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**OTHELLO.**

No. 1000's New Hybrid of the No. 1.

See page 114. Strong plants of the above grape sent on receipt of \$2. Send for descriptive catalogue of  
Fruitful plants of the leading Horticulturists in America. Address: CHAS. H. & CO. ASTORIA, OREGON.

THE  
ONTARIO FARMER ;

A MONTHLY JOURNAL OF

Agriculture, Horticulture, Country Life, Emigration, and the Mechanic Arts.

VOL. I.

TORONTO, APRIL, 1869.

No. 4.

REPORT OF THE COMMISSIONER OF  
AGRICULTURE AND ARTS.

[SECOND NOTICE].

Having in our last issue drawn attention to the body of the above report, we now proceed to give some account of the important appendices thereto.

APPENDIX A. consists of a catalogue of technical books on Arts, Manufactures, Agriculture, Horticulture, and Science. There are upwards of a thousand treatises on the above subjects, besides several hundred volumes of British and American Patents, the journals and transactions of agricultural and other writers. Most of these books formed the library of the late Board of Arts, but the Commissioner has recently added a considerable number of works on agriculture, horticulture, and other pursuits. The library is open, free to the public, every day during office hours, and affords much needed facilities to such as wish to consult technical works for practical purposes.

APPENDIX B. contains a report of Professor Buckland, stating in a concise manner the principal results of his recent visit to Britain for the purpose of obtaining agricultural and other information that might be beneficial to this Province. We gather from the Professor's remarks on the national and provincial shows which he attended, that much of their completeness and regularity of working, is attributable to the early closing of entries, and the time occupied in the arrangement and exhibition of the articles. The Royal English Society closes the entry books the beginning of May, though the show is not usually held before the middle of July. Most of the Provincial Societies, all indeed of any note, close

the entries two or three weeks, at least, before holding the exhibition. Thus there is ample time to prepare a place for everything, and to put everything in its place. The managers of our Provincial Exhibition, it is hoped, will benefit by this suggestion; for, if we cannot all at once reach so high a standard, there is no good reason why we should not set ourselves in earnest to approach it by degrees. The order and comfort to both man and beast, notwithstanding the intense heat of the weather, at the great Leicester meeting, constituted one of its chief characteristics. It is true that the great British exhibitions are almost exclusively confined to live stock and agricultural implements and machines; and the only society of note that admits of arts and manufactures is the Bath and West of England, whose exhibitions closely resemble those of our Provincial Association. This society was incorporated in 1777, and by its liberal prizes awarded at the annual exhibitions, in connection with its published transactions, has materially advanced within its own circle the important interests comprised by its organization.

Notwithstanding the great improvements that have of late years been effected in British stock, and the increased numbers to be seen at the annual exhibitions, it would appear that farm implements and machinery have increased and improved in a much greater ratio. The first show of the English Society was held in 1839 at Oxford, when there were only twenty exhibitors of implements, and it was several years before this important department attained anything approaching a distinguished position. At the late meeting at Leicester the number of exhibitors in this department of the show was 307, occupying

337 stands, comprising 6,369 articles under a run of shedding 16,700 feet in length, and covered by nearly 50,000 yards of canvas. "There were forty-two exhibitors of steam cultivating machines; of steam engines and boilers sixty-nine; of mowing machines fourteen; of reaping machines forty-three; of liquid manure carts and distributors twenty-two; and of root pulp-ers and graters thirteen; most of these articles were unknown, in a practical sense, during the earlier history of the society." The week previous to the opening of the exhibition was devoted to the testing of the various implements used in cultivation in a very thorough manner in the field; such as were moved by steam power attracted the greatest attention. "Our agriculture in Canada is yet, for want of time, not sufficiently advanced to warrant the introduction of steam cultivators, except, perhaps, in a few favored and old established districts. It is, however, only a question of time, and a few years may bring about changes in this and other matters relating to farm practice, of which at present we can form no distinct conception."

Mr. Buckland next refers to the importation of agricultural and horticultural seeds, and recommends that this important object should be sought for cautiously, or serious losses might ensue. New varieties of seed should at first be imported in small quantities, for purposes purely experimental. The Council of the Agricultural and Arts Association might undertake to superintend the proper testing of whatever might be obtained for this purpose, in their respective localities. The report contains some valuable information on the cultivation and curing of hops, and several suggestions for improvement. Such of our readers as are engaged in the culture of this plant, will turn to the report itself for detailed information. Arrangements have been made by which cuttings or young plants, and any new or improved varieties of cereals can be procured, the genuineness of which may be safely relied on. It would appear that it is very difficult to procure good seed from Russia—much of the wheat is kiln-dried before exported, consisting of a mixture of several varieties, and it generally abounds in the seeds of weeds.

With respect to agricultural implements and machines, Mr. Buckland succeeded in obtaining

for the projected Industrial Museum a loan of ploughs, harrows, cultivators, &c., from the celebrated firm of the Messrs. Howard, of Bedford, an establishment that has long enjoyed a world-wide reputation. It appears that British manufacturers of agricultural implements, most of which are constructed of iron, loudly complain of the amount of duty which our government imposes on the importation of their productions, contending that the import is mutually disadvantageous, and that the other British colonies, and indeed all foreign countries, except the United States, throw open their ports free, or impose a mere nominal amount. In reference to the proposed Industrial Museum, we regret to learn that the application made by the Commissioner of Agriculture last year to agriculturists and manufacturers has met with a very indifferent response. A few samples of grain are the only contributions that have as yet been received.

It is earnestly hoped that our manufacturers, as well as farmers, will not allow so beneficial and interesting a scheme to fall through for want of a little united exertion. A collection of the productions of our various industries would not only be of public benefit, but to manufacturers particularly, by bringing their productions before the public it must be individually advantageous.

Mr. Buckland concludes his interesting and suggestive report by stating that he had made arrangements with the leading agricultural societies for a free interchange of their journals and transactions, and with the conductors of the agricultural press for the insertion of communications relating to the industrial state and capabilities of this Province. There seems now to be in prospect that the important question of immigration will receive the earnest attention, and we trust, the united action both of the Dominion and Provincial Governments.

APPENDIX C. consists of an analysis of the reports of the county and township agricultural societies for the year 1867, comprising 81 pages. This, we believe, is the first attempt made to bring annually before the public, without loss of time, in a succinct and condensed form, the condition and proceedings of the numerous societies receiving government aid in the Province of Ontario; a circumstance that will go far to accou-

for the great meagreness that characterizes these reports. If the societies had been expected or required to give something more than a bald statement of income and expenditure, they would doubtless have inserted a few words, at least, that would have enabled a stranger, after perusing their reports, to form some definite idea of the state and prospects of agriculture and its allied mechanical arts, in the several localities which these societies represent. As it is, scarcely anything can be learned beyond what is stated by figures. It is most earnestly to be hoped, for the credit of the societies themselves, and the good of the cause which it is their duty to foster and promote, that this most serious defect will be corrected in future. There are few townships even, we should suppose, but what have something that transpires in relation to agriculture and the mechanical arts during the year that would not be worth recording. Any remarks, however general, would be an agreeable relief to the monotony of dry figures. We understand that the Commissioner has requested of the societies information of this character, so that this deficiency will, it is to be hoped, be supplied in future returns.

APPENDIX D. contains an analysis of crop returns from the various Electoral Division Societies, for the year 1868. This is a move in the right direction; and as a first effort, and considering the short time allowed for completing the returns, a good deal of interesting and useful information was obtained. The crops over so extensive an area as the Province of Ontario, and comprising considerable differences both in soil and climate would necessarily be variable; but considering the intense drought which generally prevailed, the results on the whole must be regarded as satisfactory. We are pleased to learn that the Commissioner intends to secure more correct and extended returns of this nature during this current year.

APPENDIX E. contains a tabulated abstract of the returns of Mechanics' Institutes, which was referred to in our February number, with a catalogue of technical books on various branches of science and art, with the prices and the names of the publishers, which will be found exceedingly useful to the managers of mechanical and agricultural libraries. A notice of the horticultural reports we must leave for our next issue.

#### ENCOURAGEMENT TO EXPERIMENTERS.

At a meeting of the Council of the Provincial Association, held in Toronto, March 19th, a communication was read from Mr. Charles Arnold, of Paris, Ont., in which that gentleman stated that he has been for some years past experimenting upon the production of new varieties of wheat, with a view to obtaining a grain or grains that shall be at once of high quality and proof against insect attacks. To accomplish this, he has crossed the White Soule and Red Midge-proof, and has succeeded in producing fifteen varieties, selected from upwards of one hundred, that seem to combine the good qualities of both parents. One of these yielded in a single season upwards of 4800 grains from one kernel, and last year, under ordinary cultivation, some of these varieties yielded at the rate of from 60 to 80 bushels to the acre, while other varieties in rows within 7 inches of them, under the same treatment, only yielded at the rate of from 20 to 30 bushels to the acre. At the present time, Mr. Arnold has about an acre of land planted with these new wheats.

The object of Mr. Arnold's communication was to induce the Agricultural Association to investigate these wheats, and if they are found to be valuable, aid in multiplying and disseminating them.

Mr. Christie and other members of the Council spoke in high terms of the efforts Mr. Arnold had made in this direction, and the remarkable success that had attended his experiments. It was agreed, on all hands, that it would be well in some tangible way to recognize the services of men like Mr. Arnold, who have spent much time and money in improving the produce of the country. And it was stated that, in all probability, unless the Association seized the opportunity of securing Mr. Arnold's varieties of grain at once, they would not get them at all, as several Americans had an eye on his experiments, and were prepared to purchase the results at any price.

Well, what did the Council do? Why, they just resolved that the members of the Executive Committee be instructed to supervise the operations of growth and mode of improvement, so far as opportunity allows, and that a special

premium be offered in the prize list for any new varieties of wheat produced by such experiments as those of Mr. Arnold. In other words, they did nothing at all. Supervision, under the circumstances, is an impertinence and a farce, while the offer of a trumpety \$4 prize for so great a boon to the country as the production of a new variety of wheat, is childish trifling. The least that could have been done at all, in keeping with the importance of the matter, would have been to appoint a Committee to report on these wheats, and to negotiate with Mr. Arnold for their purchase, in order that the whole country may get the benefit of these experiments. We cannot expect people to spend time and money in patriotic endeavours to improve our agriculture without their getting some recompense for it. Mr. Arnold is a most intelligent and worthy man, but he is not wealthy, and cannot afford to make the country a present of the fruits of his patient toil and outlay of time and money. What a ridiculous affair it is to offer such a man, after due "supervision" by an Executive Committee, the bare chance of carrying off a prize of \$4 at some future Provincial Exhibition! In thus giving the go-by to a most important practical matter, the Council have lost a fine opportunity of atoning somewhat for past shortcomings, and proving that they have aspirations toward public usefulness. Why didn't they resolve to retrench "Petty Cash," "Travelling Expenses," "Hotel Bills," "Liquors and Cigars," and appropriate one or two hundred dollars toward the improvement of seed wheat? They may depend upon it that the country won't stand dignified official trifling much longer, but will begin to ask what the Council costs, what it does for the interests of agriculture, and whether it is really worth the expense of its maintenance.

#### A GOOD SEED HOUSE.

We beg to call the attention of our readers to the advertisement of Messrs. C. & A. Sharpe, seed merchants, Guelph, Ont., which will be found in our advertising department. This firm is connected with one of the most extensive and respectable seed growing establishments in England, and has now in stock a large and choice assortment of imported turnip, mangel, carrot, and other varieties of seeds for the requirements

of agriculturists. As a specialty, we may particularize their celebrated "Sharpe's Improved Swede," which, after several years of the most careful cultivation upon the seed farms of Messrs. H. & F. Sharpe, Wisbeach, Cambridgeshire, England, has proved itself to be one of the most productive and hardy of the purple-top varieties of Swedish turnips.

We may also mention that they have in stock the best collection of grasses, clovers, and trefoils that we have seen in any establishment in Canada, including those varieties peculiarly adapted to the climate of this country for laying down permanent meadow and pasture, which is a branch of agriculture we regret to see so much neglected. No farm can be considered to be well managed without its having a good large proportion of permanent meadow and pasturage, which soon proves itself to be the most profitable and least expensive part of the farm, if only the proper seeds are selected for the seeding down. Those who wish to experiment upon ten or twenty acres of land for this purpose may apply with all confidence to Messrs. C. & A. Sharpe, of Guelph, for the names and varieties of clovers and grass seeds most suitable for this branch of agriculture.

#### COUNCIL OF THE AGRICULTURAL AND ARTS ASSOCIATION.

This body has held two meetings since our last issue, one at Toronto, March 17th, and the other at London, March 31st. Its doings may be very briefly summed up. It was resolved again to award the Prince of Wales prize for the best herd of Short-Horns, to offer a \$30 prize for the best herd of cattle in each of the other classes, to expunge the class of Angus cattle from the list; to re-enact the sheep rules of last year; to offer a prize of \$50 and a diploma for the best general collection of fruit, and some arrangements were made with the Local Committee about extra accommodation for the forthcoming exhibition. The Local Committee consists of Messrs. J. Johnson, (Sunnyside), Chairman; W. McBride, Secretary, and Mr. Graydon, Treasurer.

The Monthly Financial statement, which appears in our advertising department, will repay attentive perusal. Our readers will especially note the fact, that not a cent of balance has as yet been handed over by the late Treasurer to his successor in office.

### ONTARIO VETERINARY COLLEGE.

The winter session of the above institution closed on the 8th inst. A successful examination was passed, and diplomas were obtained by C. H. Sweetapple, Toronto; W. Stubbs, Caledon; Thos. Baker, Galt; and W. Evley, Yarmouth Centre. In the evening, the professors, students and friends of the College had a repast at the English Chop House, followed by toasts and speeches. Among the rest, "Our Guests," "The Press," and "*The Canada Farmer*" were toasted, but for some reason or other, can any body guess why? no invitation to be present even, was extended to the *ONTARIO FARMER*.

**SEPARATE GOVERNMENT DEPARTMENT FOR AGRICULTURE.**—English Agricultural Societies and papers are urging the establishment of a separate Government department for the benefit of the agricultural interests of the Kingdom, the same as the Board of Trade for the commercial and manufacturing interests.

**MICHIGAN AGRICULTURAL COLLEGE.**—We learn from the *Western Rural* that the Legislature of Michigan, after a protracted discussion, has voted the Michigan Agricultural College \$40,000 for the next two years, and \$30,000 for the erection of dormitory buildings. The one greatest need of the College for some years has been additional accommodations for students. Instead of the eighty-two they have had, two hundred students could have been taught with but a slight increase of cost had there been buildings suited for their accommodation.

**ADULTERATION OF SEEDS.**—The Royal Horticultural Society of England has been investigating the charges of adulteration in seeds. They quietly bought up packages from the leading wholesale houses, and had the packages tested, publishing the proportion of good seeds to bad from each package from each house. In many cases, only ten per cent were good, and very few went over fifty per cent. The most common forms of trickery appear to be that, when the stock on hand is short, and the demand good, some worthless kind is roasted enough to destroy the germ and mixed with a few of the desired thing—which, of course, is the only lot that grows. The purchaser gets his "pound of seeds," but only an ounce or two comes up. These adulterations are defended, on the ground that the public will have the lowest price seeds, and that all have to do "what the others do," in order to be able to sell at all. There are a few, it appears, who sell good seed, and these have, after a struggle at first, found that "Honesty is after all the best policy."

### EDITOR'S BOOK TABLE.

**CATALOGUE OF ARNOLD'S CANADIAN HYBRID GRAPES AND RASPBERRIES.** Will be sent to all applicants who address Mr. Charles Arnold, Paris, Ontario.

