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# THE ONTARIO FARMER,

A MONTHLY JOURNAL OF

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

VOL. II.

HAMILTON, OCTOBER 1870.

No. 10.

## Editorial.

### THE PROVINCIAL SHOW.

Our great annual exhibition of agriculture and arts is over, and it is pleasant once again to be able to write the word "Success" as its history. At first it was feared, from the lowering state of the weather, and the ominous down-pour which literally *damped* the initial day of the fair, that failure had marked the exhibition for its own. These fears, happily, were dispelled by the welcome, though gradual, clearing up of the sky, and ultimately the weather became all that could be desired. The last day of the show was as delightful a sample of our true enjoyable October weather, as could have been "made to order" as part of the great exhibition itself, were such a thing possible.

Full particulars of the exhibition will be found elsewhere in our present issue; in the President's address, which contains more than the usual amount of information; and under "The Farm" and "Live Stock" departmental headings. Some account of the horticultural and art branches of the late fair, may be expected in our next.

The most unobservant visitor who from year to year gives the Provincial Exhibition his presence, cannot fail to be struck with the signs of progress which thrust themselves into view on every hand. This feature is characteristic, more or less, of every feature of the exhibition, but especially of the live stock, machinery, and implements. Our farmers are becoming pretty generally awake to the interests of keeping a better class of animals, and the great advantages of having the best facilities for doing the work of the farm. It costs no more to keep a superior than an inferior stock,—often it costs less to keep the better class of animals. Satisfaction in handling, better prices, more profitable results, are considerations that tell on all except the most stupid of mankind. So in regard to improved implements. They save labor, economize time, do better work, and render farming easier and more profitable as a business—thus removing some of the objections often urged against it, with, it must be owned, not a little truth and force. As these objections come to be counteracted, farming will

rise in the estimation of mankind, and come to occupy that position among human avocations to which it is justly entitled.

It were unreasonable to expect that everybody would be satisfied with the judicial decisions and prize distributions on occasions like that which has just passed. But there has been, for some reason or other, more than the usual amount of grumbling this year. In some cases that we could point out, egregious blunders have been made in the selection of judges, and, as might have been expected, in the awards made. Too much care cannot be exercised in getting properly qualified persons to act as judges. We are quite aware that this is often a matter of no small difficulty; but it is also a matter of the very highest importance, and one that we believe it is possible to arrange to the satisfaction of all, except that unreasonable class of fault-finders, whom it is out of the question to expect to please.

The question as to the place of next year's exhibition excited much discussion, and some warmth of feeling. That there is force in the arguments by which an Eastern locality is urged, cannot be denied; but past experience proves that we go Eastward at the expense of all the main interests of the Exhibition, and it is at least a debatable matter how far the general good is to be sacrificed for the sake of local advantage. It is every way desirable that our great exhibition should always rally round it the co-operation of every part of the Province, and we should feel that any policy which led to division and splitting-off, would be most unwise. We trust things will be so managed as to avert any such dire calamity, and that from year to year the Provincial Show will continue to be a grand exhibition of the growth and progress of agriculture and the arts in our highly-favoured Province.

### PROVINCIAL AGRICULTURAL ASSOCIATION.

#### ANNUAL MEETING OF DIRECTORS.

The annual meeting of the Directors of the Provincial Agricultural Association was held on Thursday evening, Oct. 6th, in the Agricultural Hall. There was a large attendance, not only of

delegates, but of visitors from various parts of the Province. Hon. David Christie, the President, occupied the chair; and with him on the platform were Rev. Dr. Ryerson, Dr. Beatty, Dr. Barrett, Hon. Wm. McDougall, Mr. W. G. Beckwith, of Michigan; Mr. Jas. Johnson, of London; Mr. Sheriff Ferguson, Kingston, and the elected members of the Council of the Association.

The Secretary read the minutes of the former meeting, which were approved.

The President then delivered his annual address, as follows:—

GENTLEMEN.—In obedience to established usage, it is my duty, as President of the Association, to address you on this occasion.

We have great cause for thankfulness to God for sending us a fruitful season, affording enough for man and beast. During the early part of the summer there was much dry weather, which in some parts of the country curtailed the crops more seriously than in others; still, taking the Province as a whole, the return is somewhat near an average in the various kinds of grain.

We have also reason to thank the Giver of all good for the peace which we enjoy. Beyond the annoyance and expense caused by the incursion of a few deluded and misguided men, we have been at rest; and certainly when we think of the devastation and bloodshed which have taken place in Europe, we ought to estimate very highly the blessings of peace. We cannot be too grateful for immunity from the horrors of war. Let us unite our prayers with those of all good men throughout the world, that the sword may soon be sheathed and that henceforth nations may refer their differences to another arbitration than that of the sword. May the day soon come when the principle of universal benevolence shall prevail, when "men shall beat their swords into ploughshares and their spears into pruning-hooks; nation shall not lift up sword against nation, neither shall they learn war any more."

After reading the narratives of the terrible scenes which have lately transpired in France, one feels constrained to echo the words of the Quaker poet:—

"I hate the drum's discordant sound,  
Parading round, and round, and round;  
To me it talks of ravaged plains,  
And burning towns and ruined swains,  
And widows' tears and orphans' moans,  
And mangled limbs and dying groans,  
And all that misery's hand bestows  
To fill the catalogue of human woes."

When we recount such horrors, we have also reason to thank God for the institutions under which we have the happiness to live. They are such as to produce contentment and loyal attachment. The love of peace prevails among the people of Great Britain and her colonies. And there is no surer test of a high state of civilization than this. Where you find a nation whose policy it is to make every man a soldier, it is either for the purpose of sustaining despotism at home or for restraining it from abroad. It was well said by Lord Derby at the meeting of the Royal North Lancashire Agricultural Society the other day, that our Queen is the "one Sovereign in Europe whose throne is undoubtedly and absolutely secure." The reason is not alone to be found in the fact that she has never transcended the strict limit

of constitutional duty, but also because, in the language of England's foremost statesmen—Mr. Gladstone—"it has been providentially allotted to this favoured Isle that it should show to all the world how freedom and authority in their due and wise developments, not only may co-exist in the same body, but may, instead of impairing, sustain and strengthen one another." Among Britons, it is the extent and security of freedom which renders it safe to entrust large powers to Government, and it is the very largeness of those powers, and the vigour of their exercise, which constitute to each individual of the community the great practical safeguard of his liberties in return. The free expression of opinion, as our experience has taught us, is the safety-valve of passion. That noise, when the steam escapes, alarms the timid; but it is the sign that we are safe. The concession of reasonable privilege anticipates the growth of furious appetite. Regularity, combination and order, especially when joined with publicity, have of themselves a marvellous virtue—they tend to subordinate the individual to the mass; enlarge by healthy exercise the better and nobler parts of our nature, and depress the poorer and meaner. They make man more a creature of habit, and less of mere impulse; they weaken the relative influence of the present by strengthening his hold on the future and the past, and their hold on him. It is a great and noble secret, that of constitutional freedom; which has given to us the largest liberties, with the steadiest throne, and the most vigorous Executive in Christendom.

Gentlemen, officers, and members of the Agricultural and Arts Association of Ontario, permit me to congratulate you on the success of this the twenty-fifth annual Exhibition. Its quality it has not been excelled by any of its predecessors. The number of entries fall short of those of last year, by 1,106; last year there were 7,577 entries; this year there are 6,471. But it will be observed that the deficiency occurs almost wholly in three classes, namely, in grains and seeds, field roots, and garden vegetables, in which classes there are 991 fewer entries. This deficiency may fairly be ascribed to the character of the season, which has been very unfavourable to the growth of these articles. The history of the Association is the record of one of the best and most successful institutions of its kind in the world. But we shall be better able to judge of our progress by taking a short retrospect. Agricultural societies were first established in Upper Canada in 1830, when the amount granted to each district was \$400—while the amount required to be subscribed was \$200. By subsequent legislation, the amount was reduced to \$100, while the Government grant was increased to \$1000. The districts at that time numbered eleven. Taking it for granted that all the districts had Agricultural Societies, the whole Government grant, in 1830, would be \$4,400, while there would be half that amount subscribed in the districts. In 1853, there were 41 County Societies; the whole amount of subscriptions was 13,508, and the Government grant was \$27,330. In 1867, the amount subscribed by County Societies was \$40,312, while the Government grant paid to them was \$44,637 55. This is surely a very gratifying progress; in 14 years the amount expended has been nearly doubled. At the first exhibition held in Toronto, in 1846, the total amount offered in prizes was \$1,600; the number of entries was 1,150; and the amount of premiums awarded was \$1,100. At the last show

held in Toronto, in 1866, \$12,712 was offered; there were 6,279 entries, and \$10,288 were awarded. Last year, at London, \$13,428 was offered in premiums; there were 7,649 entries, and \$11,459 69 was awarded; so that last year the amount offered was more than 12 times that at the first exhibition, the number of entries six and a half times more, and the amount awarded was more than ten times that given in 1830. These figures give a very faint idea of the real work, or good, accomplished by the Association. It cannot be estimated. Canada would have been far behind in the race of improvement but for the labours of this Association and its branches throughout the country. The inspiration of new ideas and modes of thought in agricultural and mechanical art has been so vast and varied that the mind is almost lost in contemplating it. The results of the impetus thus given can never be even approximately estimated; and our exhibitions, it is safe to say, have been more successful than any of their kind on this continent. For many years I have attended the exhibitions of our neighbours, and they have been good displays of agricultural and mechanical products, but ours have excelled them. Now I do not say this in a spirit of egotism or partiality, but it is a fact that there is a thoroughness and completeness about our shows which can be met no where else in America. I had the honour, as one of your representatives, to attend the New York State Fair last week. It was a very good show indeed, but the whole number of entries was only 1,741—surely a small number for a State so large, populous and wealthy as the "Empire State." They must arouse or we shall outrun them in the race of agricultural improvement.

In speaking of our present position as an Association, I wish to give you, in as narrow limits as possible, an abstract of our finances from January 1st, to Sept. 26th:—

## RECEIPTS.

|                                     |             |
|-------------------------------------|-------------|
| Balance on hand 1st Jan., 1870..... | \$1,649 97  |
| Prizes unpaid and returned.....     | 12 00       |
| Miscellaneous sources.....          | 791 54      |
| Rents of Hall and shops.....        | 900 00      |
| Government Grant for 1870.....      | 10,000 00   |
| Rents for Booths to date.....       | 1,510 00    |
|                                     | <hr/>       |
|                                     | \$14,863 51 |

## PAYMENTS.

|  |             |
|--|-------------|
| Salaries.....  | \$1,323 32  |
| Board expenses.....  | 1,206 75    |
| Miscellaneous (payment to Glackmeyer,<br>\$1,000, etc.)..... | 1,397 87    |
| Printing and Stationery.....                                 | 502 84      |
| Legal expenses.....  | 229 19      |
| Exhibition.....  | 229 00      |
| Prizes.....  | 13 00       |
| Veterinary School.....                                       | 550 00      |
|  | <hr/>       |
|  | \$5,544 97  |
| By Balance.....  | 9,298 54    |
|  | <hr/>       |
|  | \$14,843 51 |

So that on the 26th of last month we had a balance in hand of \$9,298 54. The Denison matter is still in the Court of Chancery, and will soon be disposed of. I may say that we have ample security for the whole amount not in dispute, and also, that

since the security was given, it is estimated that the property held has advanced in value not less than 25 per cent. Fault has been found with our management. Now, gentlemen, we have no claim to infallibility; it is human to err; but we claim that whatever errors may have occurred, they are those of judgment, not of intention. We point with pride and satisfaction to the present Exhibition as incontestible evidence of the good which has been accomplished through the instrumentality of the Agricultural and Arts Association and its branches throughout the Province. It has been suggested that the management of the Association would be better in the hands of the Government, for the time being. My belief is exactly opposite. In the first place, it is not the business of the Government to engage in such matters; it is the business of the farmers and mechanics of the Province of Ontario, and theirs only. No other men can come and manage it so well; they can, at least, manage it to their own satisfaction. Our experience of such matters in the past does not justify the abandonment of the management of this Institution. Since the formation of a Bureau of Agriculture in 1850, has there been in any one instance a farmer placed at the head of it? Except in two or three instances, gentlemen of the long robe have occupied the position. What would the Attorney-General for the time being have said had we proposed to place the Crown Law Department in the hands of a farmer? Yet we have permitted a position, which, if it be of any importance at all to us, to be regularly occupied by men who were ignorant of agricultural pursuits, and of what the agricultural interests of the country demanded. And why has this been the case? Simply because the *political necessities* of the party in power for the time being must be met. And so it would be were the Association to be managed by a Government. It would be made a political machine whose character and complexion would change with the party holding the reins of Government, whatever that might be. It is insulting to the farmers and mechanics of Ontario to tell them that they cannot manage their own business. If the Council of the Association, now or at any future time, are in your opinion not doing their duty, send other men to represent you. This can easily be accomplished; but do not permit the influence of our Association to be ruined, and eventually its existence to be destroyed, by alliance with this or that political party. In the management of this institution, we have steadily abjured politics; if we had not done so, we would never have accomplished anything. This is common ground, on which we can all meet; and it is refreshing to have such a rendezvous. Let us say to every political meddler, no matter who he may be, "This is sacred ground." I have felt it to be my duty to make these observations, from certain ominous hints which I have heard, so that you may be prepared for the emergency should it arise. Should these be mere rumours without foundation, then the warning can do no harm. We admit to the fullest extent the right and duty of the Government to require the strictest account; but if complete vassalage be the terms on which we are to have our annual grant, then we shall say to the Government:—"Keep it, we can sustain our association ourselves." And, after all, whose money is given to aid in its sustenance but mainly the money of the farmers and mechanics of Ontario? And if they choose to have a portion of their own money devoted to the development of the two great arms of

the productive power of the country, who may complain? Great as has been the benefit resulting from our Agricultural Societies in all parts of the country, we have much work yet to do. So long as there is waste land to be reclaimed, or any portion of the country badly farmed, or there are neighbourhoods with poor, ill-provided stock—and how many such there are? we shall still have an unaccomplished mission. Besides, we need constantly the stimulus to continued improvement which these exhibitions afford; and we are all apt to have high notions of our doings and attainments. Contact with others at these exhibitions will have the effect of modifying them. Then, we must not flag in our progress; we must aspire to higher attainments. Love to our profession, and just views of its dignity and importance, are the basis of progress and success. The love of farming which prevails in many of the rural districts of France and Germany is due to the many agricultural schools and colleges which flourish there. Country life has real and substantial charms. There is in it a peacefulness and calm contentment which is welcome to every well-regulated mind. Horace, in one of his odes, says of it,

“*Beatus ille, qui procul negotiis,  
Ut prisca gens mortalium,  
Paterna rura bobus exerceat suis,  
Solutus omni penore.*”

It does present the same attractions still; yes far greater are its allurements now. The Roman farmer groped in the dark; he had not the light of science to guide him, and his implements for tillage were of the rudest and most imperfect character. Above all he wanted the benign influences of Christianity to give him cheering promise of the life that now is and high hope for the future. His religion was such as lust makes welcome; of his religious services it is a shame even to speak. How elevating and ennobling are ours! There is too much reason to suspect that by many the life of a farmer is regarded as an unceasing round of dull toil, in its most repulsive forms, which must be endured, because it cannot be dispensed with. A great living philosopher, McCosh, eloquently gives the true estimate “When God gave the earth to the children of men, He meant it to be to them a source of something more than mere sustenance. There are scenes spread all over its surface, which have delighted or roused the soul of man, and helped to shape his character and his history. The fertile field the pleasant dale, the murmuring rill, the gently flowing stream the rugged mountain, the bold headland, the thundering cataracts, these have all been the means of soothing, of exciting or awing the spirit of man. The vegetable productions embrace and vary the effect by the lightness and gracefulness of their forms and harmony of their colors, by their tangled luxuriance in our meadows and by our rivers' banks, or by the sombreness of their hue and depth of shade which they furnish. These aspects of nature have all had their influence in raising up new ideas and fresh feelings in man's soul. The physical character of a region, the nature of its surface, whether flat or hilly, its soil and minerals, the size and flow of its rivers, the mountain chains which cross it, and the bays of the sea which indent it, the clearness or cloudiness of its atmosphere—all these have moulded to some extent the physical peculiarities of man and determined his tastes, his pursuits and his destiny.”

