

moisture, and no deposit of water, in any form until the temperature is reduced to the point of saturation. It is not yet determined as to how far the cooling and moistening influence of a grove may extend. It must depend upon many circumstances, and especially upon the slope of the surface and the direction of the winds. The effect is often apparent to the eye from the freshness of the herbage in adjacent fields for many rods in width."

"The effect of woodlands in retaining snows where they fall, and in delaying their melting in the spring, has been everywhere observed in snowy countries. In such localities the snow cannot be drifted by the winds and when it melts it disappears slowly, sinking into the soil rather than flowing off upon the surface. The effect of this delay in checking a too early appearance of fruit blossoms, cannot be mistaken. The result is in fact similar to that of considerable areas of water, such as our northern lakes, along the borders of which, and especially on the lee-side, fruits are found to flourish with the greatest success. In a country interspersed with clumps and belts of woodlands, the snows drift less and their melting more evenly over the surface cannot fail to be beneficial to the interests of agriculture, and more especially to meadows and pastures."

Concluding Remarks on Forestry.

The Commissioners during the progress of their investigations under this head, have been profoundly impressed, not less with the importance than with the magnitude of the subject. In fact, had the whole time devoted by them to the discharge of their varied duties been occupied in inquiring into the question of forestry in its many aspects, it might have been well spent. They feel that the evidence they have taken rather suggests further examination into, than exhausts the whole subject.

The arrangements and laws relating to forestry in Europe, as well as the progress of tree planting in the United States, in which direction an active movement has been going on for some years—would have been matters well worthy of close observation, and the Commissioners respectfully recommend that information thereupon should be obtained by such methods as may appear to the Government to be most convenient and effectual.

Possibly such information might assist in the solution of the question frequently raised in the course of this inquiry, By what means can tree planting by individuals or corporations be most successfully promoted?

Government assistance in the shape of money grants, exemptions of planted lands from municipal taxation, and the establishment by the Government of large forest tree nurseries have all in turn been suggested.

The Commissioners would be reluctant to advise the expenditure of any considerable sum of public money without having before them some scheme, the details of which had been carefully examined and worked out.

The subject is a new one to the minds of most of our people, and it is rather by the creation of public interest in the question, and a sense of personal responsibility with regard to it, that the ground work of any future plans must be laid.

Meantime the Commissioners are glad to be informed that the Fruit Growers' Association of Ontario, has included forestry and arboriculture in its programme of operations, and that the Government have given some encouragement to this step, while at the same time experimental tree planting has, under the auspices of the Association, been commenced at the Model Farm at Guelph. A few townships and urban municipalities have also offered inducements to the planting of streets and concession lines. All these are indications of a gradual awakening to a sense of the necessity of something effectual being done.

With the facilities that exist in all parts of Ontario, for obtaining a supply of materials close at hand, organizations in townships or school sections for planting a given number of trees, within a given period of time, and at the smallest possible cost, should not be difficult.

It has also been proposed that school house lots, now usually presenting a most bare and uninviting appearance, might be planted with

forest trees, and a small premium or reward be given to those schools, in a district, whose trees had been most successfully cultivated and best preserved for a given period.

It has further been suggested that interest might be excited, and information imparted, by lectures delivered by competent persons on forestry in connection, perhaps, with ornithology and ornithology, so far as those topics affect the farmer and fruit grower.

Such lectures might be delivered in school-houses, under arrangements made by the county inspectors, the senior classes in the school, and the public generally, being invited to attend.

In treating of these subjects, however, pictorial illustrations would be indispensable, and knowledge of the colours of leaves, insects, and birds would also have to be imparted. In order to accomplish this, and as the lectures would have to be delivered in the evening, the "magic lantern" might be brought into play, the novelty of such exhibitions assisting to ensure to the lecturer an audience.

The first cost of preparing transparencies would be considerable, but the other expenses of such a scheme need not be large, while the preparation for the work, of young men of ordinary ability and culture, would not be a difficult task, in view of the materials already at hand.

The objection raised to any proposal to add such studies to the already rather overcharged public school curriculum would be avoided, while parents, teachers, and children would, at one and the same time, be interested and instructed.

The Commissioners, in conclusion, may not travel beyond the bounds of their duty if they respectfully urge upon the Executive the propriety of steps being taken with regard to the preservation of the timber lands of the Province still in possession of the Crown, and not subject to the regulations affecting the pine timber forests.

