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T H E

# Canadian Agriculturist.

OR

JOURNAL AND TRANSACTIONS OF THE BOARD OF AGRICULTURE  
OF UPPER CANADA.

VOL. XIV.

TORONTO, DECEMBER 16, 1862.

No. 24.

## Close of the Year.

With this issue the volume of the *Agriculturist* for 1862 is completed; a year that has been pregnant with great events both in the old world and the new. In Europe thrones have been jeopardized, and commerce, especially the cotton manufacture, paralyzed; while on this continent the event which stands out in boldest relief in the whole course of its history,—the Civil War of the adjoining and hitherto happy and prosperous Republic,—has continued to be waged with increasing violence and desolation, with, we grieve to say, no immediate prospect of its being brought to a satisfactory termination. In Canada we have been blessed with peace, and, in most sections, with what may be considered on the whole an average, if not a bountiful harvest; circumstances that should call forth in every heart devout thankfulness to the Giver of all good. In the enjoyment of these inestimable blessings—peace and plenty—and possessing, under British Institutions, civil and religious liberty in its fullest application, it was becoming in us as a christian people to assemble together as was done the other day in the various places of worship throughout the land, in compliance with a proclamation of His Excellency, the honored Representative of our beloved Sovereign, to return thanks to Almighty God for the continuance of His mercies to us as people, forming an integrant portion of the great Empire of Britain. It is devoutly to be

wished that, being thus favoured by a gracious Providence, we may, as a people, rightly use the privileges and opportunities afforded us in continuing to improve our agriculture and all other industrial arts; living in unity and charity among ourselves, and cultivating a kindly and pacific spirit towards all our fellow creatures. With such thoughts and aspirations as these we are about closing our editorial labors for the year.

With respect to those labors it may at this time be permitted us to observe that no one can be more sensible of their imperfection and shortcomings than ourselves. With but little assistance from Societies and individuals in furnishing materials for our pages, it must be obvious to such as have an acquaintance with the management of agricultural periodicals, that *more time and practical information* are required of the conductors of a *fortnightly* publication, that it may have all the desirable characteristics, than we are able to command. To the pens that have rendered us aid by favoring us with contributions we hereby tender our hearty thanks, and trust that articles from their pens will enrich the pages of our next volume. Again we importune such as feel an interest in the objects of this journal, to send us occasional papers on subjects coming within the range of their practice, reading or observations; such contributions, however short or homely, will be always acceptable.

In consequence of the recent and great advance in the price of paper and the scarciness

of communications either from our agricultural societies or practical farmers, it has been deemed expedient to publish this journal henceforth *monthly*, commencing with the new year. The single number will be larger than one of our heretofore semi-monthly nos., and greater attention paid both in reference to the brevity and variety of the articles.—We shall introduce a larger number of illustrations in the next volume, the numbers will be published regularly on the first of the month, and there will be a marked improvement generally in its mechanical execution. The Veterinary Department will be enlarged and improved under the editorial supervision of Mr. Smith, Consulting Veterinary Surgeon to the Board of Agriculture, who has established himself in practice in this city, where he gives stated instruction in the Veterinary Art to all young men disposed to avail themselves of the opportunity, for about six weeks during the winter. (See Advertisement.)

Each number of our next year's volume will contain at least 40 pages, of the same size as at present, but we shall not be strictly confined to this number of pages. We shall occasionally, when circumstances render a greater space desirable, give 48, or perhaps 64 pages in a number, but as a general rule for the incoming year, each number of the journal will consist of 40 pages, and will be neatly stitched together and trimmed before being sent to the subscribers.

The price for single copies, will be the same as heretofore, half a dollar per annum; but to Agents, officers of Agricultural Societies, or Clubs, sending lists of subscribers, a considerable reduction will be made. The reduction will be in the shape of a discount, on the following progressive scale, viz.:

To any person sending an order accompanied with the cash for 5 Copies and upwards, and under 20 copies, 10 per cent discount,—  
 20 copies and under 35 copies 15 per cent. dis.  
 35 “ “ 50 “ 20 “ “  
 50 “ and upwards, 25 per cent. discount will be allowed.

Or to state the same thing in other words, it will be seen that for any number of copies between 5 and 20, the price will be 45 cents. per copy.

Between 20 and 35 copies, 42½ cents per copy.  
 “ 35 and 50 “ 40 “ “

For 50 copies and upwards, 37½ cts. per copy.

Any person sending an order for a sufficient number of copies to entitle him to one of the smaller rates of discount, and afterwards increasing the order sufficiently to entitle him to a higher rate, will of course be allowed the higher rate on the whole order.

It is to be understood that the cash must always accompany the order, and the party sending the order will deduct from the amount the discount he is entitled to.

Our readers will please bear in mind that it is our invariable practice to discontinue sending our Journal to subscribers on the close of the term for which the subscription has been paid. The amount of subscription for each copy is so small, that to continue sending the paper after the close of the year, before the order has been renewed, would involve open accounts all over the country for trifling amounts, the collection of which would be exceedingly inconvenient, and would be attended by a large additional expense. We have therefore adopted the only system practicable in such a case, viz: to send out no papers till they are ordered and paid for in advance. Those of our readers therefore who wish the paper continued, and we hope that *all* will so, will please renew their subscriptions as soon as possible, either individually, or through their usual Agents. The paper will be mailed direct to the address of each subscriber on the list of any agent, or sent in bulk to the latter, as he may desire.

It is hoped that these terms will prove satisfactory to our subscribers. The *Agriculturist*, our readers will recollect, is post free. It will still be, as it has been heretofore, the cheapest publication of the kind on the continent, and we hope, with the aid of our subscribers and contributors, to make it the *best*, at least for Canada.

### Liebig's Lectures on the Application of Chemistry to Agriculture.

(Concluded from page 679.)

No one can for a moment doubt the great importance agriculture has acquired in Germany by the establishment for its instruction, founded by Thaer in the year 1807. But the agricultural colleges, founded ultimately on the same model, have done more harm than good to the science—they have the shell, but not the nut.

the school at Moeglin. We know that Thaer was not renowned as an agriculturist, but as a doctor; he was a man who had received a deep scientific education, and all his merit consisted in his being the first to apply the knowledge he had gained in science to practical agriculture. No agriculturist would confirm his agricultural calculations on the net cost and gain, or carry out the idea of net and gross produce, without a knowledge as deep as Thaer's of political economy. Without possessing the philosophical education of Thaer, it would be impossible to draw out certain rules for guidance by the help of agricultural facts as innumerable as incomprehensible. It would be still more difficult to apply the natural sciences to agriculture without a knowledge of natural history. The lessons of Thaer were so useful, not merely because he was a practical, but more because he was a scientific man.

In the time of Thaer a young man could acquire no knowledge of physics, chemistry, botany, geology, or mathematics, without a university course. Thaer, who saw the great service all these sciences would be to agriculture, was obliged to introduce a part of each theory into the plan of studies he traced for Moeglin. These are the accessory circumstances which caused the annexation of a rural estate, serving as a means of instruction in practical agriculture, and a school where all the accessory sciences could be taught under the able direction of Thaer, who knew so well how to preserve a proper relation between theory and practice. This double direction given to the studies was useful, but it became the source of great evil to agriculture itself, because it was kept up in all the agricultural colleges subsequently founded: the result being, that the direction of these establishments was given to men possessing a knowledge of the practices necessary for the conductor of rural improvements.

Unfortunately, as it was impossible to find men possessing practical knowledge of all parts of agriculture, the choice was confined to those who were capable of managing the culture of wheat or artificial meadows. But the society exposed itself by committing serious errors in measuring the ability of a man by the superiority which he manifested in one special thing; because his exceptional abilities depended upon the care, order, and activity which he displayed, on the fitness or composition of the soil—in fact, a thousand things which cannot be taught in a school.

It is true, the culture of wheat and fodder is the principal aim of agriculture, because bread and meat stand before all other produce—such as beetroot, oats, flax, tobacco, and the vine; as the development of commerce does not permit them to be considered of any significant value. For the same reason, one has a right to say that the making of sulphuric acid includes all manufactures not mechanical. However,

the culture of wheat does not constitute the whole of agriculture any more than the fabrication of sulphuric acid constitutes the whole of chemical arts. It would be as absurd to appoint as director of a school of practical chemistry and chemical arts a manufacturer of sulphuric acid because he had distinguished himself in his trade, as it would be to place at the head of an agricultural academy men whose whole talents consist in being able to raise wheat and clover.

As we have to confide these institutions to men devoid of all the qualities which have rendered the influence exercised by Thaer at once so powerful and beneficent—as we have to choose them amongst men who possess other talents of which, in one point of view, Thaer was inferior to many practitioners, these schools have lost their scientific character; and their influence and their position have shown in an incontestable manner that practice alone—that is to say, without the aid of science—is quite incapable of making progress. Hence, we can comprehend the remarkable phenomenon of academies, often richly endowed by the State, not assisting during half a century in the development of agriculture. We certainly cannot accuse them of having left the theory and practice precisely at the same point to which Thaer brought it; but it is certain they did not comprehend the aim that great man had in view, and that it is impossible for them to learn it.

These academies lost much of the faculty of ascertaining and comprehending the importance of a scientific result, when the pressure of the want was felt for experimental institutions (*versuch stationen*) taken from the heart of agricultural societies, and even recruited from the circle of practical agriculture for the purpose of experimenting on the practical results of science, and thus enabling them to connect theory with practice. The existence of these experimental stations showed how little the agricultural academies were in a state to put the forces and means at their disposal to the service of progress, which is the most important of all causes. In fact, if from the commencement the schools had kept up their character, no one would have thought of building other institutions, half scientific and half practical. It is not, then, to be wondered at that opposition against the new scientific doctrines manifested itself in these schools, where the directors should at least have shown themselves friendly to them. But it is impossible for them to shine in their schools, nor even to keep pace with the scientific discoveries of the age, whilst they have a career open before them for giving proofs of their ability, of their agricultural knowledge, and acquiring for themselves reputation and honour in the estimation of their superior officers, by augmenting each year the produce of the establishment entrusted to their management.

A director, animated by a true scientific spirit,

would consider, under all circumstances, the interests of the school as being the most essential thing, and the revenue of the land as an element very accessory, and that ought to be found in every establishment for education.

From this false position proceeds again, the distance of agricultural academies from establishments for general instruction, which have almost entirely excluded from them instructions in natural history; and that has hindered them from participating in the extraordinary advancement made in the science of nature since the time of Thær. One can scarcely picture to himself the difference which exists between the manner in which the most simple things were taught in those schools and the present state of scientific knowledge. We ought not, then, to be shocked to see the simplicity with which certain leaders of agriculture exhausted themselves, to show that the culture of the fields is not subject to the laws of nature, and that practice is a thing altogether separate—entirely different from head-knowledge, or that which is called "theory."

The men who entitle themselves "practitioner" have put forward, with immoderate enthusiasm, practice to the diminution of science. As long as the conquests of science extended over a limited circle, they passed unperceived; but as soon as its importance increased, it was incapable of appropriating them to itself. Then the right-thinking amongst the practical men acknowledged that the old way was insufficient, and that it had become necessary to open a new one for the advancement of progress.

At this time all the agricultural colleges have completely lost their importance, and if they are supported they will become the asylums of a number of professors who have forced themselves into a position which they are quite incapable of filling honestly; which is interdicted to them by the absence of the necessary faculties, and by failing of the acquirements they profess to teach. Indeed, a great number of men, who are incapable of finding the theoretical solution of the most simple problem put into practice, promise to us agriculturists to solve the most complicated questions of vegetable physiology and culture, by means of a recipe for the composition of a manure. Agriculture is a new country that science has to conquer, and which, when it comes to discover a new land, begins by falling into the hands of adventurers and swindlers. It is only recently that the true cultivators have arisen, who, by the sweat of their brow, have succeeded in the development of the natural riches of the country, and in drawing from it a portion of its resources. The period at which this transformation in agriculture will take place, is no longer at a remote distance, for we begin to comprehend that the agriculture of our times must renounce its prejudices, in virtue of which we thought it possible to succeed in husbandry with a less amount

of science than in all the other professions. The agriculturist sees that he must renounce the vague *perhaps*; that is to say, he cannot proceed in rational practice without possessing true knowledge and acquirements; that he need not fear compromising the results of his efforts and meditations by appropriating to himself what wise and experimental men have found by reflection, which they have left for the good of humanity; in fact that he ought not to be treated, in the lessons which are given him, as a child whom one makes to sit at a small table, and for whom one cuts small pieces for fear he should be choked by swallowing large pieces too quickly.

The golden age of equality in ignorance is past for agriculture; and we already see making its appearance amongst them a species of hierarchism, according to the state of their minds and the amount of knowledge they have acquired. Science is the force that conquers capital, and, consequently, power; it chases then, naturally and infallibly, the son from the heritage of his father.

