

## SUFFICIENT POWER.

Many a mill builder carries out a principle of false economy when he places the boilers and engine in his establishment. A weak man can not lift a heavy weight; a small horse cannot pull a heavy load; yet there are men, and plenty of them, who seem to think a small engine capable of driving heavy machinery. Too often machinery salesmen do much to induce men to believe this. Knowing the disposition of the majority of men to build as cheaply as possible, these salesmen argue that a small engine will do the work satisfactorily. "I want to cut from 40,000 to 50,000 feet of lumber a day," says the lumber manufacturer. "Oh, well," says the salesman, "this engine will do it." Probably it will do it. With easy feed the saw is driven through the log in a manner that cannot be complained of. But by and by there comes a time when there is need to hurry. Advantage is wanted to be taken of a good market, there is a big order to fill, or something of that kind, and the brake is taken off. The time has come to push things, but it is discovered, when it is too late, that there is no pusher. The little engine struggles, but with all its struggling the saw does not "walk" through the log. This, above all things, makes a saw mill man nervous, if not mad. He is anxious to see his mill go at a 2.40 gait, but it doesn't come under the wire in less than four minutes. As he is his own driver he knows there has been no "pulling," and must settle down to the conclusion that the whole fault is with the steed.

An engine should be of sufficient power to drive the mill to its maximum capacity, and that easily. An overworked engine complains as loudly as an overworked man. It speaks plainly for relief at every stroke. It says in language that can not be misunderstood: "You can work me thus hard, of course, if you choose, but though I am made of iron and steel, I cannot endure everything, and if you don't let up you will have to call in a physician." The engine speaks the truth. The strain and friction goes on, and the engine gets sick. It has simply worked itself sick. The physician comes in and at considerable expense doctors it up. Parts are replaced and everything is again put in good shape. The engine is again well, but it is no more infallible than it was before. The same cause produces the same effect. Overwork again prostrates it. A consultation is held and it is decided that the engine must go. It is set on one side, and then the manufacturer of it hears that his engine that was put in at such and such a place has been replaced. It wouldn't do the work; consequently it must be a poor engine. Other manufacturers, to make capital out of it, slyly wink, and adroitly infer that the engine must be poor. The fact is, it is probable that the engine was first class in every respect. It came out of a shop where excellent work is done and good material used. It was simply worked beyond its strength, and the manufacturers of it are not a bit to blame.

The result is damaging to the maker of the engine and to the man who purchased it. The latter has been bothered to such an extent that he has decided that the vexations of the saw mill business are many. The speed of the saw was not uniform enough to produce good lumber. There were big items of expense for repairs. He bore the taunts of his neighbors that he could not lift the broom over his ridge pole. There are unprofitable delays. The old engine has to be sold at a heavy discount, for the dealers in second-hand machinery are like those in second-hand clothing—they generally buy their goods for less than they are worth and sell them for more than they are worth. For the new engine there must be a larger and stronger foundation put in, and altogether the string of perplexities and expenses is a long one.

It is impossible for a man who builds a mill to know before hand how hard it will be necessary to drive it. If the price of lumber jumps up suddenly, he will feel like putting on all the steam and feed possible. And even beyond this something is liable to turn up. It may be found desirable to attach a planer, or some other machinery, and if it is it will be necessary to have enough power to run it, in connection with the saw. To increase the capacity of a mill is

an almost every day occurrence, and, oftener than otherwise, such a change necessitates a new engine and boiler.

We have heard thousands of complaints from mill and factory men because they did not have enough power, but not one because of too much. It is safe to say that no mill man ever found fault because his engine was too large. If it is larger than he really requires, he is pleased rather than otherwise. He not only has the satisfaction of seeing his machinery running easily and at uniform speed, but he knows that in case of an increased demand for the product of his mill, he will be able to meet it promptly without additional expense.

Reserve power is always desirable, at times highly profitable, and the extra cost of an engine and boiler capable of producing such power is one of the best investments a mill man can make.—*Northwestern Lumberman.*

## LUMBER IN THE NORTHWEST.

The Northwestern Lumber Manufacturers Association which met in Minneapolis, in April, proved to be an interesting one from several points. In his annual address the president pointed out a policy that might be pursued advantageously, but the trouble is getting the manufacturers to agree upon and adhere to any policy. He said:—"I respectfully suggest that the true policy for lumber manufacturers is to saw less lumber the present season than last carry the unsawed logs in 1885, and provide less logs hereafter, until consumption equals the manufacturing capacity of the country."