We ought never to forget that the advantages we

possess entail on us grave responsibility. Our responsibility keeps pace with our privileges. We must not be content with our present status. Every consideration of honor and duty demands that we should do all in our power to reclaim the waste places of our land, and to till better what we have under culture. There can be no limit to progress in agricultural science; finality is out of the question. How much has been done during this century in the elucidation of laws which were formerly hidden from man's observation, and how wonderful and varied their practical application has been! And who can estimate what will be the condition of our country and its people by the close of this century? Progression is geometrical; and we have the great part to play in the material development of the country. The requirements of the age, and above all our duty to God, demand that we shall go forward. The important question then is, do the majority of the farmers and mechanics of Canada really love their professions, or do they pursue them simply as furnishing means for subsistence? If the latter be the actuating motive, little progress will be made. Men do well what they take pleasure in doing; a man cannot be proficient in business which he does merely in a perfunctory manner. The supply of daily wants in America, as compared with the struggle for existence in many parts of the old world, is an easy task. Here nature is very bountiful in her gifts, in proportion to labor bestowed. Were our farms tilled and manured as they are in the best parts of Europe what would the products be? And, although in a new country, where there are many hardships to be encountered, it is a wise and beneficent provision of God that the means of subsistence should be easily procured, still it often proves one of the hindrances to agricultural improvement. When men get what they need easily, they are apt to aspire no higher. *Inciutem a men is*, as Quintillian says, are needed to lead to greater earnestness in the work of agricultural improvement. Much good has been done in Britain by meetings for discussion—chiefly by the instrumentality of Agricultural Societies and of Farmers' Clubs; during the last half-century, whole counties have been transformed. And even there, much yet remains to be done. Nothing, even in Yorkshire astonished me more than the large tracts of land still unreclaimed. It shows how slow is the march of improvement, even with all the skill and appliances of our times. Great Britain annually imports large quantities of food, yet much of the deficiency might be supplied by agricultural improvement. We do not need to import food, but by better tillage we could add very largely to our exports. My conviction is that we have lessened, *non t materialiter*, the *genus odium* power of the country, by the excessive drain which we have made on it for so many years. There can be no question that the most direct and economical recuperative process is in increasing the number of acres of grass and diminishing the number of acres of grain—in other words, by *more and better stock, and less grain*. After all, I should not say that the result will be *less grain*. The acres in grain would be fewer, but the gross product would be much larger, while we should have more beef, mutton, and pork, and of better quality. It is also of the greatest importance to economize food for stock as much as possible, because *labour is money*, and labour costs a good deal of money in Canada. There are *two* ways of doing this—by improving the quality of the stock, and by economy

in the mode of giving them their food. Some years ago I was much struck with the truth of a remark made by a farmer at the meeting of a farmers' club in Yorkshire. The subject under discussion was the kind and quality of stock which farmers ought to keep. He said "*I can not afford to keep inferior stock, it is too expensive.*" This was true to the letter—inferior stock is too expensive to be profitable; that is, food, which has cost a great deal to produce it, is given to animals which from their nature and conformation, give the poorest possible returns; there can be no economy in that. I do not wish to be understood as insisting that every farmer ought to keep a thoroughbred herd; that is a business by itself, for as Thomas Bates once said with entire truth, "There are twenty men fit to be premier for one that is fit to be a breeder;" yet every farmer who breeds cattle, or sheep, or pigs, ought to have pure-bred males, and to use no other if he can get them, because it is only in this way that he can cheaply raise animals which will give the largest return for the food they get. Much may also be done in the way of economizing food by the mode in which it is given. Of course food will go much further when it is prepared in such manner as will give the digestive organs as much aid as possible, such as by cutting and steaming, and by crushing grain, etc.; but I specially refer to a practice which is becoming more common than it was, namely, giving stock a portion of grain or other condensed food while on pasture, and by soiling. Many recent experiments have been made which show that a very large saving can be effected by this process. The most extensive Canadian experiment has been made at Bow Park. Mr. Brown has expressed himself to me in terms of high commendation of this mode of feeding, as proved by his experience; the results of which, it is to be hoped, he will make public.

When I had the honor on a previous occasion (15 years ago) to address you, I alluded at some length to the great necessity for more thorough and systematic agricultural education. So much does want of it still appear to me to be urgent, that I feel it to be my duty again to refer to the subject. The question is, what can be done to supply the deficiency? We have an agricultural class in University College, and an able experienced teacher, but few students. My conviction is that the work must be more radical; it must begin in our common schools; that is, elementary agricultural and mechanical instruction should form a leading part of the teaching. Dr. Ryerson has published a valuable little work on agriculture which I hope to see made a text book in all the rural districts. Unquestionably the result of giving elementary instruction would be not only to impart much important scientific and practical knowledge, but to make the farmers' sons of the country feel the importance and dignity of the profession of agriculture. Dr. Ryerson has done good service to the country by compiling the manual to which I have referred, and I hope that he will see to it that the benefit which it is so well calculated to confer shall not be lost to the country. It is a good thing for the cause which we desire to promote that we have so able a coadjutor as the Chief Superintendent of Education. I feel convinced that he will soon make agricultural and mechanical instruction a leading feature in our common school teaching.

The Council of the Association have continued the pecuniary grant to the Ontario Veterinary Col-

lege, which was given by their predecessors in the Board of Agriculture. This is a branch of education having special relations to agriculture, which, in terms of the powers and duties conferred on them by the Agricultural Act the former Board of Agriculture felt it to be their duty to establish and foster. The idea originated with that able and efficient friend of the agricultural interest, the late Hon. Mr. Fergusson of Woodville. In 1862, when Mr. Smith came to Canada, through the strong recommendation of Prof. Dick, late Principal of the Edinburgh Veterinary College, a course of veterinary lectures was given annually to a somewhat miscellaneous audience, extended in 1864, and 1866, three students passed final examination and received diplomas from the Board of Agriculture. In 1867 four students obtained diplomas. The range of studies became gradually extended, and in 1868 eight students passed. In 1869 the same number (eight) passed, so that the college has turned out twenty-three well qualified practitioners. The total number of students attending the veterinary course for the past three years has varied between 25 and 32. Some of them were agricultural students and did not take the whole veterinary course required of those who study for the practice of the profession. All veterinary students attend the lectures of Prof. Buckland on the breeding and management of farm stock. The whole expense to the Council has been annually—

|                               |          |
|-------------------------------|----------|
| Mr. Smith's salary .....      | \$200 00 |
| Dr. Thorburn's salary .....   | 100 00   |
| Expenses of examination ..... | 40 00    |
|                               | <hr/>    |
|                               | \$400 00 |

To this has been added, from last year, \$150 per annum to Professor Smith for the use of his new building, erected specially for the purpose, containing lecture and dissecting rooms, pharmacy, etc., in connection with the hospital. Mr. Smith receives a small fee from each student, except those in agriculture. Attendance in practice is strictly enforced in the case of professional students during the long summer vacation. Dr. Bovell and other resident physicians have rendered important service gratuitously, as have also two or three veterinary surgeons in Her Majesty's service, both as teachers and examiners. The success which has attended the College is very gratifying, and leads to the sanguine expectation of still more extended usefulness. Its importance to the agricultural interest of the country can hardly be over-rated. Before its establishment, well-qualified veterinary surgeons were very few, and in many parts of the country, whole counties were almost wholly destitute of professional skill. Apart from the question of practice, the relation of veterinary to social science is intimate and important. There are some diseases in animals similar to those in the human subject, and they are communicable one to the other. It is therefore important to all that the amount of danger which man incurs by living amongst animals should be known. The public health also demands that reliable information as to sound animal food should be at hand in all parts of the country. And for such information we are dependent on the wide dissemination of veterinary science.

The Council of the Association, valuing the importance of entomology in its relations to agricultural and horticultural science, voted a grant of \$400 to the Entomological Society of Canada, on condition that they should furnish an annual re-

port, form a cabinet to be placed at the disposal of the Council, and continue to publish their *Journal*.

An important modification in the late Tariff was made during the last session of the Dominion Parliament, with reference to the admission of animals of improved breeds into the Dominion for breeding purposes. Such animals are now admitted duty free. In their application to Parliament for this boon, the Council were ably assisted by Mr. Young, member for South Waterloo. I regret, however, to state that the action of our Legislature was not reciprocated by the Congress of the United States. Although the attention of the Chairman of the Committee of Ways and Means was called specially to the fact that our parliament had removed the duty formerly imposed on such animals, the only response was the special exclusion of Canada. The new American tariff provides that "animals specially imported for breeding purposes *from beyond the seas shall be admitted free.*" It is to be hoped that soon a more liberal spirit, and one more in accord with sound patriotism, may prevail. It is to the interest of American breeders, as well as our own, that there should be free intercourse for improved stock. And it is but just to say that any American breeders with whom I have conversed on the subject, unanimately denounced the action of Congress as absurd and unjust to them.

There are other matters to which reference might have been made, but I feel that I have already trespassed too much on your forbearance. Let us be encouraged by our success, in the work in which we are engaged. Be assured that the future will yet more abundantly repay your labors. "A grand plan of prophecy is advancing, both in the physical and moral world, and we live in the expectation of a coming era, when the streams which have run for ages alongside of each other will unite, and yield, at the same time, a nobler condition of the earth's surface, and of the spiritual character of its human inhabitants." "They shall not labor in vain, nor bring forth for trouble." "Instead of the thorn shall come up the fir tree, and instead of the briar shall come up the myrtle tree." "The child shall die an hundred years old."

Mr. Sheriff Ferguson moved a vote of thanks to the President for his able address.

Rev. Dr. Ryerson seconded the motion. With respect to the subject of agricultural education, he remarked that it had been suggested, and he hoped the suggestion would be carried out, that it should be included in the Normal School training of teachers.

Motion was carried.

On motion, Messrs. E. A. Macnatchon and George Murton were appointed auditors for the coming year.

Mr. Ira Morgan moved that the next Provincial Exhibition be held in the city of Ottawa. He said Ottawa only asked this as an act of justice from the farmers of the west. They had already permanent buildings, and notwithstanding the recent calamities their local show was very successful; and he was sure if the Provincial Exhibition was held there next year, it would prove a perfect success.

Mr. Geo. W. Eaton seconded the motion.

Mr. Sheriff Ferguson moved that Kingston be the next place of meeting.

Mr. Thomas Stock, Wentworth, seconded the motion.

Hon. Mr. Skead advocated at some length the claims of Ottawa. He said that Ottawa was prepared to spend any reasonable amount on the exhibition, even \$10,000 or \$15,000, if necessary. And on behalf of the merchants, the Board of Trade and the Board of Lumberers, he would say that if the City Council did not vote enough, they were prepared to give \$5,000 more. (Cheers.) They had ample accommodation for visitors. In addition to the hotels, they had five large school houses, which would be fitted up with beds; they intended to bring into the Canal a dozen steamboats, and their staterooms would be let at a reasonable rate; and they had also the promise of the Committee rooms in the House of Commons for members of Parliament and their friends. He had received letters from the managers of the railways and steamboats running to Ottawa, stating that they would carry visitors to and from the exhibition for one fare.

By request, the Secretary read a resolution of the City Council of Kingston, promising to provide ample accommodation if the Exhibition was held there.

Mr. David Wilson, President of the Kent Agricultural Society, complained that he was required to produce his papers before he could be enrolled as a delegate.

Mr. John Rochester, Mayor of Ottawa, read a resolution passed by the Ottawa City Council, pledging the Council to furnish the necessary accommodation for the exhibition, in case it would be held there next year. He added that he was sure the Association would not suffer in the least by going to Ottawa, and that the stock breeders of the west would reap a benefit, because they would find ten times as many purchasers there as they would find in Toronto, Hamilton, or London. Ottawa had gone to considerable expense in preparing grounds for the exhibition, and their stalls were higher and dryer than those at Toronto.

Mr. Findlay, of North Renfrew, argued briefly on behalf of Ottawa.

Mr. Gildersleeve spoke in favor of Kingston, objecting to Ottawa as not being so easy of access as Kingston.

Hon. Mr. Skead said they had an assurance from the Board of Agriculture from Quebec, that if the exhibition went to Ottawa, they would unite with them.

The vote was then taken, and resulted as follows

|                    |    |
|--------------------|----|
| For Kingston ..... | 77 |
| For Ottawa .....   | 51 |

Kingston was therefore declared to be the place of the next meeting.

Votes of thanks were then passed to the Mayor, Corporation, and citizens of Toronto, for the assistance they had rendered the Association, and to the Railway and Steamboat Companies for the facilities they had afforded; and the meeting separated.

The Council of the Association met in the course of Friday afternoon, and took action with regard to certain protests and complaints of exhibitors that were laid before them. In consequence of the election of Mr. James Young, M. P., as President of the Mechanics' Institutes Association, Dr. Beatty, the ex-President, retires from his seat at the Council Board, and Mr. Young takes his place. With reference to the retirement of Dr. Beatty, the fol-

lowing resolution, on motion of Prof. Buckland, seconded by Mr. Cowan, was unanimously adopted:—"The Council, having heard with deep regret that Dr. Beatty, in consequence of no longer being President of the Mechanics' Institutes Association, ceases to be a member of this Board, desire to express to that gentleman the high sense which they entertain of the invaluable services which he has for many years rendered to the agricultural, manufacturing, and artistic interests of the Province, and the industry, judgment, and urbanity which he has invariably manifested; and they also desire to convey to Dr. Beatty, on the dissolution of their connection, their high estimation of his character and the disinterested public service which he has rendered."

Another matter was brought before the Council, of not so pleasant a nature. It was alleged by gentlemen from the Ottawa district that the voting on Thursday night as to the place of the next meeting was irregular, gentlemen having in some instances voted in the name of County Societies which they did not represent. It was stated that a boy of fifteen voted for one Society; and other cases were mentioned in which the same person voted for two or three Societies in the absence of their properly qualified representatives. After some discussion, a Committee was appointed to investigate the matter, and report.

#### THE WESTERN FAIR.

[*Edito in: Corre pondeve.*]

LONDON Sept. 28th.

The much spoken of and long looked for Western Fair—by a few attempted to be magnified into a rival of the Provincial Exhibition—is in full blast, and as a consequence London wears her "best bib and tucker," and has brought out every inch of bunting she possesses for an airing. Just here it may be well to say that in so far as rivalry between the Western Fair and the Provincial Exhibition is concerned, except as a joke or a piece of sarcasm, the idea is too ridiculous to be entertained. As a local fair the Western was eminently successful—in fact a grand success,—and it may be questioned whether better, or even as good, an exhibition of the kind was ever held anywhere in Ontario. London, there can be no doubt, has made great efforts to have a successful affair in the West, and she has accomplished it in a manner that reflects credit on all connected with the arranging and carrying out of the project. In point of number of entries and amount to be paid in prizes, the Western Fair now in progress is far ahead of anything of the kind ever seen in this portion of Canada, there being nearly five thousand entries made by exhibitors, and upwards of six thousand dollars awarded in prizes.

The attendance of visitors is very large, the number being stated as little short of that at the Provincial Exhibition in London last year. Being in the centre of a thickly populated and wealthy

section, this was to be expected, as, being in a measure interested in the Fair, every person in the surrounding counties who could do so has come to London to "see the sights." It is a pity it could not be arranged so that the census of London could be taken just now, in order that the population thereof might be swelled beyond what it otherwise would be.

The Fair is held under the joint auspices of the East Middlesex and City of London Agricultural and Horticultural Societies, thus combining the energies and efforts of two very strong associations.

The show of live stock is good and large. In the different classes of horses there were over six hundred entries, about one hundred and fifteen of the number being agricultural horses. There were many very good ones, showing that the farmers of this section pay considerable attention to the raising of good horses.

The display of cattle was also large and good, the short-horned breeds being well represented. In Durhams the entries were very numerous, and some really excellent stock of this breed was exhibited. Among the animals shown were some recently imported from Great Britain.

In sheep there were about three hundred and fifty entries, principally Leicesters. None of the sheep shown were anything extra; in fact, so far as the show of sheep is concerned, the Fair cannot be called a great success.

There were not many swine shown, and what there were principally of the Berkshire breeds. There were some good animals among them, but none that could be called extra.

The show of poultry may be noted as a particularly large and good one. There were over five hundred entries, embracing nearly every breed known to poultry fanciers and some of as fine specimens as were ever exhibited in Canada. Aside from the Provincial Exhibition it is doubtful if a better collection of poultry has ever been shown in this country.

There was also a good variety of pigeons exhibited, as also quite a number of common rabbits.

In grain the show was not large, but what there was of it was good. Wheat and corn were the principal classes shown, and the samples of these were good. In other grains the show was a decided failure.

A few bales of hops were shown but the quantity was hardly sufficient to make the show in this line a good one.

In roots and other field crops the display was large, some very fine pumpkins, squashes, turnips and carrots being shown. In cabbages and cauliflowers the show was a failure. The display of potatoes was large and good.



In the horticultural department the show was very good, but did not come up to what some people had been led to expect. The display of apples was really fine, and the specimens shown gave evidence that fruit culture is not neglected in the West. There were but a few peaches and pears shown, though some of the latter were splendid specimens. Grapes were not largely exhibited, but among those shown were some of the largest clusters I ever saw.

The plants and flowers were the crowning feature of the horticultural department. The collection, besides being large, was really a very superior one, and shows that the inhabitants of London and vicinity are not behind any of their neighbors in raising flowers. Noticeable in this class was the display of coxcombs, some of the finest ever shown in Canada being on exhibition.

The dairy products exhibited would not impress the visitor with any very great sense of their superiority. The display was by no means so large as might have been expected.

There was a few entries of hams and bacon, but the specimens were inferior.

In agricultural implements the display was better than is usually expected at a local fair. Every kind and class of farming implements and machinery made were represented. Particularly noticeable was a ditching machine at work, which showed itself capable of giving good satisfaction.

Cabinet ware was not very largely represented, though the specimens shown were of a very superior class. In other wood work the display was only fair, both as regards quantity and quality.

The carriages shown were principally of London manufacture, and fully sustain the high reputation attained by that city in this branch of industry.

In the fine arts department there was a good display of painting, drawing, photographs, etc.

In ladies' work a most superb display was made, though somewhat limited in quantity. It is doubtful if the Provincial Exhibition will be able to produce any more beautiful specimens than were shown at the Western Fair.

A prominent feature in the industrial department of the Western Fair was the display of sewing machines. Several different makes were exhibited, but your Hamilton manufacturers carried away the principle prizes, Messrs R. M. Wanzer & Co. taking first, and Messrs. Wilson, Bowman & Co., second. The machines exhibited by those two firms reflects very great credit on their enterprise, and show that they can turn out work, in their line equal to any in the world. Messrs. Wanzer had on view one of the most superb machines ever turned out of their

factory. It was made on a special order for a person in England; the case is handsomely inlaid with pearl and gold, and the value of it is said to be \$250. Messrs. Bowman, Wilson & Co.'s machine is a really handsome piece of workmanship; plain, neat, and substantial, yet beautiful. The manufactures of these two firms are deservedly popular wherever they have been introduced, and reflect great credit on the enterprise of the "ambitious city."

There were a few musical instruments, such as pianos, harmoniums, melodeons, and organs, shown, but none of them were of a superior character.

A very fair show of Canadian woollen goods was made. In point of beauty and finish some of the cloths, flannels, and blankets exhibited, equal any ever produced by English manufacturers.

Leather and leather work, a fair display.

A good exhibition of stuffed birds, animals and insects, prominent among which was to be seen the destructive Colorado potato beetle and its enemies.

On the whole the London folks may congratulate themselves on having as good a local show as was ever held in Ontario.

