making one person responsible for this department a saving was kept up during the year that much more than paid the salary of the one employed, although he had other duties as well.

All saving from waste is better than an increase of business to the same amount, for it is an additional net profit or dividend obtained without risk or cost.

The subject is too large to more than suggest the many directions and methods which could be studied and applied.

THE BEST STEAM ENGINE.

WHAT will always seem like a mistake to outside engineers is not frequently made by the builders of steam engines, in assuming that the particular type of engine they build is the best for all purposes for which steam engines are used. All will remember the rather warm contention of a few years ago regarding the relative merits of high and slow speed engines. Expressions of opinion were rather positive on both sides, but if the arrangements made did not entirely convince the builders of either type that there was room for the other, they did have some effect in the way of confirming this belief in the minds of others, so that to-day there are uses for which it would be useless to attempt to sell a high-speed engine, and others for which a low-speed engine would find no favor—for the requirements of steam engineering go beyond the question of rotative speed, and one requirement will come strongly to the front in one place, or for one purpose, and another for another purpose.

Fuel may be so plenty in one location as to cut no figure in determining the type of engine to be used. In fact, in the instance of saw and lumber mills it is frequently the case that it is an advantage to burn as much of the refuse as possible under the boilers. And this may be the case in tanneries, and in the instance of engines used for the purposes. Now, under such circumstances it would be of no avail to talk to those wanting engines about the saving of fuel. Fuel is the one thing that it is not economical to save. So the saw mill, the lumber mill and the tannery have their special requirements. They are usually located in what may be called out-of-the-way places. The engines used in them are generally rather roughly handled, and there is no nearby machine shops to go to for repairs. Manifestly the requirements are for engines that will hold together under the rough usage they receive, and in the construction of which there is nothing that cannot be comprehended by the village doctor. Refinements for steam saving or for other purposes would be as much out of place as polish on a grate bar. What is wanted is something that will turn over right along without regard to pounds of steam or pounds of fuel, that is as near as possible proof against breakage, and utterly devoid of complication. There are many high-class engines that never ought to be bought or sold in such locations. Their refinements would be materially worse than wasted; a cause for dissatisfaction rather than for satisfaction. They would not be worth a moment's consideration until they gave trouble some day beyond the skill of local talent to cope with.

Transplant the saw mill engine where coal is worth five or six dollars a ton—where there is no waste material for steam making—and, of course, it is all wrong. The conditions are as unfavorable now as they were favorable before. Fuel must be carefully considered, and to this end devices or parts that may be more liable to derangement will be tolerated. Better talent is employed around the engines and the machine shop is at hand.

Here then, in the two instances cited is a place for two types of engines—the one that is nothing but an

engine, a machine, that couldn't do much to or for if he tried, and that is little liable to require the doing of anything until it goes "all at once" or requires a complete rebuilding, which it will hardly be worth, and the one upon which greater care can well be afforded to the end of saving fuel. Neither is suitable for the place occupied by the other.

The foregoing is a strong contrast: There are other requirements that may not seem so striking, but which may be of consequence. For example, the requirement may be for the nearest practicable approach to absolutely uniform turning, something beyond what would be of any particular advantage in the instance of the majority of steam engines. There are types of engines better suited to accomplish this end than others are, and so on; other examples might be given if necessary. Enough has all ready been said to show the unwisdom of claiming for any single type of engine the advantages that can belong to all.

Theoretically speaking, it might be reasoned that every steam engine should have all the good features of a dozen types, or at least all it was possible to embody. Practically, there would be waste in this. In the machine business there are required for some purposes tools and machines of great precision, tools and machines that cannot be made too well, no matter what the cost may be. But for a large part of the work of the machine shop something that costs much less is equally as good—in some instances better. It would be foolish to reason that all the tools and machines should be made like the more costly ones, just as foolish as to reason that the costly ones should not be made. To a certain extent this is true of steam engines. No single builder builds the best for all purposes.—American Machinist.

FINISHING HARDWOODS.

HOW to treat the face of hardwood joinery frequently requires, says Timber Trades Journal, much consideration, and deserves a passing notice. In the case of oak, the action of the atmosphere would tone it down admirably; but this takes time, and the first appearance of newness is often removed by the fumes of ammonia, which may be regulated to produce any desired shade, and the treatment is a good one when the work is not subject to much handling. Where it is, however, beeswax and turpentine are generally applied afterward, otherwise the damp heat of the hands will leave dark marks; care must, however, be taken that as much of the wax is rubbed off as possible, or the work will very probably turn yellow in time.

After this application the oak will cease to darken, as the wax fills up the pores and prevents any further action of the air. Beeswax and turpentine alone produce good results on most hardwoods when well rubbed in, and a pleasant surface is the result, much the same as the light polish seen on an egg shell.

This treatment is particularly useful for floors. These, however, require periodical attention. Simple oiling is never satisfactory. French polishing is a very general treatment, but it is too well known to need any description.

It is of the most vital consequence to remember that damp plays havoc with seasoned work, causing it to swell and warp. It is therefore fatal to put it up against damp walls: when it is impossible for these to have time to dry, the wood should be well coated at the back with a damp-resisting preparation, and not be fixed close against the wall.

Don't imagine that because a machine is not being used that the countershaft does not need oiling just the same, for unless the belts are off and the countershaft is idle too, it needs just as much attention as though it were running. Neglecting this has caused more than one troublesome loose pulley, and the oiler should be made to attend to all counters, whether the machines are running or not.—Machinery.

A new belt fastener recently patented in England consists of a metal plate adapted to extend across the meeting edges, the plate having one straight side and at the other side a series of spurs arranged in pairs longitudinally opposite, the spurs of each pair being at equidistant points from the transverse center of the plate and arranged in advance of the preceding pair in both directions, so that each pair will penetrate the belt at different points.