He further said: "Another important reason why an effort should be made to prevent a serious decline in values is the fact that the past history of the lumber trade shows that the market does not recover for years the decline of a few months, if caused by over production."

The president suggested that reports be received of the log cut during the past year on the different streams, and Mr. F. Weyerhaeuser reported that the cut on the Chippewa, exclusive of the Red Cedar and Eau Claire, was 886,000,000 feet, but low water threatened to make driving difficult. Mr. E. L. Hospes reported the cut on the St. Croix; that there were about 325,000,000 new and old logs on that stream.

Mr. G. S. Shaw, of Davenport, reported that he had learned that there were about 200,000,000 old and new logs, which is less than last year. The stock of lumber at La Crosse is low and at the points below the stocks are less than was the case last year. The prospect for the drives was not good.

Major Camp, for the the Mississippi, stated that there was 190,000,000 old logs carried over, and the loss on these would probably reduce the amount to 170,000,000. The surveyor general estimated that there was 310,000,000 cut, which would make an aggregate of 60,000,000 less than last year. The stock of lumber on the sticks is about 70,000,000, which is about 20,000,000 more than was the case last year. Of the entire cut of logs, about 150,000,000 would not come to Minneapolis. He estimated that the cut of lumber for the current year would be about 250,000,000. Mr. Cranage for the Saginaw valley, reported that the cut of logs was about the same as last year, and that the stock of lumber was about the same. He did not think the lumber cut would be larger than last year. The water has been low. He thought if there was a deficiency it might be made up from the railroad point, but did not think the cut there would effect this market, as their market is for the most part East. Mr. Merriman asked if it was not a fact that the low grade lumber went West, while the high grade went East. Mr. Cranage was unable to state.

Mr. Swan, of Muskegon, reported that there is about 500,000,000 of old and new logs in that stream, about 200,000,000 old logs carried over and 100,000,000 feet piled up.

The same condition in relation to water prevails on the Muskegon river as upon other streams. The water was exceedingly low. The sale of lumber had been very small thus far, and it had been the theory that it would take care of itself, and that no amount of doctoring would help it. The feeling is general among manufacturers not to push anything upon the market.

Dealers are generally in a better condition to hold it, and on the Muskegon the sales of stumpage has been at such figures that it could not be cut except at a sacrifice at present prices.

Mr. E. W. Durant, of Stillwater, thought the situation had changed within the past twenty days materially. There did not seem to be a prospect of making good drives. If nature is obstinate it will settle the price of lumber better than this convention can. It seemed advisable that a committee be appointed to report a plan for consideration at the afternoon session. The situation had undoubtedly changed for the better within the past ten days. Gov. Ludington said that on Menominee 100,000,000 logs had been carried over and 400,000,000 had been cut, which was 150,000,000 more than could be handled in the boom. He thought that all of these logs would be got down. He believed with Major Camp that we were going too fast in the lumber business.

The chair appointed a committee representing the various streams, which after a thorough canvass reported the log cut to be found as follows:

District.	Supply of 1883.	Supply of 1884.
Black river.....	200,000,000	225,000,000
St. Croix.....	\$25,000,000	310,000,000
Chippewa.....	1,200,000,000	1,200,000,000
Eau Claire.....	100,000,000	90,000,000
Red Cedar.....	110,000,000	125,000,000
Duluth.....	185,000,000	120,000,000
Ashland.....	45,000,000	45,000,000
St. Louis river.....	60,000,000	60,000,000
Wisconsin river, including Stevens point..	300,000,000	300,000,000
Hung up below Peplin..	35,000,000	20,000,000
Minneapolis.....	540,000,000	840,000,000
Total.....	3,420,000,000	3,250,000,000
Michigan.....	3,500,000,000	4,200,000,000
Illung.....		820,000,000

Shortage on same basis 400,000,000

In the afternoon session the committee appointed to formulate a plan of action for the formation of a strong organization among the manufacturers made their report, from which we extract the following preamble:—

"That the log stock of Michigan, Wisconsin, and Minnesota for the season of 1883 and 1884, old and new logs varies but slightly from the cut of 1882 and 1883. That the prospects of a successful drive are very unfavorable throughout the Northwest. That the supply of available logs in sight in the waters of the Northwest will not supply the mills to exceed thirty days. It is found that the supply of logs on the Mississippi and its tributaries is 170,000,000 feet less than last year. That the Michigan district has an excess of 400,000,000 of logs which is more than counterbalanced by the shortage of lumber in the Northwest, leaving the general situation more favorable than it was one year ago."