Only by some action of this kind can waste and destruction be staid, and the stern necessity which in other countries at this moment has to be faced—be avoided, of replacing, by slow methods and at enormous cost, what has been recklessly and unreflectingly destroyed.

A LUMBER OPERATOR'S DEFALCATION.

Charles Smith was operating during the past season for the firm of Guy, Bevan & Co., of St. John, for whom he had engaged men to stream-drive on the South-west Miramichi. These lumberers are even now oblivious of all that has happened, with regard to their prospect of receiving the slightest pittance for their whole spring work, and they are, perhaps, now toiling in the hope of getting wages which may never be paid, so that the money which was hard earned by them, in steady work for the whole spring, will, in all probability, be lavished away at the whim of a defaulter and absconder.

Smith had a contract with Guy, Bevan & Co. to get out logs by the thousand, and he drew upwards of \$5,000 to pay driving wages. On Sunday last he left the city, his wife being very ill at the time, and drove to Woodstock, where he sold his horse and wagon to Mr. Glidden, and took the train for the West. Mrs. Smith died on Tuesday. Their son was at work on the drive, and on hearing of his mother's death, he went to Newcastle to get money to come home; but on finding his father had drawn it all, he was obliged to borrow enough from his fellow workmen to come home with. Mrs. Smith was buried yesterday. Nobody suspected anything was wrong until after Mrs. Smith's death, when inquiries were made as to her husband's whereabouts, and the foregoing facts came to light.

A number of persons in this vicinity are losers by Smith. Among them is J. McCoy, of St. Mary's, to whom he owes \$1,200 on a contract for logs. Mr. McCoy thinks he can hold the logs. Cameron & McCarthy lose about \$100; S. D. Macpherson upwards of \$100; J. McMurray \$75, and others. Messrs. Balloch Brothers, of Florenceville, will lose considerable by him, as they had sent him a quantity of oats for sale, which he disposed of. Smith's son and daughter, who remain here, moved away all their furniture during last night.—*Fredericton Capital.*

WIRE ROPE FOR TRANSMITTING POWER.

BY HENRY KWING.

I suppose there is scarcely a manufacturing establishment in the country, where, at times, the ability to transmit or convey power to some isolated or distant building, would not only be of great convenience, but as well a source of profit to the owner. Under ordinary circumstances this is impossible, except by purchasing a small engine or water wheel, the expense of setting and operating which becomes a grievous tax. In such cases, wire rope becomes an invaluable aid, and as its capabilities and requirements are, really, but half understood, perhaps some of the readers of the *Lumber World* may find something in this communication interesting and of utility to them.

The distance to which power may be transmitted by wire rope ranges from fifty or sixty feet up to something more than two miles. It commences at the point where a belt becomes too long to be used profitably, and can thence be extended almost indefinitely. In point of economy, it costs only one-fiftieth of an equivalent amount of bolting and the one-twentieth of shafting. This method was first introduced, both in Europe and America, about the year 1850. The development it has received in this country is but trifling; in Europe, however, it has been immense, numbering at the present time over 2,000 permanent applications, and as many more of a temporary nature.

In many factories, long counter-shafting, with heavy bevel-gearing, can be saved by using a rope; the farther off the shaft we wish to drive, the better the arrangement will work.

When neighboring property cannot be bought, perhaps that across the street can—yet the trouble and expense of digging up the street to lay down a line of shafting is sufficient to deter one from the purchase. For such a case, a remedy is here presented. A little endless rope passing through a couple of slits in the window casing of an upper story, across to the story opposite, will do all the work, and none of the passers by will be any the wiser for it. A belt would require protection from the weather, but the rope does not, and can hang free in the air. From an engine in the basement, power can be readily conveyed to the upper storeys; it is necessary, however, that for a certain distance the rope should hang horizontally, in order to gain the required tension. The utility of this mode of transmission is so manifest, and the convenience afforded by it has been so strikingly exemplified in localities where hardly any other system would have been practicable, that it is justly attracting the attention of the manufacturing public more and more as its merits become known.

