

FORESTRY.

We take the following from the report of the committee charged with the oversight of fruit and forest planting at the agricultural college, Guelph:—

FORESTRY.—The several clumps of black walnut, European larch, butternut, sugar maple, and of mixed trees, are doing fairly well, except that the group of larch from some cause did not succeed, probably owing to the dry character of the soil in which they were planted. There is, however, a sufficient number of young larches in the nursery plot to supply all the vacancies. It was found desirable to use the field in which the clump of ash had been planted as an experimental grain plot. On this account they have been taken up and will be set out in another field next spring. The experiment of growing black walnut with and without cultivation is already demonstrating the fact that the growth is much more satisfactory where clean cultivation with occasional stirring of the soil is practiced. The nursery plantations of young trees will supply a considerable portion of the trees required for the proposed enlargement of existing clumps, and by keeping up a constant succession of nursery plantings the required trees for foresting purposes can be always at hand in the best possible condition for transplanting.

THE ARBORETUM.—In attempting to extend the Arboretum the Committee found that it was absolutely necessary to re-arrange the front grounds, and to provide some definite and well arranged plan that harmonized with the grounds and buildings on which to base all future work. Hitherto no such plan had been prepared, hence it was impossible to proceed systematically with the extension of the Arboretum in a manner that would subserve the purposes of education and at the same time adorn the grounds and produce the proper landscape effect.

After some correspondence we were so fortunate as to secure the services of the most eminent landscape gardener in America, Mr. Charles H. Miller, of Fairmount Park, Philadelphia. He visited the college in April last, and examined the grounds thoroughly in company with yourself, the Committee and architect. He has now prepared and placed in our hands a most admirable plan of all that part of the grounds; this plan has been approved of by yourself, and when the planting and grading shall have been completed in accordance therewith, we believe that the college grounds around and in front of the buildings will be all that can be desired. Work has been already begun, and the grounds immediately in front of the main building laid out in conformity with the plan, and the requisite carriage ways to the recently erected residences of the Professor of Agriculture and of the Bursar provided. Already a great improvement in the appearance of the grounds is manifest, a pleasing foreshadowing of the results to be achieved when the whole work is once completed and time enough shall have elapsed to produce the growth necessary to give due effect to the whole. Ample space is now set apart for the planting of an extensive arboretum, which your Committee intend shall be grouped in such a manner as to be convenient for study by the young men and serve as illustrations in teaching, and at the same time these groups will be so placed as to give the best landscape effects.

THE SEED BEDS.—With a view to giving a supply of young trees for future planting, and to afford at the same time instruction in the raising of forest trees from seed, a number of beds were prepared and sown with tree seeds. As was to be expected some of these seeds failed to germinate the first season, and after lying dormant in the ground for a whole year, came up in the second spring. From these beds a goodly number of some varieties of trees and shrubs will be obtained. Some of the kinds sown have apparently failed altogether, thus affording lessons to the students from failure as well as success.

FUTURE OPERATIONS.—We have made arrangements with the Professor of Agriculture for a half acre block in the Experimental Field, which it is our intention to surround with a hedge formed from a variety of hedge plants, for the purpose of showing a sample of hedge formed from each. This will afford both students and visitors an opportunity of seeing the adaptability of each for hedging purposes. The

enclosed plot will be devoted to nursery beds for the growing of young trees taken from the seed beds or procured by purchase, until they have attained sufficient size to be removed to permanent situations. It is also intended to set out in the spring two or three additional clumps of forest trees, one of white ash, one of American elm, one of mixed evergreens, also to complete the group of European larch, and extend that of Sugar Maple.

In the orchard all vacancies will be filled up, and the acre of ground recently purchased planted out so as to complete that portion; and such other varieties added as may be desirable for the purpose of testing their adaptation to our climate. Some additions will also be made to the plantation of gooseberries, currants, raspberries, and strawberries, in order to furnish a sufficient supply of these fruits for the use of the college, a large part of which will be taken from the existing plantations, particularly of raspberry and strawberry. Some new varieties of these fruits and of grapes will also be set out in the spring together with a few mulberries, so that the work of testing these may keep pace with the progress of horticulture elsewhere.