The agriculturist or manufacturer who uses his eyes must certainly see that he lives in a cruel age, regardless of persons, which renders more and more difficult the subsistence of a man ignorant, incapable, or weak, and that in the generation following it will be altogether impossible. He must understand that he ought always to learn more; that in no period can he live quietly, or avoid taking part in the determined struggle of competition, and that all protection that hinders him from employing his forces and development only hastens his ruin.

The agriculturists' education would not have been directed for a long time in a different manner from that of other professions, if, instead of interfering in their affairs by the protection of schools of agriculture, the students had been left to seek their own means of instruction. It was, therefore, tacitly acknowledged that the agricultural student was uncultivated, ignorant, without education; that he needed particular means of instruction; and that academies of agriculture were calculated to hinder him from rising to a superior position. In our schools of commerce and manufacture (which did not exist in the time of Thær) the agricultural student may acquire a much deeper knowledge of mathematics and natural history than by following the course of the academies of agronomy; as it teaches no political economy, nor chemistry, natural philosophy, nor even the science of botany, which is particularly useful to the agriculturist. The union of establishments, specially for their instruction, to the universities, is the most powerful means of supplying the wants of the agriculturists. Roscher considered that reunion as being much more important than an affiliation to a model establishment. If we enquire into the real state of these agricultural academies, we find they possessed a most miser-

able stock of implements, indeed of all machines and instruments for agriculture. The tools used for the purpose of teaching practical knowledge resembled those which come from England, or those which are in use in our great rural establishments, as the schools of brewing, distilling, vinegar, sugar, and starch making, which we find attached to these same academies, similar to the breweries, distilleries, and vinegar factories of our large towns, or rather to the manufactories of sugar and starch in the country. The machines and apparatus are old—like child's toys; in fact all that the scholar can learn through their medium is what he cannot avoid learning when he enters on practical life. Even the best moral institutions that the State supports possess faults, which increase from year to year; because the stimulus of competition, so powerful to excite industrial progress, is altogether excluded from a public establishment.

The agricultural academies have outlived themselves, like the pharmaceutical colleges which flourished till about twenty-five years ago, and then were no more heard of. The apothecary needs as much scientific and practical knowledge as the agriculturist, but he no longer now, as formerly, goes into a special institute; he apprentices himself to an accomplished apothecary for some years, and then finishes his education at the university. That is the path that Thaer proposed to indicate to the agriculturists—the object that they would attain much better, and more surely without special academies. If the State would expend usefully the money that it throws away in keeping up these academies and model institutions, which are in reality but child's play, it would give the means, now unattainable, of instruction. By procuring models of implements and machines, and forming permanent exhibitions in our large towns, it would do more for the advancement of practice, than the establishing of the most perfect model school.

In every age, as now, our academical operations have been directed towards science. The only problem that a session of learned men can solve is the increase of human knowledge. The only use that the people in mass, or citizens in particular, draw from these discoveries depends exclusively on the people or individuals; in fact, those alone can participate in the triumphs of a scientific spirit who have succeeded in mastering it.

Consequently, the effect of the operations of an academy of science depends essentially upon the intellectual elements that the nation possesses—the facility with which it approximates to itself the knowledge presented to it, and causes it to fructify. It is the essential nature of any intellectual work whatever to increase the amount of knowledge gathered in the domain of any particular science, and to exercise an influence in a circle more or less extensive. In many cases this effect is produced immediately; in

others, on the contrary, it manifests itself only after a long course of years of changes, material or intellectual, in the situation of the human species. We know no means of measuring in advance the influence of a scientific work, and its value to the life of populations. Every great result has had a small beginning; every important discovery may be compared to the roots of the oak, which are so fine that they can scarcely be seen, but which must sustain a trunk, branches, and leaves before bearing flowers, and, still further, fruit. Millions of men taste the flavor of fruit without knowing what myriads of rootlets and leaves must work to extract from the soil the juices which fill them; many are even ignorant that without the aid of these innumerable agents the sterile tree would bear no fruit. Thus, like the different links of a chain, millions of discoveries precede the great results which are the fruits of the tree of science, and to which is attached the name of a discoverer whom the vulgar proclaim inventor. The smallest discovery, almost invisible when it bursts from the mind of the thinker, reaches maturity by the evolution of time, and thus arrives at the full development of the germs it contains. The most enthusiastic man would not have dared to predict, fifteen years ago, the influence that the ideas and researches of Sommering were destined to have over the incomes of men, nations, and parts of the world. Who would have been able to say that the discovery of new chemical preparations, possessed of the property of taking fire by collision, inaugurated a new epoch in the art of war? Could we divine that the works of Fraunhofer would exercise a useful influence over astronomy, and that thirty years would pass away before the salt of Glauber was applied to the fabrication of glass by the advice of Gehlen, and that the liquid glass invented by Fuchs would give birth to a new process of painting, and come into general use in the stereoscope? Each scientific result is an expression of the life of the soul; and it is in its nature to live for great things, just as the root gives birth to a complete organism.

### On the Commercial Value of Artificial Manures.

*Continued.*

My attention has been directed to a remarkable change which has of late years come over the minds of some manufacturers with regard to analyses and money valuations; many of those who were once much opposed to such proceedings are now most anxious to have recourse to them for certain manures. The reason for this anxiety is obvious; for if scientific men whose names are well known to the public at large, gravely state that manures which are actually sold at £7 10s., according to the usual mode of computing their value, are worth £11 10s.; it is

but natural that manufacturers should desire to secure so favorable, though unreasonable, a testimony. For years I have refrained from putting a money value upon manures sent to me for manufacturers; for it strikes me very forcibly that if a maker has not sufficient chemical and commercial knowledge to determine correctly the money value of his own productions, he has mistaken his proper calling.

Although the trade in manures is getting more and more into the hands of a limited number of intelligent and large manufacturers, there are still to be found, here and there, small and ignorant makers, and farmers who make a few hundred tons of artificial manures for their own use and that their neighbours. Generally speaking, a manufacture carried out on such a limited scale brings no advantage to the consumer, and seldom benefits, for any length of time, the producer, who has neither skill, capital, or enterprise to compete with a firm which does a large trade. The price which a manufacturer has paid for his raw material, including labour, carriage, bags, &c., is not necessarily a criterion of the worth of the manure, because he may have bought under serious disadvantages. A man who has not sufficient chemical knowledge will often select raw materials which are very good in appearance, but, in reality, cannot be employed so profitably as others; or he may not have sufficient capital to buy in materials which can only be obtained by taking a ship's cargo at a time; or, if he has capital, he may not have sufficient commercial knowledge and decision to take advantage of a favourable turn in the market. For these and similar reasons such a dealer will lose money if he sells the manufactured products at a rate which will yield a good profit to another vendor more favourably circumstanced.

In commercial analysis and calculations founded upon them, the form and conditions of the several constituents are too often overlooked. This is especially the case with respect to the state of combination and mechanical condition in which the insoluble phosphates and nitrogens occur.

Insoluble phosphate of lime may be present in any of the following forms—One half, or one fourth inch bones, fine bone-dust, boiled bones, bone-black, bone-ash, coprolites, apatite, Estramadura phosphate, Sombrero guano, and phosphatic guanos.

Now, in most of these conditions insoluble phosphate of lime has a different commercial and agricultural value. One fourth-inch bones are more effective and cost more than one-half inch; fine dust is still more expensive; and, generally speaking, the fine bone-dust is the most powerful in its action and the greater the cost of preparation. When bones are acted upon by acid, but not applied in sufficient quantity to convert all the phosphate of lime which they contain in

to soluble phosphate, there remains in the mixture a certain quantity of insoluble phosphate, which, in this condition, is still more valuable than in that of fine bone-dust. On the other hand, the insoluble phosphates in animal charcoal (bone black) and even bone ash are of very little use in a turnip manure. Of still less use to root crops, if possible, are the insoluble phosphates in coprolites, apatite, and other mineral phosphates. Intermediate in their action between fossil phosphatic materials and bones are, perhaps, certain semi-fossil guanos; whilst in Peruvian and several phosphatic guanos the insoluble phosphates are so extremely minutely divided that I am inclined to consider them worth twice as much as phosphates in the form of ordinary bone dust.

It is, therefore, simply absurd to put the same value on insoluble phosphates, irrespective of the form in which they occur, since in a turnip manure their worth may range from absolutely nothing up to £7, £8, or even £12 a ton.

As regards nitrogen, this element may be present in the shape of ammoniacal salt, or of nitrate of soda, or uric acid; or, again, in shoddy, whale blubber, fish refuse, horn and hide clippings, scutch, leather refuse, and many other forms. In all these different forms nitrogen has a different agricultural and commercial value, and it is therefore unreasonable to assume the same price in calculating the money value of the nitrogen which a manure may contain in so many varied shapes.

Besides this, some purely practical matters have to be well considered before a fair estimate can be given. In some instances superior composition in regard to ingredients may be more than neutralized by imperfect pulverisation or by a damp and lumpy condition, tending to inequality of distribution and irregularity in the growth of the crop. A fine state of division, dry condition, and uniformity of composition cannot be secured without a considerable increase in the cost of manufacture. No allowance, however, is generally made for this expenditure of money by our rule-of-three chemists; or, if anything at all is allowed, the same manufacturing expenses are assumed whether the manure be fine, dry, and uniform, or the reverse. If justice thereby done to honest and skilful manufacturers, and at their expense the sale of apparently cheap, but really inferior manures is encouraged. Is the manure dry enough to admit of equal distribution on the land?—is it very fine, or coarse and lumpy?—is it uniform in composition?—are the ingredients and their relative proportions in a manure really useful for the purpose for which the latter is recommended?—what facilities are there in a particular locality for procuring the required fertilisers?—and many similar questions that do not enter for a moment into the mind of a mere "calculating machine," require to be well weighed before

anything like a just estimate of the money value of a manure can be given.

In a highly concentrated, well prepared super-phosphate, I have already noticed that soluble phosphate has a somewhat higher commercial value than in an ordinary sample. Concentration or dilution of all the more fertilising constituents similarly affects the commercial value of other manures. It is, therefore, evidently unfair to take as a standard the price at which ammonia, phosphate &c., can be purchased in Peruvian guano, in calculating the money value of night-soil, sewage, and other bulky fertilisers.

A very striking example, showing how much bulky and, comparatively speaking, valueless materials reduce the money value, is presented to us in farm-yard manure. One ton of fresh yard manure of fair average quality, I find, contains :

6½ lb. of soluble phosphate of lime, worth, at 3d. per lb.,	1 7½
8½ lb. of insoluble phosphate of lime, worth, at 1d. per lb.,	0 8½
15½ lb. of potash, worth, at 3d. per lb.,	3 1½
15 lb. of ammonia, worth, at 6d. per lb.,	7 6
Total, .. .. .	12 11¼

Whilst thus the calculated value of farm-yard manure is nearly 13s. per ton, its real commercial value is about 5s. per ton.

Again, before certain measures could be obtained that are now specially prepared to suit particular soils, or particular crops, enterprising and intelligent manufacturers have frequently incurred heavy expenses in trying all kinds of fertilising mixtures before they succeeded in ascertaining the states of combination and the relative proportions in which these should be combined in order to produce the best practical results. It is, therefore, but fair that those who profit by these researches should repay the manufacturer for the time, skill, and expense which he has bestowed upon the production of such special manures. In estimating the money value of such fertilisers this ought to be taken into consideration, and allowance be made for more than mere market price of the several uncombined ingredients.

Perhaps it may be suggested that all these observations only tend to show the inability of the chemist to give a reliable estimate of the money value of a manure. I openly confess concurrence in this sentiment if the name of "chemist" is applied to a mere human analysing and calculating machine, or even to a purely theoretical man of science; but strongly repudiate it if it indiscriminately refers to every chemist.

The errors committed by purely theoretical men, or the carelessness and ignorance of others who call themselves agricultural chemists, show a capacity in individuals; but they do not prove that men who, without presumption, may be called to the office of an agricultural chemist, are

not in a position to render most useful services to the farmer by informing him whether manures sent for examination are cheap, dear, or moderate, at the prices at which they are offered for sale. Unquestionably, a considerable amount of commercial and agricultural knowledge, as well as judgement and the fixed determination neither to favour producer or consumer, are quite as essential qualifications in an agricultural chemist as analytical skill; but those agricultural chemists who possess the somewhat rare gift of uniting sound and scientific knowledge with good sense and acquaintance with practical matters assuredly are, or ought to be, in the very best position properly to estimate the agricultural and money value of manures.—*Journal of Royal Agricultural Society of England.*

## Horticultural.

### Flower Garden and Pleasure Grounds.

A friend remarked to us after the issue of our last number, that it was very discouraging to be told that ten per cent. on the original cost should be the estimated cost of maintaining a place after its completion. He thought if that were generally known, it would prevent many from entering on country life. "My place," said he, "cost me about \$20,000, and I should be sorry to believe that I had to spend \$2,000 annually to maintain it in decent order." As our friend's place embraces but five acres, we were surprised at the cost, but found he included his house in the sum named. Allusion is again made to the subject as other parties may have misunderstood our remarks. We referred simply to the garden and its embellishments. Those few places in the Union that have had \$20,000 spent on pure gardening, will not find \$2,000 too high an estimate for their annual maintenance, and never ought to find in that fact any discouragement.