#### ASSOCIATION OF MECHANICS' INSTITUTES.

##### SECOND ANNUAL MEETING.

The Annual Meeting of the Mechanics' Institute Association of Ontario, was held on Wednesday evening, Oct. 5th. The following representatives from Mechanics' Institutes were present:—Dr. Beatty, of Cobourg, who occupied the chair; Messrs. D. McDougall, Berlin; J. Oberholtzer, do.; James Young, M. P., Galt; H. Hall, Clinton; J. J. Witrow, Toronto; T. Davison, do.; D. McCrae, Guelph; J. McNeil, do.; W. Edwards, Woodstock; Robert McKnight, Meaford; D. Sinclair, do.; R. Roy, Hamilton; and H. McKay, Woodstock.

The minutes of the last meeting were read and approved.

The Secretary read the annual report of the executive committee. A circular had been issued to affiliated Institutes, descriptive of the organization, management and success of the evening classes of the Toronto Institute. The Committee had also issued a catalogue of books procurable, and purchased books at reduced rates for Institutes desiring it. Several Institutes had followed the example of the Toronto Institute in establishing evening classes, and the experiment had been so far successful. With regard to catalogues, what was desirable was a regular publication in some popular Canadian monthly journal, or in an independent form, of a complete list of such new works and new editions of old works as were contemplated by the Agricultural

and Arts Statutes in the granting of Legislative aid to the Institutes. The Committee recommend the publication of such a list, and the sending of free copies to all the Mechanics' Institutes in the Province. The value of Books purchased for Affiliated Institutes during the year was as follows :

|  |       |    |
|--|-------|----|
| For Mount Forest Mechanics' Institute... | \$ 51 | 67 |
| do Meaford do do ...                     | 101   | 84 |
| do Merrickville do do ...                | 32    | 40 |
| do Smith's Falls do do ...               | 93    | 04 |
| do Mitchell do do ...                    | 52    | 29 |
| do Milton do do ...                      | 93    | 03 |
| do Thorold do do ...                     | 58    | 34 |

Other amounts are now in the hands of the Secretary for similar purchases. The number of Institutes taking advantage of the Legislative aid was increasing. In 1868 the amount of aid received was \$1,010.00, in 1869, \$3,397.16. This year the Institutes that have received aid to date are :—

|                    |         |    |
|--------------------|---------|----|
| Smith's Falls..... | \$ 60   | 00 |
| Brantford.....     | 200     | 00 |
| Dundas.....        | 200     | 00 |
| Paris.....         | 100     | 00 |
| Toronto.....       | 200     | 00 |
| Meaford.....       | 50      | 00 |
| Streetsville.....  | 200     | 00 |
| Hamilton.....      | 200     | 00 |
| Berlin.....        | 137     | 14 |
| Galt.....          | 100     | 00 |
| Mount Forest.....  | 41      | 88 |
| Richmond Hill..... | 52      | 68 |
| Clinton.....       | 200     | 00 |
| Ayr.....           | 167     | 00 |
| Merrickville.....  | 50      | 00 |
| Woodstock.....     | 150     | 00 |
| St. Mary's.....    | 109     | 00 |
| Total.....         | \$2,217 | 70 |

The Committee regret that the Secretary was not able to make arrangements for the delivery of lectures before the Affiliated Institutes, by celebrated lecturers.

The Treasurer's statement shows :—

|   |       |    |
|---|-------|----|
| Receipts for the year.....                                      | \$147 | 20 |
| Expenditure.....  | 34    | 82 |
| Balance on hand.....  | \$112 | 38 |
| Assets—5 per cent, on grants to<br>Institutes not yet paid..... | \$ 91 | 14 |
|   | \$203 | 61 |
| Liabilities about.....  | 100   | 00 |
| Available Assets.....   | \$103 | 61 |

Mr. D. McCrae moved, seconded by Mr. J. J. Withrow, the adoption of the report carried.

Mr. James Young moved, seconded by Mr. J. McNeil, that \$100 be presented the Secretary, Mr. Edwards, for his valuable services during the past year.—Carried.

Mr. D. McCrae moved, seconded by Mr. Roy, that all institutes paying fees on their legislative grants

shall be deemed affiliating institutes, and all other institutes affiliating shall pay an annual fee of one dollar.—Carried.

Mr. J. J. Withrow moved, seconded by Mr. McNeil, that the offer of this association of last year be repeated, in reference to the supplying of the English "Bookseller and American "Publisher's Circular," at a cost \$1.50 per annum, to those institutes affiliated with this association.—Carried.

Mr. H. Hale moved, seconded by Mr. McDougall, that in the opinion of this association it is desirable and just that Mechanics' Institutes should as regards aid from the public funds, be placed on the same footing as agricultural societies, in such manner that the amount granted to each institute shall be in proportion to the amount contributed to it by the members and subscribers; and that a petition to this effect signed by the President and Secretary, be prepared and sent to the Government of Ontario.—After some discussion the resolution was carried.

The meeting then proceeded to the election of officers for the ensuing year. The following gentlemen were elected :—

President—Mr. James Young, M. P., Galt; Vice-President—Mr. R. Roy, Hamilton; Secretary-Treasurer—Mr. Wm. Edwards, Toronto; Executive Committee—Dr. Beatty, Cobourg; and Messrs. D. McCrae, Guelph; D. McDougall, Berlin; and Thomas Davison, Toronto.

On motion of Mr Withrow, seconded by Mr. Roy, a vote of thanks was tendered to the retiring President for his valuable services in the past.

After some remarks by the retiring President and the President elect, the meeting adjourned.

#### ONTARIO BEE-KEEPERS' ASSOCIATION.

The annual meeting of the Ontario Bee-keepers' Association was held in Victoria Hall, Toronto, on the 5th Oct. The meeting having been called to order by Rev. W. F. Clarke, President of the Association, the minutes of the last meeting were then read by the Secretary and approved, after which a few very appropriate and interesting remarks were made by the President. The meeting then proceeded to the discussion of the following questions: Is there any danger of stocks having too much honey for wintering well? It was decided that there is not. What is the true principle of ventilating stocks in the winter, and how may it be secured? After a somewhat lengthy discussion, it was decided that the true principle of ventilation consists in retaining the heat, but allowing the moisture to escape. In what respect are the Italian

bees superior to the black bees? After a pleasant discussion, it was decided that they were more prolific, more inclined to swarm early, hardier and better honey gatherers.

The officers were then appointed for the ensuing year, as follows:—Rev. W. F. Clarke, President, re-elected; J. H. Thomas, Vice-President; A. C. Attwood, Secretary and Treasurer. Executive Committee—H. M. Thomas, D. A. Jones, G. Bennett, B. Losee, D. M. Beckie.

The meeting then adjourned, to meet again on Thursday evening in Victoria Hall, Meliada Street.

On Thursday evening, Oct. 6th, the Association met, pursuant to adjournment.

In the absence of the President, the meeting was called to order by the Vice-President. The meeting proceeded to discuss the following questions:

Which is the most profitable way of disposing of late or weak stocks? It was decided it was best to take them up.

The opinion was generally expressed that the honey extractor was likely to come into general use among bee-keepers.

After considerable discussion, it was decided that it was doubtful whether artificial impregnation could be reduced to successful practice.

After much discussion, it was unanimously decided that in ordinary seasons it is unsafe to take honey from the body of the hive later than the 1st of July.

No decision was arrived at on the question, What is the best plan to prevent swarming?

Have any cases of foul brood been discovered? It was answered that four cases had been observed.

Do queens mate more than once, and are queens ever partially impregnated? After some discussion, it was decided in the affirmative.

The meeting then adjourned, to meet again at the time and place of the next Provincial Fair.

#### ENGRAVINGS OF PRIZE ANIMALS.

In our present issue we complete the series of portraits of prize animals promised a year ago. We have spared no pains or cost to make them first-class and sure we are there has not been an inferior specimen among them. The production of engravings by the best artists is an item of serious expense, and as their publication is a matter of advantage to the owners and breeders of the animals represented, we cannot but feel that it is only just they should bear at least a portion of the cost. In our experience, Messrs. Cochran of Compton, Quebec, and Mr. John Miller of Brougham, Ontario, are the only parties who concur in our view of the

case. Mr. Cochran especially has manifested a most liberal spirit in regard to engravings. This year we have determined to leave the matter in the hands of our stock-men themselves, making them very cheerfully, the offer of space in which to set forth the beauties and pedigrees of their choice animals, but letting them find their own engravings. This is the course we find that almost all agricultural journals adopt, and we are inclined to think it will agree better with our profits than the one we pursued last year.

#### THE "LEADER" AND THE LONDON FAIR.

The *Toronto Leader* has delivered itself of several well executed snarls against the London Western Fair, which are quite unbecoming, or at least would be anywhere than in Toronto. It was a blow at the Provincial Exhibition the *Leader* told us, which is bad enough, but considering that the Provincial Exhibition was this year held in Toronto, the offense is intolerable. To what end has beneficent nature arranged that the sun shall rise every morning out of the blue waves of the Don and set every evening on the Western verge of Garrison Common, if such things are to be? Is the "Commercial, industrial—and all the rest of it—Centre" to have its plans frustrated by the impertinent ambition of a city lying a hundred miles beyond the peripheral boundary of the region of civilized illumination? Forbid it, ye gods and little fishes. Shall Toronto have her "adolescent gentlemen taught their alphabets at a cost of ninety-four dollars a year each, out of the funds of a dutifully admiring country, and then be bamboozled in the matter of an Agricultural Fair? "Not much," unless the sin of ingratitude is making rapid and alarming progress among the people. Will our forgetful friends of London pause and think of the services Toronto has rendered and is rendering to the country; of the costly public buildings which she has graciously allowed to be erected within her sacred limits, without so much as an ill-natured murmur; of the vast sums of money which she allows to be expended every year, for the benefit of her visitors? Thither the oppressed of every part of the country flock to find justice and lawyer's fees. She has given the world a Captain Bennet, and the rudimentary plans of a narrow gauge railway, including some examples of financiering of fascinating brilliancy. And, in the perversity of its heart the Forest City forgets these things, does it? No matter. "A great many people (says the *Leader*) have long thought that "instead of perambulating the country like the capital some years since, the [Provincial] exhibition ought to have a fixed locus."

"Fixed locus" of course is a playful name for Toronto, so let London take heed in time.

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EDITORIAL GLEANINGS.

The Agricultural Society of the united townships of Saitsfleet and Binbrook held their annual show on the 30th ultime, at Hall's Corners, in the township of Binbrook. The day being wet there was not as large an attendance as usual. The total number of entries was 800, an increase of 186 over last year. The display in general as well as the number of entries was better than of any previous exhibition.

*Tilton's Journal of Horticulture* for October has been received and is fully up to its usual standard of excellence. The illustrations and descriptions of new things are alone worth the subscription price, and as the price is to be reduced from \$3.00 to \$1.50 after this year, everyone can afford to take it. The publishers offer very liberal inducements for making Clubs. If a Club of ten be made, it will cost but \$1.00 and each may have the remaining numbers of this year free. They also offer a long list of attractive premiums to those making up Clubs. Send to J. E. Tilton & Co., Boston, for a sample copy and premium list, which they will send to any address.

*Peterson's Musical Monthly* for October is a very choice number. This periodical is published at 599 Broadway, New York for \$3.00 per year, and contains 432 pages of new music in the volume.

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CATALOGUES RECEIVED.

HOVEY & Co's CATALOGUE OF BULBS and Illustrated Guide to Winter and Spring Garden. A Descriptive Catalogue of Flowering Bulbs, containing a choice collection of Dutch and other flower roots, comprising the finest hyacinths, tulips, narcissus, crocus, crown-imperials, lilies, iris, panics, &c., with directions for their various modes of culture. Hovey & Co., Boston, Mass

VICK'S ILLUSTRATED CATALOGUE OF HARDY BULBS AND FLORAL GUIDE. Similar to the preceding. James Vick, Rochester, N. Y.

B. K. BLISS & Sons' AUTUMN CATALOGUE AND FLORAL GUIDE. 23 Park Place, New York.

CATALOGUE OF FRUIT AND ORNAMENTAL TREES, VINES AND SHRUBS for sale at Windsor Nurseries. J. Dougall, Windsor, Ont.

DESCRIPTIVE ANNUAL CATALOGUE OF BULBS AND OTHER FLOWERING ROOTS with directions for their culture and management. J. Simmicks, Toronto.

## The Farm.

### FARM IMPLEMENTS AT THE RECENT PROVINCIAL SHOW.

Nothing so decisively proves the rapid advancement of agriculture as the number and excellence of those machines and implements which mechanical ingenuity and enterprise are from time to time perfecting with a view to lightening the farmer's toil, and improving the quality and celerity of his work. In no department of our great annual exhibition do we see progress and improvement evinced more clearly than in this. We make no apology for devoting special attention to this interesting part of the display recently had in Toronto.

Passing through that portion of the grounds devoted to such machines and implements as admit of out-door exhibition, the first thing we came to of sufficient importance to claim attention, was a Ball Ohio Combined Mowing and Reaping Machine, with Dodge's self-rake attachment, manufactured by John H. Grout & Co., of Grimsby. This machine seemed to be one of the best on the ground. It is well made, has all the latest improvements which the inventive brain of Mr. Grout could suggest, and is finished in a very superior manner. Among some of the good qualities of this machine we may notice:

1st.—It cuts one width in mowing and another in reaping, the only way to make a perfect combined machine. 2nd.—The arrangement of its gearing, there being no cogs on driving wheels to catch dirt, while the rest of the gearing is completely covered up. 3rd.—Changeable speed; high speed for mowing, slow for reaping, and ease of changing the same. 4th.—Being adapted for using either smooth edge or sickle knives for reaping. 5th.—Pitman boxing, which is far superior to any other in use, and which is pronounced by all parties using it to be perfect. 6th.—Its self-rake, the lightest, strongest, easiest running, and most perfectly controllable of any self-rake made. 7th.—Its having a reel for mowing, if desired. 8th.—Its ease of change from a reaper to a mower, and *vice versa*. 9th.—Its lever for raising finger-bar in mowing, far superior to old kinds. 10th.—Its being a perfect mower, a perfect reaper, and self-raker. 11th.—Its being of lighter draft, of more perfect construction, and of better finish, than any machine in the Dominion.

A. Harris & Son, of Beamsville, show alongside of the Ball's Ohio one of their improved Kirby machines. This machine appears in every respect well built; but whether it will do as much work, and do it as well, under all circumstances, as the other, is a matter which the field test alone will decide.

John Forsyth, of Dundas, shows a couple of well made combined machines, with a new self-rake attachment.

We noticed among many others a very handsome Combined Reaper and Mower, with Dodge's Self-Rake attachment, made by Haggert Brothers, of Brampton. The Messrs. Haggert have given a great deal of attention to bringing their machines as near to perfection as possible, and the extent to which they have succeeded is expressed by the number of prizes which they have taken, and the very great satisfaction which they have given to all who have used them. One of the prominent features of these machines, is that the reaper platform can be raised or lowered either at the back or front, by the driver, without stopping his team or moving from his seat, while at the same time the arms of the rake maintain their relative position to the platform. The rake can be stopped, when desired, by a simple movement of the foot of the driver, and with equal facility the machine can be thrown out of gear, or the table raised to pass obstructions, or lowered to suit the grain in which it is being used. There are few machines now in use in which so many useful improvements are combined.

Another very good machine, and very much of the same make as that of the Messrs. Haggert, is shown by John Herring, of Napance. It has the Dodge's Self-Rake attachment, with many very valuable features in connexion with the arrangement of the gearing. It is in every respect a well made machine.

John Watson, of Ayr, exhibited a good machine. Mr. Watson has devoted a good deal of attention to studying up improvements, and he has succeeded in making several of them in his machines, which now stand among the best in the country. There is one thing about the Ayr machine, or any other implement made by Mr. Watson,—the purchaser can always depend on finding them exactly as they have been represented to him, and that none but the best of material have been used in their manufacture.

Messrs. L. D. Sawyer & Co., of Hamilton, have on exhibition one of their celebrated Ball's Ohio combined Reaping and Mowing Machines, with the Dodge Self-Rake attachment. This firm has not been long engaged in the manufacture of these machines; but so popular have the machines they make become, that they find it hard work to keep pace with the demand for their reaping and mowing machines, as well as the other agricultural implements which they manufacture. Their combined machine has all the latest improvements, is well built, and stands the field test well.

Patterson Brothers of Patterson, show a very good

combined machine, with a new and ingenious self-rake attachment, recently invented by them. This rake seems destined to become very popular.

J. Lawrence & Son, of Palermo, show one of their widely known double speed Ball Ohio combined machines, with Dodge self-rake attachment. This machine has proved itself a very serviceable one and has become quite popular among farmers.

The Massey Manufacturing Company, of Newcastle, have on exhibition an improved combined machine, which makes a good appearance.

There were also one or two American made machines on the grounds, but as they were not entered for competition, it is needless to say anything about them further than that they were of the best makes.

In threshing machines quite a number were exhibited, though we expected to see more. Those shown were all good, and give evidence of a determination on the part of our Canadian manufacturers to keep even with if not to excel their neighbours in the United States.

John Watson, of Ayr, exhibited a splendid threshing machine, on wheels, known as "Watson's Agitator." This machine has long been popular among farmers, and like everything else which Mr. Watson makes, is got up in good style and of first-class material.

Ronald & Hyslop, of Chatham, enter the lists as competitors with one of their celebrated "Vibrators," a machine very much the same as Mr. Watson's, and in every respect well made. This machine is also on wheels.

The same remarks will apply to another "Vibrator" shown by John Scott, of Caledonia.

Messrs. McPherson, Glasgow & Co., of Fingal and Clinton, show two of their celebrated "Climax" machines and one of them on wheels. The machines are certainly very good ones.

Messrs. L. D. Sawyer & Co., of Hamilton, exhibited a clover thresher. It was the only one on exhibition, and we should judge from appearances is a very good one.

Messrs. Haggert Bros., of Brampton, show in this line a splendid threshing machine. This machine possesses several very good features, one of which is an ingenious contrivance for moving the concave of the thresher to any desired position. This machine is strongly built, and well finished. We could not help noticing the smoothness with which the horse power accompanying this machine worked, a little boy turning it with apparent ease.

The other exhibitors in this line were E. & A. Medcalf, of Toronto, Samuel Marner, of New Hamburg, D. M. Potter, of Elora, and L. Butterfield, of Bradford.