In conclusion, your committee would say that such progress has been made in the department of fruit culture and forestry during the short time that has elapsed since you confided these to our direction as we trust will be satisfactory to you, both in the amount of work done and in the economical manner in which it has been accomplished. In a work of this kind great results cannot be achieved in a single season, yet, even now some fruit is being gathered, some improvements we think are to be seen, and these, we believe, will increase in progressive ratio as the years roll by until the results shall be seen in an abundant supply of fruits, of all kinds suited to the climate, sufficient to meet all the wants of the college, both for consumption and comparison; and groves of trees, and groups of specimens of every variety of tree and shrub shall give beauty to the landscape, and afford means of instruction in all that a well informed yeoman can wish to know of the character and uses of the forest productions of his native land. On behalf of the Committee, D. W. BEADLE, Secretary.

LIVERPOOL TRADE.

LIVERPOOL, Jan. 2.—James Smith & Co.'s circular contains the following:—There has been an increased import of white pine as compared with last year, but this has been less than the consumption, so that the stock of all kinds is still light, say 654,000 feet, against 770,000 cubic feet. Red pine is heavy in stock, and the consumption has been small. There have been no fresh arrivals. Ash is in good demand, and the stock is moderate. Elm has come forward freely, but the consumption continues good, so that the stock will be all required before the new import commences. Walnut is in fair request; the supplies have been somewhat heavy, still prices are firm. First-class large wood, via New York, has been sold at 6s. 4d. to 7s. 4d., averaging 6s. 9d. per cubic foot, and smaller wood at 5s. 6d. to 6s. per foot. Oak has gone into consumption on a reduced scale, and there is an ample stock. Sales have been made of several parcels at from 2s. 10d. to 3s. per cubic foot. Oak planks are in fair demand and prices are without change. Birch has been in good request, but prices have latterly given way, owing to the large arrivals. Halifax wood has been sold at 16d. per cubic foot, and maple at 13d. per foot. N. B. and N. S. spruce deals: The import has been excessive, namely, 11,100 standards against 4,255 standards, and there having been no corresponding increase in the consumption, the stock has become heavy, viz., 22,714 standards, against 16,633 standards at this time last year. At the date of our last issue prices were at about £7 15s. per standard for St. John deals, but by the middle of December the prices obtained at auction were £7 7s. 6d. per J. H. McLaren, from St. John; £7 7s. 2d. per Finn, from Musquash; £7 8s. 2d. per Hildeora, from Musquash; and £7 3s. 10d. per Tatay, from Parrabore; and a week later the Cargo per Guildfax, from Oak Bay, averaged at auction £7 3s. 3d. per standard. By private sales have been made from £7 6s. 3d. and £7 5s. for Halifax, and £7 11s. 3d. for Miramichi.

Pine deals have been sold at £13 15s. for first quality Miramichi, and £9 for second quality; the stock is moderate. Quebec pine deals are moderate in stock in spite of the increased import, as the consumption has been continued on a large scale. A parcel of broad deals, 11 in. and upwards, realized £25 15s. for 1sts, £18 for 2nds and £12 for 3rds. Quebec pipe and puncheon staves are rather dull of sale; the stock is not heavy. No sales have been reported. Falings have been sold at 65s. per mille for 4½ feet. Laths and lathwood are without change.

Preservation of Railway Ties.

Some interesting data are published showing the relative value of different methods of injecting railroad ties. On the route from Hanover and Cologne to Minden, for example, the pine ties injected with chloride of zinc required a renewal of twenty-one per cent, after a lapse of twenty-one years; beech ties injected with cresote required a renewal of forty-six per cent after twenty-two years' wear; oak ties injected with chloride of zinc required renewal to the extent of about twenty-one per cent after seventeen years; while the same kind of ties not injected necessitated fully forty-nine per cent of renewals. The conditions in all these cases were very favorable for reliable tests, and the road bed was good, permitting of easy dewatering; the unrenewed ties showed, on cutting, that they were in a condition of perfect health. On another road, where the oak ties were not injected, as large a proportion as 74.48 per cent had to be renewed after twelve years; the same description of ties injected with chloride of zinc required only 3.29 per cent renewals after seven years, while similar ties injected with cresote involved, after six years, but 0.09 per cent.