**ANNUAL REVIEW OF THE TRADE AND COMMERCE OF TORONTO.**—By the commercial editor of the *Daily Telegraph*. Every business man in the Province of Ontario should have a copy of this valuable pamphlet.

**GEORGE LESLIE & SON'S DESCRIPTIVE CATALOGUE** of fruit trees and shrubs, roses, grape vines, small fruits, &c. The Toronto Nurseries are deservedly in high repute, and the Messrs. Leslie stand A No. 1 in their class. See their advertisements in the proper department.

**ANNUAL CATALOGUES OF SEEDS.**—S. Goldsmith, of St. Catharines, sends us his list of Farm and Garden Seeds, which appears to be very complete. Mr. G., offers the Early Rose Potato at 40 cents per lb., 50 cents by mail pre-paid. See his advertisement in our present issue.

**KNOX FRUIT FARM AND NURSERIES.**—We have received the descriptive and illustrated catalogue of this extensive and noted establishment, which is especially famed for the perfection to which it has brought the propagation and culture of small fruits. Mr. Knox's reputation is deservedly high for supplying plants true to name, well-grown, and in fine condition. His advertisement will be found elsewhere in our present issue.

**CATALOGUE OF FRUIT AND ORNAMENTAL TREES,** flowering shrubs, roses, grape vines, &c., cultivated and for sale by John Gray, jr. Mr. Gray is a skilled gardener and nurseryman, and excels in the culture of the grape, as the prize list of our Provincial and other shows testifies. His establishment is on the Brockton Road, quite near the city, and conspicuous as you glide in on the Grand Trunk Railway from the West. See his advertisement.

**ABORTION IN COWS.**—We have received, with "compliments of E. M. K. Glen, Member of Assembly," the report of Dr. Dalton, Commissioner of the New York State Agricultural Society, on the important subject of abortion in cows, a matter of anxious interest to dairymen both in the United States and Canada. We shall give the Doctor's views in a future number. Meantime, Mr. Glen has our thanks for his polite attention in forwarding the report.

J. A. SIMMERS' CULTIVATOR'S GUIDE FOR 1869.—Just as we are going to press, Mr. Simmers bethinks himself that there is such a journal as the ONTARIO FARMER, and hands in his catalogue and advertisement. It is well. We do not know whether he or our readers would have been the greater losers had his memory altogether failed him. Mr. S. is second to none of our seed merchants in the qualities that should inspire confidence. His seeds as well as himself may always be depended on. The Cultivator's Guide is not a mere catalogue, but contains full directions for raising vegetables and flowers; it is in fact a sort of *cade macum* of gardening.

LONGFELLOW'S POETICAL WORKS.—This is number two of the "Chandos Classics," and truly a marvel, if not a miracle of cheapness. Mr. T. J. Day, of Guelph, who sends us the specimen copy now before us, has pencilled on the cover what we find it difficult to credit, "Mailed for 30 cents." Here are 628 pages filled with some of the choicest poetry in the language, and all for 30 cents, postage pre-paid. Solomon wrote in the olden time "of making many books there is no end," and truly he might now say "of making books cheap there is no end." Farmers! let the crops be ever so poor, there is no excuse for being without books, when Longfellow complete can be had for such a trifle. This edition comprises the great American poet's, latest productions, and even includes three cantos of the *Paradiso* from his recent translation of the *Divina Comedia* of Dante.

#### FOUL PLAY.

GRIFFITH GAUNT.

These are cheap editions of these well known novels, either of which will be mailed to any address by Mr. T. J. Day, Guelph, on receipt of 30 cents.

Mr. Day also sends us:—

HARPER'S MAGAZINE FOR APRIL.—A specially good number, containing among other interesting matter, illustrated articles on "The Freaks of Lightning," "Alaska," and "The Great South American Earthquakes of 1868."

NINE O'CLOCK IN THE MORNING.—A capital collection of Popular Songs, Duets, Trios, Sacred pieces, &c., designed for the use of schools, seminaries, classes, and the home circle. It contains "Evangeline," Gipsy's Warning," "Larboard Watch," "Paddle your own Canoe," "Your Mission," and many other popular favorites. On receipt of 60 cents Mr. Day will mail it to any address.

ELWANGER & BARRY'S CATALOGUE.—Messrs. Elwanger & Barry, of the Mount Hope Nur-

series, Rochester, N. Y., send the following catalogues:

No. 1.—A Descriptive and Illustrated Catalogue of Fruits.

No. 2.—A Descriptive and Illustrated Catalogue of Ornamental Trees, Shrubs, Roses, &c., &c., &c.

No. 3.—A Catalogue of Dahlias, Verbenas, Petunias, and select new Green-house and Bedding plants.

The above Catalogues will be sent pre-paid, upon the receipt of postage stamps as follows: Nos. 1 and 2, ten cents each; No. 3, five cents.

No Nurserymen in the world have a higher or better earned reputation for skill and trustworthiness than Messrs. Elwanger & Barry. Our personal knowledge of them extends back several years prior to our connection with the agricultural press, and we can confidently recommend them to any of our readers who require to deal with an American house in their line of business.

THE MOTHER AT HOME AND HOUSEHOLD MAGAZINE, edited by Mrs. Henry Ward Beecher.

Our best thanks are due and are hereby presented to the editress for a set of this new journal, consisting of four numbers from January to April, inclusive. After critical examination and careful perusal, we have pleasure in testifying that they are interesting, instructive and domestically orthodox. They inculcate no new theories of the family, no reconstruction of the domestic institution upon modern principles, no reduction of husbands to a state of subjugation, and no elevation of wives to the throne of the household. The views advocated are healthy, vigorous, practical and ennobling. There is an air of sprightliness and cheerful good humor apparent in these pages, and their attentive perusal cannot fail to leave the best impressions on the family circles they visit. In one point, we are pleasingly disappointed. We only looked for discussions in that branch of domestic horticulture which relates to the fruitful vine by the side of the house, and the olive plants about the table, but we find that window gardening, floriculture, and general horticulture, come in for a measure of attention, and we shall hope to enrich our own pages by occasional extracts from those of the "Mother at Home."

CIRCULAR ON THE MARENGO WINTER CRAB, OR SIBERIAN APPLE, with remarks on the Siberian species as adapted to producing good fruits for the climate of the Northern States and Canada. This circular is really a pamphlet of 16 pages, of which the following is a synopsis:—

1st. The Siberian is constitutionally hardier than the common apple, as shown by its origin in a northern climate.

2nd. It has shown the same tendency to im-

provement as the common species, succeeding well in all sections.

3rd. Letters from North-western men, showing the reliability of the Siberian sorts, and the almost complete failure of the common apple at the north.

4th. Inference from this that we must look to the Siberian species alone for hard and valuable varieties for that section.

5th. Commercial and social importance of a reliable and good winter fruit for the north.

6th. The Marengo Siberians are the first winter sorts of this species that have been brought to notice.

7th. A full account and description of the tree of Marengo Siberian apple No. 1.

8th. F. R. Elliott's description of the season and quality of the fruit.

9th. Notices and descriptions of the same from Charles Downing, Dr. Warder, and from western horticulturists and horticultural journals.

10th. Home testimony and references.

11th. Exposure of imposture and fraudulent appropriation of name.

The *Marengo Republican* says of the circular: "This is a neat little treatise of 16 pages on the Siberian species of the apple, commonly, but erroneously, we think, called crabs. It contains some new ideas, which in our opinion, will prove of value to the horticulturist interest and of course to the country at large. We advise all who wish to keep posted on the new discoveries and theories in fruit-growing, to send ten cents to the author and procure a copy."

Sent post-paid on receipt of ten cents. One stamp for prices.

Address C. ANDREWS, Marengo, Ills.

## The Farm.

### AGRICULTURE AS AN ART.

To the Editor of the ONTARIO FARMER:

STR,—As theology has been well defined "the mother of science," so may agriculture be justly entitled the mother of the arts, for, indeed, all arts are derived from and sustained by it.

From the earliest ages in the history of mankind, we find that nations in any way approaching civilization have naturally directed their attention to this matter. In fact, the science of agriculture is coeval with man's existence, for we are expressly informed in Holy Writ that Cain was "a tiller of the ground," and, although this is the first notice we have of it in the sacred volume, it is not improbable that Adam himself may have combined the two-fold occupation of agriculturist and horticulturist.

At the present day, in all countries, the

greater portion of the inhabitants are engaged in this necessary occupation. Nevertheless, in this 19th century of ours—the century of reforms—the century of gas, steam, and electricity—we may ask is agriculture advancing with the age, and holding that position to which it is justly entitled? True, many improvements have been made in the *modus operandi* and the implements of the art, but in the science of agriculture, and more especially in its relation to chemistry, I fear we are rather behind than in advance. This, I think, may, to a great extent, be attributed to the indifference towards it, evinced in our common school system of education. Its existence, either as a science or an art, for it is both, seems to be completely ignored in such institutions, for what reason I am at a loss to understand. Our youths acquire a smattering of geology and mineralogy and physiology, and, in fact, most if not all, of the *ologies*, but at the same time they are as ignorant of the nature of soils, and the manner by which they may be made productive, as the veriest boor on a farm.

There is an anecdote related of "a girl of the period," city-bred of course, who happened to secure the affections of a "son of the soil," and who on the first morning of her induction as mistress of the farmstead *naively* asked one of the dairy-maids, "Mary, which of the cows gives the buttermilk?" How many of our young men, if questioned on the fundamental principles of ordinary farming, would be compelled to make a similar display of their ignorance.

It is to be deplored, that young men in general shrink with aversion from farm labor, as if there were something contaminating in contact with their mother earth. But how false this idea is. Can there be any pursuit more healthy and innocent, more invigorating to the system, more honorable, or more independent?

Answer this query if you can ye dyspeptic specimens of humanity, attired in man-millinery, who listlessly lounge behind the counters of drapery establishments—occupying the places that nature intended for the weaker sex—and whose greatest physical strength seems to be exerted in the blandishments of a smile, when some fair customer condescends to make a purchase. Answer it, pale clerk, doomed to the desk day after day, to whom a breath of heaven, cooling the throbbing brow and wasting cheeks, is a luxury seldom enjoyed. Answer it all who are perforce obliged to work and live in a vitiated atmosphere, and then compare your condition with that of the rosy cheeked child of nature to whom existence is a pleasure, and eternity a hope.

In conclusion, I trust that the art of agriculture may yet attain its true position in this province, and that more attention will be paid to it in the future instruction of our young people.

J. M.

Toronto, 7th March, 1869.

## THE HAY TEDDER.

Much curiosity having been excited among our readers in regard to this novel and effective implement, we present herewith an engraving of "The American Hay Tedder," manufactured by the "Ames Plow Co.," of Boston, Mass., and extract from their circular on the subject the following particulars in relation to its utility and merits:—

"The introduction of this new and important invention marks a new era in the operation of hay-making, effecting, as it does, such an immense saving of time and labour, and at a season when they are of such value, as to establish itself at once, as one of the most valuable and effective labour saving machines ever offered to the farming community. The real practical value of the machine cannot be fully appreciated, except by those who have seen it in operation; but its perfectly simple and mechanical arrangement render it apparent, at first sight, that it must prove an effective machine for turning or tedding hay, and well worthy the attention of all interested in hay-making.

Till within a few years, all the necessary processes for harvesting this staple were performed with only the aid of the scythe and the hand-rake and the fork. This involved the employment of extra labour, and at prices much above the average cost of farm hands. The process was slow, and necessarily extended over a period of two or three days, after starting with the scythe, before the hay was cured sufficiently to be carted to the barn. The proper period for cutting grass is short at the best. It is liable to the interruption of storms and sudden showers. It thus happened that under the old system, the most sagacious farmer could not hope to cut all his hay at the best time, or house his whole crop without having a portion injured more or less by unfavourable weather.

The invention of the mowing machine, the horse-rake and the horse-fork had materially changed this for the better; each of these performing in its place the work of several men.

The mower leaves the grass evenly distributed over the surface of the ground, a non-conducting layer exposed to the scorching rays of the sun on the upper side, but liable to remain wet underneath till evening—thus making still more necessary a thorough opening or shaking out of the swath, the labour of performing which is even greater than when grass has been cut with a scythe; and again, since the use of mowing machines has become so general, the farmer is enabled to cut far more grass than formerly, which—in many cases—involves the necessity of hiring additional help to properly take care of it, while in others he hesitates to mow down as large a quantity as he otherwise would, unless he has the adequate means of properly securing his crop without danger from storms. Too large a quantity of grass is often cut, and

the farmer is unable to give the curing of his hay that care and attention that it deserves, or expend upon it the amount of time and labour *actually necessary* to thoroughly fit it for the hay-mow.

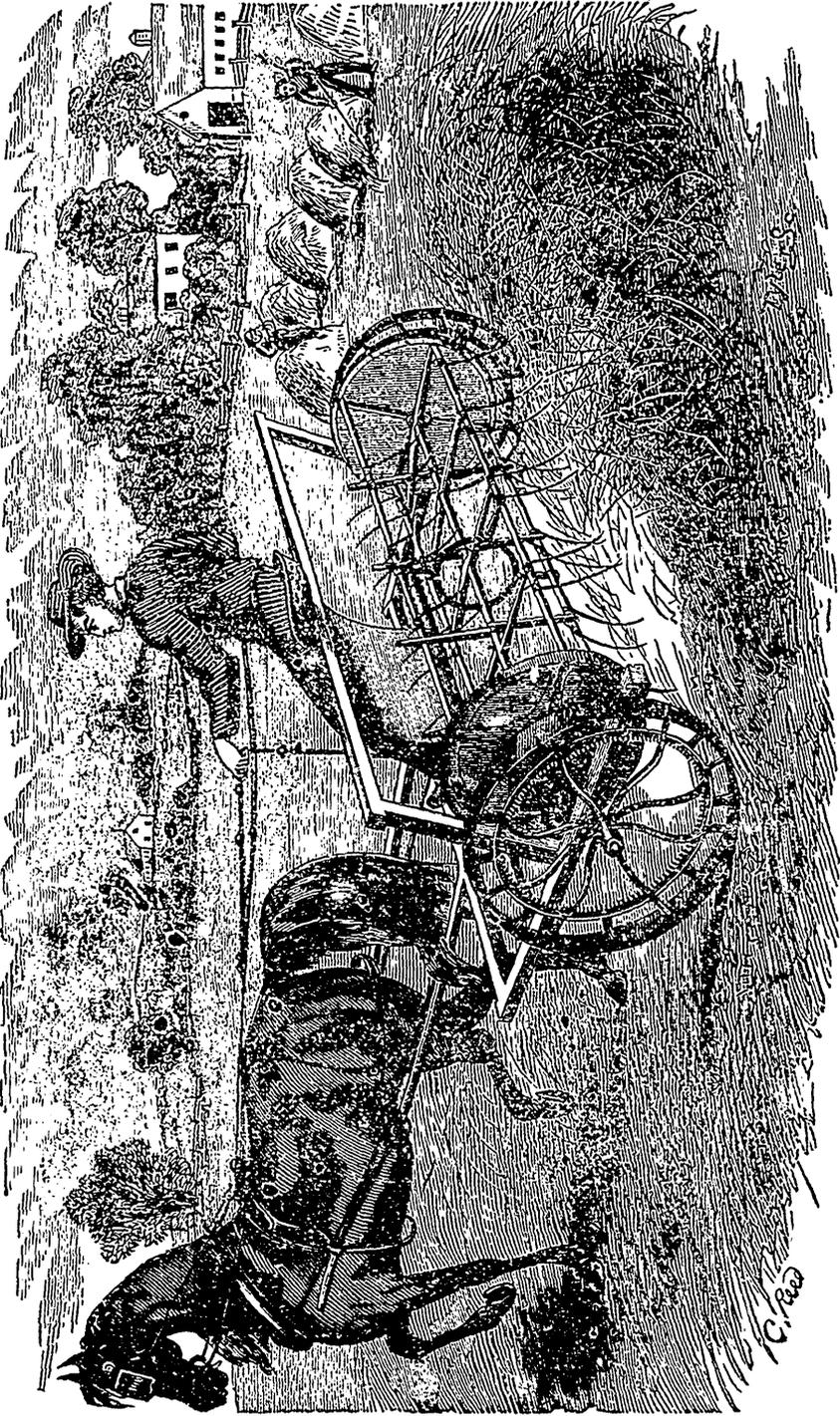
The natural result has been an inferior quality of hay, and it is a well known fact among dealers that the general quality of the crop, as offered in the market, is not so good as that produced before the advent of the mowing machine.