There were a few horse rakes on exhibition; but, after watching their motions attentively for some time, we failed to see any improvement over those shown in former years. The exhibitors were Geo Davis, of Nichol, John Watson, of Ayr, the Massey Manufacturing Co., of Newcastle, L. D. Sawyer & Co., of Hamilton, and James Soutar, of Chatham.

In land rollers, there were three or four very good ones shown. The principal exhibitors were H. Folliot, of King, Andrew Kennedy, of Strathallan, Samuel Wilcox, of Glanford, and Jas. Bolton, of London.

In cultivators, the display was large and good, and the patterns almost as varied as the number of exhibitors. The principal ones are shown by Samuel Sleep, of Perrytown, Isaac Westcott, of Bowmanville, John Dodge, of Whitby, Chas. Thain, of Guelph, Atkinson Bros., of Etobicoke, L. Johnson, of London, W. R. Gray & Co., of Dundas, T. & G. Morgan, of Markham, Misener & Borer, of W. Flamboro', Patterson Bros., of Patterson, R. Lean, of Stratford, and John Watson, of Ayr.

There were a few very good iron and wooden harrows shown, the exhibitors being Peter Malaby, of Weston, Lochart & Miller, of Peterboro', H. Folliot, of King, Isaac Westcott, of Bowmanville, John Dodge, of Whitby, and Geo. Carr, of Sidney.

Only three grain drills were shown. They were good ones, however, the exhibitors being L. D. Sawyer & Co. of Hamilton, John Watson of Ayr, and Maxwell & Whitlaw of Paris.

E. Wallis, of Elgin, Q., showed a very good combined grain sower and harrower, also a grain sower. They appear like serviceable machines.

John Colgan, of Tecumseh, had on exhibition a very handy plaster sower; also a clover seed sower for attaching to front of land rollers.

Some very good seed sowers were shown by John Watson, of Ayr, and Charles Thain, of Guelph.

Besides these, there were many small field and barnyard implements, such as turnip seed sowers, root cutters, straw cutters, fanning mills, hay knives, and a multitude of other articles which it would be tiresome both to read of and to write about.

Three or four horse pitchforks were shown, but they were just about the same as they have been for the past two years, no real improvements being apparent, though some are claimed.

A very ingenious contrivance for digging and gathering potatoes was shown by Thomas Rott, of Erin. Potato harvests will no longer be dreaded with such machines in use.

A splendid display of ploughs was made, and many really good articles were shown. Chas. Thain of Guelph, took the first prize for a doubled mould board plough; John Morley, of Thorold, for a sub-soil plough; W. Kennie, of Eglinton, for a two-furrow plough; John Warnock, of Allandale, for an iron plough; John Watson, of Ayr, for a double shear French plough.

Eyer & Bro., of Richmond Hill, show one of Carter's patent ditching machines, a very useful and well-built article.

Stump extractors were shown, but they possessed no special merit that we could discover.

In patent pumps there was a large display, and the continual streams of water which they poured upon the grounds kept it in rather an unpleasant condition. They certainly helped to aggravate the mud producing qualities of Toronto.

Patent gates and patent fences of every description were shown, and the stories that were told about them by their respective inventors, lead one to believe that before long gates and fences will be discovered that will work of their own accord, independently of the assistance of mankind.

George Northey, of Hamilton, showed one of his celebrated portable steam engines, an examination of which shows it to be well adapted for use about the farm in driving machinery of any kind. He also exhibited a small donkey pump, worked by a rotary steam engine, a very ingenious contrivance.

An effort was made during the Wednesday afternoon to exhibit one of the traction engines brought to this country some two years ago, to run through Grey and Bruce, but the attempt was a failure. Toronto is altogether too muddy a place for such an exhibition especially about the exhibition grounds. The last we saw of the concern it was stuck fast in the mud directly in front of one of the entrances to the Palace, and it seemed likely to remain there. We fear the traction engine for common roads is destined to prove a failure in this country.

## The Live Stock.

### THE LIVE STOCK AT THE RECENT PROVINCIAL EXHIBITION.

To inspect this part of the Exhibition was a thing only to be done under difficulties, especially these two: The muddy inaccessibility of the views, and the absence of informants as to ownership, history, and pedigree of the animals. Next to these a very serious difficulty presented itself in the crowded state of the precincts of such stalls and pens as contained more than usually attractive occupants.

#### HORSES.

The entries in the blood class are but few. The chestnut horse "Extra" owned by D. Morton, took the first prize for aged stallions, and the diploma for the best horse of any age. Mr. Shedden's colt, sired by "Lightning," was an object of attraction, and won the highest honors in his class. Road and carriage horses mustered strong. Mr. Orr, of Georgetown, again carried off the prize in the aged stallion class with the fine animal that carried off the same laurels in London and Hamilton. Mr. Buckland, of Guelph, exhibited an imported coach horse, which, to the surprise of many, failed to get a prize. Mr. Simon Beattie showed a fine imported animal, "Grand Turk," among the three year olds. The two year old and yearlings were well filled classes. Six French Canadian stallions were shown, fine, compact, well built, hardy looking creatures. Matched carriage horses we have seen better repre-

sented at Provincial Fairs, though some fine pairs were shown, among which those owned by Mr. Grand, of Toronto, and Mr. Carpenter, of Whitby, deserve special mention. Sixteen saddle horses were shown, Mr. A. Smith, V. S., Toronto, taking the first prize. There is a fine display of agricultural horses, and the growing necessity for deeper tillage will bring this class into higher favor, and more general use, as the years roll on. The class of draught horses, we believe, is a good one, but our opportunity of inspecting it was too limited to enable us to speak with confidence to its merits. On the whole, the Exhibition shows that our noble Province has no cause to be ashamed of its horse flesh.

#### CATTLE.

Notwithstanding the absence of some of the finest animals in the Dominion from this department, it comprehends in itself a show well worth going to see. The Short Horns are, of course, the chief glory of this department, as they are everywhere throughout the civilized world where any attention is paid to the rearing of high-bred cattle. Some newly imported animals owned by Mr. John Miller, of Pickering, were deservedly admitted both by the official and other judges of Short Horns. In a brief notice like this it is impossible to particularize or even so much as mention the more deserving animals. The bulls, from aged down to calves, were very fine; while even a stronger term may be applied to the female specimens of this inestimable breed, especially to the aged cow class which was filled up by superb creatures, and the one year old class a very fine lot of young heifers. The Herd Prize was only competed for by two herds, owned respectively by F. W. Stone, Esq., of Guelph, and John Miller, Esq., of Pickering. Mr. Stone was fairly eclipsed, and we are sure concurs in the award of the prize to Mr. Miller, whose herd was a magnificent one. In the Herefords, Mr. Stone, of Guelph, really got all the honors; for though beaten in one of bull classes, it is by an animal of his own breeding, and sold by him to his present fortunate owner. Mr. Stone deserves much credit for keeping up at so high a point of perfection a herd of a really noted breed of cattle, not as yet begun to be properly appreciated in this country. In Ayrshires there is considerable rivalry with a number of very fine animals. Mr. Thomas Thompson, of Williamsburgh, shows eight head only a fortnight imported, and of course carries off a large proportion of the prizes. A herd of Ayrshires from the Province of Quebec had been entered, but failed to appear to the regret of all admirers of this useful breed of cattle. The Devons put in a respectable appearance, Messrs. Rudd, of Guelph, Foley, of Darlington, and Spencer, of Whitby, being the leading exhibitors in

this beautiful class. The Galloways were out in all their sable glory. Most Scotchmen have a "canny" feeling toward this breed, and it is worthy of the high regard entertained for it. Long may it flourish, and then good beef will never be scarce. Messrs. T. McCrae and W. Hood, of Guelph, head the list of prize-takers in this class, while McNeil, of Vaughan, treads close on their heels. Hood, of Guelph, takes the prize for the best Galloway herd. In grades there are some beautiful animals which give evidence of the assimilating power of the short horn blood when crossed upon natives. The fat cattle comprise some very choice animals, so choice indeed that it seems a pity to doom them to the knife. Mr. John S. Armstrong, of Eramosa, and Mr. Henlock Young, of Guelph, encouraged by their success last year, are again exhibitors and prize-takers in this class. Mr. Speers, of Norval, takes all the prizes for working cattle, and is well entitled to them.

#### SHEEP.

But one feeling of commiseration and regret is felt by all admirers of these peaceful and valuable creatures that their accommodations are so uncomfortable, owing to the wet, spongy state of that part of the exhibition grounds which is devoted to them. The vicinage of their pens was in such a state during our unsatisfactory attempt to get a peep at them, that we cannot vouch for the absolute correctness of any opinion about them, except that as a whole they comprise a splendid collection of animals, and one of which any country has just cause to be proud. The total number of entries is not quite equal to last year. There are fewer Leicesters and more Cotswolds, and this, we think, indicates what is going on in many parts of the Province. The Cotswolds are steadily working themselves into favor, standing in the same relation to the sheep classes that the short horns do to the various cattle classes. The Cotswold department of the present show is extra fine. Messrs. Stone of Guelph, Miller of Pickering, Snell of Edmonton, Russell of Markham, and Mitchell of Darlington, were the leading prize-takers in this class. Mr. W. H. Wallbridge of Belleville shows imported Lincolnshire ewes, prize-takers in England and equally distinguished here. The Leicester class as a whole is good, comprising many fine specimens of this deserving breed. Mr. Snell of Edmonton takes the Prince of Wales prize for the best lot of Leicesters. The Leicester prizes are pretty widely distributed among the exhibitors in this class. In Southdowns Messrs. Stone of Guelph, and Forfar of Agincourt are the most conspicuous competitors. Spencer of Whitby, and Anderson of Guelph, come in however for some of the honors. The Shropshire, Hampshire, and Oxfordshire Downs are a class almost a monopoly on the part of H. H. Spencer of Whitby, whose flock comprises a number of praiseworthy specimens. The Merinoes put in a more creditable appearance than we remember to have noticed at any previous Provincial Exhibition. These ugly, greasy creatures are not favorites of ours, but if we are to have them let us by all means have the best samples that can be produced. Messrs. Foley of Darlington, and

Smith of Burford, are the leading Merino exhibitors at the present show. In fat sheep, Kennelson of Galt, Russell of Markham, Weldrick of Vaughan, and Snell of Edmonton, exhibit live mutton that we should be sorry to be obliged to eat when butchered and cooked, it is so outrageously fat. Jack Sprat and his wife couldn't dine on it fairly, the better half would be so over-abundantly supplied with her favorite kind of meat.

## PIGS.

The swine were even more inaccessible than the sheep, requiring utter disregard of shoe leather and dampness of feet in order to get anything like a fair look at them. The large Yorkshires and Berkshires are still fancied by some of our pig breeders, and Messrs. Broodie & Son, of Belleville, Reeves of Toronto township, and Wheeler of Scarborough, show some fine specimens. But evidently the current of public favor has taken a decided flow in the direction of the smaller breeds. The Improved Berkshire, Essex and Sussex varieties, are fast becoming favorites, as they deserve to do from their earlier maturity, aptitude to fatten, and the fine quality of the meat they yield. Mr. Thos. McCrae, of Guelph, and Mr. George Roach, of Hamilton, lead the list of Essex breeders. Messrs. Roach and Main, of Trafalgar, outdistanced their competitors in the Suffolk class, while quite a list of names divide the Improved Berkshire honors. In "other small breeds" besides those named, a variety of exhibitors make a creditable appearance.

## POULTRY.

This department of the Exhibition is not so finely stocked as it might and ought to be. Whether or not through the efforts of the Poultry Association fowl-fanciers have become wearied with frequent exhibiting, or from whatever cause, the number and quality of the specimens indicate a falling off. We are persuaded that on the whole the interest in poultry-keeping is on the increase throughout the Province, but exhibitors are not on in full force, and a large number of empty but numbered coops prove that many entries have been made, without the birds being sent. Still, there are many fine fowls to be seen, and in some breeds there is a considerable amount of rivalry. Bogue's White Dorkings are very fine, so are Van Ingen's colored Dorkings, Thomas's Brahmas, and several Spanish specimens. Bogue's golden Polands are excellent. The games and buff Cochins are conspicuous for their shortcomings, as compared with recent poultry shows. Some good specimens of Partridge Cochins are shown by Howard, of Toronto, and Thomas, of Brooklin. Howard's golden and Bogue's silver Hamburgs are beautiful; the Bantams and Pigeons hardly worthy of notice. Some fine Geese are exhibited by Mr. Cullis of Hamilton; very nice Aylesbury ducks by Messrs. Bogue of London, Forsyth of York, and Porter of Bowmanville; and good Rouen ducks by Messrs. Porter of Bowmanville, and Johnson of Grantham. We miss the splendid contributions we have been accustomed to see to this branch of the exhibition from Mr. J. Peters of London. His absence makes a big vacancy in the poultry department. Turkeys are scarce—we hope this is not an indication of what is to be the case in the Christmas and New Year's markets. Guinea fowl are out of proportion abundant.

## BEES.

These diminutive members of the live stock por-

tion of the exhibition must not be overlooked. We do not see the usual enthusiasm among the bee men on the present occasion—with the exception of Attwood, who bids fair to earn the title of "irrepressible" among bee men. He is as radiant with hope and confidence in apiculture as if last winter had not decimated all the apiaries in the country. The present season has, however, been a very fine one, and by all odds the largest yields of honey ever known in Ontario have been reported as characteristic of the season of 1870. There is no real reason for discouragement, for the course of bee-keeping, like that of "true love," never did, and never will "run smooth." The Italians are on exhibition, bright and beautiful as ever, in their golden-banded livery. There is fully the usual competition among hive-makers, but J. H. Thomas still holds his laurels as first prize taker. The first prize for strained honey is taken by Mr. J. S. Armstrong, of Eramosa, and the first prize for honey in the comb by H. M. Thomas, Brooklin. A couple of honey extractors are on the ground—machines by which the comb is emptied of its honey, and left ready for the bees to fill again.

## IMPORTATION OF ANIMALS FOR IMPROVEMENT OF STOCK.

The Governor General in Council has approved of the following regulations concerning the importation of animals for the improvement of stock:

1. In all cases a certificate of purity of blood given by the breeder of the animal, and accompanied by a certificate of identification, signed and sworn to by the importer, should be furnished to the collector at the port of entry.

2. In addition to the foregoing certificate there shall be required in special cases, the further evidence hereinafter mentioned, viz:—

## BLOOD HORSES.

3. A proper pedigree referring to the English or American Stud Book, to be given by the breeder in certificate.

## HORSES OF OTHER BREEDS.

4. Such horses having no Stud Book, an authenticated certificate of purity of blood and identification will be sufficient.

## SHORT HORN CATTLE.

5. The Breeder's certificate should embody a correct pedigree, referring to the English or American Short Horn Book.

## HEREFORD CATTLE.

6. The pedigree should refer to the English Hereford Herd Book.

## DEVON CATTLE.

7. The pedigree should refer to the English or American Devon Herd Book.

AYRSHIRE CATTLE, ANGUS CATTLE, GALLOWAY CATTLE, OR ALDERNEY CATTLE.

A certificate of purity of blood and identification will be sufficient, as first hereinabove prescribed.

8. And any other breed or description of cattle which is not specially named in the foregoing, shall be held to be included in the general description embodied in the Regulation 1.

## SHEEPS, PIGS, AND POULTRY.

9. In these cases a similar certificate and identification will be required as in the next preceding case.

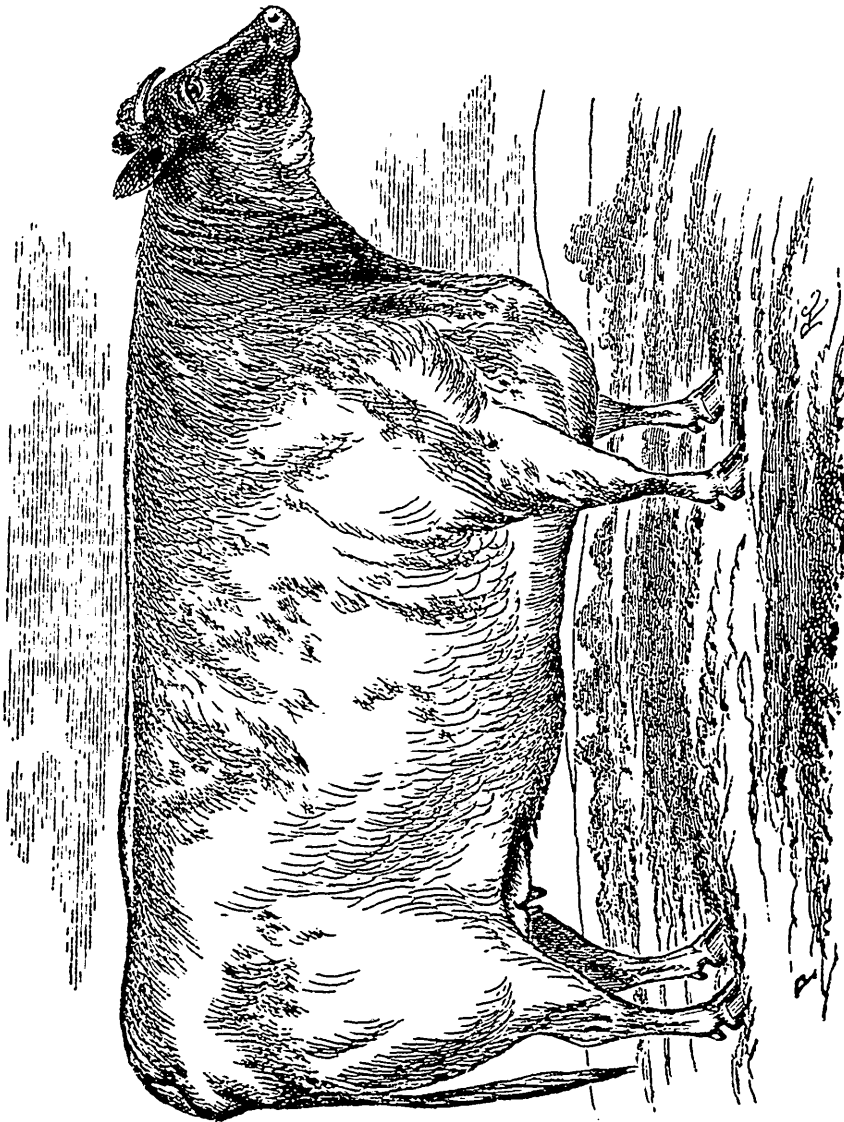


## MR. HENLOCK YOUNG'S PRIZE COW.

The fat cattle at last year's Exhibition was one of unusual excellence. It has furnished us

with these subjects for the Engraver's art during the past year, and the illustration which graces our present issue will, we are sure, do no discredit to its predecessors. A finer trio

PREMIUM FAT COW AT THE PROVINCIAL EXHIBITION OF 1869.