From remarks made by other friends, we learn that the observations offered on this subject have attracted considerable attention. We are pleased that they have done so. Gardening suffers no greater injury from any source than from parties who go ignorantly into its pursuit; and we can do both it and the citizen proposing to go into the country, no greater favor than to show plainly what gardening costs, as well as indicate the various ways in which pleasure may be derived from it.

Planting of spring bulbs, tulips, hyacinths, crocus, snowdrops, fritillarias, lilies, etc., and the transplanting of shrubs and division of herbaceous plants, will occupy chief attention in October. All herbaceous plants are much better for being protected through winter by a covering of dry leaves, on which a little soil is thrown to keep the leaves from blowing away. Half-



hardy roses and vines may be protected in the same way. When they are very long and slender they are taken down from their trellises, and coiled into circles as small as may be without risk of breaking them, and then the soil put on. Those things that grow late, such as many kinds of Noisette roses, should have their immature top shoots shortened a few weeks before the protecting process is commenced. The wound will then heal over, and not cause the decay of the upper portion of the shoots, as is very often the case when they are either cut at laying down, or not shortened at all.

Of course, those roots that suffer by frost should be taken up before danger. Gladiolas, Madeira viciae, dahlias, tuberoseas, etc., for instance.

Towards the end of the month almost all kinds of tree seeds may be sown, except pine, unless there is any danger from mice or other vermin. It is, on the whole, best as soon as the seeds are at hand, to place them in boxes with more than an equal bulk of sand, and set them out to the weather to freeze. They must be sown out in the spring as early as the ground will work.—Some seeds will not germinate till the second year. If they do not appear early in the season, they should not be disturbed. Many seeds that usually come up the season after sowing, will not do so if the shells are allowed to dry and harden first. Cherries, peaches and most fruits, will often lie so, and halesias roses and thorns, occasionally stay three years. Seed-beds should be selected in a deep, warm and rich soil; and one tolerably free from the seed of weeds, on any other it will not pay to raise seedlings. In States where the frosts are severe, seedlings of all kinds that have not attained a greater height than six inches, should be taken up, "laid in" in a sheltered place thickly, and covered with anything that will keep frozen during the winter. If left out they are liable to be drawn out and destroyed. Young seedling stock received from a distance, should be also so treated. In the more Southern States they may be set out at once, and as much planting as possible be accomplished that will save spring work. Many cuttings will not do well unless taken off at this season and laid in the ground under protection, like seedlings, the quince, syringas, or lilacs, *spiraea prunifolia*, and some others. In the "mild winter States," evergreen cuttings should be made now, and set out thickly in rows. The leaves need not be taken off, but short, thickset branches laid in under the soil. When rooted next fall they may be taken up and divided into separate plants. In more Northern States, evergreens may not be so struck at this season, unless protected by green-houses and frames.—Where these are at hand, evergreens may be put in, in boxes or pans all through the winter.—*Gardener's Monthly.*

## Transactions.

### Prize List, Provincial Exhibition.

(Concluded from last number.)

#### CLASS XXXIII.—PLANTS AND FLOWERS.— (147 Entries.)

*Judges.*—Geo. Sheppard, Montreal; Geo. Laing, Hamilton; John Gray, Toronto; Wm. Grey, Woodstock.

Best dozen Dahlias, named, Geo. Leslie, Toronto, \$2; 2d do do, John Brown, Toronto, \$1 50; 3d do do, Judge Harrison, Toronto, \$1.

Best and largest collection of dahlias, Geo. Leslie, Toronto, \$5.

Best bouquet of cut flowers (for table), Geo. Vair, Yorkville, \$2; 2d do, Judge Harrison, Toronto, \$1 50; 3d do, W. A. F. Currie, Niagara, \$1.

Best hand bouquet, Jas. Fleming, Toronto, \$2; 2d do, J. M. Hirschfelder, Toronto, \$1 50; 3d do, Geo. Vair, Yorkville, \$1.

Best collection of green-house plants, not less than 12 specimens in flower, Judge Harrison, Toronto, \$10; 2d do, H. Eccles, Toronto, \$6; 3d do, Sam Ashby, Toronto, \$4.

Best 12 pansies, Jas. Best, Ashport, \$2; 2d do, H. Eccles, Toronto, \$1 50; 3d do, Chas. Arnold, Paris, \$1.

Best 6 fuchsias, in flower, Christopher Young, Yorkville, \$4; 2d do, H. Eccles, Toronto, \$3; 3d do, Sam Ashby, Toronto, \$2.

Best collection of annuals in bloom, Jas. Forsyth, Toronto, \$2; 2d do, R. Guthrie, Toronto, \$1 50; 3d do, Joshua Norrish, Eden Mills, \$1.

Best 6 cockscombs, W. A. F. Currie, Niagara, \$2; 2d do, Geo. Vair, Yorkville, \$1 50; 3d do, Edward Lewis, Yorkville, \$1.

Best 6 balsams in bloom, S. Ashby, Toronto, \$2; 2d do, do, do, \$1 50.

Best collection of asters, Jas. Fleming, Toronto, \$2; 2d do, Mrs. M. Choate, Port Hope, \$1 50; 3d do, R. C. Gill, Colborne, \$1.

Best collection of 10 weeks' stock, Hon. W. Cayley, Toronto, \$2; 2d do, R. C. Gill, Colborne, \$1 50; 3d do, Chris. Young, Yorkville, \$1.

Best collection of hybrid perpetual roses, not less than 12 blooms, Judge Harrison, Toronto, \$3; 2d do, H. Girouard, Hamilton, \$2.

Best floral ornament or design, J. M. Hirschfelder, Toronto, \$5; 2d do, J. M. Hirschfelder, Toronto, \$4; 3d do, W. T. Goldsmith, Toronto, \$3.

Best collection of verbenas, not less than 12 varieties, John Brown, Toronto, \$3; 2d do, Jas. Forsyth, Toronto, \$2; 3d do, Geo. Vair, Yorkville, \$1.

Best 6 petunias, Rev. E. Baldwin, Toronto; \$2; 2d do, Geo. Leslie, Toronto, \$1 50; 3d do, J. M. Hirschfelder, \$1.

Best collection perennial phloxes, George Leslie, Toronto, \$2.

Best 6 hardy shrubs, spikes in flower, Jas. Forsyth, Toronto, \$2; 2d do, Geo. Leslie, Toronto, \$1 50; 3d do, H. Girouard, Hamilton, \$1.

Best collection of hollyhocks, J. C. Small, Toronto, \$2; 2d do, Chris. Young, Yorkville, \$1.

Best display of plants in flower, distinct from other entries, Chris. Young, Yorkville, \$10; 2d do, J. M. Hirschfelder, Toronto, \$6.

Best collection of native plants, dried and named, Wm. Saunders, London, \$5; 2d do, Mrs. C. P. Traill, Peterborough, \$3.

Best specimen of useful and ornamental rustic work for the garden, H. Girouard, Hamilton, \$4.

**EXTRA PRIZES.**—J. M. Hirschfelder, Toronto, collection of Petunias and foliage plants, \$1 50. Richard Guthrie, Toronto, collection of perennial and biennial flowers, \$1 50. Geo. Leslie, Toronto, collection of herbaceous flowers, \$1 50. Mrs. M. A. Choate, Port Hope, wreath and bouquet of everlasting flowers, \$1 50. John Gray, Toronto, perennial phloxes, \$1. John Gray, Toronto, collection of seedling perennial phloxes, 15 varieties, \$2. Ezekiel Snider, Brockville, bouquet of everlasting flowers, \$1. Samuel Ashby, Toronto, orange tree, \$1 50. Bruce & Murray, Hamilton, collection of gladioli, \$1 50. James Fleming, Toronto, collection of zinneas, \$1 50.

**CLASS XXXIV.—DAIRY PRODUCTS AND PROVISIONS.—(128 Entries.)**

*Judges.*—M. Thwaite, Whitby; Trueman McEvers, Cobourg; Samuel Lake, Newburgh; Wm. Smith, Frankville; E. C. Fisher, Etobicoke.

Best firkin of butter, in shipping order, not less than 56 lbs., P. R. Palmer, Thurlow, Hastings, \$12; 2d do, Ann Youart,

Nassagaweya, \$10; 3d do, Samuel Wood, Islington \$8; 4th do, Arch. Glendinning, Ellesmere, \$6.

Best butter, not less than 28 lbs, in firkins, crocks or tubs, James Patton, Markham, \$8; 2d do, Mary Thomson, York Tp., \$6; 3d do, Henry Jennings, Victoria Sq., \$4; 4th, do, Ann Youart, Nassagawega, \$2.

Best cheese, not less than 30 lbs, W. R. Dorn, Napanee \$10; 2d do, Hugh McMillan, Erin, \$8; 3d do, James Patton, Markham, \$6; 4th do, P. R. Palmer, Thurlow, \$4.

Best two stilton cheeses, not less than 14 lbs. each, Hiram Ranney, Dereham, \$10; 2d do, do, do, \$8; 3d do, H. K. Parsons, Guelph, \$6; 4th do, Hiram Ranney, Dereham, \$4.

Best honey, in the comb, not less than 10 lbs, Thos. Greenhagh, Brampton, \$3; 2d do, James Leslie, York Tp., \$2; 3d do, Hugh McKee, Norwichville, \$1 50; 4th do, Robert Anderson, York Tp., Transactions.

Best jar of clear honey, Hugh McKee, Norwichville, \$4; 2d do, John Muir, Scarborough, \$2; 3d do, Robert Anderson, York Tp., \$1 50; 4th do, Wm. Jackes, Eglinton, Trans.

Best side of cured bacon, F. W. Fearman, Hamilton, \$3.

Best ham, cured, F. W. Fearman, Hamilton, \$3; 2d do, do, F. W. Fearman, Hamilton \$2; 3d do, Jonas S. Barnes, St. Thomas, \$1.

**EXTRA PRIZES.**—Pine-apple cheese, Hiram Ranney, Dereham, \$2. Cured meats, Benj. S. Morris, Toronto, \$1. Tin of lard, Benj. S. Morris Toronto, \$1. Jar of prepared honey, John McKee, Norwichville, \$1. Two pieces of breakfast ham, F. W. Fearman, Hamilton, \$1. Two pieces of breakfast bacon, F. W. Fearman, Hamilton, \$1.

**NOTE BY JUDGES.**—Practical information of the mode of making pine-apple cheese should be required and published in the Journal of the *Board of Agriculture*.

**AGRICULTURAL IMPLEMENTS.**

**CLASS XXXV.—IMPLEMENTS WORKED BY HORSE OR OTHER POWER.—(186 Entries.)**

*Judges.*—J. Bingham, Norwich; John Tennant, Paris; John N. Diamond, Belleville; Wm. Woods; E. C. Fisher, Etobicoke.

Best iron plough, Wm. Mahaffy, Brampton, (draught on trial 466 lbs.) diploma and \$12; 2d do, Edward Wilmott, Kingston,

draught on trial 520 lbs.) \$8; 3d do, Hugh Masson, Ottawa, (draught on trial 558 lbs.) \$4.

Best wooden plough, Wm. Mahaffy, Brampton, (draught on trial, 441 lbs.) diploma and \$12; 2d do, Isaac Modeland, Brampton, (draught on trial 493 lbs.) \$8; 3d do, Hugh McLaren, Lowville, (draught on trial 489 lbs.) \$4.

Best subsoil plough, Peter Mallaby, Weston, diploma and \$12; 2d do, Atkinson Bros., Thistleton, \$8.

Best double shear trench plough, Richard Hill, Port Hope, \$10; 2d do, H. A. Massey, Newcastle, \$6.

Best double mould plough, Wm. Jeffrey Thornhill, \$10; 2d do, Peter Mallaby, Weston, \$6.

Best pair of harrows, Pet Mallaby, Weston, \$6; 2d do, Wm. Mahaffy, Brampton, \$4; 3d do, Geo. Prentice, Columbus, \$2.

Best horse power thresher and separator, John Abel, Woodbridge, diploma and \$20; 2d do, Joseph Hall, Oshawa, \$12; 3d do, Haggart Bros., Brampton, \$8.

Best grain drill, Maxwell and Whitclaw, Paris, diploma and \$12; 2d do, Jas Atkinson, Woodbridge \$8; 3d do, Robt. Fidell, Queensville, \$4.

Best straw cutter, Maxwell and Whitclaw, Paris, \$5; 2d do, Geo. C McKenzie, Georgetown, \$4; 2d do, Hugh McLaren, Lowville, \$3.

Best smut machine, Jno. Gartshore, Dundas, \$6.

Best portable grist mill, H. A. Massey, Newcastle, \$12.

Best grain cracker, Ganson Waterous & Co., Brampton, \$8; 2d do, Jacob Lawrence, Palermo, \$6; 3d do, Alanson Harris, Beamsville, \$4.

Best corn and cob crusher, Ganson Waterous & Co., Brantford, \$4.