In a majority of cases, "haying" necessarily extends over a period of a month or six weeks—thus putting the farmer to great expense of time and labour alone; but aside from these disadvantages, he is *compelled to cut parts of his crop before it has attained sufficient growth, and others, after the proper time for cutting has passed, as it will not answer to cut faster than it can be properly cured.* Every experienced farmer knows that there is *just the right time* at which grass should be cut, and *only* at that time in order that it may possess full weight, and retain its colour and flavour.

Hence the need of a machine was soon felt, which should follow in the path of the mower to shake out the grass as soon as wilted, and leave it tossed up lightly; and a machine that should not only do the work *well*, but *quickly*, so as to entirely avoid the necessity of hiring extra labor for the purpose.

The American Hay Tedder was first patented in December, 1866, and though it has been in the field but two seasons, has obtained a wide popularity, and the unqualified approval of all.

The proprietors take pleasure in offering to the farmers of this country a simple, durable, and perfect Hay Tedder, *and the only perfect Hay-Maker ever invented.* By the use of this machine, all extra help is dispensed with, and the farmer is enabled (in ordinary haying weather) to properly cure all the grass he may see fit to cut, and get it into the barn on the *same day*, thereby not only effecting a great saving of labour, but avoiding all risk from changes of the weather, etc., to which hay is subjected, when allowed to remain for two days or more after it is mown. And not only is it *quickly* dried, but it is done in the most *thorough manner*, for the arrangement and operation of the forks is such as to not merely *turn* the hay, but also to thoroughly open and shake out *every wisp*—leaving it lightly turned up, its fibres crossed in every direction, and in the very best condition for the admission of the air and the sun's rays. Its action is so rapid, and the effect so thorough, that it is fully capable of curing—ready for the barn—any given amount of grass in less time than twenty men can do it with the hand fork; while the draft upon the horse is very light. On large farms, the Tedder is often put into the field immediately after the grass is mown, and kept in operation until the hay is evenly and perfectly dried, giving the farmer ample time to rake, load, and cart it to the barn in the afternoon; and at the close of the day, he has the satisfaction of seeing his hay



THE AMERICAN HAY TEDDER.

safely stored in the barn, and cured much more perfectly than is possible where the common hand fork is used.

We wish to call the farmer's particular attention to the *greatly improved quality of his hay*, when cured by The American Hay Tedder. The operation of the forks is to so *toss up and shake out* every lock of grass as to secure a perfect circulation of the air, causing the hay to be evenly and quickly dried.

By the use of this Tedder, the *curing process* is made to keep pace with the *cutting and gathering*, as now performed by the Mower and Horse Rake, thus reducing the haying season from weeks to days, and enabling the farmer to cut all his grass at *just the right time*.

In this mode only can the nutritive ingredients of the grass, the sugar, starch, &c., be preserved; and what is almost of as much importance, in this way alone can be retained the sweetness and the fragrance of the hay, that make it most palatable to the animal.

The American Hay Tedder is constructed upon entirely new principles, and while combining all the features requisite to make a successful Tedder, avoids the many objections that are so apparent in others, and has peculiarities which render it far superior to any thing heretofore in use for the purpose. The machine is mounted upon two drive wheels, and is furnished with sixteen spring forks attached to a light reel in a very ingenious manner. The forks are made to revolve very rapidly, and will thus do great execution, even while the horse is going at a slow walk. It is impossible to clog the machine—it can be backed at all times—runs without noise—and readily passes over any obstruction that a rake will, without damage to it, and without any effort on the part of the driver, who has no levers to operate, or treadles to play upon, and has merely to drive his team. In fact, no skill or labour is required in operating this machine, and a boy ten years old answers the purpose as well as a man—the operator having nothing to do under any circumstances, except to sit in his seat and drive his horse, having *both hands free* to handle the reins. The movements when in operation being rotary, continuous and uniform, the farmer will never complain that it shakes itself to pieces before it is half worn out; while running so very lightly in all its parts, the wear is very little, so that the machine will last for years.

One of the recommendations of the American Hay Tedder is its *very great ease of draft*—to operate it being but light work for one horse. In fact, the draft is by actual test *but 150 pounds* in the stoutest grass. Another excellent feature is that it is composed of but few pieces, and those not liable to get out of order—so that it may be worked for whole seasons without requiring repairs."

The average yield of hay per acre in the State of Massachusetts in 1866 was 1.37 tons. This is a better average than in any other New England State.

## ON THE IMPORTANCE OF A THICK SOWING OF CLOVER SEED.

To the Editor of the ONTARIO FARMER:—

SIR,—I receive great pleasure in reading the numerous and interesting articles which from time to time appear on various subjects in several leading agricultural journals, and although there will occasionally appear something very unique and puzzling from some writers, yet from the discussion of many subjects, there is much to elicit and call forth valuable information and profitable reflection to those interested in agriculture and horticulture. But I feel somewhat surprised that I should never have met with an article touching on the subject at the head of this communication, and having thought that a few lines thereon might be interesting, if not profitable, to some of your readers, has induced me to take up my pen on the subject.

There are but few farmers, I am well aware, who know as I do, from many years' experience, *the real value and importance of thick sowing of clover seed*; a few advantages of which it is now my desire and aim here to point out as briefly as I am able.

Many farmers think *five pounds* of clover seed to the acre, with a few pounds of timothy, sufficiently liberal seeding to secure a heavy crop of hay or good pasturage. As far, however, as my experience goes, which has been pretty extensive, I have never seen *that accomplished* yet. But I have seen from such seeding twenty to thirty cwt. of hay per acre, and perhaps, in a favourable season, a trifle more, though more often less, and the pasturage has been commensurately meagre.

Now let us consider how trifling the additional cost is of ten pounds more seed to the acre, in comparison with the large gain (which is certain) from this additional outlay. If fifteen pounds of clover seed are sown, with four or five of Timothy to the acre, or even without, I will guarantee, in a favourable season, as I have often procured it myself, a cutting of three tons or three tons and a half of hay the first year, and from two to two and a half the second year, and more especially so, if a hundred, or a hundred and a half of plaster to the acre, is sown

each year as early as vegetation begins to stir, or in other words, a ton and a half *more grass* shall be cut to the acre for the extra quantity of clover seed sown, independently of at least a double quantity of pasturage gained thereby, and surely that would be percentage enough for your extra trouble. But there is another equally important consideration to be taken into account, never thought of by many, resulting from this thick sowing of clover seed, for independently of all impoverishing weeds being kept down thereby, the *clover root* is the best preparation or auxiliary that you can possibly have for a wheat crop. Nevertheless, an addition of salt, ashes, or lime, well worked into the soils before sowing, will materially increase the yield of grain, and add strength to the straw, and will hereby prove a great preventive to its lodging. From this process (thick sowing of clover seed), I have had my winter wheat better in quality, and far heavier in bulk and in weight, after ploughing up my one year clover, which had been eaten off by all kinds of stock close to the ground after mowing, than I could produce in any other way, and surely a heavy crop of wheat cannot be grown at less cost and time. I think it well to state that the system of farming which I followed was that known as the "four field," the clover down only one year—never sowing less than fifteen to eighteen pounds of clover seed to the acre, neither timothy, nor any other grass seeds being sown, and no system of farming, in my humble opinion, will pay like it, provided the soil (gravel or sandy loam) be suitable. Fallow for roots, afterwards barley or spring wheat; then clover, and winter or spring wheat to follow. The clover root buried deep, with but one ploughing for the wheat, the harrows afterwards well and thoroughly applied; then rolled, and the wheat drilled or ribbed in the latter I prefer, because the plant gets a better circulation of air, consequently the straw becomes stronger, and the head of wheat larger, hence a better yielding crop. With this system, your land shall always be clean and in good heart, and every crop a good one.

As, however, the pea crop is of so much importance to the Canadian farmer generally, the "five field" system might perhaps be carried out with advantage, without impairing much the condition of the soil. Peas after wheat, and then fallow again.

There is another matter which should also be taken into account when sowing any kind of grass seeds. Many seeds get under clots of earth and stones, and consequently never see any light; many others, when germinating, are eaten off by insects; and then the birds, too, when any seeds are left uncovered, must have a share; but worse than all, in this variable and

treacherous climate, how many plants, when just above ground, are cut off, or killed outright by frost, when we have thought all safe from that fell destroyer—so that, where five pounds only of seed are sown to the acre, how greatly the crop you expect is diminished from the causes over which you have no possible control.

Again, how often, in this climate, do we see one half, aye, sometimes two-thirds of a field of clover destroyed when the plant is just nicely up, by a scorching hot sun, for days and weeks in succession. Surely, therefore, there must be a *better chance* for a heavy crop of clover from a thick sowing of seed, than from a thin one. Every man, who can reason on any subject, must surely see it as clearly as I have, from practice, found it to be so.

In your next number, Mr. Editor, if acceptable to you, I may again, if other engagements permit, take up my pen to say a few words on the advantage of clover hay over timothy, and the best mode of curing that crop for fattening cattle, as also on the great advantage of a liberal use of plaster on crops where the soil needs it.

Respectfully yours,

LEICESTERENSIS.

Guelph Township, 15th March, 1869.

#### EARLY SOWING A MEANS OF ESCAPING THE DROUGHT.

It begins to be understood, now more fully than ever, that early planting is the way to take advantage of a drought. The drought usually occurs in summer, mostly midsummer, and the early rains will so advance the crop that it will occupy and *shade* the ground, and form a sufficient growth to reach maturity. If, in addition, the ground is made mellow deeply, but especially on the surface, and if the land is well drained, there can be little doubt of at least a fair yield in good soil. This is so with the grains and the early clover early plastered, and with potatoes and root crops. Potatoes cannot well be planted too early. No fear of frost while in the ground, as they are put in deep, or should be, say six inches, the frost not being able to penetrate that depth at that time, and if it does, is not likely to hurt the tuber, as the frost will *gradually* draw out, and thus save it. There is a difference in seasons; but even a wet or a good growing season is not a drawback on early planting. In a drought (and that is the rule), it certainly is an advantage, and it is sometimes the only means in severe dry weather in summer to save a crop. Potatoes, oats and barley, you cannot well get out too early. The last few years have demonstrated this, but particularly the past season. We have noticed, with a good deal of interest, the early putting out of grain. Oats that were sown on the first mellow soil—generally the mellowest—were uniformly a good crop, early, bright, and a good berry. The late sown were uniformly a failure. Rust struck them, there was light straw, and a light berry. The drought did this, as it was very severe,

commencing when the late oats were sown, and continuing pretty much till they were cut.

So it was with barley, and so with potatoes. The late growth of the Garnet and Peachblow was somewhat owing to the late rains and late growing of these roots, as they will grow the whole season through. The early Goodrich was a fair crop. The few planted late were a failure. The very earliest planted Peachblows, Garnets, Goodrich's, "California Reds," Prince Alberts, and all were a success. We never saw any better potatoes than such a medley of them planted on the first bare soil when dry enough, the earliest of any planted. We were surprised to see the load after load that was drawn from the field, and all sound, and most of them large.

Now here we have an example. It was the early planting that did this. The drought could not be more severe, and it began early, soon after spring sowing was done, catching some of the laggards.

On the other hand, we have noticed specially that late planting of the early sorts was uniformly a failure. Here is a case so clear that it cannot be misunderstood. As to the grass, that was very fine the fore part of the season, in consequence of the long, warm rain, which developed the latent germs, and gave us a fine stand of grass. It so covered the ground, shading it, that the growth was not much arrested by the drought, the grass drawing all the while from the deep fountains of the great rain of the spring; so it seemed.

It was the clover, however, that did the best. This grew unimpeded to maturity, and was a thick heavy crop—not coarse, but rather fine, dense and erect. It was cut quite early, and continued its second crop uninterruptedly. This the grass did not, but the clover did. In all directions we could see this. The tufts rose, and continued to rise till they occupied the ground for a second crop. This removed, there still were the tufts putting forth. Then the rains taking hold, there was seen, Oct. 17, the densest and richest covering, not only of clover, but of all the grasses. The drought only held back, or checked for a while the crop, the rain taking up the growth of the early moisture, continued it; and then we have the result.

We think we cannot sufficiently draw attention to this early putting out of the crops, corn excepted. That needs a good start; and later planting is required to give it this. But most of the grains, tubers and root crops, should be put out as early as the season will allow. Much can be done to secure this, if we so think and arrange accordingly. Late fall or winter ploughing will prepare the ground for tuss, and if the soil is dry or well drained, as it should be, there is no difficulty in getting out our crops in time.  
—*Cor. Prairie Farmer.*

The number of threshing machines in the United States is about 229,000, and they save five per cent. more of the grain than the flail. There is accordingly a saving by these machines of about ten million bushels of grain annually.

### GRAIN STEEPS.

The practice of using steeps or dressings for grain is not much followed in Canada, but those who are disposed to try it, I can recommend a very efficacious preparation which I got out from England. It is called "Down's Farmers Friend," can be applied in ten minutes, and assists very much the germination of the grain. A neighbour of ours had a piece of ground badly infested with wire worm, which he wished to seed down to grass. He said he was no use sowing grain for the worm would have it all. The land was so full that you could turn up half a dozen of the depredators at every turn of the foot. Here then was a chance to try it. I gave him a package and he used it faithfully. The result was a crop of wheat which none had been grown for years.

W. T. G.

### ITALIAN RYE GRASS.

Some time since inquiries were made in the *Canada Farmer* about Italian rye grass. Three years ago I imported several bushels from England, and it was sown, mixed with red clover in the barley field. It stood the following winter well, and in the ensuing season turned off about a ton of hay to the acre; but the hot, dry weather after mowing was too much for it, and by the first of September it was all quite dead, and nought but the clover remained. A few tufts of the rye grass in the lawn, where it is well watered, have grown well for five years. It requires a cool, moist and pretty rich soil.

W. T. G.

### FARM GLEANINGS.

A correspondent of the *New England Farmer* says he raised thirty heads and 6441 kernels of oats from one kernel of seed.

A correspondent of the *Journal of the Farmer* says he has raised 1200 bushels of sugar beets to the acre on soil not over six inches in depth.

The *New England Farmer* says where green undecomposed manure is to be applied to any soil, it is preferable to plough it in late in the fall.

Muck should not be applied to the fields until it has been exposed to the atmosphere for six months or more, and composted with lime and unbleached ashes.

Mr. Dietz says winter wheats received in England have not been successful, as he has failed to have them acclimate well. They have always ripened too late.

The *Irish Farmer's Gazette* recommends the application of 400 gallons to the acre, of the refuse liquor of gas works, diluted with four times its bulk of water, as a top dressing for grass.

Dickens says: "The part of the holding of a farmer or landowner which pays best for cultivation is the small estate within the ring fence of his skull." It is chiefly this small estate to which the winter leasure should be devoted.

It is believed that the manufacturers and sellers of farm implements do not take it very hard when they see a reaper or mower, plough or seed-drill standing through the storms of winter by the roadside or in the field where it was last used.