The property of Mr. Henlock Young, Guelph, Ont.

of fat animals than that which has embellished these pages, it would be difficult indeed to find. The best of it is that they have been bred and fed by ordinary, plain, hard-working farmers, and we

hope that Messrs. Armstrong, Watt, and Young will be rivalled in this direction by a noble host of brother farmers.

## The Garden.

### MR. VICKS FLOWER SEEDS.

Early last spring, Mr. Vick, the celebrated Rochester seedsman, issued a circular generously offering the editors of agricultural journals a selection of flower seeds from his published catalogue, to the amount of five dollars. We could not resist the temptation to avail ourselves of the liberal offer, and although the circular disclaimed the idea of thus purchasing the commendations of the rural press, it is but an act of simple justice to report the results of our seed-sowing. Mr. Vick has a well established reputation as a seedsman, and judging by the package sent us, it has been well and honestly earned. Choicer flowers of their several kinds we have never set eyes upon than have been blooming in our garden during the present season. It is almost invidious to single out particular flowers where all were so uniformly excellent; nevertheless we cannot forbear mentioning some with which we have been especially delighted. First of all we must speak of *Phlox Drummondii*. Mr. Vick's last catalogue, has in it as a frontispiece, a beautiful coloured engraving, representing a bouquet of this charming flower in seven different colours and markings. Such engravings are usually more or less overdone, but we can easily call from our garden a natural bouquet of seven varieties, which any impartial Connoisseur will at once admit far transcends the picture. In all, fully twelve distinct varieties have appeared from the seed sent us by Mr. Vicks, and miscellaneously intermingled in one large bed, they present a most brilliant appearance. This lovely annual should have a place in every flower garden, however limited its proportions may be. Next to the *Phlox Drummondii*, we may specify the *Petunia*. Of this well-known and favorite flower, Mr. Vick says in his catalogue, "the improved varieties of the past few years are splendid." Such we have found the products of his seed to be the present season. Part of them were started in the hot-bed, and part were sown in the open ground. There was very little difference in the time of flowering. What the hot-bed plants gained in early forcing, the outdoor plants made up in steady uninterrupted growth. Ever since the latter end of June, there has been a profusion of the richest blooms; one-coloured, striped, bloched, and almost endlessly variegated. Our *Petunia* bed has been, is, and bids fair to be until hard frost sets in, the admiration of all beholders. Not to be tedious we may mention *Clarkia Pubuhella*, both single and double, of very delicate colourings; *Convolvulus Major* and *Minor*, of the latter a new variety violet

with white centre is very beautiful; *Dianthus Chinensis* and *Heddewigii*, both exceedingly fine; *Eschscholtzia California* and *Bartonia Aurca*, very showy and brilliant yellow flowers; *Portulacca*, both single and double; and some choice Ornamental Grasses. Mr. Vick's last catalogue has an engraved portrait of himself, which is rather sad in its expression, and which we sincerely hope in this respect does him injustice, for it were indeed a pity that one whose vacation it is to make the earth bright, and its inhabitants glad, should be himself either sad at heart or sorrowful of countenance. He has our thanks for the floral beauty that has bloomed and blazed around our humble homestead, and our best wishes that he may at last attain that paradise where the flowers never fade, and the florists are never sad.

### SOIL STIRRING.

Some writer on rural affairs has somewhere said, "If I had a call to preach on horticulture, I would take for my text, "stir the soil." We do not know from what high authority our supposed rural preacher would derive this text, but certain we are it is true as gospel. Stirring the soil has many obvious advantages. It loosens the bed in which the plant roots are to spread themselves and find sustenance; it lets in the vivifying air, and lets out the superfluous moisture, thus performing the two-fold junction of drainage; in time of drought it facilitates the process of capillary attraction, by means of which the moisture that is beneath ascends to the surface; while it puts the surface into the best state of preparation for deriving the fullest benefit from any shower of rain that may happen to fall. Moreover, in an important sense, tillage is manure, for it opens the pores of the earth to suck in the fertilizing gases with which the air is loaded, and which have a strong affinity for the soil. Last but not least, it is sure death to weeds. An example strikingly illustrative of the foregoing remarks, has been under our eye the present season. Business considerations induced a friend of ours who is passionately fond of gardening, to remove to a new locality. The only house at all suitable for the wants of his family that he could rent, was surrounded by as neglected, barren and discouraging a plot of so-called garden ground, as could well be found outside the desert of Sahara. A tough, hard-trodden, gravelly top-soil rested in defiant obduracy on an obstinate hard-pan. With undaunted courage, and a sharp spade, our friend attacked the barren looking waste. After thorough digging, dwarf fruit trees, shrubs, rhubarb, strawberry and raspberry plants were set out, and vegetable and flower seeds duly sown. It seemed to be, and really was, gardening under difficulties, but fortunately the season

proved a somewhat dropping one, and was so far favorable. After planting and sewing, the soil was kept incessantly stirred. No weeds were tolerated. Whatever admitted of being so treated, was mulched. Under this treatment, persistently followed up, most satisfactory results have been achieved. The garden, so unpromising in early spring, has been beautiful to look upon all through the summer. The yield of vegetables has been most abundant, the flowers have been of the finest, while the trees, shrubs and plants have grown luxuriantly. Our friend has been repeatedly asked by what secret, magical art the metamorphosis above described has been effected. His invariable reply has been, by stirring the soil. Our friend's favorite and most-used implement in soil stirring, is a light four-pronged hoe, and the adroit manner in which he tickles the plants without hurting them, except it be by the violent laughter of an excessive growth, is a species of slight-of-hand performance well worth seeing. Theoretically we have always believed in stirring the soil, but our friend's transformation of his wilderness garden into a little paradise, has impressed the lesson upon us more forcibly than ever. We intend to have a four-pronged hoe next season, and to keep it busy. Our readers will act wisely if they do the same.

#### INCREASING THE FLAVOR OF FRUIT.

For a number of years past, there has been a decided tendency on the part of fruit growers, and more especially those who cultivate for the market, to grow only large fruit, or rather varieties of small fruit of a large size. We are not surprised at this, from the fact, that however insipid and flavorless a strawberry may be will always command the highest price in the market, if it is only large and fine looking. Hence, with the cultivator, it becomes a matter of dollars and cents. Fruit growing for profit is his business, and it is to such, generally, a matter of indifference whether the fruit is of fine flavor or otherwise, so that it finds ready purchasers at good figures. It would be simply folly to argue against such a spirit, and as long as people are content to sacrifice the sense of taste for that of sight, we have no right to object.

But it does not follow, necessarily that large fruit is obtained at the expense of its flavor. Every horticulturist knows that a wet, cloudy season invariably produces greatly increasing acidity in the small fruits, and this is especially noticeable in the peach and strawberry. The result is of course beyond human control. But not so in some other cases. We believe that it is in the power of the cultivator, who has not too keen an eye to profit, to command a flavor. "The method," says a first-class authority on the subject, is "to thin out severely."

This same writer assumes that if a peach or plum tree is allowed to mature five or six dozen of fruit, where only half that quantity should have been permitted, the result will be a flavor of

decidedly inferior quality. A case in point is cited:—A favorite plum tree, in 1861, bore but a light crop of fruit, all of which was carefully preserved. The aroma of the fruit, when made into puddings and tarts, was delicious. In 1862 the crop of plums on the same tree was so abundant as to hide the leaves. The usual quantity was preserved, but the fine aroma of those of the previous year was wanting. From all of which he insisted on the following:—"By thinning you make indifferent fruit good. By crowding you make good fruit bad."

We are aware that it is asking a great deal of an amateur to thin out fruit, but it will pay in the end when quality and not quantity is desired.—*Journal of the Farm.*

#### EVERGREENS IRREGULARLY IN THE ORCHARD.

It is many years since I wrote advising to all orchardists, whose lands were in exposed, bleak situations, and especially to the planter of orchards upon the prairies, that the most perfect protection, and the greatest security toward a permanent healthy orchard, would be to plant here and there, irregularly and discriminately among the apple, pear or other fruit trees, more or less of Norway Spruce, White Pine, Scotch Pine, and other evergreens. I have almost yearly repeated, line upon line thereupon, but not until in 1867, I think, was any special note made, or attention called to the point by the editors of Horticultural journals. A few lines I then wrote in the "Editor's Table" of the *Horticulturist*, went the rounds, and from that time to the present, I have been glad to see here and there, a voice, or rather a pen, break out in favor of the plan—a plan that I have no doubt, if it could once be carried out, would result ten-fold more beneficially to the orchard than the stiff, yet popular one of a belt or screen.

It would really occupy no more of land than the belt or screen around, and as each tree has an influence only over a certain distance, the ameliorating influence of the evergreen would be evenly and regularly distributed all through the orchard, instead of a mere wind-break, protecting only a breadth say of 100 feet. I have repeatedly witnessed the beneficial influence of a contiguous evergreen, in the bloom and fruiting of pears, apples, and peaches, and I now write from having again witnessed the effect of its protecting, soothing character in relation to a plot of dwarf pears.

It is useless to dilate or make words on this subject, for not a man who knows an evergreen, has a doubt of its influence, beneficially, in toning down cold winds; the only point is to break our people from the idea that their orchards should be in methodical, regular lines, and composed only of a certain class of trees. Once we can get them to see that Nature, in her own work, protects her tenderest plants, by placing contiguous some hardy grower as a screen; once we can get them to know that, so far, all their culture of fruit has been on too artificial a system, following out for extensive orchards the lines of rule laid down by gardeners of town lots; once we can get them to believe that, in profitable fruit-growing, in order to be successful, it is as requisite to care for, watch, associate, feed and prune their trees, as it is to rear children, and make

them worthy citizens, we shall have more general uniform and profitable results, and less annual complaints of climate, frost, etc.—*F. R. Elliott, in Horticulturist.*

### ORCHARD POLICY.

LET THE ORCHARD, AND THE ORCHARD ALONE, OCCUPY THE LAND!

I was talking with a fruit grower of three score and sixteen years, a few days since, upon the policy of permitting orchards to be occasionally cropped with corn, etc., and then left in grass, five, six or more years. This old fruit grower has now over one hundred and fifty varieties of apples in cultivation, and has grown hundreds of varieties of pears, while in cherries he is second to no man in his knowledge and extensive practice therewith; and in peaches, plums, and the small fruits, each year of his life has found him possessed of new varieties to test and compare with those already before the public. So that I felt his opinion was worth gathering.

The result of our talk was an emphatic remark that "he who thinks to grow fruit in an old settled or cultivated country, after the manner of the new sections, makes a mistake."

In the new settlements, where the ground is free from the larvae of insects, where, in fact the insects, found only after a period of civilization and cultivation are not, fruit growing is nothing more than to plant the tree or bush; it will take care of itself and yield a crop of perfect fruit. But as each section of country grows old in its settlement and cultivation, so insects increase, and he who expects to grow fruit profitably must make the orchard or garden alone a specialty; or, in other words, if he is to grow apples he must set apart land for apples, plant the trees thickly, cultivate the ground yearly by plowing light in the autumn, turning the soil to the trees, and in spring and summer, until August, cultivate with a cultivator, stirring the ground two or three inches, sufficiently often to keep the surface mellow and open to light, air and moisture.—As the trees grow and interfere with each other cut them out; they have probably paid in fruit more money than would have been obtained had the land been used for corn and potatoes. If the ground be naturally poor, apply yearly a top dressing of manure in the fall just before turning up the soil to the trees with the plow.

Occupy each plot of land separately to one variety of fruit rather than mingle pears among apples, peaches among cherries, or even small fruits, as raspberries, blackberries, &c., or strawberries among grapes, as many advise. Give the land to its specialty, care for that and that alone, and a paying success will result nine years out of ten.

I thought of these remarks, looked around my neighborhood; and counted who grew fruit, fair and good, and profitably, and who failed, and grumbled because his gooseberries did not bear much, or his currants did not pay—there was either too much shade or something; his apples were all wormy, and I found my counting gave each time the lack of culture and attention as a specialty to the last named, while the successes were all in the hands of those who attended to their fruits as to the growing of a premium crop of corn.—*A. THORS, in Rural New Yorker.*

### DURATION OF GERMINATION IN SEEDS.

There are few seeds that will not germinate as freely the second year as the first if kept in a cool place, and not exposed to either a too drying or too dampened atmosphere. With the exception of parsnips, onions, and leeks, I would just as soon sow seed two years old, as when fresh gathered; but there is a limit to the vitality of seeds, varying much in the different species.

Among those only safe for two years are beans and peas, of all kinds; peppers, carrot, egg plant, orka, salsify, thyme, sage, and rhubarb.

Those safe for three years; asparagus, endive, lettuce, parsley, spinach, and radish.

Those safe for four years; broccoli, cauliflower, cabbage, celery, and turnip.

Those possessing the greatest vitality are beet, cucumber, melon, pumpkin, squash, and tomato; the time ranging from five to ten years.

We often find this knowledge very valuable; for example, in procuring the stock of a seed said to be good of a variety that does not seed the season it is marketable, such as broccoli, cauliflower, cabbage or celery, we procure enough to last at least two seasons; the first season only a little is sown to test the merit of the variety (for we are never incautious enough to risk a full crop with one experiment); if it proves valuable we have enough in reserve to sow for a full crop, knowing that it is sure to germinate. This was particularly the case with our new Dwarf Celery; on the recommendation of a friend, I imported ten pounds of the seed, but doubtful how it would suit our market, only as much was sown as would furnish a few hundred plants.

These showed so much superiority, in all respects to the tall varieties that we had been growing, that the following season I put in half my crop with the dwarf seed. The thing was entirely new in our market and so much superior that it sold for prices that would seem incredible. My ten pound bag was not half exhausted, and the next season I planted my whole crop 14 acres, containing nearly half a million roots, and made one of the best hits I ever made in gardening. But by this time my neighbors began to take an unusual interest in my celery crop, and I could monopolize the variety no longer.—*Peter Henderson.*

### CAUSTIC LIME FOR INSECTS.

There are few insects that can withstand a dose of freshly slaked lime. We always keep a quantity of it on hand ready for sprinkling over plants infested with slugs or bugs of any kind, and it has always proved effectual if applied at the right time. Last year the white pine worm attacked nearly every pine tree on our place, but two or three dustings of lime, when the trees were wet with dew, banished or destroyed this pest, which in a few days, if unchecked, would have stripped every leaf from our trees. The asparagus-beetle appeared upon our beds of this vegetable in countless numbers, but a few doses of lime have made them leave, and the plants look healthy and vigorous at the present time.

We have driven from our garden the rose-slug, cabbage flea, and numerous other pests, by the use

of this same material, and we have never observed that the plants were damaged by its use. A correspondent at the West says that he has entirely checked the ravages of the Colorado potato-bug by freely using lime upon the plants, and we have no doubt that others might be equally successful by a persistent use of this material. Lime is so cheap that no one can object to its use on that score, and even if it fails to kill the insects, it will usually do the land good wherever it is applied.—*Hea. th and Home.*

### THE DOUBLE TIGER LILY.

There is not much tendency in the lily tribe to produce double flowers, the only two double-flowered sorts that we know of besides the present being the double white and double purple Martagon lilies. There is a variety of the common white lily known in florists' catalogues as the double white, but instead of flowers it simply produces a long spike of white leaves differing but little from the ordinary green leaves of the plant, and is therefore known among botanists as *L. candidum spicatum*.

The variety *Lilium tigrinum plenum* was introduced into this country by Mr. Thomas Hogg during his late residence in Japan, is very rare in this country, and has not, so far as we are aware, been yet introduced into European gardens. It is very double, frequently having thirty petals to each flower, of the same colour and spotting as the single species, and is both beautiful and remarkable.

Mr. Hogg has also introduced a gold-striped-leaved variety of the Tiger Lily, the foliage of which is very beautiful; of this only one plant is known to be in this country. The flower is single, and of a somewhat lighter red colour than the common species.—*Rural New Yorker.*

**PROPAGATING HOUSE PLANTS.**—As a general rule, a hot-bed, or some similar structure, is necessary for propagating the various species of tender plants. There are however, many exceptions to the rule, and with proper care, cuttings of the more common plants used for bedding purposes will strike root quite readily in the open air. Geraniums, heliotrope, verbenas, coleuses, lantanas, and other succulent plants, may be propagated to an unlimited extent from cuttings planted in a half shady border, and then supplied with an abundance of water. We use a soil composed of about equal parts of leaf-mould and sand. The cuttings are taken from the terminal shoots, cut into lengths of two or three inches, and all the leaves removed except two or three of the upper ones. The cuttings are then set with a small dibble, and the soil pressed firmly about them. If the surface of the soil is covered with a thin layer of some fine material like moss, there will be less danger of the cuttings suffering for want of moisture. Cuttings of Tea and Bourbon roses may also be made to strike root under such conditions, and fine plants for winter produced very rapidly and cheaply. The hotter the weather, the sooner will cuttings strike root, but water must be given often and in liberal quantities.

**WHY ORCHARDS DECAY.**—A correspondent of the *Valley Farmer* says orchards have died or become poor from these causes:

1. The exhaustion of the soil from the constant crops of apples; from the blowing away by the wind of the leaves of the tree which nature designed to feed the soil on which the tree stands; by the crops of grass, grain, or roots constantly taken from the same ground and little return of substance to it.

2. Another means of their destruction has been in whipping the trees with poles to remove the apples. And still another cause was the pasturage among them.

