

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

Title on header taken from: /
Le titre de l'en-tête provient:

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments: /
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below /
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	15X	18X	20X	22X	24X	26X	28X	30X	32X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THE
ONTARIO FARMER;

A MONTHLY JOURNAL OF

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

VOL. I.

TORONTO, JULY, 1869.

No. 7.

OUR FIRST HALF-YEAR.

The first half-year of a journal's existence is critical, and forms perhaps the most important epoch in its history. During that period its character becomes developed, and its fate may be augured. First impressions, if unfavourable, may possibly be outlived and corrected, but it is a work of time and difficulty, achieved, we suspect, in but rare cases. The competition among periodicals is so keen now-a-days, that some *eclat* at the start seems necessary to success in the end.

This being the case, we have every reason to be encouraged with the result of our first half-year's efforts. The **ONTARIO FARMER** has met with such a reception, and secured such a patronage, that it may be regarded as established, and its future looked at with the most confident anticipations. Commenced at short notice and under many difficulties, it would not have been surprising if its early history had been marked by a hard and long-continued struggle. Happily, however, there has been nothing of the sort. The bold and independent tone of our inaugural address in the January number, has been responded to right heartily both by subscribers and advertisers, and the result is that, so far from having to tell the farmers of Ontario that we are benevolently publishing a journal for their benefit, at a dead loss, we have the pleasure of informing them that the **ONTARIO FARMER** has paid its way, as every honest thing should

do, from the beginning. We stated at the outset that it must do this or be abandoned. Having performed the one condition of its existence, its continuance and prosperity may be regarded as certain.

Though we have by no means come up to our own ideal of what we would like this journal to be, there is, we think, no reason to blush in view of the half-volume which is already before the public. In some respects, we have done more than we expected and promised; in no respect, that we are aware of, have we done less. Those features of this journal which are peculiarly its own have, we believe, secured general if not universal approval. We refer to the departments of Emigration, and the Mechanic Arts; the Talk with the Young Folks, the page of Music, and the royal octavo size. In one of these respects we are not quite satisfied with our work, though we have kept faith with the public to the letter. Our music arrangements are not yet to our mind. It was our intention to be able, either by ordering plates of music publishers, or by having a fount of music type at command, to issue any choice new piece of music that either we or any of our readers might desire to send ringing through the land. We have not yet accomplished this, but hope to do so before long. Meantime, we have issued during the half-year six choice pieces of music, half of them secular and half of them religious, any or all of which Jenny Lind her-

self need not, and we believe would not, be ashamed to sing.

Some of our subscribers object to our issuing in the middle of the month, and we confess that we sympathize to some extent with them. It was a matter of necessity rather than of choice in regard to our first number, and we therefore announced the 15th of the month instead of the 1st as the date of publication. We intend gradually to publish earlier in the month as the year draws to a close, so as to begin and continue with the first of the month when 1870 comes in.

We beg to call the attention of our subscribers and others to the fact that the ONTARIO FARMER is so arranged that in binding their volumes at the end of the year, the advertisements, which are of course only of transient interest, are omitted without interfering with the contents proper of this journal. In other words, our readers always get the same quantity of reading matter, let the advertisements be few or many. In most other periodicals of this description, the advertisements encroach more or less on the reading matter. The *American Agriculturist* for July for example, ostensibly a 40 page journal, has 12 pages of advertisements. This is a very fine thing for the publisher, no doubt, but it reduces the permanently useful contents of the paper very seriously. We are sure that this feature in the ONTARIO FARMER only needs to be thus pointed out to be appreciated by its patrons and friends.

In conclusion, we most sincerely thank all who have aided our undertaking, and would say as we did at the outset, "We shall receive very thankfully whatever encouragement and co-operation may be accorded to us, whether in obtaining subscribers, forming clubs, or sending items of agricultural intelligence, and communications suitable for these columns." We can still supply back numbers to new subscribers, and so long as we are able to do so wish it to be understood that all subscriptions date from the first of the year.

MORE JOTTINGS BY THE WAY.

To the Editor of the ONTARIO FARMER:—

SIR,—A few thoughts on some observations made during a recent sojourn in the country may not be devoid of interest to some of your readers.

HON. D. CHRISTIE'S SALE OF STOCK.

Having some official business west, I embraced the opportunity of being present at Mr. Christie's sale of short-horn bulls, June 10th, on the Plains Farm, near Paris. The attendance was pretty good, considering that the sale was limited to eight bulls, seven of them young, of Mr. Christie's own breeding from the celebrated stock which he imported a few years since from the world-renowned herd of Mr. Douglas, Athelstaneford, Scotland. Unfortunately, a train from the west, containing, it was supposed, several American buyers, owing to some detention, did not arrive in time. The prices obtained were by no means commensurate with the high breeding and worth of the animals, none of which had been pampered, or in any way prepared for exhibition, but were in a thriving and sound condition for breeding purposes. People have been so accustomed to see pure bred cattle, particularly short-horns, in so fleshy a condition when exposed for sale or competition, that a feeling bordering on disappointment is in some way or other not unfrequently manifested when these conditions do not obtain. This mistake is much to be regretted, as nothing can be more injurious to the health and procreative power of breeding stock of either sex than what is commonly understood by "pampering," which, when carried to excess, as it often is, results in an abnormal development and debilitated constitution.

The well-known aged bull, "OXFORD LAD," sired by the renowned "Duke of Gloster," and bred by Mr. J. O. Sheldon, of Geneva, N.Y., was sold for \$325. It is true the infirmities of age are fast telling on this noble animal, still good service may be got out of him yet. The subjoined facts relating to him, taken from the catalogue, may be interesting to many of your readers:—

"OXFORD LAD was the winner of the first prize as a two-year-old, and the sweepstakes of

the New York State Show, in 1862. He also won the first prize as an aged bull at the Provincial at Hamilton, in 1864. In 1865, he won the first prize as an aged bull, and the sweepstakes, at London, at the Provincial Show; also the Prince of Wales' prize for the best bull of any age or breed. His sire, Duke of Glo'ster, was bred by Earl Ducie, and was sold after his death for 600 guineas. A grandson of Oxford Lad, 2nd Duke of Geneva, bred by Mr. Sheldon, was sold to Mr. Edwin Bedford, Kentucky, for \$3000, and a grand-daughter, 7th Duchess of Geneva, also bred by Mr. Sheldon, was sent by him to England, where, in October, 1867, she brought at public auction 700 guineas."

All the young bulls, except one, were got by "CROWN PRINCE OF ATHELSTANE," bred by Mr. Douglas in 1864, and imported by Mr. Christie as a calf at great cost. His dam was the "Queen of Athelstane" by "Sir James the Rose."

"CROWN PRINCE OF ATHELSTANE has been only once exhibited, when he took the first prize as a yearling, at the Provincial Show at London in 1865. His sire, Next of Kin, was a son of Mr. Douglas' celebrated cow Rose of Sharon, the winner of first prizes at the Highland Society's Show, and at the Royal Irish Show in 1859. Next of Kin won the first prize at the Highland Society's Show, as a yearling, in 1864, beating the winner of the first prize at the Royal English Show the month before."

The two-yearling bull, "PRINCE OF THE REALM," bred by Mr. Christie, got by "Crown Prince of Athelstane," out of the "Princess of Athelstane," is an animal of the highest breeding, and of great beauty and promise. The proprietor reserves him for his own use.

"HIS DAM PRINCESS OF ATHELSTANE won the third prize as a heifer calf at the Royal English Show at Newcastle in 1864; also, in the following month, the third prize at the Highland Society's Show at Stirling, as a yearling, she being a few days over a year old, and being beaten by a heifer which took the second prize in the yearling class at the Royal English Show at Newcastle. She also took the first prize at the Provincial Show at Hamilton, in 1864, and the first prize at the Provincial Show at London in 1865. Prince of the Realm will be entered in the 9th Volume of the American Herd Book."

What a fine opportunity was here presented to Agricultural Societies and enterprising individuals for improving the breeds of cattle, and thus augment the wealth of the country to an extent which few can estimate. The highest figure for any of these fine young bulls was only \$185, and the whole not disposed of. How much more advantageous would it be, if our Township Agricultural Societies would now and then forego their exhibitions for a year or two (often insignificant and of little worth), and devote the whole of their means to the procuring of pure bred male animals, adapted to local wants and circumstances? The farmers of Ontario have now really no need to go out of their own Province even to obtain animals of indisputable purity and excellence at a cheap rate (quality and expense of importing and breeding being considered), that would, at the minimum of trouble and risk, meet all their desires. Until farmers awaken up to a proper conception of the importance of this subject, our agriculture will lag behind, our wealth continue unnecessarily contracted, and our enterprising breeders discouraged. The practical application of this simple suggestion would, in a few years, increase the money value of the live stock of this Province thirty or forty per cent.

MR. ARNOLD'S HYBRID WHEAT.

Having a few hours in Paris, I embraced the opportunity of inspecting Mr. Charles Arnold's new varieties of wheat. He has fifteen different kinds carefully drilled in last fall, and occupying about one acre and a half of ground. The wheat, as a whole, looked promising, some of the sorts were just coming into ear (June 11th), but the crop was not sufficiently advanced to form any decided opinion on the respective merits of the different varieties. Mr. Arnold, through several years' efforts in hybridizing, has aimed to get varieties of good quality, of a hardy character, resisting, if possible, the attacks of the midge and other injurious insects, and specially adapted to the climate of this country. It is hardly possible to get a superior quality to that of the fine white wheats formerly grown so successfully in the central and western sections of this Province. But as these have of late years been unreliable, and in some sections entirely exploded, what is now urgently needed is

something more hardy and certain, even though it be not of equal quality, to supply their place. The Council of the Agricultural Association has appointed a Special Committee to examine and report on this interesting and laudable experiment, which it is most devoutly to be hoped will prove successful, and be a benefit to its conductor and the country.

MEETINGS IN THE ELECTORAL DIVISION OF BOTHWELL.

Difficulties having arisen among the members of the Bothwell Electoral Division Society, I was instructed by the Hon. the Commissioner of Agriculture to visit the Riding, with a view to acquire a more correct knowledge of those difficulties, and, as far as possible, open a way for their adjustment. I accordingly held public meetings at Bothwell, Florence, Thamesville, and Morpeth, and had considerable personal intercourse with farmers and others interested in the promotion of agriculture, and the welfare of the Society. At most of these meetings, questions relating to improved agricultural practice were freely discussed, in addition to the special object for which we had met. I cannot but feel grateful to the officers and members of the Township Societies, as well as those of the county, for their kindness and readiness to impart information, and I trust that the better feeling elicited will tend to strengthen a wider bond of union, and restore harmony, and, as a consequence, increase the usefulness and efficient working of the Society, which, by united exertion, cannot fail to obtain a foremost rank among similar institutions in the Province. I shall feel gratified to learn that my anticipations have been realized.

DRAINING AND OTHER IMPROVEMENTS.

In passing over this fine section of country, I was much impressed with its great agricultural capability. Much of the soil is naturally very rich, as is evinced by the luxuriant character of its forests, and the appearance of the growing crops, where anything beyond the most superficial culture had been given. Through the kindness of Mr. Knags, I was enabled to take a hasty glance of his farm near Dawn Mills. Some of the soil is a deep alluvium, producing very heavy crops of grass, roots, and grain. The pasturage is very rich, and Mr. Knags is forming

the nucleus of a short-horn herd, a young bull and a few heifers indicate good and pure breeding. His sheep, too, as regards size and quality, are much above the average. Leicesters predominate in this section, but for want of attention to the ordinary principles of breeding, and particularly to the importation of pure bred rams, they have very little of the modern Leicester except the name. A few more enterprising farmers, scattered here and there, are beginning to prepare the way in these respects for much desiderated improvements, and their example cannot fail of being highly beneficial around their own centres.

The most needed improvement on the rich and level lands of this portion of the Province is drainage, an artifice which I commenced publicly urging many years ago, but for want of capital, and the power of co-operation more than any other cause, this primary and indispensable means of improvement has but recently been adopted on a broad scale. In a new country, with a level surface like the one in question, the first duty of the settler, after denuding a portion of the forest for securing a habitation and the necessaries of life, is as soon as possible to aid, if I may so term it, *Nature's drainage*. In all situations, however flat they may be, the natural drainage of the country is carried on by means of creeks or streams, which, however sluggish and circuitous, allow the surplus water to find its way into lakes or seas. The improvement then of these natural channels, by clearing out decaying timber and vegetable matter, deepening and straightening where necessary, constitute the primary operation of draining, upon the successful conducting of which, the efficiency of all subsequent and more refined methods, such as ditching and field under-draining, essentially depends. It is no uncommon thing to observe, in a wet and level country, both open ditches and covered drains very much impaired in their functions, and ultimately completely obstructed for want of a sufficient outfall; for apart from this condition, both labour and money will surely be thrown away.

It was, therefore, particularly gratifying to learn that in several townships in this peninsula, the improving of what is termed arterial drainage is being carried on extensively, and with

judgment and spirit. Mr. Stephen White, of the township of Raleigh, Kent, completed the terms of a contract in my presence, involving an outlay of many hundred dollars. Since the passing of the New Drainage Act, a few years since, a fresh impetus has been given to this primary and essential means of agricultural improvement, without which all others are comparatively useless. Already the benefits begin to appear in relieving large areas of stagnant water in the spring and fall, thereby greatly increasing the fertility of the land, diminishing the cost of production, and rendering the climate more uniform and salubrious. The cost of these improvements is defrayed by a tax levied on the lands, in proportion as they are thereby benefited.

I spent a very agreeable day with some English families residing on the Middle Road, in the township of Raleigh, where I had not been for upwards of twenty years. The change effected during that period in the appearance of the country is truly marvellous, and to be fully understood, it must be personally experienced. The soil is heavy and the surface level, and the roads in wet weather, even in summer, were formerly impassable. The settlers were living in humble shanties, and what few fields had been chopped were full of large hardwood stumps. Now, a good gravel road, leading directly to Chatham, intersects this locality, with a telegraph line, houses and out-buildings substantial and comfortable both for man and beast; the front of the farms clear of stumps, and the fields along the fences generally well-ditched, and under-draining done in some places. The luxuriant appearance of the crops, considering the lateness of the season, indicated the triumph of skill and industry over what appeared formerly to be most formidable difficulties, and everything denoted comfort and plenty. This is indeed a pleasing picture of Canadian rural life; and it is encouraging to trace everywhere, more or less, the comforts and blessings that follow in the train of sobriety and persevering industry. Truly this is the country for a working man!

FRUIT GROWERS' ASSOCIATION.