Among the curious stories told of the natives of India is one to the effect that, in the neighbourhood of Bomby, some ploughs which had been imported from England are regarded, not as instruments, but as the gods of agriculture, and are preserved in a temple as objects of prayer.

Mr. Mechi, the great English farmer, says his experience has taught him that "land can never be too rich, even for wheat or other cereals, provided the manure has been applied for a previous crop. It is the sowing of too much seed that causes crops to be prematurely laid in well fertilized soils."

Adam Rankin, Monmouth, Ill., received premiums from State and Agricultural Societies on five acres of corn raised by him the past season. The yield was 575 bushels, worth 45 cents a bushel, or \$258.75. The total expense, including rent of ground, was \$86.50, leaving a net profit of \$172.25.

H. W. Beecher says that the "only way to exterminate the Canada thistle is to plant it for crop, and propose to make money out of it. Then worms will gnaw it, bugs will bite it, beetles will bore it, aphides will suck it, birds will pick it, heat will scorch it, rains will drown it, and mildew and blight will cover it."

The Monthly Report of the Agricultural Department publishes a statement from Mr. G. B. Ross, of Boone Co., Ill., showing the time of commencing sowing and harvesting wheat, oats, and corn in that vicinity for all the years from 1857 to 1868. The average time of commencing sowing wheat was April 1, of harvesting July 1; of oats April 12, July 26; of corn May 10, October 14.

Marl may be applied in two modes; burned lime, or in the natural state, but dried so as to powder. The marl should be dug, and thrown up to dry and disintegrate for several months before it is applied. It possesses the very inefficient (phosphate of lime) in which our oldest heat soils are becoming deficient. One ton of marl, properly dried and pulverized, is said to be sufficient for an acre if evenly spread over, where an abundance of the article is available, several tons per acre may be applied with good effect.

FALL WHEAT.—The fields are now sufficiently covered of snow to give the farmers some idea of the state of the fall wheat, and the majority report that in all parts of the Niagara peninsula, the crop never promised better. The wheat

presents a very healthy and strong appearance, and there is good reason to believe that the yield this year will be much better than last. The loss from winter killing will be almost nothing, while the midge has been kept on such short allowance of food for some years, that very little fears are entertained of serious damage from its ravages.—*St. Catharines Journal*.

PLOUGHING.—The *California Farmer*, which paper, by the way, was sixteen years old on the 21st of January, is in high spirits over the opening agricultural prospects for 1869, in that famous Golden State. Here what it says about ploughing:—"Never has a country, new or old, seen such activity among the ploughmen, nor even such furrows turned up to the sun, as has been seen in California within the last few weeks. What would the farmers of the east say to see the furrows of our grain planters one, two, and three miles long, straight as an arrow, and to see ten, twenty, forty, or one hundred sets of ploughs in our own grand valleys all at work at the same time, some single owners having forty "Gang Ploughs," two, four, or six ploughs at work. Let our eastern farmers come here, and we will show them such ploughing scenes as they never dreamed of before, where our farmers are preparing the soil for the seed, on farms of 300 and 500 acres each, or 2000 to 10,000 acres; this is what we call *ploughing*."

## The Live Stock.

### SHORT HORN ITEMS.

We learn from Mr. M. H. Cochrane, of Compton, Q., that he has recently sold a very promising young bull, "Captain Graham" by name, to Major Greig, of Beachville, Ont. He was dropped during the voyage from England in August last, and is therefore about eight months old. We understand that he is a young bull of high promise, and judging from his pedigree which we subjoin, there is good foundation for promise. It will be seen that beside other points of excellence in his parentage, there are two "Windsor" crosses to be put to his credit. We welcome young "Captain Graham" to the Province of Ontario, and wish his owner much joy of him, and much profit out of him. The pedigree referred to is as follows:—

CAPTAIN GRAHAM.—Red and White, calved August 27th, 1868. Imported by and the property of M. H. Cochrane, Compton, Quebec, Canada, from the stock of Mr. Bruere, Yorkshire, England. Got by the Prince of the Realm, E. H. B., (22627)

Dam Pink Thorn Leaf, by Baron Booth, (21212)  
 gr dam Windsor Lavender Leaf, by Windsor, (14013)  
 gr gr dam Lavender Leaf, by Sylvan King, (13819)  
 gr gr gr dam Lavender, by Silk Laddie, (10947)  
 gr gr gr dam Myrtle, by Rouge, (5012)  
 gr gr gr gr gr dam Tulip by Chance, (3329)  
 gr gr gr gr gr gr dam Leaf, by Barton, (3250)  
 gr gr gr gr gr gr gr dam Leaf by A Son of Comet.

Mr. Cochrane has recently enriched his herd by the purchase from Mr. Pawlett of two yearling heifers "Rose of June" and "Princess" at 100 guineas each, and his stock manager, Mr. Simon Beattie, is about to visit England again with a view of making other purchases. We are glad to learn that the stock at "Hillhurst Farm" are doing well, and that there is brisk demand for the young animals.

VALUABLE COLT.—Mr. Thomas Armstrong, of Vaughan, is the owner of a colt, 10 months' old, sired by "Coachboy," for which he has been offered \$250. This is, we are told, the highest price yet quoted for a colt of that age in Canada.

#### THE APIARY IN APRIL.

BY S. H. MITCHELL, APIARIAN, MITCHELL, ONT.

Bees that have been housed through the winter, should be set out, placing the hives in the location where they are to remain through the season, as they should not be moved after the bees have had their first flight and marked their location. Be careful to set them out on a day that is warm enough for them to return to the hive without getting chilled with cold. Be sure to set the hives far enough apart; five feet is little enough. More would be better if your yard is large enough. Clean out all the dead bees and filth under the hives. If movable comb hives are used, as they should be, draw out a frame or two near the centre of the hive, and see if there are eggs or brood, so as to ascertain if the bees have a queen. If they have not, it is best to unite them with some weak stock that has a queen. If box hives are used, turn the hives bottoms up on a warm sunny morning, setting them so that the sun will shine directly between the combs. Now see if any clusters of dead bees are wedged between the combs, if so, remove them with a crooked piece of wire. If there are combs badly molded, they may be cut out. If the bees are weak in number, contract the entrance so that only one or two bees can pass in and out at the same time, and keep a sharp look-out for robbers. See that all stocks have honey enough to last them till they can

collect from the flowers, if not, they must be fed without delay. As the drought and excessive heat cut off all honey the last of July last season leaving the bees with a large brood maturing they consumed a great deal more before the winter set in last fall than usual. If the spring is late, a great many bees will need feeding in this section. In parts of the country, where but little wheat is cultivated to any extent, this may not be the case. Unbolted rye-flour spread out in shallow dishes will be found the best substitute for pollen, and will prove beneficial to promote early breeding and prevent robbing, when there are no flowers.

#### LIVE STOCK GLEANINGS.

Sweet-oil is recommended as a cure for botches on horses.

A correspondent of *Country Homes* says: "It is not generally believed, but it is true, that broad, square-breasted hens make the best layers."

The day for old, rough, half-made bee hives is over. Let us have a better day of neat, accurately fitted hives, painted, and with ample ventilation.

S. P. Keator, in *American Farmer*, says the best food for a cow in winter is clover, hay, and corn husks, on which brine has been freely sprinkled.

John Johnson says that cows and sheep should not be pastured together. Horses and sheep form a suitable partnership, as their grazing habits are similar.

The *Rural New Yorker* thinks it would be practicable to test the speed of a horse on a flat ground, without involving any of the objectionable features of a race.

The *Hearth and Home* thinks a cow should always be allowed to be dry at least four weeks before calving, and if in thin flesh, perhaps as much as eight weeks.

Mr. Trabue, a wealthy farmer residing near Hannibal, N.Y., lately received a fine stallion from France. He is a cross between an Arabian and Norman.

A Stark County, Ohio, correspondent of the *Ohio Farmer*, says some 30,000 sheep have been slaughtered in that country, and that those are now in demand.

To cure a dog of sheep-killing, let him see a sheep he has killed; in his presence take off his pelt, fasten it tightly around him, and make him wear it from one to three days.

Horses, as a general thing, says the *Rocky Mountain Union*, get too much whipping and too little feed. If a man loses his hat while driving, whips his horse to pay for it. If he runs into another wagon through his own carelessness, whips his horse to make it all right. If his horse slips or stumbles, he gets whipped for it. If he does anything he gets whipped.

On the 15th Feb., a large straw stack, nearly one hundred feet in length, the property of Mr. James Miller, of the township of Otonabee, fell, burying beneath it 14 valuable cows, killing three of them instantly.

The *Edina Sentinel* (Mo.) says the "cattle plague" has broken out in several localities in that county, where herds of Texas cattle are being wintered. Quite a number of cattle have died from the disease.

In one day recently, the Chicago Packing and Provision Company slaughtered and packed 2380 hogs in ten hours with one set of men. This is the largest single day's work ever done in that city in the way of hog killing.

A very fine fish, beautifully speckled, and weighing over 12 lbs.—one of the largest trouts ever seen, the knowing ones aver—was recently caught through the ice at Temiscouata, and brought to Fredericton, N.B., by its captor.

A Connecticut correspondent of the *New England Farmer* says he is fattening his thorough bred Essex hogs. He likes them well, but his community is so opposed to black hogs that he cannot sell the pigs for breeding purposes.

Correspondents of the *Mark Lane Express* testify to the efficacy of a slight application of common tar around the navel a few hours after the birth of the lamb to prevent inflammation, which is often fatal to a great extent on many farms.

The amount of wool imported at New York in 1868 was 13,547,107 pounds; at Boston, 10,378,791 pounds; at Philadelphia, 408,600. The total stock of foreign and domestic wool at these cities January 1, 1869, was 33,644,200 pounds.

It seems to be pretty certain that cruelty is the real cause of the fever disseminated by Texas cattle. They are heated and worn out by over-driving—forty or fifty miles a day—and half starved at that. Disease is a natural consequence.

The Massachusetts Society for the Prevention of Cruelty to Animals propose enforcing the law against starving and bleeding veal calves. They are informed that certain butchers keep calves a whole week without feed, besides bleeding them to whiten the veal.

A Percheron colt, two years and nine months old, and weighing 1500 pounds, has recently been purchased at Brighton, Mass., to come to Galesburg, Ill. The price paid was \$1400. The colt was sired by the Norman stallion Conqueror. His dam is a large Canadian mare.

Mr. J. S. Willows, near Sharon, recently purchased twelve ewes from Mr. Thos. Selby, and one ram from Mr. Lambert, of East Gwillimbury, for customers in the Western States. Four ewes from the flocks of Mr. Wm. Denne, and one from that of Mr. B. W. Howard, in the same township, accompanied this order. The prices realized were satisfactory, and further orders are expected.

"Farmer" sends the following recipe to the *Country Gentleman* for curing inflamed udders: Make an ointment of sage and hog's lard; anoint the bag with it, thoroughly rubbing it for some time, and repeat the operation several times a day, and the bag will soon become soft and pliable.

Mr. James Tennants, jr., 3rd Concession, Blenheim, had two valuable steers, valued at \$50 each, killed by the upsetting of the straw stack not long since. The stack being unprotected at the bottom, the cattle had undermined it so that the high wind prevailing on the evening in question blew it over.

A correspondent of the *Journal of Agriculture* states that, for some seven years, his chickens have been kept free from lice by strewing small branches or spray of cedar about the hennerly. Previous to the use of this simple remedy, they were badly infested. No whitewashing or other means to expel vermin have been used.

The *Ogdensburg Journal* says:—W. H. H. Jones, of St. Lawrence County, N.Y., has a pair of calves, eight months old, which weigh 960 pounds, stand four feet high, and girt five feet three inches. They are a cross between Devon and Durham, of a dark cherry colour, and are twins from a four years old cow.

A Rutherford Co., Tenn., correspondent of the Department of Agriculture says the dogs there out-number the sheep two to one, and that sheep raising would be profitable were it not for these dogs. A correspondent in Fayette Co., Tenn., states that the sheep are gradually disappearing by the ravages of worthless dogs.

The *Kingston News* states that the owner of 52 Canada cows, which he was bringing into the United States at the port of St. Vincent, entered their value at the custom-house much below the actual price paid, and that, as a consequence, the cattle were confiscated, entailing a loss of over \$1200 in lieu of the petty gain expected.

It has been ascertained that the ammonia which is evolved from stable manure has a very injurious effect upon leather, causing it to crack and rot after being for sometime exposed to its effects. It is therefore a bad practice to keep saddles or harness in the stable; they should be kept in a separate room from which the fumes of stable manure should be carefully excluded. This room should be provided with saddle and harness racks, shelves for buckets, and other stable furniture.

Dr. Randall has an article in the *Rural New Yorker* on "Grease and Gum," in which he says: "Our belief is that, with exceptions not amounting to a tenth of the aggregate number, the Merinos of the United States do not possess any excess of yolk when exposed to the ordinary vicissitudes of the weather, and that multitudes of them, especially grades, possess too little of it. Fine wool not kept well lubricated with yolk during its growth does not grow as well; is less soft and pliable; loses some of its felting properties, and is more disposed to rot."

The *Belleville Intelligencer* says a heifer, three years old next April, owned by Mr. Hiram Ashley, in the township of Sydney, gave birth to four bull calves, fully developed in every part, on the 4th day of February, 1869. Their respective weights the morning after being calved were 20 lbs., 21 lbs., 25 lbs., 26 lbs. These calves have been seen by a large number of people.

It may perhaps serve as a warning to persons who are in the habit of killing game out of season, to mention that a family was recently poisoned by eating partridges killed during the heavy weather. The birds, driven from their natural feeding grounds by the snow, eat berries of various kinds that are poisonous to man. This is not the first case that has come to our knowledge.

An exchange says that the English sparrows imported into New York some two years ago increased very rapidly. They devour great quantities of worms, but during the past summer have subsisted to such an extent upon the dirt of the streets that they have become somewhat lazy. In the Central Park, little thatched houses are provided for them, in which they spend the winter.

Judge French writes to the *Country Gentleman* that most of the working cattle brought from Maine to the Brighton cattle market are grade Short-Horns. Dealers tell him that the working cattle in Maine have much improved of late years. A farmer at Augusta, whose personal preference was strongly for the Devons, told him three-fourths of the working oxen in the State were grade Short-Horns.

Mr. John Haight, of Du Page Co., Ill., has sold, since August last, 49 pigs for breeding purposes. The average price was \$21.21, making a total of \$1039.50. With few exceptions, the pigs were not more than six months old. He sent pigs to Illinois, Iowa, Wisconsin, Missouri, Michigan, Minnesota, Kansas, Indiana, Kentucky. Mr. Haight is not only a successful swine breeder, but also is a practising attorney.

In localities where willow, hazel, elm, and soft maple abound bees find natural pollen almost as soon as they can fly in the spring. In other places, it is of great advantage to place rye meal in shallow places near the bees every pleasant day, as a substitute for pollen. If no stream or brook is near your bees, provide them with water in some way; they need it specially in spring, and many are lost if they go far to obtain it.

A Maine man gives his method of treating baulky horses as follows:—"Let me inform the humane men and hostlers, and all who hold the rein, that the way to cure baulky horses is to take them from the carriage, and whirl them rapidly round till they are giddy. It requires two men to accomplish this, one at the horse's tail. Don't let him step out. Hold him to the smallest possible circle. One dose will often cure him; two doses are final with the worst horse that ever refused to stir."

A Detroit correspondent of the *Boston Commercial Bulletin* says that one reason why more sheep than usual have been slaughtered the past season in Michigan is the fact that the demand for sheep to be taken West to stock new farms, heretofore amounting to many thousand a year, has ceased, and consequently this surplus must be otherwise disposed of. The writer says the farmers of Michigan to-day have all the sheep they can feed, and more than were on hand one year ago.