The range in the size of wire ropes is small, varying only from three-eighths inches to three-fourths inches diameter in a range of three to two hundred and fifty horse-power. The ropes are always kept on hand, and can be spliced endless at the factory; or else directions are given to splice them, whenever an endless rope cannot be put on direct. In regard to cost, they are the cheapest part of a transmission. For instance, a No. 22 rope, conveying, say twenty-five horse power, costs nine cents per foot, whereas an equivalent belt costs about \$1.40 per foot. Where a rope transmission has to be constantly at work, it is good policy to keep a spare rope on hand, ready spliced, so as to avoid delay. Their duration is from two and one half to five years, according to speed. For the smaller powers it is advisable to take a size larger for the sake of getting wear out of the rope; although it must be borne in mind that a larger rope is always stiffer than a small one, and therefore additional power is lost in bending it round the sheave. Small ropes are made with hemp core to increase their pliability.—*Lumber World.*

ZOPERA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopera*, from Brazil, the new and remarkable compound for cleansing and toning the system, for assisting the digestive apparatus and the liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopera*, the new remedy, of your druggist. A few doses will surprise you.

Yellow Oil is *par excellence* the remedy for Pain, Lame ness, Rheumatism, Croup, Deafness, Burns, Frost Bites, Stiff Joints, and all flesh wounds. Any medicine dealer can furnish it.

A WALL STREET A. B. C.

Never take the bull point in bear times, nor a bear point in bull times.

Buy on a heavy break and sell on a sharp advance.

Have margin enough to hold on to your "longs" or "shorts." Every dog has his day on the "street," and you will be sure to make money if your staying qualities are good.

During dull or bear times have nothing to do with clogged, unknown stocks, or those companies in which there is only a small number of shares, the merits of which are known only to a few; it is better to deal in securities for which there is always a market.

Confine your operations to two or three stocks of which you have made a study.

The most conservative way to speculate is to keep cash in hand and operate only three or four times a year, buying dividend-paying stocks outright when a break occurs, selling again when the market goes up. There are never less than two breaks in the course of a year, which occur usually in the spring and fall.

Remember that there is a rhythmic motion in prices; whenever they go up very high they are sure to rebound, and *vice versa*.

A dull stock market is a weather breeder and generally brings on lower prices.

Sell on the rallies in a bear market and buy on the setbacks in a bull market. It is safer to be a bear over Saturday nights than a bull.

The accidents of the market are generally in favor of the bears.

In the long run it pays better to be a bull than a bear. We live in a prosperous era, in which money is cheapened and prices are advancing.

When any disaster occurs to any one property in a certain section, or representing a certain interest, it is safe to sell properties similarly situated. If there is a sudden drop in St. Paul, sell Northwest; if in Lacawanna, sell Delaware & Hudson.

For permanent investments or slight fluctuations, deal in bonds and securities of communities in which there are diversified industries, in preference to sections of the country where everything depends upon one interest. For instance, Central and Lake Shore will be steadier in price than the northwest and southwest stocks, which are high priced only when the agricultural classes are prosperous.

Depend upon your judgment rather than upon your special points, and do not believe anything you hear.

If you stand over the tape every day, you are pretty sure to lose your money. The commissions will eat you up.

If you have been unsuccessful in other business, Wall street is no place for you.

Pay little attention to the opinions of the newspapers; they are generally in the interest of big operators, not of the outside public.

All excited bull markets end in a break. The close of a bear campaign is marked by a semi panic.

Look out for a reaction on the third day of a heavy break.

Finally, if you are wise and have any respect, able calling, never buy what you can't pay for or sell what you have not got. In other words don't speculate.

It is reported at St. John that Chas. Smith, a well-known lumber operator who resided and operated on the Miramichi during last season for Messrs. J. & J. Stewart, has left the city. He is said to have drawn on Messrs. Stewart for upwards of \$5,000 to pay drivers' wages, and the statement of many lumbermen is that they have not been paid. Mr. Smith is known to be largely indebted.

"**Their Name is Legion**"—the people who praise that matchless medicine, **Burdock Blood Purifier**. It acts at once upon the Secretions, the Bowels, the Liver, the Skin and the Kidneys. It purifies the Blood, dispels all foul humors, and strengthens the nervous and debilitated system. No known remedy can do more. Try it and be convinced.

A Cough is usually the effort of Nature to expel some morbid matter irritating the air passages of the lungs. It may, however, proceed from an inflamed or irritable condition of the throat, a slight rash or humor often being perceptible. Let the cause be what it may, the remedy should be Hagar's Pectoral Balsam. A purely vegetable Balsamic throat and lung healer. For sale by all dealers in medicine, at 25 cents per bottle.