You will allow me a little more space for a few brief remarks relative to this Society, the summer meeting of which was held last week in

the town of Galt, and was well attended by members from various principal points west of Toronto. The smaller fruits, of which there were numerous specimens on the table, formed the subject for examination and discussion. Some new seedling strawberries attracted much observation, as did some specimens of approved varieties of gigantic size and excellent flavour. Gooseberries and currants were well represented, one or two fine varieties of the former said to be not subject to mildew, a disease so common to the gooseberry in this country. The information elicited from practical men at meetings like this will, when embodied in the Society's report, be found of great practical utility. Fruit growing in Ontario is yearly assuming greater magnitude and importance, and this Association is admirably calculated to increase and direct its influence. The holding its summer and autumn meetings by invitation in different localities tends in this direction, by diffusing a taste for, and promoting a knowledge of, this interesting and most useful department of horticultural art. It is much to be desired that it will have this effect in Galt and its vicinity, where there already exist a few well laid out gardens and grounds, and the elements of what is hoped will soon form a successful Horticultural Society.

I will only further remark, that being in Galt, I embraced the opportunity of spending a few hours at farming with Mr. James Cowan, an old resident in this vicinity, and who has for many years taken a leading part in agricultural pursuits. He has a very nice little herd of short-horns and some excellent grade cattle, and his flock of Leicester sheep, for size and characteristic symmetry, it would be difficult to surpass, or even equal, in any part of the Province. Mr. Cowan has upwards of two hundred acres thoroughly cleared up, and free of stumps and stones, and about a similar quantity in bush, or a semi-reclaimed state. He uses a powerful screw stump machine for extracting pines, which are more or less interspersed with deciduous trees in this vicinity. The soil being calcareous, and the surface undulating, the mixed system of husbandry can be carried out with much facility and success.—Yours respectfully,

GEO. BUCKLAND.

Toronto, July 10, 1869.

THE WEATHER AND CROPS.

We have before us a large number of clippings from local newspapers in all parts of our Province and Dominion, wherein are set forth, with great particularity of detail, the characteristics of the present season, and the harvest prospects of the farmer. It would occupy well nigh half our space to quote these in full, and the necessary sameness of many of them, renders it quite unnecessary to do so. Never, so far as we can remember, has the attention of the local press been so greatly drawn to the weather and crops, or so much space in their columns devoted to the state of the farming interest. Whether this arises from peculiarities in the season that is passing over us, or from an increased appreciation of the importance of agriculture, we know not, but we chronicle the fact with much pleasure. Many of our Provincial newspapers have now a department of the farm and garden, a feature which will tend to increase their popularity among farmers, while it will do the ONTARIO FARMER, and other journals of its class, great good, by awakening and sharpening an appetite for that description of reading.

Taking, what sundry ecclesiastics would term, "a conjunct view" of the numerous weather and crop reports now lying on our table, we find that the season has been wet and backward to an almost unprecedented degree, several newspapers mentioning what one of them records with a spice of facetiæ, that "never in the remembrance of that very respected and venerable personage, 'the oldest inhabitant,' has there been such a cold, wet season as the present, in this country." Notwithstanding this, there is great unanimity in representing the condition of the growing crops as well nigh all that could be desired. Grass, though light here and there, owing to lack of heat, will be, on the whole, fully an average yield, and in some sections of the country, very heavy. The great want is fair weather to cut it. At this date (July 10), we have received hardly any accounts of haying having begun in general good earnest, and fear there has been but little opportunity yet to house hay in proper condition. Such a season is well fitted to teach farmers their need of an implement like the hay tedder, by the use of which they can cure this

important crop in double-quick time, spite of catching weather. Fall wheat is universally spoken well of, and it is now so far advanced that the chief danger to be apprehended is from rust, which, if we should, unfortunately, have a time of close, muggy, sultry weather, may yet do it great damage. Spring wheat reports are generally favourable. Peas, oats and barley are everywhere in excellent condition, and some of the reports before us apply the term "splendid" to their appearance. Root crops can hardly fail to be abundant. Potatoes, especially, never looked better. All garden products are fine, and the market prices indicate supply in excess of demand. The small fruits that have already ripened, or are on the point of doing so, are a plentiful crop; and the prospect is that the larger and later fruits will well nigh equal the earlier ones. On the whole, there is cause to take up the devout strain adopted by one of our exchanges, and which we are glad to echo: "From present appearances we predict a good harvest this year, and all have reason to feel thankful to the Giver of all good things, that the prospects are so encouraging."

The exceptions to the generally favorable accounts above collated, are from sections that are flat, low and in special need of drainage. Both the extremes of drought and wet read the farmer a lesson on the importance of draining his land. This, indeed, more than any other improvement that can be named, requires to be effected on a large scale, to secure that regularity of yield, independently alike of the extremes of dry and wet weather, which is so greatly to be desired.

Very much the same state of things exists in the United States as here. The bi-monthly report of the Agricultural Department, at Washington, for May and June, is to hand, and the returns, mostly statistical, shew a high average condition of wheat, and promise of an abundant yield. Spring and summer crops are, in general, looking well in all parts of the Union, not excepting the regions where corn is a staple product. The latest accounts as to cotton, are favourable, and the crop is estimated at three million of bales, half a million in advance of last year. From causes that need not be fully explained here, there is no decline in the market value of

cotton, nor has wool been unfavourably affected by the prospect of a large yield of cotton. Fruit is unusually abundant throughout the United States this year.

Accounts from Britain show that though the early part of the season was cold, wet and backward, more genial weather has been enjoyed latterly, and crops of all kinds are likely to be good.

PROTECTION OF GAME.

If this country is to be saved the serious misfortune of being utterly stripped of wild animals and birds, public attention must be more widely drawn to our game laws, and the necessity of enforcing them: Too many people regard such laws as offensive, whereas they are thoroughly benevolent, and conducive to the greatest good of the greatest number. Indiscriminate hunting and shooting of game in the breeding season and at all seasons, can have but one result, viz., extermination. It is therefore to the interest of all that judicious game laws be enacted and put in force.

No doubt these laws are very often violated through ignorance, but it is a legal maxim that ignorance of the law excuses no one, and it is a first duty of all good citizens to get a thorough acquaintance with the laws of their country, so that they may not, even unwittingly, transgress them.

An Act was passed on the 28th of February, 1868, for the better protection of game in the Provinces of Ontario, and on the 19th of December certain amendments were made to it. The provision for the killing of deer remains the same as before, that is—"The period during which it is unlawful to hunt, take, or kill any kind of deer whatever, is between the first day of December of any year, and the first day of September in the succeeding year, or in other words, 'you may kill deer in September, October, and November, but at no other time.'"

The first amendment to the Act is one touching the killing of hares. By the law as it stood, hares were protected from 1st of January until the 1st of September. Now the time for killing them is extended to the first of March.

The second amendment is that which changes and enlarges the time for shooting woodcock and snipe. It was confined to the period between the first of September and the first of March; now these birds are declared to be in season between the 12th of August and the 1st of March.

The next amendment provides that swan, geese, and duck can be shot at any time between the 15th of August and the 15th of April; but

it is against the law to use batteries, night lights, or sunken punts for the destruction of any wild fowl whatever.

The last amendment to the Act of last year is that which enlarges the time for trapping the fur-bearing animals. The law provided that they should be unmolested between the first day of May and the fifteenth of November; but the amendment narrows this time of protection to the fifteenth of October, after which date they may be taken.

A fine varying from two to twenty-five dollars per head of game killed will be inflicted on any person convicted of a breach of the law, and one-half the fine will be paid to the person who informs against such offender.

COUNCIL OF THE AGRICULTURAL AND ARTS ASSOCIATION.

This body met in the Agricultural Hall, Toronto, on the 29th ult., and transacted the following business:—

1. Heard sundry papers and letters read.
2. Had the usual annual misunderstanding with the Local Committee about the expense of preparing the exhibition buildings and grounds.
3. Tried, with but poor success, to find what there was, by way of security, to show for the \$800 given by the Prince of Wales in 1860, as a permanent provision for an annual prize.
4. Made some routine arrangements for the Provincial Fair of 1869, appointed judges, nominated committees, and adopted a programme which will probably be quite as much honoured in the breach as in the observance.

MISSING NUMBERS.

From various causes, such as errors in mailing, and mistakes in the Post Office, subscribers now and then fail to get number of their paper. We wish it to be understood that whenever this is the case, from whatever cause, we shall most willingly supply missing numbers on being requested to do so.

TO MEMBERS OF AGRICULTURAL AND HORTICULTURAL SOCIETIES.

It is not so generally known as it ought to be, that the ONTARIO FARMER is furnished at 75 cents to clubs of any number, consisting of members of the above-named societies only. This is as low as it can possibly be afforded. We put it down to this figure to small clubs, on the ground that it is the weak societies that most need to be

aided and encouraged in this manner. There are, we learn, a number of societies that have not yet formed clubs for any agricultural paper. It is not yet too late to do so, and we still hope for numerous additions to our list from this source.

EDITOR'S BOOK TABLE.

SONGS OF LIFE: By Rev. E. H. Dewart, pp. 256.—This is a volume of poems, from the pen of a gentleman who has already made his country largely his debtor, by the publication of a collection of Canadian poetry, by various authors, thereby preserving in permanent form, a number of choice pieces of poetry, that had else been only waifs on the stream of time. Mr. Dewart is a true poet, and many of the songs in his newly-published volume, are worthy of, and, we doubt not, destined to immortality. The book is printed on nice tinted paper, but the proof reading has not been done with due care. Occasionally, too, there is the repetition of a word, which might have been avoided, if Mr. D. had submitted his MS. or proof-sheets to a sharp-eyed and tasteful critic friend. These little drawbacks, however, are comparative trifles, and we hope the volume will have, as it deserves, a wide sale. Our readers will get a taste of its quality in our "Poetry" department.

THE CANADIAN INDEPENDENT.—This denominational journal, published in the interest of the Congregationalists of Canada, enters on its 16th volume with the July number, and appears in a new and elegant dress, being decked with a coloured cover, and having an extremely neat title-page. It will, henceforth, be printed by our excellent publishers, Messrs. Hunter, Rose & Co., a firm that is fast acquiring the reputation of being the best printers in the Dominion of Canada.

REALITIES OF IRISH LIFE.—This is one of the "Handy Volume Series," published by Roberts Brothers, of Boston. It contains 22 chapters, of independent narrations, full of graphic description of thrilling interest, of historical detail, and of genuine Irish wit. A very readable book. Sent free, by mail, by Mr. T. J. Day, Guelph, on receipt of 65 cents.

Mr. Day has also laid on our table, the following well-known serials:—

BOW BELLS for June.

PHRENOLOGICAL JOURNAL for July.

THE ENGLISHWOMAN'S DOMESTIC MAGAZINE for June.

FRANK LESLIE'S LADY'S MAGAZINE for July.

GODEY'S LADY'S BOOK.

HARPER'S NEW MONTHLY MAGAZINE.

SUNDAY MAGAZINE; and GOOD WORDS, all for July.

The Farm.

MR. ARNOLD'S HYBRID WHEAT.

We have much pleasure in publishing the following letter on the above subject, from Judge King, of Dubuque, Iowa. It shows that our neighbours across the lines highly appreciate Mr. Arnold's important services to agriculture and horticulture, however lightly they may be esteemed by "the powers that be" in this country. It is evidence too that the danger is not imaginary of our being outbid by the Americans in the purchase of the new varieties of wheat. We may mention that in a business note from Judge King, enclosing his subscription to the ONTARIO FARMER, he incidentally states that it was the number containing the Hon. G. W. Allan's first article on the Ornithology of this country, which casually fell into his hands, and that he considers that one article worth far more than the cost of this journal for a year. So do we.

To the Editor of the ONTARIO FARMER:

SIR,—I accidentally received a copy of the ONTARIO FARMER lately, a periodical interesting and instructive.

As I am anxious to keep posted on Canadian affairs, especially in relation to Agriculture, Horticulture and other kindred pursuits, you will please consider me a subscriber to your excellent paper henceforth.

I have carefully observed the efforts of Mr. Charles Arnold, of Paris, in the production of new varieties of wheat, and have been gratified to learn that his experiments have resulted in entire success. To accomplish this, he crossed the white soule and red midge-proof. The result was, that from 100 new varieties, he selected 15, each combining the good qualities of the parents. Mr. Charles Arnold's hybrid wheat, grapes, and raspberries prove him to be an unrivalled scientific hybridist. The northern portion of the U. S. and Canada, exhibit diverse systems of climate, under the same parallels of latitude. The vicinity of Paris, however, has the

advantage of a high latitude, and though somewhat remote from water, derives great benefit from the softening influence of the "Northern Ocean Lakes" upon the climate—Huron and Michigan, each averaging a depth of about 1,100 feet. A portion of summer's heat is stored up in the lakes and is given out during winter, and the elevation of Paris gives Mr. Arnold great advantages in his agricultural and horticultural experiments and pursuits, as all plants from seeds, grown in that region, will naturally have a tendency to hardiness, and of course will be the more valuable for general cultivation. I was a good deal surprised to learn that the Council of the Provincial Association treated so lightly the claims of Mr. Arnold. Simply resolving to appoint a Committee to supervise the operations of growth and mode of improvement, and that a special premium of a few dollars be offered in the prize list for any new varieties of wheat produced by experiments similar to those of Mr. Arnold's. It is to be regretted that the eminent public services of that gentleman are not appreciated. A donation of \$50,000, would not be at all too liberal for the 14 years of labor, as an experimenter in agriculture for his country's good. This hybrid wheat must prove to be a very great acquisition to the country. And I believe in due time liberal offers will be made from the United States for its purchase.

JOHN KING.

Dubuque, June 7, 1869.

INDIAN CORN FOR SUMMER FEEDING.

The *Massachusetts Ploughman* says:—Indian corn makes a valuable fodder, both as a means of carrying a herd of milch cows through our severe droughts of summer, and as an article for milking cows kept in the stall. No dairy farmer will neglect to sow an extent in proportion to the number of cows he keeps. The most common practice is to sow in drills from two and a half to three feet apart, on land well tilled and thoroughly manured, making the drills from six to ten inches wide with the plow, manuring in the furrow, dropping the corn about two inches apart, and covering with the hoe. In this mode of culture, the cultivator may be used between the rows when the corn is from six to twelve inches high, and unless the ground is very weedy no other after culture is generally needed. The first sowing usually takes place about the 20th of May, and this is succeeded by other sowings at intervals of a week or ten days, till July, in order to have a succession of green fodder. But, if it is designed to cut it up to cure in warm weather in August or early in September. Sown in this way, about three or four bushels of corn are required for an acre, since, sown thickly, the fodder is better, the stalks smaller, and the waste less.

The chief difficulty in curing corn cultivated for this purpose, and after the methods spoken of, arises from the fact that it comes at a season when the weather is often colder, the days short-

er, and the dews heavier, than when the curing of hay takes place. Nor is the curing of corn cut up green so easy and simple as that of drying the stalks of indian corn cut above the ear, as in our common practice of topping. The plant is then riper, less juicy, and cures more readily.

The method sometimes adopted is to cut and tie into small bundles, after it is somewhat wilted, and stook upon the ground, where it is allowed to stand, subject to all the changes of the weather, with only the protection of the stook itself. The stocks consist of bunches of stalks first bound in small bundles, and are made sufficiently large to prevent the wind from blowing them over. The arms are thrown around the tops to bring them together as closely as possible, when the tops are broken over or twisted together, or otherwise fastened, in order to make the stook "shed the rain" as well as possible. In this condition the, and out till sufficiently dried to put into the barn. Corn fodder is very excellent for young dairy stock.