A formal discussion was entered into. Mr. Ingram thought a big mistake was being made in the effort to cut everything clean from land. The theory has been entertained that unless the timber is cut clean, that the fires would run through and destroy the standing pine. He believed that the owners of stumpage should cut reasonably clean, clear up the under litter, as far as possible and in five years the small timber may be taken and pay for the extra cost. He thought the over-production was largely due to the purpose to cut perfectly clean, and to take lumber of all grades.

Major Camp took issue with Mr. Ingram and held that if the policy was adopted there would sooner or later be an over stock of uppers and commons would be worth most. He thought the time was coming when it would be impossible to buy uppers at any price. The trouble was that the milling capacity was too great, and owners thought it was imperative that the mills should be stocked and run. The only way the thing can be prevented is to reduce the cut.

Mr. Bassett did not think the amount of lumber on hand was unusually large. Sight had seemed to have been lost of the fact that the consumption was steadily increasing and where twenty-five years ago 100,000,000 feet was consumed, 2,900,000,000 feet were now required.—*American Lumberman.*

**A BAD CASE OF STARVATION.**—To starve the lungs by a lack of vital food contained in pure air. If the lungs are obstructed by colds, remove the accumulated phlegm with the safe and pleasant throat and lung remedy, Haygard's Yellow Oil.

## DYING LUMBER.

A new process for drying lumber in just now attracting attention. It is said to be the most effectual and economical method ever practiced. No kiln is necessary, although where a shop has one it can be utilized to an advantage. The process has the great advantage of keeping the surface of the lumber moist during the drying; this holds the pores open, obviates all tendency of cracking and leaves the albumen free to perform its functions. In ordinary kiln drying the albumen is injured or destroyed, and the surface dries first, thus sealing the juices inside, to escape eventually through cracks caused by the uneven expansion of the wood. Some readers may perhaps be surprised to learn that the process consists in surrounding the wood to be dried with a common salt; but those who are acquainted with the peculiar power for extracting moisture which salt possesses will not be at all astonished at this novel and ingenious utilization of this power.—*Builders' Journal*

## AUSTRALIAN TIMBERS.

It has repeatedly been asserted that Australia is deficient in timbers suitable for building and other industrial purposes, but the assertion is utterly without foundation. On the contrary, the various colonies, especially New South Wales, are rich in timbers of every possible description, many possessing a beautiful color and grain, rendering them eminently suitable for decorative woodwork. Among the more plentiful of the New South Wales timbers are the following:—Ironbark, generally used for railway purposes, and girder beams for buildings. The retail price is 2s. 6d. per cubic foot for girders, and £1 5s. per 100 superficial feet for sawn timber. Groy gum, generally used for building purposes, palings, and fencing, and is retailed at 18s. per 100 superficial feet. Blackbutt, greatly used for all kinds of house and shipbuilding purposes, and also for street paving cubes; price 18s. per 100 superficial feet retail. Spotted gum, mostly used for shipbuilding, owing to its long lengths and bending qualities; price, 18s. per 100 superficial feet retail. Mahogany, used for fencing and general purposes, is considered to be able to stand a long time under ground; price, 18s. per 100 superficial feet retail. Tallowwood, one of the best timbers for building purposes that can be obtained in the colonies, having a greasy nature resembling Indian teak, and sells at about the same price as ironbark. Blue gum, greatly used by wheelwrights, and also used for general purposes, and belong to the best class of timber growing in this colony; price, 18s. per 100 superficial feet retail. Colonial pine is largely used for all rough purposes in house-building and box-making, and also for flooring boards, and sells at present at £1 2s. per 100 superficial feet retail.—*Land and Water.*

## FREE LUMBER.

In a very few years, unless some relief can be afforded them through the free introduction of Canadian lumber, our most valuable forest will have disappeared forever. It is no use trying to avoid this question. Either the duty upon lumber must be taken off or the country must be prepared to lose its white pine forests—long before the close of the present century.

Suppose it could be known that at the present rate of consumption all the coal or all the iron ore underlying the United States would be used up at the end of ten years; would any one for moment advocate an import duty on those articles or seek to exclude their importation into this country? And yet this is the policy of Congress with regard to the supply of pine lumber.

It is known with as much accuracy and precision as such a thing can be known just what is the existing supply of pine and spruce now standing in the United States. It is known that before ten years have passed all our northern pines and spruces will have been manufactured into lumber if the present duty upon such lumber is not removed and the Canadian forests allowed to compete upon equal terms with our own forests in supplying the United States with building materials. This is protection carried to the utmost limit of absurdity.

One of the greatest and most important sources of the prosperity of this country is