3 To restore them:—If any were left worth restoring, man must cease to crop the ground under them, and must manure them with vegetable mold, decaying leaves, lime, wood ashes and salt. A compost formed of these substances would be excellent; or one formed in part by soapsuds and refuse slops, chip-dirt, turf, etc., well rotted.

Then trim them of all dead limbs, and those that cross and gall each other, and of all suckers that feed upon trunk or limbs, not necessary for a crop.

### GARDEN GLEANINGS.

The most northern berry-bearing plant is the cranberry, which ripens on the coast of Greenland in latitude 76°.

Try tobacco steeped in water, with a little soap added, upon the green fly which infests the rose bushes.

Prune a currant bush so that it becomes a small tree and it will yield more and better fruit.

Try good barnyard manure about your pale-looking evergreens, spreading it as far as the branches reach. Let it be a top dressing not too thick, and wet it occasionally if the weather continues dry.

The *Ruralist* thinks that experience has taught that orchards on southern declivities spread their branches more, and produce better fruit than when on level ground.

A correspondent of the *Country Gentleman* who writes from the St. Lawrence county, N. Y., states that the past Spring he set out 100 apple trees, part of which he mulched with about four inches of coarse hay and straw, and the rest he kept nicely hoed. Of the 100 all are living except one, but those not mulched have made the best growth, more than a foot, notwithstanding the drought.

The *Massachusetts Ploughman* says if fruit growers will but take the trouble to remove the windfalls from beneath the trees, and feed them to swine, a very great check may be placed upon the increase of that great pest to apple-growers, the codling moth. An examination of the fallen fruit will discover in each apple a maggot or white worm which is the larvæ of the moth.

In layering the rose, the Chinese, who are famous cultivators of this flower, select a strong shoot at the commencement of August and cut a slit through the stem just below an eye having first stripped off the leaves. A pebble is placed in the slit to keep it open, and a handful of fresh moss is tied around the eye and kept constantly moist. Roots soon strike into the moss and the layer may soon be removed to another location, or potted without removing the moss. The moss must be buried in the soil when first applied to the layer.

A writer in the *Gardener's Magazine* states that in

April he takes up the roots of *Lastrea Filix Mas*, the male fern, and *Ethynium Filix Fœmina*, the female fern, and without soil puts them in a large china bowl in the center of the table, and that in this way they will keep green until Christmas, or even longer. The fronds gathered about August, dried between sheets of soft paper, and placed during the winter in bowls filled with moist sand, will become quite green and fresh, and make a pretty parlour or sitting-room decoration.

A great deal of damage is done to fruit trees every year, at the time of gathering the fruit. Large branches are trodden on and barked, small ones are broken, and in the violent shaking of the trees, fruit spurs are broken off. Selling fruit on the trees, generally results in great injury to the orchards; for the buyer, in most cases does not care how much damage is done to the trees, and his object is to gather the fruit in the most expeditious way.

The editor of the *Horticulturist* says that carbolic acid preparations, in the form of soap, or as a plant protector, or as a powder, have an admirable effect in the destruction of insects. Carbolic acid is a natural distillation of coal tar, and in its crude state is a poison alike to man or plant, but properly diluted and compounded, it can be used in a great variety of forms, either as a disinfectant or as a cleansing soap, or as an insect destroyer. No insect can stand either its fumes or its application. Like oil, it is certain death. A pound of the article dissolved in 15 or 20 gallons of water, forms a large quantity which can be forced by a syringe over the entire plant or tree, and one or two applications drive away all worms, flies, and insects of every kind.

A man claims by the following method to have produced heads of lettuce in from twenty-four to forty-eight hours, even in the winter time, by sowing the seed—which had been soaked in strong brandy twenty-four hours previously—in a box of rich earth, of which one-third part is slaked lime, watered with luke-warm water. It is a large story, unless perchance the heads may be very small.

A correspondent of the *Germantown Telegraph* says that one of the most vexatious things that meets the amateur cultivator of the strawberry, at the outset, is the vast amount of opinions, often widely at variance, recommended for the culture of the fruit. A few years ago the great point consisted in planting a certain amount of both staminate and pistillate varieties in the same patch; they would then pollenize and each produce a perfect crop. The hermaphrodites were then thought of little account, but the Wilson, with its annual crop of from 200 to 400 bushels per acre, put in a quietus on that doctrine.

A correspondent of the *Horticulturist* says that every one who has become acquainted with the habits of the rose-bug must have noticed that it has a decided preference for some grape vines over others. The Clinton is one of their special favorites. He has in his garden a seedling of the Golden Clinton, that he considers one of his most valuable vines, although it has never borne a grape and perhaps never will. Its value consists in its special attractiveness to the rose-bug. They swarm on this and abandon all other vines.

The Spaniards have a maxim that a man is ungrateful to the past generation that plant d the tree from which he eats fruit, and deals unjustly toward the next generation, unless he plants the seed that

it may furnish fruit for those who come after him. When a Spaniard eats a peach or pear by the roadside, he digs a hole in the ground and covers the seed. Consequently all over Spain, by the roadside and elsewhere fruit is abundant, and free to all.

An experienced fruit-grower, who possesses a beautiful orchard near the Niagara River, Western New York, has used one simple method with great success. He takes ley from leached ashes, mixes a little grease with it, heats it quite warm, and with a syringe throws it up into all parts of the trees, branches and trunk. It will effectually kill all caterpillars and all kinds of worms that are either infesting the trees in nests or running over the bark. Trees treated in this manner were exceedingly healthy, beautiful and vigorous in appearance, possessing a smooth, glossy bark, and bore the best apples in the country. The remedy is easy and cheap.

## Our Country.

### EMIGRATION TO CANADA.

The following letter recently appeared in *Lloyd's New-piper*. It is from the pen of an emigrant who has become a resident of Toronto, and speaks for itself. We have left out a good part of Mr. Vennel's communication. The part omitted is made up of directions to intending emigrants as to their choice of vessel, the arrangements for the voyage, &c., which, though very sensible, are more for the other side of the ocean.

"Touching taking passage tickets, most of the shipping agents advise emigrants to pay their passage to the place they intend to go to, telling them they will save money by so doing. I would, however, advise them to pay no more than to the port of embarkment, that is, if they intend coming to Canada; for if they have made up their minds to what place they are going, all they have to do is to go to the emigrant agent at Quebec, and tell him they have a prospect of work at such and such a place, provided he thinks that such trades as their's are wanted at that place. I would advise not making the mind up to any particular place, but take the agent's advice as to locality, and go where he tells them is best for their respective trades. The great misfortune is that many emigrants hear a good account of certain large towns, and they object to go anywhere else; the result is the towns are overstocked. Now, as to the class of men likely to succeed in this country. Undoubtedly the agricultural labourer or the man who, though he has acquired a trade, can and will turn his hand to agriculture, is the man to do well here. Mechanics of any kind are not so much in request as the men who will take up land and farm for themselves, or work on the farm lands of others. Don't let me be misunderstood here with respect to mechanics, for I am positive there is an abundance of work in the colony for all who have come outas yet, at remunerative wages, if they will only spread themselves and look for it in the outlying districts, instead of huddling themselves together in the large towns, refusing to go into the country, or take less wages than the fabulous amounts they have been dreaming

themselves to be worth. It is from the latter class that so many complaining letters appear, both in the English and Colonial papers. If the tide of emigration continues to flow as it has been flowing for the last two or three years, bringing over large numbers of skilled workmen, it will have the tendency to overstock the country with this kind of labour. For certainly what is most wanted are men who will settle on the land, forming new townships and populating existing ones, and thus creating a demand for skilled labour equal to the supply. There is room in this country for such men by thousands, and to them abundant opportunities of making for themselves independent positions in a comparatively short space of time. I must repeat here what has been said over and over again: that it is no use for any one to come here unless he has thoroughly made up his mind to take any work that is offered, at the wages offered, and to work hard at it until something more suitable turns up. There is no sympathy in Canada for either daintiness or laziness. There is also no room for clerks, shopmen, &c., as such, in the colony, for there are plenty born and bred in the country that are preferable to those imported. As far as I have been able to observe, wages are quite as good and the cost of living quite as cheap as I was led to suppose before leaving the old country. It is all humbug for those dissatisfied emigrants who have been complaining so loudly in the papers of late, to say they were misled in this respect. They have deceived themselves, for they might have had all the information before leaving by seeking it. Wages for mechanics about the same here as at home; in some cases better, and in some not so good. But what makes this country better than England is, that work is more certain, and the cost of living much less than at home. Farm labourers are paid a great deal more wages than at home, for while in England they get from 10s to 15s per week, without board and lodging—or equal to 12s per week and all found. In the town the cost of living is rather more than in country places, yet living in Toronto is cheaper than living at Penge, near London. Small cottages in the city, of about two rooms and a shed, are to be obtained at about 5s or 6s per week rent; bread, 5d per quarter; flour, the same. Since the declaration of war in Europe an advance of 2d has been obtained. My wife has just returned from market, and has bought a good joint of mutton at 3½d per lb; beefsteak, 5d per lb; bacon, 6d per lb; ham, 6d per lb; new-laid-eggs, 7½d per dozen; vegetables equally cheap. Last week I bought a bag of old potatoes (a bushel and a-half) for 1s 9½d. Young potatoes are now getting plentiful, and can be bought at 7½d the peck; apples, same price per peck; chickens and fowls, from 9d to 1s 1d., and 1s 8d the couple; ducks, 2s 2d the pair. There is some talk of the meat being inferior to that at home, but let me tell you that, whether inferior or not, it is far superior to the "keg joints" and "block ornaments" which fall to the poor man's share in Britain, when he can treat his family to a taste of meat at all. The prices I have quoted are for prime joints, and not inferior in quality to prime joints at home. Fuel is the only drawback. I am told it will cost from 3s to 5s per week in winter, according to size of house; but as a set-off must be set the small quantity required during the summer months. I like the country very much indeed, and my only regret is that I did not adopt it as mine a great deal sooner. A few words about myself, and I am done.

We had a long and rough passage, but thank God we took no harm. The journey from Penge to Toronto took just six weeks and a day—no stoppage, except one night at Liverpool. On landing at Quebec we took the train here, and were riding in the cars two days and nights. We reached Toronto at six p.m. on Thursday, 16th June. I obtained employment at my own trade—boot and shoe-making—the same evening, before nine o'clock. Let no man imagine, then, an inferior workman will do for Canada. There are as good boots and shoes made here as in Regent Street and as good tailoring as in Oxford Street, Cabinet-makers' work not excelled by Bath or Nottingham. Buildings of as good an elevation as in the majority of towns in England. I like Toronto much, and shall not change unless work slackens, and then only for a place less populated than Toronto by 40,000 persons. I have worked hard, but enjoyed my health better than in England, save and except an occasional attack of diarrhoea, consequent on not being yet acclimatised. I hear that house-keeping is cheaper in winter than in summer. However, on a future occasion I will write again.

I am, &c.,

G. VENNELL.

## Arts and Manufactures.

### POISONS AND ANTIDOTES.

Dr. M. R. Vedder, in the *Agriculturist* makes a list of poisons and their antidotes. We give the following:

Arsenic, Fly Powder ("Cobalt") King's Yellow, Scheel's Green, Ratsbane.—Stir two tablespoonful of ground mustard in a quart of lukewarm water, and drink until copious vomiting is produced, tickling the throat with the finger or a feather. After vomiting, give large quantities of calcined magnesia.

Sugar of Lead, White Lead, Litharge.—First, mustard to vomit, as above, and doses of Epsom Salts, say a teaspoonful to a tablespoonful according to the age of the patient, every half hour for two hours.

Corrosive Sublimate, or Bed-Bug Poison, White Precipitate, etc.—White of eggs, or milk, or wheat flour, beaten up. Administer all that can be got down in ten minutes, and then give mustard emetic as above.

Blue Vitriol, Verdigris, etc.—White of eggs or milk taken very freely for ten minutes, to be followed with an emetic of mustard as above.

Acetic, Citric, Muriatic and Tartaric Acids.—Baking soda or saleratus, lime or magnesia (a teaspoonful to a tablespoonful) dissolved in water and used freely. Powdered lime-mortar from the ceiling will do.

Sulphuric Acid (Oil Vitriol).—Drink much water quickly, and follow immediately with large doses of magnesia, or powdered white chalk or lime; or if these are not at hand, use soda or dissolved soap. Follow with plenty of flaxseed or slippery-elm tea.

Strychine, Nux-Vomica, Opium, Laudanum, Paregoric, Morphia, etc.—Emetic, mustard and warm water, as above; drink till patient vomits freely; tickle the throat with the finger or a feather; or give



a teaspoonful of powdered alum; or five grains of tartar emetic; or twenty grains (half a thimblefull) of white vitriol, dissolved in half a tumbler of warm water, every ten minutes, till vomiting is produced. If the patient is drowsy, give the strongest cold coffee, or slap smartly on the back, and walk, or use electricity to keep him awake.

Bites of Serpents, Insects Mad Dogs, Poisoned Wounds from Dead Animals.—Tie a string tightly above the wound; some one having no sores, broken skin, or exposed nerves in the mouth, suck out the blood, and wash with hot water, so as to make it bleed as much as possible; then wash with harts-horn and burn out with a large red hot wire or pointed Lunar Caustic; after this remove the string, and poultice with flaxseed.

#### HOW MARBLE STATUES ARE MADE.

It may be a matter of surprise to many people to know that the artists to whom marble statues are credited may never have handled a chisel or struck a chip from a marble block. The art of sculpture like some other callings, is most wonderful to the uninitiated. An exchange thus tells how statuary is made:

"The first thing the sculptor does is to model or fashion the figure in clay. He first builds a skeleton of iron, and then puts the clay upon it, and adds or takes off until the work is completed. He then transfers the model, or reproduces it in plaster of Paris. This is done by covering the clay with liquid plaster to the depth of about one and a half inches, more or less according to the size of the model—a life sized figure would require the plaster to be laid on at least three inches in depth. The plaster is then allowed to become perfectly hard, or to set, as it is called. The clay is then taken out, and the plaster will be found to be a mould in which to cast the *fac simile* of the original model. An additional quantity of plaster is then mixed with water, and poured into the new-made mold; in thirty or forty minutes it will become set and hard. The mold is then taken or cut off, by means of knives or chisels. The next thing is the process of cutting the head or figure in marble. This is entirely mechanical, and is accomplished by measuring-instruments called pointing machines. They are so arranged as to give the exact distances, points, depths, widths and lengths of every part of a head or figure; these are pointed to, or measured on, the marble block, and the workman cuts to a hair, according to measure, and mathematically certain. Doing a bust in marble is simply mechanical; originating the clay model is the work of the artist. The process of reproducing works in plaster is carried on in New York very extensively."

#### ART GLEANINGS.

A clay poultice is recommended for a felon. Put it on wet and keep it wet. Renew it two or three times in the day.

White lead and also quicklime, with the white of an egg, are recommended as cement for broken china.

The violet ink sold by stationers has a pretty

color and flows freely. But in respect to permanency it is worthless. Writing done with violet ink, if exposed to sun light soon fades.

One who says he has tried it, states that a cistern can be purified by letting the filling pipe from the roof go down within a foot of the bottom. The old water rises and runs off at the waste-pipe.

If you cannot catch rats someone proposes to make them change their residence thus: Hang a piece of meat over a shallow dish of vitriol. They will soon think your premises a go uty place.

Dr Lewis Sayre, of New York city, has written a pamphlet, describing three cases of lead palsy, resulting to ladies from the use of cosmetics containing a lead poison.

To obtain a good night's sleep sponge the entire length of the spine in hot water for 10 or 15 minutes; this will reduce the circulation, and quiet the nervous system, and induce sleep better than any drug.

To PRESERVE EGGS FOR ONE YEAR.—One pint of quick lime, one of salt, to three gallons of water; no care is needed in putting in the eggs, as they will be right end up, and will settle just below the surface, if proportioned rightly. This is an old and good recipe.

The composite rollers now in use by printers was the chance discovery of one Edward Dyas, printer and parish clerk of Madeley, in Shropshire, England. His glue-pot having been upset, and Dyas not having a pelt-ball ready at hand, he took up a piece of the glue in a soft state, and inked a form with it so satisfactorily that he continued its use. He afterwards added treacle to keep the glue soft.

A skin of an animal that dies on the farm may sometimes be put to better use than to be sent to the tanner's. Cut it into narrow stripes; shave off the hair with a sharp knife. It is good for halter straps; to hoop dry casks; for hinges; for broken thills, if put on wet and nailed fast; good to mend a link in a chain, or even as a substitute for a chain. Thin skins are excellent bag strings.

A correspondent of the *Hearth and Home*, speaking of the American Sumac, says:—"I notice that a correspondent of the Farmers' Club says that Sicily Sumac is preferable to American. I have had some experience in dyeing, and I have found that ordinarily five pounds of American leaves, if well dried, are equal to 10 pounds of Sicily. But American is not so good for silk. It should be always well dried; is best when two or three years old; and should be used when fresh boiled, as the liquid is of no good when cold."

KEROSENE AND BED BUGS.—Having purchased a house some three years ago where bed bugs had apparently had their way for some years, and hearing that kerosene would destroy them, I tried it and with perfect satisfaction. It being a log house, I took a feather and applied the oil to every part where there were any bugs and then to the bedstead. This I repeated twice during the summer, and have seen but two bed bugs since.—Mrs. M. E. ALLEN, in *Western Rural*.

A good cellar bottom or walk may be made thus: Sand, 5 parts. coal ashes, 2 parts; slaked lime, 1 part; fine gravel, 2 parts. Mix cold, and add coal tar, hot or cold, until the mass becomes sticky with it. Make the foundation by ramming down or rolling hard 6 inches of gravel; then put on a three



inch layer of the mixture, and roll or pound very hard.

Wet the broom in boiling suds once a week; it will be toughened and softened by the operation. A dusty carpet may be cleaned by wetting the broom, knocking off the drops, sweeping a little, and then repeating the operation.

Among the results of scientific discovery, carbolic acid is prominent. It seems likely to become common. Among the many it is said to be "good for" are the following: To destroy eggs and pupae of tree pests; to keep the flies from the horses by sponging them with a dilute solution; to keep flies off of furniture and looking glasses; to cure the pain of insect bites.