THIN vs. THICK SEEDING.

(To the Editor of the Times.)

SIR,—The question of economizing our food and expenditure, and increasing the produce of our harvests by a diminution of the usual quantity of seed sown is so important nationally that I beg to send you the following facts:—Fifty-five acres of my wheat sown with one bushel per imperial acre are amply luxuriant, and some portion has required flagging. The half bushel per acre is also ample in plant, and even the peck an acre promises to yield abundantly. Two bushels of oats per acre and six pecks of barley are almost too thick, some of the latter requiring flagging. One bushel per acre each of oats and barley appears to be all sufficient. Those who desire to see this and compare it with their much thicker-sown crops will be welcome to come here and draw their own conclusions.

High farming and deep cultivation absolutely demand a great reduction from the old quantities of seed sown.

I am, Sir, your obedient servant.

J. J. MECHE,

Tiptree Hall, near Kelvedon,
Essex, June 5.

FARM GLEANINGS.

A sample of fall wheat grown upon the farm of Mr. C. W. Smith, in Woodhouse, measures six feet two inches in length, and there are some stalks in the field still larger. It is the Treadwell variety.

A hoeing match was to be held under the auspices of the South Ontario Agricultural Society, on Saturday afternoon July 10, on the farm of Mr. S. Thompson, lot 28, 6th concession, Whitby. Five prizes were offered to men and five to boys. At date of going to press, no account of the issue has come to our hand.

Clover plowed in has three effects. It gives vegetable mould. The roots bring to the soil plant-food out of the subsoil; and the acid produced when the decay is going on aids in dissolving the mineral parts of the soil.

There are 29 Agricultural Societies in the colony of Victoria, Australia. To these Societies there was granted, in all, last year, £6250 sterling. Annual exhibitions were held at which premiums, some of them as much as \$100, were awarded.

One day this spring, Willie Brewster, of Irasburgh, Vt., a lad sixteen years old, harrowed, with a span of horses, eleven acres of ground, and after putting up his team went one mile through mud and water on foot after the cows, drove them home and milked nine of them.

The *Willamette Farmer* is a new agricultural paper published weekly at Salem, Oregon. It opens with the statement that the great want of Oregon is a home market for her products. On March 1st, at Salem, wheat was worth 65 cents; oats 50 cents, potatoes from 37 to 50 cents.

A correspondent of the *Cincinnati Times* says that the following recipe will preserve all kinds of grain and garden seeds from the ravages of cut-worms, birds, etc.: One pound sulphate of iron, one pound aloes. Dissolve in water heated to 90 or 95°, and pour over one bushel of grain and in a similar proportion for a greater or lesser quantity.

A correspondent of the *Dixie Farmer* recently found on the premises of a large farmer near Columbus, Tenn., an object resembling one end of Lookout mountain in size, but which was really a manure heap which had been accumulating for many years, the owner "not having time" to apply the manure to his land. Many of our readers will wish they had it.

Mr. W. A. Gibbs, the winner of the prize essay on drying corn in wet weather, has lately, it is stated, introduced improvements in the construction of his air-stove, so that without a steam-engine the desiccating process can be easily carried on by the help of common horse works driving a fan. Grass can be converted into hay without sunshine by his desiccator, which dries grain in the sheaf, and desiccates beet and mangold.

Joseph Harris, in his Walks and Talks, in the *American Agriculturist*, gives an illustration of what he believes is a sample of what may be found on thousands of farms. When he bought his farm there were ten acres of wheat sown. Five acres were wet low ground, yielding five bushels to the acre, at a loss of say \$50. The other five were on dry, rolling ground yielding 25 bushels per acre, and giving a profit of \$150. Thus he would have made money by not working half this piece of land. It often happens that the poor land is closely connected with the better—perhaps in small spots over the field, so that it must be worked.

A Wethersfield, Conn., onion grower is reported as saying it formerly took 80 days' labor to plant, cultivate and harvest an acre of onions, but that by improved implements the work can be better done with 50 days' labor.

An Ohio correspondent of the *Country Gentleman* says in Delaware Co., in that State, the Farmers' Clubs usually meet at the house of the members in regular order, the member at whose house the meeting is held entertaining his fellow members.

The Live Stock

HILLHURST FARM, COMPTON, QUEBEC.

We have had the pleasure of making two visits, a winter and a summer one, to the above-named estate, which is becoming widely renowned for its magnificent herd of Short Horns, comprising some of the finest animals of that breed the world has produced. Our winter visit was made in the month of February of last year—our summer visit in "the leafy month of June" of the present year. We cannot do better than repeat here the account of our winter visit, which appeared in the *Canada Farmer* of April 1st, 1888, appending thereto some notes of our more recent summer visit:—

"By invitation of its proprietor, we lately made a flying visit to Hillhurst Farm, near Compton Village, the estate and country seat of M. H. Cochrane, Esq., a prosperous Montreal merchant. This gentleman having made money in the city, wisely determined to invest a portion of it in the country, and made choice of his native place, though at some distance from the scene of his business operations, as the spot where he would have a farm. Accordingly, he purchased, one after another, a number of small holdings, until he had secured 750 acres, nearly all of which is consolidated in a convenient block, with a public road on three sides, and a private road on the fourth side. To this estate the name of "Hillhurst Farm" has been given. It lies about a mile and a half from Compton, a pretty little village of some 500 inhabitants; and three miles from the railroad station called by the same name, which is 114 miles distant from Montreal on the line of the G.T.R. to Portland. The locality is evidently one of the most lovely and picturesque in the Eastern Townships. Even in winter it is impossible not to admire the widely extended landscape, diversified as it is with hill and dale, belted by wood-crowned and snow-clad heights, and dotted with snug-looking farm-houses. Imagination supplies the river that flows through the valley when the ice and snow have melted, while the railroad that skirts the stream is a visible reality, that with its thr-

dering trains and shrill engine-whistles rouse the echoes and gives vivacity to the scene all the year round.

"Hillhurst consists of a noble stretch of fine rolling land, the soil a light loam of good depth, with a variety of sub-soils, gravelly, rocky, and blue clay. The several buildings which were on the small holdings of which the farm consists, make convenient dwellings for the men employed on the estate, as well as separate steadings for stock which it is found desirable to keep apart. The homestead, a very commodious, neat, unpretending, yet tasteful and comfortable dwelling, surrounded with spacious and well-arranged buildings and premises, occupies a central position on the estate, and is at once adorned and sheltered by some ancestral maples, the like of which we could wish embowered every farm-

house in Canada. The accompanying illustration has been drawn and engraved from a photograph of Hillhurst farm-house and surroundings.

It is Mr. Cochrane's ambition to distinguish himself as a breeder of choice stock, and especially of Short Horns. Already he has attained no small eminence, as the Prize List of our last Provincial Exhibition testifies. The best aged cow, the best three-year old cow, the best two-year old heifer, and the best one-year old heifer among the female Short Horns, were, to say nothing of Hereford cattle, sheep, and hog prizes, surely glory enough for one show, and must have taken our older stockmen very much by surprise. We candidly own that, notwithstanding the honours won at the exhibition in question, we were not prepared to find so noble



HILLHURST HOUSE, COMPTON, QUEBEC.

a collection of animals as we lately inspected at Hillhurst. The Short Horn herd already collected comprises no fewer than thirty-three pure-bred animals of various ages, and ten high grades. Among the pure Short Horns, are at least from six to eight that will be hard to beat on the continent of America. The aged cow "Rosedale" is of world-wide celebrity, having won all possible distinction in the British show-yards, and retired from competition at the early age of two years; and a half. "Snowdrop" and "Margaret III." have twice carried off the highest honours at our Provincial Shows. The "11th Duke of Thorndale," recently added to this herd at a cost of \$3,000, has no superior as a two-year old bull of Bates or Duchess blood. "Baron Booth of Lancaster" is of equal merit as a representative of the strain of Short Horns, that rivals the one just named. "Maid of Atha" is another first-class two-year old, and beside her there are some yearlings of highest excellence.

"Not content with thus mounting the highest pinnacle as a Short Horn man, Mr. Cochrane is hardly less distinguished in the Hereford class. He had the best one-year old bull, the best cow, and the best one-year old heifer of this breed at the last Provincial Show. The young bull "Compton Lad" was a close competitor with his father,

"Guelph," for the diploma awarded to the best Hereford bull of any age. From our late inspection of him we predict a career of distinction for him, if no harm befalls him. He not only holds his own, but has improved greatly since the Show. The Hillhurst herd of Herefords, comprising now thirteen animals, are a very choice lot, and will contend bravely with the notabilities of Moreton in days to come for prize honours.

"We must not omit mention of the beautiful Suffolk Punch Stallion that won the second prize for the best agricultural stallion and the diploma for the best stallion of any breed, nor the first prize three-year old filly of the same breed at the last Provincial Exhibition. Both these valuable animals are thriving finely, and bid fair to bring their owner something more substantial than the honours of the show-ring.

"Next to the Short Horns, it must be fairly conceded that the sheep are the chief distinction of Hillhurst. No fewer than fifty-seven picked animals were imported last year from noted flocks in Britain. Eight of these were sold at high figures, and seventeen added from the best flocks in Canada, so that there are now sixty-six in all. Of these, forty-three are Cotswolds, ten Leicesters, eight Oxford Downs, and seven Lin-

colns. Ten prizes were taken by this flock at the recent Provincial Show. Of these prize-takers the Oxford Downs and Lincolns were especially excellent—the shearling Oxford ewes taking first, second and third prizes. Of the forty-three Cotswolds above named, forty are breeding ewes, all of which are in a healthy con-

dition, and apparently with lamb. Seven of the Oxford Downs and five of the Lincolns are ewes with lamb. At the date of our visit (Feb. 21), a number of the ewes were daily expected to drop their lambs.

"We also found a choice lot of improved Berkshire pigs, comprising two distinct strains, so as



THE BULL OF THORNDALE.

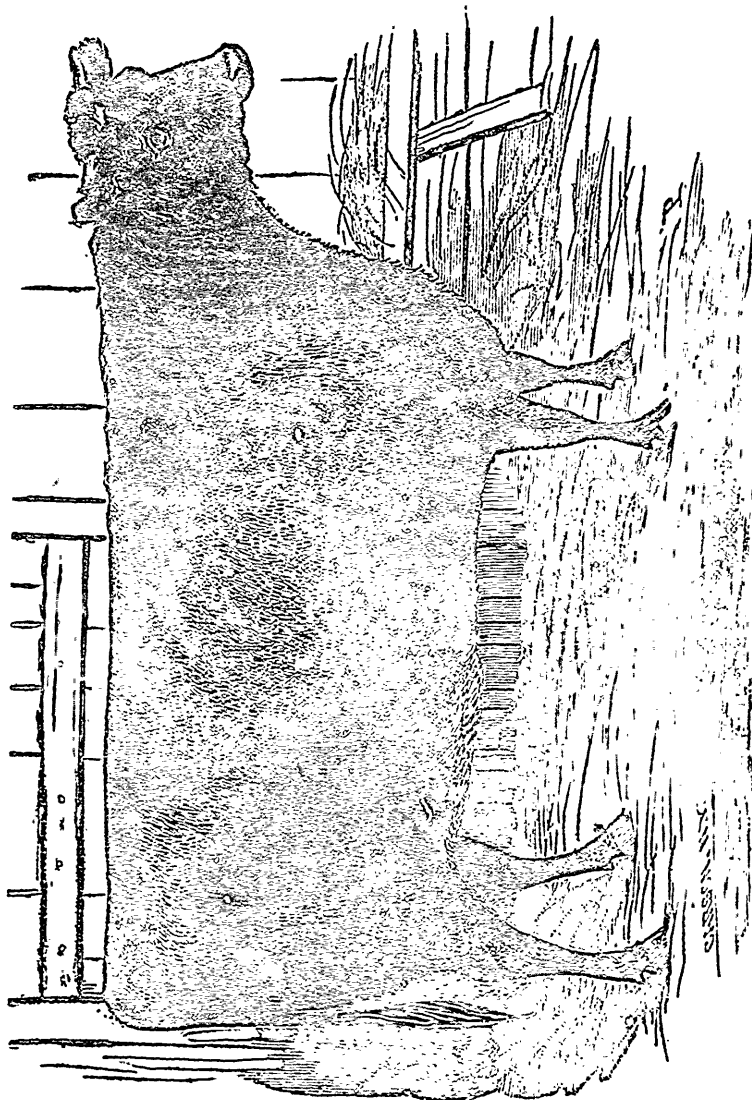
to furnish pairs not akin. Three first prizes were taken by as many of these animals at the recent Provincial Fair. Three litters have come during the present winter, and three more are expected soon.

"We present herewith engravings of three of the best Short-Horns in the Hillhurst herd. They are from drawings taken by the able and well-known pencil of that incomparable stock

artist, Mr. J. R. Page. "Rosedale," now seven years old, worthily carried off the first prize as the best aged Short Horn cow at the last Provincial Exhibition. For a full account of her pedigree, and the honours earned by her in Britain, we refer our readers to our issue of Oct. 1, 1867. When shown last fall, she was only a fortnight off a long sea voyage, during which she calved, and therefore did not appear to the

best advantage, and when we saw her the other day she was getting only turnips and hay, without grooming or special attention, yet at both the times referred to, even an uninitiated spectator could not fail to be struck with her beautiful proportions, perfect symmetry and great beauty. But better than any eulogy of ours is

the following testimony to "Rosedale's" excellence by one of the best judges in Britain, Mr. Wm. Carr, of Stackhouse, Lancaster. In his "History of the Rise and Progress of the Kilderby, Studley and Warlaby Herds of Short Horns," which has just been published, Mr. Carr says, p. 96: "To enumerate all these prize-



ers would be impossible and superfluous, but we must mention, ROSEDALE—a name which at last as long as Short Horn records may endure; ROSEDALE, perhaps the most beautiful cow England had ever seen in her show-yards at the time when Queen of the May electrified the country, and whose many victories recalled the glory of the proud triumphs of Necklace and Brazelet. Descended from a celebrated Booth

cow of Mr. Maynard's, and herself a daughter of Velasco, to whom her dam, Rosey, was in calf when transferred from Stackhouse to Branches Park, this lovely heifer was wholly Booth, with the exception that one-eighth of her blood was derived from the never-beaten prize bull Belleville. All her victories were won before she had completed the age of two years and a half, while nothing can show more positively the

strength and stamina of the Booth cattle, than the circumstance that ROSEDALE, now the property of the Duke of Montrose, notwithstanding all her training, has since bred with the greatest regularity, while her dam, Rosey, the property of Rev. Mr. Storer, of Hellidon, though now between fourteen and fifteen years old, continues to give birth annually to a living calf, and after her last, milked well for eight months, the last five of which she was again in calf." Not only her present enterprising owner, but the stock-breeders of Canada, may well be proud of this valuable addition to the Short Horn celebrities of our prosperous Dominion. We will only add that Rosedale is supposed to be in calf to the splendid bull who forms the subject of our second engraving, and a brief account of whose characteristics and pedigree we now proceed to give.