Best cider mill and press, Alanson Harris, Beamsville; \$12; 2d do, N. M. Samson, St. Catharines, \$8.

Best two horse waggon, I W. Weber, Conestoga, \$12; 2d do, Jno. Marshall, Brampton, \$8; 3d do, James Berry, Wellington Square, \$4.

Best one horse light market waggon, Sam. Lake, Newburgh, \$10; 2d do, Henry Pearson, Stanley Mills, \$7; 3d do, Shuttleworth & Mallaby, Weston, \$3.

Best horse rake, Alanson Harris, Beamsville, \$4.

Best metal roller, Atkinson Bros., Thistleton, \$11; 2d do, H. A. Massey, Newcastle, \$8.

Best wooden roller, Salem Eckhardt, Unionville, \$10; 2d do, Andrew C. Bruce, Glenmorris, \$5.

Best stump extractor, Hugh McLaren, Lowville, \$8.

Best reaping machine, Isaac Modeland, Brampton, diploma and \$20; 2d do, Collins & Osborne, Guelph, \$12.

Best Mowing machine, R. & R. S. Patterson, Belleville, diploma and \$20; 2d do, W. H. Walbridge, Belleville, \$12; 3d do, do, do, \$8.

Extra prize, a one horse mowing machine, W. H. Walbridge, Belleville, \$10.

Best combined mower and reaper, R. & R. S. Patterson, Belleville, diploma and \$20; 2d do, W. H. Walbridge, Belleville, \$12; 3d do, Collins & Osborne, Guelph, \$8.

Best field or two-horse cultivator, T. & G. Morgan, Markham, \$12; 2d do, Joshua Carlton, Toronto, \$8; 3d do, Salem Eckhardt, Unionville, \$4.

Best horse hoe, or single horse cultivator, Henry Collard, Gananoque, \$4; 2d do, George Prentice, Columbus, \$3.

Best machine for sinking field drains and laying in and covering tiles, Jas. Chase, Brooklin, \$60.

Best portable steam engine, for agricultural purposes, 6 to 10 horse power, Thomas Zealand, Port Hope, \$50; 2d do, F. G. Beckett & Co., Hamilton, \$30; 3d do, Ganson, Watrous & Co., Brantford, \$20.

Best improved liquid manure drill, for drilling two or more rows of liquid, with turnips, mangels, &c., either on the ridge or flat, Emanuel Rocky, Salem, Co. Elgin, \$25; 2d do, James Berry, Wellington Square, \$15.

EXTRA PRIZES.—One cross cut sawing machine, J. & S. Nixon, Ingersoll, \$4. Cast iron beam plough, Jos. Fleury, Aurora, \$3. Ribbing plough, do, do, do, \$2. Side hill plough, do, do, do, \$2. Grain cultivator and sower, Jas. Hamilton, Peterboro, \$3; Combined clover thresher and huller, Jos. Hall, Oshawa, \$5, Clover and Timothy seed sower, Emanuel Rocky, Salem, Elgin, \$2. Sod and subsoil plough, Whittemore, Belcher & Co., Massachusetts, \$2. Cultivator adapted for the cultivation of new land, or land encumbered with obstructions, which cannot ordinarily be ploughed, John A. Cull, Toronto, \$6.

REMARKS BY JUDGES.—The Judges in this class would call the attention of the Board to the fact that our field of labor is too great for us to be able to do justice to ourselves and the competitors, for the want of time. We therefore recommend that in future there shall be another set Judges for ploughs. We would also call the attention of the Board to the fact that we found the wooden and iron harrows were competing together in one section, when they should be in two distinct sections.

CLASS XXXVI.—AGRICULTURAL TOOLS AND IMPLEMENTS, CHIEFLY FOR HAND USE.—  
(142 Entries.)

Judges.—Geo. Davison, Kingston; Robert Alexander; C. Yale, St. Catherines; W. Gibbard, Napance.

Best fanning mill, Thomas Wilson, Richmond Hill, diploma and \$6; 2d do, O. W. Everett, Dundas \$4; 3d do, Charles Bodly, Mt. Forest, \$2.

Best seed drill, or barrow, Emanuel Rockey, Salem, Elgin, \$4; 2d do, Thomas Penton Paris, \$3; 3d do, Geo. Young, Concord, \$2.

Best straw cutter, G. C. McKenzie, Georgetown, \$5; 2d do, Maxwell & Whitelaw; Paris, \$4; 3d do, Hugh McLaren, Lowville, \$3.

Best machine for cutting roots for stock, M. Cant, Galt, \$6; 2d do, John Leigh, Aurora, \$4; 3d do, Maxwell & Whitelaw, Paris, \$2.

Best cheese press, Joel Hughes, jr., Schomberg, \$8; 2d do, And. Boyle, Eden Mills, \$6.

Best churn, Jesse Kinney, Brantford, \$3; 2d do, Nathan Campbell, Stratford, \$2.

Best garden, walk, or lawn roller, E. A. Massey, Newcastle, \$4.

Best farm gate, Chris. Doner, Cashel, \$3; 2d do, Wm. Depew, Simcoe, \$2.

Best specimen farm fence, of wood, Samuel Hall, Toronto, \$3; 2d do, David Fleming, Toronto, \$2.

Best specimen wire fencing, not less than two rods, erected on the ground, W. & Thos. Walker, Brampton, \$8.

Best wooden pump, Peter Kribbs, Stouffville, \$4; 2d do, C. W. Card, Brooklin, \$3.

Best half dozen hay rakes, A. P. Busseck, Stouffville, \$3; 2d do, Thomas Bryan, jr., London, \$2; 3d do, do, do, \$1.

Best half-dozen manure forks, A. S. Whiting, Oshawa, \$3.

Best half-dozen hay forks, A. S. Whiting, Oshawa, \$4.

Best ox-yoke and bows, John Baker, Waterdown, \$2; 2d do, John Ramsay, Eden Mills, \$1; 3d do, Platt Hinman, Grafton, Trans.

Best grain cradle, J. B. Lazier, Port Perry, \$2; 2d do, Richard Sylvester, Ellesmere, \$1.

Best half-dozen steel hoes, A. S. Whiting, Oshawa, \$3.

Best half dozen grass scythes, A. S. Whiting, Oshawa, \$3.

Best half-dozen cradle scythes, A. S. Whiting, Oshawa, \$3.

Best machine for making drain tiles, W. Hamilton & Son, diploma and \$30.

Best assortment of drain tiles, Thomas Nightingale, Yorkville, \$6; 2d do J. Brown, Carleton West, \$4; 3d do, John Snowball, Markham, \$2.

EXTRA.—Assortment of drain tiles, shown by Wm. Gibb, Yorkville, erroneously entered, and not seen by judges of this class; prize awarded by revision committee in consideration of their excellent quality, equal to first, \$6 and Diploma.

Best straw fork, of wood, Thomas Moore, Etobicoke, \$2.

Best 6 chopping axes, Ellis Burrill, Belleville, \$3.

Best set horse shoes, W. Stephenson, Nasagaweya, \$2; 2d do, W. Mahaffy, Brampton, \$1.

EXTRA PRIZES.—Weed cutter, Samuel Cummer, Willowdale, \$1. Separator for grain, Chappell & Sprague, Rochester, N. Y., \$3. Grain Separator, John Gartshore, Dundas, \$3. Screw tobacco press, John Thomas, Hamilton, \$2. Grain shipping cart, Wm. Smith, Toronto, \$2. Ornamental Gate, Christopher Doner, Cashel, \$2. Assortment of horse shoes of various kinds, for diseased feet, Alex. Dunbar, London, \$4. Machine for facilitating churning, Thos Head, Cope-town, \$2.

NOTE.—A case of edge tools, grass scythes, drawing knives, chopping axes, &c., shown by J. W. Robinson, Co. Hastings, not entered, highly commended.

CLASS XXXVII.—PREPARED CATTLE FOOD, ARTIFICIAL MANURES, &c.—(3 Entries.)

Judges.—Hugh Ross, Kingston; P. R. Palmer, Thurlow.

Best ground bones for manure, P. R. Lamb, Toronto, \$4; 2d do, do, do, \$2.

Best specimen of other artificial manure'  
Thomas Martindale, York, G. R., \$4.

## ARTS AND MANUFACTURES DEPARTMENT.

COMPETITION OPEN TO CANADIAN EXHIBITORS ONLY.

CLASS XXXVIII.—CABINET-WARE AND OTHER WOOD MANUFACTURES—(61 Entries.)

*Judges.*—George Stephens, Cobourg; George Jackson, Simcoe.

Best bed room furniture, set of, Jacques & Hay, Toronto, \$10; 2d do, do, do, \$8.

Best centre table, do, do, \$7.

Best drawing room sofa, do, do, \$7.

Best drawing room chairs, set of do, do, \$7.

Best wardrobe, do, do, \$5; 2d do, do, do, \$4.

Best Cooper's work, Coridon Lewis, Salford, \$4; 2d do, R. S. Dodd, Stratford, \$3.

Best curled hair, 10 lbs., Peter R. Lamb, Toronto, \$3; 2d do, do, do, \$2.

Best handles for tools for carpenters, blacksmiths, gunsmiths, watchmakers, &c., collection of, Thomas Moore, Etobicoke, \$8.

Best joiner's work, assortment of, Smith & Burke, Toronto, \$8.

Best machine wrought moulding and flooring, 100 feet of each, do, do, \$6.

Best turning in wood, collection of specimens, Jacques & Hay, Toronto, \$6; 2d do, Smith & Burke, Toronto, \$4.

Best veneers, from Canadian woods, W. Clements, Newbury, \$10; 2d do, T. F. Purdy & Brother, Newbury, \$6.

Best wash tubs and wooden pails, three of each, factory made, Coridon Lewis, Salford, \$4.

EXTRA PRIZES.—Ker & Brother, Streetsville, samples of jack spools and bobbins for woollen and cotton mills, \$2. P. T. Ware & Co., Toronto, three sewing machine cases, \$3. William and Thomas Walker, Brampton, washing machine, \$2. O. W. Everett, Dundas, lot of turned wooden bowls, \$2. Richmond & Walton, London, Clothes dryer, \$4. Henry Fryatt, Aurora, scrubbing machine, commended. Thomas McMurchy, Glenwilliam, Patent Mangle, \$3. John Addison, Hamilton, patent spring Mattress, Diploma. James Meyers & Son, Toronto, washing machine and wringer, \$2. Harris, Brothers, Toronto, corn brooms, \$1. Samuel Creighton, Toronto, spinning wheel, \$2.

Michael Malcolm, Toronto, Chess Boards, comm'd. Wm. Haines, Toronto, specimens of varnishing and polishing on grand piano, \$4.

CLASS XXXIX.—CARRIAGES, SLEIGHS, AND PARTS THEREOF.—(51 Entries.)

*Judges.*—James Kay, Galt; John King, St. Thomas.

Best bent shafts, half a-dozen, A. P. Bussick, Stouffville, \$3; 2d do, Abraham Efner, London, \$2.

Best buggy, double seated, C. F. Hall, Toronto, \$8; 2d do, do, do, \$6.

Best buggy, single seated, Macabe & Co., Hamilton, \$7; 2d do, C. F. Hall, Toronto, \$5.

Best carriage, two horse, pleasure, C. F. Hall, Toronto, \$12; 2d do, do, do, \$8.

Best carriage, one horse, pleasure, Macabe & Co., Hamilton, \$8; 2d do, C. F. Hall, Toronto, \$6.

Best child's carriage, John Webster, Yorkville, \$4; 2d do, Edward Colley, St. Mary's \$3.

Best hubs, two pairs of carriage, Abraham Efner, London, \$3.

Best rims or feloes, two pairs of carriage, R. McKinley & Co., St. Catharines, \$3; 2d do, Abram. Efner, London, \$2.

Best spokes, one dozen, machine made, carriage, Thos. C. Saunders, St. Catharines, \$3.

Best two horse pleasure sleigh, Hart & Son, Picton, \$10.

Best sleigh, one horse, pleasure, Samuel Lake, Newburgh, \$8; 2d do, Macabe & Co., Hamilton, \$6.

Best springs, one set of steel carriage, Isaac Briggs, Gananoque, \$4; 2d do, Moria Spring Co., Belleville, \$3; extra do, buggy springs, John Stephenson, Unionville, \$2.

Best wheels, one pair of carriage (unpainted), C. F. Hall, Toronto, \$4.

EXTRA PRIZES.—W. J. Hamilton, Homer, Lincoln, trotting buggy, \$2. Do, do, trotting sulky, \$1. R. McKinley & Co., St. Catharines, bows for carriage tops, \$1. Do, do, rails for buggy seats, \$1. Do, do, set of bent sulky feloes, \$1. Do, do, set of cutter stuff, \$1. Do, do, bent stuff and bendings for cutters, \$2. John Webster, Yorkville, Express waggon, \$3. A. P. Bussick, Stouffville, sleigh bends, \$2. Abraham Efner, London, bent cutter and sleigh stuff, \$1. C. F. Hall, Toronto, Boston chaise, \$2.