The following receipt for whitewash comes from a reliable source:

Slake half a bushel of unslaked lime with boiling water, keeping it covered during the process. Strain and add a peck of salt, dissolved in warm water; three pounds of ground rice put in boiling water, and boiled to a thin paste; half a pound of powdered Spanish whiting, and a pound of clear glue, dissolved in warm water; mix these well together, and let the mixture stand for several days. Keep the wash thus prepared in a kettle or portable furnace, and when used put it on as hot as possible, with painters' or whitewash brushes.

Rather than the excessive use of cold water during the sweltering heat of summer, the following is recommended:

Take the best white Jamaica ginger root, carefully bruised, two ounces; cream of tartar, one ounce; water six quarts; to be boiled for about five minutes, then strained; to the strained liquor add one pound of sugar, and again place it over the fire, keep it well stirred till the sugar is perfectly dissolved, and then pour it into an earthen vessel, in which you have previously put two drachms of tartaric acid, and the rind of one lemon, and let it remain until the heat is reduced to a lukewarm temperature; then add a tablespoonful of yeast, stirring them well together, and bottle for use. The cork must be well secured. The drink will be in high perfection in four or five days.

The *Journal of Chemistry* is of the opinion that Dr. Franklin has not yet been surpassed in the construction of lightning rods. It recommends the old kind. It is made of iron from three-quarters of an inch to an inch in diameter, without joint "insulator" attachments, or a multiplicity of points. It can be made by any blacksmith. The earth connection of the rod is a very important matter. If there are gas or water pipes near the building, have the rod securely fastened to a band of copper, and let this pass around the iron pipe. If there are no pipes at hand, have the rod terminate in a well, or if that is not accessible, dig a deep hole in the earth so as to reach permanent moisture, pour in a bushel of charcoal, and carefully bury the end of the rod in this. Three or four copper points may be affixed to the end, radiating horizontally. This form of conductor accords with principles of electrical science as at present understood.

If the following is really a good paste it will be a household convenience:

Dissolve a teaspoonful of alum in a quart of warm water. When cold, stir in as much flour as will give it the consistency of thick cream, being particular to beat up all the lumps; stir in as much

powdered rosin as will lay on a dime, and throw in half a dozen cloves to give a pleasant odor. Have on the fire a teacup of boiling water, pour the flour mixture into it, stirring well all the time. In a very few minutes it will be of the consistency of mush. Pour it into an earthen or china vessel; let it cool; lay a cover on, and put in a cool place. When needed for use, take out a portion and soften it with water. Paste thus made will last twelve months. It is better than gum, as it does not gloss the paper, and can be written on.

Few doubt the wisdom of keeping the feet dry, but it is not easy to keep water from soaking through the leather. The following may be good as a sanitary measure:

Take an old pair of India shoes (boots or any old India rubber); cut them up and pull off the cloth lining; put the rubber in about a pint of neat's foot oil, and seat it on the stove until the rubber is entirely melted, stirring it once in a while, and don't let it boil or burn. It will take about two days to melt the whole. As soon as the rubber is melted, stir in one-half pound of beef or mutton tallow, and one-half pound of beeswax. If it is not black enough, you may add a little lamp-black. Now to apply it to the boots: wash them clean of mud and blacking; when they are nearly dry apply the water-proof all over them—if the weather is cold, work near the stove. The best thing to use in applying this blacking is one's hands, and considerable elbow grease to rub it well into the leather.

## Hearth and Home.

### FARMING FOR BOYS.

#### CHAPTER XIV.

HARVESTING CORN.—TAKING CARE OF BLACKBERRIES.—WINTER SPORTS AND WINTER EVENINGS.—PLANTING STRAWBERRIES AND RASPBERRIES.—GETTING THE BEST TOOLS.

It was manifest that this lucky pork speculation had the happiest effect on Farmer Spangler's temper. Heretofore he had merely consented to the various jobs which Uncle Benny had laid out for his party to do, and had never entered kindly into their plans, but had rather objected, more or less strongly, to their being carried out. But the result of their good management, carried on directly under his own notice, where he had a daily view of its progress, and turned to golden account, could not be overlooked, even by one who was so firmly set in the neglectful habits of a lifetime. Thus when Uncle Benny and the boys started off to begin husking, Farmer Spangler volunteered to turn in and help. With so strong a force as they now had, they made short work of a two-acre field.

But Uncle Benny made use of the occasion to point out to Spangler the prominent features of the crop; how that portion of the ground which had received the wash of the barn-yard was of unrivalled excellence. The stalks that grew there had pro-

duced more ears, and of better size. Spangler had to admit that it was the best two-acre crop ever raised on the farm. It measured up a little over one hundred bushels of shelled corn,—an amount that satisfied him the boys would be able to pay back all they had borrowed. Besides, it had been but and stacked in the right time, so as to make the best quality of winter fodder.

This corn crop was, of course; a comparatively small thing on a large farm. But it was really something realized out of nothing,—that is, it was a grain crop produced where nothing but a weed crop had been allowed to grow. It was really so much corn found. If Uncle Benny had not been about, there would have been weeds instead of grain. Its principal value consisted in the lessons of care, economy, clean tillage, and manuring which its cultivation had been the means of teaching the boys, to which may be added the powerful spur it gave to their ambition to do something for themselves.—It was one of several subjects to occupy their minds to think of, and to fill up spare hours agreeably, all having the character of home employments.

Uncle Benny's theory was, as before mentioned, that if a boy's home on the farm were only made attractive, he could never be induced to wander off to the city, or to other equally undesirable locations. He considered the hope of making a little pocket money was one of the greatest home attractions that could be invented, and he was desirous of proving that it could be realized in the country as certainly as in the city. Young people being naturally active, as well as unsettled in their views, must be provided with something to do, something useful, honorable, and profitable.

Spangler continued to assist until the corn was safe in the crib, and the fodder stacked about the barn.

"I don't know what you won't make of these boys, Uncle Benny," he observed, when the job had been completed.

"Why, Mr. Spangler," replied the old man, "these are men in embryo. I want boys to be boys, not old or wise too soon, but giving evidence of being true to themselves and to the wishes of their friends. I like a rough-and-tumble boy, full of fun and spirit. But all such can be trained and taught to become, not only little gentleman, but to be capable of taking care of themselves. These boys already show the coming manhood in their behavior, and if you do your duty toward them, they may live to be a great comfort to you. If you will let me have my own way with them, at least in some things, I think another year will make a far better show than even this one has done."

"Well, Uncle Benny, I begin to believe it," he

replied. "I guess you'd better keep on, and do as you like."

There were several little jobs about the farm which Uncle Benny wanted done before winter set in, as then the boys would be resuming their places at school. One of these was manuring a portion of the great blackberry-patch. He considered the clearing and cultivation of that patch as really a serious undertaking, something a little out of his line, and rather an experiment. He felt, also, that his character as a teacher of sound doctrine was somewhat at stake, and that on no account must he make a failure. The whole neighborhood was aware of what he had done, and expected to have a good laugh over the bad luck they had promised him; for he well knew that most persons take especial delight in ridiculing whatever looks like a failure.

As to the bushes, he was sure they would produce a large crop, as the blackberry may be said to be an unfailling bearer. But, in addition to securing that, he was desirous of ascertaining whether the wild berry couldn't be very much improved in size by extra manuring. He thought it could; and if that were so, his idea was that the increased price which the improved fruit would command in market would more than refund the cost of manure. It was so with other plants, and ought to be the same with any wild berry.

The boys readily entered into these views, taking it for granted that the old man was right. But Farmer Spangler thought very differently, and concluded it would be a shameful waste of manure.—He did n't believe that taking so much pains with wild blackberries would ever come to anything.

But Uncle Benny carried out his project. Two rows received a heavy dressing from the pig-pen; two others were copiously dressed with the green sand-marl which has achieved such wonders for every part of New Jersey where that cheap fertilizer has been freely used; and two more rows were dressed with a mixture from the pig-pen combined with Baugh's Rawbone Superphosphate,—about a barrel of the Rawbone to three or four cart-loads of manure.

This Rawbone Superphosphate was an artificial fertilizer of which Uncle Benny had heard great things said. Mr. Allen had used it for several years with the best results, and gave it the highest character. All the other really good farmers in the neighborhood considered it indispensable to success. It originated in Philadelphia, where it is still manufactured in immense quantities, and is made of raw bones, that is, bones which have not been deprived of their gristle, meat, or marrow by boiling. They are dissolved, or softened, in acid,

and then ground up into a fine powder. Their powerful effects on most crops had been so thoroughly proved that Uncle Benny was determined to treat his wild blackberries to a good dose. He knew enough of agricultural chemistry to feel sure that a fertilizer of this character must necessarily be extremely serviceable to any kind of crop, whether wild or tame.

That winter the boys spent at school. In addition to all the ordinary topics of conversation which one generation of boys inherits from another, these had a variety of entirely new ones. Uncle Benny had allowed them to buy sundry things which few of their schoolmates had been able to obtain. Each one had a first-rate pocket-knife, containing several blades. Then they had beautiful modern skates, and a fine gun which was owned in common, with shot-pouch, powder-horn, and game-bag. They also had a variety of books, most of them full of handsome pictures; and then Uncle Benny had induced each of his three pupils to subscribe to an agricultural paper.

All these matters, except the gun, they frequently took with them to school, where, during the recess for dinner, they felt proud to exhibit them to their wondering school-fellows, many of whom envied them the possession of so many nice things. They also had long stories to tell about their pigs, their pigeons, their corn, how many dollars Uncle Benny had saved up for them, what they intended doing with the money, and what a great profit they were going to have from their blackberries. When setting forth these things to their schoolmates, as they stood round the stove at dinner-time, especially when telling how much money they had saved, they were often interrupted with the remark, "I wish I lived with Uncle Benny," or "I wish we had Uncle Benny on our farm." These new ingredients toward boyish happiness made that the pleasantest winter they had ever known.

But their new materials for happiness did not cause them to be less attentive to their studies. Though they now and then shot rabbits in the woods, or hawks in the open fields, or spent a half-day in resting on the creek, or catching fish by stunning them with a smart blow upon the clear ice above them, they still kept up with their classes. In the long winter evenings Uncle Benny went over with them the lessons of the day, ascertaining how they progressed, whether they understood what they were learning, and explaining to them the difficult points.

This outside instruction from the old man was a wonderful help, and gave them confidence for their next day's appearance in school. Spangler's daughters shared in the advantages of these evening

lectures, while even their father would occasionally put in a word of inquiry touching some uncertain point. This mode of spending their evenings was a great change from what it had been before Uncle Benny took up his residence on the farm. Then it was all dulness and dozing,—now, it was all life and improvement.

Among the articles which Uncle Benny had permitted the boys to purchase was a set of chessmen. He taught them the game; and they, in turn, taught the girls. So fond did they all become of chess, that the board was in very general demand. To relieve this, he made a fox-and-goose board, and added checkers. When the lessons had all been rehearsed, and the difficult points cleared up, then the whole family devoted themselves to reading or to amusements. An abundance of nuts had been gathered by the boys for winter use; and these, with cider, sometimes terribly hard, were regularly served up. Reading aloud was frequent, both boys and girls being encouraged to improve themselves by practice. Then the long winter evenings were never considered dull.

Uncle Benny had insensibly remodelled the mental habits of the entire family. The girls had procured photographs of themselves, of their parents, and even of Uncle Benny. They had purchased some books, and obtained others from the Trenton library. The boys, too, had been allowed to have their pictures taken. All these innocent gratifications came from the trifling fund which their industry on the pigs and blackberries had produced.—But, cheap and unpretending though they were, yet they made home bright and cheerful. It was one of Uncle Benny's ways of making farm life and farm labor attractive.

A distinguished American writer says: "The training and improvement of the physical, intellectual, social, and moral powers and sentiments of the youth of our country require something more than the school-house, academy, college, and university. The young mind should receive judicious training in the field, in the garden, in the barn, in the workshop, in the parlor, in the kitchen,—in a word, around the hearthstone at home. Whatever intellectual attainments your son may have acquired, he is unfit to go forth into society, if he has not had thrown around him the genial and purifying influences of parents, sisters, brothers, and the *man-saving* influence of the family government. The nation must look for virtue, wisdom, and strength to the education that controls and shapes the *home policy* of the family circle. There can be no love of country where there is no love of home. Patriotism, true and genuine, the only kind worthy of the name, derives its mighty strength from foun-

tains that gush out around the hearthstone; and those who forget to cherish the household interests will soon learn to look with indifference upon the interests of their common country. We must cultivate the roots,—not the tops. We must make the *family government*, the school, the farm, the church, the shop, the agricultural fairs, the laboratories of our future greatness. We must educate our sons to be farmers, artisans, architects, engineers, geologists, botanists, chemists,—in a word, practical men. Their eyes must be turned from Washington to their States, counties, townships, districts, homes."

But though the winter was passing with them more pleasantly than ever before, yet it was with renewed satisfaction that the boys beheld the first indications of returning spring. Their pigeons had prospered, their corn crop held out famously, their stock of pigs had been augmented by a new litter of ten, and all had been kept so watchfully that they came through the cold weather in the best possible condition. The boys were thus in high spirits over what the future was to bring forth; their rainbow of hope being gorgeous in its tints, and stretching from horizon to horizon.

Their claim to the two-acre cornfield being undisputed, Uncle Benny had it ploughed up very early in March, as the frost had long since disappeared. Luckily enough for the old man's projects, Spangler was accustomed to keep on the farm so many more horses than he needed, that the former could generally have the use of a team whenever his little jobs required the running of a plough.—He first ran it along the corn rows, and loosened the roots; whereupon all hands turned in and gathered them into a cart, and then threw them into a pile in a by-place. They were afterwards composted with sods, by which the decaying process was started, under the operation of which a single year would crumble the whole mass into a heap of good manure, to which marl was afterwards added.

These unsightly corn roots being out of the way, Tony King was able to do the subsequent ploughing very handsomely. Starting with a perfectly straight furrow, he turned over the succeeding ones with beautiful regularity. As most of this section of New Jersey possesses a fine loamy soil, without rocks or stones, a smart and careful boy of his age can do as much work as a man. The field was then harrowed ready for the coming crop.

"What's to go in now, Uncle Benny?" inquired Spangler. "Cabbages, I suppose?"

"Not exactly," replied the old man. "I can't afford to raise cabbages. A bushel of them is only worth half a dollar, sometimes not even that; but a bushel of strawberries, even at wholesale, will be

worth six dollars,—twelve times as much. We go in for what will pay best."

"But we never raised strawberries here," rejoined Spangler.

"So much the worse for you. It is high time for some of us to begin," replied the old man.

So Uncle Benny had determined to plant strawberries and raspberries, an acre of each. Money enough had been saved to buy the plants; so they were purchased, and the ground planted. For the strawberries deep furrows were opened, five feet apart, which the boys filled from the great pile of manure they had saved, the value of which they were now able to understand. On this they scattered great quantities of the Rawbone Superphosphate before mentioned, until the surface looked as if there had been a young snow-storm. Then the manure was covered over by turning a furrow from each side; after which the original furrow was re-opened. This repeated working completely mixed up the manure and the Rawbone with the soil. The boys thought it more labor than was necessary, and Spangler thought Uncle Benny would never be done getting ready. But he warned them all, that the first condition for success in fruit-growing must be the proper preparation of the ground, and plenty of manure well mixed through the soil.

The plants were then set out by the boys, about twenty inches apart in the rows, Uncle Benny directing. He was too old and rheumatic to do this work himself, but he did the looking on very faithfully until the job had been completed. Afterwards, he had a single grain of the best sugar corn planted between every two strawberry hills, as is the universal custom in this part of New Jersey when a strawberry field is first set out. When the ground has been properly enriched, it is considered a good practice, as the shade created by the growing corn is useful in protecting the young plants from the hot sun in a dry season, while the corn crop will enable the owner to realize a good sum of money at the same time that his strawberries are being established. A crop of sugar corn, thus managed, will more than pay the expense of getting the strawberries under way. This sugar corn produces a very short stalk, which is cut off and taken away about the time that runners begin to put out, thus leaving the strawberries in full possession of the ground.

The other acre was treated exactly in the same way for raspberries, except that the rows were made six feet apart, and the roots set four feet asunder in the rows. The tops were also cut off to within six inches of the ground. Then sugar corn was planted all through the rows, the same as among the strawberries. This arrangement would secure,

the very first season, a cash crop from the whole field, at the same time that the ground was being stocked with plants that would pay a much better profit the next season.

As may be supposed, the cost of plants for these two acres made quite a hole in the money saved from the pigs and blackberries. But the boys did not regret this. Their reasonable wants had all been gratified, and under Uncle Benny's exhortations they had lost most of their first itching for immediately spending their money. They had already begun to understand a little of the importance of saving. Besides, when talking over this matter among themselves, Uncle Benny was particular to explain to them that this expenditure for plants, and for the indispensable Rawbone, must not be regarded as an *expense*, but only as an *investment*,—that is, something laid out this year to be returned with a great increase in a future one. He showed them that, if they had put out a hundred dollars at interest, they would receive only seven dollars increase at the year's end; but that if they invested it in plants and manure, as they had now done, they would be pretty certain to get the whole amount back in little more than the same period, and still have their plants, as well as the increase, and that this return would no doubt be realized every year thereafter.

Spangler heard this lecture, and observed,—

"Then you think the more money a man spends for manure, the better it is for him? Why, if I were to manure my farm as you do these two acres, the sheriff would sell me out."

"No, Mr. Spangler, he will be more likely to sell you out if you do not," replied Uncle Benny. "You will never get your farm out of debt until you make and buy a great deal more than you do. You are now trying the very worst experiment a farmer can, that is, trying to see how little manure you can get along with. It you would sell half your farm, and invest the money in enriching the other half, you would be much more likely to get along."

But Spangler was not to be moved in his old-time opinions by any exhortations of this kind. It was a greater satisfaction to him to think that he was the owner of a hundred acres of poor land, than to be cut down to only fifty, even if the profit were really more.