"11TH DUKE OF THORNDALE is an equally valuable accession to the thoroughbred stock of this country. This choice animal is of pure Bates or Duchess blood, without the slightest admixture that can mar his reputation in the slightest degree. In all the Short Horn points, colour included, he is unexceptionable. It were too much, perhaps, to represent him as a paragon of perfection, but it would be difficult for the most experienced critic or connoisseur to say wherein he needs to be improved. But without further particularization, we add his pedigree, and leave that, together with our engraving and his future history, to tell their own tale. We quote the following from the American Short Horn Book, Vol. VII., p. 79: "11th Duke of Thorndale, red and white, bred by Samuel Thorne, Washington Hollow, New York. Calved Oct. 15, 1867, got by 6th Duke of Thorndale 4752, out of 3rd Duchess of Thorndale by Duke of Gloster (11382).—Duchess 66th by 4th Duke of York (10167).—Duchess 55th by 4th Duke of Northumberland (3649).—Duchess 38th by Norfolk (2377).—Duchess 33rd by Belvedere (1706).—Duchess 19th by 2nd Hubback (1423).—Duchess 12th by The Earl (646).—Duchess 4th by Ketton 2nd (710).—Duchess 1st by Comet (155), by Favorite (252).—by Hubback (319).—by J. Brown's red bull (07)."

"BARON BOOTH OF LANCASTER," the subject of our third illustration, is a young bull of great promise, and from the purity of his Booth descent, represents the other popular family of Short Horns, as faithfully as the preceding animal does the Bates or Duchess tribe. He was imported in company with Rosedale, being only five months old at the date of his purchase by Mr. Cochrane. Though of so tender an age, he bore the voyage well, and has greatly improved since his residence at Hillhurst. At the date of our visit, he had just reached one year old. He is of a beautiful red colour, and remarkably developed for an animal of his age. He bids fair to attain great size. He is evenly fleshed, with upper and under lines perfect, soft and silky to the touch, and of very fine carriage. He is certainly a bull of no ordinary character, and unless we greatly mistake will make his mark at the

exhibitions next autumn. His pedigree is as follows:

"BARON BOOTH OF LANCASTER, bred by G. R. Barclay, of Keavil; Calved Feb. 21, 1867; got by Baron Booth (21212); dam (Mary of Lancaster), by Lord Raglan (13244); g. d. (Lancaster 25th), by Matadore (11800); g. g. d. (Lancaster 16th), by the Marquis (10938); g. g. g. d. (Lancaster 12th), by Will Honeycomb (5660). g. g. g. d. (Lancaster 10th), by George 3rd (7038); g. g. g. g. d. (Lancaster 9th), by Spectator (2688). g. g. g. g. g. d. by Albion (1619); g. g. g. g. g. g. d. by Lancaster (360); g. g. g. g. g. g. d. by Son of Windsor (698); g. g. g. g. g. g. g. d. by Comet (155)."

"The prosperous condition of the Hillhurst flocks and herds, though chiefly attributable to the energy, intelligence, excellent judgment and liberal outlays of capital on the part of the proprietor, is also largely due to the co-operation of Mr. Simon Beattie, the farm and stock manager, whose knowledge and experience enable him to make most advantageous purchases in Britain on behalf of his employer, as well as most efficiently to superintend things on the estate, during the necessary absence of the owner. Mr. Cochrane is fortunate in having so able a right hand man, and one so competent every way to second his plans and efforts as a breeder of choice cattle and sheep.

Did space admit of it, we should like to give some account of the farm steadings, especially of the main buildings in the central part of the estate. Suffice it to say, they are spacious and convenient, well contrived for labour-saving, and nicely adapted to the requirements of stock raising. Exteriorly they are neat though plain, while interiorly they are admirably planned. There is ample root cellarage in close proximity to the cattle stalls, and arrangements not yet fully completed for cutting straw and hay, crushing oil cake, chopping coarse grain, and pulping roots by machinery, will add greatly to the conveniences of the establishment. In the management of the farm it is intended to keep about a hundred acres under the plough, and alternate the rest with meadow and pasturage. It may not be amiss to mention that there are several sugar bushes on the estate, in which maple sugar is annually made on the most approved method. We indulge the hope of being able to visit Compton at a more propitious season of the year, when we may be able to give some general account of the farms and farmers in that region. Meantime the laird of Hillhurst has our best wishes for his continued prosperity, both as a merchant and a farmer."

We now add a few notes of our more recent visit to Hillhurst. The Eastern Townships were in their summer glory, the hills and valleys of Compton drest in their richest garb of green beauty, and the estate of Hillhurst clothed with verdure and teeming with life, dotted off-doors with the magnificent animals we have previously seen in their stalls, and enlivened

doors by the family of its proprietor, whom country charms had enticed from the heat and dust and din of the crowded city. The general appearance of the farm was indicative of good, if not "high" farming; drainage and other improvements are making their mark on the growing crops. The soil and situation, naturally adapted for meadow and pasturage, need only the skilful tillage they are getting to render Hillhurst one of the finest stock farms on this continent, or indeed in the world.

Since our former visit, "Rosedale" has fulfilled the anticipations formed about her, and become the mother of a very fine rich roan heifer calf, "Rosedale's Duchess" by name. She was sired by "11th Duke of Thornedale," and the cross appears to have been an excellent one, the daughter bidding fair to be fully equal to her dam. "Rosedale's" good qualities are demonstrated by the fact that this calf was born strong and hearty just after the fatigues of last fall's touring to the exhibitions.

During the interval, the Hillhurst herd has received its noblest accession in "Duchess 97th," the costly Bates heifer, (by mistake called a Booth heifer in our first issue), whose purchase by Mr. Cochrane created such a sensation in short-horn circles last summer. The herd has also been reinforced by other valuable animals, most of them of pure Booth blood, among them, "Star of Braithwaite," a lovely roan heifer, which *Bell's Weekly Messenger*, a high short-horn authority, thought it unwise in Mr. Breure, the gentleman who bred her, to sell; "Warlabay Flower," a roan heifer of much promise; "Wild Eyes 26th," a pure Bates heifer (red), and the first of the celebrated "Wild Eyes" tribe ever imported into this country.

More purchases for the Hillhurst herd have already been made the present season in Britain, where Mr. Simon Beattie, Mr. Cochrane's herdsman, is now touring for the purpose of picking up choice animals. Five females, three in calf, have been secured, and the intention is to add to the number enough to make up from eight to twelve high-bred animals, all of either Booth or Bates blood.

At the date of our second visit, June 17th, Mr. Cochrane's herd of short-horns comprised 4 animals of all ages, and additions were daily

being made. We carefully inspected the calves, 27 in number, and so far as we can form an opinion, the best of judgment is being shown in coupling animals so as to balance excellencies, overcome defects, and secure as perfect a progeny as possible. Among the younger stock we noticed some very fine bulls:—"Star of the Realm," a light roan out of "Star of Braithwaite," by "Prince of the Realm," for which, at six weeks old, \$750 was offered in vain, Mr. Cochrane valuing him at \$2,000; "Harold," a splendid red yearling; and "Constance Duke," a very promising red bull calf, six months old. There were also some very choice young heifers and heifer calves. Among the latter may be mentioned, "Maid of Atha 2nd," a red and white, six months old, very showy like her dam, and destined, along with "Rosedale's Duchess" above-mentioned, to distinction in the showing. Among upwards of 70 animals, few, of course, can be particularized, and we take leave of our notes with regret at having to omit mention of so many really deserving names.

Since our former visit, Mr. Cochrane has sold all his Herefords, purposing to confine his attention, so far as cattle are concerned, to the breeding of short horns. He is also gradually concentrating his sheep operations upon the Cotswolds. Forty-five pure bred animals of this breed were imported by him last year. The increase from these is all of fair promise, and some of the lambs are extra fine and showy. It is Mr. Cochrane's intention to import about 50 more Cotswolds the present summer. He has still a few Oxford Downs and Leicesters on hand, but purposes to confine his sheep husbandry to the Cotswolds. Hillhurst is fast becoming famous for its choice Berkshire pigs. There are seven fine sows of this breed, and the demand for their progeny is so brisk at \$50 per pair, eight weeks old, that it is quite impossible to supply it with the present stock. Mr. Cochrane is importing seven or eight more Berkshires this season to keep up with the demand.

The Suffolk horses are doing well. "Bounce" is travelling in Markham the present season. One of the mares had a colt ten days old at the date of our visit, the other was not served last year, but increase is expected from both next year. A Suffolk horse colt, two years old, imported last year, is an animal of great promise. He has many fine points, and bids fair to prove a superior horse to "Bounce."

Some recent sales of young stock show at once the reputation of the Hillhurst herd, and the high estimate formed by breeders of the Booth strain of short-horns. A bull calf, "Robert Napier," has just been sold to go to Kentucky for \$1,100 (gold). Another calf, well dashed with Booth blood, was lately sold to Major Greig, of Beachville, for \$500. "Baron Booth," an imported bull, eighteen months old, has also been sold to an Illinois breeder for \$900 (gold),

Mr. Cochrane has already got quite a collection of medals to commemorate his triumphs in the show-ring. Foremost among these is the gold medal of the New York State Society for the best short-horn herd. There is also a gold medal awarded, by the Lower Canada Society for the best show of stock and for signal services to agriculture. Then there are seventeen silver medals and ten bronze medals also awarded as specific prizes by the Lower Canada Society.

The accompanying illustrations represent Hillhurst farm house, with its "guest cottage" to the left, erected since our first visit; "11th Duke of Thornedale" and "Duchess 97th," the "crack" members of the Hillhurst herd of short horns.

LIVE STOCK GLEANINGS.

A merciful man is merciful to his beast.

Farmers are like fowls—neither will get full crops without industry.

Pennsylvania, Maine and Illinois have enacted laws for the prevention of cruelty to animals.

Prof. Graves recommends 1½ oz. pulverized alum in a quart of strong decoction of oat bark as a good wash for galls on horses.

A correspondent advises the application of pine—not coal—tar to a brittle hoof. Used once or twice a month it heals and softens.

Mr. Willard estimates the cost of annatto and potash for a factory of 500 cows, where the cheese is coloured, at \$200 for the season.

At a recent discussion by the Herkimer Co., N. Y., Farmer's Club the very beneficial results of carding cows were referred to by different speakers.

A cow belonging to Mr. Holland, a farmer at Hartford, Cheshire, has for the last two months, says the *Farmer* (Scottish) of June 9th, been suckling three lambs, of which she appears to be very fond.

W. Delap, of Decatur Co., Iowa, has a sheep with four horns,—two on the right side of the head, side by side, one on the left, and one from the top of the head, standing upright about eight inches.

The *Practical Farmer* gives an instance where a valuable Short-Horn was cured of Hoven in five minutes by twisting a hay rope and putting one end in the animal's mouth; the other around the horns.

The last fair at Mount Forest was more successful than any of its predecessors. There was a large attendance of Guelph buyers. Oxen ranged from \$75 to \$90, steers \$40 to \$60, and cows from \$18 to \$25.

The rather extraordinary cure for jumping habits in cattle, of clipping their lower eyelashes, is pronounced effectual by a correspondent of the *Massachusetts Ploughman* who gives the details of a trial made by him.

An exchange states that a successful dairyman in Connecticut values the droppings of a cow at \$36 per annum. Does he include twin calves?

A man in Pennsylvania in preparing rhubarb stalks for market, threw the leaves to his pigs. The next morning five out of nine were dead, three appeared convalescent, and one looked doubtful. They exhibited every symptom of poison.

Mr. Allen, in the *American Farm Book*, says Mr. Percival mentions a horse that died at 67 years of age; and adds that a Mr. Marrion, of New York had a gig and saddle horse which was sound, spirited, and playful when in his forty fifth year.

A young cow, only two and a half years old, belonging to Mr. Samuel Collins, Cobourg, gave birth last week to three calves. They all live and are in good health. The boys have named the illustrious triplets, which are all of male persuasion, Shem, Ham and Japhet.

The noted Short Horn bull Fourth Duke of Thornedale, bred by Mr. Thorne and exported to England a few years since, died very suddenly recently. When eight years old, he was bought by Captain Gunter, for 550 guineas. He is said to have been the last pure Bates bull of the Duchess tribe in England.

A Massachusetts correspondent of the *Country Gentleman* is warm in his praises of the Dutch cattle. He has one cow that has given 49 pounds of milk per day for a week, and another that gave 53½ pounds per day for a week. Each had a calf about two weeks old. They had no feed but what they got in the pasture.

The *Globe* says: We noticed in the cattle market yesterday a very fine and unusually fat calf. It was fed by Mr. Uriah Young, of Pickering, on eggs and milk, with a view of selling it at a fancy price. In this he has succeeded, for it was bought yesterday by Mr. James Britton, butcher, of the Arcade, at the very high price of \$30. It will weigh about 60 lbs per quarter.

Farmers who sell milk, and care nothing for quality, are partial to short horn grades out of good milking common cows. Those who make cheese or Butter, prefer Ayrshires or Ayrshire grades. Those who make fancy butter the chief thing, or who wish milk of great richness for their own tables, select the Jerseys. Great milkers occur in all breeds occasionally. The Devons give a good quantity of rich milk, and the Holstein or Dutch cows are great milkers.

LARGE EGG.—Mr. J. M. Davis, of Richmond Hill, has been showing round a hen's egg of extraordinary size, the produce of a hen of mixed Cochin and Brahma breed. The egg weighed 4½ ounces; its circumference in the direction of the long diameter was 8½ inches, and in the opposite direction 6½ inches. The *Globe* having had a sight of this wonderful egg, cautiously observes:—"This is, perhaps, the largest that we have ever seen."

The Garden.

THE MEXICAN EVER-BEARING STRAW-BERRY.

We have thus far, as our readers will have observed, done nothing to give this much-lauded strawberry novelty publicity in our columns. Our first sight of the highly-coloured engraving of it used by agents, excited suspicion that it was only the old Alpine variety either enlarged by culture in a warm climate, or exaggerated by the artist to secure the sale of plants. This suspicion is greatly strengthened, if not changed into conviction, by a variety of paragraphs that have come under our eye in our American exchanges. We observe, too, though it escaped our attention at the time, that at the New York State Fair last September, the Fruit Committee decided that this strawberry, exhibited under the name "Maximilian," was only the old bush Alpine. We have no doubt that facts will prove this to have been a correct decision. The Alpine is of delicious flavour, but in this country it yields a very small fruit, scarcely as large as the wild strawberry, and is a very shy bearer. It should be a monthly according to its antecedents, but it only fruits semi-occasionally, and very sparingly. At least such has been our experience with it, and we grew it until our whole stock and store of patience was exhausted, when we plucked it up as a cumberer of the ground—just what we venture to predict the patrons of the Mexican ever-bearer will do when they get tired of nursing their pet, and are obliged to pronounce it seriously, what mothers do their pets ironically, "good for nothing." They will find that the berries will be "like angels' visits, few and far between," so much so, that "never-bearing" will seem the most appropriate name for the plant; and they will find, too, that each berry will need to be looked at through a powerful magnifying glass to appear as large as an ordinary Wilson. If any of our readers do better with it than we predict, they are welcome to relate their experience in our columns.