**CLASS XL.—CHEMICAL MANUFACTURES AND PREPARATIONS.—[51 Entries.]**

*Judges.*—H. Y. Hind, Toronto; Thomas J. Cottell, Woodstock; T. McLlwraith, Hamilton; W. N. Alger, Brantford.

Best Glue, 14 lbs., Peter R. Lamb, Toronto, \$3; 2d do, do, do, \$2.

Best medicinal herbs, roots and plants, native growth, Dr. D. W. Poole, Norwood, \$12; 2d do, W. Saunders, London, \$8.

Best oils, linseed and rape, and other expressed kinds, Robert Pomeroy, Toronto, \$6.

Best oil (coal, shale or rock) Petrolia Refining Co., Petrolia, \$6; 2d do, T. W. Esmonde, Toronto, \$4.

**EXTRA PRIZES.**—A. C. Walkinshaw, Toronto, blue-black writing fluid, copying ink, blue writing fluid, red writing fluid and indelible writing ink, all commended, \$3 for the assortment. Peter R. Lamb, Toronto, Neat's foot oil, \$2.

**NOTE BY JUDGES.**—The specimens of oil exhibited, both in the raw and manufactured state, are favorable samples of this new branch of industry; but as a scientific analysis of the samples produced would be of no commercial value, the Judges have awarded the prizes to the exhibitors who have shown the best assortment of oils from Canadian Petroleum.

**CLASS XLI.—DECORATIVE AND USEFUL ARTS, DRAWINGS AND DESIGNS—(91 Entries.)**

*Judges.*—John Shier, Whitby; C. Quinlan, Port Hope; Wm. Boys, Barrie.

Best carving in wood, R. E. Griffith, Toronto, \$6; 2d do, James McGee, Toronto, \$4.

Best decorative house painting, Andrew Widdowson, Toronto, \$5; 2d do, Geo. D. Lucas, do, \$3.

Best engraving on wood, with proof, Edward Roper, Hamilton, \$5; 2d do, Edward Hooper, Toronto, \$3.

Best goldsmith's work, Joseph Robinson & Co., Toronto, \$5; 2d do, Savage & Lyman, Montreal, \$5.

Best geometrical drawing of engine or Millwright work, colored, T. A. Peterson, Toronto, \$5; 2d do, Wm. Gill Toronto, \$3.

Best lithographic drawing, W. C. Chewett & Co., Toronto, \$5.

Best lithographic drawing (colored), L. Magnus, Toronto, \$6; 2d do, L. Magnus, no, \$4.

Best mantel piece, in marble, W. H. Sheppard, Toronto, \$10; 2d do, N. L. Steiner, Toronto, \$6.

Best mathematical, philosophical and surveyor's instruments, collection of, A. F. Potter, Toronto, \$15; 2d do, Geo. Mathias, do, \$10.

Best modelling in plaster, Charles Bell, Toronto, \$6; 2d do, Farrell & Duckworth, Toronto, \$4.

Best monumental tomb or headstone, Borrowman & pearse, Toronto, \$6; 2d do, Robert Sheppard, do, \$4.

Best picture frame, ornamented gilt, Mr. Scott, Montreal, \$5; 2d do, Mr. Scott, do, \$3.

Best seal engraving, Thos. Wheeler, Toronto, 2d prize, \$4.

Best silversmith's work, J. G. Joseph & Co., Toronto, \$4; 2d do, Savage & Lyman, Montreal, \$3.

Best stained glass, collection of specimens, McCausland & Horwood, Toronto, \$10; 2d do, W. Bullock, Toronto, \$6.

**EXTRA PRIZES.**—Map of Canada, Tackabury, Bros., London, \$4. Dialing instrument, W. H. Sheppard, Toronto, \$5.

Designs and stamps for embroidery, Wm. Williams, Toronto, \$3. Decorative sign painting George Booth, Toronto, \$5. Lithographic drawings, W. C. Chewett & Co., Toronto, \$3.

Assortment of gold and silver leaf, and dentist's gold foil, C. W. Hubbard, Toronto, \$4. Map engraving and printing (map of Upper Canada) G. C., G. R. and G. M. Tremaine, Toronto, diploma and \$6.

Writing on glass in gold, Geo. D. Lucas, Toronto, \$3. Dentistry, Wm. Myers, Toronto, \$4.

Sign writing or gilding on glass, And. Widdowson, Toronto, \$4. Specimens of Penmanship, I. Bates, Toronto, \$5.

Orr's system of writing, J. Edwards, Toronto, \$5. Case of dentistry, Cas. J. Curtis, Toronto, \$5.

Natural weather indicator, L. S. Ullman, Toronto, \$3. Collection of native marbles, W. Haughey, Ottawa, highly commended, \$5.

**CLASS XLII.—FINE ARTS—(67 Entries.)**

*Judges.*—W. M. Wilson, Simcoe, Norfolk; J. D. Dumble, Cobourg; H. W. Peterson, Guelph.

*Professional List—Oil.*

Best animals, grouped or single, Robert

Whale, Burford, \$12 and diploma; 2d do, W. N. Cresswell, Harpurhey, \$8.

Best historical painting, W. N. Cresswell, do., \$12; 2d do., Robert Whale, Burford, \$8.

Best landscape, Canadian subject, Robert Whale, Burford, \$12; 2d do, W. N. Cresswell, Harpurhey, \$8.

Best marine painting, Canadian subject, W. N. Cresswell, Harpurhey, \$12; 2d do, W. Armstrong, Toronto, \$8.

Best portrait, Robert Whale, Burford, \$10; 2d do, not numbered ("Indian Girl"), \$7.

#### *In Water Colours.*

Best animals, grouped or single, John H. Caddy, Hamilton, \$8; 2d do, Wm. Armstrong, Toronto, \$6.

Best flowers, grouped or single, John Grif; fith, London, \$8; 2d do, Miss A. F. H. Gibbon, Weston, \$6.

Best landscape, Canadian subject, John H. Caddy, Hamilton, \$8; 2d do, W. N. Cresswell, Harpurhey, \$6.

Best marine view, Canadian subject, W. Armstrong, Toronto, \$8; 2d do, W. N. Cresswell, Harpurhey, \$6.

#### *Pencil, Crayon, &c.*

Best crayon, colored, Wm. Armstrong, Toronto, \$6; 2d do, Miss Amelia F. H. Gibbon, Weston, \$4.

Best crayon, plain, do, do, \$6; 2d do, Miss Annie Bushell, London, \$4.

Best pencil drawing, J. C. Braithwaite, Toronto, \$6; 2d do, do, do, \$4.

Best pen and ink sketch, Miss Amelia F. H. Gibbon, Weston, \$6; 2d do, F. H. Verner, Toronto, \$4.

#### *Amateur List—Oil.*

Best animals, grouped or single, John Whale, Burford, \$9; 2d do, do, do, \$7; do, highly commended, Mrs. Gourlay, Hamilton.

Best historical painting, Rev. Wm. Grant, Port Perry, \$9; 2d do, Miss M. A. Evans, Toronto, \$7.

Best landscape, Canadian subject, J. Whale, Burford, \$9; 2d do, A. H. Gilmour, Toronto, \$7.

Best marine painting, Canadian subject, J. Whale, Burford, \$9; 2d do, do, do, \$7.

Best portrait, do, do, \$8; 2d do, Miss Beddome, London, \$6.

#### *In Water Colors.*

Best animals, grouped or single, F. Wise, Toronto, \$8; 2d do, Miss Kirkpatrick, Kingston, \$6.

Best flowers, grouped or single, M. Brunskill, Toronto, \$5; 2d do, James Griffiths, London, \$3; do, highly commended, M. Thompson, Toronto.

Best landscape, Canadian subject, T. Belfield, Grafton, \$8; 2d do, Wm. Ambrose Hamilton, \$6; do, highly commended, Mr B. Walker, St. Thomas.

Best marine view, Canadian subject, T. I. Belfield, jun., Grafton, \$8; 2d do, W. Ambrose, Hamilton, \$6.

#### *Pencil, Crayon, &c.*

Best Crayon, colored, E. A. Mara, Toronto, \$5; 2d do, Miss E. J. Thompson, Toronto, \$3.

Best Crayon, plain, Miss Rowe, Whitby, \$5. 2d do. do. do., Mrs. Henry Reid, Toronto, \$3.

Best pencil drawing, Miss Maugh Windsor St., Toronto, \$5; 2d do, do, do, \$3; extra do, James Griffith, London, \$2; highly commended, George Armitage, Toronto.

Best pen and ink sketch, Mrs. Gourlay, Hamilton, \$5; 2d do, Edward Roper, Hamilton, \$3; do, extra prize, J. G. Horne, Toronto, \$2.

#### *Photography.*

Best collection of ambrotypes, Jas. Raw Toronto, \$7.

Best collection of photograph portraits, i duplicate, one set colored, Carl Loeffler, Toronto, \$10; 2d do, do, do, \$8.

Best collection of photograph portraits plain, Mathews & Anderson, Toronto, \$8; 2d do, Jas. R. Hay, do, \$6.

Best collection of photograph landscape and views, W. Armstrong, Toronto, \$9; 2d do, Mathews & Anderson, do, \$7.

Best photograph portraits in Oil, Jan. Rawe, Toronto, \$8; 2d do, R. A. Pauling, Hamilton, \$6.

EXTRA PRIZES.—James R. Hay, Toronto photographic visiting cards, \$4. Miss A. H. Gibbon, Weston, oil painting, "Lake Lucerne, Switzerland," \$4. Miss Maugh Toronto, water color drawing, "English Ruins," \$2. Do, do, do, "Autumn," \$2. Do, do, do, "Cochem on the Moselle," \$2. D. Gourlay, Toronto, stereoscope for 14 views, \$4. J. T. Carson, Toronto, ivory

pes, \$2. Do, do, Photographs re-touched Indian ink, diploma. Wm. Armstrong, Toronto, two portraits in water colors, \$4. Do, do, series of views on lake Superior, diploma. Benoni Irwin, Newmarket, drawings in Indian ink, diploma. William Amrose, Hamilton, composition in water colors, \$2. T. Fitzgerald, Toronto, enlarged photographs, \$3. Miss Kirkpatrick, Kingston, ferns in India ink, \$2.

REMARKS BY JUDGES.—The Judges have had great difficulty in performing their duties in a manner satisfactory to themselves on the defective arrangement of the specimens. Many have not been seen at all. They would recommend that the persons in charge of the departments should be instructed to place sections as much as possible together. The judges have much pleasure in marking that a decided improvement is observable in the fine arts department.

CLASS XLIII.—GROCERIES AND PROVISIONS—(77 Entries.)

Judges.—F. W. Fearman, Hamilton; D. McLaren, Mitchell; E. A. McNaughton, Newcastle.

Best barley, pearl, Robert King, Hamilton, \$3; 2d do, A. Mitchell, York, \$2.

Best barley, Pot, Robert King, Hamilton, \$3; 2d do, A. Mitchell, York, \$2.

Best bottled pickles, an assortment, manufactured for sale, C. B. Rowland & Co., Toronto, \$6.

Best cayenne pepper, from capsicums grown in the Province, H. Girouard, Hamilton, \$2.

Best chickory, 2 lbs., G. Pears, Toronto, \$3; 2d do, D. Crawford & Co., Toronto, \$2.

Best Indian corn meal, Robert King, Hamilton, \$3.

Best oatmeal, James Russell, Claremont Mills, \$3.

Best sauces, for table use, an assortment, manufactured for sale, C. B. Rowland & Co., Toronto, \$6.

Best soaps, collection of assorted fancy, C. Watts, Brantford, \$6; 2d do, P. Freeland Co., Toronto, \$4.

Best starch, 12 lbs of corn, Benson & Wheden, Edwardsburgh, \$2.

Best starch, 12 lbs of flour, Klotz, Brothers, Preston, \$2.

Best wheat flour, Elias Snider, jun., Waterloo, \$4; 2d do, G. Wheler, Uxbridge, \$3; extra prize, John Kemp, Dumbarton, \$2.

EXTRA PRIZES.—Six jars preserves, Miss E. Charles, Yorkville, \$2. Split peas, James Wilson, Eden Mills, \$2. Pickling vinegar, B. E. Charlton, Hamilton, dip. Two bottles brandy, W. H. Smith & Co., Toronto, commended. Mustard, D. Crawford & Co., Toronto, commended. Ground spices, do, \$2. Keg challenge soap, W. F. Langlois, Toronto, commended. Collection of biscuits, M. Nasmith, Toronto, \$3. Table sauces, Mrs. Jesse Thomson, Yorkville, \$2. Preserves, 12 kinds, Mrs. Jesse Thomson, Yorkville, \$2. Rock candy, M. Davis, Toronto, \$2. Collection of Biscuits, W. Christie, Toronto, diploma.

NOTE BY JUDGES.—The judges on class 43 desire to express their regret that there has not been more care taken in classifying the different articles. A great many articles that have been entered are not to be found, and others are placed in other classes; for example, wine, maple sugar, bacon, &c, in the dairy class; and no order on the table where the class is placed.