As this business of berry culture was a new one on the Spangler farm, and would require the frequent use of hoes, Uncle Benny was thoughtful enough to provide an assortment of new ones of the best quality, with nice, light handles, such as a young boy could labor with and not be tired out under their mere weight. They were fully equal to those Mr. Allen had provided for his boys. He also furnished each with a short, flat file, having a smooth

handle and a broad end, which could be safely carried in the pocket, so that there never need be a dull hoe in the field.

When the strawberries and raspberries had recovered from the shock of being transplanted, and were growing finely, the weeds, as if determined not to be outdone, began to do their share of growing also. But the light, keen hoes which the boys flourished about among them made quick and thorough work whenever they poked up their unwelcome heads. The strawberries blossomed finely. Uncle Benny wanted all the bloom clipped off, as he said the plants, not having yet acquired new roots, would have too much to do to recover themselves and bear a crop of fruit also. But Mrs. Spangler and the girls pleaded so strongly with him to let the blossoms remain, so that they could have a little fruit that summer, that he gave way and let them alone. But he was satisfied it would be much better for the plants to be prevented from bearing the first season. As it turned out, there was only a moderate yield of fruit, but yet quite enough to gratify the wishes of the girls. The truth was, that the old man relished his share of the supply about as much as any of the family.

#### CHAPTER XV.

THE OLD FIELD AGAIN.—POVERTY A GOOD THING.—  
GATHERING THE CROP.—A GREAT PROFIT.—  
STOPPING THE CROAKERS.—THE SECRET OF SUCCESS.

While these events were transpiring on the two acres, a very different state of things was exhibited on the blackberry field. The plough and cultivator had been several times run over the ground between the rows, making everything clean and mellow, all which had been done by the boys; and now the rows were covered with astonishing profusion of blossoms. From the long branches, which had been shortened in the fall, a multitude of shoots had grown out, and were now white with bloom. It was a really magnificent display, such as the "old field" in its former days had never presented. One side of it came up to the road fence, so every one who passed by could look down the rows, and have a full view of how nicely the ground was kept, and of the great promise it gave of a bountiful crop.

Until this season the "old field" has been an eyesore to the neighborhood, giving token of the most slovenly kind of farming. But now it was directly the reverse. Still, of those who saw and admired the change, almost every one had a few words of joking for Uncle Benny and the boys when they saw them cultivating or hoeing in it. The only neighbors who encouraged them to persevere were

Mr. Allen and his sons. But such is generally the reward of agricultural effort in any direction different from the old routine. There are plenty to laugh at the pioneer, and few to encourage him.

One day when the party came up to the fence, at the end of the row they had just been cleaning, they were accosted in a very coarse way by a neighbor who was known to be the laziest and worst-mannered fellow in the township. He had mounted the top rail, and there sat until they came up to him.

"Well, blackberry farmers!" said he, "you begin poor, you'll keep poor, and you'll die poor!"

"You're a fool!" replied Tomy King, with an energy that showed how strongly he resented this rude speech of the loafer.

"Hush, Tomy!" interrupted Uncle Benny; "let him have his own idle way, and let us pursue ours. We shall see which of us will first go to the poor-house. Come, boys!"

Then starting on another row, they left the rude fellow to his own thoughts. After getting away down the row, clear out of sight and hearing, Uncle Benny halted the boys from their work, and drew a small book from his pocket. He had been all the time thinking of the sneer which the loafer had made at the boys being poor, as if poverty were the worst thing in the world that could happen to them; and he was desirous of correcting any wrong impression that even this worthless fellow might have made upon their minds.

"Now, boys," he said, as each leaned upon his hoe, "this fellow you left on the fence seems to think the worst lot for a boy is to be born poor."

"Well, it's pretty bad," replied Tony King.

"But it is not so," rejoined the old man. "Let me read you what is said by a man who knows probably as much as all of us together. His name is Titcomb, and he has written a great many lively and sensible books. Now listen," and he read as follows:—

"If there is anything in the world that a young man should be more thankful for than another, it is the poverty which necessitates his starting in life under very great disadvantages. Poverty is one of the best tests of human quality in existence. A triumph over it is like graduating with honor from West Point. It demonstrates stuff and stamina. It is a certificate of worthy labor creditably performed. A young man who cannot stand the test is not worth anything. He can never rise above a drudge or a pauper. A young man who cannot feel his way, may as well retire into some corner and hide himself. Poverty saves a thousand times more than it ruins; for it only ruins those who are not particularly worth saving, while it saves multitudes of those

whom wealth would have ruined. If any young man who reads this is so unfortunate as to be rich, I give him pity. I pity you, my rich young friend, because you are in danger. You lack one stimulus to effort and excellence which your poor companion possesses. You will be very apt, if you have a soft spot in your head, to think yourself above him; and that sort of thing makes you mean, and injures you. With full pockets and full stomach, and fine linen and broadcloth on your back, your heart and soul plethoric, in the race of life you will find yourself surpassed by all the poor boys around you before you know it.

"No, my boy, if you are poor, thank God, and take courage; for he intends to give you a chance to make something of yourself. If you had plenty of money, ten chances to one it would spoil you for all useful purposes. Do you lack education? Have you been cut short in your text-book? Remember that education, like some other things, does not consist in the multitude of things a man possesses.

"What can you do? That is the question that settles the business for you. Do you know your business? Do you know men, and how to deal with them? Has your mind, by any means whatsoever, received that discipline which gives to it action power and facility? If so, then you are more of a man and a thousand times better educated than the fellow who graduates from college with his brains full of stuff that he cannot apply to the practical business of life,—stuff, the acquisition of which has been in no sense a disciplinary process as far as he is concerned."

"Well," observed Tony, when the reading was over, "that does me good. I think I feel better for it." and, in fact, there was a general expression in favor of Mr Titcomb's views, which was continued at intervals during the remainder of that day's work. On the whole, Uncle Benny thought the rude taunt of the loafer had proved rather an advantage than otherwise.

But every seed-time has its harvest. So this care on the blackberries was about to be rewarded. In July the berries had turned black, and were beginning to ripen. Uncle Benny had carefully watched the gradual swelling of the fruit as it approached its full size, anxious to know whether the cultivated berry would be any larger and better than the wild one. In these examinations he called in the critical eyes of the boys to know if they could discover any improvement over old times. The unanimous conclusion was that there could be no mistake about the matter, and that the berries were certainly larger and better.

Then as to the different manures they had applied. The two rows dressed with marl were excellent, as

marl is well known throughout New Jersey as a valuable fertilizer, though not so quickly showing its effects as some other manures. Those dressed from the pig-pen were much better, while the two which had received a mixed dressing of manure and Baugh's Rawbone far exceeded all the others. The berries were fuller in size, and Uncle Benny thought they ripened a day or two in advance. These different manures having been applied in the fall, the winter and spring rains had carried their fertilizing juices down to the roots, thus producing an immediate result.

A great many small boxes were procured, each holding a quart, and these were placed in chests or crates which contained some thirty of them. In this condition the fruit was to be sent to market.

It was really a fine sight to behold this blackberry field when it was fully ripe for the pickers. Both boys and girls turned in with hearty good-will at picking; and to these were added a dozen other children about the same age, some even quitting school to secure the high wages that a smart picker can always earn upon a good crop. The price for picking being two cents a quart, it was an easy thing for the smart hands to earn from a dollar to a dollar and a half per day. Such pay, in all the berry neighborhoods, is a most important help to multitudes of poor families. During the fruit season the younger members quit all other employments and turn out pickers, so that there is never any scarcity of help. In fact, Uncle Benny was astonished at the number that applied for employment. They seemed to spring out of the ground, and he was obliged to turn many away.

The old man acted as boss, or foreman; that is, he gave out the empty boxes to the pickers, who filled and returned them to him at his head-quarters under the shade of a tree. Here he examined the contents, to see that no green fruit had been gathered, and that each box was full, whereupon he gave the picker a ticket for every box; and these tickets being handed in to him when the day's work was done, each picker's account was quickly calculated. They all received their money, and went home rejoicing.

The boxes, when found to be all right, were placed in the chests, and the lid being secured, they were ready for market. Having previously agreed with a fruit-dealer in Trenton to receive and sell his crop, nothing more was necessary than to drive a few miles, and the chests were in the hands of the agent. This gentleman charged a commission for the trouble of selling, and returned the net proceeds once a week.

Though only the common wild blackberry, yet, being put up in clean boxes, they brought a better price than such as came to market in dirty old tin

pans and wooden buckets. Probably one lot tasted as good as the other; but the superior style in which Uncle Benny presented his to purchasers made them sell quickly, as well as bring more than enough advanced in price to pay him for his extra care. It is pretty much the same way with all the fruit that goes to market; the careful man gets paid for his care, and a profit besides.

The crop produced nearly four hundred dollars clear of all expenses of picking and taking to market and selling. This result almost confounded Farmer Spangler, who had never dreamed of having such a gold mine in the "old field." He half regretted having given it up to its present management. The news soon spread round the neighborhood, among those who had ridiculed Uncle Benny and the boys about their blackberry patch; for the old man took pains to let all the particulars be known, and the boys boasted of it wherever they went. They completely turned the laugh against the croakers. Some of the latter became so envious of their success as to wish they owned the patch, or had one like it on their own land.

But though this large profit had been made, yet a considerable sum had to be refunded to Uncle Benny for expenses incurred by him in clearing up the wilderness of bushes into rows, as well as in providing boxes and chests. But these last were only an investment, not a mere expense. They would be wanted another year for the same crop, and also for the other berries, and if the boys ever gave up the business, they could sell them for probably three fourths of the cost. And when these drafts on the sum total of profit had been deducted, there was still about two hundred and fifty dollars left. This Uncle Benny divided into four equal sums, one for Spangler, and one for each of the boys. He then took the latter to Trenton, where there was a savings-bank, and deposited every one's share in his own name. The boys went along, that they might learn how such things were done, as Tony said he didn't know but they might be wanting to make more deposits before long. They were all quite set up with the idea of having money at interest.

It was not of much consequence, in Uncle Benny's opinion, how small the sum was to each. What he valued most was the fact that he had succeeded in teaching the boys how to farm profitably, to save their profits, and make a beginning in the science of thriving and economizing. He had allowed them to spend enough to gratify all their moderate wants, such as, when gratified, would make them entirely happy. It was simply the surplus that he wanted them to save, well knowing that, if not put beyond the reach of every-day temptation, it would soon be gone.

Now, Spangler's girls had made quite a snug little

sum at picking, far more than they had ever had a chance of earning; for the people on that farm had very few encouraging opportunities until Uncle Benny appeared among them. He did not undertake to interfere with the girls' money. But he observed that Nancy Spangler, the eldest invested most of hers in dry goods of different kinds; and that the larger portion of her time was occupied in making up sheets, bed-quilts, pillow-cases and rag-carpet, as if she soon expected to have use for them. He had noticed that a smart young farmer, who lived near by, came very frequently to see Nancy; and, putting those visits and Nancy's sheets and bed-quilts together, he let in an idea that there must be something going on between the young people which would some day make a house as desirable as anything that dry goods could be turned into. Hence he did not venture to financier for Nancy. He thought she was doing well enough, and that her beau could do what financiering she needed.

There was no denying it that Tony King was prodigiously set up about his share of the general profit; and it was noticed that, in talking to other boys about his good luck, he put on some strange airs of superiority, evidently showing that he began to think himself a little great man among those who had been so fortunate. Uncle Benny once overheard him at this, and soon put a stop to it.

"I must tell you Tony," said he, that great men never swell. Mr. Titcomb says:—

"It is only your three-cent, individuals, who are salaried at the rate of two hundred dollars a year, and dine on potatoes and dried herring, who put on airs and flashy waistcoats, swell, blow, and endeavor to give themselves a consequential appearance. No discriminating person need ever mistake the spurious for the genuine article. The difference between the two is as great as that between a barrel of vinegar and a bottle of the pure juice of the grape."

Then on another occasion Tony wanted Uncle Benny to go in and have their brier-patch made three times as large, and they would make three times as much money. But the old man said he did not know about that; he thought they had as much now, of different things, as they could well manage. They were only beginners, and must move ahead cautiously. He told him that judicious improvement or enlargement must progress step by step, and not by great double leaps as he proposed. They must not undertake too much. If he had not enough to do, the best way for him to occupy his spare time and thought would be to build up more compost heaps, as having abundance of them would be found equivalent to having twice as much land in berries.

"The fact is, Tony," said the old man, "you are

like most others,—you want to undertake too much land. It has been long ago ascertained that one acre, under an intelligent and enlightened system of cultivation, will yield as much clear profit as five or six acres tilled in an ignorant and slovenly manner. Look at the farm you are living on. Why, our six acres of berries have paid a greater profit than any twenty of Mr. Spangler's. Wait until you grow stronger, that is, until you have acquired some capital of your own; and by that time I hope you will have learned to understand these matters better, and when you do go ahead, to go with moderation."

"Then can't we have a peach-orchard?" rejoined Tony.

"Not yet," replied the old man; "you have your hands full now."

"Then," added Tony with great emphasis, at the same time slapping his hands together, "I'll have a farm of my own!"

"Ah, now you're getting on the right track," rejoined Uncle Benny. "Go on as you are doing at present, and I have no doubt in good time you will have one. What is more, show yourself to be steady, industrious, honest, and obliging, and friends will spring up to give you a lift when you don't look for them."

It must not be supposed that, while these interesting incidents were occurring, the plants in the two acres devoted to the berries were standing still, or that they had required no attention. On the contrary, they needed even more care than when the field had been planted exclusively in corn. Soon after the blackberries had ripened, the corn was cut and taken to market, where it sold for more than enough money to pay for the plants which had been purchased. Then in August the strawberries began to send out a profusion of runners. The Rawbone had evidently imparted an extraordinary vigor to the plants, as was shown by this ability to produce so vast a quantity of runners. Uncle Benny employed the girls to clip them off with scissors as fast as they appeared. This job had to be done once a week, during the growing season; but the old man had it done thoroughly. It cost a few dollars, but it enabled the girls to earn a little pocket-money; besides, the old man felt satisfied it would be a good investment on the small field he was over-seeing.

One day when Spangler was about beginning to husk out his corn crop, he came up to where Uncle Benny and the boys were standing, with an expression of considerable anxiety on his countenance, and inquired of the old man how they expected to feed their pigs and pigeons the next winter.

"Last year you had corn," said he, "but now you've got nothing but berries."

"Why," replied the old man, "we shall feed them on yours. We can't afford to raise corn. It is



cheaper for us to buy corn than to raise it. I will take my one acre of strawberries, and next season will get as much money from it as will pay for all the corn you can raise on ten acres. You never yet had over thirty-five bushels to the acre, at a dollar a bushel; but I shall have at least eighty bushels of strawberries, and will clear five dollars a bushel from them. Now, how can we afford to raise corn? Do you think that *you* can afford to do so, when you are within reach of a great city market? You see, Mr. Spangler, everybody raises corn, but only a few persons raise fruit."

Spangler stood with his hands in his pockets, but said nothing, and Uncle Benny continued his lecture to an appreciating audience of four.

"You see, Mr. Spangler, it is not the quantity of land a man has, but the use to which he puts it, makes him rich or keeps him poor. There is your 'Old Field,' which you put growing briars, but which we put to growing berries, and you know the result. I told you it could be made to pay off your mortgage. If we had had an improved variety of blackberry, such as the Lawton, our receipts would have been three or four times as much as they were. It costs no more to raise the best than it does to produce the poorest. But we took what we could get, and what no one else would have. Still, this shows what may be accomplished when a man is determined to make the best of circumstances. It proves, moreover, that there is sometimes great value in things which careless people neglect as worthless."

"Now," continued the old man, "if you were to sell half your land, pay off your debts, invest the remainder of your money in labor and manure, and change from all grass and grain to about twenty acres in fruits, you would only have half as much land to work over, and could save money every year."

"What! buy a thousand dollars' worth of manure?" inquired Spangler, drawing his hands from his pockets, and utterly amazed at the idea. "It would ruin me!"

"But the ruin will come if you do not," rejoined Uncle Benny.

## Poetry.

### MY LOVERS.

In the early golden morning,  
Walking in the break of day,  
While my little, youngest darling  
Close beside me nestling lay,  
Fearing to disturb his sleeping—  
Fearing happy dreams to break—  
Lay I there and softly watched him,  
Ere from slumber he should wake.

One small hand his cheek supported,  
One was thrown across my breast:  
Soft and gentle was his breathing,  
As a zephyr sunk to rest,  
On the cheek, fair silken lashes,  
On the lid, a smile of light—  
Azure veins, I fondly noted,  
Noble brow, and tresses bright.

As I looked he sudden opened  
Eyes that instant sought my own—  
Eyes that filled with tender love-light,  
While he spoke in cooling tone.  
"Father made a good select,  
When," said he, "he selected you;  
For" he added with deep fervor,  
"You are good and pretty too."

Oh, my little precious darling!  
Oh, my little lover true!  
Always finding in his mother  
What is best and fairest too!  
Caught I him with smiles and kisses,  
Clasped I him with springing tears,  
Thanking God for such affection  
To enrich my future years.

Answer me, true-hearted mothers!  
(Many such, thank God! there be:)  
In your fairest, rosiest girlhood  
Fonder lovers did you see?  
Gave they deeper admiration—  
Choicer, tenderer, or more sweet—  
Than you now have from your children,  
Than your sons lay at your feet.

Four such lovers God hath given me,  
And I owe Him fourfold praise!  
Tranquilly, thus love-environed;  
On the future I can gaze—  
On the future, when life's taper  
Shall be flickering dim and low,  
When the Autumn tints have faded  
Into Winter's cold and snow.

Ah, my sisters! ah, my sisters!  
Little know ye what ye do  
Who refuse the joy and beauty  
Of a love so pure and true!—  
To whose strange, perverted vision  
Childless widowhood seemeth good—  
Who despise that crown of sweetness—  
Noble crown of Motherhood!

[Lippincott's Magazine.]

## Music.

Having devoted nearly three pages to the choice piece of music which appeared in our last issue, to the exclusion of a chapter of "Farming for Boys," we must postpone the publication of another piece of music until next month when we hope to fill this department worthily again.