Since writing the above, the following has come to hand in the *Horticulturist* for July:—

"We regret to see the extent to which this

humbug has caught hold of many of our Western journals and fruit growers. It possesses very little merit, is nothing more than the old Red Alpine, which has been known for over three hundred years, and appeared here several years ago under the name of the Maximilian. Few or none of the names attached to the certificates are persons of any horticultural reputation, and even if the fruit were ever-bearing, it would be of little use for aught else than as a novelty.

"It is useless for publishers to say that they have no responsibility over their advertising columns. We say that if a publisher prints an indecent advertisement, he is the proper subject for censure, as committing an offence against the morals of society; and if, for the sake of a good fat advertising contract, he allows other parties of little or no responsibility to gull his readers out of a few dollars apiece for something as yet of untried merit, and then, in addition, editorially indorses it, when he virtually knows little or nothing about it, we think he is almost as bad as the thief himself. It is not necessary in all cases for a publisher to guarantee that all the advertisements in his journal are perfectly truthful and reliable, nor to decline advertising from respectable and responsible parties; but when something unusual appears, he should consider the wishes of his readers by satisfying himself of their reliability. Rural journals are admitted nowadays to be the very best advertising mediums of the country, because the advertisements are read regularly with as much interest as the literary matter. But public confidence gradually gets weakened in any journal where it is abused by the insertion of paid matter of doubtful character.

"There are very few journals that are able to refuse large advertisements; human nature is weak, and journalism needs money to grease the printing wheels; so conscience is laid on the shelf for a little while, to be taken down again at a more convenient season. These things ought not so to be.

"In addition to what we have heretofore exposed concerning this berry, we now close our remarks with the quotation of a correspondent who has grown the plant, and is well able to judge:—'I cultivated it two or three years by the side of several other varieties, and consider it inferior to any other I have raised. It is a very poor yielder. I do not think, with any ordinary culture, it would yield a quart to the square rod during the whole summer. The fruit is very hard, small, and seedy. From the flaming advertisements of this berry, many will be induced to invest, even at the price of \$3.00 per dozen plants, but it is nothing but a humbug—the most inferior berry I ever saw. In Mexico, it may be very good, but Mexico and Wisconsin are two quite different places. I have one or two thousand plants, which, at \$3.00 per dozen, would amount to several hundred dollars; but I will take, in round numbers, \$0.01 per thousand—provided purchasers do not bother me to dig them.'"

A HORTICULTURAL LIBEL.

The *Horticulturist*, in an article on the cultivation of orchards, in the main very sensible and good, makes a statement which is discreditable to agricultural journals generally, and which we regard as libellous, inasmuch as we do not believe that facts will sustain it. Deceiving, very properly, the "let alone" system pursued by many in regard to orchards, viz., leaving the grass to grow till the sod is thick and tough, paying no attention to insect and other pests, and never bestowing a good top-dressing of manure on the exhausted soil. Our contemporary remarks, "This 'let alone' system for orchards has been advocated for so many years by a majority of our agricultural journals, that it is not strange farmers consider it perfectly proper and reasonable; and now the task is hard to convince them of the error of a policy so deeply-seated and so self-evidently suicidal."

We have read pretty attentively most of the agricultural journals of the world for a number of years past, and do not know a single one that has advocated the "let alone" system above described. During all the years of our own editorship, we have never advocated such a policy, and we don't know who has. Those who contend that orchards should not be ploughed, because of the havoc made by the share annoy the innumerable fibres and rootlets near the surface, do not advise that orchards should be "let alone," but that they should be lightly scarified with cultivator and harrow from time to time, liberally top-dressed, properly pruned, and vigilantly watched as to insect depredations. If we are not mistaken, most agricultural journals advocate essentially the treatment of orchards advised by the *Horticulturist*, and hence the slashing condemnation we have referred to is unjust and uncalled for, if not insolent and impertinent.

MANAGEMENT OF THE LAWN.

A well managed lawn is a great setting-off to a dwelling of any kind, and as it is the object first seen, its appearance creates an impression favorable or unfavorable, according to circumstances. A neat piece of closely shaven velvet sward, is very ornamental, but a rough, weedy parched lawn or grass plot is an unsightly object. In the formation of a piece of ornamental

grass, the soil should be prepared by deep tillage, pulverization and the eradication of all weeds and coarse grasses. In most climates where frequent showers keep up the verdancy of the grass, the seed or turf is generally sown or laid upon a hard, even surface, but in hot countries the heat of Summer would scorch the grass, if the plants could not send down their roots deep into the soil to procure the necessary moisture to supply the place of that which is evaporated.

The surface of a lawn or grass plot should be as level as possible and a great deal depends on procuring grasses of the right kinds. Coarse grasses of any kind should be avoided and the preference given to dwarf varieties. It is an erroneous practice to rake off early in the Spring, or at any other time, the natural mulch which the dead leaves of the former year's growth have provided for the roots. In mowing with a machine or scythe operations should be commenced early in the morning, while the dew is on, and the grass should be raked off before it withers in the sun. Fresh cut grass is useful for mulching plants which have been recently transplanted as it preserves moisture around the roots; it may also be used for feeding poultry which are kept in yards or houses. The edges of flower beds which stand in the lawn or grass plot should be carefully trimmed after each mowing to keep the grass from encroaching on the beds and to make them look fresh and tidy. Bedding plants of various kinds should be set out from time to time in order to give variety to the scene and keep up its attractions.—*Western Rural.*

KITCHEN SLOPS.

The slops from the kitchen should not be thrown out at the back door or window, or near by on the ground as is the case in a great number of families; for this is very unpleasant and nauseating, and no doubt is often the source of disease to the family.

All the greasy slops should be given to the hogs every day. If you do not like to give them to your stock, haul two or three hundred bushels of vegetable mould to some convenient place, and put the slops on this pile. As soon as the pile becomes saturated, haul an additional one hundred bushels, and put evenly over it.

This heap may be in a circular or square shape as you prefer; but it should be hollow on top, so that all the slops will run to the centre when thrown upon it.

If you do not like this, you can greatly improve your gardens by the application of the slops to the vegetables; when the slops are greasy, be careful not to wet the leaves of plants in the application.

The suds from the laundry should be used in the manner above described. The rinsings from spittoons, and the urine from bed-chamber should not be wastefully thrown here and there, but there should be a special pile set apart for them; and by the use of a little plaster occasionally, you will have nothing unpleasant to the eye or smell, which is so often the case on many farms.

THE PELARGONIUM CONGRESS.

This meeting was held on the 22nd of May, at South Kensington, was attended by many distinguished growers, and the prize essays by Mr. Grieve and Mr. Jonathan Smith were read. From the essay by Mr. Grieve, published in the *Gardeners' Chronicle*, on the history, future changes, points of merit, and cultivation of the ornamental-foliaged Pelargoniums (better known as Geraniums), we gather that up to the year 1855 no golden-margined Pelargoniums existed, except the well-known Golden Chain. This was crossed upon Cottage Maid, a heavily-zoned, green-leaved sort, producing Golden Tom Thumb and Golden Cerise Unique. These crossed upon Emperor of the French, a strong-growing zonal seedling, produced Golden Pheasant, and from the union of this with Emperor of the French sprang the celebrated and now well-known Mrs. Pollock and Sunset. The writer of the essay is of the opinion that the limits of beautiful variegation have not yet been reached, and that a field of operation is yet open in the crossing of the best variegated varieties with strong, vigorous, well habited green zonals, in which the same is well defined.

In the course of the discussion which ensued, the opinion seemed to prevail that the employment of manure water in the cultivation of variegated Pelargoniums was to be avoided; that the plants thrive best if kept slowly moving at a temperature of 50° to 55°, until March, and in the first or second week of March shifted into larger pots, making what is termed a large shift, and for potting the top spit of a turf pasture, and up from six to nine months, chopped roughly, and used in a coarse state.—*Globe*.

A FLORAL CURIOSITY.

Visitors to Rochester will do well to take the opportunity of seeing a Century Plant on the grounds of Messrs. Frost & Co., which is now growing up its flower stalk, that has already attained a height of over twelve feet. The growers have not yet expanded, but they may be expected to make their appearance in the course of the next month. This plant is the striped or variegated American Aloe or Century plant, purchased in 1809 by Hon. John Greig, Ceandaigua, at Prince's Garden, Long Island, and becoming large and unwieldy, it was sent to Messrs. Frost & Co., with whom it has since remained, in 1856. It is supposed to be now about seventy years old. It showed indications of flowering on the 25th of April, 1869, since which time its daily average growth has been about three inches. The flower stem measures four inches in diameter, and bears a great resemblance to a gigantic asparagus bud; but branches to be thrown out at the top, upon which the flowers will be borne, which, taken singly, bear considerable resemblance to that of the lily.

FRUIT GROWERS' ASSOCIATION OF WESTERN NEW YORK.

The above Association held its summer meeting in Rochester, June 23rd. There was a fine display of flowers and fruits on the occasion. Various topics of horticultural interest were discussed. Among others the following conclusions appear to have been reached:—

"That white hellebore is a very valuable and efficient destroyer of the worm of the Gooseberry Sawfly and several other insects; that Cresylic soap, dissolved in hot water at the rate of one pound of soap to ten gallons of water, and whale-oil soap in solution are valuable agents in lessening the ravages of slugs, thrips, and various leaf-eating insects; that common gypsum or plaster of Paris, sprinkled freely on young cabbage plants, radishes, melons, cucumbers, etc., will so protect them from the turnip-fly or flea-beetle, that these insects are unable to injure them. Some had found a dusting of coal ashes, and others of wood ashes, to be very beneficial in repelling or destroying insects."

Lists of the best flowering shrubs, the best ornamental hedge-plants, the six best climbing roses, and the two best hybrid perpetual roses, were voted on, and made out. Two new evergreens, Lawson's cypress, and *Libocedrus decurrens*, were favourably noticed by Mr. Barry, of the firm of Elwanzer and Barry.

TORONTO ELECTORAL DIVISION SOCIETY.

The Summer Exhibition of the above Society was held on the 8th and 9th instant, in the Horticultural Garden. We were unable to attend, but learn from the *Globe* that, although the products exhibited were first-rate, they were few in number, and the exhibitors formed but a small class in comparison with what might be expected in such a city the size of Toronto. The weather was unfavourable the first day, materially affecting the attendance, which was not so large as could have been wished even on the second day, when there was improvement in this respect. Toronto must go to school to some of our smaller towns. Guelph, for example, could teach the metropolis a thing or two about Horticultural Shows. Why should they not be invariably a success everywhere?

WEED EXTINCTION.

One of our exchanges observes, the horticultural text for July is "weeds." Not but that they are to be fought in other months, but in

these scorching days it is a peculiar satisfaction to use the weeding implements. There are now no Spring showers to make the weeds grow all the better for a transplanting. Once uproot them now, whether with the cultivator, hoe or rake, and they immediately perish. It is particularly important not to let them go to seed. The same journal recommends a heavy hoe two inches wide, six inches long, and sharp, as an excellent implement for dealing death to weeds. It will cut off a dock root three inches under ground, and it is fine to use it where the weeds are not too plenty. Apropos of dock-killing, it is a work that should be done in good time. If cut or pulled when in bloom, it will mature all or nearly all its seed. So of some other weeds. If not cut up till in blossom, they should be put in heaps and burnt as soon as they are dry enough to catch fire.

THINNING FRUIT.

This is a process which is needful to keep trees in full bearing vigour year after year. An over-abundant crop exhausts. It is not much trouble to thin out fruit, but people hesitate to do it because it seems like so much dead loss. But this is a mistake. It is better to have a moderate yield every year than an excessive crop one year in three. Not only does thinning out fruit promote regular productiveness in an orchard, but it secures larger and finer fruit. Fewer specimens, better in quality and bigger in size, are preferable to a great lot of inferior and undersized fruit. Severe thinning wonderfully improves some kinds of fruit that are naturally diminutive in size. The Seckel pear is an example in fruit. Knowing ones who have exhibition honours in view, well understand the value of this thinning out process in producing the first samples of fruit, and practise accordingly.

PRESERVING FLOWER SPECIMENS.

To the Editor of the ONTARIO FARMER:—

SIR,—I am desirous of preserving specimens of flowers, but I am not acquainted with a good mode of doing so.

Perhaps you or some of your correspondents will be kind enough to state in your next issue the best and cheapest way of crystalizing or preserving them.

R. L.

June 22nd, 1869.

GARDEN GLEANINGS.

Garden sass is cheap in Hamilton. Strawberries can be had for eight cents a quart; gooseberries, three cents; peas, twenty-five cents a peck, &c. We pity the gardeners who have to make a living at such prices.

Hamilton and Guelph have recently been indulging in strawberry festivals pretty freely. The "ambitious little city" had no less than three in a single evening. Guelph had one on three successive evenings.

It is said that thirty years ago, a fruit-grower in Duxbury, Mass., made use of a mixture of soft-soap, whale-oil and common liquid varnish in equal parts, as a preventive of the canker worm ascending fruit trees. The result was satisfactory.

Peter Henderson, in his Practical Horticulture says that the simplest way to destroy ants is to leave fresh bones around their haunts. They will leave everything else to attack them. When thus accumulated, they can easily be destroyed by dipping in hot water.

Market-gardeners, who use the most effective manures without regard to cost, are small purchasers of guano and the bi-chemical fertilizers. They depend on compost made of vegetable refuse, thus creating a condition of soil similar to that of fresh cleaned and heavy-timbered land.

A Chicago "fashion reporter" says, of style in that village:—"A cabbage-leaf trimmed with three red peppers and a dried cherry sells for \$35. It is called a jockey; and one great advantage—can be eaten as a salad when the season changes. One composed of three sighs and a bit of pink-colored fog was considered cheap at \$55."

A writer in the *Wisconsin Farmer* says how to have a great deal of trouble to make currant or gooseberry cuttings or slips grow until he tells the following plan: He boiled some potatoes until they were nearly done, and then stuck on each slip and put it in the ground. The slip sprouted and grew well all summer, with one or two exceptions.

A correspondent of the *New England Farmer* says that for the purpose of trapping the rose-bug he has planted among his four or five hundred grape vines, some twenty rose-bushes. These roses the bugs cluster, and both roses and bugs can be readily picked, early in the morning into a pail of water. In this way the grapes protected with little labor, and in a few years nearly all the rose-bugs may be exterminated.

A correspondent of the American Institute of the Farmer's Club says that for removing knots from plum trees, he takes a paint brush, dips it in spirits of turpentine and thoroughly saturates the knot, being careful not to touch the tree elsewhere in the diseased parts. The turpentine kills the excrescence and the trees put out healthy branches below it. He burns all branches of diseased trees removed in pruning.

Our Country.

PROGRESS OF THE EMIGRATION MOVEMENT.