A correspondent of the *Rural American* makes a good point as follows: "Neighbour B—was over to-day to see if he could 'get one of them 'ere Chesters.' He has found out it pays better to keep good hogs, and not throw corn away upon mongrels. He said he thought my good hogs were indebted as much to the trough as to the breed, and I guess he was about half right, for although I could never make such hogs from mongrels, neither could I make Chesters like mine, and let them run in the woods."

Prof. Charles L. Flint says that it is better economy to churn milk than cream, because then the butter-milk is palatable as an article of food; that the quantity of butter is diminished when the temperature at churning is above or below from 55 to 60 degrees; that the average is one pound of butter to thirty pounds of milk; and that the longer the butter is in "coming" the better it will be—that three hours is short enough time for churning. The boys who have to propel the dasher will protest against the latter point.

**EGGS FOR HATCHING.**—The attention of poultry fanciers is directed to the advertisement of Mr. Acres, of Paris, Ont., who has eggs for sale from several breeds of poultry, warranted pure.

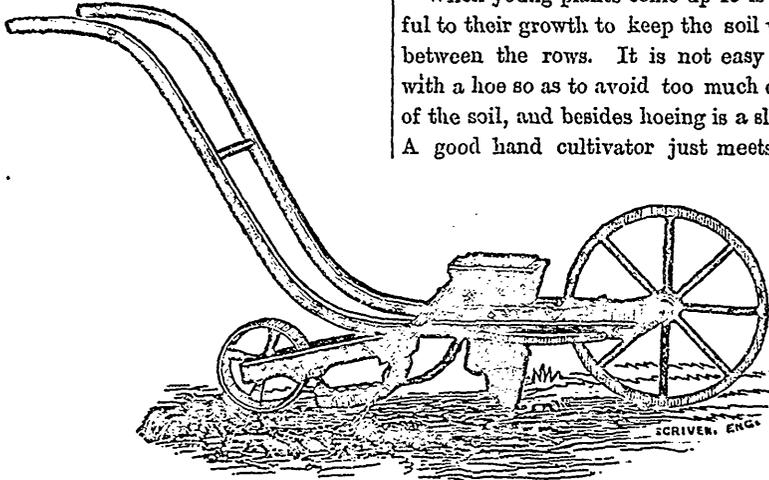
**TO RELIEVE CHOKED CATTLE.**—Having lost a heifer by choking with a turnip, and having had one choked since for which I found relief, I send you my remedy for publication:—Get eight feet of telegraph wire, double it in the middle, and twist it together, so as to leave a loop in it. Take the creature by the horns, and run the loop end of the wire down its throat, and pull it out, and the turnip will be pushed down or pulled up in its mouth, and give instant relief.—*Cor. Co. Gent.*

**MYSTERIOUS DISAPPEARANCE OF BEES.**—A Plattsburgh correspondent of the *Country Gentleman* offers an explanation of the remarkable exodus of honey-bees which occurred last year in Kentucky. The same thing often happens in his neighborhood, he says, and the apiarists there attribute it to the fact that a few warm days in early spring induce the queen to lay a large number of eggs all through the hive, which eggs are soon hatched and the larvæ capped; if then a cold, rainy time comes, the bees cluster closely together, leaving the young larvæ exposed to the cold air, which kills them in a single day, and the resulting effluvia drives the bees from the hive.

## The Garden.

### HAND SEED DRILL AND CULTIVATOR.

Labour-saving implements are of much value in the garden as well as on the farm. They expedite, cheapen, and render pleasant the operations of tillage. We illustrate herewith a

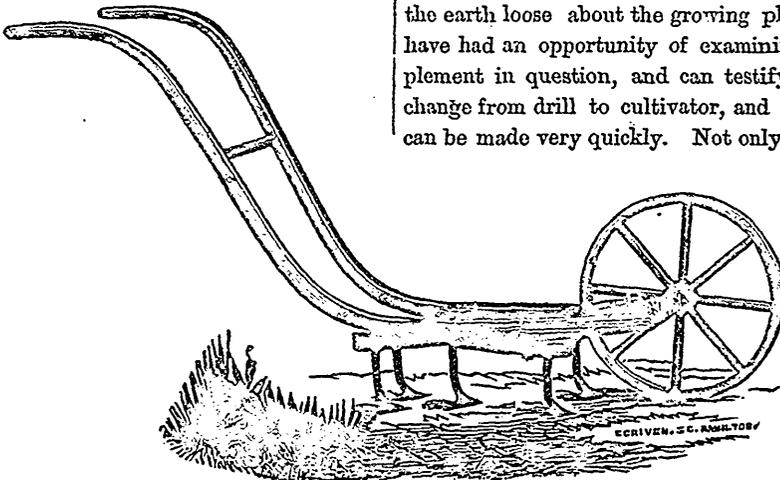


ly and surely. By means of a chain attachment it marks its own rows, a matter of some importance, for nothing offends the eye of a neat and tasteful gardener more than to see a lot of crooked, snaky, lines of vegetables. It makes its own drills, and covers the seed after dropping it.

When young plants come up it is most helpful to their growth to keep the soil well stirred between the rows. It is not easy to do this with a hoe so as to avoid too much disturbance of the soil, and besides hoeing is a slow process. A good hand cultivator just meets the case.

machine convertible either into a seed-drill or cultivator. Sowing small seeds by hand is a tedious back-breaking job, and one that it is difficult to do with regularity. A good seed-drill obviates all the trouble, and does the work with celerity and in the most satisfactory man-

With it properly set to the width of the rows, you may stir the soil close to the vegetables without uprooting them, and the work may be done at a brisk walk. It takes so little time as to tempt a frequent repetition of the process, thereby keeping the weeds down, and making the earth loose about the growing plants. We have had an opportunity of examining the implement in question, and can testify that the change from drill to cultivator, and *vice versa*, can be made very quickly. Not only gardeners



ner. The implement shown in the accompanying cuts is very simple in construction and not liable to go out of order. It is so light that a child can operate it. It sows the smallest seeds even-

but farmers will find it very useful in the seeding and after culture of turnips, carrots and mangolds. For further particulars we refer our readers to our advertising department.

## THE NEW GRAPE "OTHELLO."

(SEE FRONTISPIECE).

Our present number is embellished with a fine engraving of Mr. Arnold's new grape, "Othello," which, until recently, bore the name "No. 1," and in our opinion deserves to carry it still, as the best of the valuable hybrids which its originator has added to the list of choice fruits grown in this country. We expressed our high opinion of "Othello" more than four years ago in the columns of the *Canada Farmer*. Our opinion has undergone no change, except in the way of confirmation, since then. So great an authority in horticultural matters as Hon. Marshall P. Wilder, of Boston, expressed the same opinion as ourselves about that time; as did Thos. Meehan, Esq., of the *Gardener's Monthly*, Philadelphia. It has won high praise from all who have fairly and fully tested it, and it is with much gratification that we publish the following report by a Committee of the Fruit Growers' Association of Ontario—a Committee comprising some of the best judges of grapes in Canada. We may just add in reference to the engraving, that it is no exaggeration, but an exact representation, life-size, of a bunch expressed to us by Mr. Arnold, and by us handed over to our artist, with instructions to make a faithful sketch of it, which we can testify that he has done.

## REPORT ON MR. ARNOLD'S HYBRID GRAPES.

To the Directors of the Fruit Growers' Association of Ontario:—

GENTLEMEN,—Your Committee appointed to visit the grounds of Mr. Chas. Arnold, Sept. 17, 1868, and examine his seedling grapes, having fulfilled their duty, beg to report as follows:—

Among Mr. Arnold's seedlings are five new varieties of grapes, which he has fruited for some years past, and which it was our special business to examine. These have been, until of late, known and referred to under the following numbers:—1, 2, 5, 8, and 16. We found that the vines of all these had suffered from the combined influences of the excessive dry season, and the attacks of a multitude of insects, the results of which were apparent in damaged foliage and an unusual deficiency in size of fruit. Growing alongside of Mr. Arnold's seedlings, were the Delaware, Diana, Allen's Hybrid, some of the best of Roger's Hybrids, besides other varieties, all in fruit. These having been subject to the same unfavourable influences, afforded an excellent means of comparison. Judging by the

relative size and quality attained by these different varieties, we are of opinion that Mr. Arnold's grapes will, in better soil and situation, and under more favourable circumstances, far exceed anything they have ever shown on his own grounds. Here they have a very exposed position, and a soil scarcely generous enough to bring fruits to any high degree of perfection. It was frequently remarked by members of your committee, that any variety which would stand the exposure to which they were here subject, might with safety be recommended as hardy in almost any portion of our Province.

No. 1, OTHELLO.—This is first in regard to size, and we regard it as superior in flavour to any of the other varieties; the berry is large, black, nearly round, with a beautiful bloom; sweet, with a sufficient amount of acid to prevent cloying, and a little of the peculiar fresh flavour of the frost grape. Flesh moderately firm, will bear chewing, yet tender, and breaking readily in the mouth, without astringency. Seed small compared with size of berry, skin thin, and will bear well chewing; bunch large and well shouldered; an excellent dessert fruit; we regard it as superior in flavour to the Delaware as grown by Mr. Arnold.

No. 2, CORNUCOPIA.—Vine much resembling the Clinton in appearance, but superior in size of berry and bunch, and greatly superior in flavour. Berry small to medium, round, black, sweet, with a very agreeable sprightly flavour reminding one somewhat of a cherry. Flesh melting with a little more acid than No. 1, with a little astringency. Seeds large, bearing nearly the same proportion to size of berry as in Clinton.

No. 5, AUTUCHON.—Bunch long, not heavily shouldered. Berry medium size, round, white, with a moderately firm, but readily melting flesh, and an agreeable sprightly flavour, something like that of No. 2, yet distinct. Skin thin without astringency, will bear chewing. Much superior to Allen's Hybrids, as grown by Mr. Arnold, and free from mildew.

No. 8, BRANT.—Much like No. 2 in bunch and berry. Berry about medium size, round, black, sweet, with a melting flesh and a little more of the frost grape flavour than No. 2. Skin also a little thicker, and slightly astringent. This variety ripens the earliest of any on Mr. Arnold's grounds.

No. 16, CANADA.—Resembles No. 2 and 8 in appearance, but a little later in ripening. Berry small to medium, round, black, with a moderately firm flesh, yet tender, and readily breaking up in the mouth; flavour, astringency, and skin very like No. 8. Mr. Arnold assured us that this 16 had not reached its full perfection, and that a few days more would greatly improve it.

We found all the varieties to have ripened their wood well, to be free from mildew, of moderately vigorous growth, and we believe they will prove perfectly hardy without winter protection in most, if not all, parts of the Province. We cordially recommend them to the notice of all those interested in grape culture, as we

worthy of extensive trial, believing, as we do, that under more favourable circumstances they would command, both in regard to size and flavour, higher commendations than those we now give. Mr. Bauer's recent and very careful experiments have proved them as valuable for wine as the best grapes in the best years in Europe. Should they succeed throughout our country, as we hope and believe they will, there is a great field before them.

D. W. BEADLE,      WM. H. READ,  
JOHN FREED,      WM. SAUNDERS.

### LIVE FENCES.

To the Editor of the ONTARIO FARMER:—

SIR,—As another planting season is again at hand, it may prove a word in season to intending tree planters, if I give publicity to my sentiments and experience respecting the necessity of planting live fences in the place of wooden rails, the trees to plant, and how to plant them.

The necessity of substituting live fences in the place of zig-zag rail fences is becoming more and more apparent, for the following reasons: They occupy an immense tract of land throughout Canada, are often blown down by the wind, and as frequently levelled by the cattle (unless staked and capped). They are subject to decay, consequently agriculturists are heavily taxed both in time and money, in order to keep up the necessary supply of rails, for the forests are fast disappearing, and the price of wood is every year increasing to an alarming extent.

Those accustomed to read the agricultural journals, published in the United States and Canada, are aware that a great amount of printers' ink has been used in advocating the claims of distinct species of plants that were considered most suitable for the above purpose; but there is scarcely one kind that has been mentioned but what men have risen up in judgment to condemn. It is said that the White Willow grows too slender, and dies out prematurely, leaving breaches in the fences. The Osage Orange is too tender to endure the severe winters in Canada. The Barberry causes wheat to rust. The Hawthorne grows too thin at the bottom. Some men would like to have them turned upside down, if they could but get them to grow; and if I should presume to advocate its merits as a good hedge plant for Canada, and add to the list another that I have never seen mentioned in any of the agricultural papers, perhaps some

one will say that I have outlived my senses; but be that as it may, I beg leave to introduce the beech to the notice of the public, as a plant in every way adapted for a hedge plant in Canada. Now, it is well known to every English nurseryman in this country that the beech is one of the best trees for forming wind breaks in the English nurseries. Not only so, but there are hundreds of miles of hedges planted with it. Men of wealth have their semi-circles at their entry gates planted with it, &c., and by judicious pruning with a sharp reaping hook every year, the trees form such a thicket that no dog or hog would attempt to break through, if they could make their exit in any other direction. Now, if the beech makes strong durable fences in England, what is to hinder its being appropriated to the same purpose in Canada? The tree is a native of this country, frequently growing over one hundred feet in height, and stands the storms of centuries. Cannot the young trees be kept in subjection as stated above? The seeds are very easily obtained, and any farmer with a little care can raise his own plants. They should be planted when young, not exceeding eighteen inches in height. They should not be planted on swamp land, nor yet on very light sandy soil, but where the beech and maple grew naturally.

To prepare the ground properly, it should be dug or ploughed deep, broken fine, and raised above the common level, where the trees are to be planted, so that no stagnant water may settle around the roots. A line should be placed by the side for a guide, and the trees planted with a spade in double rows one foot apart each way. After planting, press the earth firmly around the roots, and cover the ground with partially rotted straw, and a little chip manure to keep it in its place.

Those whose aim is to make their farms and homes attractive, can plant a few purple or blood-leaved beech trees. They should be planted between the two rows of natural beech, at any desired distance. The brilliancy of the foliage during the summer months, is extremely beautiful.

Respecting the hawthorn, I need say but little to advocate its claims as a hedge plant for Canada. There are strong thrifty hawthorn fences enough in the Province of Ontario to convince any man (however sceptical) that they cannot be beat for fencing orchards, gardens, &c. That some of the trees are too thin at the foot we admit, but may not that be on account of a mistake in planting, and a neglect in pruning when the plants were young? As I have often been practically engaged in England in constructing hawthorn fences, I will state how they are planted. The first fence I ever assisted in constructing extended through fields of pasture, stubble, ploughed land, &c. The old crooked earth hedges had been previously destroyed, and the boundary line for the new was marked out with stakes, driven into the ground from east to west, perfectly straight. We commenced our operations at the west end be

stretching the line true with the stakes, and cutting the sod about eight inches deep with a spade, close to the line as far as it extended. About two feet of soil, on the south side of the line, was then cut up with the spade turned upside down, and placed on the north side of the line. The earth was then levelled with the back of the spade, and the thorn plants prepared by cutting off the tops and tap roots, being then about one foot in length. The plants were then laid flat on the levelled earth, about six inches apart, with their roots toward the north, and their tops close to the line. A man followed close behind covering the roots with fine earth. Some well decayed dung or bone-dust was then laid over the roots, and more earth from the ditch, until it formed a convex ridge. When completed, nothing was to be seen of the plants but about half an inch of the tops protruding through the soil on the south side. In the spring, the plants sprouted very thick; they were kept clean from weeds; were pruned every year, and the more they were trimmed, the more the shoots multiplied, and there was no reason to complain of their growing too thin.