CLASS XLIV.—LADIES WORK.—(424 Entries)

Judges.—Mrs. R. B. Denison, Toronto; Mrs. Dr. Beatty, Cobourg; Mrs. F. W. Coate, Toronto; Mrs. J. F. Kidner, Hamilton.

Best braiding, Miss E. Eckhardt, Unionville, \$3; 2d do, Miss F. Arnoldi, Toronto, \$2.

Best crochet work, Miss J. A. Ramsey, Kingston, \$3; 2d do, Miss Bidwell, Cramahe, \$2; 3d do, Miss Annie Norton, Toronto, do, commended, Miss Isabella Hunter, Orillia.

Best embroidery in Muslin, Miss Bidwell, Cramahe, \$3; 2d do, Miss J. A. Ramsey, Kingston, \$2.

Best embroidery in silk, Mrs. J. Johnston, Toronto, \$3; 2d do, Miss Rosa Cameron, Toronto, \$2.

Best embroidery in worsted, Miss R. M. Evans, London, \$3; 2d do, Miss Beddome, London, \$2.

Best gloves, three pairs, Platt Hinman, Grafton, \$2; 2d do, Mrs. Harper, Aurora, \$1.

Best Guipure work, Miss Bidwell, Cramahe, \$3; 2d do, Mrs. J. Bates, Hamilton, \$2.

Best knitting, Mrs. Harper, Aurora, \$3; 2d do, Mrs. E. Agar, Burwick, \$2.

Best lace work, Miss Maria Matthews, Belleville, \$3; 2d do, Miss Bidwell, Crama-



he, \$2; extra do, equal to first (Limerick lace,) Miss Helen Raleigh, Toronto, \$3.

Best mittens, three pairs woollen, Platt Hinman, Grafton, \$2; 2d do, Mrs. C. Miller, Norval, \$1.

Best needle work, ornamental, Madame Griebel, Toronto, \$3; 2d do, Miss J. A. Ramsey, Kingston, \$2.

Best netting, fancy, Miss E. Strickland, Oshawa, \$3; 2d do, Miss Strickland, Oshawa, \$2.

Best plait for bonnets or hats, of Canadian straw, Mrs. Silverthorn, Toronto, \$3; 2d do, Mrs. H. Stickle, Cobourg, \$2.

Best Gentleman's shirt, Mrs. M. A. Johnston, Yorkville, \$3; 2d do, Mrs. J. T. Ewart, Woodbridge, \$2.

Best socks, three pairs woollen, Mrs. D. Christie, Utica, \$2; 2d do, Mrs. Alex. Gerrie, Dundas, \$1.

Best stockings, three pairs woollen, No. 10 (name not known,) \$2; 2d do, Mrs. A. Geric, Dundas, \$1.

Best tatting, Miss J. A. Ramsey, Kingston, \$3; 2d do, Miss Hettie Denison, Toronto, \$2.

Best wax fruit, Miss Sophia Graham, Streetsville, \$6; 2d do, Miss M. Lyman, Toronto, \$4.

Best wax flowers, Mrs. A. Dredge, Toronto, \$6; 2d do, a case all white [ticket, misplaced] \$4.

Best worsted work, Miss Ann Unwin, Toronto, \$3; 2d do, Miss Ann Unwin, Toronto, \$2.

Best worsted work, raised, Miss J. A. Ramsey, Kingston, \$3; 2d do, do, do, \$2.

EXTRA PRIZES.—Miss Mary Sheppard, Willowdale, hearth rug, \$2. Mrs. Harper, Aurora, knitted quilt, \$2. Miss Dover, Toronto, silk table cover, \$1. Miss Elizabeth McEvers, Cobourg, ornamental wreath in seeds, \$4. Miss Isabella Graham, Streetsville, case of wax shells, \$6 and diploma. Miss Isabella Graham, Streetsville, work in hair, \$3. Mrs. Fenwick, Markham, counterpane, \$2. Mrs. D. Howland, Hamilton, case hair jewelry, \$3. Mrs. E. Goldsmith, Toronto, knitted counterpane, \$2. Mrs. G. Wiley, Richmond Hill, hearth rug, \$1. Mrs. Wright, Toronto, wax figure of Her Majesty the Queen, \$2. Mrs. S. A. Johnstone, Yorkville, night dresses, \$1. Mrs. Wood, Toronto, tatting work, \$1. Miss M. J. Wilson, Yorkville, woollen shawl, \$1. Miss Jane Mitchell, Port Hope, transferred work, \$1.

Miss Rosa Paraday, Toronto, bead work, \$1. Miss Bidwell, Cramahe, cordon collar and cuffs, \$2. Mrs. G. Silverthorn, Toronto, straw hat and bonnet, \$1.

CLASS XLV.—MACHINERY, CASTINGS AND TOOLS—[78 Entries.]

Judges.—James Crossen, Cobourg; W. P. Phillips, Kingston; Robert McKechnie, Dundas.

Best castings for general machinery, J. Gartshore, Dundas, Wentworth, \$10.

Best castings for railways, railroad cars and locomotives, assortment of, John Gartshore, Dundas, \$15.

Best edge tools, assortment, H. H. Date, Galt, \$20.

Best pump, in metal, C. P. Hinds, Toronto, \$5; 2d do Isaac Briggs, Gananoque, \$3.

Best refrigerator, J. W. Esmonde, Toronto, \$6.

Best sewing machine, manufacturing, R. M. Wanzer & Co., Hamilton, \$10; 2d do, L. N. Soper, Woodstock, \$7; extra do, for a new improvement in sewing machines, adapting them to waxed thread, Thomas Halligan, Newmarket, diploma and \$10; do, commended, Patterson & Irwin, Belleville.

Best sewing machine, family, R. M. Wanzer & Co., Hamilton, \$10; 2d do, Patterson & Irwin, Belleville, \$7.

Best valves and gearing for working steam expansively, either in model or otherwise—principle of working to be the point of competition, William Gill, Toronto, \$12.

EXTRA PRIZES.—Fire detector and burglar alarm, Salem Eckhardt, Unionville, Diploma and \$3. Blacksmith's fire iron, Salem Eckhardt, Unionville, \$2. Hand-power loom, Miles Welsh, Brantford, \$5. Saw shingle machine, J. W. & N. Green, Watford, \$4. Wood-sawing machine, David Bruce, London, \$5. Four amalgam bells, Irwin & Sons, Uxbridge, \$5. Machine for making bats, Elisha Simkins, Toronto, \$2. Coal mining machine, Elisha Simkins, Toronto, \$2. Shingle machine, G. O. S. Conway, Ashburn, \$5. Patent fire escape, George Campbell, Toronto, \$2 and diploma. Model of a locomotive, F. A. Gardner, Hamilton, \$5. Engine beer pump, D. S. Keith, Toronto, \$3. Self-regulating steam warming apparatus, D. S. Keith, Toronto, \$8. Green house hot water boiler, D. S. Keith, Toronto, \$3. Portable gas making apparatus, D. S. Keith, Toronto, \$5. Blacksmith's Bellows,

Samuel Westman, Toronto, \$3. Smith's forge bellows, Jos. Dallyn & Sons, Hamilton, \$4. A pair of mill stones, J. Gartshore, Dundas, \$10. Bran Duster, J. Gartshore, Dundas, \$8. Central discharge water wheel, John Gartshore, Dundas, \$5. Forty horse-power steam engine, not in operation, John Gartshore, Dundas, \$20. Model of improved steam engine, for working steam expansively, Thomas Northy, Hamilton, diploma and \$2. Cracker and biscuit machine, W. W. Gibson, Dundas, \$10. Coffee mill, W. W. Gibson, Dundas, \$3. Sugar mill do, do, \$2. Fire engine, W. Marks, Toronto, \$10. Branch rail for track, J. Findlay, Toronto, \$2. Shingle machine, Jas Davidson, Cobourg, \$10. Double box loom, Jas. Davidson, Cobourg, diploma and \$10. Washing machine, James Spring, Dorchester, \$2. Machine for making tin eave troughs, Robert Emery, Toronto, \$3. Mill stones, R. H. Hays, Toronto, \$5. Tailor's shears, Geo. & S. Rogers, Toronto, \$2. Steam gauges, Ashua Lowe, Toronto, \$10 and diploma. Model of patent churn, Mrs. M. Murdoch, Port Dalhousie, \$1. Combination carriage, Mrs. M. Murdoch, Port Dalhousie, \$1. Model of iron waggon, Mrs. M. Murdoch, Port Dalhousie, \$2. Model of seed-drill, Mrs. M. Murdoch, Port Dalhousie, \$2. Improved rat-trap, J. B. Ryan, Toronto, \$1. Self-acting cattle guard, James Forest, Ontario, Co. Wentworth, \$2. Small saw mill, Aaron Scott, Dereham, \$4.

CLASS XLVI.—METAL WORK (MISCELLANEOUS) INCLUDING STOVES—(95 Entries.)

Judges.—A. K. Boomer, Toronto; John Watson, Ayr; Thos. D. Harris, Toronto.

*Miscellaneous.*

Best coal oil lamps, an assortment, Parsons Brothers, Toronto, not manufactured in Canada, diploma; 2d do, H. Piper & Brother, Toronto, not manufactured in Canada, diploma.  
Best coppersmith's work, an assortment, Booth & Brother, Toronto, \$7.  
Best fire arms, an assortment, W. P. Marzani, Toronto, \$7; 2d do, James M. Jones, Dereham, \$5.  
Best files, collection of cast steel, Andrew Watt, Hamilton, \$3.  
Best fire proof office safe, J. & J. Taylor, Toronto, \$8; 2d do, do, do, \$6.  
Best iron fencing and gate, ornamental, W. Bain, Sandwich, \$7.

Best iron work from the hammer, ornamental, Wm. Midford, Ottawa, \$6; 2d do, James Berry, Wellington Square, \$4.

Best locksmith's work, an assortment, R. J. Brown, Toronto, \$7; 2d do, J. & J. Taylor, Toronto, \$5.

Best nails, 20 lbs. of pressed, Cavan & Britton, Gananoque, \$6.

Best nails, 20 lbs cut, Cavan & Britton, Gananoque, \$6; 2d do, do, do, \$4.

Best plumber's work, an assortment, John Ritchie, Toronto, \$6; 2d do, D. S. Keith, Toronto, \$4.

Best tinsmith's lacquered work, an assortment of, Booth & Brother, Toronto, \$6.

Best wire work, an assortment of, W. H. Coe, Toronto, \$6.

*Stoves.*

Best cooking stove, for wood, with furniture, John McGee, Toronto, \$6; 2d do, do, do, \$4.

Best cooking stove, for coal, with furniture, J. G. Beard & Sons, Toronto, \$6; 2d do, do, do, \$4.

Best hall stove, for wood, John McGee, Toronto, \$5; 2d do, do, do, \$3.

Best hall stove, for coal, John McGee, Toronto, \$5; 2d do, do, do, \$3.

Best parlour stove, for wood, John McGee, Toronto, \$5; 2d do, J. G. Beard & Sons, Toronto, \$3.

Best parlour stove, for coal, J. McGee, Toronto, \$5.

EXTRAS.—Improved fire-place, W. H. Sheppard, Toronto, diploma. Three iron beadsteads, J. & J. Taylor, Toronto, \$5. Parlour house safe, J. & J. Taylor, Toronto, \$3. Plumber's brass work, John Ritchie, Toronto, diploma. Engineer's brass work, John Ritchie, Toronto, \$5. Soda water fountain, T. Smith, Toronto, diploma. Soda water bottling machine, Thomas Smith, Toronto, diploma. Specimens of iron rivets, Isaac Briggs, Gananoque, diploma. A collection of saws, Morland, Watson & Co., Montreal, diploma. Pair of self-fastening skates, R. J. Brown, Toronto, diploma. Zinc window sash and eave troughs of zinc and galvanized iron, Edward Colley, St. Mary's, diploma. Steam and water engineering brass work, D. S. Keith, Toronto, diploma. Assortment of stamped copper bottoms, J. McGee, Toronto, diploma. Sample smoothing irons, Ives & Allan, Montreal, diploma. Patent door-bell, A. E. Taylor, Brockville, diploma. Railway switches, J.

Kitchen, Kingston, diploma. Laundry stove, J. G. Beard, Toronto, diploma. New and useful apparatus for economising fuel in heating rooms, applicable to open grates, E. Vernon, Hamilton, \$5 and diploma. Assortment of weights and measures, H. Piper & Brother, Toronto, \$5.

**CLASS XLVII.—MISCELLANEOUS, INCLUDING POTTERY AND INDIAN WORK—(56 Entries.)**

*Judges.*—D. B. Garton, Barrie; David Savage, Guelph.

*Miscellaneous.*

Best brushes, an assortment, Charles Boeckh, Toronto, \$6; 2d do, Alfred Green, Hamilton, \$4.

Best model of a steam vessel, Richard Osborne, Newburg, \$6.