It is very gratifying to know that the efforts which have recently been put forth, for the promotion of emigration to this country, are already beginning to bear fruit. Attention is being drawn to Canada, and enquiry excited in reference to its resources and advantages. Much valuable information is finding its way into the newspapers of Britain, and more correct views of Canadian life are coming to be entertained by the people of the Old World. Many persons possessed of means are having their thoughts drawn towards this country, as a field for investment and settlement. On the whole, the prospects of our getting a considerable and most desirable accession to our population, by means of emigration, is more encouraging than it has ever been at any previous period of our history.

For this pleasing result we are mainly indebted to the vigorous measures which have been adopted by the Government of Ontario. By the issue of a large number of pamphlets and maps, which have been industriously diffused here, there and everywhere, by the appointment of a special Commissioner to Britain, who is evincing at work most indefatigably; and by doing everything in its power to make the reception of an immigrant cordial, and his circumstances encouraging on arriving here, the Government of this Province is demonstrating its thorough earnestness in this important matter. Whatever may be said as to supineness in the past, either in reference to Dominion or Provincial authorities, too much praise cannot be awarded to them for the zeal and activity they are shewing now. All, however, is not bright and cheering. This could hardly be expected. We have not only to contend against ignorance of this country, and indifference to its claims, but, what is far worse, calumnies and wilful misrepresentation of it. Every year, and then, a spiteful communication from some disappointed person, who expected to find in Canada an earthly paradise, where he could live without work, finds its way into some of the newspapers, and, either creates or deepens already existing prejudice against us. Nor are there

wanting in Britain, journals that, for filthy lucre, are willing to decry this country, and hold up the United States as a far more inviting field for British emigrants to settle in. *Reynold's Newspaper* is a notable example of this. This periodical, once rather respectable in character, seems to have become utterly unscrupulous, and is toadying to the United States in a way which leaves no doubt that it is paid for what it does. In a recent issue, it describes the Province of Ontario as a "wilderness," affirms that the dockyard hands, lately sent out here, have been compelled to "take to farm labour for mere food, no wages being given," states that owing to the influx of mechanics, wages in Toronto have been reduced one-third; and pathetically exclaims: "What is to become of the immigrants, heaven only knows! We trust they will not perish by hundreds, as others have done before them." All this is utterly false, and more, it is malicious. Abundant contradiction and disproof of it can be mustered without the slightest difficulty. The following testimony of an unprejudiced eye witness, who lately visited this country, specially to see for himself what sort of a region it was for emigrants, flatly gives the above statements the lie. The writer is an English gentleman, of good standing, resident in the City of London, and, if we mistake not, a banker. Before his departure for England he sent the following letter to Hon. Mr. Carling:—

"OTTAWA, June 19, 1869.

"DEAR SIR,—Having come out from England for the express purpose of ascertaining how the emigrants were likely to prosper, whom we have been sending to Canada for the past two years, it may interest you to know certain facts. I would premise that I live in the east end of London, and am very well known among the poor. I have either visited, or been called upon by more than 100 families in Ontario, the great majority of whom are not only at work, but are quite contented, and anxious for friends to join them. A few mechanics, principally shipwrights, are discontented, in consequence of having been misled in England as to the wages they would receive in Canada. The strong impression left in my mind is, that there is room for any number of labourers who will work, and are sober and industrious, but that they must be prepared to turn their hands to any work that offers on their arrival, and not dream of going into the bush till they have bought their experience of the country, and learned its ways.

"The arrangements for the reception of emigrants at Hamilton are very good, but at Toron-

to, where the bulk of the emigrants are sent, the accommodation is the reverse, and emigrants who have now and then to stay several days there, are subjected to much discomfort, which would be more felt if Mr. Donaldson, the agent, was not, in all respects, well up to his work, and by firmness and kindness made the best of everything. I was much struck by the able manner in which he carried out his duties.

"I have no doubt that emigration to Canada will continue from London, and that the number will be much increased next spring, and I shall devote a great deal of time this autumn and winter to perfecting the arrangements on our side.

"Yours most truly,

"EDW. HAY CURRIE.

"The Hon. J. Carling."

Reynolds makes the following reckless and untruthful statements about us:—

"The fact is, Canada is a most undesirable country to dwell in. Its population is unsettled and fluctuating; its government is unstable; it is deeply in debt; its railways are all but bankrupt; its trade and commerce are partially paralyzed, more especially since the American war. It has no money, little industry, and still less enterprise. Whatever spurts of life might exist therein, are only to be met with in the garrison towns. Let but the British troops be drafted off—as they soon will be—and it will become like one great graveyard. It is doubtful whether the United States of America would consent to annexation with it at any price."

For the refutation of these falsehoods, we need only refer any who have met with them to the emigration pamphlet issued by the Ontario Government, wherein facts and figures are given, which will satisfy any reasonable mind how groundless such allegations are.

The journal in question betrays the inspiration by which it is animated, and does very much to refute itself by holding such language as the following in reference to the United States:—

"A few miles distant from Canada, in the territories of the United States, all is animation, bustle, and motion, presenting a striking and enviable contrast to the dullness and stagnation prevalent in the North American dominions of the Old World. New cities are springing up every day in the States, money is plentiful, labour is at a premium, enterprise is in the ascendant, and all the advantages of go-a-head republicanism are at once felt by those who cross from one country to another. Probably most of the emigrants sent to Canada will, sooner or later, find their way to the United States, and in all likelihood do much better than where they now are."

The truth is, as a Canadian contemporary observes, that "the extraordinary impetus lately

given to emigration by Canada has excited the people of the United States not a little. They find us sending new agents to Ireland, Scotland, France, Belgium, and increasing the efficiency of the head office in London; they are aware that our local government is spending this year \$50,000 on surveys, as much more on colonization roads; \$85,000 in improving the inland navigation; and we may add, that the government contemplate spending some more money in opening up communication with the new districts, and purpose surveying all the swamp lands in the Province. These facts, and the efforts which have been made in Great Britain, and the practical results of from seven to eight thousand persons remaining here in the course of a few months, instead of passing on to the United States, as immigrants have been in the habit of doing, have stirred up a bitter feeling of opposition, which is developing itself both here and at home. The article in *Reynold's Newspaper* is but a sample of the means made use of to counteract the labours of our government in England; and at this moment there are Yankee agents in Toronto posting bills upon the walls with a view to divert immigration from Canada, and in other ways seeking to turn away the new comers from our shores. It will not do. The Ontario Government, and particularly the Hon. Mr. Carling, have laid hold of the matter with a will, and will use every proper and justifiable means of pursuing the policy they have chosen, and making it a complete success.

ORNITHOLOGICAL NOTES FOR JULY.

Summer! glowing summer! has come upon us at last. Except in the early freshness of the morning, most of the songsters of the grove are now comparatively silent, but from the deep shade of the woods, or from some cool thicket near our gardens, may be heard, even during the hottest hours of the day, the soft but monotonous coo-coo of the *Coccyzus Americanus*—American Cuckoo. There are two species of this bird to be met with in Canada, the Yellow-Billed Cuckoo (*Coccyzus Americanus*), and the Black-Billed Cuckoo (*Coccyzus Erythrophthalmus*). Both species are much alike in their habits and plumage, and except when seen

at hand, are not easily distinguishable from each other. Unlike the European Cuckoo, these birds show much care and affection in bringing up their young. Their nests, it is true, are very carelessly put together, being composed of a few dry twigs, mixed with weeds and grass, and with so little concavity as sometimes to endanger the safety of the young birds, who not unfrequently fall out of their uncomfortable cradle. The nest is generally fastened to the horizontal branch of a tree at no great distance from the ground.

The eggs, four or five in number, are of a bright green colour. The young are fed with insects, which also constitute the principal food of the old birds, although the latter are also said to be addicted to the bad habit of sucking the eggs of other birds, and thus committing sad havoc amongst their neighbour's nests. The flight of the Cuckoo is rapid and silent, and although awkward in its movements on the ground, it is a very elegant looking bird when seen perched among the branches of the trees. The shape of its body, and the long tail feathers, giving it some resemblance to the Carolina Dove, or the Passenger Pigeon. The plumage of the Yellow-Billed Cuckoo is a light greenish brown over the whole of the upper parts, including the wing coverts, and two middle tail feathers. Primary quills, with the inner webs, brownish orange. Tail feathers, excepting the two middle ones, black, the next two entirely black, the rest broadly tipped with white—the under parts are greyish white. The upper mandible brownish black with yellow margin—the under mandible yellow. The black-billed variety differs but little in the general colour of the plumage, but the upper mandible is brownish black, and the lower bluish black, and there is a bare space of a deep scarlet tint around the eye.

A striking contrast to the shy retiring habits of the birds just described is presented by the very pugnacious Tyrant Fly-Catcher (*Tyrannus Carolinensis*) or King Bird, as he is commonly called, whose shrill tremulous note is as familiar to every dweller in the country as the peewee of the Pew-see Fly-Catcher. Like the latter, it seldom enters the forest, but is fond of orchards, fields of clover, and gardens or paddocks near a farmer's dwelling. The King Bird comes to

us in June, and leaves again for more southern latitudes about the beginning of September. It is a bold, fearless bird, attacking, without scruple, Hawk, Crow, or Jay that may happen to approach the neighbourhood of its nest, or even the orchard or field which it frequents. Mounting rapidly in the air, it pounces down upon the head or back of the larger intruders, who become so annoyed and tormented, as willingly to make a precipitate retreat. It pursues the enemy sometimes for a mile, and then satisfied that it has done its duty, returns to its post quivering its wings, and uttering its shrill notes in triumph.

Beetles, grasshoppers, crickets, and winged insects of all kinds form the principal food of this bird, and it may sometimes be seen hovering over a field of clover, with beating wing, after the manner of a hawk, surveying the ground and herbage for grasshoppers, which are a favourite diet. At other times, it takes its stand on the top of an apple tree, a stake, or tall weed, from which it swoops down upon the passing insects, the snapping of its bill—the death warrant of its prey—being audible at some little distances. Towards autumn, wild fruits of different kinds, such as blackberries, elderberries, and whortleberries, constitute a favourite part of its subsistence, but it seldom or never touches garden fruit of any kind. It is accused of occasionally feeding upon honey bees, but its depredations in that way are so slight that they well deserve to be condoned for the good service the bird renders the farmer, both by the quantity of insects which it devours, as well as by its unceasing hostility to the plunderers of the poultry yards and the crops.

The nest of the King Bird is usually built on the horizontal branch of an apple or pear tree. The outside consists of dried grass and weeds, interwoven with flakes of wool or tow, and lined with fine dry grass, fibrous roots, and horsehair. The eggs, from four to five in number, are reddish white, marked with spots of dark brown. The plumage of this bird is very handsome. The general colour of the upper parts is a dark bluish grey, the head darker. The feathers of the crown can be erected at will, so as to form a crest, below the black surface of which is seen a rich scarlet, or flame coloured patch margined with yellow. Wings and tail brownish black, each feather of the latter tipped with white. Under parts greyish-white, throat pure white, the breast tinged with ash-gray.

Few of the birds, which visit our gardens and orchards at this season of the year, are more remarkable for the beauty of their plumage and the melody of their song, than the Rose-breasted Grosbeak (*Guiraca Ludoviciana*). In general, it is a shy bird, keeping much in the forest, where it feeds mostly upon the tender buds and blossoms of the trees, and upon insects which it catches on the wing, but when the cherries are ripe in the gardens and orchards, it often approaches our dwellings, and amply repays us for the fruit which it consumes by the beauty and harmony of its notes. I have never met with a

nest of the Rose-breasted Grosbeak, but it is said to be built generally in the thick woods, and the nest to be composed of dried twigs lined with grass. The plumage of this bird is very handsome. The head, upper part of the neck, back, wings, and tail, glossy black. The first row of wing coverts, the tips of the secondary coverts, and the ends of the three lateral tail feathers, white. Lower part of the breast, middle of the belly, and lining of the wings, bright carmine.

Another coy beauty which may occasionally be seen in the shadiest part of the garden or orchard on its first arrival, is the American Redstart. (*Setophaga ruticilla*). It reaches Canada early in June, and is said to push its way as far north sometimes as the Red River, and even the valley of the Saskatchewan. On its first arrival it may sometimes be seen about our gardens, hunting along the mossy branch of some old apple tree in pursuit of insects, jumping rapidly from side to side, opening and closing its beautiful tail with every movement which it makes, then suddenly descending zig-zag fashion along the trunk towards the ground, flirting its expanded tail like a fan from side to side, just allowing the brilliant orange of the lateral feathers to be seen for a moment. The next instant it is off like an arrow after some fresh insect it has caught sight of in the distance, and the quick snapping of its bill tells the fate of its prey. When the period of incubation arrives, the Redstart betakes itself to the thickest woods, and it is there also that we must look for it during this month, and for the remainder of its stay with us. Its nest is generally built near the slender forks of a young hickory or beech sapling. The external materials are strips of hemlock fir, or paper-birch bark, and dried tough grass or lichens, agglutinated together by saliva, and lined with the finest fibres of the wild grape vine. The eggs, three or four in number, are white, sprinkled with yellowish brown dots. The colour of the plumage of the Redstart is black, glossed in places with steel blue over the head, neck, forepart of the breast and back. Sides of the breast and under wing coverts and upper half of the primaries a fine reddish orange. The two middle tail feathers black, the rest orange on the upper half, the terminal half black.

In the stillness of the summer evenings, when the sun has sunk to rest, and the brief twilight begun, the dwellers in the country, as they sit by their doors enjoying the cool balmy air, may hear from the edge of the nearest wood the singular but melancholy note of the Whip-poor-will (*Antrostomus vociferus*). Its sad and "oft repeated tale," prolonged far into the night, sometimes meets the ear from the adjoining field or garden, but in general the bird prefers to keep near the wood to which in the day time it resorts, or where the female has built her nest, and is rearing her young.

The Whip-poor-will, as well as its congener the Night Hawk, comes to us early in June, and in favourable seasons sometimes even earlier.

Its note is generally heard for the first time on some warm evening in June; is continued through July, after which it is seldom uttered, and towards the end of August, they leave us for a more genial climate. During the day, this bird sleeps on the ground, or on the fallen trunks of trees in the forest, and in such situations, it may sometimes be approached within a few feet without alarming it, but in rainy or very cloudy weather, it is much more on the alert, and flies off as soon as it discovers any one approaching within twenty or thirty yards of it. It has a singular habit of always sitting with its body parallel to the direction of the trunk or branch of the tree on which it is seated—never across. The food of the Whip-poor-will consists principally of large moths, beetles, and other insects, which are generally abroad about the dusk of the evening, when the bird may be seen pursuing its prey, passing low over the ground, or skimming rapidly along the skirts of the wood, and not unfrequently, like the Night Hawks, fluttering round the cattle in the field, and snapping up any insects which may approach to rest upon them.