The young plants were protected with a brush fence, constructed after the following manner. Stakes were driven into the ground about three feet apart, and brushwood wove in and out between them just like the side of a wicker-work basket. By the time the brush fence decayed, the thorns were strong enough to defend themselves, and will continue to be an impenetrable fence when the present generation shall have passed away.

Men of taste can plant a few double-flowered scarlet thorns by the road side, and near their dwellings, at any desired distance. These must be labelled, and kept to one shoot, so as to have the start of the others. They should not be stopped till they reach the desired height. They can then be left to grow like a standard fruit tree, or by skilful pruning, their heads can be trained to any shape desired, such as a globe, a square, an oblong, &c. The contrast, too, in the colour of the flowers, would produce a most pleasing effect.

One or all of the above designs can be grown in separate sections on the same tree, by first forming the head to a square, then allow one shoot to grow from the centre, and a globe can be formed. And as many designs as are required to please the eye, can be grown and trained precisely in the same way. Lovers of novelty, can graft a pear scion on the upper shoot of all, the only danger is, they are liable to be blown off with high winds.

Now, will some one try the method referred to when they plant the next fence? I am making preparations for planting fifty rods for myself, and hope to see the prediction literally fulfilled: "The wilderness and the solitary place shall be glad for them; and the desert shall rejoice, and blossom as the rose."

THOS. HOOPER.

Columbus, Ont., March 31st, 1869.

**LAWN MOWER.**—By a reference to our advertising department, it will be seen that Messrs. Rice Lewis & Son, of this city, have arranged with the Messrs. Samuelson, one of the best firms in Britain engaged in the manufacture of horticultural implements, to supply the Canadian public with their very superior improved patent lawn mowing and rolling machines. Further particulars and an illustrative cut may be expected in our next issue.

**ROGERS' HYBRID GRAPES NAMED.** In compliance with the request of the Lake Shore Grape-Growers' Association, and the expressed wishes of other horticulturists, Mr. E. S. Rogers of Salem, Mass., has consented to give distinctive names to the most approved varieties of his hybrid grapes, in place of the numerals by which they have heretofore been designated. He proposes the following names, which, with the SALEM, make up the best dozen of these remarkable seedlings, and intimates that a few other numbers may be named hereafter, if on further trial they should be found worthy of extensive cultivation:

For No. 1—Goethe.	For No. 19—Merrimac.
3—Massasoit.	28—Requa.
4—Wildier.	41—Essex.
9—Lindley.	43—Barry.
10—Gartner.	44—Herbert.
15—Agawam.	

### GARDEN GLEANINGS.

An eastern firm are manufacturing propagating boxes with a double lining for starting early vegetables. The soil is easily lifted out, and the boxes cost but 50 cents a dozen.

Plant small trees. They cost one half less at the nursery, less in transportation, and in planting you will scarcely lose any. You can shape the tops to suit yourself. Form the heads as low as practicable.

It was recently stated in a discussion by the Waltham, Mass., Agricultural Club, that a farmer in Holliston had raised cabbages on the same land for fifteen successive years and always successfully. He manured his land with common salt, and waters the plants with lime.

Early potatoes, says the *Western Rural*, should be planted as soon as the frost is well out of the soil, and there is no danger of its return. The sets may be forwarded very much by sprouting them on shelves in a warm room. When the weather is suitable for planting, and the soil ready, the sprouted sets should be taken out, planted in rows, and covered with a few inches of soil. Care should be taken not to break the sprouts off the sets; the former should be placed upright; their tops an inch under the surface. A gain of two or three weeks' growth may be obtained in this way.

## Our Country.

### THE PUBLIC LANDS.

Vast tracts of uncleared land are still in the hands of the Government of Ontario awaiting the advent of the settler. In the natural course of things the best locations in a new country are usually taken up first, nevertheless there are large quantities of wild land inviting the labour of the backwoodsman, which, when cleared and improved, will be quite equal to not a few of the older and improved settlements. There are in the Province of Ontario the following numbers of acres:—

In total area.	Total surveyed.	Total granted and sold.
77,606,400	25,297,480	21,879,048

It will thus be seen that there are some three millions and a half acres of surveyed Government lands not yet taken up, and more than fifty millions of acres not yet surveyed. The greater part of these lands lie in the region bounded at the east by the Ottawa River, at the west by the Georgian Bay, and at the south by the more northerly of what we are accustomed to call the front townships, and which are more or less improved and settled up. Some half dozen years ago, the impression went abroad that our best lands were exhausted. Statements were made in Parliament to this effect, and great stress was laid on them. It is now ascertained, however, that these statements, though made in good faith, were far too strong, and ought to have been qualified. New surveys, more extended observations, and a variety of circumstances prove that there is yet a large quantity of truly desirable land to be had in the Province of Ontario.

How the impression just referred to was produced, and what led to the statements above-mentioned being made, is explained in the following manner by one of our best public authorities on the land question:—

“The Laurentian range of mountains running south-westerly and skirting the north shore of the St. Lawrence, between Quebec and Montreal, but gradually receding from that river on approaching the latter city, trends westwards from Montreal along the north shore of the Ottawa, sending an out-lier or two to remind of its neighbourhood the traveller on that noble stream. Some distance above Ottawa city—notably at Portage du Fort—the most casual observer may see it crossing the river strong, and, somewhat modified in character, it runs southward to near Brockville, whence, again turning westward, it forms a ridge, or rather a collection of hillocks, which shed the rain that falls upon them southward to Lake Ontario and the St. Lawrence, and north and eastward to the Ottawa or Lake Simcoe and the Georgian Bay.

A grand old formation is the Laurentian, its mountains nowhere peaked, but rounded by the weather during countless ages, and the hills along

the spur just spoken of washed till they are bare, so that only near the thousands of lakes and lakelets which nestle among them, and along the beds of turbulent little streams which connect these lakes, can any fertile lands be found. When it was asserted, years ago, that the good lands of Canada were mostly sold, settlement had about reached this rocky ridge. Roads made in this region showed its uninviting character. Worst of all, the free grants located upon some of these roads gave so poor a prospect that they were abandoned.

But settlement was meantime turning the flanks of the Laurentian line. First, from the West, from near Lake Simcoe, people found the Muskoka district and Parry's Sound not uninviting. Then, from the East, the men of Lanark and of Renfrew moved up the Madawaska and the Petewawa. Then the Crown Lands Surveyors, and, better still, the employees of the lumberers, went further back. The further they penetrated into the interior, the better the land became, and the result may be stated thus, that *inside* the Laurentian barrier, best approached by the Northern Railroad and Lake Simcoe on the one hand and from the Upper Ottawa river on the other, there is, in the basin of Lake Nipissing and the watershed of the Ottawa, both in Ontario and Quebec, a most extensive tract of excellent land, nearly as large as the peninsula of Ontario, much of it deep-soiled as the basin of the St. Lawrence, timbered with a heavy growth of mixed white pine and hardwood, much of it as level as the St. Lawrence valley, and some as even as a prairie. It lies, moreover, near waters which either are or can be easily made navigable. A market for its farm products exists already in the lumberers' camps, which are even now breaking its solitudes, and but few years will elapse before its forests ring with the settler's axe—before the shores of Lake Nipissing, which is three times as large as Lake Simcoe, echo to the whistle of the steambat—or even before a railway runs across it by the shortest route from Montreal towards Chicago.”

The price of such Government lands as are for sale varies with the situation. In the Algoma District it is twenty cents per acre, but that is at present a somewhat remote region. The usual price for the more accessible tracts is seventy-five cents per acre, cash, or one dollar per acre by instalments. Occasionally townships, parts of townships, or a few lots at a time, are sold at auction, when the prices realized vary according to the location and quality of the land. In 1867, the Government of Ontario sold 132,393 acres for the sum of \$209,707, an average of a little more than a dollar and a half per acre. The regulations, under which the lands are sold, vary considerably according as they are of ordinary character, or specially valuable for their timber or minerals. The usual settlement duties required before a patent is issued for the lands occupied are, the building of a “habitable house,” and 20 acres on a 200 acre lot to be cleared and under crop. Sometimes parties take up land, work on it for a

time, and, for some reason or other, leave it before fulfilling the conditions necessary to secure a deed. It is these lands for the most part—lands on which some improvements have been made, and which have lapsed back into the hands of Government, which are, from time to time, sold by auction to the highest bidder. Very advantageous purchases may often be made at such sales.

### THE FREE GRANT LANDS.

The Free Grant Lands in the Province of Ontario are especially worthy the attention alike of the immigrant and of parties already resident in the country who are desirous of possessing freehold farms, but whose means are limited. Anxious to promote the improvement of the yet uncleared districts, the Provincial Government have thrown open, upon the most liberal terms, a number of townships, into any of which parties may go and select for themselves the site of a future home. Any person arrived at the age of 18, may obtain gratis, a hundred acres of land in the Free Grant districts. This offer is made by the Government to all persons without distinction of sex, so that a large family, having several children in it at or past 18 years of age, may take up a large tract, and become, in a few short years, when the land is cleared and improved, joint possessors of a valuable and beautiful estate. The settlement duties are to have 15 acres on each grant of 100 acres cleared and under crop, of which at least two acres are to be cleared and cultivated annually for five years; to build a habitable house, at least 16 by 20 feet in size; and to reside on the land at least six months in each year.

These Free Grant lands are comprised in the townships of Humphrey, Cardwell, Watt, Stephenson, Brunell, Macaulay, McLean, Muskoka, Draper, McDougall, Foley, Cardiff, Chandos, Monmouth, and Anstruther. By a reference to the accompanying map, it will be seen that all but four of the townships enumerated are in the Muskoka district, and are easily accessible from the City of Toronto.

Parties wishing to settle on the Free Grants in the Muskoka and Parry Sound territory, may proceed by either of the following routes:—

1st. To Collingwood from Toronto by the Northern Railway; from Collingwood to Parry Sound by steamer, once a week, every Saturday morning, and from Parry Sound to the respective townships by the Great Northern, Parry Sound, and Nipissing Colonization Roads. A stage runs from Parry Sound to Lake Rosseau, connecting with the steamer.

The office of N. P. Wakefield, Esq., Crown Lands Agent for the townships of McDougall, Foley, Humphrey, and Cardwell, is at Parry Sound.

2nd From Toronto to Barrie or Bell Ewart by the Northern Railway; from thence to the River Severn by steamer; from the River Severn to Gravenhurst, on Lake Muskoka, by stage; from Gravenhurst to Bracebridge, by

steamer or by the Muskoka Road, and from Bracebridge to the respective townships by the Muskoka, Peterson, and Parry Sound Roads. In winter, the communication with Bracebridge and Parry Sound is by stage from Barrie.

The office of C. W. Lount, Esq., Crown Lands Agent for the Townships of Watt, Stephenson, Brunell, Macaulay, McLean, Muskoka, and Draper, is at Bracebridge, in the township of Macaulay.

The other four townships of Cardiff, Chandos, Monmouth, and Anstruther, are reached by way of Peterborough, to which place there is railway communication. From thence, there is a good colonization road to the northern portion of the Free Grant townships. The office of W. Armstrong, Esq., Crown Lands Agent for the townships of Cardiff, Chandos, Monmouth, and Anstruther, is at Cardiff, in the township of Cardiff.

It is the intention of the Government to lay off other townships for Free Grant purposes as fast as they may be required in the course of settlement and improvement. Indeed, the probability is that most of the wild lands, as yet unsurveyed between the Ottawa river and the Georgian Bay, will be thus disposed of.

The Free Grant Lands are open for settlement under the authority of the Free Grant and Homestead Act, which became law Feb. 28th, 1868. The following is a brief summary of this Act:—

#### FREE GRANTS AND HOMESTEADS.

Cap. 8—Provides for Free Grants and Homesteads. It authorizes the Lieutenant-Governor in Council to apportionate lands, not being mineral lands or pine timber lands, as free grants to actual settlers, under regulations to be made for that purpose; but such grants are confined to the lands in the Algoma and Nipissing Districts, and the lands between the Ottawa River and Georgian Bay, to the west of a line drawn from a point opposite the south-east angle of the township of Palmerston, north-westerly along the western boundary line of other townships to the Ottawa River, and north of the northern boundaries of Oso, Olden, Kennebec, Kalador, Elzevir, Madoc, Marmora, Belmont, Dummer, Smith, Ennismore, Somerville, Laxton, Carden, Rome and the River Severn. No such grant is to be made to a person under 18 or for more than 100 acres. The patent shall not issue for 5 years after location, nor until the locatee has cleared and cultivated 15 acres and built a house thereon fit for habitation, has resided continuously on the lot, clearing at least 2 acres per annum; absence of 6 months is, however, allowed. Failure to perform settlement duties forfeits the location. The mines and minerals on such lots are reserved to the Crown. The settler may not cut any pine timber on it, except for fencing and building and in clearing until the issue of the patent; or if it be cut the settler must pay timber dues to the Crown. The land passes to his widow on death of the locatee, unless she prefers to accept her dower in it. The land cannot be alienated or

**MAP**  
 Showing the FREE GRANT LANDS  
 — IN THE —  
**MUSKOKA DISTRICT**  
 AND ELSEWHERE IN THE  
**PROVINCE OF ONTARIO.**



**LAKE ONTARIO**

mortgaged until the patent issues, nor within 20 years of the location without consent of the wife, if living. Nor shall it be liable during that

20 years to be sold under execution for any debt, except a mortgage or pledge after the patent issues. It may be sold for taxes.



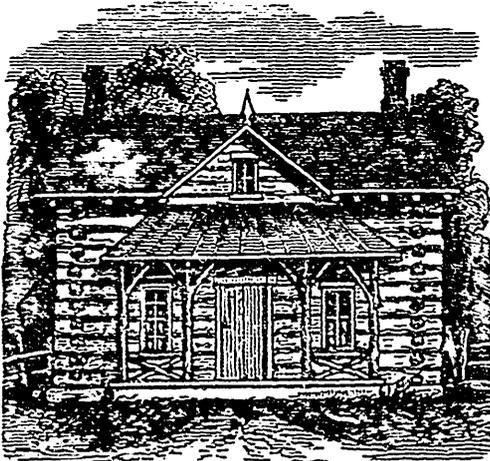
### ROUGHING IT IN THE BUSH.

The accompanying illustration gives a view of the rough beginnings of a home in the backwoods of Canada. Here are shown the first clearing, and the rude yet not uncomfortable log-house. Having inspected his estate, and selected the most advantageous site for his future residence, our settler plies his axe, and by felling a few of the trees on the chosen spot, lets in the long excluded daylight. His dwelling is to be constructed of materials that are close at hand. He need not haul the logs that form its massive frame-work many yards from where they grew, unless, indeed, there be a cedar, tamarack, or black ash swamp not far distant, and he prefers to build his house of lighter, straighter, and more uniform logs than are already on the spot. A well-built log-house is by no means to be despised. There is a fitness about it that cannot fail to impress every observant mind. The wonder is that with the architectural capabilities possessed by the new settler, better and more permanent log-houses are not erected. Below we give an illustration showing how a little skilful exercise of taste will make a log-building attractive and ornamental. Other styles might be adopted, equally, if not even more tasteful. Surprise has been expressed by good judges, that logs have been so little, if ever, used for gardeners' cottages, porters' lodges, and farm houses, on pretentious estates.

One evil usually committed in putting up the settler's first habitation, is neglecting the foundation. A moderately level spot of ground is pitched upon, the biggest logs are chosen for the bottom course; they are hastily bedded somewhat; and the work proceeds.

More pains ought to be taken with the bottom tier. It would be unreasonable, perhaps, to expect the laying of a stone foundation, though it would be the wisest policy imaginable; but, surely, good solid blocks, on end, might be let into the ground, in order to prevent that chronic evil in log-houses *settling*.