A Vast Viaduct.

The great Linzua viaduct on the branch road of the New York, Lake Erie & Western line, near Alton, McKean county, Pa., is called the highest structure of its kind in the world. It is 2,052 feet in length, and is supported by 20 towers, each composed of four wrought-iron columns, with the requisite bracing. The roadway is laid on latticed girders of 61 feet span, and the cross-ties are eight inches apart. On each side of the rails are heavy, square timbers laid parallel with the track, which would hold an engine from going over into the abyss if it were to jump the track. A passageway on either side, laid with yellow pine and secured by a railing four feet high, enables pedestrians to pass over leisurely and view the scene from this great elevation. The bridge in the centre is 302 feet in height. About 4,000,000 pounds of iron were used in its construction, and the entire cost of the structure was nearly \$300,000.—*Northwestern Lumberman.*

Kentucky Opportunities.

The *Northwestern Lumberman* says:—A northern gentleman who had been through Kentucky, writes about the Cumberland mountain region as follows: The hills are over-spread with a splendid growth of basswood, poplar, beech, maple, oak, chestnut, Norway pine, cedar and hickory. These lands have never been opened, however, and the timber stands and rots. I was offered 100 acres of Norway pine, that would cut 10,000 feet to the acre, for \$100. Stumpage is worth almost nothing. Something is done manufacturing stove bolts for the numerous distilleries, and a few saw-mills, which think they do something wonderful when they saw 5,000 feet a day, are scattered through the hills. There is need here of northern enterprise and money, and the time is soon coming when there will be plenty of both. A dozen railroads are projected, and some are being built now which will carry to market this lumber.

Miramichi Notes.

The St. John, N. B., *Telegraph* says:—Gabriel Yerra has six camps established on Burnt Hill Brook and its branches; at these camps he has 150 woodmen and 30 pairs of horses. He expects to get out 7,000,000 feet of lumber this season. Harry Turnbull has two camps on Clear Water, and his product will be about 2,000,000 feet. Messrs. Yerra and Turn-

bull's lumber is under contract for Guy, Bevan & Co. Timothy Lynch has a very large force on McLean Brook, McKiel and South West Branch; his cut is estimated at 12,000,000; his depot camp is on McKiel, where he has 15 pairs of horses and 60 men. M. Welch expects to cut about 4,000,000 at the head of the South West. William Richards is operating heavily along the South West, and Charles Smith is cutting a great quantity on the Todd block. The snow here is about two feet deep.

During the year 1882 there was shipped from the port of Jacksonville, Fla., 68,041,546 feet of lumber, as compared with 68,837,451 in 1881, and 41,719,255 in 1880, an increase in 1882 over 1881 of 9,204,095, and over 1880 of 26,322,291. It will thus be seen that, while a fair increase has been made this year, the great bound forward in lumber production in the country tributary to Jacksonville was made in 1881.

FORTUNATELY Valvular disease of the heart is not very common, its disturbed action may be due to indigestion, liver irregularities &c. A Stomach disturbed with wind, or indigestible food will cause pain and fluttering by crowding on the nerves of the heart. Burdock Blood Bitters will speedily remedy all such difficulties.

GOOD ADVICE.—If our readers will accept proffered advice, they will always keep a bottle of Hagar's Yellow Oil at hand for use in emergencies, such as Burns, Scalds, Wounds, Lameness, Croup, Chilblains, Rheumatism and all varieties of aches, pains and inflammations. It will ever be found reliable.

MR. THOMAS W. RACE, Editor and Proprietor of the *Mitchell Recorder*, writes that he had a prejudice against Patent Medicines, but being induced to try Burdock Blood Bitters, for Billiousness that occasioned such violent headache and distress as to often disable him from work. The medicine gave him relief, and he now speaks of it in the most favorable terms.

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