It deposits its eggs on the bare ground, or on dry leaves in some unfrequented part of the forest. The eggs are always two in number, of a greenish white, spotted and blotched with bluish grey and light brown. The young, like partridges, are soon able to run after the mother, and until they can fly, seem such shapeless lumps of clay-coloured down, that it is almost impossible to distinguish them from the dried leaves or the ground on which they repose. By the time they are able to fly, they are of a brown colour, very beautifully marked with darker zig-zag lines and dots, interspersed with patches of buff. The plumage of the old birds is very handsome. The upper parts generally a mixture of dark brown and grey, streaked and variegated with wavy minute lines of black brown, and rust colour. The quills and wing coverts are dark brown, spotted in bars with light brown, the tips of the former mottled with light and dark brown. The four middle tail feathers are like the back, dark brown, marked with lines of black, and a pale ochre or rust colour. The three outer feathers dark brown also, for the lower half of their length, the upper half white; cheeks and sides of the head brownish red; a narrow semicircle of white passes across the throat, the breast and belly irregularly mottled and streaked with black and yellow ochre. Unlike the Whip-poor-will, the Night Hawk, (*Chordeiles Popetue*), notwithstanding the nocturnal prefix to its name, may frequently be seen on the wing during the greater part of the day, when the weather is dull and cloudy, and even at times when the atmosphere is clear and the sun skimming in all his glory. While staying in the country, in the neighbourhood of Lake Simcoe last summer, on returning from church one bright Sunday morning, I came upon some hundreds of these birds at a spot just where the roadway was carried over the line of the Northern Railway by a high

wooden bridge. Standing on the bridge, I watched their gambols for nearly quarter of an hour, admiring the beauty and rapidity of their motions, as they glided through the air, sometimes sweeping down to within a few inches of the ground, then raising themselves rapidly in the air again, and sailing round in sweeping circles, or crossing and recrossing each other in their flight, with such rapidity that the eye could scarcely follow them, but at no time rising to any height in the air, from which I inferred that they had found some favourite insect food just at that spot, for although I left them flying in undiminished numbers around the immediate neighbourhood of the bridge, as I proceeded on my way home, I did not see a single bird during the remainder of my walk. Usually, however, the Night Hawk is seen abroad an hour or two before sunset, generally high in the air, uttering every now and then, as it flies, its harsh shrill note, occasionally like swallows in certain states of the atmosphere, descending from its airy height, and skimming over the fields or roadways within a few feet of the ground, in pursuit of its insect prey. The singular hollow whirling sound which the Night Hawk sometimes makes when on the wing, has been attributed to various causes, but there appears to be little doubt that it is produced by the bird descending suddenly through the air with wings and tail half closed, and then wheeling up again as rapidly with outstretched wings and expanded tail; the concussion of the air made by the altered position of the wings as the bird wheels suddenly up from its downward plunge, is doubtless the cause of this singular noise.

No nest is ever constructed by the Night Hawk. On the bare ground, in some elevated spot in a ploughed field, or in an open place on the skirts of the wood, the female lays two almost oval eggs of a muddy bluish white, freckled all over with brown spots. The young are for sometime covered with a soft down of a dusky brownish colour. If the female is disturbed while sitting, she will flutter off from her nest, pretending lameness, until she succeeds in drawing the intruder away from the neighbourhood, when she mounts into the air and disappears.

The plumage of the Night Hawk, like that of the Whip-poor-will, is very beautifully marked. The head and upper part of the body generally brownish black, with wavy lines and spots of pale cream colour and reddish brown. Secondary quills tipped with brownish white, and a conspicuous white bar extending across the inner web of the first, and the whole breadth of the second, third, fourth and fifth primaries. Tail feathers barred with brownish grey, the four outer on each side plain brownish black towards the end, with a white spot. Sides of the head and neck marked and mottled like the back; a broad white band in the form of the letter V reversed on the throat and sides of the neck. The rest of the under parts greyish white, marked with undulating bars of dark brown.

G. W. A.

MR. THOS. WHITE.

We are glad to find that our British Emigration Commissioner, Mr. White, is getting access to the public by means of lecturing, and is thus awakening considerable interest in the minds of Old Country people with regard to Canadian affairs. The effect of these lectures is not restricted to the audiences before whom they are delivered, for the newspapers are publishing very full reports of them, and these cannot fail to be widely read, and to be of great service in disseminating correct information. His lectures in Glasgow and Liverpool, those important centres of population and commerce, have appeared in British newspapers with but very little abbreviation, and we are glad to see that some of our Canadian papers are reproducing them here. We believe that all who have had the opportunity of seeing these reports will agree with us in saying, that Mr. White has given a very fair and faithful account of matters and things in this country, and that so far from over-colouring the picture, he might, without any impropriety, have made the tinting brighter than he has done. It is better, however, to say too little than too much, and we are certain, that no one who may be led to come hither in consequence of Mr. White's representations, will ever have occasion to reproach that gentleman for having exaggerated the inducements to emigrate to Canada.

We learn with much pleasure that both Mr. White and Mr. Dixon, the Dominion Emigration Agent, who resides in London, report an increasing eagerness for information in regard to this country on the part of people at home, so much so that a necessity has arisen for the issue of another and larger edition of the pamphlet and maps recently published in the interest of the Province of Ontario by our Local Government.

SIR JOHN YOUNG, GOVERNOR GENERAL OF CANADA.

His Excellency, the Right Hon. Sir John Young, Bart., K.C.B., G.C.M.G., Governor-General of the Dominion of Canada, was born August 31st, 1807, and is therefore now in his sixty-second year. He was educated at Eton, and Corpus Christi College, Oxford. After



Wm. George

finishing his collegiate course, he studied law, and was called to the bar in 1834. Previous to his call to the bar, he was returned—1831—as one of the members in the Conservative interest of the county of Cavan, Ireland, of which county he was also made a magistrate and deputy-lieutenant. In the House of Commons, he before long occupied an excellent position as a “working” member. He had been in the House just ten years, when, in 1841, he entered office as a Lord of the Treasury, which position he held until 1844, when he was advanced to the office of Secretary of the Treasury, from which he re-

tired, on the fall of the Ministry, in 1846. He continued to sit as a private member of the House until 1852, when he joined Lord Aberdeen’s Government, as Chief Secretary for Ireland. This office he held until 1855, when he was appointed Lord High Commissioner of the Ionian Islands, in which capacity he served until 1859. In each of these offices, he distinguished himself by faithfully and carefully discharging his duties. He won the respect and esteem of those beneath him, and the thanks of those ministers who had placed such confidence in him. As a reward for these services, he was, in 1860, appointed Governor of New South

Wales, which office he held until last year, when he was chosen Lord Monck's successor, as Governor General of the Dominion of Canada.

It is supposed by many that Sir John Young is the first wearer of the title. This is not the case. The baronetcy he inherited from his father, who earned it gallantly in the field, having served with distinction in India. Sir John succeeded to the baronetcy in 1848. His Excellency is married, and it is said that her Ladyship is a native of New South Wales.

Sir John is a handsome, pleasing looking, and very gentlemanly-appearing man. He is genial, cheerful, and happy in his manner, and has a pleasant way of speaking that is admired by all. He is sufficiently dignified without being cold and distant; and is said to be one of the most social and agreeable of men in private life. A correspondent speaking of him says:—"Sir John bears his sixty-two years well, and walks along our snow-clad roads, accompanied by the members of his staff, apparently relishing our crisp winter weather. In manner, he is genial and pleasant, being endowed with great *bon-homme*, and, I need hardly add, is a favourite with all classes."—*Telegraph*.

Arts and Manufactures.

ACOUSTICS AND BUILDINGS.

Mr. W. F. Barrett has been delivering a lecture on this subject to the Royal Engineers at the Brompton Barracks, Chatham, England, in which he drew their attention to the value of a curved over a flat surface for the reflection of sound, and the loss of sound by rolling round the walls of a building—a phenomenon which occurs when the sound-waves meet the wall at a very oblique angle. Hence, "just as we require a clear line of sight to see a speaker well, so we require a clear line of sound to hear a speaker well. Architects have sought to obtain this by a proper arrangement of seats in a building. Perhaps one of the most successful forms that has yet been adopted is that by which the seats in a building are not arranged in a perfectly straight line, gradually rising upwards, but in a curved line." This curved arrangement, he said, had proved successful in buildings where it had been tried.

The lecturer referred to the difference often experienced in rooms of the same size and proportions, in one of which the speakers can be heard, and in the other not, and asked, "What, then, is the cause of the difference?" Simply that the building which is most perfect for hearing in has more wood lining in its interior than the other. Some of the most perfect rooms in acoustics are almost entirely lined with wood, and others, built to imitate these, but without the wood linings, have failed almost altogether. The theatres of the Romans were notable for their good acoustic effects, and they were almost uniformly constructed of wood in the interior. "What, now, is the action of the wood? It is to-reinforce, by its own vibration, the sound of the speaker's voice. When the string of an instrument is caused to vibrate by its own motion, it can stir but a very small portion of air; but when this string is associated with a surface of wood, it throws that wood into vibration, and thus creates a vibratory area of much larger surface, which produces a correspondingly greater disturbance of the air. In a piano, or harp, or violin, we do not hear the sound of the strings of any of these instruments, but we hear the sound of the wood to which those strings are attached." Some striking illustrations of the correctness of this theory were given by the lecturer.

By some simple experiments with the aid of a musical box, the lecturer also showed the value of different materials as regards this reinforcement of sound, wood taking the first place, slate next, tile next, and then broken plaster from a wall, which last gave practically no reinforcement of the sound. The lecturer also instanced the room in which he was then speaking, as originally being most imperfect for auditory purposes, and most painful to speak in. An alteration was made, and side pieces, formed of wood, were erected behind the speaker, and within these side pieces air-chambers, thus strengthening the reinforcement, and rendering speaking within the room perfectly easy, simply from the fact that everything said is taken up, and reinforced by the vibration of the screens behind the speaker.

The reinforcement of the voice of the speaker from another cause was then dwelt upon, a no-

tice of which we must defer till our next number; in the meantime, any person interested in the subject should study the whole paper, as published in the *London Builder* of the 22nd May.

ARTIFICIAL MANURES.—HOW THEY ARE MADE.

"Poudrette" is the commercial manure made from the malodorous contents of city sewers, and the foul and decaying offal from abattoirs, etc. The nightsoil from the sewers is used in fabrication of first and second grade poudrette; the offal is mixed with the first grade just mentioned, in making what is known as "double refined poudrette," which is more valuable than the ordinary, as containing more ammonia and soluble phosphate.

The nightsoil as it comes from the sewers is disinfected by means of carbolic acid, and in its semi-fluid condition is run into barges in which it is conveyed to the works. Here it is lifted by great steam-scoops and poured into a chute through which it flows into a large reservoir. A screen is arranged in the top of the chute to separate the rubbish—cobble-stones, old boots, bones, etc. In the reservoir, the heavier portions slowly settle to the bottom, and the surplus water being drawn off through a sluice, the deposit is carted upon plats of hard ground termed "floors," and suffered to lie until thoroughly dried. Sometimes when the weather is wet, and also in winter, this drying is done in kilns built for the purpose. This artificial drying adds much to the cost of the manufacture.

When the material is sufficiently dry, it is drawn to the milling-house to be ground. The mills are arranged in a second story, and the material is carried to them in endless elevators like those of a grist-mill, except that the buckets are quite large, holding about half a bushel. The mills are very simple in construction, although some manufacturers of poudrette expended many thousand dollars before hitting upon an apparatus that would do its work properly. Each mill is composed of a horizontal shaft with wrought iron radial swinging-blades pivoted to it, and the whole inclosed in a cylinder having an inlet opening at the top, and an outlet at the bottom. The blades beat the material into a coarse powder, which falls through the outlet upon vibrating screens that separate any rubbish that may have previously escaped removal, and also divide the product into two grades or qualities. The material thus prepared is poudrette, commonly so called, and is a uniform powder of a greyish-brown colour dotted with little white specks, which are fragments of bones.

In order to make the double-refined article, equal parts of animal offal—decaying flesh, intestines, and the like from abattoirs and slaughter houses—and the first grade of poudrette are intimately mingled and left in a large heap under cover from rain. The poudrette

being quite dry absorbs most of the moisture from the offal, and brings the mass to such a condition that it may be passed through another mill, similar to that just described. By this means it is cut and broken fine, and comes out in appearance very similar to the poudrette formed in the first instance, except that it contains a larger proportion of bone, derived from the offal and is more sticky to the touch. This double-refined product falls in a stream from the outlet of the mill direct into a cart, by which it is carried to a store-house, where it is dumped in bulk; the building set apart for storage being capable of holding many thousand barrels. The refined poudrette is sold for about one-fifth more than the ordinary kind, but this is quite made up by its superior efficiency when applied to the soil.

It was formerly the practice to treat bones with oil of vitriol to convert them into super-phosphate, but they have now become too valuable for that, and are ground up into bone dust and bone flour, for which the demand is fully equal to the supply. Most of the bones are obtained in the great cities of the West, where many cattle are killed. The grinding-mills are composed of three pairs of cast-iron crushing-rollers set one pair above another. The bones being fed into a hopper at the top pass between the first pair of rollers, and are broken into fragments; then between the second, which crushes them still finer, and finally between the lower pair, by which they are brought to the required degree of fineness. From the mill the crushed bones pass to the sizing sieves, which separate them into coarse bone-dust, formed of fragments smaller than one-third of an inch, and fine bone-dust which is capable of passing through a sieve with one-eighth of an inch meshes; the former being generally mingled with an equal proportion of the latter before going to market. What is known as bone-flour is made much finer, being brought nearly to the condition of ordinary flour. Sometime a manufacturer obtains from the West a few hundred tons of mingled bones, pigs' hoofs, hair, etc. This is worked up in various forms mainly in making so-called nitro-phosphates, which are composed of animal offal and super-phosphate, and take their name from the large amounts of nitrogen in the form of ammonia, and the phosphoric acid combined with lime, which they are claimed to contain. The hoofs and hair are very refractory materials, and it is found best to subject them to the action of super-heated steam before mingling them with other materials.

The superphosphates now sold are made from mineral phosphates, such as are found in South Carolina and in the Island of Navassa. Some of the best in market is made from equal parts of Carolina and Navassa phosphate. The mineral is ground fine in buhr-stone mills, and packed in bags for transportation to the manufacturer of super-phosphate, who puts it in small batches into a suitable receptacle, and pours a due proportion of diluted oil of vitriol upon it. This

converts it into a mechanically mingled sulphate and superphosphate of lime; the phosphoric acid being thus rendered soluble and capable of assimilation by the roots of plants.—*American Artisan.*

ROAD DUST AND VEGETATION.

No careful observer will deny that the trees along much frequented roads, especially when exposed to the influence of prevailing winds, distinguish themselves in the rapidity of their growth and the luxuriance of their foliage as being more thriving than those of the neighboring wood. This fact is being ascribed to the dust from the roads which is carried and deposited by the wind upon their branches and foliage. Dry road dust contains from eight to ten per cent of organic matter, arising from the excrements of animals, from straw, hay, or grains which may have fallen from waggons frequenting the roads. After having been pulverized by carriage wheels to a fine dust, they form a large amount of already decomposed and readily soluble nourishment for vegetable growth. Roads kept in good condition, are therefore not only important promoters of the civilization of the district wherein they are located on account of easier transportation, but also because of an inexpensive but no less efficient fertilizer. It is in such, at the first apparent causes that an explanation of many of the declared mysteries of vegetation may be found.—*Manufacturer and Builder.*

HOW TO DRESS FURS.