Best model of a sailing vessel, Richard Osborne, Newburg, \$6; 2d do, Richard Osborne, Newburg, \$4.

*Pottery.*

Best filter for water, Jos. Brown, Carlton West, \$3; 2d do, F. P. Gould, Brantford, \$2.

Best pottery, an assortment, Jos. Brown, Carlton West, \$8; 2d do, Wm. Lea, York, \$5.

Best sewerage pipes, stoneware, assortment of sizes, W. & R. Campbell, Hamilton, \$10; 2d do, F. P. Gould, Brantford, \$6.

Best assortment of stoneware, F. P. Gould, Brantford, \$10.

Best slates for roofing, Benj. Walton, Toronto, \$8.

**EXTRA PRIZES.**—Artificial limbs, John Condell, Brockville, \$4. Stove-pipe conductor of artificial stone, W. H. Sheppard, Toronto, \$2. Patent canvas felt, W. D. Darlington, Toronto, \$3. Artificial limbs, Norris Black, Toronto, \$3. Lamp chimney cleaners, C. Boeckh, Toronto, \$1. Earthenware vases, John Burns, Yorkville, \$1. Specimens of Indian work, "Sox ska tien a chi," of Caughnawaga, \$3.

**CLASS XLVIII.—MUSICAL INSTRUMENTS—(31 Entries.)**

*Judges.*—G. W. Strathey, Mus. Doc. Toronto; Prof. F. W. Sofge, Toronto.

Best harmonium, R. S. Williams, Toronto, \$10; 2d do, Andrus Bros., London, \$6.

Best melodeon, R. S. Williams, Toronto, \$6; 2d do, Andrus Bros., London, \$4.

Best organ, church, Edward Lye, Toronto, \$25.

Best piano, square, John C. Fox, Kingston, \$15; 2d do, W. G. Vogt & Co., Montreal, \$10.

Best piano, grand, J. Thomas & Co., Toronto (2d prize), \$10.

Best piano (Cottage), J. Thomas & Co. Toronto (2d prize), \$6.

Best violin, Silas Coleman, Toronto, \$2; 2d do, Coridon Lewis, Salford, \$2.

**EXTRA PRIZES.**—Violin case, Silas Coleman, Toronto, \$2. Double bass, Silas Coleman, Toronto, \$3. Bass drum, R. S. Williams, Toronto, \$1. Side drum, in wood, R. S. Williams, Toronto, \$1. Do, in brass, R. S. Williams, Toronto, \$1. Finishing piano action, C. Baker, Toronto, \$2.

**CLASS XLIX.—NATURAL HISTORY—(17 Entries.)**

*Judges.*—H. Y. Hind, Toronto; Thor Mellwraith, Hamilton; T. J. Cottrell, Woodstock; W. N. Alger, Brantford.

Best collection of stuffed birds of Canada, classified, and common and technical names attached, S. Passmore, Toronto, \$8.

Best collection of native fishes, stuffed and preserved in spirits, and common and technical names attached, Samuel Passmore, Toronto, \$8.

Best collection of native insects, classified, and common and technical names attached, Wm. Saunders, London, \$8.

Best collection of minerals of Canada, named and classified, Thomas Herrick, Toronto, \$8; 2d do, W. W. Fox, Toronto, \$5.

Best collection of native plants, arranged in their natural families, and named, Poole, M. D., Norwood, \$8; 2d do, Kate Crooks, Hamilton, \$6.

Best collection of stuffed birds and mammals of any country, Samuel Passmore, Toronto, \$8.

**EXTRAS.**—Basket of sea weed, Mary Gall, Toronto, commended. Book of fern leaves, Mrs. Dredge, Toronto, commended. Sea weed, Mrs. Dredge, Toronto, commended as very tastefully arranged. Collection of sea Weed, Miss C. Carmichael, Toronto, commended.

**CLASS L.—PAPER, PRINTING, BOOKBINDING & TYPE.—(26 Entries.)**

*Judges.*—John Edwards, Toronto; J. W. Wyllie, Brockville; Archibald McLellan, St. Thomas.

Best bookbinding, blank book, assort.

Brown Brothers, Toronto, \$5; 2d do, W. C. Chewett & Co., Toronto, \$3.

Best bookbinding, letter-press, assortment of Brown Brothers, Toronto, diploma and \$5.

Best letter-press printing, plain, W. C. Chewett & Co., Toronto, \$5; 2d do, Geo. Brown, Toronto, \$3.

Best letter-press printing, ornamental, G. Brown, Toronto, diploma and \$5.

Best paper hangings (Canadian paper), one dozen rolls, assorted, Barber & Bros., Georgetown, diploma and \$7.

Best printing, wrapping, and writing papers, one ream of each, Buntin Bros., Toronto, \$7; 2d do, Barber Bros., Georgetown, \$5.

Best printing type, an assortment, C. T. Alsgrave, Toronto, \$7.

EXTRAS.—Paper cloth address labels, T. Hill, Toronto, \$2. Machine for cutting and filtering printers' rules, John Fensom, Toronto, diploma. Blotting paper, colored paper and envelopes, Buntin Bros., Toronto, diploma. Assortment letter-press printing, W. C. Chewett & Co., Toronto, \$2. Bankers' cases, &c., Brown Bros., Toronto, \$2.

Pocket books, wallets, &c., Brown Bros., Toronto, diploma. Embossed cloth cases, Brown Bros., Toronto, \$1.

Ornamental cards, G. Brown, Toronto, commended.

Plain cards, Geo. Brown, Toronto, commended.

Ornamental posters, Geo. Brown, Toronto, diploma. Letter-press printing, varieties, G. Brown, Toronto, commended.

CLASS LI.—SADDLE, HARNESS, ENGINE HOSE, AND TRUNK MAKE'S WORK, AND LEATHER.

(79 Entries.)

Best harness, set double carriage, Marshall Porter, Bowmanville, \$8; 2d do, J. & Irvine, Montreal, \$6.

Best harness, set of single carriage, A. Fraser, Hamilton, \$6; 2d do, W. Steward, Toronto, \$4.

Best harness, set of team, R. Malcolm, Toronto, \$5; 2d do, W. Steward, jun., Toronto, \$3.

Best saddle, lady's full quilted, W. Steward, Toronto, \$8; 2d do, Thos. Thompson, Toronto, \$6.

Best saddle, lady's quilted safe, R. M. Hinder, Toronto, \$6; 3d do, W. Steward, jun., Toronto, \$4.

Best saddle, gentleman's full quilted, T. Thompson, Toronto, \$7; 2d do., J. & R. Irvine, Montreal, \$5.

Best saddle, gentleman's plain shaftoe, W. Steward, jun., Toronto, \$5; 2d do., A. Fraser, Hamilton, \$3.

Best trunks, an assortment, H. E. Clarke, Toronto, \$8; 2d do, W. Steward, jun., Toronto, \$6.

Best valises and travelling bags, an assortment, H. E. Clarke, Toronto, \$5.

Best hames, three pair of iron cased, team or cart, Robert Malcolm, \$3.

Best hames, six pairs of wooden team, R. C. Gill, Colborne, \$3; 2d do, Robert Malcolm, Toronto, \$2.

Best belt leather, 30 lbs., R. K. Johnson, Fergus, \$3; 2d do, W. M. Macklem, Chippawa, \$2.

Best brown strap and bridle, one side of each, W. M. Macklem, Chippawa, \$3; 2d do, R. K. Johnson, Fergus, \$2.

Best carriage cover, two skins, Robinson & Flummerfelt, Markham, \$3; 2d do, R. K. Johnson, Fergus, \$2.

Best deerskins, dressed, Hy. Ferdinand, Waterloo, \$2; 2d do, Greene, DeWitt & Co., Montreal, \$1.

Best harness leather, two sides, Jos. Flack, Sandhill, \$3; 2d do, Robert Dale, Sandhill, \$2.

Best hogskins for saddles, (no first); 2d do, R. K. Johnson, Fergus, \$3.

Best patent leather, for carriage or harness work, (no first); 2d do, R. K. Johnson, Fergus, \$4.

Best skirting for saddles, two sides, W. M. Macklem, Chippawa, \$4.

### Leather.

EXTRA ENTRIES.—Stud bridle and roller, Marshal Porter, Bowmanville, \$2. Winker leather, R. K. Johnson, Fergus, \$2. Buff grain leather, R. K. Johnston, Fergus, \$2. Express harness, Robert Malcolm, Toronto, \$2. Sample of belting, U. A. Harvey, St. Davids, \$2. Assortment of horse collars, Robert Nicholl, Toronto, \$4. Cart harness, Robt. Malcolm, Toronto, \$2. Pair Scotch collars, Robert Malcolm, Toronto, \$2.

**CLASS LII.—SHOE AND BOOT-MAKER'S WORK  
LEATHER, &C.—(78 Entries.)**

*Judges*—John Sterling, Toronto; James Gow, Guelph; James F. Wright, Vienna.

Best boots, ladies, an assortment, John Sims, Toronto, \$7; 2d do, R. Nisbet & Co., Hamilton, \$5.

Best boots, gentlemen's sewed, an assortment, John Sims, Toronto, \$7; 2d do, R. Nisbet & Co., Hamilton, \$5.

Best boots, pegged, an assortment, John Sims, Toronto, \$5; 2d do, Childs & Hamilton, Toronto, \$3.

Best boot and shoemakers' lasts and trees, an assortment, W. A. Young, Dundas, \$8.

Best calf skins, W. M. Macklem, Chippewa, \$3; 2d do, Robinson & Flummerfelt, Markham, \$2.

Best calf skins, two morocco, W. M. Macklem, Chippewa, \$3; 2d do, R. K. Johnson, Fergus, \$2.

Best Cordova, two skins of, R. K. Johnson, Fergus, \$3; 2d do, Wm. Jacques, Colborne, \$2.

Best dog skins, two dressed, Wm Jacques, Colborne, \$3; 2d do, A. McGlashan, York Mills, \$2.

Best kip skins, two sides, W. M. Macklem, Chippewa, \$3; 2d do, John Tye, Whitby, \$2.

Best patent leather, for bootmakers, 20 feet, R. K. Johnson, Fergus, \$6.

Best sole leather, two sides, Robert Garner, Drummondville, \$3; 2d do, Andrew McGlashan, York Mills, \$2.

Best upper leather, two sides, W. M. Macklem, Chippewa, \$3; 2d do, Robinson & Flummerfelt, Markham, \$2.

**EXTRA PRIZES.**—Black grain kip, R. K. Johnson, Fergus, \$2. Grain upper leather, W. M. Macklem, Chippewa, \$2. Assortment of shoemaker's pegs, W. A. Young, Dundas, \$2. Boot treeing machine, W. A. Young, Dundas, \$5. Crimping machine, W. A. Young, Dundas, \$5. Boston boot polishing machine, W. A. Young, Dundas, \$2. Grain dressed calf skin, Cook & Co., Yorkville, \$2. Leather leggings, Gillyatt & Coble, Toronto, \$2. Calf kid, Greene, DeWitt & Co., Montreal, \$4. Sheep kid, for gloves, Greene, DeWitt & Co., Montreal, \$2. Grained calf skin, John Tye, Whitby, \$2. Grained kip skin, John Tye, Whitby, \$2.

**CLASS LIII.—WOOLLEN, FLAX AND COTTON  
GOODS; AND FURS AND WEARING APPAREL  
(155 Entries.)**

*Judges*—James F. Kidner, Hamilton; Thos. Oliver, Woodstock; Joseph Manning, Brownsville.

Best bags from flax or hemp, the growth of Canada, one dozen, David Smellie, Concord, \$5.

Best bags, one dozen cotton, Joseph Wright, Dundas, \$4.

Best blankets, woollen, one pair, John Woodhull, Delaware, \$6; 2d do, E. L. Snider, Brockville, \$4; Mrs. Geo. Bateman, Oakwood, commended.

Best carpet, woollen, one piece, E. Snider, Brockville \$8; 2d do, Reuben Lundy, Newmarket, \$6.

Best carpet, woollen stair, one piece, E. Snider, Brockville, \$6; 2d do, E. Snider, Brockville, \$4.

Best cloth, fullled, one piece, Fraser & Co. Cobourg, \$6; 2d do, J. N. Pitts, Port Dover, \$4.

Best cloth, broad, one piece, Fraser & Co. Cobourg, \$6; 2d do, Platt Hinman, Grafton, \$4.

Best counterpanes, two, John Bowman, Almira, \$5; 2d do, Hugh McMillan, Erin, \$3.

Best cordage and twines, from Canadian flax or hemp, assortment of, A. & D. M. Gregor, Toronto, \$10; 2d do, A. Main & Co. Hamilton, \$6.

Best check for horse collars, one piece, Ezekiel Snider, Brockville, \$4.

Best drawers, factory made, woollen, one pair, J. G. Crane, Ancaster, \$4.

Best flannel, factory made, Barber, Streetsville, \$5; 2d do, Clark & Nixon, Clarksburg, \$3.

Best flannel, not factory made, one piece, Ezekiel Snider, Brockville, \$5; 2d do, W. Forfar, Ellesmere, \$3.