In travelling through the newer sections of this country, one observes a great difference in the log structures. Some are contracted in size; composed of rough, crooked, gnarled logs; the ends wretchedly hacked, and projecting irregularly; the ceilings low; windows very small; roofs made of bark; and if you enter them, you will find they have earth—or, as they are more appropriately called sometimes—"dirt" floors. Others are spacious; made of straight logs, gradually decreasing in size toward the eaves; the ends cut smoothly, and the corners finished true and square; and the ceilings high; windows of good size; roofs neatly shingled with either short or long shingles; and inside, you will find a good floor of sawed, and, perhaps, planed lumber. It may be urged that many settlers have neither



the means nor the skill to manage all that is desirable; but, generally speaking, by arranging an exchange of work with some skilful neighbour, the most important points might be secured. Elbow and head room, airiness, neatness, and workman-like appearance, might surely be achieved from the outset. Even though a bark roof and a "dirt" floor must be borne with at first, they might soon be exchanged for shingles and planks. Sawing and planing are not needed about the exterior of a log-house; with the axe alone a good woodcutter will make very smooth, neat, and handsome work.

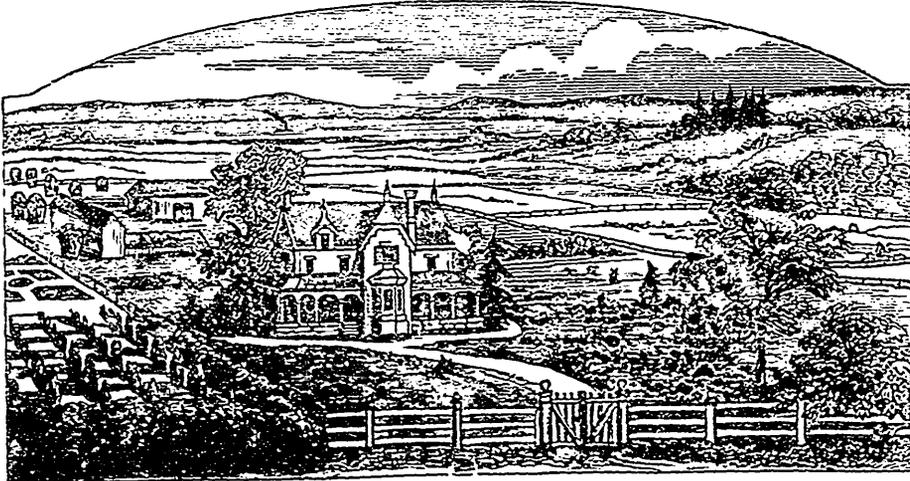
### PUTTING IN THE FIRST CROP.

This is a very simple operation. Ploughing is at once impracticable and unnecessary. The land is light and rich. All it needs is a little scratching on the surface to cover the seed. This is done with a drag or harrow, which may either be a very rough primitive implement,—a natural crotch with a few teeth in it—or it may be carefully-made and well-finished.

### THE FARM IN GOOD ORDER.

Gradually but surely the work of improving a new farm goes forward, until it is astonishing what a change is brought about in a few short years. The wilderness is transformed into a

fruitful field. One by one the stumps have rotted out, and given the plough free scope to work. Inequalities in the surface of the land have become smoothed down, and almost the only evidence that the country is new, is furnished by the rail fences. The log-buildings have given place to structures of frame or stone. A garden has been laid out and stocked. The small fruits and fresh vegetables plentifully supply the family table. An orchard has been planted, and brought into bearing. Apples, pears, plums, cherries, and, in some parts of the country, peaches are grown abundantly. Nowhere does the apple,—king of fruits,—attain greater perfection of shape, colouring, and flavour, than in Canada. Many of our farmers are somewhat remiss in the matter of orchard planting, but it



has been demonstrated that this is a fine fruit country, and even the grape ripens well in the open air. Other improvements have been made on the farm which we are supposing to have reached a state of completeness. The front fences have ceased to be of rails. A neat, ornamental paling or hedge, skirts the public road, and a tasteful bit of shrubbery environs the house and out-buildings. Altogether there is an air of beauty and attractiveness about the scene, but recently so wild. The above illustration, will give some idea of the appearance presented by a well-laid-out, and neatly-kept Canadian farm.

and pleasant expectation to the advent of spring. Of all the symptoms of the progress of the season, none come upon us more rapidly than the arrival of first one and then another of the feathered denizens of the fields and woods. Already the lively piping of the Robin, and the sweet call of the Blue-bird, have been heard in our orchards and shrubberies.

If the weather be mild, and the season propitious, they arrive sometimes as early as the middle of March, and the Song Sparrow, too, seldom fails to put in an appearance before the last days of March are over, and with its short but sweet song from many a bush and shrub in our gardens and grounds, seems to proclaim that "the winter is past, and the time of the singing of birds is come."

And now, with the first warm April weather, comes an old friend, familiar to most of us from boyhood—the Pec-see Fly-catcher (*Muscicapa Fusca*). Although it has but the one plaintive

### ORNITHOLOGICAL NOTES FOR APRIL.

#### For the ONTARIO FARMER.

Although the month of April in our northern climate is frequently characterized by cold winds, all grey skies, and hard frosts, yet as the month advances, sunshiny days and warm showers are intermingled with the less genial weather, and help us to look forward with hope

note pee-wee, sometimes long drawn out, and then changing into a little tremulous murmuring twitter, as flying down from its perch on the house-top, or the gable of some old barn, it snaps up a passing insect, yet few sounds of bird life are pleasanter to the lover of nature, for it is suggestive of warmth and sunshine, of coming blossoms and green leaves, the waking up of insect life, and all the gladness and freshness of spring. What should render this fly-catcher a special favourite with us, is the tameness and familiarity with which it harbours about our dwellings, and its attachment to the same spot, wherein to build its nest, year after year—it may be under the eaves of the barn or stable, or as if boldly claiming our protection, it will attach its fabric of mud and moss, and fine grasses to some convenient ledge under the roof of our verandahs, where its proceedings may be watched, day by day, by all the inmates of the house.

Some years ago, a pair of Pee-wee Fly-catchers built their nest on a ledge just over the inside of the door of an out-building attached to my own residence, through which servants and children were constantly passing in and out.

I did not allow them to be disturbed, and for three years, they regularly, as the season came round, repaired their old nest, laid their eggs, and brought out their young. Unluckily, the fourth spring I was away from home, and a new housemaid had also been installed, who knew not the traditions of the place, and had small respect "for them dirty birds that made such a mess, plastering the door sill all over with mud and moss." So in my absence, the broom had come into requisition, the unlucky Pee-wee's nest was destroyed, and whether it was that their faith in my hospitality had been so outraged, that they would not trust themselves under my protection again, I know not, but although, by my orders, both door and window were left temptingly open the following spring, they never rebuilt their nest again in the old spot.

The Pee-wee generally has some favourite stand, the top of a fence stake, the corner of a roof, or even the top of a tall mullien plant, from which it sweeps off in all directions in pursuit of its insect food. Its flight, which at other

times is slow and fluttering, is sufficiently rapid when in pursuit of its prey. When it alights, it shakes its wings with a tremulous motion, erects its crest, and jerks its tail upwards, as if by a spring. The same curious vibratory motion of the tail, constantly accompanies the utterance of its plaintive note.

The plumage of the Pee-wee fly catcher, is a dull olive on the upper part of the body, the head much darker, the wings and tail dusky brown, throat and breast dull grey, lower parts yellowish white. The nest of this species is composed on the outside, of mud with grasses and mosses of various kinds firmly bedded in it, while the interior, is delicately lined with the finest grass, shreds of wool, horsehair, and sometimes a few feathers.

The Hedge or Tree-Sparrow, (*Fingilla Canadensis*), is another bird which arrives here this month, although in very mild open seasons, little companies of them may occasionally be met with all through the winter. It is a pretty elegant little bird, and is easily recognised by its bright chesnut crown, and the delicate ashen grey of the throat and breast.

It has a low but sweet song in the spring; at other times, and particularly when suddenly disturbed, it utters a short sharp twittering "chip," "chip," very like the note of the Chipping Sparrow.

The Chipping Sparrow, (*Fingilla Socialis*), well merits its epithet of "Socialis," for it is one of the tamest and most sociable of our feathered friends, and under the name of "grey bird," is known to almost every child in the country. It never, like the tree sparrow, remains with us during any portion of the winter, but as soon as the cold days of autumn set in, it betakes itself to the milder climate of the middle and Southern States of America. We then see no more of our little friend, until on some warm pleasant April morning, we once more hear the familiar "chip," "chip," "chip," and if we look for the bird, we shall find him perched on the top of some low tree or bush, emitting in rapid succession its chipping note, as if determined to make up in quantity what is wanting in quality.

In plumage, it very closely resembles the Tree Sparrow—there is the same bright chesnut sp-

on the crown of the head, but the upper wing coverts, and the lower part of the body, are grey instead of brown, and the throat and breast are a lighter grey. The chipping sparrow builds early in May. Its nest, which is composed of fine dried grass, and lined with horse or cow hair, is placed sometimes in an apple tree in the orchard, sometimes in an evergreen bush or shrub near the house, and occasionally it may be met with, snugly built in among the creepers covering our verandahs. The eggs are generally four or five in number, of a light greenish blue colour, slightly marked with brown spots towards the lower end.

Although the Song Sparrow (*Fringilla Melodia*) most frequently arrives during the first mild days of March, yet if the weather become cold and stormy, they seek the shelter of the woods and the thickest recesses of the shrubbery, and their notes are not heard until returning warmth and sunshine call them forth again.

In April, if the weather is fine, the fields and gardens resound with their song at all hours of the day. Though not very prolonged, their notes are very sweet and varied, and unlike many other birds, they continue to sing throughout the whole summer. The plumage of the Song Sparrow is of a very sober hue, dark brown and grey are the prevailing tints. The upper part of the head is reddish brown, mottled with dark brown, sides of the head bluish grey, with a broad line of brown running back from the eye. The neck and breast spotted with dark brown, the back grey, streaked with brown, wings and tail dark brown. This bird builds sometimes in low bushes, but more frequently on the ground. The nest is made of fine grass and lined with horse-hair. The number of eggs is from five to six, of a light greenish white, speckled with dark umber.

No sweeter song is heard in "grove or wood" at this season of the year, than the warbling of that handsome bird, the Purple Finch (*Fringilla Purpurea*), which, although they may occasionally be seen in a very mild winter in company with the Siskin or the Crossbill, flying over woods or orchards, yet are sufficiently rare visitors during the cold weather, to make their advent the more marked when April comes, and we catch a sight of the handsome cock bird, on some bright morning, in his full livery of crimson, perched on the topmost bough of an apple tree, and pouring forth a succession of sweet warbling notes, sometimes for half an hour together. Like the Pine Grosbeak or the Bullfinch of the old world, the Purple Finch occasionally commits great depredations on the buds of our fruit trees, and later in the season, when the cherries are ripe, it rivals the Waxen Chatterer or the Robin in its devotion to that fruit. The plumage of the adult male is very handsome. The head, neck, breast, back and upper tail coverts are a rich deep lake, approaching to purplish crimson on the head and neck, and fading into rose colour on the belly. The

quills and larger wing coverts are deep brown, edged with purplish red, and the tail feathers are deep brown similarly margined.

The young birds and the females have a very sober attire of brownish olive, streaked with dark brown.

As the month advances, fresh notes from new arrivals continually strike upon the ear. Strolling through the garden or the orchard, we may hear a low, sweet, soft call note, like that of a tame canary, followed immediately by a rapid, joyous warbling—it is the American Goldfinch (*Fringilla Tristis*).

This pretty, elegant, little creature, like the Purple Finch, sometimes, though rarely, will linger with us through a mild winter, but generally they move off in large flocks to the south, at the approach of autumn, and do not return to us until towards the middle or end of this month. The cock bird, when in full plumage, is one of the handsomest of our songsters, and, unlike many other of our gaily plumaged birds, sings with great sweetness.

Indeed, both in its song and in its peculiar mode of flight, rising and falling alternately, in deep curved lines after each motion of the wings, and uttering one or two notes at the same time, it closely resembles the European Goldfinch. Like that bird also it is exceedingly fond of the seeds of the thistle. It tears up the down and withered petals of the ripening flowers, and leaning downwards upon them eats off the seed and allows the down to float in the air.

The general colour of the summer plumage of the male of the American Goldfinch is a rich lemon yellow, the forepart of the crown of the head black, and the wings and tail black, the quill feathers and larger wing coverts edged with yellowish white. The inner webs of the tail are white.

The female wants the black spot on the head, and, instead of the brilliant yellow, the general colour of the plumage is brownish olive. The younger males do not put on their yellow livery until the second year, and in winter the old ones lose their beauty and assume the duller tints of the female, so that at that season young and old of both sexes very closely resemble each other. The nest of the Goldfinch is beautifully formed of various lichens fastened together by saliva and lined with the softest substances. The female lays from four to six eggs, which are white and marked at the larger end with reddish brown spots.

Little parties of the Cow Bunting or Cow Blackbird (*Emberiza Peccoris*) may now be seen on fine mornings, visiting our pasture fields and lawns, running about the grass in search of insects, larvæ, and worms, and betaking themselves at nightfall to roost among the tall reeds and sedges, on the margin of some swamp or river.

This bird, like the Cuckoo of Europe, follows the singular custom of not making a nest of its own, but deposits its eggs one at a time in the nest of some other bird, leaving them to the care of a foster parent. When the female is about to

deposit her eggs, she moves about uneasily from tree to tree, until she discovers a nest from which the rightful owner is absent at the moment, and then quietly drops in her egg and flies off.

It never deposits more than one egg in the same nest, although it is probable it thus leaves several in different nests. The birds employed as foster parents are all smaller than the Cow Bunting. The Chipping Sparrow, the Maryland Yellow Throat, and some of the smaller species of Fly Catcher, are among those thus favoured—the Chipping Sparrow, perhaps, most frequently so with us. The egg of the Cow Bunting is a pale, greyish blue, sprinkled with amber brown dots and short streaks, more numerous towards the larger end.

As the young Cow bird grows up, it is provided for by its foster parents with all the care and assiduity that would be displayed towards their own offspring; and long after it has left the nest, it continues to be fed by its affectionate guardians. Frequently where the Chipping Sparrow has been the foster parent, the tiny little bird may be seen carefully placing some choice worm or dainty insect in the open mouth of its great clumsy, fluttering nursling, nearly half as big again as itself, whose sooty brown colour, as well as its size, offers a curious contrast to the delicately marked plumage, and pretty slender form of its foster mother.

The plumage of the Cow Blackbird, in its adult state, is brownish black on the head and neck, glossed with blue and purple tints. The female is a dusky brown.

As the month draws near to its close, the power of the sun becomes sensibly felt, and in spite of cold winds and an occasional night's frost, there is an increasing mildness in the atmosphere, and a perceptible advance in vegetation. Then come the first warm spring showers, making the air soft and balmy, and filling it with a perfume of young leaves, and opening blossoms, and springing herbage.

The birds are all jubilant. The Robin and the Bluebird, the Song Sparrow and all its kindred, are heard raising their glad voices in every direction, from wood and field; and hark! what cheery twittering note is that above our heads? The Swallows have come, and despite of the old adage, we are ready to welcome the arrival of these "harbingers of summer" as a sure pledge that all frost and cold are over, and warmth and sunshine will now be ours.

The first to make their appearance of the Swallow tribe are generally the White-bellied Swallow and the Purple Martin. The two resemble each other very much in many of their habits, but the White-bellied Swallow (*Hirundo Bicolor*) is probably the most pugnacious and quarrelsome of its species. It seems to be in a constant state of warfare with its cousins, the Martins and Barn Swallows. In the country, this Swallow generally prefers a hollow tree wherein to build its nest, which is of a globular form, composed of fine grasses, and lined with feathers of various birds; but in towns, it will frequently resort to the boxes or "bird-houses"

which have been erected for the accommodation of such feathered visitants, in the same manner as the Purple Martin.