If your suds are dried, soak in soft water, and work them on the flesh with beaming knife, or a piece of old scythe, till perfectly soft and free from flesh and fat. Then wash them good in a suds made by dissolving enough sal soda in the water to make a good suds. Take four ounces pulverized alum, eight ounces salt, one quart new milk to four gallons soft water, also one pint prepared starch; stir well; put in furs, and air them often, by hanging them across a stick laid across your tan tub, so that they will drain back in the tub. After you have handled them well several times, and they have been in about 24 hours, add to the four gallons of water half a teacupful of sulphuric acid; stir well and put back the skins, keeping them stirring pretty often for one hour; then take out, wring and rinse in soft lukewarm water; hang up in a cool place, and, when they begin to get white, work and stretch them till they are dry. Beaver and badger, and hides of such thickness, require to be in the tan sometimes a week; and your tan liquor must be strengthened occasionally by adding some more of the above ingredients. One hundred furs can be tanned at the same time, so that you have water enough to cover them, so that they will not be pressed.

When finished pluck; then heat a flat iron, and iron the fur. This will liven it.

A. TANNER,
In Western Rural.

HOW TO USE CARBOLIC ACID.

A Canada paper states that Messrs. Salt of Birmingham, have constructed a very ingenious and well-designed apparatus for the vaporization of carbolic acid, by means of which that valuable disinfectant can be diffused through the rooms of a house without any of the disadvantages attending its use in its ordinary liquid state. The apparatus consists of a receptacle for the acid covered by a finely perforated lid. Beneath the receptacle is an air chamber, and beneath this chamber is a recess for a spirit-lamp. Two or three tablespoonfuls or more of carbolic acid, if in the liquid form, or a portion of the crystals having been placed in the upper receptacle, the lamp is lighted, and in a few moments the acid begins to evaporate and the vapor is diffused into the atmosphere of the apartment through the perforated plate. The apparatus will be found an excellent addition to the sick room, where it is found desirable to use carbolic acid as a disinfecting agent. Its great advantage is that it can be so manipulated as to keep the atmosphere charged with a distinct but not unpleasant odor of the acid, by increasing or diminishing the supply as may be required, and it will thus be found particularly handy and useful in private houses.

CHEAP AND DURABLE PAINT.

Take one part fine sand, two parts wood ashes, three parts slacked lime; sift through a fine sieve or screen; mix well, then stir with linseed oil to the consistency of ordinary paint; add a little lampblack to darken the colour if wanted. This, for out-buildings, fences, etc., is one of the most durable, as well as cheapest paint there is. It is also fire-proof in all ordinary occasions; is equally good on wood or brick. Apply as other paints are applied—first coat light, second heavy.—*Cor. Western Rural.*

“BLUEING” IN SUGAR.—Continental sugar-refiners have borrowed a notion from the laundress, and now give an appearance of whiteness to their product by the judicious use of a little blue. Indigo has been employed for this purpose, but it is said that artificial ultramarine, and also aniline blue, are occasionally used. To detect these, Dr. Reimann recommends that the sugar be dissolved in a small quantity of water, and the solution be allowed to stand for some time, whereupon the blue matter will settle at the bottom of the vessel. The deposit is to be separated, and then treated with diluted hydro-chloric acid. If the blue color is destroyed, and an odor of sulphurated hydrogen evolved, the coloring matter is ultramarine. If the color remain, the solution is to be filtered, and the deposit shaken up with some alcohol. Then, if a blue solution be obtained, the color is aniline blue. It is as well to say that in either case the color is quite harmless, and no one need be afraid to eat sugar so colored.

Hearth and Home.

A TALK WITH THE YOUNG FOLKS ABOUT THE MONTH.

This is the hottest month in the year, and quite in harmony with its character, our engraving shows two young people trying to keep cool. From their dress and general appearance, they seem to belong to the class of genteel idlers, very pitiable people, who, though in a position to enjoy life more than most folks, have, generally speaking, a hard time of it, selfishly seeking after happiness. If they would diligently betake themselves to some useful employment, and try half as hard to make others happy as they do to make themselves happy, it would be better for them, and for every body about them. The most wretched, pitiable, and useless of mortals are these same genteel do-nothings. They are often objects of envy, but are far more truly objects of pity.

Most of us are under the necessity of doing work of some kind, and although perhaps we sometimes think it hard to have so much to do, it is far better for us than idleness. If we did not work, we should not know the sweetness of rest. Idleness is not rest.

"A want of occupation is not rest,
A mind quite vacant is a mind distressed."

It requires a great effort to be diligent in hot weather, and sometimes we are very impatient of the heat, as if it were a sore and needless infliction. But it is really a great and indispensable blessing. The grain would not ripen without hot weather. Flowers and fruits require heat. This is what paints the rose, puts sweetness into the strawberry, the cherry, the plum, and the apple. Every person, whether young or old, is fond of these things, but we could not have them without July, any more than without May. It is in the heat of midsummer that the bees gather and store their honey. The summer makes all the young shoots and buds grow, which the winter hardens and makes tough. No doubt the heat produces important effects on our bodies, for the greatest physical vigour is



found in countries that have both winter and summer.

How pleasant in July is the cool shade. How delightful to get into some breezy spot where we can feel comfortable and be refreshed. What a treat is a draught of cold water or a dish of ice cream, when the weather is, as we sometimes describe it, "roasting hot." But we owe these enjoyments to the summer, and should know nothing of them if the weather was always cool.

After all, we know nothing of heat as compared with the dwellers in tropical countries. Some parts of the Bible must be far more expressive to the inhabitants of the hotter parts of the earth than they are to us. Those which speak of Christ as "a covert from the heat, as the shadow of a great rock in a weary land," those which liken the blessings of the gospel to water: and those which describe heaven as a delightful region where "the sun shall not light on them nor any heat," must naturally strike the minds of those who are familiar with intense heat. But God the Holy Spirit can explain these and all other portions of Divine truth to our hearts, so that we shall perceive their meaning, and feel their power. Let us entreat him to do so for Christ's sake.

WHAT SHALL WE DRINK?

Cold water swallowed during the progress of digestion, instantly arrests it, and the process is not resumed until the water has been there long enough to be warmed from the temperature at which it was drank to that of the stomach; or from forty degrees to one hundred; to accomplish this the heat must be abstracted from the general system, chilling it. Strong, robust persons, may not feel this; but if a man in feeble health drinks cold water at a meal, at all largely, he rises from the table chilly, and soon has fever, while the stomach, being kept at work that much longer in digesting the food, loses its natural vigor, the digestion is imperfect, and the food becomes impure, thus laying the foundation of disease. The inevitable inference from these facts is, that cold water is injurious to health, if taken at meals. Injurious to the most robust, if taken largely, and to persons in feeble health if taken at all, beyond a few swallows at a meal.

I therefore set it down as a clearly established fact, that a glass or more of cold water, drank habitually at meals, or soon after, is a pernicious practice, even to the most healthy.

Injury is done in another manner. Water, or any other fluid, dilutes the gastric juice, and thus weakens its power to dissolve the food. The amount of gastric juice is not lessened, but its power is diminished by its dilution. The finger will be scalded by dipping it into a vessel of boiling water; but if an equal amount of cold water is added, it may be thrust in with impunity, although there is as much heat in the mass as before; but it is diffused.

If cold drinks are injurious at meals, cold food is for the same reason also injurious; thus it is that some of the most terrible forms of disease are brought on by persistence in eating cold food exclusively in winter time.

If cold fluids are injurious at meals, we naturally conclude that warm fluids, in moderation, are beneficial, and rightly so.

It then follows, that if we drink anything at meals, it should be first warmed.—*Hall's Journal of Health.*

Poetry.

BARTIMEUS.

A wail upon the troubled stream of time,
Drifted and tossed about by fickle Fate,
He lived a lone and sorrow-stricken life;
Shut out from nature's beauty, light and joy,
Beret of all that could assuage his woes,
Or smooth his rough and joyless way, None know
So well the selfishness of human hearts,
As those whose stern misfortune has ordained
To test their sympathy.

The only star
That shed a gleam of solace on his gloom,
The one bright oasis, that still kept green
In the bleak desert of his flowerless life,
With nought to break its dull monotony,
Was the remembrance of a mother's love.
Her loving words—the psalms she sweetly sang—
Her tender kisses on his infant lips—
These were the golden memories of his life.
Like some rare jewels kept in poverty,
As sad remembrances of happier times,

Deep in the sacred chambers of his heart
He kept them safe to light his lonely hours;
And, though he scarcely knew what beauty meant,
He thought that one, whose touch was gentleness,
With tones so soft, and heart so warm and true,
Must surely have been to sight most beautiful.
She died ere childhood blossomed into youth,
And left him friendless, destitute and blind;
Of his dead father, memory kept no trace.

'Tis Summer morn: the vivifying dews
Of night the sun has long exhaled: the hills
And vales are robed in deepest emerald,
Besprent with beauteous flowers: all nature smiles;
But the fair scene gives not a single gleam
Of sunshine to the beggar's weary heart;
Whose sightless eyes had never read the signs
By which the living world reveals its joy.
He sits a-begging by the highway side,
In lone despondency; and sick at heart,
That Heaven had made it his unpitied lot
To be both poor and blind.

The scorching sun
Scatters his burning rays, with fierce delight,
Upon the naked hills; and he is driven,
At length, to seek the cool and kindly shade
Of the wide-branching sycamore, which, with
A touch akin to human sympathy,
Spreads its long arms to shield his throbbing head.

It is a sad and unpropitious day
With Bartimeus, for the tiny spring,
At which so long he daily quenched his thirst,
Had dried; and though 'tis past the noon, and men
Have passed along the way since early morn,
Not one has paused to hear his tale of grief,
Or pity his distress. Pensive and lone
He sits; nerving at times his sinking heart
By whispered words of prayer to Jacob's God,
The faithful Friend and Helper of the poor.
But when he thought on the unbroken night,
In which his life was spent, in bitterness
Of soul he pray'd, that he might die, and be
At rest forever from the want and scorn,
Which Fate had mingled with his cup of life.

At length, attracted by the shady tree,
A traveller from Jericho drew near,
And with the beggar shared his homely meal.
And more, he spoke him kindly words, which fell
Like soothing music on his bleeding heart.
He told him of a prophet, great and good,
Who had appeared among Judea's hills;
By whom the lame were healed, the lepers cleansed,
The blind received their sight; and even the dead
Called back from Hades at his sovereign word:
And best of all, the poor and lowly ones,
Whom Pharisees and Scribes contemned with scorn,
Received his ready aid and kind regard.
With rapt attention Bartimeus heard
The wondrous tale; while joy, and doubt, and hope,
And woeper swept across his face;
And from his sightless eyes rolled grateful tears,
Which with his ragged cloak he wiped away:
For he remembered, while the stranger spoke,
Such were the deeds of grace his mother told
The holy prophets wrote the Christ would do.
He was afraid to hope, lest hope should prove
A faithless snare; yet fervently he prayed
That God might send this holy prophet near.
But, when his transient guest had gone his way,
And left him to his lonely thoughts again,
At times, he fancied all was but a dream,
A flash of hope across an ocean of despair.

At length the waning heat signals the day's
Decline; the touch of fairy-fingered eve
Has bathed the world in mellow, golden light,
In which all things look glad and beautiful.
Deeming it vain to tarry longer, he
Prepared to seek the hovel where he dwelt;
But, as he rises to depart, his ear
Catches the hum as of a multitude,
Like the low murmur of a coming storm.
He cannot tell its cause. His heart beats loud
And fast. There may be danger in his path.
Nearer the tumult comes. He cannot flee:
Though sounds of angry strife at hand he hears,
Eager he calls aloud; but none reply.
At last one near him answered, as in wrath,
" 'Tis Jesus, Nazareth's healing prophet come."
A thrill of hope shot through the blind man's soul.
He thought this hour might be his only chance;
It might be God had heard his lowly prayer:

And, with a strong and pleading voice, he cried,
Jesus, thou son of David, pity me.
 And, as he called aloud, some near him, vex'd
 By his continued cries, rebuked his zeal,
 And sharply bid him hush his brawling tongue;
 And asked him, if he thought the prophet had
 No more to do than wait on one like him?
 For in their Pharisaic thoughts, they deemed
 A man might be reputed great and good,
 Yet close his ears against the cry of grief.
 But, still, he only cried the more, as if
 The stifled agony of his dark life
 Of friendless woe, at last had found a tongue.

Then He, whose ear is ever open to
 The sufferer's cry, attracted by his calls,
 Told those around to bring the blind man near.
 Official voices passed the word along;
 And Bartimeus, with a beating heart,
 Catching the word that he was called, arose,
 And, flinging off his tattered cloak in haste,

Bounded away from those who led him, till,
 As if by some unerring instinct led,
 He cast himself at Jesus' feet, and cried
 Aloud, *Thou Son of David pity me.*
 The Master took him by the hand, bade him
 Arise, and asked what boon from him he craved?
 His ready answer came without delay.—
Lord I am blind, to me my sight restore.
 Then Jesus said, *be it according to
 Thy faith;* and instantly, his rayless night
 Of years was turned to bright and blessed day.

Bewildered, for a moment, there he stood,
 Entranced in speechless wonder and delight,
 With all the glory of the sunset hour:
 Flushing his radiant, wonder-stricken face:
 Then fixed his glance with grateful love upon
 The face, where wisdom, truth, and tenderness
 Divine, with purity and peace were blent;
 And then, with words of grateful praise upon
 His lips, he followed Jesus in the way.—*Songs of Life.*

Music.

CHANT. O COME, LET US SING.

DR. BOYCE.

1. O come, let us sing un- | to the | Lord; | Let us heartily rejoice in the . . . | strength of | our sal- | ration.

Let us come before his presence | with thanks- | giving, | And show ourselves . . | glad in | him with | psalms.

- 2 For the Lord is a | great— | God;
 And a great | King a- | bove all | gods.
 In his hand are all the corners | of the | earth;
 And the strength of the | hills is | his— | also.
- 3 The sea is his, | and he | made it;
 And his hands pre- | pared—the | dry . . | land.
 O come, let us worship | and fall | down.
 And kneel be- | fore the | Lord our | Maker.
- 4 For he is the | Lord our | God;
 And we are the people of his pasture, and the | sheep of |
 his— | hand

O worship the Lord in the | beauty . . of | holiness;
 Let the whole earth | stand in | awe of | him.

6 For he cometh, for he cometh to | judge the | earth;
 And with righteousness to judge the world, and the | people |
 with his | truth.

6 Glory be to the Father, and | to the | Son,
 And | to the | Holy | Ghost;
 As it was in the beginning, is now, and | ever | shall be,
 World | without | end. A- | men.