Best flannel, scarlet, one piece, Barber Brothers, Streetsville, \$5; 2d do, Barber Brothers, Streetsville, \$3.

Best fur cap and gloves, H. Ferdinand, Waterloo, \$4.

Best fur sleigh robe, H. Ferdinand, Waterloo, \$5; 2d do, Platt Hinman, Grafton, \$3.

Best gloves and mitts of any leather, assortment, Greene, DeWitt & Co., Montreal, \$4; 2d do, H. Ferdinand, Waterloo, \$3.

Best horse blankets, two pairs, Newbury Button, Milnesville, \$5.

Best kersey for horse clothing, one piece, H. J. Scott, Belleville, \$5; 2d do, Ez. Snider, Brockville, \$3.

Best linen goods, one piece, David Smellie, Concord, \$5.

Best winsey, checked, one piece, Elizabeth Patton, Milliken, \$3.

Best satinot black, one piece (no first); 2d do, Disher & Haight, St. Catharines, \$4.

Best satinot, mixed, one piece, Disher & Haight, St. Catharines, \$5; 2d do, Barber Bros., Streetsville, \$3.

Best shirts, factory made, three woollen, Jasper G. Crane, Ancaster, \$5.

Best silk and felt hats, Higby, Woodruff & Co., Hamilton, \$5.

Best stockings and socks, factory made woollen, three pairs each, Jasper G. Crane, Ancaster, \$4.

Best suit of clothes of Canadian cloth, Lawson & Co., Toronto and Hamilton, \$10.

Best Tweed, winter, one piece, J. N. Pitts, Port Dover, \$6; 2d do, Fraser & Co., Cobourg, \$4.

Best Tweed, summer, one piece, Barber Brothers, Streetsville, \$6; 2d do, J. N. Pitts, Port Dover, \$4.

Best twines, linen and cotton, an assortment, Alex. Main & Co. Hamilton, \$3; 2d do, A. & D. McGregor, Toronto, \$2.

Best woollen cloths, tweeds, &c., an assortment, J. N. Pitts, Port Dover, \$10; 2d do, B. & W. Rosamond, Lanark, \$6.

Best woollen shawls, stockings, drawers, shirts and mits, an assortment, J. G. Crane, Ancaster, \$10.

Best yarn, white and dyed, one pound of each, J. G. Crane, Ancaster, \$2.

Best yarn, fleecy woollen, for knitting, one pound, J. G. Crane, Ancaster, \$2.

Best yarn, cotton, Joseph Wright, Dundas, \$2.

**EXTRA ENTRIES.**—Black cassimere from merino wool, Barber Bros. Streetsville, \$4. Oxford grey, Barber Bros. Streetsville, \$4. Children's stockings, J. G. Crane, Ancaster, \$1. Overcoat of English material, Lawson & Co., Toronto and Hamilton, \$1. Overcoat of Canadian cloth, Lawson & Co., Toronto and Hamilton, \$1. Sheepskin mats, John Cooke, Toronto, \$1. Oxford doeskins, Barber Bros. Streetsville, \$3.

**NOTE BY JUDGES.**—The colours of the factory made flannels need improving. Some

of the home-made flannels to which we have not awarded prizes are very good, but the patterns are objectionable. The patterns of some of the woollen cloths and tweeds are also bad. An assortment of gentlemen's woollen scarfs from the Ontario Mills, Cobourg, is very good. A bale of factory cotton, manufactured by Gordon & McKay, is highly deserving of commendation.

**CLASS LIV.—FOREIGN MANUFACTURES.—**  
(39 Entries.)

*Judges.*—Dr. Beatty, Cobourg; Dr. Craigie, Hamilton.

Assortment of fishing hooks, fishing tackle, needles, &c. &c., Allcock, C. Laight & Co. Redditch, England, diploma.

Steam fire engine, Silsby, Myndesse & Co., Seneca, N. Y., diploma.

Patent saponifier, and soap manufactured therefrom, Erastus Burnham, Toronto, diploma.

Assortment of Steinway & Son's, Stodart's, and Chickering's pianos, exhibited by A. & S. Nordheimer, Toronto; commended as first class instruments of the respective manufacturers.

**AMATEUR MUSICAL BANDS.—**(2 Bands in competition.)

*Judges.*—G. M. Strathy, Mus. Doc. Toronto; Prof. F. M. Sofge, Toronto; W. L. Lawson, London.

Best Canadian, amateur band, consisting of not less than eight performers, of whom there shall not be more than two professional artists, Cobourg brass band, \$60; 2d do, Union brass band, Toronto, \$40.

**NOTE.**—The Judges would suggest an Overture being made one of the pieces to be played in future competitions.

**Miscellaneous.**

**INFLUENCE OF NATURE AS WE GROW OLDER.**  
—But there is a deeper truth than all this, in the influence which nature gains over us in proportion as life withdraws itself from struggle and contention. We are placed on earth for a certain period to fulfil, according to our several conditions and degrees of mind, those duties by which the earth's history is carried on. Desk and warehouse, factory and till, forum and senate, schools of science and arts, arms and letters, —by these we beautify and enrich our common habitation; by these we defend, bind together, exalt, the destinies of our common race. And

during this period the mind is wisely fitted less to contemplate than to act—less to repose than to toil. The great stream of worldly life needs attrition along its banks in order to maintain the law that regulates the movement of its waves. But when that period of action approaches towards its close, the soul, for which is decreed an existence beyond the uses of earth—an existence aloof from desk and warehouse, factory and till, forum and senate, schools of science and art, arms and letters,—gradually releases its hold of former objects, and, inensibly, perhaps, to itself, is attracted towards the divine source of all being, in the increasing witchery by which nature, distinct from man, reminds it of its independence of the the crowd from which it begins to re-emerge. And, in connection with this spiritual process, it is noticeable how intuitively in age we turn in strange fondness to all that is fresh in the earliest dawn of youth. If we never cared for little children before, we delight to see them roll in the grass over which we hobble on crutches. The grand sire turns wearily from his middle-aged care worn son to listen with infant laugh to the prattle of an infant grandchild. It is the old who plant young trees; it is the old who are most saddened in autumn, and feel most delight in the returning spring. And, in the exquisite delicacy with which hints of the invisible eternal future are conveyed to us—may not that instinctive sympathy with which life rounds its completing circle towards the point at which it touches the circle of life winding up to meet it be a subtle intimation that, from such point of contact, youth will spring forth again? May there be no meaning more profound than the obvious interpretation, in the sacred words, "Make yourselves as little children, for of such is the kingdom of heaven?"—*Sir E. Bulwer Lytton.*

**TABLE TURNING FIFTEEN HUNDRED YEARS AGO.**—In the curious work of De l'Ancre, *L'incroyable et mescreance du Sortilege* (4to, Paris, 1622, page 236), is an account of two magicians, Patritius and Hilarius, who lived in the reign of Valens. Describing their proceedings, he says: "They prepared an enclosure of branches of laurel, in the same form as was at the tripod of Delphi. And, after having pronounced many charms, both by day and by night, they caused that a round table surrounded by this inclosure should turn itself and move (*se contournoit et remouoit*) according to the matter they might require." It would occupy too much space to give the whole of the ceremonies; the result of the incantation, however, was, that the letters T. H. E. O. D. were exhibited, and said to be a portion of the name of Valens's enemy, and the emperor in consequence took care that Theodorus should not be put death. This was the circiter A. D. 373.—*Notes and Queries.*

## SEED AND IMPLEMENT WAREHOUSE.

ESTABLISHED, 1836.

THE SUBSCRIBERS beg to inform the Farming Community and the Public generally, that they have now opened their new place of business in the

## AGRICULTURAL HALL,

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### FIELD AND GARDEN SEEDS,

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Seedsman to the Agricultural Association of U. C.

TORONTO, Dec. 16th, 1862.

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Two Horse Ploughs... Nos. 1, 2 & 3 16.50 "  
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JAMES FLEMING & Co.

TORONTO, Dec. 16th, 1862.

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**T**HE Subscriber offers several Young Bulls, Heifers and Cows, on very Liberal Terms. Specimens from his *Prize Herd* will be on Exhibition at Toronto, if all's well.

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Aug. 30th, 1862.

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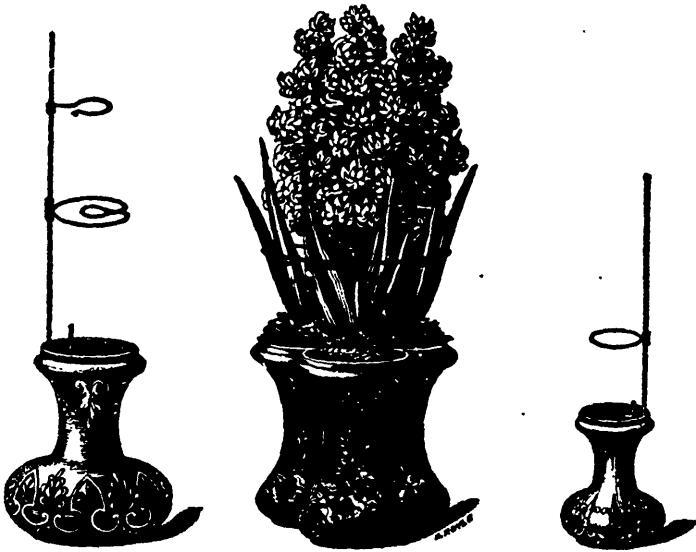
**THE  
JOURNAL OF THE BOARD OF ARTS  
AND MANUFACTURES,  
FOR UPPER CANADA,**

**Is Published on the first of every Month,**

**A**T \$1 per annum for single copies, or to clubs of ten or more at 75 cents. per copy; to members of Mechanics' Institutes, and of Literary, Scientific, and Agricultural Societies, through their Secretary or other officer, 50 cents per annum per copy.

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**DUTCH FLOWER ROOTS.**

**T**HE SUBSCRIBERS BEG TO ANNOUNCE that they have just received their annual importation of Bulbs in good condition—consisting of *Double and Single Hyacinths*, \$1.00, \$2.00, and \$3.00 per dozen. A fine assortment of *Tulips*, from 50 cents to \$2.00 per dozen. *Crocus*, 12 to 20 cents per dozen, and at \$1.00 and \$1.50 per 100. *Polyanthus*, *Narcissus*, 12 to

15 cents each.

Descriptive Catalogues furnished gratis on application. They would also call attention to their fine stock of English Hyacinth Bottles, with supports, suitable for growing Hyacinths in winter, and for holding parlour bouquets in summer. (See above cut.)

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Toronto Oct. 27th, 1862



## Agricultural and Veterinary Instruction

A CLASS will be formed in Toronto for instruction in the Principles of Agriculture, and the Veterinary Art, specially adapted to the wants of young men engaged in, or intended for agricultural pursuits.—Professor Buckland will be assisted in the department of Scientific Agriculture by the Professors of Chemistry, Geology and Natural History in University College.—Mr. A. Smith, Licentiate of the Edinburgh Veterinary College, and consulting Surgeon to the Board of Agriculture for UPPER CANADA, will have charge of the Veterinary department.

The course will commence on *Wednesday, January 21st, 1863*, and continue for about six weeks. Three Lectures a day, and *no fees*.—The subjects treated of will comprise:—

The History, Breeding, Diseases, and Treatment of Farm Animals,—including their Anatomy and Physiology, with a course of instruction in Practical Dissecting.

Agriculture in its relations to Chemistry, Geology, Mechanics, Physical Geology and Meteorology, Botany and Zoology, including Farm Architecture and Engineering, the valuation and management of Landed Property, with special reference to Canada.

Pupils may enter and leave the Class without being subjected to an examination. But with a view of promoting Emulation the Board of Agriculture offer the following Prizes, the value to be given in suitable books:—First, \$20 to the Student who shall pass the best Examination in all the subjects at the end of the term; Second, \$15; Third, \$10; and Fourth, \$5.

Further particulars may be known by applying either personally or by letter to Professor Buckland, University College.

Toronto, Nov., 1862.

## The Agriculturist,

OR JOURNAL AND TRANSACTIONS OF THE BOARD OF AGRICULTURE OF UPPER CANADA,

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## Horse Infirmary and Veterinary Establishment, Corner of Bay and Temperance Streets Toronto, C. W.

A SMITH, Licentiate of the Edinburgh Veterinary College, and Veterinary Surgeon to the Board of Agriculture of U. C., begs to return his thanks to the Public generally for their support since opening the above mentioned establishment, and respectfully solicits a continuance of the same.

And also begs to announce that Veterinary Medicines of every description are constantly kept on hand:—Such as, Physic, Diuretic, Cough Cordial, Tonic Condition, and Worm Balls and Powders. The constituents composing the Cough-balls, have been found (by Professor Dick, of Edinburgh) most serviceable in alleviating many of the symptoms of Broken-wind or Heaves in Horses. Colic Draughts, &c., a mixture which owners of Horses should always have beside them.

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Toronto, Aug. 30th, 1862.

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