The flight of the White-bellied Swallow is extremely graceful and rapid, and it is easily recognized by the pure glistening white of the lower part of the breast and belly.

The Purple Martin (*Hirundo Purpurea*) is well known to all dwellers, both in town and country, as the constant tenant of the numerous bird-boxes or swallow houses which are erected alike on the sign board of the village inn, or on some out-building in the farm-yard, or in the crowded streets of the populous city.

It is a bold handsome bird, fearless of all other birds, attacking even hawks or crows when they come in its way, and always friendly and familiar with man. They seem to become attached to particular localities, and seldom fail to return to the same boxes or "bird houses" to build their nests, and rear their young, season after season.

The plumage of the Purple Martin is peculiarly soft and silky—of a deep blackish blue, with intense purple and blue reflections.

The Barn Swallow (*Hirundo Rustica*), and the Chimney Swallow (*Hirundo Pelasgia*), also arrive before the end of the month.

The former lose but little time after their arrival in preparing for the duties of incubation.

After they have revisited their usual haunts, and examined their last year's tenements under the eaves of the barn, or the side of a beam or rafter of some cattle-shed or out-building, they betake themselves to the margin of the nearest stream or pond, where they form small pellets of mud or moist earth, which they carry in their bills to the chosen spot.

They dispose of these pellets in regular layers, mixing them with bits of grass, until it forms a fabric of sometimes nearly two pounds weight. Within this shell of mud is arranged a thick bed of dried grasses, over which again is placed a quantity of large soft feathers. The eggs, from four to six in number, are white, spotted with reddish brown. The plumage of the Barn Swallow is very handsome. The anterior part of the forehead is bright chestnut, the rest of the head, back of the neck, deep glossy blue-throat a bright chestnut, a broad band of black, glossed with steel blue, on the lower part of the neck. The back and smaller wing coverts deep blue, quill feathers and tail brownish black, the latter with a white spot on the inner web of each feather, excepting the two middle ones.

The pretty little Sand Martin (*Hirundo Riparia*), or Bank Swallow, comes to us sometimes even earlier than the Barn Swallow or the Martin. Its flight is exceedingly light and graceful, and capable of great continuance. As they procure their food more commonly than the other species, along the margins, or even the surface of pools, lakes or rivers, they may constantly be seen skimming rapidly over the water, in pursuit of insects, or dipping and bathing on the wing. Whenever sand banks or artificial excavations, such as railway cuttings occur, these birds are

generally to be found in greater or smaller numbers during the breeding season. Securing themselves by their claws and spreading out their tails, so as to support the body by pressing against the surface of the bank, they pick away the soil with their bills, until a space large enough to admit the body is formed, when feet and claws are also used in scratching out the sand. Their holes are bored sometimes to the depth of three feet, and at the furthest end, the nest is formed of short bits of dry grass, and lined with feathers. They lay from five to seven eggs. The plumage of the Bank Swallow is greyish brown on the upper part of the body with a dusky band across the forepart of the neck, the lower part of the body dusky white.

Towards the close of April, come many more new arrivals, not only of land but of water birds.

Our bays and creeks are already becoming peopled with wild ducks, and other water birds are making their appearance—but the space accorded to these ornithological notes has already been exceeded, and any further notices of our feathered friends must be deferred to another month.

G. W. A.

Moss Park, April 10th, 1869.

NOTE BY EDITOR O. F.—The above interesting article on “our feathered friends” is from the able and graceful pen of a gentleman, whom not a few of our readers will at once recognize, from his initials and place of residence, as the Hon. G. W. Allan of this city. We are happy to say it is the first of a series, to be continued from month to month, until the period of migration arrives, when an article on “The birds that winter with us” will complete the ornithology of the year. The whole will form a most valuable contribution toward the natural history of our country, and go far to disprove the libel upon it, that “in Canada the flowers have no fragrance, and the birds no song.”

#### RETURNED FROM KANSAS.

A. Buckler, of Pilkington, County of Wellington, has just returned from Kansas, whether he had gone to better his worldly circumstances. The *Elora Observer*, in noticing his return, says:

A very short stay served to convince him that Kansas as it is, and Kansas as it is represented to be, are entirely different things, and his experience in that territory are considerably at variance with many of the verbal and written accounts we get of that delectable region. The constant flow of immigration from all parts of the continent has overstocked the market with

artizans and labourers, and resulted in an injurious competition among those classes, and diminished the demand for labour to such an extent that efforts on the part of many to gain a livelihood by honest toil have proved so fruitless that begging has been resorted to. Scores are daily met with, craving a pittance from those more fortunate than themselves, in order to procure a bare subsistence. Mr. Buckler states that he daily saw indigent people wandering through the streets of cities and towns, with miserable rag wallets slung over their shoulders, as receptacles for any stray bits of fuel that might be swept from the shops, or otherwise deposited on the highways; also gathering orange and lemon peel, and other refuse of the more opulent, ejected into the streets, which they devour with an avidity that plainly indicated their utter destitution. While the Government land policy may be all that could be desired, hundreds of poor emigrants, having exhausted their funds in reaching their destination, find themselves unable to secure a homestead, or even sufficient employmen; to warrant a hope that, within a reasonable length of time, they would be in a better position to purchase. Of the thousands of acres of land placed in the market, a very large percentage may be considered useless for agricultural purposes; and the best of the land being secured by those whose means proved adequate to the purpose, there is no alternative for the poor but to cast themselves on the charity of the community, or push on closer to the confines of civilization. Mr. Buckler says that a good supply of surplus funds are essential for making a start in Kansas. He, we think, wisely concludes that Canada furnishes equal if not superior advantages to a man of limited capital; while to the willing, frugal and industrious poor, Canada is preferable to the States.

### Arts and Manufactures.

#### WIRE ROPE RAILWAYS.

Various experiments have been made in Britain, from time to time, to establish short lines of communication for the conveyance of freight, by means of wire ropes carried over suitable supports. Passing the loads over these points of support has heretofore been the chief difficulty their promoters had to contend with. This difficulty has at last been overcome, by overhanging the supporting rope, and curving in the pendant by which the load is hooked on to the rope, so that the centre of gravity of the load shall come vertically under the centre of the rope. The plan was tried on an experimental length of half a mile, two different modes of operation being adopted. The first employs a

pair of stationary supporting wires, acting as rails, with a running endless rope beneath them for giving motion to a succession of carriages; the second, the use of a single endless rope, carried on pulleys at the points of support, both as supporters and transmitters. By either modes a uniform distribution of the load and an important sum total of work are secured.

The working of this experimental half mile having been found so satisfactory, Messrs. Ellis and Everard, of Markfield, have had length of three miles completed, for the conveyance of their "paving sets and road metal" from their granite quarry to the Midland Railway at Bardon Hill. From the *London Engineer*, of the 19th of February, which also contains detailed engineering drawings, we take the following description:—

"This line consists of an endless wire rope, 1½ in. in circumference, supported on a series of 15 inch pulleys carried on substantial posts, which are ordinarily about 150 feet apart, but where necessary much longer spans are taken, in one case, the spans amounting to nearly 600 feet. This rope passes at one of its ends round a Fowler's clip drum, worked by an ordinary portable steam engine, and the rope is thus driven at a speed of from four to six miles an hour. The boxes in which the stone is carried are run on to the rope at the leading end, and off it at the railway by shunt rails, each box having a pair of small wheels to take these rails. Each of these boxes carries 1 cwt. of stone, and the delivery is at the rate of about 200 boxes or 10 tons per hour for the three miles distance. It is almost unnecessary to observe that the proportions of such lines can be varied to any extent to suit the requirements of any particular trade, ranging from 10 tons to 1,000 tons per day. In the case of lines for heavy traffic, where a series of loads, necessarily not less than 5 cwt. to 10 cwt. each, must be carried, as we have before said, a pair of stationary supporting ropes, with an endless rope for the motive power, will be employed; but the method of supporting, and the peculiar advantage of crossing almost any nature of country with a good line, without much more engineering work than is necessary for fixing an electric telegraph, without bridges, without embankments, and without masonry, exists equally in both branches of the system. The cost of establishing these lines will vary considerably in proportion to the quantity they are required to carry, but from their peculiar construction their cost will vary very slightly in relation to the nature of the ground which they may traverse. We have only to add, that the performance of the Bardon line is so satisfactory as to enable both principle and practice to be judged of at once."

We make no apology for so lengthly a reference to this novel and simple mode of conveyance, believing that even in this country it is capable of numerous and economical application, both in manufacturing and commercial operations; and especially when stationary steam motive power is required or in actual use for other purposes.

#### HOW TO REPAIR A CHAIN PUMP

If the tube has got worn too large for the chain, so it will not raise the water properly, procure some light sole or heavy harness leather, cut into circular washers a trifle larger than the buckets; make a hole or slit in the centre; take the chain apart, and slip on one of the washers next above the bucket, having it fit snugly. There should be only about 4 or 5 to any well, no matter what the depth is, as if more than two in the tube at once when drawing, the suction will be too great. Trial will show how large the washers should be left. A most efficient means of repairing a worn-out establishment. — *Country Gentleman*.

#### CARBOLIC ACID.

The *Journal of Chemistry* says that two or three drops of carbolic acid to a bottle of ink will prevent mouldiness; and about thirty drops added to a pint of water used for making paste will prevent its moulding. Carbolic acid, however, is a poison, and should be used with care. It is a very destructive to the lower orders of vegetable and animal life.

CHEAP AND EXCELLENT INK. — We clip the following recipe from the *Country Gentleman*:—

Good ink may often be had by paying a good price for it, say about fifty cents per quart; but after the manufacturer has got up his reputation, he is tempted to sell a cheap and miserable article. The best way is for all to make their own ink, and save at least one thousand per cent., as ink is commonly sold at retail, between first cost and final prices. But how shall we make it easily and cheaply? Thus: Buy *extract of logwood*, which may be had for three cents an ounce, or cheaper by the quantity. Buy also, for three cents, an ounce, of *bi-chromate of potash*. Do not make mistake and get the simple chromate of potash. The former is orange red, the latter clear yellow. Now, take half an ounce of extract of logwood and ten grains of bi-chromate of potash, and dissolve them in a quart of hot rain water. When cold, pour it into a glass bottle, and leave it uncorked for a week or two. Exposure to the air is indispensable. The ink is then made; and has cost five to ten minutes labor, and about three cents, besides the bottle. This ink is at first an intense steel blue, but becomes quite black.

## Hearth and Home.

### A TALK WITH THE YOUNG FOLKS ABOUT THE MONTH.

In this country, April does not always bear the showery character for which it is noted in some other parts of the world. Sometimes it is rainy, at other times it is dry. Quite often it is very pleasant, and makes us think of summer. It is a great improvement upon March, for it is always much warmer than that rough, blowy, stormy month. To be sure we often think the weather very backward in April, and are tempted to ask, when will the winter be gone! But this is partly our natural impatience, and partly desire to have more of those pleasant days which begin to come now and then and betoken the spring. Well, time flies fast, and soon every vestige and reminder of winter will be away.

Our young friends in the picture are not very well provided against an April shower; true they have an umbrella, but neither hat nor bonnet, while their low, light slippers will soon let them have wet feet. This picture is very true to life however, for children are continually showing their thoughtlessness by neglecting proper precaution against cold and wet. Many a serious illness and many an early death have been thus caused.

See how politely the young gentleman, in our picture, is holding the umbrella over the little lady by his side. She is most likely his sister, and if so, let the boys who read the ONTARIO FARMER, learn from his example, to be kind and polite to their sisters. Boys are too often rough and rude to their sisters. This is very wrong, besides being most unsightly and unlovely in appearance.

"Let love through all your actions run," should be the rule adopted in our behaviour toward brothers and sisters, father and mother, friends and neighbours.

April showers make the grass grow, swell the tree-buds, and form the flower germs. What a wonderful thing it is to see the whole earth awaking as it were from sleep. During winter, all nature was locked in a death-like slumber. When the snow went off, how desolate the surface of the earth looked. How bare and dry the trees appeared. Not all the skill and efforts of man could change this. But God by His Almighty power does it, oh! how completely in a very short time. Now the thermometer is below zero. Deep snow covers the ground, and in many places huge drifts are piled up. In a very short space of time it is so warm, that the bees are flying, and there is not a spec of snow to be seen anywhere! Who, but an Almighty Being could make so great a change in such a short time? Why is it that people do not adore and praise the Great Creator? "Great is the Lord, and greatly to be praised." "O that



APRIL.

men would praise the Lord for His goodness, and for his wonderful works unto the children of men." "Bless the Lord, oh my soul, and all that is within me bless His holy name."

**MISGUIDED YOUTHS.**—A correspondent of the *Guelph Mercury*, from the township of Wellesley, says:—"It is not only surprising but sad to witness the number of young men who are rejecting agricultural pursuits with scorn, and betaking themselves to the pursuits of ease and fortune under the auspices of the poorest of patrons—Literature. Poor lads! they are dropping the substance to grasp the shadow; for four are, to my own knowledge, not only forsaking farm labour, but splendid farms, which might be theirs as soon as they attained to manhood. One of the richest farmers in Wellesley, the owner of the homestead par excellence in the township, the father of a large family of boys, has been left so much alone by the desire of his sons for literary pursuits, that the homestead is for sale. And, in connection, I may add they are almost invariably purchased by Germans. It is so, not only in the County of Waterloo, but in Perth and probably in other places that I wot not of. These plodding, industrious citizens have a knack of accumulating money; and when anything good in the shape of land is for sale they are almost sure to be the purchasers.

Poetry.

SEASONABLE VERSES.

The following little poem is timely and good :

Come, gentle April showers,  
 And water my May flowers,  
 The violet—  
 Blue, white, and yellow, streaked with jet—  
 Thick in my bed are set;  
 Gay daffodilles,  
 Tulips and St. Joseph's lilies  
 Bethlehem's star,  
 Gleaming through its leaves afar;  
 Merry crocuses, which quaff,  
 Sunshine till they fairly laugh;  
 And that fragrant one so pale,  
 Meekest lily of the vale—

All are keeping whist, afraid,  
 Of this late snow o'er them laid.  
 Come then, gentle April showers,  
 And coax out my pretty flowers.

I am tired of wintry days—  
 Have no longer heart to praise,  
 Icicles and banks of snow.  
 When will dandelions blow,  
 And meadow-sweet,  
 And cowslips, dipping their cool feet  
 In little rills,  
 Gushing from the mossy hills?  
 I am weary of this weather,  
 Vernal breezes, hasten hither,  
 Bringing in your dappled train,  
 Tearful sunshine, smiling rain,  
 And to coax out all my flowers,  
 Fall, fall gently, April showers.

Music.

UNIVERSAL PRAISE.

HAPPY VOICES.

The val-leys and the moun-tains, The riv-ers and the foun-tains, The  
 sun-shine and the rain, The stars that shine a-bove me, The flowers that deck the sod, Pro-  
 claim a-loud the glo-ry of my God. Prais-es, ho-ly ad-o-ra-tion, Prais-es  
 to the God a-bove; Prais-es thro' the wide cre-ation, Sound a-loud his great-ness and his love.

And man withhold the sacrifice of praise?  
 Praise him, ye that live for ever;  
 Praise him every heart and voice;  
 Praise him, he's the glorious giver,  
 Praise him in your sorrows and your joys.

And shall the voice of nature  
 Thus glorify its king;  
 And man, the noble creature,  
 No grateful tribute bring?  
 And will he not in solemn  
 And with a voice in praise.